Naval Facilities Engineering Command Southwest
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San Diego, California 92132-5190

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DRAFT
2011 PERFORMANCE MONITORING REPORT

ENHANCED *IN-SITU* BIOREMEDIATION
INSTALLATION RESTORATION PROGRAM SITE 70
NAVAL WEAPONS STATION SEAL BEACH
SEAL BEACH, CALIFORNIA

Delivery Order No. 0006

September 2012

Prepared for:

U.S. Department of the Navy
Naval Facilities Engineering Command Southwest
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EXECUTIVE SUMMARY

This Performance Monitoring Report (PMR) presents the results of activities associated with the monitoring of the Enhanced *In-Situ* Bioremediation (EISB) at Installation Restoration Program (IRP) Site 70 (Research, Testing, and Evaluation Area), at Naval Weapons Station (NAVWPNSTA) Seal Beach, Seal Beach, California (Figure 1-1), which is being implemented to treat elevated levels of trichloroethene (TCE), cis-1,2-dichloroethene (cis-DCE), and vinyl chloride (VC). This PMR has been prepared on behalf of Naval Facilities Engineering Command Southwest (NAVFAC SW) under Contract No. N62473-09-D2610, Delivery Order No. 0006.

The remediation at IRP Site 70 is being conducted under the IRP Program. NAVWPNSTA Seal Beach is an active federal facility and is not on the National Priorities List. The lead federal agency is the Department of the Navy. California Department of Toxic Substances Control, and the California Regional Water Quality Control Board Santa Ana Region are the state regulatory agencies providing support and oversight.

The EISB remediation activities are being conducted in accordance with the technical and functional requirements specified in the Remedial Action Work Plan (Environmental Chemical Corporation [ECC]/Geosyntec 2008a). Field activities are being performed as established in the Standard Operating Procedures contained in Attachment B-2 of the Sampling and Analysis Plan (SAP) and SAP Addendum (AIS-TN&A 2011). Variances to the monitoring schedule are discussed in Section 4. Emulsified vegetable oil (EVO) and *Dehalococcoides* (Dhc) bacteria in the form of the KB-1® culture have been injected into the source area Source Area Treatment Grid (SATG) and into 6 downgradient biobarriers: Source Area Biobarrier (SAB), First Sand Biobarriers (FSB)-1 and FSB-2, Shell Horizon Biobarriers (SHB)-1 and SHB-3, and the Second Sand Biobarrier (SSB-1). The SATG and the 6 biobarriers treat contaminants of concern (COCs) in 4 hydrostratigraphic zones including the Upper Fines, First Sand, Shell Horizon, and Second Sand. EISB injections were completed in all seven areas between November 2008 and August 2010 (Insight 2009a, 2010, 2011).

The 2011 performance monitoring event documents the following field activities (Table 1-1, Figure 1-2):

- Groundwater-level elevations were measured during two events: July (74 wells) and October 2011 (76 wells).
- Groundwater samples were collected during two events in July/August 2011 (Summer 2011), and October/November 2011 (Fall 2011). The Summer 2011 groundwater sampling event consisted of collection of groundwater samples from 48 monitoring and injection wells. The Fall 2011 groundwater sampling event consisted of collection of groundwater samples from 80 monitoring and injection wells and analyzed for volatile organic compounds (VOCs), dissolved hydrocarbon gases, volatile fatty acids (VFAs), anions, total dissolved solids, alkalinity, total organic carbon

(TOC), dissolved hydrogen sulfide, dissolved metals, and Dhc with VC reductase A gene (*vcr*A) (Table 1-1).

- Field parameters (groundwater temperature, potential of hydrogen, dissolved oxygen (DO), oxidation-reduction potential (ORP), specific conductance, turbidity) and depth to water, were measured as part of the performance monitoring for the EISB activities, per the schedule outlined in Table 1-1.
- One new Second Sand monitoring well, designated as MW-70-49, was constructed in September 2011. The purpose of the Second Sand well at this location was to determine the downgradient concentration of VOCs in the Second Sand with respect to MW-70-14 and to better define the northeast lateral extent of the dissolved plume with respect to the SSB-1. In addition, RDO-4 was re-drilled and constructed in September 2011 since the casing had been found to be compromised prior to FSB-1 injection activities in December 2009. Well construction, lithologic logs, and survey details are documented in Table 1-2 and Appendix F.
- Twelve soil vapor probes were sampled for methane and hydrogen sulfide.

The data from the performance monitoring events were used to develop recommendations for future EISB activities in the different hydrostratigraphic zones. Review of the performance monitoring data indicates that that EISB activities in all 4 hydrostratigraphic zones and 7 biobarrier areas, are promoting reductive dechlorination to VC and ethene, with the extent of degradation somewhat variable.

Multiple lines of evidence were evaluated and support that EISB is working effectively at the biobarrier areas at IRP Site 70. The remedy performance is summarized as follows:

1. The presence of TCE in the Source Area at 2,800 micrograms per liter (µg/L) and a maximum site-wide TCE concentration of 3,900 µg/L in MW-70-PMW06B, upgradient of FSB-1, indicates that high concentrations of TCE in the Source Area upgradient of FSB-1 is present.
2. A significant reduction of total moles of all COCs is observed in all hydrogeologic zones since active remediation began. The 2011 performance monitoring data suggest that degradation rates have slowed in all biobarriers. The primary transformation product is cis-DCE.
3. Electron donor concentrations were measured as TOC and VFAs in select wells. TOC concentrations decreased in the SAB, FSB-2, SHB-1, and SSB-1. In 2011, groundwater VFA results for the injection wells were non-detect for almost all injection wells except for IW-70-SAT35 (SATG). In general, the concentration of VFAs in the PMWs remained below or at detection limits with one exception. These data indicate that EVO is being consumed by the fermenting population and utilized by anaerobic populations such as methanogens and dechlorinators.
4. In biobarriers SATG, SAB, FSB-1, SHB-3, and SSB-1, sulfate has been increasing and methane concentrations have generally been decreasing, indicating a reduction in methanogenesis in these biobarriers. A review of the performance monitoring wells in biobarriers FSB-2 and SHB-1 shows somewhat more variability.

5. Within all of the biobarriers, the DO concentrations were below 1 mg/L during the 2011 Performance monitoring event, except for IW-70-SHB310 in the SHB-3 biobarrier. ORP readings collected during the 2011 monitoring events indicated that all of the upgradient and downgradient PMWs and biobarrier wells were within the range of -100 and -300 millivolts. There is a slight increasing trend of ORP reported in performance monitoring wells in biobarriers SATG, SAB, and FSB-1.
6. In the SATG, SAB, FSB-1 and FSB-2 biobarriers, in general, Dhc and *vcr*A concentrations were within or sometimes above the moderate range (10^4 to 10^7 cells/L) of concentrations. However, *vcr*A and Dhc concentrations were more variable and primarily below the lower limit of the moderate concentration range (10^4 to 10^7 cells/L) in some of the downgradient performance monitoring wells in SHB-1 (MW-70-PMW10), SHB-3 (PMW-12A) and SSB-1 (MW-70-PMW14B).

The Conceptual Site Model (CSM) was updated to provide an analysis and visualization of both the subsurface hydrogeology and dissolved phase plume morphologies. The highlights of the CSM update for the 2011 PMR are summarized as follows:

- Groundwater elevations have increased approximately 2-12 feet in all hydrostratigraphic zones since 2010, which may be attributable to an increase in rainfall in Water Year 2011. Hydraulic gradients and directions remain similar to 2010. Groundwater monitoring data does not indicate that the injection of the biobarriers has impacted groundwater flow.
- The updated extent of the 250 µg/L plume for TCE was simulated using EVS in two- and three-dimensions and demonstrates that the post-EISB TCE dissolved plume has decreased in width, length and vertical distribution compared to the baseline CSM. The extent of cis-DCE and VC plume morphology in 2011 remains similar to 2010.
- The dissolved phase plume remains within the point of compliance boundary.
- Soil vapor monitoring at soil vapor wells, constructed at 6 feet bgs, indicates that methanogenesis is occurring in the SATG and SAB areas. However, the methane monitoring on the surface indicates no harmful vapors in the breathing zones monitored adjacent to utility corridors that may provide a potential pathway to the surface.

The addition of the new Second Sand well MW-70-49 in 2011, northeast of the SSB-1, defines the northeastern portion of the dissolved plume in the Second Sand. In addition, the toe of the Second Sand plume appears to be stable in 2011.

Based on the results of the 2011 PMR at IRP Site 70, the following recommendations are made:

1. In review of all the multiple lines of evidence, it appears that additional EVO injections in all biobarriers may be prudent to ensure that electron donor are present and that the *vcr*A population thrives. In order of priority, the following biobarriers may be prioritized: SSB-1, SAB, and FSB-1based on the rate of consumption of EVO and the current VOC concentrations.
2. Based on the results of the 2011 PMR, semi-annual groundwater monitoring is recommended for the next performance monitoring year per Table 6-1. Optimization strategies may be

further evaluated after each event and incorporated as needed to enhance performance monitoring results.

3. Since methane can accumulate in the subsurface and migrate to the surface, continued monitoring of methane in the vapor probes and monitoring at the surface is recommended. Special care (venting, use of explosion-proof meters, etc.) must be taken prior to any sampling or intrusive activities in this area to minimize the risk of fire or explosion. A methane monitoring plan has been put in place to ensure that onsite workers are protected. In addition, air monitoring for VOCs in these areas will be implemented as part of the monitoring plan.

The data presented in the 2011 PMR support the remedial action goals for IRP Site 70 (Geosyntec 2006a) and demonstrate the remedial action is reducing the contaminant concentrations at IRP Site 70.

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ACRONYMS/ABBREVIATIONS

BEI	Bechtel Environmental, Inc.
bgs	below ground surface
BNI	Bechtel National, Inc.
cells/L	cells per liter
CDM	Camp, Dresser, and McKee
COC	contaminant of concern
DCE	dichloroethene
Dhc	*Dehalococcoides*
Dhc/*vcr*A	*Dehalococcoides* with the vinyl chloride reductase A gene
DHGs	dissolved hydrocarbon gases
DNA	deoxyribonucleic acid
DNAPL	non-aqueous phase liquid
DO	dissolved oxygen
ECC	Environmental Chemical Corporation
EISB	Enhanced *In-Situ* Bioremediation
EVO	emulsified vegetable oil
EVS	Environmental Visualization Software
°F	degrees Fahrenheit
FSB	First Sand Biobarrier
ft	feet
Geosyntec	Geosyntec Consultants
IC	institutional control
IRP	Installation Restoration Program
KB-1®	dechlorinating microbial culture
LEL	lower explosive limit
LUC	land use control
LUST	Leaking Underground Tank
µg/L	micrograms per liter
MCL	maximum contaminant level
mg/L	milligrams per liter
MNA	monitored natural attenuation
MSL	mean sea level
MTBE	methyl tert-butyl ether
mV	millivolts
NAVWPNSTA	Naval Weapons Station
NASA	National Aeronautics and Space Administration
NAVFAC SW	Naval Facilities Engineering Command Southwest

OCWD	Orange County Water District
ORP	oxidation-reduction potential
PCE	tetrachloroethylene
PCR	polymerase chain reaction
pH	potential of hydrogen
PMR	Performance Monitoring Report
PMW	performance monitoring well
POC	point of compliance
ppmV	parts per million by volume
QA	quality assurance
QC	quality control
RAWP	Remedial Action Work Plan
RDO	remedial design optimization
redox	oxidation-reduction
RSL	Regional Screening Level
RT&E	Research, Testing, and Evaluation
RWQCB	(California) Regional Water Quality Control Board
SAB	Source Area Biobarrier
SAP	Sampling and Analysis Plan
SATG	Source Area Treatment Grid
SHB	Shell Horizon Biobarrier
SOP	standard operating procedure
SSB	Second Sand Biobarrier
TCE	trichloroethene
TCG	target cleanup goal
TDS	total dissolved solids
TOC	total organic carbon
UEL	upper explosive limit
U.S. EPA	United States Environmental Protection Agency
VC	vinyl chloride
*vcr*A	vinyl chloride reductase A gene
VFA	volatile fatty acid
VOC	volatile organic compound
WY	water year

Section 1
INTRODUCTION

This Performance Monitoring Report (PMR) presents the results of injection activities for the Enhanced *In-Situ* Bioremediation (EISB) at Installation Restoration Program (IRP) Site 70 (Research, Testing, and Evaluation [RT&E] Area), at Naval Weapons Station (NAVWPNSTA) Seal Beach, Seal Beach, California (Figure 1-1). The PMR has been prepared on behalf of Naval Facilities Engineering Command Southwest (NAVFAC SW) under Contract No. N62473-09-D2610, Delivery Order No. 0006.

The remediation at IRP Site 70 is being conducted under the IRP Program. NAVWPNSTA Seal Beach is an active federal facility and is not on the National Priorities List. The lead federal agency is the Department of the Navy. The California Department of Toxic Substances Control, and the California Regional Water Quality Control Board (RWQCB) Santa Ana Region are the state regulatory agencies providing support and oversight.

NAVFAC SW directs the remedial action (RA) in accordance with requirements of the Comprehensive Environmental Response, Compensation, and Liability Act and the National Oil and Hazardous Substances Pollution Contingency Plan. The Final Remedial Action Work Plan (RAWP) defines the site-specific requirements for implementation of EISB at IRP Site 70 (Environmental Chemical Corporation [ECC]/Geosyntec Consultants [Geosyntec] 2008a). The performance monitoring field activities documented in this PMR, were conducted between July and December 2011 (Table 1-1).

The EISB remediation activities are being conducted in accordance with the technical and functional requirements specified in the RAWP (ECC/Geosyntec 2008a). Field activities are being performed as established in the Standard Operating Procedures (SOPs) contained in Attachment B-2 of the Sampling and Analysis Plan (SAP) and SAP Addendum (AIS-TN&A 2011). Variances to the monitoring schedule are discussed in Section 4.

The 2011 Performance monitoring event documents the following field activities (Table 1-1, Figure 1-2):

- Groundwater-level elevations were measured during two events: July (74 wells) and October 2011 (76 wells).
- Groundwater samples were collected during two events in July/August 2011 (Summer 2011), and October/November 2011 (Fall 2011). Table 1-1 summarizes the number of wells sampled and the associated analyses and field parameters associated with these wells for each of these events.
- One new Second Sand monitoring well, designated as MW-70-49, was constructed in September 2011. The purpose of the Second Sand well at this location was to determine the downgradient concentration of VOCs in the Second Sand with respect to MW-70-14 and to better define the northeast lateral extent of the dissolved plume with respect to the Second Sand Biobarrier (SSB)-1. In addition, remedial design optimization (RDO)-4 was re-drilled and constructed in

September 2011 since the casing had been found to be compromised prior to First Sand Biobarrier (FSB)-1 injection activities in December 2009. Well construction, lithologic logs, and survey details are documented in Table 1-2 and Appendix F.

- Twelve soil vapor probes were sampled for methane and hydrogen sulfide.

The groundwater monitoring well network shown in Figure 1-2 consists of wells screened within five hydrostratigraphic units designated as: Upper Fines, First Sand, Shell Horizon, Second Sand, and Deep Sand. The monitoring well network wells were designed as follows (Geosyntec 2006b):

1) Monitored Natural Attenuation (MNA) or "sentinel" wells provide early indications of undesired plume migration and provide information with regards to attenuation of lower concentrations of trichloroethene (TCE) on the fringe of the plume;

2) Performance Monitoring Wells (PMW), located along the core of the plume between biobarriers, provide some indication of potential biobarrier operation timeframe; and

3) Point of Compliance (POC) Wells are monitored to determine if the plume is migrating off the station.

The majority of these wells were installed in 2007 during the RA construction phase of the project (ECC/Geosyntec 2008b, 2009) and were sampled for the first time during the baseline monitoring event in 2008. The 2011 annual monitoring event included analyses of samples collected from monitoring MNA, PMW, and POC wells monitored during the 2008 baseline monitoring round (Insight 2009a) as well as injection wells that were sampled to monitor the remedy performance at the biobarriers per the schedule outlined in Table 1-1.

EISB injection at IRP Site 70 began in November 2008 after the conclusion of baseline groundwater monitoring activities. To date, installation of all seven injection biobarriers have been completed with one round of injection activities. Injection activities of the biobarrier areas were performed in the following sequence:

1. Source Area Biobarrier (SAB), was completed on January 30, 2009 – documented in the 2009 PMR (Insight 2010).
2. SSB-1, was completed on March 18, 2009 – documented in the 2009 PMR (Insight 2010).
3. Shell Horizon Biobarrier 3 (SHB-3), was completed on September 25, 2009 – documented in the 2009 PMR (Insight 2010).
4. FSB-2, was completed on November 24, 2009 – documented in the 2010 PMR (Insight 2011).
5. FSB-1, was completed on February 12, 2010 – documented in the 2010 PMR (Insight 2011).
6. SHB-1, was completed on April 7, 2010 – documented in the 2010 PMR (Insight 2011).

7. Source Area Treatment Grid (SATG), was completed on August 3, 2010 – documented in the 2010 PMR (Insight 2011). The additional SATG wells (IW-70-SAT35 through IW-70-SAT57) were installed in April and May 2010 (Figure 2-1) after conclusion of injection activities at FSB-1, FSB-2 and SHB-1. The EISB field activities at the SATG was performed last, in order to ensure that the IRP Site 70 remediation activities do not interfere with Environmental Security Technology Certification Program demonstration project performed by Camp, Dresser, and McKee (CDM), which was completed in December 2009.

Analytical methods are summarized in Table 1-1 and Section 2.

The data from the groundwater monitoring events were used to develop recommendations for future EISB activities in the different hydrostratigraphic zones.

1.1 PURPOSE

An EISB system was implemented at IRP Site 70 for treatment of dense non-aqueous phase liquids (DNAPLs) and dissolved phase chlorinated solvent plumes. The EISB is a semi-passive approach comprised of biostimulation and bioaugmentation, which incorporates a grid of treatment wells in the source area and rows of injection wells that transect the dissolved phase plume, into which electron donor and bacteria are added. Emulsified vegetable oil (EVO) is used as the electron donor and injected into the wells using a recirculation approach that facilitates its distribution. In addition, injection wells receive a one-time addition of dechlorinating culture (KB-1®) capable of complete dechlorination of TCE to ethene.

The remedy design was based on the vertical and lateral extent of the 250 micrograms per liter (µg/L) TCE plume per previous monitoring results (ECC/Geosyntec 2008b, Bechtel Environmental, Inc. [BEI] 2006). Active treatment will be terminated once the TCE concentrations in groundwater are reduced to 200 µg/L. MNA will be employed after the active treatment phase until target cleanup goals (TCGs) for contaminants of concern (COCs) are achieved (Table 1-3).

Table 1-4 summarizes the components of the performance monitoring and why they are monitored. Analysis of these parameters during and after injection, ensure that the biobarriers are working as planned.

1.2 BACKGROUND

IRP Site 70, also known as the RT&E Area, is located south of Westminster Boulevard and east of Seal Beach Boulevard (Figure 1-1). IRP Site 70 encompasses approximately 40 acres. Groundwater at IRP Site 70 is impacted by chlorinated solvents, primarily TCE and associated degradation products. Groundwater impacted by TCE extends to a depth of approximately 160 feet (ft) below ground surface (bgs) (ECC/Geosyntec 2008b; BEI 2006). The remedial approach for the site was first presented in the Revised Feasibility Study (Geosyntec 2005). Previous investigations are summarized in the RAWP (ECC/Geosyntec 2008a) and the Fifth

Annual Groundwater Monitoring Report (BEI 2006). The EISB baseline results and 2009 and 2010 performance monitoring of the biobarriers have been documented (Insight 2009a, 2010, 2011).

IRP Site 70 consists of multi-story office and production buildings, asphalt-paved parking areas, an assortment of aboveground tanks and attendant above- and below-ground piping distribution systems, and several concrete-lined sumps. From 1962 to 1973, the National Aeronautics and Space Administration (NASA) utilized the area for the design and manufacture of the second stage of the Saturn V launch vehicle for the Apollo Program. Subsequent to NASA leaving the area, the United States Department of Energy and Garrett Engineering (Allied Signal) conducted pilot test assembly operations for a classified uranium enrichment process in portions of Building 112. The tests were conducted from 1980 to 1985 but did not include either the manufacture or enrichment of uranium. Currently, the building is used for storage, communications research, and office space.

The Final Removal Site Evaluation Report for IRP Site 70 (Bechtel National, Inc. [BNI] 1996) addressed potential waste from the following areas:

- Bulkhead Fabrication Building 128;
- Vertical Assembly and Hydrotest Building 112;
- Pneumatic Test, Paint, and Packaging Building 122;
- Tool and Maintenance Building 130;
- Structural Test Tower; and
- Water Conditioning Plant.

Operations at these facilities included the use of diluted acids, VOCs (including chlorinated solvents such as TCE), phenolic compounds, petroleum oils, sodium dichromate containing hexavalent chromium, detergents, metals containing paint wastes, and machine lubricating oil.

1.2.1 PHYSICAL SETTING AND SITE CONDITIONS

NAVWPNSTA Seal Beach is situated at latitude 33° 45’ 27” N and longitude 118° 4’ 22” W, San Bernardino Baseline and Meridian. NAVWPNSTA Seal Beach is located within the Los Angeles-Orange County coastal plain. Most of NAVWPNSTA Seal Beach lies in the flat alluvial deposits in the southeastern portion of the Los Angeles Basin. The Los Angeles Basin is bounded on the north by the Santa Monica Mountains, to the northeast by the Repetto and Puente Hills, to the east and southeast by the Santa Ana Mountains and the San Joaquin Hills, and to the south, southwest, and west by the Palos Verdes Hills and the Pacific Ocean. NAVWPNSTA Seal Beach slopes evenly from approximately 20 ft above mean sea level (MSL) in the northwestern part, near IRP Site 70, to sea level in the tidal flats of the Seal Beach National Wildlife Refuge in the southeast (Figure 1-1, ECC/Geosyntec 2008a). The most pronounced

feature at NAVWPNSTA Seal Beach is part of the Landing Hill on the southwest at a maximum elevation of 50 ft above MSL (ECC/Geosyntec 2008a).

The climate in the area is classified as a marine-influenced southern California coastal region with temperature ranges from winter lows that range from 30 degrees Fahrenheit (°F) to summer highs around 90°F. Annual precipitation is variable with an average of 12.5 inches. Precipitation data for Water Year (WY) 2011, between October 2010 and September 2011, is presented in Appendix G. Prevailing winds average 4 miles per hour from the west with occasional strong dry winds ("Santa Anas"), and occur in the fall and winter. Groundwater levels are influenced by years of high precipitation or drought, as well as tidal cycles (ECC/Geosyntec 2008a).

The sequence of stratigraphic units underlying NAVWPNSTA Seal Beach from youngest (shallowest) to oldest (deepest) is:

- Recent Alluvium with a maximum thickness of approximately 80 to 100 ft bgs. The upper 50 ft consists of fine sands, silty clays, and clays; lower unit consists of sands and gravels, silty sands, silty clays, and clays.
- Upper Pleistocene Lakewood Formation is present at the site starting at depths of approximately 80 to 100 ft bgs and extending to depths of approximately 350 ft bgs, beyond the scope of the investigations at IRP Site 70. Units are discontinuous and contain zones of high and low permeability (DWR 1961).
- Lower Pleistocene San Pedro Formation.
- Pliocene Pico Formation.

NAVWPNSTA Seal Beach is located in the Newport-Inglewood fault zone. Two faults, the Seal Beach fault and the Los Alamitos fault, are part of the Newport-Inglewood fault zone. The Seal Beach fault is located in the southern portion of the Newport-Inglewood fault zone. On the station, the Seal Beach fault has uplifted Upper Pleistocene deposits at Landing Hill and Hog Island (JEG 1995). Movement along the fault appears to not have displaced recent sediments. The Los Alamitos fault lies parallel to the Seal Beach fault and about 2.25 miles northeast of the Alamitos Gap (Appendix I).

1.2.2 SITE SPECIFIC HYDROGEOLOGY

NAVWPNSTA Seal Beach is located at the southwestern corner of the Orange County Basin. The Orange County Basin contains the Artesia, Gage, Hollydale, Jefferson, Lynwood, and Silverado aquifers. The Lynwood and Silverado aquifers are merged across most of the station (JEG 1995).

There are four general aquifer zones identified at NAVWPSTA Seal Beach and include (JEG 1995):

- a semi-perched, unconfined zone within the upper Recent alluvial deposits;
- a confined fresh groundwater zone contained in lower Recent alluvial deposits;

- Late and Early Pleistocene deposits of the Lakewood and San Pedro formations, respectively, and in some parts, deposits of the Late Pliocene Pico Formation; and
- a confined zone of saline water underlying the freshwater zone.

The shallow groundwater underlying NAVWPNSTA Seal Beach (upper Recent Alluvium deposits) is within the Lower Santa Ana River Basin (Orange County management zone) (RWQCB 1995, with Amendment R8-2004-001 2004). Beneficial uses of groundwater within the Orange County management zone include municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply. Shallow groundwater underlying IRP Site 70 does not serve as a water source for any of the beneficial uses designated in the Water Quality Control Plan, Santa Ana River Basin (Basin Plan) (RWQCB 1995).

The principal freshwater body (lower Recent Alluvium deposits and Upper Pleistocene Lakewood Formation) is a large confined aquifer occupying two zones. The first zone is approximately 75 to 200 ft deep and saline. The second zone is approximately 250 to 1,000 ft deep and freshwater. This second zone is the primary water supply source for neighboring cities. Groundwater levels in this principal freshwater zone fluctuate from year to year due to variations in pumping, infiltration, and recharge. Recharge to this aquifer is primarily from unconfined areas upgradient and from unlined rivers that are hydraulically connected to the aquifer. Seasonal variations occur with highs in the wet winter months and lows in the dry summer months when large quantities of water are used for irrigation (JEG 1995).

The six hydrostratigraphic units presented in the Final Technical Memorandum (ECC/Geosyntec 2008b) are:

1. **Upper Fines Unit (ground surface to approximately 60 ft bgs)**. The Upper Fines Unit comprises three zones: a) a shallow zone of surficial soils and recent clayey sediments; b) an intermediate zone of interbedded silts, clays, and sandy silts and clays that include a semi-perched zone; and c) a lower zone of interbedded silts, clays, and fine- to coarse-grained, silty to clayey sands. A zone of organic material, mainly wood chips, was encountered in a number of boreholes at a depth of approximately 45 to 50 ft bgs.
2. **First Sand Unit (approximately 60 to 105 ft bgs).** The First Sand Unit consists of poorly-graded, fine-grained sands and silty sands. A coarse sand/fine gravel layer was encountered in several borings between 80 and 95 ft bgs. This coarse layer lies just above or slightly within the underlying Shell Horizon Unit. The First Sand Unit varies in thickness from approximately 30 to 50 ft.
3. **Shell Horizon Unit (approximately 105 to 135 ft bgs).** The Shell Horizon Unit is characterized by a sequence of interbedded clays, silts, sands, and gravels with laterally discontinuous interbeds of dense shells and shell fragments. This unit is characterized by a sequence of interbedded clays, silts, sands, and gravels below the source area grading to predominantly fine grained sand in the vicinity of RDO wells RDO-6A and RDO-6B between 1st and 2nd Street (Figure 2-17) in the dissolved-phase plume area. This unit has been subdivided into the Shell Horizon (interbedded clays) and Shell Horizon (fine-grained sands) to reflect differences in the hydrogeologic

characteristics and potential plume migration behavior. Shell and gravel layers were encountered in some but not all borings, comprising interbeds within the Shell Horizon Unit that do not appear to be spatially extensive. Wood chips were encountered in several borings at a depth of about 110 ft bgs.

4. **Second Sand Unit (approximately 135 to 170 ft bgs)**. Similar in character to the First Sand Unit, however, this deeper unit appears to be slightly coarser in its upper section.
5. **Deep Clay Unit (approximately 170 to 190 ft bgs**). The Deep Clay Unit consists of an upper clay to silty clay horizon and an underlying clayey silt, silt, sandy silt, or sandy clay layer. The upper clay to silty clay horizon appears to be a continuous low-permeability unit that is encountered at depths ranging between 164 to 176 ft bgs. The upper clay to silty clay unit grades downward to clayey silt, silt, sandy silt, or sandy clay. This underlying layer is 3 to 20 ft thick, extending to depths of 175 to 188 ft bgs. Below the clayey silt, silt, sandy silt, or sandy clay layer is a silty sand and sand layer, up to 6 ft thick, which has been found to a depth of 191 ft bgs in extended removal site evaluation borings at NAVWPNSTA Seal Beach.
6. **Deep Sand Unit (approximately 190 ft bgs and below)**. The Deep Sand Units, where encountered, consists of variable sands (i.e., fine-grained sands and silty sands) and appears to be similar in character to the First and Second Sand Units.

1.2.3 NATURE AND EXTENT OF CONTAMINATION

The nature and extent of contamination at IRP Site 70 is based on previous and current groundwater and soil investigations at IRP Site 70 as well as the baseline groundwater monitoring report, and formed the basis of the current EISB design (BEI 2002, 2006; Geosyntec 2006b; Insight 2009a).

Groundwater contamination at IRP Site 70 may be described in two distinct areas:

(i) A source area, located between 0 to 60 feet bgs in the Upper Fines unit, with suspected residual DNAPLs, and dissolved TCE concentrations exceeding 1,000 µg/L; and

(ii) A dissolved-phase VOC plume extending downgradient in a south-southeasterly direction from the source area.

The principal COC in the dissolved-phase plume is TCE. The areal extent of the dissolved TCE plume in groundwater, prior to implementation of the EISB, was approximately 4,000 ft by 1,200 ft, with vertical migration to depths of approximately 160 ft bgs. The water table is approximately 20 ft bgs, although it can be shallower in wetter years (Insight 2009a; BEI 2006). The dissolved-phase plume is identified in the following three hydrostratigraphic units; a) the First Sand Unit (60 to 105 ft bgs), b) the Shell Horizon Unit (105 to 135 ft bgs), and c) the Second Sand Unit (135 to 170 ft bgs). The results of the 2011 EISB monitoring of groundwater documents the change in the size of the dissolved TCE plume and daughter products.

The TCE plume morphology is consistent with the previous conceptual site models (CSMs) for IRP Site 70 (Insight 2009a; ECC/Geosyntec 2008b), where the termination of the fine-grained horizons causes a downward “stair casing” of the TCE plume. The CSM has been updated to

reflect the new morphology of the plume as a result of the active EISB remediation activities (Section 3).

1.3 REPORT ORGANIZATION

This PMR is organized as follows:

- Section 2 summarizes fieldwork activities, remedy performance and the results of groundwater quality monitoring,
- Section 3 presents the conceptual site model update and the results of the soil gas survey monitoring,
- Section 4 presents variances from the work plan and Quality Assurance (QA)/Quality Control (QC) Summary,
- Section 5 presents the summary and recommendations,
- Section 6 lists the references utilized in this report,
- Appendix A presents field sample collection and purge logs, and methane monitoring logs,
- Appendix B presents chain of custody documentation,
- Appendix C presents laboratory analytical results,
- Appendix D presents laboratory data validation reports and summary of the QC results,
- Appendix E presents the database export of analytical results since 2008,
- Appendix F presents lithologic logs and survey report for MW-70-49 and RDO-04
- Appendix G presents detailed graphs and performance monitoring trends,
- Appendix H presents the 2008 Baseline Plume Maps,
- Appendix I presents Orange County Water District Well Information, precipitation data from Long Beach Airport and the Alamitos Barrier Injection Project Map, and
- Appendix J presents the regulatory agency comments and responses.

Section 2
REMEDY PERFORMANCE

Implementation of an EISB system at IRP Site 70 began in November 2008 after the conclusion of baseline groundwater monitoring activities for treatment of DNAPL and dissolved phase chlorinated solvent plumes. The 2009 and 2010 PMRs document the EISB remediation activities that were completed at the SATG, SAB, FSB-1, FSB-2, SHB-1, SHB-3, and SSB-1 (Figure 1-1; Table 1-5; Insight 2010, 2011). This report documents the activities associated with two performance monitoring events: July/August 2011 and October/November 2011, herein referred to as Summer and Fall 2011 monitoring events, respectively. The EISB remediation activities were conducted in accordance with the technical and functional requirements specified in the RAWP (ECC/Geosyntec 2008a). Field activities are being performed as established in the SOPs contained in Attachment B-2 of the SAP and the SAP Addendum (AIS-TN&A 2011). Variances to the monitoring schedule are discussed in Section 4.

Per the Remedial Design and RAWP (Geosyntec 2006b; ECC/Geosyntec 2008a), a monitoring program has been established to track the progress towards achieving the following performance criteria for the EISB remedy:

- Complete dechlorination of TCE to ethene within the biobarriers;
- Dhc growth to concentrations exceeding 10^7 cells per liter (cells/L) and migration of augmented culture throughout active treatment zones; and
- Localized and/or minimal secondary groundwater quality impacts.

Baseline monitoring was conducted for all biobarriers in August 2008. The biobarriers were installed during 2009 and 2010 and subsequently monitored. Wells upgradient, within and downgradient of the biobarrier were sampled and COC concentrations measured. Table 1-5 summarizes the biobarrier well installation dates and schedule of monitoring for each biobarrier since November 2008.

In order for complete reductive dechlorination to occur, three primary factors are required. First, the oxidation-reduction (redox) state of the aquifer must be sufficiently reducing to support the microbial community required for reductive dechlorination (e.g., dechlorinating and fermenting communities). Second, an adequate supply of electron donor must be present to maintain the reducing redox condition of the aquifer as well as provide the dechlorinating population with its preferred electron donor (i.e., molecular hydrogen). Third, an active Dhc community must be present. These primary factors are captured in the first two performance metrics. The last performance criterion is established to monitor, assess, and minimize the impact of the EISB system on secondary groundwater quality. Impacts to pH and generation of methane and hydrogen sulfide gas can influence the performance of the biobarriers as well as represent potential health and safety risks.

The groundwater monitoring program incorporates various analyses to provide the information necessary to evaluate progress towards achieving the performance criteria listed above. Performance indicators including changes in levels of VOCs, DHGs, inorganic anions, and polymerase chain reaction (PCR) assays specific to Dhc, and aquifer pH are monitored to evaluate performance and track progress toward achieving remedial goals. In addition, surrogate measures of EVO through TOC and volatile fatty acids (acetic, butyric, lactic, and propionic acids) are taken to assess the presence of the electron donor. Field measurements of groundwater elevation are being performed to optimize injection and extraction flow rates during installation of the barriers, to ensure that the barriers are not impacting the direction of groundwater flow, and to better understand and evaluate the meaning of the performance indicators discussed above.

Determining the redox state of the aquifer in the vicinity of each biobarrier is of particular importance since reductive dechlorination of the chlorinated COCs by Dhc occurs best when the environment is highly reducing. The redox state of the aquifer is best evaluated using an approach that incorporates multiple lines of evidence. Various parameters including ORP, DO, nitrate, ferrous iron, sulfate, and methane are monitored. Mildly reducing environments are anaerobic (i.e., DO is near zero) as heterotrophic bacteria utilize the oxygen in the aquifer. Other biogeochemical processes occur, which convert nitrate to nitrite, insoluble ferric iron to soluble ferrous iron, sulfate to sulfide, and carbon dioxide to methane. Hence, in addition to measuring ORP, reduction of the concentrations of DO, nitrate, and sulfate, and increases in the production of ferrous iron and methane concentrations are evaluated. This multiple lines of evidence approach provides a proper representation of the aquifer's redox potential.

In the following subsections, the groundwater quality for each biobarrier is discussed in terms of the above-mentioned performance metrics. Specifically, the state of aquifer geochemistry is presented and compared to conditions necessary to support reductive dechlorination. These conditions include the qualitative measurement of EVO and PCR assays specific to Dhc. The changes in COC concentrations that have resulted after the barriers were installed and the impacts of the biobarriers on the secondary groundwater quality are also discussed (Figures 2-1 through 2-26).

2.1 GROUNDWATER FLOW AND DIRECTION

In 2011, groundwater levels were measured during two events in July (74 wells) and October 2011 (76 wells) (Table 2-1). Groundwater flow and direction were similar in the two monitoring events in 2011. The horizontal hydraulic gradient and flow direction were determined for each of the five defined hydrostratigraphic units: Upper Fines, First Sand, Shell Horizon, Second Sand, and Deep Sand. Water level elevation contour maps that denote these gradients and flow direction for each of the units are depicted in Figures 2-1 through 2-12.

Potential external factors that may influence local horizontal and vertical gradients and groundwater flow direction include the groundwater pumping (regional and agricultural water supply wells) and aquifer recharge (e.g., Alamitos Injection Barrier) activities. Groundwater pumping and aquifer recharge in the Orange County Groundwater Basin causes significant temporal fluctuations in the local groundwater elevations (Geosyntec 2006). Specifically, variability in the groundwater behavior at IRP Site 70 may be caused by changes in operation of the Alamitos Injection Barrier. The Alamitos Injection Barrier, located to the northwest of IRP Site 70 (Appendix I), is operated jointly by Los Angeles County Department of Public Works, the Water Replenishment District of Southern California, and the Orange County Water District (OCWD) as a hydraulic barrier to seawater intrusion. This barrier includes the injection of fresh water at depths as shallow as 27 ft bgs (Geosyntec 2006b). The closest injection well is approximately 2,000 feet northwest of IRP Site 70.

OCWD well production data from municipal and agricultural wells located within a 2-mile radius of IRP Site 70 were reviewed to determine the possible influence of production wells on IRP Site 70 water levels (Appendix I). The OCWD also completed nested monitoring wells at NAVWPNSTA which are further discussed in Section 5. In addition, precipitation data from 2011 for the Long Beach airport was reviewed to determine the influence of precipitation on the water levels and is presented in Appendix I. Water levels have generally risen between 2 to 12 feet in most wells since 2010 (Figures 2-11 and 2-12). One of the influences may be higher than normal rain fall in WY 2011. The annual precipitation totals for WY 2011 was 18.79 inches for the Long Beach area, compared to 15.66 inches in WY 2010 and 9.44 inches in WY 2009 (Insight 2009a, 2010, and 2011).

2.1.1 UPPER FINES GROUNDWATER ELEVATIONS

Groundwater level elevations were measured in thirteen Upper Fines monitoring wells in both the July and October 2011 monitoring events. The Upper Fines is the shallowest hydrostratigraphic unit defined from ground surface to approximately 60 ft bgs (Tables 1-2 and 2-1; Figures 2-1 and 2-2).

Groundwater elevations in the Upper Fine wells measured in October 2011 are generally consistent with data obtain from the same wells gauged in July 2011. In July 2011, groundwater elevations in the Upper Fines monitoring wells ranged from -1.47 (MW-70-03) to -0.16 ft MSL (MW-70-22). In October 2011, groundwater elevations in the Upper Fines monitoring wells ranged from -1.58 (MW-70-03) to 0.05 ft MSL (MW-70-22). In July 2011, depth to water ranged from 5.85 (MW-70-17) to 10.41 ft bgs (MW-70-10). In October 2011, depth to water ranged from 6.03 (MW-70-17) to 10.73 ft bgs (MW-70-10). Comparison of Fall 2011 and 2010 water levels, generally suggests that water levels have risen in the Upper Fines approximately 1.69 (MW-70-22) to 7.48 ft (MW-70-28) (Table 2-1; Figures 2-1, 2-2 and 2-11). The increase in water levels within this year is primarily attributed to the rainfall increase during this period and reduction in agricultural pumping (Appendix I).

The direction of groundwater flow in the Source Area in both July and October 2011 was to the south/southwest towards a groundwater "low" and northwest in the vicinity of the Source Area Treatment wells. Comparison of historical data shows similar patterns (BEI 2006). Horizontal hydraulic gradients in the Upper Fines Unit ranged from approximately 0.0003 foot per foot (ft/ft), in the area southeast of Kitts Highway to 0.001 ft/ft in the area northwest of Kitts Highway (Figures 2-1 and 2-2).

The variable groundwater direction and horizontal hydraulic gradients observed in the Upper Fines Unit is consistent with previous investigations to date. An old stream drainage system may be traced from the area due north of IRP Site 70, north of Westminster Boulevard, trending southwest through the current location of IRP Site 70, subparallel to the current drainage channel that ultimately flows into Anaheim Bay (BEI 2006). The old drainage system is currently covered with structures at IRP Site 70. Previous investigations attribute the variable direction and gradients in the shallowest zone to the presence of the old drainage system (BEI 2006). In addition, a review of the OCWD municipal and agricultural data suggests that injection wells in the area west of IRP Site 70, part of the Alamitos Injection Barrier Project, may be influencing the water levels in the shallowest Upper Fines Unit (Appendix I).

2.1.2 FIRST SAND GROUNDWATER ELEVATIONS

Groundwater level elevations were measured in thirty-three First Sand monitoring wells in both the July and October 2011 monitoring events. The First Sand hydrostratigraphic unit is defined from approximately 60 to 105 ft bgs. The First Sand monitoring wells are further defined spatially based on their proximity to each of the FSBs: SAB-1, FSB-1, and FSB-2 (Table 2-1; Figures 2-3 and 2-4).

Groundwater elevations in the First Sand monitoring wells measured in October 2011 are generally consistent with data obtain from the same wells gauged in July 2011. In July 2011, groundwater elevations in the First Sand monitoring wells ranged from -2.69 (MW-70-16) to -0.93 ft MSL (MW-70-POC01). In October 2011, groundwater elevations in the First Sand monitoring wells ranged from -3.60 (MW-70-16) to -1.27 ft MSL (MW-70-POC01). In July 2011, depth to water ranged from 5.30 (MW-70-MNA06) to 13.37 ft (MS-70-43A). In October 2011, depth to water ranged from 5.70 (MW-70-MNA06) to 14.04 ft (MW-70-43A) (Table 2-1). Four First Sand wells (MW-70-PMW07A, MW-70-PMW08A, MW-70-MNA09 and IW-70-FSB216) were not contoured, which is generally consistent with the 2009 baseline monitoring results (Insight 2010). These wells are screened in the shallower portion of the First Sand between 64 and 75 ft bgs, and show higher water level elevations. Comparison of Fall 2011 and 2010 water levels, generally suggests that water levels have risen in the First Sand approximately 7.38 (MW-70-PM03A) to 10.63 ft (MW-70-16) (Table 2-1; Figures 2-1, 2-2 and 2-11). The increase in water levels within this year is primarily attributed to the rainfall increase during this period and reduction in agricultural pumping (Appendix I).

The direction of groundwater flow in the First Sand hydrostratigraphic unit in July and October 2011 was to the south/southeast, consistent with previous monitoring results (BEI 2006; Insight 2009a, 2010, and 2011). Horizontal hydraulic gradients in the First Sand ranged from 0.001 to 0.002 ft/ft. The upward vertical gradient between the Shell Horizon and First Sand Unit in the area of MW-70-MNA12 is also consistent with previous groundwater monitoring results (BEI 2006; Insight 2009a, 2010, and 2011).

2.1.3 SHELL HORIZON GROUNDWATER ELEVATIONS

Groundwater level elevations were measured in twelve Shell Horizon monitoring wells on both the July and October 2011 monitoring events. The Shell Horizon hydrostratigraphic unit is defined from approximately 105 to 135 ft bgs. The Shell Horizon monitoring wells are further defined spatially based on their proximity to each of the Shell Horizon Biobarriers: SHB-1 and SHB-3 (Table 2-1, Figures 2-5 and 2-6).

Groundwater elevations in the Upper Fine wells measured in October 2011 are generally consistent with data obtain from the same wells gauged in July 2011. In July 2011, groundwater elevations in the Shell Horizon monitoring wells ranged from -1.93 (MW-70-PMW09) to -2.95 ft MSL (MW-70-23). In October 2011, groundwater elevations in the Shell Horizon monitoring wells ranged from -2.53 (MW-70-PMW09) to -3.68 ft MSL (MW-70-23). In July 2011, depth to water ranged from 8.61 ft (MW-70-PMW10) to 14.12 ft (MW-70-23). In October 2011, depth to water ranged from 9.26 ft (MW-70-PMW10) to 14.85 ft (MW-70-23) (Table 2-1, Figures 2-5 and 2-6). Water levels were not contoured in IW-70-SHB310, due to the presence of vegetable oil during the July and October 2011 monitoring. Comparison of Fall 2011 and 2010 water levels (excluding IW-70-SHB310), generally suggests that water levels have risen in the Shell Horizon approximately 9.75 (IW-70-SHB113) to 11.47 ft (MW-70-MNA14) (Table 2-1; Figures 2-5, 2-6 and 2-12). The increase in water levels within this year is primarily attributed to the rainfall increase during this period and reduction in agricultural pumping (Appendix I).

The direction of groundwater flow in the Shell Horizon hydrostratigraphic unit in July and October 2011 was to the southeast, consistent with previous monitoring results (Insight 2009a, 2010, and 2011). The horizontal hydraulic gradient in the Shell Horizon was approximately 0.001 ft/ft (Figures 2-5 and 2-6).

2.1.4 SECOND SAND GROUNDWATER ELEVATIONS

Groundwater level elevations were measured in fourteen Second Sand monitoring wells in both the July and October 2011 monitoring events. The Second Sand hydrostratigraphic unit is defined from approximately 135 to 170 ft bgs. The Second Sand monitoring wells are further defined spatially based on their proximity to the Second Sand Biobarrier: SSB-1 (Table 2-1, Figures 2-7 and 2-8).

Groundwater elevations in the First Sand monitoring wells measured in October 2011 are generally consistent with data obtain from the same wells gauged in July 2011. In July 2011,

groundwater elevations in the Second Sand monitoring wells ranged from -1.33 (MW-70-PMW14A) to -3.90 ft below MSL (MW-70-21). In October 2011, groundwater elevations in the Second Sand monitoring wells ranged from -2.13 (MW-70-PMW14A) to -4.65 ft below MSL (MW-70-21). In October 2011, groundwater elevations in the Second Sand monitoring wells ranged from -2.13 (MW-70-PMW14A) to -4.65 ft below MSL (MW-70-21). In July 2011, depth to water ranged from 7.92 ft bgs (MW-70-MNA15) to 13.21 ft bgs (MW-70-14) In October 2011, depth to water ranged from 8.65 ft bgs (MW-70-MNA15) to 13.85 ft bgs (MW-70-43B and MW-70-14) (Table 2-1, Figures 2-7 and 2-8). The following wells were not contoured: MW-70-43B, MW-70-MNA15, MW-70-MNA17, and IW-70-SSB109 (Table 2-1, Figures 2-7 and 2-8). The differences in the elevations in these wells may be due to a combination of local lithologic differences in the Second Sand as well as some differences in screen intervals. Well MW-70-43B is screened slightly shallower between 136 to 146 ft bgs. Wells MW-70-MNA15 and MW-70-MNA17 are screened between 140 and 150 feet bgs. IW-70-SSB109 is screened over a greater interval, between 126 to 166 ft bgs. The differences in elevation in 2009, 2010, and 2011 may be due to localized effects from the injection and therefore, these wells were not included in the contours in this report. Depth to groundwater in Second Sand wells in October 2011 generally decreased approximately 0.8 feet when compared to July 2011.

Comparison of Fall 2011 and 2010 water levels, generally suggests that water levels have risen in the Second Sand approximately 9.93 (MW-70-36) to 11.75 ft (MW-70-21) (Table 2-1; Figures 2-7, 2-8 and 2-12). The increase in water levels within this year is primarily attributed to the rainfall increase during this period and reduction in agricultural pumping (Appendix I).

The direction of groundwater flow in the Second Sand hydrostratigraphic unit in July and October 2011 was to the southeast, consistent with previous monitoring results (BEI 2006; Insight 2009a, 2010, and 2011). The addition of the new Second Sand well MW-70-49 provided additional data during the October 2011 monitoring event, northeast of SSB1. The horizontal hydraulic gradient in the Second Sand was approximately 0.001 to 0.003 ft/ft (Figures 2-7 and 2-8).

2.1.5 DEEP SAND GROUNDWATER ELEVATIONS

Groundwater level elevations were measured in three Deep Sand POC wells in both the July and October 2011 monitoring events. The Deep Sand hydrostratigraphic unit is defined as depths greater than 190 ft bgs (Table 2-1; Figures 2-9 and 2-10).

Groundwater elevations in the First Sand monitoring wells measured in October 2011 are generally consistent with data obtain from the same wells gauged in July 2011. In October 2011, groundwater elevations in the Deep Sand POC wells ranged from -0.61 ft (MW-70-POC03) to -4.44 (MW-70-POC04) ft MSL. In October 2011, groundwater elevations in the Deep Sand POC wells ranged from -2.66 ft (MW-70-POC03) to -5.63 (MW-70-POC04) ft MSL. In July 2011, depth to water ranged from 12.30 (MW-70-POC03) to 14.13 ft bgs (MW-70-POC04). In

October 2011, depth to water ranged from 10.25 (MW-70-POC03) to 12.94 ft bgs (MW-70-POC04).

Comparison of Fall 2011 and 2010 water levels, generally suggests that water levels have risen in the Deep Sand approximately 10.04 (MW-70-PM03A) to 13.11 ft (MW-70-16) (Table 2-1; Figures 2-9, 2-10 and 2-12). The increase in water levels within this year is primarily attributed to the rainfall increase during this period and reduction in agricultural pumping (Appendix I).

The direction of groundwater flow in the Deep Sand hydrostratigraphic unit in October 2011 was to the southeast, consistent with July 2011 monitoring. The horizontal hydraulic gradient in the Deep Sand in July and October 2011 was approximately 0.002 ft/ft (Figures 2-9 and 2-10).

2.1.6 SUMMARY OF GROUNDWATER FLOW AND DIRECTION

Hydraulic directions and gradients in the hydrostratigraphic units have been generally consistent with previous investigations (BEI 2006; Geosyntec 2006b; Insight 2009a, 2010, and 2011). Groundwater elevations in October 2011 ranged from -5.63 ft MSL in Deep Sand POC well MW-70-POC04 to 0.05 ft MSL in Upper Fines POC well MW-70-22. Horizontal hydraulic gradients across IRP Site 70 ranged from 0.0003 to 0.002 ft/ft.

Groundwater elevations measured in October 2011 are generally consistent with data obtain from the same wells gauged in July 2011. Comparison of Fall 2011 and 2010 water levels, generally suggests that water levels have risen in all hydrostratigraphic zones. The increase in water levels within this year is primarily attributed to the rainfall increase during this period and reduction in agricultural pumping (Appendix I). The vertical head difference between hydrogeologic units indicates generally downward vertical gradients of groundwater flow throughout the plume and source areas between the Upper Fines, First Sand, Shell Horizons, Second Sand and Deep zones. This is consistent with previous observations (Geosyntec 2006b; Insight 2009a, 2010, and 2011).

2.2 GROUNDWATER QUALITY AND REMEDY PERFORMANCE

Groundwater samples were collected during two events in Summer 2011 and Fall 2011. The Summer 2011 groundwater sampling event consisted of collection of groundwater samples from 48 monitoring wells. The Fall 2011 groundwater sampling event consisted of collection of groundwater samples from 80 groundwater monitoring wells (Table 1-1). These wells were selected to monitor the performance of the EISB activities conducted in the biobarriers, upgradient and downgradient of the biobarriers, and in the POC wells. Groundwater quality parameters, which consisted of DO, ORP, pH, sulfate, and alkalinity, VOCs, TOC, VFAs, DHGs, and chlorinated ethenes were monitored per the schedule outlined in Table 1-1.

2.2.1 CONCENTRATIONS OF CHLORINATED ETHENES

The concentrations of chlorinated ethenes and ethene itself serve as direct evidence of degradation of VOCs. The concentrations of donor and redox conditions are indicative of whether conditions are favorable for reductive dechlorination to progress at a site. Figures 2-13

through 2-19 show CVOC molar concentration trends for each of the biobarriers. Two-dimensional concentration maps for the COCs are documented in Figures 2-27 through 2-38. Three-dimensional CSM visualizations showing the VOC concentration trends are presented in Section 3. The projected extent of TCE at 250 µg/L in 2008 and 2011 demonstrate the significant reduction of TCE concentrations across all hydrogeologic zones (Figures 2-40 and 2-41).

The performance of the SATG and the 6 biobarriers (SAB, FSB-1, FSB-2, SHB-1, SHB-3, and SSB-1) is discussed below based on changes in molar concentrations of chlorinated ethenes. Chlorinated ethene concentrations are presented as molar concentrations because reductive dechlorination is a 1 to 1 stoichiometric conversion (i.e., for each mole of TCE degraded, one mole of dichloroethene (DCE) is produced). Graphs displaying the total molar concentrations of TCE, DCE, VC, and ethene are presented in 2-13 through 2-19.

In general, within the biobarrier wells, the TCE present during baseline was converted to cis-DCE soon after installation of the biobarrier, and continued conversion to VC and ethene has been observed during the Fall 2011 performance monitoring event. In general, emulsified oil injections have created conditions conducive to reductive dechlorination in all the biobarriers and bioaugmentation appears to have been successful for establishing dechlorinating populations in the treatment areas. This is evidenced by the fact that most injection wells sampled during the 2011 monitoring events, as well as many of the performance monitoring wells located downgradient of the barriers, have shown increases in reductive daughter products VC and ethene, and decreases in TCE.

The following bullets summarize data and observations associated with each biobarrier:

- Within the SATG, where injections occurred between May and August 2010, the transformation of TCE to cis-DCE, VC, and ethene soon after treatment indicates that dechlorination is occurring in the Source Area (MW-70-PMW01A, MW-70-PMW01B, MW-70-28) (Figure 2-13). Increased concentration of TCE and cis-DCE in upgradient MW-70-MNA01 may be indicative of presence of DNAPL still present in the Source Area. The presence of increased concentrations of ethene and methane dissolved gases is also indicative that transformation is occurring as designed.
- Within the SAB, where injections occurred between November 2008 and January 2009 (the first Biobarrier that was installed), the presence of VC and low concentrations of ethene in IW-70-SAB06 and IW-70-SAB11, indicates that transformation is still occurring (Figure 2-14 and Appendix G). Increased concentrations of cis-DCE in the deeper upgradient performance monitoring well MW-70-PMW02B indicates that partial degradation is occurring upgradient of the SAB, and that contaminants are still migrating toward the SAB from the source area. The fact that the TCE is being converted to cis-DCE and VC shows that the SAB is stimulating partial degradation.
- Within FSB-1, where injections occurred between December 2009 and February 2010, the presence of VC but low concentrations of ethene, in IW-70-FSB108 and IW-70-FSB118, indicates that although transformation is occurring within the biobarrier, it may be occurring at a slower rate within FSB-1 (Figure 2-15). In addition, increased concentrations of cis-DCE and VC

in downgradient well MW-70-38 and performance monitoring well MW-70-MNA08 are indicative that transformation may be occurring outside of the areas immediately adjacent to the injection wells and upto a distance of 200 feet from the injection locations (Figure 2-15). The highest concentration of TCE at 3,900 µg/L reported in MW-70-PMW06B, upgradient of the FSB-1 biobarrier, combined with cis-DCE concentrations above 500 µg/L in upgradient FSB-1 performance monitoring wells (MW-70-PMW04A, MW-70-PMW-04B, MW-70-PMW06A, MW-70-PMW06B), suggest that higher concentration of TCE is migrating towards the biobarrier and is being dechlorinated.

- Within FSB-2, where injections occurred between October and November 2009, the presence of VC and low ethene concentrations in IW-70-FSB216 indicates that transformation is occurring (Figure 2-16). Increased concentrations of cis-DCE and VC in downgradient wells, MW-70-PMW08A, MW-70-PMW08B, MW-70-MNA12 and MW-70-MNA10, are indicative that transformation is occurring outside of the areas immediately adjacent to the injection wells, to a distance of approximately 500 feet (Figure 2-16). Increased concentration of cis-DCE in deeper upgradient well MW-70-PMW-07B, indicates that dechlorination is occurring upgradient of FSB-2.
- Within SHB-1, where injections occurred between February and March 2010, the presence of VC and ethene concentrations in IW-70-SHB113 indicate that dechlorination is occurring within SHB-1. Increased concentrations of cis-DCE, stable VC and ethene concentrations in upgradient (MW-70-PMW09) and downgradient well (MW-70-PMW10) indicates that dechlorination is occurring outside areas immediately adjacent to the injection wells but may be occurring at a slower rate and not transforming completely to ethene (Figure 2-17).
- Within SHB-3, where injections occurred between March and September 2009, the presence of cis-DCE and VC in IW-70-SHB310 and IW-70-SHB311, indicate that dechlorination is occurring although potentially at a slower rate with minimal changes since 2010. Increased concentrations of VC and ethene in upgradient and downgradient wells indicate that dechlorination is occurring outside areas immediately adjacent to the injection wells (Figure 2-18). The most significant change since 2010 is increased concentration of cis-DCE in MW-70-MNA14, located approximately 350 feet downgradient of SHB-3 indicating transformation is occurring although low concentrations of ethene may be indicative of a slower rate of transformation (Figure 2-18).
- Within SSB-1, where injections were completed between February and March 2009, low concentrations of cis-DCE, VC, and ethene indicate that transformations have slowed within SSB-1. However, increased concentrations of DCE, VC in upgradient (MW-70-PMW13A, MW-70-PMW13B, MW-70-MNA15) and downgradient wells (MW-70-PMW14A, MW-70-PMW14B) are indicative that dechlorination is occurring outside areas immediately adjacent to the injection wells. In addition, increased cis-DCE, VC and ethene concentrations in MW-70-MNA16, are indicative of dechlorination occurring at least 150 feet downgradient of SSB-1.

In general, the performance monitoring wells located upgradient and downgradient of the biobarriers are responding to dechlorination transformation processes and appear to be significantly impacted by the amendments injected into the biobarrier wells. Cis-DCE is the dominant transformation product present in wells during the Fall 2011 monitoring event. The amendments added to the biobarriers appeared to have significant effect on the wells downgradient of the biobarrier, which is anticipated since the EISB amendments and

contaminants of concern will travel downgradient of the barriers in the direction of groundwater flow. These observations are the primary line of evidence that the EISB remedy is functioning as expected.

2.2.2 ELECTRON DONOR CONCENTRATIONS

As part of the performance monitoring activities for 2011, TOC and VFAs were measured as an indication of electron donor presence to determine if sufficient EVO distribution is present in the treatment areas to allow for the continued process of dechlorination at IRP Site 70. TOC and VFAs were measured in select wells upgradient, downgradient and within each biobarrier per the schedule in Table 1-1. Figures 2-20 and 2-21 summarize consistent trends within the representative performance monitoring wells downgradient of each biobarrier. Appendix G depicts TOC trends in all the wells sampled.

Total Organic Carbon

TOC was monitored at all biobarriers during baseline and subsequent performance monitoring events (Tables 2-3 through 2-15; Appendices E and G). Select wells located upgradient, downgradient, and within the biobarriers were sampled to determine the effect of EVO injection (Figures 2-20 and 2-21). During baseline sampling, the TOC concentrations were below 3 milligrams per liter (mg/L) in all of the wells monitored with most TOC concentrations in wells reported below 1 mg/L. In general, after injection of the EVO into the biobarrier wells, the TOC concentrations increased to greater than 100 mg/L at injection wells. Maximum TOC concentrations measured after injection are summarized below based on a comparison of data to date. Figures 2-20 and 2-21, Tables 2-1 through 2-12 and Appendix G summarize the history of TOC performance monitoring results.

Results of the Fall 2011 sampling event indicate that TOC concentrations either decreased or remained at low concentrations in most of the biobarrier wells (Figures 2-20 and 2-21). Decreases in TOC concentration were specifically noted at the SAB, FSB-2, SHB-1, and SSB-1. Reduction of TOC was less in FSB-1 and SHB-3. The SATG was the last area to be installed (August 2010), but TOC in IW-70-SAT35 decreased from 1,220 to 86.2 mg/L between Fall 2010 and Fall 2011. The low TOC concentrations suggest that additional amendment injections may be needed soon. These data may reflect the heterogeneous nature of the aquifer matrix in the different lithologic layers that results in an uneven distribution of the carbon source between the injection wells and the PMWs. TOC concentrations are just one line of evidence used to evaluate whether conditions are suitable for reductive dechlorination at the site. Additionally, COC daughter products, redox conditions, Dhc levels, and VFAs are being monitored to assess the performance of the EISB remedy.

Maximum Total Organic Carbon Concentrations

Lithologic Unit	Bio-barrier	Bio-barrier Completion Date	Well Identification	Initial TOC (Baseline - 2008) (mg/L)	TOC Concentration (mg/L)		
					~ 3 Months after Installation	Fall 2010	Fall 2011
Upper Fines	SATG	08/3/2010	IW-70-SAT16	NM	NM	2,910	NM
	SATG	08/3/2010	IW-70-SAT35	NM	NM	1,220	86.2
	SATG	08/3/2010	MW-70-PMW01A	ND	NM	915	174
First Sand	SAB	01/30/2009	IW-70-SAB06	0.828 J	860	20.5	27.8
			IW-70-SAB11	1.24	616	177	111
First Sand	FSB-1	02/12/2010	IW-70-FSB108	0.656 J	186	106	129
	FSB-2	11/24/2009	IW-70-FSB216	1.68	468	468	70.5
Shell Horizon	SHB-1	4/7/2010	IW-70-SHB113	1.03	140	110	4.06
	SHB-3	09/25/2009	IW-70-SHB310	1.8	769	2,080	1670
Second Sand	SSB-1	03/18/2009	IW-70-SSB109	1.28	1,110	121	96.3

Notes:

J – estimated value
mg/L – milligrams per liter
NM – not measured
ND – not detected

Volatile Fatty Acids

VFAs were monitored in select biobarrier wells and wells upgradient and downgradient of the biobarrier (Figure 2-22; Tables 2-2 through 2-13). Monitoring VFAs helps to determine the distribution and consumption of EVO in the biobarrier and aquifer. In general, VFAs (particularly acetate and propionate) spiked directly after EVO injections in the injection wells and some performance monitoring wells (Insight 2011, Figure 2-22). During subsequent monitoring events, the concentration of the VFAs decreased, indicating that they were being consumed by microbes in the biobarrier. In 2011, concentrations of VFA in groundwater at the injection wells were below detection limits for almost all injection wells except for IW-70-SAT35 (SATG). In general, the concentration of VFAs in the PMWs remained below or at detection limits with one exception. In the SATG MW-70-PMW01A, VFA (acetate) spiked to 845 mg/L and then dropped to less than 100 mg/L but rebounded in Fall 2011 to 327 mg/L (Table 2-2, Figure 2-22). As noted above, concentrations of VFAs are one line of evidence to assess the suitability of the aquifer to support active reductive dechlorination. These data

indicate that EVO is being consumed by the fermenting population and utilized by anaerobic populations such as methanogens and dechlorinators.

2.2.3 REDOX CONDITIONS

This section discusses DO-ORP and Sulfate-Methane trends in the IRP Site 70 SATG and six biobarriers in Fall 2011.

DO-ORP Trends

For reductive dechlorination to work effectively (i.e., complete transformation of TCE to ethene) DO levels must be below 1 mg/L. Within all of the biobarriers, the DO concentrations were below 1 mg/L during the 2011 performance monitoring event, except for IW-70-SHB310 in the SHB-3 biobarrier. Although the DO is below 1 mg/L, most DO concentrations were above 0 mg/L, suggesting slightly increasing trends (Table 2-2; Figure 2-23; Appendices E and G).

ORP readings are significant in determining the geochemical condition of the aquifer. In order for Dhc to survive and grow aquifer conditions should be at least in the methanogenic range, which requires the ORP to be between -100 and -300 millivolts (mV) or lower. ORP readings collected during the 2011 monitoring events indicated that all of the upgradient and downgradient PMWs and biobarrier wells were within this range. In a few instances ORP values in Fall 2011 were below -300 mV in FSB-2 (MW-70-PMW07A and MW-70-PMW08A), indicating very favorable conditions for reductive dechlorination of TCE and its daughter products (Table 2-2; Figure 2-23; Appendices E and G). A slight increasing trend of ORP is observed for performance monitoring wells in biobarriers SATG, SAB, and FSB-1 (Table 2-2; Figure 2-23; Appendices E and G).

Sulfate-Methane Trends

A review of sulfate and methane trends are another of the multiple lines of evidence for determining whether favorable conditions exist for dechlorination. Specifically, low sulfate concentrations (or at least concentrations significantly reduced from pre-EISB concentrations) and high methane concentrations indicate that methanogenic redox conditions have been established, which are most favorable for dechlorination. Although there is some variation within each biobarrier, generally sulfate concentrations were reduced shortly after initial injections, but have been increasing in the SATG, SAB, FSB-1, SHB-3, and SSB-1. In these biobarriers (SATG, SAB, FSB-1, SHB-3, and SSB-1), methane concentrations have generally been decreasing, indicating a reduction in methanogenesis in these biobarriers. One exception in the SAB is MW-70-PMW03B, where methane concentrations have increased slightly while sulfate concentrations have remained stable. A review of the performance monitoring wells in biobarriers FSB-2 and SHB-1 shows a little more variability in sulfate-methane trends. In FSB-2 performance monitoring well MW-70-PMW08A, sulfate concentrations are decreasing and methane concentrations are increasing but in performance monitoring well MW-70-PMW08B,

the opposite trend is observed. In SHB-1, sulfate concentrations are relatively stable in MW-70-PMW10 and there is a slight rise in methane concentrations but methane concentrations are generally low (Tables 2-3 through 2-15; Figure 2-24; Appendices E and G).

2.2.4 DEHALOCOCCOIDES DISTRIBUTION AND SURVIVABILITY

During installation of the biobarriers, a culture of KB-1® was injected into the biobarrier wells. One of the important lines of evidence indicating that the EISB remedy is functioning as designed is to confirm high concentrations of Dhc and the presence of the *vcr*A gene. The expression of the *vcr*A gene by the dechlorinating population has been correlated to complete reductive dechlorination. The expression (or up regulation) of the *vcr*A gene is being used to monitor the performance of the remedy and ensure that cis-DCE and VC stall does not occur.

The concentrations of Dhc and *vcr*A were monitored in performance monitoring wells located downgradient of the biobarriers and in select biobarrier wells. In general, injection and performance monitoring wells where Dhc and *vcr*A concentrations were within or sometimes above the moderate range (10^4 to 10^7 cells/L) of concentrations in the SATG, SAB, FSB-1 and FSB-2 biobarriers (Figure 2-25). However, *vcr*A and Dhc concentrations were more variable and primarily below the lower limit of the moderate concentration range (10^4 to 10^7 cells/L) in some of the downgradient performance monitoring wells in SHB-1 (MW-70-PMW10), SHB-3 (PMW-12A) and SSB-1 (MW-70-PMW14B) (Figure 2-26). In the SHB-3, the deeper performance monitoring well, MW-70-PMW12B, had reported Dhc and *vcr*A concentrations in the moderate range. In SSB-1, Dhc was reported in moderate concentration in the deeper performance monitoring well, MW-70-PMW14B, but *vcr*A was reported below laboratory detection limits.

In general, the *vcr*A in the moderate range correlates to some production of VC and ethene. If Dhc concentrations were high but *vcr*A concentrations low, cis-DCE persisted.

2.2.5 WATER QUALITY PARAMETERS

This section describes any trends in general water quality parameters.

During the 2011 Performance monitoring event, pH values generally ranged from approximately 6 to 8 within the biobarriers, the range ideal for microbial growth. There were however a few outliers which were primarily located outside the biobarrier. The highest pH was reported in newly reconstructed well RDO-04 at 10.56. This well was developed prior to sampling, and additional sampling in the future may need to confirm whether this is a consistent pH trend in RDO-04. In addition, a pH of 4.88 was reported in MW-70-MNA03 (upper fines hydrogeologic unit) and the second highest pH was reported at 9.30 in MW-70-43A (First Sand hydrogeologic unit). These values probably reflect the general groundwater geochemistry. High pH values have been previously reported in MW-70-43A. Potentially, the low pH in MW-70-MNA03 may be attributable to production of hydrochloric acid as chlorinated ethenes degrade. Alkalinity is an indicator of the buffering capacity of the aquifer. A strong buffering capacity is important

because as the EVO is used by the microorganisms, it produces VFAs that have the potential to reduce the pH of the aquifer, in addition to the potential production of hydrochloric acid. In general, in the SATG area, the alkalinity (>700 mg/L in the SATG) is higher than in the other treatment biobarriers. Alkalinity values were consistent with the 2010 and 2009 performance monitoring data.

2.3 SOIL VAPOR RESULTS

Twelve soil vapor probes were installed at the locations shown in Figure 1-3 as part of the baseline monitoring performed in 2008, in order to monitor methane and hydrogen sulfide gases within the vadose zone soils (Insight 2009a). The twelve soil vapor probes are constructed within the vadose zone at depths between 5 and 6 ft bgs. These locations were chosen to correspond with areas present near active buildings or underground utility corridors containing potentially high concentrations of electron donor. The probes were installed around the source area and downgradient to monitor for migration of these gases as required by the RAWP (ECC/Geosyntec 2008a). Monitoring of these gases over the course of the RA at IRP Site 70 is important for the protection of onsite workers, including those engaged in the RA as well as the many tenants/occupants of the surrounding facilities.

During the 2011 performance monitoring, soil gas samples were collected from the 12 soil vapor probes, and were analyzed for methane and hydrogen sulfide gases. The analytical results are shown in Table 2-15 and Figure 2-39 and discussed in further detail below.

2.3.1 METHANE SOIL VAPOR RESULTS

Methane was reported in all samples and ranged from 2.0 parts per million by volume (ppmV) at SV-70-05 (southwest of Building 118) to 700,000 ppmV at SV-70-10 (west of Building 123). The lower explosive limit (LEL) for methane in air is 5 percent (or 50,000 ppmV) while the upper explosive limit (UEL) in air is 15 percent (or 150,000 ppmV). Methane was reported in one sample (SV-70-10) at concentrations above the UEL and in one sample (SV-70-09) at a concentration between the UEL and the LEL. In general, compared to the 2010 soil vapor sampling event, the methane concentrations have decreased in nine soil vapor probes (SV-70-01 through SV-70-08, and SV-70-12) and increased in three soil vapor probes (SV-70-09 through SV-70-11) during the 2011 soil vapor sampling event. The highest concentration of methane reported during the 2011 sampling event (SV-70-10) was measured in sample collected from location immediately adjacent to the SAB well IW-70-SAB14.

2.3.2 HYDROGEN SULFIDE SOIL VAPOR RESULTS

Hydrogen sulfide was not detected above the laboratory reporting limit of 1.0 ppmV in all twelve soil vapor samples (SV-70-01 through SV-70-12) collected during the 2011 sampling event.

2.3.3 AMBIENT AIR MONITORING FOR METHANE GAS

A Methane Monitoring Plan with emergency procedures was prepared in January 2009 (Insight 2009c) for implementation after elevated concentrations of methane were detected in the

vapor sample collected from the 12 soil vapor probes during the 2008 base line sampling activities. The purpose of this Methane Monitoring Plan is to monitor and document methane levels within utility corridors and buildings where methane concentrations could accumulate in air above the LEL. As part of this plan, selected locations throughout the RT&E Area were monitored weekly for the first two months of the EISB activities, and monthly thereafter. Monitoring locations were selected based on analytical results from soil gas probes installed within the vadose zone soils and the proximity of the probes to nearby utility corridors, buildings, and groundwater wells. The following locations were monitored periodically for methane gas in the RT&E area:

- Inside Buildings 118, 119, 121, 122, 123 (north and south), and 124.
- In the vicinity of utility corridors west of the tank farm and east of soil gas probes SV-70-02 and SV-70-05.

The periodic methane gas monitoring throughout the RT&E Areas is ongoing. The most recent ambient air monitoring event for methane gas was conducted at selected locations throughout the RT&E Area (outdoor areas, inside Buildings 118, 119, 121, 122, 123, 124, and utility corridors west of the tank farm and east of soil gas probes SV-70-02 and SV-70-05 on February 2, 2012. A hand-held multi-gas meter (RKI Eagle), equipped with methane and oxygen sensors, was used to monitor for the presence of explosive vapors and oxygen levels within the selected areas. Inside buildings, readings were taken within the breathing zone and at or near surface features (e.g., cracks, joints, penetrations, subsurface utility accesses) in the floor slab that could serve as potential pathways for the infiltration of methane gas from the underlying soils or through connecting subsurface utility chases. Stagnant areas where methane gas could potentially accumulate were also monitored. Readings were recorded on a map of the building. In outdoor areas, readings were taken in and around access openings to utility corridors and groundwater well boxes, and at or near cracks in the asphalt and/or other surface features that could serve as migration pathways for methane gas. Readings were recorded on an area map.

Logs that documented the February 2, 2012 monitoring event results are presented in Appendix A. Methane gas was not detected in the ambient air within the breathing zone either inside the buildings or in outdoor areas of the locations monitored to date in the RT&E area.

2.3.4 MEASURES TAKEN TO PROTECT ONSITE WORKERS

The following precautionary measures were instituted to protect onsite workers from the effects of methane gas production during RA at IRP Site 70.

- Instituted a methane monitoring program to monitor and document methane levels within utility corridors and buildings where methane concentrations could accumulate in air above the LEL.
- Notified building tenants/occupants of the potential methane intrusion.
- Posted warning signs throughout the area and on entrances to utility corridors to warn of the potential presence of flammable vapors.

- Posted no smoking and no parking signs in areas that could potentially present an explosive hazard.
- Designated specific smoking areas that are well outside areas of potential explosive hazard.

2.3.5 SUMMARY OF SOIL VAPOR RESULTS

The highest concentration of methane reported in the soil gas sample SV-70-10 is located immediately adjacent to the SAB injection well IW-70-SAB14. Concentrations measured in the vicinity of the SAB wells ranged from 6,800 ppmV to 700,000 ppmV, which is an indication that methanogenesis is occurring in the SAB.

Continued production of methane during EISB and subsequent mixing with air can produce concentrations within the explosive range. Migration from the vadose zone soils to the surface through cracks in the asphalt and/or to nearby utility corridors through preferential pathways in the subsurface is a potential hazard. However, a methane monitoring plan has been put in place to ensure that onsite workers are protected. In addition, air monitoring for VOCs in these areas will be implemented as part of the monitoring plan.

2.4 PERFORMANCE REMEDY SUMMARY

The following multiple lines of evidence from the 2011 performance monitoring are summarized:

1. The presence of TCE in the Source Area at 2,800 µg/L and a maximum site-wide TCE concentration of 3,900 µg/L in MW-70-PMW06B, upgradient of FSB-1, indicates that an ongoing source of TCE is present.
2. A significant reduction of total moles of all COCs is observed in all hydrogeologic zones since active remediation began. The 2011 performance monitoring data suggest that degradation rates have slowed in all biobarriers. The primary transformation product is cis-DCE.
3. Electron donor concentrations were measured as TOC and VFA's in select wells. TOC concentrations decreased in the SAB, FSB-2, SHB-1, and SSB-1. In 2011, groundwater VFA results for the injection wells were non-detect for almost all injection wells except for IW-70-SAT35 (SATG). In general, the concentration of VFAs in the PMWs remained below or at detection limits with one exception. These data indicate that EVO is being consumed by the fermenting population and utilized by anaerobic populations such as methanogens and dechlorinators.
4. In biobarriers SATG, SAB, FSB-1, SHB-3, and SSB-1, sulfate has been increasing and methane concentrations have generally been decreasing, indicating a reduction in methanogenesis in these biobarriers. A review of the performance monitoring wells in biobarriers FSB-2 and SHB-1 shows somewhat more variability.
5. Within all of the biobarriers, the DO concentrations were below 1 mg/L during the 2011 Performance monitoring event, except for IW-70-SHB310 in the SHB-3 biobarrier. ORP readings collected during the 2011 monitoring events indicated that all of the upgradient and downgradient PMWs and biobarrier wells were within the range

of -100 and -300 mV. There is a slight increasing trend of ORP reported in performance monitoring wells in biobarriers SATG, SAB, and FSB-1.

6. In the SATG, SAB, FSB-1 and FSB-2 biobarriers, in general, Dhc and *vcr*A concentrations were within or sometimes above the moderate range (10^4 to 10^7 cells/L) of concentrations. However, *vcr*A and Dhc concentrations were more variable and primarily below the lower limit of the moderate concentration range (10^4 to 10^7 cells/L) in some of the downgradient performance monitoring wells in SHB-1 (MW-70-PMW10), SHB-3 (PMW-12A) and SSB-1 (MW-70-PMW14B).

Although the Remedial Design (Geosyntec 2006b), proposes active remediation only within areas of TCE concentrations exceeding 250 µg/L, all multiple lines of evidence obtained during the performance monitoring are reviewed to assess additional treatment requirements. In review of the multiple lines of evidence, it appears that additional EVO injections in all biobarriers may be prudent to ensure that sufficient electron donor is present to continue degradation of the cis-DCE and VC that have been produced as a result of partial TCE dechlorination. In order of priority, the following biobarriers may be prioritized: SSB-1, SAB, and FSB-1. The rationale for the prioritization of these biobarriers is as follows:

- The SSB-1, where injections occurred between February and March 2009, is prioritized for EVO injections in the next year due to the time elapsed since injection, and also because SSB-1 is located at the most downgradient edge of the plume. In addition, TOC, VFA, and redox conditions suggest that EVO injections should be prioritized in the SSB-1.
- The SAB, the first biobarrier where injections occurred between November 2008 and January 2009, is prioritized for EVO injections in the next year as TCE concentrations were above 250 µg/L in MW-70-PMW02B (410 µg/L), and TOC and VFA concentrations show decreasing trends and are likely nearing depletion, as the initial injections occurred approximately 3.5 years ago.
- The FSB-1, where injections occurred between December 2009 and February 2010, is prioritized for EVO injections in the next year as the highest concentrations of TCE at IRP Site 70 in Fall 2011 was reported in MW-70-PMW06B at 3,900 µg/L, and TOC and VFAs show decreasing trends. It is crucial to ensure an adequate supply of donor is present in order to continue dechlorination of the TCE that is migrating into this Biobarrier.

It is anticipated that when additional electron donor is provided, Dhc and *vcr*A levels will increase in response to these injections.

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Section3

CONCEPTUAL SITE MODEL UPDATE

The purpose of the CSM is to provide an analysis and visualization of both the subsurface hydrogeology and dissolved-phase TCE, cis-DCE, and VC plumes morphologies, which is achieved by using both two-dimensional (2-D) water level and plume contours and the three-dimensional (3-D) plume visualization. Over several CSM iterations, both the hydrogeology and the TCE contaminant spatial distribution have been improved and refined. This updated CSM provides a comprehensive understanding of the current conditions at Site 70 based on the Fall 2011 Performance monitoring program (Figures 3-1 through 3-13). Specific data include:

- Water level elevation data from Fall 2011 annual groundwater monitoring event;
- Groundwater sampling results from Fall 2010 and 2011. These data were input into Environmental Visualization Software (EVS) as a standalone data set to compare the current conditions to the baseline conditions prior to implementing the EISB system.
- In addition to TCE, the daughter products of reductive dechlorination were incorporated into the model. Specifically, cis-DCE, VC and ethene data sets were included as part of the 2011 3-D CSM visualization.

The CSM is described in the remainder of this section. The updated model is compared to the CSM that was developed using results of the baseline sampling that was performed before the EISB remedy was put in place. Changes that have occurred at the site are discussed.

3.1 LITHOLOGY

The lithology encountered during the drilling of Second Sand well MW-70-49 and reconstruction of First Sand Well RDO-04, supports the previous lithological characterizations. Hence, no new lithologic information was included in the 2011 performance monitoring sampling event. As such, the hydrogeology of IRP Site 70 in the CSM was based on the August 2008 revision of the CSM generated by EVS. A summary of the subsurface hydrogeology is outlined below using the six separate hydrostratigraphic units as model layers. The hydrostratigraphic zones are illustrated in cross-sections Figures 3-2 and 3-3 through the Source Area and through a longitudinal cross-section through the plume in Figures 3-8 through 3-11. The lithologic units are described below:

Upper Fines Unit (below the fill to approximately 60 ft bgs [-48 ft msl]). The Upper Fines Unit is comprised of the following five subunits.

- **Clay 1:** The unit consists of predominantly clayey soils from below the fill to a depth of approximately 20 ft bgs [-8 ft msl] (i.e., “surficial fines”);
- **Sand 1:** Starting approximately at a depth of 20 ft bgs [-8 ft msl], a predominantly fine-grained sand is intercepted that ranges in thickness from 2 to 17 ft thick (i.e., “20 ft sand”);
- **Clay 2:** Starting approximately at a depth of 30 to 38 ft bgs [-18 to -26 ft mal], a predominantly clayey unit is intercepted that ranges in thickness from approximately 3 to 10 ft thick (i.e., “30 ft fines”);

- **Sand 2:** Starting at a depth of 38 to 57 ft bgs [-26 to -45 ft msl], a fine- to medium-grained sand unit is intercepted that ranges in thickness from 13 to 20 ft thick (i.e., "40 ft sand"); and
- **Clay 3:** Starting at a depth of approximately 57 to 60 ft bgs [-45 to -48 ft msl], a silty clay to clay layer is intercepted that ranges in thickness from 2 to 3 ft thick (i.e., "60 ft clay").

- **First Sand Unit (approximately 60 to 105 ft bgs [-48 to -93 ft msl]).** The First Sand Unit consists of interbedded fine-grained and medium-grained sands and silty sands. A coarse sand/fine gravel layer was encountered in several borings between 80 and 95 ft bgs [-68 to -83 ft msl], and localized clays layers were noted between 80 to 90 ft bgs [-68 to -88 ft msl] in several SAB injection wells. The First Sand Unit varies in thickness from approximately 30 to 50 ft.
- **Shell Horizon Unit (approximately 105 to 135 ft bgs [-93 to -123 ft msl]).** The Shell Horizon Unit is consists a sequence of inter bedded clays, silts, sands, and gravels with laterally discontinuous interbeds of dense shells and shell fragments. In the source area, this unit is comprised of a sequence of interbedded clays, silts, sands, and gravels. The unit transitions to predominantly fine grained sand near RDO well RDO-6A/B between First and Second Streets in the dissolved-phase plume area. Within the CSM, the Shell Horizon has been subdivided into the Shell Horizon Clays (interbedded) and Shell Horizon Sand (fine-grained) to reflect differences in the hydrogeologic characteristics and potential plume migration behavior.
- **Second Sand Unit (approximately 135 to 170 ft bgs [-123 to -158 ft msl]).** Similar in character to the First Sand Unit, however, this lower unit appears to be slightly coarser in its upper section.
- **Deep Clay Unit (approximately 170 to 190 ft bgs).** The Deep Clay Unit consists of upper clay to silty clay horizon and an underlying clayey silt, silt, sandy silt, or sandy clay layer. The upper clay to silty clay horizon appears to be a continuous low-permeability unit that is encountered at depths ranging between 164 to 176 ft bgs. The upper clay to silty clay unit grades downward to clayey silt, silt, sandy silt, or sandy clay. This underlying layer is 3 to 20 ft thick, extending to depths of 175 to 188 ft bgs. Below the clayey silt, silt, sandy silt, or sandy clay layer is a silty sand and sand layer, up to 6 feet thick, which has been found to a depth of 191 ft bgs in extended removal site evaluation (ERSE) borings at NAVWPNSTA Seal Beach.
- **Deep Sand Unit (approximately 190 ft bgs and below).** The Deep Sand Units has fine-grained sands and silty sands and appears to be similar in character to the First and Second Sand Units. It should be noted that the Deep Sand Unit has been logged in only a few boreholes on NAVWPNSTA Seal Beach (BEI 2002).

3.2 CONTAMINANTS OF CONCERN IN GROUNDWATER

This section discusses the COCs in relation to the TCGs (Table 1-3) in each of the hydrostratigraphic zones based on the groundwater monitoring results during the 2011 sampling events (Tables 2-3 through 2-14; Figures 2-27 through 2-38). The most recent analytical results are compared to the 2008 baseline event to demonstrate the transformation of the dissolved plume since the EISB implementation. In addition, the overall projected 250 µg/L dissolved TCE plume is evaluated and compared to the extent of the cis-DCE and VC plumes to update the CSM with respect to the dissolved plume at IRP Site 70 during the Fall 2011 annual performance monitoring (Figures 2-40 and 2-41). Baseline groundwater monitoring plume maps are presented in Appendix H.

3.2.1 UPPER FINES/SOURCE AREA TREATMENT GROUNDWATER QUALITY

Groundwater samples were collected from 14 designated Upper Fines Unit during the Fall 2011 groundwater monitoring event (Figures 2-27 through 2-29). Nine Upper Fines SATG wells and five Upper Fines POC wells (MW-70-02, MW-70-03, MW-70-10, MW-70-17 and MW-70-22) were sampled during this event. The Upper Fines Unit wells are screened between 20 ft and 60 ft bgs. Analytical results for the groundwater samples collected from designated Upper Fines Unit wells are summarized in Tables 2-3 and 2-4.

Groundwater samples were collected from the Upper Fines Unit wells in Fall 2011 and analyzed for VOCs using United States Environmental Protection Agency (U.S. EPA) Method 8260B (Tables 2-3 and 2-4). The VOC results for the Upper Fines Unit wells were compared to the TCGs (Table 1-3). Additionally, non-COC VOCs were compared to U.S. EPA and Cal/EPA maximum contaminant levels (MCLs). The following trends are summarized for the VOCs in the Upper Fines Unit:

- Concentrations of TCE above the TCGs were reported in five out of 14 Upper Fines Unit wells in Fall 2011. The highest concentration of TCE (2,800 µg/L) was reported in MW-70-MNA01.
- Concentrations of cis-DCE above the TCGs were reported in six out of 14 Upper Fines Unit wells. The highest concentration of cis-DCE (1,500 µg/L) was reported in MW-70-27.
- Concentrations of trans-1,2-DCE above the TCGs were reported in four out of 14 Upper Fines Unit wells. The highest concentration of trans-1,2-DCE (56 µg/L) was reported in MW-70-MNA01.
- Concentrations of VC above the TCGs were reported in eight out of 14 Upper Fines Unit wells. The highest concentration of VC (2,200 µg/L) was reported in MW-70-PMW01B.
- Concentrations of 1,1-DCE, chloroform, and tetrachloroethylene (PCE) were not reported above the TCGs or laboratory detection limits in wells sampled in the Upper Fines Unit wells in Fall 2011.

The following non-COC VOCs were reported in at least one Upper Fines Unit well above laboratory detection limits or estimated values, flagged as "J" by the laboratory in Fall 2011: 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,1-dichloroethane, 1,2-dichloroethane, 1,2-dichloropropane, 2-butanone, 2, hexanone, acetone, benzene, carbon disulfide, chloroethane, dichlorodifluoromethane, Freon 113, methylene chloride, methyl tert-butyl ether (MTBE), and trichlorofluoromethane. Of these contaminants, concentrations of 1,2-dichloroethane in wells MW-70-MNA03 (8 µg/L) and MW-70-MNA04 (6 µg/L) were above the MCL of 5 µg/L. Concentrations of 1,2-dichloropropane in well MW-70-MNA03 (5.6 µg/L) was above the MCL of 5 µg/L.

MTBE was reported in POC well MW-70-02 at a concentration of 27 µg/L, which may be indicative of off-site petroleum contamination. MTBE was reported in 2009 and 2010 at MW-70-02 at concentrations of 2.4 and 2.8 µg/L, respectively. In review of the State Water Resources Control Board GeoTracker web site, there are three Leaking Underground Tank

(LUST) Cleanup Sites, one site of which the LUST cleanup status is still open, located directly upgradient and off-site of IRP Site 70 which may be potential sources of the MTBE (SWRCB, 2012).

3.2.2 FIRST SAND GROUNDWATER QUALITY

Groundwater samples were collected from 36 designated First Sand Unit during the Fall 2011 groundwater monitoring event (Figures 2-30 through 2-32). Seven First Sand Source Area Biobarrier, 16 First Sand Biobarrior-1, nine First Sand Biobarrior-2, and four First Sand POC wells (MW-70-11, MW-70-16, MW-70-35 and MW-70-POC01) were sampled during this event. The First Sand Unit wells are screened between 60 ft and 105 ft bgs. Analytical results for the groundwater samples collected from designated First Sand Unit wells are summarized in Tables 2-5 through 2-8.

Groundwater samples were collected from designated First Sand Unit wells in Fall 2011 and analyzed for VOCs, using U.S. EPA Method 8260B. The VOC results for the First Sand Unit wells were compared to the TCGs (Table 1-3). Additionally, non-COC VOCs were compared to U.S. EPA and Cal/EPA MCLs. The following trends are summarized for the VOCs in the First Sand Unit:

- Concentrations of TCE above the TCGs were reported in 11 out of 36 First Sand Unit wells in Fall 2011. The highest concentration of TCE (3,900 µg/L) was reported in MW-70-PMW06B.
- Concentrations of 1,1-DCE above the TCGs were reported in four out of 36 First Sand Unit wells in Fall 2011. The highest concentration of 1,1-DCE (11 µg/L) was reported in MW-70-PMW04A. Concentrations of cis-DCE above the TCGs were reported in 18 out of 36 First Sand Unit wells. The highest concentration of cis-DCE (1,800 µg/L) was reported in MW-70-PMW06A.
- Concentrations of trans-1,2-DCE above the TCGs were reported in five out of 35 First Sand Unit wells. The highest concentration of trans-1,2-DCE (50 µg/L) was reported in MW-70-PMW06B.
- Concentrations of VC above the TCGs were reported in 19 out of 36 Upper Fines Unit wells. The highest concentration of VC (850 µg/L) was reported in MW-70-38.
- PCE and chloroform were not reported above the TCGs or laboratory detection limits in groundwater samples collected from the First Sand Unit in Fall 2011. Additionally, no COCs, above the TCGs were reported in the First Sand POC wells (Table 2-8).

The following non-COC VOCs were reported in at least one First Sand Unit wells above detection limits or estimated values, flagged as “J” by the laboratory in Fall 2011: 1,1-dichloroethane, 4-methyl-2-pentanone, acetone, carbon disulfide, chloroethane, dichlorodifluoromethane, ethylbenzene, o-xylene, and toluene. No non-COC VOC concentrations were reported above the MCLs in the First Sand Unit.

3.2.3 SHELL HORIZON GROUNDWATER QUALITY

Groundwater samples were collected from 13 designated Shell Horizon Unit wells during the Fall 2011 groundwater monitoring event (Figures 2-33 through 2-35). Five Shell Horizon Biobarrier-1, seven Shell Horizon Biobarrier-2, and one Shell Horizon POC (MW-70-23) wells were sampled during this event. The Shell Horizon Unit wells are screened between 105 ft and 135 ft bgs. Analytical results for the groundwater samples collected from the Shell Horizon Unit wells are summarized in Tables 2-9 through 2-11.

Groundwater samples were collected from the Shell Horizon Unit wells in Fall 2011 and analyzed for VOCs using U.S. EPA Method 8260B. The VOC results for the Shell Horizon Unit wells were compared to the TCGs (Table 1-3). Additionally, non-COC VOCs were compared to U.S. EPA and Cal/EPA MCLs. The following trends are summarized for the VOCs in the Shell Horizon Unit:

- VOCs above the TCGs or laboratory detection limits were not reported in the designated Shell Horizon POC wells in Fall 2011(Table 2-11).
- Concentrations of TCE above the TCGs were reported in 7 out of 13 Shell Horizon Unit wells in Fall 2011. The highest concentration of TCE (45 µg/L) was reported in MW-70-PMW10.
- Concentrations of 1,1-DCE above the TCGs were reported in one out of 13 Shell Horizon Unit wells in Fall 2011. 1,1-DCE at concentration of 11 µg/L was reported in MW-70-PMW10. Concentrations of cis-DCE above the TCGs were reported in 9 out of 13 Shell Horizon Unit wells. The highest concentration of cis-DCE (2,900 µg/L) was reported in MW-70-PMW10.
- Concentrations of trans-1,2-DCE above the TCGs were reported in six out of 13 Shell Horizon Unit wells. The highest concentration of trans-1,2-DCE (48 µg/L) was reported in MW-70-PMW10.
- Concentrations of VC above the TCGs were reported in 11 out of 13 Shell Horizon Unit wells. The highest concentration of VC (330 µg/L) was reported in MW-70-PMW11B.
- PCE and chloroform were not reported above the TCGs or laboratory detection limits were reported in groundwater samples collected from the Shell Horizon Unit in Fall 2011.

The following non-COC VOCs were reported in at least one Shell Horizon Unit wells above detection limits or estimated value, flagged as "J" by the laboratory in Fall 2011: 1,1-dichloroethane, 2-butanone, 2-hexanone, 4-methyl-2-pentanone, acetone, carbon sulfide, dichlorodifluoromethane, and toluene. No non-COC VOC concentrations above the MCLs were reported in the Shell horizon Unit.

3.2.4 SECOND SAND GROUNDWATER QUALITY

Groundwater samples were collected from 13 Second Sand Unit during the Fall 2011 groundwater monitoring event (Figures 2-36 through 2-38). Nine Second Sand Biobarrier and three Second Sand POC wells (MW-70-21, MW-70-23 and MW-70-36) were sampled during

this event. Analytical results for the groundwater samples collected from the Second Sand Unit wells are summarized in Tables 2-12 and 2-13.

Groundwater samples were collected from the Second Sand Unit wells in Fall 2011 and analyzed for VOCs using U.S. EPA Method 8260B. The VOC results for the Second Sand Unit wells were compared to the TCGs (Table 1-3). Additionally, non-COC VOCs were compared to U.S. EPA and Cal/EPA MCLs. The following trends are summarized for the VOCs in the Second Sand Unit:

- Concentrations of TCE above the TCGs were reported in six out of 13 Second Sand Unit wells in Fall 2011. The highest concentration of TCE (300 µg/L) was reported in MW-70-PMW13A.
- Concentrations of cis-DCE above the TCGs were reported in six out of 13 Second Sand Unit wells. The highest concentration of cis-DCE (1,100 µg/L) was reported in MW-70-PMW13B.
- Concentrations of trans-1,2-DCE above the TCGs were reported in three out of 13 Second Sand Unit wells. The highest concentration of trans-1,2-DCE (99 µg/L) was reported in MW-70-PMW13A.
- Concentrations of PCE above the TCGs were reported in one out of 13 Second Sand Unit wells. The highest concentration of PCE (8 µg/L) was reported in MW-70-36.
- Concentrations of VC above the TCGs were reported in six out of 13 Second Sand Unit wells. The highest concentration of VC (300 µg/L) was reported in MW-70-PMW13A. Additionally, VC concentration of 300 was reported in MW-70-PMW14B.
- Chloroform and 1,1-DCE were not reported above the TCGs in any Second Sand Unit wells.

The following non-COC VOCs were reported in at least one Second Sand Unit wells above detection limits or estimated value, flagged as "J" by the laboratory in Fall 2011: 1,1-dichloroethane, 4-methyl-2-pentanone, acetone, carbon sulfide, chloroethane, methylene chloride, and toluene.

No non-COC VOC concentrations above the MCLs were reported in the Second Sand Unit.

3.2.5 DEEP SAND GROUNDWATER QUALITY

Groundwater samples were collected from three Deep Clay Unit wells during the Fall 2011 groundwater monitoring event. All three Deep Sand POC wells (MW-70-POC02, MW-70-POC03 and MW-70-POC04) were sampled during this event (see Figure 2-10 for well locations). The Deep Sand wells are screened between 190 ft and 205 ft bgs. Analytical results for the groundwater samples collected from the Deep Sand wells are summarized in Table 2-14.

Groundwater samples were collected from the Deep Clay Unit/Deep Sand POC, collectively Deep Sand wells in Fall 2011 and analyzed for VOCs using U.S. EPA Method 8260B (Table 2-14). The VOC results for the Deep Sand wells were compared to the TCGs (Table 1-3). Additionally, non-COC VOCs were compared to U.S. EPA and Cal/EPA MCLs. The following trends are summarized for the VOCs in the Deep Sand Unit:

- VOCs above the TCGs or laboratory detection limits were not reported in any of the Deep Sand POC wells.

With the exception of toluene in MW-70-POC04 at concentrations of 2 µg/L, no non-COC VOCs were reported in the Deep Sand Unit wells in Fall 2011. Toluene was reported at a concentration of 2.0 µg/L in MW-70-POC04.

3.3 VISUALIZATION AND SUMMARY OF DISSOLVED PLUME EXTENT

The groundwater data from the Fall 2011 Performance monitoring event were imported into an updated post-EISB 3-D visualization software (EVS) as a separate, standalone data set. By having the 2008 and 2010 data sets generate separate models, the extent of the current TCE plume to the baseline plume is compared to provide a better understanding of progress achieved at IRP Site 70 to date. A discussion on the spatial extent of the chlorinated ethenes is provided in the subsequent subsection based on the following EVS visualization figures 3-1 through 3-13 and 2-D plume contours (Figures 2-27 through 2-38):

- **2-D CONTOURS OF TCE -** The plume extent for TCE greater than 1000 µg/L in the Source Area is depicted in Figure 3-1. Two cross-sectional views of TCE concentrations greater than 250 µg/L in the source area are shown in Figures 3-2 and 3-3. In addition, the 2008 and 2011 2-D TCE plume extent is projected to the surface to show the change in TCE plume morphology through the units in Figures 2-40 and 2-41, respectively.
- **3-D PLUME MORPHOLOGY** – As part of the visualization of the dissolved plume morphology, 3-D figures were generated using EVS for TCE, cis-DCE, VC, and Ethene (Figures 3-4 through 3-7). The 3-D plume figures are shown at TCE concentrations greater than 250 µg/L (Figure 4-25), the design basis concentration for which the active bioremediation was designed (Geosyntec 2006b). The reductive dechlorination daughter products, cis-DCE, VC, and Ethene are depicted at 60 µg/L for cis--DCE (Figure 3-5), 20 µg/L for VC (Figure 3-6), and 10 µg/L for ethene. These figures present the chlorinated ethene (i.e., TCE, cis-DCE, VC, and ethene) plume morphologies in three view points: plan, oblique, and profile . In addition, 3D plume maps through time are presented in Figures 3-12 and 3-13.
- **SELECTED CROSS-SECTIONS -** To provide an understanding through the center line of the plume, longitudinal cross-section (J-J') figures were generated for TCE, cis-DCE and VC (Figures 3-8 through 3-11 respectively).

3.3.1 TRICHLOROETHENE

Overall changes noted during the post-EISB performance monitoring, include a reduction in the number of wells where concentrations of TCE greater than 250 µg/L were observed. In 2011, a total of 5 out of 80 wells reported TCE concentrations greater than 250 µg/L compared to 11 out of 86 wells during the baseline in Fall 2010. In comparison to the baseline CSM, the updated greater than 250 µg/L 2011 TCE plume distribution shows substantial decreases in width (orthogonal to the plume axis [cross-section line J-J'] in plain view), length (parallel to the plume axis [J-J'] in plain view) and depth (vertical distribution along J-J') (Figure 3-8). These comparisons are based on the numerical model calculated using the 2011 monitoring results.

The projected TCE extent comparison between 2008 and 2011 is shown in Figures 2-40 and 2-41. The highest TCE concentration of 3,900 µg/L was reported in First Sand well MW-70-PMW06B (Figure 2-30).

The extent of the 250 µg/L TCE plume has been reduced significantly between 2010 and 2011 as observed in 2D Figures 2-27, 2-30, 2-33, and 2-36 in the Upper Fines, First Sand, Shell Horizon, and Second Sand Units, respectively. The TCE 3D Plume morphology changes between 2010 and 2011 are shown in Figures 3-4 and 3-12.

The extent of the 5 µg/L (MCL) TCE plume has also been reduced upgradient of SSB-1. Downgradient of SSB-1, the extent of the 5 µg/L (MCL) TCE plume appears stable, with the toe of the plume remaining relatively in the same location relative to furthest downgradient well MW-70-15. In this area, TCE concentrations in MW-70-15 were 16, and 14 µg/L in 2010 and 2011, respectively. TCE concentration reported in the newly constructed Second Sand well, MW-70-49, was 17 µg/L in Fall 2011, defining the northeast width of the plume.

TCE was reported at an estimated concentration of 0.33 µg/L in First Sand POC well MW-70-35 in Fall 2011. TCE was reported in MW-70-35 during the Baseline 2008 sampling at a concentration of 0.45 µg/L. TCE was not reported in any other compliance wells during the recent performance monitoring event, suggesting that the plume remains contained within the point of compliance well boundary.

3.3.2 CIS-1,2-DICHLOROETHENE

The greater than 60 µg/L cis-DCE plume of the 2011 updated post-EISB CSM, as shown in Figures 3-5 and 3-13, is distributed across the site and generally mimics the distribution of the greater than 60 µg/L cis-DCE plume represented in the 2010 CSM. The highest concentration of cis-DCE has been reported in MW-70-PMW10 at 2,900 µg/L in the Shell Horizon. The cis-DCE 3D plume morphology is presented in Figures 3-5 and 3-13.

During the Fall 2011 post-EISB performance monitoring a total of 52 out of 80 wells reported cis-DCE concentrations greater than 60 µg/L, compared to 29 out of 86 wells sampled in Fall 2010. Of the compliance wells sampled in Fall 2011, cis-DCE was reported in First Sand POC wells MW-70-11 and MW-70-35 at concentrations of 1.1 and 1.4 µg/L, respectively, which are below the MCL of 6 µg/L, consistent with 2010 performance monitoring results. Cis-DCE was not reported in any of the compliance wells, suggesting that the cis-DCE plume is completely contained within the point of compliance well boundary.

3.3.3 VINYL CHLORIDE

The greater than 20 µg/L VC plume of the 2011 updated post-EISB CSM, is shown in Figures 3-6 and 3-13. The highest concentration of VC in Fall 2011 was 2,200 µg/L reported in MW-70-PMW01B in the Source Area. The 3D plume morphology for 2011 is shown on Figures 3-6 and 3-13.

During the 2011 post-EISB performance monitoring, a total of 22 out of 80 wells reported VC concentrations greater than 20 µg/L, compared to 24 out of 86 wells sampled in Fall 2010. VC was reported in the Deep Sand POC MW-70-POC02 at an estimated concentration of 0.24 µg/L, which is similar to the estimated 0.20 µg/L reported VC concentration reported in 2010 in the same POC well. VC was not reported in any of the other compliance wells during the 2011 performance monitoring event, suggesting that the plume is completely contained within the point of compliance well boundary.

3.3.4 ETHENE

The greater than 10 µg/L ethene plume of the 2011 updated post-EISB CSM is shown in Figures 3-7 and 3-11. The highest concentration of ethene in Fall 2011 was 540 µg/L reported in MW-70-PMW01B in the Source Area. The 3D plume morphology for 2011 is shown on Figures 3-7 and 3-11. Ethene was not reported in any of the point of compliance wells. The high VC and ethene concentrations in the Source Area support the evidence of successful dechlorination occurring in the Source Area and throughout the biobarriers.

3.4 CONCLUSIONS

Based on the above discussion, the following conclusions can be drawn from the 2011 updated CSM.

- **Groundwater Level:** Water level elevations have increased approximately 2-12 feet in all hydrostratigraphic zones since 2010, which may be attributable to an increase in rainfall in WY2011. However, hydraulic gradients and direction of groundwater flow remain consistent compared to previous years (see Section 2).
- **TCE:** The greater than 250 µg/L TCE plume from the 2011 updated post-EISB CSM shows marked decreased in the width, length and vertical distribution of TCE compared to 2010. The extent of the 5 µg/L (MCL) TCE plume has also been reduced and appears stable in the downgradient area of the Second Sand at MW-70-15. The updated CSM indicates that the plume is completely contained within the point of compliance well boundary.
- **Cis-DCE:** The greater than 60 µg/L cis-DCE plume from the 2011 updated post-EISB CSM, mimics the morphology of the greater than 60 µg/L cis-DCE plume in 2010. The updated CSM indicates that the plume is completely contained within the point of compliance well boundary.
- **VC:** The greater than 20 µg/L VC plume from the 2011 updated post-EISB CSM has a similar distribution to that of the VC plume in 2010. The updated CSM indicates that the plume is completely contained within the point of compliance well boundary.
- **Ethene:** The greater than 10 µg/L ethene plume of the 2011 updated post-EISB CSM is shown in Figures 3-7 and 3-11. The highest concentration of ethene in Fall 2011 was 540 µg/L reported in MW-70-PMW01B in the Source Area. Ethene was not reported in any of the point of compliance wells.
- **Soil Vapor:** Soil vapor monitoring indicates methanogenesis is occurring in the SATG and SAB areas and requires continued monitoring (see Section 2).

EISB is successfully working to reduce the TCE concentrations through dechlorination as shown by the resultant decrease in the TCE plume morphology.

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Section 4

VARIANCES TO THE WORK PLAN AND THE DATA QUALITY ASSURANCE/QUALITY CONTROL SUMMARY

This section summarizes the variances to the RAWP and the Data Quality Assurance/Quality Control results for the period between January 2011 and December 2011.

4.1 VARIANCES TO THE WORK PLAN

The primary variance to the RAWP during this period is changes to the performance monitoring schedule. The RAWP tentative sampling schedule (Table 6.2 of RAWP, ECC/Geosyntec 2008a; AIS/TN&A 2011) indicates quarterly sampling for year one, followed by semi-annual and annual sampling. Per the monitoring schedule presented in the RAWP, quarterly sampling consisted of monitoring 11 wells (4 SATG wells, 1 SAB well, 2 FSB-1 wells, 1 FSB-2 well, 1 SHB-1 well, 1 SHB-3 well, and 1 SSB-1 well). The 2011 performance monitoring schedule is presented in Table 1-1 and consisted of the following frequency of wells:

1. Semi-Annual Monitoring Event (July/August 2011) - Field parameters were measured in 47 wells, and off-site laboratory analytical sampling was conducted in 35 wells: SATG (4 wells), SAB-1 (3 wells); FSB-1 (9 wells); FSB-2 (5 wells); SHB-1 (3 wells); SHB-3 (4 wells); and SSB-1 (7 wells, including newly installed monitoring well MW-70-49). Field monitoring consisted of: depth to water measurements (in 74 wells), pH, dissolved oxygen, oxidation-reduction potential, specific conductance, temperature, and turbidity. Off-site laboratory analyses consisted of: VOCs, DHGs, anions, VFAs, TDS, alkalinity, and TOC (Tables 2-3 through 2-15).
2. Annual Monitoring Event (October/November 2011) - Field parameters and off-site laboratory analytical sampling was conducted in 74 monitoring wells and 14 POC wells: SATG (16 wells); SAB (8 wells); FSB-1 (16 wells); FSB-2 (9 wells); SHB-1 (5 wells); SHB-3 (8 wells); SSB-1 (12 wells); POC wells (14 wells). Field parameters consisted of: depth to water measurements (in 75 wells), pH, dissolved oxygen, oxidation-reduction potential, specific conductance, temperature, and turbidity. Off-site laboratory analyses consisted of: VOCs, DHGs, anions, VFAs, TDS, alkalinity, TOC and Dehalococcoides with the vinyl chloride reductase A gene (Dhc/vcrA) (Tables 2-3 through 2-15).

The frequency and sampling of the wells was determined to adequately address the RA objectives at IRP Site 70.

4.2 QUALITY ASSURANCE/QUALITY CONTROL SUMMARY

This section summarizes quality assurance and quality control findings of the analytical results sampled during this performance period. Groundwater from 88 monitoring wells (75 monitoring wells and 13 injections wells), selected for semi-annual and annual groundwater monitoring were sampled and analyzed in accordance with the Final SAP and SAP Addendum (ECC/Geosyntec 2008a; Insight 2009b). All groundwater samples were analyzed by EMAX Laboratories located in Torrance, California, except for deoxyribonucleic acid (DNA) assay

analysis which was analyzed by SiREM located in Ontario, Canada. Appendix C summarizes laboratory analyses performed on groundwater samples collected from each well at IRP Site 70 in Summer 2011 and Fall 2011, and Tables 2-3 through 2-15 present all groundwater results. The results of the groundwater 2011 performance monitoring are summarized in Section 2. Appendix D details data usability assessment and data validation reports. Table 4-1 summarizes the results of the assessment for the data quality indicators of accuracy, precision, completeness, comparability and representativeness.

Procedures from the following methods were used to analyze groundwater and field quality control samples:

- VOCs were analyzed using U.S. EPA Method 8260B With the exception of IW-70-SHB113 in 2008 (Table 3-8) and IW-70-SHB310 in 2009 (Table 3-9), no other reporting limits for VOCs where changed;
- DHGs consist of ethane, ethene, and methane and were analyzed using RSK 175;
- Anions (bromide, chloride, sulfate, nitrate, nitrite) were analyzed using U.S. EPA Method 300.0;
- VFAs (acetate, butyrate, lactate, propionate) were analyzed using U.S. EPA Method 300.0M;
- TOC was analyzed using Standard Method 5310B;
- Dissolved Hydrogen Sulfide was analyzed using Standard Method 4500F;
- TDS was analyzed using Standard Method 2540C;
- Dissolved Metals (arsenic, iron, manganese) were analyzed using U.S. EPA Method 6010B; and
- DNA assay analysis was analyzed using SiREM developed Quantitative Gene-Trac Test.

Soil gas vapor samples were collected for analysis of methane and hydrogen sulfide at 12 locations presented in Figure 1-3 using U.S. EPA Methods 25C and 16, respectively. Methane vapor samples were analyzed by Calscience Environmental located in Garden Grove, California. If methane was not detected using Method 25C, then the sample was reanalyzed using Method 3C. The purpose of the soil vapor probes and sampling was to monitor migration of methane and hydrogen sulfide in the vadose zone in the source area and downgradient of the source area.

The laboratory's quality assurance oversight involved the performance of a first-level screening of the data and an indication of any deviations from their precision, accuracy, detection limit, or laboratory QA/QC criteria. A copy of the laboratory QA/QC analytical results can be found in Appendix C. A representative from the laboratory signed the data sheets, ensuring that the screening described above had been completed. Subsequently, Insight completed data review by comparing chain-of-custody forms, sample receipts, sample log-ins, and laboratory data packages. Review of these summaries confirmed that data quality objectives were met.

Additionally, the analytical data, along with the associated laboratory quality control information, were forwarded to Laboratory Data Consultants, Inc., an independent data validation service, for data validation. A U.S. EPA Level III data validation was performed on 90 percent of the groundwater samples; the remaining 10 percent of the samples underwent a Level IV data validation. Copies of the chain-of-custody documentation are included in Appendix B.

Data validation includes evaluation of holding times, sample preservation, cooler temperatures, calibrations, blanks, laboratory quality control samples, and field quality control samples. Generally, the results were within analytical criteria with a few minor exceptions, such as calibration outliers of some VOCs, detection of carbon disulfide in the laboratory method blank, and low spike recovery during alkalinity testing. For the most part calibration outliers affected VOCs that are not constituents of concern of Site 70. All affected compounds were qualified "J" or "UJ".

QA/QC measurements were taken in the field to ensure that meaningful and representative data sets were generated. Field duplicate samples were collected at a rate of 10 percent of the total number of groundwater monitoring wells sampled and one trip blank sample was included in each cooler that contained volatile organic analysis vials. These samples were collected to ensure the consistency and integrity of sample collection methods. Field duplicate samples were collected for wells MW-70-27, MW-70-PMW03B, MW-70-PMW04A, MW-70-PMW06B, MW-70-MNA12, IW-70-SHB217, MW-70-PMW12A, and MW-70-MNA16. Field duplicate results are generally similar to the original results and no significant problems were noted. Twenty-five trip blank samples were shipped. No VOC contaminant was reported in the trip blanks with the exception of methylene chloride (0.67 J µg/L). Five equipment rinse samples were collected. No contaminants of concern were reported with the following exceptions:

Client Sample ID	Sample Date	Analyte Name	Result	Qualifiers	Result Units
IR-70-GW-EB-055	07/27/2011	Methane	1.9	J	µg/L
IR-70-GW-EB-062	08/05/2011	Chlorobenzene	0.34	J	µg/L
IR-70-GW-EB-062	08/05/2011	Methane	0.36	J	µg/L
IR-70-GW-SB-054	07/27/2011	Methane	3.6		µg/L
IR-70-EB-166	11/22/2011	Chlorobenzene	0.28	J	µg/L
IR-70-EB-166	11/22/2011	Chloroform	0.34	J	µg/L
IR-70-EB-166	11/22/2011	Bromodichloromethane	0.25	J	µg/L
IR-70-EB-171	11/23/2011	Chlorobenzene	0.25	J	µg/L
IR-70-EB-171	11/23/2011	Chloroform	0.30	J	µg/L
IR-70-EB-171	11/23/2011	Bromodichloromethane	0.24	J	µg/L
IR-70-EB-177	11/28/2011	Chlorobenzene	0.38	J	µg/L

Two Source blanks were collected. No contaminants of concern were reported with the following exceptions:

Client Sample ID	Sample Date	Analyte Name	Result	Qualifiers	Result Units
IR-70-SB-165	11/22/2011	Chlorobenzene	0.29	J	µg/L
IR-70-SB-165	11/22/2011	Chloroform	0.35	J	µg/L
IR-70-SB-165	11/22/2011	Carbon disulfide	0.26	J	µg/L
IR-70-SB-165	11/22/2011	Bromodichloromethane	0.28	J	µg/L

Data were generally found to be acceptable with respect to accuracy, precision, completeness, and comparability criteria (Table 4-1). All analytical data presented in Tables 2-3 through 2-15 are valid and usable. Validation findings were advisory and findings are detailed in Appendix D.

Section 5
LAND USE CONTROL DOCUMENTATION

This section documents the Land Use Controls (LUCs) implemented at IRP Site 70, per the Record of Decision and RAWP (Geosyntec 2006a; ECC/Geosyntec 2008a). LUC objectives are achieved through the land-use restrictions and include:

- Preventing the use of VOC-contaminated groundwater until cleanup objectives have been achieved,
- Protecting the groundwater monitoring and extraction wells and associated piping and equipment
- Managing intrusive activities to minimize potential human exposure to contaminated groundwater, and
- Managing groundwater injection and extraction activities to assure that hydraulic control of the contaminant plume is not unacceptably compromised

The LUCs are applied to approximately 50 acres overlying the existing areas of contamination but extend to a half-mile radius buffer zone established for groundwater from the surface to a depth of 495 feet bgs. The institutional controls (ICs) addressing the on-station portion of the groundwater plume are implemented through the Station Project Review Process. Although off-base migration is unlikely, the United States Department of the Navy, Orange County Health Care Agency, OCWD, and city of Seal Beach determine ICs addressing the off-station portion of the groundwater plume to assure that any conditions necessary for adequate protection of public health. ICs are implemented to prevent use of or exposure to contaminated groundwater; protect the integrity of the RA; and allow access for sampling, installing, operating, and maintaining monitoring wells or remediation equipment, and implementing remedial measures needed in the future.

The following activities were managed as part of the on-station ICs since the remedy was implemented at IRP Site 70 since 2008:

1. Twenty-three SATG injection wells were constructed in May 2010 as part of implementation of the RA activities in the SATG
2. Second Sand Monitoring Well MW-70-49 was constructed in September 2011, northeast of the SSB-1, as documented in this PMR
3. Well RDO-04 was re-drilled and constructed in September 2011, as documented in this PMR
4. Two nested wells were constructed by OCWD and designated as OCWD-BS10 and OCWD-BS11 with coordination with NAVWPNSTA, south of IRP Site 70 (Appendix I). Each well was constructed with six nested wells, 2-inch polyvinyl chloride casing, with 10-20-foot screen intervals installed between 95 to 605 feet bgs. Well OCWD-BS11 is within the half-mile buffer zone established for groundwater. The purpose of these wells

was to provide additional water level and water quality data and permanent monitoring points for the Sunset Gap area in west Orange County. Water levels and Quality sampling were conducted in March and April 2012. Water samples were collected from each monitoring well and submitted to laboratories for the analyses of general mineral, VOC, perchlorate, and 1,4-dioxane. In review of the VOC and 1,4-dioxane results, all values were non-detect except for one sample collected in the upper most zone of OCWD-BS11, closest and downgradient of IRP Site 70, screened between 95-115 feet bgs. In this sample, cis-DCE and TCE were reported at 0.6 and 8.4 µg/L, respectively.

No activities have been found to violate the LUC objectives for IRP Site 70 as outlined in the Record of Decision and RAWP.

Section 6

SUMMARY AND RECOMMENDATIONS

The EISB remediation activities at IRP Site 70 are being conducted in accordance with the technical and functional requirements specified in the RAWP (ECC/Geosyntec 2008a). Field activities are being performed as established in the SOPs contained in Attachment B-2 of the SAP (AIS-TN&A 2011).

The 2011 Performance monitoring event documents the following field activities (Table 1-1, Figure 1-2):

- Groundwater-level elevations were measured during two events: July (74 wells) and October 2011 (76 wells).
- Groundwater samples were collected during two events in Summer 2011 and Fall 2011. The Summer 2011 groundwater sampling event consisted of collection of groundwater samples from 48 monitoring wells. The Fall 2011 groundwater sampling event consisted of collection of groundwater samples from 80 groundwater monitoring wells and analyzed for VOCs, DHGs, VFAs, anions, TDS, alkalinity, TOC, dissolved hydrogen sulfide, dissolved metals, and Dhc with *vcr*A (Table 1-1).
- Field parameters (groundwater temperature, pH, DO, ORP, specific conductance, and turbidity) and depth to water, were measured as part of the performance monitoring for the EISB activities, per the schedule outlined in Table 1-1.
- One new Second Sand Monitoring Well, designated as MW-70-49, was constructed in September 2011. The purpose of the Second Sand well at this location was to determine the downgradient concentration of VOCs in the Second Sand with respect to MW-70-14 and to better define the northeast lateral extent of the dissolved plume with respect to the SSB-1. In addition, RDO-4 was re-drilled and constructed since the casing had been found to be compromised prior to FSB-1 injection activities in December 2009. Well construction details are documented in Table 1-2 and Appendix F.
- Twelve soil vapor probes were sampled for methane and hydrogen sulfide.

6.1 SUMMARY OF REMEDY PERFORMANCE

Multiple lines of evidence were evaluated and support that EISB is working effectively at the biobarrier areas at IRP Site 70. The different geochemical parameters that were monitored are summarized as follows:

1. The presence of TCE in the Source Area at 2,900 µg/L and a maximum site-wide TCE concentration of 3,900 µg/L in MW-70-PMW06B, upgradient of FSB-1, indicates that an ongoing source of TCE is present.
2. A significant reduction of total moles of all COCs is observed in all hydrogeologic zones since active remediation began. The 2011 performance monitoring data suggest

that degradation rates have slowed in all biobarriers. The primary transformation product is cis-DCE.

3. Electron donor concentrations were measured as TOC and VFA's in select wells. TOC concentrations decreased in the SAB, FSB-2, SHB-1, and SSB-1. In 2011, groundwater VFA results for the injection wells were non-detect for almost all injection wells except for IW-70-SAT35 (SATG). In general, the concentration of VFAs in the PMWs remained below or at detection limits with one exception. These data indicate that EVO is being consumed by the fermenting population and utilized by anaerobic populations such as methanogens and dechlorinators.
4. In biobarriers SATG, SAB, FSB-1, SHB-3, and SSB-1, sulfate has been increasing and methane concentrations have generally been decreasing, indicating a reduction in methanogenesis in these biobarriers. A review of the performance monitoring wells in biobarriers FSB-2 and SHB-1 shows somewhat more variability.
5. Within all of the biobarriers, the DO concentrations were below 1 mg/L during the 2011 performance monitoring event, except for IW-70-SHB310 in the SHB-3 biobarrier. ORP readings collected during the 2011 monitoring events indicated that all of the upgradient and downgradient PMWs and biobarrier wells were within the range of -100 and -300 mV. There is a slight increasing trend of ORP reported in performance monitoring wells in biobarriers SATG, SAB, and FSB-1.
6. In the SATG, SAB, FSB-1 and FSB-2 biobarriers, in general, Dhc and *vcr*A concentrations were within or sometimes above the moderate range (10^4 to 10^7 cells/L) of concentrations. However, *vcr*A and Dhc concentrations were more variable and primarily below the lower limit of the moderate concentration range (10^4 to 10^7 cells/L) in some of the downgradient performance monitoring wells in SHB-1 (MW-70-PMW10), SHB-3 (PMW-12A) and SSB-1 (MW-70-PMW14B).

6.2 CONCEPTUAL SITE MODEL UPDATE

The CSM was updated to provide an analysis and visualization of both the subsurface hydrogeology and dissolved phase plume morphologies. The highlights of the CSM update for the 2011 PMR are summarized as follows:

- Groundwater elevations have increased approximately 2-12 feet in all hydrostratigraphic zones since 2010, which may be attributable to an increase in rainfall in Water Year 2011. Hydraulic gradients and directions remain similar to 2010. Groundwater monitoring data does not indicate that the injection of the biobarriers has impacted groundwater flow.
- The updated extent of the 250 µg/L plume for TCE was simulated using EVS in two- and three-dimensions and demonstrates that the post-EISB TCE dissolved plume has decreased in width, length and vertical distribution compared to the baseline CSM. The extent of cis-DCE and VC plume morphology in 2011 remains similar to 2010.
- The dissolved phase plume remains within the point of compliance boundary.

- Soil vapor monitoring at soil vapor wells, constructed at 6 feet bgs, indicates that methanogenesis is occurring in the SATG and SAB areas. However, the methane monitoring plan indicates no harmful vapors in the breathing zones monitored adjacent to utility corridors that may provide a potential pathway to the surface.

6.3 RECOMMENDATIONS

The data presented in the 2011 PMR support the RA goals for IRP Site 70 (Geosyntec 2006a) and demonstrate the RA is reducing the contaminant concentrations at IRP Site 70.

Based on the results of the 2011 PMR at IRP Site 70, the following recommendations are made:

1. In review of all the multiple lines of evidence, it appears that additional EVO injections in all biobarriers may be prudent to ensure that electron donor are present and that the *vcr*A population thrives. In order of priority, the following biobarriers may be prioritized: SSB-1, SAB, and FSB-1 based on the rate of consumption of EVO and the current VOC concentrations.
2. Based on the results of the 2011 PMR, semi-annual groundwater monitoring is recommended for the next performance monitoring year per Table 6-1. Optimization strategies may be further evaluated after each event and incorporated as needed to enhance performance monitoring results.
3. Since methane can accumulate in the subsurface and migrate to the surface, continued monitoring of methane in the vapor probes and monitoring at the surface is recommended. Special care (venting, use of explosion-proof meters, etc.) must be taken prior to any sampling or intrusive activities in this area to minimize the risk of fire or explosion. A methane monitoring plan has been put in place to ensure that onsite workers are protected. In addition, air monitoring for VOCs in these areas will be implemented as part of the monitoring plan.

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Section 7
REFERENCES

AIS-TN&A JV. 2011. Final Addendum 03 to the Final Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan), Installation Restoration Site 70, Naval Weapons Station Seal Beach, Seal Beach, CA. June 16.

Bechtel Environmental, Inc. 2006. Final Fifth Annual Groundwater Monitoring Report IRP Sites 40 and 70, Naval Weapons Station Seal Beach, California. April.

———. 2002. Final Groundwater Feasibility Study Report, Installation Restoration Program Sites 40 and 70, Naval Weapons Station, Seal Beach, Seal Beach, California. June.

Bechtel National, Inc. 1996. Final Removal Site Evaluation Report, for the Research, Testing, and Evaluation Area, Naval Weapons Station, Seal Beach, Seal Beach, California. November.

BEI. *See* Bechtel Environmental, Inc.

BNI. *See* Bechtel National, Inc.

California Department of Water Resources. 1961. Planned Utilization of Ground Water Basins of the Coastal Plain of Los Angeles County. Bulletin 104. Appendix B. June.

Camp, Dresser and McKee. 2007. Demonstration Plan for a Low-Cost, Passive Approach for Bacterial Growth and Distribution for Large-Scale Implementation of Bioaugmentation. February.

CDM. *See* Camp, Dresser and McKee.

DWR. *See* California Department of Water Resources.

ECC/Geosyntec. *See* Environmental Chemical Corporation/Geosyntec Consultants.

Environmental Chemical Corporation/Geosyntec Consultants. 2008a. Final Remedial Action Work Plan, Implementation of Enhanced *In-Situ* Bioremediation, Installation Restoration Program Site 70, Naval Weapons Station Seal Beach, Seal Beach, California. March.

———. 2008b. Final Technical Memorandum, Installation Restoration Program Site 70, Installation of Enhanced *In-Situ* Bioremediation System, Well Installation Phase, Naval Weapons Station Seal Beach, Seal Beach, California. January.

———. 2009. Errata to Final Technical Memorandum, Installation Restoration Program Site 70, Installation of Enhanced *In-Situ* Bioremediation System, Well Installation Phase, Naval Weapons Station Seal Beach, Seal Beach, California. January.

Geosyntec. *See* Geosyntec Consultants

Geosyntec Consultants. 2005. Final Revised Groundwater Feasibility Study Report, Installation Restoration Program Site 70, Naval Weapons Station, Seal Beach, Seal Beach, California. August.

———. 2006a. Record of Decision for IR Site 70 , Naval Weapons Station, Seal Beach, Seal Beach, California. August.

———. 2006b. Final Remedial Design for IR Site 70 Enhanced *In-Situ* Bioremediation, Naval Weapons Station, Seal Beach, Seal Beach, California. December.

Jacobs Engineering Group. 1995. Final Preliminary Assessment Report for the Research, Testing and Evaluation Area, Naval Weapons Station, Seal Beach, Seal Beach, California. February.

JEG. *See* Jacobs Engineering Group.

Insight. *See* Insight EEC, Inc.

Insight EEC, Inc. 2009a. Baseline Groundwater Monitoring Report. Installation Restoration Program Site 70, Naval Weapons Station, Seal Beach, Seal Beach, California. April.

_____. 2009b. Addendum 2, Final Sampling and Analysis Plan – IR Site 70, Naval Weapons Station, Seal Beach, Seal Beach, California. September.

_____. 2009c. Methane Monitoring Plan and Emergency Procedures. Installation Restoration Program Site 70, Naval Weapons Station, Seal Beach, Seal Beach, California. January.

_____. 2010. 2009 Performance Monitoring Report Enhanced In Situ Bioremediation Installation Restoration Program Site 70, Naval Weapons Station, Seal Beach, Seal Beach, California. May.

_____. 2011. 2010 Performance Monitoring Report Enhanced In Situ Bioremediation Installation Restoration Program Site 70, Naval Weapons Station, Seal Beach, Seal Beach, California. August.

(California) Regional Water Quality Control Board, Santa Ana Region. 1995. Water Quality Control Plan, Santa Ana River Basin; with amendment R8-2004-0001, January 2004.

_____. 2009. Letter from Patricia A. Hannon, Site Cleanup/DoD Section, California Regional Water Quality Control Board Santa Ana Region, to Ms. Pei-Fen Tamashiro Installation Restoration Coordinator, Naval Weapons Station Seal Beach. Re: Comments on Draft Baseline Groundwater Monitoring Report, Enhanced *In Situ* Bioremediation, IR Site 70, U.S. Naval Weapons Station, Seal Beach, June 5.

RWQCB. *See* (California) Regional Water Quality Control Board, Santa Ana Region.

SWRCB. *See* State Water Resources Control Board.

State Water Resources Control Board. 2012. GeoTracker map for sites in the vicinity of 13980 Seal Beach Boulevard, Seal Beach, CA: http://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=13980+Seal+Beach+Blvd.%2C+Seal+Beach%2C+CA

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TABLES

Table 1-1
2011 Groundwater and Performance Monitoring Schedule

	Biobarrier Installation Completion Date	Field Parameters	VOCs	DHGs	Anions/TDS/Alkalinity	VFAs	TOC	Sulfide	Dissolved Metals	Dhc/vcrA	Soil Vapor
Source Area Treatment Grid											
IW-70-SAT35 (25-55)		July/ October	October	October	October	October	October	October	October	October	—
MW-70-PMW01A (25-35)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-PMW01B (25-55)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-27 (25.5-35.5)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-28 (50.3-60.3)	**8/3/2010**	July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-MNA01 (40-50)		October	October	October	—	October	—	—	—	October	—
MW-70-MNA02 (35-45)		October	October	October	—	October	—	—	—	October	—
MW-70-MNA03 (35-45)		October	October	October	—	October	—	—	—	October	—
MW-70-MNA04 (35-45)		October	October	October	—	October	—	—	—	October	—
Point of Compliance/Upper Fines	**Not Applicable**										
MW-70-02 (20-30)		October	October	—	—	—	—	—	—	—	—
MW-70-03 (20-30)		October	October	—	—	—	—	—	—	—	—
MW-70-10 (30-40)		October	October	—	—	—	—	—	—	—	—
MW-70-17 (30-40)		October	October	—	—	—	—	—	—	—	—
MW-70-22 (20-30)		October	October	—	—	—	—	—	—	—	—
Source Area Biobarrier/First Sand	**1/30/2009**										
IW-70-SAB06 (65-80/85-105)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
IW-70-SAB11 (65-105)		July/ October	October	October	October	October	October	October	October	October	—
MW-70-MNA05 (70-80)		October	October	October	—	October	—	—	—	October	—
MW-70-PMW02A (70.5-80.5)		July/ October	October	October	October	October	October	October	October	October	—
MW-70-PMW02B (90-100)		July/ October	October	October	October	October	October	October	October	October	—
MW-70-PMW03A (70.5-80.5)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-PMW03B (90-100)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
First Sand Biobarrier 1											
MW-70-38 (80-100)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
IW-70-FSB108 (60-105)	**2/12/2010**	July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
IW-70-FSB118 (60-105)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-PMW04A (70-80)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-PMW04B (90-100)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—

Table 1-1 (continued)
2011 Groundwater and Performance Monitoring Schedule

	Biobarrier Installation Completion Date	Field Parameters	VOCs	DHGs	Anions/TDS/Alkalinity	VFAs	TOC	Sulfide	Dissolved Metals	Dhc/vcrA	Soil Vapor
MW-70-PMW05A (70-80)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-PMW05B (90-100)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-PMW06A (69.5-79.5)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-PMW06B (91-101)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
RDO-5 (65-105)		July/ October	October	October	October	October	October	October	October	October	—
MW-70-MNA08 (80-90)		July/ October	October	October	—	October	—	—	—	October	—
MW-70-MNA06 (80-90)		October	October	October	—	October	—	—	—	October	—
MW-70-MNA11 (80-90)		October	October	October	—	October	—	—	—	October	—
MW-70-MNA07 (90-100)		July/ October	October	October	—	October	—	—	—	October	—
MW-70-43A (86-106)		October	October	October	—	October	—	—	—	October	—
First Sand Biobarrier 2	**11/24/2009**										
IW-70-FSB216 (65-100)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
IW-70-FSB229 (65-100)		July/ October	October	October	October	October	October	October	October	October	—
MW-70-PMW07A (65-75)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-PMW07B (85-95)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-PMW08A (65-75)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-PMW08B (85-95)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-MNA09 (64-74)		July/ October	October	October	—	October	—	—	—	October	—
MW-70-MNA10 (75-85)		October	October	October	—	October	—	—	—	October	—
MW-70-MNA12 (75-85)		October	October	October	—	October	—	—	—	October	—
Point of Compliance/First Sand	**Not Applicable**										
MW-70-11 (80-100)		October	October	—	—	—	—	—	—	—	—
MW-70-16 (95-105)		October	October	—	—	—	—	—	—	—	—
MW-70-35 (90-100)		October	October	—	—	—	—	—	—	—	—
MW-70-POC01 (80-90)		October	October	—	—	—	—	—	—	—	—
Shell Horizon Biobarrier 1	**4/7/2010**										
IW-70-SHB113 (105-130)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-PMW09 (120-130)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-PMW10 (120-130)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
IW-70-SHB217 (105-130)		October	October	October	October	October	October	October	October	October	—
MW-70-MNA13 (115-125)		October	October	October	—	October	—	—	—	October	—

Table 1-1 (continued)
2011 Groundwater and Performance Monitoring Schedule

	Biobarrier Installation Completion Date	Field Parameters	VOCs	DHGs	Anions/TDS/Alkalinity	VFAs	TOC	Sulfide	Dissolved Metals	Dhc/vcrA	Soil Vapor
Shell Horizon Biobarrier 3	**9/25/2009**										
IW-70-SHB310 (105-130)		July/ October	October	October	October	October	October	October	October	October	—
IW-70-SHB311 (80-95)		July/ October	October	October	October	October	October	October	October	October	—
MW-70-PMW11A (85-95)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-PMW11B (115-125)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-PMW12A (85-95)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-PMW12B (115-125)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-MNA14 (115-125)		October	October	October	—	October	—	—	—	October	—
Point of Compliance/Shell Horizon	**Not Applicable**										
MW-70-23 (110-130)		October	October	—	—	—	—	—	—	—	—
Second Sand Biobarrier 1	**3/18/2009**										
IW-70-SSB109 (125.75-165.75)		July/ October	October	October	October	October	October	October	October	October	—
IW-70-SSB119 (125-165)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-PMW13A (125-135)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-PMW13B (145-155)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-PMW14A (128-138)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-PMW14B (149-159)		July/ October	July/ October	July/ October	July/ October	July/ October	July/ October	October	October	October	—
MW-70-MNA16 (141-151)		July/ October	October	October	—	October	—	—	—	October	—
MW-70-MNA17 (140-150)		July/ October	October	October	—	October	—	—	—	October	—
MW-70-15 (161-171)		October	October	October	—	October	—	—	—	October	—
MW-70-14 (160-170)		July/ October	July/ October	July/ October	—	October	—	—	—	October	—
MW-70-43B (136-146)	**3/18/2009**	October	October	October	—	October	—	—	—	October	—
MW-70-49 (125-165)		Sept/ October	Sept/ October	October	October	October	October	October	October	October	—
Point of Compliance/Second Sand	**Not Applicable**										
MW-70-21 (150-170)		October	October	—	—	—	—	—	—	—	—
MW-70-36 (150-160)		October	October	—	—	—	—	—	—	—	—
Point of Compliance/Deep Sand	**Not Applicable**										
MW-70-POC02 (190-200)		October	October	—	—	—	—	—	—	—	—
MW-70-POC03 (190-200)		October	October	—	—	—	—	—	—	—	—
MW-70-POC04 (195-205)		October	October	—	—	—	—	—	—	—	—

Table 1-1 (continued)
2011 Groundwater and Performance Monitoring Schedule

	Biobarrier Installation Completion Date	Field Parameters	VOCs	DHGs	Anions/TDS/Alkalinity	VFAs	TOC	Sulfide	Dissolved Metals	Dhc/vcrA	Soil Vapor
Soil Vapor Samples	**Not Applicable**										
SV-70-01		—	—	—	—	—	—	—	—	—	October
SV-70-02		—	—	—	—	—	—	—	—	—	October
SV-70-03		—	—	—	—	—	—	—	—	—	October
SV-70-04		—	—	—	—	—	—	—	—	—	October
SV-70-05		—	—	—	—	—	—	—	—	—	October
SV-70-06		—	—	—	—	—	—	—	—	—	October
SV-70-07		—	—	—	—	—	—	—	—	—	October
SV-70-08		—	—	—	—	—	—	—	—	—	October
SV-70-09		—	—	—	—	—	—	—	—	—	October
SV-70-10		—	—	—	—	—	—	—	—	—	October
SV-70-11		—	—	—	—	—	—	—	—	—	October
SV-70-12		—	—	—	—	—	—	—	—	—	October

Notes:

— - not analyzed

Anions/TDS/Alkalinity - Anions (EPA Method 300.0)/TDS (EPA Method 2540C)/Alkalinity (EPA Method 2320B)
Dhc/vcrA - Polymerase Chain Reaction Assay (Dehalococcoides/vinyl chloride reductase A gene)
DHGs - dissolved hydrogen gases (RSK 175)
dissolved metals - iron, manganese, and arsenic (EPA Method 6010B)
field parameter (pH, dissolved oxygen, oxidation-reduction potential, specific conductance, temperature, and turbidity)
sulfide - total dissolved hydrogen sulfide (EPA Method 4500F)
Soil Vapor samples analyzed for hydrogen sulfide (ASTM D5504) and methane(25C)
TOC - total organic carbon (EPA Method 5310B)
VFAs - volatile fatty acids (300.0M)
VOCs - volatile organic compounds (EPA Method 8260B)

Table 1-2
Well Construction Summary

Well Number	Well Installation			Construction Depths (feet bgs)					Construction Elevations (feet MSL, NGVD29)						Screen Dimensions			Well Maintenance		
		Coordinates (feet NAD83)			Filter Pack		Screen Interval				Filter Pack		Screen Interval						Well Depth	
	Date Installed	Northing	Easting	Borehole Depth	Top	Bottom	Top	Bottom	TOC	Ground Surface	Top	Bottom	Top	Bottom	Length (feet)	Diameter (inches)	Slot Size (inches)	Date Last Developed	Date Measured	Measurement (feet below TOC)
Source Area Treatment/Upper Fines																				
MW-70-27	07/03/01	2224170.00	6005991.20	36.00	23.00	36.00	25.50	35.50	8.25	8.80	-14.20	-27.20	-16.70	-26.70	10.00	4	0.010	08/21/01	07/09/01	35.90
MW-70-28	07/03/01	2224165.50	6005991.20	62.00	45.00	62.00	50.30	60.30	8.30	8.65	-36.35	-53.35	-41.65	-51.65	10.00	4	0.010	08/21/01	07/09/01	60.70
MW-70-MNA01	02/21/07	2224281.89	6006003.22	57.00	38.00	57.00	40.00	50.00	8.36	8.76	-29.24	-48.24	-31.24	-41.24	10.00	4	0.020	03/15/07	03/15/07	50.42
MW-70-MNA02	02/13/07	2224020.66	6006052.91	47.00	33.00	46.00	35.00	45.00	8.51	8.78	-24.22	-37.22	-26.22	-36.22	10.00	4	0.020	03/06/07	03/06/07	45.58
MW-70-MNA03	02/26/07	2224096.48	6006104.81	47.00	31.00	47.00	35.00	45.00	9.18	9.47	-21.53	-37.53	-25.53	-35.53	10.00	4	0.020	03/06/07	03/06/07	45.42
MW-70-MNA04	02/14/07	2224052.55	6005800.63	47.00	32.00	46.00	35.00	45.00	8.39	8.65	-23.35	-37.35	-26.35	-36.35	10.00	4	0.020	03/05/07	03/05/07	45.66
MW-70-PMW01A	02/26/07	2224162.70	6005948.30	37.00	20.00	37.00	25.00	35.00	8.23	8.51	-11.49	-28.49	-16.49	-26.49	10.00	4	0.020	03/19/07	03/19/07	35.67
MW-70-PMW01B	02/27/07	2224163.30	6005952.70	57.00	41.90	57.00	45.00	55.00	8.21	8.49	-33.41	-48.51	-36.51	-46.51	10.00	4	0.020	03/19/07	03/19/07	55.08
IW-70-SAT01	02/22/07	2224308.07	6005882.81	57.00	20.00	57.00	25.00	55.00	9.21	9.44	-10.56	-47.56	-15.56	-45.56	30.00	4	0.020	03/26/07	03/26/07	55.40
IW-70-SAT02	02/13/07	2224286.80	6005883.15	57.00	20.00	57.00	25.00	55.00	9.19	9.45	-10.55	-47.55	-15.55	-45.55	30.00	4	0.020	04/02/07	04/02/07	55.80
IW-70-SAT03	06/05/07	2224286.83	6005948.18	57.00	22.00	57.00	25.00	55.00	9.16	9.30	-12.7	-47.7	-15.70	-45.70	30.00	4	0.020	06/14/07	06/14/07	54.80
IW-70-SAT04	06/07/07	2224281.63	6005958.82	57.00	20.00	57.00	25.00	55.00	9.01	9.16	-10.84	-47.84	-15.84	-45.84	30.00	4	0.020	06/13/07	06/13/07	52.40
IW-70-SAT05	04/24/07	2224283.87	6005900.79	57.00	21.50	57.00	25.00	55.00	9.39	9.60	-11.9	-47.4	-45.40	-45.40	30.00	4	0.020	05/09/07	05/08/07	54.00
IW-70-SAT06	05/01/07	2224279.17	6005925.75	57.00	21.50	57.00	25.00	55.00	9.14	9.36	-12.14	-47.64	-45.64	-45.64	30.00	4	0.020	05/08/07	05/08/07	55.40
IW-70-SAT07	06/06/07	2224271.70	6005956.20	57.00	21.00	57.00	25.00	55.00	8.89	9.15	-11.85	-47.85	-15.85	-45.85	30.00	4	0.020	06/20/07	06/20/07	54.90
IW-70-SAT08	02/08/07	2224266.79	6005871.29	62.00	20.00	60.00	25.00	55.00	9.00	9.31	-10.69	-50.69	-15.69	-45.69	30.00	4	0.020	04/03/07	04/03/07	53.70
IW-70-SAT09	04/23/07	2224268.38	6005896.88	57.00	22.00	57.00	25.00	55.00	9.18	9.44	-12.56	-47.56	-15.56	-45.56	30.00	4	0.020	05/09/07	05/08/07	55.00
IW-70-SAT10	05/03/07	2224267.02	6005934.82	57.00	22.00	57.00	25.00	55.00	9.26	9.42	-12.58	-47.58	-15.58	-45.58	30.00	4	0.020	05/08/07	05/08/07	55.67
IW-70-SAT11	04/19/07	2224260.42	6005960.01	57.00	22.00	57.00	25.00	55.00	8.95	9.23	-12.77	-47.77	-15.77	-45.77	30.00	4	0.020	06/20/07	06/14/07	52.90
IW-70-SAT12	06/04/07	2224266.96	6005945.79	57.00	20.00	57.00	25.00	55.00	9.24	9.41	-10.59	-47.59	-15.59	-45.59	30.00	4	0.020	06/14/07	06/14/07	55.00
IW-70-SAT13	06/01/07	2224220.16	6005941.83	57.00	20.00	57.00	25.00	55.00	9.10	9.29	-10.71	-47.71	-15.71	-15.71	30.00	4	0.020	06/11/07	06/11/07	55.50
IW-70-SAT14	05/30/07	2224216.81	6005949.90	57.00	20.00	57.00	25.00	55.00	9.20	9.32	-10.68	-47.68	-15.68	-45.68	30.00	4	0.020	06/11/07	06/11/07	55.20
IW-70-SAT15	05/31/07	2224218.67	6005973.62	57.00	20.00	57.00	25.00	55.00	9.12	9.30	-10.7	-47.7	-15.70	-45.70	30.00	4	0.020	06/12/07	06/12/07	55.50
IW-70-SAT16	05/29/07	2224206.66	6005943.24	57.00	20.00	57.00	25.00	55.00	8.93	9.18	-10.82	-47.82	-15.82	-45.82	30.00	4	0.020	06/12/07	06/12/07	53.40
IW-70-SAT17	02/28/07	2224206.64	6005963.27	57.00	21.00	57.00	25.00	55.00	9.06	9.23	-11.77	-47.77	-15.77	-45.77	30.00	4	0.020	03/15/07	03/15/07	55.50
IW-70-SAT18	02/22/07	2224206.59	6005983.32	57.00	20.00	57.00	25.00	55.00	8.61	8.81	-11.19	-48.19	-16.19	-46.19	30.00	4	0.020	03/14/07	03/14/07	55.50
IW-70-SAT19	02/21/07	2224199.76	6005923.20	57.00	20.00	57.00	25.00	55.00	8.66	8.87	-11.13	-48.13	-16.13	-26.13	30.00	4	0.020	03/28/07	03/28/07	55.20
IW-70-SAT20	02/07/07	2224186.41	6005878.23	57.00	21.00	56.00	25.00	55.00	8.63	8.86	-12.14	-47.14	-16.14	-46.14	30.00	4	0.020	03/28/07	03/28/07	53.00
IW-70-SAT21	02/13/07	2224189.36	6005933.56	57.00	20.00	57.00	25.00	55.00	8.65	8.83	-11.17	-48.17	-16.17	-46.17	30.00	4	0.020	03/26/07	03/22/07	55.67
IW-70-SAT22	02/27/07	2224189.38	6005953.39	57.00	20.00	57.00	25.00	55.00	8.69	8.90	-11.1	-48.1	-16.10	-46.10	30.00	4	0.020	03/22/07	03/21/07	55.00
IW-70-SAT23	02/12/07	2224166.93	6005881.47	57.00	20.00	57.00	25.00	55.00	8.50	8.64	-11.36	-48.36	-16.36	-46.36	30.00	4	0.020	03/27/07	03/27/07	53.60
IW-70-SAT24	02/14/07	2224166.75	6005949.70	57.00	20.00	57.00	25.00	55.00	8.30	8.56	-11.44	-48.44	-16.44	-46.44	30.00	4	0.020	03/21/07	03/20/07	55.10
IW-70-SAT25	02/06/07	2224166.69	6005963.20	62.00	21.00	59.00	25.00	55.00	8.34	8.57	-12.43	-50.43	-16.43	-46.43	30.00	4	0.020	03/20/07	03/20/07	55.58
IW-70-SAT26	02/26/07	2224147.43	6005877.11	57.00	20.00	57.00	25.00	55.00	8.10	8.34	-11.66	-48.66	-16.66	-46.66	30.00	4	0.020	03/27/07	03/27/07	55.50
IW-70-SAT27	02/27/07	2224128.90	6005902.08	57.00	20.60	57.00	25.00	55.00	7.98	8.22	-12.38	-48.78	-16.78	-46.78	30.00	4	0.020	03/12/07	03/12/07	55.58
IW-70-SAT28	03/01/07	2224146.56	6005933.34	57.00	19.00	57.00	25.00	55.00	8.13	8.30	-10.7	-48.7	-16.70	-46.70	30.00	4	0.020	04/05/07	04/04/07	55.40
IW-70-SAT29	02/15/07	2224146.68	6005953.13	57.00	20.00	57.00	25.00	55.00	8.24	8.32	-11.68	-48.68	-16.68	-46.68	30.00	4	0.020	03/14/07	03/13/07	55.33
IW-70-SAT30	02/28/07	2224131.36	6005923.41	57.00	21.40	56.00	25.00	55.00	8.22	8.18	-13.22	-47.82	-16.82	-46.82	30.00	4	0.020	03/12/07	03/12/07	55.33
IW-70-SAT31	02/28/07	2224130.42	6005942.91	57.00	21.60	57.00	25.00	55.00	8.18	8.07	-13.53	-48.93	-16.93	-46.93	30.00	4	0.020	03/13/07	03/13/07	56.08
IW-70-SAT32	02/23/07	2224097.57	6005993.18	57.00	21.00	57.00	25.00	55.00	8.53	8.77	-12.23	-48.23	-16.23	-46.23	30.00	4	0.020	03/08/07	03/08/07	55.90
IW-70-SAT33	02/22/07	2224100.53	6006013.44	57.00	21.00	57.00	25.00	55.00	8.56	8.76	-12.24	-48.24	-16.24	-46.24	30.00	4	0.020	03/08/07	03/07/07	55.50
IW-70-SAT34	02/22/07	2224100.68	6006034.35	57.00	21.75	57.00	25.00	55.00	8.65	8.92	-12.83	-48.08	-16.08	-46.08	30.00	4	0.020	03/07/07	03/07/07	56.16
IW-70-SAT35	04/13/10	2224242.29	6005863.16	57.00	21.00	57.00	25.00	55.00	9.02	9.34	-11.66	-47.66	-15.66	-45.66	30.00	4	0.020	04/21/10	04/21/10	56.00

Table 1-2 (continued)
Well Construction Summary

Well Number	Well Installation			Construction Depths (feet bgs)					Construction Elevations (feet MSL, NGVD29)						Screen Dimensions			Well Maintenance		
		Coordinates (feet NAD83)			Filter Pack		Screen Interval				Filter Pack		Screen Interval						Well Depth	
	Date Installed	Northing	Easting	Borehole Depth	Top	Bottom	Top	Bottom	TOC	Ground Surface	Top	Bottom	Top	Bottom	Length (feet)	Diameter (inches)	Slot Size (inches)	Date Last Developed	Date Measured	Measurement (feet below TOC)
IW-70-SAT36	05/10/10	2224240.96	6005881.59	57.00	21.00	57.00	25.00	55.00	8.86	9.19	-11.81	-47.81	-15.81	-45.81	30.00	4	0.020	05/13/10	05/13/10	55.00
IW-70-SAT37	04/13/10	2224229.21	6005880.64	57.00	22.00	57.00	26.50	56.50	8.96	9.06	-12.94	-47.94	-17.44	-47.44	30.00	4	0.020	05/13/10	05/13/10	55.00
IW-70-SAT38	05/12/10	2224215.28	6005887.15	57.00	21.00	57.00	25.00	55.00	8.77	9.16	-11.84	-47.84	-15.84	-45.84	30.00	4	0.020	05/17/10	05/17/10	55.00
IW-70-SAT39	04/14/10	2224199.16	6005880.05	57.00	21.00	57.00	25.00	55.00	8.63	9.04	-11.96	-47.96	-15.96	-45.96	30.00	4	0.020	04/21/10	04/21/10	55.60
IW-70-SAT40	04/14/10	2224201.29	6005893.29	57.00	21.00	57.00	25.00	55.00	8.75	9.16	-11.84	-47.84	-15.84	-45.84	30.00	4	0.020	04/22/10	04/22/10	55.00
IW-70-SAT41	04/15/10	2224196.03	6005916.09	57.00	20.50	57.00	25.00	55.00	8.55	8.92	-11.58	-48.08	-16.08	-46.08	30.00	4	0.020	04/22/10	04/22/10	55.50
IW-70-SAT42	04/16/10	2224183.70	6005896.09	57.00	21.00	57.00	25.00	55.00	8.77	8.98	-12.02	-48.02	-16.02	-46.02	30.00	4	0.020	04/23/10	04/23/10	55.00
IW-70-SAT43	04/28/10	2224183.59	6005916.47	57.00	21.00	57.00	25.00	55.00	8.42	8.84	-12.16	-48.16	-16.16	-46.16	30.00	4	0.020	05/04/10	05/04/10	55.00
IW-70-SAT44	04/16/10	2224181.51	6005974.36	57.00	21.00	57.00	25.00	55.00	8.43	8.81	-12.19	-48.19	-16.19	-46.19	30.00	4	0.020	04/23/10	04/23/10	54.90
IW-70-SAT45	04/26/10	2224193.23	6005995.85	57.00	21.00	57.00	25.00	55.00	8.30	8.67	-12.33	-48.33	-16.33	-46.33	30.00	4	0.020	05/04/10	05/04/10	55.00
IW-70-SAT46	05/13/10	2224155.27	6005884.75	57.00	21.00	57.00	25.00	55.00	8.19	8.48	-12.52	-48.52	-16.52	-46.52	30.00	4	0.020	05/17/10	05/17/10	55.00
IW-70-SAT47	05/14/10	2224180.44	6005940.92	57.00	21.00	57.00	25.00	55.00	8.44	8.86	-12.14	-48.14	-16.14	-46.14	30.00	4	0.020	05/18/10	05/18/10	55.00
IW-70-SAT48	04/27/10	2224168.70	6005984.54	57.00	21.00	57.00	25.00	55.00	8.42	8.83	-12.17	-48.17	-16.17	-46.17	30.00	4	0.020	05/03/10	05/03/10	55.00
IW-70-SAT49	04/13/10	2224166.15	6006005.15	57.00	21.00	57.00	25.00	55.00	7.96	8.37	-12.63	-48.63	-16.63	-46.63	30.00	4	0.020	04/28/10	04/28/10	55.60
IW-70-SAT50	05/13/10	2224145.73	6005926.70	57.00	21.00	57.00	25.00	55.00	7.97	8.33	-12.67	-48.67	-16.67	-46.67	30.00	4	0.020	05/18/10	05/18/10	55.00
IW-70-SAT51	04/19/10	2224144.99	6005975.30	57.00	21.00	57.00	25.00	55.00	8.00	8.38	-12.62	-48.62	-16.62	-46.62	30.00	4	0.020	04/28/10	04/28/10	55.20
IW-70-SAT52	04/28/10	2224144.89	6005996.09	57.00	21.00	57.00	25.00	55.00	7.94	8.31	-12.69	-48.69	-16.69	-46.69	30.00	4	0.020	05/04/10	05/04/10	55.00
IW-70-SAT53	04/23/10	2224143.90	6006027.57	57.00	21.00	57.00	25.00	55.00	7.77	8.20	-12.8	-48.8	-16.80	-46.80	30.00	4	0.020	04/27/10	04/27/10	56.10
IW-70-SAT54	04/21/10	2224128.75	6005967.94	57.00	21.00	57.00	25.00	55.00	7.73	8.06	-12.94	-48.94	-16.94	-46.94	30.00	4	0.020	04/26/10	04/26/10	55.00
IW-70-SAT55	04/20/10	2224128.29	6005986.14	57.00	21.00	57.00	25.00	55.00	7.80	8.23	-12.77	-48.77	-16.77	-46.77	30.00	4	0.020	04/26/10	04/26/10	55.00
IW-70-SAT56	04/20/10	2224127.58	6006005.90	57.00	20.00	57.00	25.00	55.00	7.65	8.12	-11.88	-48.88	-16.88	-46.88	30.00	4	0.020	04/26/10	04/26/10	56.00
IW-70-SAT57	04/22/10	2224128.64	6005886.17	57.00	21.00	57.00	25.00	55.00	8.13	8.35	-12.65	-48.65	-16.65	-46.65	30.00	4	0.020	04/27/10	04/27/10	56.00
Source Area Biobarrier/First Sand																				
MW-70-MNA05	01/24/07	2224052.67	6005796.72	87.00	67.00	82.00	70.00	80.00	8.46	8.67	-58.33	-73.33	-61.33	-71.33	10.00	4	0.020	02/07/07	02/07/07	81.45
MW-70-PMW02A	02/15/07	2223909.82	6005902.30	82.00	67.84	82.00	70.50	80.50	8.35	8.56	-59.28	-73.44	-61.94	-71.94	10.00	4	0.020	03/01/07	03/01/07	81.33
MW-70-PMW02B	02/21/07	2223912.08	6005905.73	102.00	86.75	102.00	90.00	100.00	8.38	8.57	-78.18	-93.43	-81.43	-91.43	10.00	4	0.020	03/05/07	03/05/07	100.25
MW-70-PMW03A	02/15/07	2223867.82	6005930.07	82.00	66.00	82.00	70.00	80.00	7.94	8.21	-57.79	-73.79	-61.79	-71.79	10.00	4	0.020	03/01/07	03/01/07	80.75
MW-70-PMW03B	02/20/07	2223870.34	6005933.39	102.00	87.00	102.00	90.00	100.00	7.88	8.21	-78.79	-93.79	-81.79	-91.79	10.00	4	0.020	02/28/07	02/28/07	100.91
IW-70-SAB01	01/23/07	2223802.98	6005831.22	120.00	57.00	82.00	60.00	80.00	7.55	7.71	-49.29	-74.29	-52.29	-72.29	20.00	4	0.020	02/06/07	02/06/07	81.30
IW-70-SAB02	01/29/07	2223817.58	6005849.48	117.00	60.00	107.00	65.00	105.00	7.58	7.78	-52.22	-99.22	-57.22	-97.22	40.00	4	0.020	02/06/07	02/06/07	105.60
IW-70-SAB03	01/31/07	2223836.63	6005867.03	107.00	60.00	107.00	65.00	105.00	8.11	8.36	-51.64	-98.64	-56.64	-96.64	40.00	4	0.020	02/23/07	02/23/07	106.50
IW-70-SAB04 (Screen 1)	01/23/07	2223846.50	6005889.02	107.00	57.00	81.00	60.00	80.00	8.14	8.33	-48.67	-72.67	-51.67	-71.67	20.00	4	0.020	02/07/07	02/07/07	105.00
IW-70-SAB04 (Screen 2)	01/23/07	2223846.50	6005889.02	107.00	84.00	106.00	85.00	105.00	8.14	8.33	-75.67	-97.67	-76.67	-96.67	20.00	4	0.020	02/07/07	02/07/07	105.00
IW-70-SAB05	02/07/07	2223861.03	6005908.25	107.00	61.50	107.00	65.00	105.00	7.83	8.07	-53.43	-98.93	-56.93	-96.93	40.00	4	0.020	02/23/07	02/23/07	105.00
IW-70-SAB06 (Screen 1)	02/05/07	2223875.37	6005927.28	117.00	60.00	80.00	65.00	80.00	8.07	8.25	-51.75	-71.75	-56.75	-71.75	15.00	4	0.020	02/27/07	02/27/07	106.08
IW-70-SAB06 (Screen 2)	02/05/07	2223875.37	6005927.28	117.00	85.00	106.00	85.00	105.00	8.07	8.25	-76.75	-97.75	-76.75	-96.75	20.00	4	0.020	02/27/07	02/27/07	106.08
IW-70-SAB07	02/08/07	2223889.57	6005946.53	107.00	60.00	107.00	65.00	105.00	8.18	8.47	-51.53	-98.53	-56.53	-96.53	40.00	4	0.020	02/28/07	02/28/07	105.00
IW-70-SAB08	01/31/07	2223904.42	6005965.58	117.00	60.00	107.00	65.00	105.00	8.36	8.60	-51.40	-98.40	-56.40	-96.40	40.00	4	0.020	02/21/07	02/21/07	105.00
IW-70-SAB09	02/01/07	2223918.58	6005984.74	107.00	59.50	107.00	65.00	105.00	8.46	8.75	-50.75	-98.25	-56.25	-96.25	40.00	4	0.020	02/19/07	02/19/07	105.00
IW-70-SAB10 (Screen 1)	02/05/07	2223927.98	6006003.88	117.00	62.00	87.00	67.00	87.00	8.05	8.09	-53.91	-78.91	-58.91	-78.91	20.00	4	0.020	02/15/07	02/15/07	108.00
IW-70-SAB10 (Screen 2)	02/05/07	2223927.98	6006003.88	117.00	91.00	108.00	92.00	107.00	8.05	8.09	-82.91	-99.91	-83.91	-98.91	15.00	4	0.020	02/15/07	02/15/07	108.00
IW-70-SAB11	02/06/07	2223947.40	6006023.16	107.00	61.00	107.00	65.00	105.00	8.02	8.19	-52.81	-98.81	-56.81	-96.81	40.00	4	0.020	02/15/07	02/15/07	105.40
IW-70-SAB12	01/29/07	2223961.76	6006042.52	117.00	60.00	106.00	65.00	105.00	8.19	8.34	-51.66	-97.66	-56.66	-96.66	40.00	4	0.020	04/04/07	04/04/07	104.70
IW-70-SAB13	04/16/07	2223976.19	6006061.42	106.00	61.00	106.00	65.00	105.00	8.54	8.85	-52.15	-97.15	-56.15	-96.15	40.00	4	0.020	05/07/07	05/07/07	105.50
IW-70-SAB14	01/25/07	2223999.69	6006072.38	107.00	58.50	106.00	60.00	105.00	8.81	9.02	-49.48	-96.98	-50.98	-95.98	45.00	4	0.020	02/08/07	02/08/07	105.00
First Sand Biobarrier 1																				
MW-70-38	09/17/03	2223522.20	6006119.80	101.50	75.00	101.50	80.00	100.00	6.85	4.37	-70.63	-97.13	-75.63	-95.63	20.00	4	0.010	09/24/03	09/16/03	102.98

Table 1-2 (continued)
Well Construction Summary

Well Number	Well Installation			Construction Depths (feet bgs)					Construction Elevations (feet MSL, NGVD29)						Screen Dimensions			Well Maintenance		
		Coordinates (feet NAD83)			Filter Pack		Screen Interval				Filter Pack		Screen Interval						Well Depth	
	Date Installed	Northing	Easting	Borehole Depth	Top	Bottom	Top	Bottom	TOC	Ground Surface	Top	Bottom	Top	Bottom	Length (feet)	Diameter (inches)	Slot Size (inches)	Date Last Developed	Date Measured	Measurement (feet below TOC)
MW-70-43A	07/19/05	2222847.90	6007211.10	150.00	82.30	108.60	85.50	105.50	10.76	7.93	-71.54	-100.67	-77.57	-97.57	10.00	2	0.010	07/22/05	NM	NM
MW-70-MNA06	05/03/07	2223223.94	6005822.01	92.00	74.50	91.00	80.00	90.00	3.95	4.30	-70.20	-86.70	-75.70	-85.70	10.00	4	0.020	05/08/07	05/08/07	90.30
MW-70-MNA07	05/10/07	2223353.52	6006032.68	102.00	86.00	102.00	90.00	100.00	4.63	5.00	-81.00	-97.00	-85.00	-95.00	10.00	4	0.020	05/17/07	05/17/07	99.70
MW-70-MNA08	03/29/07	2223428.52	6006211.91	92.00	75.00	92.00	80.00	90.00	7.66	8.00	-67.00	-84.00	-72.00	-82.00	10.00	4	0.020	04/19/07	04/19/07	90.10
MW-70-MNA11	03/28/07	2223538.78	6006673.87	94.00	75.00	94.00	80.00	90.00	8.30	8.80	-66.20	-85.20	-71.20	-81.20	10.00	4	0.020	04/18/07	04/18/07	89.90
MW-70-PMW04A	05/07/07	2223422.47	6005948.01	92.00	65.00	82.00	70.00	80.00	4.52	5.00	-60.00	-77.00	-65.00	-75.00	10.00	4	0.020	05/21/07	05/21/07	80.10
MW-70-PMW04B	05/08/07	2223422.44	6005942.78	102.00	85.00	99.00	90.00	100.00	4.53	5.00	-80.00	-94.00	-85.00	-95.00	10.00	4	0.020	05/22/07	05/22/07	100.57
MW-70-PMW05A	05/14/07	2223356.43	6005957.41	82.00	64.00	82.00	70.00	80.00	4.21	4.60	-59.40	-77.40	-65.40	-75.40	10.00	4	0.020	08/07/07	08/07/07	80.25
MW-70-PMW05B	05/14/07	2223355.68	6005965.64	102.00	87.00	102.00	90.00	100.00	4.34	4.90	-82.10	-97.10	-85.10	-95.10	10.00	4	0.020	05/23/07	05/23/07	100.35
MW-70-PMW06A	05/08/07	2223555.96	6006088.30	82.00	65.25	80.00	69.50	79.50	4.14	4.60	-60.65	-75.40	-64.90	-74.90	10.00	4	0.020	05/21/07	05/21/07	79.70
MW-70-PMW06B	05/09/07	2223550.60	6006086.34	102.00	85.00	102.00	91.00	101.00	4.16	4.60	-80.40	-97.40	-86.40	-96.40	10.00	4	0.020	05/14/07	05/14/07	101.30
IW-70-FSB101	05/01/07	2223378.30	6005796.47	107.00	56.50	106.00	60.50	105.50	4.49	4.55	-51.95	-101.45	-55.95	-100.95	45.00	4	0.020	05/08/07	05/08/07	105.50
IW-70-FSB102	04/26/07	2223377.60	6005819.46	107.00	56.50	105.00	61.00	106.00	4.38	4.45	-52.05	-100.55	-56.55	-101.55	45.00	4	0.020	05/08/07	05/08/07	103.45
IW-70-FSB103	04/25/07	2223377.79	6005842.17	107.00	56.00	107.00	60.00	105.00	4.31	4.35	-51.65	-102.65	-55.65	-100.65	45.00	4	0.020	05/07/07	05/07/07	105.00
IW-70-FSB104	04/24/07	2223378.19	6005864.40	107.00	55.95	107.00	60.00	105.00	4.35	4.45	-51.5	-102.55	-55.55	-100.55	45.00	4	0.020	NM	NM	105.00
IW-70-FSB105	04/19/07	2223377.45	6005886.78	107.00	57.00	107.00	60.00	105.00	4.51	4.75	-52.25	-102.25	-55.25	-100.25	45.00	4	0.020	05/02/07	05/02/07	105.50
IW-70-FSB106	04/18/07	2223377.49	6005910.28	107.00	57.00	107.00	60.00	105.00	4.48	4.55	-52.45	-102.45	-55.45	-100.45	45.00	4	0.020	05/02/07	05/02/07	106.50
IW-70-FSB107	04/18/07	2223376.75	6005933.24	107.00	54.00	107.00	60.00	105.00	4.39	4.65	-49.35	-102.35	-55.35	-100.35	45.00	4	0.020	05/02/07	05/02/07	103.70
IW-70-FSB108	04/17/07	2223375.30	6005955.71	107.00	56.00	107.00	60.00	105.00	4.64	4.90	-51.1	-102.1	-55.10	-100.10	45.00	4	0.020	05/01/07	05/01/07	105.30
IW-70-FSB109	04/16/07	2223375.40	6005978.82	107.00	56.00	107.00	60.00	105.00	4.72	4.85	-51.15	-102.15	-55.15	-100.15	45.00	4	0.020	04/30/07	04/30/07	105.65
IW-70-FSB110	04/11/07	2223374.32	6006001.81	107.00	54.50	107.00	59.00	104.00	4.46	4.65	-49.85	-102.35	-54.35	-99.35	45.00	4	0.020	04/26/07	04/26/07	104.50
IW-70-FSB111	04/11/07	2223374.26	6006024.77	107.00	55.00	107.00	60.70	105.70	4.08	4.25	-50.75	-102.75	-56.45	-101.45	45.00	4	0.020	04/25/07	04/25/07	105.70
IW-70-FSB112	04/10/07	2223393.48	6006037.31	107.00	55.00	107.00	60.00	105.00	4.04	4.15	-50.85	-102.85	-55.85	-100.85	45.00	4	0.020	04/24/07	04/24/07	104.70
IW-70-FSB113	04/09/07	2222413.19	6006049.43	107.00	55.00	107.00	60.00	105.00	4.26	4.45	-50.55	-102.55	-55.55	-100.55	45.00	4	0.020	04/24/07	04/23/07	104.60
IW-70-FSB114	04/03/07	2223432.63	6006061.39	107.00	57.00	107.00	60.00	105.00	4.32	4.45	-52.55	-102.55	-57.55	-102.55	45.00	4	0.020	04/23/07	04/23/07	103.90
IW-70-FSB115	05/09/07	2223476.05	6006085.17	107.00	58.00	107.00	65.00	105.00	4.21	4.35	-53.65	-102.65	-60.65	-100.65	45.00	4	0.020	05/16/07	05/16/07	106.40
IW-70-FSB116	05/08/07	2223492.98	6006094.23	107.00	55.00	107.00	60.00	105.00	4.13	4.35	-50.65	-102.65	-55.65	-100.65	45.00	4	0.020	05/17/07	05/17/07	105.60
IW-70-FSB117	05/07/07	2223514.06	6006104.40	107.00	61.00	107.00	60.00	105.00	4.09	4.35	-56.65	-102.65	-55.65	-100.65	45.00	4	0.020	05/16/07	05/16/07	105.20
IW-70-FSB118	05/02/07	2223552.40	6006128.68	107.00	55.00	107.00	60.00	105.00	4.42	4.60	-50.4	-102.4	-55.40	-100.40	45.00	4	0.020	05/15/07	05/15/07	105.45
IW-70-FSB119	05/01/07	2223569.99	6006142.21	107.00	55.00	107.00	60.00	105.00	4.44	4.65	-50.35	-102.35	-55.35	-100.35	45.00	4	0.020	05/15/07	05/15/07	105.65
IW-70-FSB120	04/30/07	2223588.30	6006155.56	107.00	55.00	107.00	60.00	105.00	4.66	4.75	-50.25	-102.25	-55.25	-100.25	45.00	4	0.020	05/15/07	05/15/07	105.50
IW-70-FSB121	04/25/07	2223606.06	6006169.28	107.00	55.00	107.00	60.00	105.00	4.68	4.75	-50.25	-102.25	-55.25	-100.25	45.00	4	0.020	05/14/07	05/14/07	105.00
IW-70-FSB122	04/24/07	2223648.83	6006186.92	107.00	55.00	107.00	60.00	105.00	4.86	4.95	-50.05	-102.05	-55.05	-100.05	45.00	4	0.020	05/14/07	05/14/07	105.40
IW-70-FSB123	04/23/07	2223664.05	6006207.36	107.00	55.00	106.00	60.00	105.00	4.96	5.15	-49.85	-100.85	-54.85	-99.85	45.00	4	0.020	05/10/07	05/10/07	105.50
IW-70-FSB124	04/19/07	2223683.35	6006219.55	107.00	53.00	107.00	60.00	105.00	5.25	5.25	-47.75	-101.75	-54.75	-99.75	45.00	4	0.020	05/09/07	05/09/07	105.00
IW-70-FSB125	04/17/07	2223703.25	6006232.21	107.00	56.00	107.00	60.00	105.00	5.21	5.35	-50.65	-101.65	-54.65	-99.65	45.00	4	0.020	05/10/07	05/10/07	105.35
IW-70-FSB126	04/16/07	2223722.50	6006244.80	107.00	54.00	107.00	60.00	105.00	4.96	4.95	-49.05	-102.05	-55.05	-100.05	45.00	4	0.020	05/08/07	05/08/07	105.95
IW-70-FSB127	04/12/07	2223742.00	6006357.78	107.00	57.00	107.00	60.00	105.00	5.14	5.35	-51.65	-101.65	-54.65	-99.65	45.00	4	0.020	04/26/07	04/26/07	105.00
IW-70-FSB128	04/11/07	2223762.66	6006265.42	107.00	55.00	107.00	60.00	105.00	5.98	6.25	-48.75	-100.75	-53.76	-98.75	45.00	4	0.020	05/17/07	05/17/07	105.20
IW-70-FSB129	04/10/07	2223780.39	6006283.15	107.00	57.00	107.00	60.00	105.00	5.95	5.95	-51.05	-101.05	-54.05	-99.05	45.00	4	0.020	04/25/07	04/25/07	105.50
IW-70-FSB130	04/05/07	2223818.20	6006309.06	107.00	56.00	107.00	60.00	105.00	5.45	5.51	-50.49	-101.49	-54.49	-99.49	45.00	4	0.020	04/24/07	04/24/07	104.00
IW-70-FSB131	04/03/07	2223835.73	6006324.05	107.00	53.00	107.00	60.00	105.00	5.39	5.45	-47.55	-101.55	-54.55	-99.55	45.00	4	0.020	04/23/07	04/23/07	105.20
IW-70-FSB132	04/02/07	2223854.61	6006338.08	112.00	55.00	105.00	60.00	105.00	5.47	5.55	-49.45	-99.45	-54.45	-99.45	45.00	4	0.020	04/19/07	04/19/07	105.30
RDO-1	08/19/05	2223799.53	6006296.04	110.00	60.50	107.00	65.10	105.10	5.21	5.35	-55.15	-101.65	-59.75	-99.75	40.00	4	0.020	08/28/07	08/28/07	105.10
RDO-2	08/18/05	2223624.53	6006182.61	110.00	60.50	107.00	65.10	105.10	4.62	4.65	-55.85	-102.35	-60.45	-100.45	40.00	4	0.020	08/29/07	08/29/07	105.10
RDO-3A	08/23/05	2223534.56	6006114.83	31.00	16.50	31.00	20.00	30.00	9.28	7.09	-9.41	-23.91	-12.91	-22.91	10.00	4	0.020	NM	NM	NM
RDO-3B	08/23/05	2223534.56	6006114.83	107.00	61.30	107.00	65.00	105.00	6.96	4.35	-56.95	-102.65	-60.65	-100.65	40.00	4	0.020	09/06/07	09/06/07	106.08

Table 1-2 (continued)
Well Construction Summary

Well Number	Well Installation			Construction Depths (feet bgs)					Construction Elevations (feet MSL, NGVD29)						Screen Dimensions			Well Maintenance		
		Coordinates (feet NAD83)			Filter Pack		Screen Interval				Filter Pack		Screen Interval						Well Depth	
	Date Installed	Northing	Easting	Borehole Depth	Top	Bottom	Top	Bottom	TOC	Ground Surface	Top	Bottom	Top	Bottom	Length (feet)	Diameter (inches)	Slot Size (inches)	Date Last Developed	Date Measured	Measurement (feet below TOC)
RDO-4	09/13/11	2223450.58	6006075.43	112.00	60.00	112.00	65.00	105.00	4.11	4.38	-55.62	-107.62	-60.62	-100.62	40.00	4	0.020	09/16/11	10/26/11	104.73
RDO-5	08/15/05	2223283.80	6005966.40	107.00	61.00	107.00	65.00	105.00	6.01	4.00	-57.00	-103.00	-61.00	-101.00	40.00	4	0.020	08/19/05	08/19/05	103.39
RDO-6A	08/30/05	2223072.00	6006285.00	109.00	90.30	107.50	95.00	105.00	11.30	9.28	-81.02	-98.22	-85.72	-95.72	10.00	4	0.020	NM	NM	NM
RDO-6B	08/25/05	2223059.00	6006258.00	145.00	125.00	142.00	130.00	140.00	10.60	8.44	-116.56	-133.56	-121.56	-131.56	10.00	4	0.020	08/19/05	08/19/05	103.39
First Sand Biobarrier 2																				
MW-70-MNA09	03/05/07	2222951.70	6006103.60	87.00	60.00	76.00	64.25	74.25	6.82	7.10	-52.90	-68.90	-57.15	-67.15	10.00	4	0.020	04/18/07	04/18/07	73.80
MW-70-MNA10	03/27/07	2223077.90	6006534.00	87.00	71.50	87.00	74.50	84.50	7.01	7.40	-64.10	-79.60	-67.10	-77.10	10.00	4	0.020	05/18/07	04/18/07	84.10
MW-70-MNA12	03/29/07	2222706.20	6006650.50	87.00	70.00	87.00	75.00	85.00	5.85	6.10	-63.90	-80.90	-68.90	-78.90	10.00	4	0.020	04/18/07	04/18/07	85.30
MW-70-PMW07A	03/22/07	2223191.90	6006440.40	77.00	61.00	77.00	65.00	75.00	7.89	8.10	-52.90	-68.90	-56.90	-66.90	10.00	4	0.020	04/04/07	04/04/07	75.40
MW-70-PMW07B	03/27/07	2223194.30	6006445.20	97.00	80.00	97.00	85.00	95.00	7.52	8.00	-72.00	-89.00	-77.00	-87.00	10.00	4	0.020	04/04/07	04/04/07	95.60
MW-70-PMW08A	03/28/07	2223146.80	6006447.80	77.00	60.00	77.00	65.00	75.00	9.04	9.20	-50.80	-67.80	-55.80	-65.80	10.00	4	0.020	04/05/07	04/05/07	75.50
MW-70-PMW08B	03/28/07	2223144.40	6006442.70	97.00	80.00	97.00	85.00	95.00	9.08	9.20	-70.80	-87.80	-75.80	-85.80	10.00	4	0.020	04/09/07	04/05/07	95.50
IW-70-FSB201	03/06/07	2222968.01	6006154.54	107.00	61.00	107.00	65.00	100.00	8.24	8.45	-52.55	-98.55	-56.55	-91.55	35.00	4	0.020	04/17/07	04/17/07	100.30
IW-70-FSB202	03/06/07	2222994.69	6006169.02	107.00	62.50	101.00	65.00	100.00	8.75	8.95	-53.55	-92.05	-56.05	-91.05	35.00	4	0.020	04/16/07	04/16/07	100.10
IW-70-FSB203	03/07/07	2223008.01	6006188.90	107.00	61.00	107.00	65.00	100.00	7.78	7.85	-53.15	-99.15	-57.15	-92.15	35.00	4	0.020	04/17/07	04/17/07	100.40
IW-70-FSB204	03/08/07	2223020.91	6006210.05	107.00	61.00	107.00	65.00	100.00	6.50	6.65	-54.35	-100.35	-58.35	-93.35	35.00	4	0.020	04/12/07	04/12/07	100.90
IW-70-FSB205	03/12/07	2223033.98	6006229.89	107.00	61.00	102.00	65.00	100.00	5.75	5.95	-55.05	-96.05	-59.05	-94.05	35.00	4	0.020	04/16/07	04/16/07	100.60
IW-70-FSB206	03/13/07	2223045.69	6006249.09	107.00	63.00	107.00	65.00	100.00	5.94	6.15	-56.85	-100.85	-58.85	-93.85	35.00	4	0.020	04/12/07	04/12/07	100.10
IW-70-FSB207	03/14/07	2223059.19	6006269.71	107.00	62.00	105.00	65.00	100.00	6.27	6.15	-55.85	-98.85	-58.85	-93.85	35.00	4	0.020	04/12/07	04/12/07	100.00
IW-70-FSB208	03/13/07	2223071.31	6006292.10	107.00	59.00	107.00	65.00	100.00	7.30	7.05	-51.95	-99.95	-57.95	-92.95	35.00	4	0.020	04/11/07	04/11/07	100.00
IW-70-FSB209	03/15/07	2223084.89	6006310.87	107.00	60.00	107.00	65.00	100.00	7.81	8.15	-51.85	-98.85	-56.85	-91.85	35.00	4	0.020	04/11/07	04/11/07	100.00
IW-70-FSB210	03/21/07	2223107.56	6006328.12	102.00	60.00	102.00	65.00	100.00	8.01	8.35	-51.65	-93.65	-56.65	-91.65	35.00	4	0.020	04/10/07	04/10/07	100.40
IW-70-FSB211	03/20/07	2223111.01	6006352.02	102.00	62.00	102.00	65.00	100.00	8.84	9.13	-52.87	-92.87	-55.87	-90.87	35.00	4	0.020	04/11/07	04/11/07	99.90
IW-70-FSB212	03/19/07	2223124.06	6006371.93	102.00	61.00	102.00	65.00	100.00	8.72	9.03	-51.97	-92.97	-55.97	-90.97	35.00	4	0.020	04/09/07	04/09/07	99.50
IW-70-FSB213	03/20/07	2223135.90	6006391.89	102.00	60.33	102.00	65.00	100.00	8.69	8.88	-51.45	-93.12	-56.12	-91.12	35.00	4	0.020	04/10/07	04/10/07	100.30
IW-70-FSB214	03/20/07	2223148.98	6006411.70	102.00	59.83	102.00	65.00	100.00	8.75	8.96	-50.87	-93.04	-56.04	-91.05	35.00	4	0.020	04/09/07	04/09/07	100.00
IW-70-FSB215	03/05/07	2223162.09	6006433.16	102.00	61.00	102.00	66.00	101.00	8.53	8.55	-52.45	-93.45	-57.45	-92.45	35.00	4	0.020	04/05/07	04/05/07	99.50
IW-70-FSB216	03/06/07	2223174.70	6006453.10	102.00	61.00	102.00	65.00	100.00	8.34	8.60	-52.40	-93.40	-56.40	-91.40	35.00	4	0.020	04/09/07	04/05/07	99.70
IW-70-FSB217	03/06/07	2223187.76	6006472.94	102.00	61.00	102.00	65.00	100.00	8.33	8.45	-52.55	-93.55	-56.55	-91.55	35.00	4	0.020	04/04/07	04/04/07	100.00
IW-70-FSB218	03/07/07	2223202.19	6006493.55	102.00	60.00	102.00	65.00	100.00	8.39	8.45	-51.55	-93.55	-56.55	-91.55	35.00	4	0.020	04/04/07	04/04/07	99.95
IW-70-FSB219	03/07/07	2223213.05	6006514.05	102.00	61.00	102.00	65.50	100.50	8.14	8.25	-52.75	-93.75	-57.25	-92.25	35.00	4	0.020	04/03/07	04/03/07	100.20
IW-70-FSB220	03/26/07	2223236.28	6006523.70	102.00	62.00	102.00	65.00	100.00	7.70	7.75	-54.25	-94.25	-57.25	-92.25	35.00	4	0.020	04/02/07	04/02/07	100.60
IW-70-FSB221	03/08/07	2223239.02	6006554.31	102.00	54.00	102.00	65.00	100.00	7.43	7.55	-46.45	-94.45	-57.45	-92.45	35.00	4	0.020	04/03/07	04/03/07	100.20
IW-70-FSB222	03/12/07	2223251.90	6006575.07	102.00	60.00	102.00	65.00	100.00	7.47	7.55	-52.45	-94.45	-57.45	-92.45	35.00	4	0.020	03/29/07	03/29/07	100.30
IW-70-FSB223	03/13/07	2223263.90	6006595.39	102.00	60.00	102.00	65.00	100.00	7.48	7.65	-52.35	-94.35	-57.35	-92.35	35.00	4	0.020	03/28/07	03/28/07	100.00
IW-70-FSB224	03/13/07	2223274.28	6006617.78	102.00	60.00	102.00	65.00	100.00	7.37	7.35	-52.65	-94.65	-57.65	-92.65	35.00	4	0.020	03/29/07	03/29/07	100.30
IW-70-FSB225	03/15/07	2223283.98	6006640.13	102.00	58.66	102.00	65.00	100.00	7.09	6.95	-51.71	-95.05	-58.05	-93.05	35.00	4	0.020	03/28/07	03/28/07	100.50
IW-70-FSB226	03/15/07	2223292.06	6006663.09	102.00	59.33	102.00	65.00	100.00	7.22	7.25	-52.08	-94.75	-57.75	-92.75	35.00	4	0.020	03/28/07	03/28/07	100.00
IW-70-FSB227	03/19/07	2223293.29	6006693.53	102.00	60.00	102.00	65.00	100.00	6.91	6.95	-53.05	-95.05	-58.05	-93.05	35.00	4	0.020	03/27/07	03/27/07	100.70
IW-70-FSB228	03/21/07	2223321.92	6006698.54	102.00	60.00	102.00	65.00	100.00	6.94	6.85	-53.15	-95.15	-58.05	-93.05	35.00	4	0.020	03/28/07	03/28/07	98.45
IW-70-FSB229	03/22/07	2223341.19	6006714.70	102.00	60.00	102.00	65.00	100.00	6.83	7.05	-52.95	-94.95	-57.95	-92.95	35.00	4	0.020	03/27/07	03/27/07	99.70
Shell Horizon Biobarrier 1																				
MW-70-MNA13	07/17/07	2222951.31	6006096.89	128.00	113.00	128.00	115.00	125.00	6.64	6.90	-106.10	-121.10	-108.10	-118.10	10.00	4	0.020	07/30/07	07/30/07	121.50
MW-70-PMW09	06/28/07	2223253.90	6006226.30	132.00	117.00	132.00	120.00	130.00	6.82	7.00	-110.00	-125.00	-113.00	-123.00	10.00	4	0.020	07/10/07	07/10/07	130.59
MW-70-PMW10	08/02/07	2223215.80	6006247.20	132.00	116.00	132.00	120.00	130.00	6.60	7.00	-109.00	-125.00	-113.00	-123.00	10.00	4	0.020	07/09/07	07/09/07	130.70
IW-70-SHB101	05/22/07	2223111.23	6006007.76	137.00	101.00	137.00	105.00	130.00	7.77	7.95	-93.05	-129.05	-97.05	-122.05	25.00	4	0.200	06/28/07	06/28/07	128.10
IW-70-SHB102	07/17/07	2223127.25	6006021.88	132.00	102.00	132.00	105.00	130.00	8.10	8.45	-93.55	-123.55	-96.55	-121.55	25.00	4	0.200	07/31/07	07/31/07	129.52

Table 1-2 (continued)
Well Construction Summary

Well Number	Well Installation			Construction Depths (feet bgs)					Construction Elevations (feet MSL, NGVD29)						Screen Dimensions			Well Maintenance		
		Coordinates (feet NAD83)			Filter Pack		Screen Interval				Filter Pack		Screen Interval						Well Depth	
	Date Installed	Northing	Easting	Borehole Depth	Top	Bottom	Top	Bottom	TOC	Ground Surface	Top	Bottom	Top	Bottom	Length (feet)	Diameter (inches)	Slot Size (inches)	Date Last Developed	Date Measured	Measurement (feet below TOC)
IW-70-SHB103	07/26/07	2223136.27	6006040.01	132.00	100.00	132.00	105.00	130.00	8.65	8.86	-91.14	-123.14	-96.14	-121.14	25.00	4	0.200	08/08/07	08/08/07	121.40
IW-70-SHB104	07/30/07	2223144.96	6006057.96	132.00	100.00	132.00	105.00	130.00	8.83	9.03	-90.97	-122.97	-95.97	-120.97	25.00	4	0.200	08/02/07	08/02/07	129.90
IW-70-SHB105	07/31/07	2223154.22	6006076.12	132.00	101.00	132.00	105.00	130.00	8.67	8.82	-92.18	-123.18	-96.18	-121.18	25.00	4	0.200	08/08/07	08/08/07	129.15
IW-70-SHB106	07/10/07	2223163.10	6006093.86	132.00	99.00	132.00	105.00	130.00	8.36	8.89	-90.11	-123.11	-96.11	-121.11	25.00	4	0.200	08/02/07	08/02/07	129.40
IW-70-SHB107	06/18/07	2223172.96	6006113.11	132.00	100.00	132.00	105.00	130.00	8.40	8.45	-91.55	-123.55	-96.55	-121.55	25.00	4	0.200	07/03/07	07/03/07	129.80
IW-70-SHB108 (Screen 1)	06/20/07	2223181.38	6006129.32	132.00	100.00	111.50	105.00	110.00	8.58	8.65	-91.35	-102.85	-96.35	-101.35	5.00	4	0.200	07/10/07	07/10/07	130.00
IW-70-SHB108 (Screen 2)	06/20/07	2223181.38	6006129.32	132.00	113.50	132.00	115.00	130.00	8.58	8.65	-104.85	-123.35	-106.35	-121.35	15.00	4	0.200	07/10/07	07/10/07	130.00
IW-70-SHB109 (Screen 1)	06/21/07	2223190.18	6006146.80	135.00	94.50	110.50	100.00	110.00	8.20	8.45	-86.05	-102.05	-91.55	-101.55	10.00	4	0.200	07/11/07	07/11/07	130.55
IW-70-SHB109 (Screen 2)	06/21/07	2223190.18	6006146.80	135.00	114.00	135.00	115.00	130.00	8.20	8.45	-105.55	-126.55	-106.55	-121.55	15.00	4	0.200	07/11/07	07/11/07	130.55
IW-70-SHB110	06/26/07	2223200.36	6006164.79	132.00	101.00	132.00	105.00	130.00	8.50	8.45	-92.55	-123.55	-96.55	-121.55	25.00	4	0.200	07/31/07	07/31/07	129.25
IW-70-SHB111 (Screen 1)	07/09/07	2223228.40	6006171.38	132.00	95.00	112.50	100.00	110.00	8.31	8.55	-86.45	-103.95	-91.45	-101.45	10.00	4	0.200	07/30/07	07/30/07	127.54
IW-70-SHB111 (Screen 2)	07/09/07	2223228.40	6006171.38	132.00	115.00	132.00	120.00	130.00	8.31	8.55	-106.45	-123.45	-111.45	-121.45	10.00	4	0.200	07/30/07	07/30/07	127.54
IW-70-SHB112 (Screen 1)	06/28/07	2223218.79	6006200.98	132.00	94.50	110.50	100.00	110.00	8.21	8.25	-86.25	-102.25	-91.75	-101.75	10.00	4	0.200	07/11/07	07/11/07	130.50
IW-70-SHB112 (Screen 2)	06/28/07	2223218.79	6006200.98	132.00	113.00	132.00	115.00	130.00	8.21	8.25	-104.75	-123.75	-106.75	-121.75	15.00	4	0.200	07/11/07	07/11/07	130.50
IW-70-SHB113	05/16/07	2223226.40	6006218.07	132.00	100.00	132.00	105.00	130.00	7.49	7.60	-92.40	-124.40	-97.40	-122.40	25.00	4	0.020	05/24/07	06/27/07	131.20
IW-70-SHB114	05/21/07	2223236.09	6006235.54	137.00	100.00	137.00	105.00	130.00	6.72	6.85	-93.15	-130.15	-98.15	-123.15	25.00	4	0.020	05/23/07	05/23/07	130.35
IW-70-SHB115 (Screen 1)	05/30/07	2223244.79	6006254.10	132.00	100.00	110.50	105.00	110.00	6.33	6.55	-93.45	-103.95	-98.45	-103.45	5.00	4	0.020	06/26/07	06/26/07	130.00
IW-70-SHB115 (Screen 2)	05/30/07	2223244.79	6006254.10	132.00	111.00	132.00	115.00	130.00	6.33	6.55	-104.45	-125.45	-108.45	-123.45	15.00	4	0.020	06/26/07	06/26/07	130.00
IW-70-SHB116 (Screen 1)	5/31/1/07	2223254.20	6006271.93	132.00	99.00	111.50	105.00	110.00	6.41	6.55	-92.45	-104.95	-98.45	-103.45	5.00	4	0.020	06/27/07	06/27/07	130.80
IW-70-SHB116 (Screen 2)	5/31-6/1/07	2223254.20	6006271.93	132.00	112.50	132.00	115.00	130.00	6.41	6.55	-105.95	-125.45	-108.45	-123.45	15.00	4	0.020	06/27/07	06/27/07	130.80
IW-70-SHB117 (Screen 1)	06/06/07	2223262.61	6006290.12	132.00	100.50	111.00	105.50	110.50	6.48	6.65	-93.85	-104.35	-98.85	-103.85	5.00	4	0.020	07/09/07	07/09/07	130.00
IW-70-SHB117 (Screen 2)	06/06/07	2223262.61	6006290.12	132.00	113.00	131.00	115.50	130.50	6.48	6.65	-106.35	-124.35	-108.85	-123.85	15.00	4	0.020	07/09/07	07/09/07	130.00
IW-70-SHB118 (Screen 1)	06/13/07	2223279.23	6006304.06	132.00	93.00	110.50	100.00	110.00	6.31	6.55	-86.45	-103.95	-93.45	-103.45	10.00	4	0.020	07/02/07	07/02/07	128.70
IW-70-SHB118 (Screen 2)	06/13/07	2223279.23	6006304.06	132.00	114.00	132.00	115.00	130.00	6.31	6.55	-107.45	-125.45	-108.45	-123.45	15.00	4	0.020	07/02/07	07/02/07	128.70
IW-70-SHB119 (Screen 1)	06/19/07	2223288.27	6006320.24	132.00	98.00	110.50	100.00	110.00	7.00	7.25	-90.75	-103.25	-92.75	-102.75	10.00	4	0.020	06/28/07	06/28/07	130.30
IW-70-SHB119 (Screen 2)	06/19/07	2223288.27	6006320.24	132.00	114.00	132.00	115.00	130.00	7.00	7.25	-106.75	-124.75	-107.75	-122.75	15.00	4	0.020	06/28/07	06/28/07	130.30
IW-70-SHB120 (Screen 1)	06/21/07	2223289.71	6006342.88	137.00	96.00	112.00	100.00	110.00	7.83	8.05	-87.95	-103.95	-91.95	-101.95	10.00	4	0.020	06/27/07	06/28/07	130.60
IW-70-SHB120 (Screen 2)	06/21/07	2223289.71	6006342.88	137.00	117.00	132.00	120.00	130.00	7.83	8.05	-108.95	-123.95	-111.95	-121.95	10.00	4	0.020	06/28/07	06/28/07	130.60
IW-70-SHB121 (Screen 1)	06/14/07	2223298.01	6006360.94	132.00	98.00	112.00	100.00	110.00	8.57	8.75	-89.25	-103.25	-91.25	-101.25	10.00	4	0.020	06/27/07	06/27/07	130.00
IW-70-SHB121 (Screen 2)	06/14/07	2223298.01	6006360.94	132.00	117.00	132.00	120.00	130.00	8.57	8.75	-108.25	-123.25	-111.25	-121.25	10.00	4	0.020	06/27/07	06/27/07	130.00
IW-70-SHB122 (Screen 1)	06/13/07	2223303.82	6006380.97	132.00	96.00	112.00	100.00	110.00	8.15	8.35	-87.65	-103.65	-91.65	-101.65	10.00	4	0.020	06/26/07	06/26/07	130.00
IW-70-SHB122 (Screen 2)	06/13/07	2223303.82	6006380.97	132.00	117.50	132.00	120.00	130.00	8.15	8.35	-109.15	-123.65	-111.65	-121.65	10.00	4	0.020	06/26/07	06/26/07	130.00
IW-70-SHB123 (Screen 1)	06/11/07	2223302.16	6006405.55	132.00	97.00	112.00	100.00	110.00	6.46	6.55	-90.45	-105.45	-93.45	-103.45	10.00	4	0.020	06/26/07	06/26/07	130.00
IW-70-SHB123 (Screen 2)	06/11/07	2223302.16	6006405.55	132.00	119.00	132.00	120.00	130.00	6.46	6.55	-112.45	-125.45	-113.45	-123.45	10.00	4	0.020	06/26/07	06/26/07	130.00
IW-70-SHB124 (Screen 1)	06/01/07	2223337.35	6006409.84	132.00	100.00	112.00	105.00	110.00	7.58	7.65	-92.35	-104.35	-97.35	-102.35	5.00	4	0.020	06/19/07	06/19/07	130.00
IW-70-SHB124 (Screen 2)	06/01/07	2223337.35	6006409.84	132.00	113.00	132.00	115.00	130.00	7.58	7.65	-105.35	-124.35	-107.35	-122.35	15.00	4	0.020	06/19/07	06/19/07	130.00
IW-70-SHB125	05/31/07	2223336.14	6006431.77	135.00	100.00	135.00	105.00	130.00	6.53	6.65	-93.35	-128.35	-98.35	-123.35	15.00	4	0.020	06/20/07	06/20/07	130.30
IW-70-SHB126 (Screen 1)	05/30/07	2223345.25	6006449.68	132.00	101.00	112.00	105.00	110.00	6.57	6.65	-94.35	-105.35	-98.35	-103.35	5.00	4	0.020	06/21/07	06/21/07	130.60
IW-70-SHB126 (Screen 2)	05/30/07	2223345.25	6006449.68	132.00	113.08	132.00	115.00	130.00	6.57	6.65	-106.43	-125.35	-108.35	-123.35	15.00	4	0.020	06/21/07	06/21/07	130.60
IW-70-SHB127	05/17/07	2223353.91	6006467.89	132.00	99.00	132.00	103.50	128.50	6.79	6.85	-92.15	-125.15	-96.65	-121.65	25.00	4	0.020	05/24/07	05/24/07	127.60
IW-70-SHB128	05/16/07	2223362.83	6006485.63	132.00	102.00	132.00	105.00	130.00	7.61	7.75	-94.25	-124.25	-97.25	-122.25	25.00	4	0.020	05/22/07	05/22/07	130.85
IW-70-SHB129 (Screen 1)	07/11/07	2223371.33	6006504.09	132.00	96.00	112.00	100.00	110.00	8.58	8.75	-87.25	-103.25	-91.25	-101.25	10.00	4	0.020	08/01/07	08/01/07	130.00
IW-70-SHB129 (Screen 2)	07/11/07	2223371.33	6006504.09	132.00	116.00	132.00	120.00	130.00	8.58	8.75	-107.25	-123.25	-111.25	-121.25	10.00	4	0.020	08/01/07	08/01/07	130.00
IW-70-SHB130 (Screen 1)	07/13/07	2223380.74	6006521.04	132.00	97.00	110.00	100.00	110.00	9.01	9.16	-87.84	-100.84	-100.84	-110.84	10.00	4	0.020	08/01/07	08/01/07	130.00
IW-70-SHB130 (Screen 2)	07/13/07	2223380.74	6006521.04	132.00	116.00	132.00	120.00	130.00	9.01	9.16	-106.84	-122.84	-110.84	-120.84	10.00	4	0.020	08/01/07	08/01/07	130.00
IW-70-SHB131 (Screen 1)	07/12/07	2223389.92	6006538.90	132.00	97.00	112.00	100.00	110.00	9.06	9.19	-87.81	-102.81	-90.81	-100.81	10.00	4	0.020	08/01/07	08/01/07	129.90
IW-70-SHB131 (Screen 2)	07/12/07	2223389.92	6006538.90	132.00	116.00	132.00	120.00	130.00	9.06	9.19	-106.81	-122.81	-110.81	-120.81	10.00	4	0.020	08/01/07	08/01/07	129.90

Table 1-2 (continued)
Well Construction Summary

Well Number	Well Installation			Construction Depths (feet bgs)					Construction Elevations (feet MSL, NGVD29)						Screen Dimensions			Well Maintenance		
		Coordinates (feet NAD83)			Filter Pack		Screen Interval				Filter Pack		Screen Interval						Well Depth	
	Date Installed	Northing	Easting	Borehole Depth	Top	Bottom	Top	Bottom	TOC	Ground Surface	Top	Bottom	Top	Bottom	Length (feet)	Diameter (inches)	Slot Size (inches)	Date Last Developed	Date Measured	Measurement (feet below TOC)
IW-70-SHB132 (Screen 1)	06/07/07	2223398.76	6006557.30	135.00	101.00	111.20	105.00	110.00	8.57	8.65	-92.35	-102.55	-96.35	-101.35	5.00	4	0.020	06/25/07	06/25/07	132.90
IW-70-SHB132 (Screen 2)	06/07/07	2223398.76	6006557.30	135.00	113.50	135.00	115.00	130.00	8.57	8.65	-104.85	-126.35	-110.35	-120.35	15.00	4	0.020	06/25/07	06/25/07	132.90
IW-70-SHB133 (Screen 1)	06/05/07	2223407.64	6006574.95	132.00	98.00	113.00	100.00	110.00	8.34	8.55	-89.45	-104.45	-91.45	-101.45	10.00	4	0.020	06/21/07	06/21/07	130.35
IW-70-SHB133 (Screen 2)	06/05/07	2223407.64	6006574.95	132.00	118.00	132.00	120.00	130.00	8.34	8.55	-109.45	-123.45	-111.45	-121.45	10.00	4	0.020	06/21/07	06/21/07	130.35
IW-70-SHB134 (Screen 1)	06/04/07	2223416.72	6006593.08	132.00	100.00	117.00	105.00	115.00	9.01	9.15	-90.85	-107.85	-95.85	-105.85	10.00	4	0.020	06/20/07	06/20/07	130.60
IW-70-SHB134 (Screen 2)	06/04/07	2223416.72	6006593.08	132.00	118.00	132.00	120.00	130.00	9.01	9.15	-108.85	-122.85	-110.85	-120.85	10.00	4	0.020	06/20/07	06/20/07	130.60
IW-70-SHB135 (Screen 1)	07/02/07	2223426.03	6006610.97	134.00	99.00	112.50	105.00	110.00	9.17	9.28	-89.72	-103.22	-95.72	-100.72	5.00	4	0.020	07/11/07	07/11/07	130.50
IW-70-SHB135 (Screen 2)	07/02/07	2223426.03	6006610.97	134.00	117.00	134.00	120.00	130.00	9.17	9.28	-107.72	-124.72	-110.72	-120.72	10.00	4	0.020	07/11/07	07/11/07	130.50
IW-70-SHB136 (Screen 1)	07/09/07	2223436.16	6006627.91	132.00	103.00	112.00	105.00	110.00	9.12	9.24	-93.76	-102.76	-95.76	-100.76	5.00	4	0.020	07/11/07	07/11/07	130.33
IW-70-SHB136 (Screen 2)	07/09/07	2223436.16	6006627.91	132.00	116.00	132.00	120.00	130.00	9.12	9.24	-106.76	-122.76	-110.76	-120.76	10.00	4	0.020	07/11/07	07/11/07	130.33
IW-70-SHB137 (Screen 1)	05/29/07	2223444.88	6006646.03	137.00	100.00	117.00	105.00	115.00	9.02	9.14	-90.86	-107.86	-95.86	-100.86	10.00	4	0.020	06/19/07	06/19/07	130.90
IW-70-SHB137 (Screen 2)	05/29/07	2223444.88	6006646.03	137.00	118.00	137.00	120.00	130.00	9.02	9.14	-108.86	-127.86	-110.86	-120.86	10.00	4	0.020	06/19/07	06/19/07	130.90
IW-70-SHB201	05/23/07	2222510.01	6006405.50	137.00	100.00	132.00	105.00	130.00	7.63	7.45	-92.55	-124.55	-97.55	-122.55	25.00	4	0.020	08/02/07	08/02/07	130.50
IW-70-SHB217	05/24/07	2222624.89	6006709.51	137.00	100.00	137.00	105.00	130.00	8.67	8.70	-91.30	-128.30	-96.30	-121.30	25.00	4	0.020	07/12/07	07/12/07	130.50
IW-70-SHB232	05/23/07	2222844.20	6006893.69	137.00	101.00	131.00	105.00	130.00	7.93	7.85	-93.15	-123.15	-97.15	-122.15	25.00	4	0.020	07/12/07	07/12/07	130.50
Shell Horizon Biobarrier 3																				
MW-70-MNA14	07/13/07	2222157.30	6007254.70	130.00	110.00	130.00	115.00	125.00	8.86	9.20	-100.80	-120.80	-105.80	-115.80	10.00	4	0.020	07/30/07	07/30/07	125.80
MW-70-PMW11A	08/14/07	2222552.20	6007015.00	97.00	81.00	95.00	85.00	95.00	8.13	8.40	-72.60	-86.60	-76.60	-86.60	10.00	4	0.020	09/07/07	09/07/07	95.95
MW-70-PMW11B	08/23/07	2222545.80	6007013.60	127.00	110.00	127.00	115.00	125.00	7.95	8.30	-101.70	-118.70	-106.70	-116.70	10.00	4	0.020	09/06/07	09/06/07	125.30
MW-70-PMW12A	08/14/07	2222526.80	6007058.10	97.00	79.00	97.00	85.00	95.00	7.86	8.20	-70.80	-88.80	-76.80	-86.80	10.00	4	0.020	09/05/07	09/05/07	94.90
MW-70-PMW12B	08/10/07	2222518.10	6007051.40	127.00	110.00	127.00	115.00	125.00	8.09	8.30	-101.70	-118.70	-106.70	-116.70	10.00	4	0.020	08/22/07	08/22/07	125.50
IW-70-SHB301 (Screen 1)	07/26/07	2222266.64	6006863.01	132.00	76.00	97.00	80.00	95.00	7.96	8.23	-67.77	-88.77	-71.77	-86.77	15.00	4	0.020	08/08/07	08/08/07	129.20
IW-70-SHB301 (Screen 2)	07/26/07	2222266.64	6006863.01	132.00	103.00	132.00	105.00	130.00	7.96	8.23	-94.77	-123.77	-96.77	-121.77	25.00	4	0.020	08/08/07	08/08/07	129.20
IW-70-SHB302 (Screen 1)	07/31/07	2222286.47	6006875.79	132.00	76.00	97.00	80.00	95.00	8.07	8.38	-67.62	-88.62	-71.62	-86.62	15.00	4	0.020	08/08/07	08/08/07	129.75
IW-70-SHB302 (Screen 2)	07/31/07	2222286.47	6006875.79	132.00	102.50	132.00	105.00	130.00	8.07	8.38	-94.12	-123.62	-96.62	-121.62	25.00	4	0.020	08/08/07	08/08/07	129.75
IW-70-SHB303 (Screen 1)	08/01/07	2222306.99	6006888.87	132.00	75.50	96.50	80.00	95.00	8.46	8.78	-66.72	-87.72	-71.22	-86.22	15.00	4	0.020	08/09/07	08/09/07	130.00
IW-70-SHB303 (Screen 2)	08/01/07	2222306.99	6006888.87	132.00	101.50	132.00	105.00	130.00	8.46	8.78	-92.72	-123.22	-96.22	-121.22	25.00	4	0.020	08/09/07	08/09/07	130.00
IW-70-SHB304 (Screen 1)	07/23/07	2222330.86	6006904.23	132.00	77.00	100.00	82.00	97.00	8.67	9.07	-67.93	-90.93	-72.93	-87.93	10.00	4	0.020	08/10/07	08/10/07	127.00
IW-70-SHB304 (Screen 2)	07/23/07	2222330.86	6006904.23	132.00	104.00	132.00	107.00	127.00	8.67	9.07	-94.93	-122.93	-97.93	-117.93	20.00	4	0.020	08/10/07	08/10/07	127.00
IW-70-SHB305 (Screen 1)	07/24/07	2222347.45	6006915.08	132.00	76.00	97.00	80.50	95.50	8.88	9.15	-66.85	-87.85	-71.35	-86.35	15.00	4	0.020	08/13/07	08/13/07	130.50
IW-70-SHB305 (Screen 2)	07/24/07	2222347.45	6006915.08	132.00	103.00	132.00	105.50	130.50	8.88	9.15	-93.85	-122.85	-96.35	-121.35	25.00	4	0.020	08/13/07	08/13/07	130.50
IW-70-SHB306 (Screen 1)	08/07/07	2222367.42	6006928.33	132.00	76.50	97.00	80.00	95.00	8.91	9.11	-67.39	-87.89	-70.89	-85.89	15.00	4	0.020	08/15/07	08/15/07	130.00
IW-70-SHB306 (Screen 2)	08/07/07	2222367.42	6006928.33	132.00	103.00	131.50	105.00	130.00	8.91	9.11	-93.89	-122.39	-95.89	-120.89	25.00	4	0.020	08/15/07	08/15/07	130.00
IW-70-SHB307 (Screen 1)	08/08/07	2222387.55	6006941.19	133.00	77.00	97.00	80.00	95.00	8.70	9.13	-67.87	-87.87	-70.87	-85.87	15.00	4	0.020	08/22/07	08/22/07	130.00
IW-70-SHB307 (Screen 2)	08/08/07	2222387.55	6006941.19	133.00	102.50	133.00	105.00	130.00	8.70	9.13	-93.37	-123.87	-95.87	-120.87	25.00	4	0.020	08/22/07	08/22/07	130.00
IW-70-SHB308 (Screen 1)	08/10/07	2222407.92	6006954.21	132.00	76.40	97.00	80.00	95.00	8.89	9.07	-67.33	-87.93	-70.93	-85.93	15.00	4	0.020	08/16/07	08/16/07	129.60
IW-70-SHB308 (Screen 2)	08/10/07	2222407.92	6006954.21	132.00	103.00	132.00	105.00	130.00	8.89	9.07	-93.93	-122.93	-95.93	-120.93	25.00	4	0.020	08/16/07	08/16/07	129.60
IW-70-SHB309 (Screen 1)	07/26/07	2222427.88	6006967.25	132.00	75.00	97.00	80.00	95.00	8.89	9.09	-65.91	-87.91	-70.91	-85.91	15.00	4	0.020	08/23/07	08/23/07	130.50
IW-70-SHB309 (Screen 2)	07/26/07	2222427.88	6006967.25	132.00	103.00	130.50	105.00	130.00	8.89	9.09	-93.91	-121.41	-95.91	-120.91	25.00	4	0.020	08/23/07	08/23/07	130.50
IW-70-SHB310 (Screen 1)	07/30/07	2222447.97	6006980.50	137.00	77.00	95.00	80.00	95.00	8.73	9.11	-67.89	-85.89	-70.89	-85.89	15.00	4	0.020	08/27/07	08/27/07	130.70
IW-70-SHB310 (Screen 2)	07/30/07	2222447.97	6006980.50	137.00	103.00	132.00	105.00	130.00	8.73	9.11	-93.89	-122.89	-95.89	-120.89	25.00	4	0.020	08/27/07	08/27/07	130.70
IW-70-SHB311 (Screen 1)	08/01/07	2222466.38	6006996.03	132.00	76.00	98.00	80.00	95.00	8.78	9.06	-66.94	-88.94	-70.94	-85.94	15.00	4	0.020	08/14/07	08/14/07	130.00
IW-70-SHB311 (Screen 2)	08/01/07	2222466.38	6006996.03	132.00	103.00	132.00	105.00	130.00	8.78	9.06	-93.94	-122.94	-95.94	-120.94	25.00	4	0.020	08/14/07	08/14/07	130.00
IW-70-SHB312 (Screen 1)	07/25/07	2222488.35	6007006.82	132.00	76.70	102.00	80.00	100.00	8.67	8.78	-67.92	-93.22	-71.22	-91.22	20.00	4	0.020	08/13/07	08/13/07	131.00
IW-70-SHB312 (Screen 2)	07/25/07	2222488.35	6007006.82	132.00	108.00	132.00	110.00	130.00	8.67	8.78	-99.22	-123.22	-101.22	-121.22	20.00	4	0.020	08/13/07	08/13/07	131.00
IW-70-SHB313 (Screen 1)	07/23/07	2222508.44	6007019.69	132.00	76.00	103.00	80.50	100.50	8.26	8.46	-67.54	-94.54	-72.04	-92.04	20.00	4	0.020	08/10/07	08/10/07	129.55
IW-70-SHB313 (Screen 2)	07/23/07	2222508.44	6007019.69	132.00	108.00	132.00	110.50	130.50	8.26	8.46	-99.54	-123.54	-102.04	-122.04	20.00	4	0.020	08/10/07	08/10/07	129.55

Table 1-2 (continued)
Well Construction Summary

Well Number	Well Installation			Construction Depths (feet bgs)					Construction Elevations (feet MSL, NGVD29)						Screen Dimensions			Well Maintenance		
		Coordinates (feet NAD83)			Filter Pack		Screen Interval				Filter Pack		Screen Interval						Well Depth	
	Date Installed	Northing	Easting	Borehole Depth	Top	Bottom	Top	Bottom	TOC	Ground Surface	Top	Bottom	Top	Bottom	Length (feet)	Diameter (inches)	Slot Size (inches)	Date Last Developed	Date Measured	Measurement (feet below TOC)
IW-70-SHB314 (Screen 1)	08/09/07	2222527.76	6007033.48	132.00	75.00	102.00	80.00	100.00	7.88	8.05	-66.95	-93.95	-71.95	-91.95	20.00	4	0.020	08/20/07	08/20/07	129.80
IW-70-SHB314 (Screen 2)	08/09/07	2222527.76	6007033.48	132.00	107.00	132.00	110.00	130.00	7.88	8.05	-98.95	-123.95	-101.95	-121.95	20.00	4	0.020	08/20/07	08/20/07	129.80
IW-70-SHB315 (Screen 1)	08/08/07	2222544.33	6007043.63	132.00	75.50	102.00	80.00	100.00	8.06	8.25	-67.25	-93.75	-71.75	-91.75	20.00	4	0.020	08/21/07	08/21/07	129.80
IW-70-SHB315 (Screen 2)	08/08/07	2222544.33	6007043.63	132.00	107.50	132.00	110.00	130.00	8.06	8.25	-99.25	-123.75	-101.75	-121.75	20.00	4	0.020	08/21/07	08/21/07	129.80
IW-70-SHB316 (Screen 1)	07/18/07	2222561.57	6007056.54	132.00	75.50	102.50	80.00	100.00	8.77	8.95	-66.55	-93.55	-71.05	-91.05	20.00	4	0.020	08/07/07	08/07/07	129.70
IW-70-SHB316 (Screen 2)	07/18/07	2222561.57	6007056.54	132.00	107.00	132.00	110.00	130.00	8.77	8.95	-98.05	-123.05	-101.05	-121.05	20.00	4	0.020	08/07/07	08/07/07	129.70
IW-70-SHB317 (Screen 1)	08/13/07	2222587.72	6007073.02	132.00	75.00	102.00	80.00	100.00	8.75	8.95	-66.05	-93.05	-71.05	-91.05	20.00	4	0.020	08/16/07	08/16/07	130.35
IW-70-SHB317 (Screen 2)	08/13/07	2222587.72	6007073.02	132.00	107.00	132.00	110.00	130.00	8.75	8.95	-98.05	-123.05	-101.05	-121.05	20.00	4	0.020	08/16/07	08/16/07	130.35
IW-70-SHB318 (Screen 1)	08/07/07	2222611.82	6007089.34	132.00	75.00	101.50	80.00	100.00	7.76	7.85	-67.15	-93.65	-72.15	-92.15	20.00	4	0.020	08/21/07	08/21/07	130.30
IW-70-SHB318 (Screen 2)	08/07/07	2222611.82	6007089.34	132.00	105.50	132.00	110.00	130.00	7.76	7.85	-97.65	-124.15	-102.15	-121.15	20.00	4	0.020	08/21/07	08/21/07	130.30
IW-70-SHB319 (Screen 1)	08/01/07	2222631.06	6007100.61	132.00	75.00	101.00	80.00	100.00	7.54	7.85	-67.15	-93.15	-72.15	-92.15	20.00	4	0.020	08/22/07	08/22/07	128.80
IW-70-SHB319 (Screen 2)	08/01/07	2222631.06	6007100.61	132.00	107.00	132.00	110.00	130.00	7.54	7.85	-99.15	-124.15	-102.15	-121.15	20.00	4	0.020	08/22/07	08/22/07	128.80
IW-70-SHB320 (Screen 1)	07/23/07	2222648.10	60076112.67	137.00	75.00	102.66	80.00	100.00	7.78	8.15	-66.85	-94.51	-71.85	-91.85	20.00	4	0.020	08/20/07	08/20/07	130.50
IW-70-SHB320 (Screen 2)	07/23/07	2222648.10	60076112.67	137.00	105.50	137.00	110.00	130.00	7.78	8.15	-97.35	-128.85	-101.85	-121.85	20.00	4	0.020	08/20/07	08/20/07	130.50
Second Sand Biobarrier 1																				
MW-70-14	03/19/98	2223055.91	6007290.58	172.50	154.00	187.00	160.00	170.00	11.01	8.51	-145.49	-178.49	-151.49	-161.49	10.00	5	0.010	03/26/98	04/09/98	172.50
MW-70-15	03/23/98	2221994.30	6008038.90	175.00	155.00	175.00	160.80	170.30	9.41	7.14	-147.86	-167.86	-153.66	-163.16	9.50	5	0.010	03/30/98	04/08/98	172.82
MW-70-43B	07/19/05	2222847.90	6007211.10	150.00	131.30	150.00	135.50	145.50	10.58	7.93	-123.37	-142.07	-127.57	-137.57	20.00	2	0.010	07/22/05	NM	NM
MW-70-49	09/14/11	2222561.84	6007405.30	167.00	120.00	167.00	125.00	165.00	7.89	8.27	-111.73	-158.73	-116.73	-156.73	40.00	4	0.020	09/16/11	10/26/11	164.62
MW-70-MNA15	06/04/07	2222706.18	6006650.49	160.00	136.00	151.00	140.00	150.00	5.96	6.10	-129.90	-144.90	-133.90	-143.90	10.00	4	0.020	06/18/07	06/18/07	151.10
MW-70-MNA16	06/04/07	2222145.26	6007245.65	155.00	135.50	155.00	140.50	150.50	8.65	9.22	-126.28	-145.78	-131.28	-141.28	10.00	4	0.020	07/26/07	07/26/07	150.60
MW-70-MNA17	06/06/07	2222026.24	6007015.43	167.00	135.00	152.00	140.00	150.00	6.80	7.00	-128.00	-145.00	-133.00	-143.00	10.00	4	0.020	06/19/07	06/19/07	140.35
MW-70-PMW13A	08/20/07	2222293.78	6007163.19	137.00	119.00	137.00	125.00	135.00	7.47	4.60	-114.40	-132.40	-120.40	-130.40	10.00	4	0.020	09/06/07	09/06/07	135.60
MW-70-PMW13B	08/15/07	2222303.10	6007169.25	157.00	139.00	157.00	145.00	155.00	7.48	4.70	-134.30	-152.30	-140.30	-150.30	10.00	4	0.020	09/05/07	09/05/07	155.15
MW-70-PMW14A	08/22/07	2222253.67	6007203.49	140.00	123.00	140.00	128.00	138.00	7.64	8.00	-115.00	-132.00	-120.00	-130.00	10.00	4	0.020	09/05/07	09/05/07	139.35
MW-70-PMW14B	08/22/07	2222270.94	6007216.27	160.00	138.00	160.00	149.00	159.00	7.92	8.20	-129.80	-151.80	-140.80	-150.80	10.00	4	0.020	09/04/07	09/04/07	159.15
IW-70-SSB101	06/19/07	2222076.99	6007048.06	170.00	120.00	170.00	125.00	165.00	7.77	7.85	-112.15	-162.15	-117.15	-157.15	40.00	4	0.020	07/24/07	07/24/07	163.40
IW-70-SSB102	07/13/07	2222093.15	6007066.72	167.00	120.00	167.00	125.00	165.00	7.82	7.85	-112.15	-159.15	-117.15	-157.15	40.00	4	0.020	07/25/07	07/25/07	165.30
IW-70-SSB103	07/16/07	2222111.08	6007083.61	167.00	121.00	167.00	125.00	165.00	7.69	7.65	-113.35	-159.35	-117.35	-157.35	40.00	4	0.020	07/26/07	07/26/07	165.50
IW-70-SSB104	07/18/07	2222131.43	6007097.29	167.00	119.60	167.00	125.00	165.00	7.54	7.65	-111.95	-159.35	-117.35	-157.35	40.00	4	0.020	07/24/07	07/24/07	165.75
IW-70-SSB105	07/19/07	2222151.11	6007109.73	167.00	121.00	167.00	125.00	165.00	7.51	7.75	-113.25	-159.25	-117.25	-157.25	40.00	4	0.020	07/25/07	07/25/07	165.75
IW-70-SSB106	08/16/07	2222171.01	6007123.05	167.00	121.00	167.00	125.00	165.00	8.04	8.05	-112.95	-158.95	-116.95	-156.95	40.00	4	0.020	08/28/07	08/28/07	165.20
IW-70-SSB107	08/20/07	2222191.24	6007136.11	167.00	120.00	167.00	125.00	165.00	7.93	7.95	-112.05	-159.05	-117.05	-157.05	40.00	4	0.020	08/29/07	08/29/07	165.20
IW-70-SSB108	08/21/07	2222207.47	6007147.74	167.00	120.10	167.00	125.00	165.00	8.02	8.05	-112.05	-158.95	-116.95	-156.95	40.00	4	0.020	08/30/07	08/30/07	165.20
IW-70-SSB109	08/23/07	2222230.86	6007162.75	167.00	120.00	167.00	125.75	165.75	7.96	8.10	-111.90	-158.90	-117.65	-157.65	40.00	4	0.020	08/20/07	08/20/07	165.81
IW-70-SSB110	08/10/07	2222256.03	6007179.36	167.00	122.00	167.00	125.00	165.00	8.90	9.05	-112.95	-157.95	-115.95	-155.95	40.00	4	0.020	08/29/07	08/29/07	165.30
IW-70-SSB111	08/09/07	2222270.57	6007189.28	167.00	120.50	167.00	125.00	165.00	8.90	9.05	-111.45	-157.95	-115.95	-155.95	40.00	4	0.020	08/14/07	08/14/07	165.00
IW-70-SSB112	06/20/07	2222290.37	6007203.00	167.00	120.00	170.00	125.00	165.00	7.87	8.05	-111.95	-161.95	-116.95	-156.95	40.00	4	0.020	07/16/07	07/16/07	165.50
IW-70-SSB113	08/08/07	2222310.44	6007215.97	167.00	121.50	167.00	125.00	165.00	7.84	7.85	-113.65	-159.15	-117.15	-157.15	40.00	4	0.020	08/15/07	08/14/07	165.00
IW-70-SSB114	07/11/07	2222330.31	6007229.33	167.00	121.00	167.00	125.00	165.00	7.68	7.85	-113.15	-159.15	-117.15	-157.15	40.00	4	0.020	07/19/07	07/19/07	166.00
IW-70-SSB115	07/10/07	2222350.66	6007242.08	167.00	120.00	167.00	125.00	165.00	7.98	8.05	-111.95	-158.95	-116.95	-156.95	40.00	4	0.020	07/18/07	07/18/07	165.50
IW-70-SSB116	06/27/07	2222370.00	6007255.79	167.00	120.00	167.00	125.00	165.00	8.42	8.45	-111.55	-158.55	-116.55	-156.55	40.00	4	0.020	07/17/07	07/17/07	165.50
IW-70-SSB117	07/02/07	2222389.76	6007268.13	167.00	120.50	167.00	125.00	165.00	8.45	8.55	-111.95	-158.45	-116.45	-156.45	40.00	4	0.020	07/18/07	07/18/07	165.50
IW-70-SSB118	08/13/07	2222409.23	6007281.32	167.00	122.00	165.00	125.00	165.00	8.54	8.75	-113.25	-156.25	-116.25	-156.25	40.00	4	0.020	08/28/07	08/28/07	164.15
IW-70-SSB119	08/14/07	2222429.64	6007294.68	167.00	121.00	167.00	125.00	165.00	9.06	9.34	-111.66	-157.66	-115.66	-155.66	40.00	4	0.020	08/27/07	08/27/07	166.30
IW-70-SSB120	08/13/07	2222452.33	6007308.58	167.00	122.00	167.00	125.00	165.00	8.24	8.75	-113.25	-158.25	-116.25	-156.25	40.00	4	0.020	08/23/07	08/23/07	163.30
IW-70-SSB121	06/26/07	2222469.91	6007320.42	167.00	120.00	167.00	125.00	165.00	8.34	8.55	-111.45	-158.45	-116.45	-156.45	40.00	4	0.020	07/19/07	07/19/07	165.50

Table 1-2 (continued)
Well Construction Summary

Well Number	Well Installation			Construction Depths (feet bgs)					Construction Elevations (feet MSL, NGVD29)						Screen Dimensions			Well Maintenance		
		Coordinates (feet NAD83)			Filter Pack		Screen Interval				Filter Pack		Screen Interval						Well Depth	
	Date Installed	Northing	Easting	Borehole Depth	Top	Bottom	Top	Bottom	TOC	Ground Surface	Top	Bottom	Top	Bottom	Length (feet)	Diameter (inches)	Slot Size (inches)	Date Last Developed	Date Measured	Measurement (feet below TOC)
IW-70-SSB122	06/21/07	2222487.22	6007331.79	170.00	120.00	170.00	125.00	165.00	8.20	8.45	-111.55	-161.55	-116.55	-156.55	40.00	4	0.020	07/18/07	07/18/07	165.50
Point of Compliance/Upper Fines																				
MW-70-02	07/21/97	2224602.60	6005708.20	32.00	17.00	32.00	20.00	30.00	7.85	5.90	-11.10	-26.10	-14.10	-24.10	10.00	4	0.010	08/04/97	07/21/97	33.95
MW-70-10	04/13/00	2223724.30	6007203.10	41.50	27.00	41.50	30.10	40.10	10.10	8.37	-18.63	-33.13	-21.73	-31.73	10.00	4	0.010	04/24/00	04/24/00	42.28
MW-70-17	04/14/00	2222804.90	6005569.00	41.50	27.00	41.50	30.00	40.00	4.58	2.85	-24.15	-38.65	-27.15	-37.15	10.00	4	0.010	05/01/00	05/01/00	42.10
MW-70-22	04/17/00	2221971.60	6007067.40	32.00	17.00	32.00	20.00	30.00	10.21	8.67	-8.33	-23.33	-11.33	-21.33	10.00	4	0.010	05/03/00	05/03/00	32.09
Point of Compliance/First Sand																				
MW-70-11	04/21/00	2223726.20	6007217.50	102.00	67.80	102.00	80.00	100.00	11.07	8.56	-59.24	-93.44	-71.44	-91.44	20.00	5	0.010	04/24/00	04/24/00	101.70
MW-70-16	03/26/98	2222003.60	6008020.10	110.00	89.50	110.00	94.70	104.70	9.76	7.19	-82.31	-102.81	-87.51	-97.51	10.00	5	0.010	04/01/98	04/09/98	107.22
MW-70-35	03/01/02	2222536.90	6005190.60	103.00	84.00	103.00	90.00	100.00	6.31	3.67	-80.33	-99.33	-86.33	-96.33	10.00	4	0.010	03/04/02	05/02/02	103.50
MW-70-POC01	09/21/07	2224584.60	6005713.40	96.00	77.00	96.00	80.00	90.00	8.88	6.41	-70.59	-89.59	-73.59	-83.59	10.00	4	0.020	10/02/07	10/02/07	93.50
Point of Compliance/Shell Horizon																				
MW-70-23	04/18/00	2223145.60	6008894.60	132.00	103.90	132.00	110.00	130.00	11.17	8.46	-95.44	-123.54	-101.54	-121.54	20.00	5	0.010	04/21/00	04/21/00	132.00
Point of Compliance/Second Sand																				
MW-70-21	04/25/00	2221200.70	6008513.60	172.00	143.00	172.00	150.00	170.00	7.70	5.33	-137.67	-166.67	-144.67	-164.67	20.00	5	0.010	04/27/00	04/27/00	170.20
MW-70-36	03/04/02	2221672.00	6006269.80	170.00	143.00	170.00	150.00	160.00	9.04	6.71	-136.29	-163.29	-143.29	-153.29	10.00	4	0.010	03/08/02	05/23/02	163.23
Point of Compliance/Deep Sand																				
MW-70-POC02	09/19/07	2223170.00	6008885.30	240.00	186.00	202.00	190.00	200.00	8.25	8.68	-177.32	-193.32	-181.32	-191.32	10.00	4	0.020	10/03/07	10/03/07	200.50
MW-70-POC03	09/11/07	2221664.30	6006260.90	205.00	187.00	205.00	190.00	200.00	9.64	7.19	-179.81	-197.81	-182.81	-192.81	10.00	4	0.020	10/03/07	10/03/07	203.30
MW-70-POC04	10/18/07	2221192.20	6008511.20	210.00	191.00	210.00	195.00	205.00	8.50	5.87	-185.13	-204.13	-189.13	-199.13	10.00	4	0.020	10/07/08	10/07/08	208.48

Acronyms/Abbreviations:
bgs - below ground surface
MSL - mean sea level
NM - not measured
NAD83 - North American Datum of 1983
NGVD29 - National Geodetic Vertical Datum of 1929
TOC - top of casing

Table 1-3
Contaminants of Concern and Target Cleanup Goals

Contaminant of Concern	Exposure Rate	Receptor(s)	Target Cleanup Goal (µg/L)
Chloroform	Ingestion	Future residential groundwater users	100
1,1-Dichloroethene	Ingestion	Future residential groundwater users	6
cis-1,2-Dichloroethene	Ingestion	Future residential groundwater users	6
trans-1,2-Dichloroethene	Ingestion	Future residential groundwater users	10
Tetrachloroethene	Ingestion	Future residential groundwater users	5
Trichloroethene	Ingestion	Future residential groundwater users	5
Vinyl Chloride	Ingestion	Future residential groundwater users	0.5

Source: ECC/Geosyntec (2008a) – Remedial Action Work Plan. Target Cleanup Goals are based on Applicable or Relevant and Appropriate Requirements. Reevaluation of the Target Cleanup Goals may be required at a future date, per trends in remedial performance.

Note:
µg/L – micrograms per liter

Table 1-4
Summary of Performance Monitoring Rationale

Measurement	Primary Purpose
Groundwater elevations	Ensure barriers are not impacting groundwater flow direction
VOCs	Monitor changes in plume size/location
VOCs and Dhcs	Evaluate remedial performance
Geochemistry (DO, ORP, pH, nitrate, sulfate, ferrous iron)	Determine conditions are present for Dhc survival and proliferation
TOC and VFAs	Determine distribution of EVO
qPCR (Dhc and *vcr*A)	Track growth and distribution of Dhc in groundwater
Dissolved metals	Evaluate impacts to groundwater quality

Acronyms/Abbreviations:

Dhc – *Dehalococcoides*
DO – dissolved oxygen
EVO – emulsified vegetable oil
ORP – oxidation-reduced potential
pH – potential of hydrogen
qPCR – quantitation polymerase chain reaction
TOC – total organic carbon
VFA – volatile fatty acid
*vcr*A – vinyl chloride reductase A gene
VOC – volatile organic compound

Table 1-5
Injection Summary

Barrier	Total No. of Injection Wells	Target EVO per Well (gallons)	Total EVO (gallons)	Total Amended Volume (gallons)	EVO/Bioaugment Start-End	Time Since Last Injection (10/28/2011)
SAB	14	476	6,664	662,600	Nov 2008-Jan 2009 (12 weeks)	142 weeks
SSB1	22	423	9,306	925,500	Feb 2009 – March 2009 (4 weeks)	136 weeks
SHB3	20	545	10,980	1,089,000	March 2009 – Sept 2009 (25 weeks)	108 weeks
FSB2	29	370	10,730	1,067,000	Oct 2009-Nov 2009 (6 weeks)	103 weeks
FSB1	36	476	16,660	1,656,000	Dec 2009 – Feb 2010 (10 weeks)	88 weeks
SHB1	37	155 to 194	6,587	629,300	Feb 2010-March 2010 (7 weeks)	81 weeks
SATG	57	234	13,340	1,326,000	May 2010-Aug 2010 (10 weeks)	64 weeks

Acronyms/Abbreviations:
EVO = Emulsified Vegetable Oil

Table 2-1
Groundwater Level Data

Well No.	Screen Interval (feet above MSL)	TOC Elevation (feet above MSL)	Date	Time	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet +/- MSL)	Date	Time	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet +/- MSL)	Date	Time	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet +/- MSL)	Date	Time	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet +/- MSL)	Date	Time	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet +/- MSL)
Upper Fines																						
MW-70-03*	20-30	8.03	8/18/2008	NA	NA	NA	8/24/2009	15:00	19.19	-11.16	8/25/2010	16:40	13.7	-5.67	7/25/2011	10:19	9.50	-1.47	10/26/2011	7:58	9.61	-1.58
Source Area Treatment/Upper Fines																						
MW-70-PMW01A	25-35	8.23	8/18/2008	18:20	20.31	-12.08	8/24/2009	8:15	21.60	-13.37	8/25/2010	9:15	15.21	-6.98	7/25/2011	8:22	8.95	-0.72	10/26/2011	6:30	9.06	-0.83
MW-70-PMW01B	45-55	8.21	8/18/2008	18:21	22.02	-13.81	8/24/2009	8:20	22.04	-13.83	8/25/2010	9:20	16.25	-8.04	7/25/2011	8:21	9.21	-1.00	10/26/2011	6:41	9.30	-1.09
MW-70-27[a]	26-36	8.25	8/21/2008	NA	21.70	-13.45	8/24/2009	8:23	21.78	-13.53	8/25/2010	9:30	15.20	-6.95	7/25/2011	8:48	9.10	-0.85	10/26/2011	6:53	9.20	-0.95
MW-70-28[a]	50-60	8.30	8/21/2008	NA	22.13	-13.83	8/24/2009	8:27	21.81	-13.51	8/25/2010	9:33	17.02	-8.72	7/25/2011	8:57	9.43	-1.13	10/26/2011	7:05	9.54	-1.24
MW-70-MNA01	40-50	8.36	8/18/2008	18:25	22.48	-14.12	8/24/2009	8:31	22.32	-13.96	8/25/2010	9:36	17.07	-8.71	7/25/2011	9:09	9.57	-1.21	10/26/2011	7:20	9.68	-1.32
MW-70-MNA02	35-45	8.51	8/18/2008	18:11	22.23	-13.72	8/24/2009	9:25	20.45**	-11.94	8/25/2010	9:42	15.13	-6.62	7/25/2011	9:23	9.23	-0.72	10/26/2011	7:37	9.33	-0.82
MW-70-MNA03	35-45	9.18	8/18/2008	18:08	20.90	-11.72	8/24/2009	8:40	21.46	-12.28	8/25/2010	9:50	15.73	-6.55	7/25/2011	9:28	9.85	-0.67	10/26/2011	7:45	9.96	-0.78
MW-70-MNA04	35-45	8.39	8/18/2008	18:01	20.52	-12.13	8/24/2009	8:42	21.06	-12.67	8/25/2010	8:53	15.37	-6.98	7/25/2011	11:04	9.20	-0.81	10/26/2011	8:32	9.32	-0.93
Source Area Biobarrier/First Sand																						
MW-70-PMW02A	71-81	8.35	8/18/2008	17:48	23.06	-14.71	8/24/2009	8:46	22.82	-14.47	8/25/2010	10:01	17.45	-9.10	7/25/2011	9:57	9.52	-1.17	10/26/2011	8:45	9.63	-1.28
MW-70-PMW02B	90-100	8.38	8/18/2008	17:49	23.11	-14.73	8/24/2009	8:47	22.88	-14.50	8/25/2010	10:07	17.50	-9.12	7/25/2011	10:06	9.57	-1.19	10/26/2011	8:58	9.67	-1.29
IW-70-SAB06	65-80/85-105	8.07	8/18/2008	17:53	22.81	-14.74	8/24/2009	8:49	22.60	-14.53	8/25/2010	10:12	17.22	-9.15	7/25/2011	10:53	9.27	-1.20	10/26/2011	9:47	9.38	-1.31
MW-70-MNA05	70-80	8.46	8/18/2008	18:03	22.90	-14.44	8/24/2009	8:50	22.79	-14.33	8/25/2010	10:20	17.45	-8.99	7/25/2011	11:01	9.55	-1.09	10/26/2011	9:55	9.65	-1.19
MW-70-PMW03A	70-80	7.94	8/18/2008	17:54	22.72	-14.78	8/24/2009	8:53	22.49	-14.55	8/25/2010	10:23	17.05	-9.11	7/25/2011	10:34	9.56	-1.62	10/26/2011	9:25	9.67	-1.73
MW-70-PMW03B	90-100	7.88	8/18/2008	17:55	22.69	-14.81	8/24/2009	8:54	22.44	-14.56	8/25/2010	10:28	17.05	-9.17	7/25/2011	10:45	9.07	-1.19	10/26/2011	9:36	9.18	-1.30
First Sand Biobarrier 1																						
MW-70-38	80-100	6.85	8/18/2008	17:26	22.20	-15.35	8/24/2009	9:03	21.80	-14.95	8/25/2010	10:31	16.32	-9.47	7/25/2011	15:20	8.10	-1.25	10/26/2011	10:20	8.60	-1.75
IW-70-FSB118	60-105	4.42	8/18/2008	17:31	19.71	-15.29	8/24/2009	9:07	19.30	-14.88	8/25/2010	10:35	13.97	-9.55	7/25/2011	12:55	5.79	-1.37	10/26/2011	10:10	6.20	-1.78
MW-70-PMW06A	70-80	4.14	8/18/2008	17:38	19.42	-15.28	8/24/2009	9:10	19.04	-14.90	8/25/2010	10:38	13.68	-9.54	7/25/2011	13:10	5.50	-1.36	10/26/2011	10:29	6.00	-1.86
MW-70-PMW06B	91-101	4.16	8/18/2008	17:36	19.50	-15.34	8/24/2009	9:14	19.05	-14.89	8/25/2010	10:42	13.68	-9.52	7/25/2011	13:15	5.47	-1.31	10/26/2011	10:38	6.02	-1.86
MW-70-PMW04A	70-80	4.52	8/18/2008	17:14	19.90	-15.38	8/24/2009	9:16	19.47	-14.95	8/25/2010	10:47	14.03	-9.51	7/25/2011	13:51	5.78	-1.26	10/26/2011	10:46	6.24	-1.72
MW-70-PMW04B	90-100	4.53	8/18/2008	17:17	19.05	-14.52	8/24/2009	9:20	19.51	-14.98	8/25/2010	10:52	14.05	-9.52	7/25/2011	13:49	5.82	-1.29	10/26/2011	10:55	6.36	-1.83
IW-70-FSB108	60-105	4.64	8/18/2008	17:09	20.02	-15.38	8/24/2009	9:23	19.63	-14.99	8/25/2010	10:55	14.21	-9.57	7/25/2011	13:45	6.11	-1.47	10/26/2011	11:07	6.55	-1.91
MW-70-PMW05A	70-80	4.21	8/18/2008	17:06	19.65	-15.44	8/24/2009	9:30	19.21	-15.00	8/25/2010	11:07	13.82	-9.61	7/25/2011	13:40	5.51	-1.30	10/26/2011	11:16	6.06	-1.85
MW-70-PMW05B	90-100	4.34	8/18/2008	17:07	19.80	-15.46	8/24/2009	9:31	19.34	-15.00	8/25/2010	11:15	14.00	-9.66	7/25/2011	13:30	5.68	-1.34	10/26/2011	11:23	6.11	-1.77
RDO-5	65-105	6.01	8/18/2008	17:00	21.55	-15.54	8/24/2009	9:55	21.05	-15.04	8/25/2010	11:47	15.58	-9.57	7/25/2011	14:00	7.33	-1.32	10/26/2011	12:20	7.73	-1.72
MW-70-MNA08	80-90	7.66	8/18/2008	16:15	23.27	-15.61	8/24/2009	9:40	22.74	-15.08	8/25/2010	11:55	17.21	-9.55	7/25/2011	14:40	8.99	-1.33	10/26/2011	12:38	9.41	-1.75
MW-70-MNA06	80-90	3.95	8/18/2008	16:53	19.48	-15.53	8/24/2009	9:45	19.03	-15.08	8/25/2010	12:02	13.58	-9.63	7/25/2011	14:12	5.30	-1.35	10/26/2011	12:27	5.70	-1.75
MW-70-MNA11	80-90	8.30	8/18/2008	16:10	24.55	-16.25	8/24/2009	9:50	23.90	-15.60	8/25/2010	12:10	18.35	-10.05	7/25/2011	16:29	9.73	-1.43	10/26/2011	13:05	10.25	-1.95
MW-70-MNA07	90-100	4.63	8/18/2008	17:20	20.18	-15.55	8/24/2009	10:00	19.74	-15.11	8/25/2010	12:20	14.29	-9.66	7/25/2011	13:25	5.97	-1.34	10/26/2011	12:35	6.43	-1.80
First Sand Biobarrier 2																						
MW-70-PMW07A	65-75	7.89	8/18/2008	16:02	24.43	-16.54	8/24/2009	10:23	23.61	-15.72	8/25/2010	12:45	17.97	-10.08	7/25/2011	16:16	9.10	-1.21	10/26/2011	13:51	9.97	-2.08
MW-70-PMW07B	85-95	7.52	8/18/2008	16:05	26.44	-18.92	8/24/2009	10:24	25.43	-17.91	8/25/2010	12:50	19.60	-12.08	7/25/2011	16:18	9.44	-1.92	10/26/2011	13:57	9.95	-2.43
IW-70-FSB216	65-100	8.34	8/18/2008	15:56	26.89	-18.55	8/24/2009	10:34	26.50	-18.16	8/25/2010	13:00	19.13	-10.79	7/25/2011	16:05	10.75	-2.41	10/26/2011	13:42	11.34	-3.00
MW-70-PMW08A	65-75	9.04	8/18/2008	16:36	26.77	-17.73	8/24/2009	10:28	25.98	-16.94	8/25/2010	13:10	20.30	-11.26	7/25/2011	16:21	10.96	-1.92	10/26/2011	13:35	11.50	-2.46
MW-70-PMW08B	85-95	9.08	8/18/2008	16:35	28.26	-19.18	8/24/2009	10:30	27.32	-18.24	8/25/2010	13:15	21.58	-12.50	7/25/2011	16:23	11.24	-2.16	10/26/2011	13:25	11.84	-2.76
MW-70-MNA09	64-74	6.82	8/18/2008	15:17	23.30	-16.48	8/24/2009	10:49	22.68	-15.86	8/25/2010	13:20	17.08	-10.26	7/25/2011	15:58	8.53	-1.71	10/26/2011	14:12	9.00	-2.18
MW-70-MNA10	75-85	7.01	8/18/2008	15:07	26.67	-19.66	8/24/2009	10:37	25.63	-18.62	8/25/2010	13:26	19.69	-12.68	7/25/2011	16:52	9.24	-2.23	10/26/2011	14:05	9.85	-2.84
MW-70-MNA12	75-85	5.85	8/18/2008	14:51	26.22	-20.37	8/24/2009	11:04	25.07	-19.22	8/25/2010	13:40	19.23	-13.38	7/25/2011	17:20	8.33	-2.48	10/26/2011	14:40	8.91	-3.06
MW-70-43A*	86-106	10.76	8/18/2008	NA	NA	NA	8/24/2009	15:30	30.44	-19.68	8/25/2010	14:00	24.20	-13.44	7/26/2011	8:13	13.37	-2.61	10/26/2011	15:05	14.04	-3.28
Shell Horizon Biobarrier 1																						
MW-70-PMW09	120-130	6.82	8/18/2008	15:30	26.61	-19.79	8/24/2009	11:24	25.39	-18.57	8/25/2010	14:20	19.47	-12.65	7/25/2011	15:35	8.75	-1.93	10/26/2011	12:44	9.35	-2.53
IW-70-SHB113	105-130	7.49	8/18/2008	15:46	24.20	-16.71	8/24/2009	11:25	23.44	-15.95	8/25/2010	14:26	20.00	-12.51	7/25/2011	15:41	9.64	-2.15	10/26/2011	12:50	10.25	-2.76
MW-70-PMW10	120-130	6.60	8/18/2008	15:29	26.46	-19.86	8/24/2009	11:15	25.20	-18.60	8/25/2010	14:30	19.29	-12.69	7/25/2011	15:47	8.61	-2.01	10/26/2011	12:58	9.26	-2.66
IW-70-SHB217	105-130	8.67	8/18/2008	14:37	29.97	-21.30	8/24/2009	11:12	27.80	-19.13	8/25/2010	14:34	21.82	-13.15	7/25/2011	17:10	11.10	-2.43	10/26/2011	14:29	11.80	-3.13
MW-70-MNA13	115-125	6.64	8/18/2008	15:20	26.42	-19.78	8/24/2009	11:19	25.24	-18.60	8/25/2010	14:20	19.38	-12.74	7/25/2011	15:58	8.75	-2.11	10/26/2011	14:20	9.37	-2.73
Shell Horizon Biobarrier 3																						
MW-70-PMW11A	85-95	8.13	8/18/2008	14:08	28.81	-20.68	8/24/2009	12:55	27.51	-19.38	8/25/2010	14:45	22.19	-14.06	7/26/2011	9:10	10.10	-1.97	10/26/2011	15:31	11.68	-3.55
MW-70-PMW11B	115-125	7.95	8/18/2008	14:07	28.51	-20.56	8/24/2009	12:57	27.12	-19.17	8/25/2010	14:48	21.20	-13.25	7/26/2011	12:55	10.22	-2.27	10/26/2011	15:26	10.90	-2.95
IW-70-SHB310	80-95/105-130	8.73	8/18/2008	14:17	29.37	-20.64	8/24/2009	13:06	25.54	-16.81	8/25/2010	15:02	22.34	-13.61	7/26/2011	13:05	10.12	-1.39	10/26/2011	15:19	12.95	-4.22
MW-70-PMW12A	85-95	7.86	8/18/2008	14:01	28.54	-20.68	8/24/2009	13:00	27.20	-19.34	8/25/2010	15:06	22.28	-14.42	7/26/2011	8:43	10.21	-2.35	10/26/2011	15:43	10.97	-3.11
MW-70-PMW12B	115-125	8.09	8/18/2008	14:03	28.65	-20.56	8/24/2009	13:02	27.30	-19.21	8/25/2010	15:15	21.35	-13.26	7/26/2011	8:51	10.43	-2.34	10/26/2011	15:38	10.83	-2.74
MW-70-MNA14	115-125	8.86	8/18/2008	11:09	30.02	-21.16	8/24/2009	13:10	28.47	-19.61	8/25/2010	15:20	23.67	-14.81	7/26/2011	10:21	11.35	-2.49	10/26/2011	16:40	12.20	-3.34
Second Sand Biobarrier 1																						
MW-70-PMW13A	125-135	7.47	8/18/2008	13:41	27.37	-19.90	8/24/2009	13:30	26.16	-18.69	8/25/2010	15:40	20.25	-12.78	7/26/2011	9:44	9.11	-1.64	10/26/2011	16:10	9.93	-2.46
MW-70-PMW13B	145-155	7.48	8/18/2008	13:42	27.44	-19.96	8/24/2009	13:31	26.09	-18.61	8/25/2010	15:45	20.16	-12.68	7/26/2011	9:52	9.10	-1.62	10/26/2011	16:15	9.90	-2.42
IW-70-SSB109	126-166	7.96	8/18/2008	13:40	28.82	-20.86	8/24/2009	13:39	28.10	-20.14	8/25/2010	15:49	21.83	-13.87	7/26/2011	11:15	10.95	-2.99	10/26/2011	16:22	11.52	-3.56
MW-70-PMW14A	128-138	7.64	8/18/2008	12:02	27.62	-19.98	8/24/2009	13:35	26.05	-18.41	8/25/2010	15:54	20.10	-12.46	7/26/2011	11:05	8.97	-1.33	10/26/2011	16:27	9.80	-2.16
MW-70-PMW14B	149-159	7.92	8/18/2008	11:50	28.13	-20.21	8/24/2009	13:36	26.37	-18.45	8/25/2010	16:00	20.45	-12.53	7/26/2011	11:10	9.35	-1.43	10/26/2011	16:32	10.05	-2.13
MW-70-MNA16	141-151	8.65	8/18/2008	11:04	29.79	-21.14	8/24/2009	13:43	27.27	-18.62	8/25/2010	16:04	22.43	-13.78	7/26/2011	10:08	11.09	-2.44	10/26/2011	16:45	11.93	-3.28
MW-70-MNA17	140-150	6.80	8/18/2008	11:38	28.24	-21.44	8/24/2009	13:49	27.04	-20.24	8/25/2010	16:09	21.33	-14.53	7/26/2011	11:23	9.50	-2.70	10/26/2011	17:04	10.76	-3.96
MW-70-MNA15	140-150	5.96	8/18/2008	14:49	26.23	-20.27	8/24/2009	13:53	24.60	-18.64	8/25/2010	16:15	18.97	-13.01	7/25/2011	17:15	7.92	-1.96	10/26/2011	14:46	8.65	-2.69
MW-70-15	161-171	9.41	8/18/2008	10:28	31.48	-22.07	8/24/2009	14:00	29.97	-20.56	8/25/2010	16:26	23.97	-14.56	7/26/2011	10:02	12.44	-3.03	10/26/2011	17:10	13.35	-3.94
MW-70-14*	160-170	11.01	8/18/2008	NA	NA	NA	8/24/2009	14:46	30.19	-19.18	8/25/2010	16:30	24.24	-13.23	7/26/2011	8:03	13.21	-2.20	10/26/2011	14:55	13.85	-2.84
MW-70-43B*	136-146	10.58	8/18/2008	NA	NA	NA	8/24/2009	15:35	30.41	-19.83	8/25/2010	16:35	24.25	-13.67	7/26/2011	8:29	13.17	-2.59	10/26/2011	15:10	13.85	-3.27
MW-70-49	125-165	7.89																	10/26/2011	16:00	11.00	-3.11

Table 2-1 (continued)
Groundwater Level Data

Well No.	Screen Interval (feet above MSL)	TOC Elevation (feet above MSL)	Date	Time	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet +/- MSL)	Date	Time	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet +/- MSL)	Date	Time	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet +/- MSL)	Date	Time	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet +/- MSL)	Date	Time	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet +/- MSL)
Point of Compliance/Upper Fines																						
MW-70-02	20-30	7.85	8/18/2008	9:51	18.88	-11.03	8/24/2009	14:15	19.77	-11.92	8/25/2010	15:17	14.28	-6.43	7/25/2011	8:00	8.33	-0.48	10/26/2011	18:15	8.32	-0.47
MW-70-10	30-40	10.10	8/18/2008	14:59	19.33	-9.23	8/24/2009	14:29	20.29	-10.19	8/25/2010	15:51	15.44	-5.34	7/25/2011	16:35	10.41	-0.31	10/26/2011	13:19	10.73	-0.63
MW-70-17	30-40	4.58	8/18/2008	16:47	15.00	-10.42	8/24/2009	15:35	15.39	-10.81	8/25/2010	16:37	11.39	-6.81	7/25/2011	14:25	5.85	-1.27	10/26/2011	17:55	6.03	-1.45
MW-70-22	20-30	10.21	8/18/2008	11:30	12.51	-2.30	8/24/2009	15:40	12.65	-2.44	8/25/2010	16:52	11.85	-1.64	7/26/2011	11:30	10.37	-0.16	10/26/2011	16:50	10.16	0.05
Point of Compliance/First Sand																						
MW-70-POC01	80-90	8.88	8/18/2008	9:55	22.92	-14.04	8/24/2009	12:48	22.80	-13.92	8/25/2010	13:50	17.55	-8.67	7/25/2011	7:52	9.81	-0.93	10/26/2011	18:05	10.15	-1.27
MW-70-11	80-100	11.07	8/18/2008	14:57	28.67	-17.60	8/24/2009	14:08	27.76	-16.69	8/25/2010	15:10	22.10	-11.03	7/25/2011	16:42	12.73	-1.66	10/26/2011	13:10	13.35	-2.28
MW-70-35	90-100	6.31	8/18/2008	16:42	25.53	-19.22	8/24/2009	14:30	24.34	-18.03	8/25/2010	15:33	18.66	-12.35	7/25/2011	14:32	8.45	-2.14	10/26/2011	17:46	9.11	-2.80
MW-70-16	95-105	9.76	8/18/2008	10:23	31.49	-21.73	8/24/2009	13:52	30.01	-20.25	8/25/2010	14:54	23.99	-14.23	7/26/2011	12:15	12.45	-2.69	10/26/2011	18:30	13.36	-3.60
Point of Compliance/Shell Horizon																						
MW-70-23	110-130	11.17	8/18/2008	13:54	33.63	-22.46	8/24/2009	15:40	32.39	-21.22	8/25/2010	16:50	26.05	-14.88	7/26/2011	12:30	14.12	-2.95	10/26/2011	17:30	14.85	-3.68
Point of Compliance/Second Sand																						
MW-70-36	150-160	9.04	8/18/2008	14:31	29.85	-20.81	8/24/2009	13:12	28.41	-19.37	8/25/2010	14:12	22.57	-13.53	7/25/2011	17:02	11.62	-2.58	10/26/2011	15:52	12.64	-3.60
MW-70-21	150-170	7.70	8/18/2008	10:07	32.52	-24.82	8/24/2009	13:56	30.46	-22.76	8/25/2010	14:54	24.10	-16.40	7/26/2011	11:44	11.60	-3.90	10/26/2011	17:22	12.35	-4.65
Point of Compliance/Deep Sand																						
MW-70-POC02	190-200	8.25	8/18/2008	13:53	35.21	-26.96	8/24/2009	16:00	32.90	-24.65	8/25/2010	17:02	25.80	-17.55	7/26/2011	12:24	11.76	-3.51	10/26/2011	17:37	12.69	-4.44
MW-70-POC03	190-200	9.64	8/18/2008	14:10	30.00	-20.36	8/24/2009	16:20	28.39	-18.75	8/25/2010	17:18	22.34	-12.70	7/25/2011	16:58	10.25	-0.61	10/26/2011	15:48	12.30	-2.66
MW-70-POC04	195-205	8.50	8/18/2008	10:06	32.35	-23.85	8/24/2009	16:25	32.71	-24.21	8/25/2010	17:30	26.08	-17.58	7/26/2011	11:39	12.94	-4.44	10/26/2011	17:15	14.13	-5.63

Notes:
* existing monitoring well added in 2009 for sampling
** Depth to groundwater was remeasured on 9/14/2009 to check the accuracy of the previously reported depth
[a] - groundwater levels for wells MW-70-27 and MW-70-28 were measured on 8/21/08, since the wells were not accessible during the 8/18/08 measurement events

Acronyms/Abbreviations:
bgs - below ground surface
MSL - mean sea level
NA - not available
TOC - top of casing

Table 2-2
Field Parameter Data

Well ID	Date	Time	pH	Conductivity (S/m)	Turbidity (NTU)	DO (mg/L)	Temperature (°C)	ORP (mV)
SOURCE AREA TREATMENT/UPPER FINES								
MW-70-PMW01A	11/3/11	1106	7.22	0.436	19.70	0.07	23.51	-224
MW-70-PMW01A	7/27/11	0932	6.57	0.264	723.00	0.34	23.23	-236
MW-70-PMW01B	11/3/11	1245	7.62	0.670	0.00	0.03	23.56	-150
MW-70-PMW01B	7/27/11	1036	6.95	0.572	652.00	0.27	23.50	-170
IW-70-SAT35	11/22/11	1601	7.65	0.781	10.23	0.46	21.08	-329
IW-70-SAT35	8/9/11	0946	7.00	0.839	0.00	0.27	24.01	-300
MW-70-27	11/3/11	1442	7.66	1.22	0.67	0.04	24.12	-136
MW-70-27	7/27/11	1133	7.07	1.06	688.00	0.24	23.82	-113
MW-70-28	11/3/11	1602	7.70	0.518	0.92	0.07	23.61	-129
MW-70-28	7/27/11	1250	7.11	0.457	626.00	0.25	24.33	-146
MW-70-MNA01	11/2/11	0849	5.20	0.524	1.00	0.09	22.55	5
MW-70-MNA02	11/2/11	1042	5.04	0.308	0.85	0.00	22.14	-66
MW-70-MNA03	11/2/11	0939	4.88	0.355	1.00	0.15	21.36	-49
MW-70-MNA04	11/2/11	1140	5.28	0.363	1.40	0.49	24.57	1
MW-70-03	11/23/11	0912	7.86	0.227	7.59	0.44	24.15	-77
SOURCE AREA BIOBARRIER/FIRST SAND								
MW-70-PMW02A	11/7/11	1527	8.54	0.176	0.52	0.29	23.9	-206
MW-70-PMW02A	8/4/11	1248	7.79	0.170	285.00	0.00	25.49	-232
MW-70-PMW02B	11/7/11	1613	8.48	0.240	0.07	0.20	23.85	-234
MW-70-PMW02B	8/4/11	1215	7.81	0.218	263.00	0.01	25.66	-238
IW-70-SAB06	11/7/11	1416	7.22	0.215	7.21	0.24	23.5	-225
IW-70-SAB06	7/28/11	0935	6.54	0.204	977.00	0.40	24.51	-110
IW-70-SAB11	11/8/11	1017	7.56	0.441	18.10	0.00	21.35	-174
IW-70-SAB11	8/4/11	1132	6.99	0.398	*	0.10	23.05	-169
MW-70-PMW03A	11/7/11	1026	7.02	0.180	3.12	0.06	24.2	-101
MW-70-PMW03A	7/28/11	0824	6.63	0.182	*	0.34	24.07	-108
MW-70-PMW03B	11/7/11	1145	8.39	0.175	0.56	0.05	23.87	-252
MW-70-PMW03B	7/28/11	1042	7.67	0.156	785.00	0.19	24.94	-257
MW-70-MNA05	11/2/11	1242	6.22	0.786	1.30	0.06	25.02	-200
FIRST SAND BIOBARRIER 1								
MW-70-PMW04A	11/9/11	1023	8.74	0.143	0.49	0.17	23.34	-150
MW-70-PMW04A	8/2/11	1247	7.84	0.126	168.00	0.23	24.88	-158
MW-70-PMW04B	11/9/11	1129	8.77	0.146	0.47	0.25	23.90	-255
MW-70-PMW04B	8/2/11	1330	7.75	0.133	*	0.02	24.73	-208
MW-70-PMW06A	11/8/11	1326	8.31	0.288	0.69	0.17	22.04	-253
MW-70-PMW06A	7/29/11	1140	7.74	0.269	*	0.11	22.67	-214
MW-70-PMW06B	11/8/11	1424	8.65	0.209	0.45	0.09	22.1	-204
MW-70-PMW06B	7/29/11	1054	7.94	0.199	224.00	0.26	23.45	-171
IW-70-FSB108	11/9/11	1241	7.16	0.276	0.12	0.09	21.89	-154
IW-70-FSB108	8/2/11	0910	6.33	0.264	*	0.14	23.33	-144
IW-70-FSB118	11/8/11	1144	7.15	0.329	0.48	0.03	21.07	-115
IW-70-FSB118	7/29/11	0949	6.73	0.289	*	0.22	21.7	-103
MW-70-PMW05A	11/9/11	1432	7.53	0.170	0.15	0.12	21.69	-134
MW-70-PMW05A	8/2/11	1016	6.50	0.161	772.00	0.13	22.49	-114
MW-70-PMW05B	11/9/11	1532	7.59	0.211	0.29	0.01	21.51	-260
MW-70-PMW05B	8/2/11	1116	6.90	0.206	*	0.00	23.80	-183
MW-70-38	11/8/11	1551	7.29	0.268	0.00	0.08	21.23	-134
MW-70-38	7/29/11	1305	6.96	0.262	494.00	0.24	23.12	-150

Table 2-2 (continued)
Field Parameter Data

Well ID	Date	Time	pH	Conductivity (S/m)	Turbidity (NTU)	DO (mg/L)	Temperature (°C)	ORP (mV)
RDO-5	11/10/11	1053	7.86	0.156	0.31	0.13	21.54	-255
RDO-5	8/4/11	1448	7.17	0.153	*	0.11	22.02	-168
RDO-4	11/28/11	1043	10.56	0.374	97.90	0.54	22.81	-191
MW-70-MNA06	11/10/11	1208	8.14	0.101	0.45	0.09	21.71	-106
MW-70-MNA07	11/14/11	1520	7.86	0.192	0.37	0.03	21.34	-179
MW-70-MNA07	8/4/11	1412	7.17	0.184	*	0.15	23.08	-159
MW-70-MNA08	11/10/11	1331	8.15	0.328	0.95	0.06	21.86	-240
MW-70-MNA08	8/8/11	0924	7.26	0.344	261.00	0.27	21.58	-228
MW-70-MNA11	11/14/11	1401	8.31	0.278	2.36	0.06	20.9	-208
MW-70-43A	11/23/11	1114	9.30	0.616	9.48	0.26	21.9	-220
FIRST SAND BIOBARRIER 2								
MW-70-PMW07A	11/15/11	0933	7.78	3.520	1.51	0.09	21.49	-349
MW-70-PMW07A	8/1/11	0855	7.00	3.510	*	0.18	22.29	-370
MW-70-PMW07B	11/15/11	1049	8.41	0.601	1.52	0.14	21.45	-253
MW-70-PMW07B	8/1/11	0946	7.63	0.632	255.00	0.15	22.58	-258
IW-70-FSB216	11/15/11	1140	7.62	3.410	37.90	0.06	21.86	-341
IW-70-FSB216	8/1/11	1050	6.99	3.610	*	0.01	22.38	-338
IW-70-FSB229	11/28/11	1216	7.18	0.379	16.00	0.60	22.74	-88
IW-70-FSB229	8/9/11	1121	7.02	0.449	0.00	0.45	27.67	-115
MW-70-PMW08A	11/15/11	1310	7.92	1.700	2.46	0.12	21.6	-183
MW-70-PMW08A	8/1/11	1137	7.38	1.680	675.00	0.06	23.33	-219
MW-70-PMW08B	11/15/11	1407	8.21	0.604	2.62	0.07	21.51	-233
MW-70-PMW08B	8/1/11	1251	7.48	0.611	*	0.06	23.72	-218
MW-70-MNA09	11/10/11	1434	7.87	2.160	0.33	0.00	21.89	-177
MW-70-MNA09	8/8/11	1032	7.13	2.160	0.00	0.21	22.18	-130
MW-70-MNA10	11/15/11	1513	8.19	0.606	2.81	0.09	21.05	-212
MW-70-MNA12	11/17/11	1122	8.24	1.220	2.55	0.20	21.65	-202
SHELL HORIZON BIOBARRIER 1								
MW-70-PMW09	11/14/11	1037	8.35	0.116	0.12	0.10	21.42	-213
MW-70-PMW09	8/3/11	0845	7.45	0.114	283.00	0.20	21.96	-135
IW-70-SHB113	11/14/11	1151	7.47	0.273	0.27	0.09	21.47	-202
IW-70-SHB113	8/3/11	1005	6.85	0.269	*	0.01	22.85	-220
IW-70-SHB217	11/17/11	0942	8.22	1.180	3.50	0.14	21.21	-204
MW-70-PMW10	11/14/11	1255	8.58	0.206	0.23	0.07	21.62	-234
MW-70-PMW10	8/3/11	1107	7.88	0.197	*	0.02	22.42	-216
MW-70-MNA13	11/10/11	1540	8.43	0.773	1.43	0.00	21.71	-247
SHELL HORIZON BIOBARRIER 3								
MW-70-PMW11A	11/16/11	1027	7.98	3.990	3.85	0.10	21.94	-230
MW-70-PMW11A	8/3/11	1323	7.38	3.910	373.00	0.00	25.52	-267
MW-70-PMW11B	11/16/11	1122	8.27	0.661	2.94	0.08	22.12	-251
MW-70-PMW11B	8/3/11	1234	7.50	0.634	605.00	0.00	23.44	-241
IW-70-SHB310	11/21/11	1311	5.67	0.943	11.11	1.39	22.35	-191
IW-70-SHB310	8/9/11	1308	5.31	1.170	380.00	1.15	23.72	-199
IW-70-SHB311	11/22/11	1326	7.06	0.174	14.50	0.48	21.98	-126
IW-70-SHB311	8/9/11	1346	6.50	0.191	*	0.57	27.91	-136
MW-70-PMW12A	11/16/11	1349	8.05	0.434	4.10	0.23	21.72	-232
MW-70-PMW12A	8/3/11	1409	7.58	0.508	238.00	0.05	26.82	-245
MW-70-PMW12B	11/16/11	1519	7.96	0.594	2.66	0.11	21.68	-259
MW-70-PMW12B	8/5/11	0911	7.02	0.339	846.00	0.14	21.73	-159
MW-70-MNA14	11/17/11	1528	8.65	0.396	2.63	0.11	21.42	-216
SECOND SAND BIOBARRIER 1								
MW-70-PMW13A	11/18/11	0936	8.30	0.754	3.01	0.10	20.17	-169
MW-70-PMW13A	8/5/11	1209	7.63	0.440	303.00	0.17	21.58	-187
MW-70-PMW13B	11/18/11	1044	8.40	1.450	2.91	0.04	20.40	-217
MW-70-PMW13B	8/5/11	1311	7.66	0.698	855.00	0.01	21.56	-231

Table 2-2 (continued)
Field Parameter Data

Well ID	Date	Time	pH	Conductivity (S/m)	Turbidity (NTU)	DO (mg/L)	Temperature (°C)	ORP (mV)
IW-70-SSB109	11/18/11	1554	7.18	1.710	16.40	0.03	20.68	-293
IW-70-SSB109	8/5/11	1134	6.61	1.760	*	0.11	22.04	-243
IW-70-SSB119	11/21/11	1106	7.26	0.785	11.50	0.26	21.59	-195
IW-70-SSB119	8/5/11	1044	6.91	0.416	*	0.32	22.08	-225
MW-70-PMW14A	11/18/11	1158	7.38	0.650	4.90	0.04	20.71	-236
MW-70-PMW14A	8/5/11	1351	6.96	0.392	841.00	0.00	21.97	-264
MW-70-PMW14B	11/18/11	1435	7.72	1.240	3.40	0.04	21.18	-259
MW-70-PMW14B	8/5/11	1428	7.19	0.611	*	0.00	22.36	-265
MW-70-MNA15	11/17/11	1300	8.19	1.420	2.16	0.19	20.96	-207
MW-70-MNA16	11/17/11	1422	8.26	0.930	2.11	0.09	21.08	-215
MW-70-MNA16	8/8/11	1309	7.55	1.130	12.00	0.10	22.16	-262
MW-70-MNA17	11/21/11	1145	8.29	2.770	2.92	0.17	21.18	-229
MW-70-MNA17	8/8/11	1427	7.49	2.870	0.00	0.24	22.04	-266
MW-70-14	11/23/11	1249	8.11	0.422	3.93	0.53	21.77	-113
MW-70-14	8/4/11	1023	7.31	0.335	547.00	0.63	22.04	-78
MW-70-15	11/21/11	1032	8.20	2.860	3.00	0.20	20.07	-77
MW-70-43B	11/16/11	0927	8.22	0.530	3.08	0.19	21.2	-159
MW-70-49	11/28/11	1420	8.47	0.625	8.71	0.52	21.28	-211
POINT OF COMPLIANCE - UPPER FINES								
MW-70-02	10/28/11	0837	7.33	0.499	0.00	0.11	21.39	-203
MW-70-10	10/31/11	1007	7.99	0.615	0.00	0.21	21.18	-16
MW-70-17	10/28/11	1146	7.79	1.210	0.30	0.18	21.72	-40
MW-70-22	10/28/11	1235	8.31	6.090	0.00	0.74	21.76	-13
POINT OF COMPLIANCE - FIRST SAND								
MW-70-POC01	10/28/11	0921	8.45	0.182	0.00	0.02	21.98	-162
MW-70-11	10/31/11	0934	8.21	0.278	0.00	0.08	21.14	-88
MW-70-35	10/28/11	1047	8.01	1.430	0.00	0.26	21.73	-87
MW-70-16	11/1/11	1411	9.02	0.365	0.00	4.23	20.73	-25
POINT OF COMPLIANCE - SHELL HORIZON								
MW-70-23	11/1/11	0837	8.24	0.410	0.00	0.31	20.1	-71
POINT OF COMPLIANCE - SECOND SAND								
MW-70-21	11/1/11	1152	8.06	2.950	0.00	0.73	21.3	-67
MW-70-36	10/31/11	1352	8.30	2.330	0.00	0.82	22.08	-125
POINT OF COMPLIANCE - DEEP SAND								
MW-70-POC02	11/1/11	0948	8.79	0.145	0.00	0.00	20.5	-226
MW-70-POC03	10/31/11	1132	8.17	1.860	0.00	0.21	20.43	-67
MW-70-POC04	11/1/11	1108	8.23	3.810	0.00	0.41	21.51	-179

Acronyms/Abbreviations:
°C – degrees Celsius
DO – dissolved oxygen
S/m – Siemens per meter
mg/L – milligrams per liter
mV – millivolt
NTU – nephelometric turbidity unit
ORP – oxidation-reduction potential
pH – potential of hydrogen
* out of instrument's range

Table 2-3
Source Area Treatment Grid Analytical Results

			Well Number/Sampling Date/Screen Interval													
Parameters	**Method**	**Unit**	**MW-70-27 7/27/2011 (26-36)***	**MW-70-27 11/3/2011 (26-36)***	**MW-70-27 (D) 11/3/2011 (26-36)***	**MW-70-28 7/27/2011 (50-60)***	**MW-70-28 11/3/2011 (50-60)***	**IW-70-SAT35 11/22/2011 (25-55)***	**MW-70-MNA01 11/2/2011 (40-50)***	**MW-70-MNA02 11/2/2011 (35-45)***	**MW-70-MNA03 11/2/2011 (35-45)***	**MW-70-MNA04 11/2/2011 (35-45)***	**MW-70-PMW01A 7/27/2011 (25-35)***	**MW-70-PMW01A 11/3/2011 (25-35)***	**MW-70-PMW01B 7/27/2011 (45-55)***	**MW-70-PMW01B 11/3/2011 (45-55)***
Wet Chemistry																
TOTAL ALKALINITY	2320B	mg/L	810	783	784	744	659	2640	NA	NA	NA	NA	607	1120	791	767
TDS	2540C	mg/L	7210	7400	7320	3120	3150	4830	NA	NA	NA	NA	1220	2370	4110	4240
BROMIDE	300	mg/L	4.95	NA	NA	2.99	NA	NA	NA	NA	NA	NA	2.50 U	NA	3.48	NA
CHLORIDE-CL	300	mg/L	1650	1730	1760	933	884	1570	NA	NA	NA	NA	338	709	1210	1250
NITRATE-N	300	mg/L	1.00 U	0.400 U	0.400 U	1.00 U	0.400 U	2.00 U	NA	NA	NA	NA	1.00 U	0.400 U	1.00 U	0.400 U
NITRITE-N	300	mg/L	1.00 U	2.00 U	2.00 U	1.00 U	0.400 U	2.00 U	NA	NA	NA	NA	1.00 U	0.400 U	1.00 U	1.00 U
SULFATE	300	mg/L	2530	2630	2680	582	659	15.2	NA	NA	NA	NA	2.50 U	1.33	852	923
ACETATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	58.9	1.00 U	1.00 U	1.00 U	1.00 U	22.2	327	1.00 U	1.00 U
BUTYRATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.23	1.00 U	1.00 U
LACTATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
PROPIONATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	3.13	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	18.4	1.00 U	1.00 U
HYDROGEN SULFIDE	4500F	mg/L	NA	1.00 U	1.00 U	NA	1.00 U	4.53	NA	NA	NA	NA	NA	1.00 U	NA	1.00 U
TOC	5310B	mg/L	3.73	4.16	4.05	3.10	2.80	86.2	NA	NA	NA	NA	34.5	174	4.06	4.38
Dissolved Metals																
ARSENIC	6010B	mg/L	NA	0.353	0.358	NA	0.0541 J	0.190 J	NA	NA	NA	NA	NA	0.0819 J	NA	0.0936 J
IRON	6010B	mg/L	NA	34.0	34.4	NA	9.92	0.217	NA	NA	NA	NA	NA	2.87	NA	24.5
MANGANESE	6010B	mg/L	NA	9.90	9.74	NA	1.65	3.30	NA	NA	NA	NA	NA	1.34	NA	2.44
VOCs																
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	0.29 J	0.30 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.44 J	0.54 J	0.51 J	1.0 U	1.0 U	1.0 U	0.24 J	1.0 U	1.0 U	0.42 J	1.0 U	1.0 U	0.31 J	0.20 J
1,1-DICHLOROETHANE	8260B	µg/L	3.3	3.6	3.5	1.5	1.5	1.0 U	0.61 J	13	29	33	1.0 U	1.0 U	1.1	0.92 J
1,1-DICHLOROETHENE	8260B	µg/L	3.9	4.2	4.0	0.54	0.49 J	0.50 U	3.2	0.78	0.50 U	2.3	0.50 U	0.50 U	0.36 J	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.37 J	0.54	0.53	0.50 U	0.50 U	0.50 U	0.50 U	1.2	8.0	6.0	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	0.34 J	0.41 J	0.39 J	1.0 U	1.0 U	1.0 U	1.0 U	0.91 J	5.6	2.7	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	36	10 U	10 U	10 U	10 U	4.7 J	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	16	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 U	10 U	5.1 J	10 U	10 U	130	10 U	10 U	10 U	10 U	45	28	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.30 J	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CARBON DISULFIDE	8260B	µg/L	1.0 U	0.23 J	0.24 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.79 J	0.83 J	0.28 J	0.31 J
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	4.1	3.2	3.1	2.0 U	0.53 J	0.49 J	3.3	0.65 J	2.0 U	2.0 U	2.0 U	2.5	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	67	59	58	1.0 U	1.0 U	1.0 U	1.7	1.0 U	1.0 U	0.63 J	1.0 U	1.0 U	1.0 U	1.0 U

			Well Number/Sampling Date/Screen Interval													
Parameters	Method	Unit	MW-70-27 7/27/2011 (26-36)*	MW-70-27 11/3/2011 (26-36)*	MW-70-27 (D) 11/3/2011 (26-36)*	MW-70-28 7/27/2011 (50-60)*	MW-70-28 11/3/2011 (50-60)*	IW-70-SAT35 11/22/2011 (25-55)*	MW-70-MNA01 11/2/2011 (40-50)*	MW-70-MNA02 11/2/2011 (35-45)*	MW-70-MNA03 11/2/2011 (35-45)*	MW-70-MNA04 11/2/2011 (35-45)*	MW-70-PMW01A 7/27/2011 (25-35)*	MW-70-PMW01A 11/3/2011 (25-35)*	MW-70-PMW01B 7/27/2011 (45-55)*	MW-70-PMW01B 11/3/2011 (45-55)*
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	**600**	**1200**	**1500**	**51**	**40**	0.50 J	**380**	**71**	5.4	**130**	2.7	0.81 J	**39**	**16**
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.46 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	12	14	14	0.92 J	1.6	1.0 U	1.6	1.0 U	1.0 U	3.9	1.0 U	1.0 U	0.35 J	0.97 J
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	0.77 J	0.84 J	0.80 J	1.0 U	1.0 U	0.55 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0	0.66 J	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.6	1.8	1.7	1.0 U	1.0 U	1.0 U	0.65 J	1.0 U	1.0 U	4.8	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.29 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	**11**	**12**	**12**	**12**	**11**	5.3	**56**	3.3	0.34 J	3.9	6.6	7.9	**34**	**33**
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	**980**	**1800**	**2100**	**7.0**	4.3 J	0.47 J	**2800**	**26**	0.61 J	**210**	1.3 J	1.0 J	**7.9**	4.4 J
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.67 J	2.0 U
VINYL CHLORIDE	8260B	µg/L	**1300**	**1000**	**1300**	**480**	**340**	**3.3**	**290**	**10**	0.45 J	**4.1**	**30**	**5.5**	**2700**	**2200**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)																
DEHALOCOCCOIDES	qPCR	µg/L	NA	3.00E+07	NA	NA	2.00E+07	6.00E+08	6.00E+04	4.00E+03 U	4.00E+03 U	4.00E+03 U	NA	3.00E+08	NA	7.00E+07
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	NA	4.00E+06	NA	NA	1.00E+07	3.00E+08	3.00E+04	NA	NA	NA	NA	2.00E+08	NA	4.00E+07
Dissolved Hydrocarbon Gases																
ETHANE	RSK175	µg/L	2.0	2.0 U	2.8	9.3	8.8	0.94 J	2.9	4.6	0.72 J	63	0.66 J	1.3 J	3.6	4.2
ETHENE	RSK175	µg/L	77	72	67	300	230	130	33	3.6	2.0 U	2.0 U	120	92	720	540
METHANE	RSK175	µg/L	12000	12000	11000	17000	13000	15000	5500	3100	250	400	15000	14000	14000	12000

Notes:

(D) - Duplicate Sample
J - estimated value
µg/L - microgram per liter
mg/L - milligrams per liter
MTBE - methyl tertiary butyl ether
NA - not analyzed
qPCR - Quantitation Polymerase Chain Reaction
U - not detected
Bolded parameters are constituents of concern and bolded values are above target cleanup goals or federal/state primary maximum contaminant limits.
*(26-36) Well Screen Interval - feet below ground surface

Table 2-4
Upper Fines Point of Compliance Analytical Results

			Well Number/Sampling Date/Screen Interval				
			MW-70-02	MW-70-03	MW-70-10	MW-70-17	MW-70-22
			10/28/2011	10/23/2011	10/31/2011	10/28/2011	10/28/2011
Parameters	**Method**	**Unit**	(20-30)*	(20-30)*	(30-40)*	(30-40)*	(20-30)*
Wet Chemistry							
TOTAL ALKALINITY	2320B	mg/L	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	2540C	mg/L	NA	NA	NA	NA	NA
BROMIDE	300	mg/L	NA	NA	NA	NA	NA
CHLORIDE-CL	300	mg/L	NA	NA	NA	NA	NA
NITRATE-N	300	mg/L	NA	NA	NA	NA	NA
NITRITE-N	300	mg/L	NA	NA	NA	NA	NA
SULFATE	300	mg/L	NA	NA	NA	NA	NA
ACETATE	300.0M	mg/L	NA	NA	NA	NA	NA
BUTYRATE	300.0M	mg/L	NA	NA	NA	NA	NA
LACTATE	300.0M	mg/L	NA	NA	NA	NA	NA
PROPIONATE	300.0M	mg/L	NA	NA	NA	NA	NA
HYDROGEN SULFIDE	4500F	mg/L	NA	NA	NA	NA	NA
TOTAL ORGANIC CARBON	5310B	mg/L	NA	NA	NA	NA	NA
Dissolved Metals							NA
ARSENIC	6010B	mg/L	NA	NA	NA	NA	NA
IRON	6010B	mg/L	NA	NA	NA	NA	NA
MANGANESE	6010B	mg/L	NA	NA	NA	NA	NA
Volatile Organic Compounds							
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	0.42 J	0.50 U	0.50 U	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	1.6	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 U	6.1 J	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CARBON DISULFIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	**7.6**	1.0 U	1.0 U	1.0 U
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 2-4 (continued)
Upper Fines Point of Compliance Analytical Results

			Well Number/Sampling Date/Screen Interval				
			MW-70-02	MW-70-03	MW-70-10	MW-70-17	MW-70-22
			10/28/2011	10/23/2011	10/31/2011	10/28/2011	10/28/2011
Parameters	**Method**	**Unit**	**(20-30)***	**(20-30)***	**(30-40)***	**(30-40)***	**(20-30)***
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	27	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	0.25 J	1.0 U	1.0 U	1.0 U
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	5.0 U	**8.9**	5.0 U	5.0 U	5.0 U
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.50 U	0.45 J	0.50 U	0.50 U	0.50 U
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dissolved Hydrocarbon Gases							
ETHANE	RSK175	µg/L	NA	NA	NA	NA	NA
ETHENE	RSK175	µg/L	NA	NA	NA	NA	NA
METHANE	RSK175	µg/L	NA	NA	NA	NA	NA

Notes:
Bolded parameters are constituents of concern and bolded values are above target cleanup goals or federal/state primary maximum contaminant limits.

*(20-30) Well Screen Interval - feet below ground surface
J - estimated value
µg/L - microgram per liter
mg/L - milligrams per liter
MTBE - methyl tertiary butyl ether
NA - not anaylzed
U - not detected

Table 2-5
First Sand Source Area Biobarrier Analytical Results

			Well Number/Sampling Date/Screen Interval											
Parameters	**Method**	**Unit**	**IW-70-SAB06 7/28/2011 (65-80/85-105)***	**IW-70-SAB06 11/7/2011 (65-80/85-105)***	**IW-70-SAB11 11/8/2011 (65-105)***	**MW-70-MNA05 11/2/2011 (70-80)***	**MW-70-PMW02A 11/7/2011 (71-81)***	**MW-70-PMW02B 11/7/2011 (90-100)***	**MW-70-PMW03A 7/29/2011 (70-80)***	**MW-70-PMW03A(D) 7/29/2011 (70-80)***	**MW-70-PMW03A 11/7/2011 (70-80)***	**MW-70-PMW03B 7/28/2011 (90-100)***	**MW-70-PMW03B 11/7/2011 (90-100)***	**MW-70-PMW03B(D) 11/7/2011 (90-100)***
Wet Chemistry														
TOTAL ALKALINITY	2320B	mg/L	870	614	1860	NA	210	214	753	759	696	213	198	199
TOTAL DISSOLVED SOLIDS	2540C	mg/L	1290	1330	2540	NA	955	1430	1150	1190	1060	1210	1080	1100
BROMIDE	300	mg/L	2.50 U	NA	NA	NA	NA	NA	0.849	0.872	NA	0.824	NA	NA
CHLORIDE-CL	300	mg/L	229	289	457	NA	197	353	206	205	209	222	253	253
NITRATE-N	300	mg/L	0.277 J	0.0651 J	0.135 J	NA	0.200 U	0.200 U	0.0605 J	0.0617 J	0.0665 J	0.200 U	0.200 UJ	0.200 UJ
NITRITE-N	300	mg/L	1.00 U	0.200 UJ	0.400 U	NA	0.200 U	0.400 U	0.200 U	0.200 U	0.200 UJ	0.200 U	0.200 UJ	0.200 UJ
SULFATE	300	mg/L	54.5	222	1.43	NA	321	545	1.87	1.48	11.4	336	337	346
ACETATE	300.0M	mg/L	0.790 J	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.08	0.950 J	1.00 U	0.720 J	1.00 U	1.00 U
BUTYRATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
LACTATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
PROPIONATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
HYDROGEN SULFIDE	4500F	mg/L	NA	1.00 U	1.00 U	NA	1.00 U	1.00 U	NA	NA	1.00 U	NA	1.00 U	1.00 U
TOTAL ORGANIC CARBON	5310B	mg/L	5.48	27.8	111	NA	0.948 J	1.26	3.60	3.59	8.95	0.872 J	1.07	1.09
Dissolved Metals														
ARSENIC	6010B	mg/L	NA	0.200 U	0.0316 J	NA	0.200 U	0.200 U	NA	NA	0.200 U	NA	0.200 U	0.200 U
IRON	6010B	mg/L	NA	0.208	30.8	NA	0.553	0.509	NA	NA	13.4	NA	1.02	1.03
MANGANESE	6010B	mg/L	NA	0.429	1.08	NA	0.287	0.322	NA	NA	0.358	NA	0.387	0.395
Volatile Organic Compounds														
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	0.26 J	1.0 U	0.24 J	0.55 J	0.73 J	1.0 U	1.0 U	1.0 U	0.48 J	0.65 J	0.69 J
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	1.1	3.4	0.50 U	0.50 U	0.50 U	1.8	4.0	4.2
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Table 2-5 (continued)
First Sand Source Area Biobarrier Analytical Results

			Well Number/Sampling Date/Screen Interval											
Parameters	**Method**	**Unit**	**IW-70-SAB06 7/28/2011 (65-80/85-105)***	**IW-70-SAB06 11/7/2011 (65-80/85-105)***	**IW-70-SAB11 11/8/2011 (65-105)***	**MW-70-MNA05 11/2/2011 (70-80)***	**MW-70-PMW02A 11/7/2011 (71-81)***	**MW-70-PMW02B 11/7/2011 (90-100)***	**MW-70-PMW03A 7/29/2011 (70-80)***	**MW-70-PMW03A(D) 7/29/2011 (70-80)***	**MW-70-PMW03A 11/7/2011 (70-80)***	**MW-70-PMW03B 7/28/2011 (90-100)***	**MW-70-PMW03B 11/7/2011 (90-100)***	**MW-70-PMW03B(D) 11/7/2011 (90-100)***
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CARBON DISULFIDE	8260B	µg/L	0.25 J	0.51 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.34 J	1.0 U	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.33 J	0.40 J	0.43 J	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.35 J	0.48 J	0.33 J	0.57 J	**230**	**770**	0.71 J	0.73 J	0.73 J	**380**	**1000**	**1100**
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	0.31 J	0.86 J	2.0 U	2.0 U	2.0 U	2.0 U	0.63 J	0.59 J
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	0.26 J	1.0 U	2.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.86 J	1.3	1.7	0.39 J	1.4	6.0	1.1	1.1	0.82 J	3.9	8.6	8.9
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	0.26 J	0.38 J	5.0 U	0.67 J	**16**	**410**	0.47 J	0.46 J	0.42 J	**8.0**	**8.3**	**7.9**
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	**2.9**	**1.8**	**0.91**	**42**	**0.75**	**1.7**	**1.6**	**1.6**	**0.67**	**73**	**83**	**89**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table 2-5 (continued)
First Sand Source Area Biobarrier Analytical Results

			Well Number/Sampling Date/Screen Interval											
Parameters	**Method**	**Unit**	**IW-70-SAB06 7/28/2011 (65-80/85-105)***	**IW-70-SAB06 11/7/2011 (65-80/85-105)***	**IW-70-SAB11 11/8/2011 (65-105)***	**MW-70-MNA05 11/2/2011 (70-80)***	**MW-70-PMW02A 11/7/2011 (71-81)***	**MW-70-PMW02B 11/7/2011 (90-100)***	**MW-70-PMW03A 7/29/2011 (70-80)***	**MW-70-PMW03A(D) 7/29/2011 (70-80)***	**MW-70-PMW03A 11/7/2011 (70-80)***	**MW-70-PMW03B 7/28/2011 (90-100)***	**MW-70-PMW03B 11/7/2011 (90-100)***	**MW-70-PMW03B(D) 11/7/2011 (90-100)***
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)														
DEHALOCOCCOIDES	qPCR	Liter	NA	8.00E+06	4.00E+06	2.00E+06	2.00E+05	7.00E+05	NA	NA	4.00E+06	NA	5.00E+05	NA
VINYL CHLORIDE REDUCTASE	qPCR	Liter	NA	2.00E+07[a]	2.00E+06[a]	8.00E+03	4.00E+03 U	4.00E+03 U	NA	NA	4.00E+06	NA	4.00E+03 U	NA
Dissolved Hydrocarbon Gases														
ETHANE	RSK175	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.82 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.7
ETHENE	RSK175	µg/L	3.5	5.1	2.2	3.3	0.74 J	2.0 U	3.0	2.0	0.68 J	4.7	7.4	23
METHANE	RSK175	µg/L	14000	19000	15000	36	150	36	26000	23000	21000	14000	22000	18000

Notes:
Bolded parameters are constituents of concern and bolded values are above target cleanup goals or federal/state primary maximum contaminant limits.
*(70-80) Well Screen Interval - feet below ground surface
D - duplicate sample
J - estimated value
µg/L - microgram per liter
mg/L - milligrams per liter
MTBE - methyl tertiary butyl ether
NA - not analyzed
qPCR - quantation polymerase chain reaction
U - not detected

Table 2-6
First Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval																	
Parameters	Method	Unit	IW-70-FSB108 11/9/2011 (60-105)*	IW-70-FSB118 11/8/2011 (60-105)*	MW-70-38 11/8/2011 (80-100)*	MW-70-43A 11/23/2011 (86-106)*	MW-70-MNA06 11/10/2011 (80-90)*	MW-70-MNA07 11/14/2011 (90-100)*	MW-70-MNA08 11/10/2011 (80-90)*	MW-70-MNA11 11/14/2011 (80-90)*	MW-70-PMW04A 11/9/2011 (70-80)*	MW-70-PMW04A (D) 11/9/2011 (70-80)*	MW-70-PMW04B 11/9/2011 (70-80)*	MW-70-PMW05A 11/9/2011 (70-80)*	MW-70-PMW05B 11/9/2011 (90-100)*	MW-70-PMW06A 11/8/2011 (70-80)*	MW-70-PMW06B 11/8/2011 (91-101)*	MW-70-PMW06B (D) 11/8/2011 (91-101)*	RDO-4 11/28/2011 (65-105)*	RDO-5 11/10/2011 (65-105)*
Wet Chemistry																				
TOTAL ALKALINITY	2320B	mg/L	1030	771	631	NA	NA	NA	NA	NA	176	175	174	532	462	263	170	170	9.88	464
TDS	2540C	mg/L	1870	1870	1510	NA	NA	NA	NA	NA	780	750	830	895	1280	1730	1210	1200	2260	895
BROMIDE	300	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE-CL	300	mg/L	287	589	388	NA	NA	NA	NA	NA	152	159	164	133	279	501	314	318	998	125
NITRATE-N	300	mg/L	0.386 J	0.0693 J	0.0645 J	NA	NA	NA	NA	NA	0.0590 J	0.0567 J	0.0609 J	0.0638 J	0.0638 J	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
NITRITE-N	300	mg/L	1.00 U	0.400 U	0.400 U	NA	NA	NA	NA	NA	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.400 U	0.200 U	0.200 U	0.200 U	0.200 U
SULFATE	300	mg/L	1.98 J	109	175	NA	NA	NA	NA	NA	189	190	202	58.0	174	432	285	285	490	115
ACETATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
BUTYRATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
LACTATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
PROPIONATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
HYDROGEN SULFIDE	4500F	mg/L	1.00 U	1.00 U	1.00 U	NA	NA	NA	NA	NA	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
TOTAL ORGANIC CARBON	5310B	mg/L	129	10.3	1.95	NA	NA	NA	NA	NA	0.858 J	0.892 J	0.919 J	3.80	1.41	1.53	0.824 J	0.571 J	3.23	1.12
Dissolved Metals																				
ARSENIC	6010B	mg/L	0.0591 J	0.200 U	0.00623 J	NA	NA	NA	NA	NA	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
IRON	6010B	mg/L	88.2	8.00	14.2	NA	NA	NA	NA	NA	0.102 J	0.107 J	0.395	18.0	4.73	0.814	0.0541 J	0.0628 J	0.200 U	1.01
MANGANESE	6010B	mg/L	2.75	1.12	1.05	NA	NA		NA	NA	0.149 J	0.147 J	0.247	0.800	0.793	0.436	0.334	0.329	0.0197 J	0.440
Volatile Organic Compounds																				
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	0.92 J	1.0 U	1.0 U	0.34 J	1.5	1.0 U	1.1	1.1	1.3	1.0 U	0.64 J	1.4	1.8	1.8	0.47 J	1.0 U
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	4.9	0.50 U	**11**	**11**	**11**	0.50 U	0.50 U	**8.1**	**8.1**	**8.3**	1.5	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	8.7 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CARBON DISULFIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.23 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.39 J	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.52 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.23 J	2.6	**8.7**	0.22 J	**18**	**7.8**	**1600**	2.2	**1400**	**1500**	**1500**	1.0	2.0	**1800**	**550**	**550**	**310**	3.2
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 2-6 (continued)
First Sand Biobarrier-1 Analytical Results

Parameters	Method	Unit	IW-70-FSB108 11/9/2011 (60-105)*	IW-70-FSB118 11/8/2011 (60-105)*	MW-70-38 11/8/2011 (80-100)*	MW-70-43A 11/23/2011 (86-106)*	MW-70-MNA06 11/10/2011 (80-90)*	MW-70-MNA07 11/14/2011 (90-100)*	MW-70-MNA08 11/10/2011 (80-90)*	MW-70-MNA11 11/14/2011 (80-90)*	MW-70-PMW04A 11/9/2011 (70-80)*	MW-70-PMW04A (D) 11/9/2011 (70-80)*	MW-70-PMW04B 11/9/2011 (70-80)*	MW-70-PMW05A 11/9/2011 (70-80)*	MW-70-PMW05B 11/9/2011 (90-100)*	MW-70-PMW06A 11/8/2011 (70-80)*	MW-70-PMW06B 11/8/2011 (91-101)*	MW-70-PMW06B (D) 11/8/2011 (91-101)*	RDO-4 11/28/2011 (65-105)*	RDO-5 11/10/2011 (65-105)*
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.47 J	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	0.26 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	0.22 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	0.22 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.44 J	2.3	7.4	1.0 U	0.29 J	2.6	**15**	0.21 J	9.4	9.3	**21**	1.3	4.1	**16**	**49**	**50**	6.2	0.91 J
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	0.21 J	2.7 J	**6.7**	5.0 U	3.0 J	1.8 J	**11**	1.8 J	**27**	**26**	4.2 J	0.55 J	0.77 J	**10**	**3800**	**3900**	3.5 J	1.3 J
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	**3.4**	**10**	**850**	0.50 U	0.50 U	**4.6**	**97**	0.50 U	**4.3**	**4.5**	**3.7**	**4.1**	**340**	**790**	**9.1**	**9.4**	**330**	**3.3**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)																				
DEHALOCOCCOIDES	qPCR	per Liter	NA	3.00E+07	2.00E+07	NA	NA	9.00E+06	1.00E+07	4.00E+03 U	NA	NA	NA	NA	NA	9.00E+07	4.00E+03 U	NA	4.00E+03 U	5.00E+05
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	NA	2.00E+07	2.00E+07	NA	NA	3.00E+06	4.00E+03 U	NA	NA	NA	NA	NA	NA	6.00E+05	NA	NA	NA	3.00E+05
Dissolved Hydrocarbon Gases																				
ETHANE	RSK175	µg/L	2.0 U	2.0 U	12	2.0 U	2.0 U	4.0	1.8 J	2.0 U	2.0 U	2.0 U	0.71 J	0.74 J	2.0 U	2.8	0.66 J	0.91 J	1.1 J	2.0 U
ETHENE	RSK175	µg/L	1.4 J	16	130	2.0 U	2.0 U	5.7	48	2.0 U	1.7 J	1.7 J	4.3	8.3	72	68	0.96 J	1.7 J	64	5.1
METHANE	RSK175	µg/L	25000	25000	13000	12	5.9	24000	1700	15	5100	5000	790	25000	26000	3900	64	160	24000	16000

Notes:
Bolded parameters are constituents of concern and bolded values are above target cleanup goals or federal/state primary maximum contaminant limits.
*(70-80) Well Screen Interval - feet below ground surface
D - duplicate sample
J - estimated value
µg/L - microgram per liter
mg/L - milligrams per liter
NA - not analyzed
qPCR - Quantitative Polymerase Chain Reaction
U - not detected

Table 2-7
First Sand Biobarrier-2 Analytical Results

			Well Number/Sampling Date/Screen Interval									
			IW-70-FSB216	IR-70-FSB229	MW-70-MNA09	MW-70-MNA10	MW-70-MNA12	MW-70-MNA12(D)	MW-70-PMW07A	MW-70-PMW07B	MW-70-PMW08A	MW-70-PMW08B
			11/15/2011	11/28/2011	11/10/2011	11/15/2011	11/17/2011	11/17/2011	11/15/2011	11/15/2011	11/15/2011	11/15/2011
Parameters	**Method**	**Unit**	**(65-100)***	**(65-100)***	**(64-74)***	**(75-85)***	**(75-85)***	**(75-85)***	**(65-75)***	**(85-95)***	**(65-75)***	**(85-95)***
Wet Chemistry												
TOTAL ALKALINITY	2320B	mg/L	2010	1350	NA	NA	NA	NA	380	244	326	294
TOTAL DISSOLVED SOLIDS	2540C	mg/L	21800	2300	NA	NA	NA	NA	18900	4060	9880	3900
BROMIDE	300	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE-CL	300	mg/L	11800	607	NA	NA	NA	NA	10100	1620	4840	1660
NITRATE-N	300	mg/L	2.00 U	0.200 U	NA	NA	NA	NA	2.00 U	0.200 U	0.200 U	0.374
NITRITE-N	300	mg/L	5.00 U	0.200 U	NA	NA	NA	NA	2.00 U	1.00 U	4.00 U	1.00 U
SULFATE	300	mg/L	8.11	9.12	NA	NA	NA	NA	1590	656	1040	608
ACETATE	300.0M	mg/L	5.00 U	1.00 U	5.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U	1.00 U	1.00 U
BUTYRATE	300.0M	mg/L	5.00 U	1.00 U	5.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U	1.00 U	1.00 U
LACTATE	300.0M	mg/L	5.00 U	1.00 U	5.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U	1.00 U	1.00 U
PROPIONATE	300.0M	mg/L	5.00 U	1.00 U	5.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U	1.00 U	1.00 U
HYDROGEN SULFIDE	4500F	mg/L	11.8	1.00 U	NA	NA	NA	NA	8.11	1.00 U	1.00 U	1.00 U
TOTAL ORGANIC CARBON	5310B	mg/L	70.5	13.9	NA	NA	NA	NA	2.37	2.01	1.70	1.60
Dissolved Metals												
ARSENIC	6010B	mg/L	0.0168 J	0.200 U	NA	NA	NA	NA	0.200 U	0.200 U	0.200 U	0.200 U
IRON	6010B	mg/L	0.227	8.77	NA	NA	NA	NA	0.259	0.421	2.77	3.45
MANGANESE	6010B	mg/L	4.59	0.554	NA	NA	NA	NA	3.07 J	0.618	1.85	0.933
Volatile Organic Compounds												
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	0.34 J	0.43 J	0.44 J	1.0 U	0.44 J	0.28 J	0.70 J
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	3.3	3.2	0.50 U	2.3	0.50 U	0.76
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Table 2-7 (continued)
First Sand Biobarrier-2 Analytical Results

			Well Number/Sampling Date/Screen Interval									
			IW-70-FSB216	IR-70-FSB229	MW-70-MNA09	MW-70-MNA10	MW-70-MNA12	MW-70-MNA12(D)	MW-70-PMW07A	MW-70-PMW07B	MW-70-PMW08A	MW-70-PMW08B
			11/15/2011	11/28/2011	11/10/2011	11/15/2011	11/17/2011	11/17/2011	11/15/2011	11/15/2011	11/15/2011	11/15/2011
Parameters	**Method**	**Unit**	(65-100)*	(65-100)*	(64-74)*	(75-85)*	(75-85)*	(75-85)*	(65-75)*	(85-95)*	(65-75)*	(85-95)*
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	8.6 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	5.6 J	10 U	10 U	10 U	10 U	10 U	6.9 J	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CARBON DISULFIDE	8260B	µg/L	0.65 J	1.0 U	1.0 U	0.37 J	1.0 U	1.0 U	0.98 J	1.0 U	0.53 J	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.36 J	5.1	**13**	**24**	**950**	**870**	**11**	**550**	**33**	**120**
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	0.20 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.26 J	0.23 J	1.0	2.6	**22**	**22**	1.0 U	4.5	1.4	8.6
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	0.38 J	0.44 J	2.8 J	**6.5**	**11**	**11**	1.1 J	**6.1**	1.0 J	4.4 J
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table 2-7 (continued)
First Sand Biobarrier-2 Analytical Results

			Well Number/Sampling Date/Screen Interval									
			IW-70-FSB216	IR-70-FSB229	MW-70-MNA09	MW-70-MNA10	MW-70-MNA12	MW-70-MNA12(D)	MW-70-PMW07A	MW-70-PMW07B	MW-70-PMW08A	MW-70-PMW08B
			11/15/2011	11/28/2011	11/10/2011	11/15/2011	11/17/2011	11/17/2011	11/15/2011	11/15/2011	11/15/2011	11/15/2011
Parameters	**Method**	**Unit**	**(65-100)***	**(65-100)***	**(64-74)***	**(75-85)***	**(75-85)***	**(75-85)***	**(65-75)***	**(85-95)***	**(65-75)***	**(85-95)***
VINYL CHLORIDE	8260B	µg/L	**2.9**	**4.1**	0.50 U	**25**	**1.4**	**1.5**	0.50 U	**1.1**	**39**	**390**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)												
DEHALOCOCCOIDES	qPCR	per Liter	1.00E+07	1.00E+05	4.00E+03 U	5.00E+05	4.00E+03 U	NA	4.00E+03 J	7.00E+05	6.00E+06	9.00E+06
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	2.00E+06	2.00E+04 U	NA	4.00E+03 U	NA	NA	5.00E+03 U	4.00E+03 U	3.00E+05	1.00E+05
Dissolved Hydrocarbon Gases												
ETHANE	RSK175	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHENE	RSK175	µg/L	0.61 J	2.0 U	2.0 U	10	1.4 J	1.6 J	2.0 U	0.66 J	6.7	19
METHANE	RSK175	µg/L	22000	27000	5800	15000	190	200	1100	2000	17000	8200

Notes:
*(70-80) Well Screen Interval - feet below ground surface
Bolded parameters are constituents of concern and bolded values are above target cleanup goals or federal/state primary maximum contaminant limits.
(D) - Duplicate Sample
J - estimated value
µg/L - microgram per liter
mg/L milligrams per liter
MTBE - Methyl Tertiary Butyl Ether
NA - not analyzed
qPCR - Quantitation Polymerase Chain Reaction
U - not detected

Table 2-8
First Sand Point of Compliance Analytical Results

			Well Number/Sampling Date/Screen Interval			
			MW-70-11	MW-70-16	MW-70-35	MW-70-POC01
Parameters	Method	Unit	10/31/2011 (80-100)*	11/1/2011 (95-105)*	10/28/2011 (90-100)*	10/28/2011 (80-90)*
Wet Chemistry						
TOTAL ALKALINITY	2320B	mg/L	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	2540C	mg/L	NA	NA	NA	NA
BROMIDE	300	mg/L	NA	NA	NA	NA
CHLORIDE-CL	300	mg/L	NA	NA	NA	NA
NITRATE-N	300	mg/L	NA	NA	NA	NA
NITRITE-N	300	mg/L	NA	NA	NA	NA
SULFATE	300	mg/L	NA	NA	NA	NA
ACETATE	300.0M	mg/L	NA	NA	NA	NA
BUTYRATE	300.0M	mg/L	NA	NA	NA	NA
LACTATE	300.0M	mg/L	NA	NA	NA	NA
PROPIONATE	300.0M	mg/L	NA	NA	NA	NA
HYDROGEN SULFIDE	4500F	mg/L	NA	NA	NA	NA
TOTAL ORGANIC CARBON	5310B	mg/L	NA	NA	NA	NA
Dissolved Metals						
ARSENIC	6010B	mg/L	NA	NA	NA	NA
IRON	6010B	mg/L	NA	NA	NA	NA
MANGANESE	6010B	mg/L	NA	NA	NA	NA
Volatile Organic Compounds						
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	0.55 J	1.0 U
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	0.50 U	0.28 J	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 U	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U

Table 2-8 (continued)
First Sand Point of Compliance Analytical Results

			Well Number/Sampling Date/Screen Interval			
			MW-70-11	MW-70-16	MW-70-35	MW-70-POC01
Parameters	**Method**	**Unit**	**10/31/2011 (80-100)***	**11/1/2011 (95-105)***	**10/28/2011 (90-100)***	**10/28/2011 (80-90)***
CARBON DISULFIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	1.1	1.0 U	1.4	1.0 U
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	5.0 U	5.0 U	0.33 J	5.0 U
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Dissolved Hydrocarbon Gases						
ETHANE	RSK175	µg/L	NA	NA	NA	NA
ETHENE	RSK175	µg/L	NA	NA	NA	NA
METHANE	RSK175	µg/L	NA	NA	NA	NA

Notes:
Bolded parameters are constituents of concern
*(80-100) Well Screen Interval - feet below ground surface
federal/state primary maximum contaminant limits.
J - estimated value
µg/L - microgram per liter
mg/L - milligrams per liter
MTBE - methyl tertiary butyl ether
NA - not analyzed
U - not detected

Table 2-9
Shell Horizon Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval					
Parameters	**Method**	**Unit**	**IW-70-SHB113 11/14/2011 (105-130)***	**IW-70-SHB217 11/17/2011 (105-130)***	**IW-70-SHB217(D) 11/17/2011 (105-130)***	**MW-70-MNA13 11/10/2011 (115-125)***	**MW-70-PMW09 11/14/2011 (120-130)***	**MW-70-PMW10 11/14/2011 (120-130)***
Wet Chemistry								
TOTAL ALKALINITY	2320B	µg/L	1170	217	217	NA	163	188
TOTAL DISSOLVED SOLIDS	2540C	µg/L	1890	6900	6150	NA	525	1300
BROMIDE	300	µg/L	NA	NA	NA	NA	NA	NA
CHLORIDE-CL	300	µg/L	369	3300	3270	NA	114	317
NITRATE-N	300	µg/L	0.0753 J	0.200 U	0.200 U	NA	0.0585 J	0.0629 J
NITRITE-N	300	µg/L	0.400 U	1.00 U	1.00 U	NA	0.200 U	0.200 U
SULFATE	300	µg/L	3.06	733	726	NA	109	372
ACETATE	300.0M	µg/L	1.17	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
BUTYRATE	300.0M	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
LACTATE	300.0M	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
PROPIONATE	300.0M	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
HYDROGEN SULFIDE	4500F	µg/L	1.00 U	1.00 U	1.00 U	NA	1.00 U	1.00 U
TOTAL ORGANIC CARBON	5310B	µg/L	4.06	2.21	2.05	NA	1.00 U	1.00 U
Dissolved Metals								
ARSENIC	6010B	MG/L	0.0176 J	0.200 U	0.200 U	NA	0.200 U	0.200 U
IRON	6010B	MG/L	3.64	3.95	3.90	NA	0.436	0.774
MANGANESE	6010B	MG/L	1.08	0.963	0.953	NA	0.0988 J	0.324
Volatile Organic Compounds								
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	0.44 J	0.43 J	1.0 U	0.41 J	1.6
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	3.2	3.1	1.3	3.4	**11**
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CARBON DISULFIDE	8260B	µg/L	0.23 J	1.0 U	1.0 U	1.0 U	0.31 J	0.27 J
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	0.38 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.85 J	**890**	**910**	**160**	**430**	**2900**
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 2-9 (continued)
Shell Horizon Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval					
Parameters	**Method**	**Unit**	**IW-70-SHB113 11/14/2011 (105-130)***	**IW-70-SHB217 11/17/2011 (105-130)***	**IW-70-SHB217(D) 11/17/2011 (105-130)***	**MW-70-MNA13 11/10/2011 (115-125)***	**MW-70-PMW09 11/14/2011 (120-130)***	**MW-70-PMW10 11/14/2011 (120-130)***
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	0.42 J	2.3
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	4.8	**36**	**36**	4.0	6.3	**48**
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	0.92 J	**6.6**	**6.4**	**12**	**12**	**45**
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	**2.2**	**1.3**	**1.4**	0.26 J	**0.65**	**25**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)								
DEHALOCOCCOIDES	qPCR	per Liter	1.00E+06	2.00E+03	NA	4.00E+03 U	4.00E+03 U	6.00E+03
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	1.00E+06	4.00E+03 U	NA	NA	NA	4.00E+03 U
Dissolved Hydrocarbon Gases								
ETHANE	RSK175	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.84 J
ETHENE	RSK175	µg/L	18	1.3 J	1.3 J	2.0 U	1.2 J	14
METHANE	RSK175	µg/L	24000	35	35	420	21	4000

Notes:
*(105-130) Well Screen Interval - feet below ground surface
Bolded parameters are constituents of concern and bolded values are above target cleanup goals or federal/state primary maximum contaminant limits.
D - duplicate sample
J - estimated value
µg/L - microgram per liter
mg/L - milligrams per liter
MTBE - Methyl Tertiary Butyl Ether
NA - not analyzed
qPCR - Quantitation Polymerase Chain Reaction
U - not detected

Table 2-10
Shell Horizon Biobarrier-3 Analytical Results

			Well Number/Sampling Date/Screen Intervals							
Parameters	**Method**	**Unit**	**IW-70-SHB310** 11/21/2011 (80-95/105-130)*	**IW-70-SHB311** 11/22/2011 (80-95)*	**MW-70-MNA14** 11/17/2011 (115-125)*	**MW-70-PMW11A** 11/16/2011 (85-95)*	**MW-70-PMW11B** 11/16/2011 (115-125)*	**MW-70-PMW12A** 11/16/2011 (85-95)*	**MW-70-PMW12A(D)** 11/16/2011 (85-95)*	**MW-70-PMW12B** 11/16/2011 (115-125)*
Wet Chemistry										
TOTAL ALKALINITY	2320B	mg/L	670	640	NA	215	217	248	250	223
TOTAL DISSOLVED SOLIDS	2540C	mg/L	7900	945	NA	25200	4200	2590	2640	3890
BROMIDE	300.0	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE-CL	300.0	mg/L	3120	173	NA	13800	1950	1310	1300	1800
NITRATE-N	300.0	mg/L	2.00 U	1.00 U	NA	2.00 U	0.200 U	0.200 U	0.200 U	0.400 U
NITRITE-N	300.0	mg/L	2.00 U	1.00 U	NA	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SULFATE	300.0	mg/L	4.16 J	1.93 U	NA	2100	550	219	218	512
ACETATE	300.0M	mg/L	29.0	1.00 U	NA	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U
BUTYRATE	300.0M	mg/L	557	1.00 U	1.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U
LACTATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U
PROPIONATE	300.0M	mg/L	575	1.00 U	1.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U
PH	4500HB	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
HYDROGEN SULFIDE	4500F	mg/L	9.14	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
TOTAL ORGANIC CARBON	5310B	mg/L	1670	29.2	NA	2.40	2.12	4.66	4.58	1.78
Metals										
ARSENIC	6010B	mg/L	0.200 U	0.200 U	NA	0.200 U	0.00597 J	0.200 U	0.200 U	0.0115 J
IRON	6010B	mg/L	62.6	31.5	NA	4.42	1.83	3.61	3.65	8.81
MANGANESE	6010B	mg/L	2.30	0.725	NA	4.30	0.533	0.716	0.722	0.419
Volatile Organic Compounds										
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	0.47 J	1.0 U	1.0 U	0.39 J
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	0.50 U	0.60	0.50 U	0.44 J	0.50 U	0.50 U	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 2-10 (continued)
Shell Horizon Biobarrier-3 Analytical Results

			Well Number/Sampling Date/Screen Intervals							
Parameters	**Method**	**Unit**	**IW-70-SHB310 11/21/2011 (80-95/105-130)***	**IW-70-SHB311 11/22/2011 (80-95)***	**MW-70-MNA14 11/17/2011 (115-125)***	**MW-70-PMW11A 11/16/2011 (85-95)***	**MW-70-PMW11B 11/16/2011 (115-125)***	**MW-70-PMW12A 11/16/2011 (85-95)***	**MW-70-PMW12A(D) 11/16/2011 (85-95)***	**MW-70-PMW12B 11/16/2011 (115-125)***
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	330	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	100	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	33	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	400	6.7 J	10 U	10 U	10 U	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CARBON DISULFIDE	8260B	µg/L	1.5	1.0 U	0.20 J	0.28 J	0.26 J	0.27 J	0.24 J	0.30 J
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	**160**	0.48 J	**130**	**14**	**67**	**13**	**12**	0.78 J
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 2-10 (continued)
Shell Horizon Biobarrier-3 Analytical Results

			Well Number/Sampling Date/Screen Intervals							
Parameters	**Method**	**Unit**	**IW-70-SHB310** **11/21/2011** **(80-95/105-130)***	**IW-70-SHB311** **11/22/2011** **(80-95)***	**MW-70-MNA14** **11/17/2011** **(115-125)***	**MW-70-PMW11A** **11/16/2011** **(85-95)***	**MW-70-PMW11B** **11/16/2011** **(115-125)***	**MW-70-PMW12A** **11/16/2011** **(85-95)***	**MW-70-PMW12A(D)** **11/16/2011** **(85-95)***	**MW-70-PMW12B** **11/16/2011** **(115-125)***
TOLUENE	8260B	µg/L	0.50 J	1.7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	**11**	1.1	0.83 J	0.98 J	**44**	**26**	**25**	**42**
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	**19**	0.30 J	**5.0**	1.9 J	**5.5**	1.5 J	1.5 J	2.0 J
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	**6.1**	**2.1**	**0.58**	**4.1**	**330**	**250**	**230**	**130**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)										
DEHALOCOCCOIDES	qPCR	per Liter	2.00E+04 U	2.00E+06	4.00E+03 U	3.00E+04	2.00E+07	3.00E+06	NA	9.00E+05
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	NA	2.00E+06	NA	4.00E+03 U	4.00E+03 U	4.00E+03 U	NA	6.00E+05
Dissolved Hydrocarbon Gasses										
ETHANE	RSK-175	µg/L	0.93 J	0.79 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.84 J
ETHENE	RSK-175	µg/L	0.93 J	0.62 J	3.2	0.90 J	6.3	14	14	110
METHANE	RSK-175	µg/L	5200	20000	1300	1700	27	15000	12000	5100

Notes:
*(115-125) Well Screen Interval - feet below ground surface
Bolded parameters are constituents of concern and bolded values are above target cleanup goals or federal/state primary maximum contaminant limits.
D - duplicate sample
J - estimated value
µg/L - micrograms per liter
mg /L - milligrams per liter
MTBE - methyl tertiary butyl ether
NA - not analyzed
qPCR - quantitation polymerase chain reaction
U - not detected

Table 2-11
Shell Horizon Point of Compliance Analytical Results

			Well Number/Sampling Date/Screen Interval
Parameters	**Method**	**Unit**	**MW-70-23 11/1/2011 (110-130)***
Wet Chemistry			
TOTAL ALKALINITY	2320B	mg/L	NA
TOTAL DISSOLVED SOLIDS	2540C	mg/L	NA
BROMIDE	300	mg/L	NA
CHLORIDE-CL	300	mg/L	NA
NITRATE-N	300	mg/L	NA
NITRITE-N	300	mg/L	NA
SULFATE	300	mg/L	NA
ACETATE	300.0M	mg/L	NA
BUTYRATE	300.0M	mg/L	NA
LACTATE	300.0M	mg/L	NA
PROPIONATE	300.0M	mg/L	NA
HYDROGEN SULFIDE	4500F	mg/L	NA
TOTAL ORGANIC CARBON	5310B	mg/L	NA
Dissolved Metals			
ARSENIC	6010B	mg/L	NA
IRON	6010B	mg/L	NA
MANGANESE	6010B	mg/L	NA
Volatile Organic Compounds			
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U
2-BUTANONE	8260B	µg/L	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U
2-HEXANONE	8260B	µg/L	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U
ACETONE	8260B	µg/L	10 U
BENZENE	8260B	µg/L	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U

Table 2-11 (continued)
Shell Horizon Point of Compliance Analytical Results

			Well Number/Sampling Date/Screen Interval
Parameters	**Method**	**Unit**	**MW-70-23 11/1/2011 (110-130)***
BROMOFORM	8260B	µg/L	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U
CARBON DISULFIDE	8260B	µg/L	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U
FREON113	8260B	µg/L	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U
MTBE	8260B	µg/L	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U
O-XYLENE	8260B	µg/L	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U
STYRENE	8260B	µg/L	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U
TOLUENE	8260B	µg/L	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U
TRICHLOROETHENE	8260B	µg/L	5.0 U
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.50 U
XYLENES (TOTAL)	8260B	µg/L	2.0 U
Dissolved Hydrocarbon Gases			
ETHANE	RSK175	µg/L	NA
ETHENE	RSK175	µg/L	NA
METHANE	RSK175	µg/L	NA

Notes:
Bolded parameters are constituents of concern
*(110-130) Well Screen Interval - feet below ground surface
µg/L - micrograms per liter
mg/L - milligrams per liter
MTBE - methyl tertiary butyl ether
NA - not analyzed
U - not detected

Table 2-12
Second Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval									
Parameters	**Method**	**Unit**	**IW-70-SSB109 11/18/2011 (126-166)***	**IW-70-SSB119 11/22/2011 (125-165)***	**MW-70-14 11/23/2011 (161-171)***	**MW-70-15 11/21/2011 (161-171)***	**MW-70-43B 11/16/2011 (136-146)***	**MW-70-49 9/27/2011 (125-165)***	**MW-70-49 11/28/2011 (125-165)***	**MW-70-MNA15 11/17/2011 (140-150)***	**MW-70-MNA16 11/17/2011 (141-151)***	**MW-70-MNA16(D) 11/17/2011 (141-151)***
Wet Chemistry												
TOTAL ALKALINITY	2320B	mg/L	1210	1180	NA	NA	NA	NA	197	NA	NA	NA
TOTAL DISSOLVED SOLIDS	2540C	mg/L	9520	4920	NA	NA	NA	NA	3440	NA	NA	NA
BROMIDE	300.0	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE-CL	300.0	mg/L	4740	2550	NA	NA	NA	NA	1540	NA	NA	NA
NITRATE-N	300.0	mg/L	2.00 U	0.200 U	NA	NA	NA	NA	0.200 U	NA	NA	NA
NITRITE-N	300.0	mg/L	2.00 U	1.00 U	NA	NA	NA	NA	1.00 U	NA	NA	NA
SULFATE	300.0	mg/L	6.09	4.89	NA	NA	NA	NA	341	NA	NA	NA
ACETATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	2.00 U	NA	NA	1.00 U	NA	1.00 U	1.00 U
BUTYRATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	2.00 U	NA	NA	1.00 U	NA	1.00 U	1.00 U
LACTATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	2.00 U	NA	NA	1.00 U	NA	1.00 U	1.00 U
PROPIONATE	300.0M	mg/L	1.00 UJ	1.00 U	1.00 U	2.00 U	NA	NA	1.00 U	NA	1.00 U	1.00 U
HYDROGEN SULFIDE	4500F	mg/L	1.00 U	1.00 U	NA	NA	NA	NA	1.00 U	NA	NA	NA
TOTAL ORGANIC CARBON	5310B	mg/L	96.3	14.9	NA	NA	NA	NA	2.59	NA	NA	NA
Metals												
ARSENIC	6010B	mg/L	0.0247 J	0.200 U	NA	NA	NA	NA	0.200 U	NA	NA	NA
IRON	6010B	mg/L	9.85	2.29	NA	NA	NA	NA	1.04	NA	NA	NA
MANGANESE	6010B	mg/L	0.987	0.386	NA	NA	NA	NA	0.595	NA	NA	NA
Volatile Organic Compounds												
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.54 J	0.38 J	0.37 J
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	0.50 U	2.1	0.50 U	0.38 J	0.50 U	0.50 U	4.4	3.9	3.8
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Table 2-12 (continued)
Second Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval									
Parameters	**Method**	**Unit**	**IW-70-SSB109 11/18/2011 (126-166)***	**IW-70-SSB119 11/22/2011 (125-165)***	**MW-70-14 11/23/2011 (161-171)***	**MW-70-15 11/21/2011 (161-171)***	**MW-70-43B 11/16/2011 (136-146)***	**MW-70-49 9/27/2011 (125-165)***	**MW-70-49 11/28/2011 (125-165)***	**MW-70-MNA15 11/17/2011 (140-150)***	**MW-70-MNA16 11/17/2011 (141-151)***	**MW-70-MNA16(D) 11/17/2011 (141-151)***
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	7.3 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	9.5 J	10 U	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CARBON DISULFIDE	8260B	µg/L	0.42 J	1.0 U	0.25 J	1.0 U	0.29 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	0.32 J	0.49 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.29 J	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.30 J	0.74 J	**450**	3.4	**16**	**8.3**	**9.5**	**1000**	**1000**	**920**
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.66 J	1.0 U	1.0 U	1.0 U	1.0 U
METHYL TERTIARY BUTYL ETHER	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	0.45 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.43 J	0.43 J	**29**	1.0 U	9.3	1.3	1.7	**55**	**46**	**45**
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	0.30 J	0.24 J	0.89 J	**16**	**180**	**20**	**17**	**12**	**12**	**12**

Table 2-12 (continued)
Second Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval									
Parameters	**Method**	**Unit**	**IW-70-SSB109 11/18/2011 (126-166)***	**IW-70-SSB119 11/22/2011 (125-165)***	**MW-70-14 11/23/2011 (161-171)***	**MW-70-15 11/21/2011 (161-171)***	**MW-70-43B 11/16/2011 (136-146)***	**MW-70-49 9/27/2011 (125-165)***	**MW-70-49 11/28/2011 (125-165)***	**MW-70-MNA15 11/17/2011 (140-150)***	**MW-70-MNA16 11/17/2011 (141-151)***	**MW-70-MNA16(D) 11/17/2011 (141-151)***
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	**1.3**	**1.7**	**1.2**	0.50 U	**0.61**	0.50 U	0.33 J	**3.7**	**25**	**24**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)												
DEHALOCOCCOIDES	qPCR	per Liter	2.00E+05	3,000,000[b]	NA	4.00E+03 U	4.00E+03 U	NA	4.00E+03 U	NA	2.00E+07	NA
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	300,000[c]	4,000,000[c]	NA	NA	NA	NA	NA	NA	9.00E+06	NA
Dissolved Hydrocarbon Gasses												
ETHANE	RSK-175	µg/L	2.3	9.3	2.0 U	2.0 U	2.0 U	NA	4.8	NA	2.0 U	2.0 U
ETHENE	RSK-175	µg/L	0.72 J	1.9 J	1.1 J	2.0 U	2.0 U	NA	7.2	NA	19	18
METHANE	RSK-175	µg/L	17000	23000	6.9	27	10	12	7.0	33	NA	6.2

Table 2-12 (continued)
Second Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval									
Parameters	**Method**	**Unit**	**MW-70-MNA-17 11/21/2011 (140-150)***	**MW-70-PMW13A 8/5/2011 (125-135)***	**MW-70-PMW13A(D) 8/5/2011 (125-135)***	**MW-70-PMW13A 11/18/2011 (125-135)***	**MW-70-PMW13B 8/5/2011 (145-155)***	**MW-70-PMW13B 11/18/2011 (145-155)***	**MW-70-PMW14A 8/5/2011 (128-138)***	**MW-70-PMW14A 11/18/2011 (128-138)***	**MW-70-PMW14B 8/5/2011 (149-159)***	**MW-70-PMW14B 11/18/2011 (149-159)***
Wet Chemistry												
TOTAL ALKALINITY	2320B	mg/L	NA	206	205	196	214	205	402	473	327	372
TOTAL DISSOLVED SOLIDS	2540C	mg/L	NA	4500	4500	4460	7850	8320	4140	3720	6840	7400
BROMIDE	300.0	mg/L	NA	7.47	7.50	NA	13.1	NA	6.47	NA	11.4	NA
CHLORIDE-CL	300.0	mg/L	NA	2150	2060	2230	3870	4390	1780	1900	3500	3670
NITRATE-N	300.0	mg/L	NA	0.274 U	1.00 U	0.200 U	2.00 U	0.200 U	0.278 U	0.200 U	0.539 J	0.200 U
NITRITE-N	300.0	mg/L	NA	1.00 U	1.00 U	1.00 U	2.00 U	2.00 U	1.00 U	1.00 U	2.00 U	2.00 U
SULFATE	300.0	mg/L	NA	478	474	484	744	781	351	338	602	677
ACETATE	300.0M	mg/L	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
BUTYRATE	300.0M	mg/L	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
LACTATE	300.0M	mg/L	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
PROPIONATE	300.0M	mg/L	2.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 UJ	1.00 U	1.00 UJ	1.00 U	1.00 UJ
HYDROGEN SULFIDE	4500F	mg/L	NA	NA	NA	1.00 U	NA	1.00 U	NA	1.00 U	NA	1.00 U
TOTAL ORGANIC CARBON	5310B	mg/L	NA	1.92 U	1.81 U	1.73	1.56 U	1.58	3.34	1.00 U	2.31 U	1.95
Metals												
ARSENIC	6010B	mg/L	NA	NA	NA	0.200 U	NA	0.200 U	NA	0.200 U	NA	0.00660 J
IRON	6010B	mg/L	NA	NA	NA	1.88	NA	2.62	NA	24.9	NA	24.0
MANGANESE	6010B	mg/L	NA	NA	NA	0.436	NA	0.554	NA	1.38	NA	1.62
Volatile Organic Compounds												
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	0.29 J	0.30 J	0.27 J	0.51 J	0.47 J	0.32 J	1.0 U	0.65 J	0.47 J
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	3.4	2.8	2.6	5.4	4.4	0.50 U	0.50 U	1.8	1.9
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 2-12 (continued)
Second Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval									
Parameters	**Method**	**Unit**	**MW-70-MNA-17 11/21/2011 (140-150)***	**MW-70-PMW13A 8/5/2011 (125-135)***	**MW-70-PMW13A(D) 8/5/2011 (125-135)***	**MW-70-PMW13A 11/18/2011 (125-135)***	**MW-70-PMW13B 8/5/2011 (145-155)***	**MW-70-PMW13B 11/18/2011 (145-155)***	**MW-70-PMW14A 8/5/2011 (128-138)***	**MW-70-PMW14A 11/18/2011 (128-138)***	**MW-70-PMW14B 8/5/2011 (149-159)***	**MW-70-PMW14B 11/18/2011 (149-159)***
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CARBON DISULFIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.26 J
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	**9.9**	**130**	**130**	**150**	**940**	**1100**	**67**	**9.1**	**340**	**420**
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYL TERTIARY BUTYL ETHER	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	6.1	**110**	**110**	**99**	**76**	**47**	**46**	**30**	**51**	**36**
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	**65**	**200**	**200**	**300**	**11**	**13**	**6.3**	**5.4**	**12**	**11**
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.50 U	**280**	**210**	**300**	**26**	**16**	**250**	**250**	**300**	**300**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table 2-12 (continued)
Second Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval									
Parameters	**Method**	**Unit**	**MW-70-MNA-17 11/21/2011 (140-150)***	**MW-70-PMW13A 8/5/2011 (125-135)***	**MW-70-PMW13A(D) 8/5/2011 (125-135)***	**MW-70-PMW13A 11/18/2011 (125-135)***	**MW-70-PMW13B 8/5/2011 (145-155)***	**MW-70-PMW13B 11/18/2011 (145-155)***	**MW-70-PMW14A 8/5/2011 (128-138)***	**MW-70-PMW14A 11/18/2011 (128-138)***	**MW-70-PMW14B 8/5/2011 (149-159)***	**MW-70-PMW14B 11/18/2011 (149-159)***
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)												
DEHALOCOCCOIDES	qPCR	per Liter	4.00E+03 U	NA	NA	3.00E+06	NA	1.00E+07	NA	1.00E+06	NA	6.00E+06
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	NA	NA	NA	4.00E+03 U	NA	4.00E+03 U	NA	4.00E+03 U	NA	4.00E+03 U
Dissolved Hydrocarbon Gasses												
ETHANE	RSK-175	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1.8 J	2.6	4.4	4.8
ETHENE	RSK-175	µg/L	2.0 U	5.0	4.9	6.4	1.5 J	1.6 J	45	68	61	52
METHANE	RSK-175	µg/L	18000	62	56	87	15	11	17000	26000	16000	16000

Notes:
*(140-150) Well Screen Interval - feet below ground surface
Bolded parameters are constituents of concern and bolded values are above target cleanup goals or federal/state primary maximum contaminant limits.
D - duplicate sample
J - estimated value
µg/L - micrograms per liter
mg /L - milligrams per liter
NA - not analyzed
qPCR - quantitation polymerase chain reaction
U - not detected

Table 2-13
Second Sand Point of Compliance Analytical Results

			Well Number/SamplingDate/Screen Interval	
Parameters	**Method**	**Unit**	**MW-70-21 11/1/2011 (150-170)***	**MW-70-36 10/31/2011 (150-160)***
Wet Chemistry				
TOTAL ALKALINITY	2320B	mg/L	NA	NA
TOTAL DISSOLVED SOLIDS	2540C	mg/L	NA	NA
BROMIDE	300	mg/L	NA	NA
CHLORIDE-CL	300	mg/L	NA	NA
NITRATE-N	300	mg/L	NA	NA
NITRITE-N	300	mg/L	NA	NA
SULFATE	300	mg/L	NA	NA
ACETATE	300.0M	mg/L	NA	NA
BUTYRATE	300.0M	mg/L	NA	NA
LACTATE	300.0M	mg/L	NA	NA
PROPIONATE	300.0M	mg/L	NA	NA
HYDROGEN SULFIDE	4500F	mg/L	NA	NA
TOTAL ORGANIC CARBON	5310B	mg/L	NA	NA
Dissolved Metals				
ARSENIC	6010B	mg/L	NA	NA
IRON	6010B	mg/L	NA	NA
MANGANESE	6010B	mg/L	NA	NA
Volatile Organic Compounds				
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U
ACETONE	8260B	µg/L	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U

Table 2-13 (continued)
Second Sand Point of Compliance Analytical Results

			Well Number/SamplingDate/Screen Interval	
Parameters	**Method**	**Unit**	**MW-70-21 11/1/2011 (150-170)***	**MW-70-36 10/31/2011 (150-160)***
BROMOFORM	8260B	µg/L	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U
CARBON DISULFIDE	8260B	µg/L	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	1.0 U
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U
METHYL TERTIARY BUTYL ETHER	8260B	µg/L	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	**8.0**
TOLUENE	8260B	µg/L	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	1.0 U
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	5.0 U	5.0 U
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.50 U	0.50 U
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U
Dissolved Hydrocarbon Gases				
ETHANE	RSK175	µg/L	NA	NA
ETHENE	RSK175	µg/L	NA	NA
METHANE	RSK175	µg/L	NA	NA

Notes:

*(150-170) Well Screen Interval - feet below ground surface

Bolded parameters are constituents of concern and bolded values are above target cleanup goals for federal/state primary maximum contaminant limits.

µg/L - micrograms per liter

mg/L - milligrams per liter

NA - not analyzed

U - not detected

Table 2-14
Deep Sand Point of Compliance Analytical Results

			Well Number/SamplingDate/Screen Interval		
Parameters	**Method**	**Unit**	**MW-70-POC02 11/1/2011 (190-200)***	**MW-70-POC03 10/31/2011 (190-200)***	**MW-70-POC04 11/1/2011 (195-205)***
Wet Chemistry					
TOTAL ALKALINITY	2320B	mg/L	NA	NA	NA
TOTAL DISSOLVED SOLIDS	2540C	mg/L	NA	NA	NA
BROMIDE	300	mg/L	NA	NA	NA
CHLORIDE-CL	300	mg/L	NA	NA	NA
NITRATE-N	300	mg/L	NA	NA	NA
NITRITE-N	300	mg/L	NA	NA	NA
SULFATE	300	mg/L	NA	NA	NA
ACETATE	300.0M	mg/L	NA	NA	NA
BUTYRATE	300.0M	mg/L	NA	NA	NA
LACTATE	300.0M	mg/L	NA	NA	NA
PROPIONATE	300.0M	mg/L	NA	NA	NA
HYDROGEN SULFIDE	4500F	mg/L	NA	NA	NA
TOTAL ORGANIC CARBON	5310B	mg/L	NA	NA	NA
Dissolved Metals					
ARSENIC	6010B	mg/L	NA	NA	NA
IRON	6010B	mg/L	NA	NA	NA
MANGANESE	6010B	mg/L	NA	NA	NA
Volatile Organic Compounds					
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	0.50 U	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U

Table 2-14 (continued)
Deep Sand Point of Compliance Analytical Results

			Well Number/SamplingDate/Screen Interval		
Parameters	**Method**	**Unit**	**MW-70-POC02 11/1/2011 (190-200)***	**MW-70-POC03 10/31/2011 (190-200)***	**MW-70-POC04 11/1/2011 (195-205)***
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U
CARBON DISULFIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U
METHYL TERTIARY BUTYL ETHER	8260B	µg/L	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	2.0
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	5.0 U	5.0 U	5.0 U
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.24 J	0.50 U	0.50 U
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U
Dissolved Hydrocarbon Gases					
ETHANE	RSK175	µg/L	NA	NA	NA
ETHENE	RSK175	µg/L	NA	NA	NA
METHANE	RSK175	µg/L	NA	NA	NA

Notes:

Bolded parameters are constituents of concern
*(190-200) Well Screen Interval - feet below ground surface
J - estimated value
µg/L - micrograms per liter
mg/L - milligrams per liter
NA - not analyzed
U - not detected

Table 2-15

Soil Vapor Grid Analytical Results

Well Number/Sampling Date/Screen Intervals		
Sample Number	**Hydrogen Sulfide (ppmV) 12/7/2011**	**Methane (ppmV) 12/7/2011**
SV-70-01	1.0 U	2.1
SV-70-02	1.0 U	2.4
SV-70-03	1.0 U	2.1
SV-70-04	1.0 U	3.1
SV-70-05	1.0 U	2.0
SV-70-06	1.0 U	2.0
SV-70-07	1.0 U	2.1
SV-70-08	1.0 U	41
SV-70-09	1.0 U	140,000
SV-70-10	1.0 U	700,000
SV-70-11	1.0 U	6,800
SV-70-12	1.0 U	28,000

Notes:

ppmV - parts per million by volume

U - not detected

Table 4-1
Quality Assurance/Quality Control Summary

Data Quality Indicators	Measurement Performance Criteria	2010 Performance Monitoring
Accuracy	Percent recoveries for MS/MSD Criteria Varies by compound	All data was considered accurate. Two analytes were qualified due to MS/MSD. All samples met accuracy criteria except: 1) Arsenic in MS for IW-70-SHB113-125, IW-70-FSB216-132, MW-70-PMW11B-139, and MW-70-PMW12B-142, final result received a 'J' qualifier.
Precision	RPD between duplicate results ≤25 percent	Overall precision was good. No data was rejected. All samples met RPD goal except: 1) Propionate in MW-70-PMW13A-153, MW-70-PMW13B-154, MW-70-PMW14A-155, and MW-70-PMW14B-156. These samples were J flagged due to the RPDs. It is likely that matrix interference was responsible for RPDs being out or range.
Completeness	95 percent completeness	Completeness was 100 percent. No samples were rejected.
Comparability	Qualitative	Standard methods, units and reporting formats met comparability requirements per the QA/QC program.
Representativeness	DQO parameters and proper sampling techniques	DQO parameters and analytical parameters meet QA/QC program requirements.

Acronyms/Abbreviations:
- DQO – data quality objectives
- EISB – Enhanced *In-Situ* Bioremediation
- MS/MSD – matrix spike/matrix spike duplicate
- QA/QC – quality assurance, quality control
- RPD – relative percent difference

Table 6-1
Proposed 2012/2013 Groundwater and Performance Monitoring Schedule

	Biobarrier Installation Completion Date	Field Parameters	VOCs	DHGs	Anions/TDAlkalinity	VFAs	TOC	Sulfide	Dissolved Metals	DHC/vcrA	Soil Vapor
Source Area Treatment Grid											
IW-70-SAT35 (25-55)	8/3/2010	A	A	A	A	A	A	A	A	A	—
MW-70-PMW01A (25-35)		A	A	A	A	A	A	A	A	A	—
MW-70-PMW01B (25-55)		A	A	A	A	A	A	A	A	A	—
MW-70-27 (25.5-35.5)		A	A	A	A	A	A	A	A	A	—
MW-70-28 (50.3-60.3)		A	A	A	A	A	A	A	A	A	—
MW-70-MNA01 (40-50)		A	A	A	—	A	—	—	—	A	—
MW-70-MNA02 (35-45)		A	A	A	—	A	—	—	—	A	—
MW-70-MNA03 (35-45)		A	A	A	—	A	—	—	—	A	—
MW-70-MNA04 (35-45)		A	A	A	—	A	—	—	—	A	—
Point of Compliance/Upper Fines											
MW-70-02 (20-30)	Not Applicable	A	A	—	—	—	—	—	—	—	—
MW-70-03 (20-30)		A	A	—	—	—	—	—	—	—	—
MW-70-10 (30-40)		A	A	—	—	—	—	—	—	—	—
MW-70-17 (30-40)		A	A	—	—	—	—	—	—	—	—
MW-70-22 (20-30)		A	A	—	—	—	—	—	—	—	—
Source Area Biobarrier/First Sand											
IW-70-SAB06 (65-80/85-105)	1/30/2009	A	A	A	A	A	A	A	A	A	—
IW-70-SAB11 (65-105)		A	A	A	A	A	A	A	A	A	—
MW-70-MNA05 (70-80)		A	A	A	—	A	—	—	—	A	—
MW-70-PMW02A (70.5-80.5)		A	A	A	A	A	A	A	A	A	—
MW-70-PMW02B (90-100)		A	A	A	A	A	A	A	A	A	—
MW-70-PMW03A (70.5-80.5)		A	A	A	A	A	A	A	A	A	—
MW-70-PMW03B (90-100)		A	A	A	A	A	A	A	A	A	—
First Sand Biobarrier 1											
MW-70-38 (80-100)	2/12/2010	A	A	A	A	A	A	A	A	A	—
IW-70-FSB108 (60-105)		A	A	A	A	A	A	A	A	A	—
IW-70-FSB118 (60-105)		A	A	A	A	A	A	A	A	A	—

Table 6-1 (continued)

	Biobarrier Installation Completion Date	Field Parameters	VOCs	DHGs	Anions/TDAlkalinity	VFAs	TOC	Sulfide	Dissolved Metals	DHC/vcrA	Soil Vapor
MW-70-PMW04A (70-80)	2/12/2010	A	A	A	A	A	A	A	A	A	—
MW-70-PMW04B (90-100)		A	A	A	A	A	A	A	A	A	—
MW-70-PMW05A (70-80)	2/12/2010	A	A	A	A	A	A	A	A	A	—
MW-70-PMW05B (90-100)		A	A	A	A	A	A	A	A	A	—
MW-70-PMW06A (69.5-79.5)		A	A	A	A	A	A	A	A	A	—
MW-70-PMW06B (91-101)		A	A	A	A	A	A	A	A	A	—
RDO-5 (65-105)		A	A	A	A	A	A	A	A	A	—
MW-70-MNA08 (80-90)		A	A	A	—	A	—	—	—	A	—
MW-70-MNA06 (80-90)		A	A	A	—	A	—	—	—	A	—
MW-70-MNA11 (80-90)		A	A	A	—	A	—	—	—	A	—
MW-70-MNA07 (90-100)		A	A	A	—	A	—	—	—	A	—
MW-70-43A (86-106)		A	A	A	—	A	—	—	—	A	—
First Sand Biobarrier 2	11/24/2009										
IW-70-FSB216 (65-100)		A	A	A	A	A	A	A	A	A	—
IW-70-FSB229 (65-100)		A	A	A	A	A	A	A	A	A	—
MW-70-PMW07A (65-75)		A	A	A	A	A	A	A	A	A	—
MW-70-PMW07B (85-95)		A	A	A	A	A	A	A	A	A	—
MW-70-PMW08A (65-75)		A	A	A	A	A	A	A	A	A	—
MW-70-PMW08B (85-95)		A	A	A	A	A	A	A	A	A	—
MW-70-MNA09 (64-74)		A	A	A	—	A	—	—	—	A	—
MW-70-MNA10 (75-85)		A	A	A	—	A	—	—	—	A	—
MW-70-MNA12 (75-85)		A	A	A	—	A	—	—	—	A	—
Point of Compliance/First Sand	Not Applicable										
MW-70-11 (80-100)		A	A	—	—	—	—	—	—	—	—
MW-70-16 (95-105)		A	A	—	—	—	—	—	—	—	—
MW-70-35 (90-100)		A	A	—	—	—	—	—	—	—	—
MW-70-POC01 (80-90)		A	A	—	—	—	—	—	—	—	—
Shell Horizon Biobarrier 1	4/7/2010										
IW-70-SHB113 (105-130)		A	A	A	A	A	A	A	A	A	—

Table 6-1 (continued)

	Biobarrier Installation Completion Date	Field Parameters	VOCs	DHGs	Anions/TDAlkalinity	VFAs	TOC	Sulfide	Dissolved Metals	DHC/vcrA	Soil Vapor
MW-70-PMW09 (120-130)	4/7/2010	A	A	A	A	A	A	A	A	A	—
MW-70-PMW10 (120-130)		A	A	A	A	A	A	A	A	A	—
IW-70-SHB217 (105-130)		A	A	A	A	A	A	A	A	A	—
MW-70-MNA13 (115-125)		A	A	A	—	A	—	—	—	A	—
Shell Horizon Biobarrier 3	9/25/2009										
IW-70-SHB310 (105-130)		A	A	A	A	A	A	A	A	A	—
IW-70-SHB311 (80-95)		A	A	A	A	A	A	A	A	A	—
MW-70-PMW11A (85-95)		A	A	A	A	A	A	A	A	A	—
MW-70-PMW11B (115-125)		A	A	A	A	A	A	A	A	A	—
MW-70-PMW12A (85-95)		A	A	A	A	A	A	A	A	A	—
MW-70-PMW12B (115-125)		A	A	A	A	A	A	A	A	A	—
MW-70-MNA14 (115-125)		A	A	A	—	A	—	—	—	A	—
Point of Compliance/Shell Horizon	Not Applicable										
MW-70-23 (110-130)		A	A	—	—	—	—	—	—	—	—
Second Sand Biobarrier 1	3/18/2009										
IW-70-SSB109 (125.75-165.75)		A	A	A	A	A	A	A	A	A	—
IW-70-SSB119 (125-165)		A	A	A	A	A	A	A	A	A	—
MW-70-PMW13A (125-135)		A	A	A	A	A	A	A	A	A	—
MW-70-PMW13B (145-155)		A	A	A	A	A	A	A	A	A	—
MW-70-PMW14A (128-138)		A	A	A	A	A	A	A	A	A	—
MW-70-PMW14B (149-159)		A	A	A	A	A	A	A	A	A	—
MW-70-MNA16 (141-151)		A	A	A	—	A	—	—	—	A	—
MW-70-MNA17 (140-150)		A	A	A	—	A	—	—	—	A	—
MW-70-15 (161-171)		A	A	A	—	A	—	—	—	A	—
MW-70-14 (160-170)		A	A	A	—	A	—	—	—	A	—
MW-70-43B (136-146)		A	A	A	—	A	—	—	—	A	—
MW-70-49 (125-165)		A	A	A	A	A	A	A	A	A	—
Point of Compliance/Second Sand	Not Applicable										
MW-70-21 (150-170)		A	A	—	—	—	—	—	—	—	—

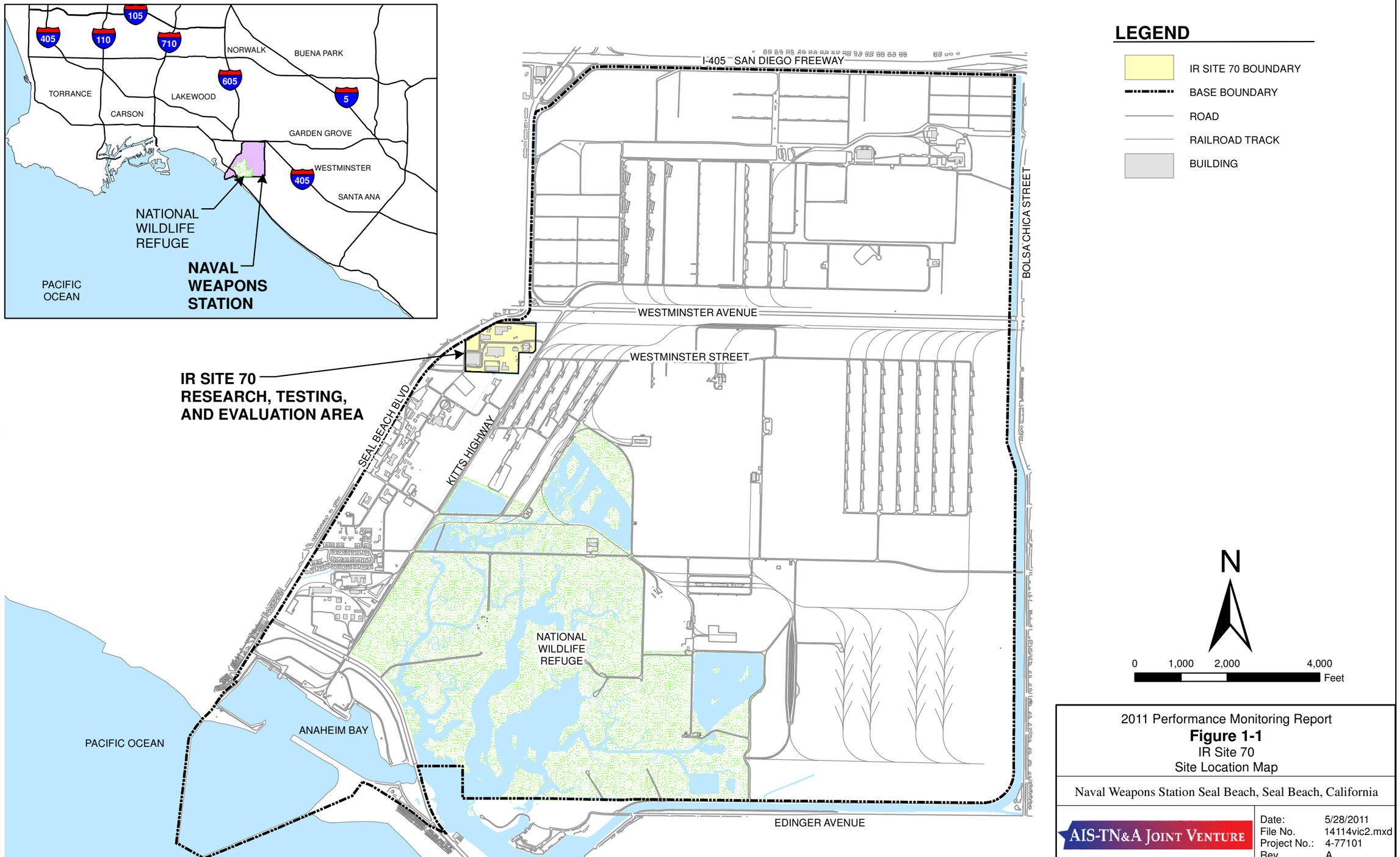
Table 6-1 (continued)

	Biobarrier Installation Completion Date	Field Parameters	VOCs	DHGs	Anions/TDAlkalinity	VFAs	TOC	Sulfide	Dissolved Metals	DHC/vcrA	Soil Vapor
MW-70-36 (150-160)	**Not Applicable**	A	A	—	—	—	—	—	—	—	—
Point of Compliance/Deep Sand	**Not Applicable**										
MW-70-POC02 (190-200)		A	A	—	—	—	—	—	—	—	—
MW-70-POC03 (190-200)	**Not Applicable**	A	A	—	—	—	—	—	—	—	—
MW-70-POC04 (195-205)		A	A	—	—	—	—	—	—	—	—
Soil Vapor Samples	**Not Applicable**										
SV-70-01		—	—	—	—	—	—	—	—	—	A
SV-70-02		—	—	—	—	—	—	—	—	—	A
SV-70-03		—	—	—	—	—	—	—	—	—	A
SV-70-04		—	—	—	—	—	—	—	—	—	A
SV-70-05		—	—	—	—	—	—	—	—	—	A
SV-70-06		—	—	—	—	—	—	—	—	—	A
SV-70-07		—	—	—	—	—	—	—	—	—	A
SV-70-08		—	—	—	—	—	—	—	—	—	A
SV-70-09		—	—	—	—	—	—	—	—	—	A
SV-70-10		—	—	—	—	—	—	—	—	—	A
SV-70-11		—	—	—	—	—	—	—	—	—	A
SV-70-12		—	—	—	—	—	—	—	—	—	A

Notes:

— - not analyzed
A - annual sampling event
Anions/TDAlkalinity - Anions (EPA Method 300.0)/TDS (EPA Method 2540C)/Dissolved Metals (EPA Method 6010B)/Alkalinity (EPA Method 2320B)
DHC/vcrA - Polymerase Chain Reaction Assay (Dehalococcoides/vinyl chloride reductase gene)
DHGs - dissolved hydrogen gases (RSK 175)
dissolved metals - iron, manganese, and arsenic
FP - field parameter (pH, dissolved oxygen, oxidation-reduction potential, specific conductance, temperature, and turbidity)
sulfide - total dissolved hydrogen sulfide (EPA Method 4500 S2F)
SV - Soil Vapor samples analyzed for hydrogen sulfide (ASTM D5504) and methane(25C)
TOC - total organic carbon (EPA Method 5310B)
VFAs- volatile fatty acids (300.0M)
VOCs - volatile organic compounds (EPA Method 8260B)

FIGURES



2011 Performance Monitoring Report

Figure 1-1

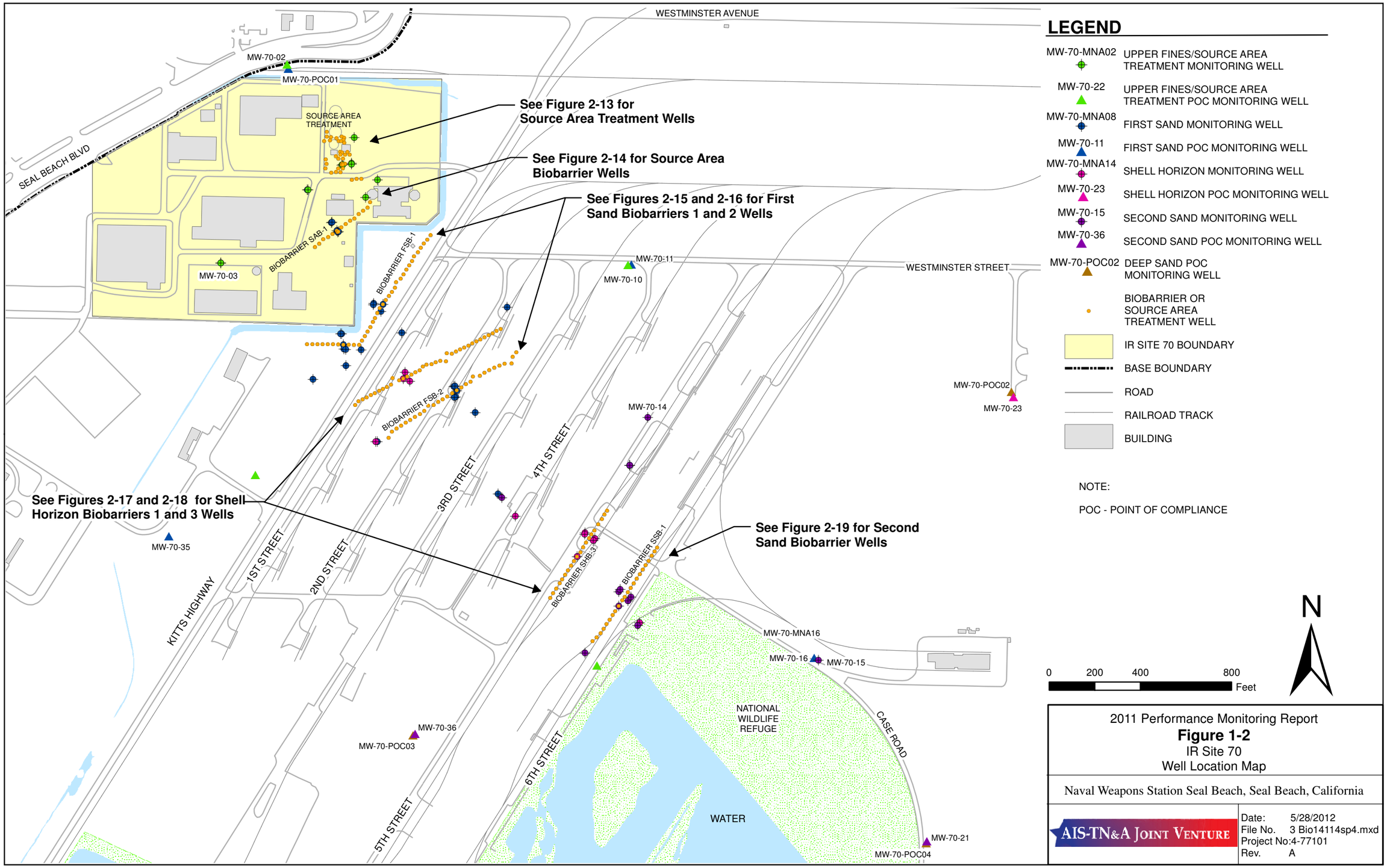
IR Site 70

Site Location Map

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A Joint Venture

Date:	5/28/2011
File No.	14114vic2.mxd
Project No.:	4-77101
Rev.	A



2011 Performance Monitoring Report

Figure 1-2

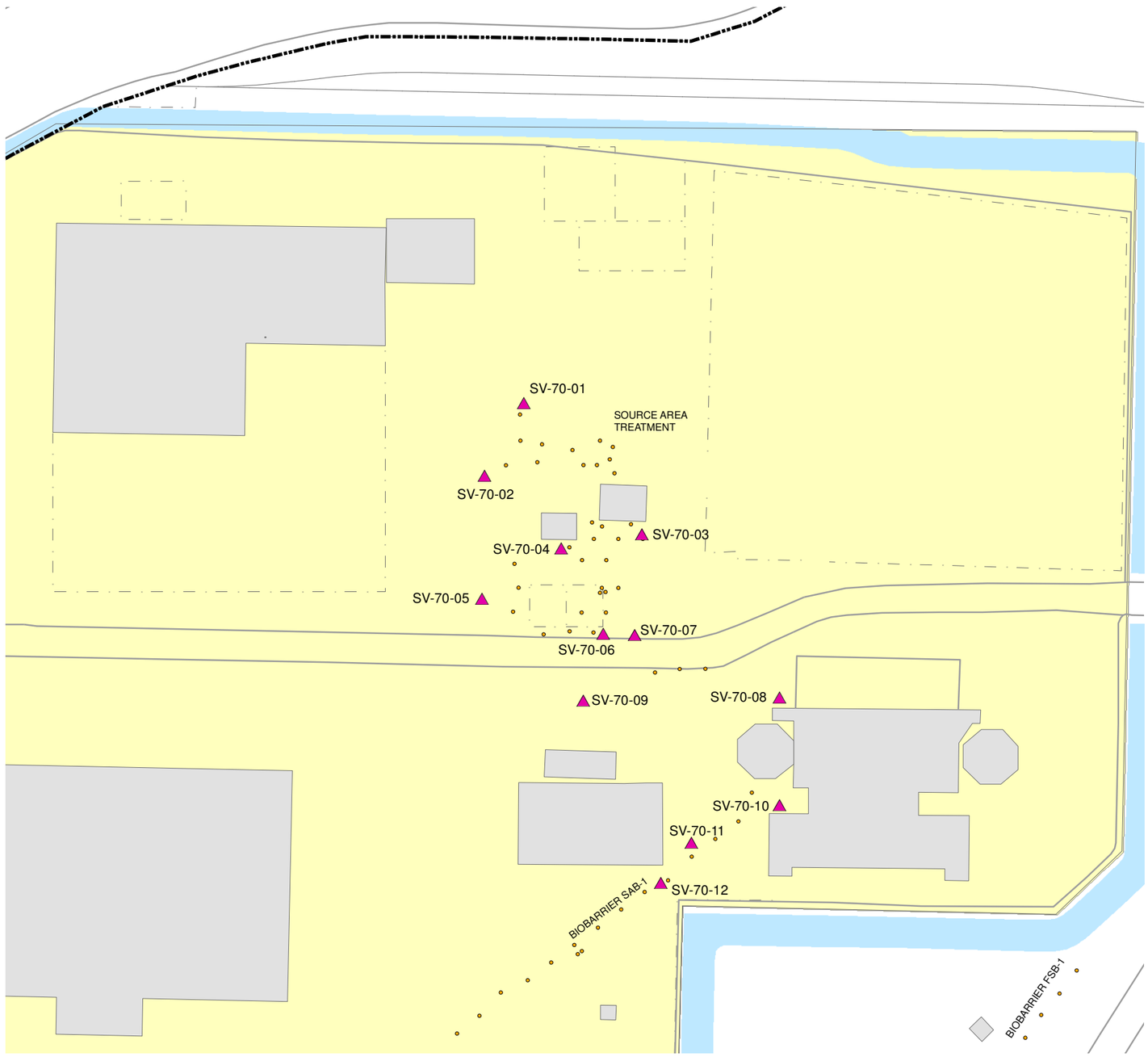
IR Site 70

Well Location Map

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 5/28/2012
File No. 3 Bio14114sp4.mxd
Project No:4-77101
Rev. A



LEGEND

- SV-70-09 — SOIL VAPOR PROBE LOCATION AND ID
- BIOBARRIER OR SOURCE AREA TREATMENT WELL
- IR SITE 70 BOUNDARY
- BASE BOUNDARY
- ROAD
- RAILROAD TRACK
- FENCE
- BUILDING

N

0 50 100 200 Feet

2011 Performance Monitoring Report

Figure 1-3

IR Site 70

Soil Vapor Location Map

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date:	5/30/2011
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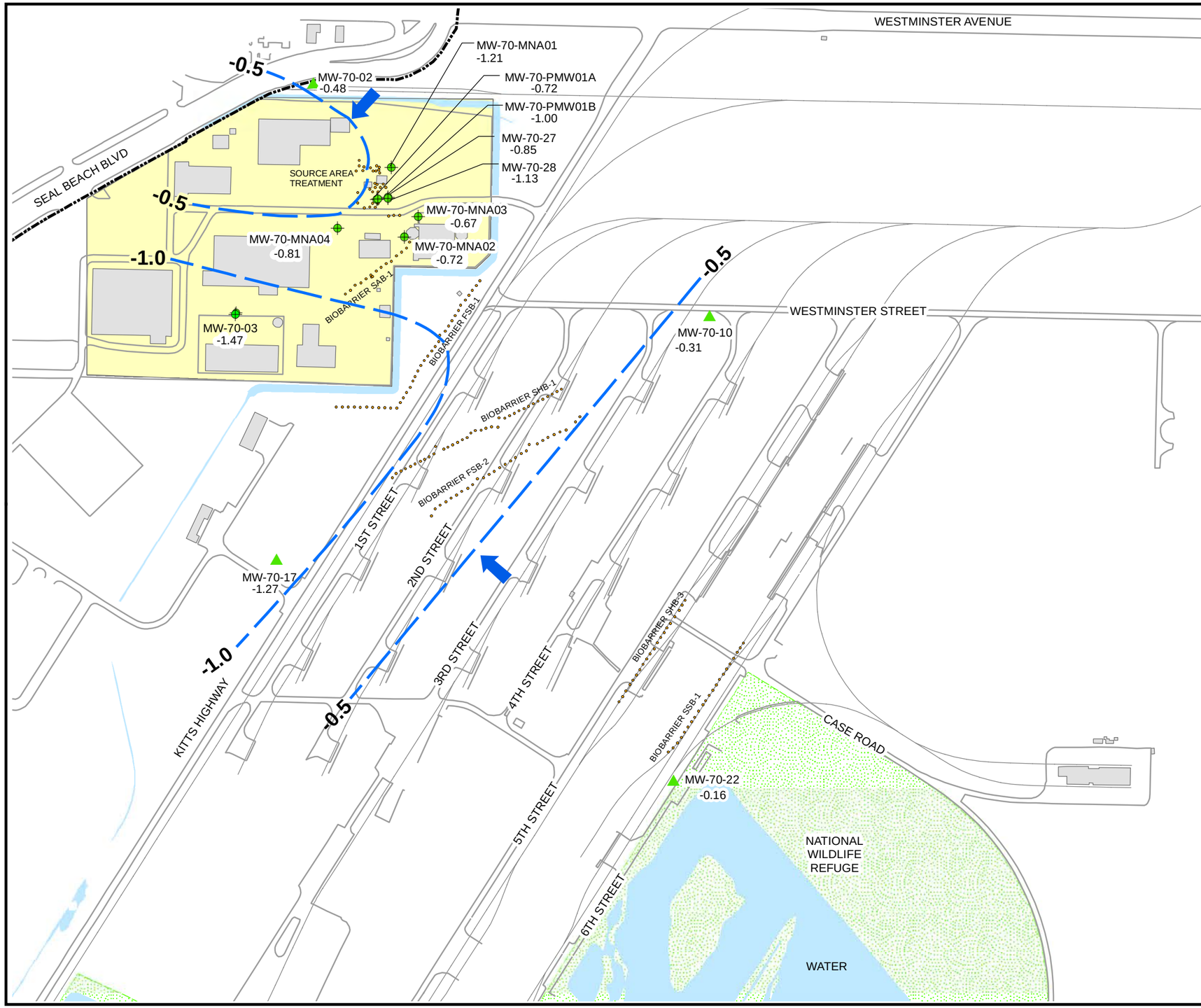
Project No.:	4-77101
Rev.	A



LEGEND

MW-70-MNA02 -0.48	UPPER FINES/SOURCE AREA TREATMENT MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET MEAN SEA LEVEL
MW-70-10 -0.31	UPPER FINES POC MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET MEAN SEA LEVEL
	BIOBARRIER OR SOURCE AREA TREATMENT WELL
	INFERRED DIRECTION OF GROUNDWATER FLOW, LOCAL VARIATIONS DUE TO SEASONAL, TIDAL, AND AGRICULTURAL INFLUENCES
	IR SITE 70 BOUNDARY
	BASE BOUNDARY
	ROAD
	RAILROAD TRACK
	APPROXIMATE GROUNDWATER ELEVATION IN FEET MEAN SEA LEVEL
	BUILDING

NOTES:

WATER LEVELS MEASURED ON JULY 25 AND 26, 2011

HORIZONTAL HYDRAULIC GRADIENT ACROSS THE SITE IS APPROXIMATELY 0.001 FOOT/FOOT

N

0 200 400 800 Feet

2011 Performance Monitoring Report

Figure 2-1

IR Site 70

Upper Fines Groundwater Elevations - July 2011

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date:	10/25/2011
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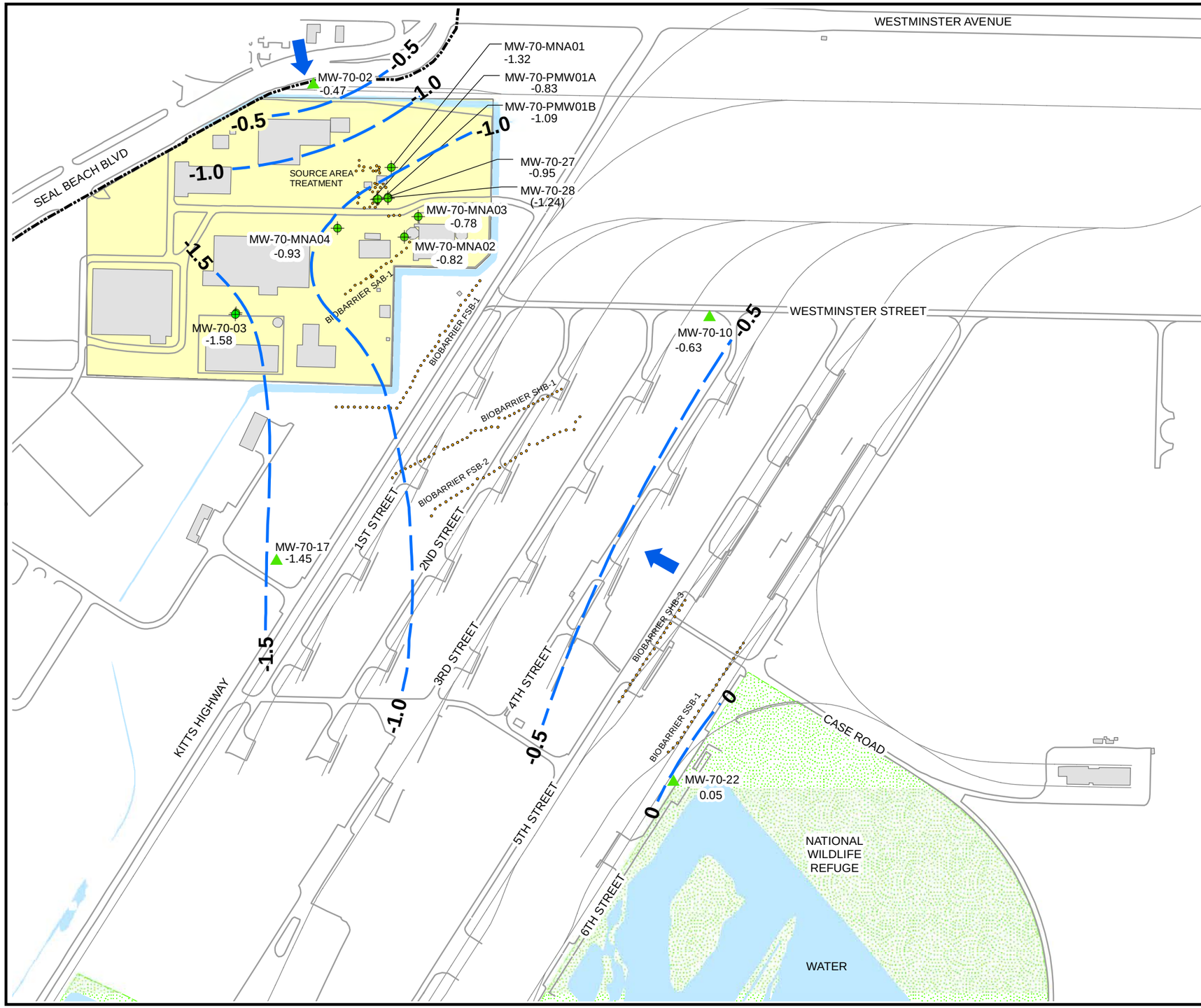
Project No.:	4-77101
Rev.	A



LEGEND

MW-70-MNA02 -0.82	UPPER FINES/SOURCE AREA TREATMENT MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET MEAN SEA LEVEL
MW-70-10 -0.63	UPPER FINES POC MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET MEAN SEA LEVEL
	BIOBARRIER OR SOURCE AREA TREATMENT WELL
	INFERRED DIRECTION OF GROUNDWATER FLOW, LOCAL VARIATIONS DUE TO SEASONAL, TIDAL, AND AGRICULTURAL INFLUENCES
	IR SITE 70 BOUNDARY
	BASE BOUNDARY
	ROAD
	RAILROAD TRACK
	APPROXIMATE GROUNDWATER ELEVATION IN FEET MEAN SEA LEVEL
	BUILDING

NOTES:

( ) - NOT CONTOURED DUE TO DEEPER SCREEN INTERVAL

WATER LEVELS MEASURED ON OCTOBER 26, 2011

HORIZONTAL HYDRAULIC GRADIENT ACROSS THE SITE RANGES FROM APPROXIMATELY 0.0003 AND 0.001 FOOT/FOOT

N

0 200 400 800 Feet

2011 Performance Monitoring Report

Figure 2-2

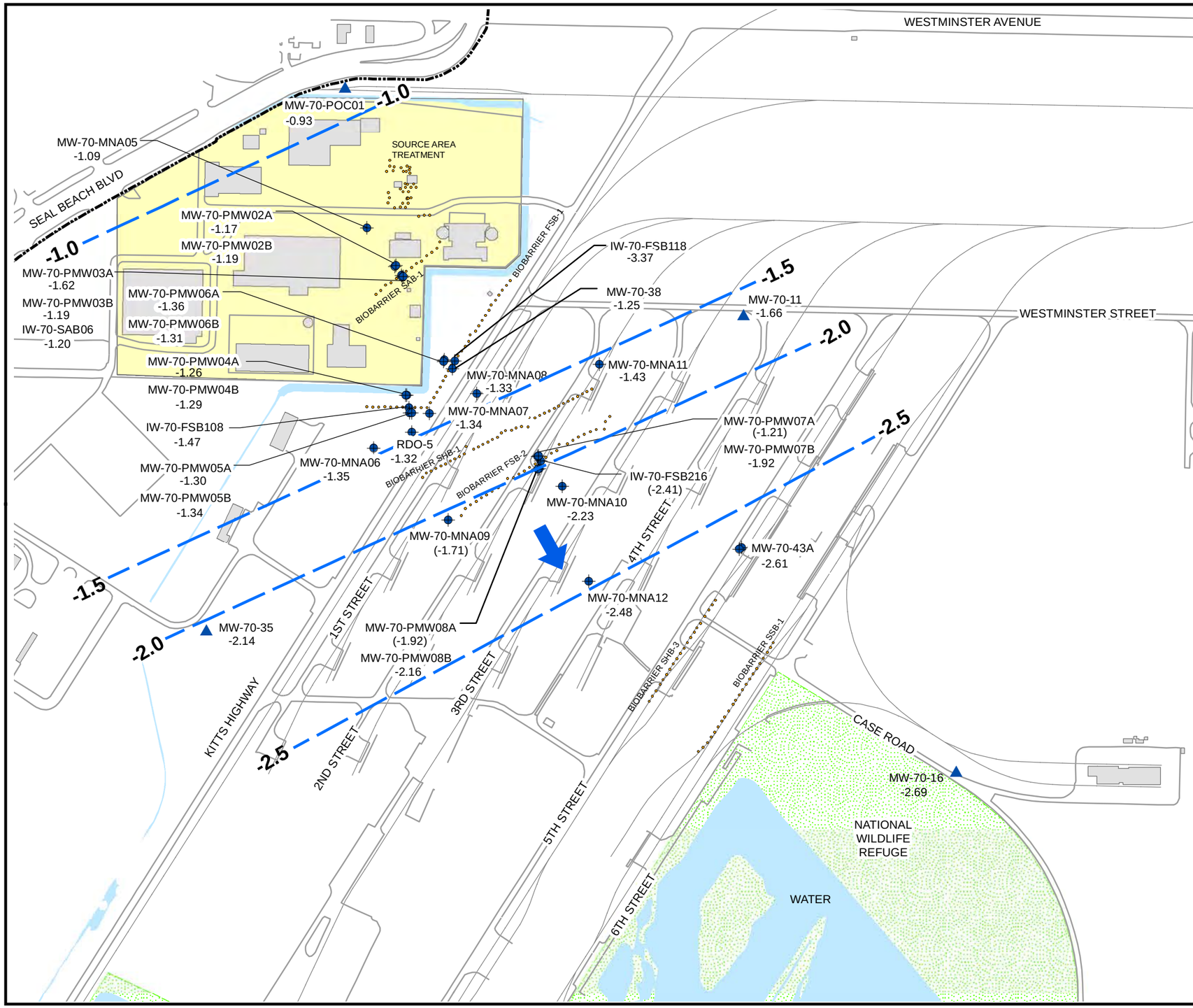
IR Site 70

Upper Fines Groundwater Elevations - October 2011

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date:	1/9/2012
File No.	14114ufgw4.mxd
Project No.:	4-77101
Rev.	A



LEGEND

MW-70-MNA08 -1.33	FIRST SAND MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET BGS MEAN SEA LEVEL
MW-70-16 -2.69	FIRST SAND POC MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET BGS MEAN SEA LEVEL
	BIOBARRIER OR SOURCE AREA TREATMENT WELL
	INFERRED DIRECTION OF GROUNDWATER FLOW, LOCAL VARIATIONS DUE TO SEASONAL, TIDAL, AND AGRICULTURAL INFLUENCES
	IR SITE 70 BOUNDARY
	BASE BOUNDARY
	ROAD
	RAILROAD TRACK
	APPROXIMATE GROUNDWATER ELEVATION, IN FEET MEAN SEA LEVEL
	BUILDING

NOTES:

( ) - PARENTHESES INDICATE THAT THE GROUNDWATER ELEVATION WAS NOT INCLUDED IN CONTOUR DUE TO SCREEN INTERVAL

WATER LEVELS MEASURED ON JULY 25 AND 26, 2011

HORIZONTAL HYDRAULIC GRADIENT ACROSSS THE SITE IS APPROXIMATELY 0.001 FOOT/FOOT

N

0 200 400 800 Feet

2011 Performance Monitoring Report

Figure 2-3

IR Site 70

First Sand Groundwater Elevations - July 2011

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 10/25/2011
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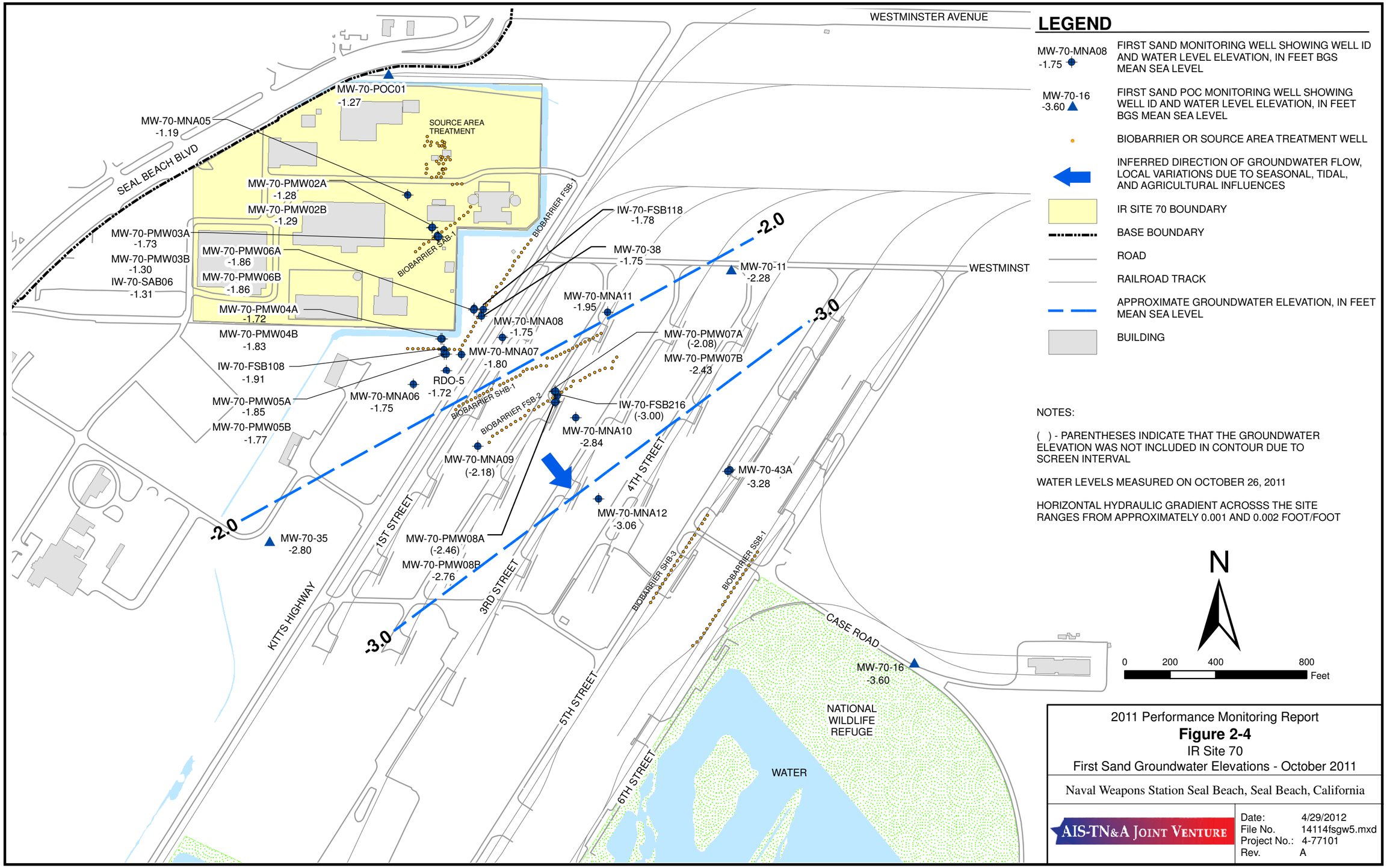
Project No.: 4-77101
Rev. A



2011 Performance Monitoring Report

Figure 2-4

IR Site 70

First Sand Groundwater Elevations - October 2011

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 4/29/2012
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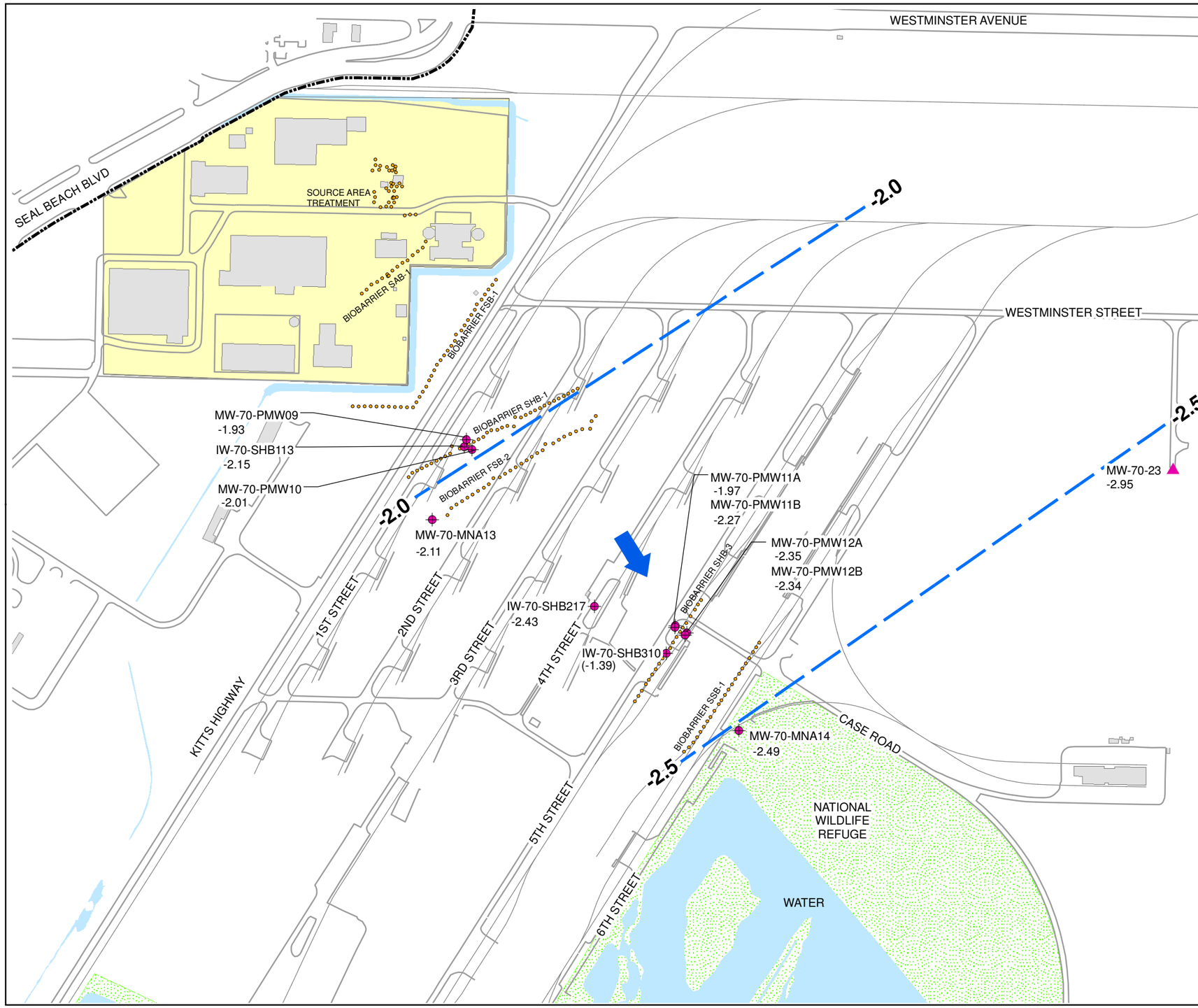
Project No.: 4-77101
Rev. A



LEGEND

MW-70-MNA14 -2.49	SHELL HORIZON MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET MEAN SEA LEVEL
MW-70-23 -2.95	SHELL HORIZON POC MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET MEAN SEA LEVEL
	BIOBARRIER OR SOURCE AREA TREATMENT WELL
	INFERRED DIRECTION OF GROUNDWATER FLOW, LOCAL VARIATIONS DUE TO SEASONAL, TIDAL, AND AGRICULTURAL INFLUENCES
	IR SITE 70 BOUNDARY
	BASE BOUNDARY
	ROAD
	RAILROAD TRACK
	APPROXIMATE GROUNDWATER ELEVATION, IN FEET MEAN SEA LEVEL
	BUILDING

NOTES:

WATER LEVELS MEASURED ON JULY 25 AND 26, 2011

HORIZONTAL HYDRAULIC GRADIENT ACROSS THE SITE IS APPROXIMATELY 0.001 FOOT/FOOT

( ) - PARENTHESES INDICATE THAT THE GROUNDWATER ELEVATION WAS NOT INCLUDED IN CONTOUR DUE TO PRESENCE OF VEGETABLE OIL

N

0 200 400 800 Feet

2011 Performance Monitoring Report

Figure 2-5

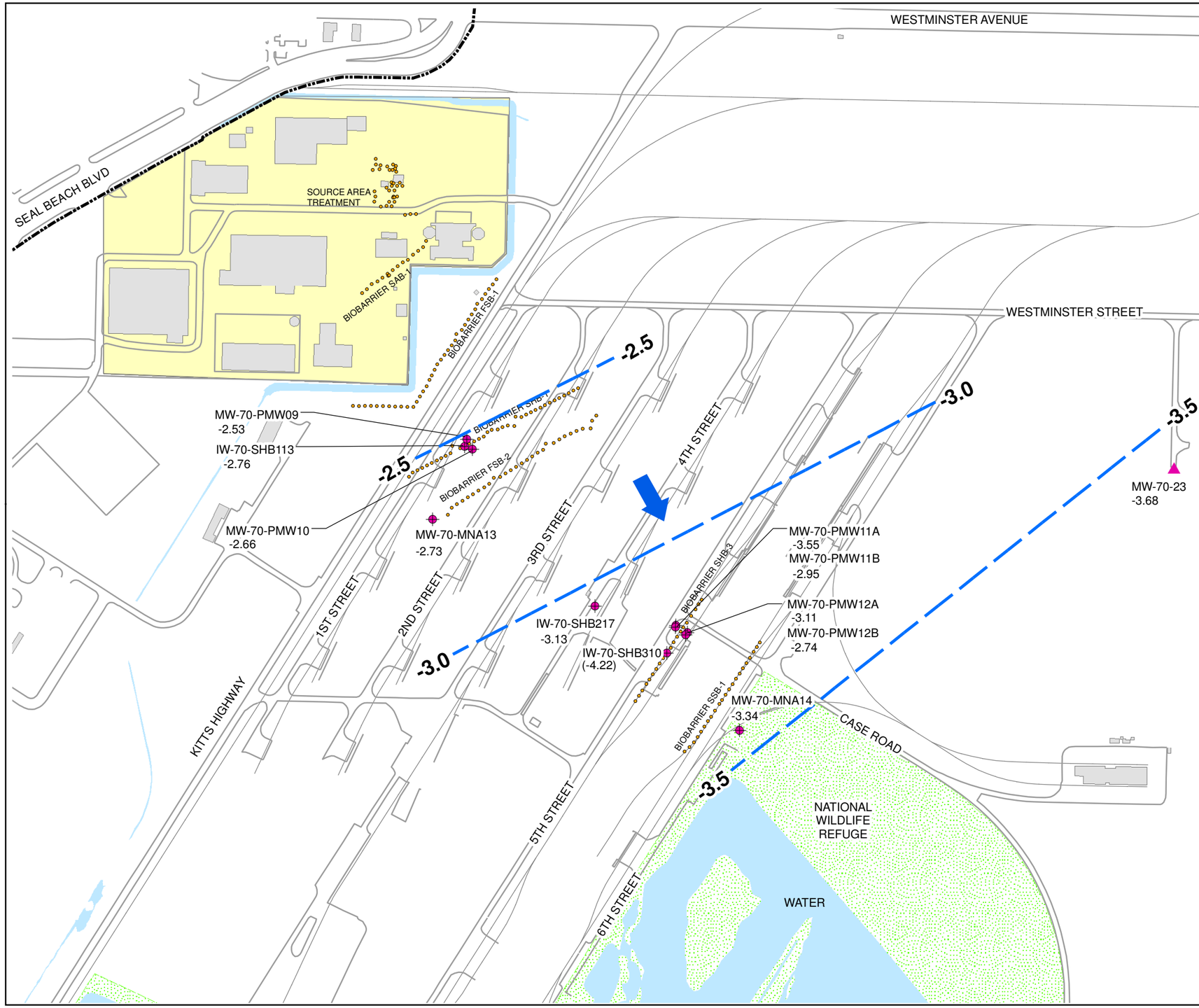
IR Site 70

Shell Horizon Groundwater Elevations - July 2011

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 4/29/2012
File No. 14114shgw2.mxd
Project No.: 4-77101
Rev. A



LEGEND

MW-70-MNA14 -3.34	SHELL HORIZON MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET MEAN SEA LEVEL
MW-70-23 -3.68	SHELL HORIZON POC MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET MEAN SEA LEVEL
	BIOBARRIER OR SOURCE AREA TREATMENT WELL
	INFERRED DIRECTION OF GROUNDWATER FLOW, LOCAL VARIATIONS DUE TO SEASONAL, TIDAL, AND AGRICULTURAL INFLUENCES
	IR SITE 70 BOUNDARY
	BASE BOUNDARY
	ROAD
	RAILROAD TRACK
	APPROXIMATE GROUNDWATER ELEVATION, IN FEET MEAN SEA LEVEL
	BUILDING

NOTES:

WATER LEVELS MEASURED ON OCTOBER 26, 2011

HORIZONTAL HYDRAULIC GRADIENT ACROSS THE SITE IS APPROXIMATELY 0.001 FOOT/FOOT

( ) - PARENTHESES INDICATE THAT THE GROUNDWATER ELEVATION WAS NOT INCLUDED IN CONTOUR DUE TO PRESENCE OF VEGETABLE OIL

N

0 200 400 800 Feet

2011 Performance Monitoring Report

Figure 2-6

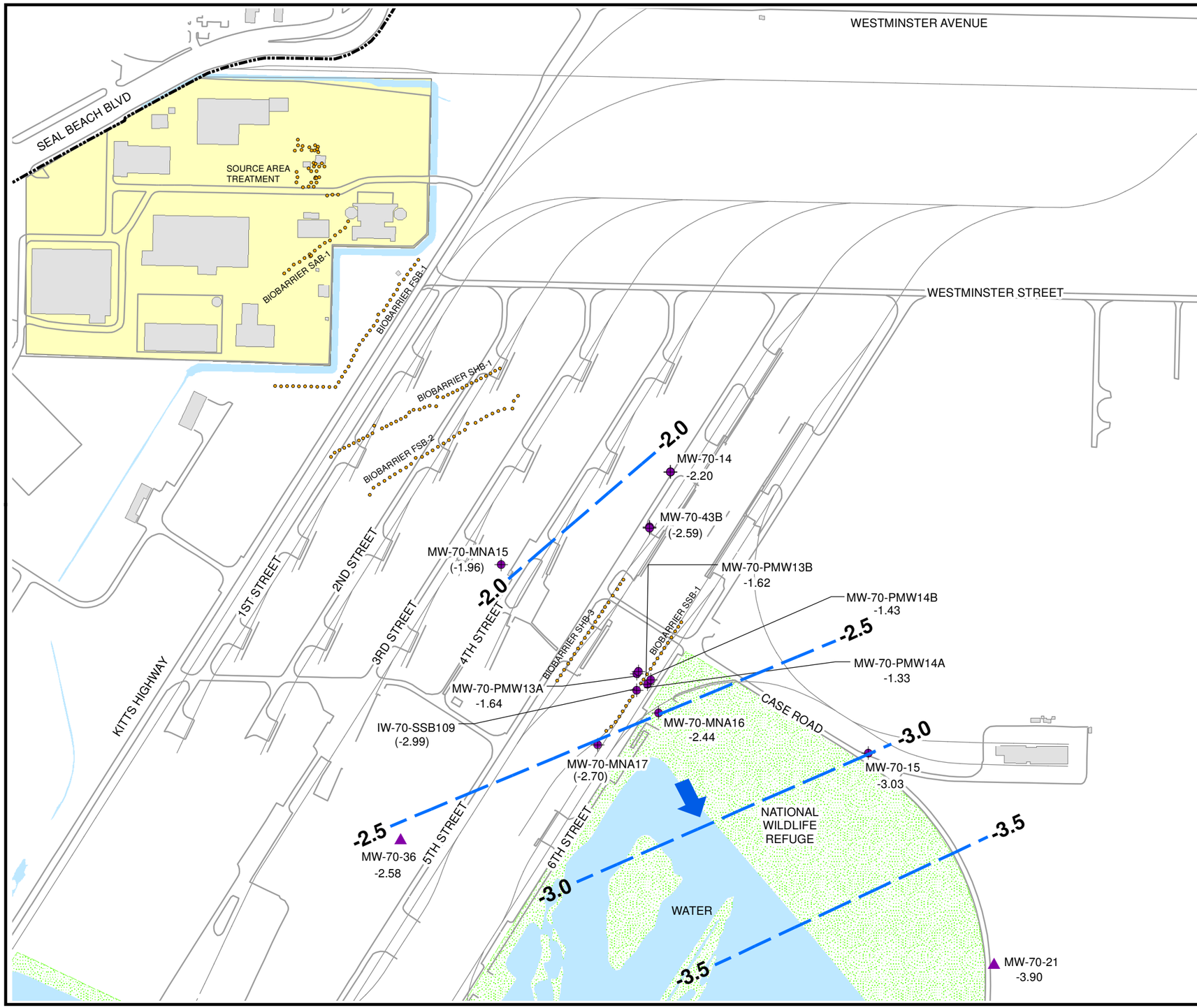
IR Site 70

Shell Horizon Groundwater Elevations - October 2011

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 4/29/2012
File No. 14114shgw3.mxd
Project No.: 4-77101
Rev. A



LEGEND

MW-70-15 -3.03	SECOND SAND MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET MEAN SEA LEVEL
MW-70-36 -2.58	SECOND SAND POC MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET MEAN SEA LEVEL
	BIOBARRIER OR SOURCE AREA TREATMENT WELL
	INFERRED DIRECTION OF GROUNDWATER FLOW, LOCAL VARIATIONS DUE TO SEASONAL, TIDAL, AND AGRICULTURAL INFLUENCES
	IR SITE 70 BOUNDARY
	BASE BOUNDARY
	ROAD
	RAILROAD TRACK
	APPROXIMATE GROUNDWATER ELEVATION, IN FEET MEAN SEA LEVEL
	BUILDING

NOTES:

( ) - PARENTHESES INDICATE THAT THE GRONDWATER ELEVATION WAS NOT INCLUDED IN CONTOUR DUE TO SCREEN INTERVAL OR RECENT INJECTION

WATER LEVELS MEASURED ON JULY 25 AND 26, 2011

HORIZONTAL HYDRAULIC GRADIENT ACROSS THE SITE IS APPROXIMATELY 0.001 FOOT/FOOT

N

0 200 400 800 Feet

2011 Performance Monitoring Report

Figure 2-7

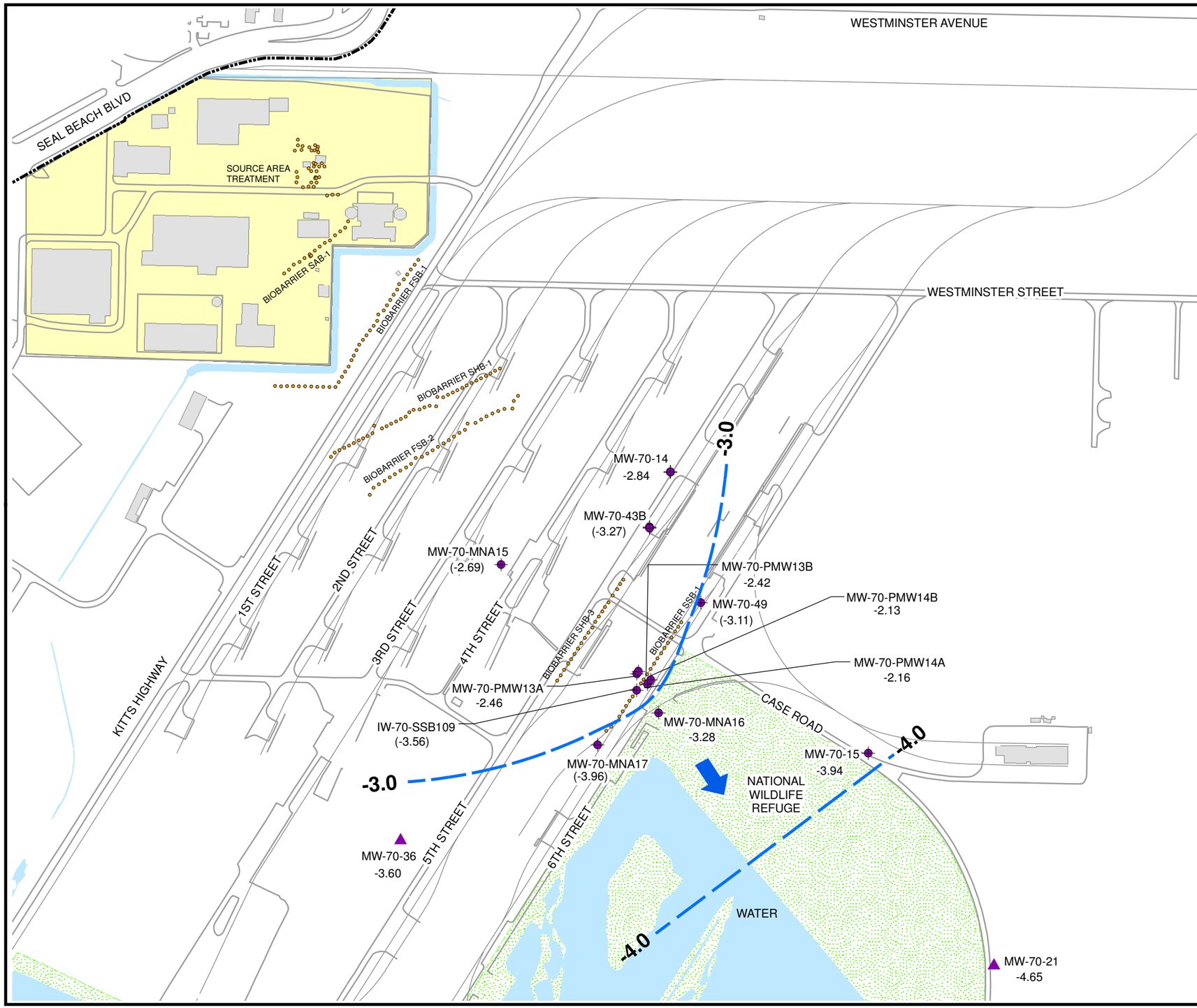
IR Site 70

Second Sand Groundwater Elevations - July 2011

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 10/25/2011
File No. 14114ssgw3.mxd
Project No.: 4-77101
Rev. A



LEGEND

MW-70-15 -3.94	SECOND SAND MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET MEAN SEA LEVEL
MW-70-36 -3.60	SECOND SAND POC MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET MEAN SEA LEVEL
	BIOBARRIER OR SOURCE AREA TREATMENT WELL
	INFERRED DIRECTION OF GROUNDWATER FLOW, LOCAL VARIATIONS DUE TO SEASONAL, TIDAL, AND AGRICULTURAL INFLUENCES
	IR SITE 70 BOUNDARY
	BASE BOUNDARY
	ROAD
	RAILROAD TRACK
	APPROXIMATE GROUNDWATER ELEVATION, IN FEET MEAN SEA LEVEL
	BUILDING

NOTES:

( ) - PARENTHESES INDICATE THAT THE GRONDWATER ELEVATION WAS NOT INCLUDED IN CONTOUR DUE TO SCREEN INTERVAL OR RECENT INJECTION

WATER LEVELS MEASURED ON OCTOBER 26, 2011

HORIZONTAL HYDRAULIC GRADIENT ACROSS THE SITE RANGES FROM APPROXIMATELY 0.001 AND 0.003 FOOT/FOOT

N

0 200 400 800 Feet

2011 Performance Monitoring Report

Figure 2-8

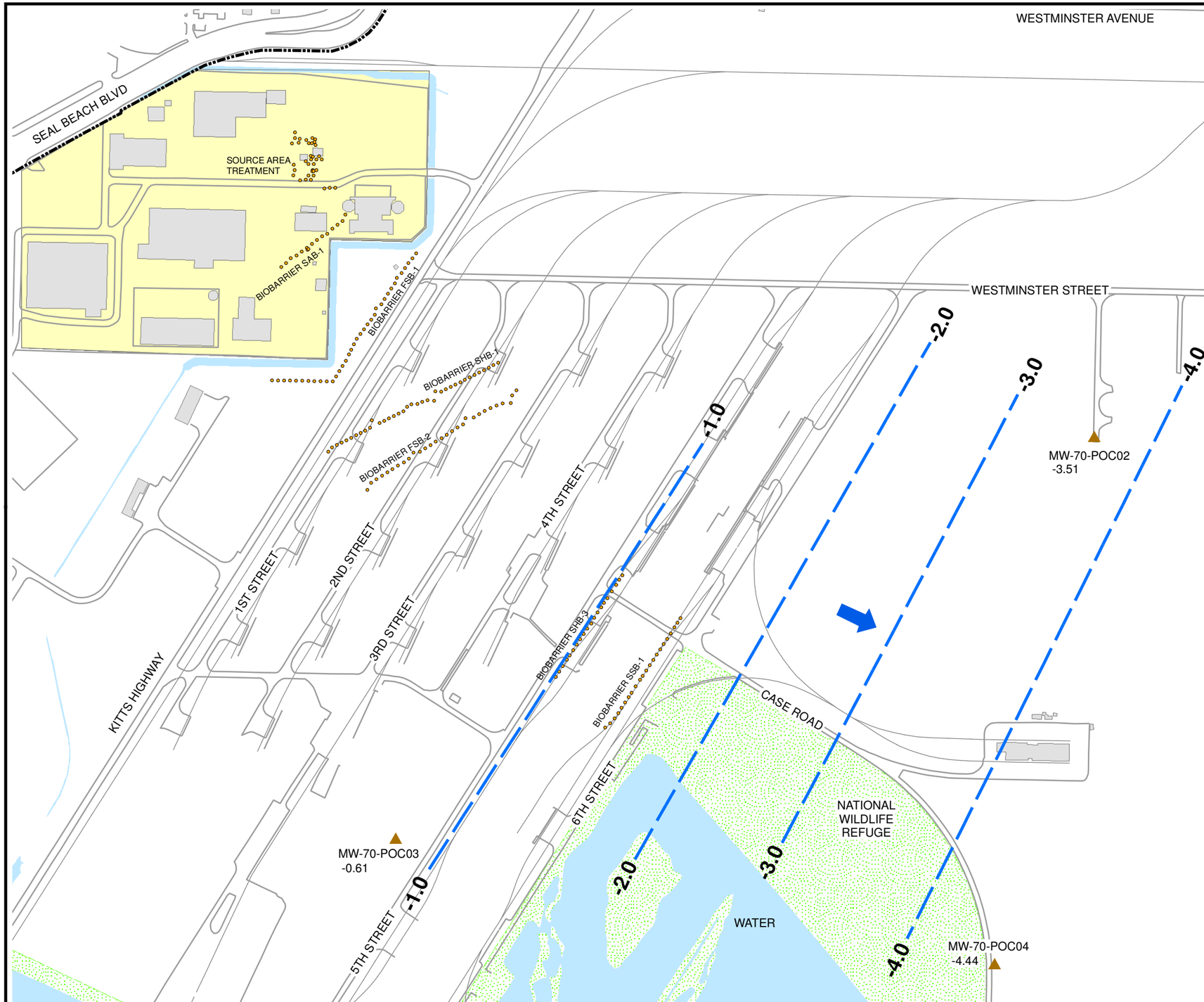
IR Site 70

Second Sand Groundwater Elevations - October 2011

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 4/29/2012
File No. 14114ssgw4.mxd
Project No.: 4-77101
Rev. A



LEGEND

MW-70-POC02 -3.51 — DEEP SAND POC MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET MEAN SEA LEVEL

BIOBARRIER OR SOURCE AREA TREATMENT WELL

INFERRED DIRECTION OF GROUNDWATER FLOW, LOCAL VARIATIONS DUE TO SEASONAL, TIDAL, AND AGRICULTURAL INFLUENCES

IR SITE 70 BOUNDARY

BASE BOUNDARY

ROAD

RAILROAD TRACK

APPROXIMATE GROUNDWATER ELEVATION, IN FEET MEAN SEA LEVEL

BUILDING

NOTES:

WATER LEVELS MEASURED ON JULY 25 AND 26, 2011

HORIZONTAL HYDRAULIC GRADIENT ACROSS THE SITE IS APPROXIMATELY 0.002 FOOT/FOOT

N

0 200 400 800 Feet

2011 Performance Monitoring Report

Figure 2-9

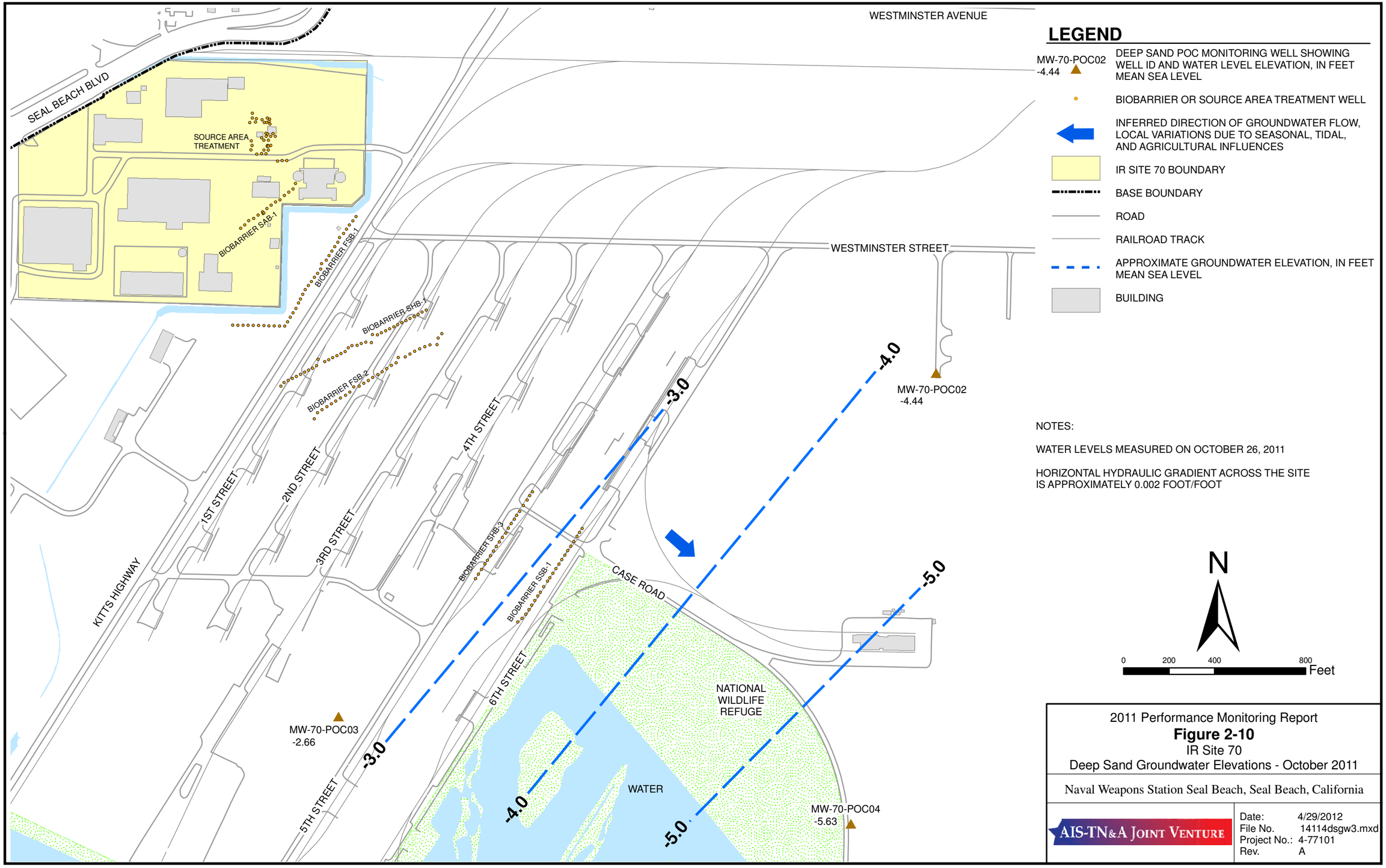
IR Site 70

Deep Sand Groundwater Elevations - July 2011

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A Joint Venture

Date: 4/29/2012
File No. 14114dsgw2.mxd
Project No.: 4-77101
Rev. A



2011 Performance Monitoring Report

Figure 2-10

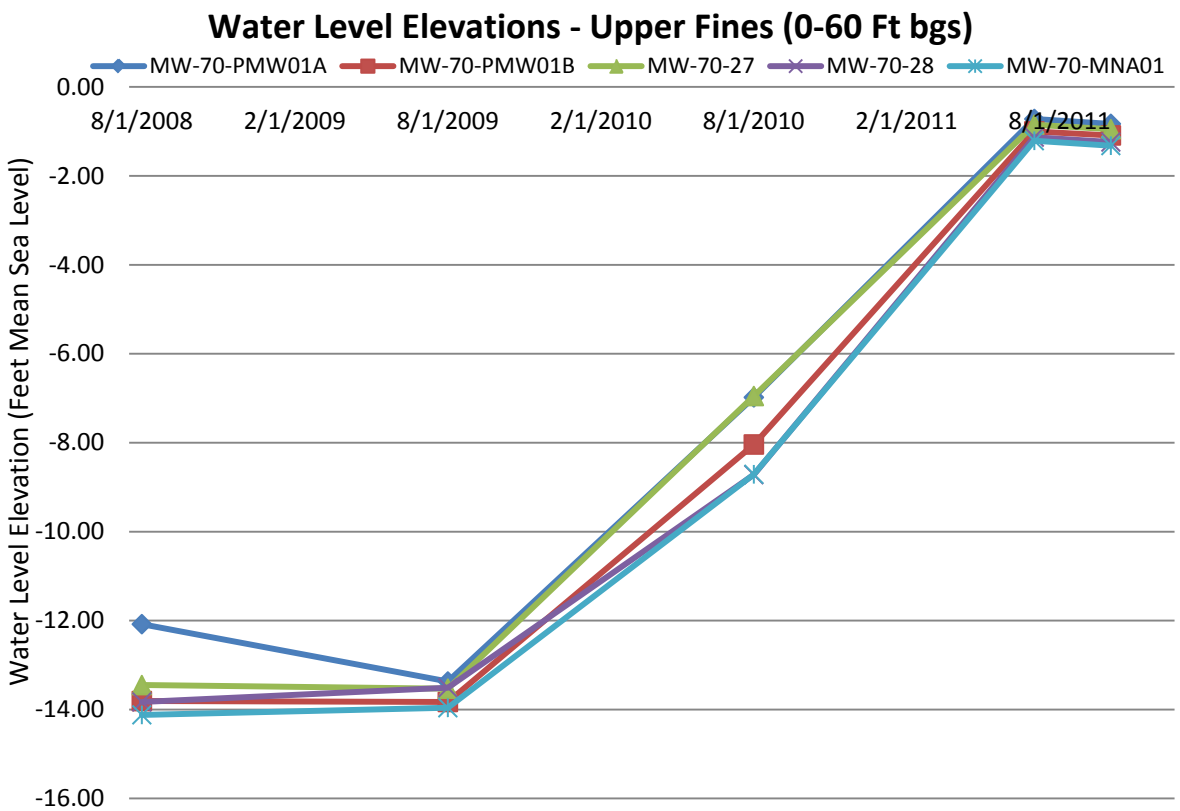
IR Site 70

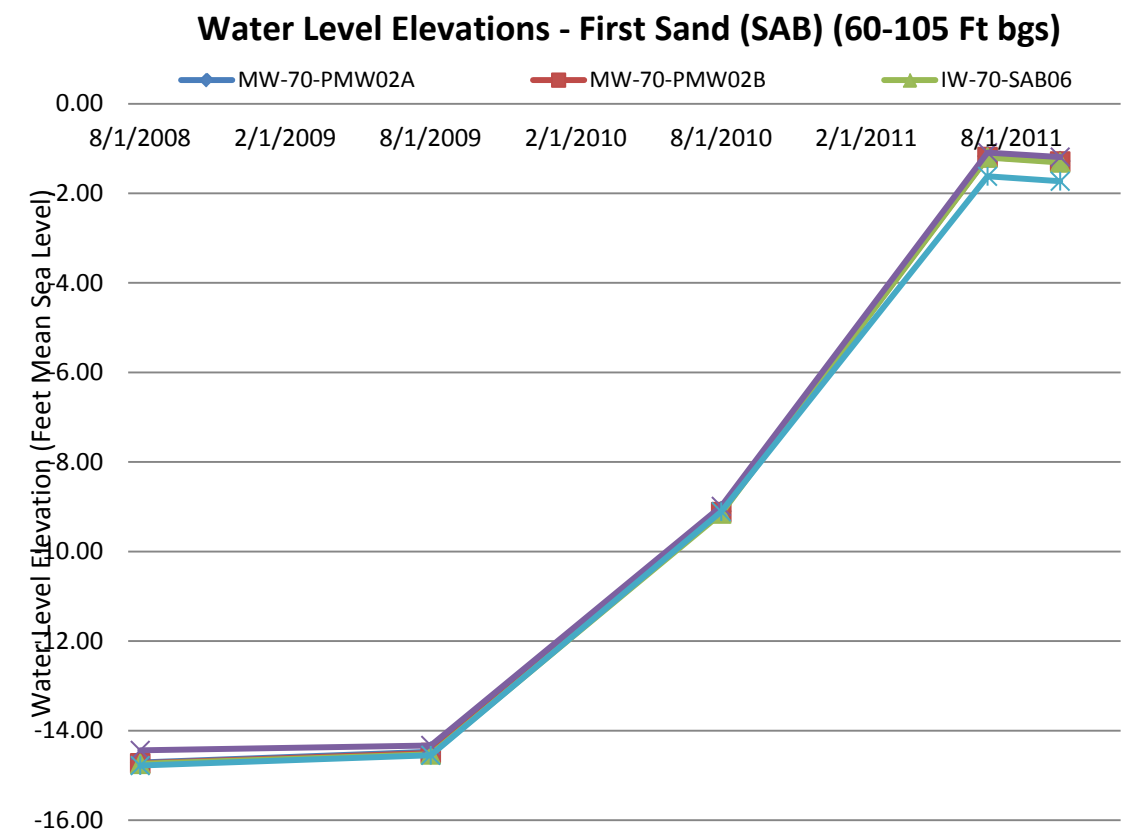
Deep Sand Groundwater Elevations - October 2011

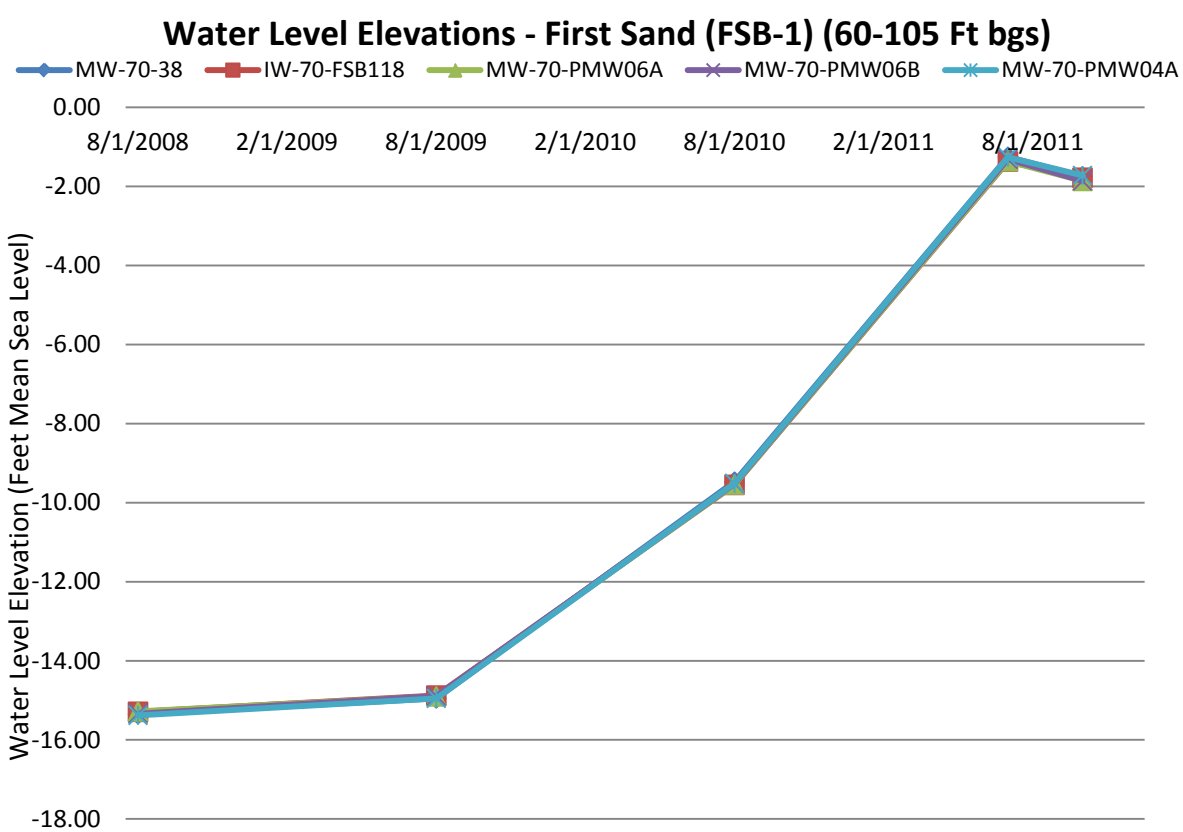
Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 4/29/2012
File No. 14114dsgw3.mxd
Project No.: 4-77101
Rev. A







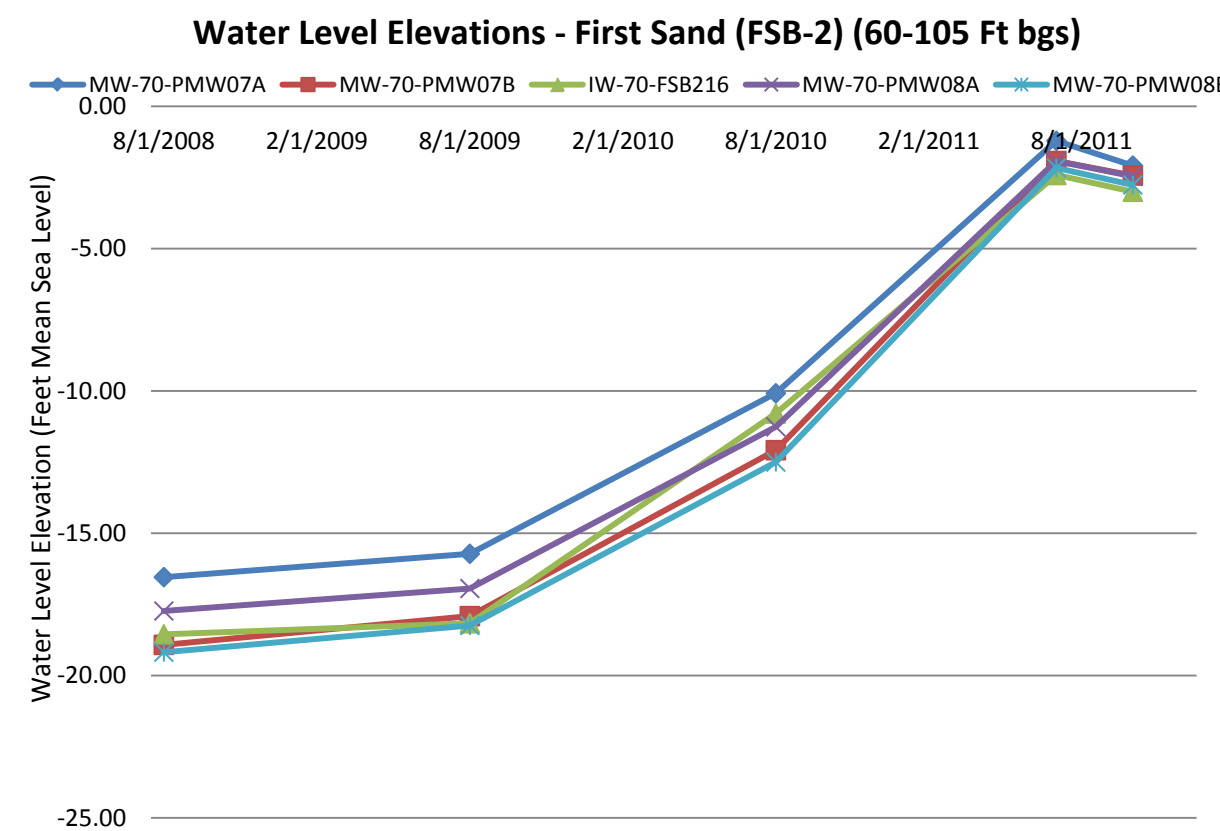
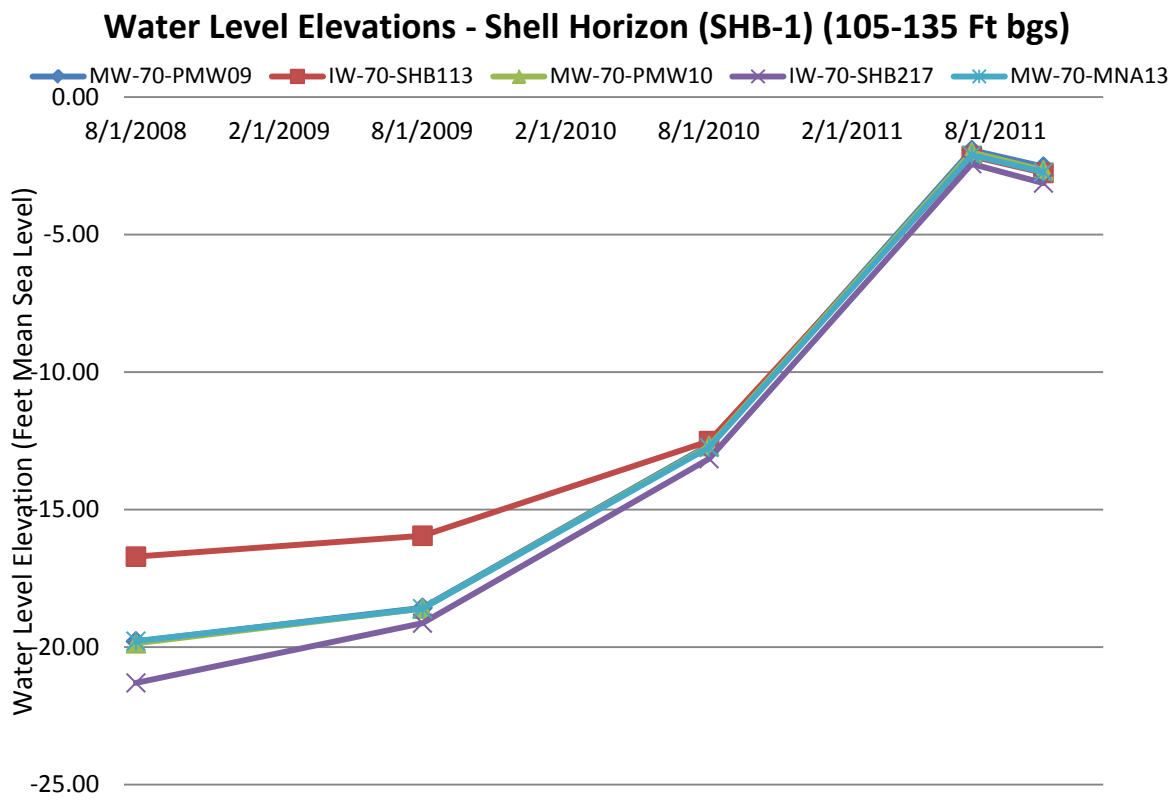
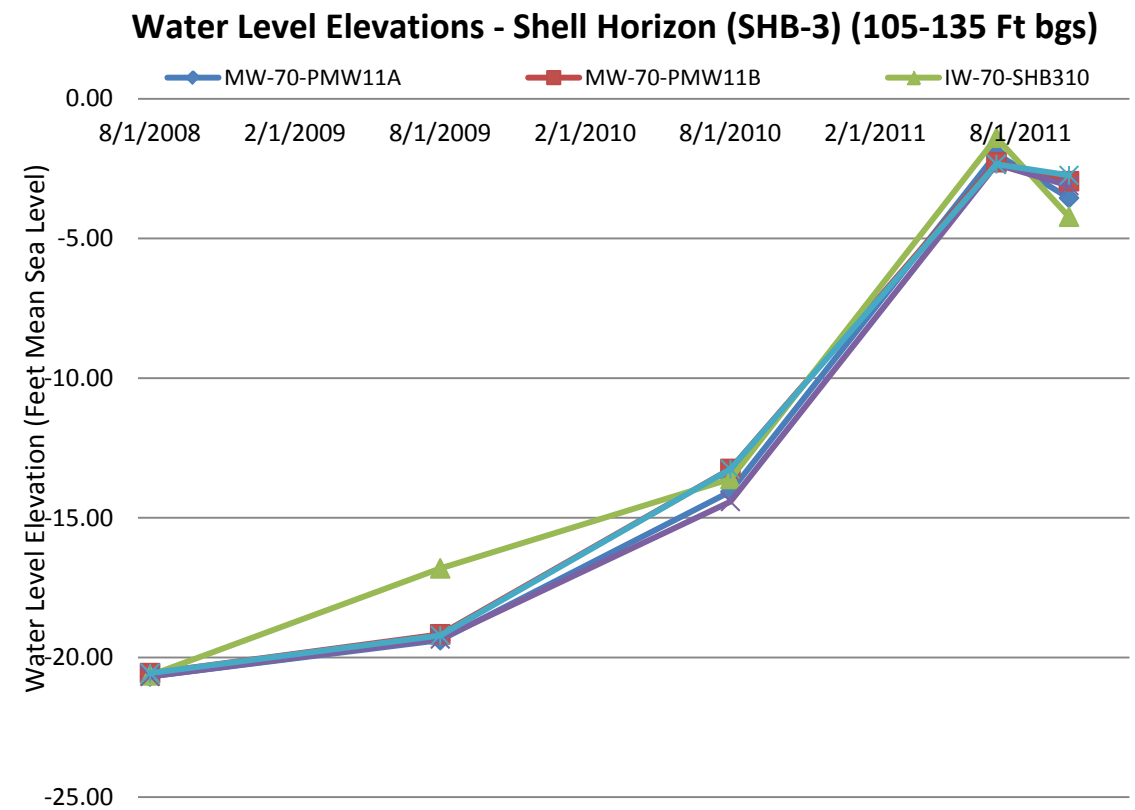
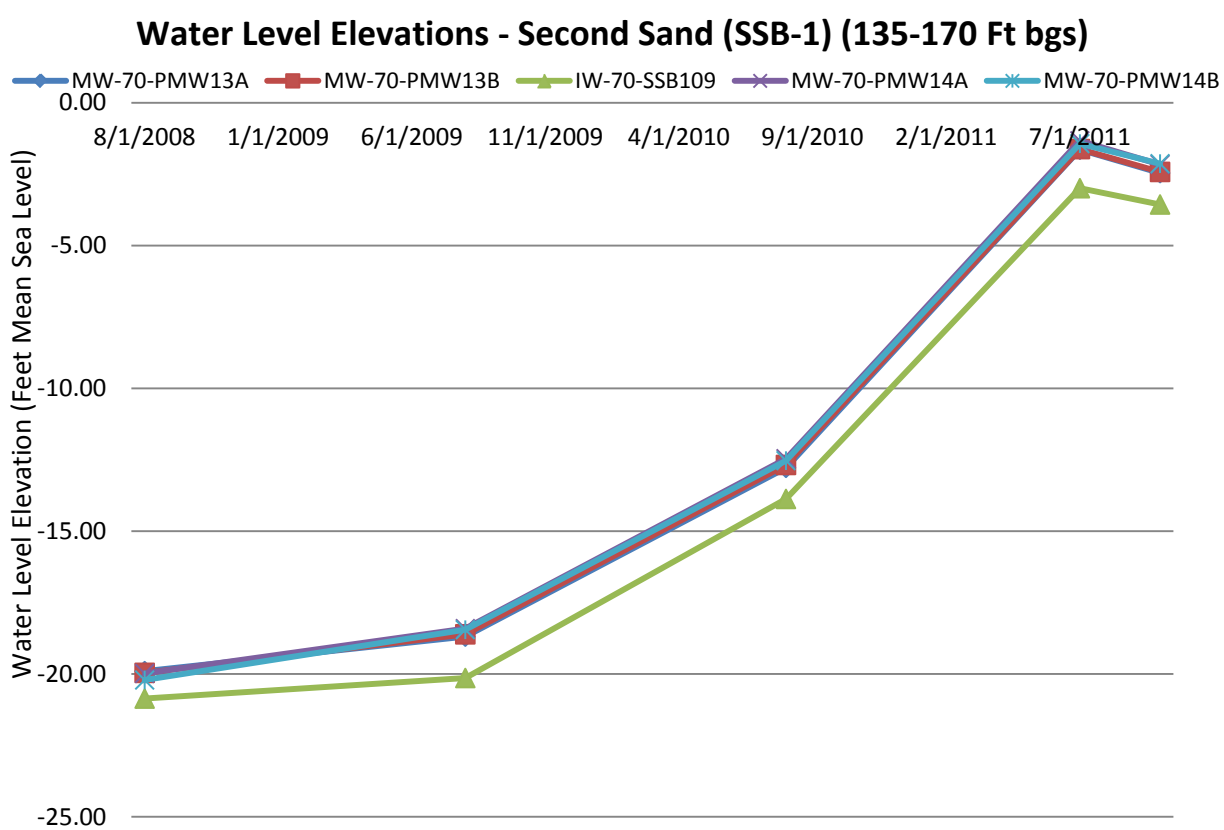


Figure 2-11. Water Level Trend Graphs: Upper Fines and First Sand (2008-2011)







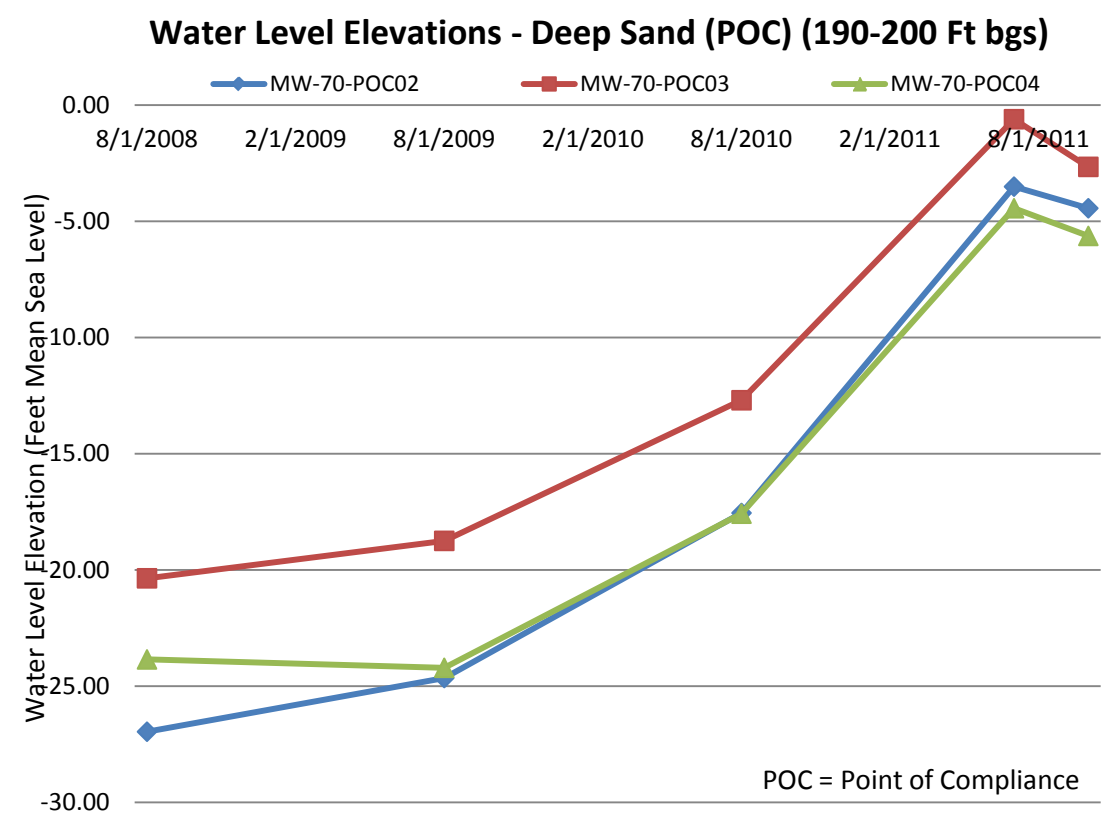
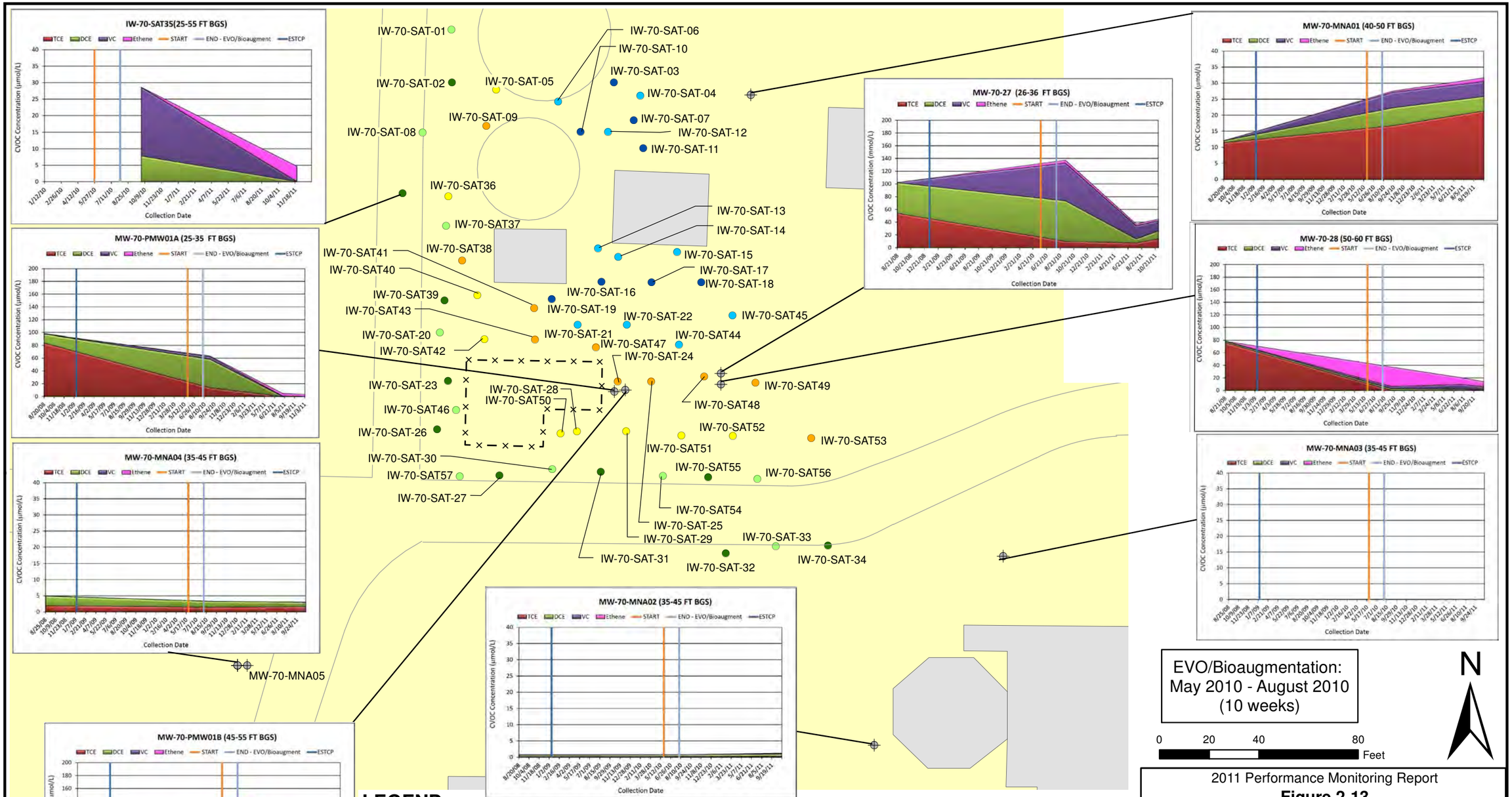


Figure 2-12. Water Level Trend Graphs: Shell Horizon, Second Sand and Deep Sand (2008-2011)



2011 Performance Monitoring Report

Figure 2-13

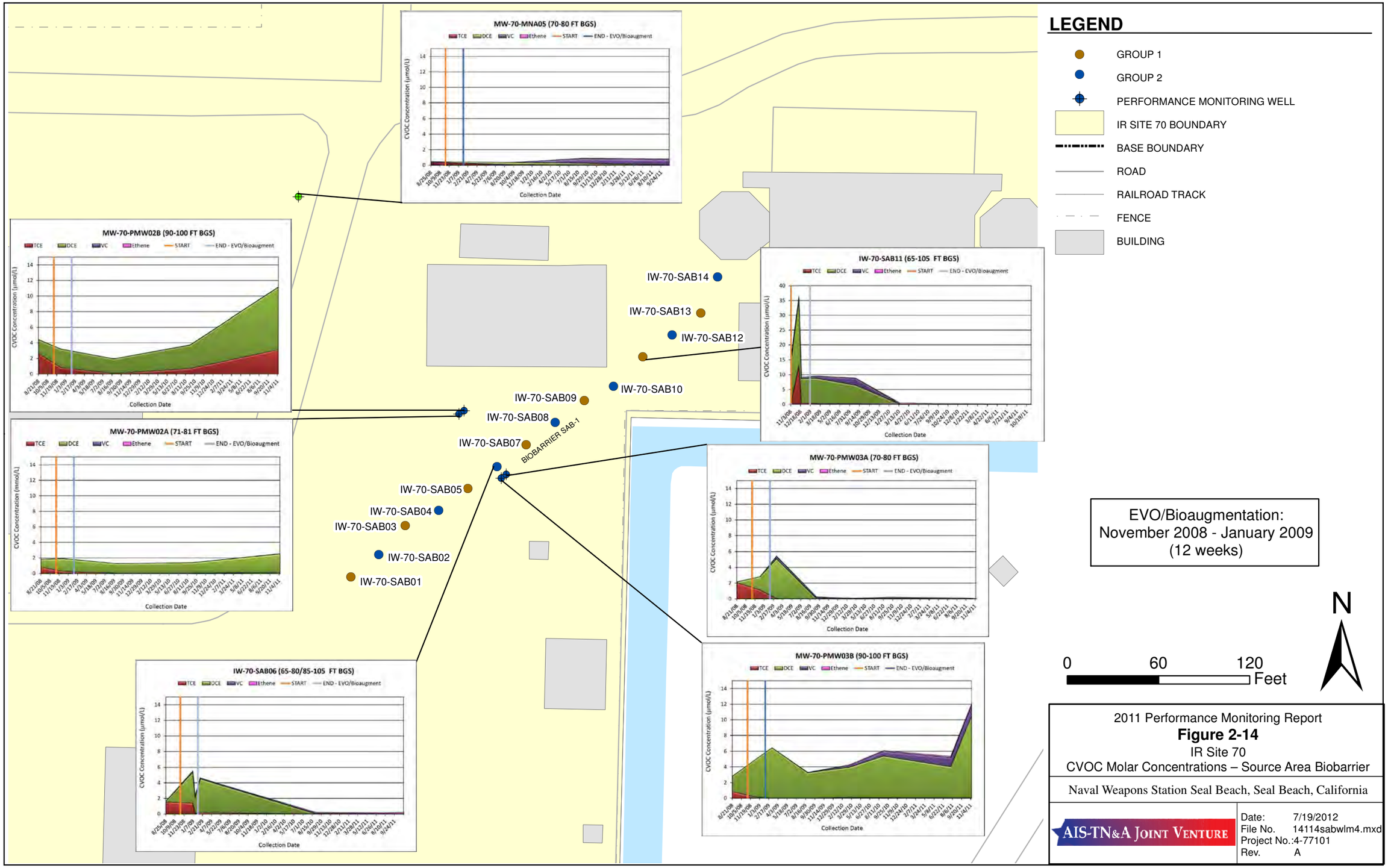
IR Site 70

CVOC Molar Concentrations – Source Area Treatment Grid

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 4/29/2012
File No. 14114inj4.mxd
Project No.: 4-77101
Rev. A



2011 Performance Monitoring Report

Figure 2-14

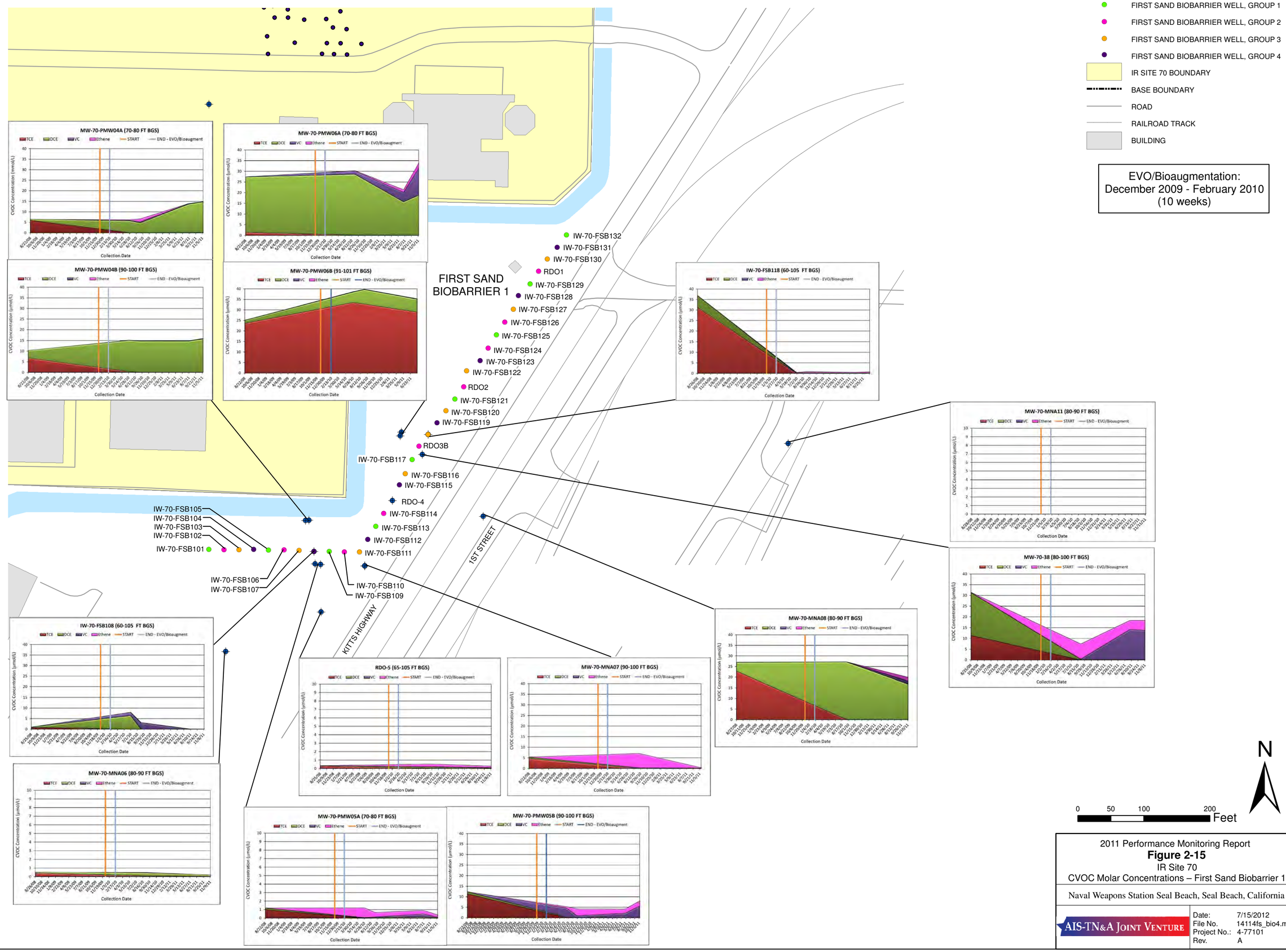
IR Site 70

CVOC Molar Concentrations – Source Area Biobarrier

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A Joint Venture

Date: 7/19/2012
File No. 14114sabwlm4.mxd
Project No.:4-77101
Rev. A



2011 Performance Monitoring Report

Figure 2-15

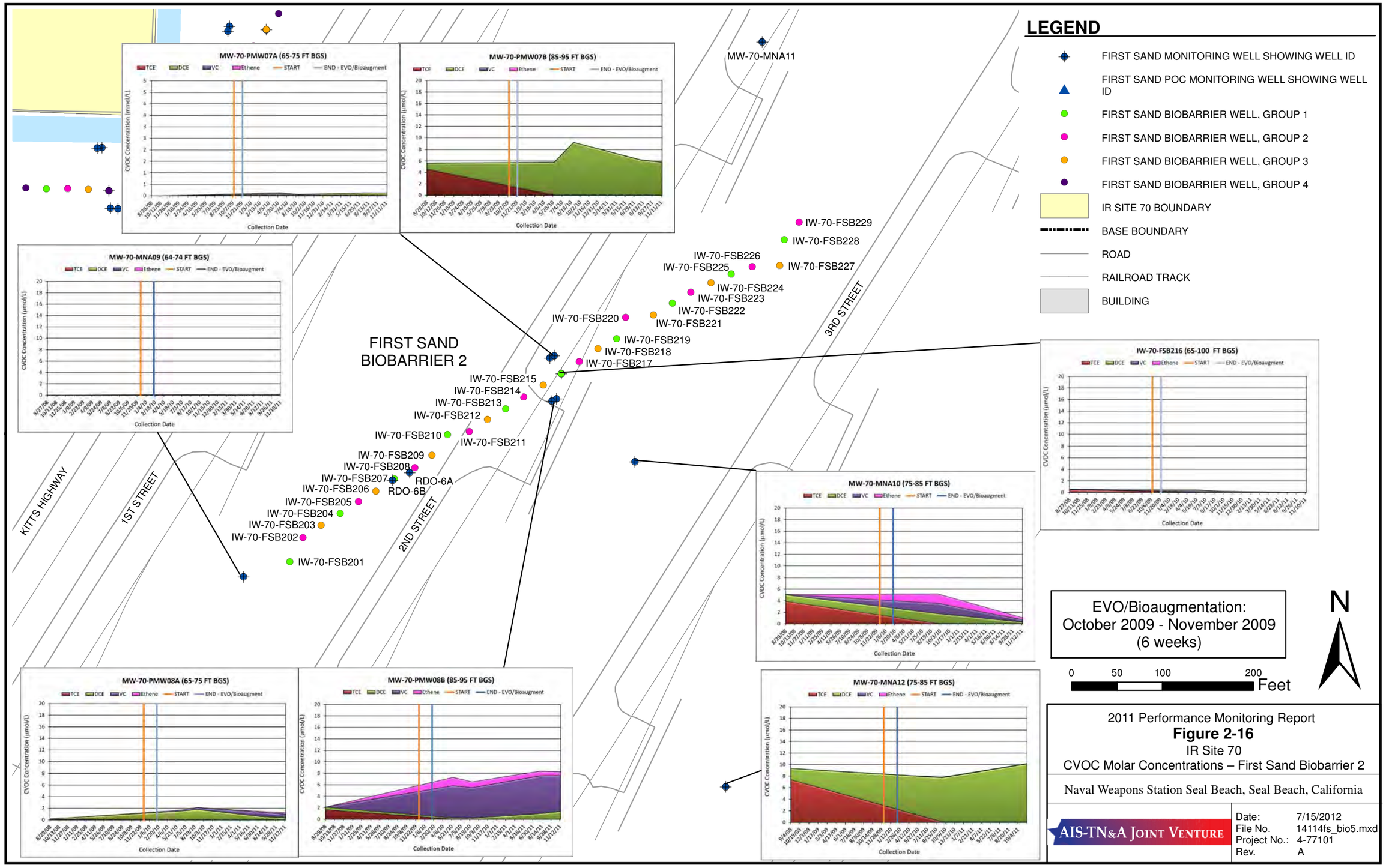
IR Site 70

CVOC Molar Concentrations – First Sand Biobarrier 1

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date:	7/15/2012
File No.	14114fs_bio4.mxd
Project No.:	4-77101
Rev.	A



2011 Performance Monitoring Report

Figure 2-16

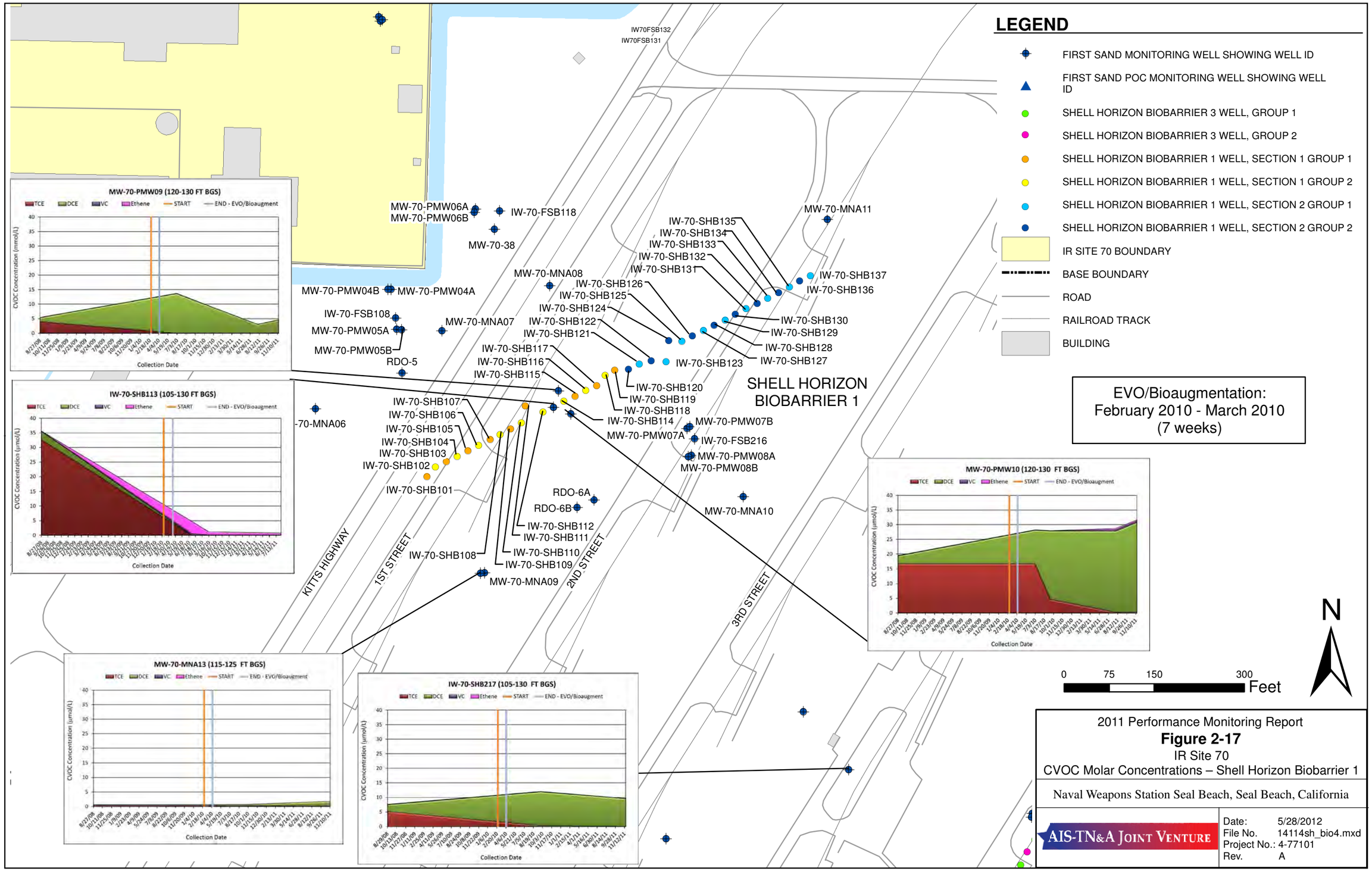
IR Site 70

CVOC Molar Concentrations – First Sand Biobarrier 2

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 7/15/2012
File No. 14114fs_bio5.mxd
Project No.: 4-77101
Rev. A



2011 Performance Monitoring Report

Figure 2-17

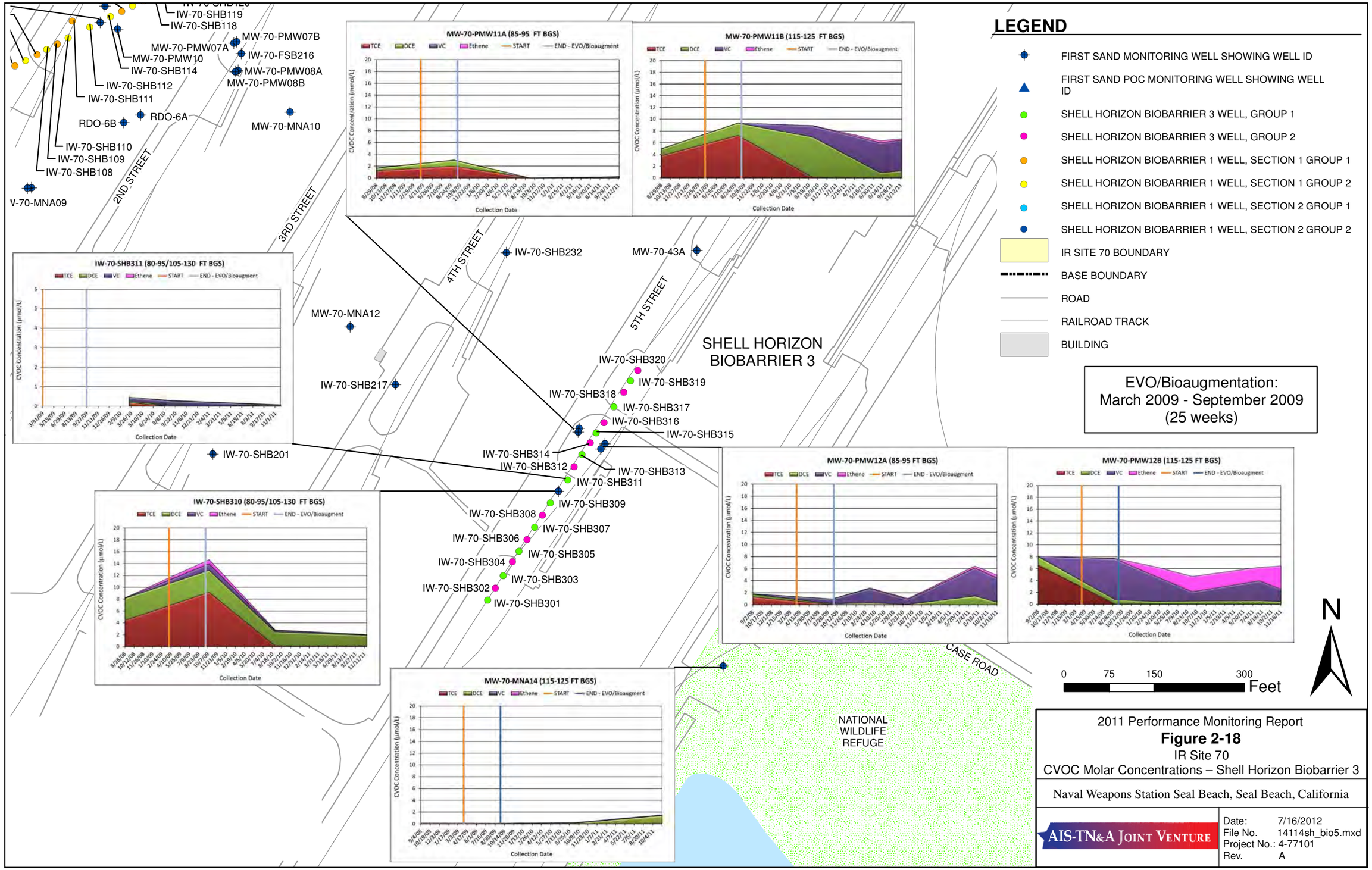
IR Site 70

CVOC Molar Concentrations – Shell Horizon Biobarrier 1

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 5/28/2012
File No. 14114sh_bio4.mxd
Project No.: 4-77101
Rev. A



2011 Performance Monitoring Report

Figure 2-18

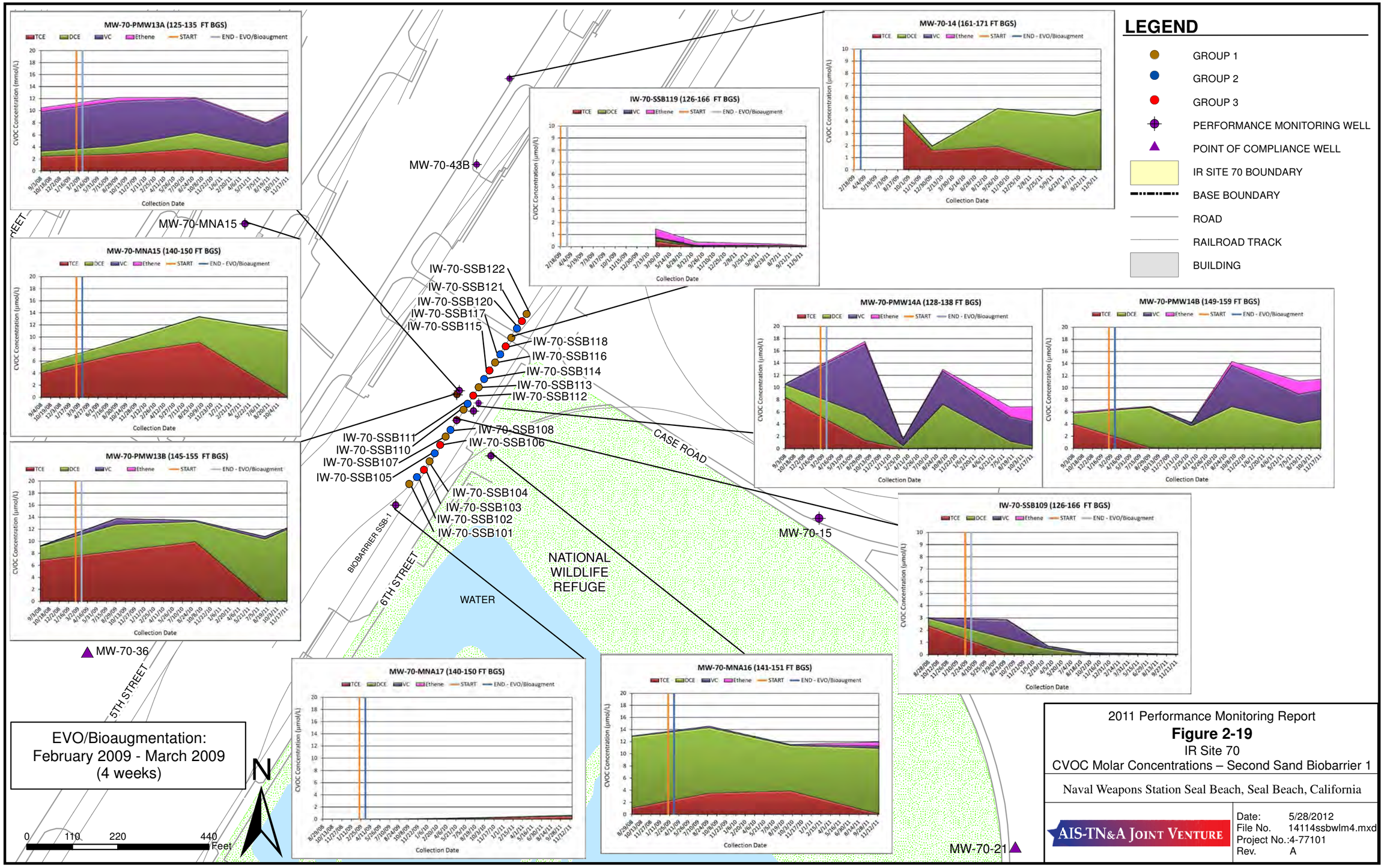
IR Site 70

CVOC Molar Concentrations – Shell Horizon Biobarrier 3

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 7/16/2012
File No. 14114sh_bio5.mxd
Project No.: 4-77101
Rev. A



2011 Performance Monitoring Report

Figure 2-19

IR Site 70

CVOC Molar Concentrations – Second Sand Biobarrier 1

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 5/28/2012
File No. 14114ssbwlm4.mxd
Project No.:4-77101
Rev. A

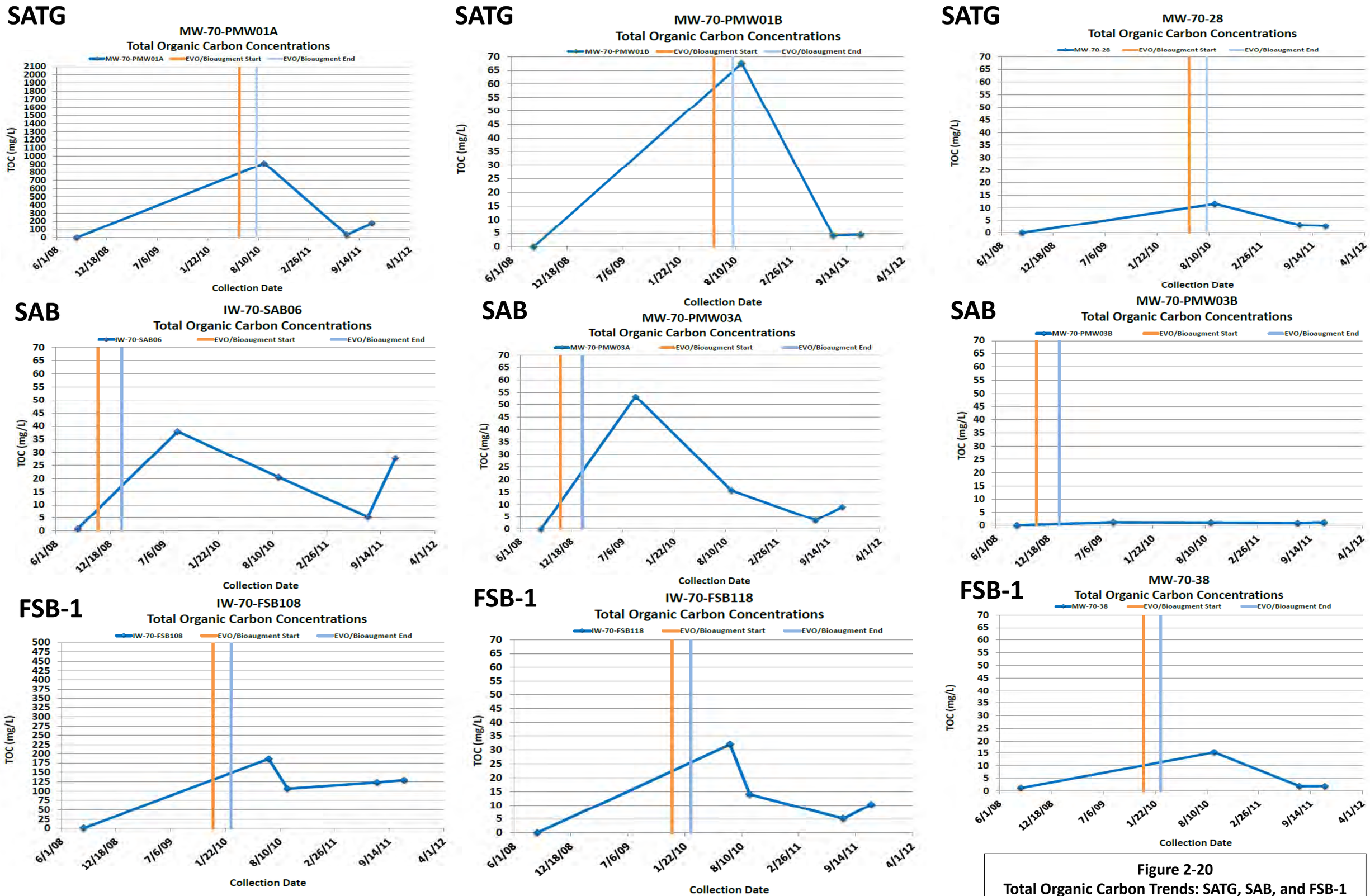


Figure 2-20
Total Organic Carbon Trends: SATG, SAB, and FSB-1

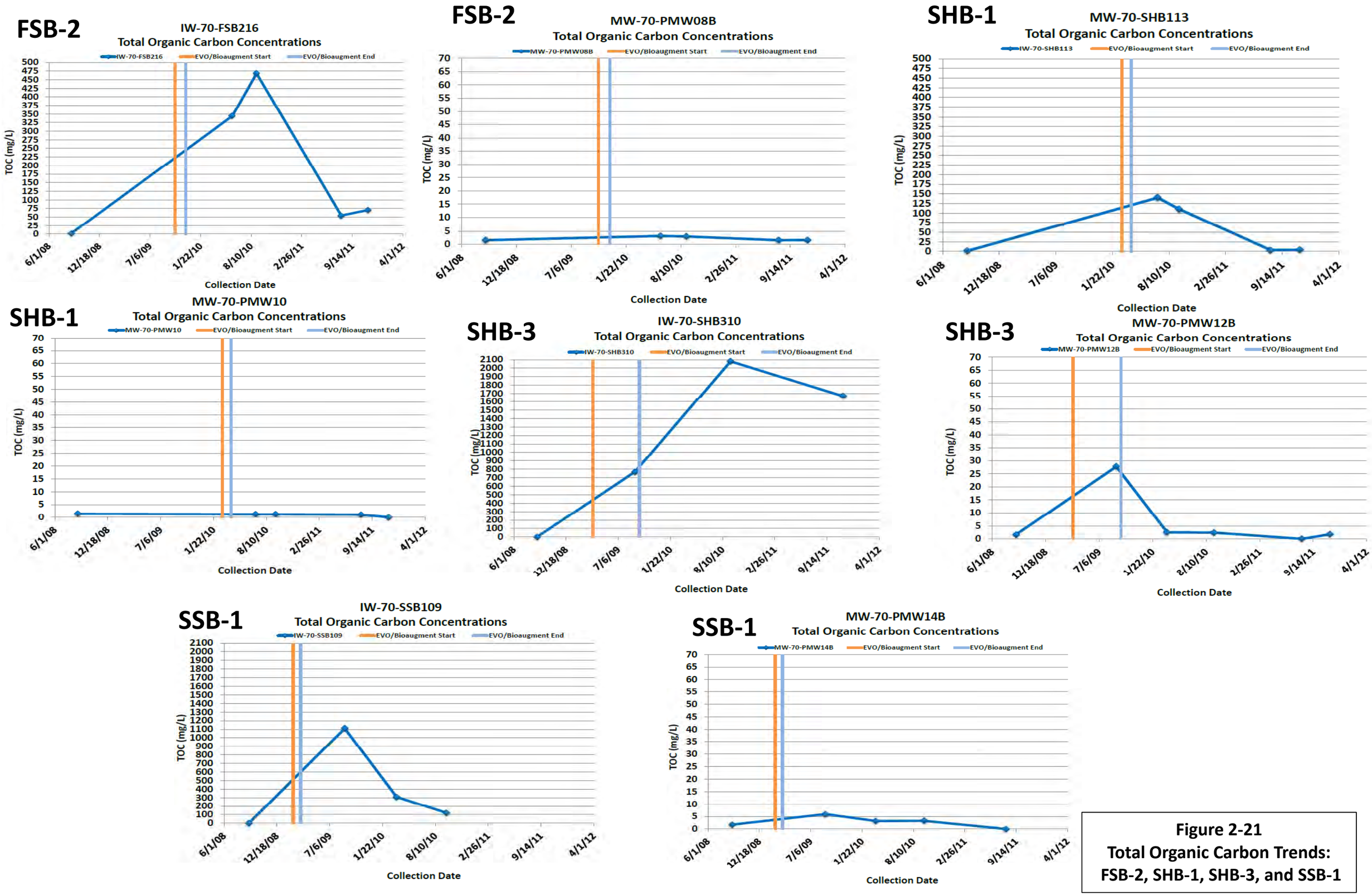
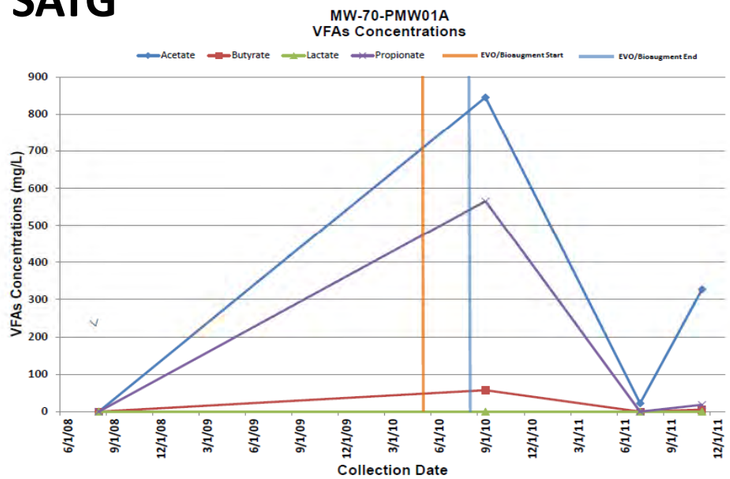
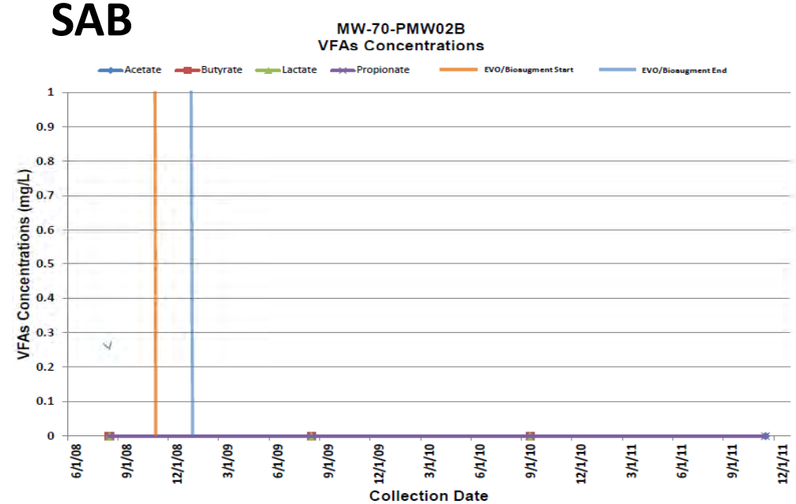


Figure 2-21
Total Organic Carbon Trends: FSB-2, SHB-1, SHB-3, and SSB-1

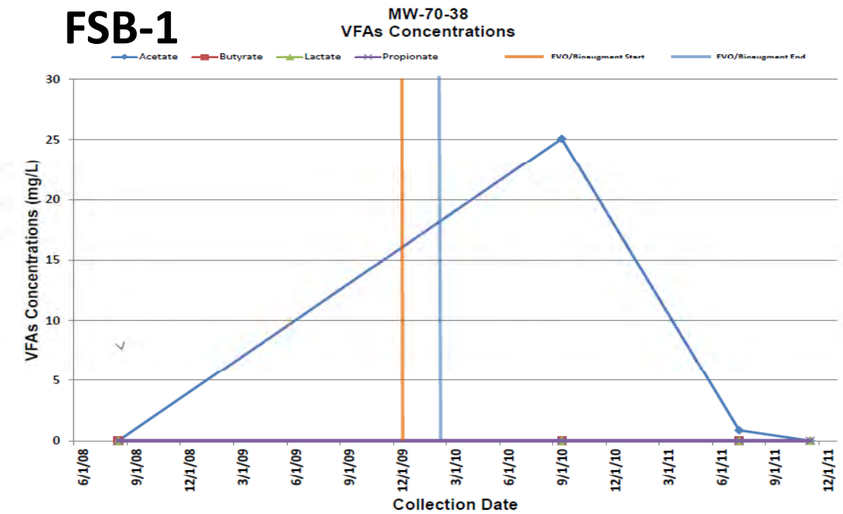
SATG



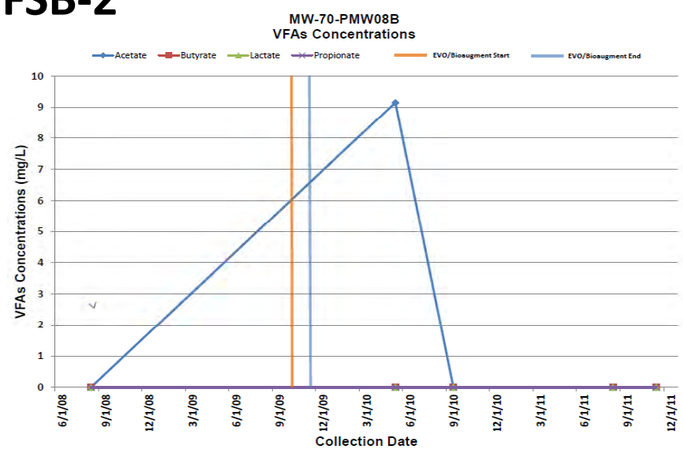
SAB



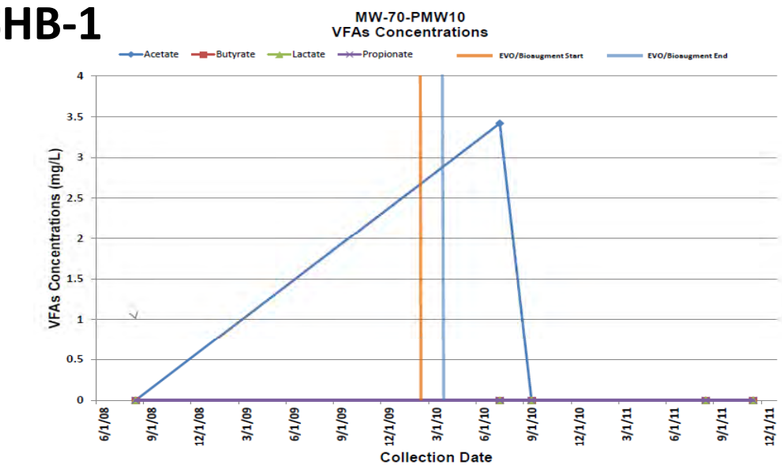
FSB-1



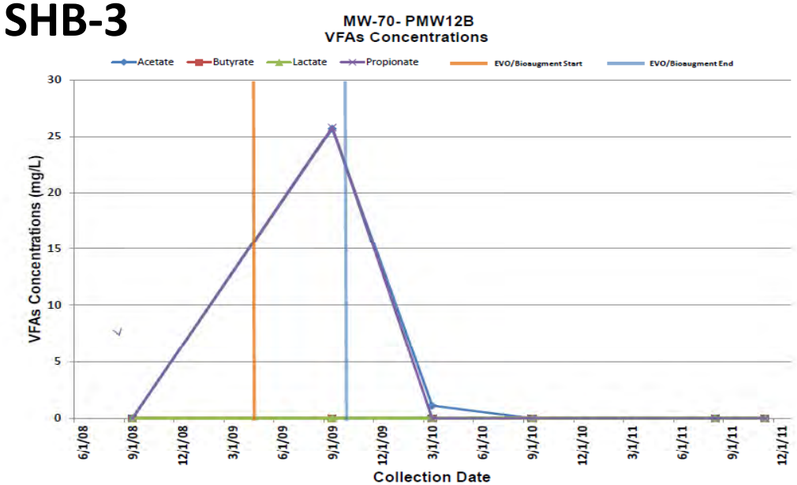
FSB-2



SHB-1



SHB-3



SSB-1

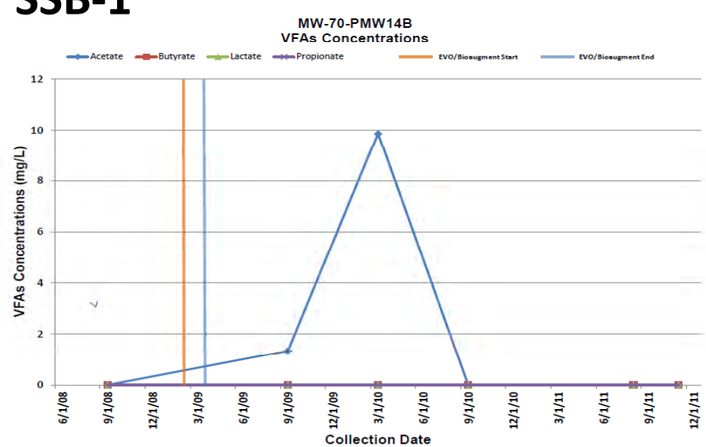
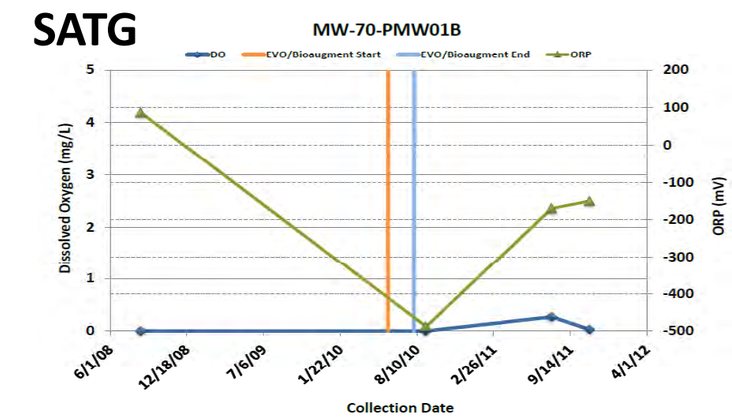
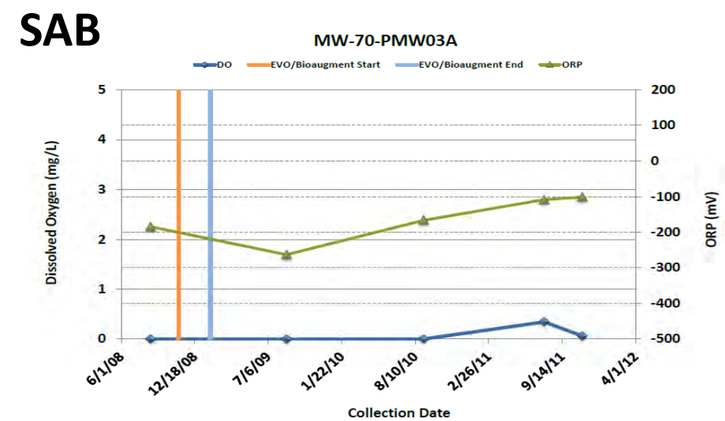
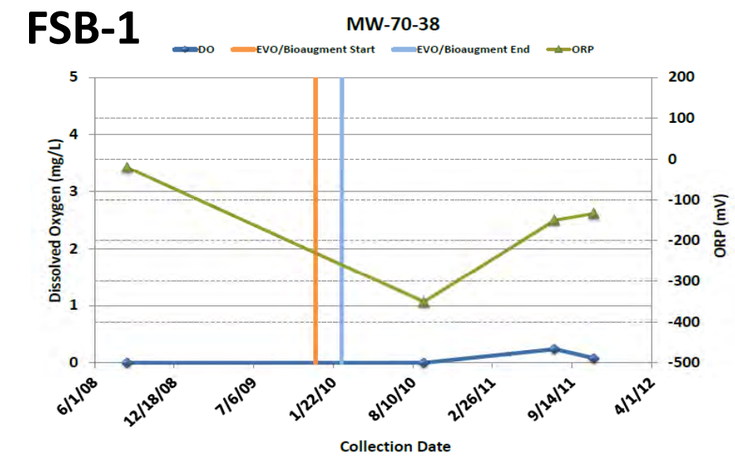
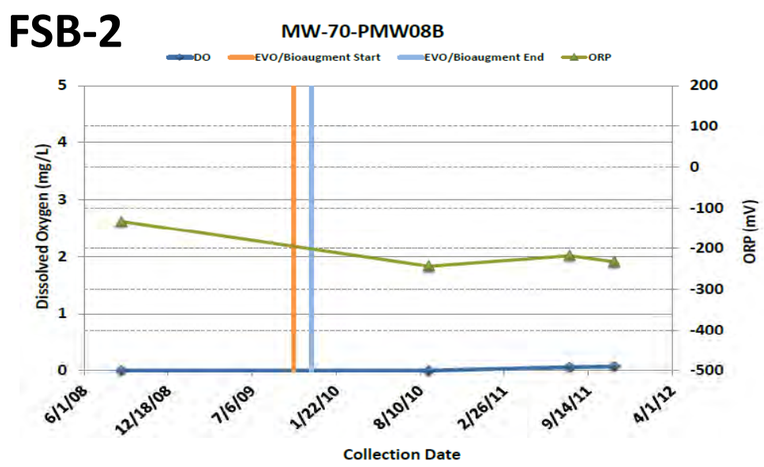


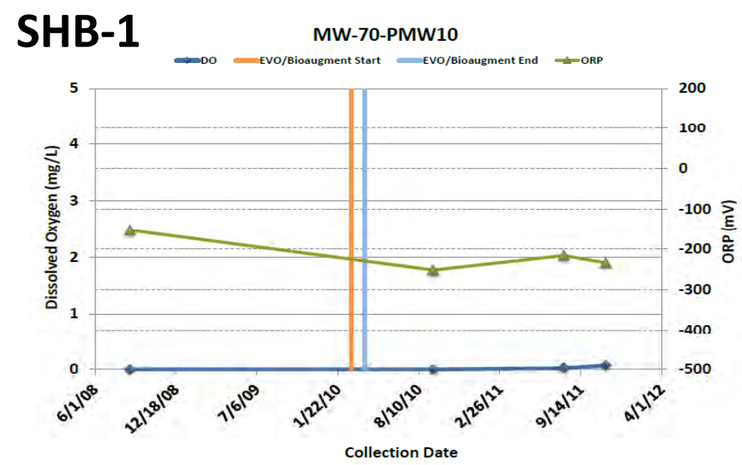
Figure 2-22
Volatile Fatty Acid (VFA)
Trends since Baseline

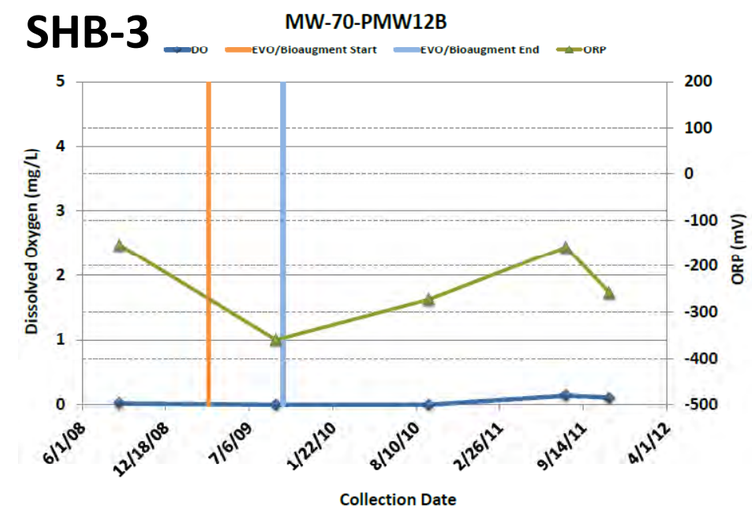












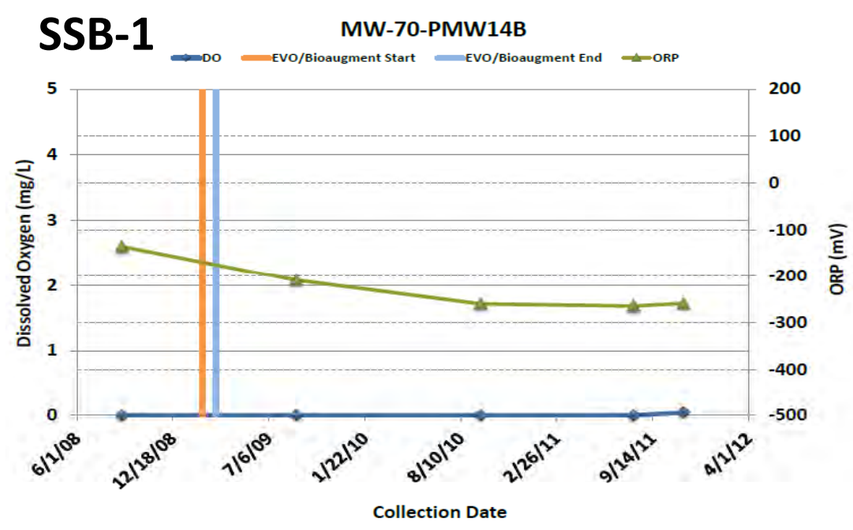
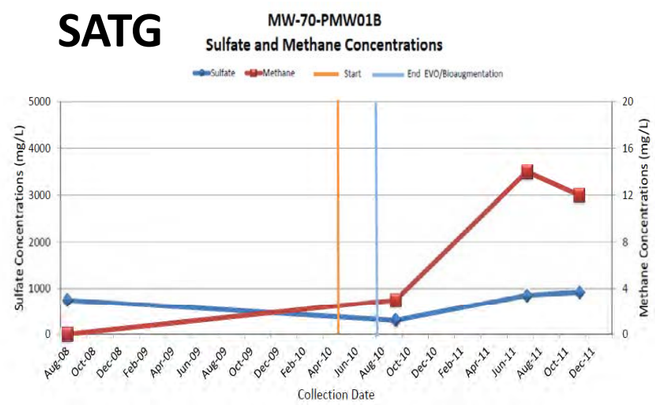
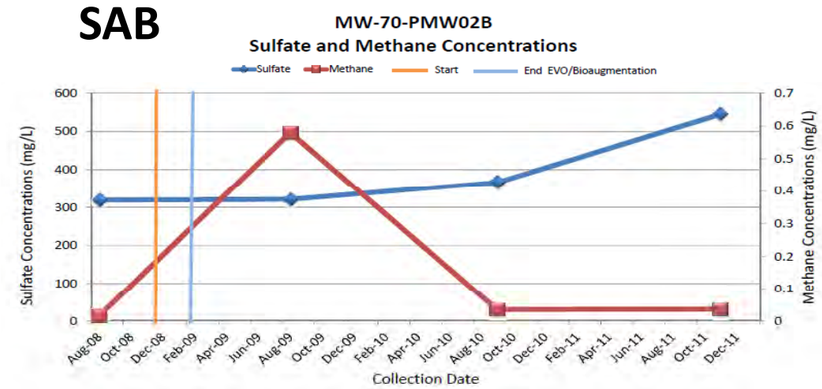
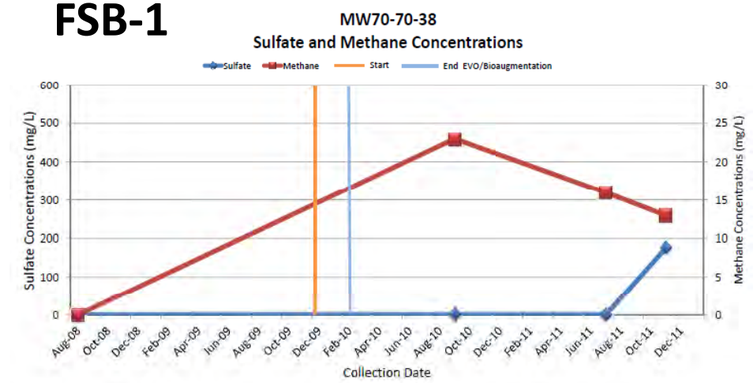
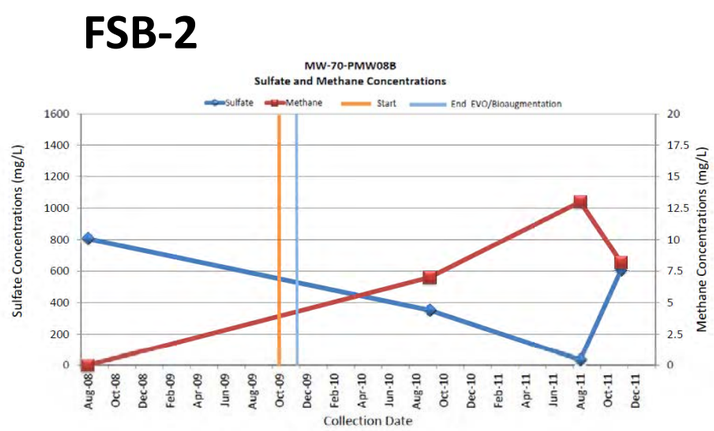


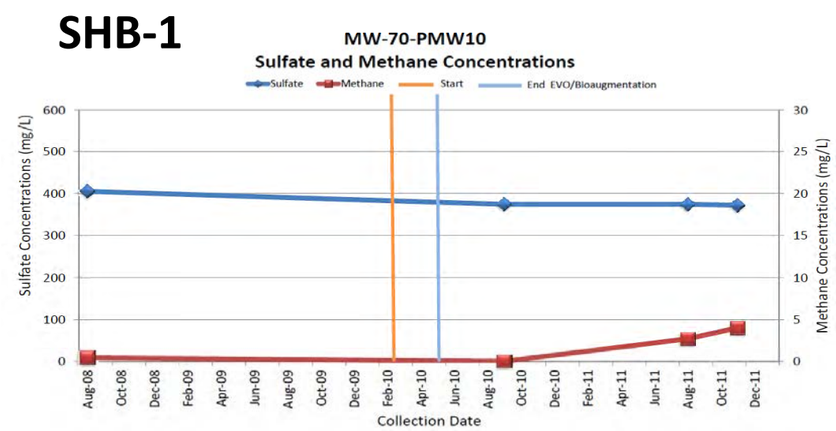
Figure 2-23
DO-ORP Trends since Baseline

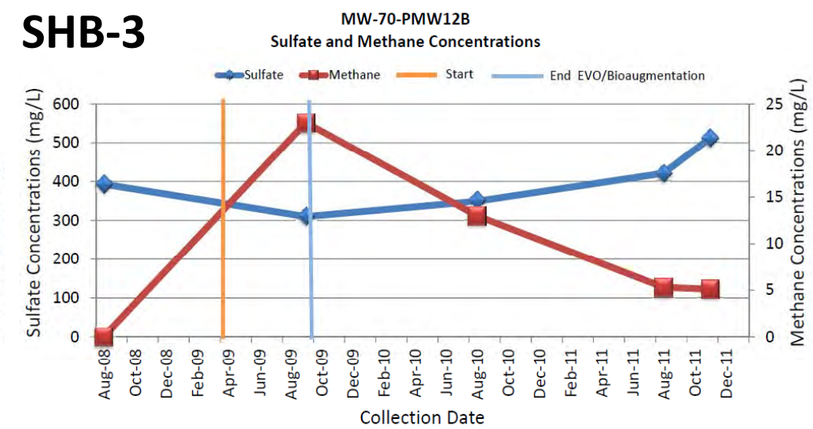












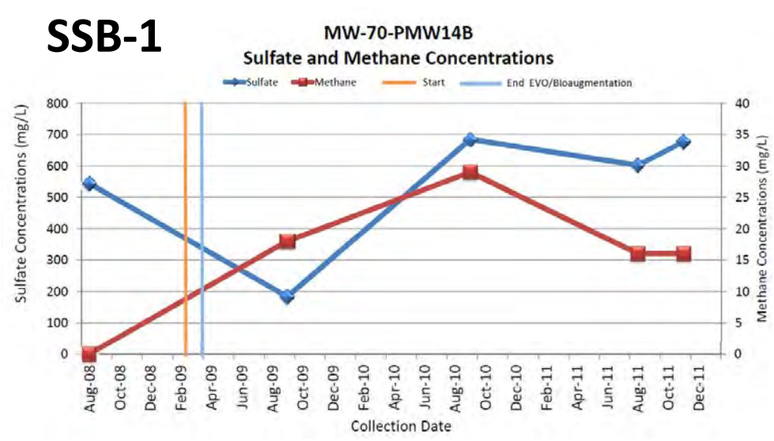
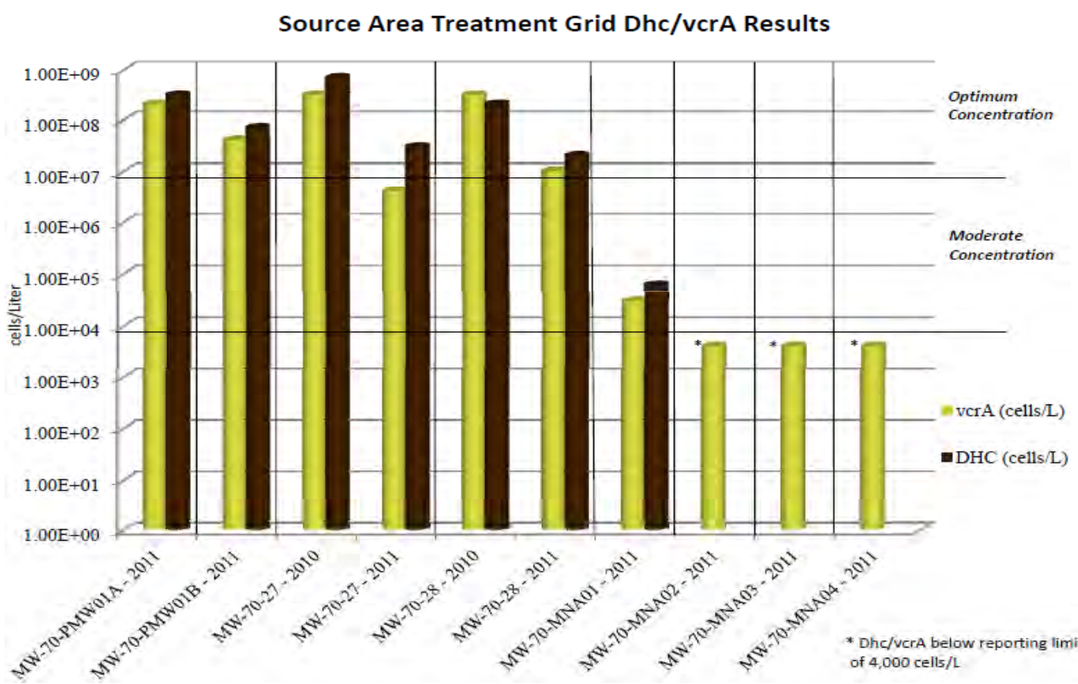
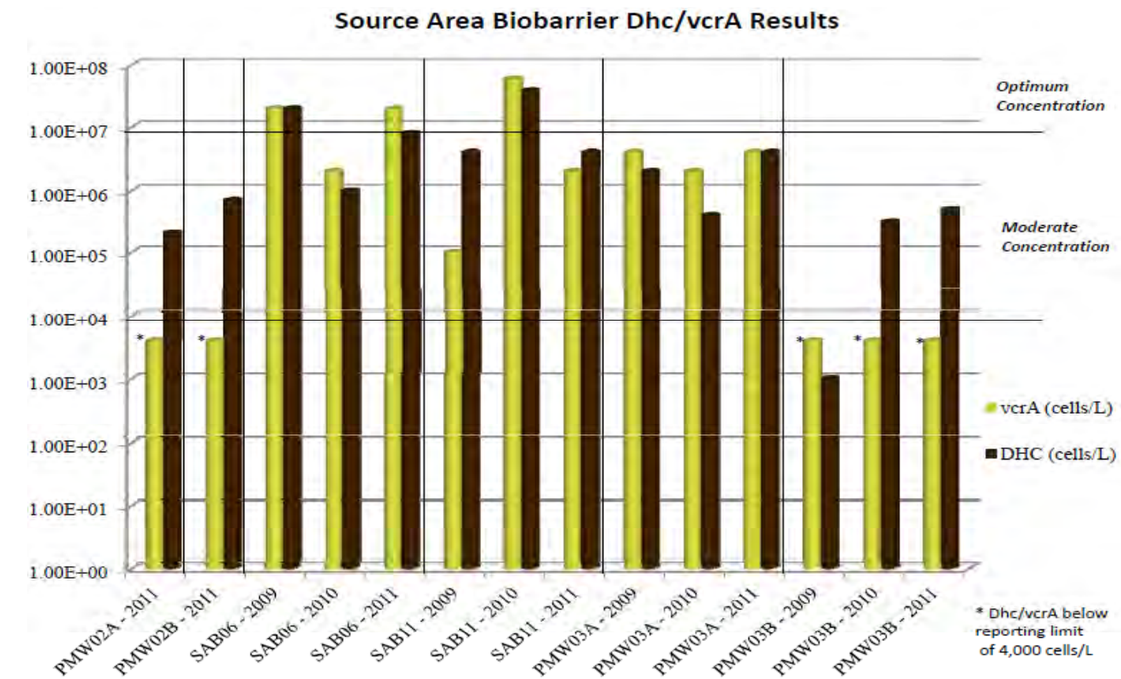
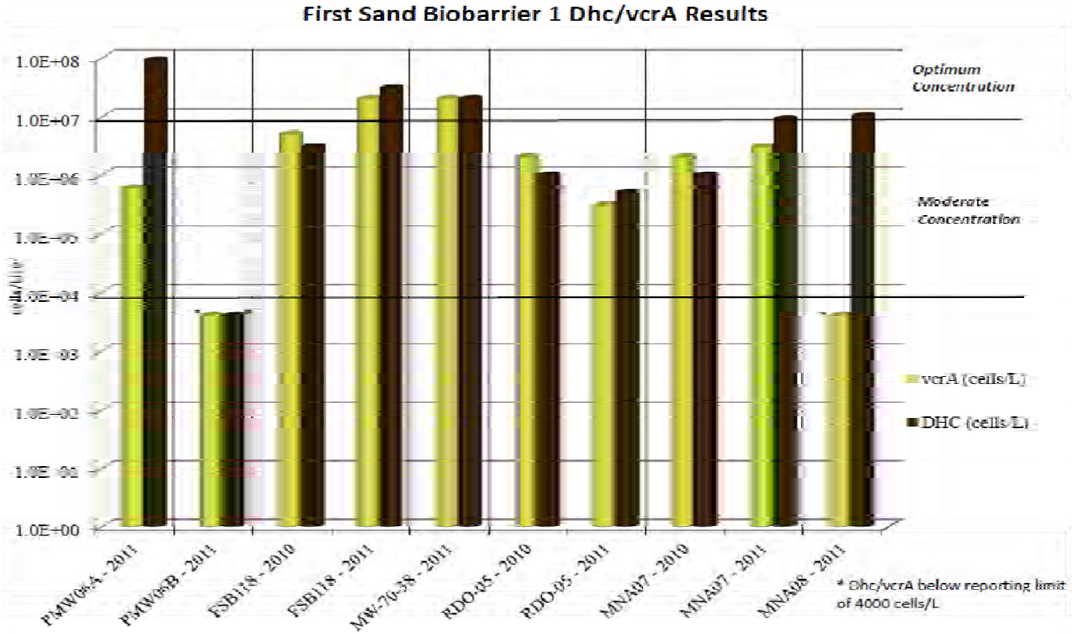


Figure 2-24
Sulfate-Methane Trends since Baseline







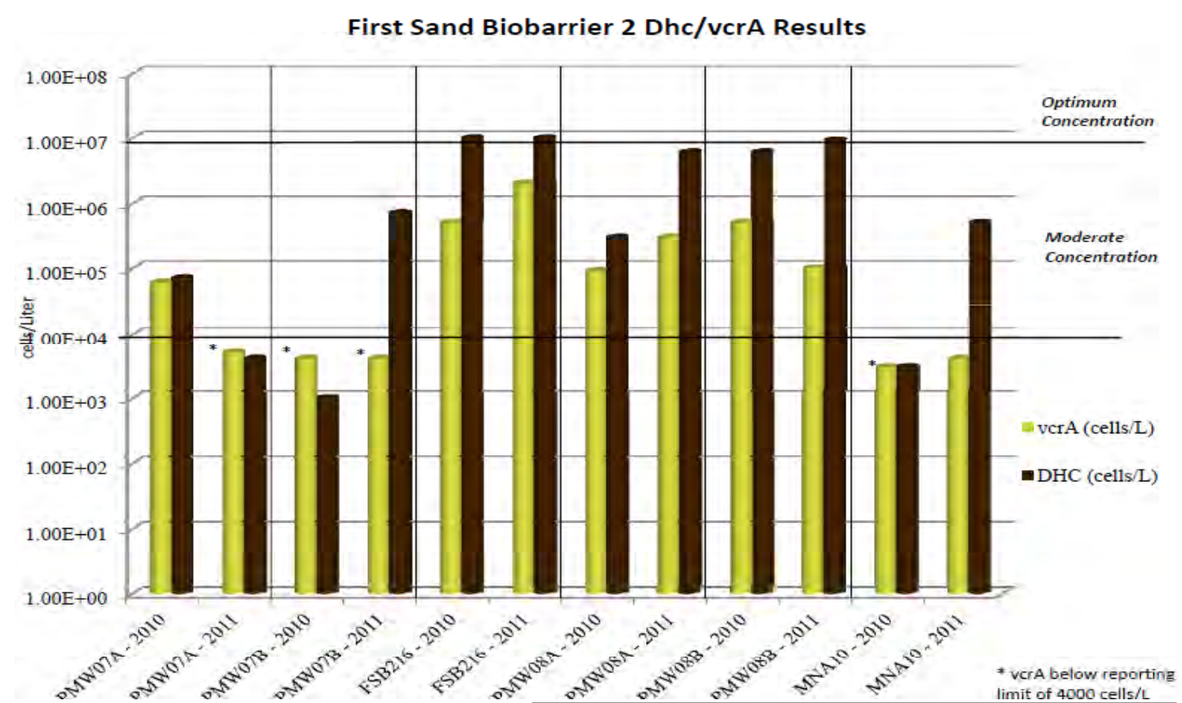
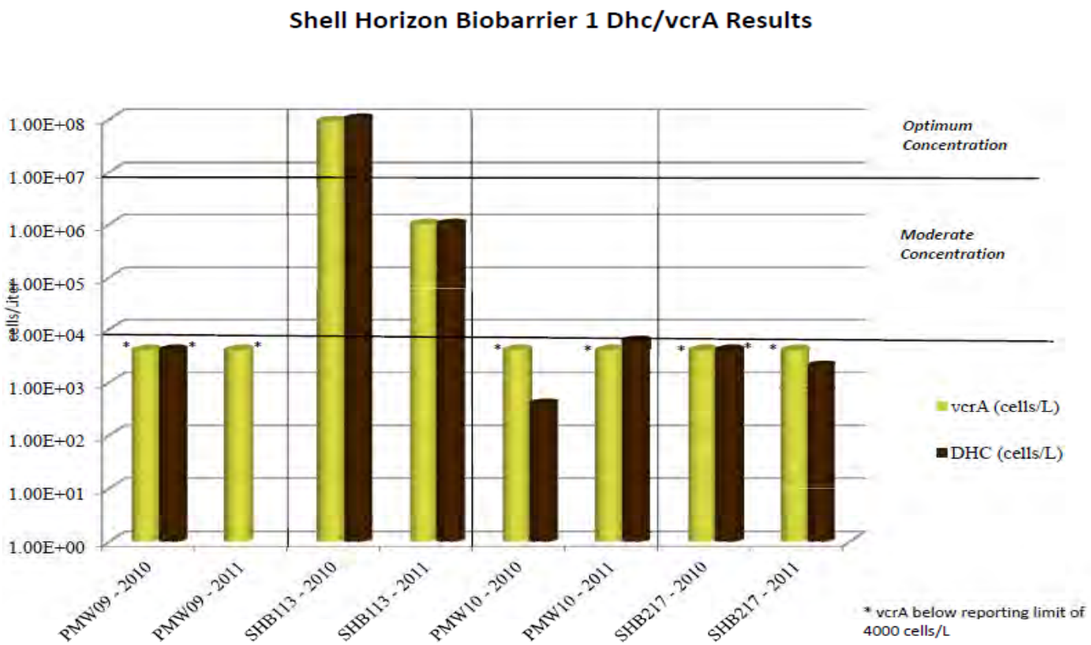
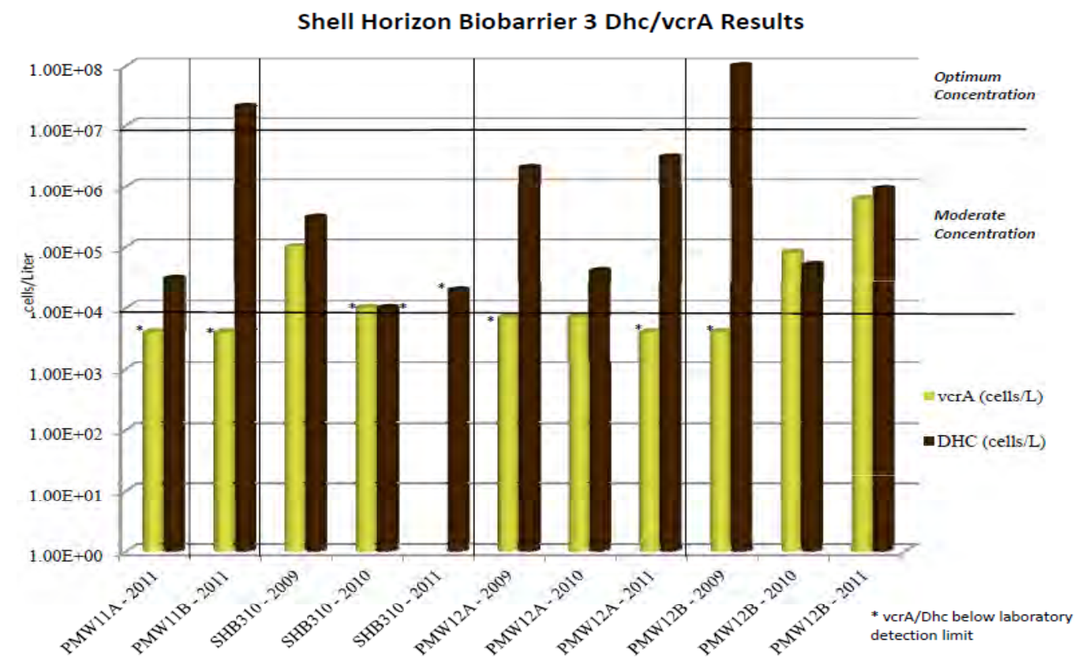


Figure 2-25
Dehalococcoides Trends since Baseline: SATG, SAB, FSB-1, FSB-2





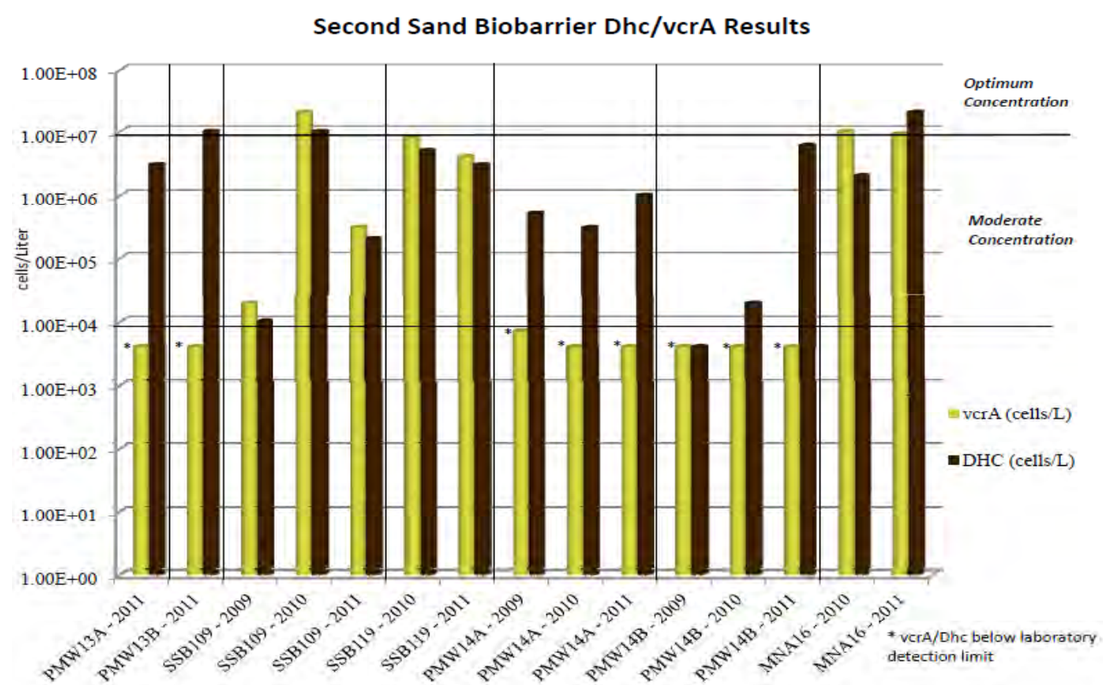
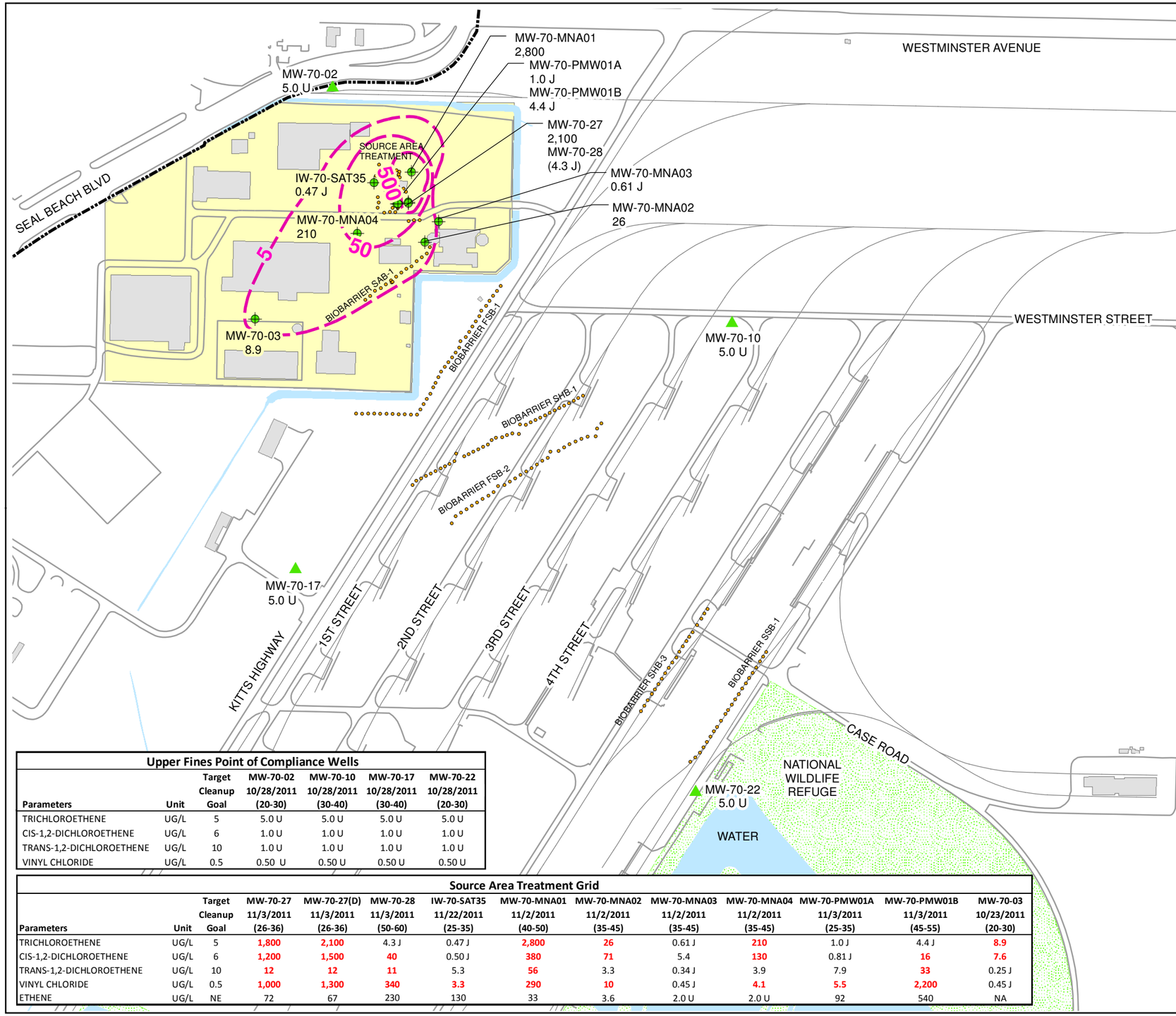


Figure 2-26
Dehalococcoides Trends since Baseline: SHB-1, SHB-3, SSB



LEGEND

MW-70-MNA02 26	UPPER FINES/SOURCE AREA TREATMENT MONITORING WELL SHOWING STATION ID AND TCE CONCENTRATION IN ug/L IN FALL 2011
MW-70-02 5.0 U	UPPER FINES POC MONITORING WELL SHOWING STATION ID AND TCE CONCENTRATION IN ug/L IN FALL 2011
	BIOBARRIER OR SOURCE AREA TREATMENT WELL
	IR SITE 70 BOUNDARY
	BASE BOUNDARY
	ROAD
	RAILROAD TRACK
	BUILDING
-5-	APPROXIMATE TCE ISOCONCENTRATION CONTOUR (ug/L), DASHED WHERE INFERRED

NOTES:

(D) - DUPLICATE SAMPLE
J - ESTIMATED VALUE
ug/L - MICROGRAMS PER LITER
NA - NOT ANALYZED
NE - NOT ESTABLISHED
U - ANALYTE NOT DETECTED ABOVE THE DETECTION LIMIT: ASSOCIATED VALUE IS THE DETECTION LIMIT

POC - POINT OF COMPLIANCE

TCE - TRICHLOROETHENE

BOLDED **RED** PARAMETERS ARE CONSTITUENTS OF CONCERN THAT EXCEED THE TARGET CLEANUP GOAL

(25-35) - WELL SCREEN INTERVAL, IN FEET BELOW GROUND SURFACE

N

0 200 400 800 Feet

Upper Fines Point of Compliance Wells

Parameters	Unit	Target Cleanup Goal	MW-70-02 10/28/2011 (20-30)	MW-70-10 10/28/2011 (30-40)	MW-70-17 10/28/2011 (30-40)	MW-70-22 10/28/2011 (20-30)
TRICHLOROETHENE	UG/L	5	5.0 U	5.0 U	5.0 U	5.0 U
CIS-1,2-DICHLOROETHENE	UG/L	6	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	UG/L	10	1.0 U	1.0 U	1.0 U	1.0 U
VINYL CHLORIDE	UG/L	0.5	0.50 U	0.50 U	0.50 U	0.50 U

Source Area Treatment Grid

Parameters	Unit	Target Cleanup Goal	MW-70-27 11/3/2011 (26-36)	MW-70-27(D) 11/3/2011 (26-36)	MW-70-28 11/3/2011 (50-60)	IW-70-SAT35 11/22/2011 (25-35)	MW-70-MNA01 11/2/2011 (40-50)	MW-70-MNA02 11/2/2011 (35-45)	MW-70-MNA03 11/2/2011 (35-45)	MW-70-MNA04 11/2/2011 (35-45)	MW-70-PMW01A 11/3/2011 (25-35)	MW-70-PMW01B 11/3/2011 (45-55)	MW-70-03 10/23/2011 (20-30)
TRICHLOROETHENE	UG/L	5	**1,800**	**2,100**	4.3 J	0.47 J	**2,800**	**26**	0.61 J	**210**	1.0 J	4.4 J	**8.9**
CIS-1,2-DICHLOROETHENE	UG/L	6	**1,200**	**1,500**	**40**	0.50 J	**380**	**71**	5.4	**130**	0.81 J	**16**	**7.6**
TRANS-1,2-DICHLOROETHENE	UG/L	10	**12**	**12**	**11**	5.3	**56**	3.3	0.34 J	3.9	7.9	**33**	0.25 J
VINYL CHLORIDE	UG/L	0.5	**1,000**	**1,300**	**340**	**3.3**	**290**	**10**	0.45 J	**4.1**	**5.5**	**2,200**	0.45 J
ETHENE	UG/L	NE	72	67	230	130	33	3.6	2.0 U	2.0 U	92	540	NA

2011 Performance Monitoring Report

Figure 2-27

IR Site 70, Upper Fines - Source Area Treatment Grid
Trichloroethene in Groundwater - Fall 2011

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

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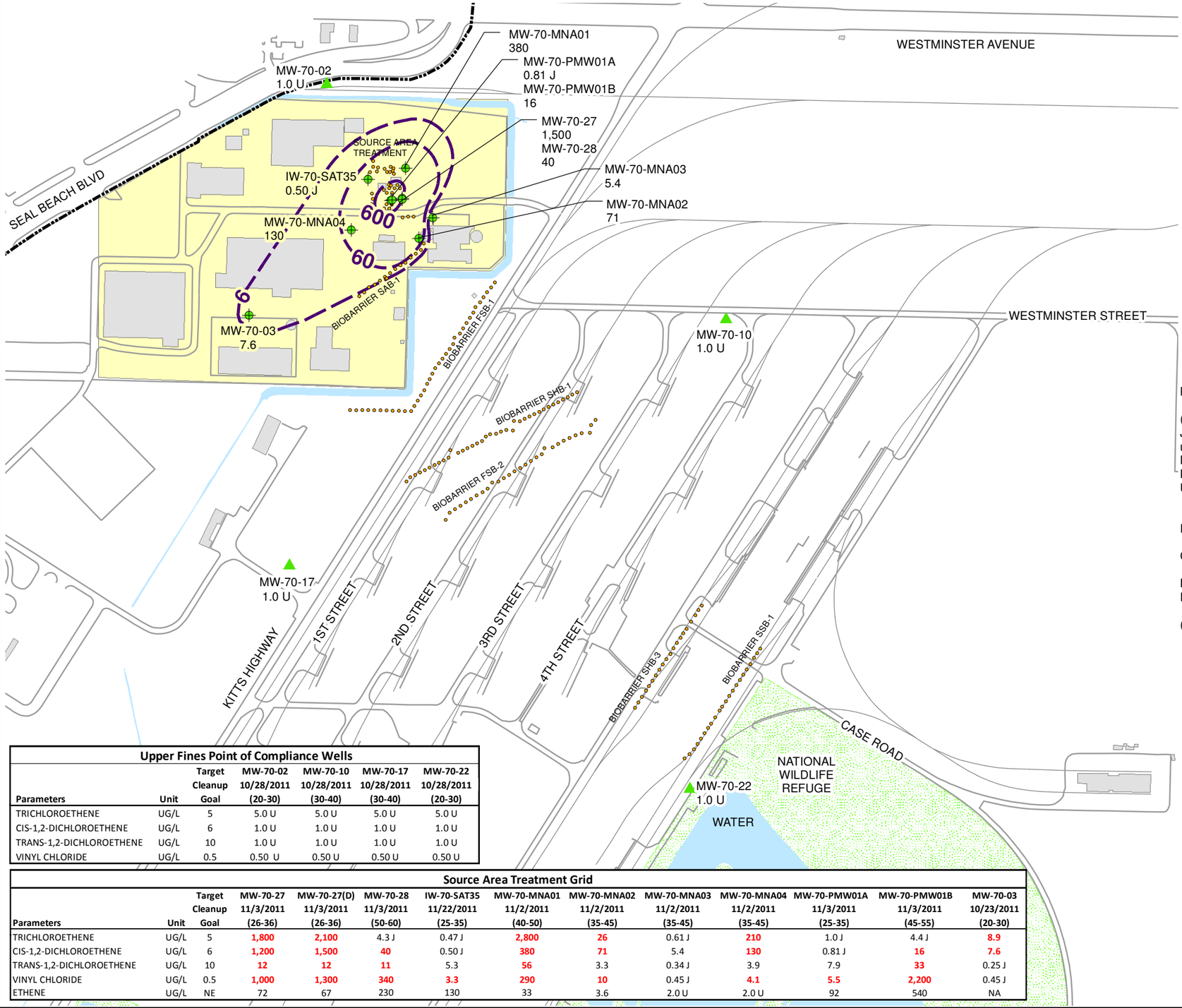
File No. 77101ufcoc2.mxd
Project No.: 4-77101
Rev. A



LEGEND

MW-70-MNA02 71	UPPER FINES/SOURCE AREA TREATMENT MONITORING WELL SHOWING STATION ID AND CIS-1,2-DCE CONCENTRATION IN ug/L IN FALL 2011
MW-70-02 1.0 U	UPPER FINES POC MONITORING WELL SHOWING STATION ID AND CIS-1,2-DCE CONCENTRATION IN ug/L IN FALL 2011
	BIOBARRIER OR SOURCE AREA TREATMENT WELL
	IR SITE 70 BOUNDARY
	BASE BOUNDARY
	ROAD
	RAILROAD TRACK
	BUILDING
6	APPROXIMATE CIS-1,2-DCE ISOCONCENTRATION CONTOUR (ug/L), DASHED WHERE INFERRED

NOTES:

(D) - DUPLICATE SAMPLE
J - ESTIMATED VALUE
ug/L - MICROGRAMS PER LITER
NA - NOT ANALYZED
NE - NOT ESTABLISHED
U - ANALYTE NOT DETECTED ABOVE THE DETECTION LIMIT: ASSOCIATED VALUE IS THE DETECTION LIMIT

POC - POINT OF COMPLIANCE

CIS-1,2-DCE - CIS-1,2-DICHLOROETHENE

BOLDED **RED** PARAMETERS ARE CONSTITUENTS OF CONCERN THAT EXCEED THE TARGET CLEANUP GOAL

(25-35) - WELL SCREEN INTERVAL, IN FEET BELOW GROUND SURFACE

N

0 200 400 800 Feet

Upper Fines Point of Compliance Wells

Parameters	Unit	Target Cleanup Goal	MW-70-02 10/28/2011 (20-30)	MW-70-10 10/28/2011 (30-40)	MW-70-17 10/28/2011 (30-40)	MW-70-22 10/28/2011 (20-30)
TRICHLOROETHENE	UG/L	5	5.0 U	5.0 U	5.0 U	5.0 U
CIS-1,2-DICHLOROETHENE	UG/L	6	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	UG/L	10	1.0 U	1.0 U	1.0 U	1.0 U
VINYL CHLORIDE	UG/L	0.5	0.50 U	0.50 U	0.50 U	0.50 U

Source Area Treatment Grid

Parameters	Unit	Target Cleanup Goal	MW-70-27 11/3/2011 (26-36)	MW-70-27(D) 11/3/2011 (26-36)	MW-70-28 11/3/2011 (50-60)	IW-70-SAT35 11/22/2011 (25-35)	MW-70-MNA01 11/2/2011 (40-50)	MW-70-MNA02 11/2/2011 (35-45)	MW-70-MNA03 11/2/2011 (35-45)	MW-70-MNA04 11/2/2011 (35-45)	MW-70-PMW01A 11/3/2011 (25-35)	MW-70-PMW01B 11/3/2011 (45-55)	MW-70-03 10/23/2011 (20-30)
TRICHLOROETHENE	UG/L	5	**1,800**	**2,100**	4.3 J	0.47 J	**2,800**	**26**	0.61 J	**210**	1.0 J	4.4 J	**8.9**
CIS-1,2-DICHLOROETHENE	UG/L	6	**1,200**	**1,500**	**40**	0.50 J	**380**	**71**	5.4	**130**	0.81 J	**16**	**7.6**
TRANS-1,2-DICHLOROETHENE	UG/L	10	**12**	**12**	**11**	5.3	**56**	3.3	0.34 J	3.9	7.9	**33**	0.25 J
VINYL CHLORIDE	UG/L	0.5	**1,000**	**1,300**	**340**	**3.3**	**290**	**10**	0.45 J	**4.1**	**5.5**	**2,200**	0.45 J
ETHENE	UG/L	NE	72	67	230	130	33	3.6	2.0 U	2.0 U	92	540	NA

2011 Performance Monitoring Report

Figure 2-28

IR Site 70, Upper Fines - Source Area Treatment Grid
cis-1,2-Dichloroethene in Groundwater - Fall 2011

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 7/12/2012
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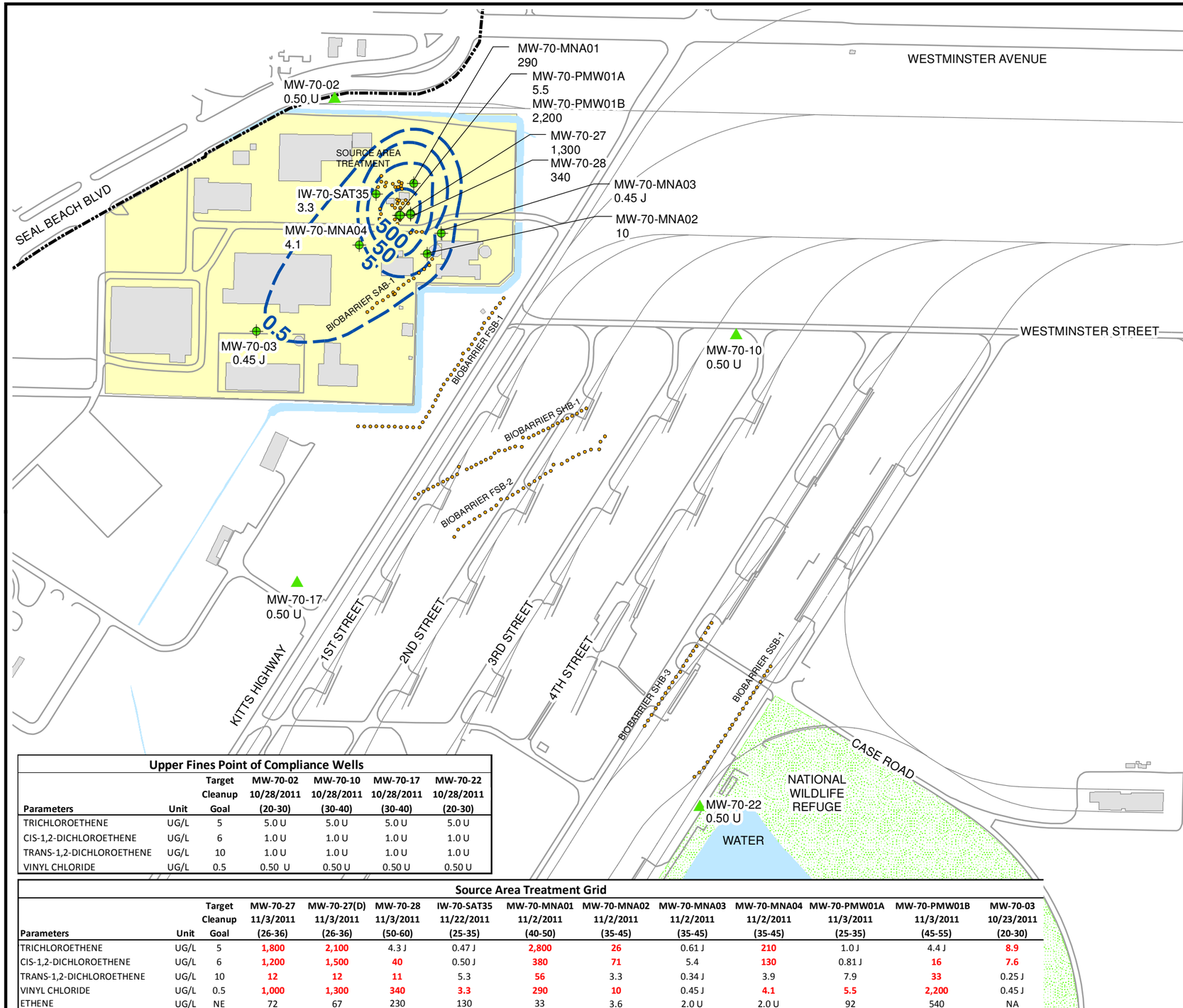
Project No.: 4-77101
Rev. A



LEGEND

MW-70-MNA02 10 — UPPER FINES/SOURCE AREA TREATMENT MONITORING WELL SHOWING STATION ID AND VINYL CHLORIDE CONCENTRATION IN ug/L IN FALL 2011

MW-70-02 0.50 U — UPPER FINES POC MONITORING WELL SHOWING STATION ID AND VINYL CHLORIDE CONCENTRATION IN ug/L IN FALL 2011

BIOBARRIER OR SOURCE AREA TREATMENT WELL

IR SITE 70 BOUNDARY

BASE BOUNDARY

ROAD

RAILROAD TRACK

BUILDING

-5- APPROXIMATE VINYL CHLORIDE ISOCONCENTRATION CONTOUR (ug/L), DASHED WHERE INFERRED

NOTES:

(D) - DUPLICATE SAMPLE
J - ESTIMATED VALUE
ug/L - MICROGRAMS PER LITER
NA - NOT ANALYZED
NE - NOT ESTABLISHED
U - ANALYTE NOT DETECTED ABOVE THE DETECTION LIMIT: ASSOCIATED VALUE IS THE DETECTION LIMIT

POC - POINT OF COMPLIANCE

BOLDED **RED** PARAMETERS ARE CONSTITUENTS OF CONCERN THAT EXCEED THE TARGET CLEANUP GOAL

(25-35) - WELL SCREEN INTERVAL, IN FEET BELOW GROUND SURFACE

N

0 200 400 800 Feet

Upper Fines Point of Compliance Wells

Parameters	Unit	Target Cleanup Goal	MW-70-02 10/28/2011 (20-30)	MW-70-10 10/28/2011 (30-40)	MW-70-17 10/28/2011 (30-40)	MW-70-22 10/28/2011 (20-30)
TRICHLOROETHENE	UG/L	5	5.0 U	5.0 U	5.0 U	5.0 U
CIS-1,2-DICHLOROETHENE	UG/L	6	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	UG/L	10	1.0 U	1.0 U	1.0 U	1.0 U
VINYL CHLORIDE	UG/L	0.5	0.50 U	0.50 U	0.50 U	0.50 U

Source Area Treatment Grid

Parameters	Unit	Target Cleanup Goal	MW-70-27 11/3/2011 (26-36)	MW-70-27(D) 11/3/2011 (26-36)	MW-70-28 11/3/2011 (50-60)	IW-70-SAT35 11/22/2011 (25-35)	MW-70-MNA01 11/2/2011 (40-50)	MW-70-MNA02 11/2/2011 (35-45)	MW-70-MNA03 11/2/2011 (35-45)	MW-70-MNA04 11/2/2011 (35-45)	MW-70-PMW01A 11/3/2011 (25-35)	MW-70-PMW01B 11/3/2011 (45-55)	MW-70-03 10/23/2011 (20-30)
TRICHLOROETHENE	UG/L	5	**1,800**	**2,100**	4.3 J	0.47 J	**2,800**	**26**	0.61 J	**210**	1.0 J	4.4 J	**8.9**
CIS-1,2-DICHLOROETHENE	UG/L	6	**1,200**	**1,500**	**40**	0.50 J	**380**	**71**	5.4	**130**	0.81 J	**16**	**7.6**
TRANS-1,2-DICHLOROETHENE	UG/L	10	**12**	**12**	**11**	5.3	**56**	3.3	0.34 J	3.9	7.9	**33**	0.25 J
VINYL CHLORIDE	UG/L	0.5	**1,000**	**1,300**	**340**	**3.3**	**290**	**10**	0.45 J	**4.1**	**5.5**	**2,200**	0.45 J
ETHENE	UG/L	NE	72	67	230	130	33	3.6	2.0 U	2.0 U	92	540	NA

2011 Performance Monitoring Report

Figure 2-29

IR Site 70, Upper Fines - Source Area Treatment Grid
Vinyl Chloride in Groundwater - Fall 2011

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

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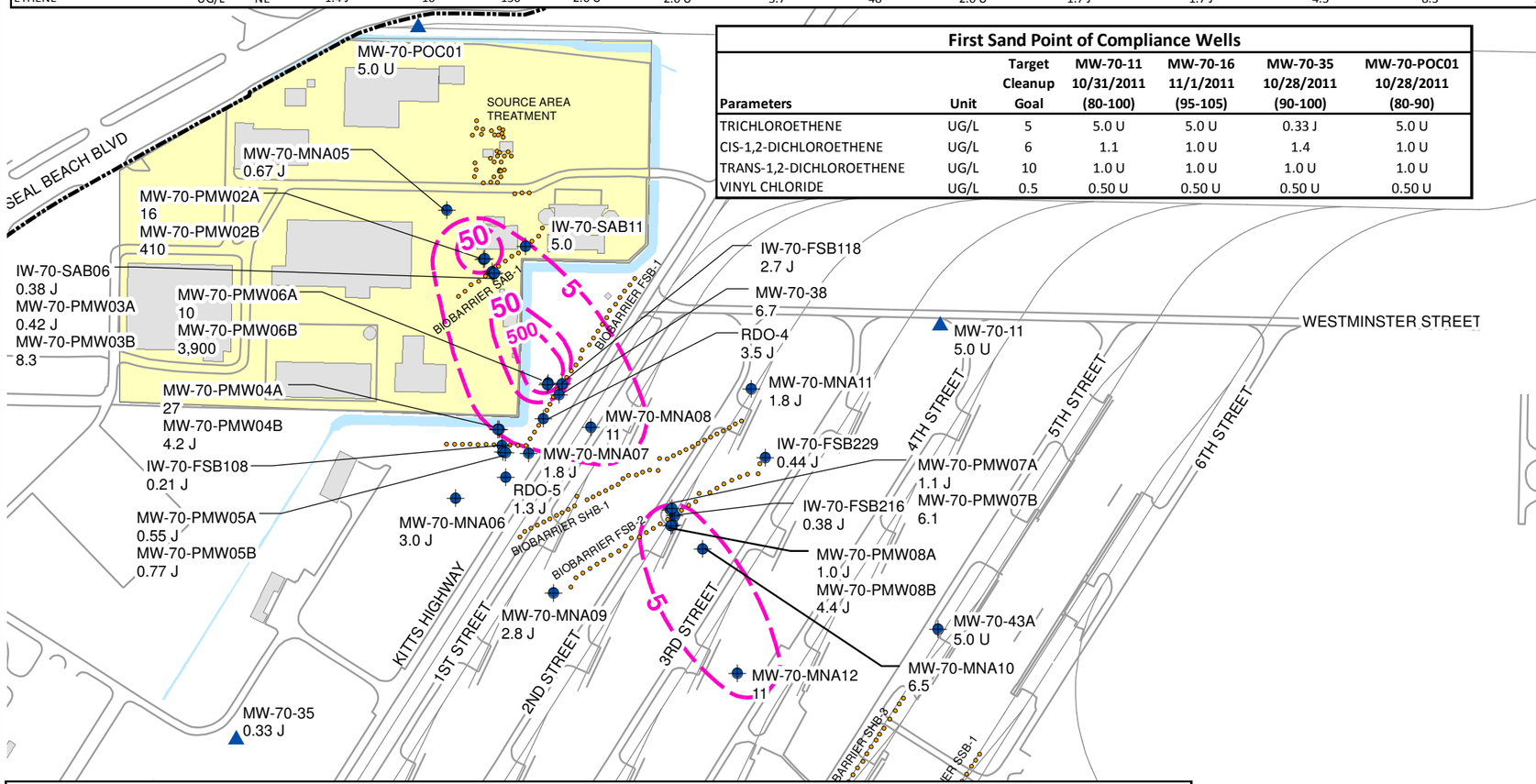
First Sand Biobarrier 1

Parameters	Unit	Target Cleanup Goal	IW-70-FSB108 11/9/2011 (60-105)	IW-70-FSB118 11/8/2011 (60-105)	MW-70-38 11/8/2011 (80-100)	MW-70-43A 11/23/2011 (86-106)	MW-70-MNA06 11/10/2011 (80-90)	MW-70-MNA07 11/14/2011 (90-100)	MW-70-MNA08 11/10/2011 (80-90)	MW-70-MNA11 11/14/2011 (80-90)	MW-70-PMW04A 11/9/2011 (70-80)	MW-70-PMW04A(D) 11/9/2011 (70-80)	MW-70-PMW04B 11/9/2011 (90-100)	MW-70-PMW05A 11/9/2011 (70-80)	MW-70-PMW05B 11/9/2011 (90-100)	MW-70-PMW06A 11/8/2011 (70-80)	MW-70-PMW06B 11/8/2011 (91-101)	MW-70-PMW06B(D) 11/8/2011 (91-101)	RDO-4 11/28/2011 (65-105)	RDO-5 11/10/2011 (65-105)
TRICHLOROETHENE	UG/L	5	0.21 J	2.7 J	**6.7**	5.0 U	3.0 J	1.8 J	**11**	1.8 J	**27**	**26**	4.2 J	0.55 J	0.77 J	**10**	**3,800**	**3,900**	3.5 J	1.3 J
CIS-1,2-DICHLOROETHENE	UG/L	6	0.23 J	2.6	**8.7**	0.22 J	**18**	**7.8**	**1600**	2.2	**1400**	**1500**	**1,500**	1.0	2.0	**1,800**	**550**	**550**	**310**	3.2
TRANS-1,2-DICHLOROETHENE	UG/L	10	0.44 J	2.3	7.4	1.0 U	0.29 J	2.6	**15**	0.21 J	9.4	9.3	**21**	1.3	4.1	**16**	**49**	**50**	6.2	0.91 J
VINYL CHLORIDE	UG/L	0.5	**3.4**	**10**	**850**	0.50 U	0.50 U	**4.6**	**97**	0.50 U	**4.3**	**4.5**	**3.7**	**4.1**	**340**	**790**	**9.1**	**9.4**	**330**	**3.3**
ETHENE	UG/L	NE	1.4 J	16	130	2.0 U	2.0 U	5.7	48	2.0 U	1.7 J	1.7 J	4.3	8.3	72	68	0.96 J	1.7 J	64	5.1

First Sand Point of Compliance Wells

Parameters	Unit	Target Cleanup Goal	MW-70-11 10/31/2011 (80-100)	MW-70-16 11/1/2011 (95-105)	MW-70-35 10/28/2011 (90-100)	MW-70-POC01 10/28/2011 (80-90)
TRICHLOROETHENE	UG/L	5	5.0 U	5.0 U	0.33 J	5.0 U
CIS-1,2-DICHLOROETHENE	UG/L	6	1.1	1.0 U	1.4	1.0 U
TRANS-1,2-DICHLOROETHENE	UG/L	10	1.0 U	1.0 U	1.0 U	1.0 U
VINYL CHLORIDE	UG/L	0.5	0.50 U	0.50 U	0.50 U	0.50 U



LEGEND

- MW-70-PMA02A 16 — FIRST SAND MONITORING WELL SHOWING WELL ID AND TCE CONCENTRATION (ug/L) IN FALL 2011
- MW-70-11 5.0 U — FIRST SAND POC MONITORING WELL SHOWING WELL ID AND TCE CONCENTRATION (ug/L) IN FALL 2011
- BIOBARRIER OR SOURCE AREA TREATMENT WELL
- IR SITE 70 BOUNDARY
- BASE BOUNDARY
- ROAD
- RAILROAD TRACK
- BUILDING
- 5 — APPROXIMATE TCE CONCENTRATION CONTOUR (ug/L)

NOTES:

(D) - DULPICATE SAMPLE
J - ESTIMATED VALUE
NE - NOT ESTABLISHED
ug/L - MICROGRAMS PER LITER
U - ANALYTE NOT DETECTED ABOVE THE DETECTION LIMIT: ASSOCIATED VALUE IS THE DETECTION LIMIT

POC - POINT OF COMPLIANCE

TCE - TRICHLOROETHENE

BOLDED **RED** PARAMETERS ARE CONSTITUENTS OF CONCERN THAT EXCEED THE TARGET CLEANUP GOAL

(80-100) - WELL SCREEN INTERVAL, IN FEET BELOW GROUND SURFACE

N

0 200 400 800 Feet

First Sand Biobarrier 2

Parameters	Unit	Target Cleanup Goal	IW-70-FSB216 11/15/2011 (65-100)	IW-70-FSB229 11/28/2011 (65-100)	MW-70-MNA09 11/10/2011 (67-74)	MW-70-MNA10 11/15/2011 (75-85)	MW-70-MNA12 11/17/2011 (75-85)	MW-70-MNA12(D) 11/17/2011 (75-85)	MW-70-PMW07A 11/15/2011 (65-75)	MW-70-PMW07B 11/15/2011 (85-95)	MW-70-PMW08A 11/15/2011 (65-75)	MW-70-PMW08B 11/15/2011 (85-95)
TRICHLOROETHENE	UG/L	5	0.38 J	0.44 J	2.8 J	**6.5**	**11**	**11**	1.1 J	**6.1**	1.0 J	4.4 J
CIS-1,2-DICHLOROETHENE	UG/L	6	0.36 J	5.1	13	**24**	**950**	**870**	**11**	**550**	**33**	**120**
TRANS-1,2-DICHLOROETHENE	UG/L	10	0.26 J	0.23 J	1.0	2.6	**22**	**22**	1.0 U	4.5	1.4	8.6
VINYL CHLORIDE	UG/L	0.5	**2.9**	**4.1**	0.50 U	**25**	**1.4**	**1.5**	0.50 U	**1.1**	**39**	**390**
ETHENE	UG/L	NE	0.61 J	2.0 U	2.0 U	2.0 U	1.4 J	2	2.0 U	0.66 J	7	19

Source Area Biobarrier / First Sand

Parameters	Unit	Target Cleanup Goal	MW-70-MNA05 11/2/2011 (70-80)	MW-70-PMW02A 11/7/2011 (71-81)	MW-70-PMW02B 11/7/2011 (90-100)	MW-70-PMW03A 11/7/2011 (70-80)	MW-70-PMW03B 11/7/2011 (90-100)	MW-70-PMW03B(D) 11/7/2011 (90-100)	IW-70-SAB06 11/7/2011 (65-80/85-105)	IW-70-SAB11 11/8/2011 (65-105)
TRICHLOROETHENE	UG/L	5	0.67 J	**16**	**410**	0.42 J	**8.3**	**7.9**	0.38 J	5.0 U
CIS-1,2-DICHLOROETHENE	UG/L	6	0.57 J	**230**	**770**	0.73 J	**1000**	**1100**	0.48 J	0.33 J
TRANS-1,2-DICHLOROETHENE	UG/L	10	0.39 J	1.4	6.0	0.82 J	8.6	8.9	1.3	1.7
VINYL CHLORIDE	UG/L	0.5	**42**	**0.75**	**1.7**	**0.67**	**83**	**89**	**1.8**	**0.91 J**
ETHENE	UG/L	NE	3.3	0.74 J	2.0 U	0.68 J	7.4	23.0	5.1	2.2

2011 Performance Monitoring Report

Figure 2-30

IR Site 70, First Sand - Source Area Biobarrier, First Sand Biobarriers 1 & 2, TCE in Groundwater - Fall 2011

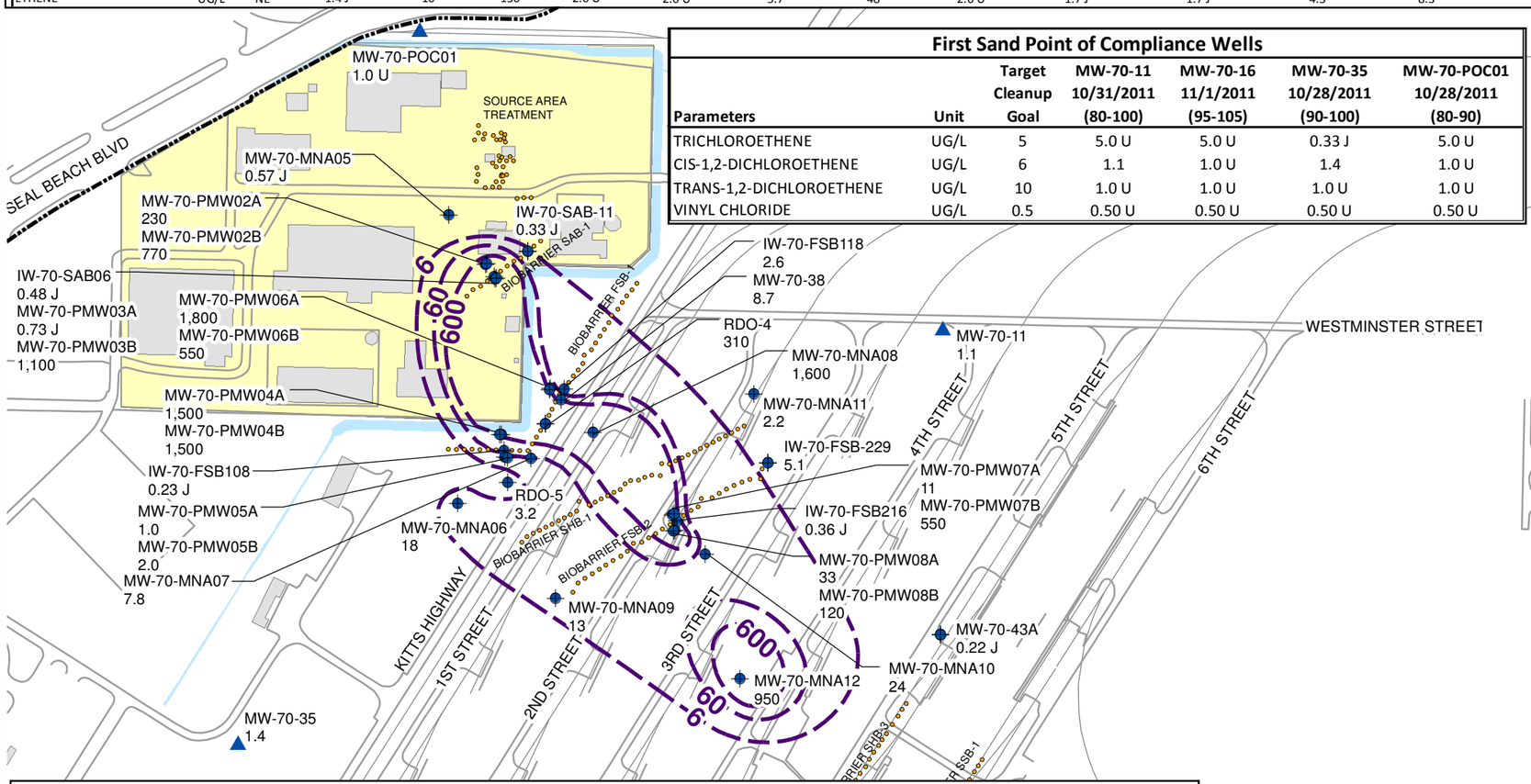
Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 7/12/2012
File No. 77101fscoc1.mxd
Project No.: 4-77101
Rev. A

First Sand Biobarrier 1

Parameters	Unit	Target Cleanup Goal	IW-70-FSB108 11/9/2011 (60-105)	IW-70-FSB118 11/8/2011 (60-105)	MW-70-38 11/8/2011 (80-100)	MW-70-43A 11/23/2011 (86-106)	MW-70-MNA06 11/10/2011 (80-90)	MW-70-MNA07 11/14/2011 (90-100)	MW-70-MNA08 11/10/2011 (80-90)	MW-70-MNA11 11/14/2011 (80-90)	MW-70-PMW04A 11/9/2011 (70-80)	MW-70-PMW04A(D) 11/9/2011 (70-80)	MW-70-PMW04B 11/9/2011 (90-100)	MW-70-PMW05A 11/9/2011 (70-80)	MW-70-PMW05B 11/9/2011 (90-100)	MW-70-PMW06A 11/8/2011 (70-80)	MW-70-PMW06B 11/8/2011 (91-101)	MW-70-PMW06B(D) 11/8/2011 (91-101)	RDO-4 11/28/2011 (65-105)	RDO-5 11/10/2011 (65-105)
TRICHLOROETHENE	UG/L	5	0.21 J	2.7 J	**6.7**	5.0 U	3.0 J	1.8 J	**11**	1.8 J	**27**	**26**	4.2 J	0.55 J	0.77 J	**10**	**3,800**	**3,900**	3.5 J	1.3 J
CIS-1,2-DICHLOROETHENE	UG/L	6	0.23 J	2.6	**8.7**	0.22 J	**18**	**7.8**	**1600**	2.2	**1400**	**1500**	**1,500**	1.0	2.0	**1,800**	**550**	**550**	**310**	3.2
TRANS-1,2-DICHLOROETHENE	UG/L	10	0.44 J	2.3	7.4	1.0 U	0.29 J	2.6	**15**	0.21 J	9.4	9.3	**21**	1.3	4.1	**16**	**49**	**50**	6.2	0.91 J
VINYL CHLORIDE	UG/L	0.5	**3.4**	**10**	**850**	0.50 U	0.50 U	**4.6**	**97**	0.50 U	**4.3**	**4.5**	**3.7**	**4.1**	**340**	**790**	**9.1**	**9.4**	**330**	**3.3**
ETHENE	UG/L	NE	1.4 J	16	130	2.0 U	2.0 U	5.7	48	2.0 U	1.7 J	1.7 J	4.3	8.3	72	68	0.96 J	1.7 J	64	5.1



First Sand Point of Compliance Wells

Parameters	Unit	Target Cleanup Goal	MW-70-11 10/31/2011 (80-100)	MW-70-16 11/1/2011 (95-105)	MW-70-35 10/28/2011 (90-100)	MW-70-POC01 10/28/2011 (80-90)
TRICHLOROETHENE	UG/L	5	5.0 U	5.0 U	0.33 J	5.0 U
CIS-1,2-DICHLOROETHENE	UG/L	6	1.1	1.0 U	1.4	1.0 U
TRANS-1,2-DICHLOROETHENE	UG/L	10	1.0 U	1.0 U	1.0 U	1.0 U
VINYL CHLORIDE	UG/L	0.5	0.50 U	0.50 U	0.50 U	0.50 U

LEGEND

- MW-70-PMA02A 230 — FIRST SAND MONITORING WELL SHOWING WELL ID AND CIS-1,2-DCE CONCENTRATION (ug/L) IN FALL 2011
- MW-70-11 1.1 — FIRST SAND POC MONITORING WELL SHOWING WELL ID AND CIS-1,2-DCE CONCENTRATION (ug/L) IN FALL 2011
- BIOBARRIER OR SOURCE AREA TREATMENT WELL
- IR SITE 70 BOUNDARY
- BASE BOUNDARY
- ROAD
- RAILROAD TRACK
- BUILDING
- 6 — APPROXIMATE CIS-1,2-DCE CONCENTRATION CONTOUR (ug/L)

NOTES:

(D) - DUPLICATE SAMPLE
J - ESTIMATED VALUE
NE - NOT ESTABLISHED
ug/L - MICROGRAMS PER LITER
U - ANALYTE NOT DETECTED ABOVE THE DETECTION LIMIT: ASSOCIATED VALUE IS THE DETECTION LIMIT

POC - POINT OF COMPLIANCE

CIS-1,2-DCE - CIS-1,2-DICHLOROETHENE

BOLDED **RED** PARAMETERS ARE CONSTITUENTS OF CONCERN THAT EXCEED THE TARGET CLEANUP GOAL

(80-100) - WELL SCREEN INTERVAL, IN FEET BELOW GROUND SURFACE

0 200 400 800 Feet

N

First Sand Biobarrier 2

Parameters	Unit	Target Cleanup Goal	IW-70-FSB216 11/15/2011 (65-100)	IW-70-FSB229 11/28/2011 (65-100)	MW-70-MNA09 11/10/2011 (67-74)	MW-70-MNA10 11/15/2011 (75-85)	MW-70-MNA12 11/17/2011 (75-85)	MW-70-MNA12(D) 11/17/2011 (75-85)	MW-70-PMW07A 11/15/2011 (65-75)	MW-70-PMW07B 11/15/2011 (85-95)	MW-70-PMW08A 11/15/2011 (65-75)	MW-70-PMW08B 11/15/2011 (85-95)
TRICHLOROETHENE	UG/L	5	0.38 J	0.44 J	2.8 J	**6.5**	**11**	**11**	1.1 J	**6.1**	1.0 J	4.4 J
CIS-1,2-DICHLOROETHENE	UG/L	6	0.36 J	5.1	13	**24**	**950**	**870**	**11**	**550**	**33**	**120**
TRANS-1,2-DICHLOROETHENE	UG/L	10	0.26 J	0.23 J	1.0	2.6	**22**	**22**	1.0 U	4.5	1.4	8.6
VINYL CHLORIDE	UG/L	0.5	**2.9**	**4.1**	0.50 U	**25**	**1.4**	**1.5**	0.50 U	**1.1**	**39**	**390**
ETHENE	UG/L	NE	0.61 J	2.0 U	2.0 U	2.0 U	1.4 J	2	2.0 U	0.66 J	7	19

Source Area Biobarrier / First Sand

Parameters	Unit	Target Cleanup Goal	MW-70-MNA05 11/2/2011 (70-80)	MW-70-PMW02A 11/7/2011 (71-81)	MW-70-PMW02B 11/7/2011 (90-100)	MW-70-PMW03A 11/7/2011 (70-80)	MW-70-PMW03B 11/7/2011 (90-100)	MW-70-PMW03B(D) 11/7/2011 (90-100)	IW-70-SAB06 11/7/2011 (65-80/85-105)	IW-70-SAB11 11/8/2011 (65-105)
TRICHLOROETHENE	UG/L	5	0.67 J	**16**	**410**	0.42 J	**8.3**	**7.9**	0.38 J	5.0 U
CIS-1,2-DICHLOROETHENE	UG/L	6	0.57 J	**230**	**770**	0.73 J	**1000**	**1100**	0.48 J	0.33 J
TRANS-1,2-DICHLOROETHENE	UG/L	10	0.39 J	1.4	6.0	0.82 J	8.6	8.9	1.3	1.7
VINYL CHLORIDE	UG/L	0.5	**42**	**0.75**	**1.7**	**0.67**	**83**	**89**	**1.8**	**0.91 J**
ETHENE	UG/L	NE	3.3	0.74 J	2.0 U	0.68 J	7.4	23.0	5.1	2.2

2011 Performance Monitoring Report

Figure 2-31

IR Site 70, First Sand - Source Area Biobarrier, First Sand Biobarriers 1 & 2, cis-1,2-DCE in Groundwater-Fall 2011

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

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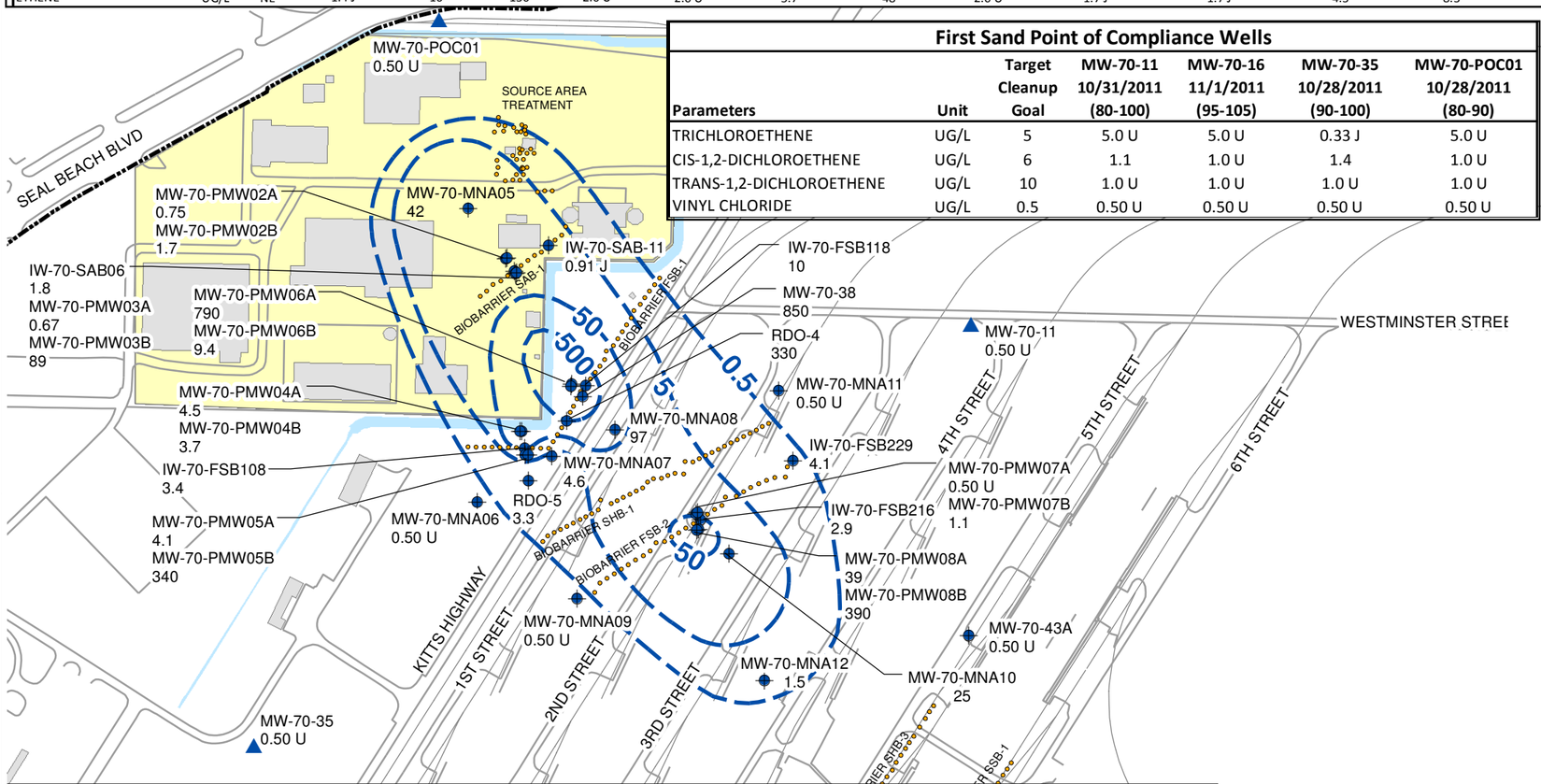
Project No.: 4-77101
Rev. A

First Sand Biobarrier 1

Parameters	Unit	Target Cleanup Goal	IW-70-FSB108 11/9/2011 (60-105)	IW-70-FSB118 11/8/2011 (60-105)	MW-70-38 11/8/2011 (80-100)	MW-70-43A 11/23/2011 (86-106)	MW-70-MNA06 11/10/2011 (80-90)	MW-70-MNA07 11/14/2011 (90-100)	MW-70-MNA08 11/10/2011 (80-90)	MW-70-MNA11 11/14/2011 (80-90)	MW-70-PMW04A 11/9/2011 (70-80)	MW-70-PMW04A(D) 11/9/2011 (70-80)	MW-70-PMW04B 11/9/2011 (90-100)	MW-70-PMW05A 11/9/2011 (70-80)	MW-70-PMW05B 11/9/2011 (90-100)	MW-70-PMW06A 11/8/2011 (70-80)	MW-70-PMW06B 11/8/2011 (91-101)	MW-70-PMW06B(D) 11/8/2011 (91-101)	RDO-4 11/28/2011 (65-105)	RDO-5 11/10/2011 (65-105)
TRICHLOROETHENE	UG/L	5	0.21 J	2.7 J	**6.7**	5.0 U	3.0 J	1.8 J	**11**	1.8 J	**27**	**26**	4.2 J	0.55 J	0.77 J	**10**	**3,800**	**3,900**	3.5 J	1.3 J
CIS-1,2-DICHLOROETHENE	UG/L	6	0.23 J	2.6	**8.7**	0.22 J	**18**	**7.8**	**1600**	2.2	**1400**	**1500**	**1,500**	1.0	2.0	**1,800**	**550**	**550**	**310**	3.2
TRANS-1,2-DICHLOROETHENE	UG/L	10	0.44 J	2.3	7.4	1.0 U	0.29 J	2.6	**15**	0.21 J	9.4	9.3	**21**	1.3	4.1	**16**	**49**	**50**	6.2	0.91 J
VINYL CHLORIDE	UG/L	0.5	**3.4**	**10**	**850**	0.50 U	0.50 U	**4.6**	**97**	0.50 U	**4.3**	**4.5**	**3.7**	**4.1**	**340**	**790**	**9.1**	**9.4**	**330**	**3.3**
ETHENE	UG/L	NE	1.4 J	16	130	2.0 U	2.0 U	5.7	48	2.0 U	1.7 J	1.7 J	4.3	8.3	72	68	0.96 J	1.7 J	64	5.1

First Sand Point of Compliance Wells

Parameters	Unit	Target Cleanup Goal	MW-70-11 10/31/2011 (80-100)	MW-70-16 11/1/2011 (95-105)	MW-70-35 10/28/2011 (90-100)	MW-70-POC01 10/28/2011 (80-90)
TRICHLOROETHENE	UG/L	5	5.0 U	5.0 U	0.33 J	5.0 U
CIS-1,2-DICHLOROETHENE	UG/L	6	1.1	1.0 U	1.4	1.0 U
TRANS-1,2-DICHLOROETHENE	UG/L	10	1.0 U	1.0 U	1.0 U	1.0 U
VINYL CHLORIDE	UG/L	0.5	0.50 U	0.50 U	0.50 U	0.50 U



First Sand Biobarrier 2

Parameters	Unit	Target Cleanup Goal	IW-70-FSB216 11/15/2011 (65-100)	IW-70-FSB229 11/28/2011 (65-100)	MW-70-MNA09 11/10/2011 (67-74)	MW-70-MNA10 11/15/2011 (75-85)	MW-70-MNA12 11/17/2011 (75-85)	MW-70-MNA12(D) 11/17/2011 (75-85)	MW-70-PMW07A 11/15/2011 (65-75)	MW-70-PMW07B 11/15/2011 (85-95)	MW-70-PMW08A 11/15/2011 (65-75)	MW-70-PMW08B 11/15/2011 (85-95)
TRICHLOROETHENE	UG/L	5	0.38 J	0.44 J	2.8 J	**6.5**	**11**	**11**	1.1 J	**6.1**	1.0 J	4.4 J
CIS-1,2-DICHLOROETHENE	UG/L	6	0.36 J	5.1	13	**24**	**950**	**870**	**11**	**550**	**33**	**120**
TRANS-1,2-DICHLOROETHENE	UG/L	10	0.26 J	0.23 J	1.0	2.6	**22**	**22**	1.0 U	4.5	1.4	8.6
VINYL CHLORIDE	UG/L	0.5	**2.9**	**4.1**	0.50 U	**25**	**1.4**	**1.5**	0.50 U	**1.1**	**39**	**390**
ETHENE	UG/L	NE	0.61 J	2.0 U	2.0 U	2.0 U	1.4 J	2	2.0 U	0.66 J	7	19

Source Area Biobarrier / First Sand

Parameters	Unit	Target Cleanup Goal	MW-70-MNA05 11/2/2011 (70-80)	MW-70-PMW02A 11/7/2011 (71-81)	MW-70-PMW02B 11/7/2011 (90-100)	MW-70-PMW03A 11/7/2011 (70-80)	MW-70-PMW03B 11/7/2011 (90-100)	MW-70-PMW03B(D) 11/7/2011 (90-100)	IW-70-SAB06 11/7/2011 (65-80/85-105)	IW-70-SAB11 11/8/2011 (65-105)
TRICHLOROETHENE	UG/L	5	0.67 J	**16**	**410**	0.42 J	**8.3**	**7.9**	0.38 J	5.0 U
CIS-1,2-DICHLOROETHENE	UG/L	6	0.57 J	**230**	**770**	0.73 J	**1000**	**1100**	0.48 J	0.33 J
TRANS-1,2-DICHLOROETHENE	UG/L	10	0.39 J	1.4	6.0	0.82 J	8.6	8.9	1.3	1.7
VINYL CHLORIDE	UG/L	0.5	**42**	**0.75**	**1.7**	**0.67**	**83**	**89**	**1.8**	**0.91 J**
ETHENE	UG/L	NE	3.3	0.74 J	2.0 U	0.68 J	7.4	23.0	5.1	2.2

LEGEND

- MW-70-PMA02A 0.75 — FIRST SAND MONITORING WELL SHOWING WELL ID AND VINYL CHLORIDE CONCENTRATION (ug/L) IN FALL 2011
- MW-70-11 0.50 U — FIRST SAND POC MONITORING WELL SHOWING WELL ID AND VINYL CHLORIDE CONCENTRATION (ug/L) IN FALL 2011
- BIOBARRIER OR SOURCE AREA TREATMENT WELL
- IR SITE 70 BOUNDARY
- BASE BOUNDARY
- ROAD
- RAILROAD TRACK
- BUILDING
- 5 — APPROXIMATE VINYL CHLORIDE CONCENTRATION CONTOUR (ug/L)

NOTES:

(D) - DUPLICATE SAMPLE
J - ESTIMATED VALUE
NE - NOT ESTABLISHED
ug/L - MICROGRAMS PER LITER
U - ANALYTE NOT DETECTED ABOVE THE DETECTION LIMIT: ASSOCIATED VALUE IS THE DETECTION LIMIT

POC - POINT OF COMPLIANCE

BOLDED **RED** PARAMETERS ARE CONSTITUENTS OF CONCERN THAT EXCEED THE TARGET CLEANUP GOAL

(80-100) - WELL SCREEN INTERVAL, IN FEET BELOW GROUND SURFACE

0 200 400 800 Feet

N

2011 Performance Monitoring Report

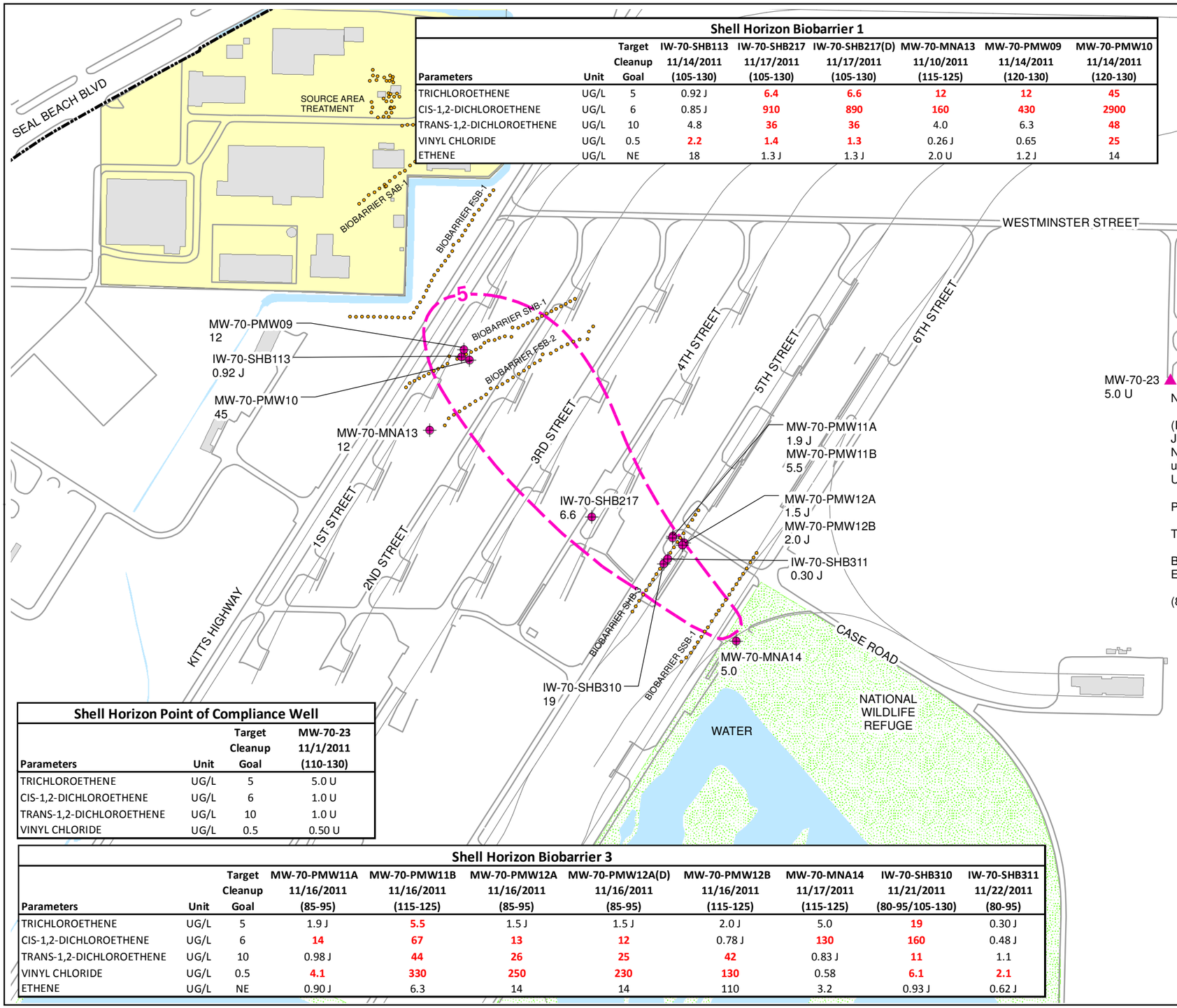
Figure 2-32

IR Site 70, First Sand - Source Area Biobarrier, First Sand Biobarriers 1 & 2, Vinyl Chloride in Groundwater - Fall 2011

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 7/12/2012
File No. 77101fscoc3.mxd
Project No.: 4-77101
Rev. A



Shell Horizon Biobarrier 1

Parameters	Unit	Target Cleanup Goal	IW-70-SHB113 11/14/2011 (105-130)	IW-70-SHB217 11/17/2011 (105-130)	IW-70-SHB217(D) 11/17/2011 (105-130)	MW-70-MNA13 11/10/2011 (115-125)	MW-70-PMW09 11/14/2011 (120-130)	MW-70-PMW10 11/14/2011 (120-130)
TRICHLOROETHENE	UG/L	5	0.92 J	**6.4**	**6.6**	**12**	**12**	**45**
CIS-1,2-DICHLOROETHENE	UG/L	6	0.85 J	**910**	**890**	**160**	**430**	**2900**
TRANS-1,2-DICHLOROETHENE	UG/L	10	4.8	**36**	**36**	4.0	6.3	**48**
VINYL CHLORIDE	UG/L	0.5	**2.2**	**1.4**	**1.3**	0.26 J	0.65	**25**
ETHENE	UG/L	NE	18	1.3 J	1.3 J	2.0 U	1.2 J	14

Shell Horizon Point of Compliance Well

Parameters	Unit	Target Cleanup Goal	MW-70-23 11/1/2011 (110-130)
TRICHLOROETHENE	UG/L	5	5.0 U
CIS-1,2-DICHLOROETHENE	UG/L	6	1.0 U
TRANS-1,2-DICHLOROETHENE	UG/L	10	1.0 U
VINYL CHLORIDE	UG/L	0.5	0.50 U

Shell Horizon Biobarrier 3

Parameters	Unit	Target Cleanup Goal	MW-70-PMW11A 11/16/2011 (85-95)	MW-70-PMW11B 11/16/2011 (115-125)	MW-70-PMW12A 11/16/2011 (85-95)	MW-70-PMW12A(D) 11/16/2011 (85-95)	MW-70-PMW12B 11/16/2011 (115-125)	MW-70-MNA14 11/17/2011 (115-125)	IW-70-SHB310 11/21/2011 (80-95/105-130)	IW-70-SHB311 11/22/2011 (80-95)
TRICHLOROETHENE	UG/L	5	1.9 J	**5.5**	1.5 J	1.5 J	2.0 J	5.0	**19**	0.30 J
CIS-1,2-DICHLOROETHENE	UG/L	6	**14**	**67**	**13**	**12**	0.78 J	**130**	**160**	0.48 J
TRANS-1,2-DICHLOROETHENE	UG/L	10	0.98 J	**44**	**26**	**25**	**42**	0.83 J	**11**	1.1
VINYL CHLORIDE	UG/L	0.5	**4.1**	**330**	**250**	**230**	**130**	0.58	**6.1**	**2.1**
ETHENE	UG/L	NE	0.90 J	6.3	14	14	110	3.2	0.93 J	0.62 J

LEGEND

MW-70-PMW11A 1.9 J — SHELL HORIZON MONITORING WELL SHOWING WELL ID AND TCE CONCENTRATION (ug/L) IN FALL 2011

MW-70-23 5.0 U — SHELL HORIZON POC MONITORING WELL SHOWING WELL ID AND TCE CONCENTRATION IN ug/L IN FALL 2011

BIOBARRIER OR SOURCE AREA TREATMENT WELL

IR SITE 70 BOUNDARY

BASE BOUNDARY

ROAD

RAILROAD TRACK

BUILDING

—5— APPROXIMATE TCE CONCENTRATION CONTOUR (ug/L)

NOTES:

(D) - DUPLICATE SAMPLE
J - ESTIMATED VALUE
NE - NOT ESTABLISHED
ug/L - MICROGRAMS PER LITER
U - ANALYTE NOT DETECTED ABOVE THE DETECTION LIMIT: ASSOCIATED VALUE IS THE DETECTION LIMIT
POC - POINT OF COMPLIANCE

TCE - TRICHLOROETHENE

BOLDED **RED** PARAMETERS ARE CONSTITUENTS OF CONCERN THAT EXCEED THE TARGET CLEANUP GOAL

(85-95) - WELL SCREEN INTERVAL, IN FEET BELOW GROUND SURFACE

0 200 400 800 Feet

N

2011 Performance Monitoring Report

Figure 2-33

IR Site 70, Shell Horizon - Shell Horizon Biobarriers 1 & 3
Trichloroethene in Groundwater - Fall 2011

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

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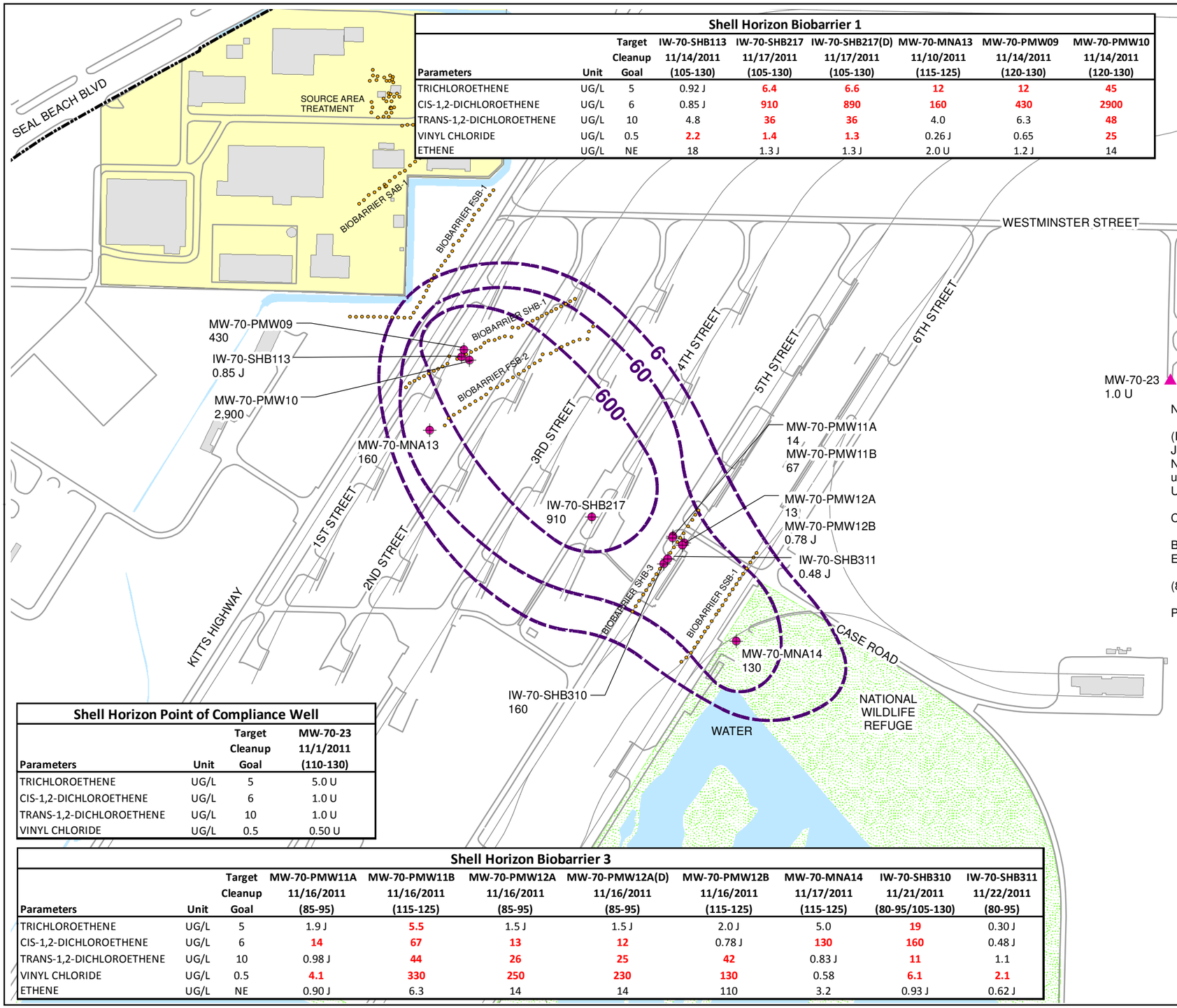
Rev. A



Shell Horizon Biobarrier 1

Parameters	Unit	Target Cleanup Goal	IW-70-SHB113 11/14/2011 (105-130)	IW-70-SHB217 11/17/2011 (105-130)	IW-70-SHB217(D) 11/17/2011 (105-130)	MW-70-MNA13 11/10/2011 (115-125)	MW-70-PMW09 11/14/2011 (120-130)	MW-70-PMW10 11/14/2011 (120-130)
TRICHLOROETHENE	UG/L	5	0.92 J	**6.4**	**6.6**	**12**	**12**	**45**
CIS-1,2-DICHLOROETHENE	UG/L	6	0.85 J	**910**	**890**	**160**	**430**	**2900**
TRANS-1,2-DICHLOROETHENE	UG/L	10	4.8	**36**	**36**	4.0	6.3	**48**
VINYL CHLORIDE	UG/L	0.5	**2.2**	**1.4**	**1.3**	0.26 J	0.65	**25**
ETHENE	UG/L	NE	18	1.3 J	1.3 J	2.0 U	1.2 J	14

LEGEND

MW-70-PMW11A 14 — SHELL HORIZON MONITORING WELL SHOWING WELL ID AND CIS-1,2-DCE CONCENTRATION (ug/L) IN FALL 2011

MW-70-23 1.0 U — SHELL HORIZON POC MONITORING WELL SHOWING WELL ID AND CIS-1,2-DCE CONCENTRATION IN ug/L IN FALL 2011

BIOBARRIER OR SOURCE AREA TREATMENT WELL

IR SITE 70 BOUNDARY

BASE BOUNDARY

ROAD

RAILROAD TRACK

BUILDING

—6— APPROXIMATE CIS-1,2-DCE CONCENTRATION CONTOUR (ug/L)

NOTES:

(D) - DUPLICATE SAMPLE
J - ESTIMATED VALUE
NE - NOT ESTABLISHED
ug/L - MICROGRAMS PER LITER
U - ANALYTE NOT DETECTED ABOVE THE DETECTION LIMIT: ASSOCIATED VALUE IS THE DETECTION LIMIT
CIS-1,2-DCE - CIS-1,2-DICHLOROETHENE

BOLDED **RED** PARAMETERS ARE CONSTITUENTS OF CONCERN THAT EXCEED THE TARGET CLEANUP GOAL

(85-95) - WELL SCREEN INTERVAL, IN FEET BELOW GROUND SURFACE

POC - POINT OF COMPLIANCE

Shell Horizon Point of Compliance Well

Parameters	Unit	Target Cleanup Goal	MW-70-23 11/1/2011 (110-130)
TRICHLOROETHENE	UG/L	5	5.0 U
CIS-1,2-DICHLOROETHENE	UG/L	6	1.0 U
TRANS-1,2-DICHLOROETHENE	UG/L	10	1.0 U
VINYL CHLORIDE	UG/L	0.5	0.50 U

Shell Horizon Biobarrier 3

Parameters	Unit	Target Cleanup Goal	MW-70-PMW11A 11/16/2011 (85-95)	MW-70-PMW11B 11/16/2011 (115-125)	MW-70-PMW12A 11/16/2011 (85-95)	MW-70-PMW12A(D) 11/16/2011 (85-95)	MW-70-PMW12B 11/16/2011 (115-125)	MW-70-MNA14 11/17/2011 (115-125)	IW-70-SHB310 11/21/2011 (80-95/105-130)	IW-70-SHB311 11/22/2011 (80-95)
TRICHLOROETHENE	UG/L	5	1.9 J	**5.5**	1.5 J	1.5 J	2.0 J	5.0	**19**	0.30 J
CIS-1,2-DICHLOROETHENE	UG/L	6	**14**	**67**	**13**	**12**	0.78 J	**130**	**160**	0.48 J
TRANS-1,2-DICHLOROETHENE	UG/L	10	0.98 J	**44**	**26**	**25**	**42**	0.83 J	**11**	1.1
VINYL CHLORIDE	UG/L	0.5	**4.1**	**330**	**250**	**230**	**130**	0.58	**6.1**	**2.1**
ETHENE	UG/L	NE	0.90 J	6.3	14	14	110	3.2	0.93 J	0.62 J

0 200 400 800 Feet

N

2011 Performance Monitoring Report

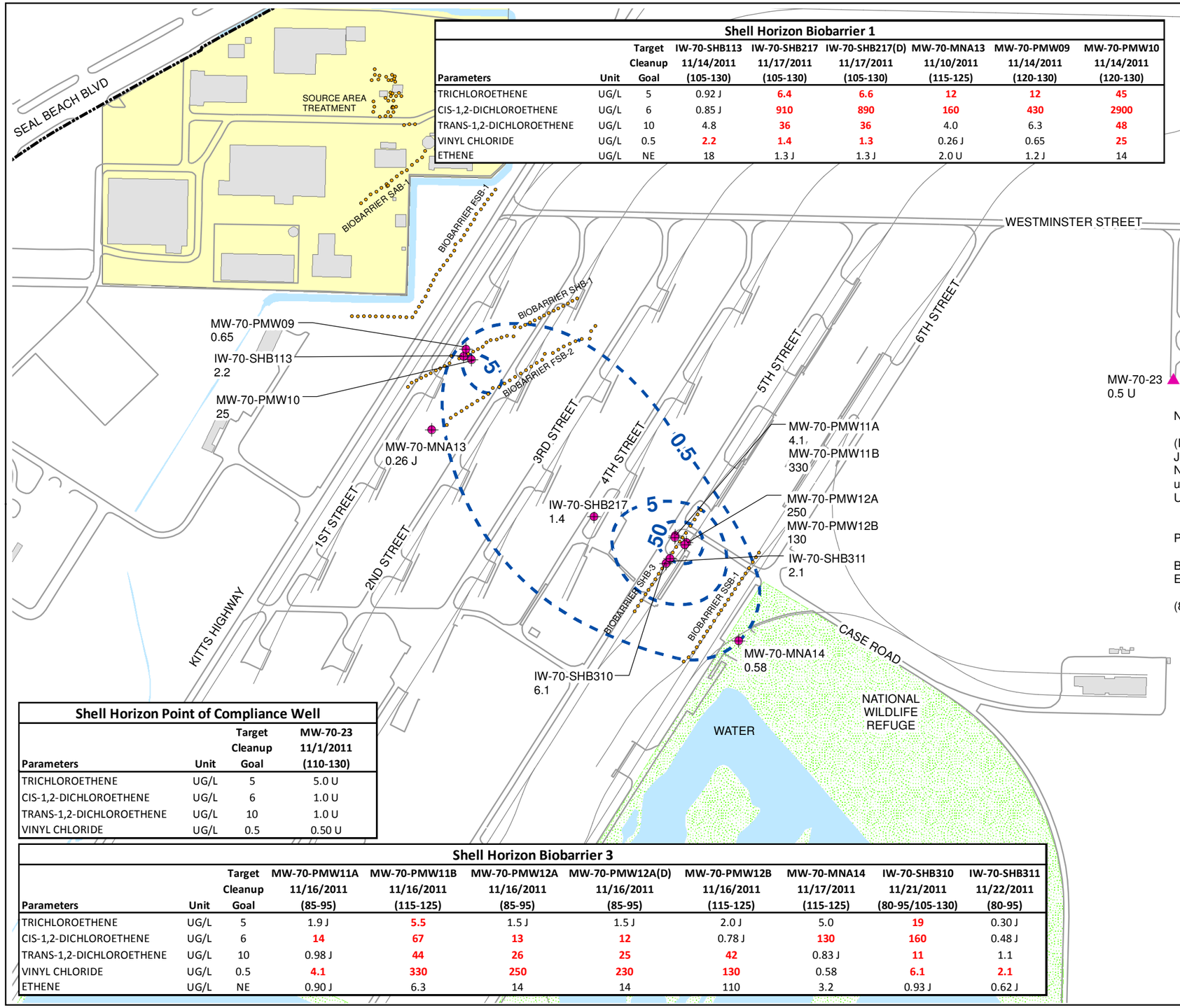
Figure 2-34

IR Site 70, Shell Horizon - Shell Horizon Biobarriers 1 & 3
cis-1,2-Dichloroethene in Groundwater - Fall 2011

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 5/24/2012
File No. 77101shcoc2.mxd
Project No.: 4-77101
Rev. A



Shell Horizon Biobarrier 1

Parameters	Unit	Target Cleanup Goal	IW-70-SHB113 11/14/2011 (105-130)	IW-70-SHB217 11/17/2011 (105-130)	IW-70-SHB217(D) 11/17/2011 (105-130)	MW-70-MNA13 11/10/2011 (115-125)	MW-70-PMW09 11/14/2011 (120-130)	MW-70-PMW10 11/14/2011 (120-130)
TRICHLOROETHENE	UG/L	5	0.92 J	**6.4**	**6.6**	**12**	**12**	**45**
CIS-1,2-DICHLOROETHENE	UG/L	6	0.85 J	**910**	**890**	**160**	**430**	**2900**
TRANS-1,2-DICHLOROETHENE	UG/L	10	4.8	**36**	**36**	4.0	6.3	**48**
VINYL CHLORIDE	UG/L	0.5	**2.2**	**1.4**	**1.3**	0.26 J	0.65	**25**
ETHENE	UG/L	NE	18	1.3 J	1.3 J	2.0 U	1.2 J	14

Shell Horizon Point of Compliance Well

Parameters	Unit	Target Cleanup Goal	MW-70-23 11/1/2011 (110-130)
TRICHLOROETHENE	UG/L	5	5.0 U
CIS-1,2-DICHLOROETHENE	UG/L	6	1.0 U
TRANS-1,2-DICHLOROETHENE	UG/L	10	1.0 U
VINYL CHLORIDE	UG/L	0.5	0.50 U

Shell Horizon Biobarrier 3

Parameters	Unit	Target Cleanup Goal	MW-70-PMW11A 11/16/2011 (85-95)	MW-70-PMW11B 11/16/2011 (115-125)	MW-70-PMW12A 11/16/2011 (85-95)	MW-70-PMW12A(D) 11/16/2011 (85-95)	MW-70-PMW12B 11/16/2011 (115-125)	MW-70-MNA14 11/17/2011 (115-125)	IW-70-SHB310 11/21/2011 (80-95/105-130)	IW-70-SHB311 11/22/2011 (80-95)
TRICHLOROETHENE	UG/L	5	1.9 J	**5.5**	1.5 J	1.5 J	2.0 J	5.0	**19**	0.30 J
CIS-1,2-DICHLOROETHENE	UG/L	6	**14**	**67**	**13**	**12**	0.78 J	**130**	**160**	0.48 J
TRANS-1,2-DICHLOROETHENE	UG/L	10	0.98 J	**44**	**26**	**25**	**42**	0.83 J	**11**	1.1
VINYL CHLORIDE	UG/L	0.5	**4.1**	**330**	**250**	**230**	**130**	0.58	**6.1**	**2.1**
ETHENE	UG/L	NE	0.90 J	6.3	14	14	110	3.2	0.93 J	0.62 J

LEGEND

MW-70-PMW11A 4.1 — SHELL HORIZON MONITORING WELL SHOWING WELL ID AND VINYL CHLORIDE CONCENTRATION (ug/L) IN FALL 2011

MW-70-23 0.5 U — SHELL HORIZON POC MONITORING WELL SHOWING WELL ID AND VINYL CHLORIDE CONCENTRATION IN ug/L IN FALL 2011

BIOBARRIER OR SOURCE AREA TREATMENT WELL

IR SITE 70 BOUNDARY

BASE BOUNDARY

ROAD

RAILROAD TRACK

BUILDING

5 — APPROXIMATE VINYL CHLORIDE CONCENTRATION CONTOUR (ug/L)

NOTES:

(D) - DUPLICATE SAMPLE
J - ESTIMATED VALUE
NE - NOT ESTABLISHED
ug/L - MICROGRAMS PER LITER
U - ANALYTE NOT DETECTED ABOVE THE DETECTION LIMIT: ASSOCIATED VALUE IS THE DETECTION LIMIT

POC - POINT OF COMPLIANCE

BOLDED **RED** PARAMETERS ARE CONSTITUENTS OF CONCERN THAT EXCEED THE TARGET CLEANUP GOAL

(85-95) - WELL SCREEN INTERVAL, IN FEET BELOW GROUND SURFACE

0 200 400 800 Feet

N

2011 Performance Monitoring Report

Figure 2-35

IR Site 70, Shell Horizon - Shell Horizon Biobarriers 1 & 3
Vinyl Chloride in Groundwater - Fall 2011

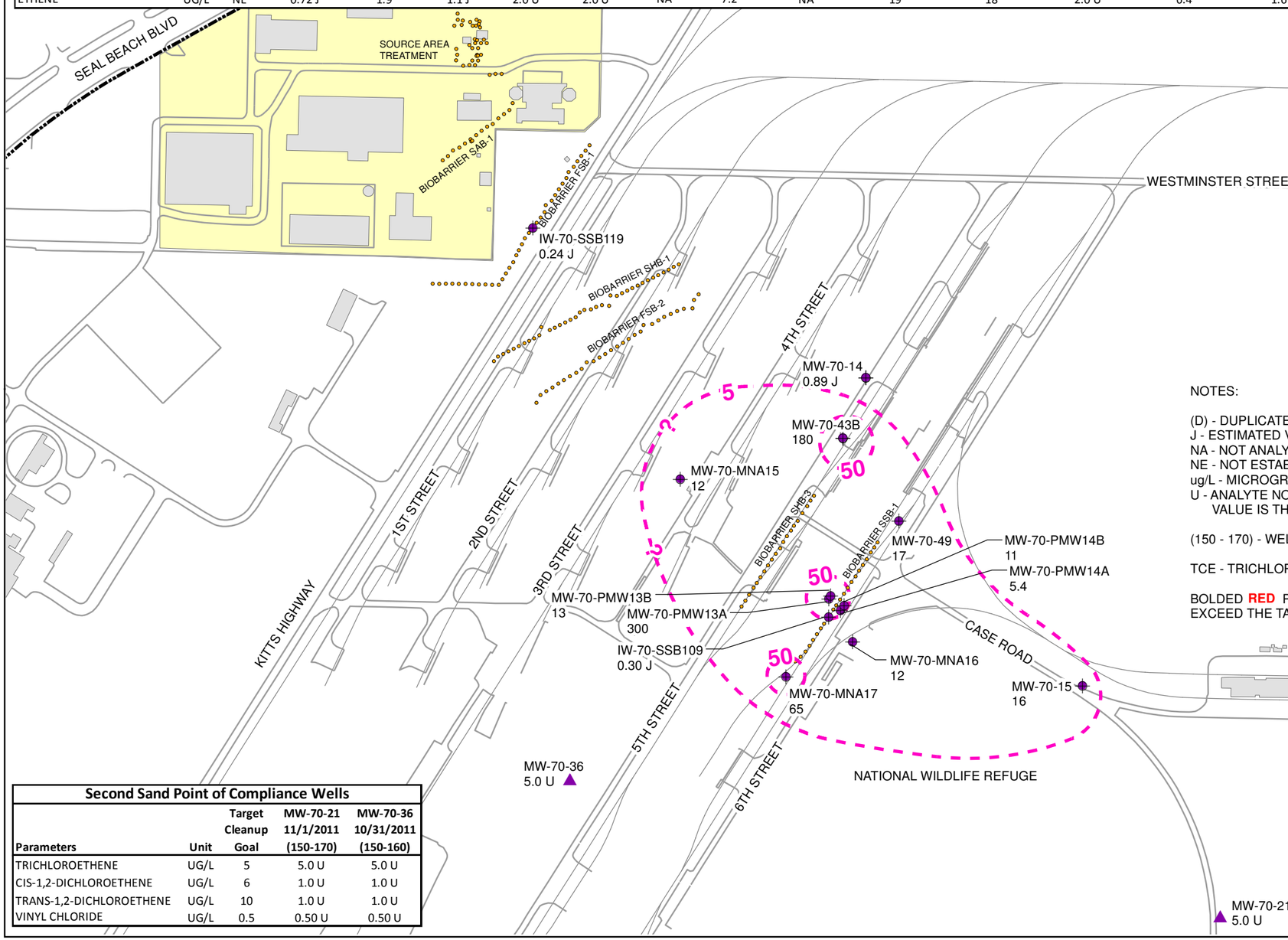
Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 5/24/2012
File No. 77101shcoc3.mxd
Project No.: 4-77101
Rev. A

Second Sand Biobarrier 1

Parameters	Unit	Target Cleanup Goal	IW-70-SSB109 11/18/2011 (126-166)	IW-70-SSB119 11/22/2011 (126-166)	MW-70-14 11/23/2011 (160-170)	MW-70-15 11/21/2011 (161-171)	MW-70-43B 11/16/2011 (136-146)	MW-70-49 9/27/2011 (125-165)	MW-70-49 11/28/2011 (125-165)	MW-70-MNA15 11/17/2011 (140-150)	MW-70-MNA16 11/17/2011 (141-151)	MW-70-MNA16(D) 11/17/2011 (141-151)	MW-70-MNA17 11/21/2011 (140-150)	MW-70-PMW13A 11/18/2011 (125-135)	MW-70-PMW13B 11/18/2011 (145-155)	MW-70-PMW14A 11/18/2011 (128-138)	MW-70-PMW14B 11/18/2011 (149-159)
TRICHLOROETHENE	UG/L	5	0.30 J	0.24 J	0.89 J	**16**	**180**	**20**	**17**	**12**	**12**	**12**	**65**	**300**	**13**	**5.4**	**11**
CIS-1,2-DICHLOROETHENE	UG/L	6	0.30 J	0.74 J	**450**	3.4	**16**	**8.3**	**9.5**	**1000**	**1000**	**920**	**9.9**	**150**	**1100**	**9.1**	**420**
TRANS-1,2-DICHLOROETHENE	UG/L	10	0.43 J	0.43 J	**29**	1.0 U	9.3	1.3	1.7	**55**	**46**	**45**	6.1	**99**	**47**	**30**	**36**
VINYL CHLORIDE	UG/L	0.5	**1.3**	**1.7**	**1.2**	0.50 U	0.61	0.50 U	0.33 J	**3.7**	**25**	**24**	0.50 U	**300**	**16**	**250**	**300**
ETHENE	UG/L	NE	0.72 J	1.9	1.1 J	2.0 U	2.0 U	NA	7.2	NA	19	18	2.0 U	6.4	1.6 J	68	52



LEGEND

- MW-70-MNA15 / 12 — SECOND SAND MONITORING WELL SHOWING WELL ID AND TCE CONCENTRATION (ug/L) IN FALL 2011
- MW-70-36 / 5.0 U — SECOND SAND POC MONITORING WELL SHOWING WELL ID AND TCE CONCENTRATION (ug/L) IN FALL 2011
- BIOBARRIER OR SOURCE AREA TREATMENT WELL
- IR SITE 70 BOUNDARY
- BASE BOUNDARY
- ROAD
- RAILROAD TRACK
- BUILDING
- 5 — APPROXIMATE TCE CONCENTRATION CONTOUR (ug/L)

NOTES:

(D) - DUPLICATE SAMPLE
J - ESTIMATED VALUE
NA - NOT ANALYZED
NE - NOT ESTABLISHED
ug/L - MICROGRAMS PER LITER
U - ANALYTE NOT DETECTED ABOVE THE DETECTION LIMIT: ASSOCIATED VALUE IS THE DETECTION LIMIT

(150 - 170) - WELL SCREEN INTERVAL, IN FEET BELOW GROUND SURFACE

TCE - TRICHLOROETHENE

BOLDED **RED** PARAMETERS ARE CONSTITUENTS OF CONCERN THAT EXCEED THE TARGET CLEANUP GOAL

Second Sand Point of Compliance Wells

Parameters	Unit	Target Cleanup Goal	MW-70-21 11/1/2011 (150-170)	MW-70-36 10/31/2011 (150-160)
TRICHLOROETHENE	UG/L	5	5.0 U	5.0 U
CIS-1,2-DICHLOROETHENE	UG/L	6	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	UG/L	10	1.0 U	1.0 U
VINYL CHLORIDE	UG/L	0.5	0.50 U	0.50 U

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Figure 2-36

IR Site 70, Second Sand - Second Sand Biobarrier 1
Trichloroethene in Groundwater - Fall 2011

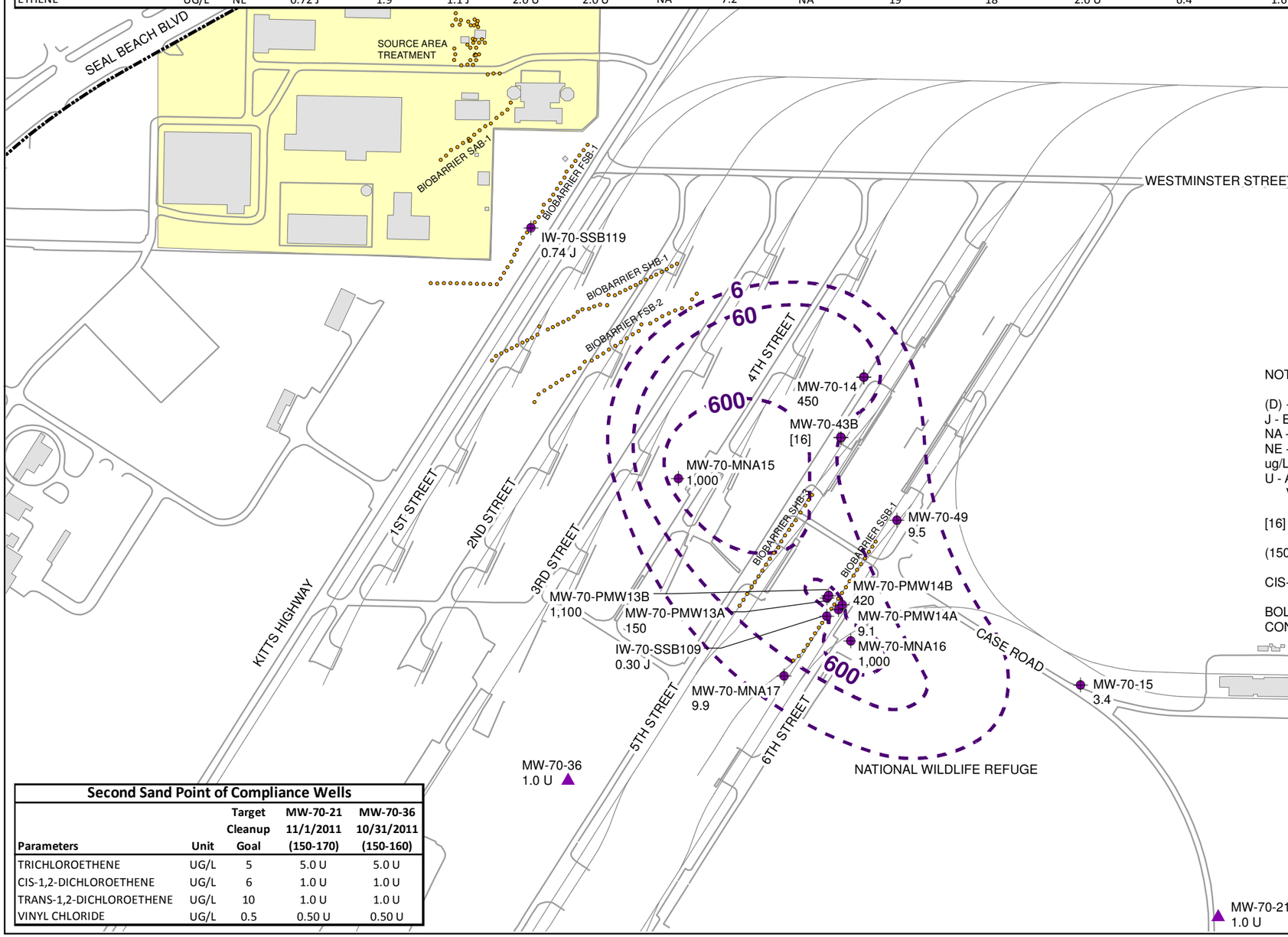
Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 9/7/2012
File No.: 77101sscoc1.mxd
Project No.: 4-77101
Rev.: A

Second Sand Biobarrier 1

Parameters	Unit	Target Cleanup Goal	IW-70-SSB109 11/18/2011 (126-166)	IW-70-SSB119 11/22/2011 (126-166)	MW-70-14 11/23/2011 (160-170)	MW-70-15 11/21/2011 (161-171)	MW-70-43B 11/16/2011 (136-146)	MW-70-49 9/27/2011 (125-165)	MW-70-49 11/28/2011 (125-165)	MW-70-MNA15 11/17/2011 (140-150)	MW-70-MNA16 11/17/2011 (141-151)	MW-70-MNA16(D) 11/17/2011 (141-151)	MW-70-MNA17 11/21/2011 (140-150)	MW-70-PMW13A 11/18/2011 (125-135)	MW-70-PMW13B 11/18/2011 (145-155)	MW-70-PMW14A 11/18/2011 (128-138)	MW-70-PMW14B 11/18/2011 (149-159)
TRICHLOROETHENE	UG/L	5	0.30 J	0.24 J	0.89 J	**16**	**180**	**20**	**17**	**12**	**12**	**12**	**65**	**300**	**13**	**5.4**	**11**
CIS-1,2-DICHLOROETHENE	UG/L	6	0.30 J	0.74 J	**450**	3.4	**16**	**8.3**	**9.5**	**1000**	**1000**	**920**	**9.9**	**150**	**1100**	**9.1**	**420**
TRANS-1,2-DICHLOROETHENE	UG/L	10	0.43 J	0.43 J	**29**	1.0 U	9.3	1.3	1.7	**55**	**46**	**45**	6.1	**99**	**47**	**30**	**36**
VINYL CHLORIDE	UG/L	0.5	**1.3**	**1.7**	**1.2**	0.50 U	0.61	0.50 U	0.33 J	**3.7**	**25**	**24**	0.50 U	**300**	**16**	**250**	**300**
ETHENE	UG/L	NE	0.72 J	1.9	1.1 J	2.0 U	2.0 U	NA	7.2	NA	19	18	2.0 U	6.4	1.6 J	68	52



LEGEND

MW-70-MNA15 1,000 — SECOND SAND MONITORING WELL SHOWING WELL ID AND CIS-1,2-DCE CONCENTRATION (ug/L) IN FALL 2011

MW-70-36 1.0 U — SECOND SAND POC MONITORING WELL SHOWING WELL ID AND CIS-1,2-DCE CONCENTRATION (ug/L) IN FALL 2011

BIOBARRIER OR SOURCE AREA TREATMENT WELL

IR SITE 70 BOUNDARY

BASE BOUNDARY

ROAD

RAILROAD TRACK

BUILDING

—6— APPROXIMATE CIS-1,2-DCE CONCENTRATION CONTOUR (ug/L)

NOTES:

(D) - DUPLICATE SAMPLE
J - ESTIMATED VALUE
NA - NOT ANALYZED
NE - NOT ESTABLISHED
ug/L - MICROGRAMS PER LITER
U - ANALYTE NOT DETECTED ABOVE THE DETECTION LIMIT: ASSOCIATED VALUE IS THE DETECTION LIMIT

[16] - NOT CONTOURED DUE TO DIFFERENCE IN SCREEN INTERVAL

(150 - 170) - WELL SCREEN INTERVAL, IN FEET BELOW GROUND SURFACE

CIS-1,2-DCE - CIS-1,2-DICHLOROETHENE

BOLDED **RED** PARAMETERS ARE CONSTITUENTS OF CONCERN THAT EXCEED THE TARGET CLEANUP GOAL

N

0 200 400 800 Feet

Second Sand Point of Compliance Wells

Parameters	Unit	Target Cleanup Goal	MW-70-21 11/1/2011 (150-170)	MW-70-36 10/31/2011 (150-160)
TRICHLOROETHENE	UG/L	5	5.0 U	5.0 U
CIS-1,2-DICHLOROETHENE	UG/L	6	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	UG/L	10	1.0 U	1.0 U
VINYL CHLORIDE	UG/L	0.5	0.50 U	0.50 U

2011 Performance Monitoring Report

Figure 2-37

IR Site 70, Second Sand - Second Sand Biobarrier 1
cis-1,2-Dichloroethene in Groundwater - Fall 2011

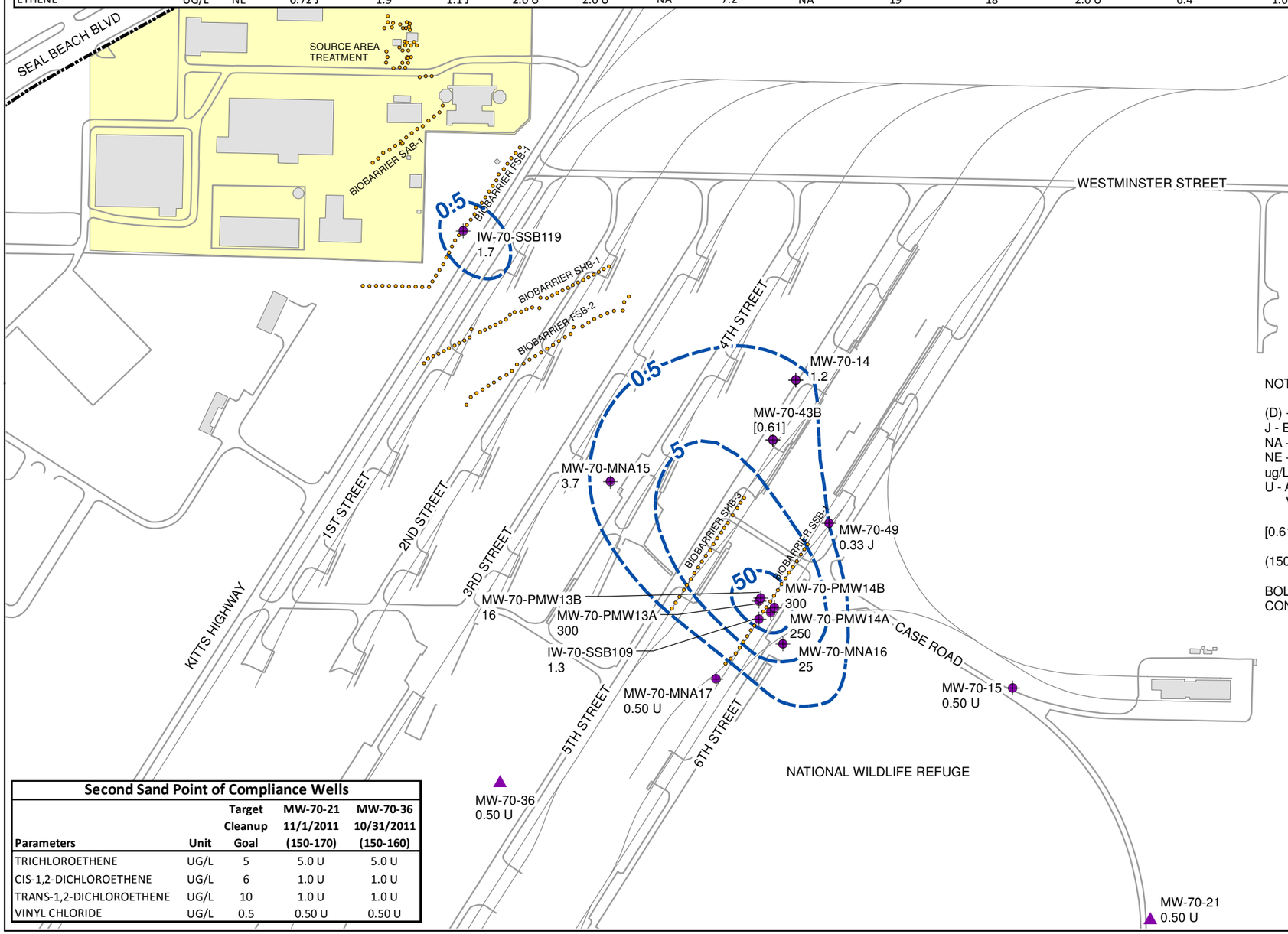
Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 9/7/2012
File No.: 77101sscoc2.mxd
Project No.: 4-77101
Rev.: A

Second Sand Biobarrier 1

Parameters	Unit	Target Cleanup Goal	IW-70-SSB109 11/18/2011 (126-166)	IW-70-SSB119 11/22/2011 (126-166)	MW-70-14 11/23/2011 (160-170)	MW-70-15 11/21/2011 (161-171)	MW-70-43B 11/16/2011 (136-146)	MW-70-49 9/27/2011 (125-165)	MW-70-49 11/28/2011 (125-165)	MW-70-MNA15 11/17/2011 (140-150)	MW-70-MNA16 11/17/2011 (141-151)	MW-70-MNA16(D) 11/17/2011 (141-151)	MW-70-MNA17 11/21/2011 (140-150)	MW-70-PMW13A 11/18/2011 (125-135)	MW-70-PMW13B 11/18/2011 (145-155)	MW-70-PMW14A 11/18/2011 (128-138)	MW-70-PMW14B 11/18/2011 (149-159)
TRICHLOROETHENE	UG/L	5	0.30 J	0.24 J	0.89 J	**16**	**180**	**20**	**17**	**12**	**12**	**12**	**65**	**300**	**13**	**5.4**	**11**
CIS-1,2-DICHLOROETHENE	UG/L	6	0.30 J	0.74 J	**450**	3.4	**16**	**8.3**	**9.5**	**1000**	**1000**	**920**	**9.9**	**150**	**1100**	**9.1**	**420**
TRANS-1,2-DICHLOROETHENE	UG/L	10	0.43 J	0.43 J	**29**	1.0 U	9.3	1.3	1.7	**55**	**46**	**45**	6.1	**99**	**47**	**30**	**36**
VINYL CHLORIDE	UG/L	0.5	**1.3**	**1.7**	**1.2**	0.50 U	0.61	0.50 U	0.33 J	**3.7**	**25**	**24**	0.50 U	**300**	**16**	**250**	**300**
ETHENE	UG/L	NE	0.72 J	1.9	1.1 J	2.0 U	2.0 U	NA	7.2	NA	19	18	2.0 U	6.4	1.6 J	68	52



LEGEND

- MW-70-MNA15 3.7 — SECOND SAND MONITORING WELL SHOWING WELL ID AND VINYL CHLORIDE CONCENTRATION (ug/L) IN FALL 2011
- MW-70-36 0.50 U — SECOND SAND POC MONITORING WELL SHOWING WELL ID AND VINYL CHLORIDE CONCENTRATION (ug/L) IN FALL 2011
- BIOBARRIER OR SOURCE AREA TREATMENT WELL
- IR SITE 70 BOUNDARY
- BASE BOUNDARY
- ROAD
- RAILROAD TRACK
- BUILDING
- 5 — APPROXIMATE VINYL CHLORIDE CONCENTRATION CONTOUR (ug/L)

NOTES:

(D) - DUPLICATE SAMPLE
J - ESTIMATED VALUE
NA - NOT ANALYZED
NE - NOT ESTABLISHED
ug/L - MICROGRAMS PER LITER
U - ANALYTE NOT DETECTED ABOVE THE DETECTION LIMIT: ASSOCIATED VALUE IS THE DETECTION LIMIT

[0.61] - NOT CONTOURED DUE TO DIFFERENCE IN SCREEN INTERVAL

(150 - 170) - WELL SCREEN INTERVAL, IN FEET BELOW GROUND SURFACE

BOLDED **RED** PARAMETERS ARE CONSTITUENTS OF CONCERN THAT EXCEED THE TARGET CLEANUP GOAL

N

0 200 400 800 Feet

Second Sand Point of Compliance Wells

Parameters	Unit	Target Cleanup Goal	MW-70-21 11/1/2011 (150-170)	MW-70-36 10/31/2011 (150-160)
TRICHLOROETHENE	UG/L	5	5.0 U	5.0 U
CIS-1,2-DICHLOROETHENE	UG/L	6	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	UG/L	10	1.0 U	1.0 U
VINYL CHLORIDE	UG/L	0.5	0.50 U	0.50 U

2011 Performance Monitoring Report

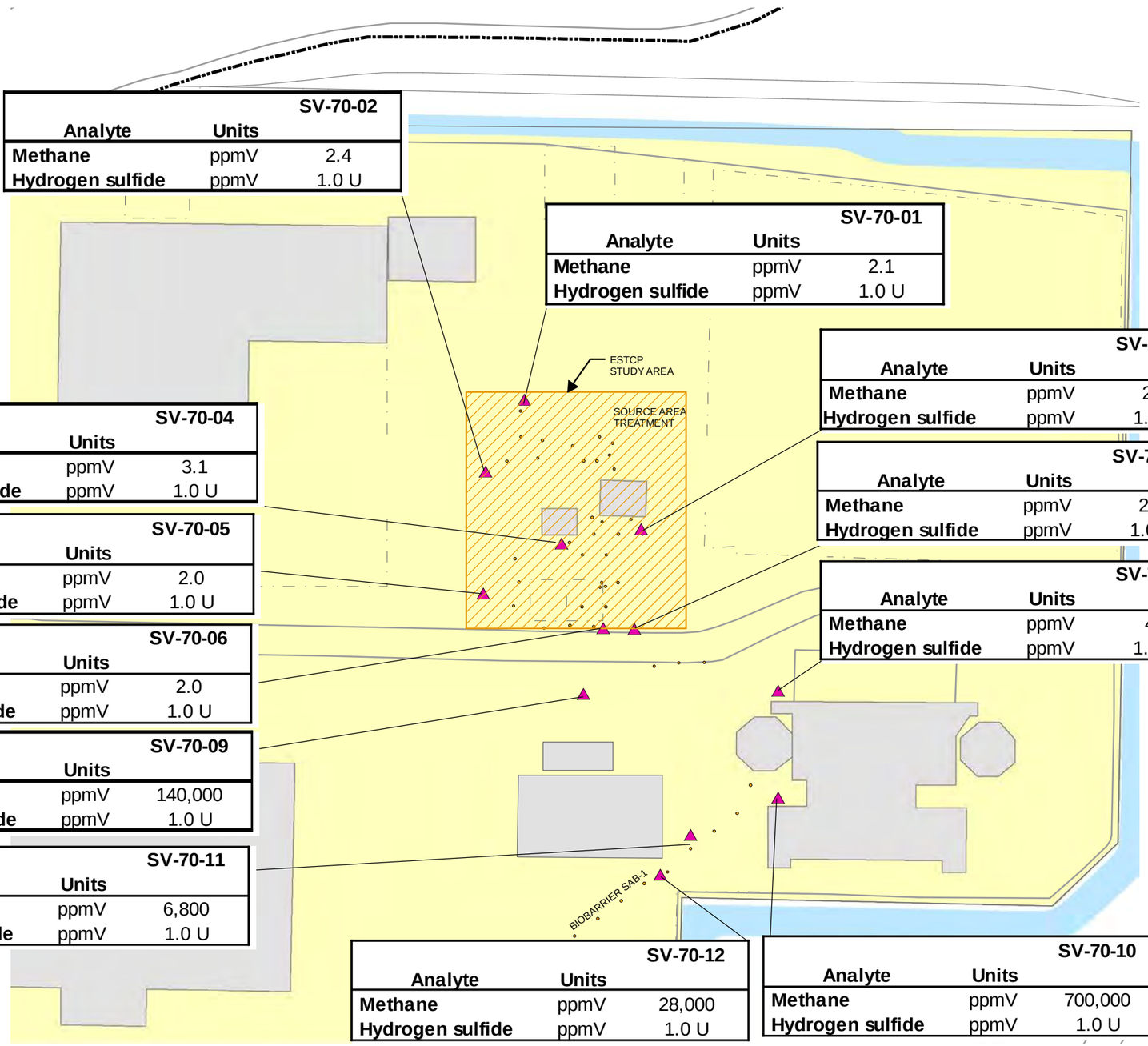
Figure 2-38

IR Site 70, Second Sand - Second Sand Biobarrier 1
Vinyl Chloride in Groundwater - Fall 2011

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 9/7/2012
File No.: 77101sscoc3.mxd
Project No.: 4-77101
Rev.: A



Analyte	Units	SV-70-02
Methane	ppmV	2.4
Hydrogen sulfide	ppmV	1.0 U

Analyte	Units	SV-70-01
Methane	ppmV	2.1
Hydrogen sulfide	ppmV	1.0 U

Analyte	Units	SV-70-03
Methane	ppmV	2.1
Hydrogen sulfide	ppmV	1.0 U

Analyte	Units	SV-70-04
Methane	ppmV	3.1
Hydrogen sulfide	ppmV	1.0 U

Analyte	Units	SV-70-07
Methane	ppmV	2.1
Hydrogen sulfide	ppmV	1.0 U

Analyte	Units	SV-70-05
Methane	ppmV	2.0
Hydrogen sulfide	ppmV	1.0 U

Analyte	Units	SV-70-08
Methane	ppmV	41
Hydrogen sulfide	ppmV	1.0 U

Analyte	Units	SV-70-06
Methane	ppmV	2.0
Hydrogen sulfide	ppmV	1.0 U

Analyte	Units	SV-70-09
Methane	ppmV	140,000
Hydrogen sulfide	ppmV	1.0 U

Analyte	Units	SV-70-11
Methane	ppmV	6,800
Hydrogen sulfide	ppmV	1.0 U

Analyte	Units	SV-70-12
Methane	ppmV	28,000
Hydrogen sulfide	ppmV	1.0 U

Analyte	Units	SV-70-10
Methane	ppmV	700,000
Hydrogen sulfide	ppmV	1.0 U

LEGEND

- SOIL VAPOR PROBE LOCATION
- BIOBARRIER OR SOURCE AREA TREATMENT WELL
- IR SITE 70 BOUNDARY
- BASE BOUNDARY
- ROAD
- RAILROAD TRACK
- FENCE
- BUILDING

NOTES:

SOIL VAPOR SAMPLES WERE COLLECTED ON DECEMBER 7, 2011

ESTCP - ENVIRONMENTAL SECURITY TECHNOLOGY CERTIFICATION PROGRAM

ppmV - PARTS PER MILLION BY VOLUME

U - NOT DETECTED

N

0 50 100 200 Feet

2011 Performance Monitoring Report

Figure 2-39

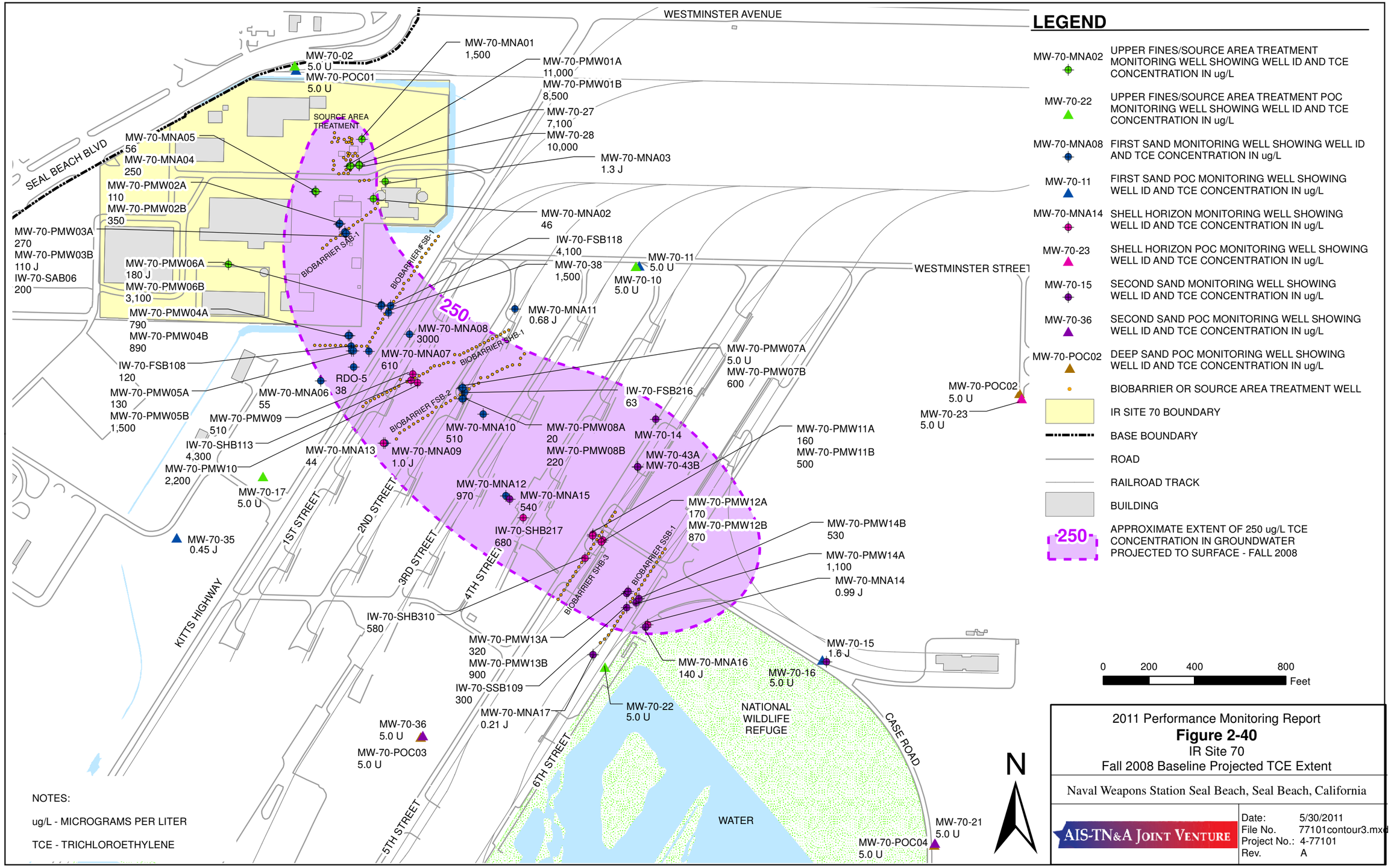
IR Site 70

Soil Vapor Analytical Results

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 5/14/2012
File No. 77101svbox1.mxd
Project No.: 4-77101
Rev. A



2011 Performance Monitoring Report

Figure 2-40

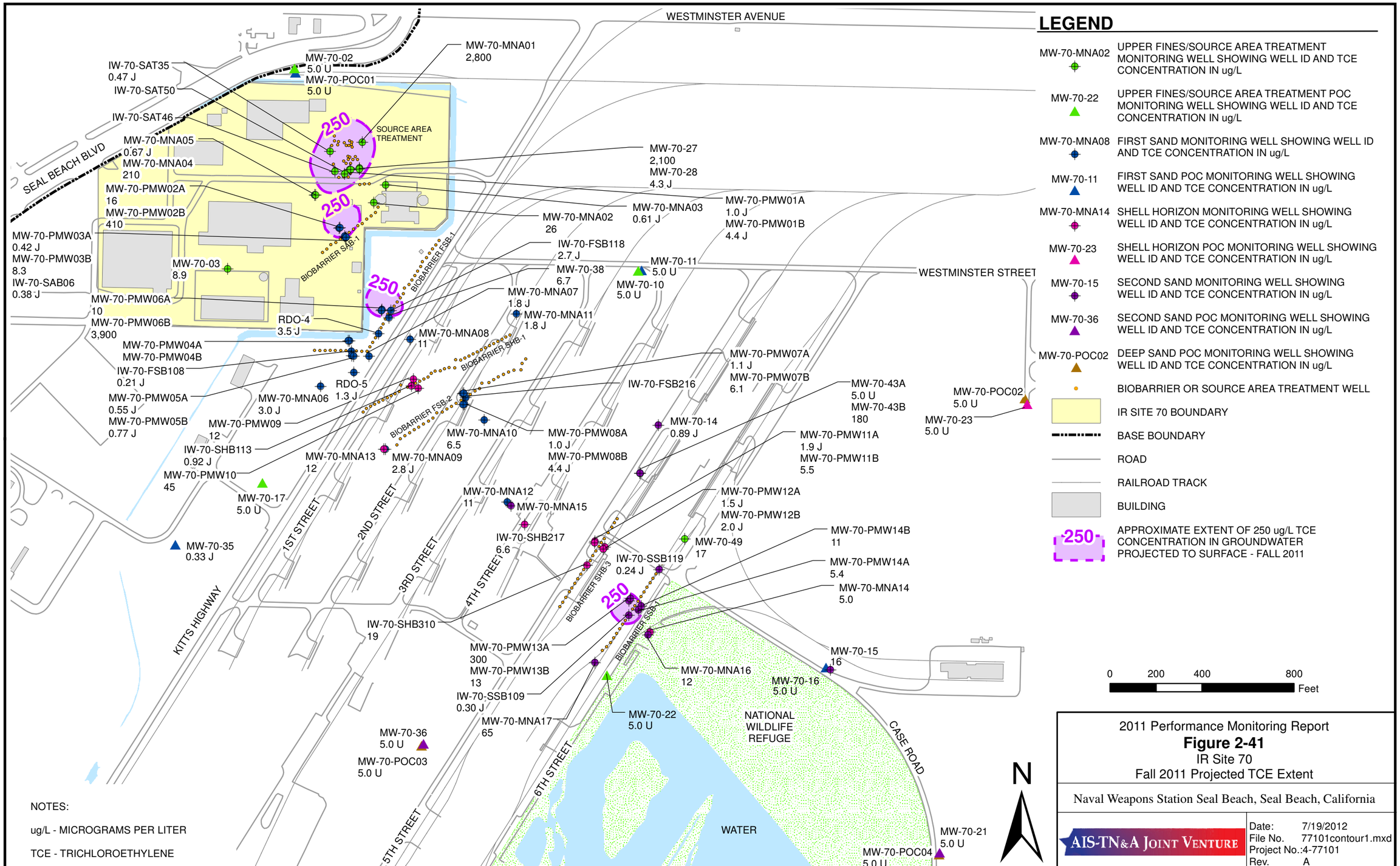
IR Site 70

Fall 2008 Baseline Projected TCE Extent

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 5/30/2011
File No. 77101contour3.mxd
Project No.: 4-77101
Rev. A



2011 Performance Monitoring Report

Figure 2-41

IR Site 70

Fall 2011 Projected TCE Extent

Naval Weapons Station Seal Beach, Seal Beach, California

AIS-TN&A JOINT VENTURE

Date: 7/19/2012
File No. 77101contour1.mxd
Project No.:4-77101
Rev. A

Figure 3-1. TCE Plume (1,000 µg/L) Extent in Source Area (2011)

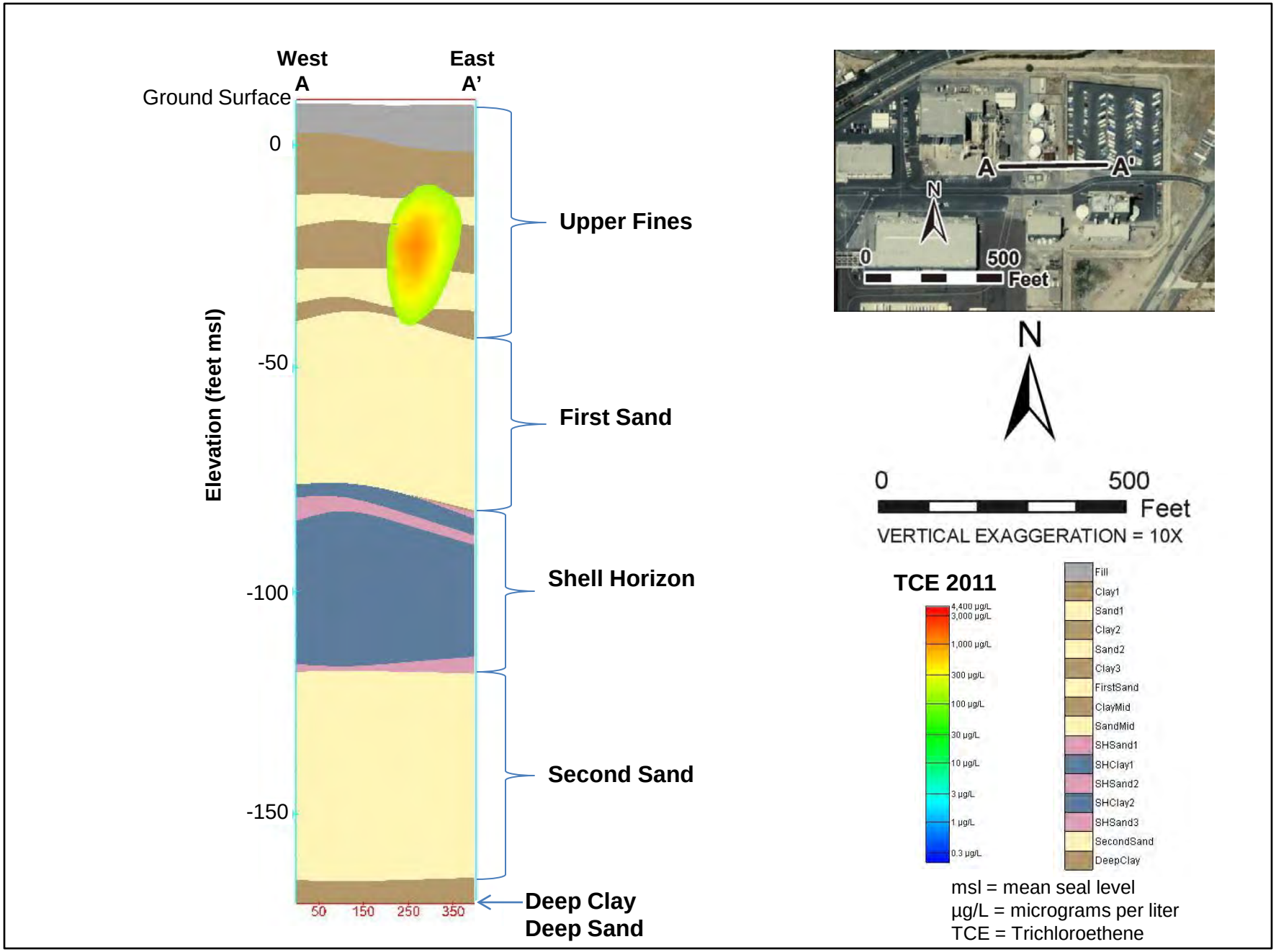


Figure 3-2. Cross Section A-A' with 250 µg/L TCE Plume (2011)

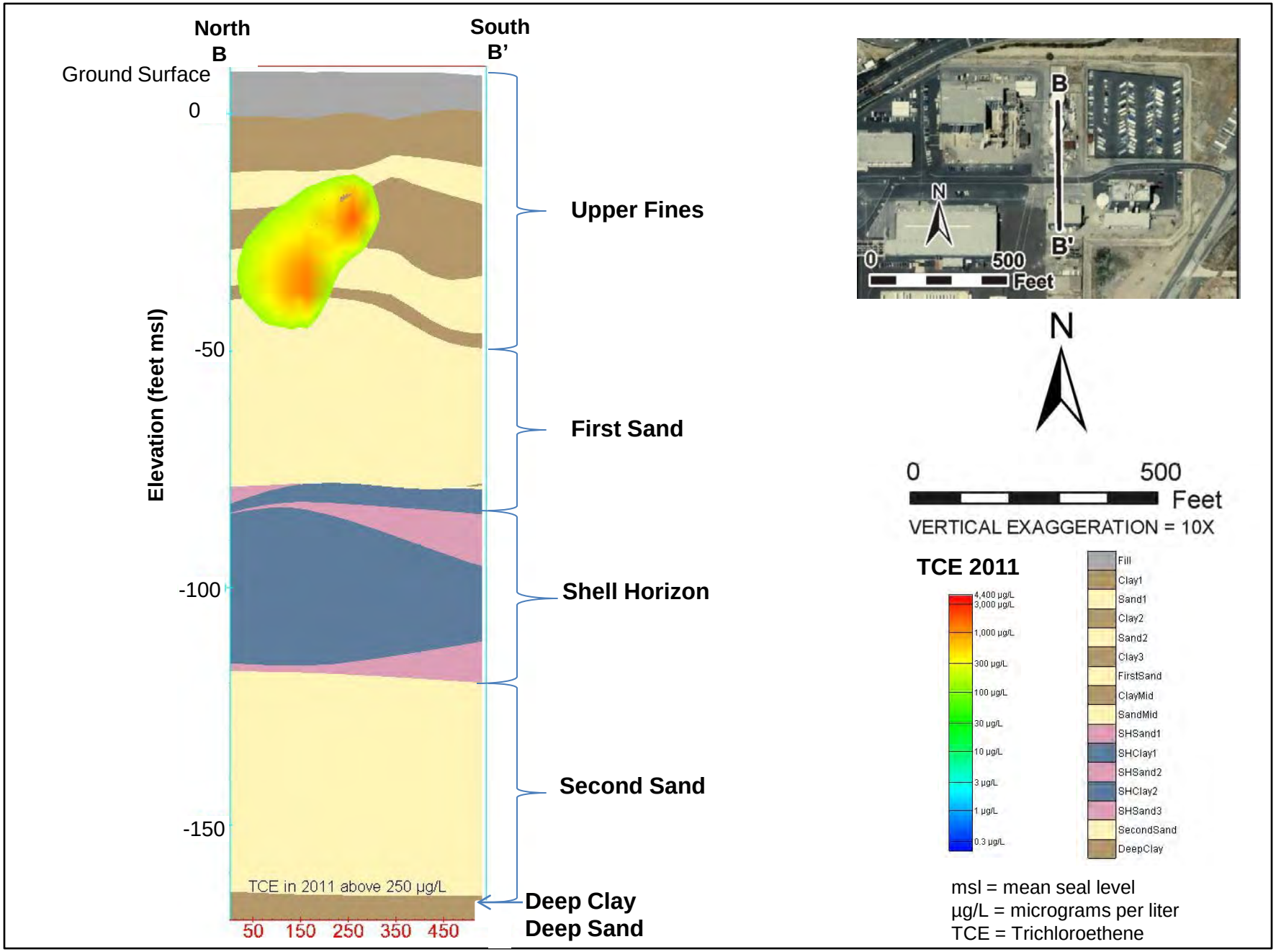


Figure 3-3. Cross Section B-B' with 250 µg/L TCE Plume (2011)

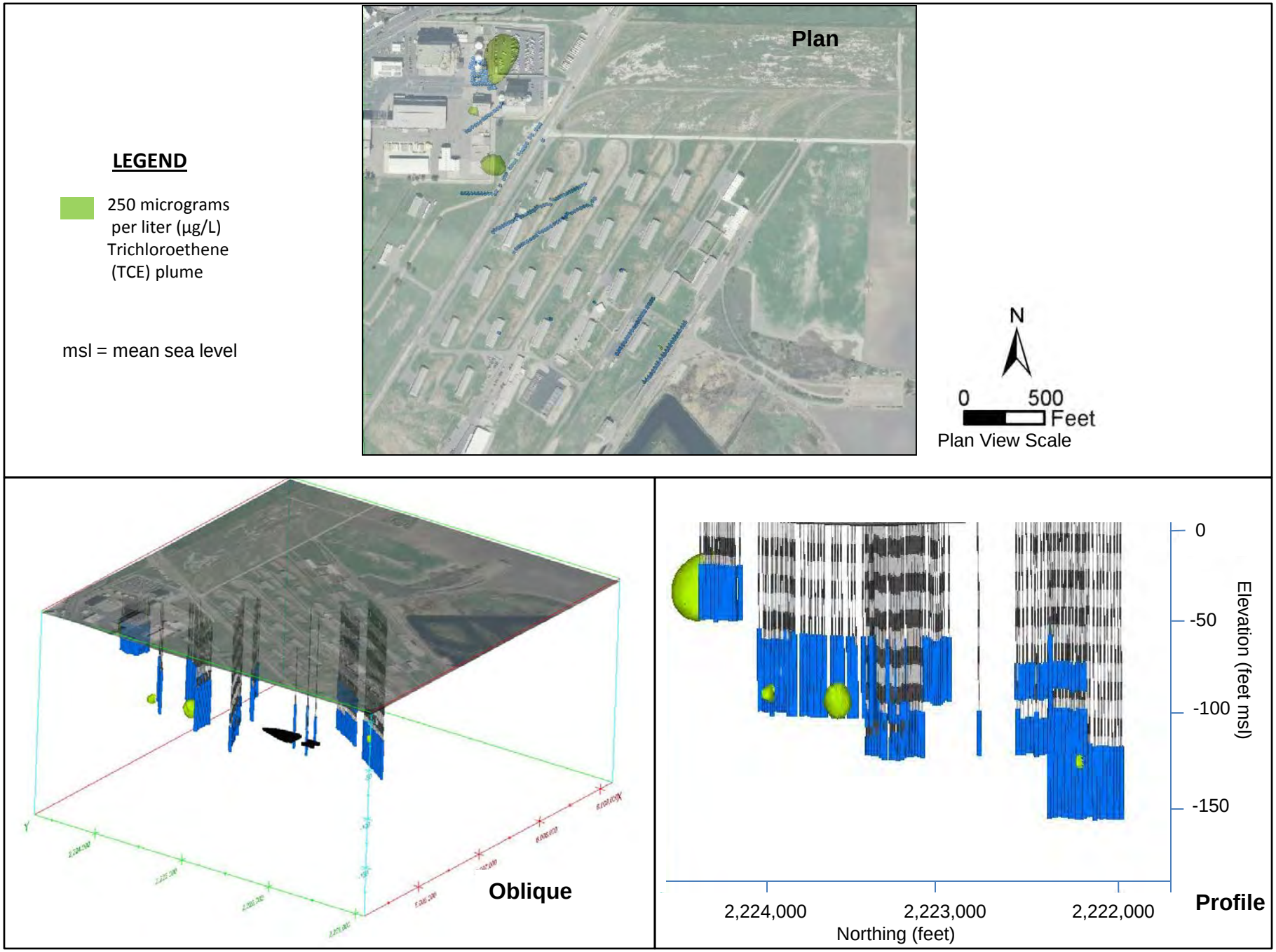


Figure 3-4. Plan, Oblique, and ProfileViews of 250 µg/L TCE Plume (2011)

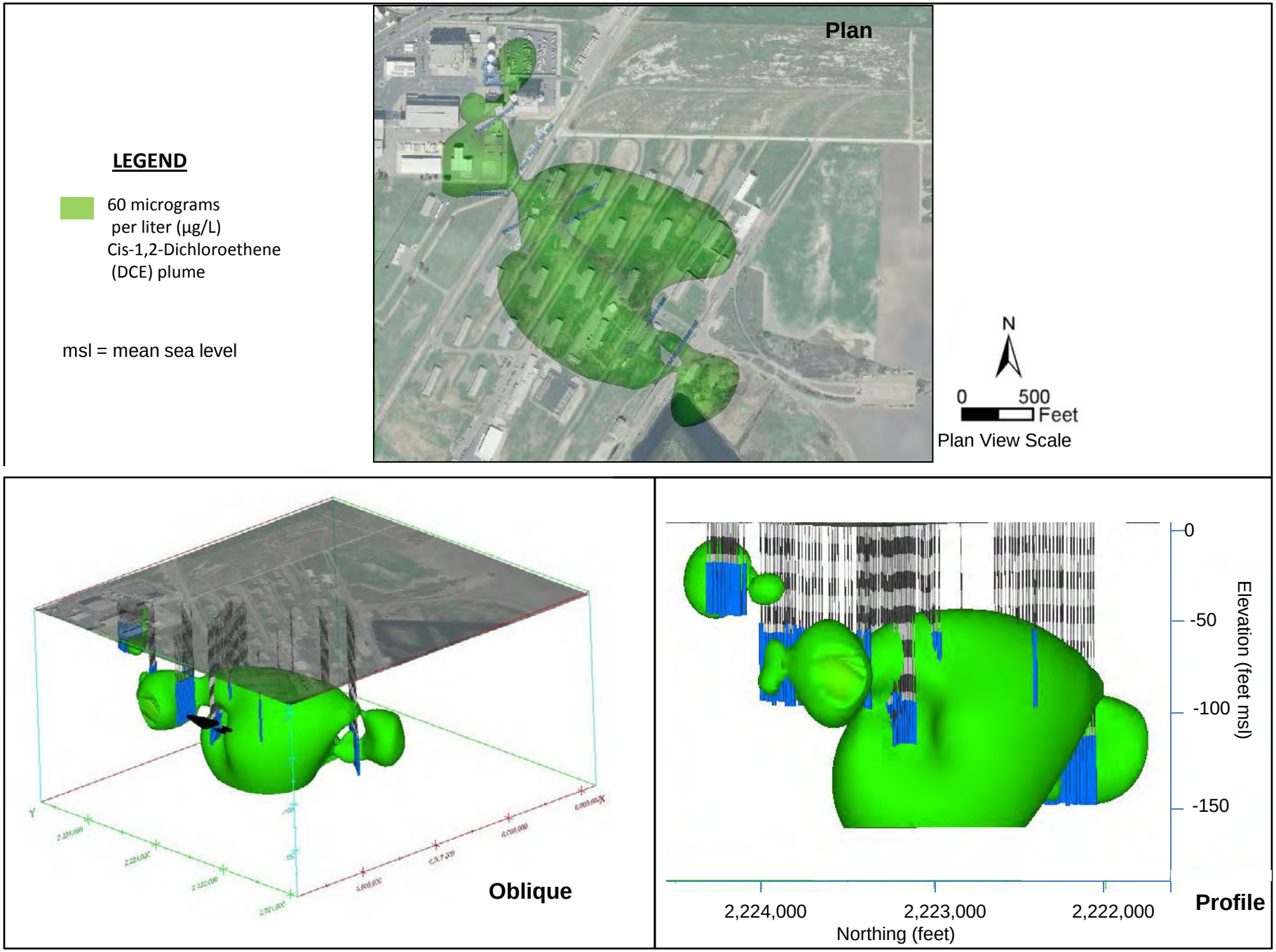


Figure 3-5. Plan, Oblique, and Profile Views of 60 µg/L cis-1,2-DCE Plume (2011)

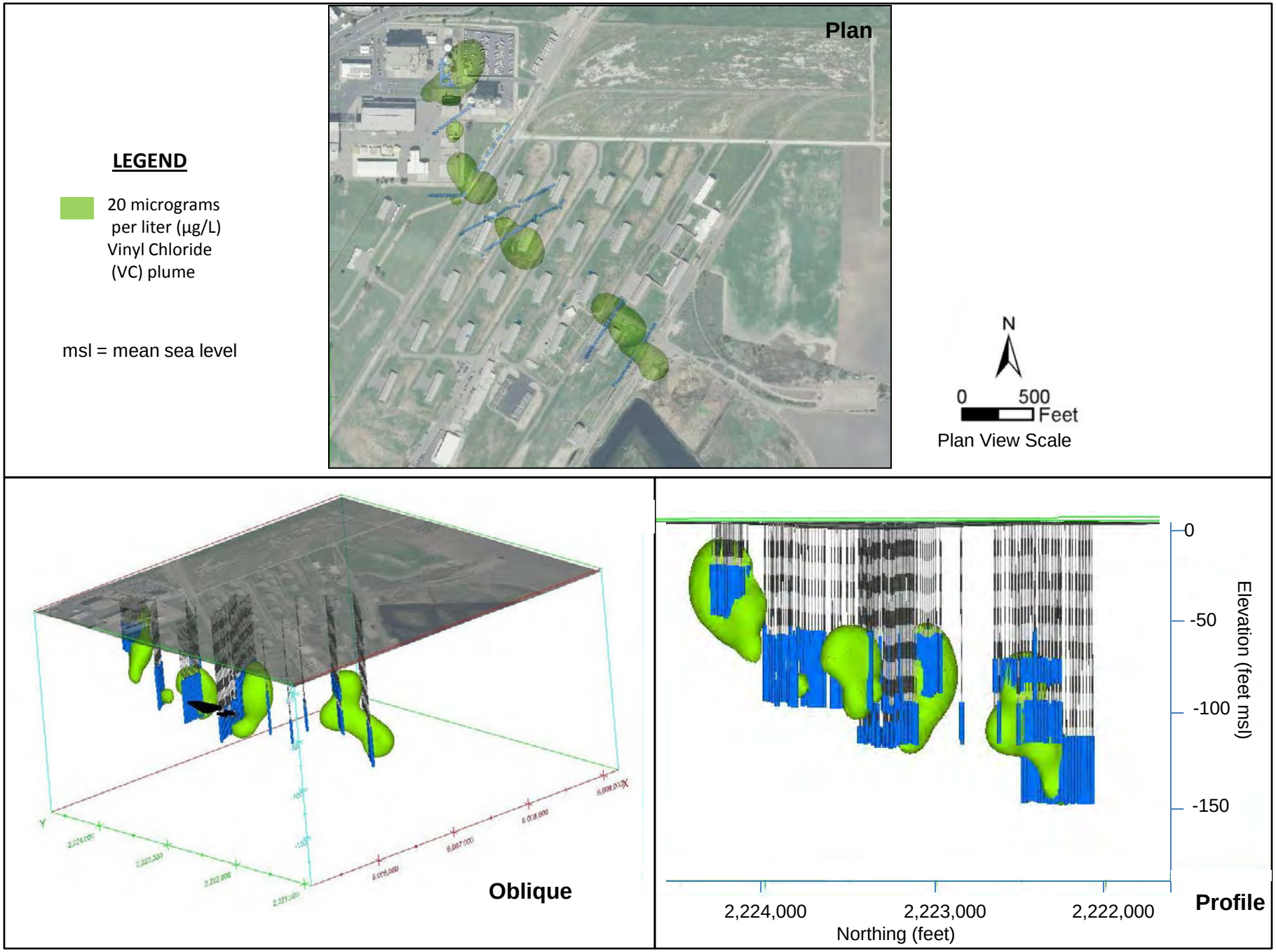


Figure 3-6. Plan, Oblique, and Profile Views of 20 µg/L VC Plume (2011)

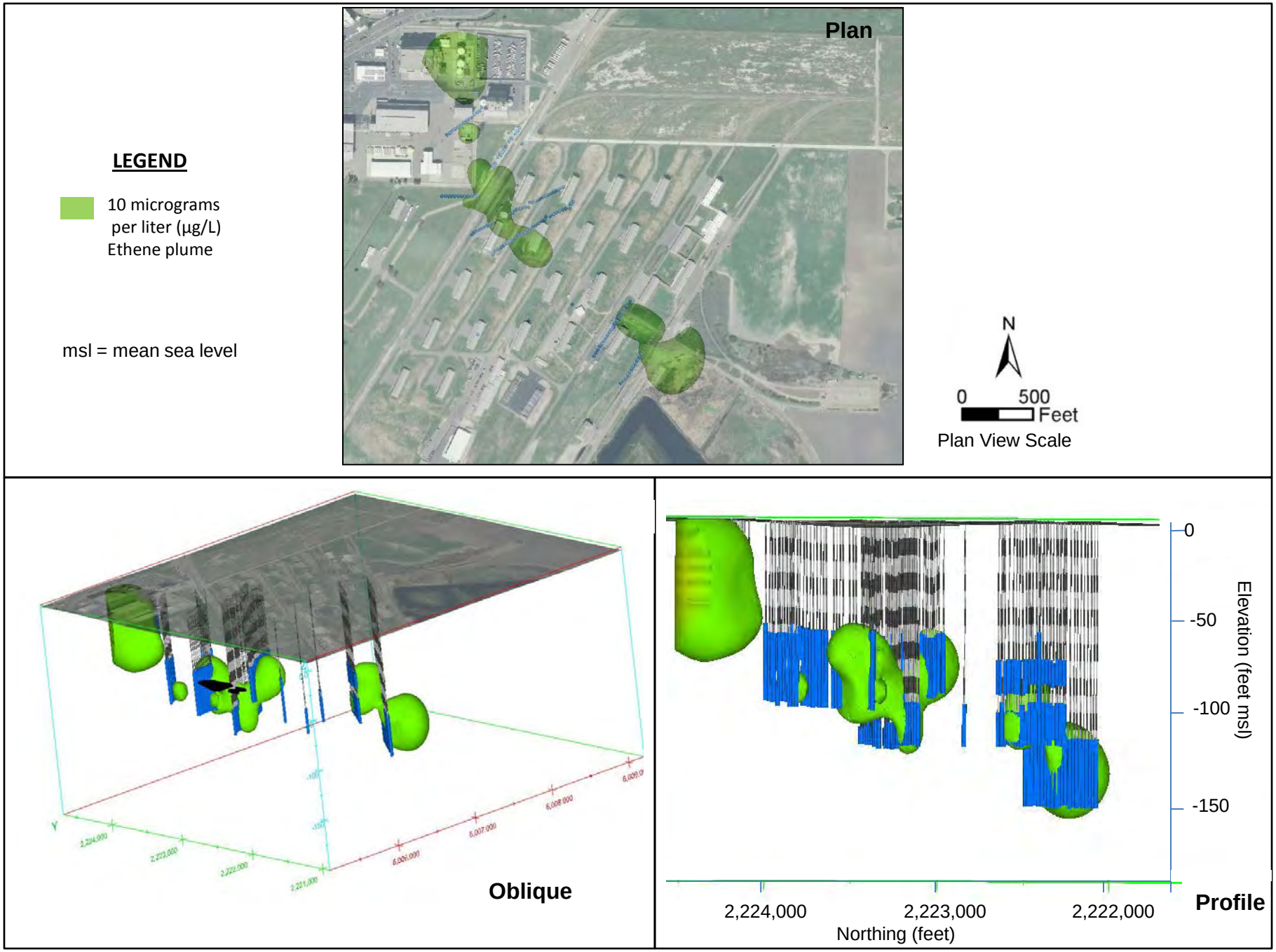
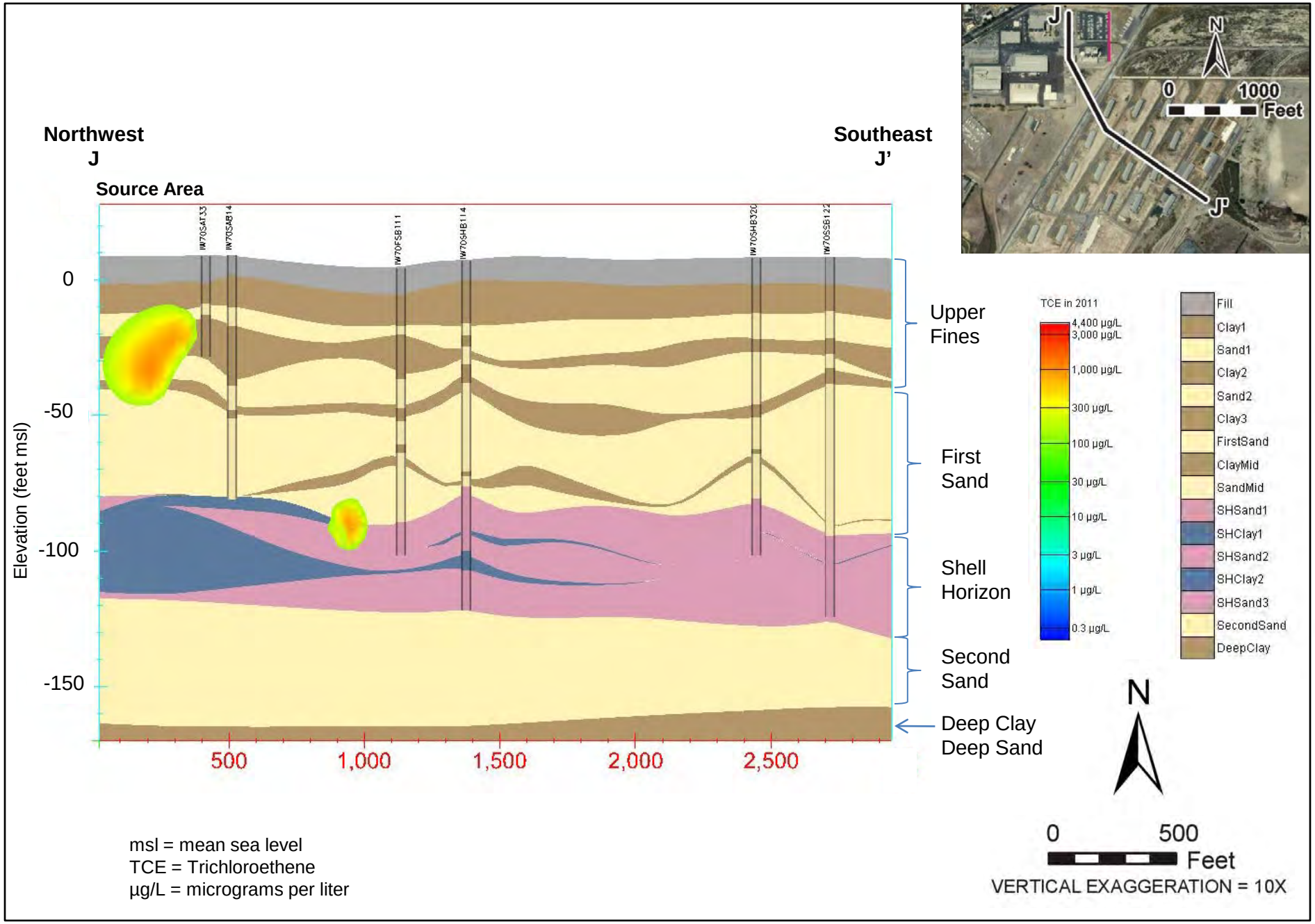


Figure 3-7. Plan, Oblique, and Profile Views of 10 µg/L Ethene Plume (2011)



msl = mean sea level
TCE = Trichloroethene
µg/L = micrograms per liter

Figure 3-8. Cross Section J-J' with TCE Plume (2011)

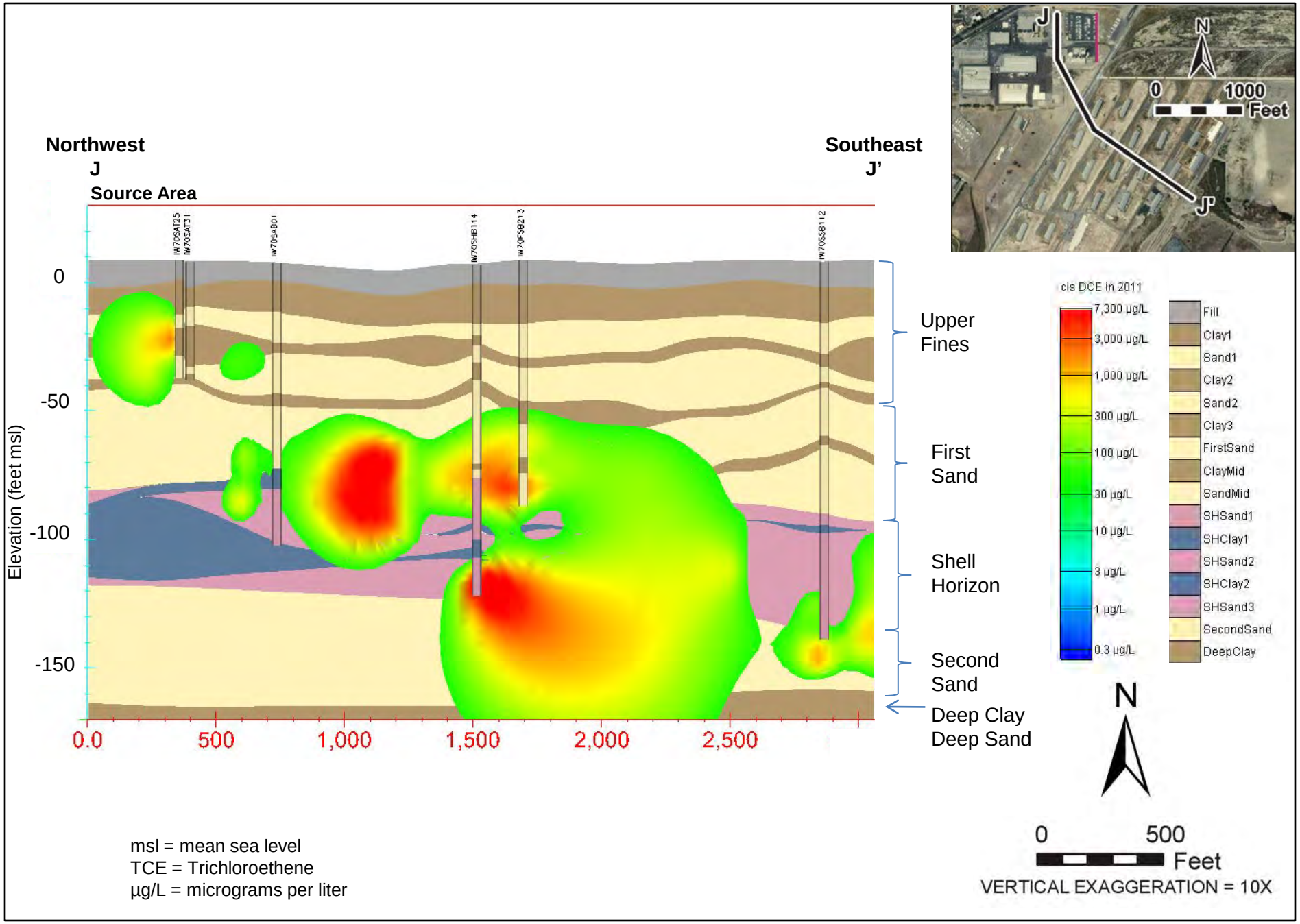


Figure 3-9. Cross Section J-J' with cis-1,2-DCE Plume (2011)

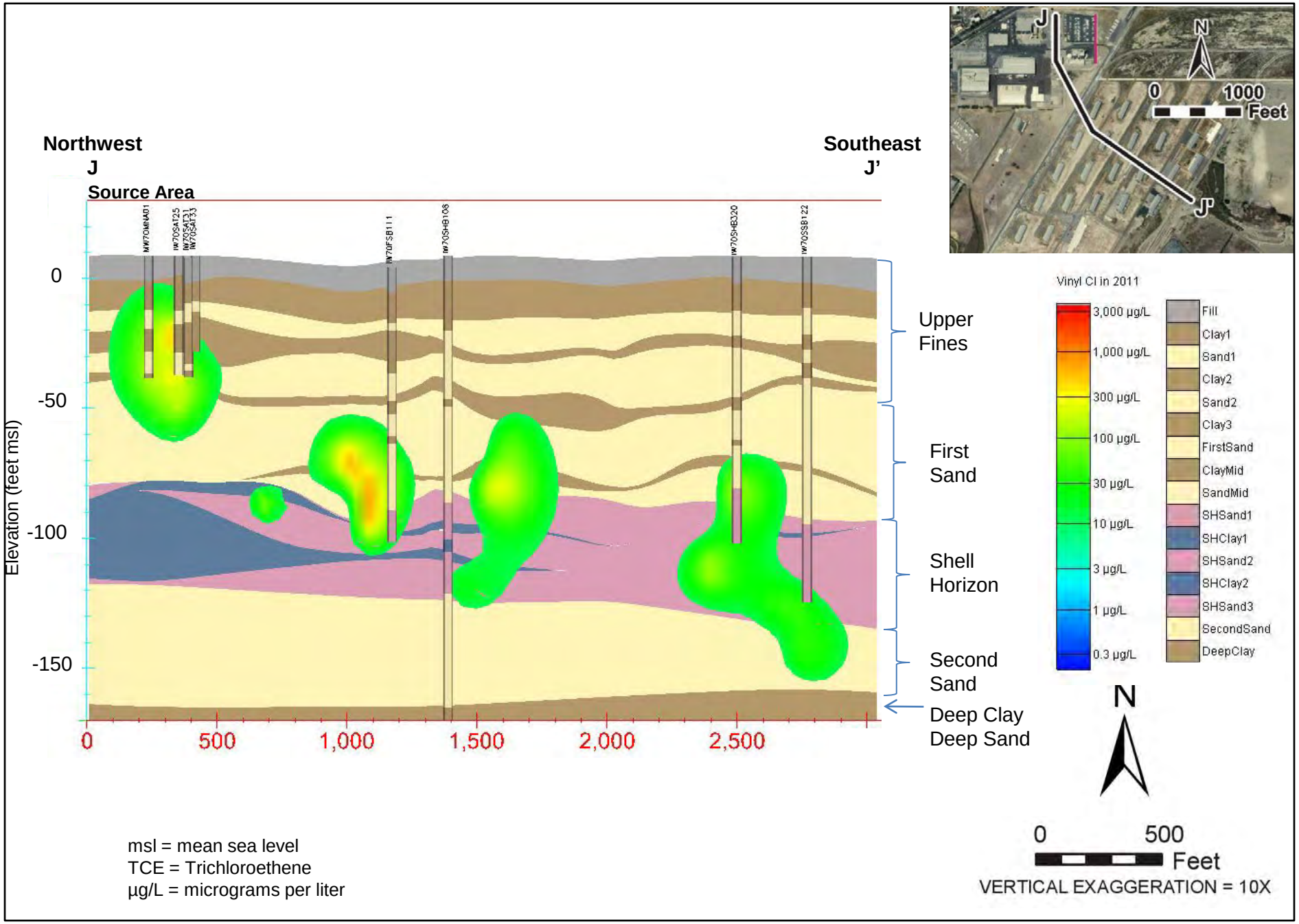


Figure 3-10. Cross Section J-J' with VC Plume (2011)

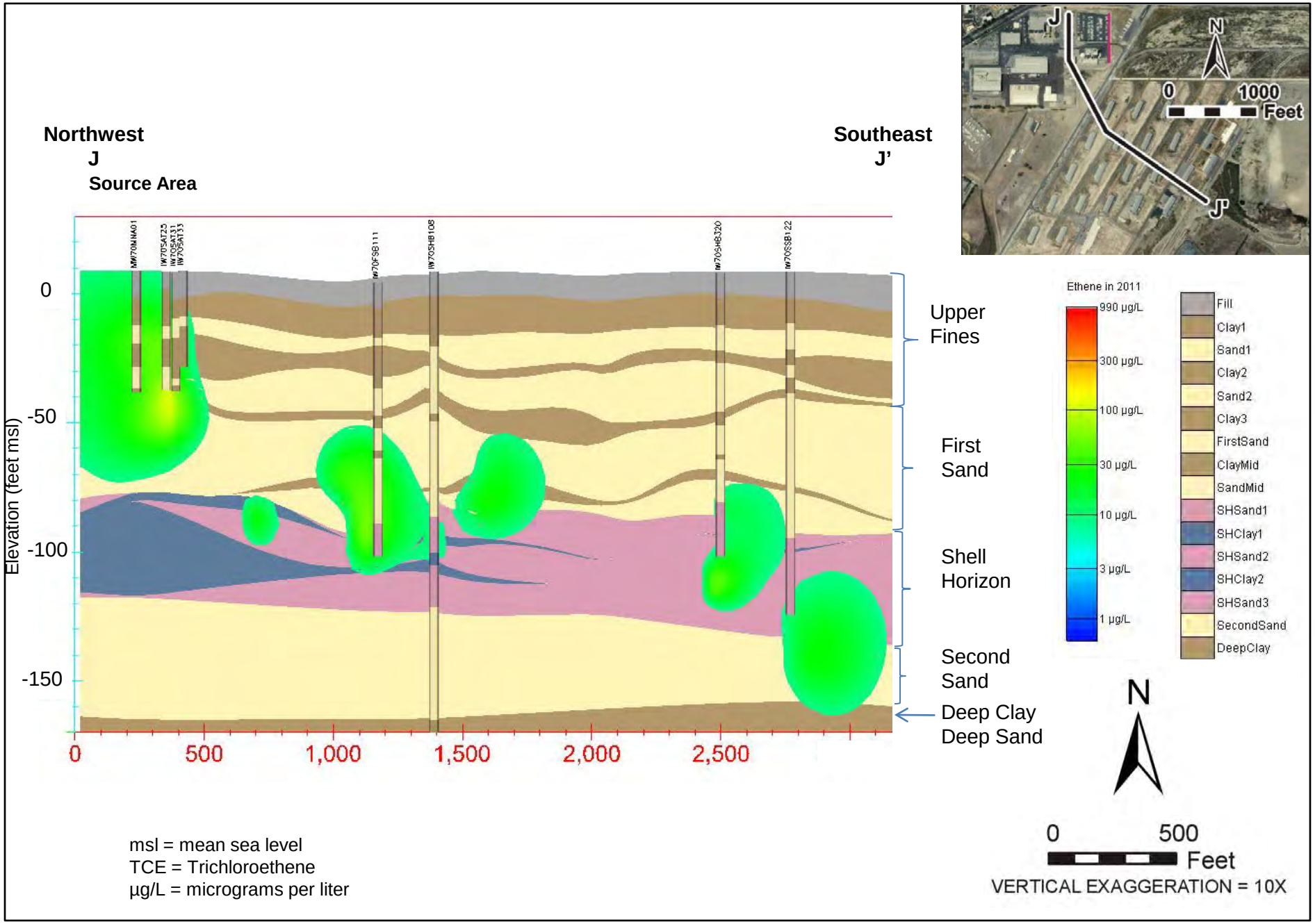
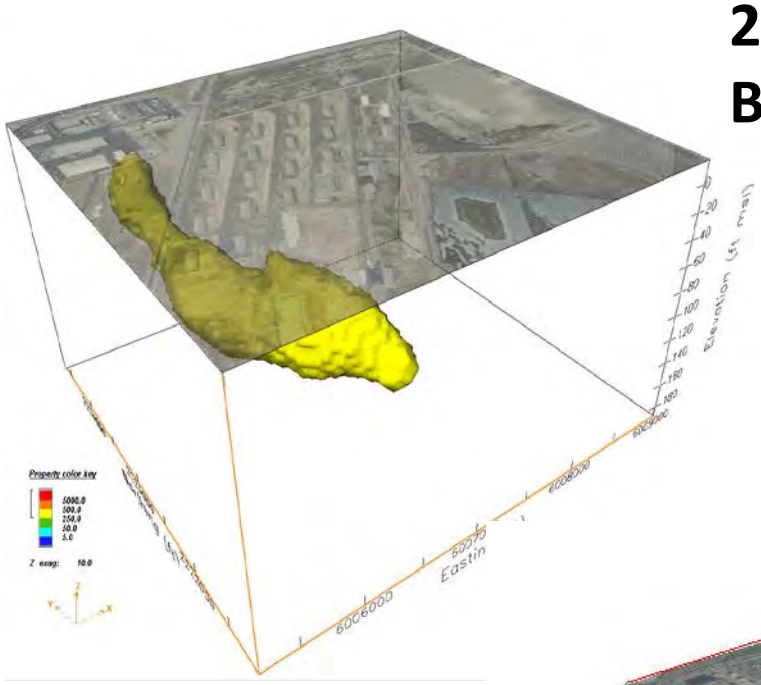


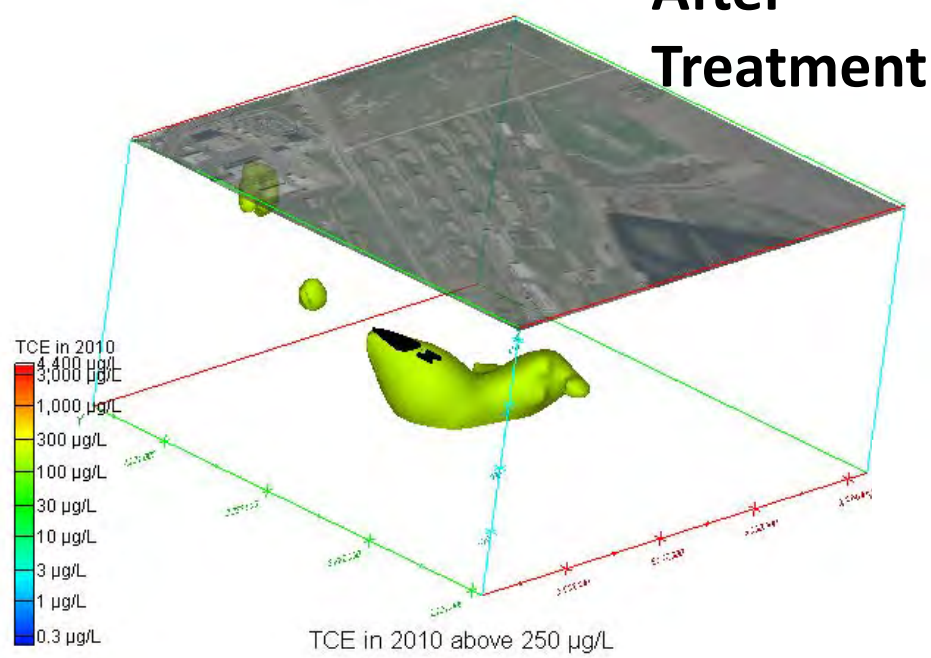
Figure 3-11. Cross Section J-J' with Ethene Plume (2011)

2008 TCE Baseline



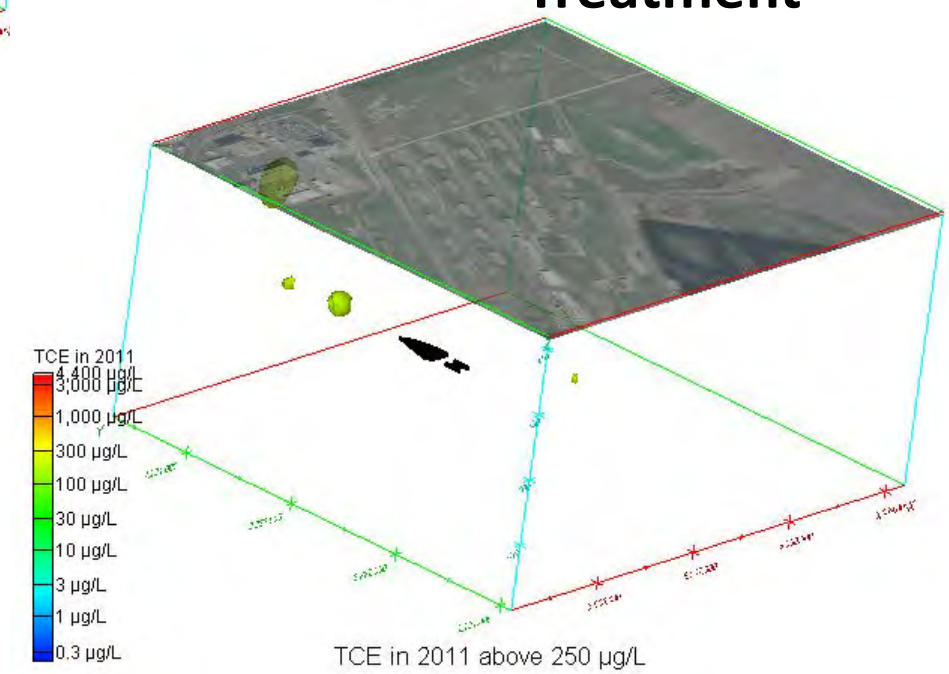
TCE in 2008 above 250 µg/L

2010 TCE – After Treatment



TCE in 2010 above 250 µg/L

2011 TCE – After Treatment



TCE in 2011 above 250 µg/L

Figure 3-12. Trichloroethylene (TCE) greater than 250 µg/L (2008 – 2011)

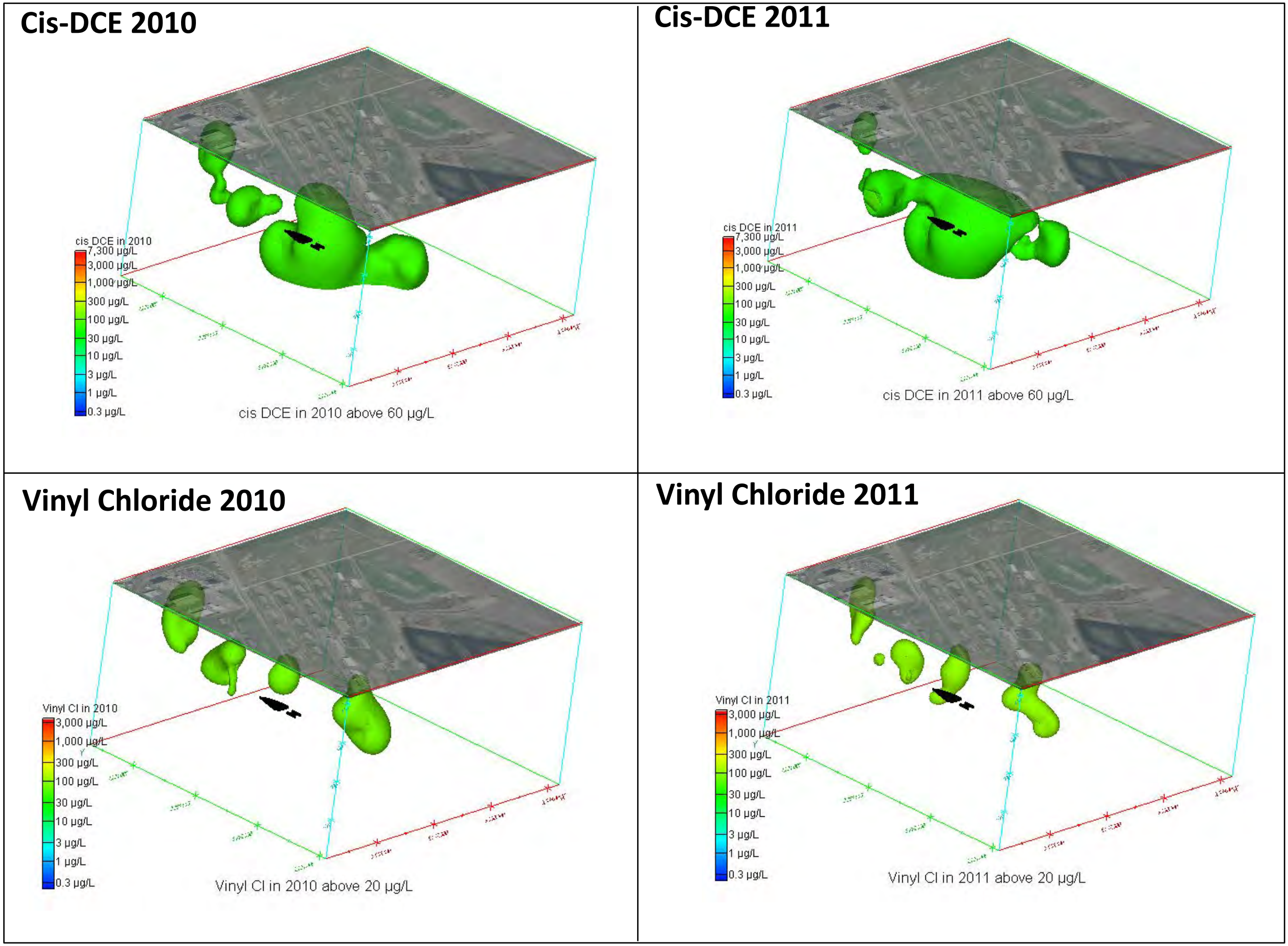


Figure 3-13. Cis-1,2-Dichloroethene (DCE) and Vinyl Chloride (Vinyl Cl) (2010 – 2011)

APPENDIX A

FIELD SAMPLE COLLECTION AND PURGE LOGS AND METHANE MONITORING LOGS

FIELD PURGE LOGS
OCTOBER/NOVEMBER 2011 SAMPLING EVENT

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# mw-70-02

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E., MEDHI S

Date: 10/28/2011

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	25
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	
[TV (mL) = 155 X D^2H	544.91
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	85

PURGE METHOD

☐ Bailer – Type: _____ ☑ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (~~us/cm~~) S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0815	8.50	~~100 mL~~	—	—	—	—	—	—	—	START PURGING
0825	8.50	100 mL	1.0	7.30	0.509	0.1	0.24	21.39	215	CH4 = 1. NO ODOR
0828	8.50	100 mL	0.3	7.31	0.507	0.0	0.19	21.40	212	CLEAR, NO ODOR
0831	8.50	100 mL	0.3	7.32	0.506	0.0	0.13	21.41	210	CLEAR, NO ODOR
0834	8.50	100 mL	0.3	7.33	0.502	0.0	0.13	21.37	206	CLEAR, NO ODOR
0837	8.50	100 mL	0.3	7.33	0.499	0.0	0.11	21.39	203	CLEAR, NO ODOR

Total Volume Purged: 2.2 (Liters) Total Purge Time: 22 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0815 Purge Stop: 0837

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 15 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: _____

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: mw-70-02-66	Sample ID:	Type:	Type:
Sample Time: 0840	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 3	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-POC01

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 10/28/11

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E., MEDHI S.

Date: 10/28/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	85'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	
[TV (mL) = 155 X D^2H	2152.73
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.15

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (µs/cm) S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0853	10.21	—	—	—	—	—	—	—	—	PURGE START
0903	10.22	200mL	0.3	8.50	.983	0.0	1.59	21.60	-208	PID=0.0, CH4=0 CLEAR NO ODOR.
0906	10.27	100mL	0.3	8.47	.164	0.0	1.16	21.75	-213	CLEAR NO ODOR
0909	10.21	100mL	0.3	8.42	.171	0.0	1.07	21.81	-197	CLEAR, STRONG ODOR
0912	10.22	100mL	0.3	8.42	.173	0.0	0.85	21.87	-188	CLEAR, SLIGHT ODOR.
0915	10.22	100mL	0.3	8.43	.177	0.0	0.34	21.98	-176	CLEAR, SLIGHT ODOR.
0918	10.19	100mL	0.3	8.44	.181	0.0	0.08	21.93	-165	
0921	10.20	100mL	0.3	8.45	.182	0.0	0.02	21.98	-162	

Total Volume Purged: 3.8 (Liters) Total Purge Time: 28 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0853 Purge Stop: 0930

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: _____

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-POC01-07	Sample ID:	Type:	Type:
Sample Time: 0925	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 3	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# mw-70-35

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: H-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E, MEHDI S.

Date: 10/28/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume)

H - Length of discharge tubing: 95'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL)

[TV (mL) = 155 X D^2H]: 2070.70

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.37

PURGE METHOD

☐ Bailer – Type: _____

☑ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (~~µs/cm~~) mS/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1015	9.06	~~100mL~~	—	—	—	—	—	—	—	PURGE START.
1035	9.10	100 mL	2.0	8.00	1.45	0.1	0.57	21.58	-85	CLEAR, NO ODOR
1039	9.01	100 mL	0.4	8.00	1.43	0.0	0.44	21.62	-86	CLEAR, NO ODOR.
1043	9.00	100 mL	0.4	8.00	1.43	0.2	0.38	21.60	-86	CLEAR, NO ODOR
1047	9.00	100 mL	0.4	8.01	1.43	0.0	0.26	21.73	-87	
1050	—	—	—	—	—	—	—	—	—	STOP PURGE.

Total Volume Purged: 3.2 (Liters)

Total Purge Time: 35 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1015 Purge Stop: 1055

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: _____

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: mw-70-35-68	Sample ID:	Type:	Type:
Sample Time: 1050	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 3	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# mw-70-17

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E., MEHDI S.

Date: 10/28/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	35
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	
[TV (mL) = 155 X D^2H	762.89
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	1.06

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity ~~(us/cm)~~ S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1120	6.06	—	—	—	—	—	—	—	—	PURGE START ~~SLIGHT ODOR, CLEAR~~
1130	6.05	100 mL	1.0	7.84	1.21	0.8	1.06	21.40	-34	CLEAR SLIGHT ODOR
1134	6.05	100 mL	0.4	7.82	1.21	0.4	0.61	21.33	-37	CLEAR NO ODOR
1138	6.05	100 mL	0.4	7.80	1.21	0.3	0.43	21.51	-38	CLEAR NO ODOR
1142	6.05	100 mL	0.4	7.79	1.21	0.2	0.21	21.69	-39	CLEAR NO ODOR
1146	6.05	100 mL	0.4	7.79	1.21	0.3	0.18	21.72	-40	CLEAR NO ODOR

Total Volume Purged: 2.6 (Liters) Total Purge Time: 25 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1120 Purge Stop: 1155

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: _____

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: mw-70-17-69	Sample ID:	Type:	Type:
Sample Time: 1150	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 3	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-22

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 477101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E, MEHDE S.

Date: 10/28/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	35
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	
[TV (mL) = 155 X D^2H	762.89
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	1,06

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (~~µs/cm~~) S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1205	10.20	—	—	—	—	—	—	—	—	— PURGE START —
1215	10.22	100mL	1.00	8.28	6.23	0.0	1.19	21.80	53	CLEAR ODOR
1219	10.22	100mL	0.4	8.29	6.11	0.0	1.78	21.93	36	CLEAR ODOR
1223	10.22	100mL	0.4	8.30	6.15	0.0*	1.07	21.96	26	* OUT OF RANGE, NO ODOR
1227	10.21	100mL	0.4	8.31	6.11	0.0*	1.15	21.90	19	* OUT OF RANGE, NO ODOR
1231	10.21	100mL	0.4	8.31	6.11	0.0*	0.83	21.87	16	* OUT OF RANGE, NO ODOR
1235	10.21	100mL	0.4	8.31	6.09	0.0*	0.74	21.76	13	* OUT OF RANGE, NO ODOR
										GAS = 0
										PID = 0.0

Total Volume Purged: 3.0 (Liters) Total Purge Time: 30 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1205 Purge Stop: 1241

Pump Control Settings:
75 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: _____

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-22-70	Sample ID:	Type:	Type:
Sample Time: 1240	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 3	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-11

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E., MEHDI S.

Date: 10/31/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	90'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL) [TV (mL) = 155 X D^2H]	1961.71
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.26

PURGE METHOD

☐ Bailer – Type: _____ ☑ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (~~µs/cm~~) S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0900	13.44	—	—	—	—	—	—	—	—	STARTED PURGING
0922	13.42	100 mL	2.2 L	8.17	.270	0.0	0.26	21.07	-78	SLIGHT ODOR, CLEAR.
0926	13.42	100 mL	.4 L	8.19	.273	0.0	0.14	21.13	-85	NO ODOR, CLEAR.
0930	13.42	100 mL	.4	8.20	.275	0.0	0.10	21.14	-85	NO ODOR, CLEAR.
0934	13.42	100 mL	.4	8.21	.278	0.0*	0.08	21.14	-88	NO ODOR, CLEAR
0940	—	—	—	—	—	—	—	—	—	PURGE STOPED STABILIZED.
										* OUT OF RANGE

Total Volume Purged: 3.4 (Liters) Total Purge Time: 40 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0900 Purge Stop: 0940

Pump Control Settings:
75 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: _____

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: MW-70-11-72	Sample ID:	Type:	Type:
Sample Time: ~~0938~~ 0938	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 3	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-10

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW ESPINOZA MEHDI S.

Date: 10/31/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume)

H - Length of discharge tubing	35'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	
[TV (mL) = 155 X D^2H	762.89
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	1.06

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (µs/cm) S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0945	10.80	—	—	—	—	—	—	—	—	PURGE STARTED.
0955	10.76	100 mL	1.0	7.98	.616	0.0	0.44	21.13	32	CLEAR, NO ODOR
0959	10.77	100 mL	.4	7.98	.615	0.0	0.32	21.12	23	CLEAR, NO ODOR
1003	10.75	100 mL	.4	7.98	.615	0.0*	0.28	21.17	19	CLEAR, NO ODOR
1007	10.75	100 mL	.4	7.99	.615	0.0*	0.21	21.18	16	
1018	—	—	—	—	—	—	—	—	—	PURGE STOPPED.
										* OUT OF RANGE TURBIDITY.

Total Volume Purged: 2.2 (Liters) Total Purge Time: 33 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0945 Purge Stop: 1018

Pump Control Settings:
75 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: _____

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: MW-70-10-73	Sample ID:	Type:	Type:
Sample Time: 1015	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 3	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# mw-70-pocc03

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E & MEHDI S.

Date: 10/31/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	195
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL) [TV (mL) = 155 X D^2H]	4250.39
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	4.55

PURGE METHOD

☐ Bailer – Type: _____

☑ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity ~~(µs/cm)~~ S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1035	12.30	—	—	—	—	—	—	—	—	PURGE STARTED
1120	12.27	200 mL	4.5	8.97	1.62	0.0	1.06	19.84	42	CLEAR, NO ODOR
1124	12.21	100 mL	.4	8.32	1.72	0.0*	.52	20.40	-53	CLEAR, NO ODOR
1128	12.22	100 mL	.4	8.21	1.81	0.0*	.32	20.44	-62	CLEAR, NO ODOR
1132	12.22	100 mL	.4	8.17	1.86	0.0*	.21	20.43	-67	CLEAR, NO ODOR
1145	—	—	—	—	—	—	—	—	—	PURGE STOPPED
										* OUT OF RANGE

Total Volume Purged: 5.7 (Liters) Total Purge Time: 70 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1035 Purge Stop: 1145

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: _____

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: mw-70-pocc03-74	Sample ID:	Type:	Type:
Sample Time: 1140	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 3	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# mw-70-36

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: H-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E, MEHDI S.

Date: 10/31/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 155

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H: 337.857

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 3678

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (µs/cm)	Turbidity (NTU)	D.O. ~~(mg/L)~~ g/L	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1300	12.47	—	—	—	—	—	—	—	—	START PURGE
1340	12.47	100mL	4.0	8.30	2.97	0.0	1.17	22.12	-171	CLEAR NO ODOR.
1344	12.42	100mL	0.4	8.30	2.30	0.0	1.04	22.13	-156	CLEAR NO ODOR
1348	12.42	100 mL	0.4	8.30	2.32	0.0	0.99	22.10	-143	CLEAR NO ODOR
1352	12.42	100 mL	0.4	8.30	2.33	0.0	0.82	22.08	-125	
1400	—	—	—	—	—	—	—	—	—	PURGE STOPPED.

Total Volume Purged: 5.2 (Liters) Total Purge Time: 60 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1300 Purge Stop: 1400

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: _____

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: mw-70-36-75	Sample ID:	Type:	Type:
Sample Time: 1355	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 3	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-23

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E. & MEHDI S.

Date: 11/1/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	120'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	
[TV (mL) = 155 X D^2H	2615.62
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.91

PURGE METHOD

☐ Bailer – Type: _____ ☑ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (µs/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0810	15.10	~~200 mL~~	~~0~~	—	—	—	—	—	—	PURGE START
0825	15.29	200 mL	3.0	8.11	.409	0.0	.49	20.23	-49	CLEAR, NO ODOR.
0829	15.26	100 mL	.4	8.18	.409	0.0	.32	20.07	-59	CLEAR, NO ODOR.
0833	15.26	100 mL	.4	8.21	.410	0.0	.30	20.04	-67	CLEAR, NO ODOR
0837	15.26	100 mL	.4	8.24	.410	0.0	.31	20.10	-71	CLEAR, NO ODOR.
0845	—	—	—	—	—	—	—	—	—	PURGE STOPPED.

Total Volume Purged: 4.2 (Liters) Total Purge Time: 35 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0810 Purge Stop: 0845

Pump Control Settings:
25/5 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: _____

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-23-77	Sample ID:	Type:	Type:
Sample Time: 0840	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 3	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# mw-70-pocc02

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
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Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E. & MEHDI S.

Date: 11/1/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	195
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL) [TV (mL) = 155 X D^2H]	4250.39
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	4.55

PURGE METHOD

☐ Bailer – Type: _____ ☑ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (µs/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0850	12.90	0	—	—	—	—	—	—	—	– PURGE START –
0936	12.91	100 mL	4.6	8.90	0.134	0.0	0.32	20.29	-211	SLIGHT ODOR, CLEAR
0940	12.91	100 mL	.4	8.87	0.138	0.0	0.12	20.39	-214	SLIGHT ODOR, CLEAR
0944	12.91	100 mL	.4	8.82	0.141	0.0*	0.00	20.42	-224	FAINT ODOR CLEAR
0948	12.91	100 mL	.4	8.79	0.145	0.0*	0.00	20.50	-226	FAINT ODOR, CLEAR
0955	—	—	—	—	—	—	—	—	—	STOPPED PURGING
										* OUT OF RANGE

Total Volume Purged: 5.8 (Liters) Total Purge Time: 65 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0850 Purge Stop: 0955

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: _____

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: mw-70-pocc02-78	Sample ID:	Type:	Type:
Sample Time: ~~0800~~ 0950	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 3	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

21

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# mw-70-21 CE

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E & MEHDI S.

Date: 11/1/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	160'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL) [TV (mL) = 155 X D^2H]	3487.5
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	3.78

PURGE METHOD

☐ Bailer – Type: _____ ☑ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (µs/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1120	12.81	~~200mL~~	—	—	—	—	—	—	—	PURGE STARTED.
1140	12.81	200mL	4.0	8.15	2.97	0.0*	1.74	21.48	-51	CLEAR, NO ODOR.
1144	12.80	100mL	.4	8.11	2.95	0.0*	1.26	21.52	-49	CLEAR, NO ODOR.
1148	12.80	100mL	.4	8.08	2.95	0.0*	.89	21.25	-62	CLEAR, NO ODOR.
1152	12.80	100mL	.4	8.06	2.95	0.0*	.73	21.30	-67	CLEAR, NO ODOR.
1200	—	—	—	—	—	—	—	—	—	PURGE STOPPED.
										* OUT OF RANGE/-5

Total Volume Purged: 5.2 (Liters) Total Purge Time: 40 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1120 Purge Stop: 1200

Pump Control Settings:
~~25~~/50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: _____

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: mw-70-21-80	Sample ID:	Type:	Type:
Sample Time: 1156	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 3	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# mw-70-pocc04

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
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Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E. & MEHDI S.

Date: 11/1/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 200'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL)
[TV (mL) = 155 X D^2H]: 4359.37

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 4.659

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (µs/cm) ~~S/m~~	Turbidity (NTU)	D.O. (mg/L) ~~g/L~~	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1010	14.21	100 mL	—	—	—	—	—	—	—	START PURGE
1056	14.10	100 mL	4.62	8.55	3.97	0.0*	1.43	21.33	-166	CLEAR, NO ODOR
1100	14.10	100 mL	.4	8.43	3.92	0.0*	0.86	21.47	-175	CLEAR, NO ODOR
1104	14.10	100 mL	.4	8.29	3.85	0.0*	0.58	21.54	-179	CLEAR, NO ODOR
1108	14.10	100 mL	.4	8.23	3.81	0.0*	0.41	21.51	-179	CLEAR, NO ODOR
1115	—	—	—	—	—	—	—	—	—	PURGE STOPPED
										* OUT OF RANGE

Total Volume Purged: 1010 (Liters) Total Purge Time: 65 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1010 Purge Stop: 1115

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: _____

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: mw-70-pocc04-79	Sample ID:	Type:	Type:
Sample Time: 1113	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 3	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-16-

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E & MEHDI S

Date: 11/1/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	100
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	
[TV (mL) = 155 X D^2H	2179.6
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.47

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (µs/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1350	13.40	~~26~~	—	—	—	—	—	—	—	START PURGE
1402	13.38	200 mL	2.4	9.08	.361	0.3	4.41	20.73	25	CLEAR, NO ODOR.
1405	13.38	200 mL	.6	9.08	.360	0.2	4.34	20.77	24	CLEAR, NO ODOR.
1408	13.38	200 mL	.6	9.06	.362	0.4	4.28	20.70	24	CLEAR, NO ODOR
1411	13.38	200 mL	.6	9.02	.365	0.0	4.23	20.73	25	CLEAR, NO ODOR
1418	—	—	—	—	—	—	—	—	—	PURGE STOPPED.

Total Volume Purged: 4.8 (Liters) Total Purge Time: 28 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1350 Purge Stop: 1418

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: _____

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-16-81	Sample ID:	Type:	Type:
Sample Time: 1415	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 3	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-MW405

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
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Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW G & MEHDI S.

Date: 11/02/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	75'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL) [TV (mL) = 155 X D^2H]	1634.7
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	1.9

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (µs/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1210	9.88	100 mL	—	—	—	—	—	—	—	PURGE STARTED.
1230	10.03	100 mL	2.0	6.23	77.9	1.0	.13	25.00	-203	NO ODOR, CLEAR.
1234	10.03	100 mL	.4	6.22	78.4	.73	.10	24.96	-202	NO ODOR, CLEAR.
1238	10.03	100 mL	.4	6.22	79.3	.86	.07	24.53	-200	NO ODOR, CLEAR
1242	10.03	100 mL	.4	6.22	78.6	1.3	.06	25.02	-200	NO ODOR, CLEAR
						*				
1255	—	—	—	—	—	—	—	—	—	PURGE STOPPED.
										* CONDITIONS STABILIZE
										* WATER IN WELL BOX

Total Volume Purged: 3.2 (Liters) Total Purge Time: 45 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1210 Purge Stop: 1255

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: _____

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-MW405-88	Sample ID:	Type:	Type: TRIP BLANK
Sample Time: 1250	Sample Time:	Sample ID:	Sample ID: IR-70-TB-87
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time: 1200
		No. of Containers:	No. of Containers: 2

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-MNA04

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E. & MEHDI S.

Date: 11/02/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	40'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	
[TV (mL) = 155 X D^2H	871.8
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	1.17

PURGE METHOD

☐ Bailer – Type: _____ ☑ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity ~~(us/cm)~~ S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1116	9.46	100 mL	—	—	—	—	—	—	—	PURGE STARTED
1128	9.80	100 mL	1.2	5.28	.362	1.10	.57	25.32	14	SLIGHT ODOR, CLEAR
1132	9.50	100 mL	.4	5.28	.362	.87	.57	25.45	6	SLIGHT ODOR, CLEAR
1136	9.48	100 mL	.4	5.28	.363	.29	.60	25.44	4	SLIGHT ODOR, CLEAR
1140	9.48	100 mL	.4	5.28	.363	1.40	.49	24.57	1	SLIGHT ODOR, CLEAR
		~~100 mL~~				*				
1155	—	—	—	—	—	—	—	—	—	PURGE STOPPED
										* COULD NOT STABILIZE TURBIDITY

Total Volume Purged: 2.4 ~~1116 mL~~ (Liters) Total Purge Time: 39 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1116 Purge Stop: 1155

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: _____

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: MW-70-MNA04-86	Sample ID:	Type:	Type:
Sample Time: 1148	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-MNA03

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E. & MEHDI S.

Date: 11/03/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 40'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H: 871.8

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 1.17

PURGE METHOD

☐ Bailer -- Type: _____

☑ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (µs/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0915	10.16	100 mL	—	—	—	—	—	—	—	PURGE START
0927	10.55	100 mL	1.2	5.00	.356	2.0	.61	21.33	-35	SLIGHT ODOR, CLEAR.
0931	10.55	100 mL	.4	4.88	.355	2.0	.34	21.35	-44	SLIGHT ODOR, CLEAR
0935	10.55	100 mL	.4	4.88	.355	1.0	.21	21.37	-47	SLIGHT ODOR, CLEAR
0939	10.55	100 mL	.4	4.88	.355	1.0	.15	21.36	-49	SLIGHT ODOR, CLEAR.
0950	—	—	—	—	—	—	—	—	—	PURGE STOPPED.

Total Volume Purged: 2.4 (Liters) Total Purge Time: 35 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0915 Purge Stop: 0950

Pump Control Settings:
75 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: _____

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-MNA03-84	Sample ID:	Type:	Type:
Sample Time: 0945	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# mw-70-MNA02

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E. & MEHDI S.

Date: 11/02/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 40'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H: 871.8

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 1.17

PURGE METHOD

☐ Bailer – Type: _____

☑ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (~~µs/cm~~) S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1018	9.54	100mL	—	—	—	—	—	—	—	- PURGE START -
1030	9.55	100mL	1.2	5.01	.269	2.0	.37	22.26	-40	SLIGHT ODOR, CLEAR
1034	9.55	100mL	.4	5.00	.267	2.3	.33	22.85	-47	SLIGHT ODOR, CLEAR
1038	9.55	100mL	.4	4.98	.272	2.0	.03	21.43	-52	SLIGHT ODOR, CLEAR
1042	9.55	100mL	.4	5.04	.308	.85	0.0	22.14	-66	
1058	—	—	—	—	—	—	—	—	—	PURGE STOPPED

Total Volume Purged: 2.4 (Liters) Total Purge Time: 40 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1018 Purge Stop: 1058

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: _____

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-MNA02-85	Sample ID:	Type:	Type:
Sample Time: 1052	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# mw-70-MW01

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
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Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E. & MEHDI S.

Date: 11/02/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	45
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	
[TV (mL) = 155 X D^2H	980.85
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	1.28

PURGE METHOD

☐ Bailer – Type: _____ ☑ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (µs/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0825	10.05	100mL	—	—	—	—	—	—	—	PURGE START
0837	10.05	100mL	1.2	5.17	.526	1.0	0.21	22.50	15	SLIGHT ODOR, CLEAR
0841	10.10	100mL	.4	5.20	.526	1.0	.11	22.61	7	SLIGHT ODOR, CLEAR
0845	10.10	100mL	.4	5.20	.525	1.0	.09	22.55	5	SLIGHT ODOR, CLEAR.
0849	10.10	100mL	.4	5.20	.524	1.0	.09		5	SLIGHT ODOR, CLEAR
0900		—	—	—	—	—	—	—	—	PURGE STOPPED.
										CH4 = 4
										PID = 320.5

Total Volume Purged: 2.4 (Liters) Total Purge Time: 35 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0825 Purge Stop: 0900

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: _____

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: mw-70-MW01-83	Sample ID:	Type:	Type:
Sample Time: 0855	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW01A

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
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Telephone: (805) 639-0884
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Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B. & SPEC A

Date: 11/03/11 ARRIVED @ 10:10

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	30
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	
[TV (mL) = 155 X D^2H	654
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	1 L.

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(us/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1032	9.48	100 ml/min	Ø	—	—	—	—	—	—	PUMP START
1042	10.26	↓	1.0	7.21	0.434	18.3	0.21	23.47	-196	STRONG ODOR. PID: 52 ppm
1046	10.35		0.4	7.21	0.436	21.8	0.18	23.31	-200	CO = 16 ppm, H_2S = 71 ppm
1050	10.44		0.4	7.20	0.434	19.0	0.11	23.43	-207	CH4 >100 ppm % LEL
1054	10.66		0.4	7.20	0.437	21.6	0.11	23.59	-210	
1058	10.94	100 ml/min	0.4	7.21	0.436	19.1	0.07	23.50	-216	GREYISH CLOUDY
1102	11.21	100 ml/min	0.4	7.21	0.438	19.3	0.04	23.46	-221	H_2O.
1106	11.46	100 ml/min	0.4	7.22	0.436	19.7	0.07	23.51	-224	

Total Volume Purged: 3.4 (Liters) Total Purge Time: 60 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1032 Purge Stop: 1136

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: EDW yard

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW01A-089	Sample ID:	Type:	Type: TRIP BLANK
Sample Time: 1130	Sample Time:	Sample ID:	Sample ID: EN-70-TB-090
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time: 1200
		No. of Containers:	No. of Containers: 2

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW01B-091

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE R & SPEE A

Date: 11-3-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume)

H - Length of discharge tubing: 50'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H: 1090

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 1.4 L.

ARRIVE @ 1203

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/M Conductivity (us/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1214	9.63	100 mL/min	Ø	–	–	–	–	–	–	PURGE START
1229	9.85	100 mL/min	1.5	7.59	0.685	0.54	0.14	23.56	-151	PID: 7.1 ppm, CH_4 2% LEL
233	9.86	100 mL/min	0.4	7.61	0.681	0.00	0.12	23.57	-152	H_2S: 0.0 ppm, CO: 0 ppm
1237	9.86	100 mL/min	0.4	7.60	0.677	0.00	0.07	23.48	-152	
1241	9.86	100 mL/min	0.4	7.60	0.674	0.00	0.08	23.34	-142	STRONG ODOR w/
1245	9.86	100 mL/min	0.4	7.62	0.670	0.00	0.03	23.56	-150	cloudy H_2O

Total Volume Purged: 3.1 (Liters)

Total Purge Time: 66 min. (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1214 Purge Stop: 1320

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: TOW YARD

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
ple ID: MW-70-PMW01B-091	Sample ID:	Type:	Type:
Sample Time: 1317	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 21 MS/MSD	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-22

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
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Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE G & SPEE A.

Date: 11-3-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	31'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	
[TV (mL) = 155 X D^2H	676
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	1.0 L

ARRIVED @ 1350

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1412	9.29	200 mL/min	Ø	—	—	—	—	—	—	PURGE START; PID: 53.2 ppm
1422	9.61	100 mL/min	1.0	7.62	1.27	1.43	0.21	24.11	-123	CH4: >100 ppm, O2: 19.9%
1426	9.63	100 mL/min	0.4	7.64	1.25	1.25	0.15	24.10	-129	H2S: 0.0 ppm, CO: 0 ppm
1430	9.63	100 mL/min	0.4	7.65	1.24	1.13	0.16	23.94	-125	
1434	9.66	100 mL/min	0.4	7.66	1.22	0.95	0.09	24.09	-133	CLEAR H2O w/ SLIGHT
1438	9.66	100 mL/min	0.4	7.66	1.22	0.84	0.06	24.16	-135	ODOR
1442	9.69	100 mL/min	0.4	7.66	1.22	0.67	0.04	24.12	-136	

Total Volume Purged: 3.0 (Liters) Total Purge Time: 48 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1412 Purge Stop: 1500

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: Tan yard

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
ple ID: MW-70-22-092	Sample ID: IR-70-FD-093	Type:	Type:
Sample Time: 1458	Sample Time: —	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers: 10	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-28

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B. & SI

Date: 11-3-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 55'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H: 1199

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 1.5 L.

ARRIVE @ 1530

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(us/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1538	9.84	200mL/min	Ø	–	–	–	–	–	–	PURGE START.
1546	9.85	200mL/min	1.6	7.71	0.533	-0.47	0.26	23.64	-118	PID: 7.2 ppm, CH4 = 1% (BACKGROUND)
1550	9.85	200mL/min	0.8	7.70	0.531	0.04	0.21	23.58	-120	H2S = 0.0 ppm, CO: 0 ppm
1554	9.85	200mL/min	0.8	7.71	0.525	-0.83	0.14	23.62	-125	
1558	9.86	200mL/min	0.8	7.70	0.522	-0.98	0.10	23.60	-127	CLEAR H2O w/
1602	9.86	200mL/min	0.8	7.70	0.518	-0.92	0.07	23.61	-129	VERY STRONG ODOR

Total Volume Purged: 4.8 (Liters)

Total Purge Time: 40 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1538 Purge Stop: 1618

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW yard

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-28-094	Sample ID:	Type:	Type:
Sample Time: 1616	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW02B

AIS-TN&A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
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Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-7-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 95'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL)

[TV (mL) = 155 X D^2H: 2071

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.37 ≈ 2.4L. ARRIVED: 1546

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1549	9.99	200 ml/min	Ø	—	—	—	—	—	—	PURGE START.
1601	10.02	200 ml/min	2.4	8.45	0.239	-0.36	0.28	24.00	-240	PID: 0.0 ppm, CH4: 3% lel
1605	10.02	200 ml/min	0.8	8.46	0.239	0.08	0.26	23.92	-238	H2S: 0.0 ppm, CO: 0 ppm.
1609	10.02	200 ml/min	0.8	8.47	0.240	0.07	0.22	23.85	-236	
1613	10.02	200 ml/min	0.8	8.48	0.240	0.07	0.20	23.85	-234	CLEAR H2O w/
~~1617~~										FAINT ODOR

Total Volume Purged: 4.7 (Liters)

Total Purge Time: 41 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1549

Purge Stop: 1630

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW02B-101	Sample ID:	Type:	Type:
Sample Time: 1627	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW02A

AIS-TN&A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-7-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 76'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 1657

[TV (mL) = 155 X D^2H

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 1.95 ≈ 2.0 L

ARRIVED 1455

PURGE METHOD

☐ Bailer – Type: _____

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1505	9.97	200 mL/min	Ø	—	—	—	—	—	—	PURGE START
1515	10.03	200 mL/min	2.0	8.54	0.178	-0.49	0.38	24.08	-209	PID=0.0ppm CH4=3% L.E.L.
1519	10.03	200 mL/min	0.8	8.52	0.177	-0.52	0.34	24.02	-208	CH4=0ppm CO=0ppm.
1523	10.03	200 mL/min	0.8	8.53	0.176	-0.51	0.32	24.05	-207	
1527	10.03	200 mL/min	0.8	8.54	0.176	-0.52	0.29	23.90	-208	CLEAR H2O w/
~~1531~~			~~0.8~~							SLIGHT ODOR.

Total Volume Purged: 4.4 (Liters)

Total Purge Time: 40 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1505 Purge Stop: 1545

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW02A-100	Sample ID:	Type:	Type:
Sample Time: 1542	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# IW-70-SAB06

AIS-TN&A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-7-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 75'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL)

[TV (mL) = 155 X D^2H: 1635

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 1.99 ≈ 2.0 L.

NOTE: SAB06 SHOWED NO OCCURRING GREY FOAM OR BLACK PARTICULATES IN THE WATER, AS PREVIOUS SAMPLING HAD DONE. WATER REMAINED CLEAN THOUGH WELL WAS GASSING.

ARRIVED - 1320

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1340	9.81	100mL/min	Ø	—	—	—	—	—	—	PURGE START
1400	9.84	100mL/min	2.0	7.18	0.213	8.20	0.37	23.68	-200	
1404	9.85	100mL/min	0.4	7.19	0.207	7.99	0.29	23.68	-216	PID: 0.0 ppm, CH_4: >100% LEL
1408	9.85	100mL/min	0.4	7.21	0.208	7.44	0.29	23.54	-220	O_2: 15.9%, CH_4: 3.5 ppm
1412	9.85	100mL/min	0.4	7.22	0.209	7.03	0.27	23.44	-222	CO: 0 ppm
1416	9.84	100mL/min	0.4	7.22	0.215	7.21	0.24	23.50	-225	
										CLEAR H_2O w/
										VERY STRONG ODOR.
										GASSING WELL.

Total Volume Purged: 3.6 (Liters)

Total Purge Time: 52 min. (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1340

Purge Stop: 1432

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: IW-70-SAB06-099	Sample ID:	Type:	Type:
Sample Time: 1430	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW03B

AIS-TN&A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-7-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 95'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H]: 2071

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.4 L

ARRIVED: 1100

PURGE METHOD

☐ Bailer – Type: _____

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity (~~us/cm~~)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1105	9.52	100 mL/min	Ø	—	—	—	—	—	—	PURGE START.
11.29	9.54	100 mL/min	2.4	8.38	0.180	-0.17	0.19	23.88	-252	
1133	9.54	100 mL/min	0.4	8.38	0.177	-0.52	0.10	23.93	-252	PID: 0.0 ppm, Clty: 3% Lel
1137	9.54	100 mL/min	0.4	8.39	0.179	-0.47	0.09	23.74	-252	Clty: 0.0 ppm, CO: 0 ppm.
1141	9.54	100 mL/min	0.4	8.39	0.177	-0.55	0.09	23.76	-251	
1145	9.55	100 mL/min	0.4	8.39	0.175	-0.56	0.05	23.87	-252	Cloudy H2O w/ strong odor.

Total Volume Purged: 4.0 (Liters)

Total Purge Time: 65 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1105 Purge Stop: 1210

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW03B-097	Sample ID: EQ-70-FD-098	Type:	Type:
Sample Time: 1208	Sample Time: 1225	Sample ID:	Sample ID:
No. of Containers: 20 + 1 (MS/MSD)	No. of Containers: 10	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW03A

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-27101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: C. BRADFORD, S. AKKENDAMY

Date: 11/7/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 75'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 1635

[TV (mL) = 155 X D^2H

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 1.93 ≈ 2.0 L.

ARRIVED @ 0900

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µS/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0950	9.56	100 mL/min	Ø	—	—	—	—	—	—	PURGE START.
1010	9.58	100 mL/min	2.0	7.01	0.179	2.71	0.12	24.13	-90	PID: 0 ppm, Cl4: 6 % Lel
1014	9.58	100 mL/min	0.4	7.00	0.176	2.79	0.07	24.14	-95	H2S: 0 ppm, CO: 0 ppm
1018	9.58	100 mL/min	0.4	7.01	0.190	3.00	0.08	24.20	-97	
1022	9.58	100 mL/min	0.4	7.01	0.186	2.94	0.06	24.13	-99	Cloudy H2O w/
1026	9.58	100 mL/min	0.4	7.02	0.180	3.12	0.06	24.20	-101	STRONG BURNT ODOR.
										EFFLUENT WELL

Total Volume Purged: 3.6 (Liters) Total Purge Time: 55 min. (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0950 Purge Stop: 1045

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: SOW YARD TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source /)***
Sample ID: MW-70-PMW03A-095	Sample ID:	Type:	Type: TB-70-TB-096
Sample Time: 1042	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers: 2

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# IW-70-SAB11

AIS-TN&A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-8-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	85'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	
[TV (mL) = 155 X D^2H	1853
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.15 ≈ 2.2

ARRIVED AT 0920

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0954	9.87	200 mL/min	Ø	—	—	—	—	—	—	PUMP START
1005	11.14	200 mL/min	2.2	7.54	0.438	17.7	0.05	21.51	-168	PID: 0.0, CH4: >100% LEL
1009	11.58	200 mL/min	0.8	7.56	0.431	18.2	0.00	21.47	-171	O2: 19.0%, H2S: 0.0 ppm, CO: 0 ppm.
1013	11.80	200 mL/min	0.8	7.56	0.427	18.2	0.00	21.42	-172	
1017	12.17	200 mL/min	0.8	7.56	0.441	18.1	0.00	21.35	-174	CLEAR H2O w/
										A VERY STRONG ODOR.
										GASSING WELL, NOTICED
										VERY FINE BLACK
										PARTICLES FINE FLOATING
										IN WATER.

Total Volume Purged: 4.6 (Liters) Total Purge Time: 43 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0954 Purge Stop: 1037

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: IW-70-SAB11-103	Sample ID:	Type:	Type:
Sample Time: 1035	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# IW-70-FSB118

AISTN&A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-8-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 82'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL)

[TV (mL) = 155 X D^2H: 1787

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.08 ≈ 2.1L. APPROX 1102

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1117	6.26	200 ml/min	Ø	—	—	—	—	—	—	PURGE START.
1128	6.52	200 ml/min	2.2	7.14	0.334	4.44	0.15	22.01	-105	PID: 0.1 ppm, Oxy: 23% vol
1132	6.53	200 ml/min	0.8	7.15	0.333	6.17	0.12	21.89	-111	H2S: 0.0 ppm, CO: 0 ppm
1136	6.53	200 ml/min	0.8	7.15	0.333	4.47	0.09	21.89	-112	
1140	6.53	200 ml/min	0.8	7.15	0.329	4.71	0.06	21.98	-114	CLEAR H2O w/
1144	6.53	200 ml/min	0.8	7.15	0.329	4.80	0.03	21.87	-115	STRONG ODOR, GASSING WELL.
										NOTICED VERY FINE
										BLACK PARTICLES IN
										WATER.

Total Volume Purged: 5.4 (Liters) Total Purge Time: 46 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1117 Purge Stop: 1203

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: IW-70-FSB118-104	Sample ID:	Type:	Type:
Sample Time: 1201	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW06A

AIS-TN&A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-8-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 75' - ANT NEST IN VAULT.

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL)

[TV (mL) = 155 X D^2H: 1635

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 1.93 ≈ 2.0 L. ARRIVED @ 1241

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	SIM Conductivity ~~(us/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1304	6.00	200 mL/min	Ø	–	–	–	–	–	–	PUMPS START
1314	6.00	200 mL/min	2.0	8.34	0.282	2.70	0.35	22.00	-246	
1318	6.00	200 mL/min	0.8	8.35	0.284	2.18	0.28	21.90	-252	PID: 17.0 ppm CH4: 0%
1322	6.00	200 mL/min	0.8	8.33	0.286	1.56	0.22	21.80	-253	H2S: 0.0 ppm CO: 0 ppm
1326	6.00	200 mL/min	0.8	8.31	0.288	0.69	0.17	22.04	-253	
										CLEAR H2O W/ STRONG ODOR

Total Volume Purged: 4.4 (Liters) Total Purge Time: 41 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1304 Purge Stop: 1345

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW06A-105	Sample ID:	Type:	Type:
Sample Time: 1342	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW06B

AISHN&A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-8-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 96'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H: 2093

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.39 ≈ 2.4 L.

ARRIVED 1350

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µS/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1400	5.98	200 ml/min	0	—	—	—	—	—	—	PUMP START.
1412	6.03	200 ml/min	2.4	8.63	0.209	-0.37	0.20	22.04	-207	PID: 159.0 ppm, CH4: 0% LEL
1416	6.03	200 ml/min	0.8	8.64	0.210	-0.42	0.15	22.16	-211	H2S: 0.0 ppm, CO: 0 ppm
1420	6.03	200 ml/min	0.8	8.63	0.210	-0.40	0.15	22.10	-202	
1424	6.03	200 ml/min	0.8	8.65	0.209	-0.45	0.09	22.10	-204	CLEAR H2O W/ STRONG ODOR

Total Volume Purged: 4.8 (Liters)

Total Purge Time: 50 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1400 Purge Stop: 1450

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW06B-106	Sample ID: IR-70-FD-107	Type:	Type:
Sample Time: 1448	Sample Time: 1510	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers: 10	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-38

AISTN&A Joint Venture
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-8-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 90'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL)

[TV (mL) = 155 X D^2H: 1962

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.26 ≈ 2.3L.

Arrived 1515

PURGE METHOD

☐ Bailer – Type: _____

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1527	9.65	200 mL/min	Ø	—	—	—	—	—	—	Purge start
1539	9.68	200 mL/min	2.4	7.32	0.276	0.00	0.20	21.33	-121	PID: 0.0, CH_4: 0% LEL
1543	9.68	200 mL/min	0.8	7.30	0.275	0.08	0.15	21.36	-128	H_2S: 0.0ppm, CO: 0ppm
1547	9.68	200 mL/min	0.8	7.30	0.272	0.00	0.10	21.27	-132	
1551	9.68	200 mL/min	0.8	7.29	0.268	0.00	0.08	21.23	-134	Clear H2O w/
										strong odor
										Gasing well

Total Volume Purged: 4.8 (Liters)

Total Purge Time: 38 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1527 Purge Stop: 1605

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: MW-70-38-108	Sample ID:	Type:	Type:
Sample Time: 1603	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW-04A

AISTN & A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-9-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 75'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H: 1635

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 1.9 ≈ 2.0 L.

APPROX 0915

PURGE METHOD

☐ Bailer – Type: _____

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity (~~µs/cm~~)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0957	6.26	200 mL/min	Ø	—	—	—	—	—	—	PUMPS START
1007	6.26	200 mL/min	2.0	8.68	0.143	-0.11	0.28	23.66	-141	PID: 9.3 ppm. CH4: 0% lel
1011	6.26	200 mL/min	0.8	8.69	0.143	-0.46	0.25	23.58	-145	H2S: 0.0 ppm, CO: 0 ppm
1015	6.26	200 mL/min	0.8	8.71	0.143	-0.40	0.21	23.52	-147	
1019	6.26	200 mL/min	0.8	8.72	0.143	-0.58	0.21	23.41	-149	CLEAR H2O w/
1023	6.26	200 mL/min	0.8	8.74	0.143	-0.49	0.17	23.34	-150	FAINT ODOR

Total Volume Purged: 5.2 (Liters)

Total Purge Time: 26 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0957 Purge Stop: 1038

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth In feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW04A-LLQ	Sample ID: ER-70-FD-111	Type: TRIP BLANK	Type:
Sample Time: 1036	Sample Time: 1100	Sample ID: ER-70-TB-108	Sample ID:
No. of Containers: 11	No. of Containers: 10	Sample Time: 0900	Sample Time:
		No. of Containers: 2	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW 70-PMW04B

AISTN&A JOINT VENTURE
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Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-9-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 95'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H]: 2070

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.371 2.4L. ARRIVED @ 1058

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity (~~us/cm~~)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1105	6.29	200mL/min	Ø	—	—	—	—	—	—	PUMPS START.
1117	6.34	200mL/min	2.4	8.56	0.146	-0.40	0.42	23.97	-259	PID: 11.1, CH4: 27%LEL
1121	6.35	200mL/min	0.8	8.70	0.146	-0.41	0.32	24.01	-258	O2: 17.9%, H2S: 0.0ppm, CO: 0ppm
1125	6.35	200mL/min	0.8	8.75	0.146	-0.33	0.25	23.98	-255	
1129	6.34	200mL/min	0.8	8.77	0.146	-0.47	0.25	23.90	-255	CLEAR H2O w/ STRONG ODOR

Total Volume Purged: 4.8 (Liters) Total Purge Time: 37 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1105 Purge Stop: 1142

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW04B-112	Sample ID:	Type:	Type:
Sample Time: 1140	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 12	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# IW-70-FSB108-

1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: FISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-9-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 83'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (ml.)

[TV (mL) = 155 X D^2H]: 1809

BV - Bladder volume (ml.): 300

Sampling system volume (ml.) [SSV = TV + BV]: 2.1 L. AMRINS 12.10

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity (~~µs/cm~~)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1218	6.57	200 mL/min	Ø	—	—	—	—	—	—	Purge start
1229	7.85	200 mL/min	2.2	7.08	0.277	13.6	0.24	22.09	-141	PID: 0.0 ppm, CH4: 419.1
1233	7.92	200 mL/min	0.8	7.10	0.275	13.3	0.20	21.91	-147	H2S: 0.0 ppm, CO: 0.0 ppm
1237	8.15	200 mL/min	0.8	7.13	0.290	13.3	0.13	21.92	-152	
1241	8.30	200 mL/min	0.8	7.16	0.276	11.9	0.09	21.89	-154	Clear H2O w/
										very strong odor,
										gas bubbles.
										very fine black
										particles freely
										floating in H2O

Total Volume Purged: 4.6 (Liters) Total Purge Time: 42 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1218 Purge Stop: 1300

Pump Control Settings:
50 ml Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: IW-70-FSB108-113	Sample ID:	Type:	Type:
Sample Time: 1259	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW05A

AIS-TN & A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-9-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 75'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H: 1635

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 1.93 ≈ 2.0L.

ARRIVED 1350

PURGE METHOD

☐ Bailer – Type: _____

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity ~~(us/cm)~~ mS	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1410	5.94	200ml/min	Ø	–	–	–	–	–	–	PUMP START
1420	5.96	200ml/min	2.0	7.53	0.168	0.04	0.21	21.76	-130	
1424	5.95	200ml/min	0.8	7.53	0.168	0.00	0.19	21.74	-130	PID: 0.0, CH4 0% LEL
1428	5.96	200ml/min	0.8	7.53	0.168	0.04	0.14	21.72	-133	H2S: 0.0 ppm, CO: 0 ppm
1432	5.95	200ml/min	0.8	7.53	0.170	0.15	0.12	21.69	-134	
										CLEAR H2O w/
										FAINT ODOR

Total Volume Purged: 4.4 (Liters) Total Purge Time: 35min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1410 Purge Stop: 1445

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW05A-HH	Sample ID:	Type:	Type:
Sample Time: 1444	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW05B

AISHN & A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-9-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 95'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H: 2071

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.37 ≈ 2.4L.

ARRIVED 1500

PURGE METHOD

☐ Bailer – Type: _____

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(us/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1508	6.14	200 mL/min	Ø	—	—	—	—	—	—	PURGE START
1520	6.14	200 mL/min	2.4	7.59	0.213	-0.06	0.10	21.56	-259	PID: 0.0 ppm CH4: 0%
1524	6.17	200 mL/min	0.8	7.59	0.211	-0.27	0.06	21.55	-259	H2S: 0.0 ppm CO: 0 ppm
1528	6.17	200 mL/min	0.8	7.61	0.210	-0.30	0.05	21.51	-260	
1532	6.17	200 mL/min	0.8	7.59	0.211	-0.29	0.01	21.51	-260	CLEAR H2O w/ STRONG ODOR

Total Volume Purged: 4.8 (Liters)

Total Purge Time: 43 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1500

Purge Stop: 1551

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW05B-115	Sample ID:	Type:	Type:
Sample Time: 1550	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# RDO-5

AISHN & A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-10-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 85'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H: 1853

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.15 x 2.2L.

~~ANT NEST NEXT TO WELL.~~

ARRIVED @ 1000

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(us/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1030	7.81	200 ml/min	Ø	—	—	—	—	—	—	PUMP START.
1041	7.81	200 ml/min	2.2	7.86	0.162	-0.29	0.26	21.54	-253	PID: 0.0 ppm, CH4 0%
1045	7.81	200 ml/min	0.8	7.86	0.158	-0.25	0.19	21.50	-254	H2S: 0.0 ppm, CO: 0 ppm
1049	7.81	200 ml/min	0.8	7.85	0.158	-0.34	0.17	21.54	-254	
1053	7.81	200 ml/min	0.8	7.86	0.156	-0.31	0.13	21.54	-255	CLEAR H2O w/
										VERY SLIGHT
										ROTTEN EGG ODOR
										GASIONS WELL

Total Volume Purged: 4.6 (Liters)

Total Purge Time: 40 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1030

Purge Stop: 1110

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: IR-70-RDO-5-117	Sample ID:	Type: TRIP BLANK	Type:
Sample Time: 1107	Sample Time:	Sample ID: IR-70-TB-116	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time: 0845	Sample Time:
		No. of Containers: 2	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-MNA06

AIS-TN&A JOINT VENTURE
1650 Palma Drive, Suite 207
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Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-10-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 85'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL)

[TV (mL) = 155 X D^2H: 1853

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.15 ≈ 2.2 L.

ANS MEST NEXT TO WELL.

ARRIVED 1130

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity S/m ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1145	5.76	700 ml/min	Ø	—	—	—	—	—	—	PURGE START
1156	6.07	200 ml/min	2.2	8.17	0.102	0.43	0.16	21.70	-97	
1200	6.07	200 ml/min	0.8	8.16	0.102	0.51	0.15	21.69	-98	PID: 0.0 ppm, Cl$_2$ 28% LEL
1204	6.07	200 ml/min	0.8	8.15	0.102	0.70	0.14	21.62	-99	H_2S: 0.0 ppm, CO: 0 ppm
1208	6.07	200 ml/min	0.8	8.14	0.101	0.45	0.09	21.71	-106	
										CLEAR H_2O w/
										A VERY STRONG
										ROTTEN EGG ODOR.

Total Volume Purged: 4.6 (Liters)

Total Purge Time: 45 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1145

Purge Stop: 1220

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-MNA06-118	Sample ID:	Type:	Type:
Sample Time: 1218	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-MPK03

1650 Palma Drive, Suite 207
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Telephone: (805) 639-0884
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Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-10-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 85

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL)

[TV (mL) = 155 X D^2H]: 1853

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.15 ≈ 2.2 L. ARRIVED AT 1250

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity (~~us/cm~~)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1308	9.45	200 mL/min	Ø	—	—	—	—	—	—	PUMPS STARTED.
1319	9.59	200 mL/min	2.2	8.13	0.331	2.83	0.13	21.99	-244	PID: 40.1, CH4: 0% lel
1323	9.59	200 mL/min	0.8	8.14	0.330	1.70	0.10	21.96	-242	H2S: 0.0 ppm CO: 0 ppm
1327	9.59	200 mL/min	0.8	8.14	0.328	0.98	0.09	21.96	-242	
1331	9.59	200 mL/min	0.8	8.15	0.328	0.95	0.06	21.96	-240	Clear H2O w/
										A very pungent
										odor

Total Volume Purged: 4.6 (Liters)

Total Purge Time: 36 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1308 Purge Stop: 1344

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-MPK03-119	Sample ID:	Type:	Type:
Sample Time: 1342	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-MNA09

AIS-TN&A JOINT VENTURE
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Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-10-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 69'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL)

[TV (mL) = 155 X D^2H: 1504

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 1.8 L

ARRIVED 1400

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1413	9.11	200 mL/min	Ø	—	—	—	—	—	—	PUMP START.
1422	9.12	200 mL/min	1.8	7.86	2.18	-0.10	0.06	21.93	-168	
1426	9.12	200 mL/min	0.8	7.86	2.17	-0.16	0.06	21.92	-169	PID: 0.0 ppm, CH4: 0% LEL
1430	9.12	200 mL/min	0.8	7.86	2.17	-0.27	0.02	21.91	-174	H2S: 0.0 ppm, CO: 0 ppm
1434	9.12	200 mL/min	0.8	7.87	2.16	-0.33	0.00	21.89	-177	
										CLEAR H2O w/
										STRONG ODOR

Total Volume Purged: 4.2 (Liters)

Total Purge Time: 35 min. (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1413

Purge Stop: 1448

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-MNA09-120	Sample ID:	Type:	Type:
Sample Time: 1445	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-MNA13

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Telephone: (805) 639-0884
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Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-10-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 120'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H]: 2616

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.9 ≈ 3.0 L.

ARRIVED @ 1500

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	~~(µs/cm)~~ S/m Conductivity	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1513	9.73	200 ml/min	0	—	—	—	—	—	—	Pump spent.
1528	9.90	200 ml/min	3.0	8.42	0.806	1.86	0.00	21.74	-250	
1532	9.90	200 ml/min	0.8	8.43	0.793	1.69	0.00	21.74	-249	PID: 0.0, CH4: 0% LEL
1536	9.90	200 ml/min	0.8	8.43	0.781	1.36	0.00	21.71	-247	H2S: 0.0 ppm CO: 0 ppm
1540	9.90	200 ml/min	0.8	8.43	0.773	1.43	0.00	21.71	-247	
										Clear H2O w/
										very strong odor

Total Volume Purged: 5.4 (Liters)

Total Purge Time: 42 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1513

Purge Stop: 1555

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-MNA13-121	Sample ID:	Type:	Type:
Sample Time: 1553	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MNA07-

1650 Palma Drive, Suite 207
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Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-14-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 95'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL)

[TV (mL) = 155 X D²H: 2071

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.371 ≈ 2.4L.

Arrives @ 1440

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1456	6.23	200 mL/min	0	—	—	—	—	—	—	Purge start
1508	6.25	200 mL/min	2.4	7.87	0.195	0.19	0.11	21.31	-176	
1512	6.25	200 mL/min	0.8	7.86	0.192	-0.11	0.11	21.32	-174	PID: 4.5 ppm Clty: 0% LEL
1516	6.27	200 mL/min	0.8	7.87	0.190	-0.17	0.05	21.32	-177	H2S: 0.0 ppm CO: 0 ppm
1520	6.27	200 mL/min	0.8	7.86	0.192	-0.37	0.03	21.34	-179	
										Clear H2O w/ strong odor

Total Volume Purged: 4.8 (Liters) Total Purge Time: 40 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1456 Purge Stop: 1536

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: Mw-70-MNA07-128	Sample ID:	Type:	Type:
Sample Time: 1533	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MNA 11

ARCADIS-BNK A Joint Venture
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
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Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-14-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 85'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H]: 1853

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.15 ≈ 2.2 L.

ANNUS @ 1330

PURGE METHOD

☐ Bailer – Type: _____

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	~~Conductivity (us/cm)~~ S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1338	10.01	200 ml/min	Ø	—	—	—	—	—	—	pump start
1349	10.01	200 ml/m	2.2	8.25	0.279	4.64	0.20	20.82	-203	
1353	10.01	200 ml/m	0.8	8.29	0.278	4.50	0.15	20.91	-206	PID: 0.0, CH4: 0% LEL
1357	10.01	200 ml/m	0.8	8.31	0.278	2.92	0.08	20.94	-209	H2S: 0.0 ppm, CO: 0 ppm
1401	10.01	200 ml/m	0.8	8.31	0.278	2.36	0.06	20.90	-208	
										Clear H2O w/
										slight odor.

Total Volume Purged: 4.6 (Liters) Total Purge Time: 34 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1338 Purge Stop: 1412

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-MNA11-127	Sample ID:	Type:	Type:
Sample Time: 1410	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# pMW10

AIS ENGINEERING
1650 Palma Drive, Suite 207
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Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-14-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 125'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H: 2725

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 3.02 = 3.0L.

ARRIVE 1220

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1228	9.11	200 ml/min	0	—	—	—	—	—	—	PUMPS STARTED
1243	9.18	200 ml/min	3.0	8.54	0.208	0.04	0.18	21.67	-235	
1247	9.17	200 ml/min	0.8	8.56	0.207	0.09	0.14	21.75	-236	NO: 1.0ppm, CHy: 0% LEL
1251	9.17	200 ml/min	0.8	8.57	0.207	-0.04	0.11	21.69	-235	H2S: 0.0ppm, CO: 0ppm
1255	9.18	200 ml/min	0.8	8.58	0.206	0.23	0.07	21.62	-234	CLEAR WATER WITH SLIGHT ODOR.

Total Volume Purged: 5.4 (Liters)

Total Purge Time: 40 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1228 Purge Stop: 1308

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-pMW10-126	Sample ID:	Type:	Type:
Sample Time: 1307	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# SHB113

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1650 Palma Drive, Suite 207
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Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-14-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 118'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 2,572

[TV (mL) = 155 X D^2H

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2,872 mL ≈ 2.8L ≈ 3.0L APPROX 1108

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (µs/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1124	10.17	200 mL/min	0	—	—	—	—	—	—	PUMPS START.
1139	11.43	200 mL/min	3.0	7.47	0.274	0.36	0.19	21.66	-185	
1143	11.52	200 mL/min	0.8	7.47	0.279	0.35	0.16	21.62	-193	PID: 0.0, CH_4: >100% LEL
1147	11.63	200 mL/min	0.8	7.46	0.281	0.35	0.11	21.53	-197	O2: 17.7%, H2S: 0.0, CO: 0 ppm
1151	11.67	200 mL/min	0.8	7.47	0.273	0.27	0.09	21.47	-202	STRONG ODOR, CLEAR WATER, EFFLUENT WELL.

Total Volume Purged: 5.4 (Liters) Total Purge Time: 40 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1124 Purge Stop: 1204

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: En-70-SHB113-125	Sample ID:	Type:	Type:
Sample Time: 1203	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# PMW09

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Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-14-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 125'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL)
[TV (mL) = 155 X D^2H: 2725

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 3.02 ≈ 3.02. ARRIVED @ 0930

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1010	9.36	200 ml/min	Ø	—	—	—	—	—	—	PUMP START
1025	9.36	200 ml/min	3.0	8.34	0.116	-0.03	0.18	21.39	-215	
1029	9.36	200 ml/min	0.8	8.34	0.116	0.08	0.16	21.33	-214	PID: 0.3 ppm, O2: 0% LEL
1033	9.36	200 ml/min	0.8	8.37	0.116	0.06	0.11	21.40	-213	H2S: 0.0 ppm, CO: 0 ppm
1037	9.36	200 ml/min	0.8	8.35	0.116	-0.12	0.10	21.42	-213	
										Clear H2O w/ strong odor

Total Volume Purged: 5.4 (Liters) Total Purge Time: 40 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1010 Purge Stop: 1050

Pump Control Settings:
500 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: MW-70-PMW09-1124	Sample ID:	Type: TRIP BLANK	Type:
Sample Time: 1049	Sample Time:	Sample ID: IR-70-TB-123	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time: 0845	Sample Time:
		No. of Containers: 2	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MNA10

AIS-TN&A JOINT VENTURE
1650 Palma Drive, Suite 207
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Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-15-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 80'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL)

[TV (mL) = 155 X D^2H: 1744

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.04 ≈ 2 L. ARRIVED @ 1445

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1451	9.71	200 ml/m	Ø	—	—	—	—	—	—	PUMPS START
1501	9.74	200 ml/m	2.0	8.19	0.660	2.79	0.23	21.10	-209	
1505	9.74	200 ml/m	0.8	8.21	0.639	2.82	0.15	21.01	-210	PID: 0.0 ppm, Cl$_2$: 0% LEL
1509	9.74	200 ml/m	0.8	8.20	0.630	2.75	0.12	21.05	-211	H$_2$S: 0.0 ppm, CO: 0 ppm
1513	9.74	200 ml/m	0.8	8.19	0.606	2.81	0.09	21.05	-212	
										CLEAR H$_2$O w/
										SLIGHT ODOR

Total Volume Purged: 4.4 (Liters) Total Purge Time: 30 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1451 Purge Stop: 1521

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: MW-70-MNA10-135	Sample ID:	Type:	Type:
Sample Time: 1519	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# PMW08B

AISHN&A Joint Venture
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-15-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 90'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H]: 1962

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.26 ≈ 2.3L.

ARRIVED. 1230

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (~~us/cm~~ S/m)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1339	11.69	200 mL/min	Ø	—	—	—	—	—	—	PUMPE START.
~~1351~~	—	—	2.4	—	—	—	—	—	—	
1355	11.69	200 m/m	0.8	8.23	0.610	3.13	0.13	21.62	-237	PID: 0.7 ppm CH4: 0% LEL
1359	11.69	200 m/m	0.8	8.21	0.610	2.91	0.11	21.58	-235	H2S: 0 ppm CO: 0 ppm.
1403	11.69	200 m/m	0.8	8.22	0.607	2.59	0.08	21.54	-234	
1407	11.69	200 m/m	0.8	8.21	0.604	2.62	0.07	21.51	-233	CLEAR H2O w/ SLIGHT ODOR

Total Volume Purged: 5.6 (Liters) Total Purge Time: 40 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1339 Purge Stop: 1419

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW08B-134	Sample ID:	Type:	Type:
Sample Time: 1418	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# pmw08A

AISTN&A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-15-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 70'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H]: 1526

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 1.82 ≈ 1.92. Arrived @ 1238

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1248	11.33	200 m/m	Ø	—	—	—	—	—	—	Pump Start.
1258	11.33	200 m/m	2.0	7.92	1.75	2.03	0.27	21.55	-172	
1302	11.33	200 m/m	0.8	7.92	1.74	2.13	0.22	21.57	-179	PID: 0.0, Chly: 0 ppm, O2: 20.4
1306	11.33	200 m/m	0.8	7.93	1.72	3.86	0.19	21.56	-182	H2S: 0.0 ppm CO: 0 ppm
1310	11.33	200 m/m	0.8	7.92	1.70	2.46	0.12	21.60	-183	
										Clear H2O w/ Slight odor

Total Volume Purged: 4.4 (Liters) Total Purge Time: 32 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1248 Purge Stop: 1320

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: MW-70-PMW08A-133	Sample ID:	Type:	Type:
Sample Time: 1319	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# FSB 216

AIS-TEN-A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-15-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 83'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 1,810

[TV (mL) = 155 X D^2H]

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2,110 = 2.1L ≈ 2.0L APPLIED @ 1110

NOTE: UPON SAMPLING WATER, BEING GASIONS, WOULD BUILD UP BUBBLES IN TUBING. WHEN IT WOULD BE COLLECTED, THE GREYISH/BLACK FOAM WOULD APPEAR IN BOTTLE, LIKE AT SAB11 IN PRIOR YEARS OF SAMP

PURGE METHOD

☐ Bailer – Type: _____

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (S/m) ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1118	11.21	200 ml/m	Ø	—	—	—	—	—	—	PUMP START
1128	12.65	200 ml/m	2.0	7.63	3.43	48.2	0.12	21.88	-335	
1132	12.79	200 ml/m	0.8	7.62	3.43	41.2	0.10	21.87	-336	PID: 11.4 ppm. Cl4: >100 %
1136	13.12	200 ml/m	0.8	7.62	3.41	40.6	0.08	21.83	-338	O2: 18.2% H2S: 35.5 ppm. CO:
1140	13.35	200 ml/m	0.8	7.62	3.41	37.9	0.06	21.86	-341	
										Cloudy H2O w/ very
										PUNGENT ODOR. VERY
										FINE BLACK PARTICLES
										FLOATING IN H2O.
										GASIONS WELL.

Total Volume Purged: 4.4 (Liters)

Total Purge Time: 47 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1118 Purge Stop: 1205

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: IW-70-FSB216-132	Sample ID:	Type:	Type:
Sample Time: 1203	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# PMW 07B

AIS-TN&A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-15-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 90'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H: 1962

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.26 ≈ 2.3 L.

ARRIVE @ 1010

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1025	9.91	200 ml/m.	Ø	—	—	—	—	—	—	PUMP START.
1037	10.21	200 ml/m	2.4	8.40	0.606	2.90	0.22	21.53	-256	
1041	10.21	200 ml/m	0.8	8.41	0.604	3.25	0.19	21.51	-255	PID: 0.0 ppm CH4: 0% LEL
1045	10.21	200 ml/m	0.8	8.41	0.603	3.05	0.16	21.50	-254	H2S: 0 ppm CO: 0 ppm.
1049	10.21	200 ml/m	0.8	8.41	0.601	1.52	0.14	21.45	-253	

Total Volume Purged: 4.8 (Liters)

Total Purge Time: 40 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1025 Purge Stop: 1105

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM). Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: PMW-70-PMW07B-131	Sample ID:	Type:	Type:
Sample Time: 1103	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# PMW07A

AIS-TN&A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-15-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 70'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H: 1526

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 1.82 ≈ 1.9L. APPROX @ 0630

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µS/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0911	9.85	200 mL/min	Ø	—	—	—	—	—	—	PUMPS START
0921	9.93	200 mL/min	2.0	7.67	3.78	-0.21	0.20	21.47	-341	
0925	9.93	200 mL/min	0.8	7.72	3.72	-1.54	0.16	21.51	-344	PID: 0.0ppm, CH4: 0% LEL
0929	9.93	200 mL/min	0.8	7.76	3.60	-1.67	0.14	21.49	-347	H2S: 0.0ppm, CO: 0ppm
0933	9.93	200 mL/min	0.8	7.78	3.52	-1.51	0.09	21.49	-349	
										CLEAR H2O w/
										VERY STRONG ODOR.
										VERY FINE BLACK
										PARTICLES FREELY FLOATING
										IN H2O

Total Volume Purged: 4.4 (Liters)

Total Purge Time: 37 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0911

Purge Stop: 0948

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW07A-130	Sample ID:	Type: TRIP BLANK	Type:
Sample Time: 0947	Sample Time:	Sample ID: TB-70-TB-129	Sample ID:
No. of Containers: 21 (MS/MSD)	No. of Containers:	Sample Time: 0730	Sample Time:
		No. of Containers: 2	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# 12B

AISHN A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-16-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 120'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H]: 2616

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.91 ≈ 3.0 L.

ARRIVE @ 1440

PURGE METHOD

☐ Bailer – Type: _____

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (~~µs/cm~~ S/m)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1452	10.86	200 ml/m	0	—	—	—	—	—	—	PUMP START
1507	11.06	200 ml/m	3.0	7.97	0.604	2.75	0.17	21.78	-266	
1511	11.06	200 ml/m	0.8	7.97	0.600	2.64	0.15	21.75	-263	PID: 0.7 ppm, CH4: 0% LEL
1515	11.07	200 ml/m	0.8	7.97	0.598	2.69	0.13	21.69	-261	O2: 7.1%, H2S: 0 ppm, CO: 0
1519	11.08	200 ml/m	0.8	7.96	0.594	2.66	0.11	21.68	-259	
										CLEAR H2O w/
										SLIGHT ODOR
										*HAD TO SUMP TANKS.

Total Volume Purged: 5.4 (Liters)

Total Purge Time: 49 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1452 Purge Stop: 1541

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: MW-70-MW12B-142	Sample ID:	Type:	Type:
Sample Time: 1540	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# 12A

AISTEN-A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-16-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 90'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 1,962

[TV (mL) = 155 X D^2H

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2,262 ≈ 2.3 L ARRIVED 1315

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1325	10.63	200 ml/m	Ø	—	—	—	—	—	—	PURGE START
1337	10.73	200 ml/m	2.4	8.08	0.432	2.83	0.35	21.87	-235	
1341	10.73	200 ml/m	0.8	8.04	0.437	3.56	0.25	21.75	-233	PID: 0.0 ppm. CH_4: 0%
1345	10.73	200 ml/m	0.8	8.05	0.437	3.53	0.24	21.74	-233	H_2S: 0 ppm CO: 0 ppm
1349	10.73	200 ml/m	0.8	8.05	0.434	4.10	0.23	21.72	-232	
										CLEAR H_2O w/
										SLIGHT ODOR.

Total Volume Purged: 4.8 (Liters) Total Purge Time: 47 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1325 Purge Stop: 1412

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-MW12A	Sample ID: EB-70-FD-141	Type:	Type:
Sample Time: 1410	Sample Time: 1430	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers: 10	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# pmw11B

AISHN & A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-16-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 120'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL):

[TV (mL) = 155 X D^2H: 2616

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.91 to 3.0 L.

ARRIVED. 1049

PURGE METHOD

☐ Bailer – Type: _____

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity ~~(µs/cm)~~ S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1055	10.71	200 mL/m	0	—	—	—	—	—	—	PUMPS START
1110	10.82	200 mL/m	3.0	8.20	0.650	3.17	0.16	22.10	-247	
1114	10.82		0.8	8.27	0.652	3.14	0.13	22.14	-251	PID: 0.0 CH4: 11% LL
1118	10.82		0.8	8.28	0.657	3.88	0.11	22.09	-252	O2: 19.3% H2S: 0ppm CO: 0ppm
1122	10.82		0.8	8.27	0.661	2.94	0.08	22.12	-251	

Total Volume Purged: 5.4 (Liters)

Total Purge Time: 40 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1055

Purge Stop: 1135

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-pmw11B-139	Sample ID:	Type:	Type:
Sample Time: 1134	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# pMW11A

AECOM & A Joint Venture
1650 Palma Drive, Suite 207
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Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-16-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 90'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 1,962 mL

[TV (mL) = 155 X D^2H

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2,262 mL ≈ 2.3 L

ARRIVED AT 0945

PURGE METHOD

☐ Bailer – Type: _____

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity (~~µs/cm~~)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1003	11.58	200 ml/min	Ø	—	—	—	—	—	—	PUMPER STARTS
1015	12.81	200 ml/min	2.4	8.07	4.00	4.16	0.13	21.91	-237	
1019	12.92	200 ml/min	0.8	8.05	4.00	4.51	0.10	21.99	-237	PID: 6.7 ppm CH4: 2% LEL
1023	12.96	200 ml/min	0.8	8.06	3.99	4.06	0.09	21.94	-237	H2S: 0 ppm CO: 0 ppm
1027	13.04	200 ml/min	0.8	7.98	3.99	3.85	0.10	21.94	-230	
										CLEAR H2O w/ STRONG ODOR

Total Volume Purged: 4.8 (Liters)

Total Purge Time: 40 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1003 Purge Stop: 1043

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-pMW11A-138	Sample ID:	Type:	Type:
Sample Time: 1042	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# 43 B

AISTNA Joint Venture
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-16-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 139'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 3,030 mL

[TV (mL) = 155 X D^2H

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 3,330 mL ≈ 3.3 L

ARRIVED 0830

PURGE METHOD

☐ Bailer – Type: _____

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m ~~Conductivity (µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0858	13.74	200 m/m	Ø	—	—	—	—	—	—	PUMPS START
0915	13.74	200 m/m	3.4	8.15	0.535	2.99	0.29	21.21	-159	
0919	13.74	200 m/m	0.8	8.17	0.533	2.88	0.26	21.16	-159	PID: 0.0 ppm, CHy: 0% LL
0923	13.74	200 m/m	0.8	8.20	0.531	3.06	0.21	21.20	-159	H2S: 0.0 ppm, CO: 0 PPM
0927	13.74	200 m/m	0.8	8.22	0.530	3.08	0.19	21.20	-159	
										Clear H2O w/
										Slight odor

Total Volume Purged: 5.8 (Liters) Total Purge Time: 40 min. (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0858 Purge Stop: 0938

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-43B-137	Sample ID:	Type: Trip Blank	Type:
Sample Time: 0930	Sample Time:	Sample ID: IR-70-TB-136	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time: 0800	Sample Time:
		No. of Containers: 2	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MNA 14

AECOM & A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-17-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 120'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 2,616

[TV (mL) = 155 X D^2H

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2,916 ≈ 3L

ARRIVED 1455

PURGE METHOD

☐ Bailer – Type: _____

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity (~~µs/cm~~)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1501	11.74	200	Ø	—	—	—	—	—	—	PUMP START.
1516	11.96	200	3.0	8.65	0.396	2.67	0.18	21.42	-220	
1520	11.96	200	0.8	8.65	0.396	2.66	0.15	21.42	-219	PID: 0ppm. Clay 0% Odor
1524	11.96	200	0.8	8.65	0.396	2.69	0.13	21.43	-217	H2S: 0ppm. CO: 0ppm
1528	11.96	200	0.8	8.65	0.396	2.63	0.11	21.42	-216	

Total Volume Purged: 5.4 (Liters)

Total Purge Time: 39 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1501 Purge Stop: 1540

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: MW-70-MNA14-151	Sample ID:	Type:	Type:
Sample Time: 1539	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MNA16

AECOM & A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-17-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 146'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 3183

[TV (mL) = 155 X D^2H]

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 3.48 ≈ 3.5L.

Arrived. 1335

PURGE METHOD

☐ Bailer – Type: _____

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity ~~(µs/cm)~~ S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1352	11.48	200	Ø	—	—	—	—	—	—	pump start.
1410	11.50	200	3.6	8.16	0.942	2.17	0.24	21.05	-217	
1414	11.50	200	0.8	8.26	0.932	2.22	0.15	21.04	-220	PID: 0ppm CH4: 0%LEL
1418	11.50	200	0.8	8.25	0.927	2.24	0.15	21.05	-218	H2S: 0ppm CO: 0ppm
1422	11.50	200	0.8	8.26	0.930	2.11	0.09	21.08	-215	
										Clear H2O w/
										strong odor

Total Volume Purged: 6.0 (Liters)

Total Purge Time: 48 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1352 Purge Stop: 1440

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-MNA16-149	Sample ID: IR-70-FD-150	Type:	Type:
Sample Time: 1438	Sample Time: 1500	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers: 7	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MNA 15

AECOM & JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-17-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 145'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 3,160

[TV (mL) = 155 X D^2H

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 3,460 ≈ 3.5 L

* VAULT FILLED W/ DIRT FROM GOPHERS/SQUIRRELS, HAD TO DIG IT OUT

ARRIVED 1210

PURGE METHOD

☐ Bailer – Type: _____

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity ~~(µs/cm)~~ S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1230	8.45	200	Ø	—	—	—	—	—	—	PURGE START.
1248	8.52		3.6	8.17	1.44	2.42	0.26	20.92	-205	
1252	8.53		0.8	8.18	1.43	2.37	0.23	20.90	-206	PID: 1.9 ppm Clty 0% LEL
1256	8.53		0.8	8.19	1.43	2.15	0.21	20.93	-207	H_2S: 0 ppm CO: 0 ppm
1300	8.53		0.8	8.19	1.42	2.16	0.19	20.96	-207	
										Clear H_2O w/ STRONG ODOR

Total Volume Purged: 6.0 (Liters)

Total Purge Time: 35 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1230 Purge Stop: 1305

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: MW-70-MNA15-148	Sample ID:	Type:	Type:
Sample Time: 1304	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 3	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MNA12

AISTEN & JOHNS VENTURA
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-17-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 80'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL)

[TV (mL) = 155 X D^2H: 1744

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.04 ≈ 2.0L.

ARRIVED AT 1050

PURGE METHOD

☐ Bailer – Type: _____

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1100	8.81	200 ml/min	Ø	—	—	—	—	—	—	PURGE START
1110	8.85	200	2.0	8.25	1.25	3.47	0.36	21.64	-205	
1114	8.85	200	0.8	8.24	1.24	3.49	0.33	21.63	-203	PID: 0.0 ppm Cl2: 0% LEL
1118	8.85	200	0.8	8.24	1.22	2.65	0.23	21.65	-202	H2S: 0 ppm CO: 0 ppm
1122	8.85	200	0.8	8.24	1.22	2.55	0.20	21.65	-202	
										Yellowish-Cloudy H2O w/ STRONG ODOR.

Total Volume Purged: 4.4 (Liters) Total Purge Time: 40 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1100 Purge Stop: 1140

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: MW-70-MNA12-146	Sample ID: IN-70-FD-147	Type:	Type:
Sample Time: 1138	Sample Time: 1155	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers: 7	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# SHB217

AISTEN & A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-17-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 118'
D - Diameter of discharge tubing (inches): 0.375
TV - Volume of tubing (mL)
[TV (mL) = 155 X D^2H: 2572
BV - Bladder volume (mL): 300
Sampling system volume (mL) [SSV = TV + BV]: 2.872 ≈ 2.9L.

* VAULT WAS FILL UP WITH DIRT FROM GOPHERS/SQUIRRELS. HAD TO DIG IT OUT. ALSO HAD ANT NEST IN DIRT, I HAD TO REMOVE CAREFULLY.

ARRIVED @ 0630

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	~~Conductivity (µs/cm)~~ S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0915	11.70	200 m/m	Ø	—	—	—	—	—	—	PURGE START
0930	11.72	200	3.0	8.17	1.18	3.22	0.25	21.20	-200	
0934	11.72	200	0.8	8.20	1.18	3.06	0.19	21.21	-202	PID: 0.0 ppm, CH4 0% LEL
0938	11.72	200	0.8	8.20	1.18	3.32	0.17	21.20	-203	H2S: 0 ppm CO: 0 ppm
0942	11.72	200	0.8	8.22	1.18	3.50	0.14	21.21	-204	
										CLEAR H2O w/
										STRONG ODOR, VERY
										FINE BLACK PARTICLES
										FLOATING IN H2O

Total Volume Purged: 5.4 (Liters) Total Purge Time: 43 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0915 Purge Stop: 1000

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: IR-70-SHB217-1486	Sample ID: IR-70-FD-145	Type: TRIP BLANK	Type:
Sample Time: 0958	Sample Time: 1020	Sample ID: IR-70-TB-143	Sample ID:
No. of Containers: 11	No. of Containers: 10	Sample Time: 0600	Sample Time:
		No. of Containers: 2	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# SSB109

AECOM
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-18-2011

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 146'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 3,182

[TV (mL) = 155 X D^2H

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 3,482 ≈ 3.5L ARRIVED AT 1513

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity (~~us/cm~~)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1524	11.57	200	0	—	—	—	—	—	—	PUMP START
1542	12.13	200	3.6	7.19	1.78	16.8	0.06	20.81	-296	
1546	12.13	200	0.8	7.18	1.76	17.5	0.04	20.75	-296	PID: 0.0, Clay: 0%, 1
1550	12.18	200	0.8	7.18	1.75	17.4	0.04	20.70	-295	H_2S: 0 ppm Cl: 0 ppm
1554	12.21	200	0.8	7.18	1.71	16.4	0.03	20.68	-293	
										CLEAR H_2O w/ STRONG ODOR
										GASING WELL.

Total Volume Purged: 6.0 (Liters) Total Purge Time: 50 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1524 Purge Stop: 1614

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: ~~[illegible]~~	Sample ID:	Type:	Type:
Sample Time: 1613	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# 14B

1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-18-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 154

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 3,357

[TV (mL) = 155 X D^2H

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 3,657 ≈ 3.6 L

ARRIVED @ 1348

PURGE METHOD

☐ Bailer – Type: _____

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1405	9.77	200 mL/m	Ø	—	—	—	—	—	—	PUMPS START
1423	10.03	200	3.6	7.77	1.23	4.53	0.10	21.26	-265	
1427	10.03	200	0.8	7.74	1.23	3.85	0.08	21.21	-262	PID: 1.4 ppm Clay Odor
1431	10.03	200	0.8	7.72	1.22	3.69	0.06	21.23	-260	H2S: 0 ppm CO: 0 ppm
1435	10.03	200	0.8	7.72	1.24	3.40	0.04	21.18	-259	
										Cloudy H2O w/ Strong odor

Total Volume Purged: 6.0 (Liters)

Total Purge Time: 48 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1405

Purge Stop: 1453

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW148-156	Sample ID:	Type:	Type:
Sample Time: 1452	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# 14A

1650 Palma Drive, Suite 207
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Telephone: (805) 639-0884
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Project Name: FISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-18-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 133'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 2898

[TV (mL) = 155 X D^2H]

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 3.19 ≈ 3.2L. ARRIVED @ 1117

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (ml /min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(us/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1130	9.48	200 m/m	Ø	—	—	—	—	—	—	PUMP START
1146	9.80	200	3.2	7.40	0.671	5.02	0.11	20.68	-241	
1150	9.80	200	0.8	7.39	0.666	3.79	0.10	20.64	-240	PID: 27.3, CH4: 0%LEL
1154	9.80	200	0.8	7.40	0.659	3.56	0.06	20.67	-238	H2S 0ppm CO: 0ppm
1158	9.80	200	0.8	7.38	0.650	4.90	0.04	20.71	-236	
										CLOUDY H2O w/ STRONG ODOR

Total Volume Purged: 5.4 (Liters) Total Purge Time: 40 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1130 Purge Stop: 1210

Pump Control Settings:
200 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): ____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW14A-155	Sample ID:	Type:	Type:
Sample Time: 1209	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# 13B

1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639 0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-18-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 150'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 3270

[TV (mL) = 155 X D²H]

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 3.56 ≈ 3.6 L.

ANNULUS @ 1000

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (~~µS/cm~~ S/m)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1014	9.58	200 s/m	Ø	—	—	—	—	—	—	PUMPS START.
1032	9.61	200	3.6	8.38	1.40	2.99	0.09	20.42	-217	
1036	9.61	200	0.8	8.38	1.40	2.98	0.06	20.43	-217	PID: 5.3 CH4: 0% LEL
1040	9.61	200	0.8	8.40	1.43	3.00	0.03	20.41	-217	H2S: 0ppm CO: 0ppm
1044	9.61	200	0.8	8.40	1.45	2.91	0.04	20.40	-217	
										CLEAR Hazel STRONG ODOR

Total Volume Purged: 6.0 (Liters)

Total Purge Time: 42 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1014

Purge Stop: 1056

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-MW13B-154	Sample ID:	Type:	Type:
Sample Time: 1055	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# 13A

ARCADIS U.S., Inc.
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-18-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 130'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 2834

[TV (mL) = 155 X D^2H

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 3.13 ≈ 3.2L. Arrived @ 0627

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0908	9.59	200 ml/min	Ø	—	—	—	—	—	—	PUMPS START
0924	9.70	200	3.2	8.25	0.769	3.01	0.15	20.11	-165	
0928	9.70	200	0.8	8.27	0.768	3.00	0.15	20.14	-166	PID: 1.5 ppm, Clty: Odor
0932	9.70	200	0.8	8.29	0.757	3.02	0.09	20.22	-168	H2S: 0 ppm LEL: 0 ppm
0936	9.70	200	0.8	8.30	0.754	3.01	0.10	20.17	-169	
										Clear H2O w/
										STRONG ODOR

Total Volume Purged: 5.6 (Liters) Total Purge Time: 38 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0908 Purge Stop: 0946

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW13A-153	Sample ID:	Type: TRIP BLANK	Type:
Sample Time: 0945	Sample Time:	Sample ID: SA-70-TB-153	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time: 0800	Sample Time:
		No. of Containers: 2	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# SHB-310

1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-21-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 110'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (ml): 2,398

[TV (mL) = 155 X D²H]

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2,698 ≈ 2.7L

* NOTICED VERY FINE BLACK PARTICLES FLOATING IN WATER. CONTINUED WELL

Arrival: 1225

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity (~~µs/cm~~)	(NTU) Turbidity (~~NTU~~)	D.O. (mg/L)	Temp (°C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1245	N/A	200 mL/m	Ø	—	—	—	—	—	—	Pump start.
1259		200	2.8	5.67	0.925	-0.83	0.80	23.31	-190	
1303		200	0.8	5.67	0.924	-0.74	1.08	22.36	-191	PID: 115.3 ppm, Oly: 6% LI
1307		200	0.8	5.67	0.932	+2.54	1.17	22.34	-191	O2: 20.9%, H2S: 0.0 ppm, CO: 2
1311	*	200	0.8	5.67	0.943	11.1	1.39	22.35	-191	
										* Stable water level unable to change. Oil causes interference w/ readings. Clear H2O w/ faint odor. Gassing well.

Total Volume Purged: 5.2 (Liters)

Total Purge Time: 50 min. (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1245 Purge Stop: 1335

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: IW-70-SHB310-761	Sample ID:	Type:	Type:
Sample Time: 1334	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# SS3119

1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-21-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 145' — SCREEN INTERVAL = 125'-165'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 3160

[TV (mL) = 155 X D^2H]

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 3.46 ≈ 3.5 L. — ARRIVED @ 0930

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: PORTABLE QED ~~Dedicated~~ Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity (µs/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1036	11.73	200 ml/min	Ø	—	—	—	—	—	—	PUMP START
1054	11.85	200	3.6	7.22	0.762	13.1	0.39	21.43	-181	
1058	11.85	200	0.8	7.24	0.768	12.0	0.36	21.45	-188	PID: 0.0, CH4: >100% LEL, O2: 18.
1102	11.85	200	0.8	7.27	0.776	12.0	0.37	21.54	-192	H2S: 0.0 ppm, CO: 0 ppm.
1106	11.85	200	0.8	7.26	0.785	11.5	0.26	21.59	-195	
										Clear like w/
										strong odor, cloudy
										water

Total Volume Purged: 6.0 (Liters) — Total Purge Time: 60 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1036 — Purge Stop: 1146

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) — Refill time (sec) 10 — Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: IW-70-SS3119-163	Sample ID:	Type: TRIP BLANK	Type:
Sample Time: 1145	Sample Time:	Sample ID: IW-70-TB-162	Sample ID:
No. of Containers: 21 MS/MSD	No. of Containers:	Sample Time: 0830	Sample Time:
		No. of Containers: 2	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW17

1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No. 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-21-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 145'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 3,160

[TV (mL) = 155 X D^2H

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 3,460 ≈ 3.5L ARRIVED - 1105

PURGE METHOD

☐ Bailer - Type: ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	(NTU) Turbidity ~~(NTU)~~	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1115	10.76	200 mL/min	Ø	—	—	—	—	—	—	pump start.
1133	12.81	200	3.6	8.27	2.80	3.21	0.23	20.90	-231	
1137	12.81	200	0.8	8.28	2.80	3.40	0.22	21.05	-230	PID: 0ppm CH4: 0% LEL
1141	12.81	200	0.8	8.30	2.79	3.03	0.20	21.13	-229	H2S: 0ppm, CO: 0ppm
1145	12.81	200	0.8	8.29	2.77	2.92	0.17	21.18	-229	
										Clearing H2O w/ strong odor.

Total Volume Purged: 6.0 (Liters) Total Purge Time: 40 min. (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1115 Purge Stop: 1155

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-MW17-160	Sample ID:	Type:	Type:
Sample Time: 1154	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-15

ARCADIS U.S., INC.
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-21-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 166'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 3618

[TV (mL) = 155 X D^2H

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 3.91 ≈ 3.9L. ARRIVED @ 0915

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1000	12.50	200 m/m	Ø	—	—	—	—	—	—	PUMPS START.
1020	12.56	200 m/m	4.0	8.14	2.89	3.05	0.30	19.81	-60	
1024	12.56	200 m/m	0.8	8.16	2.87	2.97	0.27	19.78	-67	PID: 0.0 ppm CH4: 0% LEL
1028	12.56	200 m/m	0.8	8.20	2.87	2.99	0.21	19.98	-74	H2S: 0 ppm CO: 0 ppm
1032	12.56	200 m/m	0.8	8.20	2.86	3.00	0.20	20.07	-77	
										CLEAR H2O w/
										SLIGHT ODOR

Total Volume Purged: 6.4 (Liters) Total Purge Time: 45 min. (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1000 Purge Stop: 1045

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-15-159	Sample ID:	Type: TRIP BLANK	Type:
Sample Time: 1044	Sample Time:	Sample ID: EW-70-FD-158	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time: 0830	Sample Time:
		No. of Containers: 2	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# SAT 35

ALISTON & JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-22-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 40'
D - Diameter of discharge tubing (inches): 0.375
TV - Volume of tubing (mL): 872
[TV (mL) = 155 X D^2H
BV - Bladder volume (mL): 300
Sampling system volume (mL) [SSV = TV + BV]: 1.2 L.

— NOTE APPX 12' OF TUBING IS OUTSIDE OF WELL. THIS MAY CAUSE TEMP. INACCURACIES FROM HOMEBA

ARRIVES 1520

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1543	9.94	200 mL/m	Ø	—	—	—	—	—	—	PUMPS STARTED.
1549	10.96	200	1.2	7.66	0.791	10.10	0.59	21.08	-332	
1553	11.11	200	0.8	7.66	0.787	9.75	0.55	21.07	-333	PID: 175.3 ppm CH4: 71.00%
1557	11.44	200	0.8	7.66	0.786	10.17	0.50	20.94	-332	O2: 16.3%, H2S: 100 ppm, CO: 4
1601	11.78	200	0.8	7.65	0.781	10.23	0.46	21.08	-329	
										BLACK/DARK H2O w/
			2.4							PUNGENT ODOR.

Total Volume Purged: 3.6 (Liters) Total Purge Time: 41 min. (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1543 Purge Stop: 1624

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: IW-70-SAT 35-167	Sample ID:	Type:	Type:
Sample Time: 1623	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# SHB311

1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-22-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 110'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 2,398

[TV (mL) = 155 X D^2H

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV] 2,698 ≈ 2.7L

SCREEN INTERVAL 110'

NOTE = APPROX 55' OF TUBING IS HANGING OUT OF THE WELL AS TOTAL LENGTH IS 16' BUT PUMP SET AT 110'. THIS MAY CAUSE TEMP. INCONSISTANCIES AMONG READINGS.

ARRIVED @ 1233

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity ~~(µs/cm)~~ S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1300	11.17	200 ml/m	Ø	—	—	—	—	—	—	pump start.
1314	12.24	200	2.8	7.14	0.181	15.2	0.57	21.66	-131	
1318	12.44	200	0.8	7.09	0.174	14.4	0.54	21.82	-129	PID: 0.6 ppm, CH4: >100% LEL
1322	12.70	200	0.8	7.07	0.182	14.5	0.50	21.79	-127	O2: 10.1%, H2S: 0 ppm, CO: 17 ppm
1326	13.03	200	0.8	7.06	0.174	14.5	0.48	21.98	-126	

Total Volume Purged: 5.2 (Liters)

Total Purge Time: 48 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1300 Purge Stop: 1348

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: IW-70-SHB311-164	Sample ID:	Type:	Type:
Sample Time: 1347	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

11

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# 43A

AMSTIN-A JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-23-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 96'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 2093

[TV (mL) = 155 X D^2H

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.39 ≈ 2.4L. APPROX @ 1010

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1030	12.99	200 m/m	Ø	—	—	—	—	—	—	PUMPS STOP.
1042	13.02	200	2.4	14.46	0.633	25.0	0.51	21.77	-220	
1046	13.01	200	0.8	14.00	0.545	30.8	0.49	21.83	-215	PID 0.0 ppm CH4: 0%
1050	13.02	200	0.8	12.44	0.542	49.1	0.41	21.78	-199	H2S 0 ppm CO: 0 ppm
1054	13.02	200	0.8	10.38	0.587	58.7	0.34	21.81	-206	
1058	13.02	200 m/m	0.8	10.09	0.592	27.8	0.34	21.56	-231	Cloudy H2O w/
1106	13.04	200 m/m	1.6	9.54	0.607	15.4	0.31	21.89	-230	STRONG ODD. ODOR
1110	13.04	200 m/m	0.8	9.40	0.614	11.4	0.30	21.86	-225	NOT LIKE METHANE BUT
1114	13.08	200 m/m	0.8	9.30	0.616	9.48	0.26	21.90	-220	MORE LIKE STRONG HOT SOIL. SLIGHTLY GAS ODOR.

Total Volume Purged: 8.8 (Liters) Total Purge Time: 60 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1030 Purge Stop: 1130

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-43A-170	Sample ID:	Type: EQUIP. BLANK	Type:
Sample Time: 1128	Sample Time:	Sample ID: IR-70-EB-171	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time: 1150	Sample Time:
		No. of Containers: 10	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# 70-03

AECOM & JOINT VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-23-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 25'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 543

[TV (mL) = 155 X D^2H

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 0.841 L x 1.0 Arrives @ 0820

PURGE METHOD

☐ Baller – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	~~(µs/cm)~~ S/m Conductivity	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0850	9.03	~~[illegible]~~ 200	∅	—	—	—	—	—	—	Pump START.
0900	10.18	200	1.0	7.81	0.229	8.83	0.51	24.05	-64	
0904	10.26	200	0.8	7.84	0.229	8.47	0.49	24.06	-67	PID: 0.0 ppm, CH4: 0 ppm
0908	10.42	200	0.8	7.85	0.229	7.87	0.47	24.09	-75	H2S: 0 ppm, CO: 0 ppm.
0912	10.58	200	0.8	7.86	0.227	7.59	0.44	24.15	-77	
										Clear yellowish tint
										H2O w/ SLIGHT odor

Total Volume Purged: 3.4 (Liters) Total Purge Time: 28 min. (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0850 Purge Stop: 0918

Pump Control Settings:
_____ mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-03-169	Sample ID:	Type: TRIP BLANK	Type:
Sample Time: 0917	Sample Time:	Sample ID: ~~TB-70-03~~-168	Sample ID:
No. of Containers: 3	No. of Containers:	Sample Time: 0800	Sample Time:
		No. of Containers: 2	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# 70-14

AECOM
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-23-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 165

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 3596

[TV (mL) = 155 X D^2H]

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 3.89 ~~4~~ 3.91.

Arrived @ 1200

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (~~µs/cm~~ S/m)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1217	12.91	200 mL/m	Ø	—	—	—	—	—	—	pump on, start
1237	12.99	200	4.0	8.15	0.405	4.04	0.66	21.87	-101	
1241	12.99	200	0.8	8.13	0.409	3.87	0.63	21.87	-105	PID: 0 ppm Oxy: 0%
1245	12.99	200	0.8	8.13	0.416	4.03	0.56	21.86	-110	H2S: 0 ppm CO: 0 ppm.
1249	13.00	200	0.8	8.11	0.422	3.93	0.53	21.77	-113	
										Clear H2O w/ slight odor

Total Volume Purged: 6.4 (Liters)

Total Purge Time: 50 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1217

Purge Stop: 1307

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-14472	Sample ID:	Type:	Type:
Sample Time: 1306	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-49

AISIN-AIONI VENTURE
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-28-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 155'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 3,379

[TV (mL) = 155 X D^2H

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 3,679 ≈ 3.6L ARRIVE @ 1300

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/M Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1:48	9.14	200	Ø	—	—	—	—	—	—	PURGE START.
2:06	9.19	200	3.6	8.44	0.641	9.21	0.66	21.33	-202	
2:10	9.19	200	0.8	8.45	0.638	8.81	0.63	21.28	-205	PID: 0, CH_4: 0%, O_2: 20.8
2:14	9.19	200	0.8	8.46	0.635	8.66	0.60	21.27	-208	H_2S: 0, CO: 0.
2:20	9.19	200	0.8	8.47	0.625	8.71	0.52	21.28	-211	

Total Volume Purged: 6.0 (Liters) Total Purge Time: 60 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1:48 Purge Stop: 1438

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / Equipment)*
Sample ID: MW-70-49-176	Sample ID:	Type:	Type: Equip. BLANK
Sample Time: 1438	Sample Time:	Sample ID:	Sample ID: IR-70-EB-177
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time: 1500
		No. of Containers:	No. of Containers: 10

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# FSB229

ARCADIS U.S., INC.
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-28-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 83'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 1809

[TV (mL) = 155 X D^2H

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: ≈ 2.1 L.

ARRIVE @ 1130

PURGE METHOD

☐ Bailer – Type: _____

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity (~~µs/cm~~)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1153	8.10	200 mL/m	Ø	—	—	—	—	—	—	purge start.
1204	8.19	200	2.2	7.19	0.382	16.9	0.75	22.80	-90	
1208	8.19	200	0.8	7.18	0.385	15.5	0.69	22.86	-89	PID: 0, CH4: 100%, O2: 14.8;
1212	8.19	200	0.8	7.19	0.380	16.6	0.65	22.68	-89	H2S: 0, CO: 0
1216	8.19	200	0.8	7.18	0.379	16.0	0.60	22.74	-88	
										Cloudy H2O w/
										Sulfur odor
										Gassing well.

Total Volume Purged: 4.6 (Liters)

Total Purge Time: 50 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1153

Purge Stop: 1243

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: Tw-70-FSB229-175	Sample ID:	Type:	Type:
Sample Time: 1242	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# RDO-4

AECOM
1650 Palma Drive, Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No: N62473-09-D-2610 (DO No.: 0006)

Sampled By: Chase Brogdon, Sree Akkenapally

Date: 11-28-11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 83'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 1809

[TV (mL) = 155 X D^2H

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2109 ≈ 2.1L. ARRIVED @ 0925

PURGE METHOD

☐ Bailer – Type:

☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity ~~(µs/cm)~~ S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1020	5.01	200 mL/m	Ø	—	—	—	—	—	—	PUMPER START
1031	5.05	200	2.2	10.65	0.371	65.4	0.69	22.79	-170	
1035	5.05	200	0.8	10.65	0.372	75.3	0.64	22.87	-177	PID: 28.6, Exp: >100% LEL
1039	5.05	200	0.8	10.58	0.379	87.0	0.59	22.91	-184	O2: 17.8%, H2S: 0, CO: 0
1043	5.05	200	0.8	10.56	0.374	97.9	0.54	22.81	-191	
										Cloudy H2O w/
										SLIGHT ODOR
										GASSIOUS WELL.

Total Volume Purged: 4.6 (Liters)

Total Purge Time: 35 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1020 Purge Stop: 1055

Pump Control Settings:
500 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW Yard Poly Tank

Purge water disposal:

WELL SAMPLING

Sample Depth in feet (BTOC):

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-RDO-4-174	Sample ID:	Type: TRIP BLANK	Type:
Sample Time: 1054	Sample Time:	Sample ID: SW-70-TB-17B	Sample ID:
No. of Containers: 11	No. of Containers:	Sample Time: 0830	Sample Time:
		No. of Containers: 2	No. of Containers:

ORIGINAL FIELD RECORD

FIELD PURGE LOGS
JULY/AUGUST 2011 SAMPLING EVENT

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW01A

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B, ANDREW E.

Date: 07/27/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 31'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 4.359375

[TV (mL) = 155 X D^2H: 675.703125

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 0.975 L.

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/M Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0902	8.93	100 mL	Ø	—	—	—	—	—	—	PUMPS START @
0915	9.52		1.3	6.58	0.286	706.0	0.42	23.24	-233	PID: 13.7, CH4: 36%
0918	9.53		0.3	6.57	0.284	711.0	0.40	23.24	-233	H2S: 0.0 ppm, CO: 0 ppm
0921	9.55		0.3	6.57	0.282	693.0	0.40	23.25	-234	
0924	9.60		0.3	6.57	0.274	705.0	0.36	23.23	-235	- FINE FLOATING BLACK
0927	9.60		0.3	6.57	0.270	725.0	0.37	23.23	-236	PARTICULATES IN H2O
0930	9.61		0.3	6.57	0.265	723.0	0.35	23.23	-237	- CLEAR H2O w/ GREYISH
0932	9.61		0.2	6.57	0.264	723.0*	0.34	23.23	-236	HUE, STRONG ODOR
										* UNABLE TO STABILIZE
										TURB < 10 NTU.

Total Volume Purged: 3.0 (Liters) Total Purge Time: 30 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0902 Purge Stop: 0932

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: SDRW YARD TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: MW-70-PMW01A-001	Sample ID: _____	Type: _____	Type: _____
Sample Time: 0945	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: 8	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW01B

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
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Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B., ANDREW E.

Date: 07/27/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	50'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	7.03125
[TV (mL) = 155 X D^2H	1089.84375
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	1.38 L.

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1008	9.05	100mL	Ø	—	—	—	—	—	—	PURGE START.
1018	—		1.0	—	—	—	—	—	—	PID: 0.6, Clay: 0%
1021	—		0.3	—	—	—	—	—	—	H_2S: 00ppm, Co: 0ppm
1024	9.23		0.3	7.02	0.580	404.0	0.39	23.53	-158	
1027	9.25		0.3	6.93	0.575	563.0	0.32	23.51	-164	CLEAR H_2O, STRONG
1030	9.25		0.3	6.94	0.575	560.0	0.32	23.51	-166	ODOR
1033	9.25		0.3	6.94	0.573	564.0	0.29	23.52	-167	
1036	9.25		0.3	6.95	0.572	562.0*	0.27	23.50	-170	* UNABLE TO STABILIZE TURBITIY < 10 NTU

Total Volume Purged: 2.8 (Liters) Total Purge Time: 28 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1008 Purge Stop: 1037

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW yard TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: MW-70-PMW01B-002	Sample ID: _____	Type: _____	Type: _____
Sample Time: 1055	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: 8	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-27

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B., ANDREW C.

Date: 07/27/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	31'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	4.359375
[TV (mL) = 155 X D^2H	675.703125
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	0.975

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(us/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1105	9.17	100 mL	Ø	—	—	—	—	—	—	PURGE START
1115	9.20	↓	1.0	7.04	1.09	422.0	0.51	23.84	-107	CLEAR H_2O, SLIGHT ODOR
1118	9.22		0.3	7.04	1.09	428.0	0.45	23.76	-108	
1121	9.25		0.3	7.05	1.10	482.0	0.36	23.68	-110	PID: 18.4, CH_4: 20%
1124	9.26		0.3	7.09	1.09	572.0	0.34	23.67	-110	H_2S: 0.0 ppm, CO: 0 ppm
1127	9.29		0.3	7.05	1.08	579.0	0.28	23.69	-111	POOR WELL COND.,
1130	9.32		0.3	7.06	1.08	588.0	0.25	23.74	-112	LOTS OF RUST & CALCIUM
1133	9.35		0.3	7.07	1.06	688.0*	0.24	23.82	-113	BUILD-UP. HEAVY STORM
										TURBIDITY. 12" EMCO MW
					* UNABLE TO STABILIZE TURB. <10 NTU.					w/ 15/16" BOLTS. BOTH 6 WITHIN ONE STRIPE

Total Volume Purged: 2.8 (Liters) Total Purge Time: 28 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1105 Purge Stop: 1133

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW YARD TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-27-003	Sample ID:	Type:	Type:
Sample Time: 1153	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 24 (MS/MSD)	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-28

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B. & ANDREW E.

Date: 07/27/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 55'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 7.734375

[TV (mL) = 155 X D^2H: 1198.828125

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 1.49 L.

PURGE METHOD

☐ Bailer – Type: _____

☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/M Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1220	9.17	100 mL	Ø	—	—	—	—	—	—	PURGE START
1235	9.17		1.5	7.13	0.416	541.0	0.40	24.48	-128	PID: 0.0, CH4: 0%
1238	9.18		0.3	7.11	0.467	633.0	0.37	24.57	-137	H2S: 0ppm, CO: 0ppm
1241	—		0.3	7.11	0.465	719.0	0.31	24.24	-141	
1244	—		0.3	7.11	0.460	691.0	0.29	24.25	-144	CLEAR H2O w/ STRONG
1247	—		0.3	7.11	0.458	677.0	0.26	24.29	-145	ODOR
1250	9.19		0.3	7.11	0.457	626.0	0.25	24.33	-146	POOR WELL COND.
										RUST & CALCIUM BUILD-up
										OF WELL HEAD COMPONENTS
										RECOVERY STAINED TOWELS, VERY DIRTY

Total Volume Purged: 3.0 (Liters) Total Purge Time: 30 (Minutes) 12" EMCO MW

OBSERVATIONS DURING PUMPING

Purge Start: 1220 Purge Stop: 1250

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: Blue yellow TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
ple ID: MW-70-28-004	Sample ID:	Type:	Type:
Sample Time: 1305	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# ~~MW~~ IW-70-SAB06

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE BRADDON, ANDREW ESPINOZA

Date: 07/28/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	100'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	14.0625
[TV (mL) = 155 X D^2H	2179.6875
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.47 L.

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity ~~(µs/cm)~~ S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0905	9.21	100	Ø	—	—	—	—	—	—	• PURGE START
0925	9.29		2.5	6.51	0.200	~~—~~ *OOR	0.53	24.42	-95	• PID: 0.2, CH_4: 4%
0928	9.29		0.3	6.53	0.200	* OOR	0.47	24.45	-102	H_2S: 0.0 ppm, CO: 0 ppm
0931	9.29		0.3	6.54	0.202	986.0	0.43	24.49	-107	• CORROSION BUILD-UP
0934			0.3	6.55	0.204	986.0	0.39	24.51	-110	ON AIR HOSE CONNECTION, HAD
0935			0.1	6.54	0.204	977.0	0.40	24.51	-110	TO BRUSH & SCRAP IT CLEAN
										• CLOUDY GREYISH H_2O
										W/ A VERY STRANGE ODOR
										• EFFLUENT WAS,
										LOTS OF BUBBLES.

Total Volume Purged: 3.5 (Liters) Total Purge Time: 30 (Minutes)

• HAD TO PULL PUMP TO DISLODGE OBSTRUCTION: TUBING BELOW H_2O LEVEL CAUGHT W/ BLACK RESIDUE.

* OOR = OUT OF RANGE

OBSERVATIONS DURING PUMPING

Purge Start: 0905 Purge Stop: 0935

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW yellow TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
ple ID: IW-70-SAB06-005	Sample ID:	Type:	Type:
Sample Time: 0945	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW03B

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E, CHASE B.

Date: 7/28/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	95'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	13.359375
[TV (mL) = 155 X D^2H	2070.703125
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.37 L.

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (µs/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1006	9.04	100mL	Ø	—	—	—	—	—	—	PURGE START
1030	9.05	↓	2.4	7.64	0.160	936.0	0.30	24.78	-257	PID: 0.0, CH4: 0%
1033	9.05		0.3	7.65	0.158	254.0	0.25	27.72	-258	H2S: 0.0 ppm, CO: 0 ppm
1036	9.06		0.3	7.65	0.159	729.0	0.22	24.99	-258	
1039	9.07		0.3	7.66	0.156	783.0	0.21	24.98	-257	CLEAR H2O, STRONG
1042	9.07	↓	0.3	7.67	0.156	785.0	0.19	24.94	-257	ODOR

Total Volume Purged: 3.6 (Liters) Total Purge Time: 36 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1006 Purge Stop: 1042

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: DOW YARD TANK.

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
ple ID: MW-70-PMW03B-006	Sample ID:	Type:	Type:
Sample Time: 1100	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW03A

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
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Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B, ANDREW E.

Date: 07/29/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	75'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	10.546875
[TV (mL) = 155 X D^2H	1634.765625
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	1.93 L.

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0802	9.05	100	0	—	—	—	—	—	—	PUMP START
0812	9.07		1.0	6.60	0.188	OOR *	0.52	24.02	-110	PID: 0.0, CH4: 0%
0815	9.07		0.3	6.60	0.186	OOR *	0.51	24.05	-105	H2S: 0.0 ppm, CO: 0 ppm
0818	9.07		0.3	6.61	0.182	OOR *	0.42	24.03	-105	
0821	9.07		0.3	6.62	0.183	OOR *	0.39	24.00	-106	CLEAR, STRONG ODOR
0824	9.07		0.3	6.63	0.182	OOR *	0.34	24.07	-108	

Total Volume Purged: 2.2 (Liters) Total Purge Time: 22 (Minutes)

OBSERVATIONS DURING PUMPING

* OOR = OUT OF RANGE

Purge Start: 0802 Purge Stop: 0824

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IRP YARD TANK.

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
ple ID: MW-70-PMW03A-007	Sample ID: IR-70-GW-DUP-01	Type:	Type:
Sample Time: 0840	Sample Time: —	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers: 8	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# IW-70-SSB118

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E, CLAUDE B

Date: 07/29/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	100'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	14.0625
[TV (mL) = 155 X D^2H	2179.6875
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.47 (L.)

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0921	5.78	100mL.	Ø	—	—	—	—	—	—	PURGE START
0934	5.85	↓	1.3	6.84	0.299	OOR *	0.42	22.38	-112	PID: 0.0, CH_4: 2 %
0937	5.85		0.3	6.82	0.287	OOR *	0.40	22.50	-111	H_2S: 0.0 ppm, CO: 0 ppm
0940	5.90		0.3	6.77	0.291	OOR *	0.36	22.18	-107	
0943	5.95		0.3	6.74	0.281	OOR *	0.29	21.78	-105	CLEAR H_2O, STRONG ODOR
0946	5.97		0.3	6.73	0.254	OOR *	0.25	21.70	-103	BLACK PARTICULATES FREE
0949	5.99		0.3	6.73	0.289	OOR *	0.22	21.70	-103	FLOATING IN H_2O.

Total Volume Purged: 2.8 (Liters) Total Purge Time: 28 (Minutes)

OBSERVATIONS DURING PUMPING

* OOR = OUT OF RANGE

Purge Start: 0921 Purge Stop: 0949

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW YARD TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: IW-70-SSB118-008	Sample ID:	Type:	Type:
Sample Time: 1005	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW06B

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
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Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: Chase B., Andrew E.

Date: 07/29/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	96'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	13.5
[TV (mL) = 155 X D^2H	2092.5
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.39

PURGE METHOD

☐ Bailer – Type: _____

☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (µs/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1023	5.52	100 ml/min	Ø	–	–	–	–	–	–	PURGE START
1036	5.55		1.3	7.77	0.197	235.0	0.45	22.78	-204	PID: 34.5, CH4: 0 %
1039	5.55		0.3	7.85	0.198	245.0	0.38	22.96	-190	H2S: 0.0 ppm, CO: 0 ppm
1042	5.55		0.3	7.86	0.198	227.0	0.36	23.05	-186	
1045			0.3	7.89	0.199	229.0	0.34	23.06	-181	clear H2O;
1048			0.3	7.91	0.198	224.0	0.33	23.45	-177	strong odor.
1051			0.3	7.93	0.199	225.0	0.29	23.44	-173	
1054			0.3	7.94	0.199	224.0	0.26	23.45	-171	

Total Volume Purged: 3.1 (Liters) Total Purge Time: 31 min. (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1023 Purge Stop: 1054

Pump Control Settings:
25 mL Discharge @ 21 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW yard tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW06B-009	Sample ID:	Type:	Type:
Sample Time: 1105	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW06A

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77701

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E., CHAGE B.

Date: 07/29/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	75'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	10.546875
[TV (mL) = 155 X D^2H	1634.765625
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	1.93 L.

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1120	5.50	100mL/min	Ø	—	—	—	—	—	—	PURGE START
1131	5.50	↓	1.1	7.73	0.270	686.0	0.19	22.98	-219	PID: 0.0, CH4: 0 %
1134	5.50	↓	0.3	7.73	0.269	711.0	0.18	22.69	-215	H2S: 0.0 ppm, CO: 0 ppm
1137	↓	↓	0.3	7.74	0.269	OOR *	0.16	22.66	-214	
1140	↓	↓	0.3	7.74	0.269	OOR *	0.11	22.67	-214	CLEAR H2O w/
										SLIGHT ODOR

Total Volume Purged: 2.0 (Liters) Total Purge Time: 20 min (Minutes)

OBSERVATIONS DURING PUMPING

* OOR = OUT OF RANGE

Purge Start: 1120 Purge Stop: 1140

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: DOW YARD TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW06A-010	Sample ID:	Type:	Type:
Sample Time: 1145	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-38

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B., ANDREW E.

Date: 07/29/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 90'
D - Diameter of discharge tubing (inches): 0.375
TV - Volume of tubing (mL): 12.65625
[TV (mL) = 155 X D^2H]: 1961.71875
BV - Bladder volume (mL): 300
Sampling system volume (mL) [SSV = TV + BV]: 2.26 L.

• ON QED WELL CAP THE NIPPLE FOR THE AIR HOSE IS CRACKED & LEAKS AIR. THE AIR LINE WAS CUT IN AN ATTEMPT TO USE OUR AIR LINE QUICK CONNECT NIPPLE, BUT THE QUICK CONNECT IS NOT GRABBING THE AIR LINE. IT COULD JUST BE WORN DOWN & NEEDS TO BE REPLACE

PURGE METHOD

FOR A QUICK FIX WE WRAPPED AIR LINE W/ TEFLON TAPE, ITS HOLDING & WE ARE ABLE TO PURGE WELL, BUT WILL NEED TO BE FIXED.

☐ Bailer – Type: _____

☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (µs/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1238	8.13	100mL/min	Ø	—	—	—	—	—	—	PURGE START
1250	8.17	↓	1.2	7.02	0.256	OOR *	0.42	23.03	-161	PID: 0.0, CH_4: 0%
253	8.17		0.3	7.01	0.257	OOR	0.39	23.01	-158	H_2S: 0.0 ppm, CO: 0 ppm
1256	8.17		0.3	6.98	0.255	OOR	0.32	23.08	-154	
1259	↓	↓	0.3	6.98	0.257	885.0	0.30	23.10	-153	CLEAR H_2O w/
1302			0.3	6.96	0.256	842.0	0.28	23.10	-152	STRONG ODOR
1305			0.3	6.96	0.262	*4.94.0	0.24	23.12	-150	
						* COULD NOT STABILIZE TURBIDITY				
						< 10 NTU				

Total Volume Purged: 2.7 [redacted] (Liters) Total Purge Time: 27 min (Minutes)

OBSERVATIONS DURING PUMPING

* OOR = OUT OF RANGE

Purge Start: 1238 Purge Stop: 1305

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IBC WATER TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-38-011	Sample ID:	Type:	Type:
Sample Time: 1320	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW07A

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: Andrew E, Chase B.

Date: 8/01/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	70'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	9.84375
[TV (mL) = 155 X D^2H	1525.78125
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	1.82 L

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0833	9.55	100mL	Ø	—	—	—	—	—	—	PURGE START
0843	9.60		1.0	6.92	3.79	OOR *	0.51	22.46	-353	PID: 0.0 CH4: 2%
0846	9.60		0.3	6.94	3.70	OOR *	0.38	22.24	-361	H2S: 0ppm, CO: 0ppm
0849	9.60		0.3	6.98	3.58	OOR *	0.26	22.20	-368	
0852	9.60		0.3	6.99	3.58	OOR *	0.22	22.20	-369	- Cloudy H2O w/
0855	9.60		0.3	7.00	3.51	OOR *	0.18	22.29	-370	very strong rotten
										egg odor
										- H2O turned a
										blackish color

Total Volume Purged: 2.2 (Liters) Total Purge Time: 22 (Minutes)

OBSERVATIONS DURING PUMPING

* OOR = out of range

Purge Start: 0833 Purge Stop: 0855

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: Tank yard TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW07A-002	Sample ID:	Type:	Type:
Sample Time: 0907	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW07B

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B. ANDREW C.

Date: 08/02/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	90'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	12.65625
[TV (mL) = 155 X D^2H	1961.71875
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.26 L.

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0921	9.55	100mL	Ø	—	—	—	—	—	—	PUMP START
0931	9.66		1.0	7.59	0.585	217.0	0.38	22.33	-314	PID: 0.0, Clay: 0%
0934	9.74		0.3	7.55	0.596	219.0	0.23	22.32	-291	H_2S: 0ppm, CO: 0ppm
0937	9.78		0.3	7.57	0.613	233.0	0.18	22.37	-270	
0940	9.78		0.3	7.60	0.625	240.0	0.17	22.35	-263	CLOUDY H_2O, w/
0943			0.3	7.63	0.630	247.0	0.16	22.47	-259	STRONG PETROL LIKE ODOR
0946			0.3	7.63	0.632	255.0	0.15	22.58	-258	

Total Volume Purged: 2.5 (Liters) Total Purge Time: 25 min. (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0921 Purge Stop: 0946

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW yard tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW07B-013	Sample ID:	Type:	Type:
Sample Time: 1000	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# IW-70-SSB216

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4.77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW C. CARRY B.

Date: 8/1/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	86'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	12.09375
[TV (mL) = 155 X D^2H	1874.53125
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.17 L.

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity ~~(µs/cm)~~ S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1026	9.82	100 mL	Ø	—	—	—	—	—	—	- PURGE START.
1036	11.50	↓	1.0	6.95	3.55	OOR*	0.16	23.47	-333	* PID: 5.8, CH4: 1%
1039	11.55		0.3	6.96	3.57	OOR*	0.12	23.50	-335	H2S: 0.0ppm, CO: 0ppm
1042	11.59		0.3	6.97	3.67	OOR*	0.08	22.50	-335	* Cloudy H2O w/ powerful
1045	11.63		0.3	6.98	3.65	OOR*	0.05	22.32	-336	Rotten egg odor.
1048	11.67*		0.3	6.99	3.62	OOR*	0.02	22.30	-337	
1050	11.70		0.2	6.99	3.61	OOR	0.01	22.38	-338	* Nipple for air lose
	* FOAMY BLACK STUFF CAUSING				* EFFLUENT WELL, VERY					GUMMED up w/ Built up
	SPARATIC READING AT W.L.				BUBBLY DURING					EVOO & DIRT PREVENTING
	METER AS IT ~~[illegible]~~ GUMS UP									SOLID CONNECTION. HAD TO
	SENSOR									CLEAN, BEFORE USE.

Total Volume Purged: 2.4 (Liters) Total Purge Time: 24 min. (Minutes)

OBSERVATIONS DURING PUMPING

* OOR = OUT OF RANGE.

Purge Start: 1026 Purge Stop: 1050

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW yard TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: IW-70-SSB216-014	Sample ID:	Type:	Type:
Sample Time: 1102	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW08A

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B, ANDREW E

Date: 8/1/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	70'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	9.84375
[TV (mL) = 155 X D^2H	1525.78125
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	1.82 L.

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1115	10.00	100mL	Ø	—	—	—	—	—	—	PURGE START
1125	10.06	↓	1.0	7.39	1.82	OOR*	0.23	23.75	-230	PID: 0.0, CH4 0%
1128	10.08		0.3	7.38	1.74	OOR	0.12	23.38	-226	H2S: 0ppm, CO: 0ppm
1131	10.08		0.3	7.38	1.73	OOR	0.10	23.38	-223	
1134	↓		0.3	7.38	1.70	517.0	0.09	23.33	-221	CLEAR H2O, STRONG ODOR
1137	↓	↓	0.3	7.38	1.68	675.0	0.06	23.33	-219	
						* UNABLE TO STABILIZE TURBIDITY.				

Total Volume Purged: 202 (Liters) Total Purge Time: 22 min (Minutes)

OBSERVATIONS DURING PUMPING

ODOR OUT AT PLANT

Purge Start: 1115 Purge Stop: 1137

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW YARD TANK.

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW08A-085	Sample ID:	Type:	Type:
Sample Time: 1205	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 24 MS/MSD	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW08B

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 24-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E, CHASE B.

Date: 8/1/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	90'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	12.65625
[TV (mL) = 155 X D^2H	1961.71875
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.26 L.

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1226	11.30		Ø	—	—	—	—	—	—	PURGE START
1239	11.30		1.3	7.49	0.622	OOR	0.11	23.31	-221	PID: 0.0, CH4: 0%
1242	11.32		0.3	7.49	0.618	OOR	0.10	23.30	-220	H2S: 0ppm, CO: 0ppm
1245	11.32		0.3	7.48	0.611	OOR	0.10	23.34	-220	
1248	↓		0.3	7.48	0.611	889.0	0.07	23.62	-218	CLEAR H2O, SLIGHT
1251		↓	0.3	7.48	0.611	OOR	0.06	23.72	-218	ODOR.

Total Volume Purged: 2.5 (Liters) Total Purge Time: 25min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1226 Purge Stop: 1251

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW YARD TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW08B-016	Sample ID: EW-70-GW-DUPE-050	Type:	Type:
Sample Time: 1316	Sample Time: —	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers: 8	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# IW-70-FSB108

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

oject No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B. ANDREW E.

Date: 08/2/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	83'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	11.671875
[TV (mL) = 155 X D^2H	1809.140625
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.1 L.

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0847	6.00	100mL	Ø	—	—	—	—	—	—	• PURGE START
0857	6.75	↓	1.0	6.28	0.246	OOR	0.32	22.95	-127	• PID: 0.0, CH4: 12%
0900	6.76		0.3	6.29	0.253	OOR	0.24	23.33	-134	H2S: 0ppm, CO: 0ppm
0903	6.81		0.3	6.30	0.259	OOR	0.21	23.40	-138	• HAD TO REMOVE DIRT
0906	6.83		0.3	6.31	0.262	OOR	0.16	23.55	-141	FROM VAULT, DUE TO
0909	6.86		0.3	6.32	0.264	OOR	0.15	23.41	-143	GOPHER DIGGINGS.
0910	6.86	↓	0.1	6.33	0.264	OOR	0.14	23.33	-144	• WELL HAS NO CAP COVER
										• CLOUDY H2O W/ BLACK
										PARTICULATES FREE FLOATING,
										STRONG ODOR.

Total Volume Purged: 2.3 (Liters) Total Purge Time: 23 min (Minutes) • H2O TURNED GRAY COLOR

OBSERVATIONS DURING PUMPING

OOR = OUT OF RANGE

Purge Start: 0847 Purge Stop: 0910

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW YARD TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
ple ID: IW-70-FSB108-017	Sample ID:	Type:	Type:
ıle Time: 0920	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW05A

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Telephone: (805) 639-0884
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Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B, ANDREW E.

Date: 8/2/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	75'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	10.546875
[TV (mL) = 155 X D^2H	1634.765625
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	1.93 L.

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	s/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0955	5.45	100mL/min	Ø	—	—	—	—	—	—	PURGE START
1005	5.46	↓	1.0	6.58	0.155	323.0	0.24	22.55	+14	PID: 0.0, CH4: 1%
1008	5.46	↓	0.3	6.52	0.159	470.0	0.18	22.49	-112	H2S: 0ppm, CO: 0ppm
1011	↓	↓	0.3	6.52	0.160	668.0	0.15	22.57	-113	
1014	↓	↓	0.3	6.50	0.160	OOR	0.14	22.62	-114	Cloudy H2O w/
1016	↓	↓	0.2	6.50	0.161	772.0*	0.13	22.49	-114	STRONG ODOR
						* COULD NOT STABILIZE TURBIDITY.				

Total Volume Purged: 2.1 (Liters) Total Purge Time: 21 min. (Minutes)

OBSERVATIONS DURING PUMPING

OOR = out of range

Purge Start: 0955 Purge Stop: 1016

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW ROLL TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW05A-018	Sample ID: IR-70-GW-DUPE-051	Type:	Type:
Sample Time: 1030	Sample Time: —	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers: 8	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW05B

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
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Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

roject No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B, ANDREW L.

Date: 8/2/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	95'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	13.359375
[TV (mL) = 155 X D^2H	2070.703125
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.37 L.

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1050	5.65	100mL/min	Ø	—	—	—	—	—	—	• PURGE START
1105	5.66	↓	1.5	6.90	0.220	OOR	0.06	23.49	-178	PID: 0.0 LEL: 1%
1108	5.68		0.3	6.90	0.214	OOR	0.00	23.57	-182	H2S: 0ppm, CO: 0ppm
1111	5.68		0.3	6.90	0.213	960.0	0.00	23.68	-183	• HAD TO DIG OUT
1114	5.68		0.3	6.90	0.208	OOR	0.00	23.80	-183	DIRT FROM COPPERS IN
1116	5.68		0.2	6.90	0.206	OOR	0.00	23.80	-183	WELL VAULT
										• CLEAN H2O W/
										STRONG ODOR

Total Volume Purged: 2.6 (Liters) Total Purge Time: 26 min (Minutes)

OBSERVATIONS DURING PUMPING

OOR = OUT OF RANGE

Purge Start: 1050 Purge Stop: 1116

Pump Control Settings:
_____ mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW YARD TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: MW-70-PMW05B-019	Sample ID: _____	Type: _____	Type: _____
Sample Time: 1128	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: 8	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW04A

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE D., ANDREW E.

Date: 8/2/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	75'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	10.546875
[TV (mL) = 155 X D^2H	1634.765625
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	1.93 L.

PURGE METHOD

☐ Bailer – Type: _____

☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(us/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1226	5.77	100mL	Ø	—	—	—	—	—	—	Pump start
1236	5.79	↓	1.0	7.60	0.129	23.5	0.36	24.82	-164	PID: 0.0, CH4: 0%
1239	5.79		0.3	7.73	0.128	59.7	0.30	24.73	-162	H2S: 0ppm, CO: 0ppm
1242	5.79		0.3	7.79	0.128	104.0	0.27	24.75	-160	
1245	↓		0.3	7.82	0.127	158.0	0.24	24.83	-159	CLEAR H2O w/ SLIGHT
1247			0.2	7.84	0.126	168.0	0.23	24.88	-158	ODOR

Total Volume Purged: 2.1 (Liters) Total Purge Time: 21 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1226 Purge Stop: 1247

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW YARD TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW04A-0720	Sample ID:	Type:	Type:
Sample Time: 1300	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW04B

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B, ANDREW C.

Date: 8/2/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	95'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	13.359375
[TV (mL) = 155 X D^2H	2070.703125
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.37 L.

PURGE METHOD

☐ Bailer – Type: _____

☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (µs/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1305	5.80	100mL.	Ø	—	—	—	—	—	—	PUMP START
1319	5.81		1.4	7.42	0.133	*0.0R	0.09	25.11	-198	PID: 0.0 CH4: 56%
1322	5.81		0.3	7.64	0.133	*OOR	0.06	24.69	-202	H2S: 0ppm CO: 0ppm
1325	5.81		0.3	7.73	0.133	*OOR	0.04	24.64	-205	
1328	5.81		0.3	7.75	0.133	*OOR	0.03	24.70	-206	CLEAR H2O w/
1330	5.81		0.2	7.75	0.133	*OOR	0.02	24.73	-208	SLIGHT ODOR
										*OUT OF RANGE

Total Volume Purged: 2.5 (Liters) Total Purge Time: 25 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1305 Purge Stop: 1330

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: DOW YARD TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW04B-021	Sample ID:	Type:	Type:
Sample Time: 1345	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW09

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B, ANDREW E

Date: 8/3/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	125'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	17.578121
[TV (mL) = 155 X D^2H	2724.609375
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	3.02 L.

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(us/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0813	8.85	100mL	Ø	—	—	—	—	—	—	PUMPS START
0834	8.86		2.1	7.42	0.120	313.0	0.34	21.82	-132	PID: 0.0 CH4: 0%
0837	8.86		0.3	7.44	0.118	297.0	0.29	21.92	-134	H2S: 0ppm CO: 0ppm
0840	8.86		0.3	7.44	0.116	285.0	0.27	21.98	-134	
0843			0.3	7.45	0.115	280.0	0.22	21.89	-135	clear H2O
0845			0.2	7.45	0.114	283.0	0.20	21.96	-135	SLIGHT ODOR

Total Volume Purged: 3.2 (Liters) Total Purge Time: 32min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0813 Purge Stop: 0845

Pump Control Settings:
____ mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: TOW YARD TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW-70-PMW09-0803	Sample ID: _____	Type: _____	Type: _____
Sample Time: 0900	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: 8	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# IW-70-SHB113

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 21-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE D. DUNCAN

Date: 08/03/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	118'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	16.59375
[TV (mL) = 155 X D^2H	2572.03125
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.87 L

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0935	10.01	100 mL	Ø	—	—	—	—	—	—	PUMPS START
0953	10.32		1.8	6.90	0.258	OOR	0.10	22.57	-209	PID: 0.0, CH4: 99+ %
0956	10.35		0.3	6.82	0.269	787.0	0.08	22.82	-212	H2S: 5ppm, CO: 8ppm
0959	10.39		0.3	6.83	0.270	970.0	0.06	22.84	-215	
1002	10.45		0.3	6.84	0.270	(OOR) 25.0	0.03	22.86	-218	Cloudy tan w/
1005	10.51		0.3	6.85	0.269	(OOR) 25.0	0.01	22.85	-220	strong odor

Total Volume Purged: 3.0 (Liters) Total Purge Time: 30 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0935 Purge Stop: 1005 OOR = OUT OF RANGE

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW yard TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: IW-70-SHB113-023	Sample ID:	Type:	Type:
Sample Time: 1014	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW10

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
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Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B. ANDREW E

Date: 08/3/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 125'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 17.578121

[TV (mL) = 155 X D^2H: 2724.609375

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 3.02 L.

PURGE METHOD

☐ Bailer – Type: _____

☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m ~~(µs/cm)~~ Conductivity	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1035	8.70	100 mm	Ø	—	—	—	—	—	—	PURGE START
1056	8.70		2.1	7.87	0.198	OOR	0.10	22.34	-213	PID: 0.0, CH4: 0%
1059	8.70		0.3	7.88	0.198	OOR	0.10	22.31	-214	H2S: 0ppm, CO: 0ppm
1102			0.3	7.88	0.197	993.0	0.06	22.35	-214	
1105			0.3	7.88	0.197	939.0	0.02	22.38	-215	CLEAR H2O w/
1107			0.2	7.88	0.197	OOR	0.02	22.42	-216	STRONG ODOR.

Total Volume Purged: 3.2 (Liters)

Total Purge Time: 32 min. (Minutes)

OBSERVATIONS DURING PUMPING

* OOR = OUT OF RANGE

Purge Start: 1035 Purge Stop: 1107

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW YARD TANK.

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: MW-70-PMW10-024	Sample ID:	Type:	Type:
Sample Time: 1117	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW11B

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
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Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B. ANDREW E.

Date: 8/3/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	120'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	16.875
[TV (mL) = 155 X D^2H	2615.625
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.91 L.

PURGE METHOD

☐ Bailer – Type: _____

☑ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1202	10.26	100 mL.	Ø	—	—	—	—	—	—	Purge start
1223	10.26		2.1	7.47	0.633	487.0	0.08	23.37	-231	PID: 0.0 Ch4: 0%
1226	10.26		0.3	7.48	0.634	509.0	0.05	23.39	-236	H2S: Open, CO: Open
1229	10.26		0.3	7.49	0.634	541.0	0.02	23.40	-240	
1232			0.3	7.50	0.635	576.0	0.00	23.36	-241	Clear H2O w/
1234			0.2	7.50	0.634	605.0	0.00	23.44	-241	Strong petroleum odor

Total Volume Purged: 3.2 (Liters) Total Purge Time: 32 min. (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1202 Purge Stop: 1234

Pump Control Settings: 225 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW ~~[illegible]~~ TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source /)***
Sample ID: MW-70-PMW11B-025	Sample ID:	Type:	Type:
Sample Time: 1245	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW11A

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
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Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CB & AE

Date: 8/3/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	90'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	12.65625
[TV (mL) = 155 X D^2H	1961.71875
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.26 L.

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(us/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1259	11.07	100 mL	Ø	—	—	—	—	—	—	- Purge Start
1311	11.60	↓	1.2	7.29	3.84	416.0	0.02	25.25	-259	PID 0.0 CH4: 2%
1314	11.60		0.3	7.34	3.87	406.0	0.00	25.70	-263	H2S: 0 ppm CO: 0 ppm
1317	11.60		0.3	7.35	3.91	397.0	0.00	25.53	-265	
1320	↓		0.3	7.36	3.92	392.0	0.00	25.49	-267	- Clear H2O w/
1323			0.3	7.38	3.91	373.0	0.00	25.52	-267	Strong odor
										- Black particulates
										free floating in
										H2O

Total Volume Purged: 2.4 (Liters) Total Purge Time: 24 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1259 Purge Stop: 1323

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: 500 gallon tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-PMW11A-026	Sample ID:	Type:	Type:
Sample Time: 1338	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW12A

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
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Telephone: (805) 639-0884
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Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CB & AE

Date: 8/3/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	90'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	12.65625
[TV (mL) = 155 X D^2H	1961.71875
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.261 L

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity (~~us/cm~~)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1345	10.15	100 mL	Ø	—	—	—	—	—	—	Purge START
1357	10.15		1.2	7.66	0.528	215.0	0.17	26.24	-255	PID: 0.0 CH4: 0%
1400	10.15		0.3	7.63	0.518	209.0	0.08	26.62	-257	H2S: 0ppm; CO: 0ppm
1403	10.15		0.3	7.63	0.514	211.0	0.07	26.70	-257	
1406			0.3	7.60	0.510	223.0	0.06	26.75	-248	CLEAR H2O w/
1409			0.3	7.58	0.508	238.0	0.05	26.82	-245	STRONG ODOR

Total Volume Purged: 2.4 (Liters) Total Purge Time: 24 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1345 Purge Stop: 1409

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW YARD TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
ple ID: MW-70-PMW12A-07	Sample ID:	Type:	Type:
Sample Time: 1420	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-14

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 7-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B. ANDREW E.

Date: 8/4/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	160'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	22.5
[TV (mL) = 155 X D^2H	3487.5
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	3.78

* WELL NEEDS PORTABLE PUMP.
- TUBING CUT FOR AIR & WATER @ 165'
- WELL SCREEN @ 160-170. SET @ 160'

PURGE METHOD

☐ Bailer – Type: _____

☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0943	13.30	100mL	Ø	—	—	—	—	—	—	PURGE START
1011	13.33		2.8	7.29	0.325	258.0	0.87	22.42	-74	PID: 0.0 CH4: 0%
1014	13.33		0.3	7.30	0.327	265.0	0.80	22.42	-76	H2S: 0ppm, CO: 0ppm
1017	13.33		0.3	7.30	0.330	265.0	0.75	22.40	-77	
1020			0.3	7.31	0.332	290.0	0.68	22.38	-77	CLEAR H2O W/
1023			0.3	7.31	0.335	547.0	0.63	22.37	-78	SLIGHT ODOR
										-NO DEDICATED PUMP.

Total Volume Purged: 4.0 (Liters) Total Purge Time: 40 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0943 Purge Stop: 1023

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW 55 GAL TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: MW-70-14-028	Sample ID:	Type:	Type:
Sample Time: 1030	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 6	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# ~~MW~~ IW-70-SAB11

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CB & AC

Date: 8/4/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	80'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	11.25
[TV (mL) = 155 X D^2H	1743.75
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.04 L.

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1106	9.30	100 mL	Ø	—	—	—	—	—	—	PURGE START
1117	10.43		1.1	6.98	0.400	OOR	0.24	22.39	-162	PID: 0.0 . CH4: 11%
1120	10.60		0.3	6.98	0.395	OOR	0.21	22.65	-165	H2S: 0ppm CO: 0ppm
1123	—		0.3	6.99	0.389	OOR	0.18	22.86	-167	
1126	—		0.3	6.99	0.398	OOR	0.16	22.93	-168	CLOUDY GREYISH H2O w/
1129	11.05		0.3	6.99	0.397	OOR	0.13	23.02	-168	VERY STRONG ODOR
1132	11.19		0.3	6.99	0.398	OOR	0.10	23.05	-169	
										WELL IS RECHARGING SLOW

Total Volume Purged: 2.6 (Liters) Total Purge Time: 26 min (Minutes)

OBSERVATIONS DURING PUMPING

OOR = out of range

Purge Start: 1106 Purge Stop: 1129

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW YARD TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source / _____)*
Sample ID: FIELD PARAMETERS ONLY	Sample ID:	Type:	Type:
Sample Time:	Sample Time:	Sample ID:	Sample ID:
No. of Containers: Ø	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW02B

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CB & AE

Date: 8/4/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 95'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 13.359375

[TV (mL) = 155 X D^2H]: 2070.703125

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.37 L.

PURGE METHOD

☐ Bailer – Type: _____

☑ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µS/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1150	9.50	100 mL	Ø	—	—	—	—	—	—	Purge start
1203	9.50	↓	1.3	7.81	0.208	225.0	0.12	25.76	-256	PID: 0.0, CH4: 1%
1206	9.51		0.3	7.81	0.211	260.0	0.09	25.72	-250	H2S: 0 ppm, CO: 0 ppm
1209	9.50		0.3	7.82	0.215	315.0	0.05	25.71	-242	
1212	9.50		0.3	7.81	0.218	342.0	0.03	25.67	-240	Cleaning H2O w/
1215	9.50	↓	0.3	7.81	0.218	363.0	0.01	25.66	-238	STRONG ROTTEN EGG ODOR

Total Volume Purged: 2.5 (Liters) Total Purge Time: 25 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1150 Purge Stop: 1215

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW yard tank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	*Duplicate*	*Blank*	*Other (Trip / Source /)*
Sample ID: FIELD PARAMETERS	Sample ID:	Type:	Type:
Sample Time: 0 Min	Sample Time:	Sample ID:	Sample ID:
No. of Containers: Ø	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW02A

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CB & AE

Date: 8/4/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 76'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 10.6875

[TV (mL) = 155 X D^2H: 1656.5625

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: ~~1956.5625~~ 1.95 L.

PURGE METHOD

☐ Bailer – Type: _____

☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(us/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1225	09.45		Ø	—	—	—	—	—	—	PUMP START
1236	9.52		1.1	7.85	0.170	240.0	0.03	25.34	-226	PID: 0.0 CH4: 1%
1239	9.52		0.3	7.79	0.170	249.0	0.00	25.43	-232	H2S: 0ppm, CO: 0ppm
1242	9.52		0.3	7.79	0.170	266.0	0.00	25.46	-232	
1245	↓		0.3	7.79	0.170	277.0	0.00	25.48	-232	Cloudy H2O w/
1248	↓	↓	0.3	7.79	0.170	285.0	0.00	25.49	-232	STRONG ROTTEN EGG ODOR

Total Volume Purged: 2.3 (Liters) Total Purge Time: 23 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1225 Purge Stop: 1248

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW YD. TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source /)***
ple ID: FIELD PARMS.	Sample ID:	Type:	Type:
Sample Time: ONLY	Sample Time:	Sample ID:	Sample ID:
No. of Containers: Ø	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-MNA07

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: ANDREW E., CHASE B.

Date: 8/4/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	95'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	13.359375
[TV (mL) = 155 X D^2H	2070.703125
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.37 L

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1348	5.95	100 mL	Ø	—	—	—	—	—	—	PURGE START
1400	5.95	↓	1.2	7.19	0.195	840.0	0.26	23.16	-154	PID: 0.0 CH4: 1%
1403	5.95		0.3	7.18	0.193	OOR	0.22	23.13	-156	H2S: 0ppm, CO: 0ppm.
1406	5.95		0.3	7.18	0.189	OOR	0.22	23.07	-157	
1409	↓		0.3	7.18	0.187	649.0	0.19	23.03	-158	CLEAR H2O w/
1412	↓	↓	0.3	7.17	0.184	OOR	0.15	23.08	-159	STRONG ODOR

Total Volume Purged: 2.4 (Liters) Total Purge Time: 24 min (Minutes)

OBSERVATIONS DURING PUMPING

OOR = OUT OF RANGE

Purge Start: _____ Purge Stop: _____

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: DRUM YD. TANK.

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: FIELD PARAMETERS	Sample ID:	Type:	Type:
Sample Time: ONLY	Sample Time:	Sample ID:	Sample ID:
No. of Containers: Ø	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-RD0-5

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CB & AE

Date: 8/4/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 85'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): ~~[illegible]~~ 11.953125

[TV (mL) = 155 X D^2H: ~~[illegible]~~ 1852.734375

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2.15 (L.)

PURGE METHOD

☐ Bailer – Type: _____

☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µS/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1424	7.30	100 mL	Ø	—	—	—	—	—	—	PUMP START
1436	7.30	↓	1.2	7.18	0.151	OOR	0.16	22.16	-159	PID: 0.0, CH4: 0%
1439	7.30	↓	0.3	7.18	0.151	OOR	0.14	22.08	-160	H2S: 0ppm, CO: 0ppm
1442	7.30	↓	0.3	7.17	0.150	OOR	0.12	22.13	-163	
1445	↓	↓	0.3	7.17	0.154	OOR	0.11	22.03	-166	CLEAR H2O w/
1448	↓	↓	0.3	7.17	0.153	OOR	0.11	22.02	-168	STRONG ROTTEN EGG ODOR

Total Volume Purged: 2.4 (Liters) Total Purge Time: 24 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1424 Purge Stop: 1448

Pump Control Settings:
5 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW YD TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: FIELD PARAMS ONLY	Sample ID:	Type:	Type:
Sample Time:	Sample Time:	Sample ID:	Sample ID:
No. of Containers: Ø	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW12B

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B. & ANDREW C.

Date: 8/5/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	120'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	16.875
[TV (mL) = 155 X D^2H	2615.625
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.91 L.

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0840	10.52	100mL.	Ø	—	—	—	—	—	—	PURGE START
0859	—		1.9	6.98	0.345	OOR	0.19	21.69	-153	PID: 0.0, CH4: 1%
0902	10.68		0.3	7.00	0.344	OOR	0.17	21.69	-155	H2S: 0ppm, CO: 0ppm
0905	10.68		0.3	7.01	0.334	OOR	0.15	21.70	-157	
0908	—		0.3	7.02	0.341	803.0	0.14	21.73	-158	SLIGHTLY CLOUDY H2O
0911	10.68		0.3	7.02	0.339	846.0	0.14	21.73	-159	W/ SLIGHT ODOR
										@ 0908 HORIBA BEGAN
										GIVING ERROR 3 MSG.
										WILL HAVE TO RETURN & TRAILER & TROUBLESHOOT.

Total Volume Purged: 3.1 (Liters) Total Purge Time: 31 min (Minutes)

OBSERVATIONS DURING PUMPING

OOR = OUT OF RANGE

Purge Start: 0840 Purge Stop: 0911

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW 30. TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW-70-PMW12-029	Sample ID: _____	Type: _____	Type: _____
Sample Time: 0923	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: 8	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# IW-70-SSB119

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
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Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CB & DE.

Date: 8/5/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 145'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 20.390625

[TV (mL) = 155 X D^2H: 3160.546875

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 3.46 L.

* WELL NEEDS PORTABLE PUMP.

PURGE METHOD

☐ Bailer – Type: _____

☒ Pump – Type: QED ~~Dedicated~~ PORTABLE Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity ~~(µs/cm)~~ S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1008	11.99	100mL.	Ø	—	—	—	—	—	—	PURGE START.
1032	12.00	↓	2.4	6.91	0.415	OOR	0.45	21.81	-212	PID: 0.0, CH4: 9%
1035	12.00		0.3	6.91	0.420	OOR	0.41	21.94	-216	H2S: 0ppm, CO: 0ppm
1038	12.00		0.3	6.92	0.413	OOR	0.38	21.82	-219	
1041	12.00		0.3	6.91	0.413	OOR	0.35	22.06	-223	CLEAR H2O w/
1044	12.00		0.3	6.91	0.416	OOR	0.32	22.08	-225	STRONG ODOR
										-NITROGEN TANK RUNNING
										LOW, WILL HAVE TO
										SWAP FOR FRESH ONE.

Total Volume Purged: 3.6 (Liters)

Total Purge Time: 36 min. (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1008 Purge Stop: 1044

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW yd. TK.

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: IW-70-SSB119-030	Sample ID:	Type:	Type:
Sample Time: 1058	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW13A

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CB & AC

Date: 8/5/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	130'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	18.28125
[TV (mL) = 155 X D^2H	2833.59375
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	3.13 L.

PURGE METHOD

☐ Bailer – Type: _____

☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (µs/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1137	9.25	100mL	Ø	—	—	—	—	—	—	Purge Start
1157	9.30	↓	200	7.61	0.443	282.0	0.27	21.45	-193	PID: 0.0, CH4: 0 %
1200	9.30		0.3	7.62	0.443	291.0	0.22	21.42	-190	H2S: 0ppm, CO: 0ppm
1203	9.30		0.3	7.62	0.443	293.0	0.21	21.45	-190	
1206	9.30		0.3	7.62	0.441	305.1	0.19	21.52	-188	Clear H2O w/
1209	9.30	↓	0.3	7.63	0.440	303.0	0.17	21.58	-187	slight odor

Total Volume Purged: 3.2 (Liters) Total Purge Time: 32min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1137 Purge Stop: 1209

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW yard TK.

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source /)***
Sample ID: MW-70-PMW13A-031	Sample ID: IR-70-GW-Dupe-~~032~~	Type:	Type:
Sample Time: 1227	Sample Time: —	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers: 8	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW13B

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CD & NE.

Date: 8/5/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	150'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	21.09375
[TV (mL) = 155 X D^2H	3269.5315
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	3.56 L.

PURGE METHOD

☐ Bailer – Type: _____ ☑ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1235	9.18	100mL	Ø	—	—	—	—	—	—	PUMP START
1259	9.18		2.4	7.65	0.690	781.0	0.08	21.46	-232	PID: 0.0, CH4: 0%
1302	9.18		0.3	7.65	0.695	802.0	0.06	21.49	-232	H2S: 0 ppm, CO: 0 ppm
1305	9.18		0.3	7.65	0.699	812.0	0.04	21.39	-231	
1308	↓		0.3	7.65	0.698	846.0	0.03	21.39	-231	clear H2O w/
1311	↓	↓	0.3	7.66	0.698	855.0	0.01	21.56	-231	strong odor

Total Volume Purged: 3.6 (Liters) Total Purge Time: _____ (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1235 Purge Stop: _____

Pump Control Settings: 25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW yD. TK.

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW-70-PMW13B-032	Sample ID: _____	Type: _____	Type: _____
Sample Time: 1321	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: 8	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW14A

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CB & AC

Date: 8/5/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	133'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	18.70315
[TV (mL) = 155 X D^2H	2898.984375
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	3.19 L.

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µS/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1335	9.02	200 mL	Ø	—	—	—	—	—	—	PURGE START
1345	9.45	↓	2.0	7.13	0.390	OOR	0.04	22.17	-330	PID: 0.0, CH_4: 0%
1347	9.49		0.4	6.98	0.387	OOR	0.01	22.10	-277	H_2S: 0ppm CO: 0ppm
1349	9.53		0.4	6.97	0.386	OOR	0.00	22.03	-272	
1351	9.57	↓	0.4	6.96	0.392	841.0	0.00	21.97	-264	CLEAR H_2O w/
										ROTTEN EGG ODOR
										H_2O TURNED A
										BLACKISH COLOR

Total Volume Purged: 3.2 (Liters) Total Purge Time: 16 min (Minutes)

OBSERVATIONS DURING PUMPING

OOR = OUT OF RANGE

Purge Start: 1335 Purge Stop: 1351

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW yd. TK.

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source /)***
Sample ID: MW-70-PMW14A-033	Sample ID:	Type:	Type:
Sample Time: 1405	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-PMW14B

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CB & AE

Date: 8/5/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	154'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	21.65625
[TV (mL) = 155 X D^2H	3356.71875
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	3.65 L

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1410	9.30	200mL	Ø	—	—	—	—	—	—	PURGE START
1419	9.51		1.8	7.20	0.608	OOW	0.00	22.34	-266	PID: 0.0 CH4: 0%
1422	—		0.6	7.19	0.614	OOW	0.00	22.37	-266	H2S: 0ppm CO: 0ppm
1425	—		0.6	7.19	0.609	OOW	0.00	22.34	-265	
1428	9.56		0.8	7.19	0.611	OOW	0.00	22.36	-265	Cloudy H2O w/ STRONG ODOR

Total Volume Purged: 3.8 (Liters) Total Purge Time: 28 (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1410 Purge Stop: 1428

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW YD. TR.

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW-70-PMW14B-034	Sample ID:	Type:	Type:
Sample Time: 1445	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 8	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-MNA08

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: Chase B, Spee A.

Date: 8/8/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 85'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 11.953171

[TV (mL) = 155 X D^2H: 1852.734375

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 2152.

PURGE METHOD

☐ Bailer – Type: _____ ☐ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0900	9.05	100mL	Ø	—	—	—	—	—	—	PUMP START
0915	9.20	↓	1.5	7.20	0.341	00n	0.51	21.57	-227	PID: 0.0 CH4: 0%
0918	9.20		0.3	7.23	0.344	38.9	0.44	21.58	-227	H2S: 0ppm CO: 0ppm
0921	9.21		0.3	7.24	0.344	114.0	0.36	21.59	-226	
0924	9.22	↓	0.3	7.26	0.344	267.0	0.27	21.58	-228	Clear H2O ~1
										STRONG ROTTEN Egg odor

Total Volume Purged: 25 (Liters) Total Purge Time: 24 min (Minutes)

OBSERVATIONS DURING PUMPING

ODOR = OUT OF RANGE

Purge Start: 0900 Purge Stop: 0925

Pump Control Settings: 25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW WD. TANK.

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW-70-MNA08	Sample ID:	Type:	Type:
Sample Time: PARAMETER READINGS	Sample Time:	Sample ID:	Sample ID:
No. of Containers: ONLY.	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-MNA09

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CB. SA.

Date: 8/4/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	71'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	9.984375
[TV (mL) = 155 X D^2H	1547.578125
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	1.84 L.

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity (~~us/cm~~ S/m)	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1012	8.67	100mL	Ø	—	—	—	—	—	—	PUMP START
1024	8.68	↓	1.2	7.09	2.09	0.0	0.46	22.07	-124	PID: 0.0 CH4: 0%
1026	8.68		0.2	7.10	2.09	0.0	0.38	22.08	-124	H2S: 0ppm CO: 0ppm
1028	8.68		0.2	7.11	2.13	0.0	0.30	22.12	-125	
1030	↓		0.2	7.13	2.15	0.0	0.24	22.13	-127	CLEAR H2O W/
1032			0.2	7.13	2.16	0.0	0.21	22.18	-130	SLIGHT ODOR

Total Volume Purged: 2.0 (Liters) Total Purge Time: 20 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1012 Purge Stop: 1032

Pump Control Settings:
35 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW yd. TK.

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW-70-MNA09	Sample ID: _____	Type: _____	Type: _____
Sample Time: PARAMETER READINGS	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: ONLY	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# SSB109

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: _____

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: _____

Date: _____

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	146'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	20.53125
[TV (mL) = 155 X D^2H	3182.34375
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	3.48 L

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1058	10.89	100mL	0	—	—	—	—	—	—	PUMP START
1122	—	↓	0.3	6.58	1.68	con	0.18	21.94	-215	PID: 14.8 Clay: 44%
1125	—		0.3	6.60	1.70	con	0.16	21.98	-228	H2S: 3.5ppm CO: 0ppm
1128	—		0.3	6.61	1.72	con	0.15	21.94	-233	
1131	—		0.3	6.61	1.73	con	0.14	21.93	-239	Cloudy H2O w/
1134	10.89*		0.3	6.61	1.76	con	0.11	22.04	-243	very strong odor
	* UNABLE TO GET ACCLIMATE									
	H2O LVLS. AS BLACKISH WELL									
	GUNCK INTERFERES W/ SENSOR.									

Total Volume Purged: 3.6 (Liters) Total Purge Time: 36 min (Minutes)

OBSERVATIONS DURING PUMPING

con = art. & manu.

Purge Start: 1058 Purge Stop: 1134

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW yd. TANK.

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: IDW-70-SSB109	Sample ID: _____	Type: _____	Type: _____
Sample Time: PARAMETER READINGS	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: ONLY. -0-	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-MNA17

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CB & SA

Date: 8/8/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	145
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	20.390625
[TV (mL) = 155 X D^2H	3160.546875
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	3.46 L.

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1352	10.55	100 mL	Ø	—	—	—	—	—	—	Pump Start
1418	10.56		2.8	7.54	2.66	0.0	0.31	21.97	-275	PID: 0.0 CH4: 0%
1421	10.56		0.3	7.51	2.82	0.0	0.27	22.00	-269	H2S: 0ppm CO: 0ppm
1424	10.56		0.3	7.50	2.86	0.0	0.24	22.01	-267	
1427	10.56		0.3	7.49	2.87	0.0	0.24	22.04	-266	Cloudy H2O w/
										very sewage odor

Total Volume Purged: 3.5 (Liters) Total Purge Time: 35 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1352 Purge Stop: 1427

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW yd. TK.

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MNA17	Sample ID:	Type:	Type:
Sample Time: Parameters Reached	Sample Time:	Sample ID:	Sample ID:
No. of Containers: any Ø	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# MW-70-MNA16

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
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Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CD & SA

Date: 8/8/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	146'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	20.53125
[TV (mL) = 155 X D^2H	3182.34375
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	3.48 L.

PURGE METHOD

☐ Bailer – Type: _____ ☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity ~~(µs/cm)~~ S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1444	11.13	100mL	Ø	—	—	—	—	—	—	PURGE START
1300	11.15		2.6	7.57	1.15	0.0	0.16	22.29	-268	PID: 0.0 CH4 0 %
1303	11.15		0.3	7.56	1.14	0.0	0.14	22.22	-265	H2S 0ppm CO 0ppm
1306	11.15		0.3	7.55	1.14	6.9	0.13	22.13	-263	
1309	11.15		0.3	7.55	1.13	12.0	0.10	22.16	-262	CLEAR H2O w/
										very STRONG ODOR

Total Volume Purged: 3.5 (Liters) Total Purge Time: 35 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1444 Purge Stop: 1309

Pump Control Settings:
25 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW YD. TK.

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MNA16	Sample ID:	Type:	Type:
Sample Time: PARAMETER READINGS	Sample Time:	Sample ID:	Sample ID:
No. of Containers: ONLY Ø	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# IW-70-SAT35

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CD & SA

Date: 8/9/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing: 40'

D - Diameter of discharge tubing (inches): 0.375

TV - Volume of tubing (mL): 5.625

[TV (mL) = 155 X D^2H: 871.875

BV - Bladder volume (mL): 300

Sampling system volume (mL) [SSV = TV + BV]: 1.17 L.

ARRIVE @ SAT 35 @ Approx 0815
FIND TUBING IS ALL TANGLED.
MUST UNRAVEL BEFORE PUMPING STARTS.

PURGE METHOD

☐ Bailer – Type: _____

☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	Conductivity ~~(us/cm)~~ S/m	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
0934	9.59	200mL	Ø	—	—	—	—	—	—	PUMPS STARTS
0936	10.30	↓	0.4	6.97	0.841	0.0	0.60	23.52	-262	PID: 155 ppm Clarity: 6%
0938	10.38		0.4	6.98	0.839	0.0	0.51	23.64	-272	H2S: 100+ ppm CO: 56 ppm
0940	10.43		0.4	6.99	0.841	0.0	0.39	23.72	-283	
0942	10.56		0.4	7.00	0.838	0.0	0.32	23.81	-292	BLACK COLORED H2O
0944	10.64		0.4	7.00	0.840	0.0	0.29	23.88	-297	w/ A VERY PUNGENT
0946	10.76		0.4	7.00	0.839	0.0	0.27	24.01	-300	ODOR.

Total Volume Purged: 2.4 L. (Liters)

Total Purge Time: 12 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 0934 Purge Stop: 0946

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: Bow yard TK.

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source /)***
Sample ID: SAT 35	Sample ID:	Type:	Type:
Sample Time: PARAMETER READINGS	Sample Time:	Sample ID:	Sample ID:
No. of Containers: ONLY Ø	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# IW-FSB229

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: C.B. & S.A.

Date: 8/9/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	83'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	11.671875
[TV (mL) = 155 X D^2H	1809.140625
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.10 L

* VAULT FILLED W/ DIRT FROM GOPHERS HAD TO REMOVE UPON ARRIVAL @ 1025.

PURGE METHOD

* VAULT HAS ANT NEST INSIDE, USE CAUTION.

☐ Bailer – Type: _____

☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	(*) Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1110	9.90	200 mL	Ø	—	—	—	—	—	—	PUMP STARTS
1115	9.95	↓	1.0	7.02	0.459	0.0	0.74	27.91	-116	PID: 0.0 Clay: 100+ %
1117	9.95		0.4	7.02	0.455	0.0	0.58	27.50	-117	H_2S: 0ppm CO: 0ppm
1119	↓		0.4	7.02	0.453	0.0	0.52	27.58	-117	
1120			0.2	7.02	0.452	0.0	0.48	27.56	-116	Cloudy / BLACKISH H_2O
1121	↓	↓	0.2	7.02	0.449	0.0	0.45	27.67	-115	w/ very STRONG ODOR

Total Volume Purged: 2.2 (Liters)

Total Purge Time: 11 minutes (Minutes)

OBSERVATIONS DURING PUMPING

(*) TEMP. MAY BEGIN TO GIVE MORE ERRATIC READINGS DUE TO THE FACT THAT APPROX. 80' OF TUBING ARE SITTING OUT IN THE SUN.

Purge Start: 1110 Purge Stop: 1121

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: FDW yd. TK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: FSB229	Sample ID:	Type:	Type:
Sample Time: PARAMETER	Sample Time:	Sample ID:	Sample ID:
No. of Containers: READINGS only	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# IW-70-SHB310

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B. & SREE A.

Date: 6/9/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	118'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	16.59375
[TV (mL) = 155 X D^2H	2572.03125
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.87 L.

*WELL IS VERY DIRTY. HAS A LOT OF EVO RESIDUE CAKED ON WELL HEAD & GOING DOWN PIPE. STRONG ODOR AS YOU OPEN WELL LID.
—TOOK PHOTOS OF WELL.—

PURGE METHOD

☐ Bailer – Type: _____

☒ Pump – Type: QED Dedicated Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1250	N/A *	200mL	Ø	—	—	—	—	—	—	PURGE START
1258	↓	↓	1.6	5.36	1.13	491.0	0.45	23.95	-196	PID: 55.1ppm CH4: 2%
1300			0.4	5.35	1.19	680.0	0.45	23.98	-195	H2S: 0ppm CO: 39%
1302			0.4	5.34	1.18	485.0	0.56	24.17	-196	
1304			0.4	5.32	1.17	437.0	0.76	24.32	-196	Cloudy Greyish H2O
1306			0.4	5.32	1.17	411.0	1.00	23.86	-198	w/ very pungent odor
1308			0.4	5.31	1.17	380.0	1.15	23.72	-199	
* WELL IS TOO DIRTY TO GET ACCURATE										
READINGS FOR WATER LEVEL. STICKS TO EVERYTHING										
& GETS TANGLED-UP ON TUBING & SIDE OF PIPE										

Total Volume Purged: 3.6 (Liters) Total Purge Time: 18 mins (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1250 Purge Stop: 1305

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW YD. TK.

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source /)***
Sample ID: SHB 310	Sample ID:	Type:	Type:
Sample Time: PARAMETER	Sample Time:	Sample ID:	Sample ID:
No. of Containers: READINGS ONLY	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
MONITORING WELL ID# IW-70-SHB311

AIS-TN&A JOINT VENTURE
1650 Palma Drive., Suite 207
Ventura, CA 93003
Telephone: (805) 639-0884
Fax: (805) 639-0924

Project Name: EISB of DNAPL & DPSCS Plumes at IR Site 70
Naval Weapons Station Seal Beach, California

Project No: 4-77101

Navy Contract No.: N62473-09-D-2610 (DO No.: 0006)

Sampled By:: CHASE B. & SPEE A.

Date: 8/9/11

PURGE VOLUME CALCULATION (Volume of Discharge Tubing + Bladder Volume):

H - Length of discharge tubing	86'
D - Diameter of discharge tubing (inches)	0.375
TV - Volume of tubing (mL)	12.375
[TV (mL) = 155 X D^2H	1918.125
BV - Bladder volume (mL)	300
Sampling system volume (mL) [SSV = TV + BV]	2.21 L.

PURGE METHOD

☐ Bailer – Type: _____

☒ Pump – Type: PORTABLE QED ~~Dedicated~~ Bladder Pump

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (feet)	Flow Rate (mL/min)	Purge Volume (Liters)	pH	S/m Conductivity ~~(µs/cm)~~	Turbidity (NTU)	D.O. (mg/L)	Temp (° C) (*)	ORP (mV)	Comments (Well condition, Color, Clarity, Odor, PID & Gas Meter Readings)
1333	N/A	200mL	Ø	—	—	—	—	—	—	PURGE START
1338			1.0	6.55	0.203	611.0	0.56	28.26	-129	PID: 0.0 CH4: 100+ %
1340			0.4	6.54	0.197	608.0	0.53	28.11	-132	H2S: 0ppm CO: 0ppm
1342			0.4	6.53	0.193	697.0	0.55	28.05	-134	
1344			0.4	6.52	0.191	931.0	0.55	27.96	-136	Cloudy/Grey ish H2O
1346	↓(A)	↓	0.4	6.50	0.191	OOR *	0.57	27.91	-136	w/ a very pungent odor
						* OUT OF RANGE.				
(A) UNABLE TO GET ACCURATE WATER LEVEL										WELL VALVE IS IN
AS PROBE STICKS TO TUBING / PIPE WALL										GOOD CONDITION.
AND IS OBSTRUCTED BY WALL.										

Total Volume Purged: 2.6 (Liters) Total Purge Time: 13 min (Minutes)

OBSERVATIONS DURING PUMPING

Purge Start: 1333 Purge Stop: 1346

* TEMP. MAY BE INACCURATE AS APPROX. 70' OF TUBING LAY ON HOT ASPHALT WARMING H2O IN TUBING BEFORE IT GETS TO HORIBA.

Pump Control Settings:
50 mL Discharge @ 4 cycles per minute (CPM) Refill time (sec) 10 Discharge time (sec) 5

WATER DISPOSAL

Purge water storage: IDW YD. TANK

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: SHB 311	Sample ID:	Type:	Type:
Sample Time: PARAMETER	Sample Time:	Sample ID:	Sample ID:
No. of Containers: READINGS ONLY	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

METHANE MONITORING LOGS
FEBRUARY 2012

INSIGHT	METHANE MONITORING LOG	DATE: 02/02/2012 PAGE 1 OF 8 FACILITY: NWS Seal Beach SITE: IR Site 70 RECORDED BY: SREE AKKENAPALLY

INSTRUMENT TYPE	INSTRUMENT NUMBER	CALIBRATION DATE	COMMENTS
Multi-Gas Monitor (RKI Eagle)	N/A	02/02/2012	CALIBRATION PERFORMED OKAY

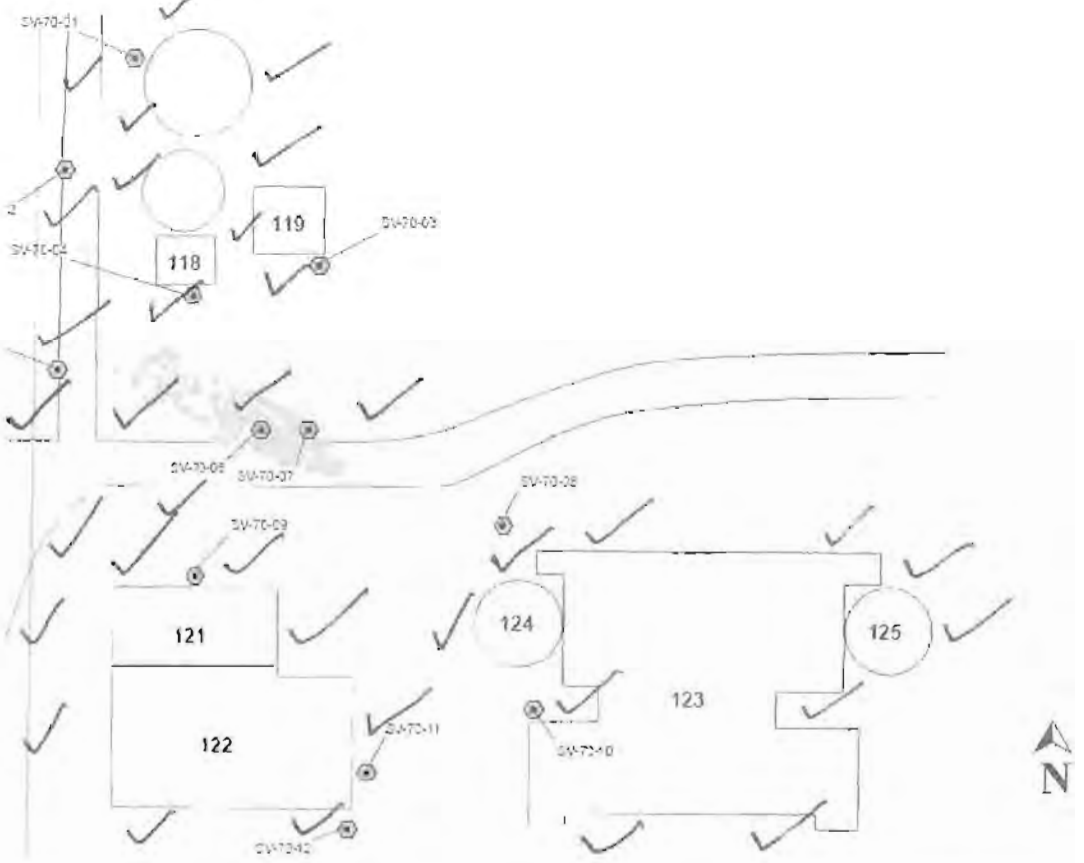
SURVEY NOTES/OBSERVATIONS:

12:30: CALIBRATED THE GAS MONITORING INSTRUMENT
12:45: BEGAN METHANE GAS MONITORING IN THE SOURCE AREA.
13:45: COMPLETED METHANE GAS MONITORING SURVEY.

METHANE GAS WAS NOT DETECTED INSIDE THE BUILDINGS SURVEYED NOR IN THE OUTDOOR AREAS/UTILITY CORRIDORS. THE INSTRUMENT READING WAS 0.0% IN ALL AREAS MONITORED DURING THIS SURVEY.

IDENTIFY AREAS SURVEYED AND RECORD INSTRUMENT READINGS ON MAP

OUTDOOR AREAS



INSIGHT

METHANE MONITORING LOG

DATE: 02/02/2012 PAGE 2 OF 8

FACILITY: NWS Seal Beach

SITE: IR Site 70

RECORDED BY: SREE AKKENAPALLY

INSTRUMENT TYPE	INSTRUMENT NUMBER	CALIBRATION DATE	COMMENTS
Multi-Gas Monitor (RKI Eagle)			

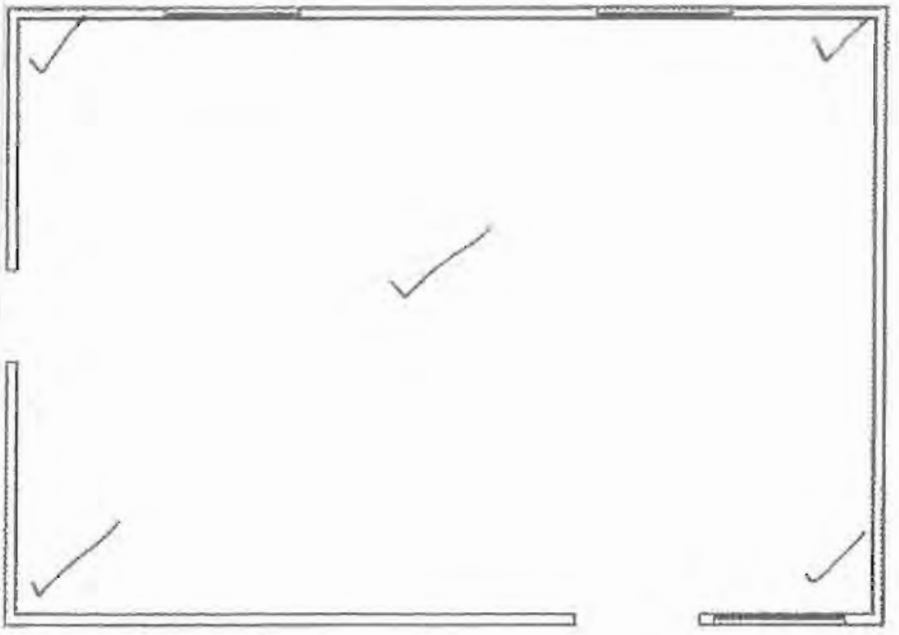
SURVEY NOTES/OBSERVATIONS:

METHANE GAS WAS NOT DETECTED IN BUILDING 118.

THE GAS MONITORING INSTRUMENT READING WAS 0.0% LEL IN ALL AREAS MONITORED INSIDE THE BUILDING 118.

IDENTIFY AREAS SURVEYED AND RECORD INSTRUMENT READINGS ON MAP

BUILDING 118



N

INSIGHT	METHANE MONITORING LOG	DATE: 02/02/2012 PAGE 3 OF 8 FACILITY: NWS Seal Beach SITE: IR Site 70 RECORDED BY: SREE AKKENAPALLY	
INSTRUMENT TYPE	INSTRUMENT NUMBER	CALIBRATION DATE	COMMENTS
Multi-Gas Monitor (RKI Eagle)			

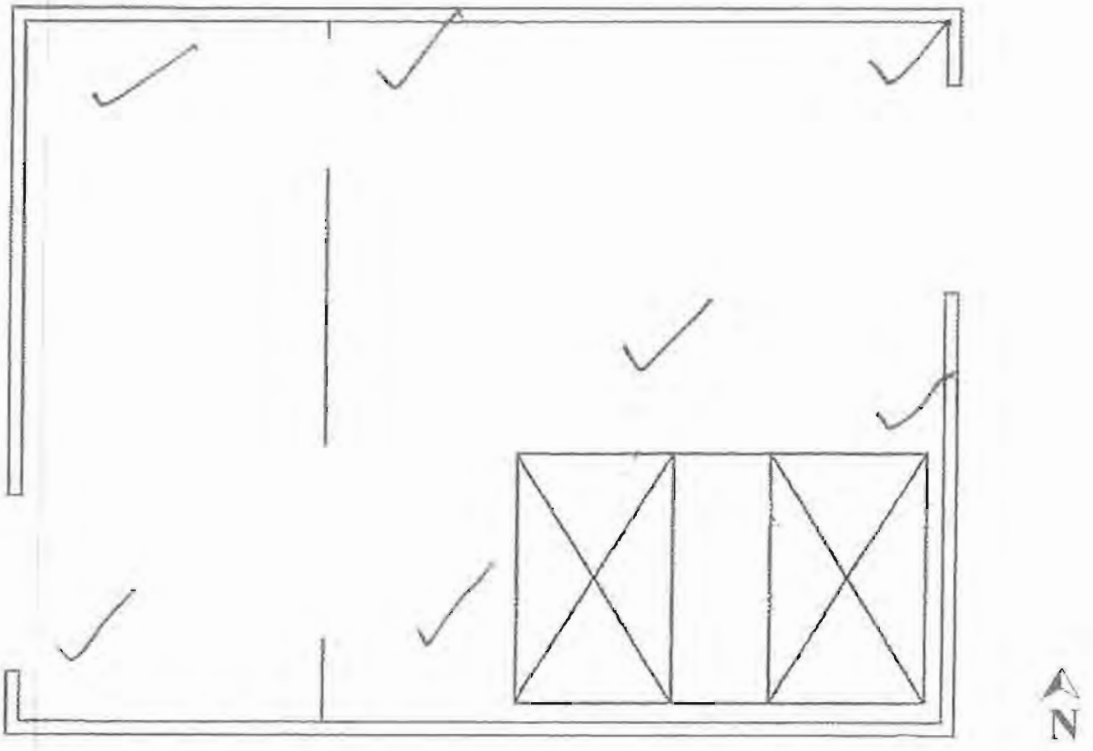
SURVEY NOTES/OBSERVATIONS:

METHANE GAS WAS NOT DETECTED IN BUILDING 119.

THE GAS MONITORING INSTRUMENT READING WAS 0.0% LEL IN ALL AREAS MONITORED INSIDE THE BUILDING 119.

IDENTIFY AREAS SURVEYED AND RECORD INSTRUMENT READINGS ON MAP

BUILDING 119



INSIGHT
Environmental, Engineering and Construction, Inc.

METHANE MONITORING LOG

DATE: 02/02/2012 PAGE 4 OF 8
FACILITY: NWS Seal Beach
SITE: IR Site 70
RECORDED BY: SREE AKKENAPALLY

INSTRUMENT TYPE	INSTRUMENT NUMBER	CALIBRATION DATE	COMMENTS
Multi-Gas Monitor (RKI Eagle)			

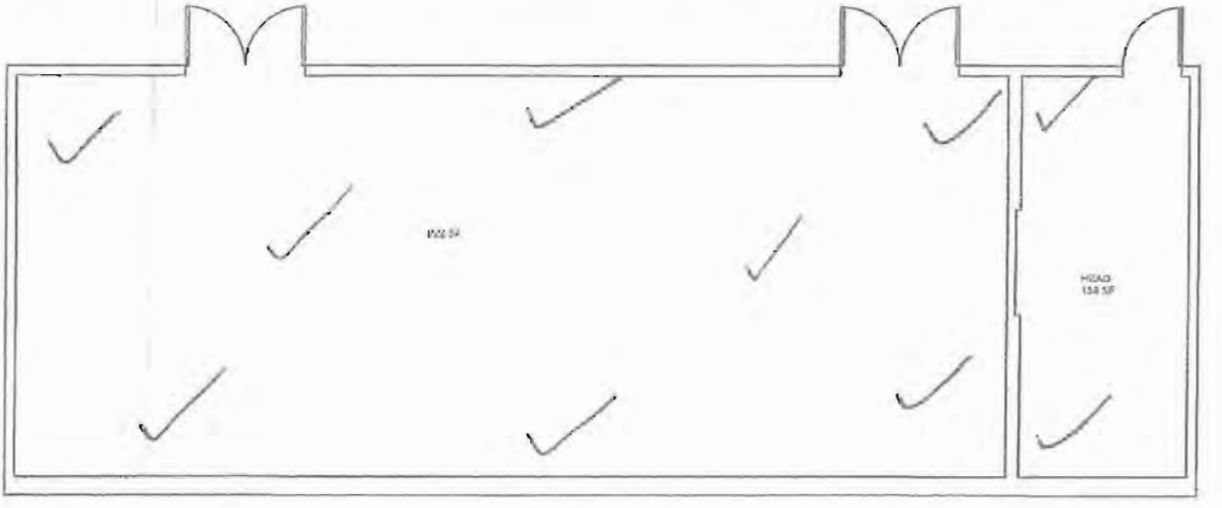
SURVEY NOTES/OBSERVATIONS:

METHANE GAS WAS NOT DETECTED IN BUILDING 121.

THE GAS MONITORING INSTRUMENT READING WAS 0.0% LEL IN ALL AREAS MONITORED INSIDE THE BUILDING 121.

IDENTIFY AREAS SURVEYED AND RECORD INSTRUMENT READINGS ON MAP

BUILDING 121



N

INSIGHT	METHANE MONITORING LOG	DATE: 02/02/2012 PAGE 5 OF 8 FACILITY: NWS Seal Beach SITE: IR Site 70 RECORDED BY: SREE AKKENAPALLY

INSTRUMENT TYPE	INSTRUMENT NUMBER	CALIBRATION DATE	COMMENTS
Multi-Gas Monitor (RKI Eagle)			

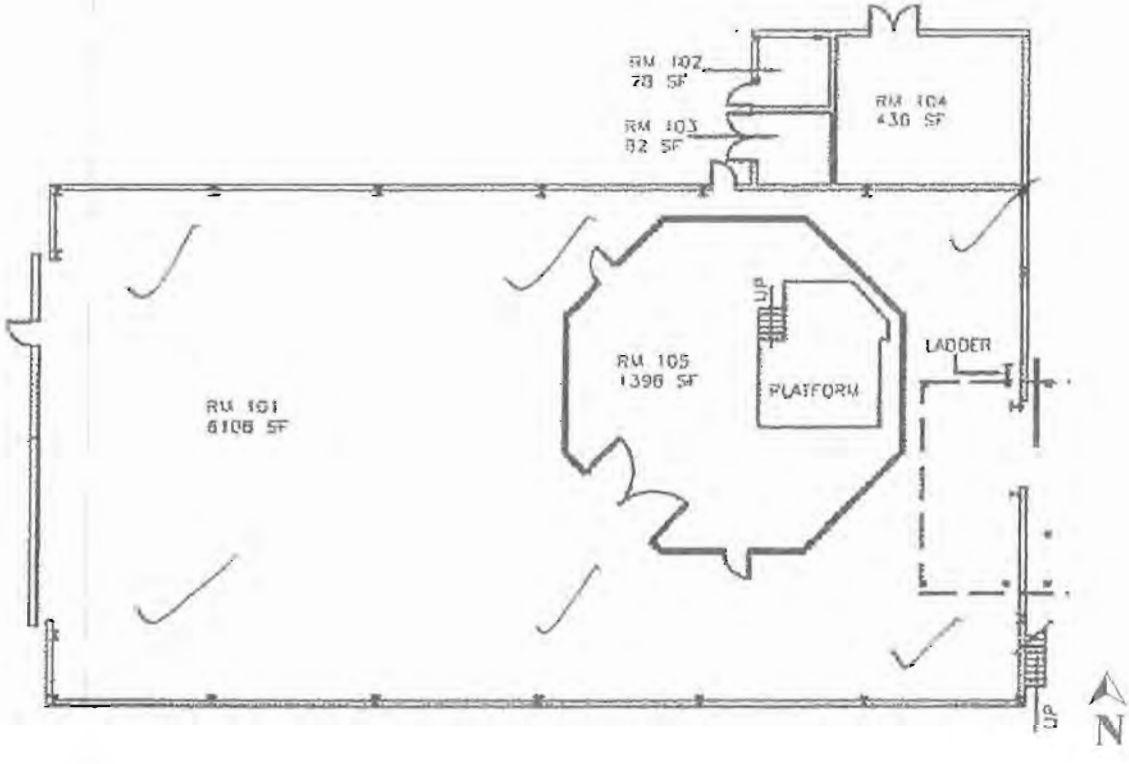
SURVEY NOTES/OBSERVATIONS:

METHANE GAS WAS NOT DETECTED IN BUILDING 122.

THE GAS MONITORING INSTRUMENT READING WAS 0.0% LEL IN ALL AREAS MONITORED INSIDE THE BUILDING 122.

IDENTIFY AREAS SURVEYED AND RECORD INSTRUMENT READINGS ON MAP

BUILDING 122



INSIGHT

METHANE MONITORING LOG

DATE: 02/02/2012 PAGE 6 OF 8

FACILITY: NWS Seal Beach

SITE: IR Site 70

RECORDED BY: SREE AKKENAPALLY

INSTRUMENT TYPE	INSTRUMENT NUMBER	CALIBRATION DATE	COMMENTS
Multi-Gas Monitor (RKI Eagle)			

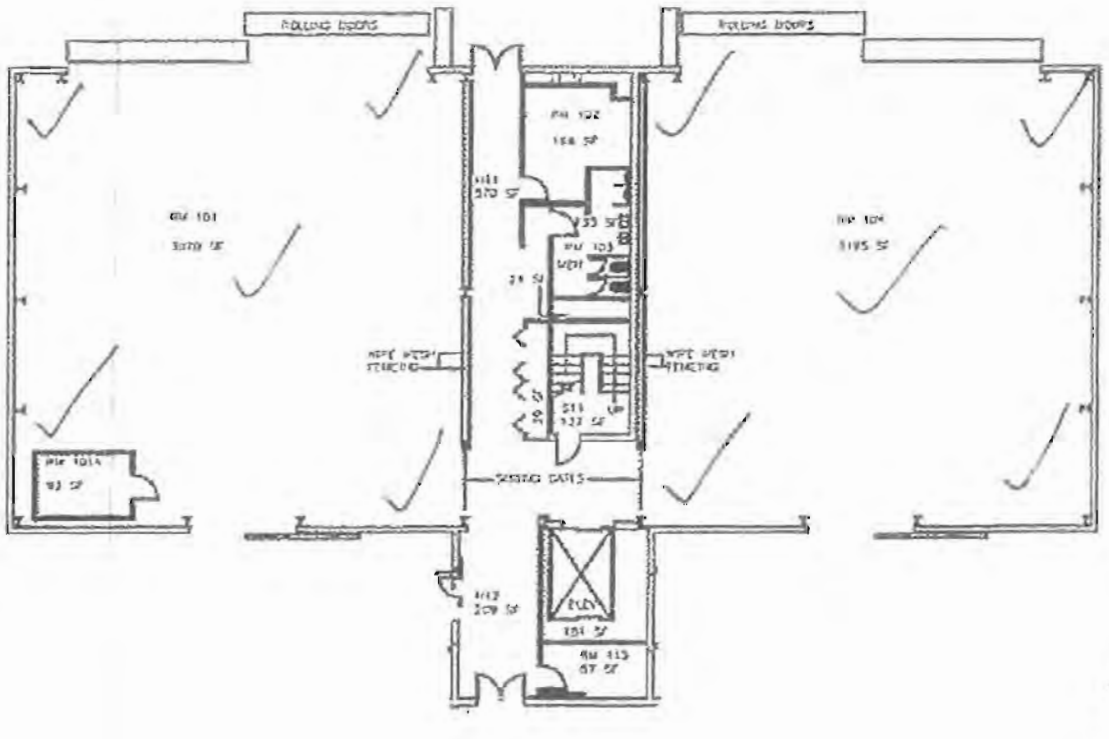
SURVEY NOTES/OBSERVATIONS:

METHANE GAS WAS NOT DETECTED IN BUILDING 123 (NORTH)

THE GAS MONITORING INSTRUMENT READING WAS 0.0% LEL IN ALL AREAS MONITORED INSIDE THE BUILDING 123 (NORTH)

IDENTIFY AREAS SURVEYED AND RECORD INSTRUMENT READINGS ON MAP

BUILDING 123 (NORTH)



INSIGHT

METHANE MONITORING LOG

DATE: 02/02/2012 PAGE 7 OF 8

FACILITY: NWS Seal Beach

SITE: IR Site 70

RECORDED BY: SREE AKKENAPALLY

INSTRUMENT TYPE	INSTRUMENT NUMBER	CALIBRATION DATE	COMMENTS
Multi-Gas Monitor (RKI Eagle)			

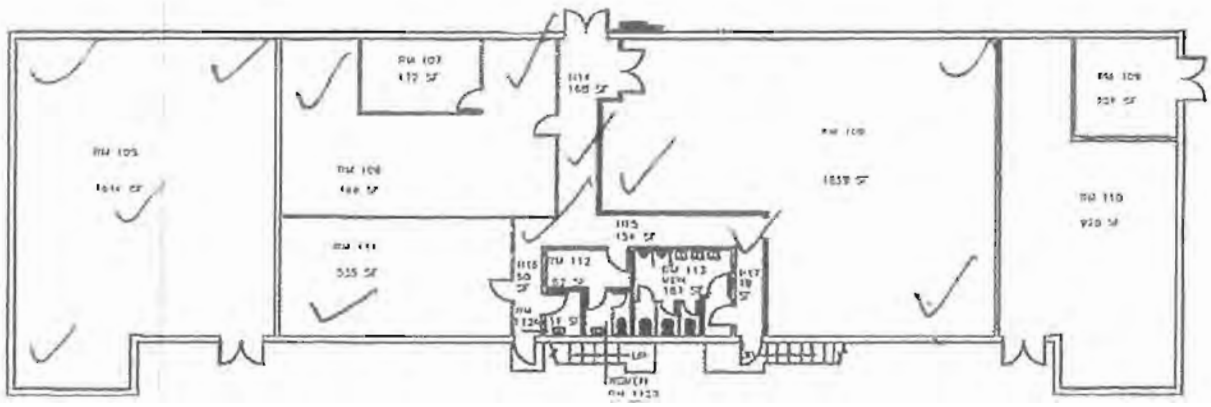
SURVEY NOTES/OBSERVATIONS:

METHANE GAS WAS NOT DETECTED IN BUILDING 123 (SOUTH)

THE GAS MONITORING INSTRUMENT READING WAS 0.0% LEL IN ALL AREAS MONITORED INSIDE THE BUILDING 123 (SOUTH).

IDENTIFY AREAS SURVEYED AND RECORD INSTRUMENT READINGS ON MAP

BUILDING 123 (SOUTH)



N

INSIGHT
Environmental, Engineering and Construction, Inc.

METHANE MONITORING LOG

DATE: 02/02/2012 PAGE 8 OF 8
FACILITY: NWS Seal Beach
SITE: IR Site 70
RECORDED BY: SREE AKKENAPALLY

INSTRUMENT TYPE	INSTRUMENT NUMBER	CALIBRATION DATE	COMMENTS
Multi-Gas Monitor (RKI Eagle)			

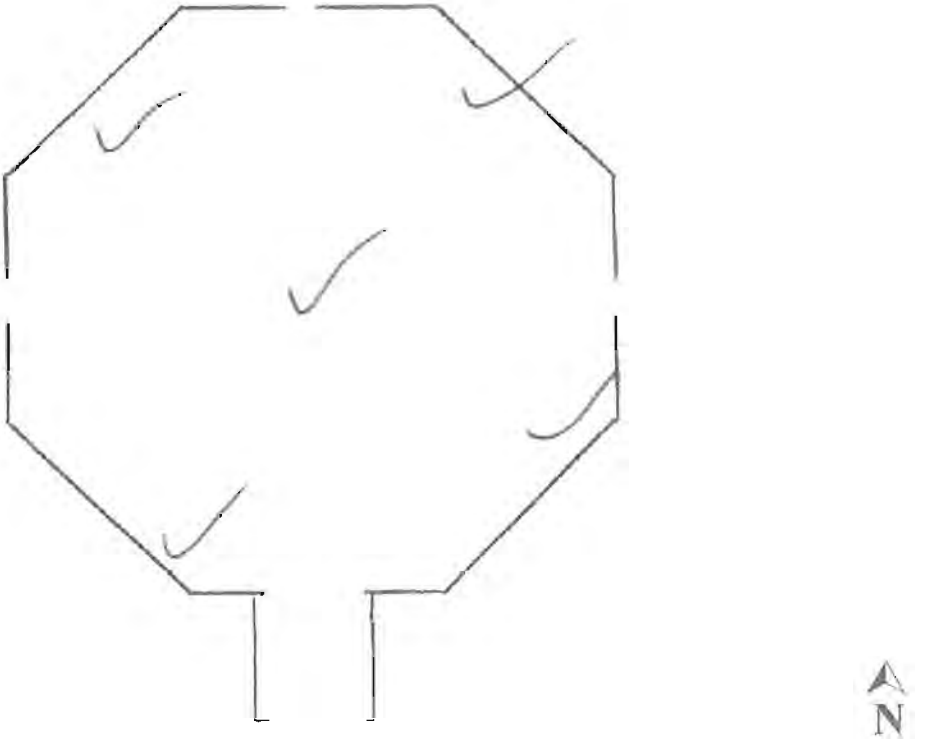
SURVEY NOTES/OBSERVATIONS:

METHANE WAS NOT DETECTED IN BUILDING 124.

THE GAS MONITORING INSTRUMENT READING WAS 0.0% LEL IN ALL AREAS MONITORED INSIDE THE BUILDING 124.

IDENTIFY AREAS SURVEYED AND RECORD INSTRUMENT READINGS ON MAP

BUILDING 124



APPENDIX B

CHAIN OF CUSTODY DOCUMENTATION

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 4-77101

SAMPLE STORAGE

EMAX CONTROL NO. *

PROJECT CODE:

CLIENT: INSIGHT GEO INC
PROJECT: SEW BEACH INNS
COORDINATOR: NICK WEINBERGER
TEL: 714 678 6700 FAX: 714 678 6711 EMAIL: NICK.WEINBERGER@INSIGHTGEO.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT GEO, INC.
ADDRESS: 7041 E. WINTERHAVEN, ANAHEIM CA 92806
EMAX PM: LIE PHAN

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: VOC's (8260B)

TAT:
- ☐ Rush ____hrs.
- ☐ Rush ____days
- ☐ 7 days
- ☐ 14 days
- ☐ 21 days
- ☐ 30 days
- ☐ ____days
- ☒ STANDARD

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	PRESERVATIVE CODE HCl	COMMENTS
1	MW-70-R-72	Site 70	10/31/10	0938	3	40ml	VOA	GW	3	X	
2	MW-30-10-73	Site 70	10/31/10	1015	3	40ml	VOA	GW	3	X	
3	MW-70-POC03-74	Site 70	10/31/10	1140	3	40ml	VOA	GW	3	X	
4	MW-70-36-75	Site 70	10/31/10	1355	3	40ml	VOA	GW	3	X	
5	IR-70-TB-76	Site 70	10/31/10	1430	2	40ml	VOA	GW	3	X	TRIP BLANK
6											
7											
8											
9											
0											

Instructions

Cooler #	Temp. (°C)	Sample #s

SAMPLER

COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[illegible]	10/31	1454	[illegible]

NOTICE: Turn-around-time (TAT) for samples shall not begin untill all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: [illegible]

SAMPLE STORAGE

EMAX CONTROL NO. *

PROJECT CODE:

CLIENT: [illegible] CCC INC.

PROJECT: [illegible]

COORDINATOR: [illegible]

TEL: [illegible] FAX: [illegible] EMAIL: [illegible]

SEND REPORT TO: [illegible]

COMPANY: [illegible] INC. INC.

ADDRESS: [illegible] Hawthorne CA 90250

EMAX PM: [illegible]

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: VOCS (8260B)

TAT:
- ☐ Rush ____hrs.
- ☐ Rush ____days
- ☐ 7 days
- ☐ 14 days
- ☐ 21 days
- ☐ 30 days
- ☐ ____days
- ☒ Standard

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	PRESERVATIVE CODE (VOCS)	COMMENTS
1	[illegible]-70-23-77	Site 70	[illegible]	[illegible]	3	40ml	VOA	GW	III	X	
2	[illegible] 70 [illegible] 2-78	Site 70	[illegible]	[illegible]	3	40ml	VOA	GW	III	X	
3	[illegible]-70-[illegible]04-79	Site 70	[illegible]	1145	3	40ml	VOA	GW	III	X	
4	[illegible]-70-21-80	Site 70	[illegible]	1156	3	40ml	VOA	GW	III	X	
5	[illegible] 70-16-81	Site 70	[illegible]	1415	3	40ml	VOA	GW	III	X	
6											
7	[illegible] 70-TB-82	Site 70	[illegible]	1420	2	40ml	VOA	GW	III	X	Trip Blank
8											
9											
0											

Instructions

Cooler #	Temp. (°C)	Sample #s

SAMPLER

COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	[illegible]	14:40	[illegible]

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 4-7 1K1

SAMPLE STORAGE

EMAX CONTROL NO. *

PROJECT CODE:

CLIENT: INSIGHT ENC INC.
PROJECT: IR SITE 70 / NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: (714) 678 1700 FAX: (714) 678 6791 EMAIL: NWEINBERGER @ILLICH.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT ENC INC.
ADDRESS: 2010 E MIRALOMA AVE ANAHEIM CA 92806
EMAX PM: YE MINT

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: VOC'S (8260B) / DISS. HEAVY METALS / VOC'S (EPA 8260B)

TAT:
- ☐ Rush ____hrs.
- ☐ Rush ____days
- ☐ 7 days
- ☐ 14 days
- ☐ 21 days
- ☐ 30 days
- ☐ ____days
- ☒ STANDARD

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	VOC'S (8260B)	DISS. HEAVY METALS	VOC'S (EPA 8260B)	COMMENTS
1	MW-70-MWA02-S3	IR SITE 70	11/2/11			VARI	VARI	GW	III	X	X	X	
2	MW-70-MWA03-SW	SITE 70	11/2/11			VARI	VARI	GW	III	X	X	X	
3	MW-70-MWA03-S5	SITE 70	11/2/11			VARI	VARI	GW	III	X	X	X	
4	MW-70-MWA04-S6	SITE 70	11/2/11			VARI	VARI	GW	III	X	X	X	
5	TW-70-TB-S7	SITE 70	11/2/11			40ml	VOA	GW	III	X			TRIP BLANK.
6	MW-70-MWA15-S8	SITE 70	11/2/11			VARI	VARI	GW	III	X	X	X	
7													
8													
9													
0													

Instructions

Cooler #	Temp. (°C)	Sample #s

SAMPLER

COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11/2/11	1:30	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin untill all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011068-8042
SAMPLE STORAGE
EMAX CONTROL NO. *
PROJECT CODE: 4-77101

CLIENT: Tasman Geo Inc
PROJECT: FR Site 70 - MWS Soil Bench
COORDINATOR: Andy Arrington
TEL: 714 678 6200 FAX: 714 678 6211 EMAIL: aarrington@geoi.com
SEND REPORT TO: Nick Wilbanks
COMPANY: Tasman Geo Inc
ADDRESS: 3010 E Miraloma Ave, Anaheim, CA 92806
EMAX PM: Lyn Mix

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: Chlor - 8260B; PSH - RSK-175; Nat Chem - 300.0/9056; TPH - 418.1; Silica - 376.2; Metals - 6010B; VOCs - 8260B

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	Chlor - 8260B (HC)	PSH - RSK-175 (HC)	Nat Chem - 300.0/9056 (NP)	TPH - 418.1 (HC)	Silica - 376.2 (ZA/NA)	Metals - 6010B (HN)	VOCs - 8260B		COMMENTS
1	MW-70-PMW01A-089	FR Site 70 MWS-SB	11-3-11	1130	10	unknown	unknown	GW	III	X	X	X	X	X	X			
2	MW-70-PMW01B-091	FR Site 70 MWS-SB	11-3-11	1313	20	unknown	unknown	GW	III	X	X	X	X	X	X			MS/MSD
3	MW-70-22-092	FR Site 70 MWS-SB	11-3-11	1455	10	unknown	unknown	GW	III	X	X	X	X	X	X			
4	MW-70-28-094	FR Site 70 MWS-SB	11-3-11	1616	10	unknown	unknown	GW	III	X	X	X	X	X	X			
5																		
6																		
7																		
8																		
9	FR-70-FD-095	FR Site 70 MWS-SB	11-3-11	—	10	unknown	unknown	GW	III	X	X	X	X	X	X			DUPLICATE
0	FR-70-TB-090	FR Site 70 MWS-SB	11-3-11	1200	2	40mL	VOA	GW	III	X								TRIP BLANK

Instructions

Cooler #	Temp. (°C)	Sample #s

SAMPLER: Chase Brannon

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-3-11	1255	[signature]

COURIER/AIRBILL

NOTICE: Turn-around-time (TAT) for samples shall not begin untill all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011068-8042
SAMPLE STORAGE
EMAX CONTROL NO. *
PROJECT CODE: 4-77101

CLIENT: Tetra Tech EC Inc
PROJECT: Tr Site 30 NWS-Seal Beach
COORDINATOR: Nick Weinberger
TEL: 714 636 6700 FAX: 714 636 6811 EMAIL: nweinberger@tetratech.com
SEND REPORT TO: Nick Weinberger
COMPANY: Tetra Tech EC Inc.
ADDRESS: 3010 E. Miraloma Ave
Anaheim, CA 92806
EMAX PM: K. Mai

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: Ubcs - EPA 8260B; Diss Metals - EPA 6010B; Diss Metals - RSK 175; Sulfide - SM4500S2; Nitrate - EPA 300.0; Nitrite - EPA 300.0; TOC - SM 5310B; Alkalinity - SM 2320B; Diss Gases - RSK 175; Ubcs - EPA 8260B

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	Ubcs (HC)	Diss Metals (HC)	TOC (NP)	Alkalinity (HC)	Sulfide (NaOH/ZA)	Nitrate (HN)	Nitrite (NP)	Diss Gases (NP)	COMMENTS
1	MW-30-PMW03B-095	Tr Site 30 NWS-SB	11-2-11	1042	10	varies	varies	GW	III	X	X	X	X	X	X	X	X	Elevated well
2	MW-30-PMW03B-097	Tr Site 30 NWS-SB	11-2-11	1205	10	varies	varies	GW	III	X	X	X	X	X	X			MS/MSD
3	TW-30-SA806-099	Tr Site 30 NWS-SB	11-2-11	1430	10	varies	varies	GW	III	X	X	X	X	X	X			
4	MW-30-PMW02B-100	Tr Site 30 NWS-SB	11-2-11	1542	10	varies	varies	GW	III	X	X	X	X	X	X			
5	MW-30-PMW02B-101	Tr Site 30 NWS-SB	11-2-11	1627	10	varies	varies	GW	III	X	X	X	X	X	X			
6																		
7																		
8																		
9	TR-30-FD-098	Tr Site 30 NWS-SB	11-2-11	1225	10	varies	varies	GW	III	X	X	X	X	X	X			Duplicate
10	TR-30-TB-096	Tr Site 30 NWS-SB	11-2-11	1100	2	40mL	VOA	GW	III	X								Trip Blank

Instructions: Inst Chem Analysis of Solids: Anions=EPA 300.0, VFA=EPA 300.0M, TDS=SM 2540C; Alkalinity - SM 2320B. Unless noted otherwise in comments

Cooler #	Temp. (°C)	Sample #s

SAMPLER: Chase Brandon
COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-2-11	1745	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011064-8042
SAMPLE STORAGE
EMAX CONTROL NO. *
PROJECT CODE: 4-72101

CLIENT: INSIGHT CEC INC
PROJECT: IR SITE 70 - NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 714-638-6700 FAX: 714-638-6711 EMAIL: NWEINBERGER@ICCI.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT CEC, INC.
ADDRESS: 3010 E. MIRALOMA AVE, ANAHEIM, CA 92806
EMAX PM: Ye Mint

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: VOCs - EPA 8260B; DISS HYD. GASES - RSK-175; WET CHEM; TDS - SM 2540B; SULFIDE - SM4500F; DISS. METALS - EPA 6010B; VOCs - EPA 8260B; DISS HYD. GASES - RSK-175

TAT: ☐ Rush ____ hrs. ☐ Rush ____ days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____ days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	HC	HC	NP	HC	SH/ZA	HN	NP	NP	COMMENTS
1	IW-70-SB11-103	IR SITE 70 NWS-SB	11-8-11	1035	10	VARIES	VARIES	GW	III	X	X	X	X	X	X			
2	IW-70-SB115-104	IR SITE 70 NWS-SB	11-8-11	1201	10	VARIES	VARIES	GW	III	X	X	X	X	X	X			
3	MW-70-PMW06A-105	IR SITE 70 NWS-SB	11-8-11	1392	10	VARIES	VARIES	GW	III	X	X	X	X	X	X			
4	MW-70-PMW06B-106	IR SITE 70 NWS-SB	11-8-11	1448	10	VARIES	VARIES	GW	III	X	X	X	X	X	X			
5	MW-70-38-108	IR SITE 70 NWS-SB	11-8-11	1603	10	VARIES	VARIES	GW	III	X	X	X	X	X	X			
6																		
7																		
8																		
9	IR-70-ED-107	IR SITE 70 NWS-SB	11-8-11	1510	10	VARIES	VARIES	GW	III	X	X	X	X	X	X			DUPLICATE
10	IR-70-TB-102	IR SITE 70 NWS-SB	11-8-11	0830	2	40mL	VOA	GW	III	X								TRIP BLANKS.

Instructions: WET CHEM AS FOLLOWS: ANIONS - EPA 300.0, VFAs - EPA 300.0M, TDS - SM 2540C, ALKALINITY - SM2320B. UNLESS NOTED OTHERWISE IN COMMENTS.

Cooler #	Temp. (°C)	Sample #s

SAMPLER: CHASE BRIGGDON
COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-8-11	1810	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011268-8042
SAMPLE STORAGE
EMAX CONTROL NO. *
PROJECT CODE: 4-20101

CLIENT: Tetra Tech EC Inc.
PROJECT: Ta Site 20 - NWS Seal Beach
COORDINATOR: Nick Weinberger
TEL: 714-424-1200 FAX: 714-424-2111 EMAIL: nicholas.weinberger@tetratech.com
SEND REPORT TO: Nick Weinberger
COMPANY: Tetra Tech EC Inc.
ADDRESS: 3000 E. Imperial Hwy, Brea, CA 92821
EMAX PM: Lee Hunt

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: Volatile - EPA 8260B; Diesel Range Organics - TPH 8015 - 17 SK; Total Alkalinity; TDS - SM 2540C; Sulfide - SM 4500S2 D; Metals - EPA 6010B; Dissolved EPA 8260B; Diesel Range Organics - TPH 8015 - 17 SK

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	Volatile (HC)	Diesel Range Organics (HC)	Total Alkalinity (NP)	TDS (HC)	Sulfide (SH/ZA)	Metals (HN)	Dissolved (NP)	Diesel Range Organics (NP)	COMMENTS
1	MW-20-PMW024-110	Ta Site 20 MW-24	11-9-11	1036	10	Vials	Amber	GW	III	X	X	X	X	X	X			
2	MW-20-PMW043-112	Ta Site 20 MW-43	11-9-11	1140	10	Vials	Amber	GW	III	X	X	X	X	X	X			
3	TW-20-EGB118-113	Ta Site 20 EGB118	11-9-11	1259	10	Vials	Amber	GW	III			X	X	X	X	X	X	Equipment well
4	MW-20-PMW054-114	Ta Site 20 MW-54	11-9-11	1444	10	Vials	Amber	GW	III	X	X	X	X	X	X			
5	MW-20-PMW068-115	Ta Site 20 MW-68	11-9-11	1551	10	Vials	Amber	GW	III	X	X	X	X	X	X			
6																		
7																		
8																		
9	TB-20-ED-111	Ta Site 20 Mw-68	11-9-11	1100	10	Vials	Amber	GW	III	X	X	X	X	X	X			Duplicate
10	TR-20-TR-116	Ta Site 20 Mw-68	11-9-11	0800	2	Vials	Amber	GW	III	X								Trip Blanks

Instructions: Run chem analysis as follows: Nitrate - EPA 300.0, Nitrite - EPA 300.0M, TDS - SM 2540C, Alkalinity - SM 2320B. Unless noted otherwise in comments. Include Dissolved Hydrogen Sulfide (DHS - SM4500) with wet chem.

Cooler #	Temp. (°C)	Sample #s

SAMPLER: Chase Brandon
COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-9-11	1745	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin untill all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

CHAIN OF CUSTODY

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1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011065-8042
SAMPLE STORAGE
EMAX CONTROL NO. *
PROJECT CODE: 4-77101

CLIENT: INSIGHT GEO, INC
PROJECT: TR SITE 70 - NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 714 638 1900 FAX: 714 636 6711 EMAIL: NWEINBERGER@IGEO.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT GEO, INC.
ADDRESS: 3010 E. MIRALOMA AVE, ANAHEIM, CA 92806
EMAX PM: G. Mint

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
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SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: Nitr. - EPA 8260B; Diss. Hyp. Gases - RSK-175; Wet Chem; TOC - SM5310B; Sulfide - SM4500; Diss. Metals - EPA 6010B; Nitr. - EPA 8260B; Dissolved Gases - RSK-175

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	HC	IC	NO	HC	SH	HN	NO	NO	COMMENTS
* 1	TR-70-RD0-5-112	ER SITE 70 NWSSB	11-10-11	1102	10	VARIOUS	VARIOUS	GW	TTT			X	X	X	X	X	X	EFFLUENT WELL
* 2	MW-70-MNA06-118	ER SITE 70 NWSSB	11-10-11	1218	7	VARIOUS	VARIOUS	GW	TTT	X	X	X						FOR WET CHEM ANALYSIS. RUN ONLY VEAL.
* 3	MW-70-MNA08-119	ER SITE 70 NWSSB	11-10-11	1342	7	VARIOUS	VARIOUS	GW	TTT	X	X	X						FOR WET CHEM ANALYSIS. RUN ONLY VEAL.
* 4	MW-70-MNA09-120	ER SITE 70 NWSSB	11-10-11	1445	7	VARIOUS	VARIOUS	GW	TTT	X	X	X						FOR WET CHEM ANALYSIS RUN ONLY VEAL.
* 5	MW-70-MNA13-121	ER SITE 70 NWSSB	11-10-11	1533	7	VARIOUS	VARIOUS	GW	TTT	X	X	X						FOR WET CHEM ANALYSIS. RUN ONLY VEAL
* 6																		
* 7																		
* 8																		
* 9																		
* 0	TR-70-TB-116	ER SITE 70 NWSSB	11-10-11	0845	2	40mL	VOA	GW	TTT	X								TRIP BLANKS

Instructions: WET CHEM ANALYSIS AS FOLLOWS: ANIONS - EPA 300.0, VEAL - EPA 300.0M, TDS - SM2540C, ALKALINITY - SM2320B, DHS - SM4500, UNLESS NOTED OTHERWISE IN COMMENTS.

Cooler #	Temp. (°C)	Sample #s

SAMPLER: CHASE BROADDUS
COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
	11-10-11	1797	

NOTICE: Turn-around-time (TAT) for samples shall not begin untill all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

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1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011065-8041
SAMPLE STORAGE
EMAX CONTROL NO. *
PROJECT CODE: 4-77101

CLIENT: Tasman Geo. Inc.
PROJECT: Lw Site 30 - NWS Seal Beach
COORDINATOR: Nick Weinberger
TEL / FAX / EMAIL: 714-538-1200 714-538-1201 nweinberger@tasmangeo.com
SEND REPORT TO: Nick Weinberger
COMPANY: Tasman Geo. Inc.
ADDRESS: 3010 E. Willowbrook Ave. Anaheim, CA 92806
EMAX PM: Joe Wright

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
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AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: VOCs - EPA 8260B; Diesel Range Hydrocarbons - EPA 8015M; Lead Dissolved; VOC - SM5310B; Semi-VOCs - SM 8270C; Dissolved Metals - EPA 6010B; Lead - EPA 8260B; Diesel Range Hydrocarbons - EPA 8015M

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	VOCs (HC)	Diesel (HC)	Lead (HN)	VOC (HC)	Semi-VOC (ZA)	Metals (HN)	Lead (HN)	Diesel (HC)	COMMENTS
1	MW-30-PMW08-124	Lw Site 30 NWS SB	11-14-11	1019	12	40ml	VOA	GW	III	X	X	X	X	X	X			
2	SB-30-SHB13-125	Lw Site 30 NWS SB	11-14-11	1203	12	40ml	40ml	GW	III			X	X	X	X	X	X	Equipment well
3	MW-30-PMW10-126	Lw Site 30 NWS SB	11-14-11	1302	12	40ml	40ml	GW	III	X	X	X	X	X	X			
4	MW-30-MNA11-127	Lw Site 30 NWS SB	11-14-11	1410	7	40ml	40ml	GW	III	X	X	X						Lab not Client provided Bottles used
5	MW-30-MNA07-128	Lw Site 30 NWS SB	11-14-11	1533	7	40ml	40ml	GW	III			X				X	X	Lab not Client provided Bottles used MW-07 Elevation well
6																		
7																		
8																		
9																		
10	TB-30-TB-129	Lw Site 30 NWS SB	11-14-11	0845	2	40ml	VOA	GW	III	X								Trip Blank

Instructions: Lab Client Analysis as Specified. Analysis - EPA 300.0 (Cl, SO4, NO3), TDS - SM 2540C, Alkalinity - SM 2320B, DWS - SM4500, unless noted otherwise on COC.

Cooler #	Temp. (°C)	Sample #s

SAMPLER: Chase Brown
COURIER/AIRBILL:

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-14-11	1700	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin untill all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 20110268-5042
SAMPLE STORAGE
EMAX CONTROL NO. *
PROJECT CODE: 4.22[illegible]

CLIENT: TA SHORT ECC, INC
PROJECT: TA SITE 70 MAND-[illegible] BENCH
COORDINATOR: NICK WEINBERGER
TEL: [illegible] FAX: 310-[illegible] EMAIL: NWEINBERGER@ECC.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INNOVATIVE, INC.
ADDRESS: 3010 E. MIDDLEFIELD AVE, ANAHEIM, CA 92806
EMAX PM: [illegible]

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: VOCs - EPA 8260B; SVOCs - EPA 8270C; Metals - EPA 6010B; Cyanide - SM4500CN; Sulfide - SM4500S; TDS - SM2540C; Nitrate - EPA 300.0; Nitrite - EPA 300.0; Lab Chem

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☐ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	HC	HN	SH	HS	ZA	HN	NO	NO	COMMENTS
1	MW-70-PMW07A-130	TA SITE 70 MAND SD	11-15-11	0912	20	VOA	VOA	GW	III	X	X	X	X	X	X			MS/MSD
2	MW-70-PMW07B-131	TA SITE 70 MAND SD	11-15-11	1103	10	VOA	VOA	GW	III	X	X	X	X	X	X			
3	IW-70-SD2216-132	TA SITE 70 MAND SD	11-15-11	1202	10	VOA	VOA	GW	III			X	X	X	X	X	X	ELECTRICAL WELL
4	MW-70-PMW08A-133	TA SITE 70 MAND SD	11-15-11	1319	10	VOA	VOA	GW	III	X	X	X	X	X	X			
5	MW-70-PMW08B-134	TA SITE 70 MAND SD	11-15-11	1418	10	VOA	VOA	GW	III	X	X	X	X	X	X			
6	MW-70-MWA10-135	TA SITE 70 MAND SD	11-15-11	1519	2	VOA	VOA	GW	III	X	X	X						ONE WET CHEM ANALYSIS RUN ONLY WEEK
7																		
8																		
9																		
10	IW-70-TB-129	TA SITE 70 MAND SD	11-15-11	0730	2	40ml	VOA	GW	III	X								TRIP BLANK

Instructions: WET CHEM ANALYSIS AS FOLLOWS: ANIONS - EPA 300.0, NO2-N - EPA 300.0, TDS - SM2540C, ALKALINITY - SM2320B, SUL - SM4500 UNLESS NOTED OTHERWISE IN COMMENTS

Cooler #	Temp. (°C)	Sample #s

SAMPLER: CHASE BROWDON
COURIER/AIRBILL:

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-15-11	1700	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin untill all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 201068-8042
SAMPLE STORAGE
EMAX CONTROL NO. *
PROJECT CODE: 4-77101

CLIENT: INSIGHT GEO, INC.
PROJECT: IR SITE 70 NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 7146786700 FAX: 7146786711 EMAIL: NWEINBERGER@INSIGHTGEO.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT GEO, INC.
ADDRESS: 3010 E. MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: Ye Ujint

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

ANALYSIS REQUIRED: VOCs - EPA 8260B; SVOCs NO. RSK-175; WET CHEM; TOC - SM5310B; SULFIDE - SM4500S; DISS METHANE - EPA 6010B; VOCs - EPA 8260B; DISSOLVED GAS RSK-175

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	HC	HC	HC	HC	SH/ZA	HN	HN	HN
* 1	MW-70-433-137	IR SITE 70	11-16-11	0936	7	VARY	VARY	GW	III	X	X	X					
* 2	MW-70-PMW11A-138	IR SITE 70	11-16-11	1042	10	VARY	VARY	GW	III	X	X	X	X	X	X		
* 3	MW-70-PMW11B-139	IR SITE 70	11-16-11	1134	10	VARY	VARY	GW	III	X	X	X	X	X	X		
* 4	MW-70-PMW12A-140	IR SITE 70	11-16-11	1410	10	VARY	VARY	GW	III	X	X	X	X	X	X		
* 5	MW-70-PMW12B-142	IR SITE 70	11-16-11	1540	10	VARY	VARY	GW	III	X	X	X	X	X	X		
* 6																	
* 7																	
* 8																	
* 9	IR-70-FD-141	IR SITE 70	11-16-11	1430	10	VARIOUS	VARIOUS	GW	III	X	X	X	X	X	X		
* 0	IR-70-TB-136	IR SITE 70	11-16-11	0800	2	40ml	VOA	GW	III	X							

COMMENTS: FOR WET CHEM ANALYSIS. RUN ONLY VFAs. / DUPLICATE / TRIP BLANK

Instructions: WET CHEM ANALYSIS AS FOLLOWS: ANIONS: EPA 300.0, VFAs - EPA 300.0M, TDS - SM2540C, ALKALINITY: SM2320B, DHS: SM4500. UNLESS NOTED OTHERWISE IN COMMENTS.

Cooler #	Temp. (°C)	Sample #s

SAMPLER: CHASE BROGDON
COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-16-11	1700	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin untill all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 4-77101*

SAMPLE STORAGE

EMAX CONTROL NO. *

PROJECT CODE:

CLIENT: INSIGHT ENV. INC

PROJECT: UL SITE 70 - MAS SUNSET BEACH

COORDINATOR: NICK WEINBERGER

TEL: 714 (949) 200 FAX: 714 (949) 671 EMAIL: NWEINBERGER@INC-1.COM

SEND REPORT TO: NICK WEINBERGER

COMPANY: INSIGHT ENV INC

ADDRESS: 3010 E. MIRALOMA AVE. ANAHEIM CA 92806

EMAX PM: Lee Hyun

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: VOA - EPA 8260

TAT:
- ☐ Rush ____hrs.
- ☐ Rush ____days
- ☐ 7 days
- ☒ 14 days
- ☐ 21 days
- ☐ 30 days
- ☐ ____days
- ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	PRESERVATIVE CODE HC							COMMENTS
* 1	MW-70-MNA15-148	SUNSET	11-17-11	1304	3	40ml	VOA	GW	TT	X							
* 2																	
* 3																	
* 4																	
* 5																	
* 6																	
* 7																	
* 8																	
* 9																	
* 0																	

Instructions: * PLEASE BILL THIS TO INSIGHT & SEND THE INVOICE TO INSIGHT ENV. INC. 3010 E. MIRALOMA AVE. ANAHEIM, CA 92806

Cooler #	Temp. (°C)	Sample #s

SAMPLER: CHASE BADGION

COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-17-11	1700	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 201068-5242
SAMPLE STORAGE
EMAX CONTROL NO. *
PROJECT CODE: 4-72101

CLIENT: INSIGHT ECC, INC.
PROJECT: IR SITE 70 NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 214 696 6700 FAX: 214 696 6711 EMAIL: NWEINBERGER@ECCI.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT ECC, INC.
ADDRESS: 3010 E. MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: Ye Myint

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: Volatile GC/MS 8260B; Diss Hyd. Gases: RSK-175; Inorg Chem; TDS - SM2540C; Sulfide - SM4500; Diss Metals: CAM 6010B; Volatile GC/MS 8260B; Diss Hyd. Gases: RSK-175

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☑ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	HC	HC	NO	HC	S/ZA	HN	NO	NO	COMMENTS
1	IW-70-SB8217-144	IR SITE 70	11-17-11	0958	10	vary	vary	GW	III	X	X	X	X	X	X			
2	MW-70-MNA12-146	IR SITE 70	11-17-11	1138	7	vary	vary	GW	III	X	X	X						RUN VOAs ONLY FOR WET CHEM.
3	MW-70-MNA16-149	IR SITE 70	11-17-11	1438	7	vary	vary	GW	III	X	X	X						RUN VOAs ONLY FOR WET CHEM
4	MW-70-MNA14-151	IR SITE 70	11-17-11	1539	7	vary	vary	GW	III			X						RUN VOAs ONLY FOR WET CHEM.
5																		
6																		
7	IR-70-FD-150	IR SITE 70	11-17-11	1500	7	vary	vary	GW	III	X	X	X						DUPLICATE - FOR WET CHEM RUN VOAs ONLY
8	IR-70-FD-147	IR SITE 70	11-17-11	1155	7	vary	vary	GW	III	X	X	X						DUPLICATE - FOR WET CHEM RUN VOAs ONLY
9	IR-70-FD-145	IR SITE 70	11-17-11	1020	10	vary	vary	GW	III	X	X	X	X	X	X			DUPLICATE
0	IR-70-TB-143	IR SITE 70	11-17-11	0800	2	40ml	VOA	GW	III	X								TRIP BLANKS

Instructions: FOR WET CHEM ANALYSIS AS FOLLOWS: ANIONS - EPA 300.0 VOAs - EPA 300.0M, TDS - SM2540C, ALKALINITY - SM2320B, DHS - SM4500. UNLESS NOTED OTHERWISE IN COMMENTS.

Cooler #	Temp. (°C)	Sample #s

SAMPLER: CHASE BRAIDON
COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-17-11	1705	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin untill all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 7011065-8047
SAMPLE STORAGE
EMAX CONTROL NO. *
PROJECT CODE: 4-72101

CLIENT: INSIGHT GEO INC.
PROJECT: IR SITE 70 - NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 714-678-6820 FAX: 714-678-6711 EMAIL: NWEINBERGER@IGEO.COM
SEND REPORT TO: NICK WEINBERGER IGEO.COM
COMPANY: INSIGHT GEO, INC.
ADDRESS: 2010 E. MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: Lee Dyer

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: Volatile - 8260B; SVOC - 8270C; Metal Cr(VI); TDS - SM2540C; Anions - 300.0; Alkalinity - SM2320B; Volatile Petroleum Hydrocarbons - 8260B; DRO/MRO - RSK-175

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	HC	HC	NA	HC	ZA	VN	NP	NP	COMMENTS
1	MW-70-PMW13A-153	IR SITE 70	11-8-11	0945	10	VOA	VOA	GW	III	X	X	X	X	X	X			
2	MW-70-PMW13B-154	IR SITE 70	11-8-11	1055	10	VOA	VOA	GW	III	X	X	X	X	X	X			
3	MW-70-PMW14A-155	IR SITE 70	11-8-11	1209	10	VOA	VOA	GW	III	X	X	X	X	X	X			
4	MW-70-PMW14B-156	IR SITE 70	11-8-11	1452	10	VOA	VOA	GW	III	X	X	X	X	X	X			
5	IW-70-SSB109-157	IR SITE 70	11-8-11	1613	10	VOA	VOA	GW	III			X	X	X	X	X	X	EFFLUENT WELL
6																		
7																		
8																		
9																		
0	TB-70-TB-152	IR SITE 70	11-8-11	0800	2	VOA	VOA	GW	III	X								TRIP BLANKS.

Instructions: THE WET CHEM ANALYSES AS SHOWN, ANIONS - 300.0, VOA - 8260B, TDS - SM2540C, ALKALINITY - SM2320B, DHS - SM5520. UNLESS NOTED OTHERWISE IN COMMENTS

Cooler #: | Temp. (°C): | Sample #s:

SAMPLER: CHASE BRAXTON
COURIER/AIRBILL:

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-8-11	1750	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin untill all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 20110648-8092
SAMPLE STORAGE
EMAX CONTROL NO. *
PROJECT CODE: 4-27101

CLIENT: ENSIGHT ECC, INC.
PROJECT: TA. STA. 70 - ANNS SAN BERNIE
COORDINATOR: NICK WEN BERGER
TEL: 949 581 1300 FAX: 949 258 6711 EMAIL: NWENBERGER@TETRA TECH.COM
SEND REPORT TO: NICK WEN BERGER
COMPANY: TETRA TECH, INC.
ADDRESS: 3010 E. MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: [illegible]

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	Water - 8260B (HC)	DISS MP. GASES - RSK-175 (HC)	WET CHEM (NO)	TC - SM5310B (HC)	SULFIDE - SM4500S2 (ZA/SH)	DISS METAL - 6010B (HN)	Bromide - 8260B (NO)	DISS MP GASES - RSK-175 (NO)	COMMENTS
1	MW-70-15-1559	Ex Site 70	11-21-11	1044	7	vary	vary	GW	III	X	X	X						FOR WET CHEM RUN ONLY VOAS
2	MW-70-MNA17-160	Ex Site 70	11-21-11	1154	7	vary	vary	GW	III	X	X	X						FOR WET CHEM RUN ONLY VOAS
3	EW-70-SHB310-161	Ex Site 70	11-21-11	1334	10	vary	vary	GW	III			X	X	X	X	X	X	EFFLUENT WELL
4																		
5																		
6																		
7																		
8																		
9																		
10	TB-70-TB-158	Ex Site 70	11-21-11	0830	2	40ml	VOA	GW	III	X								TRIP BLANKS

Instructions: WET CHEM ANALYSIS AS FOLLOWS: ANIONS - 300.0, NH3-N - 300.0M, TDS-SM2540C, ALKALINITY-SM2320B, DHS-SM4500, UNLESS NOTED OTHERWISE IN COMMENTS.

Cooler #	Temp. (°C)	Sample #s

SAMPLER: CHASE BROWDON
COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-21-11	1550	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011066-5042
SAMPLE STORAGE
EMAX CONTROL NO. *
PROJECT CODE: 4-17101

CLIENT: INSIGHT ECC, INC.
PROJECT: EL SOTO - NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 714-826-5500 FAX: 714-826-5511 EMAIL: NWEINBERGER@
SEND REPORT TO: NICK WEINBERGER EMAIL
COMPANY: INSIGHT ECC INC.
ADDRESS: 3010 E ORANGETHORPE AVE.
ANAHEIM CA 92806
EMAX PM: [illegible]

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	VOA - 8260B	PER AND PFAS-175	WET CHEM	TPH - SM5310B	SULFIDE - SM4500	NITRATE - 8260B	VOA - 8260B	DISINFECTANTS - PFAS-175	COMMENTS
1	EW-70-SB319-163	EL SOTO	11-21-11	1445	2	VOA	VOA	GW	III			X	X	X	X	X	X	MS/MSD, EFFLUENT WELL
2	EW-70-SB311-164	EL SOTO	11-22-11	1342	10	VOA	VOA	GW	III			X	X	X	X	X	X	EFFLUENT WELL.
3	EW-70-SB335-167	EL SOTO	11-23-11	1623	10	VOA	VOA	GW	III			X	X	X	X			
4																		
5																		
6																		
7																		
8	EW-70-SB-165	EL SOTO	11-22-11	1445	10	VOA	VOA	GW	III	X	X	X	X	X	X			SAMPLE BLANK
9	EW-70-EB-166	EL SOTO	11-22-11	1420	10	VOA	VOA	GW	III	X	X	X	X	X	X			EQUIPMENT BLANK
10	EW-70-TB-162	EL SOTO	11-22-11	0830	2	40ml	VOA	GW	III	X								TRIP BLANKS.

Instructions: WET CHEM ANALYSIS AS FOLLOWS: ANIONS - 300.0, VFA - 300.0M, TDS - SM2540C, ALKALINITY - SM2320B, DHS - SM4500, UNLESS NOTED OTHERWISE IN COMMENTS.

Cooler #	Temp. (°C)	Sample #s

SAMPLER: CHASE BROWN
COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-22-11	1720	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 201168-8042

SAMPLE STORAGE

EMAX CONTROL NO. *

PROJECT CODE: 4-Z2H

CLIENT: [illegible] ENG. INC.

PROJECT: [illegible]

COORDINATOR: [illegible]

TEL: [illegible] FAX: EMAIL: [illegible]

SEND REPORT TO: [illegible]

COMPANY: [illegible]

ADDRESS: [illegible]

EMAX PM: [illegible]

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: [illegible]

TAT:
- ☐ Rush ____hrs.
- ☐ Rush ____days
- ☐ 7 days
- ☑ 14-days
- ☐ 21 days
- ☐ 30 days
- ☐ ____days
- ☐

LAB	CLIENT	LOCATION	DATE	TIME	CONTAINER NO.	CONTAINER SIZE	CONTAINER TYPE	MATRIX CODE	QC	HC	HC	HN	HC	ZA	HN	HN	HN	COMMENTS
* 1	[illegible]	[illegible]	[illegible]	0912	3	[illegible]	[illegible]	GW	TB	X								
* 2	[illegible]	[illegible]	[illegible]	1128	3	[illegible]	[illegible]	GW	TB	X	X	X						For [illegible] VOCs
* 3	[illegible]	[illegible]	[illegible]	1506	3	[illegible]	[illegible]	GW	TB			X						For [illegible] VOCs
* 4																		
* 5																		
* 6																		
* 7																		
* 8																		
* 9	[illegible]	[illegible]	[illegible]	1150	10	[illegible]	[illegible]	GW	TB	X	X	X	X	X	X			[illegible]
* 0	[illegible]	[illegible]	[illegible]	0800	2	[illegible]	[illegible]	GW	TB	X								TRIP BLANK

Instructions: [illegible] CHECK ANALYSIS AS FOLLOW: ANIONS: 300.0, [illegible]: 300.0, TDS: SM2540C, ALKALINITY: SM 2320B, [illegible] UNLESS NOTED OTHERWISE IN COMMENTS.

Cooler #	Temp. (°C)	Sample #s

SAMPLER: [illegible]

COURIER/AIRBILL:

RELINQUISHED BY	Date	Time	RECEIVED BY
[illegible]	11/23/11	1905	[illegible]

NOTICE: Turn-around-time (TAT) for samples shall not begin untill all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011068-8042
SAMPLE STORAGE
EMAX CONTROL NO. *
PROJECT CODE: 4-27101

CLIENT: Insight LLC Inc
PROJECT: Tasire 20 - NWS - Soil Bench
COORDINATOR: Nick Mainberger
TEL: 714 678 6200 FAX: 714 678 6211 EMAIL: nmainberger@rect.com
SEND REPORT TO: Nick Mainberger
COMPANY: Insight LLC Inc.
ADDRESS: 3010 E. Miraloma Ave. Anaheim CA 92806
EMAX PM: Lee Wright

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: VOCs - 5260B; Diss Mtl. - P5K-175; Mass - Chem; Wet Chem; TOC - 5310B; Sulfide - SM4500F; Diss Metal - 6010B; VOCs - 5260B; Diss Mtl. - P5K-175; Mass - P5K-175

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	HC	HC	NP	HC	ZA	HN	NO	NP	COMMENTS
1	MW-20-RD2-4-174	Tasire 20	11-28-11	1054	10	vary	vary	GW	III	X	X	X	X	X	X			
2	Tw-20-TSB229-175	Tasire 20	11-28-11	1242	10	vary	vary	GW	III			X	X	X	X	X	X	EQUIPMENT WELL
3	MW-20-49-176	Tasire 20	11-28-11	1438	10	vary	vary	GW	III	X	X	X	X	X	X			
4																		
5																		
6																		
7																		
8																		
9	Tw-20-EB-177	Tasire 20	11-28-11	1500	10	vary	vary	GW	III	X	X	X	X	X	X			EQUIPMENT BLANK
10	Tw-20-TB-178	Tasire 20	11-28-11	0830	2	40ml	vial	GW	III	X								TRIP BLANK

Instructions: Gw wet chem, analysis as follows: Anions: 300.0 VOCs: 300.0M. TDS: SM2540C, Alkalinity: SM2320B DHS: SM4500 unless noted otherwise in comments.

Cooler #	Temp. (°C)	Sample #s

SAMPLER: Chase Brogdon
COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
	11-28-11	1655	

NOTICE: Turn-around-time (TAT) for samples shall not begin untill all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

2008

Chain-of-Custody Form

SIREM Site Recovery & Management

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Page 1 of 1

Lab #

Project Name	IR SITE 70 / NWS SEAL BEACH
Project #	4-77101
Project Manager	REBECCA LUSHER
Email Address	RLUSHER@OTIE.COM
Company	HIS / TNJA
Address	3010 E MIRALOMA AVE.
Phone #	714 678 6700
Fax #	714 678 6711
Sampler's Signature	
Sampler's Printed Name	ANDREW C SPINOZA

Analysis

Preservative: 0, 0

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
MW-70-MNA01-83	11/2/11	0855	AQ	1	X	X		
MW-70-MNA03-84	11/2/11	0945	AQ	1	X	X		
MW-70-MNA02-85	11/2/11	1052	AQ	1	X	X		
MW-70-MNA04-86	11/2/11	1148	AQ	1	X	X		
MW-70-MNA05-88	11/2/11	1250	AQ	1	X	X		

Sample Receipt	Billing Information	Turnaround Time Requested	For Lab Use Only
Cooler Condition:	P.O. #	Normal ☐	
Cooler Temperature:	Bill To:	Rush ☐	
Custody Seals: Yes ☐ No ☐			Proposal #:

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature FED EX	Signature	Signature	Signature	Signature
Printed Name ANDREW ESPINOZA	Printed Name 8763 9898 1881	Printed Name	Printed Name	Printed Name	Printed Name
Firm INSIGHT	Firm	Firm	Firm	Firm	Firm
Date/Time 11/2/11 1415	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator: Yellow - Lab Copy: Pink - Retained by Client

2010

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Page 1 of 1

Lab #

Project Name	IR SITE 70 - NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3910 E. MIRALOMA AVE., ANAHEIM, CA 92806 U.S.A.
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	[signature]
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative Key
0. None
1. HCl
2. Other
3. Other

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
MW-70-PMW01A-089	11/3/11	1130	WATER	1	X	X		
MW-70-PMW01B-091	11/3/11	1317	WATER	1	X	X		
MW-70-27-092	11/3/11	1458	WATER	1	X	X		
MW-70-28-094	11/3/11	1616	WATER	1	X	X		

Sample Receipt
Cooler Condition:
Cooler Temperature:
Custody Seals: Yes ☐ No ☐

Billing Information
P.O. # 2011068-8061
Bill To: OTIE
2247 SAN DIEGO AVE., SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested
Normal ☒
Rush ☐

For Lab Use Only
Proposal #:

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature [signature]	Signature FEDEX	Signature	Signature	Signature	Signature
Printed Name SREE AKKENAPALLY	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm INSIGHT EEC INC.	Firm	Firm	Firm	Firm	Firm
Date/Time 11/3/11 1705	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

№ 3268

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Page 1 of 1

Lab #

Project Name: IRSITE70-NWS SEAL BEACH

Project #:

Project Manager: REBECCA LESHER

Email Address: RLESHER@OTIE.COM

Company: INSIGHT EEC, INC.

Address: 3010 E. MIRALOMA AVE., ANAHEIM, CA 92806 U.S.A

Phone #: (714) 678-6700

Fax #: (714) 678-6711

Sampler's Signature: A.V. Sreed

Sampler's Printed Name: SREE AKKENAPALLY

Analysis

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
MW-70-PMW03A-095	11/7/11	1042	WATER	1	X	X		
MW-70-PMW03B-097	11/7/11	1208	WATER	1	X	X		
IW-70-SAB06-099	11/7/11	1430	WATER	1	X	X		
MW-70-PMW02A-100	11/7/11	1542	WATER	1	X	X		
MW-70-PMW02B-101	11/7/11	1627	WATER	1	X	X		

Sample Receipt

Cooler Condition:

Cooler Temperature:

Custody Seals: Yes ☐ No ☐

Billing Information

P.O.# 2011068-8061

Bill To: OTIE

2247 SAN DIEGO AVE., SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested

Normal ☒

Rush ☐

For Lab Use Only

Proposal #: _____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: A.V. Sreed	Signature: FEDEX	Signature:	Signature:	Signature:	Signature:
Printed Name: SREE AKKENAPALLY	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: INSIGHT EEC, INC.	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 11/7/11	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Return to Originator: Yellow - Lab Copy: Pink - Retained by Client

№ 3299

SIREM Site Recovery & Management

Chain-of-Custody Form

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Page 1 of 1

Lab #

Project Name	IR SITE 70 - NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RLESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVE., ANAHEIM, CA 92806 U.S.A.
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	S.V. Breed
Sampler's Printed Name	SREE ARKENAPALLY

Analysis

Preservative

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
MW-70-PMW04A-110	11/9/11	1036	WATER	1	X	X		
MW-70-PMW04B-112	11/9/11	1140	WATER	1	X	X		
IW-70-FSB118-113	11/9/11	1259	WATER	1	X	X		
MW-70-PMW05A-114	11/9/11	1444	WATER	1	X	X		
MW-70-PMW05B-115	11/9/11	1551	WATER	1	X	X		

Sample Receipt

Cooler Condition:

Cooler Temperature:

Custody Seals: Yes ☐ No ☐

Billing Information

P.O. # 2011068-8061

Bill To: OTIE

2247 SAN DIEGO AVE, SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested

Normal ☒

Rush ☐

For Lab Use Only

Proposal #: _____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: S.V. Breed	Signature: FED EX	Signature	Signature	Signature	Signature
Printed Name: SREE ARKENAPALLY	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: INSIGHT EEC, INC.	Firm	Firm	Firm	Firm	Firm
Date/Time: 11/9/2011 17:50	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator: Yellow - Lab Copy: Pink - Retained by Client

№ 2003

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Site Recovery & Management

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Page 1 of 1

Lab #

Project Name	IR SITE 70 - NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RLESHER@OTIE.COM
Company	INSIGHT EEC INC.
Address	3010 E. MIRALOMA AVE., ANAHEIM, CA 92806 U.S.A.
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	S. R. Sreeck
Sampler's Printed Name	SREE ARKENAPALLY

Analysis

Preservative

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
IR-70-RD05-117	11/10/11	1107	WATER	1	X	X		
MW-70-MNA06-118	11/10/11	1218	WATER	1	X	X		
MW-70-MNA08-119	11/10/11	1342	WATER	1	X	X		
MW-70-MNA09-120	11/10/11	1445	WATER	1	X	X		
MW-70-MNA13-121	11/10/11	1533	WATER	1	X	X		

Sample Receipt
Cooler Condition:
Cooler Temperature:
Custody Seals: Yes ☐ No ☐

Billing Information
P.O. # 2011068-8061
Bill To: OTIE
2247 SAN DIEGO AVE. SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested
Normal ☒
Rush ☐

For Lab Use Only
Proposal #: _____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: S. R. Sreeck	Signature: FedEx	Signature:	Signature:	Signature:	Signature:
Printed Name: SREE ARKENAPALLY	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: INSIGHT EEC, INC.	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 11/10/2011 1750	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

№ 2001

SIREM
Site Recovery & Management

Chain-of-Custody Form

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Page 1 of 1

Lab #

Project Name	IRSITE70-NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RLESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVE., ANAHEIM, CA 92806 U.S.A.
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	S.K. Sreeth
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
MW-70-PMW09-124	11/14/11	10:49	WATER	1	X	X		
IR-70-SHB113-125	11/14/11	12:03	WATER	1	X	X		
MW-70-PMW10-126	11/14/11	1307	WATER	1	X	X		
MW-70-MNA11-127	11/14/11	1410	WATER	1	X	X		
MW-70-MNA07-128	11/14/11	1533	WATER	1	X	X		

Sample Receipt

Cooler Condition:

Cooler Temperature:

Custody Seals: Yes ☐ No ☐

Billing Information

P.O. # 2011068-8061

Bill To: OTIE

2247 SAN DIEGO AVE, SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested

Normal ☒

Rush ☐

For Lab Use Only

Proposal #: _____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: S.K. Sreeth	Signature	Signature	Signature	Signature	Signature
Printed Name: SREE AKKENAPALLY	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: INSIGHT EEC, INC.	Firm	Firm	Firm	Firm	Firm
Date/Time: 11/14/11 1530	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

№ 3295

SIREM Site Recovery & Management

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Page 1 of 1

Lab #

Project Name	IR SITE 70 - NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RLESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVENUE, ANAHEIM, CA 92806 U.S.A.
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	A.V. Sreeram
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
MW-70-PMW07A-130	11/15/11	0947	WATER	1	X	X		
MW-70-PMW07B-131	11/15/11	1103	WATER	1	X	X		
IW-70-FSB216-132	11/15/11	1203	WATER	1	X	X		
MW-70-PMW08A-133	11/15/11	1319	WATER	1	X	X		
MW-70-PMW08B-134	11/15/11	1418	WATER	1	X	X		
MW-70-MNA10-135	11/15/11	1519	WATER	1	X	X		

Sample Receipt

Cooler Condition:

Cooler Temperature:

Custody Seals: Yes ☐ No ☐

Billing Information

P.O. # 2011068-8061

Bill To: OTIE

2247 SAN DIEGO AVE., SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested

Normal ☒

Rush ☐

For Lab Use Only

Proposal #:

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: A.V. Sreeram	Signature: FED EX	Signature:	Signature:	Signature:	Signature:
Printed Name: SREE AKKENAPALLY	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: INSIGHT EEC, INC.	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 11/15/11 1545	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SIREM Site Recovery & Management

Chain-of-Custody Form

130 Research Lane, Suite 2 Guelph, Ontario, Canada N1G 5G3 Phone (519) 822-2265 or toll free 1-866-251-1747 Fax (519) 822-3151

www.siremlab.com

№ 3294

Page 1 of 1

Lab #

Project Name	IRSITE70-NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RLESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVE., ANAHEIM, CA 92806 U.S.A.
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	A.V. Sreeth
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
MW-70-43B-137	11/16/11	0936	WATER	1	X	X		
MW-70-PMW11A-138	11/16/11	1042	WATER	1	X	X		
MW-70-PMW11B-139	11/16/11	1134	WATER	1	X	X		
MW-70-PMW12A-140	11/16/11	1410	WATER	1	X	X		
MW-70-PMW12B-142	11/16/11	1540	WATER	1	X	X		

Sample Receipt

Cooler Condition:

Cooler Temperature:

Custody Seals: Yes ☐ No ☐

Billing Information

P.O. # 2011068-8061

Bill To: OTIE

2247 SAN DIEGO AVE, SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested

Normal ☒

Rush ☐

For Lab Use Only

Proposal #: _____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: A.V. Sreeth	Signature: FEDEX	Signature:	Signature:	Signature:	Signature:
Printed Name: SREE AKKENAPALLY	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: INSIGHT EEC, INC.	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 11/16/11 1655	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Return to Originator: Yellow - Lab Copy: Pink - Retained by Client

№ 3297

SIREM Site Recovery & Management

Chain-of-Custody Form

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Page 1 of 1

Lab #

Project Name: IRSITE 70 - NWS SEAL BEACH	Project #:
Project Manager: REBECCA LESHER	
Email Address: RLESHER@OTIE.COM	
Company: INSIGHT EEC, INC.	
Address: 3010 E. MIRALOMA AVE., ANAHEIM, CA 92806 U.S.A.	
Phone #: (714)678-6700	Fax #: (714) 678-6711
Sampler's Signature: A.V. Sreeth	Sampler's Printed Name: SREE AKKENAPALLY

Analysis

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
IW-70-SHB217-144	11/17/11	0958	WATER	1	X	X		
MW-70-MNA12-146	11/17/11	1138	WATER	1	X	X		
MW-70-MNA16-149	11/17/11	1438	WATER	1	X	X		
MW-70-MNA14-151	11/17/11	1539	WATER	1	X	X		

Sample Receipt

Cooler Condition:

Cooler Temperature:

Custody Seals: Yes ☐ No ☐

Billing Information

P.O. # 2011068-8061

Bill To: OTIE

2247 SAN DIEGO AVE, SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested

Normal ☒

Rush ☐

For Lab Use Only

Proposal #: _____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: A.V. Sreeth	Signature: FEDEX	Signature:	Signature:	Signature:	Signature:
Printed Name: SREE AKKENAPALLY	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: INSIGHT EEC, INC.	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 11/17/11 1655	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

№ 2007

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Site Recovery & Management

Chain-of-Custody Form

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www.siremlab.com

Page 1 of 1

Lab #

Project Name	IR SITE 70 - NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RLESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVE., ANAHEIM, CA 92806 USA
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	S.V. Sreeck
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
MW-70-PMW13A-153	11/18/11	0945	WATER	1	X	X		
MW-70-PMW13B-154	11/18/11	1055	WATER	1	X	X		
MW-70-PMW14A-155	11/18/11	1209	WATER	1	X	X		
MW-70-PMW14B-156	11/18/11	1452	WATER	1	X	X		
IW-70-SSB109-157	11/18/11	1613	WATER	1	X	X		

Sample Receipt
Cooler Condition:
Cooler Temperature:
Custody Seals: Yes ☐ No ☐

Billing Information
P.O. # 2011068-8061
Bill To: OTIE
2247 SAN DIEGO AVE, SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested
Normal ☒
Rush ☐

For Lab Use Only
Proposal #: _____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: S.V. Sreeck	Signature: FEDEX	Signature:	Signature:	Signature:	Signature:
Printed Name: SREE AKKENAPALLY	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: INSIGHT EEC, INC.	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 11/18/2011 1650	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

№ 2002

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Chain-of-Custody Form

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Page ____ of 1

Lab #

Project Name	IRSITE 70-NWS SEALBEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RLESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVE., ANAHEIM, CA 92806 U.S.A.
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	A.V. Greeck
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative Key
0. None
1. HCl
2. Other ____
3. Other ____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
IW-70-SSB119-163	11/22/11	1145	WATER	1	X	X		
IW-70-SHB311-164	11/22/11	1347	WATER	1	X	X		
IW-70-SAT35-167	11/22/11	1623	WATER	1	X	X		

Sample Receipt

Cooler Condition:

Cooler Temperature:

Custody Seals: Yes ☐ No ☐

Billing Information

P.O. # 2011068-8061

Bill To: OTIE

2247 SAN DIEGO AVE, SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested

Normal ☒

Rush ☐

For Lab Use Only

Proposal #: ____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: A.V. Greeck	Signature: FEDEX	Signature:	Signature:	Signature:	Signature:
Printed Name: SREE AKKENAPALLY	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: INSIGHT EEC, INC.	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 11/22/2011 1650	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:

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№ 2009

SIREM Site Recovery & Management

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www.siremlab.com

Page 1 of 1

Lab #

Project Name	IRSITE70-NWS SEAL BEACH
Project #	
Project Manager	REBECCA LEGHER
Email Address	RLEGHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVENUE, ANAHEIM, CA 92806 U.S.A.
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
MW-70-15-159	11/21/11	1044	WATER	1	X	X		
MW-70-MNA17-160	11/21/11	1154	WATER	1	X	X		
IW-70-SHB310-161	11/21/11	1334	WATER	1	X	X		

Sample Receipt
Cooler Condition:
Cooler Temperature:
Custody Seals: Yes ☐ No ☐

Billing Information
P.O. # 2011068-8061
Bill To: OTIE
2247 SAN DIEGO AVE, SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested
Normal ☒
Rush ☐

For Lab Use Only
Proposal #: _____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature FEDEX	Signature	Signature	Signature	Signature
Printed Name SREE AKKENAPALLY	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm INSIGHT EEC, INC.	Firm	Firm	Firm	Firm	Firm
Date/Time 11/21/2011 15:00	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator: Yellow - Lab Copy: Pink - Retained by Client

№ 2006

SIREM
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Page ___ of 1

Lab #

Project Name	IRSITE 70-NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RLESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVE., ANAHEIM, CA 92806 U.S.A.
Phone #	(714)678-6700
Fax #	(714) 678-6711
Sampler's Signature	
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative Key
0. None
1. HCl
2. Other ___
3. Other ___

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
MW-70-43A-170	11/23/11	1128	WATER	1	X	X		
MW-70-14-172	11/23/11	1306	WATER	1	X	X		

Sample Receipt

Cooler Condition:

Cooler Temperature:

Custody Seals: Yes ☐ No ☐

Billing Information

P.O. # 2011068-8061

Bill To: OTIE

2247 SAN DIEGO AVE, SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested

Normal ☒

Rush ☐

For Lab Use Only

Proposal #: ___

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature FEDEX	Signature	Signature	Signature	Signature
Printed Name SREE AKKENAPALLY	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm INSIGHT EEC, INC.	Firm	Firm	Firm	Firm	Firm
Date/Time 11/23/2011 1345	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

№ 3298

SIREM Site Recovery & Management

Chain-of-Custody Form

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www.siremlab.com

Page 1 of 1

Lab #

Project Name	IRSITE70-NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RLESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVENUE, ANAHEIM, CA 92806 U.S.A.
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	S.N. Sreeth
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
MW-70-RD04-174	11/28/11	1054	WATER	1	X	X		
IW-70-FSB229-175	11/28/11	1242	WATER	1	X	X		
MW-70-49-176	11/28/11	1438	WATER	1	X	X		

Sample Receipt

Cooler Condition:

Cooler Temperature:

Custody Seals: Yes ☐ No ☐

Billing Information

P.O. # 2011068-8061

Bill To: OTIE

2247 SAN DIEGO AVE, SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested

Normal ☒

Rush ☐

For Lab Use Only

Proposal #: _____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: S.N. Sreeth	Signature: FEDEX	Signature:	Signature:	Signature:	Signature:
Printed Name: SREE AKKENAPALLY	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: INSIGHT EEC, INC.	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 11/28/11 1545	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Return to Originator: Yellow - Lab Copy: Pink - Retained by Client

APPENDIX C

LABORATORY ANALYTICAL REPORTS

TABLE OF CONTENTS

CLIENT: **INSIGHT EEC, INC.**

PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11I255**

SECTION		PAGE
Cover Letter, COC/Sample Receipt Form		1000 – 1003
GC/MS-VOA	METHOD 5030B/8260B	2000 – 2029
GC/MS-SVOA	**	3000 –
GC-VOA	**	4000 –
GC-SVOA	**	5000 –
HPLC	**	6000 –
METALS	**	7000 –
WET	**	8000 –
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 10-07-2011
EMAX Batch No.: 11I255

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 09/27/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW-70-44-064	I255-01	09/27/11	WATER	VOLATILE ORGANICS BY GC/MS
IR-70-GW-TB-065	I255-02	09/27/11	WATER	VOLATILE ORGANICS BY GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that the results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 4-77101

SAMPLE STORAGE

EMAX CONTROL NO. * 11 I 255

PROJECT CODE:

CLIENT: INSIGHT GEO INC.
PROJECT: IR SITE 70 SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 714 678 6700 FAX: 714 678 6711 EMAIL: NWEINBERGER@ KEC.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT GEO INC
ADDRESS: 3010 E. MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: Yu Mint

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: VOC's (8260B)

TAT:
- ☐ Rush ____hrs.
- ☐ Rush ____days
- ☐ 7 days
- ☒ 14 days
- ☐ 21 days
- ☐ 30 days
- ☐ ____days
- ☐

	LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	PRESERVATIVE CODE HC	COMMENTS
1	1	MW-70-44-064	IR SITE 70	9/27/11	1442	3	40mL	VOA	GW	III	X	
	2											
	3											
	4											
	5											
	6											
	7											
	8											
2	9	IR-70-GW-TB-065	IR SITE 70	9/27/11	1200	3	40 mL	VOA	GW	III	X	TRIP BLANK
	0											

Instructions: PLEASE SEND PRELIMINARY RESULTS BY FRI OCT. 07, 2011; ON COMPLETION.

Cooler #	Temp. (°C)	Sample #s
1	3.4 C	

SAMPLER: CHASE BROGDON

COURIER/AIRBILL:

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	09/27/11	2:55	Keith Stout
Keith Stout	9-27-11	1520	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associated with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

1001

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11 I 255
☑ EMAX Courier	SEE COC	Recepient I. LATE
☐ Client Delivery		Date 9/27/11
☐ Third Party		Time 1520

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☑ Preservative (if any)	☑ TAT
Safety Issues	☑ None	☐ High concentrations expected	☐ Superfund Site samples	☐ Rad screening required	

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☑ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ Plastic Bag
Temperatures (Cool, ≤6 °C but not frozen)	A ☑ Cooler 1 3.4 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C

Thermometer: ***A - S/N 101541371*** ***B - S/N 101541382***

Comments: ☐ **PM was informed on non-compliant coolers immediately.**

Note: **pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time .**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code

REVIEWS

Sample Labeling [signature] Date 9/27/11

SRF [signature] Date 9/28/11

PM LP for YG Date 9/28/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4	_____	E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	_____
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	_____
B3	Sample ID is inconsistent in COC vis-à-vis label	F2	Bubble is> 6mm		
B4	_____	G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	_____		
C4	_____	H2	_____		

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11I255

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11I255

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of two (2) water samples were received on 09/27/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for VO01I33L/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC. SDG NO. : 11I255
Project : NWS SEAL BEACH, IR SITE 70. Instrument ID : T-001

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V001I33B	1	NA	09/30/1109:18	09/30/1109:18	RIV685	RIV507	V001I33	Method Blank
LCS1W	V001I33L	1	NA	09/30/1107:47	09/30/1107:47	RIV682	RIV507	V001I33	Lab Control Sample (LCS)
LCD1W	V001I33C	1	NA	09/30/1108:16	09/30/1108:16	RIV683	RIV507	V001I33	LCS Duplicate
MW-70-44-064	I255-01	1	NA	09/30/1114:11	09/30/1114:11	RIV695	RIV507	V001I33	Field Sample
IR-70-GW-TB-065	I255-02	1	NA	09/30/1114:39	09/30/1114:39	RIV696	RIV507	V001I33	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 09/27/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 09/27/11
Batch No. : 11I255	Date Extracted: 09/30/11 14:11
Sample ID: MW-70-44-064	Date Analyzed: 09/30/11 14:11
Lab Samp ID: I255-01	Dilution Factor: 1
Lab File ID: RIV695	Matrix : WATER
Ext Btch ID: VOO1I33	% Moisture : NA
Calib. Ref.: RIV507	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	9.5J	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	0.29J	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	8.3	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	0.66J	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	1.3	1.0	0.20
TRICHLOROETHENE	20	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.1	10.00	111	70-140
4-BROMOFLUOROBENZENE	10.3	10.00	103	70-130
TOLUENE-D8	10.0	10.00	100	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 09/27/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 09/27/11
Batch No. : 11I255	Date Extracted: 09/30/11 14:39
Sample ID: IR-70-GW-TB-065	Date Analyzed: 09/30/11 14:39
Lab Samp ID: I255-02	Dilution Factor: 1
Lab File ID: RIV696	Matrix : WATER
Ext Btch ID: V001I33	% Moisture : NA
Calib. Ref.: RIV507	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.8	10.00	108	70-140
4-BROMOFLUOROBENZENE	10.2	10.00	102	70-130
TOLUENE-D8	9.95	10.00	99.5	70-140

QC SUMMARIES

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 09/30/11
Batch No. : 111255	Date Extracted: 09/30/11 09:18
Sample ID: MBLK1W	Date Analyzed: 09/30/11 09:18
Lab Samp ID: V001133B	Dilution Factor: 1
Lab File ID: RIV685	Matrix : WATER
Ext Btch ID: V001133	% Moisture : NA
Calib. Ref.: RIV507	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.2	10.00	102	70-140
4-BROMOFLUOROBENZENE	9.88	10.00	98.8	70-130
TOLUENE-D8	9.89	10.00	98.9	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11I255
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	VO01I33B	VO01I33L	VO01I33C		
LAB FILE ID:	RIV685	RIV682	RIV683		
DATE EXTRACTED:	09/30/1109:18	09/30/1107:47	09/30/1108:16	DATE COLLECTED:	NA
DATE ANALYZED:	09/30/1109:18	09/30/1107:47	09/30/1108:16	DATE RECEIVED:	09/30/11
PREP. BATCH:	VO01I33	VO01I33	VO01I33		
CALIB. REF:	RIV507	RIV507	RIV507		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	10.4	104	10.0	10.4	104	1	60-130	30
Benzene	ND	10.0	10.1	101	10.0	10.3	103	2	70-130	30
Chlorobenzene	ND	10.0	10.2	102	10.0	10.3	103	1	70-120	30
Toluene	ND	10.0	10.1	101	10.0	10.0	100	1	70-130	30
Trichloroethene	ND	10.0	10.1	101	10.0	10.1	101	0	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	10.3	103	10.0	9.99	100	70-140
4-Bromofluorobenzene	10.0	9.52	95	10.0	9.66	97	70-130
Toluene-d8	10.0	9.69	97	10.0	9.89	99	70-130

INITIAL CALIBRATION(S)

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc Contract: NWS SEAL BEACH, IR SITE 70.

Lab Code: EMXT Case No.: SAS No.: SDG No.: 11I255

Lab File ID: RIV501 BFB Injection Date : 09/23/11

Instrument ID: TO01 BFB Injection Time : 11:05

GC Column:RTX502.2ID:0.32mm (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.37
75	30.0 - 60.0% of mass 95	52.73
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.71
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	68.92
175	5.0 - 9.0% of mass 174	5.01(7.3)1
176	95.0 - 101.0% of mass 174	66.25(96.1)1
177	5.0 - 9.0% of mass 176	4.47(6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	VO01I231	RIV502	09/23/11	11:36
2	VSTD0.5	VO01I232	RIV503	09/23/11	12:05
3	VSTD01	VO01I233	RIV504	09/23/11	12:33
4	VSTD02	VO01I234	RIV505	09/23/11	13:01
5	VSTD05	VO01I235	RIV506	09/23/11	13:30
6	VSTD010	VO01I236	RIV507	09/23/11	13:58
7	VSTD020	VO01I237	RIV508	09/23/11	14:26
8	VSTD030	VO01I238	RIV509	09/23/11	14:55
9	VSTD050	VO01I239	RIV510	09/23/11	15:23
10	VSTD100	VO01I2310	RIV511	09/23/11	15:52

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc Contract: NWS SEAL BEACH, IR SITE 70.

Lab Code: EMXT Case No.: SAS No.: SDG No.: 11I255

Lab File ID: RIV528 BFB Injection Date : 09/26/11

Instrument ID: T001 BFB Injection Time : 07:27

GC Column:RTX502.2ID:0.32mm (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.53
75	30.0 - 60.0% of mass 95	52.53
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.96
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	85.40
175	5.0 - 9.0% of mass 174	5.69(6.7)1
176	95.0 - 101.0% of mass 174	81.54(95.5)1
177	5.0 - 9.0% of mass 176	5.68(7.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	IV001I232	RIV529	09/26/11	07:53

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :TO01
Beginning DateTime :09/23/11 11:36
Spike Units :PPB
IC File :RIV507

Column Spec :RTX502.2 ID :0.32MM
Ending DateTime :09/23/11 15:52
HPChem Method :VO01I23

M	IDX	Parameters	.3 11:36 RIV502	.5 12:05 RIV503	1 12:33 RIV504	2 13:01 RIV505	5 13:30 RIV506	10 13:58 RIV507	20 14:26 RIV508	30 14:55 RIV509	50 15:23 RIV510	100 15:52 RIV511	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	0	7.7813
	2	Dichlorodifluoromethane	------	0.293	0.332	0.329	0.342	0.316	0.319	0.285	0.284	0.284	0.310	7.41	2.1409
	3	Chloromethane	0.324	0.414	0.465	0.422	0.437	0.434	0.448	0.415	0.408	0.405	0.417	9.06	2.3451
	4	Vinyl chloride	------	0.367	0.435	0.414	0.437	0.425	0.440	0.401	0.419	0.397	0.415	5.64	2.5174
	5	Bromomethane	0.154	0.210	0.238	0.234	0.232	0.226	0.226	0.202	0.188	0.178	0.209	13.50	2.8941
	6	Chloroethane	0.157	0.228	0.245	0.244	0.253	0.245	0.250	0.224	0.226	0.198	0.227	13.03	3.0110
	7	Dichlorofluoromethane	0.594	0.578	0.633	0.572	0.580	0.560	0.558	0.524	0.520	0.480	0.560	7.67	3.3010
	8	Trichlorofluoromethane	------	0.381	0.463	0.448	0.471	0.441	0.458	0.412	0.406	0.387	0.430	7.87	3.3707
5	9	Acrolein	------	------	------	0.017	0.017	0.016	0.018	0.016	0.017	0.017	0.017	4.88	3.7950
	10	1,1,2-Trichloro-1,2,2-trifluoroethane	0.199	0.184	0.196	0.186	0.185	0.184	0.188	0.178	0.185	0.184	0.187	3.25	3.9742
5	11	Acetone	------	------	------	0.047	0.041	0.039	0.042	0.036	0.037	0.036	0.040	10.46	3.9556
	12	1,1-Dichloroethene	0.597	0.585	0.642	0.571	0.573	0.542	0.546	0.506	0.516	0.475	0.555	8.78	3.9402
	13	Iodomethane	0.449	0.434	0.478	0.437	0.453	0.445	0.460	0.452	0.470	0.478	0.456	3.45	4.1162
	14	Carbon disulfide	------	0.883	0.975	0.960	0.973	0.963	0.963	1.030	1.060	------	0.976	5.39	4.2346
	15	Methylene chloride	0.634	0.524	0.541	0.495	0.470	0.437	0.454	0.432	0.454	0.460	0.490	12.63	4.5113
5	16	tert-Butyl alcohol	------	------	------	0.010	0.010	0.009	0.013	0.013	0.014	0.013	0.012	17.04	4.6404
5	17	Acrylonitrile	0.053	0.049	0.053	0.049	0.052	0.048	0.056	0.051	0.056	0.058	0.052	6.41	4.7688
	18	tert-Butyl methyl ether (MTBE)	0.579	0.572	0.648	0.582	0.586	0.564	0.617	0.545	0.567	0.591	0.585	4.97	4.8398
	19	trans-1,2-Dichloroethene	0.608	0.575	0.642	0.583	0.594	0.580	0.583	0.553	0.565	0.569	0.585	4.27	4.8457
	20	Vinyl acetate	0.351	0.376	0.551	0.477	0.512	0.460	0.541	0.499	0.540	0.545	0.485	14.66	5.3532
	21	1,1-Dichloroethane	0.711	0.735	0.776	0.698	0.708	0.689	0.707	0.671	0.694	0.725	0.711	4.05	5.3710
	22	Isopropyl ether (DIPE)	1.230	1.151	1.321	1.216	1.242	1.206	1.295	1.232	1.262	------	1.239	4.03	5.4125
5	23	2-Butanol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	24	tert-Butyl ethyl ether (ETBE)	1.093	0.990	1.044	0.949	0.944	0.908	0.956	0.864	0.886	0.932	0.957	7.34	5.8651
5	25	2-Butanone	0.076	0.067	0.074	0.066	0.070	0.067	0.076	0.068	0.073	0.081	0.072	6.87	6.0486
	26	cis-1,2-Dichloroethene	0.351	0.326	0.364	0.332	0.342	0.327	0.345	0.334	0.342	0.357	0.342	3.69	6.0782
	27	2,2-Dichloropropane	0.537	0.486	0.540	0.477	0.486	0.463	0.454	0.418	0.402	0.410	0.467	10.36	6.1019
	28	Bromochloromethane	0.290	0.284	0.319	0.294	0.301	0.287	0.303	0.274	0.292	0.301	0.294	4.20	6.3801
	29	Chloroform	0.659	0.637	0.699	0.641	0.662	0.641	0.647	0.601	0.620	0.652	0.646	4.03	6.5058
	30	Dibromofluoromethane	------	------	------	------	0.312	0.277	0.302	0.280	0.283	0.293	0.291	4.71	6.7142
	31	1,1,1-Trichloroethane	0.468	0.471	0.512	0.474	0.499	0.488	0.476	0.445	0.435	0.464	0.473	4.88	6.7470
	32	tert-Amyl methyl ether (TAME)	0.145	0.135	0.148	0.136	0.144	0.140	0.148	0.134	0.139	0.144	0.141	3.82	7.3877
	33	1,2-Dichloroethane-d4	------	------	------	------	0.367	0.320	0.345	0.300	0.301	0.310	0.324	8.26	7.1729
	34	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	0	12.3282
	35	1,1-Dichloropropene	0.187	0.194	0.202	0.183	0.186	0.187	0.194	0.191	0.197	0.221	0.194	5.72	6.9512
	36	Carbon tetrachloride	0.449	0.481	0.511	0.467	0.481	0.484	0.475	0.454	0.461	0.517	0.478	4.68	6.9616
	37	Benzene	1.571	1.528	1.638	1.466	1.509	1.477	1.588	1.562	1.650	------	1.554	4.21	7.2161
	38	1,2-Dichloroethane	0.467	0.495	0.535	0.484	0.499	0.476	0.486	0.435	0.440	0.505	0.482	6.26	7.2752
	39	Trichloroethene	0.438	0.416	0.461	0.401	0.415	0.419	0.433	0.427	0.445	0.510	0.436	7.06	8.1260
	40	1,2-Dichloropropane	0.442	0.426	0.442	0.411	0.413	0.414	0.437	0.426	0.445	0.499	0.436	5.87	8.4945
20	41	1,4-Dioxane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	42	Dibromomethane	0.141	0.154	0.169	0.147	0.150	0.147	0.159	0.148	0.156	0.179	0.155	7.42	8.6202
	43	Bromodichloromethane	0.499	0.487	0.549	0.495	0.503	0.503	0.526	0.488	0.508	0.584	0.514	6.01	8.8717
	44	2-Chloroethyl vinyl ether	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	45	cis-1,3-Dichloropropene	0.604	0.583	0.624	0.577	0.606	0.603	0.632	0.605	0.635	0.728	0.620	6.85	9.5317
5	46	4-Methyl-2-pentanone	0.202	0.194	0.199	0.180	0.189	0.184	0.215	0.195	0.213	------	0.197	6.14	9.7462
	47	Toluene-d8	------	------	------	------	1.400	1.303	1.433	1.359	1.430	------	1.385	3.94	9.9667
	48	Toluene	1.617	1.558	1.695	1.522	1.575	1.585	1.622	1.597	1.670	------	1.605	3.37	10.0717

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49	Ethyl methacrylate	0.225	0.241	0.270	0.254	0.282	0.289	0.332	0.312	0.337	------	0.282	13.97	10.5140
50	trans-1,3-Dichloropropene	0.447	0.445	0.509	0.461	0.487	0.484	0.510	0.470	0.490	0.556	0.486	6.93	10.4268
51	1,1,2-Trichloroethane	0.217	0.204	0.230	0.217	0.222	0.216	0.230	0.211	0.226	0.255	0.223	6.32	10.7553
52	Tetrachloroethene	0.317	0.315	0.332	0.316	0.325	0.328	0.337	0.329	0.337	0.382	0.332	5.84	10.9181
53	1,3-Dichloropropane	0.426	0.455	0.461	0.438	0.451	0.442	0.474	0.441	0.457	0.523	0.457	5.86	11.0261
5 54	2-Hexanone	0.134	0.129	0.133	0.121	0.129	0.125	0.146	0.131	0.144	0.169	0.136	10.28	11.0971
55	Dibromochloromethane	0.242	0.242	0.280	0.252	0.274	0.273	0.292	0.269	0.279	0.318	0.272	8.54	11.3945
56	1,2-Dibromoethane	0.185	0.187	0.206	0.190	0.200	0.198	0.214	0.196	0.208	0.234	0.202	7.29	11.6046
57	1-Chlorohexane	0.690	0.615	0.658	0.635	0.661	0.681	0.696	0.671	0.668	0.735	0.671	4.96	12.3459
58	Chlorobenzene	0.981	0.972	1.051	0.999	0.991	1.007	1.041	0.983	0.999	------	1.003	2.68	12.3717
59	1,1,1,2-Tetrachloroethane	0.322	0.316	0.349	0.319	0.336	0.328	0.342	0.315	0.322	0.342	0.329	3.75	12.4998
60	Ethylbenzene	1.828	1.827	1.929	1.813	1.893	1.894	1.928	1.861	1.761	------	1.859	3.06	12.5115
2 61	m-Xylene & p-Xylene	1.421	1.369	1.463	1.394	1.440	1.467	1.480	1.398	------	------	1.429	2.79	12.6918
62	o-Xylene	1.394	1.342	1.491	1.389	1.462	1.469	1.475	1.393	1.381	------	1.422	3.70	13.1937
63	Styrene	0.816	0.810	0.913	0.912	1.029	1.074	1.105	1.044	1.048	0.997	0.975	10.84	13.2218
64	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	0	15.4250
65	Bromoform	0.290	0.296	0.334	0.309	0.330	0.330	0.359	0.353	0.374	0.457	0.343	14.06	13.4482
66	Isopropylbenzene	4.788	4.419	4.622	4.350	4.498	4.501	4.549	4.663	4.365	------	4.528	3.19	13.6442
67	4-Bromofluorobenzene	------	------	------	------	1.233	1.114	1.210	1.192	1.222	1.400	1.229	7.64	13.8534
68	1,1,2,2-Tetrachloroethane	0.642	0.664	0.704	0.600	0.641	0.607	0.671	0.653	0.680	0.790	0.665	8.11	13.9927
69	Bromobenzene	0.888	0.895	0.927	0.835	0.857	0.861	0.889	0.901	0.938	1.086	0.908	7.72	14.0194
70	trans-1,4-Dichloro-2-butene	------	0.155	0.169	0.158	0.174	0.173	0.186	0.175	0.182	0.214	0.176	9.82	14.0322
71	1,2,3-Trichloropropane	0.186	0.202	0.200	0.169	0.173	0.168	0.181	0.171	0.177	0.208	0.184	8.15	14.0593
72	n-Propylbenzene	5.482	5.140	5.455	5.320	5.518	5.614	5.627	5.719	------	------	5.484	3.38	14.1233
73	1,3,5-Trimethylbenzene	3.402	3.244	3.505	3.370	3.471	3.541	3.545	3.545	3.445	2.903	3.397	5.83	14.3182
74	2-Chlorotoluene	3.287	3.150	3.199	2.960	3.087	3.075	3.070	3.114	3.143	------	3.121	2.93	14.2212
75	4-Chlorotoluene	3.632	3.509	3.676	3.388	3.556	3.542	3.550	3.503	3.563	------	3.547	2.29	14.3495
76	tert-Butylbenzene	0.741	0.736	0.805	0.773	0.812	0.824	0.818	0.821	0.816	0.923	0.807	6.49	14.6571
77	1,2,4-Trimethylbenzene	3.551	3.166	3.569	3.443	3.543	3.603	3.586	3.558	3.543	------	3.507	3.86	14.7079
78	sec-Butylbenzene	4.564	4.200	4.562	4.585	4.841	4.868	4.848	4.886	4.348	------	4.634	5.34	14.8789
79	p-Isopropyltoluene	3.436	3.158	3.486	3.628	3.884	3.930	3.941	3.862	3.662	------	3.665	7.32	15.0285
80	1,3-Dichlorobenzene	1.832	1.785	1.897	1.797	1.862	1.855	1.919	1.870	1.888	2.047	1.875	3.92	15.0018
81	1,4-Dichlorobenzene	1.745	1.623	1.805	1.728	1.798	1.806	1.864	1.799	1.838	2.039	1.804	5.91	15.1054
82	n-Butylbenzene	3.205	2.895	3.197	3.329	3.651	3.781	3.765	3.642	3.605	------	3.452	8.91	15.4099
83	1,2-Dichlorobenzene	1.561	1.477	1.589	1.495	1.537	1.527	1.583	1.516	1.545	1.691	1.552	3.90	15.4428
84	1,2-Dibromo-3-chloropropane	------	0.063	0.079	0.074	0.080	0.078	0.091	0.083	0.091	0.097	0.082	12.49	16.1809
85	1,2,4-Trichlorobenzene	0.671	0.632	0.749	0.802	0.879	0.904	0.936	0.838	0.904	0.871	0.819	12.67	16.9697
86	Hexachlorobutadiene	0.486	0.431	0.488	0.537	0.584	0.608	0.587	0.522	0.558	0.573	0.537	10.38	17.0970
87	Naphthalene	------	0.757	0.865	0.855	0.988	1.082	1.197	------	------	------	0.957	17.04	17.2468
88	1,2,3-Trichlorobenzene	0.465	0.482	0.561	0.577	0.650	0.664	0.691	0.611	0.684	0.645	0.603	13.34	17.4713

Spike Amount = Nominal Amount * M

Ave_%RSD : 7 Max_%RSD : 17

Use Least Square Linear Regression with weighting factor of inverse concentration for comps with %_RSD > 15

Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
16	tert-Butyl alcohol	-0.00707	0.01359	0.9969
87	Naphthalene	-0.03100	1.15617	0.9974

SG 9/27/11

2013

SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :T001
IC_Beginning DateTime :09/23/11 11:36
Spike Amount :10 PPB
CC/CV File :RIV529
IC File :RIV507

Column Spec :RTX502.2 ID :0.32MM
IC_Ending DateTime :09/23/11 15:52
HPChem Method :V001I23
Date_Time :09/26/11 07:53

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	1892007	1	1	7.786	7.781	0				
	2	Dichlorodifluoromethane	10.564	5.6	618650	0.327	0.310	2.133	2.141	7.41				
	3	Chloromethane	10.262	2.6	810254	0.428	0.417	2.341	2.345	9.06				
	4	Vinyl chloride	10.279	2.8	807361	0.427	0.415	2.518	2.517	5.64				
	5	Bromomethane	11.190	11.9	442494	0.234	0.209	2.888	2.894	13.50				
	6	Chloroethane	11.058	10.6	475058	0.251	0.227	3.006	3.011	13.03				
	7	Dichlorofluoromethane	10.200	2.0	1080494	0.571	0.560	3.302	3.301	7.67				
	8	Trichlorofluoromethane	10.793	7.9	877274	0.464	0.430	3.376	3.371	7.87				
5	9	Acrolein	40.819	-18.4	131620	0.014	0.017	3.790	3.795	4.88				
	10	1,1,2-Trichloro-1,2,2-trifluoroethane	10.491	4.9	371218	0.196	0.187	3.983	3.974	3.25				
5	11	Acetone	50.776	1.6	381913	0.040	0.040	3.953	3.956	10.46				
	12	1,1-Dichloroethene	9.879	-1.2	1038308	0.549	0.555	3.938	3.940	8.78				
	13	Iodomethane	10.098	1.0	870603	0.460	0.456	4.116	4.116	3.45				
	14	Carbon disulfide	9.989	-0.1	1844504	0.975	0.976	4.220	4.235	5.39				
	15	Methylene chloride	8.834	-11.7	819310	0.433	0.490	4.516	4.511	12.63				
5	16	tert-Butyl alcohol	42.045	-15.9	94766	0.010	0.012	4.663	4.640	17.04	-0.0071	0.0136		0.9969
5	17	Acrylonitrile	46.649	-6.7	462178	0.049	0.052	4.767	4.769	6.41				
	18	tert-Butyl methyl ether (MTBE)	9.439	-5.6	1044967	0.552	0.585	4.841	4.840	4.97				
	19	trans-1,2-Dichloroethene	9.920	-0.8	1098627	0.581	0.585	4.856	4.846	4.27				
	20	Vinyl acetate	10.814	8.1	992758	0.525	0.485	5.359	5.353	14.66				
	21	1,1-Dichloroethane	9.763	-2.4	1314040	0.695	0.711	5.374	5.371	4.05				
	22	Isopropyl ether (DIPE)	9.453	-5.5	2216848	1.172	1.239	5.418	5.412	4.03				
5	23	2-Butanol												
	24	tert-Butyl ethyl ether (ETBE)	9.137	-8.6	1653667	0.874	0.957	5.862	5.865	7.34				
5	25	2-Butanone	45.152	-9.7	613358	0.065	0.072	6.054	6.049	6.87				
	26	cis-1,2-Dichloroethene	9.726	-2.7	629293	0.333	0.342	6.084	6.078	3.69				
	27	2,2-Dichloropropane	10.945	9.4	968049	0.512	0.467	6.099	6.102	10.36				
	28	Bromochloromethane	9.348	-6.5	520895	0.275	0.294	6.380	6.380	4.20				
	29	Chloroform	9.925	-0.7	1213100	0.641	0.646	6.513	6.506	4.03				
	30	Dibromofluoromethane	9.769	-2.3	538171	0.284	0.291	6.720	6.714	4.71				
	31	1,1,1-Trichloroethane	10.346	3.5	926354	0.490	0.473	6.750	6.747	4.88				
	32	tert-Amyl methyl ether (TAME)	9.541	-4.6	255057	0.135	0.141	7.386	7.388	3.82				
	33	1,2-Dichloroethane-d4	9.823	-1.8	602332	0.318	0.324	7.179	7.173	8.26				
	34	CHLOROBENZENE-D5	10.000	0	1607894	1	1	12.328	12.328	0				
	35	1,1-Dichloropropene	10.292	2.9	321257	0.200	0.194	6.957	6.951	5.72				
	36	Carbon tetrachloride	10.478	4.8	805211	0.501	0.478	6.972	6.962	4.68				
	37	Benzene	10.130	1.3	2531952	1.575	1.554	7.223	7.216	4.21				
	38	1,2-Dichloroethane	9.524	-4.8	738393	0.459	0.482	7.282	7.275	6.26				
	39	Trichloroethene	9.928	-0.7	696716	0.433	0.436	8.126	8.126	7.06				
	40	1,2-Dichloropropane	9.759	-2.4	683443	0.425	0.436	8.496	8.495	5.87				
20	41	1,4-Dioxane												
	42	Dibromomethane	9.596	-4.0	238992	0.149	0.155	8.629	8.620	7.42				
	43	Bromodichloromethane	9.858	-1.4	814913	0.507	0.514	8.880	8.872	6.01				
	44	2-Chloroethyl vinyl ether												
	45	cis-1,3-Dichloropropene	10.080	0.8	1004076	0.624	0.620	9.531	9.532	6.85				
5	46	4-Methyl-2-pentanone	46.149	-7.7	1458849	0.181	0.197	9.739	9.746	6.14				
	47	Toluene-d8	9.946	-0.5	2215034	1.378	1.385	9.960	9.967	3.94				
	48	Toluene	10.136	1.4	2615366	1.627	1.605	10.079	10.072	3.37				
	49	Ethyl methacrylate	10.049	0.5	456278	0.284	0.282	10.508	10.514	13.97				
	50	trans-1,3-Dichloropropene	10.071	0.7	786659	0.489	0.486	10.434	10.427	6.93				
	51	1,1,2-Trichloroethane	9.737	-2.6	349100	0.217	0.223	10.759	10.755	6.32				
	52	Tetrachloroethene	10.330	3.3	550971	0.343	0.332	10.922	10.918	5.84				
	53	1,3-Dichloropropane	9.860	-1.4	724041	0.450	0.457	11.026	11.026	5.86				
5	54	2-Hexanone	44.414	-11.2	972015	0.121	0.136	11.100	11.097	10.28				
	55	Dibromochloromethane	10.114	1.1	442412	0.275	0.272	11.396	11.394	8.54				
	56	1,2-Dibromoethane	9.752	-2.5	316249	0.197	0.202	11.603	11.605	7.29				
	57	1-Chlorohexane	10.616	6.2	1145235	0.712	0.671	12.343	12.346	4.96				
	58	Chlorobenzene	10.010	0.1	1613880	1.004	1.003	12.372	12.372	2.68				
	59	1,1,1,2-Tetrachloroethane	10.105	1.0	534869	0.333	0.329	12.505	12.500	3.75				

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2015

60	Ethylbenzene	10.657	6.6	3186164	1.982	1.859	12.520	12.512	3.06				
2 61	m-Xylene & p-Xylene	20.743	3.7	4765593	1.482	1.429	12.698	12.692	2.79				
62	o-Xylene	10.268	2.7	2347619	1.460	1.422	13.201	13.194	3.70				
63	Styrene	10.603	6.0	1662000	1.034	0.975	13.216	13.222	10.84				
64	1,2-DICHLOROBENZENE-D4	10.000	0	654534	1	1	15.420	15.425	0				
65	Bromoform	9.767	-2.3	219428	0.335	0.343	13.452	13.448	14.06				
66	Isopropylbenzene	10.278	2.8	3046528	4.654	4.528	13.645	13.644	3.19				
67	4-Bromofluorobenzene	9.721	-2.8	781793	1.194	1.229	13.852	13.853	7.64				
68	1,1,2,2-Tetrachloroethane	9.649	-3.5	420204	0.642	0.665	13.985	13.993	8.11				
69	Bromobenzene	9.830	-1.7	584142	0.892	0.908	14.015	14.019	7.72				
70	trans-1,4-Dichloro-2-butene	9.526	-4.7	109894	0.168	0.176	14.030	14.032	9.82				
71	1,2,3-Trichloropropane	9.156	-8.4	109978	0.168	0.184	14.059	14.059	8.15				
72	n-Propylbenzene	10.628	6.3	3815312	5.829	5.484	14.118	14.123	3.38				
73	1,3,5-Trimethylbenzene	10.634	6.3	2364591	3.613	3.397	14.325	14.318	5.83				
74	2-Chlorotoluene	10.138	1.4	2070771	3.164	3.121	14.222	14.221	2.93				
75	4-Chlorotoluene	10.137	1.4	2353164	3.595	3.547	14.355	14.349	2.29				
76	tert-Butylbenzene	10.433	4.3	551043	0.842	0.807	14.651	14.657	6.49				
77	1,2,4-Trimethylbenzene	10.269	2.7	2357196	3.601	3.507	14.710	14.708	3.86				
78	sec-Butylbenzene	10.849	8.5	3290365	5.027	4.634	14.873	14.879	5.34				
79	p-Isopropyltoluene	10.737	7.4	2575798	3.935	3.665	15.021	15.028	7.32				
80	1,3-Dichlorobenzene	9.998	-0.0	1227226	1.875	1.875	15.006	15.002	3.92				
81	1,4-Dichlorobenzene	10.173	1.7	1201543	1.836	1.804	15.110	15.105	5.91				
82	n-Butylbenzene	11.134	11.3	2515956	3.844	3.452	15.406	15.410	8.91				
83	1,2-Dichlorobenzene	9.884	-1.2	1004183	1.534	1.552	15.435	15.443	3.90				
84	1,2-Dibromo-3-chloropropane	9.723	-2.8	52079	0.080	0.082	16.190	16.181	12.49				
85	1,2,4-Trichlorobenzene	10.486	4.9	561860	0.858	0.819	16.974	16.970	12.67				
86	Hexachlorobutadiene	11.217	12.2	394553	0.603	0.537	17.092	17.097	10.38				
87	Naphthalene	8.293	-17.1	607329	0.928	0.957	17.240	17.247	17.04	-0.0310	1.1562		0.9974
88	1,2,3-Trichlorobenzene	10.373	3.7	409261	0.625	0.603	17.462	17.471	13.34				

Spike Amount = Nominal Amount * M

3cu

9/27/16

2016

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RIV680
Instrument ID: T001
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11I255
BFB Injection Date : 09/30/11
BFB Injection Time : 06:48
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.06
75	30.0 - 60.0% of mass 95	55.75
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.71
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	68.17
175	5.0 - 9.0% of mass 174	4.83(7.1)1
176	95.0 - 101.0% of mass 174	65.06(95.4)1
177	5.0 - 9.0% of mass 176	4.53(7.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV001I2310	RIV681	09/30/11	07:17
2	MBLK1W	V001I33B	RIV685	09/30/11	09:18
3	LCS1W	V001I33L	RIV682	09/30/11	07:47
4	LCD1W	V001I33C	RIV683	09/30/11	08:16
5	MW-70-44-064	I255-01	RIV695	09/30/11	14:11
6	IR-70-GW-TB-065	I255-02	RIV696	09/30/11	14:39

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RIV507
Instrument ID: T001
GC Column: RTX502.2 ID: 0.32mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11I255
Date Analyzed: 09/23/11
Time Analyzed: 13:58
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1847354	7.78	1625800	12.34	683953	15.43
	UPPER LIMIT	3694708	8.28	3251600	12.84	1367906	15.93
	LOWER LIMIT	923677	7.28	812900	11.84	341977	14.93
	SAMPLE ID						
1	VSTD010	1555739	7.78	1368627	12.34	563660	15.43
2	MBLK1W	1910715	7.78	1611334	12.34	593098	15.43
3	LCS1W	1700483	7.78	1483280	12.34	606562	15.43
4	LCD1W	1815228	7.78	1596594	12.33	637211	15.42
5	MW-70-44-064	1550310	7.78	1284886	12.34	456790	15.43
6	IR-70-GW-TB-065	1518646	7.79	1278978	12.34	451688	15.43

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11I30\RIV681.D Vial: 2
Acq On : 30 Sep 2011 7:17 am Operator: MW
Sample : CVO01I2310 Inst : TO01
Misc : 10.0ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01I23.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Mon Sep 26 13:22:55 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	84	0.00
2	T,M	Dichlorodifluoromethane	10.000	9.523	4.8	78	0.00
3	P,T,M	Chloromethane	10.000	9.280	7.2	75	-0.02
4	C,T,M	Vinyl chloride	10.000	9.495	5.1	78	-0.01
5	T,M	Bromomethane	10.000	9.961	0.4	77	0.00
6	T,M	Chloroethane	10.000	10.029	-0.3	78	0.00
7	T,M	Dichlorofluoromethane	10.000	9.830	1.7	83	-0.02
8	T,M	Trichlorofluoromethane	10.000	10.366	-3.7	85	0.00
9	T,M	Acrolein	50.000	37.940	24.1#	67	0.00
10	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.522	4.8	81	0.00
11	T,M	Acetone	50.000	51.855	-3.7	89	0.00
12	C,T,M	1,1-Dichloroethene	10.000	9.689	3.1	84	-0.02
13	T,M	Iodomethane	10.000	9.326	6.7	80	-0.02
14	T,M	Carbon disulfide	10.000	10.308	-3.1	88	-0.03
15	T,M	Methylene chloride	10.000	8.637	13.6	82	0.00
16	T,M	tert-Butyl alcohol	50.000	43.204	13.6	98	0.01
17	T,M	Acrylonitrile	50.000	47.697	4.6	87	0.00
18	T,M	tert-Butyl methyl ether (MT	10.000	9.727	2.7	85	0.00
19	T,M	trans-1,2-Dichloroethene	10.000	9.637	3.6	82	0.00
20	T,M	Vinyl acetate	10.000	9.752	2.5	87	0.00
21	P,T,M	1,1-Dichloroethane	10.000	9.380	6.2	82	-0.02
22	T,M	Isopropyl ether (DIPE)	10.000	9.320	6.8	81	0.00
23	T,M	2-Butanol	-1.000	0.000	0.0	81	0.00
24	T,M	tert-Butyl ethyl ether (ETB	10.000	9.275	7.2	82	0.00
25	T,M	2-Butanone	50.000	46.266	7.5	84	0.00
26	T,M	cis-1,2-Dichloroethene	10.000	9.449	5.5	83	0.00
27	T,M	2,2-Dichloropropane	10.000	10.855	-8.6	92	0.00
28	T,M	Bromochloromethane	10.000	9.743	2.6	84	0.00
29	C,T,M	Chloroform	10.000	9.835	1.6	83	0.00
30	S	Dibromofluoromethane	10.000	10.323	-3.2	91	0.00
31	T,M	1,1,1-Trichloroethane	10.000	10.200	-2.0	83	0.00
32	T,M	tert-Amyl methyl ether (TAM	10.000	9.825	1.8	83	0.00
33	S	1,2-Dichloroethane-d4	10.000	10.923	-9.2	93	0.00
34	I	CHLOROBENZENE-D5	10.000	10.000	0.0	84	0.00
35	T,M	1,1-Dichloropropene	10.000	9.506	4.9	83	0.00
36	T,M	Carbon tetrachloride	10.000	9.989	0.1	83	0.00
37	T,M	Benzene	10.000	9.317	6.8	83	0.00
38	T,M	1,2-Dichloroethane	10.000	9.976	0.2	85	0.00
39	T,M	Trichloroethene	10.000	9.446	5.5	83	-0.02
40	C,T,M	1,2-Dichloropropane	10.000	9.190	8.1	81	-0.02

(#) = Out of Range

2020

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11I30\RIV681.D Vial: 2
Acq On : 30 Sep 2011 7:17 am Operator: MW
Sample : CVO01I2310 Inst : TO01
Misc : 10.0ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01I23.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Mon Sep 26 13:22:55 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	1,4-Dioxane	-1.000	0.000	0.0	0	0.00
42	T,M	Dibromomethane	10.000	9.680	3.2	86	0.00
43	T,M	Bromodichloromethane	10.000	9.585	4.1	83	0.00
44	T,M	2-Chloroethyl vinyl ether	-1.000	0.000	0.0	0	0.00
45	T,M	cis-1,3-Dichloropropene	10.000	9.511	4.9	82	0.00
46	T,M	4-Methyl-2-pentanone	50.000	46.224	7.6	83	0.00
47	S	Toluene-d8	10.000	9.609	3.9	86	0.00
48	C,T,M	Toluene	10.000	9.308	6.9	79	0.00
49	T,M	Ethyl methacrylate	10.000	9.654	3.5	79	0.00
50	T,M	trans-1,3-Dichloropropene	10.000	9.903	1.0	84	0.00
51	T,M	1,1,2-Trichloroethane	10.000	9.725	2.8	85	0.00
52	T,M	Tetrachloroethene	10.000	9.637	3.6	82	0.00
53	T,M	1,3-Dichloropropane	10.000	9.705	2.9	84	-0.01
54	T,M	2-Hexanone	50.000	44.626	10.7	82	0.00
55	T,M	Dibromochloromethane	10.000	9.966	0.3	84	-0.02
56	T,M	1,2-Dibromoethane	10.000	9.730	2.7	83	0.00
57	T,M	1-Chlorohexane	10.000	9.624	3.8	80	0.00
58	P,M	Chlorobenzene	10.000	9.549	4.5	80	0.00
59	T,M	1,1,1,2-Tetrachloroethane	10.000	9.810	1.9	83	0.00
60	C,T,M	Ethylbenzene	10.000	9.839	1.6	81	0.00
61	T,M	m-Xylene & p-Xylene	20.000	19.469	2.7	80	0.00
62	T,M	o-Xylene	10.000	9.807	1.9	80	0.00
63	T,M	Styrene	10.000	10.001	-0.0	76	0.00
64	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	82	0.00
65	P,T,M	Bromoform	10.000	9.817	1.8	84	0.00
66	T,M	Isopropylbenzene	10.000	9.610	3.9	80	0.00
67	S	4-Bromofluorobenzene	10.000	9.539	4.6	87	0.02
68	P,T,M	1,1,2,2-Tetrachloroethane	10.000	9.803	2.0	88	0.00
69	T,M	Bromobenzene	10.000	9.276	7.2	81	0.00
70	T,M	trans-1,4-Dichloro-2-butene	10.000	9.041	9.6	76	0.00
71	T,M	1,2,3-Trichloropropane	10.000	9.214	7.9	83	0.00
72	T,M	n-Propylbenzene	10.000	9.693	3.1	78	0.00
73	T,M	1,3,5-Trimethylbenzene	10.000	9.890	1.1	78	0.00
74	T,M	2-Chlorotoluene	10.000	9.564	4.4	80	0.00
75	T,M	4-Chlorotoluene	10.000	9.544	4.6	79	0.00
76	T,M	tert-Butylbenzene	10.000	9.716	2.8	78	0.00
77	T,M	1,2,4-Trimethylbenzene	10.000	9.755	2.4	78	0.00
78	T,M	sec-Butylbenzene	10.000	10.056	-0.6	79	0.00
79	T,M	p-Isopropyltoluene	10.000	10.157	-1.6	78	0.00
80	T,M	1,3-Dichlorobenzene	10.000	9.654	3.5	80	0.00

(#) = Out of Range

2021

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11I30\RIV681.D Vial: 2
Acq On : 30 Sep 2011 7:17 am Operator: MW
Sample : CVO01I2310 Inst : TO01
Misc : 10.0ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01I23.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Mon Sep 26 13:22:55 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	1,4-Dichlorobenzene	10.000	9.636	3.6	79	0.00
82	T,M	n-Butylbenzene	10.000	10.029	-0.3	75	0.00
83	T,M	1,2-Dichlorobenzene	10.000	9.491	5.1	79	0.00
84	T,M	1,2-Dibromo-3-chloropropane	10.000	9.522	4.8	82	0.00
85	T,M	1,2,4-Trichlorobenzene	10.000	9.895	1.1	74	0.00
86	T,M	Hexachlorobutadiene	10.000	10.242	-2.4	75	0.00
87	T,M	Naphthalene	10.000	8.330	16.7	71	0.00
88	T,M	1,2,3-Trichlorobenzene	10.000	9.698	3.0	73	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11I30\RIV681.D Vial: 2
Acq On : 30 Sep 2011 7:17 am Operator: MW
Sample : CV001I2310 Inst : TO01
Misc : 10.0ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01I23.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Mon Sep 26 13:22:55 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	84	0.00
2	T,M	Dichlorodifluoromethane	0.310	0.295	4.8	78	0.00
3	P,T,M	Chloromethane	0.417	0.387	7.2	75	-0.02
4	C,T,M	Vinyl chloride	0.415	0.394	5.1	78	-0.01
5	T,M	Bromomethane	0.209	0.208	0.5	77	0.00
6	T,M	Chloroethane	0.227	0.228	-0.4	78	0.00
7	T,M	Dichlorofluoromethane	0.560	0.550	1.8	83	-0.02
8	T,M	Trichlorofluoromethane	0.430	0.445	-3.5	85	0.00
9	T,M	Acrolein	0.017	0.013	23.5#	67	0.00
10	T,M	1,1,2-Trichloro-1,2,2-trifl	0.187	0.178	4.8	81	0.00
11	T,M	Acetone	0.040	0.041	-2.5	89	0.00
12	C,T,M	1,1-Dichloroethene	0.555	0.538	3.1	84	-0.02
13	T,M	Iodomethane	0.456	0.425	6.8	80	-0.02
14	T,M	Carbon disulfide	0.976	1.006	-3.1	88	-0.03
15	T,M	Methylene chloride	0.490	0.423	13.7	82	0.00
16	T,M	tert-Butyl alcohol	0.012	0.010	16.7	98	0.01
17	T,M	Acrylonitrile	0.052	0.050	3.8	87	0.00
18	T,M	tert-Butyl methyl ether (MT	0.585	0.569	2.7	85	0.00
19	T,M	trans-1,2-Dichloroethene	0.585	0.564	3.6	82	0.00
20	T,M	Vinyl acetate	0.485	0.473	2.5	87	0.00
21	P,T,M	1,1-Dichloroethane	0.711	0.667	6.2	82	-0.02
22	T,M	Isopropyl ether (DIPE)	1.239	1.155	6.8	81	0.00
23	T,M	2-Butanol	0.000	0.000	0.0	81	0.00
24	T,M	tert-Butyl ethyl ether (ETB	0.957	0.887	7.3	82	0.00
25	T,M	2-Butanone	0.072	0.066	8.3	84	0.00
26	T,M	cis-1,2-Dichloroethene	0.342	0.323	5.6	83	0.00
27	T,M	2,2-Dichloropropane	0.467	0.507	-8.6	92	0.00
28	T,M	Bromochloromethane	0.294	0.287	2.4	84	0.00
29	C,T,M	Chloroform	0.646	0.635	1.7	83	0.00
30	S	Dibromofluoromethane	0.291	0.301	-3.4	91	0.00
31	T,M	1,1,1-Trichloroethane	0.473	0.483	-2.1	83	0.00
32	T,M	tert-Amyl methyl ether (TAM	0.141	0.139	1.4	83	0.00
33	S	1,2-Dichloroethane-d4	0.324	0.354	-9.3	93	0.00
34	I	CHLOROBENZENE-D5	1.000	1.000	0.0	84	0.00
35	T,M	1,1-Dichloropropene	0.194	0.185	4.6	83	0.00
36	T,M	Carbon tetrachloride	0.478	0.477	0.2	83	0.00
37	T,M	Benzene	1.554	1.448	6.8	83	0.00
38	T,M	1,2-Dichloroethane	0.482	0.481	0.2	85	0.00
39	T,M	Trichloroethene	0.436	0.412	5.5	83	-0.02
40	C,T,M	1,2-Dichloropropane	0.436	0.400	8.3	81	-0.02

(#) = Out of Range

2023

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11I30\RIV681.D Vial: 2
Acq On : 30 Sep 2011 7:17 am Operator: MW
Sample : CVO01I2310 Inst : TO01
Misc : 10.0ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01I23.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Mon Sep 26 13:22:55 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	1,4-Dioxane	0.000	0.000	0.0	0#	0.00
42	T,M	Dibromomethane	0.155	0.150	3.2	86	0.00
43	T,M	Bromodichloromethane	0.514	0.493	4.1	83	0.00
44	T,M	2-Chloroethyl vinyl ether	0.000	0.000	0.0	0#	0.00
45	T,M	cis-1,3-Dichloropropene	0.620	0.589	5.0	82	0.00
46	T,M	4-Methyl-2-pentanone	0.197	0.182	7.6	83	0.00
47	S	Toluene-d8	1.385	1.331	3.9	86	0.00
48	C,T,M	Toluene	1.605	1.494	6.9	79	0.00
49	T,M	Ethyl methacrylate	0.282	0.273	3.2	79	0.00
50	T,M	trans-1,3-Dichloropropene	0.486	0.481	1.0	84	0.00
51	T,M	1,1,2-Trichloroethane	0.223	0.217	2.7	85	0.00
52	T,M	Tetrachloroethene	0.332	0.320	3.6	82	0.00
53	T,M	1,3-Dichloropropane	0.457	0.443	3.1	84	-0.01
54	T,M	2-Hexanone	0.136	0.121	11.0	82	0.00
55	T,M	Dibromochloromethane	0.272	0.271	0.4	84	-0.02
56	T,M	1,2-Dibromoethane	0.202	0.196	3.0	83	0.00
57	T,M	1-Chlorohexane	0.671	0.646	3.7	80	0.00
58	P,M	Chlorobenzene	1.003	0.957	4.6	80	0.00
59	T,M	1,1,1,2-Tetrachloroethane	0.329	0.323	1.8	83	0.00
60	C,T,M	Ethylbenzene	1.859	1.830	1.6	81	0.00
61	T,M	m-Xylene & p-Xylene	1.429	1.391	2.7	80	0.00
62	T,M	o-Xylene	1.422	1.394	2.0	80	0.00
63	T,M	Styrene	0.975	0.975	0.0	76	0.00
64	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	82	0.00
65	P,T,M	Bromoform	0.343	0.337	1.7	84	0.00
66	T,M	Isopropylbenzene	4.528	4.352	3.9	80	0.00
67	S	4-Bromofluorobenzene	1.229	1.172	4.6	87	0.02
68	P,T,M	1,1,2,2-Tetrachloroethane	0.665	0.652	2.0	88	0.00
69	T,M	Bromobenzene	0.908	0.842	7.3	81	0.00
70	T,M	trans-1,4-Dichloro-2-butene	0.176	0.159	9.7	76	0.00
71	T,M	1,2,3-Trichloropropane	0.184	0.169	8.2	83	0.00
72	T,M	n-Propylbenzene	5.484	5.316	3.1	78	0.00
73	T,M	1,3,5-Trimethylbenzene	3.397	3.360	1.1	78	0.00
74	T,M	2-Chlorotoluene	3.121	2.985	4.4	80	0.00
75	T,M	4-Chlorotoluene	3.547	3.385	4.6	79	0.00
76	T,M	tert-Butylbenzene	0.807	0.784	2.9	78	0.00
77	T,M	1,2,4-Trimethylbenzene	3.507	3.421	2.5	78	0.00
78	T,M	sec-Butylbenzene	4.634	4.659	-0.5	79	0.00
79	T,M	p-Isopropyltoluene	3.665	3.723	-1.6	78	0.00
80	T,M	1,3-Dichlorobenzene	1.875	1.810	3.5	80	0.00

(#) = Out of Range

2024

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11I30\RIV681.D Vial: 2
Acq On : 30 Sep 2011 7:17 am Operator: MW
Sample : CVO01I2310 Inst : TO01
Misc : 10.0ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01I23.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Mon Sep 26 13:22:55 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	1,4-Dichlorobenzene	1.804	1.739	3.6	79	0.00
82	T,M	n-Butylbenzene	3.452	3.462	-0.3	75	0.00
83	T,M	1,2-Dichlorobenzene	1.552	1.473	5.1	79	0.00
84	T,M	1,2-Dibromo-3-chloropropane	0.082	0.078	4.9	82	0.00
85	T,M	1,2,4-Trichlorobenzene	0.819	0.810	1.1	74	0.00
86	T,M	Hexachlorobutadiene	0.537	0.550	-2.4	75	0.00
87	T,M	Naphthalene	0.957	0.932	2.6	71	0.00
88	T,M	1,2,3-Trichlorobenzene	0.603	0.585	3.0	73	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

2025

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☐ EMAX-8260 Rev.No. ~~6~~ A MW 9/26/11 ☐ EMAX-524.2 Rev.No. 5 ☐ EMAX-CLP-VOA ☐ EMAX-624 Rev.No. 2 ☐ EMAX-8260SIM Rev.No.0 ☐ EMAX-TCPSIM Rev.No.1 ☐ EMAX-M8260SIM Rev.No.0 ☐

Start Date: 9/23/11 ☐ 5-ml Purge ☐ 15-ml Purge ☐ 25-ml Purge Book # A01 -037

BATCH VOOI236

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount A/B/C	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RIV501	BFBOI22	1mL	n/a	N/A	N/A	N/A	11:05am
02	502	VOOI231	.05/.15/1mL					0.3/1.5/1.5ppb 8260
03	503	2	.05/.25/1mL					0.5/2.5/2.5ppb
04	504	3	.1/.5/1mL					1.0/5.0/5.0ppb
05	505	4	.2/1/1mL					2.0/10/10ppb MW 9/26/11
06	506	5	.5/2.5/2.5mL					5.0/25/25ppb
07	507	6	1/5/5mL					10/50/50ppb
08	508	7	2/10/10mL					20/100/100ppb
09	509	8	3/15/15mL					30/150/150ppb
10	510	9	5/25/25mL					50/250/250ppb
11	511	10	10/50/50mL					100/500/500ppb
12	512	IS/SS	25mL					
13	513	VOOI228	↓					
14	514	VOOI231	1/5/5mL					not used, bad spike
15	515	RINSE	25mL					5:51pm
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

MW 9/26/11

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	9/23/11
ICAL ID	VOOI23

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC GAS(C)	SV1-17-86-1	*	
DCC CH_2	-82-1		
DCC 8260	-72-1		
DCC KTTIAA	-80.3		10/40
BFB	-45-3	1	
IS/SURR.	-73-3	1	
ICV/LCS (GAS)	-81-2	1	
ICV/LCS CH_2	-71-3	1	
ICV/LCS 8260	-60-1	5	
ICV/LCS KTTIAA	-70-2	5	
DATA FILE	11I23		

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO01	

Comments: IS: SV1-17-76-3 1 } 25ppm
SS: ↓ -77-1 *
* please refer to sample amount
A: SS, 8260, CS
B: 8260
C: KTTIAA

Analyzed By: MW
Date Disposed: 9/26/11
Disposed By: MW

2027

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☐ EMAX-8260 Rev.No. 8 MW 9/27/11 ☐ EMAX-524.2 Rev.No. 5 ☐ EMAX-CLP-VOA ☐ EMAX-624 Rev.No. 2 ☐ EMAX-8260SIM Rev.No.0 ☐ EMAX-TCPSIM Rev.No.1 ☐ EMAX-M8260SIM Rev.No.0 ☐

Start Date: 9/26/11 ☐ 5-ml Purge ☐ 15-ml Purge ☑ 25-ml Purge Book # A01 -037

BATCH CV001I2302

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RIV528	BFB01I25	1mL					7:27am
02	529	1V001I237	1/5/5 mL					
03	530	CV001I2302						
04	531	V001I25L x MW 9/27/11						
05	532	↓	↓					
06	533	RINSE	25mL					
07	534	V001I25B						
08	535	↓ Q						
09	536	11I162-05		1.0	✓			
10	537	-03	↓	↓	✓			
11	538	-06I	100mL	250	✓			
12	539	-07I	↓	↓	✓			
13	540	-04	25mL	1.0	✓			
14	541	-06T	5.0mL	5.0	✓			
15	542	-07T	↓	↓	✓			
16	543	RINSE	25mL					
17	544	↓	↓					
18	545	V001I25X	1/5/5 mL					
19	546	11I161-08M	25mL		✓			
20	547	↓ -08S	↓		✓			
21	548	11I162-03T MW 9/27/11	2.5mL	10	✓			
22	549	11I161-0~~6~~ 07R	25mL	1.0	✓			
23	550	↓ -07 08R			✓			
24	551	11I162-06			✓			
25	552	↓ -07		↓	✓			7:13pm
26	553	RINSE						
27	554							
28	555	↓	↓					
29								
30		MW 9/27/11						

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	9/23/11
ICAL ID	V001I23

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV-17-86-1	1	
DCC	-82-1	1	
DCC	-72-1	5	
DCC	-80-3	5	
BFB	-45-3	1	50/250
IS/SURR.	-73-3	1	
ICV/LCS	-81-2	1	
ICV/LCS	-71-3	1	
ICV/LCS	-60-1	5	
ICV/LCS	-70-2	5	
DATA FILE	11726		

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO01	

Comments:

Analyzed By: MW

Date Disposed: 9/27/11

Disposed By: MW

20028

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☐ EMAX-8260 Rev.No. 6 ☐ EMAX-524.2 Rev.No. 5 ☐ EMAX-CLP-VOA ☐ EMAX-624 Rev.No. 2 ☐ EMAX-8260SIM Rev.No.0 ☐ EMAX-TCPSIM Rev.No.1 ☐ EMAX-M8260SIM Rev.No.0 ☐

Start Date: 9/30/11 ☐ 5-ml Purge ☐ 15-ml Purge ☑ 25-ml Purge Book # A01 -037

BATCH CV001I2310

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RIV680	BFB01I33	1mL					0:48am
02		681	CV001I2310	1.5mL					
03		682	V001I33C	↓					
04		683	↓ C	↓					
05		684	RINSE	25mL					
06		685	V001I33B	↓					
07		686	11I236-03T	2.5mL	10	✓			
08		687	-06R	25mL	1.0	✓			
09		688	-07R			✓			
10		689	-08R			✓			
11		690	11I235-11R			✓			
12		691	11I276-01			7	✓		
13		692	-02				✓		
14		693	-03				✓		
15		694	-04			↓	✓		
16		695	11I255-01			✓	✓		
17		696	↓ -02			✓	✓		
18		697	11I276-05			✓	✓		
19		698	11I235-09T	0.5mL	50	✓			
20		699	-09T	2.5mL	10	✓			
21		700	-10T	↓	↓	✓			
22		701	-08R	25mL	1.0	✓			
23		702	-08M			✓			
24		703	↓ -08S		↓	✓			5:58pm
25		704	RINSE						
26		705	↓	↓					
27									
28									
29									
30									

MW 9/30/11

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	9/23/11
ICAL ID	V001I23

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-17-86-1	1	
DCC	-82-1	1	
DCC	-72-1	5	
DCC	-80-3	5	
BFB	-45-3	1	50/250
IS/SURR.	-73-3	1	
ICV/LCS	-81-2	1	
ICV/LCS	-71-3	1	
ICV/LCS	-60-1	5	
ICV/LCS	↓ -70-2	5	
DATA FILE	11I30		

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO01	

Comments:

Analyzed By: MW

Date Disposed:

Disposed By:

2028

TABLE OF CONTENTS

CLIENT: **INSIGHT EEC, INC.**

PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11J302**

SECTION		PAGE
Cover Letter, COC/Sample Receipt Form		1000 – 1003
GC/MS-VOA	METHOD 5030B/8260B	2000 – 2031
GC/MS-SVOA	**	3000 –
GC-VOA	**	4000 –
GC-SVOA	**	5000 –
HPLC	**	6000 –
METALS	**	7000 –
WET	**	8000 –
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 11-10-2011
EMAX Batch No.: 11J302

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 10/28/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW-70-02-66	J302-01	10/28/11	WATER	VOLATILE ORGANICS BY GC/MS
MW-70-POC01-67	J302-02	10/28/11	WATER	VOLATILE ORGANICS BY GC/MS
MW-70-35-68	J302-03	10/28/11	WATER	VOLATILE ORGANICS BY GC/MS
MW-70-17-69	J302-04	10/28/11	WATER	VOLATILE ORGANICS BY GC/MS
MW-70-22-70	J302-05	10/28/11	WATER	VOLATILE ORGANICS BY GC/MS
IR-70-TB-71	J302-06	10/28/11	WATER	VOLATILE ORGANICS BY GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

for

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

INSO 801

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.

1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 4-77101

SAMPLE STORAGE

EMAX CONTROL NO. * 11J302

PROJECT CODE:

CLIENT: INSIGHT EEC. INC.
PROJECT: IR SITE 70 - NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: (714)678 6700 FAX: (714)678 6711 EMAIL: N.WEINBERGER@IEECI.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT EEC INC.
ADDRESS: 220 G MIRALOMA AVE
ANAHEIM, CA 92806
EMAX PM: YE MINT

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: VOCs (8260B)

TAT:
- ☐ Rush ____hrs.
- ☐ Rush ____days
- ☐ 7 days
- ☒ 14 days
- ☐ 21 days
- ☐ 30 days
- ☐ ____days
- ☒ ~~STANDARD~~ QC

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	PRESERVATIVE CODE: HCL	COMMENTS
1	MW-70-02-66	Site 70	10/28/11	0840	3	40ml	VOA	GW		X	
2	MW-70-POC01-67	Site 70	10/28/11	0925	3	40ml	VOA	GW		X	
3	MW-70-35-68	Site 70	10/28/11	1050	3	40ml	VOA	GW		X	
4	MW-70-17-69	SITE 70	10/28/11	1150	3	40ml	VOA	GW		X	
5	MW-70-22-70	SITE 70	10/28/11	1240	3	40ml	VOA	GW		X	
6	IR-70-TB-71	SITE	10/28/11	1337	2	40ml	VOA	GW		X	TRIP BLANK
8											
9											
0											

Instructions

Cooler #	Temp. (°C)	Sample #s
1	3.7	

SAMPLER: ANDREW ESPINOZA

COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	10/28/11	1343	[signature]
[signature]	10/28/11	14:35	Keith Stout
Keith Stout	10/28/11	1505	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies ~~resolved after~~ 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associated with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11J302
☑ EMAX Courier	See COC	Recepient V-LUND
☐ Client Delivery		Date 10-28-11
☐ Third Party		Time 1505

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☑ Preservative (if any)	☑ TAT
Safety Issues	☑ None	☐ High concentrations expected	☐ Superfund Site samples	☐ Rad screening required	

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☑ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	A ☑ Cooler 8.7 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C

Thermometer: *A - S/N 101541371* *B - S/N 101541382*

Comments: ☐ **PM was informed on non-compliant coolers immediately.**

Note: **pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time .**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code

REVIEWS

Sample Labeling [illegible] Date 10/28/11

SRC [illegible] Date 10/28/11

PM LP for YC Date 10/31/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s), wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4	_____	E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	_____
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	_____
B3	Sample ID is inconsistent in COC vis-à-vis label	F2	Bubble is> 6mm		
B4	_____	G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	_____		
C4	_____	H2	_____		

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11J302

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11J302

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of six (6) water samples were received on 10/28/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for VO01K02L/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11J302
Instrument ID : T-001

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V001K02B	1	NA	11/02/1109:30	11/02/1109:30	RKV031	RJV602	V001K02	Method Blank
LCS1W	V001K02L	1	NA	11/02/1107:57	11/02/1107:57	RKV028	RJV602	V001K02	Lab Control Sample (LCS)
LCD1W	V001K02C	1	NA	11/02/1108:28	11/02/1108:28	RKV029	RJV602	V001K02	LCS Duplicate
MW-70-02-66	J302-01	1	NA	11/02/1110:00	11/02/1110:00	RKV032	RJV602	V001K02	Field Sample
MW-70-POC01-67	J302-02	1	NA	11/02/1110:31	11/02/1110:31	RKV033	RJV602	V001K02	Field Sample
MW-70-35-68	J302-03	1	NA	11/02/1111:02	11/02/1111:02	RKV034	RJV602	V001K02	Field Sample
MW-70-17-69	J302-04	1	NA	11/02/1111:33	11/02/1111:33	RKV035	RJV602	V001K02	Field Sample
MW-70-22-70	J302-05	1	NA	11/02/1112:04	11/02/1112:04	RKV036	RJV602	V001K02	Field Sample
IR-70-TB-71	J302-06	1	NA	11/02/1112:35	11/02/1112:35	RKV037	RJV602	V001K02	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	10/28/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	10/28/11
Batch No.	: 11J302	Date Extracted:	11/02/11 10:00
Sample ID:	MW-70-02-66	Date Analyzed:	11/02/11 10:00
Lab Samp ID:	J302-01	Dilution Factor:	1
Lab File ID:	RKV032	Matrix	: WATER
Ext Btch ID:	V001K02	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	27	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M,P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.4	10.00	104	70-140
4-BROMOFLUOROBENZENE	10.5	10.00	105	70-130
TOLUENE-D8	10.1	10.00	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 10/28/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 10/28/11
Batch No. : 11J302	Date Extracted: 11/02/11 10:31
Sample ID: MW-70-POC01-67	Date Analyzed: 11/02/11 10:31
Lab Samp ID: J302-02	Dilution Factor: 1
Lab File ID: RKV033	Matrix : WATER
Ext Btch ID: V001K02	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.9	10.00	109	70-140
4-BROMOFLUOROBENZENE	10.3	10.00	103	70-130
TOLUENE-D8	10.0	10.00	100	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	10/28/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	10/28/11
Batch No.	: 11J302	Date Extracted:	11/02/11 11:02
Sample ID:	MW-70-35-68	Date Analyzed:	11/02/11 11:02
Lab Samp ID:	J302-03	Dilution Factor:	1
Lab File ID:	RKV034	Matrix :	WATER
Ext Btch ID:	V001K02	% Moisture :	NA
Calib. Ref.:	RJV602	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.55J	1.0	0.20
1,1-DICHLOROETHENE	0.28J	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	1.4	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	0.33J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.1	10.00	111	70-140
4-BROMOFLUOROBENZENE	10.4	10.00	104	70-130
TOLUENE-D8	9.72	10.00	97.2	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 10/28/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 10/28/11
Batch No. : 11J302	Date Extracted: 11/02/11 11:33
Sample ID: MW-70-17-69	Date Analyzed: 11/02/11 11:33
Lab Samp ID: J302-04	Dilution Factor: 1
Lab File ID: RKV035	Matrix : WATER
Ext Btch ID: V001K02	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,3-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.5	10.00	115	70-140
4-BROMOFLUOROBENZENE	10.3	10.00	103	70-130
TOLUENE-D8	9.81	10.00	98.1	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	10/28/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	10/28/11
Batch No.	: 11J302	Date Extracted:	11/02/11 12:04
Sample ID:	MW-70-22-70	Date Analyzed:	11/02/11 12:04
Lab Samp ID:	J302-05	Dilution Factor:	1
Lab File ID:	RKV036	Matrix	: WATER
Ext Btch ID:	V001K02	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	12.2	10.00	122	70-140
4-BROMOFLUOROBENZENE	10.1	10.00	101	70-130
TOLUENE-D8	9.64	10.00	96.4	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 10/28/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 10/28/11
Batch No. : 11J302	Date Extracted: 11/02/11 12:35
Sample ID: IR-70-TB-71	Date Analyzed: 11/02/11 12:35
Lab Samp ID: J302-06	Dilution Factor: 1
Lab File ID: RKV037	Matrix : WATER
Ext Btch ID: V001K02	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.4	10.00	114	70-140
4-BROMOFLUOROBENZENE	10.4	10.00	104	70-130
TOLUENE-D8	10.0	10.00	100	70-140

QC SUMMARIES

2010

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/02/11
Batch No.	: 11J302	Date Extracted:	11/02/11 09:30
Sample ID:	MBLK1W	Date Analyzed:	11/02/11 09:30
Lab Samp ID:	V001K02B	Dilution Factor:	1
Lab File ID:	RKV031	Matrix	: WATER
Ext Btch ID:	V001K02	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.1	10.00	101	70-140
4-BROMOFLUOROBENZENE	10.4	10.00	104	70-130
TOLUENE-D8	10.0	10.00	100	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11J302
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	V001K02B	V001K02L	V001K02C		
LAB FILE ID:	RKV031	RKV028	RKV029		
DATE EXTRACTED:	11/02/1109:30	11/02/1107:57	11/02/1108:28	DATE COLLECTED:	NA
DATE ANALYZED:	11/02/1109:30	11/02/1107:57	11/02/1108:28	DATE RECEIVED:	11/02/11
PREP. BATCH:	V001K02	V001K02	V001K02		
CALIB. REF:	RJV602	RJV602	RJV602		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.83	98	10.0	9.21	92	7	60-130	30
Benzene	ND	10.0	9.53	95	10.0	9.05	91	5	70-130	30
Chlorobenzene	ND	10.0	9.96	100	10.0	9.51	95	5	70-120	30
Toluene	ND	10.0	9.75	98	10.0	9.16	92	6	70-130	30
Trichloroethene	ND	10.0	9.67	97	10.0	9.06	91	7	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	10.1	101	10.0	9.94	99	70-140
4-Bromofluorobenzene	10.0	9.36	94	10.0	9.45	94	70-130
Toluene-d8	10.0	9.69	97	10.0	9.76	98	70-130

INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RJV596
Instrument ID: T001
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11J302
BFB Injection Date : 10/31/11
BFB Injection Time : 09:18
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.79
75	30.0 - 60.0% of mass 95	51.84
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.73
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	73.40
175	5.0 - 9.0% of mass 174	5.20(7.1)1
176	95.0 - 101.0% of mass 174	72.01(98.1)1
177	5.0 - 9.0% of mass 176	4.99(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	VO01J311	RJV597	10/31/11	09:59
2	VSTD0.5	VO01J312	RJV598	10/31/11	10:30
3	VSTD01	VO01J313	RJV599	10/31/11	11:01
4	VSTD02	VO01J314	RJV600	10/31/11	11:32
5	VSTD05	VO01J315	RJV601	10/31/11	12:03
6	VSTD010	VO01J316	RJV602	10/31/11	12:33
7	VSTD020	VO01J317	RJV603	10/31/11	13:04
8	VSTD030	VOD1J318	RJV604	10/31/11	13:35
9	VSTD050	VO01J319	RJV605	10/31/11	14:05
10	VSTD100	VO01J3110	RJV606	10/31/11	14:36
11	VSTD010	IVO01J311	RJV609	10/31/11	16:07

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :T001
Beginning DateTime :10/31/11 09:59
Spike Units :PPB
IC File :RJV602

Column Spec :RTX502.2 ID :0.32MM
Ending DateTime :10/31/11 14:36
HPChem Method :V001J31

M	IDX	Parameters	.3 09:59 RJV597	.5 10:30 RJV598	1 11:01 RJV599	2 11:32 RJV600	5 12:03 RJV601	10 12:33 RJV602	20 13:04 RJV603	30 13:35 RJV604	50 14:05 RJV605	100 14:36 RJV606	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	0	7.7772
	2	Chlorotrifluoroethylene	------	0.109	0.142	0.158	0.161	0.161	0.174	0.164	0.169	0.164	0.156	12.57	2.1081
	3	Dichlorodifluoromethane	0.309	0.336	0.351	0.390	0.390	0.404	0.374	0.355	0.365	0.359	0.363	7.72	2.1576
	4	Chloromethane	0.424	0.438	0.439	0.437	0.442	0.478	0.432	0.422	0.420	0.418	0.435	4.03	2.3766
	5	Vinyl chloride	0.390	0.428	0.455	0.475	0.480	0.515	0.481	0.460	0.478	0.455	0.461	7.36	2.5408
	6	2-Chloro-1,1,1-trifluoroethane	0.267	0.292	0.352	0.405	0.357	0.346	0.367	0.343	0.340	0.315	0.338	11.52	2.6548
	7	Bromomethane	0.218	0.243	0.243	0.252	0.251	0.264	0.237	0.222	0.213	0.143	0.229	14.94	2.9004
	8	Chloroethane	0.371	0.316	0.291	0.288	0.275	0.285	0.269	0.252	0.251	0.223	0.282	14.40	3.0217
	9	Dichlorofluoromethane	0.808	0.730	0.755	0.724	0.730	0.705	0.722	0.671	0.654	0.622	0.712	7.42	3.3088
	10	Trichlorofluoromethane	------	0.394	0.410	0.439	0.446	0.459	0.428	------	------	------	0.429	5.60	3.3129
5	11	Acrolein	------	------	0.015	0.012	0.011	0.011	0.011	0.011	0.011	0.010	0.011	12.29	3.8010
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	0.227	0.210	0.222	0.216	0.226	0.217	0.224	0.216	0.216	0.214	0.219	2.60	3.9761
5	13	Acetone	------	------	0.054	0.046	0.045	0.046	0.044	0.040	0.039	0.036	0.044	12.62	3.9619
	14	1,1-Dichloroethene	0.682	0.667	0.685	0.687	0.691	0.670	0.668	0.631	0.616	0.584	0.658	5.45	3.9272
	15	Iodomethane	0.473	0.447	0.475	0.470	0.485	0.478	0.497	0.482	0.491	0.488	0.479	2.89	4.1122
	16	Carbon disulfide	1.104	0.866	0.961	0.999	1.070	0.991	1.192	1.135	1.223	1.201	1.074	10.99	4.2084
	17	Methylene chloride	0.589	0.509	0.526	0.494	0.501	0.484	0.501	0.484	0.485	0.473	0.505	6.57	4.5117
5	18	tert-Butyl alcohol	------	------	0.011	0.010	0.011	0.012	0.014	0.013	0.012	0.012	0.012	10.38	4.6333
5	19	Acrylonitrile	0.057	0.049	0.054	0.049	0.054	0.054	0.056	0.055	0.055	0.054	0.054	4.68	4.7766
	20	tert-Butyl methyl ether (MTBE)	0.581	0.545	0.619	0.597	0.611	0.595	0.636	0.580	0.573	0.550	0.589	4.92	4.8372
	21	trans-1,2-Dichloroethene	0.705	0.636	0.678	0.676	0.683	0.672	0.685	0.661	0.654	0.626	0.668	3.56	4.8505
	22	Vinyl acetate	------	0.362	0.399	0.481	0.527	0.523	0.516	0.523	0.507	0.446	0.476	12.74	5.3567
	23	1,1-Dichloroethane	0.823	0.707	0.773	0.758	0.764	0.745	0.768	0.750	0.748	0.727	0.756	4.05	5.3714
	24	Isopropyl ether (DIPE)	1.407	1.255	1.338	1.339	1.359	1.324	1.393	1.341	1.334	------	1.343	3.23	5.4144
5	25	2-Butanol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	26	tert-Butyl ethyl ether (ETBE)	1.023	0.928	1.019	0.963	0.989	0.968	1.012	0.923	0.924	0.912	0.966	4.44	5.8596
5	27	2-Butanone	0.072	0.064	0.071	0.064	0.072	0.073	0.077	0.073	0.072	0.069	0.071	5.82	6.0416
	28	cis-1,2-Dichloroethene	0.393	0.357	0.386	0.385	0.379	0.374	0.391	0.380	0.379	0.368	0.379	2.86	6.0801
	29	2,2-Dichloropropane	0.598	0.568	0.573	0.560	0.561	0.534	0.532	0.496	0.488	0.469	0.538	7.77	6.0993
	30	Bromochloromethane	0.309	0.297	0.317	0.305	0.307	0.309	0.319	0.301	0.297	0.289	0.305	3.06	6.3775
	31	Chloroform	0.660	0.608	0.644	0.641	0.661	0.654	0.655	0.620	0.616	0.606	0.636	3.47	6.5047
	32	Dibromofluoromethane	0.282	0.250	0.254	0.287	0.283	0.277	0.288	0.274	0.275	0.266	0.274	4.90	6.7089
	33	1,1,1-Trichloroethane	0.511	0.499	0.523	0.513	0.526	0.516	0.513	0.485	0.488	0.482	0.506	3.15	6.7459
	34	tert-Amyl methyl ether (TAME)	0.134	0.128	0.146	0.142	0.146	0.148	0.155	0.144	0.141	0.136	0.142	5.46	7.3807
	35	1,2-Dichloroethane-d4	0.295	0.293	0.281	0.319	0.317	0.298	0.304	0.276	0.273	0.266	0.292	6.16	7.1646
	36	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	0	12.3211
	37	1,1-Dichloropropene	0.235	0.213	0.208	0.199	0.205	0.203	0.202	0.208	0.204	0.202	0.208	4.86	6.9486
	38	Carbon tetrachloride	0.524	0.459	0.480	0.500	0.518	0.514	0.503	0.498	0.487	0.498	0.498	3.89	6.9546
	39	Benzene	1.929	1.746	1.769	1.711	1.749	1.714	1.733	1.752	1.800	------	1.767	3.77	7.2081
	40	1,2-Dichloroethane	0.464	0.438	0.454	0.442	0.456	0.445	0.441	0.417	0.415	0.410	0.438	4.24	7.2697
	41	Trichloroethene	0.487	0.420	0.428	0.433	0.441	0.435	0.444	0.437	0.449	0.451	0.442	4.13	8.1205
	42	1,2-Dichloropropane	0.496	0.463	0.451	0.450	0.461	0.447	0.455	0.452	0.461	0.455	0.459	3.08	8.4889
20	43	1,4-Dioxane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	44	Dibromomethane	0.151	0.142	0.151	0.143	0.152	0.151	0.153	0.147	0.150	0.151	0.149	2.57	8.6117
	45	Bromodichloromethane	0.536	0.466	0.498	0.506	0.523	0.517	0.528	0.510	0.518	0.519	0.512	3.82	8.8633
	46	2-Chloroethyl vinyl ether	0.106	0.092	0.109	0.108	0.117	0.121	0.135	0.127	0.132	0.135	0.118	12.09	9.2716
	47	cis-1,3-Dichloropropene	0.638	0.563	0.591	0.602	0.617	0.610	0.632	0.618	0.632	0.634	0.614	3.83	9.5247
5	48	4-Methyl-2-pentanone	0.209	0.181	0.188	0.176	0.198	0.205	0.219	0.209	0.215	0.212	0.201	7.38	9.7348
	49	Toluene-d8	1.537	1.362	1.194	1.412	1.388	1.334	1.400	1.406	1.417	------	1.383	6.52	9.9520
	50	Toluene	1.907	1.740	1.719	1.699	1.743	1.702	1.724	1.760	1.786	------	1.753	3.65	10.0604
	51	Ethyl methacrylate	0.317	0.261	0.296	0.297	0.326	0.344	0.371	0.359	0.362	0.362	0.330	11.06	10.5042
	52	trans-1,3-Dichloropropene	0.446	0.396	0.447	0.443	0.471	0.468	0.480	0.460	0.466	0.467	0.454	5.28	10.4169
	53	1,1,2-Trichloroethane	0.243	0.203	0.217	0.208	0.215	0.211	0.222	0.214	0.215	0.212	0.216	4.93	10.7439
	54	Tetrachloroethene	0.381	0.340	0.352	0.348	0.357	0.356	0.357	0.352	0.358	0.361	0.356	2.94	10.9066
	55	1,3-Dichloropropane	0.467	0.414	0.447	0.441	0.452	0.455	0.468	0.449	0.457	0.442	0.449	3.40	11.0161
5	56	2-Hexanone	0.139	0.115	0.119	0.111	0.126	0.135	0.144	0.141	0.143	0.141	0.131	9.50	11.0857
	57	Dibromochloromethane	0.232	0.231	0.244	0.250	0.264	0.269	0.280	0.265	0.266	0.268	0.257	6.52	11.3816
	58	1,2-Dibromoethane	0.199	0.179	0.201	0.204	0.210	0.209	0.221	0.209	0.210	0.209	0.205	5.44	11.5946

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59	1-Chlorohexane	0.816	0.718	0.707	0.695	0.728	0.717	0.725	0.721	0.722	0.703	0.725	4.61	12.3360
60	Chlorobenzene	1.034	0.946	0.995	0.993	1.039	1.037	1.038	1.023	1.017	0.974	1.010	3.12	12.3641
61	1,1,1,2-Tetrachloroethane	0.350	0.301	0.326	0.332	0.346	0.344	0.351	0.335	0.334	0.322	0.334	4.52	12.4898
62	Ethylbenzene	2.164	1.945	1.977	1.991	2.089	2.054	2.104	2.054	1.984	------	2.040	3.49	12.5018
2 63	m-Xylene & p-Xylene	1.610	1.482	1.470	1.505	1.572	1.573	1.567	1.538	------	------	1.540	3.23	12.6812
64	o-Xylene	1.589	1.453	1.476	1.474	1.569	1.547	1.546	1.502	1.481	------	1.515	3.19	13.1841
65	Styrene	1.016	0.911	1.000	1.022	1.143	1.156	1.192	1.187	1.174	1.038	1.084	9.03	13.2134
66	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	0	15.4150
67	Bromoform	0.300	0.296	0.320	0.305	0.327	0.327	0.344	0.343	0.359	0.377	0.330	7.98	13.4427
68	Isopropylbenzene	5.486	4.993	4.975	4.842	4.950	4.869	4.800	4.988	4.786	------	4.966	4.25	13.6379
69	4-Bromofluorobenzene	1.481	1.312	1.095	1.243	1.225	1.133	1.166	1.195	1.226	1.246	1.232	8.67	13.8452
70	1,1,2,2-Tetrachloroethane	0.708	0.641	0.683	0.668	0.684	0.663	0.694	0.682	0.687	0.686	0.680	2.70	13.9828
71	Bromobenzene	1.217	0.984	1.027	0.976	0.999	0.987	0.997	1.005	------	------	1.024	7.74	14.0073
72	trans-1,4-Dichloro-2-butene	0.150	0.153	0.174	0.160	0.173	0.179	0.189	0.184	0.186	0.192	0.174	8.64	14.0272
73	1,2,3-Trichloropropane	0.208	0.163	0.191	0.169	0.172	0.165	0.171	0.165	0.166	0.171	0.174	8.18	14.0538
74	n-Propylbenzene	6.681	6.426	6.296	6.295	6.395	6.353	6.300	6.476	------	------	6.403	2.04	14.1128
75	1,3,5-Trimethylbenzene	4.223	4.025	4.069	4.018	4.178	4.115	4.097	4.107	4.142	------	4.108	1.64	14.3070
76	2-Chlorotoluene	3.930	3.660	3.570	3.417	3.531	3.421	3.367	3.429	3.495	------	3.536	4.91	14.2149
77	4-Chlorotoluene	4.164	3.976	3.937	3.805	3.928	3.864	3.769	3.804	3.846	------	3.899	3.11	14.3481
78	tert-Butylbenzene	0.968	0.910	0.914	0.906	0.922	0.915	0.906	0.923	0.918	0.917	0.920	1.93	14.6442
79	1,2,4-Trimethylbenzene	4.266	3.870	3.910	3.868	3.983	4.040	3.945	3.951	3.974	3.171	3.898	7.18	14.7033
80	sec-Butylbenzene	5.313	4.991	5.022	5.120	5.427	5.421	5.317	5.421	4.953	------	5.221	3.80	14.8692
81	p-Isopropyltoluene	4.020	3.777	3.939	4.070	4.305	4.382	4.330	4.345	4.239	3.076	4.048	9.79	15.0185
82	1,3-Dichlorobenzene	2.001	1.931	1.924	1.887	1.975	1.984	1.970	1.966	1.997	1.986	1.962	1.87	14.9948
83	1,4-Dichlorobenzene	1.937	1.762	1.795	1.801	1.875	1.890	1.897	1.889	1.897	1.885	1.863	3.02	15.0954
84	n-Butylbenzene	3.778	3.544	3.535	3.722	3.974	4.177	4.224	4.173	4.098	------	3.914	7.03	15.4019
85	1,2-Dichlorobenzene	1.623	1.514	1.544	1.533	1.578	1.581	1.583	1.550	1.545	1.563	1.561	2.00	15.4328
86	1,2-Dibromo-3-chloropropane	------	0.054	0.073	0.074	0.076	0.081	0.086	0.084	0.086	0.090	0.078	14.04	16.1711
87	1,2,4-Trichlorobenzene	0.599	0.558	0.592	0.622	0.706	0.786	0.817	0.793	0.802	------	0.697	15.05	16.9571
88	Hexachlorobutadiene	0.532	0.483	0.519	0.518	0.581	0.602	0.586	0.560	0.550	0.625	0.556	7.87	17.0855
89	Naphthalene	------	0.848	0.785	0.727	0.815	0.969	1.054	------	------	------	0.866	14.11	17.2361
90	1,2,3-Trichlorobenzene	0.465	0.412	0.437	0.448	0.513	0.579	0.599	0.581	0.590	------	0.514	14.54	17.4553

Spike Amount = Nominal Amount * M
Ave_%RSD : 6.3 Max_%RSD : 15

Use Least Square Linear Regression with weighting factor of inverse concentration for comps with %_RSD > 15
Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
87	1,2,4-Trichlorobenzene	-0.01281	0.80017	0.9994

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SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :T001
IC_Beginning DateTime :10/31/11 09:59
Spike Amount :10 PPB
CC/CV File :RJV609
IC File :RJV602

Column Spec :RTX502.2 ID :0.32MM
IC_Ending DateTime :10/31/11 14:36
HPChem Method :V001J31
Date_Time :10/31/11 16:07

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	2078216	1	1	7.785	7.777	0				
	2	Chlorotrifluoroethylene	10.337	3.4	334837	0.161	0.156	2.118	2.108	12.57				
	3	Dichlorodifluoromethane	8.998	-10.0	679552	0.327	0.363	2.163	2.158	7.72				
	4	Chloromethane	9.368	-6.3	847031	0.408	0.435	2.385	2.377	4.03				
	5	Vinyl chloride	9.570	-4.3	917897	0.442	0.461	2.547	2.541	7.36				
	6	2-Chloro-1,1,1-trifluoroethane	10.198	2.0	717414	0.345	0.338	2.666	2.655	11.52				
	7	Bromomethane	10.172	1.7	483272	0.233	0.229	2.917	2.900	14.94				
	8	Chloroethane	9.111	-8.9	534262	0.257	0.282	3.036	3.022	14.40				
	9	Dichlorofluoromethane	9.679	-3.2	1432022	0.689	0.712	3.317	3.309	7.42				
	10	Trichlorofluoromethane	8.656	-13.4	772218	0.372	0.429	3.317	3.313	5.60				
5	11	Acrolein	50.524	1.0	118784	0.011	0.011	3.805	3.801	12.29				
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	9.899	-1.0	450197	0.217	0.219	3.983	3.976	2.60				
5	13	Acetone	48.877	-2.2	445516	0.043	0.044	3.968	3.962	12.62				
	14	1,1-Dichloroethene	9.655	-3.5	1320508	0.635	0.658	3.938	3.927	5.45				
	15	Iodomethane	10.262	2.6	1020558	0.491	0.479	4.116	4.112	2.89				
	16	Carbon disulfide	10.377	3.8	2316232	1.115	1.074	4.219	4.208	10.99				
	17	Methylene chloride	9.852	-1.5	1033145	0.497	0.505	4.515	4.512	6.57				
5	18	tert-Butyl alcohol	49.112	-1.8	120463	0.012	0.012	4.634	4.633	10.38				
5	19	Acrylonitrile	52.562	5.1	587908	0.057	0.054	4.781	4.777	4.68				
	20	tert-Butyl methyl ether (MTBE)	10.014	0.1	1225298	0.590	0.589	4.841	4.837	4.92				
	21	trans-1,2-Dichloroethene	9.877	-1.2	1370568	0.659	0.668	4.856	4.851	3.56				
	22	Vinyl acetate	10.093	0.9	998377	0.480	0.476	5.359	5.357	12.74				
	23	1,1-Dichloroethane	10.049	0.5	1579616	0.760	0.756	5.373	5.371	4.05				
	24	Isopropyl ether (DIPE)	10.337	3.4	2886019	1.389	1.343	5.418	5.414	3.23				
5	25	2-Butanol												
	26	tert-Butyl ethyl ether (ETBE)	9.749	-2.5	1957252	0.942	0.966	5.862	5.860	4.44				
5	27	2-Butanone	52.537	5.1	771595	0.074	0.071	6.039	6.042	5.82				
	28	cis-1,2-Dichloroethene	10.308	3.1	812742	0.391	0.379	6.084	6.080	2.86				
	29	2,2-Dichloropropane	9.670	-3.3	1080913	0.520	0.538	6.098	6.099	7.77				
	30	Bromochloromethane	9.920	-0.8	629180	0.303	0.305	6.379	6.378	3.06				
	31	Chloroform	9.731	-2.7	1287132	0.619	0.636	6.513	6.505	3.47				
	32	Dibromofluoromethane	9.632	-3.7	547922	0.264	0.274	6.720	6.709	4.90				
	33	1,1,1-Trichloroethane	9.429	-5.7	990643	0.477	0.506	6.749	6.746	3.15				
	34	tert-Amyl methyl ether (TAME)	10.176	1.8	300183	0.144	0.142	7.386	7.381	5.46				
	35	1,2-Dichloroethane-d4	8.932	-10.7	542346	0.261	0.292	7.179	7.165	6.16				
	36	CHLOROBENZENE-D5	10.000	0	1765489	1	1	12.328	12.321	0				
	37	1,1-Dichloropropene	9.645	-3.5	354243	0.201	0.208	6.957	6.949	4.86				
	38	Carbon tetrachloride	9.552	-4.5	840066	0.476	0.498	6.957	6.955	3.89				
	39	Benzene	10.189	1.9	3178606	1.800	1.767	7.223	7.208	3.77				
	40	1,2-Dichloroethane	9.335	-6.6	722336	0.409	0.438	7.282	7.270	4.24				
	41	Trichloroethene	10.044	0.4	784620	0.444	0.442	8.125	8.120	4.13				
	42	1,2-Dichloropropane	10.004	0.0	810670	0.459	0.459	8.495	8.489	3.08				
20	43	1,4-Dioxane												
	44	Dibromomethane	10.144	1.4	266983	0.151	0.149	8.614	8.612	2.57				
	45	Bromodichloromethane	9.799	-2.0	885837	0.502	0.512	8.865	8.863	3.82				
	46	2-Chloroethyl vinyl ether	10.396	4.0	217043	0.123	0.118	9.280	9.272	12.09				
	47	cis-1,3-Dichloropropene	10.050	0.5	1089123	0.617	0.614	9.531	9.525	3.83				
5	48	4-Methyl-2-pentanone	51.482	3.0	1827746	0.207	0.201	9.738	9.735	7.38				
	49	Toluene-d8	9.543	-4.6	2330918	1.320	1.383	9.960	9.952	6.52				
	50	Toluene	10.051	0.5	3111412	1.762	1.753	10.064	10.060	3.65				
	51	Ethyl methacrylate	10.418	4.2	606348	0.343	0.330	10.508	10.504	11.06				
	52	trans-1,3-Dichloropropene	10.018	0.2	803608	0.455	0.454	10.419	10.417	5.28				
	53	1,1,2-Trichloroethane	9.987	-0.1	380807	0.216	0.216	10.744	10.744	4.93				
	54	Tetrachloroethene	9.960	-0.4	626428	0.355	0.356	10.922	10.907	2.94				
	55	1,3-Dichloropropane	10.067	0.7	798400	0.452	0.449	11.026	11.016	3.40				
5	56	2-Hexanone	50.570	1.1	1173148	0.133	0.131	11.085	11.086	9.50				
	57	Dibromochloromethane	10.095	1.0	457958	0.259	0.257	11.395	11.382	6.52				
	58	1,2-Dibromoethane	10.098	1.0	365541	0.207	0.205	11.603	11.595	5.44				
	59	1-Chlorohexane	9.938	-0.6	1272480	0.721	0.725	12.342	12.336	4.61				

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60	Chlorobenzene	10.114	1.1	1802805	1.021	1.010	12.372	12.364	3.12				
61	1,1,1,2-Tetrachloroethane	10.026	0.3	591491	0.335	0.334	12.490	12.490	4.52				
62	Ethylbenzene	10.043	0.4	3617689	2.049	2.040	12.505	12.502	3.49				
2 63	m-Xylene & p-Xylene	19.918	-0.4	5414517	1.533	1.540	12.683	12.681	3.23				
64	o-Xylene	9.951	-0.5	2662138	1.508	1.515	13.186	13.184	3.19				
65	Styrene	10.684	6.8	2044347	1.158	1.084	13.215	13.213	9.03				
66	1,2-DICHLOROBENZENE-D4	10.000	0	676620	1	1	15.420	15.415	0				
67	Bromoform	9.880	-1.2	220603	0.326	0.330	13.452	13.443	7.98				
68	Isopropylbenzene	9.790	-2.1	3289549	4.862	4.966	13.644	13.638	4.25				
69	4-Bromofluorobenzene	8.942	-10.6	745615	1.102	1.232	13.852	13.845	8.67				
70	1,1,2,2-Tetrachloroethane	9.932	-0.7	456807	0.675	0.680	13.985	13.983	2.70				
71	Bromobenzene	9.698	-3.0	672008	0.993	1.024	14.014	14.007	7.74				
72	trans-1,4-Dichloro-2-butene	10.164	1.6	119681	0.177	0.174	14.029	14.027	8.64				
73	1,2,3-Trichloropropane	9.577	-4.2	112697	0.167	0.174	14.059	14.054	8.18				
74	n-Propylbenzene	9.990	-0.1	4328062	6.397	6.403	14.118	14.113	2.04				
75	1,3,5-Trimethylbenzene	9.868	-1.3	2743150	4.054	4.108	14.310	14.307	1.64				
76	2-Chlorotoluene	9.609	-3.9	2298732	3.397	3.536	14.222	14.215	4.91				
77	4-Chlorotoluene	9.834	-1.7	2594676	3.835	3.899	14.355	14.348	3.11				
78	tert-Butylbenzene	9.925	-0.7	617877	0.913	0.920	14.651	14.644	1.93				
79	1,2,4-Trimethylbenzene	10.070	0.7	2655963	3.925	3.898	14.710	14.703	7.18				
80	sec-Butylbenzene	10.152	1.5	3586389	5.300	5.221	14.873	14.869	3.80				
81	p-Isopropyltoluene	10.463	4.6	2866222	4.236	4.048	15.021	15.019	9.79				
82	1,3-Dichlorobenzene	9.960	-0.4	1322269	1.954	1.962	15.006	14.995	1.87				
83	1,4-Dichlorobenzene	9.877	-1.2	1244915	1.840	1.863	15.094	15.095	3.02				
84	n-Butylbenzene	10.295	3.0	2726374	4.029	3.914	15.405	15.402	7.03				
85	1,2-Dichlorobenzene	9.923	-0.8	1048344	1.549	1.561	15.435	15.433	2.00				
86	1,2-Dibromo-3-chloropropane	9.989	-0.1	52967	0.078	0.078	16.175	16.171	14.04				
87	1,2,4-Trichlorobenzene	9.584	-4.2	510233	0.754	0.697	16.959	16.957	15.05	-0.0128	0.8002		0.9994
88	Hexachlorobutadiene	10.265	2.7	385907	0.570	0.556	17.092	17.086	7.87				
89	Naphthalene	10.703	7.0	627450	0.927	0.866	17.240	17.236	14.11				
90	1,2,3-Trichlorobenzene	10.574	5.7	367640	0.543	0.514	17.462	17.455	14.54				

Spike Amount = Nominal Amount * M

5a
M14411

2619

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKV026
Instrument ID: TQ01
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11J302
BFB Injection Date : 11/02/11
BFB Injection Time : 06:56
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.28
75	30.0 - 60.0% of mass 95	52.05
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.87
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	75.89
175	5.0 - 9.0% of mass 174	5.95(7.8)1
176	95.0 - 101.0% of mass 174	75.28(99.2)1
177	5.0 - 9.0% of mass 176	5.52(7.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV001J3103	RKV027	11/02/11	07:22
2	MBLK1W	V001K02B	RKV031	11/02/11	09:30
3	LCS1W	V001K02L	RKV028	11/02/11	07:57
4	LCD1W	V001K02C	RKV029	11/02/11	08:28
5	MW-70-02-66	J302-01	RKV032	11/02/11	10:00
6	MW-70-POC01-67	J302-02	RKV033	11/02/11	10:31
7	MW-70-35-68	J302-03	RKV034	11/02/11	11:02
8	MW-70-17-69	J302-04	RKV035	11/02/11	11:33
9	MW-70-22-70	J302-05	RKV036	11/02/11	12:04
10	IR-70-TB-71	J302-06	RKV037	11/02/11	12:35

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RJV602
Instrument ID: T001
GC Column: RTX502.2 ID: 0.32mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11J302
Date Analyzed: 10/31/11
Time Analyzed: 12:33
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1719891	7.78	1480141	12.32	584394	15.41
	UPPER LIMIT	3439782	8.28	2960282	12.82	1168788	15.91
	LOWER LIMIT	859946	7.28	740071	11.82	292197	14.91
	SAMPLE ID						
1	VSTD010	1601888	7.77	1364522	12.31	531296	15.41
2	MBLK1W	1897779	7.77	1573007	12.31	516734	15.40
3	LCS1W	1814407	7.76	1562790	12.31	622368	15.41
4	LCD1W	1960411	7.77	1702381	12.31	662531	15.40
5	MW-70-02-66	1695294	7.77	1423012	12.31	461098	15.41
6	MW-70-POC01-67	1598985	7.77	1371752	12.31	445319	15.40
7	MW-70-35-68	1600786	7.77	1371519	12.31	449874	15.41
8	MW-70-17-69	1556375	7.77	1354341	12.31	447772	15.41
9	MW-70-22-70	1588997	7.76	1417294	12.31	487821	15.40
10	IR-70-TB-71	1497516	7.76	1266977	12.31	409083	15.40

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKV027.D Vial: 2
Acq On : 2 Nov 2011 7:22 am Operator: MW
Sample : CV001J3103 Inst : T001
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\V001J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	93	0.00
2	T,M	Chlorotrifluoroethylene	10.000	0.000	100.0#	0	-2.11#
3	T,M	Dichlorodifluoromethane	10.000	9.063	9.4	76	0.00
4	P,T,M	Chloromethane	10.000	11.194	-11.9	95	0.00
5	C,T,M	Vinyl chloride	10.000	11.243	-12.4	94	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	0.000	100.0#	0	-2.66#
7	T,M	Bromomethane	10.000	12.020	-20.2#	97	0.00
8	T,M	Chloroethane	10.000	10.730	-7.3	99	0.00
9	T,M	Dichlorofluoromethane	10.000	10.266	-2.7	97	0.00
10	T,M	Trichlorofluoromethane	10.000	10.625	-6.3	92	0.00
11	T,M	Acrolein	50.000	55.275	-10.5	110	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	10.176	-1.8	96	0.00
13	T,M	Acetone	50.000	57.210	-14.4	101	0.00
14	C,T,M	1,1-Dichloroethene	10.000	9.751	2.5	89	0.00
15	T,M	Iodomethane	10.000	10.270	-2.7	96	0.00
16	T,M	Carbon disulfide	10.000	10.834	-8.3	109	0.00
17	T,M	Methylene chloride	10.000	9.846	1.5	96	0.00
18	T,M	tert-Butyl alcohol	50.000	50.538	-1.1	91	0.00
19	T,M	Acrylonitrile	50.000	51.523	-3.0	96	0.00
20	T,M	tert-Butyl methyl ether (MT	10.000	10.212	-2.1	94	0.00
21	T,M	trans-1,2-Dichloroethene	10.000	10.093	-0.9	93	0.00
22	T,M	Vinyl acetate	10.000	9.667	3.3	82	0.00
23	P,T,M	1,1-Dichloroethane	10.000	10.235	-2.3	97	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	9.899	1.0	94	0.00
25	T,M	2-Butanol	-1.000	0.000	0.0	94	0.00
26	T,M	tert-Butyl ethyl ether (ETB	10.000	10.051	-0.5	93	0.00
27	T,M	2-Butanone	50.000	52.654	-5.3	95	0.00
28	T,M	cis-1,2-Dichloroethene	10.000	10.265	-2.7	97	0.00
29	T,M	2,2-Dichloropropane	10.000	11.202	-12.0	105	0.00
30	T,M	Bromochloromethane	10.000	10.097	-1.0	93	0.00
31	C,T,M	Chloroform	10.000	10.207	-2.1	92	0.00
32	S	Dibromofluoromethane	10.000	10.076	-0.8	93	0.00
33	T,M	1,1,1-Trichloroethane	10.000	10.687	-6.9	98	0.00
34	T,M	tert-Amyl methyl ether (TAM	10.000	10.364	-3.6	93	0.00
35	S	1,2-Dichloroethane-d4	10.000	9.912	0.9	91	0.00
36	I	CHLOROBENZENE-D5	10.000	10.000	0.0	92	0.00
37	T,M	1,1-Dichloropropene	10.000	10.119	-1.2	96	0.00
38	T,M	Carbon tetrachloride	10.000	10.622	-6.2	95	0.00
39	T,M	Benzene	10.000	10.029	-0.3	95	0.00
40	T,M	1,2-Dichloroethane	10.000	10.141	-1.4	92	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKV027.D Vial: 2
Acq On : 2 Nov 2011 7:22 am Operator: MW
Sample : CV001J3103 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	10.000	10.021	-0.2	94	0.00
42	C,T,M	1,2-Dichloropropane	10.000	10.010	-0.1	95	0.00
43	T,M	1,4-Dioxane	-1.000	0.000	0.0	98	0.00
44	T,M	Dibromomethane	10.000	10.083	-0.8	92	0.00
45	T,M	Bromodichloromethane	10.000	10.212	-2.1	93	0.00
46	T,M	2-Chloroethyl vinyl ether	10.000	9.596	4.0	86	0.00
47	T,M	cis-1,3-Dichloropropene	10.000	10.484	-4.8	97	0.00
48	T,M	4-Methyl-2-pentanone	50.000	51.802	-3.6	94	0.00
49	S	Toluene-d8	10.000	10.057	-0.6	96	0.00
50	C,T,M	Toluene	10.000	10.124	-1.2	96	0.00
51	T,M	Ethyl methacrylate	10.000	10.001	-0.0	88	0.00
52	T,M	trans-1,3-Dichloropropene	10.000	10.684	-6.8	96	0.00
53	T,M	1,1,2-Trichloroethane	10.000	10.146	-1.5	96	0.00
54	T,M	Tetrachloroethene	10.000	10.385	-3.8	96	0.00
55	T,M	1,3-Dichloropropane	10.000	10.217	-2.2	93	0.00
56	T,M	2-Hexanone	50.000	51.632	-3.3	92	0.00
57	T,M	Dibromochloromethane	10.000	10.612	-6.1	93	0.00
58	T,M	1,2-Dibromoethane	10.000	10.283	-2.8	93	0.00
59	T,M	1-Chlorohexane	10.000	10.380	-3.8	97	0.00
60	P,M	Chlorobenzene	10.000	10.320	-3.2	93	0.00
61	T,M	1,1,1,2-Tetrachloroethane	10.000	10.387	-3.9	93	0.00
62	C,T,M	Ethylbenzene	10.000	10.322	-3.2	95	0.00
63	T,M	m-Xylene & p-Xylene	20.000	20.948	-4.7	94	0.00
64	T,M	o-Xylene	10.000	10.511	-5.1	95	0.00
65	T,M	Styrene	10.000	10.708	-7.1	93	0.00
66	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	91	0.00
67	P,T,M	Bromoform	10.000	10.181	-1.8	93	0.00
68	T,M	Isopropylbenzene	10.000	10.159	-1.6	94	0.00
69	S	4-Bromofluorobenzene	10.000	9.548	4.5	94	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.197	-2.0	95	0.00
71	T,M	Bromobenzene	10.000	9.842	1.6	93	0.00
72	T,M	trans-1,4-Dichloro-2-butene	10.000	10.697	-7.0	95	0.00
73	T,M	1,2,3-Trichloropropane	10.000	9.781	2.2	94	0.00
74	T,M	n-Propylbenzene	10.000	10.266	-2.7	94	0.00
75	T,M	1,3,5-Trimethylbenzene	10.000	10.249	-2.5	93	0.00
76	T,M	2-Chlorotoluene	10.000	10.065	-0.6	95	0.00
77	T,M	4-Chlorotoluene	10.000	10.041	-0.4	92	0.00
78	T,M	tert-Butylbenzene	10.000	10.285	-2.9	94	0.00
79	T,M	1,2,4-Trimethylbenzene	10.000	10.369	-3.7	91	0.00
80	T,M	sec-Butylbenzene	10.000	10.651	-6.5	93	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKV027.D Vial: 2
Acq On : 2 Nov 2011 7:22 am Operator: MW
Sample : CV001J3103 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	10.000	11.084	-10.8	93	0.00
82	T,M	1,3-Dichlorobenzene	10.000	10.358	-3.6	93	0.00
83	T,M	1,4-Dichlorobenzene	10.000	10.231	-2.3	92	0.00
84	T,M	n-Butylbenzene	10.000	11.021	-10.2	94	0.00
85	T,M	1,2-Dichlorobenzene	10.000	10.259	-2.6	92	0.00
86	T,M	1,2-Dibromo-3-chloropropane	10.000	10.498	-5.0	92	0.00
87	T,M	1,2,4-Trichlorobenzene	10.000	10.127	-1.3	92	0.00
88	T,M	Hexachlorobutadiene	10.000	11.391	-13.9	96	0.00
89	T,M	Naphthalene	10.000	10.951	-9.5	89	0.00
90	T,M	1,2,3-Trichlorobenzene	10.000	11.180	-11.8	90	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKV027.D Vial: 2
Acq On : 2 Nov 2011 7:22 am Operator: MW
Sample : CVO01J3103 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	93	0.00
2	T,M	Chlorotrifluoroethylene	0.156	0.000	100.0#	0#	-2.11#
3	T,M	Dichlorodifluoromethane	0.363	0.329	9.4	76	0.00
4	P,T,M	Chloromethane	0.435	0.487	-12.0	95	0.00
5	C,T,M	Vinyl chloride	0.461	0.519	-12.6	94	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.338	0.000	100.0#	0#	-2.66#
7	T,M	Bromomethane	0.229	0.275	-20.1#	97	0.00
8	T,M	Chloroethane	0.282	0.303	-7.4	99	0.00
9	T,M	Dichlorofluoromethane	0.712	0.731	-2.7	97	0.00
10	T,M	Trichlorofluoromethane	0.429	0.456	-6.3	92	0.00
11	T,M	Acrolein	0.011	0.013	-18.2	110	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.219	0.223	-1.8	96	0.00
13	T,M	Acetone	0.044	0.050	-13.6	101	0.00
14	C,T,M	1,1-Dichloroethene	0.658	0.642	2.4	89	0.00
15	T,M	Iodomethane	0.479	0.491	-2.5	96	0.00
16	T,M	Carbon disulfide	1.074	1.164	-8.4	109	0.00
17	T,M	Methylene chloride	0.505	0.497	1.6	96	0.00
18	T,M	tert-Butyl alcohol	0.012	0.012	0.0	91	0.00
19	T,M	Acrylonitrile	0.054	0.055	-1.9	96	0.00
20	T,M	tert-Butyl methyl ether (MT	0.589	0.601	-2.0	94	0.00
21	T,M	trans-1,2-Dichloroethene	0.668	0.674	-0.9	93	0.00
22	T,M	Vinyl acetate	0.476	0.460	3.4	82	0.00
23	P,T,M	1,1-Dichloroethane	0.756	0.774	-2.4	97	0.00
24	T,M	Isopropyl ether (DIPE)	1.343	1.330	1.0	94	0.00
25	T,M	2-Butanol	0.000	0.000	0.0	94	0.00
26	T,M	tert-Butyl ethyl ether (ETB	0.966	0.971	-0.5	93	0.00
27	T,M	2-Butanone	0.071	0.074	-4.2	95	0.00
28	T,M	cis-1,2-Dichloroethene	0.379	0.389	-2.6	97	0.00
29	T,M	2,2-Dichloropropane	0.538	0.602	-11.9	105	0.00
30	T,M	Bromochloromethane	0.305	0.308	-1.0	93	0.00
31	C,T,M	Chloroform	0.636	0.650	-2.2	92	0.00
32	S	Dibromofluoromethane	0.274	0.276	-0.7	93	0.00
33	T,M	1,1,1-Trichloroethane	0.506	0.540	-6.7	98	0.00
34	T,M	tert-Amyl methyl ether (TAM	0.142	0.147	-3.5	93	0.00
35	S	1,2-Dichloroethane-d4	0.292	0.290	0.7	91	0.00
36	I	CHLOROBENZENE-D5	1.000	1.000	0.0	92	0.00
37	T,M	1,1-Dichloropropene	0.208	0.211	-1.4	96	0.00
38	T,M	Carbon tetrachloride	0.498	0.529	-6.2	95	0.00
39	T,M	Benzene	1.767	1.772	-0.3	95	0.00
40	T,M	1,2-Dichloroethane	0.438	0.444	-1.4	92	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKV027.D Vial: 2
Acq On : 2 Nov 2011 7:22 am Operator: MW
Sample : CVO01J3103 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	0.442	0.443	-0.2	94	0.00
42	C,T,M	1,2-Dichloropropane	0.459	0.459	0.0	95	0.00
43	T,M	1,4-Dioxane	0.000	0.000	0.0	98	0.00
44	T,M	Dibromomethane	0.149	0.150	-0.7	92	0.00
45	T,M	Bromodichloromethane	0.512	0.523	-2.1	93	0.00
46	T,M	2-Chloroethyl vinyl ether	0.118	0.113	4.2	86	0.00
47	T,M	cis-1,3-Dichloropropene	0.614	0.643	-4.7	97	0.00
48	T,M	4-Methyl-2-pentanone	0.201	0.208	-3.5	94	0.00
49	S	Toluene-d8	1.383	1.391	-0.6	96	0.00
50	C,T,M	Toluene	1.753	1.775	-1.3	96	0.00
51	T,M	Ethyl methacrylate	0.330	0.330	0.0	88	0.00
52	T,M	trans-1,3-Dichloropropene	0.454	0.485	-6.8	96	0.00
53	T,M	1,1,2-Trichloroethane	0.216	0.219	-1.4	96	0.00
54	T,M	Tetrachloroethene	0.356	0.370	-3.9	96	0.00
55	T,M	1,3-Dichloropropane	0.449	0.459	-2.2	93	0.00
56	T,M	2-Hexanone	0.131	0.136	-3.8	92	0.00
57	T,M	Dibromochloromethane	0.257	0.273	-6.2	93	0.00
58	T,M	1,2-Dibromoethane	0.205	0.211	-2.9	93	0.00
59	T,M	1-Chlorohexane	0.725	0.753	-3.9	97	0.00
60	P,M	Chlorobenzene	1.010	1.042	-3.2	93	0.00
61	T,M	1,1,1,2-Tetrachloroethane	0.334	0.347	-3.9	93	0.00
62	C,T,M	Ethylbenzene	2.040	2.106	-3.2	95	0.00
63	T,M	m-Xylene & p-Xylene	1.540	1.613	-4.7	94	0.00
64	T,M	o-Xylene	1.515	1.593	-5.1	95	0.00
65	T,M	Styrene	1.084	1.161	-7.1	93	0.00
66	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	91	0.00
67	P,T,M	Bromoform	0.330	0.336	-1.8	93	0.00
68	T,M	Isopropylbenzene	4.966	5.045	-1.6	94	0.00
69	S	4-Bromofluorobenzene	1.232	1.177	4.5	94	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	0.680	0.693	-1.9	95	0.00
71	T,M	Bromobenzene	1.024	1.008	1.6	93	0.00
72	T,M	trans-1,4-Dichloro-2-butene	0.174	0.186	-6.9	95	0.00
73	T,M	1,2,3-Trichloropropane	0.174	0.170	2.3	94	0.00
74	T,M	n-Propylbenzene	6.403	6.573	-2.7	94	0.00
75	T,M	1,3,5-Trimethylbenzene	4.108	4.211	-2.5	93	0.00
76	T,M	2-Chlorotoluene	3.536	3.559	-0.7	95	0.00
77	T,M	4-Chlorotoluene	3.899	3.915	-0.4	92	0.00
78	T,M	tert-Butylbenzene	0.920	0.946	-2.8	94	0.00
79	T,M	1,2,4-Trimethylbenzene	3.898	4.042	-3.7	91	0.00
80	T,M	sec-Butylbenzene	5.221	5.561	-6.5	93	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKV027.D Vial: 2
Acq On : 2 Nov 2011 7:22 am Operator: MW
Sample : CVO01J3103 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	4.048	4.487	-10.8	93	0.00
82	T,M	1,3-Dichlorobenzene	1.962	2.032	-3.6	93	0.00
83	T,M	1,4-Dichlorobenzene	1.863	1.906	-2.3	92	0.00
84	T,M	n-Butylbenzene	3.914	4.313	-10.2	94	0.00
85	T,M	1,2-Dichlorobenzene	1.561	1.602	-2.6	92	0.00
86	T,M	1,2-Dibromo-3-chloropropane	0.078	0.082	-5.1	92	0.00
87	T,M	1,2,4-Trichlorobenzene	0.697	0.798	-14.5	92	0.00
88	T,M	Hexachlorobutadiene	0.556	0.633	-13.8	96	0.00
89	T,M	Naphthalene	0.866	0.949	-9.6	89	0.00
90	T,M	1,2,3-Trichlorobenzene	0.514	0.574	-11.7	90	0.00

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 10/31/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A01 -038

BATCH V001J31b

Sample Prep. ID	Data File Name	Lab Sample ID	* Sample Amount A/B/C	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RJV596	BFB01J29	1 mL	NH	NA	NA	NA	9:18am
02	597	V001J311	.01/.1/1.5 mL					0.3/1.5/1.5 ppb
03	598	2	.01/.1/2.5 mL					0.5/2.5/2.5 ppb
04	599	3	.1/.5/5.0 mL					1.0/5.0/5.0 ppb
05	600	4	.2/1/10 mL					2.0/10/10 ppb
06	601	5	.5/2.5/2.5 mL					5.0/25/25 ppb
07	602	6	1/5/5 mL					10/50/50 ppb
08	603	7	2/10/10 mL					20/100/100 ppb
09	604	8	3/15/15 mL					30/150/150 ppb
10	605	9	5/25/25 mL					50/250/250 ppb
11	606	10	10/50/50 mL					100/500/500 ppb
12	607	IS/SS	25 mL					
13	608	V001J29B	↓					
14	609	V001J311	1/5/5 mL					10/50/50 ppb
15	610	RINSE	25 mL	↓	↓	↓	↓	4:51pm
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30			NW	11/1/11				

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC Gases	SV1-17-96-3	*	
DCC Cl_2	-92-3		
DCC H2O	-86-2		
DCC CT/MA Freons	-90-1 -100-3		1/49/1000
BFB	-45-3	1	
IS/SURR.	-99-1	1	
ICV/LCS Gases	-97-1	1	
ICV/LCS Cl_2	-97-2	1	
ICV/LCS H2O CT/MA	-99-2 -99-2	5 5	
ICV/LCS CTFE 82-411-760	SV1-12-26-2 -26-1	0.5/ 0.5	
IS SS	SV1-17-91-1 -91-2	1 1	25 mL
DATA FILE FOLDER	11J31		

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO01	

Comments: *please refer to sample amount
A: SS, gases, Cl_2, Freons
B: H2O
C: CT/MA
IS/SS NW 11/1/11

Analyzed By: NW
Date Disposed: 11/1/11
Disposed By: NW

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☐ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/2/11 ☐ 5-mL Purge ☐ 10-mL Purge ☐ 25-mL Purge

Book # A01 -038

BATCH CV001J3103

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RKV026	BFB01K02	1mL					6:56am
02		27	CV001J3103	1/5 5mL					
03		28	V001K02L						
04		29	C						
05		30	RINSE	25mL					
06		31	V001K02B						
07		32	11J302-01		1.0	/	/		
08		33	-02			/	/		
09		34	-03			/	/		
10		35	-04			/	/		
11		36	-05			/	/		
12		37	-06			/	/		
13		38	11J314-01			/	/		
14		39	-02			/	/		
15		40	-03			/	/		
16		41	-04			/	/		
17		42	-05			/	/		
18		43	11K004-01			/	/		
19		44	-02			/	/		
20		45	-03			/	/		
21		46	-04			/	/		
22		47	-05			/	/		
23		48	-06			/	/		6:17pm
24		49	RINSE						
25		50							
26		51							
27									
28									
29									
30			MW 11/2/11						

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-17-96-3	1	
DCC	-92-3	1	
DCC	-86-2	5	
DCC	-98-1	5	
BFB	-45-3	1	
IS/SURR.	-99-1	1	50/250
ICV/LCS	-97-1	1	
ICV/LCS	-97-2	1	
ICV/LCS	-99-2	5	
ICV/LCS	-89-2	5	

DATA FILE FOLDER	11K02
Electronic Data Archival	
Location	Date
HPCHEM_VOA/TO01	

Comments:

Analyzed By: MW

Date Disposed: 11/3/11

Disposed By: MW

TABLE OF CONTENTS

CLIENT: **INSIGHT EEC, INC.**

PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11J314**

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Cover Letter, COC/Sample Receipt Form		1000 – 1003
GC/MS-VOA	METHOD 5030B/8260B	2000 – 2030
GC/MS-SVOA	**	3000 –
GC-VOA	**	4000 –
GC-SVOA	**	5000 –
HPLC	**	6000 –
METALS	**	7000 –
WET	**	8000 –
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 11-21-2011
EMAX Batch No.: 11J314

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 10/31/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW-70-11-72	J314-01	10/31/11	WATER	VOLATILE ORGANICS BY GC/MS
MW-70-10-73	J314-02	10/31/11	WATER	VOLATILE ORGANICS BY GC/MS
MW-70-POC03-74	J314-03	10/31/11	WATER	VOLATILE ORGANICS BY GC/MS
MW-70-36-75	J314-04	10/31/11	WATER	VOLATILE ORGANICS BY GC/MS
IR-70-TB-76	J314-05	10/31/11	WATER	VOLATILE ORGANICS BY GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

for

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

INS 0801

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 4-77101

SAMPLE STORAGE

EMAX CONTROL NO. * 11J314

PROJECT CODE:

CLIENT: INSIGHT EEC INC
PROJECT: SEAL BEACH / NWS
COORDINATOR: NICK WEINBERGER
TEL: (714) 678 6700 FAX: 714 678 6711 EMAIL: NWEINBERGER@IEECI.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT EEC, INC.
ADDRESS: 3010 E MIRALOMA, ANAHEIM CA 92806
EMAX PM: YE MINT

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: VOC's (8260B)

TAT:
- ☐ Rush ____hrs.
- ☐ Rush ____days
- ☐ 7 days
- ☐ 14 days
- ☐ 21 days
- ☐ 30 days
- ☐ ____days
- ☒ STANDARD

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	PRESERVATIVE CODE HCL	COMMENTS
1	MW-70-11-72	IR Site 70	10/31/11	0930	3	40ml	VOA	GW	3	X	
2	MW-70-10-73	Site 70	10/31/11	1015	3	40ml	VOA	GW	3	X	
3	MW-70-POC03-74	Site 70	10/31/11	1140	3	40ml	VOA	GW	3	X	
4	MW-70-36-75	Site 70	10/31/11	1355	3	40ml	VOA	GW	3	X	
5	IR-70-TB-76	Site 70	10/31/11	1430	2	40ml	VOA	GW	3	X	TRIP BLANK
6											
7											
8											
9											
0											

Instructions

Cooler #	Temp. (°C)
1	3.5

Sample #s

SAMPLER

COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	10/31	1454	Keith Stant
Keith Stant	10/31/11	1518	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11K312
☑ EMAX Courier	See GC	Recepient J-LUNA
☐ Client Delivery		Date 10-31-11
☐ Third Party		Time 1518

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name NO	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☑ Preservative (if any)	☑ TAT

Safety Issues: ☑ None ☐ High concentrations expected ☐ Superfund Site samples ☐ Rad screening required

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	A ☑ Cooler 13.5 °C	☐ Cooler 2 ____ °C	☐ Cooler 3 ____ °C	☐ Cooler 4 ____ °C	☐ Cooler 5 ____ °C
	☐ Cooler 6 ____ °C	☐ Cooler 7 ____ °C	☐ Cooler 8 ____ °C	☐ Cooler 9 ____ °C	☐ Cooler 10 ____ °C

Thermometer: *A - S/N 101541371* *B - S/N 101541382*

Comments: ☐ **PM was informed on non-compliant coolers immediately.**

Note: **pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code

REVIEWS

Sample Labeling: [signature] Date 10/30/11

SRF: [signature] Date 10/31/11

PM: LP for YC Date 11/1/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4	_____	E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	_____
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	_____
B3	Sample ID is incousistent in COC vis-à-vis label	F2	Bubble is> 6mm		
B4	_____	G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	_____		
C4	_____	H2	_____		

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11J314

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11J314

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of five (5) water samples were received on 10/31/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for VO01K02L/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11J314
Instrument ID : T-001

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V001K02B	1	NA	11/02/1109:30	11/02/1109:30	RKV031	RJV602	V001K02	Method Blank
LCS1W	V001K02L	1	NA	11/02/1107:57	11/02/1107:57	RKV028	RJV602	V001K02	Lab Control Sample (LCS)
LCD1W	V001K02C	1	NA	11/02/1108:28	11/02/1108:28	RKV029	RJV602	V001K02	LCS Duplicate
MW-70-11-72	J314-01	1	NA	11/02/1113:07	11/02/1113:07	RKV038	RJV602	V001K02	Field Sample
MW-70-10-73	J314-02	1	NA	11/02/1113:38	11/02/1113:38	RKV039	RJV602	V001K02	Field Sample
MW-70-POC03-74	J314-03	1	NA	11/02/1114:09	11/02/1114:09	RKV040	RJV602	V001K02	Field Sample
MW-70-36-75	J314-04	1	NA	11/02/1114:40	11/02/1114:40	RKV041	RJV602	V001K02	Field Sample
IR-70-TB-76	J314-05	1	NA	11/02/1115:11	11/02/1115:11	RKV042	RJV602	V001K02	Field Sample

FN - Filename
% Moist - Percent Moisture

2002

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	10/31/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	10/31/11
Batch No.	: 11J314	Date Extracted:	11/02/11 13:07
Sample ID:	MW-70-11-72	Date Analyzed:	11/02/11 13:07
Lab Samp ID:	J314-01	Dilution Factor:	1
Lab File ID:	RKV038	Matrix	: WATER
Ext Btch ID:	V001K02	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	1.1	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.3	10.00	113	70-140
4-BROMOFLUOROBENZENE	10.6	10.00	106	70-130
TOLUENE-D8	10.0	10.00	100	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	10/31/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	10/31/11
Batch No.	: 11J314	Date Extracted:	11/02/11 13:38
Sample ID:	MW-70-10-73	Date Analyzed:	11/02/11 13:38
Lab Samp ID:	J314-02	Dilution Factor:	1
Lab File ID:	RKV039	Matrix	: WATER
Ext Btch ID:	V001K02	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.5	10.00	115	70-140
4-BROMOFLUOROBENZENE	10.6	10.00	106	70-130
TOLUENE-D8	10.1	10.00	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	10/31/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	10/31/11
Batch No.	: 11J314	Date Extracted:	11/02/11 14:09
Sample ID:	MW-70-POC03-74	Date Analyzed:	11/02/11 14:09
Lab Samp ID:	J314-03	Dilution Factor:	1
Lab File ID:	RKV040	Matrix	: WATER
Ext Btch ID:	V001K02	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.8	10.00	118	70-140
4-BROMOFLUOROBENZENE	10.6	10.00	106	70-130
TOLUENE-D8	9.93	10.00	99.3	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	10/31/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	10/31/11
Batch No.	: 11J314	Date Extracted:	11/02/11 14:40
Sample ID:	MW-70-36-75	Date Analyzed:	11/02/11 14:40
Lab Samp ID:	J314-04	Dilution Factor:	1
Lab File ID:	RKV041	Matrix :	WATER
Ext Btch ID:	V001K02	% Moisture :	NA
Calib. Ref.:	RJV602	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	8.0	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.7	10.00	117	70-140
4-BROMOFLUOROBENZENE	10.6	10.00	106	70-130
TOLUENE-D8	9.96	10.00	99.6	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	10/31/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	10/31/11
Batch No.	: 11J314	Date Extracted:	11/02/11 15:11
Sample ID:	IR-70-TB-76	Date Analyzed:	11/02/11 15:11
Lab Samp ID:	J314-05	Dilution Factor:	1
Lab File ID:	RKV042	Matrix	: WATER
Ext Btch ID:	V001K02	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.3	10.00	113	70-140
4-BROMOFLUOROBENZENE	10.5	10.00	105	70-130
TOLUENE-D8	9.81	10.00	98.1	70-140

QC SUMMARIES

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METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/02/11
Batch No. : 11J314	Date Extracted: 11/02/11 09:30
Sample ID: MBLK1W	Date Analyzed: 11/02/11 09:30
Lab Samp ID: V001K028	Dilution Factor: 1
Lab File ID: RKV031	Matrix : WATER
Ext Btch ID: V001K02	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.1	10.00	101	70-140
4-BROMOFLUOROBENZENE	10.4	10.00	104	70-130
TOLUENE-D8	10.0	10.00	100	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11J314
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	V001K02B	V001K02L	V001K02C		
LAB FILE ID:	RKV031	RKV028	RKV029		
DATE EXTRACTED:	11/02/1109:30	11/02/1107:57	11/02/1108:28	DATE COLLECTED:	NA
DATE ANALYZED:	11/02/1109:30	11/02/1107:57	11/02/1108:28	DATE RECEIVED:	11/02/11
PREP. BATCH:	V001K02	V001K02	V001K02		
CALIB. REF:	RJV602	RJV602	RJV602		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.83	98	10.0	9.21	92	7	60-130	30
Benzene	ND	10.0	9.53	95	10.0	9.05	91	5	70-130	30
Chlorobenzene	ND	10.0	9.96	100	10.0	9.51	95	5	70-120	30
Toluene	ND	10.0	9.75	98	10.0	9.16	92	6	70-130	30
Trichloroethene	ND	10.0	9.67	97	10.0	9.06	91	7	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	10.1	101	10.0	9.94	99	70-140
4-Bromofluorobenzene	10.0	9.36	94	10.0	9.45	94	70-130
Toluene-d8	10.0	9.69	97	10.0	9.76	98	70-130

INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RJV596
Instrument ID: T001
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11J314
BFB Injection Date : 10/31/11
BFB Injection Time : 09:18
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.79
75	30.0 - 60.0% of mass 95	51.84
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.73
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	73.40
175	5.0 - 9.0% of mass 174	5.20(7.1)1
176	95.0 - 101.0% of mass 174	72.01(98.1)1
177	5.0 - 9.0% of mass 176	4.99(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	V001J311	RJV597	10/31/11	09:59
2	VSTD0.5	V001J312	RJV598	10/31/11	10:30
3	VSTD01	V001J313	RJV599	10/31/11	11:01
4	VSTD02	V001J314	RJV600	10/31/11	11:32
5	VSTD05	V001J315	RJV601	10/31/11	12:03
6	VSTD010	V001J316	RJV602	10/31/11	12:33
7	VSTD020	V001J317	RJV603	10/31/11	13:04
8	VSTD030	V001J318	RJV604	10/31/11	13:35
9	VSTD050	V001J319	RJV605	10/31/11	14:05
10	VSTD100	V001J3110	RJV606	10/31/11	14:36
11	VSTD010	IV001J311	RJV609	10/31/11	16:07

FORM V VOA DLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :TO01
Beginning DateTime :10/31/11 09:59
Spike Units :PPB
IC File :RJV602

Column Spec :RTX502.2 ID :0.32MM
Ending DateTime :10/31/11 14:36
HPChem Method :VO01J31

	M IDX	Parameters	.3 09:59 RJV597	.5 10:30 RJV598	1 11:01 RJV599	2 11:32 RJV600	5 12:03 RJV601	10 12:33 RJV602	20 13:04 RJV603	30 13:35 RJV604	50 14:05 RJV605	100 14:36 RJV606	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	0	7.7772
	2	Chlorotrifluoroethylene	------	0.109	0.142	0.158	0.161	0.161	0.174	0.164	0.169	0.164	0.156	12.57	2.1081
	3	Dichlorodifluoromethane	0.309	0.336	0.351	0.390	0.390	0.404	0.374	0.355	0.365	0.359	0.363	7.72	2.1576
	4	Chloromethane	0.424	0.438	0.439	0.437	0.442	0.478	0.432	0.422	0.420	0.418	0.435	4.03	2.3766
	5	Vinyl chloride	0.390	0.428	0.455	0.475	0.480	0.515	0.481	0.460	0.478	0.455	0.461	7.36	2.5408
	6	2-Chloro-1,1,1-trifluoroethane	0.267	0.292	0.352	0.405	0.357	0.346	0.367	0.343	0.340	0.315	0.338	11.52	2.6548
	7	Bromomethane	0.218	0.243	0.243	0.252	0.251	0.264	0.237	0.222	0.213	0.143	0.229	14.94	2.9004
	8	Chloroethane	0.371	0.316	0.291	0.288	0.275	0.285	0.269	0.252	0.251	0.223	0.282	14.40	3.0217
	9	Dichlorofluoromethane	0.808	0.730	0.755	0.724	0.730	0.705	0.722	0.671	0.654	0.622	0.712	7.42	3.3088
	10	Trichlorofluoromethane	------	0.394	0.410	0.439	0.446	0.459	0.428	------	------	------	0.429	5.60	3.3129
5	11	Acrolein	------	------	0.015	0.012	0.011	0.011	0.011	0.011	0.011	0.010	0.011	12.29	3.8010
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	0.227	0.210	0.222	0.216	0.226	0.217	0.224	0.216	0.216	0.214	0.219	2.60	3.9761
5	13	Acetone	------	------	0.054	0.046	0.045	0.046	0.044	0.040	0.039	0.036	0.044	12.62	3.9619
	14	1,1-Dichloroethene	0.682	0.667	0.685	0.687	0.691	0.670	0.668	0.631	0.616	0.584	0.658	5.45	3.9272
	15	Iodomethane	0.473	0.447	0.475	0.470	0.485	0.478	0.497	0.482	0.491	0.488	0.479	2.89	4.1122
	16	Carbon disulfide	1.104	0.866	0.961	0.999	1.070	0.991	1.192	1.135	1.223	1.201	1.074	10.99	4.2084
	17	Methylene chloride	0.589	0.509	0.526	0.494	0.501	0.484	0.501	0.484	0.485	0.473	0.505	6.57	4.5117
5	18	tert-Butyl alcohol	------	------	0.011	0.010	0.011	0.012	0.014	0.013	0.012	0.012	0.012	10.38	4.6333
5	19	Acrylonitrile	0.057	0.049	0.054	0.049	0.054	0.054	0.056	0.055	0.055	0.054	0.054	4.68	4.7766
	20	tert-Butyl methyl ether (MTBE)	0.581	0.545	0.619	0.597	0.611	0.595	0.636	0.580	0.573	0.550	0.589	4.92	4.8372
	21	trans-1,2-Dichloroethene	0.705	0.636	0.678	0.676	0.683	0.672	0.685	0.661	0.654	0.626	0.668	3.56	4.8505
	22	Vinyl acetate	------	0.362	0.399	0.481	0.527	0.523	0.516	0.523	0.507	0.446	0.476	12.74	5.3567
	23	1,1-Dichloroethane	0.823	0.707	0.773	0.758	0.764	0.745	0.768	0.750	0.748	0.727	0.756	4.05	5.3714
	24	Isopropyl ether (DIPE)	1.407	1.255	1.338	1.339	1.359	1.324	1.393	1.341	1.334	------	1.343	3.23	5.4144
5	25	2-Butanol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	26	tert-Butyl ethyl ether (ETBE)	1.023	0.928	1.019	0.963	0.989	0.968	1.012	0.923	0.924	0.912	0.966	4.44	5.8596
5	27	2-Butanone	0.072	0.064	0.071	0.064	0.072	0.073	0.077	0.073	0.072	0.069	0.071	5.82	6.0416
	28	cis-1,2-Dichloroethene	0.393	0.357	0.386	0.385	0.379	0.374	0.391	0.380	0.379	0.368	0.379	2.86	6.0801
	29	2,2-Dichloropropane	0.598	0.568	0.573	0.560	0.561	0.534	0.532	0.496	0.488	0.469	0.538	7.77	6.0993
	30	Bromochloromethane	0.309	0.297	0.317	0.305	0.307	0.309	0.319	0.301	0.297	0.289	0.305	3.06	6.3775
	31	Chloroform	0.660	0.608	0.644	0.641	0.661	0.654	0.655	0.620	0.616	0.606	0.636	3.47	6.5047
	32	Dibromofluoromethane	0.282	0.250	0.254	0.287	0.283	0.277	0.288	0.274	0.275	0.266	0.274	4.90	6.7089
	33	1,1,1-Trichloroethane	0.511	0.499	0.523	0.513	0.526	0.516	0.513	0.485	0.488	0.482	0.506	3.15	6.7459
	34	tert-Amyl methyl ether (TAME)	0.134	0.128	0.146	0.142	0.146	0.148	0.155	0.144	0.141	0.136	0.142	5.46	7.3807
	35	1,2-Dichloroethane-d4	0.295	0.293	0.281	0.319	0.317	0.298	0.304	0.276	0.273	0.266	0.292	6.16	7.1646
	36	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	0	12.3211
	37	1,1-Dichloropropene	0.235	0.213	0.208	0.199	0.205	0.203	0.202	0.208	0.204	0.202	0.208	4.86	6.9486
	38	Carbon tetrachloride	0.524	0.459	0.480	0.500	0.518	0.514	0.503	0.498	0.487	0.498	0.498	3.89	6.9546
	39	Benzene	1.929	1.746	1.769	1.711	1.749	1.714	1.733	1.752	1.800	------	1.767	3.77	7.2081
	40	1,2-Dichloroethane	0.464	0.438	0.454	0.442	0.456	0.445	0.441	0.417	0.415	0.410	0.438	4.24	7.2697
	41	Trichloroethene	0.487	0.420	0.428	0.433	0.441	0.435	0.444	0.437	0.449	0.451	0.442	4.13	8.1205
	42	1,2-Dichloropropane	0.496	0.463	0.451	0.450	0.461	0.447	0.455	0.452	0.461	0.455	0.459	3.08	8.4889
20	43	1,4-Dioxane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	44	Dibromomethane	0.151	0.142	0.151	0.143	0.152	0.151	0.153	0.147	0.150	0.151	0.149	2.57	8.6117
	45	Bromodichloromethane	0.536	0.466	0.498	0.506	0.523	0.517	0.528	0.510	0.518	0.519	0.512	3.82	8.8633
	46	2-Chloroethyl vinyl ether	0.106	0.092	0.109	0.108	0.117	0.121	0.135	0.127	0.132	0.135	0.118	12.09	9.2716
	47	cis-1,3-Dichloropropene	0.638	0.563	0.591	0.602	0.617	0.610	0.632	0.618	0.632	0.634	0.614	3.83	9.5247
5	48	4-Methyl-2-pentanone	0.209	0.181	0.188	0.176	0.198	0.205	0.219	0.209	0.215	0.212	0.201	7.38	9.7348
	49	Toluene-d8	1.537	1.362	1.194	1.412	1.388	1.334	1.400	1.406	1.417	------	1.383	6.52	9.9520
	50	Toluene	1.907	1.740	1.719	1.699	1.743	1.702	1.724	1.760	1.786	------	1.753	3.65	10.0604
	51	Ethyl methacrylate	0.317	0.261	0.296	0.297	0.326	0.344	0.371	0.359	0.362	0.362	0.330	11.06	10.5042
	52	trans-1,3-Dichloropropene	0.446	0.396	0.447	0.443	0.471	0.468	0.480	0.460	0.466	0.467	0.454	5.28	10.4169
	53	1,1,2-Trichloroethane	0.243	0.203	0.217	0.208	0.215	0.211	0.222	0.214	0.215	0.212	0.216	4.93	10.7439
	54	Tetrachloroethene	0.381	0.340	0.352	0.348	0.357	0.356	0.357	0.352	0.358	0.361	0.356	2.94	10.9066
	55	1,3-Dichloropropane	0.467	0.414	0.447	0.441	0.452	0.455	0.468	0.449	0.457	0.442	0.449	3.40	11.0161
5	56	2-Hexanone	0.139	0.115	0.119	0.111	0.126	0.135	0.144	0.141	0.143	0.141	0.131	9.50	11.0857
	57	Dibromochloromethane	0.232	0.231	0.244	0.250	0.264	0.269	0.280	0.265	0.266	0.268	0.257	6.52	11.3816
	58	1,2-Dibromoethane	0.199	0.179	0.201	0.204	0.210	0.209	0.221	0.209	0.210	0.209	0.205	5.44	11.5946

SG
11/4/11

59	1-Chlorohexane	0.816	0.718	0.707	0.695	0.728	0.717	0.725	0.721	0.722	0.703	0.725	4.61	12.3360
60	Chlorobenzene	1.034	0.946	0.995	0.993	1.039	1.037	1.038	1.023	1.017	0.974	1.010	3.12	12.3641
61	1,1,1,2-Tetrachloroethane	0.350	0.301	0.326	0.332	0.346	0.344	0.351	0.335	0.334	0.322	0.334	4.52	12.4898
62	Ethylbenzene	2.164	1.945	1.977	1.991	2.089	2.054	2.104	2.054	1.984	------	2.040	3.49	12.5018
2 63	m-Xylene & p-Xylene	1.610	1.482	1.470	1.505	1.572	1.573	1.567	1.538	------	------	1.540	3.23	12.6812
64	o-Xylene	1.589	1.453	1.476	1.474	1.569	1.547	1.546	1.502	1.481	------	1.515	3.19	13.1841
65	Styrene	1.016	0.911	1.000	1.022	1.143	1.156	1.192	1.187	1.174	1.038	1.084	9.03	13.2134
66	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	0	15.4150
67	Bromoform	0.300	0.296	0.320	0.305	0.327	0.327	0.344	0.343	0.359	0.377	0.330	7.98	13.4427
68	Isopropylbenzene	5.486	4.993	4.975	4.842	4.950	4.869	4.800	4.988	4.786	------	4.966	4.25	13.6379
69	4-Bromofluorobenzene	1.481	1.312	1.095	1.243	1.225	1.133	1.166	1.195	1.226	1.246	1.232	8.67	13.8452
70	1,1,2,2-Tetrachloroethane	0.708	0.641	0.683	0.668	0.684	0.663	0.694	0.682	0.687	0.686	0.680	2.70	13.9828
71	Bromobenzene	1.217	0.984	1.027	0.976	0.999	0.987	0.997	1.005	------	------	1.024	7.74	14.0073
72	trans-1,4-Dichloro-2-butene	0.150	0.153	0.174	0.160	0.173	0.179	0.189	0.184	0.186	0.192	0.174	8.64	14.0272
73	1,2,3-Trichloropropane	0.208	0.163	0.191	0.169	0.172	0.165	0.171	0.165	0.166	0.171	0.174	8.18	14.0538
74	n-Propylbenzene	6.681	6.426	6.296	6.295	6.395	6.353	6.300	6.476	------	------	6.403	2.04	14.1128
75	1,3,5-Trimethylbenzene	4.223	4.025	4.069	4.018	4.178	4.115	4.097	4.107	4.142	------	4.108	1.64	14.3070
76	2-Chlorotoluene	3.930	3.660	3.570	3.417	3.531	3.421	3.367	3.429	3.495	------	3.536	4.91	14.2149
77	4-Chlorotoluene	4.164	3.976	3.937	3.805	3.928	3.864	3.769	3.804	3.846	------	3.899	3.11	14.3481
78	tert-Butylbenzene	0.968	0.910	0.914	0.906	0.922	0.915	0.906	0.923	0.918	0.917	0.920	1.93	14.6442
79	1,2,4-Trimethylbenzene	4.266	3.870	3.910	3.868	3.983	4.040	3.945	3.951	3.974	3.171	3.898	7.18	14.7033
80	sec-Butylbenzene	5.313	4.991	5.022	5.120	5.427	5.421	5.317	5.421	4.953	------	5.221	3.80	14.8692
81	p-Isopropyltoluene	4.020	3.777	3.939	4.070	4.305	4.382	4.330	4.345	4.239	3.076	4.048	9.79	15.0185
82	1,3-Dichlorobenzene	2.001	1.931	1.924	1.887	1.975	1.984	1.970	1.966	1.997	1.986	1.962	1.87	14.9948
83	1,4-Dichlorobenzene	1.937	1.762	1.795	1.801	1.875	1.890	1.897	1.889	1.897	1.885	1.863	3.02	15.0954
84	n-Butylbenzene	3.778	3.544	3.535	3.722	3.974	4.177	4.224	4.173	4.098	------	3.914	7.03	15.4019
85	1,2-Dichlorobenzene	1.623	1.514	1.544	1.533	1.578	1.581	1.583	1.550	1.545	1.563	1.561	2.00	15.4328
86	1,2-Dibromo-3-chloropropane	------	0.054	0.073	0.074	0.076	0.081	0.086	0.084	0.086	0.090	0.078	14.04	16.1711
87	1,2,4-Trichlorobenzene	0.599	0.558	0.592	0.622	0.706	0.786	0.817	0.793	0.802	------	0.697	15.05	16.9571
88	Hexachlorobutadiene	0.532	0.483	0.519	0.518	0.581	0.602	0.586	0.560	0.550	0.625	0.556	7.87	17.0855
89	Naphthalene	------	0.848	0.785	0.727	0.815	0.969	1.054	------	------	------	0.866	14.11	17.2361
90	1,2,3-Trichlorobenzene	0.465	0.412	0.437	0.448	0.513	0.579	0.599	0.581	0.590	------	0.514	14.54	17.4553

Spike Amount = Nominal Amount * M
Ave_%RSD : 6.3 Max_%RSD : 15

Use Least Square Linear Regression with weighting factor of inverse concentration for comps with %_RSD > 15
Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
87	1,2,4-Trichlorobenzene	-0.01281	0.80017	0.9994

SG
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SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :T001
IC_Beginning DateTime :10/31/11 09:59
Spike Amount :10 PPB
CC/CV File :RJV609
IC File :RJV602

Column Spec :RTX502.2 ID :0.32MM
IC_Ending DateTime :10/31/11 14:36
HPChem Method :V001J31
Date_Time :10/31/11 16:07

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	2078216	1	1	7.785	7.777	0				
	2	Chlorotrifluoroethylene	10.337	3.4	334837	0.161	0.156	2.118	2.108	12.57				
	3	Dichlorodifluoromethane	8.998	-10.0	679552	0.327	0.363	2.163	2.158	7.72				
	4	Chloromethane	9.368	-6.3	847031	0.408	0.435	2.385	2.377	4.03				
	5	Vinyl chloride	9.570	-4.3	917897	0.442	0.461	2.547	2.541	7.36				
	6	2-Chloro-1,1,1-trifluoroethane	10.198	2.0	717414	0.345	0.338	2.666	2.655	11.52				
	7	Bromomethane	10.172	1.7	483272	0.233	0.229	2.917	2.900	14.94				
	8	Chloroethane	9.111	-8.9	534262	0.257	0.282	3.036	3.022	14.40				
	9	Dichlorofluoromethane	9.679	-3.2	1432022	0.689	0.712	3.317	3.309	7.42				
	10	Trichlorofluoromethane	8.656	-13.4	772218	0.372	0.429	3.317	3.313	5.60				
5	11	Acrolein	50.524	1.0	118784	0.011	0.011	3.805	3.801	12.29				
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	9.899	-1.0	450197	0.217	0.219	3.983	3.976	2.60				
5	13	Acetone	48.877	-2.2	445516	0.043	0.044	3.968	3.962	12.62				
	14	1,1-Dichloroethene	9.655	-3.5	1320508	0.635	0.658	3.938	3.927	5.45				
	15	Iodomethane	10.262	2.6	1020558	0.491	0.479	4.116	4.112	2.89				
	16	Carbon disulfide	10.377	3.8	2316232	1.115	1.074	4.219	4.208	10.99				
	17	Methylene chloride	9.852	-1.5	1033145	0.497	0.505	4.515	4.512	6.57				
5	18	tert-Butyl alcohol	49.112	-1.8	120463	0.012	0.012	4.634	4.633	10.38				
5	19	Acrylonitrile	52.562	5.1	587908	0.057	0.054	4.781	4.777	4.68				
	20	tert-Butyl methyl ether (MTBE)	10.014	0.1	1225298	0.590	0.589	4.841	4.837	4.92				
	21	trans-1,2-Dichloroethene	9.877	-1.2	1370568	0.659	0.668	4.856	4.851	3.56				
	22	Vinyl acetate	10.093	0.9	998377	0.480	0.476	5.359	5.357	12.74				
	23	1,1-Dichloroethane	10.049	0.5	1579616	0.760	0.756	5.373	5.371	4.05				
	24	Isopropyl ether (DIPE)	10.337	3.4	2886019	1.389	1.343	5.418	5.414	3.23				
5	25	2-Butanol												
	26	tert-Butyl ethyl ether (ETBE)	9.749	-2.5	1957252	0.942	0.966	5.862	5.860	4.44				
5	27	2-Butanone	52.537	5.1	771595	0.074	0.071	6.039	6.042	5.82				
	28	cis-1,2-Dichloroethene	10.308	3.1	812742	0.391	0.379	6.084	6.080	2.86				
	29	2,2-Dichloropropane	9.670	-3.3	1080913	0.520	0.538	6.098	6.099	7.77				
	30	Bromochloromethane	9.920	-0.8	629180	0.303	0.305	6.379	6.378	3.06				
	31	Chloroform	9.731	-2.7	1287132	0.619	0.636	6.513	6.505	3.47				
	32	Dibromofluoromethane	9.632	-3.7	547922	0.264	0.274	6.720	6.709	4.90				
	33	1,1,1-Trichloroethane	9.429	-5.7	990643	0.477	0.506	6.749	6.746	3.15				
	34	tert-Amyl methyl ether (TAME)	10.176	1.8	300183	0.144	0.142	7.386	7.381	5.46				
	35	1,2-Dichloroethane-d4	8.932	-10.7	542346	0.261	0.292	7.179	7.165	6.16				
	36	CHLOROBENZENE-D5	10.000	0	1765489	1	1	12.328	12.321	0				
	37	1,1-Dichloropropene	9.645	-3.5	354243	0.201	0.208	6.957	6.949	4.86				
	38	Carbon tetrachloride	9.552	-4.5	840066	0.476	0.498	6.957	6.955	3.89				
	39	Benzene	10.189	1.9	3178606	1.800	1.767	7.223	7.208	3.77				
	40	1,2-Dichloroethane	9.335	-6.6	722336	0.409	0.438	7.282	7.270	4.24				
	41	Trichloroethene	10.044	0.4	784620	0.444	0.442	8.125	8.120	4.13				
	42	1,2-Dichloropropane	10.004	0.0	810670	0.459	0.459	8.495	8.489	3.08				
20	43	1,4-Dioxane												
	44	Dibromomethane	10.144	1.4	266983	0.151	0.149	8.614	8.612	2.57				
	45	Bromodichloromethane	9.799	-2.0	885837	0.502	0.512	8.865	8.863	3.82				
	46	2-Chloroethyl vinyl ether	10.396	4.0	217043	0.123	0.118	9.280	9.272	12.09				
	47	cis-1,3-Dichloropropene	10.050	0.5	1089123	0.617	0.614	9.531	9.525	3.83				
5	48	4-Methyl-2-pentanone	51.482	3.0	1827746	0.207	0.201	9.738	9.735	7.38				
	49	Toluene-d8	9.543	-4.6	2330918	1.320	1.383	9.960	9.952	6.52				
	50	Toluene	10.051	0.5	3111412	1.762	1.753	10.064	10.060	3.65				
	51	Ethyl methacrylate	10.418	4.2	606348	0.343	0.330	10.508	10.504	11.06				
	52	trans-1,3-Dichloropropene	10.018	0.2	803608	0.455	0.454	10.419	10.417	5.28				
	53	1,1,2-Trichloroethane	9.987	-0.1	380807	0.216	0.216	10.744	10.744	4.93				
	54	Tetrachloroethene	9.960	-0.4	626428	0.355	0.356	10.922	10.907	2.94				
	55	1,3-Dichloropropane	10.067	0.7	798400	0.452	0.449	11.026	11.016	3.40				
5	56	2-Hexanone	50.570	1.1	1173148	0.133	0.131	11.085	11.086	9.50				
	57	Dibromochloromethane	10.095	1.0	457958	0.259	0.257	11.395	11.382	6.52				
	58	1,2-Dibromoethane	10.098	1.0	365541	0.207	0.205	11.603	11.595	5.44				
	59	1-Chlorohexane	9.938	-0.6	1272480	0.721	0.725	12.342	12.336	4.61				

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60	Chlorobenzene	10.114	1.1	1802805	1.021	1.010	12.372	12.364	3.12				
61	1,1,1,2-Tetrachloroethane	10.026	0.3	591491	0.335	0.334	12.490	12.490	4.52				
62	Ethylbenzene	10.043	0.4	3617689	2.049	2.040	12.505	12.502	3.49				
2 63	m-Xylene & p-Xylene	19.918	-0.4	5414517	1.533	1.540	12.683	12.681	3.23				
64	o-Xylene	9.951	-0.5	2662138	1.508	1.515	13.186	13.184	3.19				
65	Styrene	10.684	6.8	2044347	1.158	1.084	13.215	13.213	9.03				
66	1,2-DICHLOROBENZENE-D4	10.000	0	676620	1	1	15.420	15.415	0				
67	Bromoform	9.880	-1.2	220603	0.326	0.330	13.452	13.443	7.98				
68	Isopropylbenzene	9.790	-2.1	3289549	4.862	4.966	13.644	13.638	4.25				
69	4-Bromofluorobenzene	8.942	-10.6	745615	1.102	1.232	13.852	13.845	8.67				
70	1,1,2,2-Tetrachloroethane	9.932	-0.7	456807	0.675	0.680	13.985	13.983	2.70				
71	Bromobenzene	9.698	-3.0	672008	0.993	1.024	14.014	14.007	7.74				
72	trans-1,4-Dichloro-2-butene	10.164	1.6	119681	0.177	0.174	14.029	14.027	8.64				
73	1,2,3-Trichloropropane	9.577	-4.2	112697	0.167	0.174	14.059	14.054	8.18				
74	n-Propylbenzene	9.990	-0.1	4328062	6.397	6.403	14.118	14.113	2.04				
75	1,3,5-Trimethylbenzene	9.868	-1.3	2743150	4.054	4.108	14.310	14.307	1.64				
76	2-Chlorotoluene	9.609	-3.9	2298732	3.397	3.536	14.222	14.215	4.91				
77	4-Chlorotoluene	9.834	-1.7	2594676	3.835	3.899	14.355	14.348	3.11				
78	tert-Butylbenzene	9.925	-0.7	617877	0.913	0.920	14.651	14.644	1.93				
79	1,2,4-Trimethylbenzene	10.070	0.7	2655963	3.925	3.898	14.710	14.703	7.18				
80	sec-Butylbenzene	10.152	1.5	3586389	5.300	5.221	14.873	14.869	3.80				
81	p-Isopropyltoluene	10.463	4.6	2866222	4.236	4.048	15.021	15.019	9.79				
82	1,3-Dichlorobenzene	9.960	-0.4	1322269	1.954	1.962	15.006	14.995	1.87				
83	1,4-Dichlorobenzene	9.877	-1.2	1244915	1.840	1.863	15.094	15.095	3.02				
84	n-Butylbenzene	10.295	3.0	2726374	4.029	3.914	15.405	15.402	7.03				
85	1,2-Dichlorobenzene	9.923	-0.8	1048344	1.549	1.561	15.435	15.433	2.00				
86	1,2-Dibromo-3-chloropropane	9.989	-0.1	52967	0.078	0.078	16.175	16.171	14.04				
87	1,2,4-Trichlorobenzene	9.584	-4.2	510233	0.754	0.697	16.959	16.957	15.05	-0.0128	0.8002		0.9994
88	Hexachlorobutadiene	10.265	2.7	385907	0.570	0.556	17.092	17.086	7.87				
89	Naphthalene	10.703	7.0	627450	0.927	0.866	17.240	17.236	14.11				
90	1,2,3-Trichlorobenzene	10.574	5.7	367640	0.543	0.514	17.462	17.455	14.54				

Spike Amount = Nominal Amount * M

5a
M1411

2916

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKV026
Instrument ID: TQ01
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11J314
BFB Injection Date : 11/02/11
BFB Injection Time : 06:56
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.28
75	30.0 - 60.0% of mass 95	52.05
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.87
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	75.89
175	5.0 - 9.0% of mass 174	5.95(7.8)1
176	95.0 - 101.0% of mass 174	75.28(99.2)1
177	5.0 - 9.0% of mass 176	5.52(7.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV001J3103	RKV027	11/02/11	07:22
2	MBLK1W	V001K02B	RKV031	11/02/11	09:30
3	LCS1W	V001K02L	RKV028	11/02/11	07:57
4	LCD1W	V001K02C	RKV029	11/02/11	08:28
5	MW-70-11-72	J314-01	RKV038	11/02/11	13:07
6	MW-70-10-73	J314-02	RKV039	11/02/11	13:38
7	MW-70-POC03-74	J314-03	RKV040	11/02/11	14:09
8	MW-70-36-75	J314-04	RKV041	11/02/11	14:40
9	IR-70-TB-76	J314-05	RKV042	11/02/11	15:11

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RJV602
Instrument ID: T001
GC Column: RTX502.2 ID: 0.32mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11J314
Date Analyzed: 10/31/11
Time Analyzed: 12:33
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1719891	7.78	1480141	12.32	584394	15.41
	UPPER LIMIT	3439782	8.28	2960282	12.82	1168788	15.91
	LOWER LIMIT	859946	7.28	740071	11.82	292197	14.91
	SAMPLE ID						
1	VSTD010	1601888	7.77	1364522	12.31	531296	15.41
2	MBLK1W	1897779	7.77	1573007	12.31	516734	15.40
3	LCS1W	1814407	7.76	1562790	12.31	622368	15.41
4	LCD1W	1960411	7.77	1702381	12.31	662531	15.40
5	MW-70-11-72	1509115	7.77	1297718	12.31	419062	15.40
6	MW-70-10-73	1490187	7.77	1269462	12.31	410152	15.41
7	MW-70-POC03-74	1512805	7.77	1304285	12.31	432501	15.41
8	MW-70-36-75	1496002	7.77	1287072	12.31	416897	15.42
9	IR-70-T8-76	1511822	7.76	1289201	12.31	416870	15.41

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKV027.D Vial: 2
Acq On : 2 Nov 2011 7:22 am Operator: MW
Sample : CVO01J3103 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	93	0.00
2	T,M	Chlorotrifluoroethylene	10.000	0.000	100.0#	0	-2.11#
3	T,M	Dichlorodifluoromethane	10.000	9.063	9.4	76	0.00
4	P,T,M	Chloromethane	10.000	11.194	-11.9	95	0.00
5	C,T,M	Vinyl chloride	10.000	11.243	-12.4	94	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	0.000	100.0#	0	-2.66#
7	T,M	Bromomethane	10.000	12.020	-20.2#	97	0.00
8	T,M	Chloroethane	10.000	10.730	-7.3	99	0.00
9	T,M	Dichlorofluoromethane	10.000	10.266	-2.7	97	0.00
10	T,M	Trichlorofluoromethane	10.000	10.625	-6.3	92	0.00
11	T,M	Acrolein	50.000	55.275	-10.5	110	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	10.176	-1.8	96	0.00
13	T,M	Acetone	50.000	57.210	-14.4	101	0.00
14	C,T,M	1,1-Dichloroethene	10.000	9.751	2.5	89	0.00
15	T,M	Iodomethane	10.000	10.270	-2.7	96	0.00
16	T,M	Carbon disulfide	10.000	10.834	-8.3	109	0.00
17	T,M	Methylene chloride	10.000	9.846	1.5	96	0.00
18	T,M	tert-Butyl alcohol	50.000	50.538	-1.1	91	0.00
19	T,M	Acrylonitrile	50.000	51.523	-3.0	96	0.00
20	T,M	tert-Butyl methyl ether (MT	10.000	10.212	-2.1	94	0.00
21	T,M	trans-1,2-Dichloroethene	10.000	10.093	-0.9	93	0.00
22	T,M	Vinyl acetate	10.000	9.667	3.3	82	0.00
23	P,T,M	1,1-Dichloroethane	10.000	10.235	-2.3	97	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	9.899	1.0	94	0.00
25	T,M	2-Butanol	-1.000	0.000	0.0	94	0.00
26	T,M	tert-Butyl ethyl ether (ETB	10.000	10.051	-0.5	93	0.00
27	T,M	2-Butanone	50.000	52.654	-5.3	95	0.00
28	T,M	cis-1,2-Dichloroethene	10.000	10.265	-2.7	97	0.00
29	T,M	2,2-Dichloropropane	10.000	11.202	-12.0	105	0.00
30	T,M	Bromochloromethane	10.000	10.097	-1.0	93	0.00
31	C,T,M	Chloroform	10.000	10.207	-2.1	92	0.00
32	S	Dibromofluoromethane	10.000	10.076	-0.8	93	0.00
33	T,M	1,1,1-Trichloroethane	10.000	10.687	-6.9	98	0.00
34	T,M	tert-Amyl methyl ether (TAM	10.000	10.364	-3.6	93	0.00
35	S	1,2-Dichloroethane-d4	10.000	9.912	0.9	91	0.00
36	I	CHLOROBENZENE-D5	10.000	10.000	0.0	92	0.00
37	T,M	1,1-Dichloropropene	10.000	10.119	-1.2	96	0.00
38	T,M	Carbon tetrachloride	10.000	10.622	-6.2	95	0.00
39	T,M	Benzene	10.000	10.029	-0.3	95	0.00
40	T,M	1,2-Dichloroethane	10.000	10.141	-1.4	92	0.00

(#) = Out of Range

2022

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKV027.D Vial: 2
Acq On : 2 Nov 2011 7:22 am Operator: MW
Sample : CV001J3103 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	10.000	10.021	-0.2	94	0.00
42	C,T,M	1,2-Dichloropropane	10.000	10.010	-0.1	95	0.00
43	T,M	1,4-Dioxane	-1.000	0.000	0.0	98	0.00
44	T,M	Dibromomethane	10.000	10.083	-0.8	92	0.00
45	T,M	Bromodichloromethane	10.000	10.212	-2.1	93	0.00
46	T,M	2-Chloroethyl vinyl ether	10.000	9.596	4.0	86	0.00
47	T,M	cis-1,3-Dichloropropene	10.000	10.484	-4.8	97	0.00
48	T,M	4-Methyl-2-pentanone	50.000	51.802	-3.6	94	0.00
49	S	Toluene-d8	10.000	10.057	-0.6	96	0.00
50	C,T,M	Toluene	10.000	10.124	-1.2	96	0.00
51	T,M	Ethyl methacrylate	10.000	10.001	-0.0	88	0.00
52	T,M	trans-1,3-Dichloropropene	10.000	10.684	-6.8	96	0.00
53	T,M	1,1,2-Trichloroethane	10.000	10.146	-1.5	96	0.00
54	T,M	Tetrachloroethene	10.000	10.385	-3.8	96	0.00
55	T,M	1,3-Dichloropropane	10.000	10.217	-2.2	93	0.00
56	T,M	2-Hexanone	50.000	51.632	-3.3	92	0.00
57	T,M	Dibromochloromethane	10.000	10.612	-6.1	93	0.00
58	T,M	1,2-Dibromoethane	10.000	10.283	-2.8	93	0.00
59	T,M	1-Chlorohexane	10.000	10.380	-3.8	97	0.00
60	P,M	Chlorobenzene	10.000	10.320	-3.2	93	0.00
61	T,M	1,1,1,2-Tetrachloroethane	10.000	10.387	-3.9	93	0.00
62	C,T,M	Ethylbenzene	10.000	10.322	-3.2	95	0.00
63	T,M	m-Xylene & p-Xylene	20.000	20.948	-4.7	94	0.00
64	T,M	o-Xylene	10.000	10.511	-5.1	95	0.00
65	T,M	Styrene	10.000	10.708	-7.1	93	0.00
66	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	91	0.00
67	P,T,M	Bromoform	10.000	10.181	-1.8	93	0.00
68	T,M	Isopropylbenzene	10.000	10.159	-1.6	94	0.00
69	S	4-Bromofluorobenzene	10.000	9.548	4.5	94	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.197	-2.0	95	0.00
71	T,M	Bromobenzene	10.000	9.842	1.6	93	0.00
72	T,M	trans-1,4-Dichloro-2-butene	10.000	10.697	-7.0	95	0.00
73	T,M	1,2,3-Trichloropropane	10.000	9.781	2.2	94	0.00
74	T,M	n-Propylbenzene	10.000	10.266	-2.7	94	0.00
75	T,M	1,3,5-Trimethylbenzene	10.000	10.249	-2.5	93	0.00
76	T,M	2-Chlorotoluene	10.000	10.065	-0.6	95	0.00
77	T,M	4-Chlorotoluene	10.000	10.041	-0.4	92	0.00
78	T,M	tert-Butylbenzene	10.000	10.285	-2.9	94	0.00
79	T,M	1,2,4-Trimethylbenzene	10.000	10.369	-3.7	91	0.00
80	T,M	sec-Butylbenzene	10.000	10.651	-6.5	93	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKV027.D Vial: 2
Acq On : 2 Nov 2011 7:22 am Operator: MW
Sample : CVO01J3103 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	10.000	11.084	-10.8	93	0.00
82	T,M	1,3-Dichlorobenzene	10.000	10.358	-3.6	93	0.00
83	T,M	1,4-Dichlorobenzene	10.000	10.231	-2.3	92	0.00
84	T,M	n-Butylbenzene	10.000	11.021	-10.2	94	0.00
85	T,M	1,2-Dichlorobenzene	10.000	10.259	-2.6	92	0.00
86	T,M	1,2-Dibromo-3-chloropropane	10.000	10.498	-5.0	92	0.00
87	T,M	1,2,4-Trichlorobenzene	10.000	10.127	-1.3	92	0.00
88	T,M	Hexachlorobutadiene	10.000	11.391	-13.9	96	0.00
89	T,M	Naphthalene	10.000	10.951	-9.5	89	0.00
90	T,M	1,2,3-Trichlorobenzene	10.000	11.180	-11.8	90	0.00

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKV027.D Vial: 2
Acq On : 2 Nov 2011 7:22 am Operator: MW
Sample : CV001J3103 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	93	0.00
2	T,M	Chlorotrifluoroethylene	0.156	0.000	100.0#	0#	-2.11#
3	T,M	Dichlorodifluoromethane	0.363	0.329	9.4	76	0.00
4	P,T,M	Chloromethane	0.435	0.487	-12.0	95	0.00
5	C,T,M	Vinyl chloride	0.461	0.519	-12.6	94	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.338	0.000	100.0#	0#	-2.66#
7	T,M	Bromomethane	0.229	0.275	-20.1#	97	0.00
8	T,M	Chloroethane	0.282	0.303	-7.4	99	0.00
9	T,M	Dichlorofluoromethane	0.712	0.731	-2.7	97	0.00
10	T,M	Trichlorofluoromethane	0.429	0.456	-6.3	92	0.00
11	T,M	Acrolein	0.011	0.013	-18.2	110	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.219	0.223	-1.8	96	0.00
13	T,M	Acetone	0.044	0.050	-13.6	101	0.00
14	C,T,M	1,1-Dichloroethene	0.658	0.642	2.4	89	0.00
15	T,M	Iodomethane	0.479	0.491	-2.5	96	0.00
16	T,M	Carbon disulfide	1.074	1.164	-8.4	109	0.00
17	T,M	Methylene chloride	0.505	0.497	1.6	96	0.00
18	T,M	tert-Butyl alcohol	0.012	0.012	0.0	91	0.00
19	T,M	Acrylonitrile	0.054	0.055	-1.9	96	0.00
20	T,M	tert-Butyl methyl ether (MT	0.589	0.601	-2.0	94	0.00
21	T,M	trans-1,2-Dichloroethene	0.668	0.674	-0.9	93	0.00
22	T,M	Vinyl acetate	0.476	0.460	3.4	82	0.00
23	P,T,M	1,1-Dichloroethane	0.756	0.774	-2.4	97	0.00
24	T,M	Isopropyl ether (DIPE)	1.343	1.330	1.0	94	0.00
25	T,M	2-Butanol	0.000	0.000	0.0	94	0.00
26	T,M	tert-Butyl ethyl ether (ETB	0.966	0.971	-0.5	93	0.00
27	T,M	2-Butanone	0.071	0.074	-4.2	95	0.00
28	T,M	cis-1,2-Dichloroethene	0.379	0.389	-2.6	97	0.00
29	T,M	2,2-Dichloropropane	0.538	0.602	-11.9	105	0.00
30	T,M	Bromochloromethane	0.305	0.308	-1.0	93	0.00
31	C,T,M	Chloroform	0.636	0.650	-2.2	92	0.00
32	S	Dibromofluoromethane	0.274	0.276	-0.7	93	0.00
33	T,M	1,1,1-Trichloroethane	0.506	0.540	-6.7	98	0.00
34	T,M	tert-Amyl methyl ether (TAM	0.142	0.147	-3.5	93	0.00
35	S	1,2-Dichloroethane-d4	0.292	0.290	0.7	91	0.00
36	I	CHLOROBENZENE-D5	1.000	1.000	0.0	92	0.00
37	T,M	1,1-Dichloropropene	0.208	0.211	-1.4	96	0.00
38	T,M	Carbon tetrachloride	0.498	0.529	-6.2	95	0.00
39	T,M	Benzene	1.767	1.772	-0.3	95	0.00
40	T,M	1,2-Dichloroethane	0.438	0.444	-1.4	92	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKV027.D Vial: 2
Acq On : 2 Nov 2011 7:22 am Operator: MW
Sample : CVO01J3103 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	0.442	0.443	-0.2	94	0.00
42	C,T,M	1,2-Dichloropropane	0.459	0.459	0.0	95	0.00
43	T,M	1,4-Dioxane	0.000	0.000	0.0	98	0.00
44	T,M	Dibromomethane	0.149	0.150	-0.7	92	0.00
45	T,M	Bromodichloromethane	0.512	0.523	-2.1	93	0.00
46	T,M	2-Chloroethyl vinyl ether	0.118	0.113	4.2	86	0.00
47	T,M	cis-1,3-Dichloropropene	0.614	0.643	-4.7	97	0.00
48	T,M	4-Methyl-2-pentanone	0.201	0.208	-3.5	94	0.00
49	S	Toluene-d8	1.383	1.391	-0.6	96	0.00
50	C,T,M	Toluene	1.753	1.775	-1.3	96	0.00
51	T,M	Ethyl methacrylate	0.330	0.330	0.0	88	0.00
52	T,M	trans-1,3-Dichloropropene	0.454	0.485	-6.8	96	0.00
53	T,M	1,1,2-Trichloroethane	0.216	0.219	-1.4	96	0.00
54	T,M	Tetrachloroethene	0.356	0.370	-3.9	96	0.00
55	T,M	1,3-Dichloropropane	0.449	0.459	-2.2	93	0.00
56	T,M	2-Hexanone	0.131	0.136	-3.8	92	0.00
57	T,M	Dibromochloromethane	0.257	0.273	-6.2	93	0.00
58	T,M	1,2-Dibromoethane	0.205	0.211	-2.9	93	0.00
59	T,M	1-Chlorohexane	0.725	0.753	-3.9	97	0.00
60	P,M	Chlorobenzene	1.010	1.042	-3.2	93	0.00
61	T,M	1,1,1,2-Tetrachloroethane	0.334	0.347	-3.9	93	0.00
62	C,T,M	Ethylbenzene	2.040	2.106	-3.2	95	0.00
63	T,M	m-Xylene & p-Xylene	1.540	1.613	-4.7	94	0.00
64	T,M	o-Xylene	1.515	1.593	-5.1	95	0.00
65	T,M	Styrene	1.084	1.161	-7.1	93	0.00
66	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	91	0.00
67	P,T,M	Bromoform	0.330	0.336	-1.8	93	0.00
68	T,M	Isopropylbenzene	4.966	5.045	-1.6	94	0.00
69	S	4-Bromofluorobenzene	1.232	1.177	4.5	94	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	0.680	0.693	-1.9	95	0.00
71	T,M	Bromobenzene	1.024	1.008	1.6	93	0.00
72	T,M	trans-1,4-Dichloro-2-butene	0.174	0.186	-6.9	95	0.00
73	T,M	1,2,3-Trichloropropane	0.174	0.170	2.3	94	0.00
74	T,M	n-Propylbenzene	6.403	6.573	-2.7	94	0.00
75	T,M	1,3,5-Trimethylbenzene	4.108	4.211	-2.5	93	0.00
76	T,M	2-Chlorotoluene	3.536	3.559	-0.7	95	0.00
77	T,M	4-Chlorotoluene	3.899	3.915	-0.4	92	0.00
78	T,M	tert-Butylbenzene	0.920	0.946	-2.8	94	0.00
79	T,M	1,2,4-Trimethylbenzene	3.898	4.042	-3.7	91	0.00
80	T,M	sec-Butylbenzene	5.221	5.561	-6.5	93	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKV027.D Vial: 2
Acq On : 2 Nov 2011 7:22 am Operator: MW
Sample : CVO01J3103 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	4.048	4.487	-10.8	93	0.00
82	T,M	1,3-Dichlorobenzene	1.962	2.032	-3.6	93	0.00
83	T,M	1,4-Dichlorobenzene	1.863	1.906	-2.3	92	0.00
84	T,M	n-Butylbenzene	3.914	4.313	-10.2	94	0.00
85	T,M	1,2-Dichlorobenzene	1.561	1.602	-2.6	92	0.00
86	T,M	1,2-Dibromo-3-chloropropane	0.078	0.082	-5.1	92	0.00
87	T,M	1,2,4-Trichlorobenzene	0.697	0.798	-14.5	92	0.00
88	T,M	Hexachlorobutadiene	0.556	0.633	-13.8	96	0.00
89	T,M	Naphthalene	0.866	0.949	-9.6	89	0.00
90	T,M	1,2,3-Trichlorobenzene	0.514	0.574	-11.7	90	0.00

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☐ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 10/31/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A01 -038

BATCH V001J316

Sample Prep. ID	Data File Name	Lab Sample ID	* Sample Amount A/B/C	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RJU596	BFB01J29	1 ml	NA	NA	NA	NA	9:18am
02	597	V001J311	.01/.1/1.5 ml					0.3/1.5/1.5 ppb
03	598	2	.01/.1/.5 ml					0.5/2.5/2.5 ppb
04	599	3	.1/.5/1.5 ml					1.0/5.0/5.0 ppb
05	600	4	.2/1/1 ml					2.0/10/10 ppb
06	601	5	.5/2.5/2.5 ml					5.0/25/25 ppb
07	602	6	1/5/5 ml					10/50/50 ppb
08	603	7	2/10/10 ml					20/100/100 ppb
09	604	8	3/15/15 ml					30/150/150 ppb
10	605	9	5/25/25 ml					50/250/250 ppb
11	606	10	10/50/50 ml					100/500/500 ppb
12	607	IS/SS	25 ml					
13	608	V001J29B	↓					
14	609	V001J311	1/5/5 ml					10/50/50 ppb
15	610	RINSE	25 ml					4:51pm
16								
17								
18								
19								
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21								
22								
23								
24								
25								
26								
27								
28								
29								
30			NW 11/1/11					

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (uL)	Conc. (mg/L)
DCC (Gases)	SV-17-96-3	*	
DCC CF_2	-92-3		
DCC 8260	-86-2		
DCC 8270/8270 Fuels	-98-1 -100-3		1/4/1000
BFB	-45-3	1	
IS/SURR.	-99-1	1	
ICV/LCS (Gases)	-97-1	1	
ICV/LCS CF_2	-97-2	1	
ICV/LCS 8260	-99-2	5	
ICV/LCS 8270/8270 Fuels	-89-2	5	
ICV/LCS TPH-GRO/DRO	SV-12-20-2 -20-2	0.5 0.5	
IS SS	SV-17-91-1 -91-2	1 1	20 ppm
DATA FILE FOLDER	1131		

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO01	

Comments: *please refer to sample amount
A:- SS, gases, CF_2, Fuels
B:- 8260
C:- 8270/8270 Fuels
NW 11/1/11

Analyzed By: NW
Date Disposed: 11/1/11
Disposed By: NW

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☐ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/2/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A01 -038

BATCH CV001J3,103

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RKV026	BFB01K02	1mL					6:56am
02		27	CV001J3103	1.5mL					
03		28	V001K02L						
04		29	C						
05		30	RINSE	25mL					
06		31	V001K02B						
07		32	11J302-01		1.0	/	/		
08		33	-02			/	/		
09		34	-03			/	/		
10		35	-04			/	/		
11		36	-05			/	/		
12		37	-06			/	/		
13		38	11J314-01			/	/		
14		39	-02			/	/		
15		40	-03			/	/		
16		41	-04			/	/		
17		42	-05			/	/		
18		43	11K004-01			/	/		
19		44	-02			/	/		
20		45	-03			/	/		
21		46	-04			/	/		
22		47	-05			/	/		
23		48	-06			/	/		6:17pm
24		49	RINSE						
25		50							
26		51							
27									
28									
29									
30			MW 11/2/11						

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV117-96-3	1	
DCC	-92-3	1	
DCC	-86-2	5	
DCC	-98-1	5	
BFB	-45-3	1	
IS/SURR.	-99-1	1	50/250
ICV/LCS	-97-1	1	
ICV/LCS	-97-2	1	
ICV/LCS	-99-2	5	
ICV/LCS	-89-2	5	

DATA FILE FOLDER	11K02
Electronic Data Archival	
Location	Date
HPCHEM_VOA/TO01	

Comments:

Analyzed By: MW

Date Disposed: 11/3/11

Disposed By: MW

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CLIENT: **INSIGHT EEC, INC.**

PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11K004**

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GC-SVOA	**	5000 –
HPLC	**	6000 –
METALS	**	7000 –
WET	**	8000 –
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 11-18-2011
EMAX Batch No.: 11K004

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 11/01/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW-70-23-77	K004-01	11/01/11	WATER	VOLATILE ORGANICS BY GC/MS
MW-70-POC02-78	K004-02	11/01/11	WATER	VOLATILE ORGANICS BY GC/MS
MW-70-POC04-79	K004-03	11/01/11	WATER	VOLATILE ORGANICS BY GC/MS
MW-70-21-80	K004-04	11/01/11	WATER	VOLATILE ORGANICS BY GC/MS
MW-70-16-81	K004-05	11/01/11	WATER	VOLATILE ORGANICS BY GC/MS
IR-70-TB-82	K004-06	11/01/11	WATER	VOLATILE ORGANICS BY GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

for

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 4-77101
SAMPLE STORAGE
EMAX CONTROL NO. * 11K004
PROJECT CODE:

CLIENT: INSIGHT EEC INC.
PROJECT: IR SITE 70, NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: (714) 678 6700 FAX: (714) 678 6711 EMAIL: NWEINBERGER@IEECI.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT EEC INC.
ADDRESS: 3010 E. MIRALOMA AVE
ANAHEIM CA 92806
EMAX PM: YE MINT

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: VOCS (8260B)

TAT:
- ☐ Rush ____hrs.
- ☐ Rush ____days
- ☐ 7 days
- ☐ 14 days
- ☐ 21 days
- ☐ 30 days
- ☐ ____days
- ☒ STANDARD

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	PRESERVATIVE CODE HCL								COMMENTS
1	MW-70-23-77	SITE 70	11/1/11	0840	3	40 ml	VOA	GW	III	X								
2	MW-70-POC02-78	SITE 70	11/1/11	0950	3	40 ml	VOA	GW	III	X								
3	MW-70-POC04-79	SITE 70	11/1/11	1113	3	40 ml	VOA	GW	III	X								
4	MW-70-21-80	SITE 70	11/1/11	1156	3	40 ml	VOA	GW	III	X								
5	MW-70-16-81	SITE 70	11/1/11		3	40 ml	VOA	GW	III	X								
6																		
7	IR-70-TB-82	SITE 70	11/1/11	1420	2	40 ml	VOA	GW	III	X								TRIP BLANK
8																		
9																		
0																		

Instructions

Cooler #	Temp. (°C)	Sample #s
1	2.8	

SAMPLER

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-1-11	14:40	Keith Stout
Keith Stout	11-1-11	1504	[signature]

COURIER/AIRBILL

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11K004
☑ EMAX Courier	SEE COC	Recepient J. LUNA
☐ Client Delivery		Date 11-1-11
☐ Third Party		Time 1504

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☑ Preservative (if any)	☑ TAT
Safety Issues	☑ None	☐ High concentrations expected	☐ Superfund Site samples	☐ Rad screening required	

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☑ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	A ☑ Cooler 1 2.8 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C
Thermometer:	*A - S/N 101541371*	*B - S/N 101541382*			

Comments: ☐ **PM was informed on non-compliant coolers immediately.**

Note: **pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.**

DISCREPANCIES

LSID	LSCID	Sample Label ID/~~COC ID~~	Discrepancy Code	Corrective Action Code
05		1415	D1	R5

REVIEWS

Sample Labeling [signature] LP Date 11/1/11

SRF [signature] Date 11-1-11

PM LP for Ye Date 11/2/11

LEGEND

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4		E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	Login collection time
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	1415.
B3	Sample ID is inconsistent in COC vis-à-vis label	F2	Bubble is> 6mm		R6, Inform client
B4		G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1			
C4		H2			

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11K004

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K004

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of six (6) water samples were received on 11/01/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for VO01K02L/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K004
Instrument ID : T-001

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V001K02B	1	NA	11/02/1109:30	11/02/1109:30	RKV031	RJV602	V001K02	Method Blank
LCS1W	V001K02L	1	NA	11/02/1107:57	11/02/1107:57	RKV028	RJV602	V001K02	Lab Control Sample (LCS)
LCD1W	V001K02C	1	NA	11/02/1108:28	11/02/1108:28	RKV029	RJV602	V001K02	LCS Duplicate
MW-70-23-77	K004-01	1	NA	11/02/1115:42	11/02/1115:42	RKV043	RJV602	V001K02	Field Sample
MW-70-POC02-78	K004-02	1	NA	11/02/1116:13	11/02/1116:13	RKV044	RJV602	V001K02	Field Sample
MW-70-POC04-79	K004-03	1	NA	11/02/1116:44	11/02/1116:44	RKV045	RJV602	V001K02	Field Sample
MW-70-21-80	K004-04	1	NA	11/02/1117:15	11/02/1117:15	RKV046	RJV602	V001K02	Field Sample
MW-70-16-81	K004-05	1	NA	11/02/1117:46	11/02/1117:46	RKV047	RJV602	V001K02	Field Sample
IR-70-TB-82	K004-06	1	NA	11/02/1118:17	11/02/1118:17	RKV048	RJV602	V001K02	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/01/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/01/11
Batch No.	: 11K004	Date Extracted:	11/02/11 15:42
Sample ID:	MW-70-23-77	Date Analyzed:	11/02/11 15:42
Lab Samp ID:	K004-01	Dilution Factor:	1
Lab File ID:	RKV043	Matrix	: WATER
Ext Btch ID:	V001K02	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.4	10.00	114	70-140
4-BROMOFLUOROBENZENE	10.7	10.00	107	70-130
TOLUENE-D8	9.86	10.00	98.6	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/01/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/01/11
Batch No. : 11K004	Date Extracted: 11/02/11 16:13
Sample ID: MW-70-POC02-78	Date Analyzed: 11/02/11 16:13
Lab Samp ID: K004-02	Dilution Factor: 1
Lab File ID: RKV044	Matrix : WATER
Ext Btch ID: V001K02	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	0.53J	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	0.24J	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.2	10.00	112	70-140
4-BROMOFLUOROBENZENE	10.3	10.00	103	70-130
TOLUENE-D8	9.86	10.00	98.6	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/01/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/01/11
Batch No.	: 11K004	Date Extracted:	11/02/11 16:44
Sample ID:	MW-70-POC04-79	Date Analyzed:	11/02/11 16:44
Lab Samp ID:	K004-03	Dilution Factor:	1
Lab File ID:	RKV045	Matrix	: WATER
Ext Btch ID:	V001K02	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	0.53J	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	2.0	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.7	10.00	117	70-140
4-BROMOFLUOROBENZENE	10.4	10.00	104	70-130
TOLUENE-D8	9.84	10.00	98.4	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/01/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/01/11
Batch No.	: 11K004	Date Extracted:	11/02/11 17:15
Sample ID:	MW-70-21-80	Date Analyzed:	11/02/11 17:15
Lab Samp ID:	K004-04	Dilution Factor:	1
Lab File ID:	RKV046	Matrix	: WATER
Ext Btch ID:	V001K02	% Moisture	: NA
Calib. Ref.:	RJV6D2	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	0.51J	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.8	10.00	118	70-140
4-BROMOFLUOROBENZENE	10.5	10.00	105	70-130
TOLUENE-D8	9.73	10.00	97.3	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/01/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/01/11
Batch No. : 11K004	Date Extracted: 11/02/11 17:46
Sample ID: MW-70-16-81	Date Analyzed: 11/02/11 17:46
Lab Samp ID: K004-05	Dilution Factor: 1
Lab File ID: RKV047	Matrix : WATER
Ext Btch ID: V001K02	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	0.52J	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.4	10.00	114	70-140
4-BROMOFLUOROBENZENE	10.6	10.00	106	70-130
TOLUENE-D8	9.83	10.00	98.3	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/01/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/01/11
Batch No. : 11K004	Date Extracted: 11/02/11 18:17
Sample ID: IR-70-TB-82	Date Analyzed: 11/02/11 18:17
Lab Samp ID: K004-06	Dilution Factor: 1
Lab File ID: RKV048	Matrix : WATER
Ext Btch ID: V001K02	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	0.67J	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.4	10.00	114	70-140
4-BROMOFLUOROBENZENE	10.4	10.00	104	70-130
TOLUENE-D8	10.0	10.00	100	70-140

QC SUMMARIES

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/02/11
Batch No.	: 11K004	Date Extracted:	11/02/11 09:30
Sample ID:	MBLK1W	Date Analyzed:	11/02/11 09:30
Lab Samp ID:	V001K02B	Dilution Factor:	1
Lab File ID:	RKV031	Matrix	: WATER
Ext Btch ID:	V001K02	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.1	10.00	101	70-140
4-BROMOFLUOROBENZENE	10.4	10.00	104	70-130
TOLUENE-D8	10.0	10.00	100	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K004
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	V001K02B	V001K02L	V001K02C		
LAB FILE ID:	RKV031	RKV028	RKV029		
DATE EXTRACTED:	11/02/1109:30	11/02/1107:57	11/02/1108:28	DATE COLLECTED:	NA
DATE ANALYZED:	11/02/1109:30	11/02/1107:57	11/02/1108:28	DATE RECEIVED:	11/02/11
PREP. BATCH:	V001K02	V001K02	V001K02		
CALIB. REF:	RJV602	RJV602	RJV602		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.83	98	10.0	9.21	92	7	60-130	30
Benzene	ND	10.0	9.53	95	10.0	9.05	91	5	70-130	30
Chlorobenzene	ND	10.0	9.96	100	10.0	9.51	95	5	70-120	30
Toluene	ND	10.0	9.75	98	10.0	9.16	92	6	70-130	30
Trichloroethene	ND	10.0	9.67	97	10.0	9.06	91	7	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	10.1	101	10.0	9.94	99	70-140
4-Bromofluorobenzene	10.0	9.36	94	10.0	9.45	94	70-130
Toluene-d8	10.0	9.69	97	10.0	9.76	98	70-130

INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RJV596
Instrument ID: T001
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K004
BFB Injection Date : 10/31/11
BFB Injection Time : 09:18
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.79
75	30.0 - 60.0% of mass 95	51.84
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.73
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	73.40
175	5.0 - 9.0% of mass 174	5.20(7.1)1
176	95.0 - 101.0% of mass 174	72.01(98.1)1
177	5.0 - 9.0% of mass 176	4.99(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	V001J311	RJV597	10/31/11	09:59
2	VSTD0.5	V001J312	RJV598	10/31/11	10:30
3	VSTD01	V001J313	RJV599	10/31/11	11:01
4	VSTD02	V001J314	RJV600	10/31/11	11:32
5	VSTD05	V001J315	RJV601	10/31/11	12:03
6	VSTD010	V001J316	RJV602	10/31/11	12:33
7	VSTD020	V001J317	RJV603	10/31/11	13:04
8	VSTD030	V001J318	RJV604	10/31/11	13:35
9	VSTD050	V001J319	RJV605	10/31/11	14:05
10	VSTD100	V001J3110	RJV606	10/31/11	14:36
11	VSTD010	IV001J311	RJV609	10/31/11	16:07

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :T001
Beginning DateTime :10/31/11 09:59
Spike Units :PPB
IC File :RJV602

Column Spec :RTX502.2 ID :0.32MM
Ending DateTime :10/31/11 14:36
HPChem Method :V001J31

M	IDX	Parameters	.3 09:59 RJV597	.5 10:30 RJV598	1 11:01 RJV599	2 11:32 RJV600	5 12:03 RJV601	10 12:33 RJV602	20 13:04 RJV603	30 13:35 RJV604	50 14:05 RJV605	100 14:36 RJV606	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	0	7.7772
	2	Chlorotrifluoroethylene	------	0.109	0.142	0.158	0.161	0.161	0.174	0.164	0.169	0.164	0.156	12.57	2.1081
	3	Dichlorodifluoromethane	0.309	0.336	0.351	0.390	0.390	0.404	0.374	0.355	0.365	0.359	0.363	7.72	2.1576
	4	Chloromethane	0.424	0.438	0.439	0.437	0.442	0.478	0.432	0.422	0.420	0.418	0.435	4.03	2.3766
	5	Vinyl chloride	0.390	0.428	0.455	0.475	0.480	0.515	0.481	0.460	0.478	0.455	0.461	7.36	2.5408
	6	2-Chloro-1,1,1-trifluoroethane	0.267	0.292	0.352	0.405	0.357	0.346	0.367	0.343	0.340	0.315	0.338	11.52	2.6548
	7	Bromomethane	0.218	0.243	0.243	0.252	0.251	0.264	0.237	0.222	0.213	0.143	0.229	14.94	2.9004
	8	Chloroethane	0.371	0.316	0.291	0.288	0.275	0.285	0.269	0.252	0.251	0.223	0.282	14.40	3.0217
	9	Dichlorofluoromethane	0.808	0.730	0.755	0.724	0.730	0.705	0.722	0.671	0.654	0.622	0.712	7.42	3.3088
	10	Trichlorofluoromethane	------	0.394	0.410	0.439	0.446	0.459	0.428	------	------	------	0.429	5.60	3.3129
5	11	Acrolein	------	------	0.015	0.012	0.011	0.011	0.011	0.011	0.011	0.010	0.011	12.29	3.8010
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	0.227	0.210	0.222	0.216	0.226	0.217	0.224	0.216	0.216	0.214	0.219	2.60	3.9761
5	13	Acetone	------	------	0.054	0.046	0.045	0.046	0.044	0.040	0.039	0.036	0.044	12.62	3.9619
	14	1,1-Dichloroethene	0.682	0.667	0.685	0.687	0.691	0.670	0.668	0.631	0.616	0.584	0.658	5.45	3.9272
	15	Iodomethane	0.473	0.447	0.475	0.470	0.485	0.478	0.497	0.482	0.491	0.488	0.479	2.89	4.1122
	16	Carbon disulfide	1.104	0.866	0.961	0.999	1.070	0.991	1.192	1.135	1.223	1.201	1.074	10.99	4.2084
	17	Methylene chloride	0.589	0.509	0.526	0.494	0.501	0.484	0.501	0.484	0.485	0.473	0.505	6.57	4.5117
5	18	tert-Butyl alcohol	------	------	0.011	0.010	0.011	0.012	0.014	0.013	0.012	0.012	0.012	10.38	4.6333
5	19	Acrylonitrile	0.057	0.049	0.054	0.049	0.054	0.054	0.056	0.055	0.055	0.054	0.054	4.68	4.7766
	20	tert-Butyl methyl ether (MTBE)	0.581	0.545	0.619	0.597	0.611	0.595	0.636	0.580	0.573	0.550	0.589	4.92	4.8372
	21	trans-1,2-Dichloroethene	0.705	0.636	0.678	0.676	0.683	0.672	0.685	0.661	0.654	0.626	0.668	3.56	4.8505
	22	Vinyl acetate	------	0.362	0.399	0.481	0.527	0.523	0.516	0.523	0.507	0.446	0.476	12.74	5.3567
	23	1,1-Dichloroethane	0.823	0.707	0.773	0.758	0.764	0.745	0.768	0.750	0.748	0.727	0.756	4.05	5.3714
	24	Isopropyl ether (DIPE)	1.407	1.255	1.338	1.339	1.359	1.324	1.393	1.341	1.334	------	1.343	3.23	5.4144
5	25	2-Butanol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	26	tert-Butyl ethyl ether (ETBE)	1.023	0.928	1.019	0.963	0.989	0.968	1.012	0.923	0.924	0.912	0.966	4.44	5.8596
5	27	2-Butanone	0.072	0.064	0.071	0.064	0.072	0.073	0.077	0.073	0.072	0.069	0.071	5.82	6.0416
	28	cis-1,2-Dichloroethene	0.393	0.357	0.386	0.385	0.379	0.374	0.391	0.380	0.379	0.368	0.379	2.86	6.0801
	29	2,2-Dichloropropane	0.598	0.568	0.573	0.560	0.561	0.534	0.532	0.496	0.488	0.469	0.538	7.77	6.0993
	30	Bromochloromethane	0.309	0.297	0.317	0.305	0.307	0.309	0.319	0.301	0.297	0.289	0.305	3.06	6.3775
	31	Chloroform	0.660	0.608	0.644	0.641	0.661	0.654	0.655	0.620	0.616	0.606	0.636	3.47	6.5047
	32	Dibromofluoromethane	0.282	0.250	0.254	0.287	0.283	0.277	0.288	0.274	0.275	0.266	0.274	4.90	6.7089
	33	1,1,1-Trichloroethane	0.511	0.499	0.523	0.513	0.526	0.516	0.513	0.485	0.488	0.482	0.506	3.15	6.7459
	34	tert-Amyl methyl ether (TAME)	0.134	0.128	0.146	0.142	0.146	0.148	0.155	0.144	0.141	0.136	0.142	5.46	7.3807
	35	1,2-Dichloroethane-d4	0.295	0.293	0.281	0.319	0.317	0.298	0.304	0.276	0.273	0.266	0.292	6.16	7.1646
	36	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	0	12.3211
	37	1,1-Dichloropropene	0.235	0.213	0.208	0.199	0.205	0.203	0.202	0.208	0.204	0.202	0.208	4.86	6.9486
	38	Carbon tetrachloride	0.524	0.459	0.480	0.500	0.518	0.514	0.503	0.498	0.487	0.498	0.498	3.89	6.9546
	39	Benzene	1.929	1.746	1.769	1.711	1.749	1.714	1.733	1.752	1.800	------	1.767	3.77	7.2081
	40	1,2-Dichloroethane	0.464	0.438	0.454	0.442	0.456	0.445	0.441	0.417	0.415	0.410	0.438	4.24	7.2697
	41	Trichloroethene	0.487	0.420	0.428	0.433	0.441	0.435	0.444	0.437	0.449	0.451	0.442	4.13	8.1205
	42	1,2-Dichloropropane	0.496	0.463	0.451	0.450	0.461	0.447	0.455	0.452	0.461	0.455	0.459	3.08	8.4889
20	43	1,4-Dioxane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	44	Dibromomethane	0.151	0.142	0.151	0.143	0.152	0.151	0.153	0.147	0.150	0.151	0.149	2.57	8.6117
	45	Bromodichloromethane	0.536	0.466	0.498	0.506	0.523	0.517	0.528	0.510	0.518	0.519	0.512	3.82	8.8633
	46	2-Chloroethyl vinyl ether	0.106	0.092	0.109	0.108	0.117	0.121	0.135	0.127	0.132	0.135	0.118	12.09	9.2716
	47	cis-1,3-Dichloropropene	0.638	0.563	0.591	0.602	0.617	0.610	0.632	0.618	0.632	0.634	0.614	3.83	9.5247
5	48	4-Methyl-2-pentanone	0.209	0.181	0.188	0.176	0.198	0.205	0.219	0.209	0.215	0.212	0.201	7.38	9.7348
	49	Toluene-d8	1.537	1.362	1.194	1.412	1.388	1.334	1.400	1.406	1.417	------	1.383	6.52	9.9520
	50	Toluene	1.907	1.740	1.719	1.699	1.743	1.702	1.724	1.760	1.786	------	1.753	3.65	10.0604
	51	Ethyl methacrylate	0.317	0.261	0.296	0.297	0.326	0.344	0.371	0.359	0.362	0.362	0.330	11.06	10.5042
	52	trans-1,3-Dichloropropene	0.446	0.396	0.447	0.443	0.471	0.468	0.480	0.460	0.466	0.467	0.454	5.28	10.4169
	53	1,1,2-Trichloroethane	0.243	0.203	0.217	0.208	0.215	0.211	0.222	0.214	0.215	0.212	0.216	4.93	10.7439
	54	Tetrachloroethene	0.381	0.340	0.352	0.348	0.357	0.356	0.357	0.352	0.358	0.361	0.356	2.94	10.9066
	55	1,3-Dichloropropane	0.467	0.414	0.447	0.441	0.452	0.455	0.468	0.449	0.457	0.442	0.449	3.40	11.0161
5	56	2-Hexanone	0.139	0.115	0.119	0.111	0.126	0.135	0.144	0.141	0.143	0.141	0.131	9.50	11.0857
	57	Dibromochloromethane	0.232	0.231	0.244	0.250	0.264	0.269	0.280	0.265	0.266	0.268	0.257	6.52	11.3816
	58	1,2-Dibromoethane	0.199	0.179	0.201	0.204	0.210	0.209	0.221	0.209	0.210	0.209	0.205	5.44	11.5946

SG
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59	1-Chlorohexane	0.816	0.718	0.707	0.695	0.728	0.717	0.725	0.721	0.722	0.703	0.725	4.61	12.3360
60	Chlorobenzene	1.034	0.946	0.995	0.993	1.039	1.037	1.038	1.023	1.017	0.974	1.010	3.12	12.3641
61	1,1,1,2-Tetrachloroethane	0.350	0.301	0.326	0.332	0.346	0.344	0.351	0.335	0.334	0.322	0.334	4.52	12.4898
62	Ethylbenzene	2.164	1.945	1.977	1.991	2.089	2.054	2.104	2.054	1.984	------	2.040	3.49	12.5018
2 63	m-Xylene & p-Xylene	1.610	1.482	1.470	1.505	1.572	1.573	1.567	1.538	------	------	1.540	3.23	12.6812
64	o-Xylene	1.589	1.453	1.476	1.474	1.569	1.547	1.546	1.502	1.481	------	1.515	3.19	13.1841
65	Styrene	1.016	0.911	1.000	1.022	1.143	1.156	1.192	1.187	1.174	1.038	1.084	9.03	13.2134
66	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	0	15.4150
67	Bromoform	0.300	0.296	0.320	0.305	0.327	0.327	0.344	0.343	0.359	0.377	0.330	7.98	13.4427
68	Isopropylbenzene	5.486	4.993	4.975	4.842	4.950	4.869	4.800	4.988	4.786	------	4.966	4.25	13.6379
69	4-Bromofluorobenzene	1.481	1.312	1.095	1.243	1.225	1.133	1.166	1.195	1.226	1.246	1.232	8.67	13.8452
70	1,1,2,2-Tetrachloroethane	0.708	0.641	0.683	0.668	0.684	0.663	0.694	0.682	0.687	0.686	0.680	2.70	13.9828
71	Bromobenzene	1.217	0.984	1.027	0.976	0.999	0.987	0.997	1.005	------	------	1.024	7.74	14.0073
72	trans-1,4-Dichloro-2-butene	0.150	0.153	0.174	0.160	0.173	0.179	0.189	0.184	0.186	0.192	0.174	8.64	14.0272
73	1,2,3-Trichloropropane	0.208	0.163	0.191	0.169	0.172	0.165	0.171	0.165	0.166	0.171	0.174	8.18	14.0538
74	n-Propylbenzene	6.681	6.426	6.296	6.295	6.395	6.353	6.300	6.476	------	------	6.403	2.04	14.1128
75	1,3,5-Trimethylbenzene	4.223	4.025	4.069	4.018	4.178	4.115	4.097	4.107	4.142	------	4.108	1.64	14.3070
76	2-Chlorotoluene	3.930	3.660	3.570	3.417	3.531	3.421	3.367	3.429	3.495	------	3.536	4.91	14.2149
77	4-Chlorotoluene	4.164	3.976	3.937	3.805	3.928	3.864	3.769	3.804	3.846	------	3.899	3.11	14.3481
78	tert-Butylbenzene	0.968	0.910	0.914	0.906	0.922	0.915	0.906	0.923	0.918	0.917	0.920	1.93	14.6442
79	1,2,4-Trimethylbenzene	4.266	3.870	3.910	3.868	3.983	4.040	3.945	3.951	3.974	3.171	3.898	7.18	14.7033
80	sec-Butylbenzene	5.313	4.991	5.022	5.120	5.427	5.421	5.317	5.421	4.953	------	5.221	3.80	14.8692
81	p-Isopropyltoluene	4.020	3.777	3.939	4.070	4.305	4.382	4.330	4.345	4.239	3.076	4.048	9.79	15.0185
82	1,3-Dichlorobenzene	2.001	1.931	1.924	1.887	1.975	1.984	1.970	1.966	1.997	1.986	1.962	1.87	14.9948
83	1,4-Dichlorobenzene	1.937	1.762	1.795	1.801	1.875	1.890	1.897	1.889	1.897	1.885	1.863	3.02	15.0954
84	n-Butylbenzene	3.778	3.544	3.535	3.722	3.974	4.177	4.224	4.173	4.098	------	3.914	7.03	15.4019
85	1,2-Dichlorobenzene	1.623	1.514	1.544	1.533	1.578	1.581	1.583	1.550	1.545	1.563	1.561	2.00	15.4328
86	1,2-Dibromo-3-chloropropane	------	0.054	0.073	0.074	0.076	0.081	0.086	0.084	0.086	0.090	0.078	14.04	16.1711
87	1,2,4-Trichlorobenzene	0.599	0.558	0.592	0.622	0.706	0.786	0.817	0.793	0.802	------	0.697	15.05	16.9571
88	Hexachlorobutadiene	0.532	0.483	0.519	0.518	0.581	0.602	0.586	0.560	0.550	0.625	0.556	7.87	17.0855
89	Naphthalene	------	0.848	0.785	0.727	0.815	0.969	1.054	------	------	------	0.866	14.11	17.2361
90	1,2,3-Trichlorobenzene	0.465	0.412	0.437	0.448	0.513	0.579	0.599	0.581	0.590	------	0.514	14.54	17.4553

Spike Amount = Nominal Amount * M
Ave_%RSD : 6.3 Max_%RSD : 15

Use Least Square Linear Regression with weighting factor of inverse concentration for comps with %_RSD > 15
Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
87	1,2,4-Trichlorobenzene	-0.01281	0.80017	0.9994

SG
11/4/11

2815

SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :T001
IC_Beginning DateTime :10/31/11 09:59
Spike Amount :10 PPB
CC/CV File :RJV609
IC File :RJV602

Column Spec :RTX502.2 ID :0.32MM
IC_Ending DateTime :10/31/11 14:36
HPChem Method :V001J31
Date_Time :10/31/11 16:07

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	2078216	1	1	7.785	7.777	0				
	2	Chlorotrifluoroethylene	10.337	3.4	334837	0.161	0.156	2.118	2.108	12.57				
	3	Dichlorodifluoromethane	8.998	-10.0	679552	0.327	0.363	2.163	2.158	7.72				
	4	Chloromethane	9.368	-6.3	847031	0.408	0.435	2.385	2.377	4.03				
	5	Vinyl chloride	9.570	-4.3	917897	0.442	0.461	2.547	2.541	7.36				
	6	2-Chloro-1,1,1-trifluoroethane	10.198	2.0	717414	0.345	0.338	2.666	2.655	11.52				
	7	Bromomethane	10.172	1.7	483272	0.233	0.229	2.917	2.900	14.94				
	8	Chloroethane	9.111	-8.9	534262	0.257	0.282	3.036	3.022	14.40				
	9	Dichlorofluoromethane	9.679	-3.2	1432022	0.689	0.712	3.317	3.309	7.42				
	10	Trichlorofluoromethane	8.656	-13.4	772218	0.372	0.429	3.317	3.313	5.60				
5	11	Acrolein	50.524	1.0	118784	0.011	0.011	3.805	3.801	12.29				
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	9.899	-1.0	450197	0.217	0.219	3.983	3.976	2.60				
5	13	Acetone	48.877	-2.2	445516	0.043	0.044	3.968	3.962	12.62				
	14	1,1-Dichloroethene	9.655	-3.5	1320508	0.635	0.658	3.938	3.927	5.45				
	15	Iodomethane	10.262	2.6	1020558	0.491	0.479	4.116	4.112	2.89				
	16	Carbon disulfide	10.377	3.8	2316232	1.115	1.074	4.219	4.208	10.99				
	17	Methylene chloride	9.852	-1.5	1033145	0.497	0.505	4.515	4.512	6.57				
5	18	tert-Butyl alcohol	49.112	-1.8	120463	0.012	0.012	4.634	4.633	10.38				
5	19	Acrylonitrile	52.562	5.1	587908	0.057	0.054	4.781	4.777	4.68				
	20	tert-Butyl methyl ether (MTBE)	10.014	0.1	1225298	0.590	0.589	4.841	4.837	4.92				
	21	trans-1,2-Dichloroethene	9.877	-1.2	1370568	0.659	0.668	4.856	4.851	3.56				
	22	Vinyl acetate	10.093	0.9	998377	0.480	0.476	5.359	5.357	12.74				
	23	1,1-Dichloroethane	10.049	0.5	1579616	0.760	0.756	5.373	5.371	4.05				
	24	Isopropyl ether (DIPE)	10.337	3.4	2886019	1.389	1.343	5.418	5.414	3.23				
5	25	2-Butanol												
	26	tert-Butyl ethyl ether (ETBE)	9.749	-2.5	1957252	0.942	0.966	5.862	5.860	4.44				
5	27	2-Butanone	52.537	5.1	771595	0.074	0.071	6.039	6.042	5.82				
	28	cis-1,2-Dichloroethene	10.308	3.1	812742	0.391	0.379	6.084	6.080	2.86				
	29	2,2-Dichloropropane	9.670	-3.3	1080913	0.520	0.538	6.098	6.099	7.77				
	30	Bromochloromethane	9.920	-0.8	629180	0.303	0.305	6.379	6.378	3.06				
	31	Chloroform	9.731	-2.7	1287132	0.619	0.636	6.513	6.505	3.47				
	32	Dibromofluoromethane	9.632	-3.7	547922	0.264	0.274	6.720	6.709	4.90				
	33	1,1,1-Trichloroethane	9.429	-5.7	990643	0.477	0.506	6.749	6.746	3.15				
	34	tert-Amyl methyl ether (TAME)	10.176	1.8	300183	0.144	0.142	7.386	7.381	5.46				
	35	1,2-Dichloroethane-d4	8.932	-10.7	542346	0.261	0.292	7.179	7.165	6.16				
	36	CHLOROBENZENE-D5	10.000	0	1765489	1	1	12.328	12.321	0				
	37	1,1-Dichloropropene	9.645	-3.5	354243	0.201	0.208	6.957	6.949	4.86				
	38	Carbon tetrachloride	9.552	-4.5	840066	0.476	0.498	6.957	6.955	3.89				
	39	Benzene	10.189	1.9	3178606	1.800	1.767	7.223	7.208	3.77				
	40	1,2-Dichloroethane	9.335	-6.6	722336	0.409	0.438	7.282	7.270	4.24				
	41	Trichloroethene	10.044	0.4	784620	0.444	0.442	8.125	8.120	4.13				
	42	1,2-Dichloropropane	10.004	0.0	810670	0.459	0.459	8.495	8.489	3.08				
20	43	1,4-Dioxane												
	44	Dibromomethane	10.144	1.4	266983	0.151	0.149	8.614	8.612	2.57				
	45	Bromodichloromethane	9.799	-2.0	885837	0.502	0.512	8.865	8.863	3.82				
	46	2-Chloroethyl vinyl ether	10.396	4.0	217043	0.123	0.118	9.280	9.272	12.09				
	47	cis-1,3-Dichloropropene	10.050	0.5	1089123	0.617	0.614	9.531	9.525	3.83				
5	48	4-Methyl-2-pentanone	51.482	3.0	1827746	0.207	0.201	9.738	9.735	7.38				
	49	Toluene-d8	9.543	-4.6	2330918	1.320	1.383	9.960	9.952	6.52				
	50	Toluene	10.051	0.5	3111412	1.762	1.753	10.064	10.060	3.65				
	51	Ethyl methacrylate	10.418	4.2	606348	0.343	0.330	10.508	10.504	11.06				
	52	trans-1,3-Dichloropropene	10.018	0.2	803608	0.455	0.454	10.419	10.417	5.28				
	53	1,1,2-Trichloroethane	9.987	-0.1	380807	0.216	0.216	10.744	10.744	4.93				
	54	Tetrachloroethene	9.960	-0.4	626428	0.355	0.356	10.922	10.907	2.94				
	55	1,3-Dichloropropane	10.067	0.7	798400	0.452	0.449	11.026	11.016	3.40				
5	56	2-Hexanone	50.570	1.1	1173148	0.133	0.131	11.085	11.086	9.50				
	57	Dibromochloromethane	10.095	1.0	457958	0.259	0.257	11.395	11.382	6.52				
	58	1,2-Dibromoethane	10.098	1.0	365541	0.207	0.205	11.603	11.595	5.44				
	59	1-Chlorohexane	9.938	-0.6	1272480	0.721	0.725	12.342	12.336	4.61				

8-4
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2818

	60	Chlorobenzene	10.114	1.1	1802805	1.021	1.010	12.372	12.364	3.12				
	61	1,1,1,2-Tetrachloroethane	10.026	0.3	591491	0.335	0.334	12.490	12.490	4.52				
	62	Ethylbenzene	10.043	0.4	3617689	2.049	2.040	12.505	12.502	3.49				
2	63	m-Xylene & p-Xylene	19.918	-0.4	5414517	1.533	1.540	12.683	12.681	3.23				
	64	o-Xylene	9.951	-0.5	2662138	1.508	1.515	13.186	13.184	3.19				
	65	Styrene	10.684	6.8	2044347	1.158	1.084	13.215	13.213	9.03				
	66	1,2-DICHLOROBENZENE-D4	10.000	0	676620	1	1	15.420	15.415	0				
	67	Bromoform	9.880	-1.2	220603	0.326	0.330	13.452	13.443	7.98				
	68	Isopropylbenzene	9.790	-2.1	3289549	4.862	4.966	13.644	13.638	4.25				
	69	4-Bromofluorobenzene	8.942	-10.6	745615	1.102	1.232	13.852	13.845	8.67				
	70	1,1,2,2-Tetrachloroethane	9.932	-0.7	456807	0.675	0.680	13.985	13.983	2.70				
	71	Bromobenzene	9.698	-3.0	672008	0.993	1.024	14.014	14.007	7.74				
	72	trans-1,4-Dichloro-2-butene	10.164	1.6	119681	0.177	0.174	14.029	14.027	8.64				
	73	1,2,3-Trichloropropane	9.577	-4.2	112697	0.167	0.174	14.059	14.054	8.18				
	74	n-Propylbenzene	9.990	-0.1	4328062	6.397	6.403	14.118	14.113	2.04				
	75	1,3,5-Trimethylbenzene	9.868	-1.3	2743150	4.054	4.108	14.310	14.307	1.64				
	76	2-Chlorotoluene	9.609	-3.9	2298732	3.397	3.536	14.222	14.215	4.91				
	77	4-Chlorotoluene	9.834	-1.7	2594676	3.835	3.899	14.355	14.348	3.11				
	78	tert-Butylbenzene	9.925	-0.7	617877	0.913	0.920	14.651	14.644	1.93				
	79	1,2,4-Trimethylbenzene	10.070	0.7	2655963	3.925	3.898	14.710	14.703	7.18				
	80	sec-Butylbenzene	10.152	1.5	3586389	5.300	5.221	14.873	14.869	3.80				
	81	p-Isopropyltoluene	10.463	4.6	2866222	4.236	4.048	15.021	15.019	9.79				
	82	1,3-Dichlorobenzene	9.960	-0.4	1322269	1.954	1.962	15.006	14.995	1.87				
	83	1,4-Dichlorobenzene	9.877	-1.2	1244915	1.840	1.863	15.094	15.095	3.02				
	84	n-Butylbenzene	10.295	3.0	2726374	4.029	3.914	15.405	15.402	7.03				
	85	1,2-Dichlorobenzene	9.923	-0.8	1048344	1.549	1.561	15.435	15.433	2.00				
	86	1,2-Dibromo-3-chloropropane	9.989	-0.1	52967	0.078	0.078	16.175	16.171	14.04				
	87	1,2,4-Trichlorobenzene	9.584	-4.2	510233	0.754	0.697	16.959	16.957	15.05	-0.0128	0.8002		0.9994
	88	Hexachlorobutadiene	10.265	2.7	385907	0.570	0.556	17.092	17.086	7.87				
	89	Naphthalene	10.703	7.0	627450	0.927	0.866	17.240	17.236	14.11				
	90	1,2,3-Trichlorobenzene	10.574	5.7	367640	0.543	0.514	17.462	17.455	14.54				

Spike Amount = Nominal Amount * M

54
M1411

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DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKV026
Instrument ID: T001
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K004
BFB Injection Date : 11/02/11
BFB Injection Time : 06:56
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.28
75	30.0 - 60.0% of mass 95	52.05
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.87
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	75.89
175	5.0 - 9.0% of mass 174	5.95(7.8)1
176	95.0 - 101.0% of mass 174	75.28(99.2)1
177	5.0 - 9.0% of mass 176	5.52(7.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV001J3103	RKV027	11/02/11	07:22
2	MBLK1W	V001K02B	RKV031	11/02/11	09:30
3	LCS1W	V001K02L	RKV028	11/02/11	07:57
4	LCD1W	V001K02C	RKV029	11/02/11	08:28
5	MW-70-23-77	K004-01	RKV043	11/02/11	15:42
6	MW-70-POC02-78	K004-02	RKV044	11/02/11	16:13
7	MW-70-POC04-79	K004-03	RKV045	11/02/11	16:44
8	MW-70-21-80	K004-04	RKV046	11/02/11	17:15
9	MW-70-16-81	K004-05	RKV047	11/02/11	17:46
10	IR-70-TB-82	K004-06	RKV048	11/02/11	18:17

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RJV602
Instrument ID: TO01
GC Column: RTX502.2 ID: 0.32mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K004
Date Analyzed: 10/31/11
Time Analyzed: 12:33
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1719891	7.78	1480141	12.32	584394	15.41
	UPPER LIMIT	3439782	8.28	2960282	12.82	1168788	15.91
	LOWER LIMIT	859946	7.28	740071	11.82	292197	14.91
	SAMPLE ID						
1	VSTD010	1601888	7.77	1364522	12.31	531296	15.41
2	MBLK1W	1897779	7.77	1573007	12.31	516734	15.40
3	LCS1W	1814407	7.76	1562790	12.31	622368	15.41
4	LCD1W	1960411	7.77	1702381	12.31	662531	15.40
5	MW-70-23-77	1531495	7.76	1318280	12.31	427328	15.41
6	MW-70-POC02-78	1573640	7.77	1343593	12.31	447921	15.40
7	MW-70-POC04-79	1575327	7.77	1359453	12.32	460443	15.42
8	MW-70-21-80	1549013	7.78	1339179	12.32	447422	15.41
9	MW-70-16-81	1495571	7.77	1272483	12.31	404587	15.42
10	IR-70-TB-82	1569209	7.77	1302575	12.31	431489	15.42

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKV027.D Vial: 2
Acq On : 2 Nov 2011 7:22 am Operator: MW
Sample : CVO01J3103 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	93	0.00
2	T,M	Chlorotrifluoroethylene	10.000	0.000	100.0#	0	-2.11#
3	T,M	Dichlorodifluoromethane	10.000	9.063	9.4	76	0.00
4	P,T,M	Chloromethane	10.000	11.194	-11.9	95	0.00
5	C,T,M	Vinyl chloride	10.000	11.243	-12.4	94	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	0.000	100.0#	0	-2.66#
7	T,M	Bromomethane	10.000	12.020	-20.2#	97	0.00
8	T,M	Chloroethane	10.000	10.730	-7.3	99	0.00
9	T,M	Dichlorofluoromethane	10.000	10.266	-2.7	97	0.00
10	T,M	Trichlorofluoromethane	10.000	10.625	-6.3	92	0.00
11	T,M	Acrolein	50.000	55.275	-10.5	110	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	10.176	-1.8	96	0.00
13	T,M	Acetone	50.000	57.210	-14.4	101	0.00
14	C,T,M	1,1-Dichloroethene	10.000	9.751	2.5	89	0.00
15	T,M	Iodomethane	10.000	10.270	-2.7	96	0.00
16	T,M	Carbon disulfide	10.000	10.834	-8.3	109	0.00
17	T,M	Methylene chloride	10.000	9.846	1.5	96	0.00
18	T,M	tert-Butyl alcohol	50.000	50.538	-1.1	91	0.00
19	T,M	Acrylonitrile	50.000	51.523	-3.0	96	0.00
20	T,M	tert-Butyl methyl ether (MT	10.000	10.212	-2.1	94	0.00
21	T,M	trans-1,2-Dichloroethene	10.000	10.093	-0.9	93	0.00
22	T,M	Vinyl acetate	10.000	9.667	3.3	82	0.00
23	P,T,M	1,1-Dichloroethane	10.000	10.235	-2.3	97	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	9.899	1.0	94	0.00
25	T,M	2-Butanol	-1.000	0.000	0.0	94	0.00
26	T,M	tert-Butyl ethyl ether (ETB	10.000	10.051	-0.5	93	0.00
27	T,M	2-Butanone	50.000	52.654	-5.3	95	0.00
28	T,M	cis-1,2-Dichloroethene	10.000	10.265	-2.7	97	0.00
29	T,M	2,2-Dichloropropane	10.000	11.202	-12.0	105	0.00
30	T,M	Bromochloromethane	10.000	10.097	-1.0	93	0.00
31	C,T,M	Chloroform	10.000	10.207	-2.1	92	0.00
32	S	Dibromofluoromethane	10.000	10.076	-0.8	93	0.00
33	T,M	1,1,1-Trichloroethane	10.000	10.687	-6.9	98	0.00
34	T,M	tert-Amyl methyl ether (TAM	10.000	10.364	-3.6	93	0.00
35	S	1,2-Dichloroethane-d4	10.000	9.912	0.9	91	0.00
36	I	CHLOROBENZENE-D5	10.000	10.000	0.0	92	0.00
37	T,M	1,1-Dichloropropene	10.000	10.119	-1.2	96	0.00
38	T,M	Carbon tetrachloride	10.000	10.622	-6.2	95	0.00
39	T,M	Benzene	10.000	10.029	-0.3	95	0.00
40	T,M	1,2-Dichloroethane	10.000	10.141	-1.4	92	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKV027.D Vial: 2
Acq On : 2 Nov 2011 7:22 am Operator: MW
Sample : CV001J3103 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	10.000	10.021	-0.2	94	0.00
42	C,T,M	1,2-Dichloropropane	10.000	10.010	-0.1	95	0.00
43	T,M	1,4-Dioxane	-1.000	0.000	0.0	98	0.00
44	T,M	Dibromomethane	10.000	10.083	-0.8	92	0.00
45	T,M	Bromodichloromethane	10.000	10.212	-2.1	93	0.00
46	T,M	2-Chloroethyl vinyl ether	10.000	9.596	4.0	86	0.00
47	T,M	cis-1,3-Dichloropropene	10.000	10.484	-4.8	97	0.00
48	T,M	4-Methyl-2-pentanone	50.000	51.802	-3.6	94	0.00
49	S	Toluene-d8	10.000	10.057	-0.6	96	0.00
50	C,T,M	Toluene	10.000	10.124	-1.2	96	0.00
51	T,M	Ethyl methacrylate	10.000	10.001	-0.0	88	0.00
52	T,M	trans-1,3-Dichloropropene	10.000	10.684	-6.8	96	0.00
53	T,M	1,1,2-Trichloroethane	10.000	10.146	-1.5	96	0.00
54	T,M	Tetrachloroethene	10.000	10.385	-3.8	96	0.00
55	T,M	1,3-Dichloropropane	10.000	10.217	-2.2	93	0.00
56	T,M	2-Hexanone	50.000	51.632	-3.3	92	0.00
57	T,M	Dibromochloromethane	10.000	10.612	-6.1	93	0.00
58	T,M	1,2-Dibromoethane	10.000	10.283	-2.8	93	0.00
59	T,M	1-Chlorohexane	10.000	10.380	-3.8	97	0.00
60	P,M	Chlorobenzene	10.000	10.320	-3.2	93	0.00
61	T,M	1,1,1,2-Tetrachloroethane	10.000	10.387	-3.9	93	0.00
62	C,T,M	Ethylbenzene	10.000	10.322	-3.2	95	0.00
63	T,M	m-Xylene & p-Xylene	20.000	20.948	-4.7	94	0.00
64	T,M	o-Xylene	10.000	10.511	-5.1	95	0.00
65	T,M	Styrene	10.000	10.708	-7.1	93	0.00
66	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	91	0.00
67	P,T,M	Bromoform	10.000	10.181	-1.8	93	0.00
68	T,M	Isopropylbenzene	10.000	10.159	-1.6	94	0.00
69	S	4-Bromofluorobenzene	10.000	9.548	4.5	94	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.197	-2.0	95	0.00
71	T,M	Bromobenzene	10.000	9.842	1.6	93	0.00
72	T,M	trans-1,4-Dichloro-2-butene	10.000	10.697	-7.0	95	0.00
73	T,M	1,2,3-Trichloropropane	10.000	9.781	2.2	94	0.00
74	T,M	n-Propylbenzene	10.000	10.266	-2.7	94	0.00
75	T,M	1,3,5-Trimethylbenzene	10.000	10.249	-2.5	93	0.00
76	T,M	2-Chlorotoluene	10.000	10.065	-0.6	95	0.00
77	T,M	4-Chlorotoluene	10.000	10.041	-0.4	92	0.00
78	T,M	tert-Butylbenzene	10.000	10.285	-2.9	94	0.00
79	T,M	1,2,4-Trimethylbenzene	10.000	10.369	-3.7	91	0.00
80	T,M	sec-Butylbenzene	10.000	10.651	-6.5	93	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKV027.D Vial: 2
Acq On : 2 Nov 2011 7:22 am Operator: MW
Sample : CVO01J3103 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	10.000	11.084	-10.8	93	0.00
82	T,M	1,3-Dichlorobenzene	10.000	10.358	-3.6	93	0.00
83	T,M	1,4-Dichlorobenzene	10.000	10.231	-2.3	92	0.00
84	T,M	n-Butylbenzene	10.000	11.021	-10.2	94	0.00
85	T,M	1,2-Dichlorobenzene	10.000	10.259	-2.6	92	0.00
86	T,M	1,2-Dibromo-3-chloropropane	10.000	10.498	-5.0	92	0.00
87	T,M	1,2,4-Trichlorobenzene	10.000	10.127	-1.3	92	0.00
88	T,M	Hexachlorobutadiene	10.000	11.391	-13.9	96	0.00
89	T,M	Naphthalene	10.000	10.951	-9.5	89	0.00
90	T,M	1,2,3-Trichlorobenzene	10.000	11.180	-11.8	90	0.00

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKV027.D Vial: 2
Acq On : 2 Nov 2011 7:22 am Operator: MW
Sample : CV001J3103 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	93	0.00
2	T,M	Chlorotrifluoroethylene	0.156	0.000	100.0#	0#	-2.11#
3	T,M	Dichlorodifluoromethane	0.363	0.329	9.4	76	0.00
4	P,T,M	Chloromethane	0.435	✓0.487	-12.0	95	0.00
5	C,T,M	Vinyl chloride	0.461	0.519	-12.6	94	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.338	0.000	100.0#	0#	-2.66#
7	T,M	Bromomethane	0.229	0.275	-20.1#	97	0.00
8	T,M	Chloroethane	0.282	0.303	-7.4	99	0.00
9	T,M	Dichlorofluoromethane	0.712	0.731	-2.7	97	0.00
10	T,M	Trichlorofluoromethane	0.429	0.456	-6.3	92	0.00
11	T,M	Acrolein	0.011	0.013	-18.2	110	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.219	0.223	-1.8	96	0.00
13	T,M	Acetone	0.044	0.050	-13.6	101	0.00
14	C,T,M	1,1-Dichloroethene	0.658	0.642	2.4	89	0.00
15	T,M	Iodomethane	0.479	0.491	-2.5	96	0.00
16	T,M	Carbon disulfide	1.074	1.164	-8.4	109	0.00
17	T,M	Methylene chloride	0.505	0.497	1.6	96	0.00
18	T,M	tert-Butyl alcohol	0.012	0.012	0.0	91	0.00
19	T,M	Acrylonitrile	0.054	0.055	-1.9	96	0.00
20	T,M	tert-Butyl methyl ether (MT	0.589	0.601	-2.0	94	0.00
21	T,M	trans-1,2-Dichloroethene	0.668	0.674	-0.9	93	0.00
22	T,M	Vinyl acetate	0.476	0.460	3.4	82	0.00
23	P,T,M	1,1-Dichloroethane	0.756	✓0.774	-2.4	97	0.00
24	T,M	Isopropyl ether (DIPE)	1.343	1.330	1.0	94	0.00
25	T,M	2-Butanol	0.000	0.000	0.0	94	0.00
26	T,M	tert-Butyl ethyl ether (ETB	0.966	0.971	-0.5	93	0.00
27	T,M	2-Butanone	0.071	0.074	-4.2	95	0.00
28	T,M	cis-1,2-Dichloroethene	0.379	0.389	-2.6	97	0.00
29	T,M	2,2-Dichloropropane	0.538	0.602	-11.9	105	0.00
30	T,M	Bromochloromethane	0.305	0.308	-1.0	93	0.00
31	C,T,M	Chloroform	0.636	0.650	-2.2	92	0.00
32	S	Dibromofluoromethane	0.274	0.276	-0.7	93	0.00
33	T,M	1,1,1-Trichloroethane	0.506	0.540	-6.7	98	0.00
34	T,M	tert-Amyl methyl ether (TAM	0.142	0.147	-3.5	93	0.00
35	S	1,2-Dichloroethane-d4	0.292	0.290	0.7	91	0.00
36	I	CHLOROBENZENE-D5	1.000	1.000	0.0	92	0.00
37	T,M	1,1-Dichloropropene	0.208	0.211	-1.4	96	0.00
38	T,M	Carbon tetrachloride	0.498	0.529	-6.2	95	0.00
39	T,M	Benzene	1.767	1.772	-0.3	95	0.00
40	T,M	1,2-Dichloroethane	0.438	0.444	-1.4	92	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKV027.D Vial: 2
Acq On : 2 Nov 2011 7:22 am Operator: MW
Sample : CVO01J3103 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	0.442	0.443	-0.2	94	0.00
42	C,T,M	1,2-Dichloropropane	0.459	0.459	0.0	95	0.00
43	T,M	1,4-Dioxane	0.000	0.000	0.0	98	0.00
44	T,M	Dibromomethane	0.149	0.150	-0.7	92	0.00
45	T,M	Bromodichloromethane	0.512	0.523	-2.1	93	0.00
46	T,M	2-Chloroethyl vinyl ether	0.118	0.113	4.2	86	0.00
47	T,M	cis-1,3-Dichloropropene	0.614	0.643	-4.7	97	0.00
48	T,M	4-Methyl-2-pentanone	0.201	0.208	-3.5	94	0.00
49	S	Toluene-d8	1.383	1.391	-0.6	96	0.00
50	C,T,M	Toluene	1.753	1.775	-1.3	96	0.00
51	T,M	Ethyl methacrylate	0.330	0.330	0.0	88	0.00
52	T,M	trans-1,3-Dichloropropene	0.454	0.485	-6.8	96	0.00
53	T,M	1,1,2-Trichloroethane	0.216	0.219	-1.4	96	0.00
54	T,M	Tetrachloroethene	0.356	0.370	-3.9	96	0.00
55	T,M	1,3-Dichloropropane	0.449	0.459	-2.2	93	0.00
56	T,M	2-Hexanone	0.131	0.136	-3.8	92	0.00
57	T,M	Dibromochloromethane	0.257	0.273	-6.2	93	0.00
58	T,M	1,2-Dibromoethane	0.205	0.211	-2.9	93	0.00
59	T,M	1-Chlorohexane	0.725	0.753	-3.9	97	0.00
60	P,M	Chlorobenzene	1.010	1.042	-3.2	93	0.00
61	T,M	1,1,1,2-Tetrachloroethane	0.334	0.347	-3.9	93	0.00
62	C,T,M	Ethylbenzene	2.040	2.106	-3.2	95	0.00
63	T,M	m-Xylene & p-Xylene	1.540	1.613	-4.7	94	0.00
64	T,M	o-Xylene	1.515	1.593	-5.1	95	0.00
65	T,M	Styrene	1.084	1.161	-7.1	93	0.00
66	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	91	0.00
67	P,T,M	Bromoform	0.330	0.336	-1.8	93	0.00
68	T,M	Isopropylbenzene	4.966	5.045	-1.6	94	0.00
69	S	4-Bromofluorobenzene	1.232	1.177	4.5	94	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	0.680	0.693	-1.9	95	0.00
71	T,M	Bromobenzene	1.024	1.008	1.6	93	0.00
72	T,M	trans-1,4-Dichloro-2-butene	0.174	0.186	-6.9	95	0.00
73	T,M	1,2,3-Trichloropropane	0.174	0.170	2.3	94	0.00
74	T,M	n-Propylbenzene	6.403	6.573	-2.7	94	0.00
75	T,M	1,3,5-Trimethylbenzene	4.108	4.211	-2.5	93	0.00
76	T,M	2-Chlorotoluene	3.536	3.559	-0.7	95	0.00
77	T,M	4-Chlorotoluene	3.899	3.915	-0.4	92	0.00
78	T,M	tert-Butylbenzene	0.920	0.946	-2.8	94	0.00
79	T,M	1,2,4-Trimethylbenzene	3.898	4.042	-3.7	91	0.00
80	T,M	sec-Butylbenzene	5.221	5.561	-6.5	93	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKV027.D Vial: 2
Acq On : 2 Nov 2011 7:22 am Operator: MW
Sample : CV001J3103 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	4.048	4.487	-10.8	93	0.00
82	T,M	1,3-Dichlorobenzene	1.962	2.032	-3.6	93	0.00
83	T,M	1,4-Dichlorobenzene	1.863	1.906	-2.3	92	0.00
84	T,M	n-Butylbenzene	3.914	4.313	-10.2	94	0.00
85	T,M	1,2-Dichlorobenzene	1.561	1.602	-2.6	92	0.00
86	T,M	1,2-Dibromo-3-chloropropane	0.078	0.082	-5.1	92	0.00
87	T,M	1,2,4-Trichlorobenzene	0.697	0.798	-14.5	92	0.00
88	T,M	Hexachlorobutadiene	0.556	0.633	-13.8	96	0.00
89	T,M	Naphthalene	0.866	0.949	-9.6	89	0.00
90	T,M	1,2,3-Trichlorobenzene	0.514	0.574	-11.7	90	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☐ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 10/31/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A01 -038

BATCH V001J316

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount A/B/C	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RJU596	BFB01J29	1 mL	NA	NA	NA	NA	9:18am
02	597	V001J311	.01/.1/.5 mL					0.3/1.5/1.5 ppb
03	598	2	.01/.1/.5 mL					0.5/2.5/2.5 ppb
04	599	3	.1/.5/.5 mL					1.0/5.0/5.0 ppb
05	600	4	.1/1/1 mL					2.0/10/10 ppb
06	601	5	.5/2.5/2.5 mL					5.0/25/25 ppb
07	602	6	1/5/5 mL					10/50/50 ppb
08	603	7	2/10/10 mL					20/100/100 ppb
09	604	8	3/15/15 mL					30/150/150 ppb
10	605	9	5/25/25 mL					50/250/250 ppb
11	606	10	10/50/50 mL					100/500/500 ppb
12	607	IS/SS	25 mL					
13	608	V001J29B	↓					
14	609	V001J311	1/5/5 mL					10/50/50 ppb
15	610	RINSE	25 mL					4:51pm
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30			NW	11/1/11				

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC Gases	SV1-17-96-3	*	
DCC Cl_2	-92-3		
DCC BL60	-86-2		
DCC KETONE FROWS	-98-1 -100-3		1/4/1000
BFB	-45-3	1	
IS/SURR.	-99-1	1	
ICV/LCS Gases	-97-1	1	
ICV/LCS Cl_2	-97-2	1	
ICV/LCS BL60	-99-2	5	
ICV/LCS KETONE	-99-2	5	
ICV/LCS FROWS	SV1-16-26-2 -26-1	0.4 0.4	
IS SS	SV1-17-91-1 -91-2	1 1	25mL
DATA FILE FOLDER	11J31		

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO01	

Comments: *please refer to sample amount
A: SS, gases, Cl_2, FROWS
B: BL60
C: KETONE
NW 11/1/11

Analyzed By: NW
Date Disposed: 11/1/11
Disposed By: NW

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☐ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/2/11 ☐ 5-mL Purge ☐ 10-mL Purge ☐ 25-mL Purge

Book # A01 -038

BATCH CV001J3103

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKV026	BFB01K02	1mL					6:56am
02	27	CV001J3103	1.5mL					
03	28	V001K02L						
04	29	C						
05	30	RINSE	25mL					
06	31	V001K02B						
07	32	11J302-01		1.0	/	/		
08	33	-02			/	/		
09	34	-03			/	/		
10	35	-04			/	/		
11	36	-05			/	/		
12	37	-06			/	/		
13	38	11J314-01			/	/		
14	39	-02			/	/		
15	40	-03			/	/		
16	41	-04			/	/		
17	42	-05			/	/		
18	43	11K004-01			/	/		
19	44	-02			/	/		
20	45	-03			/	/		
21	46	-04			/	/		
22	47	-05			/	/		
23	48	-06			/	/		6:17pm
24	49	RINSE						
25	50							
26	51							
27								
28								
29								
30		MW 11/2/11						

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-17-96-3	1	
DCC	-92-3	1	
DCC	-86-2	5	
DCC	-98-1	5	
BFB	-45-3	1	
IS/SURR.	-99-1	1	50/200
ICV/LCS	-97-1	1	
ICV/LCS	-97-2	1	
ICV/LCS	-99-2	5	
ICV/LCS	-89-2	5	

DATA FILE FOLDER	11K02
Electronic Data Archival	
Location	Date
HPCHEM_VOA/T001	

Comments:

Analyzed By: MW

Date Disposed: 11/3/11

Disposed By: MW

TABLE OF CONTENTS

CLIENT: **INSIGHT EEC, INC.**

PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11K014**

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Cover Letter, COC/Sample Receipt Form		1000 – 1004
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GC-SVOA	**	5000 –
HPLC	**	6000 –
METALS	**	7000 –
WET	METHOD 300.0(M)	8000 – 8024
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 11-28-2011
EMAX Batch No.: 11K014

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 11/02/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW-70-MNA01-83	K014-01	11/02/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
MW-70-MNA03-84	K014-02	11/02/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
MW-70-MNA02-85	K014-03	11/02/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
MW-70-MNA04-86	K014-04	11/02/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
IR-70-TB-87	K014-05	11/02/11	WATER	VOLATILE ORGANICS BY GC/MS
MW-70-MNA05-88	K014-06	11/02/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

for

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 4-77101

SAMPLE STORAGE

EMAX CONTROL NO. * 11K014

PROJECT CODE:

CLIENT: INSIGHT EEC INC.
PROJECT: IR SITE 70 / NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: (714) 678 6700 FAX: (714) 678 6711 EMAIL: NWEINBERGER@IEECI.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT EEC INC.
ADDRESS: 3010 E MIRALOMA AVE
ANAHEIM CA 92806
EMAX PM: YE MINT

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: VOC'S (8260B) / DISS HYD GASES (RSK-175) / VFA'S (EPA 300.0)

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☐ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☒ STANDARD

LAB	CLIENT	LOCATION	DATE	TIME	CONTAINER NO.	CONTAINER SIZE	CONTAINER TYPE	MATRIX CODE	QC	VOC'S (8260B)	DISS HYD GASES (RSK-175)	VFA'S (EPA 300.0)	COMMENTS
1	MW-70-MNA02-83	IR SITE 70	11/2/11			VARI	VARI	GW	III	X	X	X	
2	MW-70-MNA03-84	SITE 70	11/2/11			VARI	VARI	GW	III	X	X	X	
3	MW-70-MNA02-85	SITE 70	11/2/11			VARI	VARI	GW	III	X	X	X	
4	MW-70-MNA04-86	SITE 70	11/2/11			VARI	VARI	GW	III	X	X	X	
5	IR-70-TB-87	SITE 70	11/2/11			40 ml	VOA	GW	III	X			TRIP BLANK.
6	MW-70-MNA05-88	SITE 70	11/2/11			VARI	VARI	GW	III	X	X	X	
7													
8													
9													
0													

Instructions

Cooler #	Temp. (°C)	Sample #s
1	3.0	

SAMPLER

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11/2/11	1430	Keith Stout
Keith Stout	11-2-11	1455	[signature]

COURIER/AIRBILL

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies resolved after 1300 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

Ye Myint

From: Nick Weinberger [NWeinberger@ieeci.com]
Sent: Thursday, November 03, 2011 8:20 AM
To: Ye Myint
Subject: RE: COCs for Seal Beach received today, 11/02/11

Ye,

I will verify the times for those samples. For the analyses, the analyses listed on the COC is correct. The labels are pre-printed, and so list all tests for the 1L poly bottle.

thanks,
Nick

Nicholas M. Weinberger, Project Chemist
3010 E. Miraloma Avenue • Anaheim, CA 92806
T 714.678.6700 • F 714.678.6711 • www.ieeci.com

From: Ye Myint [mailto:YMyint@emaxlabs.com]
Sent: Wednesday, November 02, 2011 6:20 PM
To: Nick Weinberger
Cc: 'Rebecca Lesher'; Linh Pham
Subject: COCs for Seal Beach received today, 11/02/11

Nick,

Attached are the logins and COCs information for SDG: 11K014. Please verify the analyses required for the samples. Please see our SFR for details. Let me know if you have any questions. Thanks.

Ye Myint
Project Manager
EMAX Laboratories, Inc.
1835W 205th. St.
Torrance, CA 90501
Ph: 310-618-8889 x121
Fax: 310-618-0818
E-mail: ymyint@emaxlabs.com

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11K014
☑ EMAX Courier	COC	Recepient J-LUNA
☐ Client Delivery		Date 11-2-11
☐ Third Party		Time 1455

COC Inspection

☑ Client Name	☑ Client PM/FC	☐ Sampler Name NO	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☐ Preservative (if any)	☑ TAT
Safety Issues	☑ None	☐ High concentrations expected	☐ Superfund Site samples	☐ Rad screening required	

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☑ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	A ☑ Cooler 1 3.0 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C

Thermometer: ***A - S/N 101541371*** ***B - S/N 101541382***

Comments: ☐ **PM was informed on non-compliant coolers immediately.**

Note: **pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time .**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code
01 - 06		855, 945, 1052	D1	~~R2~~, R5, R6
		1148, 1200, 1250		JM 11/3/11
01 - 04, 06			H1	~~R2~~, ~~R7~~ R5, R7

REVIEWS

Sample Labeling _____ Date 11/2/11

SRF _____ Date 11/2/11

PM _____ Date 11/3/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4	_____	E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	Inform client
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	Follow time on labels
B3	Sample ID is inconsistent in COC vis-à-vis label	F2	Bubble is> 6mm	R7	R2
B4	_____	G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	UNPRES. BOTTLE = REQ STD FOR 160.1, 310.1, 300.0/NO IN LABELS		
C4	_____				

1003

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11K014

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K014

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of six (6) water samples were received on 11/02/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary form for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for VO01K03L/C were all within QC limits.
Percent recoveries for VO01K05L/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K014
Instrument ID : T-001

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V001K03B	1	NA	11/03/1110:25	11/03/1110:25	RKV058	RJV602	V001K03	Method Blank
LCS1W	V001K03L	1	NA	11/03/1108:47	11/03/1108:47	RKV055	RJV602	V001K03	Lab Control Sample (LCS)
LCD1W	V001K03C	1	NA	11/03/1109:18	11/03/1109:18	RKV056	RJV602	V001K03	LCS Duplicate
MW-70-MNA01-83	K014-01	1	NA	11/03/1116:03	11/03/1116:03	RKV069	RJV602	V001K03	Field Sample
MW-70-MNA04-86	K014-04	1	NA	11/03/1117:36	11/03/1117:36	RKV072	RJV602	V001K03	Field Sample
IR-70-TB-87	K014-05	1	NA	11/03/1118:07	11/03/1118:07	RKV073	RJV602	V001K03	Field Sample
MW-70-MNA05-88	K014-06	1	NA	11/03/1118:38	11/03/1118:38	RKV074	RJV602	V001K03	Field Sample
MBLK2W	V001K05B	1	NA	11/04/1110:14	11/04/1110:14	RKV104	RJV602	V001K05	Method Blank
LCS2W	V001K05L	1	NA	11/04/1108:36	11/04/1108:36	RKV101	RJV602	V001K05	Lab Control Sample (LCS)
LCD2W	V001K05C	1	NA	11/04/1109:07	11/04/1109:07	RKV102	RJV602	V001K05	LCS Duplicate
MW-70-MNA03-84	K014-02R	1	NA	11/04/1117:57	11/04/1117:57	RKV118	RJV602	V001K05	Field Sample
MW-70-MNA02-85	K014-03R	1	NA	11/04/1118:28	11/04/1118:28	RKV119	RJV602	V001K05	Field Sample
MW-70-MNA04-86DL	K014-04T	10	NA	11/04/1118:59	11/04/1118:59	RKV120	RJV602	V001K05	Diluted Sample
MW-70-MNA01-83DL	K014-01T	100	NA	11/04/1119:28	11/04/1119:28	RKV121	RJV602	V001K05	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/02/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/02/11
Batch No.	: 11K014	Date Extracted:	11/03/11 16:03
Sample ID:	MW-70-MNA01-83	Date Analyzed:	11/03/11 16:03
Lab Samp ID:	K014-01	Dilution Factor:	1
Lab File ID:	RKV069	Matrix	: WATER
Ext Btch ID:	VO01K03	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	0.24J	1.0	0.20
FREON113	1.6	1.0	0.30
1,1-DICHLOROETHANE	0.61J	1.0	0.20
1,1-DICHLOROETHENE	3.2	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	3.3	2.0	0.30
CHLOROFORM	1.7	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	320E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	0.65J	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	56	1.0	0.20
TRICHLOROETHENE	730E	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	240E	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.4	10.00	114	70-140
4-BROMOFLUOROBENZENE	11.1	10.00	111	70-130
TOLUENE-D8	9.98	10.00	99.8	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/02/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/02/11
Batch No. : 11K014	Date Extracted: 11/04/11 19:28
Sample ID: MW-70-MNA01-83DL	Date Analyzed: 11/04/11 19:28
Lab Samp ID: K014-01T	Dilution Factor: 100
Lab File ID: RKV121	Matrix : WATER
Ext Btch ID: V001K05	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	100	20
1,1,1,2-TETRACHLOROETHANE	ND	100	20
1,1,2,2-TETRACHLOROETHANE	ND	100	20
1,1,2-TRICHLOROETHANE	ND	100	20
FREON113	ND	100	30
1,1-DICHLOROETHANE	ND	100	20
1,1-DICHLOROETHENE	ND	50	20
1,1-DICHLOROPROPENE	ND	100	20
1,2-DIBROMO-3-CHLOROPROPANE	ND	200	50
1,2-DIBROMOETHANE	ND	100	20
1,2-DICHLOROBENZENE	ND	100	20
1,2-DICHLOROETHANE	ND	50	20
1,2-DICHLOROPROPANE	ND	100	20
1,2,3-TRICHLOROBENZENE	ND	100	30
1,2,3-TRICHLOROPROPANE	ND	100	50
1,2,4-TRICHLOROBENZENE	ND	100	30
1,2,4-TRIMETHYLBENZENE	ND	100	20
1,3-DICHLOROBENZENE	ND	100	20
1,3,5-TRIMETHYLBENZENE	ND	100	20
1,4-DICHLOROBENZENE	ND	100	20
2-BUTANONE	ND	1000	400
2-CHLOROTOLUENE	ND	100	20
2-HEXANONE	ND	1000	400
2,2-DICHLOROPROPANE	ND	100	20
4-CHLOROTOLUENE	ND	100	20
4-METHYL-2-PENTANONE	ND	1000	400
N-BUTYLBENZENE	ND	100	20
N-PROPYLBENZENE	ND	100	20
P-ISOPROPYLTOLUENE	ND	100	20
SEC-BUTYLBENZENE	ND	100	20
TERT-BUTYLBENZENE	ND	100	20
ACETONE	ND	1000	500
BENZENE	ND	100	20
BROMOBENZENE	ND	100	20
BROMODICHLOROMETHANE	ND	100	20
CIS-1,3-DICHLOROPROPENE	ND	100	20
TRANS-1,3-DICHLOROPROPENE	ND	100	20
BROMOMETHANE	ND	200	30
BROMOFORM	ND	100	30
CARBON DISULFIDE	ND	100	20
CARBON TETRACHLORIDE	ND	50	20
CHLOROBENZENE	ND	100	20
CHLOROETHANE	ND	200	30
CHLOROFORM	ND	100	20
CHLOROMETHANE	ND	200	30
CIS-1,2-DICHLOROETHENE	380	100	20
DICHLORODIFLUOROMETHANE	ND	200	30
DIBROMOCHLOROMETHANE	ND	100	20
DIBROMOMETHANE	ND	100	20
ETHYLBENZENE	ND	100	20
HEXACHLOROBUTADIENE	ND	100	30
ISOPROPYL BENZENE	ND	100	20
METHYLENE CHLORIDE	ND	100	50
MTBE	ND	100	20
STYRENE	ND	100	20
TETRACHLOROETHYLENE	ND	100	20
TOLUENE	ND	100	20
TRANS-1,2-DICHLOROETHENE	63J	100	20
TRICHLOROETHENE	2800	500	20
TRICHLOROFLUOROMETHANE	ND	200	30
VINYL CHLORIDE	290	50	20
XYLENES (TOTAL)	ND	200	60
M/P-XYLENES	ND	100	40
O-XYLENE	ND	100	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	1150	1000	115	70-140
4-BROMOFLUOROBENZENE	1100	1000	110	70-130
TOLUENE-D8	1010	1000	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/02/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/02/11
Batch No.	: 11K014	Date Extracted:	11/04/11 17:57
Sample ID:	MW-70-MNA03-84	Date Analyzed:	11/04/11 17:57
Lab Samp ID:	K014-02R	Dilution Factor:	1
Lab File ID:	RKV118	Matrix	: WATER
Ext Btch ID:	V001K05	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	29	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	8.0	0.50	0.20
1,2-DICHLOROPROPANE	5.6	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	5.4	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	0.34J	1.0	0.20
TRICHLOROETHENE	0.61J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	0.45J	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.4	10.00	114	70-140
4-BROMOFLUOROBENZENE	10.6	10.00	106	70-130
TOLUENE-D8	9.92	10.00	99.2	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/02/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/02/11
Batch No.	: 11K014	Date Extracted:	11/04/11 18:28
Sample ID:	MW-70-MNA02-85	Date Analyzed:	11/04/11 18:28
Lab Samp ID:	K014-03R	Dilution Factor:	1
Lab File ID:	RKV119	Matrix	: WATER
Ext Btch ID:	V001K05	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	13	1.0	0.20
1,1-DICHLOROETHENE	0.78	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	1.2	0.50	0.20
1,2-DICHLOROPROPANE	0.91J	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	0.65J	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	71	1.0	0.20
DICHLORODIFLUOROMETHANE	0.46J	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	3.3	1.0	0.20
TRICHLOROETHENE	26	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	10	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.7	10.00	117	70-140
4-BROMOFLUOROBENZENE	10.5	10.00	105	70-130
TOLUENE-D8	9.91	10.00	99.1	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/02/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/02/11
Batch No. : 11K014	Date Extracted: 11/03/11 17:36
Sample ID: MW-70-MNA04-86	Date Analyzed: 11/03/11 17:36
Lab Samp ID: K014-04	Dilution Factor: 1
Lab File ID: RKV072	Matrix : WATER
Ext Btch ID: V001K03	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	0.42J	1.0	0.20
FREON113	3.9	1.0	0.30
1,1-DICHLOROETHANE	33	1.0	0.20
1,1-DICHLOROETHENE	2.3	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	6.0	0.50	0.20
1,2-DICHLOROPROPANE	2.7	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	0.30J	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	0.63J	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	120E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	4.8	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	3.9	1.0	0.20
TRICHLOROETHENE	190E	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	4.1	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.1	10.00	111	70-140
4-BROMOFLUOROBENZENE	10.9	10.00	109	70-130
TOLUENE-D8	9.87	10.00	98.7	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/02/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/02/11
Batch No. : 11K014	Date Extracted: 11/04/11 18:59
Sample ID: MW-70-MNA04-86DL	Date Analyzed: 11/04/11 18:59
Lab Samp ID: K014-04T	Dilution Factor: 10
Lab File ID: RKV120	Matrix : WATER
Ext Btch ID: V001K05	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	10	2.0
1,1,1,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2-TRICHLOROETHANE	ND	10	2.0
FREON113	3.9J	10	3.0
1,1-DICHLOROETHANE	35	10	2.0
1,1-DICHLOROETHENE	2.3J	5.0	2.0
1,1-DICHLOROPROPENE	ND	10	2.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	20	5.0
1,2-DIBROMOETHANE	ND	10	2.0
1,2-DICHLOROBENZENE	ND	10	2.0
1,2-DICHLOROETHANE	6.3	5.0	2.0
1,2-DICHLOROPROPANE	3.0J	10	2.0
1,2,3-TRICHLOROBENZENE	ND	10	3.0
1,2,3-TRICHLOROPROPANE	ND	10	5.0
1,2,4-TRICHLOROBENZENE	ND	10	3.0
1,2,4-TRIMETHYLBENZENE	ND	10	2.0
1,3-DICHLOROBENZENE	ND	10	2.0
1,3,5-TRIMETHYLBENZENE	ND	10	2.0
1,4-DICHLOROBENZENE	ND	10	2.0
2-BUTANONE	ND	100	40
2-CHLOROTOLUENE	ND	10	2.0
2-HEXANONE	ND	100	40
2,2-DICHLOROPROPANE	ND	10	2.0
4-CHLOROTOLUENE	ND	10	2.0
4-METHYL-2-PENTANONE	ND	100	40
N-BUTYLBENZENE	ND	10	2.0
N-PROPYLBENZENE	ND	10	2.0
P-ISOPROPYLTOLUENE	ND	10	2.0
SEC-BUTYLBENZENE	ND	10	2.0
TERT-BUTYLBENZENE	ND	10	2.0
ACETONE	ND	100	50
BENZENE	ND	10	2.0
BROMOBENZENE	ND	10	2.0
BROMODICHLOROMETHANE	ND	10	2.0
CIS-1,3-DICHLOROPROPENE	ND	10	2.0
TRANS-1,3-DICHLOROPROPENE	ND	10	2.0
BROMOMETHANE	ND	20	3.0
BROMOFORM	ND	10	3.0
CARBON DISULFIDE	ND	10	2.0
CARBON TETRACHLORIDE	ND	5.0	2.0
CHLOROBENZENE	ND	10	2.0
CHLOROETHANE	ND	20	3.0
CHLOROFORM	ND	10	2.0
CHLOROMETHANE	ND	20	3.0
CIS-1,2-DICHLOROETHENE	130	10	2.0
DICHLORODIFLUOROMETHANE	ND	20	3.0
DIBROMOCHLOROMETHANE	ND	10	2.0
DIBROMOMETHANE	ND	10	2.0
ETHYLBENZENE	ND	10	2.0
HEXACHLOROBUTADIENE	ND	10	3.0
ISOPROPYL BENZENE	ND	10	2.0
METHYLENE CHLORIDE	ND	10	5.0
MTBE	ND	10	2.0
STYRENE	ND	10	2.0
TETRACHLOROETHYLENE	4.5J	10	2.0
TOLUENE	ND	10	2.0
TRANS-1,2-DICHLOROETHENE	4.1J	10	2.0
TRICHLOROETHENE	210	50	2.0
TRICHLOROFLUOROMETHANE	ND	20	3.0
VINYL CHLORIDE	4.5J	5.0	2.0
XYLENES (TOTAL)	ND	20	6.0
M/P-XYLENES	ND	10	4.0
O-XYLENE	ND	10	2.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	118	100.0	118	70-140
4-BROMOFLUOROBENZENE	110	100.0	110	70-130
TOLUENE-D8	96.9	100.0	96.9	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/02/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/02/11
Batch No.	: 11K014	Date Extracted:	11/03/11 18:07
Sample ID:	IR-70-TB-87	Date Analyzed:	11/03/11 18:07
Lab Samp ID:	K014-05	Dilution Factor:	1
Lab File ID:	RKV073	Matrix	: WATER
Ext Btch ID:	V001K03	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.2	10.00	112	70-140
4-BROMOFLUOROBENZENE	10.8	10.00	108	70-130
TOLUENE-D8	9.92	10.00	99.2	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/02/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/02/11
Batch No. : 11K014	Date Extracted: 11/03/11 18:38
Sample ID: MW-70-MNA05-88	Date Analyzed: 11/03/11 18:38
Lab Samp ID: K014-06	Dilution Factor: 1
Lab File ID: RKV074	Matrix : WATER
Ext Btch ID: V001K03	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.24J	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	0.57J	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	0.39J	1.0	0.20
TRICHLOROETHENE	0.67J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	42	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.1	10.00	111	70-140
4-BROMOFLUOROBENZENE	10.5	10.00	105	70-130
TOLUENE-D8	9.98	10.00	99.8	70-140

QC SUMMARIES

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/03/11
Batch No. : 11K014	Date Extracted: 11/03/11 10:25
Sample ID: MBLK1W	Date Analyzed: 11/03/11 10:25
Lab Samp ID: V001K03B	Dilution Factor: 1
Lab File ID: RKV058	Matrix : WATER
Ext Btch ID: V001K03	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.3	10.00	103	70-140
4-BROMOFLUOROBENZENE	10.2	10.00	102	70-130
TOLUENE-D8	10.3	10.00	103	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K014
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	VO01K03B	VO01K03L	VO01K03C		
LAB FILE ID:	RKV058	RKV055	RKV056		
DATE EXTRACTED:	11/03/1110:25	11/03/1108:47	11/03/1109:18	DATE COLLECTED:	NA
DATE ANALYZED:	11/03/1110:25	11/03/1108:47	11/03/1109:18	DATE RECEIVED:	11/03/11
PREP. BATCH:	VO01K03	VO01K03	VO01K03		
CALIB. REF:	RJV602	RJV602	RJV602		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.48	95	10.0	9.29	93	2	60-130	30
Benzene	ND	10.0	9.45	94	10.0	9.48	95	0	70-130	30
Chlorobenzene	ND	10.0	9.86	99	10.0	9.85	99	0	70-120	30
Toluene	ND	10.0	9.57	96	10.0	9.55	95	0	70-130	30
Trichloroethene	ND	10.0	9.63	96	10.0	9.54	95	1	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	10.1	101	10.0	9.87	99	70-140
4-Bromofluorobenzene	10.0	9.72	97	10.0	9.41	94	70-130
Toluene-d8	10.0	9.97	100	10.0	9.83	98	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/04/11
Batch No. : 11K014	Date Extracted: 11/04/11 10:14
Sample ID: MBLK2W	Date Analyzed: 11/04/11 10:14
Lab Samp ID: V001K05B	Dilution Factor: 1
Lab File ID: RKV104	Matrix : WATER
Ext Btch ID: V001K05	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.2	10.00	102	70-140
4-BROMOFLUOROBENZENE	10.7	10.00	107	70-130
TOLUENE-D8	10.1	10.00	101	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K014
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	VO01K05B	VO01K05L	VO01K05C		
LAB FILE ID:	RKV104	RKV101	RKV102		
DATE EXTRACTED:	11/04/1110:14	11/04/1108:36	11/04/1109:07	DATE COLLECTED:	NA
DATE ANALYZED:	11/04/1110:14	11/04/1108:36	11/04/1109:07	DATE RECEIVED:	11/04/11
PREP. BATCH:	VO01K05	VO01K05	VO01K05		
CALIB. REF:	RJV602	RJV602	RJV602		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	10.0	100	10.0	9.28	93	8	60-130	30
Benzene	ND	10.0	9.64	96	10.0	9.21	92	5	70-130	30
Chlorobenzene	ND	10.0	10.2	102	10.0	9.69	97	5	70-120	30
Toluene	ND	10.0	9.83	98	10.0	9.38	94	5	70-130	30
Trichloroethene	ND	10.0	9.69	97	10.0	9.34	93	4	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	11.0	110	10.0	10.0	100	70-140
4-Bromofluorobenzene	10.0	9.40	94	10.0	9.37	94	70-130
Toluene-d8	10.0	9.82	98	10.0	9.78	98	70-130

INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RJV596
Instrument ID: T001
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K014
BFB Injection Date : 10/31/11
BFB Injection Time : 09:18
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.79
75	30.0 - 60.0% of mass 95	51.84
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.73
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	73.40
175	5.0 - 9.0% of mass 174	5.20(7.1)1
176	95.0 - 101.0% of mass 174	72.01(98.1)1
177	5.0 - 9.0% of mass 176	4.99(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	VO01J311	RJV597	10/31/11	09:59
2	VSTD0.5	VO01J312	RJV598	10/31/11	10:30
3	VSTD01	VO01J313	RJV599	10/31/11	11:01
4	VSTD02	VO01J314	RJV600	10/31/11	11:32
5	VSTD05	VO01J315	RJV601	10/31/11	12:03
6	VSTD010	VO01J316	RJV602	10/31/11	12:33
7	VSTD020	VO01J317	RJV603	10/31/11	13:04
8	VSTD030	VO01J318	RJV604	10/31/11	13:35
9	VSTD050	VO01J319	RJV605	10/31/11	14:05
10	VSTD100	VO01J3110	RJV606	10/31/11	14:36
11	VSTD010	IVO01J311	RJV609	10/31/11	16:07

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :TO01
Beginning DateTime :10/31/11 09:59
Spike Units :PPB
IC File :RJV602

Column Spec :RTX502.2 ID :0.32MM
Ending DateTime :10/31/11 14:36
HPChem Method :VO01J31

	M IDX	Parameters	.3 09:59 RJV597	.5 10:30 RJV598	1 11:01 RJV599	2 11:32 RJV600	5 12:03 RJV601	10 12:33 RJV602	20 13:04 RJV603	30 13:35 RJV604	50 14:05 RJV605	100 14:36 RJV606	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	0	7.7772
	2	Chlorotrifluoroethylene	------	0.109	0.142	0.158	0.161	0.161	0.174	0.164	0.169	0.164	0.156	12.57	2.1081
	3	Dichlorodifluoromethane	0.309	0.336	0.351	0.390	0.390	0.404	0.374	0.355	0.365	0.359	0.363	7.72	2.1576
	4	Chloromethane	0.424	0.438	0.439	0.437	0.442	0.478	0.432	0.422	0.420	0.418	0.435	4.03	2.3766
	5	Vinyl chloride	0.390	0.428	0.455	0.475	0.480	0.515	0.481	0.460	0.478	0.455	0.461	7.36	2.5408
	6	2-Chloro-1,1,1-trifluoroethane	0.267	0.292	0.352	0.405	0.357	0.346	0.367	0.343	0.340	0.315	0.338	11.52	2.6548
	7	Bromomethane	0.218	0.243	0.243	0.252	0.251	0.264	0.237	0.222	0.213	0.143	0.229	14.94	2.9004
	8	Chloroethane	0.371	0.316	0.291	0.288	0.275	0.285	0.269	0.252	0.251	0.223	0.282	14.40	3.0217
	9	Dichlorofluoromethane	0.808	0.730	0.755	0.724	0.730	0.705	0.722	0.671	0.654	0.622	0.712	7.42	3.3088
	10	Trichlorofluoromethane	------	0.394	0.410	0.439	0.446	0.459	0.428	------	------	------	0.429	5.60	3.3129
5	11	Acrolein	------	------	0.015	0.012	0.011	0.011	0.011	0.011	0.011	0.010	0.011	12.29	3.8010
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	0.227	0.210	0.222	0.216	0.226	0.217	0.224	0.216	0.216	0.214	0.219	2.60	3.9761
5	13	Acetone	------	------	0.054	0.046	0.045	0.046	0.044	0.040	0.039	0.036	0.044	12.62	3.9619
	14	1,1-Dichloroethene	0.682	0.667	0.685	0.687	0.691	0.670	0.668	0.631	0.616	0.584	0.658	5.45	3.9272
	15	Iodomethane	0.473	0.447	0.475	0.470	0.485	0.478	0.497	0.482	0.491	0.488	0.479	2.89	4.1122
	16	Carbon disulfide	1.104	0.866	0.961	0.999	1.070	0.991	1.192	1.135	1.223	1.201	1.074	10.99	4.2084
	17	Methylene chloride	0.589	0.509	0.526	0.494	0.501	0.484	0.501	0.484	0.485	0.473	0.505	6.57	4.5117
5	18	tert-Butyl alcohol	------	------	0.011	0.010	0.011	0.012	0.014	0.013	0.012	0.012	0.012	10.38	4.6333
5	19	Acrylonitrile	0.057	0.049	0.054	0.049	0.054	0.054	0.056	0.055	0.055	0.054	0.054	4.68	4.7766
	20	tert-Butyl methyl ether (MTBE)	0.581	0.545	0.619	0.597	0.611	0.595	0.636	0.580	0.573	0.550	0.589	4.92	4.8372
	21	trans-1,2-Dichloroethene	0.705	0.636	0.678	0.676	0.683	0.672	0.685	0.661	0.654	0.626	0.668	3.56	4.8505
	22	Vinyl acetate	------	0.362	0.399	0.481	0.527	0.523	0.516	0.523	0.507	0.446	0.476	12.74	5.3567
	23	1,1-Dichloroethane	0.823	0.707	0.773	0.758	0.764	0.745	0.768	0.750	0.748	0.727	0.756	4.05	5.3714
	24	Isopropyl ether (DIPE)	1.407	1.255	1.338	1.339	1.359	1.324	1.393	1.341	1.334	------	1.343	3.23	5.4144
5	25	2-Butanol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	26	tert-Butyl ethyl ether (ETBE)	1.023	0.928	1.019	0.963	0.989	0.968	1.012	0.923	0.924	0.912	0.966	4.44	5.8596
5	27	2-Butanone	0.072	0.064	0.071	0.064	0.072	0.073	0.077	0.073	0.072	0.069	0.071	5.82	6.0416
	28	cis-1,2-Dichloroethene	0.393	0.357	0.386	0.385	0.379	0.374	0.391	0.380	0.379	0.368	0.379	2.86	6.0801
	29	2,2-Dichloropropane	0.598	0.568	0.573	0.560	0.561	0.534	0.532	0.496	0.488	0.469	0.538	7.77	6.0993
	30	Bromochloromethane	0.309	0.297	0.317	0.305	0.307	0.309	0.319	0.301	0.297	0.289	0.305	3.06	6.3775
	31	Chloroform	0.660	0.608	0.644	0.641	0.661	0.654	0.655	0.620	0.616	0.606	0.636	3.47	6.5047
	32	Dibromofluoromethane	0.282	0.250	0.254	0.287	0.283	0.277	0.288	0.274	0.275	0.266	0.274	4.90	6.7089
	33	1,1,1-Trichloroethane	0.511	0.499	0.523	0.513	0.526	0.516	0.513	0.485	0.488	0.482	0.506	3.15	6.7459
	34	tert-Amyl methyl ether (TAME)	0.134	0.128	0.146	0.142	0.146	0.148	0.155	0.144	0.141	0.136	0.142	5.46	7.3807
	35	1,2-Dichloroethane-d4	0.295	0.293	0.281	0.319	0.317	0.298	0.304	0.276	0.273	0.266	0.292	6.16	7.1646
	36	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	0	12.3211
	37	1,1-Dichloropropene	0.235	0.213	0.208	0.199	0.205	0.203	0.202	0.208	0.204	0.202	0.208	4.86	6.9486
	38	Carbon tetrachloride	0.524	0.459	0.480	0.500	0.518	0.514	0.503	0.498	0.487	0.498	0.498	3.89	6.9546
	39	Benzene	1.929	1.746	1.769	1.711	1.749	1.714	1.733	1.752	1.800	------	1.767	3.77	7.2081
	40	1,2-Dichloroethane	0.464	0.438	0.454	0.442	0.456	0.445	0.441	0.417	0.415	0.410	0.438	4.24	7.2697
	41	Trichloroethene	0.487	0.420	0.428	0.433	0.441	0.435	0.444	0.437	0.449	0.451	0.442	4.13	8.1205
	42	1,2-Dichloropropane	0.496	0.463	0.451	0.450	0.461	0.447	0.455	0.452	0.461	0.455	0.459	3.08	8.4889
20	43	1,4-Dioxane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	44	Dibromomethane	0.151	0.142	0.151	0.143	0.152	0.151	0.153	0.147	0.150	0.151	0.149	2.57	8.6117
	45	Bromodichloromethane	0.536	0.466	0.498	0.506	0.523	0.517	0.528	0.510	0.518	0.519	0.512	3.82	8.8633
	46	2-Chloroethyl vinyl ether	0.106	0.092	0.109	0.108	0.117	0.121	0.135	0.127	0.132	0.135	0.118	12.09	9.2716
	47	cis-1,3-Dichloropropene	0.638	0.563	0.591	0.602	0.617	0.610	0.632	0.618	0.632	0.634	0.614	3.83	9.5247
5	48	4-Methyl-2-pentanone	0.209	0.181	0.188	0.176	0.198	0.205	0.219	0.209	0.215	0.212	0.201	7.38	9.7348
	49	Toluene-d8	1.537	1.362	1.194	1.412	1.388	1.334	1.400	1.406	1.417	------	1.383	6.52	9.9520
	50	Toluene	1.907	1.740	1.719	1.699	1.743	1.702	1.724	1.760	1.786	------	1.753	3.65	10.0604
	51	Ethyl methacrylate	0.317	0.261	0.296	0.297	0.326	0.344	0.371	0.359	0.362	0.362	0.330	11.06	10.5042
	52	trans-1,3-Dichloropropene	0.446	0.396	0.447	0.443	0.471	0.468	0.480	0.460	0.466	0.467	0.454	5.28	10.4169
	53	1,1,2-Trichloroethane	0.243	0.203	0.217	0.208	0.215	0.211	0.222	0.214	0.215	0.212	0.216	4.93	10.7439
	54	Tetrachloroethene	0.381	0.340	0.352	0.348	0.357	0.356	0.357	0.352	0.358	0.361	0.356	2.94	10.9066
	55	1,3-Dichloropropane	0.467	0.414	0.447	0.441	0.452	0.455	0.468	0.449	0.457	0.442	0.449	3.40	11.0161
5	56	2-Hexanone	0.139	0.115	0.119	0.111	0.126	0.135	0.144	0.141	0.143	0.141	0.131	9.50	11.0857
	57	Dibromochloromethane	0.232	0.231	0.244	0.250	0.264	0.269	0.280	0.265	0.266	0.268	0.257	6.52	11.3816
	58	1,2-Dibromoethane	0.199	0.179	0.201	0.204	0.210	0.209	0.221	0.209	0.210	0.209	0.205	5.44	11.5946

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59	1-Chlorohexane	0.816	0.718	0.707	0.695	0.728	0.717	0.725	0.721	0.722	0.703	0.725	4.61	12.3360
60	Chlorobenzene	1.034	0.946	0.995	0.993	1.039	1.037	1.038	1.023	1.017	0.974	1.010	3.12	12.3641
61	1,1,1,2-Tetrachloroethane	0.350	0.301	0.326	0.332	0.346	0.344	0.351	0.335	0.334	0.322	0.334	4.52	12.4898
62	Ethylbenzene	2.164	1.945	1.977	1.991	2.089	2.054	2.104	2.054	1.984	------	2.040	3.49	12.5018
2 63	m-Xylene & p-Xylene	1.610	1.482	1.470	1.505	1.572	1.573	1.567	1.538	------	------	1.540	3.23	12.6812
64	o-Xylene	1.589	1.453	1.476	1.474	1.569	1.547	1.546	1.502	1.481	------	1.515	3.19	13.1841
65	Styrene	1.016	0.911	1.000	1.022	1.143	1.156	1.192	1.187	1.174	1.038	1.084	9.03	13.2134
66	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	0	15.4150
67	Bromoform	0.300	0.296	0.320	0.305	0.327	0.327	0.344	0.343	0.359	0.377	0.330	7.98	13.4427
68	Isopropylbenzene	5.486	4.993	4.975	4.842	4.950	4.869	4.800	4.988	4.786	------	4.966	4.25	13.6379
69	4-Bromofluorobenzene	1.481	1.312	1.095	1.243	1.225	1.133	1.166	1.195	1.226	1.246	1.232	8.67	13.8452
70	1,1,2,2-Tetrachloroethane	0.708	0.641	0.683	0.668	0.684	0.663	0.694	0.682	0.687	0.686	0.680	2.70	13.9828
71	Bromobenzene	1.217	0.984	1.027	0.976	0.999	0.987	0.997	1.005	------	------	1.024	7.74	14.0073
72	trans-1,4-Dichloro-2-butene	0.150	0.153	0.174	0.160	0.173	0.179	0.189	0.184	0.186	0.192	0.174	8.64	14.0272
73	1,2,3-Trichloropropane	0.208	0.163	0.191	0.169	0.172	0.165	0.171	0.165	0.166	0.171	0.174	8.18	14.0538
74	n-Propylbenzene	6.681	6.426	6.296	6.295	6.395	6.353	6.300	6.476	------	------	6.403	2.04	14.1128
75	1,3,5-Trimethylbenzene	4.223	4.025	4.069	4.018	4.178	4.115	4.097	4.107	4.142	------	4.108	1.64	14.3070
76	2-Chlorotoluene	3.930	3.660	3.570	3.417	3.531	3.421	3.367	3.429	3.495	------	3.536	4.91	14.2149
77	4-Chlorotoluene	4.164	3.976	3.937	3.805	3.928	3.864	3.769	3.804	3.846	------	3.899	3.11	14.3481
78	tert-Butylbenzene	0.968	0.910	0.914	0.906	0.922	0.915	0.906	0.923	0.918	0.917	0.920	1.93	14.6442
79	1,2,4-Trimethylbenzene	4.266	3.870	3.910	3.868	3.983	4.040	3.945	3.951	3.974	3.171	3.898	7.18	14.7033
80	sec-Butylbenzene	5.313	4.991	5.022	5.120	5.427	5.421	5.317	5.421	4.953	------	5.221	3.80	14.8692
81	p-Isopropyltoluene	4.020	3.777	3.939	4.070	4.305	4.382	4.330	4.345	4.239	3.076	4.048	9.79	15.0185
82	1,3-Dichlorobenzene	2.001	1.931	1.924	1.887	1.975	1.984	1.970	1.966	1.997	1.986	1.962	1.87	14.9948
83	1,4-Dichlorobenzene	1.937	1.762	1.795	1.801	1.875	1.890	1.897	1.889	1.897	1.885	1.863	3.02	15.0954
84	n-Butylbenzene	3.778	3.544	3.535	3.722	3.974	4.177	4.224	4.173	4.098	------	3.914	7.03	15.4019
85	1,2-Dichlorobenzene	1.623	1.514	1.544	1.533	1.578	1.581	1.583	1.550	1.545	1.563	1.561	2.00	15.4328
86	1,2-Dibromo-3-chloropropane	------	0.054	0.073	0.074	0.076	0.081	0.086	0.084	0.086	0.090	0.078	14.04	16.1711
87	1,2,4-Trichlorobenzene	0.599	0.558	0.592	0.622	0.706	0.786	0.817	0.793	0.802	------	0.697	15.05	16.9571
88	Hexachlorobutadiene	0.532	0.483	0.519	0.518	0.581	0.602	0.586	0.560	0.550	0.625	0.556	7.87	17.0855
89	Naphthalene	------	0.848	0.785	0.727	0.815	0.969	1.054	------	------	------	0.866	14.11	17.2361
90	1,2,3-Trichlorobenzene	0.465	0.412	0.437	0.448	0.513	0.579	0.599	0.581	0.590	------	0.514	14.54	17.4553

Spike Amount = Nominal Amount * M
Ave_%RSD : 6.3 Max_%RSD : 15

Use Least Square Linear Regression with weighting factor of inverse concentration for comps with %_RSD > 15
Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
87	1,2,4-Trichlorobenzene	-0.01281	0.80017	0.9994

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SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :T001
IC_Beginning DateTime :10/31/11 09:59
Spike Amount :10 PPB
CC/CV File :RJV609
IC File :RJV602

Column Spec :RTX502.2 ID :0.32MM
IC_Ending DateTime :10/31/11 14:36
HPChem Method :V001J31
Date_Time :10/31/11 16:07

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	2078216	1	1	7.785	7.777	0				
	2	Chlorotrifluoroethylene	10.337	3.4	334837	0.161	0.156	2.118	2.108	12.57				
	3	Dichlorodifluoromethane	8.998	-10.0	679552	0.327	0.363	2.163	2.158	7.72				
	4	Chloromethane	9.368	-6.3	847031	0.408	0.435	2.385	2.377	4.03				
	5	Vinyl chloride	9.570	-4.3	917897	0.442	0.461	2.547	2.541	7.36				
	6	2-Chloro-1,1,1-trifluoroethane	10.198	2.0	717414	0.345	0.338	2.666	2.655	11.52				
	7	Bromomethane	10.172	1.7	483272	0.233	0.229	2.917	2.900	14.94				
	8	Chloroethane	9.111	-8.9	534262	0.257	0.282	3.036	3.022	14.40				
	9	Dichlorofluoromethane	9.679	-3.2	1432022	0.689	0.712	3.317	3.309	7.42				
	10	Trichlorofluoromethane	8.656	-13.4	772218	0.372	0.429	3.317	3.313	5.60				
5	11	Acrolein	50.524	1.0	118784	0.011	0.011	3.805	3.801	12.29				
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	9.899	-1.0	450197	0.217	0.219	3.983	3.976	2.60				
5	13	Acetone	48.877	-2.2	445516	0.043	0.044	3.968	3.962	12.62				
	14	1,1-Dichloroethene	9.655	-3.5	1320508	0.635	0.658	3.938	3.927	5.45				
	15	Iodomethane	10.262	2.6	1020558	0.491	0.479	4.116	4.112	2.89				
	16	Carbon disulfide	10.377	3.8	2316232	1.115	1.074	4.219	4.208	10.99				
	17	Methylene chloride	9.852	-1.5	1033145	0.497	0.505	4.515	4.512	6.57				
5	18	tert-Butyl alcohol	49.112	-1.8	120463	0.012	0.012	4.634	4.633	10.38				
5	19	Acrylonitrile	52.562	5.1	587908	0.057	0.054	4.781	4.777	4.68				
	20	tert-Butyl methyl ether (MTBE)	10.014	0.1	1225298	0.590	0.589	4.841	4.837	4.92				
	21	trans-1,2-Dichloroethene	9.877	-1.2	1370568	0.659	0.668	4.856	4.851	3.56				
	22	Vinyl acetate	10.093	0.9	998377	0.480	0.476	5.359	5.357	12.74				
	23	1,1-Dichloroethane	10.049	0.5	1579616	0.760	0.756	5.373	5.371	4.05				
	24	Isopropyl ether (DIPE)	10.337	3.4	2886019	1.389	1.343	5.418	5.414	3.23				
5	25	2-Butanol												
	26	tert-Butyl ethyl ether (ETBE)	9.749	-2.5	1957252	0.942	0.966	5.862	5.860	4.44				
5	27	2-Butanone	52.537	5.1	771595	0.074	0.071	6.039	6.042	5.82				
	28	cis-1,2-Dichloroethene	10.308	3.1	812742	0.391	0.379	6.084	6.080	2.86				
	29	2,2-Dichloropropane	9.670	-3.3	1080913	0.520	0.538	6.098	6.099	7.77				
	30	Bromochloromethane	9.920	-0.8	629180	0.303	0.305	6.379	6.378	3.06				
	31	Chloroform	9.731	-2.7	1287132	0.619	0.636	6.513	6.505	3.47				
	32	Dibromofluoromethane	9.632	-3.7	547922	0.264	0.274	6.720	6.709	4.90				
	33	1,1,1-Trichloroethane	9.429	-5.7	990643	0.477	0.506	6.749	6.746	3.15				
	34	tert-Amyl methyl ether (TAME)	10.176	1.8	300183	0.144	0.142	7.386	7.381	5.46				
	35	1,2-Dichloroethane-d4	8.932	-10.7	542346	0.261	0.292	7.179	7.165	6.16				
	36	CHLOROBENZENE-D5	10.000	0	1765489	1	1	12.328	12.321	0				
	37	1,1-Dichloropropene	9.645	-3.5	354243	0.201	0.208	6.957	6.949	4.86				
	38	Carbon tetrachloride	9.552	-4.5	840066	0.476	0.498	6.957	6.955	3.89				
	39	Benzene	10.189	1.9	3178606	1.800	1.767	7.223	7.208	3.77				
	40	1,2-Dichloroethane	9.335	-6.6	722336	0.409	0.438	7.282	7.270	4.24				
	41	Trichloroethene	10.044	0.4	784620	0.444	0.442	8.125	8.120	4.13				
	42	1,2-Dichloropropane	10.004	0.0	810670	0.459	0.459	8.495	8.489	3.08				
20	43	1,4-Dioxane												
	44	Dibromomethane	10.144	1.4	266983	0.151	0.149	8.614	8.612	2.57				
	45	Bromodichloromethane	9.799	-2.0	885837	0.502	0.512	8.865	8.863	3.82				
	46	2-Chloroethyl vinyl ether	10.396	4.0	217043	0.123	0.118	9.280	9.272	12.09				
	47	cis-1,3-Dichloropropene	10.050	0.5	1089123	0.617	0.614	9.531	9.525	3.83				
5	48	4-Methyl-2-pentanone	51.482	3.0	1827746	0.207	0.201	9.738	9.735	7.38				
	49	Toluene-d8	9.543	-4.6	2330918	1.320	1.383	9.960	9.952	6.52				
	50	Toluene	10.051	0.5	3111412	1.762	1.753	10.064	10.060	3.65				
	51	Ethyl methacrylate	10.418	4.2	606348	0.343	0.330	10.508	10.504	11.06				
	52	trans-1,3-Dichloropropene	10.018	0.2	803608	0.455	0.454	10.419	10.417	5.28				
	53	1,1,2-Trichloroethane	9.987	-0.1	380807	0.216	0.216	10.744	10.744	4.93				
	54	Tetrachloroethene	9.960	-0.4	626428	0.355	0.356	10.922	10.907	2.94				
	55	1,3-Dichloropropane	10.067	0.7	798400	0.452	0.449	11.026	11.016	3.40				
5	56	2-Hexanone	50.570	1.1	1173148	0.133	0.131	11.085	11.086	9.50				
	57	Dibromochloromethane	10.095	1.0	457958	0.259	0.257	11.395	11.382	6.52				
	58	1,2-Dibromoethane	10.098	1.0	365541	0.207	0.205	11.603	11.595	5.44				
	59	1-Chlorohexane	9.938	-0.6	1272480	0.721	0.725	12.342	12.336	4.61				

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60	Chlorobenzene	10.114	1.1	1802805	1.021	1.010	12.372	12.364	3.12				
61	1,1,1,2-Tetrachloroethane	10.026	0.3	591491	0.335	0.334	12.490	12.490	4.52				
62	Ethylbenzene	10.043	0.4	3617689	2.049	2.040	12.505	12.502	3.49				
2 63	m-Xylene & p-Xylene	19.918	-0.4	5414517	1.533	1.540	12.683	12.681	3.23				
64	o-Xylene	9.951	-0.5	2662138	1.508	1.515	13.186	13.184	3.19				
65	Styrene	10.684	6.8	2044347	1.158	1.084	13.215	13.213	9.03				
66	1,2-DICHLOROBENZENE-D4	10.000	0	676620	1	1	15.420	15.415	0				
67	Bromoform	9.880	-1.2	220603	0.326	0.330	13.452	13.443	7.98				
68	Isopropylbenzene	9.790	-2.1	3289549	4.862	4.966	13.644	13.638	4.25				
69	4-Bromofluorobenzene	8.942	-10.6	745615	1.102	1.232	13.852	13.845	8.67				
70	1,1,2,2-Tetrachloroethane	9.932	-0.7	456807	0.675	0.680	13.985	13.983	2.70				
71	Bromobenzene	9.698	-3.0	672008	0.993	1.024	14.014	14.007	7.74				
72	trans-1,4-Dichloro-2-butene	10.164	1.6	119681	0.177	0.174	14.029	14.027	8.64				
73	1,2,3-Trichloropropane	9.577	-4.2	112697	0.167	0.174	14.059	14.054	8.18				
74	n-Propylbenzene	9.990	-0.1	4328062	6.397	6.403	14.118	14.113	2.04				
75	1,3,5-Trimethylbenzene	9.868	-1.3	2743150	4.054	4.108	14.310	14.307	1.64				
76	2-Chlorotoluene	9.609	-3.9	2298732	3.397	3.536	14.222	14.215	4.91				
77	4-Chlorotoluene	9.834	-1.7	2594676	3.835	3.899	14.355	14.348	3.11				
78	tert-Butylbenzene	9.925	-0.7	617877	0.913	0.920	14.651	14.644	1.93				
79	1,2,4-Trimethylbenzene	10.070	0.7	2655963	3.925	3.898	14.710	14.703	7.18				
80	sec-Butylbenzene	10.152	1.5	3586389	5.300	5.221	14.873	14.869	3.80				
81	p-Isopropyltoluene	10.463	4.6	2866222	4.236	4.048	15.021	15.019	9.79				
82	1,3-Dichlorobenzene	9.960	-0.4	1322269	1.954	1.962	15.006	14.995	1.87				
83	1,4-Dichlorobenzene	9.877	-1.2	1244915	1.840	1.863	15.094	15.095	3.02				
84	n-Butylbenzene	10.295	3.0	2726374	4.029	3.914	15.405	15.402	7.03				
85	1,2-Dichlorobenzene	9.923	-0.8	1048344	1.549	1.561	15.435	15.433	2.00				
86	1,2-Dibromo-3-chloropropane	9.989	-0.1	52967	0.078	0.078	16.175	16.171	14.04				
87	1,2,4-Trichlorobenzene	9.584	-4.2	510233	0.754	0.697	16.959	16.957	15.05	-0.0128	0.8002		0.9994
88	Hexachlorobutadiene	10.265	2.7	385907	0.570	0.556	17.092	17.086	7.87				
89	Naphthalene	10.703	7.0	627450	0.927	0.866	17.240	17.236	14.11				
90	1,2,3-Trichlorobenzene	10.574	5.7	367640	0.543	0.514	17.462	17.455	14.54				

Spike Amount = Nominal Amount * M

5a
11/4/11

2023

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKV052
Instrument ID: T001
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K014
BFB Injection Date : 11/03/11
BFB Injection Time : 07:05
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	26.44
75	30.0 - 60.0% of mass 95	56.64
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.14
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	68.67
175	5.0 - 9.0% of mass 174	4.64(6.8)1
176	95.0 - 101.0% of mass 174	65.46(95.3)1
177	5.0 - 9.0% of mass 176	4.72(7.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV001J3104	RKV054	11/03/11	08:13
2	MBLK1W	V001K03B	RKV058	11/03/11	10:25
3	LCS1W	V001K03L	RKV055	11/03/11	08:47
4	LCD1W	V001K03C	RKV056	11/03/11	09:18
5	MW-70-MNA01-83	K014-01	RKV069	11/03/11	16:03
6	MW-70-MNA04-86	K014-04	RKV072	11/03/11	17:36
7	IR-70-TB-87	K014-05	RKV073	11/03/11	18:07
8	MW-70-MNA05-88	K014-06	RKV074	11/03/11	18:38

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RJV602
Instrument ID: T001
GC Column: RTX502.2 ID: 0.32mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K014
Date Analyzed: 10/31/11
Time Analyzed: 12:33
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1719891	7.78	1480141	12.32	584394	15.41
	UPPER LIMIT	3439782	8.28	2960282	12.82	1168788	15.91
	LOWER LIMIT	859946	7.28	740071	11.82	292197	14.91
	SAMPLE ID						
1	VSTD010	1724449	7.76	1480423	12.31	587980	15.41
2	MBLK1W	1919788	7.77	1558857	12.31	505986	15.42
3	LCS1W	1786532	7.77	1534697	12.31	584694	15.42
4	LCD1W	1914875	7.77	1639773	12.31	630457	15.40
5	MW-70-MNA01-83	1498815	7.79	1301444	12.32	410910	15.41
6	MW-70-MNA04-86	1539768	7.78	1299668	12.32	399370	15.42
7	IR-70-TB-87	1446606	7.78	1222894	12.33	383065	15.42
8	MW-70-MNA05-88	1467877	7.79	1212965	12.33	396357	15.42

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K03\RKV054.D Vial: 3
Acq On : 3 Nov 2011 8:13 am Operator: MW
Sample : CVO01J3104 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	100	-0.02
2	T,M	Chlorotrifluoroethylene	10.000	10.260	-2.6	100	0.00
3	T,M	Dichlorodifluoromethane	10.000	10.520	-5.2	95	0.00
4	P,T,M	Chloromethane	10.000	10.104	-1.0	92	0.00
5	C,T,M	Vinyl chloride	10.000	10.494	-4.9	94	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	10.851	-8.5	106	0.00
7	T,M	Bromomethane	10.000	10.781	-7.8	94	0.00
8	T,M	Chloroethane	10.000	9.860	1.4	98	0.00
9	T,M	Dichlorofluoromethane	10.000	9.625	3.8	97	0.00
10	T,M	Trichlorofluoromethane	10.000	10.577	-5.8	99	0.00
11	T,M	Acrolein	50.000	43.286	13.4	93	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.362	6.4	95	0.00
13	T,M	Acetone	50.000	51.629	-3.3	98	-0.02
14	C,T,M	1,1-Dichloroethene	10.000	9.309	6.9	92	-0.02
15	T,M	Iodomethane	10.000	9.251	7.5	93	0.00
16	T,M	Carbon disulfide	10.000	9.223	7.8	100	-0.02
17	T,M	Methylene chloride	10.000	9.008	9.9	94	0.00
18	T,M	tert-Butyl alcohol	50.000	52.023	-4.0	101	0.00
19	T,M	Acrylonitrile	50.000	47.088	5.8	95	-0.02
20	T,M	tert-Butyl methyl ether (MT	10.000	9.772	2.3	97	0.00
21	T,M	trans-1,2-Dichloroethene	10.000	9.214	7.9	92	-0.02
22	T,M	Vinyl acetate	10.000	9.583	4.2	87	0.00
23	P,T,M	1,1-Dichloroethane	10.000	9.318	6.8	95	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	9.323	6.8	95	-0.02
25	T,M	2-Butanol	-1.000	0.000	0.0	95	-0.02
26	T,M	tert-Butyl ethyl ether (ETB	10.000	9.524	4.8	95	0.00
27	T,M	2-Butanone	50.000	50.660	-1.3	98	0.00
28	T,M	cis-1,2-Dichloroethene	10.000	9.400	6.0	96	-0.02
29	T,M	2,2-Dichloropropane	10.000	10.152	-1.5	102	0.00
30	T,M	Bromochloromethane	10.000	9.536	4.6	94	0.00
31	C,T,M	Chloroform	10.000	9.569	4.3	93	-0.02
32	S	Dibromofluoromethane	10.000	10.237	-2.4	101	-0.02
33	T,M	1,1,1-Trichloroethane	10.000	9.643	3.6	95	0.00
34	T,M	tert-Amyl methyl ether (TAM	10.000	10.260	-2.6	99	-0.02
35	S	1,2-Dichloroethane-d4	10.000	10.573	-5.7	104	0.00
36	I	CHLOROBENZENE-D5	10.000	10.000	0.0	100	-0.02
37	T,M	1,1-Dichloropropene	10.000	9.130	8.7	94	-0.02
38	T,M	Carbon tetrachloride	10.000	9.622	3.8	93	0.00
39	T,M	Benzene	10.000	8.961	10.4	92	0.00
40	T,M	1,2-Dichloroethane	10.000	9.754	2.5	96	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K03\RKV054.D Vial: 3
Acq On : 3 Nov 2011 8:13 am Operator: MW
Sample : CVO01J3104 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	10.000	9.174	8.3	93	-0.02
42	C,T,M	1,2-Dichloropropane	10.000	9.058	9.4	93	-0.02
43	T,M	1,4-Dioxane	-1.000	0.000	0.0	98	0.00
44	T,M	Dibromomethane	10.000	9.728	2.7	96	0.00
45	T,M	Bromodichloromethane	10.000	9.575	4.3	95	0.00
46	T,M	2-Chloroethyl vinyl ether	10.000	8.602	14.0	84	-0.02
47	T,M	cis-1,3-Dichloropropene	10.000	9.419	5.8	95	-0.02
48	T,M	4-Methyl-2-pentanone	50.000	49.504	1.0	97	-0.02
49	S	Toluene-d8	10.000	9.914	0.9	103	-0.02
50	C,T,M	Toluene	10.000	9.245	7.6	95	0.00
51	T,M	Ethyl methacrylate	10.000	9.947	0.5	95	-0.02
52	T,M	trans-1,3-Dichloropropene	10.000	9.879	1.2	96	0.00
53	T,M	1,1,2-Trichloroethane	10.000	9.336	6.6	95	0.00
54	T,M	Tetrachloroethene	10.000	9.357	6.4	94	0.00
55	T,M	1,3-Dichloropropane	10.000	9.691	3.1	96	-0.02
56	T,M	2-Hexanone	50.000	49.348	1.3	96	0.00
57	T,M	Dibromochloromethane	10.000	10.222	-2.2	98	0.00
58	T,M	1,2-Dibromoethane	10.000	9.776	2.2	96	-0.02
59	T,M	1-Chlorohexane	10.000	9.308	6.9	94	-0.02
60	P,M	Chlorobenzene	10.000	9.564	4.4	93	-0.02
61	T,M	1,1,1,2-Tetrachloroethane	10.000	9.787	2.1	95	0.00
62	C,T,M	Ethylbenzene	10.000	9.543	4.6	95	0.00
63	T,M	m-Xylene & p-Xylene	20.000	19.052	4.7	93	0.00
64	T,M	o-Xylene	10.000	9.644	3.6	94	0.00
65	T,M	Styrene	10.000	10.154	-1.5	95	0.00
66	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	101	0.00
67	P,T,M	Bromoform	10.000	9.837	1.6	100	-0.02
68	T,M	Isopropylbenzene	10.000	9.179	8.2	94	-0.02
69	S	4-Bromofluorobenzene	10.000	9.458	5.4	104	-0.02
70	P,T,M	1,1,2,2-Tetrachloroethane	10.000	9.460	5.4	98	0.00
71	T,M	Bromobenzene	10.000	9.148	8.5	95	0.00
72	T,M	trans-1,4-Dichloro-2-butene	10.000	9.566	4.3	94	0.00
73	T,M	1,2,3-Trichloropropane	10.000	9.412	5.9	100	0.00
74	T,M	n-Propylbenzene	10.000	9.222	7.8	94	0.00
75	T,M	1,3,5-Trimethylbenzene	10.000	9.310	6.9	94	0.00
76	T,M	2-Chlorotoluene	10.000	9.205	7.9	96	-0.02
77	T,M	4-Chlorotoluene	10.000	9.334	6.7	95	-0.02
78	T,M	tert-Butylbenzene	10.000	9.681	3.2	98	0.00
79	T,M	1,2,4-Trimethylbenzene	10.000	9.638	3.6	94	-0.02
80	T,M	sec-Butylbenzene	10.000	9.652	3.5	94	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K03\RKV054.D Vial: 3
Acq On : 3 Nov 2011 8:13 am Operator: MW
Sample : CVO01J3104 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	10.000	10.242	-2.4	95	0.00
82	T,M	1,3-Dichlorobenzene	10.000	9.546	4.5	95	-0.02
83	T,M	1,4-Dichlorobenzene	10.000	9.593	4.1	95	0.00
84	T,M	n-Butylbenzene	10.000	9.926	0.7	94	0.00
85	T,M	1,2-Dichlorobenzene	10.000	9.587	4.1	95	0.00
86	T,M	1,2-Dibromo-3-chloropropane	10.000	10.319	-3.2	100	0.00
87	T,M	1,2,4-Trichlorobenzene	10.000	9.619	3.8	97	0.00
88	T,M	Hexachlorobutadiene	10.000	10.661	-6.6	99	-0.02
89	T,M	Naphthalene	10.000	10.458	-4.6	94	0.00
90	T,M	1,2,3-Trichlorobenzene	10.000	10.924	-9.2	98	0.00

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K03\RKV054.D Vial: 3
Acq On : 3 Nov 2011 8:13 am Operator: MW
Sample : CVO01J3104 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	100	-0.02
2	T,M	Chlorotrifluoroethylene	0.156	0.160	-2.6	100	0.00
3	T,M	Dichlorodifluoromethane	0.363	0.382	-5.2	95	0.00
4	P,T,M	Chloromethane	0.435	0.440	-1.1	92	0.00
5	C,T,M	Vinyl chloride	0.461	0.484	-5.0	94	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.338	0.367	-8.6	106	0.00
7	T,M	Bromomethane	0.229	0.246	-7.4	94	0.00
8	T,M	Chloroethane	0.282	0.278	1.4	98	0.00
9	T,M	Dichlorofluoromethane	0.712	0.685	3.8	97	0.00
10	T,M	Trichlorofluoromethane	0.429	0.454	-5.8	99	0.00
11	T,M	Acrolein	0.011	0.010	9.1	93	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.219	0.205	6.4	95	0.00
13	T,M	Acetone	0.044	0.045	-2.3	98	-0.02
14	C,T,M	1,1-Dichloroethene	0.658	0.613	6.8	92	-0.02
15	T,M	Iodomethane	0.479	0.443	7.5	93	0.00
16	T,M	Carbon disulfide	1.074	0.991	7.7	100	-0.02
17	T,M	Methylene chloride	0.505	0.454	10.1	94	0.00
18	T,M	tert-Butyl alcohol	0.012	0.012	0.0	101	0.00
19	T,M	Acrylonitrile	0.054	0.051	5.6	95	-0.02
20	T,M	tert-Butyl methyl ether (MT	0.589	0.575	2.4	97	0.00
21	T,M	trans-1,2-Dichloroethene	0.668	0.615	7.9	92	-0.02
22	T,M	Vinyl acetate	0.476	0.456	4.2	87	0.00
23	P,T,M	1,1-Dichloroethane	0.756	0.705	6.7	95	0.00
24	T,M	Isopropyl ether (DIPE)	1.343	1.252	6.8	95	-0.02
25	T,M	2-Butanol	0.000	0.000	0.0	95	-0.02
26	T,M	tert-Butyl ethyl ether (ETB	0.966	0.920	4.8	95	0.00
27	T,M	2-Butanone	0.071	0.072	-1.4	98	0.00
28	T,M	cis-1,2-Dichloroethene	0.379	0.357	5.8	96	-0.02
29	T,M	2,2-Dichloropropane	0.538	0.546	-1.5	102	0.00
30	T,M	Bromochloromethane	0.305	0.291	4.6	94	0.00
31	C,T,M	Chloroform	0.636	0.609	4.2	93	-0.02
32	S	Dibromofluoromethane	0.274	0.280	-2.2	101	-0.02
33	T,M	1,1,1-Trichloroethane	0.506	0.487	3.8	95	0.00
34	T,M	tert-Amyl methyl ether (TAM	0.142	0.146	-2.8	99	-0.02
35	S	1,2-Dichloroethane-d4	0.292	0.309	-5.8	104	0.00
36	I	CHLOROBENZENE-D5	1.000	1.000	0.0	100	-0.02
37	T,M	1,1-Dichloropropene	0.208	0.190	8.7	94	-0.02
38	T,M	Carbon tetrachloride	0.498	0.479	3.8	93	0.00
39	T,M	Benzene	1.767	1.583	10.4	92	0.00
40	T,M	1,2-Dichloroethane	0.438	0.427	2.5	96	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K03\RKV054.D Vial: 3
Acq On : 3 Nov 2011 8:13 am Operator: MW
Sample : CVO01J3104 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	0.442	0.406	8.1	93	-0.02
42	C,T,M	1,2-Dichloropropane	0.459	0.416	9.4	93	-0.02
43	T,M	1,4-Dioxane	0.000	0.000	0.0	98	0.00
44	T,M	Dibromomethane	0.149	0.145	2.7	96	0.00
45	T,M	Bromodichloromethane	0.512	0.490	4.3	95	0.00
46	T,M	2-Chloroethyl vinyl ether	0.118	0.102	13.6	84	-0.02
47	T,M	cis-1,3-Dichloropropene	0.614	0.578	5.9	95	-0.02
48	T,M	4-Methyl-2-pentanone	0.201	0.199	1.0	97	-0.02
49	S	Toluene-d8	1.383	1.371	0.9	103	-0.02
50	C,T,M	Toluene	1.753	1.621	7.5	95	0.00
51	T,M	Ethyl methacrylate	0.330	0.328	0.6	95	-0.02
52	T,M	trans-1,3-Dichloropropene	0.454	0.449	1.1	96	0.00
53	T,M	1,1,2-Trichloroethane	0.216	0.202	6.5	95	0.00
54	T,M	Tetrachloroethene	0.356	0.333	6.5	94	0.00
55	T,M	1,3-Dichloropropane	0.449	0.435	3.1	96	-0.02
56	T,M	2-Hexanone	0.131	0.130	0.8	96	0.00
57	T,M	Dibromochloromethane	0.257	0.263	-2.3	98	0.00
58	T,M	1,2-Dibromoethane	0.205	0.200	2.4	96	-0.02
59	T,M	1-Chlorohexane	0.725	0.675	6.9	94	-0.02
60	P,M	Chlorobenzene	1.010	0.966	4.4	93	-0.02
61	T,M	1,1,1,2-Tetrachloroethane	0.334	0.327	2.1	95	0.00
62	C,T,M	Ethylbenzene	2.040	1.947	4.6	95	0.00
63	T,M	m-Xylene & p-Xylene	1.540	1.467	4.7	93	0.00
64	T,M	o-Xylene	1.515	1.461	3.6	94	0.00
65	T,M	Styrene	1.084	1.100	-1.5	95	0.00
66	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	101	0.00
67	P,T,M	Bromoform	0.330	0.325	1.5	100	-0.02
68	T,M	Isopropylbenzene	4.966	4.558	8.2	94	-0.02
69	S	4-Bromofluorobenzene	1.232	1.166	5.4	104	-0.02
70	P,T,M	1,1,2,2-Tetrachloroethane	0.680	0.643	5.4	98	0.00
71	T,M	Bromobenzene	1.024	0.937	8.5	95	0.00
72	T,M	trans-1,4-Dichloro-2-butene	0.174	0.166	4.6	94	0.00
73	T,M	1,2,3-Trichloropropane	0.174	0.164	5.7	100	0.00
74	T,M	n-Propylbenzene	6.403	5.904	7.8	94	0.00
75	T,M	1,3,5-Trimethylbenzene	4.108	3.825	6.9	94	0.00
76	T,M	2-Chlorotoluene	3.536	3.255	7.9	96	-0.02
77	T,M	4-Chlorotoluene	3.899	3.640	6.6	95	-0.02
78	T,M	tert-Butylbenzene	0.920	0.891	3.2	98	0.00
79	T,M	1,2,4-Trimethylbenzene	3.898	3.756	3.6	94	-0.02
80	T,M	sec-Butylbenzene	5.221	5.039	3.5	94	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K03\RKV054.D Vial: 3
Acq On : 3 Nov 2011 8:13 am Operator: MW
Sample : CVO01J3104 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	4.048	4.147	-2.4	95	0.00
82	T,M	1,3-Dichlorobenzene	1.962	1.873	4.5	95	-0.02
83	T,M	1,4-Dichlorobenzene	1.863	1.787	4.1	95	0.00
84	T,M	n-Butylbenzene	3.914	3.885	0.7	94	0.00
85	T,M	1,2-Dichlorobenzene	1.561	1.497	4.1	95	0.00
86	T,M	1,2-Dibromo-3-chloropropane	0.078	0.081	-3.8	100	0.00
87	T,M	1,2,4-Trichlorobenzene	0.697	0.757	-8.6	97	0.00
88	T,M	Hexachlorobutadiene	0.556	0.592	-6.5	99	-0.02
89	T,M	Naphthalene	0.866	0.906	-4.6	94	0.00
90	T,M	1,2,3-Trichlorobenzene	0.514	0.561	-9.1	98	0.00

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKV099
Instrument ID: T001
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K014
BFB Injection Date : 11/04/11
BFB Injection Time : 07:32
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	26.30
75	30.0 - 60.0% of mass 95	54.37
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.44
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	64.38
175	5.0 - 9.0% of mass 174	4.12(6.4)1
176	95.0 - 101.0% of mass 174	62.95(97.8)1
177	5.0 - 9.0% of mass 176	4.37(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV001J3106	RKV100	11/04/11	08:03
2	MBLK2W	V001K05B	RKV104	11/04/11	10:14
3	LCS2W	V001K05L	RKV101	11/04/11	08:36
4	LCD2W	V001K05C	RKV102	11/04/11	09:07
5	MW-70-MNA03-84	K014-02R	RKV118	11/04/11	17:57
6	MW-70-MNA02-85	K014-03R	RKV119	11/04/11	18:28
7	MW-70-MNA04-86DL	K014-04T	RKV120	11/04/11	18:59
8	MW-70-MNA01-83DL	K014-01T	RKV121	11/04/11	19:28

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RJV602
Instrument ID: T001
GC Column: RTX502.2 ID: 0.32mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K014
Date Analyzed: 10/31/11
Time Analyzed: 12:33
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1719891	7.78	1480141	12.32	584394	15.41
	UPPER LIMIT	3439782	8.28	2960282	12.82	1168788	15.91
	LOWER LIMIT	859946	7.28	740071	11.82	292197	14.91
	SAMPLE ID						
1	VSTD010	1487372	7.79	1328277	12.34	551639	15.43
2	MBLK2W	1830857	7.80	1506369	12.34	472126	15.43
3	LCS2W	1595536	7.79	1397398	12.34	560553	15.43
4	LCD2W	1815100	7.79	1559523	12.34	622263	15.43
5	MW-70-MNA03-84	1519238	7.80	1289538	12.34	422381	15.44
6	MW-70-MNA02-85	1497275	7.80	1266427	12.34	412738	15.43
7	MW-70-MNA04-86DL	1368143	7.81	1166504	12.35	364246	15.43
8	MW-70-MNA01-83DL	1401224	7.81	1171217	12.35	363610	15.43

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K04\RKV100.D Vial: 2
Acq On : 4 Nov 2011 8:03 am Operator: MW
Sample : CVO01J3106 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	86	0.01
2	T,M	Chlorotrifluoroethylene	10.000	9.682	3.2	81	0.00
3	T,M	Dichlorodifluoromethane	10.000	11.207	-12.1	87	0.01
4	P,T,M	Chloromethane	10.000	10.497	-5.0	83	0.01
5	C,T,M	Vinyl chloride	10.000	11.002	-10.0	85	0.01
6	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	10.620	-6.2	90	0.01
7	T,M	Bromomethane	10.000	11.448	-14.5	86	0.01
8	T,M	Chloroethane	10.000	10.298	-3.0	88	0.01
9	T,M	Dichlorofluoromethane	10.000	9.899	1.0	86	0.01
10	T,M	Trichlorofluoromethane	10.000	11.726	-17.3	95	0.07
11	T,M	Acrolein	50.000	46.665	6.7	86	0.02
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.658	3.4	84	0.01
13	T,M	Acetone	50.000	54.677	-9.4	90	0.02
14	C,T,M	1,1-Dichloroethene	10.000	10.163	-1.6	86	0.01
15	T,M	Iodomethane	10.000	9.505	4.9	82	0.01
16	T,M	Carbon disulfide	10.000	7.991	20.1#	75	0.01
17	T,M	Methylene chloride	10.000	9.622	3.8	87	0.01
18	T,M	tert-Butyl alcohol	50.000	51.406	-2.8	86	0.02
19	T,M	Acrylonitrile	50.000	48.912	2.2	85	0.01
20	T,M	tert-Butyl methyl ether (MT	10.000	10.742	-7.4	92	0.01
21	T,M	trans-1,2-Dichloroethene	10.000	9.966	0.3	86	0.01
22	T,M	Vinyl acetate	10.000	11.497	-15.0	91	0.03
23	P,T,M	1,1-Dichloroethane	10.000	9.972	0.3	88	0.03
24	T,M	Isopropyl ether (DIPE)	10.000	10.380	-3.8	91	0.02
25	T,M	2-Butanol	-1.000	0.000	0.0	91	0.01
26	T,M	tert-Butyl ethyl ether (ETB	10.000	10.520	-5.2	91	0.01
27	T,M	2-Butanone	50.000	52.592	-5.2	88	0.03
28	T,M	cis-1,2-Dichloroethene	10.000	10.001	-0.0	88	0.01
29	T,M	2,2-Dichloropropane	10.000	10.667	-6.7	93	0.03
30	T,M	Bromochloromethane	10.000	10.221	-2.2	87	0.03
31	C,T,M	Chloroform	10.000	10.624	-6.2	89	0.01
32	S	Dibromofluoromethane	10.000	10.465	-4.6	89	0.01
33	T,M	1,1,1-Trichloroethane	10.000	10.230	-2.3	87	0.01
34	T,M	tert-Amyl methyl ether (TAM	10.000	10.855	-8.6	90	0.01
35	S	1,2-Dichloroethane-d4	10.000	11.257	-12.6	96	0.03
36	I	CHLOROBENZENE-D5	10.000	10.000	0.0	90	0.01
37	T,M	1,1-Dichloropropene	10.000	9.181	8.2	84	0.01
38	T,M	Carbon tetrachloride	10.000	10.029	-0.3	87	0.03
39	T,M	Benzene	10.000	9.196	8.0	85	0.03
40	T,M	1,2-Dichloroethane	10.000	10.679	-6.8	94	0.03

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K04\RKV100.D Vial: 2
Acq On : 4 Nov 2011 8:03 am Operator: MW
Sample : CVO01J3106 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	10.000	9.511	4.9	87	0.01
42	C,T,M	1,2-Dichloropropane	10.000	9.385	6.2	87	0.01
43	T,M	1,4-Dioxane	-1.000	0.000	0.0	77	0.03
44	T,M	Dibromomethane	10.000	9.976	0.2	89	0.03
45	T,M	Bromodichloromethane	10.000	10.108	-1.1	90	0.03
46	T,M	2-Chloroethyl vinyl ether	10.000	8.130	18.7	71	0.01
47	T,M	cis-1,3-Dichloropropene	10.000	9.662	3.4	87	0.01
48	T,M	4-Methyl-2-pentanone	50.000	50.167	-0.3	88	0.01
49	S	Toluene-d8	10.000	9.507	4.9	88	0.01
50	C,T,M	Toluene	10.000	9.231	7.7	85	0.03
51	T,M	Ethyl methacrylate	10.000	9.958	0.4	86	0.01
52	T,M	trans-1,3-Dichloropropene	10.000	10.433	-4.3	91	0.03
53	T,M	1,1,2-Trichloroethane	10.000	9.968	0.3	91	0.03
54	T,M	Tetrachloroethene	10.000	9.501	5.0	85	0.03
55	T,M	1,3-Dichloropropane	10.000	10.087	-0.9	89	0.01
56	T,M	2-Hexanone	50.000	50.815	-1.6	89	0.03
57	T,M	Dibromochloromethane	10.000	10.673	-6.7	91	0.03
58	T,M	1,2-Dibromoethane	10.000	10.383	-3.8	91	0.01
59	T,M	1-Chlorohexane	10.000	9.456	5.4	86	0.01
60	P,M	Chlorobenzene	10.000	10.119	-1.2	88	0.01
61	T,M	1,1,1,2-Tetrachloroethane	10.000	10.625	-6.3	93	0.03
62	C,T,M	Ethylbenzene	10.000	9.966	0.3	89	0.02
63	T,M	m-Xylene & p-Xylene	20.000	20.263	-1.3	89	0.03
64	T,M	o-Xylene	10.000	10.340	-3.4	91	0.02
65	T,M	Styrene	10.000	10.378	-3.8	87	0.01
66	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	94	0.01
67	P,T,M	Bromoform	10.000	9.903	1.0	94	0.01
68	T,M	Isopropylbenzene	10.000	9.357	6.4	90	0.01
69	S	4-Bromofluorobenzene	10.000	9.260	7.4	95	0.01
70	P,T,M	1,1,2,2-Tetrachloroethane	10.000	9.903	1.0	96	0.01
71	T,M	Bromobenzene	10.000	9.495	5.1	93	0.01
72	T,M	trans-1,4-Dichloro-2-butene	10.000	10.134	-1.3	93	0.01
73	T,M	1,2,3-Trichloropropane	10.000	9.708	2.9	97	0.01
74	T,M	n-Propylbenzene	10.000	9.519	4.8	91	0.02
75	T,M	1,3,5-Trimethylbenzene	10.000	9.781	2.2	92	0.01
76	T,M	2-Chlorotoluene	10.000	9.331	6.7	91	0.02
77	T,M	4-Chlorotoluene	10.000	9.636	3.6	92	0.02
78	T,M	tert-Butylbenzene	10.000	9.745	2.6	92	0.01
79	T,M	1,2,4-Trimethylbenzene	10.000	9.992	0.1	91	0.01
80	T,M	sec-Butylbenzene	10.000	10.018	-0.2	91	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K04\RKV100.D Vial: 2
Acq On : 4 Nov 2011 8:03 am Operator: MW
Sample : CVO01J3106 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	10.000	10.606	-6.1	92	0.01
82	T,M	1,3-Dichlorobenzene	10.000	10.032	-0.3	94	0.01
83	T,M	1,4-Dichlorobenzene	10.000	10.293	-2.9	96	0.01
84	T,M	n-Butylbenzene	10.000	10.174	-1.7	90	0.01
85	T,M	1,2-Dichlorobenzene	10.000	10.209	-2.1	95	0.01
86	T,M	1,2-Dibromo-3-chloropropane	10.000	10.577	-5.8	96	0.01
87	T,M	1,2,4-Trichlorobenzene	10.000	9.861	1.4	93	0.03
88	T,M	Hexachlorobutadiene	10.000	10.974	-9.7	96	0.01
89	T,M	Naphthalene	10.000	9.372	6.3	79	0.02
90	T,M	1,2,3-Trichlorobenzene	10.000	10.936	-9.4	92	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K04\RKV100.D Vial: 2
Acq On : 4 Nov 2011 8:03 am Operator: MW
Sample : CVO01J3106 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	86	0.01
2	T,M	Chlorotrifluoroethylene	0.156	0.151	3.2	81	0.00
3	T,M	Dichlorodifluoromethane	0.363	0.407	-12.1	87	0.01
4	P,T,M	Chloromethane	0.435	0.457	-5.1	83	0.01
5	C,T,M	Vinyl chloride	0.461	0.508	-10.2	85	0.01
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.338	0.359	-6.2	90	0.01
7	T,M	Bromomethane	0.229	0.262	-14.4	86	0.01
8	T,M	Chloroethane	0.282	0.291	-3.2	88	0.01
9	T,M	Dichlorofluoromethane	0.712	0.705	1.0	86	0.01
10	T,M	Trichlorofluoromethane	0.429	0.503	-17.2	95	0.07
11	T,M	Acrolein	0.011	0.011	0.0	86	0.02
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.219	0.211	3.7	84	0.01
13	T,M	Acetone	0.044	0.048	-9.1	90	0.02
14	C,T,M	1,1-Dichloroethene	0.658	0.669	-1.7	86	0.01
15	T,M	Iodomethane	0.479	0.455	5.0	82	0.01
16	T,M	Carbon disulfide	1.074	0.858	20.1#	75	0.01
17	T,M	Methylene chloride	0.505	0.486	3.8	87	0.01
18	T,M	tert-Butyl alcohol	0.012	0.012	0.0	86	0.02
19	T,M	Acrylonitrile	0.054	0.053	1.9	85	0.01
20	T,M	tert-Butyl methyl ether (MT	0.589	0.632	-7.3	92	0.01
21	T,M	trans-1,2-Dichloroethene	0.668	0.665	0.4	86	0.01
22	T,M	Vinyl acetate	0.476	0.547	-14.9	91	0.03
23	P,T,M	1,1-Dichloroethane	0.756	0.754	0.3	88	0.03
24	T,M	Isopropyl ether (DIPE)	1.343	1.394	-3.8	91	0.02
25	T,M	2-Butanol	0.000	0.000	0.0	91	0.01
26	T,M	tert-Butyl ethyl ether (ETB	0.966	1.016	-5.2	91	0.01
27	T,M	2-Butanone	0.071	0.074	-4.2	88	0.03
28	T,M	cis-1,2-Dichloroethene	0.379	0.379	0.0	88	0.01
29	T,M	2,2-Dichloropropane	0.538	0.574	-6.7	93	0.03
30	T,M	Bromochloromethane	0.305	0.312	-2.3	87	0.03
31	C,T,M	Chloroform	0.636	0.676	-6.3	89	0.01
32	S	Dibromofluoromethane	0.274	0.286	-4.4	89	0.01
33	T,M	1,1,1-Trichloroethane	0.506	0.517	-2.2	87	0.01
34	T,M	tert-Amyl methyl ether (TAM	0.142	0.154	-8.5	90	0.01
35	S	1,2-Dichloroethane-d4	0.292	0.329	-12.7	96	0.03
36	I	CHLOROBENZENE-D5	1.000	1.000	0.0	90	0.01
37	T,M	1,1-Dichloropropene	0.208	0.191	8.2	84	0.01
38	T,M	Carbon tetrachloride	0.498	0.500	-0.4	87	0.03
39	T,M	Benzene	1.767	1.625	8.0	85	0.03
40	T,M	1,2-Dichloroethane	0.438	0.468	-6.8	94	0.03

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K04\RKV100.D Vial: 2
Acq On : 4 Nov 2011 8:03 am Operator: MW
Sample : CVO01J3106 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	0.442	0.421	4.8	87	0.01
42	C,T,M	1,2-Dichloropropane	0.459	0.431	6.1	87	0.01
43	T,M	1,4-Dioxane	0.000	0.000	0.0	77	0.03
44	T,M	Dibromomethane	0.149	0.149	0.0	89	0.03
45	T,M	Bromodichloromethane	0.512	0.518	-1.2	90	0.03
46	T,M	2-Chloroethyl vinyl ether	0.118	0.096	18.6	71	0.01
47	T,M	cis-1,3-Dichloropropene	0.614	0.593	3.4	87	0.01
48	T,M	4-Methyl-2-pentanone	0.201	0.202	-0.5	88	0.01
49	S	Toluene-d8	1.383	1.315	4.9	88	0.01
50	C,T,M	Toluene	1.753	1.619	7.6	85	0.03
51	T,M	Ethyl methacrylate	0.330	0.328	0.6	86	0.01
52	T,M	trans-1,3-Dichloropropene	0.454	0.474	-4.4	91	0.03
53	T,M	1,1,2-Trichloroethane	0.216	0.215	0.5	91	0.03
54	T,M	Tetrachloroethene	0.356	0.338	5.1	85	0.03
55	T,M	1,3-Dichloropropane	0.449	0.453	-0.9	89	0.01
56	T,M	2-Hexanone	0.131	0.134	-2.3	89	0.03
57	T,M	Dibromochloromethane	0.257	0.274	-6.6	91	0.03
58	T,M	1,2-Dibromoethane	0.205	0.213	-3.9	91	0.01
59	T,M	1-Chlorohexane	0.725	0.686	5.4	86	0.01
60	P,M	Chlorobenzene	1.010	1.022	-1.2	88	0.01
61	T,M	1,1,1,2-Tetrachloroethane	0.334	0.355	-6.3	93	0.03
62	C,T,M	Ethylbenzene	2.040	2.033	0.3	89	0.02
63	T,M	m-Xylene & p-Xylene	1.540	1.560	-1.3	89	0.03
64	T,M	o-Xylene	1.515	1.567	-3.4	91	0.02
65	T,M	Styrene	1.084	1.125	-3.8	87	0.01
66	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	94	0.01
67	P,T,M	Bromoform	0.330	0.327	0.9	94	0.01
68	T,M	Isopropylbenzene	4.966	4.646	6.4	90	0.01
69	S	4-Bromofluorobenzene	1.232	1.141	7.4	95	0.01
70	P,T,M	1,1,2,2-Tetrachloroethane	0.680	0.673	1.0	96	0.01
71	T,M	Bromobenzene	1.024	0.972	5.1	93	0.01
72	T,M	trans-1,4-Dichloro-2-butene	0.174	0.176	-1.1	93	0.01
73	T,M	1,2,3-Trichloropropane	0.174	0.169	2.9	97	0.01
74	T,M	n-Propylbenzene	6.403	6.095	4.8	91	0.02
75	T,M	1,3,5-Trimethylbenzene	4.108	4.018	2.2	92	0.01
76	T,M	2-Chlorotoluene	3.536	3.299	6.7	91	0.02
77	T,M	4-Chlorotoluene	3.899	3.757	3.6	92	0.02
78	T,M	tert-Butylbenzene	0.920	0.897	2.5	92	0.01
79	T,M	1,2,4-Trimethylbenzene	3.898	3.894	0.1	91	0.01
80	T,M	sec-Butylbenzene	5.221	5.230	-0.2	91	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K04\RKV100.D Vial: 2
Acq On : 4 Nov 2011 8:03 am Operator: MW
Sample : CVO01J3106 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	4.048	4.294	-6.1	92	0.01
82	T,M	1,3-Dichlorobenzene	1.962	1.968	-0.3	94	0.01
83	T,M	1,4-Dichlorobenzene	1.863	1.917	-2.9	96	0.01
84	T,M	n-Butylbenzene	3.914	3.982	-1.7	90	0.01
85	T,M	1,2-Dichlorobenzene	1.561	1.594	-2.1	95	0.01
86	T,M	1,2-Dibromo-3-chloropropane	0.078	0.083	-6.4	96	0.01
87	T,M	1,2,4-Trichlorobenzene	0.697	0.776	-11.3	93	0.03
88	T,M	Hexachlorobutadiene	0.556	0.610	-9.7	96	0.01
89	T,M	Naphthalene	0.866	0.812	6.2	79	0.02
90	T,M	1,2,3-Trichlorobenzene	0.514	0.562	-9.3	92	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-S24.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 10/31/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A01 -038

BATCH V001J316

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount A/B/C	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RJV596	BFB01J29	1 mL	NA	NA	NA	NA	9:18am
02		597	V001J311	.01/.1/1/5 mL					0.3/1.5/1.5 ppb
03		598	2	.01/.1/1/5 mL					0.5/2.5/2.5 ppb
04		599	3	.1/.5/1/5 mL					1.0/5.0/5.0 ppb
05		600	4	.2/1/1 mL					2.0/10/10 ppb
06		601	5	.5/2.5/2.5/5 mL					5.0/25/25 ppb
07		602	6	1/5/5 mL					10/50/50 ppb
08		603	7	2/10/10 mL					20/100/100 ppb
09		604	8	3/15/15 mL					30/150/150 ppb
10		605	9	5/25/25 mL					50/250/250 ppb
11		606	10	10/50/50 mL					100/500/500 ppb
12		607	IS/SS	25 mL					
13		608	V001J29B	↓					
14		609	V001J311	1/5/5 mL					10/50/50 ppb
15		610	RINSE	25 mL					4:51pm
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30				NW 11/1/11					

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC (Gases)	SV1-17-96-3	*	
DCC Cl_2	-92-3		
DCC 8260	-86-2		
DCC 624/1624 Freons	-98-1 -100-3		1/4/1000
BFB	-45-3	1	
IS/SURR.	-99-1	1	
ICV/LCS (Gases)	-97-1	1	
ICV/LCS Cl_2	-97-2	1	
ICV/LCS 8260	-99-2	5	
ICV/LCS 624/1624 Freons	-89-2	5	
ICV/LCS SS-MW-7265	SV1-12-26-6 -26-7	0.4 0.4	
IS SS	SV1-17-91-1 -91-2	1 1	250ppm
DATA FILE FOLDER	11J31		

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO01	

Comments: *please refer to sample amount
A= SS, gases, Cl_2, Freons
B: 8260
C: 624/1624
IS/SS NW 11/1/11

Analyzed By: NW
Date Disposed: 11/1/11
Disposed By: NW

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☐ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/3/11 ☐ 5-mL Purge ☐ 10-mL Purge ☐ 25-mL Purge

Book # A01 -038

BATCH CV001J3104

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKV052	BFB01K03	1 mL					7:05am
02	53	STD TEST	1/5/5 mL					
03	54	CV001J3104						
04	55	V001K03C						
05	56	↓ C	↓					
06	57	RINSE	25 mL					
07	58	V001K03B						
08	59	11K019-01		1.0	/	/		
09	60	-02			/	/		
10	61	-03			/	/		
11	62	-04			/	/		
12	63	-05			/	/		
13	64	-06			/	/		
14	65	-07			/	/		
15	66	-08			/	/		
16	67	-09			/	/		
17	68	-10			/	/		
18	69	11K014-01			/	/		700x
19	70	-02			/	/		3x 1% MW 11/4/11
20	71	-03			/	/		~~1x 10x~~
21	72	-04			/	/		-1x/10x
22	73	-05			/	/		
23	74	-06			/	/		6:38pm
24	75	11K017-01			/	/		7 min out/1-hx 7:09pm
25	76	-02			/	/		7:34pm
26	77	RINSE						
27								
28								
29								
30		MW 11/4/11						

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-17-96-3	1	
DCC	-92-3	1	
DCC	-86-2	5	
DCC	-95-1 -100-3	5 1	
BFB	-45-3	1	50/250/1000
IS/SURR.	-99-1	1	
ICV/LCS	-97-1	1	
ICV/LCS	-97-2	1	
ICV/LCS	-99-2 -89-2	5	
ICV/LCS	SV11-12-26-6 -7	0.25 0.25	
DATA FILE FOLDER	11K03		

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO01	

Comments:

Analyzed By: MW

Date Disposed: 11/4/11

Disposed By: MW

2013

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☐ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/4/11 ☐ 5-mL Purge ☐ 10-mL Purge ☐ 25-mL Purge Book # A01 -038

BATCH V001J3106

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKV099	BFB01K05	1 mL					7:52am
02	100	V001J3106	1.5 mL					
03	101	V001K05L						
04	102	↓ C	↓					
05	103	RINSE	25 mL					
06	104	V001K05B						
07	105	11K016-06R		1.0	✓			
08	106	↓ -07R		↓	✓			
09	107	RINSE	↓					
10	108	11K016-06T	1.0 mL	25	✓			
11	109	-07T	0.5 mL	50	✓			
12	110	-01R	25 mL	1.0	✓			
13	111	-02R			✓			
14	112	-03R			✓			
15	113	-04R			✓			
16	114	-05R			✓			
17	115	-08R			✓			
18	116	11K017-01R			✓			
19	117	↓ -02R			✓			
20	118	11K014-02R			✓			
21	119	-03R	↓	↓	✓			
22	120	-04T	2.5 mL	10	✓			
23	121	-01T	250 mL	100	✓			7:26pm
24	122	↓ -04R	25 mL	1.0	✓			-1out. only, 1:50 11-hr. 7:19pm
25	123	11K017-08	↓	↓	✓	✓		-1X1:100 X out 11-hr. 8:31pm
26	124	RINSE						
27								
28								
29								
30		MW 11/4/11						

Instrument No.	01

INITIAL CALIBRATION REFERENCE

DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV-17-96-3	1	
DCC	-92-3	1	
DCC	-86-2	5	
DCC	-98-1 -100-3	5	
BFB	-45-3	1	10/30/
IS/SURR.	-99-1	1	
ICV/LCS	-97-1	1	1000
ICV/LCS	-97-2	1	
ICV/LCS	-99-1 -99-2	5	
ICV/LCS	SV-12-26-6 -26-7	0.5	

DATA FILE FOLDER	11K04

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO01	

Comments:

Analyzed By: MW

Date Disposed: 11/7/11

Disposed By: MW

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD RSK-175
DISSOLVED GASES

SDG#: 11K014

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K014

METHOD RSK-175
DISSOLVED GASES

A total of five (5) water samples were received on 11/02/11 for Dissolved Gas analysis, Method RSK-175 in accordance with USEPA at R.S. Kerr Environmental Research Laboratory, Ada, OK 74820 March 15, 1989.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for DGK001WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED GASES

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K014
Instrument ID : GCT010

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DGK001WB	1	NA	11/04/1112:27	11/04/1110:00	FK04003A	FK04002A	DGK001W	Method Blank
LCS1W	DGK001WL	1	NA	11/04/1112:44	11/04/1110:00	FK04004A	FK04002A	DGK001W	Lab Control Sample (LCS)
LCD1W	DGK001WC	1	NA	11/04/1112:58	11/04/1110:00	FK04005A	FK04002A	DGK001W	LCS Duplicate
MW-70-MNA01-83	K014-01	1	NA	11/04/1115:40	11/04/1110:00	FK04016A	FK04015A	DGK001W	Field Sample
MW-70-MNA01-83DL	K014-01T	400	NA	11/04/1116:59	11/04/1110:00	FK04021A	FK04015A	DGK001W	Diluted Sample
MW-70-MNA03-84	K014-02	1	NA	11/04/1115:53	11/04/1110:00	FK04017A	FK04015A	DGK001W	Field Sample
MW-70-MNA03-84DL	K014-02T	10	NA	11/04/1117:13	11/04/1110:00	FK04022A	FK04015A	DGK001W	Diluted Sample
MW-70-MNA02-85	K014-03	1	NA	11/04/1116:09	11/04/1110:00	FK04018A	FK04015A	DGK001W	Field Sample
MW-70-MNA02-85DL	K014-03T	200	NA	11/04/1117:26	11/04/1110:00	FK04023A	FK04015A	DGK001W	Diluted Sample
MW-70-MNA04-86	K014-04	1	NA	11/04/1116:25	11/04/1110:00	FK04019A	FK04015A	DGK001W	Field Sample
MW-70-MNA04-86DL	K014-04T	20	NA	11/04/1117:42	11/04/1110:00	FK04024A	FK04015A	DGK001W	Diluted Sample
MW-70-MNA05-88	K014-06	1	NA	11/04/1116:38	11/04/1110:00	FK04020A	FK04015A	DGK001W	Field Sample
MW-70-MNA05-88DL	K014-06T	2	NA	11/04/1117:56	11/04/1110:00	FK04025A	FK04015A	DGK001W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/02/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/02/11
Batch No. : 11K014	Date Extracted: 11/04/11 10:00
Sample ID: MW-70-MNA01-83	Date Analyzed: 11/04/11 15:40
Lab Samp ID: K014-01	Dilution Factor: 1
Lab File ID: FK04016A	Matrix : WATER
Ext Btch ID: DGK001W	% Moisture : NA
Calib. Ref.: FK04015A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	2.9	2.0	0.64
ETHENE	33	2.0	0.60
METHANE	120E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/02/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/02/11
Batch No. : 11K014	Date Extracted: 11/04/11 10:00
Sample ID: MW-70-MNA01-83DL	Date Analyzed: 11/04/11 16:59
Lab Samp ID: K014-01T	Dilution Factor: 400
Lab File ID: FK04021A	Matrix : WATER
Ext Btch ID: DGK001W	% Moisture : NA
Calib. Ref.: FK04015A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	800	260
ETHENE	ND	800	240
METHANE	5500	800	140

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/02/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/02/11
Batch No. : 11K014	Date Extracted: 11/04/11 10:00
Sample ID: MW-70-MNA03-84	Date Analyzed: 11/04/11 15:53
Lab Samp ID: K014-02	Dilution Factor: 1
Lab File ID: FK04017A	Matrix : WATER
Ext Btch ID: DGK001W	% Moisture : NA
Calib. Ref.: FK04015A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	0.72J	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	100E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/02/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/02/11
Batch No. : 11K014	Date Extracted: 11/04/11 10:00
Sample ID: MW-70-MNA03-84DL	Date Analyzed: 11/04/11 17:13
Lab Samp ID: K014-02T	Dilution Factor: 10
Lab File ID: FK04022A	Matrix : WATER
Ext Btch ID: DGK001W	% Moisture : NA
Calib. Ref.: FK04015A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	20	6.4
ETHENE	ND	20	6.0
METHANE	250	20	3.4

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/02/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/02/11
Batch No. : 11K014	Date Extracted: 11/04/11 10:00
Sample ID: MW-70-MNA02-85	Date Analyzed: 11/04/11 16:09
Lab Samp ID: K014-03	Dilution Factor: 1
Lab File ID: FK04018A	Matrix : WATER
Ext Btch ID: DGK001W	% Moisture : NA
Calib. Ref.: FK04015A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	4.6	2.0	0.64
ETHENE	3.6	2.0	0.60
METHANE	270E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/02/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/02/11
Batch No. : 11K014	Date Extracted: 11/04/11 10:00
Sample ID: MW-70-MNA02-85DL	Date Analyzed: 11/04/11 17:26
Lab Samp ID: K014-03T	Dilution Factor: 200
Lab File ID: FK04023A	Matrix : WATER
Ext Btch ID: DGK001W	% Moisture : NA
Calib. Ref.: FK04015A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	400	130
ETHENE	ND	400	120
METHANE	3100	400	68

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/02/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/02/11
Batch No. : 11K014	Date Extracted: 11/04/11 10:00
Sample ID: MW-70-MNA04-86	Date Analyzed: 11/04/11 16:25
Lab Samp ID: K014-04	Dilution Factor: 1
Lab File ID: FK04019A	Matrix : WATER
Ext Btch ID: DGK001W	% Moisture : NA
Calib. Ref.: FK04015A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	63	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	120E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/02/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/02/11
Batch No. : 11K014	Date Extracted: 11/04/11 10:00
Sample ID: MW-70-MNA04-86DL	Date Analyzed: 11/04/11 17:42
Lab Samp ID: K014-04T	Dilution Factor: 20
Lab File ID: FK04024A	Matrix : WATER
Ext Btch ID: DGK001W	% Moisture : NA
Calib. Ref.: FK04015A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	56	40	13
ETHENE	ND	40	12
METHANE	400	40	6.8

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/02/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/02/11
Batch No.	: 11K014	Date Extracted:	11/04/11 10:00
Sample ID:	MW-70-MNA05-88	Date Analyzed:	11/04/11 16:38
Lab Samp ID:	K014-06	Dilution Factor:	1
Lab File ID:	FK04020A	Matrix :	WATER
Ext Btch ID:	DGK001W	% Moisture :	NA
Calib. Ref.:	FK04015A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	3.3	2.0	0.60
METHANE	36E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/02/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/02/11
Batch No.	: 11K014	Date Extracted:	11/04/11 10:00
Sample ID:	MW-70-MNA05-88DL	Date Analyzed:	11/04/11 17:56
Lab Samp ID:	K014-06T	Dilution Factor:	2
Lab File ID:	FK04025A	Matrix :	WATER
Ext Btch ID:	DGK001W	% Moisture :	NA
Calib. Ref.:	FK04015A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	4.0	1.3
ETHENE	3.3J	4.0	1.2
METHANE	36	4.0	0.68

QC SUMMARIES

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/04/11
Batch No. : 11K014	Date Extracted: 11/04/11 10:00
Sample ID: MBLK1W	Date Analyzed: 11/04/11 12:27
Lab Samp ID: DGK001WB	Dilution Factor: 1
Lab File ID: FK04003A	Matrix : WATER
Ext Btch ID: DGK001W	% Moisture : NA
Calib. Ref.: FK04002A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K014
METHOD: METHOD RSK-175

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	DGK001WB	DGK001WL	DGK001WC		
LAB FILE ID:	FK04003A	FK04004A	FK04005A		
DATE EXTRACTED:	11/04/1110:00	11/04/1110:00	11/04/1110:00	DATE COLLECTED:	NA
DATE ANALYZED:	11/04/1112:27	11/04/1112:44	11/04/1112:58	DATE RECEIVED:	11/04/11
PREP. BATCH:	DGK001W	DGK001W	DGK001W		
CALIB. REF:	FK04002A	FK04002A	FK04002A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	ND	25.4	26.3	104	25.4	26.3	104	0	70-140	30
Ethene	ND	23.7	25.0	105	23.7	25.0	105	0	70-140	30
Methane	ND	13.6	12.3	90	13.6	12.3	90	0	70-130	30

INITIAL CALIBRATIONS

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	25.00X	40.00X	75.00X	100.00X	MEAN	%RSD
Methane	0.34	31626	33510	29954	29307	29338	29307	30507.1	5.6
Acetylene	0.55	2465	2595	2723	2744	2716	2643	2647.7	4.0
Ethylene	0.59	14655	16070	16617	16602	17123	16803	16311.8	5.4
Ethane	0.64	22748	24144	25289	25073	26185	26048	24914.4	5.2
Propane	0.93	29887	24871	26520	26214	27735	27800	27171.2	6.3

DG10K01.MET

FORM VI DGAS -2 1/96 Rev 2/2006

11/03/11

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK01008A 11/01/2011 13:45
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	416247	13.64	1		15
Acetylene	2.175	2.149	2.201	22.0	2647.6	66913	25.27	15		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	437326	26.81	13		15
Ethane	3.075	3.025	3.125	25.4	24914.4	691218	27.74	9		15
Propane	5.900	5.824	5.976	37.3	27171.2	1111008	40.89	10		15

DG10K01.MET

AJ
11/3/11

DAILY CALIBRATIONS

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK04002A 11/04/2011 10:13
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	376450	12.34	-9		15
Acetylene	2.183	2.157	2.209	22.0	2647.6	57585	21.75	-1		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	377882	23.17	-2		15
Ethane	3.067	3.017	3.117	25.4	24914.4	614581	24.67	-3		15
Propane	5.892	5.816	5.968	37.3	27171.2	939396	34.57	-7		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK04015A 11/04/2011 15:27
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	376581	12.34	-9		15
Acetylene	2.192	2.166	2.218	22.0	2647.6	56741	21.43	-3		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	370615	22.72	-4		15
Ethane	3.058	3.008	3.108	25.4	24914.4	615363	24.70	-3		15
Propane	5.875	5.799	5.951	37.3	27171.2	933380	34.35	-8		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK04026A 11/04/2011 18:10
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	381412	12.50	-8		15
Acetylene	2.192	2.166	2.218	22.0	2647.6	58166	21.97	-0		15
Ethylene	2.625	2.574	2.676	23.7	16311.8	369334	22.64	-5		15
Ethane	3.058	3.008	3.108	25.4	24914.4	615012	24.68	-3		15
Propane	5.867	5.791	5.943	37.3	27171.2	933770	34.37	-8		15

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGAS ICAL

Book #:	A10-025
Instrument No.:	10
Analytical Sequence:	FK01
Method File:	DG10K01
Analytical Batch:	N/A

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGAS ICAL SSSA-05-01-10	500 ppm
DGAS ICV SSSA-05-01-7	500ppm
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: SC

Date: 11/01/11

Disposed By: SC

Date Disposed: 11/01/11

Method: Dg10k01.met - Batch: Fk01.seq - Data: Fk01.011 - [Batch: fk01.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Run Type	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
1	Unknown	IB10K407	dg10k01.met	FK01.001	100ml 1	1	
2	Unknown	DG10K01-01	dg10k01.met	FK01.002	1	1	
3	Unknown	DG10K01-02	dg10k01.met	FK01.003	1	1	
4	Unknown	DG10K01-03	dg10k01.met	FK01.004	1	1	DGAS 1CML
5	Unknown	DG10K01-04	dg10k01.met	FK01.005	1	1	
6	Unknown	DG10K01-05	dg10k01.met	FK01.006	1	1	
7	Unknown	DG10K01-06	dg10k01.met	FK01.007	1	1	
8	Unknown	IDG10K0101	dg10k01.met	FK01.008	1	1	DGAS 1CV
9	Unknown	IB	dg10k01.met	FK01.009	1	1	
10	Unknown	IB	dg10k01.met	FK01.010	1	1	
11	Unknown	IB	dg10k01.met	FK01.011	1	1	
12	Unknown	IB	dg10k01.met	FK01.012	1	1	
13	Unknown	IB	dg10k01.met	FK01.013	1	1	
14	Unknown	IB	dg10k01.met	FK01.014	1	1	
15	Unknown	IB	dg10k01.met	FK01.015	1	1	FINAL
16	Unknown	IB	dg10k01.met	FK01.016	1	1	
17	Unknown	IB	dg10k01.met	FK01.017	1	1	
18	Unknown	IB	dg10k01.met	FK01.018	1	1	
19	Unknown	IB	dg10k01.met	FK01.019	1	1	
20	Unknown	IB	dg10k01.met	FK01.020	1	1	
21	Unknown	IB	dg10k01.met	FK01.021	1	1	
22	Unknown	IB	dg10k01.met	FK01.022	1	1	
23	Unknown	IB	dg10k01.met	FK01.023	1	1	
24	Unknown	IB	dg10k01.met	FK01.024	1	1	
25	Unknown	IB	dg10k01.met	FK01.025	1	1	
26	Unknown	IB	dg10k01.met	FK01.026	1	1	
27	Unknown	IB	dg10k01.met	FK01.027	1	1	
28	Unknown	IB	dg10k01.met	FK01.028	1	1	
29	Unknown	IB	dg10k01.met	FK01.029	1	1	
30	Unknown	IB	dg10k01.met	FK01.030	1	1	
31	Unknown	IB	dg10k01.met	FK01.031	1	1	
32	Unknown	IB	dg10k01.met	FK01.032	1	1	
33	Unknown	IB	dg10k01.met	FK01.033	1	1	
34	Unknown	IB	dg10k01.met	FK01.034	1	1	

EC 11/01/11

Waiting For Trigger...

Start | EZChrom Chromatograp... | Method: Dg10k01.... | Calculator | Method: Dg10k01.met | untitled - Paint | Exploring | Tuesday, November 01, 2011

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGK001W: K015, K014

Book #:	A10-025
Instrument No.:	10
Analytical Sequence:	FK04
Method File:	DG10K01
Analytical Batch:	CDG10K01408

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGas DC SSSB-07-35-03	200
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: RA

Date: 11/04/11

Disposed By: RA

Date Disposed: 11/04/11

Method: Dg10k01.met - Batch: Fk04.seq - Data: Fk04.026 - [Batch: fk04.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Run Type	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
1	Unknown	IB10K408	dg10k01.met	FK04.001	100uL 1	1	
2	Unknown	CDG10K01408	dg10k01.met	FK04.002	1	1	
3	Unknown	DGK001WB	dg10k01.met	FK04.003	1	1	
4	Unknown	DGK001WL	dg10k01.met	FK04.004	1	1	
5	Unknown	DGK001WC	dg10k01.met	FK04.005	1	1	
6	Unknown	11K015-11	dg10k01.met	FK04.006	1	1	
7	Unknown	11K015-08	dg10k01.met	FK04.007	1	1	
8	Unknown	11K015-09	dg10k01.met	FK04.008	1	1	
9	Unknown	11K015-10	dg10k01.met	FK04.009	1	1	
10	Unknown	11K015-11T DF=200	dg10k01.met	FK04.010	5uL (10x) 1	200	
11	Unknown	11K015-08T DF=200	dg10k01.met	FK04.011	1	200	
12	Unknown	11K015-09T DF=200	dg10k01.met	FK04.012	1	200	
13	Unknown	11K015-10T DF=5	dg10k01.met	FK04.013	20uL 1	5	
14	Unknown	11K015-10I DF=200	dg10k01.met	FK04.014	5uL (10x) 1	200	
15	Unknown	CDG10K01409	dg10k01.met	FK04.015	100uL 1	1	
16	Unknown	11K014-01	dg10k01.met	FK04.016	1	1	
17	Unknown	11K014-02	dg10k01.met	FK04.017	1	1	
18	Unknown	11K014-03	dg10k01.met	FK04.018	1	1	
19	Unknown	11K014-04	dg10k01.met	FK04.019	1	1	
20	Unknown	11K014-06	dg10k01.met	FK04.020	1	1	
21	Unknown	11K014-01T DF=400	dg10k01.met	FK04.021	5uL (20x) 1	400	
22	Unknown	11K014-02T DF=10	dg10k01.met	FK04.022	10uL 1	10	
23	Unknown	11K014-03T DF=200	dg10k01.met	FK04.023	5uL (10x) 1	200	
24	Unknown	11K014-04T DF=20	dg10k01.met	FK04.024	5uL 1	20	
25	Unknown	11K014-06T DF=2	dg10k01.met	FK04.025	50uL 1	2	
26	Unknown	CDG10K01410	dg10k01.met	FK04.026	100uL 1	1	FINAL
27	Unknown	ib	dg10k01.met	FK04.027	1	1	
28	Unknown	ib	dg10k01.met	FK04.028	1	1	
29	Unknown	ib	dg10k01.met	FK04.029	1	1	
30	Unknown	ib	dg10k01.met	FK04.030	1	1	
31	Unknown	ib	dg10k01.met	FK04.031	1	1	
32	Unknown	ib	dg10k01.met	FK04.032	1	1	
33	Unknown	ib	dg10k01.met	FK04.033	1	1	
34	Unknown	ib	dg10k01.met	FK04.034	1	1	

RH 11/04/11

Instrument 2 (TO10) - Running CDG10K01410 (Run 26)...

Start | EZChrom Chromatograp... | Method: Dg10k01.... | Calculator | Method: Dg10k01.met ... | untitled - Paint | Exploring - Fk | Friday, November 04, 2011

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/01/11 Time: 10:00 End Date: 11/01/11 Time: 10:40

PREPARATION BATCH # N/A

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DG10K01-01	39	4	N/A	
02	-02			N/A	
03	-03			N/A	DGAS ICAL
04	-04			N/A	
05	-05			N/A	
06	-06			N/A	
07	IDG10K01 01			N/A	DGAS ICV
08					
09					
10					
11					
12					
13					SC 11/01/11
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Standards	ID	Amount Added (µl)
LCS/MS / ICV	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic free
He	Air Gas
ICAL STD (500 ppm)	SSSA-05-01-10 (SPECIALTY AIR)
ICV STD 500 ppm	SSSA-05-01-7 (MATHESON)

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #: (ESS)	28100705

Comments:

1) 0.08 ml ICAL STD + 3.92 ml He
2) 0.4 ml 3.6 ml
3) 1.0 ml 3.0 ml
4) 1.6 ml 2.4 ml
5) 3.0 ml 1.0 ml
6) 4.0 ml 0 ml

Prepared By: SC

Standard Added By: SC

1031

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/04/11 Time: ~~12:00~~ 10:00 RH 11/04/11 End Date: 11/04/11 Time: ~~12:45~~ 10:45 RH 11/04/11

PREPARATION BATCH # DGK001W

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (< 2)	Notes
01	DGK001WB	39	4	N/A	
02	L			N/A	
03	L			N/A	
04	11K015-08			✓	
05	09			✓	
06	10			✓	
07	11			✓	
08	11K014-01			✓	
09	02			✓	
10	03			✓	
11	04			✓	
12	06			✓	
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

RH 11/04/11

Standards	ID	Amount Added (µl)
LCS/MS	555A-05-01-7	1600

Reagent	Source
H_2O	Organic Free
He	Air Gas

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #:	281007 05

Comments:

Prepared By: RH

Standard Added By: RS

1032

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 300.0(M)
ORGANIC ACIDS

SDG#: 11K014

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K014

METHOD 300.0(M)
ORGANIC ACIDS BY IC

A total of five (5) water samples were received on 11/02/11 for Organic Acids (Acetate, Butyrate, Lactate and Propionate) by IC analysis, Method 300.0(M) in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for OAK002WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

SAMPLE RESULTS

METHOD 300.0(M)
ACETATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K014

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK002WB	ND	1	NA	1.00	0.0500	11/08/1102:35	NA	HK07003	HK07001	OAK002W	NA	NA
LCS1W	OAK002WL	21.2	1	NA	1.00	0.0500	11/08/1102:56	NA	HK07004	HK07001	OAK002W	NA	NA
LCD1W	OAK002WC	21.0	1	NA	1.00	0.0500	11/08/1103:17	NA	HK07005	HK07001	OAK002W	NA	NA
MW-70-MNA01-83	K014-01	ND	1	NA	1.00	0.0500	11/08/1103:38	NA	HK07006	HK07001	OAK002W	11/02/1108:55	11/02/11
MW-70-MNA03-84	K014-02	ND	1	NA	1.00	0.0500	11/08/1104:19	NA	HK07007	HK07001	OAK002W	11/02/1109:45	11/02/11
MW-70-MNA02-85	K014-03	ND	1	NA	1.00	0.0500	11/08/1105:00	NA	HK07008	HK07001	OAK002W	11/02/1110:52	11/02/11
MW-70-MNA04-86	K014-04	ND	1	NA	1.00	0.0500	11/08/1105:41	NA	HK07009	HK07001	OAK002W	11/02/1111:48	11/02/11
MW-70-MNA05-88	K014-06	ND	1	NA	1.00	0.0500	11/08/1106:22	NA	HK07010	HK07001	OAK002W	11/02/1112:50	11/02/11

METHOD 300.0(M)
BUTYRATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K014

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK002WB	ND	1	NA	1.00	0.0500	11/08/1102:35	NA	HK07003	HK07001	OAK002W	NA	NA
LCS1W	OAK002WL	20.1	1	NA	1.00	0.0500	11/08/1102:56	NA	HK07004	HK07001	OAK002W	NA	NA
LCD1W	OAK002WC	20.7	1	NA	1.00	0.0500	11/08/1103:17	NA	HK07005	HK07001	OAK002W	NA	NA
MW-70-MNA01-83	K014-01	ND	1	NA	1.00	0.0500	11/08/1103:38	NA	HK07006	HK07001	OAK002W	11/02/1108:55	11/02/11
MW-70-MNA03-84	K014-02	ND	1	NA	1.00	0.0500	11/08/1104:19	NA	HK07007	HK07001	OAK002W	11/02/1109:45	11/02/11
MW-70-MNA02-85	K014-03	ND	1	NA	1.00	0.0500	11/08/1105:00	NA	HK07008	HK07001	OAK002W	11/02/1110:52	11/02/11
MW-70-MNA04-86	K014-04	ND	1	NA	1.00	0.0500	11/08/1105:41	NA	HK07009	HK07001	OAK002W	11/02/1111:48	11/02/11
MW-70-MNA05-88	K014-06	ND	1	NA	1.00	0.0500	11/08/1106:22	NA	HK07010	HK07001	OAK002W	11/02/1112:50	11/02/11

METHOD 300.0(M)
LACTATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K014

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK002WB	ND	1	NA	1.00	0.0500	11/08/1102:35	NA	HK07003	HK07001	OAK002W	NA	NA
LCS1W	OAK002WL	19.7	1	NA	1.00	0.0500	11/08/1102:56	NA	HK07004	HK07001	OAK002W	NA	NA
LCD1W	OAK002WC	19.6	1	NA	1.00	0.0500	11/08/1103:17	NA	HK07005	HK07001	OAK002W	NA	NA
MW-70-MNA01-83	K014-01	ND	1	NA	1.00	0.0500	11/08/1103:38	NA	HK07006	HK07001	OAK002W	11/02/1108:55	11/02/11
MW-70-MNA03-84	K014-02	ND	1	NA	1.00	0.0500	11/08/1104:19	NA	HK07007	HK07001	OAK002W	11/02/1109:45	11/02/11
MW-70-MNA02-85	K014-03	ND	1	NA	1.00	0.0500	11/08/1105:00	NA	HK07008	HK07001	OAK002W	11/02/1110:52	11/02/11
MW-70-MNA04-86	K014-04	ND	1	NA	1.00	0.0500	11/08/1105:41	NA	HK07009	HK07001	OAK002W	11/02/1111:48	11/02/11
MW-70-MNA05-88	K014-06	ND	1	NA	1.00	0.0500	11/08/1106:22	NA	HK07010	HK07001	OAK002W	11/02/1112:50	11/02/11

METHOD 300.0(M)
PROPIONATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K014

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK002WB	ND	1	NA	1.00	0.0500	11/08/1102:35	NA	HK07003	HK07001	OAK002W	NA	NA
LCS1W	OAK002WL	20.3	1	NA	1.00	0.0500	11/08/1102:56	NA	HK07004	HK07001	OAK002W	NA	NA
LCD1W	OAK002WC	20.2	1	NA	1.00	0.0500	11/08/1103:17	NA	HK07005	HK07001	OAK002W	NA	NA
MW-70-MNA01-83	K014-01	ND	1	NA	1.00	0.0500	11/08/1103:38	NA	HK07006	HK07001	OAK002W	11/02/1108:55	11/02/11
MW-70-MNA03-84	K014-02	ND	1	NA	1.00	0.0500	11/08/1104:19	NA	HK07007	HK07001	OAK002W	11/02/1109:45	11/02/11
MW-70-MNA02-85	K014-03	ND	1	NA	1.00	0.0500	11/08/1105:00	NA	HK07008	HK07001	OAK002W	11/02/1110:52	11/02/11
MW-70-MNA04-86	K014-04	ND	1	NA	1.00	0.0500	11/08/1105:41	NA	HK07009	HK07001	OAK002W	11/02/1111:48	11/02/11
MW-70-MNA05-88	K014-06	ND	1	NA	1.00	0.0500	11/08/1106:22	NA	HK07010	HK07001	OAK002W	11/02/1112:50	11/02/11

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K014
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK002WB	OAK002WL	OAK002WC		
LAB FILE ID:	HK07003	HK07004	HK07005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/08/1102:35	11/08/1102:56	11/08/1103:17	DATE RECEIVED:	NA
PREP. BATCH:	OAK002W	OAK002W	OAK002W		
CALIB. REF:	HK07001	HK07001	HK07001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	21.2	106	20.0	21.0	105	1	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K014
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK002WB	OAK002WL	OAK002WC		
LAB FILE ID:	HK07003	HK07004	HK07005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/08/1102:35	11/08/1102:56	11/08/1103:17	DATE RECEIVED:	NA
PREP. BATCH:	OAK002W	OAK002W	OAK002W		
CALIB. REF:	HK07001	HK07001	HK07001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	20.0	20.1	100	20.0	20.7	103	3	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K014
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK002WB	OAK002WL	OAK002WC		
LAB FILE ID:	HK07003	HK07004	HK07005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/08/1102:35	11/08/1102:56	11/08/1103:17	DATE RECEIVED:	NA
PREP. BATCH:	OAK002W	OAK002W	OAK002W		
CALIB. REF:	HK07001	HK07001	HK07001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	20.0	19.7	98	20.0	19.6	98	1	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K014
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK002WB	OAK002WL	OAK002WC		
LAB FILE ID:	HK07003	HK07004	HK07005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/08/1102:35	11/08/1102:56	11/08/1103:17	DATE RECEIVED:	NA
PREP. BATCH:	OAK002W	OAK002W	OAK002W		
CALIB. REF:	HK07001	HK07001	HK07001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	20.0	20.3	102	20.0	20.2	101	0	90-110	20

INITIAL CALIBRATIONS

IC SEQ FORM/HI26(2011)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
HI26001	IB	ABLPY	OAD6I26	09/26/1118:09	1
HI26002	S-0	ABLPY	OAD6I26	09/26/1118:30	1
HI26003	S-1	ABLPY	OAD6I26	09/26/1118:51	1
HI26004	S-2	ABLPY	OAD6I26	09/26/1119:12	1
HI26005	S-3	ABLPY	OAD6I26	09/26/1119:33	1
HI26006	S-4	ABLPY	OAD6I26	09/26/1119:54	1
HI26007	S-5	ABLPY	OAD6I26	09/26/1120:15	1
HI26008	ICV	ABLPY	OAD6I26	09/26/1120:36	1
HI26009	ICB	ABLPY	OAD6I26	09/26/1120:57	1
HI26010	CCV2	ABLPY	OAD6I26	09/26/1121:18	1
HI26011	CCB2	ABLPY	OAD6I26	09/26/1121:39	1
HI26012	OAI002WB	ABLPY	OAD6I26	09/26/1122:00	1
HI26013	OAI002WL	ABLPY	OAD6I26	09/26/1122:21	1
HI26014	OAI002WC	ABLPY	OAD6I26	09/26/1122:42	1
HI26015	I159-02	ABLPY	OAD6I26	09/26/1123:03	1
HI26016	I160-02	*BLPY	OAD6I26	09/27/1100:09	1
HI26017	I201-07	ABLPY	OAD6I26	09/27/1101:15	1
HI26018	I202-02	ABLPY	OAD6I26	09/27/1102:21	1
HI26019	CCV4	ABLPY	OAD6I26	09/27/1103:26	1
HI26020	CCB4	ABLPY	OAD6I26	09/27/1103:47	1

No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square	Offset	Slope	Curve
1	4.83	LACTATE	0LOff	5	0.9995	-0.001001	0.0486	0.0000
2	5.16	ACETATE	0LOff	5	0.9998	-0.001213	0.0584	0.0000
3	5.97	PROPIONA	0LOff	5	0.9996	-0.000106	0.0401	0.0000
4	6.82	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	7.44	BUTYRATE	0LOff	5	0.9995	0.000245	0.0335	0.0000
6	8.87	PYRUVATE	0LOff	5	0.9992	-0.001369	0.0562	0.0000
Average:					n.a.	n.a.	n.a.	0.0000

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09/30/11

SECOND SOURCE VERIFICATION

IC RESULT FORM CalVersion: 300M.I26/HI26(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HI26001	IB	ABLPY	ND	ND	ND	ND	ND	09/26/1118:09	1
HI26002	S-0	ABLPY	ND	ND	ND	ND	ND	09/26/1118:30	1
HI26003	S-1	ABLPY	.092	.111	.112	.109	.115	09/26/1118:51	1
HI26004	S-2	ABLPY	.483	.487	.481	.497	.495	09/26/1119:12	1
HI26005	S-3	ABLPY	1.013	1.031	.995	1.006	.969	09/26/1119:33	1
HI26006	S-4	ABLPY	1.978	1.962	1.963	1.96	1.957	09/26/1119:54	1
HI26007	S-5	ABLPY	3.014	3.017	3.029	3.025	3.039	09/26/1120:15	1
HI26008	ICV	ABLPY	98.5%	101%	96.4%	100%	95.8%	09/26/1120:36	1
HI26009	ICB	ABLPY	ND	ND	ND	ND	ND	09/26/1120:57	1
HI26010	CCV2	ABLPY	97.2%	91.6%	97.8%	94.7%	96.8%	09/26/1121:18	1
HI26011	CCB2	ABLPY	ND	ND	ND	ND	ND	09/26/1121:39	1
HI26012	OAI002WB	ABLPY	ND	ND	ND	ND	ND	09/26/1122:00	1
HI26013	OAI002WL	ABLPY	1.96	1.89	1.9	1.91	1.92	09/26/1122:21	1
HI26014	OAI002WC	ABLPY	1.98	2.04	1.88	2.03	1.93	09/26/1122:42	1
HI26015	I159-02	ABLPY	ND	ND	ND	ND	ND	09/26/1123:03	1
HI26016	I160-02	*BLPY	3.39E	ND	ND	ND	ND	09/27/1100:09	1
HI26017	I201-07	ABLPY	ND	ND	ND	ND	ND	09/27/1101:15	1
HI26018	I202-02	ABLPY	ND	ND	ND	ND	ND	09/27/1102:21	1
HI26019	CCV4	ABLPY	93.4%	90.3%	93.6%	93%	96.3%	09/27/1103:26	1
HI26020	CCB4	ABLPY	ND	ND	ND	ND	ND	09/27/1103:47	1

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DAILY CALIBRATIONS

IC RESULT FORM CalVersion: 300M.I26/HI26(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK07001	CCV44	ABLPY	102%	97.3%	97.8%	102%	95.9%	11/08/1101:53	1
HK07002	CCB44	ABLPY	ND	ND	ND	ND	ND	11/08/1102:14	1
HK07003	OAK002WB	ABLPY	ND	ND	ND	ND	ND	11/08/1102:35	1
HK07004	OAK002WL	ABLPY	2.12	2.01	1.97	2.03	1.94	11/08/1102:56	1
HK07005	OAK002WC	ABLPY	2.1	2.07	1.96	2.02	1.95	11/08/1103:17	1
HK07006	K014-01	ABLPY	ND	ND	ND	ND	ND	11/08/1103:38	1
HK07007	K014-02	ABLPY	ND	ND	ND	ND	ND	11/08/1104:19	1
HK07008	K014-03	ABLPY	ND	ND	ND	ND	ND	11/08/1105:00	1
HK07009	K014-04	ABLPY	ND	ND	ND	ND	ND	11/08/1105:41	1
HK07010	K014-06	ABLPY	ND	ND	ND	ND	ND	11/08/1106:22	1
HK07011	CCV46	ABLPY	103%	94%	94.7%	102%	93.1%	11/08/1107:03	1
HK07012	CCB46	ABLPY	ND	ND	ND	ND	ND	11/08/1107:24	1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-209

0AD6I26.met : 300M ICAL → Passed.

- Linear Range:

S-0: 0.0 ppm S-3: 1.0 ppm

S-1: 0.1 ppm S-4: 2.0 ppm

S-2: 0.5 ppm S-5: 3.0 ppm

- ICV: 2 ppm
- Sample Loop: 25 uL
- Flow Rate: 1.50 mL/min
- Suppressor : ASRS 4mm
- SRS Current: 100 mA
- Column : Ion Pac AS11 HC ; 4x 250 mm
- Guard Column : IonPac AG16 ; 4x 250 mm

0AI002W: I159, I160, I201 & I202

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HI26
Method File:	0AD6I26.met
Analytical Batch:	0AI002W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID		
ICAL	SW12A - 02 - 322	
ICV		323
CCV		320
LCS		321
MS	↓	319

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: [illegible]

Date: 09/26/11

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Sequence: HI26
Operator: cmadmin

Printed: 9/27/2011 10:32:03 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 20

Created: 9/26/2011 5:40:12 PM by cmadmin
Last Update: 9/27/2011 10:31:06 AM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor	Comment
1	HI26	001	IB	Unknown	1	25.0	ORG	OAD6I26	Finished	9/26/2011 6:09:42 PM	1.0000	
2	HI26	002	S-0	Standard	2	25.0	ORG	OAD6I26	Finished	9/26/2011 6:30:40 PM	1.0000	
3	HI26	003	S-1	Standard	3	25.0	ORG	OAD6I26	Finished	9/26/2011 6:51:39 PM	1.0000	
4	HI26	004	S-2	Standard	4	25.0	ORG	OAD6I26	Finished	9/26/2011 7:12:38 PM	1.0000	
5	HI26	005	S-3	Standard	5	25.0	ORG	OAD6I26	Finished	9/26/2011 7:33:36 PM	1.0000	
6	HI26	006	S-4	Standard	6	25.0	ORG	OAD6I26	Finished	9/26/2011 7:54:35 PM	1.0000	
7	HI26	007	S-5	Standard	7	25.0	ORG	OAD6I26	Finished	9/26/2011 8:15:34 PM	1.0000	
8	HI26	008	ICV	Unknown	8	25.0	ORG	OAD6I26	Finished	9/26/2011 8:36:33 PM	1.0000	
9	HI26	009	ICB	Unknown	9	25.0	ORG	OAD6I26	Finished	9/26/2011 8:57:31 PM	1.0000	
10	HI26	010	CCV2	Unknown	100	25.0	ORG	OAD6I26	Finished	9/26/2011 9:18:30 PM	1.0000	
11	HI26	011	CCB2	Unknown	99	25.0	ORG	OAD6I26	Finished	9/26/2011 9:39:29 PM	1.0000	
12	HI26	012	OAI002WB	Unknown	98	25.0	ORG	OAD6I26	Finished	9/26/2011 10:00:28 PM	1.0000	
13	HI26	013	OAI002WL	Unknown	97	25.0	ORG	OAD6I26	Finished	9/26/2011 10:21:26 PM	1.0000	
14	HI26	014	OAI002WC	Unknown	96	25.0	ORG	OAD6I26	Finished	9/26/2011 10:42:25 PM	1.0000	
15	HI26	015	I159-02	Unknown	11	25.0	ORG-SAMPLE	OAD6I26	Finished	9/26/2011 11:03:24 PM	1.0000	
16	HI26	016	I160-02	Unknown	12	25.0	ORG-SAMPLE	OAD6I26	Finished	9/27/2011 12:09:18 AM	1.0000	
17	HI26	017	I201-07	Unknown	13	25.0	ORG-SAMPLE	OAD6I26	Finished	9/27/2011 1:15:12 AM	1.0000	
18	HI26	018	I202-02	Unknown	14	25.0	ORG-SAMPLE	OAD6I26	Finished	9/27/2011 2:21:05 AM	1.0000	
19	HI26	019	CCV4	Unknown	100	25.0	ORG	OAD6I26	Finished	9/27/2011 3:26:58 AM	1.0000	
20	HI26	020	CCB4	Unknown	99	25.0	ORG	OAD6I26	Finished	9/27/2011 3:47:57 AM	1.0000	

FINAL

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EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
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ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-221

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK07
Method File:	OAD6I26
Analytical Batch:	OAK002W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SW12A-02-328
LCS	↓ -329
MS	

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: [illegible]

Date: 11/7/11

8022

Sequence: HK07
Operator: cmadmin

Printed: 11/15/2011 4:23:07 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 21

Created: 11/7/2011 4:39:18 PM by CHERRY
Last Update: 11/9/2011 2:04:13 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK07		IB	Unknown	1	25.0	ORG	OAD6I26	Finished	9/26/2011 6:09:42 PM	1.0000
2	HK07		S-0	Standard	2	25.0	ORG	OAD6I26	Finished	9/26/2011 6:30:40 PM	1.0000
3	HK07		S-1	Standard	3	25.0	ORG	OAD6I26	Finished	9/26/2011 6:51:39 PM	1.0000
4	HK07		S-2	Standard	4	25.0	ORG	OAD6I26	Finished	9/26/2011 7:12:38 PM	1.0000
5	HK07		S-3	Standard	5	25.0	ORG	OAD6I26	Finished	9/26/2011 7:33:36 PM	1.0000
6	HK07		S-4	Standard	6	25.0	ORG	OAD6I26	Finished	9/26/2011 7:54:35 PM	1.0000
7	HK07		S-5	Standard	7	25.0	ORG	OAD6I26	Finished	9/26/2011 8:15:34 PM	1.0000
8	HK07		ICV	Unknown	8	25.0	ORG	OAD6I26	Finished	9/26/2011 8:36:33 PM	1.0000
9	HK07		ICB	Unknown	9	25.0	ORG	OAD6I26	Finished	9/26/2011 8:57:31 PM	1.0000
10	HK07	001	CCV44	Unknown	100	25.0	ORG	OAD6I26	Finished	11/8/2011 1:53:45 AM	1.0000
11	HK07	002	CCB44	Unknown	99	25.0	ORG	OAD6I26	Finished	11/8/2011 2:14:43 AM	1.0000
12	HK07	003	OAK002WB	Unknown	98	25.0	ORG	OAD6I26	Finished	11/8/2011 2:35:42 AM	1.0000
13	HK07	004	OAK002WL	Unknown	97	25.0	ORG	OAD6I26	Finished	11/8/2011 2:56:41 AM	1.0000
14	HK07	005	OAK002WC	Unknown	96	25.0	ORG	OAD6I26	Finished	11/8/2011 3:17:39 AM	1.0000
15	HK07	006	K014-01	Unknown	1	25.0	ORG	OAD6I26	Finished	11/8/2011 3:38:38 AM	1.0000
16	HK07	007	K014-02	Unknown	2	25.0	ORG	OAD6I26	Finished	11/8/2011 4:19:32 AM	1.0000
17	HK07	008	K014-03	Unknown	3	25.0	ORG	OAD6I26	Finished	11/8/2011 5:00:25 AM	1.0000
18	HK07	009	K014-04	Unknown	4	25.0	ORG	OAD6I26	Finished	11/8/2011 5:41:19 AM	1.0000
19	HK07	010	K014-06	Unknown	5	25.0	ORG	OAD6I26	Finished	11/8/2011 6:22:13 AM	1.0000
20	HK07	011	CCV46	Unknown	100	25.0	ORG	OAD6I26	Finished	11/8/2011 7:03:07 AM	1.0000
21	HK07	012	CCB46	Unknown	99	25.0	ORG	OAD6I26	Finished	11/8/2011 7:24:06 AM	1.0000

8323

FINAL

Sequence: HK07
Operator: cmadmin

Printed: 11/15/2011 4:23:07 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 21

Created: 11/7/2011 4:39:18 PM by CHERRY
Last Update: 11/9/2011 2:04:13 PM by cmadmin

No.	Sequence	Comment
1	HK07	
2	HK07	
3	HK07	
4	HK07	
5	HK07	
6	HK07	
7	HK07	
8	HK07	
9	HK07	
10	HK07	
11	HK07	
12	HK07	
13	HK07	
14	HK07	
15	HK07	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK07	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
17	HK07	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK07	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK07	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK07	
21	HK07	

FINAL

8024

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CLIENT: **INSIGHT EEC, INC.**

PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11K035**

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** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 11-29-2011
EMAX Batch No.: 11K035

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 11/03/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW-70-PMW01A-089	K035-01	11/03/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-PMW01B-091	K035-02	11/03/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-27-092	K035-03	11/03/11	WATER	ANIONS BY IC

Sample ID	Control #	Col Date	Matrix	Analysis
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-28-094	K035-04	11/03/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IR-70-FD-093	K035-05	11/03/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IR-70-TB-090	K035-06	11/03/11	WATER	VOLATILE ORGANICS BY GC/MS
MW-70-PMW01B-091MS	K035-02M	11/03/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
MW-70-PMW01B-091MSD	K035-02S	11/03/11	WATER	DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				TOTAL ORGANIC CARBON
MW-70-PMW01B-091DUP	K035-02D	11/03/11	WATER	ANIONS BY IC
				ORGANIC ACIDS BY IC
				ALKALINITY
				TOTAL DISSOLVED SOLIDS

Sample ID	Control #	Col Date	Matrix	Analysis
				DISSOLVED HYDROGEN SULFIDE

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011068-8042
SAMPLE STORAGE
EMAX CONTROL NO. * 11K035
PROJECT CODE: 4-77101

CLIENT: INSIGHT GEO, INC.
PROJECT: IR SITE 70 - NWS SEAL BEACH
COORDINATOR: NICK WANBANGER
TEL: 714 678 6700 FAX: 714 678 6711 EMAIL: NWANBANGER@IGEO1.COM
SEND REPORT TO: NICK WANBANGER
COMPANY: INSIGHT GEO, INC.
ADDRESS: 3010 E. MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: YA. MINT

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	VOCs - 8260B (HC)	PCBs Aroclors - RSK-175 (HC)	Inert Chem - 300.0/9056, 310.1 (NP)	TPH - 418.1 (HC)	Sulfide - 376.2 (ZA/NaOH)	PCBs Congeners - 6010B (HN)		VOCs - 8260B (NP)	COMMENTS
1	MW-70-PMW01A-089	IR SITE 70 NWS SB	11-3-11	1130	10	VARIES	VARIES	GW	III	X	X	X	X	X	X			
2	MW-70-PMW01B-091	IR SITE 70 NWS-SB	11-3-11	1317	20	VARIES	VARIES	GW	III	X	X	X	X	X	X			MS/MSD
3	MW-70-27-092	IR SITE 70 NWS-SB	11-3-11	1459	10	VARY	VARY	GW	III	X	X	X	X	X	X			
4	MW-70-28-094	IR SITE 70 NWS-SB	11-3-11	1616	10	VARY	VARY	GW	III	X	X	X	X	X	X			
5																		
6																		
7																		
8																		
5	IR-70-FD-093	IR SITE 70 NWS-SB	11-3-11	—	10	VARY	VARY	GW	III	X	X	X	X	X	X			DUPLICATE
6	IR-70-TB-090	IR SITE 70 NWS-SB	11-3-11	1200	2	40mL	VOA	GW	III	X								TRIP BLANK

Instructions

Cooler #	Temp. (°C)
1	3.4

Sample #s

SAMPLER: CHASE BROWN

COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-3-11	1755	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin untill all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11K035
☐ EMAX Courier	FE Gc	Recepient J - LUNA
☑ Client Delivery		Date 11-3-11
☐ Third Party		Time 1755

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☑ Preservative (if any)	☑ TAT

Safety Issues ☑ None ☐ High concentrations expected ☐ Superfund Site samples ☐ Rad screening required

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☑ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	A ☑ Cooler 1 3.4 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C

Thermometer: *A - S/N 101541371* *B - S/N 101541382*

Comments: ☐ **PM was informed on non-compliant coolers immediately.**

Note: **pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code

REVIEWS

Sample Labeling [signature] / ES Date 11/3/11

SRC [signature] Date 11/3/11

PM [signature] Date 11/4/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s), wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4	_____	E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	_____
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	_____
B3	Sample ID is inconsistent in COC vis-à-vis label	F2	Bubble is> 6mm		
B4	_____	G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	_____		
C4	_____	H2	_____		

Ye Myint

From: Nick Weinberger [NWeinberger@ieeci.com]
Sent: Friday, November 04, 2011 7:57 AM
To: Ye Myint
Cc: Rebecca Lesher; Linh Pham
Subject: RE: Samples received today (11/03/11) -11K035

Those require both 300 (anions) and 300.0M (VFAs). I abbreviated it on the label since there was no room. It should be listed as a separate test on the COC. I'll let the field crew know to change it.

thanks,
Nick

Nicholas M. Weinberger, Project Chemist
3010 E. Miraloma Avenue Anaheim, CA 92806
T 714.678.6700 F 714.678.6711 www.ieeci.com

From: Ye Myint [mailto:YMyint@emaxlabs.com]
Sent: Thursday, November 03, 2011 6:32 PM
To: Nick Weinberger
Cc: 'Rebecca Lesher'; Linh Pham
Subject: Samples received today (11/03/11) -11K035

Nick,

Please verify the analyses requested on the COCs especially the request for 300.0/M. I'm not sure if you need both Anions and organic acids by this method. Could you instruct the field team to specify the parameters required by the method to minimize the confusion on future COCs.

Thanks.

Ye Myint
Project Manager
EMAX Laboratories, Inc.
1835W 205th. St.
Torrance, CA 90501
Ph: 310-618-8889 x121
Fax: 310-618-0818
E-mail: ymyint@emaxlabs.com

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11K035

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K035

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of six (6) water samples were received on 11/03/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied except for Acetone in CV001J3116 was not within 20% of expected value (biased high). However, analyte was not one of analytes required dilution in associated diluted samples. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, three (3) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary form for details.

Lab Control Sample
Three (3) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for V001K12L/C were all within QC limits.
Percent recoveries for V001K14L/C were all within QC limits.
Percent recoveries for V001K15L/C were all within QC limits.

Matrix QC Sample
A set of MS/MSD was analyzed with the samples in this SDG.
Percent recoveries for K035-02M/S were within project QC limits.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K035
Instrument ID : T-001

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V001K12B	1	NA	11/10/1112:49	11/10/1112:49	RKV264	RJV602	V001K12	Method Blank
LCS1W	V001K12L	1	NA	11/10/1111:04	11/10/1111:04	RKV261	RJV602	V001K12	Lab Control Sample (LCS)
LCD1W	V001K12C	1	NA	11/10/1111:35	11/10/1111:35	RKV262	RJV602	V001K12	LCS Duplicate
MW-70-PMW01B-091	K035-02	1	NA	11/10/1117:26	11/10/1117:26	RKV273	RJV602	V001K12	Field Sample
MW-70-PMW01B-091MS	K035-02M	1	NA	11/10/1119:30	11/10/1119:30	RKV277	RJV602	V001K12	Matrix Spike Sample (MS)
MW-70-PMW01B-091MSD	K035-02S	1	NA	11/10/1120:01	11/10/1120:01	RKV278	RJV602	V001K12	MS Duplicate (MSD)
MW-70-27-092	K035-03	1	NA	11/10/1121:03	11/10/1121:03	RKV280	RJV602	V001K12	Field Sample
IR-70-FD-093	K035-05	1	NA	11/10/1122:06	11/10/1122:06	RKV282	RJV602	V001K12	Field Sample
MBLK2W	V001K14B	1	NA	11/14/1111:14	11/14/1111:14	RKV300	RJV602	V001K14	Method Blank
LCS2W	V001K14L	1	NA	11/14/1109:41	11/14/1109:41	RKV297	RJV602	V001K14	Lab Control Sample (LCS)
LCD2W	V001K14C	1	NA	11/14/1110:12	11/14/1110:12	RKV298	RJV602	V001K14	LCS Duplicate
MW-70-PMW01A-089	K035-01R	1	NA	11/14/1112:17	11/14/1112:17	RKV302	RJV602	V001K14	Field Sample
IR-70-TB-090	K035-06R	1	NA	11/14/1116:28	11/14/1116:28	RKV310	RJV602	V001K14	Field Sample
MW-70-27-092DL	K035-03T	100	NA	11/14/1119:03	11/14/1119:03	RKV315	RJV602	V001K14	Diluted Sample
MW-70-28-094DL	K035-04T	25	NA	11/14/1119:34	11/14/1119:34	RKV316	RJV602	V001K14	Diluted Sample
MW-70-28-094	K035-04R	1	NA	11/14/1120:05	11/14/1120:05	RKV317	RJV602	V001K14	Field Sample
MBLK3W	V001K15B	1	NA	11/15/1109:28	11/15/1109:28	RKV326	RJV602	V001K15	Method Blank
LCS3W	V001K15L	1	NA	11/15/1107:55	11/15/1107:55	RKV323	RJV602	V001K15	Lab Control Sample (LCS)
LCD3W	V001K15C	1	NA	11/15/1108:26	11/15/1108:26	RKV324	RJV602	V001K15	LCS Duplicate
MW-70-PMW01B-091DL	K035-02T	100	NA	11/15/1110:30	11/15/1110:30	RKV328	RJV602	V001K15	Diluted Sample
IR-70-FD-093DL	K035-05T	100	NA	11/15/1111:01	11/15/1111:01	RKV329	RJV602	V001K15	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/03/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/03/11
Batch No. : 11K035	Date Extracted: 11/14/11 12:17
Sample ID: MW-70-PMW01A-089	Date Analyzed: 11/14/11 12:17
Lab Samp ID: K035-01R	Dilution Factor: 1
Lab File ID: RKV302	Matrix : WATER
Ext Btch ID: V001K14	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	28	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.83J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	2.5	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	0.81J	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	0.66J	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	7.9	1.0	0.20
TRICHLOROETHENE	1.0J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	5.5	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.4	10.00	114	70-140
4-BROMOFLUOROBENZENE	10.3	10.00	103	70-130
TOLUENE-D8	10.1	10.00	101	70-140

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV302.D Vial: 8
Acq On : 14 Nov 2011 12:17 pm Operator: MW
Sample : 11K035-01R 25mL Inst : TO01
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 13:36 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

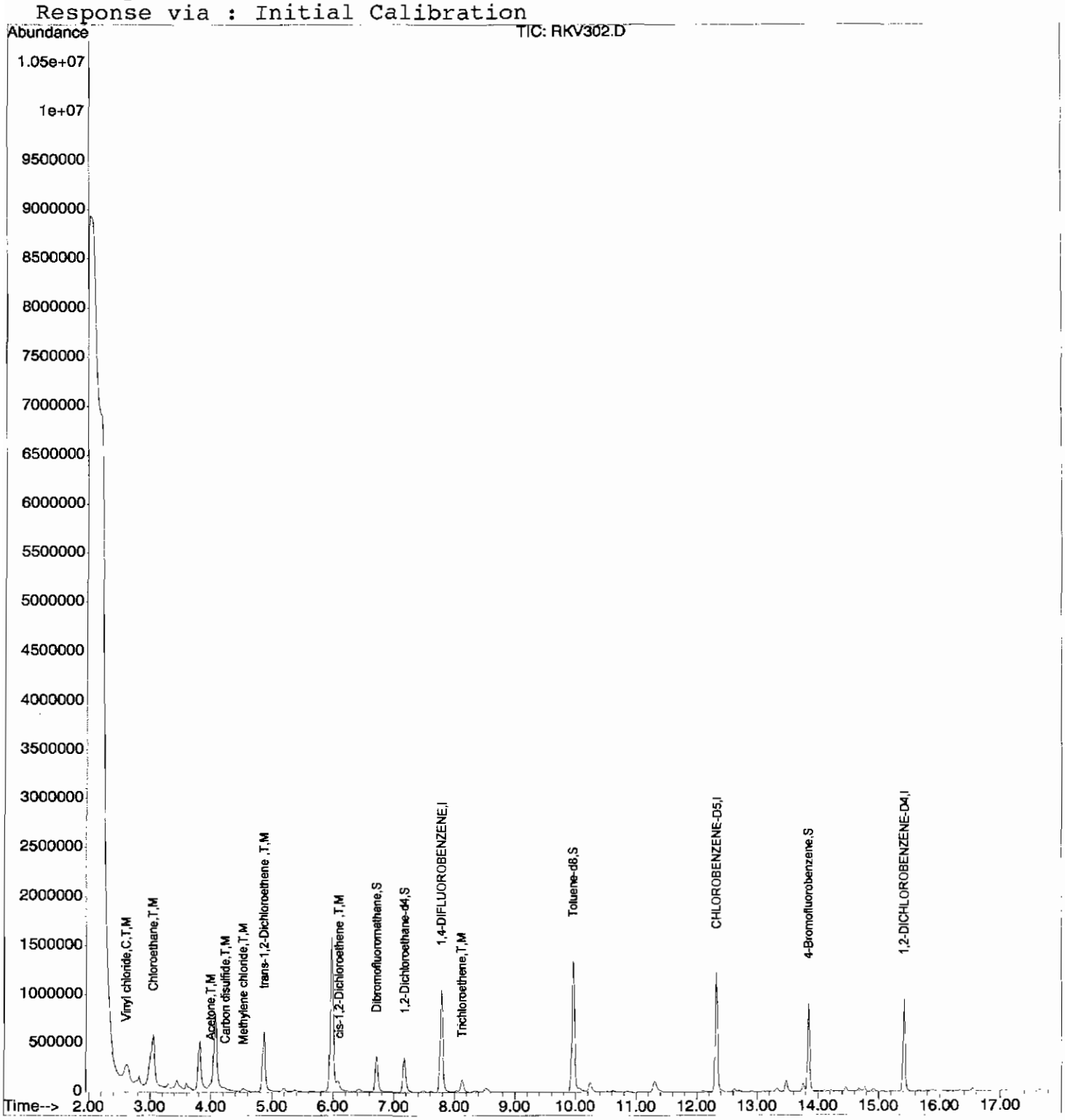
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1273459	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1046280	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	349154	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.72	111	364526	10.46	ug/l	0.00
Spiked Amount 10.000			Recovery	=	104.60%	
35) 1,2-Dichloroethane-d4	7.17	65	424969	11.42	ug/l	0.02
Spiked Amount 10.000			Recovery	=	114.20%	
49) Toluene-d8	9.96	98	1457352	10.07	ug/l	0.00
Spiked Amount 10.000			Recovery	=	100.70%	
69) 4-Bromofluorobenzene	13.85	95	443382	10.30	ug/l	0.00
Spiked Amount 10.000			Recovery	=	103.00%	
Target Compounds						Qvalue
5) Vinyl chloride	2.60	62	320387	5.45	ug/l	97
8) Chloroethane	3.05	64	90583	2.52	ug/l #	1
13) Acetone	3.99	43	156690	28.05	ug/l	95
16) Carbon disulfide	4.23	76	113024	0.83	ug/l	100
17) Methylene chloride	4.53	49	42707	0.66	ug/l	94
21) trans-1,2-Dichloroethene	4.87	61	675924	7.95	ug/l	99
28) cis-1,2-Dichloroethene	6.09	96	38971	0.81	ug/l #	1
41) Trichloroethene	8.12	130	46871	1.01	ug/l	94

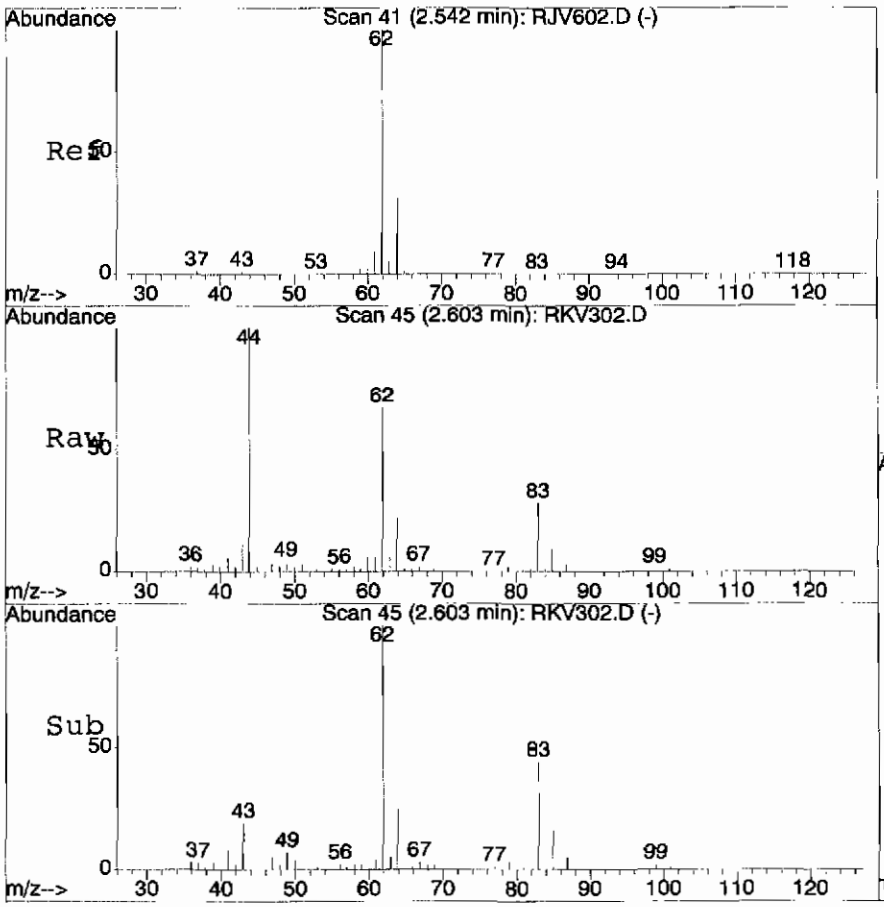
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV302.D Vial: 8
Acq On : 14 Nov 2011 12:17 pm Operator: MW
Sample : 11K035-01R 25mL Inst : TO01
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 13:36 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration

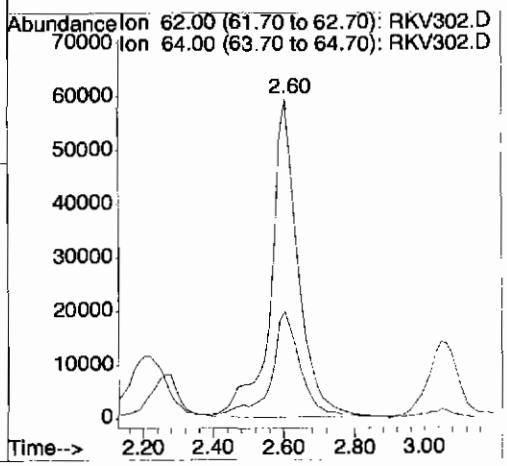


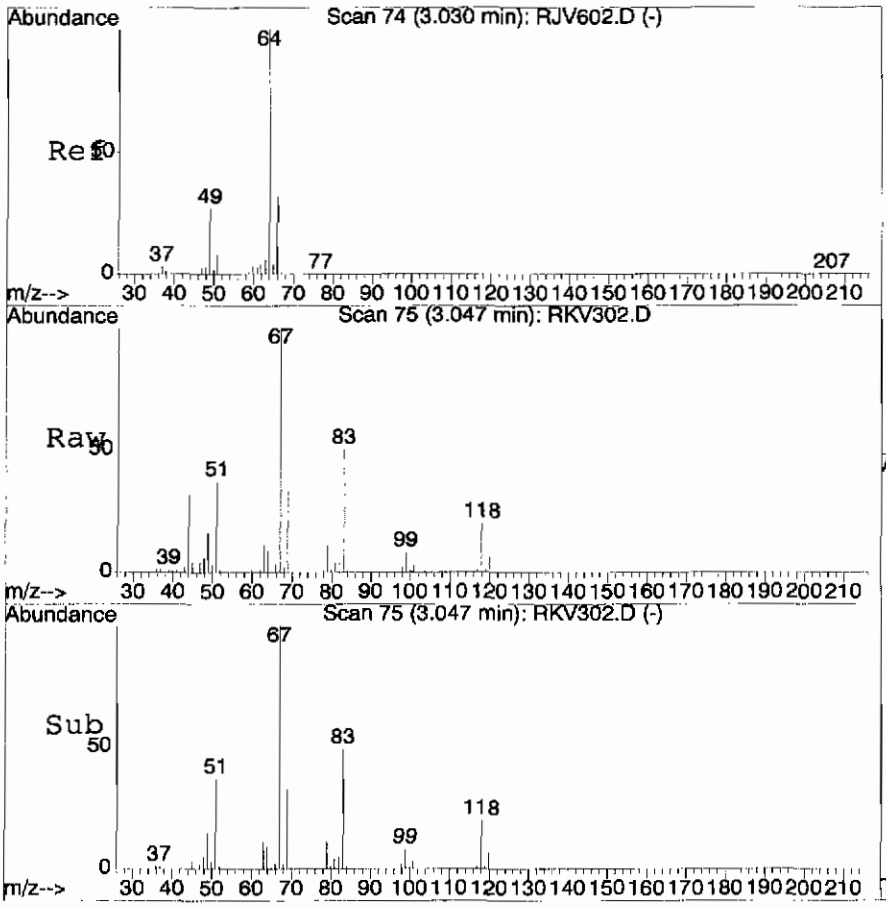


#5
Vinyl chloride
Concen: 5.45 ug/l
RT: 2.60 min Scan# 45
Delta R.T. 0.06 min
Lab File: RKV302.D
Acq: 14 Nov 2011 12:17 pm

Tgt Ion: 62 Resp: 320387

Ion	Ratio	Lower	Upper
62	100		
64	39.1	7.2	67.2

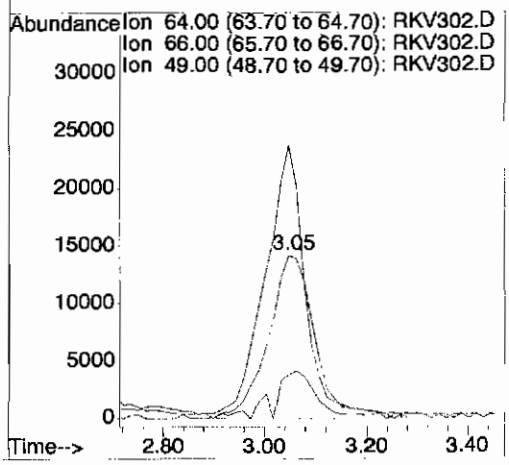


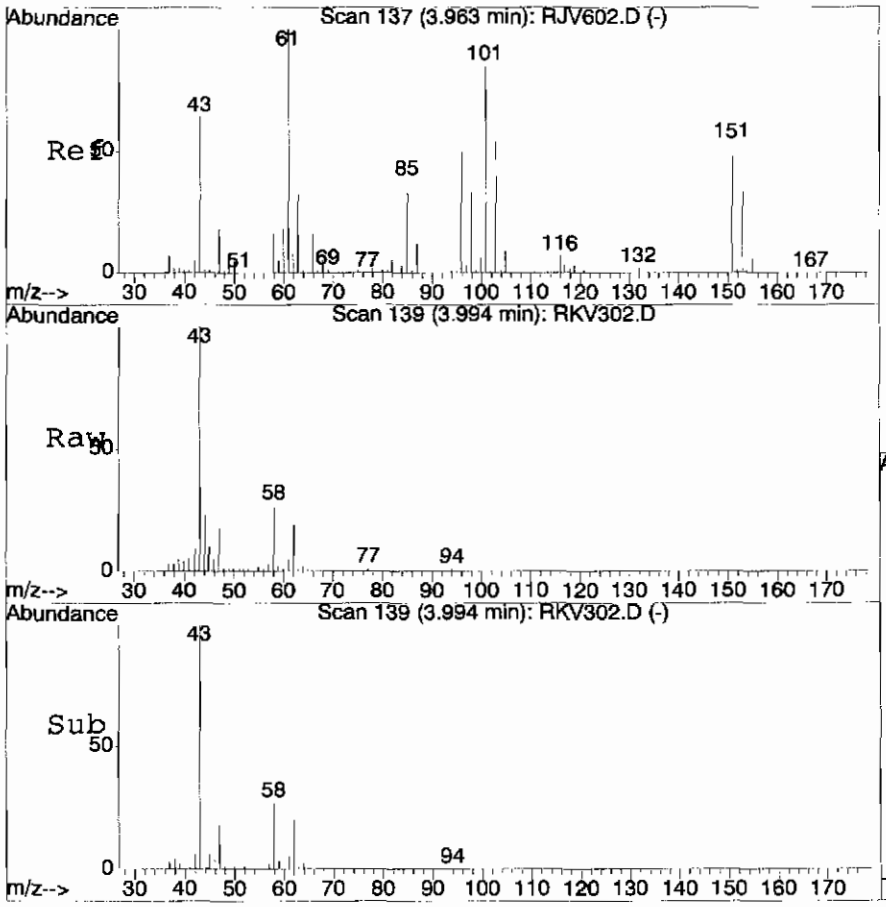


#8
Chloroethane
Concen: 2.52 ug/l
RT: 3.05 min Scan# 75
Delta R.T. 0.02 min
Lab File: RKV302.D
Acq: 14 Nov 2011 12:17 pm

Tgt Ion: 64 Resp: 90583

Ion	Ratio	Lower	Upper
64	100		
66	28.0	3.4	63.4
49	143.8	0.0	57.3#

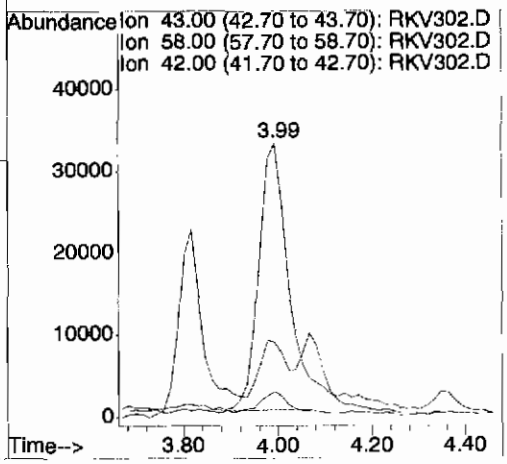


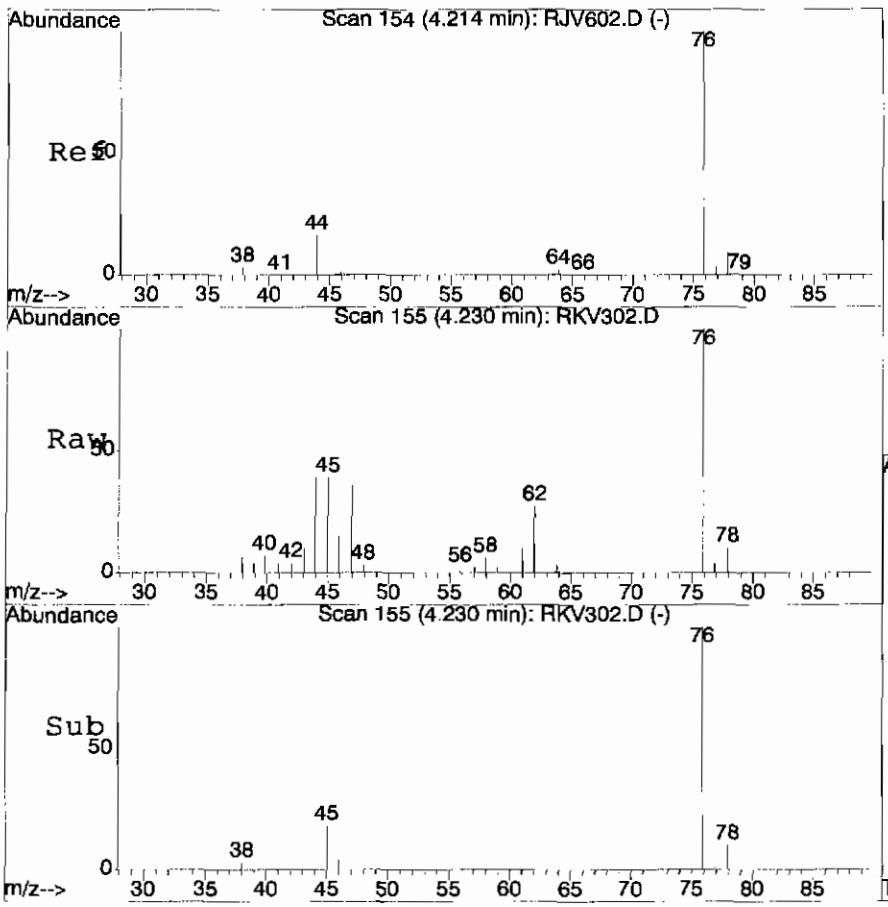


#13
Acetone
Concen: 28.05 ug/l
RT: 3.99 min Scan# 139
Delta R.T. 0.03 min
Lab File: RKV302.D
Acq: 14 Nov 2011 12:17 pm

Tgt Ion: 43 Resp: 156690

Ion	Ratio	Lower	Upper
43	100		
58	23.1	0.0	56.5
42	8.3	0.0	38.8

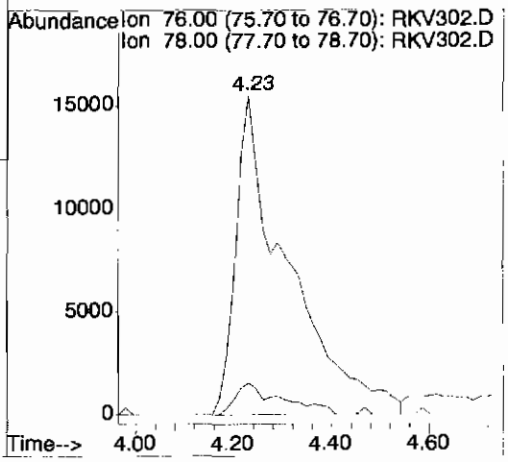


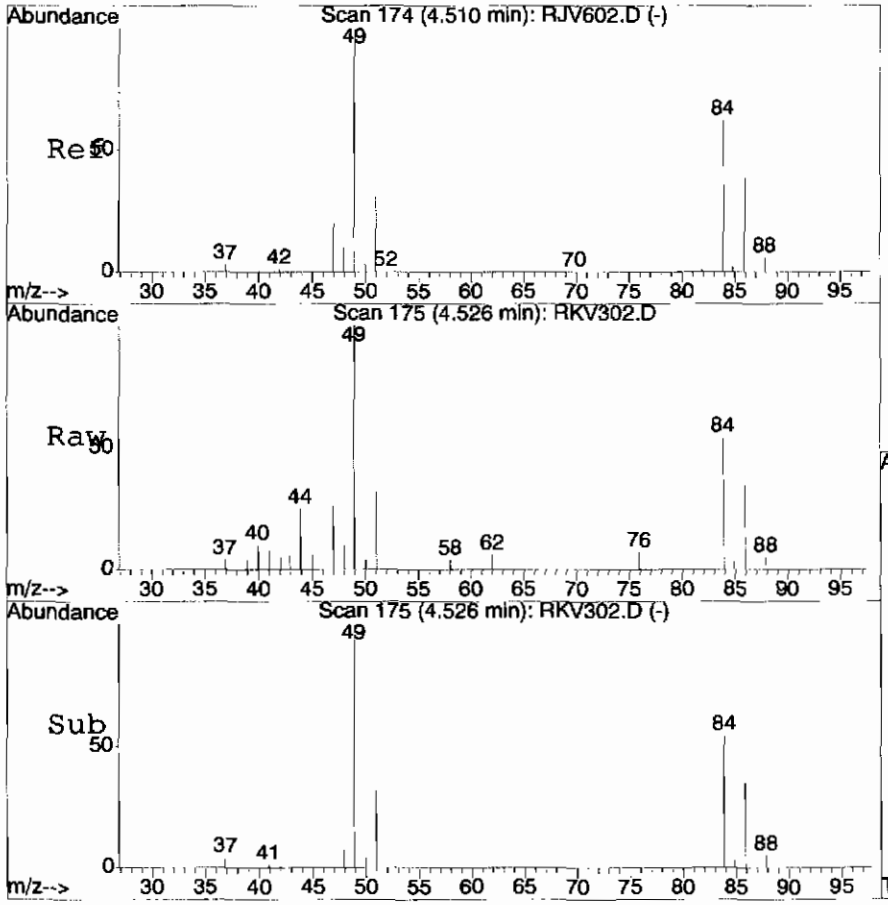


#16
Carbon disulfide
Concen: 0.83 ug/l
RT: 4.23 min Scan# 155
Delta R.T. 0.02 min
Lab File: RKV302.D
Acq: 14 Nov 2011 12:17 pm

Tgt Ion: 76 Resp: 113024

Ion	Ratio	Lower	Upper
76	100		
78	8.8	0.0	38.9

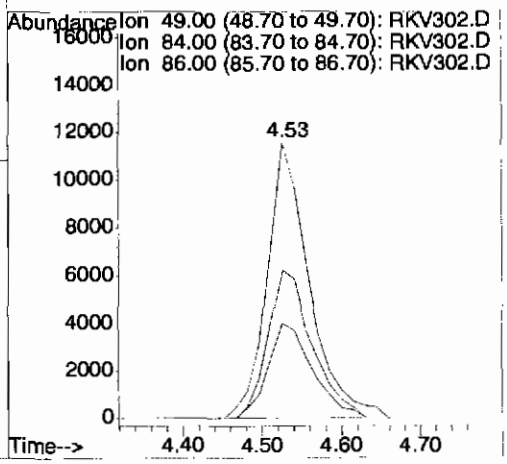


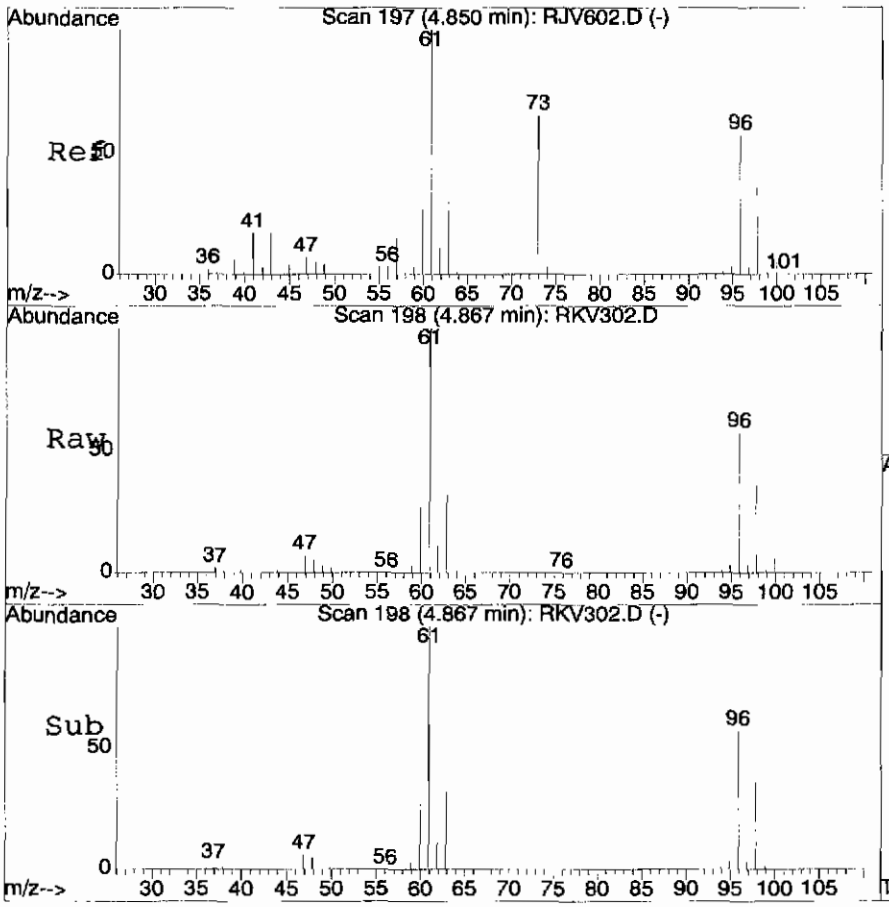


#17
Methylene chloride
Concen: 0.66 ug/l
RT: 4.53 min Scan# 175
Delta R.T. 0.02 min
Lab File: RKV302.D
Acq: 14 Nov 2011 12:17 pm

Tgt Ion: 49 Resp: 42707

Ion	Ratio	Lower	Upper
49	100		
84	56.4	31.9	91.9
86	36.5	9.5	69.5

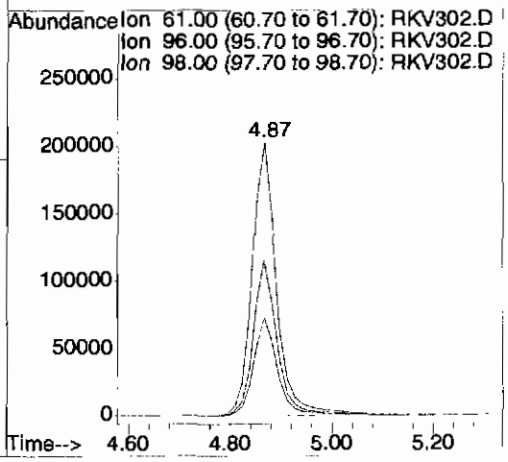


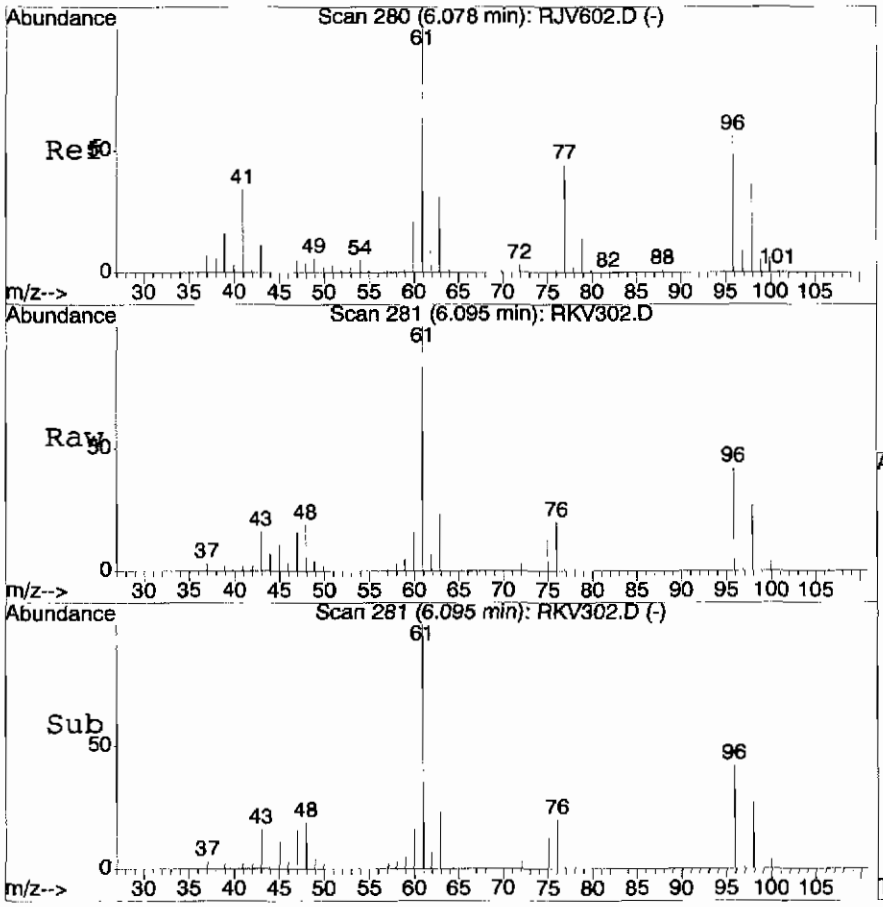


#21
trans-1,2-Dichloroethene
Concen: 7.95 ug/l
RT: 4.87 min Scan# 198
Delta R.T. 0.02 min
Lab File: RKV302.D
Acq: 14 Nov 2011 12:17 pm

Tgt Ion: 61 Resp: 675924

Ion	Ratio	Lower	Upper
61	100		
96	55.6	26.1	86.1
98	35.4	5.2	65.2

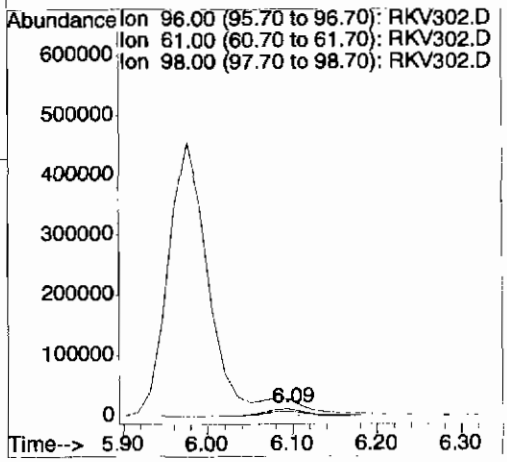


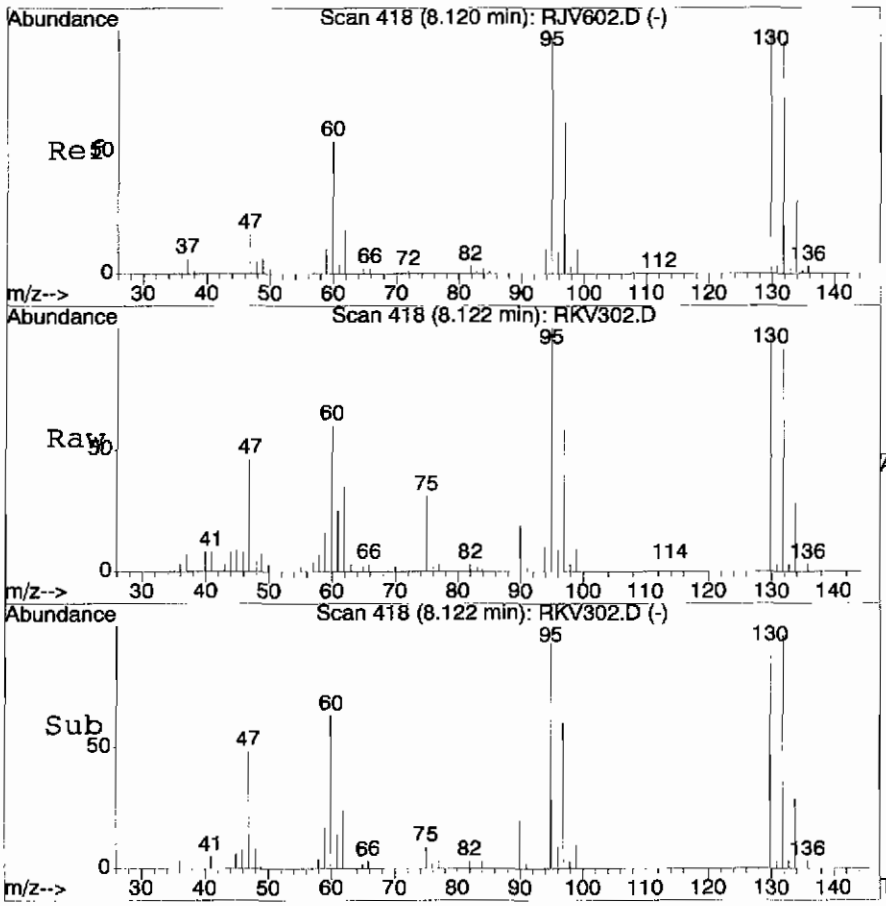


#28
cis-1,2-Dichloroethene
Concen: 0.81 ug/l
RT: 6.09 min Scan# 281
Delta R.T. 0.02 min
Lab File: RKV302.D
Acq: 14 Nov 2011 12:17 pm

Tgt Ion: 96 Resp: 38971

Ion	Ratio	Lower	Upper
96	100		
61	4125.0	157.0	217.0#
98	65.0	33.8	93.8

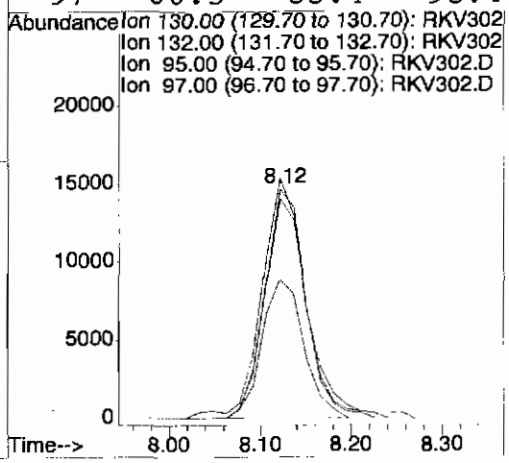




#41
Trichloroethene
Concen: 1.01 ug/l
RT: 8.12 min Scan# 418
Delta R.T. 0.00 min
Lab File: RKV302.D
Acq: 14 Nov 2011 12:17 pm

Tgt Ion:130 Resp: 46871

Ion	Ratio	Lower	Upper
130	100		
132	95.0	64.6	124.6
95	111.7	69.6	129.6
97	60.5	33.4	93.4



METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/03/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/03/11
Batch No. : 11K035	Date Extracted: 11/10/11 17:26
Sample ID: MW-70-PMW01B-091	Date Analyzed: 11/10/11 17:26
Lab Samp ID: K035-02	Dilution Factor: 1
Lab File ID: RKV273	Matrix : WATER
Ext Btch ID: V001K12	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	0.20J	1.0	0.20
FREON113	0.97J	1.0	0.30
1,1-DICHLOROETHANE	0.92J	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.31J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	16	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	33	1.0	0.20
TRICHLOROETHENE	4.4J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	930E	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.0	10.00	110	70-140
4-BROMOFLUOROBENZENE	11.3	10.00	113	70-130
TOLUENE-D8	10.1	10.00	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/03/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/03/11
Batch No. : 11K035	Date Extracted: 11/15/11 10:30
Sample ID: MW-70-PMW01B-091DL	Date Analyzed: 11/15/11 10:30
Lab Samp ID: K035-02T	Dilution Factor: 100
Lab File ID: RKV328	Matrix : WATER
Ext Btch ID: V001K15	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	100	20
1,1,1,2-TETRACHLOROETHANE	ND	100	20
1,1,2,2-TETRACHLOROETHANE	ND	100	20
1,1,2-TRICHLOROETHANE	ND	100	20
FREON113	ND	100	30
1,1-DICHLOROETHANE	ND	100	20
1,1-DICHLOROETHENE	ND	50	20
1,1-DICHLOROPROPENE	ND	100	20
1,2-DIBROMO-3-CHLOROPROPANE	ND	200	50
1,2-DIBROMOETHANE	ND	100	20
1,2-DICHLOROBENZENE	ND	100	20
1,2-DICHLOROETHANE	ND	50	20
1,2-DICHLOROPROPANE	ND	100	20
1,2,3-TRICHLOROBENZENE	ND	100	30
1,2,3-TRICHLOROPROPANE	ND	100	50
1,2,4-TRICHLOROBENZENE	ND	100	30
1,2,4-TRIMETHYLBENZENE	ND	100	20
1,3-DICHLOROBENZENE	ND	100	20
1,3,5-TRIMETHYLBENZENE	ND	100	20
1,4-DICHLOROBENZENE	ND	100	20
2-BUTANONE	ND	1000	400
2-CHLOROTOLUENE	ND	100	20
2-HEXANONE	ND	1000	400
2,2-DICHLOROPROPANE	ND	100	20
4-CHLOROTOLUENE	ND	100	20
4-METHYL-2-PENTANONE	ND	1000	400
N-BUTYLBENZENE	ND	100	20
N-PROPYLBENZENE	ND	100	20
P-ISOPROPYLTOLUENE	ND	100	20
SEC-BUTYLBENZENE	ND	100	20
TERT-BUTYLBENZENE	ND	100	20
ACETONE	ND	1000	500
BENZENE	ND	100	20
BROMOBENZENE	ND	100	20
BROMODICHLOROMETHANE	ND	100	20
CIS-1,3-DICHLOROPROPENE	ND	100	20
TRANS-1,3-DICHLOROPROPENE	ND	100	20
BROMOMETHANE	ND	200	30
BROMOFORM	ND	100	30
CARBON DISULFIDE	ND	100	20
CARBON TETRACHLORIDE	ND	50	20
CHLOROBENZENE	ND	100	20
CHLOROETHANE	ND	200	30
CHLOROFORM	ND	100	20
CHLOROMETHANE	ND	200	30
CIS-1,2-DICHLOROETHENE	ND	100	20
DICHLORODIFLUOROMETHANE	ND	200	30
DIBROMOCHLOROMETHANE	ND	100	20
DIBROMOMETHANE	ND	100	20
ETHYLBENZENE	ND	100	20
HEXACHLOROBUTADIENE	ND	100	30
ISOPROPYL BENZENE	ND	100	20
METHYLENE CHLORIDE	ND	100	50
MTBE	ND	100	20
STYRENE	ND	100	20
TETRACHLOROETHYLENE	ND	100	20
TOLUENE	ND	100	20
TRANS-1,2-DICHLOROETHENE	35J	100	20
TRICHLOROETHENE	ND	500	20
TRICHLOROFLUOROMETHANE	ND	200	30
VINYL CHLORIDE	2200	50	20
XYLENES (TOTAL)	ND	200	60
M/P-XYLENES	ND	100	40
O-XYLENE	ND	100	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	1050	1000	105	70-140
4-BROMOFLUOROBENZENE	1110	1000	111	70-130
TOLUENE-D8	1020	1000	102	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/03/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/03/11
Batch No. : 11K035	Date Extracted: 11/10/11 21:03
Sample ID: MW-70-27-092	Date Analyzed: 11/10/11 21:03
Lab Samp ID: K035-03	Dilution Factor: 1
Lab File ID: RKV280	Matrix : WATER
Ext Btch ID: V001K12	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	0.29J	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	0.54J	1.0	0.20
FREON113	14	1.0	0.30
1,1-DICHLOROETHANE	3.6	1.0	0.20
1,1-DICHLOROETHENE	4.2	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	0.54	0.50	0.20
1,2-DICHLOROPROPANE	0.41J	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.23J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	3.2	2.0	0.30
CHLOROFORM	59	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	510E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	0.84J	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	1.8	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	12	1.0	0.20
TRICHLOROETHENE	520E	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	590E	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.3	10.00	103	70-140
4-BROMOFLUOROBENZENE	11.2	10.00	112	70-130
TOLUENE-D8	10.0	10.00	100	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/03/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/03/11
Batch No. : 11K035	Date Extracted: 11/14/11 19:03
Sample ID: MW-70-27-092DL	Date Analyzed: 11/14/11 19:03
Lab Samp ID: K035-03T	Dilution Factor: 100
Lab File ID: RKV315	Matrix : WATER
Ext Btch ID: V001K14	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	100	20
1,1,1,2-TETRACHLOROETHANE	ND	100	20
1,1,2,2-TETRACHLOROETHANE	ND	100	20
1,1,2-TRICHLOROETHANE	ND	100	20
FREON113	ND	100	30
1,1-DICHLOROETHANE	ND	100	20
1,1-DICHLOROETHENE	ND	50	20
1,1-DICHLOROPROPENE	ND	100	20
1,2-DIBROMO-3-CHLOROPROPANE	ND	200	50
1,2-DIBROMOETHANE	ND	100	20
1,2-DICHLOROBENZENE	ND	100	20
1,2-DICHLOROETHANE	ND	50	20
1,2-DICHLOROPROPANE	ND	100	20
1,2,3-TRICHLOROBENZENE	ND	100	30
1,2,3-TRICHLOROPROPANE	ND	100	50
1,2,4-TRICHLOROBENZENE	ND	100	30
1,2,4-TRIMETHYLBENZENE	ND	100	20
1,3-DICHLOROBENZENE	ND	100	20
1,3,5-TRIMETHYLBENZENE	ND	100	20
1,4-DICHLOROBENZENE	ND	100	20
2-BUTANONE	ND	1000	400
2-CHLOROTOLUENE	ND	100	20
2-HEXANONE	ND	1000	400
2,2-DICHLOROPROPANE	ND	100	20
4-CHLOROTOLUENE	ND	100	20
4-METHYL-2-PENTANONE	ND	1000	400
N-BUTYLBENZENE	ND	100	20
N-PROPYLBENZENE	ND	100	20
P-ISOPROPYLTOLUENE	ND	100	20
SEC-BUTYLBENZENE	ND	100	20
TERT-BUTYLBENZENE	ND	100	20
ACETONE	ND	1000	500
BENZENE	ND	100	20
BROMOBENZENE	ND	100	20
BROMODICHLOROMETHANE	ND	100	20
CIS-1,3-DICHLOROPROPENE	ND	100	20
TRANS-1,3-DICHLOROPROPENE	ND	100	20
BROMOMETHANE	ND	200	30
BROMOFORM	ND	100	30
CARBON DISULFIDE	ND	100	20
CARBON TETRACHLORIDE	ND	50	20
CHLOROBENZENE	ND	100	20
CHLOROETHANE	ND	200	30
CHLOROFORM	63J	100	20
CHLOROMETHANE	ND	200	30
CIS-1,2-DICHLOROETHENE	1200	100	20
DICHLORODIFLUOROMETHANE	ND	200	30
DIBROMOCHLOROMETHANE	ND	100	20
DIBROMOMETHANE	ND	100	20
ETHYLBENZENE	ND	100	20
HEXACHLOROBUTADIENE	ND	100	30
ISOPROPYL BENZENE	ND	100	20
METHYLENE CHLORIDE	ND	100	50
MTBE	ND	100	20
STYRENE	ND	100	20
TETRACHLOROETHYLENE	ND	100	20
TOLUENE	ND	100	20
TRANS-1,2-DICHLOROETHENE	ND	100	20
TRICHLOROETHENE	1800	500	20
TRICHLOROFLUOROMETHANE	ND	200	30
VINYL CHLORIDE	1000	50	20
XYLENES (TOTAL)	ND	200	60
M/P-XYLENES	ND	100	40
O-XYLENE	ND	100	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	1020	1000	102	70-140
4-BROMOFLUOROBENZENE	1150	1000	115	70-130
TOLUENE-D8	1010	1000	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/03/11
Batch No.	: 11K035	Date Extracted:	11/14/11 20:05
Sample ID:	MW-70-28-094	Date Analyzed:	11/14/11 20:05
Lab Samp ID:	K035-04R	Dilution Factor:	1
Lab File ID:	RKV317	Matrix	: WATER
Ext Btch ID:	V001K14	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	1.6	1.0	0.30
1,1-DICHLOROETHANE	1.5	1.0	0.20
1,1-DICHLOROETHENE	0.49J	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	0.53J	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	40	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	11	1.0	0.20
TRICHLOROETHENE	4.3J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	280E	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.7	10.00	107	70-140
4-BROMOFLUOROBENZENE	11.2	10.00	112	70-130
TOLUENE-D8	10.0	10.00	100	70-140

METHOD 5D30B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/03/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/03/11
Batch No. : 11K035	Date Extracted: 11/14/11 19:34
Sample ID: MW-70-28-094DL	Date Analyzed: 11/14/11 19:34
Lab Samp ID: K035-04T	Dilution Factor: 25
Lab File ID: RKV316	Matrix : WATER
Ext Btch ID: V001K14	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	25	5.0
1,1,1,2-TETRACHLOROETHANE	ND	25	5.0
1,1,2,2-TETRACHLOROETHANE	ND	25	5.0
1,1,2-TRICHLOROETHANE	ND	25	5.0
FREON113	ND	25	7.5
1,1-DICHLOROETHANE	ND	25	5.0
1,1-DICHLOROETHENE	ND	12	5.0
1,1-DICHLOROPROPENE	ND	25	5.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	50	12
1,2-DIBROMOETHANE	ND	25	5.0
1,2-DICHLOROBENZENE	ND	25	5.0
1,2-DICHLOROETHANE	ND	12	5.0
1,2-DICHLOROPROPANE	ND	25	5.0
1,2,3-TRICHLOROBENZENE	ND	25	7.5
1,2,3-TRICHLOROPROPANE	ND	25	12
1,2,4-TRICHLOROBENZENE	ND	25	7.5
1,2,4-TRIMETHYLBENZENE	ND	25	5.0
1,3-DICHLOROBENZENE	ND	25	5.0
1,3,5-TRIMETHYLBENZENE	ND	25	5.0
1,4-DICHLOROBENZENE	ND	25	5.0
2-BUTANONE	ND	250	100
2-CHLOROTOLUENE	ND	25	5.0
2-HEXANONE	ND	250	100
2,2-DICHLOROPROPANE	ND	25	5.0
4-CHLOROTOLUENE	ND	25	5.0
4-METHYL-2-PENTANONE	ND	250	100
N-BUTYLBENZENE	ND	25	5.0
N-PROPYLBENZENE	ND	25	5.0
P-ISOPROPYLTOLUENE	ND	25	5.0
SEC-BUTYLBENZENE	ND	25	5.0
TERT-BUTYLBENZENE	ND	25	5.0
ACETONE	ND	250	120
BENZENE	ND	25	5.0
BROMOBENZENE	ND	25	5.0
BROMODICHLOROMETHANE	ND	25	5.0
CIS-1,3-DICHLOROPROPENE	ND	25	5.0
TRANS-1,3-DICHLOROPROPENE	ND	25	5.0
BROMOMETHANE	ND	50	7.5
BROMOFORM	ND	25	7.5
CARBON DISULFIDE	ND	25	5.0
CARBON TETRACHLORIDE	ND	12	5.0
CHLOROBENZENE	ND	25	5.0
CHLOROETHANE	ND	50	7.5
CHLOROFORM	ND	25	5.0
CHLOROMETHANE	ND	50	7.5
CIS-1,2-DICHLOROETHENE	44	25	5.0
DICHLORODIFLUOROMETHANE	ND	50	7.5
DIBROMOCHLOROMETHANE	ND	25	5.0
DIBROMOMETHANE	ND	25	5.0
ETHYLBENZENE	ND	25	5.0
HEXACHLOROBUTADIENE	ND	25	7.5
ISOPROPYL BENZENE	ND	25	5.0
METHYLENE CHLORIDE	ND	25	12
MTBE	ND	25	5.0
STYRENE	ND	25	5.0
TETRACHLOROETHYLENE	ND	25	5.0
TOLUENE	ND	25	5.0
TRANS-1,2-DICHLOROETHENE	12J	25	5.0
TRICHLOROETHENE	ND	120	5.0
TRICHLOROFLUOROMETHANE	ND	50	7.5
VINYL CHLORIDE	340	12	5.0
XYLENES (TOTAL)	ND	50	15
M/P-XYLENES	ND	25	10
O-XYLENE	ND	25	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	279	250.0	112	70-140
4-BROMOFLUOROBENZENE	279	250.0	112	70-130
TOLUENE-D8	252	250.0	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/03/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/03/11
Batch No. : 11K035	Date Extracted: 11/10/11 22:06
Sample ID: IR-70-FD-093	Date Analyzed: 11/10/11 22:06
Lab Samp ID: K035-05	Dilution Factor: 1
Lab File ID: RKV282	Matrix : WATER
Ext Btch ID: V001K12	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	0.30J	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	0.51J	1.0	0.20
FREON113	14	1.0	0.30
1,1-DICHLOROETHANE	3.5	1.0	0.20
1,1-DICHLOROETHENE	4.0	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	0.53	0.50	0.20
1,2-DICHLOROPROPANE	0.39J	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	5.1J	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.24J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	3.1	2.0	0.30
CHLOROFORM	58	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	510E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	0.80J	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	1.7	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	12	1.0	0.20
TRICHLOROETHENE	540E	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	580E	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.8	10.00	108	70-140
4-BROMOFLUOROBENZENE	11.5	10.00	115	70-130
TOLUENE-D8	9.83	10.00	98.3	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/03/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/03/11
Batch No. : 11K035	Date Extracted: 11/15/11 11:01
Sample ID: IR-70-FD-093DL	Date Analyzed: 11/15/11 11:01
Lab Samp ID: K035-05T	Dilution Factor: 100
Lab File ID: RKV329	Matrix : WATER
Ext Btch ID: V001K15	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	100	20
1,1,1,2-TETRACHLOROETHANE	ND	100	20
1,1,2,2-TETRACHLOROETHANE	ND	100	20
1,1,2-TRICHLOROETHANE	ND	100	20
FREON113	ND	100	30
1,1-DICHLOROETHANE	ND	100	20
1,1-DICHLOROETHENE	ND	50	20
1,1-DICHLOROPROPENE	ND	100	20
1,2-DIBROMO-3-CHLOROPROPANE	ND	200	50
1,2-DIBROMOETHANE	ND	100	20
1,2-DICHLOROBENZENE	ND	100	20
1,2-DICHLOROETHANE	ND	50	20
1,2-DICHLOROPROPANE	ND	100	20
1,2,3-TRICHLOROBENZENE	ND	100	30
1,2,3-TRICHLOROPROPANE	ND	100	50
1,2,4-TRICHLOROBENZENE	ND	100	30
1,2,4-TRIMETHYLBENZENE	ND	100	20
1,3-DICHLOROBENZENE	ND	100	20
1,3,5-TRIMETHYLBENZENE	ND	100	20
1,4-DICHLOROBENZENE	ND	100	20
2-BUTANONE	ND	1000	400
2-CHLOROTOLUENE	ND	100	20
2-HEXANONE	ND	1000	400
2,2-DICHLOROPROPANE	ND	100	20
4-CHLOROTOLUENE	ND	100	20
4-METHYL-2-PENTANONE	ND	1000	400
N-BUTYLBENZENE	ND	100	20
N-PROPYLBENZENE	ND	100	20
P-ISOPROPYLTOLUENE	ND	100	20
SEC-BUTYLBENZENE	ND	100	20
TERT-BUTYLBENZENE	ND	100	20
ACETONE	ND	1000	500
BENZENE	ND	100	20
BROMOBENZENE	ND	100	20
BROMODICHLOROMETHANE	ND	100	20
CIS-1,3-DICHLOROPROPENE	ND	100	20
TRANS-1,3-DICHLOROPROPENE	ND	100	20
BROMOMETHANE	ND	200	30
BROMOFORM	ND	100	30
CARBON DISULFIDE	ND	100	20
CARBON TETRACHLORIDE	ND	50	20
CHLOROBENZENE	ND	100	20
CHLOROETHANE	ND	200	30
CHLOROFORM	74J	100	20
CHLOROMETHANE	ND	200	30
CIS-1,2-DICHLOROETHENE	1500	100	20
DICHLORODIFLUOROMETHANE	ND	200	30
DIBROMOCHLOROMETHANE	ND	100	20
DIBROMOMETHANE	ND	100	20
ETHYLBENZENE	ND	100	20
HEXACHLOROBUTADIENE	ND	100	30
ISOPROPYL BENZENE	ND	100	20
METHYLENE CHLORIDE	ND	100	50
MTBE	ND	100	20
STYRENE	ND	100	20
TETRACHLOROETHYLENE	ND	100	20
TOLUENE	ND	100	20
TRANS-1,2-DICHLOROETHENE	ND	100	20
TRICHLOROETHENE	2100	500	20
TRICHLOROFLUOROMETHANE	ND	200	30
VINYL CHLORIDE	1300	50	20
XYLENES (TOTAL)	ND	200	60
M/P-XYLENES	ND	100	40
O-XYLENE	ND	100	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	1060	1000	106	70-140
4-BROMOFLUOROBENZENE	1170	1000	117	70-130
TOLUENE-D8	1020	1000	102	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/03/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/03/11
Batch No. : 11K035	Date Extracted: 11/14/11 16:28
Sample ID: IR-70-TB-090	Date Analyzed: 11/14/11 16:28
Lab Samp ID: K035-06R	Dilution Factor: 1
Lab File ID: RKV310	Matrix : WATER
Ext Btch ID: V001K14	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.0	10.00	100	70-140
4-BROMOFLUOROBENZENE	11.8	10.00	118	70-130
TOLUENE-D8	10.4	10.00	104	70-140

QC SUMMARIES

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/10/11
Batch No. : 11K035	Date Extracted: 11/10/11 12:49
Sample ID: MBLK1W	Date Analyzed: 11/10/11 12:49
Lab Samp ID: V001K12B	Dilution Factor: 1
Lab File ID: RKV264	Matrix : WATER
Ext Btch ID: V001K12	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.1	10.00	101	70-140
4-BROMOFLUOROBENZENE	11.3	10.00	113	70-130
TOLUENE-D8	10.1	10.00	101	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	V001K12B	V001K12L	V001K12C		
LAB FILE ID:	RKV264	RKV261	RKV262		
DATE EXTRACTED:	11/10/1112:49	11/10/1111:04	11/10/1111:35	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1112:49	11/10/1111:04	11/10/1111:35	DATE RECEIVED:	11/10/11
PREP. BATCH:	V001K12	V001K12	V001K12		
CALIB. REF:	RJV602	RJV602	RJV602		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	11.0	110	10.0	10.1	101	9	60-130	30
Benzene	ND	10.0	10.1	101	10.0	9.55	95	6	70-130	30
Chlorobenzene	ND	10.0	10.7	107	10.0	10.1	101	6	70-120	30
Toluene	ND	10.0	10.3	103	10.0	9.71	97	6	70-130	30
Trichloroethene	ND	10.0	10.5	105	10.0	9.89	99	6	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	10.3	103	10.0	9.89	99	70-140
4-Bromofluorobenzene	10.0	9.57	96	10.0	9.70	97	70-130
Toluene-d8	10.0	9.89	99	10.0	9.81	98	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/14/11
Batch No.	: 11K035	Date Extracted:	11/14/11 11:14
Sample ID:	MBLK2W	Date Analyzed:	11/14/11 11:14
Lab Samp ID:	V001K14B	Dilution Factor:	1
Lab File ID:	RKV300	Matrix :	WATER
Ext Btch ID:	V001K14	% Moisture :	NA
Calib. Ref.:	RJV602	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.2	10.00	102	70-140
4-BROMOFLUOROBENZENE	11.4	10.00	114	70-130
TOLUENE-D8	10.3	10.00	103	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	V001K14B	V001K14L	V001K14C		
LAB FILE ID:	RKV300	RKV297	RKV298		
DATE EXTRACTED:	11/14/1111:14	11/14/1109:41	11/14/1110:12	DATE COLLECTED:	NA
DATE ANALYZED:	11/14/1111:14	11/14/1109:41	11/14/1110:12	DATE RECEIVED:	11/14/11
PREP. BATCH:	V001K14	V001K14	V001K14		
CALIB. REF:	RJV602	RJV602	RJV602		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.98	100	10.0	9.99	100	0	60-130	30
Benzene	ND	10.0	9.85	98	10.0	9.83	98	0	70-130	30
Chlorobenzene	ND	10.0	10.3	103	10.0	10.2	102	1	70-120	30
Toluene	ND	10.0	10.1	101	10.0	10.0	100	1	70-130	30
Trichloroethene	ND	10.0	10.1	101	10.0	10.0	100	1	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	10.7	107	10.0	10.2	102	70-140
4-Bromofluorobenzene	10.0	9.73	97	10.0	9.59	96	70-130
Toluene-d8	10.0	9.77	98	10.0	9.86	99	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/15/11
Batch No. : 11K035	Date Extracted: 11/15/11 09:28
Sample ID: MBLK3W	Date Analyzed: 11/15/11 09:28
Lab Samp ID: V001K15B	Dilution Factor: 1
Lab File ID: RKV326	Matrix : WATER
Ext Btch ID: V001K15	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	D.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.97	10.00	99.7	70-140
4-BROMOFLUOROBENZENE	11.3	10.00	113	70-130
TOLUENE-D8	10.1	10.00	101	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK3W				
LAB SAMP ID:	V001K15B	V001K15L	V001K15C		
LAB FILE ID:	RKV326	RKV323	RKV324		
DATE EXTRACTED:	11/15/1109:28	11/15/1107:55	11/15/1108:26	DATE COLLECTED:	NA
DATE ANALYZED:	11/15/1109:28	11/15/1107:55	11/15/1108:26	DATE RECEIVED:	11/15/11
PREP. BATCH:	V001K15	V001K15	V001K15		
CALIB. REF:	RJV602	RJV602	RJV602		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.88	99	10.0	10.3	103	4	60-130	30
Benzene	ND	10.0	10.2	102	10.0	10.4	104	2	70-130	30
Chlorobenzene	ND	10.0	10.7	107	10.0	10.8	108	1	70-120	30
Toluene	ND	10.0	10.5	105	10.0	10.5	105	0	70-130	30
Trichloroethene	ND	10.0	10.6	106	10.0	10.5	105	1	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	9.62	96	10.0	9.85	99	70-140
4-Bromofluorobenzene	10.0	9.63	96	10.0	9.51	95	70-130
Toluene-d8	10.0	9.98	100	10.0	9.87	99	70-130

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MW-70-PMW01B-091				
LAB SAMP ID:	K035-02	K035-02M	K035-02S		
LAB FILE ID:	RKV273	RKV277	RKV278		
DATE EXTRACTED:	11/10/1117:26	11/10/1119:30	11/10/1120:01	DATE COLLECTED:	11/03/11
DATE ANALYZED:	11/10/1117:26	11/10/1119:30	11/10/1120:01	DATE RECEIVED:	11/03/11
PREP. BATCH:	V001K12	V001K12	V001K12		
CALIB. REF:	RJV602	RJV602	RJV602		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	11.2	112	10.0	10.6	106	6	60-140	30
Benzene	ND	10.0	9.66	97	10.0	9.50	95	2	60-140	30
Chlorobenzene	ND	10.0	10.1	101	10.0	9.67	97	4	63-132	30
Toluene	ND	10.0	9.79	98	10.0	9.56	96	2	70-140	30
Trichloroethene	4.42J	10.0	13.6	92	10.0	13.4	89	2	60-140	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	10.6	106	10.0	10.0	100	70-140
4-Bromofluorobenzene	10.0	9.25	92	10.0	9.51	95	70-130
Toluene-d8	10.0	9.78	98	10.0	9.97	100	70-140

QC DATA

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV300.D Vial: 6
Acq On : 14 Nov 2011 11:14 am Operator: MW
Sample : VO01K14B 25mL Inst : TO01
Misc : BLANK Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 11:42 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1702049	10.00	ug/1	0.00
36) CHLOROBENZENE-D5	12.33	117	1385661	10.00	ug/1	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	389856	10.00	ug/1	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.72	111	468840	10.06	ug/1	0.00
Spiked Amount 10.000			Recovery	=	100.60%	
35) 1,2-Dichloroethane-d4	7.18	65	509350	10.24	ug/1	0.02
Spiked Amount 10.000			Recovery	=	102.40%	
49) Toluene-d8	9.96	98	1976350	10.31	ug/1	0.00
Spiked Amount 10.000			Recovery	=	103.10%	
69) 4-Bromofluorobenzene	13.85	95	547253	11.39	ug/1	0.00
Spiked Amount 10.000			Recovery	=	113.90%	

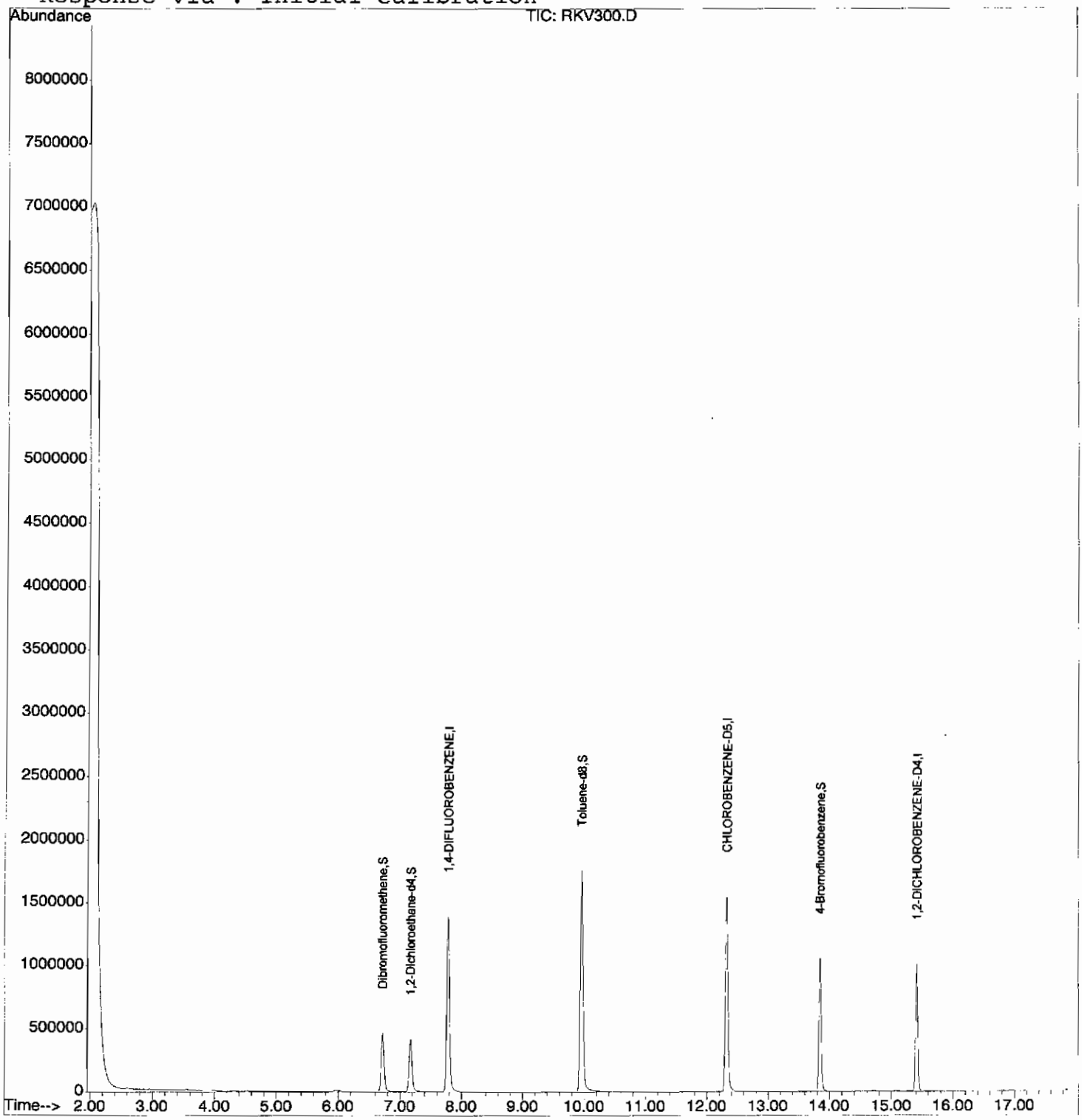
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV300.D Vial: 6
Acq On : 14 Nov 2011 11:14 am Operator: MW
Sample : VO01K14B 25mL Inst : TO01
Misc : BLANK Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 11:42 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV297.D
Acq On : 14 Nov 2011 9:41 am
Sample : VO01K14L
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA
MS Integration Params: 524C.P
Quant Time: Nov 14 9:59 2011

Vial: 3
Operator: MW
Inst : TO01
Multiplr: 1.00
Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.77	114	1653852	10.00	ug/l	-0.01
36) CHLOROBENZENE-D5	12.32	117	1449229	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	534680	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.70	111	472564	10.44	ug/l	-0.01
Spiked Amount 10.000			Recovery	=	104.40%	
35) 1,2-Dichloroethane-d4	7.16	65	519090	10.74	ug/l	0.00
Spiked Amount 10.000			Recovery	=	107.40%	
49) Toluene-d8	9.94	98	1959494	9.77	ug/l	-0.01
Spiked Amount 10.000			Recovery	=	97.70%	
69) 4-Bromofluorobenzene	13.85	95	641297	9.73	ug/l	0.00
Spiked Amount 10.000			Recovery	=	97.30%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	2.17	85	528794	8.80	ug/l	99
4) Chloromethane	2.40	50	697211	9.69	ug/l	99
5) Vinyl chloride	2.56	62	753884	9.88	ug/l	92
6) 2-Chloro-1,1,1-trifluoroet	2.66	118	5698	0.10	ug/l	90
7) Bromomethane	2.93	94	412300	10.91	ug/l	100
8) Chloroethane	3.05	64	479708	10.28	ug/l	99
9) Dichlorofluoromethane	3.33	67	1204726	10.23	ug/l	100
10) Trichlorofluoromethane	3.31	101	828017	11.66	ug/l	99
11) Acrolein	3.80	56	63013	33.68	ug/l	83
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	362174	10.01	ug/l	99
13) Acetone	3.96	43	359336	49.54	ug/l	96
14) 1,1-Dichloroethene	3.93	61	1085833	9.98	ug/l	100
15) Iodomethane	4.11	142	805966	10.18	ug/l	100
16) Carbon disulfide	4.22	76	1685071	9.49	ug/l	100
17) Methylene chloride	4.51	49	819326	9.82	ug/l	99
18) tert-Butyl alcohol	4.64	59	82380	42.20	ug/l	76
19) Acrylonitrile	4.78	53	433929	48.75	ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	1030294	10.58	ug/l	100
21) trans-1,2-Dichloroethene	4.85	61	1100694	9.97	ug/l	99
22) Vinyl acetate	5.35	43	595654	7.57	ug/l	91
23) 1,1-Dichloroethane	5.37	63	1260667	10.08	ug/l	100
24) Isopropyl ether (DIPE)	5.41	45	2230740	10.04	ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	1629012	10.20	ug/l	99
27) 2-Butanone	6.05	43	572638	48.99	ug/l	98
28) cis-1,2-Dichloroethene	6.08	96	651323	10.38	ug/l	98
29) 2,2-Dichloropropane	6.09	77	995308	11.19	ug/l	100
30) Bromochloromethane	6.38	49	519355	10.29	ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV297.D Vial: 3
Acq On : 14 Nov 2011 9:41 am Operator: MW
Sample : VO01K14L Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 9:59 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) Chloroform	6.51	83	1113244	10.58 ug/l	99
33) 1,1,1-Trichloroethane	6.75	97	893390	10.69 ug/l	99
34) tert-Amyl methyl ether (TA	7.38	87	252380	10.75 ug/l	98
37) 1,1-Dichloropropene	6.94	110	300265	9.96 ug/l	99
38) Carbon tetrachloride	6.95	119	720950	9.99 ug/l	100
39) Benzene	7.20	78	2521898	9.85 ug/l	100
40) 1,2-Dichloroethane	7.26	62	677995	10.67 ug/l	98
41) Trichloroethene	8.12	130	645563	10.07 ug/l	99
42) 1,2-Dichloropropane	8.49	63	657210	9.88 ug/l	98
44) Dibromomethane	8.61	93	227192	10.52 ug/l	98
45) Bromodichloromethane	8.86	83	769747	10.37 ug/l	100
46) 2-Chloroethyl vinyl ether	9.26	63	36624	2.14 ug/l	98
47) cis-1,3-Dichloropropene	9.53	75	907682	10.20 ug/l	98
48) 4-Methyl-2-pentanone	9.73	43	1325849	45.50 ug/l	99
50) Toluene	10.06	91	2560347	10.08 ug/l	99
51) Ethyl methacrylate	10.50	69	452361	9.47 ug/l	97
52) trans-1,3-Dichloropropene	10.41	75	690497	10.49 ug/l	98
53) 1,1,2-Trichloroethane	10.74	97	323919	10.35 ug/l	99
54) Tetrachloroethene	10.90	164	533236	10.33 ug/l	99
55) 1,3-Dichloropropane	11.01	76	676971	10.40 ug/l	100
56) 2-Hexanone	11.08	43	838798	44.05 ug/l	99
57) Dibromochloromethane	11.38	129	406960	10.93 ug/l	99
58) 1,2-Dibromoethane	11.58	107	317960	10.70 ug/l	100
59) 1-Chlorohexane	12.34	91	1041768	9.91 ug/l	98
60) Chlorobenzene	12.35	112	1508835	10.31 ug/l	99
61) 1,1,1,2-Tetrachloroethane	12.49	131	519644	10.73 ug/l	100
62) Ethylbenzene	12.50	91	3035445	10.27 ug/l	99
63) m-Xylene & p-Xylene	12.68	91	4615464	20.68 ug/l	100
64) o-Xylene	13.18	91	2293915	10.45 ug/l	100
65) Styrene	13.21	104	1515071	9.65 ug/l	99
67) Bromoform	13.43	173	197678	11.20 ug/l	100
68) Isopropylbenzene	13.64	105	2776193	10.46 ug/l	99
70) 1,1,2,2-Tetrachloroethane	13.98	83	395299	10.88 ug/l	98
71) Bromobenzene	14.01	156	574215	10.49 ug/l	99
72) trans-1,4-Dichloro-2-buten	14.03	53	77087	8.28 ug/l	99
73) 1,2,3-Trichloropropane	14.05	110	99989	10.75 ug/l	89
74) n-Propylbenzene	14.11	91	3569813	10.43 ug/l	100
75) 1,3,5-Trimethylbenzene	14.31	105	2295022	10.45 ug/l	100
76) 2-Chlorotoluene	14.22	91	1969340	10.42 ug/l	100
77) 4-Chlorotoluene	14.34	91	2187823	10.49 ug/l	99
78) tert-Butylbenzene	14.65	134	514391	10.46 ug/l	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV297.D Vial: 3
Acq On : 14 Nov 2011 9:41 am Operator: MW
Sample : VO01K14L Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 9:59 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

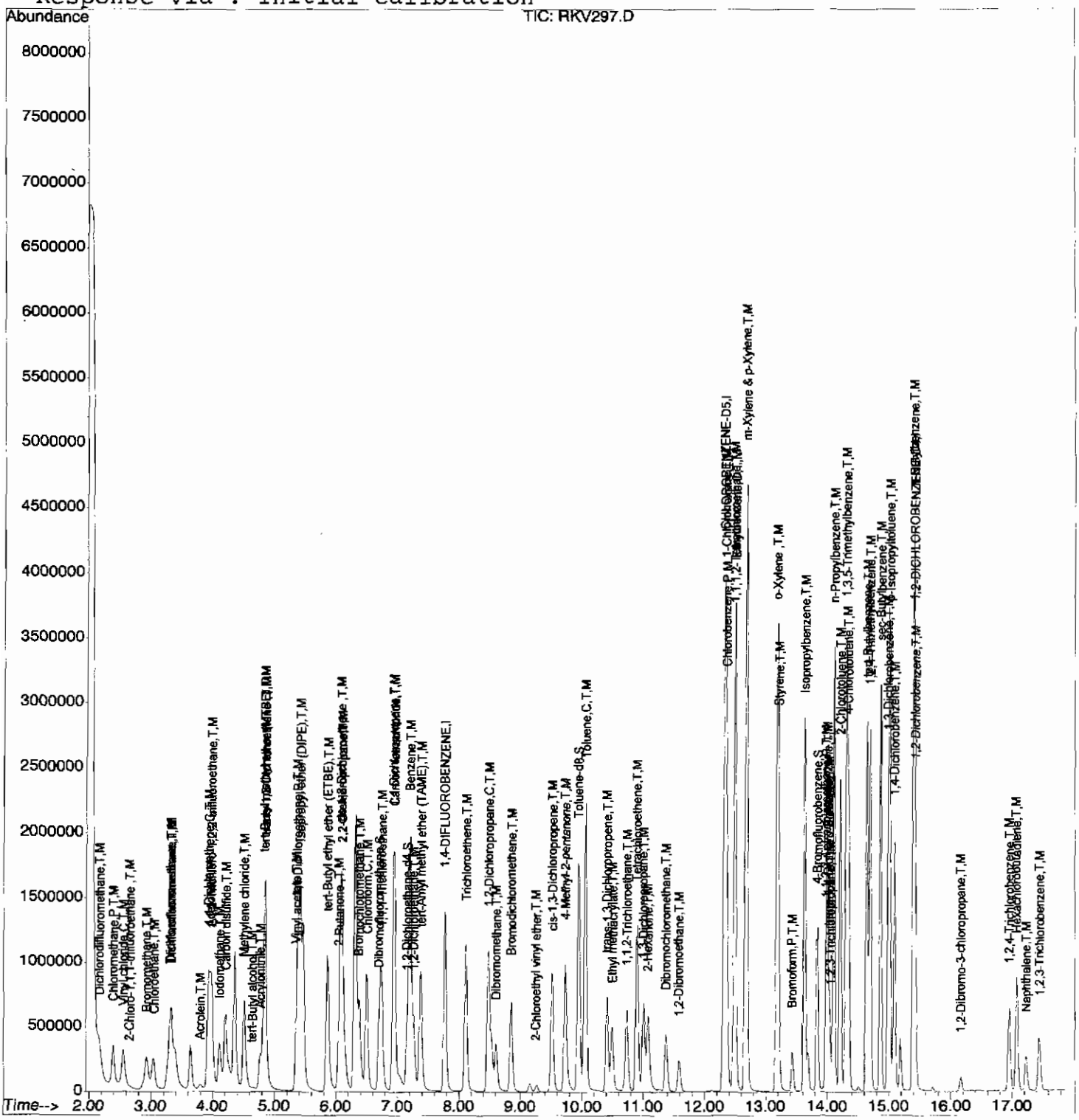
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79) 1,2,4-Trimethylbenzene	14.69	105	2179998	10.46 ug/l	100
80) sec-Butylbenzene	14.87	105	2904602	10.41 ug/l	99
81) p-Isopropyltoluene	15.02	119	2297051	10.61 ug/l	99
82) 1,3-Dichlorobenzene	14.99	146	1124971	10.72 ug/l	100
83) 1,4-Dichlorobenzene	15.09	146	1054385	10.59 ug/l	100
84) n-Butylbenzene	15.40	91	2057814	9.83 ug/l	100
85) 1,2-Dichlorobenzene	15.43	146	874568	10.48 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.17	157	43293	10.33 ug/l	98
87) 1,2,4-Trichlorobenzene	16.95	180	346891	8.27 ug/l	99
88) Hexachlorobutadiene	17.07	225	305074	10.27 ug/l	99
89) Naphthalene	17.24	128	395286	8.53 ug/l	99
90) 1,2,3-Trichlorobenzene	17.46	180	246606	8.98 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV297.D Vial: 3
Acq On : 14 Nov 2011 9:41 am Operator: MW
Sample : VO01K14L Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 9:59 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV298.D Vial: 4
Acq On : 14 Nov 2011 10:12 am Operator: MW
Sample : VO01K14C Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 10:30 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.77	114	1601733	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.31	117	1354066	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	517770	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.71	111	440417	10.05	ug/l	0.00
Spiked Amount 10.000			Recovery	=	100.50%	
35) 1,2-Dichloroethane-d4	7.17	65	478524	10.23	ug/l	0.00
Spiked Amount 10.000			Recovery	=	102.30%	
49) Toluene-d8	9.95	98	1846759	9.86	ug/l	0.00
Spiked Amount 10.000			Recovery	=	98.60%	
69) 4-Bromofluorobenzene	13.84	95	611860	9.59	ug/l	0.00
Spiked Amount 10.000			Recovery	=	95.90%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	2.19	85	451336	7.75	ug/l	99
4) Chloromethane	2.42	50	597016	8.57	ug/l	96
5) Vinyl chloride	2.58	62	688290	9.31	ug/l	93
6) 2-Chloro-1,1,1-trifluoroet	2.68	118	4952	0.09	ug/l	95
7) Bromomethane	2.95	94	366314	10.00	ug/l	100
8) Chloroethane	3.05	64	419402	9.28	ug/l	100
9) Dichlorofluoromethane	3.35	67	1116653	9.79	ug/l	99
10) Trichlorofluoromethane	3.32	101	742700	10.80	ug/l	99
11) Acrolein	3.81	56	63316	34.94	ug/l	95
12) 1,1,2-Trichloro-1,2,2-trif	4.00	151	353094	10.07	ug/l	98
13) Acetone	3.97	43	352755	50.21	ug/l	99
14) 1,1-Dichloroethene	3.94	61	1052712	9.99	ug/l	98
15) Iodomethane	4.12	142	766419	10.00	ug/l	98
16) Carbon disulfide	4.22	76	1746841	10.15	ug/l	100
17) Methylene chloride	4.52	49	767055	9.49	ug/l	98
18) tert-Butyl alcohol	4.67	59	92312	48.83	ug/l	87
19) Acrylonitrile	4.78	53	417640	48.45	ug/l	99
20) tert-Butyl methyl ether (M	4.84	73	933236	9.90	ug/l	99
21) trans-1,2-Dichloroethene	4.86	61	1035887	9.69	ug/l	98
22) Vinyl acetate	5.36	43	535823	7.03	ug/l	95
23) 1,1-Dichloroethane	5.38	63	1161504	9.59	ug/l	100
24) Isopropyl ether (DIPE)	5.42	45	2036328	9.46	ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	1468532	9.49	ug/l	99
27) 2-Butanone	6.04	43	546599	48.29	ug/l	98
28) cis-1,2-Dichloroethene	6.09	96	611660	10.07	ug/l	96
29) 2,2-Dichloropropane	6.10	77	893566	10.37	ug/l	99
30) Bromochloromethane	6.38	49	479887	9.82	ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV298.D Vial: 4
Acq On : 14 Nov 2011 10:12 am Operator: MW
Sample : VO01K14C Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 10:30 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) Chloroform	6.50	83	1007061	9.88 ug/l	99
33) 1,1,1-Trichloroethane	6.75	97	806779	9.96 ug/l	99
34) tert-Amyl methyl ether (TA	7.39	87	226738	9.97 ug/l	99
37) 1,1-Dichloropropene	6.94	110	280256	9.95 ug/l	98
38) Carbon tetrachloride	6.96	119	647221	9.60 ug/l	100
39) Benzene	7.21	78	2351386	9.83 ug/l	100
40) 1,2-Dichloroethane	7.27	62	610214	10.28 ug/l	99
41) Trichloroethene	8.13	130	599790	10.01 ug/l	99
42) 1,2-Dichloropropane	8.48	63	599820	9.65 ug/l	97
44) Dibromomethane	8.62	93	208798	10.34 ug/l	98
45) Bromodichloromethane	8.87	83	699048	10.08 ug/l	99
46) 2-Chloroethyl vinyl ether	9.27	63	38946	2.43 ug/l	96
47) cis-1,3-Dichloropropene	9.52	75	836665	10.07 ug/l	97
48) 4-Methyl-2-pentanone	9.74	43	1271355	46.69 ug/l	99
50) Toluene	10.07	91	2377094	10.01 ug/l	99
51) Ethyl methacrylate	10.49	69	413523	9.26 ug/l	98
52) trans-1,3-Dichloropropene	10.42	75	627488	10.20 ug/l	98
53) 1,1,2-Trichloroethane	10.75	97	297614	10.18 ug/l	100
54) Tetrachloroethene	10.91	164	493663	10.23 ug/l	99
55) 1,3-Dichloropropane	11.01	76	620348	10.20 ug/l	100
56) 2-Hexanone	11.09	43	802512	45.10 ug/l	99
57) Dibromochloromethane	11.38	129	372478	10.71 ug/l	100
58) 1,2-Dibromoethane	11.59	107	290644	10.47 ug/l	100
59) 1-Chlorohexane	12.33	91	958316	9.76 ug/l	99
60) Chlorobenzene	12.36	112	1398422	10.23 ug/l	99
61) 1,1,1,2-Tetrachloroethane	12.49	131	472234	10.44 ug/l	99
62) Ethylbenzene	12.51	91	2778458	10.06 ug/l	99
63) m-Xylene & p-Xylene	12.68	91	4159222	19.95 ug/l	100
64) o-Xylene	13.19	91	2082585	10.15 ug/l	99
65) Styrene	13.20	104	1374019	9.36 ug/l	99
67) Bromoform	13.44	173	175144	10.25 ug/l	100
68) Isopropylbenzene	13.63	105	2546887	9.91 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.99	83	359192	10.21 ug/l	100
71) Bromobenzene	14.00	156	521932	9.84 ug/l	97
72) trans-1,4-Dichloro-2-buten	14.02	53	71118	7.89 ug/l	97
73) 1,2,3-Trichloropropane	14.05	110	92085	10.23 ug/l	93
74) n-Propylbenzene	14.11	91	3261883	9.84 ug/l	99
75) 1,3,5-Trimethylbenzene	14.31	105	2094800	9.85 ug/l	100
76) 2-Chlorotoluene	14.21	91	1792482	9.79 ug/l	100
77) 4-Chlorotoluene	14.34	91	2000113	9.91 ug/l	98
78) tert-Butylbenzene	14.64	134	479292	10.06 ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV298.D Vial: 4
Acq On : 14 Nov 2011 10:12 am Operator: MW
Sample : VO01K14C Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 10:30 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

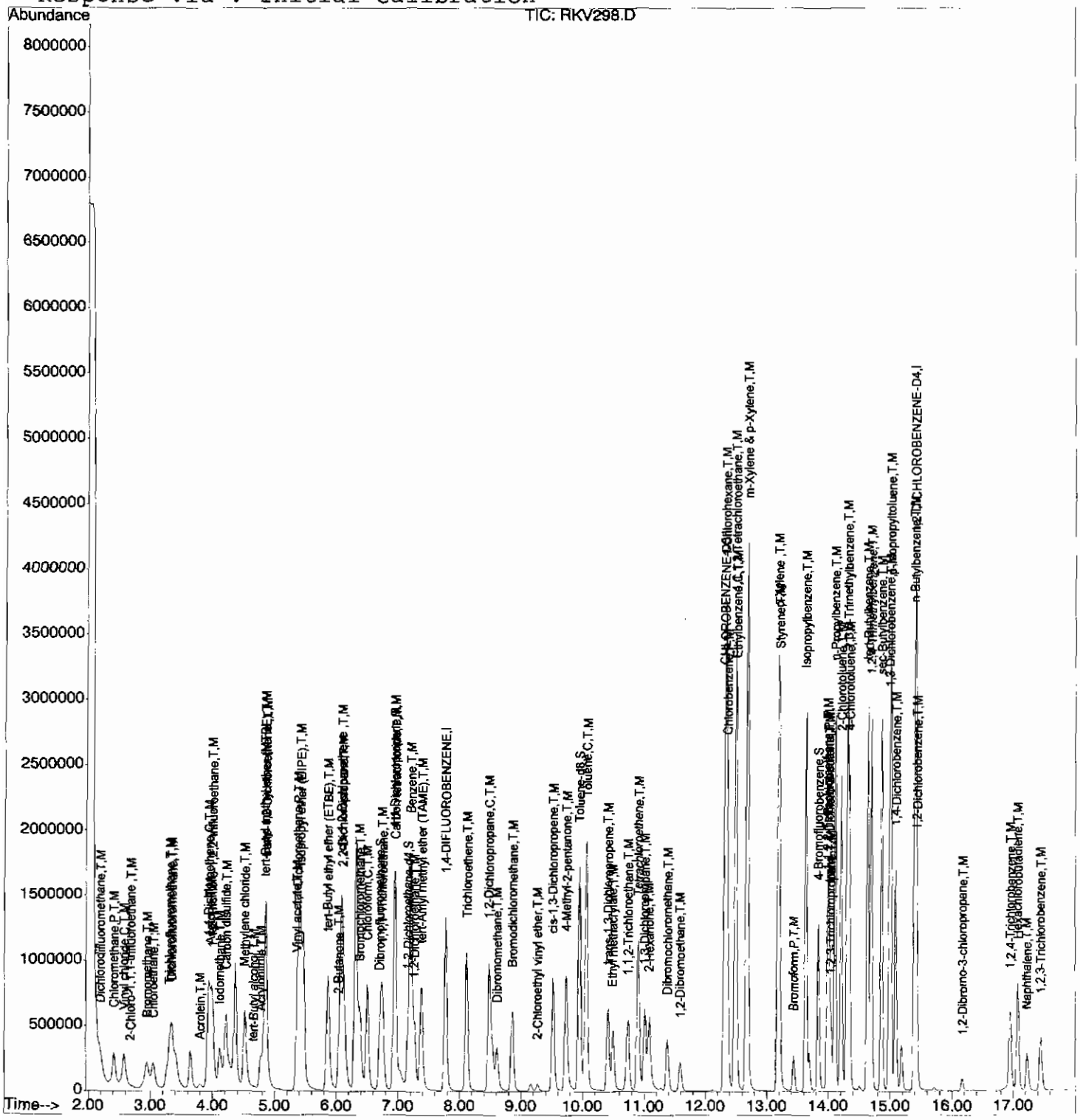
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79) 1,2,4-Trimethylbenzene	14.70	105	2025080	10.03 ug/l	99
80) sec-Butylbenzene	14.86	105	2714502	10.04 ug/l	99
81) p-Isopropyltoluene	15.01	119	2115832	10.09 ug/l	99
82) 1,3-Dichlorobenzene	14.99	146	1039187	10.23 ug/l	100
83) 1,4-Dichlorobenzene	15.10	146	975884	10.12 ug/l	100
84) n-Butylbenzene	15.39	91	1952730	9.64 ug/l	100
85) 1,2-Dichlorobenzene	15.44	146	830580	10.27 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.18	157	40538	9.99 ug/l	97
87) 1,2,4-Trichlorobenzene	16.96	180	334714	8.24 ug/l	100
88) Hexachlorobutadiene	17.08	225	281341	9.78 ug/l	99
89) Naphthalene	17.23	128	411593	9.18 ug/l	99
90) 1,2,3-Trichlorobenzene	17.45	180	238048	8.95 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV298.D Vial: 4
Acq On : 14 Nov 2011 10:12 am Operator: MW
Sample : VO01K14C Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 10:30 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



INITIAL CALIBRATION(S)

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RJV596
Instrument ID: TQ01
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K035
BFB Injection Date : 10/31/11
BFB Injection Time : 09:18
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.79
75	30.0 - 60.0% of mass 95	51.84
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.73
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	73.40
175	5.0 - 9.0% of mass 174	5.20(7.1)1
176	95.0 - 101.0% of mass 174	72.01(98.1)1
177	5.0 - 9.0% of mass 176	4.99(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	V001J311	RJV597	10/31/11	09:59
2	VSTD0.5	V001J312	RJV598	10/31/11	10:30
3	VSTD01	V001J313	RJV599	10/31/11	11:01
4	VSTD02	V001J314	RJV600	10/31/11	11:32
5	VSTD05	V001J315	RJV601	10/31/11	12:03
6	VSTD010	V001J316	RJV602	10/31/11	12:33
7	VSTD020	V001J317	RJV603	10/31/11	13:04
8	VSTD030	V001J318	RJV604	10/31/11	13:35
9	VSTD050	V001J319	RJV605	10/31/11	14:05
10	VSTD100	V001J3110	RJV606	10/31/11	14:36
11	VSTD010	IV001J311	RJV609	10/31/11	16:07

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :T001
Beginning DateTime :10/31/11 09:59
Spike Units :PPB
IC File :RJV602

Column Spec :RTX502.2 ID :0.32MM
Ending DateTime :10/31/11 14:36
HPChem Method :V001J31

M	IDX	Parameters	.3 09:59 RJV597	.5 10:30 RJV598	1 11:01 RJV599	2 11:32 RJV600	5 12:03 RJV601	10 12:33 RJV602	20 13:04 RJV603	30 13:35 RJV604	50 14:05 RJV605	100 14:36 RJV606	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	0	7.7772
	2	Chlorotrifluoroethylene	------	0.109	0.142	0.158	0.161	0.161	0.174	0.164	0.169	0.164	0.156	12.57	2.1081
	3	Dichlorodifluoromethane	0.309	0.336	0.351	0.390	0.390	0.404	0.374	0.355	0.365	0.359	0.363	7.72	2.1576
	4	Chloromethane	0.424	0.438	0.439	0.437	0.442	0.478	0.432	0.422	0.420	0.418	0.435	4.03	2.3766
	5	Vinyl chloride	0.390	0.428	0.455	0.475	0.480	0.515	0.481	0.460	0.478	0.455	0.461	7.36	2.5408
	6	2-Chloro-1,1,1-trifluoroethane	0.267	0.292	0.352	0.405	0.357	0.346	0.367	0.343	0.340	0.315	0.338	11.52	2.6548
	7	Bromomethane	0.218	0.243	0.243	0.252	0.251	0.264	0.237	0.222	0.213	0.143	0.229	14.94	2.9004
	8	Chloroethane	0.371	0.316	0.291	0.288	0.275	0.285	0.269	0.252	0.251	0.223	0.282	14.40	3.0217
	9	Dichlorofluoromethane	0.808	0.730	0.755	0.724	0.730	0.705	0.722	0.671	0.654	0.622	0.712	7.42	3.3088
	10	Trichlorofluoromethane	------	0.394	0.410	0.439	0.446	0.459	0.428	------	------	------	0.429	5.60	3.3129
5	11	Acrolein	------	------	0.015	0.012	0.011	0.011	0.011	0.011	0.011	0.010	0.011	12.29	3.8010
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	0.227	0.210	0.222	0.216	0.226	0.217	0.224	0.216	0.216	0.214	0.219	2.60	3.9761
5	13	Acetone	------	------	0.054	0.046	0.045	0.046	0.044	0.040	0.039	0.036	0.044	12.62	3.9619
	14	1,1-Dichloroethene	0.682	0.667	0.685	0.687	0.691	0.670	0.668	0.631	0.616	0.584	0.658	5.45	3.9272
	15	Iodomethane	0.473	0.447	0.475	0.470	0.485	0.478	0.497	0.482	0.491	0.488	0.479	2.89	4.1122
	16	Carbon disulfide	1.104	0.866	0.961	0.999	1.070	0.991	1.192	1.135	1.223	1.201	1.074	10.99	4.2084
	17	Methylene chloride	0.589	0.509	0.526	0.494	0.501	0.484	0.501	0.484	0.485	0.473	0.505	6.57	4.5117
5	18	tert-Butyl alcohol	------	------	0.011	0.010	0.011	0.012	0.014	0.013	0.012	0.012	0.012	10.38	4.6333
5	19	Acrylonitrile	0.057	0.049	0.054	0.049	0.054	0.054	0.056	0.055	0.055	0.054	0.054	4.68	4.7766
	20	tert-Butyl methyl ether (MTBE)	0.581	0.545	0.619	0.597	0.611	0.595	0.636	0.580	0.573	0.550	0.589	4.92	4.8372
	21	trans-1,2-Dichloroethene	0.705	0.636	0.678	0.676	0.683	0.672	0.685	0.661	0.654	0.626	0.668	3.56	4.8505
	22	Vinyl acetate	------	0.362	0.399	0.481	0.527	0.523	0.516	0.523	0.507	0.446	0.476	12.74	5.3567
	23	1,1-Dichloroethane	0.823	0.707	0.773	0.758	0.764	0.745	0.768	0.750	0.748	0.727	0.756	4.05	5.3714
	24	Isopropyl ether (DIPE)	1.407	1.255	1.338	1.339	1.359	1.324	1.393	1.341	1.334	------	1.343	3.23	5.4144
5	25	2-Butanol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	26	tert-Butyl ethyl ether (ETBE)	1.023	0.928	1.019	0.963	0.989	0.968	1.012	0.923	0.924	0.912	0.966	4.44	5.8596
5	27	2-Butanone	0.072	0.064	0.071	0.064	0.072	0.073	0.077	0.073	0.072	0.069	0.071	5.82	6.0416
	28	cis-1,2-Dichloroethene	0.393	0.357	0.386	0.385	0.379	0.374	0.391	0.380	0.379	0.368	0.379	2.86	6.0801
	29	2,2-Dichloropropane	0.598	0.568	0.573	0.560	0.561	0.534	0.532	0.496	0.488	0.469	0.538	7.77	6.0993
	30	Bromochloromethane	0.309	0.297	0.317	0.305	0.307	0.309	0.319	0.301	0.297	0.289	0.305	3.06	6.3775
	31	Chloroform	0.660	0.608	0.644	0.641	0.661	0.654	0.655	0.620	0.616	0.606	0.636	3.47	6.5047
	32	Dibromofluoromethane	0.282	0.250	0.254	0.287	0.283	0.277	0.288	0.274	0.275	0.266	0.274	4.90	6.7089
	33	1,1,1-Trichloroethane	0.511	0.499	0.523	0.513	0.526	0.516	0.513	0.485	0.488	0.482	0.506	3.15	6.7459
	34	tert-Amyl methyl ether (TAME)	0.134	0.128	0.146	0.142	0.146	0.148	0.155	0.144	0.141	0.136	0.142	5.46	7.3807
	35	1,2-Dichloroethane-d4	0.295	0.293	0.281	0.319	0.317	0.298	0.304	0.276	0.273	0.266	0.292	6.16	7.1646
	36	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	0	12.3211
	37	1,1-Dichloropropene	0.235	0.213	0.208	0.199	0.205	0.203	0.202	0.208	0.204	0.202	0.208	4.86	6.9486
	38	Carbon tetrachloride	0.524	0.459	0.480	0.500	0.518	0.514	0.503	0.498	0.487	0.498	0.498	3.89	6.9546
	39	Benzene	1.929	1.746	1.769	1.711	1.749	1.714	1.733	1.752	1.800	------	1.767	3.77	7.2081
	40	1,2-Dichloroethane	0.464	0.438	0.454	0.442	0.456	0.445	0.441	0.417	0.415	0.410	0.438	4.24	7.2697
	41	Trichloroethene	0.487	0.420	0.428	0.433	0.441	0.435	0.444	0.437	0.449	0.451	0.442	4.13	8.1205
	42	1,2-Dichloropropane	0.496	0.463	0.451	0.450	0.461	0.447	0.455	0.452	0.461	0.455	0.459	3.08	8.4889
20	43	1,4-Dioxane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	44	Dibromomethane	0.151	0.142	0.151	0.143	0.152	0.151	0.153	0.147	0.150	0.151	0.149	2.57	8.6117
	45	Bromodichloromethane	0.536	0.466	0.498	0.506	0.523	0.517	0.528	0.510	0.518	0.519	0.512	3.82	8.8633
	46	2-Chloroethyl vinyl ether	0.106	0.092	0.109	0.108	0.117	0.121	0.135	0.127	0.132	0.135	0.118	12.09	9.2716
	47	cis-1,3-Dichloropropene	0.638	0.563	0.591	0.602	0.617	0.610	0.632	0.618	0.632	0.634	0.614	3.83	9.5247
5	48	4-Methyl-2-pentanone	0.209	0.181	0.188	0.176	0.198	0.205	0.219	0.209	0.215	0.212	0.201	7.38	9.7348
	49	Toluene-d8	1.537	1.362	1.194	1.412	1.388	1.334	1.400	1.406	1.417	------	1.383	6.52	9.9520
	50	Toluene	1.907	1.740	1.719	1.699	1.743	1.702	1.724	1.760	1.786	------	1.753	3.65	10.0604
	51	Ethyl methacrylate	0.317	0.261	0.296	0.297	0.326	0.344	0.371	0.359	0.362	0.362	0.330	11.06	10.5042
	52	trans-1,3-Dichloropropene	0.446	0.396	0.447	0.443	0.471	0.468	0.480	0.460	0.466	0.467	0.454	5.28	10.4169
	53	1,1,2-Trichloroethane	0.243	0.203	0.217	0.208	0.215	0.211	0.222	0.214	0.215	0.212	0.216	4.93	10.7439
	54	Tetrachloroethene	0.381	0.340	0.352	0.348	0.357	0.356	0.357	0.352	0.358	0.361	0.356	2.94	10.9066
	55	1,3-Dichloropropane	0.467	0.414	0.447	0.441	0.452	0.455	0.468	0.449	0.457	0.442	0.449	3.40	11.0161
5	56	2-Hexanone	0.139	0.115	0.119	0.111	0.126	0.135	0.144	0.141	0.143	0.141	0.131	9.50	11.0857
	57	Dibromochloromethane	0.232	0.231	0.244	0.250	0.264	0.269	0.280	0.265	0.266	0.268	0.257	6.52	11.3816
	58	1,2-Dibromoethane	0.199	0.179	0.201	0.204	0.210	0.209	0.221	0.209	0.210	0.209	0.205	5.44	11.5946

SG
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2011

59	1-Chlorohexane	0.816	0.718	0.707	0.695	0.728	0.717	0.725	0.721	0.722	0.703	0.725	4.61	12.3360
60	Chlorobenzene	1.034	0.946	0.995	0.993	1.039	1.037	1.038	1.023	1.017	0.974	1.010	3.12	12.3641
61	1,1,1,2-Tetrachloroethane	0.350	0.301	0.326	0.332	0.346	0.344	0.351	0.335	0.334	0.322	0.334	4.52	12.4898
62	Ethylbenzene	2.164	1.945	1.977	1.991	2.089	2.054	2.104	2.054	1.984	------	2.040	3.49	12.5018
2 63	m-Xylene & p-Xylene	1.610	1.482	1.470	1.505	1.572	1.573	1.567	1.538	------	------	1.540	3.23	12.6812
64	o-Xylene	1.589	1.453	1.476	1.474	1.569	1.547	1.546	1.502	1.481	------	1.515	3.19	13.1841
65	Styrene	1.016	0.911	1.000	1.022	1.143	1.156	1.192	1.187	1.174	1.038	1.084	9.03	13.2134
66	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	0	15.4150
67	Bromoform	0.300	0.296	0.320	0.305	0.327	0.327	0.344	0.343	0.359	0.377	0.330	7.98	13.4427
68	Isopropylbenzene	5.486	4.993	4.975	4.842	4.950	4.869	4.800	4.988	4.786	------	4.966	4.25	13.6379
69	4-Bromofluorobenzene	1.481	1.312	1.095	1.243	1.225	1.133	1.166	1.195	1.226	1.246	1.232	8.67	13.8452
70	1,1,2,2-Tetrachloroethane	0.708	0.641	0.683	0.668	0.684	0.663	0.694	0.682	0.687	0.686	0.680	2.70	13.9828
71	Bromobenzene	1.217	0.984	1.027	0.976	0.999	0.987	0.997	1.005	------	------	1.024	7.74	14.0073
72	trans-1,4-Dichloro-2-butene	0.150	0.153	0.174	0.160	0.173	0.179	0.189	0.184	0.186	0.192	0.174	8.64	14.0272
73	1,2,3-Trichloropropane	0.208	0.163	0.191	0.169	0.172	0.165	0.171	0.165	0.166	0.171	0.174	8.18	14.0538
74	n-Propylbenzene	6.681	6.426	6.296	6.295	6.395	6.353	6.300	6.476	------	------	6.403	2.04	14.1128
75	1,3,5-Trimethylbenzene	4.223	4.025	4.069	4.018	4.178	4.115	4.097	4.107	4.142	------	4.108	1.64	14.3070
76	2-Chlorotoluene	3.930	3.660	3.570	3.417	3.531	3.421	3.367	3.429	3.495	------	3.536	4.91	14.2149
77	4-Chlorotoluene	4.164	3.976	3.937	3.805	3.928	3.864	3.769	3.804	3.846	------	3.899	3.11	14.3481
78	tert-Butylbenzene	0.968	0.910	0.914	0.906	0.922	0.915	0.906	0.923	0.918	0.917	0.920	1.93	14.6442
79	1,2,4-Trimethylbenzene	4.266	3.870	3.910	3.868	3.983	4.040	3.945	3.951	3.974	3.171	3.898	7.18	14.7033
80	sec-Butylbenzene	5.313	4.991	5.022	5.120	5.427	5.421	5.317	5.421	4.953	------	5.221	3.80	14.8692
81	p-Isopropyltoluene	4.020	3.777	3.939	4.070	4.305	4.382	4.330	4.345	4.239	3.076	4.048	9.79	15.0185
82	1,3-Dichlorobenzene	2.001	1.931	1.924	1.887	1.975	1.984	1.970	1.966	1.997	1.986	1.962	1.87	14.9948
83	1,4-Dichlorobenzene	1.937	1.762	1.795	1.801	1.875	1.890	1.897	1.889	1.897	1.885	1.863	3.02	15.0954
84	n-Butylbenzene	3.778	3.544	3.535	3.722	3.974	4.177	4.224	4.173	4.098	------	3.914	7.03	15.4019
85	1,2-Dichlorobenzene	1.623	1.514	1.544	1.533	1.578	1.581	1.583	1.550	1.545	1.563	1.561	2.00	15.4328
86	1,2-Dibromo-3-chloropropane	------	0.054	0.073	0.074	0.076	0.081	0.086	0.084	0.086	0.090	0.078	14.04	16.1711
87	1,2,4-Trichlorobenzene	0.599	0.558	0.592	0.622	0.706	0.786	0.817	0.793	0.802	------	0.697	15.05	16.9571
88	Hexachlorobutadiene	0.532	0.483	0.519	0.518	0.581	0.602	0.586	0.560	0.550	0.625	0.556	7.87	17.0855
89	Naphthalene	------	0.848	0.785	0.727	0.815	0.969	1.054	------	------	------	0.866	14.11	17.2361
90	1,2,3-Trichlorobenzene	0.465	0.412	0.437	0.448	0.513	0.579	0.599	0.581	0.590	------	0.514	14.54	17.4553

Spike Amount = Nominal Amount * M
Ave_%RSD : 6.3 Max_%RSD : 15

Use Least Square Linear Regression with weighting factor of inverse concentration for comps with %_RSD > 15
Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
87	1,2,4-Trichlorobenzene	-0.01281	0.80017	0.9994

SG
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2012

Compound List Report T001

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
Total Cpnds : 90

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-DIFLUOROBENZENE	114	7.78	1.000	A	1	A	B
2	T	Chlorotrifluoroethylene	116	2.11	0.272	A	2	A	B
3	T	Dichlorodifluoromethane	85	2.16	0.277	A	1	A	B
4	T	Chloromethane	50	2.38	0.306	A	1	A	B
5	T	Vinyl chloride	62	2.54	0.327	A	1	A	B
6	T	2-Chloro-1,1,1-trifluoroethane	118	2.66	0.342	A	2	A	B
7	T	Bromomethane	94	2.91	0.374	A	1	A	B
8	T	Chloroethane	64	3.03	0.390	A	2	A	B
9	T	Dichlorofluoromethane	67	3.31	0.426	A	1	A	B
10	T	Trichlorofluoromethane	101	3.31	0.426	A	1	A	B
11	T	Acrolein	56	3.80	0.488	A	1	A	B
12	T	1,1,2-Trichloro-1,2,2-trifluor	151	3.98	0.511	A	1	A	B
13	T	Acetone	43	3.96	0.509	A	2	A	B
14	T	1,1-Dichloroethene	61	3.93	0.506	A	2	A	B
15	T	Iodomethane	142	4.11	0.528	A	1	A	B
16	T	Carbon disulfide	76	4.21	0.542	A	1	A	B
17	T	Methylene chloride	49	4.51	0.580	A	2	A	B
18	T	tert-Butyl alcohol	59	4.63	0.595	A	1	A	B
19	T	Acrylonitrile	53	4.78	0.614	A	2	A	B
20	T	tert-Butyl methyl ether (MTBE)	73	4.84	0.622	A	1	A	B
21	T	trans-1,2-Dichloroethene	61	4.85	0.623	A	2	A	B
22	T	Vinyl acetate	43	5.35	0.688	A	1	A	B
23	T	1,1-Dichloroethane	63	5.37	0.690	A	2	A	B
24	T	Isopropyl ether (DIPE)	45	5.41	0.696	A	1	A	B
25	T	2-Butanol	45	5.41	0.696	A	1	A	B
26	T	tert-Butyl ethyl ether (ETBE)	59	5.86	0.753	A	1	A	B
27	T	2-Butanone	43	6.03	0.776	A	1	A	B
28	T	cis-1,2-Dichloroethene	96	6.08	0.781	A	2	A	B
29	T	2,2-Dichloropropane	77	6.09	0.783	A	2	A	B
30	T	Bromochloromethane	49	6.37	0.819	A	2	A	B
31	T	Chloroform	83	6.51	0.836	A	2	A	B
32	S	Dibromofluoromethane	111	6.71	0.863	A	2	A	B
33	T	1,1,1-Trichloroethane	97	6.74	0.867	A	2	A	B
34	T	tert-Amyl methyl ether (TAME)	87	7.38	0.949	A	2	A	B
35	S	1,2-Dichloroethane-d4	65	7.16	0.920	A	1	A	B
36	I	CHLOROBENZENE-D5	117	12.32	1.000	A	2	A	B
37	T	1,1-Dichloropropene	110	6.95	0.564	A	1	A	B
38	T	Carbon tetrachloride	119	6.95	0.564	A	1	A	B
39	T	Benzene	78	7.20	0.584	A	2	A	B
40	T	1,2-Dichloroethane	62	7.26	0.589	A	1	A	B
41	T	Trichloroethene	130	8.12	0.659	A	3	A	B
42	T	1,2-Dichloropropane	63	8.49	0.689	A	2	A	B
43	T	1,4-Dioxane	88	8.58	0.696	A	1	A	B
44	T	Dibromomethane	93	8.61	0.699	A	2	A	B
45	T	Bromodichloromethane	83	8.86	0.719	A	1	A	B
46	T	2-Chloroethyl vinyl ether	63	9.27	0.753	A	2	A	B
47	T	cis-1,3-Dichloropropene	75	9.53	0.773	A	3	A	B
48	T	4-Methyl-2-pentanone	43	9.73	0.790	A	3	A	B
49	S	Toluene-d8	98	9.96	0.808	A	1	A	B
50	T	Toluene	91	10.06	0.816	A	1	A	B
51	T	Ethyl methacrylate	69	10.50	0.852	A	2	A	B
52	T	trans-1,3-Dichloropropene	75	10.41	0.845	A	2	A	B

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53	T	1,1,2-Trichloroethane	97	10.74	0.872	A	3	A	B
54	T	Tetrachloroethene	164	10.90	0.885	A	3	A	B
55	T	1,3-Dichloropropane	76	11.02	0.894	A	1	A	B
56	T	2-Hexanone	43	11.08	0.899	A	2	A	B
57	T	Dibromochloromethane	129	11.38	0.923	A	1	A	B
58	T	1,2-Dibromoethane	107	11.60	0.941	A	1	A	B
59	T	1-Chlorohexane	91	12.34	1.001	A	3	A	B
60	P,M	Chlorobenzene	112	12.37	1.004	A	3	A	B
61	T	1,1,1,2-Tetrachloroethane	131	12.49	1.013	A	3	A	B
62	T	Ethylbenzene	91	12.50	1.014	A	1	A	B
63	T	m-Xylene & p-Xylene	91	12.68	1.029	A	1	A	B
64	T	o-Xylene	91	13.18	1.070	A	1	A	B
65	T	Styrene	104	13.21	1.072	A	2	A	B
66	I	1,2-DICHLOROBENZENE-D4	152	15.41	1.000	A	1	A	B
67	T	Bromoform	173	13.45	0.872	A	2	A	B
68	T	Isopropylbenzene	105	13.64	0.885	A	3	A	B
69	S	4-Bromofluorobenzene	95	13.85	0.898	A	2	A	B
70	T	1,1,2,2-Tetrachloroethane	83	13.98	0.907	A	1	A	B
71	T	Bromobenzene	156	14.01	0.909	A	2	A	B
72	T	trans-1,4-Dichloro-2-butene	53	14.02	0.910	A	1	A	B
73	T	1,2,3-Trichloropropane	110	14.05	0.912	A	2	A	B
74	T	n-Propylbenzene	91	14.11	0.915	A	2	A	B
75	T	1,3,5-Trimethylbenzene	105	14.31	0.928	A	2	A	B
76	T	2-Chlorotoluene	91	14.22	0.922	A	1	A	B
77	T	4-Chlorotoluene	91	14.35	0.931	A	1	A	B
78	T	tert-Butylbenzene	134	14.65	0.950	A	2	A	B
79	T	1,2,4-Trimethylbenzene	105	14.70	0.954	A	1	A	B
80	T	sec-Butylbenzene	105	14.87	0.964	A	1	A	B
81	T	p-Isopropyltoluene	119	15.02	0.974	A	2	A	B
82	T	1,3-Dichlorobenzene	146	15.00	0.973	A	2	A	B
83	T	1,4-Dichlorobenzene	146	15.09	0.979	A	2	A	B
84	T	n-Butylbenzene	91	15.40	0.999	A	2	A	B
85	T	1,2-Dichlorobenzene	146	15.43	1.001	A	2	A	B
86	T	1,2-Dibromo-3-chloropropane	157	16.17	1.049	A	2	A	B
87	T	1,2,4-Trichlorobenzene	180	16.95	1.100	L	2	A	B
88	T	Hexachlorobutadiene	225	17.09	1.108	A	2	A	B
89	T	Naphthalene	128	17.23	1.118	A	1	A	B
90	T	1,2,3-Trichlorobenzene	180	17.46	1.132	A	2	A	B

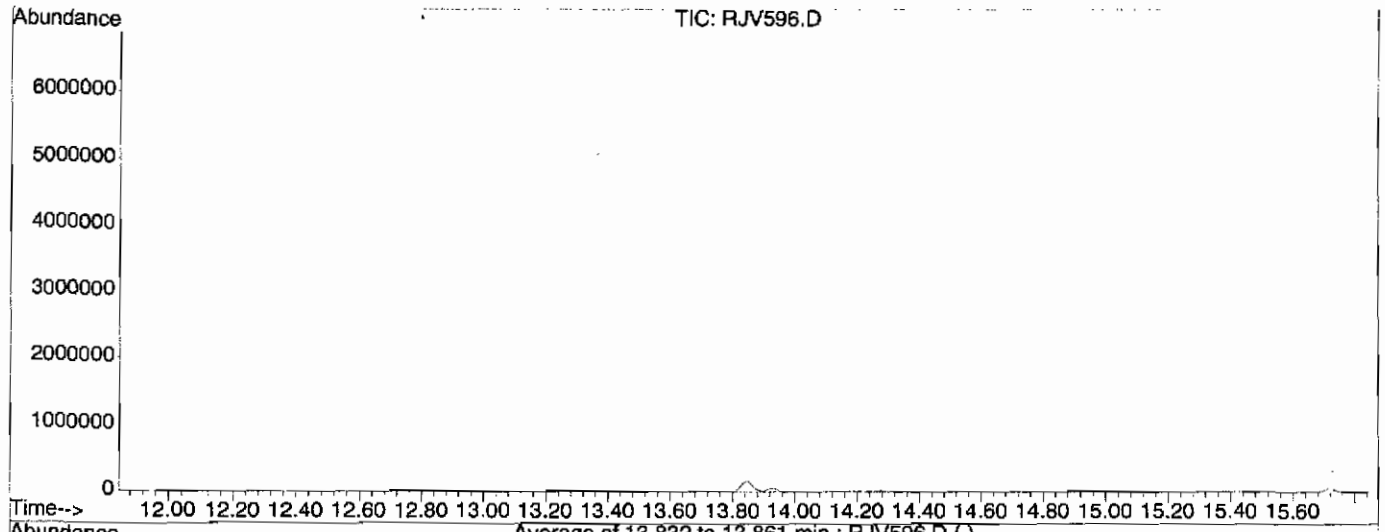
Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

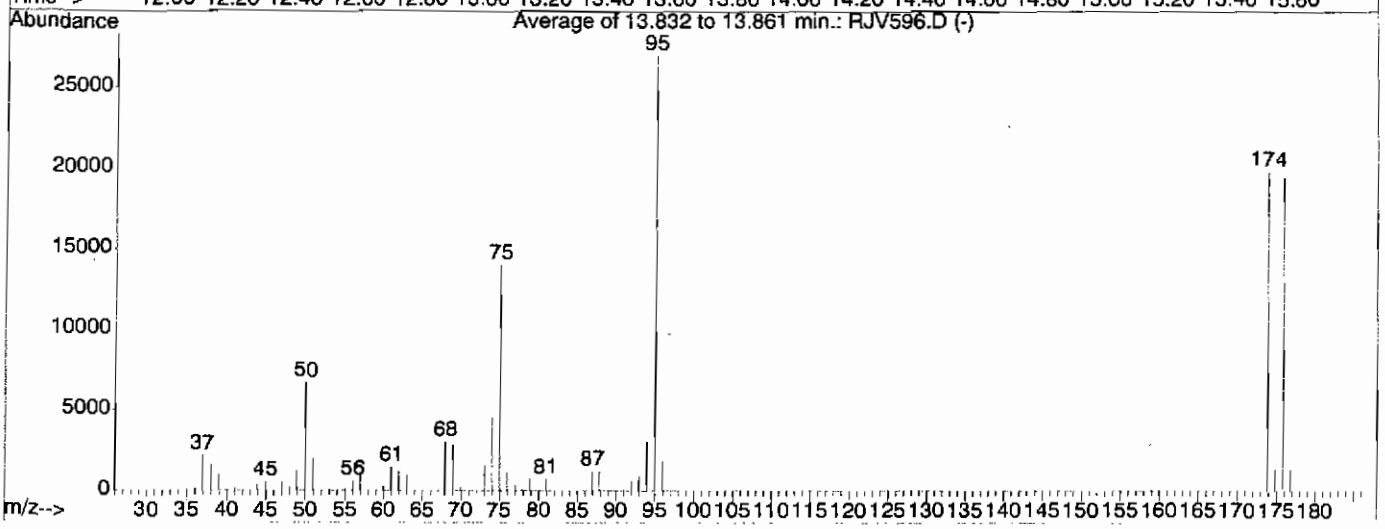
VO01J31.M Thu Nov 03 11:02:03 2011

Su
11/4/11

BFB

Data File : D:\HPCHEM\1\DATA\11J31\RJV596.D Vial: 1
Acq On : 31 Oct 2011 9:18 am Operator: MW
Sample : BFB01J29 Inst : TO01
Misc : T/CHK Multiplr: 1.00
MS Integration Params: 524C.P
Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls





AutoFind: Scans 804, 805, 806; Background Corrected with Scan 799

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.8	6686	PASS
75	95	30	60	51.8	13984	PASS
95	95	100	100	100.0	26973	PASS
96	95	5	9	6.7	1815	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	73.4	19798	PASS
175	174	5	9	7.1	1403	PASS
176	174	95	101	98.1	19424	PASS
177	176	5	9	6.9	1345	PASS

RJV596.D VO01J31.M Thu Nov 03 11:02:30 2011

Sa 11/4/11

2045

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV597.D Vial: 2
Acq On : 31 Oct 2011 9:59 am Operator: MW
Sample : VO01J311 0.3ppb Inst : TO01
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:00 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.77	114	1597901	10.00 ug/l	-0.01
36) CHLOROBENZENE-D5	12.32	117	1291317	10.00 ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	438784	10.00 ug/l	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	6.70	111	13529	0.31 ug/l	-0.01
Spiked Amount 10.000			Recovery	= 3.10%	
35) 1,2-Dichloroethane-d4	7.16	65	14144	0.30 ug/l	0.00
Spiked Amount 10.000			Recovery	= 3.00%	
49) Toluene-d8	9.94	98	59550	0.33 ug/l	-0.01
Spiked Amount 10.000			Recovery	= 3.30%	
69) 4-Bromofluorobenzene	13.85	95	19493	0.36 ug/l	0.00
Spiked Amount 10.000			Recovery	= 3.60%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.11	116	3975	0.16 ug/l #	59
3) Dichlorodifluoromethane	2.16	85	14832	0.26 ug/l	86
4) Chloromethane	2.37	50	20345	0.29 ug/l	99
5) Vinyl chloride	2.54	62	18701	0.25 ug/l	63
6) 2-Chloro-1,1,1-trifluoroet	2.66	118	12791	0.24 ug/l	97
7) Bromomethane	2.90	94	10453	0.29 ug/l	91
8) Chloroethane	3.02	64	17790	0.39 ug/l	91
9) Dichlorofluoromethane	3.30	67	38711	0.34 ug/l	100
10) Trichlorofluoromethane	3.37	101	17234	0.26 ug/l	97
11) Acrolein	3.82	56	5860	3.24 ug/l #	1
12) 1,1,2-Trichloro-1,2,2-trif	3.96	151	10894	0.31 ug/l	99
13) Acetone	3.96	43	23943	3.42 ug/l	50
14) 1,1-Dichloroethene	3.93	61	32714	0.31 ug/l	97
15) Iodomethane	4.11	142	22694	0.30 ug/l	98
16) Carbon disulfide	4.22	76	52902	0.31 ug/l	97
17) Methylene chloride	4.51	49	28220	0.35 ug/l	98
18) tert-Butyl alcohol	4.66	59	2113	1.12 ug/l #	1
19) Acrylonitrile	4.78	53	13601	1.58 ug/l	89
20) tert-Butyl methyl ether (M	4.84	73	27869	0.30 ug/l	89
21) trans-1,2-Dichloroethene	4.85	61	33804	0.32 ug/l	99
22) Vinyl acetate	5.36	43	13717	0.18 ug/l #	81
23) 1,1-Dichloroethane	5.37	63	39453	0.33 ug/l	99
24) Isopropyl ether (DIPE)	5.41	45	67434	0.31 ug/l	98
26) tert-Butyl ethyl ether (ET	5.86	59	49028	0.32 ug/l	95
27) 2-Butanone	6.05	43	17373	1.54 ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	18858	0.31 ug/l	98
29) 2,2-Dichloropropane	6.10	77	28653	0.33 ug/l	99

(#) = qualifier out of range (m) = manual integration

SW 11/4/11

2046

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV597.D
Acq On : 31 Oct 2011 9:59 am
Sample : VO01J311 0.3ppb
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA
MS Integration Params: 524C.P
Quant Time: Nov 1 12:00 2011

Vial: 2
Operator: MW
Inst : TO01
Multiplr: 1.00
Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
30)	Bromochloromethane	6.38	49	14834	0.30 ug/l		99
31)	Chloroform	6.49	83	31656	0.31 ug/l		97
33)	1,1,1-Trichloroethane	6.75	97	24482	0.30 ug/l		97
34)	tert-Amyl methyl ether (TA	7.38	87	6444	0.28 ug/l		88
37)	1,1-Dichloropropene	6.94	110	9085	0.34 ug/l		93
38)	Carbon tetrachloride	6.95	119	20312	0.32 ug/l		95
39)	Benzene	7.20	78	74724	0.33 ug/l		98
40)	1,2-Dichloroethane	7.26	62	17969	0.32 ug/l		99
41)	Trichloroethene	8.12	130	18857	0.33 ug/l		96
42)	1,2-Dichloropropane	8.49	63	19229	0.32 ug/l		90
44)	Dibromomethane	8.61	93	5833	0.30 ug/l		91
45)	Bromodichloromethane	8.86	83	20755	0.31 ug/l		97
46)	2-Chloroethyl vinyl ether	9.28	63	4107	0.27 ug/l		85
47)	cis-1,3-Dichloropropene	9.53	75	24706	0.31 ug/l		94
48)	4-Methyl-2-pentanone	9.73	43	40434	1.56 ug/l		95
50)	Toluene	10.06	91	73881	0.33 ug/l		99
51)	Ethyl methacrylate	10.50	69	12283	0.29 ug/l		77
52)	trans-1,3-Dichloropropene	10.42	75	17269	0.29 ug/l		79
53)	1,1,2-Trichloroethane	10.74	97	9396	0.34 ug/l		91
54)	Tetrachloroethene	10.90	164	14742	0.32 ug/l		98
55)	1,3-Dichloropropane	11.01	76	18089	0.31 ug/l		100
56)	2-Hexanone	11.10	43	26882	1.58 ug/l		86
57)	Dibromochloromethane	11.38	129	9001	0.27 ug/l		93
58)	1,2-Dibromoethane	11.60	107	7709	0.29 ug/l		90
59)	1-Chlorohexane	12.32	91	31597	0.34 ug/l	#	62
60)	Chlorobenzene	12.37	112	40039	0.31 ug/l	#	66
61)	1,1,1,2-Tetrachloroethane	12.49	131	13572	0.31 ug/l	#	80
62)	Ethylbenzene	12.50	91	83818	0.32 ug/l		98
63)	m-Xylene & p-Xylene	12.68	91	124746	0.63 ug/l		99
64)	o-Xylene	13.18	91	61563	0.31 ug/l		98
65)	Styrene	13.21	104	39369	0.28 ug/l		97
67)	Bromoform	13.45	173	3953	0.27 ug/l		95
68)	Isopropylbenzene	13.64	105	72221	0.33 ug/l		97
70)	1,1,2,2-Tetrachloroethane	13.98	83	9319	0.31 ug/l		95
71)	Bromobenzene	14.01	156	16014	0.36 ug/l		90
72)	trans-1,4-Dichloro-2-buten	14.03	53	1978	0.26 ug/l	#	34
73)	1,2,3-Trichloropropane	14.06	110	2735	0.36 ug/l		83
74)	n-Propylbenzene	14.11	91	87952	0.31 ug/l		98
75)	1,3,5-Trimethylbenzene	14.31	105	55592	0.31 ug/l		97
76)	2-Chlorotoluene	14.22	91	51738	0.33 ug/l		95
77)	4-Chlorotoluene	14.35	91	54817	0.32 ug/l		98

(#) = qualifier out of range (m) = manual integration

3a 11/4/11

2047

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV597.D Vial: 2
Acq On : 31 Oct 2011 9:59 am Operator: MW
Sample : VO01J311 0.3ppb Inst : TO01
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:00 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.65	134	12737	0.32 ug/l	99
79) 1,2,4-Trimethylbenzene	14.71	105	56160	0.33 ug/l	96
80) sec-Butylbenzene	14.87	105	69944	0.31 ug/l	99
81) p-Isopropyltoluene	15.02	119	52918	0.30 ug/l	98
82) 1,3-Dichlorobenzene	14.99	146	26346	0.31 ug/l	95
83) 1,4-Dichlorobenzene	15.09	146	25494	0.31 ug/l	97
84) n-Butylbenzene	15.40	91	49733	0.29 ug/l	97
85) 1,2-Dichlorobenzene	15.43	146	21367	0.31 ug/l	82
87) 1,2,4-Trichlorobenzene	16.97	180	7883	0.38 ug/l	96
88) Hexachlorobutadiene	17.09	225	7003	0.29 ug/l	96
89) Naphthalene	17.24	128	15693	0.41 ug/l	95
90) 1,2,3-Trichlorobenzene	17.46	180	6124	0.27 ug/l	99

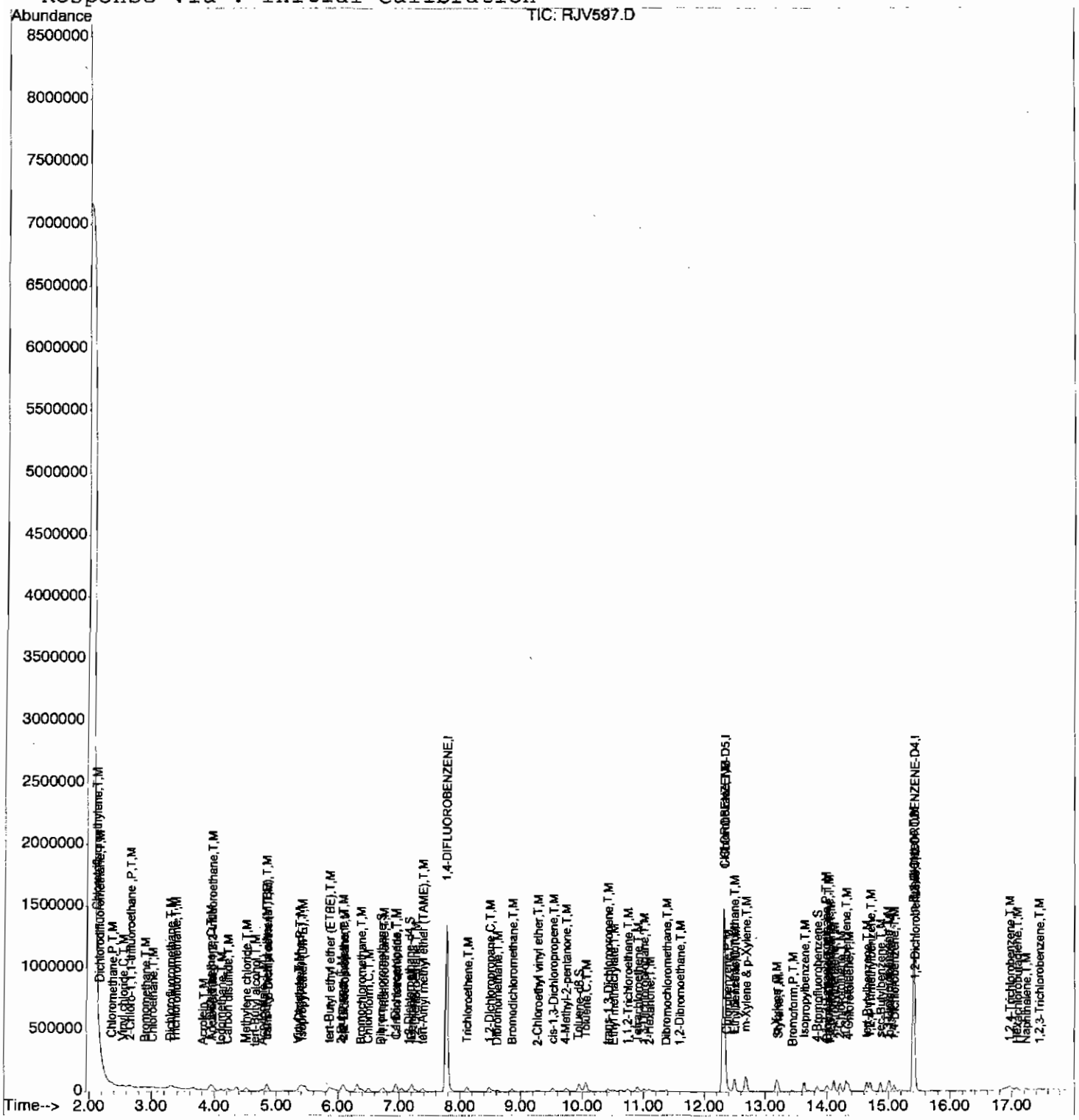
3a 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV597.D Vial: 2
Acq On : 31 Oct 2011 9:59 am Operator: MW
Sample : VO01J311 0.3ppb Inst : TO01
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:00 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



SU 11/4/11

2049

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV598.D Vial: 3
Acq On : 31 Oct 2011 10:30 am Operator: MW
Sample : VO01J312 0.5ppb Inst : TO01
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.77	114	1727883	10.00 ug/l	0.00
36) CHLOROBENZENE-D5	12.31	117	1429122	10.00 ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	485773	10.00 ug/l	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	6.71	111	21577	0.46 ug/l	0.00
Spiked Amount 10.000			Recovery	= 4.60%	
35) 1,2-Dichloroethane-d4	7.16	65	25297	0.50 ug/l	0.00
Spiked Amount 10.000			Recovery	= 5.00%	
49) Toluene-d8	9.95	98	97312	0.49 ug/l	0.00
Spiked Amount 10.000			Recovery	= 4.90%	
69) 4-Bromofluorobenzene	13.84	95	31867	0.53 ug/l	0.00
Spiked Amount 10.000			Recovery	= 5.30%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.10	116	9448	0.35 ug/l	90
3) Dichlorodifluoromethane	2.16	85	29008	0.46 ug/l	94
4) Chloromethane	2.37	50	37807	0.50 ug/l	100
5) Vinyl chloride	2.53	62	36936	0.46 ug/l	81
6) 2-Chloro-1,1,1-trifluoroet	2.65	118	25267	0.43 ug/l	96
7) Bromomethane	2.89	94	20968	0.53 ug/l	95
8) Chloroethane	3.02	64	27326	0.56 ug/l	91
9) Dichlorofluoromethane	3.30	67	63070	0.51 ug/l	100
10) Trichlorofluoromethane	3.32	101	34050	0.48 ug/l	99
11) Acrolein	3.81	56	9208	4.71 ug/l #	67
12) 1,1,2-Trichloro-1,2,2-trif	3.97	151	18127	0.48 ug/l	99
13) Acetone	3.97	43	29230	3.86 ug/l	66
14) 1,1-Dichloroethene	3.92	61	57632	0.51 ug/l	99
15) Iodomethane	4.12	142	38640	0.47 ug/l	97
16) Carbon disulfide	4.20	76	74790	0.40 ug/l	96
17) Methylene chloride	4.52	49	43986	0.50 ug/l	98
18) tert-Butyl alcohol	4.66	59	3692	1.81 ug/l #	1
19) Acrylonitrile	4.78	53	21328	2.29 ug/l	96
20) tert-Butyl methyl ether (M	4.84	73	47093	0.46 ug/l	93
21) trans-1,2-Dichloroethene	4.84	61	54955	0.48 ug/l	99
22) Vinyl acetate	5.36	43	31294	0.38 ug/l	99
23) 1,1-Dichloroethane	5.37	63	61102	0.47 ug/l	98
24) Isopropyl ether (DIPE)	5.42	45	108418	0.47 ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	80199	0.48 ug/l	98
27) 2-Butanone	6.05	43	27609	2.26 ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	30866	0.47 ug/l	100
29) 2,2-Dichloropropane	6.10	77	49030	0.53 ug/l	99

(#) = qualifier out of range (m) = manual integration

SA 11/4/11

2050

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV598.D
Acq On : 31 Oct 2011 10:30 am
Sample : VO01J312 0.5ppb
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011

Vial: 3
Operator: MW
Inst : TO01
Multiplr: 1.00

Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
30)	Bromochloromethane	6.38	49	25664	0.49 ug/l		92
31)	Chloroform	6.50	83	52486	0.48 ug/l		99
33)	1,1,1-Trichloroethane	6.75	97	43108	0.49 ug/l		98
34)	tert-Amyl methyl ether (TA	7.39	87	11033	0.45 ug/l		92
37)	1,1-Dichloropropene	6.94	110	15207	0.51 ug/l		92
38)	Carbon tetrachloride	6.96	119	32771	0.46 ug/l		92
39)	Benzene	7.21	78	124786	0.49 ug/l		99
40)	1,2-Dichloroethane	7.27	62	31316	0.50 ug/l		99
41)	Trichloroethene	8.11	130	29985	0.47 ug/l		95
42)	1,2-Dichloropropane	8.48	63	33053	0.50 ug/l		95
44)	Dibromomethane	8.61	93	10159	0.48 ug/l		94
45)	Bromodichloromethane	8.87	83	33266	0.45 ug/l		99
46)	2-Chloroethyl vinyl ether	9.27	63	6603	0.39 ug/l		94
47)	cis-1,3-Dichloropropene	9.52	75	40214	0.46 ug/l		96
48)	4-Methyl-2-pentanone	9.74	43	64614	2.25 ug/l		98
50)	Toluene	10.06	91	124314	0.50 ug/l		99
51)	Ethyl methacrylate	10.51	69	18630	0.40 ug/l		78
52)	trans-1,3-Dichloropropene	10.42	75	28270	0.44 ug/l		88
53)	1,1,2-Trichloroethane	10.74	97	14487	0.47 ug/l		97
54)	Tetrachloroethene	10.91	164	24280	0.48 ug/l		96
55)	1,3-Dichloropropane	11.01	76	29611	0.46 ug/l		99
56)	2-Hexanone	11.08	43	41247	2.20 ug/l		94
57)	Dibromochloromethane	11.38	129	16485	0.45 ug/l		99
58)	1,2-Dibromoethane	11.59	107	12758	0.44 ug/l		95
59)	1-Chlorohexane	12.33	91	51324	0.50 ug/l	#	75
60)	Chlorobenzene	12.36	112	67631	0.47 ug/l		78
61)	1,1,1,2-Tetrachloroethane	12.49	131	21520	0.45 ug/l		86
62)	Ethylbenzene	12.51	91	138999	0.48 ug/l		99
63)	m-Xylene & p-Xylene	12.68	91	211809	0.96 ug/l		98
64)	o-Xylene	13.19	91	103832	0.48 ug/l		99
65)	Styrene	13.22	104	65089	0.42 ug/l		97
67)	Bromoform	13.44	173	7198	0.45 ug/l		89
68)	Isopropylbenzene	13.63	105	121282	0.50 ug/l		99
70)	1,1,2,2-Tetrachloroethane	13.99	83	15572	0.47 ug/l		92
71)	Bromobenzene	14.00	156	23911	0.48 ug/l		98
72)	trans-1,4-Dichloro-2-buten	14.03	53	3707	0.44 ug/l		97
73)	1,2,3-Trichloropropane	14.06	110	3961	0.47 ug/l		90
74)	n-Propylbenzene	14.10	91	156081	0.50 ug/l		98
75)	1,3,5-Trimethylbenzene	14.31	105	97755	0.49 ug/l		99
76)	2-Chlorotoluene	14.21	91	88893	0.52 ug/l		100
77)	4-Chlorotoluene	14.34	91	96574	0.51 ug/l		99

(#) = qualifier out of range (m) = manual integration

2051

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV598.D
Acq On : 31 Oct 2011 10:30 am
Sample : VO01J312 0.5ppb
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011

Vial: 3
Operator: MW
Inst : TO01
Multiplr: 1.00
Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
78)	tert-Butylbenzene	14.64	134	22107	0.49 ug/l		96
79)	1,2,4-Trimethylbenzene	14.70	105	93988	0.50 ug/l		97
80)	sec-Butylbenzene	14.87	105	121225	0.48 ug/l		99
81)	p-Isopropyltoluene	15.02	119	91733	0.47 ug/l		98
82)	1,3-Dichlorobenzene	14.99	146	46912	0.49 ug/l		99
83)	1,4-Dichlorobenzene	15.09	146	42807	0.47 ug/l		99
84)	n-Butylbenzene	15.41	91	86074	0.45 ug/l		97
85)	1,2-Dichlorobenzene	15.44	146	36768	0.48 ug/l		83
86)	1,2-Dibromo-3-chloropropan	16.17	157	1311	0.34 ug/l	#	74
87)	1,2,4-Trichlorobenzene	16.96	180	13546	0.51 ug/l		99
88)	Hexachlorobutadiene	17.08	225	11728	0.43 ug/l		95
89)	Naphthalene	17.24	128	20591	0.49 ug/l		95
90)	1,2,3-Trichlorobenzene	17.45	180	10019	0.40 ug/l		98

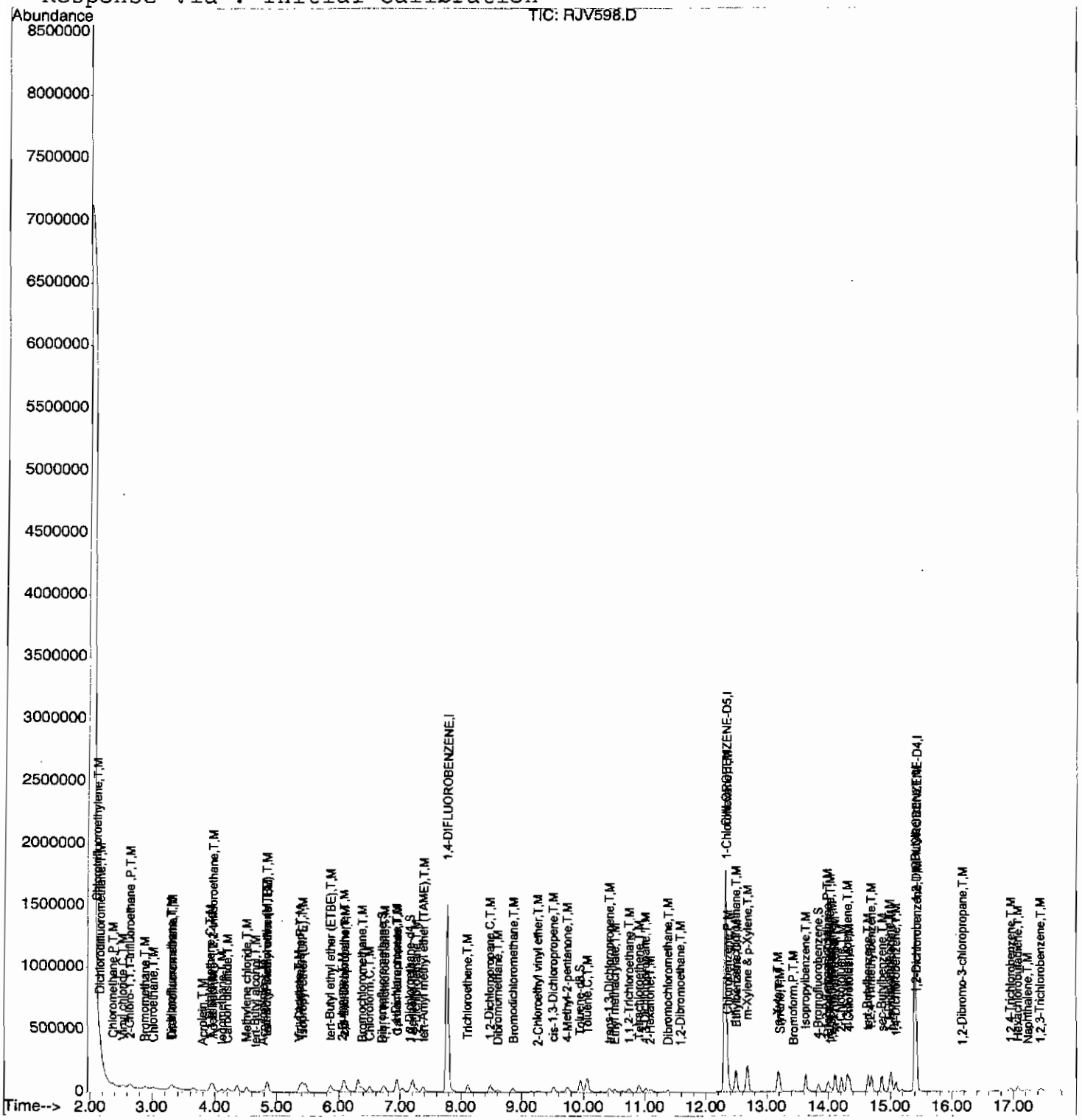
SU
11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV598.D Vial: 3
Acq On : 31 Oct 2011 10:30 am Operator: MW
Sample : VO01J312 0.5ppb Inst : TO01
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



SM 11/4/11

2053

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV599.D Vial: 4
Acq On : 31 Oct 2011 11:01 am Operator: MW
Sample : VO01J313 1.0ppb Inst : TO01
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.77	114	1653051	10.00 ug/l	-0.01
36) CHLOROBENZENE-D5	12.31	117	1414639	10.00 ug/l	-0.01
66) 1,2-DICHLOROBENZENE-D4	15.40	152	497896	10.00 ug/l	-0.01
System Monitoring Compounds					
32) Dibromofluoromethane	6.70	111	41935	0.93 ug/l	-0.01
Spiked Amount 10.000			Recovery	= 9.30%	
35) 1,2-Dichloroethane-d4	7.16	65	46376	0.96 ug/l	0.00
Spiked Amount 10.000			Recovery	= 9.60%	
49) Toluene-d8	9.94	98	168950	0.86 ug/l	-0.01
Spiked Amount 10.000			Recovery	= 8.60%	
69) 4-Bromofluorobenzene	13.84	95	54541	0.89 ug/l	-0.01
Spiked Amount 10.000			Recovery	= 8.90%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.10	116	23413	0.91 ug/l	94
3) Dichlorodifluoromethane	2.15	85	58088	0.97 ug/l	98
4) Chloromethane	2.37	50	72520	1.01 ug/l	100
5) Vinyl chloride	2.53	62	75133	0.98 ug/l	90
6) 2-Chloro-1,1,1-trifluoroet	2.65	118	58142	1.04 ug/l	98
7) Bromomethane	2.90	94	40211	1.06 ug/l	98
8) Chloroethane	3.02	64	48159	1.03 ug/l	97
9) Dichlorofluoromethane	3.30	67	124758	1.06 ug/l	99
10) Trichlorofluoromethane	3.32	101	67764	0.99 ug/l	99
11) Acrolein	3.80	56	12009	6.42 ug/l	75
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	36643	1.01 ug/l	99
13) Acetone	3.97	43	44886	6.19 ug/l	77
14) 1,1-Dichloroethene	3.92	61	113267	1.04 ug/l	98
15) Iodomethane	4.12	142	78566	0.99 ug/l	100
16) Carbon disulfide	4.20	76	158780	0.89 ug/l	100
17) Methylene chloride	4.51	49	86920	1.04 ug/l	99
18) tert-Butyl alcohol	4.63	59	9456	4.85 ug/l	83
19) Acrylonitrile	4.78	53	44604	5.01 ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	102377	1.05 ug/l	99
21) trans-1,2-Dichloroethene	4.85	61	112079	1.02 ug/l	99
22) Vinyl acetate	5.36	43	65922	0.84 ug/l	99
23) 1,1-Dichloroethane	5.37	63	127810	1.02 ug/l	99
24) Isopropyl ether (DIPE)	5.42	45	221146	1.00 ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	168367	1.05 ug/l	97
27) 2-Butanone	6.04	43	58365	5.00 ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	63787	1.02 ug/l	98
29) 2,2-Dichloropropane	6.10	77	94719	1.07 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV599.D Vial: 4
Acq On : 31 Oct 2011 11:01 am Operator: MW
Sample : VO01J313 1.0ppb Inst : TO01
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.38	49	52446	1.04 ug/l	97
31) Chloroform	6.50	83	106408	1.01 ug/l	99
33) 1,1,1-Trichloroethane	6.75	97	86446	1.03 ug/l	97
34) tert-Amyl methyl ether (TA	7.37	87	24076	1.03 ug/l	90
37) 1,1-Dichloropropene	6.94	110	29469	1.00 ug/l	97
38) Carbon tetrachloride	6.96	119	67909	0.96 ug/l	98
39) Benzene	7.21	78	250194	1.00 ug/l	100
40) 1,2-Dichloroethane	7.27	62	64243	1.04 ug/l	98
41) Trichloroethene	8.12	130	60510	0.97 ug/l	97
42) 1,2-Dichloropropane	8.48	63	63783	0.98 ug/l	99
44) Dibromomethane	8.61	93	21414	1.02 ug/l	96
45) Bromodichloromethane	8.86	83	70477	0.97 ug/l	100
46) 2-Chloroethyl vinyl ether	9.26	63	15483	0.93 ug/l	97
47) cis-1,3-Dichloropropene	9.52	75	83650	0.96 ug/l	96
48) 4-Methyl-2-pentanone	9.74	43	132949	4.67 ug/l	95
50) Toluene	10.06	91	243151	0.98 ug/l	100
51) Ethyl methacrylate	10.51	69	41920	0.90 ug/l	89
52) trans-1,3-Dichloropropene	10.42	75	63213	0.98 ug/l	94
53) 1,1,2-Trichloroethane	10.74	97	30647	1.00 ug/l	97
54) Tetrachloroethene	10.91	164	49834	0.99 ug/l	99
55) 1,3-Dichloropropane	11.01	76	63265	1.00 ug/l	99
56) 2-Hexanone	11.08	43	84028	4.52 ug/l	97
57) Dibromochloromethane	11.38	129	34460	0.95 ug/l	97
58) 1,2-Dibromoethane	11.59	107	28366	0.98 ug/l	98
59) 1-Chlorohexane	12.33	91	100066	0.98 ug/l	88
60) Chlorobenzene	12.36	112	140798	0.99 ug/l	89
61) 1,1,1,2-Tetrachloroethane	12.49	131	46148	0.98 ug/l	92
62) Ethylbenzene	12.50	91	279734	0.97 ug/l	100
63) m-Xylene & p-Xylene	12.68	91	415869	1.91 ug/l	100
64) o-Xylene	13.19	91	208745	0.97 ug/l	100
65) Styrene	13.21	104	141430	0.92 ug/l	99
67) Bromoform	13.44	173	15913	0.97 ug/l	98
68) Isopropylbenzene	13.63	105	247705	1.00 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	34020	1.01 ug/l	95
71) Bromobenzene	14.00	156	51125	1.00 ug/l	98
72) trans-1,4-Dichloro-2-buten	14.03	53	8663	1.00 ug/l	92
73) 1,2,3-Trichloropropane	14.04	110	9487	1.10 ug/l	94
74) n-Propylbenzene	14.12	91	313488	0.98 ug/l	99
75) 1,3,5-Trimethylbenzene	14.31	105	202589	0.99 ug/l	98
76) 2-Chlorotoluene	14.21	91	177728	1.01 ug/l	98
77) 4-Chlorotoluene	14.34	91	196039	1.01 ug/l	99

(#) = qualifier out of range (m) = manual integration

2055

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV599.D Vial: 4
Acq On : 31 Oct 2011 11:01 am Operator: MW
Sample : VO01J313 1.0ppb Inst : TO01
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	tert-Butylbenzene	14.64	134	45521	0.99 ug/l	99
79)	1,2,4-Trimethylbenzene	14.69	105	194664	1.00 ug/l	99
80)	sec-Butylbenzene	14.87	105	250065	0.96 ug/l	100
81)	p-Isopropyltoluene	15.02	119	196143	0.97 ug/l	99
82)	1,3-Dichlorobenzene	14.99	146	95806	0.98 ug/l	99
83)	1,4-Dichlorobenzene	15.09	146	89357	0.96 ug/l	99
84)	n-Butylbenzene	15.40	91	175983	0.90 ug/l	98
85)	1,2-Dichlorobenzene	15.43	146	76886	0.99 ug/l	93
86)	1,2-Dibromo-3-chloropropan	16.17	157	3617	0.93 ug/l	91
87)	1,2,4-Trichlorobenzene	16.96	180	29497	0.90 ug/l	100
88)	Hexachlorobutadiene	17.08	225	25832	0.93 ug/l	98
89)	Naphthalene	17.24	128	39086	0.91 ug/l	100
90)	1,2,3-Trichlorobenzene	17.45	180	21778	0.85 ug/l	98

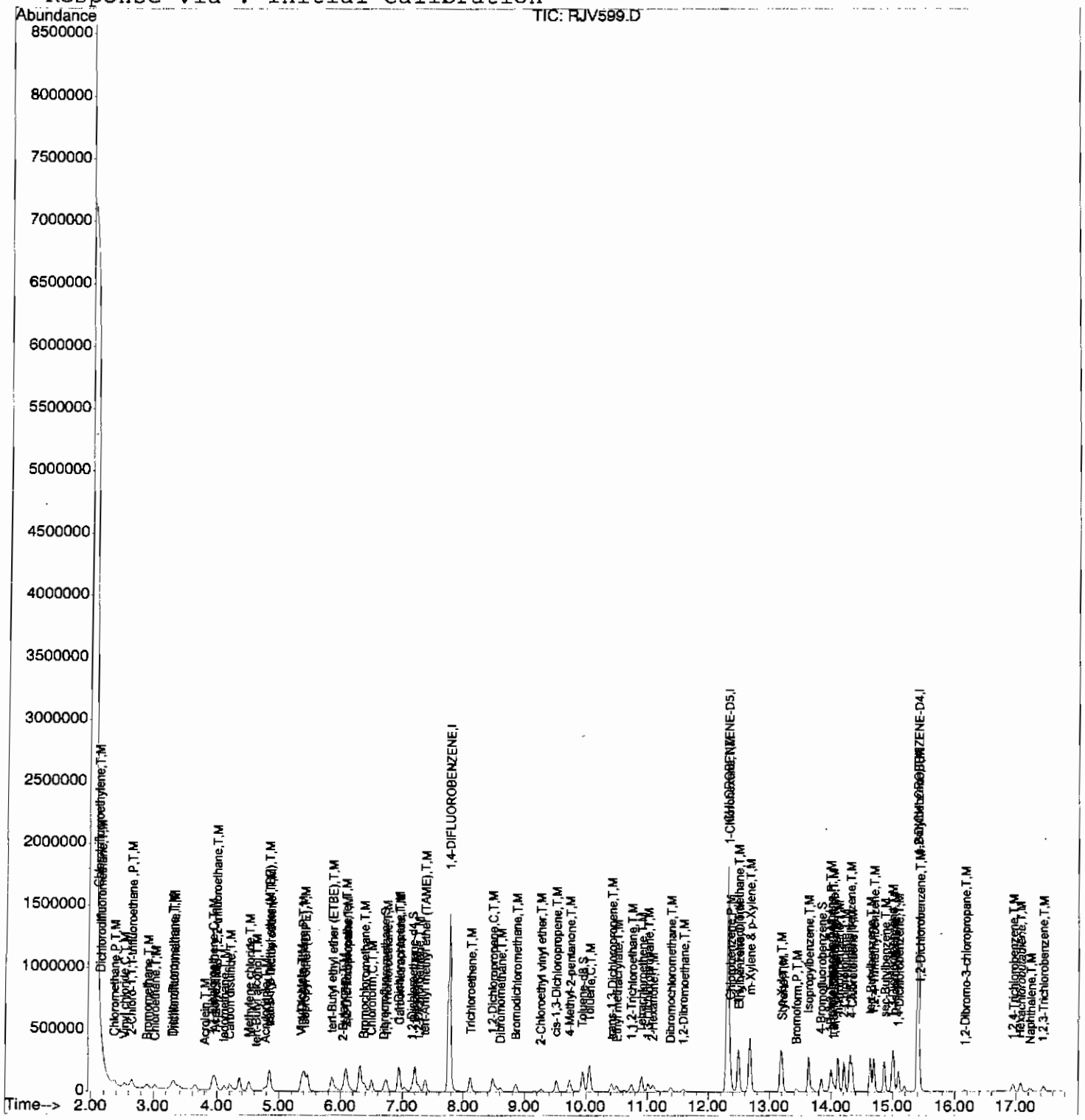
SA 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV599.D Vial: 4
Acq On : 31 Oct 2011 11:01 am Operator: MW
Sample : VO01J313 1.0ppb Inst : TO01
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



SU 11/4/11

2057

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV600.D Vial: 5
Acq On : 31 Oct 2011 11:32 am Operator: MW
Sample : VO01J314 2.0ppb Inst : TO01
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1659793	10.00 ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1409102	10.00 ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	526243	10.00 ug/l	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	6.71	111	95425	2.10 ug/l	0.00
Spiked Amount 10.000			Recovery	= 21.00%	
35) 1,2-Dichloroethane-d4	7.16	65	105900	2.18 ug/l	0.00
Spiked Amount 10.000			Recovery	= 21.80%	
49) Toluene-d8	9.95	98	397792	2.04 ug/l	0.00
Spiked Amount 10.000			Recovery	= 20.40%	
69) 4-Bromofluorobenzene	13.85	95	130871	2.02 ug/l	0.00
Spiked Amount 10.000			Recovery	= 20.20%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.11	116	52459	2.03 ug/l	98
3) Dichlorodifluoromethane	2.16	85	129344	2.14 ug/l	96
4) Chloromethane	2.38	50	145196	2.01 ug/l	100
5) Vinyl chloride	2.54	62	157743	2.06 ug/l	94
6) 2-Chloro-1,1,1-trifluoroet	2.66	118	134546	2.39 ug/l	97
7) Bromomethane	2.90	94	83534	2.20 ug/l	100
8) Chloroethane	3.03	64	95730	2.04 ug/l	98
9) Dichlorofluoromethane	3.31	67	240255	2.03 ug/l	99
10) Trichlorofluoromethane	3.31	101	145641	2.12 ug/l	97
11) Acrolein	3.80	56	19656	10.47 ug/l	89
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	71749	1.98 ug/l	99
13) Acetone	3.96	43	76089	10.45 ug/l	91
14) 1,1-Dichloroethene	3.93	61	228124	2.09 ug/l	99
15) Iodomethane	4.11	142	155936	1.96 ug/l	100
16) Carbon disulfide	4.21	76	331745	1.86 ug/l	100
17) Methylene chloride	4.51	49	163839	1.96 ug/l	99
18) tert-Butyl alcohol	4.64	59	16072	8.20 ug/l	80
19) Acrylonitrile	4.78	53	82078	9.19 ug/l	99
20) tert-Butyl methyl ether (M	4.84	73	198136	2.03 ug/l	96
21) trans-1,2-Dichloroethene	4.85	61	224517	2.03 ug/l	100
22) Vinyl acetate	5.37	43	159811	2.02 ug/l	99
23) 1,1-Dichloroethane	5.37	63	251579	2.00 ug/l	99
24) Isopropyl ether (DIPE)	5.41	45	444531	1.99 ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	319736	1.99 ug/l	100
27) 2-Butanone	6.05	43	106068	9.04 ug/l	98
28) cis-1,2-Dichloroethene	6.08	96	127887	2.03 ug/l	97
29) 2,2-Dichloropropane	6.09	77	185866	2.08 ug/l	99

(#) = qualifier out of range (m) = manual integration

SZ 11/4/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV600.D Vial: 5
Acq On : 31 Oct 2011 11:32 am Operator: MW
Sample : VO01J314 2.0ppb Inst : TO01
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
30)	Bromochloromethane	6.37	49	101219	2.00 ug/l		98
31)	Chloroform	6.51	83	212631	2.01 ug/l		99
33)	1,1,1-Trichloroethane	6.74	97	170234	2.03 ug/l		99
34)	tert-Amyl methyl ether (TA	7.38	87	47130	2.00 ug/l		97
37)	1,1-Dichloropropene	6.95	110	56040	1.91 ug/l		99
38)	Carbon tetrachloride	6.95	119	140805	2.01 ug/l		99
39)	Benzene	7.20	78	482089	1.94 ug/l		99
40)	1,2-Dichloroethane	7.28	62	124588	2.02 ug/l		99
41)	Trichloroethene	8.12	130	122054	1.96 ug/l		98
42)	1,2-Dichloropropane	8.49	63	126895	1.96 ug/l		98
44)	Dibromomethane	8.61	93	40194	1.91 ug/l		96
45)	Bromodichloromethane	8.86	83	142513	1.98 ug/l		98
46)	2-Chloroethyl vinyl ether	9.27	63	30321	1.82 ug/l		98
47)	cis-1,3-Dichloropropene	9.53	75	169572	1.96 ug/l		98
48)	4-Methyl-2-pentanone	9.73	43	247990	8.75 ug/l		98
50)	Toluene	10.06	91	478930	1.94 ug/l		100
51)	Ethyl methacrylate	10.50	69	83836	1.80 ug/l		91
52)	trans-1,3-Dichloropropene	10.41	75	124857	1.95 ug/l		96
53)	1,1,2-Trichloroethane	10.74	97	58618	1.93 ug/l		98
54)	Tetrachloroethene	10.90	164	98196	1.96 ug/l		99
55)	1,3-Dichloropropane	11.02	76	124246	1.96 ug/l		97
56)	2-Hexanone	11.09	43	156142	8.43 ug/l		98
57)	Dibromochloromethane	11.38	129	70448	1.95 ug/l		100
58)	1,2-Dibromoethane	11.60	107	57452	1.99 ug/l		99
59)	1-Chlorohexane	12.34	91	195834	1.92 ug/l		93
60)	Chlorobenzene	12.37	112	279822	1.97 ug/l		96
61)	1,1,1,2-Tetrachloroethane	12.48	131	93699	1.99 ug/l		97
62)	Ethylbenzene	12.50	91	561030	1.95 ug/l		100
63)	m-Xylene & p-Xylene	12.68	91	848308	3.91 ug/l		100
64)	o-Xylene	13.18	91	415516	1.95 ug/l		100
65)	Styrene	13.21	104	288140	1.89 ug/l		98
67)	Bromoform	13.45	173	32107	1.85 ug/l		98
68)	Isopropylbenzene	13.64	105	509635	1.95 ug/l		100
70)	1,1,2,2-Tetrachloroethane	13.98	83	70351	1.97 ug/l		99
71)	Bromobenzene	14.01	156	102733	1.91 ug/l		98
72)	trans-1,4-Dichloro-2-buten	14.02	53	16867	1.84 ug/l		95
73)	1,2,3-Trichloropropane	14.05	110	17780	1.94 ug/l	#	1
74)	n-Propylbenzene	14.11	91	662553	1.97 ug/l		99
75)	1,3,5-Trimethylbenzene	14.30	105	422840	1.96 ug/l		99
76)	2-Chlorotoluene	14.22	91	359621	1.93 ug/l		100
77)	4-Chlorotoluene	14.35	91	400467	1.95 ug/l		100

(#) = qualifier out of range (m) = manual integration

SU 11/4/11

2059

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV600.D Vial: 5
Acq On : 31 Oct 2011 11:32 am Operator: MW
Sample : VO01J314 2.0ppb Inst : TO01
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.65	134	95388	1.97 ug/l	99
79) 1,2,4-Trimethylbenzene	14.70	105	407124	1.98 ug/l	99
80) sec-Butylbenzene	14.87	105	538840	1.96 ug/l	100
81) p-Isopropyltoluene	15.01	119	428339	2.01 ug/l	100
82) 1,3-Dichlorobenzene	15.00	146	198564	1.92 ug/l	99
83) 1,4-Dichlorobenzene	15.09	146	189542	1.93 ug/l	99
84) n-Butylbenzene	15.40	91	391749	1.90 ug/l	99
85) 1,2-Dichlorobenzene	15.43	146	161308	1.96 ug/l	97
86) 1,2-Dibromo-3-chloropropan	16.17	157	7789	1.89 ug/l	92
87) 1,2,4-Trichlorobenzene	16.95	180	65483	1.72 ug/l	100
88) Hexachlorobutadiene	17.09	225	54522	1.86 ug/l	97
89) Naphthalene	17.23	128	76516	1.68 ug/l	100
90) 1,2,3-Trichlorobenzene	17.46	180	47107	1.74 ug/l	98

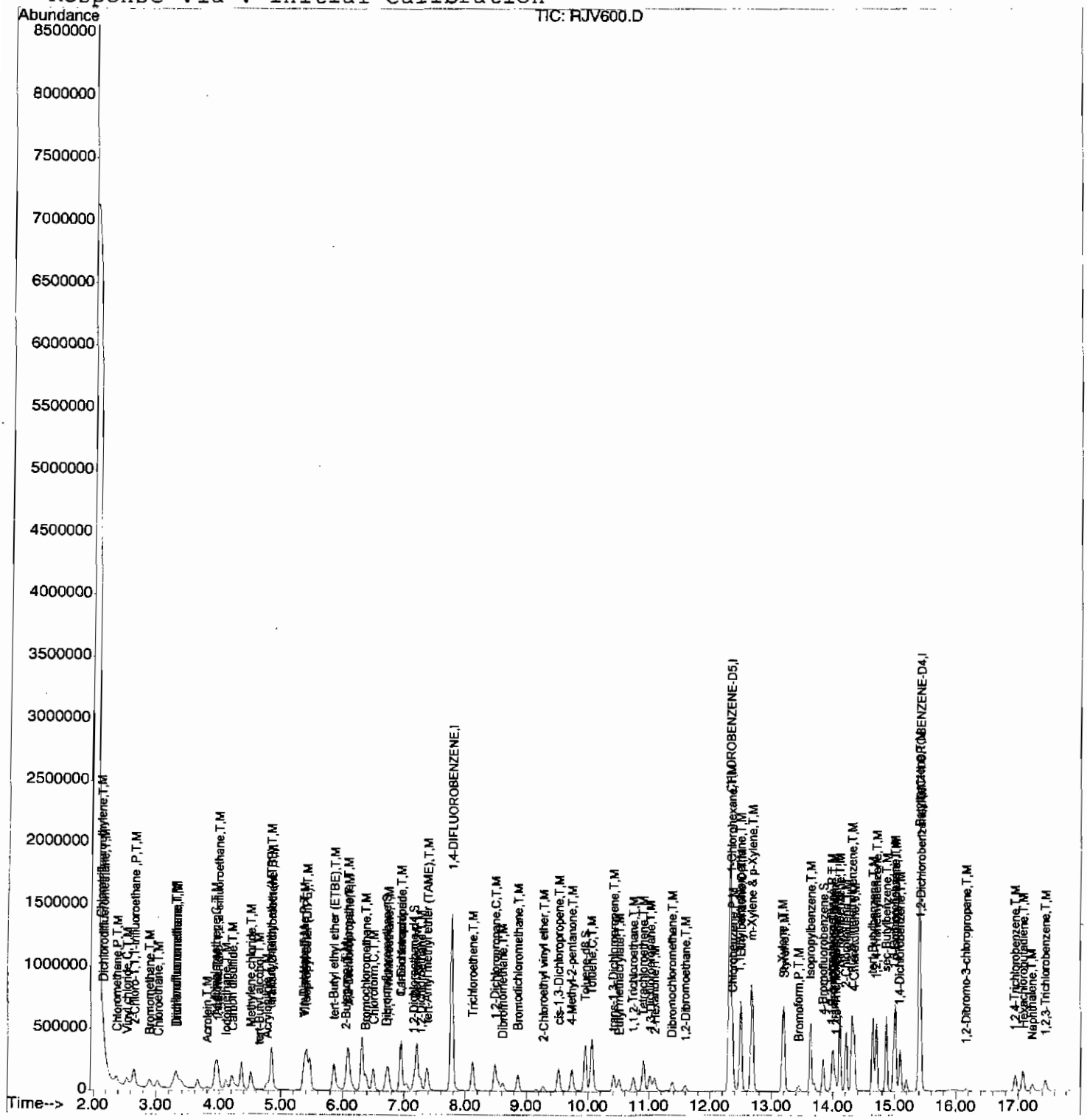
SO 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV600.D Vial: 5
Acq On : 31 Oct 2011 11:32 am Operator: MW
Sample : VO01J314 2.0ppb Inst : TO01
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



SS 11/4/11

2061

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV601.D Vial: 6
Acq On : 31 Oct 2011 12:03 pm Operator: MW
Sample : VO01J315 5.0ppb Inst : TO01
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1667331	10.00 ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1424999	10.00 ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	552274	10.00 ug/l	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	6.70	111	236318	5.18 ug/l	-0.02
Spiked Amount 10.000			Recovery	= 51.80%	
35) 1,2-Dichloroethane-d4	7.16	65	264223	5.42 ug/l	0.00
Spiked Amount 10.000			Recovery	= 54.20%	
49) Toluene-d8	9.95	98	989286	5.02 ug/l	0.00
Spiked Amount 10.000			Recovery	= 50.20%	
69) 4-Bromofluorobenzene	13.85	95	338251	4.97 ug/l	0.00
Spiked Amount 10.000			Recovery	= 49.70%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.11	116	134595	5.18 ug/l	98
3) Dichlorodifluoromethane	2.16	85	325453	5.37 ug/l	99
4) Chloromethane	2.38	50	368498	5.08 ug/l	99
5) Vinyl chloride	2.54	62	399995	5.20 ug/l	97
6) 2-Chloro-1,1,1-trifluoroet	2.66	118	297845	5.28 ug/l	99
7) Bromomethane	2.91	94	209299	5.49 ug/l	99
8) Chloroethane	3.03	64	229435	4.88 ug/l	99
9) Dichlorofluoromethane	3.31	67	608227	5.12 ug/l	99
10) Trichlorofluoromethane	3.31	101	371747	5.39 ug/l	100
11) Acrolein	3.80	56	46969	24.90 ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	188794	5.17 ug/l	100
13) Acetone	3.96	43	185663	25.39 ug/l	94
14) 1,1-Dichloroethene	3.93	61	575697	5.25 ug/l	100
15) Iodomethane	4.11	142	404101	5.06 ug/l	100
16) Carbon disulfide	4.21	76	891940	4.98 ug/l	100
17) Methylene chloride	4.51	49	417583	4.96 ug/l	99
18) tert-Butyl alcohol	4.64	59	44384	22.55 ug/l	98
19) Acrylonitrile	4.78	53	225949	25.18 ug/l	100
20) tert-Butyl methyl ether (M	4.83	73	509598	5.19 ug/l	100
21) trans-1,2-Dichloroethene	4.85	61	569608	5.12 ug/l	99
22) Vinyl acetate	5.35	43	439621	5.54 ug/l	100
23) 1,1-Dichloroethane	5.37	63	636880	5.05 ug/l	99
24) Isopropyl ether (DIPE)	5.41	45	1133034	5.06 ug/l	100
26) tert-Butyl ethyl ether (ET	5.86	59	824253	5.12 ug/l	100
27) 2-Butanone	6.03	43	300798	25.53 ug/l	100
28) cis-1,2-Dichloroethene	6.08	96	315546	4.99 ug/l	99
29) 2,2-Dichloropropane	6.09	77	467665	5.21 ug/l	99

(#) = qualifier out of range (m) = manual integration

SU 11/4/11

2062

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV601.D Vial: 6
Acq On : 31 Oct 2011 12:03 pm Operator: MW
Sample : VO01J315 5.0ppb Inst : TO01
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.37	49	256279	5.04 ug/l	100
31) Chloroform	6.51	83	550815	5.19 ug/l	100
33) 1,1,1-Trichloroethane	6.74	97	438220	5.20 ug/l	99
34) tert-Amyl methyl ether (TA	7.38	87	121788	5.15 ug/l	97
37) 1,1-Dichloropropene	6.95	110	146381	4.94 ug/l	99
38) Carbon tetrachloride	6.95	119	369280	5.20 ug/l	99
39) Benzene	7.20	78	1245836	4.95 ug/l	99
40) 1,2-Dichloroethane	7.26	62	324993	5.20 ug/l	98
41) Trichloroethene	8.12	130	314478	4.99 ug/l	99
42) 1,2-Dichloropropane	8.49	63	328257	5.02 ug/l	99
44) Dibromomethane	8.61	93	108195	5.09 ug/l	99
45) Bromodichloromethane	8.86	83	372868	5.11 ug/l	100
46) 2-Chloroethyl vinyl ether	9.26	63	83401	4.95 ug/l	99
47) cis-1,3-Dichloropropene	9.53	75	439962	5.03 ug/l	99
48) 4-Methyl-2-pentanone	9.73	43	705512	24.62 ug/l	99
50) Toluene	10.06	91	1241598	4.97 ug/l	100
51) Ethyl methacrylate	10.50	69	232579	4.95 ug/l	99
52) trans-1,3-Dichloropropene	10.41	75	335582	5.18 ug/l	99
53) 1,1,2-Trichloroethane	10.74	97	153329	4.98 ug/l	99
54) Tetrachloroethene	10.90	164	254088	5.01 ug/l	99
55) 1,3-Dichloropropane	11.01	76	322220	5.03 ug/l	100
56) 2-Hexanone	11.08	43	449574	24.01 ug/l	100
57) Dibromochloromethane	11.37	129	188230	5.14 ug/l	98
58) 1,2-Dibromoethane	11.58	107	149657	5.12 ug/l	100
59) 1-Chlorohexane	12.34	91	519053	5.02 ug/l	99
60) Chlorobenzene	12.35	112	740263	5.15 ug/l	98
61) 1,1,1,2-Tetrachloroethane	12.48	131	246215	5.17 ug/l	99
62) Ethylbenzene	12.50	91	1488142	5.12 ug/l	100
63) m-Xylene & p-Xylene	12.68	91	2240668	10.21 ug/l	100
64) o-Xylene	13.18	91	1117820	5.18 ug/l	100
65) Styrene	13.21	104	814121	5.27 ug/l	99
67) Bromoform	13.43	173	90333	4.96 ug/l	99
68) Isopropylbenzene	13.64	105	1366963	4.98 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	188971	5.03 ug/l	100
71) Bromobenzene	14.01	156	275792	4.88 ug/l	98
72) trans-1,4-Dichloro-2-buten	14.02	53	47739	4.97 ug/l	99
73) 1,2,3-Trichloropropane	14.05	110	47417	4.94 ug/l	99
74) n-Propylbenzene	14.11	91	1765872	4.99 ug/l	100
75) 1,3,5-Trimethylbenzene	14.30	105	1153676	5.08 ug/l	100
76) 2-Chlorotoluene	14.22	91	975106	4.99 ug/l	99
77) 4-Chlorotoluene	14.35	91	1084599	5.04 ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV601.D Vial: 6
Acq On : 31 Oct 2011 12:03 pm Operator: MW
Sample : VO01J315 5.0ppb Inst : TO01
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.64	134	254622	5.01 ug/l	99
79) 1,2,4-Trimethylbenzene	14.70	105	1099833	5.11 ug/l	99
80) sec-Butylbenzene	14.87	105	1498680	5.20 ug/l	100
81) p-Isopropyltoluene	15.01	119	1188883	5.32 ug/l	99
82) 1,3-Dichlorobenzene	14.99	146	545388	5.03 ug/l	100
83) 1,4-Dichlorobenzene	15.09	146	517635	5.03 ug/l	98
84) n-Butylbenzene	15.40	91	1097417	5.08 ug/l	99
85) 1,2-Dichlorobenzene	15.43	146	435689	5.05 ug/l	98
86) 1,2-Dibromo-3-chloropropan	16.17	157	20984	4.85 ug/l	99
87) 1,2,4-Trichlorobenzene	16.95	180	195083	4.57 ug/l	99
88) Hexachlorobutadiene	17.09	225	160479	5.23 ug/l	99
89) Naphthalene	17.23	128	225188	4.71 ug/l	98
90) 1,2,3-Trichlorobenzene	17.46	180	141603	4.99 ug/l	99

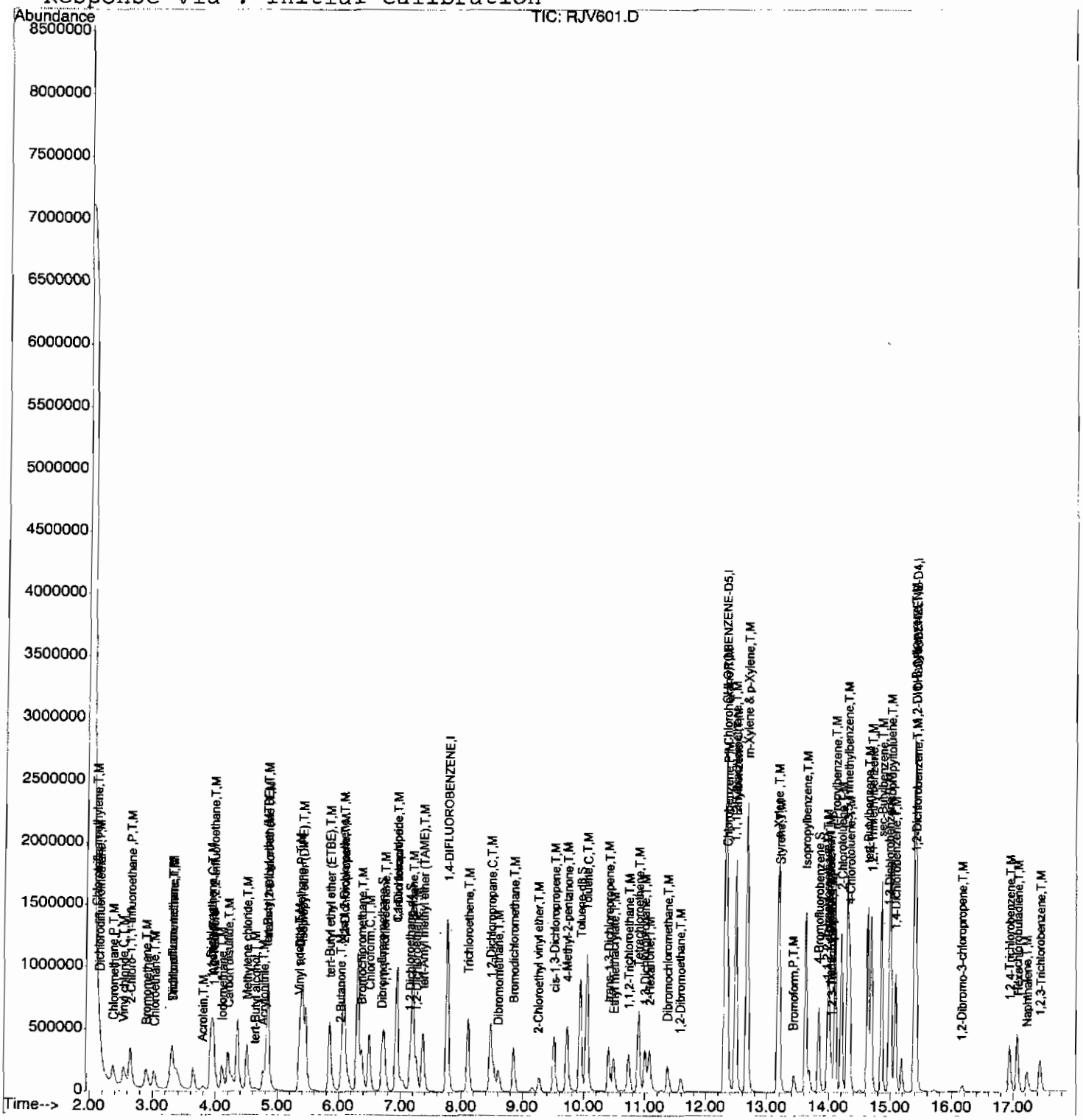
Sa 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV601.D Vial: 6
Acq On : 31 Oct 2011 12:03 pm Operator: MW
Sample : VO01J315 5.0ppb Inst : TO01
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



Sa 11/4/11

2065

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV602.D Vial: 7
Acq On : 31 Oct 2011 12:33 pm Operator: MW
Sample : VO01J316 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1719891	10.00 ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1480141	10.00 ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	584394	10.00 ug/l	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	6.71	111	476891	10.13 ug/l	0.00
Spiked Amount 10.000			Recovery	= 101.30%	
35) 1,2-Dichloroethane-d4	7.16	65	511956	10.19 ug/l	0.00
Spiked Amount 10.000			Recovery	= 101.90%	
49) Toluene-d8	9.96	98	1975217	9.65 ug/l	0.00
Spiked Amount 10.000			Recovery	= 96.50%	
69) 4-Bromofluorobenzene	13.85	95	662153	9.19 ug/l	0.00
Spiked Amount 10.000			Recovery	= 91.90%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.11	116	276100	10.30 ug/l	100
3) Dichlorodifluoromethane	2.16	85	694418	11.11 ug/l	100
4) Chloromethane	2.38	50	822931	11.00 ug/l	100
5) Vinyl chloride	2.54	62	885921	11.16 ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	2.66	118	595620	10.23 ug/l	100
7) Bromomethane	2.91	94	453924	11.55 ug/l	100
8) Chloroethane	3.03	64	490375	10.11 ug/l	100
9) Dichlorofluoromethane	3.31	67	1212411	9.90 ug/l	100
10) Trichlorofluoromethane	3.31	101	790130	11.10 ug/l	100
11) Acrolein	3.80	56	91113	46.83 ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	372713	9.90 ug/l	100
13) Acetone	3.96	43	398149	52.78 ug/l	100
14) 1,1-Dichloroethene	3.93	61	1151902	10.18 ug/l	100
15) Iodomethane	4.11	142	821311	9.98 ug/l	100
16) Carbon disulfide	4.21	76	1704059	9.23 ug/l	100
17) Methylene chloride	4.51	49	832134	9.59 ug/l	100
18) tert-Butyl alcohol	4.63	59	104663	51.56 ug/l	100
19) Acrylonitrile	4.78	53	460761	49.78 ug/l	100
20) tert-Butyl methyl ether (M	4.84	73	1023725	10.11 ug/l	100
21) trans-1,2-Dichloroethene	4.85	61	1155912	10.07 ug/l	100
22) Vinyl acetate	5.35	43	898961	10.98 ug/l	100
23) 1,1-Dichloroethane	5.37	63	1281558	9.85 ug/l	100
24) Isopropyl ether (DIPE)	5.41	45	2277211	9.86 ug/l	100
26) tert-Butyl ethyl ether (ET	5.86	59	1664323	10.02 ug/l	100
27) 2-Butanone	6.03	43	627685	51.64 ug/l	100
28) cis-1,2-Dichloroethene	6.08	96	643660	9.86 ug/l	100
29) 2,2-Dichloropropane	6.09	77	918750	9.93 ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV602.D Vial: 7
Acq On : 31 Oct 2011 12:33 pm Operator: MW
Sample : VO01J316 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.37	49	531689	10.13 ug/l	100
31) Chloroform	6.51	83	1125479	10.28 ug/l	100
33) 1,1,1-Trichloroethane	6.74	97	887340	10.21 ug/l	100
34) tert-Amyl methyl ether (TA	7.38	87	254430	10.42 ug/l	100
37) 1,1-Dichloropropene	6.95	110	300394	9.76 ug/l	100
38) Carbon tetrachloride	6.95	119	761006	10.32 ug/l	100
39) Benzene	7.20	78	2536787	9.70 ug/l	100
40) 1,2-Dichloroethane	7.26	62	658788	10.16 ug/l	100
41) Trichloroethene	8.12	130	643696	9.83 ug/l	100
42) 1,2-Dichloropropane	8.49	63	660977	9.73 ug/l	100
44) Dibromomethane	8.61	93	223027	10.11 ug/l	100
45) Bromodichloromethane	8.86	83	765516	10.10 ug/l	100
46) 2-Chloroethyl vinyl ether	9.27	63	179170	10.24 ug/l	100
47) cis-1,3-Dichloropropene	9.53	75	902904	9.94 ug/l	100
48) 4-Methyl-2-pentanone	9.73	43	1515324	50.91 ug/l	100
50) Toluene	10.06	91	2519020	9.71 ug/l	100
51) Ethyl methacrylate	10.50	69	509535	10.44 ug/l	100
52) trans-1,3-Dichloropropene	10.41	75	692433	10.30 ug/l	100
53) 1,1,2-Trichloroethane	10.74	97	312834	9.79 ug/l	100
54) Tetrachloroethene	10.90	164	527228	10.00 ug/l	100
55) 1,3-Dichloropropane	11.02	76	672790	10.12 ug/l	100
56) 2-Hexanone	11.08	43	1001577	51.50 ug/l	100
57) Dibromochloromethane	11.38	129	398755	10.49 ug/l	100
58) 1,2-Dibromoethane	11.60	107	309125	10.19 ug/l	100
59) 1-Chlorohexane	12.34	91	1061481	9.89 ug/l	100
60) Chlorobenzene	12.37	112	1534459	10.27 ug/l	100
61) 1,1,1,2-Tetrachloroethane	12.49	131	509033	10.29 ug/l	100
62) Ethylbenzene	12.50	91	3039684	10.07 ug/l	100
63) m-Xylene & p-Xylene	12.68	91	4657557	20.44 ug/l	100
64) o-Xylene	13.18	91	2289498	10.21 ug/l	100
65) Styrene	13.21	104	1710763	10.66 ug/l	100
67) Bromoform	13.45	173	191250	9.92 ug/l	100
68) Isopropylbenzene	13.64	105	2845236	9.80 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	387320	9.75 ug/l	100
71) Bromobenzene	14.01	156	576797	9.64 ug/l	100
72) trans-1,4-Dichloro-2-buten	14.02	53	104528	10.28 ug/l	100
73) 1,2,3-Trichloropropane	14.05	110	96348	9.48 ug/l	100
74) n-Propylbenzene	14.11	91	3712779	9.92 ug/l	100
75) 1,3,5-Trimethylbenzene	14.31	105	2404528	10.02 ug/l	100
76) 2-Chlorotoluene	14.22	91	1999464	9.68 ug/l	100
77) 4-Chlorotoluene	14.35	91	2257893	9.91 ug/l	100

(#) = qualifier out of range (m) = manual integration
RJV602.D VO01J31.M Tue Nov 01 12:01:49 2011

Su 11/4/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV602.D Vial: 7
Acq On : 31 Oct 2011 12:33 pm Operator: MW
Sample : VO01J316 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.65	134	534932	9.95 ug/l	100
79) 1,2,4-Trimethylbenzene	14.70	105	2360716	10.36 ug/l	100
80) sec-Butylbenzene	14.87	105	3168241	10.38 ug/l	100
81) p-Isopropyltoluene	15.02	119	2560910	10.82 ug/l	100
82) 1,3-Dichlorobenzene	15.00	146	1159223	10.11 ug/l	100
83) 1,4-Dichlorobenzene	15.09	146	1104230	10.14 ug/l	100
84) n-Butylbenzene	15.40	91	2441091	10.67 ug/l	100
85) 1,2-Dichlorobenzene	15.43	146	923829	10.12 ug/l	100
86) 1,2-Dibromo-3-chloropropan	16.17	157	47396	10.35 ug/l	100
87) 1,2,4-Trichlorobenzene	16.95	180	459079	9.98 ug/l	100
88) Hexachlorobutadiene	17.09	225	351615	10.83 ug/l	100
89) Naphthalene	17.23	128	566222	11.18 ug/l	100
90) 1,2,3-Trichlorobenzene	17.46	180	338329	11.27 ug/l	100

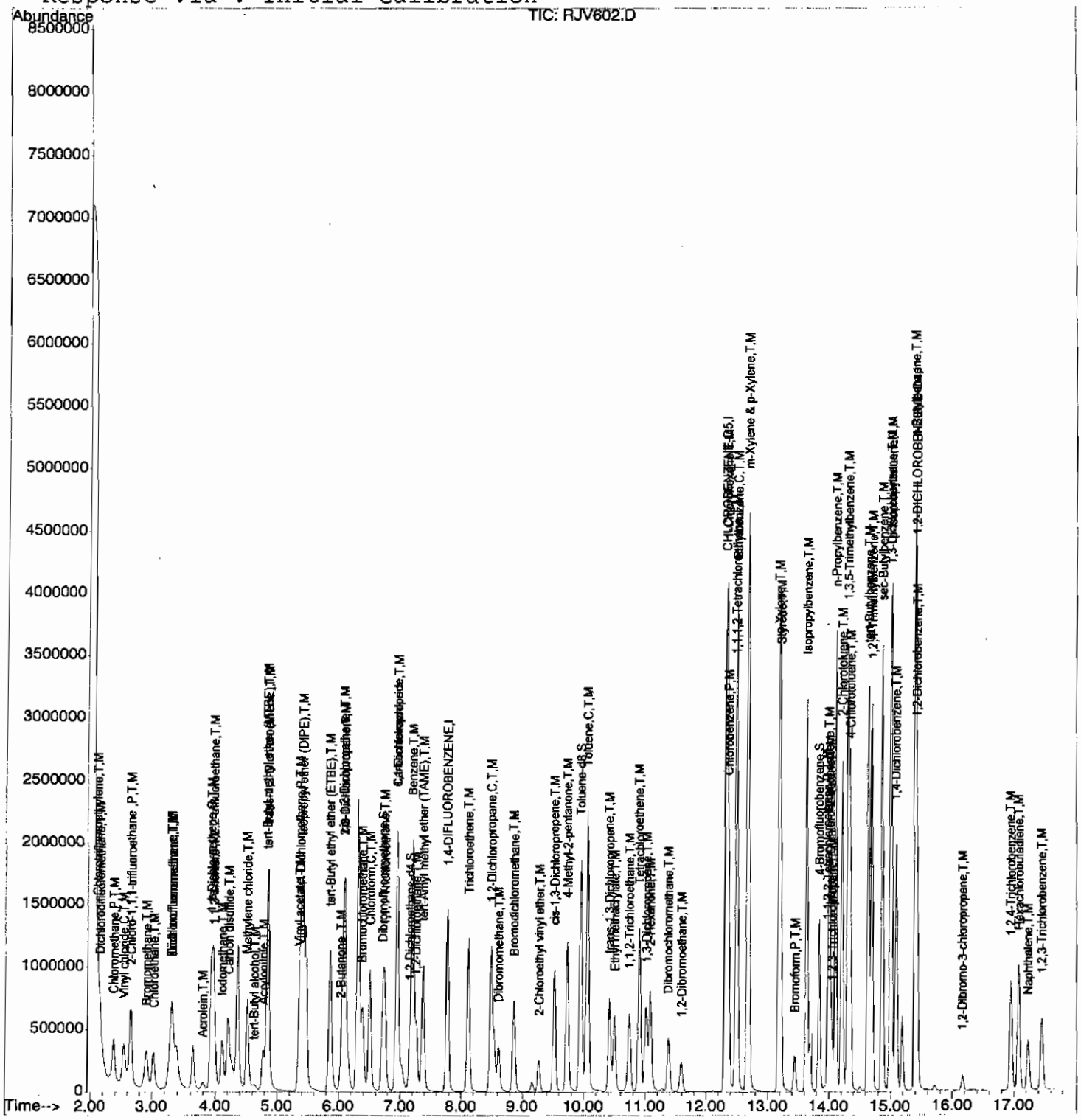
SW
11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV602.D Vial: 7
Acq On : 31 Oct 2011 12:33 pm Operator: MW
Sample : VO01J316 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



Sm 11/4/11

2069

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV603.D Vial: 8
Acq On : 31 Oct 2011 1:04 pm Operator: MW
Sample : VO01J317 20.0ppb Inst : TO01
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1779518	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1549810	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	625052	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.71	111	1025767	21.06	ug/l	0.00
Spiked Amount 10.000			Recovery	=	210.60%	
35) 1,2-Dichloroethane-d4	7.17	65	1080974	20.79	ug/l	0.01
Spiked Amount 10.000			Recovery	=	207.90%	
49) Toluene-d8	9.95	98	4337966	20.23	ug/l	0.00
Spiked Amount 10.000			Recovery	=	202.30%	
69) 4-Bromofluorobenzene	13.85	95	1458130	18.93	ug/l	0.00
Spiked Amount 10.000			Recovery	=	189.30%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	2.11	116	619157	22.32	ug/l	97
3) Dichlorodifluoromethane	2.16	85	1332729	20.61	ug/l	99
4) Chloromethane	2.38	50	1536794	19.85	ug/l	99
5) Vinyl chloride	2.54	62	1711387	20.84	ug/l	99
6) 2-Chloro-1,1,1-trifluoroet	2.66	118	1306611	21.69	ug/l	99
7) Bromomethane	2.91	94	845037	20.77	ug/l	100
8) Chloroethane	3.03	64	956239	19.05	ug/l	99
9) Dichlorofluoromethane	3.31	67	2569689	20.28	ug/l	99
10) Trichlorofluoromethane	3.31	101	1521533	20.66	ug/l	100
11) Acrolein	3.80	56	191956	95.35	ug/l	94
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	796334	20.45	ug/l	100
13) Acetone	3.96	43	790572	101.29	ug/l	99
14) 1,1-Dichloroethene	3.93	61	2377378	20.30	ug/l	99
15) Iodomethane	4.11	142	1769507	20.78	ug/l	98
16) Carbon disulfide	4.21	76	4242746	22.20	ug/l	100
17) Methylene chloride	4.51	49	1783638	19.87	ug/l	100
18) tert-Butyl alcohol	4.63	59	243093	115.74	ug/l	94
19) Acrylonitrile	4.78	53	999525	104.36	ug/l	98
20) tert-Butyl methyl ether (M	4.83	73	2261970	21.59	ug/l	99
21) trans-1,2-Dichloroethene	4.85	61	2436914	20.51	ug/l	99
22) Vinyl acetate	5.35	43	1835696	21.67	ug/l	100
23) 1,1-Dichloroethane	5.38	63	2732458	20.30	ug/l	100
24) Isopropyl ether (DIPE)	5.41	45	4958183	20.74	ug/l	100
26) tert-Butyl ethyl ether (ET	5.86	59	3601366	20.95	ug/l	100
27) 2-Butanone	6.03	43	1369537	108.90	ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	1393330	20.64	ug/l	97
29) 2,2-Dichloropropane	6.11	77	1893188	19.78	ug/l	99

(#) = qualifier out of range (m) = manual integration
RJV603.D VO01J31.M Tue Nov 01 12:02:00 2011 11/4/11

2070

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV603.D
Acq On : 31 Oct 2011 1:04 pm
Sample : VO01J317 20.0ppb
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011

Vial: 8
Operator: MW
Inst : TO01
Multiplr: 1.00
Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.37	49	1135905	20.92 ug/l	100
31) Chloroform	6.51	83	2332870	20.60 ug/l	99
33) 1,1,1-Trichloroethane	6.74	97	1826203	20.30 ug/l	100
34) tert-Amyl methyl ether (TA	7.38	87	551721	21.84 ug/l	98
37) 1,1-Dichloropropene	6.95	110	626975	19.45 ug/l	100
38) Carbon tetrachloride	6.95	119	1558491	20.19 ug/l	99
39) Benzene	7.22	78	5373072	19.62 ug/l	100
40) 1,2-Dichloroethane	7.28	62	1368426	20.15 ug/l	99
41) Trichloroethene	8.12	130	1374856	20.05 ug/l	99
42) 1,2-Dichloropropane	8.49	63	1410225	19.83 ug/l	99
44) Dibromomethane	8.61	93	474846	20.55 ug/l	99
45) Bromodichloromethane	8.86	83	1635177	20.61 ug/l	100
46) 2-Chloroethyl vinyl ether	9.27	63	417426	22.78 ug/l	99
47) cis-1,3-Dichloropropene	9.53	75	1959642	20.60 ug/l	98
48) 4-Methyl-2-pentanone	9.73	43	3397594	109.02 ug/l	99
50) Toluene	10.06	91	5342633	19.66 ug/l	99
51) Ethyl methacrylate	10.50	69	1151317	22.54 ug/l	99
52) trans-1,3-Dichloropropene	10.41	75	1489122	21.15 ug/l	99
53) 1,1,2-Trichloroethane	10.74	97	687671	20.55 ug/l	100
54) Tetrachloroethene	10.90	164	1106278	20.04 ug/l	99
55) 1,3-Dichloropropane	11.02	76	1450831	20.84 ug/l	99
56) 2-Hexanone	11.08	43	2231750	109.59 ug/l	99
57) Dibromochloromethane	11.39	129	867364	21.78 ug/l	99
58) 1,2-Dibromoethane	11.60	107	685662	21.58 ug/l	100
59) 1-Chlorohexane	12.34	91	2246704	19.99 ug/l	98
60) Chlorobenzene	12.37	112	3217343	20.56 ug/l	99
61) 1,1,1,2-Tetrachloroethane	12.48	131	1086418	20.98 ug/l	100
62) Ethylbenzene	12.50	91	6520501	20.62 ug/l	100
63) m-Xylene & p-Xylene	12.69	91	9711209	40.70 ug/l	99
64) o-Xylene	13.18	91	4791780	20.41 ug/l	100
65) Styrene	13.21	104	3693235	21.99 ug/l	99
67) Bromoform	13.45	173	430525	20.87 ug/l	100
68) Isopropylbenzene	13.64	105	6000625	19.33 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	867417	20.42 ug/l	99
71) Bromobenzene	14.01	156	1246515	19.47 ug/l	99
72) trans-1,4-Dichloro-2-buten	14.02	53	236469	21.74 ug/l	99
73) 1,2,3-Trichloropropane	14.05	110	213892	19.68 ug/l	95
74) n-Propylbenzene	14.11	91	7875979	19.68 ug/l	100
75) 1,3,5-Trimethylbenzene	14.30	105	5121879	19.95 ug/l	100
76) 2-Chlorotoluene	14.22	91	4208913	19.05 ug/l	100
77) 4-Chlorotoluene	14.35	91	4712246	19.33 ug/l	99

(#) = qualifier out of range (m) = manual integration

Sn 11/4/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV603.D Vial: 8
Acq On : 31 Oct 2011 1:04 pm Operator: MW
Sample : VO01J317 20.0ppb Inst : TO01
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.64	134	1132771	19.70 ug/l	98
79) 1,2,4-Trimethylbenzene	14.70	105	4931279	20.24 ug/l	100
80) sec-Butylbenzene	14.87	105	6646646	20.37 ug/l	100
81) p-Isopropyltoluene	15.01	119	5412692	21.39 ug/l	99
82) 1,3-Dichlorobenzene	15.00	146	2462860	20.08 ug/l	100
83) 1,4-Dichlorobenzene	15.10	146	2371037	20.36 ug/l	100
84) n-Butylbenzene	15.40	91	5280613	21.59 ug/l	100
85) 1,2-Dichlorobenzene	15.43	146	1979099	20.28 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.17	157	108025	22.05 ug/l	96
87) 1,2,4-Trichlorobenzene	16.95	180	1021088	20.58 ug/l	99
88) Hexachlorobutadiene	17.09	225	732172	21.08 ug/l	100
89) Naphthalene	17.23	128	1317521	24.33 ug/l	99
90) 1,2,3-Trichlorobenzene	17.46	180	748982	23.32 ug/l	99

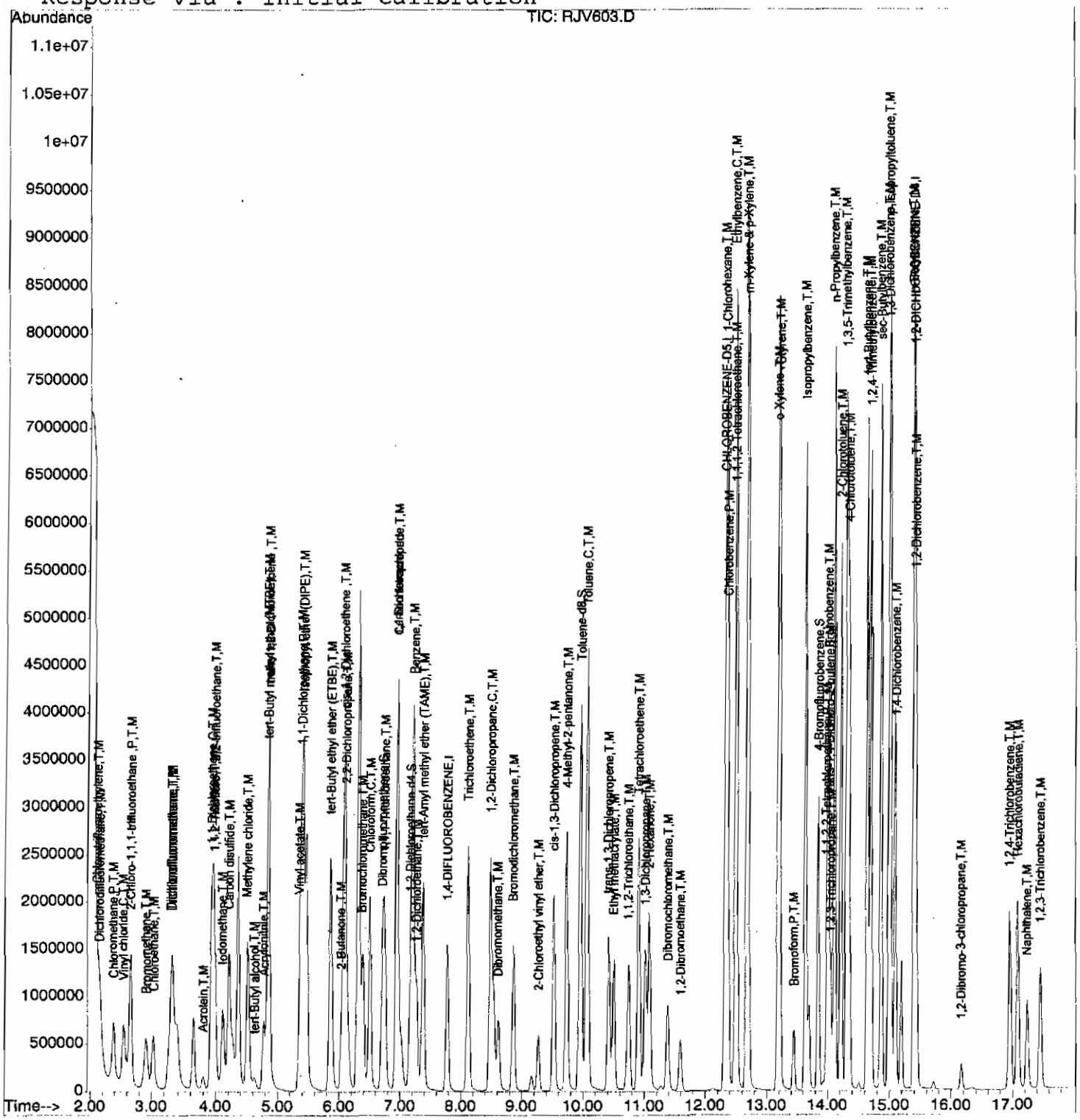
Sa 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV603.D Vial: 8
Acq On : 31 Oct 2011 1:04 pm Operator: MW
Sample : VO01J317 20.0ppb Inst : TO01
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



SW 11/4/11 2073

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV604.D Vial: 9
Acq On : 31 Oct 2011 1:35 pm Operator: MW
Sample : VO01J318 30.0ppb Inst : TO01
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1944105	10.00 ug/l	0.00
36) CHLOROBENZENE-D5	12.33	117	1642533	10.00 ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	623118	10.00 ug/l	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	6.70	111	1600153	30.07 ug/l	-0.01
Spiked Amount 10.000			Recovery	= 300.70%	
35) 1,2-Dichloroethane-d4	7.16	65	1611045	28.36 ug/l	0.00
Spiked Amount 10.000			Recovery	= 283.60%	
49) Toluene-d8	9.96	98	6927928	30.49 ug/l	0.00
Spiked Amount 10.000			Recovery	= 304.90%	
69) 4-Bromofluorobenzene	13.85	95	2234361	29.10 ug/l	0.00
Spiked Amount 10.000			Recovery	= 291.00%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.10	116	959090	31.65 ug/l	97
3) Dichlorodifluoromethane	2.16	85	2071610	29.32 ug/l	99
4) Chloromethane	2.38	50	2459072	29.08 ug/l	100
5) Vinyl chloride	2.55	62	2680047	29.87 ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	2.65	118	1998069	30.36 ug/l	99
7) Bromomethane	2.90	94	1296227	29.17 ug/l	99
8) Chloroethane	3.02	64	1467399	26.75 ug/l	97
9) Dichlorofluoromethane	3.32	67	3913511	28.28 ug/l	99
10) Trichlorofluoromethane	3.38	101	2362974	29.37 ug/l	99
11) Acrolein	3.80	56	309344	140.66 ug/l	93
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	1257372	29.56 ug/l	99
13) Acetone	3.95	43	1175036	137.81 ug/l	99
14) 1,1-Dichloroethene	3.92	61	3679949	28.76 ug/l	98
15) Iodomethane	4.12	142	2809158	30.20 ug/l	96
16) Carbon disulfide	4.20	76	6618018	31.70 ug/l	99
17) Methylene chloride	4.51	49	2820351	28.75 ug/l	98
18) tert-Butyl alcohol	4.62	59	370690	161.55 ug/l	90
19) Acrylonitrile	4.77	53	1614225	154.28 ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	3380669	29.54 ug/l	99
21) trans-1,2-Dichloroethene	4.85	61	3856033	29.71 ug/l	97
22) Vinyl acetate	5.36	43	3051479	32.98 ug/l	100
23) 1,1-Dichloroethane	5.37	63	4375129	29.76 ug/l	100
24) Isopropyl ether (DIPE)	5.42	45	7821803	29.95 ug/l	100
26) tert-Butyl ethyl ether (ET	5.86	59	5385324	28.67 ug/l	99
27) 2-Butanone	6.04	43	2132827	155.24 ug/l	100
28) cis-1,2-Dichloroethene	6.08	96	2218715	30.08 ug/l	94
29) 2,2-Dichloropropane	6.10	77	2894614	27.68 ug/l	99

(#) = qualifier out of range (m) = manual integration

SW 11/14/11

2074

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV604.D Vial: 9
Acq On : 31 Oct 2011 1:35 pm Operator: MW
Sample : VO01J318 30.0ppb Inst : TO01
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.38	49	1757164	29.62 ug/l	100
31) Chloroform	6.51	83	3616890	29.23 ug/l	99
33) 1,1,1-Trichloroethane	6.75	97	2831129	28.81 ug/l	99
34) tert-Amyl methyl ether (TA	7.39	87	837280	30.34 ug/l	97
37) 1,1-Dichloropropene	6.96	110	1027036	30.06 ug/l	100
38) Carbon tetrachloride	6.96	119	2452549	29.98 ug/l	100
39) Benzene	7.21	78	8635600	29.75 ug/l	99
40) 1,2-Dichloroethane	7.27	62	2052805	28.52 ug/l	100
41) Trichloroethene	8.12	130	2152986	29.62 ug/l	99
42) 1,2-Dichloropropane	8.49	63	2226456	29.53 ug/l	95
44) Dibromomethane	8.61	93	725022	29.61 ug/l	98
45) Bromodichloromethane	8.86	83	2511280	29.86 ug/l	99
46) 2-Chloroethyl vinyl ether	9.28	63	626988	32.28 ug/l	99
47) cis-1,3-Dichloropropene	9.53	75	3047283	30.22 ug/l	96
48) 4-Methyl-2-pentanone	9.74	43	5147126	155.83 ug/l	100
50) Toluene	10.06	91	8672793	30.12 ug/l	99
51) Ethyl methacrylate	10.51	69	1769262	32.68 ug/l	99
52) trans-1,3-Dichloropropene	10.42	75	2265119	30.35 ug/l	98
53) 1,1,2-Trichloroethane	10.74	97	1053999	29.71 ug/l	99
54) Tetrachloroethene	10.91	164	1734669	29.65 ug/l	99
55) 1,3-Dichloropropane	11.03	76	2210603	29.96 ug/l	100
56) 2-Hexanone	11.08	43	3468558	160.71 ug/l	99
57) Dibromochloromethane	11.38	129	1306686	30.96 ug/l	100
58) 1,2-Dibromoethane	11.60	107	1031679	30.63 ug/l	100
59) 1-Chlorohexane	12.34	91	3552970	29.83 ug/l	96
60) Chlorobenzene	12.37	112	5041374	30.40 ug/l	98
61) 1,1,1,2-Tetrachloroethane	12.49	131	1651646	30.09 ug/l	99
62) Ethylbenzene	12.50	91	10122986	30.21 ug/l	99
63) m-Xylene & p-Xylene	12.68	91	15158450	59.94 ug/l	100
64) o-Xylene	13.19	91	7399756	29.73 ug/l	99
65) Styrene	13.21	104	5848025	32.85 ug/l	98
67) Bromoform	13.44	173	641572	31.20 ug/l	99
68) Isopropylbenzene	13.64	105	9324644	30.14 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	1275187	30.11 ug/l	100
71) Bromobenzene	14.01	156	1879383	29.45 ug/l	99
72) trans-1,4-Dichloro-2-buten	14.03	53	344575	31.78 ug/l	98
73) 1,2,3-Trichloropropane	14.06	110	307702	28.39 ug/l	97
74) n-Propylbenzene	14.12	91	12105235	30.34 ug/l	99
75) 1,3,5-Trimethylbenzene	14.31	105	7677402	29.99 ug/l	100
76) 2-Chlorotoluene	14.22	91	6409822	29.09 ug/l	100
77) 4-Chlorotoluene	14.35	91	7110939	29.27 ug/l	99

(#) = qualifier out of range (m) = manual integration

Sa 11/4/11

2075

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV604.D Vial: 9
Acq On : 31 Oct 2011 1:35 pm Operator: MW
Sample : VO01J318 30.0ppb Inst : TO01
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.65	134	1726031	30.11 ug/l	97
79) 1,2,4-Trimethylbenzene	14.71	105	7386704	30.41 ug/l	100
80) sec-Butylbenzene	14.87	105	10134115	31.15 ug/l	100
81) p-Isopropyltoluene	15.02	119	8122945	32.20 ug/l	99
82) 1,3-Dichlorobenzene	14.99	146	3674932	30.06 ug/l	100
83) 1,4-Dichlorobenzene	15.09	146	3531924	30.43 ug/l	99
84) n-Butylbenzene	15.40	91	7800996	31.99 ug/l	100
85) 1,2-Dichlorobenzene	15.43	146	2898081	29.79 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.17	157	157656	32.29 ug/l	94
87) 1,2,4-Trichlorobenzene	16.96	180	1481504	29.87 ug/l	99
88) Hexachlorobutadiene	17.09	225	1047559	30.26 ug/l	100
89) Naphthalene	17.24	128	1974632	36.58 ug/l	100
90) 1,2,3-Trichlorobenzene	17.46	180	1086525	33.94 ug/l	99

(#) = qualifier out of range (m) = manual integration

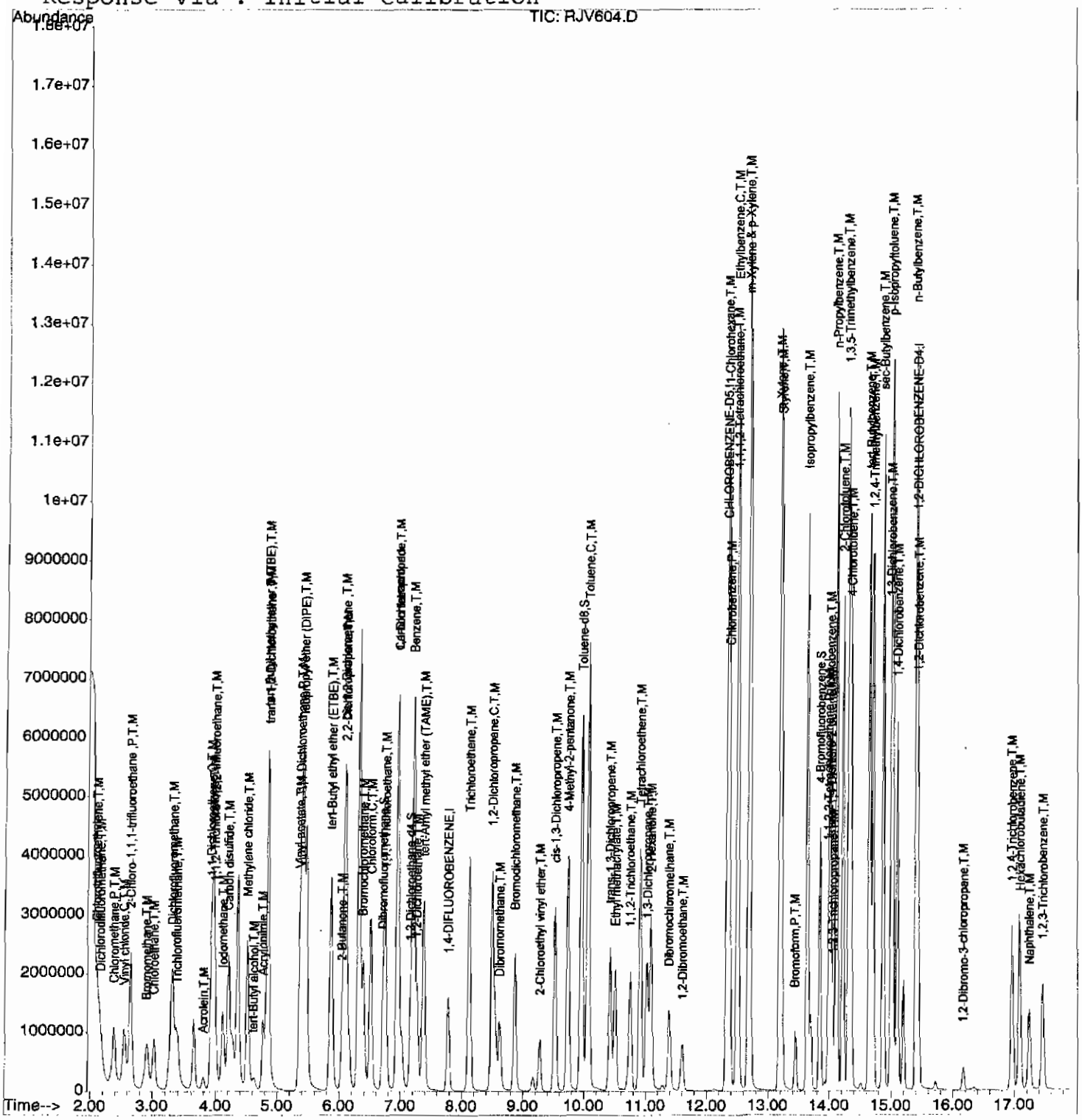
SW 11/4/11

2076

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV604.D Vial: 9
Acq On : 31 Oct 2011 1:35 pm Operator: MW
Sample : VO01J318 30.0ppb Inst : TO01
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



SW 11/4/11

2077

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV605.D Vial: 11
Acq On : 31 Oct 2011 2:05 pm Operator: MW
Sample : VO01J319 50.0ppb Inst : TO01
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	2009420	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1673368	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	609594	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.72	111	2760567	50.19	ug/l	0.00
Spiked Amount 10.000			Recovery	=	501.90%	
35) 1,2-Dichloroethane-d4	7.18	65	2744499	46.75	ug/l	0.02
Spiked Amount 10.000			Recovery	=	467.50%	
49) Toluene-d8	9.96	98	11858124	51.22	ug/l	0.00
Spiked Amount 10.000			Recovery	=	512.20%	
69) 4-Bromofluorobenzene	13.85	95	3735684	49.73	ug/l	0.00
Spiked Amount 10.000			Recovery	=	497.30%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	2.10	116	1702770	54.37	ug/l	97
3) Dichlorodifluoromethane	2.16	85	3668635	50.24	ug/l	100
4) Chloromethane	2.38	50	4222194	48.30	ug/l	99
5) Vinyl chloride	2.54	62	4799083	51.75	ug/l	99
6) 2-Chloro-1,1,1-trifluoroet	2.65	118	3415291	50.21	ug/l	99
7) Bromomethane	2.90	94	2135280	46.49	ug/l	99
8) Chloroethane	3.02	64	2518778	44.43	ug/l	97
9) Dichlorofluoromethane	3.31	67	6568593	45.92	ug/l	99
10) Trichlorofluoromethane	3.37	101	4112056	49.45	ug/l	99
11) Acrolein	3.80	56	534262	235.03	ug/l	91
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	2174084	49.44	ug/l	99
13) Acetone	3.96	43	1952617	221.56	ug/l	98
14) 1,1-Dichloroethene	3.92	61	6186662	46.78	ug/l	97
15) Iodomethane	4.11	142	4929746	51.27	ug/l	95
16) Carbon disulfide	4.20	76	12286394	56.93	ug/l	99
17) Methylene chloride	4.51	49	4877164	48.10	ug/l	98
18) tert-Butyl alcohol	4.63	59	603415	254.43	ug/l	90
19) Acrylonitrile	4.78	53	2761953	255.39	ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	5759400	48.68	ug/l	99
21) trans-1,2-Dichloroethene	4.85	61	6566876	48.95	ug/l	96
22) Vinyl acetate	5.36	43	5089972	53.22	ug/l	99
23) 1,1-Dichloroethane	5.37	63	7517951	49.47	ug/l	100
24) Isopropyl ether (DIPE)	5.41	45	13401731	49.65	ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	9283442	47.82	ug/l	99
27) 2-Butanone	6.04	43	3598371	253.40	ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	3806666	49.94	ug/l	93
29) 2,2-Dichloropropane	6.11	77	4905534	45.39	ug/l	99

(#) = qualifier out of range (m) = manual integration

Sa 11/4/11

2078

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV605.D Vial: 11
Acq On : 31 Oct 2011 2:05 pm Operator: MW
Sample : VO01J319 50.0ppb Inst : TO01
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.38	49	2983317	48.65 ug/l	99
31) Chloroform	6.51	83	6188584	48.39 ug/l	99
33) 1,1,1-Trichloroethane	6.75	97	4900213	48.24 ug/l	99
34) tert-Amyl methyl ether (TA	7.38	87	1421634	49.84 ug/l	97
37) 1,1-Dichloropropene	6.95	110	1709663	49.11 ug/l	100
38) Carbon tetrachloride	6.95	119	4075850	48.90 ug/l	100
39) Benzene	7.22	78	15061821	50.94 ug/l	99
40) 1,2-Dichloroethane	7.28	62	3468505	47.30 ug/l	99
41) Trichloroethene	8.12	130	3759638	50.78 ug/l	99
42) 1,2-Dichloropropane	8.49	63	3854263	50.18 ug/l	93
44) Dibromomethane	8.61	93	1258398	50.45 ug/l	98
45) Bromodichloromethane	8.86	83	4332390	50.57 ug/l	99
46) 2-Chloroethyl vinyl ether	9.28	63	1103296	55.76 ug/l	100
47) cis-1,3-Dichloropropene	9.53	75	5290073	51.50 ug/l	96
48) 4-Methyl-2-pentanone	9.74	43	8986510	267.06 ug/l	100
50) Toluene	10.06	91	14946793	50.94 ug/l	99
51) Ethyl methacrylate	10.50	69	3027427	54.88 ug/l	98
52) trans-1,3-Dichloropropene	10.42	75	3900084	51.30 ug/l	97
53) 1,1,2-Trichloroethane	10.76	97	1799649	49.80 ug/l	99
54) Tetrachloroethene	10.92	164	2996227	50.26 ug/l	98
55) 1,3-Dichloropropane	11.02	76	3820354	50.83 ug/l	100
56) 2-Hexanone	11.08	43	5961741	271.14 ug/l	99
57) Dibromochloromethane	11.39	129	2229241	51.85 ug/l	99
58) 1,2-Dibromoethane	11.60	107	1758612	51.26 ug/l	100
59) 1-Chlorohexane	12.34	91	6038065	49.76 ug/l	94
60) Chlorobenzene	12.37	112	8506064	50.35 ug/l	98
61) 1,1,1,2-Tetrachloroethane	12.50	131	2794766	49.98 ug/l	100
62) Ethylbenzene	12.50	91	16600587	48.63 ug/l	98
63) m-Xylene & p-Xylene	12.69	91	22426784	87.05 ug/l	90
64) o-Xylene	13.20	91	12391328	48.87 ug/l	100
65) Styrene	13.21	104	9819196	54.14 ug/l	97
67) Bromoform	13.45	173	1095097	54.44 ug/l	100
68) Isopropylbenzene	13.64	105	14588321	48.19 ug/l	98
70) 1,1,2,2-Tetrachloroethane	13.98	83	2094516	50.55 ug/l	100
71) Bromobenzene	14.01	156	3147518	50.42 ug/l	98
72) trans-1,4-Dichloro-2-buten	14.03	53	566772	53.43 ug/l	99
73) 1,2,3-Trichloropropane	14.06	110	505221	47.66 ug/l	99
74) n-Propylbenzene	14.11	91	16939080	43.40 ug/l	94
75) 1,3,5-Trimethylbenzene	14.31	105	12624805	50.41 ug/l	100
76) 2-Chlorotoluene	14.22	91	10653400	49.43 ug/l	100
77) 4-Chlorotoluene	14.35	91	11722235	49.32 ug/l	99

(#) = qualifier out of range (m) = manual integration

SA 11/14/11

2079

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV605.D Vial: 11
Acq On : 31 Oct 2011 2:05 pm Operator: MW
Sample : VO01J319 50.0ppb Inst : TO01
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.65	134	2799133	49.91 ug/l	98
79) 1,2,4-Trimethylbenzene	14.71	105	12111871	50.98 ug/l	100
80) sec-Butylbenzene	14.87	105	15097959	47.44 ug/l	96
81) p-Isopropyltoluene	15.02	119	12920168	52.35 ug/l	99
82) 1,3-Dichlorobenzene	15.00	146	6085296	50.88 ug/l	99
83) 1,4-Dichlorobenzene	15.11	146	5782196	50.92 ug/l	99
84) n-Butylbenzene	15.40	91	12489996	52.35 ug/l	99
85) 1,2-Dichlorobenzene	15.43	146	4708100	49.47 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.17	157	263605	55.18 ug/l	94
87) 1,2,4-Trichlorobenzene	16.96	180	2445232	50.29 ug/l	99
88) Hexachlorobutadiene	17.09	225	1676790	49.51 ug/l	99
89) Naphthalene	17.24	128	3325101	62.96 ug/l	100
90) 1,2,3-Trichlorobenzene	17.46	180	1796843	57.37 ug/l	99

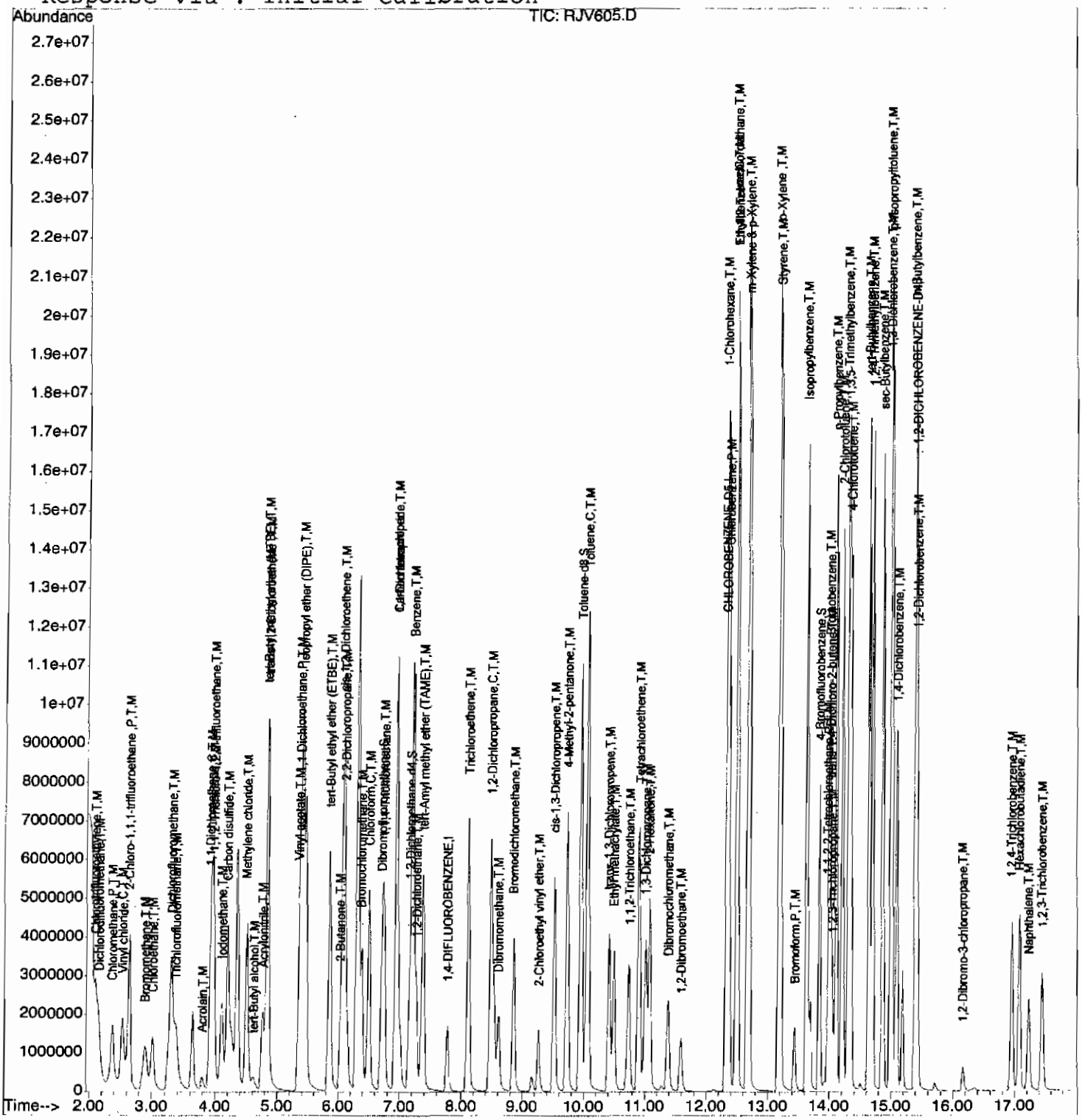
Sa 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV605.D Vial: 11
Acq On : 31 Oct 2011 2:05 pm Operator: MW
Sample : VO01J319 50.0ppb Inst : TO01
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



SU 11/4/11

2081

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV606.D Vial: 12
Acq On : 31 Oct 2011 2:36 pm Operator: MW
Sample : VO01J3110 100.0ppb Inst : TO01
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	2019193	10.00 ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1632197	10.00 ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	556773	10.00 ug/l	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	6.71	111	5371213	97.18 ug/l	0.00
Spiked Amount 10.000			Recovery	= 971.80%	
35) 1,2-Dichloroethane-d4	7.17	65	5380561	91.21 ug/l	0.02
Spiked Amount 10.000			Recovery	= 912.10%	
49) Toluene-d8	9.97	98	21895188	96.97 ug/l	0.02
Spiked Amount 10.000			Recovery	= 969.70%	
69) 4-Bromofluorobenzene	13.85	95	6937717	101.12 ug/l	0.00
Spiked Amount 10.000			Recovery	= 1011.20%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.11	116	3307943	105.11 ug/l	97
3) Dichlorodifluoromethane	2.16	85	7241206	98.69 ug/l	100
4) Chloromethane	2.38	50	8441047	96.09 ug/l	99
5) Vinyl chloride	2.54	62	9180163	98.52 ug/l	99
6) 2-Chloro-1,1,1-trifluoroet	2.65	118	6369347	93.19 ug/l	100
7) Bromomethane	2.88	94	2888542	62.58 ug/l	99
8) Chloroethane	3.00	64	4504311	79.06 ug/l	97
9) Dichlorofluoromethane	3.31	67	12550063	87.31 ug/l	100
10) Trichlorofluoromethane	3.37	101	7857297	94.02 ug/l	99
11) Acrolein	3.80	56	1033441	452.42 ug/l	91
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	4329449	97.99 ug/l	99
13) Acetone	3.96	43	3664542	413.79 ug/l	98
14) 1,1-Dichloroethene	3.92	61	11790148	88.73 ug/l	97
15) Iodomethane	4.11	142	9846958	101.91 ug/l	94
16) Carbon disulfide	4.20	76	24241123	111.78 ug/l	99
17) Methylene chloride	4.51	49	9560645	93.84 ug/l	98
18) tert-Butyl alcohol	4.64	59	1220902	512.31 ug/l	91
19) Acrylonitrile	4.78	53	5489606	505.15 ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	11101894	93.39 ug/l	100
21) trans-1,2-Dichloroethene	4.85	61	12650206	93.83 ug/l	95
22) Vinyl acetate	5.35	43	8995610	93.60 ug/l	97
23) 1,1-Dichloroethane	5.37	63	14671188	96.07 ug/l	100
24) Isopropyl ether (DIPE)	5.41	45	23978854	88.40 ug/l	96
26) tert-Butyl ethyl ether (ET	5.87	59	18416161	94.41 ug/l	98
27) 2-Butanone	6.05	43	6955853	487.46 ug/l	98
28) cis-1,2-Dichloroethene	6.08	96	7437489	97.09 ug/l	92
29) 2,2-Dichloropropane	6.11	77	9465387	87.16 ug/l	99

(#) = qualifier out of range (m) = manual integration

Sa 11/4/11

2082

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV606.D Vial: 12
Acq On : 31 Oct 2011 2:36 pm Operator: MW
Sample : VO01J3110 100.0ppb Inst : TO01
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.39	49	5840370	94.78 ug/l	98
31) Chloroform	6.51	83	12230633	95.17 ug/l	98
33) 1,1,1-Trichloroethane	6.74	97	9727196	95.30 ug/l	98
34) tert-Amyl methyl ether (TA	7.38	87	2737844	95.52 ug/l	96
37) 1,1-Dichloropropene	6.95	110	3303413	97.29 ug/l	100
38) Carbon tetrachloride	6.97	119	8133170	100.04 ug/l	99
39) Benzene	7.22	78	25072109	86.93 ug/l	94
40) 1,2-Dichloroethane	7.28	62	6697859	93.64 ug/l	99
41) Trichloroethene	8.12	130	7367105	102.01 ug/l	99
42) 1,2-Dichloropropane	8.49	63	7424707	99.11 ug/l	94
44) Dibromomethane	8.62	93	2459610	101.09 ug/l	98
45) Bromodichloromethane	8.88	83	8475930	101.43 ug/l	99
46) 2-Chloroethyl vinyl ether	9.27	63	2205665	114.28 ug/l	99
47) cis-1,3-Dichloropropene	9.53	75	10350306	103.31 ug/l	95
48) 4-Methyl-2-pentanone	9.73	43	17269595	526.16 ug/l	100
50) Toluene	10.07	91	24557608	85.81 ug/l	84
51) Ethyl methacrylate	10.50	69	5907227	109.79 ug/l	98
52) trans-1,3-Dichloropropene	10.43	75	7622995	102.80 ug/l	98
53) 1,1,2-Trichloroethane	10.75	97	3464697	98.29 ug/l	99
54) Tetrachloroethene	10.92	164	5898802	101.45 ug/l	98
55) 1,3-Dichloropropane	11.02	76	7220281	98.48 ug/l	100
56) 2-Hexanone	11.09	43	11533837	537.79 ug/l	99
57) Dibromochloromethane	11.39	129	4368849	104.18 ug/l	99
58) 1,2-Dibromoethane	11.60	107	3406871	101.80 ug/l	99
59) 1-Chlorohexane	12.35	91	11468060	96.89 ug/l	92
60) Chlorobenzene	12.37	112	15904879	96.52 ug/l	97
61) 1,1,1,2-Tetrachloroethane	12.50	131	5256896	96.39 ug/l	99
62) Ethylbenzene	12.52	91	22246127	66.81 ug/l	77
63) m-Xylene & p-Xylene	12.69	91	28613530	113.86 ug/l	61
64) o-Xylene	13.20	91	19704910	79.68 ug/l	88
65) Styrene	13.23	104	16944312	95.79 ug/l	97
67) Bromoform	13.45	173	2100489	114.33 ug/l	100
68) Isopropylbenzene	13.64	105	20115159	72.76 ug/l	83
70) 1,1,2,2-Tetrachloroethane	13.99	83	3821795	100.98 ug/l	100
71) Bromobenzene	14.01	156	5960940	104.55 ug/l	96
72) trans-1,4-Dichloro-2-buten	14.04	53	1068405	110.27 ug/l	98
73) 1,2,3-Trichloropropane	14.05	110	950447	98.16 ug/l	94
74) n-Propylbenzene	14.13	91	21314579	59.79 ug/l	72
75) 1,3,5-Trimethylbenzene	14.32	105	17714898	77.45 ug/l	81
76) 2-Chlorotoluene	14.22	91	16708507	84.88 ug/l	91
77) 4-Chlorotoluene	14.35	91	19557394	90.08 ug/l	93

(#) = qualifier out of range (m) = manual integration
RJV606.D VO01J31.M Tue Nov 01 12:02:41 2011 SA 11/4/11 Page 2

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Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV606.D Vial: 12
Acq On : 31 Oct 2011 2:36 pm Operator: MW
Sample : VO01J3110 100.0ppb Inst : TO01
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.65	134	5105325	99.66 ug/l #	86
79) 1,2,4-Trimethylbenzene	14.70	105	17652572	81.34 ug/l	82
80) sec-Butylbenzene	14.88	105	19491707	67.06 ug/l	77
81) p-Isopropyltoluene	15.03	119	17127519	75.99 ug/l	81
82) 1,3-Dichlorobenzene	15.00	146	11055385	101.20 ug/l	99
83) 1,4-Dichlorobenzene	15.10	146	10497852	101.22 ug/l	99
84) n-Butylbenzene	15.40	91	17802076	81.69 ug/l	80
85) 1,2-Dichlorobenzene	15.44	146	8701945	100.10 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.17	157	502864	115.25 ug/l	93
87) 1,2,4-Trichlorobenzene	16.97	180	4889343	109.91 ug/l	99
88) Hexachlorobutadiene	17.09	225	3481664	112.55 ug/l	99
89) Naphthalene	17.23	128	6641092	137.68 ug/l	100
90) 1,2,3-Trichlorobenzene	17.46	180	3592189	125.57 ug/l	99

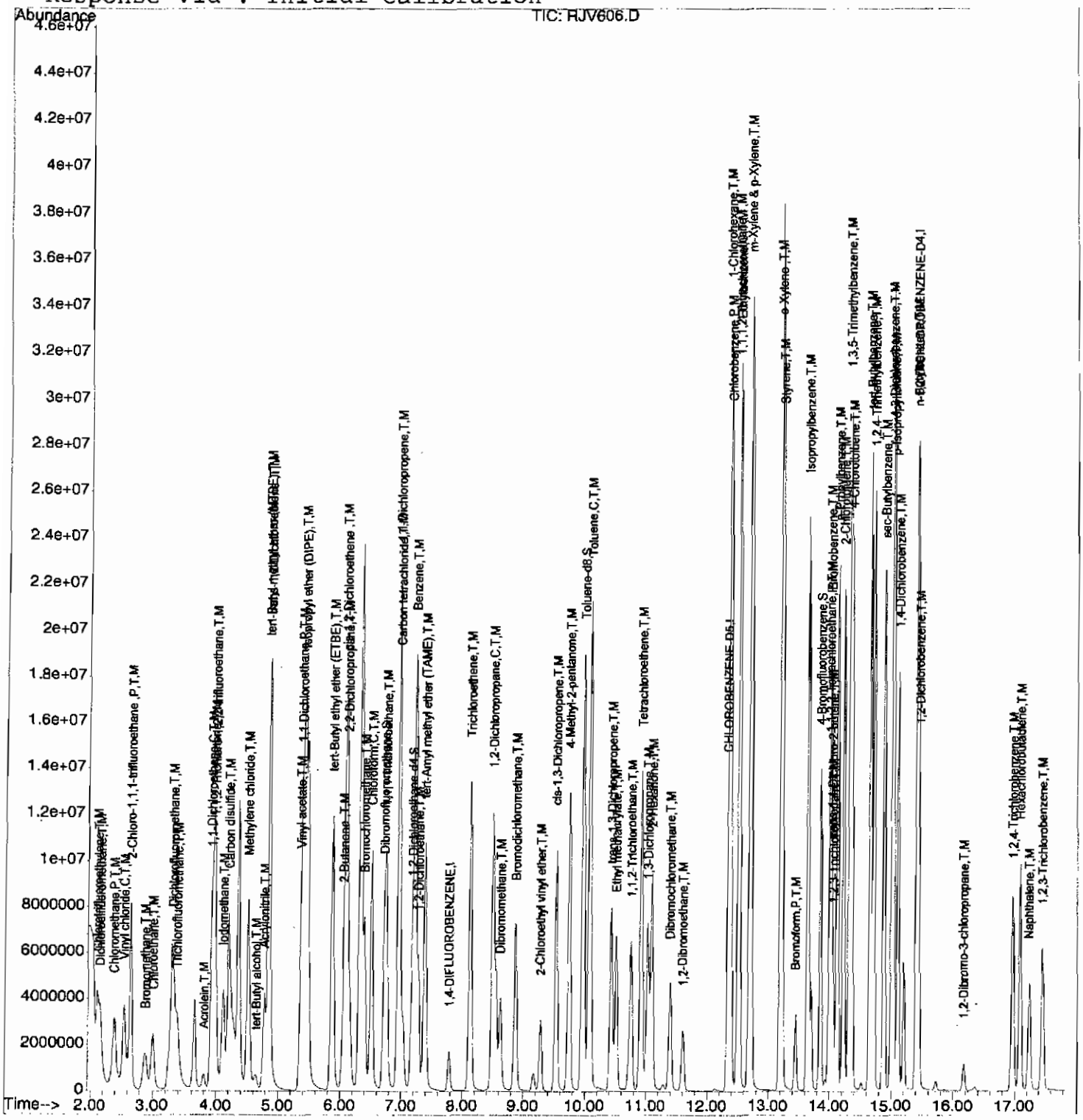
SA 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV606.D Vial: 12
Acq On : 31 Oct 2011 2:36 pm Operator: MW
Sample : VO01J3110 100.0ppb Inst : TO01
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



Sr 11/4/11
2085

SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :T001
IC_Beginning DateTime :10/31/11 09:59
Spike Amount :10 PPB
CC/CV File :RJV609
IC File :RJV602

Column Spec :RTX502.2 ID :0.32MM
IC_Ending DateTime :10/31/11 14:36
HPChem Method :VQ01J31
Date_Time :10/31/11 16:07

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	2078216	1	1	7.785	7.777	0				
	2	Chlorotrifluoroethylene	10.337	3.4	334837	0.161	0.156	2.118	2.108	12.57				
	3	Dichlorodifluoromethane	8.998	-10.0	679552	0.327	0.363	2.163	2.158	7.72				
	4	Chloromethane	9.368	-6.3	847031	0.408	0.435	2.385	2.377	4.03				
	5	Vinyl chloride	9.570	-4.3	917897	0.442	0.461	2.547	2.541	7.36				
	6	2-Chloro-1,1,1-trifluoroethane	10.198	2.0	717414	0.345	0.338	2.666	2.655	11.52				
	7	Bromomethane	10.172	1.7	483272	0.233	0.229	2.917	2.900	14.94				
	8	Chloroethane	9.111	-8.9	534262	0.257	0.282	3.036	3.022	14.40				
	9	Dichlorofluoromethane	9.679	-3.2	1432022	0.689	0.712	3.317	3.309	7.42				
	10	Trichlorofluoromethane	8.656	-13.4	772218	0.372	0.429	3.317	3.313	5.60				
5	11	Acrolein	50.524	1.0	118784	0.011	0.011	3.805	3.801	12.29				
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	9.899	-1.0	450197	0.217	0.219	3.983	3.976	2.60				
5	13	Acetone	48.877	-2.2	445516	0.043	0.044	3.968	3.962	12.62				
	14	1,1-Dichloroethene	9.655	-3.5	1320508	0.635	0.658	3.938	3.927	5.45				
	15	Iodomethane	10.262	2.6	1020558	0.491	0.479	4.116	4.112	2.89				
	16	Carbon disulfide	10.377	3.8	2316232	1.115	1.074	4.219	4.208	10.99				
	17	Methylene chloride	9.852	-1.5	1033145	0.497	0.505	4.515	4.512	6.57				
5	18	tert-Butyl alcohol	49.112	-1.8	120463	0.012	0.012	4.634	4.633	10.38				
5	19	Acrylonitrile	52.562	5.1	587908	0.057	0.054	4.781	4.777	4.68				
	20	tert-Butyl methyl ether (MTBE)	10.014	0.1	1225298	0.590	0.589	4.841	4.837	4.92				
	21	trans-1,2-Dichloroethene	9.877	-1.2	1370568	0.659	0.668	4.856	4.851	3.56				
	22	Vinyl acetate	10.093	0.9	998377	0.480	0.476	5.359	5.357	12.74				
	23	1,1-Dichloroethane	10.049	0.5	1579616	0.760	0.756	5.373	5.371	4.05				
	24	Isopropyl ether (DIPE)	10.337	3.4	2886019	1.389	1.343	5.418	5.414	3.23				
5	25	2-Butanol												
	26	tert-Butyl ethyl ether (ETBE)	9.749	-2.5	1957252	0.942	0.966	5.862	5.860	4.44				
5	27	2-Butanone	52.537	5.1	771595	0.074	0.071	6.039	6.042	5.82				
	28	cis-1,2-Dichloroethene	10.308	3.1	812742	0.391	0.379	6.084	6.080	2.86				
	29	2,2-Dichloropropane	9.670	-3.3	1080913	0.520	0.538	6.098	6.099	7.77				
	30	Bromochloromethane	9.920	-0.8	629180	0.303	0.305	6.379	6.378	3.06				
	31	Chloroform	9.731	-2.7	1287132	0.619	0.636	6.513	6.505	3.47				
	32	Dibromofluoromethane	9.632	-3.7	547922	0.264	0.274	6.720	6.709	4.90				
	33	1,1,1-Trichloroethane	9.429	-5.7	990643	0.477	0.506	6.749	6.746	3.15				
	34	tert-Amyl methyl ether (TAME)	10.176	1.8	300183	0.144	0.142	7.386	7.381	5.46				
	35	1,2-Dichloroethane-d4	8.932	-10.7	542346	0.261	0.292	7.179	7.165	6.16				
	36	CHLOROBENZENE-D5	10.000	0	1765489	1	1	12.328	12.321	0				
	37	1,1-Dichloropropene	9.645	-3.5	354243	0.201	0.208	6.957	6.949	4.86				
	38	Carbon tetrachloride	9.552	-4.5	840066	0.476	0.498	6.957	6.955	3.89				
	39	Benzene	10.189	1.9	3178606	1.800	1.767	7.223	7.208	3.77				
	40	1,2-Dichloroethane	9.335	-6.6	722336	0.409	0.438	7.282	7.270	4.24				
	41	Trichloroethene	10.044	0.4	784620	0.444	0.442	8.125	8.120	4.13				
	42	1,2-Dichloropropane	10.004	0.0	810670	0.459	0.459	8.495	8.489	3.08				
20	43	1,4-Dioxane												
	44	Dibromomethane	10.144	1.4	266983	0.151	0.149	8.614	8.612	2.57				
	45	Bromodichloromethane	9.799	-2.0	885837	0.502	0.512	8.865	8.863	3.82				
	46	2-Chloroethyl vinyl ether	10.396	4.0	217043	0.123	0.118	9.280	9.272	12.09				
	47	cis-1,3-Dichloropropene	10.050	0.5	1089123	0.617	0.614	9.531	9.525	3.83				
5	48	4-Methyl-2-pentanone	51.482	3.0	1827746	0.207	0.201	9.738	9.735	7.38				
	49	Toluene-d8	9.543	-4.6	2330918	1.320	1.383	9.960	9.952	6.52				
	50	Toluene	10.051	0.5	3111412	1.762	1.753	10.064	10.060	3.65				
	51	Ethyl methacrylate	10.418	4.2	606348	0.343	0.330	10.508	10.504	11.06				
	52	trans-1,3-Dichloropropene	10.018	0.2	803608	0.455	0.454	10.419	10.417	5.28				
	53	1,1,2-Trichloroethane	9.987	-0.1	380807	0.216	0.216	10.744	10.744	4.93				
	54	Tetrachloroethene	9.960	-0.4	626428	0.355	0.356	10.922	10.907	2.94				
	55	1,3-Dichloropropane	10.067	0.7	798400	0.452	0.449	11.026	11.016	3.40				
5	56	2-Hexanone	50.570	1.1	1173148	0.133	0.131	11.085	11.086	9.50				
	57	Dibromochloromethane	10.095	1.0	457958	0.259	0.257	11.395	11.382	6.52				
	58	1,2-Dibromoethane	10.098	1.0	365541	0.207	0.205	11.603	11.595	5.44				
	59	1-Chlorohexane	9.938	-0.6	1272480	0.721	0.725	12.342	12.336	4.61				

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11/4/11

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60	Chlorobenzene	10.114	1.1	1802805	1.021	1.010	12.372	12.364	3.12				
61	1,1,1,2-Tetrachloroethane	10.026	0.3	591491	0.335	0.334	12.490	12.490	4.52				
62	Ethylbenzene	10.043	0.4	3617689	2.049	2.040	12.505	12.502	3.49				
2 63	m-Xylene & p-Xylene	19.918	-0.4	5414517	1.533	1.540	12.683	12.681	3.23				
64	o-Xylene	9.951	-0.5	2662138	1.508	1.515	13.186	13.184	3.19				
65	Styrene	10.684	6.8	2044347	1.158	1.084	13.215	13.213	9.03				
66	1,2-DICHLOROBENZENE-D4	10.000	0	676620	1	1	15.420	15.415	0				
67	Bromoform	9.880	-1.2	220603	0.326	0.330	13.452	13.443	7.98				
68	Isopropylbenzene	9.790	-2.1	3289549	4.862	4.966	13.644	13.638	4.25				
69	4-Bromofluorobenzene	8.942	-10.6	745615	1.102	1.232	13.852	13.845	8.67				
70	1,1,2,2-Tetrachloroethane	9.932	-0.7	456807	0.675	0.680	13.985	13.983	2.70				
71	Bromobenzene	9.698	-3.0	672008	0.993	1.024	14.014	14.007	7.74				
72	trans-1,4-Dichloro-2-butene	10.164	1.6	119681	0.177	0.174	14.029	14.027	8.64				
73	1,2,3-Trichloropropane	9.577	-4.2	112697	0.167	0.174	14.059	14.054	8.18				
74	n-Propylbenzene	9.990	-0.1	4328062	6.397	6.403	14.118	14.113	2.04				
75	1,3,5-Trimethylbenzene	9.868	-1.3	2743150	4.054	4.108	14.310	14.307	1.64				
76	2-Chlorotoluene	9.609	-3.9	2298732	3.397	3.536	14.222	14.215	4.91				
77	4-Chlorotoluene	9.834	-1.7	2594676	3.835	3.899	14.355	14.348	3.11				
78	tert-Butylbenzene	9.925	-0.7	617877	0.913	0.920	14.651	14.644	1.93				
79	1,2,4-Trimethylbenzene	10.070	0.7	2655963	3.925	3.898	14.710	14.703	7.18				
80	sec-Butylbenzene	10.152	1.5	3586389	5.300	5.221	14.873	14.869	3.80				
81	p-Isopropyltoluene	10.463	4.6	2866222	4.236	4.048	15.021	15.019	9.79				
82	1,3-Dichlorobenzene	9.960	-0.4	1322269	1.954	1.962	15.006	14.995	1.87				
83	1,4-Dichlorobenzene	9.877	-1.2	1244915	1.840	1.863	15.094	15.095	3.02				
84	n-Butylbenzene	10.295	3.0	2726374	4.029	3.914	15.405	15.402	7.03				
85	1,2-Dichlorobenzene	9.923	-0.8	1048344	1.549	1.561	15.435	15.433	2.00				
86	1,2-Dibromo-3-chloropropane	9.989	-0.1	52967	0.078	0.078	16.175	16.171	14.04				
87	1,2,4-Trichlorobenzene	9.584	-4.2	510233	0.754	0.697	16.959	16.957	15.05	-0.0128	0.8002		0.9994
88	Hexachlorobutadiene	10.265	2.7	385907	0.570	0.556	17.092	17.086	7.87				
89	Naphthalene	10.703	7.0	627450	0.927	0.866	17.240	17.236	14.11				
90	1,2,3-Trichlorobenzene	10.574	5.7	367640	0.543	0.514	17.462	17.455	14.54				

Spike Amount = Nominal Amount * M

54
M1411

2988

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	121	0.00
2	T,M	Chlorotrifluoroethylene	10.000	10.337	-3.4	121	0.00
3	T,M	Dichlorodifluoromethane	10.000	8.999	10.0	98	0.00
4	P,T,M	Chloromethane	10.000	9.369	6.3	103	0.00
5	C,T,M	Vinyl chloride	10.000	9.571	4.3	104	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	10.198	-2.0	120	0.00
7	T,M	Bromomethane	10.000	10.173	-1.7	106	0.00
8	T,M	Chloroethane	10.000	9.111	8.9	109	0.00
9	T,M	Dichlorofluoromethane	10.000	9.679	3.2	118	0.00
10	T,M	Trichlorofluoromethane	10.000	8.656	13.4	98	0.00
11	T,M	Acrolein	50.000	50.524	-1.0	130	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.900	1.0	121	0.00
13	T,M	Acetone	50.000	48.877	2.2	112	0.00
14	C,T,M	1,1-Dichloroethene	10.000	9.655	3.5	115	0.00
15	T,M	Iodomethane	10.000	10.263	-2.6	124	0.00
16	T,M	Carbon disulfide	10.000	10.377	-3.8	136	0.00
17	T,M	Methylene chloride	10.000	9.853	1.5	124	0.00
18	T,M	tert-Butyl alcohol	50.000	49.112	1.8	115	0.00
19	T,M	Acrylonitrile	50.000	52.562	-5.1	128	0.00
20	T,M	tert-Butyl methyl ether (MT	10.000	10.014	-0.1	120	0.00
21	T,M	trans-1,2-Dichloroethene	10.000	9.877	1.2	119	0.00
22	T,M	Vinyl acetate	10.000	10.094	-0.9	111	0.00
23	P,T,M	1,1-Dichloroethane	10.000	10.050	-0.5	123	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	10.338	-3.4	127	0.00
25	T,M	2-Butanol	-1.000	0.000	0.0	126	0.00
26	T,M	tert-Butyl ethyl ether (ETB	10.000	9.749	2.5	118	0.00
27	T,M	2-Butanone	50.000	52.537	-5.1	123	0.00
28	T,M	cis-1,2-Dichloroethene	10.000	10.309	-3.1	126	0.00
29	T,M	2,2-Dichloropropane	10.000	9.670	3.3	118	0.00
30	T,M	Bromochloromethane	10.000	9.920	0.8	118	0.00
31	C,T,M	Chloroform	10.000	9.731	2.7	114	0.00
32	S	Dibromofluoromethane	10.000	9.632	3.7	115	0.00
33	T,M	1,1,1-Trichloroethane	10.000	9.430	5.7	112	0.00
34	T,M	tert-Amyl methyl ether (TAM	10.000	10.176	-1.8	118	0.00
35	S	1,2-Dichloroethane-d4	10.000	8.932	10.7	106	0.02
36	I	CHLOROBENZENE-D5	10.000	10.000	0.0	119	0.00
37	T,M	1,1-Dichloropropene	10.000	9.645	3.6	118	0.00
38	T,M	Carbon tetrachloride	10.000	9.553	4.5	110	0.00
39	T,M	Benzene	10.000	10.189	-1.9	125	0.02
40	T,M	1,2-Dichloroethane	10.000	9.336	6.6	110	0.02

(#) = Out of Range

SU 11/4/11

2989

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IV001J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	10.000	10.044	-0.4	122	0.00
42	C,T,M	1,2-Dichloropropane	10.000	10.004	-0.0	123	0.00
43	T,M	1,4-Dioxane	-1.000	0.000	0.0	127	0.00
44	T,M	Dibromomethane	10.000	10.144	-1.4	120	0.00
45	T,M	Bromodichloromethane	10.000	9.800	2.0	116	0.00
46	T,M	2-Chloroethyl vinyl ether	10.000	10.397	-4.0	121	0.00
47	T,M	cis-1,3-Dichloropropene	10.000	10.050	-0.5	121	0.00
48	T,M	4-Methyl-2-pentanone	50.000	51.482	-3.0	121	0.00
49	S	Toluene-d8	10.000	9.544	4.6	118	0.00
50	C,T,M	Toluene	10.000	10.052	-0.5	124	0.00
51	T,M	Ethyl methacrylate	10.000	10.418	-4.2	119	0.00
52	T,M	trans-1,3-Dichloropropene	10.000	10.018	-0.2	116	0.00
53	T,M	1,1,2-Trichloroethane	10.000	9.988	0.1	122	0.00
54	T,M	Tetrachloroethene	10.000	9.960	0.4	119	0.02
55	T,M	1,3-Dichloropropane	10.000	10.068	-0.7	119	0.00
56	T,M	2-Hexanone	50.000	50.570	-1.1	117	0.00
57	T,M	Dibromochloromethane	10.000	10.096	-1.0	115	0.02
58	T,M	1,2-Dibromoethane	10.000	10.098	-1.0	118	0.00
59	T,M	1-Chlorohexane	10.000	9.939	0.6	120	0.00
60	P,M	Chlorobenzene	10.000	10.114	-1.1	117	0.00
61	T,M	1,1,1,2-Tetrachloroethane	10.000	10.026	-0.3	116	0.00
62	C,T,M	Ethylbenzene	10.000	10.044	-0.4	119	0.00
63	T,M	m-Xylene & p-Xylene	20.000	19.919	0.4	116	0.00
64	T,M	o-Xylene	10.000	9.952	0.5	116	0.00
65	T,M	Styrene	10.000	10.684	-6.8	119	0.00
66	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	116	0.00
67	P,T,M	Bromoform	10.000	9.880	1.2	115	0.00
68	T,M	Isopropylbenzene	10.000	9.791	2.1	116	0.00
69	S	4-Bromofluorobenzene	10.000	8.942	10.6	113	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	10.000	9.932	0.7	118	0.00
71	T,M	Bromobenzene	10.000	9.699	3.0	117	0.00
72	T,M	trans-1,4-Dichloro-2-butene	10.000	10.164	-1.6	114	0.00
73	T,M	1,2,3-Trichloropropane	10.000	9.577	4.2	117	0.00
74	T,M	n-Propylbenzene	10.000	9.990	0.1	117	0.00
75	T,M	1,3,5-Trimethylbenzene	10.000	9.869	1.3	114	0.00
76	T,M	2-Chlorotoluene	10.000	9.609	3.9	115	0.00
77	T,M	4-Chlorotoluene	10.000	9.835	1.6	115	0.00
78	T,M	tert-Butylbenzene	10.000	9.925	0.7	116	0.00
79	T,M	1,2,4-Trimethylbenzene	10.000	10.071	-0.7	113	0.00
80	T,M	sec-Butylbenzene	10.000	10.153	-1.5	113	0.00

(#) = Out of Range

Su 11/4/11 2090

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	10.000	10.464	-4.6	112	0.00
82	T,M	1,3-Dichlorobenzene	10.000	9.960	0.4	114	0.00
83	T,M	1,4-Dichlorobenzene	10.000	9.877	1.2	113	0.00
84	T,M	n-Butylbenzene	10.000	10.295	-2.9	112	0.00
85	T,M	1,2-Dichlorobenzene	10.000	9.923	0.8	113	0.00
86	T,M	1,2-Dibromo-3-chloropropane	10.000	9.990	0.1	112	0.00
87	T,M	1,2,4-Trichlorobenzene	10.000	9.584	4.2	111	0.00
88	T,M	Hexachlorobutadiene	10.000	10.265	-2.7	110	0.00
89	T,M	Naphthalene	10.000	10.704	-7.0	111	0.00
90	T,M	1,2,3-Trichlorobenzene	10.000	10.575	-5.7	109	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

11/4/2011

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	121	0.00
2	T,M	Chlorotrifluoroethylene	0.156	0.161	-3.2	121	0.00
3	T,M	Dichlorodifluoromethane	0.363	0.327	9.9	98	0.00
4	P,T,M	Chloromethane	0.435	0.408	6.2	103	0.00
5	C,T,M	Vinyl chloride	0.461	0.442	4.1	104	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.338	0.345	-2.1	120	0.00
7	T,M	Bromomethane	0.229	0.233	-1.7	106	0.00
8	T,M	Chloroethane	0.282	0.257	8.9	109	0.00
9	T,M	Dichlorofluoromethane	0.712	0.689	3.2	118	0.00
10	T,M	Trichlorofluoromethane	0.429	0.372	13.3	98	0.00
11	T,M	Acrolein	0.011	0.011	0.0	130	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.219	0.217	0.9	121	0.00
13	T,M	Acetone	0.044	0.043	2.3	112	0.00
14	C,T,M	1,1-Dichloroethene	0.658	0.635	3.5	115	0.00
15	T,M	Iodomethane	0.479	0.491	-2.5	124	0.00
16	T,M	Carbon disulfide	1.074	1.115	-3.8	136	0.00
17	T,M	Methylene chloride	0.505	0.497	1.6	124	0.00
18	T,M	tert-Butyl alcohol	0.012	0.012	0.0	115	0.00
19	T,M	Acrylonitrile	0.054	0.057	-5.6	128	0.00
20	T,M	tert-Butyl methyl ether (MT	0.589	0.590	-0.2	120	0.00
21	T,M	trans-1,2-Dichloroethene	0.668	0.659	1.3	119	0.00
22	T,M	Vinyl acetate	0.476	0.480	-0.8	111	0.00
23	P,T,M	1,1-Dichloroethane	0.756	0.760	-0.5	123	0.00
24	T,M	Isopropyl ether (DIPE)	1.343	1.389	-3.4	127	0.00
25	T,M	2-Butanol	0.000	0.000	0.0	126	0.00
26	T,M	tert-Butyl ethyl ether (ETB	0.966	0.942	2.5	118	0.00
27	T,M	2-Butanone	0.071	0.074	-4.2	123	0.00
28	T,M	cis-1,2-Dichloroethene	0.379	0.391	-3.2	126	0.00
29	T,M	2,2-Dichloropropane	0.538	0.520	3.3	118	0.00
30	T,M	Bromochloromethane	0.305	0.303	0.7	118	0.00
31	C,T,M	Chloroform	0.636	0.619	2.7	114	0.00
32	S	Dibromofluoromethane	0.274	0.264	3.6	115	0.00
33	T,M	1,1,1-Trichloroethane	0.506	0.477	5.7	112	0.00
34	T,M	tert-Amyl methyl ether (TAM	0.142	0.144	-1.4	118	0.00
35	S	1,2-Dichloroethane-d4	0.292	0.261	10.6	106	0.02
36	I	CHLOROBENZENE-D5	1.000	1.000	0.0	119	0.00
37	T,M	1,1-Dichloropropene	0.208	0.201	3.4	118	0.00
38	T,M	Carbon tetrachloride	0.498	0.476	4.4	110	0.00
39	T,M	Benzene	1.767	1.800	-1.9	125	0.02
40	T,M	1,2-Dichloroethane	0.438	0.409	6.6	110	0.02

(#) = Out of Range

Sa 11/4/11

2092

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	0.442	0.444	-0.5	122	0.00
42	C,T,M	1,2-Dichloropropane	0.459	0.459	0.0	123	0.00
43	T,M	1,4-Dioxane	0.000	0.000	0.0	127	0.00
44	T,M	Dibromomethane	0.149	0.151	-1.3	120	0.00
45	T,M	Bromodichloromethane	0.512	0.502	2.0	116	0.00
46	T,M	2-Chloroethyl vinyl ether	0.118	0.123	-4.2	121	0.00
47	T,M	cis-1,3-Dichloropropene	0.614	0.617	-0.5	121	0.00
48	T,M	4-Methyl-2-pentanone	0.201	0.207	-3.0	121	0.00
49	S	Toluene-d8	1.383	1.320	4.6	118	0.00
50	C,T,M	Toluene	1.753	1.762	-0.5	124	0.00
51	T,M	Ethyl methacrylate	0.330	0.343	-3.9	119	0.00
52	T,M	trans-1,3-Dichloropropene	0.454	0.455	-0.2	116	0.00
53	T,M	1,1,2-Trichloroethane	0.216	0.216	0.0	122	0.00
54	T,M	Tetrachloroethene	0.356	0.355	0.3	119	0.02
55	T,M	1,3-Dichloropropane	0.449	0.452	-0.7	119	0.00
56	T,M	2-Hexanone	0.131	0.133	-1.5	117	0.00
57	T,M	Dibromochloromethane	0.257	0.259	-0.8	115	0.02
58	T,M	1,2-Dibromoethane	0.205	0.207	-1.0	118	0.00
59	T,M	1-Chlorohexane	0.725	0.721	0.6	120	0.00
60	P,M	Chlorobenzene	1.010	1.021	-1.1	117	0.00
61	T,M	1,1,1,2-Tetrachloroethane	0.334	0.335	-0.3	116	0.00
62	C,T,M	Ethylbenzene	2.040	2.049	-0.4	119	0.00
63	T,M	m-Xylene & p-Xylene	1.540	1.533	0.5	116	0.00
64	T,M	o-Xylene	1.515	1.508	0.5	116	0.00
65	T,M	Styrene	1.084	1.158	-6.8	119	0.00
66	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	116	0.00
67	P,T,M	Bromoform	0.330	0.326	1.2	115	0.00
68	T,M	Isopropylbenzene	4.966	4.862	2.1	116	0.00
69	S	4-Bromofluorobenzene	1.232	1.102	10.6	113	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	0.680	0.675	0.7	118	0.00
71	T,M	Bromobenzene	1.024	0.993	3.0	117	0.00
72	T,M	trans-1,4-Dichloro-2-butene	0.174	0.177	-1.7	114	0.00
73	T,M	1,2,3-Trichloropropane	0.174	0.167	4.0	117	0.00
74	T,M	n-Propylbenzene	6.403	6.397	0.1	117	0.00
75	T,M	1,3,5-Trimethylbenzene	4.108	4.054	1.3	114	0.00
76	T,M	2-Chlorotoluene	3.536	3.397	3.9	115	0.00
77	T,M	4-Chlorotoluene	3.899	3.835	1.6	115	0.00
78	T,M	tert-Butylbenzene	0.920	0.913	0.8	116	0.00
79	T,M	1,2,4-Trimethylbenzene	3.898	3.925	-0.7	113	0.00
80	T,M	sec-Butylbenzene	5.221	5.300	-1.5	113	0.00

(#) = Out of Range

SW 11/4/11

2093

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IV001J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	4.048	4.236	-4.6	112	0.00
82	T,M	1,3-Dichlorobenzene	1.962	1.954	0.4	114	0.00
83	T,M	1,4-Dichlorobenzene	1.863	1.840	1.2	113	0.00
84	T,M	n-Butylbenzene	3.914	4.029	-2.9	112	0.00
85	T,M	1,2-Dichlorobenzene	1.561	1.549	0.8	113	0.00
86	T,M	1,2-Dibromo-3-chloropropane	0.078	0.078	0.0	112	0.00
87	T,M	1,2,4-Trichlorobenzene	0.697	0.754	-8.2	111	0.00
88	T,M	Hexachlorobutadiene	0.556	0.570	-2.5	110	0.00
89	T,M	Naphthalene	0.866	0.927	-7.0	111	0.00
90	T,M	1,2,3-Trichlorobenzene	0.514	0.543	-5.6	109	0.00

SA 11/4/11

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 3 11:03 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.79	114	2078216	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.33	117	1765489	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	676620	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.72	111	547922	9.63	ug/l	0.00
Spiked Amount 10.000			Recovery	=	96.30%	
35) 1,2-Dichloroethane-d4	7.18	65	542346	8.93	ug/l	0.02
Spiked Amount 10.000			Recovery	=	89.30%	
49) Toluene-d8	9.96	98	2330918	9.54	ug/l	0.00
Spiked Amount 10.000			Recovery	=	95.40%	
69) 4-Bromofluorobenzene	13.85	95	745615	8.94	ug/l	0.00
Spiked Amount 10.000			Recovery	=	89.40%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	2.12	116	334837	10.34	ug/l	98
3) Dichlorodifluoromethane	2.16	85	679552	9.00	ug/l	98
4) Chloromethane	2.38	50	847031	9.37	ug/l	100
5) Vinyl chloride	2.55	62	917897	9.57	ug/l	98
6) 2-Chloro-1,1,1-trifluoroet	2.67	118	717414	10.20	ug/l	99
7) Bromomethane	2.92	94	483272	10.17	ug/l	100
8) Chloroethane	3.04	64	534262	9.11	ug/l	97
9) Dichlorofluoromethane	3.32	67	1432022	9.68	ug/l	99
10) Trichlorofluoromethane	3.32	101	772218	8.66	ug/l	100
11) Acrolein	3.80	56	118784	50.52	ug/l	89
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	450197	9.90	ug/l	99
13) Acetone	3.97	43	445516	48.88	ug/l	97
14) 1,1-Dichloroethene	3.94	61	1320508	9.66	ug/l	97
15) Iodomethane	4.12	142	1020558	10.26	ug/l	95
16) Carbon disulfide	4.22	76	2316232	10.38	ug/l	99
17) Methylene chloride	4.52	49	1033145	9.85	ug/l	97
18) tert-Butyl alcohol	4.63	59	120463	49.11	ug/l	97
19) Acrylonitrile	4.78	53	587908	52.56	ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	1225298	10.01	ug/l	99
21) trans-1,2-Dichloroethene	4.86	61	1370568	9.88	ug/l	96
22) Vinyl acetate	5.36	43	998377	10.09	ug/l	98
23) 1,1-Dichloroethane	5.37	63	1579616	10.05	ug/l	100
24) Isopropyl ether (DIPE)	5.42	45	2886019	10.34	ug/l	100
26) tert-Butyl ethyl ether (ET	5.86	59	1957252	9.75	ug/l	98
27) 2-Butanone	6.04	43	771595	52.54	ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	812742	10.31	ug/l	94
29) 2,2-Dichloropropane	6.10	77	1080913	9.67	ug/l	98

(#) = qualifier out of range (m) = manual integration
RJV609.D VO01J31.M Thu Nov 03 11:03:52 2011 Sa 11/4/11 Page 1

2095

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IV001J311 10.0ppb Inst : T001
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 3 11:03 2011 Quant Results File: V001J31.RES

Quant Method : D:\HPCHEM\1\METHODS\V001J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : V001J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.38	49	629180	9.92 ug/l	99
31) Chloroform	6.51	83	1287132	9.73 ug/l	99
33) 1,1,1-Trichloroethane	6.75	97	990643	9.43 ug/l	99
34) tert-Amyl methyl ether (TA	7.39	87	300183	10.18 ug/l	96
37) 1,1-Dichloropropene	6.96	110	354243	9.65 ug/l	98
38) Carbon tetrachloride	6.96	119	840066	9.55 ug/l	100
39) Benzene	7.22	78	3178606	10.19 ug/l	99
40) 1,2-Dichloroethane	7.28	62	722336	9.34 ug/l	99
41) Trichloroethene	8.13	130	784620	10.04 ug/l	99
42) 1,2-Dichloropropane	8.50	63	810670	10.00 ug/l	92
44) Dibromomethane	8.61	93	266983	10.14 ug/l	99
45) Bromodichloromethane	8.87	83	885837	9.80 ug/l	100
46) 2-Chloroethyl vinyl ether	9.28	63	217043	10.40 ug/l	99
47) cis-1,3-Dichloropropene	9.53	75	1089123	10.05 ug/l	95
48) 4-Methyl-2-pentanone	9.74	43	1827746	51.48 ug/l	100
50) Toluene	10.06	91	3111412	10.05 ug/l	98
51) Ethyl methacrylate	10.51	69	606348	10.42 ug/l	98
52) trans-1,3-Dichloropropene	10.42	75	803608	10.02 ug/l	96
53) 1,1,2-Trichloroethane	10.74	97	380807	9.99 ug/l	99
54) Tetrachloroethene	10.92	164	626428	9.96 ug/l	99
55) 1,3-Dichloropropane	11.03	76	798400	10.07 ug/l	100
56) 2-Hexanone	11.08	43	1173148	50.57 ug/l	98
57) Dibromochloromethane	11.40	129	457958	10.10 ug/l	99
58) 1,2-Dibromoethane	11.60	107	365541	10.10 ug/l	100
59) 1-Chlorohexane	12.34	91	1272480	9.94 ug/l	96
60) Chlorobenzene	12.37	112	1802805	10.11 ug/l	99
61) 1,1,1,2-Tetrachloroethane	12.49	131	591491	10.03 ug/l	99
62) Ethylbenzene	12.51	91	3617689	10.04 ug/l	99
63) m-Xylene & p-Xylene	12.68	91	5414517	19.92 ug/l	99
64) o-Xylene	13.19	91	2662138	9.95 ug/l	99
65) Styrene	13.22	104	2044347	10.68 ug/l	98
67) Bromoform	13.45	173	220603	9.88 ug/l	100
68) Isopropylbenzene	13.64	105	3289549	9.79 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	456807	9.93 ug/l	100
71) Bromobenzene	14.01	156	672008	9.70 ug/l	99
72) trans-1,4-Dichloro-2-buten	14.03	53	119681	10.16 ug/l	97
73) 1,2,3-Trichloropropane	14.06	110	112697	9.58 ug/l	94
74) n-Propylbenzene	14.12	91	4328062	9.99 ug/l	99
75) 1,3,5-Trimethylbenzene	14.31	105	2743150	9.87 ug/l	99
76) 2-Chlorotoluene	14.22	91	2298732	9.61 ug/l	100
77) 4-Chlorotoluene	14.35	91	2594676	9.83 ug/l	99

(#) = qualifier out of range (m) = manual integration

Sa 11/4/11

2096

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 3 11:03 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	tert-Butylbenzene	14.65	134	617877	9.93 ug/l	96
79)	1,2,4-Trimethylbenzene	14.71	105	2655963	10.07 ug/l	100
80)	sec-Butylbenzene	14.87	105	3586389	10.15 ug/l	99
81)	p-Isopropyltoluene	15.02	119	2866222	10.46 ug/l	99
82)	1,3-Dichlorobenzene	15.01	146	1322269	9.96 ug/l	100
83)	1,4-Dichlorobenzene	15.09	146	1244915	9.88 ug/l	99
84)	n-Butylbenzene	15.41	91	2726374	10.30 ug/l	99
85)	1,2-Dichlorobenzene	15.43	146	1048344	9.92 ug/l	100
86)	1,2-Dibromo-3-chloropropan	16.17	157	52967	9.99 ug/l	97
87)	1,2,4-Trichlorobenzene	16.96	180	510233	9.58 ug/l	99
88)	Hexachlorobutadiene	17.09	225	385907	10.27 ug/l	100
89)	Naphthalene	17.24	128	627450	10.70 ug/l	100
90)	1,2,3-Trichlorobenzene	17.46	180	367640	10.57 ug/l	98

(#) = qualifier out of range (m) = manual integration
RJV609.D VO01J31.M Thu Nov 03 11:03:53 2011

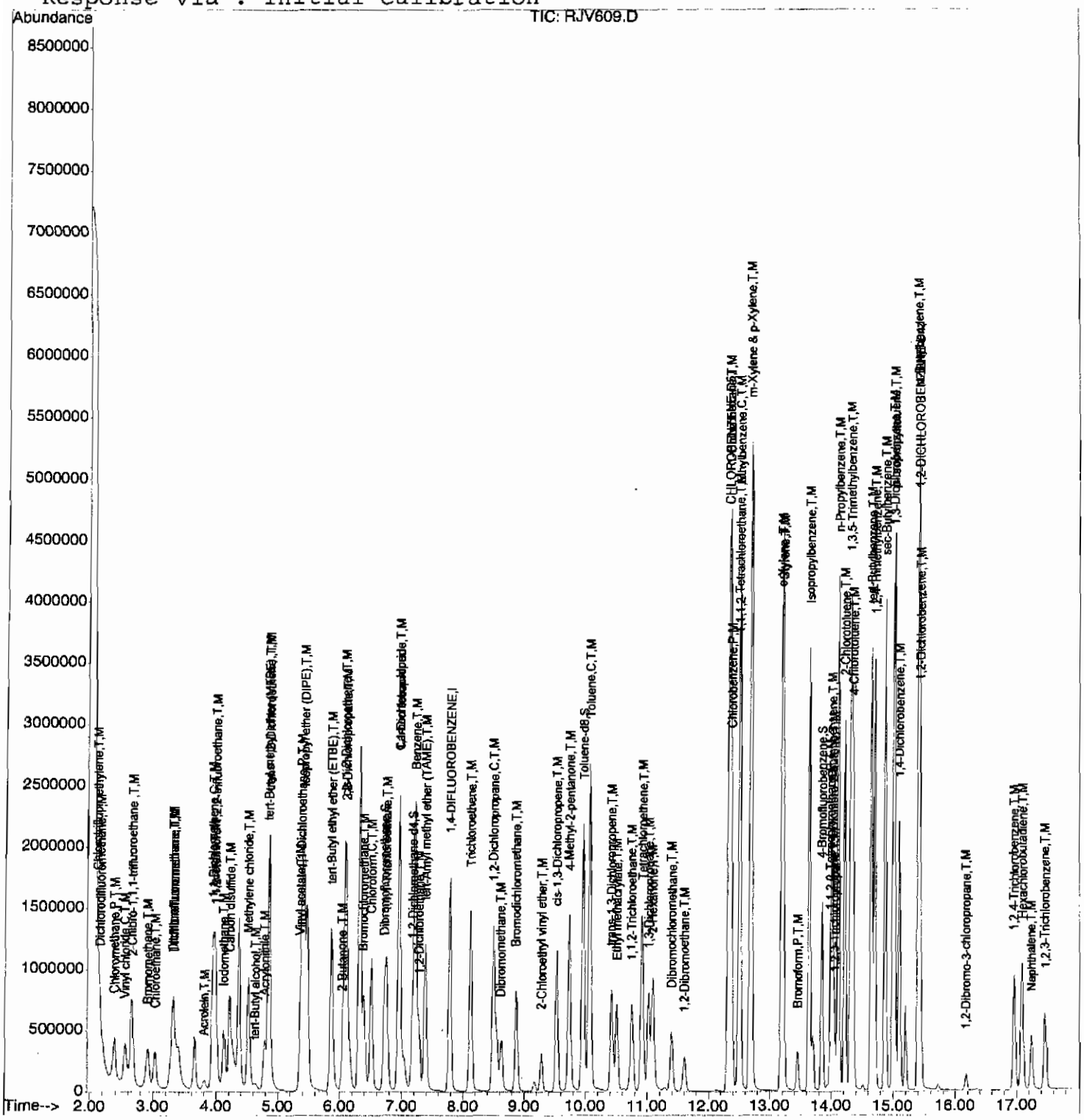
SL 11/4/11

2097

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IV001J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 3 11:03 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



SW 11/14/11

2098

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKV259
Instrument ID: T001
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K035
BFB Injection Date : 11/10/11
BFB Injection Time : 10:06
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.15
75	30.0 - 60.0% of mass 95	50.26
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.32
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	73.02
175	5.0 - 9.0% of mass 174	5.47(7.5)1
176	95.0 - 101.0% of mass 174	70.64(96.7)1
177	5.0 - 9.0% of mass 176	4.59(6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV001J3113	RKV260	11/10/11	10:31
2	MBLK1W	V001K12B	RKV264	11/10/11	12:49
3	LCS1W	V001K12L	RKV261	11/10/11	11:04
4	LCD1W	V001K12C	RKV262	11/10/11	11:35
5	MW-70-PMW01B-091	K035-02	RKV273	11/10/11	17:26
6	MW-70-PMW01B-091MS	K035-02M	RKV277	11/10/11	19:30
7	MW-70-PMW01B-091MSD	K035-02S	RKV278	11/10/11	20:01
8	MW-70-27-092	K035-03	RKV280	11/10/11	21:03
9	IR-70-FD-093	K035-05	RKV282	11/10/11	22:06

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RJV602
Instrument ID: T001
GC Column: RTX502.2 ID: 0.32mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K035
Date Analyzed: 10/31/11
Time Analyzed: 12:33
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1719891	7.78	1480141	12.32	584394	15.41
	UPPER LIMIT	3439782	8.28	2960282	12.82	1168788	15.91
	LOWER LIMIT	859946	7.28	740071	11.82	292197	14.91
	SAMPLE ID						
1	VSTD01D	1658885	7.77	1437181	12.29	548833	15.40
2	MBLK1W	1948222	7.77	1603472	12.31	447554	15.40
3	LCS1W	1693514	7.77	1473044	12.29	571669	15.40
4	LCD1W	1864965	7.77	1599008	12.31	600203	15.40
5	MW-70-PMW01B-091	1653670	7.77	1370791	12.31	397874	15.41
6	MW-70-PMW01B-091MS	1878244	7.78	1652913	12.31	636773	15.42
7	MW-70-PMW01B-091MSD	2033275	7.78	1757187	12.31	653589	15.42
8	MW-70-27-092	2032782	7.79	1712896	12.31	506832	15.41
9	IR-70-FD-093	1932479	7.78	1656230	12.31	467794	15.42

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.
page 1 of 1

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K10\RKV260.D Vial: 2
Acq On : 10 Nov 2011 10:31 am Operator: MW
Sample : CVO01J3113 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	96	-0.01
2	T,M	Chlorotrifluoroethylene	10.000	0.000	100.0#	0	-2.11#
3	T,M	Dichlorodifluoromethane	10.000	9.239	7.6	80	0.04
4	P,T,M	Chloromethane	10.000	9.334	6.7	82	0.03
5	C,T,M	Vinyl chloride	10.000	10.184	-1.8	88	0.04
6	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	0.000	100.0#	0	-2.66#
7	T,M	Bromomethane	10.000	11.093	-10.9	93	0.03
8	T,M	Chloroethane	10.000	10.177	-1.8	97	0.02
9	T,M	Dichlorofluoromethane	10.000	10.393	-3.9	101	0.03
10	T,M	Trichlorofluoromethane	10.000	11.585	-15.9	104	0.02
11	T,M	Acrolein	50.000	32.040	35.9#	66	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	10.243	-2.4	100	0.03
13	T,M	Acetone	50.000	48.657	2.7	89	0.00
14	C,T,M	1,1-Dichloroethene	10.000	10.359	-3.6	98	0.00
15	T,M	Iodomethane	10.000	9.988	0.1	97	0.02
16	T,M	Carbon disulfide	10.000	9.531	4.7	100	0.00
17	T,M	Methylene chloride	10.000	9.557	4.4	96	0.00
18	T,M	tert-Butyl alcohol	50.000	46.120	7.8	86	0.02
19	T,M	Acrylonitrile	50.000	47.397	5.2	92	0.00
20	T,M	tert-Butyl methyl ether (MT	10.000	9.869	1.3	94	0.02
21	T,M	trans-1,2-Dichloroethene	10.000	10.071	-0.7	96	0.00
22	T,M	Vinyl acetate	10.000	7.058	29.4#	62	0.00
23	P,T,M	1,1-Dichloroethane	10.000	9.857	1.4	97	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	9.870	1.3	97	0.00
25	T,M	2-Butanol	-1.000	0.000	0.0	96	0.00
26	T,M	tert-Butyl ethyl ether (ETB	10.000	9.683	3.2	93	0.00
27	T,M	2-Butanone	50.000	45.154	9.7	84	0.00
28	T,M	cis-1,2-Dichloroethene	10.000	10.067	-0.7	98	0.00
29	T,M	2,2-Dichloropropane	10.000	10.666	-6.7	104	0.00
30	T,M	Bromochloromethane	10.000	9.945	0.5	95	0.00
31	C,T,M	Chloroform	10.000	10.336	-3.4	97	-0.01
32	S	Dibromofluoromethane	10.000	9.908	0.9	94	-0.01
33	T,M	1,1,1-Trichloroethane	10.000	10.148	-1.5	96	0.00
34	T,M	tert-Amyl methyl ether (TAM	10.000	9.816	1.8	91	-0.01
35	S	1,2-Dichloroethane-d4	10.000	10.085	-0.9	95	0.00
36	I	CHLOROBENZENE-D5	10.000	10.000	0.0	97	-0.03
37	T,M	1,1-Dichloropropene	10.000	10.048	-0.5	100	-0.01
38	T,M	Carbon tetrachloride	10.000	9.646	3.5	91	0.00
39	T,M	Benzene	10.000	9.603	4.0	96	0.00
40	T,M	1,2-Dichloroethane	10.000	10.189	-1.9	97	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K10\RKV260.D Vial: 2
Acq On : 10 Nov 2011 10:31 am Operator: MW
Sample : CVO01J3113 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	10.000	10.012	-0.1	99	-0.01
42	C,T,M	1,2-Dichloropropane	10.000	9.683	3.2	97	-0.01
43	T,M	1,4-Dioxane	-1.000	0.000	0.0	80	0.00
44	T,M	Dibromomethane	10.000	9.924	0.8	95	-0.01
45	T,M	Bromodichloromethane	10.000	9.931	0.7	95	-0.01
46	T,M	2-Chloroethyl vinyl ether	10.000	2.533	74.7#	24	-0.01
47	T,M	cis-1,3-Dichloropropene	10.000	9.718	2.8	95	-0.01
48	T,M	4-Methyl-2-pentanone	50.000	44.715	10.6	85	-0.01
49	S	Toluene-d8	10.000	9.831	1.7	99	-0.03
50	C,T,M	Toluene	10.000	9.915	0.9	99	-0.01
51	T,M	Ethyl methacrylate	10.000	8.659	13.4	81	-0.01
52	T,M	trans-1,3-Dichloropropene	10.000	9.950	0.5	94	-0.01
53	T,M	1,1,2-Trichloroethane	10.000	9.896	1.0	98	-0.01
54	T,M	Tetrachloroethene	10.000	10.218	-2.2	99	-0.01
55	T,M	1,3-Dichloropropane	10.000	10.104	-1.0	97	-0.03
56	T,M	2-Hexanone	50.000	42.419	15.2	80	-0.01
57	T,M	Dibromochloromethane	10.000	10.268	-2.7	95	-0.01
58	T,M	1,2-Dibromoethane	10.000	10.203	-2.0	97	-0.03
59	T,M	1-Chlorohexane	10.000	9.912	0.9	97	-0.03
60	P,M	Chlorobenzene	10.000	10.338	-3.4	98	-0.03
61	T,M	1,1,1,2-Tetrachloroethane	10.000	10.456	-4.6	99	-0.01
62	C,T,M	Ethylbenzene	10.000	10.267	-2.7	99	-0.01
63	T,M	m-Xylene & p-Xylene	20.000	20.738	-3.7	99	-0.01
64	T,M	o-Xylene	10.000	10.336	-3.4	98	-0.01
65	T,M	Styrene	10.000	9.165	8.4	83	-0.01
66	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	94	-0.01
67	P,T,M	Bromoform	10.000	10.055	-0.5	95	-0.03
68	T,M	Isopropylbenzene	10.000	10.296	-3.0	99	-0.01
69	S	4-Bromofluorobenzene	10.000	9.735	2.7	99	-0.03
70	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.134	-1.3	98	-0.01
71	T,M	Bromobenzene	10.000	10.047	-0.5	98	-0.01
72	T,M	trans-1,4-Dichloro-2-butene	10.000	7.160	28.4#	65	-0.01
73	T,M	1,2,3-Trichloropropane	10.000	9.954	0.5	99	-0.01
74	T,M	n-Propylbenzene	10.000	10.411	-4.1	99	-0.01
75	T,M	1,3,5-Trimethylbenzene	10.000	10.328	-3.3	97	-0.01
76	T,M	2-Chlorotoluene	10.000	10.473	-4.7	102	-0.01
77	T,M	4-Chlorotoluene	10.000	10.464	-4.6	99	-0.03
78	T,M	tert-Butylbenzene	10.000	10.218	-2.2	96	-0.01
79	T,M	1,2,4-Trimethylbenzene	10.000	10.346	-3.5	94	-0.01
80	T,M	sec-Butylbenzene	10.000	10.300	-3.0	93	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K10\RKV260.D Vial: 2
Acq On : 10 Nov 2011 10:31 am Operator: MW
Sample : CV001J3113 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	10.000	10.730	-7.3	93	-0.01
82	T,M	1,3-Dichlorobenzene	10.000	10.687	-6.9	99	-0.03
83	T,M	1,4-Dichlorobenzene	10.000	10.514	-5.1	97	-0.01
84	T,M	n-Butylbenzene	10.000	9.923	0.8	87	-0.01
85	T,M	1,2-Dichlorobenzene	10.000	10.470	-4.7	97	-0.01
86	T,M	1,2-Dibromo-3-chloropropane	10.000	9.437	5.6	86	-0.01
87	T,M	1,2,4-Trichlorobenzene	10.000	8.117	18.8	76	-0.01
88	T,M	Hexachlorobutadiene	10.000	10.208	-2.1	89	-0.03
89	T,M	Naphthalene	10.000	8.069	19.3	68	-0.03
90	T,M	1,2,3-Trichlorobenzene	10.000	8.607	13.9	72	-0.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K10\RKV260.D Vial: 2
Acq On : 10 Nov 2011 10:31 am Operator: MW
Sample : CV001J3113 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	96	-0.01
2	T,M	Chlorotrifluoroethylene	0.156	0.000	100.0#	0#	-2.11#
3	T,M	Dichlorodifluoromethane	0.363	0.336	7.4	80	0.04
4	P,T,M	Chloromethane	0.435	✓0.406	6.7	82	0.03
5	C,T,M	Vinyl chloride	0.461	0.470	-2.0	88	0.04
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.338	0.000	100.0#	0#	-2.66#
7	T,M	Bromomethane	0.229	0.254	-10.9	93	0.03
8	T,M	Chloroethane	0.282	0.287	-1.8	97	0.02
9	T,M	Dichlorofluoromethane	0.712	0.740	-3.9	101	0.03
10	T,M	Trichlorofluoromethane	0.429	0.497	-15.9	104	0.02
11	T,M	Acrolein	0.011	0.007	36.4#	66	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.219	0.224	-2.3	100	0.03
13	T,M	Acetone	0.044	0.043	2.3	89	0.00
14	C,T,M	1,1-Dichloroethene	0.658	0.682	-3.6	98	0.00
15	T,M	Iodomethane	0.479	0.478	0.2	97	0.02
16	T,M	Carbon disulfide	1.074	1.024	4.7	100	0.00
17	T,M	Methylene chloride	0.505	0.482	4.6	96	0.00
18	T,M	tert-Butyl alcohol	0.012	0.011	8.3	86	0.02
19	T,M	Acrylonitrile	0.054	0.051	5.6	92	0.00
20	T,M	tert-Butyl methyl ether (MT	0.589	0.581	1.4	94	0.02
21	T,M	trans-1,2-Dichloroethene	0.668	0.672	-0.6	96	0.00
22	T,M	Vinyl acetate	0.476	0.336	29.4#	62	0.00
23	P,T,M	1,1-Dichloroethane	0.756	✓0.746	1.3	97	0.00
24	T,M	Isopropyl ether (DIPE)	1.343	1.326	1.3	97	0.00
25	T,M	2-Butanol	0.000	0.000	0.0	96	0.00
26	T,M	tert-Butyl ethyl ether (ETB	0.966	0.935	3.2	93	0.00
27	T,M	2-Butanone	0.071	0.064	9.9	84	0.00
28	T,M	cis-1,2-Dichloroethene	0.379	0.382	-0.8	98	0.00
29	T,M	2,2-Dichloropropane	0.538	0.574	-6.7	104	0.00
30	T,M	Bromochloromethane	0.305	0.304	0.3	95	0.00
31	C,T,M	Chloroform	0.636	0.658	-3.5	97	-0.01
32	S	Dibromofluoromethane	0.274	0.271	1.1	94	-0.01
33	T,M	1,1,1-Trichloroethane	0.506	0.513	-1.4	96	0.00
34	T,M	tert-Amyl methyl ether (TAM	0.142	0.139	2.1	91	-0.01
35	S	1,2-Dichloroethane-d4	0.292	0.295	-1.0	95	0.00
36	I	CHLOROBENZENE-D5	1.000	1.000	0.0	97	-0.03
37	T,M	1,1-Dichloropropene	0.208	0.209	-0.5	100	-0.01
38	T,M	Carbon tetrachloride	0.498	0.480	3.6	91	0.00
39	T,M	Benzene	1.767	1.697	4.0	96	0.00
40	T,M	1,2-Dichloroethane	0.438	0.447	-2.1	97	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K10\RKV260.D
Acq On : 10 Nov 2011 10:31 am
Sample : CVO01J3113
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA
MS Integration Params: 524C.P

Vial: 2
Operator: MW
Inst : TO01
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	0.442	0.443	-0.2	99	-0.01
42	C,T,M	1,2-Dichloropropane	0.459	0.444	3.3	97	-0.01
43	T,M	1,4-Dioxane	0.000	0.000	0.0	80	0.00
44	T,M	Dibromomethane	0.149	0.148	0.7	95	-0.01
45	T,M	Bromodichloromethane	0.512	0.508	0.8	95	-0.01
46	T,M	2-Chloroethyl vinyl ether	0.118	0.030	74.6#	24#	-0.01
47	T,M	cis-1,3-Dichloropropene	0.614	0.596	2.9	95	-0.01
48	T,M	4-Methyl-2-pentanone	0.201	0.180	10.4	85	-0.01
49	S	Toluene-d8	1.383	1.360	1.7	99	-0.03
50	C,T,M	Toluene	1.753	1.738	0.9	99	-0.01
51	T,M	Ethyl methacrylate	0.330	0.285	13.6	81	-0.01
52	T,M	trans-1,3-Dichloropropene	0.454	0.452	0.4	94	-0.01
53	T,M	1,1,2-Trichloroethane	0.216	0.214	0.9	98	-0.01
54	T,M	Tetrachloroethene	0.356	0.364	-2.2	99	-0.01
55	T,M	1,3-Dichloropropane	0.449	0.454	-1.1	97	-0.03
56	T,M	2-Hexanone	0.131	0.111	15.3	80	-0.01
57	T,M	Dibromochloromethane	0.257	0.264	-2.7	95	-0.01
58	T,M	1,2-Dibromoethane	0.205	0.209	-2.0	97	-0.03
59	T,M	1-Chlorohexane	0.725	0.719	0.8	97	-0.03
60	P,M	Chlorobenzene	1.010	1.044	-3.4	98	-0.03
61	T,M	1,1,1,2-Tetrachloroethane	0.334	0.349	-4.5	99	-0.01
62	C,T,M	Ethylbenzene	2.040	2.095	-2.7	99	-0.01
63	T,M	m-Xylene & p-Xylene	1.540	1.596	-3.6	99	-0.01
64	T,M	o-Xylene	1.515	1.566	-3.4	98	-0.01
65	T,M	Styrene	1.084	0.993	8.4	83	-0.01
66	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	94	-0.01
67	P,T,M	Bromoform	0.330	0.332	-0.6	95	-0.03
68	T,M	Isopropylbenzene	4.966	5.113	-3.0	99	-0.01
69	S	4-Bromofluorobenzene	1.232	1.200	2.6	99	-0.03
70	P,T,M	1,1,2,2-Tetrachloroethane	0.680	0.689	-1.3	98	-0.01
71	T,M	Bromobenzene	1.024	1.029	-0.5	98	-0.01
72	T,M	trans-1,4-Dichloro-2-butene	0.174	0.125	28.2#	65	-0.01
73	T,M	1,2,3-Trichloropropane	0.174	0.173	0.6	99	-0.01
74	T,M	n-Propylbenzene	6.403	6.666	-4.1	99	-0.01
75	T,M	1,3,5-Trimethylbenzene	4.108	4.243	-3.3	97	-0.01
76	T,M	2-Chlorotoluene	3.536	3.703	-4.7	102	-0.01
77	T,M	4-Chlorotoluene	3.899	4.080	-4.6	99	-0.03
78	T,M	tert-Butylbenzene	0.920	0.940	-2.2	96	-0.01
79	T,M	1,2,4-Trimethylbenzene	3.898	4.032	-3.4	94	-0.01
80	T,M	sec-Butylbenzene	5.221	5.377	-3.0	93	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K10\RKV260.D Vial: 2
Acq On : 10 Nov 2011 10:31 am Operator: MW
Sample : CVO01J3113 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	4.048	4.344	-7.3	93	-0.01
82	T,M	1,3-Dichlorobenzene	1.962	2.097	-6.9	99	-0.03
83	T,M	1,4-Dichlorobenzene	1.863	1.958	-5.1	97	-0.01
84	T,M	n-Butylbenzene	3.914	3.884	0.8	87	-0.01
85	T,M	1,2-Dichlorobenzene	1.561	1.635	-4.7	97	-0.01
86	T,M	1,2-Dibromo-3-chloropropane	0.078	0.074	5.1	86	-0.01
87	T,M	1,2,4-Trichlorobenzene	0.697	0.637	8.6	76	-0.01
88	T,M	Hexachlorobutadiene	0.556	0.567	-2.0	89	-0.03
89	T,M	Naphthalene	0.866	0.699	19.3	68	-0.03
90	T,M	1,2,3-Trichlorobenzene	0.514	0.442	14.0	72	-0.03

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKV295
Instrument ID: T001
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K035
BFB Injection Date : 11/14/11
BFB Injection Time : 08:40
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.27
75	30.0 - 60.0% of mass 95	55.65
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.29
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	75.40
175	5.0 - 9.0% of mass 174	5.06(6.7)1
176	95.0 - 101.0% of mass 174	74.49(98.8)1
177	5.0 - 9.0% of mass 176	4.82(6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV001J3115	RKV296	11/14/11	09:05
2	MBLK2W	V001K14B	RKV300	11/14/11	11:14
3	LCS2W	V001K14L	RKV297	11/14/11	09:41
4	LCD2W	V001K14C	RKV298	11/14/11	10:12
5	MW-70-PMW01A-089	K035-01R	RKV302	11/14/11	12:17
6	IR-70-TB-090	K035-06R	RKV310	11/14/11	16:28
7	MW-70-27-092DL	K035-03T	RKV315	11/14/11	19:03
8	MW-70-28-094DL	K035-04T	RKV316	11/14/11	19:34
9	MW-70-28-094	K035-04R	RKV317	11/14/11	20:05

FORM V VOA OLM02.0

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RJV602
Instrument ID: T001
GC Column: RTX502.2 ID: 0.32mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K035
Date Analyzed: 10/31/11
Time Analyzed: 12:33
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1719891	7.78	1480141	12.32	584394	15.41
	UPPER LIMIT	3439782	8.28	2960282	12.82	1168788	15.91
	LOWER LIMIT	859946	7.28	740071	11.82	292197	14.91
	SAMPLE ID						
1	VSTD010	1525322	7.79	1321856	12.31	519149	15.41
2	MBLK2W	1702049	7.78	1385661	12.33	389856	15.42
3	LCS2W	1653852	7.77	1449229	12.32	534680	15.42
4	LCD2W	1601733	7.77	1354066	12.31	517770	15.41
5	MW-70-PMW01A-089	1273459	7.78	1046280	12.32	349154	15.42
6	IR-70-IB-090	1726935	7.78	1380742	12.32	364238	15.42
7	MW-70-27-092DL	1660553	7.78	1352872	12.32	373620	15.42
8	MW-70-28-094DL	1593833	7.78	1329136	12.32	382340	15.42
9	MW-70-28-094	1656533	7.78	1354442	12.32	398804	15.42

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

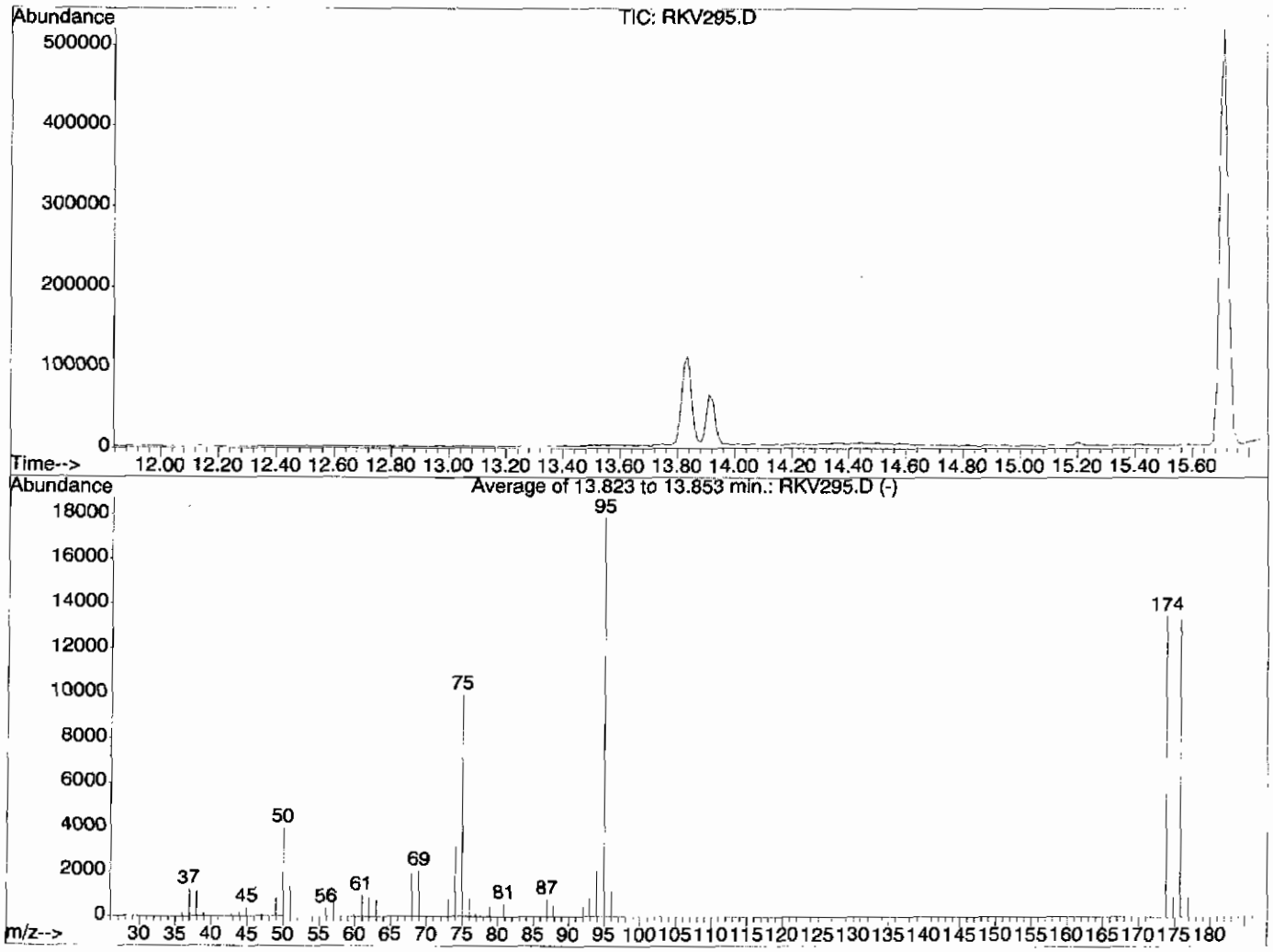
Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.
page 1 of 1

FORM VIII VOA-8260 1/2000

BFB

Data File : D:\HPCHEM\1\DATA\11K14\RKV295.D
Acq On : 14 Nov 2011 8:40 am
Sample : BFB01K14
Misc : T/CHK
MS Integration Params: 524C.P
Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls

Vial: 1
Operator: MW
Inst : TO01
Multiplr: 1.00



AutoFind: Scans 803, 804, 805; Background Corrected with Scan 798

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.3	3976	PASS
75	95	30	60	55.6	9935	PASS
95	95	100	100	100.0	17853	PASS
96	95	5	9	6.3	1123	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	75.4	13462	PASS
175	174	5	9	6.7	904	PASS
176	174	95	101	98.8	13299	PASS
177	176	5	9	6.5	860	PASS

RKV295.D VO01J31.M Mon Nov 14 11:40:06 2011

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D Vial: 2
Acq On : 14 Nov 2011 9:05 am Operator: MW
Sample : CVO01J3115 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	89	0.00
2	T,M	Chlorotrifluoroethylene	10.000	0.000	100.0#	0	-2.11#
3	T,M	Dichlorodifluoromethane	10.000	8.571	14.3	68	0.02
4	P,T,M	Chloromethane	10.000	8.721	12.8	70	0.02
5	C,T,M	Vinyl chloride	10.000	9.199	8.0	73	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	0.000	100.0#	0	-2.66#
7	T,M	Bromomethane	10.000	10.154	-1.5	78	0.02
8	T,M	Chloroethane	10.000	9.635	3.7	85	0.02
9	T,M	Dichlorofluoromethane	10.000	10.055	-0.5	90	0.02
10	T,M	Trichlorofluoromethane	10.000	11.610	-16.1	96	0.02
11	T,M	Acrolein	50.000	32.889	34.2#	62	0.02
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	10.221	-2.2	92	0.00
13	T,M	Acetone	50.000	50.167	-0.3	84	0.00
14	C,T,M	1,1-Dichloroethene	10.000	10.216	-2.2	89	0.00
15	T,M	Iodomethane	10.000	10.188	-1.9	91	0.02
16	T,M	Carbon disulfide	10.000	9.151	8.5	88	0.00
17	T,M	Methylene chloride	10.000	9.543	4.6	88	0.02
18	T,M	tert-Butyl alcohol	50.000	47.599	4.8	82	0.04
19	T,M	Acrylonitrile	50.000	46.403	7.2	83	0.00
20	T,M	tert-Butyl methyl ether (MT	10.000	10.289	-2.9	90	0.02
21	T,M	trans-1,2-Dichloroethene	10.000	9.977	0.2	88	0.00
22	T,M	Vinyl acetate	10.000	8.789	12.1	71	0.02
23	P,T,M	1,1-Dichloroethane	10.000	10.114	-1.1	91	0.02
24	T,M	Isopropyl ether (DIPE)	10.000	9.918	0.8	89	0.00
25	T,M	2-Butanol	-1.000	0.000	0.0	89	0.00
26	T,M	tert-Butyl ethyl ether (ETB	10.000	10.033	-0.3	89	0.00
27	T,M	2-Butanone	50.000	47.532	4.9	82	0.02
28	T,M	cis-1,2-Dichloroethene	10.000	10.350	-3.5	93	0.00
29	T,M	2,2-Dichloropropane	10.000	11.129	-11.3	99	0.02
30	T,M	Bromochloromethane	10.000	10.175	-1.8	89	0.00
31	C,T,M	Chloroform	10.000	10.699	-7.0	92	0.00
32	S	Dibromofluoromethane	10.000	10.259	-2.6	90	0.00
33	T,M	1,1,1-Trichloroethane	10.000	10.947	-9.5	95	0.00
34	T,M	tert-Amyl methyl ether (TAM	10.000	10.560	-5.6	90	0.00
35	S	1,2-Dichloroethane-d4	10.000	10.524	-5.2	92	0.00
36	I	CHLOROBENZENE-D5	10.000	10.000	0.0	89	0.00
37	T,M	1,1-Dichloropropene	10.000	10.238	-2.4	94	0.00
38	T,M	Carbon tetrachloride	10.000	10.474	-4.7	91	0.00
39	T,M	Benzene	10.000	9.939	0.6	92	0.00
40	T,M	1,2-Dichloroethane	10.000	10.755	-7.6	95	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D Vial: 2
Acq On : 14 Nov 2011 9:05 am Operator: MW
Sample : CVO01J3115 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	10.000	10.311	-3.1	94	0.00
42	C,T,M	1,2-Dichloropropane	10.000	9.886	1.1	91	0.00
43	T,M	1,4-Dioxane	-1.000	0.000	0.0	81	0.00
44	T,M	Dibromomethane	10.000	10.567	-5.7	93	0.00
45	T,M	Bromodichloromethane	10.000	10.663	-6.6	94	0.00
46	T,M	2-Chloroethyl vinyl ether	10.000	1.898	81.0#	17	0.00
47	T,M	cis-1,3-Dichloropropene	10.000	10.318	-3.2	93	0.00
48	T,M	4-Methyl-2-pentanone	50.000	43.950	12.1	77	0.00
49	S	Toluene-d8	10.000	9.825	1.8	91	0.00
50	C,T,M	Toluene	10.000	10.410	-4.1	96	0.00
51	T,M	Ethyl methacrylate	10.000	9.282	7.2	79	0.00
52	T,M	trans-1,3-Dichloropropene	10.000	10.760	-7.6	93	0.00
53	T,M	1,1,2-Trichloroethane	10.000	10.469	-4.7	96	0.00
54	T,M	Tetrachloroethene	10.000	10.653	-6.5	95	0.00
55	T,M	1,3-Dichloropropane	10.000	10.506	-5.1	93	0.00
56	T,M	2-Hexanone	50.000	43.869	12.3	76	0.00
57	T,M	Dibromochloromethane	10.000	11.101	-11.0	95	0.00
58	T,M	1,2-Dibromoethane	10.000	10.643	-6.4	93	0.00
59	T,M	1-Chlorohexane	10.000	10.250	-2.5	93	0.00
60	P,M	Chlorobenzene	10.000	10.488	-4.9	91	0.00
61	T,M	1,1,1,2-Tetrachloroethane	10.000	10.966	-9.7	95	0.00
62	C,T,M	Ethylbenzene	10.000	10.625	-6.3	94	0.00
63	T,M	m-Xylene & p-Xylene	20.000	21.533	-7.7	94	0.00
64	T,M	o-Xylene	10.000	10.790	-7.9	94	0.00
65	T,M	Styrene	10.000	9.954	0.5	83	0.00
66	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	89	0.00
67	P,T,M	Bromoform	10.000	10.892	-8.9	98	0.00
68	T,M	Isopropylbenzene	10.000	10.449	-4.5	95	0.00
69	S	4-Bromofluorobenzene	10.000	9.651	3.5	93	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.387	-3.9	95	0.00
71	T,M	Bromobenzene	10.000	10.252	-2.5	94	0.00
72	T,M	trans-1,4-Dichloro-2-butene	10.000	7.999	20.0#	69	0.00
73	T,M	1,2,3-Trichloropropane	10.000	10.490	-4.9	98	0.00
74	T,M	n-Propylbenzene	10.000	10.405	-4.0	93	0.00
75	T,M	1,3,5-Trimethylbenzene	10.000	10.592	-5.9	94	0.00
76	T,M	2-Chlorotoluene	10.000	10.485	-4.8	96	0.00
77	T,M	4-Chlorotoluene	10.000	10.518	-5.2	94	0.00
78	T,M	tert-Butylbenzene	10.000	10.584	-5.8	95	0.00
79	T,M	1,2,4-Trimethylbenzene	10.000	10.432	-4.3	89	0.00
80	T,M	sec-Butylbenzene	10.000	10.637	-6.4	91	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D Vial: 2
Acq On : 14 Nov 2011 9:05 am Operator: MW
Sample : CVO01J3115 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	10.000	10.835	-8.4	89	0.00
82	T,M	1,3-Dichlorobenzene	10.000	10.730	-7.3	94	0.00
83	T,M	1,4-Dichlorobenzene	10.000	10.471	-4.7	92	0.00
84	T,M	n-Butylbenzene	10.000	10.296	-3.0	86	0.00
85	T,M	1,2-Dichlorobenzene	10.000	10.622	-6.2	93	0.00
86	T,M	1,2-Dibromo-3-chloropropane	10.000	10.304	-3.0	88	0.00
87	T,M	1,2,4-Trichlorobenzene	10.000	8.564	14.4	76	0.00
88	T,M	Hexachlorobutadiene	10.000	10.608	-6.1	87	0.00
89	T,M	Naphthalene	10.000	7.609	23.9#	60	0.00
90	T,M	1,2,3-Trichlorobenzene	10.000	9.169	8.3	72	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D Vial: 2
Acq On : 14 Nov 2011 9:05 am Operator: MW
Sample : CVO01J3115 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	89	0.00
2	T,M	Chlorotrifluoroethylene	0.156	0.000	100.0#	0#	-2.11#
3	T,M	Dichlorodifluoromethane	0.363	0.311	14.3	68	0.02
4	P,T,M	Chloromethane	0.435	0.379	12.9	70	0.02
5	C,T,M	Vinyl chloride	0.461	0.425	7.8	73	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.338	0.000	100.0#	0#	-2.66#
7	T,M	Bromomethane	0.229	0.232	-1.3	78	0.02
8	T,M	Chloroethane	0.282	0.272	3.5	85	0.02
9	T,M	Dichlorofluoromethane	0.712	0.716	-0.6	90	0.02
10	T,M	Trichlorofluoromethane	0.429	0.498	-16.1	96	0.02
11	T,M	Acrolein	0.011	0.007	36.4#	62	0.02
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.219	0.224	-2.3	92	0.00
13	T,M	Acetone	0.044	0.044	0.0	84	0.00
14	C,T,M	1,1-Dichloroethene	0.658	0.672	-2.1	89	0.00
15	T,M	Iodomethane	0.479	0.487	-1.7	91	0.02
16	T,M	Carbon disulfide	1.074	0.983	8.5	88	0.00
17	T,M	Methylene chloride	0.505	0.481	4.8	88	0.02
18	T,M	tert-Butyl alcohol	0.012	0.011	8.3	82	0.04
19	T,M	Acrylonitrile	0.054	0.050	7.4	83	0.00
20	T,M	tert-Butyl methyl ether (MT	0.589	0.606	-2.9	90	0.02
21	T,M	trans-1,2-Dichloroethene	0.668	0.666	0.3	88	0.00
22	T,M	Vinyl acetate	0.476	0.418	12.2	71	0.02
23	P,T,M	1,1-Dichloroethane	0.756	0.765	-1.2	91	0.02
24	T,M	Isopropyl ether (DIPE)	1.343	1.332	0.8	89	0.00
25	T,M	2-Butanol	0.000	0.000	0.0	89	0.00
26	T,M	tert-Butyl ethyl ether (ETB	0.966	0.969	-0.3	89	0.00
27	T,M	2-Butanone	0.071	0.067	5.6	82	0.02
28	T,M	cis-1,2-Dichloroethene	0.379	0.393	-3.7	93	0.00
29	T,M	2,2-Dichloropropane	0.538	0.599	-11.3	99	0.02
30	T,M	Bromochloromethane	0.305	0.311	-2.0	89	0.00
31	C,T,M	Chloroform	0.636	0.681	-7.1	92	0.00
32	S	Dibromofluoromethane	0.274	0.281	-2.6	90	0.00
33	T,M	1,1,1-Trichloroethane	0.506	0.553	-9.3	95	0.00
34	T,M	tert-Amyl methyl ether (TAM	0.142	0.150	-5.6	90	0.00
35	S	1,2-Dichloroethane-d4	0.292	0.307	-5.1	92	0.00
36	I	CHLOROBENZENE-D5	1.000	1.000	0.0	89	0.00
37	T,M	1,1-Dichloropropene	0.208	0.213	-2.4	94	0.00
38	T,M	Carbon tetrachloride	0.498	0.522	-4.8	91	0.00
39	T,M	Benzene	1.767	1.756	0.6	92	0.00
40	T,M	1,2-Dichloroethane	0.438	0.471	-7.5	95	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D Vial: 2
Acq On : 14 Nov 2011 9:05 am Operator: MW
Sample : CVO01J3115 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	0.442	0.456	-3.2	94	0.00
42	C,T,M	1,2-Dichloropropane	0.459	0.454	1.1	91	0.00
43	T,M	1,4-Dioxane	0.000	0.000	0.0	81	0.00
44	T,M	Dibromomethane	0.149	0.158	-6.0	93	0.00
45	T,M	Bromodichloromethane	0.512	0.546	-6.6	94	0.00
46	T,M	2-Chloroethyl vinyl ether	0.118	0.022	81.4#	17#	0.00
47	T,M	cis-1,3-Dichloropropene	0.614	0.633	-3.1	93	0.00
48	T,M	4-Methyl-2-pentanone	0.201	0.177	11.9	77	0.00
49	S	Toluene-d8	1.383	1.359	1.7	91	0.00
50	C,T,M	Toluene	1.753	1.825	-4.1	96	0.00
51	T,M	Ethyl methacrylate	0.330	0.306	7.3	79	0.00
52	T,M	trans-1,3-Dichloropropene	0.454	0.489	-7.7	93	0.00
53	T,M	1,1,2-Trichloroethane	0.216	0.226	-4.6	96	0.00
54	T,M	Tetrachloroethene	0.356	0.380	-6.7	95	0.00
55	T,M	1,3-Dichloropropane	0.449	0.472	-5.1	93	0.00
56	T,M	2-Hexanone	0.131	0.115	12.2	76	0.00
57	T,M	Dibromochloromethane	0.257	0.285	-10.9	95	0.00
58	T,M	1,2-Dibromoethane	0.205	0.218	-6.3	93	0.00
59	T,M	1-Chlorohexane	0.725	0.743	-2.5	93	0.00
60	P,M	Chlorobenzene	1.010	1.059	-4.9	91	0.00
61	T,M	1,1,1,2-Tetrachloroethane	0.334	0.366	-9.6	95	0.00
62	C,T,M	Ethylbenzene	2.040	2.168	-6.3	94	0.00
63	T,M	m-Xylene & p-Xylene	1.540	1.658	-7.7	94	0.00
64	T,M	o-Xylene	1.515	1.635	-7.9	94	0.00
65	T,M	Styrene	1.084	1.079	0.5	83	0.00
66	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	89	0.00
67	P,T,M	Bromoform	0.330	0.359	-8.8	98	0.00
68	T,M	Isopropylbenzene	4.966	5.188	-4.5	95	0.00
69	S	4-Bromofluorobenzene	1.232	1.189	3.5	93	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	0.680	0.706	-3.8	95	0.00
71	T,M	Bromobenzene	1.024	1.050	-2.5	94	0.00
72	T,M	trans-1,4-Dichloro-2-butene	0.174	0.139	20.1#	69	0.00
73	T,M	1,2,3-Trichloropropane	0.174	0.182	-4.6	98	0.00
74	T,M	n-Propylbenzene	6.403	6.662	-4.0	93	0.00
75	T,M	1,3,5-Trimethylbenzene	4.108	4.351	-5.9	94	0.00
76	T,M	2-Chlorotoluene	3.536	3.707	-4.8	96	0.00
77	T,M	4-Chlorotoluene	3.899	4.101	-5.2	94	0.00
78	T,M	tert-Butylbenzene	0.920	0.974	-5.9	95	0.00
79	T,M	1,2,4-Trimethylbenzene	3.898	4.066	-4.3	89	0.00
80	T,M	sec-Butylbenzene	5.221	5.553	-6.4	91	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D Vial: 2
Acq On : 14 Nov 2011 9:05 am Operator: MW
Sample : CVO01J3115 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	4.048	4.387	-8.4	89	0.00
82	T,M	1,3-Dichlorobenzene	1.962	2.105	-7.3	94	0.00
83	T,M	1,4-Dichlorobenzene	1.863	1.950	-4.7	92	0.00
84	T,M	n-Butylbenzene	3.914	4.030	-3.0	86	0.00
85	T,M	1,2-Dichlorobenzene	1.561	1.658	-6.2	93	0.00
86	T,M	1,2-Dibromo-3-chloropropane	0.078	0.081	-3.8	88	0.00
87	T,M	1,2,4-Trichlorobenzene	0.697	0.672	3.6	76	0.00
88	T,M	Hexachlorobutadiene	0.556	0.589	-5.9	87	0.00
89	T,M	Naphthalene	0.866	0.659	23.9#	60	0.00
90	T,M	1,2,3-Trichlorobenzene	0.514	0.471	8.4	72	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D Vial: 2
Acq On : 14 Nov 2011 9:05 am Operator: MW
Sample : CVO01J3115 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 11:40 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.79	114	1525322	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.31	117	1321856	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	519149	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.72	111	428316	10.26	ug/l	0.00
Spiked Amount 10.000			Recovery	=	102.60%	
35) 1,2-Dichloroethane-d4	7.17	65	468983	10.52	ug/l	0.00
Spiked Amount 10.000			Recovery	=	105.20%	
49) Toluene-d8	9.95	98	1796714	9.83	ug/l	0.00
Spiked Amount 10.000			Recovery	=	98.30%	
69) 4-Bromofluorobenzene	13.84	95	617426	9.65	ug/l	0.00
Spiked Amount 10.000			Recovery	=	96.50%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	2.18	85	475078	8.57	ug/l	98
4) Chloromethane	2.40	50	578707	8.72	ug/l	98
5) Vinyl chloride	2.56	62	647575	9.20	ug/l	92
7) Bromomethane	2.93	94	354031	10.15	ug/l	98
8) Chloroethane	3.05	64	414679	9.64	ug/l	97
9) Dichlorofluoromethane	3.33	67	1091839	10.06	ug/l	99
10) Trichlorofluoromethane	3.33	101	760227	11.61	ug/l	99
11) Acrolein	3.82	56	56751	32.89	ug/l	76
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	341134	10.22	ug/l	99
13) Acetone	3.97	43	335619	50.17	ug/l	99
14) 1,1-Dichloroethene	3.94	61	1025473	10.22	ug/l	99
15) Iodomethane	4.13	142	743594	10.19	ug/l	99
16) Carbon disulfide	4.22	76	1499142	9.15	ug/l	99
17) Methylene chloride	4.53	49	734403	9.54	ug/l	99
18) tert-Butyl alcohol	4.66	59	85690	47.60	ug/l	82
19) Acrylonitrile	4.78	53	380932	46.40	ug/l	98
20) tert-Butyl methyl ether (M	4.86	73	923986	10.29	ug/l	99
21) trans-1,2-Dichloroethene	4.86	61	1016092	9.98	ug/l	100
22) Vinyl acetate	5.38	43	638030	8.79	ug/l	95
23) 1,1-Dichloroethane	5.39	63	1166792	10.11	ug/l	99
24) Isopropyl ether (DIPE)	5.42	45	2032282	9.92	ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	1478438	10.03	ug/l	99
27) 2-Butanone	6.06	43	512364	47.53	ug/l	98
28) cis-1,2-Dichloroethene	6.09	96	598937	10.35	ug/l	99
29) 2,2-Dichloropropane	6.11	77	913027	11.13	ug/l	99
30) Bromochloromethane	6.38	49	473641	10.17	ug/l	95
31) Chloroform	6.51	83	1038675	10.70	ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D Vial: 2
Acq On : 14 Nov 2011 9:05 am Operator: MW
Sample : CVO01J3115 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 11:40 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
33) 1,1,1-Trichloroethane	6.75	97	844085	10.95 ug/l	99
34) tert-Amyl methyl ether (TA	7.39	87	228643	10.56 ug/l	98
37) 1,1-Dichloropropene	6.96	110	281534	10.24 ug/l	99
38) Carbon tetrachloride	6.96	119	689638	10.47 ug/l	98
39) Benzene	7.21	78	2321559	9.94 ug/l	100
40) 1,2-Dichloroethane	7.27	62	623058	10.76 ug/l	99
41) Trichloroethene	8.13	130	603044	10.31 ug/l	99
42) 1,2-Dichloropropane	8.50	63	599781	9.89 ug/l	99
44) Dibromomethane	8.62	93	208225	10.57 ug/l	98
45) Bromodichloromethane	8.87	83	721658	10.66 ug/l	100
46) 2-Chloroethyl vinyl ether	9.27	63	29671	1.90 ug/l	96
47) cis-1,3-Dichloropropene	9.52	75	837159	10.32 ug/l	99
48) 4-Methyl-2-pentanone	9.74	43	1168238	43.95 ug/l	99
50) Toluene	10.07	91	2412598	10.41 ug/l	100
51) Ethyl methacrylate	10.49	69	404446	9.28 ug/l	100
52) trans-1,3-Dichloropropene	10.42	75	646223	10.76 ug/l	99
53) 1,1,2-Trichloroethane	10.75	97	298843	10.47 ug/l	99
54) Tetrachloroethene	10.91	164	501649	10.65 ug/l	99
55) 1,3-Dichloropropane	11.01	76	623825	10.51 ug/l	100
56) 2-Hexanone	11.09	43	761955	43.87 ug/l	99
57) Dibromochloromethane	11.38	129	377009	11.10 ug/l	99
58) 1,2-Dibromoethane	11.59	107	288450	10.64 ug/l	100
59) 1-Chlorohexane	12.33	91	982551	10.25 ug/l	98
60) Chlorobenzene	12.36	112	1399695	10.49 ug/l	99
61) 1,1,1,2-Tetrachloroethane	12.49	131	484357	10.97 ug/l	99
62) Ethylbenzene	12.49	91	2865293	10.62 ug/l	99
63) m-Xylene & p-Xylene	12.68	91	4382394	21.53 ug/l	99
64) o-Xylene	13.19	91	2161161	10.79 ug/l	99
65) Styrene	13.20	104	1426002	9.95 ug/l	99
67) Bromoform	13.44	173	186595	10.89 ug/l	99
68) Isopropylbenzene	13.63	105	2693562	10.45 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.99	83	366536	10.39 ug/l	99
71) Bromobenzene	14.00	156	545038	10.25 ug/l	99
72) trans-1,4-Dichloro-2-buten	14.02	53	72261	8.00 ug/l	98
73) 1,2,3-Trichloropropane	14.05	110	94707	10.49 ug/l	95
74) n-Propylbenzene	14.10	91	3458593	10.40 ug/l	100
75) 1,3,5-Trimethylbenzene	14.31	105	2259032	10.59 ug/l	99
76) 2-Chlorotoluene	14.21	91	1924529	10.49 ug/l	100
77) 4-Chlorotoluene	14.34	91	2129189	10.52 ug/l	100
78) tert-Butylbenzene	14.64	134	505557	10.58 ug/l	98
79) 1,2,4-Trimethylbenzene	14.70	105	2110801	10.43 ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D Vial: 2
Acq On : 14 Nov 2011 9:05 am Operator: MW
Sample : CVO01J3115 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 11:40 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

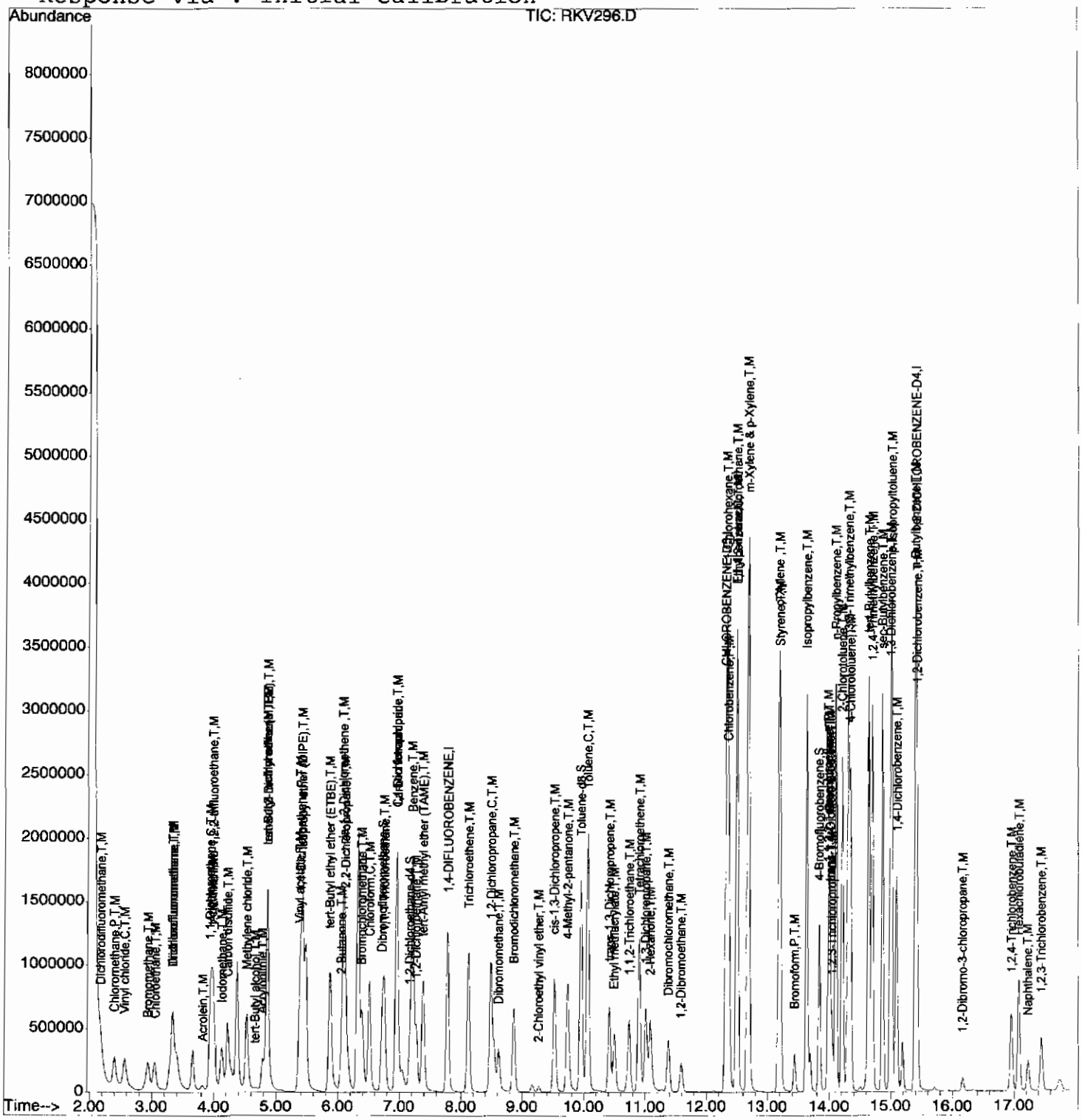
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
80)	sec-Butylbenzene	14.86	105	2882982	10.64 ug/l	99
81)	p-Isopropyltoluene	15.01	119	2277261	10.84 ug/l	99
82)	1,3-Dichlorobenzene	14.99	146	1092931	10.73 ug/l	99
83)	1,4-Dichlorobenzene	15.10	146	1012576	10.47 ug/l	100
84)	n-Butylbenzene	15.39	91	2092075	10.30 ug/l	99
85)	1,2-Dichlorobenzene	15.42	146	860999	10.62 ug/l	99
86)	1,2-Dibromo-3-chloropropan	16.16	157	41920	10.30 ug/l	98
87)	1,2,4-Trichlorobenzene	16.96	180	349099	8.56 ug/l	99
88)	Hexachlorobutadiene	17.08	225	305990	10.61 ug/l	99
89)	Naphthalene	17.23	128	342234	7.61 ug/l	99
90)	1,2,3-Trichlorobenzene	17.45	180	244585	9.17 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D Vial: 2
Acq On : 14 Nov 2011 9:05 am Operator: MW
Sample : CVO01J3115 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 11:40 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKV321
Instrument ID: T001
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K035
BFB Injection Date : 11/15/11
BFB Injection Time : 06:53
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.25
75	30.0 - 60.0% of mass 95	53.53
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.17
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	67.42
175	5.0 - 9.0% of mass 174	5.86(8.7)1
176	95.0 - 101.0% of mass 174	66.04(97.9)1
177	5.0 - 9.0% of mass 176	4.34(6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV001J3116	RKV322	11/15/11	07:20
2	MBLK3W	V001K15B	RKV326	11/15/11	09:28
3	LCS3W	V001K15L	RKV323	11/15/11	07:55
4	LCD3W	V001K15C	RKV324	11/15/11	08:26
5	MW-70-PMW01B-091DL	K035-02T	RKV328	11/15/11	10:30
6	IR-70-FD-093DL	K035-05T	RKV329	11/15/11	11:01

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RJV602
Instrument ID: TO01
GC Column: RTX502.2 ID: 0.32mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K035
Date Analyzed: 10/31/11
Time Analyzed: 12:33
Heated Purge: (Y/N) N

	IS1(DBF)		IS2(CBZ)		IS3(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	1719891	7.78	1480141	12.32	584394	15.41
UPPER LIMIT	3439782	8.28	2960282	12.82	1168788	15.91
LOWER LIMIT	859946	7.28	740071	11.82	292197	14.91
SAMPLE ID						
1 VST0010	1803087	7.77	1529062	12.31	587346	15.41
2 MBLK3W	1935526	7.77	1574709	12.31	432484	15.40
3 LCS3W	1864116	7.77	1537142	12.31	578806	15.40
4 LCD3W	1848859	7.77	1578614	12.31	595495	15.40
5 MW-70-PMW01B-091DL	1704004	7.77	1368108	12.32	394311	15.41
6 IR-70-FD-093DL	1499447	7.77	1223145	12.32	329373	15.41

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.
page 1 of 1

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K15\RKV322.D Vial: 2
Acq On : 15 Nov 2011 7:20 am Operator: MW
Sample : CV001J3116 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	105	0.00
2	T,M	Chlorotrifluoroethylene	10.000	0.000	100.0#	0	-2.11#
3	T,M	Dichlorodifluoromethane	10.000	8.525	14.7	80	0.05
4	P,T,M	Chloromethane	10.000	9.565	4.4	91	0.05
5	C,T,M	Vinyl chloride	10.000	10.102	-1.0	95	0.05
6	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	0.000	100.0#	0	-2.66#
7	T,M	Bromomethane	10.000	11.012	-10.1	100	0.05
8	T,M	Chloroethane	10.000	10.568	-5.7	110	0.02
9	T,M	Dichlorofluoromethane	10.000	10.533	-5.3	112	0.04
10	T,M	Trichlorofluoromethane	10.000	11.562	-15.6	113	0.10
11	T,M	Acrolein	50.000	46.507	7.0	104	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	10.695	-7.0	113	0.02
13	T,M	Acetone	50.000	61.427	-22.9#	122	0.00
14	C,T,M	1,1-Dichloroethene	10.000	10.091	-0.9	104	0.00
15	T,M	Iodomethane	10.000	10.614	-6.1	112	0.02
16	T,M	Carbon disulfide	10.000	10.117	-1.2	115	0.00
17	T,M	Methylene chloride	10.000	10.227	-2.3	112	0.00
18	T,M	tert-Butyl alcohol	50.000	55.561	-11.1	113	0.04
19	T,M	Acrylonitrile	50.000	52.074	-4.1	110	0.00
20	T,M	tert-Butyl methyl ether (MT	10.000	11.116	-11.2	115	0.00
21	T,M	trans-1,2-Dichloroethene	10.000	10.153	-1.5	106	0.00
22	T,M	Vinyl acetate	10.000	8.421	15.8	80	0.00
23	P,T,M	1,1-Dichloroethane	10.000	10.598	-6.0	113	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	10.459	-4.6	111	0.00
25	T,M	2-Butanol	-1.000	0.000	0.0	111	0.00
26	T,M	tert-Butyl ethyl ether (ETB	10.000	10.612	-6.1	111	0.00
27	T,M	2-Butanone	50.000	52.258	-4.5	106	0.00
28	T,M	cis-1,2-Dichloroethene	10.000	10.609	-6.1	113	0.00
29	T,M	2,2-Dichloropropane	10.000	10.970	-9.7	116	0.00
30	T,M	Bromochloromethane	10.000	10.547	-5.5	109	0.00
31	C,T,M	Chloroform	10.000	10.800	-8.0	110	0.00
32	S	Dibromofluoromethane	10.000	10.158	-1.6	105	0.00
33	T,M	1,1,1-Trichloroethane	10.000	10.778	-7.8	111	0.00
34	T,M	tert-Amyl methyl ether (TAM	10.000	11.135	-11.3	112	0.00
35	S	1,2-Dichloroethane-d4	10.000	10.038	-0.4	103	0.00
36	I	CHLOROBENZENE-D5	10.000	10.000	0.0	103	0.00
37	T,M	1,1-Dichloropropene	10.000	10.384	-3.8	110	0.00
38	T,M	Carbon tetrachloride	10.000	10.694	-6.9	107	0.00
39	T,M	Benzene	10.000	10.408	-4.1	111	0.00
40	T,M	1,2-Dichloroethane	10.000	10.967	-9.7	112	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K15\RKV322.D Vial: 2
Acq On : 15 Nov 2011 7:20 am Operator: MW
Sample : CV001J3116 Inst : T001
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\V001J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	10.000	10.700	-7.0	112	0.00
42	C,T,M	1,2-Dichloropropane	10.000	10.544	-5.4	112	0.00
43	T,M	1,4-Dioxane	-1.000	0.000	0.0	122	0.00
44	T,M	Dibromomethane	10.000	11.376	-13.8	116	0.00
45	T,M	Bromodichloromethane	10.000	11.098	-11.0	113	0.00
46	T,M	2-Chloroethyl vinyl ether	10.000	2.501	75.0#	25	0.00
47	T,M	cis-1,3-Dichloropropene	10.000	11.023	-10.2	115	0.00
48	T,M	4-Methyl-2-pentanone	50.000	51.389	-2.8	104	0.00
49	S	Toluene-d8	10.000	9.918	0.8	106	0.00
50	C,T,M	Toluene	10.000	10.659	-6.6	113	0.00
51	T,M	Ethyl methacrylate	10.000	10.024	-0.2	99	0.00
52	T,M	trans-1,3-Dichloropropene	10.000	11.323	-13.2	114	0.00
53	T,M	1,1,2-Trichloroethane	10.000	11.086	-10.9	117	0.00
54	T,M	Tetrachloroethene	10.000	10.751	-7.5	111	0.00
55	T,M	1,3-Dichloropropane	10.000	11.211	-12.1	114	0.00
56	T,M	2-Hexanone	50.000	49.188	1.6	99	0.00
57	T,M	Dibromochloromethane	10.000	11.732	-17.3	116	0.00
58	T,M	1,2-Dibromoethane	10.000	11.442	-14.4	116	0.00
59	T,M	1-Chlorohexane	10.000	10.684	-6.8	112	0.00
60	P,M	Chlorobenzene	10.000	10.957	-9.6	110	0.00
61	T,M	1,1,1,2-Tetrachloroethane	10.000	11.400	-14.0	114	0.00
62	C,T,M	Ethylbenzene	10.000	10.798	-8.0	111	0.00
63	T,M	m-Xylene & p-Xylene	20.000	21.516	-7.6	109	0.00
64	T,M	o-Xylene	10.000	10.964	-9.6	111	0.00
65	T,M	Styrene	10.000	9.870	1.3	96	0.00
66	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	101	0.00
67	P,T,M	Bromoform	10.000	11.760	-17.6	119	0.00
68	T,M	Isopropylbenzene	10.000	10.749	-7.5	110	0.00
69	S	4-Bromofluorobenzene	10.000	9.546	4.5	104	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	10.000	11.594	-15.9	120	0.00
71	T,M	Bromobenzene	10.000	10.798	-8.0	113	0.00
72	T,M	trans-1,4-Dichloro-2-butene	10.000	9.966	0.3	97	0.00
73	T,M	1,2,3-Trichloropropane	10.000	11.289	-12.9	120	0.00
74	T,M	n-Propylbenzene	10.000	10.757	-7.6	109	0.00
75	T,M	1,3,5-Trimethylbenzene	10.000	10.729	-7.3	108	0.00
76	T,M	2-Chlorotoluene	10.000	10.596	-6.0	110	0.00
77	T,M	4-Chlorotoluene	10.000	10.755	-7.6	109	0.00
78	T,M	tert-Butylbenzene	10.000	10.877	-8.8	110	0.00
79	T,M	1,2,4-Trimethylbenzene	10.000	10.861	-8.6	105	0.00
80	T,M	sec-Butylbenzene	10.000	10.827	-8.3	105	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K15\RKV322.D Vial: 2
Acq On : 15 Nov 2011 7:20 am Operator: MW
Sample : CVO01J3116 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	10.000	11.143	-11.4	103	0.00
82	T,M	1,3-Dichlorobenzene	10.000	10.911	-9.1	108	0.00
83	T,M	1,4-Dichlorobenzene	10.000	11.067	-10.7	110	0.00
84	T,M	n-Butylbenzene	10.000	10.575	-5.7	100	0.00
85	T,M	1,2-Dichlorobenzene	10.000	11.102	-11.0	110	0.00
86	T,M	1,2-Dibromo-3-chloropropane	10.000	11.517	-15.2	112	0.00
87	T,M	1,2,4-Trichlorobenzene	10.000	9.297	7.0	94	0.00
88	T,M	Hexachlorobutadiene	10.000	11.480	-14.8	107	0.00
89	T,M	Naphthalene	10.000	9.340	6.6	84	0.00
90	T,M	1,2,3-Trichlorobenzene	10.000	10.122	-1.2	90	0.00

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K15\RKV322.D Vial: 2
Acq On : 15 Nov 2011 7:20 am Operator: MW
Sample : CV001J3116 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	105	0.00
2	T,M	Chlorotrifluoroethylene	0.156	0.000	100.0#	0#	-2.11#
3	T,M	Dichlorodifluoromethane	0.363	0.310	14.6	80	0.05
4	P,T,M	Chloromethane	0.435	0.416	4.4	91	0.05
5	C,T,M	Vinyl chloride	0.461	0.466	-1.1	95	0.05
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.338	0.000	100.0#	0#	-2.66#
7	T,M	Bromomethane	0.229	0.252	-10.0	100	0.05
8	T,M	Chloroethane	0.282	0.298	-5.7	110	0.02
9	T,M	Dichlorofluoromethane	0.712	0.750	-5.3	112	0.04
10	T,M	Trichlorofluoromethane	0.429	0.496	-15.6	113	0.10
11	T,M	Acrolein	0.011	0.011	0.0	104	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.219	0.234	-6.8	113	0.02
13	T,M	Acetone	0.044	0.054	-22.7#	122	0.00
14	C,T,M	1,1-Dichloroethene	0.658	0.664	-0.9	104	0.00
15	T,M	Iodomethane	0.479	0.508	-6.1	112	0.02
16	T,M	Carbon disulfide	1.074	1.087	-1.2	115	0.00
17	T,M	Methylene chloride	0.505	0.516	-2.2	112	0.00
18	T,M	tert-Butyl alcohol	0.012	0.013	-8.3	113	0.04
19	T,M	Acrylonitrile	0.054	0.056	-3.7	110	0.00
20	T,M	tert-Butyl methyl ether (MT	0.589	0.654	-11.0	115	0.00
21	T,M	trans-1,2-Dichloroethene	0.668	0.678	-1.5	106	0.00
22	T,M	Vinyl acetate	0.476	0.401	15.8	80	0.00
23	P,T,M	1,1-Dichloroethane	0.756	0.802	-6.1	113	0.00
24	T,M	Isopropyl ether (DIPE)	1.343	1.405	-4.6	111	0.00
25	T,M	2-Butanol	0.000	0.000	0.0	111	0.00
26	T,M	tert-Butyl ethyl ether (ETB	0.966	1.025	-6.1	111	0.00
27	T,M	2-Butanone	0.071	0.074	-4.2	106	0.00
28	T,M	cis-1,2-Dichloroethene	0.379	0.402	-6.1	113	0.00
29	T,M	2,2-Dichloropropane	0.538	0.590	-9.7	116	0.00
30	T,M	Bromochloromethane	0.305	0.322	-5.6	109	0.00
31	C,T,M	Chloroform	0.636	0.687	-8.0	110	0.00
32	S	Dibromofluoromethane	0.274	0.278	-1.5	105	0.00
33	T,M	1,1,1-Trichloroethane	0.506	0.545	-7.7	111	0.00
34	T,M	tert-Amyl methyl ether (TAM	0.142	0.158	-11.3	112	0.00
35	S	1,2-Dichloroethane-d4	0.292	0.293	-0.3	103	0.00
36	I	CHLOROBENZENE-D5	1.000	1.000	0.0	103	0.00
37	T,M	1,1-Dichloropropene	0.208	0.216	-3.8	110	0.00
38	T,M	Carbon tetrachloride	0.498	0.533	-7.0	107	0.00
39	T,M	Benzene	1.767	1.839	-4.1	111	0.00
40	T,M	1,2-Dichloroethane	0.438	0.481	-9.8	112	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K15\RKV322.D Vial: 2
Acq On : 15 Nov 2011 7:20 am Operator: MW
Sample : CV001J3116 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	0.442	0.473	-7.0	112	0.00
42	C,T,M	1,2-Dichloropropane	0.459	0.484	-5.4	112	0.00
43	T,M	1,4-Dioxane	0.000	0.000	0.0	122	0.00
44	T,M	Dibromomethane	0.149	0.170	-14.1	116	0.00
45	T,M	Bromodichloromethane	0.512	0.568	-10.9	113	0.00
46	T,M	2-Chloroethyl vinyl ether	0.118	0.030	74.6#	25#	0.00
47	T,M	cis-1,3-Dichloropropene	0.614	0.677	-10.3	115	0.00
48	T,M	4-Methyl-2-pentanone	0.201	0.207	-3.0	104	0.00
49	S	Toluene-d8	1.383	1.372	0.8	106	0.00
50	C,T,M	Toluene	1.753	1.869	-6.6	113	0.00
51	T,M	Ethyl methacrylate	0.330	0.330	0.0	99	0.00
52	T,M	trans-1,3-Dichloropropene	0.454	0.514	-13.2	114	0.00
53	T,M	1,1,2-Trichloroethane	0.216	0.239	-10.6	117	0.00
54	T,M	Tetrachloroethene	0.356	0.383	-7.6	111	0.00
55	T,M	1,3-Dichloropropane	0.449	0.504	-12.2	114	0.00
56	T,M	2-Hexanone	0.131	0.129	1.5	99	0.00
57	T,M	Dibromochloromethane	0.257	0.301	-17.1	116	0.00
58	T,M	1,2-Dibromoethane	0.205	0.235	-14.6	116	0.00
59	T,M	1-Chlorohexane	0.725	0.775	-6.9	112	0.00
60	P,M	Chlorobenzene	1.010	1.106	-9.5	110	0.00
61	T,M	1,1,1,2-Tetrachloroethane	0.334	0.381	-14.1	114	0.00
62	C,T,M	Ethylbenzene	2.040	2.203	-8.0	111	0.00
63	T,M	m-Xylene & p-Xylene	1.540	1.656	-7.5	109	0.00
64	T,M	o-Xylene	1.515	1.661	-9.6	111	0.00
65	T,M	Styrene	1.084	1.070	1.3	96	0.00
66	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	101	0.00
67	P,T,M	Bromoform	0.330	0.388	-17.6	119	0.00
68	T,M	Isopropylbenzene	4.966	5.337	-7.5	110	0.00
69	S	4-Bromofluorobenzene	1.232	1.176	4.5	104	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	0.680	0.788	-15.9	120	0.00
71	T,M	Bromobenzene	1.024	1.106	-8.0	113	0.00
72	T,M	trans-1,4-Dichloro-2-butene	0.174	0.173	0.6	97	0.00
73	T,M	1,2,3-Trichloropropane	0.174	0.196	-12.6	120	0.00
74	T,M	n-Propylbenzene	6.403	6.888	-7.6	109	0.00
75	T,M	1,3,5-Trimethylbenzene	4.108	4.408	-7.3	108	0.00
76	T,M	2-Chlorotoluene	3.536	3.746	-5.9	110	0.00
77	T,M	4-Chlorotoluene	3.899	4.193	-7.5	109	0.00
78	T,M	tert-Butylbenzene	0.920	1.001	-8.8	110	0.00
79	T,M	1,2,4-Trimethylbenzene	3.898	4.233	-8.6	105	0.00
80	T,M	sec-Butylbenzene	5.221	5.652	-8.3	105	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K15\RKV322.D Vial: 2
Acq On : 15 Nov 2011 7:20 am Operator: MW
Sample : CVO01J3116 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	4.048	4.511	-11.4	103	0.00
82	T,M	1,3-Dichlorobenzene	1.962	2.141	-9.1	108	0.00
83	T,M	1,4-Dichlorobenzene	1.863	2.062	-10.7	110	0.00
84	T,M	n-Butylbenzene	3.914	4.139	-5.7	100	0.00
85	T,M	1,2-Dichlorobenzene	1.561	1.733	-11.0	110	0.00
86	T,M	1,2-Dibromo-3-chloropropane	0.078	0.090	-15.4	112	0.00
87	T,M	1,2,4-Trichlorobenzene	0.697	0.731	-4.9	94	0.00
88	T,M	Hexachlorobutadiene	0.556	0.638	-14.7	107	0.00
89	T,M	Naphthalene	0.866	0.809	6.6	84	0.00
90	T,M	1,2,3-Trichlorobenzene	0.514	0.520	-1.2	90	0.00

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 10/31/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A01 -038

BATCH V001J31b

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount A/B/C	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RJU596	BFB01J29	1 mL	NA	NA	NA	NA	9:18am
02	597	V001J311	.01/.1/.5 mL					0.5/1.5/1.5 ppb
03	598	2	.01/.1/.5 mL					0.5/2.5/2.5 ppb
04	599	3	.1/.5/1.5 mL					1.0/5.0/5.0 ppb
05	600	4	.5/1/1 mL					5.0/10/10 ppb
06	601	5	.5/2.5/2.5 mL					5.0/25/25 ppb
07	602	6	1/5/5 mL					10/50/50 ppb
08	603	7	2/10/10 mL					20/100/100 ppb
09	604	8	3/15/15 mL					30/150/150 ppb
10	605	9	5/25/25 mL					50/250/250 ppb
11	606	10	10/50/50 mL					100/500/500 ppb
12	607	IS/SS	25 mL					
13	608	V001J29B	↓					
14	609	V001J311	1/5/5 mL					10/50/50 ppb
15	610	RINSE	25 mL					4:51pm
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30			NW	11/1/11				

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC Gases	SV1-17-96-3	*	
DCC Cl_2	-92-3		
DCC H2O	-86-2		
DCC CFC11/114 Freons	-90-1 -100-3		1/4 of 1000
BFB	-45-3	1	
IS/SURR.	-99-1	1	
ICV/LCS Gases	-97-1	1	
ICV/LCS Cl_2	-97-2	1	
ICV/LCS H2O	-99-2	5	
ICV/LCS CFC11/114	-99-2	5	
ICV/LCS CFC Mix	SV1-12-26-6	0.5	
	-12-26-7	0.5	
IS	SV1-17-91-1	*	20ppm
SS	-91-2	*	
DATA FILE FOLDER	11J31		

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO01	

Comments: *please refer to sample amount
A: SS, gases, Cl_2, Freons
B: H2O
C: CFC11/114
IS NW 11/1/11
SS

Analyzed By: NW
Date Disposed: 11/1/11
Disposed By: NW

2436

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/10/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge Book # A01 -038

BATCH V001J3113

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKV259	BFB01K12	1µL					10:06am
02	260	V001J3113	1/5/5mL					
03	261	V001K12L						
04	262	↓ C	↓					
05	263	RINSE	25mL					
06	264	V001K12B	↓					
07	265	11K061-03I	50mL	500	/			
08	266	-04I	0.5mL	50	/			
09	267	-05T	250µL	100	/			
10	268	-06T	↓	↓	/			
11	269	-07R	5.0mL	5.0	/			
12	270	-03R	↓	↓	/			
13	271	RINSE	25mL					
14	272	11K035-01T	50mL	5.0	/			-1X
15	273	↓ -02	25mL	1.0	/	/		-100X
16	274	11K063-02			/	/		1X/10X/50
17	275	-02M			/			1X
18	276	↓ -02S			/			
19	277	11K035-02M			/			
20	278	↓ -02S			/			
21	279	RINSE						
22	280	11K035-03		1.0	/	/		-100X
23	281	-04			/	/		-1X/25X/50
24	282	-05			/	/		-100X 10:06am
25	283	↓ -06		↓	/	/		1X DILT 12-N.G. 10:44am
26	284	RINSE	↓					
27								
28								
29								
30		MW 11/14/11						

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-17-96-3	1	
DCC	-92-3	1	
DCC	-86-2	5	
DCC	-98-1	5	
BFB	-45-3	1	50/250
IS/SURR.	-99-1	1	
ICV/LCS	-97-1	1	
ICV/LCS	-97-2	1	
ICV/LCS	-99-2	5	
ICV/LCS	-89-2	5	

DATA FILE FOLDER 11K10

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO01	

Comments:

Analyzed By: MW

Date Disposed: 11/14/11

Disposed By: MW

2131

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/4/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A01 -038

BATCH V001J315

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKV 295	BFB01K14	1mL					t: 9:00am
02	296	CV001J315	1.5/5mL					
03	297	V001K14C						
04	298	C						
05	299	RINSE	25mL					
06	300	V001K14B						
07	301	11K063-01R		1.0	7			
08	302	11K055-01R			/			
09	303	11K083-06T	25mL	1000	/			
10	304	-06	2.5mL	10	/			
11	305	RINSE	25mL					
12	306							
13	307							
14	308							
15	309	11K083-06I	5.0mL	5000	/			10,000X
16	310	11K055-06R	25mL	1.0	/	MW 11/5/11		
17	311	11K063-02R			/			
18	312	-02M			/			
19	313	-02S			/			
20	314	RINSE						
21	315	11K055-03T	250mL	100	/			
22	316	-04T	1.0mL	25	/			
23	317	-04R	25mL	1.0	/			
24	318	11K063-02T	0.5mL	50	/			t: 36pm
25	319	-03R	25mL	1.0	/			MOVED TO HV. 9:07pm
26	320	RINSE						
27								
28								
29								
30		MW 11/5/11						

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (ul)	Conc. (mg/L)
DCC	SV1.17-96.3	1	
DCC	-92.3	1	
DCC	-86.2	5	
DCC	-98.1	5	
BFB	-45.3	1	
IS/SURR.	-99.1	1	50/20
ICV/LCS	-97.1	1	
ICV/LCS	-97.2	1	
ICV/LCS	-99.2	5	
ICV/LCS	-99.2	5	

DATA FILE FOLDER	11K14
Electronic Data Archival	
Location	Date
HPCHEM_VOA/TO01	

Comments:

Analyzed By: MW

Date Disposed: 11/15/11

Disposed By: MW

2132

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/15/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A01 -038

BATCH CV001J3116

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKV321	BFB01K15	1uL					6:53 am
02	322	CV001J3116	1.5/5mL					
03	323	V001K15L						
04	324	C						
05	325	RINSE	25mL					
06	326	V001K15B						
07	327	11K0F3-06J	2.5mL	10000	✓			
08	328	11K0350 2T	250mL	100	✓			
09	329	-05T			✓			
10	330	11K083-07T	50mL	500	✓	✓		-50X
11	331	-09T	0.5mL	50	✓	✓		-mix w. high
12	332	TEST	25mL					
13	333	11K083-10T	0.5mL	50	✓	✓		3mix int chkov
14	334	-19T	25mL	1000	✓	✓		
15	335	RINSE	25mL					
16	336	11K083-21T	25mL	1000	4	✓		-25X
17	337	-05	25mL	10	✓	✓		3mix
18	338	-08			✓	✓		
19	339	-11			✓	✓		-50X
20	340	-12			✓	✓		-50X
21	341	-09			✓	✓		-mix/10
22	342	-10			✓	✓		-50X
23	343	-07			✓	✓		-mix/10 6:45pm
24	344	RINSE						
25								
26								
27								
28								
29								
30		MN 11/16/11						

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (ul)	Conc. (mg/L)
DCC	SV1-17-96-3	1	
DCC	-92-3	1	
DCC	-86-2	5	
DCC	-98-1	5	
BFB	-45-3	1	10/250
IS/SURR.	-99-1	1	
ICV/LCS	-97-1	1	
ICV/LCS	-97-2	1	
ICV/LCS	-99-2	5	
ICV/LCS	-89-2	5	

DATA FILE FOLDER 11K15

Electronic Data Archival

Location	Date
HPCHEM_VOA/T001	

Comments:

Analyzed By: MW

Date Disposed: 11/16/11

Disposed By: MW

2133

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD RSK-175
DISSOLVED GASES

SDG#: 11K035

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K035

METHOD RSK-175
DISSOLVED GASES

A total of five (5) water samples were received on 11/03/11 for Dissolved Gas analysis, Method RSK-175 in accordance with USEPA at R.S. Kerr Environmental Research Laboratory, Ada, OK 74820 March 15, 1989.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for DGK003WL/C were all within QC limits.

Matrix QC Sample
A set of MS/MSD was analyzed with the samples in this SDG.
Percent recoveries were within project QC limits except for results qualified with [*] in K035-02 M/S summary form, most likely due to matrix interference. Check QC summary form for details. Methane recovery was out of QC limits due to high concentration of the parent sample.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED GASES

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K035
Instrument ID : GCT010

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DGK003WB	1	NA	11/09/1111:56	11/09/1110:30	FK09004A	FK09003A	DGK003W	Method Blank
LCS1W	DGK003WL	1	NA	11/09/1112:12	11/09/1110:30	FK09005A	FK09003A	DGK003W	Lab Control Sample (LCS)
LCD1W	DGK003WC	1	NA	11/09/1112:27	11/09/1110:30	FK09006A	FK09003A	DGK003W	LCS Duplicate
MW-70-PMW01A-089	K035-01	1	NA	11/09/1113:27	11/09/1110:30	FK09010A	FK09003A	DGK003W	Field Sample
MW-70-PMW01A-089DL	K035-01T	5	NA	11/09/1113:40	11/09/1110:30	FK09011A	FK09003A	DGK003W	Diluted Sample
MW-70-PMW01A-089DL	K035-01I	500	NA	11/09/1114:09	11/09/1110:30	FK09012A	FK09003A	DGK003W	Diluted Sample
MW-70-PMW01B-091	K035-02	1	NA	11/09/1112:40	11/09/1110:30	FK09007A	FK09003A	DGK003W	Field Sample
MW-70-PMW01B-091DL	K035-02T	20	NA	11/09/1114:21	11/09/1110:30	FK09013A	FK09003A	DGK003W	Diluted Sample
MW-70-PMW01B-091DL	K035-02I	500	NA	11/09/1115:26	11/09/1110:30	FK09017A	FK09015A	DGK003W	Diluted Sample
MW-70-27-092	K035-03	1	NA	11/09/1115:11	11/09/1110:30	FK09016A	FK09015A	DGK003W	Field Sample
MW-70-27-092DL	K035-03T	5	NA	11/09/1115:40	11/09/1110:30	FK09018A	FK09015A	DGK003W	Diluted Sample
MW-70-27-092DL	K035-03I	500	NA	11/09/1116:04	11/09/1110:30	FK09019A	FK09015A	DGK003W	Diluted Sample
MW-70-28-094	K035-04	1	NA	11/09/1116:18	11/09/1110:30	FK09020A	FK09015A	DGK003W	Field Sample
MW-70-28-094DL	K035-04T	10	NA	11/09/1116:31	11/09/1110:30	FK09021A	FK09015A	DGK003W	Diluted Sample
MW-70-28-094DL	K035-04I	1000	NA	11/09/1117:14	11/09/1110:30	FK09024A	FK09015A	DGK003W	Diluted Sample
IR-70-FD-093	K035-05	1	NA	11/09/1116:45	11/09/1110:30	FK09D22A	FK09015A	DGK003W	Field Sample
IR-70-FD-093DL	K035-05T	5	NA	11/09/1116:57	11/09/1110:30	FK09023A	FK09015A	DGK003W	Diluted Sample
IR-70-FD-093DL	K035-05I	500	NA	11/09/1117:27	11/09/1110:30	FK09025A	FK09015A	DGK003W	Diluted Sample
MW-70-PMW01B-091MS	K035-02M	1	NA	11/09/1112:55	11/09/1110:30	FK09008A	FK09003A	DGK003W	Matrix Spike Sample (MS)
MW-70-PMW01B-091MSD	K035-02S	1	NA	11/09/1113:08	11/09/1110:30	FK09009A	FK09003A	DGK003W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/03/11
Batch No.	: 11K035	Date Extracted:	11/09/11 10:30
Sample ID:	MW-70-PMW01A-089	Date Analyzed:	11/09/11 13:27
Lab Samp ID:	K035-01	Dilution Factor:	1
Lab File ID:	FK09010A	Matrix	: WATER
Ext Btch ID:	DGK003W	% Moisture	: NA
Calib. Ref.:	FK09003A	Instrument ID	: GCT010

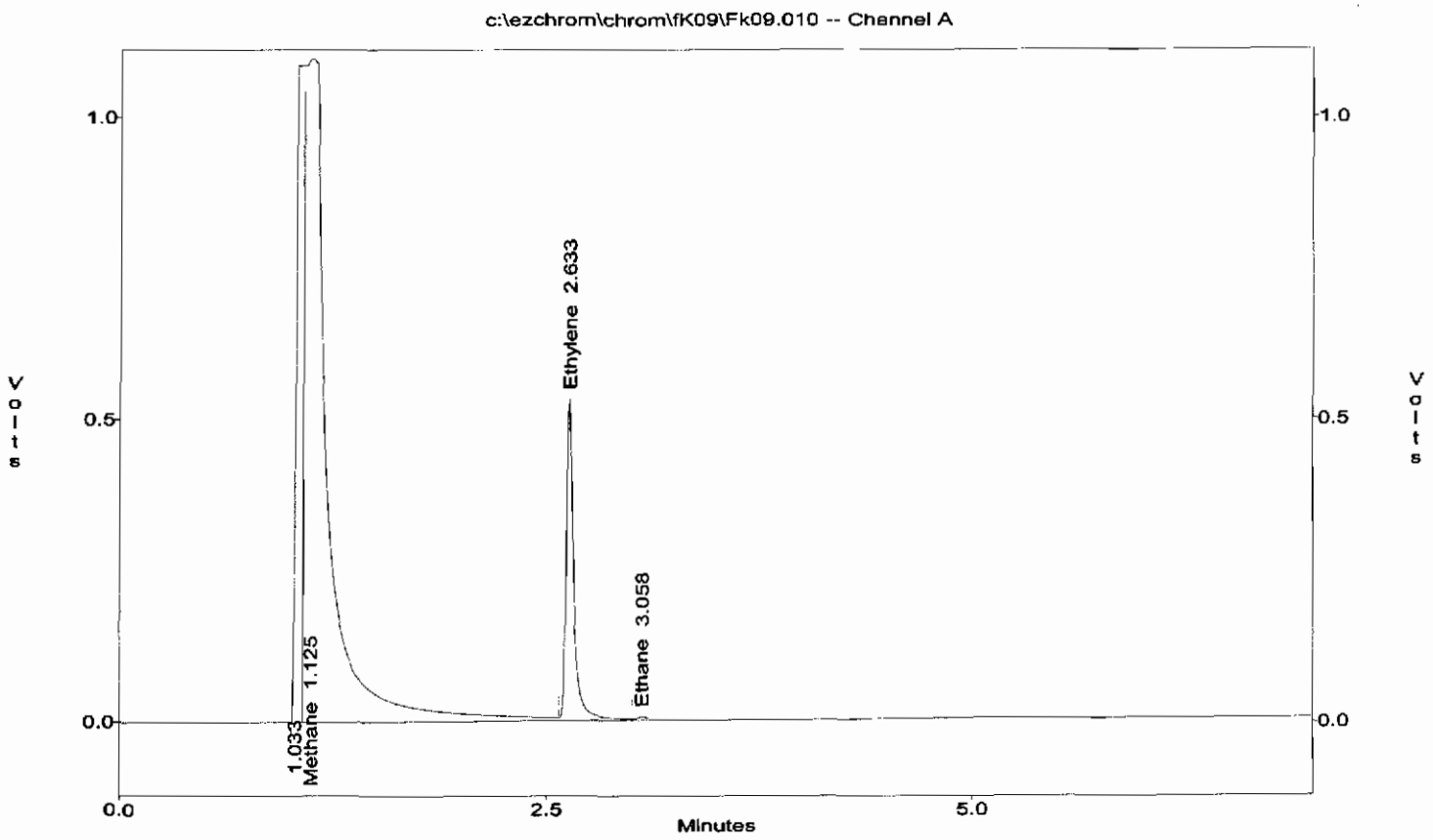
PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	1.3J	2.0	0.64
ETHENE	100E	2.0	0.60
METHANE	350E	2.0	0.34

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK09\Fk09.010
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : 11K035-01
Acquired : Nov 09, 2011 13:27:05
Printed : Nov 09, 2011 13:34:07
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
2	Methane	1.125	10723483.0	30507.1	351.51
--	Acetylene	2.233	0.0	0.0	0.00
3	Ethylene	2.633	1644120.0	16311.8	100.79
4	Ethane	3.058	31948.0	24914.4	1.28
--	Propane	5.942	0.0	0.0	0.00



METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/03/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/03/11
Batch No. : 11K035	Date Extracted: 11/09/11 10:30
Sample ID: MW-70-PMW01A-089DL	Date Analyzed: 11/09/11 13:40
Lab Samp ID: K035-01T	Dilution Factor: 5
Lab File ID: FK09011A	Matrix : WATER
Ext Btch ID: DGK003W	% Moisture : NA
Calib. Ref.: FK09003A	Instrument ID : GCT010

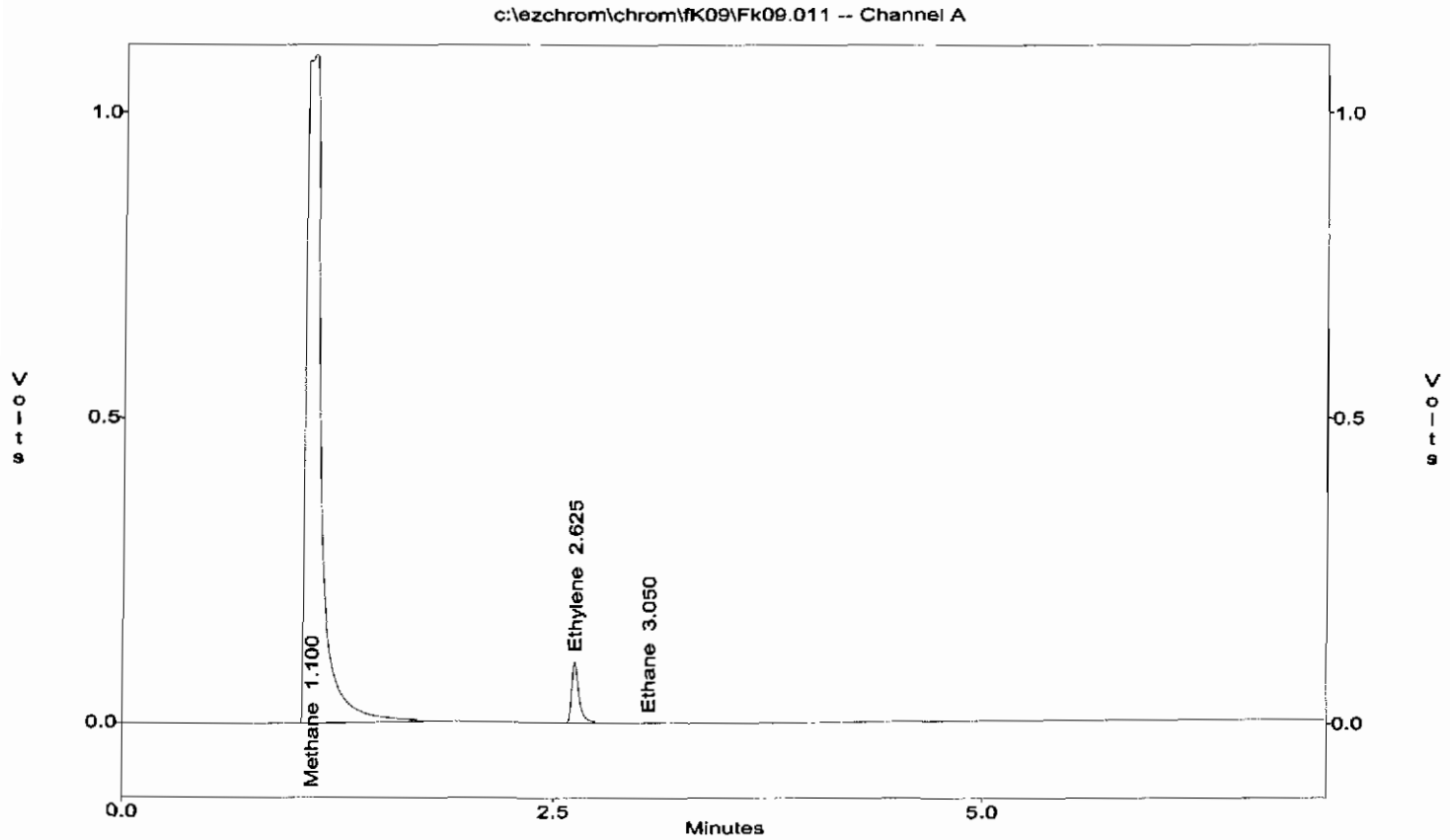
PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	10	3.2
ETHENE	92	10	3.0
METHANE	1100E	10	1.7

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK09\Fk09.011
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : 11K035-01T DF=5
Acquired : Nov 09, 2011 13:40:52
Printed : Nov 09, 2011 13:47:54
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.100	6868250.0	30507.1	1125.68 E
--	Acetylene	2.233	0.0	0.0	0.00
2	Ethylene	2.625	299327.0	16311.8	91.75 ✓
3	Ethane	3.050	2606.0	24914.4	0.52
--	Propane	5.942	0.0	0.0	0.00



METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/03/11
Batch No.	: 11K035	Date Extracted:	11/09/11 10:30
Sample ID:	MW-70-PMW01A-089DL	Date Analyzed:	11/09/11 14:09
Lab Samp ID:	K035-01I	Dilution Factor:	500
Lab File ID:	FK09012A	Matrix :	WATER
Ext Btch ID:	DGK003W	% Moisture :	NA
Calib. Ref.:	FK09003A	Instrument ID :	GCT010

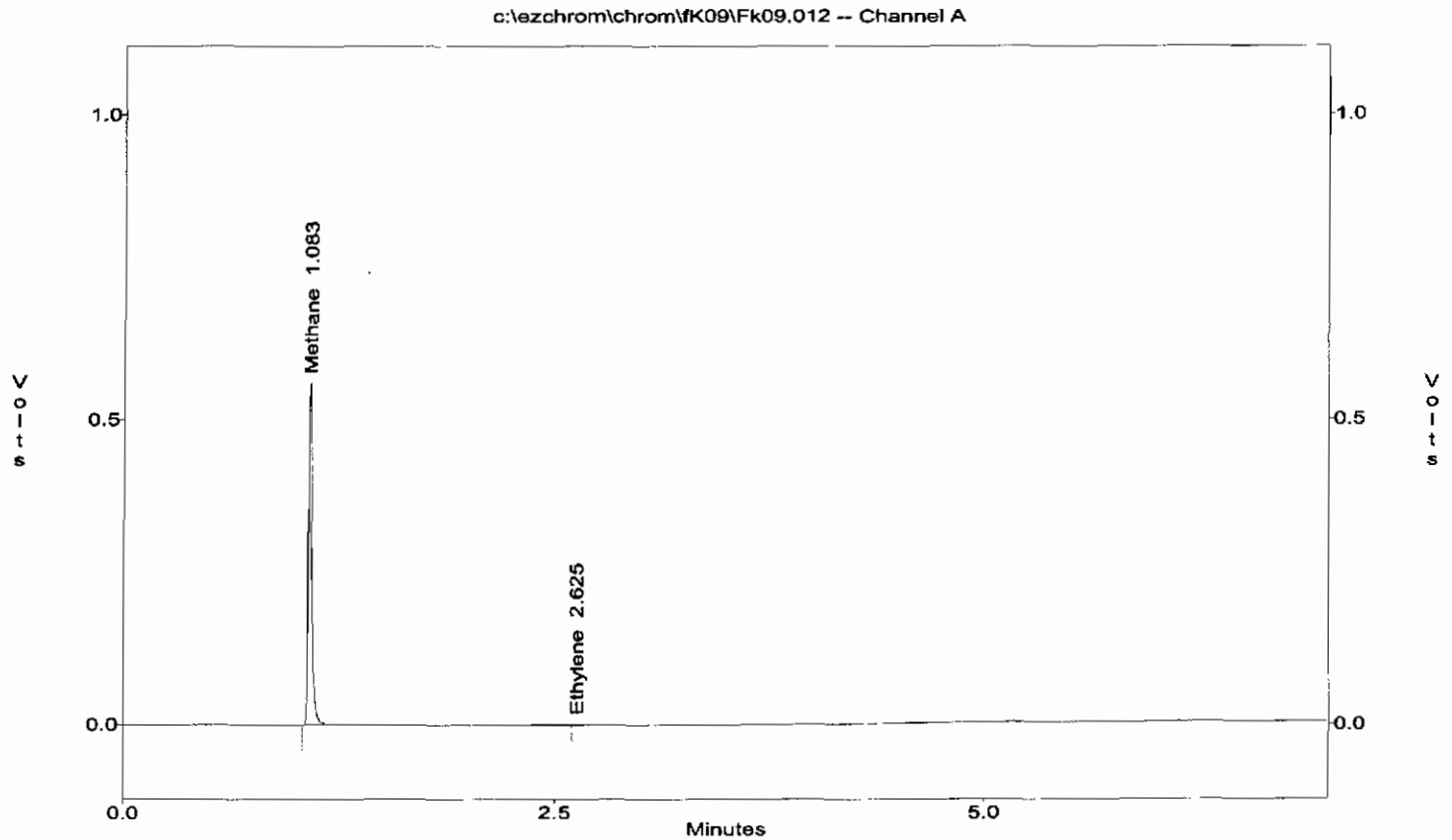
PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	1000	320
ETHENE	ND	1000	300
METHANE	14000	1000	170

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK09\Fk09.012
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : 11K035-01I DF=500
Acquired : Nov 09, 2011 14:09:05
Printed : Nov 09, 2011 14:16:07
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	835201.0	30507.1	13688.65
--	Acetylene	2.233	0.0	0.0	0.00
2	Ethylene	2.625	1599.0	16311.8	49.01
--	Ethane	3.100	0.0	0.0	0.00
--	Propane	5.942	0.0	0.0	0.00



METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/03/11
Batch No.	: 11K035	Date Extracted:	11/09/11 10:30
Sample ID:	MW-70-PMW01B-091	Date Analyzed:	11/09/11 12:40
Lab Samp ID:	K035-02	Dilution Factor:	1
Lab File ID:	FK09007A	Matrix :	WATER
Ext Btch ID:	DGK003W	% Moisture :	NA
Calib. Ref.:	FK09003A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	4.2	2.0	0.64
ETHENE	360E	2.0	0.60
METHANE	470E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/03/11
Batch No.	: 11K035	Date Extracted:	11/09/11 10:30
Sample ID:	MW-70-PMW01B-091DL	Date Analyzed:	11/09/11 14:21
Lab Samp ID:	K035-02T	Dilution Factor:	20
Lab File ID:	FK09013A	Matrix :	WATER
Ext Btch ID:	DGK003W	% Moisture :	NA
Calib. Ref.:	FK09003A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	40	13
ETHENE	540	40	12
METHANE	2700E	40	6.8

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/03/11
Batch No.	: 11K035	Date Extracted:	11/09/11 10:30
Sample ID:	MW-70-PMW01B-091DL	Date Analyzed:	11/09/11 15:26
Lab Samp ID:	K035-021	Dilution Factor:	500
Lab File ID:	FK09017A	Matrix :	WATER
Ext Btch ID:	DGK003W	% Moisture :	NA
Calib. Ref.:	FK09015A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	1000	320
ETHENE	310J	1000	300
METHANE	12000	1000	170

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/03/11
Batch No.	: 11K035	Date Extracted:	11/09/11 10:30
Sample ID:	MW-70-27-092	Date Analyzed:	11/09/11 15:11
Lab Samp ID:	K035-03	Dilution Factor:	1
Lab File ID:	FK09016A	Matrix :	WATER
Ext Btch ID:	DGK003W	% Moisture :	NA
Calib. Ref.:	FK09015A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	83E	2.0	0.60
METHANE	110E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/03/11
Batch No.	: 11K035	Date Extracted:	11/09/11 10:30
Sample ID:	MW-70-27-092DL	Date Analyzed:	11/09/11 15:40
Lab Samp ID:	K035-03T	Dilution Factor:	5
Lab File ID:	FK09018A	Matrix :	WATER
Ext Btch ID:	DGK003W	% Moisture :	NA
Calib. Ref.:	FK09015A	Instrument ID :	GCTD10

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	10	3.2
ETHENE	72	10	3.0
METHANE	1100E	10	1.7

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/03/11
Batch No.	: 11K035	Date Extracted:	11/09/11 10:30
Sample ID:	MW-70-27-092DL	Date Analyzed:	11/09/11 16:04
Lab Samp ID:	K035-03I	Dilution Factor:	500
Lab File ID:	FK09019A	Matrix :	WATER
Ext Btch ID:	DGK003W	% Moisture :	NA
Calib. Ref.:	FK09015A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	1000	320
ETHENE	ND	1000	300
METHANE	12000	1000	170

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/03/11
Batch No.	: 11K035	Date Extracted:	11/09/11 10:30
Sample ID:	MW-70-28-094	Date Analyzed:	11/09/11 16:18
Lab Samp ID:	K035-04	Dilution Factor:	1
Lab File ID:	FK09020A	Matrix :	WATER
Ext Btch ID:	DGK003W	% Moisture :	NA
Calib. Ref.:	FK09015A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	8.8	2.0	0.64
ETHENE	240E	2.0	0.60
METHANE	420E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/03/11
Batch No.	: 11K035	Date Extracted:	11/09/11 10:30
Sample ID:	MW-70-28-094DL	Date Analyzed:	11/09/11 16:31
Lab Samp ID:	K035-04T	Dilution Factor:	10
Lab File ID:	FK09021A	Matrix :	WATER
Ext Btch ID:	DGK003W	% Moisture :	NA
Calib. Ref.:	FK09015A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	20	6.4
ETHENE	230	20	6.0
METHANE	1900E	20	3.4

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/03/11
Batch No.	: 11K035	Date Extracted:	11/09/11 10:30
Sample ID:	MW-70-28-094DL	Date Analyzed:	11/09/11 17:14
Lab Samp ID:	K035-04I	Dilution Factor:	1000
Lab File ID:	FK09024A	Matrix :	WATER
Ext Btch ID:	DGK003W	% Moisture :	NA
Calib. Ref.:	FK09015A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	13000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/03/11
Batch No.	: 11K035	Date Extracted:	11/09/11 10:30
Sample ID:	IR-70-FD-093	Date Analyzed:	11/09/11 16:45
Lab Samp ID:	K035-05	Dilution Factor:	1
Lab File ID:	FK09022A	Matrix :	WATER
Ext Btch ID:	DGK003W	% Moisture :	NA
Calib. Ref.:	FK09015A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	2.8	2.0	0.64
ETHENE	73E	2.0	0.60
METHANE	440E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/03/11
Batch No.	: 11K035	Date Extracted:	11/09/11 10:30
Sample ID:	IR-70-FD-093DL	Date Analyzed:	11/09/11 16:57
Lab Samp ID:	K035-05T	Dilution Factor:	5
Lab File ID:	FK09023A	Matrix :	WATER
Ext Btch ID:	DGK003W	% Moisture :	NA
Calib. Ref.:	FK09015A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	10	3.2
ETHENE	67	10	3.0
METHANE	1100E	10	1.7

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/03/11
Batch No.	: 11K035	Date Extracted:	11/09/11 10:30
Sample ID:	IR-70-FD-093DL	Date Analyzed:	11/09/11 17:27
Lab Samp ID:	K035-05I	Dilution Factor:	500
Lab File ID:	FK09025A	Matrix :	WATER
Ext Btch ID:	DGK003W	% Moisture :	NA
Calib. Ref.:	FK09015A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	1000	320
ETHENE	ND	1000	300
METHANE	11000	1000	170

QC SUMMARIES

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K035	Date Extracted:	11/09/11 10:30
Sample ID:	MBLK1W	Date Analyzed:	11/09/11 11:56
Lab Samp ID:	DGK003WB	Dilution Factor:	1
Lab File ID:	FK09004A	Matrix :	WATER
Ext Btch ID:	DGK003W	% Moisture :	NA
Calib. Ref.:	FK09003A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD RSK-175

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	DGK003WB	DGK003WL	DGK003WC		
LAB FILE ID:	FK09004A	FK09005A	FK09006A		
DATE EXTRACTED:	11/09/1110:30	11/09/1110:30	11/09/1110:30	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1111:56	11/09/1112:12	11/09/1112:27	DATE RECEIVED:	11/09/11
PREP. BATCH:	DGK003W	DGK003W	DGK003W		
CALIB. REF:	FK09003A	FK09003A	FK09003A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	ND	25.4	29.1	115	25.4	29.1	114	0	70-140	30
Ethene	ND	23.7	27.5	116	23.7	27.6	116	0	70-140	30
Methane	ND	13.6	14.0	103	13.6	14.3	105	2	70-130	30

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD RSK-175

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MW-70-PMW01B-091				
LAB SAMP ID:	K035-02	K035-02M	K035-02S		
LAB FILE ID:	FK09007A	FK09008A	FK09009A		
DATE EXTRACTED:	11/09/1110:30	11/09/1110:30	11/09/1110:30	DATE COLLECTED:	11/03/11
DATE ANALYZED:	11/D9/1112:40	11/09/1112:55	11/09/1113:08	DATE RECEIVED:	11/03/11
PREP. BATCH:	DGK003W	DGK003W	DGK003W		
CALIB. REF:	FK09003A	FK09003A	FK09003A		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	4.16	25.4	22.1	71	25.4	21.6	69	2	60-140	30
Ethene	364E	23.7	373E	38	23.7	371E	26	1	20-160	30
Methane	465E	13.6	458E	-53*	13.6	460E	-41*	0	10-160	30

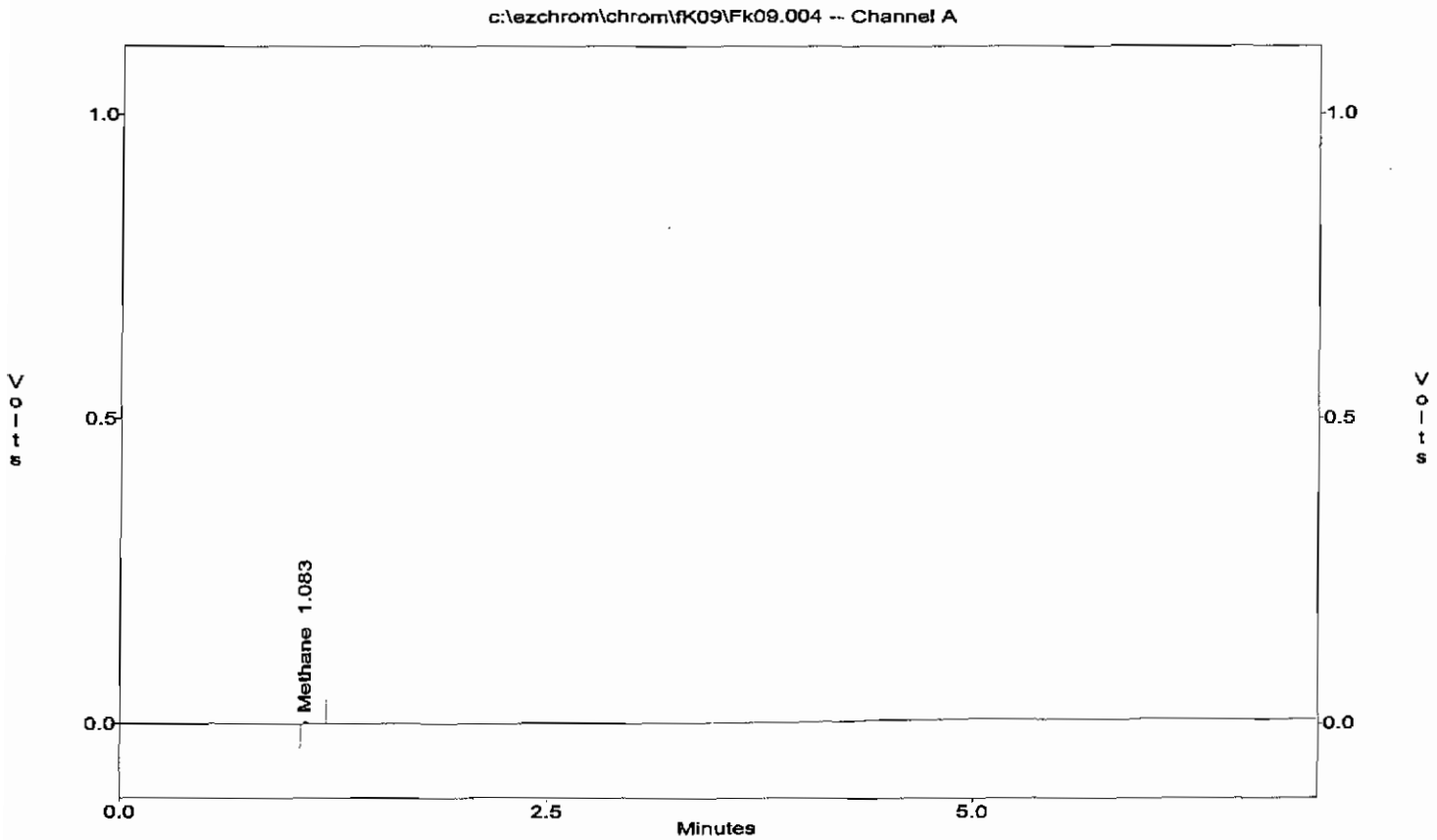
QC DATA

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK09\Fk09.004
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK003WB
Acquired : Nov 09, 2011 11:56:03
Printed : Nov 09, 2011 12:03:04
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	5982.0	30507.1	0.20
--	Acetylene	2.233	0.0	0.0	0.00
--	Ethylene	2.667	0.0	0.0	0.00
--	Ethane	3.100	0.0	0.0	0.00
--	Propane	5.942	0.0	0.0	0.00

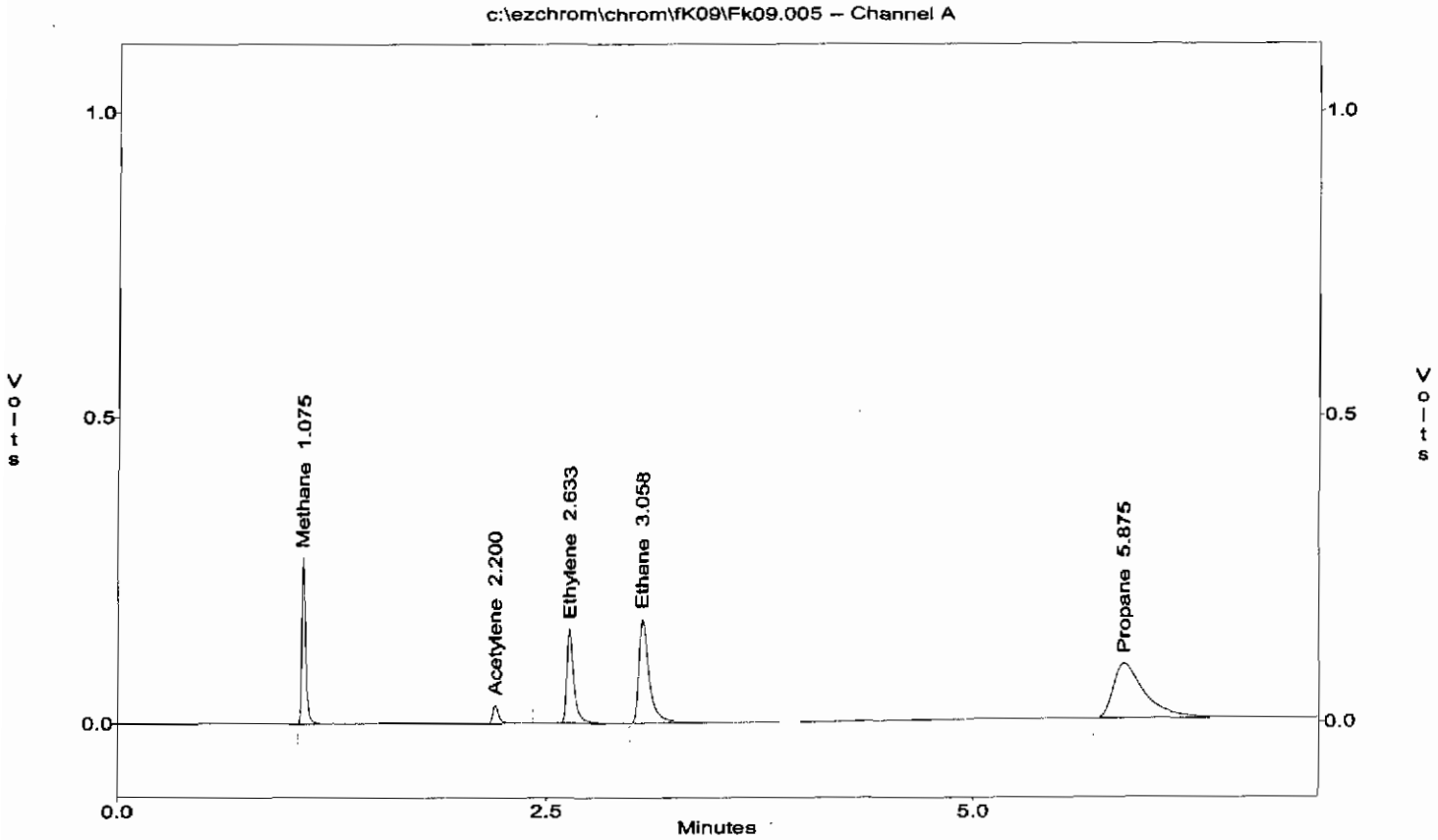


EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK09\Fk09.005
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK003WL
Acquired : Nov 09, 2011 12:12:16
Printed : Nov 09, 2011 12:19:18 /
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	428449.0	30507.1	14.04
2	Acetylene	2.200	68148.0	2647.6	25.74
3	Ethylene	2.633	449176.0	16311.8	27.54
4	Ethane	3.058	724856.0	24914.4	29.09
5	Propane	5.875	1153959.0	27171.2	42.47

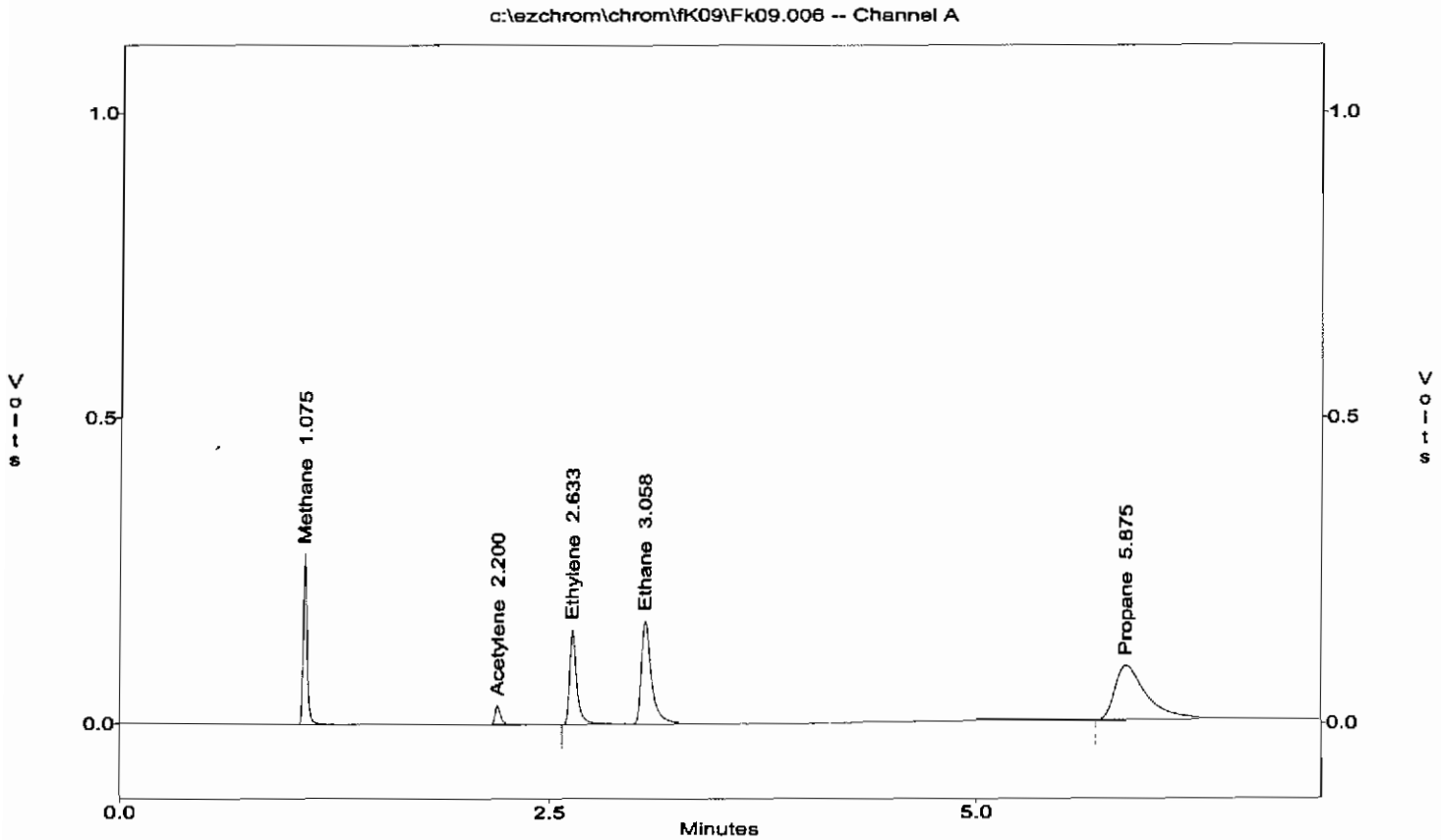


EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK09\Fk09.006
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK003WC
Acquired : Nov 09, 2011 12:27:15
Printed : Nov 09, 2011 12:34:17
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	436076.0	30507.1	14.29
2	Acetylene	2.200	69605.0	2647.6	26.29
3	Ethylene	2.633	449730.0	16311.8	27.57
4	Ethane	3.058	724125.0	24914.4	29.06
5	Propane	5.875	1143469.0	27171.2	42.08

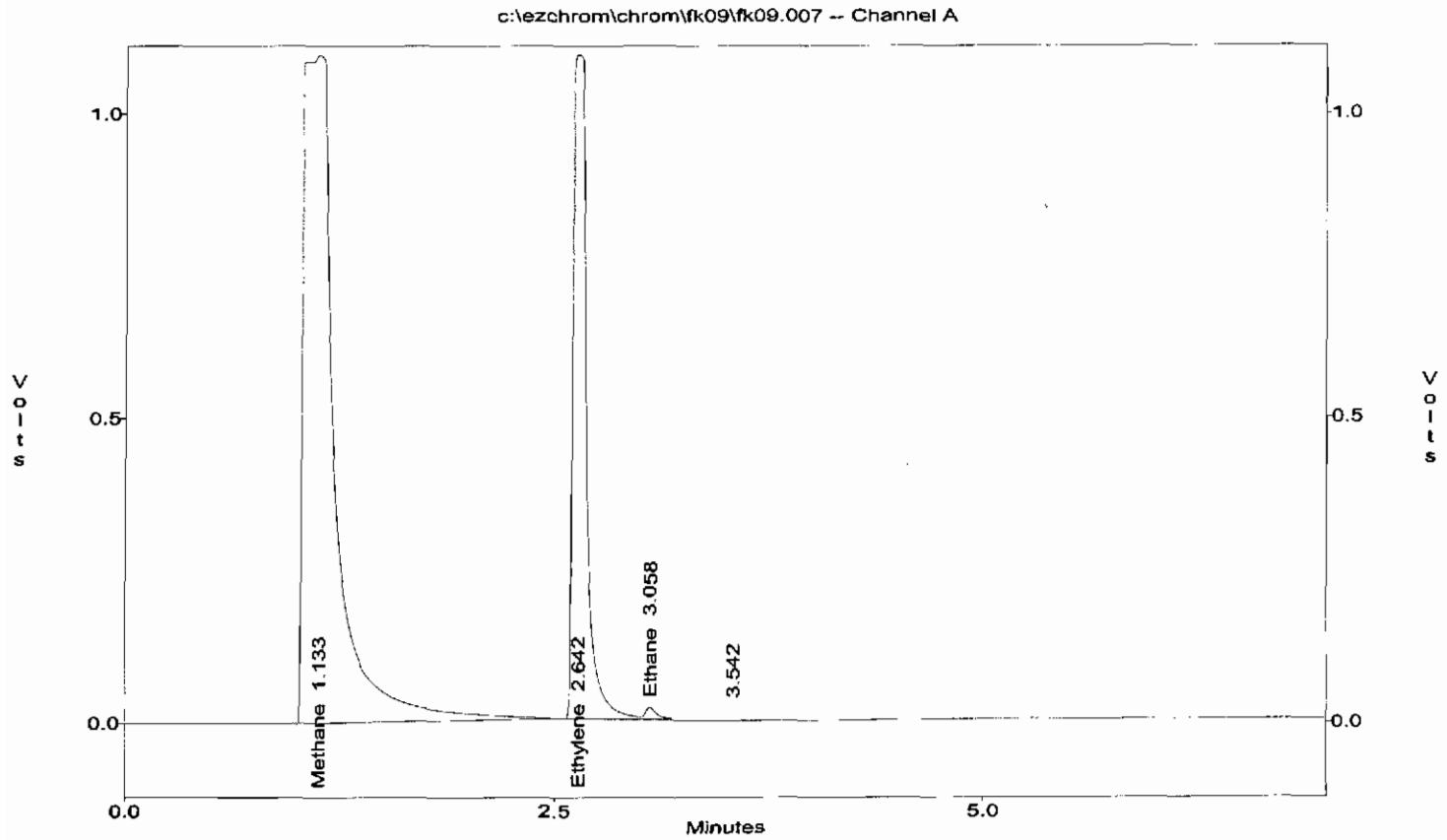


EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk09\fk09.007
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : 11K035-02
Acquired : Nov 09, 2011 12:40:34
Printed : Nov 09, 2011 13:10:29
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.133	14195835.0	30507.1	465.33 E
--	Acetylene	2.233	0.0	0.0	0.00
2	Ethylene	2.642	5942866.0	16311.8	364.33 E
3	Ethane	3.058	103731.0	24914.4	4.16
--	Propane	5.942	0.0	0.0	0.00

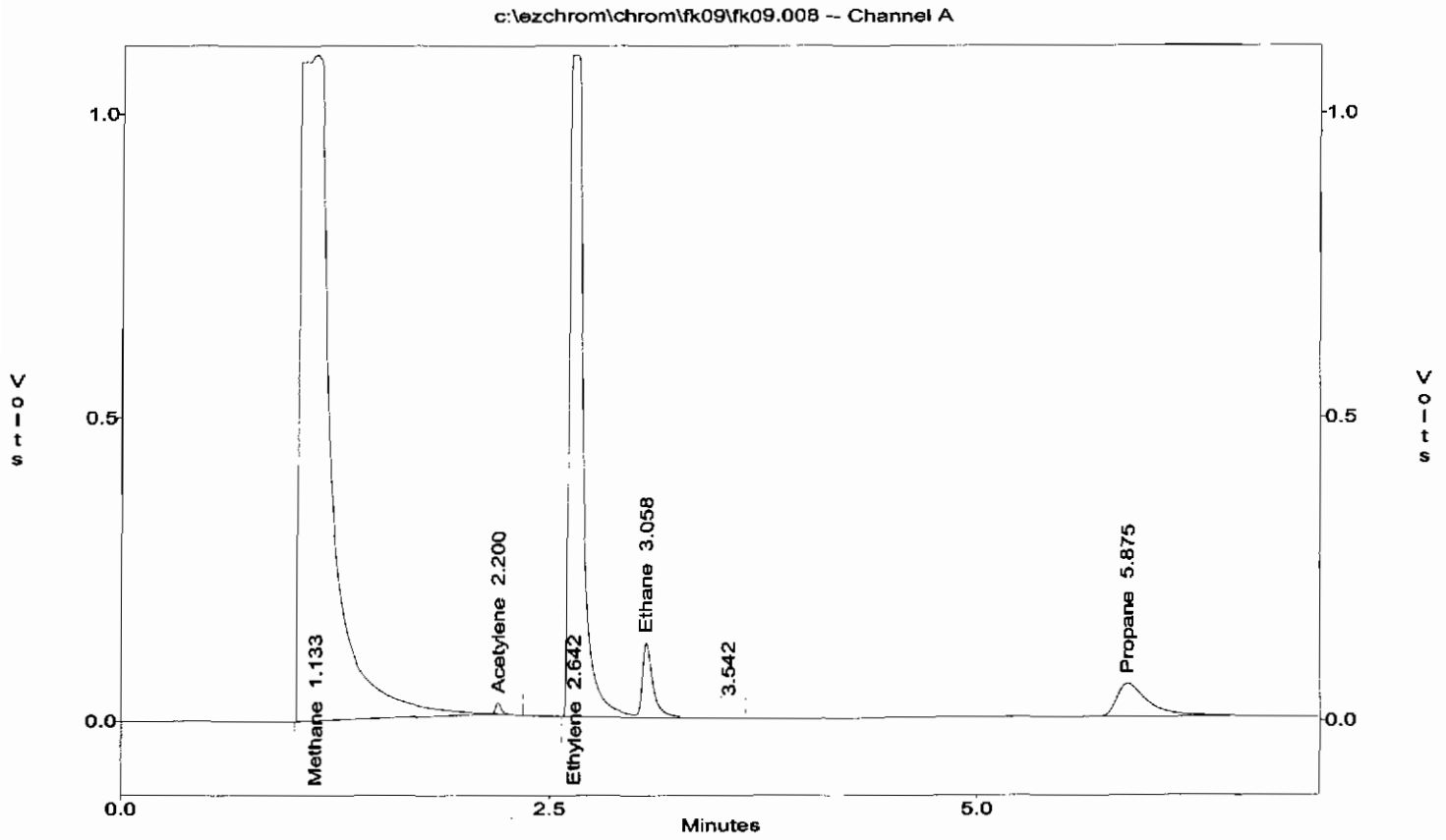


EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk09\fk09.008
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : 11K035-02M
Acquired : Nov 09, 2011 12:55:44
Printed : Nov 09, 2011 13:13:19
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.133	13977216.0	30507.1	458.16 E
2	Acetylene	2.200	43319.0	2647.6	16.36
3	Ethylene	2.642	6088076.0	16311.8	373.23 E
4	Ethane	3.058	550014.0	24914.4	22.08
6	Propane	5.875	689878.0	27171.2	25.39

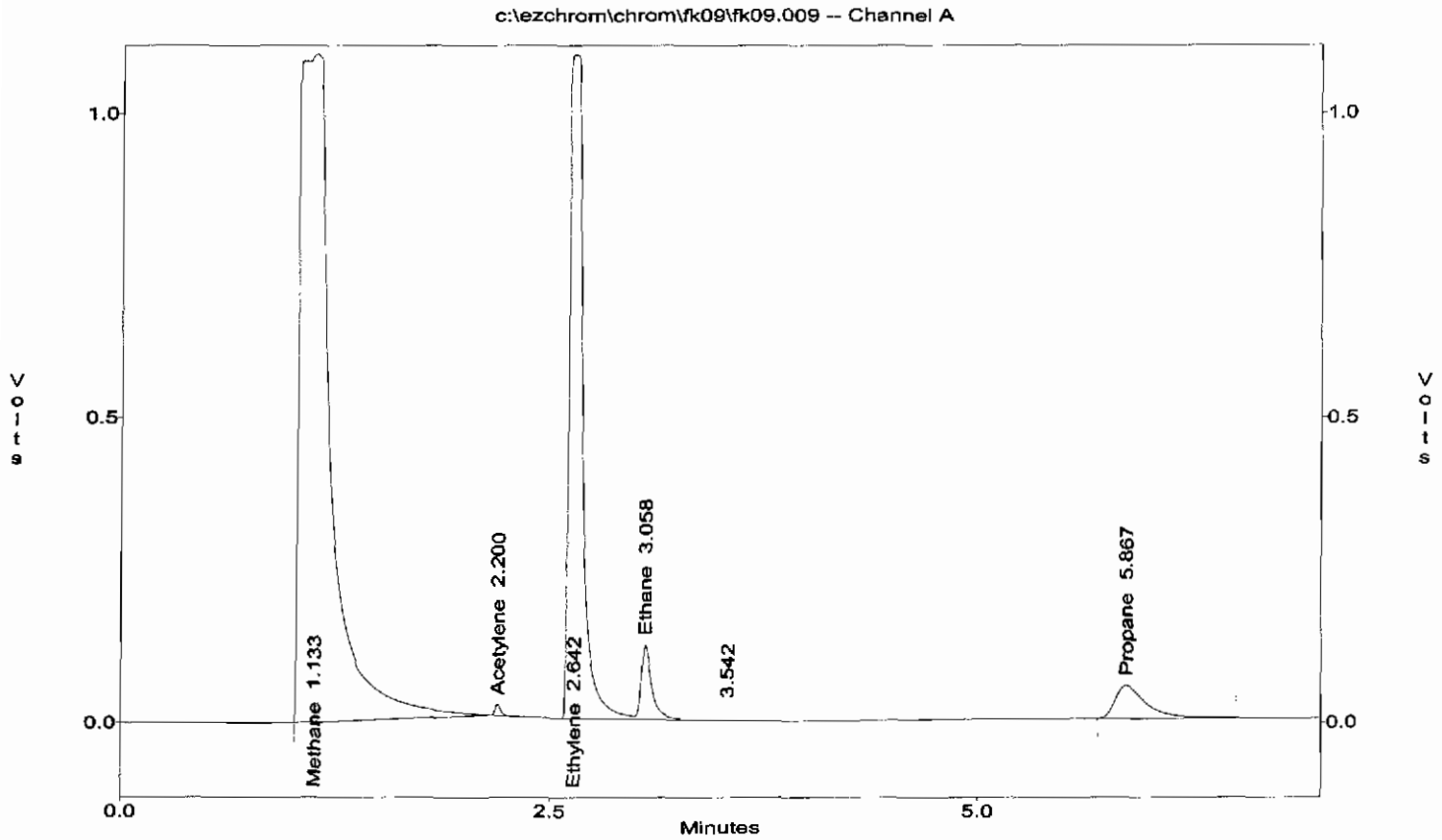


EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk09\fk09.009
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : 11K035-02S
Acquired : Nov 09, 2011 13:08:57
Printed : Nov 09, 2011 13:18:17
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.133	14025692.0	30507.1	459.75 E
2	Acetylene	2.200	42109.0	2647.6	15.90
3	Ethylene	2.642	6045107.0	16311.8	370.60 E
4	Ethane	3.058	538401.0	24914.4	21.61
6	Propane	5.867	670593.0	27171.2	24.68



INITIAL CALIBRATIONS

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01D04A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	25.00X	40.00X	75.00X	100.00X	MEAN	%RSD
Methane	0.34	31626	33510	29954	29307	29338	29307	30507.1	5.6
Acetylene	0.55	2465	2595	2723	2744	2716	2643	2647.7	4.0
Ethylene	0.59	14655	16070	16617	16602	17123	16803	16311.8	5.4
Ethane	0.64	22748	24144	25289	25073	26185	26048	24914.4	5.2
Propane	0.93	29887	24871	26520	26214	27735	27800	27171.2	6.3

DG10K01.MET

FORM VI DGAS -2 1/96 Rev 2/2006

11/03/11

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53

COMPOUND	RT OF STANDARDS (MIN) 2.0X	10.0X	25.0X	40.0X	75.0X	100.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
Methane	1.083	1.075	1.083	1.083	1.083	1.083	1.082	1.056	1.108	0.026
Acetylene	2.208	2.192	2.208	2.217	2.217	2.217	2.210	2.184	2.236	0.026
Ethylene	2.642	2.633	2.650	2.658	2.658	2.658	2.650	2.599	2.701	0.051
Ethane	3.067	3.067	3.075	3.083	3.092	3.083	3.078	3.028	3.128	0.050
Propane	5.942	5.883	5.900	5.917	5.917	5.908	5.911	5.835	5.987	0.076

DG10K01.MET

AS 11/03/11

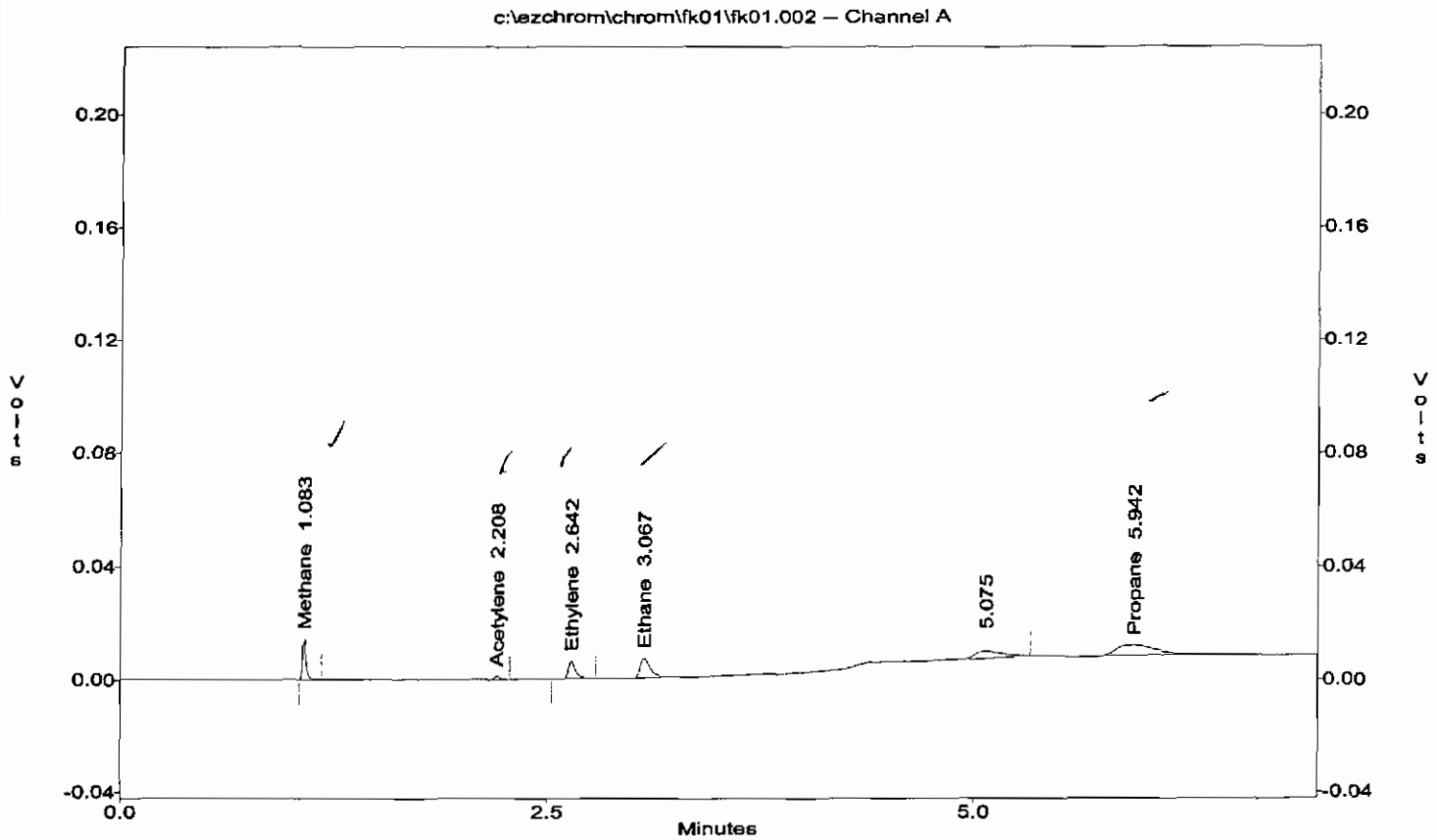
FORM VI DGAS -1 1/96 Rev 2/2006

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.002
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-01
Acquired : Nov 01, 2011 11:28:48
Printed : Nov 01, 2011 16:46:40
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	21439.0	30507.1	0.68
2	Acetylene	2.208	2712.0	2647.6	1.10
3	Ethylene	2.642	17381.0	16311.8	1.19
4	Ethane	3.067	28913.0	24914.4	1.27
6	Propane	5.942	55710.0	27171.2	1.86



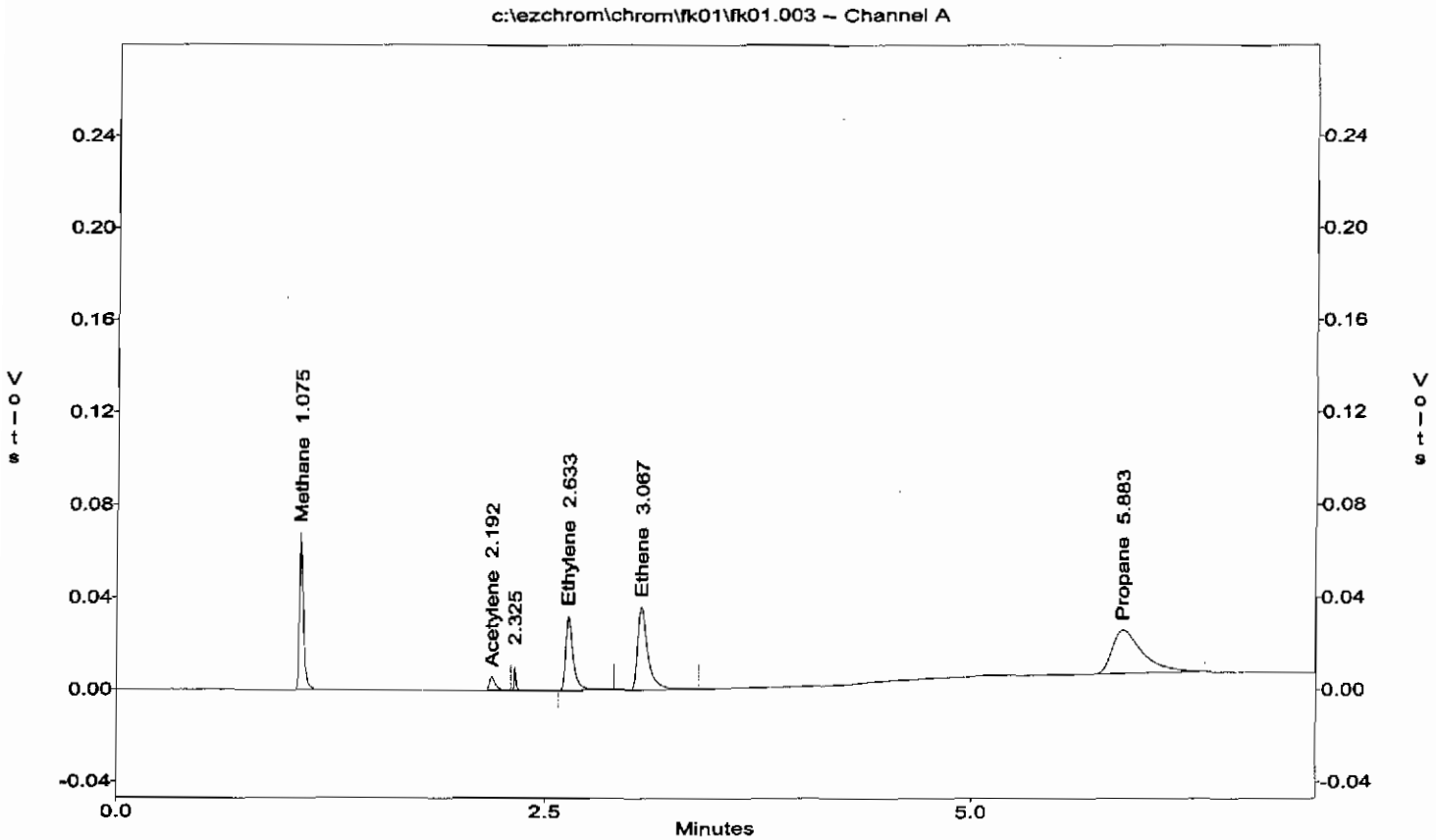
AS
11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.003
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-02
Acquired : Nov 01, 2011 11:41:49
Printed : Nov 01, 2011 16:46:57
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	113600.0	30507.1	3.39
2	Acetylene	2.192	14297.0	2647.6	5.51
4	Ethylene	2.633	95326.0	16311.8	5.93
5	Ethane	3.067	153436.0	24914.4	6.36
6	Propane	5.883	231819.0	27171.2	9.32



AS
11/03/11

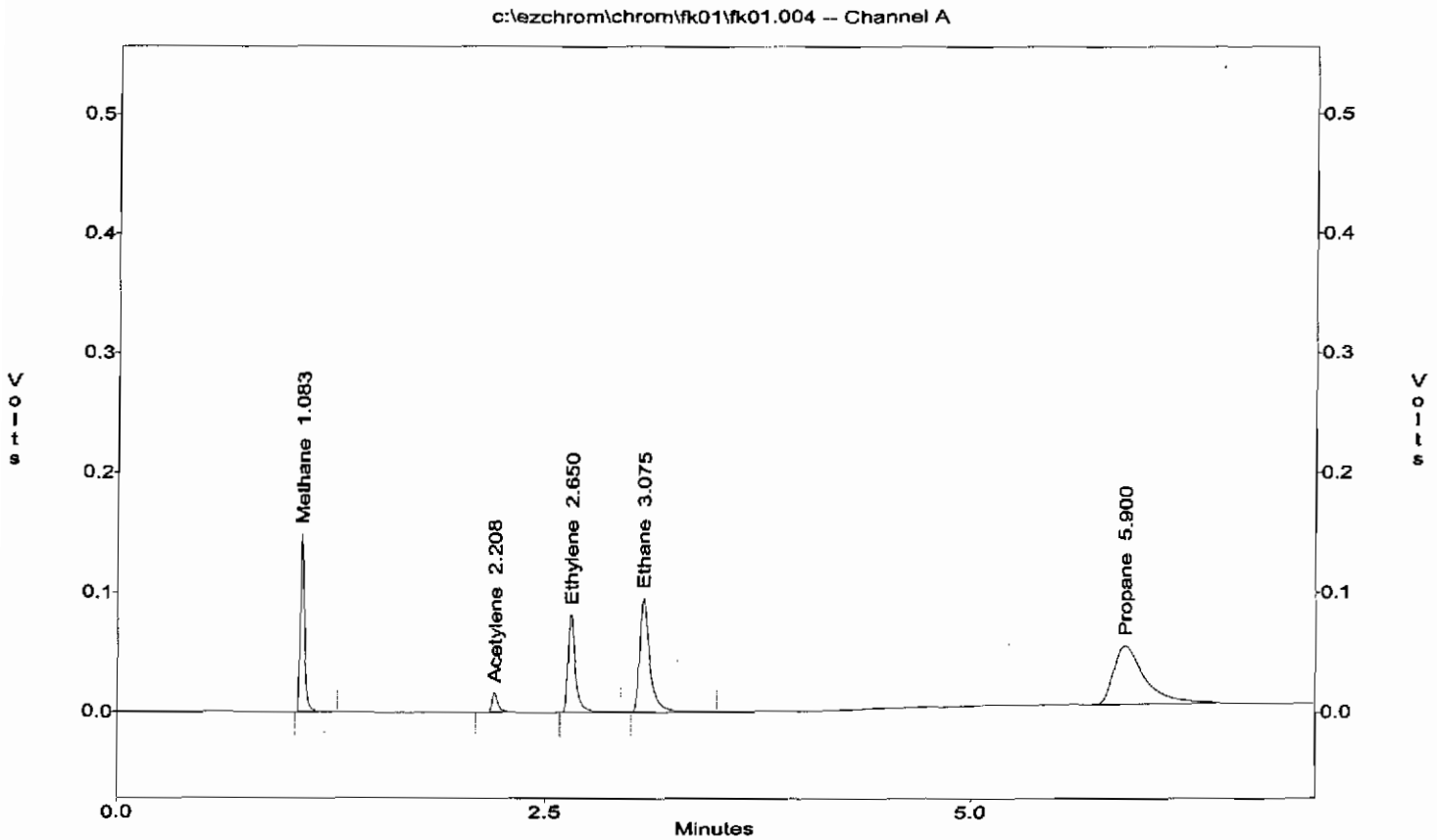
4037

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.004
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-03
Acquired : Nov 01, 2011 11:55:36
Printed : Nov 01, 2011 16:47:09
User : *SERGIO*

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	253836.0	30507.1	8.47
2	Acetylene	2.208	37503.0	2647.6	13.77
3	Ethylene	2.650	246435.0	16311.8	14.83
4	Ethane	3.075	401839.0	24914.4	15.89
5	Propane	5.900	617912.0	27171.2	23.30



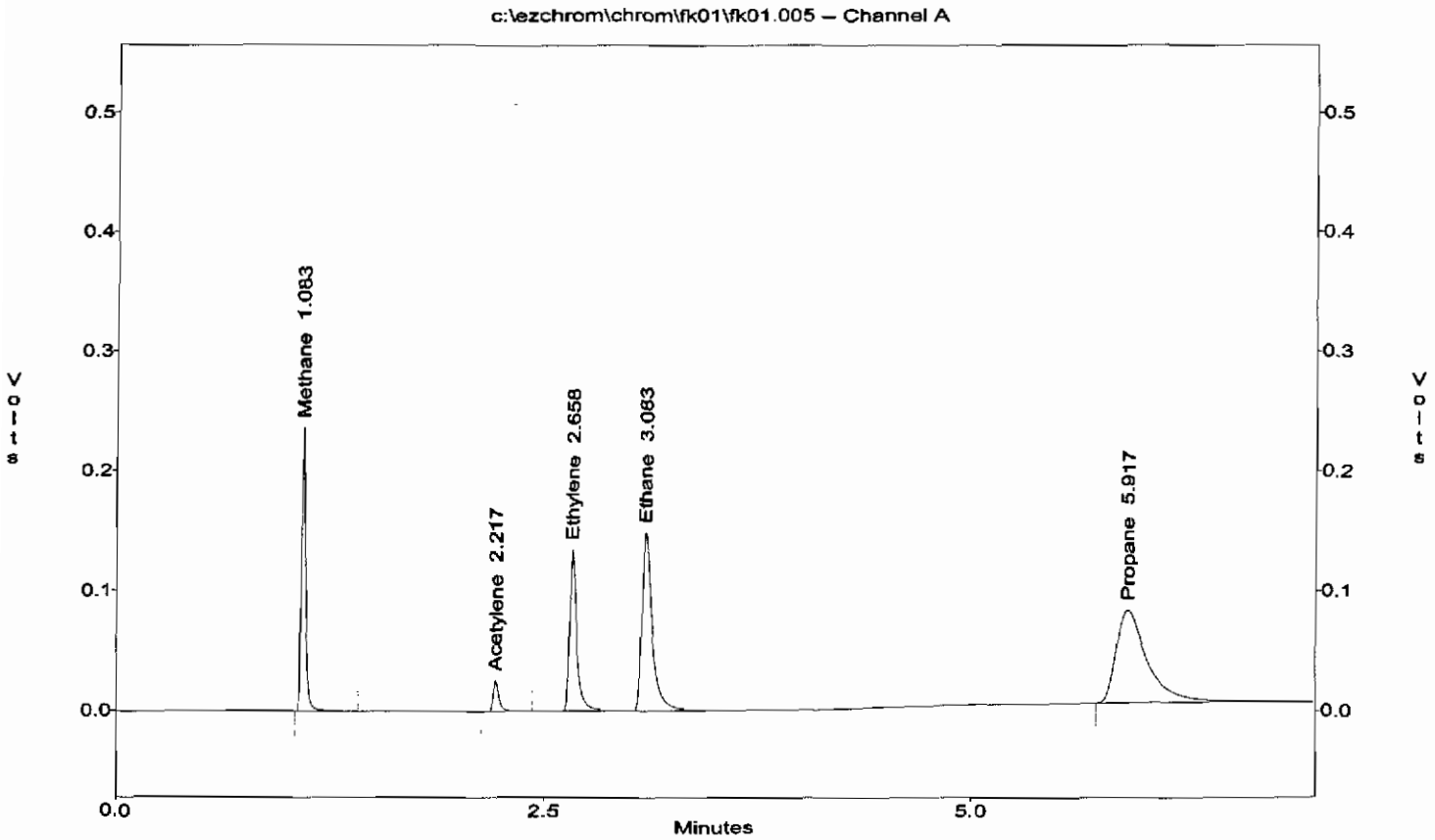
11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.005
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-04
Acquired : Nov 01, 2011 12:09:18
Printed : Nov 01, 2011 16:47:15
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	397403.0	30507.1	13.56
2	Acetylene	2.217	60362.0	2647.6	22.00
3	Ethylene	2.658	393970.0	16311.8	23.73
4	Ethane	3.083	637350.0	24914.4	25.42
5	Propane	5.917	977274.0	27171.2	37.28



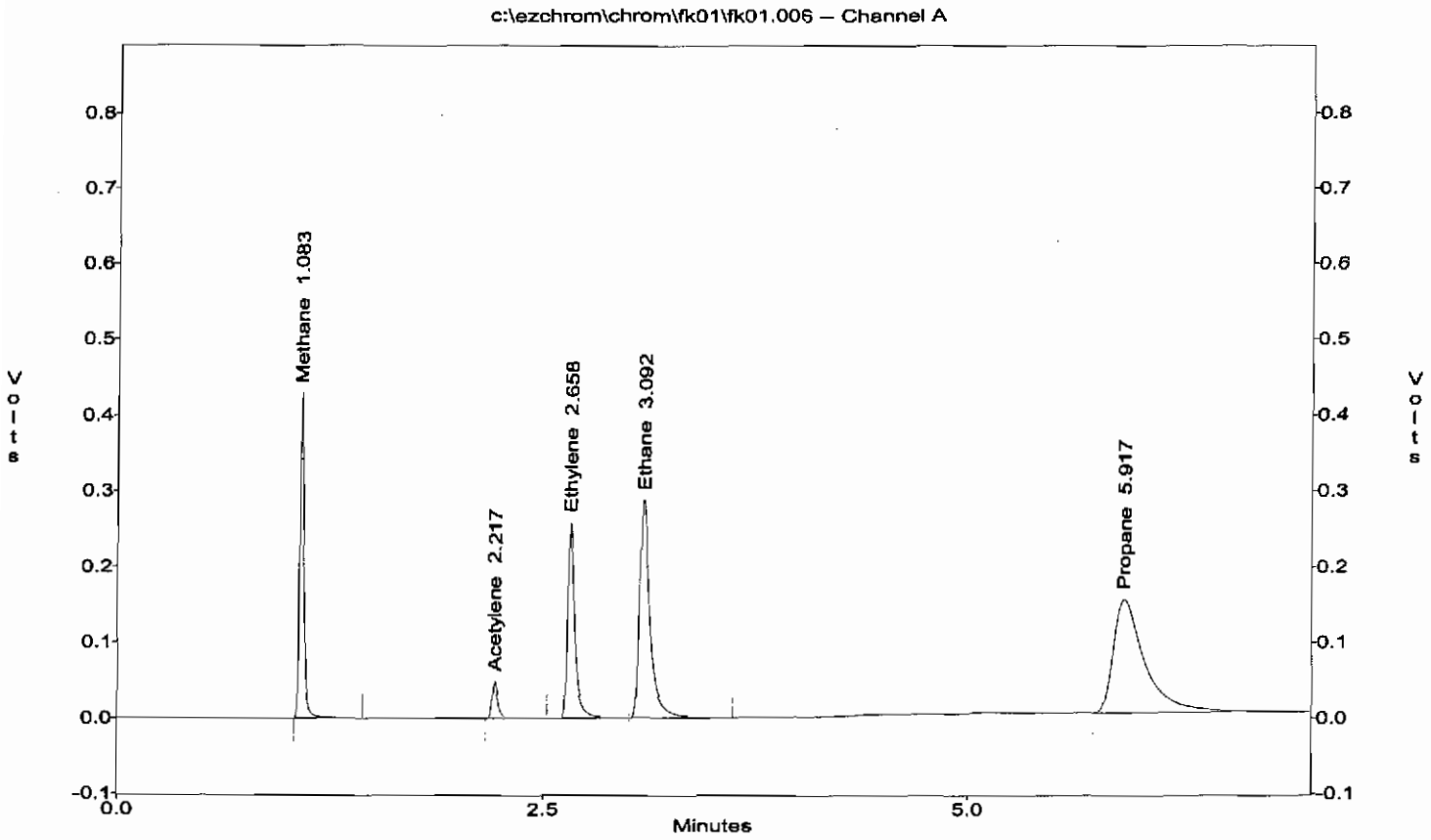
AS
11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.006
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-05
Acquired : Nov 01, 2011 12:38:25
Printed : Nov 01, 2011 16:47:32
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	745775.0	30507.1	25.42
2	Acetylene	2.217	112175.0	2647.6	41.30
3	Ethylene	2.658	761815.0	16311.8	44.49
4	Ethane	3.092	1248240.0	24914.4	47.67
5	Propane	5.917	1938976.0	27171.2	69.91



11/03/11

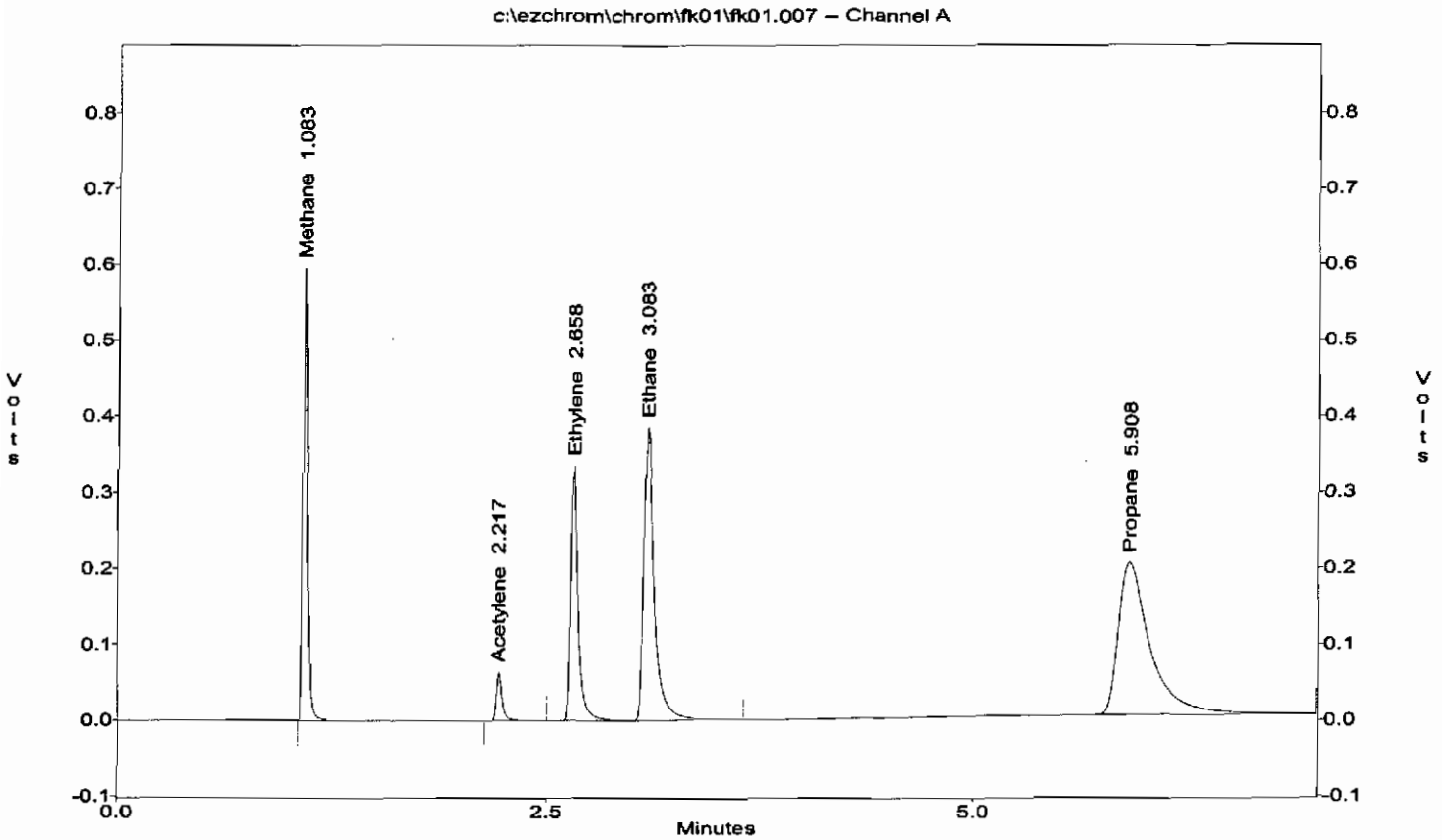
4040

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.007
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-06
Acquired : Nov 01, 2011 12:53:24
Printed : Nov 01, 2011 16:47:38
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	993496.0	30507.1	33.90
2	Acetylene	2.217	145648.0	2647.6	55.10
3	Ethylene	2.658	996770.0	16311.8	59.32
4	Ethane	3.083	1655327.0	24914.4	63.55
5	Propane	5.908	2591233.0	27171.2	93.21



AS 11/3/11

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK01008A 11/01/2011 13:45
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	416247	13.64	1		15
Acetylene	2.175	2.149	2.201	22.0	2647.6	66913	25.27	15		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	437326	26.81	13		15
Ethane	3.075	3.025	3.125	25.4	24914.4	691218	27.74	9		15
Propane	5.900	5.824	5.976	37.3	27171.2	1111008	40.89	10		15

DG10K01.MET

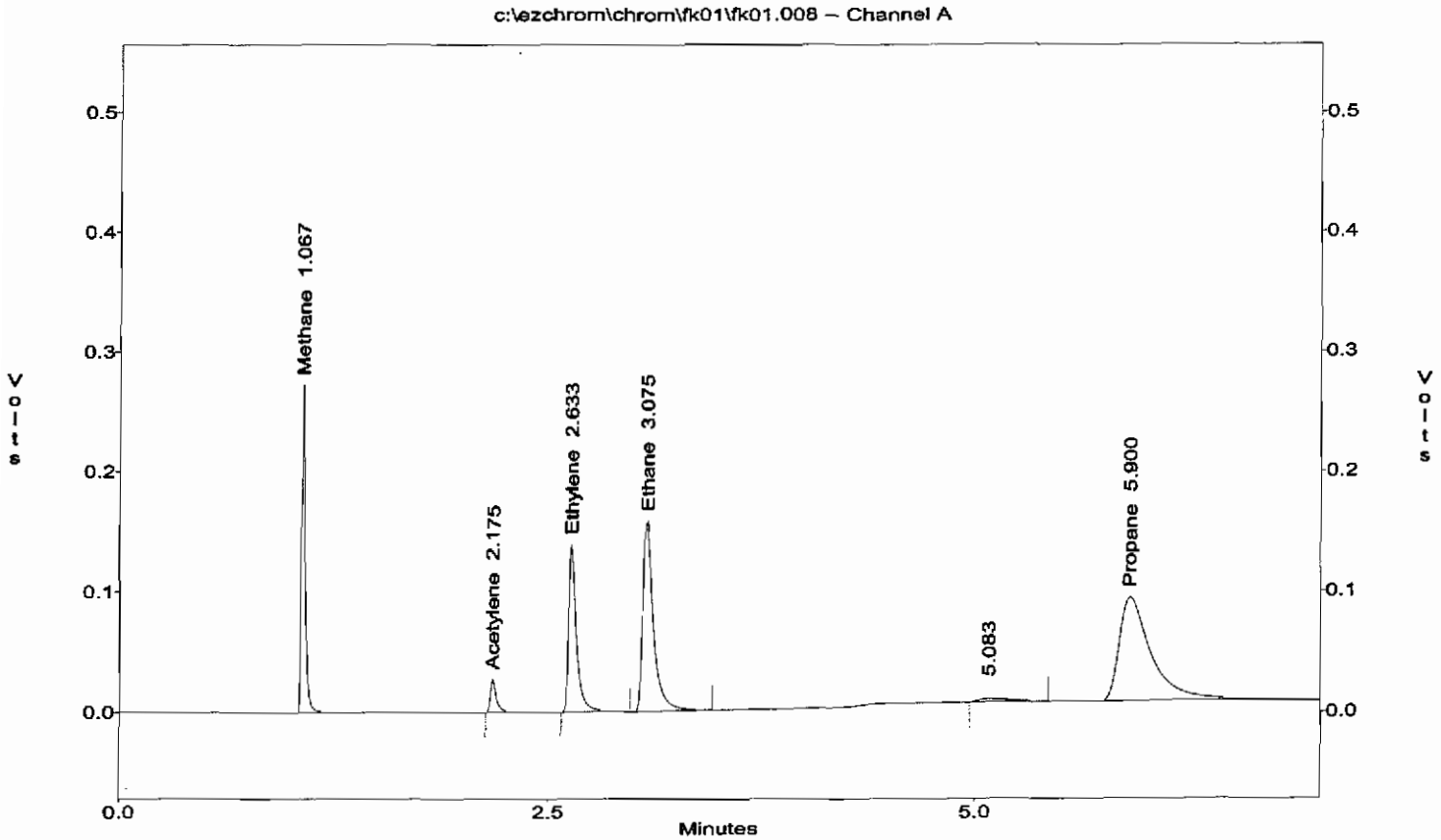
AJ
11/3/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.008
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : IDG10K0101
Acquired : Nov 01, 2011 13:45:55
Printed : Nov 01, 2011 16:47:55
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.067	416247.0	30507.1	13.64
2	Acetylene	2.175	66913.0	2647.6	25.27
3	Ethylene	2.633	437326.0	16311.8	26.81
4	Ethane	3.075	691218.0	24914.4	27.74
6	Propane	5.900	1111008.0	27171.2	40.89



11/3/11

DAILY CALIBRATIONS

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK09003A 11/09/2011 11:17
CONC UNIT : ppb

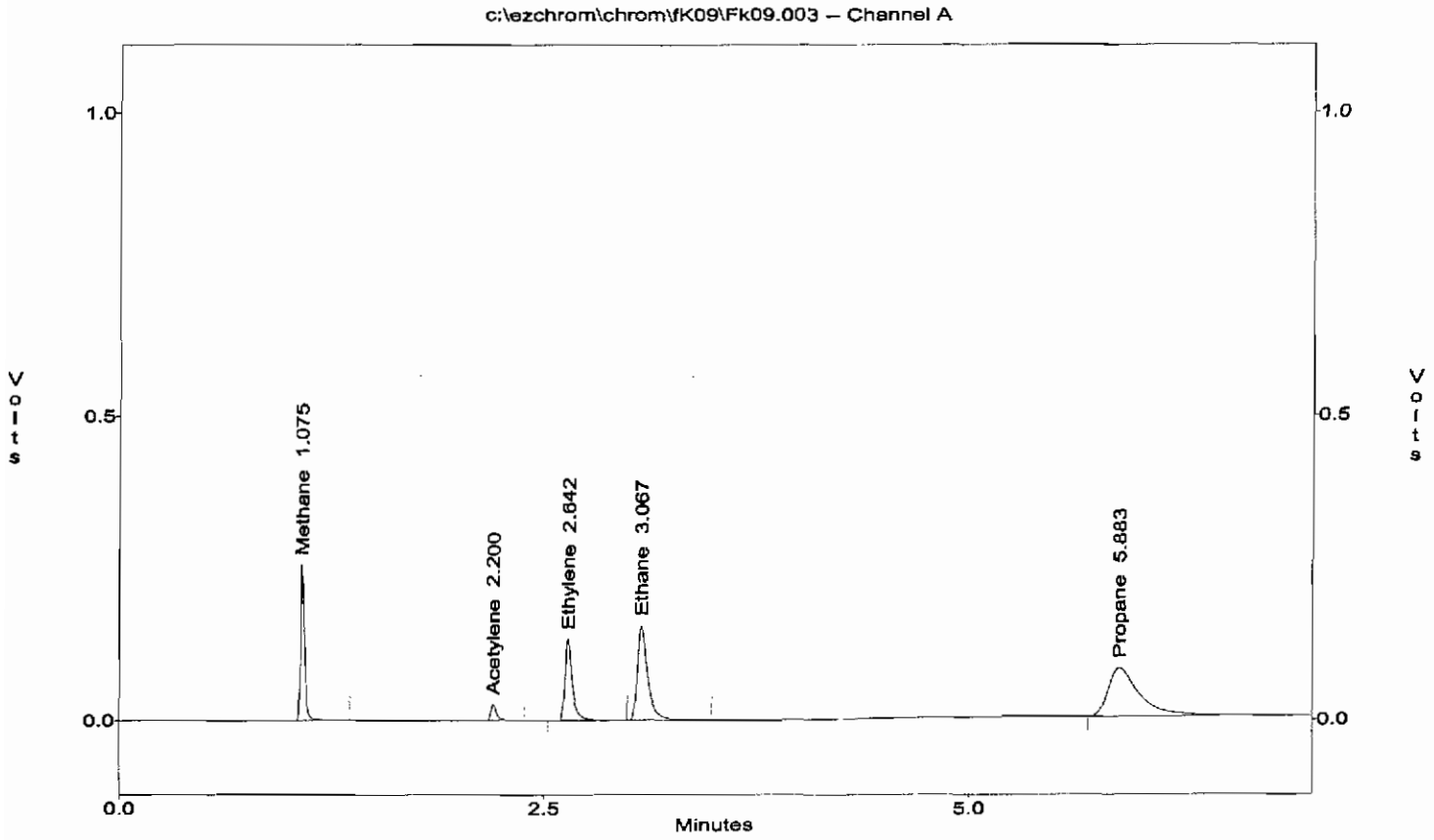
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	416333	13.65	1		15
Acetylene	2.200	2.174	2.226	22.0	2647.6	59144	22.34	2		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	401520	24.61	4		15
Ethane	3.067	3.017	3.117	25.4	24914.4	656702	26.36	4		15
Propane	5.883	5.807	5.959	37.3	27171.2	1028917	37.87	2		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK09\Fk09.003
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01415
Acquired : Nov 09, 2011 11:17:32
Printed : Nov 09, 2011 11:24:33
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	416333.0	30507.1	13.65
2	Acetylene	2.200	59144.0	2647.6	22.34
3	Ethylene	2.642	401520.0	16311.8	24.62
4	Ethane	3.067	656702.0	24914.4	26.36
5	Propane	5.883	1028917.0	27171.2	37.87



CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK09015A 11/09/2011 14:48
CONC UNIT : ppb

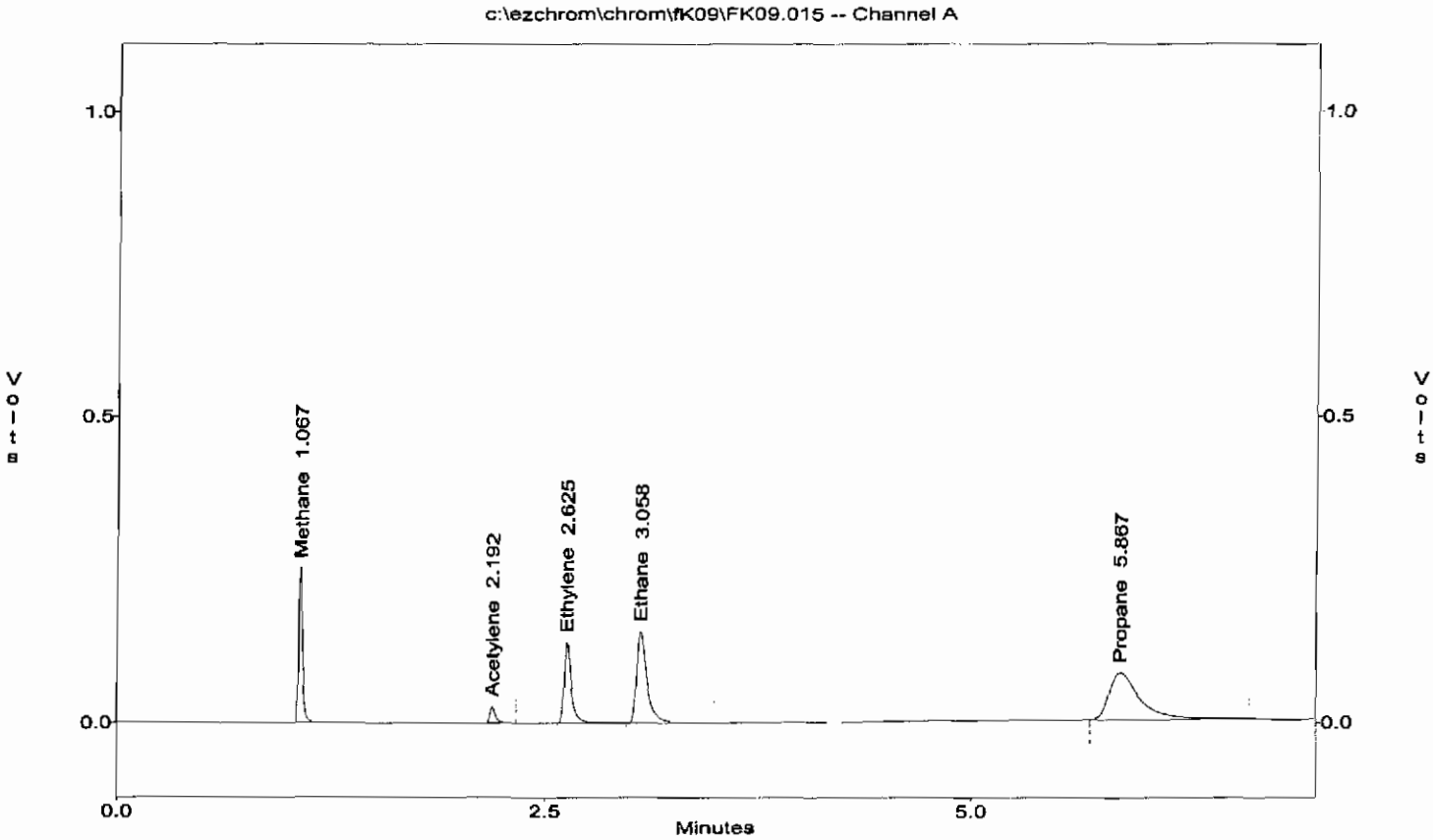
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	411797	13.50	-0		15
Acetylene	2.192	2.166	2.218	22.0	2647.6	60359	22.80	4		15
Ethylene	2.625	2.574	2.676	23.7	16311.8	392333	24.05	1		15
Ethane	3.058	3.008	3.108	25.4	24914.4	640153	25.69	1		15
Propane	5.867	5.791	5.943	37.3	27171.2	975536	35.90	-4		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK09\FK09.015
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : CDG10K01416
Acquired : Nov 09, 2011 14:48:08
Printed : Nov 09, 2011 15:01:46
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.067	411797.0	30507.1	13.50
2	Acetylene	2.192	60359.0	2647.6	22.80
3	Ethylene	2.625	392333.0	16311.8	24.05
4	Ethane	3.058	640153.0	24914.4	25.69
5	Propane	5.867	975536.0	27171.2	35.90



CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK09026A 11/09/2011 17:41
CONC UNIT : ppb

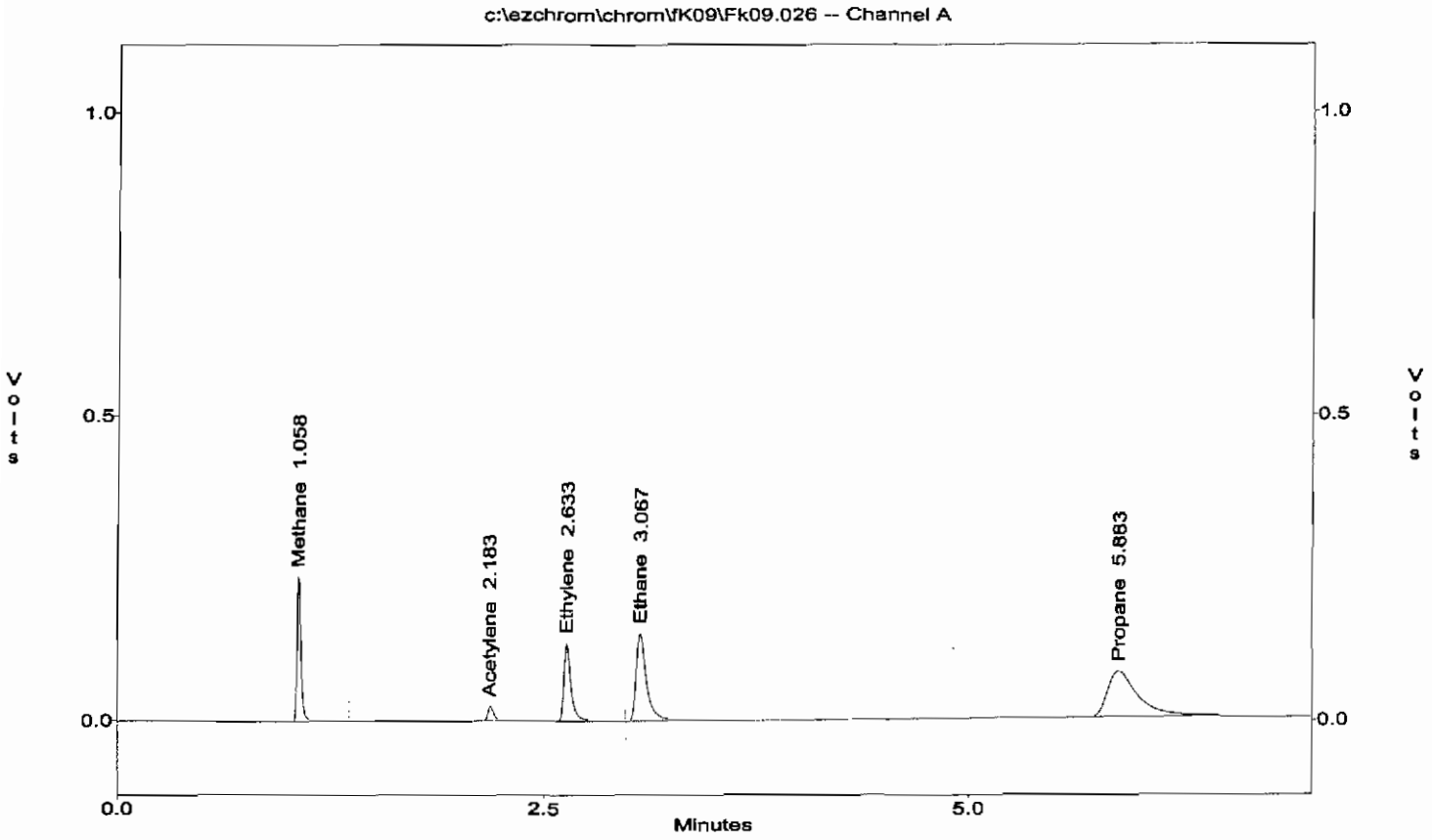
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.058	1.032	1.084	13.6	30507.1	396890	13.01	-4		15
Acetylene	2.183	2.157	2.209	22.0	2647.6	58770	22.20	1		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	382957	23.48	-1		15
Ethane	3.067	3.017	3.117	25.4	24914.4	615142	24.69	-3		15
Propane	5.883	5.807	5.959	37.3	27171.2	927591	34.14	-8		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK09\Fk09.026
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01417
Acquired : Nov 09, 2011 17:41:17
Printed : Nov 09, 2011 17:48:18
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.058	396890.0	30507.1	13.01
2	Acetylene	2.183	58770.0	2647.6	22.20
3	Ethylene	2.633	382957.0	16311.8	23.48
4	Ethane	3.067	615142.0	24914.4	24.69
5	Propane	5.883	927591.0	27171.2	34.14



ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGAS ICAL

Book #:	A10-025
Instrument No.:	10
Analytical Sequence:	FK01
Method File:	DG1CK01
Analytical Batch:	N/A

SOP #	Rev. #
☐ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGAS ICAL SSSA-05-01-10	500 ppm
DGAS ICV SSSA-05-01-7	500ppm
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: SC

Date: 11/01/11

Disposed By: SC

Date Disposed: 11/01/11

Method: Dg10k01.met Batch: Fk01.seq Data: Fk01.011 - [Batch: fk01.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Run Type	Sample ID	Method	Filename	Sample Amt	Mult	Description
1	Unknown	IB10K407	dg10k01.met	FK01.001	10ml 1	1	
2	Unknown	DG10K01-01	dg10k01.met	FK01.002	1	1	
3	Unknown	DG10K01-02	dg10k01.met	FK01.003	1	1	
4	Unknown	DG10K01-03	dg10k01.met	FK01.004	1	1	DGAS ICAL
5	Unknown	DG10K01-04	dg10k01.met	FK01.005	1	1	
6	Unknown	DG10K01-05	dg10k01.met	FK01.006	1	1	
7	Unknown	DG10K01-06	dg10k01.met	FK01.007	1	1	
8	Unknown	IDG10K0101	dg10k01.met	FK01.008	1	1	DGAS ICV
9	Unknown	IB	dg10k01.met	FK01.009	1	1	
10	Unknown	IB	dg10k01.met	FK01.010	1	1	
11	Unknown	IB	dg10k01.met	FK01.011	1	1	
12	Unknown	IB	dg10k01.met	FK01.012	1	1	
13	Unknown	IB	dg10k01.met	FK01.013	1	1	
14	Unknown	IB	dg10k01.met	FK01.014	1	1	
15	Unknown	IB	dg10k01.met	FK01.015	1	1	FINAL
16	Unknown	IB	dg10k01.met	FK01.016	1	1	
17	Unknown	IB	dg10k01.met	FK01.017	1	1	
18	Unknown	IB	dg10k01.met	FK01.018	1	1	
19	Unknown	IB	dg10k01.met	FK01.019	1	1	
20	Unknown	IB	dg10k01.met	FK01.020	1	1	
21	Unknown	IB	dg10k01.met	FK01.021	1	1	
22	Unknown	IB	dg10k01.met	FK01.022	1	1	
23	Unknown	IB	dg10k01.met	FK01.023	1	1	
24	Unknown	IB	dg10k01.met	FK01.024	1	1	
25	Unknown	IB	dg10k01.met	FK01.025	1	1	
26	Unknown	IB	dg10k01.met	FK01.026	1	1	
27	Unknown	IB	dg10k01.met	FK01.027	1	1	
28	Unknown	IB	dg10k01.met	FK01.028	1	1	
29	Unknown	IB	dg10k01.met	FK01.029	1	1	
30	Unknown	IB	dg10k01.met	FK01.030	1	1	
31	Unknown	IB	dg10k01.met	FK01.031	1	1	
32	Unknown	IB	dg10k01.met	FK01.032	1	1	
33	Unknown	IB	dg10k01.met	FK01.033	1	1	
34	Unknown	IB	dg10k01.met	FK01.034	1	1	

EC 11/01/11

Waiting For Trigger...

Start | Exchem Homelogon | Method: Dg10k01 | Calculator | Method: Dg10k01.met | untitled - Paint | Exploring | Tuesday, November 01, 2011

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGK003W: K035

Book #:	A10-025
Instrument No.:	10
Analytical Sequence:	FK09
Method File:	DG10K01
Analytical Batch:	CDG10K01415

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGIOS DCC SSSB-07-36-02	200
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: RN

Date: 11/29/11

Disposed By: RN

Date Disposed: 11/29/11

Method: Dg10k01.met Batch: FK09.seq Data: FK09.027 - [Batch: FK09.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Sample ID	Method	Filename	Sample Amt	Mult	Description
1	IB	dg10k01.met	FK09.001	100 ul 1	1	
2	IB10K415	dg10k01.met	FK09.002	1	1	
3	CDG10K01415	dg10k01.met	FK09.003	1	1	
4	DGK003WB	dg10k01.met	FK09.004	1	1	
5	DGK003WL	dg10k01.met	FK09.005	1	1	
6	DGK003WC	dg10k01.met	FK09.006	1	1	
7	11K035-02	dg10k01.met	FK09.007	1	1	
8	11K035-02M	dg10k01.met	FK09.008	1	1	
9	11K035-02S	dg10k01.met	FK09.009	1	1	
10	11K035-01	dg10k01.met	FK09.010	1	1	
11	11K035-01T DF=5	dg10k01.met	FK09.011	20 ul 1	5	
12	11K035-01I DF=500	dg10k01.met	FK09.012	4 ul (20x) 1	500	
13	11K035-02T DF=20	dg10k01.met	FK09.013	5 ul 1	20	
14	TEST	dg10k01.met	FK09.014	100 ul 1	1	
15	CDG10K01416	dg10k01.met	FK09.015	1	1	
16	11K035-03	dg10k01.met	FK09.016	1	1	
17	11K035-02I DF=500	dg10k01.met	FK09.017	4 ul (20x) 1	500	
18	11K035-03T DF=5	dg10k01.met	FK09.018	20 ul 1	5	
19	11K035-03I DF=500	dg10k01.met	FK09.019	4 ul (20x) 1	500	FINAL
20	11K035-04	dg10k01.met	FK09.020	100 ul 1	1	
21	11K035-04T DF=10	dg10k01.met	FK09.021	10 ul 1	10	
22	11K035-05	dg10k01.met	FK09.022	100 ul 1	1	
23	11K035-05T DF=5	dg10k01.met	FK09.023	20 ul 1	5	
24	11K035-04I DF=1000	dg10k01.met	FK09.024	2 ul (20x) 1	1000	
25	11K035-05I DF=500	dg10k01.met	FK09.025	4 ul (20x) 1	500	
26	CDG10K01417	dg10k01.met	FK09.026	100 ul 1	1	
27	IB	dg10k01.met	FK09.027	1	1	
28	IB	dg10k01.met	FK09.028	1	1	
29	IB	dg10k01.met	FK09.029	1	1	
30	IB	dg10k01.met	FK09.030	1	1	
31	IB	dg10k01.met	FK09.031	1	1	
32	IB	dg10k01.met	FK09.032	1	1	
33	IB	dg10k01.met	FK09.033	1	1	
34	IB	dg10k01.met	FK09.034	1	1	

pl 11/09/11

Waiting For Trigger

Wednesday, November 09, 2011

Start | PeaChromChrome | Method: Dg10k | Untitled - Paint | Method: Dg10k01 | Calculator | Method: Vg50.09 | Batch: FK09 | 5:56 PM

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/01/11 Time: 10:00 End Date: 11/01/11 Time: 10:40

PREPARATION BATCH # N/A

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DG10K01-01	39	4	N/A	
02	-02			N/A	
03	-03			N/A	DGAS ICAL
04	-04			N/A	
05	-05			N/A	
06	-06			N/A	
07	IDG10K01 01			N/A	DGAS ICV
08					
09					
10					
11					
12					
13					SC 11/01/11
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Standards	ID	Amount Added (µl)
LCS/MS / ICV	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic free
He	Air Gas
ICAL STD (500ppm)	SSSA-05-01-10 (SPECIALTY AIR)
ICV STD 500 ppm	SSSA-05-01-7 (MATHESON)

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #: (ESS)	28100705

Comments:

1) 0.08 ml ICAL STD + 3.92 ml He
2) 0.4 ml 3.6 ml
3) 1.0 ml 3.0 ml
4) 1.6 ml 2.4 ml
5) 3.0 ml 1.0 ml
6) 4.0 ml 0 ml

Prepared By: SC

Standard Added By: SC

1058

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/09/11 Time: 10:30 End Date: 11/09/11 Time: 11:15

PREPARATION BATCH # DGK003W

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DGK003WB	39	4	N/A	
02	↓ L	↓	↓	N/A	
03	↓ C	↓	↓	N/A	
04	11K035-01	↓	↓	✓	
05	02	↓	↓	✓	
06	02M	↓	↓	✓	
07	02S	↓	↓	✓	
08	03	↓	↓	✓	
09	04	↓	↓	✓	
10	05	↓	↓	✓	
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

RA 11/09/11

Standards	ID	Amount Added (µl)
LCS/MS	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic Free
He	AirGas

Thermometer ID #:	RSKM5-01
Tedlar Bag Lot #:	28100705

Comments:

Prepared By:

Standard Added By:

6506

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

SDG#: 11K035

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K035

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

A total of five (5) water samples were received on 11/03/11 for Dissolved Metals by ICP analysis, Method 3010A/6010B in accordance with Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source. Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for IPK026WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample was analyzed at the frequency prescribed by the project.
Percent recoveries for K035-02M/S were within project QC limits.
In addition, analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED METALS BY TRACE ICP

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K035
Instrument ID : T-ID8

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IPK026WB	1	NA	11/16/1116:20	11/15/1111:41	ID8K015022	ID8K015020	IPK026W	Method Blank
LCS1W	IPK026WL	1	NA	11/16/1116:23	11/15/1111:41	ID8K015023	ID8K015020	IPK026W	Lab Control Sample (LCS)
LCD1W	IPK026WC	1	NA	11/16/1116:54	11/15/1111:41	ID8K015034	ID8K015032	IPK026W	LCS Duplicate
MW-70-PMW01B-091AS	K035-02A	1	NA	11/16/1117:30	11/15/1111:41	ID8K015046	ID8K015044	IPK026W	Analytical Spike Sample
MW-70-PMW01B-091	K035-02	1	NA	11/16/1117:33	11/15/1111:41	ID8K015047	ID8K015044	IPK026W	Field Sample
MW-70-PMW01B-091DL	K035-02J	5	NA	11/16/1117:36	11/15/1111:41	ID8K015048	ID8K015044	IPK026W	Diluted Sample
MW-70-PMW01B-091MS	K035-02M	1	NA	11/16/1117:39	11/15/1111:41	ID8K015049	ID8K015044	IPK026W	Matrix Spike Sample (MS)
MW-70-PMW01B-091MSD	K035-02S	1	NA	11/16/1117:42	11/15/1111:41	ID8K015050	ID8K015044	IPK026W	MS Duplicate (MSD)
MW-70-PMW01A-089	K035-01	1	NA	11/16/1117:45	11/15/1111:41	ID8K015051	ID8K015044	IPK026W	Field Sample
MW-70-27-092	K035-03	1	NA	11/16/1117:48	11/15/1111:41	ID8K015052	ID8K015044	IPK026W	Field Sample
MW-70-28-094	K035-04	1	NA	11/16/1117:52	11/15/1111:41	ID8K015053	ID8K015044	IPK026W	Field Sample
IR-70-FD-093	K035-05	1	NA	11/16/1117:55	11/15/1111:41	ID8K015054	ID8K015044	IPK026W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11 11:30
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/03/11
SDG NO.	: 11K035	Date Extracted:	11/15/1111:41
Sample ID:	MW-70-PMW01A-089	Date Analyzed:	11/16/11 17:45
Lab Samp ID:	K035-01	Dilution Factor:	1
Lab File ID:	ID8K015051	Matrix :	WATER
Ext Btch ID:	IPK026W	% Moisture :	NA
Calib. Ref.:	ID8K015044	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	0.0819J	0.200	0.00500
Iron	2.87	0.200	0.0400
Manganese	1.34	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11 13:17
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/03/11
SDG NO.	: 11K035	Date Extracted:	11/15/1111:41
Sample ID:	MW-70-PMW01B-091	Date Analyzed:	11/16/11 17:33
Lab Samp ID:	K035-02	Dilution Factor:	1
Lab File ID:	ID8K015047	Matrix :	WATER
Ext Btch ID:	IPK026W	% Moisture :	NA
Calib. Ref.:	ID8K015044	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	0.0936J	0.200	0.00500
Iron	24.5	0.200	0.0400
Manganese	2.44	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11 14:58
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/03/11
SDG NO.	: 11K035	Date Extracted:	11/15/1111:41
Sample ID:	MW-70-27-092	Date Analyzed:	11/16/11 17:48
Lab Samp ID:	K035-03	Dilution Factor:	1
Lab File ID:	ID8K015052	Matrix :	WATER
Ext Btch ID:	IPK026W	% Moisture :	NA
Calib. Ref.:	ID8K015044	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	0.353	0.200	0.00500
Iron	34.0	0.200	0.0400
Manganese	9.90	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11 16:16
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/03/11
SDG NO.	: 11K035	Date Extracted:	11/15/1111:41
Sample ID:	MW-70-28-094	Date Analyzed:	11/16/11 17:52
Lab Samp ID:	K035-04	Dilution Factor:	1
Lab File ID:	ID8K015053	Matrix :	WATER
Ext Btch ID:	IPK026W	% Moisture :	NA
Calib. Ref.:	ID8K015044	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	0.0541J	0.200	0.00500
Iron	9.92	0.200	0.0400
Manganese	1.65	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/03/11 00:00
Project	: NWS SEAL BEACH, IR STTE 70.	Date Received:	11/03/11
SDG NO.	: 11K035	Date Extracted:	11/15/1111:41
Sample ID:	IR-70-FD-093	Date Analyzed:	11/16/11 17:55
Lab Samp ID:	K035-05	Dilution Factor:	1
Lab File ID:	ID8K015054	Matrix :	WATER
Ext Btch ID:	IPK026W	% Moisture :	NA
Calib. Ref.:	ID8K015044	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	0.358	0.200	0.00500
Iron	34.4	0.200	0.0400
Manganese	9.74	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/15/11
SDG NO.	: 11K035	Date Extracted:	11/15/1111:41
Sample ID:	MBLK1W	Date Analyzed:	11/16/11 16:20
Lab Samp ID:	IPK026WB	Dilution Factor:	1
Lab File ID:	ID8K015022	Matrix :	WATER
Ext Btch ID:	IPK026W	% Moisture :	NA
Calib. Ref.:	ID8K015020	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	ND	0.200	0.0400
Manganese	ND	0.200	0.00300

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K035
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	IPK026WB	IPK026WL	IPK026WC		
LAB FILE ID:	ID8K015022	ID8K015023	ID8K015034		
DATIME EXTRCTD:	11/15/1111:41	11/15/1111:41	11/15/1111:41	OATE COLLECTED:	NA
DATIME ANALYZD:	11/16/1116:20	11/16/1116:23	11/16/1116:54	DATE RECEIVED:	11/15/11
PREP. BATCH:	IPK026W	IPK026W	IPK026W		
CALIB. REF:	ID8K015020	ID8K015020	I08K015032		

ACCESSION:

PARAMETER	BLNK RSLT mg/L	SPIKE AMT mg/L	BS RSLT mg/L	BS % REC	SPIKE AMT mg/L	BSD RSLT mg/L	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	ND	.5	.538	108	.5	.539	108	0	80-120	20
Iron	ND	5	5.16	103	5	5.23	1D5	1	80-120	20
Manganese	ND	.5	.532	106	.5	.533	107	0	80-120	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K035
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MW-70-PMW01B-091				
CONTROL NO.:	K035-02	K035-02M	K035-02S		
LAB FILE ID:	ID8K015047	ID8K015049	ID8K015050		
DATIME EXTRCTD:	11/15/1111:41	11/15/1111:41	11/15/1111:41	DATE COLLECTED:	11/03/11 13:17
DATIME ANALYZD:	11/16/1117:33	11/16/1117:39	11/16/1117:42	DATE RECEIVED:	11/03/11
PREP. BATCH:	IPK026W	IPK026W	IPK026W		
CALIB. REF:	ID8K015044	ID8K015044	ID8K015044		

ACCESSION:

PARAMETER	SMPL RSLT mg/L	SPIKE AMT mg/L	MS RSLT mg/L	MS % REC	SPIKE AMT mg/L	MSD RSLT mg/L	MSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	.0936J	.5	.694	120	.5	.713	124	3	75-125	20
Iron	24.5	5	29.6	102	5	29.8	105	1	75-125	20
Manganese	2.44	.5	2.94	100	.5	3.01	115	2	75-125	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	MW-70-PMW01B-091	MW-70-PMW01B-091DL		
EMAX SAMP ID:	K035-02	K035-02J		
LAB FILE ID:	ID8K015047	ID8K015048		
DATE EXTRACTED:	11/15/1111:41	11/15/1111:41	DATE COLLECTED:	11/03/11 13:17
DATE ANALYZED:	11/16/1117:33	11/16/1117:36	DATE RECEIVED:	11/03/11
PREP. BATCH:	IPK026W	IPK026W		
CALIB. REF:	ID8K015044	ID8K015044		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SERIAL DIL RSLT (mg/L)	DIF RSLT %	QC LIMIT (%)
Arsenic	0.0936J	0.0872J	7	10
Iron	24.5	25.2	3	10
Manganese	2.44	2.47	1	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K035
METHOD: METHOD 3010A/6010B (DISSOLVED)

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MATRIX:	WATER		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	MW-70-PMW01B-091			
CONTROL NO.:	K035-02	K035-02A		
LAB FILE ID:	ID8K015047	ID8K015046		
DATIME EXTRCTD:	11/15/1111:41	11/15/1111:41	DATE COLLECTED:	11/03/11 13:17
DATIME ANALYZD:	11/16/1117:33	11/16/1117:30	DATE RECEIVED:	11/03/11
PREP. BATCH:	IPK026W	IPK026W		
CALIB. REF:	ID8K015044	ID8K015044		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	AS RSLT (mg/L)	AS % REC	QC LIMIT (%)
Arsenic	.0936J	.5	.727	127*	75-125
Iron	24.5	5	29.1	92	75-125
Manganese	2.44	.5	2.9	92	75-125

ICP QC CHECK TABLE

QC	ICV	CCV	ICSAB	ICSA	MLCV
Limit%	90-110	90-110	80-120	80-120	80-120
Comp	mg/L	mg/L	mg/L	mg/L	mg\L
Al	100	100	400	400	200
Sb	1.5	1.5	1	0	5
As	1	1	1	0	1
Ba	2	2	0.5	0	5
Be	1.5	1.5	0.5	0	5
B	2.5	2.5	0.5	0	5
Cd	2	2	1	0	5
Ca	75	75	500	500	250
Cr	2.5	2.5	0.5	0	5
Co	1	1	0.5	0	1
Cu	2.5	2.5	0.5	0	5
Fe	25	25	200	200	200
Pb	2.5	2.5	1	0	5
Li	0.5	0.5	1	0	0.5
Mg	60	60	200	200	100
Mn	2.5	2.5	0.5	0	5
Mo	2.5	2.5	1	0	5
Ni	2.5	2.5	1	0	5
K	60	60	75	0	250
Se	1	1	1	0	1
Ag	0.5	0.5	1	0	0.5
Na	60	60	75	0	150
Sr	0.5	0.5	0.5	0	0.5
Tl	2.5	2.5	1	0	5
Sn	0.5	0.5	1	0	0.5
Ti	0.5	0.5	1	0	0.5
V	1.5	1.5	0.5	0	5
Zn	2.5	2.5	1	0	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 11/16/11 15:17

End Date: 11/16/11 20:00

SOP #	Rev. #
☑ EMAX-6010	7
☐ EMAX-6010C	1
☐ EMAX-200.7	2
☐ EMAX-	

Comments:

- K476-12 TCLP to be diluted matrix interference MOZNR.

Book #: AD8-021

Instrument No.: D8

Analytical Batch: 1D8K015

Analytical Sequence: S-11K6010(V23)

Method File: 11K6010(V23)

Database: Emax14

	STANDARDS ID		STANDARDS ID
S0	SM1B14-7805	S30	SM1B14-6802
S1	NA	S31	6803
S2		ICV	8201
S3		CCV	8301
S4		ICSA	8502
S5		ICSAB	6702
S6		CRI/MRL1	8101
S7		MRL2	7401
S8			
S9			
S10			
S11			
S12			
S16			
S17			
S18			
S20	SM1B14-8401		
S21	6503		
S22	6504		
S23	8402		
S24	6702		
S25	6703		
S26	7801		
S27	7802		
S28	7803		
S29	7804		

Analyzed By: TH

Date: 11/17/11

SEQUENCE FILE : ID8K015

4-18	19-33	34-43	44-53	54-63
LFID	LSID	TIME	DATE	DF
ID8K015001	Blank	15:17	11/16/11	1.000
ID8K015002	S20	15:20	11/16/11	1.000
ID8K015003	S21	15:23	11/16/11	1.000
ID8K015004	S22	15:26	11/16/11	1.000
ID8K015005	S23	15:29	11/16/11	1.000
ID8K015006	S24	15:32	11/16/11	1.000
ID8K015007	S25	15:35	11/16/11	1.000
ID8K015008	S26	15:38	11/16/11	1.000
ID8K015009	S27	15:41	11/16/11	1.000
ID8K015010	S28	15:44	11/16/11	1.000
ID8K015011	S29	15:47	11/16/11	1.000
ID8K015012	S30	15:50	11/16/11	1.000
ID8K015013	S31	15:53	11/16/11	1.000
ID8K015014	ICV	15:56	11/16/11	1.000
ID8K015015	ICB	15:59	11/16/11	1.000
ID8K015016	MRLK1601	16:02	11/16/11	1.000
ID8K015017	MRLK1602	16:05	11/16/11	1.000
ID8K015018	ICSA1	16:08	11/16/11	1.000
ID8K015019	ICSA81	16:11	11/16/11	1.000
ID8K015020	CCV1	16:14	11/16/11	1.000
ID8K015021	CCB1	16:17	11/16/11	1.000
ID8K015022	IPK026W8	16:20	11/16/11	1.000
ID8K015023	IPK026WL	16:23	11/16/11	1.000
ID8K015024	ZZZZ	16:25	11/16/11	1.000
ID8K015025	K018-03A	16:28	11/16/11	1.000
ID8K015026	K018-03	16:31	11/16/11	1.000
ID8K015027	K018-03J	16:34	11/16/11	5.000
ID8K015028	K018-03M	16:37	11/16/11	1.000
ID8K015029	K018-03S	16:39	11/16/11	1.000
ID8K015030	K018-01	16:42	11/16/11	1.000
ID8K015031	Blank	16:45	11/16/11	1.000
ID8K015032	CCV2	16:48	11/16/11	1.000
ID8K015033	CCB2	16 51	11/16/11	1 000
ID8K015034	IPK026WC	16.54	11/16/11	1.000
ID8K015035	K018-02	16:57	11/16/11	1.000
ID8K015036	K114-01	17:00	11/16/11	1.000
ID8K015037	K114-02	17:03	11/16/11	1.000
ID8K015038	K114-03	17:06	11/16/11	1.000
ID8K015039	K052-01	17:09	11/16/11	1.000
ID8K015040	K055-01	17:12	11/16/11	1.000
ID8K015041	K056-01	17:15	11/16/11	1 000
ID8K015042	K057-01	17:18	11/16/11	1.000
ID8K015043	Blank	17:21	11/16/11	1.000
ID8K015044	CCV3	17:24	11/16/11	1.000
ID8K015045	CCB3	17:27	11/16/11	1.000
ID8K015046	K035-02A	17:30	11/16/11	1.000
ID8K015047	K035-02	17:33	11/16/11	1.000
ID8K015048	K035-02J	17:36	11/16/11	5.000
ID8K015049	K035-02M	17:39	11/16/11	1.000
ID8K015050	K035-02S	17:42	11/16/11	1 000
ID8K015051	K035-01	17:45	11/16/11	1.000
ID8K015052	K035-03	17:48	11/16/11	1.000

1D8K015053	K035-04	17:52	11/16/11	1.000
1D8K015054	K035-05	17:55	11/16/11	1.000
1D8K015055	Blank	17:58	11/16/11	1.000
1D8K015056	CCV4	18:01	11/16/11	1.000
1D8K015057	CCB4	18:04	11/16/11	1.000
1D8K015058	K476-03	18:07	11/16/11	1.000
1D8K015059	K478-03	18:10	11/16/11	1.000
1D8K015060	K473-05	18:13	11/16/11	1.000
1D8K015061	Blank	18:15	11/16/11	1.000
1D8K015062	CCV5	18:18	11/16/11	1.000
1D8K015063	CCB5	18:21	11/16/11	1.000
1D8K015064	1PK028WB	18:24	11/16/11	1.000
1D8K015065	1PK028WL	18:27	11/16/11	1.000
1D8K015066	1PK028WC	18:30	11/16/11	1.000
1D8K015067	TXK005W8	18:33	11/16/11	1.000
1D8K015068	K426-10A	18:36	11/16/11	1.000
1D8K015069	K426-10	18:39	11/16/11	1.000
1D8K015070	K426-10J	18:42	11/16/11	5.000
1D8K015071	K426-10M	18:45	11/16/11	1.000
1D8K015072	K426-10S	18:48	11/16/11	1.000
1D8K015073	Blank	18:50	11/16/11	1.000
1D8K015074	CCV6	18:53	11/16/11	1.000
1D8K015075	CCB6	18:56	11/16/11	1.000
1D8K015076	TXK006SB	18:59	11/16/11	1.000
1D8K015077	K426-12	19:02	11/16/11	1.000
1D8K015078	K426-01	19:05	11/16/11	1.000
1D8K015079	K426-02	19:08	11/16/11	1.000
1D8K015080	K426-03	19:12	11/16/11	1.000
1D8K015081	K426-04	19:15	11/16/11	1.000
1D8K015082	K426-05	19:18	11/16/11	1.000
1D8K015083	K426-06	19:21	11/16/11	1.000
1D8K015084	Blank	19:24	11/16/11	1.000
1D8K015085	CCV7	19:27	11/16/11	1.000
1D8K015086	CCB7	19:30	11/16/11	1.000
1D8K015087	K426-07A	19:33	11/16/11	1.000
1D8K015088	K426-07	19:36	11/16/11	1.000
1D8K015089	K426-07J	19:39	11/16/11	5.000
1D8K015090	K426-07M	19:42	11/16/11	1.000
1D8K015091	K426-07S	19:45	11/16/11	1 000
1D8K015092	K426-08	19:48	11/16/11	1.000
1D8K015093	K426-09	19:51	11/16/11	1.000
1D8K015094	Blank	19:54	11/16/11	1.000
1D8K015095	CCV8	19:57	11/16/11	1.000
1D8K015096	CCB8	20:00	11/16/11	1.000

VERSON : 11A UNIT : % SUMMARY of ICV and CCV : 1D8K015 DATE : 11/16/11 INST : EMAXT

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S26	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	103	99	106	96	101	99	100	102	99	96	103	100	97	108	93	99	100	99	99	105	103	102	98	92	94	100	101	104
ICB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK1601	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK1602	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA1	98	----	----	----	----	----	----	96	----	----	----	94	----	----	95	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSAB1	99	104	107	99	101	103	95	95	94	94	105	94	95	120	96	101	102	97	105	106	109	107	97	85	93	102	98	103
CCV1	102	100	103	98	99	97	97	101	96	94	99	98	96	103	94	100	100	97	99	103	100	102	97	91	101	100	98	103
CCB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK026WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK026WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ZZZZ	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K018-03A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K018-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K018-03J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K018-03M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K018-03S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K018-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	103	100	103	98	99	97	97	101	96	94	99	98	96	103	94	100	100	97	99	103	101	103	97	91	100	100	98	103
CCB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK026WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K018-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K114-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K114-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K114-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K052-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K055-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K056-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K057-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	103	100	103	98	99	97	97	101	96	94	99	98	95	103	95	100	100	97	100	102	101	103	97	91	100	100	99	103
CCB3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K035-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K035-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K035-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K035-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K035-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K035-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K035-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K035-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K035-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	102	100	103	96	96	97	97	99	97	94	101	98	95	101	90	96	100	98	100	103	102	103	97	90	100	97	99	102
CCB4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K476-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K478-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K473-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	102	100	102	98	97	96	95	100	95	94	99	97	96	102	92	98	100	97	100	102	100	103	97	90	101	99	99	102
CCB5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK028WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK028WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK028WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TXK005WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-10A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-10J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-10M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-10S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	103	100	101	99	99	96	95	100	95	94	98	97	96	105	94	99	101	97	100	101	100	103	97	90	101	100	98	102
CCB6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TXK006SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	103	100	102	99	98	96	95	100	94	94	98	97	95	104	93	98	100	97	100	101	99	103	97	90	101	100	98	102
CCB7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-07A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-07J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-07M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-07S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	103	101	103	98	97	97	96	100	95	95	100	98	96	103	91	97	101	98	100	103	100	104	98	91	101	99	99	102
CCB8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

QC limit of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC Limit

VERSON : 11A UNIT : UG/L SUMMARY of CALIBRATION BLANKS : ID8K015 (WATER) DATE : 11/16/11 INST : EMAXT

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S26	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICB	3.94	.650	-1.04	.030	.080	3.57	.080	8.90	.110	.210	-.010	-3.50	-.670	.260	-1.46	.890	.110	-.020	123	.070	.010	-5.57	.040	.070	.160	.160	.070	.720
MRLK1601	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK1602	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA1	----	-.470	1.83	.080	.060	19.3	7.19	----	.500	-.560	1.01	----	4.90	21.5	----	1.18	-1.14	1.29	103	.000	.100	31.6	.960	-2.47	1.43	4.50	.470	2.55
ICSAB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB1	7.62	.940	-.490	.090	.090	3.65	.130	18.2	.130	.030	.180	-.760	-.490	.430	7.52	.210	.250	.120	187	-2.31	-.010	5.50	.080	.160	-.020	.110	.120	.460
1PK026WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK026WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ZZZZ	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K018-03A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K018-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K018-03J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K018-03M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K018-03S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K018-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB2	2.38	1.35	-1.55	-.050	.040	3.79	.090	3.09	.050	.100	.100	-2.78	-.540	1.000	-5.62	.110	-.160	.150	147	-.220	.080	5.35	.000	-.270	.310	-.280	.140	.030
1PK026WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K018-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K114-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K114-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K114-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K052-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K055-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K056-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K057-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB3	2.53	.740	-.310	.070	.080	4.86	.050	6.54	.070	.090	.170	-2.89	-.350	.400	-3.59	.320	.180	.030	164	-.170	.040	69.2	.070	-.090	.410	-.030	.030	.180
K035-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K035-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K035-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K035-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K035-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K035-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K035-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K035-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K035-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB4	3.40	.310	-.620	.000	.070	1.77	.090	7.09	.150	.030	.190	-3.85	-.540	.450	-1.68	.260	.200	.140	163	-.540	-.070	305	.140	-.080	.230	.040	.090	.120
K476-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K478-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K473-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB5	5.22	.960	.590	.080	.120	2.31	.120	6.93	.070	.030	.070	-.810	-.150	.630	-1.15	.450	.180	.140	129	-.520	.090	147	.050	.160	.270	-.160	.100	.050
IPK028WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK028WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK028WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TXK005WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-10A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-10J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-10M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-10S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB6	1.29	1.48	.190	-.050	.080	2.69	.110	5.88	.000	.000	.140	-2.88	-1.08	.550	4.30	.360	.190	.010	211	-.460	.120	197	.110	.290	.690	-.160	.080	.030
TXK006SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB7	1.000	-.520	-.090	-.020	.060	2.70	.090	4.92	070	.010	.240	-4.29	-.640	.520	1.73	.280	.180	.000	152	-.720	-.050	189	.040	-.180	.330	-.020	.190	.150
K426-07A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-07J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-07M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-07S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K426-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB8	8.24	.880	-.410	.090	090	2.47	.170	47.7	.180	040	250	-1.35	-.110	.720	-1.61	.390	.240	.200	165	.140	.050	214	.180	.210	.240	.040	.140	2.22

QC limit of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC Limit

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
1	0	0	0	0	Unk	S0		ID8K015001			1	☒	unk	---
2	0	0	0	0	Unk	S20		ID8K015002			1	☒	unk	---
3	0	0	0	0	Unk	S21		ID8K015003			1	☒	unk	---
4	0	0	0	0	Unk	S22		ID8K015004			1	☒	unk	---
5	0	0	0	0	Unk	S23		ID8K015005			1	☒	unk	---
6	0	0	0	0	Unk	S24		ID8K015006			1	☒	unk	---
7	0	0	0	0	Unk	S25		ID8K015007			1	☒	unk	---
8	0	0	0	0	Unk	S26		ID8K015008			1	☒	unk	---
9	0	0	0	0	Unk	S27		ID8K015009			1	☒	unk	---
10	0	0	0	0	Unk	S28		ID8K015010			1	☒	unk	---
11	0	0	0	0	Unk	S29		ID8K015011			1	☒	unk	---
12	0	0	0	0	Unk	S30		ID8K015012			1	☒	unk	---
13	0	0	0	0	Unk	S31		ID8K015013			1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8K015014			1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8K015015			1	☒	3XIDL	None
16	3	2	3	1	QC	MRLK1601		ID8K015016			1	☒	MRL-EMAX	None
17	4	2	4	1	QC	MRLK1602		ID8K015017			1	☒	MRL-AFCEE	None
18	5	2	5	1	QC	ICSA1		ID8K015018			1	☒	ICSA	None
19	6	2	6	1	QC	ICSAB1		ID8K015019			1	☒	ICSAB	None
20	7	2	7	1	QC	CCV1		ID8K015020			1	☒	CCV	None
21	8	2	8	1	QC	CCB1		ID8K015021			1	☒	3XIDL	None
22	9	2	9	1	QC	IPK026WB		ID8K015022			1	☒	1/2LOQ	None
23	10	2	10	1	QC	IPK026WL		ID8K015023			1	☒	LCS	None
24	11	2	11	1	QC	ZZZZ		ID8K015024			1	☒	LCS	None
25	12	2	12	1	Unk	K018-03A		ID8K015025			1	☒	unk	---
26	13	2	1	2	Unk	K018-03		ID8K015026			1	☒	unk	---
27	14	2	2	2	Unk	K018-03J		ID8K015027			1	☒	unk	---
28	15	2	3	2	Unk	K018-03M		ID8K015028			1	☒	unk	---
29	16	2	4	2	Unk	K018-03S		ID8K015029			1	☒	unk	---
30	17	2	5	2	Unk	K018-01		ID8K015030			1	☒	unk	---
31	18	2	6	2	Blank	Blank		ID8K015031			1	☐		---
32	19	2	7	2	QC	CCV2		ID8K015032			1	☒	CCV	None
33	20	2	8	2	QC	CCB2		ID8K015033			1	☒	3XIDL	None
34	50	2	2	5	QC	IPK026WC		ID8K015034			1	☒	LCS	None
35	21	2	9	2	Unk	K018-02		ID8K015035			1	☒	unk	---
36	22	2	10	2	Unk	K114-01		ID8K015036			1	☒	unk	---
37	23	2	11	2	Unk	K114-02		ID8K015037			1	☒	unk	---
38	24	2	12	2	Unk	K114-03		ID8K015038			1	☒	unk	---
39	25	2	1	3	Unk	K052-01		ID8K015039			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	ConFact	Check	Check Table	Fail Action
40	26	2	2	3	Unk	K055-01		ID8K015040			1	☒	unk	---
41	27	2	3	3	Unk	K056-01		ID8K015041			1	☒	unk	---
42	28	2	4	3	Unk	K057-01		ID8K015042			1	☒	unk	---
43	29	2	5	3	Blank	Blank		ID8K015043			1	☐		---
44	30	2	6	3	QC	CCV3		ID8K015044			1	☒	CCV	None
45	31	2	7	3	QC	CCB3		ID8K015045			1	☒	3XIDL	None
46	32	2	8	3	Unk	K035-02A	DISS	ID8K015046			1	☒	unk	---
47	33	2	9	3	Unk	K035-02	DISS	ID8K015047			1	☒	unk	---
48	34	2	10	3	Unk	K035-02J	DISS	ID8K015048			1	☒	unk	---
49	35	2	11	3	Unk	K035-02M	DISS	ID8K015049			1	☒	unk	---
50	36	2	12	3	Unk	K035-02S	DISS	ID8K015050			1	☒	unk	---
51	37	2	1	4	Unk	K035-01	DISS	ID8K015051			1	☒	unk	---
52	38	2	2	4	Unk	K035-03	DISS	ID8K015052			1	☒	unk	---
53	39	2	3	4	Unk	K035-04	DISS	ID8K015053			1	☒	unk	---
54	40	2	4	4	Unk	K035-05	DISS	ID8K015054			1	☒	unk	---
55	41	2	5	4	Blank	Blank		ID8K015055			1	☐		---
56	42	2	6	4	QC	CCV4		ID8K015056			1	☒	CCV	None
57	43	2	7	4	QC	CCB4		ID8K015057			1	☒	3XIDL	None
58	44	2	8	4	Unk	K476-03		ID8K015058			1	☒	unk	---
59	45	2	9	4	Unk	K478-03		ID8K015059			1	☒	unk	---
60	46	2	10	4	Unk	K473-05		ID8K015060			1	☒	unk	---
61	47	2	11	4	Blank	Blank		ID8K015061			1	☐		---
62	48	2	12	4	QC	CCV5		ID8K015062			1	☒	CCV	None
63	49	2	1	5	QC	CCB5		ID8K015063			1	☒	3XIDL	None
64	51	2	3	5	QC	IPK028WB		ID8K015064			1	☒	1/2LOQ	None
65	52	2	4	5	QC	IPK028WL		ID8K015065			1	☒	LCS	None
66	53	2	5	5	QC	IPK028WC		ID8K015066			1	☒	LCS	None
67	54	2	6	5	QC	TXK005WB	TCLP	ID8K015067			1	☒	1/2LOQ	None
68	55	2	7	5	Unk	K426-10A	TCLP	ID8K015068			1	☒	unk	---
69	56	2	8	5	Unk	K426-10	TCLP	ID8K015069			1	☒	unk	---
70	57	2	9	5	Unk	K426-10J	TCLP	ID8K015070			1	☒	unk	---
71	58	2	10	5	Unk	K426-10M	TCLP	ID8K015071			1	☒	unk	---
72	59	2	11	5	Unk	K426-10S	TCLP	ID8K015072			1	☒	unk	---
73	60	2	12	5	Blank	Blank		ID8K015073			1	☐		---
74	61	3	1	1	QC	CCV6		ID8K015074			1	☒	CCV	None
75	62	3	2	1	QC	CCB6		ID8K015075			1	☒	3XIDL	None
76	63	3	3	1	QC	TXK006SB	TCLP	ID8K015076			1	☒	felec	None
77	64	3	4	1	Unk	K426-12	TCLP	ID8K015077			1	☒	unk	---
78	65	3	5	1	Unk	K426-01	TCLP	ID8K015078			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
79	66	3	6	1	Unk	K426-02	TCLP	ID8K015079			1	☒	unk	---
80	67	3	7	1	Unk	K426-03	TCLP	ID8K015080			1	☒	unk	---
81	68	3	8	1	Unk	K426-04	TCLP	ID8K015081			1	☒	unk	---
82	69	3	9	1	Unk	K426-05	TCLP	ID8K015082			1	☒	unk	—
83	70	3	10	1	Unk	K426-06	TCLP	ID8K015083			1	☒	unk	—
84	71	3	11	1	Blank	Blank		ID8K015084			1	☐		—
85	72	3	12	1	QC	CCV7		ID8K015085			1	☒	CCV	None
86	73	3	1	2	QC	CCB7		ID8K015086			1	☒	3XIDL	None
87	74	3	2	2	Unk	K426-07A	TCLP	ID8K015087			1	☒	unk	---
88	75	3	3	2	Unk	K426-07	TCLP	ID8K015088			1	☒	unk	---
89	76	3	4	2	Unk	K426-07J	TCLP	ID8K015089			1	☒	unk	—
90	77	3	5	2	Unk	K426-07M	TCLP	ID8K015090			1	☒	unk	—
91	78	3	6	2	Unk	K426-07S	TCLP	ID8K015091			1	☒	unk	—
92	79	3	7	2	Unk	K426-08	TCLP	ID8K015092			1	☒	unk	---
93	80	3	8	2	Unk	K426-09	TCLP	ID8K015093			1	☒	unk	—
94	81	3	9	2	Blank	Blank		ID8K015094			1	☐		—
95	82	3	10	2	QC	CCV8		ID8K015095			1	☒	CCV	None
96	83	3	11	2	QC	CCB8		ID8K015096			1	☒	3XIDL	None

ID8K015 Section 1 of 3

INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID
1	Blank	.00109	.00002	-.00001	.00024	.00003	.00066	-.00004	.00023	-.00006	-.00107	Blank
2	S20					.97860		.12136				S20
3	S21					9.7254		1.1768				S21
4	S22				.55379						.16078	S22
5	S23				5.5177						1.6312	S23
6	S24						.09985					S24
7	S25						1.0186					S25
8	S26	.22614							.91149	.14297		S26
9	S27	8.2423							8.4820	1.3738		S27
10	S28		.00490									S28
11	S29		.04827									S29
12	S30			.00120								S30
13	S31			.00483								S31
14	ICV	103.49	1.4879	1.0578	1.9294	1.5095	2.4806	2.0100	76.208	2.4874	.95506	ICV
15	ICB	.00394	.00065	-.00104	.00003	.00008	.00357	.00008	.00890	.00011	.00021	ICB
16	MRLK1601	.21029	.09814	.01038	.01005	.01024	.09599	.01061	1.0451	.01063	.00966	MRLK1601
17	MRLK1602	.20367	.04843	.00913	.00489	.00400	.09602	.00527	.52424	.01015	.00952	MRLK1602
18	ICSA1	393.81	-.00047	.00183	.00008	.00006	.01930	.00719	477.70	.00050	-.00056	ICSA1
19	ICSAB1	396.56	1.0375	1.0667	.49716	.50585	.51555	.94524	476.99	.46830	.46919	ICSAB1
20	CCV1	102.16	1.5070	1.0320	1.9593	1.4827	2.4158	1.9398	75.489	2.3924	.93970	CCV1
21	CCB1	.00762	.00094	-.00049	.00009	.00009	.00365	.00013	.01819	.00013	.00003	CCB1
22	IPK026WB	.00112	.00001	-.00039	-.00021	.00000	.00148	.00003	.00084	.00002	-.00002	IPK026WB
23	IPK026WL	5.4541	2.6061	.53822	.51126	.52858	.51368	.51818	51.675	.50373	.49214	IPK026WL
24	ZZZZ	******	2.4959	.51577	.51416	.53210	.51477	.49955	51.716	******	.49260	ZZZZ
25	K018-03A	5.8001	2.5922	.57110	.56151	.55736	.59400	.54328	66.825	.53015	.51576	K018-03A
26	K018-03	.08571	.00171	.00077	.02484	.00003	.08289	.00000	15.993	.00031	-.00001	K018-03
27	K018-03J	.01602	.00169	.00033	.00478	-.00001	.01692	.00005	3.2056	.00003	.00001	K018-03J
28	K018-03M	5.5331	2.6327	.55047	.52508	.51946	.60453	.51973	67.493	.51076	.49582	K018-03M
29	K018-03S	5.4691	2.6099	.54515	.51751	.51085	.59990	.51474	67.020	.50511	.49188	K018-03S
30	K018-01	.03530	.00086	.00141	.23247	.00004	.36188	.00041	94.916	.00041	-.00024	K018-01
31	Blank	-.00129	.00070	.00077	-.00025	.00000	.00058	.00005	.00209	-.00002	.00001	Blank
32	CCV2	102.87	1.5013	1.0307	1.9600	1.4823	2.4257	1.9444	75.584	2.4049	.93799	CCV2
33	CCB2	.00238	.00135	-.00155	-.00005	.00004	.00379	.00009	.00309	.00005	.00010	CCB2
34	IPK026WC	5.4764	2.5966	.53868	.50945	.53035	.51898	.52117	52.246	.51000	.49441	IPK026WC
35	K018-02	.04889	-.00012	-.00093	.69491	.00002	.04648	.00037	115.13	.00216	.02079	K018-02
36	K114-01	.05790	.00208	.00177	.10631	.00018	1.6050	.00036	252.13	.00315	.00069	K114-01
37	K114-02	.13633	.00113	.00038	1.4545	.00012	2.0121	.00115	267.28	.02101	.00021	K114-02
38	K114-03	.19085	.00031	.00513	.75138	.00006	1.7429	.00255	385.58	.00289	.00091	K114-03
39	K052-01	.80873	.00153	.00153	.01738	-.00001	.01634	.00017	8.9168	.00169	.00102	K052-01
40	K055-01	2.4335	.00080	.00277	.04688	.00010	.02793	.00040	38.417	.00749	.00130	K055-01
41	K056-01	2.5585	.00162	.00146	.07922	.00001	.09480	.00009	120.01	.00387	.00201	K056-01
42	K057-01	.68588	.00037	.00132	.02442	.00001	.05385	.00026	27.132	.00425	.00041	K057-01
43	Blank	.00055	.00041	-.00088	-.00013	.00000	.00249	.00006	-.00026	-.00006	-.00007	Blank
44	CCV3	103.10	1.4984	1.0260	1.9568	1.4896	2.4244	1.9454	75.619	2.4066	.94020	CCV3
45	CCB3	.00253	.00074	-.00031	.00007	.00008	.00486	.00005	.00654	.00007	.00009	CCB3
46	K035-02A	6.1800	2.8166	.72724	.73004	.52921	.79504	.53164	549.58	.53230	.52730	K035-02A
47	K035-02	.01729	-.00013	.09362	.20405	-.00002	.25706	.00068	515.82	.00035	-.00098	K035-02
48	K035-02J	.00747	-.00001	.01745	.03991	.00002	.04986	.00004	107.69	.00036	-.00021	K035-02J
49	K035-02M	5.8372	2.8224	.69382	.70708	.49768	.80527	.50096	563.87	.49787	.49427	K035-02M
50	K035-02S	6.0642	2.9250	.71293	.73479	.51671	.82525	.51268	563.67	.51001	.50890	K035-02S
51	K035-01	.02542	.00071	.08189	.01538	.00001	.20283	.00000	256.97	.00060	-.00014	K035-01
52	K035-03	.02456	-.00034	.35339	.03447	.00000	.35906	.00118	720.62	.00039	-.00126	K035-03

53	K035-04	.03169	-.00042	.05405	.15034	-.00001	.22624	.00015	455.25	.00073	-.00095	K035-04
54	K035-05	.02251	.00032	.35784	.03400	-.00002	.36156	.00111	724.74	.00048	-.00124	K035-05
55	Blank	.00047	.00081	-.00077	-.00008	.00003	-.00047	.00005	.05342	-.00007	-.00001	Blank
56	CCV4	101.62	1.4992	1.0348	1.9230	1.4414	2.4349	1.9349	74.533	2.4128	.94320	CCV4
57	CCB4	.00340	.00031	-.00062	.00000	.00007	.00177	.00009	.00709	.00015	.00003	CCB4
58	K476-03	.69360	.00126	.00146	.03404	.00002	.01474	.00055	4.3436	.00371	.00150	K476-03
59	K478-03	.69822	.00405	.00132	.05384	.00003	.06379	.00130	8.6398	.00353	.00064	K478-03
60	K473-05	.38329	.00142	.00110	.02148	.00003	.00494	.00285	2.4134	.00173	.00082	K473-05
61	Blank	-.00129	.00078	-.00045	-.00020	-.00002	-.00135	.00002	-.00260	.00006	-.00010	Blank
62	CCV5	101.95	1.4943	1.0161	1.9555	1.4608	2.4028	1.9018	74.728	2.3665	.94046	CCV5
63	CCB5	.00522	.00096	.00059	.00008	.00012	.00231	.00012	.00693	.00007	.00003	CCB5
64	IPK028WB	.00006	.00092	-.00018	-.00015	.00000	.00072	.00004	.01253	.00015	.00000	IPK028WB
65	IPK028WL	5.4684	2.6045	.54151	.50631	.51977	.51835	.51670	51.472	.50899	.49980	IPK028WL
66	IPK028WC	5.2598	2.5322	.52714	.48349	.49420	.50451	.50084	49.878	.49432	.48311	IPK028WC
67	TXK005WB	.00307	.00043	-.00027	.00011	.00001	.01941	.00003	.03902	.00007	-.00001	TXK005WB
68	K426-10A	5.9594	2.7057	.60150	1.6258	.52461	.84136	.53385	92.610	.52799	.52270	K426-10A
69	K426-10	.06987	.01369	-.00009	1.1236	.00001	.32050	.00016	44.316	.00178	.00119	K426-10
70	K426-10J	.01516	.00230	.00082	.23058	-.00003	.06317	.00013	9.3585	.00038	.00012	K426-10J
71	K426-10M	5.7650	2.7733	.57991	1.8036	.50417	.90347	.50632	99.801	.49795	.49608	K426-10M
72	K426-10S	5.7480	2.7457	.57474	1.6341	.51009	.8511B	.50877	93.687	.49938	.49636	K426-10S
73	Blank	-.00263	.00125	-.00143	-.00010	-.00002	.00053	.00007	.00176	-.00002	.00006	Blank
74	CCV6	103.21	1.4948	1.0149	1.9853	1.4842	2.4028	1.9049	74.765	2.3635	.94096	CCV6
75	CCB6	.00129	.00148	.00019	-.00005	.00008	.00269	.00011	.00588	.00000	.00000	CCB6
76	TXK006S8	.02412	.00118	-.00151*	.00083	.00000	.04221*	.00000	.00738	.00014	.00001	TXK006S8
77	K426-12	.03613	.00528	.01131	.06714	-.00053	.79427	.01389	4.0732	.00256	-.02037*	K426-12
78	K426-01	.04284	.00136	-.00146	.87100	-.00001	.16423	.00044	5.0148	.00123	.00004	K426-01
79	K426-02	.11300	.00196	.00065	.72996	-.00001	.21569	.00346	6.1911	.00107	.00055	K426-02
80	K426-03	.16410	.48756	-.00044	.24733	-.00001	.35602	.11604	7.2460	.00119	-.00019	K426-03
81	K426-04	.03406	.00115	-.00180	.37518	.00001	.35862	00028	2.0404	.00020	.00004	K426-04
82	K426-05	.21955	.08291	-.00132	.47115	.00000	.18377	.03372	4.8593	.00553	-.00125	K426-05
83	K426-06	.07289	.00026	.00024	.64230	-.00001	.12203	.00092	6.6372	.01067	.00522	K426-06
84	Blank	-.00160	.00000	.00016	-.00014	.00003	-.00017	.00007	-.00455	.00000	-.00003	Blank
85	CCV7	103.01	1.4930	1.0152	1.9705	1.4752	2.3997	1.9025	74.661	2.3599	.93934	CCV7
86	CCB7	00100	-.00052	-.00009	-.00002	.00006	.00270	.00009	.00492	.00007	.00001	CCB7
87	K426-07A	5.8297	2.6641	.59956	.69997	.53136	.74801	.53213	154.40	.52936	.52862	K426-07A
88	K426-07	.01606	.00137	.00015	.17684	.00004	.23128	.00010	109.58	.00096	.00142	K426-07
89	K426-07J	.00510	-.00033	- 00002	.03661	-.00004	.04655	.00003	23.162	.00025	.00025	K426-07J
90	K426-07M	5.6335	2.7283	57852	.65810	.50369	.74676	.51204	152 50	50559	.50504	K426-07M
91	K426-07S	5.5616	2.6825	56893	.65618	.50315	.73489	.50224	150.44	.49793	.49835	K426-07S
92	K426-08	.09482	.00183	- 00083	.33472	.00004	.13319	.00144	8.4566	.00097	.00035	K426-08
93	K426-09	.01171	.00030	-.00066	.15008	.00002	.24330	00075	125.58	00048	.00197	K426-09
94	Blank	.00099	.00068	- 00022	-.00007	.00000	-.00066	.00008	.02185	-.00003	.00009	Blank
95	CCV8	103.03	1.5090	1.0286	1.9631	1.4590	2.4183	1.9185	74.787	2.3792	.94537	CCV8
96	CCB8	.00824	.00088	-.00041	.00009	.00009	.00247	.00017	.04768*	.00018	.00004	CCB8
INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID

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INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID
1	Blank	.00103	.00002	.00019	-.00035	.00001	.00004	.00006	-.00070	-.00049	.00001	Blank
2	S20			.20559			.08820					S20
3	S21			2.0501			.89398					S21
4	S22	.28851	05034									S22
5	S23	2.8336	1.9775									S23
6	S24							.75183				S24
7	S25							7.5222				S25
8	S26								.79256	.41977		S26
9	S27								7.5718	4.0736		S27
10	S28					.02220						S28
11	S29					.22808						S29
12	S30				.03065						.00136	S30
13	S31				.15087						.00547	S31
14	ICV	2.5636	25.017	2.4329	.54146	55.965	2.4784	2.5047	2.4791	59.325	1.0489	ICV
15	ICB	-.00001	-.00350	-.00067	.00026	-.00146	.00089	.00011	-.00002	.12309	.00007	ICB
16	MRLK1601	.01047	.21231	.01004	.01032	.95347	.01090	.01026	.01039	.99005	.01015	MRLK1601
17	MRLK1602	.01011	.10371	.00234*	.10221	.18115	.00528	.00965	.01027	.97260	.01018	MRLK1602
18	ICSA1	.00101	188.76	.00490	.02152	190.78	.00118	-.00114	.00129	.10256	.00000	ICSA1
19	ICSAB1	.52530	188.80	.95138	1.2027*	191.13	.50518	1.0208	.96885	78.398	1.0551	ICSAB1
20	CCV1	2.4665	24.411	2.3912	.51389	56.469	2.5001	2.5014	2.4342	59.226	1.0317	CCV1
21	CCB1	.00018	-.00076	-.00049	.00043	.00752	.00021	.00025	.00012	.18693	-.00231	CCB1
22	IPK026WB	.00025	.00329	-.00084	.00040	-.00991	.00008	.00001	.00008	.08910	-.00052	IPK026WB
23	IPK026WL	.51004	5.1605	.50493	.00263*	48.967	.53203	.53134	.51538	49.996	.53473	IPK026WL
24	ZZZZ	******	******	.50481	.00197*	49.143	.53394	.53185	.51518	50.474	.51146	ZZZZ
25	K018-03A	.54270	5.4504	.53128	.00630	56.192	.56913	.52231	.47715	51.681	.56071	K018-03A
26	K018-03	.00268	.07446	.00107	.00316	7.2146	.00365	.00106	.00056	1.6476	.00034	K018-03
27	K018-03J	.00072	.01335	.00004	.00089	1.4169	.00065	.00002	.00016	37567	- 00153	K01B-03J
28	K018-03M	.52791	5.3180	.50537	.00589	54.961	.52220	.53530	.51801	52.273	.54155	K018-03M
29	K018-03S	.52295	5.2624	.50176	.00630	54.293	.51427	.53169	.51399	51.863	.53620	K018-03S
30	K018-01	.00177	.08300	.00587	.01558	20.307	.12946	.00606	.00118	1.4397	00034	K018-01
31	Blank	-.00001	-.00238	-.00042	.00062	-.00955	-.00006	-.00013	.00011	.11052	-.00035	Blank
32	CCV2	2.4766	24 426	2.390B	.51307	56.393	2.5007	2.4955	2.4321	59.698	1 0315	CCV2
33	CCB2	.00010	-.00278	-.00054	.00100	-.00562	.00011	.00016	.00015	.14734	- 00022	CCB2
34	IPK026WC	.51583	5.2327	.50717	.00246*	49.300	.53256	.53095	.51689	50.604	53232	IPK026WC
35	K018-02	.00266	.25001	.00546	.01602	37.938	12.281	.00759	.00773	2 9487	.00031	K018-02
36	K114-01	.00247	4.8586	.00264	.11949	120.39	.47332	.03228	.01600	70.891	.00143	K114-01
37	K114-02	.01483	30.901	.00536	.12626	101.77	.56192	.00646	.00944	80 961	00085	K114-02
38	K114-03	.05270	65.450	.00624	.14338	150.05	1.3005	.01726	.01790	73.671	.00293	K114-03
39	K052-01	.01221	.78533	.00512	.00210	.94473	.03445	.00094	.00307	.93170	-.00089	K052-01
40	K055-01	.01411	2.2257	.01012	.00636	1.4493	.10296	.00085	.00422	3.5704	.00081	K055-01
41	K056-01	.01424	3.1705	01107	.02572	15.034	.10030	.00726	.00231	9.0234	00724	K056-01
42	K057-01	.01159	.84496	.00255	.00913	1.3571	.03043	.01351	.00207	3 4053	.00075	K057-01
43	Blank	.00002	-.00003	-.00039	-.00023	-.01356	-.00009	-.00013	-.00008	.11038	-.00065	Blank
44	CCV3	2.4754	24.551	2.3865	.51675	56.860	2.5034	2.4973	2.4270	59.735	1.0194	CCV3
45	CCB3	.00017	-.00289	-.00035	.00040	-.00359	.00032	.00018	.00003	.16415	-.00017	CCB3
46	K035-02A	.59858	29.118	.53199	.03983	155.69	2.9004	.54054	.48450	64.412	.63493	K035-02A
47	K035-02	.00151	24.496	.00434	.03757	110.22	2.4384	-.00096	.00045	8.2534	-.00018	K035-02
48	K035-02J	.00076	5.0305	-.00035	.00758	21.749	.49350	-.00031	-.00001	1.5716	-.00134	K035-02J
49	K035-02M	.55443	29 589	.50024	04163	159.09	2.9398	.55112	.51293	64.753	.60272	K035-02M
50	K035-02S	.57127	29.765	.51428	.04071	162.89	3.0122	.56977	.52736	66.651	.62352	K035-02S
51	K035-01	.00156	2.8679	.00164	.02080	57.296	1.3372	-.00056	.00201	4.4334	-.00051	K035-01
52	K035-03	.00176	34.024	.00541	.05426	220.50	9.9043	.06689	.00253	4.9226	-.00166	K035-03

INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID
53	K035-04	.00191	9.9159	.00359	.04343	100.84	1.6550	-.00094	.00131	9.2235	-.00001	K035-04
54	K035-05	.00187	34.428	.00502	.05486	217.41	9.7432	.06808	.00232	4.8531	.00168	K035-05
55	Blank	.00016	-.00184	-.00048	.00045	.00117	.00048	-.00008	-.00006	.19440	-.00089	Blank
56	CCV4	2.5301	24.596	2.3821	.50406	54.128	2.3991	2.4943	2.4381	60.004	1.0318	CCV4
57	CCB4	.00019	-.00385	-.00054	.00045	-.00168	.00026	.00020	.00014	.16332	-.00054	CCB4
58	K476-03	.03957	.73272	.01067	.00156	1.0395	.05704	.00041	.00530	2.1182	-.00052	K476-03
59	K478-03	.03705	.84482	.00818	.00770	1.2614	.02768	.00336	.00517	3.6792	-.00009	K478-03
60	K473-05	.02433	.47367	.00373	.00198	.56120	.04963	.00138	.00718	.62176	-.00121	K473-05
61	Blank	.00000	-.00389	-.00019	.00085	-.00366	-.00013	-.00009	.00014	.07610	-.00077	Blank
62	CCV5	2.4722	24.350	2.3885	.51243	55.215	2.4393	2.5086	2.4308	59.764	1.0174	CCV5
63	CCB5	.00007	-.00081	-.00015	.00063	-.00115	.00045	.00018	.00014	.12873	-.00052	CCB5
64	1PK028WB	.00034	-.00086	-.00067	.00068	-.00953	.00011	-.00002	.00006	.07029	-.00005	1PK028WB
65	1PK028WL	.52617	5.2529	.50856	.00286*	47.571	.51509	.53479	.52121	50.675	.53266	1PK028WL
66	1PK028WC	.51233	5.0940	.49051	.00327*	45.438	.49084	.51808	.50438	49.171	.51899	1PK028WC
67	TXK005WB	.00179	-.00231	-.00024	.00088	.00068	.00020	.00002	.00009	.17413	-.00020	TXK005WB
68	K426-10A	.58692	5.3341	.52522	.02224	111.07	.81676	.53776	.80405	81.952	.59967	K426-10A
69	K426-10	.01081	.03286	.00010	.02061	66.377	.30525	.00560	.33032	29.202	.00034	K426-10
70	K426-10J	.00263	.00416	-.00020	.00369	13.771	.06415	.00102	.06723	5.8671	-.00147	K426-10J
71	K426-10M	.55354	5.0827	.49823	.02613	123.18	.84271	.55243	.88550	87.795	.57730	K426-10M
72	K426-10S	.54676	5.0998	.49892	.02310	114.15	.80693	.54976	.83268	83.061	.57096	K426-10S
73	Blank	-.00011	-.00434	-.00067	.00042	.00321	.00169	.00008	.00005	.33738	-.00046	Blank
74	CCV6	2.4561	24.274	2.3890	.52451	56.140	2.4857	2.5169	2.4288	60.084	1.0127	CCV6
75	CCB6	.00014	-.00288	-.00108	.00055	.00430	.00036	.00019	.00001	.21137*	-.00046	CCB6
76	TXK006SB	.00079	.00119	-.00071	.00028	.00202	.00025	.00040	-.00007	.29880	.00149*	TXK006SB
77	K426-12	.12132	.08548	.01077	.02142	10.255	.00941	14.074*	.00149	5.3111	.08561	K426-12
78	K426-01	.03368	.13514	.00402	.00099	1.3247	03621	.00069	.01217	1.3994	.00086	K426-01
79	K426-02	.02399	.01128	.00090	.00181	.58272	.01183	.00025	.00537	1.7247	.00267	K426-02
80	K426-03	.00222	02308	-.00038	2.6119	1.2778	.02179	.00025	.00168	1.2368	.00134	K426-03
81	K426-04	.00662	.00981	-.00025	.00448	.38188	.00320	.00027	.00327	.84259	.00068	K426-04
82	K426-05	.46900	1.0688	.00104	.00361	1.6391	.24550	2.4226	.33995	1.0023	.00162	K426-05
83	K426-06	.04033	14.428	.00016	.00150	.70755	28945	.00002	.01655	.91355	.00125	K426-06
84	Blank	-.00001	-.00178	-.00119	.00064	-.01163	.00018	-.00009	.00005	10760	-.00135	Blank
85	CCV7	2.4603	24 272	2.3831	.52154	55.689	2.4594	2.5124	2.4262	59.850	1.0148	CCV7
86	CCB7	.00024	-.00429	-.00064	.00052	.00173	.00028	.00018	.00000	.15198	-.00072	CCB7
87	K426-07A	.57470	5.3737	.52910	.01010	76.266	.69621	.53643	1.0223	56.832	.60443	K426-07A
88	K426-07	.00466	00691	.00011	.00956	29 911	.17332	.00122	.55371	2.7968	.00107	K426-07
89	K426-07J	.00123	.00093	-.00016	.00237	6.2968	.03711	.00018	.11309	.73942	-.00115	K426-07J
90	K426-07M	.54915	5.1255	.50377	.01092	75.316	.66340	.55385	1.0564	57.070	.58716	K426-07M
91	K426-07S	.53804	5.0641	.49841	.01039	75.018	.66020	.54713	1 0373	56.651	.57788	K426-07S
92	K426-08	.03835	.10697	.00068	.01040	67860	.00974	.00055	.01520	95772	.00114	K426-08
93	K426-09	.22079	.00006	-.00085	.01340	35.966	.36809	.01991	.84377	4.2299	.00033	K426-09
94	Blank	.00013	-.00217	-.00035	.00038	-.01110	.00007	-.00013	.00015	.17635	-.00018	Blank
95	CCV8	2 4880	24.448	2.3974	.51695	54.876	2.4226	2.5249	2.4439	60.271	1.0327	CCV8
96	CCB8	.00025	-.00135	-.00011	.00072	-.00161	00039	.00024	.00020	.16491	.00014	CCB8

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INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID
1	Blank	.00010	.00151	-.00015	-.00002	.00005	.00006	-.00018	.00053	Blank
2	S20									S20
3	S21									S21
4	S22							.12846		S22
5	S23							1.2820		S23
6	S24		1.2809							S24
7	S25		7.4326							S25
8	S26									S26
9	S27									S27
10	S28				.00553					S28
11	S29				.05528					S29
12	S30	.04244		.14206		.02583	.01633		.62083	S30
13	S31	.21207		.69645		.12340	.08624		6.0171	S31
14	ICV	.51495	61.463	.49086	2.3120	.47194	.50133	1.5206	2.5975	ICV
15	ICB	.00001	-.00557	.00004	.00007	.00016	.00016	.00007	.00072	ICB
16	MRLK1601	.01033	.97735	.01035	.01101	.00049	.00973	.01053	.02116	MRLK1601
17	MRLK1602	.00997	.47446	.01011	.01045	.00937	.01006	.01015	.01117	MRLK1602
18	ICSA1	.00010	.03158	.00096	-.00247	.00143	.00450	.00047	.00255	ICSA1
19	ICSA81	1.0865	80.552	.48381	.84551	.92923	1.0231	.49053	1.0263	ICSAB1
20	CCV1	.50019	61.210	.48292	2.2739	.50305	.50117	1.4762	2.5695	CCV1
21	CCB1	-.00001	.00550	.00008	.00016	-.00002	.00011	.00012	.00046	CCB1
22	IPK026WB	-.00003	-.02200	.00002	-.00031	.00028	.00005	.00003	.00063	IPK026WB
23	IPK026WL	.51787	52.121	.50095	.49585	.49512	.53758	.51958	.53936	IPK026WL
24	ZZZZ	.51434	52.556	.50432	.47804	.49396	.53890	******	.54006	ZZZZ
25	K018-03A	.51295	80.236	.62508	.51537	.48831	.53374	.54672	.57084	K018-03A
26	K01B-03	.00016	28.498	.14224	-.00010	.00004	.00045	.00346	.00434	K018-03
27	K018-03J	.00004	5.5923	.02830	-.00013	.00011	-.00011	.00074	.00132	K018-03J
28	K018-03M	.52956	81.494	.64730	.49042	.49716	.52689	.53164	.54262	K01B-03M
29	K018-03S	.52381	80.771	.64168	.48611	.49298	.51729	.52758	.53990	K018-03S
30	K018-01	.00005	179.56	.67987	-.00015	-.00007	.00201	.02000	.00909	K018-01
31	Blank	.00009	.04280	.00014	-.00023	.00020	.00000	.00007	-.00023	Blank
32	CCV2	.50255	61.635	.48603	2.2796	.50143	.49914	1.4746	2.5657	CCV2
33	CC82	.00008	.00535	.00000	-.00027	.00031	-.00028	.00014	.00003	CCB2
34	IPK026WC	.52313	52.687	.50374	.49778	49441	53519	.52656	.54274	IPK026WC
35	K018-02	-.00029	96.668	.75287	-.00244	.00000	.00336	.00782	.00753	K018-02
36	K114-01	-.00025	786.18*	1.7178	-.00092	00113	.00330	.00019	.03700	K114-01
37	K114-02	- 00013	487.02	1.7230	- 00162	.00107	.00502	.00316	.14903	K114-02
3B	K114-03	-.00006	721.30*	2.2773	-.00324	.00127	.00592	.00429	.18511	K114-03
39	K052-01	-.00019	6.0701	.03206	.00005	.00046	.02349	.00470	.28849	K052-01
40	K055-01	-.00024	6.7305	.06642	-.00035	00010	.08893	.01244	.09602	K055-01
41	K056-01	-.00027	114.59	.33040	-.00140	-.00019	.22030	.02013	.04509	K056-01
42	K057-01	-.00007	10.680	.06398	00002	.00004	.03236	.01001	.08742	K057-01
43	Blank	-.00005	.06694	.00005	.00031	.00024	-.00019	.00009	- 00027	Blank
44	CCV3	.50380	61.666	.48281	2.2778	.50139	.50112	1.4843	2.5626	CCV3
45	CC83	.00004	.06918*	.00007	-.00009	.00041	-.00003	.00003	.0001B	CCB3
46	K035-02A	.59054	750.14*	4.6057	.46568	.49132	.51499	.56146	.5B225	K035-02A
47	K035-02	-.00017	720.31*	4.2202	-.00118	-.00051	.00239	.00020	.00302	K035-02
48	K035-02J	-.00012	146.12	.82497	-.00032	-.00019	.00150	-.00006	.00070	K035-02J
49	K035-02M	.59405	772.13*	4.6709	.43991	.49863	.51783	.52888	.55014	K035-02M
50	K035-02S	.60911	775.57*	4.7793	.45055	.51321	.53814	.54108	.56140	K035-02S
51	K035-01	-.00023	625.05	1.6372	-.00098	.00043	.00327	.00354	.00951	K035-01
52	K035-03	-.00030	1288.4*	4.5621	-.00317	-.00015	.00147	.00000	.00672	K035-03

53	K035-04	-.00029	479.26	3.7779	-.00115	-.00011	.00224	-.00008	.01765	K035-04
54	K035-05	-.00038	1281.2*	4.5924	-.00309	-.00003	.00261	.00010	.00624	K035-05
55	Blank	-.00003	.81442	.00038	-.00033	.00019	-.00015	-.00007	-.00014	Blank
56	CCV4	.50762	61.966	.48742	2.2575	.50078	.48599	1.4900	2.5527	CCV4
57	CCB4	-.00007	.30477*	.00014	-.00008	.00023	.00004	.00009	.00012	CCB4
58	K476-03	-.00004	3.9948	.03233	-.00004	.00045	.01300	.00609	.25490	K476-03
59	K478-03	-.00011	14.952	.04096	-.00035	.00053	.02133	.00525	.35214	K478-03
60	K473-05	-.00003	4.2729	.01060	-.00041	.00027	.00909	.01080	.39838	K473-05
61	Blank	-.00006	.15440	.00003	.00009	.00018	-.00001	.00017	-.00015	Blank
62	CCV5	.49771	61.632	.48440	2.2430*	.50521	.49541	1.4779	2.5569	CCV5
63	CCB5	.00009	.14691*	.00005	.00016	.00027	-.00016	.00010	.00005	CCB5
64	IPK028W8	.00003	.12192	.00013	-.00019	.00009	-.00011	-.00001	.00074	IPK028W8
65	IPK028WL	.52737	52.881	.50587	.49356	.49839	.52758	.53142	.54099	IPK028WL
66	IPK028WC	.51206	51.215	.49152	.47864	.48226	.50411	.51583	.52208	IPK028WC
67	TXK005W8	.00002	.71893*	.00052	.00024	.00016	-.00023	.00019	.00416	TXK005W8
68	K426-10A	.56019	634.28	.91616	.47396	.48795	.50881	.55001	.63674	K426-10A
69	K426-10	.00005	593.89	.43805	-.00070	.00082	.00095	-.00011	.05671	K426-10
70	K426-10J	.00012	128.03	.09030	-.00007	.00067	-.00011	-.00012	.01280	K426-10J
71	K426-10M	.56858	724.07*	1.0033	.44980	.49804	.52095	.52474	.61475	K426-10M
72	K426-10S	.56362	636.08	.93634	.45361	.49609	.52472	.52438	.60369	K426-10S
73	Blank	.00004	.44575	.00008	.00029	.00037	.00004	.00011	-.00025	Blank
74	CCV6	.49827	62.012	.48666	2.2462*	.50643	.50108	1.4752	2.5510	CCV6
75	CCB6	.00012	.19675*	.00011	.00029	.00069	-.00016	.00008	.00003	CCB6
76	TXK006SB	.00001	316.10	.00150	-.00119	.00063	-.00028	.00012	.00267	TXK006SB
77	K426-12	-.00065	200.29	.05491	-.05043*	.04037	.00044	.02351	2.4723	K426-12
78	K426-01	.00027	350.29	.07123	-.00237	.00110	.00234	.00029	.36332	K426-01
79	K426-02	-.00010	287.74	.03015	-.00164	.00123	-.00012	.00030	.80070	K426-02
80	K426-03	-.00015	284.97	.36730	-.00194	.00109	.00015	.00022	.36849	K426-03
81	K426-04	.00002	275.82	.06918	-.00143	.00099	-.00010	.00024	16695	K426-04
82	K426-05	-.00021	293.88	.04873	-.00028	.00083	.00142	.00289	3.0006	K426-05
83	K426-06	-.00024	310.49	.01889	-.00178	.00151	-.00007	.00024	.94542	K426-06
84	Blank	-.00004	.31347	.00006	.00008	.00029	-.00014	.00000	-.00019	Blank
85	CCV7	.49739	61.872	.48368	2.2476*	.50594	.49936	1.4758	2.5499	CCV7
86	CCB7	-.00005	.18925*	.00004	-.00018	.00033	-.00002	.00019	.00015	CCB7
87	K426-07A	.54820	397.16	2.8001	.47770	.48910	.51205	.55574	.67386	K426-07A
88	K426-07	-.00011	350.35	2.3663	- 00101	.00098	.00165	-.00018	.09900	K426-07
89	K426-07J	-.00008	75.186	.49111	-.00006	.00002	.00030	.00007	.01987	K426-07J
90	K426-07M	.55854	390.90	2.8116	.46104	.50213	.51833	.53240	.64098	K426-07M
91	K426-07S	.54906	388.05	2.7608	.45348	.49651	.51745	.52593	.63334	K426-07S
92	K426-08	.00002	266.96	.04810	-.00103	.00127	.00014	.00014	1.2302	K426-08
93	K426-09	-.00021	397.99	2.5485	-.00196	.00139	.00157	-.00025	.85909	K426-09
94	Blank	-.00006	.38929	.00024	-.00009	.00024	-.00005	.00012	.00070	Blank
95	CCV8	.50065	62.165	.48769	2.2641	.50715	.49588	1.4843	2 5613	CCV8
96	CCB8	.00005	.21410*	.00018	.00021	.00024	.00004	.00014	.00222	CCB8
INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID

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7029

Sample Name: Blank Acquired: 11/16/2011 15:17:06 Type: Cal
Method: 11K6010(v23) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00109	.00002	-.00001	.00024	.00003	.00066	-.00004
Stddev	.00002	.00000	.00000	.00007	.00000	.00001	.00000
%RSD	1.4132	14.798	27.617	29.729	9.9839	.87010	10.067
#1	.00108	.00002	-.00001	.00023	.00003	.00066	-.00005
#2	.00108	.00002	-.00002	.00017	.00003	.00065	-.00005
#3	.00111	.00001	-.00001	.00031	.00003	.00066	-.00004

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00023	-.00006	-.00107	.00103	.00002	.00019	-.00035
Stddev	.00003	.00001	.00008	.00002	.00001	.00008	.00007
%RSD	15.403	19.487	7.2869	2.2619	30.787	45.257	19.579
#1	.00022	-.00005	-.00112	.00101	.00002	.00015	-.00040
#2	.00019	-.00007	-.00111	.00103	.00001	.00013	-.00027
#3	.00026	-.00005	-.00098	.00106	.00002	.00028	-.00038

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00001	.00004	.00006	-.00070	-.00049	.00001	.00010
Stddev	.00001	.00002	.00007	.00016	.00004	.00000	.00001
%RSD	96.560	67.541	107.23	22.808	7.1643	16.813	13.713
#1	.00000	.00003	.00014	-.00072	-.00047	.00001	.00012
#2	.00002	.00002	.00002	-.00053	-.00053	.00001	.00010
#3	.00002	.00006	.00003	-.00085	-.00048	.00001	.00009

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00151	-.00015	-.00002	.00005	.00006	-.00018	.00053
Stddev	.00005	.00007	.00000	.00005	.00004	.00003	.00005
%RSD	3.6417	43.529	30.033	102.97	61.268	18.664	8.5833
#1	.00145	-.00008	-.00001	.00007	.00004	-.00020	.00048
#2	.00156	-.00016	-.00002	.00009	.00011	-.00020	.00055
#3	.00152	-.00022	-.00001	-.00001	.00005	-.00014	.00056

Sample Name: Blank Acquired: 11/16/2011 15:17:06 Type: Cal
Method: 11K6010(v23) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8390.1**	**91384.**	**190520.**
Stddev	.5	360.	510.
%RSD	.00568	.39443	.26762
#1	8389.8	91800.	190730.
#2	8389.8	91185.	189930.
#3	8390.7	91166.	190880.

Sample Name: S20 Acquired: 11/16/2011 15:20:05 Type: Cal
Method: 11K6010(v23) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Be	Cd	Pb	Mn
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.97860**	**.12136**	**.20559**	**.08820**
Stddev	.00064	.00025	.00003	.00031
%RSD	.06534	.20478	.01637	.35024
#1	.97870	.12122	.20563	.08816
#2	.97791	.12165	.20557	.08792
#3	.97918	.12122	.20558	.08853

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8492.4**	**93086.**	**192910.**
Stddev	11.0	1064.	101.
%RSD	.12909	1.1433	.05234
#1	8482.1	93432.	192910.
#2	8503.9	93935.	192810.
#3	8491.2	91892.	193010.

Sample Name: S21 Acquired: 11/16/2011 15:23:01 Type: Cal
Method: 11K6010(v23) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Be	Cd	Pb	Mn
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**9.7254**	**1.1768**	**2.0501**	**.89398**
Stddev	.0395	.0041	.0010	.00417
%RSD	.40628	.34553	.04855	.46655
#1	9.7495	1.1721	2.0507	.88924
#2	9.6798	1.1795	2.0507	.89561
#3	9.7468	1.1788	2.0490	.89708

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8469.4**	**93351.**	**193650.**
Stddev	11.7	284.	707.
%RSD	.13792	.30400	.36523
#1	8464.4	93597.	194400.
#2	8461.0	93415.	192990.
#3	8482.7	93040.	193570.

Sample Name: S22 Acquired: 11/16/2011 15:26:05 Type: Cal
Method: 11K6010(v23) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Ba	Co	Cu	Fe	V
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.55379**	**.16078**	**.28851**	**.05034**	**.12846**
Stddev	.00255	.00022	.00073	.00006	.00003
%RSD	.46011	.13589	.25172	.12405	.02364
#1	.55465	.16061	.28773	.05031	.12847
#2	.55092	.16069	.28917	.05041	.12843
#3	.55579	.16102	.28862	.05030	.12848

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8525.1**	**92936.**	**192730.**
Stddev	18.9	1089.	824.
%RSD	.22141	1.1717	.42756
#1	8512.6	93082.	193600.
#2	8516.0	93944.	191960.
#3	8546.9	91781.	192640.

Sample Name: S23 Acquired: 11/16/2011 15:29:04 Type: Cal
Method: 11K6010(v23) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment: .

Elem	Ba	Co	Cu	Fe	V
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5.5177**	**1.6312**	**2.8336**	**1.9775**	**1.2820**
Stddev	.0559	.0012	.0121	.0050	.0019
%RSD	1.0123	.07217	.42638	.25380	.15172
#1	5.5821	1.6308	2.8399	1.9726	1.2803
#2	5.4838	1.6325	2.8197	1.9826	1.2841
#3	5.4871	1.6302	2.8412	1.9772	1.2815

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7799.4**	**92641.**	**184760.**
Stddev	14.6	379.	303.
%RSD	.18673	.40953	.16396
#1	7813.5	92566.	184980.
#2	7784.4	92304.	184880.
#3	7800.3	93052.	184410.

Sample Name: S24 Acquired: 11/16/2011 15:32:31 Type: Cal
Method: 11K6010(v23) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	B	Mo	Na
Units	Cts/S	Cts/S	Cts/S
Avg	**.09985**	**.75183**	**1.2809**
Stddev	.00004	.00169	.0019
%RSD	.03725	.22434	.14690
#1	.09989	.75217	1.2798
#2	.09986	.75332	1.2799
#3	.09981	.75000	1.2831

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8193.6**	**94589.**	**185710.**
Stddev	10.8	703.	462.
%RSD	.13234	.74302	.24890
#1	8185.2	94857.	186160.
#2	8189.8	95118.	185240.
#3	8205.9	93791.	185740.

Sample Name: S25 Acquired: 11/16/2011 15:35:28 Type: Cal
Method: 11K6010(v23) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	B	Mo	Na
Units	Cts/S	Cts/S	Cts/S
Avg	1.0186	7.5222	7.4326
Stddev	.0015	.0031	.1203
%RSD	.14449	.04162	1.6180
#1	1.0201	7.5218	7.4415
#2	1.0185	7.5193	7.5481
#3	1.0172	7.5256	7.3081

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7646.0	94897.	175610.
Stddev	15.5	622.	476.
%RSD	.20301	.65565	.27123
#1	7645.1	95294.	175080.
#2	7662.0	94180.	176010.
#3	7631.0	95217.	175730.

Sample Name: S26 Acquired: 11/16/2011 15:38:33 Type: Cal
Method: 11K6010(v23) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Al	Ca	Cr	Ni	K
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.22614	.91149	.14297	.79256	.41977
Stddev	.00022	.00205	.00037	.00034	.00072
%RSD	.09509	.22533	.25726	.04257	.17107
#1	.22592	.90993	.14338	.79233	.41908
#2	.22616	.91382	.14287	.79239	.42051
#3	.22635	.91072	.14266	.79295	.41973

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7740.4	92395.	178290.
Stddev	6.3	331.	540.
%RSD	.08179	.35851	.30286
#1	7747.7	92774.	177770.
#2	7736.5	92250.	178270.
#3	7737.0	92160.	178850.

Sample Name: S27 Acquired: 11/16/2011 15:41:30 Type: Cal
Method: 11K6010(v23) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Al	Ca	Cr	Ni	K
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**8.2423**	**8.4820**	**1.3738**	**7.5718**	**4.0736**
Stddev	.0418	.0283	.0033	.0060	.0150
%RSD	.50748	.33322	.23889	.07965	.36701
#1	8.1964	8.4584	1.3701	7.5649	4.0837
#2	8.2783	8.5134	1.3755	7.5756	4.0806
#3	8.2523	8.4743	1.3759	7.5751	4.0564

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6698.7**	**90630.**	**160160.**
Stddev	6.2	174.	74.
%RSD	.09239	.19233	.04611
#1	6697.8	90655.	160240.
#2	6705.3	90445.	160110.
#3	6693.0	90791.	160130.

Sample Name: S28 Acquired: 11/16/2011 15:44:51 Type: Cal
Method: 11K6010(v23) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Sb	Mg	Tl
Units	Cts/S	Cts/S	Cts/S
Avg	**.00490**	**.02220**	**.00553**
Stddev	.00001	.00001	.00002
%RSD	.20241	.04657	.28873
#1	.00490	.02221	.00551
#2	.00489	.02219	.00553
#3	.00491	.02220	.00554

Int. Std.	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S
Avg	**95718.**	**192230.**
Stddev	418.	254.
%RSD	.43721	.13230
#1	95317.	192480.
#2	96152.	192240.
#3	95686.	191970.

Sample Name: S29 Acquired: 11/16/2011 15:47:48 Type: Cal
Method: 11K6010(v23) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Sb	Mg	Tl
Units	Cts/S	Cts/S	Cts/S
Avg	**.04827**	**.22808**	**.05528**
Stddev	.00012	.00070	.00010
%RSD	.24750	.30663	.18493
#1	.04818	.22884	.05519
#2	.04841	.22746	.05539
#3	.04823	.22796	.05527

Int. Std.	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S
Avg	**95917.**	**186600.**
Stddev	413.	325.
%RSD	.43040	.17444
#1	95538.	186970.
#2	96357.	186360.
#3	95855.	186470.

Sample Name: S30 Acquired: 11/16/2011 15:50:46 Type: Cal
Method: 11K6010(v23) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	As	Li	Se	Ag	Sr	Sn	Ti	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00120**	**.03065**	**.00136**	**.04244**	**.14206**	**.02583**	**.01633**	**.62083**
Stddev	.00001	.00029	.00001	.00017	.00036	.00008	.00003	.00084
%RSD	.80457	.94741	.45925	.39175	.25475	.29237	.18628	.13511
#1	.00120	.03033	.00136	.04255	.14239	.02580	.01629	.61988
#2	.00121	.03089	.00136	.04252	.14212	.02592	.01634	.62115
#3	.00119	.03073	.00135	.04225	.14167	.02578	.01635	.62147

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8395.7**	**95082.**	**193950.**
Stddev	22.2	184.	890.
%RSD	.26441	.19368	.45894
#1	8371.1	95222.	193560.
#2	8401.9	94873.	193320.
#3	8414.2	95149.	194970.

Sample Name: S31 Acquired: 11/16/2011 15:53:43 Type: Cal
Method: 11K6010(v23) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	As	Li	Se	Ag	Sr	Sn	Ti	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00483	.15087	.00547	.21207	.69645	.12340	.08624	6.0171
Stddev	.00002	.00120	.00003	.00057	.00393	.00010	.00042	.0065
%RSD	.41931	.79438	.49900	.26879	.56438	.08092	.49194	.10745
#1	.00482	.15222	.00545	.21156	.69977	.12334	.08641	6.0153
#2	.00486	.15047	.00550	.21269	.69747	.12352	.08655	6.0118
#3	.00482	.14993	.00546	.21196	.69211	.12334	.08575	6.0243

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8530.9	98299.	193710.
Stddev	9.7	300.	620.
%RSD	.11428	.30556	.31989
#1	8520.3	98101.	194240.
#2	8539.5	98152.	193030.
#3	8532.9	98645.	193860.

Sample Name: ICV Acquired: 11/16/2011 15:56:41 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015014 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	103.49	1.4879	1.0578	1.9294	1.5095	2.4806	2.0100	76.208
Stddev	.52	.0030	.0021	.0049	.0013	.0010	.0046	.193
%RSD	.50211	.20407	.19980	.25235	.08884	.04016	.23148	.25286
#1	103.72	1.4882	1.0583	1.9288	1.5080	2.4795	2.0059	76.041
#2	103.84	1.4908	1.0597	1.9346	1.5100	2.4814	2.0150	76.163
#3	102.89	1.4847	1.0555	1.9249	1.5105	2.4809	2.0091	76.419
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.4874	.95506	2.5636	25.017	2.4329	.54146	55.965	2.4784
Stddev	.0044	.00024	.0045	.023	.0025	.00163	.197	.0027
%RSD	.17806	.02466	.17667	.09347	.10160	.30056	.35225	.10922
#1	2.4858	.95524	2.5674	24.998	2.4333	.54062	55.790	2.4754
#2	2.4924	.95515	2.5586	25.043	2.4302	.54333	55.926	2.4806
#3	2.4840	.95479	2.5648	25.009	2.4351	.54041	56.179	2.4793
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.5047	2.4791	59.325	1.0489	.51495	61.463	.49086	2.3120
Stddev	.0032	.0013	.026	.0012	.00021	.068	.00082	.0077
%RSD	.12732	.05360	.04427	.11081	.03992	.11143	.16641	.33187
#1	2.5051	2.4798	59.295	1.0499	.51510	61.454	.49061	2.3038
#2	2.5013	2.4776	59.339	1.0476	.51472	61.536	.49177	2.3190
#3	2.5077	2.4801	59.341	1.0492	.51502	61.400	.49019	2.3132
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: ICV Acquired: 11/16/2011 15:56:41 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015014 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.47194**	**.50133**	**1.5206**	**2.5975**
Stddev	.00121	.00086	.0007	.0044
%RSD	.25725	.17223	.04716	.16886
#1	.47142	.50061	1.5200	2.5934
#2	.47332	.50228	1.5214	2.6021
#3	.47107	.50108	1.5204	2.5969
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7465.5**	**96716.**	**176250.**
Stddev	12.3	553.	199.
%RSD	.16507	.57178	.11311
#1	7461.0	97298.	176430.
#2	7479.5	96652.	176040.
#3	7456.1	96197.	176280.

Sample Name: ICB Acquired: 11/16/2011 15:59:31 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015015 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00394**	**.00065**	**-.00104**	**.00003**	**.00008**	**.00357**	**.00008**	**.00890**
Stddev	.00053	.00084	.00071	.00004	.00002	.00041	.00003	.00184
%RSD	13.397	128.56	68.323	126.17	22.237	11.433	41.668	20.720
#1	.00342	.00148	-.00166	.00003	.00009	.00398	.00004	.00739
#2	.00394	-.00020	-.00026	.00008	.00006	.00356	.00011	.01096
#3	.00448	.00069	-.00120	-.00001	.00007	.00317	.00009	.00835
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00011**	**.00021**	**-.00001**	**-.00350**	**-.00067**	**.00026**	**-.00146**	**.00089**
Stddev	.00017	.00026	.00000	.00198	.00017	.00072	.00843	.00026
%RSD	153.29	120.90	35.938	56.401	25.554	278.43	577.08	28.704
#1	.00008	.00031	-.00001	-.00286	-.00087	.00096	.00456	.00064
#2	.00030	.00041	-.00001	-.00193	-.00057	.00028	-.01110	.00089
#3	-.00004	-.00008	-.00002	-.00572	-.00058	-.00047	.00216	.00115
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00011**	**-.00002**	**.12309**	**.00007**	**.00001**	**-.00557**	**.00004**	**.00007**
Stddev	.00005	.00009	.00210	.00025	.00024	.00670	.00005	.00081
%RSD	45.337	392.51	1.7065	335.51	3408.6	120.16	100.77	1181.2
#1	.00013	.00005	.12317	-.00019	-.00023	.00210	.00001	.00061
#2	.00006	-.00012	.12516	.00011	.00025	-.00860	.00002	.00047
#3	.00015	.00000	.12096	.00031	.00001	-.01023	.00010	-.00087
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: ICB Acquired: 11/16/2011 15:59:31 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015015 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00016**	**.00016**	**.00007**	**.00072**
Stddev	.00061	.00034	.00006	.00007
%RSD	391.20	207.71	81.799	10.117
#1	-.00010	-.00006	.00003	.00064
#2	.00085	-.00001	.00004	.00072
#3	-.00028	.00055	.00014	.00079
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8486.5**	**97041.**	**191200.**
Stddev	16.6	660.	267.
%RSD	.19542	.68047	.13961
#1	8470.4	97375.	190990.
#2	8485.6	97467.	191100.
#3	8503.5	96280.	191500.

Sample Name: MRLK1601 Acquired: 11/16/2011 16:02:31 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015016 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.21029**	**.09814**	**.01038**	**.01005**	**.01024**	**.09599**	**.01061**	**1.0451**
Stddev	.00111	.00184	.00033	.00016	.00004	.00027	.00003	.0035
%RSD	.52753	1.8716	3.1632	1.5946	.43184	.28479	.32319	.33681
#1	.20978	.10025	.01012	.00988	.01019	.09584	.01060	1.0446
#2	.21156	.09697	.01075	.01008	.01027	.09630	.01065	1.0489
#3	.20952	.09718	.01027	.01020	.01027	.09582	.01058	1.0419
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01063**	**.00966**	**.01047**	**.21231**	**.01004**	**.01032**	**.95347**	**.01090**
Stddev	.00004	.00002	.00001	.00235	.00025	.00031	.01587	.00023
%RSD	.34213	.17449	.09492	1.1068	2.4809	3.0438	1.6649	2.0731
#1	.01061	.00964	.01047	.21486	.00980	.01063	.96879	.01114
#2	.01060	.00967	.01047	.21023	.01029	.01034	.93709	.01070
#3	.01067	.00967	.01046	.21185	.01004	.01000	.95452	.01085
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01026**	**.01039**	**.99005**	**.01015**	**.01033**	**.97735**	**.01035**	**.01101**
Stddev	.00013	.00007	.00683	.00104	.00009	.00318	.00016	.00033
%RSD	1.2398	.67314	.68956	10.244	.87474	.32548	1.5263	2.9558
#1	.01040	.01031	.99121	.01107	.01037	.97405	.01019	.01123
#2	.01021	.01040	.98272	.00903	.01023	.98039	.01035	.01064
#3	.01015	.01045	.99622	.01036	.01040	.97761	.01051	.01116
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: MRLK1601 Acquired: 11/16/2011 16:02:31 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015016 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00049**	**.00973**	**.01053**	**.02116**
Stddev	.00025	.00026	.00013	.00006
%RSD	51.100	2.6488	1.2042	.28826
#1	.00029	.01003	.01067	.02115
#2	.00042	.00961	.01046	.02111
#3	.00078	.00956	.01045	.02123
Check ?	None	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8437.4**	**97765.**	191750.
Stddev	16.8	210.	316.
%RSD	.19892	.21468	.16462
#1	8427.8	97638.	191820.
#2	8456.8	98007.	191400.
#3	8427.6	97650.	192020.

Sample Name: MRLK1602 Acquired: 11/16/2011 16:05:27 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015017 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.20367	.04843	.00913	.00489	.00400	.09602	.00527
Stddev	.00153	.00127	.00145	.00013	.00002	.00038	.00004
%RSD	.74880	2.6133	15.937	2.5715	.58281	.39546	.66726
#1	.20444	.04817	.01079	.00483	.00398	.09599	.00527
#2	.20191	.04981	.00848	.00481	.00400	.09642	.00523
#3	.20466	.04732	.00811	.00503	.00402	.09566	.00530
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.52424	.01015	.00952	.01011	.10371	F .00234	.10221
Stddev	.00172	.00006	.00005	.00019	.00076	.00082	.00079
%RSD	.32753	.61517	.47764	1.9116	.73480	35.139	.77119
#1	.52231	.01019	.00947	.01017	.10297	.00302	.10194
#2	.52480	.01018	.00956	.01026	.10449	.00142	.10310
#3	.52561	.01007	.00954	.00989	.10367	.00258	.10159
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						.00300	
Range						-20.000%	

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.18115	.00528	.00965	.01027	.97260	.01018	.00997
Stddev	.01125	.00002	.00017	.00015	.01656	.00049	.00026
%RSD	6.2091	.44260	1.7515	1.4972	1.7027	4.8473	2.6439
#1	.18275	.00526	.00969	.01013	.95444	.01045	.00968
#2	.16918	.00527	.00980	.01043	.97649	.01047	.01019
#3	.19151	.00530	.00946	.01024	.98687	.00961	.01003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: MRLK1602 Acquired: 11/16/2011 16:05:27 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015017 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.47446**	**.01011**	**.01045**	**.00937**	**.01006**	**.01015**	**.01117**
Stddev	.00306	.00011	.00038	.00041	.00073	.00012	.00008
%RSD	.64429	1.1089	3.6132	4.3832	7.2191	1.2075	.73760
#1	.47720	.01000	.01032	.00913	.00970	.01016	.01109
#2	.47501	.01022	.01087	.00985	.00957	.01002	.01125
#3	.47116	.01010	.01015	.00915	.01089	.01026	.01116
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8384.2**	**97949.**	**190470.**
Stddev	22.8	481.	795.
%RSD	.27134	.49081	.41748
#1	8392.6	98312.	191270.
#2	8401.5	98130.	189680.
#3	8358.4	97404.	190470.

Sample Name: ICSA1 Acquired: 11/16/2011 16:08:26 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015018 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**393.81**	**-.00047**	**.00183**	**.00008**	**.00006**	**.01930**	**.00719**	**477.70**
Stddev	2.19	.00190	.00219	.00008	.00002	.00016	.00007	3.26
%RSD	.55672	406.81	119.93	101.46	34.921	.85281	1.0058	.68223
#1	391.29	.00037	.00185	.00008	.00008	.01919	.00727	473.94
#2	394.88	.00088	-.00038	.00000	.00004	.01949	.00715	479.56
#3	395.26	-.00265	.00400	.00015	.00007	.01922	.00714	479.61
Check ?	Chk Pass	None	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00050**	**-.00056**	**.00101**	**188.76**	**.00490**	**.02152**	**190.78**	**.00118**
Stddev	.00005	.00014	.00005	.45	.00145	.00102	.78	.00015
%RSD	9.0251	24.019	5.3795	.23822	29.501	4.7366	.40716	12.464
#1	.00056	-.00052	.00096	188.24	.00332	.02227	189.96	.00131
#2	.00048	-.00071	.00107	189.01	.00523	.02036	190.87	.00102
#3	.00048	-.00045	.00101	189.02	.00615	.02193	191.51	.00121
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00114**	**.00129**	**.10256**	**.00000**	**.00010**	**.03158**	**.00096**	**-.00247**
Stddev	.00050	.00049	.02602	.00169	.00014	.00472	.00012	.00134
%RSD	44.108	37.855	25.374	45699.	144.59	14.959	12.212	54.261
#1	-.00057	.00169	.12989	.00193	-.00001	.02745	.00106	-.00098
#2	-.00151	.00143	.09969	-.00126	.00004	.03673	.00083	-.00285
#3	-.00133	.00074	.07808	-.00065	.00025	.03056	.00100	-.00359
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Sample Name: ICSA1 Acquired: 11/16/2011 16:08:26 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015018 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	.00143	.00450	.00047	.00255
Stddev	.00035	.00035	.00019	.00018
%RSD	24.669	7.8764	40.369	7.0577
#1	.00145	.00413	.00068	.00244
#2	.00177	.00452	.00044	.00245
#3	.00107	.00484	.00030	.00276
Check ?	None	None	None	None
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	6627.5	93844.	164080.
Stddev	10.0	717.	228.
%RSD	.15111	.76431	.13885
#1	6633.4	94587.	163980.
#2	6633.2	93788.	164340.
#3	6615.9	93156.	163920.

Sample Name: ICSAB1 Acquired: 11/16/2011 16:11:35 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015019 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**396.56**	**1.0375**	**1.0667**	**.49716**	**.50585**	**.51555**	**.94524**
Stddev	2.56	.0040	.0037	.00224	.00305	.00150	.00369
%RSD	.64678	.38181	.34265	.45120	.60276	.29164	.39023
#1	393.71	1.0375	1.0631	.49459	.50237	.51494	.94157
#2	397.27	1.0336	1.0704	.49817	.50804	.51445	.94519
#3	398.69	1.0415	1.0668	.49871	.50714	.51727	.94895
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**476.99**	**.46830**	**.46919**	**.52530**	**188.80**	**.95138**	**F 1.2027**
Stddev	1.46	.00220	.00078	.00022	.80	.00071	.0094
%RSD	.30670	.46978	.16580	.04236	.42335	.07421	.78115
#1	475.42	.46724	.46916	.52553	188.90	.95057	1.1920
#2	477.24	.46683	.46843	.52509	187.95	.95174	1.2092
#3	478.32	.47083	.46998	.52526	189.54	.95184	1.2070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1.0000
Range							20.000%

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**191.13**	**.50518**	**1.0208**	**.96885**	**78.398**	**1.0551**	**1.0865**
Stddev	1.40	.00415	.0008	.00042	.190	.0035	.0013
%RSD	.73460	.82102	.07616	.04311	.24268	.32849	.11758
#1	189.51	.50039	1.0208	.96923	78.181	1.0515	1.0857
#2	191.87	.50754	1.0216	.96894	78.478	1.0555	1.0859
#3	192.02	.50762	1.0201	.96840	78.536	1.0584	1.0880
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: ICSAB1 Acquired: 11/16/2011 16:11:35 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015019 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**80.552**	**.48381**	**.84551**	**.92923**	**1.0231**	**.49053**	**1.0263**
Stddev	.082	.00003	.00325	.00253	.0042	.00107	.0027
%RSD	.10144	.00644	.38403	.27179	.40742	.21828	.26643
#1	80.463	.48378	.84281	.92692	1.0183	.49104	1.0236
#2	80.568	.48381	.84460	.93193	1.0259	.48930	1.0263
#3	80.624	.48384	.84912	.92884	1.0252	.49125	1.0290
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6473.7**	**92298.**	**161760.**
Stddev	9.3	500.	540.
%RSD	.14386	.54153	.33369
#1	6463.5	92874.	162130.
#2	6481.7	91989.	162010.
#3	6475.8	92030.	161140.

Sample Name: CCV1 Acquired: 11/16/2011 16:14:31 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015020 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**102.16**	**1.5070**	**1.0320**	**1.9593**	**1.4827**	**2.4158**	**1.9398**	**75.489**
Stddev	1.01	.0054	.0018	.0015	.0010	.0050	.0044	.087
%RSD	.98844	.36131	.17564	.07560	.06562	.20659	.22567	.11552
#1	103.01	1.5027	1.0302	1.9579	1.4826	2.4156	1.9348	75.458
#2	102.43	1.5051	1.0320	1.9608	1.4837	2.4109	1.9420	75.587
#3	101.05	1.5131	1.0339	1.9593	1.4817	2.4209	1.9426	75.421
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.3924**	**.93970**	**2.4665**	**24.411**	**2.3912**	**.51389**	**56.469**	**2.5001**
Stddev	.0052	.00111	.0087	.053	.0056	.00051	.157	.0016
%RSD	.21679	.11806	.35330	.21903	.23264	.09828	.27772	.06221
#1	2.3898	.94095	2.4751	24.350	2.3924	.51338	56.449	2.5019
#2	2.3890	.93932	2.4577	24.433	2.3961	.51392	56.635	2.4992
#3	2.3984	.93883	2.4669	24.450	2.3851	.51438	56.324	2.4992
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.5014**	**2.4342**	**59.226**	**1.0317**	**.50019**	**61.210**	**.48292**	**2.2739**
Stddev	.0052	.0013	.043	.0017	.00114	.056	.00107	.0058
%RSD	.20652	.05218	.07233	.15975	.22712	.09137	.22094	.25309
#1	2.5038	2.4331	59.268	1.0326	.50034	61.242	.48380	2.2677
#2	2.5050	2.4356	59.228	1.0326	.49898	61.146	.48173	2.2750
#3	2.4955	2.4340	59.183	1.0298	.50124	61.243	.48324	2.2791
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV1 Acquired: 11/16/2011 16:14:31 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015020 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.50305**	**.50117**	**1.4762**	**2.5695**
Stddev	.00149	.00087	.0020	.0020
%RSD	.29680	.17310	.13277	.07762
#1	.50133	.50079	1.4740	2.5686
#2	.50402	.50216	1.4774	2.5718
#3	.50379	.50055	1.4773	2.5680
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7453.1**	**97775.**	**179160.**
Stddev	15.9	66.	136.
%RSD	.21303	.06721	.07584
#1	7439.3	97709.	179290.
#2	7449.5	97778.	179180.
#3	7470.5	97840.	179020.

Sample Name: CCB1 Acquired: 11/16/2011 16:17:19 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015021 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00762	.00094	-.00049	.00009	.00009	.00365	.00013	.01819
Stddev	.00076	.00042	.00092	.00003	.00003	.00043	.00006	.00304
%RSD	9.9464	44.427	188.88	35.276	33.801	11.882	43.730	16.703
#1	.00681	.00056	-.00138	.00005	.00006	.00412	.00018	.01523
#2	.00774	.00139	.00046	.00010	.00012	.00355	.00007	.02130
#3	.00831	.00088	-.00054	.00011	.00011	.00327	.00014	.01804
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00013	.00003	.00018	-.00076	-.00049	.00043	.00752	.00021
Stddev	.00018	.00019	.00006	.00083	.00008	.00100	.00220	.00014
%RSD	138.68	569.83	31.801	108.97	16.504	233.18	29.317	66.281
#1	.00028	-.00018	.00018	-.00047	-.00045	-.00010	.00654	.00017
#2	-.00007	.00018	.00012	-.00012	-.00058	.00158	.00598	.00009
#3	.00018	.00010	.00024	-.00169	-.00043	-.00019	.01005	.00036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00025	.00012	.18693	-.00231	-.00001	.00550	.00008	.00016
Stddev	.00006	.00018	.00985	.00047	.00012	.00752	.00009	.00031
%RSD	23.603	156.14	5.2703	20.178	1877.4	136.87	115.63	188.97
#1	.00030	-.00004	.19640	-.00189	.00010	.01410	.00016	.00051
#2	.00026	.00032	.18765	-.00224	.00001	.00219	-.00001	-.00002
#3	.00019	.00007	.17674	-.00281	-.00013	.00020	.00008	-.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB1 Acquired: 11/16/2011 16:17:19 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015021 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**-.00002**	**.00011**	**.00012**	**.00046**
Stddev	.00010	.00029	.00010	.00011
%RSD	512.91	263.02	77.746	24.122
#1	.00008	-.00017	.00022	.00044
#2	-.00012	.00040	.00012	.00036
#3	-.00002	.00010	.00003	.00058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8348.1**	**97281.**	**191880.**
Stddev	6.2	399.	511.
%RSD	.07427	.41065	.26618
#1	8355.3	96832.	192430.
#2	8345.1	97596.	191800.
#3	8344.0	97417.	191420.

Sample Name: IPK026WB Acquired: 11/16/2011 16:20:18 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015022 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00112	.00001	-.00039	-.00021	.00000	.00148	.00003	.00084
Stddev	.00051	.00043	.00037	.00006	.00001	.00023	.00001	.00146
%RSD	46.062	3872.2	93.402	29.426	268.98	15.344	42.674	174.34
#1	.00062	.00050	-.00069	-.00026	.00001	.00139	.00004	.00076
#2	.00109	-.00031	.00002	-.00023	-.00001	.00173	.00002	.00233
#3	.00164	-.00016	-.00051	-.00014	.00001	.00130	.00002	-.00058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00002	-.00002	.00025	.00329	-.00084	.00040	-.00991	.00008
Stddev	.00012	.00014	.00014	.00025	.00031	.00027	.00658	.00020
%RSD	617.47	951.61	55.418	7.5194	36.526	67.307	66.335	238.31
#1	.00006	.00013	.00029	.00320	-.00051	.00013	-.01745	.00008
#2	-.00011	-.00001	.00010	.00357	-.00111	.00066	-.00692	.00028
#3	.00011	-.00016	.00037	.00310	-.00089	.00040	-.00536	-.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00001	.00008	.08910	-.00052	-.00003	-.02200	.00002	-.00031
Stddev	.00020	.00013	.01423	.00050	.00008	.00256	.00005	.00029
%RSD	1439.0	152.19	15.976	95.807	232.53	11.652	313.71	91.759
#1	.00024	.00010	.10175	-.00038	-.00010	-.01952	.00006	-.00048
#2	-.00007	.00020	.09186	-.00108	-.00005	-.02464	-.00005	-.00047
#3	-.00013	-.00005	.07368	-.00011	.00005	-.02184	.00004	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: IPK026WB Acquired: 11/16/2011 16:20:18 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015022 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00028**	**.00005**	**.00003**	**.00063**
Stddev	.00006	.00059	.00015	.00006
%RSD	20.865	1142.0	436.76	10.117
#1	.00032	.00034	-.00014	.00070
#2	.00031	-.00062	.00015	.00057
#3	.00021	.00044	.00009	.00062
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8328.0**	**98160.**	**192460.**
Stddev	8.1	410.	537.
%RSD	.09772	.41739	.27926
#1	8327.5	98115.	192980.
#2	8320.2	98590.	191910.
#3	8336.4	97774.	192490.

Sample Name: IPK026WL Acquired: 11/16/2011 16:23:17 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015023 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**5.4541**	**2.6061**	**.53822**	**.51126**	**.52858**	**.51368**	**.51818**
Stddev	.0072	.0054	.00035	.00199	.00226	.00043	.00010
%RSD	.13122	.20762	.06536	.38941	.42835	.08416	.01999
#1	5.4593	2.6123	.53860	.51342	.53027	.51414	.51812
#2	5.4570	2.6023	.53790	.50950	.52601	.51328	.51812
#3	5.4459	2.6037	.53816	.51087	.52947	.51362	.51830
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**51.675**	**.50373**	**.49214**	**.51004**	**5.1605**	**.50493**	F **.00263**
Stddev	.060	.00038	.00052	.00152	.0130	.00025	.00098
%RSD	.11558	.07632	.10515	.29837	.25121	.04955	37.301
#1	51.699	.50355	.49181	.51075	5.1489	.50513	.00198
#2	51.607	.50348	.49188	.51107	5.1580	.50501	.00216
#3	51.719	.50417	.49274	.50829	5.1745	.50465	.00376
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							.50000
Range							-20.000%

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**48.967**	**.53203**	**.53134**	**.51538**	**49.996**	**.53473**	**.51787**
Stddev	.300	.00280	.00040	.00071	.090	.00164	.00018
%RSD	.61346	.52600	.07591	.13729	.17909	.30685	.03488
#1	49.088	.53369	.53088	.51600	50.064	.53571	.51784
#2	48.625	.52879	.53154	.51461	50.030	.53563	.51806
#3	49.187	.53359	.53161	.51552	49.895	.53283	.51770
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: IPK026WL Acquired: 11/16/2011 16:23:17 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015023 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**52.121**	**.50095**	**.49585**	**.49512**	**.53758**	**.51958**	**.53936**
Stddev	.049	.00200	.00050	.00088	.00145	.00089	.00053
%RSD	.09483	.39825	.10070	.17750	.26910	.17209	.09782
#1	52.176	.50246	.49610	.49589	.53810	.51906	.53875
#2	52.103	.50171	.49618	.49416	.53594	.51907	.53967
#3	52.082	.49869	.49528	.49531	.53869	.52061	.53966
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7460.2**	**95992.**	**177380.**
Stddev	6.6	490.	222.
%RSD	.08842	.51025	.12512
#1	7458.6	95819.	177250.
#2	7467.4	96544.	177630.
#3	7454.5	95612.	177250.

Sample Name: K018-03A Acquired: 11/16/2011 16:28:42 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015025 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**5.8001**	**2.5922**	**.57110**	**.56151**	**.55736**	**.59400**	**.54328**	**66.825**
Stddev	.0197	.0104	.00211	.00230	.00213	.00096	.00089	.091
%RSD	.33962	.40109	.36903	.40889	.38143	.16095	.16344	.13633
#1	5.7988	2.6033	.57274	.55897	.55491	.59510	.54430	66.808
#2	5.8204	2.5904	.56872	.56343	.55873	.59349	.54283	66.744
#3	5.7810	2.5827	.57184	.56214	.55845	.59341	.54270	66.923

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.53015**	**.51576**	**.54270**	**5.4504**	**.53128**	**.00630**	**56.192**	**.56913**
Stddev	.00142	.00026	.00068	.0161	.00121	.00025	.201	.00240
%RSD	.26754	.05131	.12561	.29590	.22804	3.9762	.35726	.42192
#1	.53081	.51587	.54343	5.4579	.53004	.00655	56.033	.56636
#2	.52852	.51595	.54208	5.4318	.53246	.00605	56.127	.57051
#3	.53112	.51545	.54257	5.4614	.53135	.00631	56.418	.57052

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.52231**	**.47715**	**51.681**	**.56071**	**.51295**	**80.236**	**.62508**	**.51537**
Stddev	.00078	.00057	.066	.00067	.00112	.079	.00139	.00103
%RSD	.14981	.12038	.12862	.11926	.21853	.09876	.22300	.19999
#1	.52287	.47727	51.604	.56140	.51409	80.161	.62348	.51651
#2	.52263	.47765	51.710	.56006	.51184	80.227	.62603	.51509
#3	.52141	.47652	51.727	.56068	.51291	80.319	.62573	.51451

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.48831**	**.53374**	**.54672**	**.57084**
Stddev	.00174	.00205	.00152	.00048
%RSD	.35681	.38440	.27810	.08366
#1	.48803	.53138	.54706	.57059
#2	.49018	.53486	.54506	.57139
#3	.48673	.53500	.54804	.57054

Sample Name: K018-03A Acquired: 11/16/2011 16:28:42 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015025 Type: Diln Factor:
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7383.5**	**94216.**	**175250.**
Stddev	13.9	153.	368.
%RSD	.18782	.16210	.21022
#1	7370.3	94069.	174830.
#2	7382.1	94374.	175490.
#3	7398.0	94205.	175450.

Sample Name: K018-03 Acquired: 11/16/2011 16:31:26 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015026 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.08571**	**.00171**	**.00077**	**.02484**	**.00003**	**.08289**	**.00000**	**15.993**
Stddev	.00150	.00118	.00099	.00031	.00001	.00017	.00004	.044
%RSD	1.7550	69.085	128.09	1.2293	39.560	.20475	7827.5	.27644
#1	.08401	.00055	.00014	.02476	.00004	.08270	-.00004	15.975
#2	.08625	.00291	.00192	.02459	.00004	.08296	-.00001	15.961
#3	.08687	.00166	.00026	.02518	.00002	.08302	.00005	16.044

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00031**	**-.00001**	**.00268**	**.07446**	**.00107**	**.00316**	**7.2146**	**.00365**
Stddev	.00002	.00007	.00014	.00255	.00099	.00101	.0575	.00009
%RSD	5.3680	824.32	5.1033	3.4311	92.454	32.111	.79774	2.4598
#1	.00031	-.00009	.00257	.07712	.00101	.00260	7.1514	.00369
#2	.00029	.00003	.00265	.07203	.00011	.00255	7.2285	.00355
#3	.00032	.00003	.00283	.07422	.00210	.00433	7.2640	.00371

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00106**	**.00056**	**1.6476**	**.00034**	**.00016**	**28.498**	**.14224**	**-.00010**
Stddev	.00008	.00019	.0188	.00049	.00016	.038	.00022	.00030
%RSD	7.1284	33.534	1.1441	144.88	105.09	.13178	.15721	311.54
#1	.00109	.00048	1.6694	.00090	.00008	28.468	.14208	-.00043
#2	.00097	.00077	1.6375	.00015	.00005	28.486	.14214	-.00001
#3	.00111	.00042	1.6360	-.00003	.00035	28.540	.14249	.00015

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00004**	**.00045**	**.00346**	**.00434**
Stddev	.00021	.00057	.00008	.00004
%RSD	533.89	126.97	2.4160	.85769
#1	.00027	-.00011	.00352	.00430
#2	-.00014	.00103	.00337	.00436
#3	-.00002	.00042	.00350	.00437

Sample Name: K018-03 Acquired: 11/16/2011 16:31:26 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015026 Type: Diln Factor:
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7991.6**	**96471.**	**185050.**
Stddev	10.3	625.	257.
%RSD	.12838	.64752	.13871
#1	7984.2	96689.	185320.
#2	8003.3	96956.	185020.
#3	7987.3	95766.	184800.

Sample Name: K018-03J Acquired: 11/16/2011 16:34:20 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015027 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.01602	.00169	.00033	.00478	-.00001	.01692	.00005	3.2056
Stddev	.00022	.00008	.00081	.00004	.00002	.00008	.00003	.0011
%RSD	1.4021	4.7919	244.82	.83905	426.98	.46276	60.221	.03516
#1	.01601	.00178	.00031	.00474	.00002	.01696	.00004	3.2045
#2	.01625	.00165	.00115	.00477	-.00001	.01697	.00002	3.2067
#3	.01580	.00163	-.00047	.00482	-.00003	.01683	.00008	3.2056

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00003	.00001	.00072	.01335	.00004	.00089	1.4169	.00065
Stddev	.00016	.00004	.00011	.00218	.00011	.00074	.0092	.00011
%RSD	564.62	679.55	15.464	16.329	243.03	82.781	.64775	16.530
#1	.00000	.00004	.00060	.01243	-.00006	.00007	1.4065	.00077
#2	-.00012	-.00003	.00074	.01179	.00016	.00113	1.4238	.00056
#3	.00020	.00000	.00082	.01584	.00004	.00149	1.4206	.00063

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00002	.00016	.37567	-.00153	.00004	5.5923	.02830	-.00013
Stddev	.00010	.00001	.00626	.00048	.00015	.0078	.00009	.00057
%RSD	551.80	6.4300	1.6657	31.333	357.67	.13898	.30803	439.11
#1	.00001	.00015	.38146	-.00200	-.00007	5.5885	.02820	-.00077
#2	.00012	.00016	.36903	-.00104	.00021	5.5871	.02834	.00008
#3	-.00008	.00017	.37651	-.00154	-.00002	5.6012	.02836	.00030

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	.00011	-.00011	.00074	.00132
Stddev	.00059	.00060	.00008	.00013
%RSD	549.67	553.94	11.360	9.6135
#1	.00017	.00057	.00082	.00126
#2	.00066	-.00056	.00073	.00146
#3	-.00051	-.00033	.00065	.00123

Sample Name: K018-03J Acquired: 11/16/2011 16:34:20 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015027 Type: Diln Factor:
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8315.0	97182.	189870.
Stddev	23.1	583.	55.
%RSD	.27796	.59979	.02890
#1	8340.2	96639.	189870.
#2	8294.7	97798.	189820.
#3	8310.3	97109.	189930.

Sample Name: CCV2 Acquired: 11/16/2011 16:48:41 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015032 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**102.87**	**1.5013**	**1.0307**	**1.9600**	**1.4823**	**2.4257**	**1.9444**	**75.584**
Stddev	.95	.0019	.0046	.0021	.0038	.0024	.0073	.249
%RSD	.92446	.12897	.44527	.10938	.25657	.09701	.37394	.32903
#1	101.79	1.4992	1.0295	1.9595	1.4782	2.4230	1.9362	75.303
#2	103.57	1.5014	1.0357	1.9582	1.4830	2.4275	1.9500	75.672
#3	103.26	1.5031	1.0268	1.9624	1.4857	2.4266	1.9471	75.776
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4049**	**.93799**	**2.4766**	**24.426**	**2.3908**	**.51307**	**56.393**	**2.5007**
Stddev	.0056	.00019	.0020	.021	.0005	.00129	.457	.0103
%RSD	.23268	.02029	.08027	.08533	.01903	.25237	.81099	.41294
#1	2.3993	.93820	2.4770	24.404	2.3903	.51223	55.878	2.4888
#2	2.4105	.93795	2.4744	24.445	2.3910	.51242	56.546	2.5069
#3	2.4050	.93783	2.4783	24.429	2.3911	.51456	56.754	2.5064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4955**	**2.4321**	**59.698**	**1.0315**	**.50255**	**61.635**	**.48603**	**2.2796**
Stddev	.0015	.0001	.091	.0012	.00054	.051	.00068	.0076
%RSD	.06048	.00615	.15193	.11303	.10745	.08356	.13924	.33219
#1	2.4971	2.4320	59.593	1.0303	.50194	61.581	.48657	2.2712
#2	2.4941	2.4323	59.746	1.0326	.50274	61.640	.48626	2.2859
#3	2.4952	2.4321	59.754	1.0316	.50297	61.684	.48527	2.2816
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV2 Acquired: 11/16/2011 16:48:41 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015032 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.50143**	**.49914**	**1.4746**	**2.5657**
Stddev	.00100	.00044	.0018	.0023
%RSD	.20012	.08834	.12163	.09020
#1	.50256	.49926	1.4734	2.5633
#2	.50106	.49950	1.4767	2.5679
#3	.50066	.49865	1.4737	2.5660
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7443.7**	**96729.**	**177960.**
Stddev	6.4	689.	421.
%RSD	.08540	.71246	.23659
#1	7438.4	97453.	178420.
#2	7450.7	96654.	177600.
#3	7441.8	96081.	177850.

Sample Name: CCB2 Acquired: 11/16/2011 16:51:27 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015033 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00238	.00135	-.00155	-.00005	.00004	.00379	.00009	.00309
Stddev	.00138	.00098	.00036	.00003	.00003	.00037	.00003	.00189
%RSD	57.791	73.154	23.028	48.386	64.575	9.8825	30.324	61.311
#1	.00318	.00222	-.00179	-.00003	.00002	.00421	.00008	.00296
#2	.00317	.00028	-.00171	-.00008	.00004	.00350	.00012	.00504
#3	.00079	.00154	-.00114	-.00005	.00008	.00365	.00007	.00126
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00005	.00010	.00010	-.00278	-.00054	.00100	-.00562	.00011
Stddev	.00007	.00001	.00005	.00319	.00073	.00052	.00981	.00037
%RSD	142.74	9.4638	51.132	114.58	136.15	52.517	174.70	338.44
#1	.00007	.00011	.00011	-.00646	-.00138	.00105	-.00537	-.00029
#2	.00010	.00009	.00014	-.00093	-.00021	.00045	-.01555	.00044
#3	-.00003	.00009	.00004	-.00096	-.00003	.00149	.00407	.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00016	.00015	.14734	-.00022	.00008	.00535	.00000	-.00027
Stddev	.00005	.00006	.00939	.00055	.00023	.00493	.00008	.00049
%RSD	32.414	40.176	6.3725	248.47	281.84	92.089	2494.1	180.12
#1	.00020	.00015	.14354	.00029	.00007	.00838	-.00008	-.00078
#2	.00018	.00009	.15803	-.00081	.00032	-.00033	.00008	.00019
#3	.00010	.00020	.14044	-.00014	-.00014	.00801	.00001	-.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB2 Acquired: 11/16/2011 16:51:27 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015033 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00031**	**-.00028**	**.00014**	**.00003**
Stddev	.00023	.00057	.00013	.00012
%RSD	74.740	206.33	95.393	329.17
#1	.00054	-.00067	.00017	.00001
#2	.00007	-.00053	-.00001	-.00007
#3	.00032	.00038	.00025	.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8377.8**	**94607.**	**190470.**
Stddev	14.8	593.	215.
%RSD	.17695	.62698	.11281
#1	8369.9	94902.	190690.
#2	8394.9	94995.	190440.
#3	8368.5	93924.	190270.

Sample Name: IPK026WC Acquired: 11/16/2011 16:54:27 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015034 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**5.4764**	**2.5966**	**.53868**	**.50945**	**.53035**	**.51898**	**.52117**
Stddev	.0036	.0018	.00200	.00383	.00202	.00045	.00164
%RSD	.06481	.06998	.37167	.75224	.38139	.08745	.31524
#1	5.4775	2.5965	.53676	.51050	.53007	.51887	.51933
#2	5.4794	2.5984	.54076	.51265	.53250	.51859	.52250
#3	5.4725	2.5948	.53852	.50520	.52849	.51948	.52167
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**52.246**	**.51000**	**.49441**	**.51583**	**5.2327**	**.50717**	F **.00246**
Stddev	.149	.00068	.00080	.00144	.0148	.00176	.00038
%RSD	.28585	.13252	.16177	.27978	.28253	.34750	15.279
#1	52.088	.50925	.49369	.51451	5.2498	.50513	.00290
#2	52.264	.51018	.49427	.51737	5.2239	.50825	.00225
#3	52.385	.51057	.49527	.51561	5.2244	.50812	.00224
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							.50000
Range							-20.000%

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**49.300**	**.53256**	**.53095**	**.51689**	**50.604**	**.53232**	**.52313**
Stddev	.168	.00162	.00075	.00069	.055	.00111	.00116
%RSD	.34123	.30430	.14150	.13284	.10815	.20817	.22158
#1	49.201	.53243	.53150	.51612	50.559	.53104	.52180
#2	49.494	.53424	.53009	.51709	50.665	.53289	.52395
#3	49.205	.53101	.53124	.51745	50.589	.53303	.52364
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: IPK026WC Acquired: 11/16/2011 16:54:27 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015034 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	52.687	.50374	.49778	.49441	.53519	.52656	.54274
Stddev	.016	.00090	.00139	.00080	.00387	.00044	.00084
%RSD	.02985	.17820	.27841	.16105	.72385	.08262	.15558
#1	52.695	.50422	.49646	.49532	.53610	.52666	.54177
#2	52.696	.50430	.49923	.49386	.53852	.52693	.54314
#3	52.668	.50271	.49766	.49404	.53094	.52608	.54331
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7429.8	93658.	176070.
Stddev	11.0	402.	332.
%RSD	.14779	.42968	.18866
#1	7417.5	93948.	176280.
#2	7438.4	93827.	175680.
#3	7433.7	93199.	176230.

Sample Name: CCV3 Acquired: 11/16/2011 17:24:17 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015044 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**103.10**	**1.4984**	**1.0260**	**1.9568**	**1.4896**	**2.4244**	**1.9454**	**75.619**
Stddev	.31	.0029	.0013	.0107	.0044	.0050	.0062	.223
%RSD	.29627	.19178	.12151	.54655	.29674	.20406	.31942	.29553
#1	103.27	1.4970	1.0246	1.9692	1.4942	2.4189	1.9382	75.441
#2	103.28	1.5017	1.0269	1.9508	1.4853	2.4284	1.9494	75.547
#3	102.75	1.4966	1.0266	1.9505	1.4893	2.4261	1.9485	75.870
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4066**	**.94020**	**2.4754**	**24.551**	**2.3865**	**.51675**	**56.860**	**2.5034**
Stddev	.0027	.00051	.0049	.057	.0011	.00322	.308	.0153
%RSD	.11189	.05399	.19917	.23127	.04726	.62340	.54241	.60942
#1	2.4044	.94007	2.4700	24.498	2.3873	.52042	57.055	2.5177
#2	2.4096	.93977	2.4796	24.544	2.3852	.51542	56.504	2.4873
#3	2.4059	.94076	2.4767	24.611	2.3869	.51441	57.020	2.5051
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4973**	**2.4270**	**59.735**	**1.0194**	**.50380**	**61.666**	**.48281**	**2.2778**
Stddev	.0020	.0042	.073	.0032	.00186	.084	.00071	.0060
%RSD	.08063	.17463	.12155	.30895	.36936	.13556	.14607	.26103
#1	2.4967	2.4221	59.752	1.0171	.50200	61.684	.48317	2.2736
#2	2.4995	2.4297	59.655	1.0230	.50571	61.574	.48200	2.2846
#3	2.4956	2.4291	59.797	1.0181	.50368	61.738	.48326	2.2751
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV3 Acquired: 11/16/2011 17:24:17 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015044 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.50139**	**.50112**	**1.4843**	**2.5626**
Stddev	.00292	.00137	.0024	.0028
%RSD	.58309	.27350	.16373	.11086
#1	.50450	.50268	1.4829	2.5595
#2	.49870	.50061	1.4829	2.5630
#3	.50098	.50008	1.4871	2.5652
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7409.7**	**94902.**	**176910.**
Stddev	9.6	655.	298.
%RSD	.12900	.68998	.16846
#1	7400.8	95143.	177200.
#2	7408.4	95402.	176610.
#3	7419.8	94161.	176930.

Sample Name: CCB3 Acquired: 11/16/2011 17:27:06 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015045 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00253**	**.00074**	**-.00031**	**.00007**	**.00008**	**.00486**	**.00005**
Stddev	.00154	.00111	.00215	.00009	.00003	.00032	.00003
%RSD	60.985	150.83	697.14	138.46	35.925	6.5392	50.298
#1	.00430	.00033	-.00006	.00018	.00006	.00521	.00003
#2	.00174	.00200	.00170	.00001	.00011	.00481	.00004
#3	.00153	-.00011	-.00257	.00002	.00006	.00458	.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00654**	**.00007**	**.00009**	**.00017**	**-.00289**	**-.00035**	**.00040**
Stddev	.00131	.00006	.00004	.00010	.00190	.00034	.00048
%RSD	20.021	75.340	46.968	56.650	65.802	97.829	118.94
#1	.00504	.00007	.00013	.00016	-.00075	-.00063	.00049
#2	.00743	.00013	.00009	.00028	-.00440	.00003	-.00011
#3	.00716	.00002	.00004	.00008	-.00353	-.00044	.00083
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00359**	**.00032**	**.00018**	**.00003**	**.16415**	**-.00017**	**.00004**
Stddev	.01087	.00009	.00009	.00006	.00852	.00101	.00007
%RSD	302.89	29.286	48.790	175.92	5.1921	594.26	205.79
#1	-.01301	.00021	.00027	.00001	.16145	-.00133	.00006
#2	-.00606	.00038	.00018	.00010	.17370	.00035	-.00005
#3	.00831	.00037	.00010	-.00001	.15731	.00047	.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB3 Acquired: 11/16/2011 17:27:06 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015045 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F .06918	.00007	-.00009	.00041	-.00003	.00003	.00018
Stddev	.00115	.00009	.00037	.00061	.00024	.00012	.00012
%RSD	1.6691	125.78	412.55	147.54	917.08	375.46	63.924
#1	.06947	-.00002	.00024	.00069	-.00027	.00016	.00031
#2	.07016	.00008	-.00050	.00082	-.00003	-.00001	.00011
#3	.06791	.00015	-.00001	-.00029	.00022	-.00006	.00012
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.05090						
Low Limit	-.05090						

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8360.7	95073.	190110.
Stddev	7.9	479.	269.
%RSD	.09437	.50417	.14164
#1	8369.8	94908.	189830.
#2	8356.3	95612.	190150.
#3	8356.0	94697.	190360.

Sample Name: K035-02A Acquired: 11/16/2011 17:30:05 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015046 Type: Diln Factor:
Comment: DISS

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**6.1800**	**2.8166**	**.72724**	**.73004**	**.52921**	**.79504**	**.53164**
Stddev	.0097	.0030	.00107	.00208	.00069	.00316	.00194
%RSD	.15670	.10631	.14704	.28555	.13066	.39788	.36526
#1	6.1853	2.8145	.72800	.73128	.52959	.79139	.52976
#2	6.1859	2.8200	.72602	.72764	.52842	.79666	.53151
#3	6.1689	2.8152	.72771	.73122	.52964	.79705	.53364

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**549.58**	**.53230**	**.52730**	**.59858**	**29.118**	**.53199**	**.03983**
Stddev	1.95	.00324	.00038	.00274	.145	.00154	.00082
%RSD	.35428	.60826	.07169	.45770	.49870	.29013	2.0683
#1	551.22	.52867	.52728	.59547	28.951	.53021	.03913
#2	550.09	.53332	.52768	.60064	29.189	.53283	.03962
#3	547.43	.53490	.52693	.59963	29.215	.53294	.04074

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**155.69**	**2.9004**	**.54054**	**.48450**	**64.412**	**.63493**	**.59054**
Stddev	.35	.0090	.00048	.00153	.036	.00394	.00241
%RSD	.22638	.31040	.08885	.31619	.05630	.61992	.40753
#1	155.58	2.9009	.54043	.48275	64.454	.63233	.58778
#2	155.41	2.8912	.54107	.48561	64.390	.63300	.59221
#3	156.09	2.9091	.54013	.48514	64.392	.63945	.59164

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **750.14**	**4.6057**	**.46568**	**.49132**	**.51499**	**.56146**	**.58225**
Stddev	6.36	.0024	.00240	.00116	.00134	.00244	.00055
%RSD	.84724	.05313	.51587	.23705	.25991	.43477	.09524
#1	743.32	4.6073	.46291	.49146	.51551	.55865	.58203
#2	751.21	4.6029	.46685	.49010	.51347	.56309	.58183
#3	755.89	4.6070	.46726	.49241	.51599	.56263	.58288

Sample Name: K035-02A Acquired: 11/16/2011 17:30:05 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015046 Type: Diln Factor:
Comment: DISS

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6030.3**	**90435.**	**149950.**
Stddev	7.8	170.	456.
%RSD	.12875	.18773	.30425
#1	6038.6	90623.	150440.
#2	6028.9	90391.	149870.
#3	6023.3	90292.	149530.

Sample Name: K035-02 Acquired: 11/16/2011 17:33:07 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015047 Type: Diln Factor:
Comment: DISS

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01729**	**-.00013**	**.09362**	**.20405**	**-.00002**	**.25706**	**.00068**
Stddev	.00057	.00023	.00294	.00093	.00004	.00093	.00003
%RSD	3.2791	177.78	3.1423	.45365	252.85	.36028	5.0632
#1	.01770	-.00035	.09345	.20311	-.00006	.25797	.00072
#2	.01754	.00011	.09076	.20496	.00002	.25612	.00065
#3	.01665	-.00016	.09664	.20409	-.00001	.25711	.00069

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**515.82**	**.00035**	**-.00098**	**.00151**	**24.496**	**.00434**	**.03757**
Stddev	1.42	.00018	.00008	.00021	.030	.00007	.00044
%RSD	.27540	52.101	8.5864	13.906	.12440	1.6443	1.1732
#1	514.21	.00018	-.00106	.00170	24.489	.00438	.03709
#2	516.88	.00055	-.00099	.00129	24.470	.00426	.03768
#3	516.37	.00033	-.00089	.00154	24.530	.00438	.03795

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**110.22**	**2.4384**	**-.00096**	**.00045**	**8.2534**	**-.00018**	**-.00017**
Stddev	.95	.0221	.00016	.00029	.0112	.00042	.00014
%RSD	.86472	.90668	16.834	63.561	.13532	231.67	79.866
#1	109.13	2.4134	-.00100	.00036	8.2580	-.00061	-.00017
#2	110.88	2.4555	-.00110	.00078	8.2615	.00024	-.00004
#3	110.66	2.4463	-.00078	.00023	8.2407	-.00017	-.00031

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **720.31**	**4.2202**	**-.00118**	**-.00051**	**.00239**	**.00020**	**.00302**
Stddev	6.25	.0058	.00023	.00098	.00054	.00007	.00020
%RSD	.86763	.13751	19.556	193.17	22.632	33.815	6.6605
#1	718.25	4.2138	-.00120	-.00045	.00215	.00013	.00305
#2	715.34	4.2252	-.00094	.00044	.00301	.00026	.00281
#3	727.32	4.2215	-.00140	-.00152	.00201	.00021	.00321

Sample Name: K035-02 Acquired: 11/16/2011 17:33:07 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015047 Type: Diln Factor:
Comment: DISS

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6088.3**	**90196.**	**150510.**
Stddev	5.9	669.	380.
%RSD	.09753	.74185	.25269
#1	6094.1	90963.	150150.
#2	6082.3	89732.	150910.
#3	6088.6	89893.	150460.

Sample Name: K035-02J Acquired: 11/16/2011 17:36:19 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015048 Type: Diln Factor:
Comment: DISS

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00747**	**-.00001**	**.01745**	**.03991**	**.00002**	**.04986**	**.00004**	**107.69**
Stddev	.00181	.00082	.00202	.00021	.00003	.00047	.00002	.08
%RSD	24.285	8639.3	11.553	.52422	137.43	.94397	54.091	.07150
#1	.00540	-.00095	.01595	.03988	-.00001	.05003	.00005	107.78
#2	.00881	.00038	.01974	.03971	.00003	.05022	.00001	107.64
#3	.00818	.00054	.01665	.04013	.00005	.04932	.00005	107.66

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00036**	**-.00021**	**.00076**	**5.0305**	**-.00035**	**.00758**	**21.749**	**.49350**
Stddev	.00003	.00001	.00015	.0240	.00043	.00020	.113	.00360
%RSD	8.0147	6.7923	19.481	.47769	121.33	2.5870	.51912	.72955
#1	.00039	-.00021	.00069	5.0518	-.00034	.00773	21.810	.49439
#2	.00037	-.00022	.00065	5.0352	.00007	.00765	21.619	.48954
#3	.00033	-.00019	.00092	5.0044	-.00079	.00736	21.819	.49658

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00031**	**-.00001**	**1.5716**	**-.00134**	**-.00012**	**146.12**	**.82497**	**-.00032**
Stddev	.00007	.00017	.0156	.00077	.00011	1.65	.00054	.00066
%RSD	22.284	2018.4	.99174	57.367	92.740	1.1261	.06594	205.40
#1	-.00023	-.00012	1.5814	-.00197	-.00024	147.71	.82441	.00035
#2	-.00036	-.00010	1.5797	-.00157	-.00005	144.42	.82500	-.00034
#3	-.00036	.00019	1.5536	-.00048	-.00005	146.25	.82549	-.00097

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**-.00019**	**.00150**	**-.00006**	**.00070**
Stddev	.00032	.00014	.00003	.00010
%RSD	165.03	9.3431	42.540	14.299
#1	-.00046	.00153	-.00003	.00074
#2	-.00027	.00135	-.00008	.00077
#3	.00016	.00162	-.00007	.00059

Sample Name: K035-02J Acquired: 11/16/2011 17:36:19 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015048 Type: Diln Factor:
Comment: DISS

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7333.5**	**94849.**	**174150.**
Stddev	7.7	555.	938.
%RSD	.10541	.58514	.53884
#1	7324.6	94318.	175040.
#2	7338.5	95425.	174260.
#3	7337.5	94803.	173170.

Sample Name: K035-02M Acquired: 11/16/2011 17:39:21 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015049 Type: Diln Factor:
Comment: DISS

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**5.8372**	**2.8224**	**.69382**	**.70708**	**.49768**	**.80527**	**.50096**
Stddev	.0262	.0043	.00061	.00325	.00151	.00042	.00058
%RSD	.44910	.15167	.08768	.46015	.30418	.05246	.11539
#1	5.8417	2.8203	.69425	.71052	.49916	.80510	.50029
#2	5.8090	2.8273	.69408	.70405	.49614	.80496	.50131
#3	5.8608	2.8195	.69312	.70666	.49774	.80575	.50127

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**563.87**	**.49787**	**.49427**	**.55443**	**29.589**	**.50024**	**.04163**
Stddev	4.41	.00005	.00021	.00082	.088	.00023	.00129
%RSD	.78247	.00925	.04211	.14836	.29648	.04638	3.1007
#1	568.19	.49791	.49438	.55536	29.584	.49998	.04216
#2	559.37	.49787	.49403	.55378	29.679	.50032	.04257
#3	564.06	.49782	.49441	.55416	29.504	.50042	.04015

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**159.09**	**2.9398**	**.55112**	**.51293**	**64.753**	**.60272**	**.59405**
Stddev	.54	.0084	.00042	.00093	.099	.00327	.00058
%RSD	.34124	.28650	.07663	.18036	.15313	.54199	.09830
#1	159.56	2.9477	.55088	.51263	64.791	.60018	.59429
#2	158.50	2.9309	.55087	.51219	64.641	.60157	.59338
#3	159.23	2.9409	.55161	.51397	64.828	.60641	.59447

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **772.13**	**4.6709**	**.43991**	**.49863**	**.51783**	**.52888**	**.55014**
Stddev	3.10	.0656	.00076	.00073	.00200	.00184	.00082
%RSD	.40155	1.4038	.17234	.14680	.38657	.34743	.14946
#1	768.88	4.6177	.43927	.49943	.51923	.52903	.54927
#2	772.47	4.6510	.44075	.49800	.51554	.53063	.55090
#3	775.05	4.7442	.43971	.49847	.51872	.52697	.55024

Sample Name: K035-02M Acquired: 11/16/2011 17:39:21 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015049 Type: Diln Factor:
Comment: DISS

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	5941.3	88740.	148460.
Stddev	6.0	262.	94.
%RSD	.10077	.29487	.06305
#1	5945.2	88769.	148560.
#2	5944.4	88986.	148370.
#3	5934.4	88465.	148460.

Sample Name: K035-02S Acquired: 11/16/2011 17:42:30 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015050 Type: Diln Factor:
Comment: DISS

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**6.0642**	**2.9250**	**.71293**	**.73479**	**.51671**	**.82525**	**.51268**
Stddev	.0196	.0078	.00440	.00330	.00169	.00314	.00017
%RSD	.32264	.26636	.61744	.44932	.32732	.37995	.03268
#1	6.0808	2.9161	.70876	.73099	.51478	.82727	.51250
#2	6.0692	2.9279	.71753	.73650	.51742	.82164	.51271
#3	6.0426	2.9309	.71250	.73690	.51793	.82684	.51283

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**563.67**	**.51001**	**.50890**	**.57127**	**29.765**	**.51428**	.04071
Stddev	2.75	.00194	.00106	.00231	.083	.00059	.00111
%RSD	.48742	.37968	.20854	.40390	.28036	.11437	2.7322
#1	563.35	.51070	.50797	.57306	29.716	.51373	.04121
#2	561.10	.50782	.50868	.56867	29.717	.51490	.03944
#3	566.57	.51151	.51006	.57209	29.861	.51422	.04149

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**162.89**	**3.0122**	**.56977**	**.52736**	**66.651**	**.62352**	**.60911**
Stddev	.66	.0129	.00207	.00088	.193	.00234	.00088
%RSD	.40646	.42855	.36369	.16617	.28957	.37562	.14502
#1	162.14	2.9977	.56738	.52638	66.443	.62200	.60952
#2	163.37	3.0224	.57106	.52767	66.685	.62622	.60810
#3	163.17	3.0165	.57087	.52805	66.824	.62236	.60972

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **775.57**	**4.7793**	**.45055**	**.51321**	**.53814**	**.54108**	**.56140**
Stddev	1.82	.0299	.00288	.00099	.00153	.00146	.00072
%RSD	.23446	.62601	.63956	.19292	.28419	.26907	.12882
#1	777.04	4.7527	.45269	.51209	.53639	.54034	.56139
#2	773.54	4.7735	.44727	.51398	.53923	.54014	.56213
#3	776.14	4.8116	.45168	.51354	.53880	.54276	.56068

Sample Name: K035-02S Acquired: 11/16/2011 17:42:30 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015050 Type: Diln Factor:
Comment: DISS

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**5924.5**	**89078.**	**148440.**
Stddev	10.0	283.	125.
%RSD	.16908	.31740	.08431
#1	5935.3	89401.	148450.
#2	5922.6	88873.	148550.
#3	5915.5	88962.	148300.

Sample Name: K035-01 Acquired: 11/16/2011 17:45:39 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015051 Type: Diln Factor:
Comment: DISS

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.02542	.00071	.08189	.01538	.00001	.20283	.00000	256.97
Stddev	.00108	.00015	.00078	.00012	.00001	.00009	.00010	.35
%RSD	4.2456	21.227	.94905	.78990	76.081	.04225	7477.2	.13467
#1	.02651	.00077	.08160	.01538	.00002	.20291	.00002	257.36
#2	.02539	.00054	.08277	.01526	.00002	.20274	.00009	256.85
#3	.02435	.00082	.08131	.01550	.00000	.20285	-.00011	256.70

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00060	-.00014	.00156	2.8679	.00164	.02080	57.296	1.3372
Stddev	.00011	.00016	.00011	.0071	.00028	.00085	.300	.0084
%RSD	18.935	112.23	7.3258	.24877	17.358	4.0972	.52342	.62512
#1	.00048	-.00006	.00158	2.8711	.00133	.02036	57.169	1.3342
#2	.00062	-.00032	.00166	2.8597	.00188	.02179	57.638	1.3466
#3	.00071	-.00004	.00144	2.8728	.00171	.02026	57.080	1.3307

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.00056	.00201	4.4334	-.00051	-.00023	625.05	1.6372	-.00098
Stddev	.00009	.00022	.0151	.00088	.00013	8.36	.0035	.00046
%RSD	16.273	11.021	.34100	172.37	56.739	1.3370	.21333	46.903
#1	-.00056	.00178	4.4328	.00050	-.00035	632.97	1.6392	-.00060
#2	-.00046	.00222	4.4488	-.00089	-.00010	625.87	1.6331	-.00149
#3	-.00064	.00203	4.4186	-.00115	-.00024	616.32	1.6391	-.00085

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	.00043	.00327	.00354	.00951
Stddev	.00040	.00028	.00027	.00012
%RSD	93.917	8.6846	7.6894	1.2684
#1	.00028	.00355	.00381	.00954
#2	.00088	.00329	.00326	.00938
#3	.00012	.00298	.00355	.00961

Sample Name: K035-01 Acquired: 11/16/2011 17:45:39 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015051 Type: Diln Factor:
Comment: DISS

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	6415.5	92202.	158280.
Stddev	8.5	473.	32.
%RSD	.13245	.51316	.01995
#1	6408.0	92397.	158260.
#2	6413.6	91663.	158310.
#3	6424.7	92547.	158260.

Sample Name: K035-03 Acquired: 11/16/2011 17:48:50 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015052 Type: Diln Factor: .
Comment: DISS

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.02456	-.00034	.35339	.03447	.00000	.35906	.00118
Stddev	.00095	.00085	.00141	.00021	.0000	.00118	.00005
%RSD	3.8765	252.91	.39866	.61947	597.30	.32944	3.8952
#1	.02562	.00062	.35185	.03424	-.00001	.35990	.00120
#2	.02377	-.00061	.35371	.03452	.00001	.35771	.00122
#3	.02430	-.00102	.35461	.03466	-.00001	.35958	.00113

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	720.62	.00039	-.00126	.00176	34.024	.00541	.05426
Stddev	6.64	.00008	.00030	.00019	.032	.00071	.00103
%RSD	.92174	19.706	23.724	10.698	.09291	13.193	1.8941
#1	722.33	.00032	-.00161	.00194	34.023	.00529	.05411
#2	713.29	.00048	-.00112	.00179	34.056	.00475	.05331
#3	726.24	.00038	-.00106	.00156	33.993	.00617	.05535

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	220.50	9.9043	.06689	.00253	4.9226	-.00166	-.00030
Stddev	.71	.0249	.00002	.00000	.0286	.00143	.00024
%RSD	.32310	.25107	.03267	.08112	.58085	86.155	78.214
#1	220.41	9.9091	.06691	.00254	4.9166	-.00210	-.00054
#2	219.83	9.8774	.06687	.00254	4.8975	-.00006	-.00030
#3	221.25	9.9264	.06690	.00253	4.9537	-.00281	-.00007

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F 1288.4	4.5621	-.00317	-.00015	.00147	.00000	.00672
Stddev	8.5	.0143	.00043	.00085	.00076	.00035	.00003
%RSD	.65807	.31229	13.697	580.68	51.880	13045.	.48262
#1	1288.8	4.5766	-.00267	.00054	.00232	.00038	.00669
#2	1279.7	4.5481	-.00348	-.00109	.00084	-.00031	.00675
#3	1296.6	4.5615	-.00336	.00011	.00125	-.00006	.00673

Sample Name: K035-03 Acquired: 11/16/2011 17:48:50 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015052 Type: Diln Factor:
Comment: DISS

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**5659.7**	**85817.**	**142340.**
Stddev	17.2	383.	542.
%RSD	.30418	.44588	.38108
#1	5650.0	85822.	141810.
#2	5649.5	86197.	142890.
#3	5679.6	85432.	142320.

Sample Name: K035-04 Acquired: 11/16/2011 17:52:02 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015053 Type: Diln Factor:
Comment: DISS

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.03169	-.00042	.05405	.15034	-.00001	.22624	.00015	455.25
Stddev	.00104	.00126	.00365	.00089	.00004	.00106	.00003	4.05
%RSD	3.2722	301.24	6.7554	.59461	640.37	.46785	18.569	.88862
#1	.03052	-.00073	.05289	.15128	.00001	.22706	.00018	459.54
#2	.03209	-.00149	.05814	.14950	.00002	.22661	.00013	454.71
#3	.03247	.00097	.05112	.15022	-.00005	.22504	.00014	451.50

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00073	-.00095	.00191	9.9159	.00359	.04343	100.84	1.6550
Stddev	.00009	.00005	.00010	.0121	.00055	.00049	.28	.0076
%RSD	11.823	5.1789	5.1699	.12193	15.263	1.1309	.28240	.46055
#1	.00078	-.00093	.00202	9.9204	.00296	.04396	101.17	1.6637
#2	.00063	-.00092	.00190	9.9251	.00396	.04300	100.74	1.6514
#3	.00078	-.00101	.00182	9.9022	.00386	.04332	100.63	1.6498

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.00094	.00131	9.2235	-.00001	-.00029	479.26	3.7779	-.00115
Stddev	.00007	.00027	.0110	.00027	.00014	4.87	.0121	.00036
%RSD	7.4258	20.633	.11929	2267.7	49.181	1.0158	.31901	30.856
#1	-.00098	.00158	9.2224	.00002	-.00018	483.73	3.7919	-.00097
#2	-.00086	.00104	9.2350	.00024	-.00045	479.99	3.7712	-.00093
#3	-.00098	.00133	9.2131	-.00030	-.00023	474.07	3.7707	-.00156

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	-.00011	.00224	-.00008	.01765
Stddev	.00021	.00063	.00007	.00010
%RSD	192.21	28.304	85.108	.56949
#1	-.00034	.00297	-.00002	.01763
#2	-.00008	.00191	-.00016	.01776
#3	.00008	.00183	-.00006	.01756

Sample Name: K035-04 Acquired: 11/16/2011 17:52:02 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015053 Type: Diln Factor:
Comment: DISS

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6241.7**	**88602.**	**154860.**
Stddev	2.6	452.	167.
%RSD	.04190	.51030	.10806
#1	6242.9	88104.	154660.
#2	6243.5	88713.	154950.
#3	6238.7	88988.	154950.

Sample Name: K035-05 Acquired: 11/16/2011 17:55:13 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015054 Type: Diln Factor:
Comment: DISS

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.02251	.00032	.35784	.03400	-.00002	.36156	.00111
Stddev	.00322	.00111	.00132	.00045	.00004	.00040	.00006
%RSD	14.290	348.58	.36998	1.3200	221.77	.10980	5.2880
#1	.01886	-.00090	.35645	.03354	-.00007	.36128	.00111
#2	.02375	.00059	.35909	.03402	.00002	.36201	.00116
#3	.02492	.00127	.35798	.03444	-.00001	.36138	.00105

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	724.74	.00048	-.00124	.00187	34.428	.00502	.05486
Stddev	6.02	.00008	.00013	.00009	.175	.00056	.00049
%RSD	.83120	16.667	10.102	4.8102	.50730	11.155	.89966
#1	717.83	.00039	-.00138	.00177	34.626	.00552	.05499
#2	728.84	.00049	-.00118	.00194	34.294	.00512	.05432
#3	727.56	.00055	-.00116	.00191	34.365	.00441	.05528

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	217.41	9.7432	.06808	.00232	4.8531	.00168	-.00038
Stddev	1.36	.0775	.00011	.00007	.0178	.00044	.00011
%RSD	.62425	.79509	.15831	3.0007	.36630	25.985	28.204
#1	216.11	9.6671	.06795	.00232	4.8401	.00152	-.00040
#2	217.30	9.7407	.06816	.00239	4.8459	.00218	-.00027
#3	218.81	9.8219	.06811	.00225	4.8734	.00135	-.00048

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F 1281.2	4.5924	-.00309	-.00003	.00261	.00010	.00624
Stddev	9.5	.0095	.00059	.00036	.00026	.00031	.00015
%RSD	.74113	.20600	19.137	1176.5	10.115	299.68	2.3391
#1	1273.8	4.5834	-.00243	.00035	.00249	.00002	.00640
#2	1278.0	4.5914	-.00357	-.00036	.00243	.00045	.00618
#3	1291.9	4.6023	-.00328	-.00008	.00292	-.00016	.00613

Sample Name: K035-05 Acquired: 11/16/2011 17:55:13 Type: Unk
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015054 Type: Diln Factor:
Comment: DISS

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	5644.1	86250.	140910.
Stddev	14.9	400.	178.
%RSD	.26320	.46358	.12617
#1	5636.8	86674.	140720.
#2	5661.2	86197.	140950.
#3	5634.4	85880.	141070.

Sample Name: CCV4 Acquired: 11/16/2011 18:01:24 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015056 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**101.62**	**1.4992**	**1.0348**	**1.9230**	**1.4414**	**2.4349**	**1.9349**	**74.533**
Stddev	.10	.0101	.0060	.0046	.0019	.0039	.0064	.074
%RSD	.10050	.67540	.58338	.23887	.13003	.15925	.32867	.09905
#1	101.56	1.5080	1.0414	1.9194	1.4400	2.4353	1.9386	74.480
#2	101.74	1.5014	1.0335	1.9282	1.4435	2.4386	1.9386	74.501
#3	101.56	1.4881	1.0295	1.9215	1.4406	2.4308	1.9276	74.617
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4128**	**.94320**	**2.5301**	**24.596**	**2.3821**	**.50406**	**54.128**	**2.3991**
Stddev	.0056	.00063	.0068	.063	.0054	.00198	.186	.0065
%RSD	.23365	.06709	.26878	.25484	.22699	.39273	.34382	.27064
#1	2.4128	.94320	2.5281	24.533	2.3759	.50299	53.914	2.3916
#2	2.4184	.94256	2.5377	24.658	2.3841	.50634	54.218	2.4031
#3	2.4071	.94383	2.5246	24.597	2.3862	.50284	54.253	2.4026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4943**	**2.4381**	**60.004**	**1.0318**	**.50762**	**61.966**	**.48742**	**2.2575**
Stddev	.0029	.0033	.034	.0043	.00093	.037	.00016	.0073
%RSD	.11790	.13610	.05728	.41656	.18267	.06032	.03331	.32147
#1	2.4946	2.4368	59.988	1.0340	.50734	61.996	.48723	2.2602
#2	2.4972	2.4357	60.044	1.0345	.50865	61.924	.48749	2.2631
#3	2.4913	2.4419	59.981	1.0268	.50686	61.978	.48753	2.2493
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV4 Acquired: 11/16/2011 18:01:24 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015056 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.50078**	**.48599**	**1.4900**	**2.5527**
Stddev	.00069	.00184	.0024	.0037
%RSD	.13871	.37781	.16197	.14385
#1	.50137	.48497	1.4880	2.5505
#2	.50002	.48811	1.4927	2.5507
#3	.50097	.48489	1.4894	2.5570
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7425.1**	**97172.**	**178170.**
Stddev	11.2	394.	460.
%RSD	.15095	.40557	.25832
#1	7437.3	97606.	177960.
#2	7422.9	97072.	177840.
#3	7415.2	96837.	178690.

Sample Name: CCB4 Acquired: 11/16/2011 18:04:13 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015057 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00340**	**.00031**	-.00062	**.00000**	**.00007**	**.00177**	**.00009**
Stddev	.00027	.00107	.00091	.0001	.00001	.00035	.00004
%RSD	7.9149	347.66	148.04	1818.4	16.461	19.910	42.285
#1	.00330	.00102	-.00166	-.00010	.00006	.00212	.00005
#2	.00371	.00083	-.00026	.00004	.00007	.00179	.00010
#3	.00320	-.00092	.00007	.00004	.00008	.00141	.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00709**	**.00015**	**.00003**	**.00019**	**-.00385**	**-.00054**	**.00045**
Stddev	.00079	.00004	.00012	.00002	.00113	.00027	.00110
%RSD	11.143	23.845	378.11	8.9245	29.383	50.167	246.25
#1	.00626	.00017	.00001	.00019	-.00445	-.00083	.00153
#2	.00784	.00011	.00015	.00018	-.00255	-.00050	.00049
#3	.00717	.00016	-.00008	.00022	-.00456	-.00029	-.00067
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00168**	**.00026**	**.00020**	**.00014**	**.16332**	**-.00054**	**-.00007**
Stddev	.00825	.00015	.00001	.00002	.01175	.00014	.00012
%RSD	490.94	57.394	5.8568	15.382	7.1937	25.326	165.19
#1	-.00615	.00011	.00020	.00011	.17515	-.00065	.00003
#2	.00784	.00041	.00019	.00016	.15165	-.00039	-.00020
#3	-.00673	.00026	.00022	.00014	.16317	-.00059	-.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB4 Acquired: 11/16/2011 18:04:13 Type: QC
Method: 11K6010(v23) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K015057 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F .30477	.00014	-.00008	.00023	.00004	.00009	.00012
Stddev	.00180	.00003	.00001	.00028	.00025	.00006	.00008
%RSD	.58931	23.096	7.8725	123.98	625.58	71.147	66.717
#1	.30397	.00012	-.00007	.00028	.00028	.00013	.00003
#2	.30352	.00017	-.00009	.00048	-.00022	.00011	.00017
#3	.30683	.00012	-.00008	-.00008	.00006	.00002	.00017
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.05090						
Low Limit	-.05090						

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8341.0	97114.	191510.
Stddev	1.3	411.	144.
%RSD	.01584	.42338	.07537
#1	8339.5	97441.	191340.
#2	8341.7	97249.	191610.
#3	8341.9	96652.	191560.

EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP METALS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

All samples pH <2

Book #: EIP-104
Batch: IPKD26W
Matrix: Water
Digestor ID: E

SOP #	Rev. #
☐ EMAX-3005	4
☑ EMAX-3010	5
☐ EMAX-3050	4
☐ EMAX-200.7	2
☐ EMAX-	

Start	Temp	End	Temp
	95 °C		95 °C

Standards	ID	Amount Added (ml)
LCS-1	SM1A-013-04-13	0.25
LCS-2	SM1A-013-03-13	0.25
LCS-3	SM1A-013-04-14	0.5
MS	same spike vol added as LCS1, LCS2, LCS3	
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SW1A-04-407	1.5 + 1.5
HCl	SW1A-04-408	2.5 + 2.5
H_2O_2	N/A	
HNO3(1:1)	N/A	

Digestate Location	ICP
Extract Location	

☑ Reagent Water ID: SM5A-02-014
☑ Thermometer ID: 101993366
☑ Pipette ID: ICP-07
☑ Pipette ID: 142780035
☐ Pipette ID:
☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask
☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask

Prepared By: GG
Standard Added By: GG
Witnessed By: TH
Extract Rcvd By: TH
Checked By: TH

EMAX LABORATORIES, INC.

FileID: IPK026W

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
11IPK026W01	IPK026WB	50	ml	11/15/11 11:28	50	50	50	1	
11IPK026W02	IPK026WL	50	ml	11/15/11 11:28	50	50	50	1	
11IPK026W03	IPK026WC	50	ml	11/15/11 11:28	50	50	50	1	
11IPK026W04	K114-01	50	ml	11/15/11 11:28	50	50	50	1	
11IPK026W05	K114-02	50	ml	11/15/11 11:28	50	50	50	1	
11IPK026W06	K114-03	50	ml	11/15/11 11:28	50	50	50	1	
11IPK026W07	K052-01	50	ml	11/15/11 11:28	50	50	50	1	
11IPK026W08	K055-01	50	ml	11/15/11 11:28	50	50	50	1	
11IPK026W09	K056-01	50	ml	11/15/11 11:28	50	50	50	1	
11IPK026W10	K057-01	50	ml	11/15/11 11:28	50	50	50	1	
11IPK026W11	K035-01	50	ml	11/15/11 11:28	50	50	50	1	DISSOLVED
11IPK026W12	K035-02	50	ml	11/15/11 11:28	50	50	50	1	DISSOLVED
11IPK026W13	K035-02M	50	ml	11/15/11 11:28	50	50	50	1	DISSOLVED
11IPK026W14	K035-02S	50	ml	11/15/11 11:28	50	50	50	1	DISSOLVED
11IPK026W15	K035-03	50	ml	11/15/11 11:28	50	50	50	1	DISSOLVED
11IPK026W16	K035-04	50	ml	11/15/11 11:28	50	50	50	1	DISSOLVED
11IPK026W17	K035-05	50	ml	11/15/11 11:28	50	50	50	1	DISSOLVED
11IPK026W18	K018-01	50	ml	11/15/11 11:28	50	50	50	1	
11IPK026W19	K018-02	50	ml	11/15/11 11:28	50	50	50	1	
11IPK026W20	K018-03	50	ml	11/15/11 11:28	50	50	50	1	
11IPK026W21	K018-03M	50	ml	11/15/11 11:28	50	50	50	1	
11IPK026W22	K018-03S	50	ml	11/15/11 11:28	50	50	50	1	
11IPK026W23	K476-03	50	ml	11/15/11 11:28	50	50	50	1	
11IPK026W24	K478-03	50	ml	11/15/11 11:28	50	50	50	1	
11IPK026W25	K473-05	50	ml	11/15/11 11:28	50	50	50	1	

11/15/11 GG

Vd=digestate volume PrepFctr=)ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 11/15/11 11:41 Prepared By: GG

☑ Digestion Ended @ 11/15/11 15:56 Checked By: [illegible]

Comments: Date 11/15/11

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

WET CHEMICAL ANALYSES

SDG#: 11K035

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K035

METHOD 300.0
ANIONS BY IC

A total of five (5) water samples were received on 11/03/11 for Anions (Chloride, Nitrate, Nitrite and Sulfate) by IC analysis, Method 300.0 in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. Results were compliant to project requirement.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for ICK015WL/C were all within QC limits.
Percent recoveries for ICK017WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample were analyzed at the frequency prescribed by the project. Percent recoveries were within project QC limits except for one for Chloride result qualified with [*] in K035-02 M/S summary form, most likely due to matrix interference. Check QC summary form for details. Sample duplicate were also analyzed with the samples. RPDs were within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. Samples K035-01, -02, -03, -04 and -05 were analyzed at 2x dilution for Nitrate due to strong odor and turbidity and at various dilutions for Nitrite due to interference from high Chloride concentration.

SAMPLE RESULTS

METHOD 300.0
CHLORIDE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K035

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK017WB	ND	1	NA	0.200	0.100	11/04/1120:50	NA	AK07-38	AK07-36	ICK017W	NA	NA
LCS1W	ICK017WL	1.91	1	NA	0.200	0.100	11/04/1121:07	NA	AK07-39	AK07-36	ICK017W	NA	NA
LCD1W	ICK017WC	1.90	1	NA	0.200	0.100	11/04/1121:23	NA	AK07-40	AK07-36	ICK017W	NA	NA
MW-70-PMW01A-089	K035-01	709	50	NA	10.0	5.00	11/04/1123:16	NA	AK07-47	AK07-36	ICK017W	11/03/1111:30	11/03/11
MW-70-PMW01B-091	K035-02	1250	100	NA	20.0	10.0	11/05/1100:04	NA	AK07-50	AK07-48	ICK017W	11/03/1113:17	11/03/11
MW-70-PMW01B-091DUP	K035-02D	1250	100	NA	20.0	10.0	11/05/1100:21	NA	AK07-51	AK07-48	ICK017W	11/03/1113:17	11/03/11
MW-70-PMW01B-091MS	K035-02M	1390	100	NA	20.0	10.0	11/05/1100:37	NA	AK07-52	AK07-48	ICK017W	11/03/1113:17	11/03/11
MW-70-PMW01B-091MSD	K035-02S	1390	100	NA	20.0	10.0	11/05/1100:53	NA	AK07-53	AK07-48	ICK017W	11/03/1113:17	11/03/11
MW-70-27-092	K035-03	1730	200	NA	40.0	20.0	11/05/1101:09	NA	AK07-54	AK07-48	ICK017W	11/03/1114:58	11/03/11
MW-70-28-094	K035-04	884	100	NA	20.0	10.0	11/05/1101:25	NA	AK07-55	AK07-48	ICK017W	11/03/1116:16	11/03/11
IR-70-FD-093	K035-05	1760	200	NA	40.0	20.0	11/05/1101:41	NA	AK07-56	AK07-48	ICK017W	11/03/1100:00	11/03/11

METHOD 300.0
NITRATE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K035

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK015WB	ND	1	NA	0.200	0.0500	11/04/1111:25	NA	AK07-03	AK07-01	ICK015W	NA	NA
LCS1W	ICK015WL	0.944	1	NA	0.200	0.0500	11/04/1111:41	NA	AK07-04	AK07-01	ICK015W	NA	NA
LCD1W	ICK015WC	0.961	1	NA	0.200	0.0500	11/04/1111:57	NA	AK07-05	AK07-01	ICK015W	NA	NA
MW-70-PMW01A-089	K035-01	ND	2	NA	0.400	0.100	11/04/1114:39	NA	AK07-15	AK07-13	ICK015W	11/03/1111:30	11/03/11
1R-70-FD-093	K035-05	ND	2	NA	0.400	0.100	11/04/1114:55	NA	AK07-16	AK07-13	ICK015W	11/03/1100:00	11/03/11
MW-70-PMW01B-091	K035-02	ND	2	NA	0.400	0.100	11/04/1115:11	NA	AK07-17	AK07-13	ICK015W	11/03/1113:17	11/03/11
MW-70-PMW01B-091DUP	K035-02D	ND	2	NA	0.400	0.100	11/04/1115:27	NA	AK07-18	AK07-13	ICK015W	11/03/1113:17	11/03/11
MW-70-PMW01B-091MS	K035-02M	2.07	2	NA	0.400	0.100	11/04/1115:43	NA	AK07-19	AK07-13	ICK015W	11/03/1113:17	11/03/11
MW-70-PMW01B-091MSD	K035-02S	2.09	2	NA	0.400	0.100	11/04/1116:00	NA	AK07-20	AK07-13	ICK015W	11/03/1113:17	11/03/11
MW-70-27-092	K035-03	ND	2	NA	0.400	0.100	11/04/1116:16	NA	AK07-21	AK07-13	ICK015W	11/03/1114:58	11/03/11
MW-70-28-094	K035-04	ND	2	NA	0.400	0.100	11/04/1116:32	NA	AK07-22	AK07-13	ICK015W	11/03/1116:16	11/03/11

METHOD 300.0
NITRITE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K035

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK015WB	ND	1	NA	0.200	0.0500	11/04/1111:25	NA	AK07-03	AK07-01	ICK015W	NA	NA
LCS1W	ICK015WL	2.01	1	NA	0.200	0.0500	11/04/1111:41	NA	AK07-04	AK07-01	ICK015W	NA	NA
LCD1W	ICK015WC	2.04	1	NA	0.200	0.0500	11/04/1111:57	NA	AK07-05	AK07-01	ICK015W	NA	NA
MW-70-PMW01A-089	K035-01	ND	2	NA	0.400	0.100	11/04/1114:39	NA	AK07-15	AK07-13	ICK015W	11/03/1111:30	11/03/11
MW-70-28-094	K035-04	ND	2	NA	0.400	0.100	11/04/1116:32	NA	AK07-22	AK07-13	ICK015W	11/03/1116:16	11/03/11
IR-70-FD-093	K035-05	ND	10	NA	2.00	0.500	11/04/1118:09	NA	AK07-28	AK07-25	ICK015W	11/03/1100:00	11/03/11
MW-70-PMW01B-091	K035-02	ND	5	NA	1.00	0.250	11/04/1118:25	NA	AK07-29	AK07-25	ICK015W	11/03/1113:17	11/03/11
MW-70-PMW01B-091DUP	K035-02D	ND	5	NA	1.00	0.250	11/04/1118:41	NA	AK07-30	AK07-25	ICKD15W	11/03/1113:17	11/03/11
MW-70-PMW01B-091MS	K035-02M	11.6	5	NA	1.00	0.250	11/04/1118:57	NA	AK07-31	AK07-25	ICK015W	11/03/1113:17	11/03/11
MW-70-PMW01B-091MSD	K035-02S	11.7	5	NA	1.00	0.250	11/04/1119:13	NA	AK07-32	AK07-25	ICK015W	11/03/1113:17	11/03/11
MW-70-27-092	K035-03	ND	10	NA	2.00	0.500	11/04/1119:30	NA	AK07-33	AK07-25	ICK015W	11/03/1114:58	11/03/11

METHOD 300.0
SULFATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K035

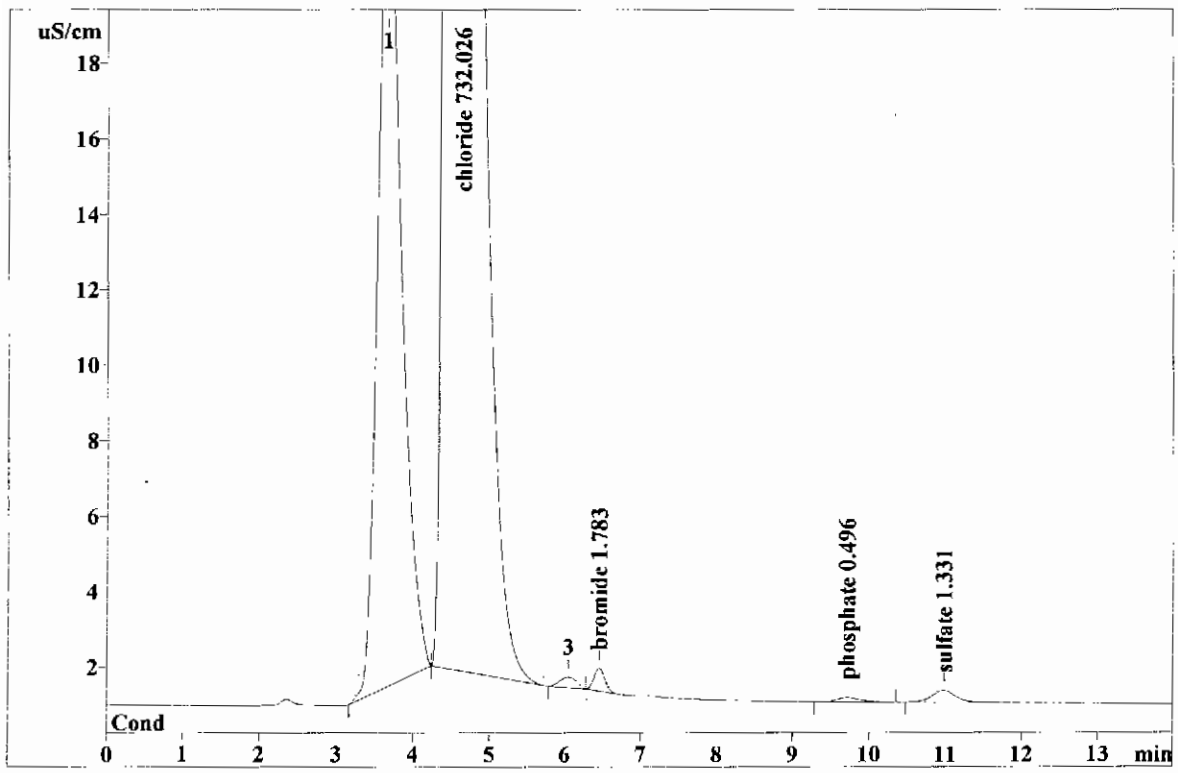
Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK015WB	ND	1	NA	0.500	0.250	11/04/1111:25	NA	AK07-03	AK07-01	ICK015W	NA	NA
LCS1W	ICK015WL	4.75	1	NA	0.500	0.250	11/04/1111:41	NA	AK07-04	AK07-01	ICK015W	NA	NA
LCD1W	ICK015WC	4.87	1	NA	0.500	0.250	11/04/1111:57	NA	AK07-05	AK07-01	ICK015W	NA	NA
MW-70-PMW01A-089	K035-01	1.33	2	NA	1.00	0.500	11/04/1114:39	NA	AK07-15	AK07-13	ICK015W	11/03/1111:30	11/03/11
MBLK2W	ICK017WB	ND	1	NA	0.500	0.250	11/04/1120:50	NA	AK07-38	AK07-36	ICK017W	NA	NA
LCS2W	ICK017WL	4.87	1	NA	0.500	0.250	11/04/1121:07	NA	AK07-39	AK07-36	ICK017W	NA	NA
LCD2W	ICK017WC	4.87	1	NA	0.500	0.250	11/04/1121:23	NA	AK07-40	AK07-36	ICK017W	NA	NA
MW-70-PMW01B-091	K035-02	923	100	NA	50.0	25.0	11/05/1100:04	NA	AK07-50	AK07-48	ICK017W	11/03/1113:17	11/03/11
MW-70-PMW01B-091DUP	K035-02D	924	100	NA	50.0	25.0	11/05/1100:21	NA	AK07-51	AK07-48	ICK017W	11/03/1113:17	11/03/11
MW-70-PMW01B-091MS	K035-02M	1430	100	NA	50.0	25.0	11/05/1100:37	NA	AK07-52	AK07-48	ICK017W	11/03/1113:17	11/03/11
MW-70-PMW01B-091MSD	K035-02S	1430	100	NA	50.0	25.0	11/05/1100:53	NA	AK07-53	AK07-48	ICK017W	11/03/1113:17	11/03/11
MW-70-27-092	K035-03	2630	200	NA	100	50.0	11/05/1101:09	NA	AK07-54	AK07-48	ICK017W	11/03/1114:58	11/03/11
MW-70-28-094	K035-04	659	100	NA	50.0	25.0	11/05/1101:25	NA	AK07-55	AK07-48	ICK017W	11/03/1116:16	11/03/11
IR-70-FD-093	K035-05	2680	200	NA	100	50.0	11/05/1101:41	NA	AK07-56	AK07-48	ICK017W	11/03/1100:00	11/03/11

Report date: 11/4/2011 3:18:06 PM
Printed by: Jadelyn Chun

Ident: AK07-15 K035-01 DF=2
Analysis from: 11/4/2011 2:39:17 PM
File: vb041439.chw Last save: 11/4/2011 2:53:14 PM
Modified!
Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71026

SAMPLE:
:
Vial number: 15
Volume: 1.0 µL
Dilution: 2.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.66	21.39	465.557	0.000	
2	4.65	416.66	6561.999	732.026	chloride
3	6.05	0.28	4.321	0.000	
4	6.46	0.60	5.950	1.783	bromide
5	9.72	0.12	2.633	0.496	phosphate
6	10.98	0.32	7.082	1.331	sulfate ✓
6	14.00	439.37	7047.541	735.637	

NO_2N ✓
NO_3N ✓

This report has been created by IC Net
METROHM LTD

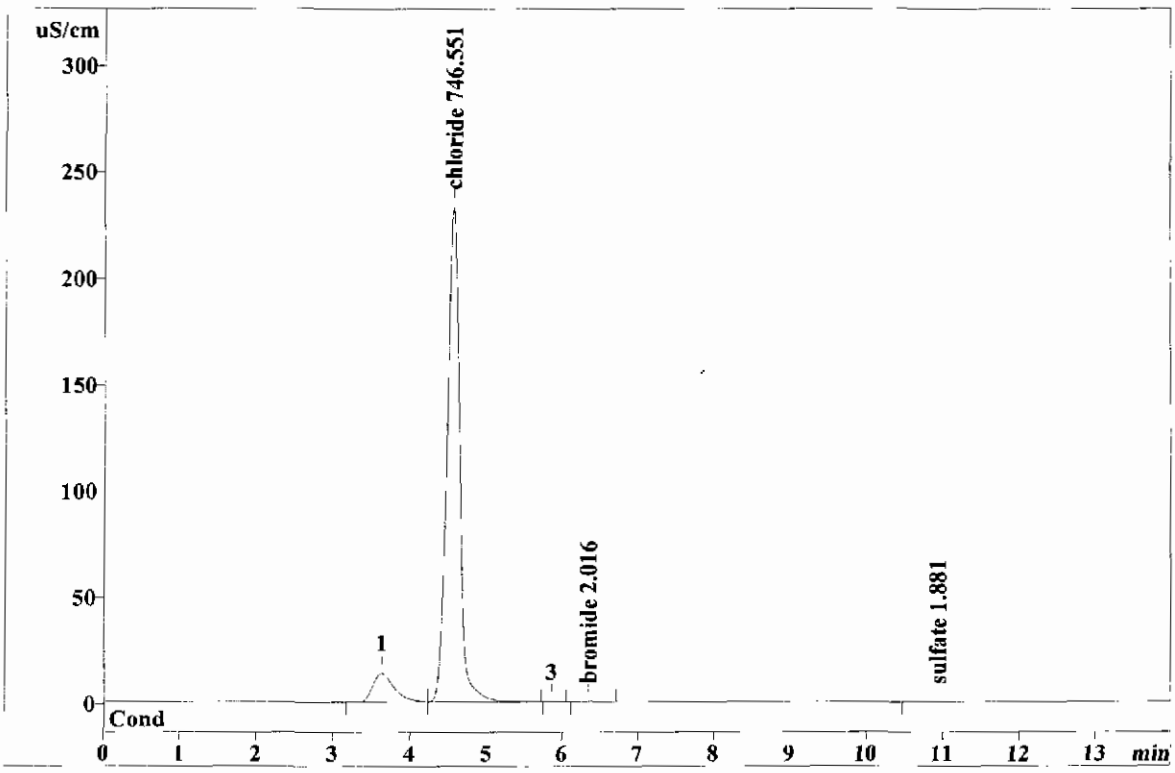
8007

Report date: 11/4/2011 5:02:32 PM
Printed by: Jadelyn Chun

Ident: AK07-23 K035-01 DF=5
Analysis from: 11/4/2011 4:48:35 PM
File: VB041648.CHW Last save: 11/4/2011 5:02:32 PM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71034

SAMPLE:
:
Vial number: 23
Volume: 1.0 µL
Dilution: 5.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.63	13.44	255.984	0.000	
2	4.56	232.39	2675.964	746.551	chloride
3	5.86	0.03	0.257	0.000	
4	6.34	0.22	2.482	2.016	bromide
5	10.94	0.15	3.262	1.881	sulfate
5	14.00	246.23	2937.949	750.449	

This report has been created by IC Net
METROHM LTD

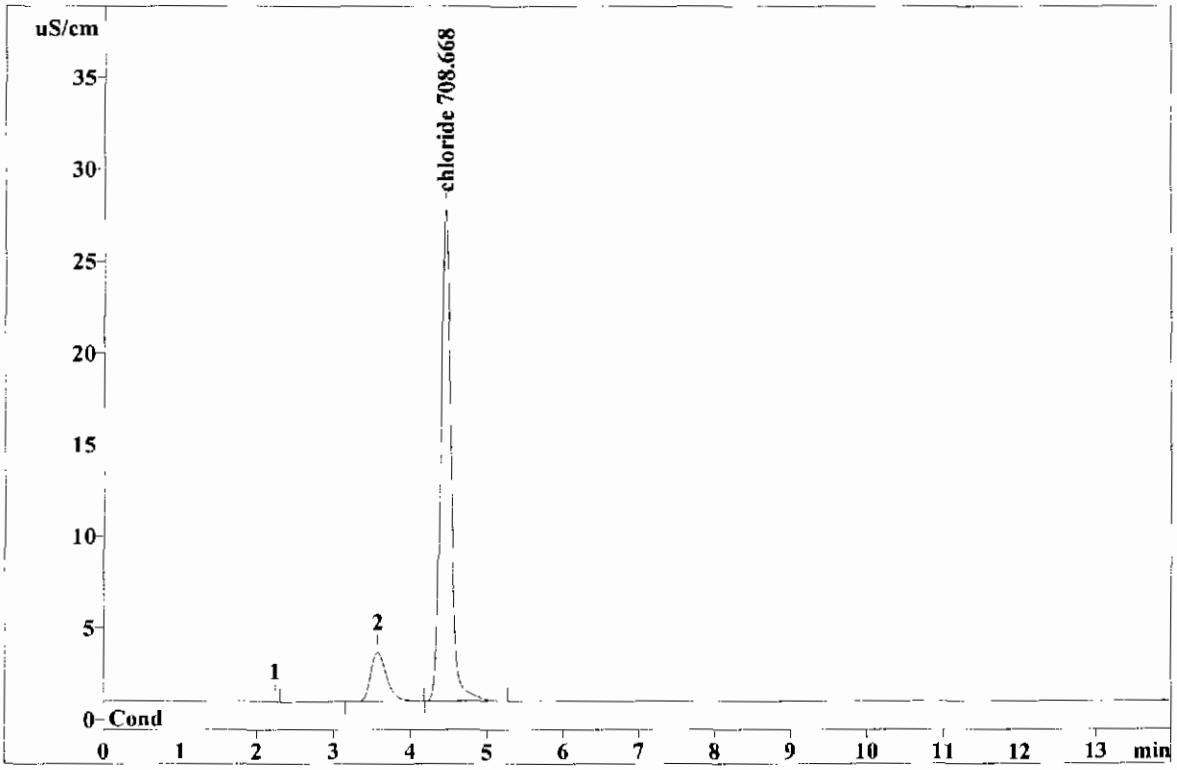
x not exceed

8008

Report date: 11/7/2011 3:03:52 PM
Printed by: Jadelyn Chun

Ident: AK07-47 K035-01 DF=50
Analysis from: 11/4/2011 11:16:24 PM
File: vb042316.chw Last save: 11/4/2011 10:30:22 PM
Modified!
Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71058

SAMPLE:
:
Vial number: 47
Volume: 1.0 µL
Dilution: 50.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.23	0.01	0.095	0.000	
2	3.57	2.67	38.696	0.000	
3	4.46	26.78	252.611	708.668	chloride
3	14.00	29.46	291.403	708.668	

This report has been created by IC Net
METROHM LTD

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK017WB	ICK017WL	ICK017WC		
LAB FILE ID:	AK07-38	AK07-39	AK07-40		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/04/1120:50	11/04/1121:07	11/04/1121:23	DATE RECEIVED:	NA
PREP. BATCH:	ICK017W	ICK017W	ICK017W		
CALIB. REF:	AK07-36	AK07-36	AK07-36		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	ND	2.00	1.91	95	2.00	1.90	95	0	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOO 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	100	100	100		
SAMPLE ID:	MW-70-PMW01B-091				
LAB SAMP ID:	K035-02	K035-02M	K035-02S		
LAB FILE ID:	AK07-50	AK07-52	AK07-53		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/03/11 13:17
DATE ANALYZED:	11/05/1100:04	11/05/1100:37	11/05/1100:53	DATE RECEIVED:	11/03/11
PREP. BATCH:	ICK017W	ICK017W	ICK017W		
CALIB. REF:	AK07-48	AK07-48	AK07-48		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	1250	200	1390	72*	200	1390	72*	0	80-120	20

8012

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	100	100		
SAMPLE ID:	MW-70-PMW01B-091			
EMAX SAMP ID:	K035-02	K035-02D		
LAB FILE ID:	AK07-50	AK07-51		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/03/11 13:17
DATE ANALYZED:	11/05/1100:04	11/05/1100:21	DATE RECEIVED:	11/03/11
PREP. BATCH:	ICK017W	ICK017W		
CALIB. REF:	AK07-48	AK07-48		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Chloride-Cl	1250	1250	0	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK015WB	ICK015WL	ICK015WC		
LAB FILE ID:	AK07-03	AK07-04	AK07-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/04/1111:25	11/04/1111:41	11/04/1111:57	DATE RECEIVED:	NA
PREP. BATCH:	ICK015W	ICK015W	ICK015W		
CALIB. REF:	AK07-01	AK07-01	AK07-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrate-N	ND	1.00	0.944	94	1.00	0.961	96	2	90-110	20

8014

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	2	2	2		
SAMPLE ID:	MW-70-PMW01B-091				
LAB SAMP ID:	K035-02	K035-02M	K035-02S		
LAB FILE ID:	AK07-17	AK07-19	AK07-20		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/03/11 13:17
DATE ANALYZED:	11/04/1115:11	11/04/1115:43	11/04/1116:00	DATE RECEIVED:	11/03/11
PREP. BATCH:	ICK015W	ICK015W	ICK015W		
CALIB. REF:	AK07-13	AK07-13	AK07-13		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrate-N	ND	2.00	2.07	103	2.00	2.09	104	1	80-120	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0

==========

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	2	2		
SAMPLE ID:	MW-70-PMW01B-091			
EMAX SAMP ID:	K035-02	K035-02D		
LAB FILE ID:	AK07-17	AK07-18		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/03/11 13:17
DATE ANALYZED:	11/04/1115:11	11/04/1115:27	DATE RECEIVED:	11/03/11
PREP. BATCH:	ICK015W	ICK015W		
CALIB. REF:	AK07-13	AK07-13		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Nitrate-N	ND	ND	0	20

8016

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK015WB	ICK015WL	ICK015WC		
LAB FILE ID:	AK07-03	AK07-04	AK07-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/04/1111:25	11/04/1111:41	11/04/1111:57	DATE RECEIVED:	NA
PREP. BATCH:	ICK015W	ICK015W	ICK015W		
CALIB. REF:	AK07-01	AK07-01	AK07-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	2.00	2.01	100	2.00	2.04	102	1	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	5	5	5		
SAMPLE ID:	MW-70-PMW01B-091				
LAB SAMP ID:	K035-02	K035-02M	K035-02S		
LAB FILE ID:	AK07-29	AK07-31	AK07-32		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/03/11 13:17
DATE ANALYZED:	11/04/1118:25	11/04/1118:57	11/04/1119:13	DATE RECEIVED:	11/03/11
PREP. BATCH:	ICK015W	ICK015W	ICK015W		
CALIB. REF:	AK07-25	AK07-25	AK07-25		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	10.0	11.6	116	10.0	11.7	117	1	80-120	20

8018

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 5 5
SAMPLE ID: MW-70-PMW01B-091
EMAX SAMP ID: K035-02 K035-02D
LAB FILE ID: AK07-29 AK07-30
DATE EXTRACTED: NA NA DATE COLLECTED: 11/03/11 13:17
DATE ANALYZED: 11/04/1118:25 11/04/1118:41 DATE RECEIVED: 11/03/11
PREP. BATCH: ICK015W ICK015W
CALIB. REF: AK07-25 AK07-25

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Nitrite-N	ND	ND	0	20

8015

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK015WB	ICK015WL	ICK015WC		
LAB FILE ID:	AK07-03	AK07-04	AK07-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/04/1111:25	11/04/1111:41	11/04/1111:57	DATE RECEIVED:	NA
PREP. BATCH:	ICK015W	ICK015W	ICK015W		
CALIB. REF:	AK07-01	AK07-01	AK07-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	4.75	95	5.00	4.87	97	2	90-110	20

8920

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	ICK017WB	ICK017WL	ICK017WC		
LAB FILE ID:	AK07-38	AK07-39	AK07-40		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/04/1120:50	11/04/1121:07	11/04/1121:23	DATE RECEIVED:	NA
PREP. BATCH:	ICK017W	ICK017W	ICK017W		
CALIB. REF:	AK07-36	AK07-36	AK07-36		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	4.87	97	5.00	4.87	97	0	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	100	100	100		
SAMPLE ID:	MW-70-PMW01B-091				
LAB SAMP ID:	K035-02	K035-02M	K035-02S		
LAB FILE ID:	AK07-50	AK07-52	AK07-53		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/03/11 13:17
DATE ANALYZED:	11/05/1100:04	11/05/1100:37	11/05/1100:53	DATE RECEIVED:	11/03/11
PREP. BATCH:	ICK017W	ICK017W	ICK017W		
CALIB. REF:	AK07-48	AK07-48	AK07-48		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	923	500	1430	101	500	1430	102	0	80-120	20

8022

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	100	100		
SAMPLE ID:	MW-70-PMW01B-091			
EMAX SAMP ID:	K035-02	K035-02D		
LAB FILE ID:	AK07-50	AK07-51		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/03/11 13:17
DATE ANALYZED:	11/05/1100:04	11/05/1100:21	DATE RECEIVED:	11/03/11
PREP. BATCH:	ICK017W	ICK017W		
CALIB. REF:	AK07-48	AK07-48		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Sulfate	923	924	0	20

8023

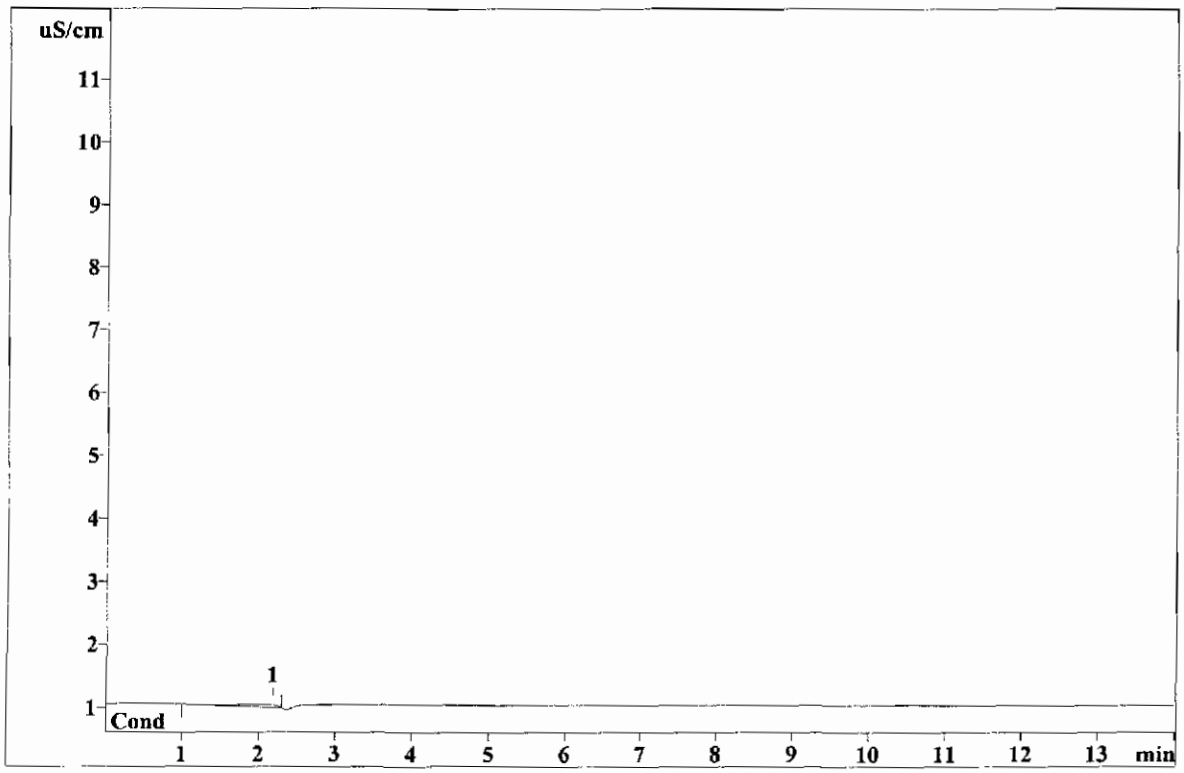
QC DATA

Report date: 11/4/2011 2:17:48 PM
Printed by: Jadelyn Chun

Ident: AK07-03 ICK015WB
Analysis from: 11/4/2011 11:25:22 AM
File: vb041125.chw Last save: 11/4/2011 11:39:19 AM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71014

SAMPLE:
:
Vial number: 3
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.04	1.696	0.000	

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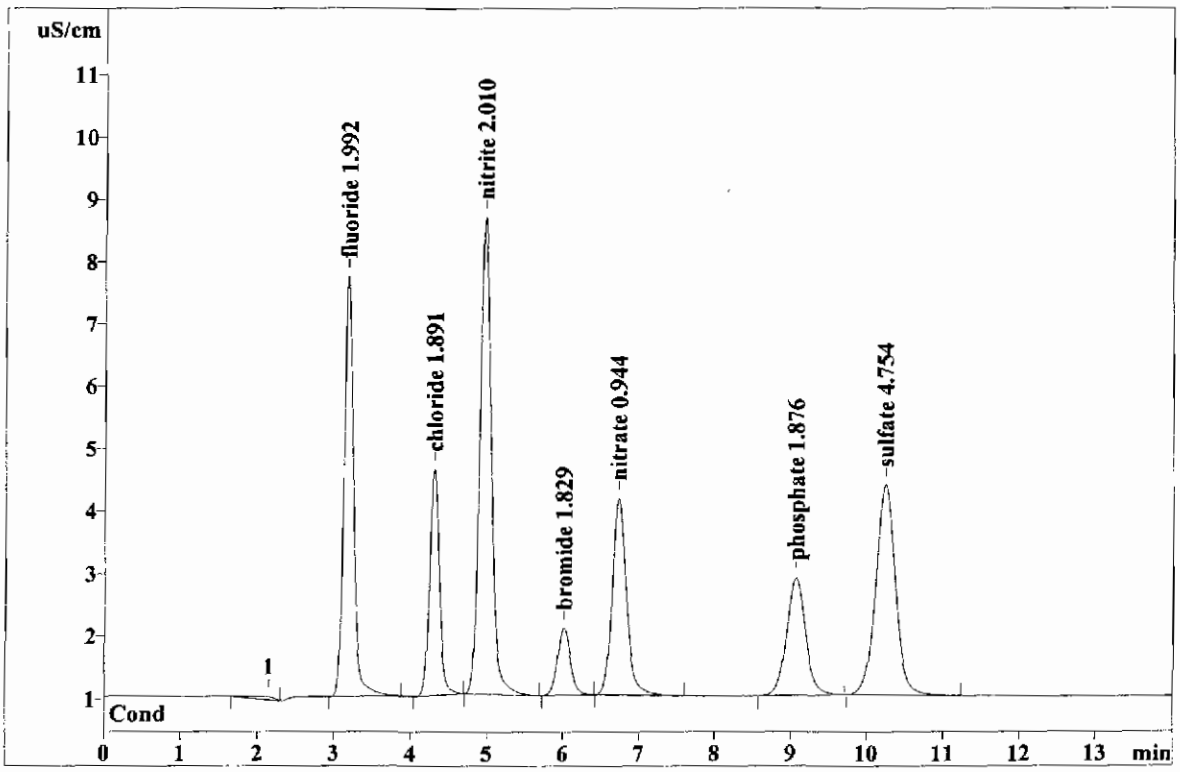
Report date: 11/4/2011 11:55:29 AM
Printed by: Jadelyn Chun

Ident: AK07-04 ICK015WL
Analysis from: 11/4/2011 11:41:31 AM
File: VB041141.CHW Last save: 11/4/2011 11:55:29 AM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71015

SAMPLE:
:
Vial number: 4
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.15	0.05	1.069	0.000	
2	3.17	6.73	58.460	1.992	fluoride
3	4.30	3.62	32.356	1.891	chloride
4	4.96	7.65	81.488	2.010	nitrite
5	6.01	1.07	12.606	1.829	bromide
6	6.73	3.14	40.632	0.944	nitrate
7	9.06	1.87	32.443	1.876	phosphate
8	10.24	3.36	61.010	4.754	sulfate
8	14.00	27.48	320.064	15.296	

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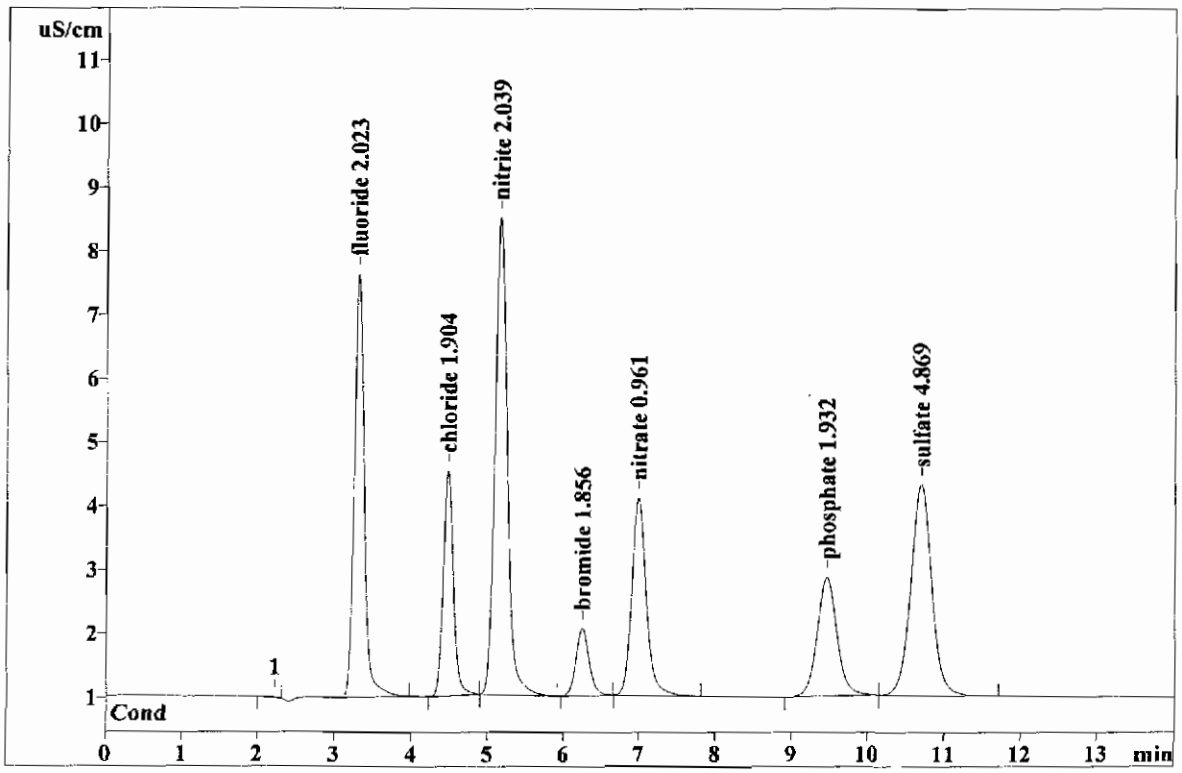
Report date: 11/4/2011 12:11:38 PM
Printed by: Jadelyn Chun

Ident: AK07-05 ICK015WC
Analysis from: 11/4/2011 11:57:41 AM
File: VB041157.CHW Last save: 11/4/2011 12:11:38 PM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71016

SAMPLE:
:
Vial number: 5
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.21	0.01	0.132	0.000	
2	3.30	6.63	59.380	2.023	fluoride
3	4.47	3.52	32.586	1.904	chloride
4	5.15	7.49	82.674	2.039	nitrite
5	6.24	1.05	12.800	1.856	bromide
6	6.98	3.09	41.403	0.961	nitrate
7	9.46	1.85	33.470	1.932	phosphate
8	10.69	3.30	62.534	4.869	sulfate
8	14.00	26.96	324.979	15.585	

This report has been created by IC Net
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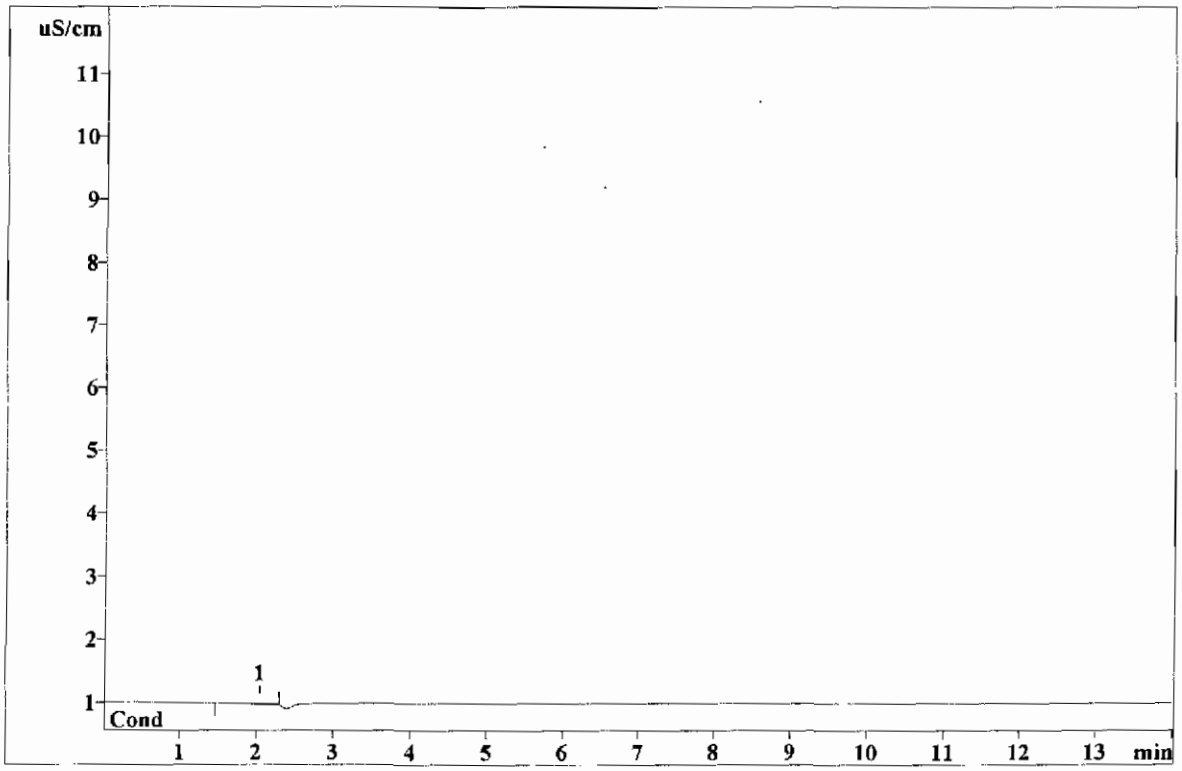
Report date: 11/7/2011 2:40:02 PM
Printed by: Jadelyn Chun

Ident: AK07-38 ICK017WB
Analysis from: 11/4/2011 8:50:57 PM
File: vb042050.chw Last save: 11/4/2011 8:04:54 PM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71049

SAMPLE:
:
Vial number: 38
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.04	0.02	0.586	0.000	

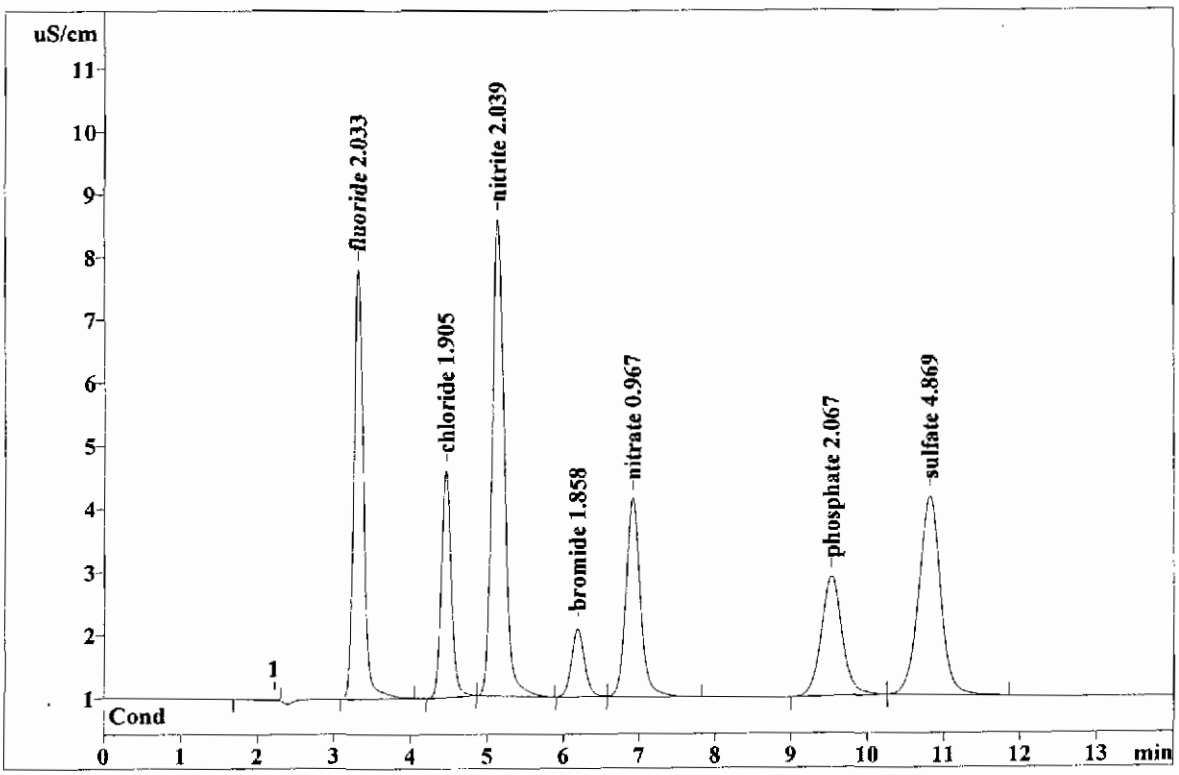
This report has been created by IC Net
METROHM LTD

Report date: 11/4/2011 9:21:03 PM
Printed by: Jadelyn Chun

Ident: AK07-39 ICK017WL
Analysis from: 11/4/2011 9:07:06 PM
File: VB042107.CHW Last save: 11/4/2011 9:21:03 PM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71050

SAMPLE:
:
Vial number: 39
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.21	0.02	0.393	0.000	
2	3.31	6.82	59.702	2.033	fluoride
3	4.46	3.59	32.610	1.905	chloride
4	5.13	7.57	82.676	2.039	nitrite
5	6.18	1.07	12.807	1.858	bromide
6	6.90	3.14	41.680	0.967	nitrate
7	9.52	1.90	35.941	2.067	phosphate
8	10.81	3.14	62.537	4.869	sulfate
8	14.00	27.25	328.347	15.739	

This report has been created by IC Net
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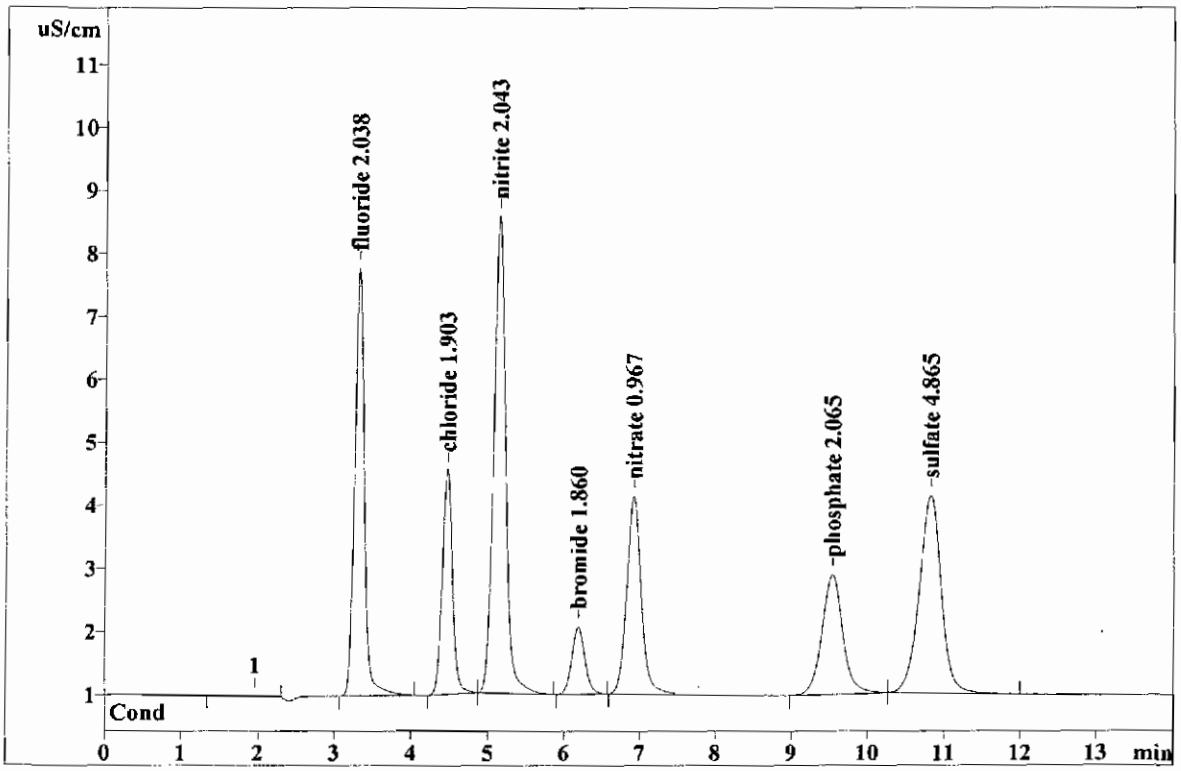
Report date: 11/4/2011 9:37:13 PM
Printed by: Jadelyn Chun

Ident: AK07-40 ICK017WC
Analysis from: 11/4/2011 9:23:16 PM
File: VB042123.CHW Last save: 11/4/2011 9:37:13 PM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71051

SAMPLE:
:
Vial number: 40
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	1.96	0.02	0.636	0.000	
2	3.31	6.78	59.841	2.038	fluoride
3	4.46	3.56	32.565	1.903	chloride
4	5.13	7.56	82.820	2.043	nitrite
5	6.19	1.07	12.822	1.860	bromide
6	6.91	3.12	41.674	0.967	nitrate
7	9.53	1.89	35.905	2.065	phosphate
8	10.82	3.13	62.485	4.865	sulfate
8	14.00	27.12	328.747	15.741	

This report has been created by IC Net
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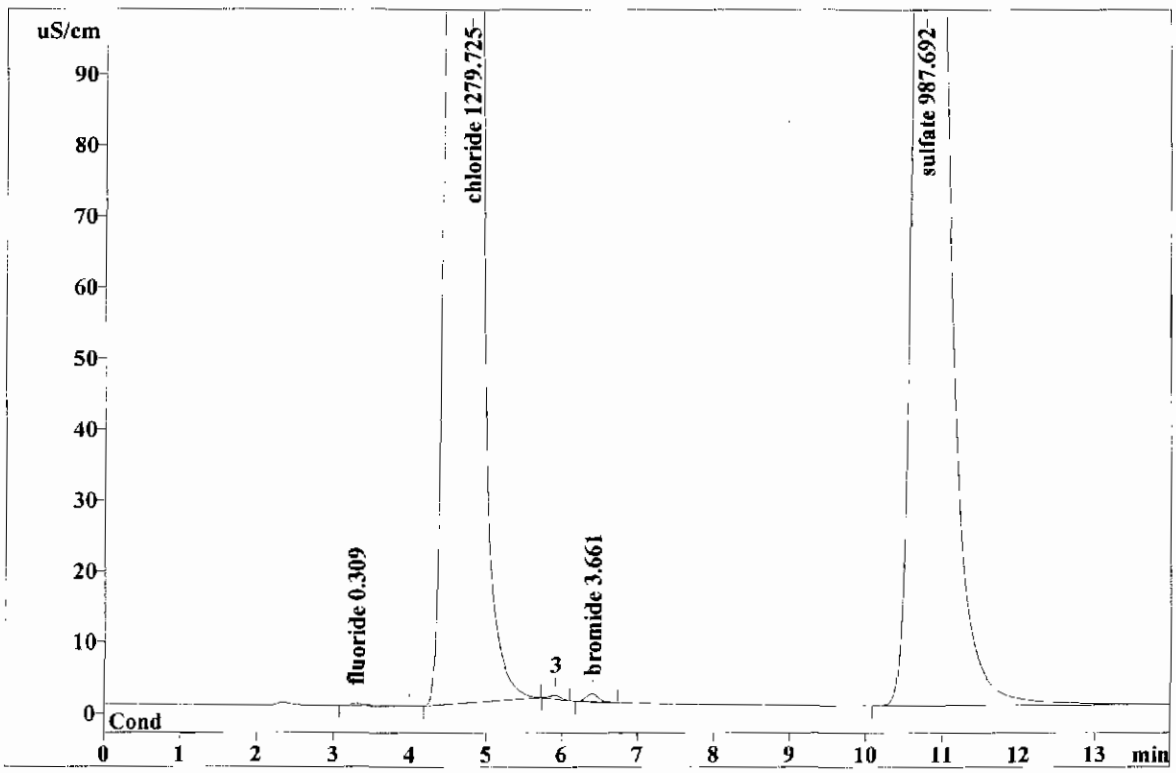
Report date: 11/4/2011 4:04:35 PM
Printed by: Jadelyn Chun

Ident: AK07-17 K035-02 DF=2
Analysis from: 11/4/2011 3:11:37 PM
File: vb041511.chw Last save: 11/4/2011 3:32:29 PM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71028

SAMPLE:
:
Vial number: 17
Volume: 1.0 µL
Dilution: 2.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.29	0.27	3.431	0.309	fluoride
2	4.79	544.01	11472.827	1279.725	chloride
3	5.92	0.52	5.333	0.000	
4	6.40	1.12	12.614	3.661	bromide
5	10.78	272.27	6513.298	987.692	sulfate
5	14.00	818.19	18007.502	2271.387	

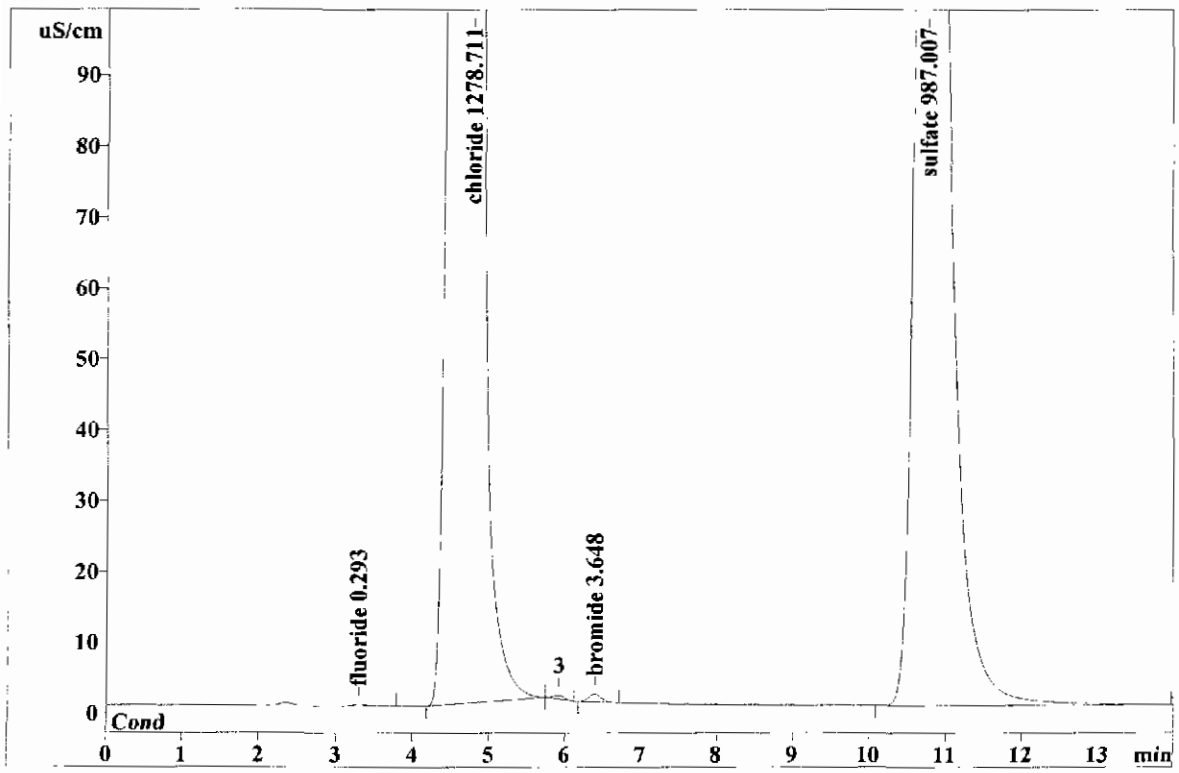
This report has been created by IC Net
METROHM LTD

NO_3 ✓

Report date: 11/4/2011 4:05:03 PM
Printed by: Jadelyn Chun

Ident: AK07-18 K035-02D DF=2
Analysis from: 11/4/2011 3:27:47 PM
File: vb041527.chw Last save: 11/4/2011 3:41:44 PM
Modified!
Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71029

SAMPLE:
:
Vial number: 18
Volume: 1.0 µL
Dilution: 2.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.29	0.26	3.197	0.293	fluoride
2	4.78	544.61	11463.733	1278.711	chloride
3	5.92	0.52	5.266	0.000	
4	6.39	1.12	12.570	3.648	bromide
5	10.77	271.80	6508.777	987.007	sulfate
5	14.00	818.32	17993.543	2269.659	

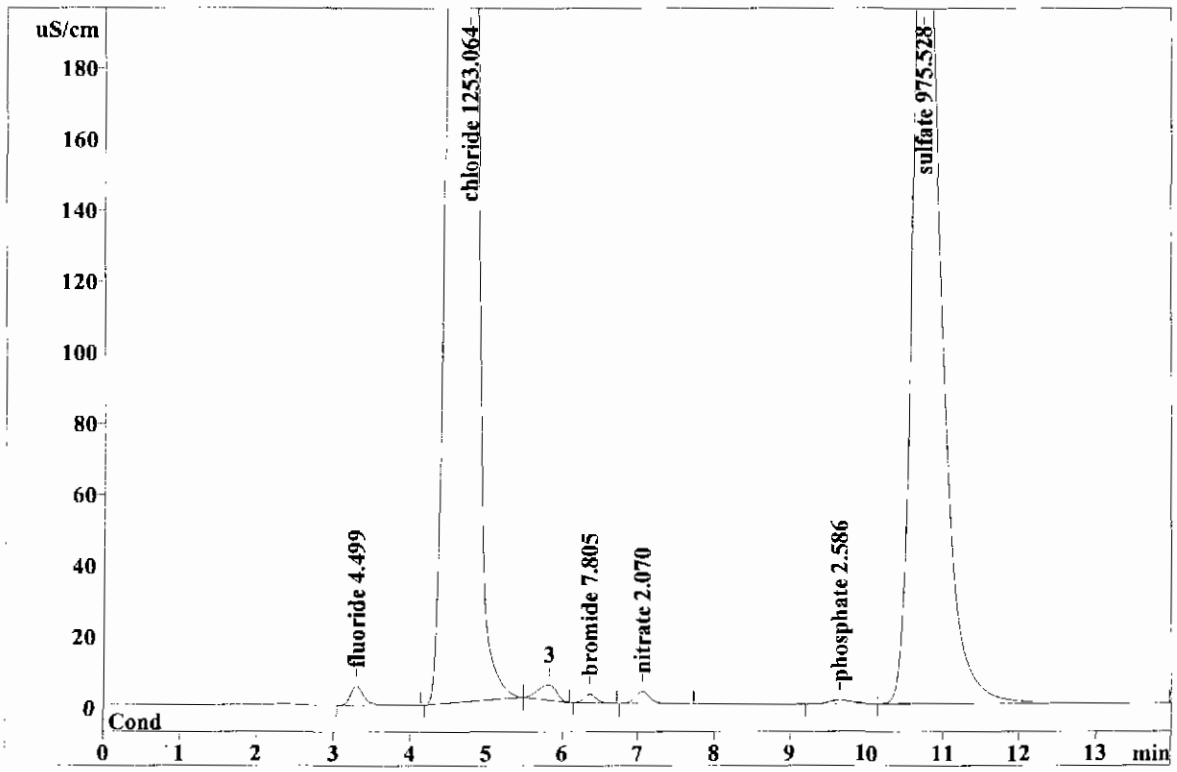
This report has been created by IC Net
METROHM LTD

Report date: 11/4/2011 4:05:22 PM
Printed by: Jadelyn Chun

Ident: AK07-19 K035-02M DF=2
Analysis from: 11/4/2011 3:43:56 PM
File: vb041543.chw Last save: 11/4/2011 3:57:53 PM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71030

SAMPLE:
:
Vial number: 19
Volume: 1.0 µL
Dilution: 2.00
Amount: 1.0000



Quantitation method: Custom

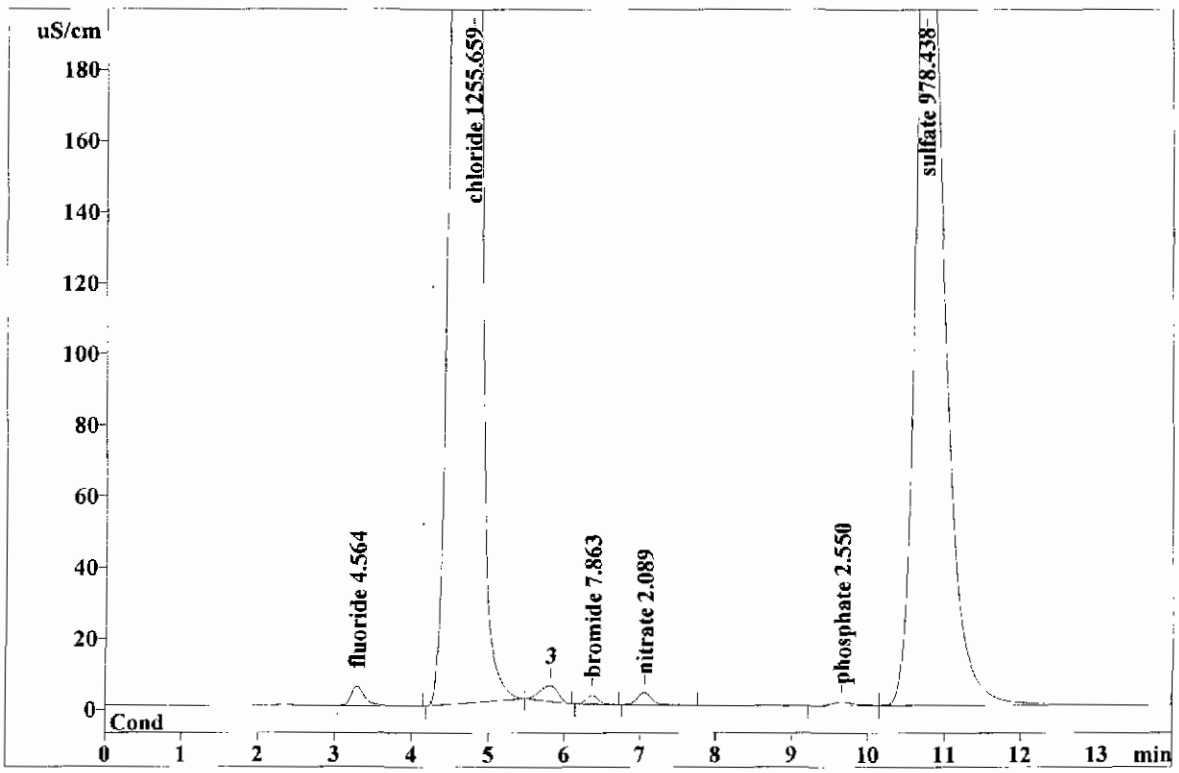
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.29	5.46	66.176	4.499	fluoride
2	4.76	543.21	11233.779	1253.064	chloride
3	5.81	4.30	72.808	0.000	
4	6.36	2.46	27.327	7.805	bromide
5	7.05	3.44	44.767	2.070	nitrate
6	9.64	1.11	21.764	2.586	phosphate
7	10.73	269.86	6433.060	975.528	sulfate
7	14.00	829.83	17899.683	2245.552	

This report has been created by IC Net
METROHM LTD

Report date: 11/4/2011 4:59:52 PM
Printed by: Jadelyn Chun

Ident: AK07-20 K035-02S DF=2
Analysis from: 11/4/2011 4:00:05 PM
File: vb041600.chw Last save: 11/4/2011 4:14:02 PM
Modified!
Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71031

SAMPLE:
:
Vial number: 20
Volume: 1.0 µL
Dilution: 2.00
Amount: 1.0000



Quantitation method: Custom

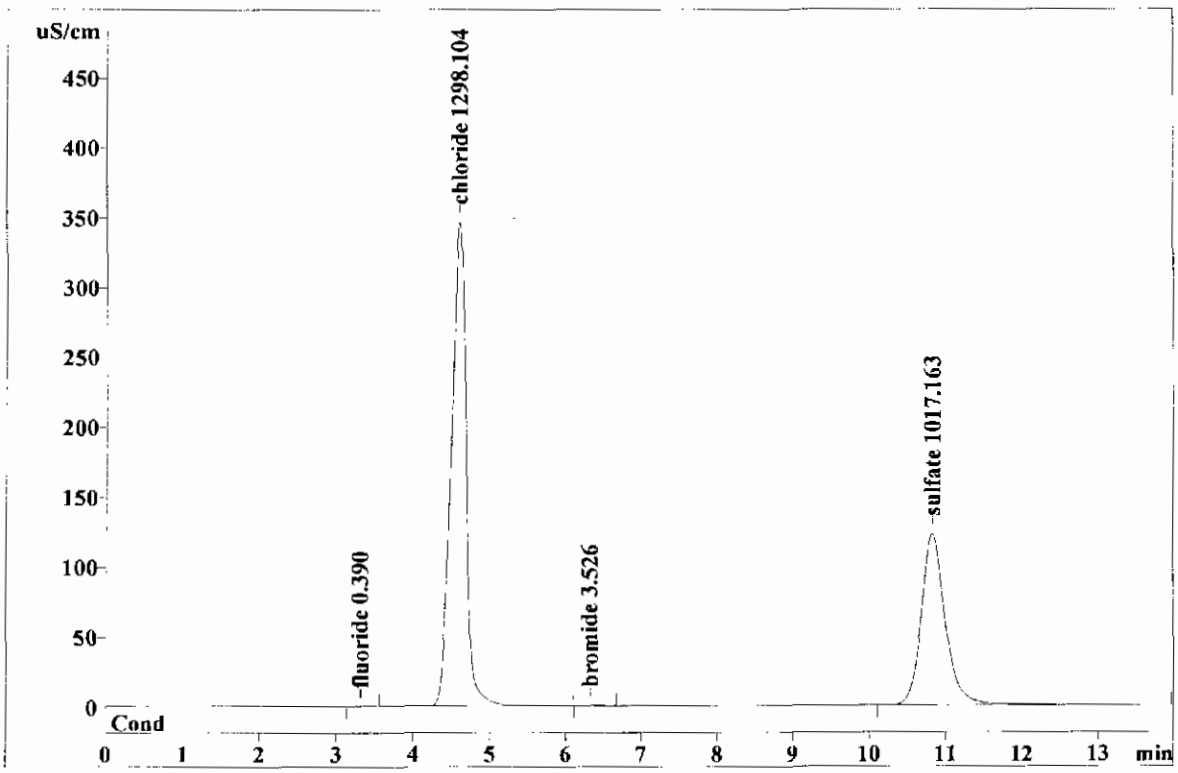
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.29	5.48	67.150	4.564	fluoride
2	4.77	542.80	11257.048	1255.659	chloride
3	5.82	4.42	74.533	0.000	
4	6.37	2.46	27.533	7.863	bromide
5	7.06	3.44	45.198	2.089	nitrate
6	9.66	1.09	21.442	2.550	phosphate
7	10.75	269.65	6452.259	978.438	sulfate
7	14.00	829.35	17945.163	2251.164	

This report has been created by IC Net
METROHM LTD

Report date: 11/7/2011 3:02:09 PM
Printed by: Jadelyn Chun

Ident: AK07-29 K035-02 DF=5
Analysis from: 11/4/2011 6:25:31 PM
File: vb041825.chw Last save: 11/4/2011 5:39:29 PM
Modified!
Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71040

SAMPLE:
:
Vial number: 29
Volume: 1.0 µL
Dilution: 5.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.31	0.12	1.137	0.390	fluoride
2	4.61	345.80	4654.118	1298.104	chloride
3	6.32	0.42	4.626	3.526	bromide
4	10.82	122.69	2682.056	1017.163	sulfate
4	14.00	469.03	7341.937	2319.184	

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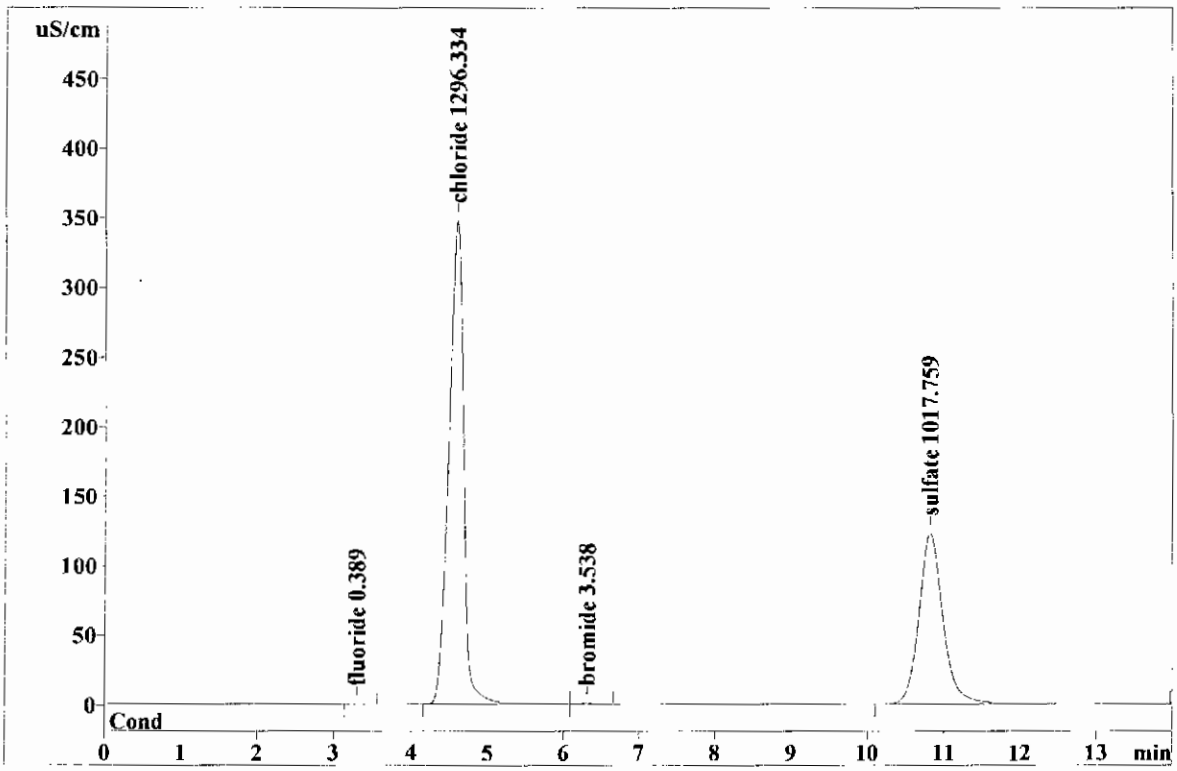
NO_2N ✓

Report date: 11/7/2011 3:02:27 PM
Printed by: Jadelyn Chun

Ident: AK07-30 K035-02D DF=5
Analysis from: 11/4/2011 6:41:41 PM
File: vb041841.chw Last save: 11/4/2011 5:55:38 PM
Modified!
Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71041

SAMPLE:
:
Vial number: 30
Volume: 1.0 µL
Dilution: 5.00
Amount: 1.0000



Quantitation method: Custom

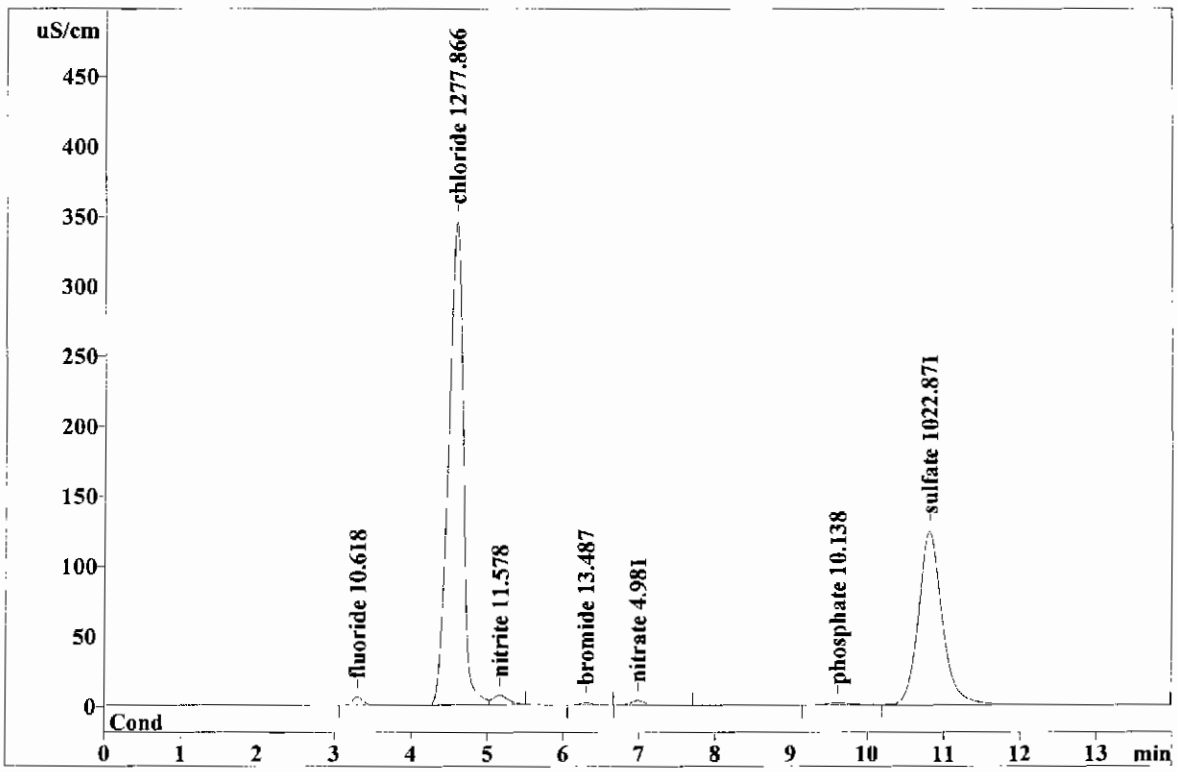
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.30	0.12	1.135	0.389	fluoride
2	4.60	347.03	4647.769	1296.334	chloride
3	6.31	0.42	4.643	3.538	bromide
4	10.81	122.65	2683.629	1017.759	sulfate
4	14.00	470.21	7337.176	2318.021	

This report has been created by IC Net
METROHM LTD

Report date: 11/7/2011 3:09:02 PM
Printed by: Jadelyn Chun

Ident: AK07-31 K035-02M DF=5
Analysis from: 11/4/2011 6:57:50 PM
File: vb041857.chw Last save: 11/7/2011 3:02:52 PM
Modified!
Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71042

SAMPLE:
:
Vial number: 31
Volume: 1.0 µL
Dilution: 5.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.30	6.11	62.404	10.618	fluoride
2	4.59	344.98	4581.532	1277.866	chloride
3	5.16	6.66	93.892	11.578	nitrite
4	6.30	1.70	18.771	13.487	bromide
5	6.98	3.31	42.992	4.981	nitrate
6	9.61	1.76	35.221	10.138	phosphate
7	10.80	123.66	2697.118	1022.871	sulfate
7	14.00	488.19	7531.929	2351.540	

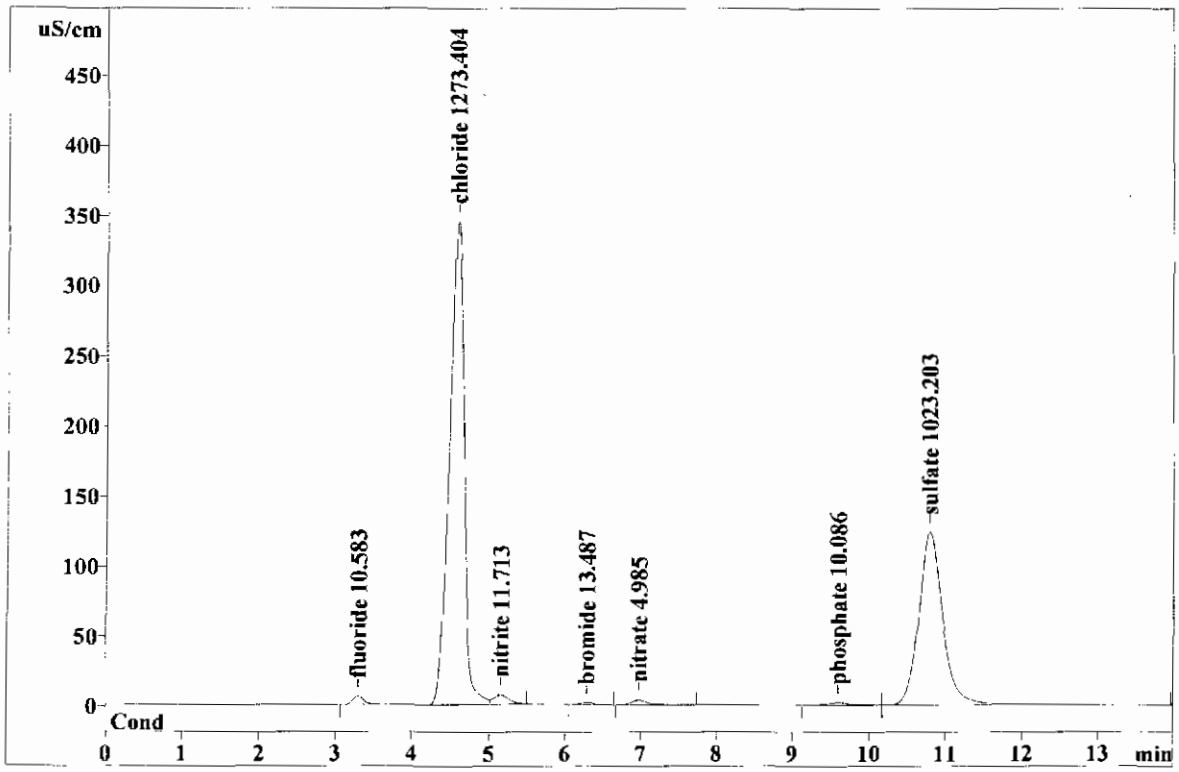
☐ Incorrect Retention Time
☑ Incorrect Baseline cl SO_4
☐ Incorrect Integration
☐ Other
Initials
Date 11/7/11

This report has been created by IC Net
METROHM LTD

Report date: 11/7/2011 3:10:22 PM
Printed by: Jadelyn Chun

Ident: AK07-32 K035-02S DF=5
Analysis from: 11/4/2011 7:13:59 PM
File: vb041913.chw Last save: 11/7/2011 3:03:13 PM
Modified!
Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71043

SAMPLE:
:
Vial number: 32
Volume: 1.0 µL
Dilution: 5.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.30	6.12	62.192	10.583	fluoride
2	4.59	344.94	4565.529	1273.404	chloride
3	5.16	6.69	94.983	11.713	nitrite
4	6.29	1.71	18.771	13.487	bromide
5	6.97	3.32	43.032	4.985	nitrate
6	9.60	1.75	35.030	10.086	phosphate
7	10.79	123.77	2697.994	1023.203	sulfate
7	14.00	488.30	7517.529	2347.461	

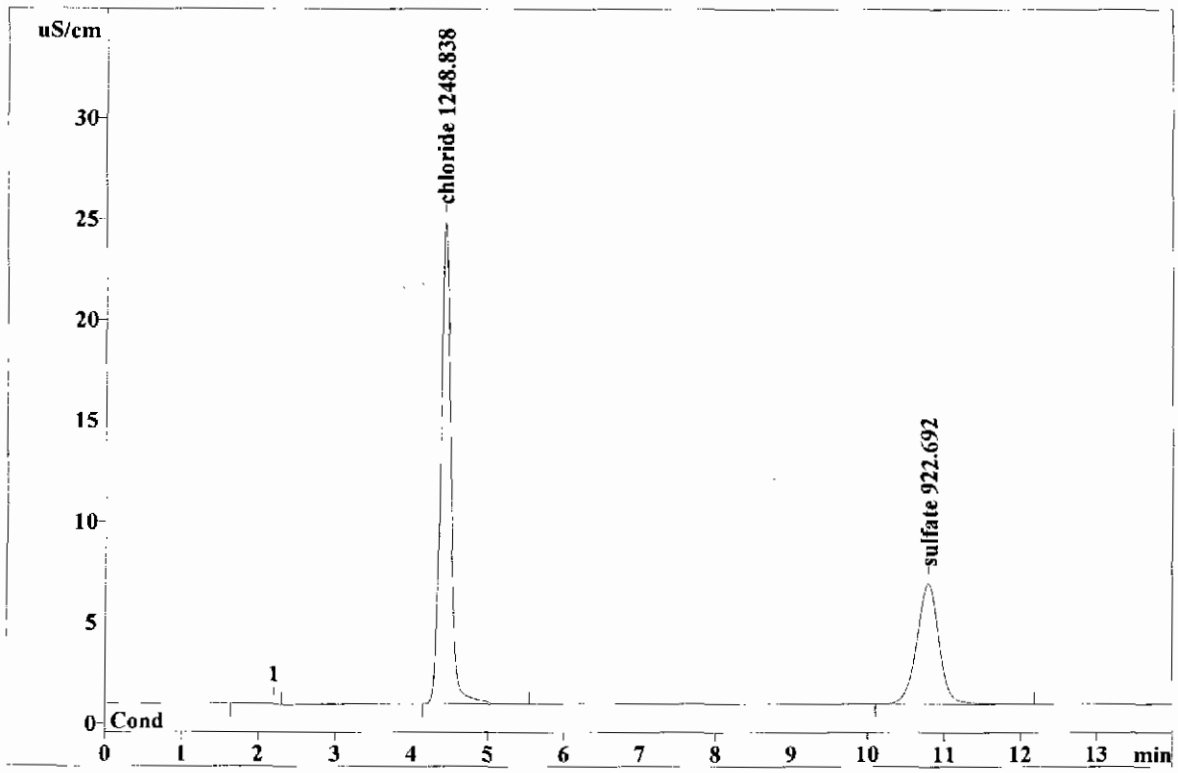
☐ Incorrect Retention Time
☑ Incorrect Baseline
☐ Incorrect Integration
☐ Other
Initials Am
Date 11/7/11

This report has been created by IC Net
METROHM LTD

Report date: 11/7/2011 3:04:08 PM
Printed by: Jadelyn Chun

Ident: AK07-50 K035-02 DF=100
Analysis from: 11/5/2011 12:04:53 AM
File: vb050004.chw Last save: 11/4/2011 11:18:50 PM
Modified!
Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71061

SAMPLE:
:
Vial number: 50
Volume: 1.0 µL
Dilution: 100.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.21	0.02	0.509	0.000	
2	4.43	23.86	222.395	1248.838	chloride
3	10.79	5.98	120.024	922.692	sulfate
3	14.00	29.86	342.929	2171.531	

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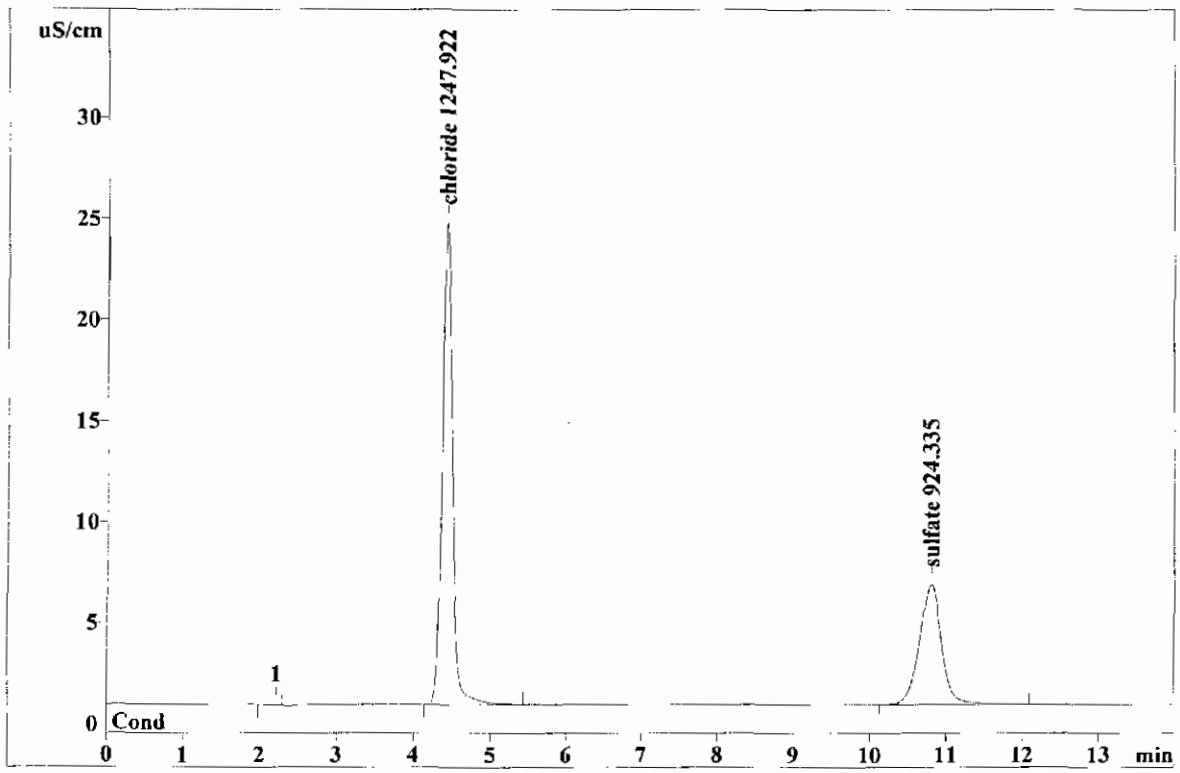
Report date: 11/7/2011 3:04:27 PM
Printed by: Jadelyn Chun

Ident: AK07-51 K035-02D DF=100
Analysis from: 11/5/2011 12:21:03 AM
File: vb050021.chw Last save: 11/4/2011 11:35:00 PM
Modified!
Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71062

SAMPLE:
:
Vial number: 51
Volume: 1.0 µL
Dilution: 100.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.22	0.02	0.189	0.000	
2	4.43	23.86	222.231	1247.922	chloride
3	10.80	5.95	120.241	924.335	sulfate
3	14.00	29.82	342.661	2172.257	

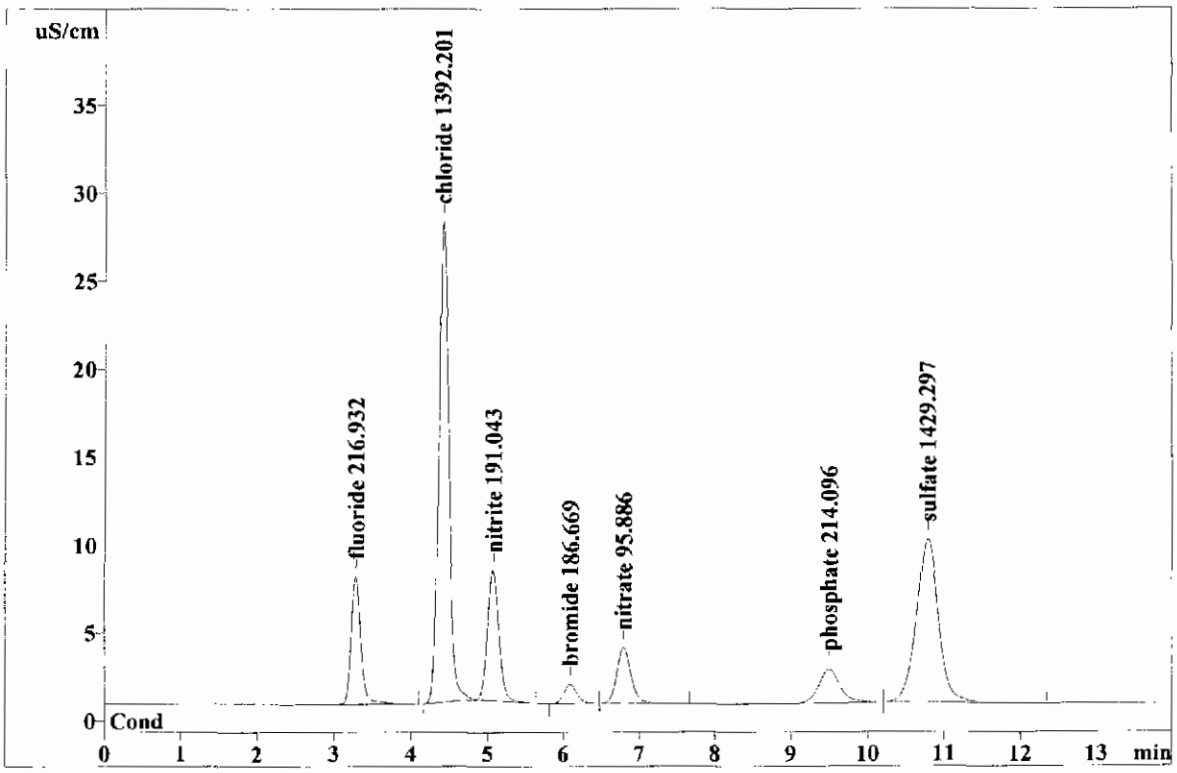
This report has been created by IC Net
METROHM LTD

Report date: 11/7/2011 3:04:40 PM
Printed by: Jadelyn Chun

Ident: AK07-52 K035-02M DF=100
Analysis from: 11/5/2011 12:37:13 AM
File: vb050037.chw Last save: 11/4/2011 11:51:10 PM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71063

SAMPLE:
:
Vial number: 52
Volume: 1.0 µL
Dilution: 100.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.29	7.25	63.771	216.932	fluoride
2	4.42	27.27	248.104	1392.201	chloride
3	5.07	7.41	77.448	191.043	nitrite
4	6.09	1.11	12.873	186.669	bromide
5	6.79	3.18	41.291	95.886	nitrate
6	9.50	1.94	37.296	214.096	phosphate
7	10.79	9.27	186.857	1429.297	sulfate
7	14.00	57.43	667.641	3726.124	

This report has been created by IC Net
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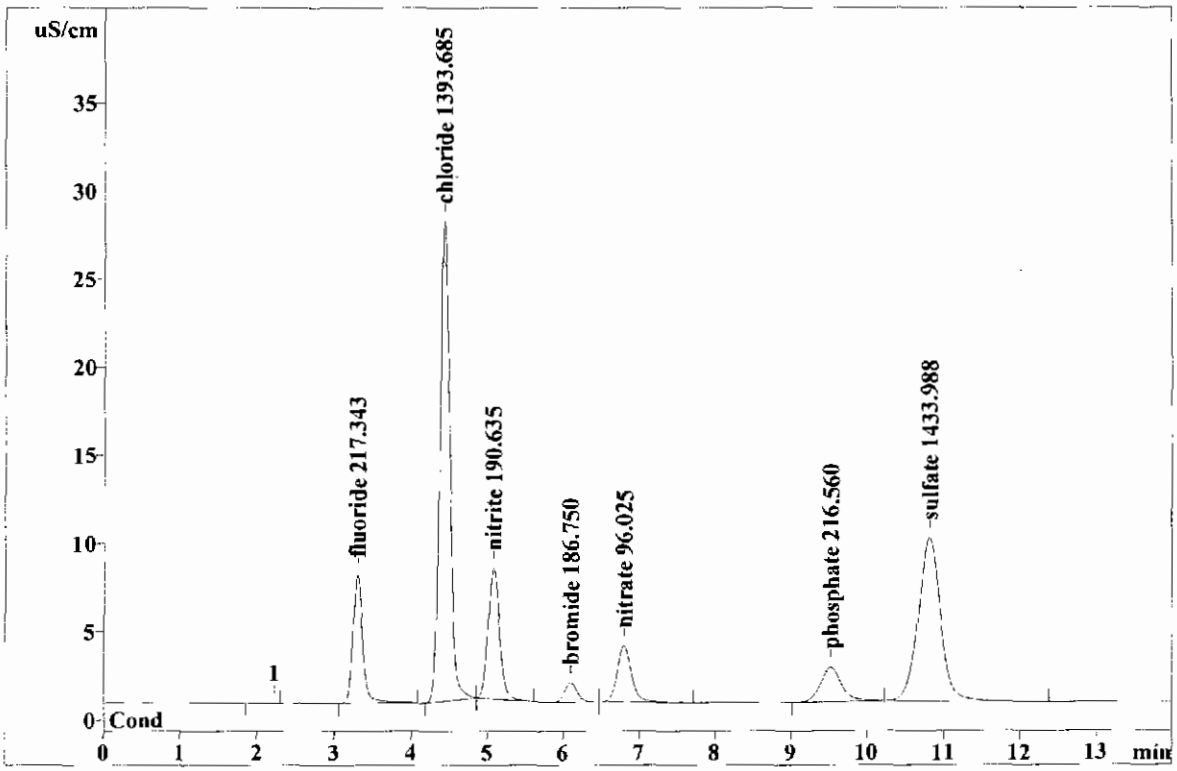
Report date: 11/7/2011 3:04:43 PM
Printed by: Jadelyn Chun

Ident: AK07-53 K035-02S DF=100
Analysis from: 11/5/2011 12:53:22 AM
File: vb050053.chw Last save: 11/5/2011 12:07:19 AM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71064

SAMPLE:
:
Vial number: 53
Volume: 1.0 µL
Dilution: 100.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.22	0.02	0.267	0.000	
2	3.30	7.24	63.894	217.343	fluoride
3	4.43	27.21	248.370	1393.685	chloride
4	5.08	7.38	77.283	190.635	nitrite
5	6.10	1.10	12.878	186.750	bromide
6	6.80	3.18	41.354	96.025	nitrate
7	9.52	1.95	37.748	216.560	phosphate
8	10.82	9.25	187.476	1433.988	sulfate
8	14.00	57.34	669.271	3734.986	

This report has been created by IC Net
METROHM LTD

INITIAL CALIBRATIONS

IC Result Check FormVersion : I30/AI39

.FID	LSID	Selection	nitrite	fluoride	chloride	bromide	nitrate	phosphate	sulfate	RawNetID	DF
AI39-01	IB	IFCBNPS	0	0	0	0	0	0	0	v9301829	1
AI39-02	S0	IFCBNPS	0	0	0	0	0	0	0	v9301845	1
AI39-03	S1	IFCBNPS	0.0402732	0.0794447	0.137238	0.0962101	0.0900188	0.132659	0.181386	v9301901	1
AI39-04	S2	IFCBNPS	0.0827484	0.120657	0.172987	0.138434	0.127411	0.166211	0.219384	v9301917	1
AI39-05	S3	IFCBNPS	0.175829	0.207372	0.255839	0.223376	0.213499	0.241921	0.298411	v9301934	1
AI39-06	S4	IFCBNPS	0.468611	0.487287	0.510168	0.483675	0.481038	0.46682	0.535669	v9301950	1
AI39-07	S5	IFCBNPS	0.987232	0.975831	0.969747	0.947628	0.958434	0.904972	0.974277	v9302006	1
AI39-08	S6	IFCBNPS	2.03579	2.00618	1.92527	1.92275	1.95393	1.87863	1.87805	v9302022	1
AI39-09	S7	IFCBNPS	5.13141	5.00267	4.89791	5.03793	5.02567	5.05879	4.80122	v9302038	1
AI39-10	S8	IFCBNPS	9.9281	9.57748	9.9004	10.4648	10.1254	10.4079	9.8176	v9302054	1
AI39-11	S9	IFCBNPS	18.5849	17.9543	20.0804	21.615	20.3941	21.1232	20.144	v9302111	1
AI39-12	ICV	IFCBNPS	98.6%	100.1%	97.7%	94.1%	98.6%	92.5%	99.9%	v9302127	1
AI39-13	ICB	IFCBNPS	0	0	0	0	0	0	0	v9302143	1

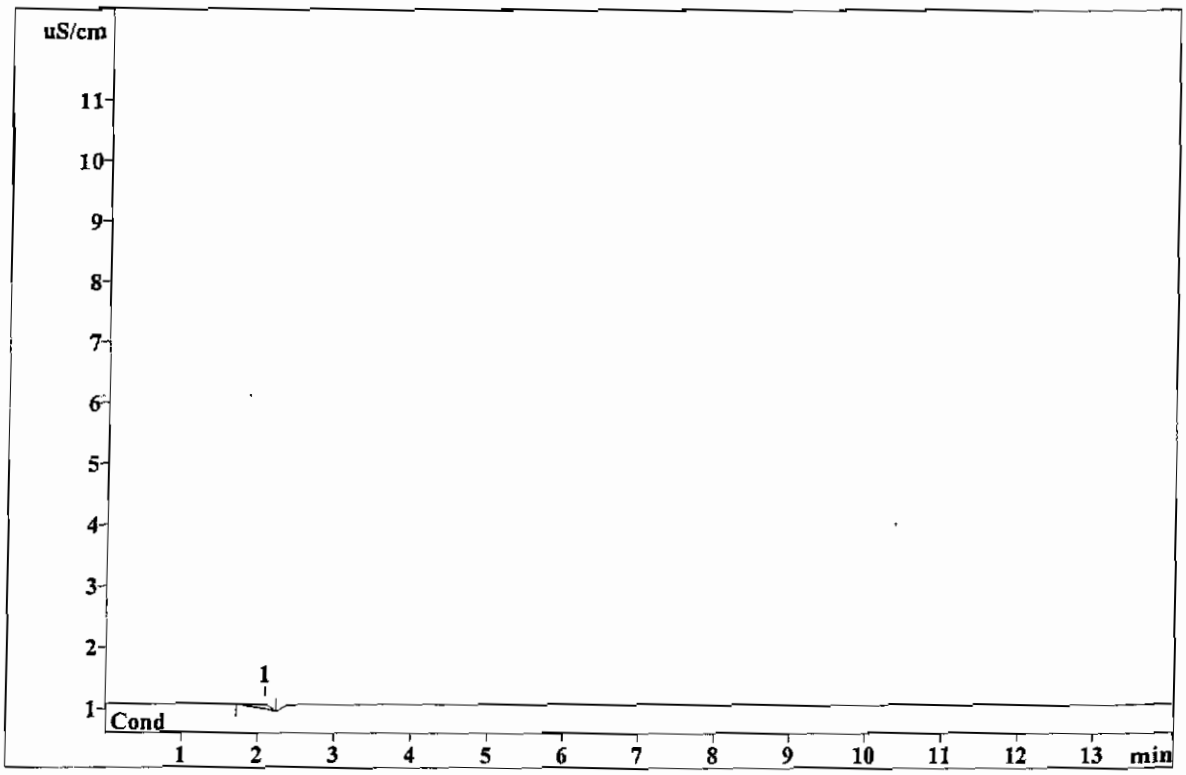
AJ
03/11

Report date: 10/3/2011 10:48:38 AM
Printed by: Jadelyn Chun

Ident: AI39-02 S0
Analysis from: 9/30/2011 6:45:36 PM
File: v9301845.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69483

SAMPLE:
:
Vial number: 2
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.07	1.184	0.000	

This report has been created by IC Net
METROHM LTD

AS
10/03/11

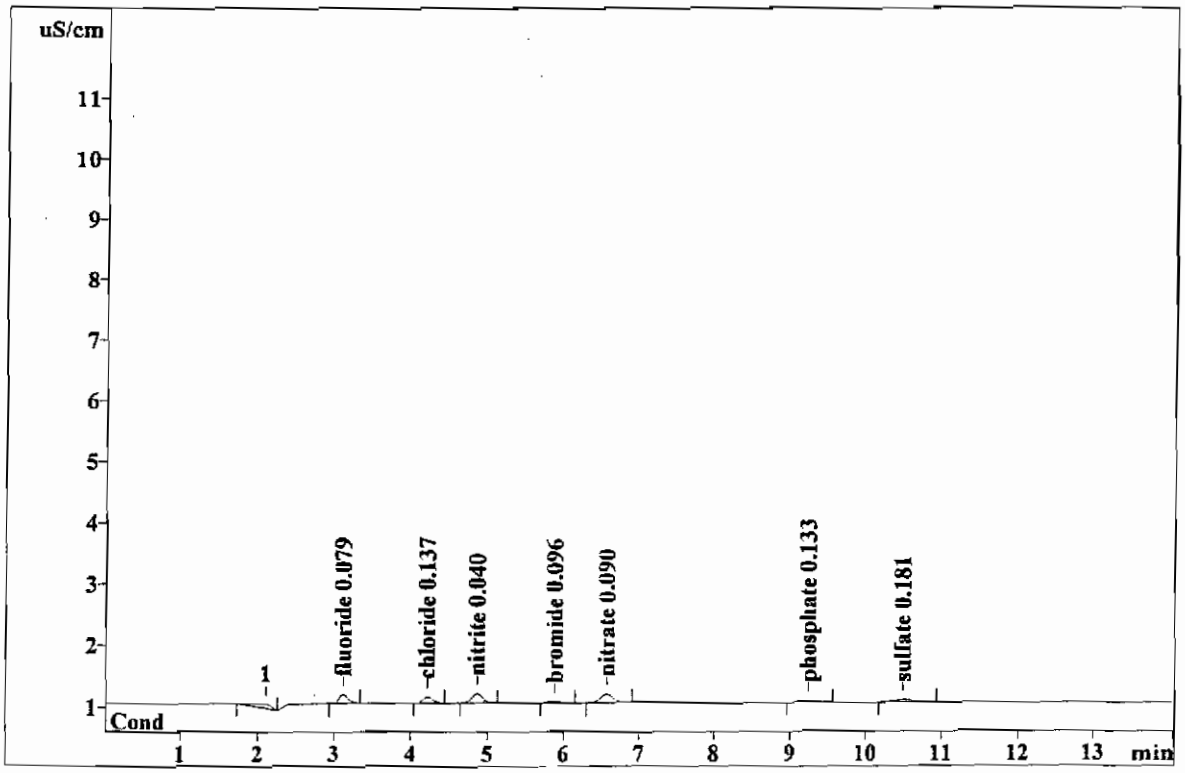
8045

Report date: 10/3/2011 10:48:46 AM
Printed by: Jadelyn Chun

Ident: AI39-03 S1
Analysis from: 9/30/2011 7:01:46 PM
File: v9301901.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69484

SAMPLE:
:
Vial number: 3
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.07	1.147	0.000	
2	3.12	0.14	1.182 ✓	0.079	fluoride
3	4.23	0.10	0.908 ✓	0.137	chloride
4	4.87	0.16	1.561 ✓	0.040	nitrite
5	5.87	0.03	0.301 ✓	0.096	bromide
6	6.57	0.14	1.722 ✓	0.090 ✓	nitrate
7	9.23	0.03	0.520 ✓	0.133 ✓	phosphate
8	10.50	0.04	0.692 ✓	0.181 ✓	sulfate
8	14.00	0.71	8.034	0.757	

This report has been created by IC Net
METROHM LTD

AS 10/03/11

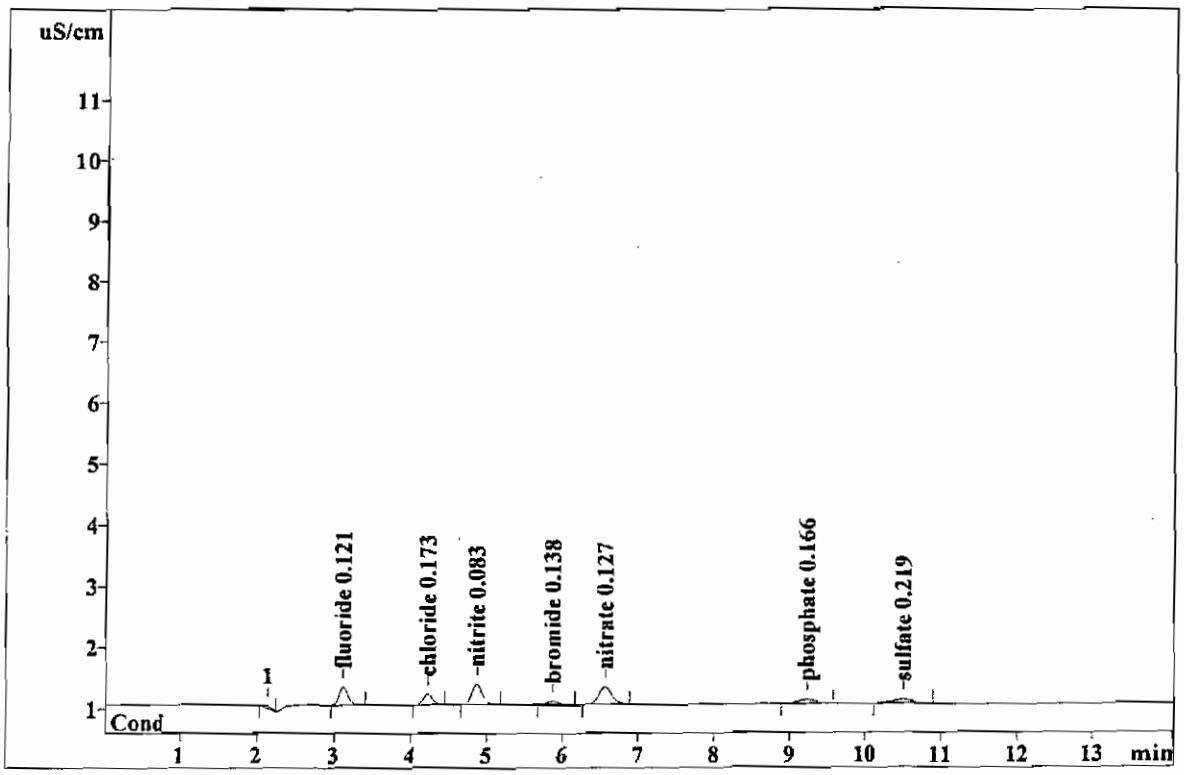
8046

Report date: 10/3/2011 10:49:06 AM
Printed by: Jadelyn Chun

Ident: AI39-04 S2
Analysis from: 9/30/2011 7:17:56 PM
File: v9301917.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69485

SAMPLE:
:
Vial number: 4
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.13	0.04	0.262	0.000	
2	3.12	0.30	2.417	0.121	fluoride
3	4.22	0.18	1.549	0.173	chloride
4	4.86	0.34	3.285	0.083	nitrite
5	5.87	0.05	0.601	0.138	bromide
6	6.56	0.29	3.425	0.127	nitrate
7	9.24	0.07	1.135	0.166	phosphate
8	10.51	0.07	1.193	0.219	sulfate
8	14.00	1.32	13.866	1.028	

This report has been created by IC Net
METROHM LTD

AS
10/03/11

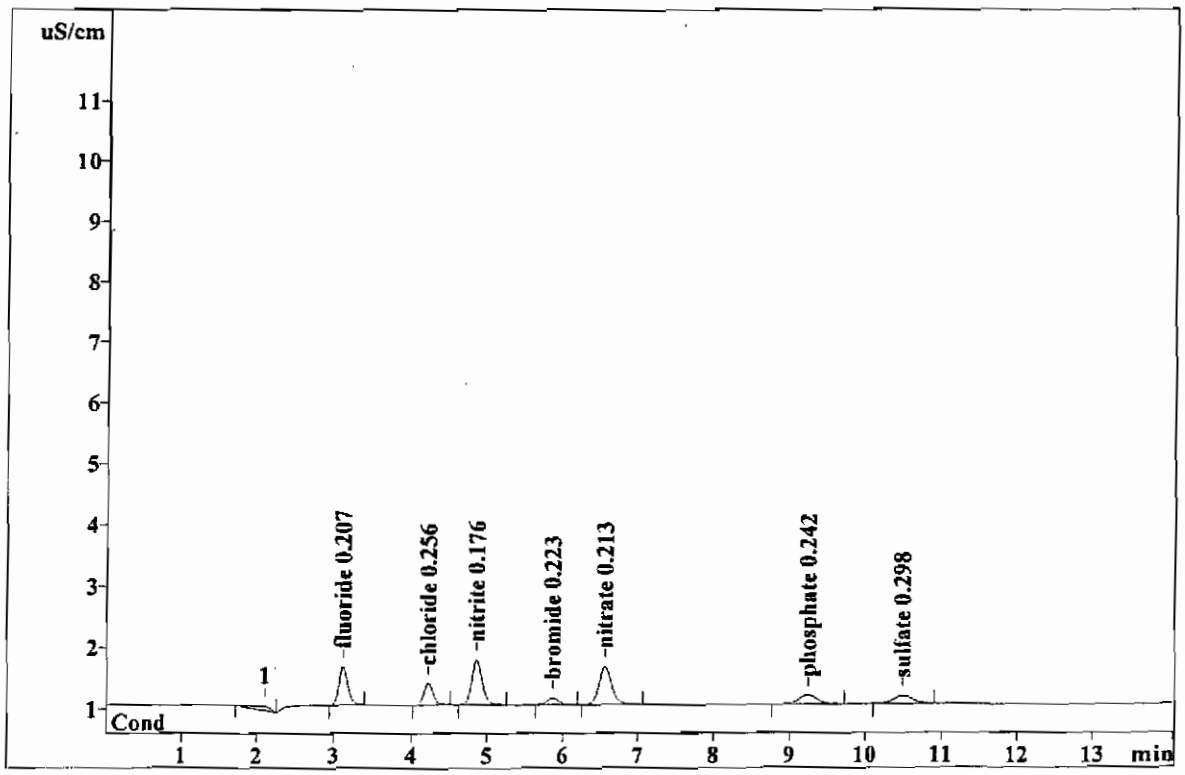
8047

Report date: 10/3/2011 10:49:15 AM
Printed by: Jadelyn Chun

Ident: AI39-05 S3
Analysis from: 9/30/2011 7:34:06 PM
File: v9301934.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69486

SAMPLE:
:
Vial number: 5
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.07	1.155	0.000	
2	3.12	0.62	5.014	0.207	fluoride
3	4.22	0.35	3.034	0.256	chloride ✓
4	4.87	0.73	7.062	0.176	nitrite
5	5.87	0.11	1.204	0.223	bromide
6	6.56	0.62	7.345	0.213	nitrate
7	9.24	0.15	2.521	0.242	phosphate
8	10.50	0.13	2.236 ✓	0.298	sulfate
8	14.00	2.78	29.572	1.616	

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AA
10/03/11

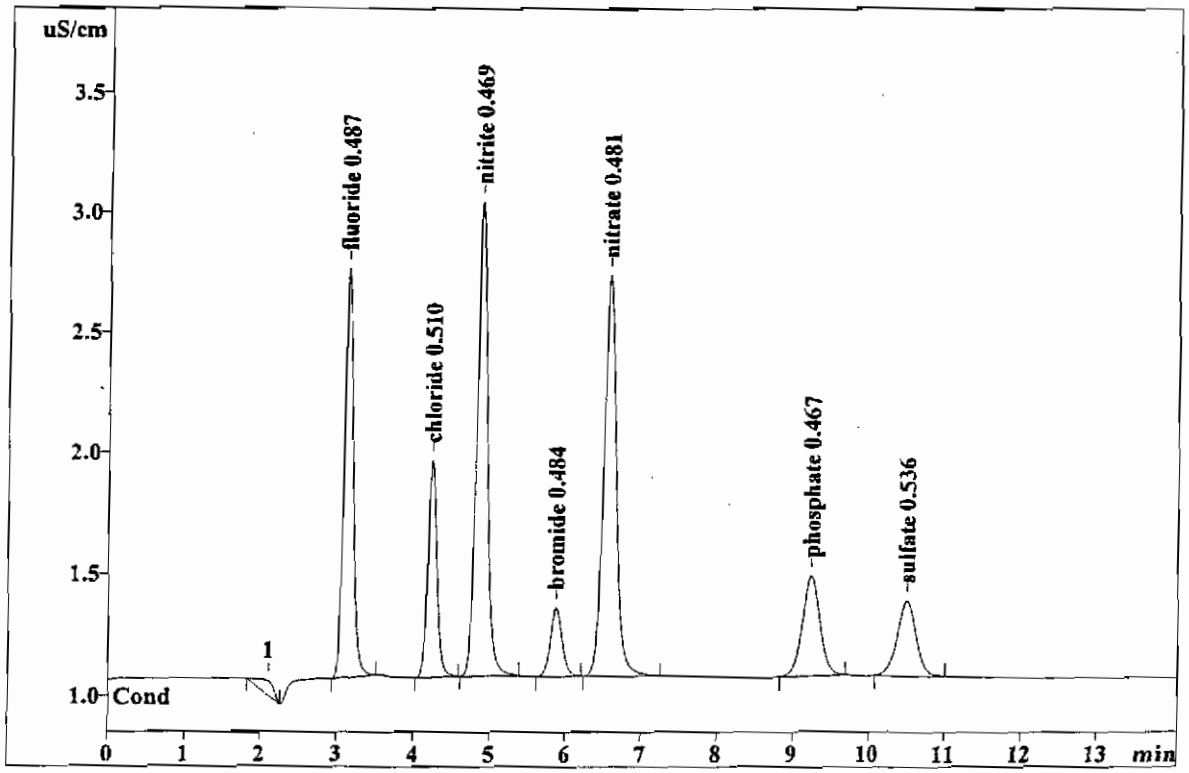
8048

Report date: 10/3/2011 10:49:34 AM
Printed by: Jadelyn Chun

Ident: AI39-06 S4
Analysis from: 9/30/2011 7:50:16 PM
File: v9301950.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69487

SAMPLE:
:
Vial number: 6
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.06	0.880	0.000	
2	3.12	1.69	13.397	0.487	fluoride
3	4.23	0.89	7.595	0.510	chloride ✓
4	4.87	1.96	18.943	0.469	nitrite
5	5.87	0.28	3.053	0.484	bromide ✓
6	6.55	1.66	19.530	0.481	nitrate
7	9.24	0.41	6.640	0.467	phosphate ✓
8	10.51	0.31	5.366 ✓	0.536	sulfate ✓
8	14.00	7.26	75.402	3.433	

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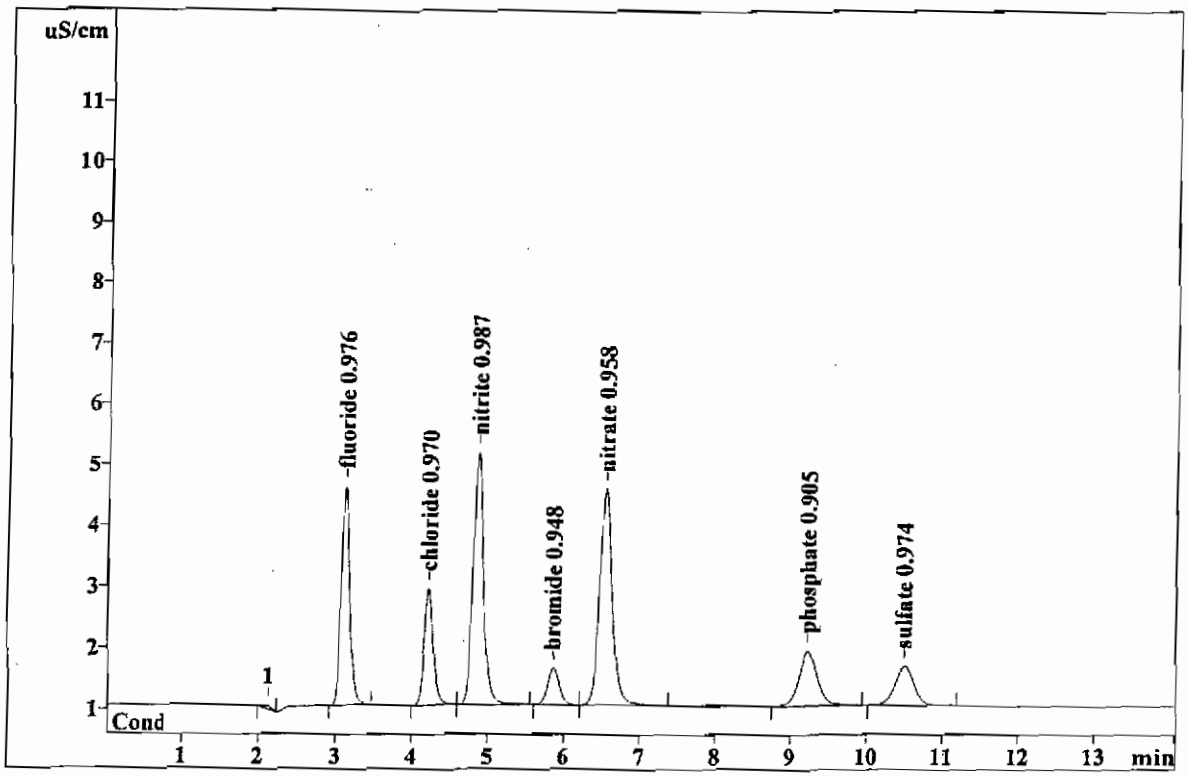
10/03/11

Report date: 10/3/2011 10:49:41 AM
Printed by: Jadelyn Chun

Ident: AI39-07 S5
Analysis from: 9/30/2011 8:06:26 PM
File: v9302006.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69488

SAMPLE:
:
Vial number: 7
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.13	0.04	0.341	0.000	
2	3.12	3.57	28.028	0.976	fluoride
3	4.22	1.90	15.837	0.970	chloride
4	4.86	4.12	39.987	0.987	nitrite
5	5.86	0.59	6.347	0.948	bromide
6	6.54	3.52	41.272	0.958	nitrate
7	9.24	0.88	14.663	0.905	phosphate
8	10.50	0.63	11.152	0.974	sulfate
8	14.00	15.25	157.627	6.718	

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AS
10/03/11

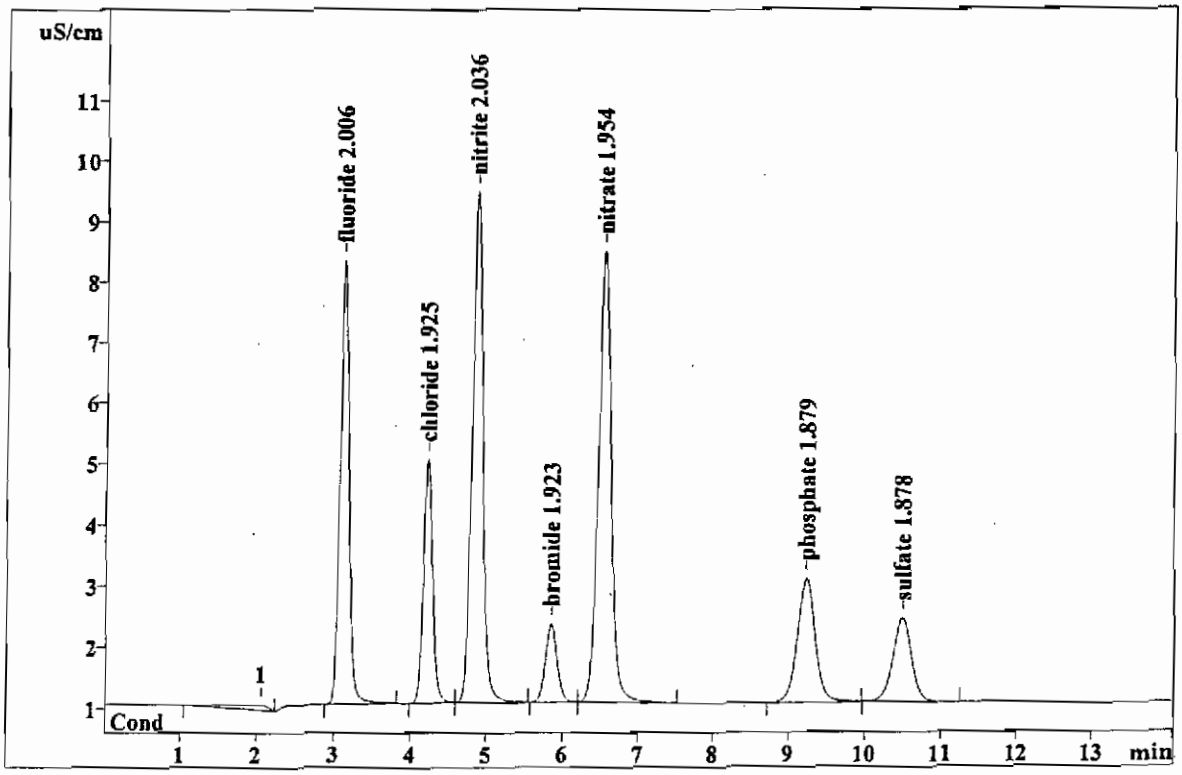
8050

Report date: 10/3/2011 10:49:51 AM
Printed by: Jadelyn Chun

Ident: AI39-08 S6
Analysis from: 9/30/2011 8:22:36 PM
File: v9302022.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69489

SAMPLE:
:
Vial number: 8
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.08	0.08	3.161	0.000	
2	3.12	7.28	58.886	2.006	fluoride
3	4.22	3.98	32.972	1.925	chloride
4	4.86	8.39	82.536	2.036	nitrite
5	5.86	1.27	13.271	1.923	bromide
6	6.53	7.42	86.609	1.954	nitrate
7	9.23	2.01	32.493	1.879	phosphate
8	10.50	1.36	23.075 ✓	1.878	sulfate
8	14.00	31.79	333.001	13.601	

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AJ
10/03/11

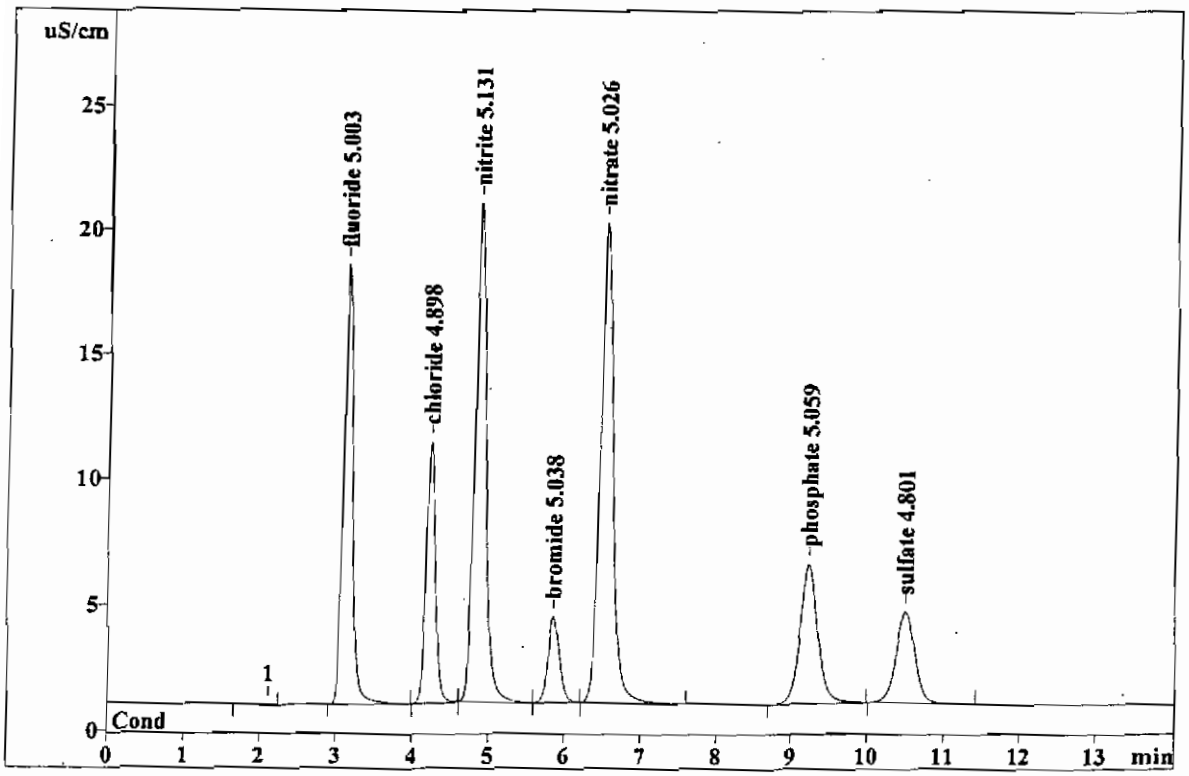
8051

Report date: 10/3/2011 10:49:56 AM
Printed by: Jadelyn Chun

Ident: AI39-09 S7
Analysis from: 9/30/2011 8:38:46 PM
File: v9302038.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69490

SAMPLE:
:
Vial number: 9
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.06	1.110	0.000	
2	3.13	17.51	148.626	5.003	fluoride
3	4.23	10.38	86.279	4.898	chloride
4	4.86	19.91	208.149	5.131	nitrite
5	5.86	3.40	35.390	5.038	bromide
6	6.53	19.15	226.504	5.026	nitrate
7	9.23	5.51	90.728	5.059	phosphate
8	10.50	3.62	61.639 ✓	4.801	sulfate
8	14.00	79.53	858.424	34.956	

This report has been created by IC Net
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Ag
10/03/11

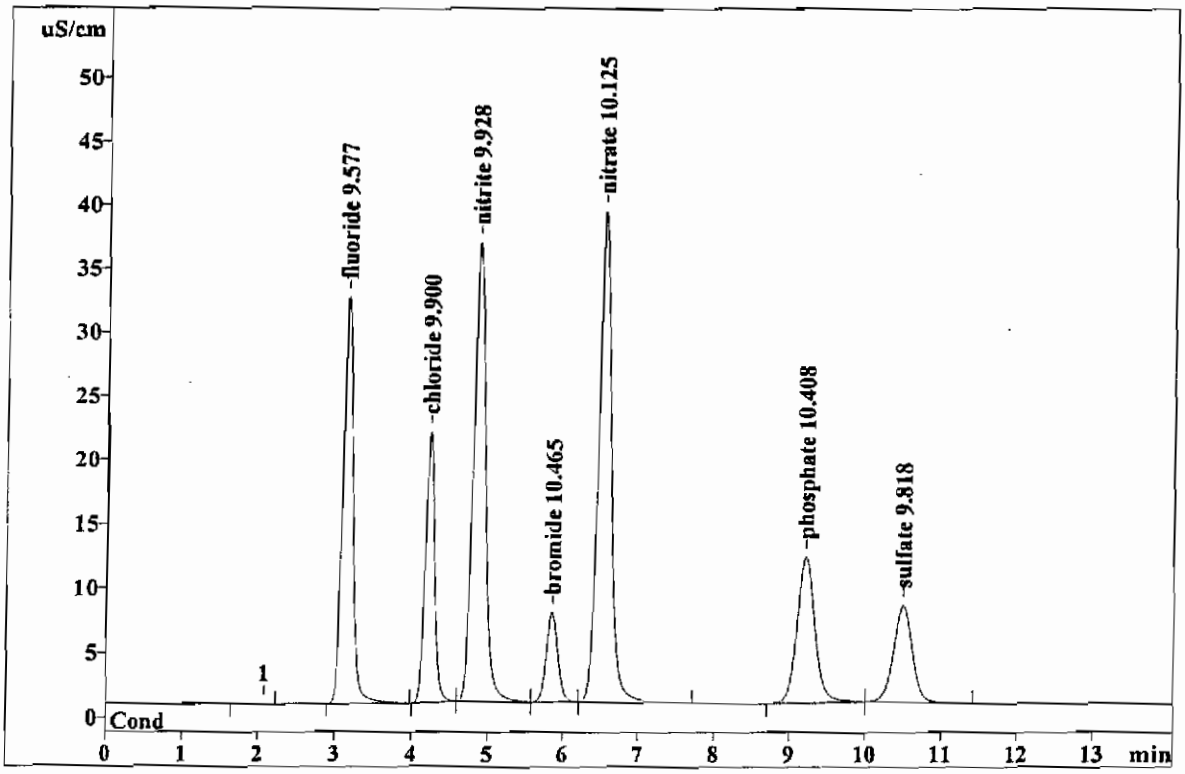
8052

Report date: 10/3/2011 10:50:01 AM
Printed by: Jadelyn Chun

Ident: AI39-10 S8
Analysis from: 9/30/2011 8:54:55 PM
File: v9302054.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69491

SAMPLE:
:
Vial number: 10
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.09	0.04	0.883	0.000	
2	3.14	31.68	285.635	9.577	fluoride
3	4.22	21.04	175.986	9.900	chloride
4	4.86	35.83	402.789	9.928	nitrite
5	5.85	6.92	73.923	10.465	bromide
6	6.52	38.33	458.760	10.125	nitrate
7	9.21	11.30	188.680	10.408	phosphate
8	10.49	7.47	127.816	9.818	sulfate
8	14.00	152.61	1714.471	70.222	

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AS
10/03/11

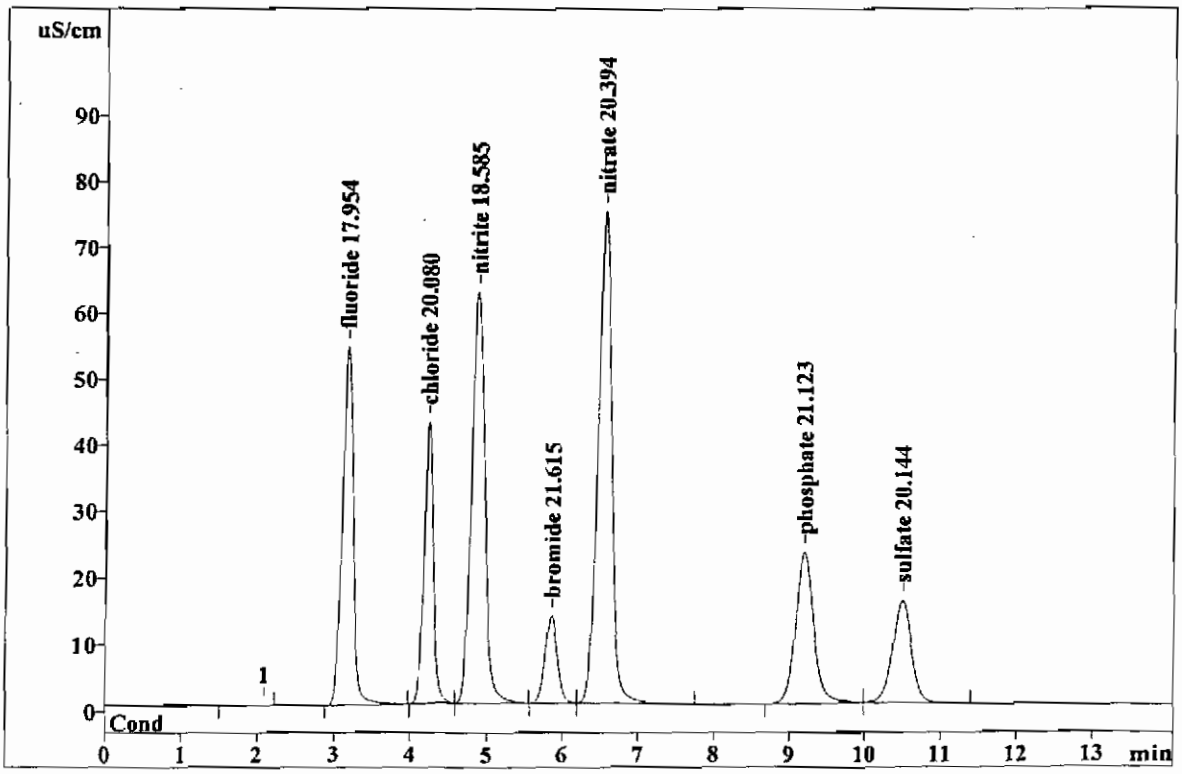
8053

Report date: 10/3/2011 10:50:10 AM
Printed by: Jadelyn Chun

Ident: AI39-11 S9
Analysis from: 9/30/2011 9:11:05 PM
File: v9302111.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69492

SAMPLE:
:
Vial number: 11
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.09	0.02	0.447	0.000	
2	3.16	53.88	536.509	17.954	fluoride
3	4.23	42.24	358.541	20.080	chloride
4	4.86	61.98	754.064	18.585	nitrite
5	5.85	13.02	153.094	21.615	bromide
6	6.54	74.20	926.425	20.394	nitrate
7	9.19	22.65	384.898	21.123	phosphate
8	10.49	15.33	264.046 ✓	20.144	sulfate
8	14.00	283.33	3378.024	139.896	

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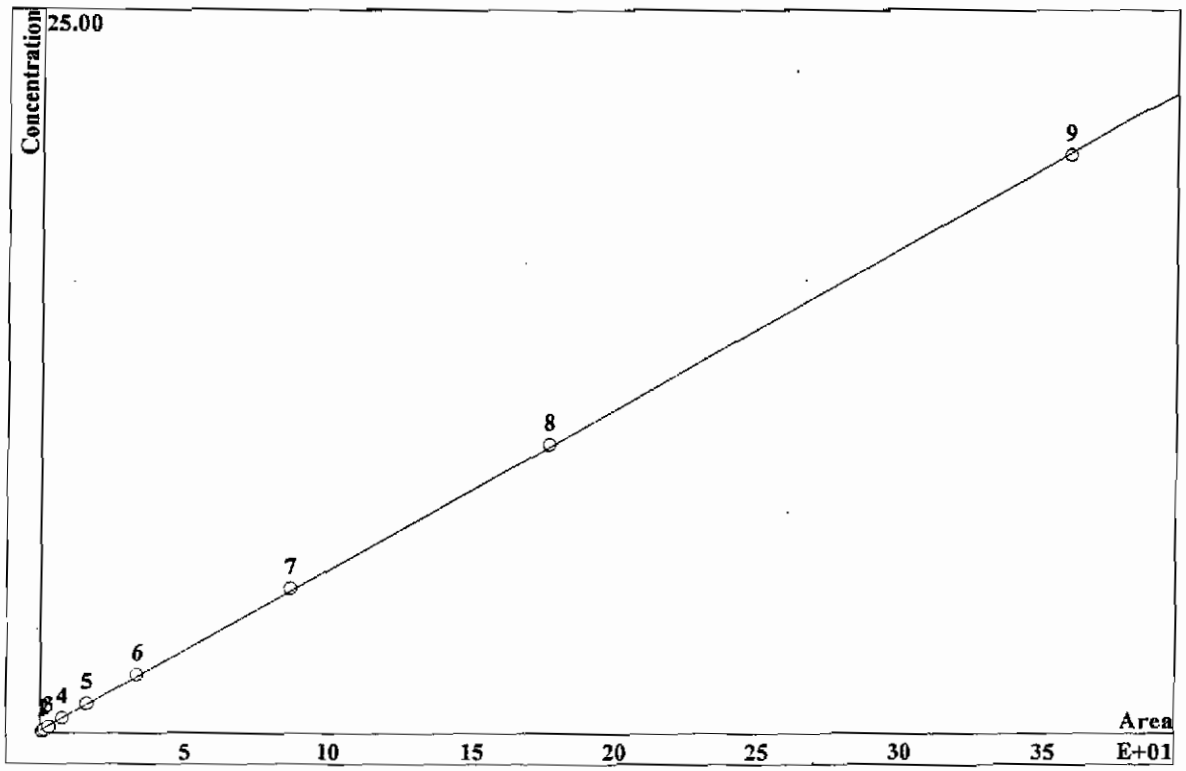
AS
10/03/11

CALIBRATION OF COMPONENT chloride

Method: ICD0-I30.mtw
Equation: Q = 0.0557644·A + 0.0866239
RSD: 1.948 %
Correlation coefficient: 0.999932



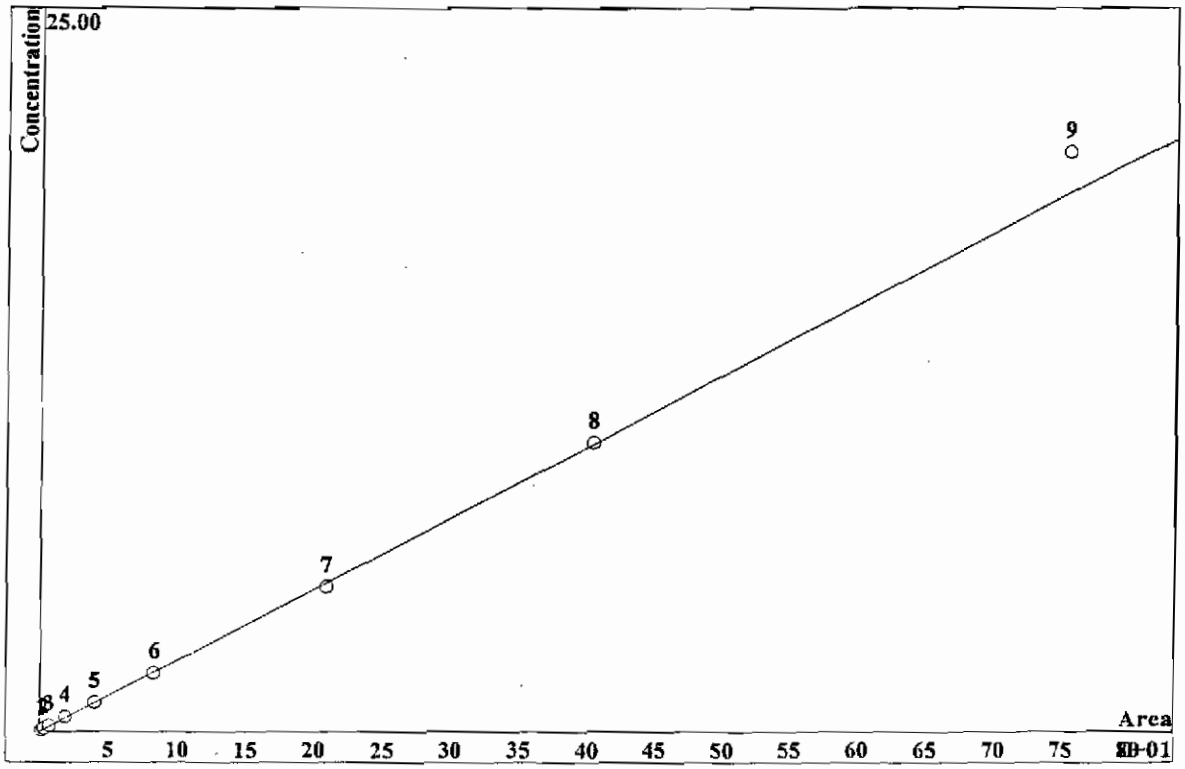
K3 = 0 K2 = 0 K1 = 0.0557644 K0 = 0.0866239
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1035	0.9076	0.05	1	4.26	Yes	v9301901.chw
2	0.1796	1.549	0.1	1	4.26	Yes	v9301917.chw
3	0.354	3.034	0.2	1	4.26	Yes	v9301934.chw
4	0.8921	7.595	0.5	1	4.26	Yes	v9301950.chw
5	1.896	15.84	1	1	4.26	Yes	v9302006.chw
6	3.983	32.97	2	1	4.26	Yes	v9302022.chw
7	10.38	86.28	5	1	4.26	Yes	v9302038.chw
8	21.04	176	10	1	4.26	Yes	v9302054.chw
9	42.24	358.5	20	1	4.26	Yes	v9302111.chw

AA
10/03/11

CALIBRATION OF COMPONENT nitrite

Method: ICD0-I30.mtw ✓ ✓
Equation: Q = 0.024644·A + 0.00179217
RSD: 2.785 %
Correlation coefficient: 0.999850



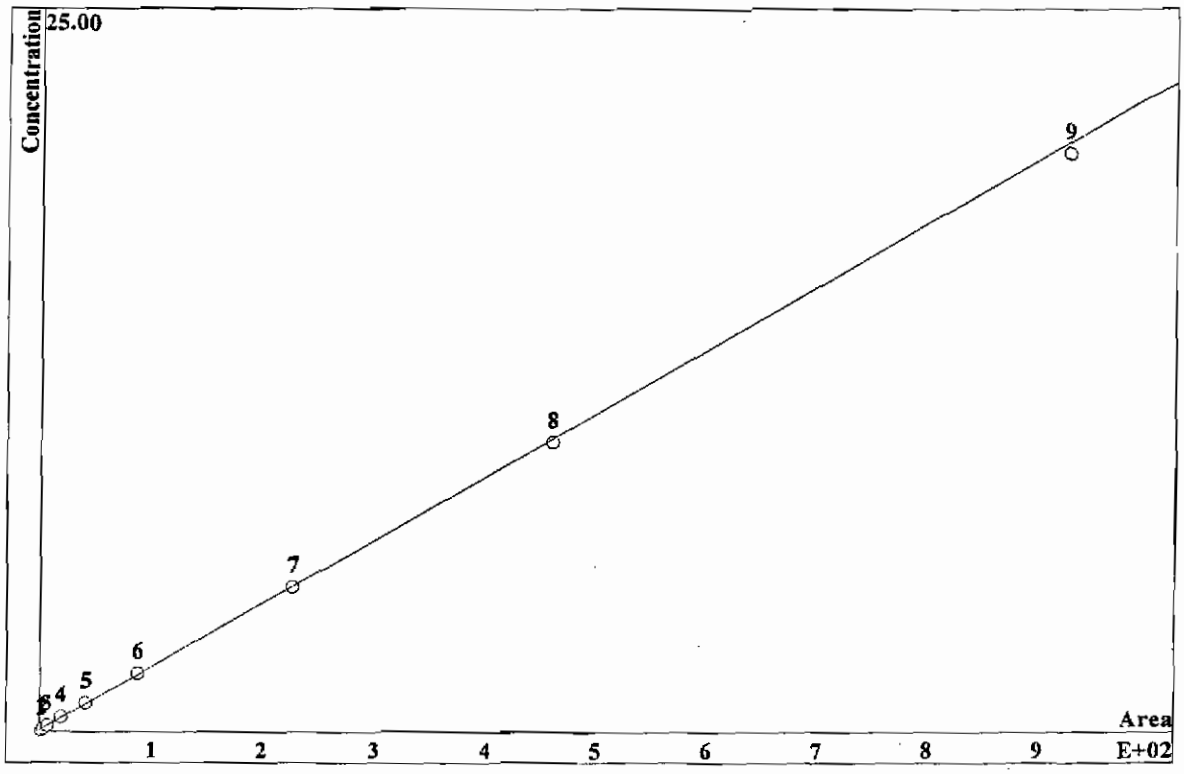
K3 = 0 K2 = 0 K1 = 0.024644 K0 = 0.00179217
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1597	1.561 ✓	0.05	1	4.932	Yes	v9301901.chw
2	0.3368	3.285 ✓	0.1	1	4.932	Yes	v9301917.chw
3	0.7305	7.062 ✓	0.2	1	4.932	Yes	v9301934.chw
4	1.964	18.94 ✓	0.5	1	4.932	Yes	v9301950.chw
5	4.115	39.99 ✓	1	1	4.932	Yes	v9302006.chw
6	8.392	82.54 ✓	2	1	4.932	Yes	v9302022.chw
7	19.91	208.1 ✓	5	1	4.932	Yes	v9302038.chw
8	35.83	402.8 ✓	10	1	4.932	Yes	v9302054.chw
9	61.98	754.1 ✓	20	1	4.932	No	v9302111.chw

RS
10/13/11

CALIBRATION OF COMPONENT nitrate

Method: ICD0-I30.mtw
Equation: Q = 0.0219574·A + 0.0522169
RSD: 3.044 %
Correlation coefficient: 0.999806



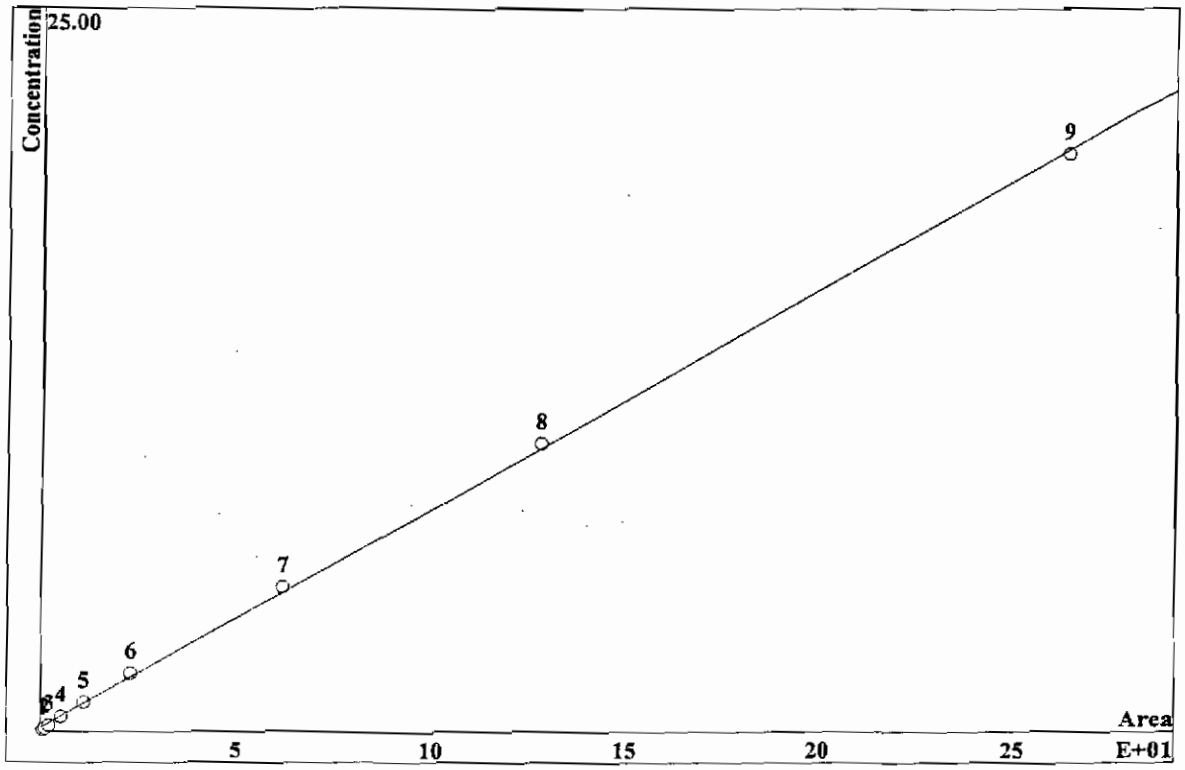
K3 = 0 K2 = 0 K1 = 0.0219574 K0 = 0.0522169
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1416	1.722	0.05	1	6.74	Yes	v9301901.chw
2	0.2866	3.425	0.1	1	6.74	Yes	v9301917.chw
3	0.6179	7.345	0.2	1	6.74	Yes	v9301934.chw
4	1.658	19.53	0.5	1	6.74	Yes	v9301950.chw
5	3.518	41.27	1	1	6.74	Yes	v9302006.chw
6	7.416	86.61	2	1	6.74	Yes	v9302022.chw
7	19.15	226.5	5	1	6.74	Yes	v9302038.chw
8	38.33	458.8	10	1	6.74	No	v9302054.chw
9	74.21	926.4	20	1	6.74	No	v9302111.chw

10/03/11

CALIBRATION OF COMPONENT sulfate

Method: ICD0-I30.mtw ✓ ✓
Equation: Q = 0.0758014·A + 0.128926
RSD: 3.408 %
Correlation coefficient: 0.999791



K3 = 0 K2 = 0 K1 = 0.0758014 K0 = 0.128926
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.03861	0.6921 ✓	0.05	1	10.79	Yes	v9301901.chw
2	0.06635	1.193 ✓	0.1	1	10.79	Yes	v9301917.chw
3	0.1288	2.236 ✓	0.2	1	10.79	Yes	v9301934.chw
4	0.3105	5.366 ✓	0.5	1	10.79	Yes	v9301950.chw
5	0.6333	11.15 ✓	1	1	10.79	Yes	v9302006.chw
6	1.361	23.08 ✓	2	1	10.79	Yes	v9302022.chw
7	3.625	61.64 ✓	5	1	10.79	Yes	v9302038.chw
8	7.471	127.8 ✓	10	1	10.79	Yes	v9302054.chw
9	15.34	264 ✓	20	1	10.79	Yes	v9302111.chw

RA
10/03/11

SECOND SOURCE VERIFICATION

IC Result Check FormVersion : I30/AI39

.FID	LSID	Selection	bromide	nitrite	sulfate	fluoride	chloride	nitrate	phosphate	RawNetID	DF
\I39-12	ICV	BISFCNP	94.1%	98.6%	99.9%	100.1%	97.7%	98.6%	92.5%	v9302127	1
\I39-13	ICB	BISFCNP	0	0	0	0	0	0	0	v9302143	1

AS 10/03/11

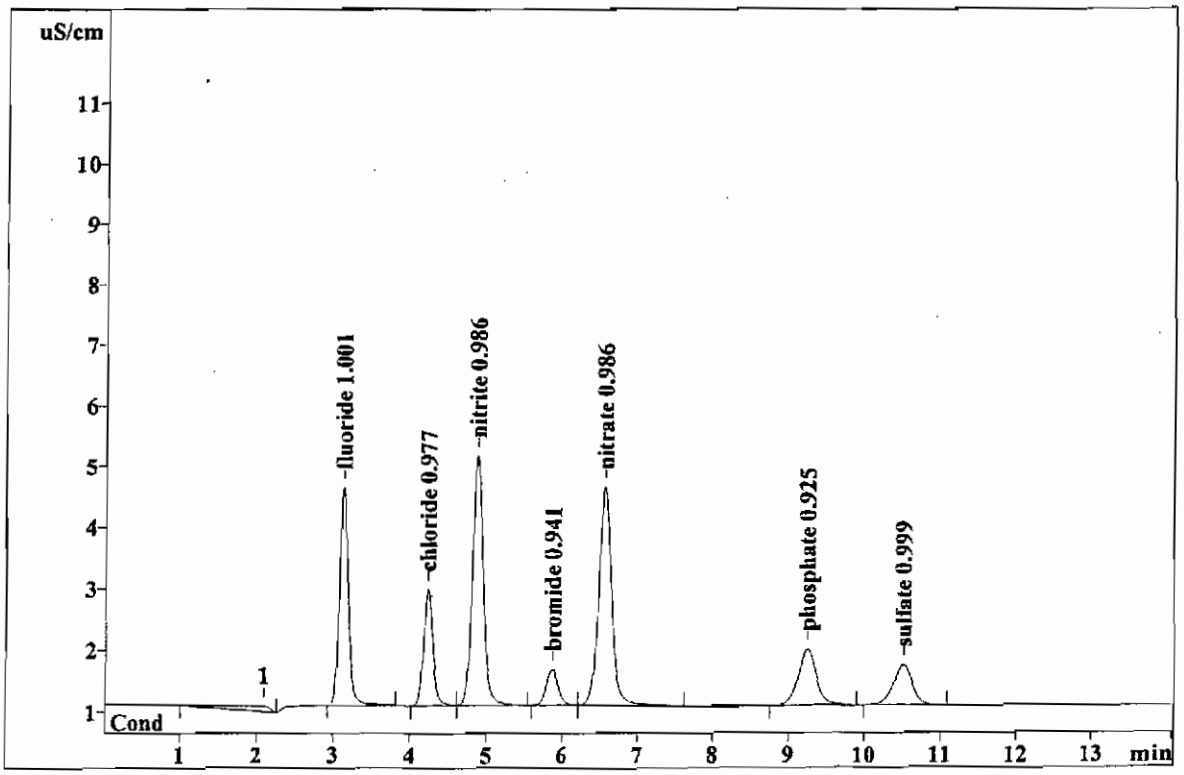
8060

Report date: 10/3/2011 10:50:13 AM
Printed by: Jadelyn Chun

Ident: AI39-12 ICV
Analysis from: 9/30/2011 9:27:15 PM
File: v9302127.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69493

SAMPLE:
:
Vial number: 12
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.08	0.09	3.575	0.000	
2	3.12	3.55	28.790 ✓	1.001 ✓	fluoride
3	4.23	1.89	15.958 ✓	0.977 ✓	chloride
4	4.87	4.07	39.941 ✓	0.986 ✓	nitrite
5	5.87	0.58	6.302 ✓	0.941 ✓	bromide
6	6.55	3.55	42.546 ✓	0.986 ✓	nitrate
7	9.24	0.91	15.033 ✓	0.925 ✓	phosphate
8	10.51	0.65	11.474 ✓	0.999 ✓	sulfate
8	14.00	15.29	163.619	6.815	

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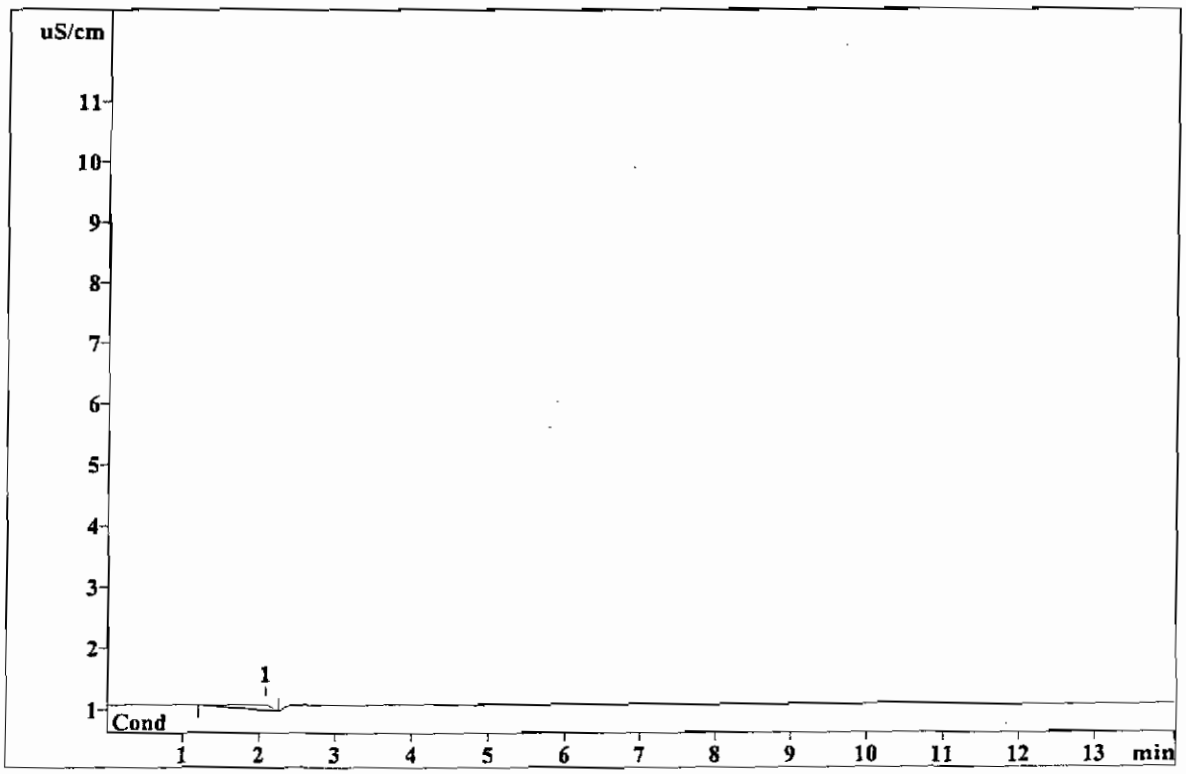
10/03/11

Report date: 10/3/2011 10:50:20 AM
Printed by: Jadelyn Chun

Ident: AI39-13 ICB
Analysis from: 9/30/2011 9:43:24 PM
File: v9302143.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69494

SAMPLE:
:
Vial number: 13
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.08	0.08	2.935	0.000	

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AJ
10/03/11

8062

DAILY CALIBRATIONS

IC Result Check FormVersion : I30\AI39(2011)

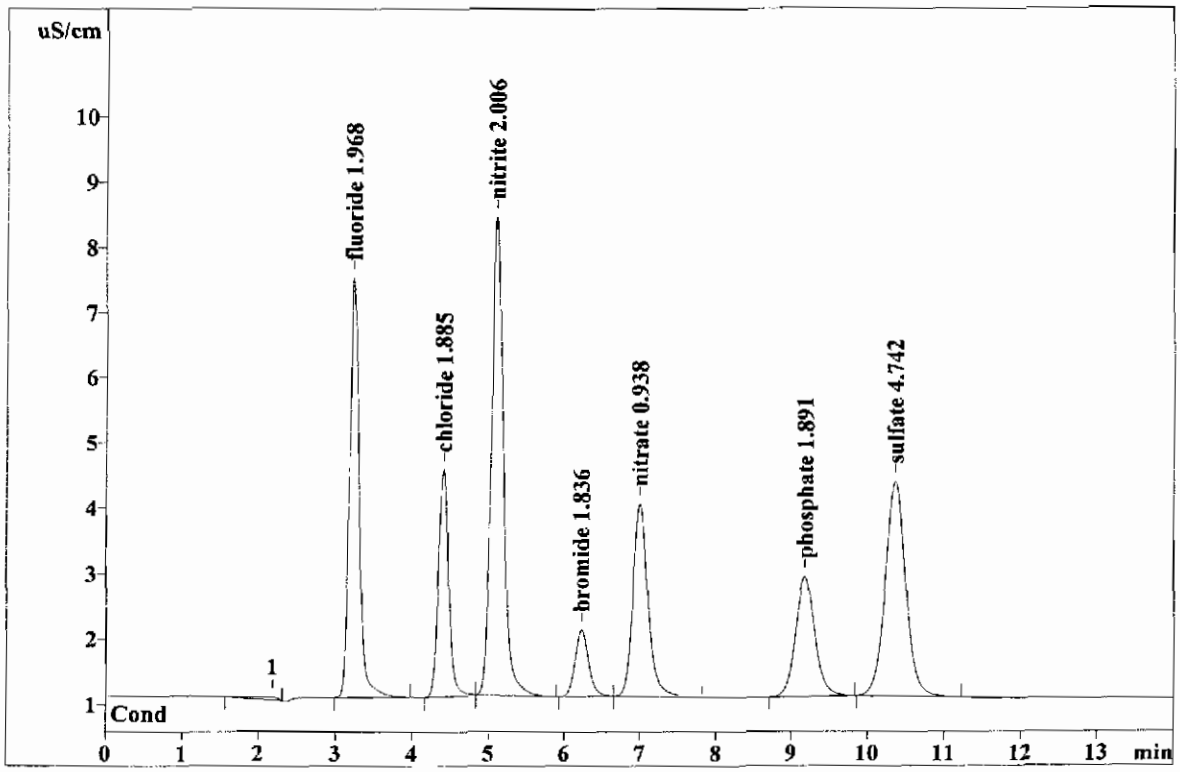
LFID	LSID	Selection	bromide	sulfate	nitrite	nitrate	fluoride	chloride	phosphate	RawNetID	DF
AK07-01	CCV331	BSINFCP	91.8%	94.8%	100.3%	93.8%	98.4%	94.2%	94.5%	vb041053	1
AK07-02	CCB331	BSINFCP	0	0	0	0	0	0	0	vb041109	1
AK07-13	CCV333	BSINFCP	93.3%	96.3%	101.5%	95.6%	100.3%	94.8%	99.9%	vb041406	1
AK07-14	CCB333	BSINFCP	0	0	0	0	0	0	0	vb041423	1
AK07-25	CCV335	BSINFCP	93.9%	96.3%	101.4%	95.7%	100.5%	95.2%	106.6%	vb041720	1
AK07-26	CCB335	BSINFCP	0	0	0	0	0	0	0	vb041737	1
AK07-36	CCV337	BSINFCP	92.6%	95.6%	101%	95.2%	99.8%	94.3%	103.7%	vb042018	1
AK07-37	CCB337	BSINFCP	0	0	0	0	0	0	0	vb042034	1
AK07-48	CCV339	BSINFCP	92.8%	95.7%	101.2%	95.1%	100.2%	94.6%	103.3%	vb042332	1
AK07-49	CCB339	BSINFCP	0	0	0	0	0	0	0	vb042348	1
AK07-58	CCV341	BSINFCP	91.8%	94.3%	100%	94.5%	99.1%	93.9%	105.8%	vb050214	1
AK07-59	CCB341	BSINFCP	0	0	0	0	0	0	0	vb050230	1
AK07-70	CCV343	BSINFCP	92.4%	94.9%	100.6%	95%	99.5%	94.2%	105.7%	vb050528	1
AK07-71	CCB343	BSINFCP	0	0	0	0	0	0	0	vb050544	1
AK07-80	CCV345	BSINFCP	92.5%	95.2%	100.8%	95.2%	99.8%	94.2%	105.8%	vb050809	1
AK07-81	CCB345	BSINFCP	0	0	0	0	0	0	0	vb050825	1

Report date: 11/4/2011 11:07:00 AM
Printed by: Jadelyn Chun

Ident: AK07-01 CCV331
Analysis from: 11/4/2011 10:53:02 AM
File: VB041053.CHW Last save: 11/4/2011 11:07:00 AM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71012

SAMPLE:
:
Vial number: 1
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

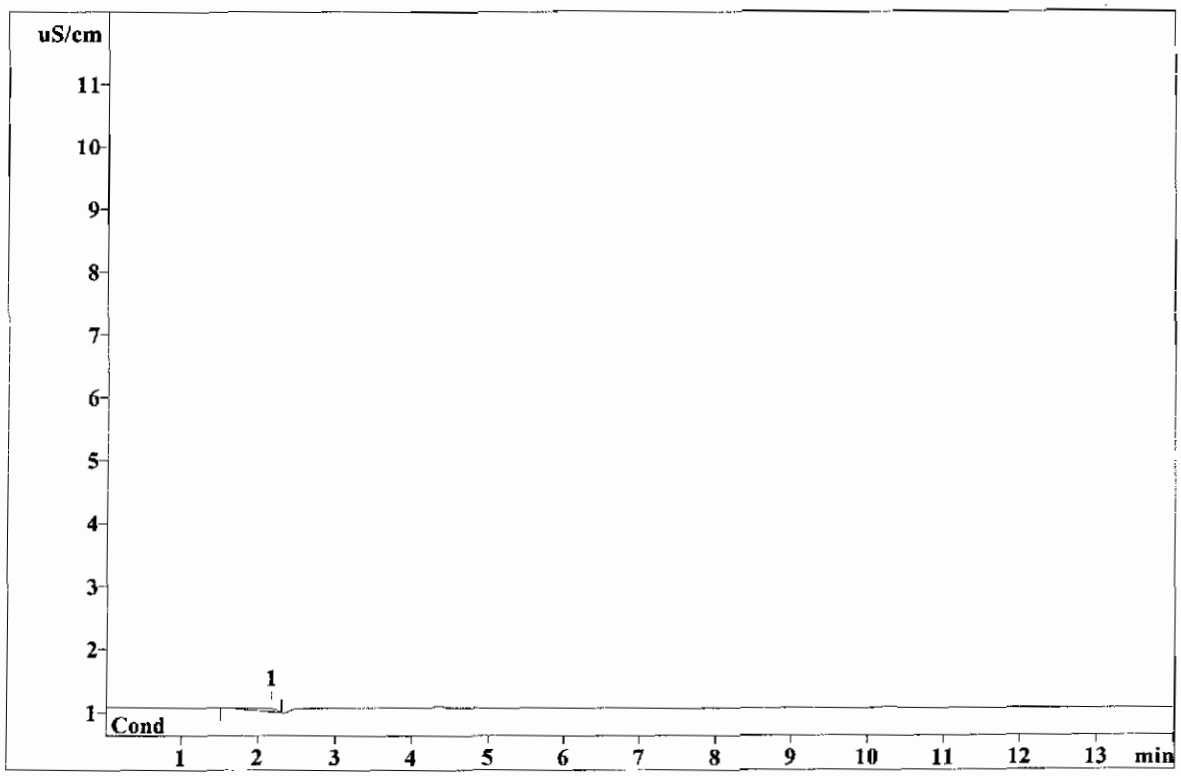
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.04	1.034	0.000	
2	3.23	6.42	57.738	1.968	fluoride
3	4.40	3.46	32.247	1.885	chloride
4	5.10	7.32	81.317	2.006	nitrite
5	6.23	1.02	12.654	1.836	bromide
6	6.99	2.94	40.345	0.938	nitrate
7	9.18	1.83	32.713	1.891	phosphate
8	10.36	3.27	60.858	4.742	sulfate
8	14.00	26.30	318.907	15.265	

This report has been created by IC Net
METROHM LTD

Report date: 11/4/2011 2:17:21 PM
Printed by: Jadelyn Chun

Ident: AK07-02 CCB331
Analysis from: 11/4/2011 11:09:13 AM
File: vb041109.chw Last save: 11/4/2011 11:23:10 AM
Modified!
Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71013

SAMPLE:
:
Vial number: 2
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.16	0.05	1.427	0.000	

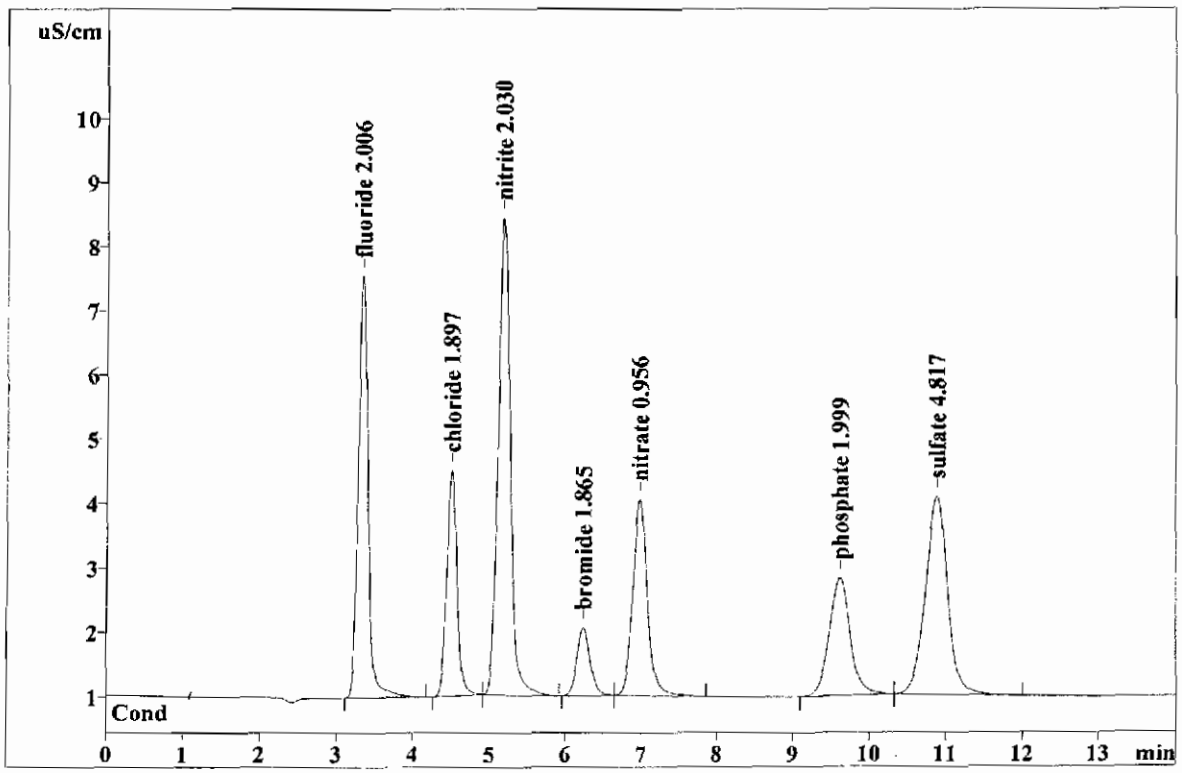
This report has been created by IC Net
METROHM LTD

Report date: 11/4/2011 2:20:56 PM
Printed by: Jadelyn Chun

Ident: AK07-13 CCV333
Analysis from: 11/4/2011 2:06:58 PM
File: VB041406.CHW Last save: 11/4/2011 2:20:56 PM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71024

SAMPLE:
:
Vial number: 13
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

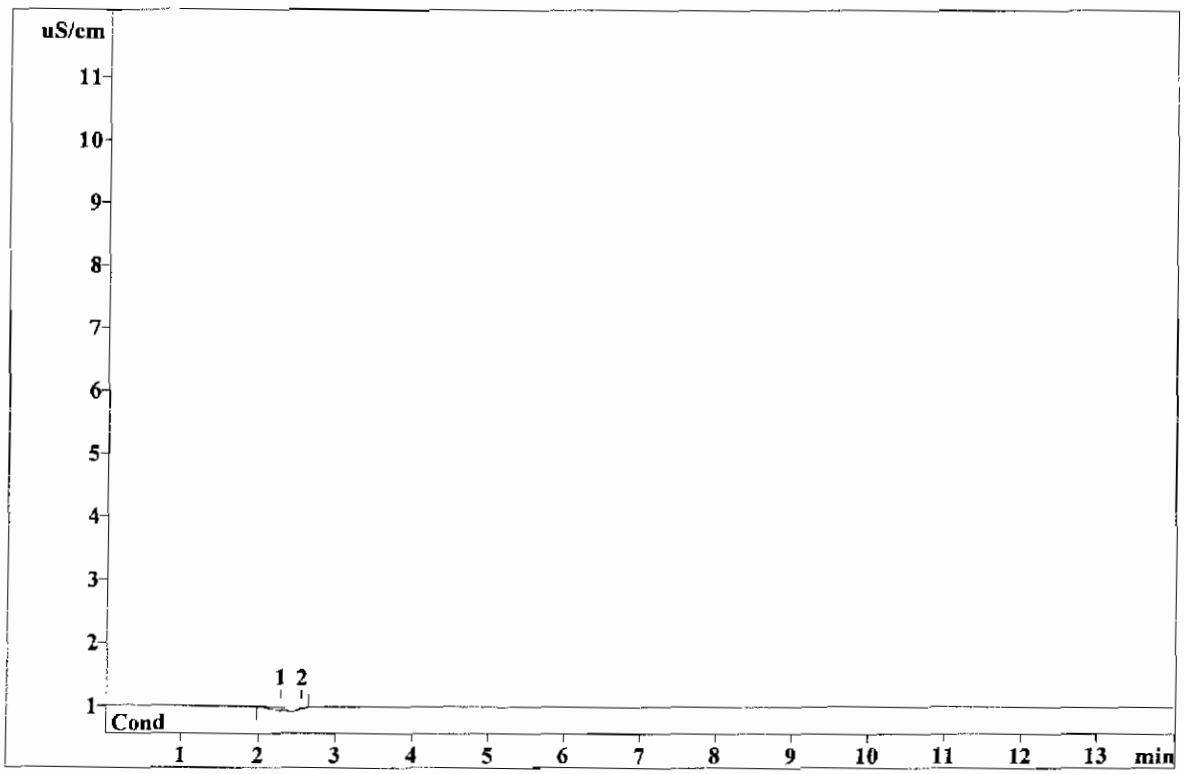
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.34	6.58	58.893	2.006	fluoride
2	4.50	3.51	32.462	1.897	chloride
3	5.18	7.43	82.292	2.030	nitrite
4	6.24	1.05	12.862	1.865	bromide
5	6.97	3.05	41.156	0.956	nitrate
6	9.61	1.83	34.696	1.999	phosphate
7	10.88	3.08	61.845	4.817	sulfate
7	14.00	26.52	324.207	15.570	

This report has been created by IC Net
METROHM LTD

Report date: 11/4/2011 2:59:53 PM
Printed by: Jadelyn Chun

Ident: AK07-14 CCB333
Analysis from: 11/4/2011 2:23:08 PM
File: vb041423.chw Last save: 11/4/2011 2:37:05 PM
Modified!
Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71025

SAMPLE:
:
Vial number: 14
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.28	0.05	0.689	0.000	
2	2.55	0.02	0.111	0.000	
2	14.00	0.07	0.800	0.000	

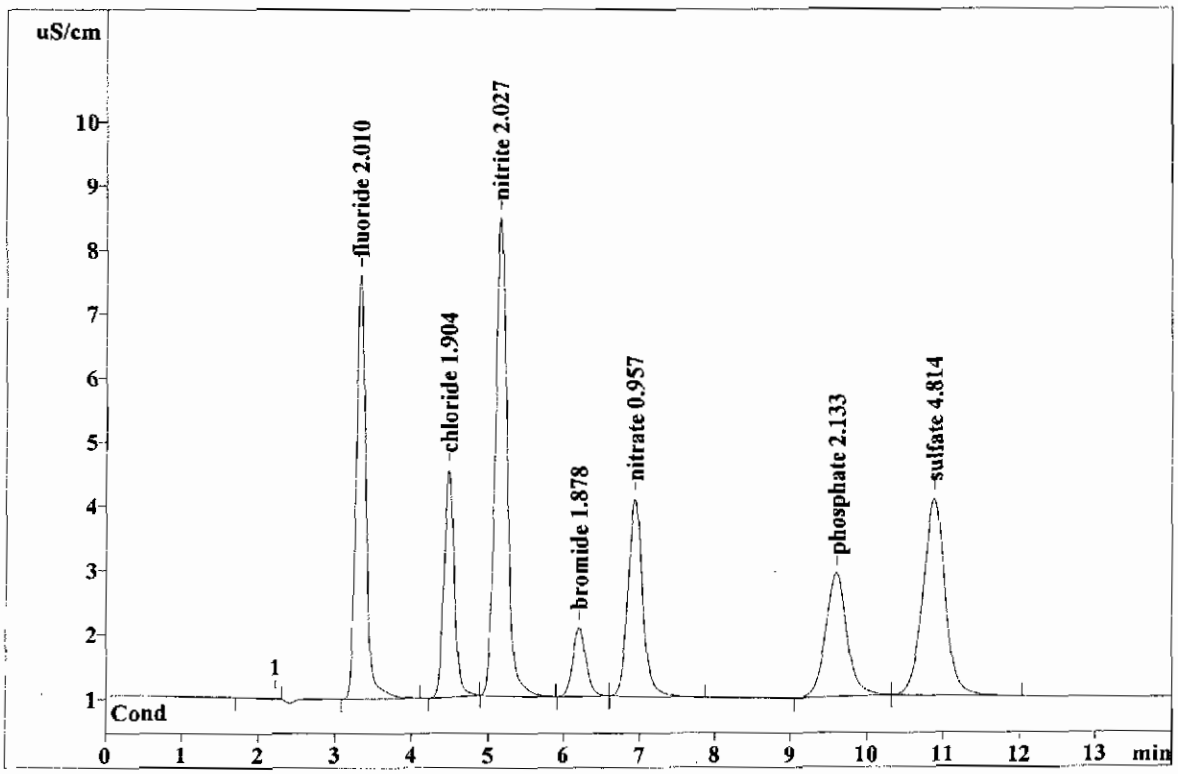
This report has been created by IC Net
METROHM LTD

Report date: 11/4/2011 5:34:51 PM
Printed by: Jadelyn Chun

Ident: AK07-25 CCV335
Analysis from: 11/4/2011 5:20:54 PM
File: VB041720.CHW Last save: 11/4/2011 5:34:51 PM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71036

SAMPLE:
:
Vial number: 25
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.20	0.01	0.369	0.000	
2	3.32	6.60	58.991	2.010	fluoride
3	4.48	3.53	32.597	1.904	chloride
4	5.15	7.45	82.198	2.027	nitrite
5	6.20	1.07	12.951	1.878	bromide
6	6.93	3.07	41.219	0.957	nitrate
7	9.59	1.92	37.150	2.133	phosphate
8	10.88	3.06	61.804	4.814	sulfate
8	14.00	26.69	327.279	15.723	

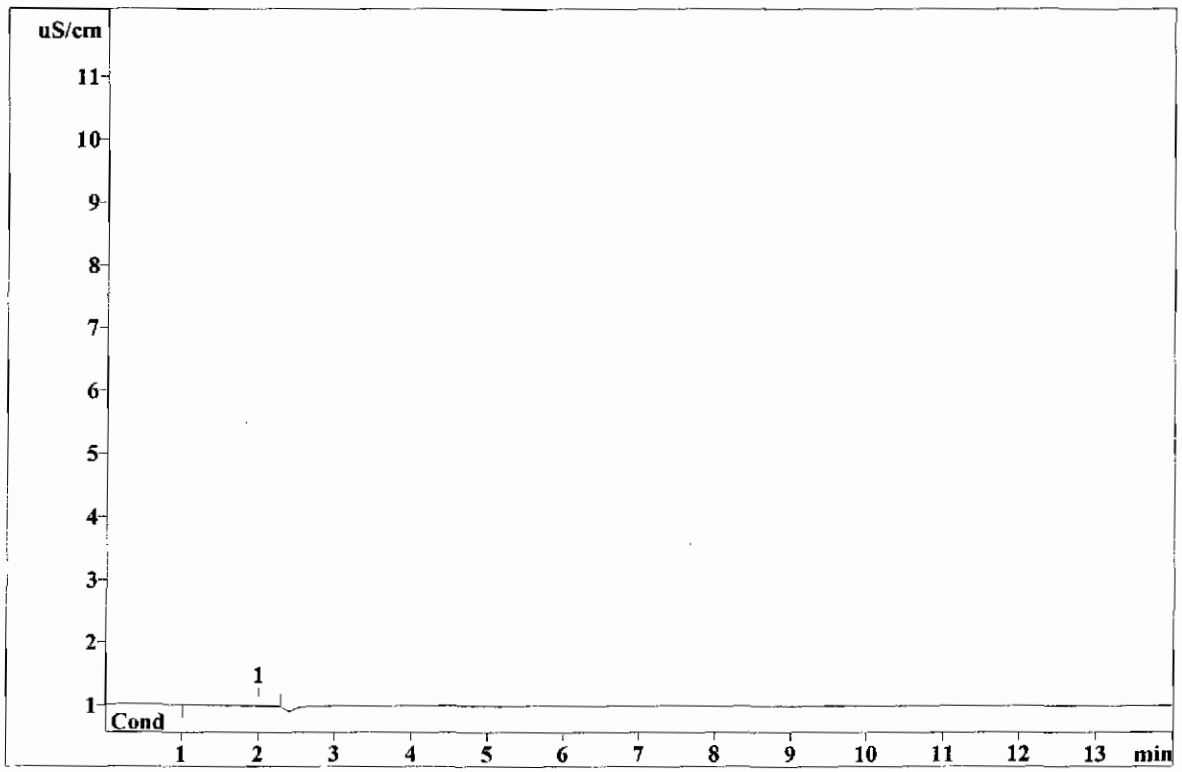
This report has been created by IC Net
METROHM LTD

Report date: 11/4/2011 6:36:35 PM
Printed by: Jadelyn Chun

Ident: AK07-26 CCB335
Analysis from: 11/4/2011 5:37:03 PM
File: vb041737.chw Last save: 11/4/2011 5:51:01 PM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71037

SAMPLE:
:
Vial number: 26
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	1.99	0.02	0.821	0.000	

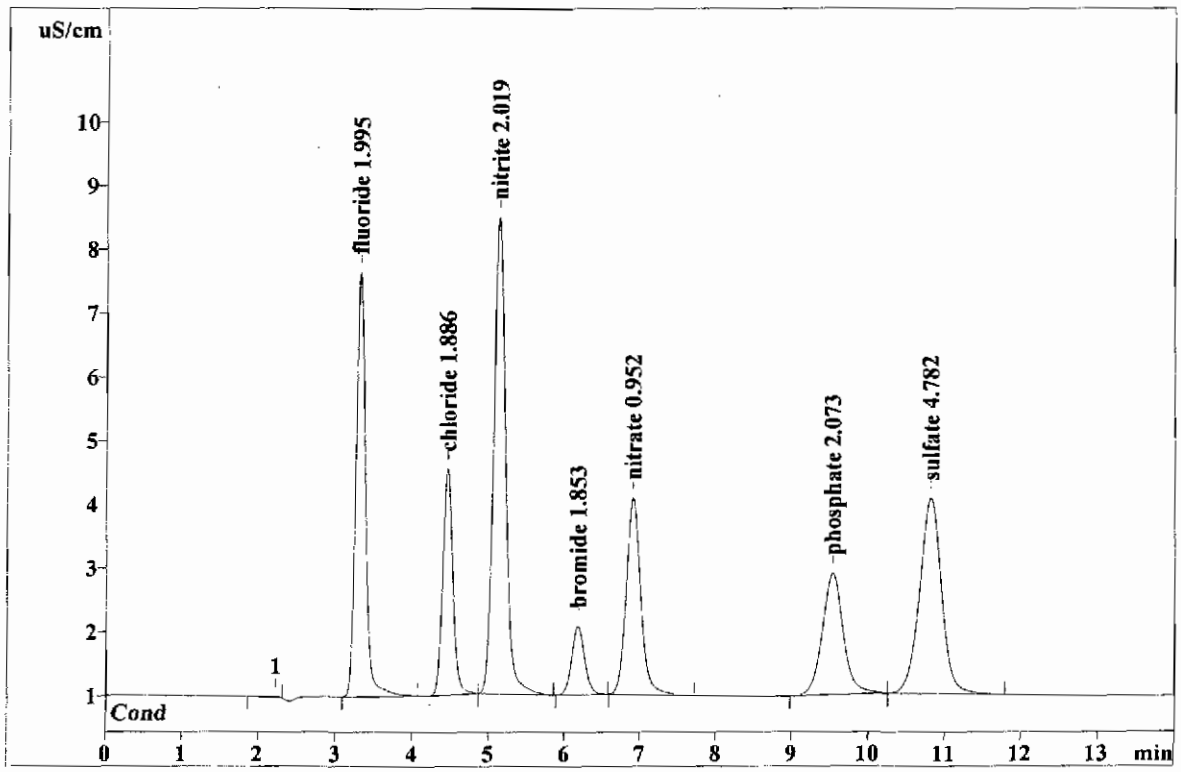
This report has been created by IC Net
METROHM LTD

Report date: 11/4/2011 8:32:34 PM
Printed by: Jadelyn Chun

Ident: AK07-36 CCV337
Analysis from: 11/4/2011 8:18:37 PM
File: VB042018.CHW Last save: 11/4/2011 8:32:34 PM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71047

SAMPLE:
:
Vial number: 36
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.21	0.02	0.267	0.000	
2	3.31	6.66	58.555	1.995	fluoride
3	4.46	3.55	32.263	1.886	chloride
4	5.12	7.47	81.859	2.019	nitrite
5	6.17	1.07	12.774	1.853	bromide
6	6.90	3.08	40.986	0.952	nitrate
7	9.53	1.90	36.059	2.073	phosphate
8	10.81	3.07	61.382	4.782	sulfate
8	14.00	26.81	324.146	15.560	

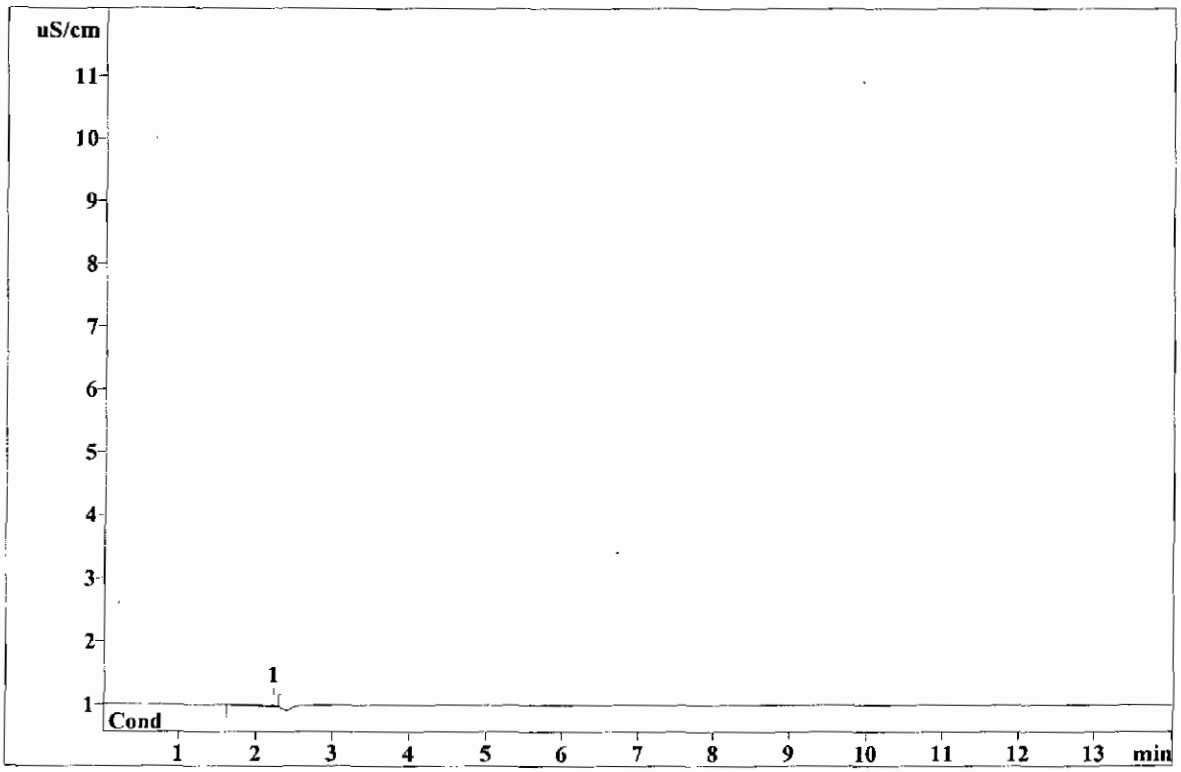
This report has been created by IC Net
METROHM LTD

Report date: 11/7/2011 2:40:00 PM
Printed by: Jadelyn Chun

Ident: AK07-37 CCB337
Analysis from: 11/4/2011 8:34:47 PM
File: vb042034.chw Last save: 11/4/2011 7:48:45 PM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71048

SAMPLE:
:
Vial number: 37
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.21	0.02	0.494	0.000	

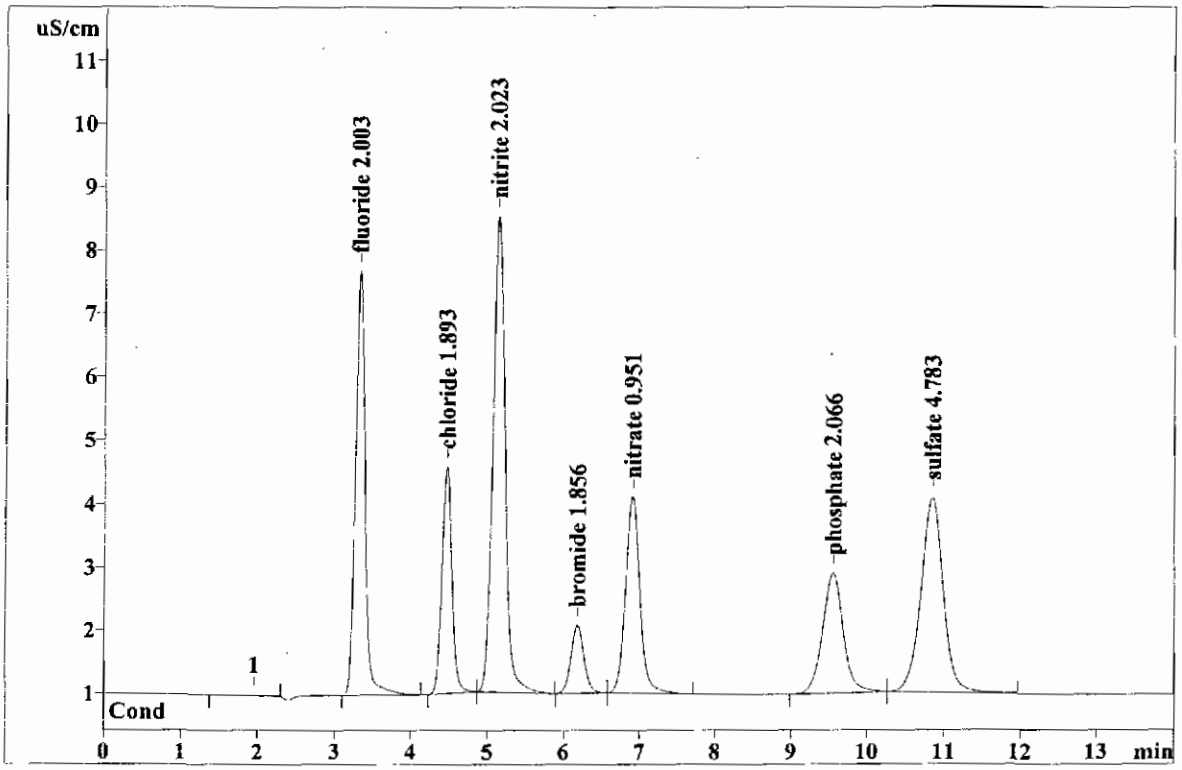
This report has been created by IC Net
METROHM LTD

Report date: 11/4/2011 11:46:31 PM
Printed by: Jadelyn Chun

Ident: AK07-48 CCV339
Analysis from: 11/4/2011 11:32:34 PM
File: VB042332.CHW Last save: 11/4/2011 11:46:31 PM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71059

SAMPLE:
:
Vial number: 48
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	1.96	0.02	0.600	0.000	
2	3.32	6.70	58.791	2.003	fluoride
3	4.47	3.58	32.390	1.893	chloride
4	5.13	7.53	82.031	2.023	nitrite
5	6.18	1.08	12.794	1.856	bromide
6	6.90	3.11	40.947	0.951	nitrate
7	9.55	1.90	35.924	2.066	phosphate
8	10.85	3.07	61.404	4.783	sulfate
8	14.00	26.97	324.882	15.576	

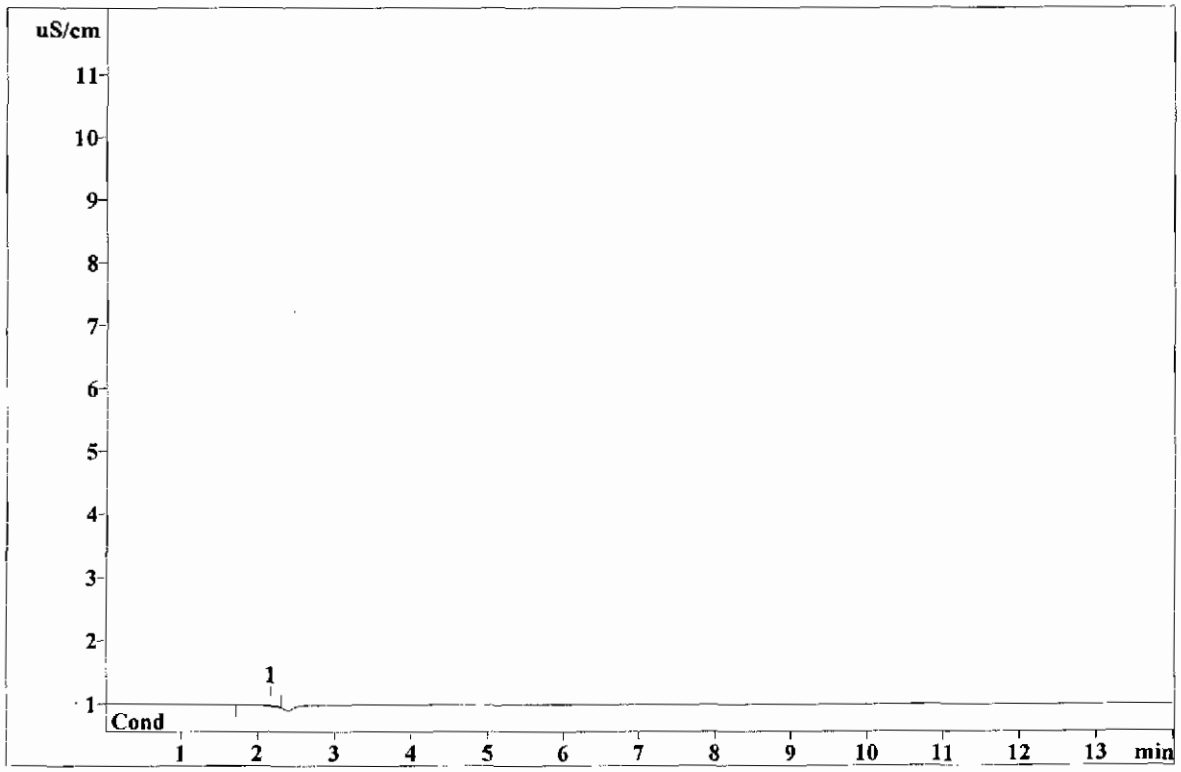
This report has been created by IC Net
METROHM LTD

Report date: 11/7/2011 2:40:05 PM
Printed by: Jadelyn Chun

Ident: AK07-49 CCB339
Analysis from: 11/4/2011 11:48:44 PM
File: vb042348.chw Last save: 11/4/2011 11:02:41 PM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71060

SAMPLE:
:
Vial number: 49
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.02	0.432	0.000	

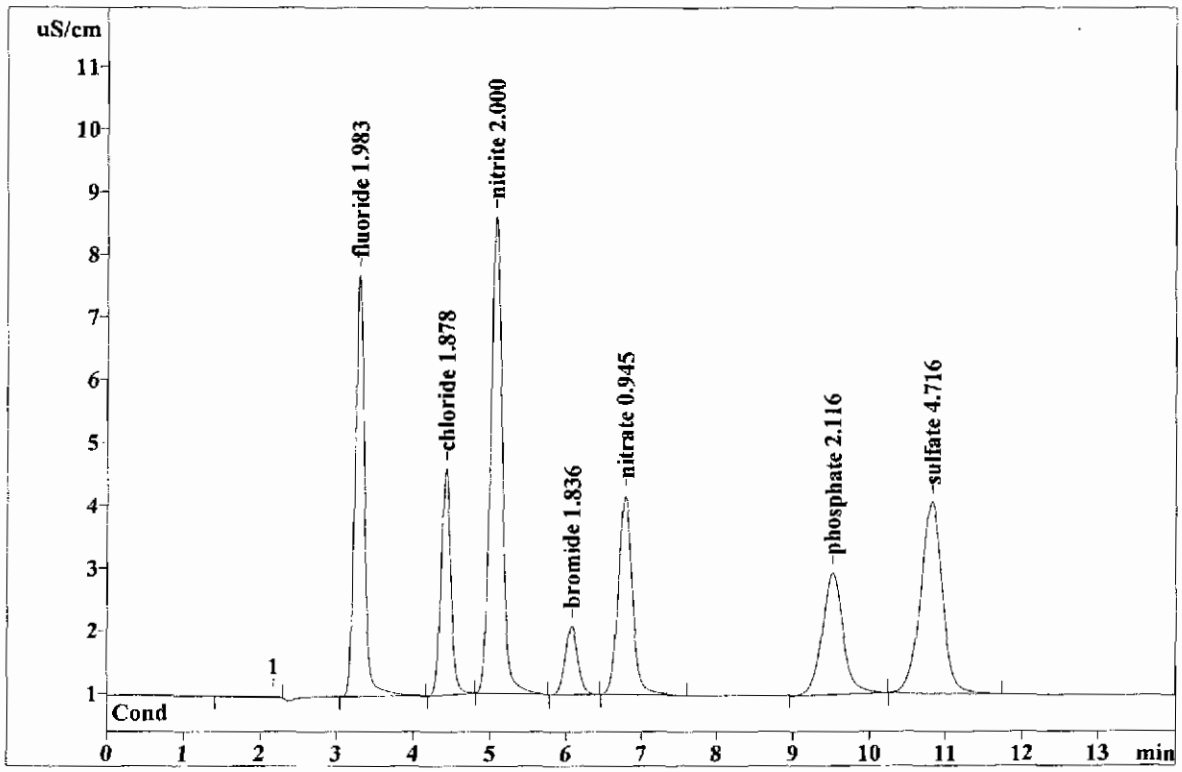
This report has been created by IC Net
METROHM LTD

Report date: 11/5/2011 2:28:08 AM
Printed by: Jadelyn Chun

Ident: AK07-58 CCV341
Analysis from: 11/5/2011 2:14:11 AM
File: VB050214.CHW Last save: 11/5/2011 2:28:08 AM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71069

SAMPLE:
:
Vial number: 58
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.19	0.02	0.800	0.000	
2	3.29	6.71	58.180	1.983	fluoride
3	4.42	3.60	32.117	1.878	chloride
4	5.07	7.61	81.063	2.000	nitrite
5	6.08	1.09	12.657	1.836	bromide
6	6.78	3.16	40.649	0.945	nitrate
7	9.51	1.94	36.842	2.116	phosphate
8	10.82	3.05	60.509	4.716	sulfate
8	14.00	27.18	322.818	15.473	

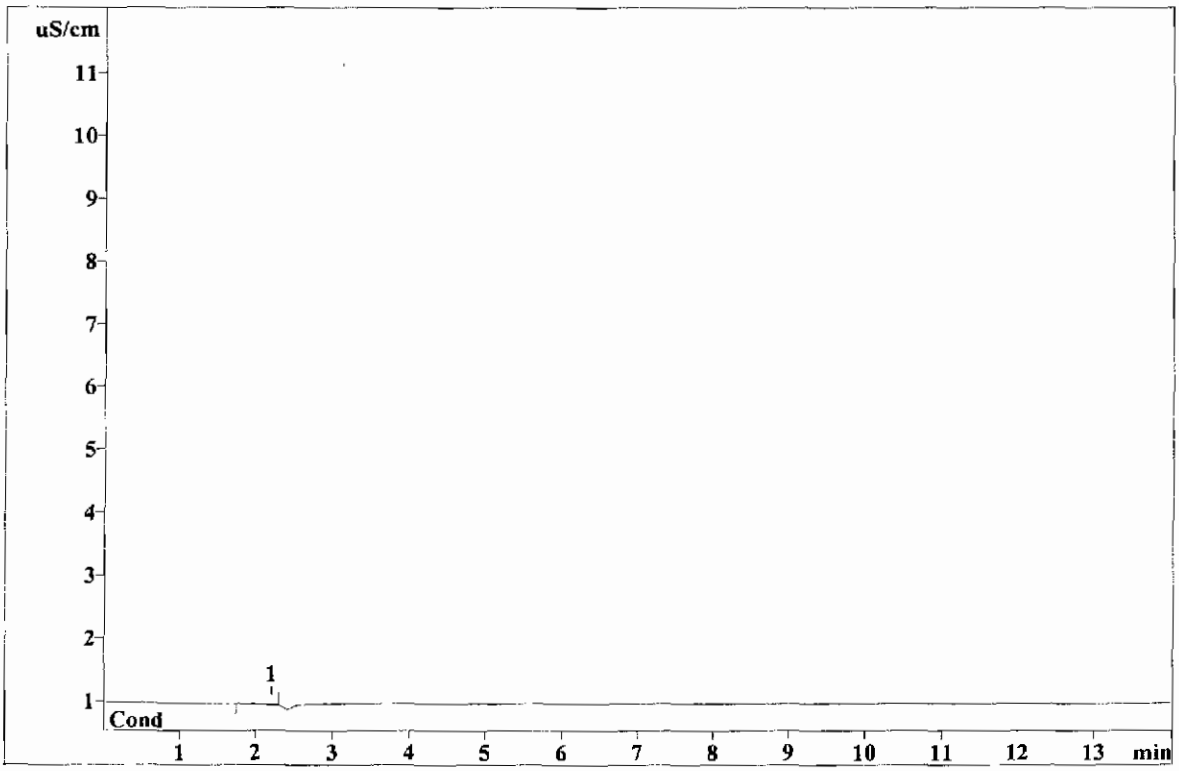
This report has been created by IC Net
METROHM LTD

Report date: 11/7/2011 2:40:07 PM
Printed by: Jadelyn Chun

Ident: AK07-59 CCB341
Analysis from: 11/5/2011 2:30:21 AM
File: vb050230.chw Last save: 11/5/2011 1:44:18 AM

Method: ICD0-I30.mtw Last save: 11/4/2011 11:05:43 AM
Run operator: Jadelyn Chun
Analysis number: 71070

SAMPLE:
:
Vial number: 59
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.21	0.01	0.279	0.000	

This report has been created by IC Net
METROHM LTD

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Concentrations of:

S_1 — 0.05 ppm
S_2 — 0.1
S_3 — 0.2
S_4 — 0.5
S_5 — 1.0
S_6 — 2.0
S_7 — 5.0
S_8 — 10.0
S_9 — 20.0

Linearity (ppm)

F^- — 5
Cl^- — 20
NO_2N — 10
Br^- — 5
NO_3N — 5
PO_4P — 5
SO_4^{2-} — 20

Column: Metrosep A Supp 5-100

Flow Rate: 0.70 ml/min

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-220 (1000 mM H_2SO_4) 100 ml - 1 L

Book #:	AD0-031
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AI39
Method File:	ICD0-I30.mtw
Analytical Batch:	NA

SOP #	Rev. #
☑ EMAX-300.0	6
☐ EMAX-4110B	0
☑ EMAX-9056	3
☐ EMAX-	

STANDARDS ID	
ICAL	SI1B-17-57-02
ICV	SI1B-17-57-03
CCV	NA
LCS	↓
MS	↓

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 9/30/11

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
v9301829.chw	ICD0-130.mtw	AI39-01 IB	1	1.0	1.0	1.0	100.0	0		
v9301845.chw	ICD0-130.mtw	AI39-02 S0	2	1.0	1.0	1.0	100.0	0		
v9301901.chw	ICD0-130.mtw	AI39-03 S1	3	1.0	1.0	1.0	100.0	1		
v9301917.chw	ICD0-130.mtw	AI39-04 S2	4	1.0	1.0	1.0	100.0	2		
v9301934.chw	ICD0-130.mtw	AI39-05 S3	5	1.0	1.0	1.0	100.0	3		
v9301950.chw	ICD0-130.mtw	AI39-06 S4	6	1.0	1.0	1.0	100.0	4		
v9302006.chw	ICD0-130.mtw	AI39-07 S5	7	1.0	1.0	1.0	100.0	5		
v9302022.chw	ICD0-130.mtw	AI39-08 S6	8	1.0	1.0	1.0	100.0	6		
v9302038.chw	ICD0-130.mtw	AI39-09 S7	9	1.0	1.0	1.0	100.0	7		
v9302054.chw	ICD0-130.mtw	AI39-10 S8	10	1.0	1.0	1.0	100.0	8		
v9302111.chw	ICD0-130.mtw	AI39-11 S9	11	1.0	1.0	1.0	100.0	9	FINAL	
v9302127.chw	ICD0-130.mtw	AI39-12 ICV	12	1.0	1.0	1.0	100.0	0		
v9302143.chw	ICD0-130.mtw	AI39-13 ICB	13	1.0	1.0	1.0	100.0	0		

JC 10/3/11

11/03/11

8975

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AD0-032

Instrument No.: D0

Pipette ID's: 039380124

SW8A-02-12

SW8A-02-13

Balance ID#: 40706360

Analytical Sequence: AK07

Method File: IC00 -I30.mtw

Analytical Batch: IC007W ; IC0107W ; IC0109W

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SIB-17-81-01
LCS	↓ -02
MS	Refer to LCS Parent ID

Column: Metrosep A Supp 5-100 Filter 0.45µm : 21787469

Flow Rate: 0.70 ml/min 0.20µm : 21772726

IC Eluent:

SWM-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SWM-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 11/4/11

8080

(F)

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb041053.chw	ICD0-I30.mtw	AK07-01 CCV331	1	1.0	1.0	1.0	100.0	0		
vb041109.chw	ICD0-I30.mtw	AK07-02 CCB331	2	1.0	1.0	1.0	100.0	0		
vb041125.chw	ICD0-I30.mtw	AK07-03 ICK015WB	3	1.0	1.0	1.0	100.0	0		
vb041141.chw	ICD0-I30.mtw	AK07-04 ICK015WL	4	1.0	1.0	1.0	100.0	0		
vb041157.chw	ICD0-I30.mtw	AK07-05 ICK015WC	5	1.0	1.0	1.0	100.0	0		
vb041213.chw	ICD0-I30.mtw	AK07-06 K037-01	6	1.0	1.0	1.0	100.0	0		
vb041230.chw	ICD0-I30.mtw	AK07-07 K031-03 DF=5	7	1.0	5.0	1.0	100.0	0		
vb041246.chw	ICD0-I30.mtw	AK07-08 K031-04 DF=5	8	1.0	5.0	1.0	100.0	0		
vb041302.chw	ICD0-I30.mtw	AK07-09 K031-05 DF=2	9	1.0	2.0	1.0	100.0	0		
vb041318.chw	ICD0-I30.mtw	AK07-10 K031-06 DF=5	10	1.0	5.0	1.0	100.0	0		
vb041334.chw	ICD0-I30.mtw	AK07-11 K031-07 DF=5	11	1.0	5.0	1.0	100.0	0		
vb041350.chw	ICD0-I30.mtw	AK07-12 K039-01	12	1.0	1.0	1.0	100.0	0		
vb041406.chw	ICD0-I30.mtw	AK07-13 CCV333	13	1.0	1.0	1.0	100.0	0		
vb041423.chw	ICD0-I30.mtw	AK07-14 CCB333	14	1.0	1.0	1.0	100.0	0		
vb041439.chw	ICD0-I30.mtw	AK07-15 K035-01 DF=2	15	1.0	2.0	1.0	100.0	0		
vb041455.chw	ICD0-I30.mtw	AK07-16 K035-05 DF=2	16	1.0	2.0	1.0	100.0	0		
vb041511.chw	ICD0-I30.mtw	AK07-17 K035-02 DF=2	17	1.0	2.0	1.0	100.0	0		
vb041527.chw	ICD0-I30.mtw	AK07-18 K035-02D DF=2	18	1.0	2.0	1.0	100.0	0		
vb041543.chw	ICD0-I30.mtw	AK07-19 K035-02M DF=2	19	1.0	2.0	1.0	100.0	0		
vb041600.chw	ICD0-I30.mtw	AK07-20 K035-02S DF=2	20	1.0	2.0	1.0	100.0	0		
vb041616.chw	ICD0-I30.mtw	AK07-21 K035-03 DF=2	21	1.0	2.0	1.0	100.0	0		
vb041632.chw	ICD0-I30.mtw	AK07-22 K035-04 DF=2	22	1.0	2.0	1.0	100.0	0		
vb041648.chw	ICD0-I30.mtw	AK07-23 K035-01 DF=5	23	1.0	5.0	1.0	100.0	0		
vb041704.chw	ICD0-I30.mtw	AK07-24 K035-04 DF=5	24	1.0	5.0	1.0	100.0	0		
vb041720.chw	ICD0-I30.mtw	AK07-25 CCV335	25	1.0	1.0	1.0	100.0	0		
vb041737.chw	ICD0-I30.mtw	AK07-26 CCB335	26	1.0	1.0	1.0	100.0	0		
vb041753.chw	ICD0-I30.mtw	AK07-27 K475-04	27	1.0	1.0	1.0	100.0	0		
vb041809.chw	ICD0-I30.mtw	AK07-28 K035-05 DF=10	28	1.0	10.0	1.0	100.0	0		
vb041825.chw	ICD0-I30.mtw	AK07-29 K035-02 DF=5	29	1.0	5.0	1.0	100.0	0		
vb041841.chw	ICD0-I30.mtw	AK07-30 K035-02D DF=5	30	1.0	5.0	1.0	100.0	0		
vb041857.chw	ICD0-I30.mtw	AK07-31 K035-02M DF=5	31	1.0	5.0	1.0	100.0	0		
vb041913.chw	ICD0-I30.mtw	AK07-32 K035-02S DF=5	32	1.0	5.0	1.0	100.0	0		
vb041930.chw	ICD0-I30.mtw	AK07-33 K035-03 DF=10	33	1.0	10.0	1.0	100.0	0		
vb041946.chw	ICD0-I30.mtw	AK07-34 K031-03 DF=10	34	1.0	10.0	1.0	100.0	0		
vb042002.chw	ICD0-I30.mtw	AK07-35 K031-04 DF=10	35	1.0	10.0	1.0	100.0	0		
vb042018.chw	ICD0-I30.mtw	AK07-36 CCV337	36	1.0	1.0	1.0	100.0	0		
vb042034.chw	ICD0-I30.mtw	AK07-37 CCB337	37	1.0	1.0	1.0	100.0	0		
vb042050.chw	ICD0-I30.mtw	AK07-38 ICK017WB	38	1.0	1.0	1.0	100.0	0		
vb042107.chw	ICD0-I30.mtw	AK07-39 ICK017WL	39	1.0	1.0	1.0	100.0	0		
vb042123.chw	ICD0-I30.mtw	AK07-40 ICK017WC	40	1.0	1.0	1.0	100.0	0		
vb042139.chw	ICD0-I30.mtw	AK07-41 K031-03	41	1.0	1.0	1.0	100.0	0		
vb042155.chw	ICD0-I30.mtw	AK07-42 K031-04	42	1.0	1.0	1.0	100.0	0		
vb042211.chw	ICD0-I30.mtw	AK07-43 K031-06	43	1.0	1.0	1.0	100.0	0		
vb042227.chw	ICD0-I30.mtw	AK07-44 K031-07	44	1.0	1.0	1.0	100.0	0		
vb042244.chw	ICD0-I30.mtw	AK07-45 K031-06 DF=10	45	1.0	10.0	1.0	100.0	0		
vb042300.chw	ICD0-I30.mtw	AK07-46 K031-07 DF=10	46	1.0	10.0	1.0	100.0	0		
vb042316.chw	ICD0-I30.mtw	AK07-47 K035-01 DF=50	47	1.0	50.0	1.0	100.0	0		
vb042332.chw	ICD0-I30.mtw	AK07-48 CCV339	48	1.0	1.0	1.0	100.0	0		
vb042348.chw	ICD0-I30.mtw	AK07-49 CCB339	49	1.0	1.0	1.0	100.0	0		
vb050004.chw	ICD0-I30.mtw	AK07-50 K035-02 DF=100	50	1.0	100.0	1.0	100.0	0		
vb050021.chw	ICD0-I30.mtw	AK07-51 K035-02D DF=100	51	1.0	100.0	1.0	100.0	0		
vb050037.chw	ICD0-I30.mtw	AK07-52 K035-02M DF=100	52	1.0	100.0	1.0	100.0	0		
vb050053.chw	ICD0-I30.mtw	AK07-53 K035-02S DF=100	53	1.0	100.0	1.0	100.0	0		
vb050109.chw	ICD0-I30.mtw	AK07-54 K035-03 DF=200	54	1.0	200.0	1.0	100.0	0		
vb050125.chw	ICD0-I30.mtw	AK07-55 K035-04 DF=100	55	1.0	100.0	1.0	100.0	0		
vb050141.chw	ICD0-I30.mtw	AK07-56 K035-05 DF=200	56	1.0	200.0	1.0	100.0	0		
vb050158.chw	ICD0-I30.mtw	AK07-57 K039-01 DF=20	57	1.0	20.0	1.0	100.0	0		

Am 11/7/14

FINAL

(F2)

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb050214.chw	ICD0-I30.mtw	AK07-58 CCV341	58	1.0	1.0	1.0	100.0	0		
vb050230.chw	ICD0-I30.mtw	AK07-59 CCB341	59	1.0	1.0	1.0	100.0	0		
vb050246.chw	ICD0-I30.mtw	AK07-60 ICK019WB	60	1.0	1.0	1.0	100.0	0		
vb050302.chw	ICD0-I30.mtw	AK07-61 ICK019WL	61	1.0	1.0	1.0	100.0	0		
vb050318.chw	ICD0-I30.mtw	AK07-62 ICK019WC	62	1.0	1.0	1.0	100.0	0		
vb050335.chw	ICD0-I30.mtw	AK07-63 J311-04 DF=2	63	1.0	2.0	1.0	100.0	0		
vb050351.chw	ICD0-I30.mtw	AK07-64 J311-07 DF=2	64	1.0	2.0	1.0	100.0	0		
vb050407.chw	ICD0-I30.mtw	AK07-65 J311-08 DF=5	65	1.0	5.0	1.0	100.0	0		
vb050423.chw	ICD0-I30.mtw	AK07-66 J311-12 DF=2	66	1.0	2.0	1.0	100.0	0		
vb050439.chw	ICD0-I30.mtw	AK07-67 J311-01 DF=20	67	1.0	20.0	1.0	100.0	0		
vb050455.chw	ICD0-I30.mtw	AK07-68 J311-04 DF=20	68	1.0	20.0	1.0	100.0	0		
vb050511.chw	ICD0-I30.mtw	AK07-69 J311-06 DF=20	69	1.0	20.0	1.0	100.0	0		
vb050528.chw	ICD0-I30.mtw	AK07-70 CCV343	70	1.0	1.0	1.0	100.0	0		
vb050544.chw	ICD0-I30.mtw	AK07-71 CCB343	71	1.0	1.0	1.0	100.0	0		
vb050600.chw	ICD0-I30.mtw	AK07-72 J311-05 DF=20	72	1.0	20.0	1.0	100.0	0		
vb050616.chw	ICD0-I30.mtw	AK07-73 J311-05D DF=20	73	1.0	20.0	1.0	100.0	0		
vb050632.chw	ICD0-I30.mtw	AK07-74 J311-05M DF=20	74	1.0	20.0	1.0	100.0	0		
vb050648.chw	ICD0-I30.mtw	AK07-75 J311-05S DF=20	75	1.0	20.0	1.0	100.0	0		
vb050705.chw	ICD0-I30.mtw	AK07-76 J311-07 DF=40	76	1.0	40.0	1.0	100.0	0		
vb050721.chw	ICD0-I30.mtw	AK07-77 J311-08 DF=50	77	1.0	50.0	1.0	100.0	0		
vb050737.chw	ICD0-I30.mtw	AK07-78 J311-12 DF=40	78	1.0	40.0	1.0	100.0	0		
vb050753.chw	ICD0-I30.mtw	AK07-79 RINSE	79	1.0	1.0	1.0	100.0	0		
vb050809.chw	ICD0-I30.mtw	AK07-80 CCV345	80	1.0	1.0	1.0	100.0	0		
vb050825.chw	ICD0-I30.mtw	AK07-81 CCB345	81	1.0	1.0	1.0	100.0	0		

AM 11/7/07

FINAL

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RETENTION TIME WINDOW

RETENTION TIME WINDOW
METHOD 300.0

Lab name:	**EMAX**	**Method:**	**EMAX-300.0**
Instrument ID:	IC100 (761 IC)	IC column:	METROSEP A SUPP 5
		Column size:	100X4.0mm

Compound	Retention time Window
FLUORIDE	0.234
CHLORIDE	0.407
NTIRITE	0.52
BROMIDE	0.688
NTIRATE	0.836
PHOSPHATE	0.678
SULFATE	0.915
IODIDE	1.078

AW
10-17-07

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K035

METHOD 300.0(M)
ORGANIC ACIDS BY IC

A total of five (5) water samples were received on 11/03/11 for Organic Acids (Acetate, Butyrate, Lactate and Propionate) by IC analysis, Method 300.0(M) in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary forms for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for OAK004WL/C were all within QC limits.
Percent recoveries for OAK006WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample were analyzed at the frequency prescribed by the project.
Percent recovery for K035-02M was within project QC limits.
Sample duplicate were also analyzed with the samples. RPDs were within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

SAMPLE RESULTS

METHOD 300.0(M)
ACETATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K035

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK004WB	ND	1	NA	1.00	0.0500	11/09/1101:58	NA	HK08003	HK08001	OAK004W	NA	NA
LCS1W	OAK004WL	21.4	1	NA	1.00	0.0500	11/09/1102:19	NA	HK08004	HK08001	OAK004W	NA	NA
LCD1W	OAK004WC	21.0	1	NA	1.00	0.0500	11/09/1102:40	NA	HK08005	HK08001	OAK004W	NA	NA
MW-70-PMW01B-091	K035-02	ND	1	NA	1.00	0.0500	11/09/1103:41	NA	HK08007	HK08001	OAK004W	11/03/1113:17	11/03/11
MW-70-PMW01B-091DUP	K035-02D	ND	1	NA	1.00	0.0500	11/09/1104:22	NA	HK08008	HK08001	OAK004W	11/03/1113:17	11/03/11
MW-70-PMW01B-091MS	K035-02M	8.40	1	NA	1.00	0.0500	11/09/1105:03	NA	HK08009	HK08001	OAK004W	11/03/1113:17	11/03/11
MW-70-27-092	K035-03	ND	1	NA	1.00	0.0500	11/09/1105:44	NA	HK08010	HK08001	OAK004W	11/03/1114:58	11/03/11
MW-70-28-094	K035-04	ND	1	NA	1.00	0.0500	11/09/1106:25	NA	HK08011	HK08001	OAK004W	11/03/1116:16	11/03/11
IR-70-FD-093	K035-05	ND	1	NA	1.00	0.0500	11/09/1107:06	NA	HK08012	HK08001	OAK004W	11/03/1100:00	11/03/11
MBLK2W	OAK006WB	ND	1	NA	1.00	0.0500	11/09/1117:14	NA	HK09003	HK09001	OAK006W	NA	NA
LCS2W	OAK006WL	21.0	1	NA	1.00	0.0500	11/09/1117:35	NA	HK09004	HK09001	OAK006W	NA	NA
LCD2W	OAK006WC	21.5	1	NA	1.00	0.0500	11/09/1117:56	NA	HK09005	HK09001	OAK006W	NA	NA
MW-70-PMW01A-089	K035-01	327	20	NA	20.0	1.00	11/10/1101:49	NA	HK09017	HK09013	OAK006W	11/03/1111:30	11/03/11

METHOD 300.0(M)
BUTYRATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K035

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK004WB	ND	1	NA	1.00	0.0500	11/09/1101:58	NA	HK08003	HK08001	OAK004W	NA	NA
LCS1W	OAK004WL	19.5	1	NA	1.00	0.0500	11/09/1102:19	NA	HK08004	HK08001	OAK004W	NA	NA
LCD1W	OAK004WC	19.2	1	NA	1.00	0.0500	11/09/1102:40	NA	HK08005	HK08001	OAK004W	NA	NA
MW-70-PMW01A-089	K035-01	5.23	1	NA	1.00	0.0500	11/09/1103:00	NA	HK08006	HK08001	OAK004W	11/03/1111:30	11/03/11
MW-70-PMW01B-091	K035-02	ND	1	NA	1.00	0.0500	11/09/1103:41	NA	HK08007	HK08001	OAK004W	11/03/1113:17	11/03/11
MW-70-PMW01B-091DUP	K035-02D	ND	1	NA	1.00	0.0500	11/09/1104:22	NA	HK08008	HK08001	OAK004W	11/03/1113:17	11/03/11
MW-70-PMW01B-091MS	K035-02M	8.13	1	NA	1.00	0.0500	11/09/1105:03	NA	HK08009	HK08001	OAK004W	11/03/1113:17	11/03/11
MW-70-27-092	K035-03	ND	1	NA	1.00	0.0500	11/09/1105:44	NA	HK08010	HK08001	OAK004W	11/03/1114:58	11/03/11
MW-70-28-094	K035-04	ND	1	NA	1.00	0.0500	11/09/1106:25	NA	HK08011	HK08001	OAK004W	11/03/1116:16	11/03/11
IR-70-FD-093	K035-05	ND	1	NA	1.00	0.0500	11/09/1107:06	NA	HK08012	HK08001	OAK004W	11/03/1100:00	11/03/11

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METHOD 300.0(M)
LACTATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K035

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK004WB	ND	1	NA	1.00	0.0500	11/09/1101:58	NA	HK08003	HK08001	OAK004W	NA	NA
LCS1W	OAK004WL	18.9	1	NA	1.00	0.0500	11/09/1102:19	NA	HK08004	HK08001	OAK004W	NA	NA
LCD1W	OAK004WC	18.7	1	NA	1.00	0.0500	11/09/1102:40	NA	HK08005	HK08001	OAK004W	NA	NA
MW-70-PMW01A-089	K035-01	ND	1	NA	1.00	0.0500	11/09/1103:00	NA	HK08006	HK08001	OAK004W	11/03/1111:30	11/03/11
MW-70-PMW01B-091	K035-02	ND	1	NA	1.00	0.0500	11/09/1103:41	NA	HK08007	HK08001	OAK004W	11/03/1113:17	11/03/11
MW-70-PMW01B-091DUP	K035-02D	ND	1	NA	1.00	0.0500	11/09/1104:22	NA	HK08008	HK08001	OAK004W	11/03/1113:17	11/03/11
MW-70-PMW01B-091MS	K035-02M	7.52	1	NA	1.00	0.0500	11/09/1105:03	NA	HK08009	HK08001	OAK004W	11/03/1113:17	11/03/11
MW-70-27-092	K035-03	ND	1	NA	1.00	0.0500	11/09/1105:44	NA	HK08010	HK08001	OAK004W	11/03/1114:58	11/03/11
MW-70-28-094	K035-04	ND	1	NA	1.00	0.0500	11/09/1106:25	NA	HK08011	HK08001	OAK004W	11/03/1116:16	11/03/11
IR-70-FD-093	K035-05	ND	1	NA	1.00	0.0500	11/09/1107:06	NA	HK08012	HK08001	OAK004W	11/03/1100:00	11/03/11

METHOD 300.0(M)
PROPIONATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K035

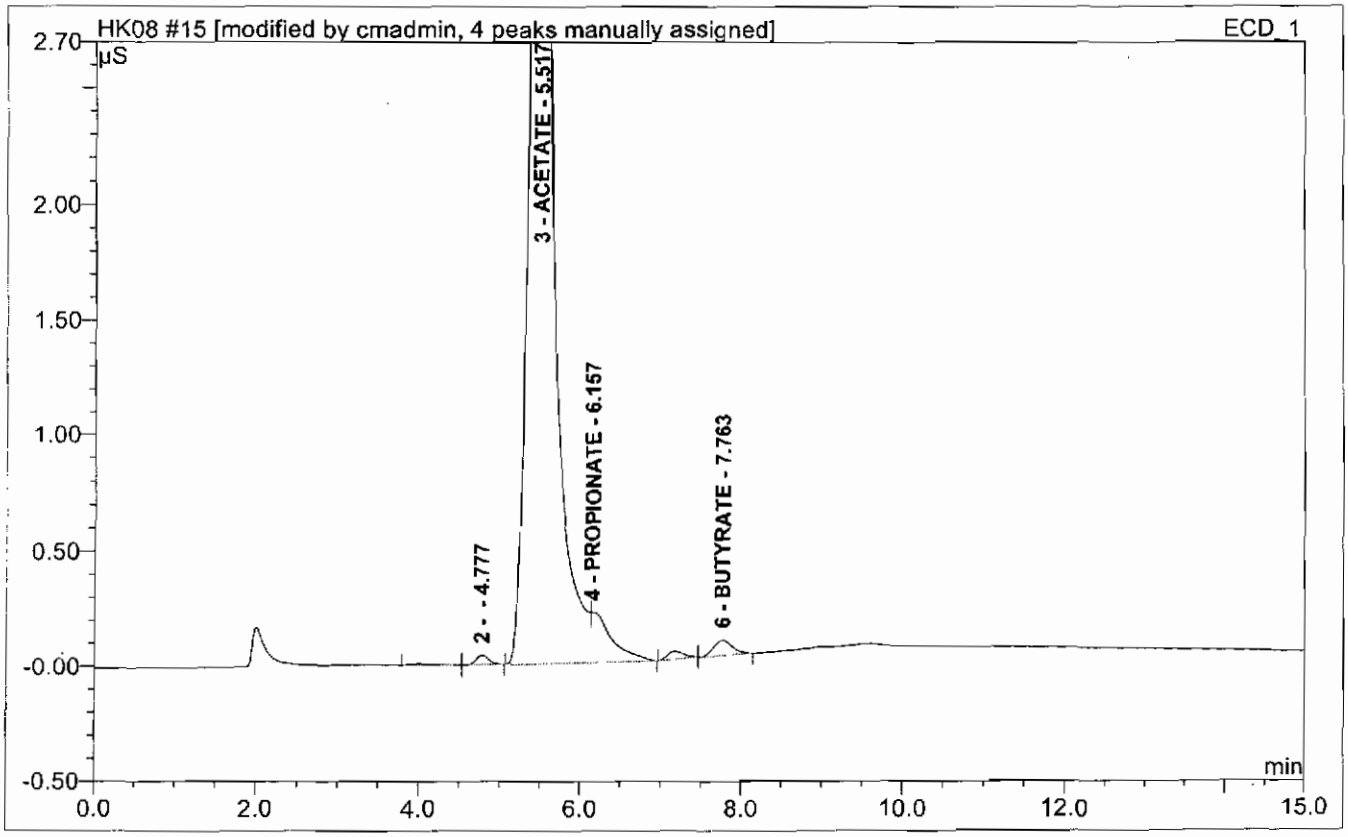
Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK004WB	ND	1	NA	1.00	0.0500	11/09/1101:58	NA	HK08003	HK08001	OAK004W	NA	NA
LCS1W	OAK004WL	21.8	1	NA	1.00	0.0500	11/09/1102:19	NA	HK08004	HK08001	OAK004W	NA	NA
LCD1W	OAK004WC	21.0	1	NA	1.00	0.0500	11/09/1102:40	NA	HK08005	HK08001	OAK004W	NA	NA
MW-70-PMW01B-091	K035-02	ND	1	NA	1.00	0.0500	11/09/1103:41	NA	HK08007	HK08001	OAK004W	11/03/1113:17	11/03/11
MW-70-PMW01B-091OUP	K035-02D	ND	1	NA	1.00	0.0500	11/09/1104:22	NA	HK08008	HK08001	OAK004W	11/03/1113:17	11/03/11
MW-70-PMW01B-091MS	K035-02M	8.67	1	NA	1.00	0.0500	11/09/1105:03	NA	HK08009	HK08001	OAK004W	11/03/1113:17	11/03/11
MW-70-27-092	K035-03	ND	1	NA	1.00	0.0500	11/09/1105:44	NA	HK08010	HK08001	OAK004W	11/03/1114:58	11/03/11
MW-70-28-094	K035-04	ND	1	NA	1.00	0.0500	11/09/1106:25	NA	HK08011	HK08001	OAK004W	11/03/1116:16	11/03/11
IR-70-FD-093	K035-05	ND	1	NA	1.00	0.0500	11/09/1107:06	NA	HK08012	HK08001	OAK004W	11/03/1100:00	11/03/11
MBLK2W	OAK006WB	ND	1	NA	1.00	0.0500	11/09/1117:14	NA	HK09003	HK09001	OAK006W	NA	NA
LCS2W	OAK006WL	20.4	1	NA	1.00	0.0500	11/09/1117:35	NA	HK09004	HK09001	OAK006W	NA	NA
LCD2W	OAK006WC	21.9	1	NA	1.00	0.0500	11/09/1117:56	NA	HK09005	HK09001	OAK006W	NA	NA
MW-70-PMW01A-089	K035-01	18.4	2	NA	2.00	0.100	11/10/1101:08	NA	HK09016	HK09013	OAK006W	11/03/1111:30	11/03/11

HK08 006 K035-01

SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

Sample Name:	**K035-01**	*Injection Volume:*	**25.0**
Vial Number:	**1**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 3:00**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



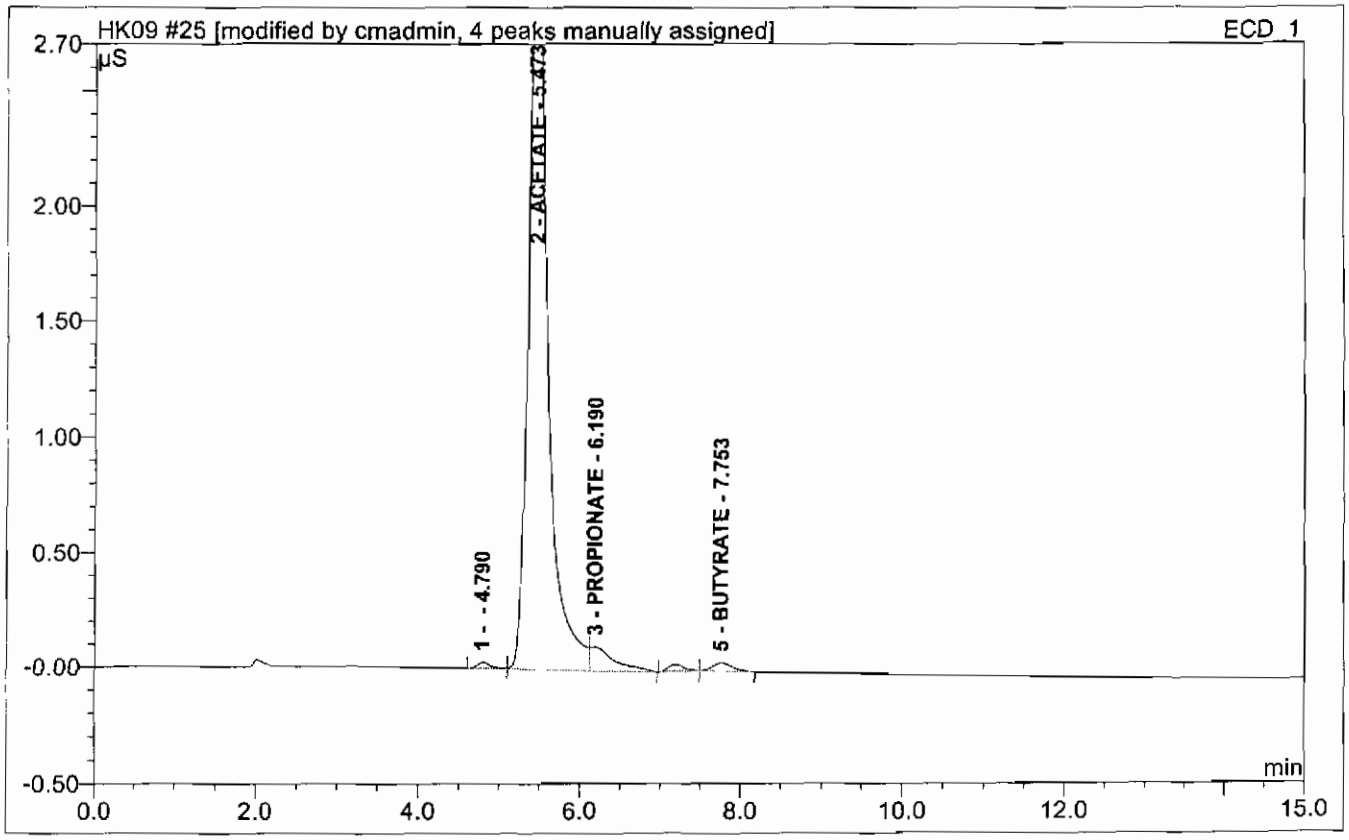
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.99	n.a.	0.006048	0.001884	0.11	n.a.	BM
2	4.78		0.040756	0.007018	0.41	n.a.	MB^
3	5.52	ACETATE	5.244978	1.614183	94.20	27.672	BM ^
4	6.16	PROPIONATE	0.218856	0.064645	3.77	1.616	MB^
5	7.17	n.a.	0.035456	0.008121	0.47	n.a.	BMb*
6	7.76	BUTYRATE	0.065048	0.017762	1.04	0.523 ✓	bMB*^
Total:			5.611	1.714	100.00	29.811	

a.z 11/5/11
* Also report lactate ~~and pyruvate~~.

HK09 016 K035-01

SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=2

Sample Name:	**K035-01**	*Injection Volume:*	**25.0**
Vial Number:	**9**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**2**
Recording Time:	**11/10/2011 1:08**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

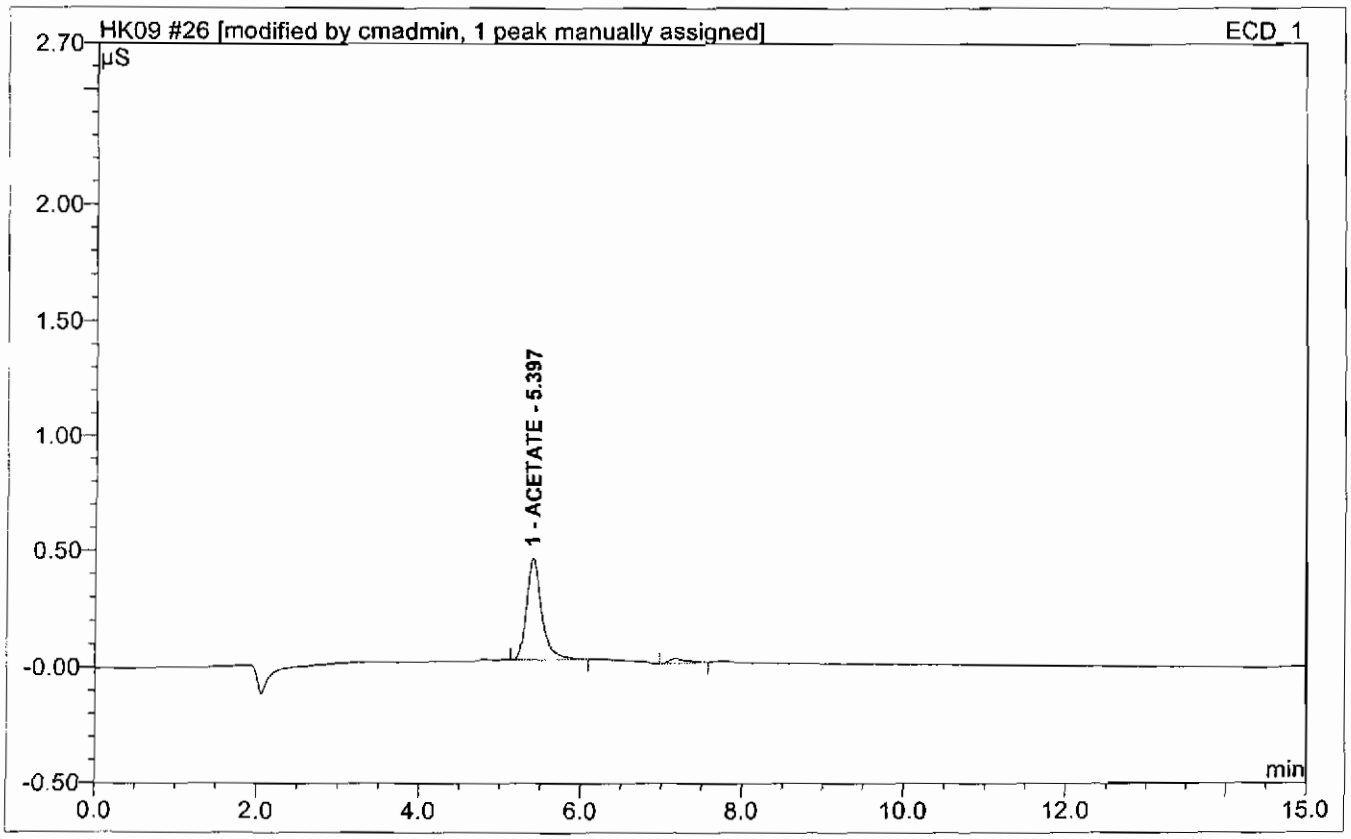


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.79		0.026418	0.005237	0.55	n.a.	BM ^
2	5.47	ACETATE	3.384036	0.889729	93.87	30.524	M ^
3	6.19	PROPIONATE	0.103904	0.036754	3.88	1.840	MB^
4	7.18	n.a.	0.028322	0.006646	0.70	n.a.	BMb*
5	7.75	BUTYRATE	0.035204	0.009509	1.00	0.553	bMB*^
Total:			3.578	0.948	100.00	32.917	

HK09 017 K035-01

SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=20

Sample Name:	**K035-01**	*Injection Volume:*	**25.0**
Vial Number:	**10**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**20**
Recording Time:	**11/10/2011 1:49**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.40	ACETATE	0.434424	0.094106	94.84	32.656	BMB^
2	7.17	n.a.	0.019482	0.005123	5.16	n.a.	BMB*
Total:			0.454	0.099	100.00	32.656	

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK004WB	OAK004WL	OAK004WC		
LAB FILE ID:	HK08003	HK08004	HK08005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1101:58	11/09/1102:19	11/09/1102:40	DATE RECEIVED:	NA
PREP. BATCH:	OAK004W	OAK004W	OAK004W		
CALIB. REF:	HK08001	HK08001	HK08001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	21.4	107	20.0	21.0	105	2	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	OAK006WB	OAK006WL	OAK006WC		
LAB FILE ID:	HK09003	HK09004	HK09005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1117:14	11/09/1117:35	11/09/1117:56	DATE RECEIVED:	NA
PREP. BATCH:	OAK006W	OAK006W	OAK006W		
CALIB. REF:	HK09001	HK09001	HK09001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	21.0	105	20.0	21.5	108	2	90-110	20

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0(M)

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MW-70-PMW01B-091
LAB SAMP ID: K035-02 K035-02M
LAB FILE ID: HK08007 HK08009
DATE EXTRACTED: NA NA DATE COLLECTED: 11/03/11 13:17
DATE ANALYZED: 11/09/1103:41 11/09/1105:03 DATE RECEIVED: 11/03/11
PREP. BATCH: OAK004W OAK004W
CALIB. REF: HK08001 HK08001

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	QC LIMIT (%)
Acetate	ND	10.0	8.40	84	75-125

8097

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0(M)

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MW-70-PMW01B-091			
EMAX SAMP ID:	K035-02	K035-02D		
LAB FILE ID:	HK08007	HK08008		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/03/11 13:17
DATE ANALYZED:	11/09/1103:41	11/09/1104:22	DATE RECEIVED:	11/03/11
PREP. BATCH:	OAK004W	OAK004W		
CALIB. REF:	HK08001	HK08001		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Acetate	ND	ND	0	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK0D4WB	OAK004WL	OAK004WC		
LAB FILE ID:	HK08003	HK08004	HK08005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1101:58	11/09/1102:19	11/09/1102:40	DATE RECEIVED:	NA
PREP. BATCH:	OAK004W	OAK004W	OAK004W		
CALIB. REF:	HK08001	HK08001	HK08001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	20.0	19.5	98	20.0	19.2	96	2	90-110	20

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MW-70-PMW01B-091			
LAB SAMP ID:	K035-02	K035-02M		
LAB FILE ID:	HK08007	HK08009		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/03/11 13:17
DATE ANALYZED:	11/09/1103:41	11/09/1105:03	DATE RECEIVED:	11/03/11
PREP. BATCH:	OAK004W	OAK004W		
CALIB. REF:	HK08001	HK08001		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	QC LIMIT (%)
Butyrate	ND	10.0	8.13	81	75-125

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0(M)

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MW-70-PMW01B-091
EMAX SAMP ID: K035-02 K035-02D
LAB FILE ID: HK08007 HK08008
DATE EXTRACTED: NA NA DATE COLLECTED: 11/03/11 13:17
DATE ANALYZED: 11/09/1103:41 11/09/1104:22 DATE RECEIVED: 11/03/11
PREP. BATCH: OAK004W DAK004W
CALIB. REF: HK08001 HK08001

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Butyrate	ND	ND	0	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK004WB	OAK004WL	OAK004WC		
LAB FILE ID:	HK08003	HK08004	HK08005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1101:58	11/09/1102:19	11/09/1102:40	DATE RECEIVED:	NA
PREP. BATCH:	OAK004W	OAK004W	OAK004W		
CALIB. REF:	HK08001	HK08001	HK08001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	20.0	18.9	94	20.0	18.7	94	1	90-110	20

8192

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0(M)

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MW-70-PMW01B-091
LAB SAMP ID: K035-02 K035-02M
LAB FILE ID: HK08007 HK08009
DATE EXTRACTED: NA NA DATE COLLECTED: 11/03/11 13:17
DATE ANALYZED: 11/09/1103:41 11/09/1105:03 DATE RECEIVED: 11/03/11
PREP. BATCH: OAK004W OAK004W
CALIB. REF: HK08001 HK08001

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	QC LIMIT (%)
Lactate	ND	10.0	7.52	75	75-125

8103

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0(M)

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MW-70-PMW01B-091			
EMAX SAMP ID:	K035-02	K035-02D		
LAB FILE ID:	HK08007	HK08008		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/03/11 13:17
DATE ANALYZED:	11/09/1103:41	11/09/1104:22	DATE RECEIVED:	11/03/11
PREP. BATCH:	OAK004W	OAK004W		
CALIB. REF:	HK08001	HK08001		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Lactate	ND	ND	0	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK004WB	OAK004WL	OAK004WC		
LAB FILE ID:	HK08003	HK08004	HK08005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1101:58	11/09/1102:19	11/09/1102:40	DATE RECEIVED:	NA
PREP. BATCH:	OAK004W	OAK004W	OAK004W		
CALIB. REF:	HK08001	HK08001	HK08001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	20.0	21.8	109	20.0	21.0	105	4	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	OAK006WB	OAK006WL	OAK006WC		
LAB FILE ID:	HK09003	HK09004	HK09005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1117:14	11/09/1117:35	11/09/1117:56	DATE RECEIVED:	NA
PREP. BATCH:	OAK006W	OAK006W	OAK006W		
CALIB. REF:	HK09001	HK09001	HK09001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	20.0	20.4	102	20.0	21.9	110	7	90-110	20

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0(M)

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MW-70-PMW01B-091
LAB SAMP ID: K035-02 K035-02M
LAB FILE ID: HK08007 HK08009
DATE EXTRACTED: NA NA DATE COLLECTED: 11/03/11 13:17
DATE ANALYZED: 11/09/1103:41 11/09/1105:03 DATE RECEIVED: 11/03/11
PREP. BATCH: OAK004W OAK004W
CALIB. REF: HK08001 HK08001

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	QC LIMIT (%)
Propionate	ND	10.0	8.67	87	75-125

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 300.0(M)

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MW-70-PMW01B-091			
EMAX SAMP ID:	K035-02	K035-02D		
LAB FILE ID:	HK08007	HK08008		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/03/11 13:17
DATE ANALYZED:	11/09/1103:41	11/09/1104:22	DATE RECEIVED:	11/03/11
PREP. BATCH:	OAK004W	OAK004W		
CALIB. REF:	HK08001	HK08001		

ACCESSION:

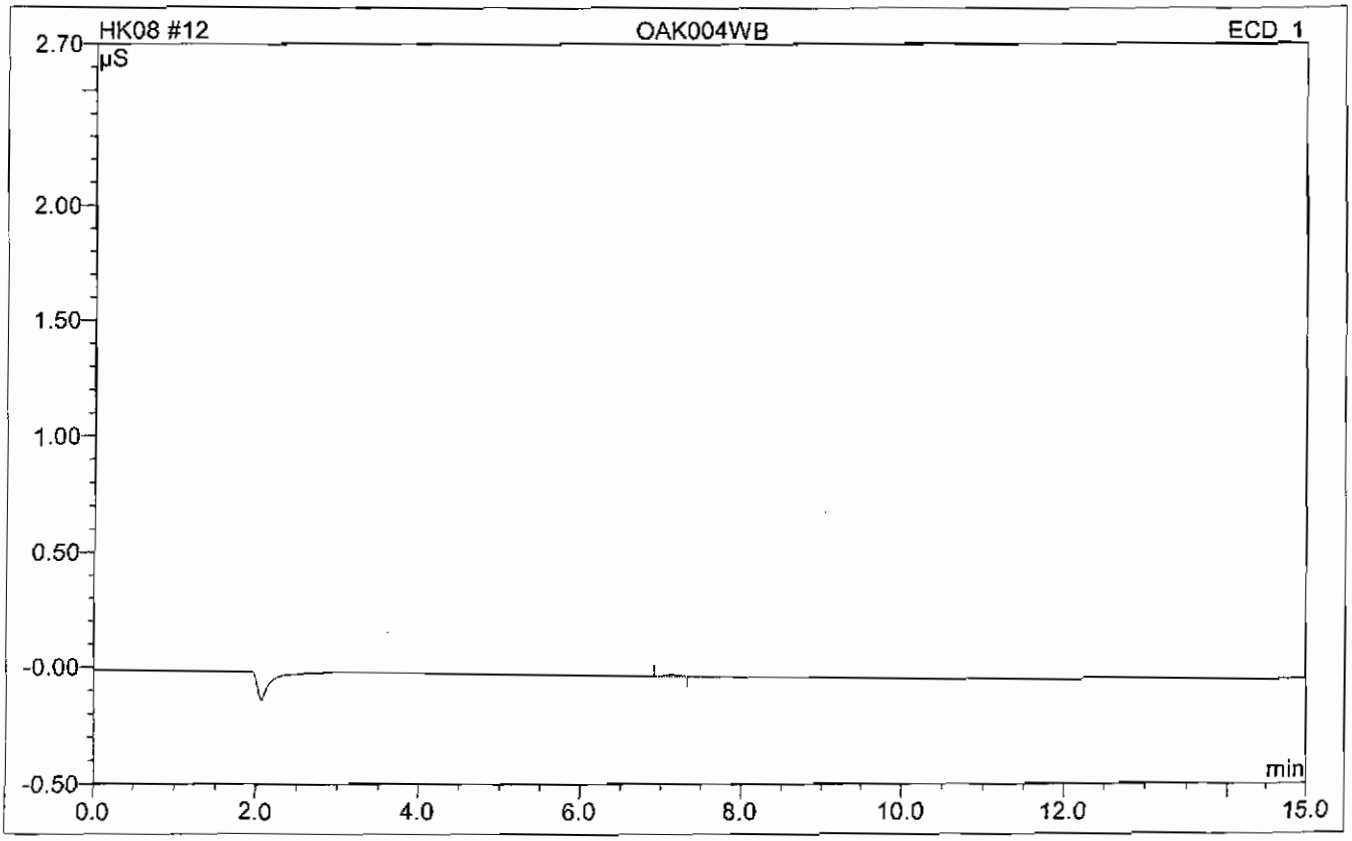
PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Propionate	ND	ND	0	20

8108

QC DATA

HK08 003 OAK004WB

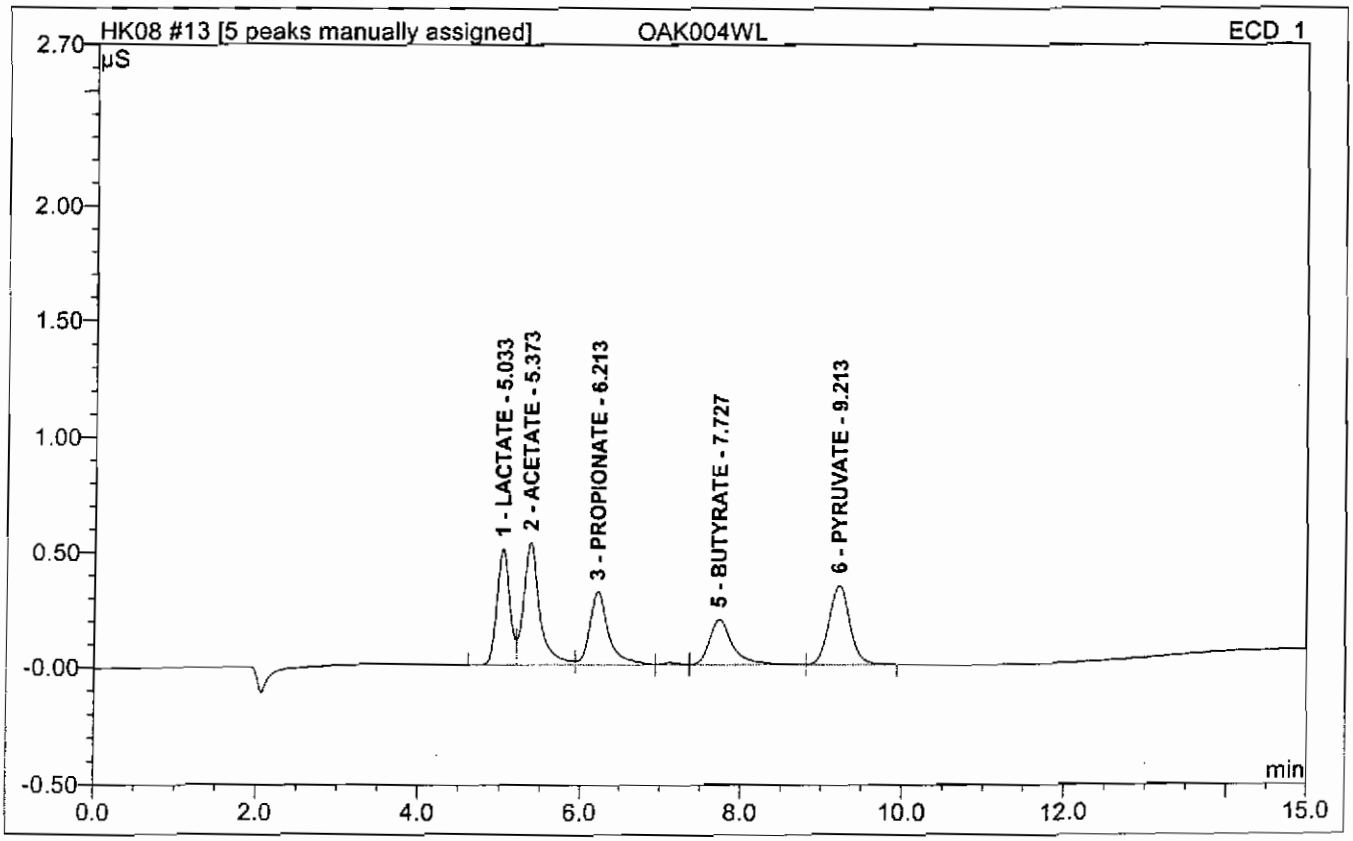
Sample Name:	**OAK004WB**	*Injection Volume:*	**25.0**
Vial Number:	**98**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 1:58**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	7.10	n.a.	0.006368	0.001300	100.00	n.a.	BMB
Total:			0.006	0.001	100.00	0.000	

HK08 004 OAK004WL

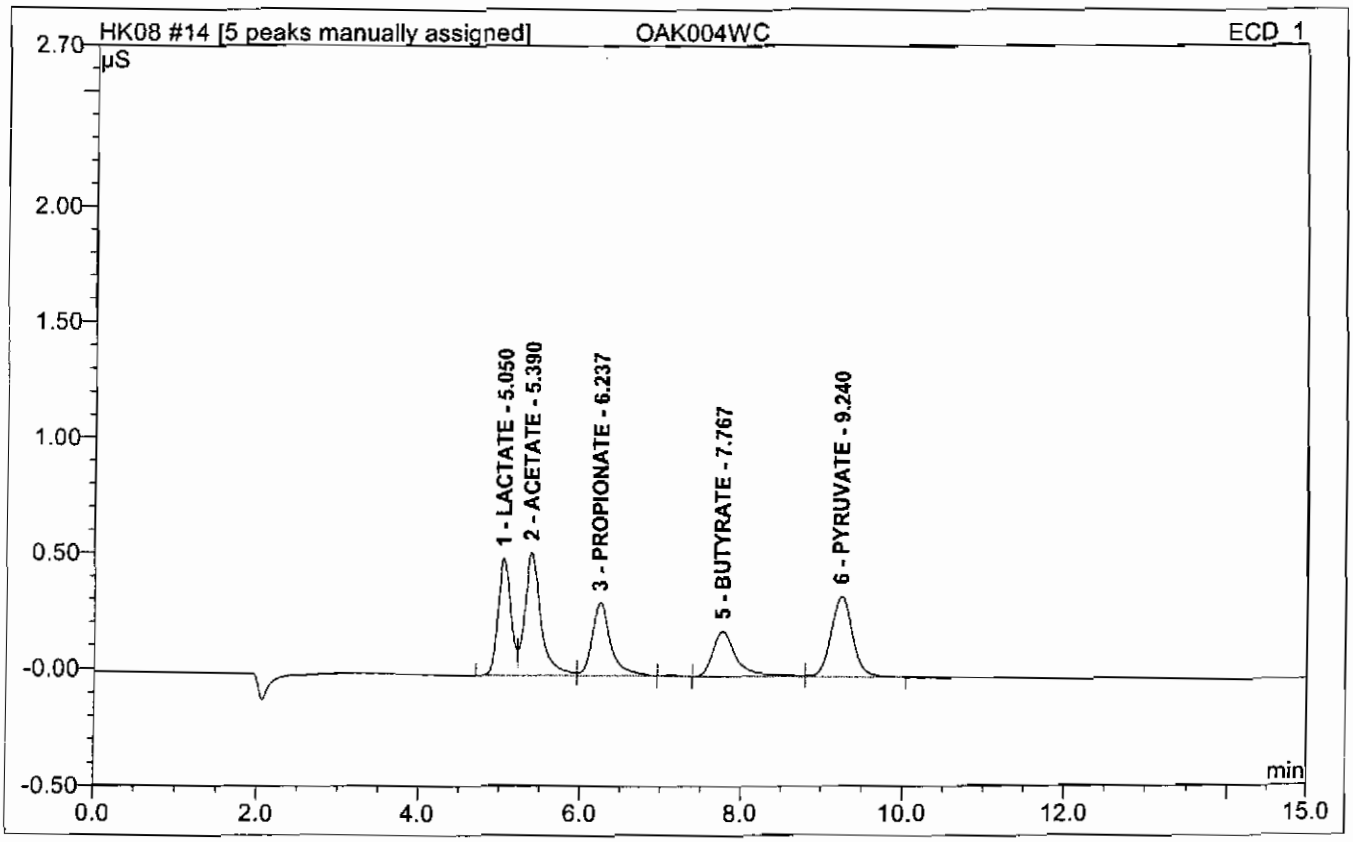
Sample Name:	**OAK004WL**	*Injection Volume:*	**25.0**
Vial Number:	**97**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 2:19**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.03	LACTATE	0.505684	0.090694	19.21	1.888	BM ^
2	5.37	ACETATE	0.533416	0.124013	26.27	2.145	M ^
3	6.21	PROPIONATE	0.318004	0.087095	18.45	2.176	M ^
4	7.12	n.a.	0.008878	0.002137	0.45	n.a.	M
5	7.73	BUTYRATE	0.196840	0.065404	13.85	1.945	M ^
6	9.21	PYRUVATE	0.343928	0.102812	21.78	1.855	MB^
Total:			1.907	0.472	100.00	10.009	

HK08 005 OAK004WC

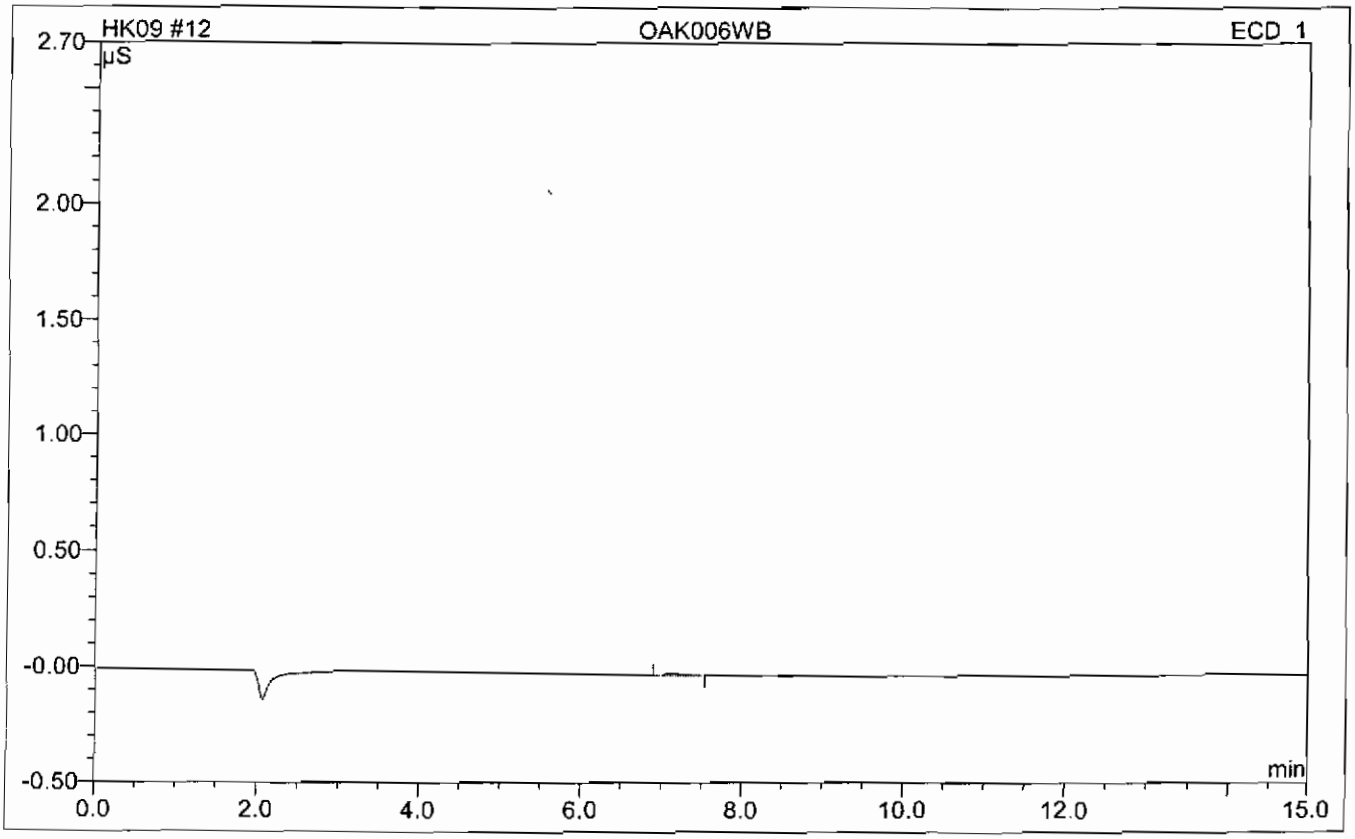
Sample Name:	**OAK004WC**	*Injection Volume:*	**25.0**
Vial Number:	**96**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 2:40**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.05	LACTATE	0.503372	0.089957	19.32	1.873	BM ^
2	5.39	ACETATE	0.529894	0.121178	26.02	2.097	M ^
3	6.24	PROPIONATE	0.314094	0.083940	18.02	2.098	MB^
4	7.11	n.a.	0.005502	0.001121	0.24	n.a.	BMB
5	7.77	BUTYRATE	0.194276	0.064671	13.89	1.923	BM ^
6	9.24	PYRUVATE	0.346680	0.104861	22.52	1.892	MB^
Total:			1.894	0.466	100.00	9.881	

HK09 003 OAK006WB

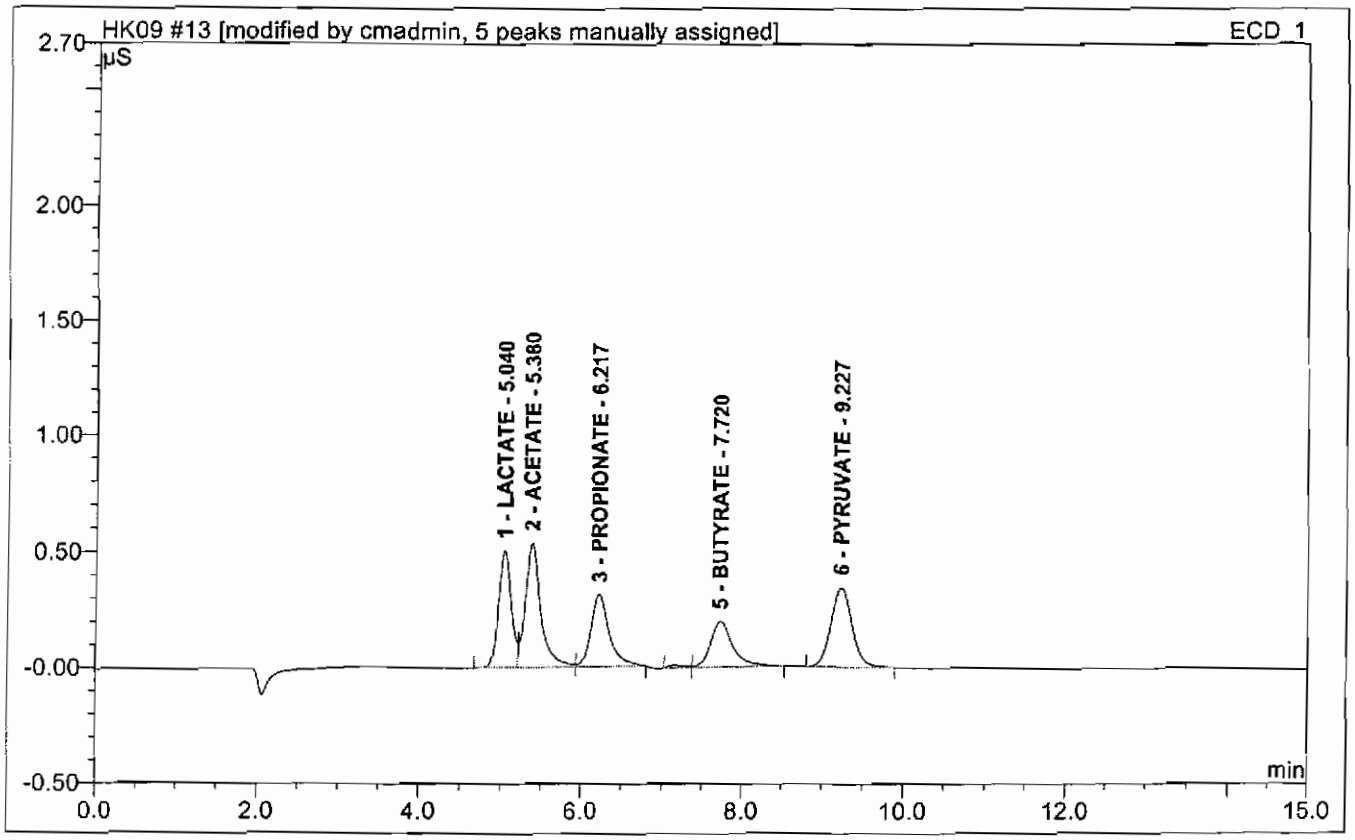
Sample Name:	**OAK006WB**	*Injection Volume:*	**25.0**
Vial Number:	**98**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 17:14**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	7.10	n.a.	0.010024	0.002499	100.00	n.a.	BMB
Total:			0.010	0.002	100.00	0.000	

HK09 004 OAK006WL

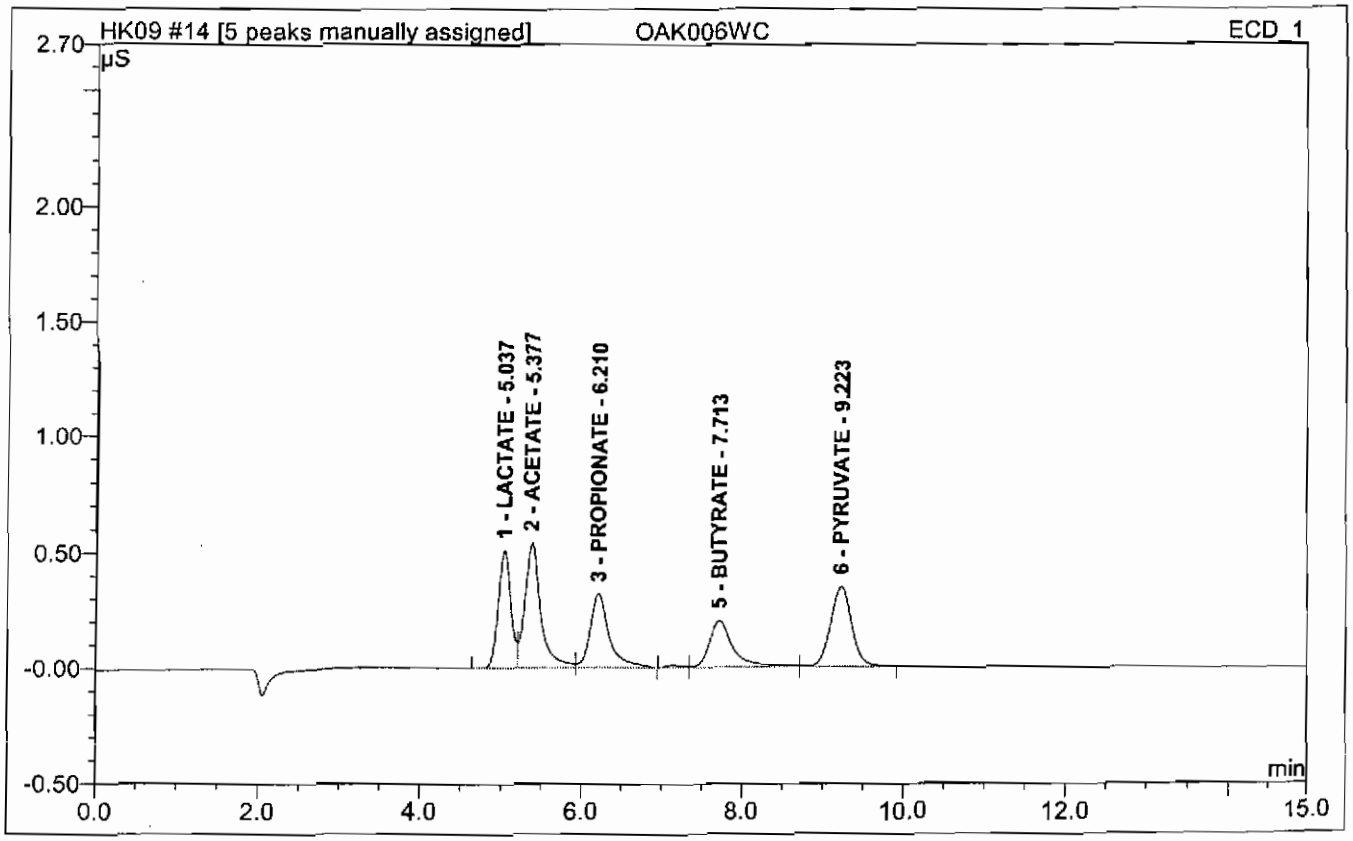
Sample Name:	**OAK006WL**	*Injection Volume:*	**25.0**
Vial Number:	**97**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 17:35**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.04	LACTATE	0.503326	0.089797	19.49	1.869	BM *^
2	5.38	ACETATE	0.533540	0.121179	26.30	2.097	M *^
3	6.22	PROPIONATE	0.312182	0.081714	17.73	2.042	MB*^
4	7.16	n.a.	0.011630	0.002590	0.56	n.a.	BM *
5	7.72	BUTYRATE	0.198150	0.063575	13.80	1.890	MB*^
6	9.23	PYRUVATE	0.343044	0.101932	22.12	1.839	BMB^
Total:			1.902	0.461	100.00	9.738	

HK09 005 OAK006WC

Sample Name:	**OAK006WC**	*Injection Volume:*	**25.0**
Vial Number:	**96**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 17:56**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

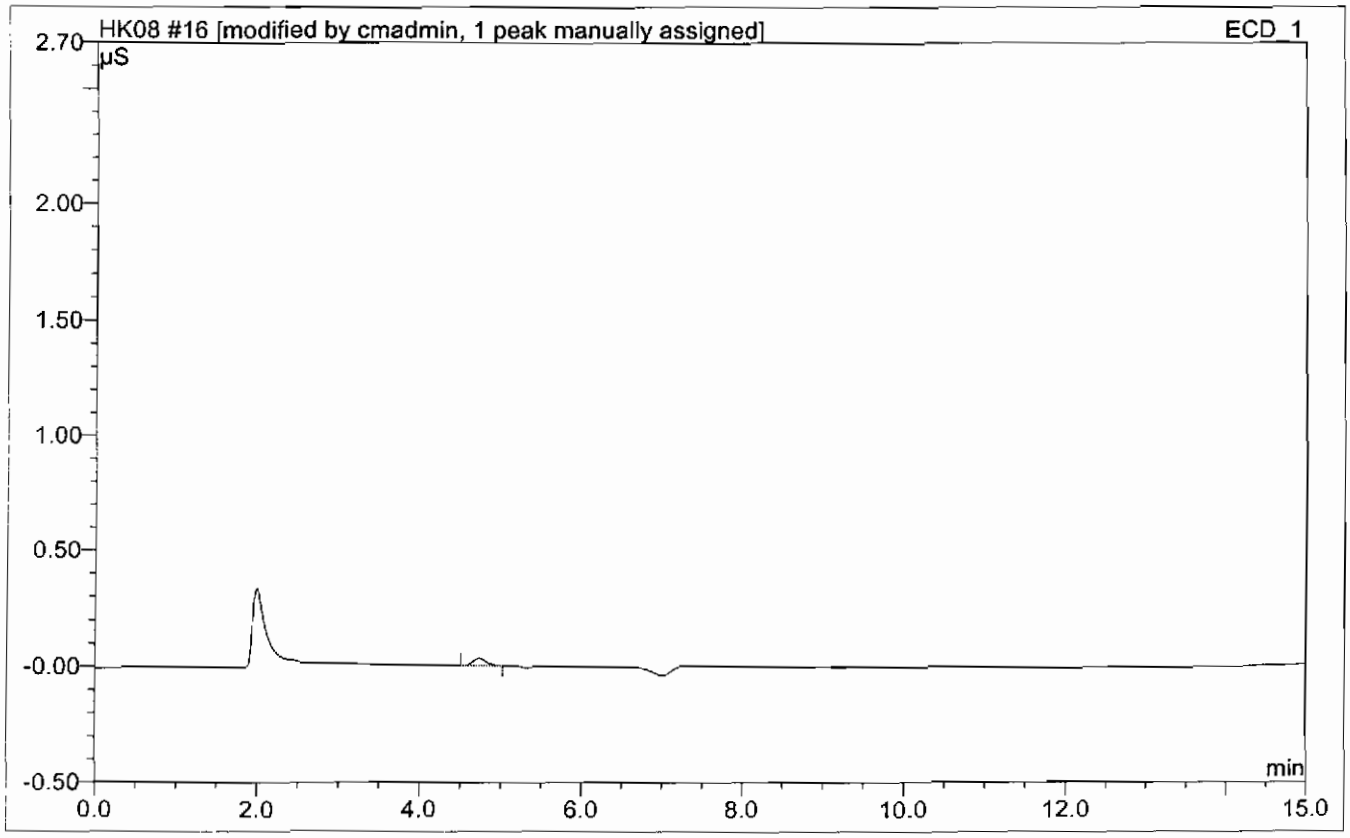


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.04	LACTATE	0.507838	0.091015	19.07	1.894	BM ^
2	5.38	ACETATE	0.537704	0.124167	26.01	2.148	M ^
3	6.21	PROPIONATE	0.319606	0.087626	18.36	2.190	MB^
4	7.14	n.a.	0.010516	0.002464	0.52	n.a.	BM
5	7.71	BUTYRATE	0.199222	0.068013	14.25	2.023	M ^
6	9.22	PYRUVATE	0.346198	0.104010	21.79	1.876	MB^
Total:			1.921	0.477	100.00	10.131	

HK08 007 K035-02

SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

Sample Name:	**K035-02**	*Injection Volume:*	**25.0**
Vial Number:	**2**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 3:41**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

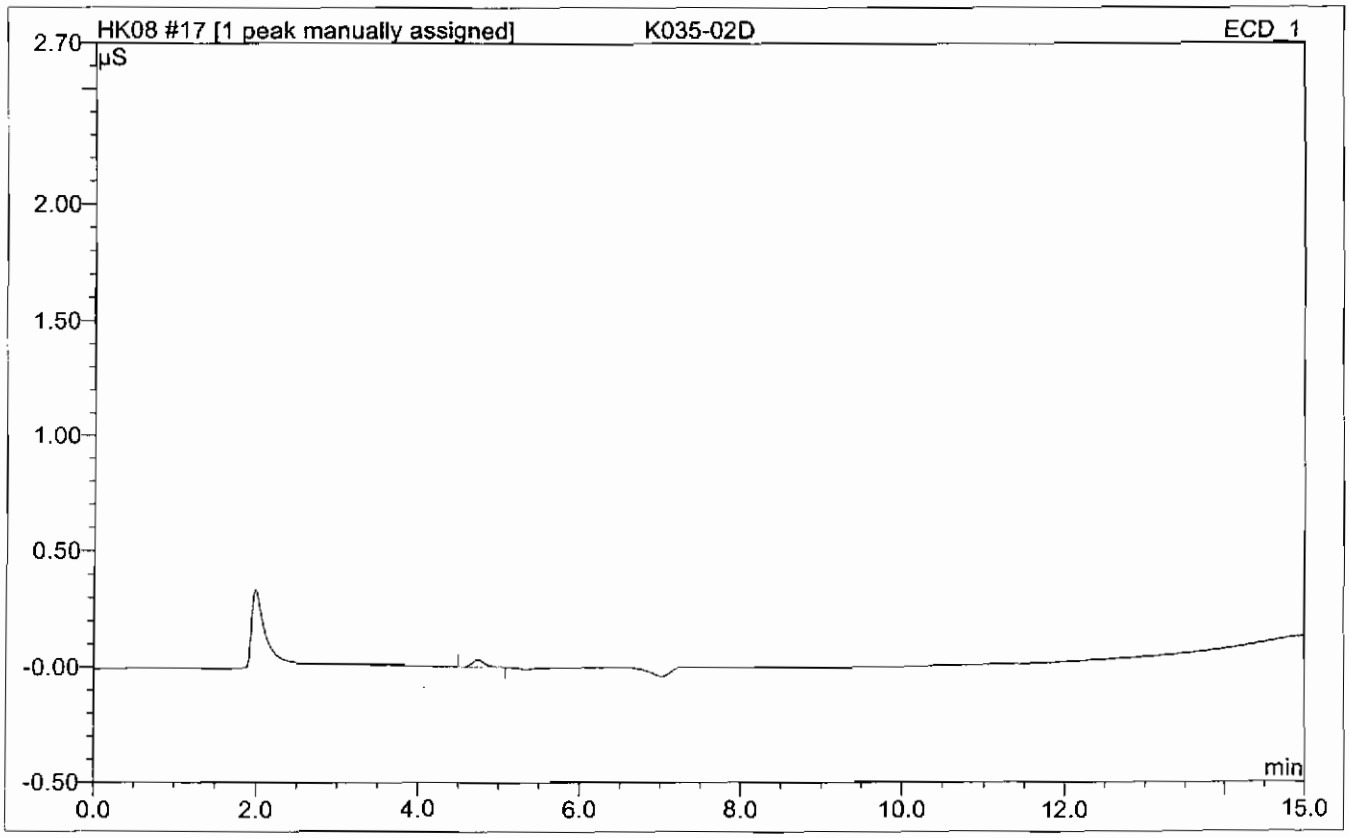


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.73	n.a.	0.030988	0.005711	100.00	n.a.	BMB^
Total:			0.031	0.006	100.00	0.000	

HK08 008 K035-02D

SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

Sample Name:	**K035-02D**	*Injection Volume:*	**25.0**
Vial Number:	**3**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 4:22**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

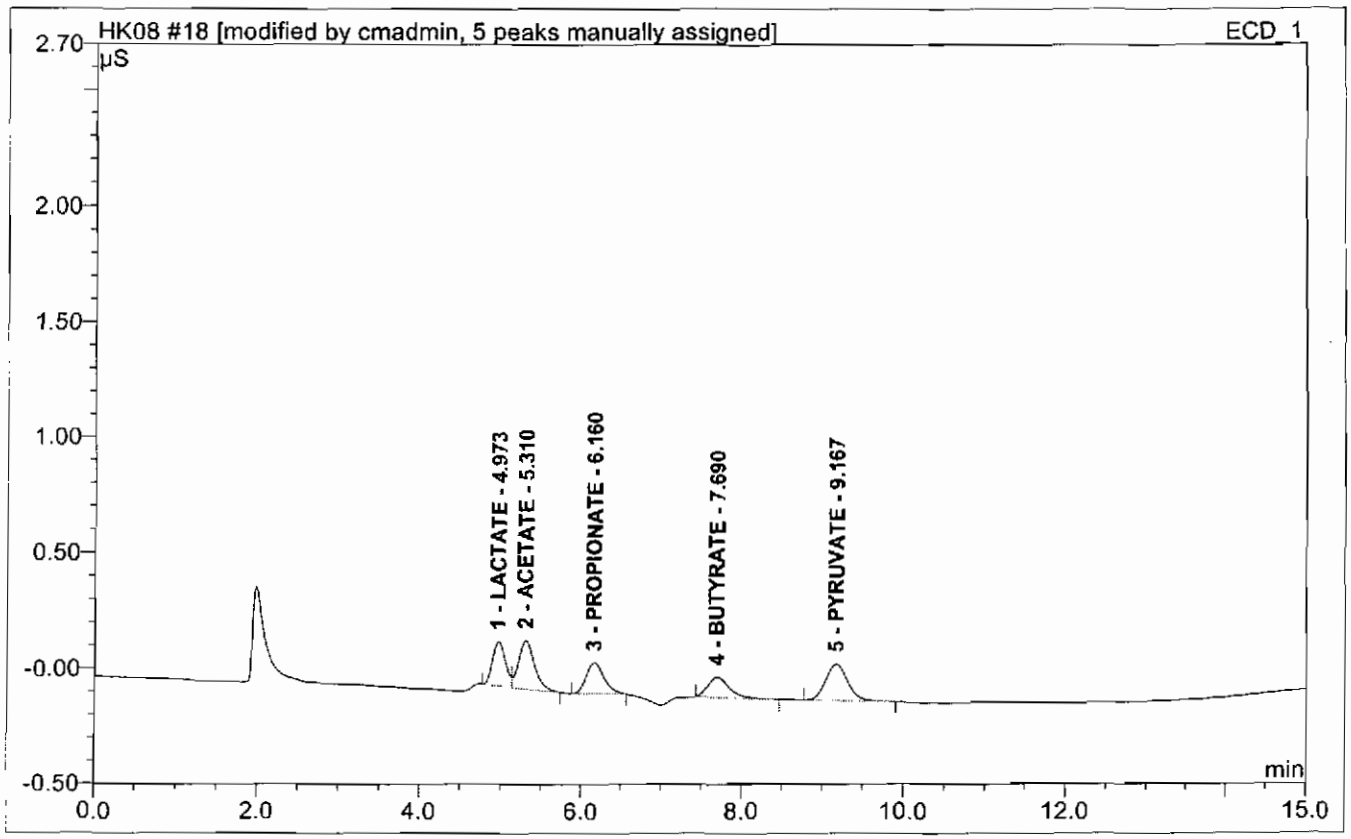


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.74	n.a.	0.031312	0.005885	100.00	n.a.	BMB^
Total:			0.031	0.006	100.00	0.000	

HK08 009 K035-02M

SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

Sample Name:	**K035-02M**	*Injection Volume:*	**25.0**
Vial Number:	**4**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 5:03**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.97	LACTATE	0.190016	0.035506	18.22	0.752	BM *^
2	5.31	ACETATE	0.210554	0.047826	24.55	0.840	MB*^
3	6.16	PROPIONATE	0.133832	0.034614	17.77	0.867	BMB*^
4	7.69	BUTYRATE	0.089146	0.027500	14.12	0.813	BMB*^
5	9.17	PYRUVATE	0.157780	0.049376	25.34	0.904	BMB*^
Total:			0.781	0.195	100.00	4.175	

INITIAL CALIBRATIONS

IC RESULT FORM CalVersion: 300M.I26/HI26(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HI26001	IB	ABLPY	ND	ND	ND	ND	ND	09/26/1118:09	1
HI26002	S-0	ABLPY	ND	ND	ND	ND	ND	09/26/1118:30	1
HI26003	S-1	ABLPY	.092	.111	.112	.109	.115	09/26/1118:51	1
HI26004	S-2	ABLPY	.483	.487	.481	.497	.495	09/26/1119:12	1
HI26005	S-3	ABLPY	1.013	1.031	.995	1.006	.969	09/26/1119:33	1
HI26006	S-4	ABLPY	1.978	1.962	1.963	1.96	1.957	09/26/1119:54	1
HI26007	S-5	ABLPY	3.014	3.017	3.029	3.025	3.039	09/26/1120:15	1
HI26008	ICV	ABLPY	98.5%	101%	96.4%	100%	95.8%	09/26/1120:36	1
HI26009	ICB	ABLPY	ND	ND	ND	ND	ND	09/26/1120:57	1
HI26010	CCV2	ABLPY	97.2%	91.6%	97.8%	94.7%	96.8%	09/26/1121:18	1
HI26011	CCB2	ABLPY	ND	ND	ND	ND	ND	09/26/1121:39	1
HI26012	OAI002WB	ABLPY	ND	ND	ND	ND	ND	09/26/1122:00	1
HI26013	OAI002WL	ABLPY	1.96	1.89	1.9	1.91	1.92	09/26/1122:21	1
HI26014	OAI002WC	ABLPY	1.98	2.04	1.88	2.03	1.93	09/26/1122:42	1
HI26015	I159-02	ABLPY	ND	ND	ND	ND	ND	09/26/1123:03	1
HI26016	I160-02	*BLPY	3.39E	ND	ND	ND	ND	09/27/1100:09	1
HI26017	I201-07	ABLPY	ND	ND	ND	ND	ND	09/27/1101:15	1
HI26018	I202-02	ABLPY	ND	ND	ND	ND	ND	09/27/1102:21	1
HI26019	CCV4	ABLPY	93.4%	90.3%	93.6%	93%	96.3%	09/27/1103:26	1
HI26020	CCB4	ABLPY	ND	ND	ND	ND	ND	09/27/1103:47	1

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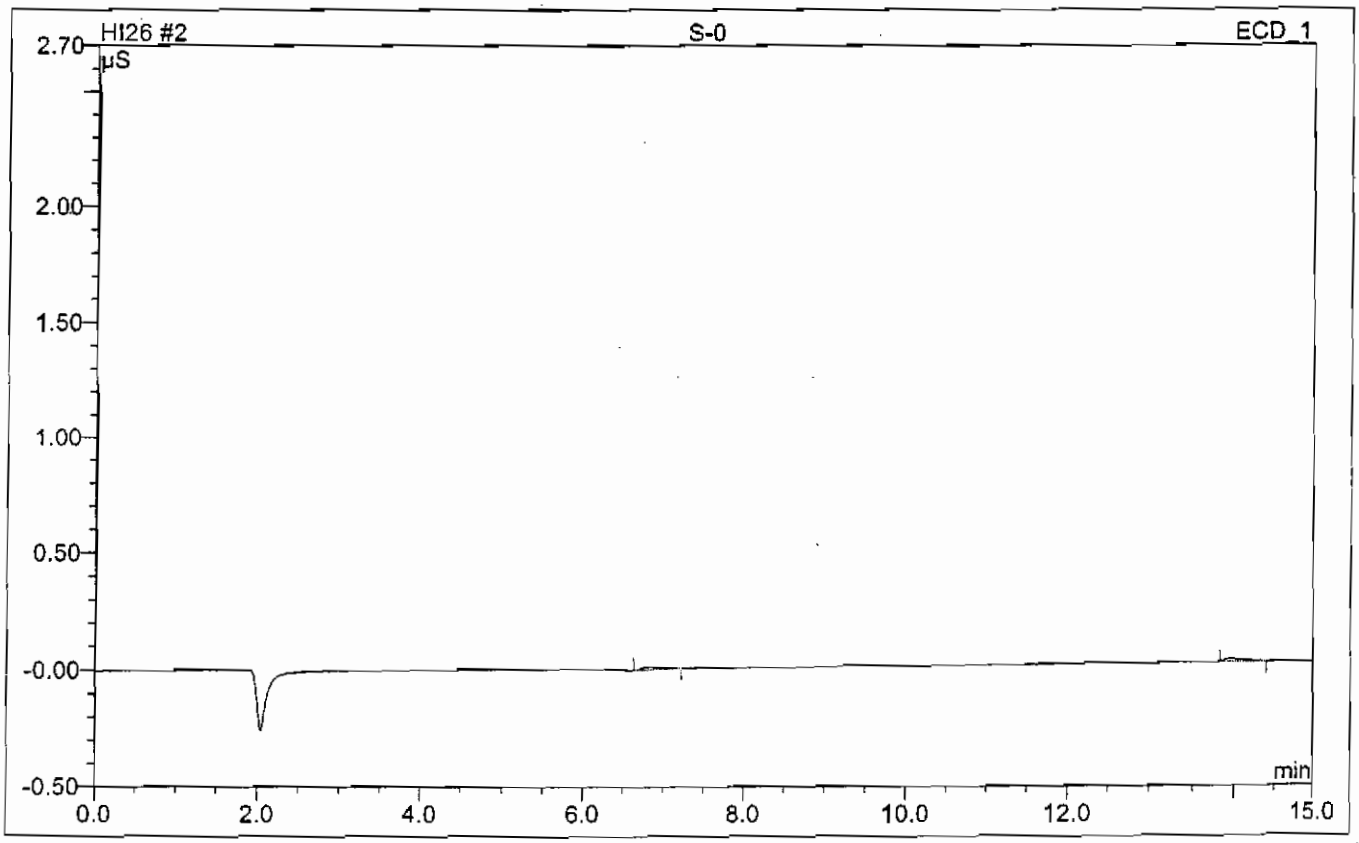
HI26 002 S-0

Sample Name:	**S-0**	*Injection Volume:*	**25.0**
Vial Number:	**2**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**9/26/2011 18:30**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	6.83	n.a.	0.013002	0.003709	49.36	n.a.	BMB
2	13.94	n.a.	0.015270	0.003805	50.64	n.a.	BMB
Total:			0.028	0.008	100.00	0.000	

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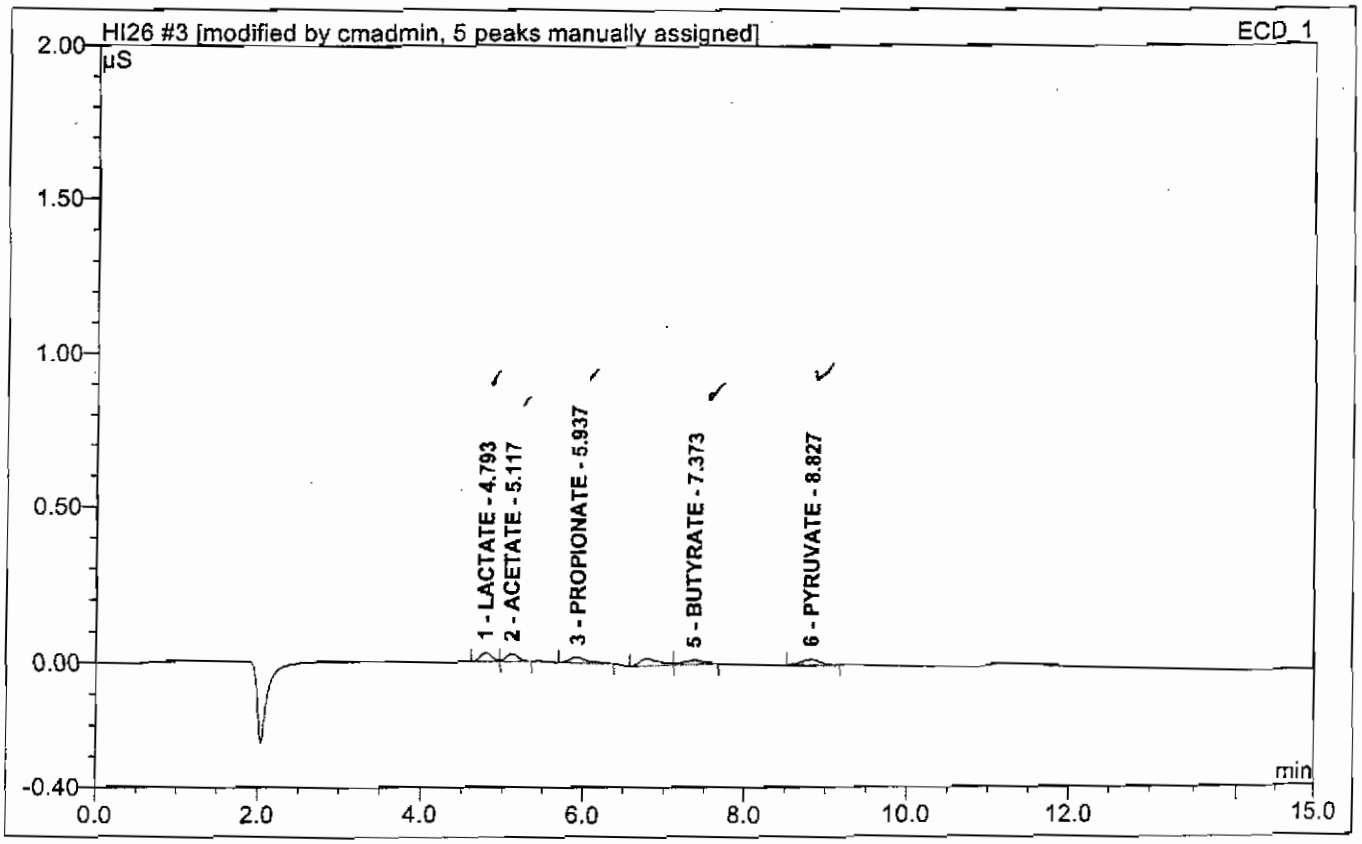
HI26 003 S-1

Sample Name:	**S-1**	*Injection Volume:*	**25.0**
Vial Number:	**3**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**9/26/2011 18:51**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.79	LACTATE	0.027968	0.004418	15.68	0.112	BM ^
2	5.12	ACETATE	0.024890	0.004158	14.76	0.092	MB^
3	5.94	PROPIONATE	0.016624	0.004273	15.17	0.109	BMB*^
4	6.80	n.a.	0.021972	0.006275	22.28	n.a.	BM *
5	7.37	BUTYRATE	0.012660	0.003966	14.08	0.111	MB*^
6	8.83	PYRUVATE	0.018748	0.005078	18.03	0.115	BMB^
Total:			0.123	0.028	100.00	0.539	

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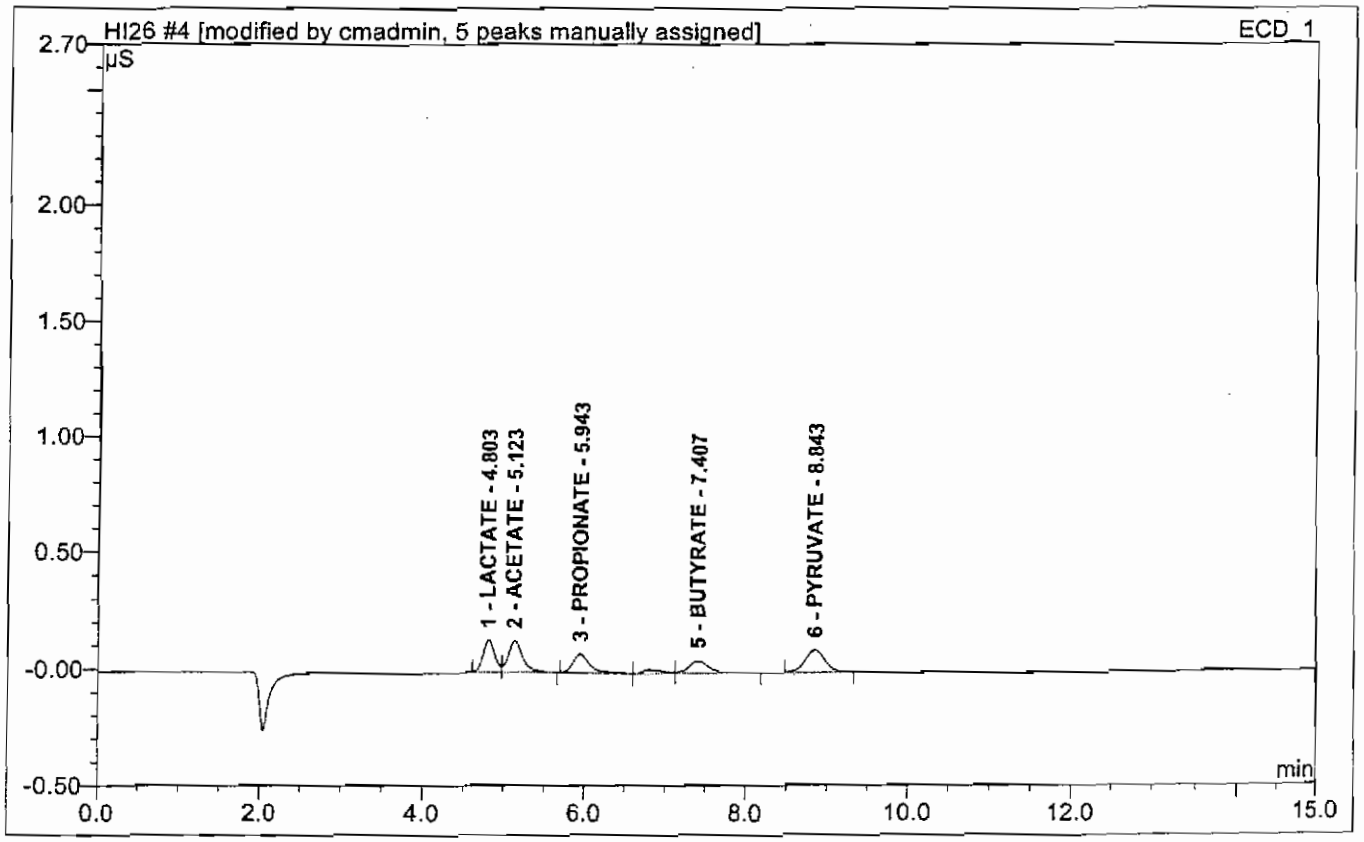
HI26 004 S-2

Sample Name:	**S-2**	*Injection Volume:*	**25.0**
Vial Number:	**4**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**9/26/2011 19:12**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.80	LACTATE	0.135140	0.022353 ✓	19.06	0.481 ✓	BM ^
2	5.12	ACETATE	0.133820	0.026980 ✓	23.00	0.483 ✓	MB^
3	5.94	PROPIONATE	0.079710	0.019806 ✓	16.89	0.497 ✓	BMB^
4	6.81	n.a.	0.018216	0.005141	4.38	n.a.	BM *
5	7.41	BUTYRATE	0.052398	0.016555 ✓	14.12	0.487 ✓	MB*^
6	8.84	PYRUVATE	0.093646	0.026450 ✓	22.55	0.495 ✓	BMB^
Total:			0.513	0.117	100.00	2.443	

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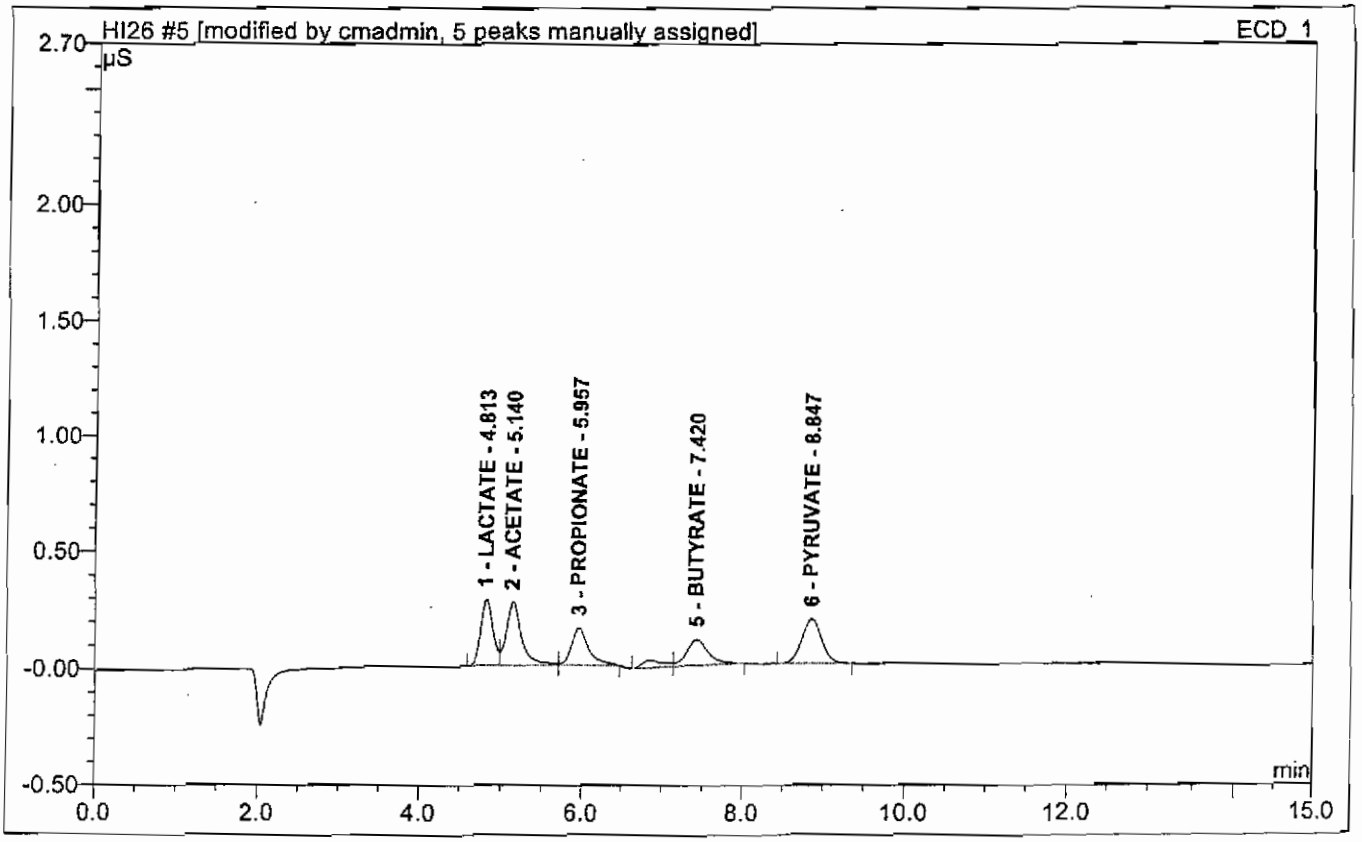
HI26 005 S-3

Sample Name:	**S-3**	*Injection Volume:*	**25.0**
Vial Number:	**5**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**9/26/2011 19:33**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.81	LACTATE	0.278280	0.047315 ✓	19.50	0.995 ✓	BM *^
2	5.14	ACETATE	0.268600	0.057908 ✓	23.86	1.013 ✓	M *^
3	5.96	PROPIONATE	0.159284	0.040209 ✓	16.57	1.006 ✓	MB*^
4	6.84	n.a.	0.030514	0.009386	3.87	n.a.	BM *
5	7.42	BUTYRATE	0.110646	0.034778 ✓	14.33	1.031✓	MB*^
6	8.85	PYRUVATE	0.188340	0.053073 ✓	21.87	0.969 ✓	BMB^
Total:			1.036	0.243	100.00	5.014	

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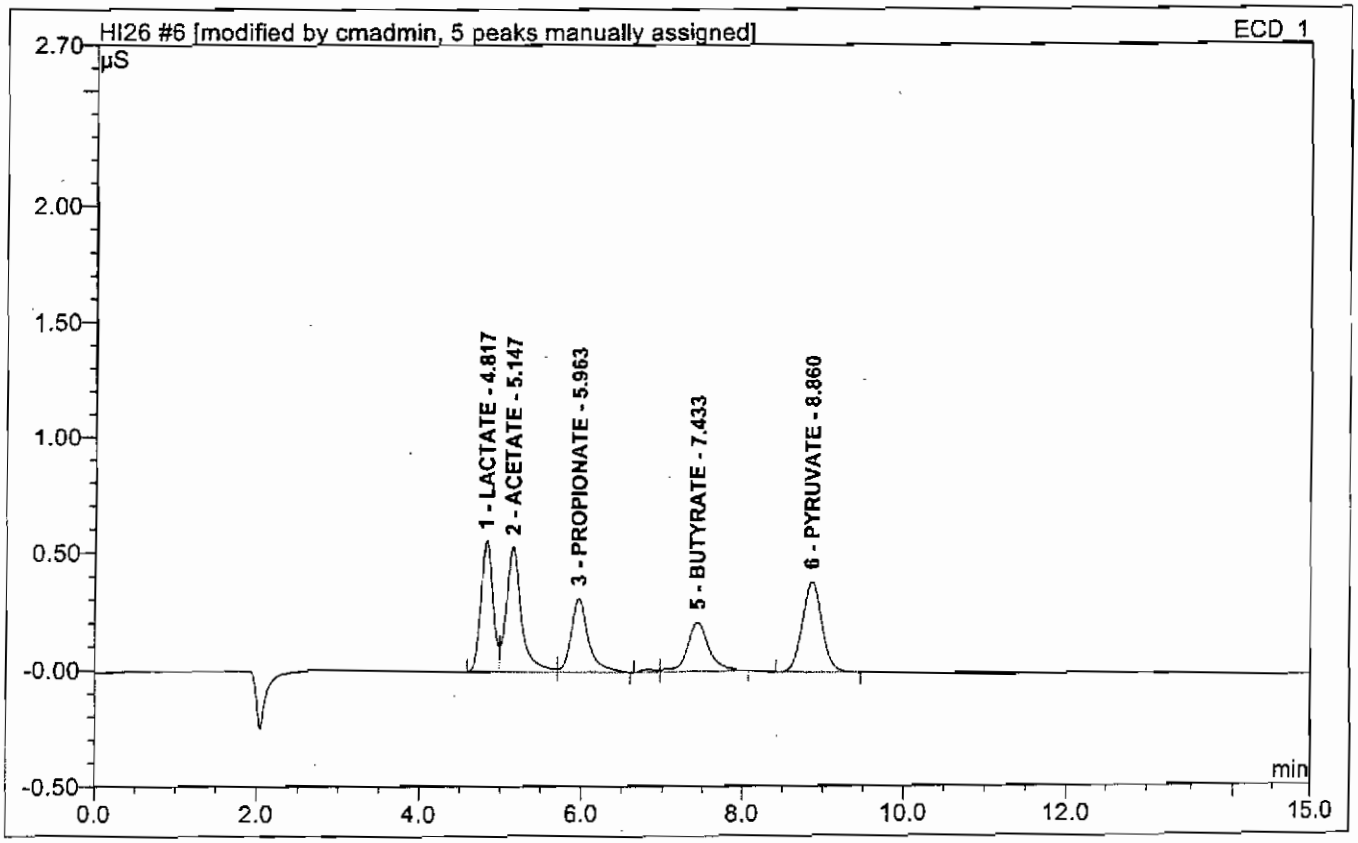
HI26 006 S-4

Sample Name:	**S-4**	*Injection Volume:*	**25.0**
Vial Number:	**6**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**9/26/2011 19:54**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.82	LACTATE	0.555906	0.094349 ✓	20.33	1.963 ✓	BM ^
2	5.15	ACETATE	0.530676	0.114252 ✓	24.61	1.978 ✓	M ^
3	5.96	PROPIONATE	0.314528	0.078443 ✓	16.90	1.960 ✓	MB^
4	6.81	n.a.	0.012992	0.002663	0.57	n.a.	BM *
5	7.43	BUTYRATE	0.208732	0.065977 ✓	14.21	1.962 ✓	MB*^
6	8.86	PYRUVATE	0.384952	0.108518 ✓	23.38	1.957 ✓	BMB^
Total:			2.008	0.464	100.00	9.820	

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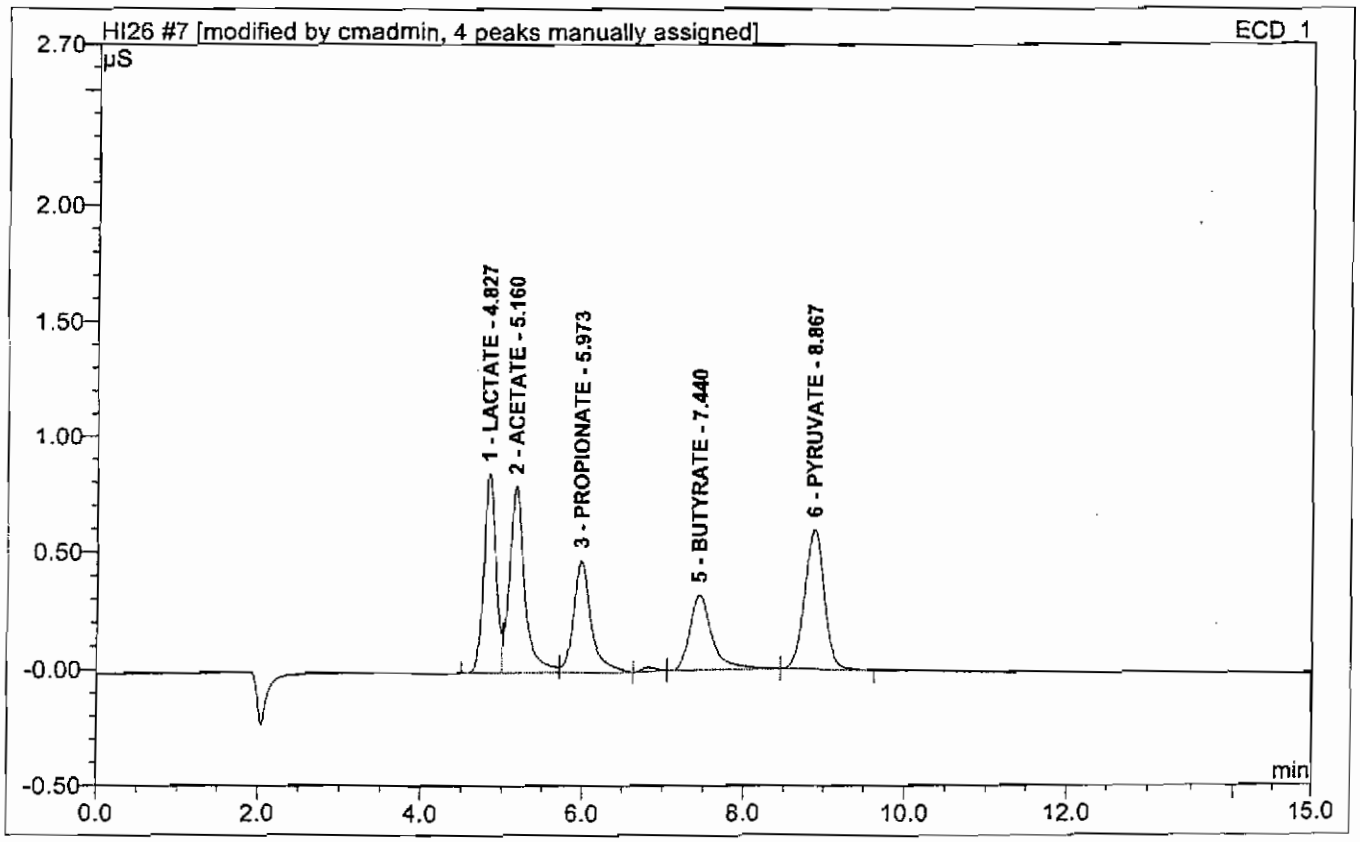
HI26 007 S-5

Sample Name:	**S-5**	*Injection Volume:*	**25.0**
Vial Number:	**7**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**9/26/2011 20:15**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.83	LACTATE	0.853038	0.146128 ✓	20.39	3.029 ✓	BM ^
2	5.16	ACETATE	0.797870	0.174710 ✓	24.38	3.014 ✓	M
3	5.97	PROPIONATE	0.475346	0.121081 ✓	16.90	3.025 ✓	MB^
4	6.82	n.a.	0.019572	0.003937	0.55	n.a.	BMb*
5	7.44	BUTYRATE	0.319450	0.101337 ✓	14.14	3.017 ✓	bMb*^
6	8.87	PYRUVATE	0.596148	0.169320 ✓	23.63	3.039 ✓	bMB*^
Total:			3.061	0.717	100.00	15.124	

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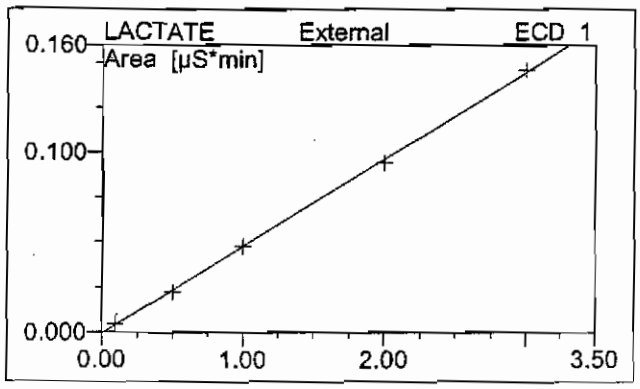
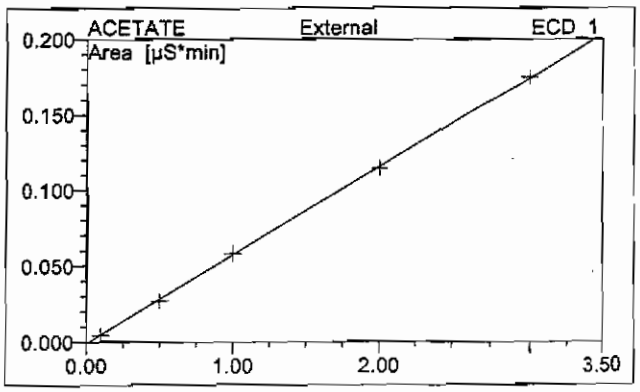
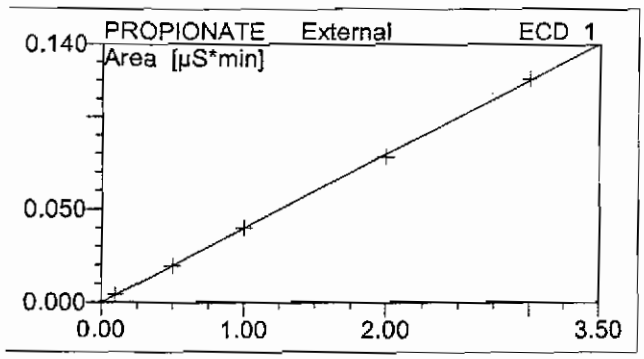
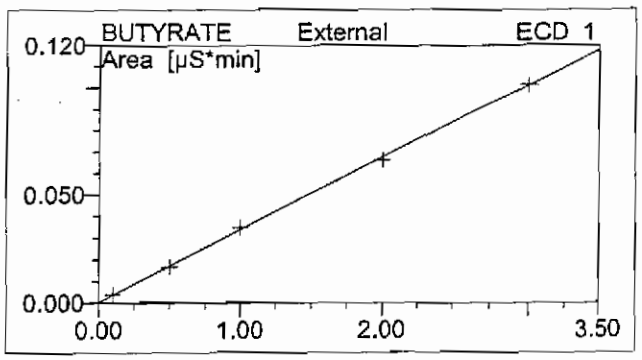
HI26 007 S-5

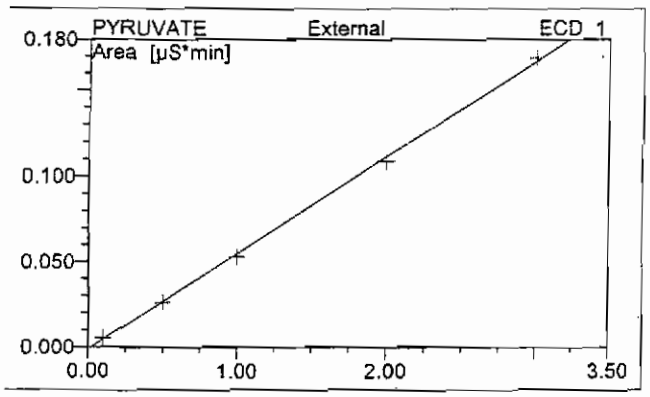
Sample Name:	**S-5**	*Injection Volume:*	**25.0**
Vial Number:	7	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1.0000**
Recording Time:	**9/26/2011 20:15**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**











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No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square	Offset	Slope	Curve
1	4.83	LACTATE	0LOff	5	0.9995	-0.001001	0.0486	0.0000
2	5.16	ACETATE	0LOff	5	0.9998	-0.001213	0.0584	0.0000
3	5.97	PROPIONA	0LOff	5	0.9996	-0.000106	0.0401	0.0000
4	6.82	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	7.44	BUTYRATE	0LOff	5	0.9995	0.000245	0.0335	0.0000
6	8.87	PYRUVATE	0LOff	5	0.9992	-0.001369	0.0562	0.0000
Average:					n.a.	n.a.	n.a.	0.0000

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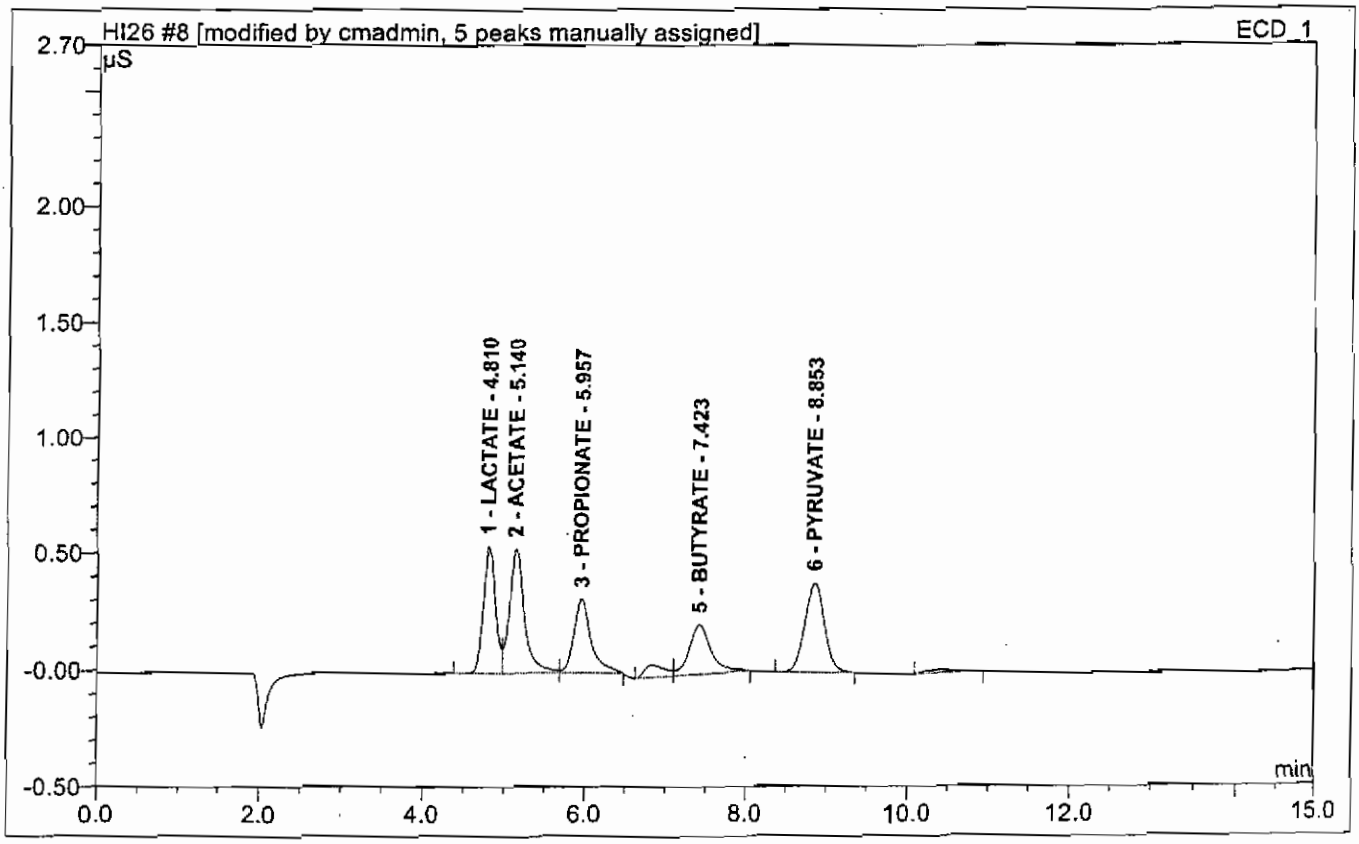
SECOND SOURCE VERIFICATION

HI26 008 ICV

Sample Name:	**ICV**	*Injection Volume:*	**25.0**
Vial Number:	**8**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**9/26/2011 20:36**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.81	LACTATE	0.541522	0.092656 ✓	19.21	1.928 ✓	BM *^
2	5.14	ACETATE	0.530032	0.113792 ✓	23.59	1.970 ✓	M *^
3	5.96	PROPIONATE	0.314588	0.080116 ✓	16.61	2.002 ✓	MB*^
4	6.84	n.a.	0.054228	0.015529	3.22	n.a.	BM *
5	7.42	BUTYRATE	0.211092	0.067722 ✓	14.04	2.014 ✓	MB*^
6	8.85	PYRUVATE	0.379136	0.106265 ✓	22.03	1.917 ✓	BMB*^
7	10.35	n.a.	0.014602	0.006259	1.30	n.a.	BMB
Total:			2.045	0.482	100.00	9.831	

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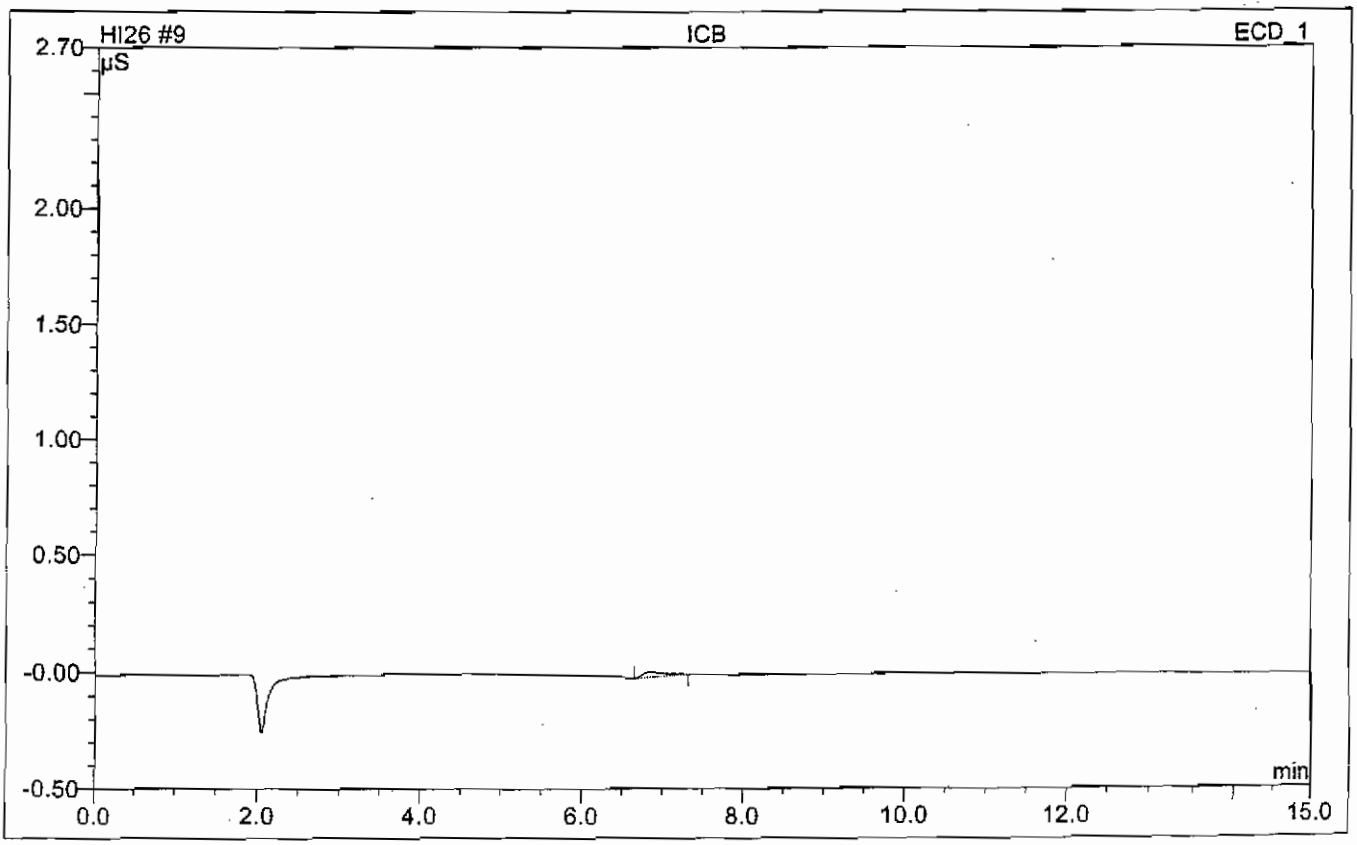
HI26 009 ICB

Sample Name:	**ICB**	*Injection Volume:*	**25.0**
Vial Number:	**9**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**9/26/2011 20:57**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	6.84	n.a.	0.022444	0.006733	100.00	n.a.	BMB
Total:			0.022	0.007	100.00	0.000	

RS
09/30/11

DAILY CALIBRATIONS

IC RESULT FORM CalVersion: 300M.I26/HI26(2011)

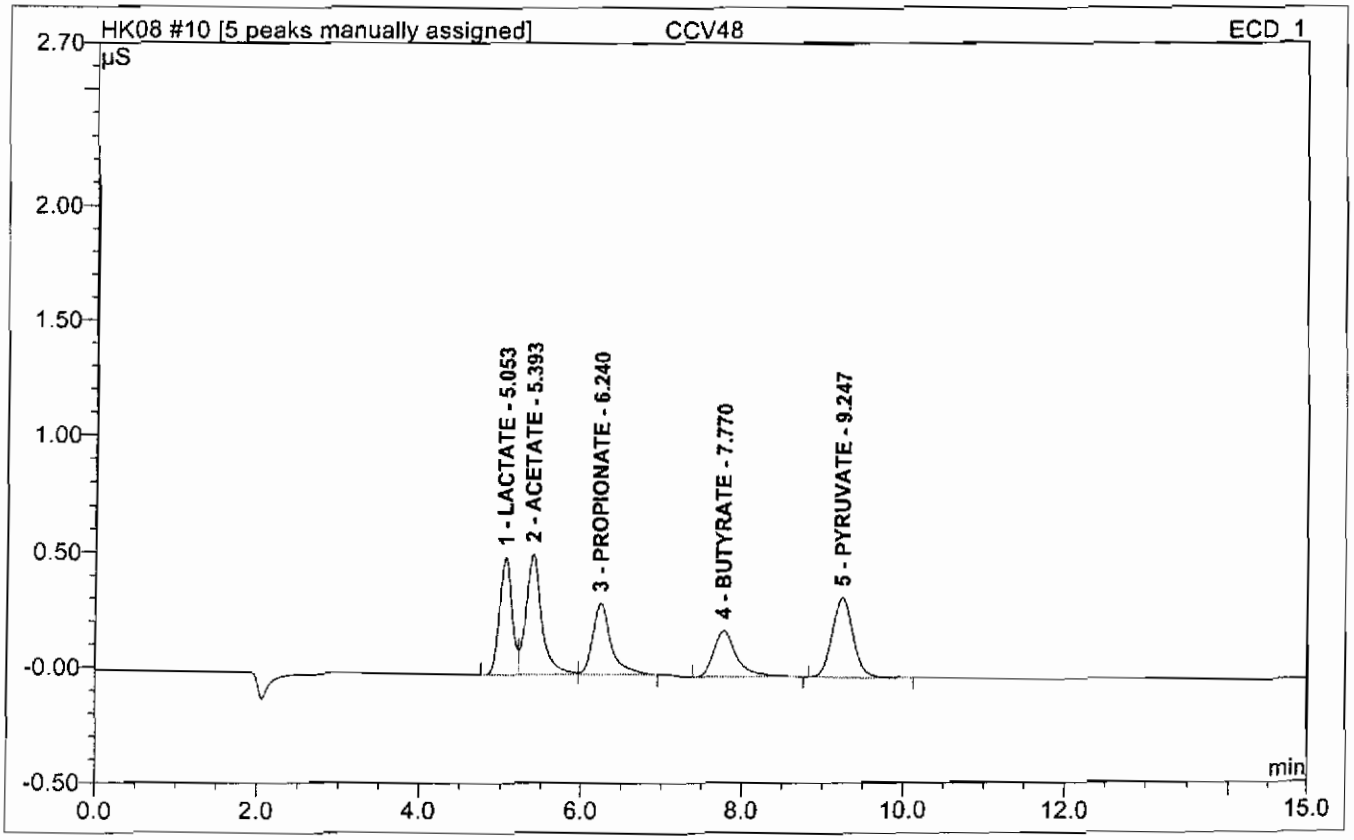
LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK08001	CCV48	ABLPY	102%	96.5%	93.9%	102%	92.6%	11/09/1101:16	1
HK08002	CCB48	ABLPY	ND	ND	ND	ND	ND	11/09/1101:37	1
HK08003	OAK004WB	ABLPY	ND	ND	ND	ND	ND	11/09/1101:58	1
HK08004	OAK004WL	ABLPY	2.14	1.95	1.89	2.18	1.86	11/09/1102:19	1
HK08005	OAK004WC	ABLPY	2.1	1.92	1.87	2.1	1.89	11/09/1102:40	1
HK08006	K035-01	*BL*Y	27.7E	.523	ND	1.62	ND	11/09/1103:00	1
HK08007	K035-02	ABLPY	ND	ND	ND	ND	ND	11/09/1103:41	1
HK08008	K035-02D	ABLPY	ND	ND	ND	ND	ND	11/09/1104:22	1
HK08009	K035-02M	ABLPY	.84	.813	.752	.867	.904	11/09/1105:03	1
HK08010	K035-03	ABLPY	ND	ND	ND	ND	ND	11/09/1105:44	1
HK08011	K035-04	ABLPY	ND	ND	ND	ND	ND	11/09/1106:25	1
HK08012	K035-05	ABLPY	ND	ND	ND	ND	ND	11/09/1107:06	1
HK08013	CCV50	ABLPY	108%	96%	107%	93.3%	108%	11/09/1107:47	1
HK08014	CCB50	ABLPY	ND	ND	ND	ND	ND	11/09/1108:08	1

IC RESULT FORM CalVersion: 300M.I26/H126(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK09001	CCV52	ABLPY	101%	94.5%	93.2%	102%	90.2%	11/09/1116:32	1
HK09002	CCB52	ABLPY	ND	ND	ND	ND	ND	11/09/1116:53	1
HK09003	OAK006WB	ABLPY	ND	ND	ND	ND	ND	11/09/1117:14	1
HK09004	OAK006WL	ABLPY	2.1	1.89	1.87	2.04	1.84	11/09/1117:35	1
HK09005	OAK006WC	ABLPY	2.15	2.02	1.89	2.19	1.88	11/09/1117:56	1
HK09006	K063-01	ABLPY	ND	ND	ND	ND	ND	11/09/1118:17	1
HK09007	K063-02	ABLPY	ND	ND	ND	ND	ND	11/09/1118:58	1
HK09008	K063-02D	ABLPY	ND	ND	ND	ND	ND	11/09/1119:39	1
HK09009	K063-02M	ABLPY	1.02	.806	1.11	.942	1.04	11/09/1120:20	1
HK09010	K063-03	ABLPY	ND	ND	ND	ND	ND	11/09/1121:00	1
HK09011	K063-04	ABLPY	ND	ND	ND	ND	ND	11/09/1121:41	1
HK09012	K063-05	ABLPY	ND	ND	ND	ND	ND	11/09/1122:22	1
HK09013	CCV54	ABLPY	102%	93.2%	93.9%	104%	92%	11/09/1123:03	1
HK09014	CCB54	ABLPY	ND	ND	ND	ND	ND	11/09/1123:24	1
HK09015	K063-06	ABLPY	ND	ND	ND	ND	ND	11/10/1100:27	1
HK09016	K035-01	*BLPY	30.5E	.553	ND	1.84	ND	11/10/1101:08	2
HK09017	K035-01	ABLPY	32.7	ND	ND	ND	ND	11/10/1101:49	20
HK09018	CCV56	ABLPY	104%	97%	95.1%	105%	91.9%	11/10/1102:30	1
HK09019	CCB56	ABLPY	ND	ND	ND	ND	ND	11/10/1102:51	1

HK08 001 CCV48

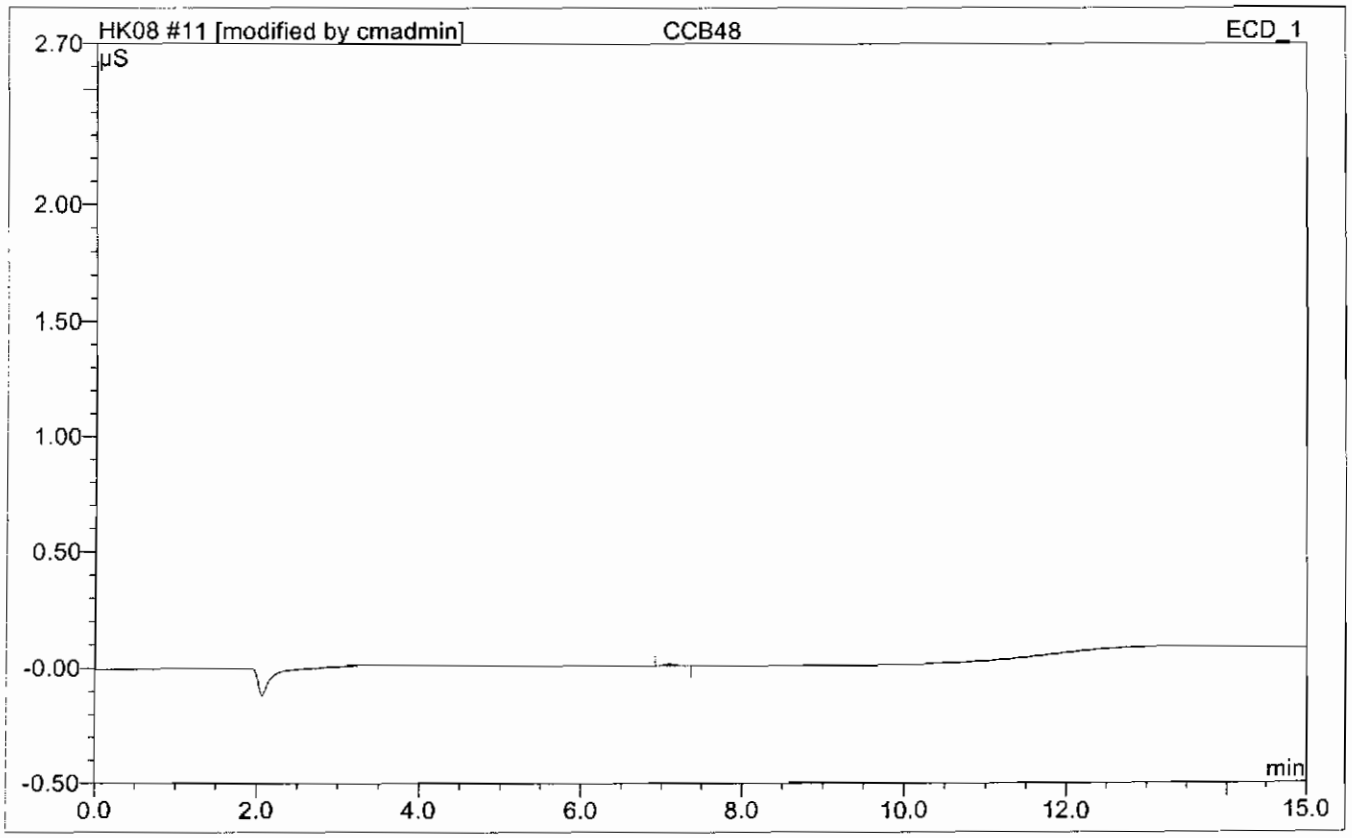
Sample Name:	**CCV48**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 1:16**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.05	LACTATE	0.506758	0.090255	19.73	1.879	BM ^
2	5.39	ACETATE	0.520224	0.117720	25.74	2.037	M ^
3	6.24	PROPIONATE	0.307958	0.081800	17.89	2.044	MB^
4	7.77	BUTYRATE	0.197122	0.064912	14.19	1.930	BMB^
5	9.25	PYRUVATE	0.342872	0.102675	22.45	1.853	BMB^
Total:			1.875	0.457	100.00	9.743	

HK08 002 CCB48

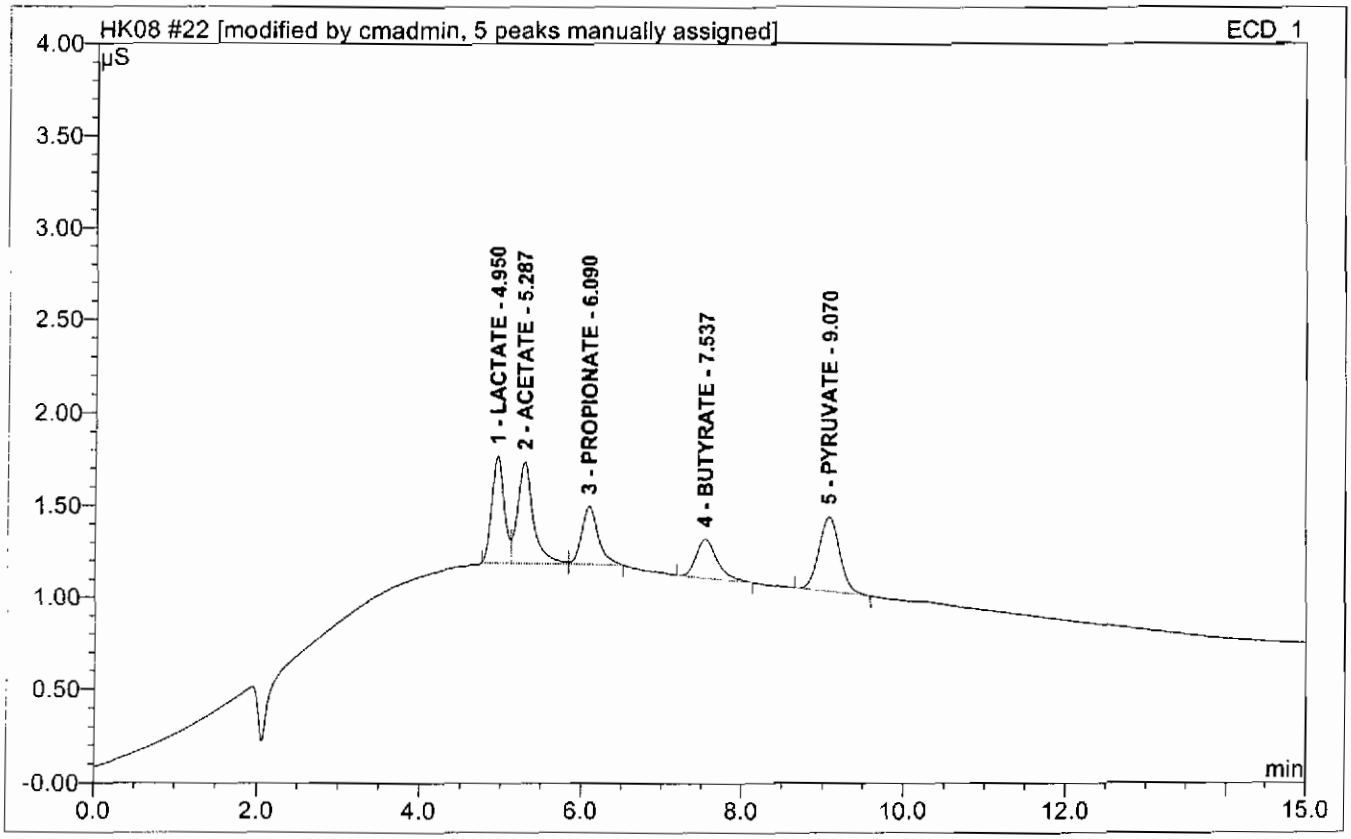
Sample Name:	**CCB48**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 1:37**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	7.09	n.a.	0.006944	0.001433	100.00	n.a.	BMB
Total:			0.007	0.001	100.00	0.000	

HK08 013 CCV50

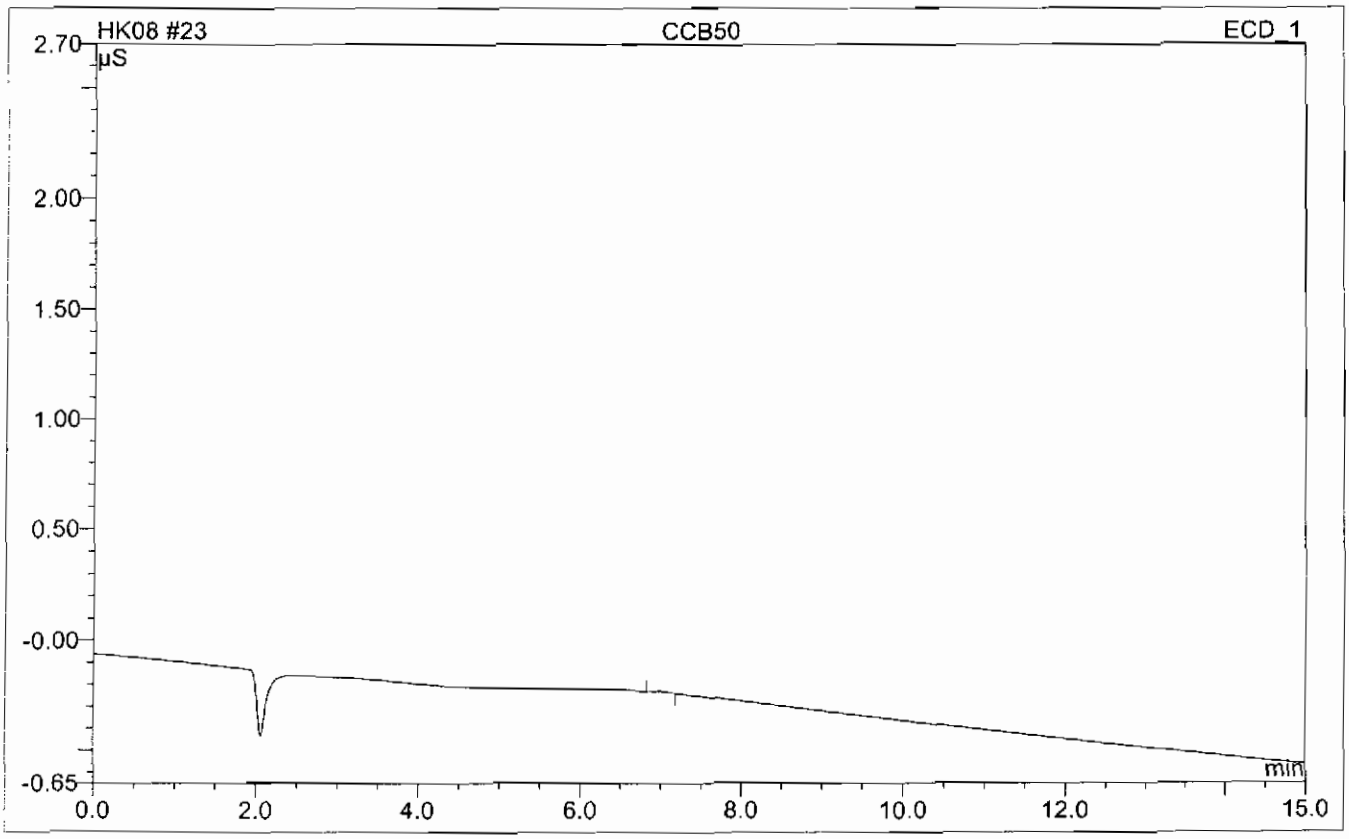
Sample Name:	**CCV50**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 7:47**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.95	LACTATE	0.577076	0.103149	21.12	2.144	BM *^
2	5.29	ACETATE	0.549598	0.125373	25.68	2.168	M *^
3	6.09	PROPIONATE	0.314636	0.074649	15.29	1.866	MB*^
4	7.54	BUTYRATE	0.212386	0.064623	13.23	1.921	BMB^
5	9.07	PYRUVATE	0.405146	0.120505	24.68	2.170	BMB^
Total:			2.059	0.488	100.00	10.270	

HK08 014 CCB50

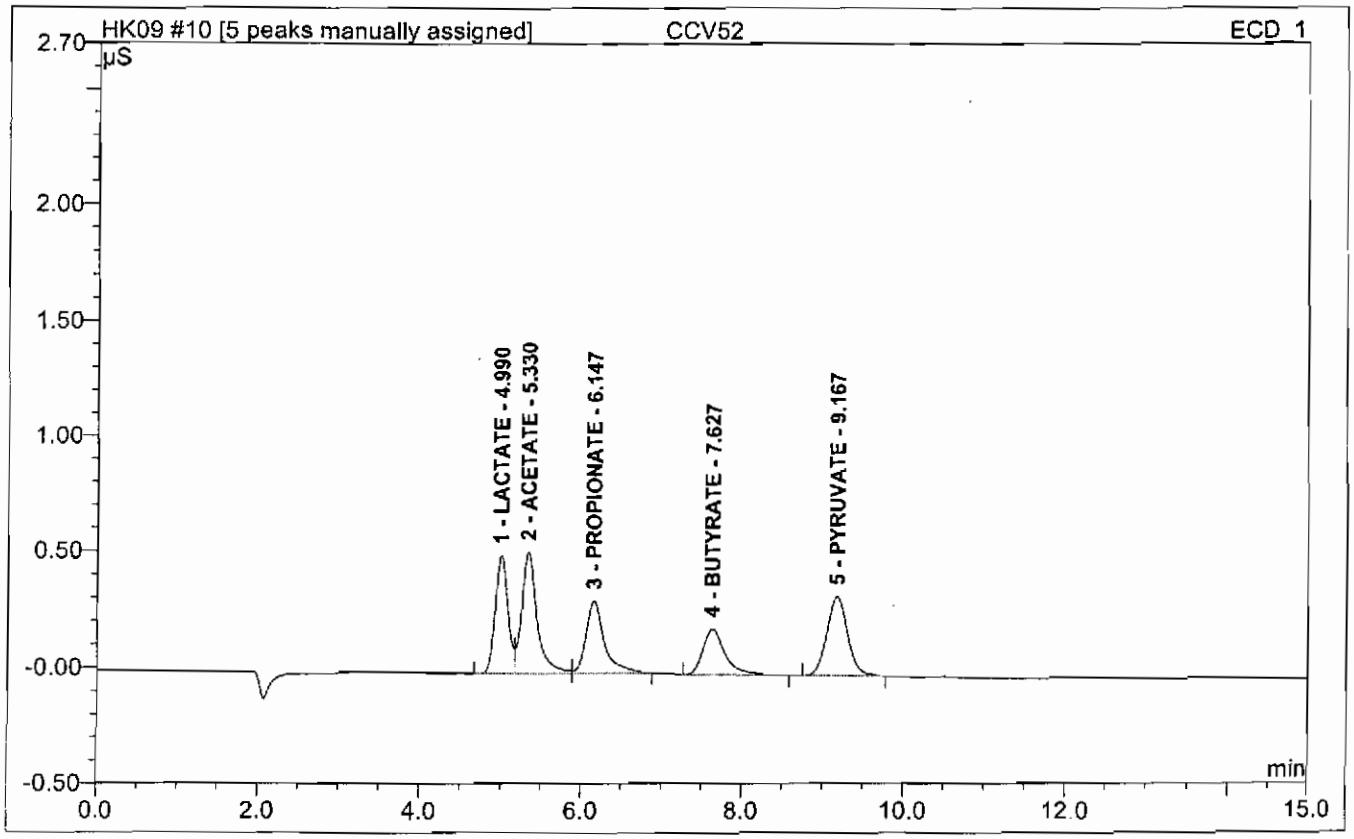
Sample Name:	**CCB50**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 8:08**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	6.98	n.a.	0.007894	0.001420	100.00	n.a.	BMB
Total:			0.008	0.001	100.00	0.000	

HK09 001 CCV52

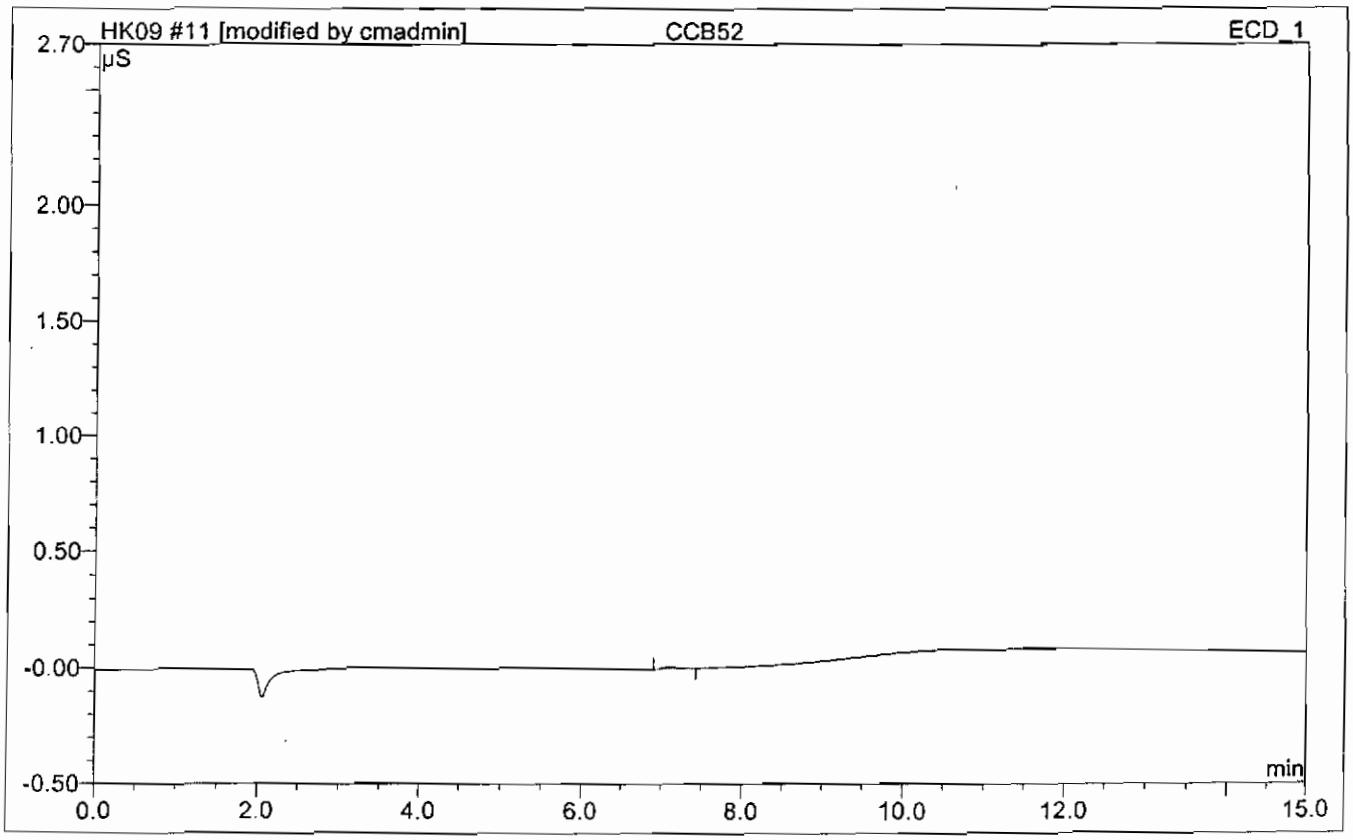
Sample Name:	**CCV52**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 16:32**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.99	LACTATE	0.504268	0.089601	19.80	1.865	BM ^
2	5.33	ACETATE	0.519346	0.117311	25.93	2.030	M ^
3	6.15	PROPIONATE	0.308480	0.082040	18.13	2.050	MB^
4	7.63	BUTYRATE	0.195732	0.063525	14.04	1.889	BMB^
5	9.17	PYRUVATE	0.336902	0.100006	22.10	1.805	BMB^
Total:			1.865	0.452	100.00	9.640	

HK09 002 CCB52

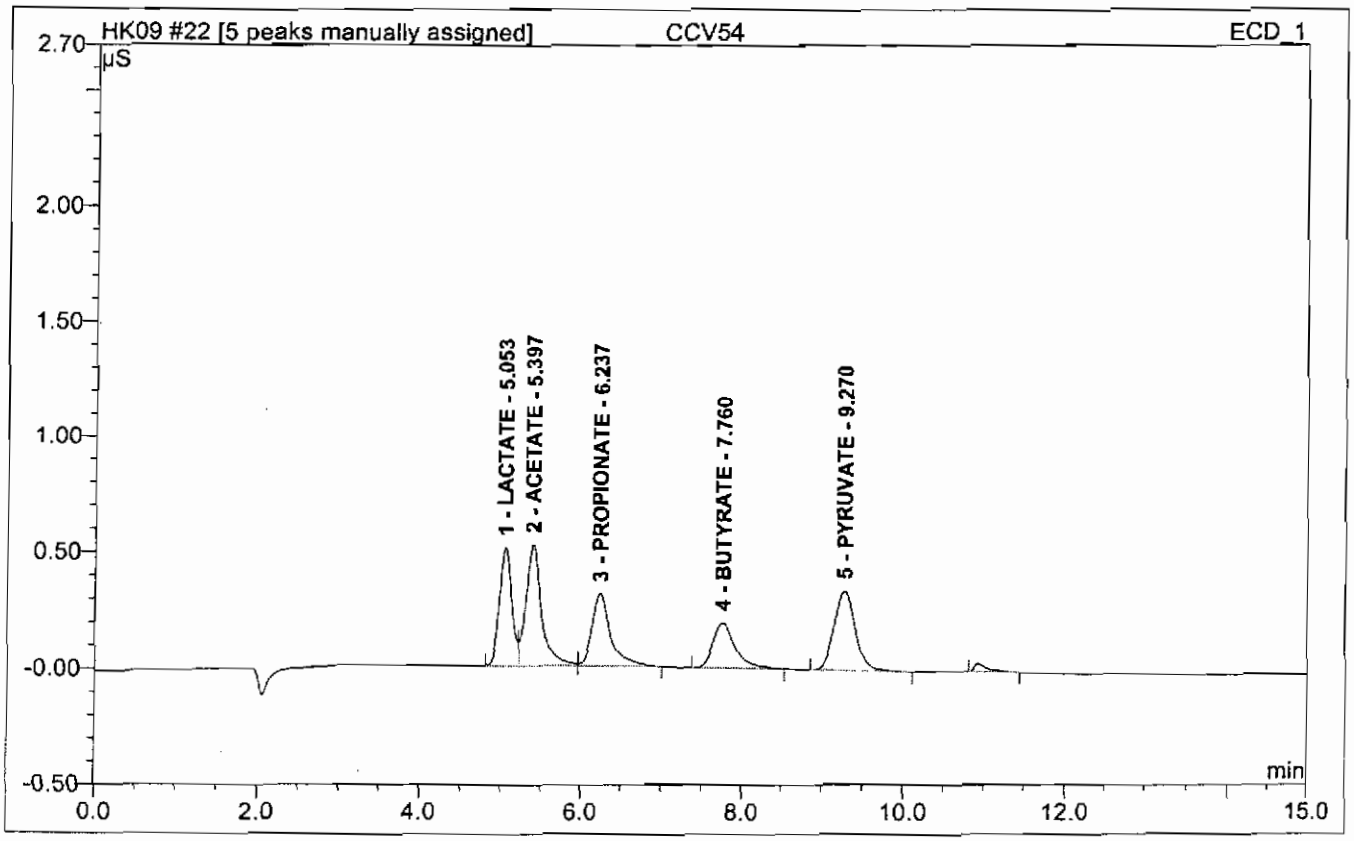
Sample Name:	**CCB52**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 16:53**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	7.09	n.a.	0.008800	0.002031	100.00	n.a.	BMB
Total:			0.009	0.002	100.00	0.000	

HK09 013 CCV54

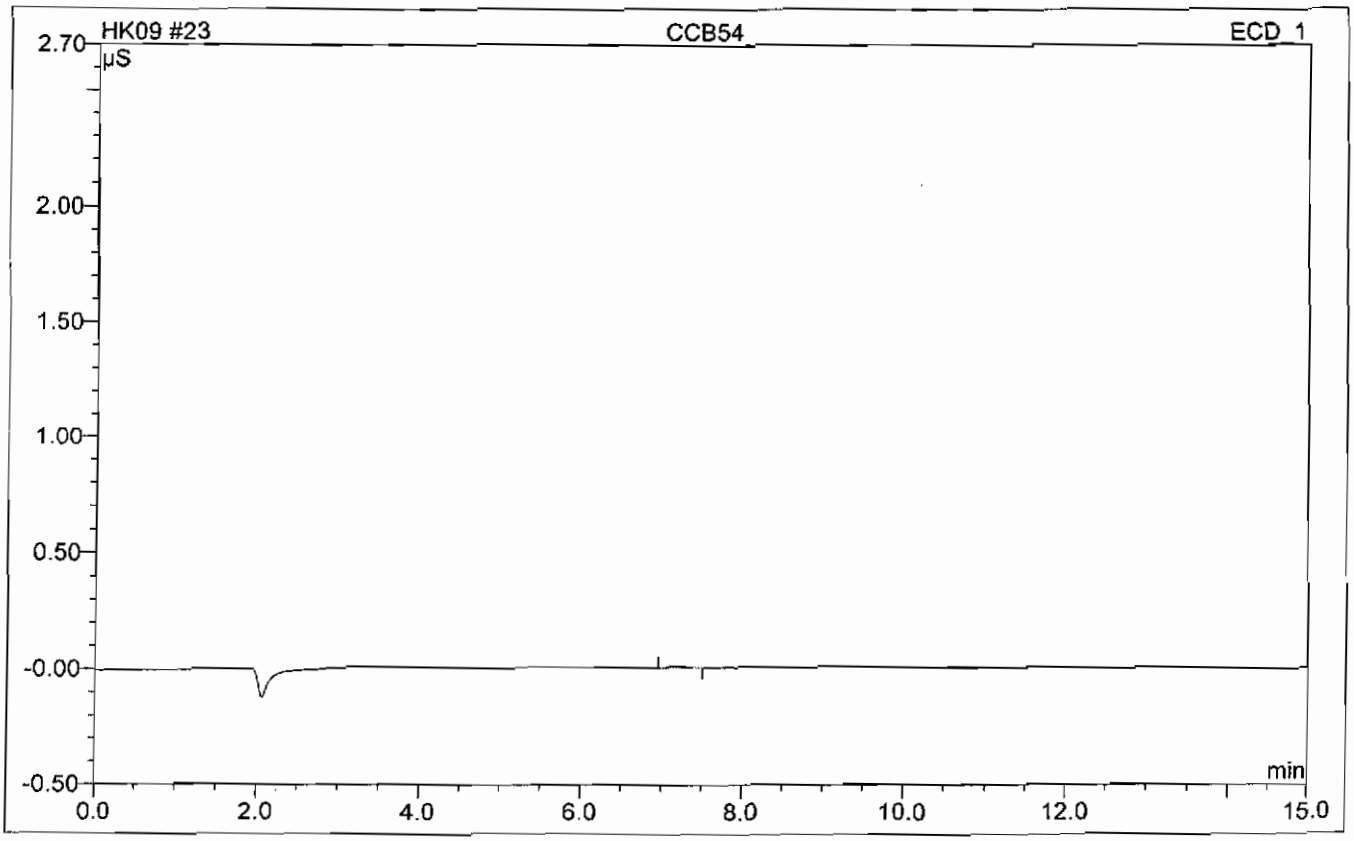
Sample Name:	**CCV54**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 23:03**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.05	LACTATE	0.504716	0.090168	19.52	1.877	BM ^
2	5.40	ACETATE	0.519180	0.117791	25.50	2.039	M ^
3	6.24	PROPIONATE	0.309516	0.083080	17.99	2.076	MB^
4	7.76	BUTYRATE	0.195658	0.062710	13.58	1.864	BMB^
5	9.27	PYRUVATE	0.338634	0.101995	22.08	1.841	BMB^
6	10.91	n.a.	0.034838	0.006180	1.34	n.a.	BMB
Total:			1.903	0.462	100.00	9.696	

HK09 014 CCB54

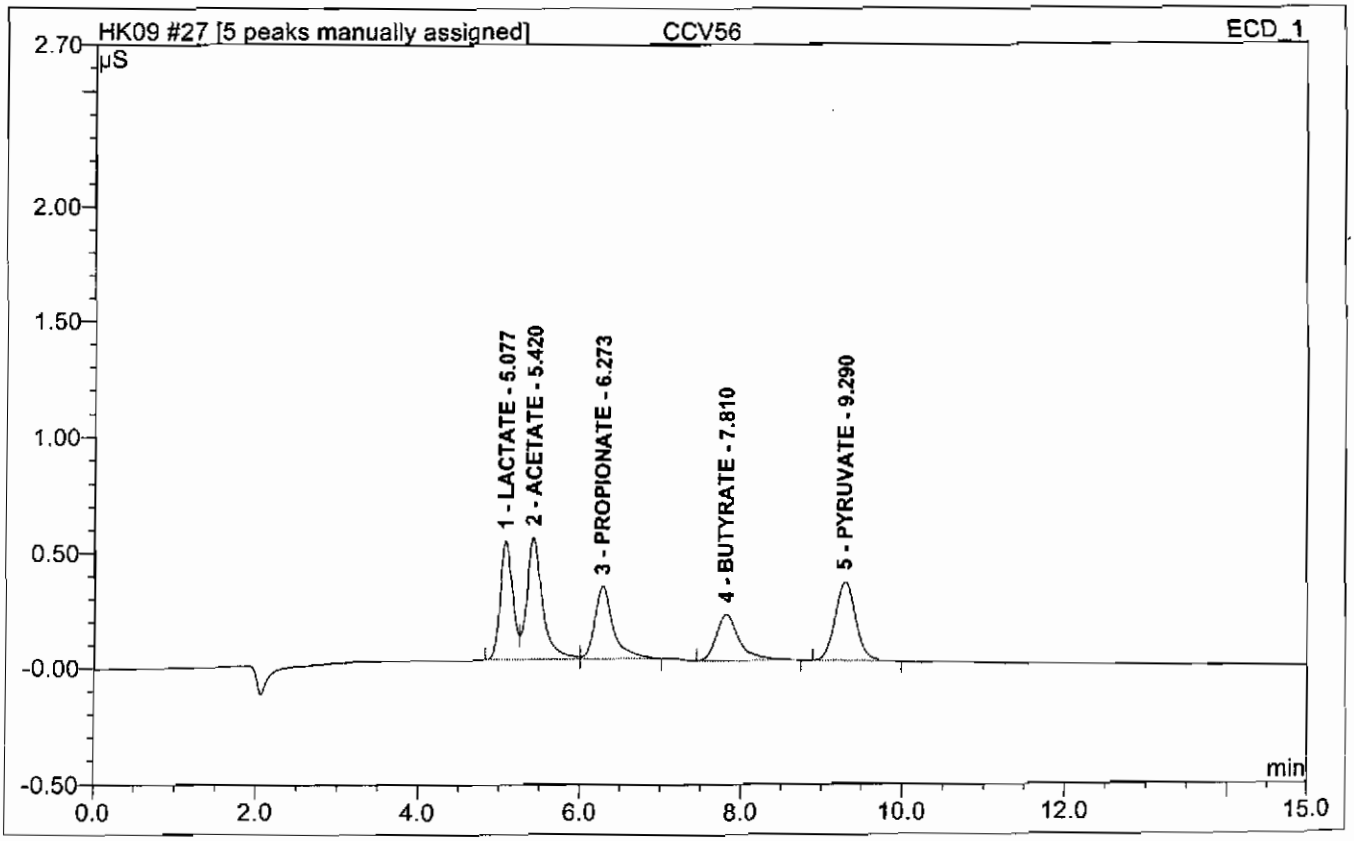
Sample Name:	**CCB54**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 23:24**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	7.16	n.a.	0.009620	0.002459	100.00	n.a.	BMB
Total:			0.010	0.002	100.00	0.000	

HK09 018 CCV56

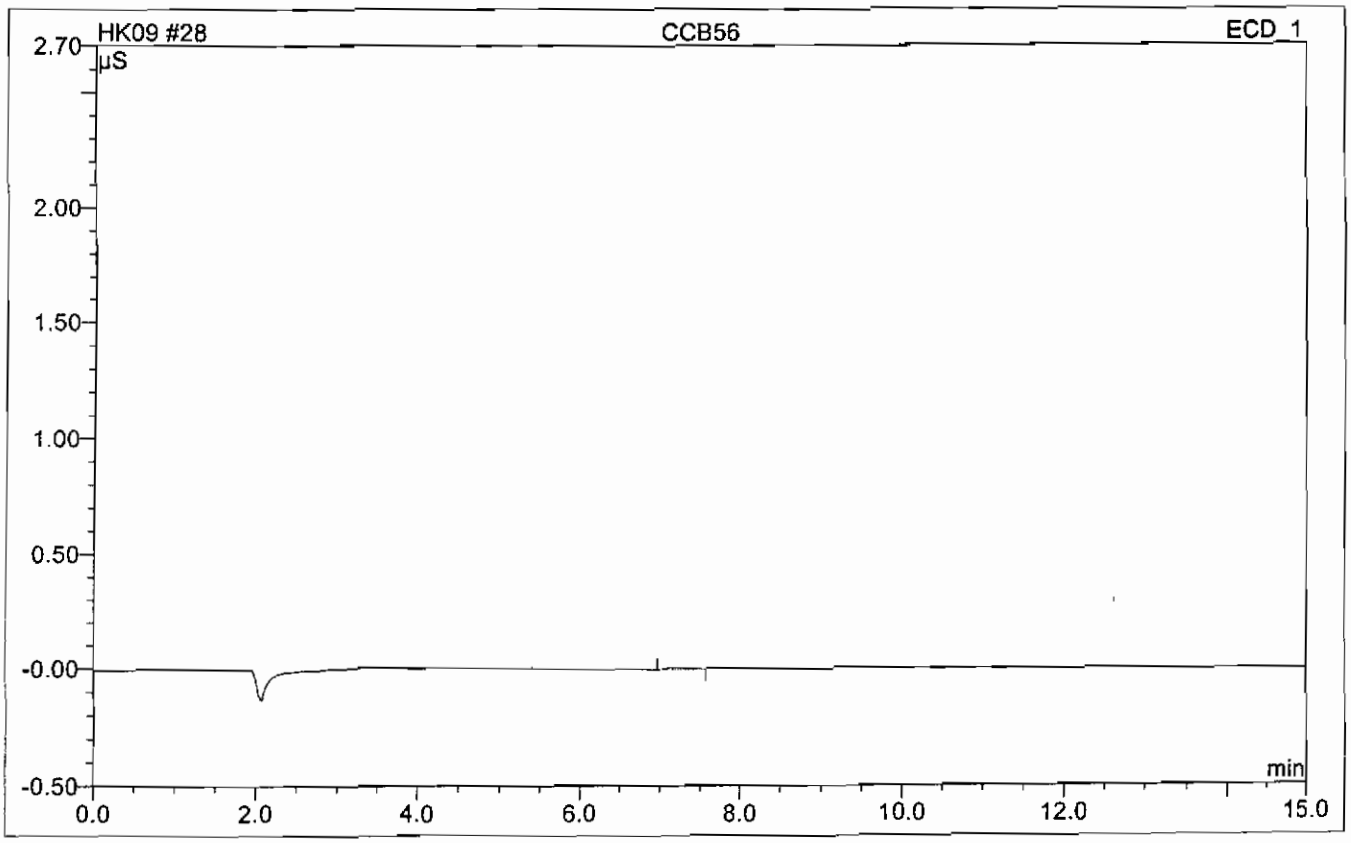
Sample Name:	**CCV56**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/10/2011 2:30**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.08	LACTATE	0.512492	0.091348	19.75	1.901	BM ^
2	5.42	ACETATE	0.528358	0.119670	25.88	2.071	M ^
3	6.27	PROPIONATE	0.314650	0.084267	18.22	2.106	MB^
4	7.81	BUTYRATE	0.200248	0.065219	14.10	1.939	BMB^
5	9.29	PYRUVATE	0.341642	0.101903	22.04	1.839	BMB^
Total:			1.897	0.462	100.00	9.856	

HK09 019 CCB56

Sample Name:	**CCB56**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/10/2011 2:51**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	7.18	n.a.	0.010204	0.002699	100.00	n.a.	BMB
Total:			0.010	0.003	100.00	0.000	

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-209

0AD6I26.met : 300M ICAL → Passed.

- Linear Range:

S-0: 0.0 ppm S-3: 1.0 ppm

S-1: 0.1 ppm S-4: 2.0 ppm

S-2: 0.5 ppm S-5: 3.0 ppm

- ICV: 2 ppm
- Sample Loop: 25 µL
- Flow Rate: 1.50 mL/min
- Suppressor : ASRS 4mm
- SRS Current: 100 mA
- Column : Ion Pac AS11 HC, 4x 250 mm
- Guard Column : IonPac AG16; 4x 250 mm

0AI002W: I159, I160, I201 & I202

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SWBA-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	7HI26
Method File:	0AD6I26.met
Analytical Batch:	0AI002W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID		
ICAL	SW12A - 02 - 322	
ICV		323
CCV		320
LCS		321
MS	↓	319

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: [illegible]

Date: 09/26/11

Sequence: HI26
Operator: cmadmin

Printed: 9/27/2011 10:32:03 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 20

Created: 9/26/2011 5:40:12 PM by cmadmin
Last Update: 9/27/2011 10:31:06 AM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor	Comment
1	HI26	001	IB	Unknown	1	25.0	ORG	OAD6I26	Finished	9/26/2011 6:09:42 PM	1.0000	
2	HI26	002	S-0	Standard	2	25.0	ORG	OAD6I26	Finished	9/26/2011 6:30:40 PM	1.0000	
3	HI26	003	S-1	Standard	3	25.0	ORG	OAD6I26	Finished	9/26/2011 6:51:39 PM	1.0000	
4	HI26	004	S-2	Standard	4	25.0	ORG	OAD6I26	Finished	9/26/2011 7:12:38 PM	1.0000	
5	HI26	005	S-3	Standard	5	25.0	ORG	OAD6I26	Finished	9/26/2011 7:33:36 PM	1.0000	
6	HI26	006	S-4	Standard	6	25.0	ORG	OAD6I26	Finished	9/26/2011 7:54:35 PM	1.0000	
7	HI26	007	S-5	Standard	7	25.0	ORG	OAD6I26	Finished	9/26/2011 8:15:34 PM	1.0000	
8	HI26	008	ICV	Unknown	8	25.0	ORG	OAD6I26	Finished	9/26/2011 8:36:33 PM	1.0000	
9	HI26	009	ICB	Unknown	9	25.0	ORG	OAD6I26	Finished	9/26/2011 8:57:31 PM	1.0000	
10	HI26	010	CCV2	Unknown	100	25.0	ORG	OAD6I26	Finished	9/26/2011 9:18:30 PM	1.0000	
11	HI26	011	CCB2	Unknown	99	25.0	ORG	OAD6I26	Finished	9/26/2011 9:39:29 PM	1.0000	
12	HI26	012	OAI002WB	Unknown	98	25.0	ORG	OAD6I26	Finished	9/26/2011 10:00:28 PM	1.0000	
13	HI26	013	OAI002WL	Unknown	97	25.0	ORG	OAD6I26	Finished	9/26/2011 10:21:26 PM	1.0000	
14	HI26	014	OAI002WC	Unknown	96	25.0	ORG	OAD6I26	Finished	9/26/2011 10:42:25 PM	1.0000	
15	HI26	015	I159-02	Unknown	11	25.0	ORG-SAMPLE	OAD6I26	Finished	9/26/2011 11:03:24 PM	1.0000	
16	HI26	016	I160-02	Unknown	12	25.0	ORG-SAMPLE	OAD6I26	Finished	9/27/2011 12:09:18 AM	1.0000	
17	HI26	017	I201-07	Unknown	13	25.0	ORG-SAMPLE	OAD6I26	Finished	9/27/2011 1:15:12 AM	1.0000	
18	HI26	018	I202-02	Unknown	14	25.0	ORG-SAMPLE	OAD6I26	Finished	9/27/2011 2:21:05 AM	1.0000	
19	HI26	019	CCV4	Unknown	100	25.0	ORG	OAD6I26	Finished	9/27/2011 3:26:58 AM	1.0000	
20	HI26	020	CCB4	Unknown	99	25.0	ORG	OAD6I26	Finished	9/27/2011 3:47:57 AM	1.0000	

FINAL

8147

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EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01 -221

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK08
Method File:	OAD6I26
Analytical Batch:	OAK004W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	–
ICV	–
CCV	SW12A-02-328
LCS	↓ -329
MS	↓ -327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: [illegible]

Date: 11/3/11

8148

Sequence: HK08
Operator: cmadmin

Printed: 11/15/2011 4:27:34 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 23

Created: 11/8/2011 4:08:19 PM by cmadmin
Last Update: 11/9/2011 4:20:24 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK08		IB	Unknown	1	25.0	ORG	OAD6I26	Finished	9/26/2011 6:09:42 PM	1.0000
2	HK08		S-0	Standard	2	25.0	ORG	OAD6I26	Finished	9/26/2011 6:30:40 PM	1.0000
3	HK08		S-1	Standard	3	25.0	ORG	OAD6I26	Finished	9/26/2011 6:51:39 PM	1.0000
4	HK08		S-2	Standard	4	25.0	ORG	OAD6I26	Finished	9/26/2011 7:12:38 PM	1.0000
5	HK08		S-3	Standard	5	25.0	ORG	OAD6I26	Finished	9/26/2011 7:33:36 PM	1.0000
6	HK08		S-4	Standard	6	25.0	ORG	OAD6I26	Finished	9/26/2011 7:54:35 PM	1.0000
7	HK08		S-5	Standard	7	25.0	ORG	OAD6I26	Finished	9/26/2011 8:15:34 PM	1.0000
8	HK08		ICV	Unknown	8	25.0	ORG	OAD6I26	Finished	9/26/2011 8:36:33 PM	1.0000
9	HK08		ICB	Unknown	9	25.0	ORG	OAD6I26	Finished	9/26/2011 8:57:31 PM	1.0000
10	HK08	001	CCV48	Unknown	100	25.0	ORG	OAD6I26	Finished	11/9/2011 1:16:05 AM	1.0000
11	HK08	002	CCB48	Unknown	99	25.0	ORG	OAD6I26	Finished	11/9/2011 1:37:04 AM	1.0000
12	HK08	003	OAK004WB	Unknown	98	25.0	ORG	OAD6I26	Finished	11/9/2011 1:58:03 AM	1.0000
13	HK08	004	OAK004WL	Unknown	97	25.0	ORG	OAD6I26	Finished	11/9/2011 2:19:01 AM	1.0000
14	HK08	005	OAK004WC	Unknown	96	25.0	ORG	OAD6I26	Finished	11/9/2011 2:40:00 AM	1.0000
15	HK08	006	K035-01	Unknown	1	25.0	ORG	OAD6I26	Finished	11/9/2011 3:00:59 AM	1.0000
16	HK08	007	K035-02	Unknown	2	25.0	ORG	OAD6I26	Finished	11/9/2011 3:41:53 AM	1.0000
17	HK08	008	K035-02D	Unknown	3	25.0	ORG	OAD6I26	Finished	11/9/2011 4:22:46 AM	1.0000
18	HK08	009	K035-02M	Unknown	4	25.0	ORG	OAD6I26	Finished	11/9/2011 5:03:40 AM	1.0000
19	HK08	010	K035-03	Unknown	5	25.0	ORG	OAD6I26	Finished	11/9/2011 5:44:34 AM	1.0000
20	HK08	011	K035-04	Unknown	6	25.0	ORG	OAD6I26	Finished	11/9/2011 6:25:27 AM	1.0000
21	HK08	012	K035-05	Unknown	7	25.0	ORG	OAD6I26	Finished	11/9/2011 7:06:21 AM	1.0000
22	HK08	013	CCV50	Unknown	100	25.0	ORG	OAD6I26	Finished	11/9/2011 7:47:15 AM	1.0000
23	HK08	014	CCB50	Unknown	99	25.0	ORG	OAD6I26	Finished	11/9/2011 8:08:13 AM	1.0000

FINAL

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Sequence: HK08
Operator: cmadmin

Printed: 11/15/2011 4:27:34 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 23

Created: 11/8/2011 4:08:19 PM by cmadmin
Last Update: 11/9/2011 4:20:24 PM by cmadmin

No.	Sequence	Comment
1	HK08	
2	HK08	
3	HK08	
4	HK08	
5	HK08	
6	HK08	
7	HK08	
8	HK08	
9	HK08	
10	HK08	
11	HK08	
12	HK08	
13	HK08	
14	HK08	
15	HK08	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK08	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
17	HK08	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK08	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK08	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK08	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK08	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK08	
23	HK08	

FINAL

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EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-221

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	H609
Method File:	OAD6226
Analytical Batch:	OAK006W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	–
ICV	–
CCV	SW2A-02-328
LCS	-329
MS	-327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: AM

Date: 11/9/11

Sequence: HK09
Operator: cmadmin

Printed: 11/15/2011 4:40:29 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 28

Created: 11/9/2011 4:19:44 PM by cmadmin
Last Update: 11/15/2011 4:40:03 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK09		IB	Unknown	1	25.0	ORG	OAD6I26	Finished	9/26/2011 6:09:42 PM	1.0000
2	HK09		S-0	Standard	2	25.0	ORG	OAD6I26	Finished	9/26/2011 6:30:40 PM	1.0000
3	HK09		S-1	Standard	3	25.0	ORG	OAD6I26	Finished	9/26/2011 6:51:39 PM	1.0000
4	HK09		S-2	Standard	4	25.0	ORG	OAD6I26	Finished	9/26/2011 7:12:38 PM	1.0000
5	HK09		S-3	Standard	5	25.0	ORG	OAD6I26	Finished	9/26/2011 7:33:36 PM	1.0000
6	HK09		S-4	Standard	6	25.0	ORG	OAD6I26	Finished	9/26/2011 7:54:35 PM	1.0000
7	HK09		S-5	Standard	7	25.0	ORG	OAD6I26	Finished	9/26/2011 8:15:34 PM	1.0000
8	HK09		ICV	Unknown	8	25.0	ORG	OAD6I26	Finished	9/26/2011 8:36:33 PM	1.0000
9	HK09		ICB	Unknown	9	25.0	ORG	OAD6I26	Finished	9/26/2011 8:57:31 PM	1.0000
10	HK09	001	CCV52	Unknown	100	25.0	ORG	OAD6I26	Finished	11/9/2011 4:32:25 PM	1.0000
11	HK09	002	CCB52	Unknown	99	25.0	ORG	OAD6I26	Finished	11/9/2011 4:53:25 PM	1.0000
12	HK09	003	OAK006WB	Unknown	98	25.0	ORG	OAD6I26	Finished	11/9/2011 5:14:23 PM	1.0000
13	HK09	004	OAK006WL	Unknown	97	25.0	ORG	OAD6I26	Finished	11/9/2011 5:35:23 PM	1.0000
14	HK09	005	OAK006WC	Unknown	96	25.0	ORG	OAD6I26	Finished	11/9/2011 5:56:22 PM	1.0000
15	HK09	006	K063-01	Unknown	1	25.0	ORG	OAD6I26	Finished	11/9/2011 6:17:21 PM	1.0000
16	HK09	007	K063-02	Unknown	2	25.0	ORG	OAD6I26	Finished	11/9/2011 6:58:14 PM	1.0000
17	HK09	008	K063-02D	Unknown	3	25.0	ORG	OAD6I26	Finished	11/9/2011 7:39:08 PM	1.0000
18	HK09	009	K063-02M	Unknown	4	25.0	ORG	OAD6I26	Finished	11/9/2011 8:20:02 PM	1.0000
19	HK09	010	K063-03	Unknown	5	25.0	ORG	OAD6I26	Finished	11/9/2011 9:00:55 PM	1.0000
20	HK09	011	K063-04	Unknown	6	25.0	ORG	OAD6I26	Finished	11/9/2011 9:41:49 PM	1.0000
21	HK09	012	K063-05	Unknown	7	25.0	ORG	OAD6I26	Finished	11/9/2011 10:22:43 PM	1.0000
22	HK09	013	CCV54	Unknown	100	25.0	ORG	OAD6I26	Finished	11/9/2011 11:03:37 PM	1.0000
23	HK09	014	CCB54	Unknown	99	25.0	ORG	OAD6I26	Finished	11/9/2011 11:24:36 PM	1.0000
24	HK09	015	K063-06	Unknown	8	25.0	ORG	OAD6I26	Finished	11/10/2011 12:27:32 AM	1.0000
25	HK09	016	K035-01	Unknown	9	25.0	ORG	OAD6I26	Finished	11/10/2011 1:08:26 AM	2.0000
26	HK09	017	K035-01	Unknown	10	25.0	ORG	OAD6I26	Finished	11/10/2011 1:49:20 AM	20.0000
27	HK09	018	CCV56	Unknown	100	25.0	ORG	OAD6I26	Finished	11/10/2011 2:30:13 AM	1.0000

8152

FINAL

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Sequence: HK09
Operator: cmadmin

Printed: 11/15/2011 4:40:29 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 28

Created: 11/9/2011 4:19:44 PM by cmadmin
Last Update: 11/15/2011 4:40:03 PM by cmadmin

No.	Sequence	Comment
1	HK09	
2	HK09	
3	HK09	
4	HK09	
5	HK09	
6	HK09	
7	HK09	
8	HK09	
9	HK09	
10	HK09	
11	HK09	
12	HK09	
13	HK09	
14	HK09	
15	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
17	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK09	
23	HK09	
24	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
25	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=2
26	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=20
27	HK09	

FINAL

8158

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Sequence: HK09
Operator: cmadmin

Printed: 11/15/2011 4:40:29 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 28

Created: 11/9/2011 4:19:44 PM by cmadmin
Last Update: 11/15/2011 4:40:03 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK09	019	CCB56	Unknown	99	25.0	ORG	OAD6I26	Finished	11/10/2011 2:51:12 AM	1.0000

FINAL

Sequence: HK09
Operator: cmadmin

Printed: 11/15/2011 4:40:29 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 28

Created: 11/9/2011 4:19:44 PM by cmadmin
Last Update: 11/15/2011 4:40:03 PM by cmadmin

No.	Sequence	Comment
28	HK09	

FINAL

3155

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CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K035

METHOD 2320B
TOTAL ALKALINITY

A total of five (5) water samples were received on 11/03/11 for Alkalinity analysis, Method 2320B in accordance with Methods for the Chemical Analysis of Water and Wastes (MCAWW) (EPA/600/4-79/020).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for ALK005WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG. However, sample duplicate was analyzed with the samples. RPD was within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2320B
TOTAL ALKALINITY

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K035

Matrix : WATER
Instrument ID : E5

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ALK005WB	ND	1	NA	5.00	5.00	11/09/1121:28	NA	11E5K02056	11E5K02046	ALK005W	NA	NA
LCS1W	ALK005WL	210	1	NA	5.00	5.00	11/09/1121:35	NA	11E5K02057	11E5K02046	ALK005W	NA	NA
LCD1W	ALK005WC	210	1	NA	5.00	5.00	11/09/1121:42	NA	11E5K02058	11E5K02046	ALK005W	NA	NA
MW-70-PMW01A-089	K035-01	1120	1	NA	5.00	5.00	11/09/1123:53	NA	11E5K02074	11E5K02068	ALK005W	11/03/1111:30	11/03/11
MW-70-PMW01B-091	K035-02	767	1	NA	5.00	5.00	11/10/1112:06	NA	11E5K02075	11E5K02068	ALK005W	11/03/1113:17	11/03/11
MW-70-PMW01B-091DUP	K035-02D	772	1	NA	5.00	5.00	11/10/1112:18	NA	11E5K02076	11E5K02068	ALK005W	11/03/1113:17	11/03/11
MW-70-27-092	K035-03	783	1	NA	5.00	5.00	11/10/1112:31	NA	11E5K02077	11E5K02068	ALK005W	11/03/1114:58	11/03/11
MW-70-28-094	K035-04	659	1	NA	5.00	5.00	11/10/1112:41	NA	11E5K02078	11E5K02068	ALK005W	11/03/1116:16	11/03/11
IR-70-FD-093	K035-05	784	1	NA	5.00	5.00	11/10/1112:53	NA	11E5K02079	11E5K02068	ALK005W	11/03/1100:00	11/03/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 2320B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ALK005WB	ALK005WL	ALK005WC		
LAB FILE ID:	11E5K02056	11E5K02057	11E5K02058		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1121:28	11/09/1121:35	11/09/1121:42	DATE RECEIVED:	NA
PREP. BATCH:	ALK005W	ALK005W	ALK005W		
CALIB. REF:	11E5K02046	11E5K02046	11E5K02046		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Total Alkalinity	ND	230	210	91	230	210	91	0	80-120	20

8158

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 2320B

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MW-70-PMW01B-091
EMAX SAMP ID: K035-02 K035-02D
LAB FILE ID: 11E5K02075 11E5K02076
DATE EXTRACTED: NA NA DATE COLLECTED: 11/03/11 13:17
DATE ANALYZED: 11/10/1112:06 11/10/1112:18 DATE RECEIVED: 11/03/11
PREP. BATCH: ALK005W ALK005W
CALIB. REF: 11E5K02068 11E5K02068

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Total Alkalinity	767	772	1	20

8159

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ALKALINITY

Note: For samples and relevent QCs/Standards analyzed, refer to attached analytical sequence.

Book#: AAL-030

Instrument No.: ☐ 53 ☐ 97 ☒ E5

Analytical Batch: ALK003; ALK004; ALK005

Analytical Sequence: 11E5K02

Comments:

MS/MSD amount of spike: 0.4ml of SWP1-007-57-01 (10,000mg/L) was spiked into J311-05M/S with a final volume of 40ml.

SOP #	Rev. #
☐ EMAX-310.1	4
☐ EMAX-2320B	2
☐ EMAX-	

STANDARDS ID	CONC. (mg/L)
LCS SW1-01-402	230
MS/MSD SWP1-007-57-01	100
ICV SW1-01-344	108
0.02N HCL SWR1-01-338	0.02

pH Buffer	ID
pH 4	SW1-01-341
pH 7	SW1-01-279
pH 10	SW1-01-396
pH Check	SW1-01-347

Analyzed By: RO

Date: 11/9/11

8160

Report Date: 11/10/2011 : 1:17 AM

PC-TitratION PLUS

pH and Alkalinity In-Run Report

Run Number 543 **Analytical Batch#** **11E5K02**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
1	ICV PH8	11E5K02	11/09/2011	2:44 PM	7.97	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	
2	ICV	11E5K02	11/09/2011	2:51 PM	8.46	.44	2.62	-1.00	17.53	104.84	69.78	35.07	.00	
3	ICB	11E5K02	11/09/2011	2:55 PM	4.35	.00	.00	.00	.00	-.12	-.12	.00	.00	
4	ALK003WB	11E5K02	11/09/2011	2:59 PM	3.82	.00	.00	.00	.00	.00	.00	.00	.00	
5	ALK003WL	11E5K02	11/09/2011	3:06 PM	8.39	.52	5.17	-1.00	20.65	206.87	165.57	41.30	.00	
6	ALK003WC	11E5K02	11/09/2011	3:13 PM	8.38	.48	5.19	-1.00	19.37	207.44	168.71	38.73	.00	
7	J311-01	11E5K02	11/09/2011	3:21 PM	7.43	.00	7.69	-1.00	.00	307.75	307.75	.00	.00	
8	J311-04	11E5K02	11/09/2011	3:30 PM	7.56	.00	6.74	-1.00	.00	269.53	269.53	.00	.00	
9	J311-05	11E5K02	11/09/2011	3:39 PM	7.68	.00	9.47	-1.00	.00	378.69	378.69	.00	.00	
10	J311-05M	11E5K02	11/09/2011	3:47 PM	8.65	.87	12.01	-1.00	34.97	480.54	410.61	69.93	.00	
11	J311-05S	11E5K02	11/09/2011	3:58 PM	8.64	.84	11.91	-1.00	33.67	476.47	409.13	67.34	.00	
12	J311-06	11E5K02	11/09/2011	4:06 PM	7.69	.00	9.47	-1.00	.00	378.90	378.90	.00	.00	
13	J311-07	11E5K02	11/09/2011	4:13 PM	7.74	.00	2.72	-1.00	.00	108.68	108.68	.00	.00	
14	J311-08	11E5K02	11/09/2011	4:22 PM	7.58	.00	4.34	-1.00	.00	173.72	173.72	.00	.00	
15	J311-10	11E5K02	11/09/2011	4:27 PM	5.19	.00	.07	.08	.00	2.17	2.17	.00	.00	
16	J311-12	11E5K02	11/09/2011	4:34 PM	7.10	.00	6.50	-1.00	.00	259.96	259.96	.00	.00	
17	K042-03	11E5K02	11/09/2011	4:41 PM	7.53	.00	5.50	-1.00	.00	220.03	220.03	.00	.00	
18	K063-01	11E5K02	11/09/2011	4:52 PM	6.30	.00	17.40	-1.00	.00	695.95	695.95	.00	.00	

Analyzed by: Rc Reviewed by: RC Date: 11/10/11

PC-TitratION PLUS by Man-Tech Associates, Inc.

pH AND ALKALINITY IN-RUN REPORT.SRW
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Run Number 543 **Analytical Batch#** **11E5K02**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
19	K063-02	11E5K02	11/09/2011	4:59 PM	7.27	.00	4.95	-1.00	.00	197.97	197.97	.00	.00	
20	K063-02D	11E5K02	11/09/2011	5:06 PM	7.40	.00	4.98	-1.00	.00	199.28	199.28	.00	.00	
21	K063-03	11E5K02	11/09/2011	5:17 PM	6.50	.00	15.36	-1.00	.00	614.25	614.25	.00	.00	
22	K063-04	11E5K02	11/09/2011	5:24 PM	7.38	.00	5.24	-1.00	.00	209.58	209.58	.00	.00	
23	K063-05	11E5K02	11/09/2011	5:31 PM	7.42	.00	5.35	-1.00	.00	214.09	214.09	.00	.00	
24	CCV1	11E5K02	11/09/2011	5:40 PM	8.62	1.59	5.21	-1.00	63.52	208.59	81.55	127.04	.00	
25	CCB1	11E5K02	11/09/2011	5:44 PM	4.41	.00	.00	.01	.00	-.21	-.21	.00	.00	
26	K063-06	11E5K02	11/09/2011	5:51 PM	7.42	.00	4.97	-1.00	.00	198.83	198.83	.00	.00	
27	RINSE	11E5K02	11/09/2011	5:56 PM	5.10	.00	.02	.03	.00	.17	.17	.00	.00	
28	ALK004WB	11E5K02	11/09/2011	6:01 PM	4.68	.00	.01	.02	.00	-.23	-.23	.00	.00	
29	ALK004WL	11E5K02	11/09/2011	6:08 PM	8.57	1.46	5.21	-1.00	58.26	208.29	91.76	116.53	.00	
30	ALK004WC	11E5K02	11/09/2011	6:15 PM	8.58	1.51	5.22	-1.00	60.26	208.97	88.46	120.51	.00	
31	K009-01	11E5K02	11/09/2011	6:22 PM	7.50	.00	4.75	-1.00	.00	189.91	189.91	.00	.00	
32	K012-02	11E5K02	11/09/2011	6:31 PM	7.39	.00	6.93	-1.00	.00	277.24	277.24	.00	.00	
33	K012-03	11E5K02	11/09/2011	6:39 PM	7.19	.00	8.43	-1.00	.00	337.26	337.26	.00	.00	
34	K012-04	11E5K02	11/09/2011	6:47 PM	7.21	.00	7.91	-1.00	.00	316.36	316.36	.00	.00	
35	K012-05	11E5K02	11/09/2011	6:56 PM	7.29	.00	7.98	-1.00	.00	319.16	319.16	.00	.00	
36	K012-06	11E5K02	11/09/2011	7:04 PM	7.22	.00	9.76	-1.00	.00	390.39	390.39	.00	.00	
37	K012-07	11E5K02	11/09/2011	7:11 PM	7.68	.00	6.96	-1.00	.00	278.29	278.29	.00	.00	
38	K012-08	11E5K02	11/09/2011	7:21 PM	7.42	.00	7.45	-1.00	.00	297.95	297.95	.00	.00	

Analyzed by: Rc Reviewed by: Rc Date: 11/10/11

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Run Number 543 **Analytical Batch#** **11E5K02**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
39	K012-08D	11E5K02	11/09/2011	7:28 PM	7.39	.00	7.39	-1.00	.00	295.42	295.42	.00	.00	
40	K005-02	11E5K02	11/09/2011	7:35 PM	7.62	.00	5.61	-1.00	.00	224.32	224.32	.00	.00	
41	K005-03	11E5K02	11/09/2011	7:42 PM	7.43	.00	3.55	-1.00	.00	141.92	141.92	.00	.00	
42	K005-04	11E5K02	11/09/2011	7:50 PM	7.61	.00	3.42	-1.00	.00	136.98	136.98	.00	.00	
43	K005-05	11E5K02	11/09/2011	7:58 PM	7.51	.00	4.46	-1.00	.00	178.41	178.41	.00	.00	
44	K005-06	11E5K02	11/09/2011	8:05 PM	7.65	.00	3.38	-1.00	.00	135.05	135.05	.00	.00	
45	K005-08	11E5K02	11/09/2011	8:13 PM	7.57	.00	5.92	-1.00	.00	236.84	236.84	.00	.00	
46	CCV2	11E5K02	11/09/2011	8:20 PM	8.71	2.04	5.25	-1.00	81.42	209.81	46.97	162.84	.00	
47	CCB2	11E5K02	11/09/2011	8:24 PM	4.75	.00	.01	.01	.00	-.10	-.10	.00	.00	
48	K005-08D	11E5K02	11/09/2011	8:33 PM	7.57	.00	5.97	-1.00	.00	238.75	238.75	.00	.00	
49	K005-09	11E5K02	11/09/2011	8:40 PM	7.47	.00	5.42	-1.00	.00	216.63	216.63	.00	.00	
50	K005-10	11E5K02	11/09/2011	8:47 PM	7.40	.00	3.62	-1.00	.00	144.70	144.70	.00	.00	
51	K005-11	11E5K02	11/09/2011	8:54 PM	7.32	.00	5.19	-1.00	.00	207.72	207.72	.00	.00	
52	K005-12	11E5K02	11/09/2011	9:01 PM	7.67	.00	4.47	-1.00	.00	178.78	178.78	.00	.00	
53	K005-14	11E5K02	11/09/2011	9:08 PM	7.61	.00	4.69	-1.00	.00	187.60	187.60	.00	.00	
54	K005-16	11E5K02	11/09/2011	9:17 PM	7.62	.00	4.62	-1.00	.00	184.92	184.92	.00	.00	
55	RINSE	11E5K02	11/09/2011	9:22 PM	5.48	.00	.03	.07	.00	-.28	-.28	.00	.00	
56	ALK005WB	11E5K02	11/09/2011	9:28 PM	5.14	.00	.02	.06	.00	-.53	-.53	.00	.00	
57	ALK005WL	11E5K02	11/09/2011	9:35 PM	8.78	2.28	5.26	-1.00	91.24	210.38	27.91	182.47	.00	
58	ALK005WC	11E5K02	11/09/2011	9:42 PM	8.80	2.35	5.25	-1.00	94.02	210.06	22.01	188.05	.00	

Analyzed by: Rc Reviewed by: Rc Date: 11/10/11

pH AND ALKALINITY IN-RUN REPORT.SRW

PC-TitratION PLUS by Man-Tech Associates, Inc.

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Run Number 543 **Analytical Batch#** **11E5K02**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
59	J315-01	11E5K02	11/09/2011	9:50 PM	7.72	.00	4.32	-1.00	.00	172.82	172.82	.00	.00	
60	J315-02	11E5K02	11/09/2011	9:57 PM	7.70	.00	4.70	-1.00	.00	187.91	187.91	.00	.00	
61	J315-03	11E5K02	11/09/2011	10:06 PM	7.71	.00	6.81	-1.00	.00	272.27	272.27	.00	.00	
62	J315-04	11E5K02	11/09/2011	10:14 PM	7.80	.00	6.82	-1.00	.00	272.84	272.84	.00	.00	
63	J315-06	11E5K02	11/09/2011	10:21 PM	7.73	.00	5.66	-1.00	.00	226.56	226.56	.00	.00	
64	J315-07	11E5K02	11/09/2011	10:28 PM	8.00	.00	5.16	-1.00	.00	206.20	206.20	.00	.00	
65	J315-08	11E5K02	11/09/2011	10:37 PM	7.69	.00	3.37	-1.00	.00	134.93	134.93	.00	.00	
66	J315-09	11E5K02	11/09/2011	10:44 PM	7.69	.00	3.36	-1.00	.00	134.34	134.34	.00	.00	
67	J315-10	11E5K02	11/09/2011	10:52 PM	7.98	.00	4.21	-1.00	.00	168.25	168.25	.00	.00	
68	CCV3	11E5K02	11/09/2011	10:59 PM	9.01	2.94	5.30	-1.00	117.65	211.94	.00	188.59	23.36	
69	CCB3	11E5K02	11/09/2011	11:05 PM	5.28	.00	.03	.08	.00	-1.36	-1.36	.00	.00	
70	J315-11	11E5K02	11/09/2011	11:12 PM	7.96	.00	5.39	-1.00	.00	215.58	215.58	.00	.00	
71	K018-01	11E5K02	11/09/2011	11:22 PM	7.73	.00	10.20	-1.00	.00	407.87	407.87	.00	.00	
72	K018-02	11E5K02	11/09/2011	11:29 PM	7.42	.00	5.88	-1.00	.00	235.19	235.19	.00	.00	
73	K018-03	11E5K02	11/09/2011	11:37 PM	8.07	.00	1.61	-1.00	.00	64.27	64.27	.00	.00	
74	K035-01	11E5K02	11/09/2011	11:53 PM	7.36	.00	28.04	-1.00	.00	1,121.80	1,121.80	.00	.00	
75	K035-02	11E5K02	11/10/2011	12:06 AM	7.62	.00	19.17	-1.00	.00	766.96	766.96	.00	.00	
76	K035-02D	11E5K02	11/10/2011	12:18 AM	7.69	.00	19.31	-1.00	.00	772.23	772.23	.00	.00	
77	K035-03	11E5K02	11/10/2011	12:31 AM	7.66	.00	19.58	-1.00	.00	783.39	783.39	.00	.00	
78	K035-04	11E5K02	11/10/2011	12:41 AM	7.75	.00	16.48	-1.00	.00	659.34	659.34	.00	.00	

Analyzed by: Rc Reviewed by: Rc Date: 11/10/11

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Run Number 543 **Analytical Batch#** **11E5K02**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
79	K035-05	11E5K02	11/10/2011	12:53 AM	7.64	.00	19.59	-1.00	.00	783.68	783.68	.00	.00	
80	K039-01	11E5K02	11/10/2011	1:01 AM	8.23	.00	4.94	-1.00	.00	197.66	197.66	.00	.00	
81	CCV4	11E5K02	11/10/2011	1:09 AM	9.04	2.99	5.32	-1.00	119.73	212.81	.00	186.16	26.65	
82	CCB4	11E5K02	11/10/2011	1:15 AM	5.42	.00	.04	.10	.00	-1.00	-1.00	.00	.00	

Analyzed by: RC Reviewed by: RC Date: 11/10/11

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PC-Titrate For Windows

Running List Report

Order Number - 11E5K02

	Schedule	Sample Id	Vial	Weight	Volume
1	PH CAL	CAL	1	.00	25.00
2	PH ONLY	ICV PH8	4	.00	25.00
3	PH-ALK	ICV	5	.00	25.00
4	PH-ALK	ICB	6	.00	25.00
5	PH-ALK	ALK003WB	7	.00	25.00
6	PH-ALK	ALK003WL	8	.00	25.00
7	PH-ALK	ALK003WC	9	.00	25.00
8	PH-ALK	J311-01	10	.00	25.00
9	PH-ALK	J311-04	11	.00	25.00
10	PH-ALK	J311-05	12	.00	25.00
11	PH-ALK	J311-05M	13	.00	25.00
12	PH-ALK	J311-05S	14	.00	25.00
13	PH-ALK	J311-06	15	.00	25.00
14	PH-ALK	J311-07	16	.00	25.00
15	PH-ALK	J311-08	17	.00	25.00
16	PH-ALK	J311-10	18	.00	25.00
17	PH-ALK	J311-12	19	.00	25.00
18	PH-ALK	K041-03	20	.00	25.00
19	PH-ALK	K063-01	21	.00	25.00
20	PH-ALK	K063-02	22	.00	25.00
21	PH-ALK	K063-02D	23	.00	25.00
22	PH-ALK	K063-03	24	.00	25.00
23	PH-ALK	K063-04	25	.00	25.00
24	PH-ALK	K063-05	26	.00	25.00
25	PH-ALK	CCV1	27	.00	25.00
26	PH-ALK	CCB1	28	.00	25.00
27	PH-ALK	K063-06	29	.00	25.00
28	PH-ALK	RINSE	30	.00	25.00
29	PH-ALK	ALK004WB	31	.00	25.00
30	PH-ALK	ALK004WL	32	.00	25.00
31	PH-ALK	ALK004WC	33	.00	25.00
32	PH-ALK	K009-01	34	.00	25.00
33	PH-ALK	K012-02	35	.00	25.00
34	PH-ALK	K012-03	36	.00	25.00
35	PH-ALK	K012-04	37	.00	25.00
36	PH-ALK	K012-05	38	.00	25.00
37	PH-ALK	K012-06	39	.00	25.00
38	PH-ALK	K012-07	40	.00	25.00
39	PH-ALK	K012-08	41	.00	25.00
40	PH-ALK	K012-08D	42	.00	25.00

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Running List Report

Order Number - 11E5K02

	Schedule	Sample Id	Vial	Weight	Volume
41	PH-ALK	K005-02	43	.00	25.00
42	PH-ALK	K005-03	44	.00	25.00
43	PH-ALK	K005-04	45	.00	25.00
44	PH-ALK	K005-05	46	.00	25.00
45	PH-ALK	K005-06	47	.00	25.00
46	PH-ALK	K005-08	48	.00	25.00
47	PH-ALK	CCV2	49	.00	25.00
48	PH-ALK	CCB2	50	.00	25.00
49	PH-ALK	K005-08D	51	.00	25.00
50	PH-ALK	K005-09	52	.00	25.00
51	PH-ALK	K005-10	53	.00	25.00
52	PH-ALK	K005-11	54	.00	25.00
53	PH-ALK	K005-12	55	.00	25.00
54	PH-ALK	K005-14	56	.00	25.00
55	PH-ALK	K005-16	57	.00	25.00
56	PH-ALK	RINSE	58	.00	25.00
57	PH-ALK	ALK005WB	59	.00	25.00
58	PH-ALK	ALK005WL	60	.00	25.00
59	PH-ALK	ALK005WC	61	.00	25.00
60	PH-ALK	J315-01	62	.00	25.00
61	PH-ALK	J315-02	63	.00	25.00
62	PH-ALK	J315-03	64	.00	25.00
63	PH-ALK	J315-04	65	.00	25.00
64	PH-ALK	J315-06	66	.00	25.00
65	PH-ALK	J315-07	67	.00	25.00
66	PH-ALK	J315-08	68	.00	25.00
67	PH-ALK	J315-09	69	.00	25.00
68	PH-ALK	J315-10	70	.00	25.00
69	PH-ALK	CCV3	71	.00	25.00
70	PH-ALK	CCB3	72	.00	25.00
71	PH-ALK	J315-11	73	.00	25.00
72	PH-ALK	K018-01	74	.00	25.00
73	PH-ALK	K018-02	75	.00	25.00
74	PH-ALK	K018-03	76	.00	25.00
75	PH-ALK	K035-01	77	.00	25.00
76	PH-ALK	K035-02	78	.00	25.00
77	PH-ALK	K035-02D	79	.00	25.00
78	PH-ALK	K035-03	80	.00	25.00
79	PH-ALK	K035-04	81	.00	25.00
80	PH-ALK	K035-05	82	.00	25.00
81	PH-ALK	K039-01	83	.00	25.00
82	PH-ALK	CCV4	84	.00	25.00

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Running List Report

Order Number - 11E5K02

	Schedule	Sample Id	Vial	Weight	Volume
83	PH-ALK	CCB4	85	.00	25.00

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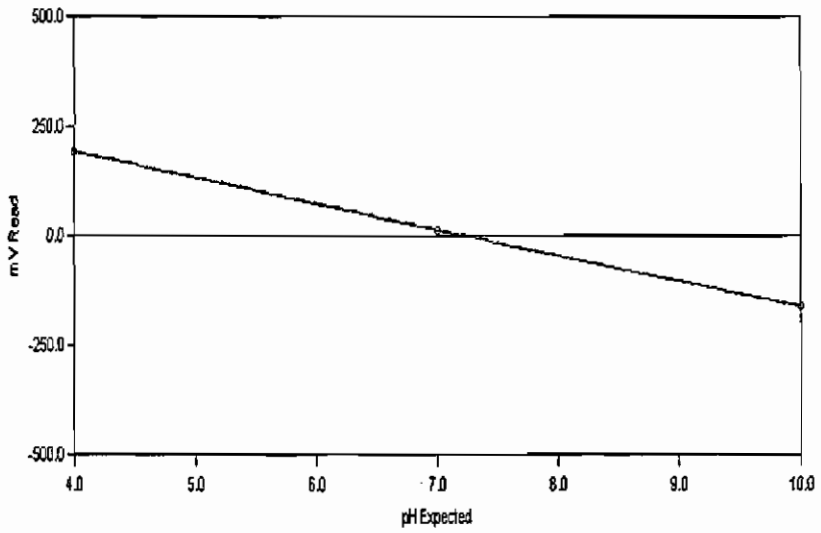
PC-TitratION PLUS
Calibration Report

Calibration Record # 281



Calibration Settings

Calibration ID	PH CAL 4-7-10	Date	11/09/2011	
Channel	1	Time	2:41 PM	
Probe Type	pH	Temperature	297.01 K	23.86 C
Probe ID	PH ELECTRODE	Analysis Type	*Single Line Fit*	

Calibration Results

Slope	-59.325	CorrCoeff	0.9998
Intercept	14.320	Equation:	Y = (-59.325) X + (14.320)

Calibration Validity **True** Operator

	Result	Minimum	Maximum
Slope	-59.325	-65.00	-53.00
Intercept	14.320	-40.00	40.00
Correlation Coefficient	0.9998	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	***Standard***	**Reading**
	4.00	194.33
	7.00	10.25
	10.00	-161.62

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CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K035

METHOD 2540C
TOTAL DISSOLVED SOLIDS

A total of five (5) water samples were received on 11/03/11 for Total Dissolved Solids analysis, Method 2540C in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Balance calibration was checked as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TDK005WL/C were all within QC limits.

Matrix QC Sample
Sample duplicate was analyzed with the samples in this SDG. RPD was within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2540C
TOTAL DISSOLVED SOLIDS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K035

Matrix : WATER
Instrument ID : 40706360

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TDK005WB	ND	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00501	NA	TDK005W	NA	NA
LCS1W	TDK005WL	895	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00502	NA	TDK005W	NA	NA
LCD1W	TDK005WC	880	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00503	NA	TDK005W	NA	NA
MW-70-PMW01A-089	K035-01	2370	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00504	NA	TDK005W	11/03/1111:30	11/03/11
MW-70-PMW01B-091	K035-02	4240	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00505	NA	TDK005W	11/03/1113:17	11/03/11
MW-70-PMW01B-091DUP	K035-02D	4230	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00506	NA	TDK005W	11/03/1113:17	11/03/11
MW-70-27-092	K035-03	7400	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00507	NA	TDK005W	11/03/1114:58	11/03/11
MW-70-28-094	K035-04	3150	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00508	NA	TDK005W	11/03/1116:16	11/03/11
IR-70-FD-093	K035-05	7320	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00509	NA	TDK005W	11/03/1100:00	11/03/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 2540C

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TDK005WB	TDK005WL	TDK005WC		
LAB FILE ID:	TDK00501	TDK00502	TDK00503		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1116:38	11/10/1116:38	11/10/1116:38	DATE RECEIVED:	NA
PREP. BATCH:	TDK005W	TDK005W	TDK005W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TDS	ND	1000	895	90	1000	880	88	2	80-120	20

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EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD 2540C

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MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MW-70-PMW01B-091			
EMAX SAMP ID:	K035-02	K035-02D		
LAB FILE ID:	TDK00505	TDK00506		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/03/11 13:17
DATE ANALYZED:	11/10/1116:38	11/10/1116:38	DATE RECEIVED:	11/03/11
PREP. BATCH:	TDK005W	TDK005W		
CALIB. REF:	NA	NA		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
TDS	4240	4230	0	5

8173

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
GRAVIMETRIC

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AGV-047

Balance ID: 40706360

Analytical Batch: TDK005

SOP #	Rev. #
☐ EMAX-160.1	6
☐ EMAX-160.2	4
☐ EMAX-160.3	2
☐ EMAX-2540B	1
☑ EMAX-2540C	5
☐ EMAX-2540D	1

STANDARDS ID	CONC. (mg/L)
LCS SW2-02-914	1000

Micropipette ID:

Analyzed By: NM

Date: 11/14/11

GRAVIMETRIC ANALYSES
RAW DATA

EMAX LABORATORIES, INC.

Analytical Batch: TDK005 | Instrument ID: 40706360 | Oven Temp IN (°C): 180 | Oven Temp OUT (°C): 180 | SOP: EMAX-2540C Rev.1

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish #	Dish (g)	Date	Time	1st Dry Weight + Dish (g)	Date	Time	2nd Dry Weight + Dish (g)	Date	Time	3rd Dry Weight + Dish (g)	Date	Time	Difference 1st & 2nd Dry Wt. Rdg.	Difference 2nd & 3rd Dry Wt. Rdg. (<0.5mg)	NOTES
TDK00501	TDK005WB	100	B	71.3230	11/10/11	16:38	71.3226	11/14/11	10:17	71.3226	11/14/11	12:02	71.3226	11/14/11	12:02	0	0.0	
TDK00502	TDK005WL	20	L	21.4860	11/10/11	16:38	21.5038	11/14/11	10:17	21.5039	11/14/11	12:03	21.5039	11/14/11	12:03	0.0001	0.0	
TDK00503	TDK005WC	20	C	21.4203	11/10/11	16:38	21.4378	11/14/11	10:17	21.4379	11/14/11	12:04	21.4379	11/14/11	12:04	1E-04	0.0	
TDK00504	K035-01	20	1	21.6520	11/10/11	16:39	21.6998	11/14/11	10:18	21.6995	11/14/11	12:04	21.6995	11/14/11	12:04	-0.0003	0.0	
TDK00505	K035-02	10	2	21.4904	11/10/11	16:39	21.5326	11/14/11	10:18	21.5328	11/14/11	12:04	21.5328	11/14/11	12:04	0.0002	0.0	
TDK00506	K035-02D	10	3	21.7407	11/10/11	16:39	21.7827	11/14/11	10:18	21.783	11/14/11	12:05	21.783	11/14/11	12:05	0.0003	0.0	
TDK00507	K035-03	10	4	21.5108	11/10/11	16:39	21.5847	11/14/11	10:18	21.5848	11/14/11	12:05	21.5848	11/14/11	12:06	1E-04	0.0	
TDK00508	K035-04	20	5	21.2552	11/10/11	16:39	21.3178	11/14/11	10.19	21.3182	11/14/11	12:06	21.3182	11/14/11	12:06	0.0004	0.0	
TDK00509	K035-05	10	6	21.4821	11/10/11	16:40	21.5552	11/14/11	10.19	21.5553	11/14/11	12:06	21.5553	11/14/11	12:06	1E-04	0.0	
TDK00510	K063-01	20	7	21.5468	11/10/11	16:40	21.5675	11/14/11	10.19	21.5679	11/14/11	12:07	21.5679	11/14/11	12:07	0.0004	0.0	
TDK00511	K063-02	20	8	21.3955	11/10/11	16:40	21.4167	11/14/11	10:20	21.4171	11/14/11	12:07	21.4171	11/14/11	12:07	0.0004	0.0	
TDK00512	K063-02D	20	9	21.5431	11/10/11	16:41	21.5639	11/14/11	10.20	21.5641	11/14/11	12:08	21.5641	11/14/11	12:08	0.0002	0.0	
TDK00513	K063-03	20	10	21.5358	11/10/11	16:41	21.562	11/14/11	10.20	21.5624	11/14/11	12:08	21.5624	11/14/11	12:08	0.0004	0.0	
TDK00514	K063-04	20	11	21.4350	11/10/11	16:41	21.4537	11/14/11	10:20	21.4541	11/14/11	12:09	21.4541	11/14/11	12:09	0.0004	0.0	
TDK00515	K063-05	20	12	21.4642	11/10/11	16:41	21.4925	11/14/11	10:21	21.4929	11/14/11	12.10	21.4929	11/14/11	12:10	0.0004	0.0	
TDK00516	K063-06	20	13	21.3348	11/10/11	16.42	21.3569	11/14/11	10 21	21.3569	11/14/11	12:10	21.3569	11/14/11	12:10	0	0.0	
TDK00517	K070-01	20	14	21.4889	11/10/11	16.42	21.5398	11/14/11	10 21	21.5398	11/14/11	12:10	21.5398	11/14/11	12:10	0	0.0	
TDK00518	K070-02	20	15	21.4706	11/10/11	16:42	21.5078	11/14/11	10:22	21.508	11/14/11	12:11	21.508	11/14/11	12:11	0.0002	0.0	
TDK00519	K070-03	20	16	21.7457	11/10/11	16:42	21.7798	11/14/11	10:22	21.7802	11/14/11	12:11	21.7802	11/14/11	12:11	0.0004	0.0	
TDK00520	K070-04	20	17	21.4787	11/10/11	16:43	21.5027	11/14/11	10.22	21.5028	11/14/11	12:12	21.5028	11/14/11	12:12	1E-04	0.0	
TDK00521	K070-05	20	18	21.3347	11/10/11	16:43	21.365	11/14/11	10:22	21.365	11/14/11	12:12	21.365	11/14/11	12:12	0	0.0	
TDK00522	K070-06	20	19	21.4641	11/10/11	16:43	21.488	11/14/11	10.23	21.488	11/14/11	12:13	21.488	11/14/11	12:13	0	0.0	

Beginning Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/10/11 16:36	PASSED
5	4.9997	11/10/11 16:37	PASSED
100	99.9954	11/10/11 16:37	PASSED

Ending Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/10/11 16:43	PASSED
5	5.0000	11/10/11 16:44	PASSED
100	99.9951	11/10/11 16:44	PASSED

Beginning Balance Check

Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1001	11/14/11 10:16	PASSED
5	5.0000	11/14/11 10:16	PASSED
100	99.9987	11/14/11 10:16	PASSED

Ending Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/14/11 12:13	PASSED
5	5.0000	11/14/11 12:14	PASSED
100	99.9986	11/14/11 12:15	PASSED

Acceptance Criteria: ± 0.1% OR 0.05 mg whichever is greater

LCS Conc. 1000 mg/L MDL: 10 mg/L RL: 10 mg/L Initial Rdg by: NM Final Rdg by: NM Reviewed by: NM

Remarks:

Date: 11/14/11

EMAX LABORATORIES INC

GRAVIMETRIC CALCULATION

Analytical Batch: TDK005 Start Date/Time: 11/10/11 16:38 Temp IN(°C): 180

Balance ID: 40706360 End Date/Time: 11/14/11 12:12 Temp Out(°C): 180

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish (g)	Dry Weight + Dish (g)	SOLIDS (mg)	RESULT (mg/L)	NOTES
TDK00501	TDK005WB	100	71.323	71.3226	-0.4000	ND	
TDK00502	TDK005WL	20	21.486	21.5039	17.9000	895	90
TDK00503	TDK005WC	20	21.4203	21.4379	17.6000	880	88
TDK00504	K035-01	20	21.652	21.6995	47.5000	2370	
TDK00505	K035-02	10	21.4904	21.5328	42.4000	4240	
TDK00506	K035-02D	10	21.7407	21.783	42.3000	4230	
TDK00507	K035-03	10	21.5108	21.5848	74.0000	7400	
TDK00508	K035-04	20	21.2552	21.3182	63.0000	3150	
TDK00509	K035-05	10	21.4821	21.5553	73.2000	7320	
TDK00510	K063-01	20	21.5468	21.5679	21.1000	1060	
TDK00511	K063-02	20	21.3955	21.4171	21.6000	1080	
TDK00512	K063-02D	20	21.5431	21.5641	21.0000	1050	
TDK00513	K063-03	20	21.5358	21.5624	26.6000	1330	
TDK00514	K063-04	20	21.435	21.4541	19.1000	955	
TDK00515	K063-05	20	21.4642	21.4929	28.7000	1430	
TDK00516	K063-06	20	21.3348	21.3569	22.1000	1100	
TDK00517	K070-01	20	21.4889	21.5398	50.9000	2540	
TDK00518	K070-02	20	21.4706	21.508	37.4000	1870	
TDK00519	K070-03	20	21.7457	21.7802	34.5000	1730	
TDK00520	K070-04	20	21.4787	21.5028	24.1000	1210	
TDK00521	K070-05	20	21.3347	21.365	30.3000	1510	
TDK00522	K070-06	20	21.4641	21.488	23.9000	1200	

LCS Concentration: 1000 mg/L MDL(mg/L): 10 Initial Reading by: NM

SOP: EMAX-2540C Rev.1 RL (mg/L): 10 Final Reading by: NM

Remarks:

Reviewed by: NM

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K035

METHOD 4500F
DISSOLVED HYDROGEN SULFIDE

A total of five (5) water samples were received on 11/03/11 for Dissolved Hydrogen Sulfide analysis, Method 4500F in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Matrix QC Sample
No matrix QC sample was designated for this SDG. However, sample duplicate was analyzed with the samples. RPD was within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 4500F
Dissolved Hydrogen Sulfide

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 7D.
Batch No. : 11K035

Matrix : WATER
Instrument ID : NA

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	HSK001WB	ND	1	NA	1.00	1.00	11/10/1112:40	NA	HSK00111	NA	HSK001W	NA	NA
MW-70-PMW01A-089	K035-01	ND	1	NA	1.00	1.00	11/10/1113:01	NA	HSK00114	NA	HSK001W	11/03/1111:30	11/03/11
MW-70-PMW01B-091	K035-02	ND	1	NA	1.00	1.00	11/10/1113:02	NA	HSK00115	NA	HSK001W	11/03/1113:17	11/03/11
MW-70-PMW01B-091DUP	K035-02D	ND	1	NA	1.00	1.00	11/10/1113:09	NA	HSK00116	NA	HSK001W	11/03/1113:17	11/03/11
MW-70-27-092	K035-03	ND	1	NA	1.00	1.00	11/10/1113:12	NA	HSK00117	NA	HSK001W	11/03/1114:58	11/03/11
MW-70-28-094	K035-04	ND	1	NA	1.00	1.00	11/10/1113:15	NA	HSK00118	NA	HSK001W	11/03/1116:16	11/03/11
IR-70-FD-093	K035-05	ND	1	NA	1.00	1.00	11/10/1113:18	NA	HSK00119	NA	HSK001W	11/03/1100:00	11/03/11

EMAX QUALITY CONTROL DATA
DUPLICATE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
METHOD: METHOD 4500F (DISSOLVED)
MATRIX: WATER
% MOISTURE: NA

BATCH NO.: 11K035
SAMPLE ID: MW-70-PMW01B-091DUP
CONTROL NO.: K035-02D

DATE RECEIVED: 11/03/11
DATE EXTRACTED: NA
DATE ANALYZED: 11/10/11 13:09

ACCESSION:

PARAMETER	SAMPLE (mg/L)	DUP. SAMPLE (mg/L)	RPD (%)	RPD LIMIT (%)
Hydrogen Sulfide	ND	ND	0	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
SULFIDE

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Book #: ASD-018

Analytical Batch: HSK001

Comments:

SOP #	Rev. #
☐ EMAX-376.1	3
☐ EMAX-9034	0
☐ EMAX-4500-S2F	1
☑ EMAX-4500-S2H	0
☐ EMAX-	

STANDARDS ID	conc.
LCS SWI-01-902	5.52
Spike NA	NA
$Na_2S_2O_3$ Standard SWPI-01-384	0.0246
Iodine SWPI-01-465	0.0250
HCl SWPI-007-60-03	6N
Indicator SWPI-01-348	—

Analyzed By: NH

Date: 11/10/11

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SM4500-S^{2-} H

LABORATORIES INC.

ANALYSIS FOR UN-IONIZED HYDROGEN SULFIDE

Method SM4500-S2-H **Analytical Batch:** HSK001

Data File Name	Lab Sample ID	Sulfide	Unit	Date Time	Temp. °C	pH	Conductivity µS/cm	H2S	Unit	COMMENTS
HSK0011	HSK001WB	ND	mg/L	11/10/11 12:40				ND	mg/L	
HSK0012	HSK001WL	4.48	mg/L	11/10/11 12:47				#VALUE!	mg/L	
HSK0013	HSK001WC	4.44	mg/L	11/10/11 12:57				#VALUE!	mg/L	
HSK0014	K035-01	ND	mg/L	11/10/11 13:01	24.8	6.54	4000	ND	mg/L	
HSK0015	K035-02	ND	mg/L	11/10/11 13:02	24.9	6.78	6030	ND	mg/L	
HSK0016	K035-02D	ND	mg/L	11/10/11 13:09	25	6.76	5980	ND	mg/L	
HSK0017	K035-03	ND	mg/L	11/10/11 13:12	25.1	6.72	9320	ND	mg/L	
HSK0018	K035-04	ND	mg/L	11/10/11 13:15	24.9	6.8	4520	ND	mg/L	
HSK0019	K035-05	ND	mg/L	11/10/11 13:18	24.8	6.73	9390	ND	mg/L	
HSK00110	K063-01	ND	mg/L	11/10/11 13:27	25.1	6.58	1753	ND	mg/L	
HSK00111	K063-02	ND	mg/L	11/10/11 13:33	25.3	7.49	1660	ND	mg/L	
HSK00112	K063-02D	ND	mg/L	11/10/11 13:37	25.3	7.48	1703	ND	mg/L	
HSK00113	K063-03	ND	mg/L	11/10/11 13:52	25.3	6.67	2240	ND	mg/L	
HSK00114	K063-04	ND	mg/L	11/10/11 13:55	25.3	7.62	1518	ND	mg/L	
HSK00115	K063-05	ND	mg/L	11/10/11 14:01	25.3	7.55	2180	ND	mg/L	
HSK00116	K063-06	ND	mg/L	11/10/11 14:04	25.2	7.53	1689	ND	mg/L	

NM 11/10/11

$$pK_1 = 32.5 + 1519.44/T - 15.672\log_{10}T + 0.02722T$$

$$A = 0.7083 - 2.277x10^{-3}T + 5.399x10^{-6}T^2$$

$$I = 1.6x10^{-5}\,Conductivity$$

$$pf_m = A\left(\frac{\sqrt{I}}{1+\sqrt{I}} - 0.3\right)$$

$$K'_1 = 10^{-pK_1+2pf_m}$$

$$H^+ = 10^{-pH+pf_m}$$

$$H_2S = \left(\frac{S_T}{1+\frac{K'_1}{H^+}}\right)$$

Analyzed by: NM

Reviewed by: NM

Date: 11/10/11

Where: T(°K)= T°C+272.15 pK1=dissociation constant for zero ionic strength A= Debye-Huckel Parameter I= Ionic Strength pfm=negative logarithm of the monovalent ion activity coefficient K'1=conditional ionization constant H+=Hydrogen ion concentration S_T=Total Sulfide Concentration

EMAX LABORATORIES, INC.

ANALYSIS FOR SULFIDE

Method: SM4500-S2-H Analytical Batch: **HSK001** Book #: ASD-018 Page: 11

Data File Name	Lab Sample ID	V_c (ml)	V_i (ml)	Volume of Titant V_t (ml)	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Sulfide	Sample Result	Flag J	Unit
HSK0011	**HSK001WB**	100	2.5	2.54	11/10/11	12:40:09	-0.07872	ND		mg/L
HSK0012	**HSK001WL**	100	2.5	1.39	11/10/11	12:47:40	4.48448	4.48		mg/L
HSK0013	**HSK001WC**	100	2.5	1.4	11/10/11	12:57:45	4.4448	4.44		mg/L
HSK0014	**K035-01**	100	2.5	2.48	11/10/11	13:01:03	0.15936	ND		mg/L
HSK0015	**K035-02**	100	2.5	2.6	11/10/11	13:02:40	-0.3168	ND		mg/L
HSK0016	**K035-02D**	100	2.5	2.59	11/10/11	13:09:17	-0.27712	ND		mg/L
HSK0017	**K035-03**	100	2.5	2.73	11/10/11	13:12:29	-0.83264	ND		mg/L
HSK0018	**K035-04**	100	2.5	2.54	11/10/11	13:15:27	-0.07872	ND		mg/L
HSK0019	**K035-05**	100	2.5	2.48	11/10/11	13:18:00	0.15936	ND		mg/L
HSK00110	**K063-01**	100	2.5	2.55	11/10/11	13:27:51	-0.1184	ND		mg/L
HSK00111	**K063-02**	100	2.5	2.48	11/10/11	13:33:18	0.15936	ND		mg/L
HSK00112	**K063-02D**	100	2.5	2.52	11/10/11	13:37:15	0.00064	ND		mg/L
HSK00113	**K063-03**	100	2.5	2.51	11/10/11	13:52:08	0.04032	ND		mg/L
HSK00114	**K063-04**	100	2.5	2.5	11/10/11	13:55:45	0.08	ND		mg/L
HSK00115	**K063-05**	100	2.5	2.54	11/10/11	14:01:32	-0.07872	ND		mg/L
HSK00116	**K063-06**	100	2.5	2.5	11/10/11	14:04:42	0.08	ND		mg/L

NM 11/10/11

STANDARDIZATION

V_I (ml)	V_{Na2SO3} (ml)	DATE	TIME	Titrant Na_2SO_3 (N)
Average Normality of Iodine (NI)=				**0.025**

☑ Standard Purchased as Certified Solution

$$N_I = \frac{(N * V)_{Na_2SO_3}}{V_I}$$

MISCELLANEOUS INFORMATION

Standard	Concentration		Unit
Iodine	0.025		*N*
$Na_2S_2O_3$	0.0248		*N*
LCS [WATER | SOIL]	5.52	55.2	*mg/L | mg/Kg*
MDL [WATER | SOIL]	1	10	*mg/L | mg/Kg*
RL	1	20	*mg/L | mg/Kg*

$$S(mg/L) = \frac{[(V_I * N_I) - (V_t * N_t)](16{,}000)}{V_S}$$

MS/MSD	TV=	5.52	mg/L
ID	Result (mg/L)	%Rec.	RPD

Comments:

Analyzed By: NM

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K035

METHOD SM5310B
TOC

A total of five (5) water samples were received on 11/03/11 for Total Organic Carbon analysis, Method SM5310B in accordance with Standard Methods for the Examination of Water and Wastewater, 18th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary forms for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for TCK005WL/C were all within QC limits.
Percent recoveries for TCK006WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample was analyzed at the frequency prescribed by the project.
Percent recoveries for K035-02M/S were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. Sample K035-01 was filtered prior to analysis due to its turbidity.

METHOD SM5310B
TOC

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K035

Matrix : WATER
Instrument ID : 162

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TCK005WB	ND	1	NA	1.00	0.500	11/09/1113:59	NA	TCK005-05	TCK005-02	TCK005W	NA	NA
LCS1W	TCK005WL	26.3	1	NA	1.00	0.500	11/09/1114:12	NA	TCK005-06	TCK005-02	TCK005W	NA	NA
LCD1W	TCK005WC	26.1	1	NA	1.00	0.500	11/09/1114:25	NA	TCK005-07	TCK005-02	TCK005W	NA	NA
MW-70-PMW01B-091	K035-02	4.38	1	NA	1.00	0.500	11/09/1117:01	NA	TCK005-20	TCK005-14	TCK005W	11/03/1113:17	11/03/11
MW-70-PMW01B-091MS	K035-02M	30.9	1	NA	1.00	0.500	11/09/1117:14	NA	TCK005-21	TCK005-14	TCK005W	11/03/1113:17	11/03/11
MW-70-PMW01B-091MSD	K035-02S	30.7	1	NA	1.00	0.500	11/09/1117:27	NA	TCK005-22	TCK005-14	TCK005W	11/03/1113:17	11/03/11
MW-70-27-092	K035-03	4.16	1	NA	1.00	0.500	11/09/1117:39	NA	TCK005-23	TCK005-14	TCK005W	11/03/1114:58	11/03/11
MW-70-28-094	K035-04	2.80	1	NA	1.00	0.500	11/09/1117:50	NA	TCK005-24	TCK005-14	TCK005W	11/03/1116:16	11/03/11
IR-70-FD-093	K035-05	4.05	1	NA	1.00	0.500	11/09/1118:01	NA	TCK005-25	TCK005-14	TCK005W	11/03/1100:00	11/03/11
MBLK2W	TCK006WB	ND	1	NA	1.00	0.500	11/10/1120:11	NA	TCK006-05	TCK006-02	TCK006W	NA	NA
LCS2W	TCK006WL	26.2	1	NA	1.00	0.500	11/10/1120:25	NA	TCK006-06	TCK006-02	TCK006W	NA	NA
LCD2W	TCK006WC	26.3	1	NA	1.00	0.500	11/10/1120:38	NA	TCK006-07	TCK006-02	TCK006W	NA	NA
MW-70-PMW01A-089	K035-01T	174	10	NA	10.0	5.00	11/10/1122:35	NA	TCK006-17	TCK006-14	TCK006W	11/03/1111:30	11/03/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSTS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD SM5310B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TCK005WB	TCK005WL	TCK005WC		
LAB FILE ID:	TCK005-05	TCK005-06	TCK005-07		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1113:59	11/09/1114:12	11/09/1114:25	DATE RECEIVED:	NA
PREP. BATCH:	TCK005W	TCK005W	TCK005W		
CALIB. REF:	TCK005-02	TCK005-02	TCK005-02		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	ND	25.0	26.3	105	25.0	26.1	104	1	85-115	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD SM5310B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	TCK006WB	TCK006WL	TCK006WC		
LAB FILE ID:	TCK006-05	TCK006-06	TCK006-07		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1120:11	11/10/1120:25	11/10/1120:38	DATE RECEIVED:	NA
PREP. BATCH:	TCK006W	TCK006W	TCK006W		
CALIB. REF:	TCK006-02	TCK006-02	TCK006-02		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	ND	25.0	26.2	105	25.0	26.3	105	1	85-115	20

8186

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K035
METHOD: METHOD SM5310B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MW-70-PMW01B-091				
LAB SAMP ID:	K035-02	K035-02M	K035-02S		
LAB FILE ID:	TCK005-20	TCK005-21	TCK005-22		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/03/11 13:17
DATE ANALYZED:	11/09/1117:01	11/09/1117:14	11/09/1117:27	DATE RECEIVED:	11/03/11
PREP. BATCH:	TCK005W	TCK005W	TCK005W		
CALIB. REF:	TCK005-14	TCK005-14	TCK005-14		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	4.38	25.0	30.9	106	25.0	30.7	106	1	75-125	20

8187

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TOC

	Date	Time
Start	11/9/14	12 11
End	11/9/14	18 20

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

TCK005W
K031 9060
K063 5310B
K035 ↓

2 M HCl SW4-01-223

Book #:	A62-020
Instrument No.:	62
Pipette ID:	03938002S
	SW3-01-33
	SI1A-01-4
Balance ID:	40706360
Analytical Sequence:	TCK005
Method File:	TCK005
Analytical Batch:	TCK005W

SOP #	Rev. #
☐ EMAX-415.1	2
☑ EMAX-5310B	1
☑ EMAX-9060	2
☐ EMAX-	

STANDARDS ID	CONC. (mg/L)
S0 nanopure	0
S1 SW10B-04-168	1
S2	5
S3	10
S4	40
S5	80
S6	—
ICV/LCS SW10B-04-172	25
CCV ↓ -173	25

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ TOC	
☐	

Analyzed By: AM

Date: 11/9/14

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	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
1	Standard	NPOC	ICAL	TCK005-01	0A-123456-	C:\Program	1.000		
2	Control	NPOC	ICV	TCK005-02	0A-123456-	C:\Program	1.000	NPOC:26.02 mg/L	
3	Unknown	NPOC	ICB	TCK005-03	0A-123456-	C:\Program	1.000	NPOC:0.1274 mg/	
4	Unknown	NPOC	HCO3\CO3	TCK005-04	0A-123456-	C:\Program	1.000	NPOC:0.2322 mg/	
5	Unknown	NPOC	TCK005WB	TCK005-05	0A-123456-	C:\Program	1.000	NPOC:0.1491 mg/	
6	Unknown	NPOC	TCK005WL	TCK005-06	0A-123456-	C:\Program	1.000	NPOC:26.32 mg/L	
7	Unknown	NPOC	TCK005WC	TCK005-07	0A-123456-	C:\Program	1.000	NPOC:26.08 mg/L	
8	Unknown	NPOC	K031-05T	TCK005-08	0A-123456-	C:\Program	4.000	NPOC:77.58 mg/L	DF=4
9	Unknown	NPOC	K063-01	TCK005-09	0A-123456-	C:\Program	1.000	NPOC:8.949 mg/L	PH<2
10	Unknown	NPOC	K063-02	TCK005-10	0A-123456-	C:\Program	1.000	NPOC:1.067 mg/L	PH<2
11	Unknown	NPOC	K063-02M	TCK005-11	0A-123456-	C:\Program	1.000	NPOC:25.69 mg/L	
12	Unknown	NPOC	K063-02S	TCK005-12	0A-123456-	C:\Program	1.000	NPOC:25.84 mg/L	
13	Unknown	NPOC	K063-03	TCK005-13	0A-123456-	C:\Program	1.000	NPOC:27.82 mg/L	PH<2
14	Control	NPOC	CCV1	TCK005-14	0A-123456-	C:\Program	1.000	NPOC:26.36 mg/L	
15	Unknown	NPOC	CCB1	TCK005-15	0A-123456-	C:\Program	1.000	NPOC:0.1295 mg/	
16	Unknown	NPOC	K063-04	TCK005-16	0A-123456-	C:\Program	1.000	NPOC:0.9485 mg/	PH<2
17	Unknown	NPOC	K063-05	TCK005-17	0A-123456-	C:\Program	1.000	NPOC:1.257 mg/L	PH<2
18	Unknown	NPOC	K063-06	TCK005-18	0A-123456-	C:\Program	1.000	NPOC:1.089 mg/L	PH<2
19	Unknown	NPOC	K035-01	TCK005-19	0A-123456-	C:\Program	1.000	NPOC:184.2 mg/L	PH<2
20	Unknown	NPOC	K035-02	TCK005-20	0A-123456-	C:\Program	1.000	NPOC:4.375 mg/L	PH<2
21	Unknown	NPOC	K035-02M	TCK005-21	0A-123456-	C:\Program	1.000	NPOC:30.92 mg/L	
22	Unknown	NPOC	K035-02S	TCK005-22	0A-123456-	C:\Program	1.000	NPOC:30.75 mg/L	
23	Unknown	NPOC	K035-03	TCK005-23	0A-123456-	C:\Program	1.000	NPOC:4.157 mg/L	PH<2
24	Unknown	NPOC	K035-04	TCK005-24	0A-123456-	C:\Program	1.000	NPOC:2.796 mg/L	PH<2
25	Unknown	NPOC	K035-05	TCK005-25	0A-123456-	C:\Program	1.000	NPOC:4.045 mg/L	PH<2
26	Control	NPOC	CCV2	TCK005-26	0A-123456-	C:\Program	1.000	NPOC:26.40 mg/L	
27	Unknown	NPOC	CCB2	TCK005-27	0A-123456-	C:\Program	1.000	NPOC:0.1750 mg/	

Instr.Information

System	toc
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Cal. Curve

Sample Name:	ICAL
Sample ID:	TCK005-01
Cal. Curve:	TCK005.2011_11_09_12_04_46.cal

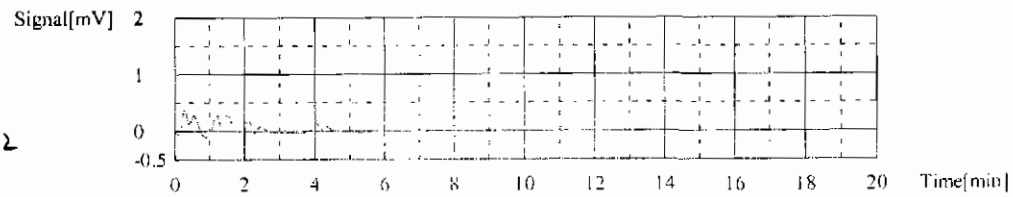
Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.9780	50uL	1	*******		11/09/11 12:11:58 PM
2	0.7512	50uL	1	*******		11/09/11 12:13:04 PM
3	0.000	50uL	1	*******		11/09/11 12:15:09 PM
4	0.000	50uL	1	*******		11/09/11 12:17:13 PM

Acid Add.	2.500%
Sp. Time	90.00sec
Mean Area	0.4323

$$\frac{\text{mean area}}{\text{slope}} = \frac{0.4323}{2.096} = 0.2062$$

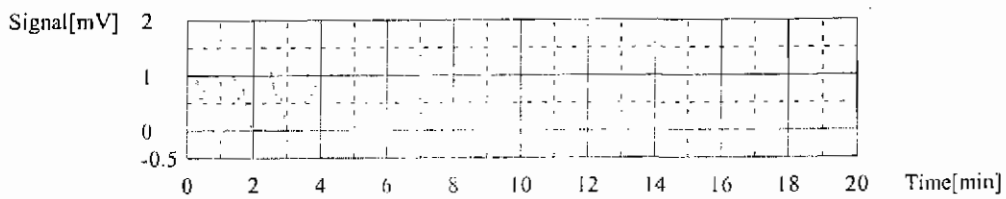


Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	2.258	50uL	10	*******		11/09/11 12:25:31 PM
2	2.388	50uL	10	*******		11/09/11 12:26:48 PM
3	2.326	50uL	10	*******		11/09/11 12:28:05 PM
4	2.268	50uL	10	*******		11/09/11 12:29:18 PM

Acid Add.	2.500%
Sp. Time	90.00sec
Mean Area	2.310

$$\frac{\bar{A}}{m} = \frac{2.310}{2.096} = 1.102$$

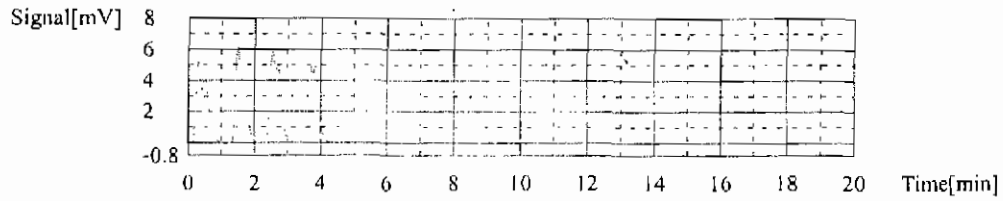


Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	12.01	50uL	2	*******		11/09/11 12:35:45 PM
2	12.05	50uL	2	*******		11/09/11 12:36:58 PM
3	12.19	50uL	2	*******		11/09/11 12:38:15 PM
4	12.17	50uL	2	*******		11/09/11 12:39:33 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 12.11

$\frac{\bar{A}}{m} = \frac{12.11}{2.096} = 5.778$

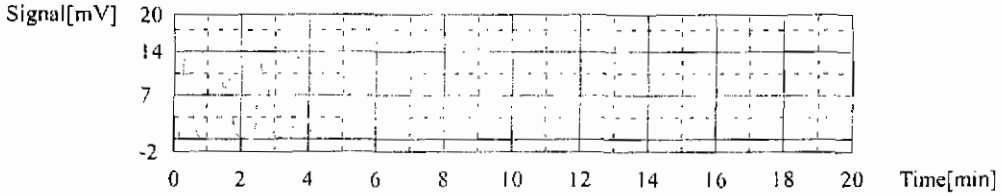


Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	24.51	50uL	1	*******		11/09/11 12:45:12 PM
2	24.45	50uL	1	*******		11/09/11 12:46:32 PM
3	24.78	50uL	1	*******		11/09/11 12:47:50 PM
4	24.95	50uL	1	*******		11/09/11 12:49:07 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 24.67

$\frac{\bar{A}}{m} = \frac{24.67}{2.096} = 11.77$

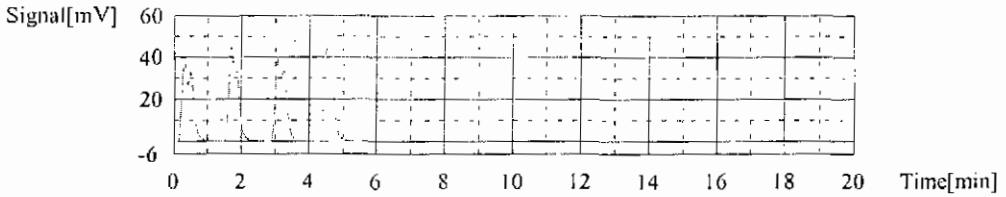


Conc: 40.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	82.52	50uL	2	*******		11/09/11 12:57:41 PM
2	84.11	50uL	2	*******		11/09/11 12:59:15 PM
3	83.36	50uL	2	*******		11/09/11 01:00:52 PM
4	83.07	50uL	2	*******		11/09/11 01:02:24 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 83.27

$\frac{\bar{A}}{m} = \frac{83.27}{2.096} = 39.73$

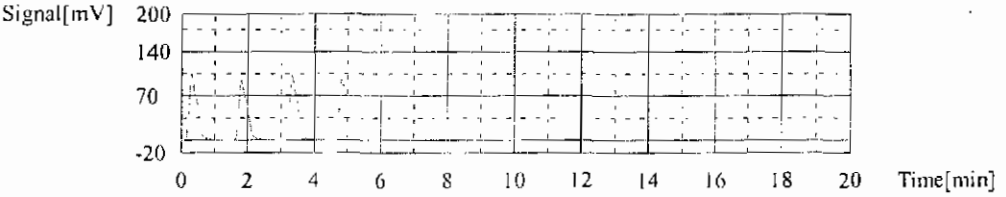


Conc: 80.00mg/L

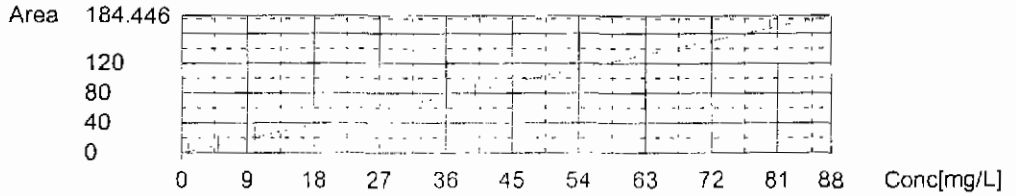
No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	171.1	50uL	1	*******		11/09/11 01:08:27 PM
2	167.2	50uL	1	*******		11/09/11 01:10:09 PM
3	170.6	50uL	1	*******		11/09/11 01:11:49 PM
4	168.8	50uL	1	*******		11/09/11 01:13.28 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 169.4

$\frac{\bar{A}}{m} = \frac{169.4}{2.096} = 80.82$



Slope: 2.096
Intercept 0.000
r^2 0.999481



8191

Control Sample

Sample Name: ICV
Sample ID: TCK005-02
Method: TCK005.lpl
Chk. Result Control value: 26.02 / Control exceeds range!

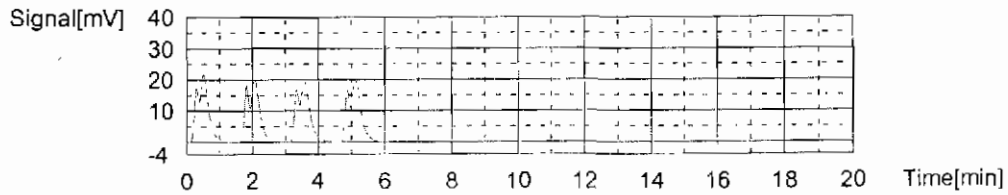
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:26.02 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.22	25.87mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:21:41 PM
2	54.35	25.93mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:23:23 PM
3	54.82	26.15mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:25:06 PM
4	54.76	26.13mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:26:49 PM

Mean Area 54.54
Mean Conc. 26.02mg/L



Sample

Sample Name: ICB
Sample ID: TCK005-03
Origin: TCK005.cal
Chk. Result

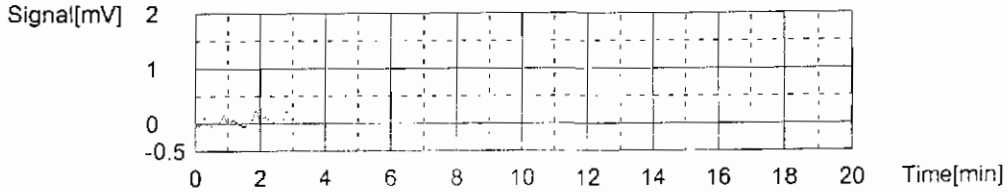
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1274 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.06370	0.03039mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:33:57 PM
2	0.2688	0.1282mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:35:07 PM
3	0.3466	0.1654mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:36:15 PM
4	0.3894	0.1858mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:37:25 PM

Mean Area 0.2671
Mean Conc. 0.1274mg/L



EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TOC

	Date	Time
Start	11/10/11	1823
End	11/11/11	0004

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

TCk006W
K706 415.1
K430 5310B
K035 ↓
K070

Book #:	A62-020
Instrument No.:	62
Pipette ID:	039380025
	SW3-01-33
	SI1A-01-4
Balance ID:	40706360
Analytical Sequence:	TCk006
Method File:	TCk006
Analytical Batch:	TCk006W

SOP #	Rev. #
☐ EMAX-415.1	2
☐ EMAX-5310B	1
☐ EMAX-9060	2
☐ EMAX-	

STANDARDS ID		CONC. (mg/L)
S0	nanopure	0
S1	SW10B-04 -174	1
S2	↓	5
S3		10
S4		40
S5		80
S6	—	—
ICV/LCS	SW10B-04 -172	
CCV	↓ -173	

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ TOC	
☐	

Analyzed By: AM

Date: 11/10/11

2 M HCl SW4-01 -223

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	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
1	Standard	NPOC	ICAL	TCK006-01	0A-123456-	C:\Program	1.000		
2	Control	NPOC	ICV	TCK006-02	0A-123456-	C:\Program	1.000	NPOC:25.92 mg/L	
3	Unknown	NPOC	ICB	TCK006-03	0A-123456-	C:\Program	1.000	NPOC:0.1709 mg/	
4	Unknown	NPOC	HCO3\CO3	TCK006-04	0A-123456-	C:\Program	1.000	NPOC:0.2802 mg/	
5	Unknown	NPOC	TCK006WB	TCK006-05	0A-123456-	C:\Program	1.000	NPOC:0.1457 mg/	
6	Unknown	NPOC	TCK006WL	TCK006-06	0A-123456-	C:\Program	1.000	NPOC:26.16 mg/L	
7	Unknown	NPOC	TCK006WC	TCK006-07	0A-123456-	C:\Program	1.000	NPOC:26.33 mg/L	
8	Unknown	NPOC	K706-01	TCK006-08	0A-123456-	C:\Program	1.000	NPOC:5.360 mg/L	PH<2
9	Unknown	NPOC	K706-01D	TCK006-09	0A-123456-	C:\Program	1.000	NPOC:5.315 mg/L	
10	Unknown	NPOC	K706-01M	TCK006-10	0A-123456-	C:\Program	1.000	NPOC:31.67 mg/L	
11	Unknown	NPOC	K706-01S	TCK006-11	0A-123456-	C:\Program	1.000	NPOC:31.59 mg/L	
12	Unknown	NPOC	K430-01	TCK006-12	0A-123456-	C:\Program	1.000	NPOC:1.501 mg/L	PH<2
13	Unknown	NPOC	K430-02	TCK006-13	0A-123456-	C:\Program	1.000	NPOC:1.299 mg/L	PH<2
14	Control	NPOC	CCV1	TCK006-14	0A-123456-	C:\Program	1.000	NPOC:26.26 mg/L	
15	Unknown	NPOC	CCB1	TCK006-15	0A-123456-	C:\Program	1.000	NPOC:0.1063 mg/	
16	Unknown	NPOC	K430-03	TCK006-16	0A-123456-	C:\Program	1.000	NPOC:1.099 mg/L	PH<2
17	Unknown	NPOC	K035-01T	TCK006-17	0A-123456-	C:\Program	10.00	NPOC:174.5 mg/L	DF=10
18	Unknown	NPOC	K070-01	TCK006-18	0A-123456-	C:\Program	1.000	NPOC:106.3 mg/L	PH<2
19	Unknown	NPOC	K070-02	TCK006-19	0A-123456-	C:\Program	1.000	NPOC:10.29 mg/L	PH<2
20	Unknown	NPOC	K070-03	TCK006-20	0A-123456-	C:\Program	1.000	NPOC:1.529 mg/L	PH<2
21	Unknown	NPOC	K070-04	TCK006-21	0A-123456-	C:\Program	1.000	NPOC:0.8240 mg/	PH<2
22	Unknown	NPOC	K070-05	TCK006-22	0A-123456-	C:\Program	1.000	NPOC:1.951 mg/L	PH<2
23	Unknown	NPOC	K070-06	TCK006-23	0A-123456-	C:\Program	1.000	NPOC:0.5709 mg/	PH<2
24	Control	NPOC	CCV2	TCK006-24	0A-123456-	C:\Program	1.000	NPOC:26.38 mg/L	
25	Unknown	NPOC	CCB2	TCK006-25	0A-123456-	C:\Program	1.000	NPOC:0.1086 mg/	
26									
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11/14/11

Instr.Information

System	toc
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Cal. Curve

Sample Name:	ICAL
Sample ID:	TCK006-01
Cal. Curve:	TCK006.2011_11_10_18_15_02.cal

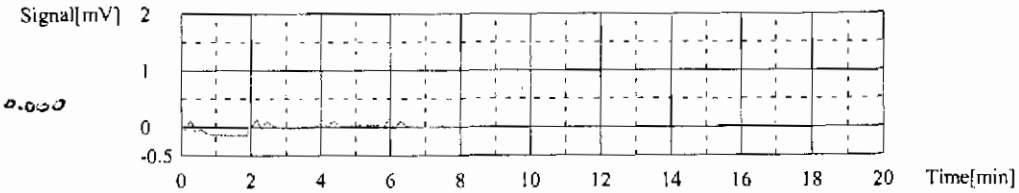
Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.000	50uL	1	*******		11/10/11 06:23:09 PM
2	0.000	50uL	1	*******		11/10/11 06:25:14 PM
3	0.000	50uL	1	*******		11/10/11 06:27:19 PM
4	0.000	50uL	1	*******		11/10/11 06:29:24 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 0.000

$$\frac{\text{mean area}}{\text{slope}} = \frac{\bar{A}}{m} = \frac{0.000}{2.118} = 0.000$$

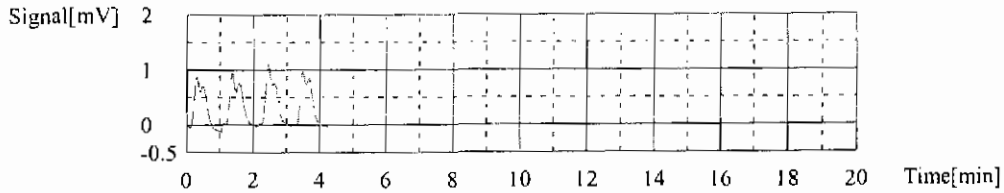


Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	2.051	50uL	10	*******		11/10/11 06:37:40 PM
2	2.125	50uL	10	*******		11/10/11 06:38:55 PM
3	2.257	50uL	10	*******		11/10/11 06:40:09 PM
4	2.243	50uL	10	*******		11/10/11 06:41:23 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 2.169

$$\frac{\bar{A}}{m} = \frac{2.169}{2.118} = 1.024$$



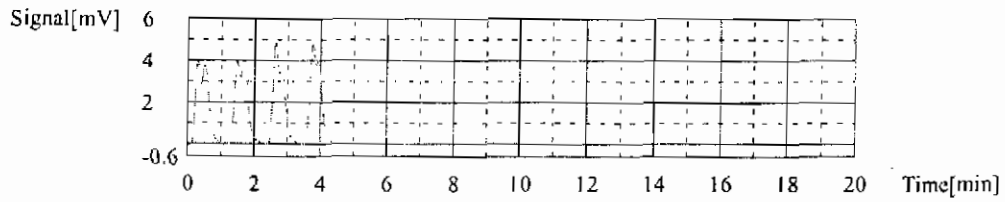
Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	10.20	50uL	2	*******		11/10/11 06:47:49 PM
2	10.38	50uL	2	*******		11/10/11 06:49:09 PM
3	10.43	50uL	2	*******		11/10/11 06:50:28 PM
4	10.48	50uL	2	*******		11/10/11 06:51:43 PM

8195

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 10.37

$\frac{\bar{A}}{m} = \frac{10.37}{2.118} = 4.896$

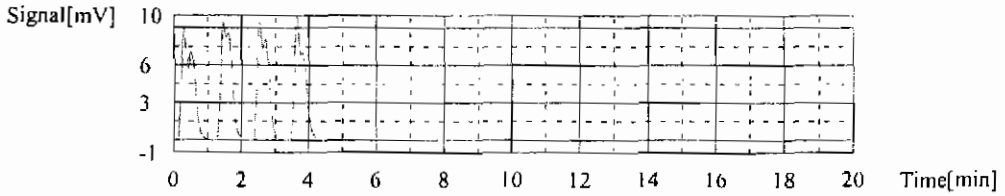


Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	20.58	50uL	1	*******		11/10/11 06:57:26 PM
2	20.68	50uL	1	*******		11/10/11 06:58:42 PM
3	20.86	50uL	1	*******		11/10/11 06:59:59 PM
4	20.65	50uL	1	*******		11/10/11 07:01:19 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 20.69

$\frac{\bar{A}}{m} = \frac{20.69}{2.118} = 9.769$

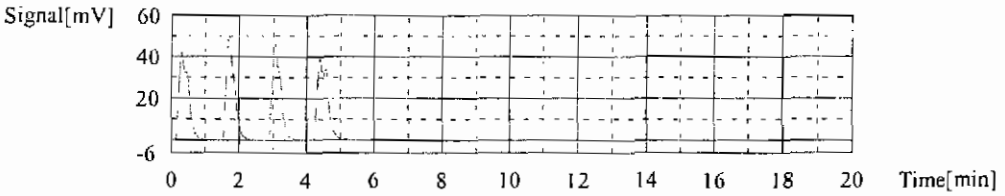


Conc: 40.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	81.82	50uL	2	*******		11/10/11 07:09:54 PM
2	83.76	50uL	2	*******		11/10/11 07:11:26 PM
3	83.55	50uL	2	*******		11/10/11 07:12:58 PM
4	84.36	50uL	2	*******		11/10/11 07:14:37 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 83.37

$\frac{\bar{A}}{m} = \frac{83.37}{2.118} = 39.36$

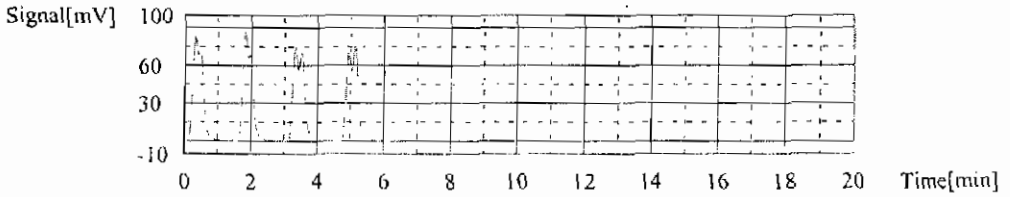


Conc: 80.00mg/L

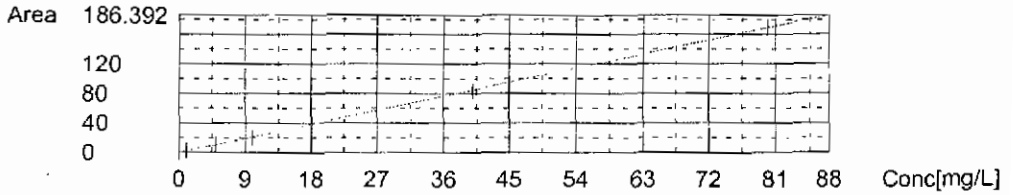
No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	168.2	50uL	1	*******		11/10/11 07:20:41 PM
2	170.1	50uL	1	*******		11/10/11 07:22:23 PM
3	171.2	50uL	1	*******		11/10/11 07:24:11 PM
4	169.3	50uL	1	*******		11/10/11 07:25:56 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 169.7

$\frac{\bar{A}}{m} = \frac{169.7}{2.118} = 80.12$



Slope: 2.118
Intercept 0.000
r^2 0.999926



8196

Control Sample

Sample Name: ICV
Sample ID: TCK006-02
Method: TCK006.tpl
Chk. Result Control value: 25.92 / Control exceeds range!

Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:25.92 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.31	25.64mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 07:34:10 PM
2	55.03	25.98mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 07:35:55 PM
3	55.23	26.08mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 07:37:40 PM
4	55.01	25.97mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 07:39:21 PM

Mean Area 54.89
Mean Conc. 25.92mg/L

Sample

Sample Name: ICB
Sample ID: TCK006-03
Origin: TCK006.cal
Chk. Result

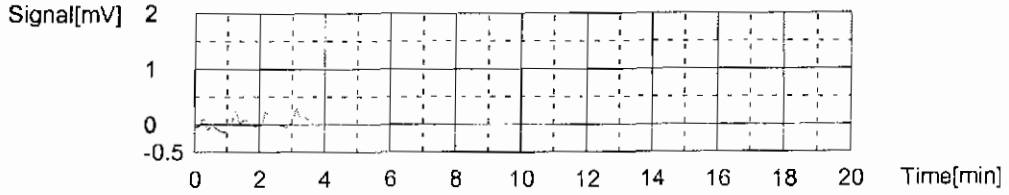
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1709 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2093	0.09882mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 07:46:52 PM
2	0.3876	0.1830mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 07:47:59 PM
3	0.4114	0.1942mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 07:49:07 PM
4	0.4397	0.2076mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 07:50:15 PM

Mean Area 0.3620
Mean Conc. 0.1709mg/L



8197

Sample

Sample Name: HCO3\CO3
Sample ID: TCK006-04
Origin: TCK006.cal
Chk. Result

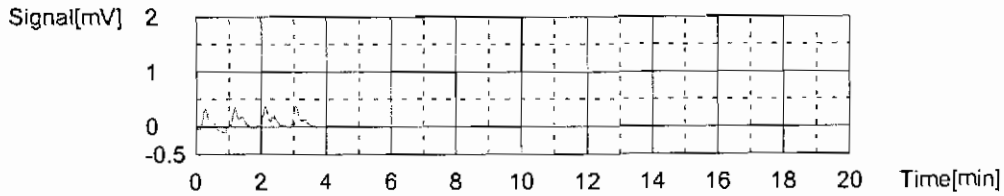
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.2802 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.5418	0.2558mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 07:57:40 PM
2	0.6198	0.2926mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 07:58:48 PM
3	0.5852	0.2763mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 07:59:55 PM
4	0.6268	0.2959mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 08:01:03 PM

Mean Area 0.5934
Mean Conc. 0.2802mg/L



Sample

Sample Name: TCK006WB
Sample ID: TCK006-05
Origin: TCK006.cal
Chk. Result

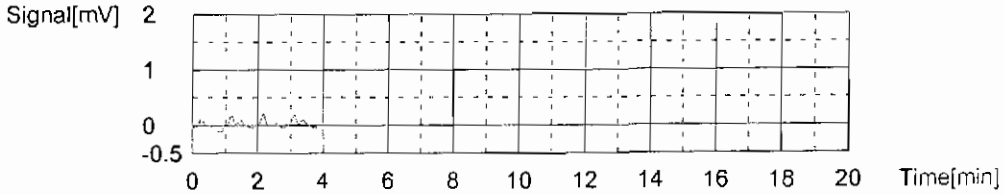
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1457 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2641	0.1247mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 08:08:27 PM
2	0.3212	0.1516mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 08:09:36 PM
3	0.3318	0.1567mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 08:10:44 PM
4	0.3174	0.1499mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 08:11:53 PM

Mean Area 0.3086
Mean Conc. 0.1457mg/L



Sample

Sample Name: TCK006WL
Sample ID: TCK006-06
Origin: TCK006.cal
Chk. Result

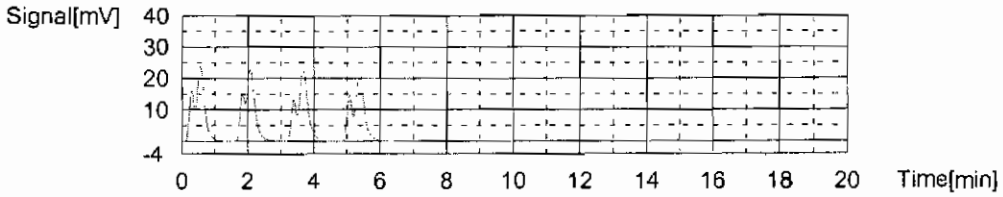
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:26.16 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.07	26.00mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 08:19:53 PM
2	55.34	26.13mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 08:21:38 PM
3	55.03	25.98mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 08:23:30 PM
4	56.21	26.54mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 08:25:19 PM

Mean Area 55.41
Mean Conc. 26.16mg/L



Sample

Sample Name: TCK006WC
Sample ID: TCK006-07
Origin: TCK006.cal
Chk. Result

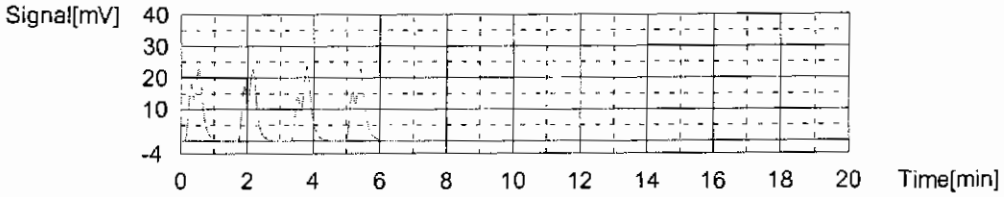
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:26.33 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.27	26.09mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 08:33:25 PM
2	55.81	26.35mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 08:35:13 PM
3	55.94	26.41mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 08:37:03 PM
4	56.08	26.48mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 08:38:53 PM

Mean Area 55.78
Mean Conc. 26.33mg/L



Sample

Sample Name: K706-01
Sample ID: TCK006-08
Origin: TCK006.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:5.360 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.18	5.278mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 08:46:31 PM
2	11.25	5.311mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 08:47:48 PM
3	11.46	5.411mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 08:49:03 PM
4	11.52	5.439mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 08:50:17 PM

Mean Area 11.35
Mean Conc. 5.360mg/L

Sample

Sample Name: K706-01D
Sample ID: TCK006-09
Origin: TCK006.cal
Chk. Result

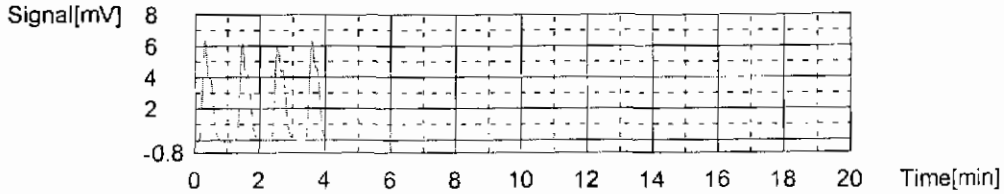
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:5.315 mg/L

1. Det

Anal.. NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.08	5.231mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 08:57:55 PM
2	11.30	5.335mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 08:59:11 PM
3	11.39	5.377mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:00:25 PM
4	11.26	5.316mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:01:41 PM

Mean Area 11.26
Mean Conc. 5.315mg/L



Sample

Sample Name: K706-01M
Sample ID: TCK006-10
Origin: TCK006.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:31.67 mg/L

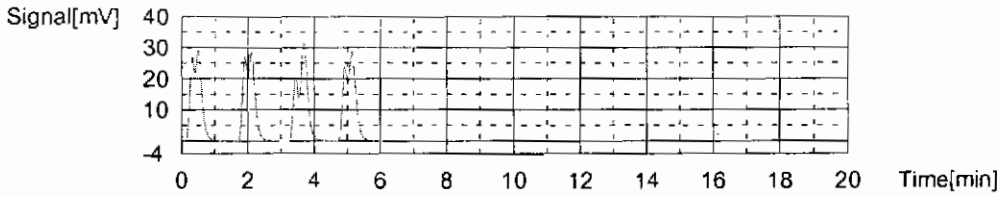
8209

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	66.60	31.44mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:09:46 PM
2	66.86	31.57mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:11:30 PM
3	68.15	32.18mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:13:10 PM
4	66.75	31.51mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:14:48 PM

Mean Area 67.09
Mean Conc. 31.67mg/L



Sample

Sample Name: K706-01S
Sample ID: TCK006-11
Origin: TCK006.cal
Chk. Result

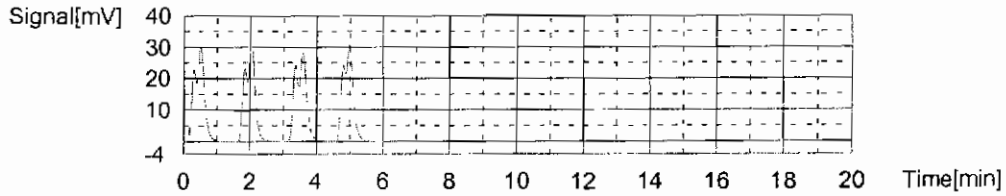
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:31.59 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	66.07	31.19mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:22:48 PM
2	66.94	31.60mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:24:31 PM
3	67.45	31.84mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:26:08 PM
4	67.19	31.72mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:27:50 PM

Mean Area 66.91
Mean Conc. 31.59mg/L



Sample

Sample Name: K430-01
Sample ID: TCK006-12
Origin: TCK006.cal
Chk. Result

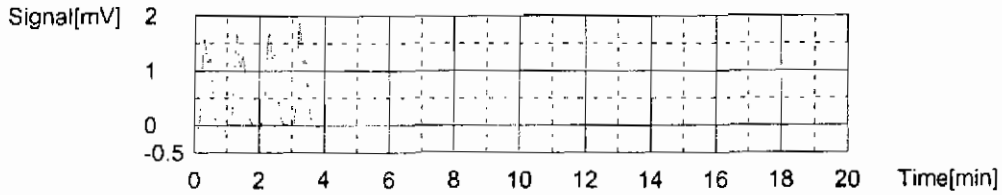
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.501 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.025	1.428mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:35:18 PM
2	3.212	1.516mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:36:29 PM
3	3.239	1.529mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:37:37 PM
4	3.244	1.532mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:38:47 PM

Mean Area 3.180
Mean Conc. 1.501mg/L



Sample

Sample Name: K430-02
Sample ID: TCK006-13
Origin: TCK006.cal
Chk. Result

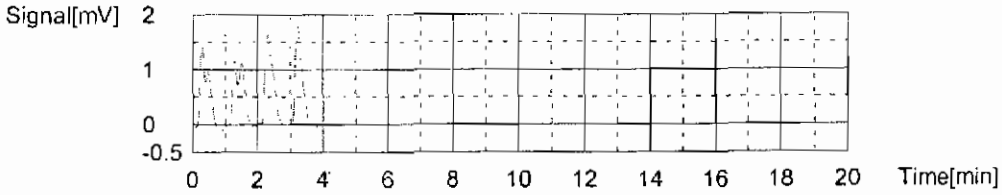
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.299 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.762	1.304mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:46:16 PM
2	2.712	1.280mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:47:27 PM
3	2.774	1.310mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:48:33 PM
4	2.758	1.302mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:49:38 PM

Mean Area 2.752
Mean Conc. 1.299mg/L



Control Sample

Sample Name: CCV1
Sample ID: TCK006-14
Method: TCK006.tpl
Chk. Result Control value: 26.26 / Control exceeds range!

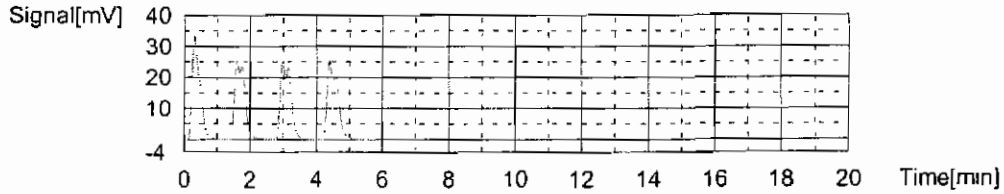
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:26.26 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.25	26.08mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:57:23 PM
2	55.39	26.15mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 09:58:57 PM
3	56.04	26.46mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:00:33 PM
4	55.77	26.33mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:02:09 PM

Mean Area 55.61
Mean Conc. 26.26mg/L



Sample

Sample Name: CCB1
Sample ID: TCK006-15
Origin: TCK006.cal
Chk. Result

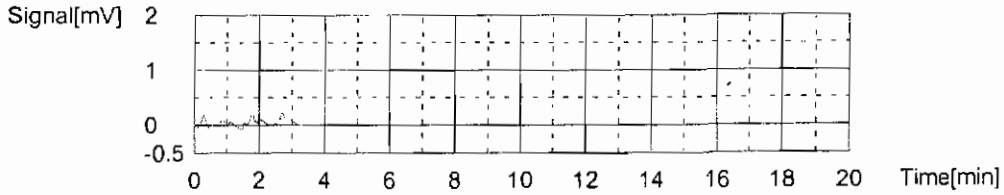
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1063 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1569	0.07408mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:09:13 PM
2	0.2304	0.1088mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:10:18 PM
3	0.2398	0.1132mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:11:25 PM
4	0.2733	0.1290mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:12:28 PM

Mean Area 0.2251
Mean Conc. 0.1063mg/L



Sample

Sample Name: K430-03
Sample ID: TCK006-16
Origin: TCK006.cal
Chk. Result

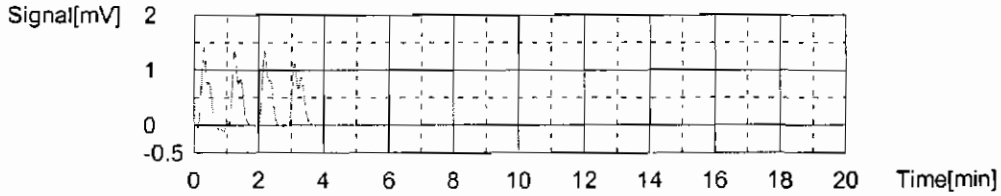
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.099 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.354	1.111mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:19:53 PM
2	2.300	1.086mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:21:00 PM
3	2.319	1.095mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:22:06 PM
4	2.335	1.102mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:23:16 PM

Mean Area 2.327
Mean Conc. 1.099mg/L



Sample

Sample Name: K035-01T
Sample ID: TCK006-17
Origin: TCK006.cal
Chk. Result

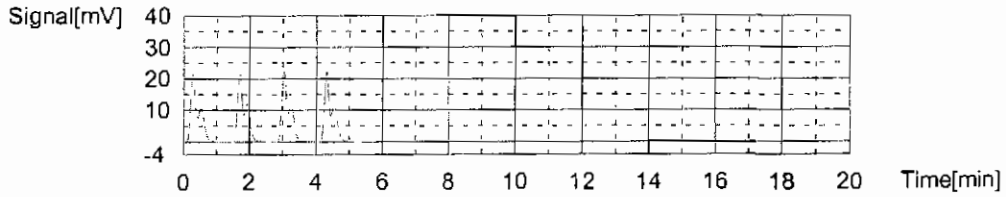
Type	Anal.	Dil.	Result
Unknown	NPOC	10.00	NPOC:174.5 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil	Ex.	Cal. Curve	Date / Time
1	36.72	173.4mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:31:09 PM
2	36.88	174.1mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:32:40 PM
3	37.31	176.1mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:34:08 PM
4	36.95	174.4mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:35:38 PM

Mean Area 36.97
Mean Conc. 174.5mg/L



Sample

Sample Name: K070-01
Sample ID: TCK006-18
Origin: TCK006.cal
Chk. Result

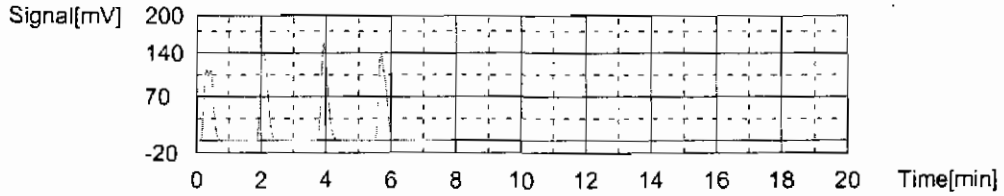
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:106.3 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	221.7	104.7mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:43:50 PM
2	225.7	106.6mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:45:54 PM
3	226.2	106.8mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:47:51 PM
4	227.4	107.4mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:49:52 PM

Mean Area 225.3
Mean Conc. 106.3mg/L



Sample

Sample Name: K070-02
Sample ID: TCK006-19
Origin: TCK006.cal
Chk. Result

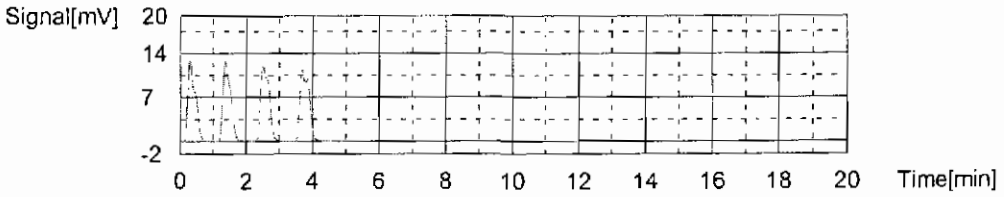
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:10.29 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	21.26	10.04mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:57:24 PM
2	21.27	10.04mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 10:58:43 PM
3	22.35	10.55mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:00:05 PM
4	22.31	10.53mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:01:24 PM

Mean Area 21.80
Mean Conc. 10.29mg/L



Sample

Sample Name: K070-03
Sample ID: TCK006-20
Origin: TCK006.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.529 mg/L

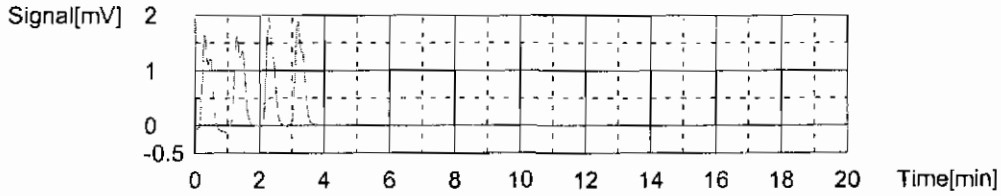
1. Det

Anal.: NPOC

8205

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.175	1.499mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:08:51 PM
2	3.189	1.506mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:10:01 PM
3	3.249	1.534mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:11:06 PM
4	3.345	1.579mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:12:12 PM

Mean Area 3.240
Mean Conc. 1.529mg/L



Sample

Sample Name: K070-04
Sample ID: TCK006-21
Origin: TCK006.cal
Chk. Result

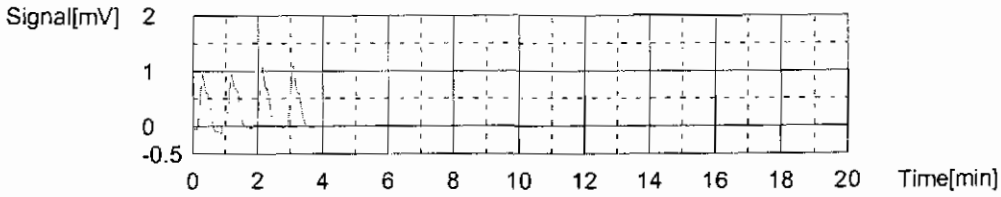
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.8240 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.677	0.7918mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:19:33 PM
2	1.705	0.8050mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:20:41 PM
3	1.766	0.8338mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:21:49 PM
4	1.833	0.8654mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:22:57 PM

Mean Area 1.745
Mean Conc. 0.8240mg/L



Sample

Sample Name: K070-05
Sample ID: TCK006-22
Origin: TCK006.cal
Chk. Result

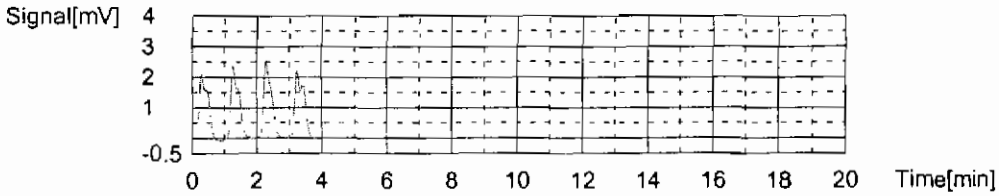
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.951 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.890	1.837mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:30:23 PM
2	4.136	1.953mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:31:35 PM
3	4.159	1.964mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:32:44 PM
4	4.344	2.051mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:33:56 PM

Mean Area 4.132
Mean Conc. 1.951mg/L



Sample

Sample Name: K070-06
Sample ID: TCK006-23
Origin: TCK006.cal
Chk. Result

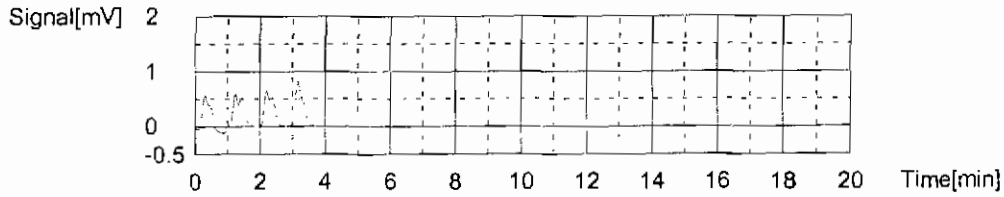
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.5709 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.095	0.5170mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:41:21 PM
2	1.206	0.5694mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:42:29 PM
3	1.291	0.6095mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:43:38 PM
4	1.245	0.5878mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:44:40 PM

Mean Area 1.209
Mean Conc. 0.5709mg/L



Control Sample

Sample Name: CCV2
Sample ID: TCK006-24
Method: TCK006.tpl
Chk. Result Control value: 26.38 / *Control exceeds range!*

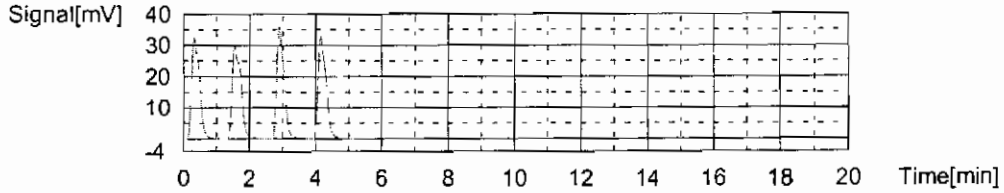
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:26.38 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.70	26.30mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:52:22 PM
2	55.44	26.17mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:53:53 PM
3	56.35	26.60mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:55:19 PM
4	56.02	26.45mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 11:56:53 PM

Mean Area 55.88
Mean Conc. 26.38mg/L



Sample

Sample Name: CCB2
Sample ID: TCK006-25
Origin: TCK006.cal
Chk. Result

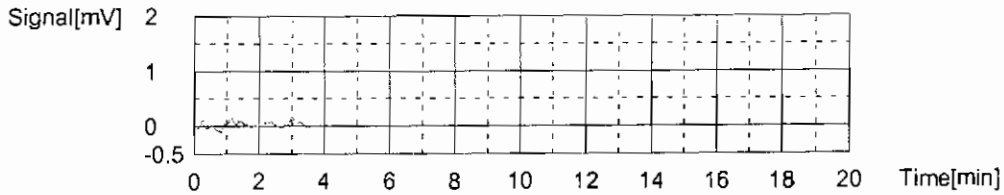
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1086 mg/L

1 Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2262	0.1068mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/11/11 12:04:13 AM
2	0.2475	0.1169mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/11/11 12:05:21 AM
3	0.2645	0.1249mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/11/11 12:06:26 AM
4	0.1820	0.08593mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/11/11 12:07:28 AM

Mean Area 0.2300
Mean Conc. 0.1086mg/L



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CLIENT: **INSIGHT EEC, INC.**

PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11K063**

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** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 12-02-2011
EMAX Batch No.: 11K063

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 11/07/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW-70-PMW03A-095	K063-01	11/07/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-PMW03B-097	K063-02	11/07/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IW-70-SAB06-099	K063-03	11/07/11	WATER	ANIONS BY IC

Sample ID	Control #	Col Date	Matrix	Analysis
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-PMW02A-100	K063-04	11/07/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-PMW02B-101	K063-05	11/07/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IR-70-FD-098	K063-06	11/07/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IR-70-TB-096	K063-07	11/07/11	WATER	VOLATILE ORGANICS BY GC/MS
MW-70-PMW03B-097MS	K063-02M	11/07/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC

Sample ID	Control #	Col Date	Matrix	Analysis
MW-70-PMW03B-097MSD	K063-02S	11/07/11	WATER	TOTAL ORGANIC CARBON DISSOLVED GAS DISSOLVED METALS BY ICP VOLATILE ORGANICS BY GC/MS
MW-70-PMW03B-097DUP	K063-02D	11/07/11	WATER	TOTAL ORGANIC CARBON ANIONS BY IC ORGANIC ACIDS BY IC ALKALINITY TOTAL DISSOLVED SOLIDS DISSOLVED HYDROGEN SULFIDE

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011068-8042
SAMPLE STORAGE
EMAX CONTROL NO. * 11K063
PROJECT CODE: 4-77101

CLIENT: INSIGHT ERC, INC.
PROJECT: IR SITE 70 NWS-SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 714 678 6700 FAX: 714 678 6711 EMAIL: NWEINBERGER@ERCI.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT ERC, INC.
ADDRESS: 3010 E. MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: G. Hunt

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: VOCs - EPA 8260B; DISS GASSES - RSK-175; WET CHEM; TDC - SM 5310B; SULFIDE - SM4500F; DISS METALS - EPA 6010B; DISS GASSES - RSK-175; VOCs - EPA 8260B

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	HC	HC	NP	HC	ZN/ZA	HN	NP	NP	COMMENTS
1	MW-70-PMW03A-095	IR SITE 70 NWS-SB	11-7-11	1042	10	VARIOUS	VARIOUS	GW	IV	[illegible]	[illegible]	X	X	X	X	X	X	EFFLUENT WELL
2	MW-70-PMW03B-097	IR SITE 70 NWS-SB	11-7-11	1208	20	VARY	VARY	GW	III	X	X	X	X	X	X			MS/MSD
3	IW-70-SAB06-099	IR SITE 70 NWS-SB	11-7-11	1430	10	VARY	VARY	GW	IV	X	X	X	X	X	X			
4	MW-70-PMW02A-100	IR SITE 70 NWS-SB	11-7-11	1542	10	VARY	VARY	GW	III	X	X	X	X	X	X			
5	MW-70-PMW02B-101	IR SITE 70 NWS-SB	11-7-11	1627	10	VARY	VARY	GW	III	X	X	X	X	X	X			
6																		
7																		
8																		
9	IR-70-FD-098	IR SITE 70 NWS-SB	11-7-11	1225	10	VARIOUS	VARIOUS	GW	III	X	X	X	X	X	X			DUPLICATE
10	IR-70-TB-096	IR SITE 70 NWS-SB	11-7-11	1100	2	40mL	VOA	GW	III	X								TRIP BLANK

Instructions: WET CHEM ANALYSIS AS FOLLOWS: ANIONS-EPA 300.0; VFA's-EPA 300.0M; TDS-SM 2540C; ALKALINITY - SM 2320 B. UNLESS NOTED OTHERWISE IN COMMENTS.

Cooler #: 1 Temp. (°C): 2.6

Sample #s

SAMPLER: CHASE BRAGDON

COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-7-11	1745	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11K063
☐ EMAX Courier		Recepient J-LUNA
☑ Client Delivery	SEE COC	Date 11-7-11
☐ Third Party		Time 1745

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☑ Preservative (if any)	☑ TAT

Safety Issues ☑ None ☐ High concentrations expected ☐ Superfund Site samples ☐ Rad screening required

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☑ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	A ☑ Cooler 1 2.6 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C

Thermometer: *A - S/N 101541371* *B - S/N 101541382*

Comments: ☐ **PM was informed on non-compliant coolers immediately.**

Note: **pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code

REVIEWS

Sample Labeling [signature] Date 11/7/11 | CB

SFE [signature] Date 11/7/11

PM [signature] for YL Date 11/8/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4	_____	E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	_____
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	_____
B3	Sample ID is inconsistent in COC vis-à-vis label	F2	Bubble is> 6mm		
B4	_____	G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	_____		
C4	_____	H2	_____		

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11K063

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K063

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of seven (7) water samples were received on 11/07/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, three (3) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary form for details.

Lab Control Sample
Three (3) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for VO01K14L/C were all within QC limits.
Percent recoveries for VO01K16L/C were all within QC limits.
Percent recoveries for VO01K20L/C were all within QC limits.

Matrix QC Sample
A set of MS/MSD was analyzed with the samples in this SDG.
Percent recoveries for K063-02M/S were within project QC limits.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K063
Instrument ID : T-001

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V001K14B	1	NA	11/14/1111:14	11/14/1111:14	RKV300	RJV602	V001K14	Method Blank
LCS1W	V001K14L	1	NA	11/14/1109:41	11/14/1109:41	RKV297	RJV602	V001K14	Lab Control Sample (LCS)
LCD1W	V001K14C	1	NA	11/14/1110:12	11/14/1110:12	RKV298	RJV602	V001K14	LCS Duplicate
MW-70-PMW03A-095	K063-01R	1	NA	11/14/1111:46	11/14/1111:46	RKV301	RJV602	V001K14	Field Sample
MW-70-PMW03B-097	K063-02R	1	NA	11/14/1116:59	11/14/1116:59	RKV311	RJV602	V001K14	Field Sample
MW-70-PMW03B-097MS	K063-02M	1	NA	11/14/1117:30	11/14/1117:30	RKV312	RJV602	V001K14	Matrix Spike Sample (MS)
MW-70-PMW03B-097MSD	K063-02S	1	NA	11/14/1118:01	11/14/1118:01	RKV313	RJV602	V001K14	MS Duplicate (MSD)
MW-70-PMW03B-097DL	K063-02T	50	NA	11/14/1120:36	11/14/1120:36	RKV318	RJV602	V001K14	Diluted Sample
MBLK2W	V001K16B	1	NA	11/15/1122:04	11/15/1122:04	RKV352	RJV602	V001K16	Method Blank
LCS2W	V001K16L	1	NA	11/15/1120:39	11/15/1120:39	RKV349	RJV602	V001K16	Lab Control Sample (LCS)
LCD2W	V001K16C	1	NA	11/15/1121:07	11/15/1121:07	RKV350	RJV602	V001K16	LCS Duplicate
MW-70-PMW02A-100DL	K063-04T	10	NA	11/15/1122:32	11/15/1122:32	RKV353	RJV602	V001K16	Diluted Sample
MW-70-PMW02B-101DL	K063-05T	50	NA	11/15/1122:59	11/15/1122:59	RKV354	RJV602	V001K16	Diluted Sample
MW-70-PMW02A-100	K063-04R	1	NA	11/15/1123:27	11/15/1123:27	RKV355	RJV602	V001K16	Field Sample
MW-70-PMW02B-101	K063-05R	1	NA	11/15/1123:55	11/15/1123:55	RKV356	RJV602	V001K16	Field Sample
IR-70-FD-098	K063-06	1	NA	11/16/1100:24	11/16/1100:24	RKV357	RJV602	V001K16	Field Sample
IR-70-TB-096	K063-07	1	NA	11/16/1100:52	11/16/1100:52	RKV358	RJV602	V001K16	Field Sample
MBLK3W	V001K20Q	1	NA	11/18/1112:36	11/18/1112:36	RKV450	RJV602	V001K20	Method Blank
LCS3W	V001K20L	1	NA	11/18/1109:19	11/18/1109:19	RKV443	RJV602	V001K20	Lab Control Sample (LCS)
LCD3W	V001K20C	1	NA	11/18/1109:47	11/18/1109:47	RKV444	RJV602	V001K20	LCS Duplicate
IW-70-SAB06-099	K063-03N	1	NA	11/18/1111:40	11/18/1111:40	RKV448	RJV602	V001K20	Field Sample
IR-70-FD-098DL	K063-06T	50	NA	11/18/1113:19	11/18/1113:19	RKV451	RJV602	V001K20	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/14/11 11:46
Sample ID:	MW-70-PMW03A-095	Date Analyzed:	11/14/11 11:46
Lab Samp ID:	K063-01R	Dilution Factor:	1
Lab File ID:	RKV301	Matrix	: WATER
Ext Btch ID:	V001K14	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.34J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	0.43J	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	0.73J	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	0.82J	1.0	0.20
TRICHLOROETHENE	0.42J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	0.67	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.80	10.00	98.0	70-140
4-BROMOFLUOROBENZENE	11.7	10.00	117	70-130
TOLUENE-D8	10.6	10.00	106	70-140

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV301.D Vial: 7
Acq On : 14 Nov 2011 11:46 am Operator: MW
Sample : 11K063-01R 25mL Inst : TO01
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 12:07 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

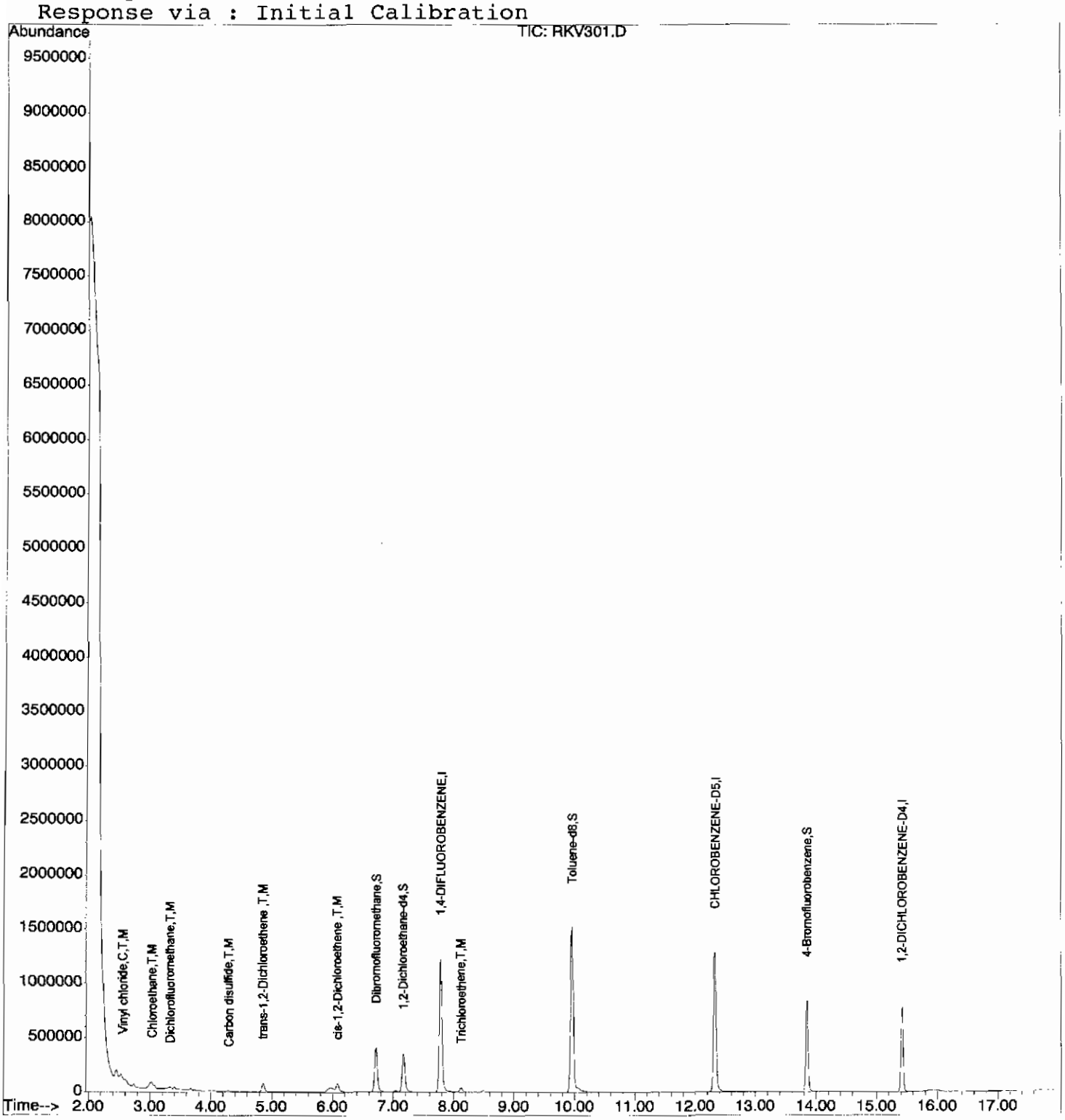
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.79	114	1523058	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.33	117	1182492	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	310199	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.72	111	411455	9.87	ug/l	0.00
Spiked Amount 10.000			Recovery	=	98.70%	
35) 1,2-Dichloroethane-d4	7.16	65	436154	9.80	ug/l	0.00
Spiked Amount 10.000			Recovery	=	98.00%	
49) Toluene-d8	9.96	98	1734540	10.60	ug/l	0.00
Spiked Amount 10.000			Recovery	=	106.00%	
69) 4-Bromofluorobenzene	13.85	95	445640	11.66	ug/l	0.00
Spiked Amount 10.000			Recovery	=	116.60%	
Target Compounds						Qvalue
5) Vinyl chloride	2.56	62	47357	0.67	ug/l	82
8) Chloroethane	3.04	64	18537	0.43	ug/l #	63
9) Dichlorofluoromethane	3.33	67	39025	0.36	ug/l	88
16) Carbon disulfide	4.29	76	55267	0.34	ug/l	97
21) trans-1,2-Dichloroethene	4.86	61	83719	0.82	ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	41971	0.73	ug/l	89
41) Trichloroethene	8.13	130	21860	0.42	ug/l	97

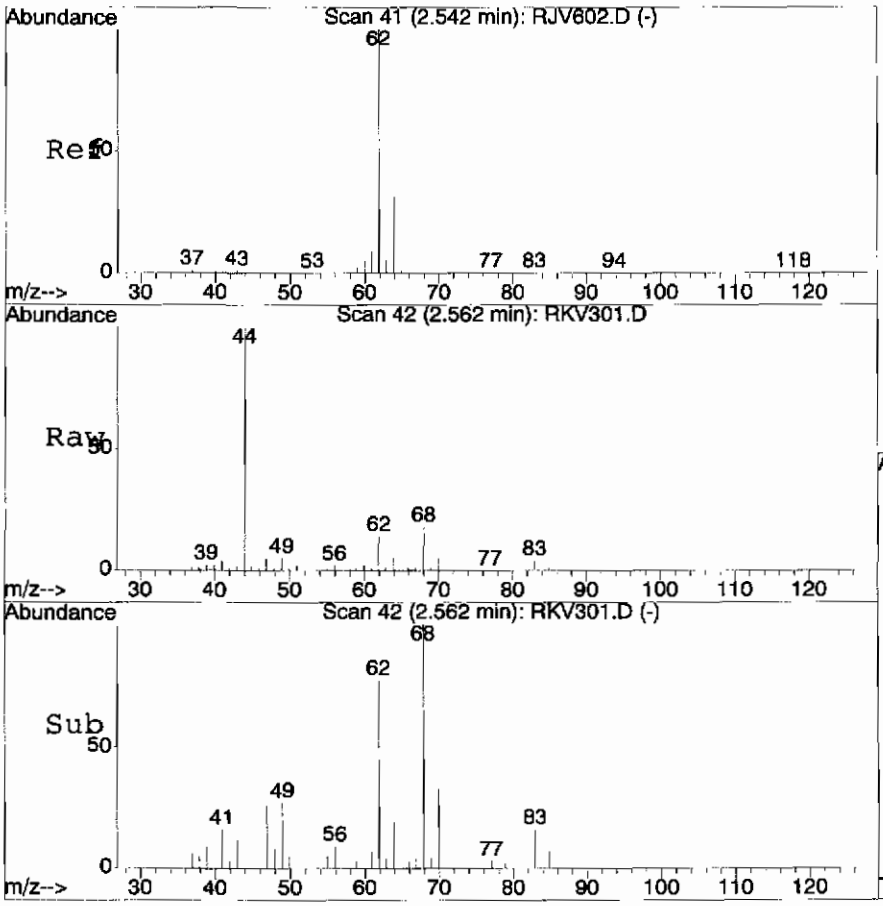
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV301.D Vial: 7
Acq On : 14 Nov 2011 11:46 am Operator: MW
Sample : 11K063-01R 25mL Inst : TO01
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 12:07 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration

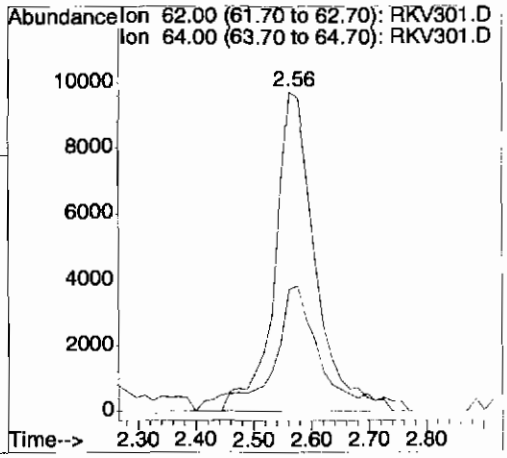


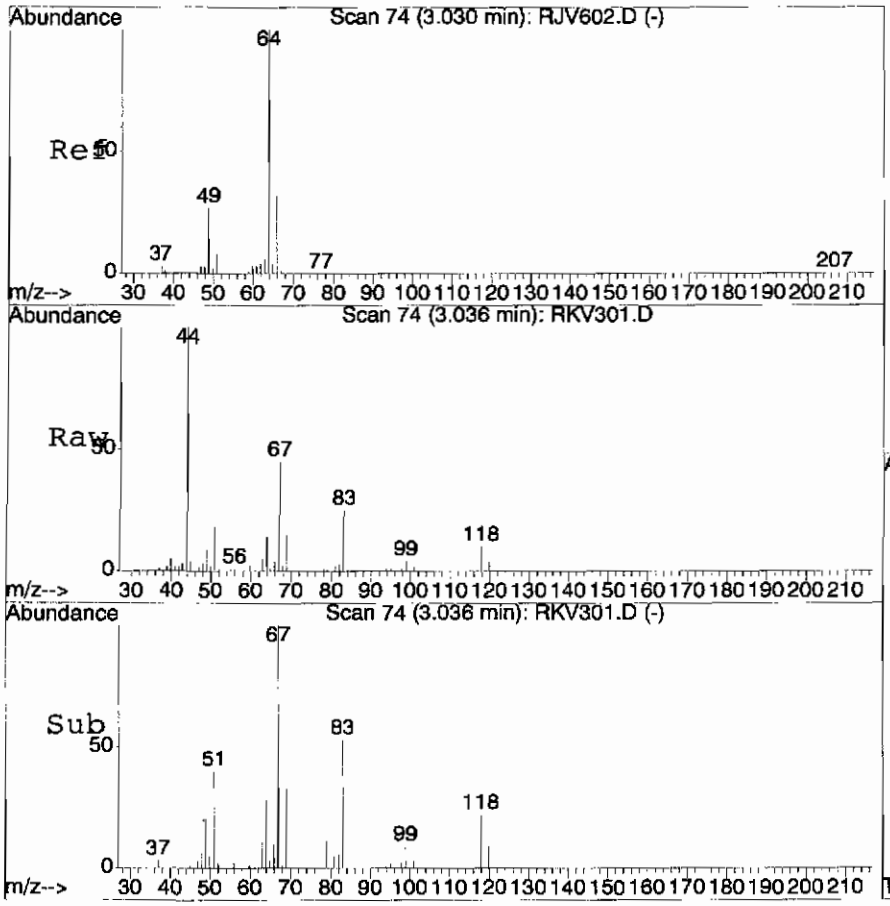


#5
Vinyl chloride
Concen: 0.67 ug/l
RT: 2.56 min Scan# 42
Delta R.T. 0.02 min
Lab File: RKV301.D
Acq: 14 Nov 2011 11:46 am

Tgt Ion: 62 Resp: 47357

Ion	Ratio	Lower	Upper
62	100		
64	47.9	7.2	67.2

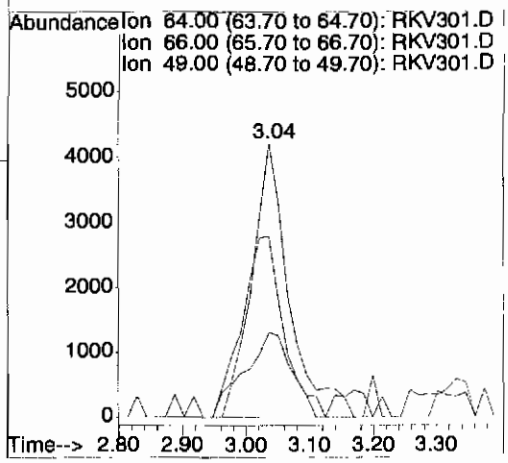


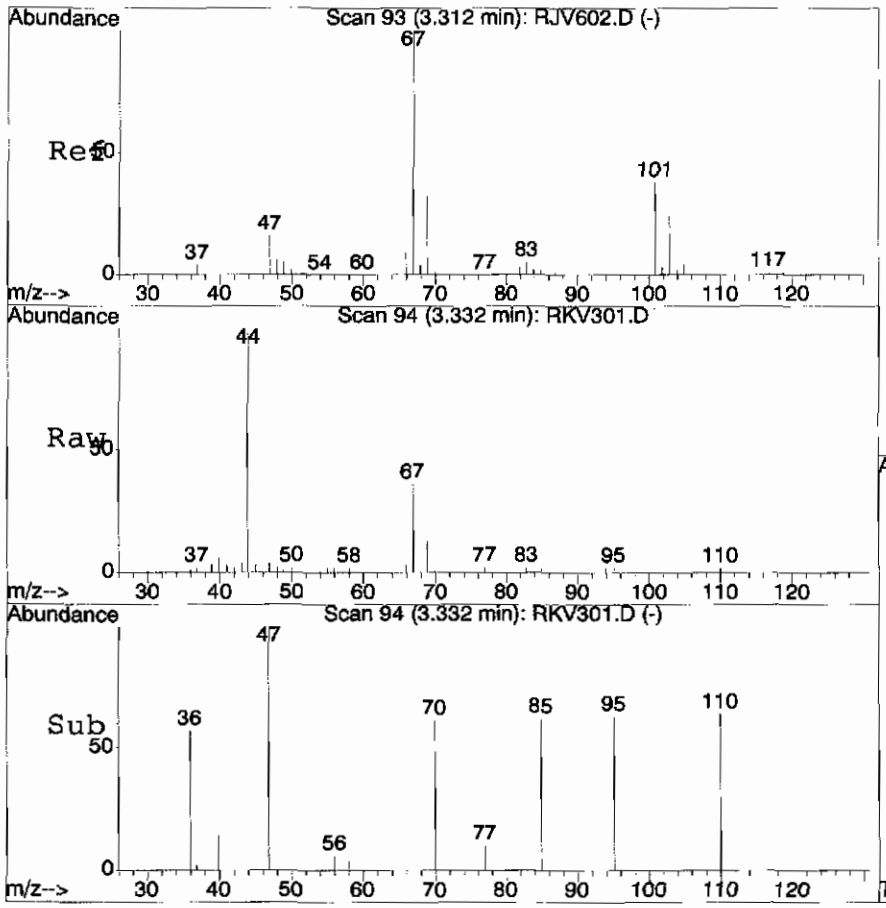


#8
Chloroethane
Concen: 0.43 ug/l
RT: 3.04 min Scan# 74
Delta R.T. 0.01 min
Lab File: RKV301.D
Acq: 14 Nov 2011 11:46 am

Tgt Ion: 64 Resp: 18537

Ion	Ratio	Lower	Upper
64	100		
66	36.1	3.4	63.4
49	67.4	0.0	57.3#

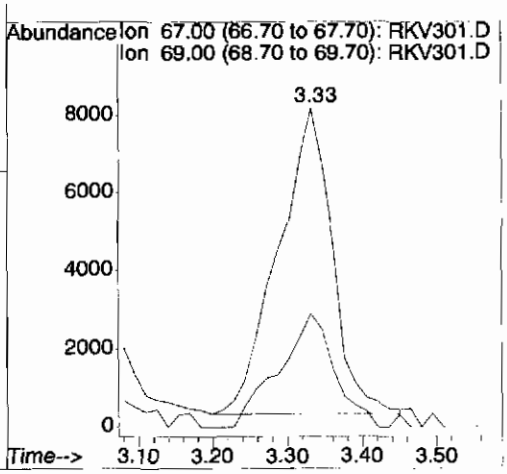


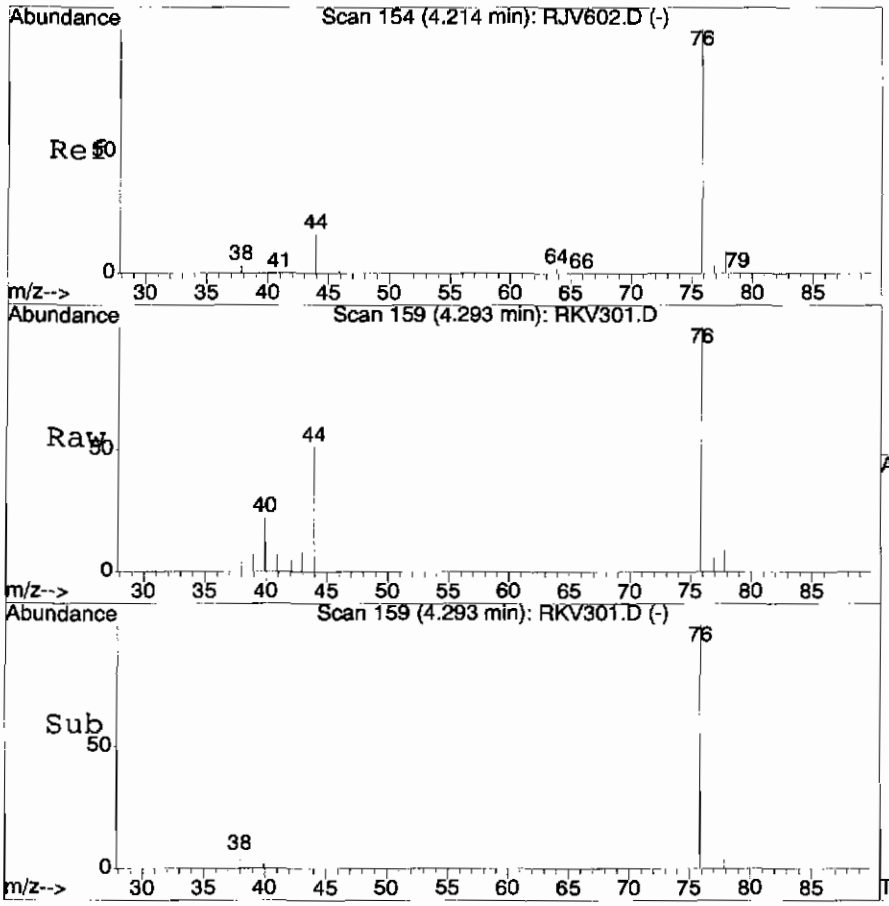


#9
Dichlorofluoromethane
Concen: 0.36 ug/l
RT: 3.33 min Scan# 94
Delta R.T. 0.02 min
Lab File: RKV301.D
Acq: 14 Nov 2011 11:46 am

Tgt Ion: 67 Resp: 39025

Ion	Ratio	Lower	Upper
67	100		
69	38.0	1.6	61.6

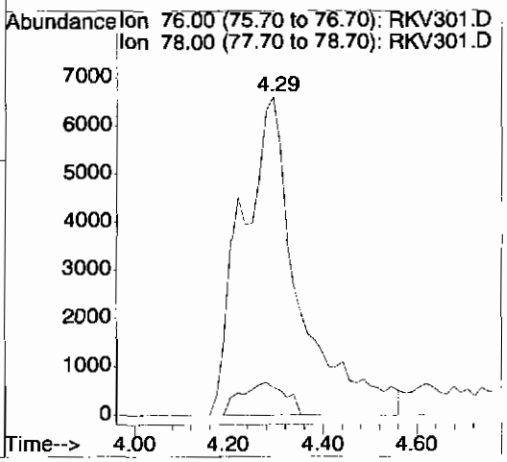


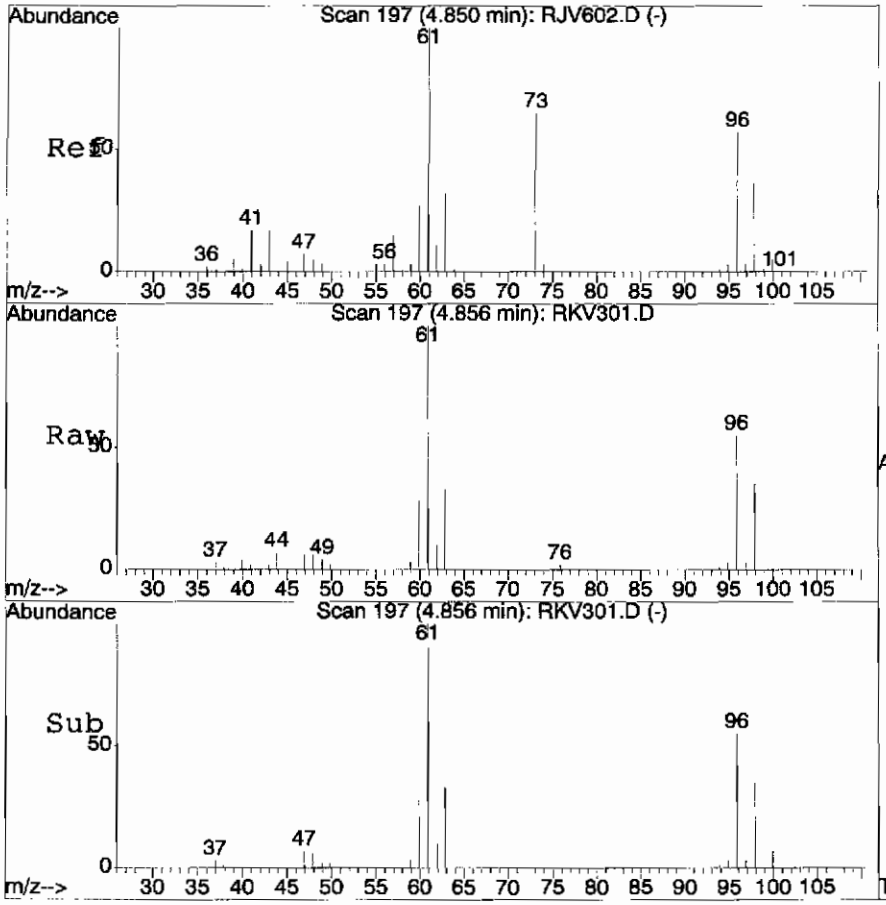


#16
Carbon disulfide
Concen: 0.34 ug/l
RT: 4.29 min Scan# 159
Delta R.T. 0.08 min
Lab File: RKV301.D
Acq: 14 Nov 2011 11:46 am

Tgt Ion: 76 Resp: 55267

Ion	Ratio	Lower	Upper
76	100		
78	8.0	0.0	38.9

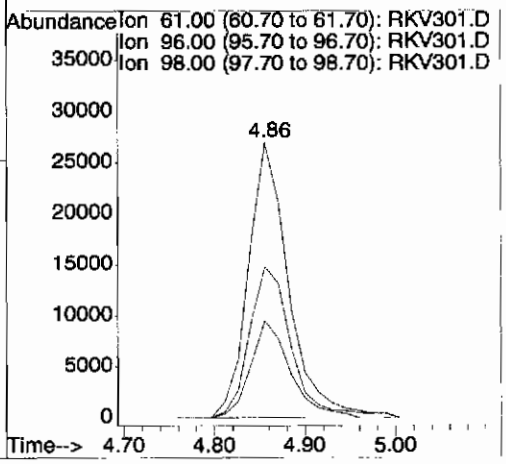


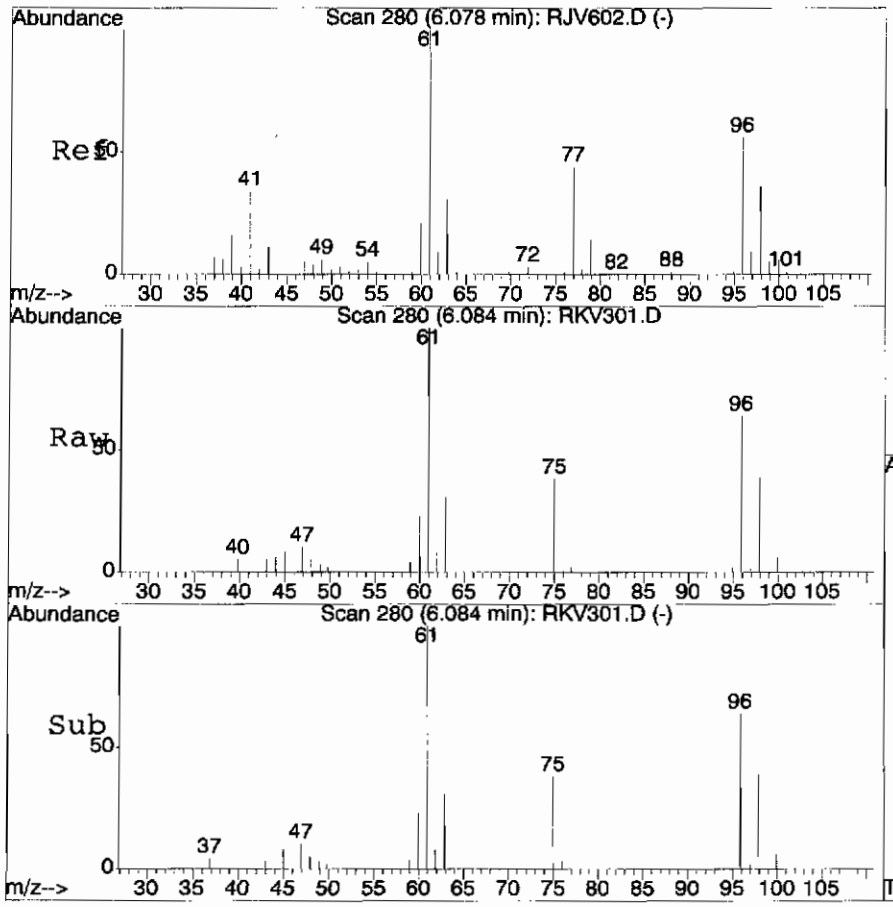


#21
trans-1,2-Dichloroethene
Concen: 0.82 ug/l
RT: 4.86 min Scan# 197
Delta R.T. 0.01 min
Lab File: RKV301.D
Acq: 14 Nov 2011 11:46 am

Tgt Ion: 61 Resp: 83719

Ion	Ratio	Lower	Upper
61	100		
96	57.0	26.1	86.1
98	34.5	5.2	65.2

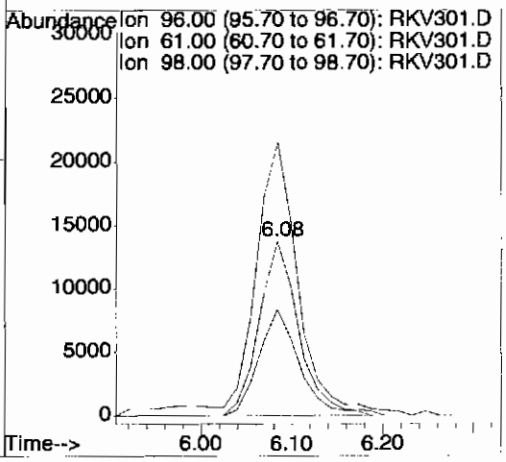


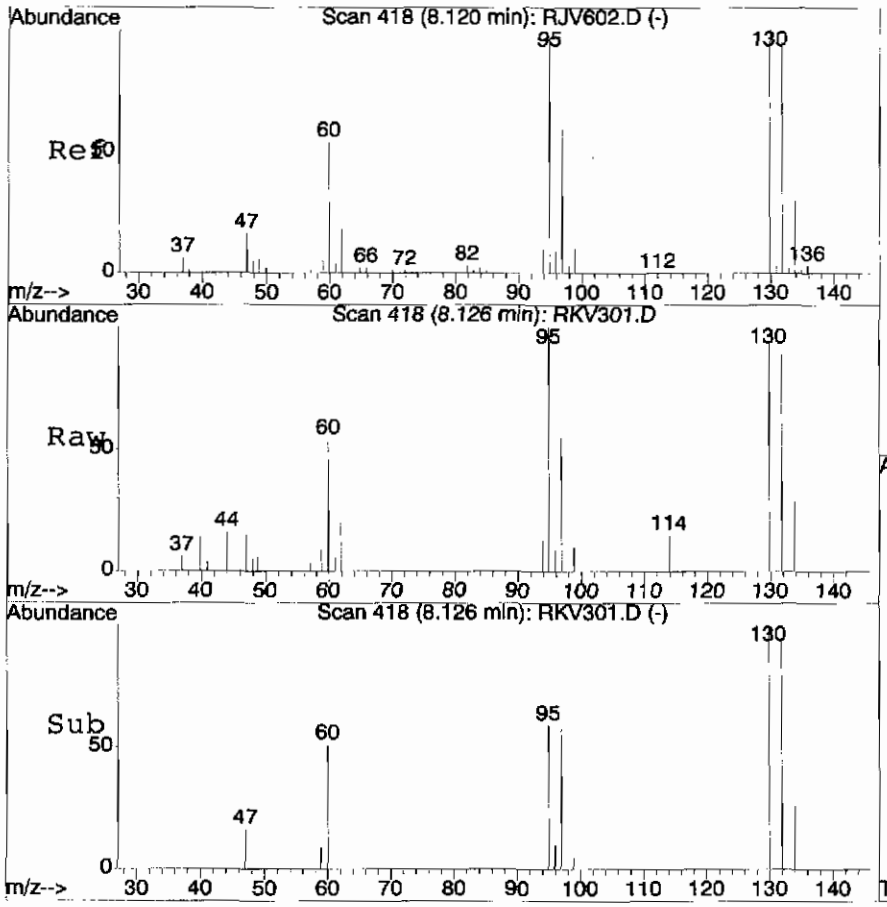


#28
cis-1,2-Dichloroethene
Concen: 0.73 ug/l
RT: 6.08 min Scan# 280
Delta R.T. 0.01 min
Lab File: RKV301.D
Acq: 14 Nov 2011 11:46 am

Tgt Ion: 96 Resp: 41971

Ion	Ratio	Lower	Upper
96	100		
61	166.7	157.0	217.0
98	61.5	33.8	93.8

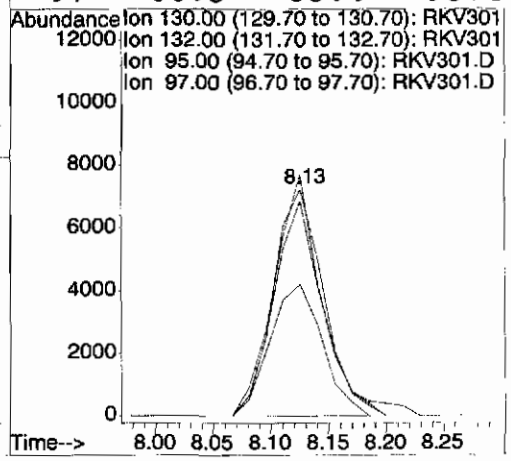




#41
Trichloroethene
Concen: 0.42 ug/l
RT: 8.13 min Scan# 418
Delta R.T. 0.01 min
Lab File: RKV301.D
Acq: 14 Nov 2011 11:46 am

Tgt Ion:130 Resp: 21860

Ion	Ratio	Lower	Upper
130	100		
132	91.7	64.6	124.6
95	102.8	69.6	129.6
97	60.5	33.4	93.4



METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/14/11 16:59
Sample ID:	MW-70-PMW03B-097	Date Analyzed:	11/14/11 16:59
Lab Samp ID:	K063-02R	Dilution Factor:	1
Lab File ID:	RKV311	Matrix :	WATER
Ext Btch ID:	V001K14	% Moisture :	NA
Calib. Ref.:	RJV602	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.65J	1.0	0.20
1,1-DICHLOROETHENE	4.0	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	530E	1.0	0.20
DICHLORODIFLUOROMETHANE	0.63J	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	8.6	1.0	0.20
TRICHLOROETHENE	8.3	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	83	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.5	10.00	105	70-140
4-BROMOFLUOROBENZENE	11.9	10.00	119	70-130
TOLUENE-D8	10.3	10.00	103	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/07/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/07/11
Batch No. : 11K063	Date Extracted: 11/14/11 20:36
Sample ID: MW-70-PMW03B-097DL	Date Analyzed: 11/14/11 20:36
Lab Samp ID: K063-02T	Dilution Factor: 50
Lab File ID: RKV318	Matrix : WATER
Ext Btch ID: V001K14	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	50	10
1,1,1,2-TETRACHLOROETHANE	ND	50	10
1,1,2,2-TETRACHLOROETHANE	ND	50	10
1,1,2-TRICHLOROETHANE	ND	50	10
FREON113	ND	50	15
1,1-DICHLOROETHANE	ND	50	10
1,1-DICHLOROETHENE	ND	25	10
1,1-DICHLOROPROPENE	ND	50	10
1,2-DIBROMO-3-CHLOROPROPANE	ND	100	25
1,2-DIBROMOETHANE	ND	50	10
1,2-DICHLOROBENZENE	ND	50	10
1,2-DICHLOROETHANE	ND	25	10
1,2-DICHLOROPROPANE	ND	50	10
1,2,3-TRICHLOROBENZENE	ND	50	15
1,2,3-TRICHLOROPROPANE	ND	50	25
1,2,4-TRICHLOROBENZENE	ND	50	15
1,2,4-TRIMETHYLBENZENE	ND	50	10
1,3-DICHLOROBENZENE	ND	50	10
1,3,5-TRIMETHYLBENZENE	ND	50	10
1,4-DICHLOROBENZENE	ND	50	10
2-BUTANONE	ND	500	200
2-CHLOROTOLUENE	ND	50	10
2-HEXANONE	ND	500	200
2,2-DICHLOROPROPANE	ND	50	10
4-CHLOROTOLUENE	ND	50	10
4-METHYL-2-PENTANONE	ND	500	200
N-BUTYLBENZENE	ND	50	10
N-PROPYLBENZENE	ND	50	10
P-ISOPROPYLTOLUENE	ND	50	10
SEC-BUTYLBENZENE	ND	50	10
TERT-BUTYLBENZENE	ND	50	10
ACETONE	ND	500	250
BENZENE	ND	50	10
BROMOBENZENE	ND	50	10
BROMODICHLOROMETHANE	ND	50	10
CIS-1,3-DICHLOROPROPENE	ND	50	10
TRANS-1,3-DICHLOROPROPENE	ND	50	10
BROMOMETHANE	ND	100	15
BROMOFORM	ND	50	15
CARBON DISULFIDE	ND	50	10
CARBON TETRACHLORIDE	ND	25	10
CHLOROBENZENE	ND	50	10
CHLOROETHANE	ND	100	15
CHLOROFORM	ND	50	10
CHLOROMETHANE	ND	100	15
CIS-1,2-DICHLOROETHENE	1000	50	10
DICHLORODIFLUOROMETHANE	ND	100	15
DIBROMOCHLOROMETHANE	ND	50	10
DIBROMOMETHANE	ND	50	10
ETHYLBENZENE	ND	50	10
HEXACHLOROBUTADIENE	ND	50	15
ISOPROPYL BENZENE	ND	50	10
METHYLENE CHLORIDE	ND	50	25
MTBE	ND	50	10
STYRENE	ND	50	10
TETRACHLOROETHYLENE	ND	50	10
TOLUENE	ND	50	10
TRANS-1,2-DICHLOROETHENE	ND	50	10
TRICHLOROETHENE	ND	250	10
TRICHLOROFLUOROMETHANE	ND	100	15
VINYL CHLORIDE	99	25	10
XYLENES (TOTAL)	ND	100	30
M/P-XYLENES	ND	50	20
O-XYLENE	ND	50	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	542	500.0	108	70-140
4-BROMOFLUOROBENZENE	579	500.0	116	70-130
TOLUENE-D8	512	500.0	102	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/18/11 11:40
Sample ID:	IW-70-SAB06-099	Date Analyzed:	11/18/11 11:40
Lab Samp ID:	K063-03N	Dilution Factor:	1
Lab File ID:	RKV448	Matrix :	WATER
Ext Btch ID:	V001K20	% Moisture :	NA
Calib. Ref.:	RJV602	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.26J	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.51J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	0.48J	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	1.3	1.0	0.20
TRICHLOROETHENE	0.38J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	1.8	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.26	10.00	92.6	70-140
4-BROMOFLUOROBENZENE	10.1	10.00	101	70-130
TOLUENE-D8	10.4	10.00	104	70-140

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV448.D Vial: 8
Acq On : 18 Nov 2011 11:40 am Operator: MW
Sample : 11K063-03N 25mL Inst : TO01
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 13:51 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

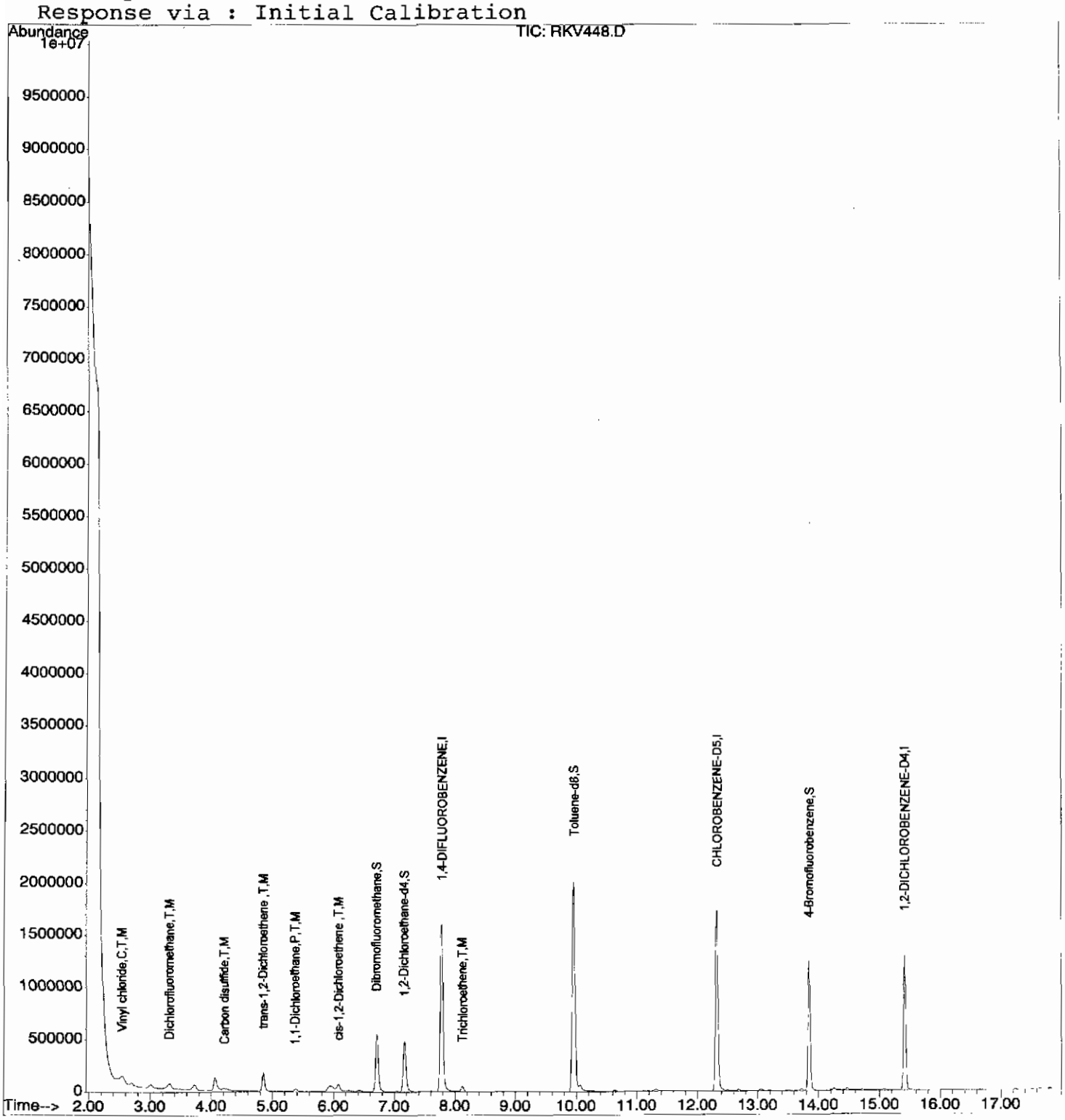
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	2049601	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.33	117	1603033	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	514447	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.70	111	557333	9.93	ug/l	-0.01
Spiked Amount 10.000			Recovery	=	99.30%	
35) 1,2-Dichloroethane-d4	7.16	65	554688	9.26	ug/l	0.00
Spiked Amount 10.000			Recovery	=	92.60%	
49) Toluene-d8	9.96	98	2301909	10.38	ug/l	0.00
Spiked Amount 10.000			Recovery	=	103.80%	
69) 4-Bromofluorobenzene	13.85	95	642102	10.13	ug/l	0.00
Spiked Amount 10.000			Recovery	=	101.30%	
Target Compounds						Qvalue
5) Vinyl chloride	2.55	62	169288	1.79	ug/l	99
9) Dichlorofluoromethane	3.32	67	129102	0.88	ug/l	100
16) Carbon disulfide	4.22	76	112039	0.51	ug/l	99
21) trans-1,2-Dichloroethene	4.85	61	173164	1.27	ug/l	95
23) 1,1-Dichloroethane	5.37	63	40201	0.26	ug/l	100
28) cis-1,2-Dichloroethene	6.08	96	37301	0.48	ug/l	88
41) Trichloroethene	8.12	130	26715	0.38	ug/l	95

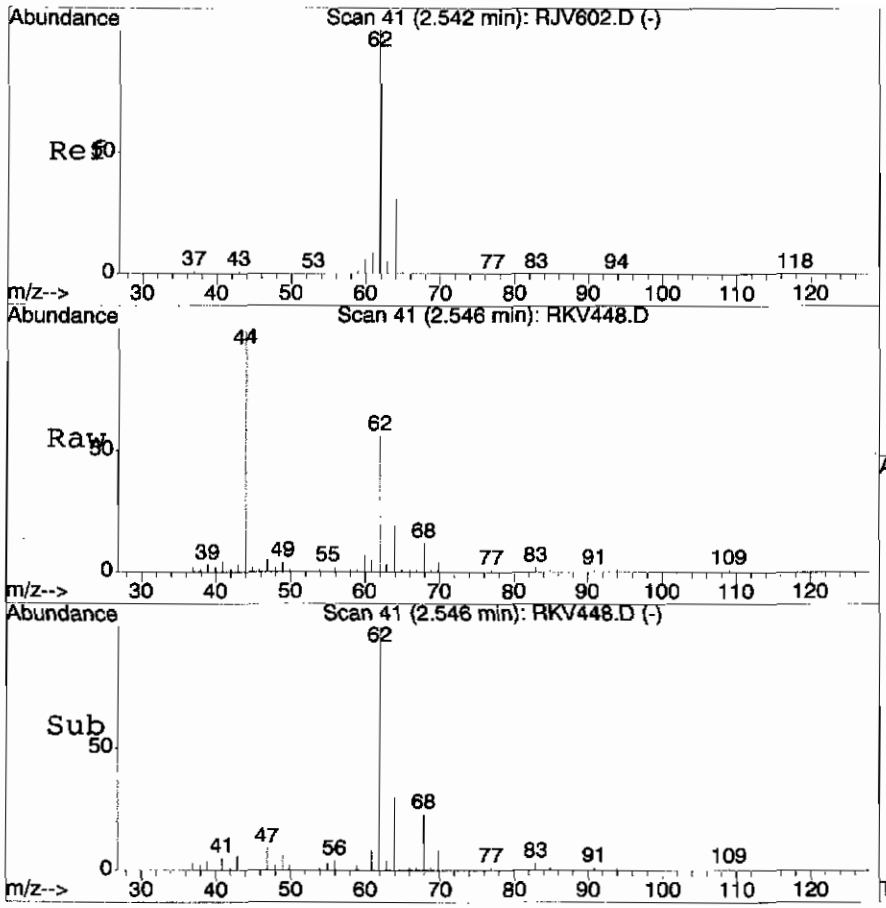
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV448.D Vial: 8
Acq On : 18 Nov 2011 11:40 am Operator: MW
Sample : 11K063-03N 25mL Inst : TO01
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 13:51 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration

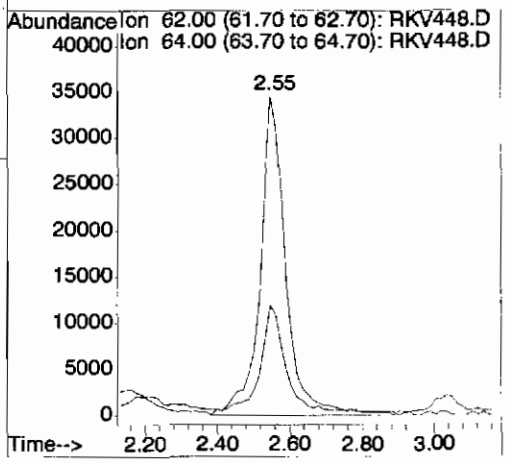


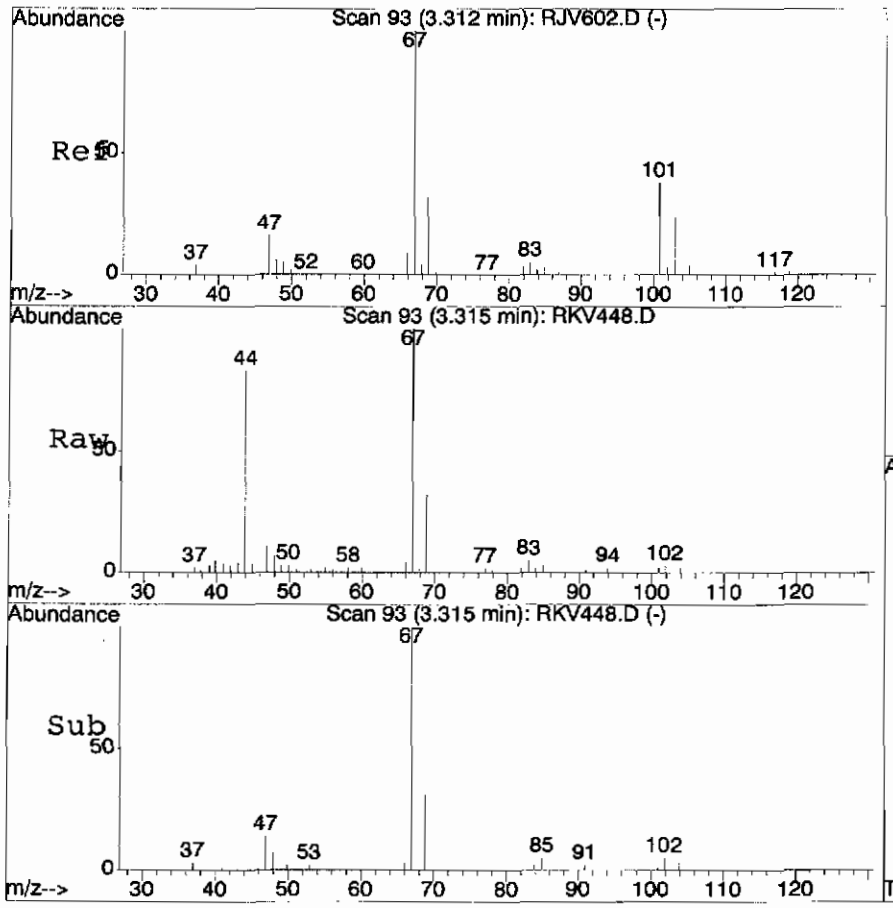


#5
Vinyl chloride
Concen: 1.79 ug/l
RT: 2.55 min Scan# 41
Delta R.T. 0.00 min
Lab File: RKV448.D
Acq: 18 Nov 2011 11:40 am

Tgt Ion: 62 Resp: 169288

Ion	Ratio	Lower	Upper
62	100		
64	38.1	7.2	67.2

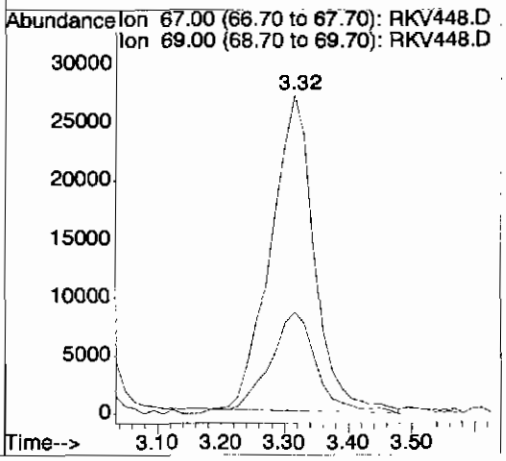


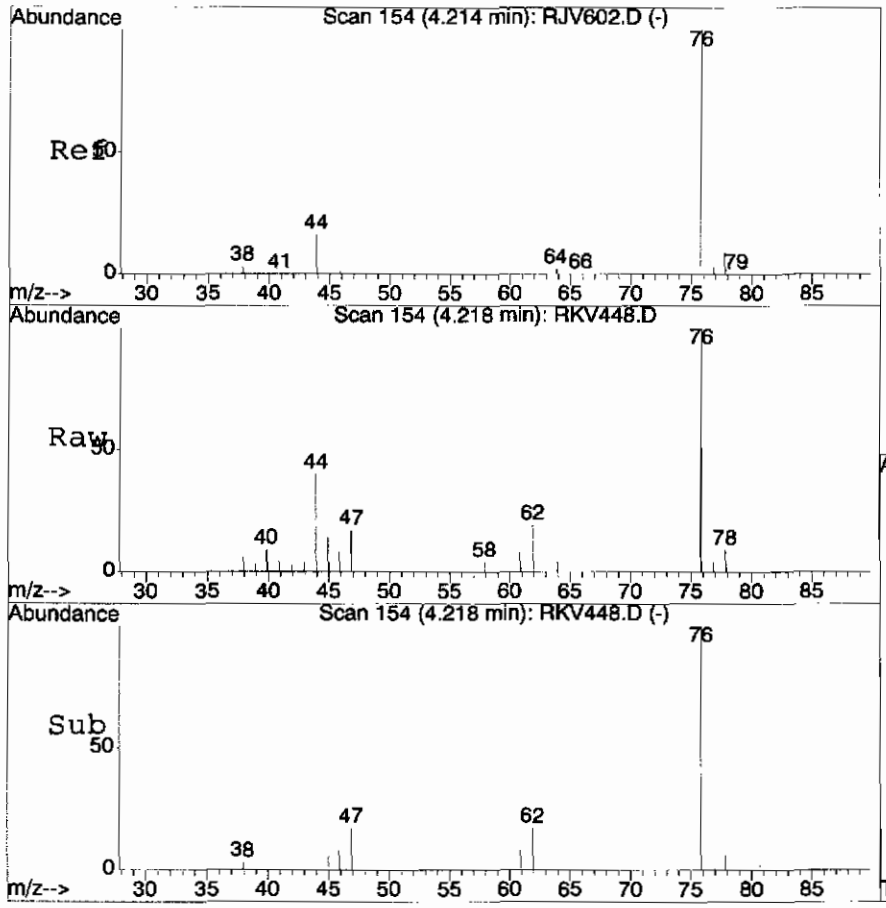


#9
Dichlorofluoromethane
Concen: 0.88 ug/l
RT: 3.32 min Scan# 93
Delta R.T. 0.00 min
Lab File: RKV448.D
Acq: 18 Nov 2011 11:40 am

Tgt Ion: 67 Resp: 129102

Ion	Ratio	Lower	Upper
67	100		
69	31.8	1.6	61.6

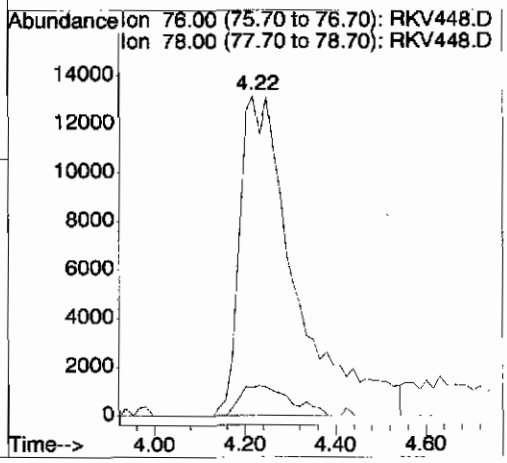


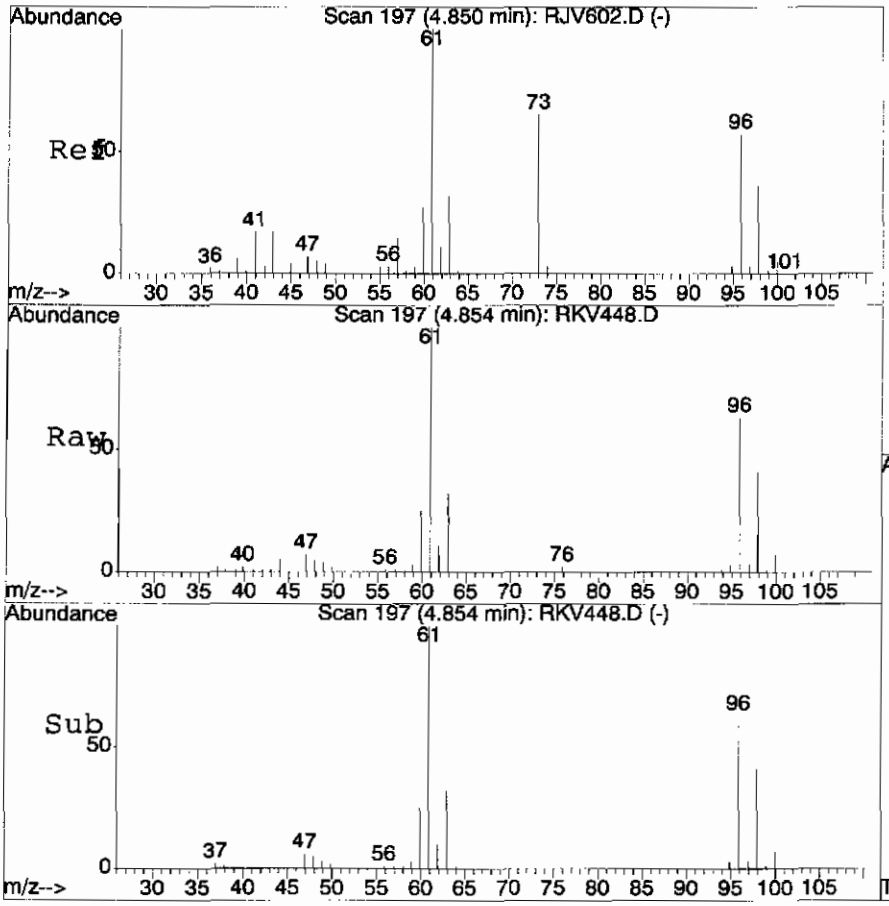


#16
Carbon disulfide
Concen: 0.51 ug/l
RT: 4.22 min Scan# 154
Delta R.T. 0.00 min
Lab File: RKV448.D
Acq: 18 Nov 2011 11:40 am

Tgt Ion: 76 Resp: 112039

Ion	Ratio	Lower	Upper
76	100		
78	8.4	0.0	38.9

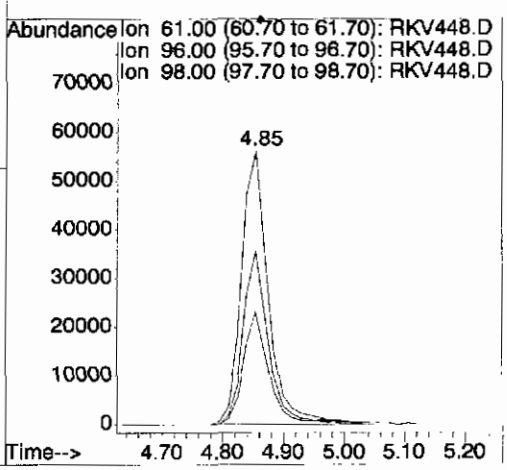


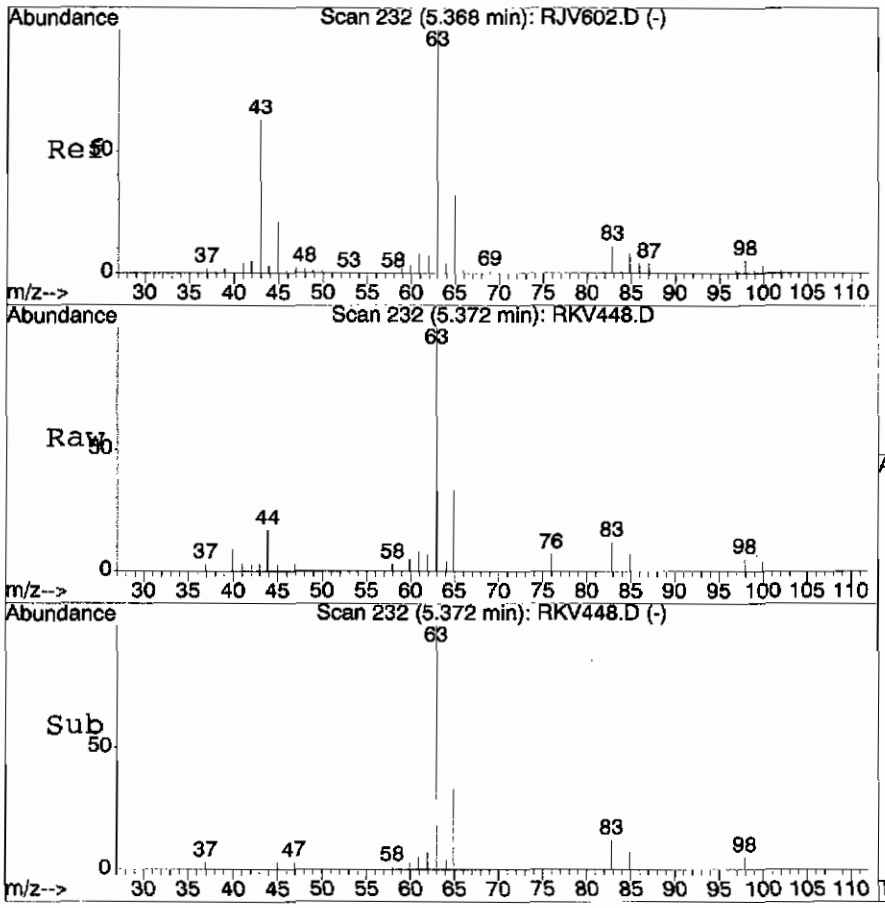


#21
trans-1,2-Dichloroethene
Concen: 1.27 ug/l
RT: 4.85 min Scan# 197
Delta R.T. 0.00 min
Lab File: RKV448.D
Acq: 18 Nov 2011 11:40 am

Tgt Ion: 61 Resp: 173164

Ion	Ratio	Lower	Upper
61	100		
96	59.5	26.1	86.1
98	38.3	5.2	65.2

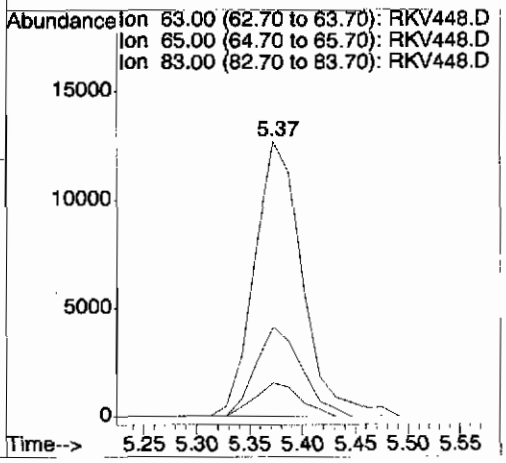


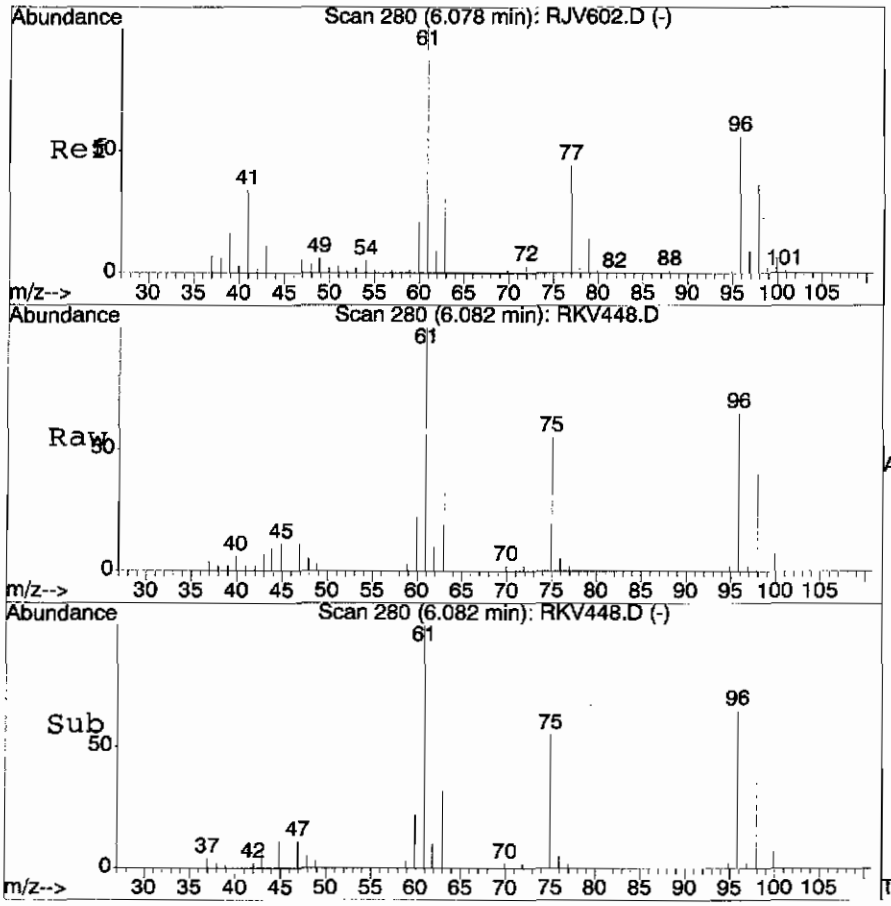


#23
1,1-Dichloroethane
Concen: 0.26 ug/l
RT: 5.37 min Scan# 232
Delta R.T. 0.00 min
Lab File: RKV448.D
Acq: 18 Nov 2011 11:40 am

Tgt Ion: 63 Resp: 40201

Ion	Ratio	Lower	Upper
63	100		
65	31.1	1.3	61.3
83	11.5	0.0	41.5

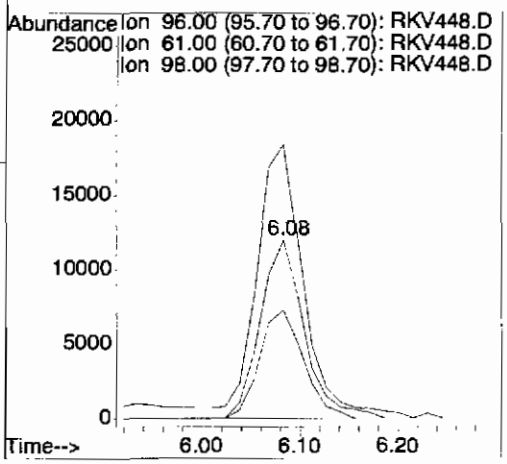


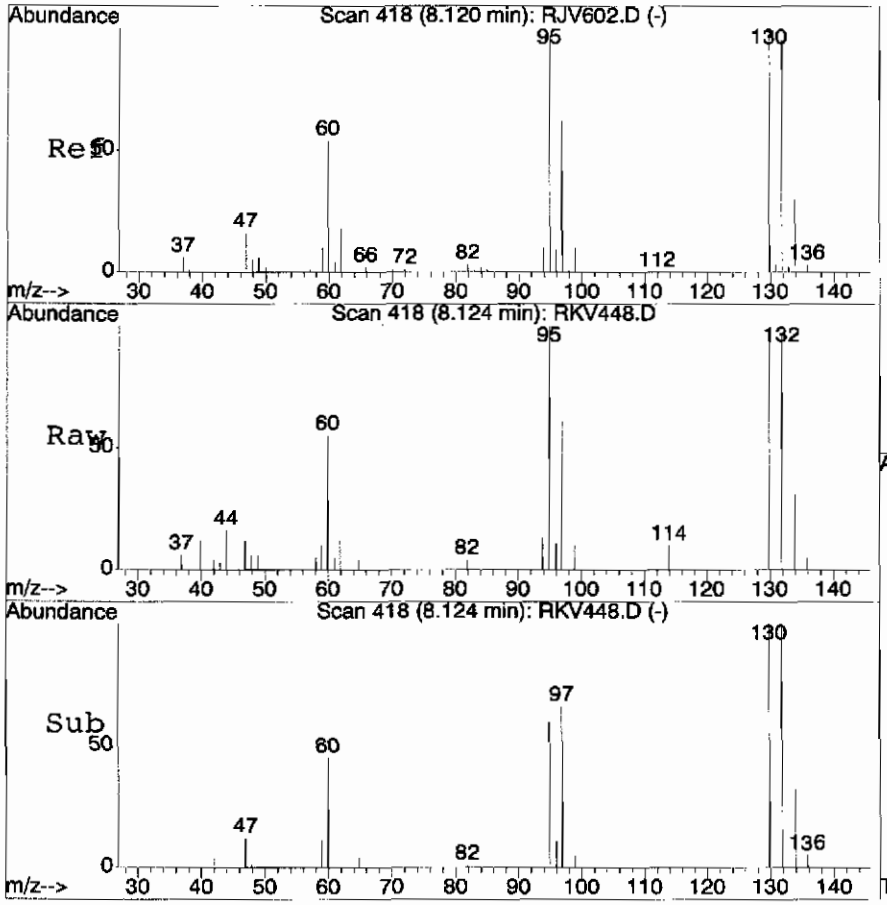


#28
cis-1,2-Dichloroethene
Concen: 0.48 ug/l
RT: 6.08 min Scan# 280
Delta R.T. 0.00 min
Lab File: RKV448.D
Acq: 18 Nov 2011 11:40 am

Tgt Ion: 96 Resp: 37301

Ion	Ratio	Lower	Upper
96	100		
61	164.6	157.0	217.0
98	61.0	33.8	93.8

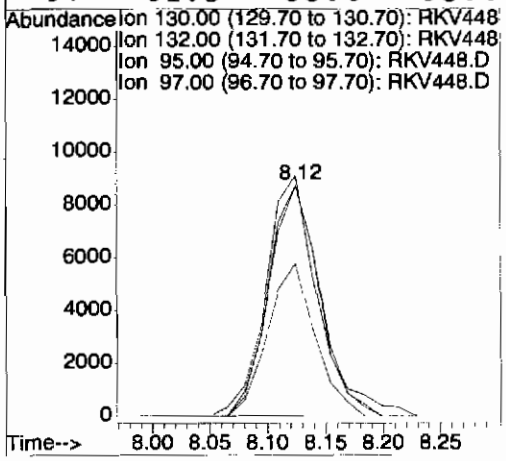




#41
Trichloroethene
Concen: 0.38 ug/l
RT: 8.12 min Scan# 418
Delta R.T. 0.00 min
Lab File: RKV448.D
Acq: 18 Nov 2011 11:40 am

Tgt Ion:130 Resp: 26715

Ion	Ratio	Lower	Upper
130	100		
132	98.9	64.6	124.6
95	107.3	69.6	129.6
97	61.5	33.4	93.4



METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/15/11 23:27
Sample ID:	MW-70-PMW02A-100	Date Analyzed:	11/15/11 23:27
Lab Samp ID:	K063-04R	Dilution Factor:	1
Lab File ID:	RKV355	Matrix	: WATER
Ext.Btch ID:	V001K16	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.55J	1.0	0.20
1,1-DICHLOROETHENE	1.1	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.20J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	210E	1.0	0.20
DICHLORODIFLUOROMETHANE	0.31J	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	1.4	1.0	0.20
TRICHLOROETHENE	16	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	0.75	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.8	10.00	108	70-140
4-BROMOFLUOROBENZENE	11.1	10.00	111	70-130
TOLUENE-D8	10.0	10.00	100	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/15/11 22:32
Sample ID:	MW-70-PMW02A-100DL	Date Analyzed:	11/15/11 22:32
Lab Samp ID:	K063-04T	Dilution Factor:	10
Lab File ID:	RKV353	Matrix :	WATER
Ext Btch ID:	V001K16	% Moisture :	NA
Calib. Ref.:	RJV602	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	10	2.0
1,1,1,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2-TRICHLOROETHANE	ND	10	2.0
FREON113	ND	10	3.0
1,1-DICHLOROETHANE	ND	10	2.0
1,1-DICHLOROETHENE	ND	5.0	2.0
1,1-DICHLOROPROPENE	ND	10	2.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	20	5.0
1,2-DIBROMOETHANE	ND	10	2.0
1,2-DICHLOROBENZENE	ND	10	2.0
1,2-DICHLOROETHANE	ND	5.0	2.0
1,2-DICHLOROPROPANE	ND	10	2.0
1,2,3-TRICHLOROBENZENE	ND	10	3.0
1,2,3-TRICHLOROPROPANE	ND	10	5.0
1,2,4-TRICHLOROBENZENE	ND	10	3.0
1,2,4-TRIMETHYLBENZENE	ND	10	2.0
1,3-DICHLOROBENZENE	ND	10	2.0
1,3,5-TRIMETHYLBENZENE	ND	10	2.0
1,4-DICHLOROBENZENE	ND	10	2.0
2-BUTANONE	ND	100	40
2-CHLOROTOLUENE	ND	10	2.0
2-HEXANONE	ND	100	40
2,2-DICHLOROPROPANE	ND	10	2.0
4-CHLOROTOLUENE	ND	10	2.0
4-METHYL-2-PENTANONE	ND	100	40
N-BUTYLBENZENE	ND	10	2.0
N-PROPYLBENZENE	ND	10	2.0
P-ISOPROPYLTOLUENE	ND	10	2.0
SEC-BUTYLBENZENE	ND	10	2.0
TERT-BUTYLBENZENE	ND	10	2.0
ACETONE	ND	100	50
BENZENE	ND	10	2.0
BROMOBENZENE	ND	10	2.0
BROMODICHLOROMETHANE	ND	10	2.0
CIS-1,3-DICHLOROPROPENE	ND	10	2.0
TRANS-1,3-DICHLOROPROPENE	ND	10	2.0
BROMOMETHANE	ND	20	3.0
BROMOFORM	ND	10	3.0
CARBON DISULFIDE	ND	10	2.0
CARBON TETRACHLORIDE	ND	5.0	2.0
CHLOROBENZENE	ND	10	2.0
CHLOROETHANE	ND	20	3.0
CHLOROFORM	ND	10	2.0
CHLOROMETHANE	ND	20	3.0
CIS-1,2-DICHLOROETHENE	230	10	2.0
DICHLORODIFLUOROMETHANE	ND	20	3.0
DIBROMOCHLOROMETHANE	ND	10	2.0
DIBROMOMETHANE	ND	10	2.0
ETHYLBENZENE	ND	10	2.0
HEXACHLOROBUTADIENE	ND	10	3.0
ISOPROPYL BENZENE	ND	10	2.0
METHYLENE CHLORIDE	ND	10	5.0
MTBE	ND	10	2.0
STYRENE	ND	10	2.0
TETRACHLOROETHYLENE	ND	10	2.0
TOLUENE	ND	10	2.0
TRANS-1,2-DICHLOROETHENE	ND	10	2.0
TRICHLOROETHENE	17J	50	2.0
TRICHLOROFLUOROMETHANE	ND	20	3.0
VINYL CHLORIDE	ND	5.0	2.0
XYLENES (TOTAL)	ND	20	6.0
M/P-XYLENES	ND	10	4.0
O-XYLENE	ND	10	2.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	106	100.0	106	70-140
4-BROMOFLUOROBENZENE	112	100.0	112	70-130
TOLUENE-D8	102	100.0	102	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/15/11 23:55
Sample ID:	MW-70-PMW02B-101	Date Analyzed:	11/15/11 23:55
Lab Samp ID:	K063-05R	Dilution Factor:	1
Lab File ID:	RKV356	Matrix	: WATER
Ext Btch ID:	V001K16	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.73J	1.0	0.20
1,1-DICHLOROETHENE	3.4	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	470E	1.0	0.20
DICHLORODIFLUOROMETHANE	0.86J	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	6.0	1.0	0.20
TRICHLOROETHENE	350E	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	1.7	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.8	10.00	108	70-140
4-BROMOFLUOROBENZENE	11.4	10.00	114	70-130
TOLUENE-D8	9.93	10.00	99.3	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/15/11 22:59
Sample ID:	MW-70-PMW02B-101DL	Date Analyzed:	11/15/11 22:59
Lab Samp ID:	K063-05T	Dilution Factor:	50
Lab File ID:	RKV354	Matrix :	WATER
Ext Btch ID:	V001K16	% Moisture :	NA
Calib. Ref.:	RJV602	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	50	10
1,1,1,2-TETRACHLOROETHANE	ND	50	10
1,1,2,2-TETRACHLOROETHANE	ND	50	10
1,1,2-TRICHLOROETHANE	ND	50	10
FREON113	ND	50	15
1,1-DICHLOROETHANE	ND	50	10
1,1-DICHLOROETHENE	ND	25	10
1,1-DICHLOROPROPENE	ND	50	10
1,2-DIBROMO-3-CHLOROPROPANE	ND	100	25
1,2-DIBROMOETHANE	ND	50	10
1,2-DICHLOROBENZENE	ND	50	10
1,2-DICHLOROETHANE	ND	25	10
1,2-DICHLOROPROPANE	ND	50	10
1,2,3-TRICHLOROBENZENE	ND	50	15
1,2,3-TRICHLOROPROPANE	ND	50	25
1,2,4-TRICHLOROBENZENE	ND	50	15
1,2,4-TRIMETHYLBENZENE	ND	50	10
1,3-DICHLOROBENZENE	ND	50	10
1,3,5-TRIMETHYLBENZENE	ND	50	10
1,4-DICHLOROBENZENE	ND	50	10
2-BUTANONE	ND	500	200
2-CHLOROTOLUENE	ND	50	10
2-HEXANONE	ND	500	200
2,2-DICHLOROPROPANE	ND	50	10
4-CHLOROTOLUENE	ND	50	10
4-METHYL-2-PENTANONE	ND	500	200
N-BUTYLBENZENE	ND	50	10
N-PROPYLBENZENE	ND	50	10
P-ISOPROPYLTOLUENE	ND	50	10
SEC-BUTYLBENZENE	ND	50	10
TERT-BUTYLBENZENE	ND	50	10
ACETONE	ND	500	250
BENZENE	ND	50	10
BROMOBENZENE	ND	50	10
BROMODICHLOROMETHANE	ND	50	10
CIS-1,3-DICHLOROPROPENE	ND	50	10
TRANS-1,3-DICHLOROPROPENE	ND	50	10
BROMOMETHANE	ND	100	15
BROMOFORM	ND	50	15
CARBON DISULFIDE	ND	50	10
CARBON TETRACHLORIDE	ND	25	10
CHLOROBENZENE	ND	50	10
CHLOROETHANE	ND	100	15
CHLOROFORM	ND	50	10
CHLOROMETHANE	ND	100	15
CIS-1,2-DICHLOROETHENE	770	50	10
DICHLORODIFLUOROMETHANE	ND	100	15
DIBROMOCHLOROMETHANE	ND	50	10
DIBROMOMETHANE	ND	50	10
ETHYLBENZENE	ND	50	10
HEXACHLOROBUTADIENE	ND	50	15
ISOPROPYL BENZENE	ND	50	10
METHYLENE CHLORIDE	ND	50	25
MTBE	ND	50	10
STYRENE	ND	50	10
TETRACHLOROETHYLENE	ND	50	10
TOLUENE	ND	50	10
TRANS-1,2-DICHLOROETHENE	ND	50	10
TRICHLOROETHENE	410	250	10
TRICHLOROFLUOROMETHANE	ND	100	15
VINYL CHLORIDE	ND	25	10
XYLENES (TOTAL)	ND	100	30
M/P-XYLENES	ND	50	20
O-XYLENE	ND	50	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	564	500.D	113	70-140
4-BROMOFLUOROBENZENE	556	500.0	111	70-130
TOLUENE-D8	515	500.0	103	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/16/11 00:24
Sample ID:	IR-70-FD-098	Date Analyzed:	11/16/11 00:24
Lab Samp ID:	K063-06	Dilution Factor:	1
Lab File ID:	RKV357	Matrix	: WATER
Ext Btch ID:	V001K16	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.69J	1.0	0.20
1,1-DICHLOROETHENE	4.2	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.23J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	520E	1.0	0.20
DICHLORODIFLUOROMETHANE	0.59J	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	8.9	1.0	0.20
TRICHLOROETHENE	7.9	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	89	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.7	10.00	117	70-140
4-BROMOFLUOROBENZENE	11.0	10.00	110	70-130
TOLUENE-D8	9.86	10.00	98.6	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/18/11 13:19
Sample ID:	IR-70-FD-098DL	Date Analyzed:	11/18/11 13:19
Lab Samp ID:	K063-06T	Dilution Factor:	50
Lab File ID:	RKV451	Matrix :	WATER
Ext Btch ID:	V001K20	% Moisture :	NA
Calib. Ref.:	RJV602	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	50	10
1,1,1,2-TETRACHLOROETHANE	ND	50	10
1,1,2,2-TETRACHLOROETHANE	ND	50	10
1,1,2-TRICHLOROETHANE	ND	50	10
FREON113	ND	50	15
1,1-DICHLOROETHANE	ND	50	10
1,1-DICHLOROETHENE	ND	25	10
1,1-DICHLOROPROPENE	ND	50	10
1,2-DIBROMO-3-CHLOROPROPANE	ND	100	25
1,2-DIBROMOETHANE	ND	50	10
1,2-DICHLOROBENZENE	ND	50	10
1,2-DICHLOROETHANE	ND	25	10
1,2-DICHLOROPROPANE	ND	50	10
1,2,3-TRICHLOROBENZENE	ND	50	15
1,2,3-TRICHLOROPROPANE	ND	50	25
1,2,4-TRICHLOROBENZENE	ND	50	15
1,2,4-TRIMETHYLBENZENE	ND	50	10
1,3-DICHLOROBENZENE	ND	50	10
1,3,5-TRIMETHYLBENZENE	ND	50	10
1,4-DICHLOROBENZENE	ND	50	10
2-BUTANONE	ND	500	200
2-CHLOROTOLUENE	ND	50	10
2-HEXANONE	ND	500	200
2,2-DICHLOROPROPANE	ND	50	10
4-CHLOROTOLUENE	ND	50	10
4-METHYL-2-PENTANONE	ND	500	200
N-BUTYLBENZENE	ND	50	10
N-PROPYLBENZENE	ND	50	10
P-ISOPROPYLTOLUENE	ND	50	10
SEC-BUTYLBENZENE	ND	50	10
TERT-BUTYLBENZENE	ND	50	10
ACETONE	ND	500	250
BENZENE	ND	50	10
BROMOBENZENE	ND	50	10
BROMODICHLOROMETHANE	ND	50	10
CIS-1,3-DICHLOROPROPENE	ND	50	10
TRANS-1,3-DICHLOROPROPENE	ND	50	10
BROMOMETHANE	ND	100	15
BROMOFORM	ND	50	15
CARBON DISULFIDE	ND	50	10
CARBON TETRACHLORIDE	ND	25	10
CHLOROBENZENE	ND	50	10
CHLOROETHANE	ND	100	15
CHLOROFORM	ND	50	10
CHLOROMETHANE	ND	100	15
CIS-1,2-DICHLOROETHENE	1100	50	10
DICHLORODIFLUOROMETHANE	ND	100	15
DIBROMOCHLOROMETHANE	ND	50	10
DIBROMOMETHANE	ND	50	10
ETHYLBENZENE	ND	50	10
HEXACHLOROBUTADIENE	ND	50	15
ISOPROPYL BENZENE	ND	50	10
METHYLENE CHLORIDE	ND	50	25
MTBE	ND	50	10
STYRENE	ND	50	10
TETRACHLOROETHYLENE	ND	50	10
TOLUENE	ND	50	10
TRANS-1,2-DICHLOROETHENE	ND	50	10
TRICHLOROETHENE	ND	250	10
TRICHLOROFLUOROMETHANE	ND	100	15
VINYL CHLORIDE	100	25	10
XYLENES (TOTAL)	ND	100	30
M/P-XYLENES	ND	50	20
O-XYLENE	ND	50	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	485	500.0	97.1	70-140
4-BROMOFLUOROBENZENE	551	500.0	110	70-130
TOLUENE-D8	500	500.0	100	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/16/11 00:52
Sample ID:	IR-70-TB-096	Date Analyzed:	11/16/11 00:52
Lab Samp ID:	K063-07	Dilution Factor:	1
Lab File ID:	RKV358	Matrix	: WATER
Ext Btch ID:	V001K16	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.9	10.00	109	70-140
4-BROMOFLUOROBENZENE	11.2	10.00	112	70-130
TOLUENE-D8	10.1	10.00	101	70-140

QC SUMMARIES

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/14/11
Batch No.	: 11K063	Date Extracted:	11/14/11 11:14
Sample ID:	MBLK1W	Date Analyzed:	11/14/11 11:14
Lab Samp ID:	V001K14B	Dilution Factor:	1
Lab File ID:	RKV300	Matrix :	WATER
Ext Btch ID:	V001K14	% Moisture :	NA
Calib. Ref.:	RJV602	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.2	10.00	102	70-140
4-BROMOFLUOROBENZENE	11.4	10.00	114	70-130
TOLUENE-D8	10.3	10.00	103	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	V001K14B	V001K14L	V001K14C		
LAB FILE ID:	RKV300	RKV297	RKV298		
DATE EXTRACTED:	11/14/1111:14	11/14/1109:41	11/14/1110:12	DATE COLLECTED:	NA
DATE ANALYZED:	11/14/1111:14	11/14/1109:41	11/14/1110:12	DATE RECEIVED:	11/14/11
PREP. BATCH:	V001K14	V001K14	V001K14		
CALIB. REF:	RJV602	RJV602	RJV602		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.98	100	10.0	9.99	100	0	60-130	30
Benzene	ND	10.0	9.85	98	10.0	9.83	98	0	70-130	30
Chlorobenzene	ND	10.0	10.3	103	10.0	10.2	102	1	70-120	30
Toluene	ND	10.0	10.1	101	10.0	10.0	100	1	70-130	30
Trichloroethene	ND	10.0	10.1	101	10.0	10.0	100	1	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	10.7	107	10.0	10.2	102	70-140
4-Bromofluorobenzene	10.0	9.73	97	10.0	9.59	96	70-130
Toluene-d8	10.0	9.77	98	10.0	9.86	99	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/15/11
Batch No.	: 11K063	Date Extracted:	11/15/11 22:04
Sample ID:	MBLK2W	Date Analyzed:	11/15/11 22:04
Lab Samp ID:	V001K16B	Dilution Factor:	1
Lab File ID:	RKV352	Matrix :	WATER
Ext Btch ID:	V001K16	% Moisture :	NA
Calib. Ref.:	RJV602	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.23J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.83	10.00	98.3	70-140
4-BROMOFLUOROBENZENE	11.1	10.00	111	70-130
TOLUENE-D8	10.4	10.00	104	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	V001K16B	V001K16L	V001K16C		
LAB FILE ID:	RKV352	RKV349	RKV350		
DATE EXTRACTED:	11/15/1122:04	11/15/1120:39	11/15/1121:07	DATE COLLECTED:	NA
DATE ANALYZED:	11/15/1122:04	11/15/1120:39	11/15/1121:07	DATE RECEIVED:	11/15/11
PREP. BATCH:	V001K16	V001K16	V001K16		
CALIB. REF:	RJV602	RJV602	RJV602		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.96	100	10.0	9.53	95	4	60-130	30
Benzene	ND	10.0	9.58	96	10.0	9.54	95	0	70-130	30
Chlorobenzene	ND	10.0	10.1	101	10.0	10.3	103	1	70-120	30
Toluene	ND	10.0	9.68	97	10.0	9.62	96	1	70-130	30
Trichloroethene	ND	10.0	9.89	99	10.0	9.75	97	1	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	10.3	103	10.0	10.0	100	70-140
4-Bromofluorobenzene	10.0	9.46	95	10.0	9.61	96	70-130
Toluene-d8	10.0	9.69	97	10.0	9.77	98	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
Batch No.	: 11K063	Date Extracted:	11/18/11 12:36
Sample ID:	MBLK3W	Date Analyzed:	11/18/11 12:36
Lab Samp ID:	V001K20Q	Dilution Factor:	1
Lab File ID:	RKV450	Matrix	: WATER
Ext Btch ID:	V001K20	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.40	10.00	94.0	70-140
4-BROMOFLUOROBENZENE	10.8	10.00	108	70-130
TOLUENE-D8	10.4	10.00	104	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	M8LK3W				
LAB SAMP ID:	V001K20Q	V001K20L	V001K20C		
LAB FILE ID:	RKV450	RKV443	RKV444		
DATE EXTRACTED:	11/18/1112:36	11/18/1109:19	11/18/1109:47	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1112:36	11/18/1109:19	11/18/1109:47	DATE RECEIVED:	11/18/11
PREP. BATCH:	V0D1K20	V0D1K20	V001K20		
CALIB. REF:	RJV602	RJV602	RJV602		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	10.0	100	10.0	9.30	93	8	60-130	30
Benzene	ND	10.0	11.5	115	10.0	10.7	107	7	70-130	30
Chlorobenzene	ND	10.0	11.7	117	10.0	10.9	109	7	70-120	30
Toluene	ND	10.0	11.5	115	10.0	10.6	106	9	70-130	30
Trichloroethene	ND	10.0	11.5	115	10.0	10.6	106	8	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.82	88	10.0	9.11	91	70-140
4-Bromofluorobenzene	10.0	9.85	99	10.0	9.71	97	70-130
Toluene-d8	10.0	10.1	101	10.0	10.1	101	70-130

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MW-70-PMW03B-097				
LAB SAMP ID:	K063-02R	K063-02M	K063-02S		
LAB FILE ID:	RKV311	RKV312	RKV313		
DATE EXTRACTED:	11/14/1116:59	11/14/1117:30	11/14/1118:01	DATE COLLECTED:	11/07/11
DATE ANALYZED:	11/14/1116:59	11/14/1117:30	11/14/1118:01	DATE RECEIVED:	11/07/11
PREP. BATCH:	V001K14	V001K14	V001K14		
CALIB. REF:	RJV602	RJV602	RJV602		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	3.98	10.0	13.7	97	10.0	14.2	102	4	60-140	30
Benzene	ND	10.0	9.77	98	10.0	10.3	103	5	60-140	30
Chlorobenzene	ND	10.0	10.7	107	10.0	10.9	109	2	63-132	30
Toluene	ND	10.0	10.1	101	10.0	10.5	105	3	70-140	30
Trichloroethene	8.27	10.0	17.7	94	10.0	18.3	100	3	60-140	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	10.6	106	10.0	10.1	101	70-140
4-Bromofluorobenzene	10.0	9.68	97	10.0	9.53	95	70-130
Toluene-d8	10.0	9.77	98	10.0	9.73	97	70-140

QC DATA

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV300.D Vial: 6
Acq On : 14 Nov 2011 11:14 am Operator: MW
Sample : VO01K14B 25mL Inst : TO01
Misc : BLANK Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 11:42 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1702049	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.33	117	1385661	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	389856	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.72	111	468840	10.06	ug/l	0.00
Spiked Amount 10.000			Recovery	=	100.60%	
35) 1,2-Dichloroethane-d4	7.18	65	509350	10.24	ug/l	0.02
Spiked Amount 10.000			Recovery	=	102.40%	
49) Toluene-d8	9.96	98	1976350	10.31	ug/l	0.00
Spiked Amount 10.000			Recovery	=	103.10%	
69) 4-Bromofluorobenzene	13.85	95	547253	11.39	ug/l	0.00
Spiked Amount 10.000			Recovery	=	113.90%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
RKV300.D VO01J31.M Mon Nov 14 11:42:49 2011 Page 1

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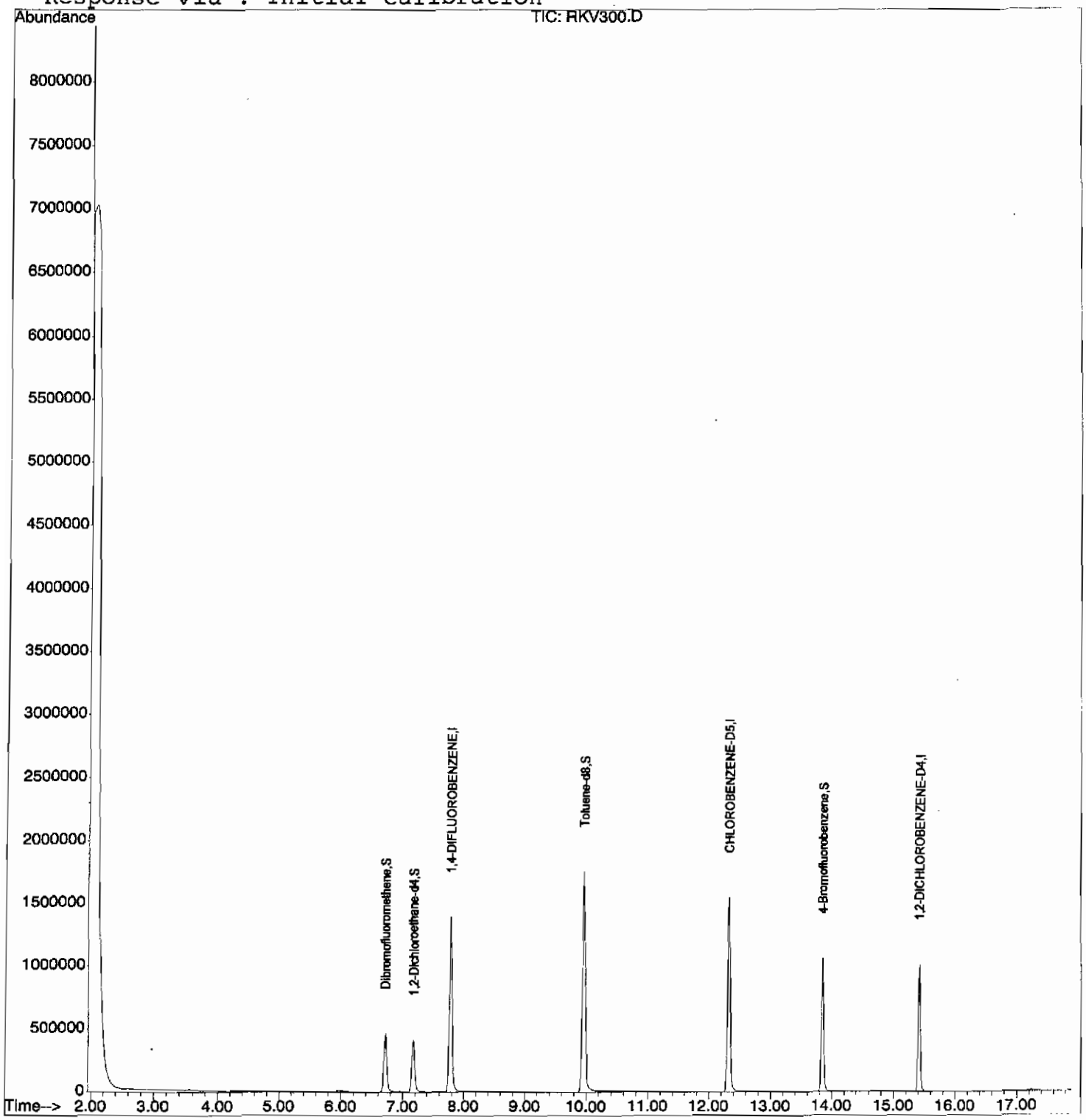
Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV300.D Vial: 6
Acq On : 14 Nov 2011 11:14 am Operator: MW
Sample : VO01K14B 25mL Inst : TO01
Misc : BLANK Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 11:42 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV297.D Vial: 3
Acq On : 14 Nov 2011 9:41 am Operator: MW
Sample : VO01K14L Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 9:59 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.77	114	1653852	10.00	ug/l	-0.01
36) CHLOROBENZENE-D5	12.32	117	1449229	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	534680	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.70	111	472564	10.44	ug/l	-0.01
Spiked Amount 10.000			Recovery	=	104.40%	
35) 1,2-Dichloroethane-d4	7.16	65	519090	10.74	ug/l	0.00
Spiked Amount 10.000			Recovery	=	107.40%	
49) Toluene-d8	9.94	98	1959494	9.77	ug/l	-0.01
Spiked Amount 10.000			Recovery	=	97.70%	
69) 4-Bromofluorobenzene	13.85	95	641297	9.73	ug/l	0.00
Spiked Amount 10.000			Recovery	=	97.30%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	2.17	85	528794	8.80	ug/l	99
4) Chloromethane	2.40	50	697211	9.69	ug/l	99
5) Vinyl chloride	2.56	62	753884	9.88	ug/l	92
6) 2-Chloro-1,1,1-trifluoroet	2.66	118	5698	0.10	ug/l	90
7) Bromomethane	2.93	94	412300	10.91	ug/l	100
8) Chloroethane	3.05	64	479708	10.28	ug/l	99
9) Dichlorofluoromethane	3.33	67	1204726	10.23	ug/l	100
10) Trichlorofluoromethane	3.31	101	828017	11.66	ug/l	99
11) Acrolein	3.80	56	63013	33.68	ug/l	83
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	362174	10.01	ug/l	99
13) Acetone	3.96	43	359336	49.54	ug/l	96
14) 1,1-Dichloroethene	3.93	61	1085833	9.98	ug/l	100
15) Iodomethane	4.11	142	805966	10.18	ug/l	100
16) Carbon disulfide	4.22	76	1685071	9.49	ug/l	100
17) Methylene chloride	4.51	49	819326	9.82	ug/l	99
18) tert-Butyl alcohol	4.64	59	82380	42.20	ug/l	76
19) Acrylonitrile	4.78	53	433929	48.75	ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	1030294	10.58	ug/l	100
21) trans-1,2-Dichloroethene	4.85	61	1100694	9.97	ug/l	99
22) Vinyl acetate	5.35	43	595654	7.57	ug/l	91
23) 1,1-Dichloroethane	5.37	63	1260667	10.08	ug/l	100
24) Isopropyl ether (DIPE)	5.41	45	2230740	10.04	ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	1629012	10.20	ug/l	99
27) 2-Butanone	6.05	43	572638	48.99	ug/l	98
28) cis-1,2-Dichloroethene	6.08	96	651323	10.38	ug/l	98
29) 2,2-Dichloropropane	6.09	77	995308	11.19	ug/l	100
30) Bromochloromethane	6.38	49	519355	10.29	ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV297.D Vial: 3
Acq On : 14 Nov 2011 9:41 am Operator: MW
Sample : VO01K14L Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 9:59 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31)	Chloroform	6.51	83	1113244	10.58 ug/l	99
33)	1,1,1-Trichloroethane	6.75	97	893390	10.69 ug/l	99
34)	tert-Amyl methyl ether (TA	7.38	87	252380	10.75 ug/l	98
37)	1,1-Dichloropropene	6.94	110	300265	9.96 ug/l	99
38)	Carbon tetrachloride	6.95	119	720950	9.99 ug/l	100
39)	Benzene	7.20	78	2521898	9.85 ug/l	100
40)	1,2-Dichloroethane	7.26	62	677995	10.67 ug/l	98
41)	Trichloroethene	8.12	130	645563	10.07 ug/l	99
42)	1,2-Dichloropropane	8.49	63	657210	9.88 ug/l	98
44)	Dibromomethane	8.61	93	227192	10.52 ug/l	98
45)	Bromodichloromethane	8.86	83	769747	10.37 ug/l	100
46)	2-Chloroethyl vinyl ether	9.26	63	36624	2.14 ug/l	98
47)	cis-1,3-Dichloropropene	9.53	75	907682	10.20 ug/l	98
48)	4-Methyl-2-pentanone	9.73	43	1325849	45.50 ug/l	99
50)	Toluene	10.06	91	2560347	10.08 ug/l	99
51)	Ethyl methacrylate	10.50	69	452361	9.47 ug/l	97
52)	trans-1,3-Dichloropropene	10.41	75	690497	10.49 ug/l	98
53)	1,1,2-Trichloroethane	10.74	97	323919	10.35 ug/l	99
54)	Tetrachloroethene	10.90	164	533236	10.33 ug/l	99
55)	1,3-Dichloropropane	11.01	76	676971	10.40 ug/l	100
56)	2-Hexanone	11.08	43	838798	44.05 ug/l	99
57)	Dibromochloromethane	11.38	129	406960	10.93 ug/l	99
58)	1,2-Dibromoethane	11.58	107	317960	10.70 ug/l	100
59)	1-Chlorohexane	12.34	91	1041768	9.91 ug/l	98
60)	Chlorobenzene	12.35	112	1508835	10.31 ug/l	99
61)	1,1,1,2-Tetrachloroethane	12.49	131	519644	10.73 ug/l	100
62)	Ethylbenzene	12.50	91	3035445	10.27 ug/l	99
63)	m-Xylene & p-Xylene	12.68	91	4615464	20.68 ug/l	100
64)	o-Xylene	13.18	91	2293915	10.45 ug/l	100
65)	Styrene	13.21	104	1515071	9.65 ug/l	99
67)	Bromoform	13.43	173	197678	11.20 ug/l	100
68)	Isopropylbenzene	13.64	105	2776193	10.46 ug/l	99
70)	1,1,2,2-Tetrachloroethane	13.98	83	395299	10.88 ug/l	98
71)	Bromobenzene	14.01	156	574215	10.49 ug/l	99
72)	trans-1,4-Dichloro-2-buten	14.03	53	77087	8.28 ug/l	99
73)	1,2,3-Trichloropropane	14.05	110	99989	10.75 ug/l	89
74)	n-Propylbenzene	14.11	91	3569813	10.43 ug/l	100
75)	1,3,5-Trimethylbenzene	14.31	105	2295022	10.45 ug/l	100
76)	2-Chlorotoluene	14.22	91	1969340	10.42 ug/l	100
77)	4-Chlorotoluene	14.34	91	2187823	10.49 ug/l	99
78)	tert-Butylbenzene	14.65	134	514391	10.46 ug/l	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV297.D Vial: 3
Acq On : 14 Nov 2011 9:41 am Operator: MW
Sample : VO01K14L Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 9:59 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

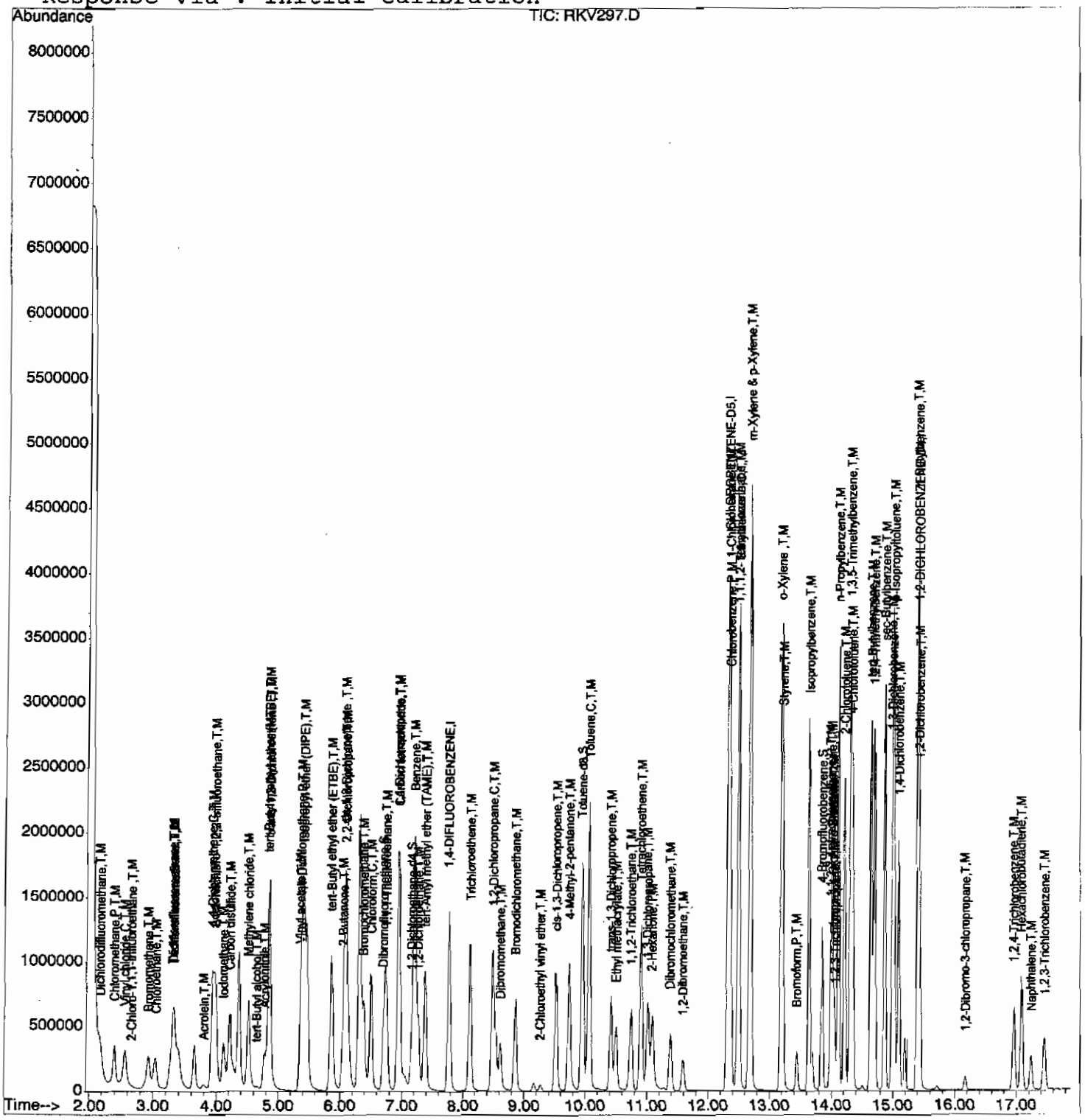
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79) 1,2,4-Trimethylbenzene	14.69	105	2179998	10.46 ug/l	100
80) sec-Butylbenzene	14.87	105	2904602	10.41 ug/l	99
81) p-Isopropyltoluene	15.02	119	2297051	10.61 ug/l	99
82) 1,3-Dichlorobenzene	14.99	146	1124971	10.72 ug/l	100
83) 1,4-Dichlorobenzene	15.09	146	1054385	10.59 ug/l	100
84) n-Butylbenzene	15.40	91	2057814	9.83 ug/l	100
85) 1,2-Dichlorobenzene	15.43	146	874568	10.48 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.17	157	43293	10.33 ug/l	98
87) 1,2,4-Trichlorobenzene	16.95	180	346891	8.27 ug/l	99
88) Hexachlorobutadiene	17.07	225	305074	10.27 ug/l	99
89) Naphthalene	17.24	128	395286	8.53 ug/l	99
90) 1,2,3-Trichlorobenzene	17.46	180	246606	8.98 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV297.D Vial: 3
Acq On : 14 Nov 2011 9:41 am Operator: MW
Sample : VO01K14L Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 9:59 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV298.D Vial: 4
Acq On : 14 Nov 2011 10:12 am Operator: MW
Sample : VO01K14C Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 10:30 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.77	114	1601733	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.31	117	1354066	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	517770	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.71	111	440417	10.05	ug/l	0.00
Spiked Amount 10.000			Recovery	=	100.50%	
35) 1,2-Dichloroethane-d4	7.17	65	478524	10.23	ug/l	0.00
Spiked Amount 10.000			Recovery	=	102.30%	
49) Toluene-d8	9.95	98	1846759	9.86	ug/l	0.00
Spiked Amount 10.000			Recovery	=	98.60%	
69) 4-Bromofluorobenzene	13.84	95	611860	9.59	ug/l	0.00
Spiked Amount 10.000			Recovery	=	95.90%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	2.19	85	451336	7.75	ug/l	99
4) Chloromethane	2.42	50	597016	8.57	ug/l	96
5) Vinyl chloride	2.58	62	688290	9.31	ug/l	93
6) 2-Chloro-1,1,1-trifluoroet	2.68	118	4952	0.09	ug/l	95
7) Bromomethane	2.95	94	366314	10.00	ug/l	100
8) Chloroethane	3.05	64	419402	9.28	ug/l	100
9) Dichlorofluoromethane	3.35	67	1116653	9.79	ug/l	99
10) Trichlorofluoromethane	3.32	101	742700	10.80	ug/l	99
11) Acrolein	3.81	56	63316	34.94	ug/l	95
12) 1,1,2-Trichloro-1,2,2-trif	4.00	151	353094	10.07	ug/l	98
13) Acetone	3.97	43	352755	50.21	ug/l	99
14) 1,1-Dichloroethene	3.94	61	1052712	9.99	ug/l	98
15) Iodomethane	4.12	142	766419	10.00	ug/l	98
16) Carbon disulfide	4.22	76	1746841	10.15	ug/l	100
17) Methylene chloride	4.52	49	767055	9.49	ug/l	98
18) tert-Butyl alcohol	4.67	59	92312	48.83	ug/l	87
19) Acrylonitrile	4.78	53	417640	48.45	ug/l	99
20) tert-Butyl methyl ether (M	4.84	73	933236	9.90	ug/l	99
21) trans-1,2-Dichloroethene	4.86	61	1035887	9.69	ug/l	98
22) Vinyl acetate	5.36	43	535823	7.03	ug/l	95
23) 1,1-Dichloroethane	5.38	63	1161504	9.59	ug/l	100
24) Isopropyl ether (DIPE)	5.42	45	2036328	9.46	ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	1468532	9.49	ug/l	99
27) 2-Butanone	6.04	43	546599	48.29	ug/l	98
28) cis-1,2-Dichloroethene	6.09	96	611660	10.07	ug/l	96
29) 2,2-Dichloropropane	6.10	77	893566	10.37	ug/l	99
30) Bromochloromethane	6.38	49	479887	9.82	ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV298.D
Acq On : 14 Nov 2011 10:12 am
Sample : VO01K14C
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA
MS Integration Params: 524C.P
Quant Time: Nov 14 10:30 2011

Vial: 4
Operator: MW
Inst : TO01
Multiplr: 1.00
Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31)	Chloroform	6.50	83	1007061	9.88 ug/l	99
33)	1,1,1-Trichloroethane	6.75	97	806779	9.96 ug/l	99
34)	tert-Amyl methyl ether (TA	7.39	87	226738	9.97 ug/l	99
37)	1,1-Dichloropropene	6.94	110	280256	9.95 ug/l	98
38)	Carbon tetrachloride	6.96	119	647221	9.60 ug/l	100
39)	Benzene	7.21	78	2351386	9.83 ug/l	100
40)	1,2-Dichloroethane	7.27	62	610214	10.28 ug/l	99
41)	Trichloroethene	8.13	130	599790	10.01 ug/l	99
42)	1,2-Dichloropropane	8.48	63	599820	9.65 ug/l	97
44)	Dibromomethane	8.62	93	208798	10.34 ug/l	98
45)	Bromodichloromethane	8.87	83	699048	10.08 ug/l	99
46)	2-Chloroethyl vinyl ether	9.27	63	38946	2.43 ug/l	96
47)	cis-1,3-Dichloropropene	9.52	75	836665	10.07 ug/l	97
48)	4-Methyl-2-pentanone	9.74	43	1271355	46.69 ug/l	99
50)	Toluene	10.07	91	2377094	10.01 ug/l	99
51)	Ethyl methacrylate	10.49	69	413523	9.26 ug/l	98
52)	trans-1,3-Dichloropropene	10.42	75	627488	10.20 ug/l	98
53)	1,1,2-Trichloroethane	10.75	97	297614	10.18 ug/l	100
54)	Tetrachloroethene	10.91	164	493663	10.23 ug/l	99
55)	1,3-Dichloropropane	11.01	76	620348	10.20 ug/l	100
56)	2-Hexanone	11.09	43	802512	45.10 ug/l	99
57)	Dibromochloromethane	11.38	129	372478	10.71 ug/l	100
58)	1,2-Dibromoethane	11.59	107	290644	10.47 ug/l	100
59)	1-Chlorohexane	12.33	91	958316	9.76 ug/l	99
60)	Chlorobenzene	12.36	112	1398422	10.23 ug/l	99
61)	1,1,1,2-Tetrachloroethane	12.49	131	472234	10.44 ug/l	99
62)	Ethylbenzene	12.51	91	2778458	10.06 ug/l	99
63)	m-Xylene & p-Xylene	12.68	91	4159222	19.95 ug/l	100
64)	o-Xylene	13.19	91	2082585	10.15 ug/l	99
65)	Styrene	13.20	104	1374019	9.36 ug/l	99
67)	Bromoform	13.44	173	175144	10.25 ug/l	100
68)	Isopropylbenzene	13.63	105	2546887	9.91 ug/l	100
70)	1,1,2,2-Tetrachloroethane	13.99	83	359192	10.21 ug/l	100
71)	Bromobenzene	14.00	156	521932	9.84 ug/l	97
72)	trans-1,4-Dichloro-2-buten	14.02	53	71118	7.89 ug/l	97
73)	1,2,3-Trichloropropane	14.05	110	92085	10.23 ug/l	93
74)	n-Propylbenzene	14.11	91	3261883	9.84 ug/l	99
75)	1,3,5-Trimethylbenzene	14.31	105	2094800	9.85 ug/l	100
76)	2-Chlorotoluene	14.21	91	1792482	9.79 ug/l	100
77)	4-Chlorotoluene	14.34	91	2000113	9.91 ug/l	98
78)	tert-Butylbenzene	14.64	134	479292	10.06 ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV298.D Vial: 4
Acq On : 14 Nov 2011 10:12 am Operator: MW
Sample : VO01K14C Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 10:30 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

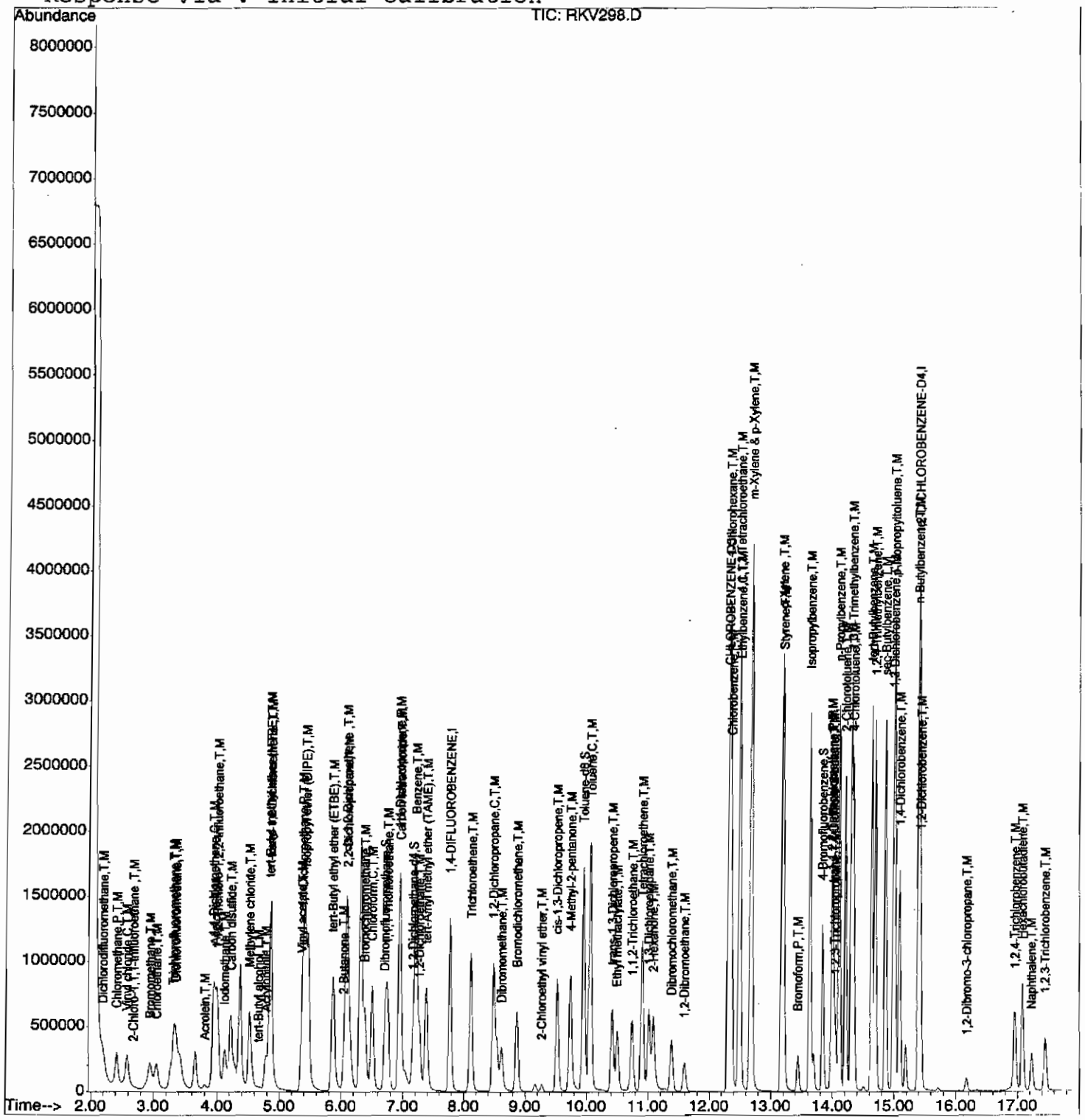
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79) 1,2,4-Trimethylbenzene	14.70	105	2025080	10.03 ug/l	99
80) sec-Butylbenzene	14.86	105	2714502	10.04 ug/l	99
81) p-Isopropyltoluene	15.01	119	2115832	10.09 ug/l	99
82) 1,3-Dichlorobenzene	14.99	146	1039187	10.23 ug/l	100
83) 1,4-Dichlorobenzene	15.10	146	975884	10.12 ug/l	100
84) n-Butylbenzene	15.39	91	1952730	9.64 ug/l	100
85) 1,2-Dichlorobenzene	15.44	146	830580	10.27 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.18	157	40538	9.99 ug/l	97
87) 1,2,4-Trichlorobenzene	16.96	180	334714	8.24 ug/l	100
88) Hexachlorobutadiene	17.08	225	281341	9.78 ug/l	99
89) Naphthalene	17.23	128	411593	9.18 ug/l	99
90) 1,2,3-Trichlorobenzene	17.45	180	238048	8.95 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV298.D Vial: 4
Acq On : 14 Nov 2011 10:12 am Operator: MW
Sample : VO01K14C Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 10:30 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



2045

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV450.D Vial: 10
Acq On : 18 Nov 2011 12:36 pm Operator: MW
Sample : VO01K20Q 25mL Inst : TO01
Misc : BLANK Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 13:48 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	2155290	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1690340	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	498815	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.72	111	591675	10.03	ug/l	0.00
Spiked Amount 10.000			Recovery	=	100.30%	
35) 1,2-Dichloroethane-d4	7.18	65	592181	9.40	ug/l	0.02
Spiked Amount 10.000			Recovery	=	94.00%	
49) Toluene-d8	9.96	98	2420311	10.35	ug/l	0.00
Spiked Amount 10.000			Recovery	=	103.50%	
69) 4-Bromofluorobenzene	13.85	95	664573	10.81	ug/l	0.00
Spiked Amount 10.000			Recovery	=	108.10%	

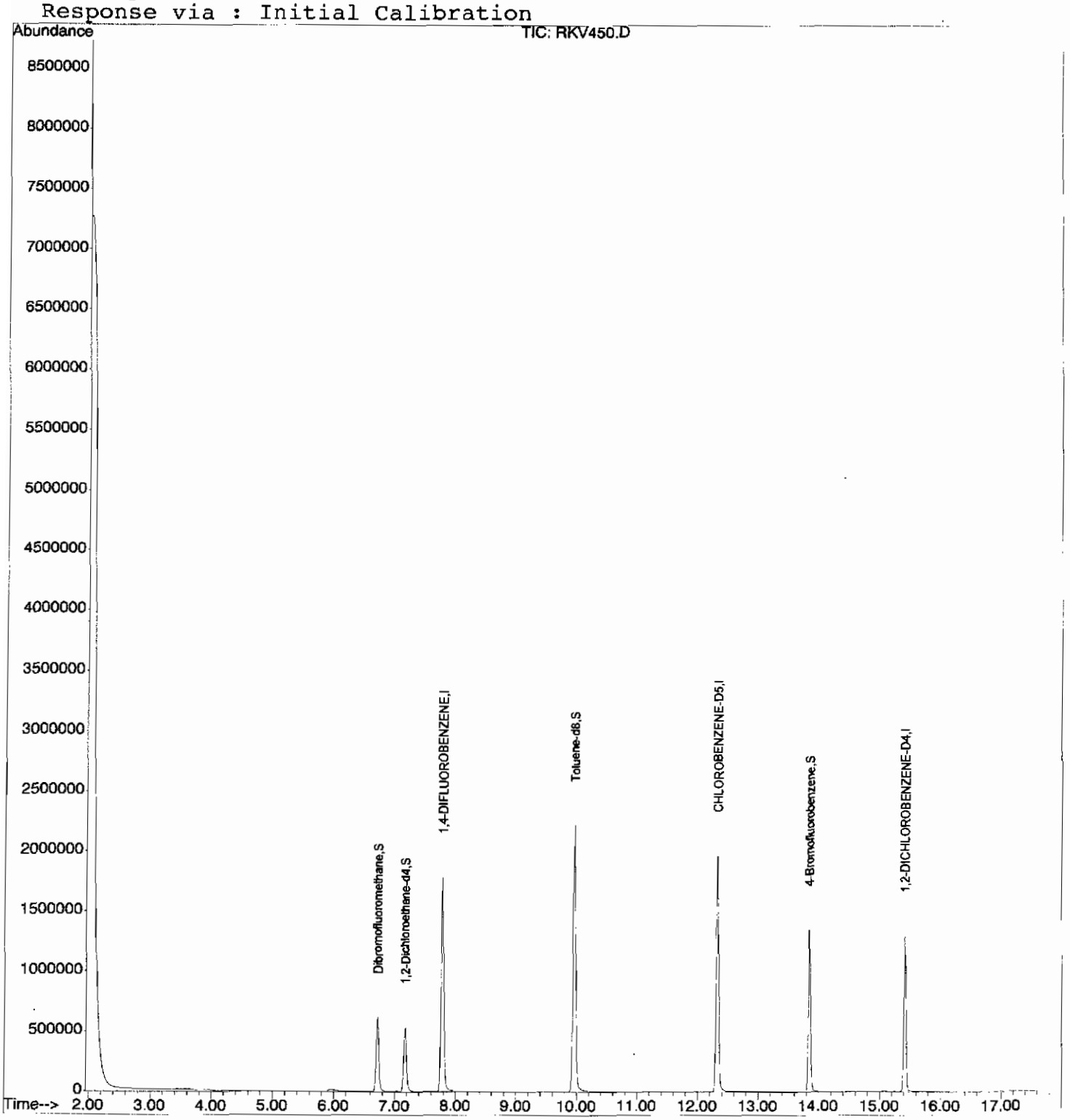
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV450.D Vial: 10
Acq On : 18 Nov 2011 12:36 pm Operator: MW
Sample : VO01K20Q 25mL Inst : TO01
Misc : BLANK Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 13:48 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV443.D Vial: 3
Acq On : 18 Nov 2011 9:19 am Operator: MW
Sample : VO01K20L Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 9:37 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.77	114	1911840	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.31	117	1568117	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	659298	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.71	111	516014	9.86	ug/l	0.00
Spiked Amount 10.000			Recovery	=	98.60%	
35) 1,2-Dichloroethane-d4	7.17	65	492503	8.82	ug/l	0.00
Spiked Amount 10.000			Recovery	=	88.20%	
49) Toluene-d8	9.95	98	2195713	10.12	ug/l	0.00
Spiked Amount 10.000			Recovery	=	101.20%	
69) 4-Bromofluorobenzene	13.84	95	800300	9.85	ug/l	0.00
Spiked Amount 10.000			Recovery	=	98.50%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	2.16	85	676364	9.74	ug/l	99
4) Chloromethane	2.39	50	901656	10.84	ug/l	100
5) Vinyl chloride	2.55	62	967880	10.97	ug/l	89
6) 2-Chloro-1,1,1-trifluoroet	2.67	118	7435	0.11	ug/l	85
7) Bromomethane	2.93	94	477274	10.92	ug/l	99
8) Chloroethane	3.04	64	551393	10.22	ug/l	98
9) Dichlorofluoromethane	3.32	67	1418267	10.42	ug/l	99
10) Trichlorofluoromethane	3.38	101	804049	9.80	ug/l	100
11) Acrolein	3.81	56	80933	37.42	ug/l	83
12) 1,1,2-Trichloro-1,2,2-trif	3.97	151	454290	10.86	ug/l	99
13) Acetone	3.95	43	426900	50.91	ug/l	95
14) 1,1-Dichloroethene	3.94	61	1261349	10.03	ug/l	95
15) Iodomethane	4.12	142	998526	10.91	ug/l	92
16) Carbon disulfide	4.21	76	2180311	10.62	ug/l	100
17) Methylene chloride	4.52	49	1021139	10.59	ug/l	96
18) tert-Butyl alcohol	4.64	59	111042	49.21	ug/l	94
19) Acrylonitrile	4.77	53	627165	60.95	ug/l	97
20) tert-Butyl methyl ether (M	4.84	73	1156013	10.27	ug/l	99
21) trans-1,2-Dichloroethene	4.84	61	1349784	10.57	ug/l	94
22) Vinyl acetate	5.36	43	785362	8.63	ug/l	96
23) 1,1-Dichloroethane	5.37	63	1558634	10.78	ug/l	100
24) Isopropyl ether (DIPE)	5.40	45	2788765	10.86	ug/l	98
26) tert-Butyl ethyl ether (ET	5.86	59	1840248	9.96	ug/l	97
27) 2-Butanone	6.04	43	771728	57.12	ug/l	98
28) cis-1,2-Dichloroethene	6.07	96	839244	11.57	ug/l	93
29) 2,2-Dichloropropane	6.10	77	1119748	10.89	ug/l	99
30) Bromochloromethane	6.38	49	627547	10.76	ug/l	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV443.D Vial: 3
Acq On : 18 Nov 2011 9:19 am Operator: MW
Sample : VO01K20L Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 9:37 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) Chloroform	6.50	83	1339555	11.01 ug/l	98
33) 1,1,1-Trichloroethane	6.74	97	1017927	10.53 ug/l	99
34) tert-Amyl methyl ether (TA	7.37	87	277902	10.24 ug/l	96
37) 1,1-Dichloropropene	6.94	110	369531	11.33 ug/l	99
38) Carbon tetrachloride	6.96	119	796900	10.20 ug/l	99
39) Benzene	7.21	78	3183959	11.49 ug/l	98
40) 1,2-Dichloroethane	7.27	62	710107	10.33 ug/l	100
41) Trichloroethene	8.11	130	800966	11.54 ug/l	99
42) 1,2-Dichloropropane	8.48	63	838369	11.65 ug/l	87
44) Dibromomethane	8.62	93	265768	11.37 ug/l	97
45) Bromodichloromethane	8.87	83	905194	11.27 ug/l	100
46) 2-Chloroethyl vinyl ether	9.27	63	10067	0.54 ug/l	95
47) cis-1,3-Dichloropropene	9.52	75	1082096	11.24 ug/l	93
48) 4-Methyl-2-pentanone	9.73	43	1760471	55.83 ug/l	99
50) Toluene	10.07	91	3170468	11.53 ug/l	99
51) Ethyl methacrylate	10.49	69	559409	10.82 ug/l	96
52) trans-1,3-Dichloropropene	10.42	75	756397	10.62 ug/l	96
53) 1,1,2-Trichloroethane	10.75	97	384160	11.34 ug/l	100
54) Tetrachloroethene	10.91	164	642735	11.51 ug/l	98
55) 1,3-Dichloropropane	11.01	76	795917	11.30 ug/l	100
56) 2-Hexanone	11.09	43	1049907	50.95 ug/l	98
57) Dibromochloromethane	11.38	129	460404	11.43 ug/l	100
58) 1,2-Dibromoethane	11.59	107	370210	11.51 ug/l	99
59) 1-Chlorohexane	12.33	91	1286897	11.32 ug/l	95
60) Chlorobenzene	12.36	112	1845731	11.66 ug/l	98
61) 1,1,1,2-Tetrachloroethane	12.49	131	611982	11.68 ug/l	99
62) Ethylbenzene	12.51	91	3682837	11.51 ug/l	99
63) m-Xylene & p-Xylene	12.68	91	5419230	22.45 ug/l	98
64) o-Xylene	13.19	91	2689008	11.32 ug/l	98
65) Styrene	13.22	104	1912943	11.26 ug/l	98
67) Bromoform	13.44	173	219671	10.10 ug/l	100
68) Isopropylbenzene	13.63	105	3339767	10.20 ug/l	99
70) 1,1,2,2-Tetrachloroethane	13.99	83	458903	10.24 ug/l	99
71) Bromobenzene	14.00	156	673536	9.98 ug/l	96
72) trans-1,4-Dichloro-2-buten	14.02	53	50831	4.43 ug/l	99
73) 1,2,3-Trichloropropane	14.05	110	112545	9.82 ug/l	95
74) n-Propylbenzene	14.12	91	4296077	10.18 ug/l	99
75) 1,3,5-Trimethylbenzene	14.31	105	2675087	9.88 ug/l	99
76) 2-Chlorotoluene	14.21	91	2349892	10.08 ug/l	100
77) 4-Chlorotoluene	14.34	91	2572400	10.01 ug/l	98
78) tert-Butylbenzene	14.64	134	610601	10.07 ug/l	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV443.D Vial: 3
Acq On : 18 Nov 2011 9:19 am Operator: MW
Sample : VO01K20L Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 9:37 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

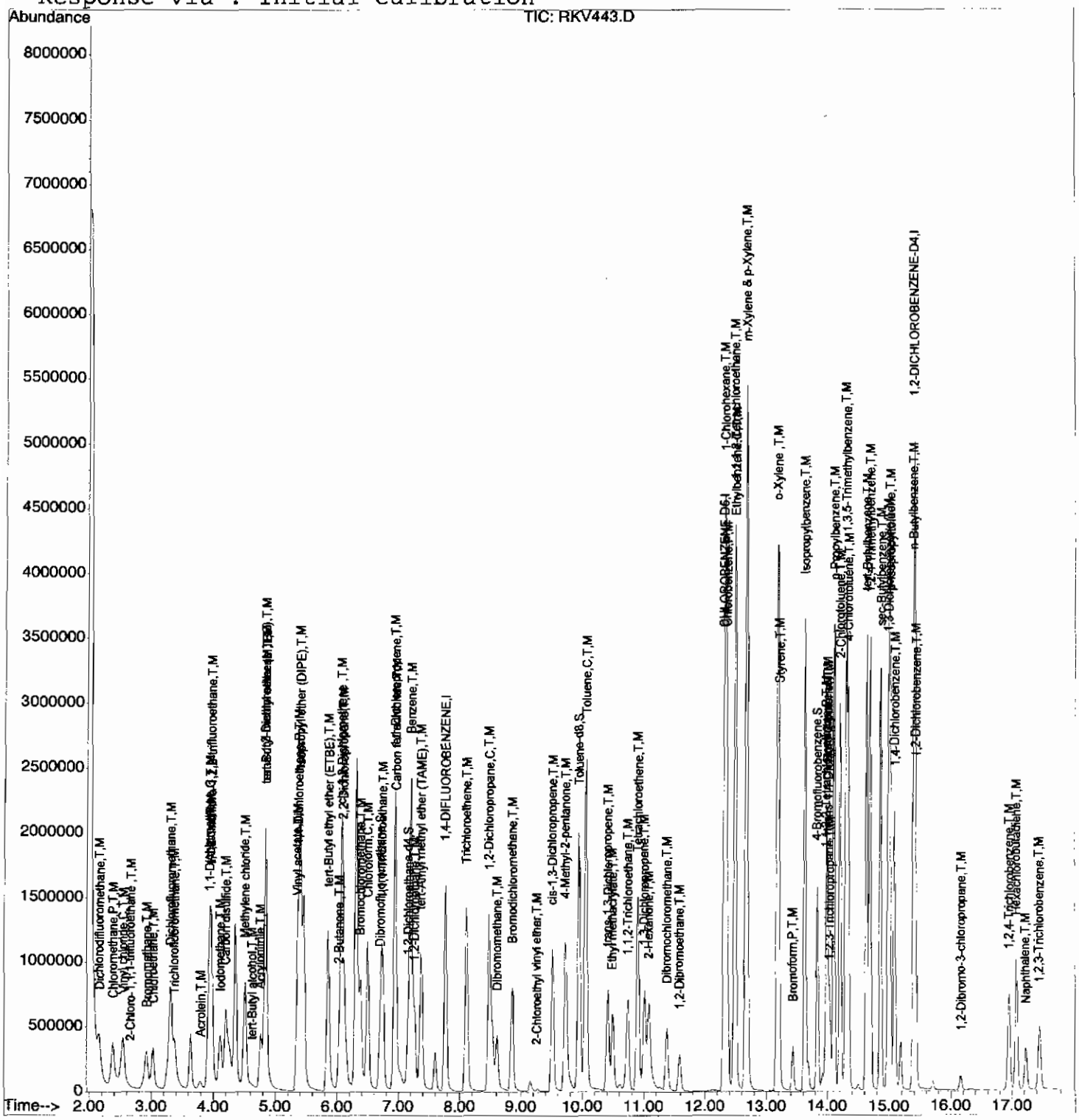
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79) 1,2,4-Trimethylbenzene	14.70	105	2534301	9.86 ug/l	99
80) sec-Butylbenzene	14.87	105	3407102	9.90 ug/l	99
81) p-Isopropyltoluene	15.02	119	2705527	10.14 ug/l	99
82) 1,3-Dichlorobenzene	14.99	146	1342559	10.38 ug/l	99
83) 1,4-Dichlorobenzene	15.10	146	1248219	10.16 ug/l	100
84) n-Butylbenzene	15.39	91	2464158	9.55 ug/l	100
85) 1,2-Dichlorobenzene	15.44	146	1038713	10.09 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.18	157	48555	9.40 ug/l	93
87) 1,2,4-Trichlorobenzene	16.96	180	427504	8.26 ug/l	99
88) Hexachlorobutadiene	17.08	225	353892	9.66 ug/l	99
89) Naphthalene	17.23	128	484839	8.49 ug/l	100
90) 1,2,3-Trichlorobenzene	17.45	180	295818	8.73 ug/l	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV443.D Vial: 3
Acq On : 18 Nov 2011 9:19 am Operator: MW
Sample : VO01K20L Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 9:37 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV444.D Vial: 4
Acq On : 18 Nov 2011 9:47 am Operator: MW
Sample : VO01K20C Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 10:05 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	2080865	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1721978	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	653761	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.70	111	566895	9.95	ug/l	-0.01
Spiked Amount 10.000			Recovery	=	99.50%	
35) 1,2-Dichloroethane-d4	7.16	65	553643	9.11	ug/l	0.00
Spiked Amount 10.000			Recovery	=	91.10%	
49) Toluene-d8	9.96	98	2397437	10.06	ug/l	0.00
Spiked Amount 10.000			Recovery	=	100.60%	
69) 4-Bromofluorobenzene	13.85	95	782631	9.71	ug/l	0.00
Spiked Amount 10.000			Recovery	=	97.10%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	2.16	85	782501	10.35	ug/l	100
4) Chloromethane	2.38	50	1034884	11.43	ug/l	100
5) Vinyl chloride	2.54	62	1102767	11.48	ug/l	90
6) 2-Chloro-1,1,1-trifluoroet	2.66	118	6756	0.10	ug/l	86
7) Bromomethane	2.93	94	543875	11.43	ug/l	99
8) Chloroethane	3.03	64	623140	10.61	ug/l	98
9) Dichlorofluoromethane	3.31	67	1393957	9.41	ug/l	99
10) Trichlorofluoromethane	3.37	101	917940	10.28	ug/l	99
11) Acrolein	3.80	56	89150	37.87	ug/l	88
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	468559	10.29	ug/l	99
13) Acetone	3.96	43	473999	51.94	ug/l	96
14) 1,1-Dichloroethene	3.94	61	1273409	9.30	ug/l	96
15) Iodomethane	4.11	142	1012026	10.16	ug/l	92
16) Carbon disulfide	4.20	76	2131491	9.54	ug/l	100
17) Methylene chloride	4.51	49	1044498	9.95	ug/l	96
18) tert-Butyl alcohol	4.63	59	126403	51.47	ug/l	96
19) Acrylonitrile	4.76	53	671236	59.94	ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	1255953	10.25	ug/l	100
21) trans-1,2-Dichloroethene	4.85	61	1350678	9.72	ug/l	94
22) Vinyl acetate	5.36	43	1113411	11.24	ug/l	99
23) 1,1-Dichloroethane	5.37	63	1574846	10.01	ug/l	100
24) Isopropyl ether (DIPE)	5.41	45	2951929	10.56	ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	1932291	9.61	ug/l	98
27) 2-Butanone	6.04	43	842578	57.30	ug/l	98
28) cis-1,2-Dichloroethene	6.08	96	857360	10.86	ug/l	91
29) 2,2-Dichloropropane	6.10	77	1122561	10.03	ug/l	98
30) Bromochloromethane	6.38	49	652510	10.27	ug/l	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV444.D Vial: 4
Acq On : 18 Nov 2011 9:47 am Operator: MW
Sample : VO01K20C Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 10:05 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) Chloroform	6.51	83	1355890	10.24 ug/l	98
33) 1,1,1-Trichloroethane	6.75	97	1008365	9.59 ug/l	98
34) tert-Amyl methyl ether (TA	7.38	87	291520	9.87 ug/l	94
37) 1,1-Dichloropropene	6.95	110	372340	10.39 ug/l	99
38) Carbon tetrachloride	6.95	119	786042	9.16 ug/l	100
39) Benzene	7.21	78	3263156	10.72 ug/l	99
40) 1,2-Dichloroethane	7.26	62	746127	9.89 ug/l	98
41) Trichloroethene	8.12	130	808216	10.61 ug/l	98
42) 1,2-Dichloropropane	8.49	63	846875	10.72 ug/l	90
44) Dibromomethane	8.61	93	279568	10.89 ug/l	96
45) Bromodichloromethane	8.86	83	929182	10.54 ug/l	99
46) 2-Chloroethyl vinyl ether	9.26	63	15921	0.78 ug/l	91
47) cis-1,3-Dichloropropene	9.53	75	1093607	10.35 ug/l	93
48) 4-Methyl-2-pentanone	9.74	43	1915245	55.31 ug/l	99
50) Toluene	10.06	91	3188320	10.56 ug/l	99
51) Ethyl methacrylate	10.50	69	606891	10.69 ug/l	96
52) trans-1,3-Dichloropropene	10.42	75	791963	10.12 ug/l	95
53) 1,1,2-Trichloroethane	10.74	97	409178	11.00 ug/l	99
54) Tetrachloroethene	10.90	164	647805	10.56 ug/l	98
55) 1,3-Dichloropropane	11.01	76	844748	10.92 ug/l	99
56) 2-Hexanone	11.08	43	1147360	50.71 ug/l	97
57) Dibromochloromethane	11.38	129	486077	10.99 ug/l	100
58) 1,2-Dibromoethane	11.60	107	389091	11.02 ug/l	100
59) 1-Chlorohexane	12.34	91	1269793	10.17 ug/l	95
60) Chlorobenzene	12.37	112	1887469	10.86 ug/l	97
61) 1,1,1,2-Tetrachloroethane	12.49	131	607880	10.56 ug/l	98
62) Ethylbenzene	12.50	91	3630286	10.33 ug/l	99
63) m-Xylene & p-Xylene	12.68	91	5389970	20.33 ug/l	99
64) o-Xylene	13.18	91	2692495	10.32 ug/l	98
65) Styrene	13.21	104	1890168	10.13 ug/l	99
67) Bromoform	13.43	173	230955	10.71 ug/l	100
68) Isopropylbenzene	13.64	105	3330742	10.26 ug/l	99
70) 1,1,2,2-Tetrachloroethane	13.98	83	497028	11.18 ug/l	99
71) Bromobenzene	14.01	156	697226	10.41 ug/l	96
72) trans-1,4-Dichloro-2-buten	14.03	53	51141	4.50 ug/l	97
73) 1,2,3-Trichloropropane	14.06	110	117077	10.30 ug/l	87
74) n-Propylbenzene	14.11	91	4238984	10.13 ug/l	99
75) 1,3,5-Trimethylbenzene	14.31	105	2659216	9.90 ug/l	99
76) 2-Chlorotoluene	14.22	91	2335947	10.11 ug/l	100
77) 4-Chlorotoluene	14.34	91	2559794	10.04 ug/l	98
78) tert-Butylbenzene	14.65	134	615585	10.23 ug/l	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV444.D Vial: 4
Acq On : 18 Nov 2011 9:47 am Operator: MW
Sample : VO01K20C Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 10:05 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

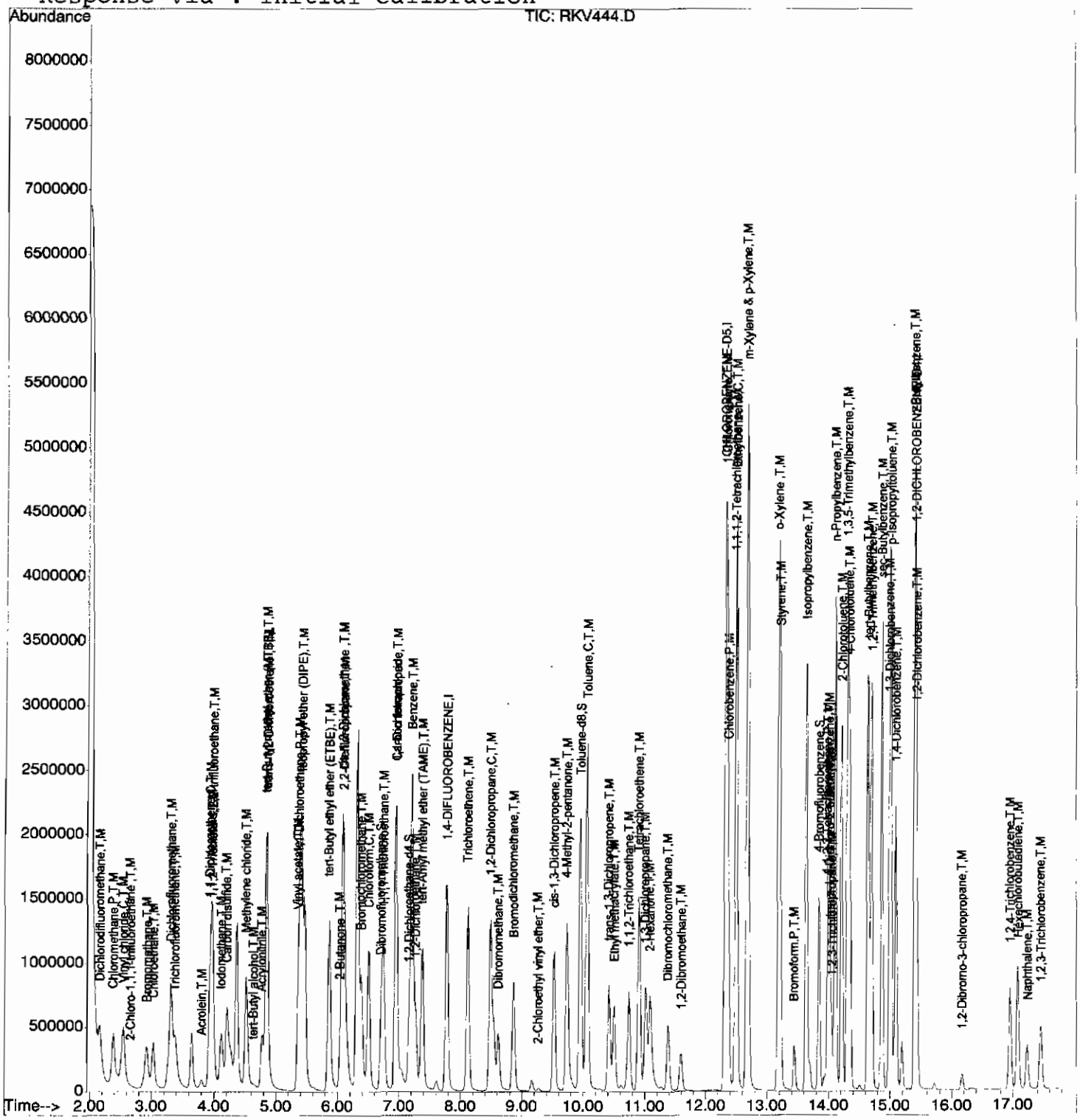
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79) 1,2,4-Trimethylbenzene	14.71	105	2550955	10.01 ug/l	99
80) sec-Butylbenzene	14.87	105	3415102	10.01 ug/l	100
81) p-Isopropyltoluene	15.02	119	2648584	10.01 ug/l	98
82) 1,3-Dichlorobenzene	14.99	146	1329407	10.36 ug/l	99
83) 1,4-Dichlorobenzene	15.09	146	1264189	10.38 ug/l	99
84) n-Butylbenzene	15.40	91	2373975	9.28 ug/l	99
85) 1,2-Dichlorobenzene	15.43	146	1054163	10.33 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.17	157	52507	10.25 ug/l	95
87) 1,2,4-Trichlorobenzene	16.96	180	436514	8.50 ug/l	100
88) Hexachlorobutadiene	17.09	225	347598	9.57 ug/l	99
89) Naphthalene	17.24	128	504236	8.90 ug/l	100
90) 1,2,3-Trichlorobenzene	17.46	180	306158	9.11 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV444.D Vial: 4
Acq On : 18 Nov 2011 9:47 am Operator: MW
Sample : VO01K20C Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 10:05 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV311.D
Acq On : 14 Nov 2011 4:59 pm
Sample : 11K063-02R 25mL
Misc : DF=1.0
MS Integration Params: 524C.P
Quant Time: Nov 15 11:36 2011

Vial: 17
Operator: MW
Inst : TO01
Multiplr: 1.00
Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

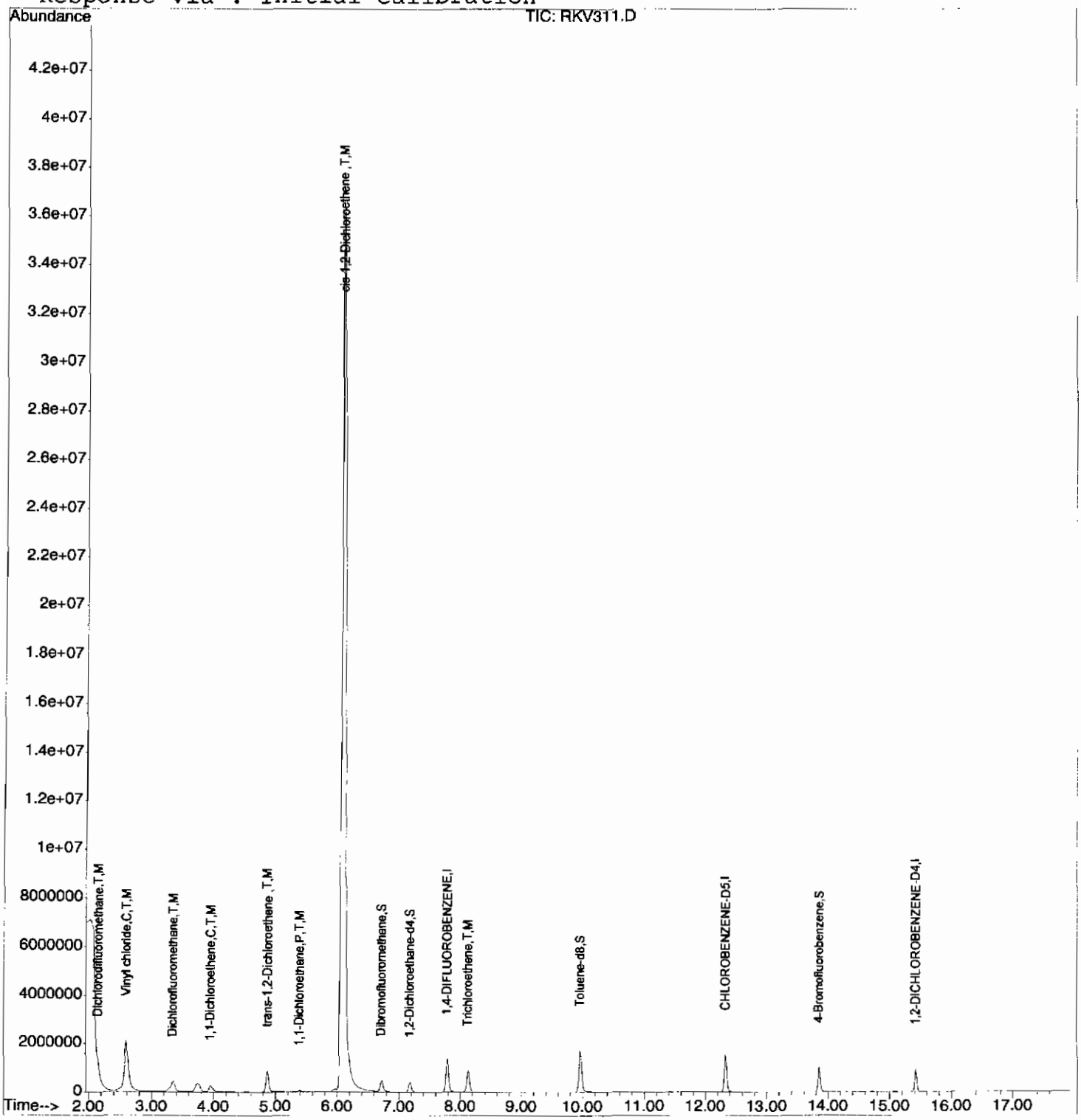
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1638230	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1339049	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	350864	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.72	111	460729	10.27	ug/l	0.00
Spiked Amount 10.000			Recovery	=	102.70%	
35) 1,2-Dichloroethane-d4	7.18	65	500809	10.46	ug/l	0.02
Spiked Amount 10.000			Recovery	=	104.60%	
49) Toluene-d8	9.96	98	1904427	10.28	ug/l	0.00
Spiked Amount 10.000			Recovery	=	102.80%	
69) 4-Bromofluorobenzene	13.85	95	514201	11.89	ug/l	0.00
Spiked Amount 10.000			Recovery	=	118.90%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	2.14	85	37420	0.63	ug/l	99
5) Vinyl chloride	2.59	62	6238173	82.51	ug/l	90
9) Dichlorofluoromethane	3.34	67	1207237	10.35	ug/l	99
14) 1,1-Dichloroethene	3.95	61	428742	3.98	ug/l	99
21) trans-1,2-Dichloroethene	4.87	61	940387	8.60	ug/l	99
23) 1,1-Dichloroethane	5.39	63	80705	0.65	ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	33162472	533.60	ug/l # E	60
41) Trichloroethene	8.12	130	489908	8.27	ug/l	99

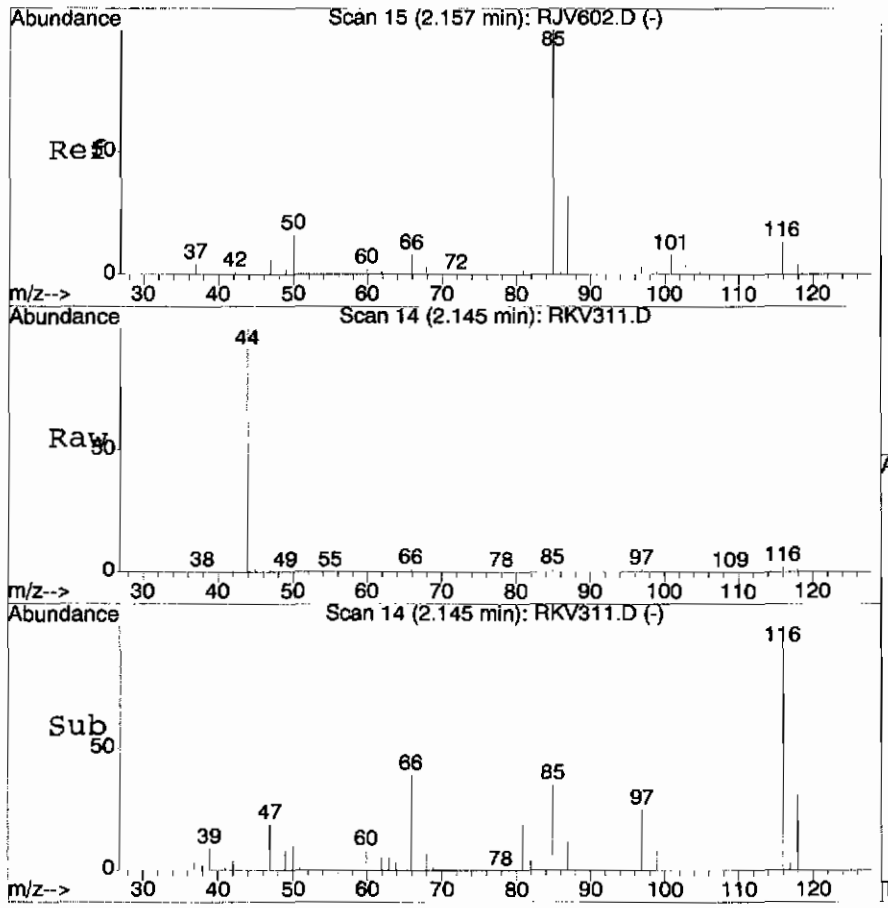
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV311.D Vial: 17
Acq On : 14 Nov 2011 4:59 pm Operator: MW
Sample : 11K063-02R 25mL Inst : TO01
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 15 11:36 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration

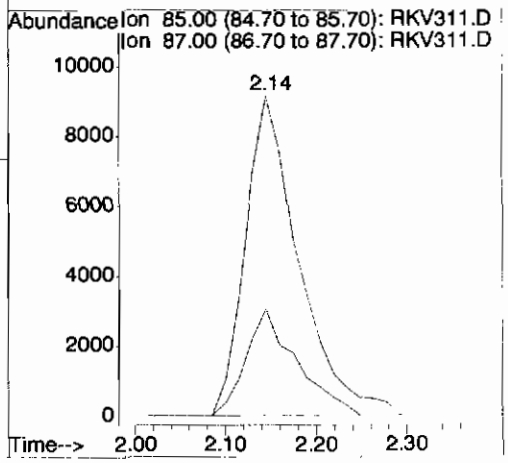


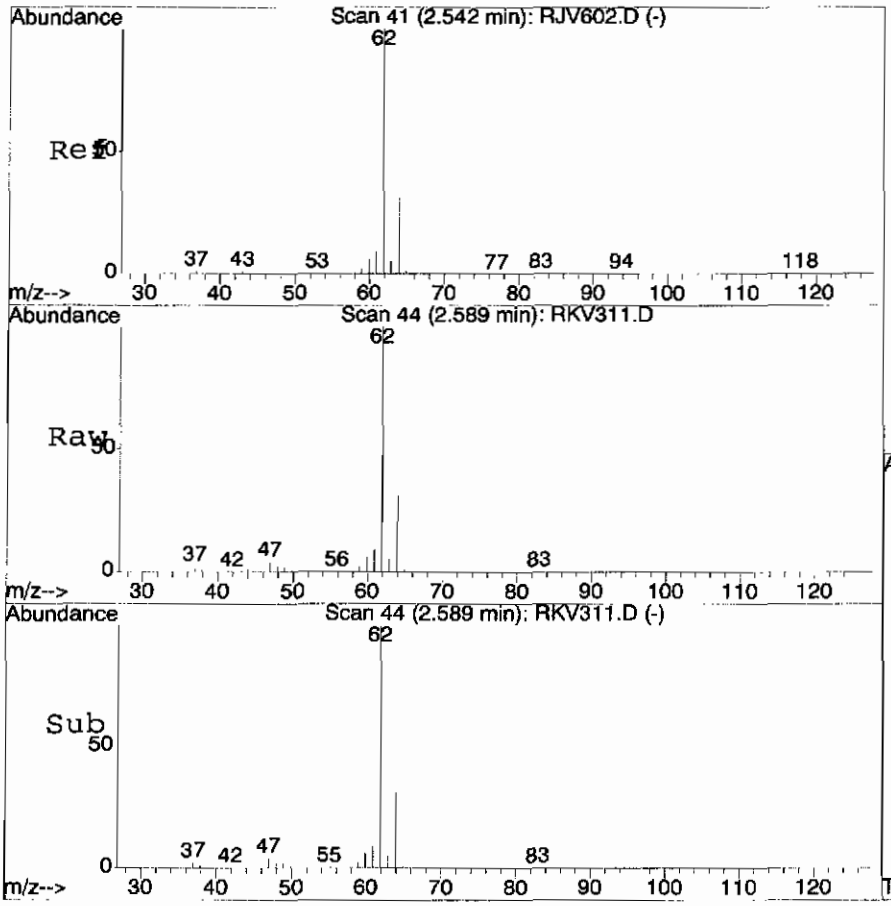


#3
Dichlorodifluoromethane
Concen: 0.63 ug/l
RT: 2.14 min Scan# 14
Delta R.T. -0.01 min
Lab File: RKV311.D
Acq: 14 Nov 2011 4:59 pm

Tgt Ion: 85 Resp: 37420

Ion	Ratio	Lower	Upper
85	100		
87	31.6	1.9	61.9

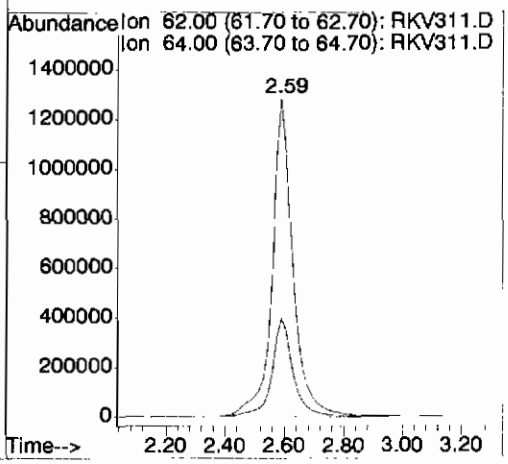


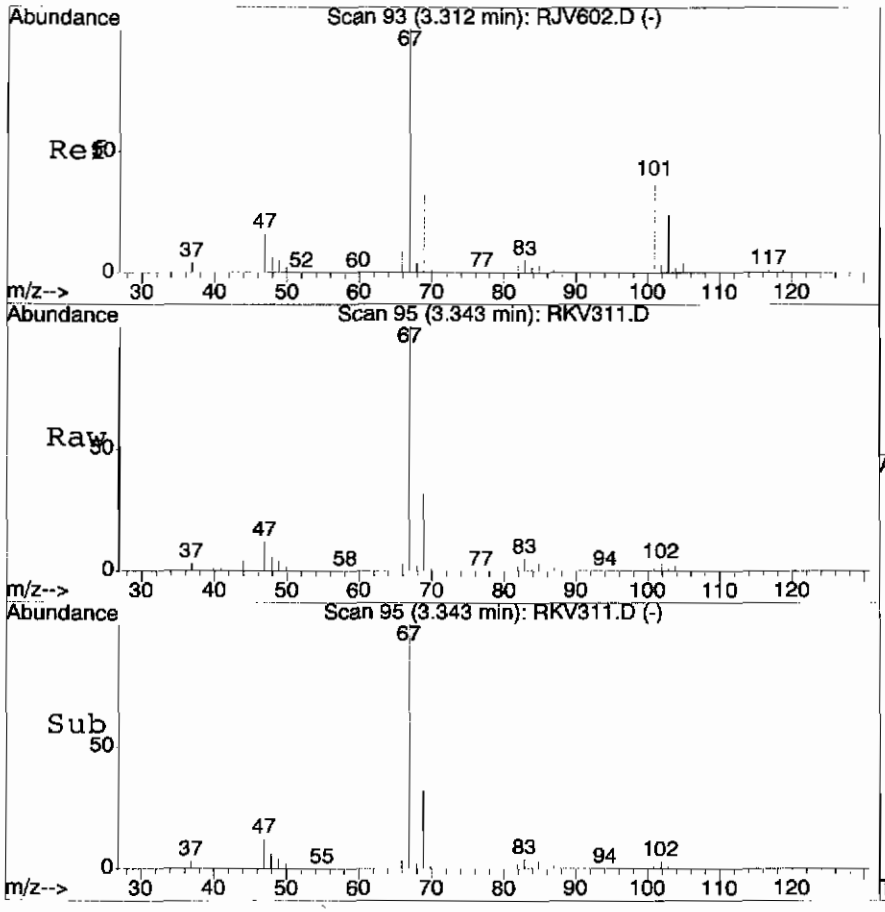


#5
Vinyl chloride
Concen: 82.51 ug/l
RT: 2.59 min Scan# 44
Delta R.T. 0.05 min
Lab File: RKV311.D
Acq: 14 Nov 2011 4:59 pm

Tgt Ion: 62 Resp: 6238173

Ion	Ratio	Lower	Upper
62	100		
64	31.3	7.2	67.2

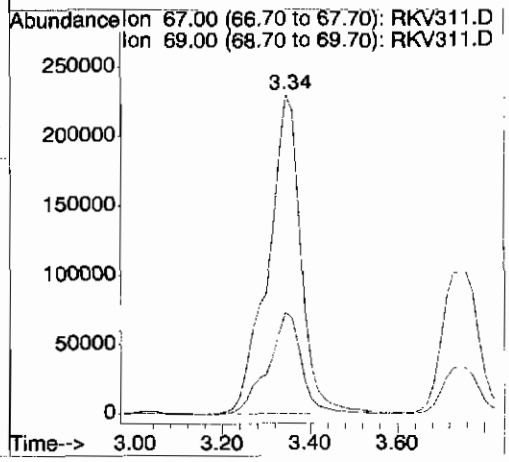


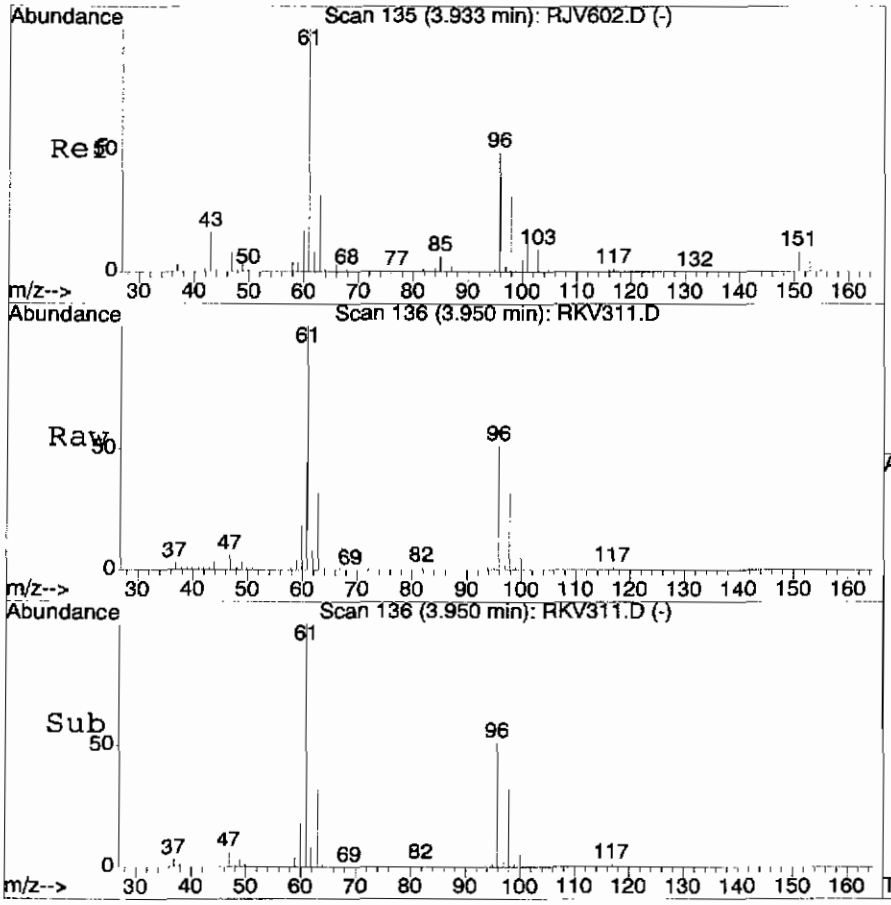


#9
Dichlorofluoromethane
Concen: 10.35 ug/l
RT: 3.34 min Scan# 95
Delta R.T. 0.03 min
Lab File: RKV311.D
Acq: 14 Nov 2011 4:59 pm

Tgt Ion: 67 Resp: 1207237

Ion	Ratio	Lower	Upper
67	100		
69	32.2	1.6	61.6

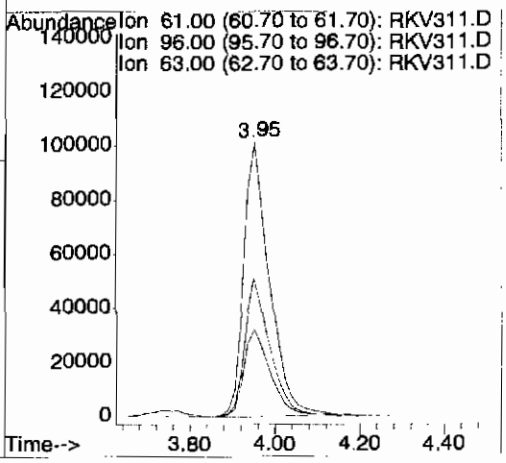


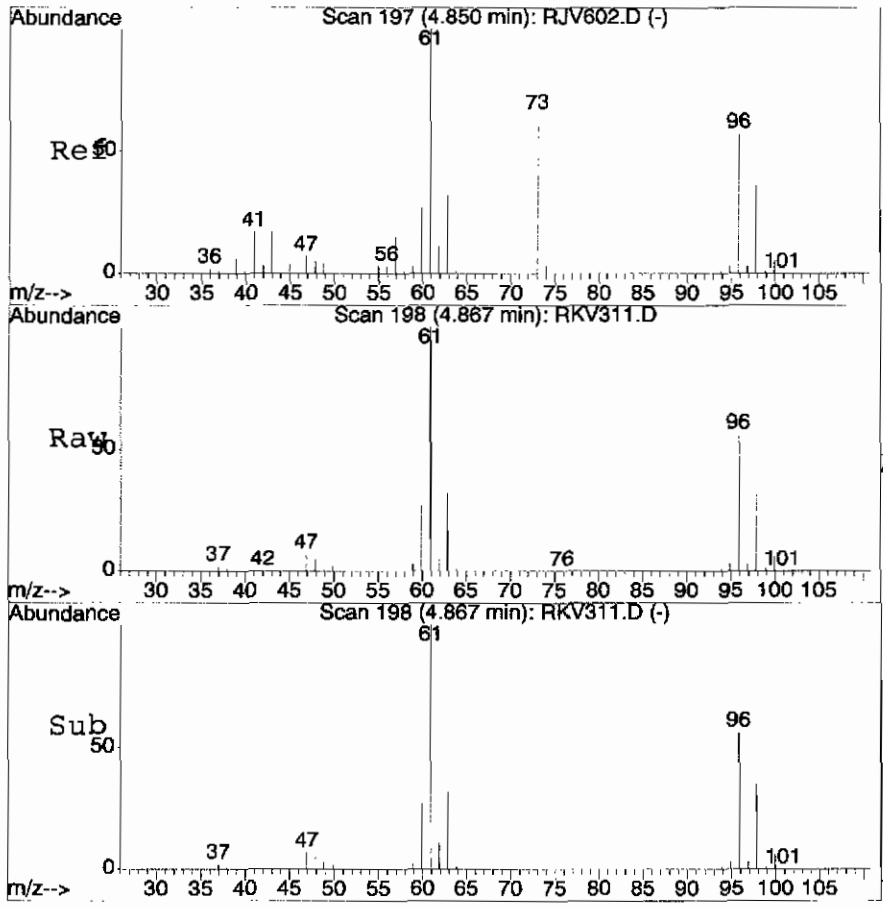


#14
1,1-Dichloroethene
Concen: 3.98 ug/l
RT: 3.95 min Scan# 136
Delta R.T. 0.02 min
Lab File: RKV311.D
Acq: 14 Nov 2011 4:59 pm

Tgt Ion: 61 Resp: 428742

Ion	Ratio	Lower	Upper
61	100		
96	49.1	18.5	78.5
63	32.6	1.3	61.3

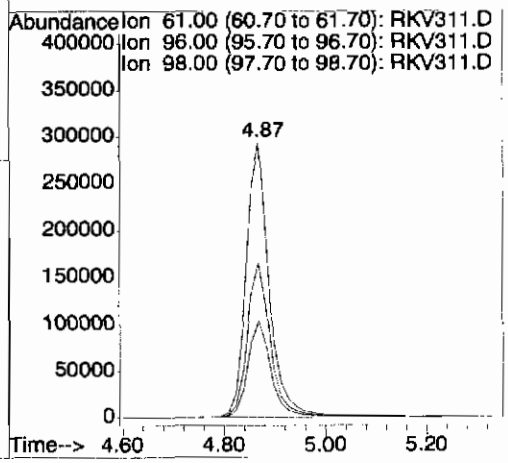


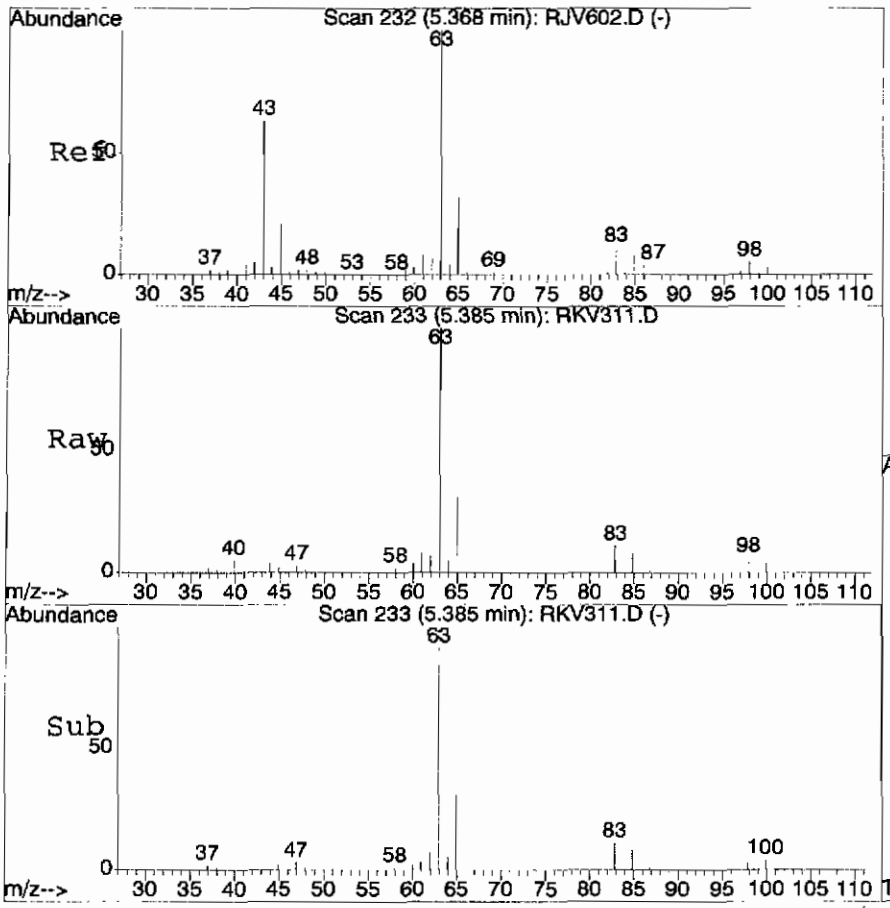


#21
trans-1,2-Dichloroethene
Concen: 8.60 ug/l
RT: 4.87 min Scan# 198
Delta R.T. 0.02 min
Lab File: RKV311.D
Acq: 14 Nov 2011 4:59 pm

Tgt Ion: 61 Resp: 940387

Ion	Ratio	Lower	Upper
61	100		
96	56.6	26.1	86.1
98	35.6	5.2	65.2

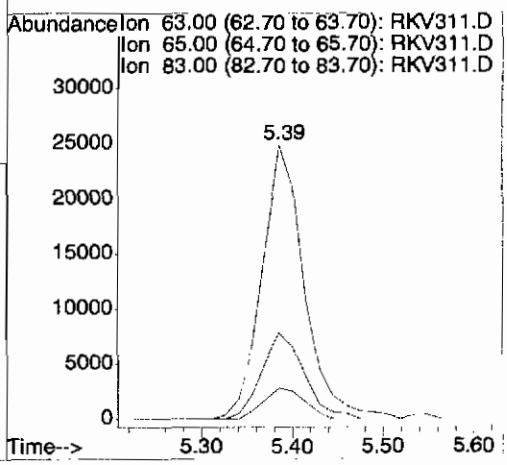


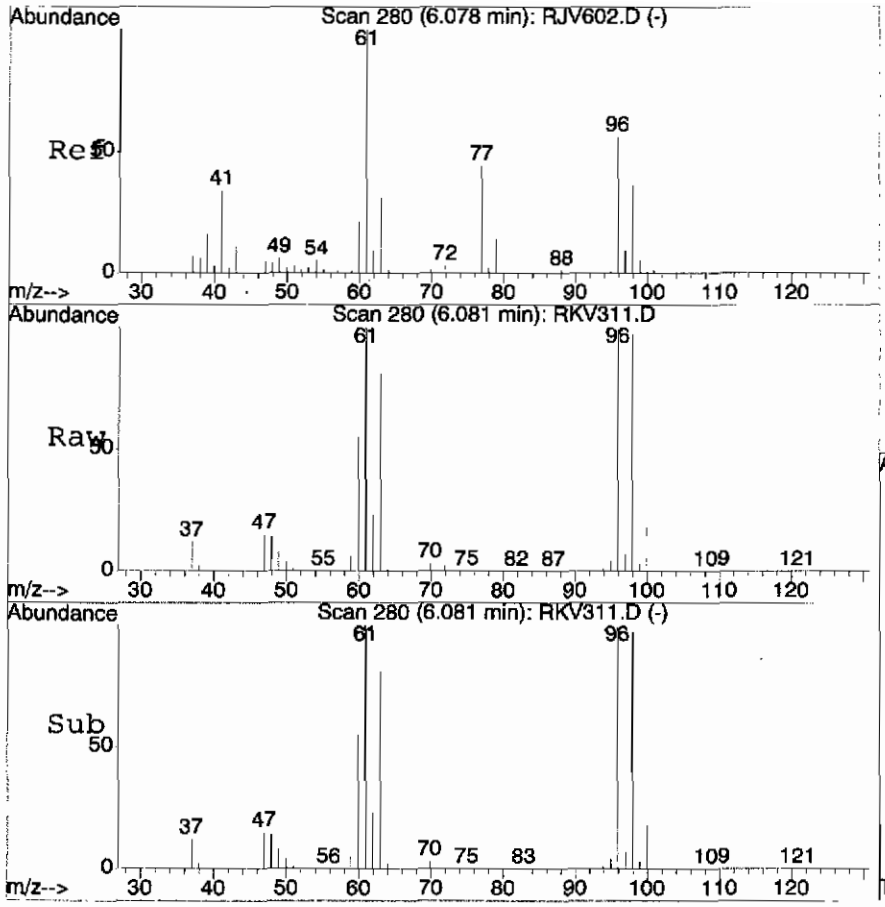


#23
1,1-Dichloroethane
Concen: 0.65 ug/l
RT: 5.39 min Scan# 233
Delta R.T. 0.02 min
Lab File: RKV311.D
Acq: 14 Nov 2011 4:59 pm

Tgt Ion: 63 Resp: 80705

Ion	Ratio	Lower	Upper
63	100		
65	31.5	1.3	61.3
83	11.0	0.0	41.5

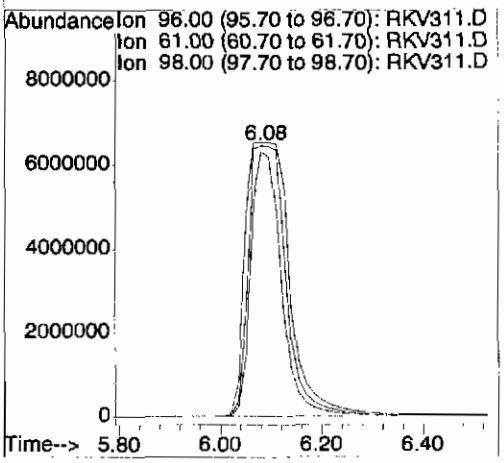


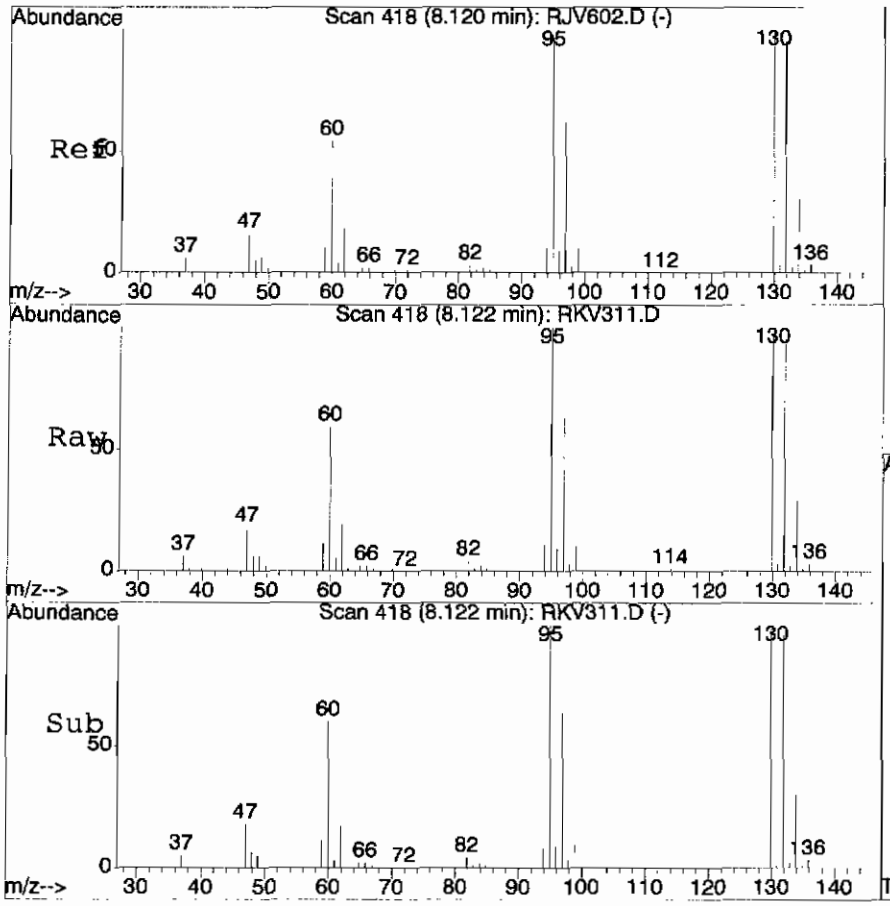


#28
cis-1,2-Dichloroethene
Concen: 533.60 ug/l
RT: 6.08 min Scan# 280
Delta R.T. 0.00 min
Lab File: RKV311.D
Acq: 14 Nov 2011 4:59 pm

Tgt Ion: 96 Resp:33162472

Ion	Ratio	Lower	Upper
96	100		
61	119.6	157.0	217.0#
98	80.3	33.8	93.8

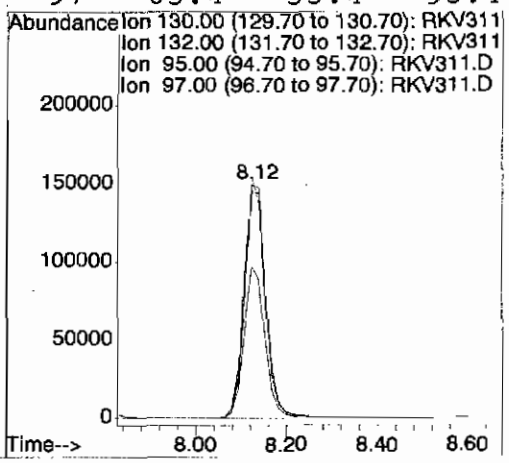




#41
Trichloroethene
Concen: 8.27 ug/l
RT: 8.12 min Scan# 418
Delta R.T. 0.00 min
Lab File: RKV311.D
Acq: 14 Nov 2011 4:59 pm

Tgt Ion:130 Resp: 489908

Ion	Ratio	Lower	Upper
130	100		
132	97.0	64.6	124.6
95	100.4	69.6	129.6
97	63.4	33.4	93.4



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV312.D Vial: 18
Acq On : 14 Nov 2011 5:30 pm Operator: MW
Sample : 11K063-02M 25mL Inst : TO01
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 17:48 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.79	114	1679455	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.33	117	1476954	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	576811	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.72	111	475429	10.34	ug/l	0.00
Spiked Amount 10.000			Recovery	=	103.40%	
35) 1,2-Dichloroethane-d4	7.18	65	518560	10.57	ug/l	0.02
Spiked Amount 10.000			Recovery	=	105.70%	
49) Toluene-d8	9.96	98	1995420	9.77	ug/l	0.00
Spiked Amount 10.000			Recovery	=	97.70%	
69) 4-Bromofluorobenzene	13.85	95	688369	9.68	ug/l	0.00
Spiked Amount 10.000			Recovery	=	96.80%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	2.15	116	103935	3.97	ug/l	90
3) Dichlorodifluoromethane	2.21	85	482016	7.90	ug/l	97
4) Chloromethane	2.43	50	558669	7.65	ug/l	96
5) Vinyl chloride	2.59	62	6896197	88.98	ug/l	90
6) 2-Chloro-1,1,1-trifluoroet	2.70	118	5300	0.09	ug/l #	1
7) Bromomethane	2.98	94	352776	9.19	ug/l	99
8) Chloroethane	3.07	64	419534	8.85	ug/l	99
9) Dichlorofluoromethane	3.36	67	2335500	19.53	ug/l	98
10) Trichlorofluoromethane	3.42	101	779138	10.81	ug/l	99
11) Acrolein	3.82	56	54522	28.70	ug/l	81
12) 1,1,2-Trichloro-1,2,2-trif	4.01	151	342068	9.31	ug/l	99
13) Acetone	3.97	43	358137	48.62	ug/l	97
14) 1,1-Dichloroethene	3.95	61	1515846	13.72	ug/l	99
15) Iodomethane	4.13	142	789197	9.82	ug/l	100
16) Carbon disulfide	4.24	76	1558030	8.64	ug/l	100
17) Methylene chloride	4.53	49	808030	9.54	ug/l	99
18) tert-Butyl alcohol	4.66	59	95215	48.04	ug/l	89
19) Acrylonitrile	4.78	53	446378	49.38	ug/l	98
20) tert-Butyl methyl ether (M	4.86	73	1048709	10.61	ug/l	100
21) trans-1,2-Dichloroethene	4.87	61	2109091	18.81	ug/l	100
22) Vinyl acetate	5.42	43	1607786	20.11	ug/l	90
23) 1,1-Dichloroethane	5.39	63	1321432	10.40	ug/l	100
24) Isopropyl ether (DIPE)	5.42	45	2263747	10.03	ug/l	99
26) tert-Butyl ethyl ether (ET	5.88	59	1642223	10.12	ug/l	99
27) 2-Butanone	5.88	43	184521	15.55	ug/l	62
28) cis-1,2-Dichloroethene	6.08	96	33638021	527.96	ug/l #	59
29) 2,2-Dichloropropane	6.13	77	723399	8.01	ug/l #	1

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV312.D Vial: 18
Acq On : 14 Nov 2011 5:30 pm Operator: MW
Sample : 11K063-02M 25mL Inst : TO01
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 17:48 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.40	49	531162	10.36 ug/l	98
31) Chloroform	6.51	83	1126666	10.54 ug/l	99
33) 1,1,1-Trichloroethane	6.77	97	858252	10.11 ug/l	96
34) tert-Amyl methyl ether (TA	7.39	87	256401	10.76 ug/l	98
37) 1,1-Dichloropropene	6.96	110	292081	9.51 ug/l	99
38) Carbon tetrachloride	6.97	119	682564	9.28 ug/l	99
39) Benzene	7.22	78	2548473	9.77 ug/l	100
40) 1,2-Dichloroethane	7.28	62	692273	10.70 ug/l	99
41) Trichloroethene	8.13	130	1155338	17.68 ug/l	99
42) 1,2-Dichloropropane	8.50	63	677283	9.99 ug/l	100
44) Dibromomethane	8.63	93	233364	10.60 ug/l	98
45) Bromodichloromethane	8.87	83	789716	10.44 ug/l	99
47) cis-1,3-Dichloropropene	9.53	75	891215	9.83 ug/l	99
48) 4-Methyl-2-pentanone	9.74	43	1409432	47.46 ug/l	99
50) Toluene	10.06	91	2623385	10.13 ug/l	99
51) Ethyl methacrylate	10.51	69	505892	10.39 ug/l	98
52) trans-1,3-Dichloropropene	10.42	75	698242	10.41 ug/l	98
53) 1,1,2-Trichloroethane	10.75	97	335745	10.53 ug/l	100
54) Tetrachloroethene	10.91	164	522526	9.93 ug/l	99
55) 1,3-Dichloropropane	11.03	76	697321	10.51 ug/l	100
56) 2-Hexanone	11.09	43	860333	44.33 ug/l	99
57) Dibromochloromethane	11.40	129	419348	11.05 ug/l	100
58) 1,2-Dibromoethane	11.60	107	331999	10.96 ug/l	100
59) 1-Chlorohexane	12.34	91	994895	9.29 ug/l	99
60) Chlorobenzene	12.37	112	1595221	10.70 ug/l	99
61) 1,1,1,2-Tetrachloroethane	12.49	131	541884	10.98 ug/l	99
62) Ethylbenzene	12.51	91	3099249	10.29 ug/l	99
63) m-Xylene & p-Xylene	12.68	91	4753767	20.90 ug/l	99
64) o-Xylene	13.19	91	2355425	10.53 ug/l	100
65) Styrene	13.22	104	1654601	10.34 ug/l	100
67) Bromoform	13.45	173	205085	10.77 ug/l	99
68) Isopropylbenzene	13.65	105	2945849	10.28 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.99	83	423063	10.79 ug/l	99
71) Bromobenzene	14.02	156	617017	10.45 ug/l	97
72) trans-1,4-Dichloro-2-buten	14.03	53	65057	6.48 ug/l	98
73) 1,2,3-Trichloropropane	14.06	110	105429	10.51 ug/l	89
74) n-Propylbenzene	14.12	91	3713840	10.06 ug/l	100
75) 1,3,5-Trimethylbenzene	14.31	105	2377075	10.03 ug/l	100
76) 2-Chlorotoluene	14.22	91	2084768	10.22 ug/l	99
77) 4-Chlorotoluene	14.36	91	2308634	10.26 ug/l	99
78) tert-Butylbenzene	14.65	134	549467	10.35 ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV312.D Vial: 18
Acq On : 14 Nov 2011 5:30 pm Operator: MW
Sample : 11K063-02M 25mL Inst : TO01
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 17:48 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

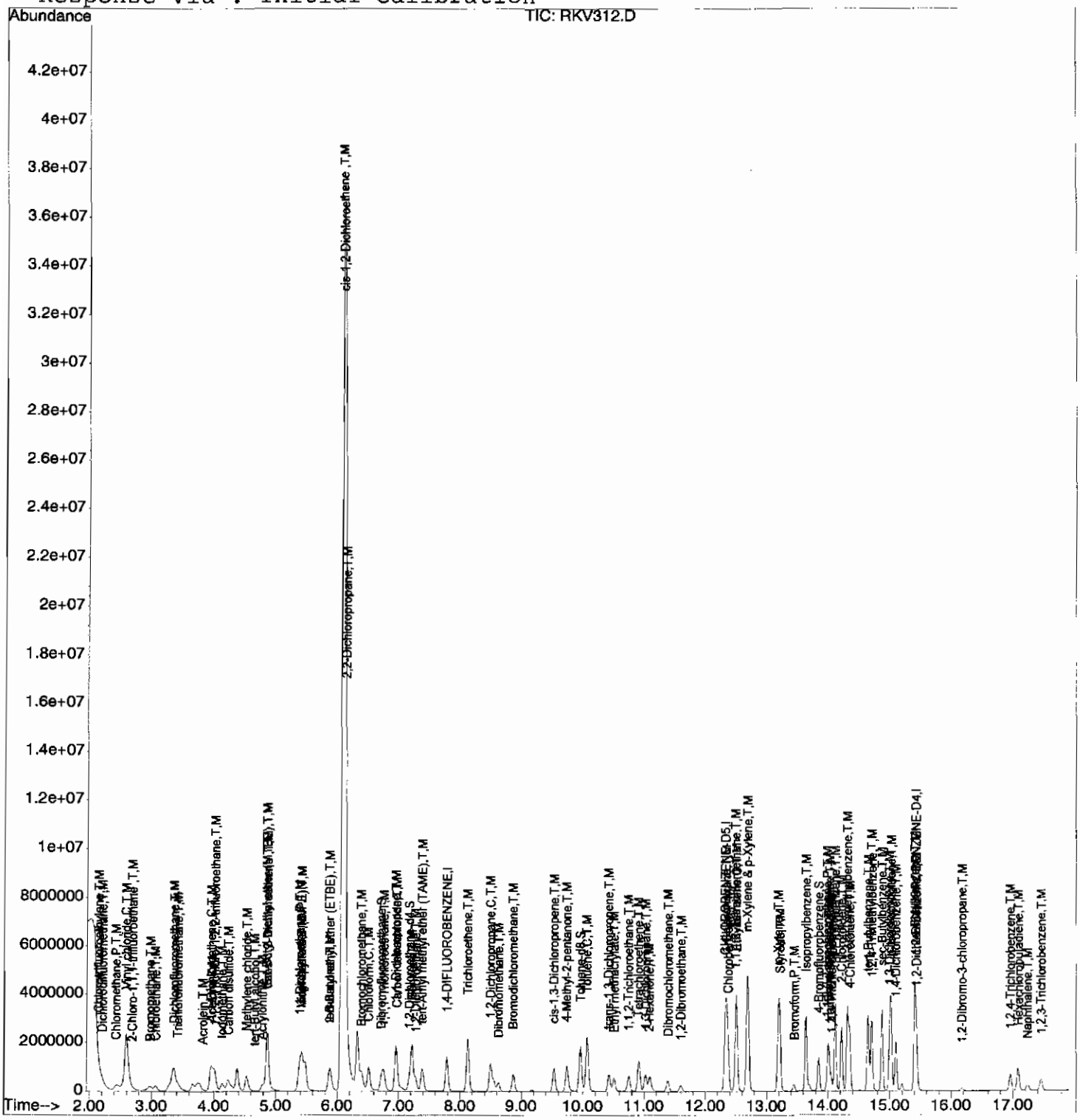
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79) 1,2,4-Trimethylbenzene	14.71	105	2310594	10.28 ug/l	99
80) sec-Butylbenzene	14.87	105	3084765	10.24 ug/l	100
81) p-Isopropyltoluene	15.02	119	2461662	10.54 ug/l	99
82) 1,3-Dichlorobenzene	14.99	146	1193762	10.55 ug/l	100
83) 1,4-Dichlorobenzene	15.10	146	1131703	10.53 ug/l	100
84) n-Butylbenzene	15.41	91	2132124	9.44 ug/l	100
85) 1,2-Dichlorobenzene	15.44	146	951359	10.56 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.18	157	48214	10.67 ug/l	97
87) 1,2,4-Trichlorobenzene	16.96	180	370644	8.19 ug/l	99
88) Hexachlorobutadiene	17.09	225	323917	10.11 ug/l	99
89) Naphthalene	17.24	128	377976	7.56 ug/l	99
90) 1,2,3-Trichlorobenzene	17.46	180	269205	9.08 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV312.D Vial: 18
Acq On : 14 Nov 2011 5:30 pm Operator: MW
Sample : 11K063-02M 25mL Inst : TO01
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 17:48 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV313.D Vial: 19
Acq On : 14 Nov 2011 6:01 pm Operator: MW
Sample : 11K063-02S 25mL Inst : TO01
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 18:19 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1734386	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1505359	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	576381	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.72	111	486972	10.26	ug/l	0.00
Spiked Amount 10.000			Recovery	=	102.60%	
35) 1,2-Dichloroethane-d4	7.18	65	512974	10.12	ug/l	0.02
Spiked Amount 10.000			Recovery	=	101.20%	
49) Toluene-d8	9.96	98	2025621	9.73	ug/l	0.00
Spiked Amount 10.000			Recovery	=	97.30%	
69) 4-Bromofluorobenzene	13.85	95	676796	9.53	ug/l	0.00
Spiked Amount 10.000			Recovery	=	95.30%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	2.16	116	115901	4.29	ug/l	92
3) Dichlorodifluoromethane	2.20	85	551582	8.75	ug/l	98
4) Chloromethane	2.44	50	637939	8.45	ug/l	97
5) Vinyl chloride	2.59	62	7699841	96.20	ug/l	90
6) 2-Chloro-1,1,1-trifluoroet	2.71	118	5499	0.09	ug/l #	1
7) Bromomethane	2.97	94	388116	9.79	ug/l	99
8) Chloroethane	3.06	64	459094	9.38	ug/l	100
9) Dichlorofluoromethane	3.36	67	2563653	20.76	ug/l	99
10) Trichlorofluoromethane	3.42	101	808677	10.86	ug/l	99
11) Acrolein	3.82	56	60006	30.58	ug/l	82
12) 1,1,2-Trichloro-1,2,2-trif	4.01	151	382006	10.07	ug/l	99
13) Acetone	3.98	43	365429	48.04	ug/l	98
14) 1,1-Dichloroethene	3.95	61	1623312	14.22	ug/l	98
15) Iodomethane	4.13	142	871203	10.50	ug/l	97
16) Carbon disulfide	4.23	76	1874185	10.06	ug/l	100
17) Methylene chloride	4.53	49	878710	10.04	ug/l	97
18) tert-Butyl alcohol	4.67	59	105073	51.33	ug/l	81
19) Acrylonitrile	4.79	53	462106	49.51	ug/l	98
20) tert-Butyl methyl ether (M	4.85	73	1083959	10.62	ug/l	99
21) trans-1,2-Dichloroethene	4.87	61	2313069	19.97	ug/l	97
22) Vinyl acetate	5.43	43	1639016	19.86	ug/l	82
23) 1,1-Dichloroethane	5.38	63	1408489	10.74	ug/l	100
24) Isopropyl ether (DIPE)	5.43	45	2402092	10.31	ug/l	99
26) tert-Butyl ethyl ether (ET	5.87	59	1737093	10.37	ug/l	98
27) 2-Butanone	5.87	43	202870	16.55	ug/l	63
28) cis-1,2-Dichloroethene	6.08	96	34116418	518.51	ug/l #	60
29) 2,2-Dichloropropane	6.12	77	757009	8.11	ug/l #	1

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV313.D Vial: 19
Acq On : 14 Nov 2011 6:01 pm Operator: MW
Sample : 11K063-02S 25mL Inst : TO01
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 18:19 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30)	Bromochloromethane	6.39	49	543804	10.27 ug/l	96
31)	Chloroform	6.51	83	1158805	10.50 ug/l	99
33)	1,1,1-Trichloroethane	6.76	97	867496	9.89 ug/l	95
34)	tert-Amyl methyl ether (TA	7.40	87	262301	10.65 ug/l	100
37)	1,1-Dichloropropene	6.95	110	308519	9.85 ug/l	99
38)	Carbon tetrachloride	6.97	119	694296	9.26 ug/l	100
39)	Benzene	7.22	78	2733188	10.28 ug/l	100
40)	1,2-Dichloroethane	7.28	62	702397	10.65 ug/l	99
41)	Trichloroethene	8.12	130	1217968	18.29 ug/l	99
42)	1,2-Dichloropropane	8.49	63	703906	10.19 ug/l	95
44)	Dibromomethane	8.63	93	237378	10.58 ug/l	97
45)	Bromodichloromethane	8.88	83	809240	10.50 ug/l	100
47)	cis-1,3-Dichloropropene	9.53	75	913437	9.89 ug/l	98
48)	4-Methyl-2-pentanone	9.73	43	1393910	46.05 ug/l	99
50)	Toluene	10.06	91	2764186	10.47 ug/l	99
51)	Ethyl methacrylate	10.50	69	488754	9.85 ug/l	98
52)	trans-1,3-Dichloropropene	10.43	75	684413	10.01 ug/l	100
53)	1,1,2-Trichloroethane	10.76	97	334400	10.29 ug/l	99
54)	Tetrachloroethene	10.92	164	545305	10.17 ug/l	99
55)	1,3-Dichloropropane	11.02	76	705038	10.43 ug/l	99
56)	2-Hexanone	11.10	43	858824	43.42 ug/l	99
57)	Dibromochloromethane	11.39	129	415214	10.74 ug/l	99
58)	1,2-Dibromoethane	11.60	107	329168	10.66 ug/l	99
59)	1-Chlorohexane	12.34	91	1049078	9.61 ug/l	97
60)	Chlorobenzene	12.37	112	1653163	10.88 ug/l	99
61)	1,1,1,2-Tetrachloroethane	12.50	131	549811	10.93 ug/l	100
62)	Ethylbenzene	12.50	91	3201240	10.42 ug/l	99
63)	m-Xylene & p-Xylene	12.69	91	4723546	20.38 ug/l	100
64)	o-Xylene	13.18	91	2410968	10.57 ug/l	99
65)	Styrene	13.21	104	1515132	9.29 ug/l	98
67)	Bromoform	13.45	173	195333	10.27 ug/l	99
68)	Isopropylbenzene	13.64	105	2925764	10.22 ug/l	99
70)	1,1,2,2-Tetrachloroethane	13.98	83	414569	10.58 ug/l	98
71)	Bromobenzene	14.01	156	614003	10.40 ug/l	97
72)	trans-1,4-Dichloro-2-buten	14.03	53	61146	6.10 ug/l	97
73)	1,2,3-Trichloropropane	14.06	110	102681	10.24 ug/l	94
74)	n-Propylbenzene	14.11	91	3755126	10.18 ug/l	100
75)	1,3,5-Trimethylbenzene	14.31	105	2381738	10.06 ug/l	99
76)	2-Chlorotoluene	14.22	91	2094318	10.28 ug/l	100
77)	4-Chlorotoluene	14.35	91	2321926	10.33 ug/l	99
78)	tert-Butylbenzene	14.65	134	553779	10.44 ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV313.D Vial: 19
Acq On : 14 Nov 2011 6:01 pm Operator: MW
Sample : 11K063-02S 25mL Inst : TO01
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 18:19 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

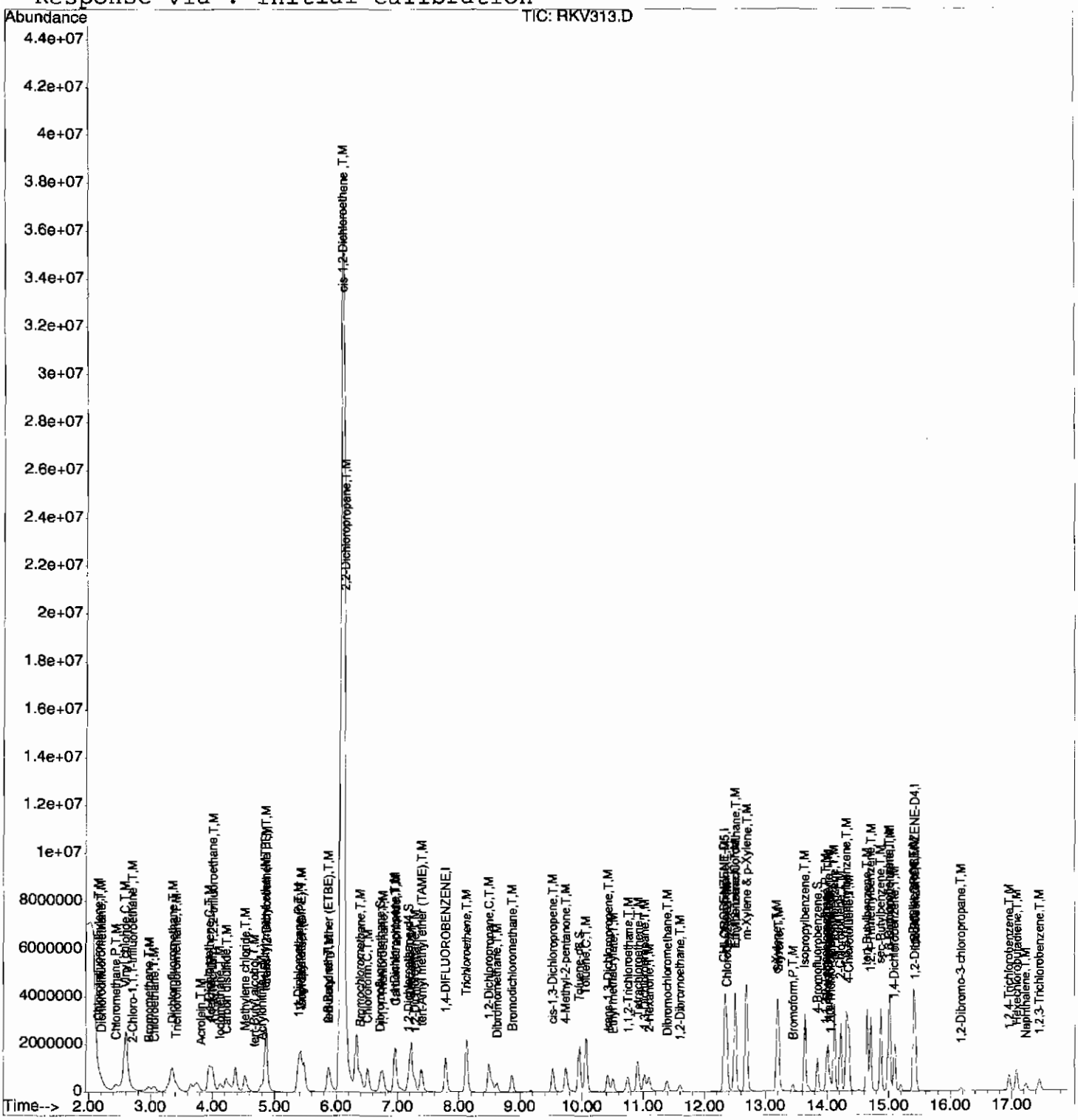
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79) 1,2,4-Trimethylbenzene	14.71	105	2233331	9.94 ug/l	99
80) sec-Butylbenzene	14.87	105	3123310	10.38 ug/l	99
81) p-Isopropyltoluene	15.02	119	2461047	10.55 ug/l	100
82) 1,3-Dichlorobenzene	15.00	146	1209033	10.69 ug/l	100
83) 1,4-Dichlorobenzene	15.09	146	1133916	10.56 ug/l	99
84) n-Butylbenzene	15.40	91	2145770	9.51 ug/l	99
85) 1,2-Dichlorobenzene	15.43	146	958276	10.65 ug/l	100
86) 1,2-Dibromo-3-chloropropan	16.17	157	45857	10.15 ug/l	97
87) 1,2,4-Trichlorobenzene	16.96	180	373216	8.25 ug/l	99
88) Hexachlorobutadiene	17.09	225	319459	9.98 ug/l	99
89) Naphthalene	17.24	128	423137	8.47 ug/l	99
90) 1,2,3-Trichlorobenzene	17.46	180	267934	9.05 ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV313.D Vial: 19
Acq On : 14 Nov 2011 6:01 pm Operator: MW
Sample : 11K063-02S 25mL Inst : TO01
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 18:19 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RJV596
Instrument ID: T001
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K063
BFB Injection Date : 10/31/11
BFB Injection Time : 09:18
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.79
75	30.0 - 60.0% of mass 95	51.84
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.73
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	73.40
175	5.0 - 9.0% of mass 174	5.20(7.1)1
176	95.0 - 101.0% of mass 174	72.01(98.1)1
177	5.0 - 9.0% of mass 176	4.99(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	V001J311	RJV597	10/31/11	09:59
2	VSTD0.5	V001J312	RJV598	10/31/11	10:30
3	VSTD01	V001J313	RJV599	10/31/11	11:01
4	VSTD02	V001J314	RJV600	10/31/11	11:32
5	VSTD05	V001J315	RJV601	10/31/11	12:03
6	VSTD010	V001J316	RJV602	10/31/11	12:33
7	VSTD020	V001J317	RJV603	10/31/11	13:04
8	VSTD030	V001J318	RJV604	10/31/11	13:35
9	VSTD050	V001J319	RJV605	10/31/11	14:05
10	VSTD100	V001J3110	RJV606	10/31/11	14:36
11	VSTD010	IV001J311	RJV609	10/31/11	16:07

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :T001
Beginning DateTime :10/31/11 09:59
Spike Units :PPB
IC File :RJV602

Column Spec :RTX502.2 ID :0.32MM
Ending DateTime :10/31/11 14:36
HPChem Method :V001J31

M	IDX	Parameters	.3 09:59 RJV597	.5 10:30 RJV598	1 11:01 RJV599	2 11:32 RJV600	5 12:03 RJV601	10 12:33 RJV602	20 13:04 RJV603	30 13:35 RJV604	50 14:05 RJV605	100 14:36 RJV606	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	0	7.7772
	2	Chlorotrifluoroethylene	------	0.109	0.142	0.158	0.161	0.161	0.174	0.164	0.169	0.164	0.156	12.57	2.1081
	3	Dichlorodifluoromethane	0.309	0.336	0.351	0.390	0.390	0.404	0.374	0.355	0.365	0.359	0.363	7.72	2.1576
	4	Chloromethane	0.424	0.438	0.439	0.437	0.442	0.478	0.432	0.422	0.420	0.418	0.435	4.03	2.3766
	5	Vinyl chloride	0.390	0.428	0.455	0.475	0.480	0.515	0.481	0.460	0.478	0.455	0.461	7.36	2.5408
	6	2-Chloro-1,1,1-trifluoroethane	0.267	0.292	0.352	0.405	0.357	0.346	0.367	0.343	0.340	0.315	0.338	11.52	2.6548
	7	Bromomethane	0.218	0.243	0.243	0.252	0.251	0.264	0.237	0.222	0.213	0.143	0.229	14.94	2.9004
	8	Chloroethane	0.371	0.316	0.291	0.288	0.275	0.285	0.269	0.252	0.251	0.223	0.282	14.40	3.0217
	9	Dichlorofluoromethane	0.808	0.730	0.755	0.724	0.730	0.705	0.722	0.671	0.654	0.622	0.712	7.42	3.3088
	10	Trichlorofluoromethane	------	0.394	0.410	0.439	0.446	0.459	0.428	------	------	------	0.429	5.60	3.3129
5	11	Acrolein	------	------	0.015	0.012	0.011	0.011	0.011	0.011	0.011	0.010	0.011	12.29	3.8010
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	0.227	0.210	0.222	0.216	0.226	0.217	0.224	0.216	0.216	0.214	0.219	2.60	3.9761
5	13	Acetone	------	------	0.054	0.046	0.045	0.046	0.044	0.040	0.039	0.036	0.044	12.62	3.9619
	14	1,1-Dichloroethene	0.682	0.667	0.685	0.687	0.691	0.670	0.668	0.631	0.616	0.584	0.658	5.45	3.9272
	15	Iodomethane	0.473	0.447	0.475	0.470	0.485	0.478	0.497	0.482	0.491	0.488	0.479	2.89	4.1122
	16	Carbon disulfide	1.104	0.866	0.961	0.999	1.070	0.991	1.192	1.135	1.223	1.201	1.074	10.99	4.2084
	17	Methylene chloride	0.589	0.509	0.526	0.494	0.501	0.484	0.501	0.484	0.485	0.473	0.505	6.57	4.5117
5	18	tert-Butyl alcohol	------	------	0.011	0.010	0.011	0.012	0.014	0.013	0.012	0.012	0.012	10.38	4.6333
5	19	Acrylonitrile	0.057	0.049	0.054	0.049	0.054	0.054	0.056	0.055	0.055	0.054	0.054	4.68	4.7766
	20	tert-Butyl methyl ether (MTBE)	0.581	0.545	0.619	0.597	0.611	0.595	0.636	0.580	0.573	0.550	0.589	4.92	4.8372
	21	trans-1,2-Dichloroethene	0.705	0.636	0.678	0.676	0.683	0.672	0.685	0.661	0.654	0.626	0.668	3.56	4.8505
	22	Vinyl acetate	------	0.362	0.399	0.481	0.527	0.523	0.516	0.523	0.507	0.446	0.476	12.74	5.3567
	23	1,1-Dichloroethane	0.823	0.707	0.773	0.758	0.764	0.745	0.768	0.750	0.748	0.727	0.756	4.05	5.3714
	24	Isopropyl ether (DIPE)	1.407	1.255	1.338	1.339	1.359	1.324	1.393	1.341	1.334	------	1.343	3.23	5.4144
5	25	2-Butanol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	26	tert-Butyl ethyl ether (ETBE)	1.023	0.928	1.019	0.963	0.989	0.968	1.012	0.923	0.924	0.912	0.966	4.44	5.8596
5	27	2-Butanone	0.072	0.064	0.071	0.064	0.072	0.073	0.077	0.073	0.072	0.069	0.071	5.82	6.0416
	28	cis-1,2-Dichloroethene	0.393	0.357	0.386	0.385	0.379	0.374	0.391	0.380	0.379	0.368	0.379	2.86	6.0801
	29	2,2-Dichloropropane	0.598	0.568	0.573	0.560	0.561	0.534	0.532	0.496	0.488	0.469	0.538	7.77	6.0993
	30	Bromochloromethane	0.309	0.297	0.317	0.305	0.307	0.309	0.319	0.301	0.297	0.289	0.305	3.06	6.3775
	31	Chloroform	0.660	0.608	0.644	0.641	0.661	0.654	0.655	0.620	0.616	0.606	0.636	3.47	6.5047
	32	Dibromofluoromethane	0.282	0.250	0.254	0.287	0.283	0.277	0.288	0.274	0.275	0.266	0.274	4.90	6.7089
	33	1,1,1-Trichloroethane	0.511	0.499	0.523	0.513	0.526	0.516	0.513	0.485	0.488	0.482	0.506	3.15	6.7459
	34	tert-Amyl methyl ether (TAME)	0.134	0.128	0.146	0.142	0.146	0.148	0.155	0.144	0.141	0.136	0.142	5.46	7.3807
	35	1,2-Dichloroethane-d4	0.295	0.293	0.281	0.319	0.317	0.298	0.304	0.276	0.273	0.266	0.292	6.16	7.1646
	36	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	0	12.3211
	37	1,1-Dichloropropene	0.235	0.213	0.208	0.199	0.205	0.203	0.202	0.208	0.204	0.202	0.208	4.86	6.9486
	38	Carbon tetrachloride	0.524	0.459	0.480	0.500	0.518	0.514	0.503	0.498	0.487	0.498	0.498	3.89	6.9546
	39	Benzene	1.929	1.746	1.769	1.711	1.749	1.714	1.733	1.752	1.800	------	1.767	3.77	7.2081
	40	1,2-Dichloroethane	0.464	0.438	0.454	0.442	0.456	0.445	0.441	0.417	0.415	0.410	0.438	4.24	7.2697
	41	Trichloroethene	0.487	0.420	0.428	0.433	0.441	0.435	0.444	0.437	0.449	0.451	0.442	4.13	8.1205
	42	1,2-Dichloropropane	0.496	0.463	0.451	0.450	0.461	0.447	0.455	0.452	0.461	0.455	0.459	3.08	8.4889
20	43	1,4-Dioxane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	44	Dibromomethane	0.151	0.142	0.151	0.143	0.152	0.151	0.153	0.147	0.150	0.151	0.149	2.57	8.6117
	45	Bromodichloromethane	0.536	0.466	0.498	0.506	0.523	0.517	0.528	0.510	0.518	0.519	0.512	3.82	8.8633
	46	2-Chloroethyl vinyl ether	0.106	0.092	0.109	0.108	0.117	0.121	0.135	0.127	0.132	0.135	0.118	12.09	9.2716
	47	cis-1,3-Dichloropropene	0.638	0.563	0.591	0.602	0.617	0.610	0.632	0.618	0.632	0.634	0.614	3.83	9.5247
5	48	4-Methyl-2-pentanone	0.209	0.181	0.188	0.176	0.198	0.205	0.219	0.209	0.215	0.212	0.201	7.38	9.7348
	49	Toluene-d8	1.537	1.362	1.194	1.412	1.388	1.334	1.400	1.406	1.417	------	1.383	6.52	9.9520
	50	Toluene	1.907	1.740	1.719	1.699	1.743	1.702	1.724	1.760	1.786	------	1.753	3.65	10.0604
	51	Ethyl methacrylate	0.317	0.261	0.296	0.297	0.326	0.344	0.371	0.359	0.362	0.362	0.330	11.06	10.5042
	52	trans-1,3-Dichloropropene	0.446	0.396	0.447	0.443	0.471	0.468	0.480	0.460	0.466	0.467	0.454	5.28	10.4169
	53	1,1,2-Trichloroethane	0.243	0.203	0.217	0.208	0.215	0.211	0.222	0.214	0.215	0.212	0.216	4.93	10.7439
	54	Tetrachloroethene	0.381	0.340	0.352	0.348	0.357	0.356	0.357	0.352	0.358	0.361	0.356	2.94	10.9066
	55	1,3-Dichloropropane	0.467	0.414	0.447	0.441	0.452	0.455	0.468	0.449	0.457	0.442	0.449	3.40	11.0161
5	56	2-Hexanone	0.139	0.115	0.119	0.111	0.126	0.135	0.144	0.141	0.143	0.141	0.131	9.50	11.0857
	57	Dibromochloromethane	0.232	0.231	0.244	0.250	0.264	0.269	0.280	0.265	0.266	0.268	0.257	6.52	11.3816
	58	1,2-Dibromoethane	0.199	0.179	0.201	0.204	0.210	0.209	0.221	0.209	0.210	0.209	0.205	5.44	11.5946

SG
11/4/11

2012

	59	1-Chlorohexane	0.816	0.718	0.707	0.695	0.728	0.717	0.725	0.721	0.722	0.703	0.725	4.61	12.3360
	60	Chlorobenzene	1.034	0.946	0.995	0.993	1.039	1.037	1.038	1.023	1.017	0.974	1.010	3.12	12.3641
	61	1,1,1,2-Tetrachloroethane	0.350	0.301	0.326	0.332	0.346	0.344	0.351	0.335	0.334	0.322	0.334	4.52	12.4898
	62	Ethylbenzene	2.164	1.945	1.977	1.991	2.089	2.054	2.104	2.054	1.984	------	2.040	3.49	12.5018
2	63	m-Xylene & p-Xylene	1.610	1.482	1.470	1.505	1.572	1.573	1.567	1.538	------	------	1.540	3.23	12.6812
	64	o-Xylene	1.589	1.453	1.476	1.474	1.569	1.547	1.546	1.502	1.481	------	1.515	3.19	13.1841
	65	Styrene	1.016	0.911	1.000	1.022	1.143	1.156	1.192	1.187	1.174	1.038	1.084	9.03	13.2134
	66	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	0	15.4150
	67	Bromoform	0.300	0.296	0.320	0.305	0.327	0.327	0.344	0.343	0.359	0.377	0.330	7.98	13.4427
	68	Isopropylbenzene	5.486	4.993	4.975	4.842	4.950	4.869	4.800	4.988	4.786	------	4.966	4.25	13.6379
	69	4-Bromofluorobenzene	1.481	1.312	1.095	1.243	1.225	1.133	1.166	1.195	1.226	1.246	1.232	8.67	13.8452
	70	1,1,2,2-Tetrachloroethane	0.708	0.641	0.683	0.668	0.684	0.663	0.694	0.682	0.687	0.686	0.680	2.70	13.9828
	71	Bromobenzene	1.217	0.984	1.027	0.976	0.999	0.987	0.997	1.005	------	------	1.024	7.74	14.0073
	72	trans-1,4-Dichloro-2-butene	0.150	0.153	0.174	0.160	0.173	0.179	0.189	0.184	0.186	0.192	0.174	8.64	14.0272
	73	1,2,3-Trichloropropane	0.208	0.163	0.191	0.169	0.172	0.165	0.171	0.165	0.166	0.171	0.174	8.18	14.0538
	74	n-Propylbenzene	6.681	6.426	6.296	6.295	6.395	6.353	6.300	6.476	------	------	6.403	2.04	14.1128
	75	1,3,5-Trimethylbenzene	4.223	4.025	4.069	4.018	4.178	4.115	4.097	4.107	4.142	------	4.108	1.64	14.3070
	76	2-Chlorotoluene	3.930	3.660	3.570	3.417	3.531	3.421	3.367	3.429	3.495	------	3.536	4.91	14.2149
	77	4-Chlorotoluene	4.164	3.976	3.937	3.805	3.928	3.864	3.769	3.804	3.846	------	3.899	3.11	14.3481
	78	tert-Butylbenzene	0.968	0.910	0.914	0.906	0.922	0.915	0.906	0.923	0.918	0.917	0.920	1.93	14.6442
	79	1,2,4-Trimethylbenzene	4.266	3.870	3.910	3.868	3.983	4.040	3.945	3.951	3.974	3.171	3.898	7.18	14.7033
	80	sec-Butylbenzene	5.313	4.991	5.022	5.120	5.427	5.421	5.317	5.421	4.953	------	5.221	3.80	14.8692
	81	p-Isopropyltoluene	4.020	3.777	3.939	4.070	4.305	4.382	4.330	4.345	4.239	3.076	4.048	9.79	15.0185
	82	1,3-Dichlorobenzene	2.001	1.931	1.924	1.887	1.975	1.984	1.970	1.966	1.997	1.986	1.962	1.87	14.9948
	83	1,4-Dichlorobenzene	1.937	1.762	1.795	1.801	1.875	1.890	1.897	1.889	1.897	1.885	1.863	3.02	15.0954
	84	n-Butylbenzene	3.778	3.544	3.535	3.722	3.974	4.177	4.224	4.173	4.098	------	3.914	7.03	15.4019
	85	1,2-Dichlorobenzene	1.623	1.514	1.544	1.533	1.578	1.581	1.583	1.550	1.545	1.563	1.561	2.00	15.4328
	86	1,2-Dibromo-3-chloropropane	------	0.054	0.073	0.074	0.076	0.081	0.086	0.084	0.086	0.090	0.078	14.04	16.1711
	87	1,2,4-Trichlorobenzene	0.599	0.558	0.592	0.622	0.706	0.786	0.817	0.793	0.802	------	0.697	15.05	16.9571
	88	Hexachlorobutadiene	0.532	0.483	0.519	0.518	0.581	0.602	0.586	0.560	0.550	0.625	0.556	7.87	17.0855
	89	Naphthalene	------	0.848	0.785	0.727	0.815	0.969	1.054	------	------	------	0.866	14.11	17.2361
	90	1,2,3-Trichlorobenzene	0.465	0.412	0.437	0.448	0.513	0.579	0.599	0.581	0.590	------	0.514	14.54	17.4553

Spike Amount = Nominal Amount * M
Ave_%RSD : 6.3 Max_%RSD : 15

Use Least Square Linear Regression with weighting factor of inverse concentration for comps with %_RSD > 15
Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
87	1,2,4-Trichlorobenzene	-0.01281	0.80017	0.9994

SG
11/4/11

2073

Compound List Report TO01

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
Total Cpnds : 90

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-DIFLUOROBENZENE	114	7.78	1.000	A	1	A	B
2	T	Chlorotrifluoroethylene	116	2.11	0.272	A	2	A	B
3	T	Dichlorodifluoromethane	85	2.16	0.277	A	1	A	B
4	T	Chloromethane	50	2.38	0.306	A	1	A	B
5	T	Vinyl chloride	62	2.54	0.327	A	1	A	B
6	T	2-Chloro-1,1,1-trifluoroethane	118	2.66	0.342	A	2	A	B
7	T	Bromomethane	94	2.91	0.374	A	1	A	B
8	T	Chloroethane	64	3.03	0.390	A	2	A	B
9	T	Dichlorofluoromethane	67	3.31	0.426	A	1	A	B
10	T	Trichlorofluoromethane	101	3.31	0.426	A	1	A	B
11	T	Acrolein	56	3.80	0.488	A	1	A	B
12	T	1,1,2-Trichloro-1,2,2-trifluor	151	3.98	0.511	A	1	A	B
13	T	Acetone	43	3.96	0.509	A	2	A	B
14	T	1,1-Dichloroethene	61	3.93	0.506	A	2	A	B
15	T	Iodomethane	142	4.11	0.528	A	1	A	B
16	T	Carbon disulfide	76	4.21	0.542	A	1	A	B
17	T	Methylene chloride	49	4.51	0.580	A	2	A	B
18	T	tert-Butyl alcohol	59	4.63	0.595	A	1	A	B
19	T	Acrylonitrile	53	4.78	0.614	A	2	A	B
20	T	tert-Butyl methyl ether (MTBE)	73	4.84	0.622	A	1	A	B
21	T	trans-1,2-Dichloroethene	61	4.85	0.623	A	2	A	B
22	T	Vinyl acetate	43	5.35	0.688	A	1	A	B
23	T	1,1-Dichloroethane	63	5.37	0.690	A	2	A	B
24	T	Isopropyl ether (DIPE)	45	5.41	0.696	A	1	A	B
25	T	2-Butanol	45	5.41	0.696	A	1	A	B
26	T	tert-Butyl ethyl ether (ETBE)	59	5.86	0.753	A	1	A	B
27	T	2-Butanone	43	6.03	0.776	A	1	A	B
28	T	cis-1,2-Dichloroethene	96	6.08	0.781	A	2	A	B
29	T	2,2-Dichloropropane	77	6.09	0.783	A	2	A	B
30	T	Bromochloromethane	49	6.37	0.819	A	2	A	B
31	T	Chloroform	83	6.51	0.836	A	2	A	B
32	S	Dibromofluoromethane	111	6.71	0.863	A	2	A	B
33	T	1,1,1-Trichloroethane	97	6.74	0.867	A	2	A	B
34	T	tert-Amyl methyl ether (TAME)	87	7.38	0.949	A	2	A	B
35	S	1,2-Dichloroethane-d4	65	7.16	0.920	A	1	A	B
36	I	CHLOROBENZENE-D5	117	12.32	1.000	A	2	A	B
37	T	1,1-Dichloropropene	110	6.95	0.564	A	1	A	B
38	T	Carbon tetrachloride	119	6.95	0.564	A	1	A	B
39	T	Benzene	78	7.20	0.584	A	2	A	B
40	T	1,2-Dichloroethane	62	7.26	0.589	A	1	A	B
41	T	Trichloroethene	130	8.12	0.659	A	3	A	B
42	T	1,2-Dichloropropane	63	8.49	0.689	A	2	A	B
43	T	1,4-Dioxane	88	8.58	0.696	A	1	A	B
44	T	Dibromomethane	93	8.61	0.699	A	2	A	B
45	T	Bromodichloromethane	83	8.86	0.719	A	1	A	B
46	T	2-Chloroethyl vinyl ether	63	9.27	0.753	A	2	A	B
47	T	cis-1,3-Dichloropropene	75	9.53	0.773	A	3	A	B
48	T	4-Methyl-2-pentanone	43	9.73	0.790	A	3	A	B
49	S	Toluene-d8	98	9.96	0.808	A	1	A	B
50	T	Toluene	91	10.06	0.816	A	1	A	B
51	T	Ethyl methacrylate	69	10.50	0.852	A	2	A	B
52	T	trans-1,3-Dichloropropene	75	10.41	0.845	A	2	A	B

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53	T	1,1,2-Trichloroethane	97	10.74	0.872	A	3	A	B
54	T	Tetrachloroethene	164	10.90	0.885	A	3	A	B
55	T	1,3-Dichloropropane	76	11.02	0.894	A	1	A	B
56	T	2-Hexanone	43	11.08	0.899	A	2	A	B
57	T	Dibromochloromethane	129	11.38	0.923	A	1	A	B
58	T	1,2-Dibromoethane	107	11.60	0.941	A	1	A	B
59	T	1-Chlorohexane	91	12.34	1.001	A	3	A	B
60	P,M	Chlorobenzene	112	12.37	1.004	A	3	A	B
61	T	1,1,1,2-Tetrachloroethane	131	12.49	1.013	A	3	A	B
62	T	Ethylbenzene	91	12.50	1.014	A	1	A	B
63	T	m-Xylene & p-Xylene	91	12.68	1.029	A	1	A	B
64	T	o-Xylene	91	13.18	1.070	A	1	A	B
65	T	Styrene	104	13.21	1.072	A	2	A	B
66	I	1,2-DICHLOROBENZENE-D4	152	15.41	1.000	A	1	A	B
67	T	Bromoform	173	13.45	0.872	A	2	A	B
68	T	Isopropylbenzene	105	13.64	0.885	A	3	A	B
69	S	4-Bromofluorobenzene	95	13.85	0.898	A	2	A	B
70	T	1,1,2,2-Tetrachloroethane	83	13.98	0.907	A	1	A	B
71	T	Bromobenzene	156	14.01	0.909	A	2	A	B
72	T	trans-1,4-Dichloro-2-butene	53	14.02	0.910	A	1	A	B
73	T	1,2,3-Trichloropropane	110	14.05	0.912	A	2	A	B
74	T	n-Propylbenzene	91	14.11	0.915	A	2	A	B
75	T	1,3,5-Trimethylbenzene	105	14.31	0.928	A	2	A	B
76	T	2-Chlorotoluene	91	14.22	0.922	A	1	A	B
77	T	4-Chlorotoluene	91	14.35	0.931	A	1	A	B
78	T	tert-Butylbenzene	134	14.65	0.950	A	2	A	B
79	T	1,2,4-Trimethylbenzene	105	14.70	0.954	A	1	A	B
80	T	sec-Butylbenzene	105	14.87	0.964	A	1	A	B
81	T	p-Isopropyltoluene	119	15.02	0.974	A	2	A	B
82	T	1,3-Dichlorobenzene	146	15.00	0.973	A	2	A	B
83	T	1,4-Dichlorobenzene	146	15.09	0.979	A	2	A	B
84	T	n-Butylbenzene	91	15.40	0.999	A	2	A	B
85	T	1,2-Dichlorobenzene	146	15.43	1.001	A	2	A	B
86	T	1,2-Dibromo-3-chloropropane	157	16.17	1.049	A	2	A	B
87	T	1,2,4-Trichlorobenzene	180	16.95	1.100	L	2	A	B
88	T	Hexachlorobutadiene	225	17.09	1.108	A	2	A	B
89	T	Naphthalene	128	17.23	1.118	A	1	A	B
90	T	1,2,3-Trichlorobenzene	180	17.46	1.132	A	2	A	B

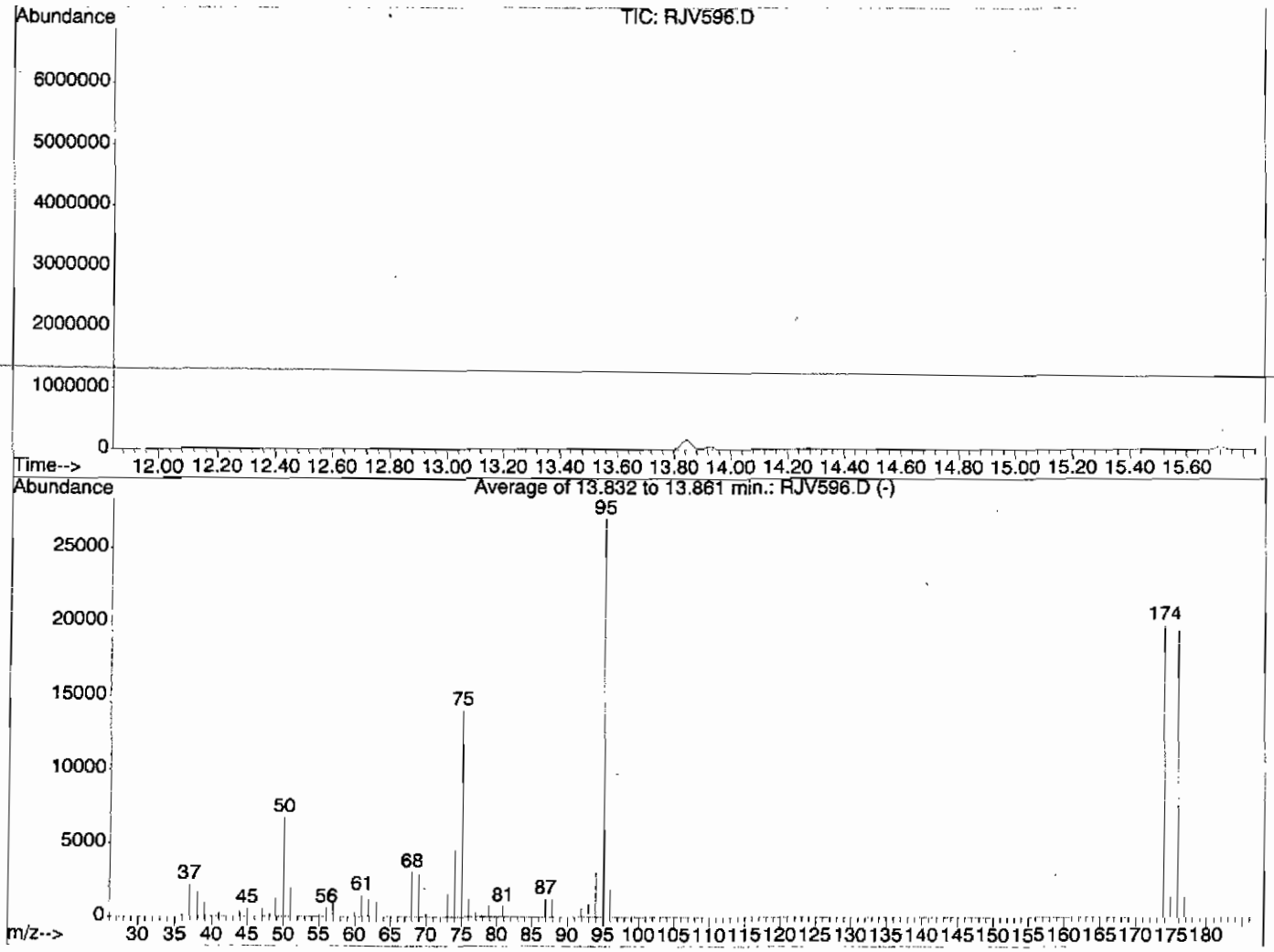
Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

VO01J31.M Thu Nov 03 11:02:03 2011

Su
11/4/11

BFB

Data File : D:\HPCHEM\1\DATA\11J31\RJV596.D Vial: 1
Acq On : 31 Oct 2011 9:18 am Operator: MW
Sample : BFB01J29 Inst : TO01
Misc : T/CHK Multiplr: 1.00
MS Integration Params: 524C.P
Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls



AutoFind: Scans 804, 805, 806; Background Corrected with Scan 799

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.8	6686	PASS
75	95	30	60	51.8	13984	PASS
95	95	100	100	100.0	26973	PASS
96	95	5	9	6.7	1815	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	73.4	19798	PASS
175	174	5	9	7.1	1403	PASS
176	174	95	101	98.1	19424	PASS
177	176	5	9	6.9	1345	PASS

RJV596.D VO01J31.M Thu Nov 03 11:02:30 2011

Sa 11/4/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV597.D Vial: 2
Acq On : 31 Oct 2011 9:59 am Operator: MW
Sample : VO01J311 0.3ppb Inst : TO01
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:00 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.77	114	1597901	10.00 ug/l	-0.01
36) CHLOROBENZENE-D5	12.32	117	1291317	10.00 ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	438784	10.00 ug/l	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	6.70	111	13529	0.31 ug/l	-0.01
Spiked Amount 10.000			Recovery	= 3.10%	
35) 1,2-Dichloroethane-d4	7.16	65	14144	0.30 ug/l	0.00
Spiked Amount 10.000			Recovery	= 3.00%	
49) Toluene-d8	9.94	98	59550	0.33 ug/l	-0.01
Spiked Amount 10.000			Recovery	= 3.30%	
69) 4-Bromofluorobenzene	13.85	95	19493	0.36 ug/l	0.00
Spiked Amount 10.000			Recovery	= 3.60%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.11	116	3975	0.16 ug/l #	59
3) Dichlorodifluoromethane	2.16	85	14832	0.26 ug/l	86
4) Chloromethane	2.37	50	20345	0.29 ug/l	99
5) Vinyl chloride	2.54	62	18701	0.25 ug/l	63
6) 2-Chloro-1,1,1-trifluoroet	2.66	118	12791	0.24 ug/l	97
7) Bromomethane	2.90	94	10453	0.29 ug/l	91
8) Chloroethane	3.02	64	17790	0.39 ug/l	91
9) Dichlorofluoromethane	3.30	67	38711	0.34 ug/l	100
10) Trichlorofluoromethane	3.37	101	17234	0.26 ug/l	97
11) Acrolein	3.82	56	5860	3.24 ug/l #	1
12) 1,1,2-Trichloro-1,2,2-trif	3.96	151	10894	0.31 ug/l	99
13) Acetone	3.96	43	23943	3.42 ug/l	50
14) 1,1-Dichloroethene	3.93	61	32714	0.31 ug/l	97
15) Iodomethane	4.11	142	22694	0.30 ug/l	98
16) Carbon disulfide	4.22	76	52902	0.31 ug/l	97
17) Methylene chloride	4.51	49	28220	0.35 ug/l	98
18) tert-Butyl alcohol	4.66	59	2113	1.12 ug/l #	1
19) Acrylonitrile	4.78	53	13601	1.58 ug/l	89
20) tert-Butyl methyl ether (M	4.84	73	27869	0.30 ug/l	89
21) trans-1,2-Dichloroethene	4.85	61	33804	0.32 ug/l	99
22) Vinyl acetate	5.36	43	13717	0.18 ug/l #	81
23) 1,1-Dichloroethane	5.37	63	39453	0.33 ug/l	99
24) Isopropyl ether (DIPE)	5.41	45	67434	0.31 ug/l	98
26) tert-Butyl ethyl ether (ET	5.86	59	49028	0.32 ug/l	95
27) 2-Butanone	6.05	43	17373	1.54 ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	18858	0.31 ug/l	98
29) 2,2-Dichloropropane	6.10	77	28653	0.33 ug/l	99

(#) = qualifier out of range (m) = manual integration

Su 11/4/11

2077

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV597.D Vial: 2
Acq On : 31 Oct 2011 9:59 am Operator: MW
Sample : VO01J311 0.3ppb Inst : TO01
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:00 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
30) Bromochloromethane	6.38	49	14834	0.30 ug/l		99
31) Chloroform	6.49	83	31656	0.31 ug/l		97
33) 1,1,1-Trichloroethane	6.75	97	24482	0.30 ug/l		97
34) tert-Amyl methyl ether (TA	7.38	87	6444	0.28 ug/l		88
37) 1,1-Dichloropropene	6.94	110	9085	0.34 ug/l		93
~~38) Carbon tetrachloride~~	~~6.95~~	~~119~~	~~20312~~	~~0.32 ug/l~~		~~95~~
~~39) Benzene~~	~~7.20~~	~~78~~	~~74724~~	~~0.33 ug/l~~		~~98~~
40) 1,2-Dichloroethane	7.26	62	17969	0.32 ug/l		99
41) Trichloroethene	8.12	130	18857	0.33 ug/l		96
42) 1,2-Dichloropropane	8.49	63	19229	0.32 ug/l		90
44) Dibromomethane	8.61	93	5833	0.30 ug/l		91
45) Bromodichloromethane	8.86	83	20755	0.31 ug/l		97
46) 2-Chloroethyl vinyl ether	9.28	63	4107	0.27 ug/l		85
47) cis-1,3-Dichloropropene	9.53	75	24706	0.31 ug/l		94
48) 4-Methyl-2-pentanone	9.73	43	40434	1.56 ug/l		95
50) Toluene	10.06	91	73881	0.33 ug/l		99
51) Ethyl methacrylate	10.50	69	12283	0.29 ug/l		77
52) trans-1,3-Dichloropropene	10.42	75	17269	0.29 ug/l		79
53) 1,1,2-Trichloroethane	10.74	97	9396	0.34 ug/l		91
54) Tetrachloroethene	10.90	164	14742	0.32 ug/l		98
55) 1,3-Dichloropropane	11.01	76	18089	0.31 ug/l		100
56) 2-Hexanone	11.10	43	26882	1.58 ug/l		86
57) Dibromochloromethane	11.38	129	9001	0.27 ug/l		93
58) 1,2-Dibromoethane	11.60	107	7709	0.29 ug/l		90
59) 1-Chlorohexane	12.32	91	31597	0.34 ug/l	#	62
60) Chlorobenzene	12.37	112	40039	0.31 ug/l	#	66
61) 1,1,1,2-Tetrachloroethane	12.49	131	13572	0.31 ug/l	#	80
62) Ethylbenzene	12.50	91	83818	0.32 ug/l		98
63) m-Xylene & p-Xylene	12.68	91	124746	0.63 ug/l		99
64) o-Xylene	13.18	91	61563	0.31 ug/l		98
65) Styrene	13.21	104	39369	0.28 ug/l		97
67) Bromoform	13.45	173	3953	0.27 ug/l		95
68) Isopropylbenzene	13.64	105	72221	0.33 ug/l		97
70) 1,1,2,2-Tetrachloroethane	13.98	83	9319	0.31 ug/l		95
71) Bromobenzene	14.01	156	16014	0.36 ug/l		90
72) trans-1,4-Dichloro-2-buten	14.03	53	1978	0.26 ug/l	#	34
73) 1,2,3-Trichloropropane	14.06	110	2735	0.36 ug/l		83
74) n-Propylbenzene	14.11	91	87952	0.31 ug/l		98
75) 1,3,5-Trimethylbenzene	14.31	105	55592	0.31 ug/l		97
76) 2-Chlorotoluene	14.22	91	51738	0.33 ug/l		95
77) 4-Chlorotoluene	14.35	91	54817	0.32 ug/l		98

(#) = qualifier out of range (m) = manual integration

3a 11/4/11

2078

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV597.D Vial: 2
Acq On : 31 Oct 2011 9:59 am Operator: MW
Sample : VO01J311 0.3ppb Inst : TO01
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:00 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.65	134	12737	0.32 ug/l	99
79) 1,2,4-Trimethylbenzene	14.71	105	56160	0.33 ug/l	96
80) sec-Butylbenzene	14.87	105	69944	0.31 ug/l	99
81) p-Isopropyltoluene	15.02	119	52918	0.30 ug/l	98
82) 1,3-Dichlorobenzene	14.99	146	26346	0.31 ug/l	95
~~83) 1,4-Dichlorobenzene~~	~~15.09~~	~~146~~	~~25494~~	~~0.31 ug/l~~	~~97~~
~~84) n-Butylbenzene~~	~~15.40~~	~~91~~	~~49733~~	~~0.29 ug/l~~	~~97~~
85) 1,2-Dichlorobenzene	15.43	146	21367	0.31 ug/l	82
87) 1,2,4-Trichlorobenzene	16.97	180	7883	0.38 ug/l	96
88) Hexachlorobutadiene	17.09	225	7003	0.29 ug/l	96
89) Naphthalene	17.24	128	15693	0.41 ug/l	95
90) 1,2,3-Trichlorobenzene	17.46	180	6124	0.27 ug/l	99

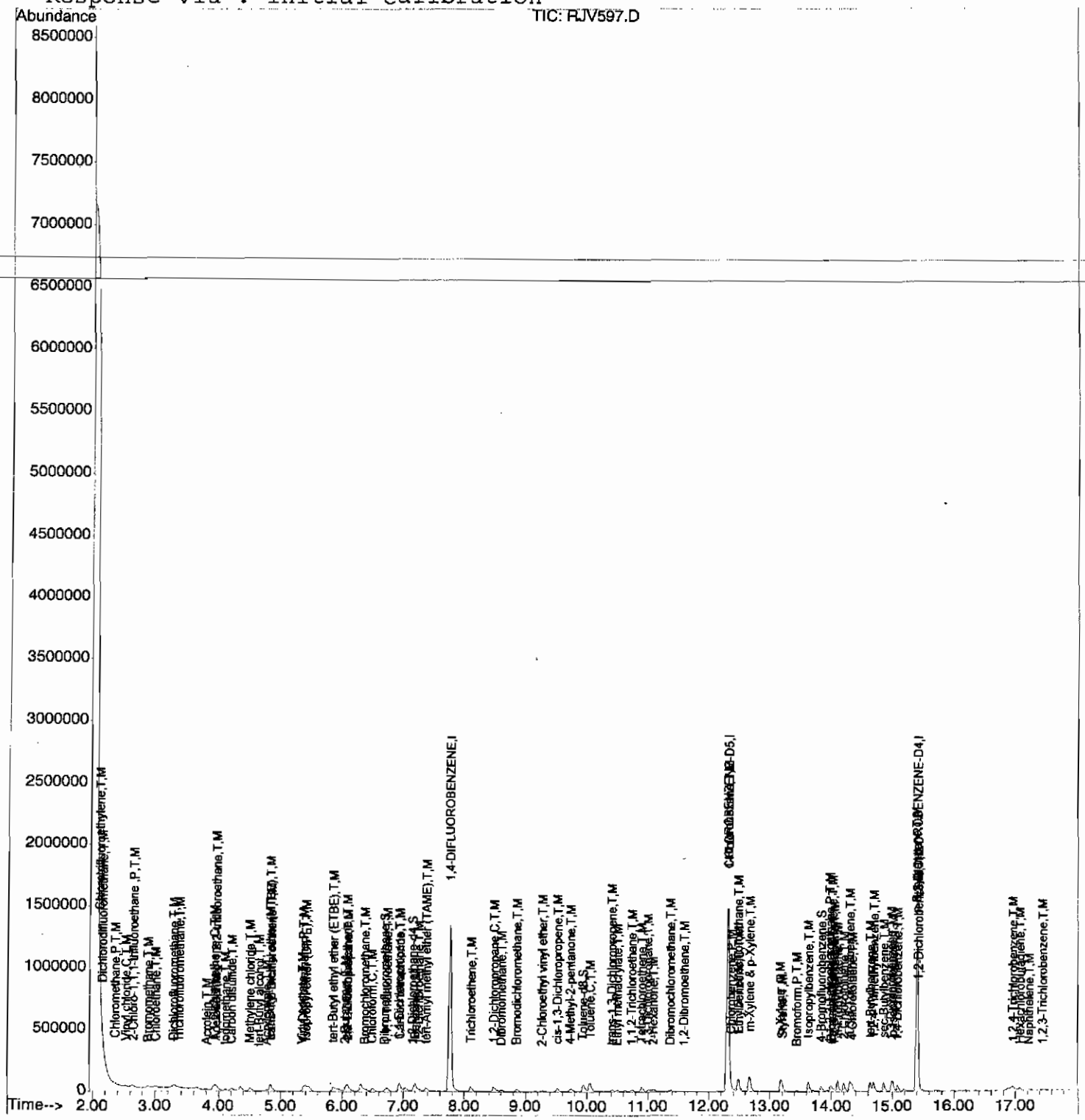
SA 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV597.D Vial: 2
Acq On : 31 Oct 2011 9:59 am Operator: MW
Sample : VO01J311 0.3ppb Inst : TO01
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:00 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



SA 11/4/11

2080

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV598.D Vial: 3
Acq On : 31 Oct 2011 10:30 am Operator: MW
Sample : VO01J312 0.5ppb Inst : TO01
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.77	114	1727883	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.31	117	1429122	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	485773	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.71	111	21577	0.46	ug/l	0.00
Spiked Amount 10.000			Recovery	=	4.60%	
35) 1,2-Dichloroethane-d4	7.16	65	25297	0.50	ug/l	0.00
Spiked Amount 10.000			Recovery	=	5.00%	
49) Toluene-d8	9.95	98	97312	0.49	ug/l	0.00
Spiked Amount 10.000			Recovery	=	4.90%	
69) 4-Bromofluorobenzene	13.84	95	31867	0.53	ug/l	0.00
Spiked Amount 10.000			Recovery	=	5.30%	

Target Compounds						Qvalue
2) Chlorotrifluoroethylene	2.10	116	9448	0.35	ug/l	90
3) Dichlorodifluoromethane	2.16	85	29008	0.46	ug/l	94
4) Chloromethane	2.37	50	37807	0.50	ug/l	100
5) Vinyl chloride	2.53	62	36936	0.46	ug/l	81
6) 2-Chloro-1,1,1-trifluoroet	2.65	118	25267	0.43	ug/l	96
7) Bromomethane	2.89	94	20968	0.53	ug/l	95
8) Chloroethane	3.02	64	27326	0.56	ug/l	91
9) Dichlorofluoromethane	3.30	67	63070	0.51	ug/l	100
10) Trichlorofluoromethane	3.32	101	34050	0.48	ug/l	99
11) Acrolein	3.81	56	9208	4.71	ug/l #	67
12) 1,1,2-Trichloro-1,2,2-trif	3.97	151	18127	0.48	ug/l	99
13) Acetone	3.97	43	29230	3.86	ug/l	66
14) 1,1-Dichloroethene	3.92	61	57632	0.51	ug/l	99
15) Iodomethane	4.12	142	38640	0.47	ug/l	97
16) Carbon disulfide	4.20	76	74790	0.40	ug/l	96
17) Methylene chloride	4.52	49	43986	0.50	ug/l	98
18) tert-Butyl alcohol	4.66	59	3692	1.81	ug/l #	1
19) Acrylonitrile	4.78	53	21328	2.29	ug/l	96
20) tert-Butyl methyl ether (M	4.84	73	47093	0.46	ug/l	93
21) trans-1,2-Dichloroethene	4.84	61	54955	0.48	ug/l	99
22) Vinyl acetate	5.36	43	31294	0.38	ug/l	99
23) 1,1-Dichloroethane	5.37	63	61102	0.47	ug/l	98
24) Isopropyl ether (DIPE)	5.42	45	108418	0.47	ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	80199	0.48	ug/l	98
27) 2-Butanone	6.05	43	27609	2.26	ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	30866	0.47	ug/l	100
29) 2,2-Dichloropropane	6.10	77	49030	0.53	ug/l	99

(#) = qualifier out of range (m) = manual integration
RJV598.D VO01J31.M Tue Nov 01 12:01:05 2011

SA 11/4/11

2081

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV598.D Vial: 3
Acq On : 31 Oct 2011 10:30 am Operator: MW
Sample : VO01J312 0.5ppb Inst : TO01
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
30) Bromochloromethane	6.38	49	25664	0.49 ug/l		92
31) Chloroform	6.50	83	52486	0.48 ug/l		99
33) 1,1,1-Trichloroethane	6.75	97	43108	0.49 ug/l		98
34) tert-Amyl methyl ether (TA	7.39	87	11033	0.45 ug/l		92
37) 1,1-Dichloropropene	6.94	110	15207	0.51 ug/l		92
~~38) Carbon tetrachloride~~	~~6.96~~	~~119~~	~~32771~~	~~0.46 ug/l~~		~~92~~
~~39) Benzene~~	~~7.21~~	~~78~~	~~124786~~	~~0.49 ug/l~~		~~99~~
40) 1,2-Dichloroethane	7.27	62	31316	0.50 ug/l		99
41) Trichloroethene	8.11	130	29985	0.47 ug/l		95
42) 1,2-Dichloropropane	8.48	63	33053	0.50 ug/l		95
44) Dibromomethane	8.61	93	10159	0.48 ug/l		94
45) Bromodichloromethane	8.87	83	33266	0.45 ug/l		99
46) 2-Chloroethyl vinyl ether	9.27	63	6603	0.39 ug/l		94
47) cis-1,3-Dichloropropene	9.52	75	40214	0.46 ug/l		96
48) 4-Methyl-2-pentanone	9.74	43	64614	2.25 ug/l		98
50) Toluene	10.06	91	124314	0.50 ug/l		99
51) Ethyl methacrylate	10.51	69	18630	0.40 ug/l		78
52) trans-1,3-Dichloropropene	10.42	75	28270	0.44 ug/l		88
53) 1,1,2-Trichloroethane	10.74	97	14487	0.47 ug/l		97
54) Tetrachloroethene	10.91	164	24280	0.48 ug/l		96
55) 1,3-Dichloropropane	11.01	76	29611	0.46 ug/l		99
56) 2-Hexanone	11.08	43	41247	2.20 ug/l		94
57) Dibromochloromethane	11.38	129	16485	0.45 ug/l		99
58) 1,2-Dibromoethane	11.59	107	12758	0.44 ug/l		95
59) 1-Chlorohexane	12.33	91	51324	0.50 ug/l	#	75
60) Chlorobenzene	12.36	112	67631	0.47 ug/l		78
61) 1,1,1,2-Tetrachloroethane	12.49	131	21520	0.45 ug/l		86
62) Ethylbenzene	12.51	91	138999	0.48 ug/l		99
63) m-Xylene & p-Xylene	12.68	91	211809	0.96 ug/l		98
64) o-Xylene	13.19	91	103832	0.48 ug/l		99
65) Styrene	13.22	104	65089	0.42 ug/l		97
67) Bromoform	13.44	173	7198	0.45 ug/l		89
68) Isopropylbenzene	13.63	105	121282	0.50 ug/l		99
70) 1,1,2,2-Tetrachloroethane	13.99	83	15572	0.47 ug/l		92
71) Bromobenzene	14.00	156	23911	0.48 ug/l		98
72) trans-1,4-Dichloro-2-buten	14.03	53	3707	0.44 ug/l		97
73) 1,2,3-Trichloropropane	14.06	110	3961	0.47 ug/l		90
74) n-Propylbenzene	14.10	91	156081	0.50 ug/l		98
75) 1,3,5-Trimethylbenzene	14.31	105	97755	0.49 ug/l		99
76) 2-Chlorotoluene	14.21	91	88893	0.52 ug/l		100
77) 4-Chlorotoluene	14.34	91	96574	0.51 ug/l		99

(#) = qualifier out of range (m) = manual integration

SH 11/4/11

2082

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV598.D
Acq On : 31 Oct 2011 10:30 am
Sample : VO01J312 0.5ppb
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011

Vial: 3
Operator: MW
Inst : TO01
Multiplr: 1.00
Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.64	134	22107	0.49 ug/l	96
79) 1,2,4-Trimethylbenzene	14.70	105	93988	0.50 ug/l	97
80) sec-Butylbenzene	14.87	105	121225	0.48 ug/l	99
81) p-Isopropyltoluene	15.02	119	91733	0.47 ug/l	98
82) 1,3-Dichlorobenzene	14.99	146	46912	0.49 ug/l	99
83) 1,4-Dichlorobenzene	15.09	146	42807	0.47 ug/l	99
~~84) n-Butylbenzene~~	~~15.41~~	~~91~~	~~86074~~	~~0.45 ug/l~~	~~97~~
85) 1,2-Dichlorobenzene	15.44	146	36768	0.48 ug/l	83
86) 1,2-Dibromo-3-chloropropan	16.17	157	1311	0.34 ug/l #	74
87) 1,2,4-Trichlorobenzene	16.96	180	13546	0.51 ug/l	99
88) Hexachlorobutadiene	17.08	225	11728	0.43 ug/l	95
89) Naphthalene	17.24	128	20591	0.49 ug/l	95
90) 1,2,3-Trichlorobenzene	17.45	180	10019	0.40 ug/l	98

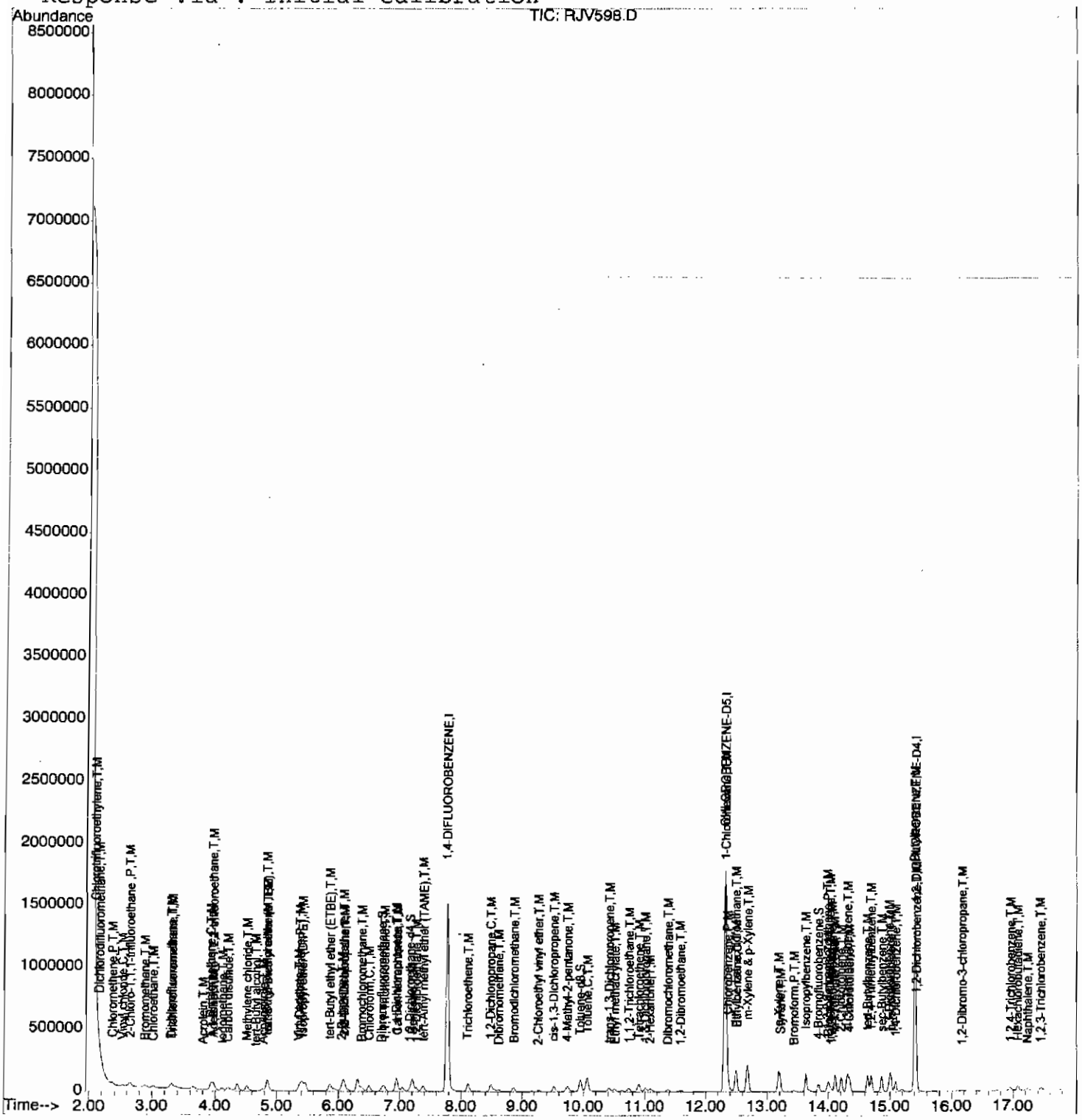
SU
11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV598.D Vial: 3
Acq On : 31 Oct 2011 10:30 am Operator: MW
Sample : VO01J312 0.5ppb Inst : TO01
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



SW 11/4/11

2084

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV599.D Vial: 4
Acq On : 31 Oct 2011 11:01 am Operator: MW
Sample : VO01J313 1.0ppb Inst : TO01
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.77	114	1653051	10.00 ug/l	-0.01
36) CHLOROBENZENE-D5	12.31	117	1414639	10.00 ug/l	-0.01
66) 1,2-DICHLOROBENZENE-D4	15.40	152	497896	10.00 ug/l	-0.01
System Monitoring Compounds					
32) Dibromofluoromethane	6.70	111	41935	0.93 ug/l	-0.01
Spiked Amount 10.000			Recovery	= 9.30%	
35) 1,2-Dichloroethane-d4	7.16	65	46376	0.96 ug/l	0.00
Spiked Amount 10.000			Recovery	= 9.60%	
49) Toluene-d8	9.94	98	168950	0.86 ug/l	-0.01
Spiked Amount 10.000			Recovery	= 8.60%	
69) 4-Bromofluorobenzene	13.84	95	54541	0.89 ug/l	-0.01
Spiked Amount 10.000			Recovery	= 8.90%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.10	116	23413	0.91 ug/l	94
3) Dichlorodifluoromethane	2.15	85	58088	0.97 ug/l	98
4) Chloromethane	2.37	50	72520	1.01 ug/l	100
5) Vinyl chloride	2.53	62	75133	0.98 ug/l	90
6) 2-Chloro-1,1,1-trifluoroet	2.65	118	58142	1.04 ug/l	98
7) Bromomethane	2.90	94	40211	1.06 ug/l	98
8) Chloroethane	3.02	64	48159	1.03 ug/l	97
9) Dichlorofluoromethane	3.30	67	124758	1.06 ug/l	99
10) Trichlorofluoromethane	3.32	101	67764	0.99 ug/l	99
11) Acrolein	3.80	56	12009	6.42 ug/l	75
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	36643	1.01 ug/l	99
13) Acetone	3.97	43	44886	6.19 ug/l	77
14) 1,1-Dichloroethene	3.92	61	113267	1.04 ug/l	98
15) Iodomethane	4.12	142	78566	0.99 ug/l	100
16) Carbon disulfide	4.20	76	158780	0.89 ug/l	100
17) Methylene chloride	4.51	49	86920	1.04 ug/l	99
18) tert-Butyl alcohol	4.63	59	9456	4.85 ug/l	83
19) Acrylonitrile	4.78	53	44604	5.01 ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	102377	1.05 ug/l	99
21) trans-1,2-Dichloroethene	4.85	61	112079	1.02 ug/l	99
22) Vinyl acetate	5.36	43	65922	0.84 ug/l	99
23) 1,1-Dichloroethane	5.37	63	127810	1.02 ug/l	99
24) Isopropyl ether (DIPE)	5.42	45	221146	1.00 ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	168367	1.05 ug/l	97
27) 2-Butanone	6.04	43	58365	5.00 ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	63787	1.02 ug/l	98
29) 2,2-Dichloropropane	6.10	77	94719	1.07 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV599.D Vial: 4
Acq On : 31 Oct 2011 11:01 am Operator: MW
Sample : VO01J313 1.0ppb Inst : TO01
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.38	49	52446	1.04 ug/l	97
31) Chloroform	6.50	83	106408	1.01 ug/l	99
33) 1,1,1-Trichloroethane	6.75	97	86446	1.03 ug/l	97
34) tert-Amyl methyl ether (TA	7.37	87	24076	1.03 ug/l	90
37) 1,1-Dichloropropene	6.94	110	29469	1.00 ug/l	97
38) Carbon tetrachloride	6.96	119	67909	0.96 ug/l	98
39) Benzene	7.21	78	250194	1.00 ug/l	100
40) 1,2-Dichloroethane	7.27	62	64243	1.04 ug/l	98
41) Trichloroethene	8.12	130	60510	0.97 ug/l	97
42) 1,2-Dichloropropane	8.48	63	63783	0.98 ug/l	99
44) Dibromomethane	8.61	93	21414	1.02 ug/l	96
45) Bromodichloromethane	8.86	83	70477	0.97 ug/l	100
46) 2-Chloroethyl vinyl ether	9.26	63	15483	0.93 ug/l	97
47) cis-1,3-Dichloropropene	9.52	75	83650	0.96 ug/l	96
48) 4-Methyl-2-pentanone	9.74	43	132949	4.67 ug/l	95
50) Toluene	10.06	91	243151	0.98 ug/l	100
51) Ethyl methacrylate	10.51	69	41920	0.90 ug/l	89
52) trans-1,3-Dichloropropene	10.42	75	63213	0.98 ug/l	94
53) 1,1,2-Trichloroethane	10.74	97	30647	1.00 ug/l	97
54) Tetrachloroethene	10.91	164	49834	0.99 ug/l	99
55) 1,3-Dichloropropane	11.01	76	63265	1.00 ug/l	99
56) 2-Hexanone	11.08	43	84028	4.52 ug/l	97
57) Dibromochloromethane	11.38	129	34460	0.95 ug/l	97
58) 1,2-Dibromoethane	11.59	107	28366	0.98 ug/l	98
59) 1-Chlorohexane	12.33	91	100066	0.98 ug/l	88
60) Chlorobenzene	12.36	112	140798	0.99 ug/l	89
61) 1,1,1,2-Tetrachloroethane	12.49	131	46148	0.98 ug/l	92
62) Ethylbenzene	12.50	91	279734	0.97 ug/l	100
63) m-Xylene & p-Xylene	12.68	91	415869	1.91 ug/l	100
64) o-Xylene	13.19	91	208745	0.97 ug/l	100
65) Styrene	13.21	104	141430	0.92 ug/l	99
67) Bromoform	13.44	173	15913	0.97 ug/l	98
68) Isopropylbenzene	13.63	105	247705	1.00 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	34020	1.01 ug/l	95
71) Bromobenzene	14.00	156	51125	1.00 ug/l	98
72) trans-1,4-Dichloro-2-buten	14.03	53	8663	1.00 ug/l	92
73) 1,2,3-Trichloropropane	14.04	110	9487	1.10 ug/l	94
74) n-Propylbenzene	14.12	91	313488	0.98 ug/l	99
75) 1,3,5-Trimethylbenzene	14.31	105	202589	0.99 ug/l	98
76) 2-Chlorotoluene	14.21	91	177728	1.01 ug/l	98
77) 4-Chlorotoluene	14.34	91	196039	1.01 ug/l	99

(#) = qualifier out of range (m) = manual integration
RJV599.D VO01J31.M Tue Nov 01 12:01:17 2011 Page 2

2086

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV599.D
Acq On : 31 Oct 2011 11:01 am
Sample : VO01J313 1.0ppb
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011

Vial: 4
Operator: MW
Inst : TO01
Multiplr: 1.00
Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	tert-Butylbenzene	14.64	134	45521	0.99 ug/l	99
79)	1,2,4-Trimethylbenzene	14.69	105	194664	1.00 ug/l	99
80)	sec-Butylbenzene	14.87	105	250065	0.96 ug/l	100
81)	p-Isopropyltoluene	15.02	119	196143	0.97 ug/l	99
82)	1,3-Dichlorobenzene	14.99	146	95806	0.98 ug/l	99
83)	1,4-Dichlorobenzene	15.09	146	89357	0.96 ug/l	99
84)	n-Butylbenzene	15.40	91	175983	0.90 ug/l	98
85)	1,2-Dichlorobenzene	15.43	146	76886	0.99 ug/l	93
86)	1,2-Dibromo-3-chloropropan	16.17	157	3617	0.93 ug/l	91
87)	1,2,4-Trichlorobenzene	16.96	180	29497	0.90 ug/l	100
88)	Hexachlorobutadiene	17.08	225	25832	0.93 ug/l	98
89)	Naphthalene	17.24	128	39086	0.91 ug/l	100
90)	1,2,3-Trichlorobenzene	17.45	180	21778	0.85 ug/l	98

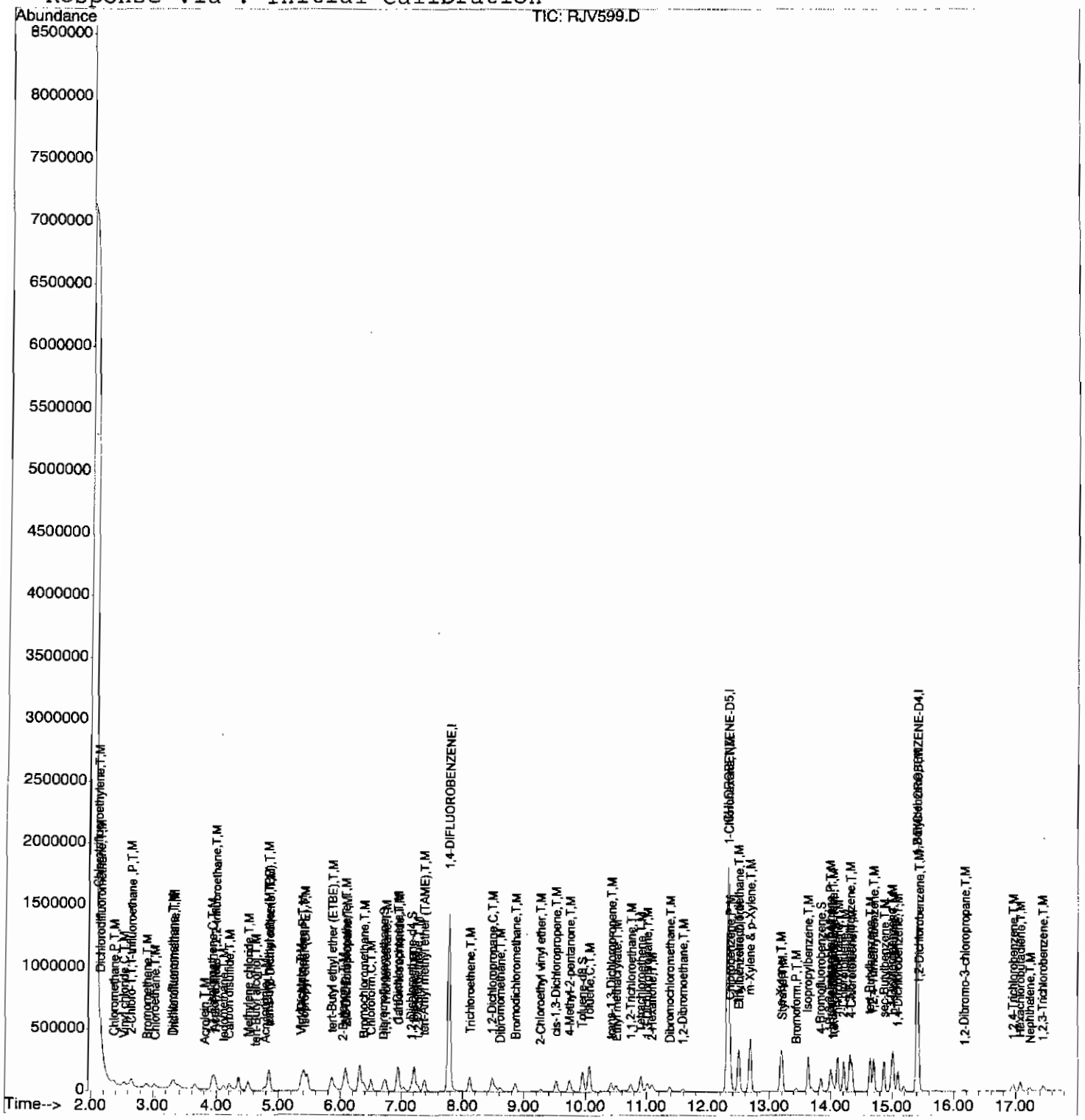
SA 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV599.D Vial: 4
Acq On : 31 Oct 2011 11:01 am Operator: MW
Sample : VO01J313 1.0ppb Inst : TO01
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



SU 11/4/11

2088

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV600.D Vial: 5
Acq On : 31 Oct 2011 11:32 am Operator: MW
Sample : VO01J314 2.0ppb Inst : TO01
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1659793	10.00 ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1409102	10.00 ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	526243	10.00 ug/l	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	6.71	111	95425	2.10 ug/l	0.00
Spiked Amount 10.000			Recovery	= 21.00%	
35) 1,2-Dichloroethane-d4	7.16	65	105900	2.18 ug/l	0.00
Spiked Amount 10.000			Recovery	= 21.80%	
49) Toluene-d8	9.95	98	397792	2.04 ug/l	0.00
Spiked Amount 10.000			Recovery	= 20.40%	
69) 4-Bromofluorobenzene	13.85	95	130871	2.02 ug/l	0.00
Spiked Amount 10.000			Recovery	= 20.20%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.11	116	52459	2.03 ug/l	98
3) Dichlorodifluoromethane	2.16	85	129344	2.14 ug/l	96
4) Chloromethane	2.38	50	145196	2.01 ug/l	100
5) Vinyl chloride	2.54	62	157743	2.06 ug/l	94
6) 2-Chloro-1,1,1-trifluoroet	2.66	118	134546	2.39 ug/l	97
7) Bromomethane	2.90	94	83534	2.20 ug/l	100
8) Chloroethane	3.03	64	95730	2.04 ug/l	98
9) Dichlorofluoromethane	3.31	67	240255	2.03 ug/l	99
10) Trichlorofluoromethane	3.31	101	145641	2.12 ug/l	97
11) Acrolein	3.80	56	19656	10.47 ug/l	89
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	71749	1.98 ug/l	99
13) Acetone	3.96	43	76089	10.45 ug/l	91
14) 1,1-Dichloroethene	3.93	61	228124	2.09 ug/l	99
15) Iodomethane	4.11	142	155936	1.96 ug/l	100
16) Carbon disulfide	4.21	76	331745	1.86 ug/l	100
17) Methylene chloride	4.51	49	163839	1.96 ug/l	99
18) tert-Butyl alcohol	4.64	59	16072	8.20 ug/l	80
19) Acrylonitrile	4.78	53	82078	9.19 ug/l	99
20) tert-Butyl methyl ether (M	4.84	73	198136	2.03 ug/l	96
21) trans-1,2-Dichloroethene	4.85	61	224517	2.03 ug/l	100
22) Vinyl acetate	5.37	43	159811	2.02 ug/l	99
23) 1,1-Dichloroethane	5.37	63	251579	2.00 ug/l	99
24) Isopropyl ether (DIPE)	5.41	45	444531	1.99 ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	319736	1.99 ug/l	100
27) 2-Butanone	6.05	43	106068	9.04 ug/l	98
28) cis-1,2-Dichloroethene	6.08	96	127887	2.03 ug/l	97
29) 2,2-Dichloropropane	6.09	77	185866	2.08 ug/l	99

(#) = qualifier out of range (m) = manual integration

SZ 11/4/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV600.D Vial: 5
Acq On : 31 Oct 2011 11:32 am Operator: MW
Sample : VO01J314 2.0ppb Inst : TO01
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.37	49	101219	2.00 ug/l	98
31) Chloroform	6.51	83	212631	2.01 ug/l	99
33) 1,1,1-Trichloroethane	6.74	97	170234	2.03 ug/l	99
34) tert-Amyl methyl ether (TA	7.38	87	47130	2.00 ug/l	97
37) 1,1-Dichloropropene	6.95	110	56040	1.91 ug/l	99
38) Carbon tetrachloride	6.95	119	140805	2.01 ug/l	99
39) Benzene	7.20	78	482089	1.94 ug/l	99
40) 1,2-Dichloroethane	7.28	62	124588	2.02 ug/l	99
41) Trichloroethene	8.12	130	122054	1.96 ug/l	98
42) 1,2-Dichloropropane	8.49	63	126895	1.96 ug/l	98
44) Dibromomethane	8.61	93	40194	1.91 ug/l	96
45) Bromodichloromethane	8.86	83	142513	1.98 ug/l	98
46) 2-Chloroethyl vinyl ether	9.27	63	30321	1.82 ug/l	98
47) cis-1,3-Dichloropropene	9.53	75	169572	1.96 ug/l	98
48) 4-Methyl-2-pentanone	9.73	43	247990	8.75 ug/l	98
50) Toluene	10.06	91	478930	1.94 ug/l	100
51) Ethyl methacrylate	10.50	69	83836	1.80 ug/l	91
52) trans-1,3-Dichloropropene	10.41	75	124857	1.95 ug/l	96
53) 1,1,2-Trichloroethane	10.74	97	58618	1.93 ug/l	98
54) Tetrachloroethene	10.90	164	98196	1.96 ug/l	99
55) 1,3-Dichloropropane	11.02	76	124246	1.96 ug/l	97
56) 2-Hexanone	11.09	43	156142	8.43 ug/l	98
57) Dibromochloromethane	11.38	129	70448	1.95 ug/l	100
58) 1,2-Dibromoethane	11.60	107	57452	1.99 ug/l	99
59) 1-Chlorohexane	12.34	91	195834	1.92 ug/l	93
60) Chlorobenzene	12.37	112	279822	1.97 ug/l	96
61) 1,1,1,2-Tetrachloroethane	12.48	131	93699	1.99 ug/l	97
62) Ethylbenzene	12.50	91	561030	1.95 ug/l	100
63) m-Xylene & p-Xylene	12.68	91	848308	3.91 ug/l	100
64) o-Xylene	13.18	91	415516	1.95 ug/l	100
65) Styrene	13.21	104	288140	1.89 ug/l	98
67) Bromoform	13.45	173	32107	1.85 ug/l	98
68) Isopropylbenzene	13.64	105	509635	1.95 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	70351	1.97 ug/l	99
71) Bromobenzene	14.01	156	102733	1.91 ug/l	98
72) trans-1,4-Dichloro-2-buten	14.02	53	16867	1.84 ug/l	95
73) 1,2,3-Trichloropropane	14.05	110	17780	1.94 ug/l #	1
74) n-Propylbenzene	14.11	91	662553	1.97 ug/l	99
75) 1,3,5-Trimethylbenzene	14.30	105	422840	1.96 ug/l	99
76) 2-Chlorotoluene	14.22	91	359621	1.93 ug/l	100
77) 4-Chlorotoluene	14.35	91	400467	1.95 ug/l	100

(#) = qualifier out of range (m) = manual integration

Su 11/4/11

2090

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV600.D Vial: 5
Acq On : 31 Oct 2011 11:32 am Operator: MW
Sample : VO01J314 2.0ppb Inst : TO01
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.65	134	95388	1.97 ug/l	99
79) 1,2,4-Trimethylbenzene	14.70	105	407124	1.98 ug/l	99
80) sec-Butylbenzene	14.87	105	538840	1.96 ug/l	100
81) p-Isopropyltoluene	15.01	119	428339	2.01 ug/l	100
82) 1,3-Dichlorobenzene	15.00	146	198564	1.92 ug/l	99
83) 1,4-Dichlorobenzene	15.09	146	189542	1.93 ug/l	99
84) n-Butylbenzene	15.40	91	391749	1.90 ug/l	99
85) 1,2-Dichlorobenzene	15.43	146	161308	1.96 ug/l	97
86) 1,2-Dibromo-3-chloropropan	16.17	157	7789	1.89 ug/l	92
87) 1,2,4-Trichlorobenzene	16.95	180	65483	1.72 ug/l	100
88) Hexachlorobutadiene	17.09	225	54522	1.86 ug/l	97
89) Naphthalene	17.23	128	76516	1.68 ug/l	100
90) 1,2,3-Trichlorobenzene	17.46	180	47107	1.74 ug/l	98

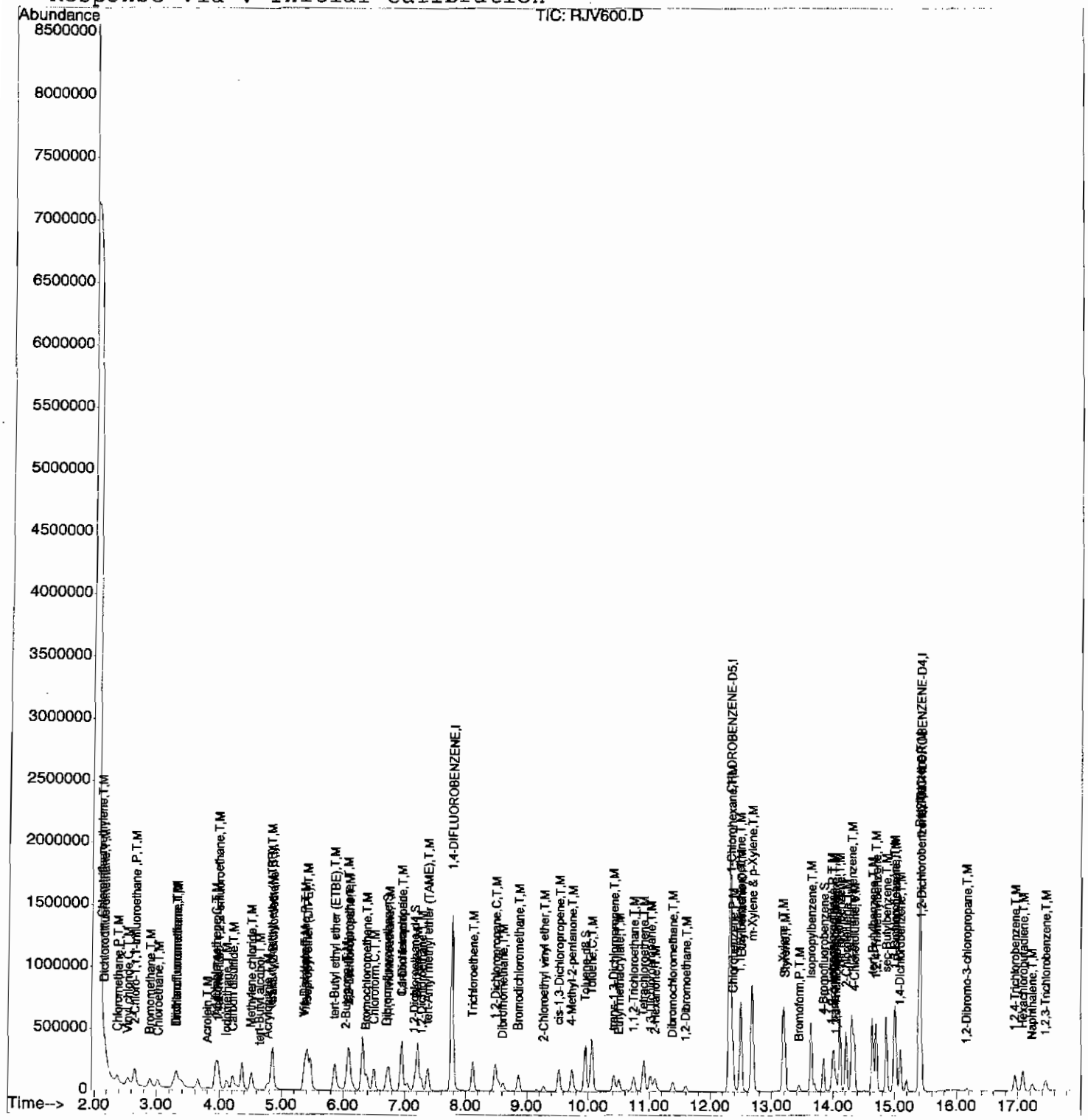
SO 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV600.D Vial: 5
Acq On : 31 Oct 2011 11:32 am Operator: MW
Sample : VO01J314 2.0ppb Inst : TO01
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



SH 11/4/11

2092

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV601.D Vial: 6
Acq On : 31 Oct 2011 12:03 pm Operator: MW
Sample : VO01J315 5.0ppb Inst : TO01
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1667331	10.00 ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1424999	10.00 ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	552274	10.00 ug/l	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	6.70	111	236318	5.18 ug/l	-0.02
Spiked Amount 10.000			Recovery	= 51.80%	
35) 1,2-Dichloroethane-d4	7.16	65	264223	5.42 ug/l	0.00
Spiked Amount 10.000			Recovery	= 54.20%	
49) Toluene-d8	9.95	98	989286	5.02 ug/l	0.00
Spiked Amount 10.000			Recovery	= 50.20%	
69) 4-Bromofluorobenzene	13.85	95	338251	4.97 ug/l	0.00
Spiked Amount 10.000			Recovery	= 49.70%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.11	116	134595	5.18 ug/l	98
3) Dichlorodifluoromethane	2.16	85	325453	5.37 ug/l	99
4) Chloromethane	2.38	50	368498	5.08 ug/l	99
5) Vinyl chloride	2.54	62	399995	5.20 ug/l	97
6) 2-Chloro-1,1,1-trifluoroet	2.66	118	297845	5.28 ug/l	99
7) Bromomethane	2.91	94	209299	5.49 ug/l	99
8) Chloroethane	3.03	64	229435	4.88 ug/l	99
9) Dichlorofluoromethane	3.31	67	608227	5.12 ug/l	99
10) Trichlorofluoromethane	3.31	101	371747	5.39 ug/l	100
11) Acrolein	3.80	56	46969	24.90 ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	188794	5.17 ug/l	100
13) Acetone	3.96	43	185663	25.39 ug/l	94
14) 1,1-Dichloroethene	3.93	61	575697	5.25 ug/l	100
15) Iodomethane	4.11	142	404101	5.06 ug/l	100
16) Carbon disulfide	4.21	76	891940	4.98 ug/l	100
17) Methylene chloride	4.51	49	417583	4.96 ug/l	99
18) tert-Butyl alcohol	4.64	59	44384	22.55 ug/l	98
19) Acrylonitrile	4.78	53	225949	25.18 ug/l	100
20) tert-Butyl methyl ether (M	4.83	73	509598	5.19 ug/l	100
21) trans-1,2-Dichloroethene	4.85	61	569608	5.12 ug/l	99
22) Vinyl acetate	5.35	43	439621	5.54 ug/l	100
23) 1,1-Dichloroethane	5.37	63	636880	5.05 ug/l	99
24) Isopropyl ether (DIPE)	5.41	45	1133034	5.06 ug/l	100
26) tert-Butyl ethyl ether (ET	5.86	59	824253	5.12 ug/l	100
27) 2-Butanone	6.03	43	300798	25.53 ug/l	100
28) cis-1,2-Dichloroethene	6.08	96	315546	4.99 ug/l	99
29) 2,2-Dichloropropane	6.09	77	467665	5.21 ug/l	99

(#) = qualifier out of range (m) = manual integration

3 4
11/4/11

2093

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV601.D
Acq On : 31 Oct 2011 12:03 pm
Sample : VO01J315 5.0ppb
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011

Vial: 6
Operator: MW
Inst : TO01
Multiplr: 1.00
Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.37	49	256279	5.04 ug/l	100
31) Chloroform	6.51	83	550815	5.19 ug/l	100
33) 1,1,1-Trichloroethane	6.74	97	438220	5.20 ug/l	99
34) tert-Amyl methyl ether (TA	7.38	87	121788	5.15 ug/l	97
37) 1,1-Dichloropropene	6.95	110	146381	4.94 ug/l	99
38) Carbon tetrachloride	6.95	119	369280	5.20 ug/l	99
39) Benzene	7.20	78	1245836	4.95 ug/l	99
40) 1,2-Dichloroethane	7.26	62	324993	5.20 ug/l	98
41) Trichloroethene	8.12	130	314478	4.99 ug/l	99
42) 1,2-Dichloropropane	8.49	63	328257	5.02 ug/l	99
44) Dibromomethane	8.61	93	108195	5.09 ug/l	99
45) Bromodichloromethane	8.86	83	372868	5.11 ug/l	100
46) 2-Chloroethyl vinyl ether	9.26	63	83401	4.95 ug/l	99
47) cis-1,3-Dichloropropene	9.53	75	439962	5.03 ug/l	99
48) 4-Methyl-2-pentanone	9.73	43	705512	24.62 ug/l	99
50) Toluene	10.06	91	1241598	4.97 ug/l	100
51) Ethyl methacrylate	10.50	69	232579	4.95 ug/l	99
52) trans-1,3-Dichloropropene	10.41	75	335582	5.18 ug/l	99
53) 1,1,2-Trichloroethane	10.74	97	153329	4.98 ug/l	99
54) Tetrachloroethene	10.90	164	254088	5.01 ug/l	99
55) 1,3-Dichloropropane	11.01	76	322220	5.03 ug/l	100
56) 2-Hexanone	11.08	43	449574	24.01 ug/l	100
57) Dibromochloromethane	11.37	129	188230	5.14 ug/l	98
58) 1,2-Dibromoethane	11.58	107	149657	5.12 ug/l	100
59) 1-Chlorohexane	12.34	91	519053	5.02 ug/l	99
60) Chlorobenzene	12.35	112	740263	5.15 ug/l	98
61) 1,1,1,2-Tetrachloroethane	12.48	131	246215	5.17 ug/l	99
62) Ethylbenzene	12.50	91	1488142	5.12 ug/l	100
63) m-Xylene & p-Xylene	12.68	91	2240668	10.21 ug/l	100
64) o-Xylene	13.18	91	1117820	5.18 ug/l	100
65) Styrene	13.21	104	814121	5.27 ug/l	99
67) Bromoform	13.43	173	90333	4.96 ug/l	99
68) Isopropylbenzene	13.64	105	1366963	4.98 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	188971	5.03 ug/l	100
71) Bromobenzene	14.01	156	275792	4.88 ug/l	98
72) trans-1,4-Dichloro-2-buten	14.02	53	47739	4.97 ug/l	99
73) 1,2,3-Trichloropropane	14.05	110	47417	4.94 ug/l	99
74) n-Propylbenzene	14.11	91	1765872	4.99 ug/l	100
75) 1,3,5-Trimethylbenzene	14.30	105	1153676	5.08 ug/l	100
76) 2-Chlorotoluene	14.22	91	975106	4.99 ug/l	99
77) 4-Chlorotoluene	14.35	91	1084599	5.04 ug/l	100

(#) = qualifier out of range (m) = manual integration

SM 11/14/11

2094

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV601.D Vial: 6
Acq On : 31 Oct 2011 12:03 pm Operator: MW
Sample : VO01J315 5.0ppb Inst : TO01
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.64	134	254622	5.01 ug/l	99
79) 1,2,4-Trimethylbenzene	14.70	105	1099833	5.11 ug/l	99
80) sec-Butylbenzene	14.87	105	1498680	5.20 ug/l	100
81) p-Isopropyltoluene	15.01	119	1188883	5.32 ug/l	99
82) 1,3-Dichlorobenzene	14.99	146	545388	5.03 ug/l	100
83) 1,4-Dichlorobenzene	15.09	146	517635	5.03 ug/l	98
84) n-Butylbenzene	15.40	91	1097417	5.08 ug/l	99
85) 1,2-Dichlorobenzene	15.43	146	435689	5.05 ug/l	98
86) 1,2-Dibromo-3-chloropropan	16.17	157	20984	4.85 ug/l	99
87) 1,2,4-Trichlorobenzene	16.95	180	195083	4.57 ug/l	99
88) Hexachlorobutadiene	17.09	225	160479	5.23 ug/l	99
89) Naphthalene	17.23	128	225188	4.71 ug/l	98
90) 1,2,3-Trichlorobenzene	17.46	180	141603	4.99 ug/l	99

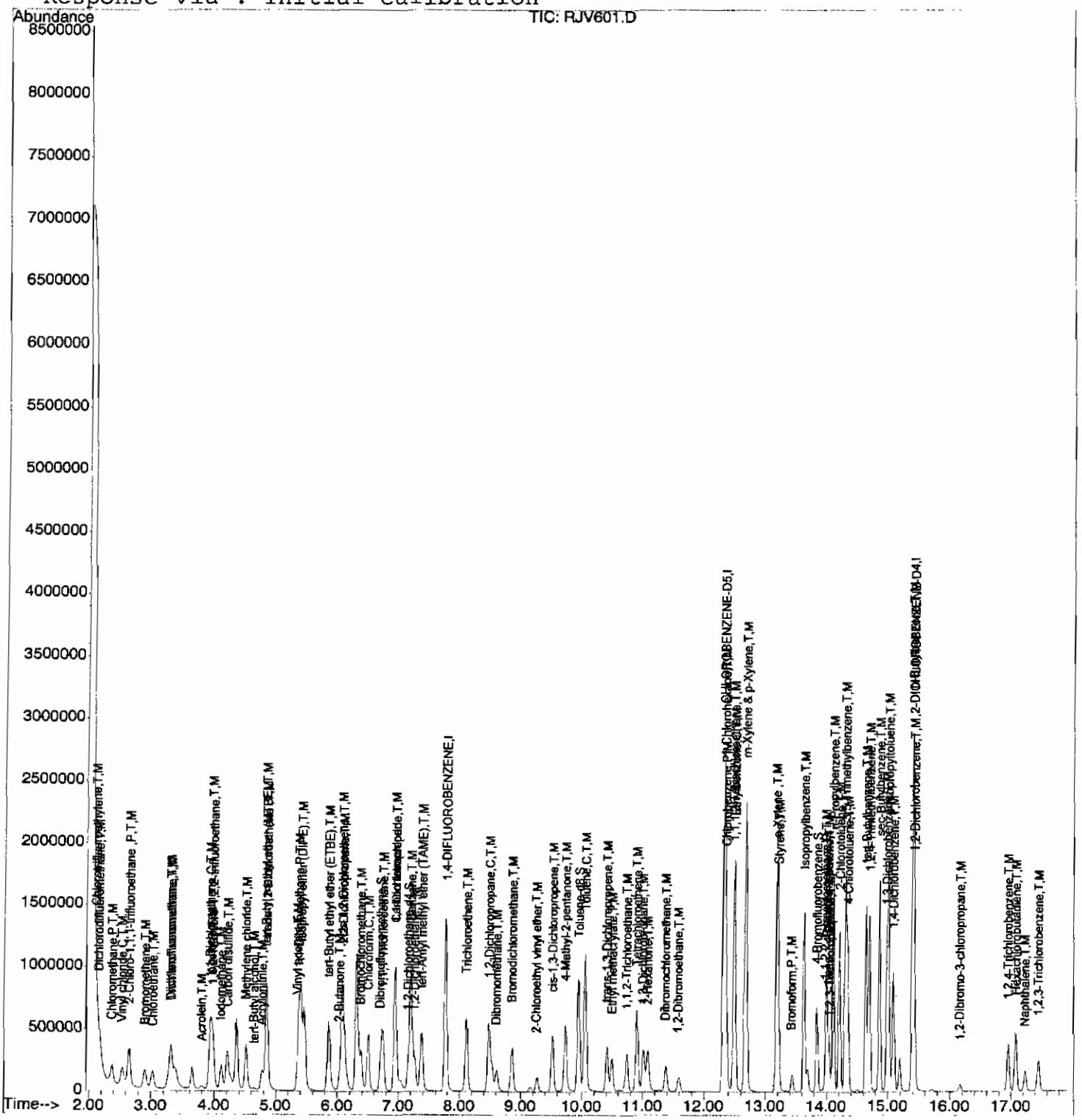
Sa 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV601.D Vial: 6
Acq On : 31 Oct 2011 12:03 pm Operator: MW
Sample : VO01J315 5.0ppb Inst : TO01
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



Su 11/4/11

2096

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV602.D Vial: 7
Acq On : 31 Oct 2011 12:33 pm Operator: MW
Sample : VO01J316 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1719891	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1480141	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	584394	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.71	111	476891	10.13	ug/l	0.00
Spiked Amount 10.000			Recovery	=	101.30%	
35) 1,2-Dichloroethane-d4	7.16	65	511956	10.19	ug/l	0.00
Spiked Amount 10.000			Recovery	=	101.90%	
49) Toluene-d8	9.96	98	1975217	9.65	ug/l	0.00
Spiked Amount 10.000			Recovery	=	96.50%	
69) 4-Bromofluorobenzene	13.85	95	662153	9.19	ug/l	0.00
Spiked Amount 10.000			Recovery	=	91.90%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	2.11	116	276100	10.30	ug/l	100
3) Dichlorodifluoromethane	2.16	85	694418	11.11	ug/l	100
4) Chloromethane	2.38	50	822931	11.00	ug/l	100
5) Vinyl chloride	2.54	62	885921	11.16	ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	2.66	118	595620	10.23	ug/l	100
7) Bromomethane	2.91	94	453924	11.55	ug/l	100
8) Chloroethane	3.03	64	490375	10.11	ug/l	100
9) Dichlorofluoromethane	3.31	67	1212411	9.90	ug/l	100
10) Trichlorofluoromethane	3.31	101	790130	11.10	ug/l	100
11) Acrolein	3.80	56	91113	46.83	ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	372713	9.90	ug/l	100
13) Acetone	3.96	43	398149	52.78	ug/l	100
14) 1,1-Dichloroethene	3.93	61	1151902	10.18	ug/l	100
15) Iodomethane	4.11	142	821311	9.98	ug/l	100
16) Carbon disulfide	4.21	76	1704059	9.23	ug/l	100
17) Methylene chloride	4.51	49	832134	9.59	ug/l	100
18) tert-Butyl alcohol	4.63	59	104663	51.56	ug/l	100
19) Acrylonitrile	4.78	53	460761	49.78	ug/l	100
20) tert-Butyl methyl ether (M	4.84	73	1023725	10.11	ug/l	100
21) trans-1,2-Dichloroethene	4.85	61	1155912	10.07	ug/l	100
22) Vinyl acetate	5.35	43	898961	10.98	ug/l	100
23) 1,1-Dichloroethane	5.37	63	1281558	9.85	ug/l	100
24) Isopropyl ether (DIPE)	5.41	45	2277211	9.86	ug/l	100
26) tert-Butyl ethyl ether (ET	5.86	59	1664323	10.02	ug/l	100
27) 2-Butanone	6.03	43	627685	51.64	ug/l	100
28) cis-1,2-Dichloroethene	6.08	96	643660	9.86	ug/l	100
29) 2,2-Dichloropropane	6.09	77	918750	9.93	ug/l	100

(#) = qualifier out of range (m) = manual integration

SW 11/9/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV602.D Vial: 7
Acq On : 31 Oct 2011 12:33 pm Operator: MW
Sample : VO01J316 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.37	49	531689	10.13 ug/l	100
31) Chloroform	6.51	83	1125479	10.28 ug/l	100
33) 1,1,1-Trichloroethane	6.74	97	887340	10.21 ug/l	100
34) tert-Amyl methyl ether (TA	7.38	87	254430	10.42 ug/l	100
37) 1,1-Dichloropropene	6.95	110	300394	9.76 ug/l	100
38) Carbon tetrachloride	6.95	119	761006	10.32 ug/l	100
39) Benzene	7.20	78	2536787	9.70 ug/l	100
40) 1,2-Dichloroethane	7.26	62	658788	10.16 ug/l	100
41) Trichloroethene	8.12	130	643696	9.83 ug/l	100
42) 1,2-Dichloropropane	8.49	63	660977	9.73 ug/l	100
44) Dibromomethane	8.61	93	223027	10.11 ug/l	100
45) Bromodichloromethane	8.86	83	765516	10.10 ug/l	100
46) 2-Chloroethyl vinyl ether	9.27	63	179170	10.24 ug/l	100
47) cis-1,3-Dichloropropene	9.53	75	902904	9.94 ug/l	100
48) 4-Methyl-2-pentanone	9.73	43	1515324	50.91 ug/l	100
50) Toluene	10.06	91	2519020	9.71 ug/l	100
51) Ethyl methacrylate	10.50	69	509535	10.44 ug/l	100
52) trans-1,3-Dichloropropene	10.41	75	692433	10.30 ug/l	100
53) 1,1,2-Trichloroethane	10.74	97	312834	9.79 ug/l	100
54) Tetrachloroethene	10.90	164	527228	10.00 ug/l	100
55) 1,3-Dichloropropane	11.02	76	672790	10.12 ug/l	100
56) 2-Hexanone	11.08	43	1001577	51.50 ug/l	100
57) Dibromochloromethane	11.38	129	398755	10.49 ug/l	100
58) 1,2-Dibromoethane	11.60	107	309125	10.19 ug/l	100
59) 1-Chlorohexane	12.34	91	1061481	9.89 ug/l	100
60) Chlorobenzene	12.37	112	1534459	10.27 ug/l	100
61) 1,1,1,2-Tetrachloroethane	12.49	131	509033	10.29 ug/l	100
62) Ethylbenzene	12.50	91	3039684	10.07 ug/l	100
63) m-Xylene & p-Xylene	12.68	91	4657557	20.44 ug/l	100
64) o-Xylene	13.18	91	2289498	10.21 ug/l	100
65) Styrene	13.21	104	1710763	10.66 ug/l	100
67) Bromoform	13.45	173	191250	9.92 ug/l	100
68) Isopropylbenzene	13.64	105	2845236	9.80 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	387320	9.75 ug/l	100
71) Bromobenzene	14.01	156	576797	9.64 ug/l	100
72) trans-1,4-Dichloro-2-buten	14.02	53	104528	10.28 ug/l	100
73) 1,2,3-Trichloropropane	14.05	110	96348	9.48 ug/l	100
74) n-Propylbenzene	14.11	91	3712779	9.92 ug/l	100
75) 1,3,5-Trimethylbenzene	14.31	105	2404528	10.02 ug/l	100
76) 2-Chlorotoluene	14.22	91	1999464	9.68 ug/l	100
77) 4-Chlorotoluene	14.35	91	2257893	9.91 ug/l	100

(#) = qualifier out of range (m) = manual integration
RJV602.D VO01J31.M Tue Nov 01 12:01:49 2011

Su 11/4/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV602.D
Acq On : 31 Oct 2011 12:33 pm
Sample : VO01J316 10.0ppb
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011

Vial: 7
Operator: MW
Inst : TO01
Multiplr: 1.00
Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.65	134	534932	9.95 ug/l	100
79) 1,2,4-Trimethylbenzene	14.70	105	2360716	10.36 ug/l	100
80) sec-Butylbenzene	14.87	105	3168241	10.38 ug/l	100
81) p-Isopropyltoluene	15.02	119	2560910	10.82 ug/l	100
82) 1,3-Dichlorobenzene	15.00	146	1159223	10.11 ug/l	100
83) 1,4-Dichlorobenzene	15.09	146	1104230	10.14 ug/l	100
84) n-Butylbenzene	15.40	91	2441091	10.67 ug/l	100
85) 1,2-Dichlorobenzene	15.43	146	923829	10.12 ug/l	100
86) 1,2-Dibromo-3-chloropropan	16.17	157	47396	10.35 ug/l	100
87) 1,2,4-Trichlorobenzene	16.95	180	459079	9.98 ug/l	100
88) Hexachlorobutadiene	17.09	225	351615	10.83 ug/l	100
89) Naphthalene	17.23	128	566222	11.18 ug/l	100
90) 1,2,3-Trichlorobenzene	17.46	180	338329	11.27 ug/l	100

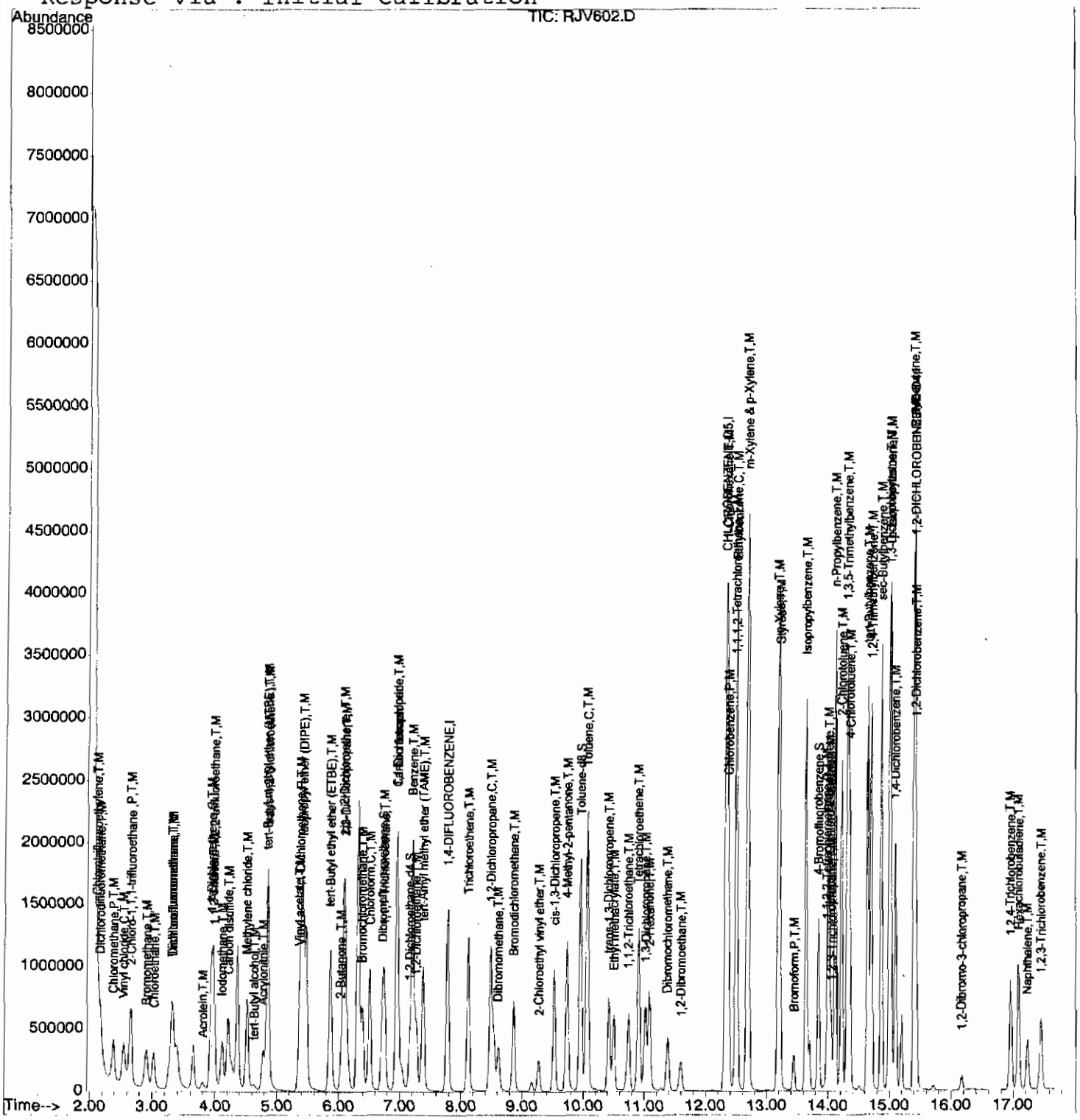
SW
11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV602.D Vial: 7
Acq On : 31 Oct 2011 12:33 pm Operator: MW
Sample : VO01J316 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



Sa 11/4/11

2100

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV603.D Vial: 8
Acq On : 31 Oct 2011 1:04 pm Operator: MW
Sample : VO01J317 20.0ppb Inst : TO01
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1779518	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1549810	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	625052	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.71	111	1025767	21.06	ug/l	0.00
Spiked Amount 10.000			Recovery	=	210.60%	
35) 1,2-Dichloroethane-d4	7.17	65	1080974	20.79	ug/l	0.01
Spiked Amount 10.000			Recovery	=	207.90%	
49) Toluene-d8	9.95	98	4337966	20.23	ug/l	0.00
Spiked Amount 10.000			Recovery	=	202.30%	
69) 4-Bromofluorobenzene	13.85	95	1458130	18.93	ug/l	0.00
Spiked Amount 10.000			Recovery	=	189.30%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	2.11	116	619157	22.32	ug/l	97
3) Dichlorodifluoromethane	2.16	85	1332729	20.61	ug/l	99
4) Chloromethane	2.38	50	1536794	19.85	ug/l	99
5) Vinyl chloride	2.54	62	1711387	20.84	ug/l	99
6) 2-Chloro-1,1,1-trifluoroet	2.66	118	1306611	21.69	ug/l	99
7) Bromomethane	2.91	94	845037	20.77	ug/l	100
8) Chloroethane	3.03	64	956239	19.05	ug/l	99
9) Dichlorofluoromethane	3.31	67	2569689	20.28	ug/l	99
10) Trichlorofluoromethane	3.31	101	1521533	20.66	ug/l	100
11) Acrolein	3.80	56	191956	95.35	ug/l	94
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	796334	20.45	ug/l	100
13) Acetone	3.96	43	790572	101.29	ug/l	99
14) 1,1-Dichloroethene	3.93	61	2377378	20.30	ug/l	99
15) Iodomethane	4.11	142	1769507	20.78	ug/l	98
16) Carbon disulfide	4.21	76	4242746	22.20	ug/l	100
17) Methylene chloride	4.51	49	1783638	19.87	ug/l	100
18) tert-Butyl alcohol	4.63	59	243093	115.74	ug/l	94
19) Acrylonitrile	4.78	53	999525	104.36	ug/l	98
20) tert-Butyl methyl ether (M	4.83	73	2261970	21.59	ug/l	99
21) trans-1,2-Dichloroethene	4.85	61	2436914	20.51	ug/l	99
22) Vinyl acetate	5.35	43	1835696	21.67	ug/l	100
23) 1,1-Dichloroethane	5.38	63	2732458	20.30	ug/l	100
24) Isopropyl ether (DIPE)	5.41	45	4958183	20.74	ug/l	100
26) tert-Butyl ethyl ether (ET	5.86	59	3601366	20.95	ug/l	100
27) 2-Butanone	6.03	43	1369537	108.90	ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	1393330	20.64	ug/l	97
29) 2,2-Dichloropropane	6.11	77	1893188	19.78	ug/l	99

(#) = qualifier out of range (m) = manual integration
RJV603.D VO01J31.M Tue Nov 01 12:02:00 2011 11/4/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV603.D Vial: 8
Acq On : 31 Oct 2011 1:04 pm Operator: MW
Sample : VO01J317 20.0ppb Inst : TO01
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.37	49	1135905	20.92 ug/l	100
31) Chloroform	6.51	83	2332870	20.60 ug/l	99
33) 1,1,1-Trichloroethane	6.74	97	1826203	20.30 ug/l	100
34) tert-Amyl methyl ether (TA	7.38	87	551721	21.84 ug/l	98
37) 1,1-Dichloropropene	6.95	110	626975	19.45 ug/l	100
38) Carbon tetrachloride	6.95	119	1558491	20.19 ug/l	99
39) Benzene	7.22	78	5373072	19.62 ug/l	100
40) 1,2-Dichloroethane	7.28	62	1368426	20.15 ug/l	99
41) Trichloroethene	8.12	130	1374856	20.05 ug/l	99
42) 1,2-Dichloropropane	8.49	63	1410225	19.83 ug/l	99
44) Dibromomethane	8.61	93	474846	20.55 ug/l	99
45) Bromodichloromethane	8.86	83	1635177	20.61 ug/l	100
46) 2-Chloroethyl vinyl ether	9.27	63	417426	22.78 ug/l	99
47) cis-1,3-Dichloropropene	9.53	75	1959642	20.60 ug/l	98
48) 4-Methyl-2-pentanone	9.73	43	3397594	109.02 ug/l	99
50) Toluene	10.06	91	5342633	19.66 ug/l	99
51) Ethyl methacrylate	10.50	69	1151317	22.54 ug/l	99
52) trans-1,3-Dichloropropene	10.41	75	1489122	21.15 ug/l	99
53) 1,1,2-Trichloroethane	10.74	97	687671	20.55 ug/l	100
54) Tetrachloroethene	10.90	164	1106278	20.04 ug/l	99
55) 1,3-Dichloropropane	11.02	76	1450831	20.84 ug/l	99
56) 2-Hexanone	11.08	43	2231750	109.59 ug/l	99
57) Dibromochloromethane	11.39	129	867364	21.78 ug/l	99
58) 1,2-Dibromoethane	11.60	107	685662	21.58 ug/l	100
59) 1-Chlorohexane	12.34	91	2246704	19.99 ug/l	98
60) Chlorobenzene	12.37	112	3217343	20.56 ug/l	99
61) 1,1,1,2-Tetrachloroethane	12.48	131	1086418	20.98 ug/l	100
62) Ethylbenzene	12.50	91	6520501	20.62 ug/l	100
63) m-Xylene & p-Xylene	12.69	91	9711209	40.70 ug/l	99
64) o-Xylene	13.18	91	4791780	20.41 ug/l	100
65) Styrene	13.21	104	3693235	21.99 ug/l	99
67) Bromoform	13.45	173	430525	20.87 ug/l	100
68) Isopropylbenzene	13.64	105	6000625	19.33 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	867417	20.42 ug/l	99
71) Bromobenzene	14.01	156	1246515	19.47 ug/l	99
72) trans-1,4-Dichloro-2-buten	14.02	53	236469	21.74 ug/l	99
73) 1,2,3-Trichloropropane	14.05	110	213892	19.68 ug/l	95
74) n-Propylbenzene	14.11	91	7875979	19.68 ug/l	100
75) 1,3,5-Trimethylbenzene	14.30	105	5121879	19.95 ug/l	100
76) 2-Chlorotoluene	14.22	91	4208913	19.05 ug/l	100
77) 4-Chlorotoluene	14.35	91	4712246	19.33 ug/l	99

(#) = qualifier out of range (m) = manual integration

Sa 11/4/11

2102

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV603.D Vial: 8
Acq On : 31 Oct 2011 1:04 pm Operator: MW
Sample : VO01J317 20.0ppb Inst : TO01
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.64	134	1132771	19.70 ug/l	98
79) 1,2,4-Trimethylbenzene	14.70	105	4931279	20.24 ug/l	100
80) sec-Butylbenzene	14.87	105	6646646	20.37 ug/l	100
81) p-Isopropyltoluene	15.01	119	5412692	21.39 ug/l	99
82) 1,3-Dichlorobenzene	15.00	146	2462860	20.08 ug/l	100
83) 1,4-Dichlorobenzene	15.10	146	2371037	20.36 ug/l	100
84) n-Butylbenzene	15.40	91	5280613	21.59 ug/l	100
85) 1,2-Dichlorobenzene	15.43	146	1979099	20.28 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.17	157	108025	22.05 ug/l	96
87) 1,2,4-Trichlorobenzene	16.95	180	1021088	20.58 ug/l	99
88) Hexachlorobutadiene	17.09	225	732172	21.08 ug/l	100
89) Naphthalene	17.23	128	1317521	24.33 ug/l	99
90) 1,2,3-Trichlorobenzene	17.46	180	748982	23.32 ug/l	99

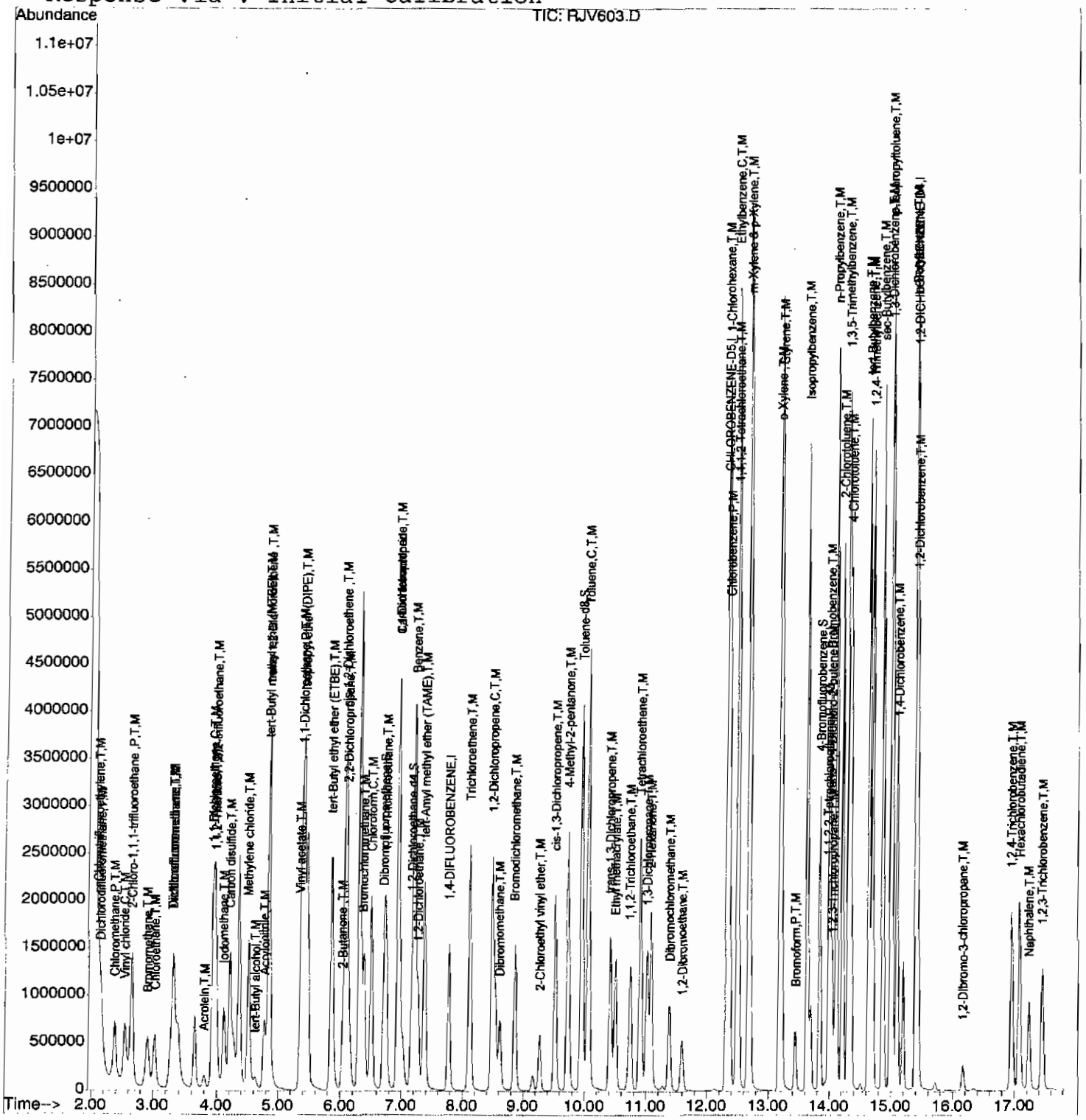
Sa 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV603.D Vial: 8
Acq On : 31 Oct 2011 1:04 pm Operator: MW
Sample : VO01J317 20.0ppb Inst : TO01
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



Su 11/4/11 2104

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV604.D Vial: 9
Acq On : 31 Oct 2011 1:35 pm Operator: MW
Sample : VO01J318 30.0ppb Inst : TO01
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1944105	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.33	117	1642533	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	623118	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.70	111	1600153	30.07	ug/l	-0.01
Spiked Amount 10.000			Recovery	=	300.70%	
35) 1,2-Dichloroethane-d4	7.16	65	1611045	28.36	ug/l	0.00
Spiked Amount 10.000			Recovery	=	283.60%	
49) Toluene-d8	9.96	98	6927928	30.49	ug/l	0.00
Spiked Amount 10.000			Recovery	=	304.90%	
69) 4-Bromofluorobenzene	13.85	95	2234361	29.10	ug/l	0.00
Spiked Amount 10.000			Recovery	=	291.00%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	2.10	116	959090	31.65	ug/l	97
3) Dichlorodifluoromethane	2.16	85	2071610	29.32	ug/l	99
4) Chloromethane	2.38	50	2459072	29.08	ug/l	100
5) Vinyl chloride	2.55	62	2680047	29.87	ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	2.65	118	1998069	30.36	ug/l	99
7) Bromomethane	2.90	94	1296227	29.17	ug/l	99
8) Chloroethane	3.02	64	1467399	26.75	ug/l	97
9) Dichlorofluoromethane	3.32	67	3913511	28.28	ug/l	99
10) Trichlorofluoromethane	3.38	101	2362974	29.37	ug/l	99
11) Acrolein	3.80	56	309344	140.66	ug/l	93
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	1257372	29.56	ug/l	99
13) Acetone	3.95	43	1175036	137.81	ug/l	99
14) 1,1-Dichloroethene	3.92	61	3679949	28.76	ug/l	98
15) Iodomethane	4.12	142	2809158	30.20	ug/l	96
16) Carbon disulfide	4.20	76	6618018	31.70	ug/l	99
17) Methylene chloride	4.51	49	2820351	28.75	ug/l	98
18) tert-Butyl alcohol	4.62	59	370690	161.55	ug/l	90
19) Acrylonitrile	4.77	53	1614225	154.28	ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	3380669	29.54	ug/l	99
21) trans-1,2-Dichloroethene	4.85	61	3856033	29.71	ug/l	97
22) Vinyl acetate	5.36	43	3051479	32.98	ug/l	100
23) 1,1-Dichloroethane	5.37	63	4375129	29.76	ug/l	100
24) Isopropyl ether (DIPE)	5.42	45	7821803	29.95	ug/l	100
26) tert-Butyl ethyl ether (ET	5.86	59	5385324	28.67	ug/l	99
27) 2-Butanone	6.04	43	2132827	155.24	ug/l	100
28) cis-1,2-Dichloroethene	6.08	96	2218715	30.08	ug/l	94
29) 2,2-Dichloropropane	6.10	77	2894614	27.68	ug/l	99

(#) = qualifier out of range (m) = manual integration

SU 11/14/11

2105

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV604.D Vial: 9
Acq On : 31 Oct 2011 1:35 pm Operator: MW
Sample : VO01J318 30.0ppb Inst : TO01
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.38	49	1757164	29.62 ug/l	100
31) Chloroform	6.51	83	3616890	29.23 ug/l	99
33) 1,1,1-Trichloroethane	6.75	97	2831129	28.81 ug/l	99
34) tert-Amyl methyl ether (TA	7.39	87	837280	30.34 ug/l	97
37) 1,1-Dichloropropene	6.96	110	1027036	30.06 ug/l	100
38) Carbon tetrachloride	6.96	119	2452549	29.98 ug/l	100
39) Benzene	7.21	78	8635600	29.75 ug/l	99
40) 1,2-Dichloroethane	7.27	62	2052805	28.52 ug/l	100
41) Trichloroethene	8.12	130	2152986	29.62 ug/l	99
42) 1,2-Dichloropropane	8.49	63	2226456	29.53 ug/l	95
44) Dibromomethane	8.61	93	725022	29.61 ug/l	98
45) Bromodichloromethane	8.86	83	2511280	29.86 ug/l	99
46) 2-Chloroethyl vinyl ether	9.28	63	626988	32.28 ug/l	99
47) cis-1,3-Dichloropropene	9.53	75	3047283	30.22 ug/l	96
48) 4-Methyl-2-pentanone	9.74	43	5147126	155.83 ug/l	100
50) Toluene	10.06	91	8672793	30.12 ug/l	99
51) Ethyl methacrylate	10.51	69	1769262	32.68 ug/l	99
52) trans-1,3-Dichloropropene	10.42	75	2265119	30.35 ug/l	98
53) 1,1,2-Trichloroethane	10.74	97	1053999	29.71 ug/l	99
54) Tetrachloroethene	10.91	164	1734669	29.65 ug/l	99
55) 1,3-Dichloropropane	11.03	76	2210603	29.96 ug/l	100
56) 2-Hexanone	11.08	43	3468558	160.71 ug/l	99
57) Dibromochloromethane	11.38	129	1306686	30.96 ug/l	100
58) 1,2-Dibromoethane	11.60	107	1031679	30.63 ug/l	100
59) 1-Chlorohexane	12.34	91	3552970	29.83 ug/l	96
60) Chlorobenzene	12.37	112	5041374	30.40 ug/l	98
61) 1,1,1,2-Tetrachloroethane	12.49	131	1651646	30.09 ug/l	99
62) Ethylbenzene	12.50	91	10122986	30.21 ug/l	99
63) m-Xylene & p-Xylene	12.68	91	15158450	59.94 ug/l	100
64) o-Xylene	13.19	91	7399756	29.73 ug/l	99
65) Styrene	13.21	104	5848025	32.85 ug/l	98
67) Bromoform	13.44	173	641572	31.20 ug/l	99
68) Isopropylbenzene	13.64	105	9324644	30.14 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	1275187	30.11 ug/l	100
71) Bromobenzene	14.01	156	1879383	29.45 ug/l	99
72) trans-1,4-Dichloro-2-buten	14.03	53	344575	31.78 ug/l	98
73) 1,2,3-Trichloropropane	14.06	110	307702	28.39 ug/l	97
74) n-Propylbenzene	14.12	91	12105235	30.34 ug/l	99
75) 1,3,5-Trimethylbenzene	14.31	105	7677402	29.99 ug/l	100
76) 2-Chlorotoluene	14.22	91	6409822	29.09 ug/l	100
77) 4-Chlorotoluene	14.35	91	7110939	29.27 ug/l	99

(#) = qualifier out of range (m) = manual integration

Sa 11/4/11

2106

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV604.D Vial: 9
Acq On : 31 Oct 2011 1:35 pm Operator: MW
Sample : VO01J318 30.0ppb Inst : TO01
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.65	134	1726031	30.11 ug/l	97
79) 1,2,4-Trimethylbenzene	14.71	105	7386704	30.41 ug/l	100
80) sec-Butylbenzene	14.87	105	10134115	31.15 ug/l	100
81) p-Isopropyltoluene	15.02	119	8122945	32.20 ug/l	99
82) 1,3-Dichlorobenzene	14.99	146	3674932	30.06 ug/l	100
83) 1,4-Dichlorobenzene	15.09	146	3531924	30.43 ug/l	99
84) n-Butylbenzene	15.40	91	7800996	31.99 ug/l	100
85) 1,2-Dichlorobenzene	15.43	146	2898081	29.79 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.17	157	157656	32.29 ug/l	94
87) 1,2,4-Trichlorobenzene	16.96	180	1481504	29.87 ug/l	99
88) Hexachlorobutadiene	17.09	225	1047559	30.26 ug/l	100
89) Naphthalene	17.24	128	1974632	36.58 ug/l	100
90) 1,2,3-Trichlorobenzene	17.46	180	1086525	33.94 ug/l	99

(#) = qualifier out of range (m) = manual integration

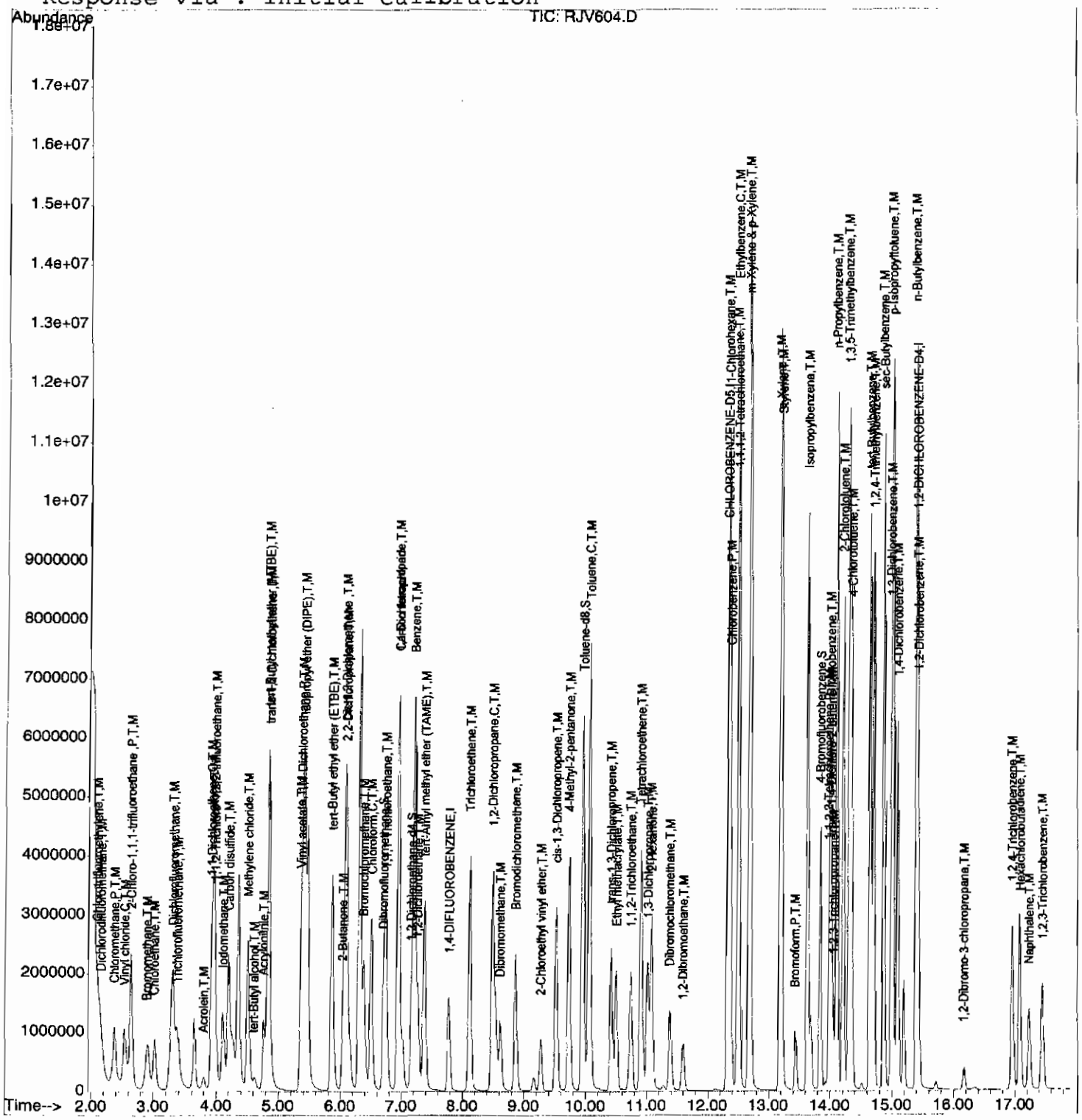
Su 11/4/11

2107

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV604.D Vial: 9
Acq On : 31 Oct 2011 1:35 pm Operator: MW
Sample : VO01J318 30.0ppb Inst : TO01
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



SW 11/4/11

2108

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV605.D Vial: 11
Acq On : 31 Oct 2011 2:05 pm Operator: MW
Sample : VO01J319 50.0ppb Inst : TO01
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	2009420	10.00 ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1673368	10.00 ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	609594	10.00 ug/l	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	6.72	111	2760567	50.19 ug/l	0.00
Spiked Amount 10.000			Recovery	= 501.90%	
35) 1,2-Dichloroethane-d4	7.18	65	2744499	46.75 ug/l	0.02
Spiked Amount 10.000			Recovery	= 467.50%	
49) Toluene-d8	9.96	98	11858124	51.22 ug/l	0.00
Spiked Amount 10.000			Recovery	= 512.20%	
69) 4-Bromofluorobenzene	13.85	95	3735684	49.73 ug/l	0.00
Spiked Amount 10.000			Recovery	= 497.30%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.10	116	1702770	54.37 ug/l	97
3) Dichlorodifluoromethane	2.16	85	3668635	50.24 ug/l	100
4) Chloromethane	2.38	50	4222194	48.30 ug/l	99
5) Vinyl chloride	2.54	62	4799083	51.75 ug/l	99
6) 2-Chloro-1,1,1-trifluoroet	2.65	118	3415291	50.21 ug/l	99
7) Bromomethane	2.90	94	2135280	46.49 ug/l	99
8) Chloroethane	3.02	64	2518778	44.43 ug/l	97
9) Dichlorofluoromethane	3.31	67	6568593	45.92 ug/l	99
10) Trichlorofluoromethane	3.37	101	4112056	49.45 ug/l	99
11) Acrolein	3.80	56	534262	235.03 ug/l	91
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	2174084	49.44 ug/l	99
13) Acetone	3.96	43	1952617	221.56 ug/l	98
14) 1,1-Dichloroethene	3.92	61	6186662	46.78 ug/l	97
15) Iodomethane	4.11	142	4929746	51.27 ug/l	95
16) Carbon disulfide	4.20	76	12286394	56.93 ug/l	99
17) Methylene chloride	4.51	49	4877164	48.10 ug/l	98
18) tert-Butyl alcohol	4.63	59	603415	254.43 ug/l	90
19) Acrylonitrile	4.78	53	2761953	255.39 ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	5759400	48.68 ug/l	99
21) trans-1,2-Dichloroethene	4.85	61	6566876	48.95 ug/l	96
22) Vinyl acetate	5.36	43	5089972	53.22 ug/l	99
23) 1,1-Dichloroethane	5.37	63	7517951	49.47 ug/l	100
24) Isopropyl ether (DIPE)	5.41	45	13401731	49.65 ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	9283442	47.82 ug/l	99
27) 2-Butanone	6.04	43	3598371	253.40 ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	3806666	49.94 ug/l	93
29) 2,2-Dichloropropane	6.11	77	4905534	45.39 ug/l	99

(#) = qualifier out of range (m) = manual integration

SW 11/4/11

2109

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV605.D Vial: 11
Acq On : 31 Oct 2011 2:05 pm Operator: MW
Sample : VO01J319 50.0ppb Inst : TO01
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.38	49	2983317	48.65 ug/l	99
31) Chloroform	6.51	83	6188584	48.39 ug/l	99
33) 1,1,1-Trichloroethane	6.75	97	4900213	48.24 ug/l	99
34) tert-Amyl methyl ether (TA	7.38	87	1421634	49.84 ug/l	97
37) 1,1-Dichloropropene	6.95	110	1709663	49.11 ug/l	100
38) Carbon tetrachloride	6.95	119	4075850	48.90 ug/l	100
39) Benzene	7.22	78	15061821	50.94 ug/l	99
40) 1,2-Dichloroethane	7.28	62	3468505	47.30 ug/l	99
41) Trichloroethene	8.12	130	3759638	50.78 ug/l	99
42) 1,2-Dichloropropane	8.49	63	3854263	50.18 ug/l	93
44) Dibromomethane	8.61	93	1258398	50.45 ug/l	98
45) Bromodichloromethane	8.86	83	4332390	50.57 ug/l	99
46) 2-Chloroethyl vinyl ether	9.28	63	1103296	55.76 ug/l	100
47) cis-1,3-Dichloropropene	9.53	75	5290073	51.50 ug/l	96
48) 4-Methyl-2-pentanone	9.74	43	8986510	267.06 ug/l	100
50) Toluene	10.06	91	14946793	50.94 ug/l	99
51) Ethyl methacrylate	10.50	69	3027427	54.88 ug/l	98
52) trans-1,3-Dichloropropene	10.42	75	3900084	51.30 ug/l	97
53) 1,1,2-Trichloroethane	10.76	97	1799649	49.80 ug/l	99
54) Tetrachloroethene	10.92	164	2996227	50.26 ug/l	98
55) 1,3-Dichloropropane	11.02	76	3820354	50.83 ug/l	100
56) 2-Hexanone	11.08	43	5961741	271.14 ug/l	99
57) Dibromochloromethane	11.39	129	2229241	51.85 ug/l	99
58) 1,2-Dibromoethane	11.60	107	1758612	51.26 ug/l	100
59) 1-Chlorohexane	12.34	91	6038065	49.76 ug/l	94
60) Chlorobenzene	12.37	112	8506064	50.35 ug/l	98
61) 1,1,1,2-Tetrachloroethane	12.50	131	2794766	49.98 ug/l	100
62) Ethylbenzene	12.50	91	16600587	48.63 ug/l	98
63) m-Xylene & p-Xylene	12.69	91	22426784	87.05 ug/l	90
64) o-Xylene	13.20	91	12391328	48.87 ug/l	100
65) Styrene	13.21	104	9819196	54.14 ug/l	97
67) Bromoform	13.45	173	1095097	54.44 ug/l	100
68) Isopropylbenzene	13.64	105	14588321	48.19 ug/l	98
70) 1,1,2,2-Tetrachloroethane	13.98	83	2094516	50.55 ug/l	100
71) Bromobenzene	14.01	156	3147518	50.42 ug/l	98
72) trans-1,4-Dichloro-2-buten	14.03	53	566772	53.43 ug/l	99
73) 1,2,3-Trichloropropane	14.06	110	505221	47.66 ug/l	99
74) n-Propylbenzene	14.11	91	16939080	43.40 ug/l	94
75) 1,3,5-Trimethylbenzene	14.31	105	12624805	50.41 ug/l	100
76) 2-Chlorotoluene	14.22	91	10653400	49.43 ug/l	100
77) 4-Chlorotoluene	14.35	91	11722235	49.32 ug/l	99

(#) = qualifier out of range (m) = manual integration

SA 11/14/11

2110

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV605.D Vial: 11
Acq On : 31 Oct 2011 2:05 pm Operator: MW
Sample : VO01J319 50.0ppb Inst : TO01
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.65	134	2799133	49.91 ug/l	98
79) 1,2,4-Trimethylbenzene	14.71	105	12111871	50.98 ug/l	100
80) sec-Butylbenzene	14.87	105	15097959	47.44 ug/l	96
81) p-Isopropyltoluene	15.02	119	12920168	52.35 ug/l	99
82) 1,3-Dichlorobenzene	15.00	146	6085296	50.88 ug/l	99
83) 1,4-Dichlorobenzene	15.11	146	5782196	50.92 ug/l	99
84) n-Butylbenzene	15.40	91	12489996	52.35 ug/l	99
85) 1,2-Dichlorobenzene	15.43	146	4708100	49.47 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.17	157	263605	55.18 ug/l	94
87) 1,2,4-Trichlorobenzene	16.96	180	2445232	50.29 ug/l	99
88) Hexachlorobutadiene	17.09	225	1676790	49.51 ug/l	99
89) Naphthalene	17.24	128	3325101	62.96 ug/l	100
90) 1,2,3-Trichlorobenzene	17.46	180	1796843	57.37 ug/l	99

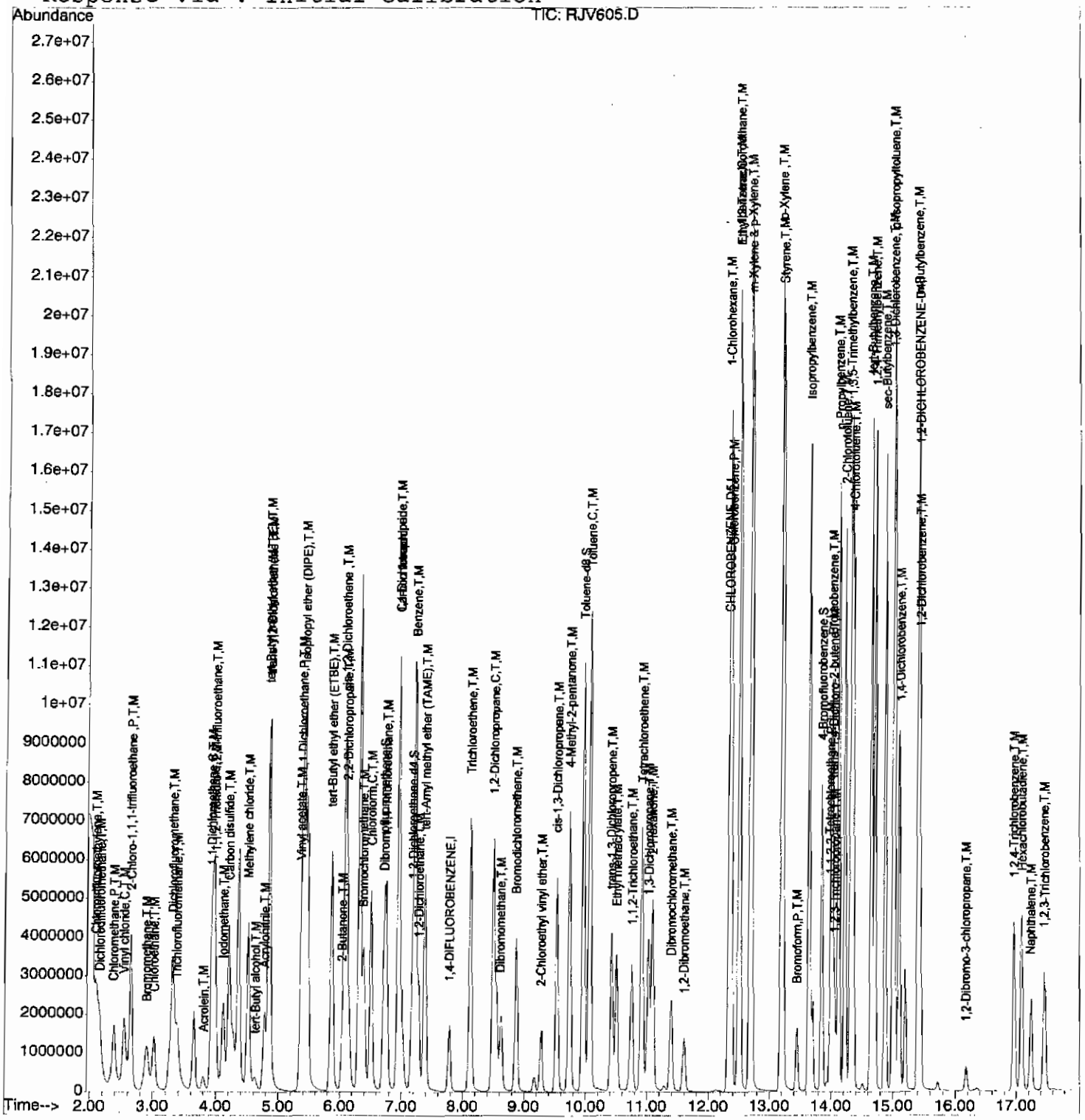
Su 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV605.D Vial: 11
Acq On : 31 Oct 2011 2:05 pm Operator: MW
Sample : VO01J319 50.0ppb Inst : TO01
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



SU 11/4/11

2112

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV606.D Vial: 12
Acq On : 31 Oct 2011 2:36 pm Operator: MW
Sample : VO01J3110 100.0ppb Inst : TO01
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	2019193	10.00 ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1632197	10.00 ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	556773	10.00 ug/l	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	6.71	111	5371213	97.18 ug/l	0.00
Spiked Amount 10.000			Recovery	= 971.80%	
35) 1,2-Dichloroethane-d4	7.17	65	5380561	91.21 ug/l	0.02
Spiked Amount 10.000			Recovery	= 912.10%	
49) Toluene-d8	9.97	98	21895188	96.97 ug/l	0.02
Spiked Amount 10.000			Recovery	= 969.70%	
69) 4-Bromofluorobenzene	13.85	95	6937717	101.12 ug/l	0.00
Spiked Amount 10.000			Recovery	= 1011.20%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.11	116	3307943	105.11 ug/l	97
3) Dichlorodifluoromethane	2.16	85	7241206	98.69 ug/l	100
4) Chloromethane	2.38	50	8441047	96.09 ug/l	99
5) Vinyl chloride	2.54	62	9180163	98.52 ug/l	99
6) 2-Chloro-1,1,1-trifluoroet	2.65	118	6369347	93.19 ug/l	100
7) Bromomethane	2.88	94	2888542	62.58 ug/l	99
8) Chloroethane	3.00	64	4504311	79.06 ug/l	97
9) Dichlorofluoromethane	3.31	67	12550063	87.31 ug/l	100
10) Trichlorofluoromethane	3.37	101	7857297	94.02 ug/l	99
11) Acrolein	3.80	56	1033441	452.42 ug/l	91
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	4329449	97.99 ug/l	99
13) Acetone	3.96	43	3664542	413.79 ug/l	98
14) 1,1-Dichloroethene	3.92	61	11790148	88.73 ug/l	97
15) Iodomethane	4.11	142	9846958	101.91 ug/l	94
16) Carbon disulfide	4.20	76	24241123	111.78 ug/l	99
17) Methylene chloride	4.51	49	9560645	93.84 ug/l	98
18) tert-Butyl alcohol	4.64	59	1220902	512.31 ug/l	91
19) Acrylonitrile	4.78	53	5489606	505.15 ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	11101894	93.39 ug/l	100
21) trans-1,2-Dichloroethene	4.85	61	12650206	93.83 ug/l	95
22) Vinyl acetate	5.35	43	8995610	93.60 ug/l	97
23) 1,1-Dichloroethane	5.37	63	14671188	96.07 ug/l	100
24) Isopropyl ether (DIPE)	5.41	45	23978854	88.40 ug/l	96
26) tert-Butyl ethyl ether (ET	5.87	59	18416161	94.41 ug/l	98
27) 2-Butanone	6.05	43	6955853	487.46 ug/l	98
28) cis-1,2-Dichloroethene	6.08	96	7437489	97.09 ug/l	92
29) 2,2-Dichloropropane	6.11	77	9465387	87.16 ug/l	99

(#) = qualifier out of range (m) = manual integration

Sa 11/4/11

2113

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV606.D Vial: 12
Acq On : 31 Oct 2011 2:36 pm Operator: MW
Sample : VO01J3110 100.0ppb Inst : TO01
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.39	49	5840370	94.78 ug/l	98
31) Chloroform	6.51	83	12230633	95.17 ug/l	98
33) 1,1,1-Trichloroethane	6.74	97	9727196	95.30 ug/l	98
34) tert-Amyl methyl ether (TA	7.38	87	2737844	95.52 ug/l	96
37) 1,1-Dichloropropene	6.95	110	3303413	97.29 ug/l	100
38) Carbon tetrachloride	6.97	119	8133170	100.04 ug/l	99
39) Benzene	7.22	78	25072109	86.93 ug/l	94
40) 1,2-Dichloroethane	7.28	62	6697859	93.64 ug/l	99
41) Trichloroethene	8.12	130	7367105	102.01 ug/l	99
42) 1,2-Dichloropropane	8.49	63	7424707	99.11 ug/l	94
44) Dibromomethane	8.62	93	2459610	101.09 ug/l	98
45) Bromodichloromethane	8.88	83	8475930	101.43 ug/l	99
46) 2-Chloroethyl vinyl ether	9.27	63	2205665	114.28 ug/l	99
47) cis-1,3-Dichloropropene	9.53	75	10350306	103.31 ug/l	95
48) 4-Methyl-2-pentanone	9.73	43	17269595	526.16 ug/l	100
50) Toluene	10.07	91	24557608	85.81 ug/l	84
51) Ethyl methacrylate	10.50	69	5907227	109.79 ug/l	98
52) trans-1,3-Dichloropropene	10.43	75	7622995	102.80 ug/l	98
53) 1,1,2-Trichloroethane	10.75	97	3464697	98.29 ug/l	99
54) Tetrachloroethene	10.92	164	5898802	101.45 ug/l	98
55) 1,3-Dichloropropane	11.02	76	7220281	98.48 ug/l	100
56) 2-Hexanone	11.09	43	11533837	537.79 ug/l	99
57) Dibromochloromethane	11.39	129	4368849	104.18 ug/l	99
58) 1,2-Dibromoethane	11.60	107	3406871	101.80 ug/l	99
59) 1-Chlorohexane	12.35	91	11468060	96.89 ug/l	92
60) Chlorobenzene	12.37	112	15904879	96.52 ug/l	97
61) 1,1,1,2-Tetrachloroethane	12.50	131	5256896	96.39 ug/l	99
62) Ethylbenzene	12.52	91	22246127	66.81 ug/l	77
63) m-Xylene & p-Xylene	12.69	91	28613530	113.86 ug/l	61
64) o-Xylene	13.20	91	19704910	79.68 ug/l	88
65) Styrene	13.23	104	16944312	95.79 ug/l	97
67) Bromoform	13.45	173	2100489	114.33 ug/l	100
68) Isopropylbenzene	13.64	105	20115159	72.76 ug/l	83
70) 1,1,2,2-Tetrachloroethane	13.99	83	3821795	100.98 ug/l	100
71) Bromobenzene	14.01	156	5960940	104.55 ug/l	96
72) trans-1,4-Dichloro-2-buten	14.04	53	1068405	110.27 ug/l	98
73) 1,2,3-Trichloropropane	14.05	110	950447	98.16 ug/l	94
74) n-Propylbenzene	14.13	91	21314579	59.79 ug/l	72
75) 1,3,5-Trimethylbenzene	14.32	105	17714898	77.45 ug/l	81
76) 2-Chlorotoluene	14.22	91	16708507	84.88 ug/l	91
77) 4-Chlorotoluene	14.35	91	19557394	90.08 ug/l	93

(#) = qualifier out of range (m) = manual integration
RJV606.D VO01J31.M Tue Nov 01 12:02:41 2011 SW 11/4/11

2114

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV606.D Vial: 12
Acq On : 31 Oct 2011 2:36 pm Operator: MW
Sample : VO01J3110 100.0ppb Inst : TO01
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
78) tert-Butylbenzene	14.65	134	5105325	99.66 ug/l	#	86
79) 1,2,4-Trimethylbenzene	14.70	105	17652572	81.34 ug/l		82
80) sec-Butylbenzene	14.88	105	19491707	67.06 ug/l		77
81) p-Isopropyltoluene	15.03	119	17127519	75.99 ug/l		81
82) 1,3-Dichlorobenzene	15.00	146	11055385	101.20 ug/l		99
83) 1,4-Dichlorobenzene	15.10	146	10497852	101.22 ug/l		99
84) n-Butylbenzene	15.40	91	17802076	81.69 ug/l		80
85) 1,2-Dichlorobenzene	15.44	146	8701945	100.10 ug/l		99
86) 1,2-Dibromo-3-chloropropan	16.17	157	502864	115.25 ug/l		93
87) 1,2,4-Trichlorobenzene	16.97	180	4889343	109.91 ug/l		99
88) Hexachlorobutadiene	17.09	225	3481664	112.55 ug/l		99
89) Naphthalene	17.23	128	6641092	137.68 ug/l		100
90) 1,2,3-Trichlorobenzene	17.46	180	3592189	125.57 ug/l		99

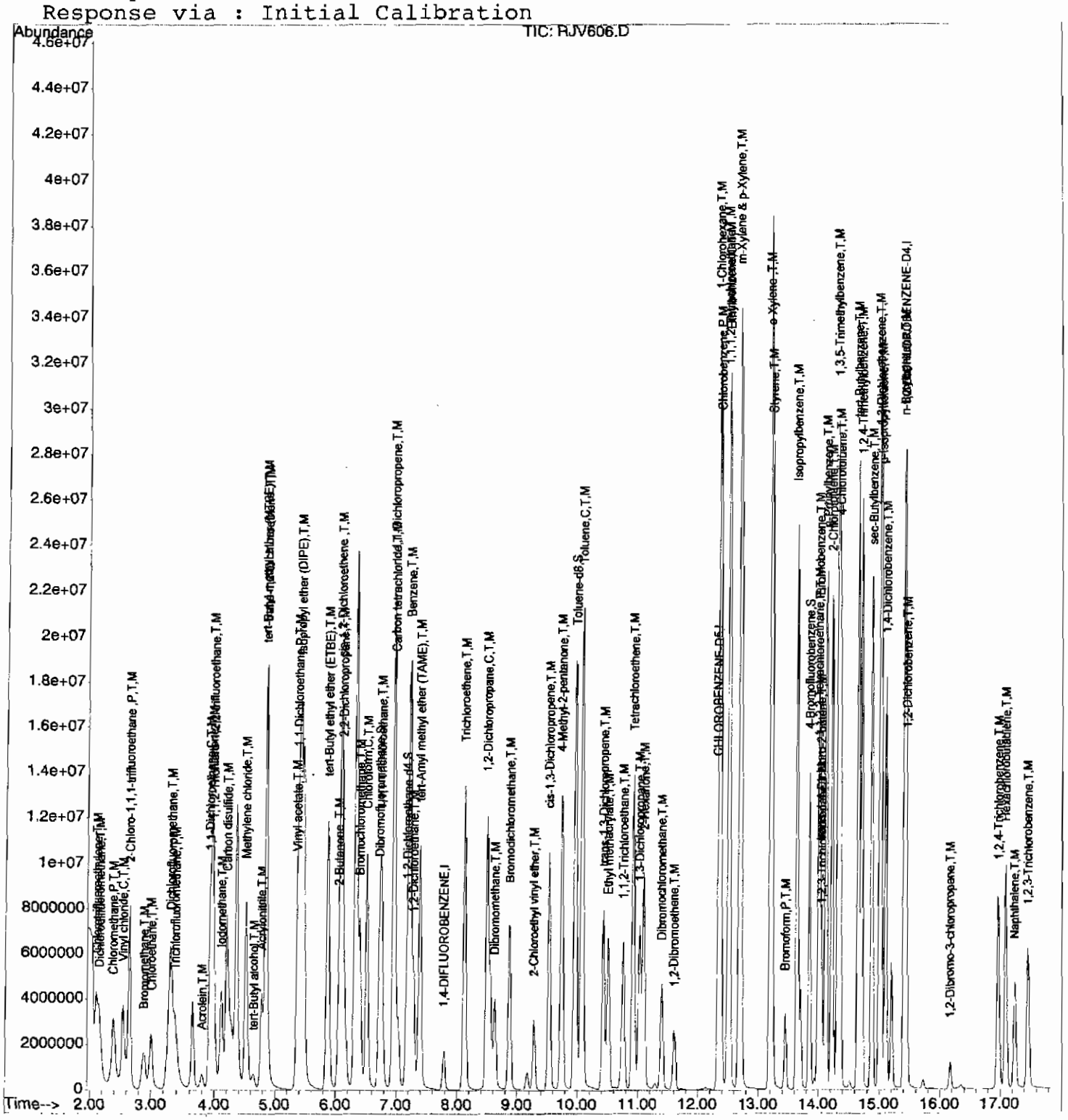
SM 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV606.D Vial: 12
Acq On : 31 Oct 2011 2:36 pm Operator: MW
Sample : VO01J3110 100.0ppb Inst : TO01
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



Sr 11/4/11

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SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :T001
IC_Beginning DateTime :10/31/11 09:59
Spike Amount :10 PPB
CC/CV File :RJV609
IC File :RJV602

Column Spec :RTX502.2 ID :0.32MM
IC_Ending DateTime :10/31/11 14:36
HPChem Method :V001J31
Date_Time :10/31/11 16:07

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	2078216	1	1	7.785	7.777	0				
	2	Chlorotrifluoroethylene	10.337	3.4	334837	0.161	0.156	2.118	2.108	12.57				
	3	Dichlorodifluoromethane	8.998	-10.0	679552	0.327	0.363	2.163	2.158	7.72				
	4	Chloromethane	9.368	-6.3	847031	0.408	0.435	2.385	2.377	4.03				
	5	Vinyl chloride	9.570	-4.3	917897	0.442	0.461	2.547	2.541	7.36				
	6	2-Chloro-1,1,1-trifluoroethane	10.198	2.0	717414	0.345	0.338	2.666	2.655	11.52				
	7	Bromomethane	10.172	1.7	483272	0.233	0.229	2.917	2.900	14.94				
	8	Chloroethane	9.111	-8.9	534262	0.257	0.282	3.036	3.022	14.40				
	9	Dichlorofluoromethane	9.679	-3.2	1432022	0.689	0.712	3.317	3.309	7.42				
	10	Trichlorofluoromethane	8.656	-13.4	772218	0.372	0.429	3.317	3.313	5.60				
5	11	Acrolein	50.524	1.0	118784	0.011	0.011	3.805	3.801	12.29				
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	9.899	-1.0	450197	0.217	0.219	3.983	3.976	2.60				
5	13	Acetone	48.877	-2.2	445516	0.043	0.044	3.968	3.962	12.62				
	14	1,1-Dichloroethene	9.655	-3.5	1320508	0.635	0.658	3.938	3.927	5.45				
	15	Iodomethane	10.262	2.6	1020558	0.491	0.479	4.116	4.112	2.89				
	16	Carbon disulfide	10.377	3.8	2316232	1.115	1.074	4.219	4.208	10.99				
	17	Methylene chloride	9.852	-1.5	1033145	0.497	0.505	4.515	4.512	6.57				
5	18	tert-Butyl alcohol	49.112	-1.8	120463	0.012	0.012	4.634	4.633	10.38				
5	19	Acrylonitrile	52.562	5.1	587908	0.057	0.054	4.781	4.777	4.68				
	20	tert-Butyl methyl ether (MTBE)	10.014	0.1	1225298	0.590	0.589	4.841	4.837	4.92				
	21	trans-1,2-Dichloroethene	9.877	-1.2	1370568	0.659	0.668	4.856	4.851	3.56				
	22	Vinyl acetate	10.093	0.9	998377	0.480	0.476	5.359	5.357	12.74				
	23	1,1-Dichloroethane	10.049	0.5	1579616	0.760	0.756	5.373	5.371	4.05				
	24	Isopropyl ether (DIPE)	10.337	3.4	2886019	1.389	1.343	5.418	5.414	3.23				
5	25	2-Butanol												
	26	tert-Butyl ethyl ether (ETBE)	9.749	-2.5	1957252	0.942	0.966	5.862	5.860	4.44				
5	27	2-Butanone	52.537	5.1	771595	0.074	0.071	6.039	6.042	5.82				
	28	cis-1,2-Dichloroethene	10.308	3.1	812742	0.391	0.379	6.084	6.080	2.86				
	29	2,2-Dichloropropane	9.670	-3.3	1080913	0.520	0.538	6.098	6.099	7.77				
	30	Bromochloromethane	9.920	-0.8	629180	0.303	0.305	6.379	6.378	3.06				
	31	Chloroform	9.731	-2.7	1287132	0.619	0.636	6.513	6.505	3.47				
	32	Dibromofluoromethane	9.632	-3.7	547922	0.264	0.274	6.720	6.709	4.90				
	33	1,1,1-Trichloroethane	9.429	-5.7	990643	0.477	0.506	6.749	6.746	3.15				
	34	tert-Amyl methyl ether (TAME)	10.176	1.8	300183	0.144	0.142	7.386	7.381	5.46				
	35	1,2-Dichloroethane-d4	8.932	-10.7	542346	0.261	0.292	7.179	7.165	6.16				
	36	CHLOROBENZENE-D5	10.000	0	1765489	1	1	12.328	12.321	0				
	37	1,1-Dichloropropene	9.645	-3.5	354243	0.201	0.208	6.957	6.949	4.86				
	38	Carbon tetrachloride	9.552	-4.5	840066	0.476	0.498	6.957	6.955	3.89				
	39	Benzene	10.189	1.9	3178606	1.800	1.767	7.223	7.208	3.77				
	40	1,2-Dichloroethane	9.335	-6.6	722336	0.409	0.438	7.282	7.270	4.24				
	41	Trichloroethene	10.044	0.4	784620	0.444	0.442	8.125	8.120	4.13				
	42	1,2-Dichloropropane	10.004	0.0	810670	0.459	0.459	8.495	8.489	3.08				
20	43	1,4-Dioxane												
	44	Dibromomethane	10.144	1.4	266983	0.151	0.149	8.614	8.612	2.57				
	45	Bromodichloromethane	9.799	-2.0	885837	0.502	0.512	8.865	8.863	3.82				
	46	2-Chloroethyl vinyl ether	10.396	4.0	217043	0.123	0.118	9.280	9.272	12.09				
	47	cis-1,3-Dichloropropene	10.050	0.5	1089123	0.617	0.614	9.531	9.525	3.83				
5	48	4-Methyl-2-pentanone	51.482	3.0	1827746	0.207	0.201	9.738	9.735	7.38				
	49	Toluene-d8	9.543	-4.6	2330918	1.320	1.383	9.960	9.952	6.52				
	50	Toluene	10.051	0.5	3111412	1.762	1.753	10.064	10.060	3.65				
	51	Ethyl methacrylate	10.418	4.2	606348	0.343	0.330	10.508	10.504	11.06				
	52	trans-1,3-Dichloropropene	10.018	0.2	803608	0.455	0.454	10.419	10.417	5.28				
	53	1,1,2-Trichloroethane	9.987	-0.1	380807	0.216	0.216	10.744	10.744	4.93				
	54	Tetrachloroethene	9.960	-0.4	626428	0.355	0.356	10.922	10.907	2.94				
	55	1,3-Dichloropropane	10.067	0.7	798400	0.452	0.449	11.026	11.016	3.40				
5	56	2-Hexanone	50.570	1.1	1173148	0.133	0.131	11.085	11.086	9.50				
	57	Dibromochloromethane	10.095	1.0	457958	0.259	0.257	11.395	11.382	6.52				
	58	1,2-Dibromoethane	10.098	1.0	365541	0.207	0.205	11.603	11.595	5.44				
	59	1-Chlorohexane	9.938	-0.6	1272480	0.721	0.725	12.342	12.336	4.61				

S-4
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60	Chlorobenzene	10.114	1.1	1802805	1.021	1.010	12.372	12.364	3.12				
61	1,1,1,2-Tetrachloroethane	10.026	0.3	591491	0.335	0.334	12.490	12.490	4.52				
62	Ethylbenzene	10.043	0.4	3617689	2.049	2.040	12.505	12.502	3.49				
2 63	m-Xylene & p-Xylene	19.918	-0.4	5414517	1.533	1.540	12.683	12.681	3.23				
64	o-Xylene	9.951	-0.5	2662138	1.508	1.515	13.186	13.184	3.19				
65	Styrene	10.684	6.8	2044347	1.158	1.084	13.215	13.213	9.03				
66	1,2-DICHLOROBENZENE-D4	10.000	0	676620	1	1	15.420	15.415	0				
67	Bromoform	9.880	-1.2	220603	0.326	0.330	13.452	13.443	7.98				
68	Isopropylbenzene	9.790	-2.1	3289549	4.862	4.966	13.644	13.638	4.25				
69	4-Bromofluorobenzene	8.942	-10.6	745615	1.102	1.232	13.852	13.845	8.67				
70	1,1,2,2-Tetrachloroethane	9.932	-0.7	456807	0.675	0.680	13.985	13.983	2.70				
71	Bromobenzene	9.698	-3.0	672008	0.993	1.024	14.014	14.007	7.74				
72	trans-1,4-Dichloro-2-butene	10.164	1.6	119681	0.177	0.174	14.029	14.027	8.64				
73	1,2,3-Trichloropropane	9.577	-4.2	112697	0.167	0.174	14.059	14.054	8.18				
74	n-Propylbenzene	9.990	-0.1	4328062	6.397	6.403	14.118	14.113	2.04				
75	1,3,5-Trimethylbenzene	9.868	-1.3	2743150	4.054	4.108	14.310	14.307	1.64				
76	2-Chlorotoluene	9.609	-3.9	2298732	3.397	3.536	14.222	14.215	4.91				
77	4-Chlorotoluene	9.834	-1.7	2594676	3.835	3.899	14.355	14.348	3.11				
78	tert-Butylbenzene	9.925	-0.7	617877	0.913	0.920	14.651	14.644	1.93				
79	1,2,4-Trimethylbenzene	10.070	0.7	2655963	3.925	3.898	14.710	14.703	7.18				
80	sec-Butylbenzene	10.152	1.5	3586389	5.300	5.221	14.873	14.869	3.80				
81	p-Isopropyltoluene	10.463	4.6	2866222	4.236	4.048	15.021	15.019	9.79				
82	1,3-Dichlorobenzene	9.960	-0.4	1322269	1.954	1.962	15.006	14.995	1.87				
83	1,4-Dichlorobenzene	9.877	-1.2	1244915	1.840	1.863	15.094	15.095	3.02				
84	n-Butylbenzene	10.295	3.0	2726374	4.029	3.914	15.405	15.402	7.03				
85	1,2-Dichlorobenzene	9.923	-0.8	1048344	1.549	1.561	15.435	15.433	2.00				
86	1,2-Dibromo-3-chloropropane	9.989	-0.1	52967	0.078	0.078	16.175	16.171	14.04				
87	1,2,4-Trichlorobenzene	9.584	-4.2	510233	0.754	0.697	16.959	16.957	15.05	-0.0128	0.8002		0.9994
88	Hexachlorobutadiene	10.265	2.7	385907	0.570	0.556	17.092	17.086	7.87				
89	Naphthalene	10.703	7.0	627450	0.927	0.866	17.240	17.236	14.11				
90	1,2,3-Trichlorobenzene	10.574	5.7	367640	0.543	0.514	17.462	17.455	14.54				

Spike Amount = Nominal Amount * M

5a
M1411

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	121	0.00
2	T,M	Chlorotrifluoroethylene	10.000	10.337	-3.4	121	0.00
3	T,M	Dichlorodifluoromethane	10.000	8.999	10.0	98	0.00
4	P,T,M	Chloromethane	10.000	9.369	6.3	103	0.00
5	C,T,M	Vinyl chloride	10.000	9.571	4.3	104	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	10.198	-2.0	120	0.00
7	T,M	Bromomethane	10.000	10.173	-1.7	106	0.00
8	T,M	Chloroethane	10.000	9.111	8.9	109	0.00
9	T,M	Dichlorofluoromethane	10.000	9.679	3.2	118	0.00
10	T,M	Trichlorofluoromethane	10.000	8.656	13.4	98	0.00
11	T,M	Acrolein	50.000	50.524	-1.0	130	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.900	1.0	121	0.00
13	T,M	Acetone	50.000	48.877	2.2	112	0.00
14	C,T,M	1,1-Dichloroethene	10.000	9.655	3.5	115	0.00
15	T,M	Iodomethane	10.000	10.263	-2.6	124	0.00
16	T,M	Carbon disulfide	10.000	10.377	-3.8	136	0.00
17	T,M	Methylene chloride	10.000	9.853	1.5	124	0.00
18	T,M	tert-Butyl alcohol	50.000	49.112	1.8	115	0.00
19	T,M	Acrylonitrile	50.000	52.562	-5.1	128	0.00
20	T,M	tert-Butyl methyl ether (MT	10.000	10.014	-0.1	120	0.00
21	T,M	trans-1,2-Dichloroethene	10.000	9.877	1.2	119	0.00
22	T,M	Vinyl acetate	10.000	10.094	-0.9	111	0.00
23	P,T,M	1,1-Dichloroethane	10.000	10.050	-0.5	123	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	10.338	-3.4	127	0.00
25	T,M	2-Butanol	-1.000	0.000	0.0	126	0.00
26	T,M	tert-Butyl ethyl ether (ETB	10.000	9.749	2.5	118	0.00
27	T,M	2-Butanone	50.000	52.537	-5.1	123	0.00
28	T,M	cis-1,2-Dichloroethene	10.000	10.309	-3.1	126	0.00
29	T,M	2,2-Dichloropropane	10.000	9.670	3.3	118	0.00
30	T,M	Bromochloromethane	10.000	9.920	0.8	118	0.00
31	C,T,M	Chloroform	10.000	9.731	2.7	114	0.00
32	S	Dibromofluoromethane	10.000	9.632	3.7	115	0.00
33	T,M	1,1,1-Trichloroethane	10.000	9.430	5.7	112	0.00
34	T,M	tert-Amyl methyl ether (TAM	10.000	10.176	-1.8	118	0.00
35	S	1,2-Dichloroethane-d4	10.000	8.932	10.7	106	0.02
36	I	CHLOROBENZENE-D5	10.000	10.000	0.0	119	0.00
37	T,M	1,1-Dichloropropene	10.000	9.645	3.6	118	0.00
38	T,M	Carbon tetrachloride	10.000	9.553	4.5	110	0.00
39	T,M	Benzene	10.000	10.189	-1.9	125	0.02
40	T,M	1,2-Dichloroethane	10.000	9.336	6.6	110	0.02

(#) = Out of Range

SU 11/4/11

2120

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IV001J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	10.000	10.044	-0.4	122	0.00
42	C,T,M	1,2-Dichloropropane	10.000	10.004	-0.0	123	0.00
43	T,M	1,4-Dioxane	-1.000	0.000	0.0	127	0.00
44	T,M	Dibromomethane	10.000	10.144	-1.4	120	0.00
45	T,M	Bromodichloromethane	10.000	9.800	2.0	116	0.00
46	T,M	2-Chloroethyl vinyl ether	10.000	10.397	-4.0	121	0.00
47	T,M	cis-1,3-Dichloropropene	10.000	10.050	-0.5	121	0.00
48	T,M	4-Methyl-2-pentanone	50.000	51.482	-3.0	121	0.00
49	S	Toluene-d8	10.000	9.544	4.6	118	0.00
50	C,T,M	Toluene	10.000	10.052	-0.5	124	0.00
51	T,M	Ethyl methacrylate	10.000	10.418	-4.2	119	0.00
52	T,M	trans-1,3-Dichloropropene	10.000	10.018	-0.2	116	0.00
53	T,M	1,1,2-Trichloroethane	10.000	9.988	0.1	122	0.00
54	T,M	Tetrachloroethene	10.000	9.960	0.4	119	0.02
55	T,M	1,3-Dichloropropane	10.000	10.068	-0.7	119	0.00
56	T,M	2-Hexanone	50.000	50.570	-1.1	117	0.00
57	T,M	Dibromochloromethane	10.000	10.096	-1.0	115	0.02
58	T,M	1,2-Dibromoethane	10.000	10.098	-1.0	118	0.00
59	T,M	1-Chlorohexane	10.000	9.939	0.6	120	0.00
60	P,M	Chlorobenzene	10.000	10.114	-1.1	117	0.00
61	T,M	1,1,1,2-Tetrachloroethane	10.000	10.026	-0.3	116	0.00
62	C,T,M	Ethylbenzene	10.000	10.044	-0.4	119	0.00
63	T,M	m-Xylene & p-Xylene	20.000	19.919	0.4	116	0.00
64	T,M	o-Xylene	10.000	9.952	0.5	116	0.00
65	T,M	Styrene	10.000	10.684	-6.8	119	0.00
66	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	116	0.00
67	P,T,M	Bromoform	10.000	9.880	1.2	115	0.00
68	T,M	Isopropylbenzene	10.000	9.791	2.1	116	0.00
69	S	4-Bromofluorobenzene	10.000	8.942	10.6	113	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	10.000	9.932	0.7	118	0.00
71	T,M	Bromobenzene	10.000	9.699	3.0	117	0.00
72	T,M	trans-1,4-Dichloro-2-butene	10.000	10.164	-1.6	114	0.00
73	T,M	1,2,3-Trichloropropane	10.000	9.577	4.2	117	0.00
74	T,M	n-Propylbenzene	10.000	9.990	0.1	117	0.00
75	T,M	1,3,5-Trimethylbenzene	10.000	9.869	1.3	114	0.00
76	T,M	2-Chlorotoluene	10.000	9.609	3.9	115	0.00
77	T,M	4-Chlorotoluene	10.000	9.835	1.6	115	0.00
78	T,M	tert-Butylbenzene	10.000	9.925	0.7	116	0.00
79	T,M	1,2,4-Trimethylbenzene	10.000	10.071	-0.7	113	0.00
80	T,M	sec-Butylbenzene	10.000	10.153	-1.5	113	0.00

(#) = Out of Range

Sa 11/4/11 2121

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	10.000	10.464	-4.6	112	0.00
82	T,M	1,3-Dichlorobenzene	10.000	9.960	0.4	114	0.00
83	T,M	1,4-Dichlorobenzene	10.000	9.877	1.2	113	0.00
84	T,M	n-Butylbenzene	10.000	10.295	-2.9	112	0.00
85	T,M	1,2-Dichlorobenzene	10.000	9.923	0.8	113	0.00
86	T,M	1,2-Dibromo-3-chloropropane	10.000	9.990	0.1	112	0.00
87	T,M	1,2,4-Trichlorobenzene	10.000	9.584	4.2	111	0.00
88	T,M	Hexachlorobutadiene	10.000	10.265	-2.7	110	0.00
89	T,M	Naphthalene	10.000	10.704	-7.0	111	0.00
90	T,M	1,2,3-Trichlorobenzene	10.000	10.575	-5.7	109	0.00

11/4/11 2122

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	121	0.00
2	T,M	Chlorotrifluoroethylene	0.156	0.161	-3.2	121	0.00
3	T,M	Dichlorodifluoromethane	0.363	0.327	9.9	98	0.00
4	P,T,M	Chloromethane	0.435	0.408	6.2	103	0.00
5	C,T,M	Vinyl chloride	0.461	0.442	4.1	104	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.338	0.345	-2.1	120	0.00
7	T,M	Bromomethane	0.229	0.233	-1.7	106	0.00
8	T,M	Chloroethane	0.282	0.257	8.9	109	0.00
9	T,M	Dichlorofluoromethane	0.712	0.689	3.2	118	0.00
10	T,M	Trichlorofluoromethane	0.429	0.372	13.3	98	0.00
11	T,M	Acrolein	0.011	0.011	0.0	130	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.219	0.217	0.9	121	0.00
13	T,M	Acetone	0.044	0.043	2.3	112	0.00
14	C,T,M	1,1-Dichloroethene	0.658	0.635	3.5	115	0.00
15	T,M	Iodomethane	0.479	0.491	-2.5	124	0.00
16	T,M	Carbon disulfide	1.074	1.115	-3.8	136	0.00
17	T,M	Methylene chloride	0.505	0.497	1.6	124	0.00
18	T,M	tert-Butyl alcohol	0.012	0.012	0.0	115	0.00
19	T,M	Acrylonitrile	0.054	0.057	-5.6	128	0.00
20	T,M	tert-Butyl methyl ether (MT	0.589	0.590	-0.2	120	0.00
21	T,M	trans-1,2-Dichloroethene	0.668	0.659	1.3	119	0.00
22	T,M	Vinyl acetate	0.476	0.480	-0.8	111	0.00
23	P,T,M	1,1-Dichloroethane	0.756	0.760	-0.5	123	0.00
24	T,M	Isopropyl ether (DIPE)	1.343	1.389	-3.4	127	0.00
25	T,M	2-Butanol	0.000	0.000	0.0	126	0.00
26	T,M	tert-Butyl ethyl ether (ETB	0.966	0.942	2.5	118	0.00
27	T,M	2-Butanone	0.071	0.074	-4.2	123	0.00
28	T,M	cis-1,2-Dichloroethene	0.379	0.391	-3.2	126	0.00
29	T,M	2,2-Dichloropropane	0.538	0.520	3.3	118	0.00
30	T,M	Bromochloromethane	0.305	0.303	0.7	118	0.00
31	C,T,M	Chloroform	0.636	0.619	2.7	114	0.00
32	S	Dibromofluoromethane	0.274	0.264	3.6	115	0.00
33	T,M	1,1,1-Trichloroethane	0.506	0.477	5.7	112	0.00
34	T,M	tert-Amyl methyl ether (TAM	0.142	0.144	-1.4	118	0.00
35	S	1,2-Dichloroethane-d4	0.292	0.261	10.6	106	0.02
36	I	CHLOROBENZENE-D5	1.000	1.000	0.0	119	0.00
37	T,M	1,1-Dichloropropene	0.208	0.201	3.4	118	0.00
38	T,M	Carbon tetrachloride	0.498	0.476	4.4	110	0.00
39	T,M	Benzene	1.767	1.800	-1.9	125	0.02
40	T,M	1,2-Dichloroethane	0.438	0.409	6.6	110	0.02

(#) = Out of Range

SA 11/4/11

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	0.442	0.444	-0.5	122	0.00
42	C,T,M	1,2-Dichloropropane	0.459	0.459	0.0	123	0.00
43	T,M	1,4-Dioxane	0.000	0.000	0.0	127	0.00
44	T,M	Dibromomethane	0.149	0.151	-1.3	120	0.00
45	T,M	Bromodichloromethane	0.512	0.502	2.0	116	0.00
46	T,M	2-Chloroethyl vinyl ether	0.118	0.123	-4.2	121	0.00
47	T,M	cis-1,3-Dichloropropene	0.614	0.617	-0.5	121	0.00
48	T,M	4-Methyl-2-pentanone	0.201	0.207	-3.0	121	0.00
49	S	Toluene-d8	1.383	1.320	4.6	118	0.00
50	C,T,M	Toluene	1.753	1.762	-0.5	124	0.00
51	T,M	Ethyl methacrylate	0.330	0.343	-3.9	119	0.00
52	T,M	trans-1,3-Dichloropropene	0.454	0.455	-0.2	116	0.00
53	T,M	1,1,2-Trichloroethane	0.216	0.216	0.0	122	0.00
54	T,M	Tetrachloroethene	0.356	0.355	0.3	119	0.02
55	T,M	1,3-Dichloropropane	0.449	0.452	-0.7	119	0.00
56	T,M	2-Hexanone	0.131	0.133	-1.5	117	0.00
57	T,M	Dibromochloromethane	0.257	0.259	-0.8	115	0.02
58	T,M	1,2-Dibromoethane	0.205	0.207	-1.0	118	0.00
59	T,M	1-Chlorohexane	0.725	0.721	0.6	120	0.00
60	P,M	Chlorobenzene	1.010	1.021	-1.1	117	0.00
61	T,M	1,1,1,2-Tetrachloroethane	0.334	0.335	-0.3	116	0.00
62	C,T,M	Ethylbenzene	2.040	2.049	-0.4	119	0.00
63	T,M	m-Xylene & p-Xylene	1.540	1.533	0.5	116	0.00
64	T,M	o-Xylene	1.515	1.508	0.5	116	0.00
65	T,M	Styrene	1.084	1.158	-6.8	119	0.00
66	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	116	0.00
67	P,T,M	Bromoform	0.330	0.326	1.2	115	0.00
68	T,M	Isopropylbenzene	4.966	4.862	2.1	116	0.00
69	S	4-Bromofluorobenzene	1.232	1.102	10.6	113	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	0.680	0.675	0.7	118	0.00
71	T,M	Bromobenzene	1.024	0.993	3.0	117	0.00
72	T,M	trans-1,4-Dichloro-2-butene	0.174	0.177	-1.7	114	0.00
73	T,M	1,2,3-Trichloropropane	0.174	0.167	4.0	117	0.00
74	T,M	n-Propylbenzene	6.403	6.397	0.1	117	0.00
75	T,M	1,3,5-Trimethylbenzene	4.108	4.054	1.3	114	0.00
76	T,M	2-Chlorotoluene	3.536	3.397	3.9	115	0.00
77	T,M	4-Chlorotoluene	3.899	3.835	1.6	115	0.00
78	T,M	tert-Butylbenzene	0.920	0.913	0.8	116	0.00
79	T,M	1,2,4-Trimethylbenzene	3.898	3.925	-0.7	113	0.00
80	T,M	sec-Butylbenzene	5.221	5.300	-1.5	113	0.00

(#) = Out of Range

SU 11/4/11

2124

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IV001J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	4.048	4.236	-4.6	112	0.00
82	T,M	1,3-Dichlorobenzene	1.962	1.954	0.4	114	0.00
83	T,M	1,4-Dichlorobenzene	1.863	1.840	1.2	113	0.00
84	T,M	n-Butylbenzene	3.914	4.029	-2.9	112	0.00
85	T,M	1,2-Dichlorobenzene	1.561	1.549	0.8	113	0.00
86	T,M	1,2-Dibromo-3-chloropropane	0.078	0.078	0.0	112	0.00
87	T,M	1,2,4-Trichlorobenzene	0.697	0.754	-8.2	111	0.00
88	T,M	Hexachlorobutadiene	0.556	0.570	-2.5	110	0.00
89	T,M	Naphthalene	0.866	0.927	-7.0	111	0.00
90	T,M	1,2,3-Trichlorobenzene	0.514	0.543	-5.6	109	0.00

SA 11/4/11

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D
Acq On : 31 Oct 2011 4:07 pm
Sample : IVO01J311 10.0ppb
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA
MS Integration Params: 524C.P
Quant Time: Nov 3 11:03 2011

Vial: 15
Operator: MW
Inst : TO01
Multiplr: 1.00
Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.79	114	2078216	10.00 ug/l	0.00
36) CHLOROBENZENE-D5	12.33	117	1765489	10.00 ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	676620	10.00 ug/l	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	6.72	111	547922	9.63 ug/l	0.00
Spiked Amount 10.000			Recovery	= 96.30%	
35) 1,2-Dichloroethane-d4	7.18	65	542346	8.93 ug/l	0.02
Spiked Amount 10.000			Recovery	= 89.30%	
49) Toluene-d8	9.96	98	2330918	9.54 ug/l	0.00
Spiked Amount 10.000			Recovery	= 95.40%	
69) 4-Bromofluorobenzene	13.85	95	745615	8.94 ug/l	0.00
Spiked Amount 10.000			Recovery	= 89.40%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.12	116	334837	10.34 ug/l	98
3) Dichlorodifluoromethane	2.16	85	679552	9.00 ug/l	98
4) Chloromethane	2.38	50	847031	9.37 ug/l	100
5) Vinyl chloride	2.55	62	917897	9.57 ug/l	98
6) 2-Chloro-1,1,1-trifluoroet	2.67	118	717414	10.20 ug/l	99
7) Bromomethane	2.92	94	483272	10.17 ug/l	100
8) Chloroethane	3.04	64	534262	9.11 ug/l	97
9) Dichlorofluoromethane	3.32	67	1432022	9.68 ug/l	99
10) Trichlorofluoromethane	3.32	101	772218	8.66 ug/l	100
11) Acrolein	3.80	56	118784	50.52 ug/l	89
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	450197	9.90 ug/l	99
13) Acetone	3.97	43	445516	48.88 ug/l	97
14) 1,1-Dichloroethene	3.94	61	1320508	9.66 ug/l	97
15) Iodomethane	4.12	142	1020558	10.26 ug/l	95
16) Carbon disulfide	4.22	76	2316232	10.38 ug/l	99
17) Methylene chloride	4.52	49	1033145	9.85 ug/l	97
18) tert-Butyl alcohol	4.63	59	120463	49.11 ug/l	97
19) Acrylonitrile	4.78	53	587908	52.56 ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	1225298	10.01 ug/l	99
21) trans-1,2-Dichloroethene	4.86	61	1370568	9.88 ug/l	96
22) Vinyl acetate	5.36	43	998377	10.09 ug/l	98
23) 1,1-Dichloroethane	5.37	63	1579616	10.05 ug/l	100
24) Isopropyl ether (DIPE)	5.42	45	2886019	10.34 ug/l	100
26) tert-Butyl ethyl ether (ET	5.86	59	1957252	9.75 ug/l	98
27) 2-Butanone	6.04	43	771595	52.54 ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	812742	10.31 ug/l	94
29) 2,2-Dichloropropane	6.10	77	1080913	9.67 ug/l	98

(#) = qualifier out of range (m) = manual integration
RJV609.D VO01J31.M Thu Nov 03 11:03:52 2011

Sa 11/4/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IV001J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 3 11:03 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.38	49	629180	9.92 ug/l	99
31) Chloroform	6.51	83	1287132	9.73 ug/l	99
33) 1,1,1-Trichloroethane	6.75	97	990643	9.43 ug/l	99
34) tert-Amyl methyl ether (TA	7.39	87	300183	10.18 ug/l	96
37) 1,1-Dichloropropene	6.96	110	354243	9.65 ug/l	98
38) Carbon tetrachloride	6.96	119	840066	9.55 ug/l	100
39) Benzene	7.22	78	3178606	10.19 ug/l	99
40) 1,2-Dichloroethane	7.28	62	722336	9.34 ug/l	99
41) Trichloroethene	8.13	130	784620	10.04 ug/l	99
42) 1,2-Dichloropropane	8.50	63	810670	10.00 ug/l	92
44) Dibromomethane	8.61	93	266983	10.14 ug/l	99
45) Bromodichloromethane	8.87	83	885837	9.80 ug/l	100
46) 2-Chloroethyl vinyl ether	9.28	63	217043	10.40 ug/l	99
47) cis-1,3-Dichloropropene	9.53	75	1089123	10.05 ug/l	95
48) 4-Methyl-2-pentanone	9.74	43	1827746	51.48 ug/l	100
50) Toluene	10.06	91	3111412	10.05 ug/l	98
51) Ethyl methacrylate	10.51	69	606348	10.42 ug/l	98
52) trans-1,3-Dichloropropene	10.42	75	803608	10.02 ug/l	96
53) 1,1,2-Trichloroethane	10.74	97	380807	9.99 ug/l	99
54) Tetrachloroethene	10.92	164	626428	9.96 ug/l	99
55) 1,3-Dichloropropane	11.03	76	798400	10.07 ug/l	100
56) 2-Hexanone	11.08	43	1173148	50.57 ug/l	98
57) Dibromochloromethane	11.40	129	457958	10.10 ug/l	99
58) 1,2-Dibromoethane	11.60	107	365541	10.10 ug/l	100
59) 1-Chlorohexane	12.34	91	1272480	9.94 ug/l	96
60) Chlorobenzene	12.37	112	1802805	10.11 ug/l	99
61) 1,1,1,2-Tetrachloroethane	12.49	131	591491	10.03 ug/l	99
62) Ethylbenzene	12.51	91	3617689	10.04 ug/l	99
63) m-Xylene & p-Xylene	12.68	91	5414517	19.92 ug/l	99
64) o-Xylene	13.19	91	2662138	9.95 ug/l	99
65) Styrene	13.22	104	2044347	10.68 ug/l	98
67) Bromoform	13.45	173	220603	9.88 ug/l	100
68) Isopropylbenzene	13.64	105	3289549	9.79 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	456807	9.93 ug/l	100
71) Bromobenzene	14.01	156	672008	9.70 ug/l	99
72) trans-1,4-Dichloro-2-buten	14.03	53	119681	10.16 ug/l	97
73) 1,2,3-Trichloropropane	14.06	110	112697	9.58 ug/l	94
74) n-Propylbenzene	14.12	91	4328062	9.99 ug/l	99
75) 1,3,5-Trimethylbenzene	14.31	105	2743150	9.87 ug/l	99
76) 2-Chlorotoluene	14.22	91	2298732	9.61 ug/l	100
77) 4-Chlorotoluene	14.35	91	2594676	9.83 ug/l	99

(#) = qualifier out of range (m) = manual integration

Sa 11/4/11

2127

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 3 11:03 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.65	134	617877	9.93 ug/l	96
79) 1,2,4-Trimethylbenzene	14.71	105	2655963	10.07 ug/l	100
80) sec-Butylbenzene	14.87	105	3586389	10.15 ug/l	99
81) p-Isopropyltoluene	15.02	119	2866222	10.46 ug/l	99
82) 1,3-Dichlorobenzene	15.01	146	1322269	9.96 ug/l	100
83) 1,4-Dichlorobenzene	15.09	146	1244915	9.88 ug/l	99
84) n-Butylbenzene	15.41	91	2726374	10.30 ug/l	99
85) 1,2-Dichlorobenzene	15.43	146	1048344	9.92 ug/l	100
86) 1,2-Dibromo-3-chloropropan	16.17	157	52967	9.99 ug/l	97
87) 1,2,4-Trichlorobenzene	16.96	180	510233	9.58 ug/l	99
88) Hexachlorobutadiene	17.09	225	385907	10.27 ug/l	100
89) Naphthalene	17.24	128	627450	10.70 ug/l	100
90) 1,2,3-Trichlorobenzene	17.46	180	367640	10.57 ug/l	98

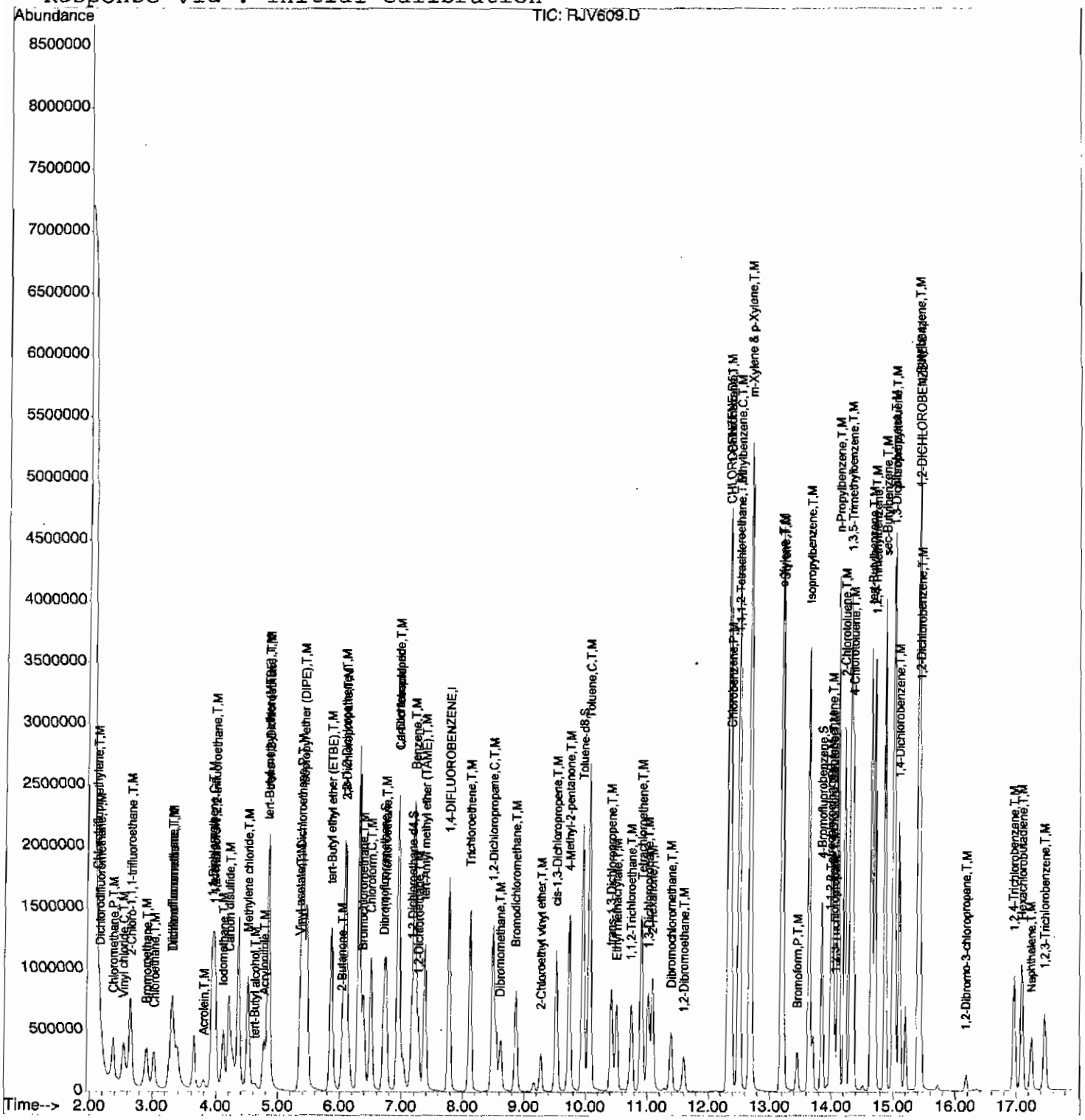
(#) = qualifier out of range (m) = manual integration
RJV609.D VO01J31.M Thu Nov 03 11:03:53 2011

Sa 11/4/11

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IV001J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 3 11:03 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



SW 11/4/11

2129

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKV295
Instrument ID: T001
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11KD63
BFB Injection Date : 11/14/11
BFB Injection Time : 08:40
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.27
75	30.0 - 60.0% of mass 95	55.65
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.29
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	75.40
175	5.0 - 9.0% of mass 174	5.06(6.7)1
176	95.0 - 101.0% of mass 174	74.49(98.8)1
177	5.0 - 9.0% of mass 176	4.82(6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV001J3115	RKV296	11/14/11	09:05
2	MBLK1W	V001K14B	RKV300	11/14/11	11:14
3	LCS1W	V001K14L	RKV297	11/14/11	09:41
4	LCD1W	V001K14C	RKV298	11/14/11	10:12
5	MW-70-PMW03A-095	K063-01R	RKV301	11/14/11	11:46
6	MW-70-PMW03B-097	K063-02R	RKV311	11/14/11	16:59
7	MW-70-PMW03B-097MS	K063-02M	RKV312	11/14/11	17:30
8	MW-70-PMW03B-097MSD	K063-02S	RKV313	11/14/11	18:01
9	MW-70-PMW03B-097DL	K063-02T	RKV318	11/14/11	20:36

FORM V VOA OLM02.0

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RJV602
Instrument ID: T001
GC Column: RTX502.2 ID: 0.32mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K063
Date Analyzed: 10/31/11
Time Analyzed: 12:33
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1719891	7.78	1480141	12.32	584394	15.41
	UPPER LIMIT	3439782	8.28	2960282	12.82	1168788	15.91
	LOWER LIMIT	859946	7.28	740071	11.82	292197	14.91
	SAMPLE ID						
1	VSTD010	1525322	7.79	1321856	12.31	519149	15.41
2	MBLK1W	1702049	7.78	1385661	12.33	389856	15.42
3	LCS1W	1653852	7.77	1449229	12.32	534680	15.42
4	LCD1W	1601733	7.77	1354066	12.31	517770	15.41
5	MW-70-PMW03A-095	1523058	7.79	1182492	12.33	310199	15.42
6	MW-70-PMW03B-097	1638230	7.78	1339049	12.32	350864	15.42
7	MW-70-PMW03B-097MS	1679455	7.79	1476954	12.33	576811	15.42
8	MW-70-PMW03B-097MSD	1734386	7.78	1505359	12.32	576381	15.42
9	MW-70-PMW03B-097DL	1533824	7.78	1254839	12.32	348504	15.42

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

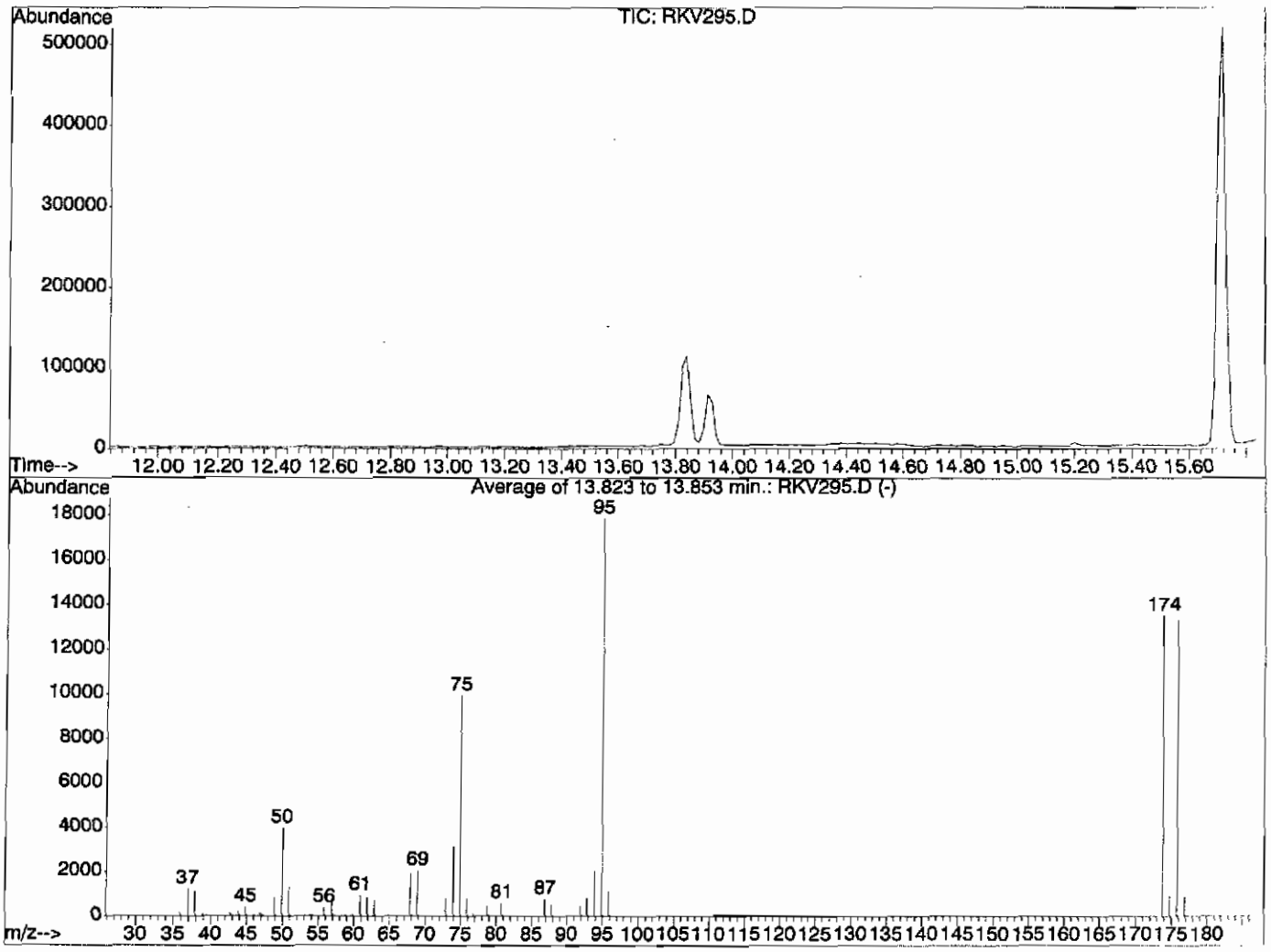
AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

BFB

Data File : D:\HPCHEM\1\DATA\11K14\RKV295.D Vial: 1
Acq On : 14 Nov 2011 8:40 am Operator: MW
Sample : BFB01K14 Inst : TO01
Misc : T/CHK Multiplr: 1.00
MS Integration Params: 524C.P
Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls



AutoFind: Scans 803, 804, 805; Background Corrected with Scan 798

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.3	3976	PASS
75	95	30	60	55.6	9935	PASS
95	95	100	100	100.0	17853	PASS
96	95	5	9	6.3	1123	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	75.4	13462	PASS
175	174	5	9	6.7	904	PASS
176	174	95	101	98.8	13299	PASS
177	176	5	9	6.5	860	PASS

RKV295.D VO01J31.M Mon Nov 14 11:40:06 2011

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D
Acq On : 14 Nov 2011 9:05 am
Sample : CV001J3115
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA
MS Integration Params: 524C.P

Vial: 2
Operator: MW
Inst : TO01
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	89	0.00
2	T,M	Chlorotrifluoroethylene	10.000	0.000	100.0#	0	-2.11#
3	T,M	Dichlorodifluoromethane	10.000	8.571	14.3	68	0.02
4	P,T,M	Chloromethane	10.000	8.721	12.8	70	0.02
5	C,T,M	Vinyl chloride	10.000	9.199	8.0	73	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	0.000	100.0#	0	-2.66#
7	T,M	Bromomethane	10.000	10.154	-1.5	78	0.02
8	T,M	Chloroethane	10.000	9.635	3.7	85	0.02
9	T,M	Dichlorofluoromethane	10.000	10.055	-0.5	90	0.02
10	T,M	Trichlorofluoromethane	10.000	11.610	-16.1	96	0.02
11	T,M	Acrolein	50.000	32.889	34.2#	62	0.02
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	10.221	-2.2	92	0.00
13	T,M	Acetone	50.000	50.167	-0.3	84	0.00
14	C,T,M	1,1-Dichloroethene	10.000	10.216	-2.2	89	0.00
15	T,M	Iodomethane	10.000	10.188	-1.9	91	0.02
16	T,M	Carbon disulfide	10.000	9.151	8.5	88	0.00
17	T,M	Methylene chloride	10.000	9.543	4.6	88	0.02
18	T,M	tert-Butyl alcohol	50.000	47.599	4.8	82	0.04
19	T,M	Acrylonitrile	50.000	46.403	7.2	83	0.00
20	T,M	tert-Butyl methyl ether (MT	10.000	10.289	-2.9	90	0.02
21	T,M	trans-1,2-Dichloroethene	10.000	9.977	0.2	88	0.00
22	T,M	Vinyl acetate	10.000	8.789	12.1	71	0.02
23	P,T,M	1,1-Dichloroethane	10.000	10.114	-1.1	91	0.02
24	T,M	Isopropyl ether (DIPE)	10.000	9.918	0.8	89	0.00
25	T,M	2-Butanol	-1.000	0.000	0.0	89	0.00
26	T,M	tert-Butyl ethyl ether (ETB	10.000	10.033	-0.3	89	0.00
27	T,M	2-Butanone	50.000	47.532	4.9	82	0.02
28	T,M	cis-1,2-Dichloroethene	10.000	10.350	-3.5	93	0.00
29	T,M	2,2-Dichloropropane	10.000	11.129	-11.3	99	0.02
30	T,M	Bromochloromethane	10.000	10.175	-1.8	89	0.00
31	C,T,M	Chloroform	10.000	10.699	-7.0	92	0.00
32	S	Dibromofluoromethane	10.000	10.259	-2.6	90	0.00
33	T,M	1,1,1-Trichloroethane	10.000	10.947	-9.5	95	0.00
34	T,M	tert-Amyl methyl ether (TAM	10.000	10.560	-5.6	90	0.00
35	S	1,2-Dichloroethane-d4	10.000	10.524	-5.2	92	0.00
36	I	CHLOROBENZENE-D5	10.000	10.000	0.0	89	0.00
37	T,M	1,1-Dichloropropene	10.000	10.238	-2.4	94	0.00
38	T,M	Carbon tetrachloride	10.000	10.474	-4.7	91	0.00
39	T,M	Benzene	10.000	9.939	0.6	92	0.00
40	T,M	1,2-Dichloroethane	10.000	10.755	-7.6	95	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D Vial: 2
Acq On : 14 Nov 2011 9:05 am Operator: MW
Sample : CV001J3115 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	10.000	10.311	-3.1	94	0.00
42	C,T,M	1,2-Dichloropropane	10.000	9.886	1.1	91	0.00
43	T,M	1,4-Dioxane	-1.000	0.000	0.0	81	0.00
44	T,M	Dibromomethane	10.000	10.567	-5.7	93	0.00
45	T,M	Bromodichloromethane	10.000	10.663	-6.6	94	0.00
46	T,M	2-Chloroethyl vinyl ether	10.000	1.898	81.0#	17	0.00
47	T,M	cis-1,3-Dichloropropene	10.000	10.318	-3.2	93	0.00
48	T,M	4-Methyl-2-pentanone	50.000	43.950	12.1	77	0.00
49	S	Toluene-d8	10.000	9.825	1.8	91	0.00
50	C,T,M	Toluene	10.000	10.410	-4.1	96	0.00
51	T,M	Ethyl methacrylate	10.000	9.282	7.2	79	0.00
52	T,M	trans-1,3-Dichloropropene	10.000	10.760	-7.6	93	0.00
53	T,M	1,1,2-Trichloroethane	10.000	10.469	-4.7	96	0.00
54	T,M	Tetrachloroethene	10.000	10.653	-6.5	95	0.00
55	T,M	1,3-Dichloropropane	10.000	10.506	-5.1	93	0.00
56	T,M	2-Hexanone	50.000	43.869	12.3	76	0.00
57	T,M	Dibromochloromethane	10.000	11.101	-11.0	95	0.00
58	T,M	1,2-Dibromoethane	10.000	10.643	-6.4	93	0.00
59	T,M	1-Chlorohexane	10.000	10.250	-2.5	93	0.00
60	P,M	Chlorobenzene	10.000	10.488	-4.9	91	0.00
61	T,M	1,1,1,2-Tetrachloroethane	10.000	10.966	-9.7	95	0.00
62	C,T,M	Ethylbenzene	10.000	10.625	-6.3	94	0.00
63	T,M	m-Xylene & p-Xylene	20.000	21.533	-7.7	94	0.00
64	T,M	o-Xylene	10.000	10.790	-7.9	94	0.00
65	T,M	Styrene	10.000	9.954	0.5	83	0.00
66	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	89	0.00
67	P,T,M	Bromoform	10.000	10.892	-8.9	98	0.00
68	T,M	Isopropylbenzene	10.000	10.449	-4.5	95	0.00
69	S	4-Bromofluorobenzene	10.000	9.651	3.5	93	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.387	-3.9	95	0.00
71	T,M	Bromobenzene	10.000	10.252	-2.5	94	0.00
72	T,M	trans-1,4-Dichloro-2-butene	10.000	7.999	20.0#	69	0.00
73	T,M	1,2,3-Trichloropropane	10.000	10.490	-4.9	98	0.00
74	T,M	n-Propylbenzene	10.000	10.405	-4.0	93	0.00
75	T,M	1,3,5-Trimethylbenzene	10.000	10.592	-5.9	94	0.00
76	T,M	2-Chlorotoluene	10.000	10.485	-4.8	96	0.00
77	T,M	4-Chlorotoluene	10.000	10.518	-5.2	94	0.00
78	T,M	tert-Butylbenzene	10.000	10.584	-5.8	95	0.00
79	T,M	1,2,4-Trimethylbenzene	10.000	10.432	-4.3	89	0.00
80	T,M	sec-Butylbenzene	10.000	10.637	-6.4	91	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D Vial: 2
Acq On : 14 Nov 2011 9:05 am Operator: MW
Sample : CVO01J3115 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	10.000	10.835	-8.4	89	0.00
82	T,M	1,3-Dichlorobenzene	10.000	10.730	-7.3	94	0.00
83	T,M	1,4-Dichlorobenzene	10.000	10.471	-4.7	92	0.00
84	T,M	n-Butylbenzene	10.000	10.296	-3.0	86	0.00
85	T,M	1,2-Dichlorobenzene	10.000	10.622	-6.2	93	0.00
86	T,M	1,2-Dibromo-3-chloropropane	10.000	10.304	-3.0	88	0.00
87	T,M	1,2,4-Trichlorobenzene	10.000	8.564	14.4	76	0.00
88	T,M	Hexachlorobutadiene	10.000	10.608	-6.1	87	0.00
89	T,M	Naphthalene	10.000	7.609	23.9#	60	0.00
90	T,M	1,2,3-Trichlorobenzene	10.000	9.169	8.3	72	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D Vial: 2
Acq On : 14 Nov 2011 9:05 am Operator: MW
Sample : CVO01J3115 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	89	0.00
2	T,M	Chlorotrifluoroethylene	0.156	0.000	100.0#	0#	-2.11#
3	T,M	Dichlorodifluoromethane	0.363	0.311	14.3	68	0.02
4	P,T,M	Chloromethane	0.435	0.379	12.9	70	0.02
5	C,T,M	Vinyl chloride	0.461	0.425	7.8	73	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.338	0.000	100.0#	0#	-2.66#
7	T,M	Bromomethane	0.229	0.232	-1.3	78	0.02
8	T,M	Chloroethane	0.282	0.272	3.5	85	0.02
9	T,M	Dichlorofluoromethane	0.712	0.716	-0.6	90	0.02
10	T,M	Trichlorofluoromethane	0.429	0.498	-16.1	96	0.02
11	T,M	Acrolein	0.011	0.007	36.4#	62	0.02
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.219	0.224	-2.3	92	0.00
13	T,M	Acetone	0.044	0.044	0.0	84	0.00
14	C,T,M	1,1-Dichloroethene	0.658	0.672	-2.1	89	0.00
15	T,M	Iodomethane	0.479	0.487	-1.7	91	0.02
16	T,M	Carbon disulfide	1.074	0.983	8.5	88	0.00
17	T,M	Methylene chloride	0.505	0.481	4.8	88	0.02
18	T,M	tert-Butyl alcohol	0.012	0.011	8.3	82	0.04
19	T,M	Acrylonitrile	0.054	0.050	7.4	83	0.00
20	T,M	tert-Butyl methyl ether (MT	0.589	0.606	-2.9	90	0.02
21	T,M	trans-1,2-Dichloroethene	0.668	0.666	0.3	88	0.00
22	T,M	Vinyl acetate	0.476	0.418	12.2	71	0.02
23	P,T,M	1,1-Dichloroethane	0.756	0.765	-1.2	91	0.02
24	T,M	Isopropyl ether (DIPE)	1.343	1.332	0.8	89	0.00
25	T,M	2-Butanol	0.000	0.000	0.0	89	0.00
26	T,M	tert-Butyl ethyl ether (ETB	0.966	0.969	-0.3	89	0.00
27	T,M	2-Butanone	0.071	0.067	5.6	82	0.02
28	T,M	cis-1,2-Dichloroethene	0.379	0.393	-3.7	93	0.00
29	T,M	2,2-Dichloropropane	0.538	0.599	-11.3	99	0.02
30	T,M	Bromochloromethane	0.305	0.311	-2.0	89	0.00
31	C,T,M	Chloroform	0.636	0.681	-7.1	92	0.00
32	S	Dibromofluoromethane	0.274	0.281	-2.6	90	0.00
33	T,M	1,1,1-Trichloroethane	0.506	0.553	-9.3	95	0.00
34	T,M	tert-Amyl methyl ether (TAM	0.142	0.150	-5.6	90	0.00
35	S	1,2-Dichloroethane-d4	0.292	0.307	-5.1	92	0.00
36	I	CHLOROBENZENE-D5	1.000	1.000	0.0	89	0.00
37	T,M	1,1-Dichloropropene	0.208	0.213	-2.4	94	0.00
38	T,M	Carbon tetrachloride	0.498	0.522	-4.8	91	0.00
39	T,M	Benzene	1.767	1.756	0.6	92	0.00
40	T,M	1,2-Dichloroethane	0.438	0.471	-7.5	95	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D Vial: 2
Acq On : 14 Nov 2011 9:05 am Operator: MW
Sample : CVO01J3115 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	0.442	0.456	-3.2	94	0.00
42	C,T,M	1,2-Dichloropropane	0.459	0.454	1.1	91	0.00
43	T,M	1,4-Dioxane	0.000	0.000	0.0	81	0.00
44	T,M	Dibromomethane	0.149	0.158	-6.0	93	0.00
45	T,M	Bromodichloromethane	0.512	0.546	-6.6	94	0.00
46	T,M	2-Chloroethyl vinyl ether	0.118	0.022	81.4#	17#	0.00
47	T,M	cis-1,3-Dichloropropene	0.614	0.633	-3.1	93	0.00
48	T,M	4-Methyl-2-pentanone	0.201	0.177	11.9	77	0.00
49	S	Toluene-d8	1.383	1.359	1.7	91	0.00
50	C,T,M	Toluene	1.753	1.825	-4.1	96	0.00
51	T,M	Ethyl methacrylate	0.330	0.306	7.3	79	0.00
52	T,M	trans-1,3-Dichloropropene	0.454	0.489	-7.7	93	0.00
53	T,M	1,1,2-Trichloroethane	0.216	0.226	-4.6	96	0.00
54	T,M	Tetrachloroethene	0.356	0.380	-6.7	95	0.00
55	T,M	1,3-Dichloropropane	0.449	0.472	-5.1	93	0.00
56	T,M	2-Hexanone	0.131	0.115	12.2	76	0.00
57	T,M	Dibromochloromethane	0.257	0.285	-10.9	95	0.00
58	T,M	1,2-Dibromoethane	0.205	0.218	-6.3	93	0.00
59	T,M	1-Chlorohexane	0.725	0.743	-2.5	93	0.00
60	P,M	Chlorobenzene	1.010	1.059	-4.9	91	0.00
61	T,M	1,1,1,2-Tetrachloroethane	0.334	0.366	-9.6	95	0.00
62	C,T,M	Ethylbenzene	2.040	2.168	-6.3	94	0.00
63	T,M	m-Xylene & p-Xylene	1.540	1.658	-7.7	94	0.00
64	T,M	o-Xylene	1.515	1.635	-7.9	94	0.00
65	T,M	Styrene	1.084	1.079	0.5	83	0.00
66	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	89	0.00
67	P,T,M	Bromoform	0.330	0.359	-8.8	98	0.00
68	T,M	Isopropylbenzene	4.966	5.188	-4.5	95	0.00
69	S	4-Bromofluorobenzene	1.232	1.189	3.5	93	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	0.680	0.706	-3.8	95	0.00
71	T,M	Bromobenzene	1.024	1.050	-2.5	94	0.00
72	T,M	trans-1,4-Dichloro-2-butene	0.174	0.139	20.1#	69	0.00
73	T,M	1,2,3-Trichloropropane	0.174	0.182	-4.6	98	0.00
74	T,M	n-Propylbenzene	6.403	6.662	-4.0	93	0.00
75	T,M	1,3,5-Trimethylbenzene	4.108	4.351	-5.9	94	0.00
76	T,M	2-Chlorotoluene	3.536	3.707	-4.8	96	0.00
77	T,M	4-Chlorotoluene	3.899	4.101	-5.2	94	0.00
78	T,M	tert-Butylbenzene	0.920	0.974	-5.9	95	0.00
79	T,M	1,2,4-Trimethylbenzene	3.898	4.066	-4.3	89	0.00
80	T,M	sec-Butylbenzene	5.221	5.553	-6.4	91	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D Vial: 2
Acq On : 14 Nov 2011 9:05 am Operator: MW
Sample : CVO01J3115 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	4.048	4.387	-8.4	89	0.00
82	T,M	1,3-Dichlorobenzene	1.962	2.105	-7.3	94	0.00
83	T,M	1,4-Dichlorobenzene	1.863	1.950	-4.7	92	0.00
84	T,M	n-Butylbenzene	3.914	4.030	-3.0	86	0.00
85	T,M	1,2-Dichlorobenzene	1.561	1.658	-6.2	93	0.00
86	T,M	1,2-Dibromo-3-chloropropane	0.078	0.081	-3.8	88	0.00
87	T,M	1,2,4-Trichlorobenzene	0.697	0.672	3.6	76	0.00
88	T,M	Hexachlorobutadiene	0.556	0.589	-5.9	87	0.00
89	T,M	Naphthalene	0.866	0.659	23.9#	60	0.00
90	T,M	1,2,3-Trichlorobenzene	0.514	0.471	8.4	72	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D Vial: 2
Acq On : 14 Nov 2011 9:05 am Operator: MW
Sample : CVO01J3115 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 11:40 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.79	114	1525322	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.31	117	1321856	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	519149	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.72	111	428316	10.26	ug/l	0.00
Spiked Amount 10.000			Recovery	=	102.60%	
35) 1,2-Dichloroethane-d4	7.17	65	468983	10.52	ug/l	0.00
Spiked Amount 10.000			Recovery	=	105.20%	
49) Toluene-d8	9.95	98	1796714	9.83	ug/l	0.00
Spiked Amount 10.000			Recovery	=	98.30%	
69) 4-Bromofluorobenzene	13.84	95	617426	9.65	ug/l	0.00
Spiked Amount 10.000			Recovery	=	96.50%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	2.18	85	475078	8.57	ug/l	98
4) Chloromethane	2.40	50	578707	8.72	ug/l	98
5) Vinyl chloride	2.56	62	647575	9.20	ug/l	92
7) Bromomethane	2.93	94	354031	10.15	ug/l	98
8) Chloroethane	3.05	64	414679	9.64	ug/l	97
9) Dichlorofluoromethane	3.33	67	1091839	10.06	ug/l	99
10) Trichlorofluoromethane	3.33	101	760227	11.61	ug/l	99
11) Acrolein	3.82	56	56751	32.89	ug/l	76
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	341134	10.22	ug/l	99
13) Acetone	3.97	43	335619	50.17	ug/l	99
14) 1,1-Dichloroethene	3.94	61	1025473	10.22	ug/l	99
15) Iodomethane	4.13	142	743594	10.19	ug/l	99
16) Carbon disulfide	4.22	76	1499142	9.15	ug/l	99
17) Methylene chloride	4.53	49	734403	9.54	ug/l	99
18) tert-Butyl alcohol	4.66	59	85690	47.60	ug/l	82
19) Acrylonitrile	4.78	53	380932	46.40	ug/l	98
20) tert-Butyl methyl ether (M	4.86	73	923986	10.29	ug/l	99
21) trans-1,2-Dichloroethene	4.86	61	1016092	9.98	ug/l	100
22) Vinyl acetate	5.38	43	638030	8.79	ug/l	95
23) 1,1-Dichloroethane	5.39	63	1166792	10.11	ug/l	99
24) Isopropyl ether (DIPE)	5.42	45	2032282	9.92	ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	1478438	10.03	ug/l	99
27) 2-Butanone	6.06	43	512364	47.53	ug/l	98
28) cis-1,2-Dichloroethene	6.09	96	598937	10.35	ug/l	99
29) 2,2-Dichloropropane	6.11	77	913027	11.13	ug/l	99
30) Bromochloromethane	6.38	49	473641	10.17	ug/l	95
31) Chloroform	6.51	83	1038675	10.70	ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D Vial: 2
Acq On : 14 Nov 2011 9:05 am Operator: MW
Sample : CVO01J3115 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 11:40 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
33) 1,1,1-Trichloroethane	6.75	97	844085	10.95 ug/l	99
34) tert-Amyl methyl ether (TA	7.39	87	228643	10.56 ug/l	98
37) 1,1-Dichloropropene	6.96	110	281534	10.24 ug/l	99
38) Carbon tetrachloride	6.96	119	689638	10.47 ug/l	98
39) Benzene	7.21	78	2321559	9.94 ug/l	100
40) 1,2-Dichloroethane	7.27	62	623058	10.76 ug/l	99
41) Trichloroethene	8.13	130	603044	10.31 ug/l	99
42) 1,2-Dichloropropane	8.50	63	599781	9.89 ug/l	99
44) Dibromomethane	8.62	93	208225	10.57 ug/l	98
45) Bromodichloromethane	8.87	83	721658	10.66 ug/l	100
46) 2-Chloroethyl vinyl ether	9.27	63	29671	1.90 ug/l	96
47) cis-1,3-Dichloropropene	9.52	75	837159	10.32 ug/l	99
48) 4-Methyl-2-pentanone	9.74	43	1168238	43.95 ug/l	99
50) Toluene	10.07	91	2412598	10.41 ug/l	100
51) Ethyl methacrylate	10.49	69	404446	9.28 ug/l	100
52) trans-1,3-Dichloropropene	10.42	75	646223	10.76 ug/l	99
53) 1,1,2-Trichloroethane	10.75	97	298843	10.47 ug/l	99
54) Tetrachloroethene	10.91	164	501649	10.65 ug/l	99
55) 1,3-Dichloropropane	11.01	76	623825	10.51 ug/l	100
56) 2-Hexanone	11.09	43	761955	43.87 ug/l	99
57) Dibromochloromethane	11.38	129	377009	11.10 ug/l	99
58) 1,2-Dibromoethane	11.59	107	288450	10.64 ug/l	100
59) 1-Chlorohexane	12.33	91	982551	10.25 ug/l	98
60) Chlorobenzene	12.36	112	1399695	10.49 ug/l	99
61) 1,1,1,2-Tetrachloroethane	12.49	131	484357	10.97 ug/l	99
62) Ethylbenzene	12.49	91	2865293	10.62 ug/l	99
63) m-Xylene & p-Xylene	12.68	91	4382394	21.53 ug/l	99
64) o-Xylene	13.19	91	2161161	10.79 ug/l	99
65) Styrene	13.20	104	1426002	9.95 ug/l	99
67) Bromoform	13.44	173	186595	10.89 ug/l	99
68) Isopropylbenzene	13.63	105	2693562	10.45 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.99	83	366536	10.39 ug/l	99
71) Bromobenzene	14.00	156	545038	10.25 ug/l	99
72) trans-1,4-Dichloro-2-buten	14.02	53	72261	8.00 ug/l	98
73) 1,2,3-Trichloropropane	14.05	110	94707	10.49 ug/l	95
74) n-Propylbenzene	14.10	91	3458593	10.40 ug/l	100
75) 1,3,5-Trimethylbenzene	14.31	105	2259032	10.59 ug/l	99
76) 2-Chlorotoluene	14.21	91	1924529	10.49 ug/l	100
77) 4-Chlorotoluene	14.34	91	2129189	10.52 ug/l	100
78) tert-Butylbenzene	14.64	134	505557	10.58 ug/l	98
79) 1,2,4-Trimethylbenzene	14.70	105	2110801	10.43 ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D Vial: 2
Acq On : 14 Nov 2011 9:05 am Operator: MW
Sample : CVO01J3115 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 11:40 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

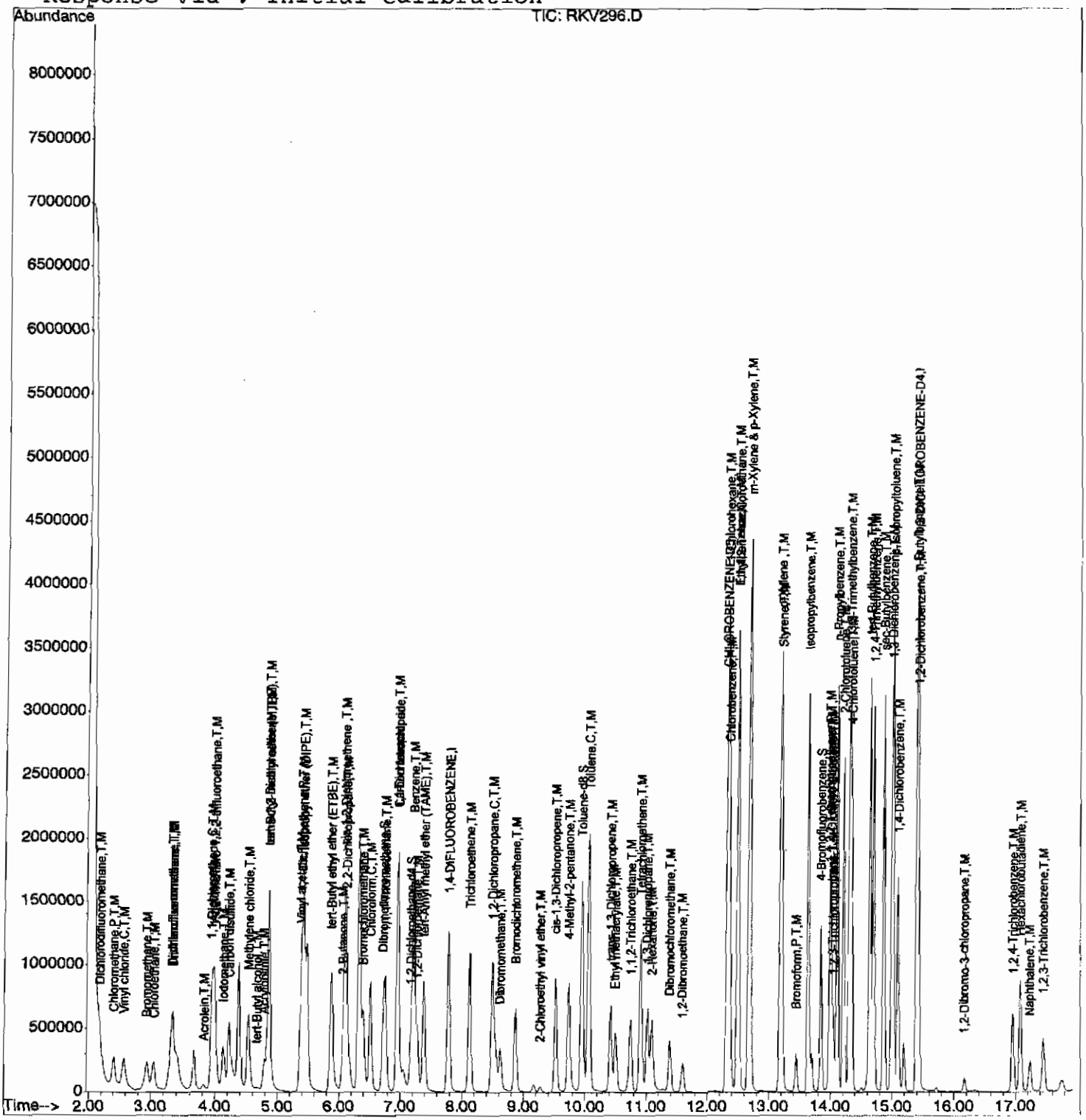
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
80) sec-Butylbenzene	14.86	105	2882982	10.64 ug/l	99
81) p-Isopropyltoluene	15.01	119	2277261	10.84 ug/l	99
82) 1,3-Dichlorobenzene	14.99	146	1092931	10.73 ug/l	99
83) 1,4-Dichlorobenzene	15.10	146	1012576	10.47 ug/l	100
84) n-Butylbenzene	15.39	91	2092075	10.30 ug/l	99
85) 1,2-Dichlorobenzene	15.42	146	860999	10.62 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.16	157	41920	10.30 ug/l	98
87) 1,2,4-Trichlorobenzene	16.96	180	349099	8.56 ug/l	99
88) Hexachlorobutadiene	17.08	225	305990	10.61 ug/l	99
89) Naphthalene	17.23	128	342234	7.61 ug/l	99
90) 1,2,3-Trichlorobenzene	17.45	180	244585	9.17 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K14\RKV296.D Vial: 2
Acq On : 14 Nov 2011 9:05 am Operator: MW
Sample : CV001J3115 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 14 11:40 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKV347
Instrument ID: T001
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K063
BFB Injection Date : 11/15/11
BFB Injection Time : 19:42
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.81
75	30.0 - 60.0% of mass 95	55.06
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.78
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	76.46
175	5.0 - 9.0% of mass 174	4.87(6.4)1
176	95.0 - 101.0% of mass 174	74.38(97.3)1
177	5.0 - 9.0% of mass 176	4.56(6.1)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV001J3117	RKV348	11/15/11	20:10
2	MBLK2W	V001K16B	RKV352	11/15/11	22:04
3	LCS2W	V001K16L	RKV349	11/15/11	20:39
4	LCD2W	V001K16C	RKV350	11/15/11	21:07
5	MW-70-PMW02A-100DL	K063-04T	RKV353	11/15/11	22:32
6	MW-70-PMW02B-101DL	K063-05T	RKV354	11/15/11	22:59
7	MW-70-PMW02A-100	K063-04R	RKV355	11/15/11	23:27
8	MW-70-PMW02B-101	K063-05R	RKV356	11/15/11	23:55
9	IR-70-FD-098	K063-06	RKV357	11/16/11	00:24
10	IR-70-TB-096	K063-07	RKV358	11/16/11	00:52

FORM V VOA OLM02.0

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RJV602
Instrument ID: T001
GC Column: RTX502.2 ID: 0.32mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K063
Date Analyzed: 10/31/11
Time Analyzed: 12:33
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1719891	7.78	1480141	12.32	584394	15.41
	UPPER LIMIT	3439782	8.28	2960282	12.82	1168788	15.91
	LOWER LIMIT	859946	7.28	740071	11.82	292197	14.91
	SAMPLE ID						
1	VSTD010	1582827	7.77	1395744	12.31	557267	15.42
2	MBLK2W	1977242	7.77	1565893	12.31	454227	15.40
3	LCS2W	1790628	7.77	1555178	12.31	602885	15.41
4	LCD2W	1858764	7.77	1620200	12.31	613004	15.40
5	MW-70-PMW02A-100DL	1602898	7.77	1316592	12.31	374323	15.41
6	MW-70-PMW02B-101DL	1657843	7.77	1376598	12.31	406515	15.41
7	MW-70-PMW02A-100	1677002	7.77	1408580	12.31	398368	15.41
8	MW-70-PMW02B-101	1658061	7.77	1404072	12.31	405861	15.40
9	IR-70-FD-098	1675170	7.77	1434777	12.31	421285	15.41
10	IR-70-TB-096	1649128	7.77	1383688	12.31	388091	15.40

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.
page 1 of 1

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K15\RKV348.D Vial: 2
Acq On : 15 Nov 2011 8:10 pm Operator: MW
Sample : CVO01J3117 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	92	-0.01
2	T,M	Chlorotrifluoroethylene	10.000	0.000	100.0#	0	-2.11#
3	T,M	Dichlorodifluoromethane	10.000	8.876	11.2	74	0.00
4	P,T,M	Chloromethane	10.000	9.135	8.7	76	0.00
5	C,T,M	Vinyl chloride	10.000	9.512	4.9	78	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	0.086	99.1#	1	0.00
7	T,M	Bromomethane	10.000	10.576	-5.8	84	0.00
8	T,M	Chloroethane	10.000	9.965	0.4	91	0.00
9	T,M	Dichlorofluoromethane	10.000	10.206	-2.1	95	0.00
10	T,M	Trichlorofluoromethane	10.000	11.692	-16.9	101	0.07
11	T,M	Acrolein	50.000	33.949	32.1#	67	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	10.182	-1.8	95	0.00
13	T,M	Acetone	50.000	45.336	9.3	79	-0.01
14	C,T,M	1,1-Dichloroethene	10.000	10.359	-3.6	94	0.00
15	T,M	Iodomethane	10.000	10.046	-0.5	93	0.00
16	T,M	Carbon disulfide	10.000	8.715	12.9	87	-0.01
17	T,M	Methylene chloride	10.000	9.768	2.3	94	0.00
18	T,M	tert-Butyl alcohol	50.000	41.274	17.5	74	0.02
19	T,M	Acrylonitrile	50.000	45.624	8.8	84	-0.01
20	T,M	tert-Butyl methyl ether (MT	10.000	10.559	-5.6	96	0.00
21	T,M	trans-1,2-Dichloroethene	10.000	10.285	-2.9	94	0.00
22	T,M	Vinyl acetate	10.000	8.205	17.9	69	0.00
23	P,T,M	1,1-Dichloroethane	10.000	10.355	-3.6	97	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	10.304	-3.0	96	0.00
25	T,M	2-Butanol	-1.000	0.000	0.0	96	0.00
26	T,M	tert-Butyl ethyl ether (ETB	10.000	10.376	-3.8	95	0.00
27	T,M	2-Butanone	50.000	45.109	9.8	80	0.00
28	T,M	cis-1,2-Dichloroethene	10.000	10.409	-4.1	97	0.00
29	T,M	2,2-Dichloropropane	10.000	11.004	-10.0	102	0.00
30	T,M	Bromochloromethane	10.000	10.435	-4.4	95	0.00
31	C,T,M	Chloroform	10.000	11.147	-11.5	100	-0.01
32	S	Dibromofluoromethane	10.000	10.532	-5.3	96	-0.01
33	T,M	1,1,1-Trichloroethane	10.000	10.733	-7.3	97	0.00
34	T,M	tert-Amyl methyl ether (TAM	10.000	10.833	-8.3	96	0.00
35	S	1,2-Dichloroethane-d4	10.000	10.718	-7.2	97	0.00
36	I	CHLOROBENZENE-D5	10.000	10.000	0.0	94	-0.01
37	T,M	1,1-Dichloropropene	10.000	9.802	2.0	95	-0.01
38	T,M	Carbon tetrachloride	10.000	10.073	-0.7	92	0.00
39	T,M	Benzene	10.000	9.812	1.9	95	0.00
40	T,M	1,2-Dichloroethane	10.000	11.048	-10.5	103	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K15\RKV348.D Vial: 2
Acq On : 15 Nov 2011 8:10 pm Operator: MW
Sample : CV001J3117 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	10.000	10.101	-1.0	97	0.00
42	C,T,M	1,2-Dichloropropane	10.000	9.843	1.6	95	-0.01
43	T,M	1,4-Dioxane	-1.000	0.000	0.0	68	0.00
44	T,M	Dibromomethane	10.000	10.279	-2.8	96	0.00
45	T,M	Bromodichloromethane	10.000	10.450	-4.5	98	0.00
46	T,M	2-Chloroethyl vinyl ether	10.000	2.389	76.1#	22	-0.01
47	T,M	cis-1,3-Dichloropropene	10.000	10.108	-1.1	96	-0.01
48	T,M	4-Methyl-2-pentanone	50.000	43.646	12.7	81	0.00
49	S	Toluene-d8	10.000	9.556	4.4	93	-0.01
50	C,T,M	Toluene	10.000	9.998	0.0	97	0.00
51	T,M	Ethyl methacrylate	10.000	10.423	-4.2	94	0.00
52	T,M	trans-1,3-Dichloropropene	10.000	10.549	-5.5	97	0.00
53	T,M	1,1,2-Trichloroethane	10.000	10.318	-3.2	99	0.00
54	T,M	Tetrachloroethene	10.000	10.099	-1.0	95	0.00
55	T,M	1,3-Dichloropropane	10.000	10.248	-2.5	95	-0.01
56	T,M	2-Hexanone	50.000	42.373	15.3	78	0.00
57	T,M	Dibromochloromethane	10.000	11.340	-13.4	102	0.00
58	T,M	1,2-Dibromoethane	10.000	10.789	-7.9	100	-0.01
59	T,M	1-Chlorohexane	10.000	9.690	3.1	92	-0.01
60	P,M	Chlorobenzene	10.000	10.693	-6.9	98	-0.01
61	T,M	1,1,1,2-Tetrachloroethane	10.000	11.150	-11.5	102	0.00
62	C,T,M	Ethylbenzene	10.000	10.560	-5.6	99	0.00
63	T,M	m-Xylene & p-Xylene	20.000	21.255	-6.3	98	0.00
64	T,M	o-Xylene	10.000	10.871	-8.7	100	0.00
65	T,M	Styrene	10.000	11.360	-13.6	100	0.00
66	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	95	0.00
67	P,T,M	Bromoform	10.000	10.730	-7.3	103	-0.01
68	T,M	Isopropylbenzene	10.000	10.274	-2.7	100	-0.01
69	S	4-Bromofluorobenzene	10.000	9.487	5.1	98	-0.01
70	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.517	-5.2	103	0.00
71	T,M	Bromobenzene	10.000	10.287	-2.9	102	0.00
72	T,M	trans-1,4-Dichloro-2-butene	10.000	8.506	14.9	79	0.00
73	T,M	1,2,3-Trichloropropane	10.000	10.345	-3.5	104	-0.01
74	T,M	n-Propylbenzene	10.000	10.248	-2.5	98	0.00
75	T,M	1,3,5-Trimethylbenzene	10.000	10.576	-5.8	101	0.00
76	T,M	2-Chlorotoluene	10.000	10.251	-2.5	101	-0.01
77	T,M	4-Chlorotoluene	10.000	10.461	-4.6	101	-0.01
78	T,M	tert-Butylbenzene	10.000	10.522	-5.2	101	0.00
79	T,M	1,2,4-Trimethylbenzene	10.000	10.695	-7.0	98	-0.01
80	T,M	sec-Butylbenzene	10.000	10.687	-6.9	98	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K15\RKV348.D Vial: 2
Acq On : 15 Nov 2011 8:10 pm Operator: MW
Sample : CV001J3117 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	10.000	11.099	-11.0	98	0.00
82	T,M	1,3-Dichlorobenzene	10.000	10.718	-7.2	101	-0.01
83	T,M	1,4-Dichlorobenzene	10.000	10.628	-6.3	100	0.00
84	T,M	n-Butylbenzene	10.000	10.104	-1.0	90	-0.01
85	T,M	1,2-Dichlorobenzene	10.000	10.697	-7.0	101	0.00
86	T,M	1,2-Dibromo-3-chloropropane	10.000	10.357	-3.6	95	0.00
87	T,M	1,2,4-Trichlorobenzene	10.000	8.858	11.4	84	0.00
88	T,M	Hexachlorobutadiene	10.000	10.542	-5.4	93	-0.01
89	T,M	Naphthalene	10.000	7.989	20.1#	68	-0.01
90	T,M	1,2,3-Trichlorobenzene	10.000	9.576	4.2	81	-0.01

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K15\RKV348.D Vial: 2
Acq On : 15 Nov 2011 8:10 pm Operator: MW
Sample : CV001J3117 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	92	-0.01
2	T,M	Chlorotrifluoroethylene	0.156	0.000	100.0#	0#	-2.11#
3	T,M	Dichlorodifluoromethane	0.363	0.323	11.0	74	0.00
4	P,T,M	Chloromethane	0.435	0.397	8.7	76	0.00
5	C,T,M	Vinyl chloride	0.461	0.439	4.8	78	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.338	0.003	99.1#	1#	0.00
7	T,M	Bromomethane	0.229	0.242	-5.7	84	0.00
8	T,M	Chloroethane	0.282	0.281	0.4	91	0.00
9	T,M	Dichlorofluoromethane	0.712	0.727	-2.1	95	0.00
10	T,M	Trichlorofluoromethane	0.429	0.502	-17.0	101	0.07
11	T,M	Acrolein	0.011	0.008	27.3#	67	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.219	0.223	-1.8	95	0.00
13	T,M	Acetone	0.044	0.040	9.1	79	-0.01
14	C,T,M	1,1-Dichloroethene	0.658	0.682	-3.6	94	0.00
15	T,M	Iodomethane	0.479	0.481	-0.4	93	0.00
16	T,M	Carbon disulfide	1.074	0.936	12.8	87	-0.01
17	T,M	Methylene chloride	0.505	0.493	2.4	94	0.00
18	T,M	tert-Butyl alcohol	0.012	0.010	16.7	74	0.02
19	T,M	Acrylonitrile	0.054	0.049	9.3	84	-0.01
20	T,M	tert-Butyl methyl ether (MT	0.589	0.622	-5.6	96	0.00
21	T,M	trans-1,2-Dichloroethene	0.668	0.687	-2.8	94	0.00
22	T,M	Vinyl acetate	0.476	0.391	17.9	69	0.00
23	P,T,M	1,1-Dichloroethane	0.756	0.783	-3.6	97	0.00
24	T,M	Isopropyl ether (DIPE)	1.343	1.384	-3.1	96	0.00
25	T,M	2-Butanol	0.000	0.000	0.0	96	0.00
26	T,M	tert-Butyl ethyl ether (ETB	0.966	1.002	-3.7	95	0.00
27	T,M	2-Butanone	0.071	0.064	9.9	80	0.00
28	T,M	cis-1,2-Dichloroethene	0.379	0.395	-4.2	97	0.00
29	T,M	2,2-Dichloropropane	0.538	0.592	-10.0	102	0.00
30	T,M	Bromochloromethane	0.305	0.318	-4.3	95	0.00
31	C,T,M	Chloroform	0.636	0.709	-11.5	100	-0.01
32	S	Dibromofluoromethane	0.274	0.288	-5.1	96	-0.01
33	T,M	1,1,1-Trichloroethane	0.506	0.543	-7.3	97	0.00
34	T,M	tert-Amyl methyl ether (TAM	0.142	0.154	-8.5	96	0.00
35	S	1,2-Dichloroethane-d4	0.292	0.313	-7.2	97	0.00
36	I	CHLOROBENZENE-D5	1.000	1.000	0.0	94	-0.01
37	T,M	1,1-Dichloropropene	0.208	0.204	1.9	95	-0.01
38	T,M	Carbon tetrachloride	0.498	0.502	-0.8	92	0.00
39	T,M	Benzene	1.767	1.734	1.9	95	0.00
40	T,M	1,2-Dichloroethane	0.438	0.484	-10.5	103	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K15\RKV348.D Vial: 2
Acq On : 15 Nov 2011 8:10 pm Operator: MW
Sample : CV001J3117 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	0.442	0.447	-1.1	97	0.00
42	C,T,M	1,2-Dichloropropane	0.459	0.452	1.5	95	-0.01
43	T,M	1,4-Dioxane	0.000	0.000	0.0	68	0.00
44	T,M	Dibromomethane	0.149	0.153	-2.7	96	0.00
45	T,M	Bromodichloromethane	0.512	0.535	-4.5	98	0.00
46	T,M	2-Chloroethyl vinyl ether	0.118	0.028	76.3#	22#	-0.01
47	T,M	cis-1,3-Dichloropropene	0.614	0.620	-1.0	96	-0.01
48	T,M	4-Methyl-2-pentanone	0.201	0.176	12.4	81	0.00
49	S	Toluene-d8	1.383	1.322	4.4	93	-0.01
50	C,T,M	Toluene	1.753	1.753	0.0	97	0.00
51	T,M	Ethyl methacrylate	0.330	0.344	-4.2	94	0.00
52	T,M	trans-1,3-Dichloropropene	0.454	0.479	-5.5	97	0.00
53	T,M	1,1,2-Trichloroethane	0.216	0.223	-3.2	99	0.00
54	T,M	Tetrachloroethene	0.356	0.360	-1.1	95	0.00
55	T,M	1,3-Dichloropropane	0.449	0.460	-2.4	95	-0.01
56	T,M	2-Hexanone	0.131	0.111	15.3	78	0.00
57	T,M	Dibromochloromethane	0.257	0.291	-13.2	102	0.00
58	T,M	1,2-Dibromoethane	0.205	0.221	-7.8	100	-0.01
59	T,M	1-Chlorohexane	0.725	0.703	3.0	92	-0.01
60	P,M	Chlorobenzene	1.010	1.080	-6.9	98	-0.01
61	T,M	1,1,1,2-Tetrachloroethane	0.334	0.373	-11.7	102	0.00
62	C,T,M	Ethylbenzene	2.040	2.154	-5.6	99	0.00
63	T,M	m-Xylene & p-Xylene	1.540	1.636	-6.2	98	0.00
64	T,M	o-Xylene	1.515	1.647	-8.7	100	0.00
65	T,M	Styrene	1.084	1.231	-13.6	100	0.00
66	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	95	0.00
67	P,T,M	Bromoform	0.330	0.354	-7.3	103	-0.01
68	T,M	Isopropylbenzene	4.966	5.102	-2.7	100	-0.01
69	S	4-Bromofluorobenzene	1.232	1.169	5.1	98	-0.01
70	P,T,M	1,1,2,2-Tetrachloroethane	0.680	0.715	-5.1	103	0.00
71	T,M	Bromobenzene	1.024	1.053	-2.8	102	0.00
72	T,M	trans-1,4-Dichloro-2-butene	0.174	0.148	14.9	79	0.00
73	T,M	1,2,3-Trichloropropane	0.174	0.180	-3.4	104	-0.01
74	T,M	n-Propylbenzene	6.403	6.562	-2.5	98	0.00
75	T,M	1,3,5-Trimethylbenzene	4.108	4.345	-5.8	101	0.00
76	T,M	2-Chlorotoluene	3.536	3.624	-2.5	101	-0.01
77	T,M	4-Chlorotoluene	3.899	4.079	-4.6	101	-0.01
78	T,M	tert-Butylbenzene	0.920	0.968	-5.2	101	0.00
79	T,M	1,2,4-Trimethylbenzene	3.898	4.168	-6.9	98	-0.01
80	T,M	sec-Butylbenzene	5.221	5.579	-6.9	98	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K15\RKV348.D Vial: 2
Acq On : 15 Nov 2011 8:10 pm Operator: MW
Sample : CVO01J3117 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	4.048	4.493	-11.0	98	0.00
82	T,M	1,3-Dichlorobenzene	1.962	2.103	-7.2	101	-0.01
83	T,M	1,4-Dichlorobenzene	1.863	1.980	-6.3	100	0.00
84	T,M	n-Butylbenzene	3.914	3.955	-1.0	90	-0.01
85	T,M	1,2-Dichlorobenzene	1.561	1.670	-7.0	101	0.00
86	T,M	1,2-Dibromo-3-chloropropane	0.078	0.081	-3.8	95	0.00
87	T,M	1,2,4-Trichlorobenzene	0.697	0.696	0.1	84	0.00
88	T,M	Hexachlorobutadiene	0.556	0.586	-5.4	93	-0.01
89	T,M	Naphthalene	0.866	0.692	20.1#	68	-0.01
90	T,M	1,2,3-Trichlorobenzene	0.514	0.492	4.3	81	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKV441
Instrument ID: T001
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K063
BFB Injection Date : 11/18/11
BFB Injection Time : 08:16
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.99
75	30.0 - 60.0% of mass 95	53.42
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.72
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	76.43
175	5.0 - 9.0% of mass 174	5.44(7.1)1
176	95.0 - 101.0% of mass 174	74.53(97.5)1
177	5.0 - 9.0% of mass 176	4.98(6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV001J3121	RKV442	11/18/11	08:41
2	MBLK3W	V001K20Q	RKV450	11/18/11	12:36
3	LCS3W	V001K20L	RKV443	11/18/11	09:19
4	LCD3W	V001K20C	RKV444	11/18/11	09:47
5	IW-70-SAB06-099	K063-D3N	RKV448	11/18/11	11:40
6	IR-70-FD-098DL	K063-06T	RKV451	11/18/11	13:19

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RJV602
Instrument ID: TOD1
GC Column: RTX502.2 ID: 0.32mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K063
Date Analyzed: 10/31/11
Time Analyzed: 12:33
Heated Purge: (Y/N) N

	IS1(DBF)		IS2(CBZ)		IS3(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	1719891	7.78	1480141	12.32	584394	15.41
UPPER LIMIT	3439782	8.28	2960282	12.82	1168788	15.91
LOWER LIMIT	859946	7.28	740071	11.82	292197	14.91
SAMPLE ID						
1 VSTD010	2031597	7.77	1677234	12.32	604047	15.41
2 MBLK3W	2155290	7.78	1690340	12.32	498815	15.42
3 LCS3W	1911840	7.77	1568117	12.31	659298	15.41
4 LCD3W	2080865	7.78	1721978	12.32	653761	15.42
5 IW-70-SAB06-099	2049601	7.78	1603033	12.33	514447	15.42
6 IR-70-FD-098DL	1816737	7.79	1442756	12.33	423545	15.42

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

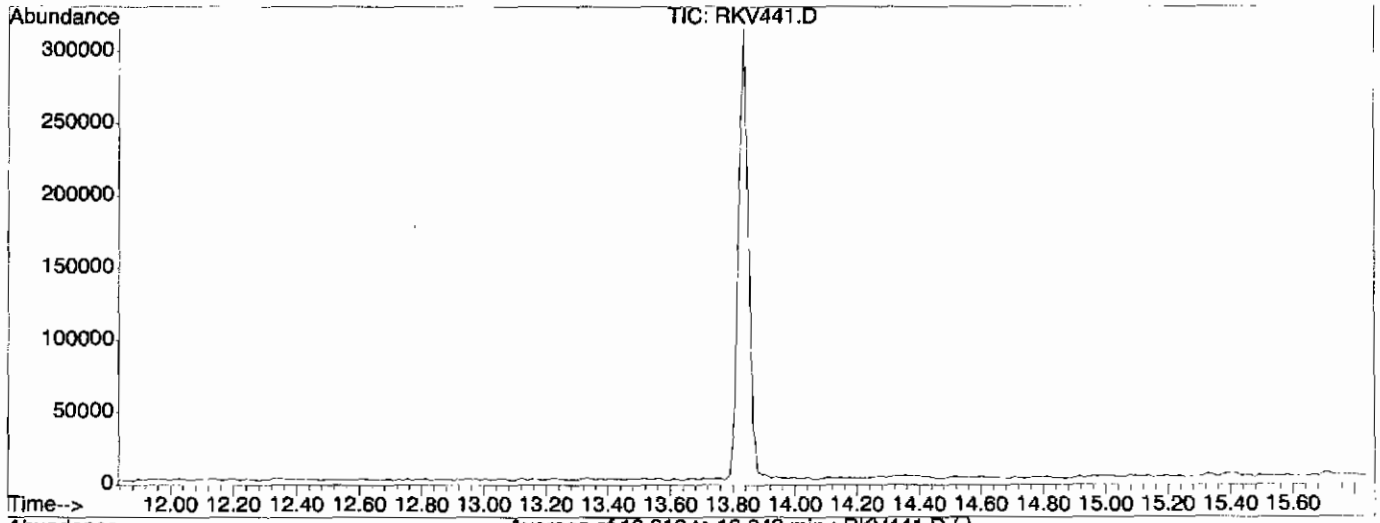
AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

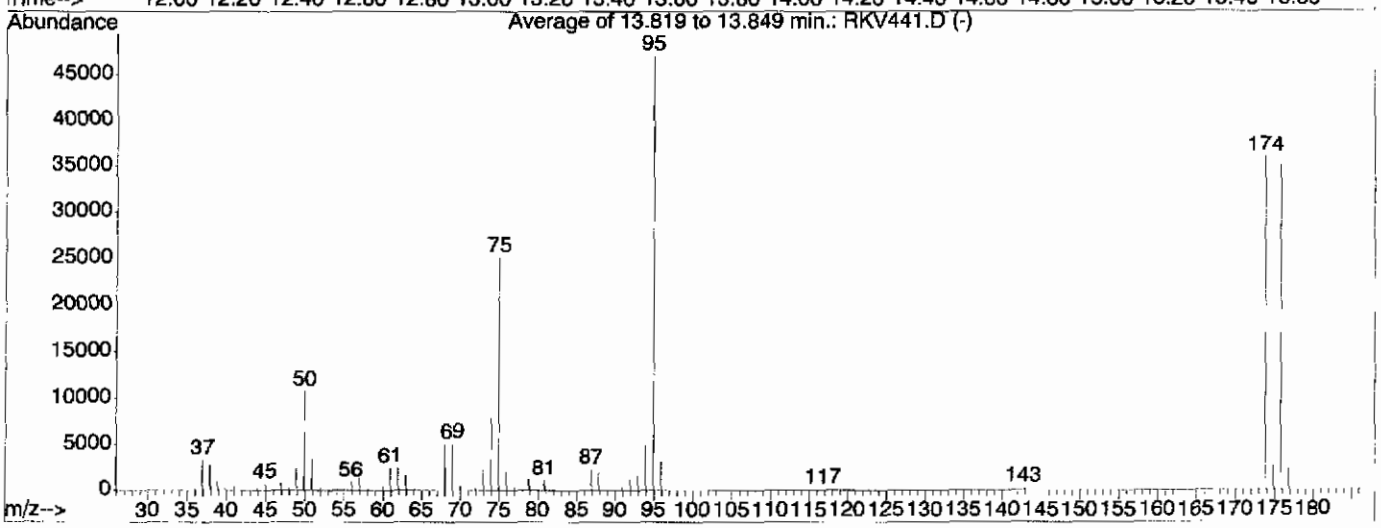
Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.
page 1 of 1

FORM VIII VOA-8260 1/2000

BFB

Data File : D:\HPCHEM\1\DATA\11K18\RKV441.D Vial: 1
Acq On : 18 Nov 2011 8:16 am Operator: MW
Sample : BFB01K20 Inst : TO01
Misc : T/CHK Multiplr: 1.00
MS Integration Params: 524C.P
Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls





AutoFind: Scans 803, 804, 805; Background Corrected with Scan 796

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.0	10802	PASS
75	95	30	60	53.4	25099	PASS
95	95	100	100	100.0	46989	PASS
96	95	5	9	6.7	3160	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	76.4	35912	PASS
175	174	5	9	7.1	2556	PASS
176	174	95	101	97.5	35019	PASS
177	176	5	9	6.7	2341	PASS

RKV441.D VO01J31.M Fri Nov 18 13:28:17 2011

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D Vial: 2
Acq On : 18 Nov 2011 8:41 am Operator: MW
Sample : CV001J3121 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	118	0.00
2	T,M	Chlorotrifluoroethylene	10.000	0.037	99.6#	0	0.00
3	T,M	Dichlorodifluoromethane	10.000	9.614	3.9	102	0.00
4	P,T,M	Chloromethane	10.000	10.555	-5.5	113	0.00
5	C,T,M	Vinyl chloride	10.000	10.509	-5.1	111	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	0.111	98.9#	1	0.00
7	T,M	Bromomethane	10.000	10.754	-7.5	110	0.02
8	T,M	Chloroethane	10.000	9.781	2.2	114	0.00
9	T,M	Dichlorofluoromethane	10.000	9.723	2.8	116	0.00
10	T,M	Trichlorofluoromethane	10.000	9.501	5.0	105	0.07
11	T,M	Acrolein	50.000	39.244	21.5#	99	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	10.252	-2.5	122	0.00
13	T,M	Acetone	50.000	50.627	-1.3	113	0.00
14	C,T,M	1,1-Dichloroethene	10.000	9.325	6.8	108	0.00
15	T,M	Iodomethane	10.000	10.317	-3.2	122	0.00
16	T,M	Carbon disulfide	10.000	9.985	0.2	128	0.00
17	T,M	Methylene chloride	10.000	10.072	-0.7	124	0.00
18	T,M	tert-Butyl alcohol	50.000	47.505	5.0	109	0.00
19	T,M	Acrylonitrile	50.000	60.315	-20.6#	143	0.00
20	T,M	tert-Butyl methyl ether (MT	10.000	10.081	-0.8	118	0.00
21	T,M	trans-1,2-Dichloroethene	10.000	9.927	0.7	116	0.00
22	T,M	Vinyl acetate	10.000	10.675	-6.8	115	0.00
23	P,T,M	1,1-Dichloroethane	10.000	10.209	-2.1	122	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	10.508	-5.1	126	0.00
25	T,M	2-Butanol	-1.000	0.000	0.0	125	0.00
26	T,M	tert-Butyl ethyl ether (ETB	10.000	9.588	4.1	113	0.00
27	T,M	2-Butanone	50.000	54.825	-9.7	125	0.00
28	T,M	cis-1,2-Dichloroethene	10.000	10.834	-8.3	130	0.00
29	T,M	2,2-Dichloropropane	10.000	10.266	-2.7	122	0.00
30	T,M	Bromochloromethane	10.000	10.222	-2.2	119	0.00
31	C,T,M	Chloroform	10.000	10.347	-3.5	119	0.00
32	S	Dibromofluoromethane	10.000	9.924	0.8	116	0.00
33	T,M	1,1,1-Trichloroethane	10.000	9.828	1.7	114	0.00
34	T,M	tert-Amyl methyl ether (TAM	10.000	9.830	1.7	111	0.00
35	S	1,2-Dichloroethane-d4	10.000	9.086	9.1	105	0.00
36	I	CHLOROBENZENE-D5	10.000	10.000	0.0	113	0.00
37	T,M	1,1-Dichloropropene	10.000	10.611	-6.1	123	0.00
38	T,M	Carbon tetrachloride	10.000	9.481	5.2	104	0.00
39	T,M	Benzene	10.000	10.847	-8.5	127	0.00
40	T,M	1,2-Dichloroethane	10.000	9.808	1.9	109	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D Vial: 2
Acq On : 18 Nov 2011 8:41 am Operator: MW
Sample : CV001J3121 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	10.000	10.627	-6.3	123	0.00
42	C,T,M	1,2-Dichloropropane	10.000	10.814	-8.1	126	0.00
43	T,M	1,4-Dioxane	-1.000	0.000	0.0	106	0.00
44	T,M	Dibromomethane	10.000	10.752	-7.5	121	0.00
45	T,M	Bromodichloromethane	10.000	10.606	-6.1	119	0.00
46	T,M	2-Chloroethyl vinyl ether	10.000	0.504	95.0#	6	0.00
47	T,M	cis-1,3-Dichloropropene	10.000	10.577	-5.8	121	0.00
48	T,M	4-Methyl-2-pentanone	50.000	53.912	-7.8	120	0.00
49	S	Toluene-d8	10.000	10.066	-0.7	118	0.00
50	C,T,M	Toluene	10.000	10.721	-7.2	125	0.00
51	T,M	Ethyl methacrylate	10.000	10.596	-6.0	115	0.00
52	T,M	trans-1,3-Dichloropropene	10.000	10.425	-4.3	115	0.00
53	T,M	1,1,2-Trichloroethane	10.000	11.090	-10.9	128	0.00
54	T,M	Tetrachloroethene	10.000	10.711	-7.1	121	0.00
55	T,M	1,3-Dichloropropane	10.000	10.968	-9.7	123	0.00
56	T,M	2-Hexanone	50.000	49.677	0.6	109	0.00
57	T,M	Dibromochloromethane	10.000	11.122	-11.2	120	0.00
58	T,M	1,2-Dibromoethane	10.000	10.993	-9.9	122	0.00
59	T,M	1-Chlorohexane	10.000	10.426	-4.3	119	0.00
60	P,M	Chlorobenzene	10.000	10.832	-8.3	120	0.00
61	T,M	1,1,1,2-Tetrachloroethane	10.000	10.846	-8.5	119	0.00
62	C,T,M	Ethylbenzene	10.000	10.606	-6.1	119	0.00
63	T,M	m-Xylene & p-Xylene	20.000	21.069	-5.3	117	0.00
64	T,M	o-Xylene	10.000	10.477	-4.8	116	0.00
65	T,M	Styrene	10.000	10.280	-2.8	109	0.00
66	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	103	0.00
67	P,T,M	Bromoform	10.000	11.282	-12.8	118	0.00
68	T,M	Isopropylbenzene	10.000	10.869	-8.7	115	0.00
69	S	4-Bromofluorobenzene	10.000	9.915	0.9	111	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	10.000	11.710	-17.1	124	0.00
71	T,M	Bromobenzene	10.000	10.964	-9.6	118	0.00
72	T,M	trans-1,4-Dichloro-2-butene	10.000	4.657	53.4#	47	0.00
73	T,M	1,2,3-Trichloropropane	10.000	11.049	-10.5	120	0.00
74	T,M	n-Propylbenzene	10.000	10.888	-8.9	113	0.00
75	T,M	1,3,5-Trimethylbenzene	10.000	10.513	-5.1	108	0.00
76	T,M	2-Chlorotoluene	10.000	10.823	-8.2	116	0.00
77	T,M	4-Chlorotoluene	10.000	10.416	-4.2	109	0.00
78	T,M	tert-Butylbenzene	10.000	10.772	-7.7	112	0.00
79	T,M	1,2,4-Trimethylbenzene	10.000	10.493	-4.9	105	0.00
80	T,M	sec-Butylbenzene	10.000	10.643	-6.4	106	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D Vial: 2
Acq On : 18 Nov 2011 8:41 am Operator: MW
Sample : CVO01J3121 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	10.000	10.635	-6.3	102	0.00
82	T,M	1,3-Dichlorobenzene	10.000	10.994	-9.9	112	0.00
83	T,M	1,4-Dichlorobenzene	10.000	10.747	-7.5	110	0.00
84	T,M	n-Butylbenzene	10.000	9.849	1.5	95	0.00
85	T,M	1,2-Dichlorobenzene	10.000	10.801	-8.0	110	0.00
86	T,M	1,2-Dibromo-3-chloropropane	10.000	10.528	-5.3	105	0.00
87	T,M	1,2,4-Trichlorobenzene	10.000	8.324	16.8	86	0.00
88	T,M	Hexachlorobutadiene	10.000	9.547	4.5	91	0.00
89	T,M	Naphthalene	10.000	7.861	21.4#	73	0.00
90	T,M	1,2,3-Trichlorobenzene	10.000	8.628	13.7	79	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D Vial: 2
Acq On : 18 Nov 2011 8:41 am Operator: MW
Sample : CVO01J3121 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	118	0.00
2	T,M	Chlorotrifluoroethylene	0.156	0.001	99.4#	0#	0.00
3	T,M	Dichlorodifluoromethane	0.363	0.349	3.9	102	0.00
4	P,T,M	Chloromethane	0.435	0.459	-5.5	113	0.00
5	C,T,M	Vinyl chloride	0.461	0.485	-5.2	111	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.338	0.004	98.8#	1#	0.00
7	T,M	Bromomethane	0.229	0.246	-7.4	110	0.02
8	T,M	Chloroethane	0.282	0.276	2.1	114	0.00
9	T,M	Dichlorofluoromethane	0.712	0.692	2.8	116	0.00
10	T,M	Trichlorofluoromethane	0.429	0.408	4.9	105	0.07
11	T,M	Acrolein	0.011	0.009	18.2	99	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.219	0.224	-2.3	122	0.00
13	T,M	Acetone	0.044	0.044	0.0	113	0.00
14	C,T,M	1,1-Dichloroethene	0.658	0.614	6.7	108	0.00
15	T,M	Iodomethane	0.479	0.494	-3.1	122	0.00
16	T,M	Carbon disulfide	1.074	1.072	0.2	128	0.00
17	T,M	Methylene chloride	0.505	0.508	-0.6	124	0.00
18	T,M	tert-Butyl alcohol	0.012	0.011	8.3	109	0.00
19	T,M	Acrylonitrile	0.054	0.065	-20.4#	143	0.00
20	T,M	tert-Butyl methyl ether (MT	0.589	0.594	-0.8	118	0.00
21	T,M	trans-1,2-Dichloroethene	0.668	0.663	0.7	116	0.00
22	T,M	Vinyl acetate	0.476	0.508	-6.7	115	0.00
23	P,T,M	1,1-Dichloroethane	0.756	0.772	-2.1	122	0.00
24	T,M	Isopropyl ether (DIPE)	1.343	1.412	-5.1	126	0.00
25	T,M	2-Butanol	0.000	0.000	0.0	125	0.00
26	T,M	tert-Butyl ethyl ether (ETB	0.966	0.926	4.1	113	0.00
27	T,M	2-Butanone	0.071	0.077	-8.5	125	0.00
28	T,M	cis-1,2-Dichloroethene	0.379	0.411	-8.4	130	0.00
29	T,M	2,2-Dichloropropane	0.538	0.552	-2.6	122	0.00
30	T,M	Bromochloromethane	0.305	0.312	-2.3	119	0.00
31	C,T,M	Chloroform	0.636	0.659	-3.6	119	0.00
32	S	Dibromofluoromethane	0.274	0.272	0.7	116	0.00
33	T,M	1,1,1-Trichloroethane	0.506	0.497	1.8	114	0.00
34	T,M	tert-Amyl methyl ether (TAM	0.142	0.140	1.4	111	0.00
35	S	1,2-Dichloroethane-d4	0.292	0.265	9.2	105	0.00
36	I	CHLOROBENZENE-D5	1.000	1.000	0.0	113	0.00
37	T,M	1,1-Dichloropropene	0.208	0.221	-6.3	123	0.00
38	T,M	Carbon tetrachloride	0.498	0.472	5.2	104	0.00
39	T,M	Benzene	1.767	1.917	-8.5	127	0.00
40	T,M	1,2-Dichloroethane	0.438	0.430	1.8	109	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D Vial: 2
Acq On : 18 Nov 2011 8:41 am Operator: MW
Sample : CVO01J3121 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	0.442	0.470	-6.3	123	0.00
42	C,T,M	1,2-Dichloropropane	0.459	0.496	-8.1	126	0.00
43	T,M	1,4-Dioxane	0.000	0.000	0.0	106	0.00
44	T,M	Dibromomethane	0.149	0.160	-7.4	121	0.00
45	T,M	Bromodichloromethane	0.512	0.543	-6.1	119	0.00
46	T,M	2-Chloroethyl vinyl ether	0.118	0.006	94.9#	6#	0.00
47	T,M	cis-1,3-Dichloropropene	0.614	0.649	-5.7	121	0.00
48	T,M	4-Methyl-2-pentanone	0.201	0.217	-8.0	120	0.00
49	S	Toluene-d8	1.383	1.392	-0.7	118	0.00
50	C,T,M	Toluene	1.753	1.880	-7.2	125	0.00
51	T,M	Ethyl methacrylate	0.330	0.349	-5.8	115	0.00
52	T,M	trans-1,3-Dichloropropene	0.454	0.474	-4.4	115	0.00
53	T,M	1,1,2-Trichloroethane	0.216	0.239	-10.6	128	0.00
54	T,M	Tetrachloroethene	0.356	0.382	-7.3	121	0.00
55	T,M	1,3-Dichloropropane	0.449	0.493	-9.8	123	0.00
56	T,M	2-Hexanone	0.131	0.131	0.0	109	0.00
57	T,M	Dibromochloromethane	0.257	0.286	-11.3	120	0.00
58	T,M	1,2-Dibromoethane	0.205	0.225	-9.8	122	0.00
59	T,M	1-Chlorohexane	0.725	0.756	-4.3	119	0.00
60	P,M	Chlorobenzene	1.010	1.094	-8.3	120	0.00
61	T,M	1,1,1,2-Tetrachloroethane	0.334	0.362	-8.4	119	0.00
62	C,T,M	Ethylbenzene	2.040	2.164	-6.1	119	0.00
63	T,M	m-Xylene & p-Xylene	1.540	1.622	-5.3	117	0.00
64	T,M	o-Xylene	1.515	1.587	-4.8	116	0.00
65	T,M	Styrene	1.084	1.114	-2.8	109	0.00
66	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	103	0.00
67	P,T,M	Bromoform	0.330	0.372	-12.7	118	0.00
68	T,M	Isopropylbenzene	4.966	5.397	-8.7	115	0.00
69	S	4-Bromofluorobenzene	1.232	1.222	0.8	111	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	0.680	0.796	-17.1	124	0.00
71	T,M	Bromobenzene	1.024	1.123	-9.7	118	0.00
72	T,M	trans-1,4-Dichloro-2-butene	0.174	0.081	53.4#	47#	0.00
73	T,M	1,2,3-Trichloropropane	0.174	0.192	-10.3	120	0.00
74	T,M	n-Propylbenzene	6.403	6.971	-8.9	113	0.00
75	T,M	1,3,5-Trimethylbenzene	4.108	4.319	-5.1	108	0.00
76	T,M	2-Chlorotoluene	3.536	3.826	-8.2	116	0.00
77	T,M	4-Chlorotoluene	3.899	4.061	-4.2	109	0.00
78	T,M	tert-Butylbenzene	0.920	0.991	-7.7	112	0.00
79	T,M	1,2,4-Trimethylbenzene	3.898	4.090	-4.9	105	0.00
80	T,M	sec-Butylbenzene	5.221	5.556	-6.4	106	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D Vial: 2
Acq On : 18 Nov 2011 8:41 am Operator: MW
Sample : CVO01J3121 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	4.048	4.306	-6.4	102	0.00
82	T,M	1,3-Dichlorobenzene	1.962	2.157	-9.9	112	0.00
83	T,M	1,4-Dichlorobenzene	1.863	2.002	-7.5	110	0.00
84	T,M	n-Butylbenzene	3.914	3.855	1.5	95	0.00
85	T,M	1,2-Dichlorobenzene	1.561	1.686	-8.0	110	0.00
86	T,M	1,2-Dibromo-3-chloropropane	0.078	0.083	-6.4	105	0.00
87	T,M	1,2,4-Trichlorobenzene	0.697	0.653	6.3	86	0.00
88	T,M	Hexachlorobutadiene	0.556	0.530	4.7	91	0.00
89	T,M	Naphthalene	0.866	0.681	21.4#	73	0.00
90	T,M	1,2,3-Trichlorobenzene	0.514	0.443	13.8	79	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D Vial: 2
Acq On : 18 Nov 2011 8:41 am Operator: MW
Sample : CVO01J3121 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 8:59 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.77	114	2031597	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1677234	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	604047	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.71	111	551874	9.92	ug/l	0.00
Spiked Amount 10.000			Recovery	=	99.20%	
35) 1,2-Dichloroethane-d4	7.17	65	539303	9.09	ug/l	0.00
Spiked Amount 10.000			Recovery	=	90.90%	
49) Toluene-d8	9.95	98	2335473	10.07	ug/l	0.00
Spiked Amount 10.000			Recovery	=	100.70%	
69) 4-Bromofluorobenzene	13.84	95	738054	9.92	ug/l	0.00
Spiked Amount 10.000			Recovery	=	99.20%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	2.16	85	709734	9.61	ug/l	99
4) Chloromethane	2.39	50	932838	10.55	ug/l	99
5) Vinyl chloride	2.55	62	985248	10.51	ug/l	91
6) 2-Chloro-1,1,1-trifluoroet	2.65	118	7611	0.11	ug/l	95
7) Bromomethane	2.93	94	499427	10.75	ug/l	99
8) Chloroethane	3.04	64	560652	9.78	ug/l	98
9) Dichlorofluoromethane	3.32	67	1406158	9.72	ug/l	98
10) Trichlorofluoromethane	3.38	101	828569	9.50	ug/l	99
11) Acrolein	3.81	56	90194	39.24	ug/l	85
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	455774	10.25	ug/l	98
13) Acetone	3.96	43	451108	50.63	ug/l	94
14) 1,1-Dichloroethene	3.94	61	1246723	9.33	ug/l	96
15) Iodomethane	4.12	142	1002920	10.32	ug/l	92
16) Carbon disulfide	4.21	76	2178691	9.99	ug/l	100
17) Methylene chloride	4.52	49	1032465	10.07	ug/l	95
18) tert-Butyl alcohol	4.64	59	113907	47.51	ug/l	89
19) Acrylonitrile	4.77	53	659484	60.31	ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	1205784	10.08	ug/l	99
21) trans-1,2-Dichloroethene	4.86	61	1346523	9.93	ug/l	94
22) Vinyl acetate	5.36	43	1032225	10.68	ug/l	97
23) 1,1-Dichloroethane	5.38	63	1568680	10.21	ug/l	100
24) Isopropyl ether (DIPE)	5.42	45	2867703	10.51	ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	1881724	9.59	ug/l	97
27) 2-Butanone	6.04	43	787130	54.82	ug/l	98
28) cis-1,2-Dichloroethene	6.09	96	834995	10.83	ug/l	92
29) 2,2-Dichloropropane	6.10	77	1121755	10.27	ug/l	99
30) Bromochloromethane	6.38	49	633796	10.22	ug/l	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D Vial: 2
Acq On : 18 Nov 2011 8:41 am Operator: MW
Sample : CVO01J3121 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 8:59 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) Chloroform	6.50	83	1337893	10.35 ug/l	98
33) 1,1,1-Trichloroethane	6.75	97	1009353	9.83 ug/l	98
34) tert-Amyl methyl ether (TA	7.39	87	283459	9.83 ug/l	95
37) 1,1-Dichloropropene	6.94	110	370253	10.61 ug/l	100
38) Carbon tetrachloride	6.96	119	792085	9.48 ug/l	100
39) Benzene	7.21	78	3214812	10.85 ug/l	99
40) 1,2-Dichloroethane	7.27	62	720973	9.81 ug/l	99
41) Trichloroethene	8.13	130	788645	10.63 ug/l	99
42) 1,2-Dichloropropane	8.48	63	832445	10.81 ug/l	88
44) Dibromomethane	8.62	93	268839	10.75 ug/l	97
45) Bromodichloromethane	8.87	83	910803	10.61 ug/l	99
46) 2-Chloroethyl vinyl ether	9.27	63	9993	0.50 ug/l	98
47) cis-1,3-Dichloropropene	9.52	75	1088931	10.58 ug/l	93
48) 4-Methyl-2-pentanone	9.74	43	1818317	53.91 ug/l	99
50) Toluene	10.07	91	3152722	10.72 ug/l	99
51) Ethyl methacrylate	10.50	69	585847	10.60 ug/l	96
52) trans-1,3-Dichloropropene	10.42	75	794439	10.43 ug/l	95
53) 1,1,2-Trichloroethane	10.75	97	401686	11.09 ug/l	99
54) Tetrachloroethene	10.91	164	639956	10.71 ug/l	98
55) 1,3-Dichloropropane	11.01	76	826310	10.97 ug/l	100
56) 2-Hexanone	11.09	43	1094816	49.68 ug/l	98
57) Dibromochloromethane	11.38	129	479264	11.12 ug/l	99
58) 1,2-Dibromoethane	11.59	107	378035	10.99 ug/l	100
59) 1-Chlorohexane	12.33	91	1268146	10.43 ug/l	95
60) Chlorobenzene	12.36	112	1834272	10.83 ug/l	98
61) 1,1,1,2-Tetrachloroethane	12.49	131	607827	10.85 ug/l	99
62) Ethylbenzene	12.51	91	3629327	10.61 ug/l	99
63) m-Xylene & p-Xylene	12.68	91	5440952	21.07 ug/l	99
64) o-Xylene	13.19	91	2662594	10.48 ug/l	98
65) Styrene	13.20	104	1868688	10.28 ug/l	98
67) Bromoform	13.44	173	224887	11.28 ug/l	99
68) Isopropylbenzene	13.63	105	3260154	10.87 ug/l	99
70) 1,1,2,2-Tetrachloroethane	13.99	83	480826	11.71 ug/l	99
71) Bromobenzene	14.00	156	678182	10.96 ug/l	96
72) trans-1,4-Dichloro-2-buten	14.02	53	48955	4.66 ug/l	100
73) 1,2,3-Trichloropropane	14.05	110	116068	11.05 ug/l	89
74) n-Propylbenzene	14.11	91	4211064	10.89 ug/l	99
75) 1,3,5-Trimethylbenzene	14.31	105	2608811	10.51 ug/l	100
76) 2-Chlorotoluene	14.21	91	2311347	10.82 ug/l	100
77) 4-Chlorotoluene	14.34	91	2453214	10.42 ug/l	96
78) tert-Butylbenzene	14.64	134	598676	10.77 ug/l	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D Vial: 2
Acq On : 18 Nov 2011 8:41 am Operator: MW
Sample : CVO01J3121 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 8:59 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

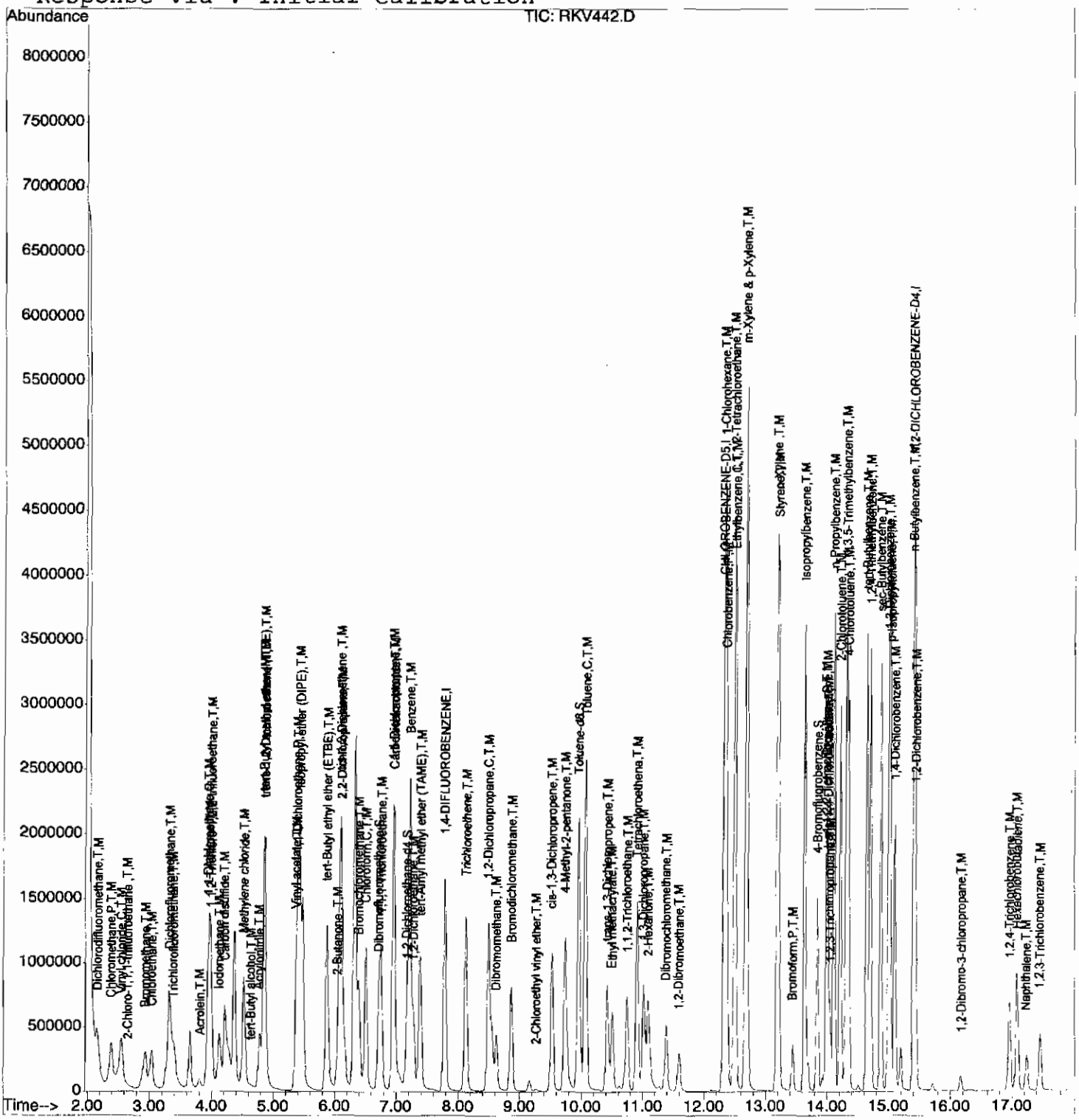
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79) 1,2,4-Trimethylbenzene	14.70	105	2470555	10.49 ug/l	100
80) sec-Butylbenzene	14.86	105	3356210	10.64 ug/l	99
81) p-Isopropyltoluene	15.02	119	2600802	10.64 ug/l	98
82) 1,3-Dichlorobenzene	14.99	146	1302929	10.99 ug/l	99
83) 1,4-Dichlorobenzene	15.10	146	1209255	10.75 ug/l	99
84) n-Butylbenzene	15.39	91	2328519	9.85 ug/l	100
85) 1,2-Dichlorobenzene	15.44	146	1018681	10.80 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.18	157	49837	10.53 ug/l	92
87) 1,2,4-Trichlorobenzene	16.96	180	394605	8.32 ug/l	98
88) Hexachlorobutadiene	17.08	225	320425	9.55 ug/l	99
89) Naphthalene	17.23	128	411357	7.86 ug/l	100
90) 1,2,3-Trichlorobenzene	17.45	180	267776	8.63 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D Vial: 2
Acq On : 18 Nov 2011 8:41 am Operator: MW
Sample : CVO01J3121 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 8:59 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 10/31/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A01 -038

BATCH V001J316

Sample Prep. ID	Data File Name	Lab Sample ID	* Sample Amount A/B/C	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RJV596	BFB01J29	1 mL	NA	NA	NA	NA	9:18am
02	597	V001J311	.01/.5/1.5 mL					0.3/1.5/1.5 ppb
03	598	2	.01/.5/2.5 mL					0.5/2.5/2.5 ppb
04	599	3	.1/.5/5 mL					1.0/5.0/5.0 ppb
05	600	4	.2/1/10 mL					2.0/10/10 ppb
06	601	5	.5/2.5/2.5 mL					5.0/25/25 ppb
07	602	6	1/5/5 mL					10/50/50 ppb
08	603	7	2/10/10 mL					20/100/100 ppb
09	604	8	3/15/15 mL					30/150/150 ppb
10	605	9	5/25/25 mL					50/250/250 ppb
11	606	10	10/50/50 mL					100/500/500 ppb
12	607	IS/SS	25 mL					
13	608	V001J29B	↓					
14	609	V001J311	1/5/5 mL					10/50/50 ppb
15	610	RINSE	25 mL	↓	↓	↓	↓	4:51pm
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30			MW	11/1/11				

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC Gases	54-17-96-3	*	
DCC Cl_2	-92-3		
DCC 8260	-86-2		
DCC 624/524 Freons	-98-1 -100-3		5/4/1000
BFB	-45-3	1	
IS/SURR.	-99-1	1	
ICV/LCS Gases	-97-1	1	
ICV/LCS Cl_2	-97-2	1	
ICV/LCS 8260 624/524	-99-2 -89-2	5 5	
ICV/LCS CTFE	54-12-20-3 -20-4	0.5 0.4	
IS SS	54-17-91-1 -91-2	1 1	50ppm
DATA FILE FOLDER	11J31		

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO01	

Comments: *please refer to sample amount
A:- SS, gases, Cl_2, Freons
B:- 8260
C:- 624/524
IS/SS MW 11/1/11

Analyzed By: MW
Date Disposed: 11/1/11
Disposed By: MW

2466

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/4/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A01 -038

BATCH CV001J3115

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKV 295	BFB01K14	1µL					t: 10am
02	296	CV001J3115	1.5µL					
03	297	V001K14C						
04	298	C						
05	299	RINSE	25mL					
06	300	V001K14B						
07	301	11K063-01R		1.0	7			
08	302	11K035-01R			/			
09	303	11K083-06T	25µL	1000	/			
10	304	-06	2.5mL	10	/			
11	305	RINSE	25mL					
12	306							
13	307							
14	308							
15	309	11K083-06I	5.0µL	5000	/			10,000X
16	310	11K035-06R	25mL	1.0	/	MW 11/5/11		
17	311	11K063-02R			/			
18	312	-02M			/			
19	313	-02S			/			
20	314	RINSE						
21	315	11K035-03T	250µL	100	/			
22	316	-04T	1.0mL	25	/			
23	317	-04R	25mL	1.0	/			
24	318	11K063-02T	0.5mL	50	/			t: 36pm
25	319	-03R	25mL	1.0	/			MANIT 11/6/11 9:07pm
26	320	RINSE						
27								
28								
29								
30		MW 11/5/11						

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-17-96-3	1	
DCC	-92-3	1	
DCC	-86-2	5	
DCC	-98-1	5	
BFB	-45-3	1	
IS/SURR.	-99-1	1	50/250
ICV/LCS	-97-1	1	
ICV/LCS	-97-2	1	
ICV/LCS	-99-2	5	
ICV/LCS	-59-2	5	

DATA FILE FOLDER: 11K14

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO01	

Comments:

Analyzed By: MW

Date Disposed: 11/15/11

Disposed By: MW

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/15/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A01 -038

BATCH V001J311

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKV347	BFB01K16	1 mL					7:42pm
02	348	CV001J3117	1/5/5 mL					
03	349	V001K16L						
04	350	C						
05	351	RINSE	25mL					
06	352	V001K16B						
07	353	11K063-04T	2.5mL	10	/			
08	354	-05T	0.5mL	50	/			
09	355	-04R	25mL	1.0	/			
10	356	-05R			/			
11	357	-06			/	/		-pox
12	358	-07			/	/		
13	359	11K083-02			/	/		
14	360	-03			/	/		
15	361	-04			/	/		-NATBA
16	362	-13			/	/		
17	363	-14			/	/		
18	364	-15			/	/		
19	365	-15M			/			
20	366	-15S			/			
21	367	RINSE						11/16/11 7:35AM
22								
23								
24								
25								
26								
27								
28								
29								
30		MLO 11/16/11						

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (ul)	Conc. (mg/L)
DCC	SV1-17-96-3	1	
DCC	-92-3	1	
DCC	-86-2	5	
DCC	-98-1	5	
BFB	-45-3	1	50/250
IS/SURR.	-99-1	1	
ICV/LCS	-77-1	1	
ICV/LCS	-97-2	1	
ICV/LCS	-99-2	5	
ICV/LCS	-89-2	5	

DATA FILE FOLDER 11/15

Electronic Data Archival

Location	Date
HPCHEM_VOA/T001	

Comments:

Analyzed By: MV

Date Disposed: 11/16/11

Disposed By: MLO

2100

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/8/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge Book # A01 -038

BATCH G100J3121

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RFV441	BFB01K20	1 µL					8:16am
02		442	G100J3121	1.5 mL					
03		443	V001K20L						
04		444	C						
05		445	RINSE	25 mL					
06		446	V001K20B						
07		447	11K063-03R		1.0	/			
08		448	11K063-03N			/			
09		449	TEST						
10		450	V001K20Q						
11		451	11K063-06T	0.5 mL	50	/			
12		452	11K113-03	250 µL	100	/			
13		453	RINSE	25 mL					
14		454	11K113-01R		1.0	/			
15		455	RINSE						
16		456	11K113-02T	2.5 mL	10	/			
17		457	-04T	250 mL	100	/			
18		458	-03I	5.0 µL	5000	/			
19		459	-04R	25 mL	1.0	/			
20		460	RINSE						
21		461	11K119-01		1.0	/	/		-50X
22		462	-05			7	/		1:10
23		463	-02			7	/		
24		464	-03			/	/		-100X
25		465	RINSE						8:13pm
26									
27									
28									
29									
30									

MW 11/21/11

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-17-96-9	1	
DCC	-92-9	1	
DCC	-86-2	5	
DCC	-98-1	5	
BFB	-45-3	1	
IS/SURR.	-99-1	1	50/250
ICV/LCS	-97-1	1	
ICV/LCS	-97-2	1	
ICV/LCS	-99-2	5	
ICV/LCS	-89-2	5	

DATA FILE FOLDER	11K18
Electronic Data Archival	
Location	Date
HPCHEM_VOA/T001	

Comments:

Analyzed By: MW

Date Disposed: 11/21/11

Disposed By: MW

2159

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD RSK-175
DISSOLVED GASES

SDG#: 11K063

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K063

METHOD RSK-175
DISSOLVED GASES

A total of six (6) water samples were received on 11/07/11 for Dissolved Gas analysis, Method RSK-175 in accordance with USEPA at R.S. Kerr Environmental Research Laboratory, Ada, OK 74820 March 15, 1989.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary form for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for DGK002WL/C were all within QC limits.
Percent recoveries for DGK004WL/C were all within QC limits.

Matrix QC Sample
A set of MS/MSD was analyzed with the samples in this SDG.
Percent recoveries were within project QC limits except for results qualified with [*] in K063-02 M/S summary form, most likely due to matrix interference.
Methane was out of QC limits due to high concentration of the parent sample.
Check QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED GASES

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K063
Instrument ID : GCT010

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DGK002WQ	1	NA	11/08/1111:17	11/08/1109:30	FK08004A	FK08002A	DGK002W	Method Blank
LCS1W	DGK002WL	1	NA	11/08/1111:36	11/08/1109:30	FK08005A	FK08002A	DGK002W	Lab Control Sample (LCS)
LCD1W	DGK002WC	1	NA	11/08/1111:51	11/08/1109:30	FK08006A	FK08002A	DGK002W	LCS Duplicate
MBLK2W	DGK004WB	1	NA	11/10/1110:07	11/10/1109:40	FK10003A	FK10002A	DGK004W	Method Blank
LCS2W	DGK004WL	1	NA	11/10/1110:19	11/10/1109:40	FK10004A	FK10002A	DGK004W	Lab Control Sample (LCS)
LCD2W	DGK004WC	1	NA	11/10/1110:33	11/10/1109:40	FK10005A	FK10002A	DGK004W	LCS Duplicate
MW-70-PMW03A-095	K063-01	1	NA	11/08/1116:45	11/08/1109:30	FK08025A	FK08024A	DGK002W	Field Sample
MW-70-PMW03A-095DL	K063-01T	1000	NA	11/08/1117:04	11/08/1109:30	FK08026A	FK08024A	DGK002W	Diluted Sample
MW-70-PMW03B-097	K063-02	1	NA	11/10/1110:49	11/10/1109:40	FK10006A	FK10002A	DGK004W	Field Sample
MW-70-PMW03B-097DL	K063-02T	1000	NA	11/10/1111:32	11/10/1109:40	FK10009A	FK10002A	DGK004W	Diluted Sample
IW-70-SAB06-099	K063-03	1	NA	11/10/1111:50	11/10/1109:40	FK10010A	FK10002A	DGK004W	Field Sample
IW-70-SAB06-099DL	K063-03T	1000	NA	11/10/1112:28	11/10/1109:40	FK10012A	FK10002A	DGK004W	Diluted Sample
MW-70-PMW02A-100	K063-04	1	NA	11/10/1112:10	11/10/1109:40	FK10011A	FK10002A	DGK004W	Field Sample
MW-70-PMW02A-100DL	K063-04T	10	NA	11/10/1113:02	11/10/1109:40	FK10014A	FK10013A	DGK004W	Diluted Sample
MW-70-PMW02B-101	K063-05	1	NA	11/10/1113:16	11/10/1109:40	FK10015A	FK10013A	DGK004W	Field Sample
MW-70-PMWD2B-101DL	K063-05T	2	NA	11/10/1113:44	11/10/1109:40	FK10017A	FK10013A	DGK004W	Diluted Sample
IR-70-FD-098	K063-06	1	NA	11/10/1113:30	11/10/1109:40	FK10016A	FK10013A	DGK004W	Field Sample
IR-70-FD-098DL	K063-06T	1000	NA	11/10/1113:58	11/10/1109:40	FK10018A	FK10013A	DGK004W	Diluted Sample
MW-70-PMW03B-097MS	K063-02M	1	NA	11/10/1111:01	11/10/1109:40	FK10007A	FK10002A	DGK004W	Matrix Spike Sample (MS)
MW-70-PMW03B-097MSD	K063-02S	1	NA	11/10/1111:15	11/10/1109:40	FK10008A	FK10002A	DGK004W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/08/11 09:30
Sample ID:	MW-70-PMW03A-095	Date Analyzed:	11/08/11 16:45
Lab Samp ID:	K063-01	Dilution Factor:	1
Lab File ID:	FK08025A	Matrix :	WATER
Ext Btch ID:	DGK002W	% Moisture :	NA
Calib. Ref.:	FK08024A	Instrument ID :	GCT010

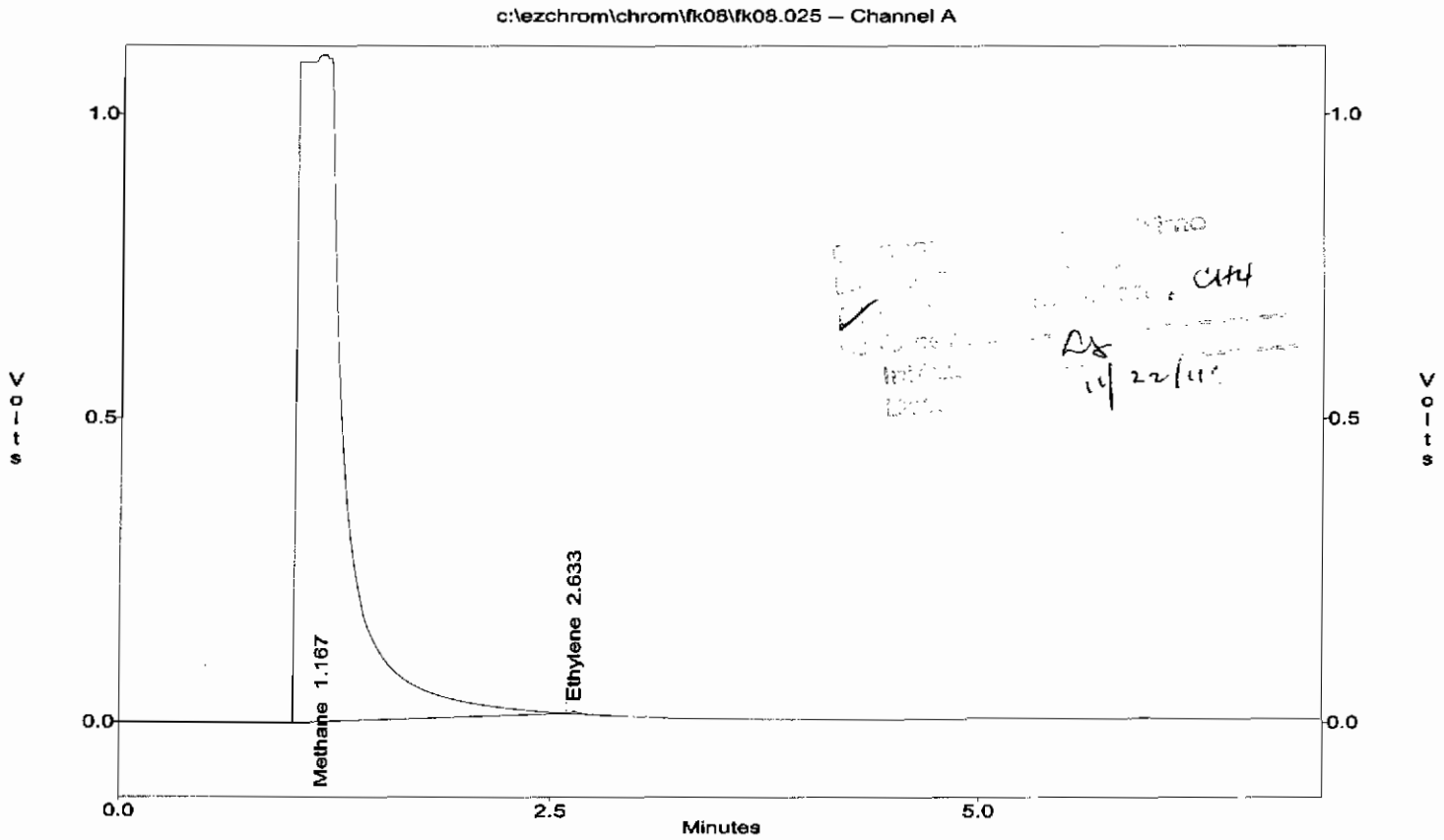
PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	0.68J	2.0	0.60
METHANE	690E	2.0	0.34

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk08\fk08.025
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : 11K063-01
Acquired : Nov 08, 2011 16:45:49
Printed : Nov 22, 2011 09:47:40
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.167	21053834.0	30507.1	690.13
--	Acetylene	2.233	0.0	0.0	0.00
2	Ethylene	2.633	11083.0	16311.8	0.68
--	Ethane	3.100	0.0	0.0	0.00
--	Propane	5.942	0.0	0.0	0.00



METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/08/11 09:30
Sample ID:	MW-70-PMW03A-095DL	Date Analyzed:	11/08/11 17:04
Lab Samp ID:	K063-01T	Dilution Factor:	1000
Lab File ID:	FK08026A	Matrix :	WATER
Ext Btch ID:	DGK002W	% Moisture :	NA
Calib. Ref.:	FK08024A	Instrument ID :	GCT010

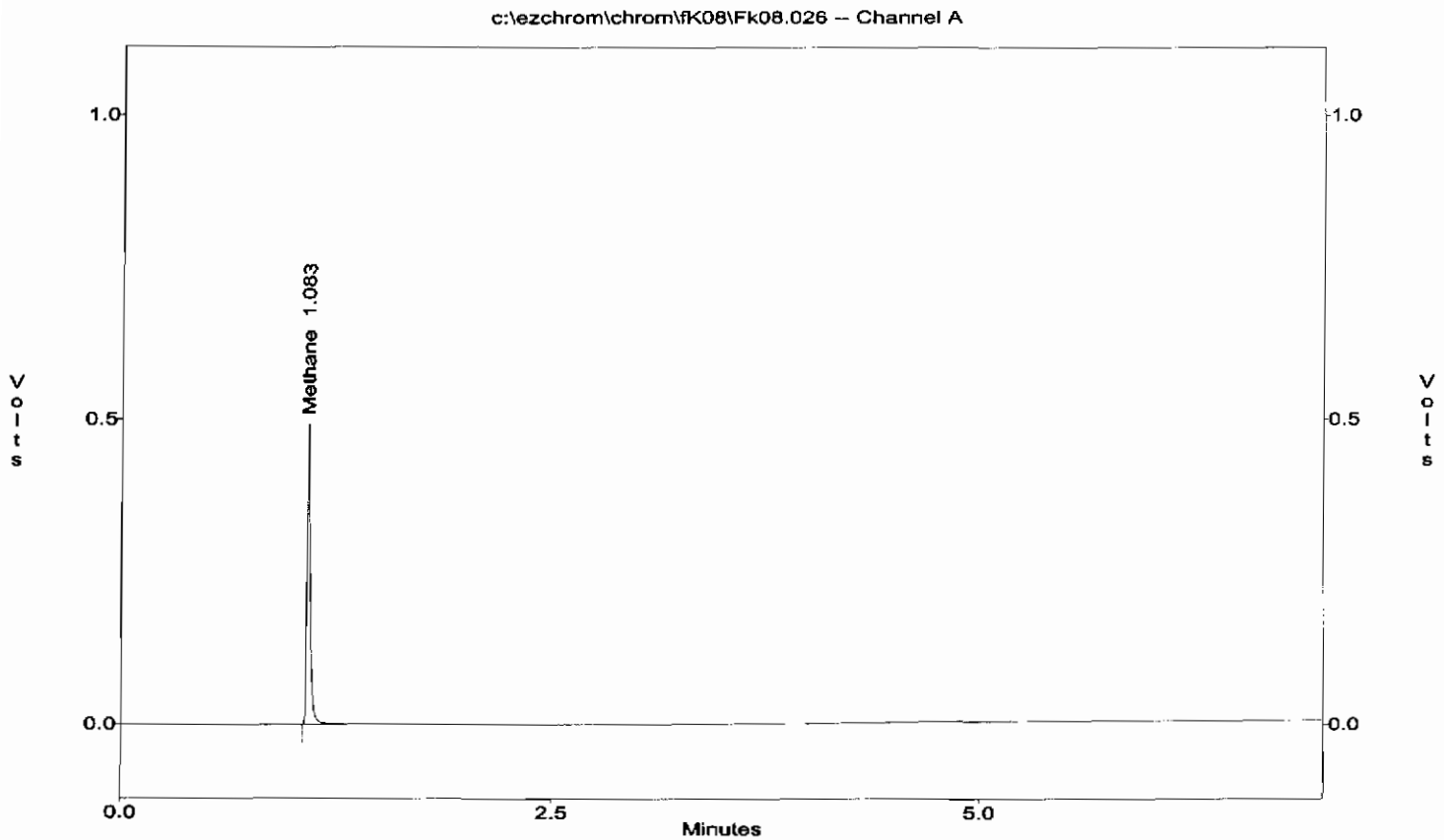
PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	21000	2000	340

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK08\Fk08.026
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : 11K063-01T DF=1000
Acquired : Nov 08, 2011 17:04:42
Printed : Nov 08, 2011 17:11:44
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	652375.0	30507.1	21384.39
--	Acetylene	2.233	0.0	0.0	0.00
--	Ethylene	2.667	0.0	0.0	0.00
--	Ethane	3.100	0.0	0.0	0.00
--	Propane	5.942	0.0	0.0	0.00



METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/10/11 09:40
Sample ID:	MW-70-PMW03B-097	Date Analyzed:	11/10/11 10:49
Lab Samp ID:	K063-02	Dilution Factor:	1
Lab File ID:	FK10006A	Matrix :	WATER
Ext Btch ID:	DGK004W	% Moisture :	NA
Calib. Ref.:	FK10002A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	7.4	2.0	0.60
METHANE	620E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/10/11 09:40
Sample ID:	MW-70-PMW03B-097DL	Date Analyzed:	11/10/11 11:32
Lab Samp ID:	K063-02T	Dilution Factor:	1000
Lab File ID:	FK10009A	Matrix :	WATER
Ext Btch ID:	DGK004W	% Moisture :	NA
Calib. Ref.:	FK10002A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	22000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/10/11 09:40
Sample ID:	IW-70-SAB06-099	Date Analyzed:	11/10/11 11:50
Lab Samp ID:	K063-03	Dilution Factor:	1
Lab File ID:	FK10010A	Matrix :	WATER
Ext Btch ID:	DGK004W	% Moisture :	NA
Calib. Ref.:	FK10002A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	5.1	2.0	0.60
METHANE	550E	2.0	0.34

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

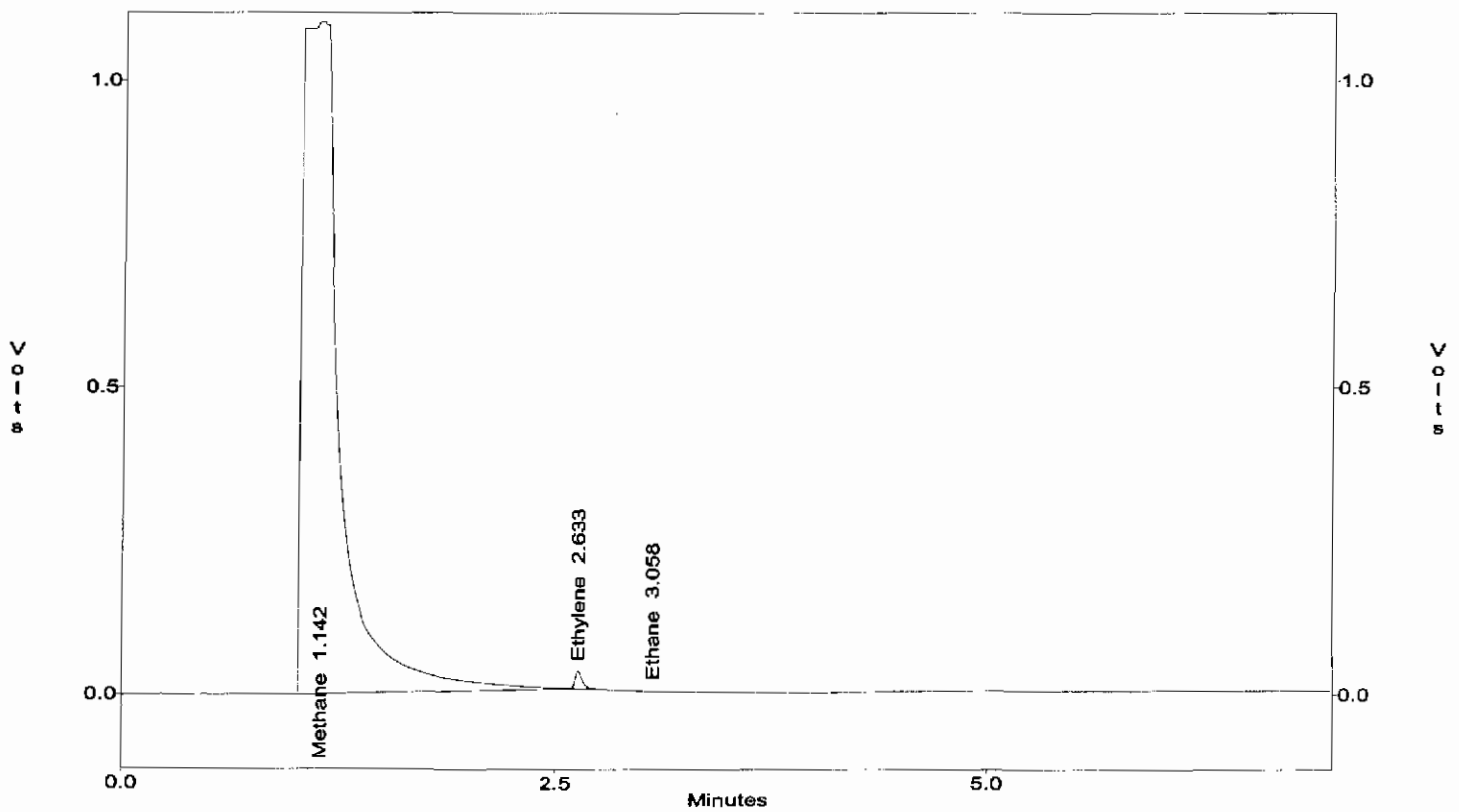
File : c:\ezchrom\chrom\fk10\fk10.010
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : 11K063-03
Acquired : Nov 10, 2011 11:50:51
Printed : Nov 10, 2011 12:23:03
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.142	16818248.0	30507.1	551.29
--	Acetylene	2.233	0.0	0.0	0.00
2	Ethylene	2.633	82877.0	16311.8	5.08
3	Ethane	3.058	6813.0	24914.4	0.27
--	Propane	5.942	0.0	0.0	0.00

☐ Incorrect Retention Time
☐ Incorrect Baseline
☑ Incorrect Integration
☐ Other
Initials SC
Date 11/10/11

c:\ezchrom\chrom\fk10\fk10.010 -- Channel A



METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/10/11 09:40
Sample ID:	IW-70-SAB06-099DL	Date Analyzed:	11/10/11 12:28
Lab Samp ID:	K063-03T	Dilution Factor:	1000
Lab File ID:	FK10012A	Matrix	: WATER
Ext Btch ID:	DGK004W	% Moisture	: NA
Calib. Ref.:	FK10002A	Instrument ID	: GCT010

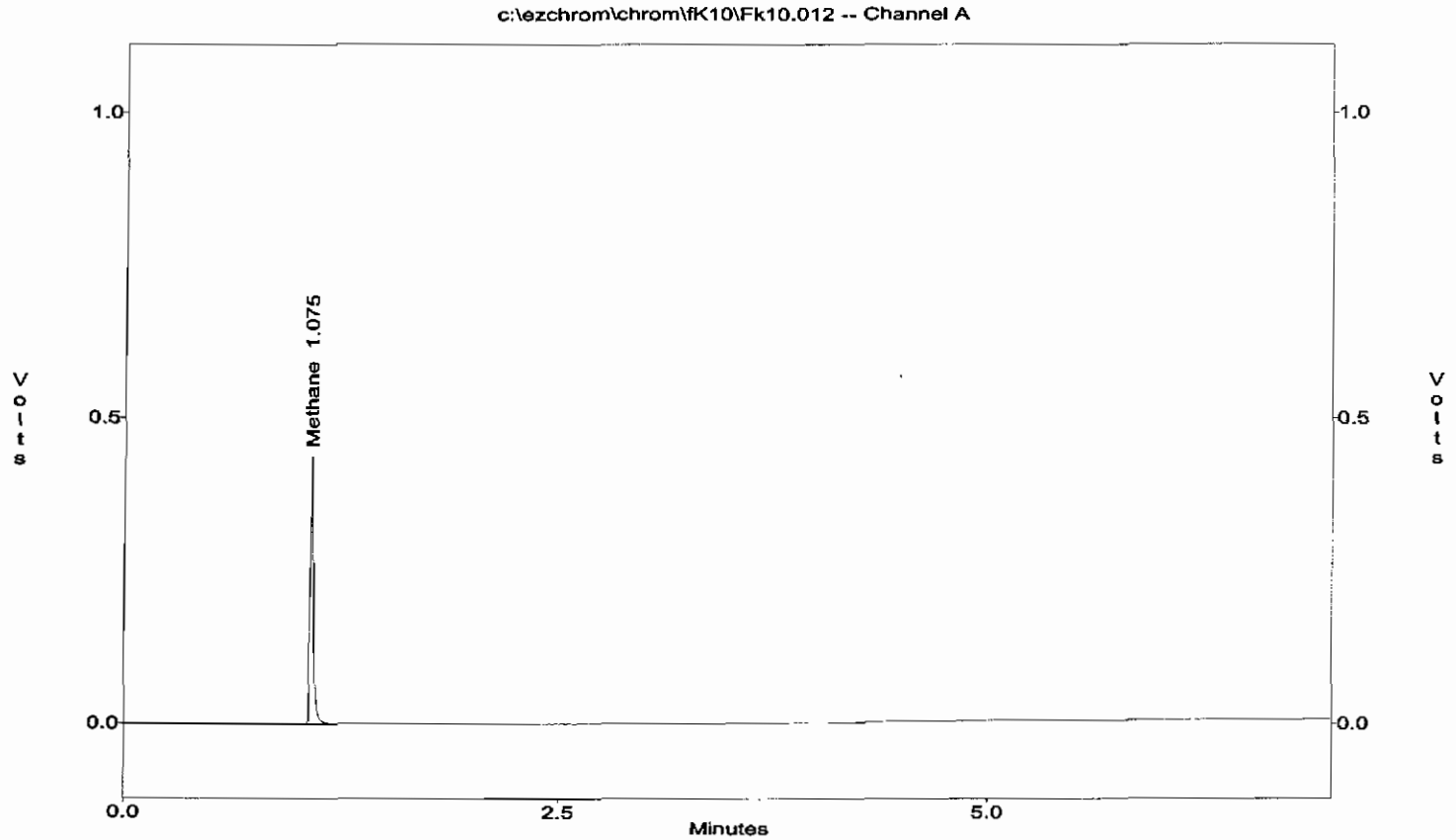
PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	19000	2000	340

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK10\Fk10.012
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : 11K063-03T DF=1000
Acquired : Nov 10, 2011 12:28:36
Printed : Nov 10, 2011 12:35:38
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	574948.0	30507.1	18846.39
--	Acetylene	2.233	0.0	0.0	0.00
--	Ethylene	2.667	0.0	0.0	0.00
--	Ethane	3.100	0.0	0.0	0.00
--	Propane	5.942	0.0	0.0	0.00



METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/10/11 09:40
Sample ID:	MW-70-PMW02A-100	Date Analyzed:	11/10/11 12:10
Lab Samp ID:	K063-04	Dilution Factor:	1
Lab File ID:	FK10011A	Matrix	: WATER
Ext Btch ID:	DGK004W	% Moisture	: NA
Calib. Ref.:	FK10002A	Instrument ID	: GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	0.74J	2.0	0.60
METHANE	90E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/10/11 09:40
Sample ID:	MW-70-PMW02A-100DL	Date Analyzed:	11/10/11 13:02
Lab Samp ID:	K063-04T	Dilution Factor:	10
Lab File ID:	FK10014A	Matrix :	WATER
Ext Btch ID:	DGK004W	% Moisture :	NA
Calib. Ref.:	FK10013A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	20	6.4
ETHENE	ND	20	6.0
METHANE	150	20	3.4

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/10/11 09:40
Sample ID:	MW-70-PMW02B-101	Date Analyzed:	11/10/11 13:16
Lab Samp ID:	K063-05	Dilution Factor:	1
Lab File ID:	FK10015A	Matrix :	WATER
Ext Btch ID:	DGK004W	% Moisture :	NA
Calib. Ref.:	FK10013A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	0.82J	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	36E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/10/11 09:40
Sample ID:	MW-70-PMW02B-101DL	Date Analyzed:	11/10/11 13:44
Lab Samp ID:	K063-05T	Dilution Factor:	2
Lab File ID:	FK10017A	Matrix :	WATER
Ext Btch ID:	DGK004W	% Moisture :	NA
Calib. Ref.:	FK10013A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	4.0	1.3
ETHENE	ND	4.0	1.2
METHANE	36	4.0	0.68

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/10/11 09:40
Sample ID:	IR-70-FD-098	Date Analyzed:	11/10/11 13:30
Lab Samp ID:	K063-06	Dilution Factor:	1
Lab File ID:	FK10016A	Matrix :	WATER
Ext Btch ID:	DGK004W	% Moisture :	NA
Calib. Ref.:	FK10013A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	5.7	2.0	0.64
ETHENE	23	2.0	0.60
METHANE	150E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
Batch No.	: 11K063	Date Extracted:	11/10/11 09:40
Sample ID:	IR-70-FD-098DL	Date Analyzed:	11/10/11 13:58
Lab Samp ID:	K063-06T	Dilution Factor:	1000
Lab File ID:	FK10018A	Matrix :	WATER
Ext Btch ID:	DGK004W	% Moisture :	NA
Calib. Ref.:	FK10013A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	18000	2000	340

QC SUMMARIES

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K063	Date Extracted:	11/08/11 09:30
Sample ID:	MBLK1W	Date Analyzed:	11/08/11 11:17
Lab Samp ID:	DGK002WQ	Dilution Factor:	1
Lab File ID:	FK08004A	Matrix :	WATER
Ext Btch ID:	DGK002W	% Moisture :	NA
Calib. Ref.:	FK08002A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD RSK-175

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	DGK002WQ	DGK002WL	DGK002WC		
LAB FILE ID:	FK08004A	FK08005A	FK08006A		
DATE EXTRACTED:	11/08/1109:30	11/08/1109:30	11/08/1109:30	DATE COLLECTED:	NA
DATE ANALYZED:	11/08/1111:17	11/08/1111:36	11/08/1111:51	DATE RECEIVED:	11/08/11
PREP. BATCH:	DGK002W	DGK002W	DGK002W		
CALIB. REF:	FK08002A	FK08002A	FK08002A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	ND	25.4	30.3	119	25.4	30.3	119	0	70-140	30
Ethene	ND	23.7	29.0	122	23.7	28.9	122	0	70-140	30
Methane	ND	13.6	14.9	109	13.6	14.9	110	0	70-130	30

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/10/11
Batch No.	: 11K063	Date Extracted:	11/10/11 09:40
Sample ID:	MBLK2W	Date Analyzed:	11/10/11 10:07
Lab Samp ID:	DGK004WB	Dilution Factor:	1
Lab File ID:	FK10003A	Matrix :	WATER
Ext Btch ID:	DGK004W	% Moisture :	NA
Calib. Ref.:	FK10002A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD RSK-175

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	DGK004WB	DGK004WL	DGK004WC		
LAB FILE ID:	FK10003A	FK10004A	FK10005A		
DATE EXTRACTED:	11/10/1109:40	11/10/1109:40	11/10/1109:40	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1110:07	11/10/1110:19	11/10/1110:33	DATE RECEIVED:	11/10/11
PREP. BATCH:	DGK004W	DGK004W	DGK004W		
CALIB. REF:	FK10002A	FK10002A	FK100D2A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	ND	25.4	29.9	118	25.4	28.6	113	4	70-140	30
Ethene	ND	23.7	28.4	120	23.7	27.5	116	3	70-140	30
Methane	ND	13.6	14.8	109	13.6	14.0	103	5	70-130	30

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD RSK-175

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MW-70-PMW03B-097				
LAB SAMP ID:	K063-02	K063-02M	K063-02S		
LAB FILE ID:	FK10006A	FK10007A	FK10008A		
DATE EXTRACTED:	11/10/1109:40	11/10/1109:40	11/10/1109:40	DATE COLLECTED:	11/07/11
DATE ANALYZED:	11/10/1110:49	11/10/1111:01	11/10/1111:15	DATE RECEIVED:	11/07/11
PREP. BATCH:	DGK004W	DGK004W	DGK004W		
CALIB. REF:	FK10002A	FK10002A	FK10002A		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	ND	25.4	18.7	74	25.4	19.9	78	6	60-140	30
Ethene	7.42	23.7	25.0	74	23.7	25.8	77	3	20-160	30
Methane	616E	13.6	612E	-28*	13.6	609E	-51*	1	10-160	30

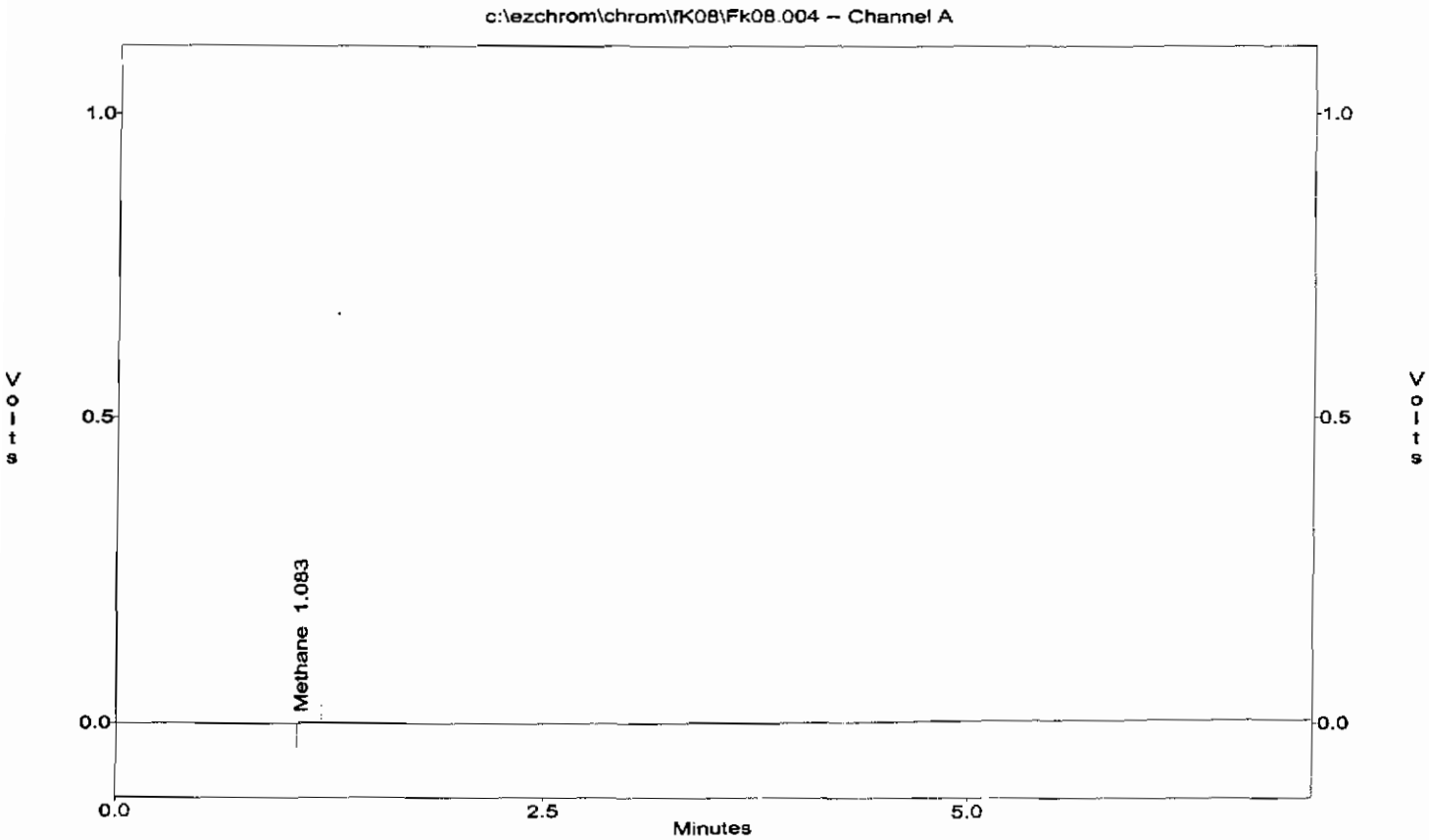
QC DATA

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK08\Fk08.004
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK002WQ
Acquired : Nov 08, 2011 11:17:17
Printed : Nov 08, 2011 11:24:19
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	5069.0	30507.1	0.17
--	Acetylene	2.233	0.0	0.0	0.00
--	Ethylene	2.667	0.0	0.0	0.00
--	Ethane	3.100	0.0	0.0	0.00
--	Propane	5.942	0.0	0.0	0.00

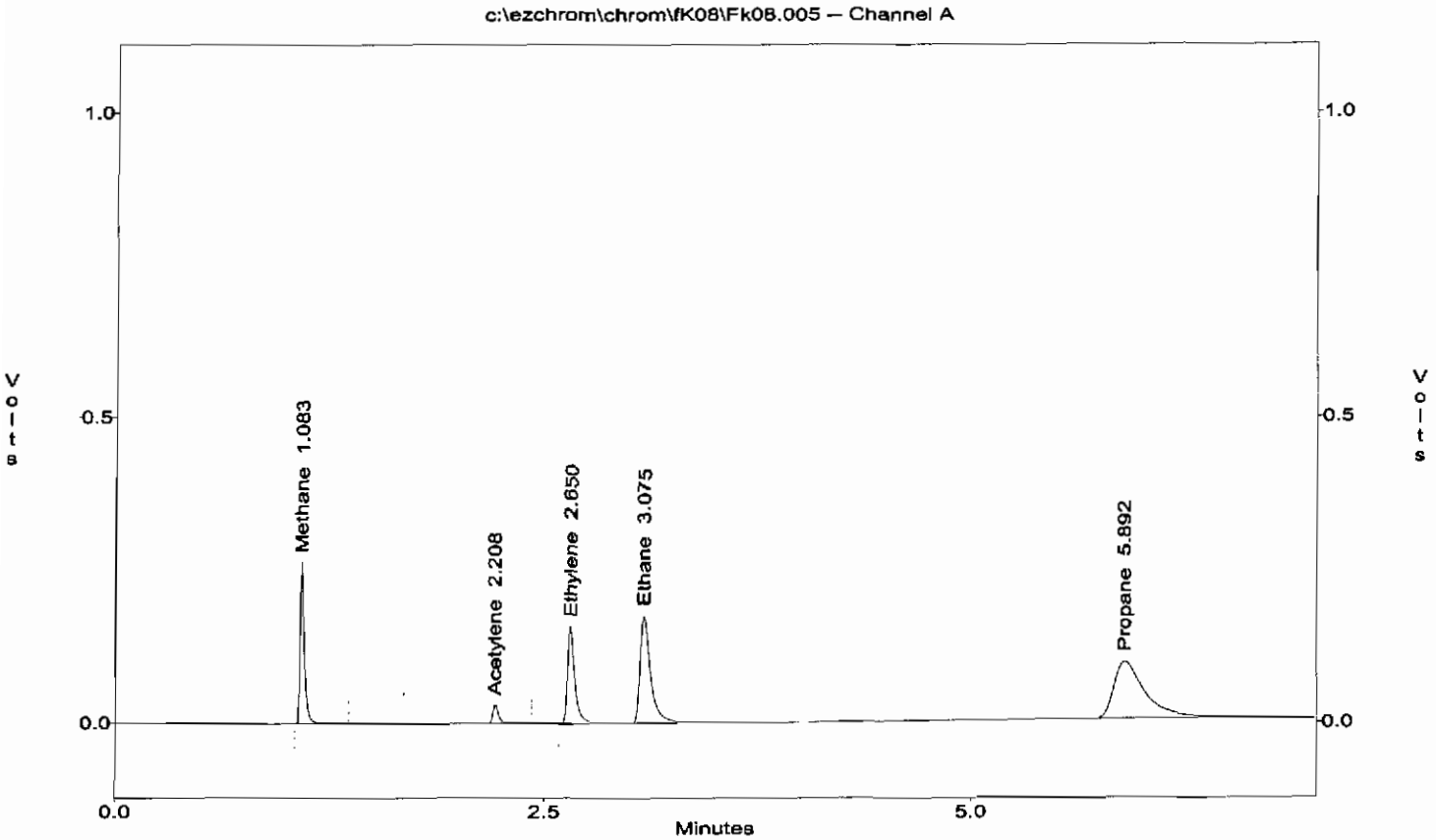


EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK08\Fk08.005
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK002WL
Acquired : Nov 08, 2011 11:36:22
Printed : Nov 08, 2011 11:43:23
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	453771.0	30507.1	14.87
2	Acetylene	2.208	72290.0	2647.6	27.30
3	Ethylene	2.650	472469.0	16311.8	28.96
4	Ethane	3.075	755929.0	24914.4	30.34
5	Propane	5.892	1189011.0	27171.2	43.76

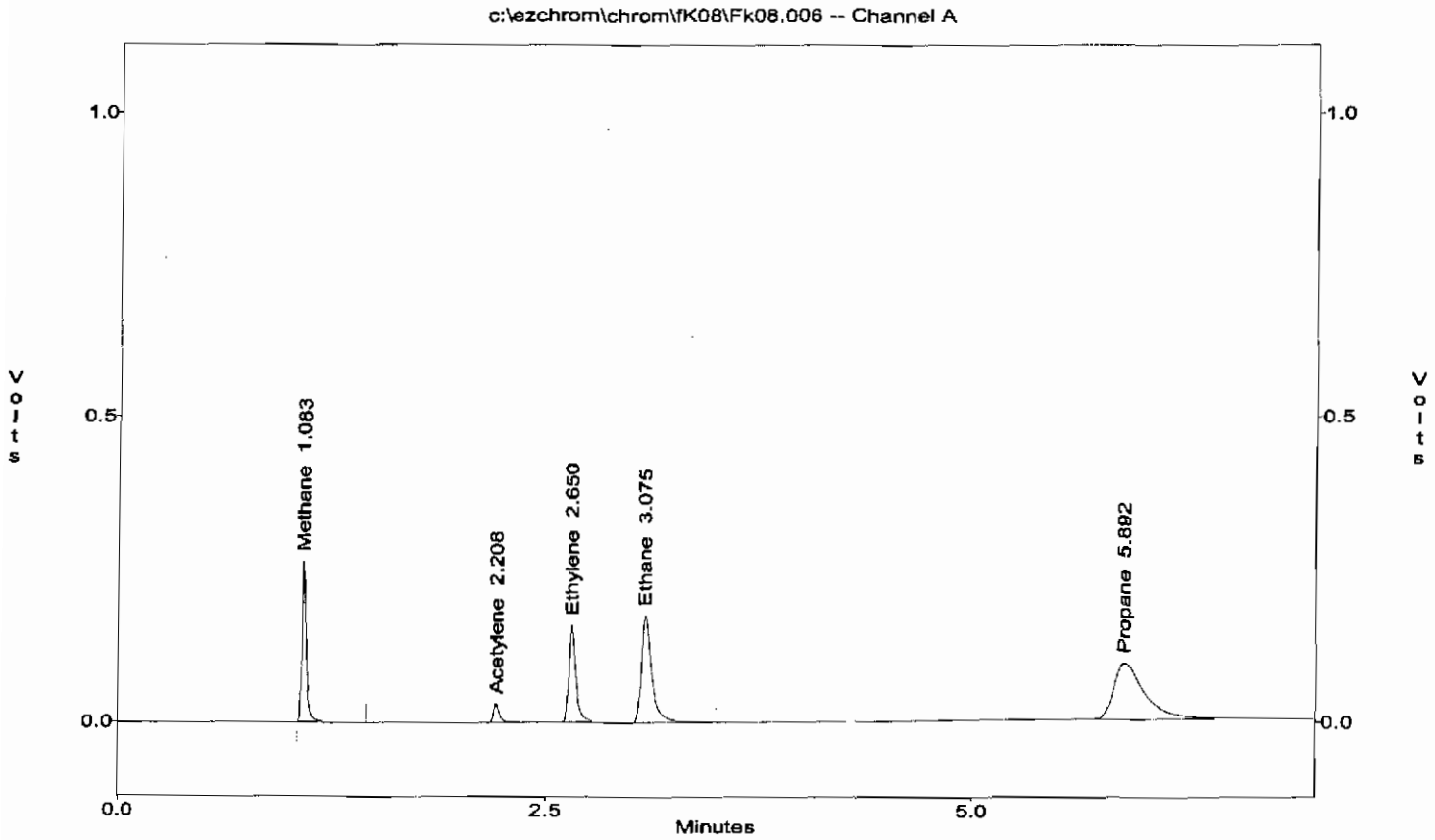


EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK08\Fk08.006
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK002WC
Acquired : Nov 08, 2011 11:51:36
Printed : Nov 08, 2011 11:58:38
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	455887.0	30507.1	14.94
2	Acetylene	2.208	73680.0	2647.6	27.83
3	Ethylene	2.650	471198.0	16311.8	28.89
4	Ethane	3.075	754462.0	24914.4	30.28
5	Propane	5.892	1184265.0	27171.2	43.59

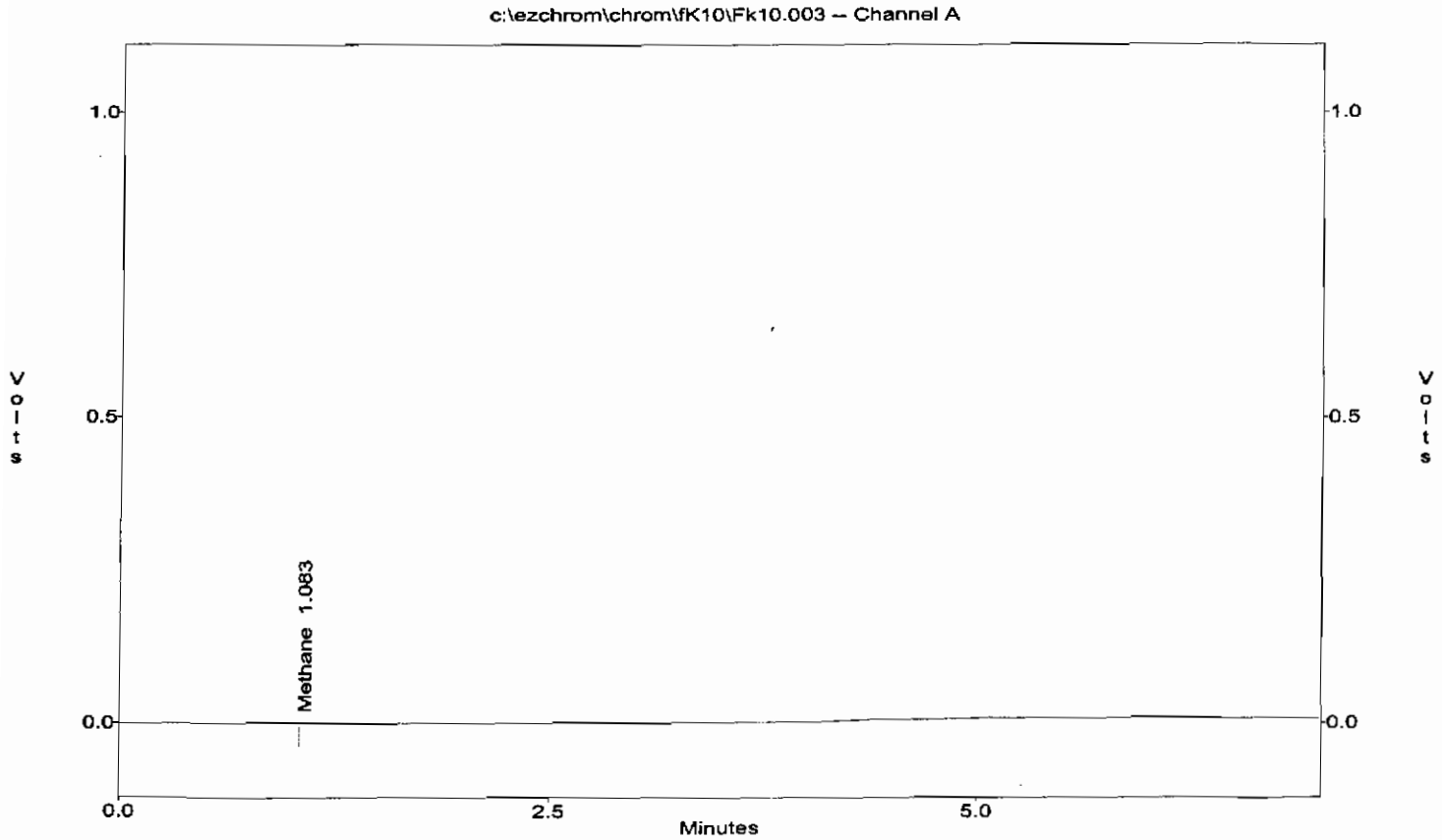


EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK10\Fk10.003
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK004WB
Acquired : Nov 10, 2011 10:07:10
Printed : Nov 10, 2011 10:14:12
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	3818.0	30507.1	0.13
--	Acetylene	2.233	0.0	0.0	0.00
--	Ethylene	2.667	0.0	0.0	0.00
--	Ethane	3.100	0.0	0.0	0.00
--	Propane	5.942	0.0	0.0	0.00

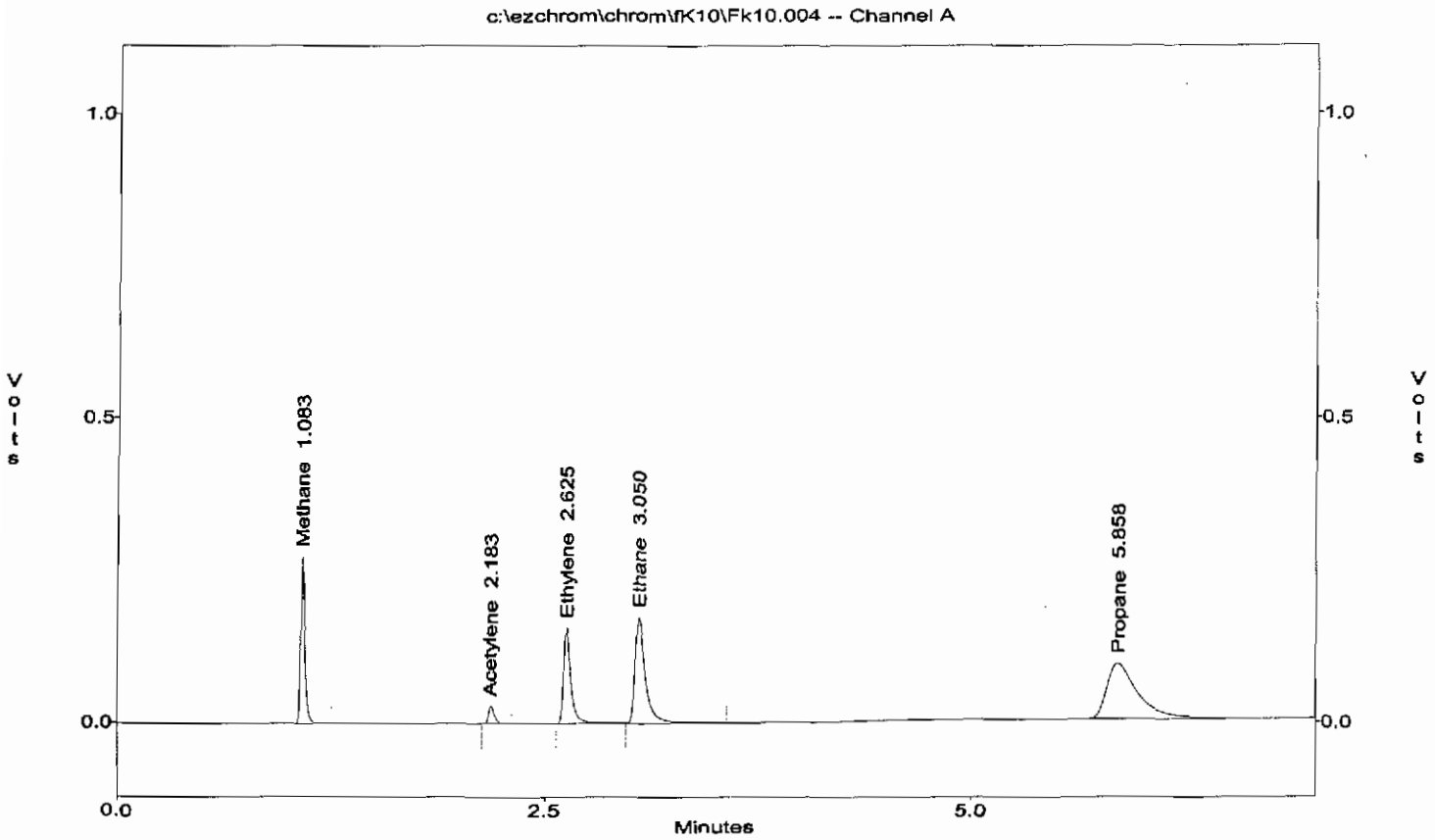


EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK10\Fk10.004
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK004WL
Acquired : Nov 10, 2011 10:19:40
Printed : Nov 10, 2011 10:26:41
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	451675.0	30507.1	14.81
2	Acetylene	2.183	70340.0	2647.6	26.57
3	Ethylene	2.625	463835.0	16311.8	28.44
4	Ethane	3.050	745063.0	24914.4	29.90
5	Propane	5.858	1159184.0	27171.2	42.66

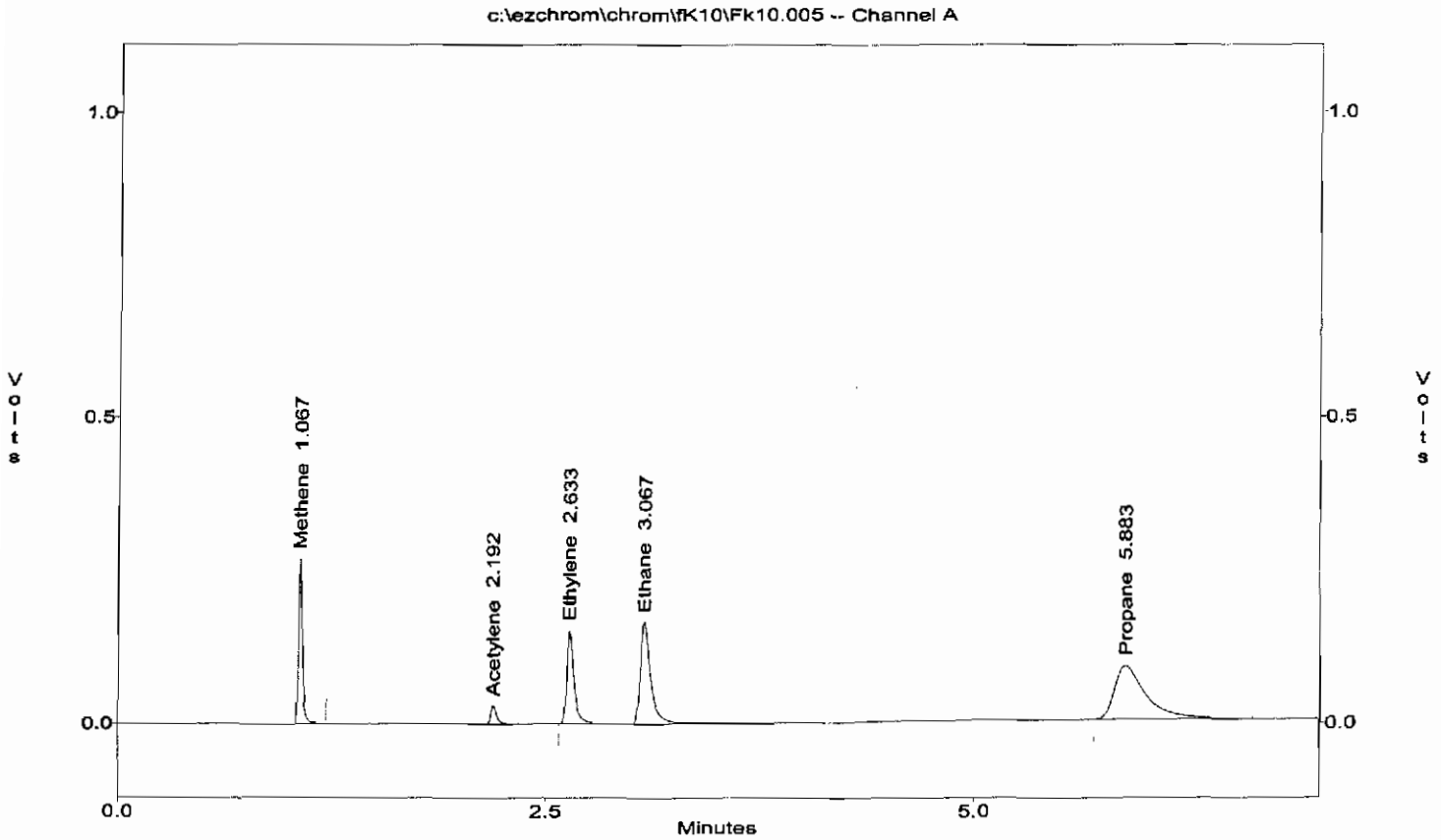


EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK10\Fk10.005
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK004WC
Acquired : Nov 10, 2011 10:33:15
Printed : Nov 10, 2011 10:40:16
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.067	428506.0	30507.1	14.05
2	Acetylene	2.192	70791.0	2647.6	26.74
3	Ethylene	2.633	448842.0	16311.8	27.52
4	Ethane	3.067	713350.0	24914.4	28.63
5	Propane	5.883	1129802.0	27171.2	41.58



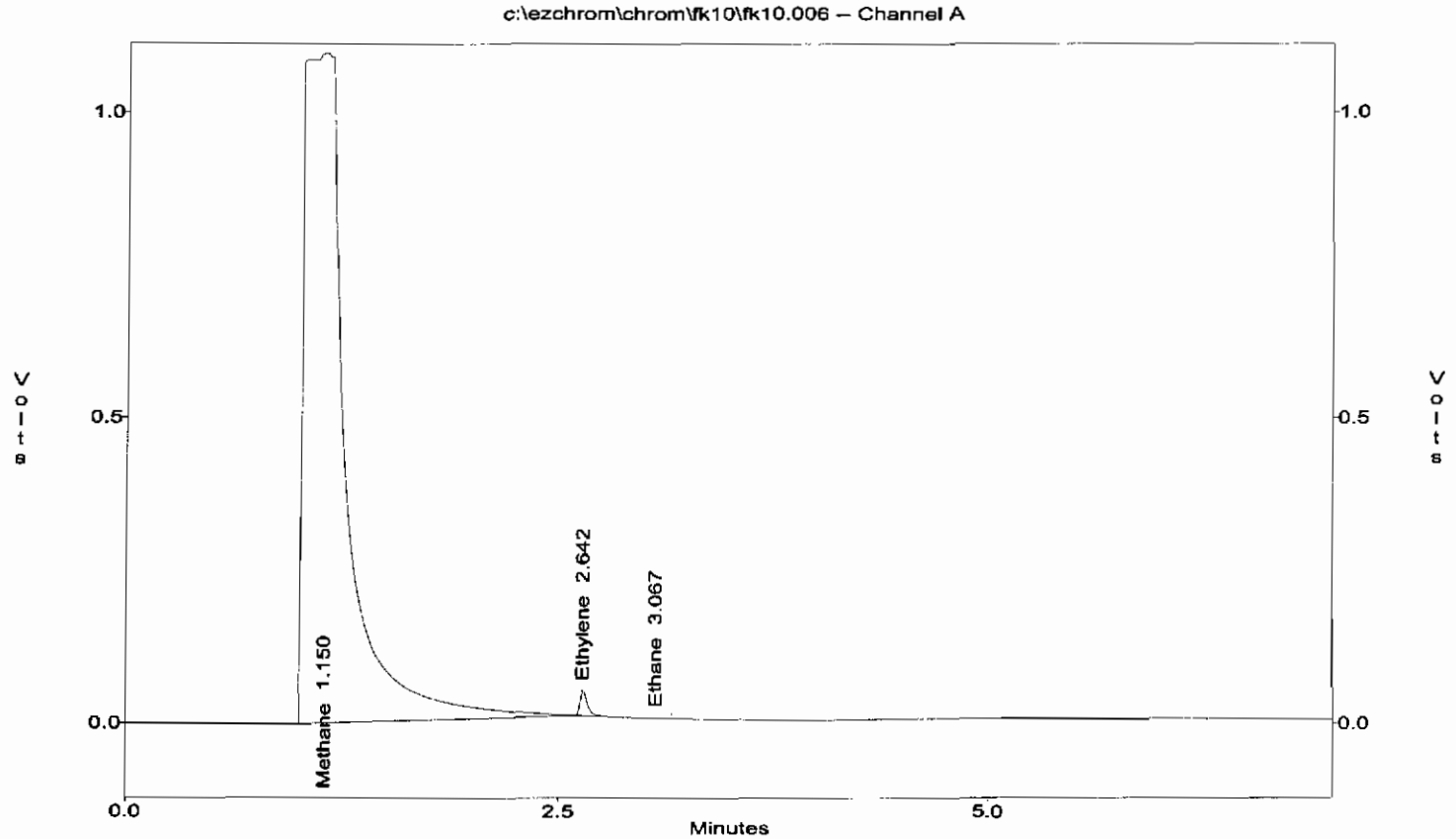
EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk10\fk10.006
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : 11K063-02
Acquired : Nov 10, 2011 10:49:01
Printed : Nov 10, 2011 11:17:44
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.150	18787428.0	30507.1	615.84
--	Acetylene	2.233	0.0	0.0	0.00
2	Ethylene	2.642	121013.0	16311.8	7.42
3	Ethane	3.067	7944.0	24914.4	0.32
--	Propane	5.942	0.0	0.0	0.00

☐ Incorrect Retention Time
☐ Incorrect Baseline
☑ Incorrect Integration , CH4
☐ Other
Initials SC
Date 11/10/11



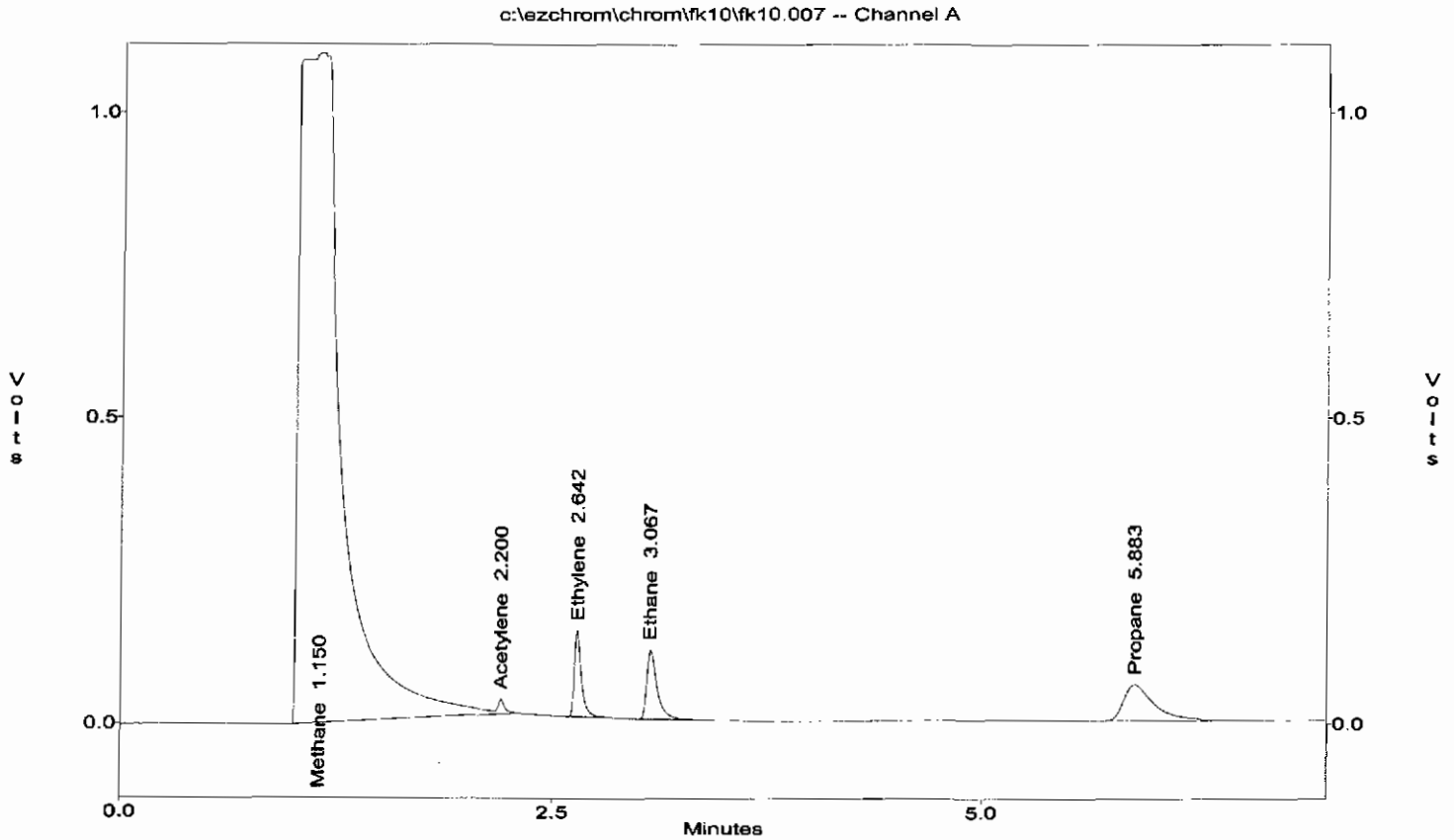
EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk10\fk10.007
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : 11K063-02M
Acquired : Nov 10, 2011 11:01:58
Printed : Nov 10, 2011 11:36:46
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.150	18672116.0	30507.1	612.06
2	Acetylene	2.200	65295.0	2647.6	24.66
3	Ethylene	2.642	407246.0	16311.8	24.97
4	Ethane	3.067	466794.0	24914.4	18.74
5	Propane	5.883	743313.0	27171.2	27.36

☐ Incorrect Retention Time
☐ Incorrect Baseline
☑ Incorrect Integration
☐ Other
Initials SC
Date 11/10/11



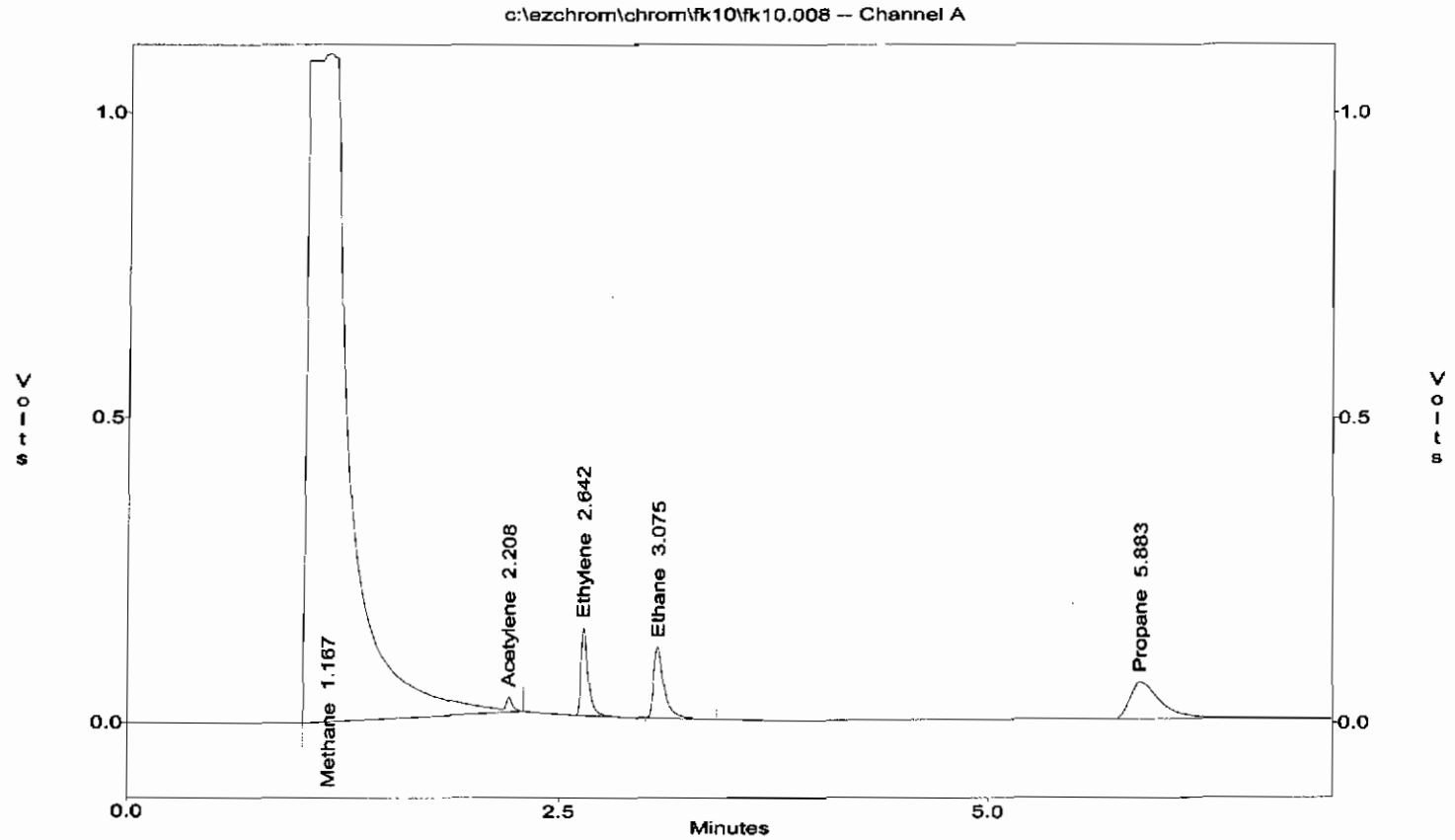
EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk10\fk10.008
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : 11K063-02S
Acquired : Nov 10, 2011 11:15:46
Printed : Nov 10, 2011 11:36:04
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.167	18577852.0	30507.1	608.97
2	Acetylene	2.208	64670.0	2647.6	24.43
3	Ethylene	2.642	420126.0	16311.8	25.76
4	Ethane	3.075	495610.0	24914.4	19.89
5	Propane	5.883	764954.0	27171.2	28.15

☐ Incorrect Retention Time
☐ Incorrect Baseline
☐ Incorrect Integration
☐ Other
Initials SC
Date 11/10/11



INITIAL CALIBRATIONS

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	25.00X	40.00X	75.00X	100.00X	MEAN	%RSD
Methane	0.34	31626	33510	29954	29307	29338	29307	30507.1	5.6
Acetylene	0.55	2465	2595	2723	2744	2716	2643	2647.7	4.0
Ethylene	0.59	14655	16070	16617	16602	17123	16803	16311.8	5.4
Ethane	0.64	22748	24144	25289	25073	26185	26048	24914.4	5.2
Propane	0.93	29887	24871	26520	26214	27735	27800	27171.2	6.3

DG10K01.MET

FORM VI DGAS -2 1/96 Rev 2/2006

11/03/11

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53

COMPOUND	RT OF STANDARDS (MIN)						MEAN	RT WINDOW		RTWINDOW
	2.0X	10.0X	25.0X	40.0X	75.0X	100.0X	RT	FROM	TO	WIDTH
Methane	1.083	1.075	1.083	1.083	1.083	1.083	1.082	1.056	1.108	0.026
Acetylene	2.208	2.192	2.208	2.217	2.217	2.217	2.210	2.184	2.236	0.026
Ethylene	2.642	2.633	2.650	2.658	2.658	2.658	2.650	2.599	2.701	0.051
Ethane	3.067	3.067	3.075	3.083	3.092	3.083	3.078	3.028	3.128	0.050
Propane	5.942	5.883	5.900	5.917	5.917	5.908	5.911	5.835	5.987	0.076

DG10K01.MET

AS 11/03/11

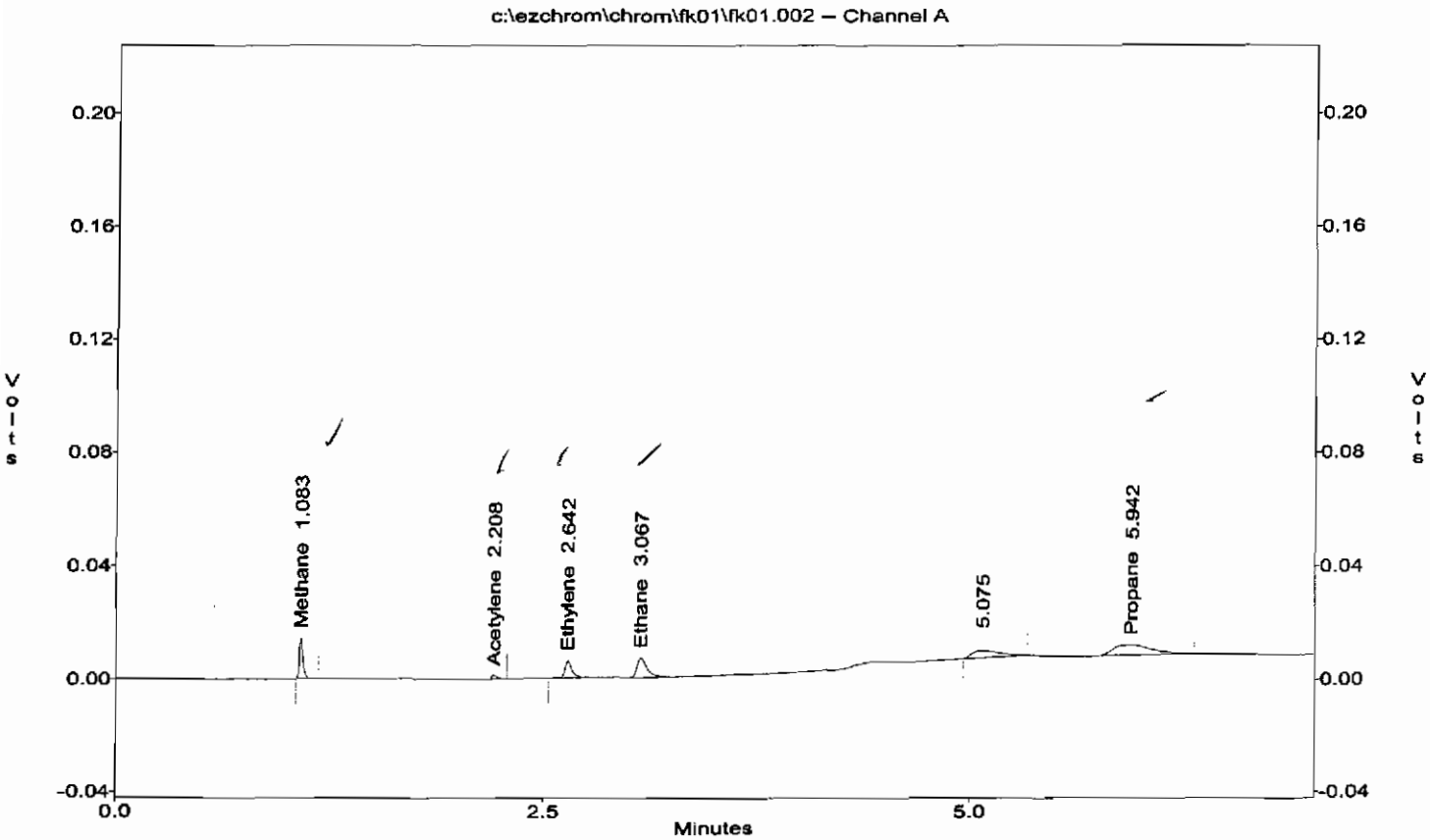
FORM VI DGAS -1 1/96 Rev 2/2006

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.002
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-01
Acquired : Nov 01, 2011 11:28:48
Printed : Nov 01, 2011 16:46:40
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	21439.0	30507.1	0.68
2	Acetylene	2.208	2712.0	2647.6	1.10
3	Ethylene	2.642	17381.0	16311.8	1.19
4	Ethane	3.067	28913.0	24914.4	1.27
6	Propane	5.942	55710.0	27171.2	1.86



AS 11/03/11

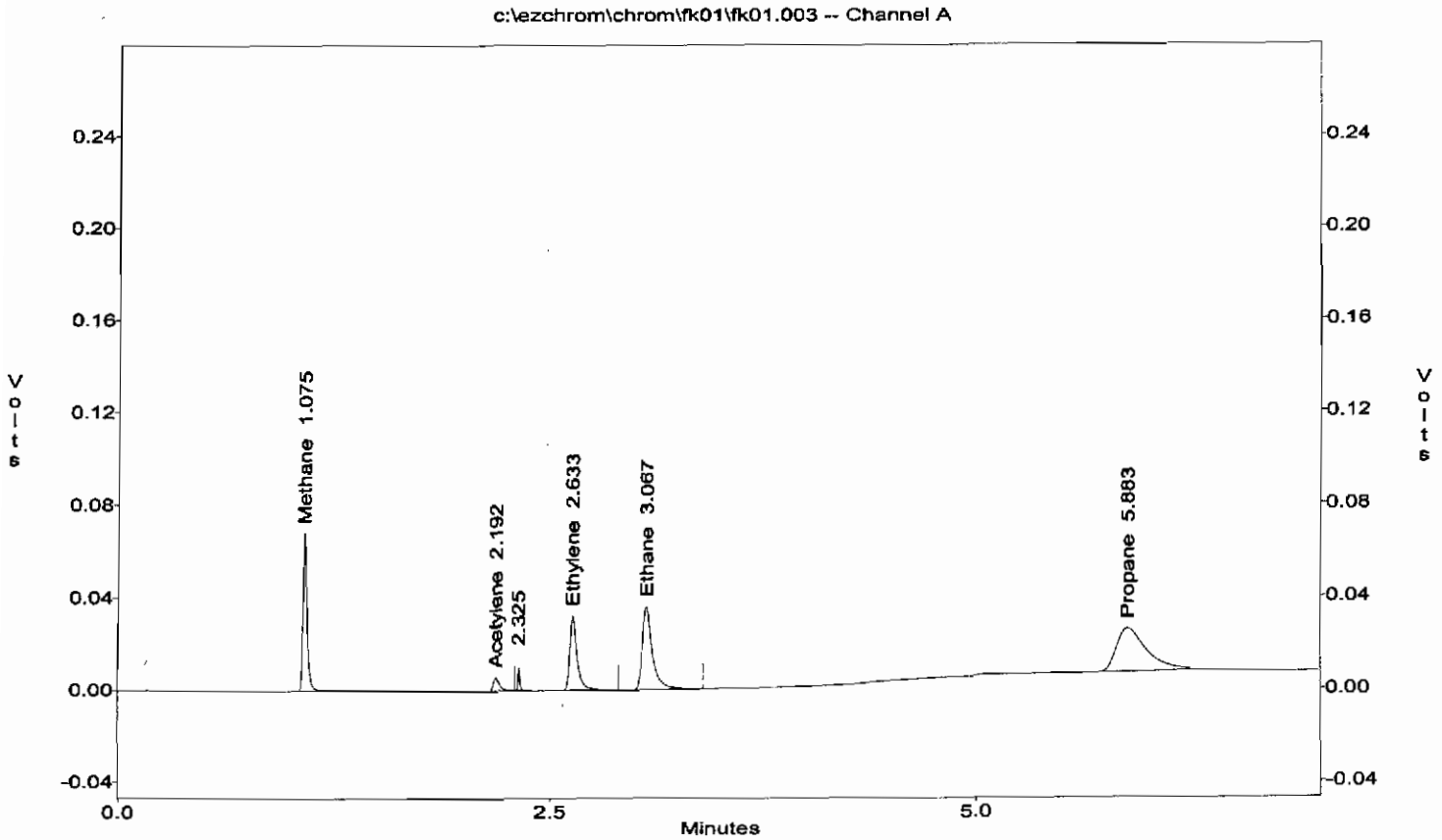
4039

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.003
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-02
Acquired : Nov 01, 2011 11:41:49
Printed : Nov 01, 2011 16:46:57
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	113600.0	30507.1	3.39
2	Acetylene	2.192	14297.0	2647.6	5.51
4	Ethylene	2.633	95326.0	16311.8	5.93
5	Ethane	3.067	153436.0	24914.4	6.36
6	Propane	5.883	231819.0	27171.2	9.32



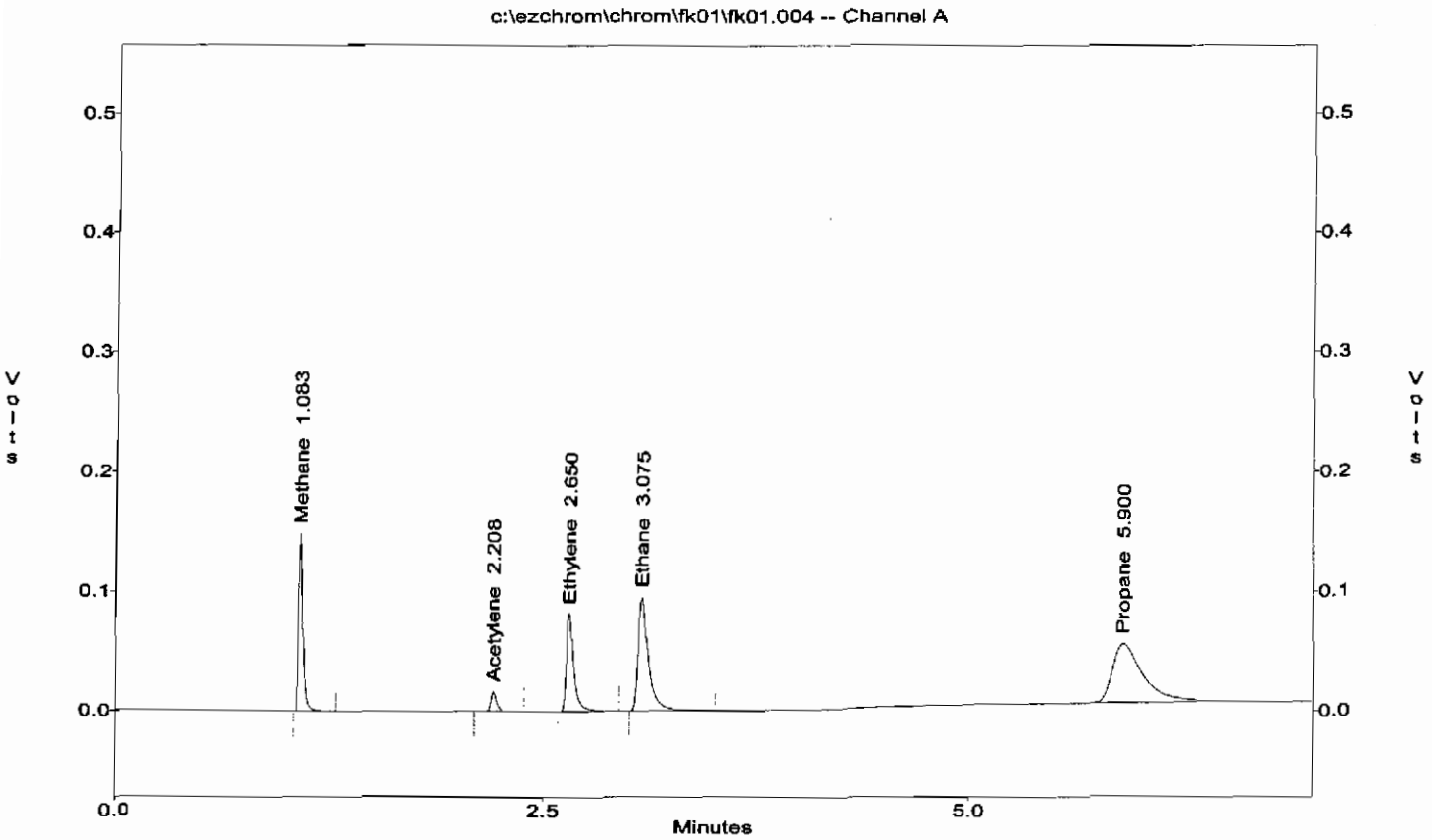
RA
11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.004
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-03
Acquired : Nov 01, 2011 11:55:36
Printed : Nov 01, 2011 16:47:09
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	253836.0	30507.1	8.47
2	Acetylene	2.208	37503.0	2647.6	13.77
3	Ethylene	2.650	246435.0	16311.8	14.83
4	Ethane	3.075	401839.0	24914.4	15.89
5	Propane	5.900	617912.0	27171.2	23.30



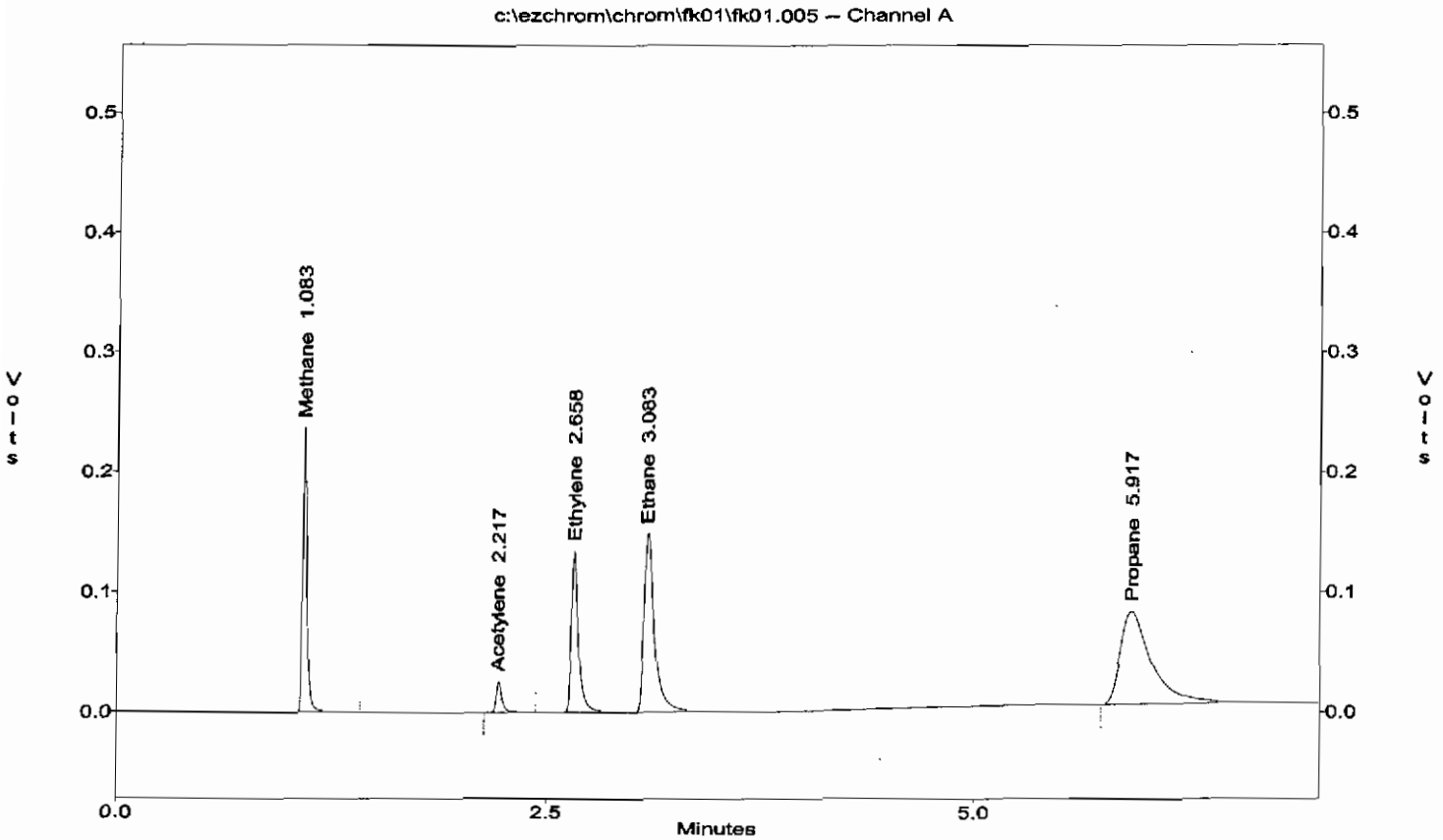
11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.005
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-04
Acquired : Nov 01, 2011 12:09:18
Printed : Nov 01, 2011 16:47:15
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	397403.0	30507.1	13.56
2	Acetylene	2.217	60362.0	2647.6	22.00
3	Ethylene	2.658	393970.0	16311.8	23.73
4	Ethane	3.083	637350.0	24914.4	25.42
5	Propane	5.917	977274.0	27171.2	37.28



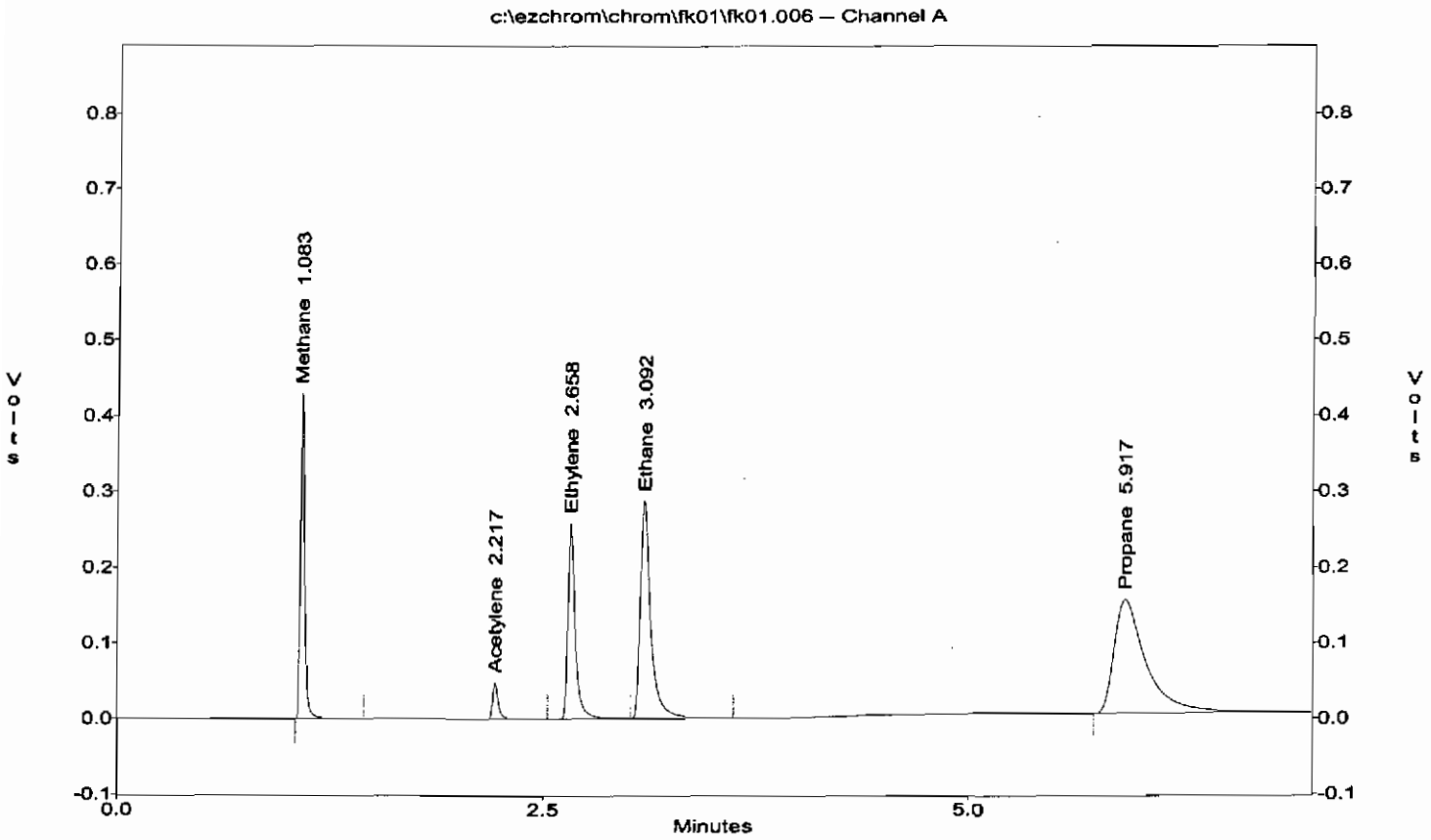
AS
11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.006
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-05
Acquired : Nov 01, 2011 12:38:25
Printed : Nov 01, 2011 16:47:32
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	745775.0	30507.1	25.42
2	Acetylene	2.217	112175.0	2647.6	41.30
3	Ethylene	2.658	761815.0	16311.8	44.49
4	Ethane	3.092	1248240.0	24914.4	47.67
5	Propane	5.917	1938976.0	27171.2	69.91



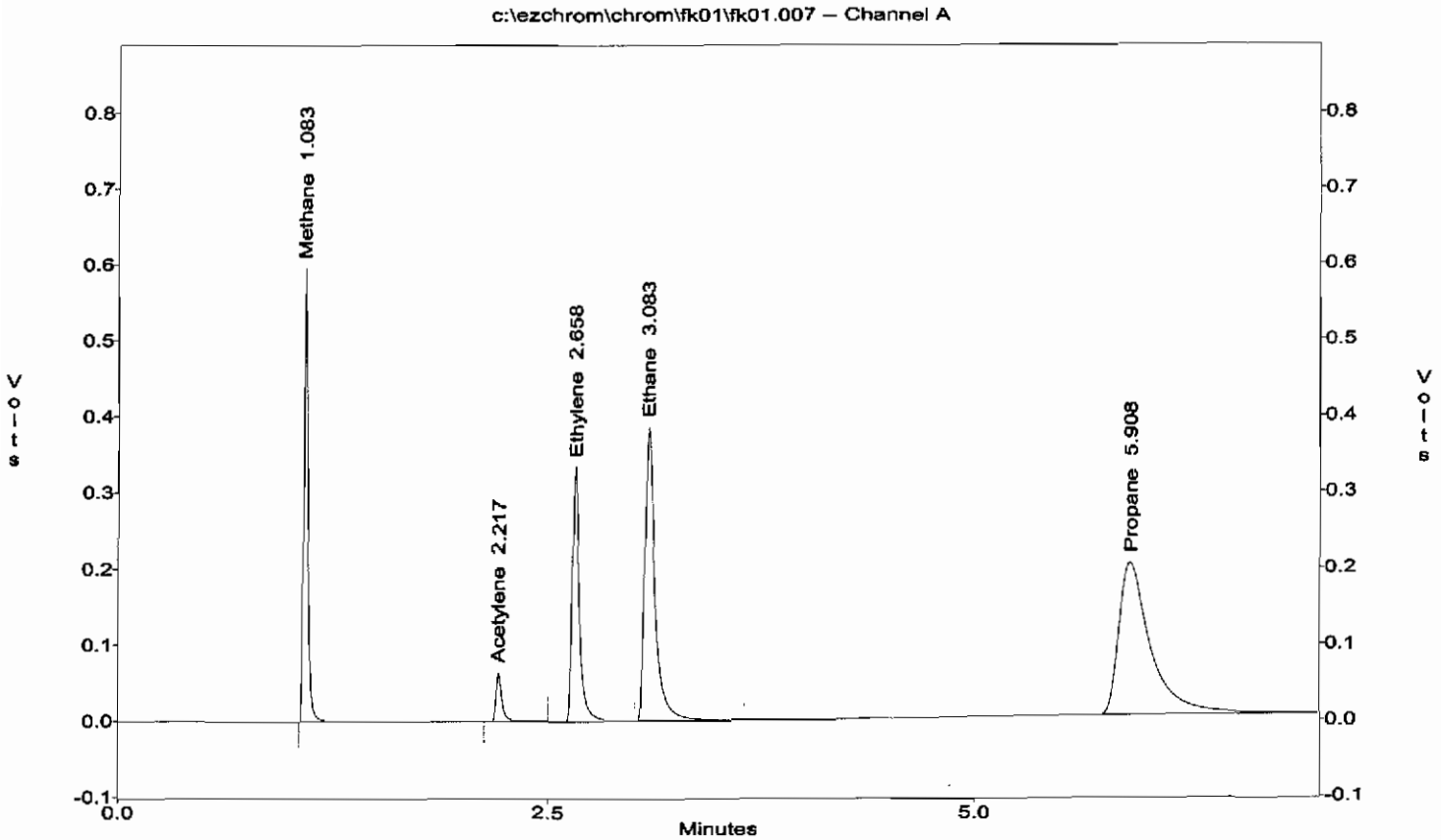
11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.007
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-06
Acquired : Nov 01, 2011 12:53:24
Printed : Nov 01, 2011 16:47:38
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	993496.0	30507.1	33.90
2	Acetylene	2.217	145648.0	2647.6	55.10
3	Ethylene	2.658	996770.0	16311.8	59.32
4	Ethane	3.083	1655327.0	24914.4	63.55
5	Propane	5.908	2591233.0	27171.2	93.21



AS 11/3/11

4044

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK01008A 11/01/2011 13:45
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	416247	13.64	1		15
Acetylene	2.175	2.149	2.201	22.0	2647.6	66913	25.27	15		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	437326	26.81	13		15
Ethane	3.075	3.025	3.125	25.4	24914.4	691218	27.74	9		15
Propane	5.900	5.824	5.976	37.3	27171.2	1111008	40.89	10		15

DG10K01.MET

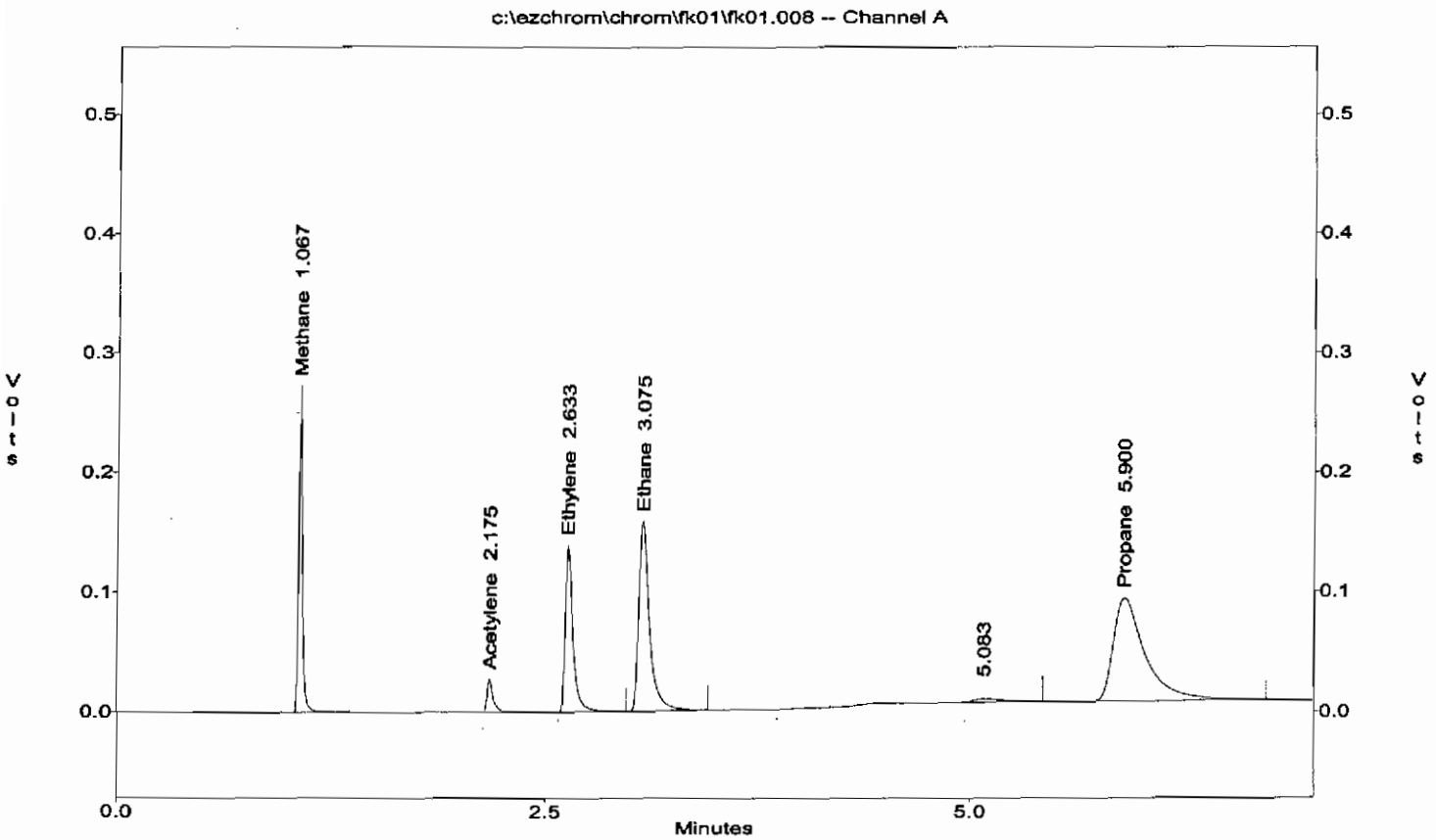
AJ
11/3/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.008
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : IDG10K0101
Acquired : Nov 01, 2011 13:45:55
Printed : Nov 01, 2011 16:47:55
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.067	416247.0	30507.1	13.64
2	Acetylene	2.175	66913.0	2647.6	25.27
3	Ethylene	2.633	437326.0	16311.8	26.81
4	Ethane	3.075	691218.0	24914.4	27.74
6	Propane	5.900	1111008.0	27171.2	40.89



11/3/11

DAILY CALIBRATIONS

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK08002A 11/08/2011 10:33
CONC UNIT : ppb

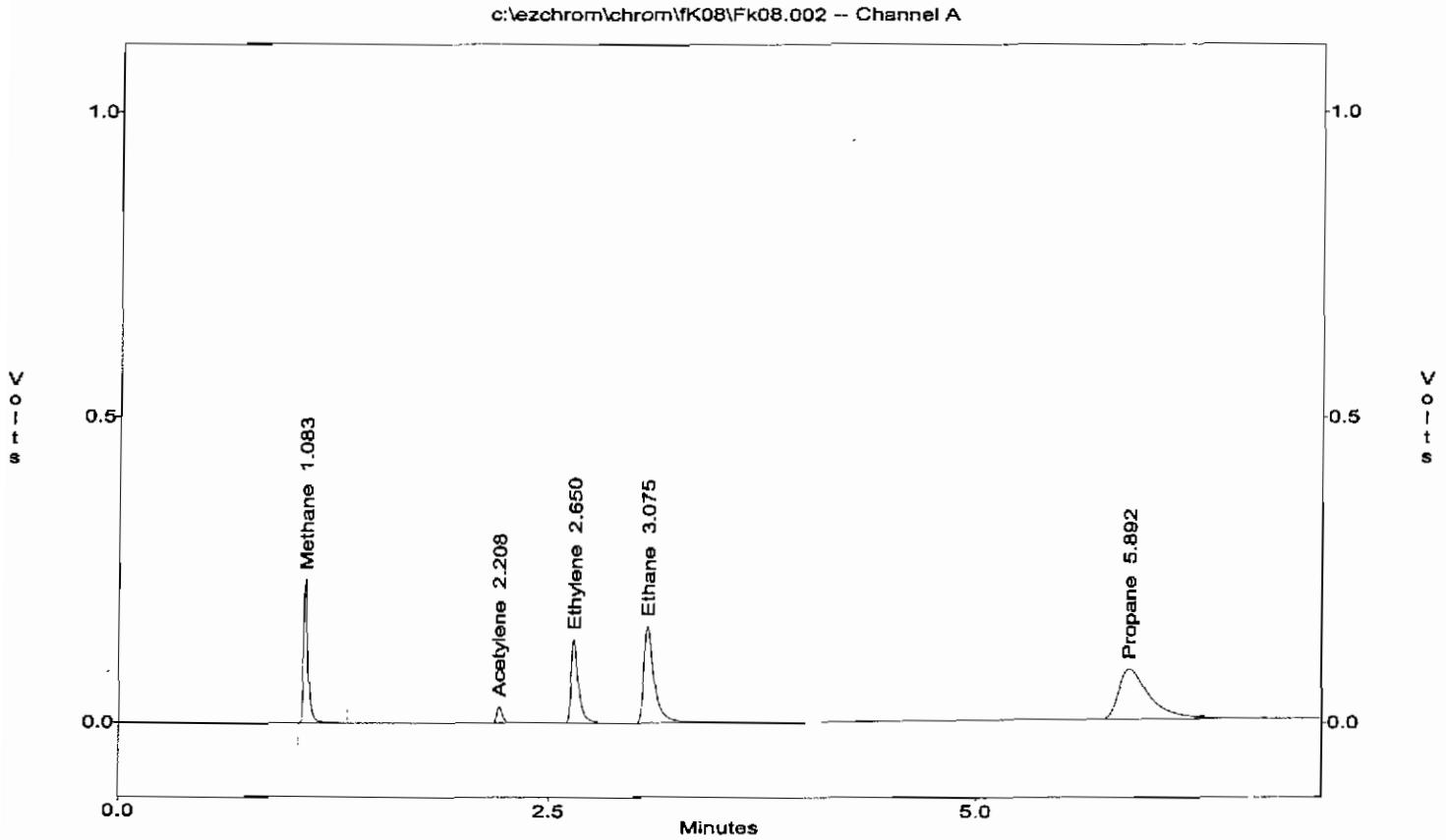
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.083	1.057	1.109	13.6	30507.1	425227	13.94	3		15
Acetylene	2.208	2.182	2.234	22.0	2647.6	62227	23.50	7		15
Ethylene	2.650	2.599	2.701	23.7	16311.8	415144	25.45	7		15
Ethane	3.075	3.025	3.125	25.4	24914.4	677823	27.21	7		15
Propane	5.892	5.816	5.968	37.3	27171.2	1050696	38.67	4		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK08\Fk08.002
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01411
Acquired : Nov 08, 2011 10:33:21
Printed : Nov 08, 2011 10:40:23
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	425227.0	30507.1	13.94
2	Acetylene	2.208	62227.0	2647.6	23.50
3	Ethylene	2.650	415144.0	16311.8	25.45
4	Ethane	3.075	677823.0	24914.4	27.21
5	Propane	5.892	1050696.0	27171.2	38.67



CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK08013A 11/08/2011 13:40
CONC UNIT : ppb

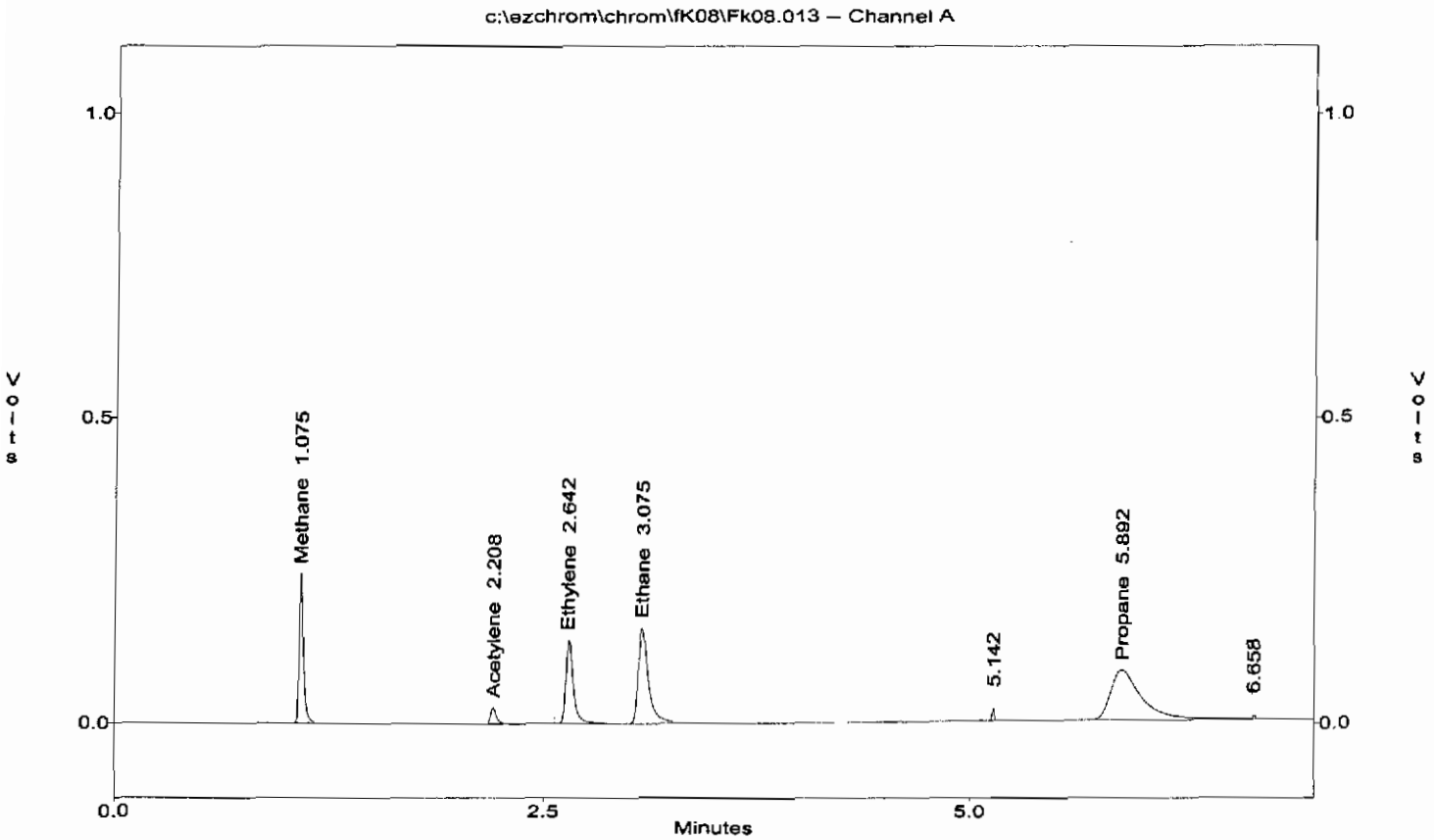
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	421077	13.80	2		15
Acetylene	2.208	2.182	2.234	22.0	2647.6	63646	24.04	9		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	411851	25.25	6		15
Ethane	3.075	3.025	3.125	25.4	24914.4	670318	26.91	6		15
Propane	5.892	5.816	5.968	37.3	27171.2	1045568	38.48	3		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK08\Fk08.013
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01412
Acquired : Nov 08, 2011 13:40:37
Printed : Nov 08, 2011 13:47:39
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	421077.0	30507.1	13.80
2	Acetylene	2.208	63646.0	2647.6	24.04
3	Ethylene	2.642	411851.0	16311.8	25.25
4	Ethane	3.075	670318.0	24914.4	26.90
6	Propane	5.892	1045568.0	27171.2	38.48



CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK08024A 11/08/2011 16:32
CONC UNIT : ppb

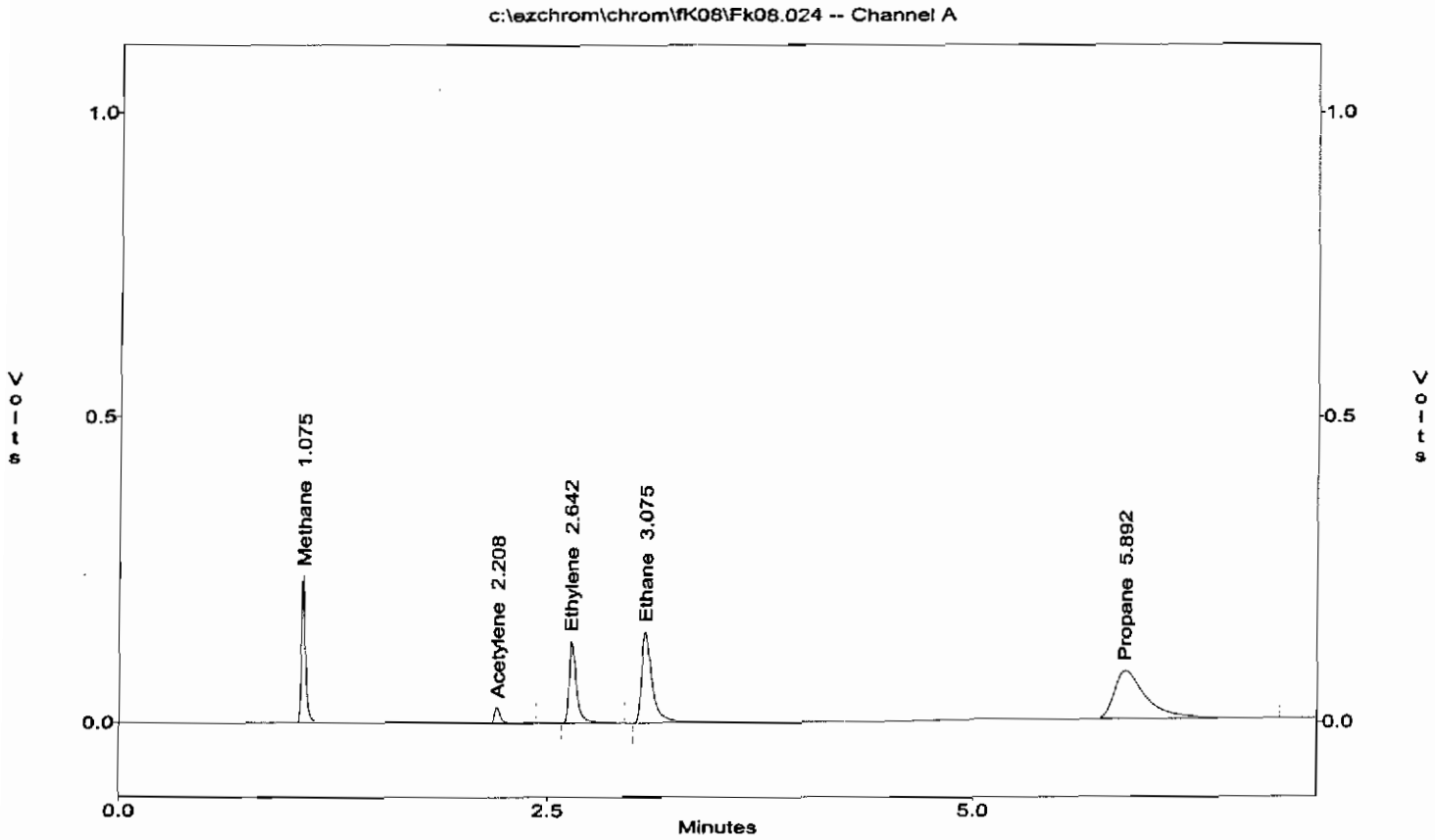
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	399796	13.10	-3		15
Acetylene	2.208	2.182	2.234	22.0	2647.6	60686	22.92	4		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	394477	24.18	2		15
Ethane	3.075	3.025	3.125	25.4	24914.4	637155	25.57	1		15
Propane	5.892	5.816	5.968	37.3	27171.2	1022376	37.63	1		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK08\Fk08.024
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01413
Acquired : Nov 08, 2011 16:32:07
Printed : Nov 08, 2011 16:39:09
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	399796.0	30507.1	13.11
2	Acetylene	2.208	60686.0	2647.6	22.92
3	Ethylene	2.642	394477.0	16311.8	24.18
4	Ethane	3.075	637155.0	24914.4	25.57
5	Propane	5.892	1022376.0	27171.2	37.63



CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK08027A 11/08/2011 17:23
CONC UNIT : ppb

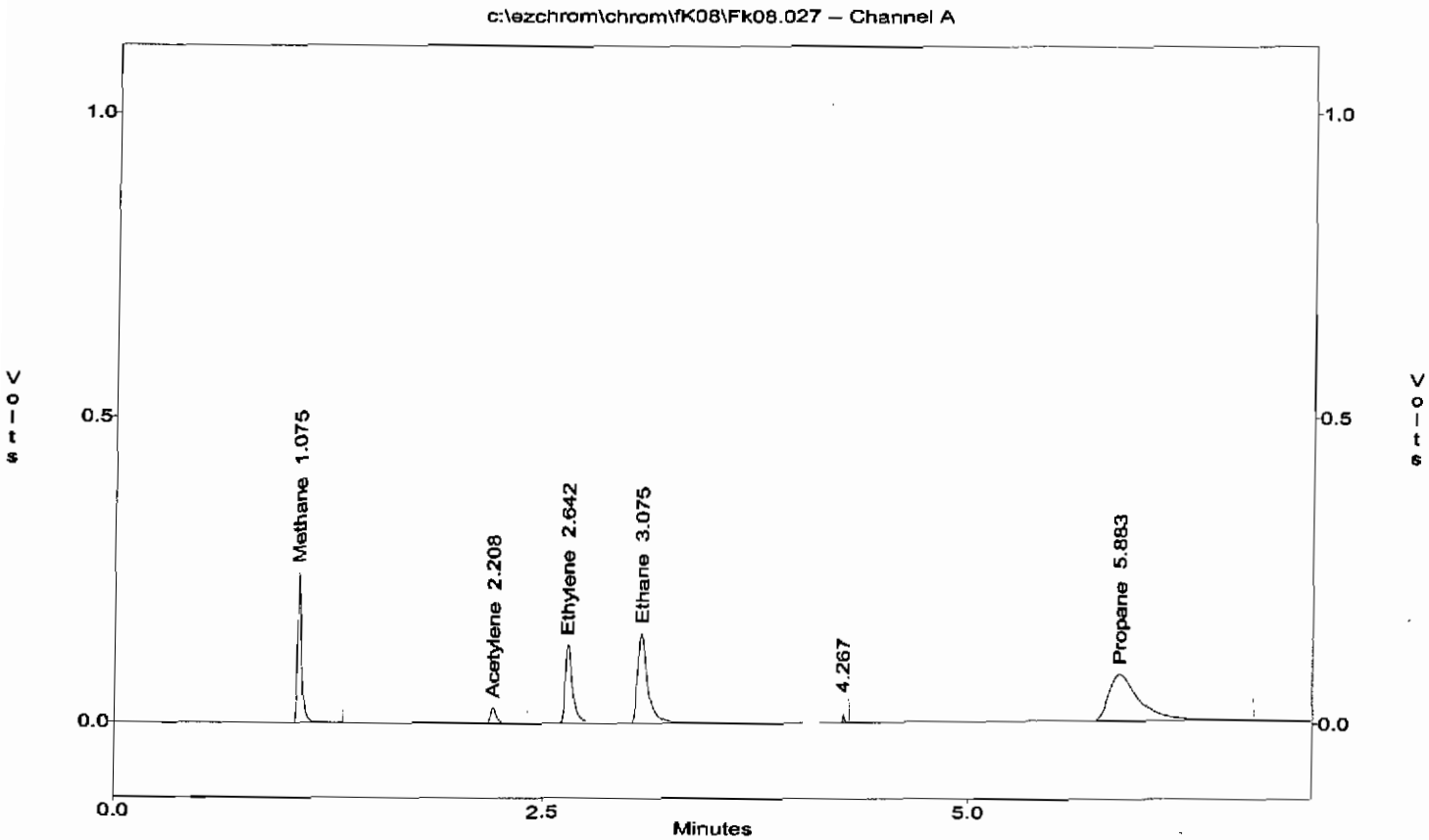
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	397749	13.04	-4		15
Acetylene	2.208	2.182	2.234	22.0	2647.6	59880	22.62	3		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	389554	23.88	1		15
Ethane	3.075	3.025	3.125	25.4	24914.4	626799	25.16	-1		15
Propane	5.883	5.807	5.959	37.3	27171.2	961108	35.37	-5		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK08\Fk08.027
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01414
Acquired : Nov 08, 2011 17:23:43
Printed : Nov 08, 2011 17:30:45
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	397749.0	30507.1	13.04
2	Acetylene	2.208	59880.0	2647.6	22.62
3	Ethylene	2.642	389554.0	16311.8	23.88
4	Ethane	3.075	626799.0	24914.4	25.16
6	Propane	5.883	961108.0	27171.2	35.37



CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK10002A 11/10/2011 09:49
CONC UNIT : ppb

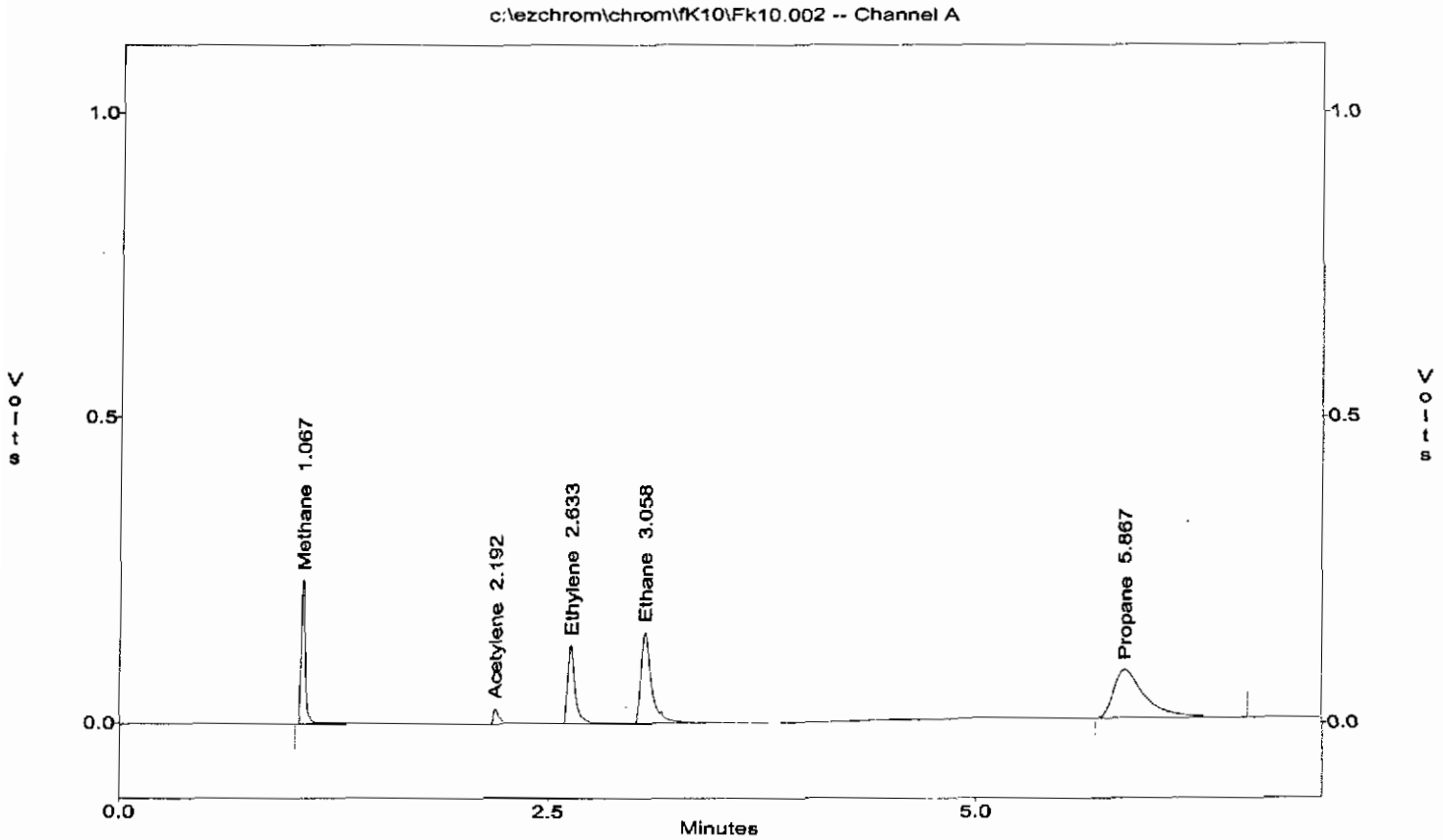
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	409444	13.42	-1		15
Acetylene	2.192	2.166	2.218	22.0	2647.6	58082	21.94	-0		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	385837	23.65	-0		15
Ethane	3.058	3.008	3.108	25.4	24914.4	645960	25.93	2		15
Propane	5.867	5.791	5.943	37.3	27171.2	993574	36.57	-2		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK10\Fk10.002
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01418
Acquired : Nov 10, 2011 09:49:28
Printed : Nov 10, 2011 09:56:30
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.067	409444.0	30507.1	13.42
2	Acetylene	2.192	58082.0	2647.6	21.94
3	Ethylene	2.633	385837.0	16311.8	23.65
4	Ethane	3.058	645960.0	24914.4	25.93
5	Propane	5.867	993574.0	27171.2	36.57



CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK10013A 11/10/2011 12:44
CONC UNIT : ppb

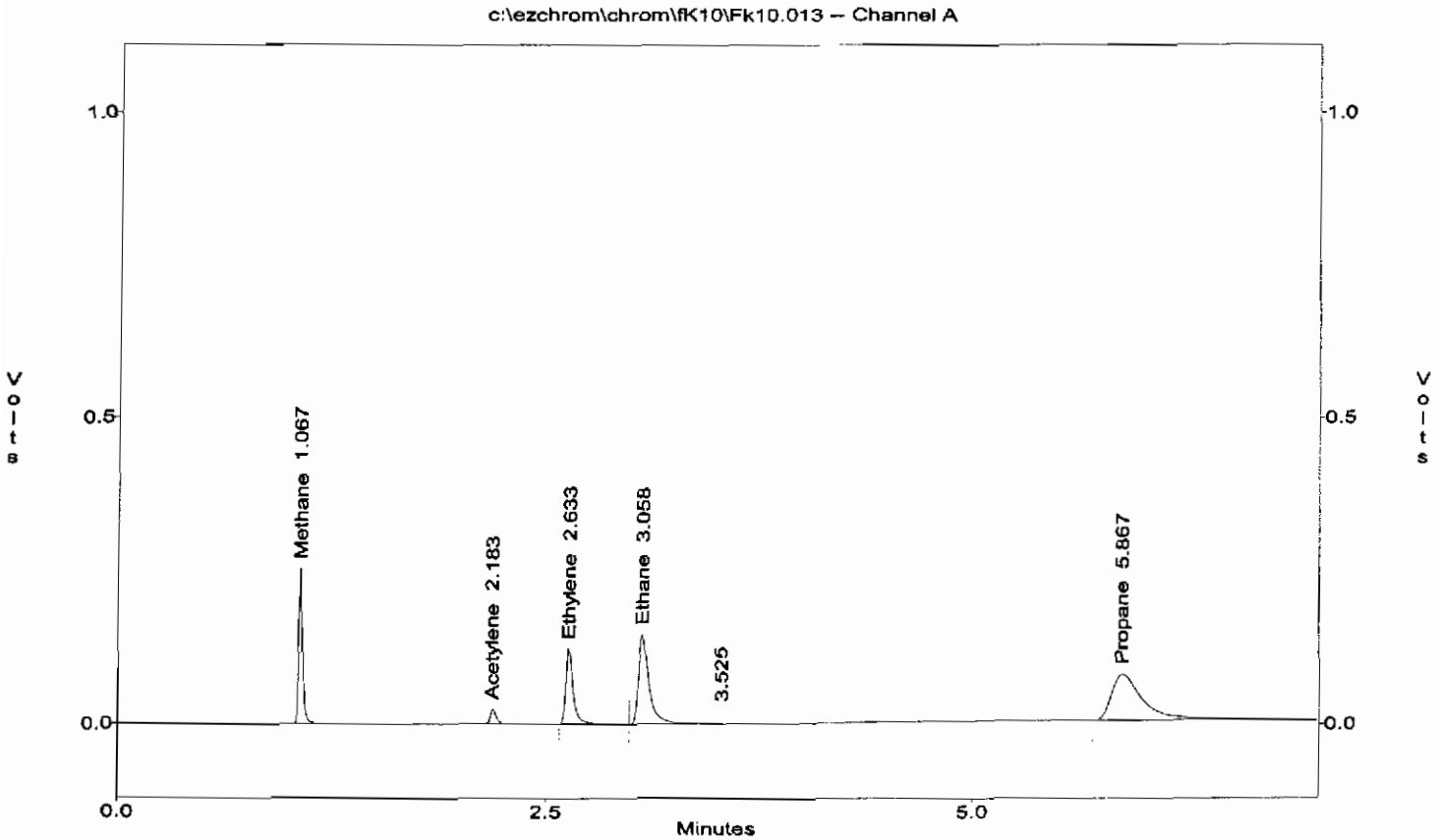
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	391217	12.82	-5		15
Acetylene	2.183	2.157	2.209	22.0	2647.6	55770	21.06	-4		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	378473	23.20	-2		15
Ethane	3.058	3.008	3.108	25.4	24914.4	627901	25.20	-1		15
Propane	5.867	5.791	5.943	37.3	27171.2	951688	35.03	-6		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK10\Fk10.013
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01419
Acquired : Nov 10, 2011 12:44:11
Printed : Nov 10, 2011 12:51:13
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.067	391217.0	30507.1	12.82
2	Acetylene	2.183	55770.0	2647.6	21.06
3	Ethylene	2.633	378473.0	16311.8	23.20
4	Ethane	3.058	627901.0	24914.4	25.20
6	Propane	5.867	951688.0	27171.2	35.03



CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK10026A 11/10/2011 16:32
CONC UNIT : ppb

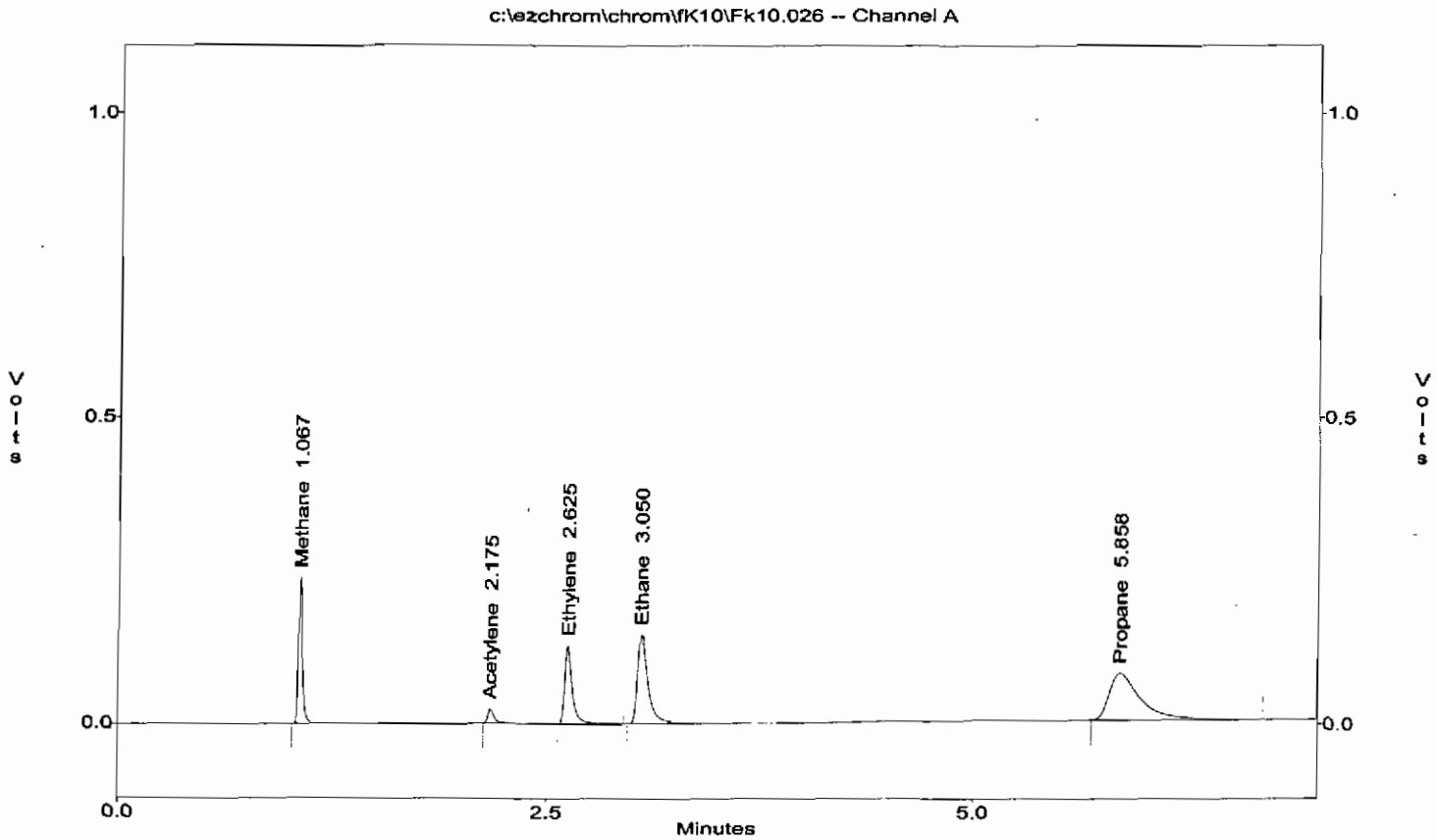
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	398006	13.05	-4		15
Acetylene	2.175	2.149	2.201	22.0	2647.6	58516	22.10	0		15
Ethylene	2.625	2.574	2.676	23.7	16311.8	387111	23.73	0		15
Ethane	3.050	3.000	3.100	25.4	24914.4	629153	25.25	-1		15
Propane	5.858	5.782	5.934	37.3	27171.2	981729	36.13	-3		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK10\Fk10.026
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01420
Acquired : Nov 10, 2011 16:32:43
Printed : Nov 10, 2011 16:39:44
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.067	398006.0	30507.1	13.05
2	Acetylene	2.175	58516.0	2647.6	22.10
3	Ethylene	2.625	387111.0	16311.8	23.73
4	Ethane	3.050	629153.0	24914.4	25.25
5	Propane	5.858	981729.0	27171.2	36.13



ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGAS ICAL

Book #:	A10-025
Instrument No.:	10
Analytical Sequence:	FK01
Method File:	DG10K01
Analytical Batch:	N/A

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGAS ICAL SSSA-05-01-10	500 ppm
DGAS ICV SSSA-05-01-7	500 ppm
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: SC

Date: 11/01/11

Disposed By: SC

Date Disposed: 11/01/11

Method: Dg10k01.met Batch: Fk01.seq Data: Fk01.011 - [Batch: fk01.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Run Type	Sample ID	Method	Filename	Sample Amt	Mult	Description
1	Unknown	IB10K407	dg10k01.met	FK01.001	100ml 1	1	
2	Unknown	DG10K01-01	dg10k01.met	FK01.002	1	1	
3	Unknown	DG10K01-02	dg10k01.met	FK01.003	1	1	
4	Unknown	DG10K01-03	dg10k01.met	FK01.004	1	1	DGAS ICML
5	Unknown	DG10K01-04	dg10k01.met	FK01.005	1	1	
6	Unknown	DG10K01-05	dg10k01.met	FK01.006	1	1	
7	Unknown	DG10K01-06	dg10k01.met	FK01.007	1	1	
8	Unknown	IDG10K0101	dg10k01.met	FK01.008	1	1	DGAS ICV
9	Unknown	IB	dg10k01.met	FK01.009	1	1	
10	Unknown	IB	dg10k01.met	FK01.010	1	1	
11	Unknown	IB	dg10k01.met	FK01.011	1	1	
12	Unknown	IB	dg10k01.met	FK01.012	1	1	
13	Unknown	IB	dg10k01.met	FK01.013	1	1	
14	Unknown	IB	dg10k01.met	FK01.014	1	1	
15	Unknown	IB	dg10k01.met	FK01.015	1	1	FINAL
16	Unknown	IB	dg10k01.met	FK01.016	1	1	
17	Unknown	IB	dg10k01.met	FK01.017	1	1	
18	Unknown	IB	dg10k01.met	FK01.018	1	1	
19	Unknown	IB	dg10k01.met	FK01.019	1	1	
20	Unknown	IB	dg10k01.met	FK01.020	1	1	
21	Unknown	IB	dg10k01.met	FK01.021	1	1	
22	Unknown	IB	dg10k01.met	FK01.022	1	1	
23	Unknown	IB	dg10k01.met	FK01.023	1	1	
24	Unknown	IB	dg10k01.met	FK01.024	1	1	
25	Unknown	IB	dg10k01.met	FK01.025	1	1	
26	Unknown	IB	dg10k01.met	FK01.026	1	1	
27	Unknown	IB	dg10k01.met	FK01.027	1	1	
28	Unknown	IB	dg10k01.met	FK01.028	1	1	
29	Unknown	IB	dg10k01.met	FK01.029	1	1	
30	Unknown	IB	dg10k01.met	FK01.030	1	1	
31	Unknown	IB	dg10k01.met	FK01.031	1	1	
32	Unknown	IB	dg10k01.met	FK01.032	1	1	
33	Unknown	IB	dg10k01.met	FK01.033	1	1	
34	Unknown	IB	dg10k01.met	FK01.034	1	1	

EC 11/01/11

Waiting For Trigger

Start | Method: Dg10k01... | Tuesday, November 01, 2011

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EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGK002W: K033, K054, K063

Book #:	A10-02S
Instrument No.:	10
Analytical Sequence:	FK08
Method File:	DG10K01
Analytical Batch:	CDG10K0141

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGAS DCC SSSB-07-36-01	200
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: SC

Date: 11/8/11

Disposed By: SC

Date Disposed: 11/8/11

Method: Dg10k01.met Batch: Fk08.seq Data: Fk08.028 - [Batch: fk08.seq]

File Edit Method Batch Options Analysis Control Window Help

Run	Run Type	Sample ID	Method	Filename	Sample Amt	Mult	Description
1	Unknown	IB10K411	dg10k01.met	FK08.001	100ul 1	1	
2	Unknown	CDG10K01411	dg10k01.met	FK08.002	1	1	
3	Unknown	DGK002WB Not evaluated	dg10k01.met	FK08.003	1	1	
4	Unknown	DGK002WQ	dg10k01.met	FK08.004	1	1	
5	Unknown	DGK002WL	dg10k01.met	FK08.005	1	1	
6	Unknown	DGK002WC	dg10k01.met	FK08.006	1	1	
7	Unknown	11K033-09	dg10k01.met	FK08.007	1	1	
8	Unknown	11K033-09T DF=25, ~~Not evaluated~~ SC 11/8/11	dg10k01.met	FK08.008	4ul 1	25	Not evaluated
9	Unknown	11K033-09I DF=50	dg10k01.met	FK08.009	2ul 1	50	
10	Unknown	11K054-01	dg10k01.met	FK08.010	100ul 1	1	
11	Unknown	11K054-02	dg10k01.met	FK08.011	1	1	
12	Unknown	11K054-01T DF=100	dg10k01.met	FK08.012	10ul(10x) 1	100	
13	Unknown	CDG10K01412	dg10k01.met	FK08.013	100ul 1	1	
14	Unknown	11K054-03	dg10k01.met	FK08.014	1	1	
15	Unknown	11K054-02T DF=100	dg10k01.met	FK08.015	10ul(10x) 1	100	
16	Unknown	11K054-04	dg10k01.met	FK08.016	100ul 1	1	
17	Unknown	11K054-04T DF=4	dg10k01.met	FK08.017	25ul 1	4	
18	Unknown	11K054-03T DF=400	dg10k01.met	FK08.018	5ul(20x) 1	400	FINAL
19	Unknown	11K054-05	dg10k01.met	FK08.019	100ul 1	1	
20	Unknown	11K054-05M	dg10k01.met	FK08.020	1	1	
21	Unknown	11K054-05S	dg10k01.met	FK08.021	1	1	
22	Unknown	11K054-05T DF=500	dg10k01.met	FK08.022	4ul(20x) 1	500	
23	Unknown	11K054-04I DF=400	dg10k01.met	FK08.023	5ul(20x) 1	400	
24	Unknown	CDG10K01413	dg10k01.met	FK08.024	100ul 1	1	
25	Unknown	11K063-01	dg10k01.met	FK08.025	1	1	
26	Unknown	11K063-01T DF=1000	dg10k01.met	FK08.026	2ul(20x) 1	1000	
27	Unknown	CDG10K01414	dg10k01.met	FK08.027	100ul 1	1	
28	Unknown	IB	dg10k01.met	FK08.028	1	1	
29	Unknown	IB	dg10k01.met	FK08.029	1	1	
30	Unknown	IB	dg10k01.met	FK08.030	1	1	
31	Unknown	IB SC 11/8/11	dg10k01.met	FK08.031	1	1	
32	Unknown	IB	dg10k01.met	FK08.032	1	1	
33	Unknown	IB	dg10k01.met	FK08.033	1	1	
34	Unknown	IB	dg10k01.met	FK08.034	1	1	

Waiting For Trigger...

Tuesday, November 08, 2011

Start | EZ Chrom Chromatograp | Method: Dg10k01... | untitled - Paint | Method: Dg10k01.met | Calculator | Explorer - FK08 | 5:02 PM

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGK004W: K063, K069

Book #:	A10-025
Instrument No.:	10
Analytical Sequence:	FK10
Method File:	DG10K01
Analytical Batch:	CDG10K01418

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGAS DKC 555B-07-36-3	200
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: RA

Date: 11/10/11

Disposed By: RA

Date Disposed: 11/10/11

Method: Dg10k01.met Batch: Fk10.seq Data: Fk10.027 - [Batch: fk10.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Sample ID	Method	Filename	Sample Amt	Mult.	Description
1	IB10K418	dg10k01.met	FK10.001	100ul 1	1	
2	CDG10K01418	dg10k01.met	FK10.002	1	1	
3	DGK004WB	dg10k01.met	FK10.003	1	1	
4	DGK004WL	dg10k01.met	FK10.004	1	1	
5	DGK004WC	dg10k01.met	FK10.005	1	1	
6	11K063-02	dg10k01.met	FK10.006	1	1	
7	11K063-02M	dg10k01.met	FK10.007	1	1	
8	11K063-02S	dg10k01.met	FK10.008	1	1	FINAL
9	11K063-02T DF=1000	dg10k01.met	FK10.009	2ul (20x) 1	1000	
10	11K063-03	dg10k01.met	FK10.010	100ul 1	1	
11	11K063-04	dg10k01.met	FK10.011	1	1	
12	11K063-03T DF=1000	dg10k01.met	FK10.012	2ul (20x) 1	1000	
13	CDG10K01419	dg10k01.met	FK10.013	100ul 1	1	
14	11K063-04T DF=10	dg10k01.met	FK10.014	10ul 1	10	
15	11K063-05	dg10k01.met	FK10.015	100ul 1	1	
16	11K063-06	dg10k01.met	FK10.016	1	1	
17	11K063-05T DF=2	dg10k01.met	FK10.017	50ul 1	2	
18	11K063-06T DF=1000	dg10k01.met	FK10.018	2ul (20x) 1	1000	
19	11K069-05	dg10k01.met	FK10.019	100ul 1	1	
20	11K069-05T DF=50	dg10k01.met	FK10.020	2ul 1	50	
21	11K069-05I DF=100	dg10k01.met	FK10.021	10ul (10x) 1	100	
22	11K069-06	dg10k01.met	FK10.022	100ul 1	1	
23	TEST	dg10k01.met	FK10.023	— 1	1	
24	11K069-06T DF=10	dg10k01.met	FK10.024	10ul 1	10	
25	11K069-06I DF=100	dg10k01.met	FK10.025	10ul (10x) 1	100	
26	CDG10K01420	dg10k01.met	FK10.026	100ul 1	1	
27	IB	dg10k01.met	FK10.027	1	1	
28	IB	dg10k01.met	FK10.028	1	1	
29	IB	dg10k01.met	FK10.029	1	1	
30	IB	dg10k01.met	FK10.030	1	1	
31	IB	dg10k01.met	FK10.031	1	1	
32	IB	dg10k01.met	FK10.032	1	1	
33	IB	dg10k01.met	FK10.033	1	1	
34	IB	dg10k01.met	FK10.034	1	1	

11/10/11

Instrument 2 STO 10

Start | EZ Chrom Chroma | Method: Dg10k... | Untitled - Paint | Method Dg10k01 | Calculator | Method: V650_09 | Explo | Thursday, November 10, 2011

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/01/11 Time: 10:00 End Date: 11/01/11 Time: 10:40

PREPARATION BATCH # N/A

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (< 2)	Notes
01	DG10K01-01	39	4	N/A	
02	-02			N/A	
03	-03			N/A	DGAS ICAL
04	-04			N/A	
05	-05			N/A	
06	-06			N/A	
07	IDG10K01 01			N/A	DGAS ICV
08					
09					
10					
11					
12					
13					SC 11/01/11
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Standards	ID	Amount Added (µl)
LCS/MS / ICV	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic free
He	Air Gas
ICAL STD (500 ppm)	SSSA-05-01-10 (SPECIALTY AIR)
ICV STD 500 ppm	SSSA-05-01-7 (MATHESON)

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #: (ESS)	28100705

Comments:

1) 0.08 ml ICAL STD + 3.92 ml He
2) 0.4 ml 3.6 ml
3) 1.0 ml 3.0 ml
4) 1.6 ml 2.4 ml
5) 3.0 ml 1.0 ml
6) 4.0 ml 0 ml

Prepared By: SC

Standard Added By: SC

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EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☐ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/8/11 Time: 9:30 End Date: 11/8/11 Time: 10:30

PREPARATION BATCH # DGK002W

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DGK002WB	39	4	N/A	
02	L			N/A	
03	C			N/A	
04	11K033-09			✓	
05	11K054-01			7	
06	-02			7	
07	-03			7	
08	-04			7	
09	-05			7	
10	-05M			7	
11	-05S			7	
12	11K063-01			7	
13					
14					
15					
16					
17					SC 11/08/11
18					
19					
20					
21					
22					
23					
24					
25					

Standards	ID	Amount Added (µl)
LCS/MS	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic free
He	Air Gas

Thermometer ID #:	
Tedlar Bag Lot #:	

Comments:

Prepared By: SC

Standard Added By: SC

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EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/10/11 Time: 09:40 End Date: 11/10/11 Time: 10:05

PREPARATION BATCH # DGK004W

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DGK004WB	39	4	N/A	
02	L			N/A	
03	C			N/A	
04	11K063-02			✓	
05	02M			✓	
06	02S			✓	
07	03			✓	
08	04			✓	
09	05			✓	
10	06			✓	
11	11K069-05			✓	
12	06			✓	
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

RA 11/10/11

Standards	ID	Amount Added (µl)
LCS/MS	555A-05-01-7	1600

Reagent	Source
H_2O	Organic Free
He	Air Gas

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #:	28100705

Comments:

Prepared By: RA

Standard Added By: RA

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

SDG#: 11K063

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K063

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

A total of six (6) water samples were received on 11/07/11 for Dissolved Metals by ICP analysis, Method 3010A/6010B in accordance with Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source. Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for IPK028WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample was analyzed at the frequency prescribed by the project.
Percent recoveries for K063-02M/S were within project QC limits.
In addition, analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED METALS BY TRACE ICP

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K063
Instrument ID : T-ID8

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	1PK028WB	1	NA	11/18/1115:46	11/16/1111:37	ID8K018028	ID8K018026	1PK028W	Method Blank
LCS1W	1PK028WL	1	NA	11/18/1115:49	11/16/1111:37	ID8K018029	ID8K018026	1PK028W	Lab Control Sample (LCS)
LCD1W	1PK028WC	1	NA	11/18/1115:52	11/16/1111:37	ID8K018030	ID8K018026	1PK028W	LCS Duplicate
MW-70-PMW03B-097AS	K063-02A	1	NA	11/18/1115:54	11/16/1111:37	ID8K018031	ID8K018026	1PK028W	Analytical Spike Sample
MW-70-PMW03B-097	K063-02	1	NA	11/18/1115:57	11/16/1111:37	ID8K018032	ID8K018026	1PK028W	Field Sample
MW-70-PMW03B-097DL	K063-02J	5	NA	11/18/1116:00	11/16/1111:37	ID8K018033	ID8K018026	1PK028W	Diluted Sample
MW-70-PMW03B-097MS	K063-02M	1	NA	11/18/1116:03	11/16/1111:37	ID8K018034	ID8K018026	1PK028W	Matrix Spike Sample (MS)
MW-70-PMW03B-097MSD	K063-02S	1	NA	11/18/1116:06	11/16/1111:37	ID8K018035	ID8K018026	1PK028W	MS Duplicate (MSD)
MW-70-PMW03A-095	K063-01	1	NA	11/18/1116:09	11/16/1111:37	ID8K018036	ID8K018026	1PK028W	Field Sample
IW-70-SAB06-099	K063-03	1	NA	11/18/1116:21	11/16/1111:37	ID8K018040	ID8K018038	1PK028W	Field Sample
MW-70-PMW02A-100	K063-04	1	NA	11/18/1116:24	11/16/1111:37	ID8K018041	ID8K018038	1PK028W	Field Sample
MW-70-PMW02B-101	K063-05	1	NA	11/18/1116:27	11/16/1111:37	ID8K018042	ID8K018038	1PK028W	Field Sample
IR-70-FO-098	K063-06	1	NA	11/18/1116:30	11/16/1111:37	ID8K018043	ID8K018038	1PK028W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11 10:42
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
SDG NO.	: 11K063	Date Extracted:	11/16/11 11:37
Sample ID:	MW-70-PMW03A-095	Date Analyzed:	11/18/11 16:09
Lab Samp ID:	K063-01	Dilution Factor:	1
Lab File ID:	ID8K018036	Matrix :	WATER
Ext Btch ID:	IPK028W	% Moisture :	NA
Calib. Ref.:	ID8K018026	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	13.4	0.200	0.0400
Manganese	0.358	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11 12:08
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
SDG NO.	: 11K063	Date Extracted:	11/16/11 11:37
Sample ID:	MW-70-PMW03B-097	Date Analyzed:	11/18/11 15:57
Lab Samp ID:	K063-02	Dilution Factor:	1
Lab File ID:	ID8K018032	Matrix :	WATER
Ext Btch ID:	IPK028W	% Moisture :	NA
Calib. Ref.:	ID8K018026	Instrument ID :	EMAXTI08

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	1.02	0.200	0.0400
Manganese	0.387	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11 14:30
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
SDG NO.	: 11K063	Date Extracted:	11/16/11 11:37
Sample ID:	IW-70-SAB06-099	Date Analyzed:	11/18/11 16:21
Lab Samp ID:	K063-03	Dilution Factor:	1
Lab File ID:	ID8K018040	Matrix :	WATER
Ext Btch ID:	IPK028W	% Moisture :	NA
Calib. Ref.:	ID8K018038	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	0.208	0.200	0.0400
Manganese	0.429	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11 15:42
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
SDG NO.	: 11K063	Date Extracted:	11/16/11 11:37
Sample ID:	MW-70-PMW02A-100	Date Analyzed:	11/18/11 16:24
Lab Samp ID:	K063-04	Dilution Factor:	1
Lab File ID:	IDBK018041	Matrix :	WATER
Ext Btch ID:	IPK028W	% Moisture :	NA
Calib. Ref.:	IDBK018038	Instrument ID :	EMAXTIDB

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	0.553	0.200	0.0400
Manganese	0.287	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11 16:27
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
SDG NO.	: 11K063	Date Extracted:	11/16/11 11:37
Sample ID:	MW-70-PMW02B-101	Date Analyzed:	11/18/11 16:27
Lab Samp ID:	K063-05	Dilution Factor:	1
Lab File ID:	ID8K018042	Matrix :	WATER
Ext Btch ID:	IPK028W	% Moisture :	NA
Calib. Ref.:	ID8K018D38	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	0.509	0.200	0.0400
Manganese	0.322	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/07/11 12:25
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/07/11
SDG NO.	: 11K063	Date Extracted:	11/16/11 11:37
Sample ID:	IR-70-FD-098	Date Analyzed:	11/18/11 16:30
Lab Samp ID:	K063-06	Dilution Factor:	1
Lab File ID:	ID8K018043	Matrix :	WATER
Ext Btch ID:	IPK028W	% Moisture :	NA
Calib. Ref.:	ID8K018038	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	1.03	0.200	0.0400
Manganese	0.395	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/16/11
SDG NO.	: 11K063	Date Extracted:	11/16/11 11:37
Sample ID:	MBLK1W	Date Analyzed:	11/18/11 15:46
Lab Samp ID:	IPK028WB	Dilution Factor:	1
Lab File ID:	ID8K018028	Matrix :	WATER
Ext Btch ID:	IPK028W	% Moisture :	NA
Calib. Ref.:	ID8K018026	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	ND	0.200	0.0400
Manganese	ND	0.200	0.00300

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K063
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	IPK028WB	IPK028WL	IPK028WC		
LAB FILE ID:	ID8K018028	ID8K018029	ID8K018030		
DATIME EXTRCTD:	11/16/1111:37	11/16/1111:37	11/16/1111:37	DATE COLLECTED:	NA
DATIME ANALYZD:	11/18/1115:46	11/18/1115:49	11/18/1115:52	DATE RECEIVED:	11/16/11
PREP. BATCH:	IPK028W	IPK028W	IPK028W		
CALIB. REF:	ID8K018026	ID8K018026	ID8K018026		

ACCESSION:

PARAMETER	BLNK RSLT mg/L	SPIKE AMT mg/L	BS RSLT mg/L	BS % REC	SPIKE AMT mg/L	BSD RSLT mg/L	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	ND	.5	.536	107	.5	.527	105	2	80-120	20
Iron	ND	5	5.19	104	5	5.09	102	2	80-120	20
Manganese	ND	.5	.496	99	.5	.488	98	2	80-120	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K063
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MW-70-PMW03B-097				
CONTROL NO.:	K063-02	K063-02M	K063-02S		
LAB FILE ID:	ID8K018032	ID8K018034	ID8K018035		
DATIME EXTRCTD:	11/16/1111:37	11/16/1111:37	11/16/1111:37	DATE COLLECTED:	11/07/11 12:08
DATIME ANALYZD:	11/18/1115:57	11/18/1116:03	11/18/1116:06	DATE RECEIVED:	11/07/11
PREP. BATCH:	IPK028W	IPK028W	IPK028W		
CALIB. REF:	ID8K018026	ID8K018026	ID8K018026		

ACCESSION:

PARAMETER	SMPL RSLT mg/L	SPIKE AMT mg/L	MS RSLT mg/L	MS % REC	SPIKE AMT mg/L	MSD RSLT mg/L	MSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	ND	.5	.542	108	.5	.549	110	1	75-125	20
Iron	1.02	5	6.03	100	5	6.13	102	2	75-125	20
Manganese	.387	.5	.87	97	.5	.9	103	3	75-125	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	MW-70-PMW03B-097	MW-70-PMW03B-097DL		
EMAX SAMP ID:	K063-02	K063-02J		
LAB FILE ID:	ID8K018032	ID8K018033		
DATE EXTRACTED:	11/16/1111:37	11/16/1111:37	DATE COLLECTED:	11/07/11 12:08
DATE ANALYZED:	11/18/1115:57	11/18/1116:00	DATE RECEIVED:	11/07/11
PREP. BATCH:	IPK028W	IPK028W		
CALIB. REF:	ID8K018026	ID8K018026		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SERIAL DIL RSLT (mg/L)	DIF RSLT %	QC LIMIT (%)
Arsenic	ND	ND	0	10
Iron	1.02	1.08	6	10
Manganese	0.387	0.414J	NA	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 7D.
SDG NO.: 11K063
METHOD: METHOD 3010A/6010B (DISSOLVED)

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MATRIX: WATER % MOISTURE: NA
DILTN FACTR: 1 1
SAMPLE ID: MW-70-PMWD3B-097
CONTROL NO.: K063-02 K063-D2A
LAB FILE ID: ID8K018032 ID8KD18031
DATIME EXTRCTD: 11/16/1111:37 11/16/1111:37 DATE COLLECTED: 11/D7/11 12:D8
DATIME ANALYZD: 11/18/1115:57 11/18/1115:54 DATE RECEIVED: 11/07/11
PREP. BATCH: IPK028W IPKD28W
CALIB. REF: ID8K018026 ID8K018D26

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	AS RSLT (mg/L)	AS % REC	QC LIMIT (%)
Arsenic	ND	.5	.59	118	75-125
Iron	1.02	5	6.45	1D9	75-125
Manganese	.387	.5	.905	104	75-125

ICP QC CHECK TABLE

QC	ICV	CCV	ICSAB	ICSA	MLCV
Limit%	90-110	90-110	80-120	80-120	80-120
Comp	mg/L	mg/L	mg/L	mg/L	mg\L
Al	100	100	400	400	200
Sb	1.5	1.5	1	0	5
As	1	1	1	0	1
Ba	2	2	0.5	0	5
Be	1.5	1.5	0.5	0	5
B	2.5	2.5	0.5	0	5
Cd	2	2	1	0	5
Ca	75	75	500	500	250
Cr	2.5	2.5	0.5	0	5
Co	1	1	0.5	0	1
Cu	2.5	2.5	0.5	0	5
Fe	25	25	200	200	200
Pb	2.5	2.5	1	0	5
Li	0.5	0.5	1	0	0.5
Mg	60	60	200	200	100
Mn	2.5	2.5	0.5	0	5
Mo	2.5	2.5	1	0	5
Ni	2.5	2.5	1	0	5
K	60	60	75	0	250
Se	1	1	1	0	1
Ag	0.5	0.5	1	0	0.5
Na	60	60	75	0	150
Sr	0.5	0.5	0.5	0	0.5
Tl	2.5	2.5	1	0	5
Sn	0.5	0.5	1	0	0.5
Ti	0.5	0.5	1	0	0.5
V	1.5	1.5	0.5	0	5
Zn	2.5	2.5	1	0	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 11/18/11 14:26

End Date: 11/18/11 19:05

SOP #	Rev. #
☑ EMAX-6010	7
☐ EMAX-6010C	1
☐ EMAX-200.7	2
☐ EMAX-	

Comments:

CCB3 Ca > 3x IDL However associated sample K063-02 detected > 10x blank conc. level. Thus no corrective action.

CCB4 Ca > 3x IDL. However associated samples K063-06, K063-05 and K039-01 detected > 10x blank conc. level. Thus no corrective action.

CCB5 Ca > 3x IDL. However associated samples K108-01, K108-02 detected > 10x ~~be~~ blank conc. Thus no corrective action

CCB6 Ca > 3x IDL. However associated sample K070-01, K070-02, and K070-03 detected ~~>4x IDL~~ > 10x blank conc. Thus no correction action.

CCB7 Ca > 3x IDL. However associated sample K105-01 K093-01 and K072-01 detected > 10x blank conc. Thus no corrective action

Book #: AD8-021

Instrument No.: D8

Analytical Batch: 108K018

Analytical Sequence: S-11K6010 (v26)

Method File: 11K6010 (v26)

Database: EMAX 14

	STANDARDS ID		STANDARDS ID
S0	SM1814-7805	S30	SM1814-6802
S1	NA	S31	-6803
S2		ICV	-8204
S3		CCV	-8301
S4		ICSA	-8502
S5		ICSAB	-6702
S6		CRI/MRL 1	-8101
S7		MRL2	-7401
S8			
S9			
S10			
S11			
S12			
S16			
S17			
S18			
S20	SM1814-8401		
S21	-6503		
S22	~~-6504~~ -6504		
S23	-8402		
S24	-6702		
S25	-6703		
S26	-704		
S27	-7802		
S28	-7803		
S29	-7804		

Analyzed By: PP

Date: 11/18/11

SEQUENCE FILE : ID8K018

4-18	19-33	34-43	44-53	54-63
LFID	LSID	TIME	DATE	DF
ID8K018001	Blank	14:26	11/18/11	1.000
ID8K018002	S20	14:29	11/18/11	1.000
ID8K018003	S21	14:32	11/18/11	1.000
ID8K018004	S22	14:35	11/18/11	1.000
ID8K018005	S23	14:38	11/18/11	1.000
ID8K018006	S24	14:41	11/18/11	1.000
ID8K018007	S25	14:44	11/18/11	1.000
ID8K018008	S26	14:47	11/18/11	1.000
ID8K018009	S27	14:50	11/18/11	1.000
ID8K018010	S28	14:53	11/18/11	1.000
ID8K018011	S29	14:56	11/18/11	1.000
ID8K018012	S30	14:59	11/18/11	1.000
ID8K018013	S31	15:02	11/18/11	1.000
ID8K018014	1CV	15:05	11/18/11	1.000
ID8K018015	1CB	15:08	11/18/11	1.000
ID8K018016	MRLK1B01	15:11	11/18/11	1.000
ID8K018017	MRLK1B02	15:14	11/18/11	1.000
ID8K018018	1CSA1	15:17	11/18/11	1.000
ID8K018019	1CSAB1	15:20	11/18/11	1.000
ID8K018020	CCV1	15:23	11/18/11	1.000
ID8K018021	CCB1	15:26	11/18/11	1.000
ID8K018022	K467-01A	15:29	11/18/11	1.000
ID8K018023	K467-01W	15:31	11/18/11	1.000
ID8K018024	K467-01J	15:34	11/18/11	5.000
ID8K018025	Blank	15:37	11/18/11	1.000
ID8K018026	CCV2	15:40	11/18/11	1.000
ID8K018027	CCB2	15:43	11/18/11	1.000
ID8K018028	1PK028WB	15:46	11/18/11	1.000
ID8K018029	1PK028WL	15:49	11/18/11	1.000
ID8K018030	1PK028WC	15:52	11/18/11	1.000
ID8K018031	K063-02A	15:54	11/18/11	1.000
ID8K018032	K063-02	15:57	11/18/11	1.000
ID8K018033	K063-02J	16:00	11/18/11	5.000
ID8K018034	K063-02M	16:03	11/18/11	1.000
ID8K018035	K063-02S	16:06	11/18/11	1.000
ID8K018036	K063-01	16:09	11/18/11	1.000
ID8K018037	Blank	16:12	11/18/11	1.000
ID8K018038	CCV3	16:15	11/18/11	1.000
ID8K018039	CCB3	16:18	11/18/11	1.000
ID8K018040	K063-03	16:21	11/18/11	1.000
ID8K018041	K063-04	16:24	11/18/11	1.000
ID8K018042	K063-05	16:27	11/18/11	1.000
ID8K018043	K063-06	16:30	11/18/11	1.000
ID8K018044	K039-01	16:33	11/18/11	1.000
ID8K018045	K039-01D	16:36	11/18/11	1.000
ID8K018046	Blank	16:39	11/18/11	1.000
ID8K018047	CCV4	16:42	11/18/11	1.000
ID8K018048	CCB4	16:45	11/18/11	1.000
ID8K018049	1PK031WB	16:48	11/18/11	1.000
ID8K018050	1PK031WL	16:51	11/18/11	1.000
ID8K018051	1PK031WC	16:53	11/18/11	1.000
ID8K018052	K108-02A	16:56	11/18/11	1.000

ID8K018053	K108-02	16:59	11/18/11	1.000
ID8K018054	K108-02J	17:02	11/18/11	5.000
ID8K018055	K108-02M	17:04	11/18/11	1.000
ID8K018056	K108-02S	17:07	11/18/11	1.000
ID8K018057	K108-01	17:10	11/18/11	1.000
ID8K018058	Blank	17:13	11/18/11	1.000
ID8K018059	CCV5	17:16	11/18/11	1.000
ID8K018060	CCB5	17:19	11/18/11	1.000
ID8K018061	K084-01	17:22	11/18/11	1.000
ID8K018062	K084-02	17:24	11/18/11	1.000
ID8K018063	K084-03	17:27	11/18/11	1.000
ID8K018064	K084-04	17:30	11/18/11	1.000
ID8K018065	K084-05	17:33	11/18/11	1.000
ID8K018066	K084-06	17:37	11/18/11	1.000
ID8K018067	K070-01	17:39	11/18/11	1.000
ID8K018068	K070-02	17:43	11/18/11	1.000
ID8K018069	K070-03	17:46	11/18/11	1.000
ID8K018070	Blank	17:49	11/18/11	1.000
ID8K018071	CCV6	17:52	11/18/11	1.000
ID8K018072	CCB6	17:54	11/18/11	1.000
ID8K018073	K070-04	17:57	11/18/11	1.000
ID8K018074	K070-05	18:01	11/18/11	1.000
ID8K018075	K070-06	18:04	11/18/11	1.000
ID8K018076	K101-01	18:07	11/18/11	1.000
ID8K018077	K093-01	18:10	11/18/11	1.000
ID8K018078	K093-01D	18:12	11/18/11	1.000
ID8K018079	K072-01	18:15	11/18/11	1.000
ID8K018080	K090-03	18:18	11/18/11	1.000
ID8K018081	Blank	18:21	11/18/11	1.000
ID8K018082	CCV7	18:24	11/18/11	1.000
ID8K018083	CCB7	18:27	11/18/11	1.000
ID8K018084	ICSA2	18:30	11/18/11	1.000
ID8K018085	ICSAB2	18:33	11/18/11	1.000
ID8K018086	CCV8	18:36	11/18/11	1.000
ID8K018087	CCB8	18:39	11/18/11	1.000
ID8K018088	IPK032S8	18:42	11/18/11	1.000
ID8K018089	IPK032SL	18:45	11/18/11	1.000
ID8K018090	IPK032SC	18:48	11/18/11	1.000
ID8K018091	K152-01A	18:50	11/18/11	1.000
ID8K018092	K152-01	18:53	11/18/11	1.000
ID8K018093	K152-01J	18:56	11/18/11	5.000
ID8K018094	Blank	18:59	11/18/11	1.000
ID8K018095	CCV9	19:02	11/18/11	1.000
ID8K018096	CCB9	19:05	11/18/11	1.000

VERSON : 11A UNIT : % SUMMARY of ICV and CCV : ID8K01B DATE : 11/18/11 INST : EMAX7

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S26	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1CV	102	98	105	99	102	102	99	99	97	97	102	101	98	108	97	97	100	96	97	104	101	104	98	93	96	102	101	105
1CB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK1801	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK1802	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1CSA1	98	----	----	----	----	----	----	96	----	----	----	99	----	----	99	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSAB1	95	102	106	97	99	108	95	94	94	96	106	98	96	114	95	94	101	95	102	104	107	109	95	86	94	99	100	105
CCV1	102	101	105	98	98	102	100	99	97	97	103	102	97	100	96	95	99	96	99	104	102	106	98	94	101	99	101	105
CCB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K467-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K467-01W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K467-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	100	99	102	101	102	99	98	99	96	98	101	100	97	104	99	99	101	96	99	101	100	107	98	92	101	102	99	105
CCB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK028WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK028WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK028WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	98	99	103	99	100	99	99	99	97	98	101	101	97	101	97	96	101	96	99	103	100	107	98	92	101	100	100	106
CCB3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K039-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K039-01D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	98	98	103	99	100	99	99	99	97	98	100	100	97	102	98	97	100	96	100	102	100	107	98	92	101	100	100	106
CCB4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK031WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK031WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK031WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K108-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	99	99	102	101	101	98	98	99	95	98	98	99	97	104	99	98	101	97	99	101	98	107	97	91	102	102	99	106
CCB5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	97	98	102	101	101	98	98	99	95	98	98	100	97	104	99	98	101	97	100	102	98	107	97	91	102	102	99	106
CCB6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K101-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K093-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K093-01D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K072-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K090-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	95	98	103	99	99	98	98	99	96	98	99	101	97	101	97	96	101	97	100	102	98	107	97	91	102	100	100	107
CCB7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA2	92	----	----	----	----	----	----	94	----	----	----	96	----	----	96	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSAB2	92	101	105	100	101	105	94	94	92	96	102	96	95	116	97	96	102	95	103	103	104	111	96	85	94	102	98	105
CCV8	95	96	103	99	101	98	98	99	95	97	98	100	98	109	98	97	101	97	98	102	97	105	97	91	96	102	100	106
CCB8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK032SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK032SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK032SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	96	99	108	99	102	101	103	100	98	99	101	102	100	110	98	98	101	98	101	106	101	108	99	95	96	102	101	109
CCB9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

QC limit of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC Limit

VERSON : 11A UNIT : UG/L SUMMARY of CALIBRATION BLANKS : 1D8K018 (WATER) DATE : 11/18/11 INST : EMAX1

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S26	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICB	5.75	.640	.410	.040	.070	5.32	.040	12.4	.110	.130	.000	1.46	-.750	.840	11.7	.080	.350	-.030	111	-1.58	.110	-10.6	.030	.390	.700	.760	.160	.370
MRLK1801	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK1802	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1CSA1	----	-1.27	1.38	.460	.040	34.8	3.15	----	.760	-.320	1.42	----	-.290	19.3	----	1.46	-1.02	1.54	162	.920	.070	75.9	.830	-.260	1.81	5.56	.730	2.47
1CSAB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB1	16.8	.620	.840	.210	.100	4.57	.120	77.8	-.020	.080	.280	3.74	-.340	1.33	6.74	.180	.410	.040	171	1.33	.270	-2.64	.200	-.040	.410	1.14	.150	3.38
K467-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K467-01W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K467-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB2	9.54	1.93	.820	.250	.120	3.32	.100	75.6	.010	.000	-.050	.770	-.330	.880	24.7	.490	.400	.060	121	-1.01	.140	-20.3	-.010	.680	.520	-.050	.180	3.44
1PK028WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK028WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK028WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB3	8.99	1.10	2.89	.290	.160	2.98	.110	95.9	.190	.020	-.010	2.13	-.360	.980	17.9	.570	.390	.100	120	.760	.360	-2.60	-.040	1.15	.530	.700	.140	4.29
K063-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K039-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K039-01D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB4	6.33	.860	.610	.060	.130	2.19	.130	105	.110	.070	-.170	2.12	-.130	.860	13.1	.200	.410	.070	95.3	-.870	.010	3.04	.030	.60D	.200	.410	.160	4.99
1PK031WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK031WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK031WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K108-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB5	4.66	.710	.490	.030	.150	3.66	.110	70.1	.110	.080	-.220	2.49	-.370	1.58	11.3	.420	.330	.080	138	-1.19	.130	-21.9	.040	.490	.830	.550	.080	3.25
K084-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB6	.750	1.50	.020	.090	.100	2.34	.080	50.9	.090	-.060	-.310	.300	-.350	.520	10.7	.290	.360	.070	122	-.310	.230	23.5	.000	.790	.370	.130	.160	2.30
K070-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K101-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K093-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K093-01D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K072-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K090-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB7	9.59	1.11	1.12	-.030	.130	2.34	080	91.2	.180	-.060	-.490	8.27	-.260	2.45	11.6	.270	.260	.090	95.5	-1.62	.020	8.71	.020	.600	.020	1.34	.200	4.21
ICSA2	----	.330	-2.19	.580	.130	30.9	1.82	----	.660	-.330	.790	----	-1.19	20.6	----	1.27	-1.15	1.52	45.7	.030	.190	118	.770	-.720	.960	5.48	.660	3.33
ICSAB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCVB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB8	.270	-.430	-.020	-.030	.090	3.25	.080	18.9	.060	.020	-.300	-.220	-.710	1.17	1.85	.100	.300	.040	113	080	.100	-5.47	-.080	.790	.320	.750	-.010	.350
IPK032SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK032SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK032SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB9	-3.43	-.140	1.51	.180	.070	1.91	.080	19.3	.180	.120	-.550	3.22	-.340	1.15	4.79	040	.370	.040	70.8	-.760	.120	-56.7	-.070	.420	.670	.620	.110	1.75

QC limit of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC Limit

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
1	0	0	0	0	Unk	S0		ID8K018001			1	☒	unk	---
2	0	0	0	0	Unk	S20		ID8K018002			1	☒	unk	---
3	0	0	0	0	Unk	S21		ID8K018003			1	☒	unk	---
4	0	0	0	0	Unk	S22		ID8K018004			1	☒	unk	---
5	0	0	0	0	Unk	S23		ID8K018005			1	☒	unk	---
6	0	0	0	0	Unk	S24		ID8K018006			1	☒	unk	---
7	0	0	0	0	Unk	S25		ID8K018007			1	☒	unk	---
8	0	0	0	0	Unk	S26		ID8K018008			1	☒	unk	---
9	0	0	0	0	Unk	S27		ID8K018009			1	☒	unk	---
10	0	0	0	0	Unk	S28		ID8K018010			1	☒	unk	---
11	0	0	0	0	Unk	S29		ID8K018011			1	☒	unk	---
12	0	0	0	0	Unk	S30		ID8K018012			1	☒	unk	---
13	0	0	0	0	Unk	S31		ID8K018013			1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8K018014			1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8K018015			1	☒	3XIDL	None
16	3	2	3	1	QC	MRLK1801		ID8K018016			1	☒	MRL-EMAX	None
17	4	2	4	1	QC	MRLK1802		ID8K018017			1	☒	MRL-AFCEE	None
18	5	2	5	1	QC	ICSA1		ID8K018018			1	☒	ICSA	None
19	6	2	6	1	QC	ICSAB1		ID8K018019			1	☒	ICSAB	None
20	7	2	7	1	QC	CCV1		ID8K018020			1	☒	CCV	None
21	8	2	8	1	QC	CCB1		ID8K018021			1	☒	3XIDL	None
22	9	2	9	1	Unk	K467-01A		ID8K018022			1	☒	unk	---
23	10	2	10	1	Unk	K467-01W		ID8K018023			1	☒	unk	---
24	11	2	11	1	Unk	K467-01J		ID8K018024			1	☒	unk	---
25	12	2	12	1	Blank	Blank		ID8K018025			1	☐		---
26	13	2	1	2	QC	CCV2		ID8K018026			1	☒	CCV	None
27	14	2	2	2	QC	CCB2		ID8K018027			1	☒	3XIDL	None
28	15	2	3	2	QC	IPK028WB		ID8K018028			1	☒	1/2LOQ	None
29	16	2	4	2	QC	IPK028WL		ID8K018029			1	☒	LCS	None
30	17	2	5	2	QC	IPK028WC		ID8K018030			1	☒	LCS	None
31	18	2	6	2	Unk	K063-02A	DISSOLVED	ID8K018031			1	☒	unk	---
32	19	2	7	2	Unk	K063-02	DISSOLVED	ID8K018032			1	☒	unk	---
33	20	2	8	2	Unk	K063-02J	DISSOLVED	ID8K018033			1	☒	unk	---
34	21	2	9	2	Unk	K063-02M	DISSOLVED	ID8K018034			1	☒	unk	---
35	22	2	10	2	Unk	K063-02S	DISSOLVED	ID8K018035			1	☒	unk	---
36	23	2	11	2	Unk	K063-01	DISSOLVED	ID8K018036			1	☒	unk	---
37	24	2	12	2	Blank	Blank		ID8K018037			1	☐		---
38	25	2	1	3	QC	CCV3		ID8K018038			1	☒	CCV	None
39	26	2	2	3	QC	CCB3		ID8K018039			1	☒	3XIDL	None

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
40	27	2	3	3	Unk	K063-03	DISSOLVED	ID8K018040			1	☒	unk	---
41	28	2	4	3	Unk	K063-04	DISSOLVED	ID8K018041			1	☒	unk	---
42	29	2	5	3	Unk	K063-05	DISSOLVED	ID8K018042			1	☒	unk	---
43	30	2	6	3	Unk	K063-06	DISSOLVED	ID8K018043			1	☒	unk	---
44	31	2	7	3	Unk	K039-01	DISSOLVED	ID8K018044			1	☒	unk	---
45	32	2	8	3	Unk	K039-01D	DISSOLVED	ID8K018045			1	☒	unk	---
46	33	2	9	3	Blank	Blank		ID8K018046			1	☐		---
47	34	2	10	3	QC	CCV4		ID8K018047			1	☒	CCV	None
48	35	2	11	3	QC	CCB4		ID8K018048			1	☒	3XIDL	None
49	36	2	12	3	QC	IPK031WB		ID8K018049			1	☒	1/2LOQ	None
50	37	2	1	4	QC	IPK031WL		ID8K018050			1	☒	LCS	None
51	38	2	2	4	QC	IPK031WC		ID8K018051			1	☒	LCS	None
52	39	2	3	4	Unk	K108-02A		ID8K018052			1	☒	unk	---
53	40	2	4	4	Unk	K108-02		ID8K018053			1	☒	unk	---
54	41	2	5	4	Unk	K108-02J		ID8K018054			1	☒	unk	---
55	42	2	6	4	Unk	K108-02M		ID8K018055			1	☒	unk	---
56	43	2	7	4	Unk	K108-02S		ID8K018056			1	☒	unk	---
57	44	2	8	4	Unk	K108-01		ID8K018057			1	☒	unk	---
58	45	2	9	4	Blank	Blank		ID8K018058			1	☐		---
59	46	2	10	4	QC	CCV5		ID8K018059			1	☒	CCV	None
60	47	2	11	4	QC	CCB5		ID8K018060			1	☒	3XIDL	None
61	48	2	12	4	Unk	K084-01	DISSOLVED	ID8K018061			1	☒	unk	---
62	49	2	1	5	Unk	K084-02	DISSOLVED	ID8K018062			1	☒	unk	---
63	50	2	2	5	Unk	K084-03	DISSOLVED	ID8K018063			1	☒	unk	---
64	51	2	3	5	Unk	K084-04	DISSOLVED	ID8K018064			1	☒	unk	---
65	52	2	4	5	Unk	K084-05	DISSOLVED	ID8K018065			1	☒	unk	---
66	53	2	5	5	Unk	K084-06	DISSOLVED	ID8K018066			1	☒	unk	---
67	54	2	6	5	Unk	K070-01	DISSOLVED	ID8K018067			1	☒	unk	---
68	55	2	7	5	Unk	K070-02	DISSOLVED	ID8K018068			1	☒	unk	---
69	56	2	8	5	Unk	K070-03	DISSOLVED	ID8K018069			1	☒	unk	---
70	57	2	9	5	Blank	Blank		ID8K018070			1	☐		---
71	58	2	10	5	QC	CCV6		ID8K018071			1	☒	CCV	None
72	59	2	11	5	QC	CCB6		ID8K018072			1	☒	3XIDL	None
73	60	2	12	5	Unk	K070-04	DISSOLVED	ID8K018073			1	☒	unk	---
74	61	3	1	1	Unk	K070-05	DISSOLVED	ID8K018074			1	☒	unk	---
75	62	3	2	1	Unk	K070-06	DISSOLVED	ID8K018075			1	☒	unk	---
76	63	3	3	1	Unk	K101-01	DISSOLVED	ID8K018076			1	☒	unk	---
77	64	3	4	1	Unk	K093-01	DISSOLVED	ID8K018077			1	☒	unk	---
78	65	3	5	1	Unk	K093-01D	DISSOLVED	ID8K018078			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
79	66	3	6	1	Unk	K072-01	DISSOLVED	ID8K018079			1	☒	unk	---
80	67	3	7	1	Unk	K090-03	DISSOLVED	ID8K018080			1	☒	unk	---
81	68	3	8	1	Blank	Blank		ID8K018081			1	☐		---
82	69	3	9	1	QC	CCV7		ID8K018082			1	☒	CCV	None
83	70	3	10	1	QC	CCB7		ID8K018083			1	☒	3XIDL	None
84	71	3	11	1	QC	ICSA2		ID8K018084			1	☒	ICSA	None
85	72	3	12	1	QC	ICSAB2		ID8K018085			1	☒	ICSAB	None
86	73	3	1	2	QC	CCV8		ID8K018086			1	☒	CCV	None
87	74	3	2	2	QC	CCB8		ID8K018087			1	☒	3XIDL	None
88	75	3	3	2	QC	IPK032SB		ID8K018088			1	☒	1/2LOQ	None
89	76	3	4	2	QC	IPK032SL		ID8K018089			1	☒	LCS	None
90	77	3	5	2	QC	IPK032SC		ID8K018090			1	☒	LCS	None
91	78	3	6	2	Unk	K152-01A		ID8K018091			1	☒	unk	---
92	79	3	7	2	Unk	K152-01		ID8K018092			1	☒	unk	---
93	80	3	8	2	Unk	K152-01J		ID8K018093			1	☒	unk	---
94	83	3	11	2	Blank	Blank		ID8K018094			1	☐		---
95	84	3	12	2	QC	CCV9		ID8K018095			1	☒	CCV	None
96	85	3	1	3	QC	CCB9		ID8K018096			1	☒	3XIDL	None

ID8K018 Section 1 of 3

INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID
1	Blank	.00130	.00002	-.00002	.00040	.00009	.00074	-.00005	.00023	-.00008	-.00115	Blank
2	S20					1.0272		.14317				S20
3	S21					10.310		1.3994				S21
4	S22				.57219						.15174	S22
5	S23				5.7640						1.5246	S23
6	S24						.10386					S24
7	S25						1.0501					S25
8	S26	.24775							.98689	.15619		S26
9	S27	8.8712							9.2807	1.5607		S27
10	S28		.00522									S28
11	S29		.05092									S29
12	S30			.00131								S30
13	S31			.00527								S31
14	ICV	101.67	1.4774	1.0462	1.9789	1.5234	2.5379	1.9823	74.283	2.4145	.97000	ICV
15	ICB	.00575	.00064	.00041	.00004	.00007	.00532	.00004	.01245	.00011	.00013	ICB
16	MRLK1801	.22441	.09677	.01157	.01056	.01023	.09909	.01036	1.0118	.00999	.00973	MRLK1801
17	MRLK1802	.21411	.04916	.01020	.00528	.00410	.09799	.00504	.50879	.00959	.00957	MRLK1802
18	ICSA1	393.18	-.00127	.00138	.00046	.00004	.03482	.00315	477.89	.00076	-.00032	ICSA1
19	ICSAB1	381.69	1.0156	1.0609	.48696	.49401	.54160	.95304	470.56	.46925	.48201	ICSAB1
20	CCV1	101.93	1.5101	1.0463	1.9564	1.4725	2.5489	1.9909	74.378	2.4316	.96755	CCV1
21	CCB1	.01681	.00062	.00084	.00021	.00010	.00457	.00012	.07778*	-.00002	.00008	CCB1
22	K467-01A	5.7181	2.5802	.57112	.58005	.54312	.65264	.53891	81.520	.52221	.52286	K467-01A
23	K467-01W	.06912	.00170	.00044	.04579	.00002	.12609	.00061	33.259	.00103	.00081	K467-01W
24	K467-01J	.01312	.00216	.00052	.00960	-.00004	.02550	.00016	7.0591	.00023	.00017	K467-01J
25	Blank	.01168	.00023	.00175	.00024	.00017	-.00011	.00017	.06082	.00017	.00005	Blank
26	CCV2	100.24	1.4790	1.0239	2.0197	1.5288	2.4843	1.9607	74.130	2.3972	.97893	CCV2
27	CCB2	.00954	.00193	.00082	.00025	.00012	.00332	.00010	.07563*	.00001	.00000	CCB2
28	1PK028WB	.00083	.00083	.00180	-.00002	.00001	.00063	.00003	.00223	-.00010	.00008	1PK028WB
29	1PK028WL	5.1159	2.5204	.53556	.50373	.51722	.51934	.51718	49.594	.49993	.50154	1PK028WL
30	1PK028WC	5.0110	2.4853	.52715	.49605	.50853	.51331	.51321	48.622	.48782	.49070	1PK028WC
31	K063-02A	5.5900	2.6448	.58986	.72755	.54779	.64279	.53836	247.25	.52610	.53859	K063-02A
32	K063-02	.02026	.00024	.00260	.18735	.00006	.10884	-.00006	207.89	.00050	-.00054	K063-02
33	K063-02J	.00503	.00029	.00022	.03957	.00000	.02255	-.00005	44.752	.00024	-.00020	K063-02J
34	K063-02M	5.1664	2.5691	.54245	.69180	.51034	.62872	.49584	247.22	.48032	.49572	K063-02M
35	K063-02S	5.3275	2.6239	.54932	.71028	.52452	.64184	.50540	255.79	.49005	.50456	K063-02S
36	K063-01	.01646	.00027	.00392	.17218	.00013	.10995	-.00003	260.99	.00055	.00074	K063-01
37	Blank	.00958	.00086	.00189	.00019	.00019	-.00027	.00024	.06563	.00029	.00011	Blank
38	CCV3	98.478	1.4815	1.0344	1.9732	1.4943	2.4855	1.9746	74.043	2.4133	.97769	CCV3
39	CCB3	.00899	.00110	.00289	.00029	.00016	.00298	.00011	.09593*	.00019	.00002	CCB3
40	K063-03	.02817	-.00082	.00243	.09815	-.00002	.11237	-.00011	294.15	.00065	.00058	K063-03
41	K063-04	.01836	-.00084	.00397	.15140	.00003	.10590	-.00007	192.48	.00052	-.00047	K063-04
42	K063-05	.01572	-.00195	.00230	.17829	-.00003	.11349	-.00012	285.89	.00041	-.00047	K063-05
43	K063-06	.00858	-.00163	.00415	.19026	-.00001	.10709	-.00006	209.15	.00045	-.00055	K063-06
44	K039-01	.00694	-.00100	.00083	.10377	.00002	.04588	-.00005	73.533	.00049	.00329	K039-01
45	K039-01D	.00686	-.00055	.00057	.10708	.00000	.04580	-.00003	74.864	.00029	.00317	K039-01D
46	Blank	.00624	.00068	.00156	.00000	.00020	-.00108	.00021	.05544	.00017	.00019	Blank
47	CCV4	97.816	1.4716	1.0314	1.9875	1.5063	2.4757	1.9817	74.238	2.4147	.97704	CCV4
48	CCB4	.00633	.00086	.00061	.00006	.00013	.00219	.00013	.10477*	.00011	.00007	CCB4
49	1PK031WB	-.00191	-.00092	-.00019	-.00014	-.00005	-.00015	.00000	.00119	.00009	.00006	1PK031WB
50	1PK031WL	5.0840	2.5350	.53219	.50216	.51701	.51841	.51538	49.674	.49771	.50026	1PK031WL
51	1PK031WC	5.1117	2.5730	.54236	.51029	.52563	.52205	.52419	50.460	.50351	.50655	1PK031WC
52	K108-02A	5.3177	2.5388	.57210	.62510	.54876	.56847	.53549	110.02	.52647	.52457	K108-02A

53	K108-02	.00133	.00196	.00238	.08975	.00003	.05556	.00006	62.067	.00947	- 00031	K108-02
54	K108-02J	.00226	.00066	.00171	.01965	-.00001	.01112	-.00002	13.307	.00193	-.00017	K108-02J
55	K108-02M	5.1669	2.5668	.54401	.60494	.52772	.57505	.50847	111.67	.49991	.50055	K108-02M
56	K108-02S	5.0948	2.5797	.54700	.60251	.52508	.57332	.50925	110.72	.49965	.49810	K108-02S
57	K108-01	.00085	-.00014	.00586	.09003	-.00001	.05427	.00004	62.149	.01119	-.00035	K108-01
58	Blank	.00505	-.00006	.00238	.00005	.00021	-.00053	.00019	.05433	.00009	.00007	Blank
59	CCV5	98.674	1.4800	1.0194	2.0242	1.5213	2.4495	1.9503	74.370	2.3707	.97526	CCV5
60	CC85	.00466	.00071	.00049	.00003	.00015	.00366	.00011	.07012*	.00011	.00008	CC85
61	K084-01	.01450	-.00032	.00155	.14518	.00002	.08270	-.00005	136.35	.00037	-.00033	K084-01
62	K084-02	.01570	-.00139	.00230	.08376	-.00002	.08355	-.00002	145.73	.00038	-.00031	K084-02
63	K084-03	.01393	.00063	.05906	.03606	-.00003	.17307	.00039	345.88	.00018	.00106	K084-03
64	K084-04	.01200	-.00181	.00164	.20713	-.00002	.12503	-.00002	202.16	.00053	-.00015	K084-04
65	K084-05	.00767	-.00048	-.00102	.23625	.00001	.11162	-.00010	229.47	.00046	-.00054	K084-05
66	K084-06	.01215	-.00107	.00284	.14336	.00001	.08002	-.00005	135.07	.00048	-.00022	K084-06
67	K070-01	.01196	-.00212	.03160	.06237	-.00002	.17774	.00005	498.75	.00034	.00025	K070-01
68	K070-02	.01935	-.00136	.00001	.12083	-.00002	.10397	-.00022	419.56	.00044	-.00031	K070-02
69	K070-03	.02689	-.00128	.00187	.11657	.00000	.11465	-.00016	312.43	.00045	-.00037	K070-03
70	Blank	.00468	.00085	.00144	.00027	.00019	-.00166	.00022	.07243	.00023	.00002	Blank
71	CCV6	97.248	1.4773	1.0224	2.0161	1.5152	2.4464	1.9513	74.378	2.3717	.97595	CCV6
72	CCB6	.00075	.00150	.00002	.00009	.00010	.00234	.00008	.05085*	.00009	-.00006	CCB6
73	K070-04	.00879	-.00222	.00123	.21511	.00006	.08351	-.00010	217.61	.00029	-.00035	K070-04
74	K070-05	.01638	-.00119	.00623	.33496	.00003	.12988	-.00014	321.20	.00047	-.00053	K070-05
75	K070-06	.00635	-.00167	.00087	.21256	-.00001	.08083	-.00005	217.64	.00049	-.00024	K070-06
76	K101-01	.00448	-.00146	.00212	.22012	.00004	.11312	-.00005	181.91	.00037	-.00045	K101-01
77	K093-01	.00247	-.00074	-.00032	.10840	-.00003	.04492	.00000	74.673	.00034	.00276	K093-01
78	K093-01D	.00034	-.00038	.00200	.10851	-.00004	.04477	-.00003	74.676	.00035	.00279	K093-01D
79	K072-01	.01138	.00073	.00151	.10938	.00010	.04197	-.00006	63.894	.00037	.00160	K072-01
80	K090-03	.02535	-.00035	-.00132	.03403	.00023	.19801	.00022	9.7168	.00024	.00002	K090-03
81	Blank	.00280	.00072	.00000	.00018	.00016	-.00225	.00018	.04622	.00017	.00005	Blank
82	CCV7	95.263	1.4751	1.0304	1.9711	1.4884	2.4506	1.9580	74.381	2.3950	.97776	CCV7
83	CCB7	.00959	.00111	.00112	-.00003	.00013	.00234	.00008	.09124*	.00018	-.00006	CCB7
84	ICSA2	368.55	.00033	-.00219	.00058	.00013	03089	.00182	469.86	.00066	-.00033	ICSA2
85	ICSAB2	369.14	1.0065	1.0481	.49944	50461	.52563	.94330	467.76	.46142	.48134	ICSAB2
86	CCV8	95.423	1.4444	1.0312	1.9726	1.5221	2.4464	1.9678	74.508	2.3841	.97485	CCV8
87	CCB8	.00027	- 00043	-.00002	-.00003	.00009	.00325	.00008	.01894	.00006	.00002	CC88
88	IPK032S8	-.00560	.00025	-.00049	-.00012	- 00003	.00042	-.00004	.01310	.00040	.00000	IPK032SB
89	IPK032SL	4.8545	2.4950	.52104	.52656	.53816	.48204	.51412	51.806	.50640	.5266B	IPK032SL
90	IPK032SC	4 8172	2.4533	.51336	.52408	.53474	.47924	.50772	51.352	.50028	.52145	IPK032SC
91	K152-01A	70.983	2.5175	.63658	2.1809	.55945	.55017	1.1205	361.58	.63593	.59119	K152-01A
92	K152-01	67.990	.02699	.09530	1.6917	.00589	.06939	.65592	326.87	13405	.05550	K152-01
93	K152-01J	13.732	.00760	.02105	.34200	.00118	.01410	.14297	68.995	.02863	.01108	K152-01J
94	Blank	-.00196	-.00036	.00125	.00023	.00000	-.00132	-.00002	.02644	-.00005	-.00009	Blank
95	CCV9	96.460	1.4884	1.0752	1.9822	1.5334	2.5137	2.0639	75.244	2.4441	.98837	CCV9
96	CCB9	-.00343	-.00014	.00151	.00018	.00007	.00191	.00008	.01931	.00018	.00012	CCB9
INDX	LS1D	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LS1D

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INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID
1	Blank	.00108	.00001	.00019	-.00061	-.00001	.00006	-.00011	-.00057	-.00092	.00001	Blank
2	S20			.20004			.10533					S20
3	S21			2.0153			1.0542					S21
4	S22	.28663	.05391									S22
5	S23	2.7478	2.0913									S23
6	S24							.69431				S24
7	S25							7.0782				S25
8	S26								.75477	.44222		S26
9	S27								7.4278	4.4476		S27
10	S28					.02592						S28
11	S29					.25485						S29
12	S30				.03336						.00147	S30
13	S31				.16786						.00589	S31
14	1CV	2.5588	25.335	2.4568	.54075	58.325	2.4215	2.4979	2.4123	58.366	1.0441	1CV
15	1CB	.00000	.00146	-.00075	.00084	.01173	.00008	.00035	-.00003	.11074	-.00158	1CB
16	MRLK1801	.01052	.21283	.01020	.01130	1.0203	.01053	.01016	.00984	.99412	.00992	MRLK1801
17	MRLK1802	.00999	.10306	.00269	.10419	.20863	.00534	.00937	.00970	.97612	.00922	MRLK1802
18	ICSA1	.00142	197.65	-.00029	.01932	197.71	.00146	-.00102	.00154	.16213	00092	ICSA1
19	1CSAB1	.53123	195.57	.96189	1.1360	189.85	.46890	1.0119	.95246	76.540	1.0372	1CSAB1
20	CCV1	2.5808	25.412	2.4207	.49776	57.572	2.3700	2.4799	2.3914	59.553	1.0432	CCV1
21	CCB1	.00028	.00374	-.00034	.00133	.00674	.00018	.00041	.00004	.17075	.00133	CCB1
22	K467-01A	.70232	6.2479	.52826	.01661	62.543	.66793	.51770	.46480	52.996	.56477	K467-01A
23	K467-01W	.14675	.82775	.00293	.01491	13.875	.14660	.00733	.00409	3.3280	-.00080	K467-01W
24	K467-01J	.03041	.17789	.00033	.00372	2.9183	.03084	.00157	.00086	.74270	-.00067	K467-01J
25	Blank	.00011	.00574	-.00055	.00085	.00980	.00031	.00032	.00033	.07726	-.00047	Blank
26	CCV2	2.5142	24.901	2.4349	.52058	59.376	2.4653	2.5307	2.4117	59.509	1.0147	CCV2
27	CCB2	-.00005	.00077	-.00033	.00088	.02473	.00049	.00040	.00006	.12105	-.00101	CCB2
28	IPK028WB	-.00012	.00091	-.00039	.00111	.00863	.00009	.00005	-.00026	.02627	-.00044	IPK028WB
29	IPK02BWL	.52157	5.1935	.50108	.00303*	48.848	.49578	.52006	.50065	48.949	.52476	IPK02BWL
30	IPK028WC	.50777	5.0856	49691	.00294*	48.177	.48802	.51249	.48915	48.126	.51830	IPK028WC
31	K063-02A	.56836	6.4488	.53993	.01820	84.873	.90527	.53719	.47554	56.516	.57466	K063-02A
32	K063-02	.00098	1.0177	.00109	.01834	36.340	.38709	.00290	.00022	5.0399	-.00089	K063-02
33	K063-02J	.00026	.21615	00024	.00376	7 7952	.08272	00057	.00013	1.0648	-.00007	K063-02J
34	K063-02M	.51117	6.0307	49909	.01893	84.291	.87040	.53380	.49411	54.952	.52591	K063-02M
35	K063-02S	.52305	6.1331	50754	.01905	87.560	.89977	.54519	.50245	56.603	.53592	K063-02S
36	K063-01	.00090	13.420	.00137	.02043	31.836	.35770	-.00042	.00194	5.3676	-.00130	K063-01
37	Blank	-.00005	.00235	-.00032	.00127	.00945	.00036	.00031	.00025	.09884	00069	Blank
38	CCV3	2.5350	25.131	2.4237	.50623	58.271	2.3983	2.5138	2.4124	59.326	1.0252	CCV3
39	CCB3	-.00001	.00213	-.00036	.00098	.01786	.00057	.00039	.00010	.11978	.00076	CCB3
40	K063-03	.00126	.20809	.00207	.02284	43.348	.42920	-.00036	.00034	6.0617	.00063	K063-03
41	K063-04	.00082	.55312	.00194	01506	33.904	.28696	.00350	.00050	4.7425	-.00137	K063-04
42	K063-05	.00072	.50895	.00128	.02221	50.895	.32214	.00291	.00079	5.8228	.00034	K063-05
43	K063-06	.00079	1.0305	.00099	.01729	37.013	.39523	.00272	.00065	4.9750	.00006	K063-06
44	K039-01	.00042	-.00165	.00151	.03708	26.953	.43085	.03263	.01544	3.3885	.00207	K039-01
45	K039-01D	.00010	-.00395	.00047	.03823	27.710	.44372	.03333	.01574	3.4598	.00165	K039-01D
46	Blank	-.00023	.00409	-.00090	.00041	.02622	.00037	.00019	.00028	.03292	.00044	Blank
47	CCV4	2.5083	25.101	2.4180	.51168	58.898	2.4287	2.5114	2.4078	59.732	1.0213	CCV4
48	CCB4	-.00017	.00212	-.00013	.00086	.01308	.00020	.00041	.00007	.09532	-.00087	CCB4
49	IPK031WB	-.00012	.00108	-.00024	.00076	-.00022	-.00022	.00008	.00060	.02068	-.00240	IPK031WB
50	IPK031WL	.51307	5.2003	.49975	.00230*	49.077	.49652	.52349	.49982	49.350	.52288	IPK031WL
51	IPK031WC	.51670	5.2609	.50541	.00374*	50.082	.50397	.52887	.50535	49.867	.53238	IPK031WC
52	K108-02A	.53676	5.9915	.52826	.03852	62.107	.53662	.53095	.46286	52.551	.55408	K108-02A

53	K108-02	.00016	.60745	.00163	.03587	12.631	.00779	.01485	.00007	2.3162	.00040	K108-02
54	K108-02J	.00004	.13121	.00063	.00936	2.7372	.00177	.00309	-.00008	.50004	.00028	K108-02J
55	K108-02M	.50921	5.7965	.50457	.03977	62.574	.51241	.54410	.49956	52.308	.52703	K108-02M
56	K108-02S	.50628	5.7780	.50175	.03920	62.378	.50847	.54244	.49664	52.124	.52875	K108-02S
57	K108-01	.00015	.00161	.00200	.03647	12.428	.00020	.01522	.00011	2.3316	.00229	K108-01
58	Blank	-.00016	.00341	-.00057	.00017	.01892	.00035	.00026	.00048	.06036	.00037	Blank
59	CCV5	2.4517	24.830	2.4353	.51951	59.652	2.4595	2.5291	2.4128	59.572	1.0134	CCV5
60	CCB5	-.00022	.00249	-.00037	.00158	.01126	.00042	.00033	.00008	.13814	-.00119	CCB5
61	K084-01	.00037	.10200	.00105	.01092	23.461	.14869	.00362	.00010	3.4649	-.00116	K084-01
62	K084-02	.00108	.39522	.00106	.01137	25.770	.24738	.00486	.00026	3.8328	-.00062	K084-02
63	K084-03	.00051	88.209	.00396	.04195	65.957	2.7479	-.00077	.00451	8.6649	-.00150	K084-03
64	K084-04	.00091	17.986	.00095	.02022	25.203	.80021	-.00014	.00174	4.6523	-.00254	K084-04
65	K084-05	.00053	4.7264	.00140	.02454	43.781	.79340	-.00005	.00053	5.1511	.00034	K084-05
66	K084-06	.00068	.10687	.00203	.01077	22.807	.14707	.00369	.00186	3.5021	-.00166	K084-06
67	K070-01	.00067	30.797	.00485	.05656	88.800	1.0768	-.00070	.00532	11.183	.00020	K070-01
68	K070-02	.00131	7.9987	.00221	.03607	67.065	1.1231	-.00015	.00295	7.1947	-.00046	K070-02
69	K070-03	.00109	.81415	.00149	.02512	62.240	.43632	.00236	.00050	6.2243	.00062	K070-03
70	Blank	-.00036	.00056	-.00016	.00143	.01416	.00052	.00019	.00020	.08439	-.00073	Blank
71	CCV6	2.4438	24.926	2.4316	.51819	59.512	2.4572	2.5275	2.4126	59.794	1.0168	CCV6
72	CCB6	-.00031	.00030	-.00035	.00052	.01074	.00029	.00036	.00007	.12229	-.00031	CCB6
73	K070-04	.00048	.05411	.00193	.01666	39.203	.33377	.00334	.00063	4.8515	.00078	K070-04
74	K070-05	.00033	14.244	.00215	.03435	62.737	1.0472	-.00064	.00040	7.0409	.00013	K070-05
75	K070-06	.00057	.06285	.00133	.01605	38.849	.32930	.00315	.00050	4.8162	-.00030	K070-06
76	K101-01	-.00008	1.0135	.00145	.01906	34.669	.43962	.00009	.00034	4.3773	-.00162	K101-01
77	K093-01	.00011	-.00497	.00098	.04088	27.732	.36014	.01557	.00540	3.7777	.00055	K093-01
78	K093-01D	.00003	-.00021	.00062	.04081	27.844	.36380	.01574	.00541	3.7462	.00100	K093-01D
79	K072-01	.00027	.01835	.00034	.04584	24.523	.43012	.13627	.02282	3.9636	.00048	K072-01
80	K090-03	.00088	.00741	.00342	.01398	10.579	.00138	.00128	.00356	.81804	.00327	K090-03
81	Blank	-.00043	.00309	-.00019	.00094	.01062	.00058	.00036	.00028	.04039	-.00069	Blank
82	CCV7	2.4736	25.209	2.4229	.50355	58.443	2.4002	2.5216	2.4167	59.839	1.0184	CCV7
83	CCB7	-.00049	.00827	-.00026	.00245	.01157	.00027	.00026	.00009	.09550	-.00162	CCB7
84	ICSA2	.00079	192.39	-.00119	.02063	192.43	.00127	-.00115	.00152	.04575	.00003	ICSA2
85	ICSAB2	.50850	192.42	.95477	1.1576	194.74	.48177	1.0161	.95223	77.547	1.0305	ICSAB2
86	CCV8	2.4512	25.082	2.4471	.54372	58.769	2.4229	2.5166	2.4269	59.018	1.0206	CCV8
87	CCB8	-.00030	-.00022	-.00071	.00117	.00185	.00010	.00030	.00004	.11313	.00008	CCB8
88	IPK032SB	-.00042	.00532	-.00046	.00023	.01054	.00007	.00042	.00000	.08370	.00001	IPK032SB
89	IPK032SL	.50361	5.2644	.51820	.00343*	52.065	.52271	.55743	.52455	50.955	.50806	IPK032SL
90	IPK032SC	.49794	5.2111	.51260	.00168*	51.904	.52064	.55269	.51866	50.574	49783	IPK032SC
91	K152-01A	.97294	128.86	6.6496	.06066	84.504	5.0768	.53858	.61313	60.828	53607	K152-01A
92	K152-01	.44292	128.27	6.4091	.06051	35.683	4.7471	-.00079	.14907	9.6913	.00422	K152-01
93	K152-01J	.08968	27.376	1.3247	.01178	7.4153	.99004	-.00182	.02971	1.8500	.00240	K152-01J
94	Blank	-.00051	.00298	-.00064	.00080	.00765	.00034	.00000	-.00004	-.03976	-.00045	Blank
95	CCV9	2.5238	25.528	2.4890	.54788	59.076	2.4429	2.5313	2.4529	60.544	1.0571	CCV9
96	CCB9	-.00055	.00322	-.00034	.00115	.00479	.00004	.00037	.00004	.07075	-.00076	CCB9
INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID

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INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID
1	Blank	.00011	.00331	-.00012	-.00002	.00001	.00005	-.00025	.00044	Blank
2	S20									S20
3	S21									S21
4	S22							.12964		S22
5	S23							1.3040		S23
6	S24		1.335B							S24
7	S25		7.7723							S25
8	S26									S26
9	S27									S27
10	S28				.00636					S28
11	S29				.06360					S29
12	S30	.04537		.14907		.02413	.01673		.63640	S30
13	S31	.22325		.73021		.11527	.08932		6.2345	S31
14	ICV	.50281	62.567	.48845	2.3329	.47812	.50801	1.5096	2.6246	ICV
15	ICB	.00011	-.01065	.00003	.00039	.00070	.00076	.00016	.00037	ICB
16	MRLK1801	.01023	.98344	.01031	.01122	.00089	.01063	.01030	.02088	MRLK1801
17	MRLK1802	.00986	.46685	.00988	.01023	.00977	.01063	.00963	.01085	MRLK1802
18	ICSA1	.00007	.07594	.00083	-.00026	.00181	.00556	.00073	.00247	ICSA1
19	ICSAB1	1.0699	82.009	.47722	.86039	.94339	.99405	.50012	1.0498	ICSAB1
20	CCV1	.50901	63.824	.48946	2.3466	.50440	.49426	1.5077	2.6186	CCV1
21	CCB1	.00027	-.00264	.00020	-.00004	.00041	.00114	.00015	.00338	CCB1
22	K467-01A	.51151	111.54	.82632	.51105	.48315	.52347	.54263	.83716	K467-01A
23	K467-01W	.00012	59.600	.35090	.00011	.00062	.00381	.00058	.28042	K467-01W
24	K467-01J	.00012	12.368	.07381	.00081	.00042	.00167	.00026	.05850	K467-01J
25	Blank	.00018	-.02760	.00003	.00011	.00056	.00045	.00021	.00279	Blank
26	CCV2	.49922	64.026	.49088	2.2996	.50725	.51135	1.4875	2.6341	CCV2
27	CCB2	.00014	-.02027	-.00001	.00068	.00052	-.00005	.00018	.00344	CCB2
28	IPK028WB	.00014	-.03569	-.00003	.00023	.00052	.00067	-.00002	.00060	IPK028WB
29	IPK028WL	.51507	53.280	.49953	.49109	.48347	.51555	.51741	.54349	IPK028WL
30	IPK028WC	.51336	52.350	.49178	.49003	.47845	.51157	.50696	.53703	IPK028WC
31	K063-02A	.52611	145.39	2.2797	.49605	.49890	.52568	.55254	.59412	K063-02A
32	K063-02	.00007	92.655	1.8213	.00068	.00081	.00280	-.00005	.00995	K063-02
33	K063-02J	.00010	19.162	.38440	.00012	.00051	.00087	.00004	.00249	K063-02J
34	K063-02M	.51916	143.47	2.2665	.45885	.49338	.52037	.51174	.54314	K063-02M
35	K063-02S	.52890	148.03	2.3399	.46827	.50201	.53546	.52001	.55461	K063-02S
36	K063-01	-.00032	89.754	1.5835	-.00067	.00029	.00375	.00165	.00642	K063-01
37	Blank	.00004	.00275	.00010	.00057	.00056	.00089	.00015	.00220	Blank
38	CCV3	.50073	64.007	.48785	2.2912	.50643	.49967	1.4990	2.6469	CCV3
39	CCB3	.00036	-.00260	-.00004	.00115	.00053	.00070	.00014	.00429	CCB3
40	K063-03	-.00020	129.74	2.0871	-.00057	.00040	.00346	.00079	.01800	K063-03
41	K063-04	-.00005	85.401	1.6505	.00039	.00020	.00238	-.00015	.00589	K063-04
42	K063-05	-.00015	115.32	2.4559	.00014	-.00026	.00310	-.00032	.00594	K063-05
43	K063-06	.00009	93.157	1.8254	-.00027	.00104	.00256	-.00009	.00254	K063-06
44	K039-01	-.00002	93.253	.73912	.00126	.00025	.00271	-.00003	.00814	K039-01
45	K039-01D	-.00003	95.418	.75563	.00185	.00051	.00160	.00016	.00757	K039-01D
46	Blank	.00012	.02336	.00004	.00061	.00051	.00058	.00004	.00247	Blank
47	CCV4	.49862	64.383	.48949	2.2927	.50513	.50117	1.4975	2.6435	CCV4
48	CCB4	.00001	.00304	.00003	.00060	.00020	.00041	.00016	.00499	CCB4
49	IPK031WB	.00014	-.03245	.00000	.00104	.00058	.00091	.00005	.00077	IPK031WB
50	IPK031WL	.50777	53.566	.50222	.48761	.48772	.52129	.51808	.54460	IPK031WL
51	IPK031WC	.51236	54.055	.50431	.49601	.49309	.52891	.52315	.55115	IPK031WC
52	K108-02A	.49734	97.975	1.3104	.49994	.48836	.52242	.54475	.63700	K108-02A

53	K108-02	.00008	44.624	.84434	.00044	.00049	.00140	.00549	.06279	K108-02
54	K108-02J	.00023	9.3457	.18055	.00017	.00079	.00068	.00109	.01432	K108-02J
55	K108-02M	.50876	98.876	1.3438	.47552	.49823	.53022	.52385	.61337	K108-02M
56	K108-02S	.50632	97.815	1.3246	.47508	.49687	.52890	.52009	.60874	K108-02S
57	K108-01	.00010	44.206	.82773	.00072	.00019	.00175	.00598	.02799	K108-01
58	Blank	.00015	-.01248	.00001	.00024	.00009	.00107	.00048	.00248	Blank
59	CCV5	.48876	64.020	.48748	2.2704	.51158	.51104	1.4794	2.6598	CCV5
60	CCB5	.00013	-.02189	.00004	.00049	.00083	.00055	.00008	.00325	CCB5
61	K084-01	.00008	63.466	1.1898	.00001	.00027	.00195	-.00004	.00221	K084-01
62	K084-02	.00008	66.476	1.2320	.00049	.00054	.00258	-.00032	.00595	K084-02
63	K084-03	-.00012	125.87	2.7943	-.00059	.00078	.00286	.00088	.00362	K084-03
64	K084-04	-.00023	79.695	1.3677	-.00001	.00032	.00280	.00034	.00576	K084-04
65	K084-05	-.00017	111.88	2.0054	.00069	.00048	.00311	.00005	.00659	K084-05
66	K084-06	.00003	63.376	1.1947	-.00026	.00000	.00162	-.00004	.00545	K084-06
67	K070-01	-.00029	395.55	4.5010	-.00066	.00074	.00350	.00116	.00433	K070-01
68	K070-02	-.00038	135.29	3.2456	.00008	.00080	.00325	.00064	.01085	K070-02
69	K070-03	-.00013	148.76	2.5450	-.00030	.00021	.00248	.00000	.01739	K070-03
70	Blank	.00014	.08014	.00023	.00022	.00025	.00082	.00028	.00213	Blank
71	CCV6	.48805	64.136	.48710	2.2655	.51185	.51017	1.4866	2.6606	CCV6
72	CCB6	.00023	.02346	.00000	.00079	.00037	.00013	.00016	.00230	CCB6
73	K070-04	.00000	82.694	1.9099	.00022	-.00047	.00295	-.00023	.00503	K070-04
74	K070-05	-.00038	122.43	2.8332	-.00050	-.00015	.00301	-.00015	.00454	K070-05
75	K070-06	-.00004	81.610	1.8884	-.00015	.00001	.00280	.00000	.00588	K070-06
76	K101-01	.00014	72.938	1.6616	.00022	-.00005	.00227	-.00004	.00114	K101-01
77	K093-01	.00019	94.073	.76499	.00138	.00057	.00161	.00006	.07039	K093-01
78	K093-01D	-.00006	94.169	.76454	.00196	.00037	.00143	-.00013	.07059	K093-01D
79	K072-01	.00004	90.679	.66046	.00267	.00073	.00228	-.00006	.00919	K072-01
80	K090-03	.00013	158.45	.11412	.00035	.00001	.00116	.00273	.00988	K090-03
81	Blank	.00019	.05870	.00005	.00019	.00059	.00061	.00016	.00199	Blank
82	CCV7	.49180	64.221	.48690	2.2630	.51144	.49997	1.5025	2.6638	CCV7
83	CCB7	.00002	.00871	.00002	.00060	.00002	.00134	.00020	.00421	CCB7
84	ICSA2	.00019	.11849	.00077	-.00072	.00096	.00548	.00066	.00333	ICSA2
85	ICSAB2	1.0354	82.996	.48095	.84564	.94332	1.0158	.49196	1.0544	ICSAB2
86	CCV8	.48684	63.295	.48531	2.2677	.47913	.50777	1.4983	2.6539	CCV8
87	CCB8	.00010	-.00547	-.00008	.00079	.00032	.00075	-.00001	.00035	CCB8
88	IPK032SB	.00003	.00013	-.00014	.00011	.03369	.00091	.00004	.00168	IPK032SB
89	IPK032SL	.49336	55.144	.50831	.47973	.54531	.54431	.53226	.57361	IPK032SL
90	IPK032SC	.48884	54.724	.50305	.47247	.53802	.54293	.52624	.56756	IPK032SC
91	K152-01A	.49575	56.325	1.1177	.45734	.58020	1.9838	.71338	117.09*	K152-01A
92	K152-01	.00114	.98259	.65599	-.00144	.09450	1.5013	.18265	119.67*	K152-01
93	K152-01J	.00039	.11742	.13386	.00033	.01913	.30243	.03756	31.088	K152-01J
94	Blank	.00024	-.08136	-.00007	.00013	.00048	.00128	-.00002	.00383	Blank
95	CCV9	.50456	64.783	.49434	2.3639	.48002	.50828	1.5215	2.7131	CCV9
96	CCB9	.00012	-.05667*	-.00007	.00042	.00067	.00062	.00011	.00175	CCB9
INDX	LS1D	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LS1D

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Sample Name: Blank Acquired: 11/18/2011 14:26:25 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00130	.00002	-.00002	.00040	.00009	.00074	-.00005
Stddev	.00001	.00000	.00000	.00010	.00002	.00001	.00000
%RSD	1.0959	16.718	15.688	25.409	21.272	1.7349	8.4720
#1	.00132	.00002	-.00002	.00029	.00010	.00072	-.00004
#2	.00130	.00002	-.00002	.00041	.00007	.00075	-.00005
#3	.00129	.00002	-.00002	.00049	.00010	.00074	-.00005

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00023	-.00008	-.00115	.00108	.00001	.00019	-.00061
Stddev	.00002	.00001	.00012	.00003	.00001	.00001	.00015
%RSD	9.6906	9.5937	10.525	2.4442	78.090	5.9323	23.841
#1	.00025	-.00009	-.00102	.00107	.00002	.00020	-.00072
#2	.00024	-.00007	-.00125	.00110	.00000	.00018	-.00068
#3	.00021	-.00009	-.00118	.00105	.00002	.00020	-.00045

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00001	.00006	-.00011	-.00057	-.00092	.00001	.00011
Stddev	.00002	.00002	.00004	.00013	.00023	.00000	.00003
%RSD	324.08	33.237	35.193	22.211	24.791	7.9492	26.471
#1	.00001	.00005	-.00006	-.00043	-.00096	.00001	.00009
#2	.00000	.00004	-.00013	-.00068	-.00067	.00001	.00014
#3	-.00004	.00008	-.00013	-.00058	-.00112	.00001	.00009

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00331	-.00012	-.00002	.00001	.00005	-.00025	.00044
Stddev	.00003	.00004	.00001	.00008	.00005	.00003	.00002
%RSD	.95540	34.398	28.728	699.15	89.314	10.820	4.9498
#1	.00333	-.00015	-.00003	-.00004	.00008	-.00022	.00044
#2	.00332	-.00007	-.00002	.00010	.00000	-.00025	.00045
#3	.00327	-.00013	-.00002	-.00002	.00008	-.00027	.00041

Sample Name: Blank Acquired: 11/18/2011 14:26:25 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8682.2**	**60633.**	**162850.**
Stddev	6.4	746.	730.
%RSD	.07332	1.2306	.44850
#1	8678.5	61225.	163390.
#2	8678.6	60878.	162020.
#3	8689.6	59795.	163130.

Sample Name: S20 Acquired: 11/18/2011 14:29:25 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Be	Cd	Pb	Mn
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.0272**	**.14317**	**.20004**	**.10533**
Stddev	.0032	.00112	.00031	.00043
%RSD	.31111	.77994	.15646	.40395
#1	1.0238	.14189	.20007	.10484
#2	1.0301	.14391	.19971	.10558
#3	1.0277	.14373	.20034	.10557

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8799.4**	**61559.**	**163750.**
Stddev	36.8	790.	709.
%RSD	.41850	1.2838	.43310
#1	8762.5	62431.	164550.
#2	8836.1	61355.	163200.
#3	8799.7	60891.	163500.

Sample Name: S21 Acquired: 11/18/2011 14:32:20 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Be	Cd	Pb	Mn
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**10.310**	**1.3994**	**2.0153**	**1.0542**
Stddev	.144	.0043	.0022	.0026
%RSD	1.4011	.30622	.10675	.24833
#1	10.398	1.3972	2.0133	1.0529
#2	10.143	1.4043	2.0149	1.0572
#3	10.388	1.3966	2.0176	1.0525

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8777.4**	**62519.**	**165270.**
Stddev	31.5	273.	380.
%RSD	.35841	.43623	.23012
#1	8794.7	62834.	165680.
#2	8796.5	62377.	164940.
#3	8741.1	62347.	165170.

Sample Name: S22 Acquired: 11/18/2011 14:35:25 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Ba	Co	Cu	Fe	V
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.57219**	**.15174**	**.28663**	**.05391**	**.12964**
Stddev	.00211	.00029	.00143	.00015	.00028
%RSD	.36809	.18987	.49731	.27669	.21798
#1	.57232	.15193	.28612	.05405	.12980
#2	.57001	.15141	.28552	.05375	.12931
#3	.57422	.15188	.28824	.05394	.12981

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8850.8**	**63095.**	**165430.**
Stddev	9.4	769.	504.
%RSD	.10571	1.2189	.30452
#1	8850.5	63789.	165460.
#2	8860.3	63229.	165920.
#3	8841.6	62268.	164910.

Sample Name: S23 Acquired: 11/18/2011 14:38:23 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Ba	Co	Cu	Fe	V
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5.7640**	**1.5246**	**2.7478**	**2.0913**	**1.3040**
Stddev	.0603	.0005	.0370	.0195	.0023
%RSD	1.0463	.03460	1.3461	.93382	.17655
#1	5.7543	1.5242	2.7836	2.1138	1.3066
#2	5.8286	1.5245	2.7097	2.0821	1.3028
#3	5.7092	1.5252	2.7502	2.0782	1.3025

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8186.3**	**62791.**	**160900.**
Stddev	10.5	706.	946.
%RSD	.12871	1.1245	.58764
#1	8184.3	63579.	159810.
#2	8197.7	62576.	161470.
#3	8177.0	62216.	161420.

Sample Name: S24 Acquired: 11/18/2011 14:41:42 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	B	Mo	Na
Units	Cts/S	Cts/S	Cts/S
Avg	**.10386**	**.69431**	**1.3358**
Stddev	.00027	.00085	.0009
%RSD	.26275	.12208	.06414
#1	.10417	.69334	1.3353
#2	.10380	.69465	1.3368
#3	.10363	.69492	1.3353

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8558.6**	**63487.**	**162520.**
Stddev	19.6	321.	963.
%RSD	.22952	.50566	.59268
#1	8577.6	63850.	161870.
#2	8559.8	63370.	162060.
#3	8538.3	63241.	163620.

Sample Name: S25 Acquired: 11/18/2011 14:44:39 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	B	Mo	Na
Units	Cts/S	Cts/S	Cts/S
Avg	**1.0501**	**7.0782**	**7.7723**
Stddev	.0023	.0088	.1188
%RSD	.21837	.12446	1.5289
#1	1.0485	7.0684	7.9093
#2	1.0490	7.0855	7.6981
#3	1.0527	7.0807	7.7093

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7884.3**	**62656.**	**152790.**
Stddev	12.4	381.	79.
%RSD	.15724	.60739	.05200
#1	7898.5	63001.	152830.
#2	7875.9	62719.	152840.
#3	7878.4	62248.	152700.

Sample Name: S26 Acquired: 11/18/2011 14:47:44 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Al	Ca	Cr	Ni	K
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.24775**	**.98689**	**.15619**	**.75477**	**.44222**
Stddev	.00066	.00119	.00033	.00127	.00096
%RSD	.26832	.12088	.21274	.16786	.21621
#1	.24850	.98612	.15593	.75603	.44323
#2	.24724	.98628	.15608	.75480	.44133
#3	.24751	.98826	.15657	.75349	.44209

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7876.7**	**60367.**	**152040.**
Stddev	16.6	351.	270.
%RSD	.21113	.58091	.17727
#1	7884.2	60765.	152350.
#2	7888.3	60233.	151840.
#3	7857.7	60103.	151940.

Sample Name: S27 Acquired: 11/18/2011 14:50:41 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Al	Ca	Cr	Ni	K
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**8.8712**	**9.2807**	**1.5607**	**7.4278**	**4.4476**
Stddev	.0362	.0872	.0037	.0073	.0028
%RSD	.40827	.93946	.23506	.09758	.06285
#1	8.9121	9.3525	1.5630	7.4276	4.4505
#2	8.8432	9.1837	1.5565	7.4351	4.4450
#3	8.8584	9.3061	1.5627	7.4206	4.4472

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6732.8**	**57388.**	**133730.**
Stddev	2.9	311.	200.
%RSD	.04308	.54191	.14964
#1	6735.1	57605.	133500.
#2	6733.6	57527.	133890.
#3	6729.5	57031.	133780.

Sample Name: S28 Acquired: 11/18/2011 14:53:54 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Sb	Mg	Tl
Units	Cts/S	Cts/S	Cts/S
Avg	**.00522**	**.02592**	**.00636**
Stddev	.00001	.00014	.00002
%RSD	.21063	.53320	.35384
#1	.00523	.02592	.00635
#2	.00523	.02606	.00639
#3	.00521	.02579	.00634

Int. Std.	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S
Avg	**62889.**	**163930.**
Stddev	338.	462.
%RSD	.53781	.28184
#1	63181.	163960.
#2	62967.	163450.
#3	62518.	164370.

Sample Name: S29 Acquired: 11/18/2011 14:56:50 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Sb	Mg	Tl
Units	Cts/S	Cts/S	Cts/S
Avg	**.05092**	**.25485**	**.06360**
Stddev	.00023	.00075	.00023
%RSD	.44651	.29574	.36917
#1	.05117	.25490	.06383
#2	.05089	.25558	.06362
#3	.05072	.25408	.06336

Int. Std.	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S
Avg	**63640.**	**159640.**
Stddev	440.	325.
%RSD	.69189	.20365
#1	64146.	159860.
#2	63433.	159260.
#3	63342.	159790.

Sample Name: S30 Acquired: 11/18/2011 14:59:49 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	As	Li	Se	Ag	Sr	Sn	Ti	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00131	.03336	.00147	.04537	.14907	.02413	.01673	.63640
Stddev	.00001	.00007	.00001	.00011	.00026	.00012	.00010	.00108
%RSD	.60823	.21785	.61690	.23492	.17267	.49353	.58530	.17027
#1	.00130	.03338	.00146	.04531	.14925	.02420	.01673	.63611
#2	.00131	.03342	.00147	.04530	.14919	.02399	.01683	.63550
#3	.00132	.03328	.00148	.04549	.14878	.02419	.01663	.63760

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8752.7	63093.	164860.
Stddev	12.1	450.	671.
%RSD	.13865	.71314	.40676
#1	8741.1	63547.	165590.
#2	8765.3	63085.	164720.
#3	8751.6	62647.	164270.

Sample Name: S31 Acquired: 11/18/2011 15:02:47 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	As	Li	Se	Ag	Sr	Sn	Ti	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00527**	**.16786**	**.00589**	**.22325**	**.73021**	**.11527**	**.08932**	**6.2345**
Stddev	.00001	.00078	.00002	.00116	.00171	.00027	.00025	.0051
%RSD	.10601	.46611	.36734	.51827	.23405	.23211	.27463	.08214
#1	.00526	.16796	.00590	.22301	.73177	.11545	.08937	6.2297
#2	.00527	.16859	.00587	.22223	.73049	.11539	.08953	6.2399
#3	.00527	.16704	.00591	.22451	.72838	.11496	.08905	6.2338

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8877.0**	**63908.**	**165560.**
Stddev	17.0	297.	108.
%RSD	.19094	.46493	.06523
#1	8882.0	64191.	165440.
#2	8858.2	63933.	165590.
#3	8891.0	63599.	165650.

Sample Name: ICV Acquired: 11/18/2011 15:05:41 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018014 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**101.67**	**1.4774**	**1.0462**	**1.9789**	**1.5234**	**2.5379**	**1.9823**	**74.283**
Stddev	.67	.0048	.0037	.0041	.0044	.0082	.0034	.218
%RSD	.65959	.32377	.35210	.20717	.28989	.32404	.16900	.29412
#1	101.20	1.4804	1.0474	1.9747	1.5184	2.5350	1.9788	74.066
#2	102.44	1.4719	1.0420	1.9829	1.5270	2.5315	1.9827	74.280
#3	101.37	1.4799	1.0491	1.9791	1.5247	2.5472	1.9854	74.503
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4145**	**.97000**	**2.5588**	**25.335**	**2.4568**	**.54075**	**58.325**	**2.4215**
Stddev	.0069	.00102	.0067	.053	.0030	.00218	.295	.0074
%RSD	.28626	.10507	.26096	.20894	.12073	.40366	.50531	.30386
#1	2.4138	.97113	2.5575	25.308	2.4543	.53828	57.997	2.4130
#2	2.4080	.96916	2.5530	25.302	2.4560	.54242	58.410	2.4256
#3	2.4217	.96970	2.5661	25.396	2.4601	.54156	58.567	2.4259
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4979**	**2.4123**	**58.366**	**1.0441**	**.50281**	**62.567**	**.48845**	**2.3329**
Stddev	.0020	.0004	.238	.0045	.00163	.190	.00128	.0067
%RSD	.07985	.01668	.40725	.42658	.32372	.30287	.26239	.28555
#1	2.5000	2.4124	58.125	1.0446	.50218	62.364	.48719	2.3292
#2	2.4960	2.4119	58.372	1.0394	.50160	62.599	.48840	2.3289
#3	2.4977	2.4127	58.600	1.0482	.50466	62.739	.48975	2.3406
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: ICV Acquired: 11/18/2011 15:05:41 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018014 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.47812**	**.50801**	**1.5096**	**2.6246**
Stddev	.00067	.00141	.0031	.0071
%RSD	.13910	.27828	.20733	.27039
#1	.47747	.50856	1.5080	2.6191
#2	.47811	.50641	1.5076	2.6220
#3	.47880	.50907	1.5132	2.6326
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7763.1**	**62681.**	**152470.**
Stddev	12.5	705.	330.
%RSD	.16131	1.1254	.21664
#1	7754.9	63365.	152570.
#2	7777.5	62723.	152740.
#3	7756.9	61956.	152100.

Sample Name: ICB Acquired: 11/18/2011 15:08:32 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018015 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00575	.00064	.00041	.00004	.00007	.00532	.00004	.01245
Stddev	.00024	.00093	.00070	.00015	.00004	.00041	.00008	.00095
%RSD	4.1162	143.54	169.42	375.58	58.601	7.6972	205.84	7.6521
#1	.00551	.00155	.00057	.00014	.00012	.00578	-.00002	.01175
#2	.00598	-.00030	.00101	-.00013	.00005	.00518	.00012	.01206
#3	.00575	.00068	-.00035	.00010	.00004	.00500	.00000	.01354
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00011	.00013	.00000	.00146	-.00075	.00084	.01173	.00008
Stddev	.00008	.00010	.00013	.00042	.00032	.00048	.01085	.00014
%RSD	69.097	71.342	32461.	28.812	43.548	57.345	92.465	172.52
#1	.00014	.00012	.00015	.00193	-.00112	.00114	.02307	.00022
#2	.00002	.00024	-.00007	.00112	-.00055	.00108	.01069	.00008
#3	.00017	.00005	-.00008	.00133	-.00056	.00028	.00144	-.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00035	-.00003	.11074	-.00158	.00011	-.01065	.00003	.00039
Stddev	.00013	.00013	.01456	.00094	.00019	.00743	.00008	.00010
%RSD	39.003	436.04	13.152	59.649	179.01	69.833	288.16	24.407
#1	.00039	.00003	.12718	-.00209	.00024	-.00235	-.00005	.00029
#2	.00045	.00006	.09946	-.00049	.00018	-.01288	.00003	.00043
#3	.00019	-.00018	.10557	-.00215	-.00011	-.01671	.00010	.00047
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: ICB Acquired: 11/18/2011 15:08:32 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018015 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	.00070	.00076	.00016	.00037
Stddev	.00019	.00007	.00015	.00017
%RSD	27.333	9.2949	93.360	45.126
#1	.00087	.00068	.00019	.00023
#2	.00072	.00078	.00030	.00033
#3	.00050	.00081	.00000	.00056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8923.2	63453.	166000.
Stddev	26.8	430.	136.
%RSD	.30055	.67816	.08163
#1	8951.1	63879.	165950.
#2	8921.1	63462.	165890.
#3	8897.6	63019.	166150.

Sample Name: MRLK1801 Acquired: 11/18/2011 15:11:31 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018016 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.22441**	**.09677**	**.01157**	**.01056**	**.01023**	**.09909**	**.01036**	**1.0118**
Stddev	.00206	.00138	.00040	.00026	.00008	.00079	.00003	.0038
%RSD	.91776	1.4226	3.4364	2.4221	.77648	.79990	.33502	.37350
#1	.22210	.09607	.01112	.01083	.01015	.09849	.01035	1.0155
#2	.22510	.09588	.01176	.01052	.01031	.09878	.01040	1.0079
#3	.22604	.09836	.01185	.01032	.01022	.09998	.01034	1.0120
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00999**	**.00973**	**.01052**	**.21283**	**.01020**	**.01130**	**1.0203**	**.01053**
Stddev	.00016	.00005	.00014	.00259	.00055	.00125	.0065	.00029
%RSD	1.6045	.48983	1.3673	1.2192	5.3691	11.040	.63299	2.7637
#1	.00990	.00978	.01039	.21538	.00986	.01219	1.0268	.01080
#2	.00990	.00970	.01067	.21293	.00991	.01184	1.0139	.01056
#3	.01018	.00970	.01049	.21019	.01083	.00987	1.0200	.01022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01016**	**.00984**	**.99412**	**.00992**	**.01023**	**.98344**	**.01031**	**.01122**
Stddev	.00003	.00019	.02370	.00081	.00013	.00569	.00004	.00062
%RSD	.31929	1.9014	2.3844	8.1648	1.2232	.57848	.41255	5.4958
#1	.01020	.01005	1.0053	.01085	.01009	.99000	.01033	.01060
#2	.01014	.00970	1.0101	.00937	.01033	.97993	.01027	.01123
#3	.01015	.00976	.96689	.00955	.01027	.98038	.01035	.01183
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: MRLK1801 Acquired: 11/18/2011 15:11:31 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018016 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00089**	**.01063**	**.01030**	**.02088**
Stddev	.00013	.00023	.00020	.00007
%RSD	14.772	2.2019	1.9177	.33697
#1	.00086	.01036	.01016	.02093
#2	.00103	.01075	.01022	.02080
#3	.00078	.01078	.01053	.02092
Check ?	None	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8829.5**	**63049.**	**164180.**
Stddev	8.0	306.	558.
%RSD	.09045	.48591	.33994
#1	8823.8	63354.	164710.
#2	8838.6	63051.	164230.
#3	8826.2	62742.	163600.

Sample Name: MRLK1802 Acquired: 11/18/2011 15:14:27 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018017 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.21411	.04916	.01020	.00528	.00410	.09799	.00504	.50879
Stddev	.00054	.00084	.00123	.00018	.00005	.00006	.00001	.00556
%RSD	.25093	1.7096	12.043	3.4384	1.1492	.06414	.15604	1.0935
#1	.21459	.05013	.00878	.00510	.00413	.09804	.00504	.50393
#2	.21353	.04874	.01100	.00529	.00412	.09792	.00504	.50757
#3	.21421	.04862	.01080	.00546	.00404	.09801	.00503	.51486
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00959	.00957	.00999	.10306	.00269	.10419	.20863	.00534
Stddev	.00012	.00013	.00018	.00166	.00015	.00077	.01636	.00035
%RSD	1.2956	1.3250	1.7560	1.6149	5.7518	.73827	7.8400	6.5519
#1	.00966	.00958	.00998	.10135	.00259	.10331	.19581	.00500
#2	.00944	.00944	.00982	.10315	.00262	.10472	.20303	.00533
#3	.00966	.00969	.01017	.10468	.00287	.10454	.22705	.00570
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00937	.00970	.97612	.00922	.00986	.46685	.00988	.01023
Stddev	.00012	.00010	.01482	.00140	.00021	.00571	.00006	.00087
%RSD	1.2645	1.0708	1.5182	15.139	2.1085	1.2238	.59727	8.4954
#1	.00933	.00980	.99012	.01062	.00962	.47342	.00986	.00926
#2	.00950	.00959	.97765	.00783	.00995	.46301	.00994	.01051
#3	.00927	.00971	.96060	.00921	.01001	.46412	.00983	.01093
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: MRLK1802 Acquired: 11/18/2011 15:14:27 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018017 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00977**	**.01063**	**.00963**	**.01085**
Stddev	.00012	.00041	.00020	.00012
%RSD	1.2065	3.8109	2.0250	1.1280
#1	.00965	.01068	.00969	.01072
#2	.00977	.01020	.00979	.01088
#3	.00988	.01100	.00942	.01096
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8866.9**	**62722.**	**164620.**
Stddev	6.6	717.	554.
%RSD	.07403	1.1424	.33676
#1	8874.3	63453.	165120.
#2	8864.3	62692.	164020.
#3	8861.9	62021.	164720.

Sample Name: ICSA1 Acquired: 11/18/2011 15:17:25 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018018 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**393.18**	**-.00127**	**.00138**	**.00046**	**.00004**	**.03482**	**.00315**	**477.89**
Stddev	5.16	.00196	.00479	.00011	.00004	.00076	.00018	9.01
%RSD	1.3128	154.15	346.26	23.889	95.794	2.1936	5.6776	1.8858
#1	398.86	-.00076	-.00408	.00037	.00001	.03482	.00328	486.02
#2	391.87	.00038	.00489	.00058	.00003	.03405	.00323	468.20
#3	388.79	-.00344	.00334	.00042	.00008	.03558	.00295	479.45
Check ?	Chk Pass	None	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00076**	**-.00032**	**.00142**	**197.65**	**-.00029**	**.01932**	**197.71**	**.00146**
Stddev	.00009	.00011	.00031	.14	.00015	.00046	1.13	.00057
%RSD	11.742	33.354	21.843	.07241	53.329	2.3982	.57038	38.935
#1	.00066	-.00044	.00158	197.67	-.00025	.01892	197.13	.00181
#2	.00079	-.00022	.00162	197.50	-.00016	.01922	196.99	.00177
#3	.00083	-.00031	.00106	197.78	-.00046	.01983	199.01	.00080
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00102**	**.00154**	**.16213**	**.00092**	**.00007**	**.07594**	**.00083**	**-.00026**
Stddev	.00011	.00035	.01773	.00259	.00013	.00545	.00022	.00106
%RSD	10.308	22.873	10.937	280.42	178.01	7.1744	26.902	414.31
#1	-.00109	.00123	.14504	-.00196	.00017	.07726	.00066	-.00058
#2	-.00107	.00192	.16092	.00169	-.00008	.06995	.00109	.00093
#3	-.00090	.00148	.18044	.00304	.00013	.08061	.00075	-.00111
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Sample Name: ICSA1 Acquired: 11/18/2011 15:17:25 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018018 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	.00181	.00556	.00073	.00247
Stddev	.00029	.00085	.00036	.00034
%RSD	16.210	15.323	50.101	13.740
#1	.00176	.00608	.00065	.00285
#2	.00154	.00601	.00112	.00223
#3	.00213	.00458	.00040	.00232
Check ?	None	None	None	None
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	6766.3	58858.	137780.
Stddev	14.4	574.	396.
%RSD	.21225	.97592	.28765
#1	6764.7	59336.	137320.
#2	6781.3	59017.	137980.
#3	6752.8	58221.	138030.

Sample Name: ICSAB1 Acquired: 11/18/2011 15:20:35 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018019 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**381.69**	**1.0156**	**1.0609**	**.48696**	**.49401**	**.54160**	**.95304**	**470.56**
Stddev	2.93	.0015	.0006	.00158	.00229	.00067	.00149	3.39
%RSD	.76837	.14830	.05570	.32429	.46287	.12451	.15626	.71942
#1	383.76	1.0139	1.0615	.48876	.49656	.54141	.95133	472.62
#2	378.34	1.0169	1.0603	.48628	.49213	.54235	.95405	472.41
#3	382.99	1.0158	1.0610	.48583	.49335	.54105	.95373	466.65
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.46925**	**.48201**	**.53123**	**195.57**	**.96189**	**1.1360**	**189.85**	**.46890**
Stddev	.00053	.00110	.00061	.53	.00244	.0066	.44	.00287
%RSD	.11360	.22888	.11566	.27329	.25321	.58273	.23250	.61149
#1	.46910	.48075	.53190	196.15	.96446	1.1432	190.33	.47150
#2	.46881	.48246	.53070	195.10	.95962	1.1346	189.76	.46939
#3	.46984	.48281	.53109	195.45	.96159	1.1301	189.46	.46582
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**1.0119**	**.95246**	**76.540**	**1.0372**	**1.0699**	**82.009**	**.47722**	**.86039**
Stddev	.0006	.00176	.153	.0013	.0010	.094	.00092	.00126
%RSD	.06262	.18495	.20050	.12155	.09702	.11469	.19247	.14644
#1	1.0113	.95170	76.570	1.0376	1.0687	81.955	.47736	.86075
#2	1.0118	.95121	76.373	1.0382	1.0702	81.954	.47624	.86143
#3	1.0126	.95448	76.676	1.0358	1.0707	82.117	.47806	.85899
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: ICSAB1 Acquired: 11/18/2011 15:20:35 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018019 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.94339**	**.99405**	**.50012**	**1.0498**
Stddev	.00194	.00793	.00162	.0014
%RSD	.20609	.79813	.32334	.13469
#1	.94453	1.0032	.50195	1.0499
#2	.94115	.98919	.49887	1.0484
#3	.94450	.98976	.49955	1.0512
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6816.1**	**59928.**	**138780.**
Stddev	18.0	371.	223.
%RSD	.26360	.61945	.16048
#1	6820.1	60301.	138900.
#2	6831.7	59924.	138920.
#3	6796.4	59558.	138520.

Sample Name: CCV1 Acquired: 11/18/2011 15:23:30 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018020 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**101.93**	**1.5101**	**1.0463**	**1.9564**	**1.4725**	**2.5489**	**1.9909**	**74.378**
Stddev	.95	.0006	.0041	.0107	.0062	.0037	.0038	.334
%RSD	.92785	.03950	.39352	.54841	.41991	.14432	.19187	.44876
#1	100.97	1.5103	1.0471	1.9533	1.4683	2.5447	1.9906	74.107
#2	102.86	1.5106	1.0500	1.9684	1.4796	2.5513	1.9949	74.277
#3	101.97	1.5094	1.0418	1.9476	1.4696	2.5507	1.9872	74.751
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4316**	**.96755**	**2.5808**	**25.412**	**2.4207**	**.49776**	**57.572**	**2.3700**
Stddev	.0060	.00041	.0057	.046	.0013	.00552	.393	.0196
%RSD	.24624	.04214	.21943	.17912	.05301	1.1080	.68303	.82743
#1	2.4277	.96718	2.5761	25.389	2.4202	.49951	57.127	2.3557
#2	2.4385	.96799	2.5871	25.464	2.4222	.50220	57.874	2.3924
#3	2.4286	.96748	2.5791	25.382	2.4198	.49159	57.714	2.3620
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4799**	**2.3914**	**59.553**	**1.0432**	**.50901**	**63.824**	**.48946**	**2.3466**
Stddev	.0015	.0029	.143	.0025	.00123	.078	.00074	.0044
%RSD	.06133	.12172	.23945	.24064	.24158	.12154	.15191	.18700
#1	2.4782	2.3880	59.411	1.0444	.50818	63.734	.48946	2.3509
#2	2.4810	2.3927	59.552	1.0448	.51042	63.869	.48872	2.3466
#3	2.4806	2.3934	59.696	1.0403	.50843	63.868	.49021	2.3421
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV1 Acquired: 11/18/2011 15:23:30 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018020 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	.50440	.49426	1.5077	2.6186
Stddev	.00188	.00271	.0032	.0038
%RSD	.37197	.54908	.21154	.14444
#1	.50263	.49286	1.5052	2.6144
#2	.50420	.49739	1.5113	2.6196
#3	.50637	.49253	1.5067	2.6218
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7811.1	62105.	150960.
Stddev	17.8	830.	479.
%RSD	.22827	1.3370	.31699
#1	7828.2	62992.	151070.
#2	7792.6	61978.	150440.
#3	7812.5	61346.	151380.

Sample Name: CCB1 Acquired: 11/18/2011 15:26:17 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018021 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01681**	**.00062**	**.00084**	**.00021**	**.00010**	**.00457**	**.00012**
Stddev	.00059	.00035	.00165	.00017	.00012	.00053	.00005
%RSD	3.4812	57.057	197.93	81.998	119.87	11.656	44.200
#1	.01745	.00098	.00223	.00033	-.00002	.00494	.00013
#2	.01666	.00061	.00127	.00001	.00022	.00481	.00006
#3	.01631	.00028	-.00099	.00030	.00010	.00396	.00017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.07778**	**-.00002**	**.00008**	**.00028**	**.00374**	**-.00034**	**.00133**
Stddev	.00138	.00004	.00012	.00006	.00500	.00047	.00132
%RSD	1.7717	184.55	150.99	22.594	133.92	135.95	98.883
#1	.07904	.00001	.00019	.00029	.00062	.00010	.00272
#2	.07798	-.00006	.00009	.00034	.00108	-.00083	.00011
#3	.07631	-.00002	-.00005	.00021	.00951	-.00030	.00116
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.03240						
Low Limit	-.03240						

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00674**	**.00018**	**.00041**	**.00004**	**.17075**	**.00133**	**.00027**
Stddev	.00373	.00049	.00007	.00011	.01741	.00276	.00017
%RSD	55.344	271.73	16.417	272.19	10.194	207.35	63.074
#1	.00378	.00028	.00045	-.00008	.15070	-.00072	.00038
#2	.00551	-.00035	.00033	.00014	.18204	.00025	.00007
#3	.01093	.00061	.00044	.00006	.17950	.00446	.00036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB1 Acquired: 11/18/2011 15:26:17 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018021 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.00264	.00020	-.00004	.00041	.00114	.00015	.00338
Stddev	.00152	.00008	.00056	.00042	.00077	.00020	.00014
%RSD	57.676	40.458	1431.8	102.91	66.834	137.41	4.1857
#1	-.00092	.00020	-.00044	.00077	.00119	.00031	.00353
#2	-.00321	.00012	-.00028	.00051	.00188	-.00008	.00333
#3	-.00381	.00029	.00061	-.00005	.00036	.00022	.00326
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8830.7	62061.	161700.
Stddev	20.9	368.	256.
%RSD	.23657	.59241	.15824
#1	8838.6	62398.	161630.
#2	8846.4	62116.	161490.
#3	8807.0	61669.	161980.

Sample Name: CCV2 Acquired: 11/18/2011 15:40:48 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018026 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**100.24**	**1.4790**	**1.0239**	**2.0197**	**1.5288**	**2.4843**	**1.9607**	**74.130**
Stddev	.95	.0024	.0051	.0114	.0068	.0016	.0064	.137
%RSD	.95156	.16270	.49432	.56515	.44200	.06421	.32581	.18438
#1	99.792	1.4769	1.0214	2.0103	1.5218	2.4861	1.9538	74.099
#2	101.33	1.4784	1.0206	2.0324	1.5353	2.4834	1.9664	74.012
#3	99.587	1.4816	1.0297	2.0164	1.5294	2.4834	1.9619	74.280
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.3972**	**.97893**	**2.5142**	**24.901**	**2.4349**	**.52058**	**59.376**	**2.4653**
Stddev	.0053	.00140	.0024	.019	.0043	.00154	.256	.0165
%RSD	.22245	.14270	.09568	.07684	.17691	.29677	.43176	.67044
#1	2.3915	.98016	2.5169	24.889	2.4354	.51929	59.089	2.4478
#2	2.4021	.97741	2.5124	24.924	2.4304	.52229	59.583	2.4806
#3	2.3978	.97921	2.5132	24.892	2.4390	.52016	59.455	2.4675
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.5307**	**2.4117**	**59.509**	**1.0147**	**.49922**	**64.026**	**.49088**	**2.2996**
Stddev	.0031	.0040	.095	.0029	.00018	.160	.00116	.0116
%RSD	.12066	.16603	.15986	.28669	.03628	.25029	.23530	.50625
#1	2.5306	2.4110	59.399	1.0113	.49924	63.860	.48980	2.2862
#2	2.5277	2.4082	59.556	1.0160	.49903	64.180	.49209	2.3052
#3	2.5338	2.4161	59.572	1.0167	.49939	64.038	.49073	2.3074
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV2 Acquired: 11/18/2011 15:40:48 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018026 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.50725**	**.51135**	**1.4875**	**2.6341**
Stddev	.00125	.00120	.0009	.0025
%RSD	.24668	.23496	.06332	.09412
#1	.50828	.51045	1.4885	2.6369
#2	.50586	.51271	1.4866	2.6326
#3	.50761	.51088	1.4873	2.6326
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7448.2**	**59583.**	**147880.**
Stddev	6.2	590.	445.
%RSD	.08353	.99088	.30079
#1	7441.4	60255.	148280.
#2	7449.6	59349.	147400.
#3	7453.6	59146.	147960.

Sample Name: CCB2 Acquired: 11/18/2011 15:43:37 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018027 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00954	.00193	.00082	.00025	.00012	.00332	.00010
Stddev	.00171	.00096	.00195	.00013	.00008	.00057	.00005
%RSD	17.964	49.495	239.05	52.503	69.688	17.142	55.390
#1	.01103	.00273	.00234	.00020	.00002	.00374	.00006
#2	.00767	.00218	-.00139	.00015	.00015	.00355	.00016
#3	.00994	.00087	.00150	.00039	.00017	.00267	.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F .07563	.00001	.00000	-.00005	.00077	-.00033	.00088
Stddev	.00107	.00015	.00024	.00007	.00162	.00018	.00167
%RSD	1.4117	1626.2	7443.7	156.45	209.28	53.807	190.84
#1	.07570	.00008	.00023	-.00011	.00197	-.00030	.00197
#2	.07666	.00010	-.00024	.00004	-.00107	-.00016	.00170
#3	.07453	-.00016	.00002	-.00008	.00141	-.00051	-.00105
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.03240						
Low Limit	-.03240						

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.02473	.00049	.00040	.00006	.12105	-.00101	.00014
Stddev	.00830	.00027	.00012	.00026	.00774	.00078	.00009
%RSD	33.574	54.895	29.314	435.12	6.3940	77.107	69.423
#1	.01862	.00071	.00051	.00030	.11278	-.00022	.00013
#2	.03418	.00019	.00040	.00010	.12811	-.00102	.00004
#3	.02138	.00057	.00028	-.00021	.12225	-.00178	.00023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB2 Acquired: 11/18/2011 15:43:37 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018027 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.02027	-.00001	.00068	.00052	-.00005	.00018	.00344
Stddev	.00883	.00010	.00056	.00011	.00039	.00022	.00012
%RSD	43.554	1920.5	82.080	21.761	842.52	122.80	3.3673
#1	-.01014	.00011	.00085	.00065	.00031	.00005	.00338
#2	-.02635	-.00008	.00112	.00044	.00001	.00043	.00336
#3	-.02431	-.00004	.00005	.00046	-.00046	.00005	.00357
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8357.0	59518.	157440.
Stddev	8.5	517.	739.
%RSD	.10120	.86847	.46914
#1	8347.4	60037.	156950.
#2	8360.3	59514.	157090.
#3	8363.4	59003.	158290.

Sample Name: IPK028WB Acquired: 11/18/2011 15:46:37 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018028 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00083**	**.00083**	**.00180**	**-.00002**	**.00001**	**.00063**	**.00003**	**.00223**
Stddev	.00043	.00056	.00216	.00032	.00007	.00015	.00003	.00173
%RSD	52.012	67.694	119.83	1901.4	606.04	23.365	100.07	77.318
#1	.00133	.00019	.00123	.00035	-.00005	.00079	.00004	.00074
#2	.00057	.00109	-.00001	-.00025	.00008	.00050	.00005	.00412
#3	.00059	.00122	.00420	-.00015	.00000	.00060	.00000	.00183
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00010**	**.00008**	**-.00012**	**.00091**	**-.00039**	**.00111**	**.00863**	**.00009**
Stddev	.00007	.00013	.00018	.00397	.00083	.00064	.02092	.00032
%RSD	64.604	154.98	150.71	435.49	211.39	57.783	242.29	346.96
#1	-.00003	.00022	-.00033	-.00320	-.00012	.00077	.01852	-.00001
#2	-.00015	-.00003	-.00001	.00474	-.00132	.00071	-.01540	-.00016
#3	-.00013	.00005	-.00002	.00120	.00026	.00185	.02278	.00045
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00005**	**-.00026**	**.02627**	**-.00044**	**.00014**	**-.03569**	**-.00003**	**.00023**
Stddev	.00009	.00026	.00768	.00029	.00006	.00439	.00009	.00018
%RSD	190.73	97.757	29.242	65.306	42.171	12.298	284.07	80.611
#1	-.00001	-.00053	.01779	-.00014	.00020	-.03793	.00005	.00013
#2	.00000	-.00002	.02825	-.00071	.00013	-.03852	-.00014	.00012
#3	.00016	-.00024	.03276	-.00046	.00009	-.03064	-.00001	.00044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: IPK028WB Acquired: 11/18/2011 15:46:37 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018028 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00052**	**.00067**	-.00002	**.00060**
Stddev	.00011	.00056	.00018	.00012
%RSD	21.767	83.227	1197.3	20.407
#1	.00044	.00034	-.00022	.00069
#2	.00066	.00035	.00005	.00065
#3	.00048	.00132	.00012	.00046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8526.1**	**61548.**	**160960.**
Stddev	16.4	270.	247.
%RSD	.19251	.43880	.15369
#1	8535.9	61735.	160680.
#2	8535.2	61671.	161080.
#3	8507.1	61239.	161120.

Sample Name: IPK028WL Acquired: 11/18/2011 15:49:36 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018029 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**5.1159**	**2.5204**	**.53556**	**.50373**	**.51722**	**.51934**	**.51718**
Stddev	.0118	.0049	.00293	.00020	.00073	.00150	.00045
%RSD	.23114	.19336	.54687	.04024	.14048	.28835	.08754
#1	5.1285	2.5147	.53354	.50361	.51674	.51773	.51717
#2	5.1051	2.5230	.53892	.50397	.51687	.51960	.51764
#3	5.1140	2.5233	.53423	.50362	.51806	.52069	.51673
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**49.594**	**.49993**	**.50154**	**.52157**	**5.1935**	**.50108**	F **.00303**
Stddev	.122	.00074	.00025	.00130	.0049	.00077	.00066
%RSD	.24546	.14901	.05021	.24925	.09438	.15359	21.898
#1	49.496	.49907	.50160	.52112	5.1964	.50195	.00368
#2	49.557	.50040	.50176	.52055	5.1878	.50050	.00307
#3	49.730	.50032	.50126	.52303	5.1962	.50078	.00235
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							.50000
Range							-20.000%

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**48.848**	**.49578**	**.52006**	**.50065**	**48.949**	**.52476**	**.51507**
Stddev	.281	.00262	.00020	.00093	.045	.00178	.00026
%RSD	.57426	.52892	.03820	.18609	.09152	.33906	.05036
#1	48.622	.49276	.52023	.50152	48.925	.52294	.51481
#2	48.760	.49750	.52010	.50077	48.922	.52649	.51507
#3	49.162	.49708	.51984	.49967	49.001	.52486	.51533
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: IPK028WL Acquired: 11/18/2011 15:49:36 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018029 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**53.280**	**.49953**	.49109	.48347	.51555	.51741	.54349
Stddev	.081	.00094	.00075	.00204	.00089	.00047	.00133
%RSD	.15276	.18913	.15255	.42191	.17297	.09098	.24428
#1	53.199	.49997	.49055	.48361	.51546	.51696	.54371
#2	53.277	.50018	.49194	.48136	.51471	.51735	.54207
#3	53.362	.49845	.49077	.48543	.51648	.51790	.54469
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7833.0**	**61611.**	**152340.**
Stddev	16.1	570.	49.
%RSD	.20543	.92440	.03188
#1	7819.0	62162.	152350.
#2	7850.6	61646.	152280.
#3	7829.3	61025.	152380.

Sample Name: IPK028WC Acquired: 11/18/2011 15:52:17 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018030 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**5.0110**	**2.4853**	**.52715**	**.49605**	**.50853**	**.51331**	**.51321**
Stddev	.0161	.0040	.00289	.00138	.00129	.00069	.00102
%RSD	.32169	.16307	.54782	.27900	.25279	.13365	.19813
#1	4.9956	2.4815	.52643	.49684	.50828	.51258	.51245
#2	5.0277	2.4896	.53033	.49445	.50739	.51341	.51282
#3	5.0098	2.4850	.52469	.49686	.50992	.51394	.51437
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**48.622**	**.48782**	**.49070**	**.50777**	**5.0856**	**.49691**	F **.00294**
Stddev	.019	.00061	.00048	.00101	.0140	.00071	.00129
%RSD	.03951	.12541	.09793	.19818	.27604	.14316	43.877
#1	48.618	.48712	.49024	.50768	5.0772	.49618	.00321
#2	48.643	.48805	.49067	.50882	5.0778	.49694	.00407
#3	48.605	.48828	.49120	.50681	5.1018	.49760	.00153
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							.50000
Range							-20.000%

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**48.177**	**.48802**	**.51249**	**.48915**	**48.126**	**.51830**	**.51336**
Stddev	.156	.00268	.00066	.00102	.126	.00271	.00107
%RSD	.32347	.54868	.12808	.20785	.26082	.52267	.20878
#1	48.208	.48754	.51276	.48970	48.124	.51651	.51295
#2	48.009	.48562	.51174	.48798	48.001	.51696	.51458
#3	48.316	.49091	.51296	.48978	48.252	.52141	.51256
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: IPK028WC Acquired: 11/18/2011 15:52:17 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018030 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**52.350**	**.49178**	**.49003**	**.47845**	**.51157**	**.50696**	**.53703**
Stddev	.080	.00100	.00121	.00140	.00226	.00123	.00085
%RSD	.15306	.20320	.24754	.29249	.44217	.24243	.15903
#1	52.307	.49102	.48888	.47871	.51320	.50794	.53688
#2	52.301	.49140	.49130	.47694	.50899	.50558	.53625
#3	52.443	.49291	.48993	.47970	.51253	.50736	.53794
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7765.3**	**61419.**	**151230.**
Stddev	11.8	538.	30.
%RSD	.15185	.87602	.01976
#1	7752.1	61944.	151260.
#2	7774.6	61446.	151230.
#3	7769.3	60868.	151200.

Sample Name: K063-02A Acquired: 11/18/2011 15:54:58 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018031 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**5.5900**	**2.6448**	**.58986**	**.72755**	**.54779**	**.64279**	**.53836**	**247.25**
Stddev	.0138	.0074	.00076	.00193	.00034	.00091	.00054	.88
%RSD	.24781	.27894	.12949	.26509	.06121	.14097	.10004	.35559
#1	5.5867	2.6373	.58937	.72969	.54777	.64278	.53868	247.39
#2	5.5781	2.6450	.58948	.72701	.54814	.64371	.53865	248.06
#3	5.6052	2.6520	.59074	.72595	.54747	.64189	.53774	246.31

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.52610**	**.53859**	**.56836**	**6.4488**	**.53993**	**.01820**	**84.873**	**.90527**
Stddev	.00092	.00113	.00067	.0199	.00123	.00131	.338	.00177
%RSD	.17531	.21037	.11826	.30900	.22712	7.1806	.39877	.19545
#1	.52711	.53929	.56758	6.4567	.53871	.01963	84.487	.90420
#2	.52589	.53728	.56871	6.4637	.53992	.01790	85.119	.90731
#3	.52530	.53919	.56878	6.4262	.54116	.01707	85.013	.90430

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.53719**	**.47554**	**56.516**	**.57466**	**.52611**	**145.39**	**2.2797**	**.49605**
Stddev	.00091	.00063	.109	.00144	.00039	.38	.0036	.00055
%RSD	.16861	.13218	.19323	.25082	.07430	.26373	.15746	.11145
#1	.53748	.47551	56.445	.57303	.52568	145.04	2.2806	.49558
#2	.53618	.47493	56.461	.57577	.52645	145.32	2.2758	.49590
#3	.53792	.47618	56.642	.57517	.52620	145.80	2.2828	.49666

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.49890**	**.52568**	**.55254**	**.59412**
Stddev	.00343	.00093	.00074	.00054
%RSD	.68754	.17714	.13397	.09111
#1	.49675	.52541	.55194	.59353
#2	.49708	.52491	.55337	.59460
#3	.50285	.52671	.55231	.59423

Sample Name: K063-02A Acquired: 11/18/2011 15:54:58 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018031 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7103.3	59975.	143310.
Stddev	5.6	742.	81.
%RSD	.07894	1.2378	.05628
#1	7102.8	60827.	143270.
#2	7109.2	59633.	143270.
#3	7098.0	59466.	143410.

Sample Name: K063-02 Acquired: 11/18/2011 15:57:48 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018032 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.02026**	**.00024**	**.00260**	**.18735**	**.00006**	**.10884**	**-.00006**	**207.89**
Stddev	.00188	.00020	.00205	.00126	.00007	.00016	.00002	2.70
%RSD	9.3045	82.069	78.830	.66988	109.85	.15117	36.438	1.2965
#1	.01810	.00041	.00036	.18858	.00012	.10865	-.00008	210.94
#2	.02108	.00002	.00436	.18741	-.00001	.10896	-.00004	205.85
#3	.02158	.00030	.00307	.18607	.00008	.10890	-.00006	206.88

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00050**	**-.00054**	**.00098**	**1.0177**	**.00109**	**.01834**	**36.340**	**.38709**
Stddev	.00014	.00003	.00009	.0063	.00065	.00019	.102	.00084
%RSD	27.269	4.8614	9.5781	.62251	59.307	1.0586	.28166	.21577
#1	.00065	-.00055	.00100	1.0249	.00057	.01819	36.389	.38774
#2	.00045	-.00051	.00087	1.0133	.00090	.01827	36.408	.38737
#3	.00039	-.00055	.00106	1.0148	.00182	.01856	36.222	.38615

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00290**	**.00022**	**5.0399**	**-.00089**	**.00007**	**92.655**	**1.8213**	**.00068**
Stddev	.00014	.00016	.0275	.00207	.00013	.109	.0051	.00075
%RSD	4.7529	73.526	.54476	233.11	180.31	.11808	.27960	110.24
#1	.00289	.00039	5.0683	.00073	.00002	92.734	1.8256	.00019
#2	.00305	.00020	5.0380	-.00017	-.00002	92.701	1.8226	.00154
#3	.00277	.00007	5.0135	-.00323	.00022	92.530	1.8157	.00030

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00081**	**.00280**	**-.00005**	**.00995**
Stddev	.00042	.00051	.00022	.00008
%RSD	51.497	18.092	463.90	.79677
#1	.00059	.00272	-.00030	.01002
#2	.00055	.00234	.00004	.00987
#3	.00130	.00334	.00012	.00998

Sample Name: K063-02 Acquired: 11/18/2011 15:57:48 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018032 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7376.2	60314.	147050.
Stddev	18.9	88.	307.
%RSD	.25616	.14561	.20890
#1	7392.8	60233.	147300.
#2	7380.3	60407.	146710.
#3	7355.6	60300.	147150.

Sample Name: K063-02J Acquired: 11/18/2011 16:00:50 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018033 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00503	.00029	.00022	.03957	.00000	.02255	-.00005	44.752
Stddev	.00028	.00106	.00019	.00037	.0001	.00027	.00006	.149
%RSD	5.5504	366.94	86.834	.94530	1545.5	1.1797	128.63	.33186
#1	.00525	-.00073	.00028	.03919	-.00007	.02270	-.00001	44.606
#2	.00472	.00139	.00001	.03993	.00007	.02271	-.00012	44.747
#3	.00513	.00021	.00038	.03959	-.00001	.02224	-.00001	44.903

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00024	-.00020	.00026	.21615	.00024	.00376	7.7952	.08272
Stddev	.00005	.00002	.00012	.00126	.00103	.00113	.0411	.00078
%RSD	19.794	10.033	48.106	.58222	432.07	30.061	.52662	.94702
#1	.00029	-.00019	.00023	.21645	.00094	.00271	7.7587	.08192
#2	.00020	-.00023	.00039	.21724	.00072	.00362	7.8397	.08276
#3	.00022	-.00020	.00015	.21477	-.00094	.00496	7.7873	.08349

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00057	.00013	1.0648	-.00007	.00010	19.162	.38440	.00012
Stddev	.00019	.00009	.0244	.00134	.00022	.038	.00069	.00025
%RSD	33.100	70.067	2.2905	1929.0	224.95	.19923	.17929	210.04
#1	.00046	.00022	1.0369	.00136	-.00016	19.118	.38425	.00036
#2	.00079	.00004	1.0754	-.00029	.00025	19.186	.38515	-.00014
#3	.00046	.00012	1.0820	-.00128	.00020	19.183	.38379	.00014

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	.00051	.00087	.00004	.00249
Stddev	.00010	.00092	.00021	.00007
%RSD	19.072	105.31	498.85	2.8497
#1	.00050	-.00019	.00008	.00242
#2	.00061	.00135	.00023	.00256
#3	.00042	.00146	-.00018	.00249

Sample Name: K063-02J Acquired: 11/18/2011 16:00:50 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018033 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8018.2**	**61311.**	**155600.**
Stddev	11.0	634.	513.
%RSD	.13712	1.0340	.32977
#1	8027.8	61947.	155500.
#2	8020.6	61305.	155150.
#3	8006.2	60680.	156160.

Sample Name: K063-02M Acquired: 11/18/2011 16:03:46 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018034 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**5.1664**	**2.5691**	**.54245**	**.69180**	**.51034**	**.62872**	**.49584**	**247.22**
Stddev	.0213	.0039	.00226	.00442	.00286	.00233	.00123	.31
%RSD	.41179	.15066	.41603	.63823	.55950	.37023	.24766	.12395
#1	5.1674	2.5712	.54303	.68940	.50841	.62956	.49510	247.08
#2	5.1447	2.5646	.53997	.69690	.51362	.62609	.49517	247.57
#3	5.1872	2.5715	.54437	.68910	.50898	.63051	.49726	247.01

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.48032**	**.49572**	**.51117**	**6.0307**	**.49909**	**.01893**	**84.291**	**.87040**
Stddev	.00071	.00045	.00213	.0060	.00110	.00112	.614	.00456
%RSD	.14737	.09014	.41611	.10029	.21999	5.9118	.72868	.52418
#1	.47996	.49570	.51232	6.0313	.49793	.01775	83.808	.86721
#2	.47986	.49528	.50871	6.0244	.50012	.01905	84.982	.87562
#3	.48113	.49617	.51247	6.0365	.49923	.01998	84.082	.86836

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.53380**	**.49411**	**54.952**	**.52591**	**.51916**	**143.47**	**2.2665**	**.45885**
Stddev	.00049	.00044	.084	.00137	.00170	.22	.0031	.00147
%RSD	.09146	.08988	.15336	.26004	.32817	.15664	.13655	.32142
#1	.53324	.49416	54.919	.52599	.51890	143.29	2.2670	.45802
#2	.53399	.49364	55.048	.52724	.51760	143.72	2.2693	.45798
#3	.53415	.49452	54.889	.52451	.52098	143.42	2.2631	.46056

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.49338**	**.52037**	**.51174**	**.54314**
Stddev	.00214	.00307	.00075	.00094
%RSD	.43283	.59089	.14664	.17325
#1	.49381	.51730	.51238	.54251
#2	.49106	.52345	.51091	.54268
#3	.49527	.52035	.51192	.54422

Sample Name: K063-02M Acquired: 11/18/2011 16:03:46 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018034 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7112.6	60310.	144600.
Stddev	8.0	650.	384.
%RSD	.11223	1.0781	.26553
#1	7119.5	61058.	144850.
#2	7114.6	59884.	144800.
#3	7103.9	59988.	144160.

Sample Name: K063-02S Acquired: 11/18/2011 16:06:36 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018035 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**5.3275**	**2.6239**	**.54932**	**.71028**	**.52452**	**.64184**	**.50540**	**255.79**
Stddev	.0147	.0055	.00161	.00542	.00205	.00147	.00155	2.51
%RSD	.27541	.21058	.29269	.76336	.39151	.22850	.30729	.98068
#1	5.3289	2.6253	.54835	.71618	.52685	.64081	.50363	258.46
#2	5.3122	2.6286	.54843	.70912	.52372	.64119	.50651	255.41
#3	5.3414	2.6178	.55117	.70552	.52299	.64352	.50607	253.49

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.49005**	**.50456**	**.52305**	**6.1331**	**.50754**	**.01905**	**87.560**	**.89977**
Stddev	.00121	.00081	.00042	.0189	.00149	.00057	.100	.00475
%RSD	.24597	.16019	.08079	.30800	.29436	2.9742	.11397	.52787
#1	.48874	.50456	.52261	6.1150	.50911	.01890	87.665	.90525
#2	.49032	.50375	.52308	6.1317	.50613	.01857	87.549	.89713
#3	.49111	.50537	.52345	6.1527	.50737	.01968	87.467	.89692

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.54519**	**.50245**	**56.603**	**.53592**	**.52890**	**148.03**	**2.3399**	**.46827**
Stddev	.00141	.00031	.153	.00023	.00157	.21	.0094	.00083
%RSD	.25828	.06072	.27000	.04363	.29719	.14273	.40012	.17635
#1	.54667	.50276	56.758	.53569	.52756	148.23	2.3507	.46754
#2	.54387	.50243	56.453	.53592	.52851	147.81	2.3350	.46810
#3	.54504	.50215	56.597	.53616	.53063	148.06	2.3341	.46916

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.50201**	**.53546**	**.52001**	**.55461**
Stddev	.00101	.00165	.00116	.00064
%RSD	.20020	.30761	.22331	.11510
#1	.50085	.53711	.51877	.55432
#2	.50261	.53382	.52108	.55417
#3	.50257	.53544	.52017	.55534

Sample Name: K063-02S Acquired: 11/18/2011 16:06:36 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018035 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7033.5	58838.	142480.
Stddev	14.1	268.	275.
%RSD	.20104	.45613	.19267
#1	7019.0	59114.	142720.
#2	7047.3	58824.	142180.
#3	7034.2	58577.	142550.

Sample Name: K063-01 Acquired: 11/18/2011 16:09:27 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018036 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01646**	**.00027**	**.00392**	**.17218**	**.00013**	**.10995**	**-.00003**	**260.99**
Stddev	.00093	.00044	.00074	.00066	.00001	.00033	.00002	2.51
%RSD	5.6571	159.80	18.904	.38428	10.988	.30460	73.766	.96035
#1	.01751	.00047	.00308	.17280	.00014	.11022	-.00002	263.54
#2	.01573	-.00023	.00448	.17226	.00013	.11005	-.00005	260.90
#3	.01614	.00058	.00421	.17149	.00011	.10957	-.00001	258.53

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00055**	**.00074**	**.00090**	**13.420**	**.00137**	**.02043**	**31.836**	**.35770**
Stddev	.00008	.00013	.00009	.027	.00101	.00111	.201	.00219
%RSD	14.522	16.858	9.9524	.19805	73.897	5.4439	.63062	.61168
#1	.00065	.00065	.00083	13.391	.00253	.02102	31.635	.35823
#2	.00052	.00070	.00087	13.444	.00085	.02113	32.036	.35958
#3	.00050	.00089	.00101	13.423	.00072	.01915	31.837	.35530

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00042**	**.00194**	**5.3676**	**-.00130**	**-.00032**	**89.754**	**1.5835**	**-.00067**
Stddev	.00006	.00017	.0143	.00125	.00020	.089	.0013	.00008
%RSD	15.268	8.9743	.26686	96.332	63.125	.09949	.08466	12.549
#1	-.00035	.00205	5.3816	-.00266	-.00047	89.811	1.5839	-.00074
#2	-.00044	.00174	5.3529	-.00100	-.00040	89.800	1.5846	-.00070
#3	-.00047	.00203	5.3683	-.00022	-.00009	89.652	1.5820	-.00058

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00029**	**.00375**	**.00165**	**.00642**
Stddev	.00066	.00033	.00015	.00015
%RSD	225.85	8.7459	9.3539	2.2636
#1	.00094	.00412	.00178	.00643
#2	.00032	.00363	.00170	.00626
#3	-.00038	.00349	.00148	.00655

Sample Name: K063-01 Acquired: 11/18/2011 16:09:27 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018036 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7284.5	59254.	146540.
Stddev	4.5	575.	11.
%RSD	.06201	.97015	.00742
#1	7279.5	59910.	146540.
#2	7288.3	58836.	146550.
#3	7285.8	59017.	146530.

Sample Name: CCV3 Acquired: 11/18/2011 16:15:32 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018038 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**98.478**	**1.4815**	**1.0344**	**1.9732**	**1.4943**	**2.4855**	**1.9746**	**74.043**
Stddev	.685	.0049	.0021	.0034	.0034	.0023	.0038	.125
%RSD	.69519	.33114	.19865	.17292	.22484	.09154	.19048	.16842
#1	98.177	1.4772	1.0344	1.9694	1.4904	2.4833	1.9721	73.900
#2	99.261	1.4806	1.0324	1.9743	1.4959	2.4854	1.9727	74.108
#3	97.995	1.4868	1.0365	1.9760	1.4965	2.4879	1.9789	74.123
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4133**	**.97769**	**2.5350**	**25.131**	**2.4237**	**.50623**	**58.271**	**2.3983**
Stddev	.0009	.00097	.0059	.028	.0003	.00093	.225	.0091
%RSD	.03863	.09887	.23288	.11233	.01419	.18293	.38557	.37781
#1	2.4128	.97664	2.5374	25.158	2.4240	.50520	58.036	2.3879
#2	2.4128	.97789	2.5394	25.102	2.4239	.50651	58.484	2.4048
#3	2.4144	.97854	2.5283	25.131	2.4233	.50698	58.292	2.4021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.5138**	**2.4124**	**59.326**	**1.0252**	**.50073**	**64.007**	**.48785**	**2.2912**
Stddev	.0017	.0016	.027	.0043	.00023	.107	.00068	.0028
%RSD	.06594	.06633	.04555	.41602	.04565	.16760	.13964	.12240
#1	2.5153	2.4141	59.339	1.0252	.50097	64.018	.48779	2.2884
#2	2.5141	2.4121	59.295	1.0210	.50072	63.895	.48720	2.2911
#3	2.5120	2.4109	59.344	1.0295	.50051	64.109	.48856	2.2940
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV3 Acquired: 11/18/2011 16:15:32 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018038 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.50643**	**.49967**	**1.4990**	**2.6469**
Stddev	.00119	.00360	.0020	.0035
%RSD	.23458	.72084	.13070	.13206
#1	.50691	.49758	1.5005	2.6430
#2	.50508	.49760	1.4968	2.6497
#3	.50730	.50383	1.4997	2.6480
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7576.1**	**60454.**	**149300.**
Stddev	8.9	533.	180.
%RSD	.11762	.88144	.12060
#1	7573.8	61056.	149450.
#2	7568.6	60266.	149360.
#3	7586.0	60041.	149100.

Sample Name: CCB3 Acquired: 11/18/2011 16:18:21 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018039 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00899**	**.00110**	**.00289**	**.00029**	**.00016**	**.00298**	**.00011**
Stddev	.00025	.00080	.00126	.00026	.00010	.00027	.00005
%RSD	2.7758	72.573	43.482	90.317	61.929	8.9366	39.847
#1	.00919	.00075	.00428	.00001	.00028	.00326	.00016
#2	.00906	.00201	.00186	.00033	.00009	.00296	.00008
#3	.00871	.00053	.00252	.00054	.00012	.00273	.00010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.09593**	**.00019**	**.00002**	**-.00001**	**.00213**	**-.00036**	**.00098**
Stddev	.00460	.00009	.00005	.00010	.00125	.00018	.00062
%RSD	4.7912	47.648	197.71	789.49	58.523	51.507	63.097
#1	.09131	.00011	.00008	-.00006	.00072	-.00016	.00086
#2	.10050	.00029	.00000	.00011	.00258	-.00052	.00164
#3	.09597	.00017	.00000	-.00008	.00309	-.00039	.00043
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.03240						
Low Limit	-.03240						

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01786**	**.00057**	**.00039**	**.00010**	**.11978**	**.00076**	**.00036**
Stddev	.00463	.00024	.00008	.00005	.02671	.00035	.00008
%RSD	25.912	42.799	21.359	47.872	22.295	46.658	23.178
#1	.02286	.00034	.00047	.00005	.14541	.00053	.00044
#2	.01373	.00082	.00039	.00015	.12182	.00117	.00036
#3	.01697	.00055	.00031	.00010	.09212	.00059	.00028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB3 Acquired: 11/18/2011 16:18:21 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018039 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00260**	**-.00004**	**.00115**	**.00053**	**.00070**	**.00014**	**.00429**
Stddev	.00414	.00005	.00027	.00041	.00043	.00022	.00009
%RSD	158.92	134.69	23.890	76.770	60.592	162.41	2.0789
#1	-.00206	-.00006	.00098	.00027	.00022	-.00012	.00423
#2	.00123	-.00007	.00147	.00032	.00104	.00025	.00425
#3	-.00698	.00002	.00100	.00100	.00085	.00028	.00439
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8431.5**	**60009.**	**158680.**
Stddev	22.1	534.	226.
%RSD	.26232	.89019	.14226
#1	8447.5	60508.	158560.
#2	8440.7	60075.	158530.
#3	8406.2	59446.	158940.

Sample Name: K063-03 Acquired: 11/18/2011 16:21:20 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018040 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.02817	-.00082	.00243	.09815	-.00002	.11237	-.00011	294.15
Stddev	.00061	.00057	.00321	.00042	.00005	.00053	.00002	2.15
%RSD	2.1694	69.648	132.11	.42654	233.51	.47445	19.131	.72987
#1	.02882	-.00039	.00319	.09779	-.00002	.11207	-.00012	293.09
#2	.02806	-.00060	-.00109	.09804	.00003	.11298	-.00009	296.62
#3	.02761	-.00147	.00520	.09861	-.00006	.11205	-.00013	292.74

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00065	.00058	.00126	.20809	.00207	.02284	43.348	.42920
Stddev	.00010	.00016	.00016	.00598	.00035	.00057	.316	.00119
%RSD	15.371	27.567	12.670	2.8746	16.819	2.5008	.72925	.27715
#1	.00054	.00074	.00121	.20472	.00216	.02279	43.002	.42943
#2	.00073	.00060	.00114	.21500	.00237	.02230	43.420	.42790
#3	.00067	.00042	.00144	.20456	.00169	.02344	43.621	.43025

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.00036	.00034	6.0617	.00063	-.00020	129.74	2.0871	-.00057
Stddev	.00008	.00019	.0378	.00216	.00026	.11	.0018	.00072
%RSD	21.841	57.105	.62334	342.19	130.15	.08566	.08554	126.67
#1	-.00042	.00015	6.0773	.00312	-.00002	129.61	2.0853	.00025
#2	-.00027	.00033	6.0893	-.00059	-.00049	129.77	2.0888	-.00111
#3	-.00039	.00053	6.0187	-.00064	-.00008	129.83	2.0874	-.00084

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	.00040	.00346	.00079	.01800
Stddev	.00017	.00096	.00039	.00015
%RSD	41.421	27.628	50.024	.84978
#1	.00053	.00258	.00057	.01796
#2	.00021	.00332	.00124	.01817
#3	.00046	.00448	.00055	.01787

Sample Name: K063-03 Acquired: 11/18/2011 16:21:20 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018040 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7219.8**	**59733.**	**143530.**
Stddev	10.2	546.	541.
%RSD	.14148	.91339	.37690
#1	7208.4	60357.	143370.
#2	7228.2	59492.	143080.
#3	7222.7	59349.	144130.

Sample Name: K063-04 Acquired: 11/18/2011 16:24:23 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018041 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01836**	**-.00084**	**.00397**	**.15140**	**.00003**	**.10590**	**-.00007**	**192.48**
Stddev	.00235	.00128	.00038	.00084	.00004	.00011	.00005	1.54
%RSD	12.796	151.80	9.6799	.55278	150.52	.10479	68.686	.80002
#1	.02081	.00053	.00353	.15237	-.00002	.10597	-.00013	192.00
#2	.01817	-.00105	.00423	.15086	.00005	.10577	-.00006	191.23
#3	.01612	-.00201	.00414	.15098	.00006	.10595	-.00003	194.20

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00052**	**-.00047**	**.00082**	**.55312**	**.00194**	**.01506**	**33.904**	**.28696**
Stddev	.00007	.00011	.00022	.00668	.00090	.00063	.134	.00069
%RSD	13.174	22.456	26.757	1.2085	46.129	4.1761	.39609	.24147
#1	.00049	-.00040	.00084	.55967	.00178	.01556	33.774	.28618
#2	.00048	-.00060	.00103	.54631	.00114	.01528	33.895	.28719
#3	.00060	-.00043	.00059	.55336	.00291	.01436	34.043	.28751

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00350**	**.00050**	**4.7425**	**-.00137**	**-.00005**	**85.401**	**1.6505**	**.00039**
Stddev	.00030	.00018	.0301	.00200	.00006	.046	.0010	.00056
%RSD	8.7102	37.042	.63419	145.84	122.01	.05433	.05824	143.45
#1	.00335	.00030	4.7729	-.00356	-.00001	85.381	1.6507	.00002
#2	.00330	.00052	4.7128	.00035	-.00002	85.368	1.6512	.00104
#3	.00385	.00067	4.7417	-.00090	-.00013	85.454	1.6494	.00011

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00020**	**.00238**	**-.00015**	**.00589**
Stddev	.00042	.00110	.00007	.00008
%RSD	207.27	46.330	43.185	1.3605
#1	.00049	.00360	-.00019	.00594
#2	.00040	.00210	-.00019	.00580
#3	-.00028	.00145	-.00008	.00594

Sample Name: K063-04 Acquired: 11/18/2011 16:24:23 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018041 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7494.5**	**60420.**	**149120.**
Stddev	17.5	500.	688.
%RSD	.23400	.82762	.46153
#1	7498.4	60971.	149210.
#2	7509.8	59994.	148400.
#3	7475.3	60296.	149770.

Sample Name: K063-05 Acquired: 11/18/2011 16:27:23 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018042 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01572**	**-.00195**	**.00230**	**.17829**	**-.00003**	**.11349**	**-.00012**	**285.89**
Stddev	.00023	.00094	.00165	.00136	.00008	.00045	.00002	3.03
%RSD	1.4855	48.209	71.924	.76390	257.85	.39675	14.704	1.0606
#1	.01548	-.00135	.00081	.17986	.00005	.11342	-.00010	289.36
#2	.01595	-.00303	.00408	.17740	-.00003	.11397	-.00012	283.76
#3	.01573	-.00146	.00200	.17761	-.00011	.11308	-.00013	284.55

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00041**	**-.00047**	**.00072**	**.50895**	**.00128**	**.02221**	**50.895**	**.32214**
Stddev	.00009	.00002	.00011	.00609	.00013	.00182	.156	.00285
%RSD	23.331	4.4943	15.217	1.1963	10.215	8.1988	.30593	.88604
#1	.00049	-.00048	.00060	.51533	.00118	.02096	51.075	.32537
#2	.00042	-.00048	.00082	.50832	.00143	.02137	50.803	.32107
#3	.00031	-.00044	.00074	.50320	.00124	.02430	50.807	.31997

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00291**	**.00079**	**5.8228**	**.00034**	**-.00015**	**115.32**	**2.4559**	**.00014**
Stddev	.00016	.00043	.0101	.00074	.00014	.18	.0119	.00083
%RSD	5.5058	54.778	.17334	219.40	97.918	.15545	.48637	611.21
#1	.00284	.00074	5.8133	.00059	-.00012	115.49	2.4696	-.00039
#2	.00309	.00038	5.8217	-.00050	-.00002	115.14	2.4478	.00110
#3	.00279	.00124	5.8334	.00091	-.00030	115.33	2.4504	-.00030

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**-.00026**	**.00310**	**-.00032**	**.00594**
Stddev	.00012	.00032	.00029	.00014
%RSD	47.492	10.243	89.901	2.3208
#1	-.00026	.00328	-.00015	.00598
#2	-.00038	.00327	-.00066	.00578
#3	-.00014	.00273	-.00016	.00605

Sample Name: K063-05 Acquired: 11/18/2011 16:27:23 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018042 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7196.4	60072.	145460.
Stddev	20.7	118.	164.
%RSD	.28725	.19625	.11284
#1	7217.0	60019.	145640.
#2	7196.7	60208.	145410.
#3	7175.6	59991.	145320.

Sample Name: K063-06 Acquired: 11/18/2011 16:30:25 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018043 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00858**	**-.00163**	**.00415**	**.19026**	**-.00001**	**.10709**	**-.00006**	**209.15**
Stddev	.00074	.00030	.00194	.00052	.00002	.00001	.00001	2.75
%RSD	8.6553	18.534	46.673	.27360	419.06	.00891	13.721	1.3161
#1	.00834	-.00198	.00192	.19041	-.00001	.10710	-.00007	212.25
#2	.00799	-.00144	.00516	.19069	-.00003	.10708	-.00005	208.19
#3	.00942	-.00146	.00538	.18968	.00002	.10709	-.00006	207.01

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00045**	**-.00055**	**.00079**	**1.0305**	**.00099**	**.01729**	**37.013**	**.39523**
Stddev	.00015	.00013	.00005	.0062	.00010	.00035	.047	.00243
%RSD	32.458	23.497	5.7313	.59755	9.9515	2.0474	.12792	.61583
#1	.00053	-.00046	.00074	1.0285	.00088	.01767	36.963	.39253
#2	.00054	-.00049	.00079	1.0375	.00106	.01697	37.057	.39592
#3	.00028	-.00070	.00083	1.0256	.00102	.01722	37.019	.39724

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00272**	**.00065**	**4.9750**	**.00006**	**.00009**	**93.157**	**1.8254**	**-.00027**
Stddev	.00016	.00009	.0383	.00207	.00012	.156	.0014	.00028
%RSD	5.7730	13.156	.76896	3414.5	129.38	.16792	.07780	103.24
#1	.00262	.00065	4.9724	.00028	.00021	93.005	1.8257	-.00024
#2	.00264	.00074	5.0145	-.00212	.00009	93.318	1.8267	-.00001
#3	.00290	.00057	4.9381	.00201	-.00003	93.148	1.8239	-.00057

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00104**	**.00256**	**-.00009**	**.00254**
Stddev	.00031	.00028	.00016	.00006
%RSD	29.395	11.029	180.80	2.2524
#1	.00081	.00228	-.00019	.00259
#2	.00092	.00284	.00009	.00256
#3	.00138	.00255	-.00016	.00248

Sample Name: K063-06 Acquired: 11/18/2011 16:30:25 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018043 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7399.4	59979.	148340.
Stddev	14.3	432.	141.
%RSD	.19339	.72103	.09529
#1	7394.7	60469.	148350.
#2	7415.4	59815.	148480.
#3	7388.0	59652.	148190.

Sample Name: CCV4 Acquired: 11/18/2011 16:42:14 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018047 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**97.816**	**1.4716**	**1.0314**	**1.9875**	**1.5063**	**2.4757**	**1.9817**	**74.238**
Stddev	.329	.0050	.0045	.0047	.0037	.0031	.0029	.231
%RSD	.33684	.34051	.43309	.23649	.24544	.12317	.14786	.31139
#1	97.939	1.4721	1.0284	1.9889	1.5053	2.4727	1.9820	73.988
#2	98.066	1.4763	1.0365	1.9823	1.5032	2.4755	1.9845	74.281
#3	97.443	1.4663	1.0291	1.9914	1.5104	2.4788	1.9786	74.444
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4147**	**.97704**	**2.5083**	**25.101**	**2.4180**	**.51168**	**58.898**	**2.4287**
Stddev	.0038	.00191	.0071	.038	.0059	.00200	.239	.0112
%RSD	.15806	.19553	.28215	.15331	.24369	.39050	.40581	.46015
#1	2.4114	.97854	2.5027	25.094	2.4195	.51204	58.797	2.4265
#2	2.4189	.97489	2.5060	25.142	2.4115	.50952	58.726	2.4187
#3	2.4140	.97769	2.5162	25.066	2.4230	.51347	59.171	2.4408
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.5114**	**2.4078**	**59.732**	**1.0213**	**.49862**	**64.383**	**.48949**	**2.2927**
Stddev	.0044	.0037	.048	.0042	.00054	.101	.00057	.0043
%RSD	.17478	.15448	.08104	.41086	.10826	.15660	.11590	.18945
#1	2.5139	2.4113	59.717	1.0200	.49801	64.268	.48936	2.2919
#2	2.5063	2.4039	59.786	1.0260	.49880	64.457	.49011	2.2974
#3	2.5140	2.4082	59.693	1.0179	.49904	64.424	.48899	2.2889
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV4 Acquired: 11/18/2011 16:42:14 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018047 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.50513**	**.50117**	**1.4975**	**2.6435**
Stddev	.00119	.00179	.0016	.0036
%RSD	.23470	.35812	.10836	.13576
#1	.50507	.50040	1.4965	2.6452
#2	.50635	.49989	1.4994	2.6394
#3	.50398	.50322	1.4967	2.6459
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7567.7	59471.	148580.
Stddev	9.5	507.	399.
%RSD	.12611	.85268	.26846
#1	7558.7	60006.	148440.
#2	7577.7	59410.	148270.
#3	7566.7	58998.	149030.

Sample Name: CCB4 Acquired: 11/18/2011 16:45:03 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018048 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00633**	**.00086**	**.00061**	**.00006**	**.00013**	**.00219**	**.00013**
Stddev	.00283	.00050	.00098	.00021	.00003	.00029	.00004
%RSD	44.678	57.969	162.01	347.65	26.233	13.143	33.875
#1	.00953	.00037	.00171	.00017	.00009	.00252	.00016
#2	.00529	.00084	.00027	.00020	.00016	.00206	.00014
#3	.00417	.00137	-.00016	-.00018	.00015	.00199	.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.10477**	**.00011**	**.00007**	**-.00017**	**.00212**	**-.00013**	**.00086**
Stddev	.00286	.00002	.00031	.00004	.00591	.00056	.00047
%RSD	2.7332	22.108	456.12	23.965	278.99	418.87	54.248
#1	.10435	.00011	.00026	-.00014	.00790	-.00047	.00047
#2	.10782	.00009	.00024	-.00021	.00237	-.00044	.00138
#3	.10213	.00014	-.00029	-.00015	-.00391	.00051	.00073
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.03240						
Low Limit	-.03240						

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01308**	**.00020**	**.00041**	**.00007**	**.09532**	**-.00087**	**.00001**
Stddev	.01544	.00035	.00006	.00025	.04512	.00070	.00013
%RSD	118.02	172.94	13.512	364.28	47.338	80.557	2287.5
#1	-.00464	-.00016	.00047	-.00021	.13528	-.00046	.00012
#2	.02360	.00023	.00040	.00014	.10429	-.00168	.00004
#3	.02028	.00053	.00036	.00027	.04639	-.00047	-.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB4 Acquired: 11/18/2011 16:45:03 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018048 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00304	.00003	.00060	.00020	.00041	.00016	.00499
Stddev	.00356	.00014	.00034	.00041	.00098	.00025	.00013
%RSD	117.16	451.05	55.515	199.66	236.71	154.65	2.6008
#1	.00371	.00000	.00057	-.00003	.00091	.00005	.00487
#2	.00623	-.00009	.00029	.00067	.00104	-.00001	.00497
#3	-.00081	.00018	.00095	-.00004	-.00071	.00045	.00512
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8432.1	59570.	158570.
Stddev	2.4	428.	260.
%RSD	.02822	.71882	.16416
#1	8434.5	60063.	158500.
#2	8429.8	59293.	158860.
#3	8432.0	59353.	158360.

EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP METALS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:
All samples pH <2

Book #: 66 **EIP-104**
Batch: ~~1PK028W~~ 1PK028W
Matrix: Water
Digestor ID: E

SOP #	Rev. #
☐ EMAX-3005	4
☑ EMAX-3010	5
☐ EMAX-3050	4
☐ EMAX-200.7	2
☐ EMAX-	

Start	Temp	End	Temp
	94 °C		95 °C

Standards	ID	Amount Added (ml)
LCS-1	SM1A-013-04-13	0.25
LCS-2	SM1A-013-03-13	0.25
LCS-3	SM1A-013-04-14	0.5
MS	Same spike vol and sol as LCS1, LCS2, LCS3	
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SW1A-04-407	1.5 + 1.5
HCl	SW1A-04-408	2.5 + 2.5
H_2O_2	N/A	
HNO3(1:1)	N/A	
Digestate Location	ICP	
Extract Location		
☑ Reagent Water ID: SM5A-02-074		
☑ Thermometer ID: 101993366		
☑ Pipette ID: ICP-07		
☑ Pipette ID: 142780035		
☐ Pipette ID:		
☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask		
☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask		

Prepared By: GG
Standard Added By: GG Witnessed By: PP
Extract Rcvd By: TH Checked By: TH

EMAX LABORATORIES, INC.

FileID: IPK028W

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
11IPK028W01	IPK028WB	50	ml	11/16/11 11:37	50	50	50	1	
11IPK028W02	IPK028WL	50	ml	11/16/11 11:37	50	50	50	1	
11IPK028W03	IPK028WC	50	ml	11/16/11 11:37	50	50	50	1	
11IPK028W04	TXK005WB	10	ml	11/16/11 11:37	50	50	50	5	TCLP
11IPK028W05	K426-10	10	ml	11/16/11 11:37	50	50	50	5	TCLP
11IPK028W06	K426-10M	10	ml	11/16/11 11:37	50	50	50	5	TCLP
11IPK028W07	K426-10S	10	ml	11/16/11 11:37	50	50	50	5	TCLP
11IPK028W08	K426-12	10	ml	11/16/11 11:37	50	50	50	5	TCLP
11IPK028W09	TXK006SB	10	ml	11/16/11 11:37	50	50	50	5	TCLP
11IPK028W10	K426-01	10	ml	11/16/11 11:37	50	50	50	5	TCLP
11IPK028W11	K426-02	10	ml	11/16/11 11:37	50	50	50	5	TCLP
11IPK028W12	K426-03	10	ml	11/16/11 11:37	50	50	50	5	TCLP
11IPK028W13	K426-04	10	ml	11/16/11 11:37	50	50	50	5	TCLP
11IPK028W14	K426-05	10	ml	11/16/11 11:37	50	50	50	5	TCLP
11IPK028W15	K426-06	10	ml	11/16/11 11:37	50	50	50	5	TCLP
11IPK028W16	K426-07	10	ml	11/16/11 11:37	50	50	50	5	TCLP
11IPK028W17	K426-07M	10	ml	11/16/11 11:37	50	50	50	5	TCLP
11IPK028W18	K426-07S	10	ml	11/16/11 11:37	50	50	50	5	TCLP
11IPK028W19	K426-08	10	ml	11/16/11 11:37	50	50	50	5	TCLP
11IPK028W20	K426-09	10	ml	11/16/11 11:37	50	50	50	5	TCLP
11IPK028W21	K039-01	50	ml	11/16/11 11:37	50	50	50	1	DISSOLVED
11IPK028W22	K039-01D	50	ml	11/16/11 11:37	50	50	50	1	DISSOLVED
11IPK028W23	K063-01	50	ml	11/16/11 11:37	50	50	50	1	DISSOLVED
11IPK028W24	K063-02	50	ml	11/16/11 11:37	50	50	50	1	DISSOLVED
11IPK028W25	K063-02M	50	ml	11/16/11 11:37	50	50	50	1	DISSOLVED
11IPK028W26	K063-02S	50	ml	11/16/11 11:37	50	50	50	1	DISSOLVED
11IPK028W27	K063-03	50	ml	11/16/11 11:37	50	50	50	1	DISSOLVED
11IPK028W28	K063-04	50	ml	11/16/11 11:37	50	50	50	1	DISSOLVED
11IPK028W29	K063-05	50	ml	11/16/11 11:37	50	50	50	1	DISSOLVED
11IPK028W30	K063-06	50	ml	11/16/11 11:37	50	50	50	1	DISSOLVED

11/16/11 GG

Vd=digestate volume PrepFctr=(ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 11/16/11 11:37

☑ Digestion Ended @ 11/16/11 15:53

Prepared By: GG

Checked By: TH

Comments:

Date 11/16/11

7.00

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

WET CHEMICAL ANALYSES

SDG#: 11K063

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K063

METHOD 300.0
ANIONS BY IC

A total of six (6) water samples were received on 11/07/11 for Anions (Chloride, Nitrate, Nitrite and Sulfate) by IC analysis, Method 300.0 in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary forms for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for ICK025WL/C were all within QC limits.
Percent recoveries for ICK029WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample were analyzed at the frequency prescribed by the project.
Percent recovery for K063-02M were within project QC limits.
Sample duplicate were also analyzed with the samples. RPDs were within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. Samples K063-01, -02, -03 and -06 for Nitrate and Nitrite were analyzed beyond 48-hours holding time due to lab oversight. Sample K063-05 for Nitrite was analyzed at 2x dilution due to interference from high Chloride concentration.

SAMPLE RESULTS

METHOD 300.0
CHLORIDE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K063

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK029WB	ND	1	NA	0.200	0.100	11/10/1103:10	NA	AK13-63	AK13-61	ICK029W	NA	NA
LCS1W	ICK029WL	1.97	1	NA	0.200	0.100	11/10/1103:27	NA	AK13-64	AK13-61	ICK029W	NA	NA
LCD1W	ICK029WC	1.96	1	NA	0.200	0.100	11/10/1103:43	NA	AK13-65	AK13-61	ICK029W	NA	NA
IW-70-SAB06-099	K063-03	289	20	NA	4.00	2.00	11/10/1105:36	NA	AK13-72	AK13-61	ICK029W	11/07/1114:30	11/07/11
MW-70-PMW02A-100	K063-04	197	20	NA	4.00	2.00	11/10/1106:24	NA	AK13-75	AK13-73	ICK029W	11/07/1115:42	11/07/11
MW-70-PMW02B-101	K063-05	353	40	NA	8.00	4.00	11/10/1106:40	NA	AK13-76	AK13-73	ICK029W	11/07/1116:27	11/07/11
IR-70-FD-098	K063-06	253	20	NA	4.00	2.00	11/10/1106:57	NA	AK13-77	AK13-73	ICK029W	11/07/1112:25	11/07/11
MW-70-PMW03A-095	K063-01	209	20	NA	4.00	2.00	11/10/1107:13	NA	AK13-78	AK13-73	ICK029W	11/07/1110:42	11/07/11
MW-70-PMW03B-097	K063-02	253	40	NA	8.00	4.00	11/10/1107:29	NA	AK13-79	AK13-73	ICK029W	11/07/1112:08	11/07/11
MW-70-PMW03B-097DUP	K063-02D	254	40	NA	8.00	4.00	11/10/1107:45	NA	AK13-80	AK13-73	ICK029W	11/07/1112:08	11/07/11
MW-70-PMW03B-097MS	K063-02M	326	40	NA	8.00	4.00	11/10/1108:01	NA	AK13-81	AK13-73	ICK029W	11/07/1112:08	11/07/11

METHOD 300.0
NITRATE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K063

Matrix : WATER
Instrument ID : D0

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK025WB	ND	1	NA	0.200	0.0500	11/09/1110:42	NA	AK13-03	AK13-01	ICK025W	NA	NA
LCS1W	ICK025WL	1.00	1	NA	0.200	0.0500	11/09/1110:58	NA	AK13-04	AK13-01	ICK025W	NA	NA
LCD1W	ICK025WC	1.00	1	NA	0.200	0.0500	11/09/1111:15	NA	AK13-05	AK13-01	ICK025W	NA	NA
MW-70-PMW02A-100	K063-04	ND	1	NA	0.200	0.0500	11/09/1115:41	NA	AK13-21	AK13-13	ICK025W	11/07/1115:42	11/07/11
MW-70-PMW02B-101	K063-05	ND	1	NA	0.200	0.0500	11/09/1115:57	NA	AK13-22	AK13-13	ICK025W	11/07/1116:27	11/07/11
IW-70-SAB06-099	K063-03	0.0651J	1	NA	0.200	0.0500	11/09/1116:30	NA	AK13-24	AK13-13	ICK025W	11/07/1114:30	11/07/11
IR-70-FD-098	K063-06	ND	1	NA	0.200	0.0500	11/09/1117:28	NA	AK13-27	AK13-25	ICK025W	11/07/1112:25	11/07/11
MW-70-PMW03A-095	K063-01	0.0665J	1	NA	0.200	0.0500	11/09/1117:44	NA	AK13-28	AK13-25	ICK025W	11/07/1110:42	11/07/11
MW-70-PMW03B-097	K063-02	ND	1	NA	0.200	0.0500	11/09/1118:01	NA	AK13-29	AK13-25	ICK025W	11/07/1112:08	11/07/11
MW-70-PMW03B-097DUP	K063-02D	ND	1	NA	0.200	0.0500	11/09/1118:17	NA	AK13-30	AK13-25	ICK025W	11/07/1112:08	11/07/11
MW-70-PMW03B-097MS	K063-02M	1.05	1	NA	0.200	0.0500	11/09/1118:33	NA	AK13-31	AK13-25	ICK025W	11/07/1112:08	11/07/11

METHOD 300.0
NITRITE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K063

Matrix : WATER
Instrument ID : D0

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK025WB	ND	1	NA	0.200	0.0500	11/09/1110:42	NA	AK13-03	AK13-01	ICK025W	NA	NA
LCS1W	ICK025WL	2.04	1	NA	0.200	0.0500	11/09/1110:58	NA	AK13-04	AK13-01	ICK025W	NA	NA
LCD1W	ICK025WC	2.04	1	NA	0.200	0.0500	11/09/1111:15	NA	AK13-05	AK13-01	ICK025W	NA	NA
MW-70-PMW02A-100	K063-04	ND	1	NA	0.200	0.0500	11/09/1115:41	NA	AK13-21	AK13-13	ICK025W	11/07/1115:42	11/07/11
MW-70-PMW02B-101	K063-05	ND	2	NA	0.400	0.100	11/09/1116:14	NA	AK13-23	AK13-13	ICK025W	11/07/1116:27	11/07/11
IW-70-SAB06-099	K063-03	ND	1	NA	0.200	0.0500	11/09/1116:30	NA	AK13-24	AK13-13	ICK025W	11/07/1114:30	11/07/11
IR-70-FD-098	K063-06	ND	1	NA	0.200	0.0500	11/09/1117:28	NA	AK13-27	AK13-25	ICK025W	11/07/1112:25	11/07/11
MW-70-PMW03A-095	K063-01	ND	1	NA	0.200	0.0500	11/09/1117:44	NA	AK13-28	AK13-25	ICK025W	11/07/1110:42	11/07/11
MW-70-PMW03B-097	K063-02	ND	1	NA	0.200	0.0500	11/09/1118:01	NA	AK13-29	AK13-25	ICK025W	11/07/1112:08	11/07/11
MW-70-PMW03B-097DUP	K063-02D	ND	1	NA	0.200	0.0500	11/09/1118:17	NA	AK13-30	AK13-25	ICK025W	11/07/1112:08	11/07/11
MW-70-PMW03B-097MS	K063-02M	0.931	1	NA	0.200	0.0500	11/09/1118:33	NA	AK13-31	AK13-25	ICK025W	11/07/1112:08	11/07/11

METHOD 300.0
SULFATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K063

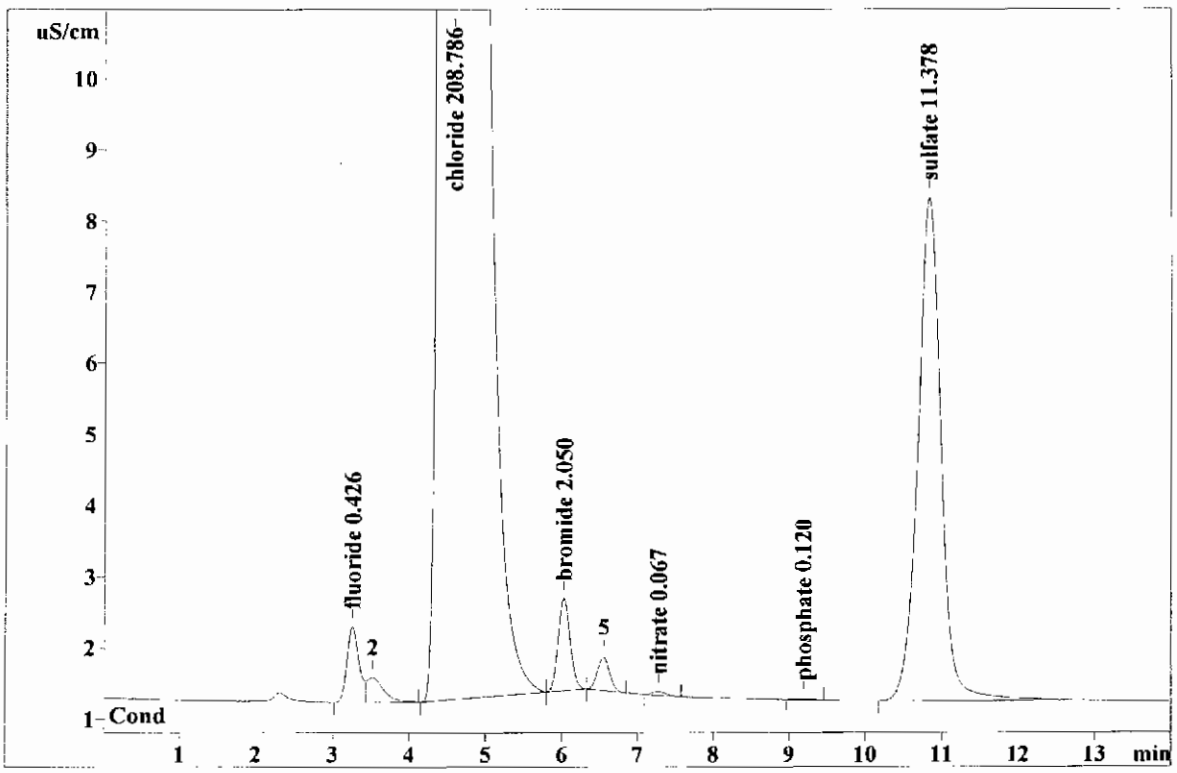
Matrix : WATER
Instrument ID : D0

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK025WB	ND	1	NA	0.500	0.250	11/09/1110:42	NA	AK13-03	AK13-01	ICK025W	NA	NA
LCS1W	ICK025WL	5.07	1	NA	0.500	0.250	11/09/1110:58	NA	AK13-04	AK13-01	ICK025W	NA	NA
LCD1W	ICK025WC	5.08	1	NA	0.500	0.250	11/09/1111:15	NA	AK13-05	AK13-01	ICK025W	NA	NA
MW-70-PMW03A-095	K063-01	11.4	1	NA	0.500	0.250	11/09/1117:44	NA	AK13-28	AK13-25	ICK025W	11/07/1110:42	11/07/11
MBLK2W	ICK029WB	ND	1	NA	0.500	0.250	11/10/1103:10	NA	AK13-63	AK13-61	ICK029W	NA	NA
LCS2W	ICK029WL	5.07	1	NA	0.500	0.250	11/10/1103:27	NA	AK13-64	AK13-61	ICK029W	NA	NA
LCD2W	ICK029WC	5.04	1	NA	0.500	0.250	11/10/1103:43	NA	AK13-65	AK13-61	ICK029W	NA	NA
IW-70-SA806-099	K063-03	222	20	NA	10.0	5.00	11/10/1105:36	NA	AK13-72	AK13-61	ICK029W	11/07/1114:30	11/07/11
MW-70-PMW02A-100	K063-04	321	20	NA	10.0	5.00	11/10/1106:24	NA	AK13-75	AK13-73	ICK029W	11/07/1115:42	11/07/11
MW-70-PMW02B-101	K063-05	545	40	NA	20.0	10.0	11/10/1106:40	NA	AK13-76	AK13-73	ICK029W	11/07/1116:27	11/07/11
IR-70-FD-098	K063-06	346	20	NA	10.0	5.00	11/10/1106:57	NA	AK13-77	AK13-73	ICK029W	11/07/1112:25	11/07/11
MW-70-PMW03B-097	K063-02	337	40	NA	20.0	10.0	11/10/1107:29	NA	AK13-79	AK13-73	ICK029W	11/07/1112:08	11/07/11
MW-70-PMW03B-097DUP	K063-02D	340	40	NA	20.0	10.0	11/10/1107:45	NA	AK13-80	AK13-73	ICK029W	11/07/1112:08	11/07/11
MW-70-PMW03B-097MS	K063-02M	540	40	NA	20.0	10.0	11/10/1108:01	NA	AK13-81	AK13-73	ICK029W	11/07/1112:08	11/07/11

Report date: 11/9/2011 6:06:01 PM
Printed by: Jadelyn Chun

Ident: AK13-28 K063-01
Analysis from: 11/9/2011 5:44:55 PM
File: vb091744.chw Last save: 11/9/2011 5:58:52 PM
Modified!
Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71193

SAMPLE:
:
Vial number: 28
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.25	1.06	11.547	0.426	fluoride
2	3.52	0.35	5.411	0.000	
3	4.58	213.03	3742.525	208.786	chloride
4	6.02	1.30	14.176	2.050	bromide
5	6.55	0.47	5.330	0.000	
6	7.28	0.05	0.651	0.067	nitrate ✓
7	9.18	0.02	0.282	0.120	phosphate
8	10.82	7.07	148.396	11.378	sulfate ✓
8	14.00	223.34	3928.318	222.826	

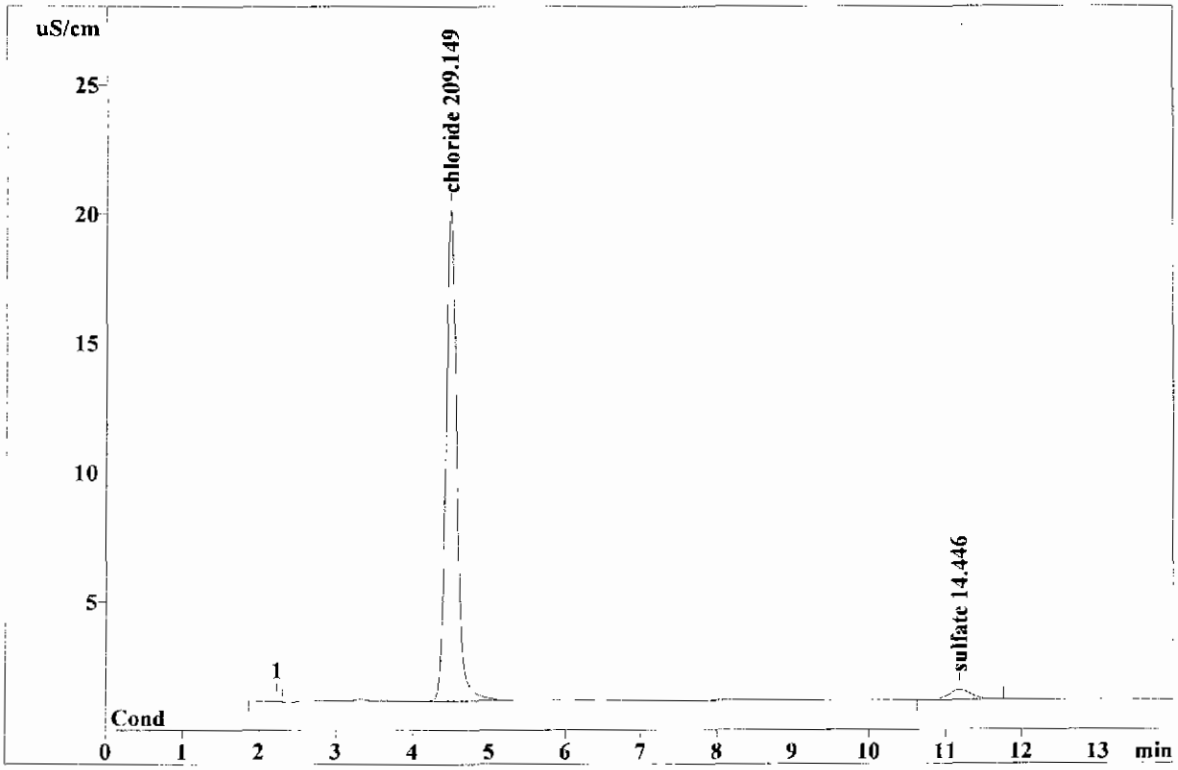
NO3N ✓

This report has been created by IC Net
METROHM LTD

Report date: 11/10/2011 11:32:52 AM
Printed by: Jadelyn Chun

Ident: AK13-78 K063-01 DF=20
Analysis from: 11/10/2011 7:13:18 AM
File: vb100713.chw Last save: 11/10/2011 7:27:15 AM
Modified!
Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71243

SAMPLE:
:
Vial number: 78
Volume: 1.0 µL
Dilution: 20.00
Amount: 1.0000



Quantitation method: Custom

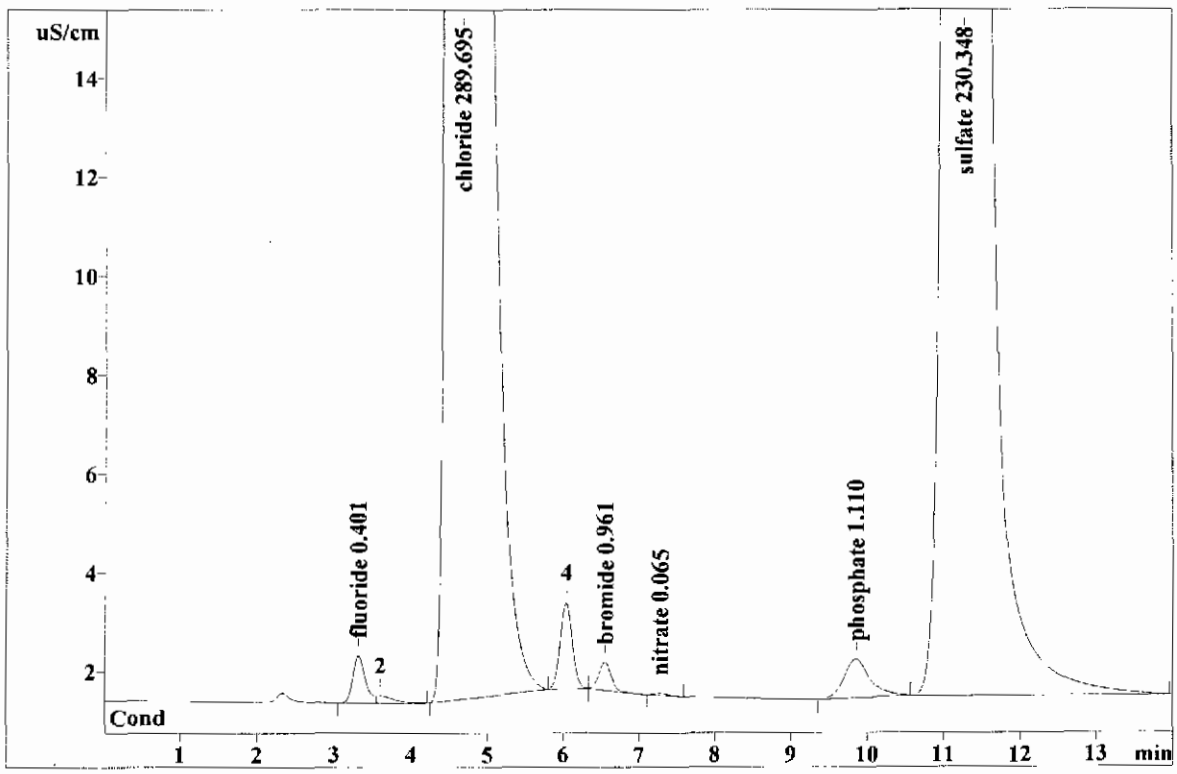
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.22	0.03	0.398	0.000	
2	4.49	18.98	185.976	209.149	chloride ✓
3	11.18	0.37	7.828	14.446	sulfate
3	14.00	19.37	194.202	223.595	

This report has been created by IC Net
METROHM LTD

Report date: 11/9/2011 6:26:12 PM
Printed by: Jadelyn Chun

Ident: AK13-24 K063-03
Analysis from: 11/9/2011 4:30:36 PM
File: vb091630.chw Last save: 11/9/2011 6:24:13 PM
Modified!
Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71189

SAMPLE:
:
Vial number: 24
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.32	0.95	10.821	0.401	fluoride
2	3.60	0.14	2.245	0.000	
3	4.69	306.77	5193.433	289.695	chloride
4	6.04	1.73	19.409	0.000	
5	6.56	0.57	6.444	0.961	bromide
6	7.28	0.05	0.586	0.065	nitrate ✓
7	9.85	0.78	18.418	1.110	phosphate
8	11.28	131.34	3037.141	230.348	sulfate
8	14.00	442.34	8288.499	522.582	

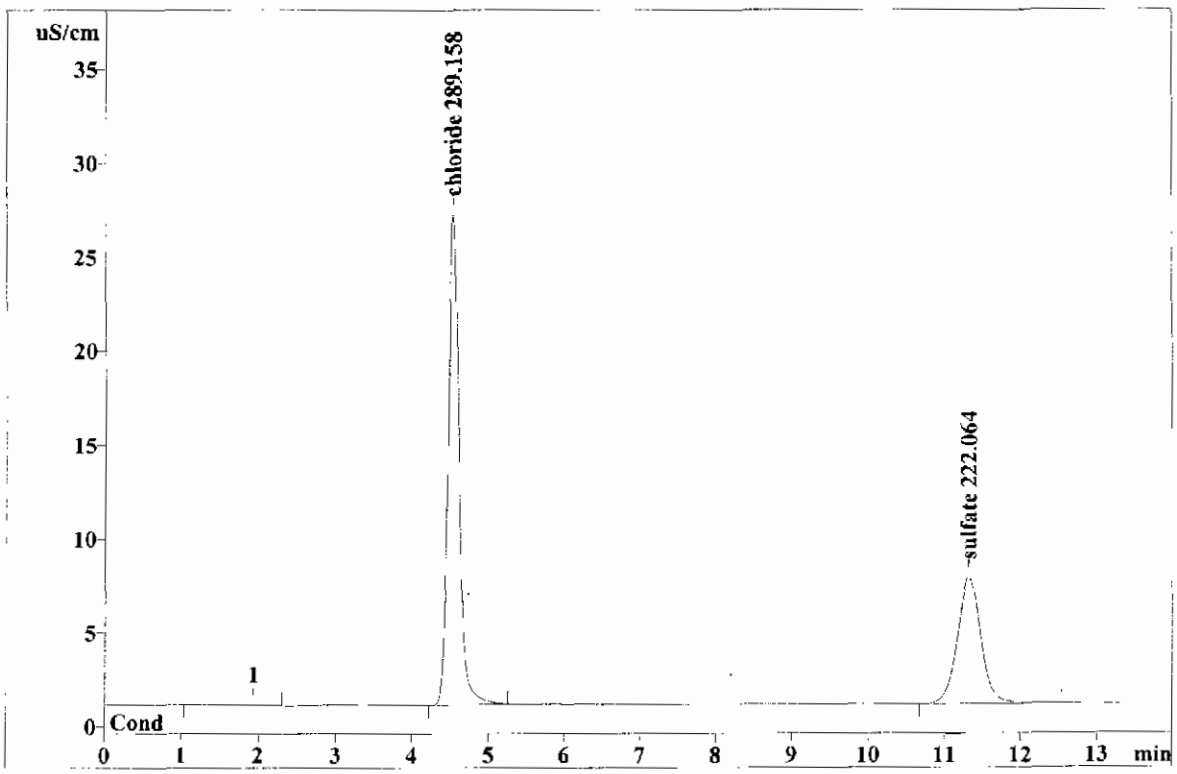
NO_{2+N} ✓

This report has been created by IC Net
METROHM LTD

Report date: 11/10/2011 11:32:09 AM
Printed by: Jadelyn Chun

Ident: AK13-72 K063-03 DF=20
Analysis from: 11/10/2011 5:36:19 AM
File: vb100536.chw Last save: 11/10/2011 5:50:16 AM
Modified!
Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71237

SAMPLE:
:
Vial number: 72
Volume: 1.0 µL
Dilution: 20.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	1.94	0.02	0.745	0.000	
2	4.53	26.15	257.714	289.158	chloride ✓
3	11.32	6.75	144.777	222.064	sulfate ✓
3	14.00	32.92	403.236	511.222	

This report has been created by IC Net
METROHM LTD

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK029WB	ICK029WL	ICK029WC		
LAB FILE ID:	AK13-63	AK13-64	AK13-65		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1103:10	11/10/1103:27	11/10/1103:43	DATE RECEIVED:	NA
PREP. BATCH:	ICK029W	ICK029W	ICK029W		
CALIB. REF:	AK13-61	AK13-61	AK13-61		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	ND	2.00	1.97	99	2.00	1.96	98	0	90-110	20

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 40 40
SAMPLE ID: MW-70-PMW03B-097
LAB SAMP ID: K063-02 K063-02M
LAB FILE ID: AK13-79 AK13-81
DATE EXTRACTED: NA NA DATE COLLECTED: 11/07/11 12:08
DATE ANALYZED: 11/10/1107:29 11/10/1108:01 DATE RECEIVED: 11/07/11
PREP. BATCH: ICK029W ICK029W
CALIB. REF: AK13-73 AK13-73

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	QC LIMIT (%)
Chloride-Cl	253	80.0	326	91	80-120

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	40	40		
SAMPLE ID:	MW-70-PMW03B-097			
EMAX SAMP ID:	K063-02	K063-02D		
LAB FILE ID:	AK13-79	AK13-80		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/07/11 12:08
DATE ANALYZED:	11/10/1107:29	11/10/1107:45	DATE RECEIVED:	11/07/11
PREP. BATCH:	ICK029W	ICK029W		
CALIB. REF:	AK13-73	AK13-73		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Chloride-Cl	253	254	1	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	1CK025WB	1CKD25WL	1CK025WC		
LAB FILE ID:	AK13-03	AK13-04	AK13-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1110:42	11/09/111D:58	11/09/1111:15	DATE RECEIVED:	NA
PREP. BATCH:	1CK025W	1CK025W	1CK025W		
CALIB. REF:	AK13-01	AK13-D1	AK13-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrate-N	ND	1.00	1.00	100	1.00	1.00	100	0	90-110	20

8015

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MW-70-PMW03B-097
LAB SAMP ID: K063-02 K063-02M
LAB FILE ID: AK13-29 AK13-31
DATE EXTRACTED: NA NA DATE COLLECTED: 11/07/11 12:08
DATE ANALYZED: 11/09/1118:01 11/09/1118:33 DATE RECEIVED: 11/07/11
PREP. BATCH: ICK025W ICK025W
CALIB. REF: AK13-25 AK13-25

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	QC LIMIT (%)
Nitrate-N	ND	1.00	1.05	105	80-120

8016

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MW-70-PMW03B-097			
EMAX SAMP ID:	K063-02	K063-02D		
LAB FILE ID:	AK13-29	AK13-30		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/07/11 12:08
DATE ANALYZED:	11/09/1118:01	11/09/1118:17	DATE RECEIVED:	11/07/11
PREP. BATCH:	ICK025W	ICK025W		
CALIB. REF:	AK13-25	AK13-25		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Nitrate-N	ND	ND	0	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK025WB	ICK025WL	ICK025WC		
LAB FILE ID:	AK13-03	AK13-04	AK13-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1110:42	11/09/1110:58	11/09/1111:15	DATE RECEIVED:	NA
PREP. BATCH:	ICK025W	ICK025W	ICK025W		
CALIB. REF:	AK13-01	AK13-01	AK13-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	2.00	2.04	102	2.00	2.04	102	0	90-110	20

0108

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MW-70-PMW03B-097
LAB SAMP ID: K063-02 K063-02M
LAB FILE ID: AK13-29 AK13-31
DATE EXTRACTED: NA NA DATE COLLECTED: 11/07/11 12:08
DATE ANALYZED: 11/09/1118:01 11/09/1118:33 DATE RECEIVED: 11/07/11
PREP. BATCH: ICK025W ICK025W
CALIB. REF: AK13-25 AK13-25

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	QC LIMIT (%)
Nitrite-N	ND	1.00	0.931	93	80-120

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MW-70-PMW03B-097			
EMAX SAMP ID:	K063-02	K063-02D		
LAB FILE ID:	AK13-29	AK13-30		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/07/11 12:08
DATE ANALYZED:	11/09/1118:01	11/09/1118:17	DATE RECEIVED:	11/07/11
PREP. BATCH:	ICK025W	ICK025W		
CALIB. REF:	AK13-25	AK13-25		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Nitrite-N	ND	ND	0	20

0220

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK025WB	ICK025WL	ICK025WC		
LAB FILE ID:	AK13-03	AK13-04	AK13-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1110:42	11/09/1110:58	11/09/1111:15	DATE RECEIVED:	NA
PREP. BATCH:	ICK025W	ICK025W	ICK025W		
CALIB. REF:	AK13-01	AK13-01	AK13-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	5.07	101	5.00	5.08	102	0	90-110	20

8621

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	ICK029WB	ICK029WL	ICK029WC		
LAB FILE ID:	AK13-63	AK13-64	AK13-65		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1103:10	11/10/1103:27	11/10/1103:43	DATE RECEIVED:	NA
PREP. BATCH:	ICK029W	ICK029W	ICK029W		
CALIB. REF:	AK13-61	AK13-61	AK13-61		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	5.07	101	5.00	5.04	101	1	90-110	20

8622

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 40 40
SAMPLE ID: MW-70-PMW03B-097
LAB SAMP ID: K063-02 K063-02M
LAB FILE ID: AK13-79 AK13-81
DATE EXTRACTED: NA NA DATE COLLECTED: 11/07/11 12:08
DATE ANALYZED: 11/10/1107:29 11/10/1108:01 DATE RECEIVED: 11/07/11
PREP. BATCH: ICK029W ICK029W
CALIB. REF: AK13-73 AK13-73

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	QC LIMIT (%)
Sulfate	337	200	540	101	80-120

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	40	40		
SAMPLE ID:	MW-70-PMW03B-097			
EMAX SAMP ID:	K063-02	K063-02D		
LAB FILE ID:	AK13-79	AK13-8D		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/07/11 12:08
DATE ANALYZED:	11/10/1107:29	11/10/1107:45	DATE RECEIVED:	11/07/11
PREP. BATCH:	ICK029W	ICK029W		
CALIB. REF:	AK13-73	AK13-73		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Sulfate	337	340	1	20

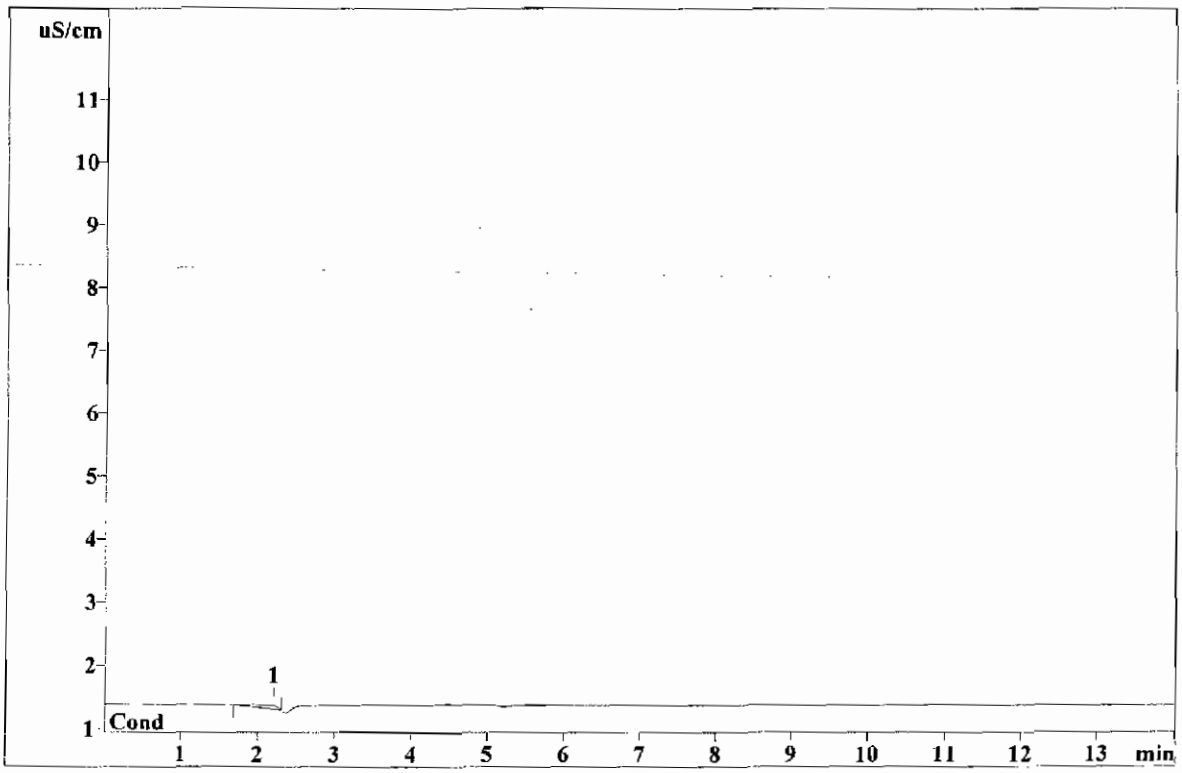
8024

QC DATA

Report date: 11/9/2011 5:44:19 PM
Printed by: Jadelyn Chun

Ident: AK13-03 ICK025WB
Analysis from: 11/9/2011 10:42:43 AM
File: vb091042.chw Last save: 11/9/2011 10:56:40 AM
Modified!
Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71168

SAMPLE:
:
Vial number: 3
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.19	0.05	1.160	0.000	

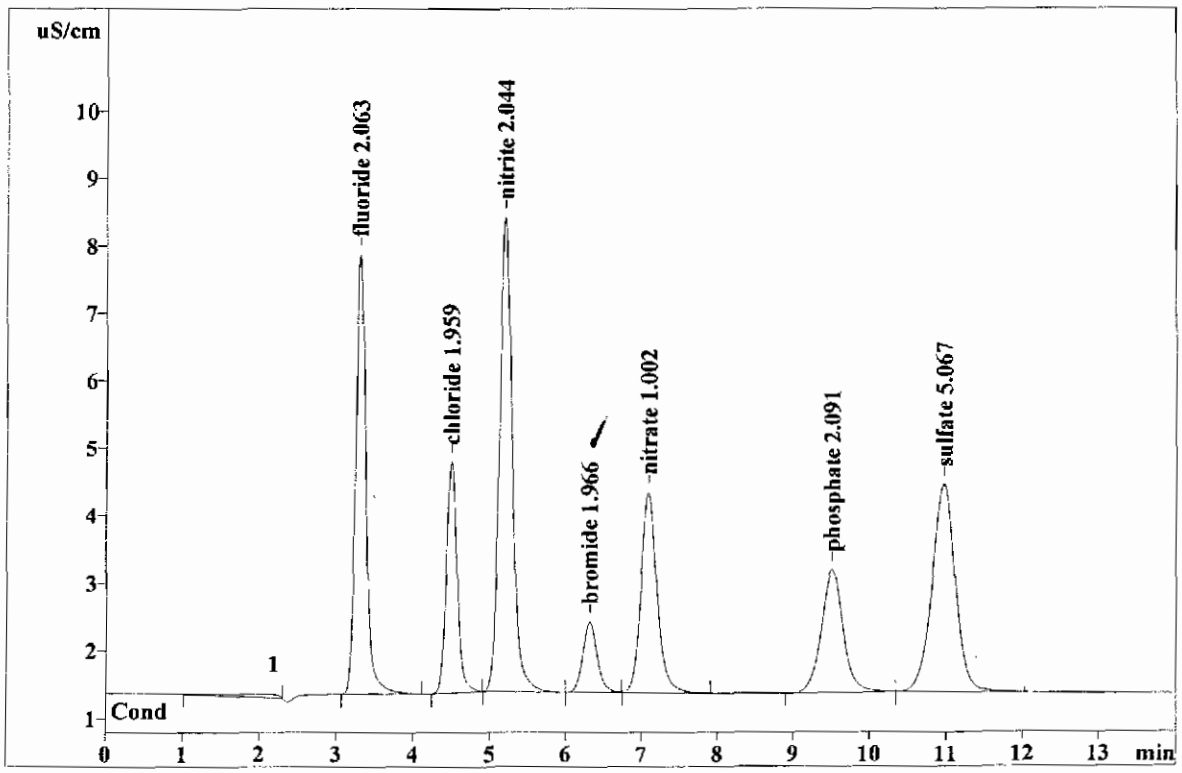
This report has been created by IC Net
METROHM LTD

Report date: 11/9/2011 11:12:49 AM
Printed by: Jadelyn Chun

Ident: AK13-04 ICK025WL
Analysis from: 11/9/2011 10:58:52 AM
File: VB091058.CHW Last save: 11/9/2011 11:12:49 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71169

SAMPLE:
:
Vial number: 4
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.05	2.289	0.000	
2	3.30	6.51	60.602	2.063	fluoride
3	4.49	3.42	33.582	1.959	chloride
4	5.19	7.03	82.853	2.044	nitrite
5	6.31	1.03	13.576	1.966	bromide
6	7.08	2.96	43.241	1.002	nitrate
7	9.50	1.82	36.383	2.091	phosphate
8	10.97	3.08	65.146	5.067	sulfate
8	14.00	25.89	337.671	16.192	

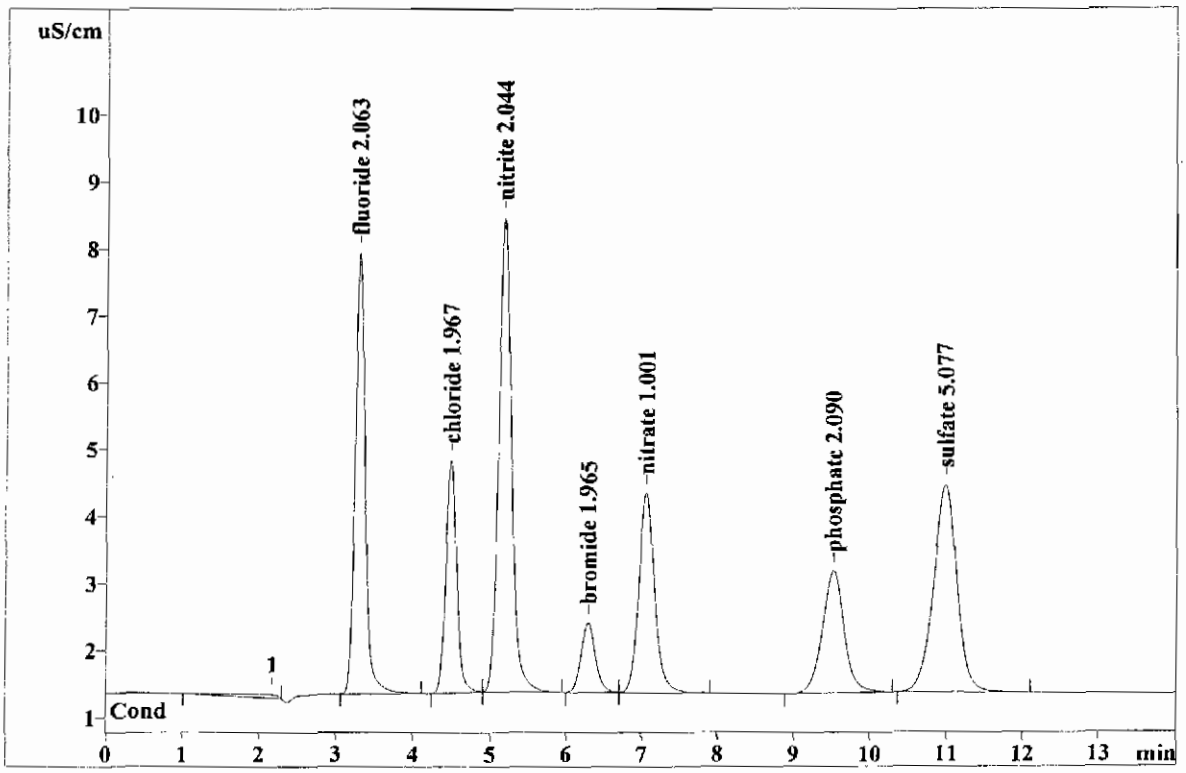
This report has been created by IC Net
METROHM LTD

Report date: 11/9/2011 11:28:59 AM
Printed by: Jadelyn Chun

Ident: AK13-05 ICK025WC
Analysis from: 11/9/2011 11:15:02 AM
File: VB091115.CHW Last save: 11/9/2011 11:28:59 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71170

SAMPLE:
:
Vial number: 5
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

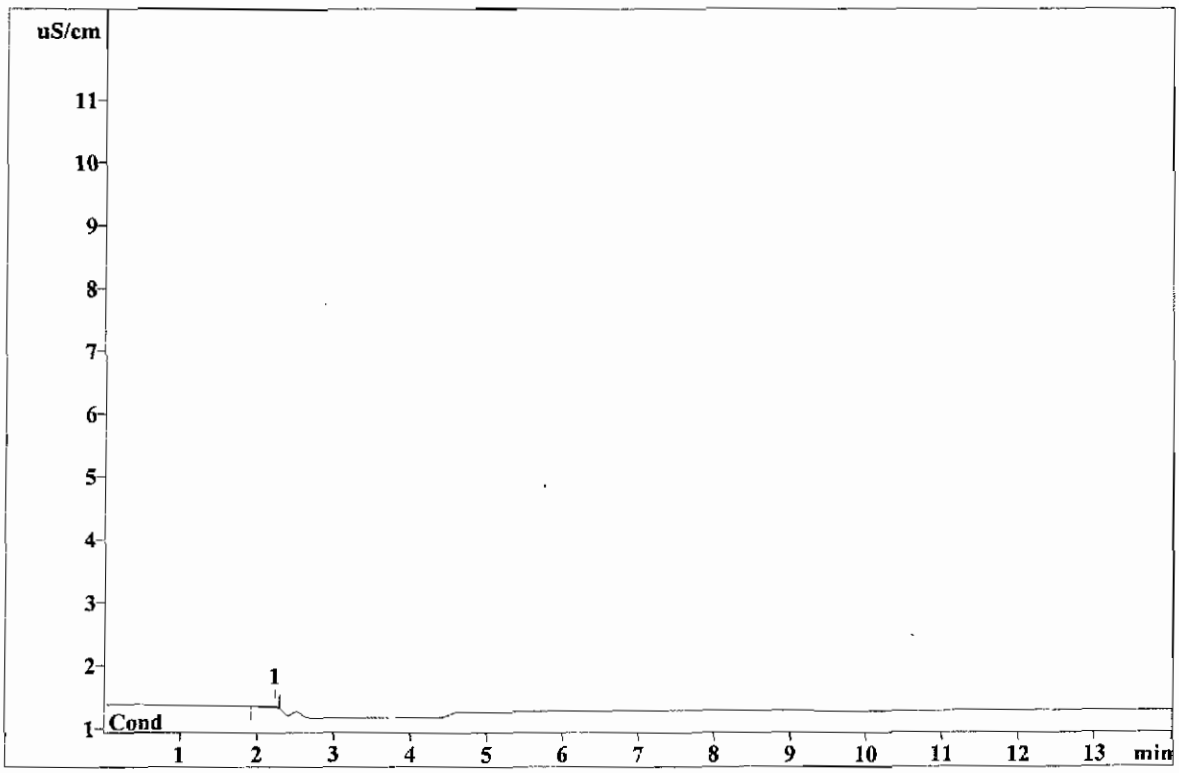
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.05	2.211	0.000	
2	3.30	6.58	60.600	2.063	fluoride
3	4.49	3.46	33.725	1.967	chloride
4	5.18	7.08	82.871	2.044	nitrite
5	6.29	1.04	13.572	1.965	bromide
6	7.05	2.98	43.215	1.001	nitrate
7	9.52	1.83	36.356	2.090	phosphate
8	10.98	3.08	65.275	5.077	sulfate
8	14.00	26.11	337.825	16.208	

This report has been created by IC Net
METROHM LTD

Report date: 11/14/2011 5:26:41 PM
Printed by: Jadelyn Chun

Ident: AK13-63 ICK029WB
Analysis from: 11/10/2011 3:10:51 AM
File: vb100310.chw Last save: 11/10/2011 10:49:30 AM
Modified!
Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71228

SAMPLE:
:
Vial number: 63
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

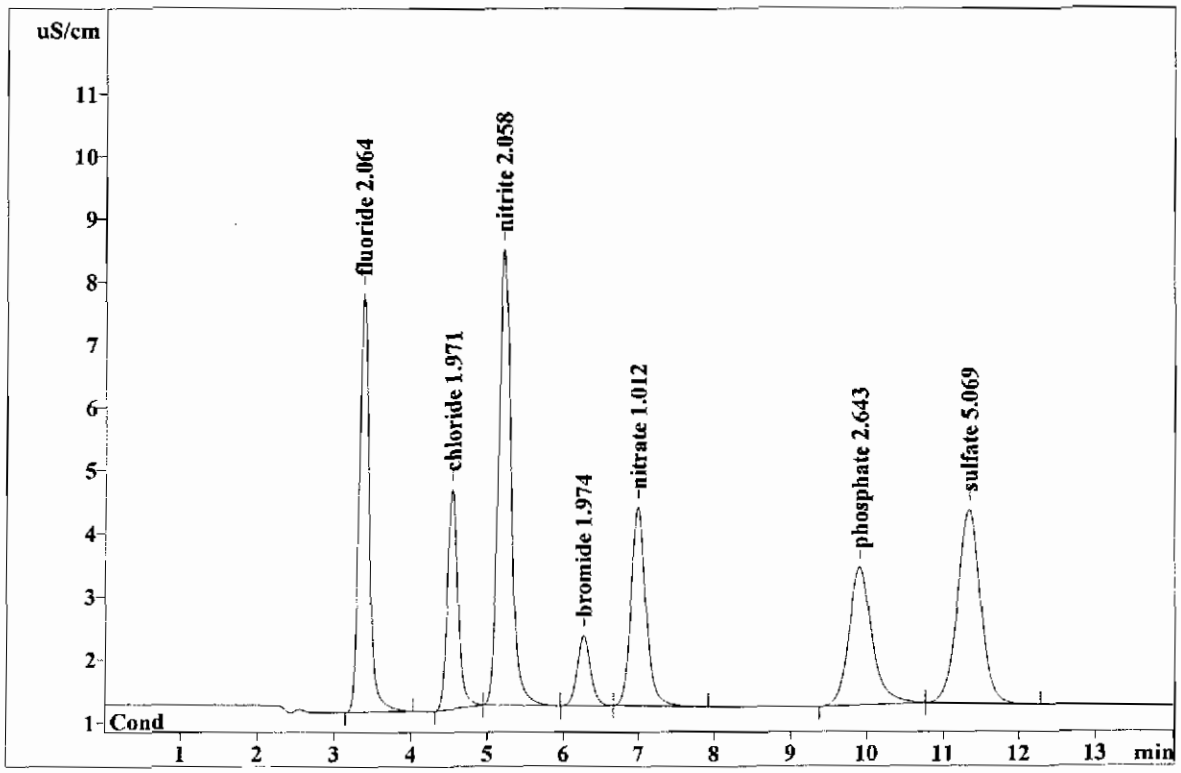
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.24	0.02	0.204	0.000	

This report has been created by IC Net
METROHM LTD

Report date: 11/14/2011 5:27:03 PM
Printed by: Jadelyn Chun

Ident: AK13-64 ICK029WL
Analysis from: 11/10/2011 3:27:01 AM
File: vb100327.chw Last save: 11/10/2011 3:40:58 AM
Modified!
Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71229

SAMPLE:
:
Vial number: 64
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

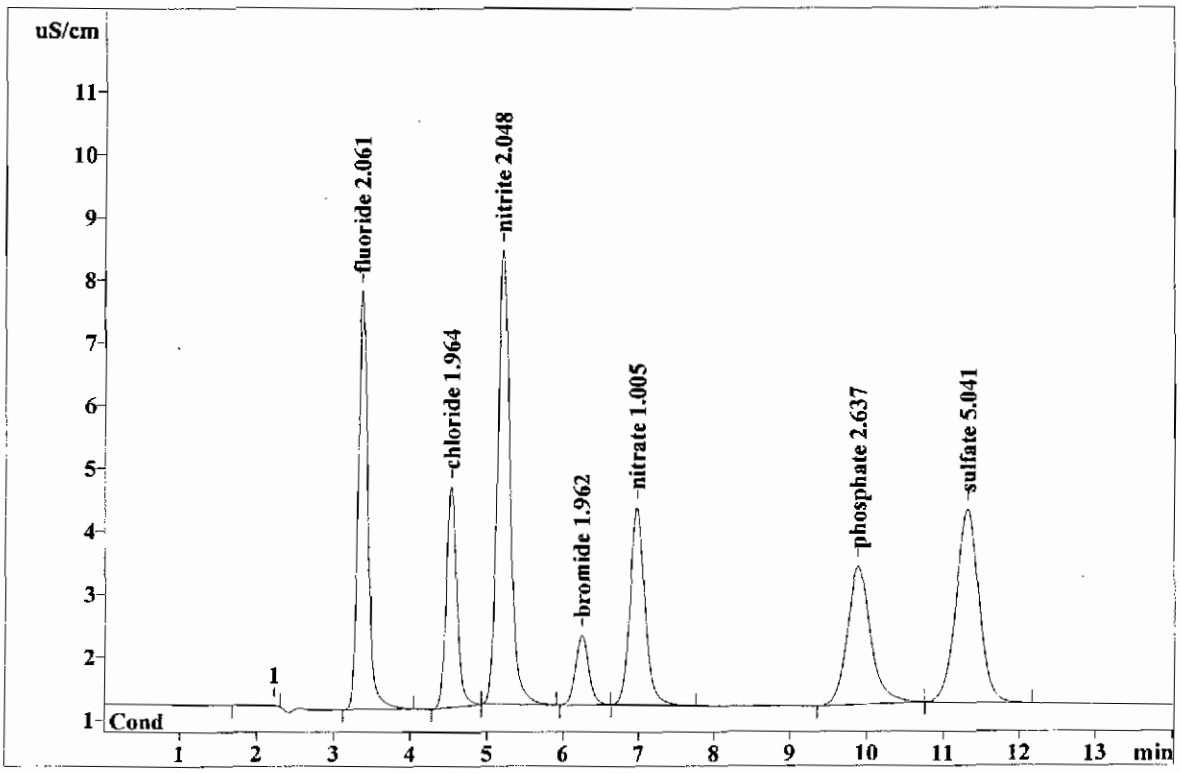
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.37	6.64	60.608	2.064	fluoride
2	4.54	3.49	33.790	1.971	chloride
3	5.21	7.24	83.438	2.058	nitrite
4	6.26	1.11	13.637	1.974	bromide
5	6.98	3.14	43.717	1.012	nitrate
6	9.90	2.19	46.487	2.643	phosphate
7	11.34	3.07	65.172	5.069	sulfate
7	14.00	26.89	346.849	16.791	

This report has been created by IC Net
METROHM LTD

Report date: 11/14/2011 5:27:21 PM
Printed by: Jadelyn Chun

Ident: AK13-65 ICK029WC
Analysis from: 11/10/2011 3:43:10 AM
File: vb100343.chw Last save: 11/10/2011 3:57:07 AM
Modified!
Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71230

SAMPLE:
:
Vial number: 65
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.22	0.01	0.368	0.000	
2	3.36	6.66	60.515	2.061	fluoride
3	4.53	3.50	33.663	1.964	chloride
4	5.20	7.23	83.031	2.048	nitrite
5	6.24	1.10	13.550	1.962	bromide
6	6.96	3.14	43.392	1.005	nitrate
7	9.88	2.19	46.382	2.637	phosphate
8	11.31	3.07	64.795	5.041	sulfate
8	14.00	26.91	345.697	16.717	

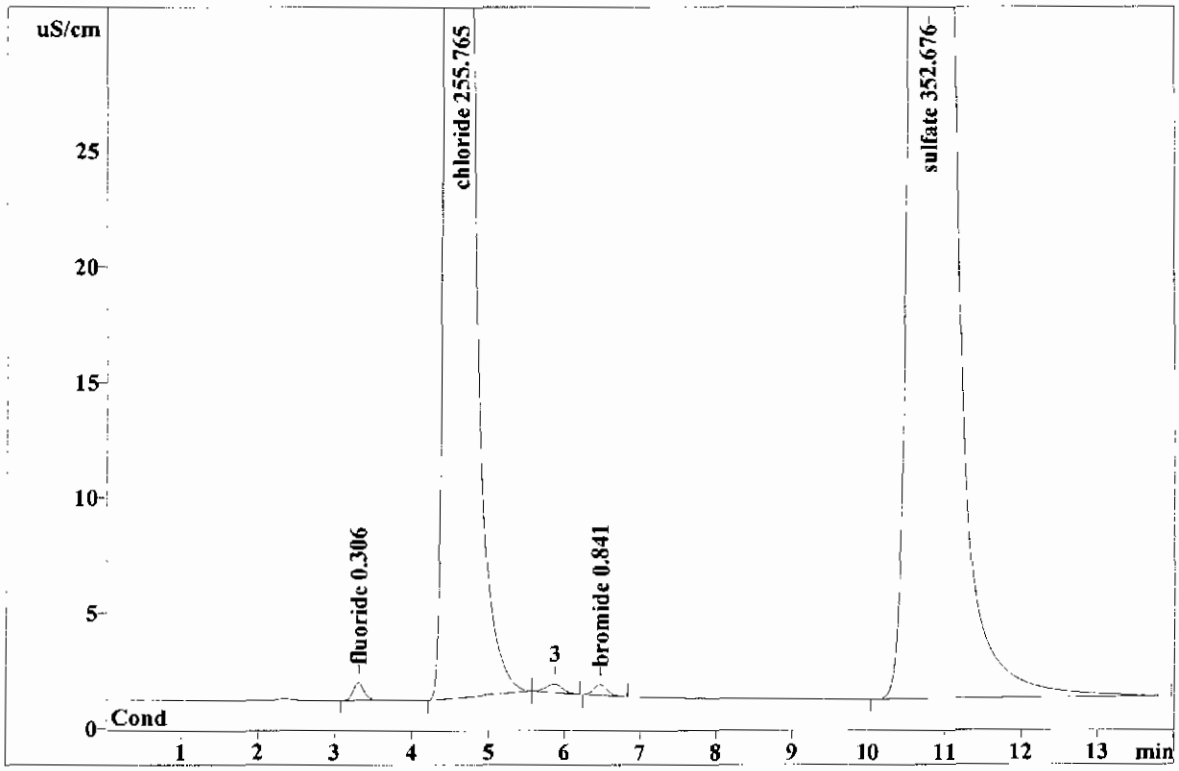
This report has been created by IC Net
METROHM LTD

Report date: 11/9/2011 6:23:30 PM
Printed by: Jadelyn Chun

Ident: AK13-29 K063-02
Analysis from: 11/9/2011 6:01:04 PM
File: vb091801.chw Last save: 11/9/2011 6:15:01 PM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71194

SAMPLE:
:
Vial number: 29
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.30	0.77	7.969	0.306	fluoride
2	4.63	328.12	4584.967	255.765	chloride
3	5.87	0.37	5.589	0.000	
4	6.47	0.46	5.593	0.841	bromide
5	10.79	201.86	4650.930	352.676	sulfate
5	14.00	531.59	9255.048	609.588	

NO_2N ✓
NO_3N ✓

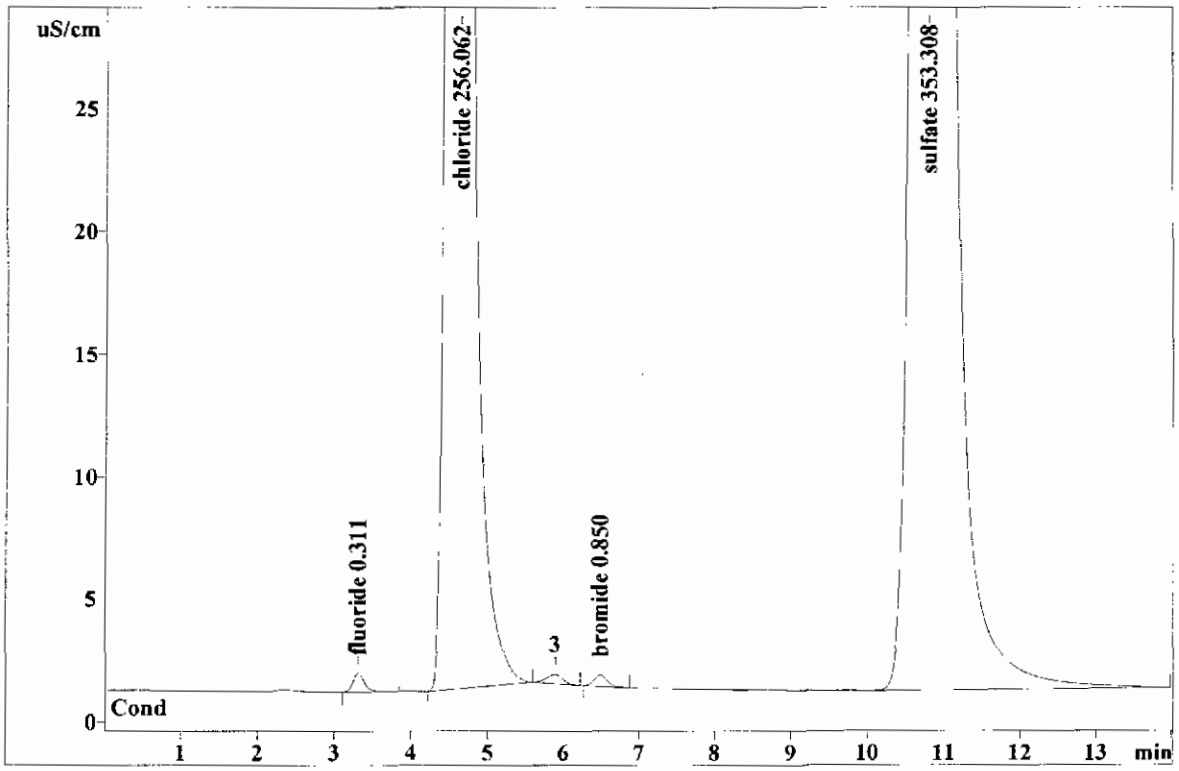
This report has been created by IC Net
METROHM LTD

Report date: 11/9/2011 6:34:51 PM
Printed by: Jadelyn Chun

Ident: AK13-30 K063-02D
Analysis from: 11/9/2011 6:17:32 PM
File: vb091817.chw Last save: 11/9/2011 6:31:29 PM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71195

SAMPLE:
:
Vial number: 30
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.31	0.77	8.104	0.311	fluoride
2	4.65	327.42	4590.296	256.062	chloride
3	5.89	0.37	5.499	0.000	
4	6.48	0.47	5.655	0.850	bromide
5	10.81	201.50	4659.265	353.308	sulfate
5	14.00	530.52	9268.819	610.530	

This report has been created by IC Net
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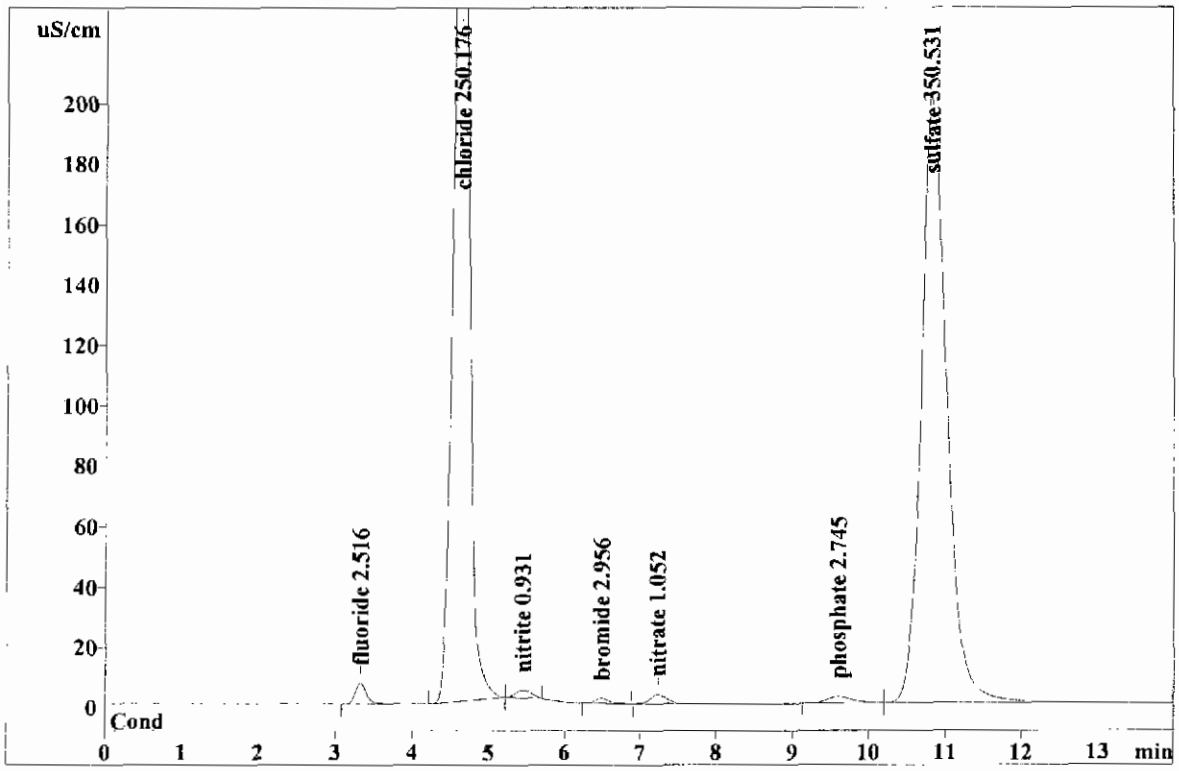
Report date: 11/10/2011 11:30:30 AM
Printed by: Jadelyn Chun

Ident: AK13-31 K063-02M
Analysis from: 11/9/2011 6:33:42 PM
File: vb091833.chw Last save: 11/9/2011 6:47:39 PM
Modified!
Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71196

SAMPLE:
:
Vial number: 31
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.32	6.99	74.163	2.516	fluoride
2	4.65	325.35	4484.746	250.176	chloride
3	5.45	2.61	37.705	0.931	nitrite
4	6.48	1.69	20.608	2.956	bromide
5	7.23	3.15	45.553	1.052	nitrate
6	9.60	2.15	48.350	2.745	phosphate
7	10.82	200.77	4622.638	350.531	sulfate
7	14.00	542.72	9333.762	610.908	

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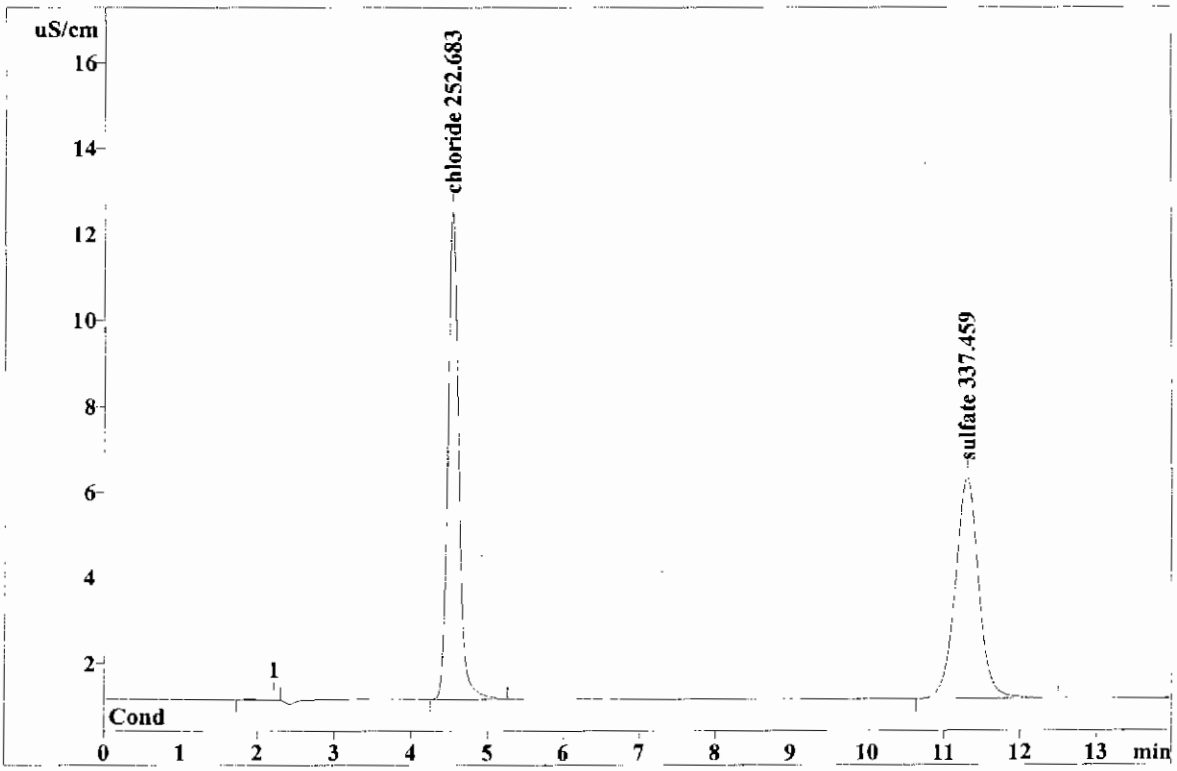
Report date: 11/10/2011 11:33:07 AM
Printed by: Jadelyn Chun

Ident: AK13-79 K063-02 DF=40
Analysis from: 11/10/2011 7:29:28 AM
File: vb100729.chw Last save: 11/10/2011 7:43:25 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71244

SAMPLE:
:
Vial number: 79
Volume: 1.0 µL
Dilution: 40.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.23	0.01	0.249	0.000	
2	4.54	11.37	111.728	252.683	chloride ✓
3	11.30	5.15	109.596	337.459	sulfate ✓
3	14.00	16.53	221.574	590.142	

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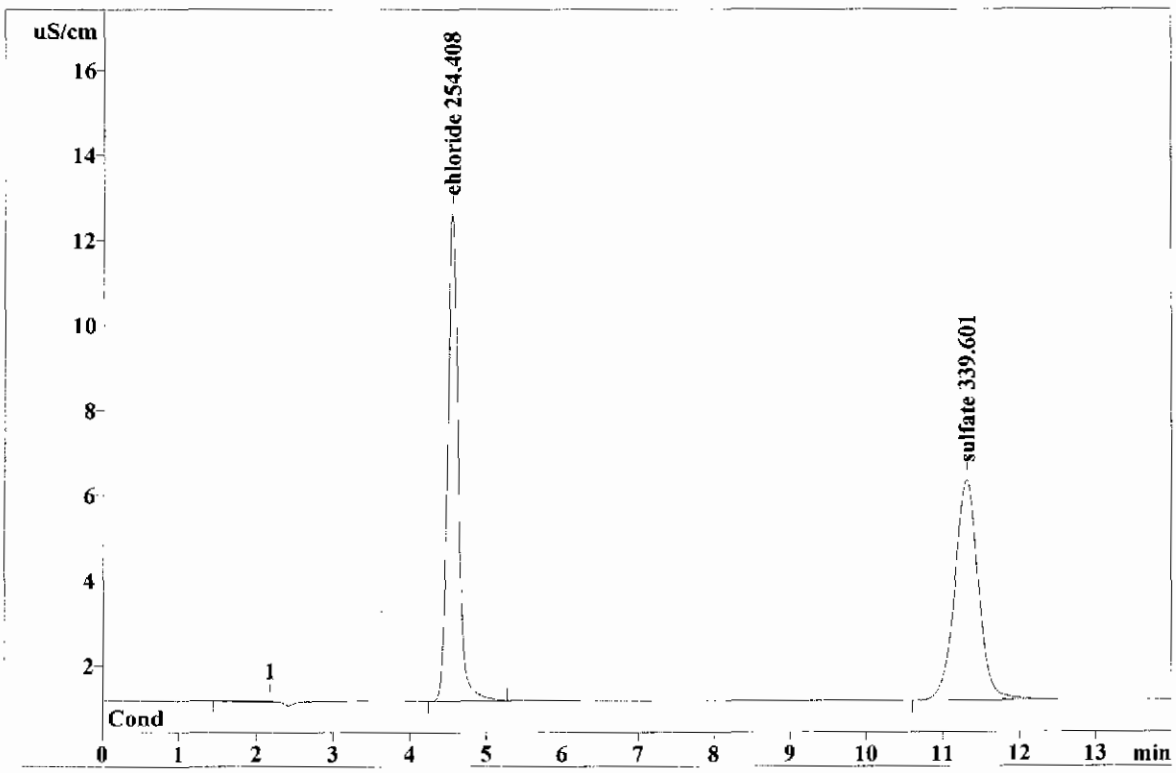
Report date: 11/10/2011 11:33:13 AM
Printed by: Jadelyn Chun

Ident: AK13-80 K063-02D DF=40
Analysis from: 11/10/2011 7:45:37 AM
File: vb100745.chw Last save: 11/10/2011 7:59:34 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71245

SAMPLE:
:
Vial number: 80
Volume: 1.0 µL
Dilution: 40.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.02	0.554	0.000	
2	4.54	11.48	112.501	254.408	chloride ✓
3	11.30	5.17	110.303	339.601	sulfate ✓
3	14.00	16.67	223.358	594.009	

This report has been created by IC Net
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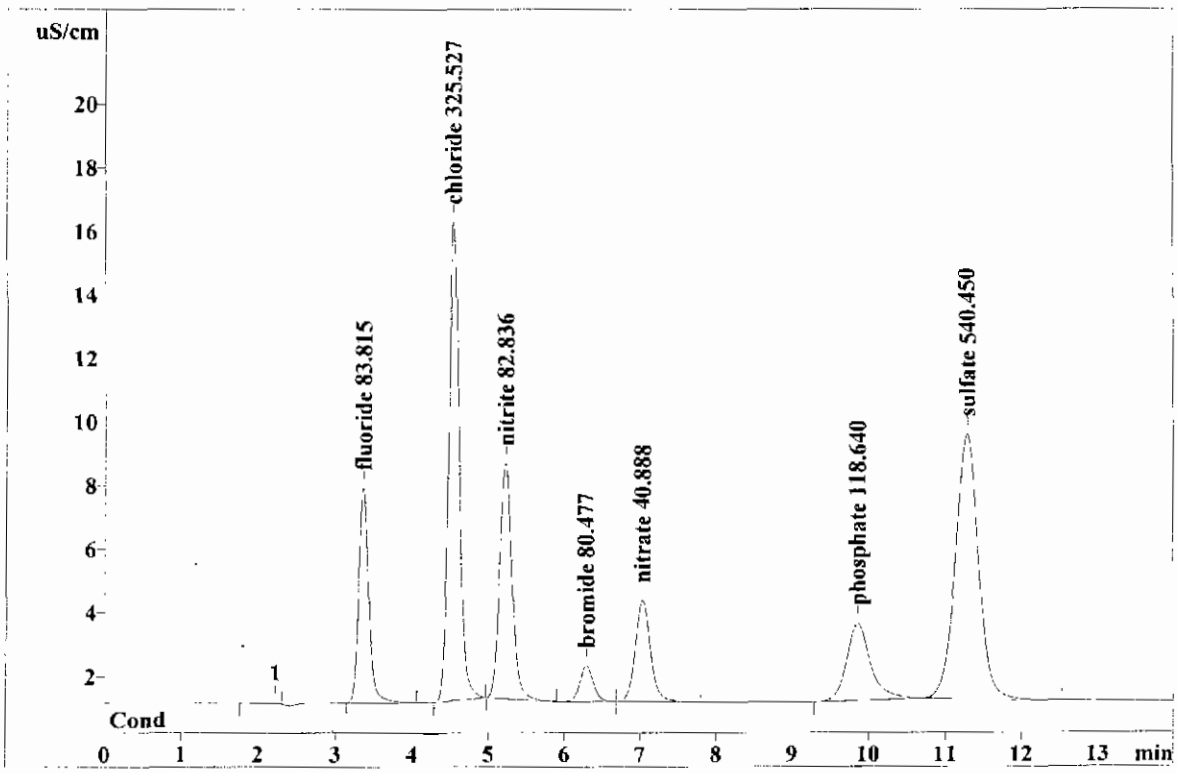
Report date: 11/10/2011 11:33:22 AM
Printed by: Jadelyn Chun

Ident: AK13-81 K063-02M DF=40
Analysis from: 11/10/2011 8:01:47 AM
File: vb100801.chw Last save: 11/10/2011 8:15:44 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71246

SAMPLE:
:
Vial number: 81
Volume: 1.0 µL
Dilution: 40.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.21	0.01	0.313	0.000	
2	3.36	6.74	61.557	83.815	fluoride
3	4.54	15.04	144.385	325.527	chloride
4	5.22	7.41	83.960	82.836	nitrite
5	6.29	1.13	13.904	80.477	bromide
6	7.03	3.18	44.176	40.888	nitrate
7	9.85	2.41	52.405	118.640	phosphate
8	11.28	8.32	176.545	540.450	sulfate
8	14.00	44.24	577.245	1272.634	

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INITIAL CALIBRATIONS

IC Result Check FormVersion : I30/AI39

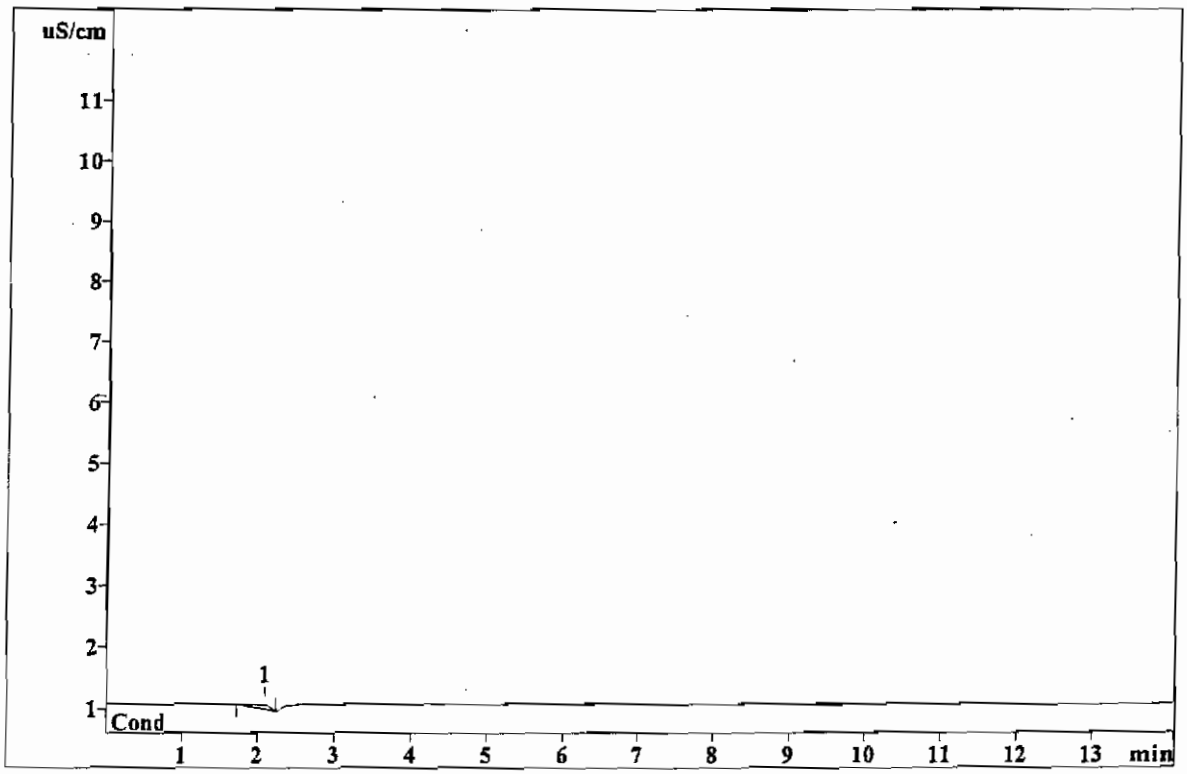
LFID	LSID	Selection	nitrite	fluoride	chloride	bromide	nitrate	phosphate	sulfate	RawNetID	DF
AI39-01	IB	IFCBNPS	0	0	0	0	0	0	0	v9301829	1
AI39-02	S0	IFCBNPS	0	0	0	0	0	0	0	v9301845	1
AI39-03	S1	IFCBNPS	0.0402732	0.0794447	0.137238	0.0962101	0.0900188	0.132659	0.181386	v9301901	1
AI39-04	S2	IFCBNPS	0.0827484	0.120657	0.172987	0.138434	0.127411	0.166211	0.219384	v9301917	1
AI39-05	S3	IFCBNPS	0.175829	0.207372	0.255839	0.223376	0.213499	0.241921	0.298411	v9301934	1
AI39-06	S4	IFCBNPS	0.468611	0.487287	0.510168	0.483675	0.481038	0.46682	0.535669	v9301950	1
AI39-07	S5	IFCBNPS	0.987232	0.975831	0.969747	0.947628	0.958434	0.904972	0.974277	v9302006	1
AI39-08	S6	IFCBNPS	2.03579	2.00618	1.92527	1.92275	1.95393	1.87863	1.87805	v9302022	1
AI39-09	S7	IFCBNPS	5.13141	5.00267	4.89791	5.03793	5.02567	5.05879	4.80122	v9302038	1
AI39-10	S8	IFCBNPS	9.9281	9.57748	9.9004	10.4648	10.1254	10.4079	9.8176	v9302054	1
AI39-11	S9	IFCBNPS	18.5849	17.9543	20.0804	21.615	20.3941	21.1232	20.144	v9302111	1
AI39-12	ICV	IFCBNPS	98.6%	100.1%	97.7%	94.1%	98.6%	92.5%	99.9%	v9302127	1
AI39-13	ICB	IFCBNPS	0	0	0	0	0	0	0	v9302143	1

Report date: 10/3/2011 10:48:38 AM
Printed by: Jadelyn Chun

Ident: AI39-02 S0
Analysis from: 9/30/2011 6:45:36 PM
File: v9301845.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69483

SAMPLE:
:
Vial number: 2
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.07	1.184	0.000	

This report has been created by IC Net
METROHM LTD

AS
10/03/11

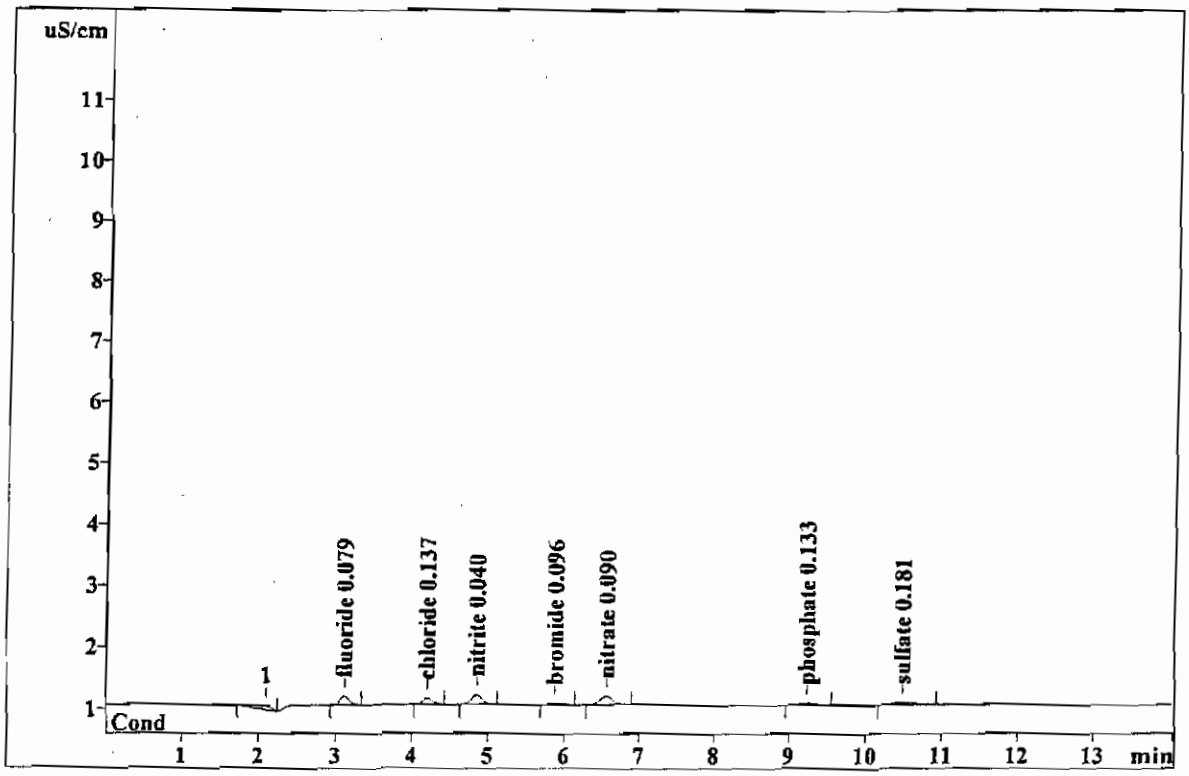
8048

Report date: 10/3/2011 10:48:46 AM
Printed by: Jadelyn Chun

Ident: AI39-03 S1
Analysis from: 9/30/2011 7:01:46 PM
File: v9301901.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69484

SAMPLE:
:
Vial number: 3
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.07	1.147	0.000	
2	3.12	0.14	1.182 ✓	0.079	fluoride
3	4.23	0.10	0.908 ✓	0.137	chloride
4	4.87	0.16	1.561 ✓	0.040	nitrite
5	5.87	0.03	0.301 ✓	0.096	bromide
6	6.57	0.14	1.722 ✓	0.090 ✓	nitrate
7	9.23	0.03	0.520 ✓	0.133 ✓	phosphate
8	10.50	0.04	0.692 ✓	0.181 ✓	sulfate
8	14.00	0.71	8.034	0.757	

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AS 10/03/11

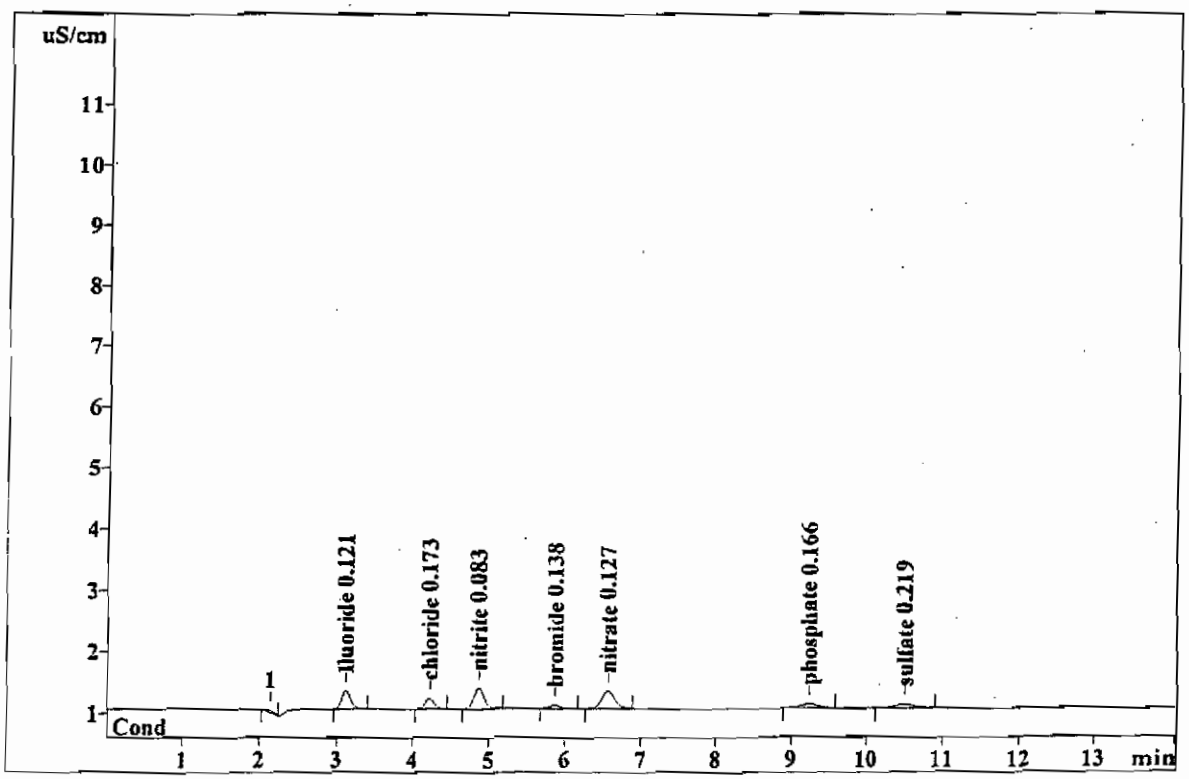
8041

Report date: 10/3/2011 10:49:06 AM
Printed by: Jadelyn Chun

Ident: AI39-04 S2
Analysis from: 9/30/2011 7:17:56 PM
File: v9301917.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69485

SAMPLE:
:
Vial number: 4
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.13	0.04	0.262	0.000	
2	3.12	0.30	2.417	0.121	fluoride ✓
3	4.22	0.18	1.549	0.173	chloride
4	4.86	0.34	3.285	0.083	nitrite ✓
5	5.87	0.05	0.601	0.138	bromide
6	6.56	0.29	3.425	0.127	nitrate ✓
7	9.24	0.07	1.135	0.166	phosphate
8	10.51	0.07	1.193 ✓	0.219	sulfate
8	14.00	1.32	13.866	1.028	

This report has been created by IC Net
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AS
10/03/11

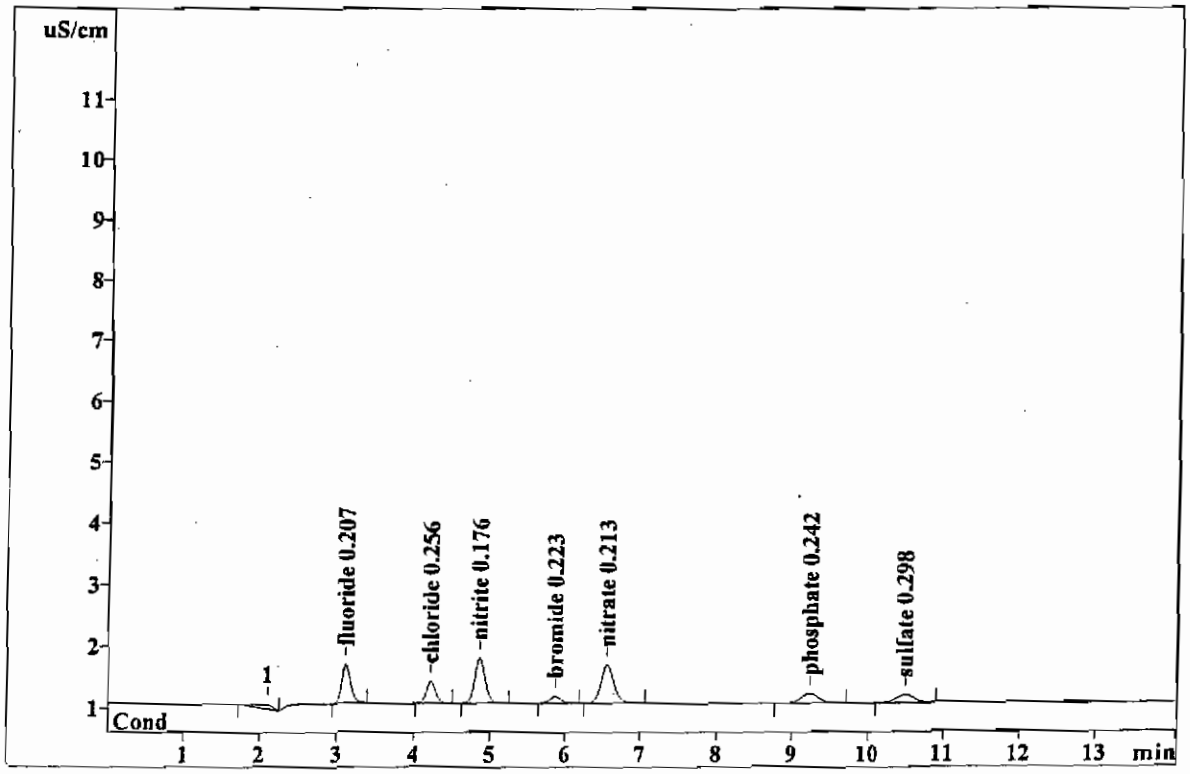
8042

Report date: 10/3/2011 10:49:15 AM
Printed by: Jadelyn Chun

Ident: AI39-05 S3
Analysis from: 9/30/2011 7:34:06 PM
File: v9301934.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69486

SAMPLE:
:
Vial number: 5
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.07	1.155	0.000	
2	3.12	0.62	5.014	0.207	fluoride
3	4.22	0.35	3.034	0.256	chloride ✓
4	4.87	0.73	7.062	0.176	nitrite
5	5.87	0.11	1.204	0.223	bromide
6	6.56	0.62	7.345	0.213	nitrate
7	9.24	0.15	2.521	0.242	phosphate
8	10.50	0.13	2.236 ✓	0.298	sulfate
8	14.00	2.78	29.572	1.616	

This report has been created by IC Net
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AS
10/03/11

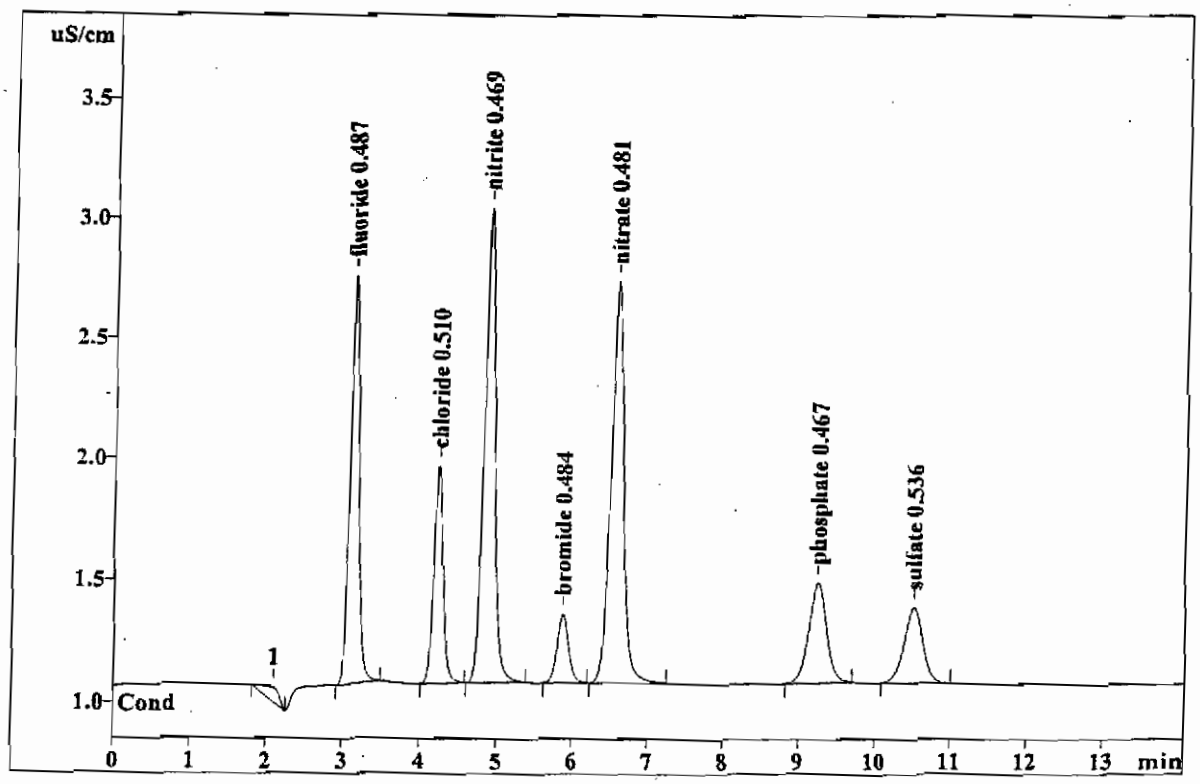
8643

Report date: 10/3/2011 10:49:34 AM
Printed by: Jadelyn Chun

Ident: AI39-06 S4
Analysis from: 9/30/2011 7:50:16 PM
File: v9301950.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69487

SAMPLE:
:
Vial number: 6
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.06	0.880	0.000	
2	3.12	1.69	13.397	0.487	fluoride
3	4.23	0.89	7.595	0.510	chloride ✓
4	4.87	1.96	18.943	0.469	nitrite
5	5.87	0.28	3.053	0.484	bromide ✓
6	6.55	1.66	19.530	0.481	nitrate
7	9.24	0.41	6.640	0.467	phosphate ✓
8	10.51	0.31	5.366 ✓	0.536	sulfate ✓
8	14.00	7.26	75.402	3.433	

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As
10/03/11

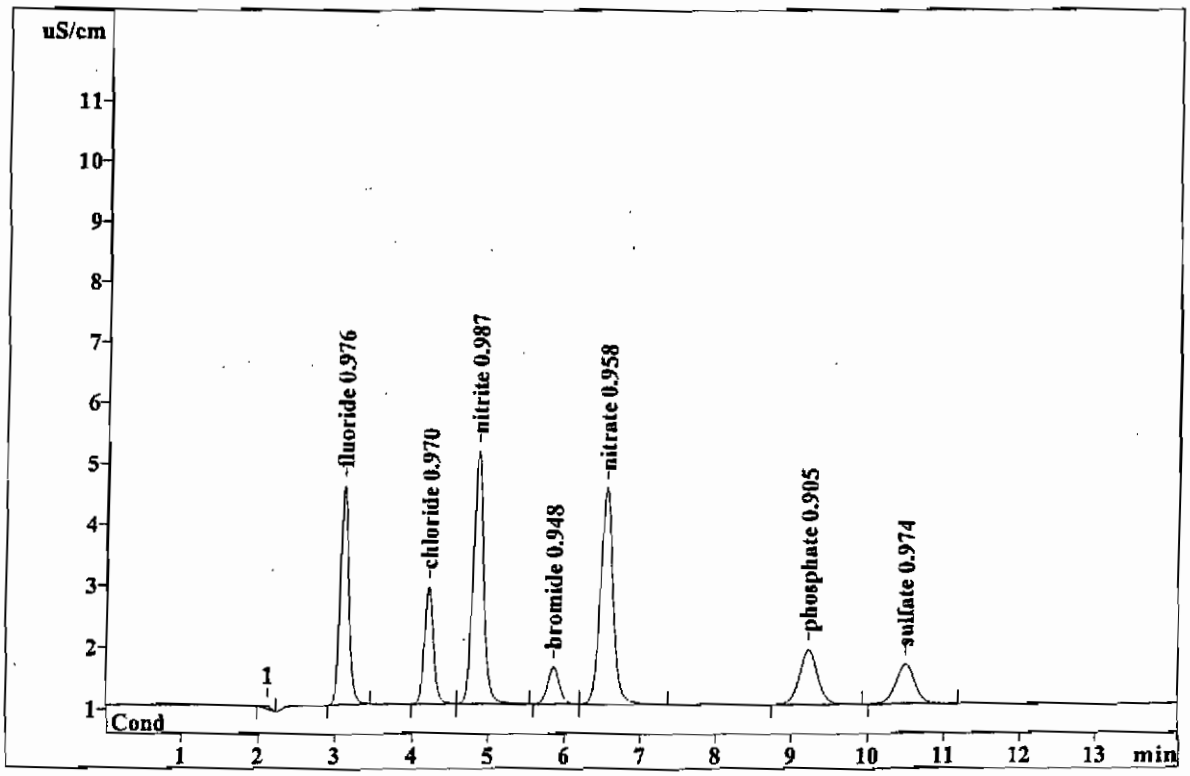
8044

Report date: 10/3/2011 10:49:41 AM
Printed by: Jadelyn Chun

Ident: AI39-07 S5
Analysis from: 9/30/2011 8:06:26 PM
File: v9302006.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69488

SAMPLE:
:
Vial number: 7
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.13	0.04	0.341	0.000	
2	3.12	3.57	28.028	0.976	fluoride
3	4.22	1.90	15.837	0.970	chloride
4	4.86	4.12	39.987	0.987	nitrite
5	5.86	0.59	6.347	0.948	bromide
6	6.54	3.52	41.272	0.958	nitrate
7	9.24	0.88	14.663	0.905	phosphate
8	10.50	0.63	11.152 ✓	0.974	sulfate
8	14.00	15.25	157.627	6.718	

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AS
10/03/11

8045

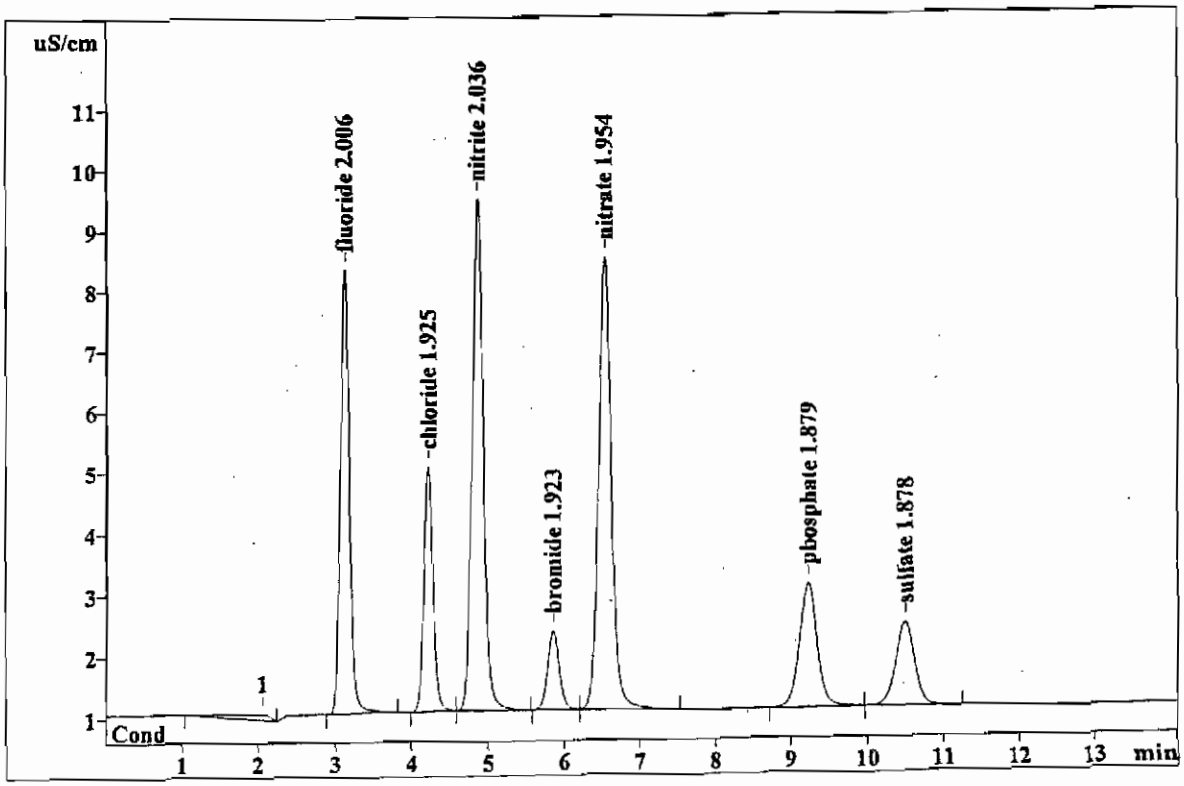
Report date: 10/3/2011 10:49:51 AM
Printed by: Jadelyn Chun

Ident: AI39-08 S6
Analysis from: 9/30/2011 8:22:36 PM
File: v9302022.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69489

SAMPLE:

Vial number: 8
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.08	0.08	3.161	0.000	
2	3.12	7.28	58.886	2.006	fluoride
3	4.22	3.98	32.972	1.925	chloride
4	4.86	8.39	82.536	2.036	nitrite
5	5.86	1.27	13.271	1.923	bromide
6	6.53	7.42	86.609	1.954	nitrate
7	9.23	2.01	32.493	1.879	phosphate
8	10.50	1.36	23.075 ✓	1.878	sulfate
8	14.00	31.79	333.001	13.601	

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10/03/11

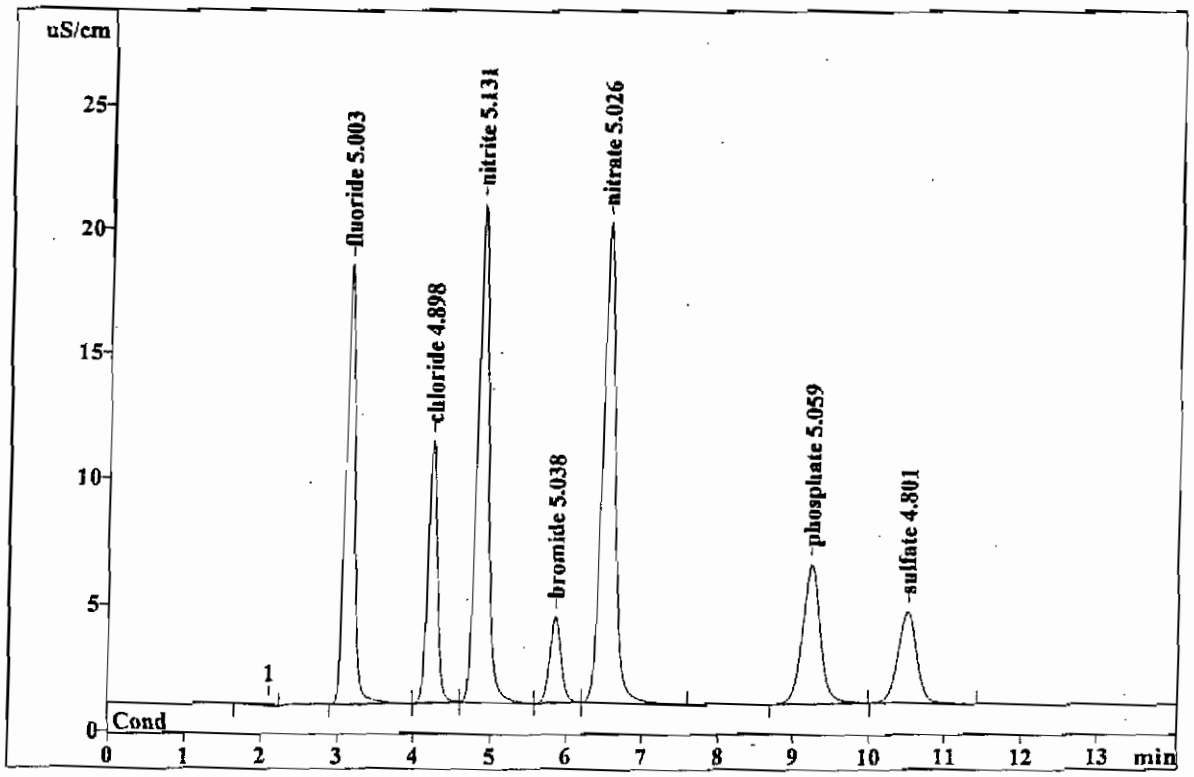
8046

Report date: 10/3/2011 10:49:56 AM
Printed by: Jadelyn Chun

Ident: AI39-09 S7
Analysis from: 9/30/2011 8:38:46 PM
File: v9302038.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69490

SAMPLE:
:
Vial number: 9
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.06	1.110	0.000	
2	3.13	17.51	148.626	5.003	fluoride
3	4.23	10.38	86.279	4.898	chloride
4	4.86	19.91	208.149	5.131	nitrite
5	5.86	3.40	35.390	5.038	bromide
6	6.53	19.15	226.504	5.026	nitrate
7	9.23	5.51	90.728	5.059	phosphate
8	10.50	3.62	61.639 ✓	4.801	sulfate
8	14.00	79.53	858.424	34.956	

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10/03/11

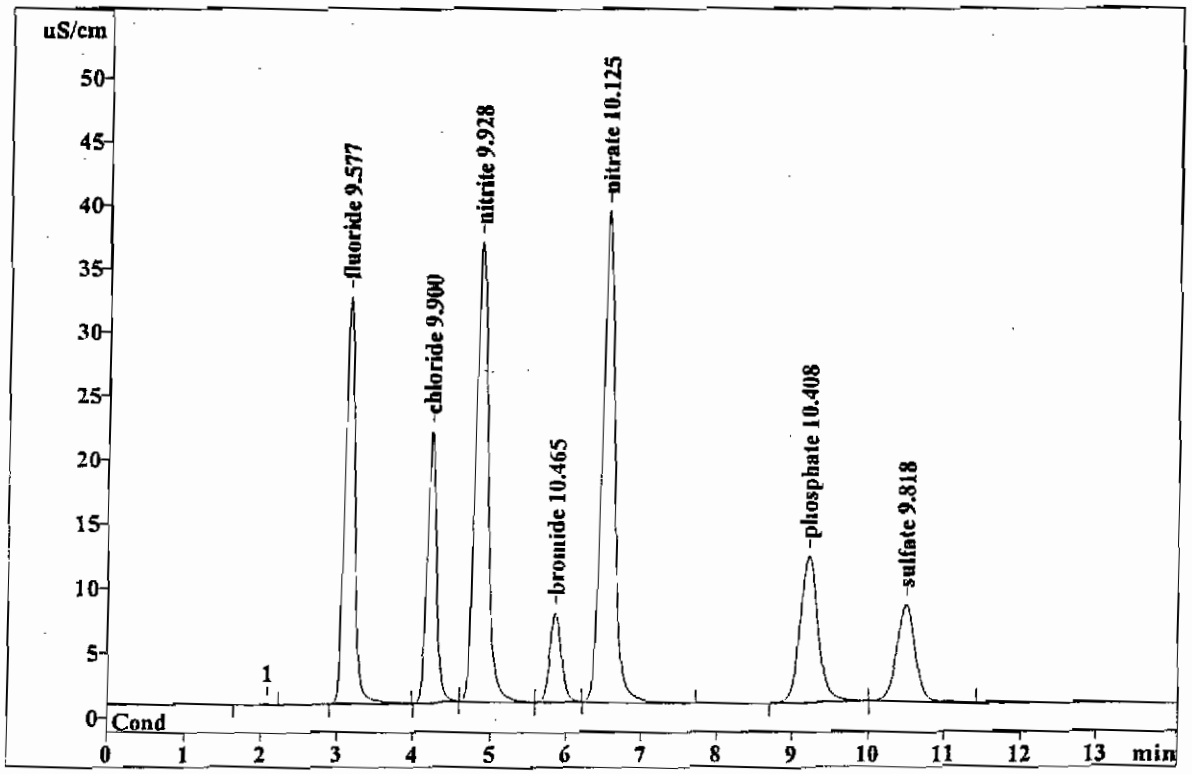
8047

Report date: 10/3/2011 10:50:01 AM
Printed by: Jadelyn Chun

Ident: AI39-10 S8
Analysis from: 9/30/2011 8:54:55 PM
File: v9302054.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69491

SAMPLE:
:
Vial number: 10
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.09	0.04	0.883	0.000	
2	3.14	31.68	285.635	9.577	fluoride
3	4.22	21.04	175.986	9.900	chloride
4	4.86	35.83	402.789	9.928	nitrite
5	5.85	6.92	73.923	10.465	bromide
6	6.52	38.33	458.760	10.125	nitrate
7	9.21	11.30	188.680	10.408	phosphate
8	10.49	7.47	127.816	9.818	sulfate
8	14.00	152.61	1714.471	70.222	

This report has been created by IC Net
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AS
10/03/11

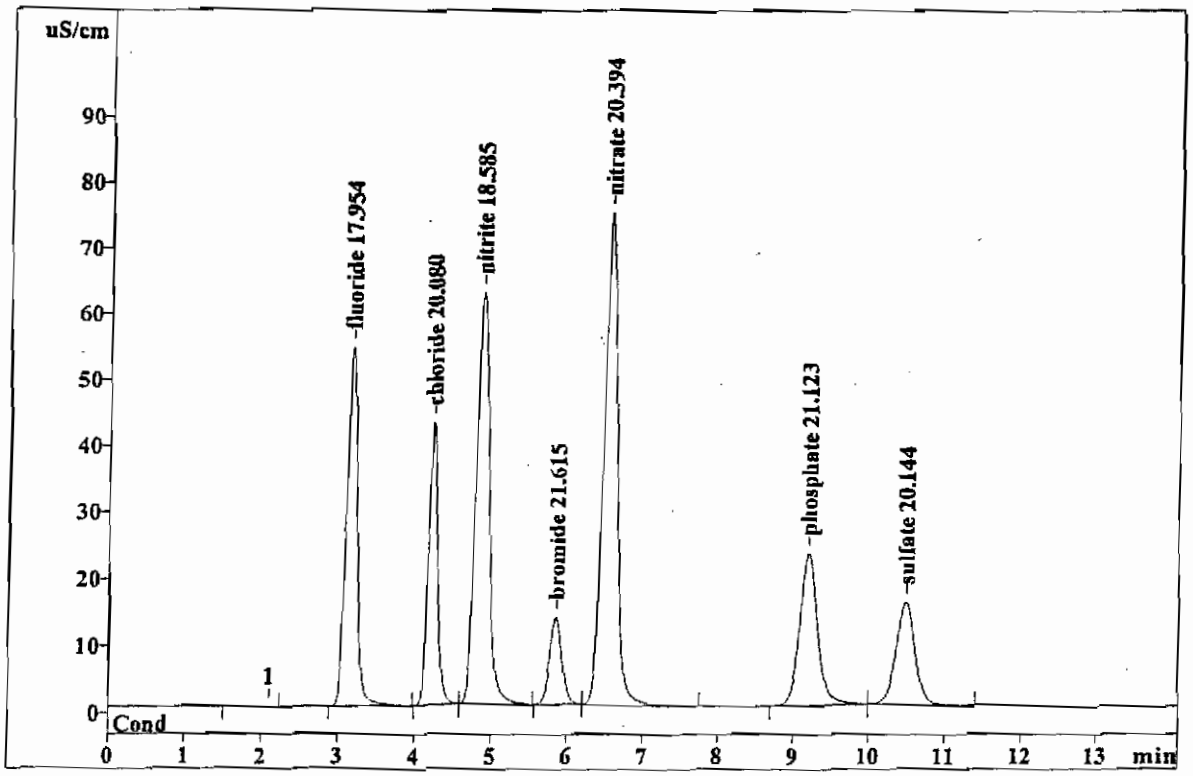
8048

Report date: 10/3/2011 10:50:10 AM
Printed by: Jadelyn Chun

Ident: AI39-11 S9
Analysis from: 9/30/2011 9:11:05 PM
File: v9302111.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69492

SAMPLE:
:
Vial number: 11
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.09	0.02	0.447	0.000	
2	3.16	53.88	536.509	17.954	fluoride
3	4.23	42.24	358.541	20.080	chloride
4	4.86	61.98	754.064	18.585	nitrite
5	5.85	13.02	153.094	21.615	bromide
6	6.54	74.20	926.425	20.394	nitrate
7	9.19	22.65	384.898	21.123	phosphate
8	10.49	15.33	264.046 ✓	20.144	sulfate
8	14.00	283.33	3378.024	139.896	

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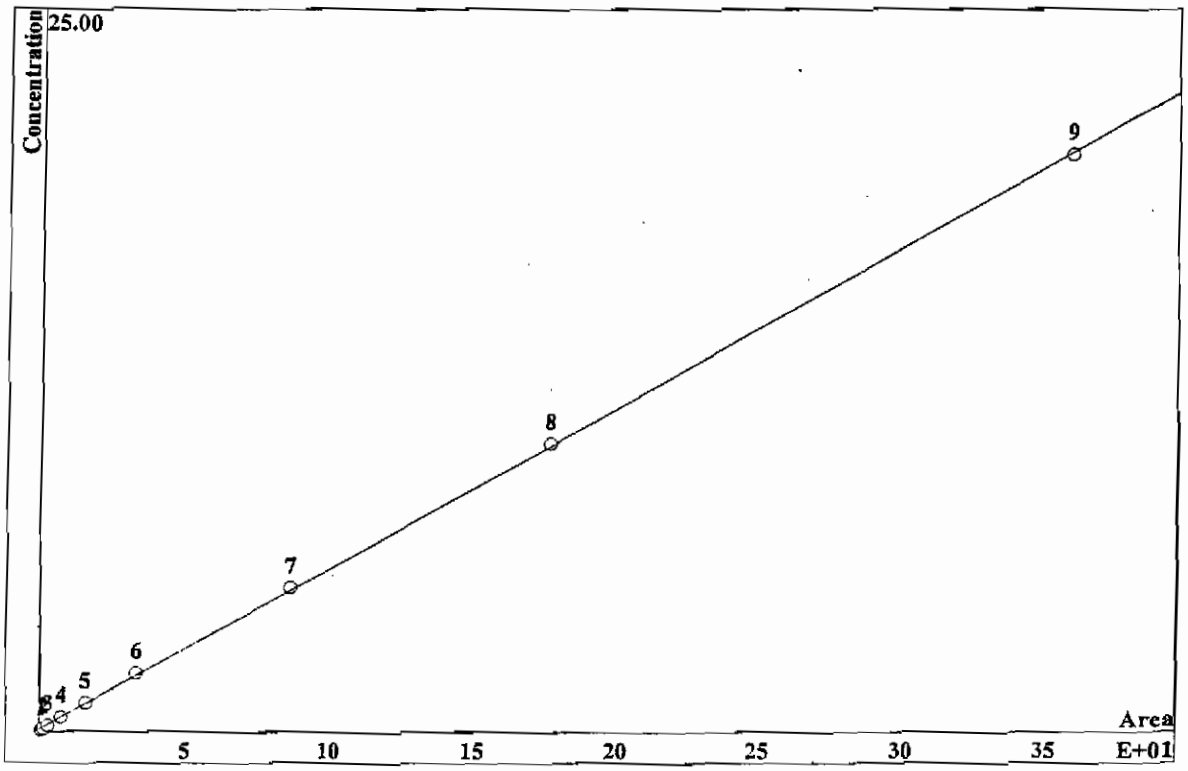
CALIBRATION OF COMPONENT chloride

Method: ICD0-I30.mtw
Equation: Q = 0.0557644·A + 0.0866239
RSD: 1.948 %
Correlation coefficient: 0.999932



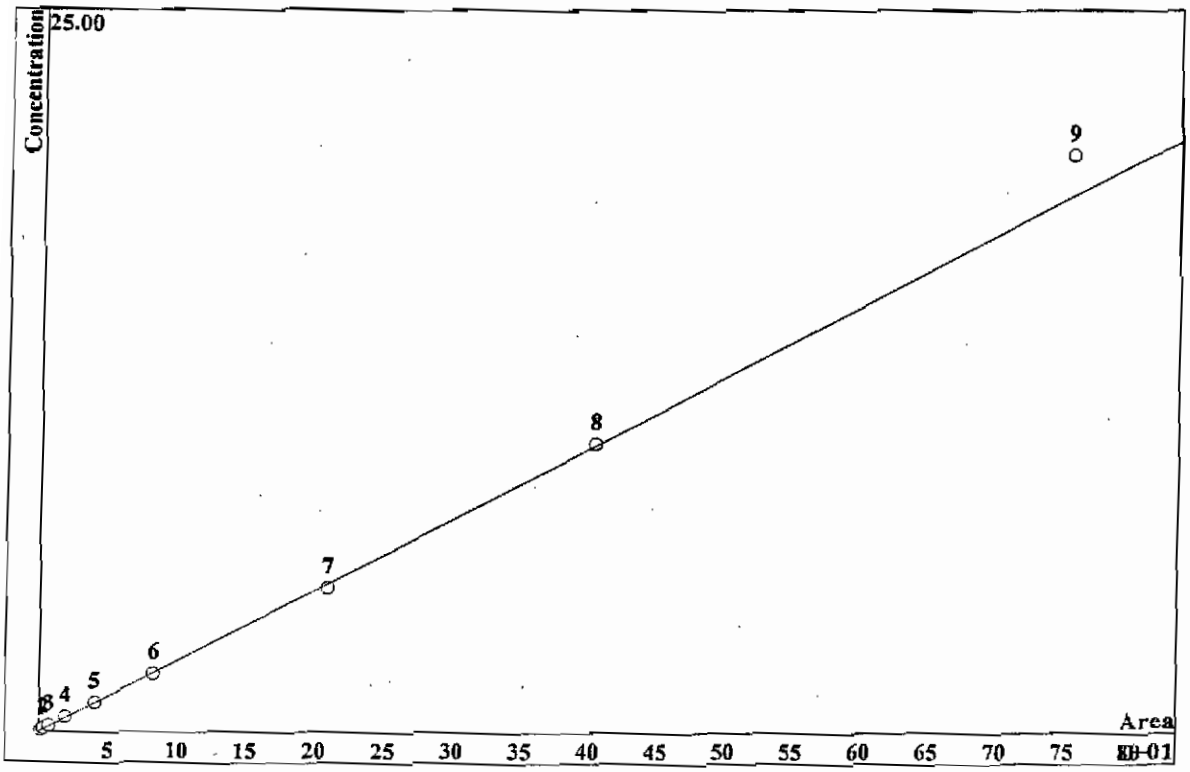
K3 = 0 K2 = 0 K1 = 0.0557644 K0 = 0.0866239
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1035	0.9076	0.05	1	4.26	Yes	v9301901.chw
2	0.1796	1.549	0.1	1	4.26	Yes	v9301917.chw
3	0.354	3.034	0.2	1	4.26	Yes	v9301934.chw
4	0.8921	7.595	0.5	1	4.26	Yes	v9301950.chw
5	1.896	15.84	1	1	4.26	Yes	v9302006.chw
6	3.983	32.97	2	1	4.26	Yes	v9302022.chw
7	10.38	86.28	5	1	4.26	Yes	v9302038.chw
8	21.04	176	10	1	4.26	Yes	v9302054.chw
9	42.24	358.5	20	1	4.26	Yes	v9302111.chw

AA
10/03/11

CALIBRATION OF COMPONENT nitrite

Method: ICD0-I30.mtw
Equation: Q = 0.024644·A + 0.00179217
RSD: 2.785 %
Correlation coefficient: 0.999850



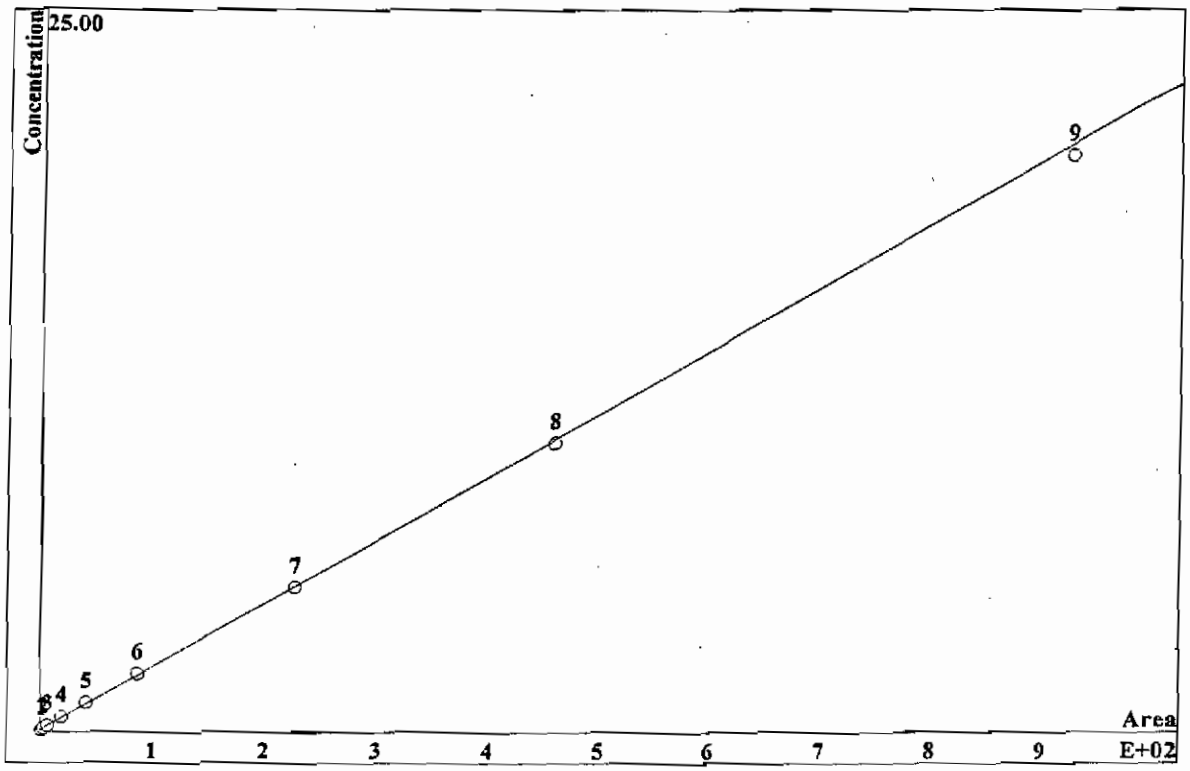
K3 = 0 K2 = 0 K1 = 0.024644 K0 = 0.00179217
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1597	1.561	0.05	1	4.932	Yes	v9301901.chw
2	0.3368	3.285	0.1	1	4.932	Yes	v9301917.chw
3	0.7305	7.062	0.2	1	4.932	Yes	v9301934.chw
4	1.964	18.94	0.5	1	4.932	Yes	v9301950.chw
5	4.115	39.99	1	1	4.932	Yes	v9302006.chw
6	8.392	82.54	2	1	4.932	Yes	v9302022.chw
7	19.91	208.1	5	1	4.932	Yes	v9302038.chw
8	35.83	402.8	10	1	4.932	Yes	v9302054.chw
9	61.98	754.1	20	1	4.932	No	v9302111.chw

DS
10/13/11

CALIBRATION OF COMPONENT nitrate

Method: ICD0-I30.mtw
Equation: Q = 0.0219574·A + 0.0522169
RSD: 3.044 %
Correlation coefficient: 0.999806



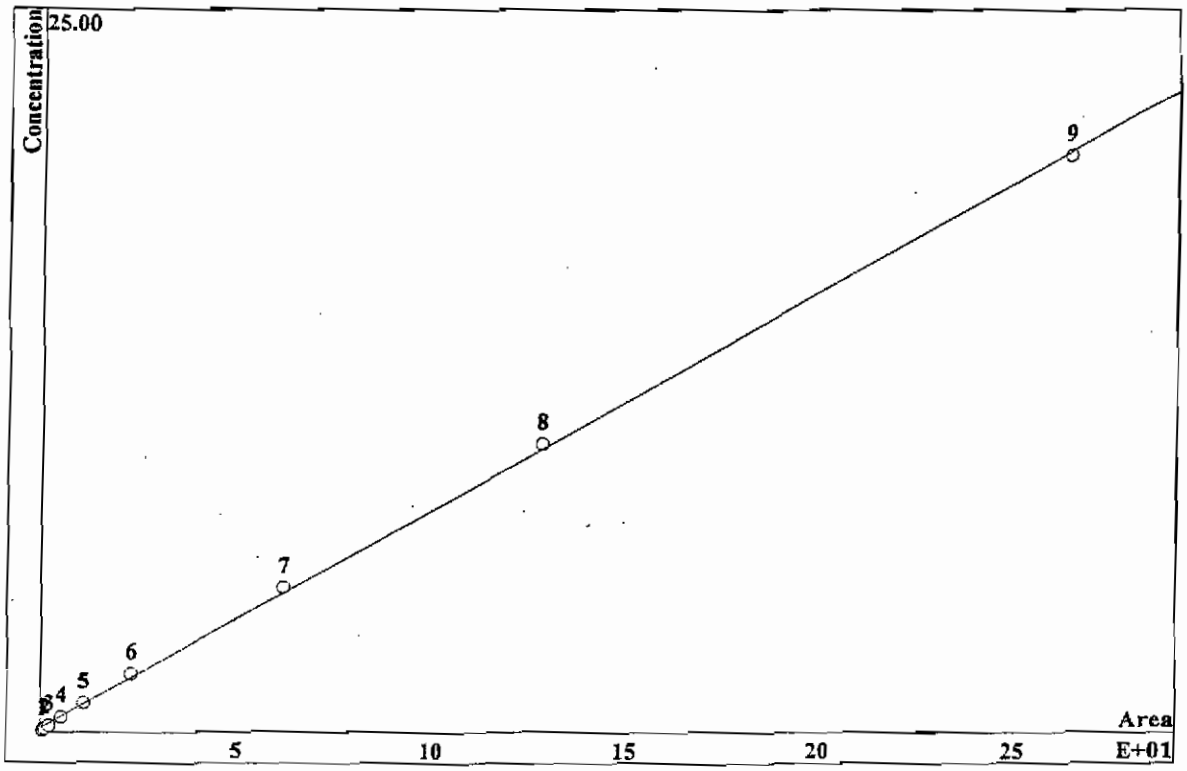
K3 = 0 K2 = 0 K1 = 0.0219574 K0 = 0.0522169
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1416	1.722	0.05	1	6.74	Yes	v9301901.chw
2	0.2866	3.425	0.1	1	6.74	Yes	v9301917.chw
3	0.6179	7.345	0.2	1	6.74	Yes	v9301934.chw
4	1.658	19.53	0.5	1	6.74	Yes	v9301950.chw
5	3.518	41.27	1	1	6.74	Yes	v9302006.chw
6	7.416	86.61	2	1	6.74	Yes	v9302022.chw
7	19.15	226.5	5	1	6.74	Yes	v9302038.chw
8	38.33	458.8	10	1	6.74	No	v9302054.chw
9	74.21	926.4	20	1	6.74	No	v9302111.chw

AS
10/03/11

CALIBRATION OF COMPONENT sulfate

Method: ICD0-I30.mtw ✓ ✓
Equation: Q = 0.0758014·A + 0.128926
RSD: 3.408 %
Correlation coefficient: 0.999791



K3 = 0 K2 = 0 K1 = 0.0758014 K0 = 0.128926
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.03861	0.6921 ✓	0.05	1	10.79	Yes	v9301901.chw
2	0.06635	1.193 ✓	0.1	1	10.79	Yes	v9301917.chw
3	0.1288	2.236 ✓	0.2	1	10.79	Yes	v9301934.chw
4	0.3105	5.366 ✓	0.5	1	10.79	Yes	v9301950.chw
5	0.6333	11.15 ✓	1	1	10.79	Yes	v9302006.chw
6	1.361	23.08 ✓	2	1	10.79	Yes	v9302022.chw
7	3.625	61.64 ✓	5	1	10.79	Yes	v9302038.chw
8	7.471	127.8 ✓	10	1	10.79	Yes	v9302054.chw
9	15.34	264 ✓	20	1	10.79	Yes	v9302111.chw

LA
10/03/11

SECOND SOURCE VERIFICATION

IC Result Check FormVersion : 130/AI39

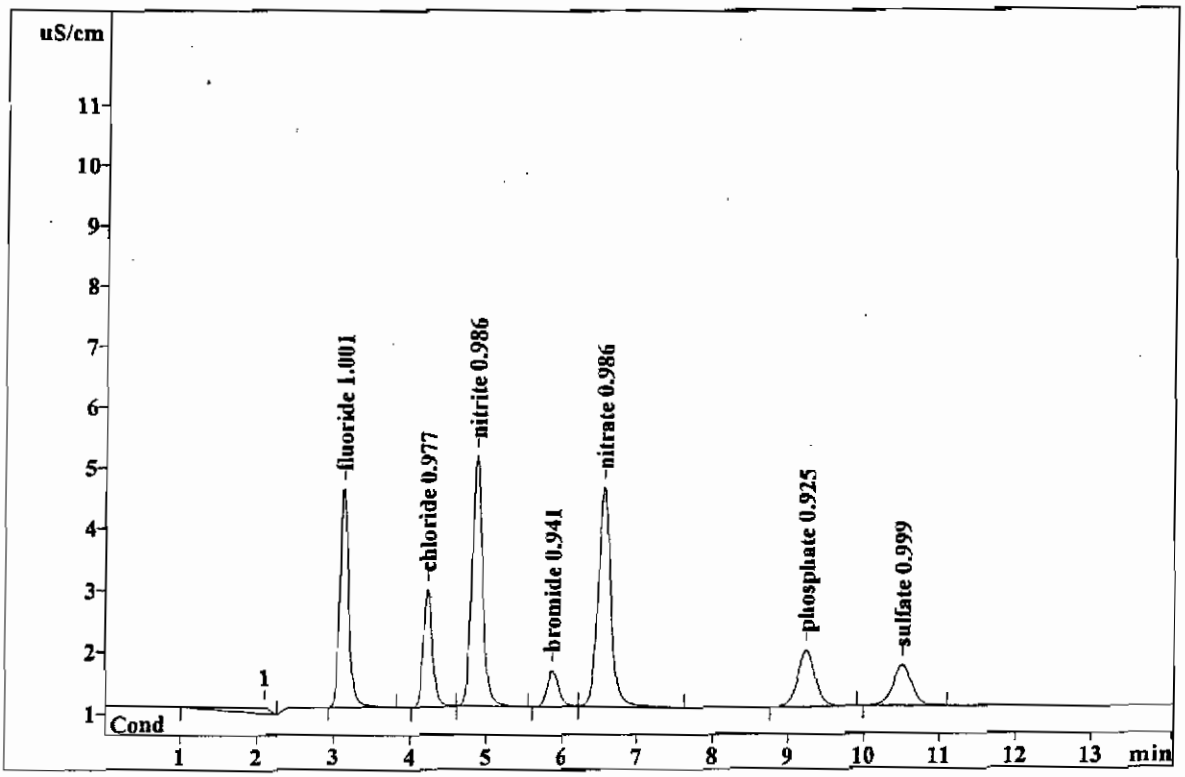
LFID	LSID	Selection	nitrite	fluoride	chloride	bromide	nitrate	phosphate	sulfate	RawNetID	DF
AI39-01	IB	IFCBNPS	0	0	0	0	0	0	0	v9301829	1
AI39-12	ICV	IFCBNPS	98.6%	100.1%	97.7%	94.1%	98.6%	92.5%	99.9%	v9302127	1
AI39-13	ICB	IFCBNPS	0	0	0	0	0	0	0	v9302143	1

Report date: 10/3/2011 10:50:13 AM
Printed by: Jadelyn Chun

Ident: AI39-12 ICV
Analysis from: 9/30/2011 9:27:15 PM
File: v9302127.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69493

SAMPLE:
:
Vial number: 12
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.08	0.09	3.575	0.000	
2	3.12	3.55	28.790 ✓	1.001 ✓	fluoride
3	4.23	1.89	15.958 ✓	0.977 ✓	chloride
4	4.87	4.07	39.941 ✓	0.986 ✓	nitrite
5	5.87	0.58	6.302 ✓	0.941 ✓	bromide
6	6.55	3.55	42.546 ✓	0.986 ✓	nitrate
7	9.24	0.91	15.033 ✓	0.925 ✓	phosphate
8	10.51	0.65	11.474 ✓	0.999 ✓	sulfate
8	14.00	15.29	163.619	6.815	

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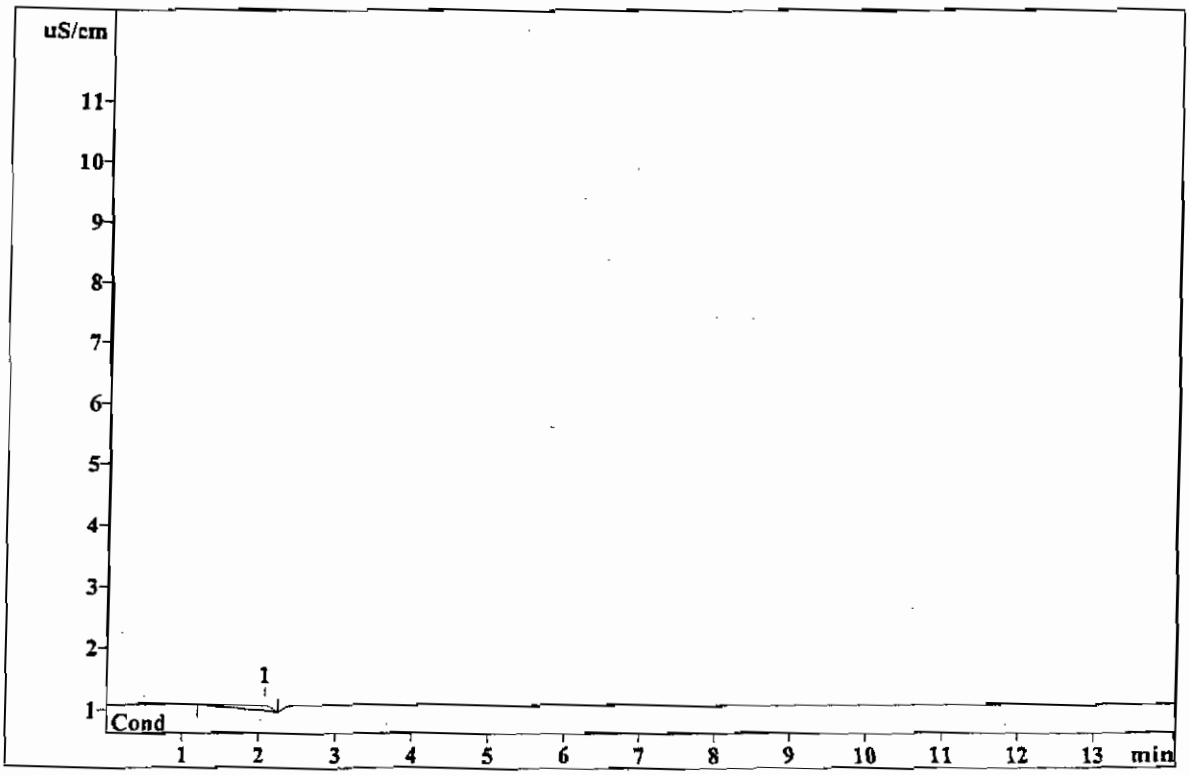
8056

Report date: 10/3/2011 10:50:20 AM
Printed by: Jadelyn Chun

Ident: AI39-13 ICB
Analysis from: 9/30/2011 9:43:24 PM
File: v9302143.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69494

SAMPLE:
:
Vial number: 13
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.08	0.08	2.935	0.000	

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8057

DAILY CALIBRATIONS

IC Result Check FormVersion : I30/AI39

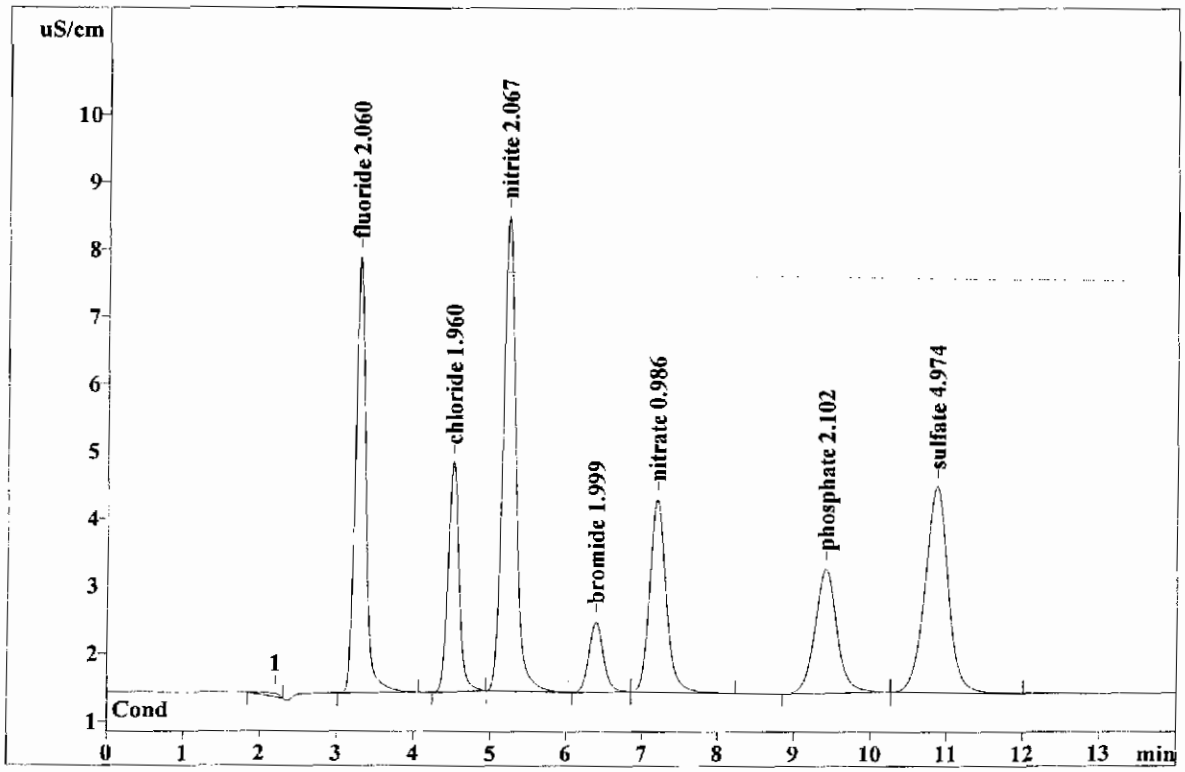
LFID	LSID	Selection	bromide	sulfate	nitrite	nitrate	fluoride	chloride	phosphate	RawNetID	DF
AK13-01	CCV365	BSINFCP	99.9%	99.5%	103.3%	98.6%	103%	98%	105.1%	vb091010	1
AK13-02	CCB365	BSINFCP	0	0	0	0	0	0	0	vb091026	1
AK13-13	CCV367	BSINFCP	0%*	97.9%	102.6%	100.6%	101.1%	97.6%	127.3%*	vb091324	1
AK13-14	CCB367	BSINFCP	0	0	0	0	0	0	0	vb091340	1
AK13-25	CCV369	BSINFCP	97.5%	99.3%	103.3%	99%	101.5%	97.5%	127.4%*	vb091656	1
AK13-26	CCB369	BSINFCP	0	0	0	0	0	0	0	vb091712	1
AK13-37	CCV371	BSINFCP	0%*	96.5%	102.4%	99.3%	100%	96.6%	131.1%*	vb092010	1
AK13-38	CCB371	BSINFCP	0	0	0	0	0	0	0	vb092026	1
AK13-49	CCV373	BSINFCP	0%*	97.9%	102.9%	100.8%	99.8%	98.6%	134.8%*	vb092324	1
AK13-50	CCB373	BSINFCP	0	0	0	0	0	0	0	vb092340	1
AK13-61	CCV375	BSINFCP	0%*	101%	104.6%	103.7%	101%	102.9%	132.1%*	vb100238	1
AK13-62	CCB375	BSINFCP	0	0	0	0	0	0	0	vb100254	1
AK13-73	CCV377	BSINFCP	0%*	99.1%	102.7%	99.8%	100.8%	99.6%	134.8%*	vb100552	1
AK13-74	CCB377	BSINFCP	0	0	0	0	0	0	0	vb100608	1
AK13-82	CCV379	BSINFCP	0%*	95.7%	102.1%	98.8%	99.6%	96.1%	129%*	vb100817	1
AK13-83	CCB379	BSINFCP	0	0	0	0	0	0	0	vb100834	1
AK13-92	CCV381	BSINFCP	0%*	97.1%	102.7%	100.1%	100.2%	97.6%	128.8%*	vb101100	1
AK13-93	CCB381	BSINFCP	0	0	0	0	0	0	0	vb101116	1
AK13-94	CCV383	BSINFCP	97.4%	96.8%	101.9%	97.8%	101.8%	94.1%	127%*	vb101132	1

Report date: 11/9/2011 10:24:19 AM
Printed by: Jadelyn Chun

Ident: AK13-01 CCV365
Analysis from: 11/9/2011 10:10:21 AM
File: VB091010.CHW Last save: 11/9/2011 10:24:19 AM

Method: ICD0-I30.mtw Last save: 11/8/2011 10:45:49 AM
Run operator: Jadelyn Chun
Analysis number: 71166

SAMPLE:
:
Vial number: 1
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.20	0.05	0.842	0.000	
2	3.29	6.47	60.483	2.060	fluoride
3	4.50	3.40	33.602	1.960	chloride
4	5.22	7.04	83.798	2.067	nitrite
5	6.39	1.04	13.812	1.999	bromide
6	7.19	2.85	42.520	0.986	nitrate
7	9.41	1.84	36.582	2.102	phosphate
8	10.86	3.05	63.917	4.974	sulfate
8	14.00	25.74	335.555	16.148	

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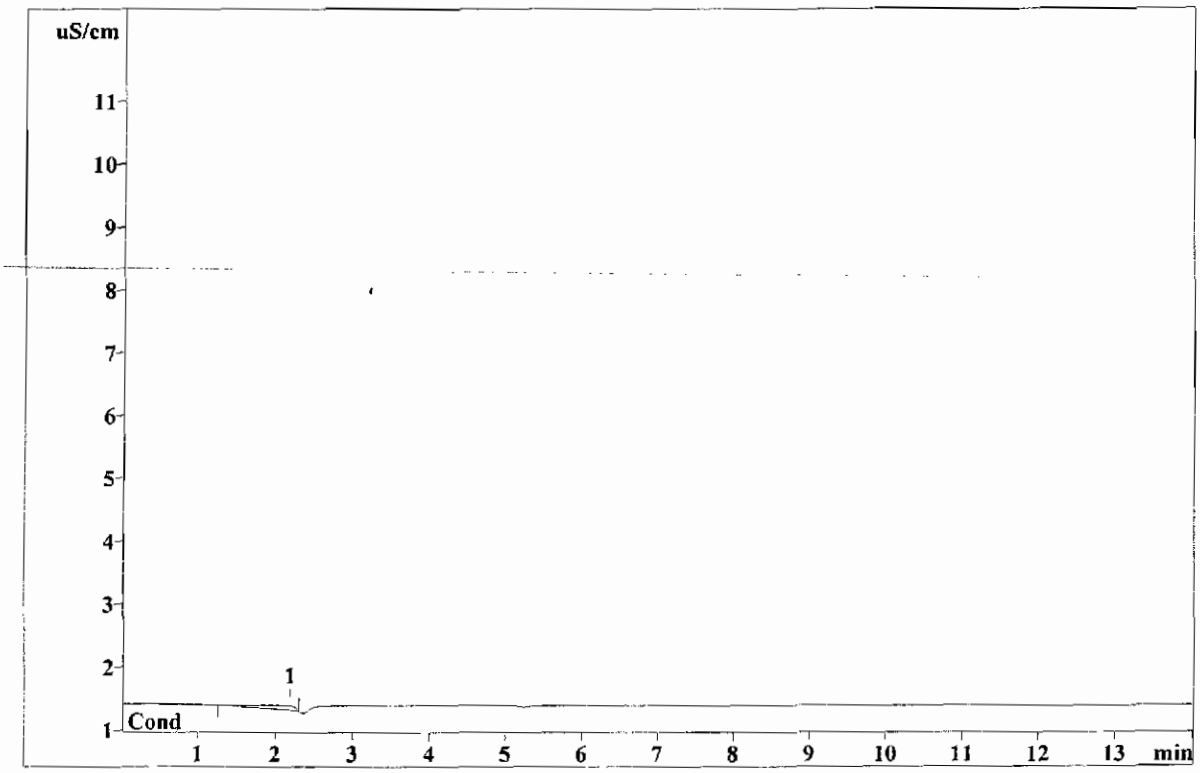
Report date: 11/9/2011 5:43:02 PM
Printed by: Jadelyn Chun

Ident: AK13-02 CCB365
Analysis from: 11/9/2011 10:26:33 AM
File: vb091026.chw Last save: 11/9/2011 10:40:30 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71167

SAMPLE:
:
Vial number: 2
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.07	2.364	0.000	

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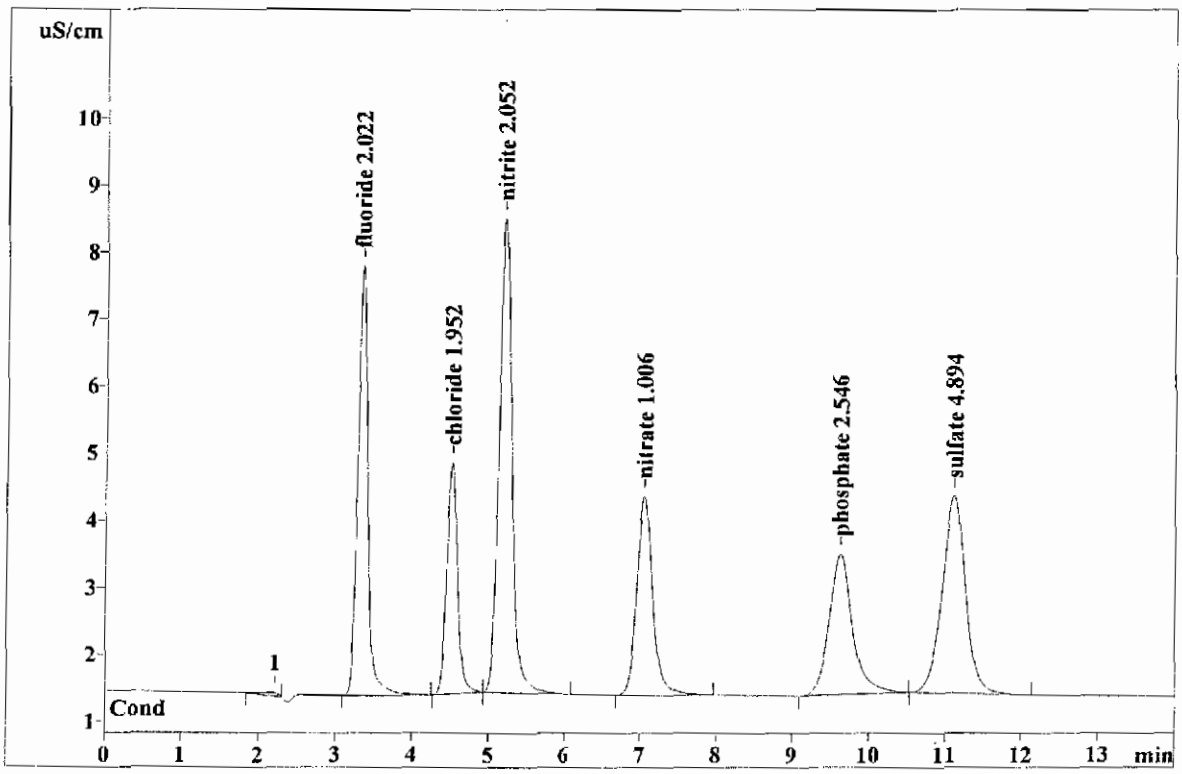
Report date: 11/9/2011 1:38:16 PM
Printed by: Jadelyn Chun

Ident: AK13-13 CCV367
Analysis from: 11/9/2011 1:24:18 PM
File: VB091324.CHW Last save: 11/9/2011 1:38:16 PM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71178

SAMPLE:
:
Vial number: 13
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.21	0.05	0.813	0.000	
2	3.33	6.41	59.349	2.022	fluoride
3	4.51	3.44	33.457	1.952	chloride
4	5.20	7.08	83.182	2.052	nitrite
5	7.05	2.96	43.420	1.006	nitrate
6	9.62	2.09	44.718	2.546	phosphate
7	11.11	2.94	62.861	4.894	sulfate
7	14.00	24.97	327.800	14.471	

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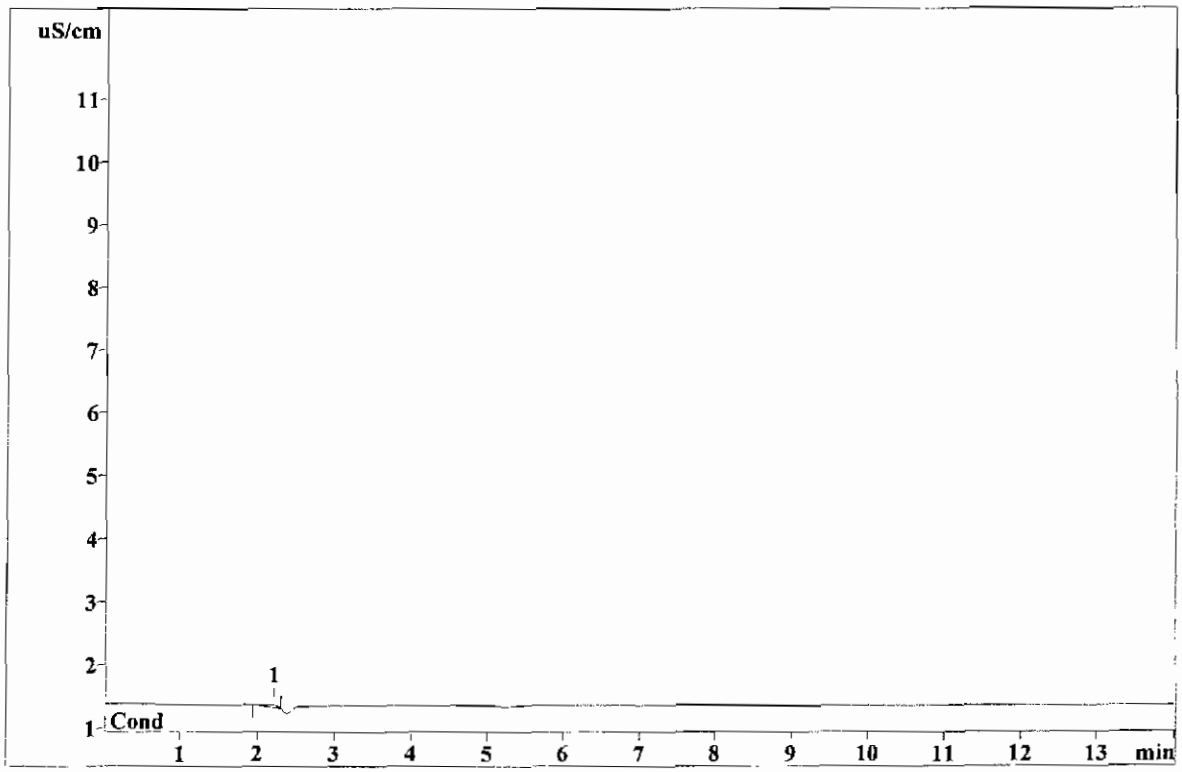
Report date: 11/9/2011 5:44:31 PM
Printed by: Jadelyn Chun

Ident: AK13-14 CCB367
Analysis from: 11/9/2011 1:40:28 PM
File: vb091340.chw Last save: 11/9/2011 1:54:25 PM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71179

SAMPLE:
:
Vial number: 14
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.22	0.04	0.484	0.000	

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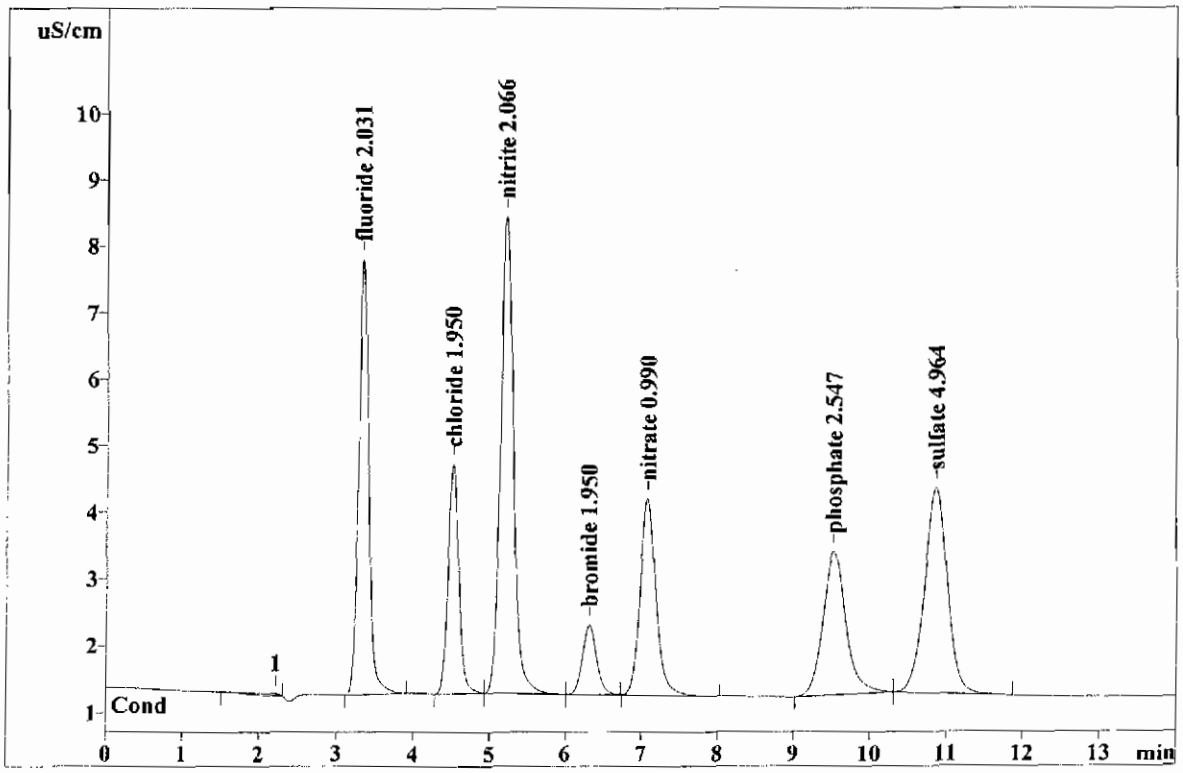
Report date: 11/9/2011 5:10:21 PM
Printed by: Jadelyn Chun

Ident: AK13-25 . CCV369
Analysis from: 11/9/2011 4:56:23 PM
File: VB091656.CHW Last save: 11/9/2011 5:10:21 PM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71190

SAMPLE:
:
Vial number: 25
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.20	0.03	0.862	0.000	
2	3.33	6.54	59.619	2.031	fluoride
3	4.51	3.44	33.417	1.950	chloride
4	5.20	7.16	83.778	2.066	nitrite
5	6.31	1.04	13.465	1.950	bromide
6	7.07	2.94	42.727	0.990	nitrate
7	9.53	2.15	44.733	2.547	phosphate
8	10.87	3.08	63.785	4.964	sulfate
8	14.00	26.37	342.388	16.499	

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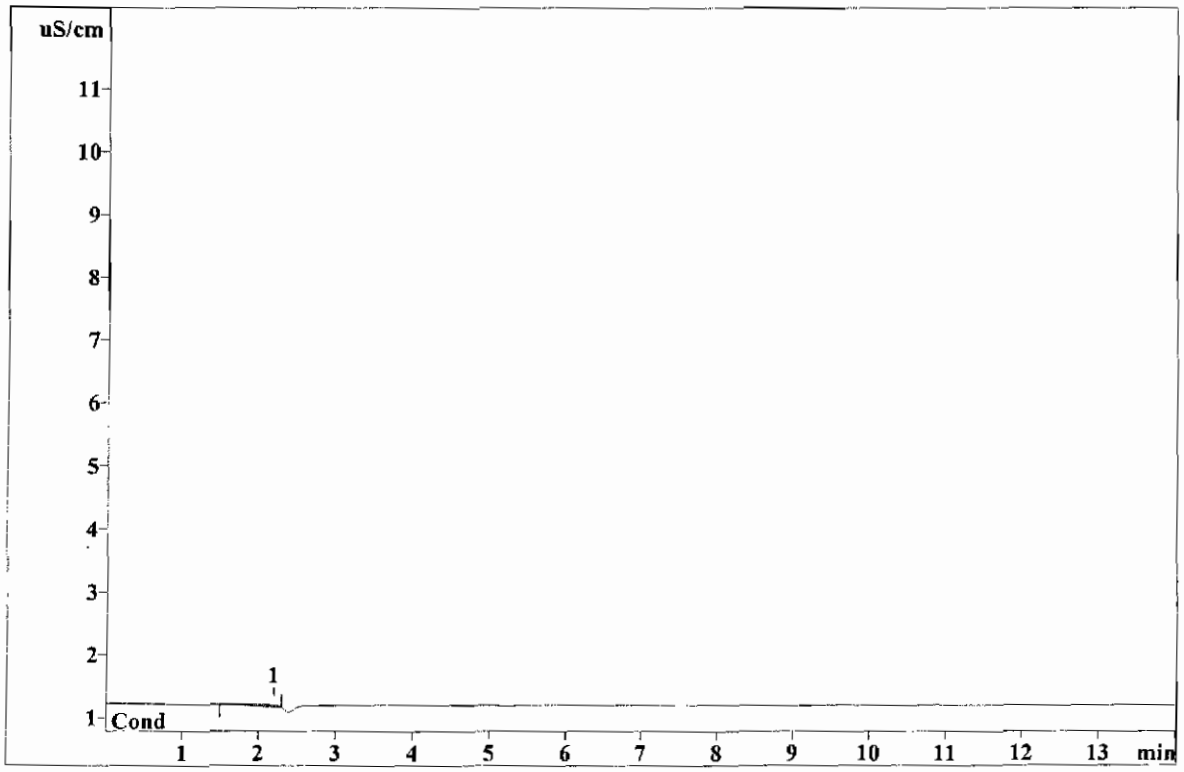
Report date: 11/9/2011 5:44:36 PM
Printed by: Jadelyn Chun

Ident: AK13-26 CCB369
Analysis from: 11/9/2011 5:12:35 PM
File: vb091712.chw Last save: 11/9/2011 5:26:33 PM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71191

SAMPLE:
:
Vial number: 26
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.20	0.03	0.857	0.000	

This report has been created by IC Net
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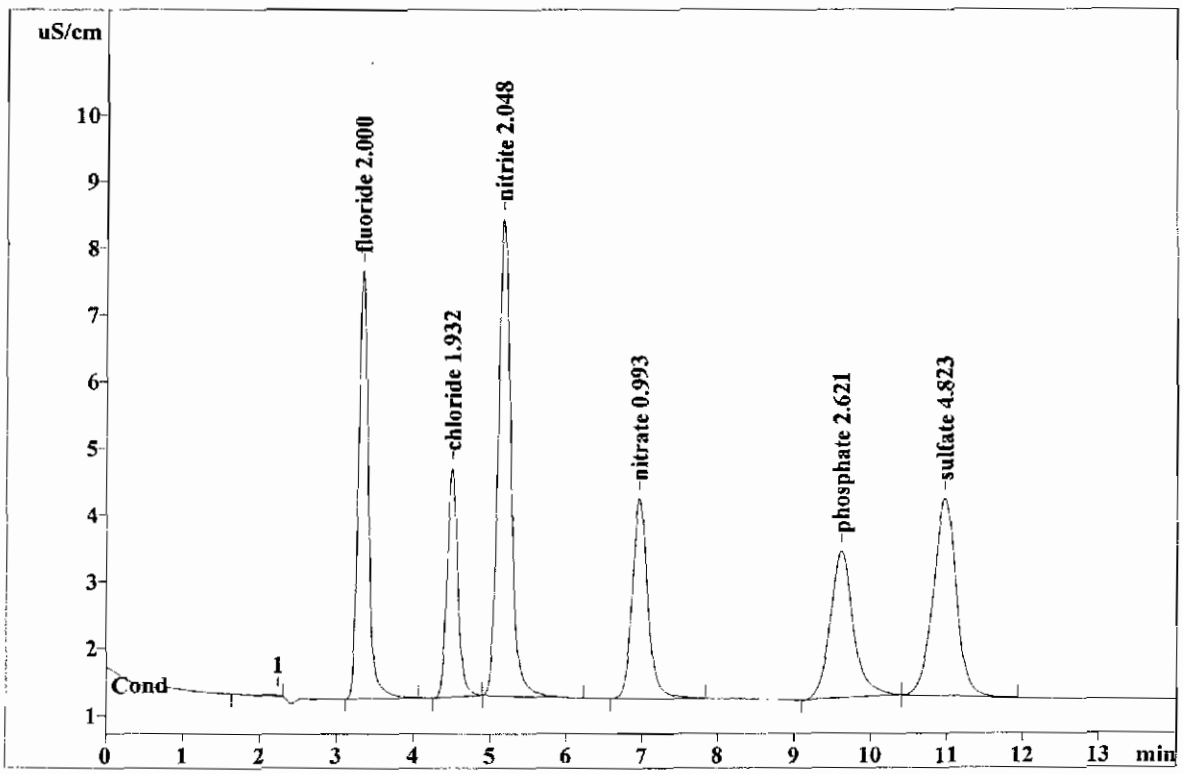
Report date: 11/9/2011 8:24:37 PM
Printed by: Jadelyn Chun

Ident: AK13-37 CCV371
Analysis from: 11/9/2011 8:10:40 PM
File: VB092010.CHW Last save: 11/9/2011 8:24:37 PM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71202

SAMPLE:
:
Vial number: 37
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.23	0.02	0.416	0.000	
2	3.33	6.41	58.690	2.000	fluoride
3	4.49	3.42	33.094	1.932	chloride
4	5.17	7.15	83.039	2.048	nitrite
5	6.96	2.99	42.858	0.993	nitrate
6	9.61	2.19	46.088	2.621	phosphate
7	10.97	2.96	61.926	4.823	sulfate
7	14.00	25.15	326.110	14.417	

This report has been created by IC Net
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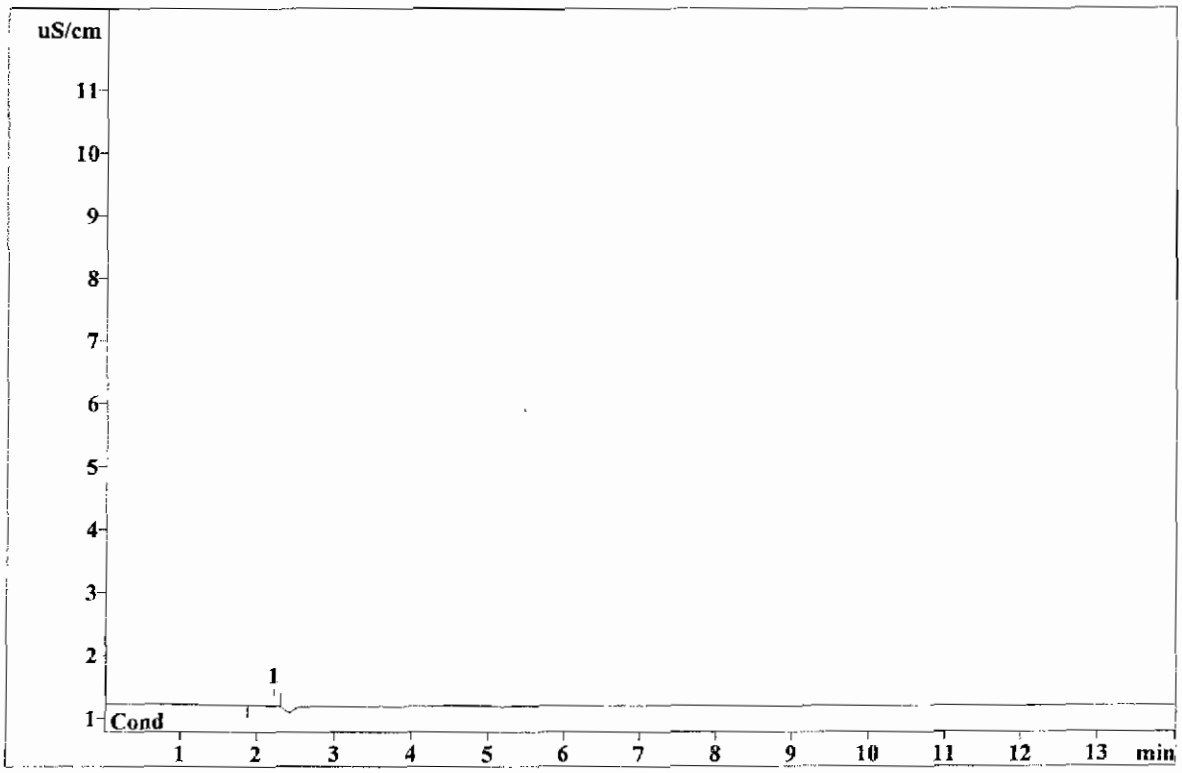
Report date: 11/10/2011 10:48:49 AM
Printed by: Jadelyn Chun

Ident: AK13-38 CCB371
Analysis from: 11/9/2011 8:26:49 PM
File: vb092026.chw Last save: 11/9/2011 8:40:46 PM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71203

SAMPLE:
:
Vial number: 38
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.21	0.02	0.258	0.000	

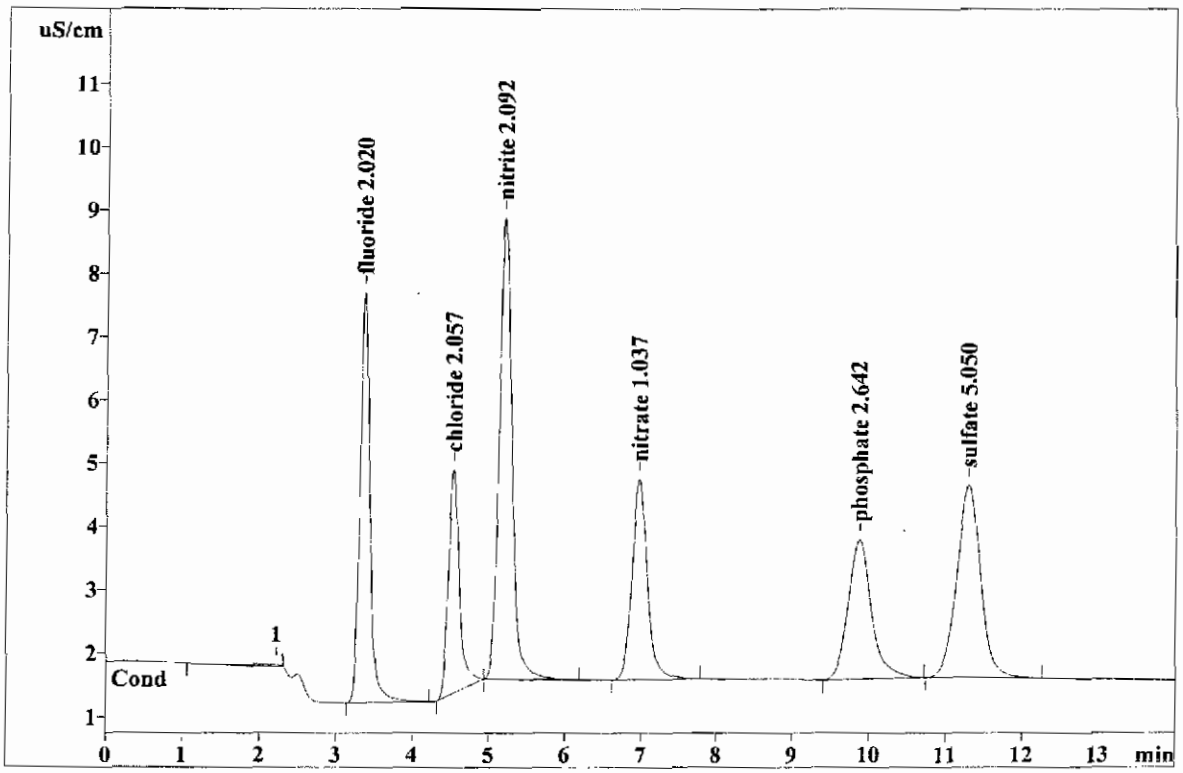
This report has been created by IC Net
METROHM LTD

Report date: 11/10/2011 2:52:29 AM
Printed by: Jadelyn Chun

Ident: AK13-61 CCV375
Analysis from: 11/10/2011 2:38:32 AM
File: VB100238.CHW Last save: 11/10/2011 2:52:29 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71226

SAMPLE:
:
Vial number: 61
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.21	0.03	1.261	0.000	
2	3.36	6.47	59.310	2.020	fluoride
3	4.53	3.53	35.343	2.057	chloride
4	5.20	7.29	84.831	2.092	nitrite
5	6.97	3.16	44.871	1.037	nitrate
6	9.87	2.19	46.470	2.642	phosphate
7	11.29	3.03	64.927	5.050	sulfate
7	14.00	25.70	337.014	14.900	

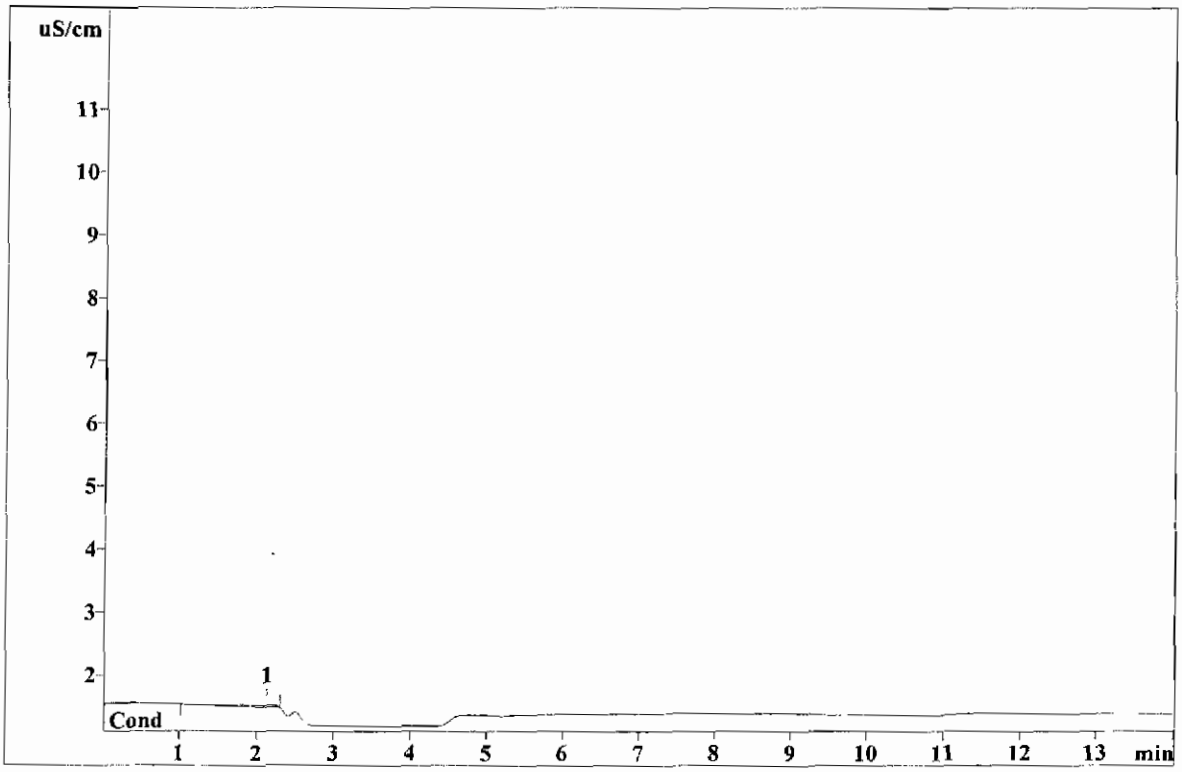
This report has been created by IC Net
METROHM LTD

Report date: 11/10/2011 10:49:01 AM
Printed by: Jadelyn Chun

Ident: AK13-62 CCB375
Analysis from: 11/10/2011 2:54:41 AM
File: vb100254.chw Last save: 11/10/2011 3:08:38 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71227

SAMPLE:
:
Vial number: 62
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.12	0.03	1.443	0.000	

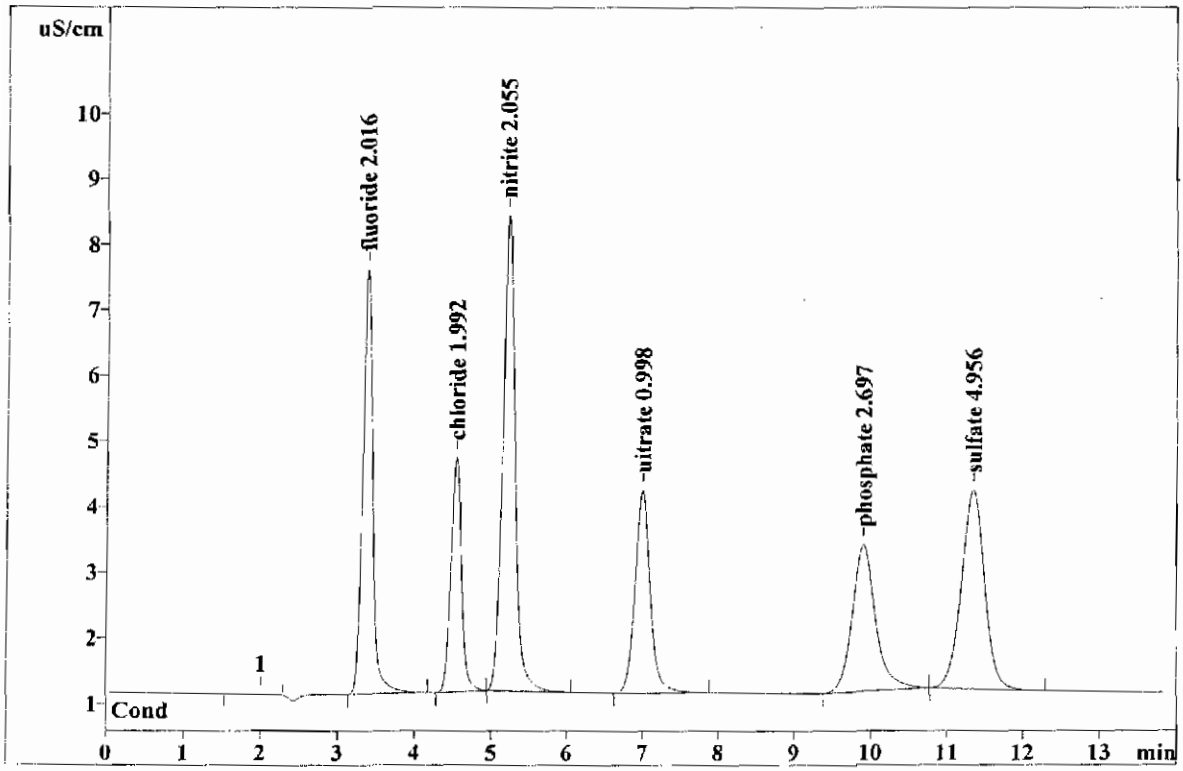
This report has been created by IC Net
METROHM LTD

Report date: 11/10/2011 6:06:26 AM
Printed by: Jadelyn Chun

Ident: AK13-73 CCV377
Analysis from: 11/10/2011 5:52:29 AM
File: VB100552.CHW Last save: 11/10/2011 6:06:26 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71238

SAMPLE:
:
Vial number: 73
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	1.98	0.01	0.332	0.000	
2	3.37	6.47	59.188	2.016	fluoride
3	4.54	3.56	34.164	1.992	chloride
4	5.22	7.24	83.310	2.055	nitrite
5	6.99	3.08	43.079	0.998	nitrate
6	9.91	2.22	47.472	2.697	phosphate
7	11.34	3.02	63.676	4.956	sulfate
7	14.00	25.61	331.220	14.713	

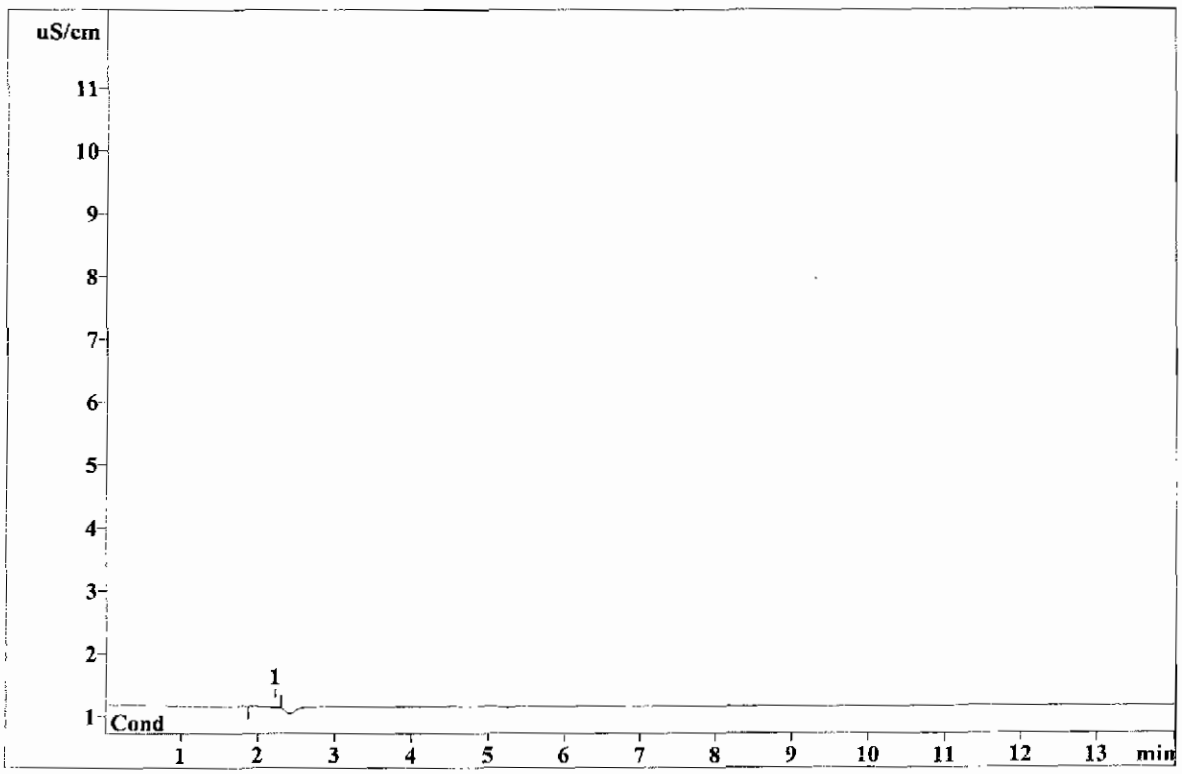
This report has been created by IC Net
METROHM LTD

Report date: 11/10/2011 10:49:33 AM
Printed by: Jadelyn Chun

Ident: AK13-74 CCB377
Analysis from: 11/10/2011 6:08:39 AM
File: vb100608.chw Last save: 11/10/2011 6:22:36 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71239

SAMPLE:
:
Vial number: 74
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.22	0.01	0.169	0.000	

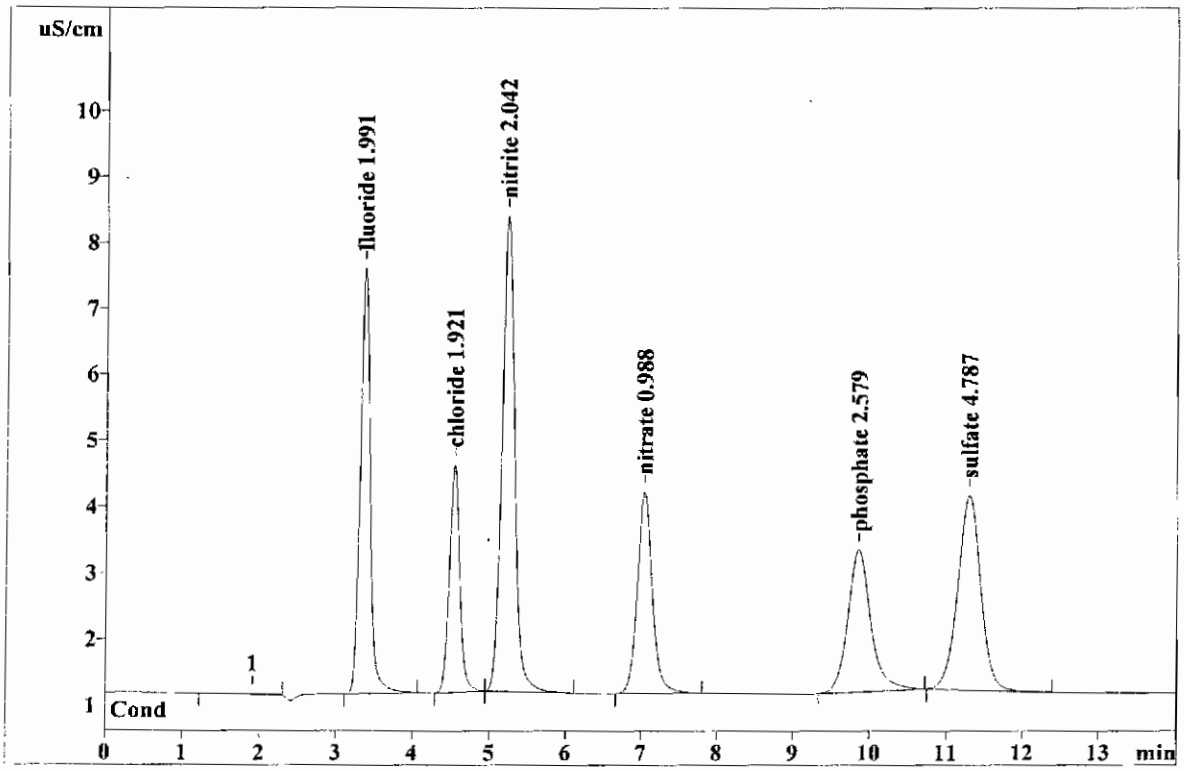
This report has been created by IC Net
METROHM LTD

Report date: 11/10/2011 8:31:54 AM
Printed by: Jadelyn Chun

Ident: AK13-82 CCV379
Analysis from: 11/10/2011 8:17:57 AM
File: VB100817.CHW Last save: 11/10/2011 8:31:54 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71247

SAMPLE:
:
Vial number: 82
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	1.92	0.02	0.642	0.000	
2	3.36	6.43	58.432	1.991	fluoride
3	4.54	3.43	32.899	1.921	chloride
4	5.22	7.19	82.798	2.042	nitrite
5	7.03	3.04	42.613	0.988	nitrate
6	9.86	2.15	45.319	2.579	phosphate
7	11.30	2.93	61.454	4.787	sulfate
7	14.00	25.18	324.157	14.309	

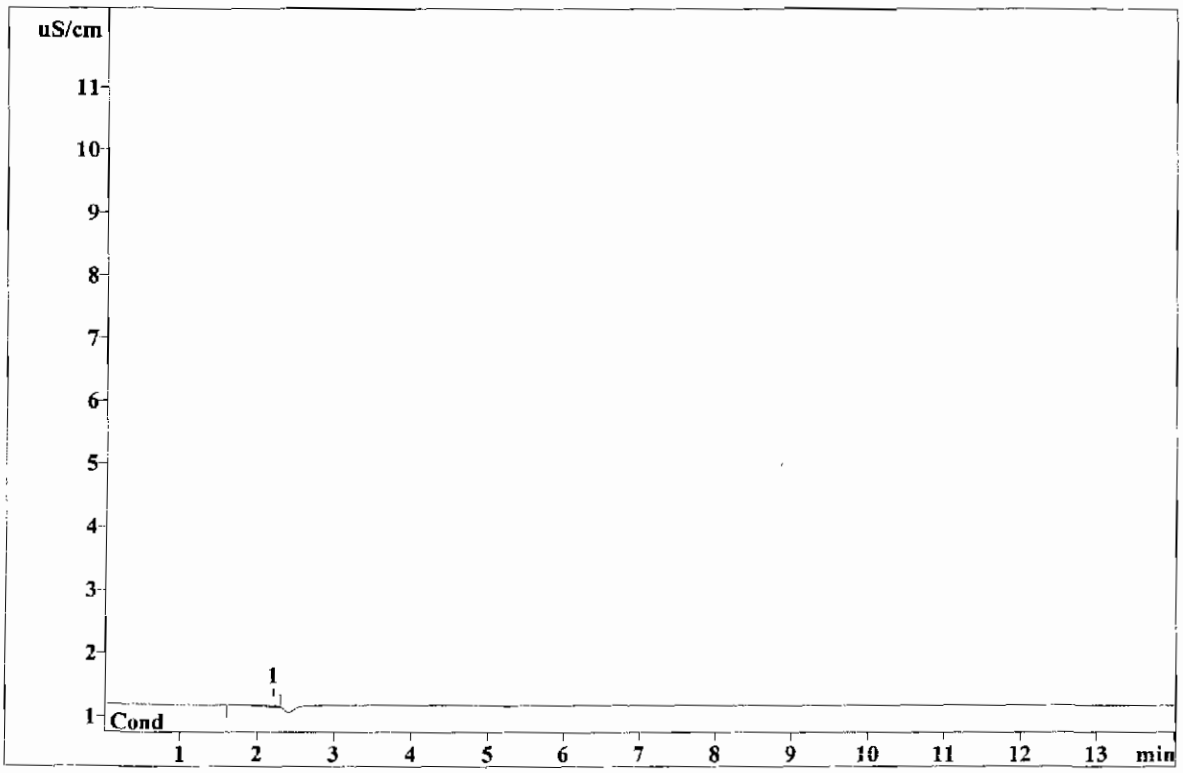
This report has been created by IC Net
METROHM LTD

Report date: 11/10/2011 10:51:32 AM
Printed by: Jadelyn Chun

Ident: AK13-83 CCB379
Analysis from: 11/10/2011 8:34:07 AM
File: vb100834.chw Last save: 11/10/2011 8:48:04 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71248

SAMPLE:
:
Vial number: 83
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.21	0.02	0.477	0.000	

This report has been created by IC Net
METROHM LTD

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Concentrations of:

S_1 — 0.05 ppm
S_2 — 0.1
S_3 — 0.2
S_4 — 0.5
S_5 — 1.0
S_6 — 2.0
S_7 — 5.0
S_8 — 10.0
S_9 — 20.0

Linearity (ppm)

F^- — 5
Cl^- — 20
NO_2N — 10
Br^- — 5
NO_3N — 5
PO_4P — 5
SO_4^{2-} — 20

Column: Metrosep A Supp 5-100

Flow Rate: 0.70 ml/min

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-220 (1000 mM H_2SO_4) 100 ml - 1 L

Book #:	AD0-031
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AI39
Method File:	ICD0-I30.mth
Analytical Batch:	NA

SOP #	Rev. #
☑ EMAX-300.0	6
☐ EMAX-4110B	0
☑ EMAX-9056	3
☐ EMAX-	

STANDARDS ID	
ICAL	SI1B-17-57-02
ICV	SI1B-17-57-03
CCV	NA
LCS	↓
MS	

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 9/30/11

F1

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
v9301829.chw	ICD0-130.mtw	AI39-01 IB	1	1.0	1.0	1.0	100.0	0		
v9301845.chw	ICD0-130.mtw	AI39-02 S0	2	1.0	1.0	1.0	100.0	0		
v9301901.chw	ICD0-130.mtw	AI39-03 S1	3	1.0	1.0	1.0	100.0	1		
v9301917.chw	ICD0-130.mtw	AI39-04 S2	4	1.0	1.0	1.0	100.0	2		
v9301934.chw	ICD0-130.mtw	AI39-05 S3	5	1.0	1.0	1.0	100.0	3		
v9301950.chw	ICD0-130.mtw	AI39-06 S4	6	1.0	1.0	1.0	100.0	4		
v9302006.chw	ICD0-130.mtw	AI39-07 S5	7	1.0	1.0	1.0	100.0	5		
v9302022.chw	ICD0-130.mtw	AI39-08 S6	8	1.0	1.0	1.0	100.0	6		
v9302038.chw	ICD0-130.mtw	AI39-09 S7	9	1.0	1.0	1.0	100.0	7		
v9302054.chw	ICD0-130.mtw	AI39-10 S8	10	1.0	1.0	1.0	100.0	8		
v9302111.chw	ICD0-130.mtw	AI39-11 S9	11	1.0	1.0	1.0	100.0	9	FINAL	
v9302127.chw	ICD0-130.mtw	AI39-12 ICV	12	1.0	1.0	1.0	100.0	0		
v9302143.chw	ICD0-130.mtw	AI39-13 ICB	13	1.0	1.0	1.0	100.0	0		

JC 10/3/11

10/03/11

8876

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

CCV 367 (*)
CCV 371
CCV 373
CCV 375
CCV 377
CCV 379
CCV 381

(*) W/O BS

Book #:	AD0-032
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AK 13
Method File:	ICD0-130.mtw
Analytical Batch:	ICK025W, ICK027W ICK029W

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SI IB-19-85-01 SI IB-17-85-03 (*)
LCS	SI IB-19-85-02 SI IB-17-86-01 (*)
MS	Refer to LCS Parent IDs

(*) W/O BS

Column: Metrosep A Supp 5-100 Filter 0.45µm: 21787469

Flow Rate: 0.70 ml/min 0.20µm: 21772726

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: KMC

Date: 11/9/11

8877

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb091010.chw	ICD0-I30.mtw	AK13-01 CCV365	1	1.0	1.0	1.0	100.0	0		
vb091026.chw	ICD0-I30.mtw	AK13-02 CCB365	2	1.0	1.0	1.0	100.0	0		
vb091042.chw	ICD0-I30.mtw	AK13-03 ICK025WB	3	1.0	1.0	1.0	100.0	0		
vb091058.chw	ICD0-I30.mtw	AK13-04 ICK025WL	4	1.0	1.0	1.0	100.0	0		
vb091115.chw	ICD0-I30.mtw	AK13-05 ICK025WC	5	1.0	1.0	1.0	100.0	0		
vb091131.chw	ICD0-I30.mtw	AK13-06 K072-01	6	1.0	1.0	1.0	100.0	0		
vb091147.chw	ICD0-I30.mtw	AK13-07 K070-01 DF=2	7	1.0	2.0	1.0	100.0	0		
vb091203.chw	ICD0-I30.mtw	AK13-08 K070-02	8	1.0	1.0	1.0	100.0	0		
vb091219.chw	ICD0-I30.mtw	AK13-09 K070-03	9	1.0	1.0	1.0	100.0	0		
vb091235.chw	ICD0-I30.mtw	AK13-10 K070-04	10	1.0	1.0	1.0	100.0	0		
vb091251.chw	ICD0-I30.mtw	AK13-11 K070-05	11	1.0	1.0	1.0	100.0	0		
vb091308.chw	ICD0-I30.mtw	AK13-12 K070-06	12	1.0	1.0	1.0	100.0	0		
vb091324.chw	ICD0-I30.mtw	AK13-13 CCV367	13	1.0	1.0	1.0	100.0	0		
vb091340.chw	ICD0-I30.mtw	AK13-14 CCB367	14	1.0	1.0	1.0	100.0	0		
vb091356.chw	ICD0-I30.mtw	AK13-15 K072-01 DF=20	15	1.0	20.0	1.0	100.0	0		
vb091412.chw	ICD0-I30.mtw	AK13-16 K070-02 DF=2	16	1.0	2.0	1.0	100.0	0		
vb091428.chw	ICD0-I30.mtw	AK13-17 K070-03 DF=2	17	1.0	2.0	1.0	100.0	0		
vb091445.chw	ICD0-I30.mtw	AK13-18 K070-04 DF=2	18	1.0	2.0	1.0	100.0	0		
vb091501.chw	ICD0-I30.mtw	AK13-19 K070-05 DF=2	19	1.0	2.0	1.0	100.0	0		
vb091524.chw	ICD0-I30.mtw	AK13-20 K070-06 DF=2	20	1.0	2.0	1.0	100.0	0		
vb091541.chw	ICD0-I30.mtw	AK13-21 K063-04	21	1.0	1.0	1.0	100.0	0		
vb091557.chw	ICD0-I30.mtw	AK13-22 K063-05	22	1.0	1.0	1.0	100.0	0		
vb091614.chw	ICD0-I30.mtw	AK13-23 K063-05 DF=2	23	1.0	2.0	1.0	100.0	0		
vb091630.chw	ICD0-I30.mtw	AK13-24 K063-03	24	1.0	1.0	1.0	100.0	0		
vb091656.chw	ICD0-I30.mtw	AK13-25 CCV369	25	1.0	1.0	1.0	100.0	0		
vb091712.chw	ICD0-I30.mtw	AK13-26 CCB369	26	1.0	1.0	1.0	100.0	0		
vb091728.chw	ICD0-I30.mtw	AK13-27 K063-06	27	1.0	1.0	1.0	100.0	0		
vb091744.chw	ICD0-I30.mtw	AK13-28 K063-01	28	1.0	1.0	1.0	100.0	0		
vb091801.chw	ICD0-I30.mtw	AK13-29 K063-02	29	1.0	1.0	1.0	100.0	0		
vb091817.chw	ICD0-I30.mtw	AK13-30 K063-02D	30	1.0	1.0	1.0	100.0	0		
vb091833.chw	ICD0-I30.mtw	AK13-31 K063-02M	31	1.0	1.0	1.0	100.0	0		
vb091849.chw	ICD0-I30.mtw	AK13-32 ICK027WL	32	1.0	1.0	1.0	100.0	0		
vb091906.chw	ICD0-I30.mtw	AK13-33 ICK027WC	33	1.0	1.0	1.0	100.0	0		
vb091922.chw	ICD0-I30.mtw	AK13-34 ICK027WB	34	1.0	1.0	1.0	100.0	0		
vb091938.chw	ICD0-I30.mtw	AK13-35 K077-10	35	1.0	1.0	1.0	100.0	0		
vb091954.chw	ICD0-I30.mtw	AK13-36 K077-11	36	1.0	1.0	1.0	100.0	0		
vb092010.chw	ICD0-I30.mtw	AK13-37 CCV371	37	1.0	1.0	1.0	100.0	0		
vb092026.chw	ICD0-I30.mtw	AK13-38 CCB371	38	1.0	1.0	1.0	100.0	0		
vb092042.chw	ICD0-I30.mtw	AK13-39 K077-17	39	1.0	1.0	1.0	100.0	0		
vb092059.chw	ICD0-I30.mtw	AK13-40 K077-02 DF=5	40	1.0	5.0	1.0	100.0	0		
vb092115.chw	ICD0-I30.mtw	AK13-41 K077-18	41	1.0	1.0	1.0	100.0	0		
vb092131.chw	ICD0-I30.mtw	AK13-42 K077-03	42	1.0	1.0	1.0	100.0	0		
vb092147.chw	ICD0-I30.mtw	AK13-43 K077-12	43	1.0	1.0	1.0	100.0	0		
vb092203.chw	ICD0-I30.mtw	AK13-44 K077-19	44	1.0	1.0	1.0	100.0	0		
vb092219.chw	ICD0-I30.mtw	AK13-45 K077-13	45	1.0	1.0	1.0	100.0	0		
vb092236.chw	ICD0-I30.mtw	AK13-46 K077-04 DF=10	46	1.0	10.0	1.0	100.0	0		
vb092252.chw	ICD0-I30.mtw	AK13-47 K077-05 DF=20	47	1.0	20.0	1.0	100.0	0		
vb092308.chw	ICD0-I30.mtw	AK13-48 K077-06 DF=20	48	1.0	20.0	1.0	100.0	0		
vb092324.chw	ICD0-I30.mtw	AK13-49 CCV373	49	1.0	1.0	1.0	100.0	0		
vb092340.chw	ICD0-I30.mtw	AK13-50 CCB373	50	1.0	1.0	1.0	100.0	0		
vb092356.chw	ICD0-I30.mtw	AK13-51 K077-14	51	1.0	1.0	1.0	100.0	0		
vb100013.chw	ICD0-I30.mtw	AK13-52 K077-20	52	1.0	1.0	1.0	100.0	0		
vb100029.chw	ICD0-I30.mtw	AK13-53 K077-21	53	1.0	1.0	1.0	100.0	0		
vb100045.chw	ICD0-I30.mtw	AK13-54 K077-07 DF=10	54	1.0	10.0	1.0	100.0	0		
vb100101.chw	ICD0-I30.mtw	AK13-55 K077-08	55	1.0	1.0	1.0	100.0	0		
vb100117.chw	ICD0-I30.mtw	AK13-56 K077-08D	56	1.0	1.0	1.0	100.0	0		
vb100133.chw	ICD0-I30.mtw	AK13-57 K077-08M	57	1.0	1.0	1.0	100.0	0		

FINAL

11/14/14

8078

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb100150.chw	ICD0-I30.mtw	AK13-58 K077-15	58	1.0	1.0	1.0	100.0	0		
vb100206.chw	ICD0-I30.mtw	AK13-59 K077-22	59	1.0	1.0	1.0	100.0	0		
vb100222.chw	ICD0-I30.mtw	AK13-60 K077-23	60	1.0	1.0	1.0	100.0	0		
vb100238.chw	ICD0-I30.mtw	AK13-61 CCV375	61	1.0	1.0	1.0	100.0	0		
vb100254.chw	ICD0-I30.mtw	AK13-62 CCB375	62	1.0	1.0	1.0	100.0	0		
vb100310.chw	ICD0-I30.mtw	AK13-63 ICK029WB	63	1.0	1.0	1.0	100.0	0		
vb100327.chw	ICD0-I30.mtw	AK13-64 ICK029WL	64	1.0	1.0	1.0	100.0	0		
vb100343.chw	ICD0-I30.mtw	AK13-65 ICK029WC	65	1.0	1.0	1.0	100.0	0		
vb100359.chw	ICD0-I30.mtw	AK13-66 K070-01 DF=50	66	1.0	50.0	1.0	100.0	0		
vb100415.chw	ICD0-I30.mtw	AK13-67 K070-02 DF=50	67	1.0	50.0	1.0	100.0	0		
vb100431.chw	ICD0-I30.mtw	AK13-68 K070-03 DF=50	68	1.0	50.0	1.0	100.0	0		
vb100447.chw	ICD0-I30.mtw	AK13-69 K070-04 DF=20	69	1.0	20.0	1.0	100.0	0		
vb100503.chw	ICD0-I30.mtw	AK13-70 K070-05 DF=25	70	1.0	25.0	1.0	100.0	0		
vb100520.chw	ICD0-I30.mtw	AK13-71 K070-06 DF=40	71	1.0	40.0	1.0	100.0	0		
vb100536.chw	ICD0-I30.mtw	AK13-72 K063-03 DF=20	72	1.0	20.0	1.0	100.0	0		
vb100552.chw	ICD0-I30.mtw	AK13-73 CCV377	73	1.0	1.0	1.0	100.0	0		
vb100608.chw	ICD0-I30.mtw	AK13-74 CCB377	74	1.0	1.0	1.0	100.0	0		
vb100624.chw	ICD0-I30.mtw	AK13-75 K063-04 DF=20	75	1.0	20.0	1.0	100.0	0		
vb100640.chw	ICD0-I30.mtw	AK13-76 K063-05 DF=40	76	1.0	40.0	1.0	100.0	0		
vb100657.chw	ICD0-I30.mtw	AK13-77 K063-06 DF=20	77	1.0	20.0	1.0	100.0	0		
vb100713.chw	ICD0-I30.mtw	AK13-78 K063-01 DF=20	78	1.0	20.0	1.0	100.0	0		
vb100729.chw	ICD0-I30.mtw	AK13-79 K063-02 DF=40	79	1.0	40.0	1.0	100.0	0		
vb100745.chw	ICD0-I30.mtw	AK13-80 K063-02D DF=40	80	1.0	40.0	1.0	100.0	0		
vb100801.chw	ICD0-I30.mtw	AK13-81 K063-02M DF=40	81	1.0	40.0	1.0	100.0	0		
vb100817.chw	ICD0-I30.mtw	AK13-82 CCV379	82	1.0	1.0	1.0	100.0	0		
vb100834.chw	ICD0-I30.mtw	AK13-83 CCB379	83	1.0	1.0	1.0	100.0	0		
vb100850.chw	ICD0-I30.mtw	AK13-84 K084-01	84	1.0	1.0	1.0	100.0	0		
vb100906.chw	ICD0-I30.mtw	AK13-85 K084-02	85	1.0	1.0	1.0	100.0	0		
vb100923.chw	ICD0-I30.mtw	AK13-86 K084-06	86	1.0	1.0	1.0	100.0	0		
vb100939.chw	ICD0-I30.mtw	AK13-87 K084-05	87	1.0	1.0	1.0	100.0	0		
vb100956.chw	ICD0-I30.mtw	AK13-88 K084-04	88	1.0	1.0	1.0	100.0	0		FINAL
vb101012.chw	ICD0-I30.mtw	AK13-89 K084-03 DF=5	89	1.0	5.0	1.0	100.0	0		
vb101028.chw	ICD0-I30.mtw	AK13-90 K077-12 DF=5	90	1.0	5.0	1.0	100.0	0		
vb101044.chw	ICD0-I30.mtw	AK13-91 K077-13 DF=10	91	1.0	10.0	1.0	100.0	0		
vb101100.chw	ICD0-I30.mtw	AK13-92 CCV381	92	1.0	1.0	1.0	100.0	0		
vb101116.chw	ICD0-I30.mtw	AK13-93 CCB381	93	1.0	1.0	1.0	100.0	0		
vb101132.chw	ICD0-I30.mtw	AK13-94 CCV383	94	1.0	1.0	1.0	100.0	0		

VM 11/14/11

8079

RETENTION TIME WINDOW

RETENTION TIME WINDOW
METHOD 300.0

Lab name:	**EMAX**	**Method:**	**EMAX-300.0**
Instrument ID:	IC100 (761 IC)	IC column:	METROSEP A SUPP 5
		Column size:	100X4.0mm

Compound	Retention time Window
FLUORIDE	0.234
CHLORIDE	0.407
NTIRITE	0.52
BROMIDE	0.688
NTIRATE	0.836
PHOSPHATE	0.678
SULFATE	0.915
IODIDE	1.078

10-17-07

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K063

METHOD 300.0(M)
ORGNIC ACIDS BY IC

A total of six (6) water samples were received on 11/07/11 for Organic Acids (Acetate, Butyrate, Lactate and Propionate) by IC analysis, Method 300.0(M) in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for OAK006WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample were analyzed at the frequency prescribed by the project.
Percent recovery for K063-02M was within project QC limits.
Sample duplicate were also analyzed with the samples. RPDs were within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

SAMPLE RESULTS

METHOD 300.0(M)
ACETATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K063

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK006WB	ND	1	NA	1.00	0.0500	11/09/1117:14	NA	HK09003	HK09001	OAK006W	NA	NA
LCS1W	OAK006WL	21.0	1	NA	1.00	0.0500	11/09/1117:35	NA	HK09004	HK09001	OAK006W	NA	NA
LCD1W	OAK006WC	21.5	1	NA	1.00	0.0500	11/09/1117:56	NA	HK09005	HK09001	OAK006W	NA	NA
MW-70-PMW03A-095	K063-01	ND	1	NA	1.00	0.0500	11/09/1118:17	NA	HK09006	HK09001	OAK006W	11/07/1110:42	11/07/11
MW-70-PMW03B-097	K063-02	ND	1	NA	1.00	0.0500	11/09/1118:58	NA	HK09007	HK09001	OAK006W	11/07/1112:08	11/07/11
MW-70-PMW03B-097DUP	K063-02D	ND	1	NA	1.00	0.0500	11/09/1119:39	NA	HK09008	HK09001	OAK006W	11/07/1112:08	11/07/11
MW-70-PMW03B-097MS	K063-02M	10.2	1	NA	1.00	0.0500	11/09/1120:20	NA	HK09009	HK09001	OAK006W	11/07/1112:08	11/07/11
IW-70-SAB06-099	K063-03	ND	1	NA	1.00	0.0500	11/09/1121:00	NA	HK09010	HK09001	OAK006W	11/07/1114:30	11/07/11
MW-70-PMW02A-100	K063-04	ND	1	NA	1.00	0.0500	11/09/1121:41	NA	HK09011	HK09001	OAK006W	11/07/1115:42	11/07/11
MW-70-PMW02B-101	K063-05	ND	1	NA	1.00	0.0500	11/09/1122:22	NA	HK09012	HK09001	OAK006W	11/07/1116:27	11/07/11
IR-70-FD-098	K063-06	ND	1	NA	1.00	0.0500	11/10/1100:27	NA	HK09015	HK09013	OAK006W	11/07/1112:25	11/07/11

METHOD 300.0(M)
BUTYRATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K063

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK006WB	ND	1	NA	1.00	0.0500	11/09/1117:14	NA	HK09003	HK09001	OAK006W	NA	NA
LCS1W	OAK006WL	18.9	1	NA	1.00	0.0500	11/09/1117:35	NA	HK09004	HK09001	OAK006W	NA	NA
LCD1W	OAK006WC	20.2	1	NA	1.00	0.0500	11/09/1117:56	NA	HK09005	HK09001	OAK006W	NA	NA
MW-70-PMW03A-095	K063-01	ND	1	NA	1.00	0.0500	11/09/1118:17	NA	HK09006	HK09001	OAK006W	11/07/1110:42	11/07/11
MW-70-PMW03B-097	K063-02	ND	1	NA	1.00	0.0500	11/09/1118:58	NA	HK09007	HK09001	OAK006W	11/07/1112:08	11/07/11
MW-70-PMW03B-097DUP	K063-02D	ND	1	NA	1.00	0.0500	11/09/1119:39	NA	HK09008	HK09001	OAK006W	11/07/1112:08	11/07/11
MW-70-PMW03B-097MS	K063-02M	8.06	1	NA	1.00	0.0500	11/09/1120:20	NA	HK09009	HK09001	OAK006W	11/07/1112:08	11/07/11
IW-70-SAB06-099	K063-03	ND	1	NA	1.00	0.0500	11/09/1121:00	NA	HK09010	HK09001	OAK006W	11/07/1114:30	11/07/11
MW-70-PMW02A-100	K063-04	ND	1	NA	1.00	0.0500	11/09/1121:41	NA	HK09011	HK09001	OAK006W	11/07/1115:42	11/07/11
MW-70-PMW02B-101	K063-05	ND	1	NA	1.00	0.0500	11/09/1122:22	NA	HK09012	HK09001	OAK006W	11/07/1116:27	11/07/11
IR-70-FD-098	K063-06	ND	1	NA	1.00	0.0500	11/10/1100:27	NA	HK09015	HK09013	OAK006W	11/07/1112:25	11/07/11

METHOD 300.0(M)
LACTATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K063

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETTME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK006WB	ND	1	NA	1.00	0.0500	11/09/1117:14	NA	HK09003	HK09001	OAK006W	NA	NA
LCS1W	OAK006WL	18.7	1	NA	1.00	0.0500	11/09/1117:35	NA	HK09004	HK09001	OAK006W	NA	NA
LCD1W	OAK006WC	18.9	1	NA	1.00	0.0500	11/09/1117:56	NA	HK09005	HK09001	OAK006W	NA	NA
MW-70-PMW03A-095	K063-01	ND	1	NA	1.00	0.0500	11/09/1118:17	NA	HK09006	HK09001	OAK006W	11/07/1110:42	11/07/11
MW-70-PMW03B-097	K063-02	ND	1	NA	1.00	0.0500	11/09/1118:58	NA	HK09007	HK09001	OAK006W	11/07/1112:08	11/07/11
MW-70-PMW03B-097DUP	K063-02D	ND	1	NA	1.00	0.0500	11/09/1119:39	NA	HK09008	HK09001	OAK006W	11/07/1112:08	11/07/11
MW-70-PMW03B-097MS	K063-02M	11.1	1	NA	1.00	0.0500	11/09/1120:20	NA	HK09009	HK09001	OAK006W	11/07/1112:08	11/07/11
IW-70-SAB06-099	K063-03	ND	1	NA	1.00	0.0500	11/09/1121:00	NA	HK09010	HK09001	OAK006W	11/07/1114:30	11/07/11
MW-70-PMW02A-100	K063-04	ND	1	NA	1.00	0.0500	11/09/1121:41	NA	HK09011	HK09001	OAK006W	11/07/1115:42	11/07/11
MW-70-PMW02B-101	K063-05	ND	1	NA	1.00	0.0500	11/09/1122:22	NA	HK09012	HK09001	OAK006W	11/07/1116:27	11/07/11
IR-70-FD-098	K063-06	ND	1	NA	1.00	0.0500	11/10/1100:27	NA	HK09015	HK09013	OAK006W	11/07/1112:25	11/07/11

METHOD 300.0(M)
PROPIONATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K063

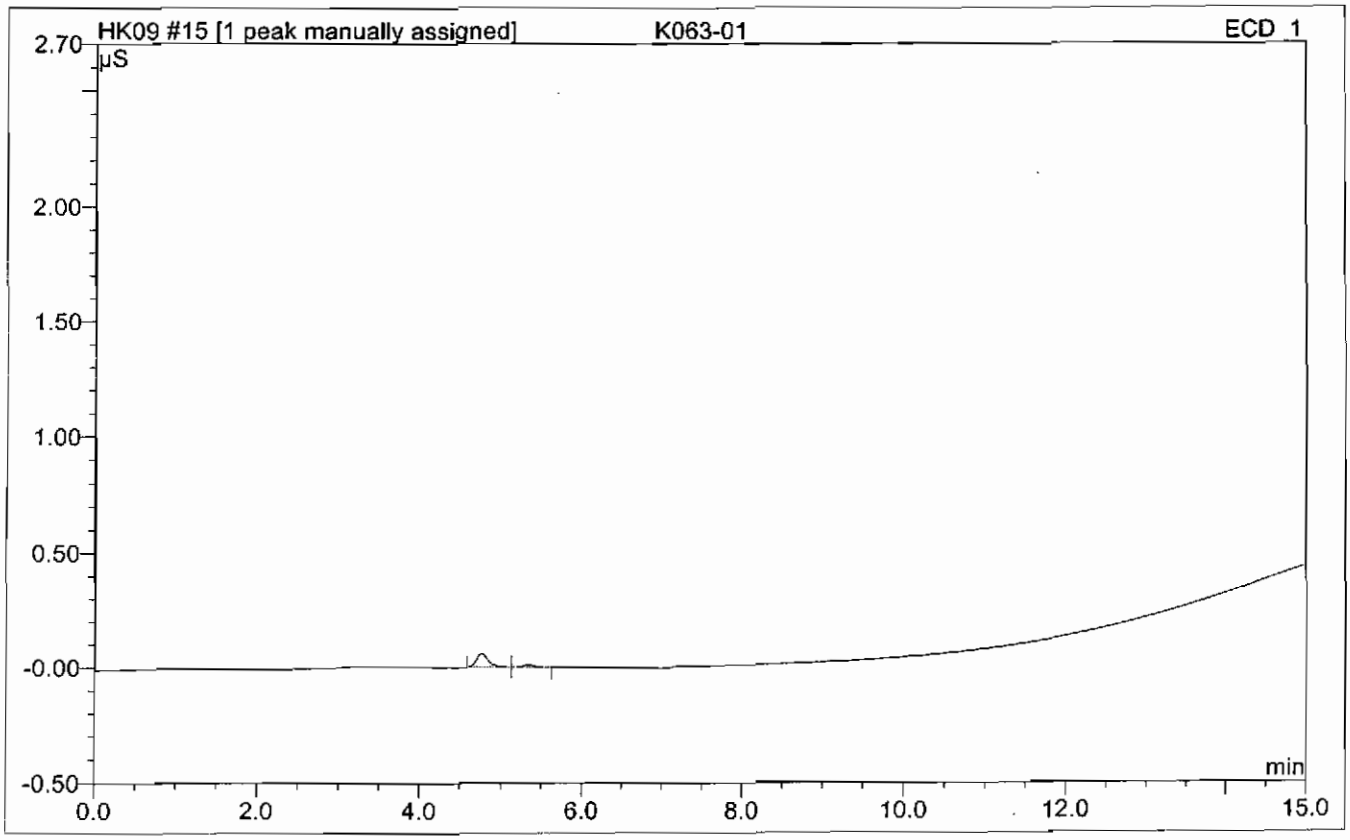
Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK006WB	ND	1	NA	1.00	0.0500	11/09/1117:14	NA	HK09003	HK09001	OAK006W	NA	NA
LCS1W	OAK006WL	20.4	1	NA	1.00	0.0500	11/09/1117:35	NA	HK09004	HK09001	OAK006W	NA	NA
LCD1W	OAK006WC	21.9	1	NA	1.00	0.0500	11/09/1117:56	NA	HK09005	HK09001	OAK006W	NA	NA
MW-70-PMW03A-095	K063-01	ND	1	NA	1.00	0.0500	11/09/1118:17	NA	HK09006	HK09001	OAK006W	11/07/1110:42	11/07/11
MW-70-PMW03B-097	K063-02	ND	1	NA	1.00	0.0500	11/09/1118:58	NA	HK09007	HK09001	OAK006W	11/07/1112:08	11/07/11
MW-70-PMW03B-097DUP	K063-020	ND	1	NA	1.00	0.0500	11/09/1119:39	NA	HK09008	HK09001	OAK006W	11/07/1112:08	11/07/11
MW-70-PMW03B-097MS	K063-02M	9.42	1	NA	1.00	0.0500	11/09/1120:20	NA	HK09009	HK09001	OAK006W	11/07/1112:08	11/07/11
IW-70-SAB06-099	K063-03	ND	1	NA	1.00	0.0500	11/09/1121:00	NA	HK09010	HK09001	OAK006W	11/07/1114:30	11/07/11
MW-70-PMW02A-100	K063-04	ND	1	NA	1.00	0.0500	11/09/1121:41	NA	HK09011	HK09001	OAK006W	11/07/1115:42	11/07/11
MW-70-PMW02B-101	K063-05	ND	1	NA	1.00	0.0500	11/09/1122:22	NA	HK09012	HK09001	OAK006W	11/07/1116:27	11/07/11
IR-70-FD-098	K063-06	ND	1	NA	1.00	0.0500	11/10/1100:27	NA	HK09015	HK09013	OAK006W	11/07/1112:25	11/07/11

HK09 006 K063-01

SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

Sample Name:	**K063-01**	*Injection Volume:*	**25.0**
Vial Number:	**1**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 18:17**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

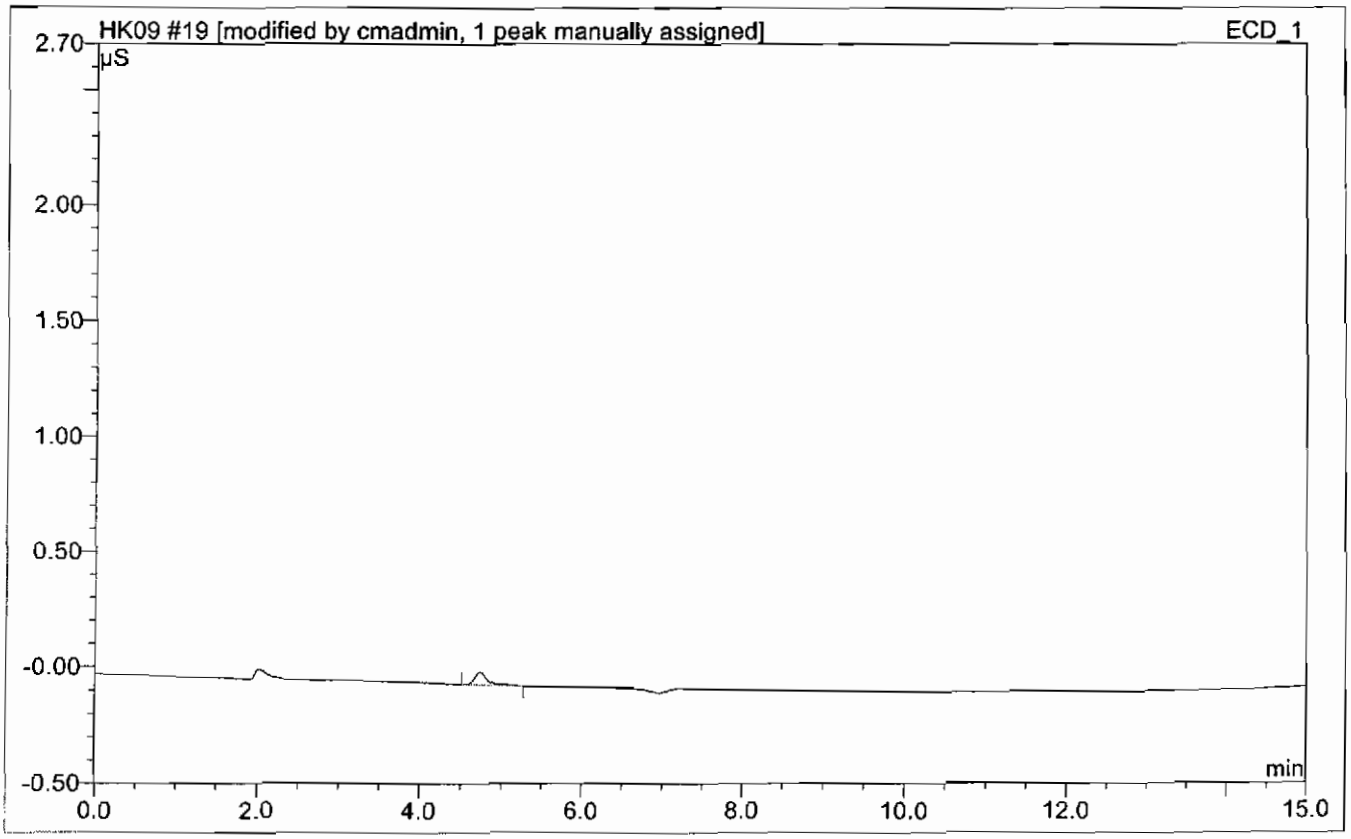


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.76	n.a.	0.058734	0.009873	84.56	n.a.	BM ^
2	5.33	n.a.	0.009098	0.001802	15.44	n.a.	MB
Total:			0.068	0.012	100.00	0.000	

HK09 010 K063-03

SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

Sample Name:	**K063-03**	*Injection Volume:*	**25.0**
Vial Number:	**5**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 21:00**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.74	n.a.	0.054716	0.010046	100.00	n.a.	BMB^
Total:			0.055	0.010	100.00	0.000	

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK006WB	OAK006WL	OAK006WC		
LAB FILE ID:	HK09003	HK09004	HK09005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1117:14	11/09/1117:35	11/09/1117:56	DATE RECEIVED:	NA
PREP. BATCH:	OAK006W	OAK006W	OAK006W		
CALIB. REF:	HK09001	HK09001	HK09001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	21.0	105	20.0	21.5	108	2	90-110	20

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0(M)

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MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MW-70-PMW03B-097
LAB SAMP ID: K063-02 K063-02M
LAB FILE ID: HK09007 HK09009
DATE EXTRACTED: NA NA DATE COLLECTED: 11/07/11 12:08
DATE ANALYZED: 11/09/1118:58 11/09/1120:20 DATE RECEIVED: 11/07/11
PREP. BATCH: OAK006W OAK006W
CALIB. REF: HK09001 HK09001

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	QC LIMIT (%)
Acetate	ND	10.0	10.2	102	75-125

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0(M)

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MW-70-PMW03B-097			
EMAX SAMP ID:	K063-02	K063-02D		
LAB FILE ID:	HK09007	HK09008		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/07/11 12:08
DATE ANALYZED:	11/09/1118:58	11/09/1119:39	DATE RECEIVED:	11/07/11
PREP. BATCH:	OAK006W	OAK006W		
CALIB. REF:	HK09001	HK09001		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Acetate	ND	ND	0	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK006WB	OAK006WL	OAK006WC		
LAB FILE ID:	HK09003	HK09004	HK09005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1117:14	11/09/1117:35	11/09/1117:56	DATE RECEIVED:	NA
PREP. BATCH:	OAK006W	OAK006W	OAK006W		
CALIB. REF:	HK09001	HK09001	HK09001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	20.0	18.9	94	20.0	20.2	101	7	90-110	20

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0(M)

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MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MW-70-PMW03B-097
LAB SAMP ID: K063-02 K063-02M
LAB FILE ID: HK09007 HK09009
DATE EXTRACTED: NA NA DATE COLLECTED: 11/07/11 12:08
DATE ANALYZED: 11/09/1118:58 11/09/1120:20 DATE RECEIVED: 11/07/11
PREP. BATCH: OAK006W OAK006W
CALIB. REF: HK09001 HK09001

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPTKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	QC LIMIT (%)
Butyrate	ND	10.0	8.06	81	75-125

8695

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0(M)

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MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MW-70-PMW03B-097			
EMAX SAMP ID:	K063-02	K063-02D		
LAB FILE ID:	HK09007	HK09008		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/07/11 12:08
DATE ANALYZED:	11/09/1118:58	11/09/1119:39	DATE RECEIVED:	11/07/11
PREP. BATCH:	OAK006W	OAK006W		
CALIB. REF:	HK09001	HK09001		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Butyrate	ND	ND	0	20

8096

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK006WB	OAK006WL	OAK006WC		
LAB FILE ID:	HK09003	HK09004	HK09005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1117:14	11/09/1117:35	11/09/1117:56	DATE RECEIVED:	NA
PREP. BATCH:	OAK006W	OAK006W	OAK006W		
CALIB. REF:	HK09001	HK09001	HK09001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	20.0	18.7	94	20.0	18.9	94	1	90-110	20

8087

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0(M)

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MW-70-PMW03B-097
LAB SAMP ID: K063-02 K063-02M
LAB FILE ID: HK09007 HK09009
DATE EXTRACTED: NA NA DATE COLLECTED: 11/07/11 12:08
DATE ANALYZED: 11/09/1118:58 11/09/1120:20 DATE RECEIVED: 11/07/11
PREP. BATCH: OAK006W OAK006W
CALIB. REF: HK09001 HK09001

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	QC LIMIT (%)
Lactate	ND	10.0	11.1	111	75-125

8098

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0(M)

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MW-70-PMW03B-097			
EMAX SAMP ID:	K063-02	K063-02D		
LAB FILE ID:	HK09007	HK09008		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/07/11 12:08
DATE ANALYZED:	11/09/1118:58	11/09/1119:39	DATE RECEIVED:	11/07/11
PREP. BATCH:	OAK006W	OAK006W		
CALIB. REF:	HK09001	HK09001		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Lactate	ND	ND	0	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK006WB	OAK006WL	OAK006WC		
LAB FILE ID:	HK09003	HK09004	HK09005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1117:14	11/09/1117:35	11/09/1117:56	DATE RECEIVED:	NA
PREP. BATCH:	OAK006W	OAK006W	OAK006W		
CALIB. REF:	HK09001	HK09001	HK09001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	20.0	20.4	102	20.0	21.9	110	7	90-110	20

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0(M)

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MW-70-PMW03B-097
LAB SAMP ID: K063-02 K063-02M
LAB FILE ID: HK09007 HK09009
DATE EXTRACTED: NA NA DATE COLLECTED: 11/07/11 12:08
DATE ANALYZED: 11/09/1118:58 11/09/1120:20 DATE RECEIVED: 11/07/11
PREP. BATCH: OAK006W OAK006W
CALIB. REF: HK09001 HK09001

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	QC LIMIT (%)
Propionate	ND	10.0	9.42	94	75-125

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MW-70-PMW03B-097			
EMAX SAMP ID:	K063-02	K063-02D		
LAB FILE ID:	HK09007	HK09008		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/07/11 12:08
DATE ANALYZED:	11/09/1118:58	11/09/1119:39	DATE RECEIVED:	11/07/11
PREP. BATCH:	OAK006W	OAK006W		
CALIB. REF:	HK09001	HK09001		

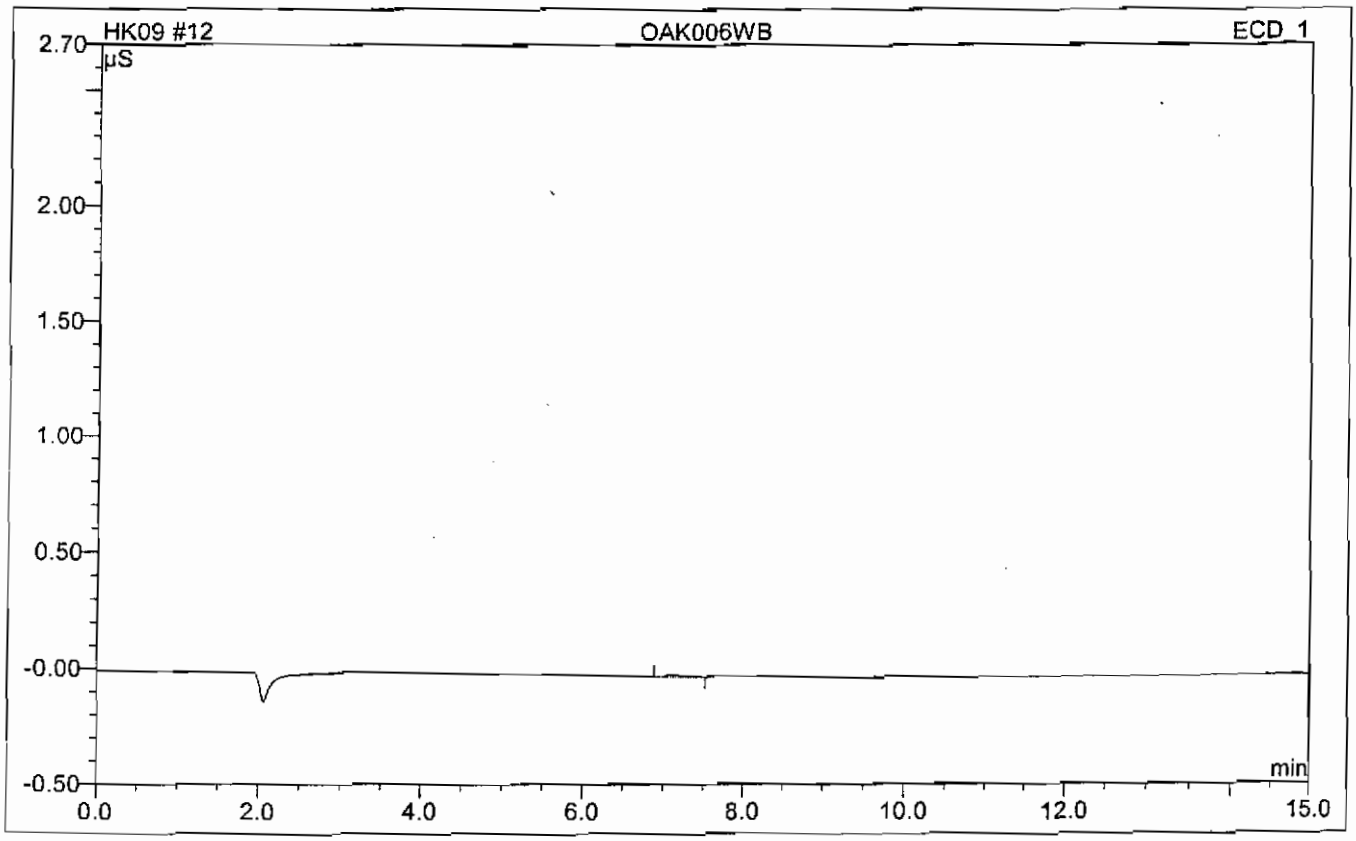
ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Propionate	ND	ND	0	20

QC DATA

HK09 003 OAK006WB

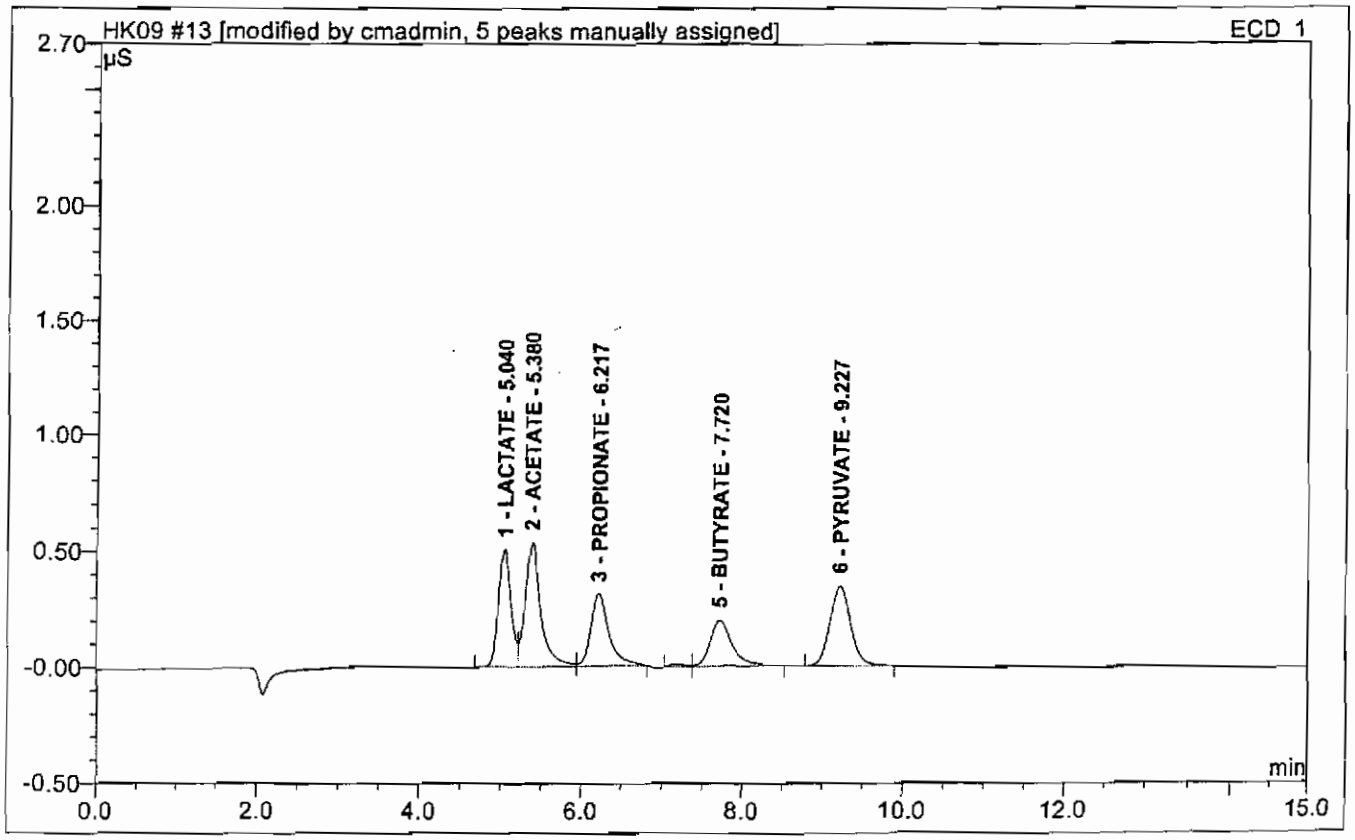
Sample Name:	**OAK006WB**	*Injection Volume:*	**25.0**
Vial Number:	**98**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 17:14**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	7.10	n.a.	0.010024	0.002499	100.00	n.a.	BMB
Total:			0.010	0.002	100.00	0.000	

HK09 004 OAK006WL

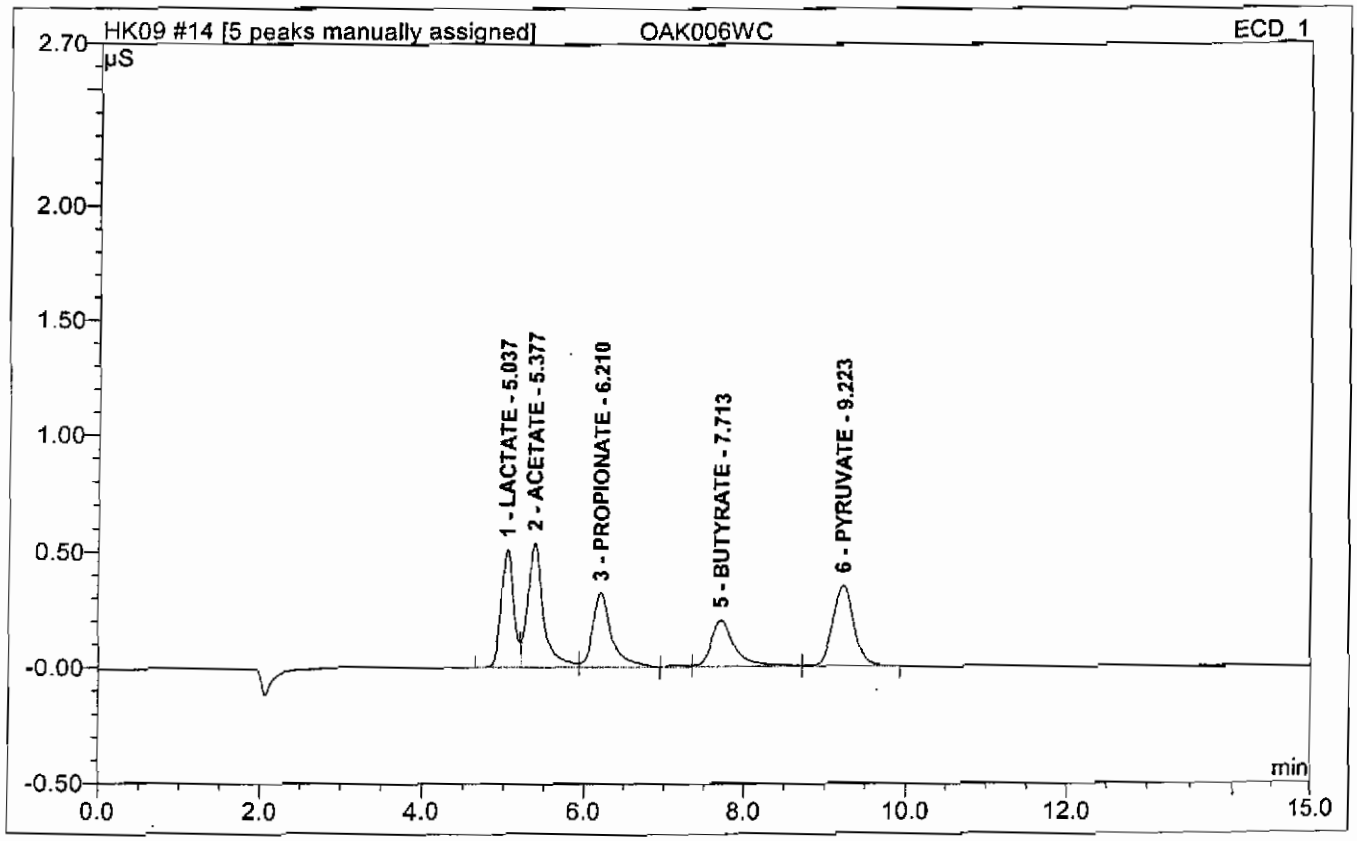
Sample Name:	**OAK006WL**	*Injection Volume:*	**25.0**
Vial Number:	**97**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 17:35**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.04	LACTATE	0.503326	0.089797	19.49	1.869	BM *^
2	5.38	ACETATE	0.533540	0.121179	26.30	2.097	M *^
3	6.22	PROPIONATE	0.312182	0.081714	17.73	2.042	MB*^
4	7.16	n.a.	0.011630	0.002590	0.56	n.a.	BM *
5	7.72	BUTYRATE	0.198150	0.063575	13.80	1.890	MB*^
6	9.23	PYRUVATE	0.343044	0.101932	22.12	1.839	BMB^
Total:			1.902	0.461	100.00	9.738	

HK09 005 OAK006WC

Sample Name:	**OAK006WC**	*Injection Volume:*	**25.0**
Vial Number:	**96**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 17:56**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

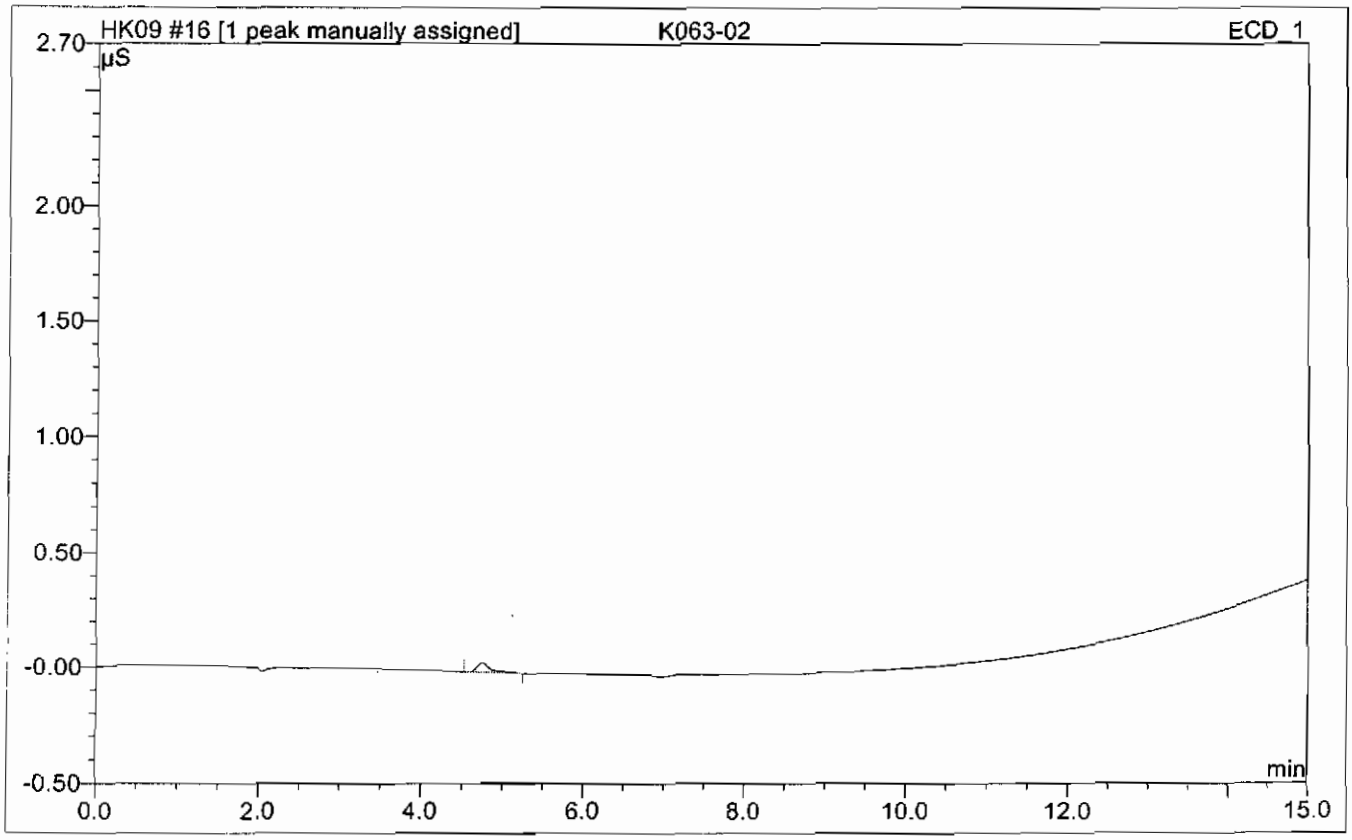


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.04	LACTATE	0.507838	0.091015	19.07	1.894	BM ^
2	5.38	ACETATE	0.537704	0.124167	26.01	2.148	M ^
3	6.21	PROPIONATE	0.319606	0.087626	18.36	2.190	MB^
4	7.14	n.a.	0.010516	0.002464	0.52	n.a.	BM
5	7.71	BUTYRATE	0.199222	0.068013	14.25	2.023	M ^
6	9.22	PYRUVATE	0.346198	0.104010	21.79	1.876	MB^
Total:			1.921	0.477	100.00	10.131	

HK09 007 K063-02

SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

Sample Name:	**K063-02**	*Injection Volume:*	**25.0**
Vial Number:	**2**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 18:58**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

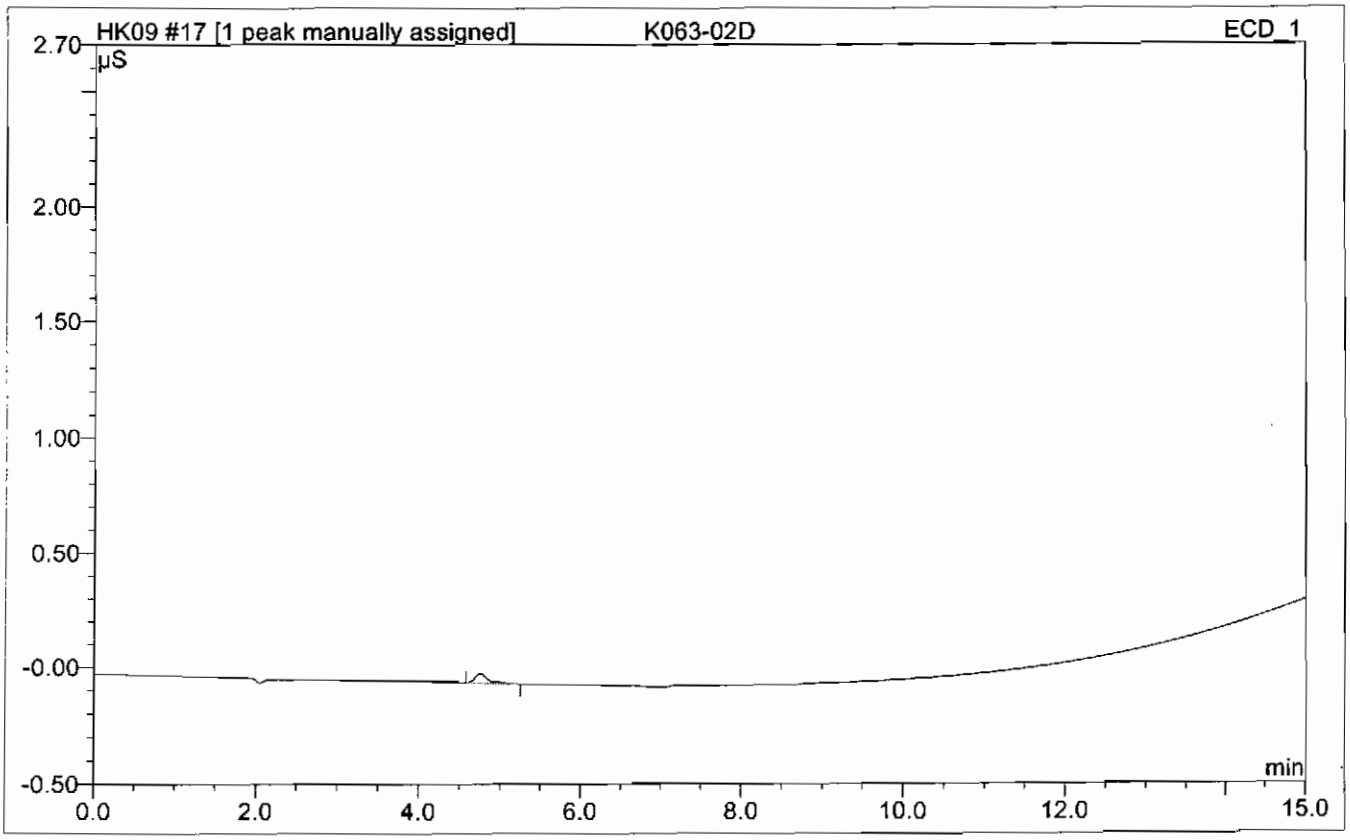


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.74	n.a.	0.041004	0.008098	100.00	n.a.	BMB^
Total:			0.041	0.008	100.00	0.000	

HK09 008 K063-02D

SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

Sample Name:	**K063-02D**	*Injection Volume:*	**25.0**
Vial Number:	**3**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 19:39**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

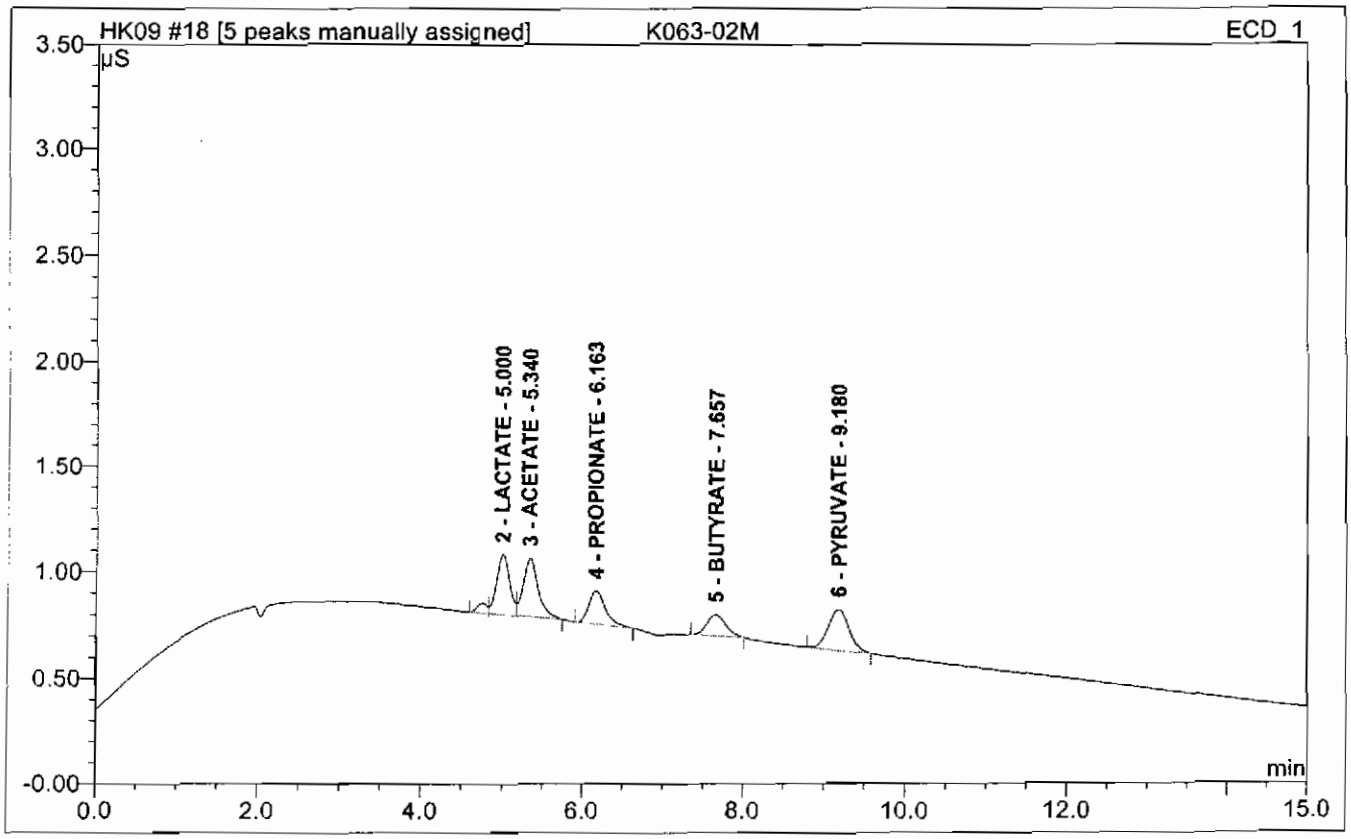


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.75	n.a.	0.041274	0.007690	100.00	n.a.	BMB^
Total:			0.041	0.008	100.00	0.000	

HK09 009 K063-02M

SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

Sample Name:	**K063-02M**	*Injection Volume:*	**25.0**
Vial Number:	**4**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 20:20**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.76	n.a.	0.047070	0.006528	2.72	n.a.	BM
2	5.00	LACTATE	0.283350	0.052647	21.96	1.105 ✓	M ^
3	5.34	ACETATE	0.272436	0.058312	24.33	1.020 ✓	MB^
4	6.16	PROPIONATE	0.155442	0.037640	15.70	0.942 ✓	BMB^
5	7.66	BUTYRATE	0.099170	0.027265	11.37	0.806 ✓	BMB^
6	9.18	PYRUVATE	0.192768	0.057322	23.91	1.045	BMB^
Total:			1.050	0.240	100.00	4.918	

INITIAL CALIBRATIONS

IC RESULT FORM CalVersion: 300M.I26/HI26(2011)

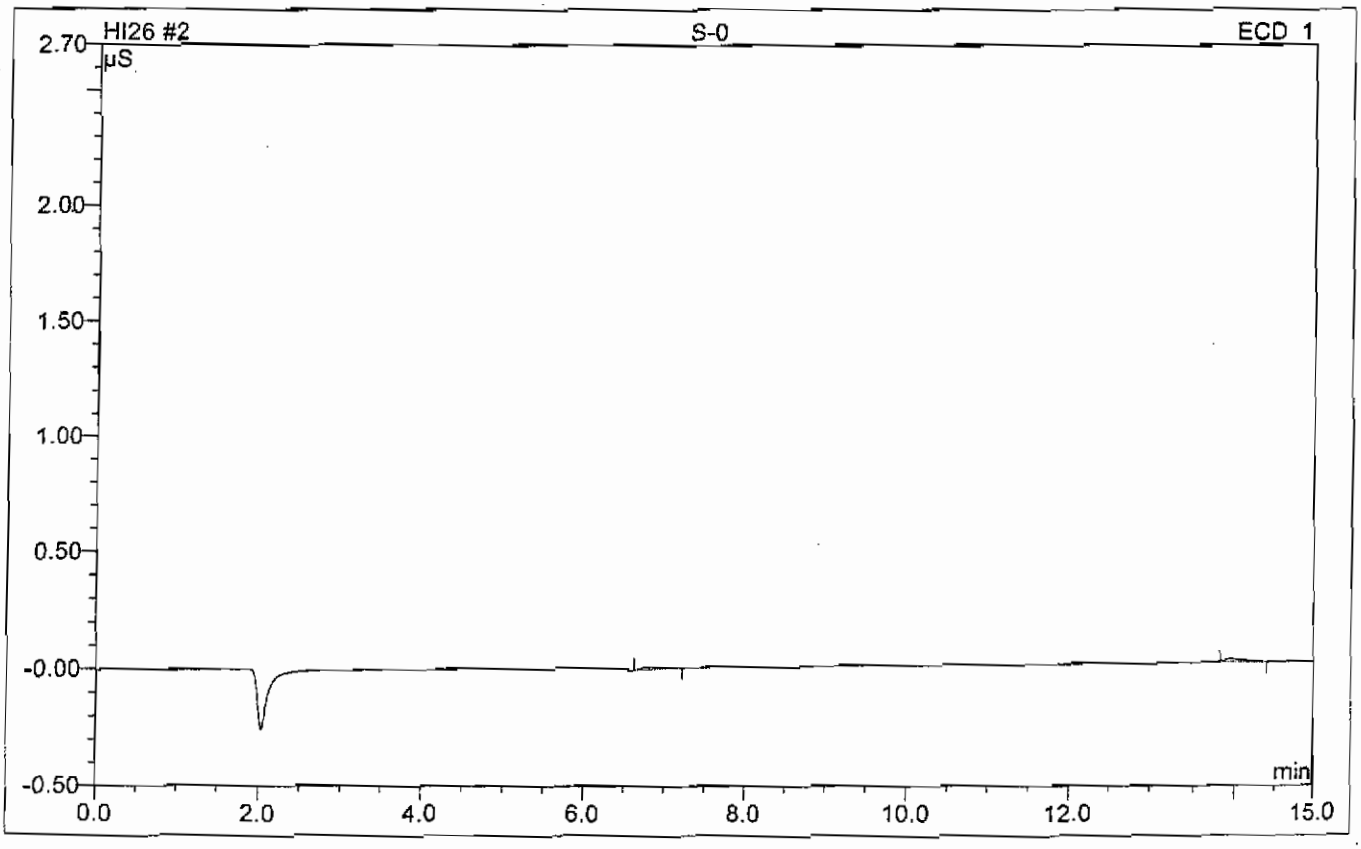
LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HI26001	IB	ABLPY	ND	ND	ND	ND	ND	09/26/1118:09	1
HI26002	S-0	ABLPY	ND	ND	ND	ND	ND	09/26/1118:30	1
HI26003	S-1	ABLPY	.092	.111	.112	.109	.115	09/26/1118:51	1
HI26004	S-2	ABLPY	.483	.487	.481	.497	.495	09/26/1119:12	1
HI26005	S-3	ABLPY	1.013	1.031	.995	1.006	.969	09/26/1119:33	1
HI26006	S-4	ABLPY	1.978	1.962	1.963	1.96	1.957	09/26/1119:54	1
HI26007	S-5	ABLPY	3.014	3.017	3.029	3.025	3.039	09/26/1120:15	1
HI26008	ICV	ABLPY	98.5%	101%	96.4%	100%	95.8%	09/26/1120:36	1
HI26009	ICB	ABLPY	ND	ND	ND	ND	ND	09/26/1120:57	1
HI26010	CCV2	ABLPY	97.2%	91.6%	97.8%	94.7%	96.8%	09/26/1121:18	1
HI26011	CCB2	ABLPY	ND	ND	ND	ND	ND	09/26/1121:39	1
HI26012	OAI002WB	ABLPY	ND	ND	ND	ND	ND	09/26/1122:00	1
HI26013	OAI002WL	ABLPY	1.96	1.89	1.9	1.91	1.92	09/26/1122:21	1
HI26014	OAI002WC	ABLPY	1.98	2.04	1.88	2.03	1.93	09/26/1122:42	1
HI26015	I159-02	ABLPY	ND	ND	ND	ND	ND	09/26/1123:03	1
HI26016	I160-02	*BLPY	3.39E	ND	ND	ND	ND	09/27/1100:09	1
HI26017	I201-07	ABLPY	ND	ND	ND	ND	ND	09/27/1101:15	1
HI26018	I202-02	ABLPY	ND	ND	ND	ND	ND	09/27/1102:21	1
HI26019	CCV4	ABLPY	93.4%	90.3%	93.6%	93%	96.3%	09/27/1103:26	1
HI26020	CCB4	ABLPY	ND	ND	ND	ND	ND	09/27/1103:47	1

RS
9/30/11

8111

HI26 002 S-0

Sample Name:	**S-0**	*Injection Volume:*	**25.0**
Vial Number:	**2**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**9/26/2011 18:30**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

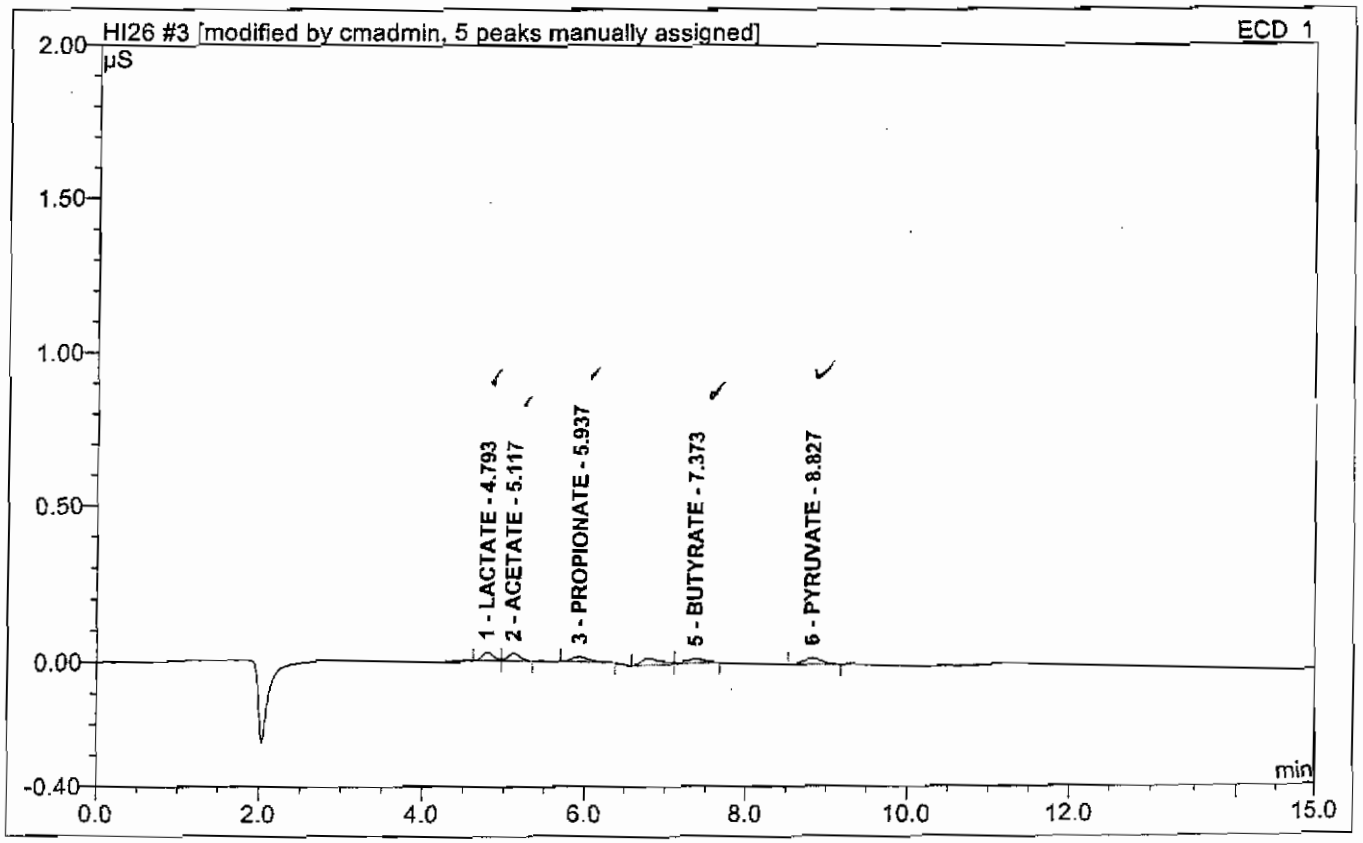


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	6.83	n.a.	0.013002	0.003709	49.36	n.a.	BMB
2	13.94	n.a.	0.015270	0.003805	50.64	n.a.	BMB
Total:			0.028	0.008	100.00	0.000	

KS
09/30/11

HI26 003 S-1

Sample Name:	**S-1**	*Injection Volume:*	**25.0**
Vial Number:	**3**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**9/26/2011 18:51**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

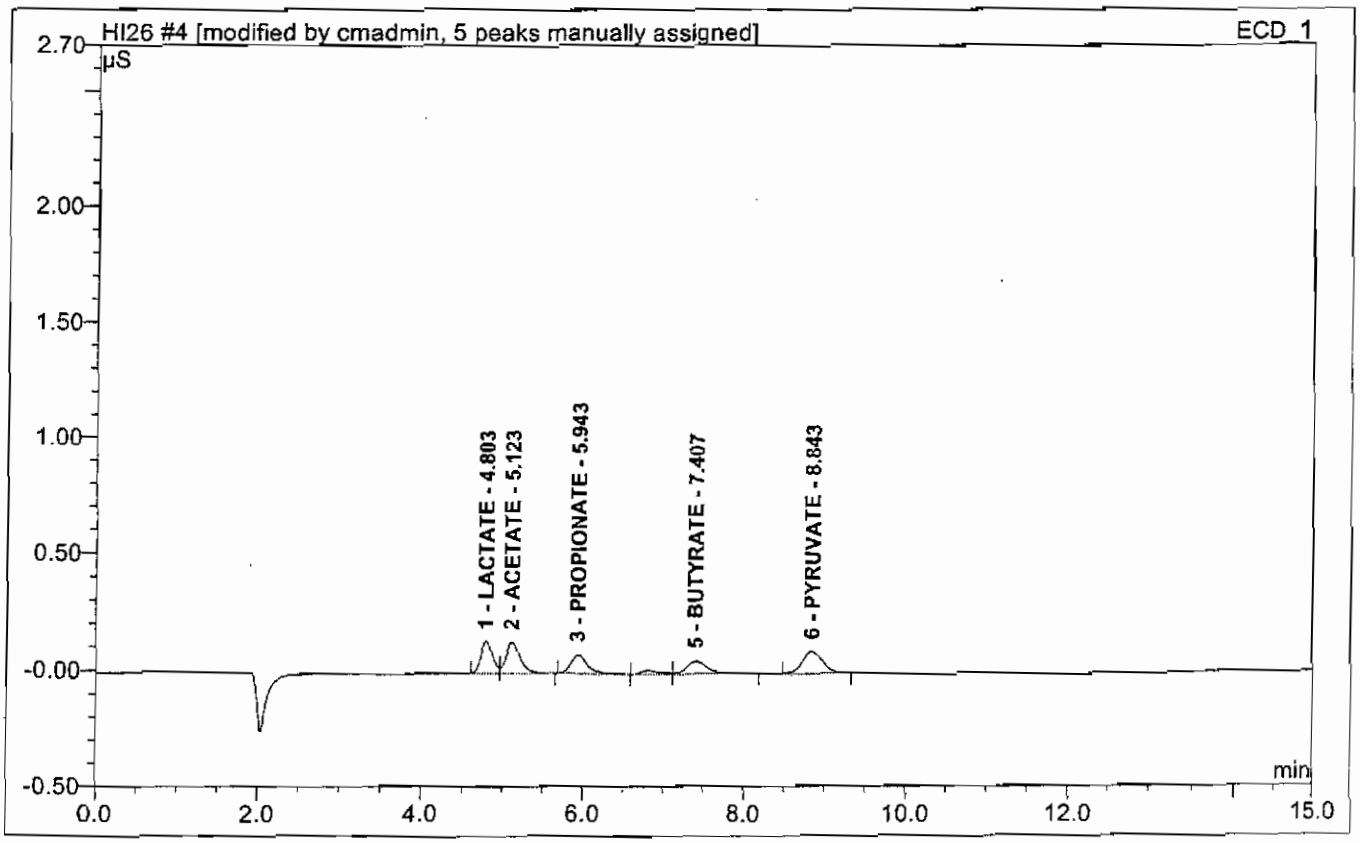


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.79	LACTATE	0.027968	0.004418	15.68	0.112	BM ^
2	5.12	ACETATE	0.024890	0.004158	14.76	0.092	MB^
3	5.94	PROPIONATE	0.016624	0.004273	15.17	0.109	BMB*^
4	6.80	n.a.	0.021972	0.006275	22.28	n.a.	BM *
5	7.37	BUTYRATE	0.012660	0.003966	14.08	0.111	MB*^
6	8.83	PYRUVATE	0.018748	0.005078	18.03	0.115	BMB^
Total:			0.123	0.028	100.00	0.539	

AS 9/30/11

HI26 004 S-2

Sample Name:	**S-2**	*Injection Volume:*	**25.0**
Vial Number:	**4**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**9/26/2011 19:12**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

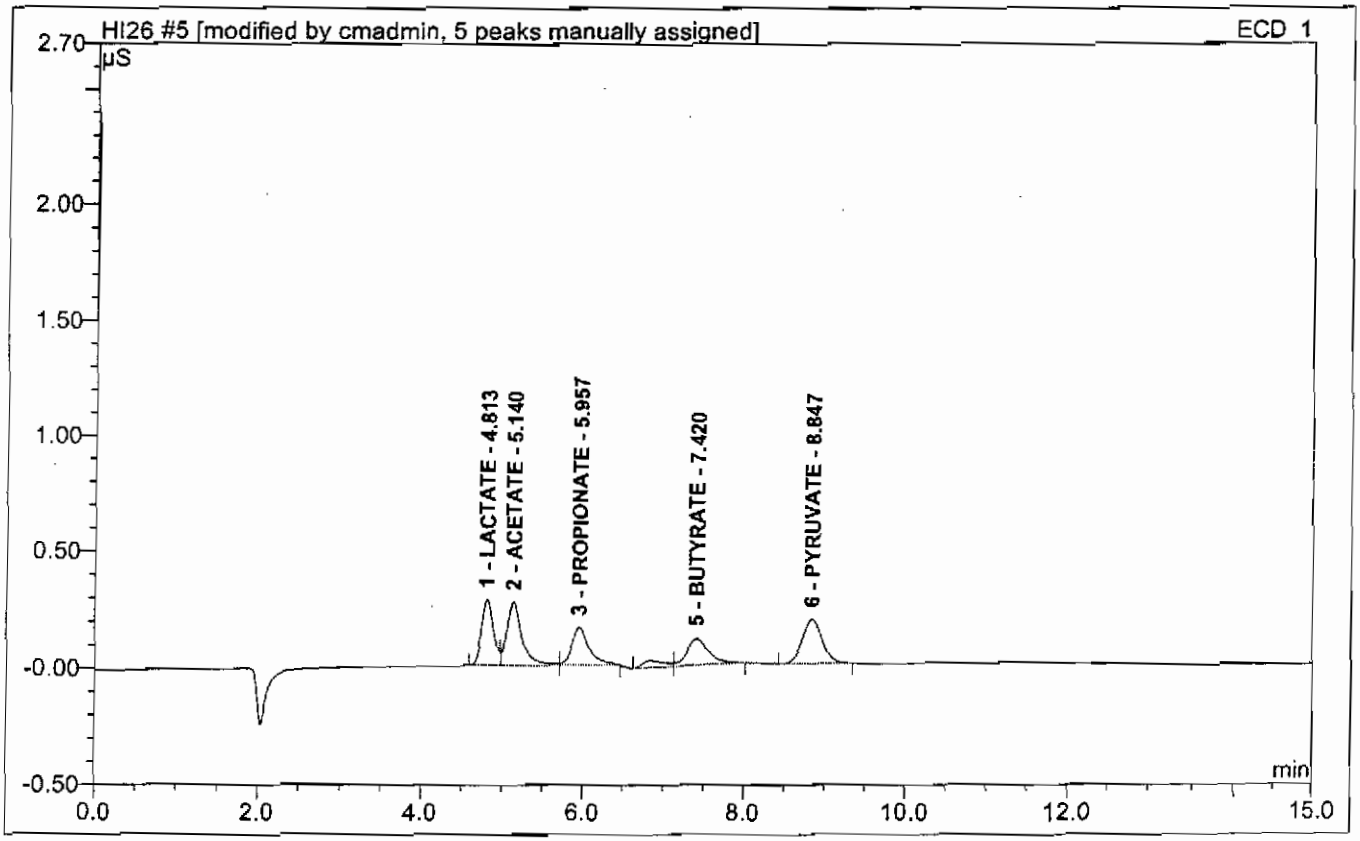


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.80	LACTATE	0.135140	0.022353 ✓	19.06	0.481 ✓	BM ^
2	5.12	ACETATE	0.133820	0.026980 ✓	23.00	0.483 ✓	MB^
3	5.94	PROPIONATE	0.079710	0.019806 ✓	16.89	0.497 ✓	BMB^
4	6.81	n.a.	0.018216	0.005141	4.38	n.a.	BM *
5	7.41	BUTYRATE	0.052398	0.016555 ✓	14.12	0.487 ✓	MB*^
6	8.84	PYRUVATE	0.093646	0.026450 ✓	22.55	0.495 ✓	BMB^
Total:			0.513	0.117	100.00	2.443	

AS 09/30/11

HI26 005 S-3

Sample Name:	**S-3**	*Injection Volume:*	**25.0**
Vial Number:	**5**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**9/26/2011 19:33**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

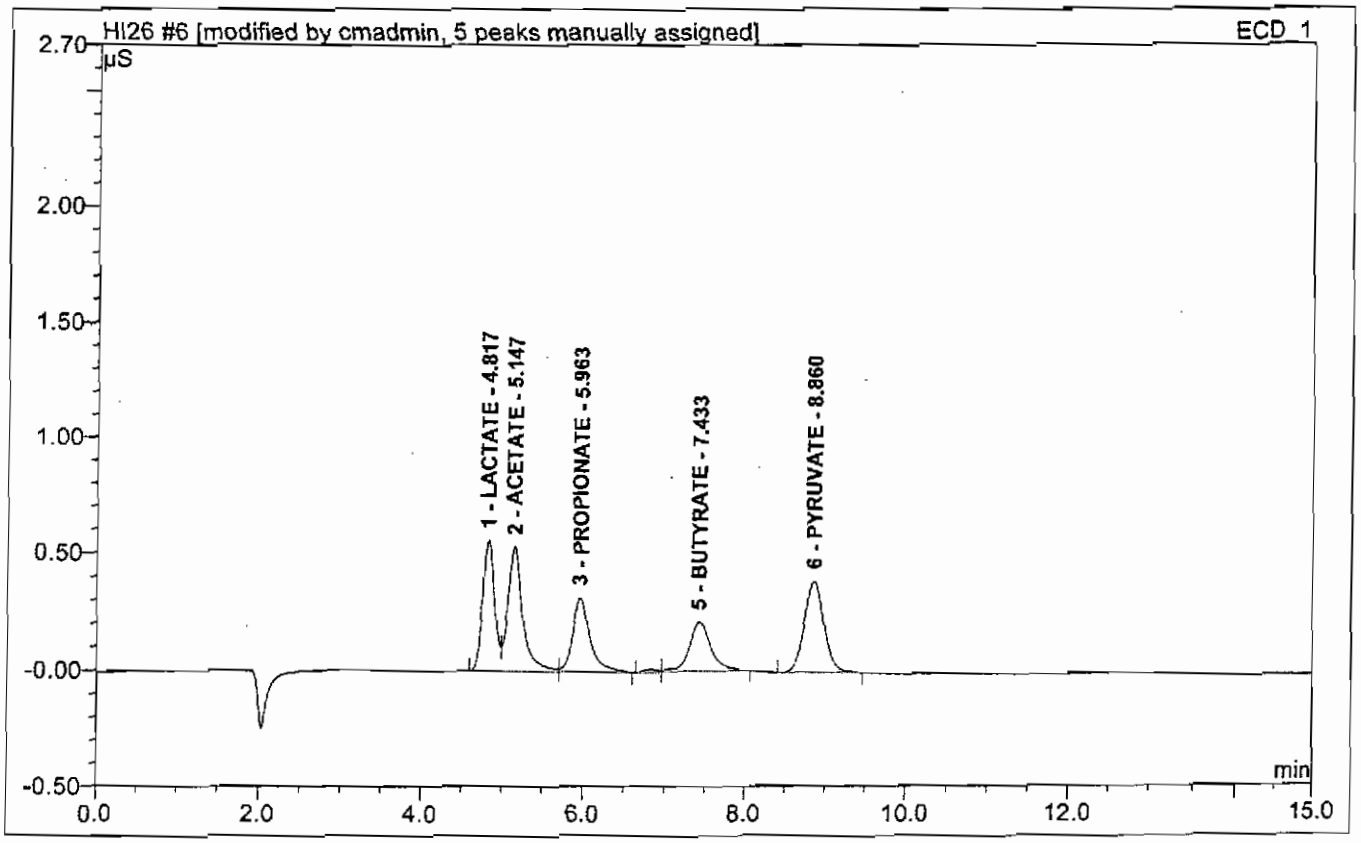


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.81	LACTATE	0.278280	0.047315 ✓	19.50	0.995 ✓	BM *^
2	5.14	ACETATE	0.268600	0.057908 ✓	23.86	1.013 ✓	M *^
3	5.96	PROPIONATE	0.159284	0.040209 ✓	16.57	1.006 ✓	MB*^
4	6.84	n.a.	0.030514	0.009386	3.87	n.a.	BM *
5	7.42	BUTYRATE	0.110646	0.034778 ✓	14.33	1.031✓	MB*^
6	8.85	PYRUVATE	0.188340	0.053073 ✓	21.87	0.969 ✓	BMB^
Total:			1.036	0.243	100.00	5.014	

AS 09/30/11

HI26 006 S-4

Sample Name:	**S-4**	*Injection Volume:*	**25.0**
Vial Number:	**6**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**9/26/2011 19:54**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

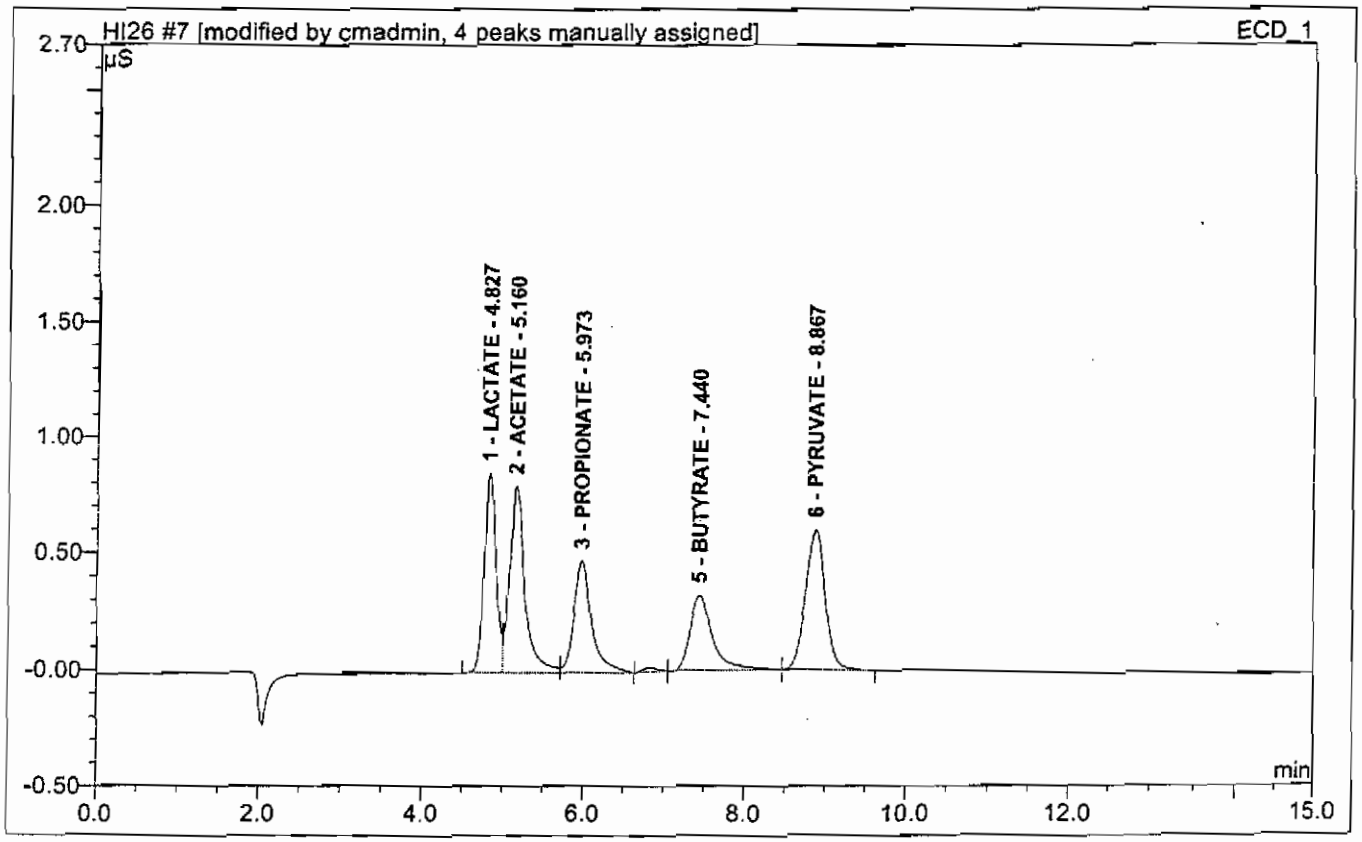


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.82	LACTATE	0.555906	0.094349 ✓	20.33	1.963 ✓	BM ^
2	5.15	ACETATE	0.530676	0.114252 ✓	24.61	1.978 ✓	M ^
3	5.96	PROPIONATE	0.314528	0.078443 ✓	16.90	1.960 ✓	MB^
4	6.81	n.a.	0.012992	0.002663	0.57	n.a.	BM *
5	7.43	BUTYRATE	0.208732	0.065977 ✓	14.21	1.962 ✓	MB*^
6	8.86	PYRUVATE	0.384952	0.108518 ✓	23.38	1.957 ✓	BMB^
Total:			2.008	0.464	100.00	9.820	

AS 09/30/11

HI26 007 S-5

Sample Name:	**S-5**	*Injection Volume:*	**25.0**
Vial Number:	**7**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**9/26/2011 20:15**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

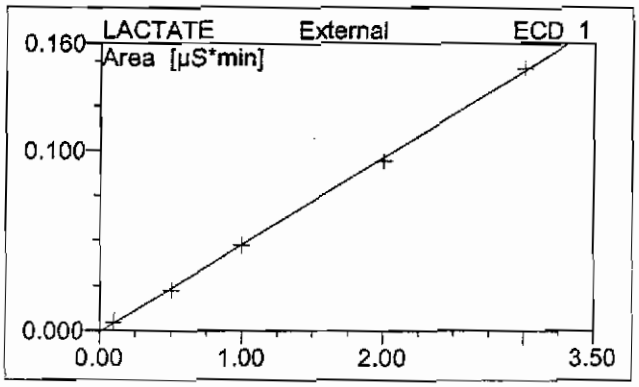


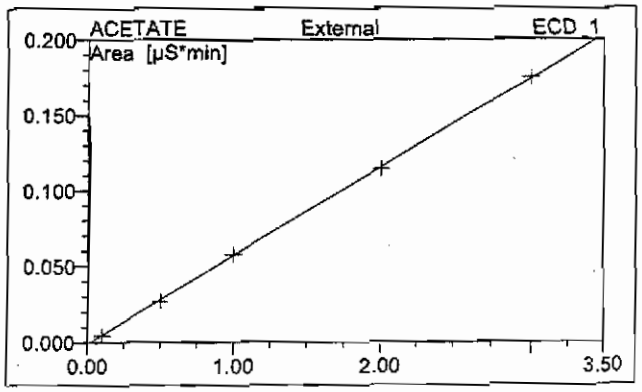
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.83	LACTATE	0.853038	0.146128 ✓	20.39	3.029 ✓	BM ^
2	5.16	ACETATE	0.797870	0.174710 ✓	24.38	3.014 ✓	M
3	5.97	PROPIONATE	0.475346	0.121081 ✓	16.90	3.025 ✓	MB^
4	6.82	n.a.	0.019572	0.003937	0.55	n.a.	BMb*
5	7.44	BUTYRATE	0.319450	0.101337 ✓	14.14	3.017 ✓	bMb*^
6	8.87	PYRUVATE	0.596148	0.169320 ✓	23.63	3.039 ✓	bMB*^
Total:			3.061	0.717	100.00	15.124	

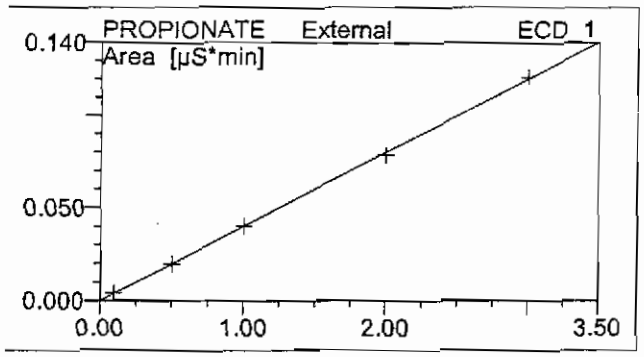
AS 09/30/11

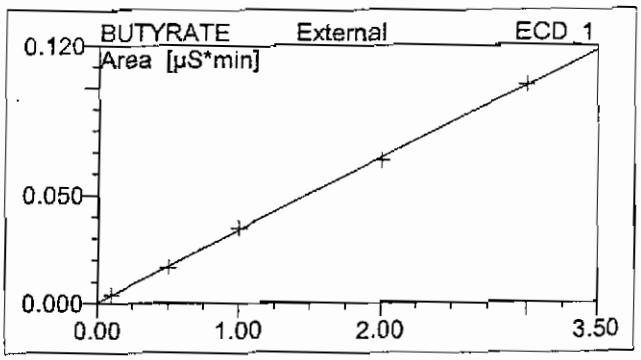
HI26 007 S-5

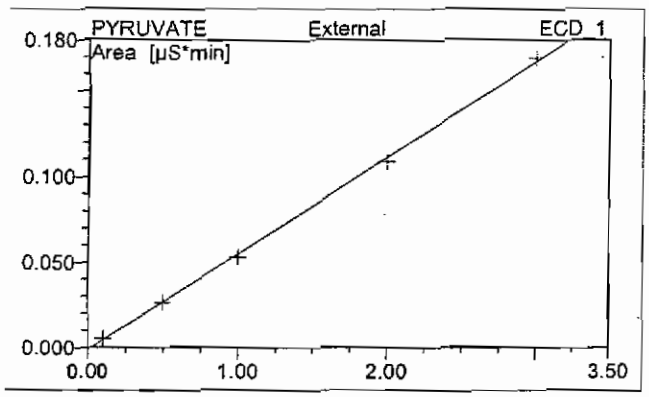
Sample Name:	**S-5**	*Injection Volume:*	**25.0**
Vial Number:	**7**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1.0000**
Recording Time:	**9/26/2011 20:15**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**











AS
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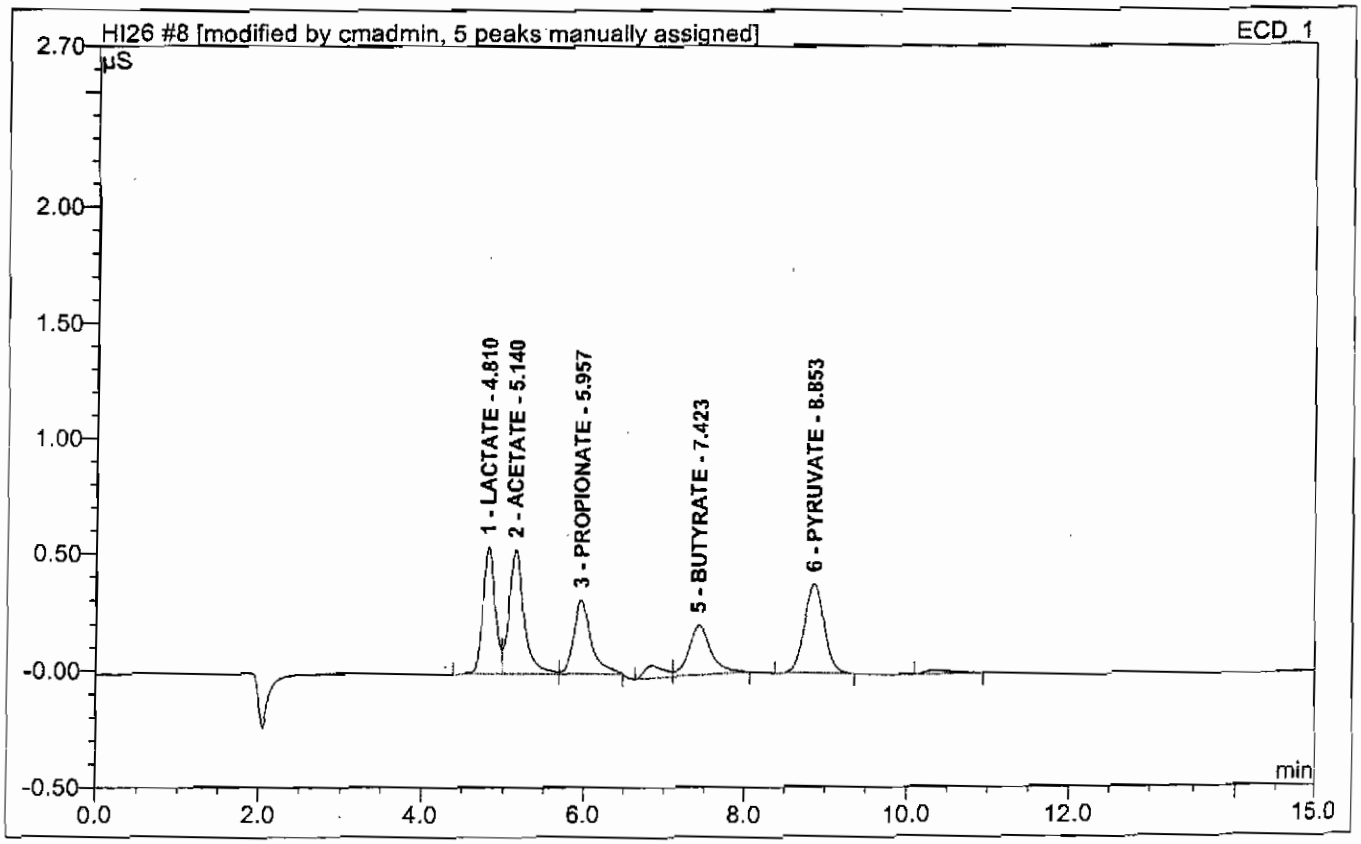
No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square	Offset	Slope	Curve
1	4.83	LACTATE	0LOff	5	0.9995	-0.001001	0.0486	0.0000
2	5.16	ACETATE	0LOff	5	0.9998	-0.001213	0.0584	0.0000
3	5.97	PROPIONA	0LOff	5	0.9996	-0.000106	0.0401	0.0000
4	6.82	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	7.44	BUTYRATE	0LOff	5	0.9995	0.000245	0.0335	0.0000
6	8.87	PYRUVATE	0LOff	5	0.9992	-0.001369	0.0562	0.0000
Average:					n.a.	n.a.	n.a.	0.0000

RS
09/30/11

SECOND SOURCE VERIFICATION

HI26 008 ICV

Sample Name:	**ICV**	*Injection Volume:*	**25.0**
Vial Number:	**8**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**9/26/2011 20:36**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.81	LACTATE	0.541522	0.092656	19.21	1.928	BM *^
2	5.14	ACETATE	0.530032	0.113792	23.59	1.970	M *^
3	5.96	PROPIONATE	0.314588	0.080116	16.61	2.002	MB*^
4	6.84	n.a.	0.054228	0.015529	3.22	n.a.	BM *
5	7.42	BUTYRATE	0.211092	0.067722	14.04	2.014	MB*^
6	8.85	PYRUVATE	0.379136	0.106265	22.03	1.917	BMB*^
7	10.35	n.a.	0.014602	0.006259	1.30	n.a.	BMB
Total:			2.045	0.482	100.00	9.831	

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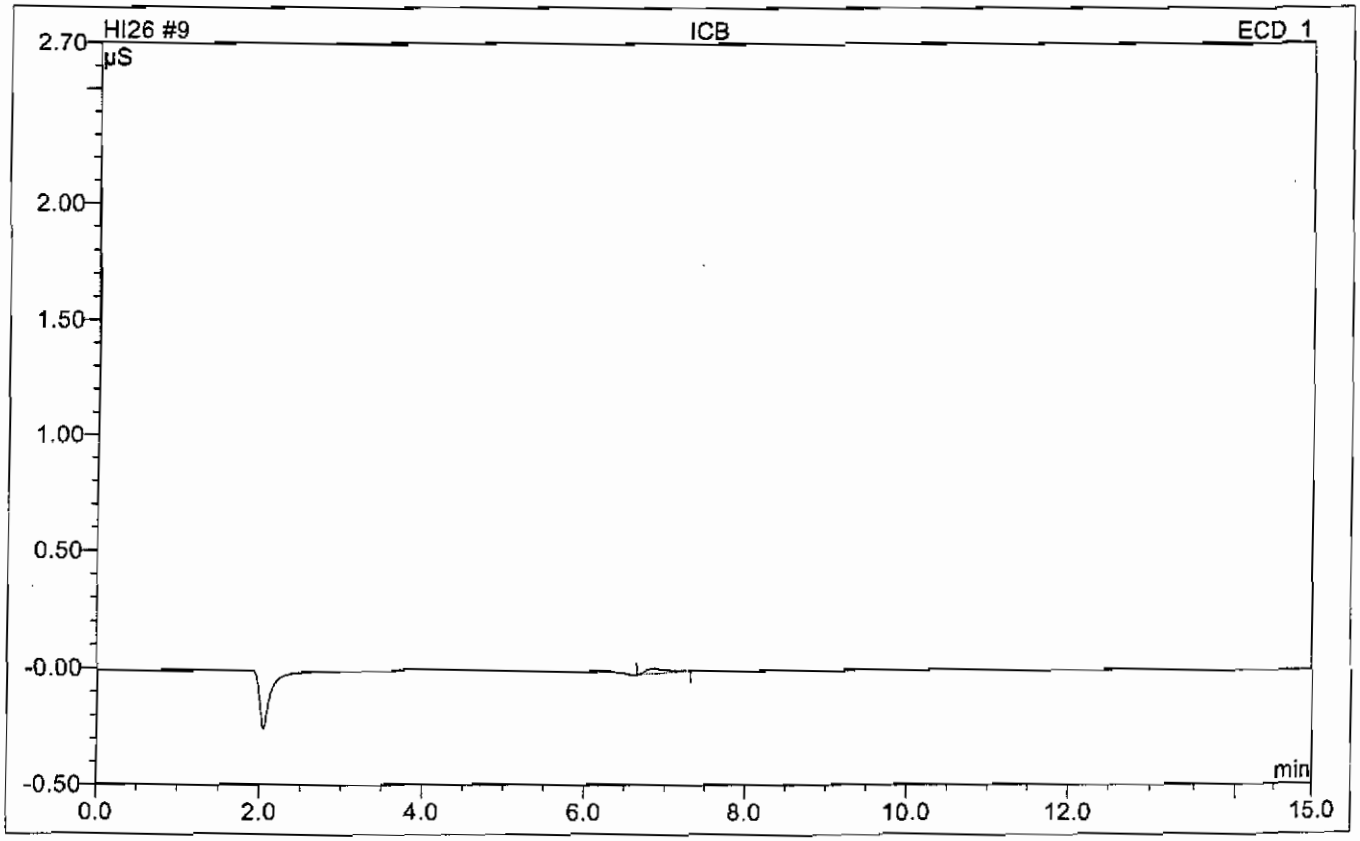
HI26 009 ICB

Sample Name:	**ICB**	*Injection Volume:*	**25.0**
Vial Number:	**9**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**9/26/2011 20:57**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	6.84	n.a.	0.022444	0.006733	100.00	n.a.	BMB
Total:			0.022	0.007	100.00	0.000	

RS
09/30/11

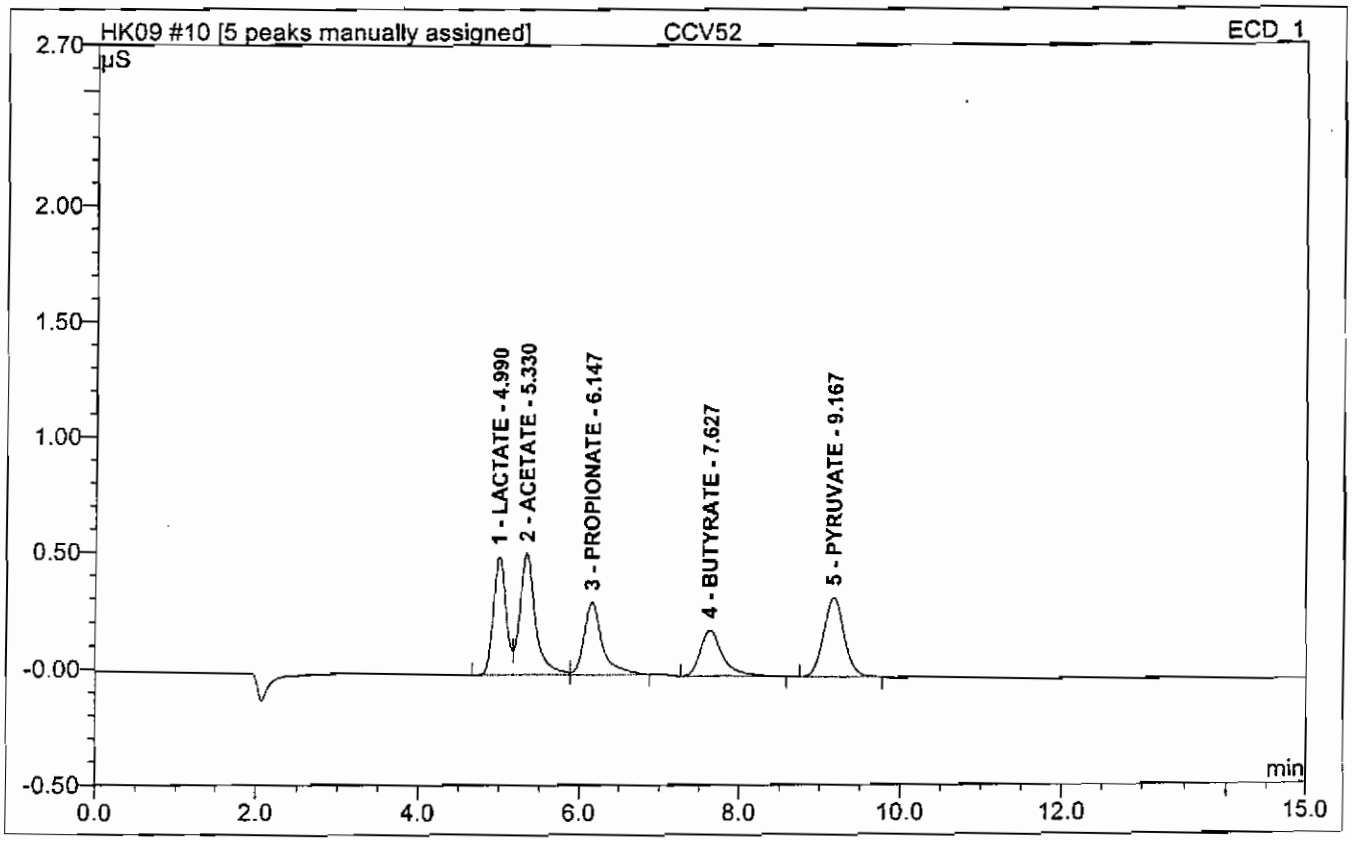
DAILY CALIBRATIONS

IC RESULT FORM CalVersion: 300M.I26/HI26(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK09001	CCV52	ABLPY	101%	94.5%	93.2%	102%	90.2%	11/09/1116:32	1
HK09002	CCB52	ABLPY	ND	ND	ND	ND	ND	11/09/1116:53	1
HK09003	OAK006WB	ABLPY	ND	ND	ND	ND	ND	11/09/1117:14	1
HK09004	OAK006WL	ABLPY	2.1	1.89	1.87	2.04	1.84	11/09/1117:35	1
HK09005	OAK006WC	ABLPY	2.15	2.02	1.89	2.19	1.88	11/09/1117:56	1
HK09006	K063-01	ABLPY	ND	ND	ND	ND	ND	11/09/1118:17	1
HK09007	K063-02	ABLPY	ND	ND	ND	ND	ND	11/09/1118:58	1
HK09008	K063-02D	ABLPY	ND	ND	ND	ND	ND	11/09/1119:39	1
HK09009	K063-02M	ABLPY	1.02	.806	1.11	.942	1.04	11/09/1120:20	1
HK09010	K063-03	ABLPY	ND	ND	ND	ND	ND	11/09/1121:00	1
HK09011	K063-04	ABLPY	ND	ND	ND	ND	ND	11/09/1121:41	1
HK09012	K063-05	ABLPY	ND	ND	ND	ND	ND	11/09/1122:22	1
HK09013	CCV54	ABLPY	102%	93.2%	93.9%	104%	92%	11/09/1123:03	1
HK09014	CCB54	ABLPY	ND	ND	ND	ND	ND	11/09/1123:24	1
HK09015	K063-06	ABLPY	ND	ND	ND	ND	ND	11/10/1100:27	1
HK09016	K035-01	*BLPY	30.5E	.553	ND	1.84	ND	11/10/1101:08	2
HK09017	K035-01	ABLPY	32.7	ND	ND	ND	ND	11/10/1101:49	20
HK09018	CCV56	ABLPY	104%	97%	95.1%	105%	91.9%	11/10/1102:30	1
HK09019	CCB56	ABLPY	ND	ND	ND	ND	ND	11/10/1102:51	1

HK09 001 CCV52

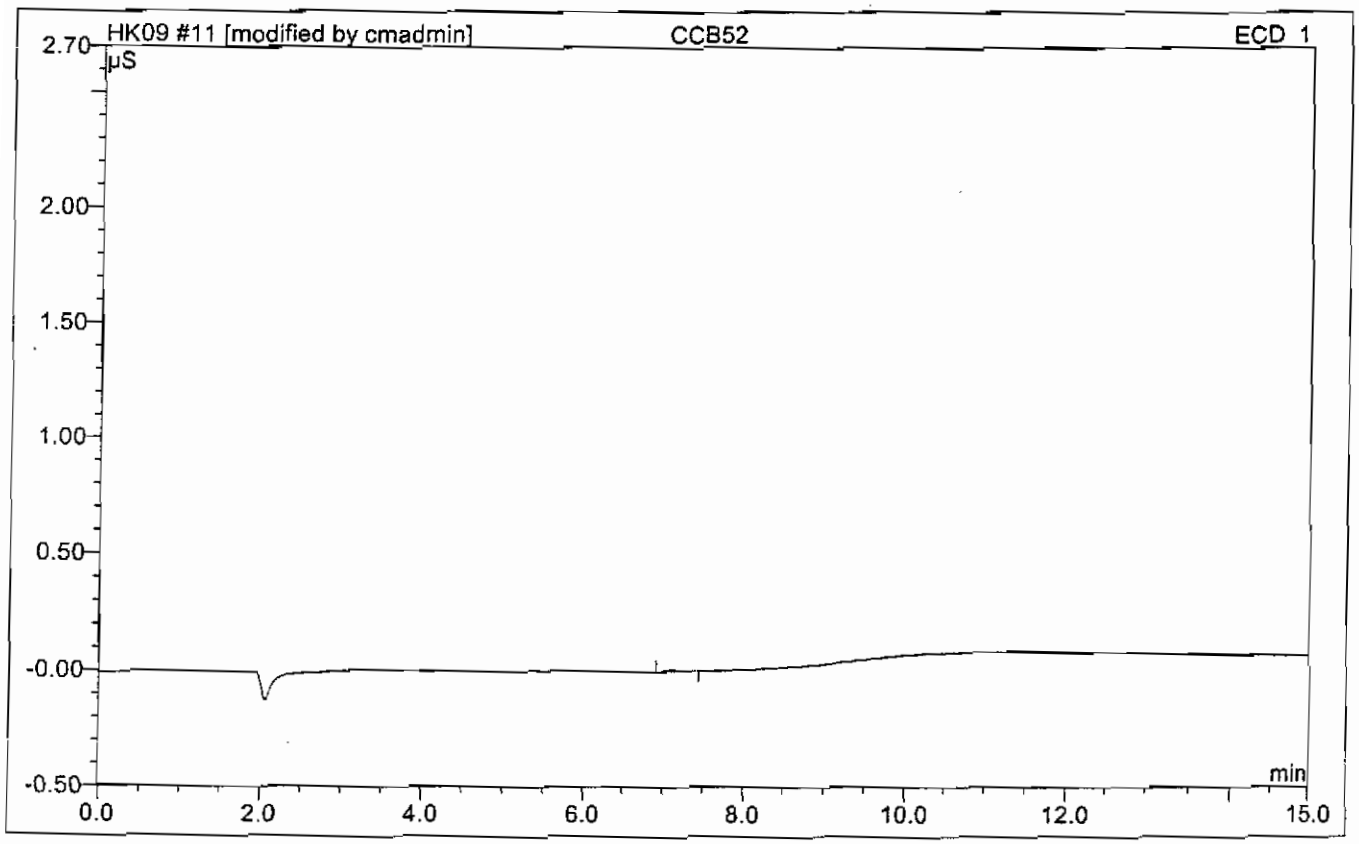
Sample Name:	**CCV52**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 16:32**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.99	LACTATE	0.504268	0.089601	19.80	1.865	BM ^
2	5.33	ACETATE	0.519346	0.117311	25.93	2.030	M ^
3	6.15	PROPIONATE	0.308480	0.082040	18.13	2.050	MB^
4	7.63	BUTYRATE	0.195732	0.063525	14.04	1.889	BMB^
5	9.17	PYRUVATE	0.336902	0.100006	22.10	1.805	BMB^
Total:			1.865	0.452	100.00	9.640	

HK09 002 CCB52

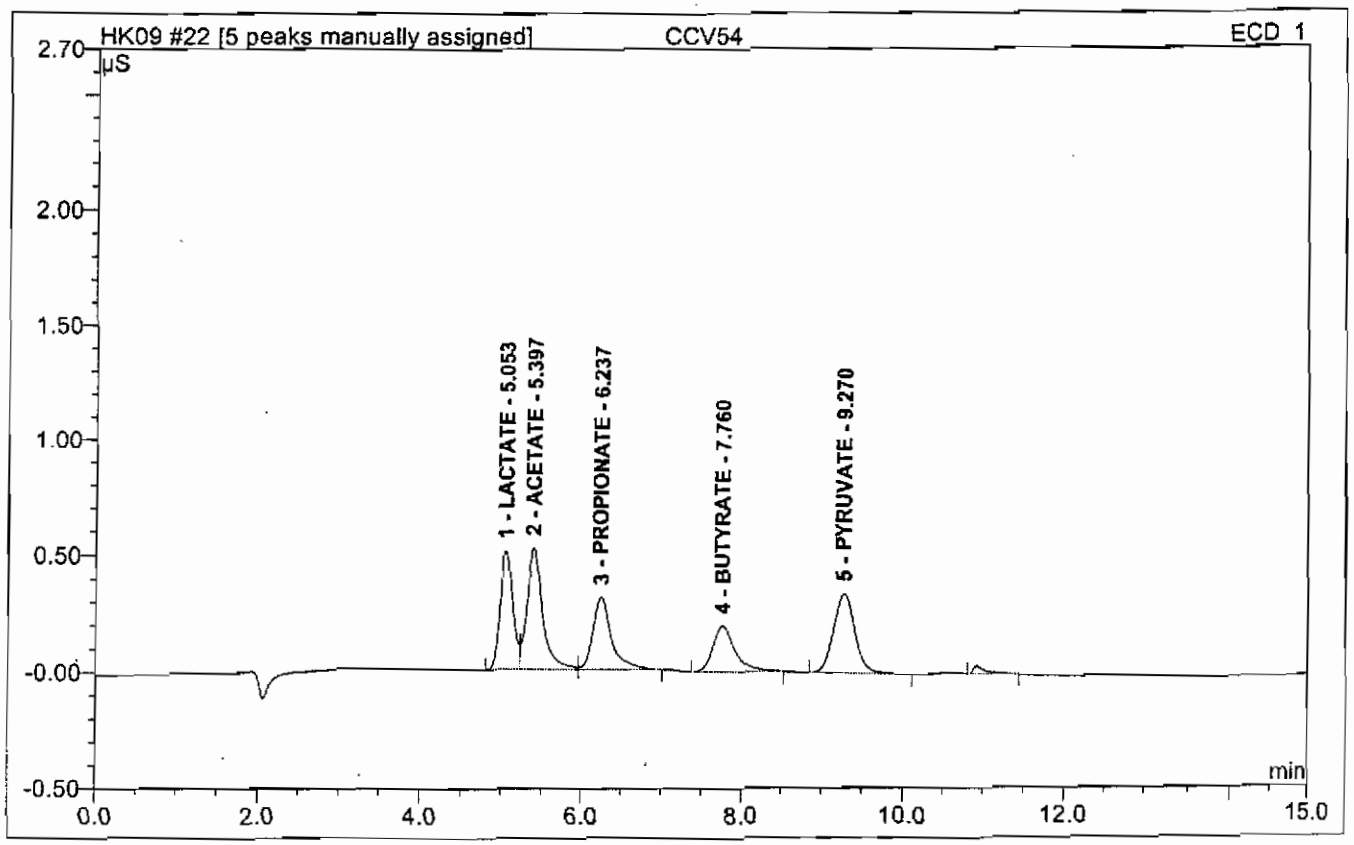
Sample Name:	**CCB52**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 16:53**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	7.09	n.a.	0.008800	0.002031	100.00	n.a.	BMB
Total:			0.009	0.002	100.00	0.000	

HK09 013 CCV54

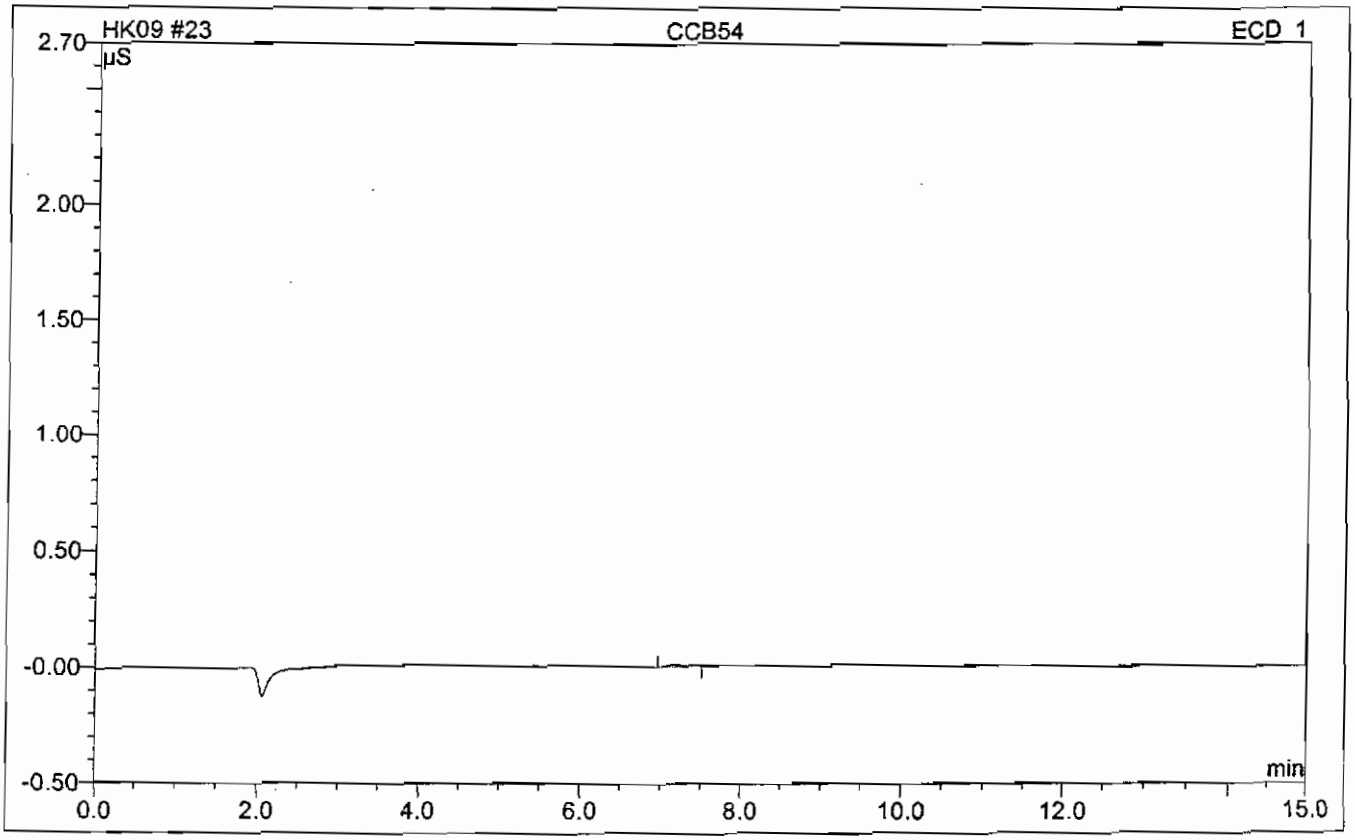
Sample Name:	**CCV54**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 23:03**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.05	LACTATE	0.504716	0.090168	19.52	1.877	BM ^
2	5.40	ACETATE	0.519180	0.117791	25.50	2.039	M ^
3	6.24	PROPIONATE	0.309516	0.083080	17.99	2.076	MB^
4	7.76	BUTYRATE	0.195658	0.062710	13.58	1.864	BMB^
5	9.27	PYRUVATE	0.338634	0.101995	22.08	1.841	BMB^
6	10.91	n.a.	0.034838	0.006180	1.34	n.a.	BMB
Total:			1.903	0.462	100.00	9.696	

HK09 014 CCB54

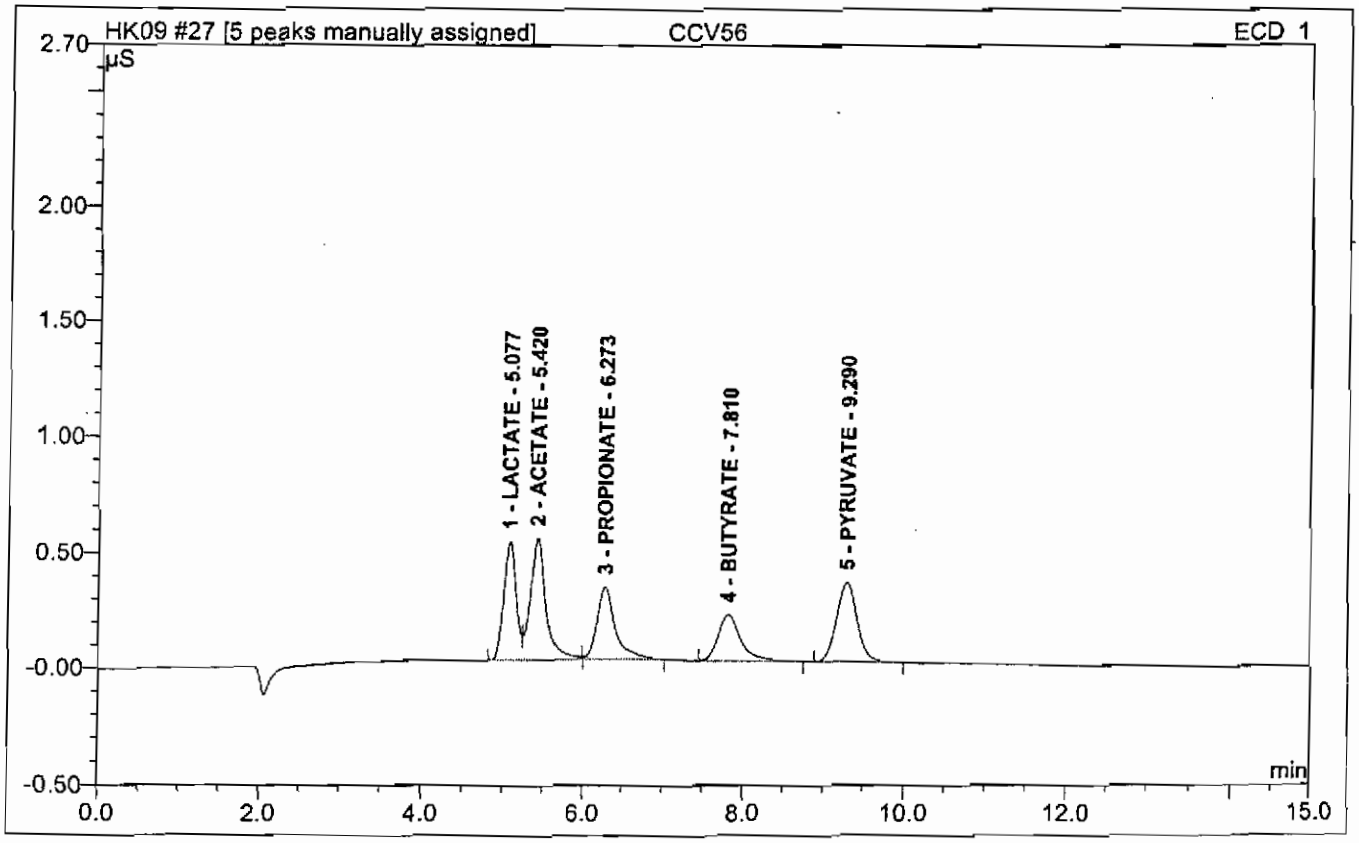
Sample Name:	**CCB54**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/9/2011 23:24**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	7.16	n.a.	0.009620	0.002459	100.00	n.a.	BMB
Total:			0.010	0.002	100.00	0.000	

HK09 018 CCV56

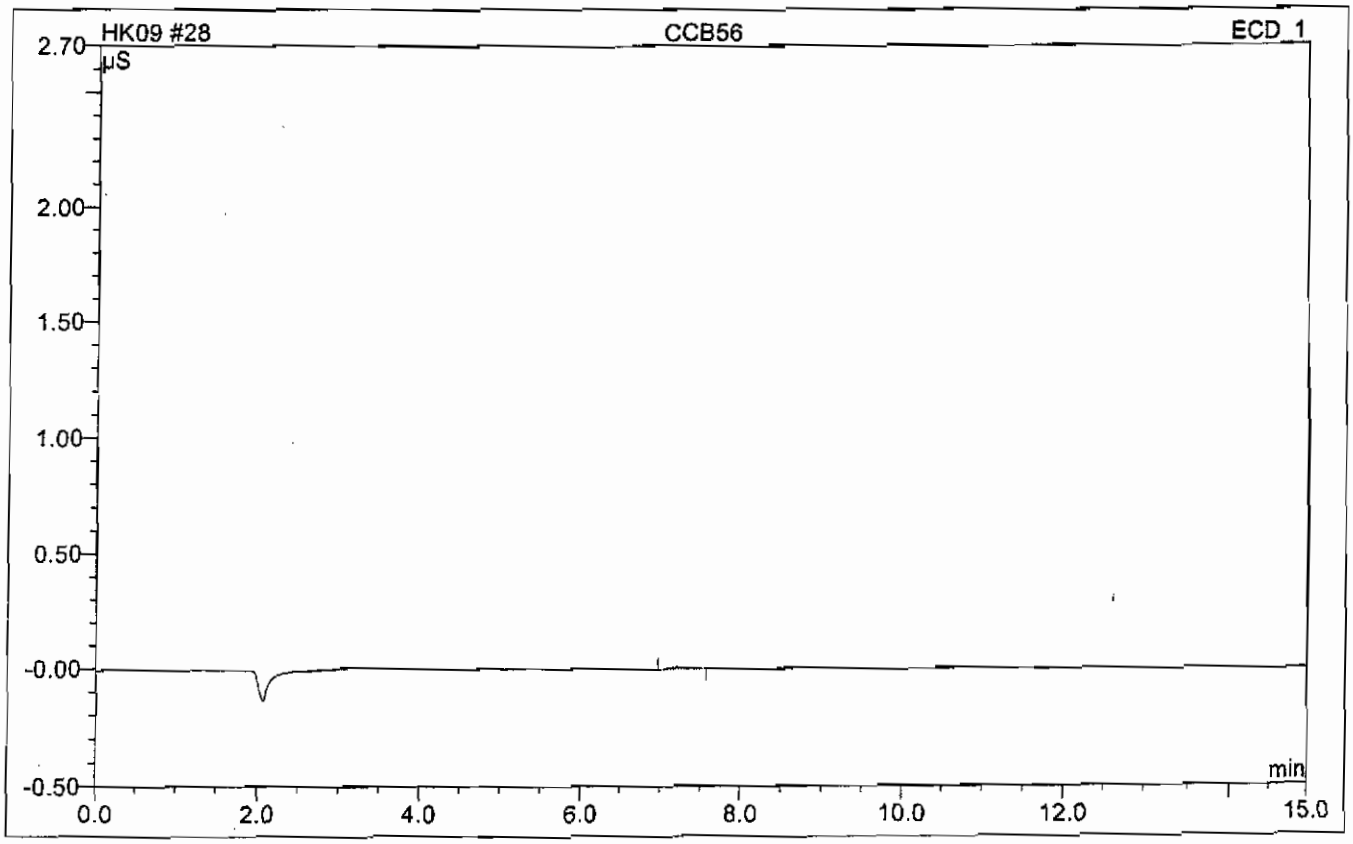
Sample Name:	**CCV56**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/10/2011 2:30**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.08	LACTATE	0.512492	0.091348	19.75	1.901	BM ^
2	5.42	ACETATE	0.528358	0.119670	25.88	2.071	M ^
3	6.27	PROPIONATE	0.314650	0.084267	18.22	2.106	MB^
4	7.81	BUTYRATE	0.200248	0.065219	14.10	1.939	BMB^
5	9.29	PYRUVATE	0.341642	0.101903	22.04	1.839	BMB^
Total:			1.897	0.462	100.00	9.856	

HK09 019 CCB56

Sample Name:	**CCB56**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6I26**	*Dilution Factor:*	**1**
Recording Time:	**11/10/2011 2:51**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	7.18	n.a.	0.010204	0.002699	100.00	n.a.	BMB
Total:			0.010	0.003	100.00	0.000	

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-209

0AD6I26.met : 300M ICAL → Passed.

- Linear Range:

S-0: 0.0 ppm S-3: 1.0 ppm

S-1: 0.1 ppm S-4: 2.0 ppm

S-2: 0.5 ppm S-5: 3.0 ppm

- ICV: 2 ppm
- Sample Loop: 25 µL
- Flow Rate: 1.50 ml/min
- Suppressor : ASRS 4mm
- SRS Current: 100 mA
- Column : Ion Pac AS11 HC ; 4x 250 mm
- Guard Column : IonPac AG11 ; 4x 250 mm

0AI002W: I159, I160, I201 & I202

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	7HI26
Method File:	0AD6I26.met
Analytical Batch:	0AI002W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID		
ICAL	SW12A - 02 - 322	
ICV		323
CCV		320
LCS		321
MS		319

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: ao

Date: 09/26/11

Sequence: HI26
Operator: cmadmin

Printed: 9/27/2011 10:32:03 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 20

Created: 9/26/2011 5:40:12 PM by cmadmin
Last Update: 9/27/2011 10:31:06 AM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor	Comment
1	HI26	001	IB	Unknown	1	25.0	ORG	OAD6I26	Finished	9/26/2011 6:09:42 PM	1.0000	
2	HI26	002	S-0	Standard	2	25.0	ORG	OAD6I26	Finished	9/26/2011 6:30:40 PM	1.0000	
3	HI26	003	S-1	Standard	3	25.0	ORG	OAD6I26	Finished	9/26/2011 6:51:39 PM	1.0000	
4	HI26	004	S-2	Standard	4	25.0	ORG	OAD6I26	Finished	9/26/2011 7:12:38 PM	1.0000	
5	HI26	005	S-3	Standard	5	25.0	ORG	OAD6I26	Finished	9/26/2011 7:33:36 PM	1.0000	
6	HI26	006	S-4	Standard	6	25.0	ORG	OAD6I26	Finished	9/26/2011 7:54:35 PM	1.0000	
7	HI26	007	S-5	Standard	7	25.0	ORG	OAD6I26	Finished	9/26/2011 8:15:34 PM	1.0000	
8	HI26	008	ICV	Unknown	8	25.0	ORG	OAD6I26	Finished	9/26/2011 8:36:33 PM	1.0000	
9	HI26	009	ICB	Unknown	9	25.0	ORG	OAD6I26	Finished	9/26/2011 8:57:31 PM	1.0000	
10	HI26	010	CCV2	Unknown	100	25.0	ORG	OAD6I26	Finished	9/26/2011 9:18:30 PM	1.0000	
11	HI26	011	CCB2	Unknown	99	25.0	ORG	OAD6I26	Finished	9/26/2011 9:39:29 PM	1.0000	
12	HI26	012	OAI002WB	Unknown	98	25.0	ORG	OAD6I26	Finished	9/26/2011 10:00:28 PM	1.0000	
13	HI26	013	OAI002WL	Unknown	97	25.0	ORG	OAD6I26	Finished	9/26/2011 10:21:26 PM	1.0000	
14	HI26	014	OAI002WC	Unknown	96	25.0	ORG	OAD6I26	Finished	9/26/2011 10:42:25 PM	1.0000	
15	HI26	015	I159-02	Unknown	11	25.0	ORG-SAMPLE	OAD6I26	Finished	9/26/2011 11:03:24 PM	1.0000	
16	HI26	016	I160-02	Unknown	12	25.0	ORG-SAMPLE	OAD6I26	Finished	9/27/2011 12:09:18 AM	1.0000	
17	HI26	017	I201-07	Unknown	13	25.0	ORG-SAMPLE	OAD6I26	Finished	9/27/2011 1:15:12 AM	1.0000	
18	HI26	018	I202-02	Unknown	14	25.0	ORG-SAMPLE	OAD6I26	Finished	9/27/2011 2:21:05 AM	1.0000	
19	HI26	019	CCV4	Unknown	100	25.0	ORG	OAD6I26	Finished	9/27/2011 3:26:58 AM	1.0000	
20	HI26	020	CCB4	Unknown	99	25.0	ORG	OAD6I26	Finished	9/27/2011 3:47:57 AM	1.0000	

FINAL

8133

Chromeleon © Dionex Corporation, Version 6.70 Build 1820

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-221

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK09
Method File:	OAD6226
Analytical Batch:	OAK006W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	–
ICV	–
CCV	SW2A-02-328
LCS	-329
MS	-327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: Am

Date: 11/9/11

8134

Sequence: HK09
Operator: cmadmin

Printed: 11/15/2011 4:40:29 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 28

Created: 11/9/2011 4:19:44 PM by cmadmin
Last Update: 11/15/2011 4:40:03 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK09		IB	Unknown	1	25.0	ORG	OAD6I26	Finished	9/26/2011 6:09:42 PM	1.0000
2	HK09		S-0	Standard	2	25.0	ORG	OAD6I26	Finished	9/26/2011 6:30:40 PM	1.0000
3	HK09		S-1	Standard	3	25.0	ORG	OAD6I26	Finished	9/26/2011 6:51:39 PM	1.0000
4	HK09		S-2	Standard	4	25.0	ORG	OAD6I26	Finished	9/26/2011 7:12:38 PM	1.0000
5	HK09		S-3	Standard	5	25.0	ORG	OAD6I26	Finished	9/26/2011 7:33:36 PM	1.0000
6	HK09		S-4	Standard	6	25.0	ORG	OAD6I26	Finished	9/26/2011 7:54:35 PM	1.0000
7	HK09		S-5	Standard	7	25.0	ORG	OAD6I26	Finished	9/26/2011 8:15:34 PM	1.0000
8	HK09		ICV	Unknown	8	25.0	ORG	OAD6I26	Finished	9/26/2011 8:36:33 PM	1.0000
9	HK09		ICB	Unknown	9	25.0	ORG	OAD6I26	Finished	9/26/2011 8:57:31 PM	1.0000
10	HK09	001	CCV52	Unknown	100	25.0	ORG	OAD6I26	Finished	11/9/2011 4:32:25 PM	1.0000
11	HK09	002	CCB52	Unknown	99	25.0	ORG	OAD6I26	Finished	11/9/2011 4:53:25 PM	1.0000
12	HK09	003	OAK006WB	Unknown	98	25.0	ORG	OAD6I26	Finished	11/9/2011 5:14:23 PM	1.0000
13	HK09	004	OAK006WL	Unknown	97	25.0	ORG	OAD6I26	Finished	11/9/2011 5:35:23 PM	1.0000
14	HK09	005	OAK006WC	Unknown	96	25.0	ORG	OAD6I26	Finished	11/9/2011 5:56:22 PM	1.0000
15	HK09	006	K063-01	Unknown	1	25.0	ORG	OAD6I26	Finished	11/9/2011 6:17:21 PM	1.0000
16	HK09	007	K063-02	Unknown	2	25.0	ORG	OAD6I26	Finished	11/9/2011 6:58:14 PM	1.0000
17	HK09	008	K063-02D	Unknown	3	25.0	ORG	OAD6I26	Finished	11/9/2011 7:39:08 PM	1.0000
18	HK09	009	K063-02M	Unknown	4	25.0	ORG	OAD6I26	Finished	11/9/2011 8:20:02 PM	1.0000
19	HK09	010	K063-03	Unknown	5	25.0	ORG	OAD6I26	Finished	11/9/2011 9:00:55 PM	1.0000
20	HK09	011	K063-04	Unknown	6	25.0	ORG	OAD6I26	Finished	11/9/2011 9:41:49 PM	1.0000
21	HK09	012	K063-05	Unknown	7	25.0	ORG	OAD6I26	Finished	11/9/2011 10:22:43 PM	1.0000
22	HK09	013	CCV54	Unknown	100	25.0	ORG	OAD6I26	Finished	11/9/2011 11:03:37 PM	1.0000
23	HK09	014	CCB54	Unknown	99	25.0	ORG	OAD6I26	Finished	11/9/2011 11:24:36 PM	1.0000
24	HK09	015	K063-06	Unknown	8	25.0	ORG	OAD6I26	Finished	11/10/2011 12:27:32 AM	1.0000
25	HK09	016	K035-01	Unknown	9	25.0	ORG	OAD6I26	Finished	11/10/2011 1:08:26 AM	2.0000
26	HK09	017	K035-01	Unknown	10	25.0	ORG	OAD6I26	Finished	11/10/2011 1:49:20 AM	20.0000
27	HK09	018	CCV56	Unknown	100	25.0	ORG	OAD6I26	Finished	11/10/2011 2:30:13 AM	1.0000

FINAL

Sequence: HK09
Operator: cmadmin

Printed: 11/15/2011 4:40:29 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 28

Created: 11/9/2011 4:19:44 PM by cmadmin
Last Update: 11/15/2011 4:40:03 PM by cmadmin

No.	Sequence	Comment
1	HK09	
2	HK09	
3	HK09	
4	HK09	
5	HK09	
6	HK09	
7	HK09	
8	HK09	
9	HK09	
10	HK09	
11	HK09	
12	HK09	
13	HK09	
14	HK09	
15	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
17	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK09	
23	HK09	
24	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
25	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=2
26	HK09	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=20
27	HK09	

FINAL

8136

Sequence: HK09
Operator: cmadmin

Printed: 11/15/2011 4:40:29 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 28

Created: 11/9/2011 4:19:44 PM by cmadmin
Last Update: 11/15/2011 4:40:03 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK09	019	CCB56	Unknown	99	25.0	ORG	OAD6I26	Finished	11/10/2011 2:51:12 AM	1.0000

8137

FINAL

Sequence: HK09
Operator: cmadmin
Printed: 11/15/2011 4:40:29 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 28

Created: 11/9/2011 4:19:44 PM by cmadmin
Last Update: 11/15/2011 4:40:03 PM by cmadmin

No.	Sequence	Comment
28	HK09	

FINAL

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K063

METHOD 2320B
TOTAL ALKALINITY

A total of six (6) water samples were received on 11/07/11 for Alkalinity analysis, Method 2320B in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for ALK003WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG. However, sample duplicate was analyzed with the samples. RPD was within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2320B
TOTAL ALKALINITY

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K063

Matrix : WATER
Instrument ID : E5

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ALK003WB	ND	1	NA	5.00	5.00	11/09/1114:59	NA	11E5K02004	11E5K02002	ALK003W	NA	NA
LCS1W	ALK003WL	207	1	NA	5.00	5.00	11/09/1115:06	NA	11E5K02005	11E5K02002	ALK003W	NA	NA
LCD1W	ALK003WC	207	1	NA	5.00	5.00	11/09/1115:13	NA	11E5K02006	11E5K02002	ALK003W	NA	NA
MW-70-PMW03A-095	K063-01	696	1	NA	5.00	5.00	11/09/1116:52	NA	11E5K02018	11E5K02002	ALK003W	11/07/1110:42	11/07/11
MW-70-PMW03B-097	K063-02	198	1	NA	5.00	5.00	11/09/1116:59	NA	11E5K02019	11E5K02002	ALK003W	11/07/1112:08	11/07/11
MW-70-PMW03B-097DUP	K063-02D	199	1	NA	5.00	5.00	11/09/1117:06	NA	11E5K02020	11E5K02002	ALK003W	11/07/1112:08	11/07/11
IW-70-SAB06-099	K063-03	614	1	NA	5.00	5.00	11/09/1117:17	NA	11E5K02021	11E5K02002	ALK003W	11/07/1114:30	11/07/11
MW-70-PMW02A-100	K063-04	210	1	NA	5.00	5.00	11/09/1117:24	NA	11E5K02022	11E5K02002	ALK003W	11/07/1115:42	11/07/11
MW-70-PMW02B-101	K063-05	214	1	NA	5.00	5.00	11/09/1117:31	NA	11E5K02023	11E5K02002	ALK003W	11/07/1116:27	11/07/11
IR-70-FD-098	K063-06	199	1	NA	5.00	5.00	11/09/1117:51	NA	11E5K02026	11E5K02024	ALK003W	11/07/1112:25	11/07/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 2320B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ALK003WB	ALK003WL	ALK003WC		
LAB FILE ID:	11E5K02004	11E5K02005	11E5K02006		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1114:59	11/09/1115:06	11/09/1115:13	DATE RECEIVED:	NA
PREP. BATCH:	ALK003W	ALK003W	ALK003W		
CALIB. REF:	11E5K02002	11E5K02002	11E5K02002		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Total Alkalinity	ND	230	207	90	230	207	90	0	80-120	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 2320B

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MW-70-PMW03B-097
EMAX SAMP ID: K063-02 K063-02D
LAB FILE ID: 11E5K02019 11E5K02020
DATE EXTRACTED: NA NA DATE COLLECTED: 11/07/11 12:08
DATE ANALYZED: 11/09/1116:59 11/09/1117:06 DATE RECEIVED: 11/07/11
PREP. BATCH: ALK003W ALK003W
CALIB. REF: 11E5K02002 11E5K02002

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Total Alkalinity	198	199	1	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ALKALINITY

Note: For samples and relevent QCs/Standards analyzed, refer to attached analytical sequence.

Book#: AAL-030

Instrument No.: ☐ 53 ☐ 97 ☒ E5

Analytical Batch: ALK003; ALK004; ALK005

Analytical Sequence: 11E5K02

Comments:

MS/MSD amount of spike: 0.4ml of SWP1-007-57-01 (10,000mg/L) was spiked into J311-05M/S with a final volume of 40ml.

SOP #	Rev. #
☐ EMAX-310.1	4
☐ EMAX-2320B	2
☐ EMAX-	

STANDARDS ID	CONC. (mg/L)
LCS SW1-01-402	230
MS/MSD SWP1-007-57-01	100
ICV SW1-01-344	108
0.02N HCL SWR1-01-338	0.02

pH Buffer	ID
pH 4	SW1-01-341
pH 7	SW1-01-279
pH 10	SW1-01-396
pH Check	SW1-01-347

Analyzed By: RO

Date: 11/9/11

Report Date: 11/10/2011 : 1:17 AM

PC-TitratION PLUS

pH and Alkalinity In-Run Report

Run Number 543 **Analytical Batch#** **11E5K02**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
1	ICV PH8	11E5K02	11/09/2011	2:44 PM	7.97	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	
2	ICV	11E5K02	11/09/2011	2:51 PM	8.46	.44	2.62	-1.00	17.53	104.84	69.78	35.07	.00	
3	ICB	11E5K02	11/09/2011	2:55 PM	4.35	.00	.00	.00	.00	-.12	-.12	.00	.00	
4	ALK003WB	11E5K02	11/09/2011	2:59 PM	3.82	.00	.00	.00	.00	.00	.00	.00	.00	
5	ALK003WL	11E5K02	11/09/2011	3:06 PM	8.39	.52	5.17	-1.00	20.65	206.87	165.57	41.30	.00	
6	ALK003WC	11E5K02	11/09/2011	3:13 PM	8.38	.48	5.19	-1.00	19.37	207.44	168.71	38.73	.00	
7	J311-01	11E5K02	11/09/2011	3:21 PM	7.43	.00	7.69	-1.00	.00	307.75	307.75	.00	.00	
8	J311-04	11E5K02	11/09/2011	3:30 PM	7.56	.00	6.74	-1.00	.00	269.53	269.53	.00	.00	
9	J311-05	11E5K02	11/09/2011	3:39 PM	7.68	.00	9.47	-1.00	.00	378.69	378.69	.00	.00	
10	J311-05M	11E5K02	11/09/2011	3:47 PM	8.65	.87	12.01	-1.00	34.97	480.54	410.61	69.93	.00	
11	J311-05S	11E5K02	11/09/2011	3:58 PM	8.64	.84	11.91	-1.00	33.67	476.47	409.13	67.34	.00	
12	J311-06	11E5K02	11/09/2011	4:06 PM	7.69	.00	9.47	-1.00	.00	378.90	378.90	.00	.00	
13	J311-07	11E5K02	11/09/2011	4:13 PM	7.74	.00	2.72	-1.00	.00	108.68	108.68	.00	.00	
14	J311-08	11E5K02	11/09/2011	4:22 PM	7.58	.00	4.34	-1.00	.00	173.72	173.72	.00	.00	
15	J311-10	11E5K02	11/09/2011	4:27 PM	5.19	.00	.07	.08	.00	2.17	2.17	.00	.00	
16	J311-12	11E5K02	11/09/2011	4:34 PM	7.10	.00	6.50	-1.00	.00	259.96	259.96	.00	.00	
17	K042-03	11E5K02	11/09/2011	4:41 PM	7.53	.00	5.50	-1.00	.00	220.03	220.03	.00	.00	
18	K063-01	11E5K02	11/09/2011	4:52 PM	6.30	.00	17.40	-1.00	.00	695.95	695.95	.00	.00	

Analyzed by: RC Reviewed by: RC Date: 11/10/11

PC-TitratION PLUS by Man-Tech Associates, Inc.

pH AND ALKALINITY IN-RUN REPORT.SRW
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Run Number 543 **Analytical Batch#** **11E5K02**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
19	K063-02	11E5K02	11/09/2011	4:59 PM	7.27	.00	4.95	-1.00	.00	197.97	197.97	.00	.00	
20	K063-02D	11E5K02	11/09/2011	5:06 PM	7.40	.00	4.98	-1.00	.00	199.28	199.28	.00	.00	
21	K063-03	11E5K02	11/09/2011	5:17 PM	6.50	.00	15.36	-1.00	.00	614.25	614.25	.00	.00	
22	K063-04	11E5K02	11/09/2011	5:24 PM	7.38	.00	5.24	-1.00	.00	209.58	209.58	.00	.00	
23	K063-05	11E5K02	11/09/2011	5:31 PM	7.42	.00	5.35	-1.00	.00	214.09	214.09	.00	.00	
24	CCV1	11E5K02	11/09/2011	5:40 PM	8.62	1.59	5.21	-1.00	63.52	208.59	81.55	127.04	.00	
25	CCB1	11E5K02	11/09/2011	5:44 PM	4.41	.00	.00	.01	.00	-.21	-.21	.00	.00	
26	K063-06	11E5K02	11/09/2011	5:51 PM	7.42	.00	4.97	-1.00	.00	198.83	198.83	.00	.00	
27	RINSE	11E5K02	11/09/2011	5:56 PM	5.10	.00	.02	.03	.00	.17	.17	.00	.00	
28	ALK004WB	11E5K02	11/09/2011	6:01 PM	4.68	.00	.01	.02	.00	-.23	-.23	.00	.00	
29	ALK004WL	11E5K02	11/09/2011	6:08 PM	8.57	1.46	5.21	-1.00	58.26	208.29	91.76	116.53	.00	
30	ALK004WC	11E5K02	11/09/2011	6:15 PM	8.58	1.51	5.22	-1.00	60.26	208.97	88.46	120.51	.00	
31	K009-01	11E5K02	11/09/2011	6:22 PM	7.50	.00	4.75	-1.00	.00	189.91	189.91	.00	.00	
32	K012-02	11E5K02	11/09/2011	6:31 PM	7.39	.00	6.93	-1.00	.00	277.24	277.24	.00	.00	
33	K012-03	11E5K02	11/09/2011	6:39 PM	7.19	.00	8.43	-1.00	.00	337.26	337.26	.00	.00	
34	K012-04	11E5K02	11/09/2011	6:47 PM	7.21	.00	7.91	-1.00	.00	316.36	316.36	.00	.00	
35	K012-05	11E5K02	11/09/2011	6:56 PM	7.29	.00	7.98	-1.00	.00	319.16	319.16	.00	.00	
36	K012-06	11E5K02	11/09/2011	7:04 PM	7.22	.00	9.76	-1.00	.00	390.39	390.39	.00	.00	
37	K012-07	11E5K02	11/09/2011	7:11 PM	7.68	.00	6.96	-1.00	.00	278.29	278.29	.00	.00	
38	K012-08	11E5K02	11/09/2011	7:21 PM	7.42	.00	7.45	-1.00	.00	297.95	297.95	.00	.00	

Analyzed by: Rc Reviewed by: Rc Date: 11/10/11

PC-TitratION PLUS by Man-Tech Associates, Inc.

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Run Number 543 **Analytical Batch#** **11E5K02**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
39	K012-08D	11E5K02	11/09/2011	7:28 PM	7.39	.00	7.39	-1.00	.00	295.42	295.42	.00	.00	
40	K005-02	11E5K02	11/09/2011	7:35 PM	7.62	.00	5.61	-1.00	.00	224.32	224.32	.00	.00	
41	K005-03	11E5K02	11/09/2011	7:42 PM	7.43	.00	3.55	-1.00	.00	141.92	141.92	.00	.00	
42	K005-04	11E5K02	11/09/2011	7:50 PM	7.61	.00	3.42	-1.00	.00	136.98	136.98	.00	.00	
43	K005-05	11E5K02	11/09/2011	7:58 PM	7.51	.00	4.46	-1.00	.00	178.41	178.41	.00	.00	
44	K005-06	11E5K02	11/09/2011	8:05 PM	7.65	.00	3.38	-1.00	.00	135.05	135.05	.00	.00	
45	K005-08	11E5K02	11/09/2011	8:13 PM	7.57	.00	5.92	-1.00	.00	236.84	236.84	.00	.00	
46	CCV2	11E5K02	11/09/2011	8:20 PM	8.71	2.04	5.25	-1.00	81.42	209.81	46.97	162.84	.00	
47	CCB2	11E5K02	11/09/2011	8:24 PM	4.75	.00	.01	.01	.00	-.10	-.10	.00	.00	
48	K005-08D	11E5K02	11/09/2011	8:33 PM	7.57	.00	5.97	-1.00	.00	238.75	238.75	.00	.00	
49	K005-09	11E5K02	11/09/2011	8:40 PM	7.47	.00	5.42	-1.00	.00	216.63	216.63	.00	.00	
50	K005-10	11E5K02	11/09/2011	8:47 PM	7.40	.00	3.62	-1.00	.00	144.70	144.70	.00	.00	
51	K005-11	11E5K02	11/09/2011	8:54 PM	7.32	.00	5.19	-1.00	.00	207.72	207.72	.00	.00	
52	K005-12	11E5K02	11/09/2011	9:01 PM	7.67	.00	4.47	-1.00	.00	178.78	178.78	.00	.00	
53	K005-14	11E5K02	11/09/2011	9:08 PM	7.61	.00	4.69	-1.00	.00	187.60	187.60	.00	.00	
54	K005-16	11E5K02	11/09/2011	9:17 PM	7.62	.00	4.62	-1.00	.00	184.92	184.92	.00	.00	
55	RINSE	11E5K02	11/09/2011	9:22 PM	5.48	.00	.03	.07	.00	-.28	-.28	.00	.00	
56	ALK005WB	11E5K02	11/09/2011	9:28 PM	5.14	.00	.02	.06	.00	-.53	-.53	.00	.00	
57	ALK005WL	11E5K02	11/09/2011	9:35 PM	8.78	2.28	5.26	-1.00	91.24	210.38	27.91	182.47	.00	
58	ALK005WC	11E5K02	11/09/2011	9:42 PM	8.80	2.35	5.25	-1.00	94.02	210.06	22.01	188.05	.00	

Analyzed by: Rc Reviewed by: Rc Date: 11/10/11

pH AND ALKALINITY IN-RUN REPORT.SRW

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Run Number 543 **Analytical Batch#** **11E5K02**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
59	J315-01	11E5K02	11/09/2011	9:50 PM	7.72	.00	4.32	-1.00	.00	172.82	172.82	.00	.00	
60	J315-02	11E5K02	11/09/2011	9:57 PM	7.70	.00	4.70	-1.00	.00	187.91	187.91	.00	.00	
61	J315-03	11E5K02	11/09/2011	10:06 PM	7.71	.00	6.81	-1.00	.00	272.27	272.27	.00	.00	
62	J315-04	11E5K02	11/09/2011	10:14 PM	7.80	.00	6.82	-1.00	.00	272.84	272.84	.00	.00	
63	J315-06	11E5K02	11/09/2011	10:21 PM	7.73	.00	5.66	-1.00	.00	226.56	226.56	.00	.00	
64	J315-07	11E5K02	11/09/2011	10:28 PM	8.00	.00	5.16	-1.00	.00	206.20	206.20	.00	.00	
65	J315-08	11E5K02	11/09/2011	10:37 PM	7.69	.00	3.37	-1.00	.00	134.93	134.93	.00	.00	
66	J315-09	11E5K02	11/09/2011	10:44 PM	7.69	.00	3.36	-1.00	.00	134.34	134.34	.00	.00	
67	J315-10	11E5K02	11/09/2011	10:52 PM	7.98	.00	4.21	-1.00	.00	168.25	168.25	.00	.00	
68	CCV3	11E5K02	11/09/2011	10:59 PM	9.01	2.94	5.30	-1.00	117.65	211.94	.00	188.59	23.36	
69	CCB3	11E5K02	11/09/2011	11:05 PM	5.28	.00	.03	.08	.00	-1.36	-1.36	.00	.00	
70	J315-11	11E5K02	11/09/2011	11:12 PM	7.96	.00	5.39	-1.00	.00	215.58	215.58	.00	.00	
71	K018-01	11E5K02	11/09/2011	11:22 PM	7.73	.00	10.20	-1.00	.00	407.87	407.87	.00	.00	
72	K018-02	11E5K02	11/09/2011	11:29 PM	7.42	.00	5.88	-1.00	.00	235.19	235.19	.00	.00	
73	K018-03	11E5K02	11/09/2011	11:37 PM	8.07	.00	1.61	-1.00	.00	64.27	64.27	.00	.00	
74	K035-01	11E5K02	11/09/2011	11:53 PM	7.36	.00	28.04	-1.00	.00	1,121.80	1,121.80	.00	.00	
75	K035-02	11E5K02	11/10/2011	12:06 AM	7.62	.00	19.17	-1.00	.00	766.96	766.96	.00	.00	
76	K035-02D	11E5K02	11/10/2011	12:18 AM	7.69	.00	19.31	-1.00	.00	772.23	772.23	.00	.00	
77	K035-03	11E5K02	11/10/2011	12:31 AM	7.66	.00	19.58	-1.00	.00	783.39	783.39	.00	.00	
78	K035-04	11E5K02	11/10/2011	12:41 AM	7.75	.00	16.48	-1.00	.00	659.34	659.34	.00	.00	

Analyzed by: RC Reviewed by: RC Date: 11/10/11

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Run Number 543 **Analytical Batch#** **11E5K02**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
79	K035-05	11E5K02	11/10/2011	12:53 AM	7.64	.00	19.59	-1.00	.00	783.68	783.68	.00	.00	
80	K039-01	11E5K02	11/10/2011	1:01 AM	8.23	.00	4.94	-1.00	.00	197.66	197.66	.00	.00	
81	CCV4	11E5K02	11/10/2011	1:09 AM	9.04	2.99	5.32	-1.00	119.73	212.81	.00	186.16	26.65	
82	CCB4	11E5K02	11/10/2011	1:15 AM	5.42	.00	.04	.10	.00	-1.00	-1.00	.00	.00	

Analyzed by: RC Reviewed by: RC Date: 11/10/11

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PC-Titrate For Windows

Running List Report

Order Number - 11E5K02

	Schedule	Sample Id	Vial	Weight	Volume
1	PH CAL	CAL	1	.00	25.00
2	PH ONLY	ICV PH8	4	.00	25.00
3	PH-ALK	ICV	5	.00	25.00
4	PH-ALK	ICB	6	.00	25.00
5	PH-ALK	ALK003WB	7	.00	25.00
6	PH-ALK	ALK003WL	8	.00	25.00
7	PH-ALK	ALK003WC	9	.00	25.00
8	PH-ALK	J311-01	10	.00	25.00
9	PH-ALK	J311-04	11	.00	25.00
10	PH-ALK	J311-05	12	.00	25.00
11	PH-ALK	J311-05M	13	.00	25.00
12	PH-ALK	J311-05S	14	.00	25.00
13	PH-ALK	J311-06	15	.00	25.00
14	PH-ALK	J311-07	16	.00	25.00
15	PH-ALK	J311-08	17	.00	25.00
16	PH-ALK	J311-10	18	.00	25.00
17	PH-ALK	J311-12	19	.00	25.00
18	PH-ALK	K042-03	20	.00	25.00
19	PH-ALK	K063-01	21	.00	25.00
20	PH-ALK	K063-02	22	.00	25.00
21	PH-ALK	K063-02D	23	.00	25.00
22	PH-ALK	K063-03	24	.00	25.00
23	PH-ALK	K063-04	25	.00	25.00
24	PH-ALK	K063-05	26	.00	25.00
25	PH-ALK	CCV1	27	.00	25.00
26	PH-ALK	CCB1	28	.00	25.00
27	PH-ALK	K063-06	29	.00	25.00
28	PH-ALK	RINSE	30	.00	25.00
29	PH-ALK	ALK004WB	31	.00	25.00
30	PH-ALK	ALK004WL	32	.00	25.00
31	PH-ALK	ALK004WC	33	.00	25.00
32	PH-ALK	K009-01	34	.00	25.00
33	PH-ALK	K012-02	35	.00	25.00
34	PH-ALK	K012-03	36	.00	25.00
35	PH-ALK	K012-04	37	.00	25.00
36	PH-ALK	K012-05	38	.00	25.00
37	PH-ALK	K012-06	39	.00	25.00
38	PH-ALK	K012-07	40	.00	25.00
39	PH-ALK	K012-08	41	.00	25.00
40	PH-ALK	K012-08D	42	.00	25.00

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Running List Report

Order Number - 11E5K02

	Schedule	Sample Id	Vial	Weight	Volume
41	PH-ALK	K005-02	43	.00	25.00
42	PH-ALK	K005-03	44	.00	25.00
43	PH-ALK	K005-04	45	.00	25.00
44	PH-ALK	K005-05	46	.00	25.00
45	PH-ALK	K005-06	47	.00	25.00
46	PH-ALK	K005-08	48	.00	25.00
47	PH-ALK	CCV2	49	.00	25.00
48	PH-ALK	CCB2	50	.00	25.00
49	PH-ALK	K005-08D	51	.00	25.00
50	PH-ALK	K005-09	52	.00	25.00
51	PH-ALK	K005-10	53	.00	25.00
52	PH-ALK	K005-11	54	.00	25.00
53	PH-ALK	K005-12	55	.00	25.00
54	PH-ALK	K005-14	56	.00	25.00
55	PH-ALK	K005-16	57	.00	25.00
56	PH-ALK	RINSE	58	.00	25.00
57	PH-ALK	ALK005WB	59	.00	25.00
58	PH-ALK	ALK005WL	60	.00	25.00
59	PH-ALK	ALK005WC	61	.00	25.00
60	PH-ALK	J315-01	62	.00	25.00
61	PH-ALK	J315-02	63	.00	25.00
62	PH-ALK	J315-03	64	.00	25.00
63	PH-ALK	J315-04	65	.00	25.00
64	PH-ALK	J315-06	66	.00	25.00
65	PH-ALK	J315-07	67	.00	25.00
66	PH-ALK	J315-08	68	.00	25.00
67	PH-ALK	J315-09	69	.00	25.00
68	PH-ALK	J315-10	70	.00	25.00
69	PH-ALK	CCV3	71	.00	25.00
70	PH-ALK	CCB3	72	.00	25.00
71	PH-ALK	J315-11	73	.00	25.00
72	PH-ALK	K018-01	74	.00	25.00
73	PH-ALK	K018-02	75	.00	25.00
74	PH-ALK	K018-03	76	.00	25.00
75	PH-ALK	K035-01	77	.00	25.00
76	PH-ALK	K035-02	78	.00	25.00
77	PH-ALK	K035-02D	79	.00	25.00
78	PH-ALK	K035-03	80	.00	25.00
79	PH-ALK	K035-04	81	.00	25.00
80	PH-ALK	K035-05	82	.00	25.00
81	PH-ALK	K039-01	83	.00	25.00
82	PH-ALK	CCV4	84	.00	25.00

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Running List Report

Order Number - 11E5K02

	Schedule	Sample Id	Vial	Weight	Volume
83	PH-ALK	CCB4	85	.00	25.00

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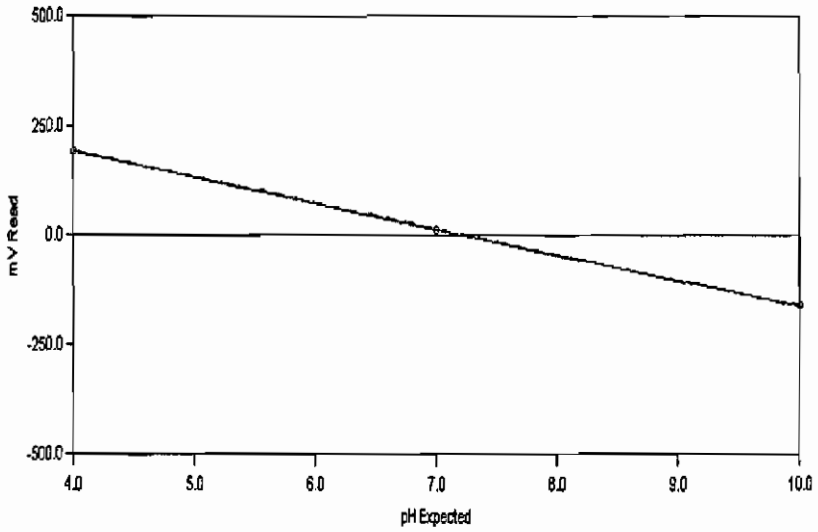
PC-TitratION PLUS
Calibration Report

Calibration Record # 281



Calibration Settings

Calibration ID	PH CAL 4-7-10	Date	11/09/2011	
Channel	1	Time	2:41 PM	
Probe Type	pH	Temperature	297.01 K	23.86 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit	

Calibration Results

Slope	-59.325	CorrCoeff	0.9998
Intercept	14.320	Equation: Y = (-59.325) X + (14.320)	

Calibration Validity **True** Operator

	Result	Minimum	Maximum
Slope	-59.325	-65.00	-53.00
Intercept	14.320	-40.00	40.00
Correlation Coefficient	0.9998	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	**Standard**	**Reading**
	4.00	194.33
	7.00	10.25
	10.00	-161.62

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CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K063

METHOD 2540C
TOTAL DISSOLVED SOLIDS

A total of six (6) water samples were received on 11/07/11 for Total Dissolved Solids analysis, Method 2540C in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Balance calibration was checked as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TDK005WL/C were all within QC limits.

Matrix QC Sample
Sample duplicate was analyzed with the samples in this SDG. RPD was within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2540C
TOTAL DISSOLVED SOLIDS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K063

Matrix : WATER
Instrument ID : 40706360

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TDK005WB	ND	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00501	NA	TDK005W	NA	NA
LCS1W	TDK005WL	895	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00502	NA	TDK005W	NA	NA
LCD1W	TDK005WC	880	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00503	NA	TDK005W	NA	NA
MW-70-PMW03A-095	K063-01	1060	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00510	NA	TDK005W	11/07/1110:42	11/07/11
MW-70-PMW03B-097	K063-02	1080	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00511	NA	TDK005W	11/07/1112:08	11/07/11
MW-70-PMW03B-097DUP	K063-02D	1050	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00512	NA	TDK005W	11/07/1112:08	11/07/11
IW-70-SAB06-099	K063-03	1330	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00513	NA	TDK005W	11/07/1114:30	11/07/11
MW-70-PMW02A-100	K063-04	955	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00514	NA	TDK005W	11/07/1115:42	11/07/11
MW-70-PMW02B-101	K063-05	1430	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00515	NA	TDK005W	11/07/1116:27	11/07/11
IR-70-FD-098	K063-06	1100	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00516	NA	TDK005W	11/07/1112:25	11/07/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 2540C

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TDK005WB	TDK005WL	TDK005WC		
LAB FILE ID:	TDK00501	TDK00502	TDK00503		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1116:38	11/10/1116:38	11/10/1116:38	DATE RECEIVED:	NA
PREP. BATCH:	TDK005W	TDK005W	TDK005W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TDS	ND	1000	895	90	1000	880	88	2	80-120	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD 2540C

==========

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MW-70-PMW03B-097			
EMAX SAMP ID:	K063-02	K063-02D		
LAB FILE ID:	TDK00511	TDK00512		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/07/11 12:08
DATE ANALYZED:	11/10/1116:38	11/10/1116:38	DATE RECEIVED:	11/07/11
PREP. BATCH:	TDK005W	TDK005W		
CALIB. REF:	NA	NA		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
TDS	1080	1050	3	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
GRAVIMETRIC

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AGV-047

Balance ID: 40706360

Analytical Batch: TDK005

SOP #	Rev. #
☐ EMAX-160.1	6
☐ EMAX-160.2	4
☐ EMAX-160.3	2
☐ EMAX-2540B	1
☑ EMAX-2540C	5
☐ EMAX-2540D	1

STANDARDS ID	CONC. (mg/L)
LCS SW2-02-914	1000

Micropipette ID:

Analyzed By: NM

Date: 11/14/11

GRAVIMETRIC ANALYSES
RAW DATA

EMAX LABORATORIES, INC.

Analytical Batch: TDK005 | Instrument ID: 40706360 | Oven Temp IN (°C): 180 | Oven Temp OUT (°C): 180 | SOP: EMAX-2540C Rev.1

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish #	Dish (g)	Date	Time	1st Dry Weight + Dish (g)	Date	Time	2nd Dry Weight + Dish (g)	Date	Time	3rd Dry Weight + Dish (g)	Date	Time	Difference 1st & 2nd Dry Wt. Rdg.	Difference 2nd & 3rd Dry Wt. Rdg. (<0.5mg)	NOTES
TDK00501	TDK005WB	100	B	71.3230	11/10/11	16:38	71.3226	11/14/11	10:17	71.3226	11/14/11	12:02	71.3226	11/14/11	12:02	0	0.0	
TDK00502	TDK005WL	20	L	21.4860	11/10/11	16:38	21.5038	11/14/11	10:17	21.5039	11/14/11	12:03	21.5039	11/14/11	12:03	0.0001	0.0	
TDK00503	TDK005WC	20	C	21.4203	11/10/11	16:38	21.4378	11/14/11	10:17	21.4379	11/14/11	12:04	21.4379	11/14/11	12:04	1E-04	0.0	
TDK00504	K035-01	20	1	21.6520	11/10/11	16:39	21.6998	11/14/11	10.18	21.6995	11/14/11	12.04	21.6995	11/14/11	12:04	-0.0003	0.0	
TDK00505	K035-02	10	2	21.4904	11/10/11	16:39	21.5326	11/14/11	10.18	21.5328	11/14/11	12:04	21.5328	11/14/11	12:04	0.0002	0.0	
TDK00506	K035-02D	10	3	21.7407	11/10/11	16:39	21.7827	11/14/11	10:18	21.783	11/14/11	12:05	21.783	11/14/11	12:05	0.0003	0.0	
TDK00507	K035-03	10	4	21.5108	11/10/11	16:39	21.5847	11/14/11	10:18	21.5848	11/14/11	12:05	21.5848	11/14/11	12.06	1E-04	0.0	
TDK00508	K035-04	20	5	21.2552	11/10/11	16:39	21.3178	11/14/11	10:19	21.3182	11/14/11	12:06	21.3182	11/14/11	12:06	0.0004	0.0	
TDK00509	K035-05	10	6	21.4821	11/10/11	16:40	21.5552	11/14/11	10.19	21.5553	11/14/11	12:06	21.5553	11/14/11	12:06	1E-04	0.0	
TDK00510	K063-01	20	7	21.5468	11/10/11	16:40	21.5675	11/14/11	10.19	21.5679	11/14/11	12:07	21.5679	11/14/11	12:07	0.0004	0.0	
TDK00511	K063-02	20	8	21.3955	11/10/11	16.40	21.4167	11/14/11	10.20	21.4171	11/14/11	12:07	21.4171	11/14/11	12:07	0.0004	0.0	
TDK00512	K063-02D	20	9	21.5431	11/10/11	16:41	21.5639	11/14/11	10.20	21.5641	11/14/11	12:08	21.5641	11/14/11	12:08	0.0002	0.0	
TDK00513	K063-03	20	10	21.5358	11/10/11	16:41	21.562	11/14/11	10.20	21.5624	11/14/11	12:08	21.5624	11/14/11	12:08	0.0004	0.0	
TDK00514	K063-04	20	11	21.4350	11/10/11	16:41	21.4537	11/14/11	10.20	21.4541	11/14/11	12:09	21.4541	11/14/11	12.09	0.0004	0.0	
TDK00515	K063-05	20	12	21.4642	11/10/11	16:41	21.4925	11/14/11	10:21	21.4929	11/14/11	12:10	21.4929	11/14/11	12:10	0.0004	0.0	
TDK00516	K063-06	20	13	21.3348	11/10/11	16:42	21.3569	11/14/11	10.21	21.3569	11/14/11	12:10	21.3569	11/14/11	12:10	0	0.0	
TDK00517	K070-01	20	14	21.4889	11/10/11	16:42	21.5398	11/14/11	10:21	21.5398	11/14/11	12:10	21.5398	11/14/11	12:10	0	0.0	
TDK00518	K070-02	20	15	21.4706	11/10/11	16:42	21.5078	11/14/11	10.22	21.508	11/14/11	12:11	21.508	11/14/11	12:11	0.0002	0.0	
TDK00519	K070-03	20	16	21.7457	11/10/11	16:42	21.7798	11/14/11	10:22	21.7802	11/14/11	12:11	21.7802	11/14/11	12:11	0.0004	0.0	
TDK00520	K070-04	20	17	21.4787	11/10/11	16:43	21.5027	11/14/11	10.22	21.5028	11/14/11	12:12	21.5028	11/14/11	12:12	1E-04	0.0	
TDK00521	K070-05	20	18	21.3347	11/10/11	16:43	21.365	11/14/11	10:22	21.365	11/14/11	12:12	21.365	11/14/11	12:12	0	0.0	
TDK00522	K070-06	20	19	21.4641	11/10/11	16:43	21.488	11/14/11	10:23	21.488	11/14/11	12:13	21.488	11/14/11	12:13	0	0.0	

Beginning Balance Check

Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/10/11 16:36	PASSED
5	4.9997	11/10/11 16:37	PASSED
100	99.9954	11/10/11 16:37	PASSED

Ending Balance Check

Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/10/11 16:43	PASSED
5	5.0000	11/10/11 16:44	PASSED
100	99.9951	11/10/11 16:44	PASSED

Beginning Balance Check

Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1001	11/14/11 10:16	PASSED
5	5.0000	11/14/11 10:16	PASSED
100	99.9987	11/14/11 10:16	PASSED

Ending Balance Check

Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/14/11 12:13	PASSED
5	5.0000	11/14/11 12:14	PASSED
100	99.9986	11/14/11 12:15	PASSED

Acceptance Criteria: ± 0.1% OR 0.05 mg whichever is greater

LCS Conc. 1000 mg/L MDL 10 mg/L RL: 10 mg/L Initial Rdg by: NM Final Rdg by: NM Reviewed by: NM

Remarks: Date 11/14/11

EMAX LABORATORIES INC.

GRAVIMETRIC CALCULATION

Analytical Batch: TDK005 Start Date/Time: 11/10/11 16:38 Temp IN(°C): 180

Balance ID: 40706360 End Date/Time: 11/14/11 12:12 Temp Out(°C): 180

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish (g)	Dry Weight + Dish (g)	SOLIDS (mg)	RESULT (mg/L)	NOTES
TDK00501	TDK005WB	100	71.323	71.3226	-0.4000	ND	
TDK00502	TDK005WL	20	21.486	21.5039	17.9000	895	90
TDK00503	TDK005WC	20	21.4203	21.4379	17.6000	880	88
TDK00504	K035-01	20	21.652	21.6995	47.5000	2370	
TDK00505	K035-02	10	21.4904	21.5328	42.4000	4240	
TDK00506	K035-02D	10	21.7407	21.783	42.3000	4230	
TDK00507	K035-03	10	21.5108	21.5848	74.0000	7400	
TDK00508	K035-04	20	21.2552	21.3182	63.0000	3150	
TDK00509	K035-05	10	21.4821	21.5553	73.2000	7320	
TDK00510	K063-01	20	21.5468	21.5679	21.1000	1060	
TDK00511	K063-02	20	21.3955	21.4171	21.6000	1080	
TDK00512	K063-02D	20	21.5431	21.5641	21.0000	1050	
TDK00513	K063-03	20	21.5358	21.5624	26.6000	1330	
TDK00514	K063-04	20	21.435	21.4541	19.1000	955	
TDK00515	K063-05	20	21.4642	21.4929	28.7000	1430	
TDK00516	K063-06	20	21.3348	21.3569	22.1000	1100	
TDK00517	K070-01	20	21.4889	21.5398	50.9000	2540	
TDK00518	K070-02	20	21.4706	21.508	37.4000	1870	
TDK00519	K070-03	20	21.7457	21.7802	34.5000	1730	
TDK00520	K070-04	20	21.4787	21.5028	24.1000	1210	
TDK00521	K070-05	20	21.3347	21.365	30.3000	1510	
TDK00522	K070-06	20	21.4641	21.488	23.9000	1200	

LCS Concentration: 1000 mg/L MDL(mg/L): 10 Initial Reading by: NM

SOP: EMAX-2540C Rev.1 RL (mg/L): 10 Final Reading by: NM

Remarks:

Reviewed by: NM

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K063

METHOD 4500F
DISSOLVED HYDROGEN SULFIDE

A total of six (6) water samples were received on 11/07/11 for Dissolved Hydrogen Sulfide analysis, Method 4500F in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Matrix QC Sample
Sample duplicate was analyzed with the samples. RPD was within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 4500F
Dissolved Hydrogen Sulfide

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K063

Matrix : WATER
Instrument ID : NA

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	HSK001WB	ND	1	NA	1.00	1.00	11/10/1112:40	NA	HSK00111	NA	HSK001W	NA	NA
MW-70-PMW03A-095	K063-01	ND	1	NA	1.00	1.00	11/10/1113:27	NA	HSK00110	NA	HSK001W	11/07/1110:42	11/07/11
MW-70-PMW03B-097	K063-02	ND	1	NA	1.00	1.00	11/10/1113:33	NA	HSK00111	NA	HSK001W	11/07/1112:08	11/07/11
IW-70-SAB06-099	K063-03	ND	1	NA	1.00	1.00	11/10/1113:52	NA	HSK00113	NA	HSK001W	11/07/1114:30	11/07/11
MW-70-PMW02A-100	K063-04	ND	1	NA	1.00	1.00	11/10/1113:55	NA	HSK00114	NA	HSK001W	11/07/1115:42	11/07/11
MW-70-PMW02B-101	K063-05	ND	1	NA	1.00	1.00	11/10/1114:01	NA	HSK00115	NA	HSK001W	11/07/1116:27	11/07/11
IR-70-FD-098	K063-06	ND	1	NA	1.00	1.00	11/10/1114:04	NA	HSK00116	NA	HSK001W	11/07/1112:25	11/07/11
MW-70-PMW03B-097DUP	K063-02D	ND	1	NA	1.00	1.00	11/10/1113:37	NA	HSK00112	NA	HSK001W	11/07/1112:08	11/07/11

EMAX QUALITY CONTROL DATA
DUPLICATE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
METHOD: METHOD 4500F (DISSOLVED)
MATRIX: WATER
% MOISTURE: NA

BATCH NO.: 11K063
SAMPLE ID: MW-70-PMW03B-097DUP
CONTROL NO.: K063-02D

DATE RECEIVED: 11/07/11
DATE EXTRACTED: NA
DATE ANALYZED: 11/10/11 13:37

ACCESSION:

PARAMETER	SAMPLE (mg/L)	DUP. SAMPLE (mg/L)	RPD (%)	RPD LIMIT (%)
Hydrogen Sulfide	ND	ND	0	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
SULFIDE

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Book #: ASD-018

Analytical Batch: HSK001

Comments:

SOP #	Rev. #
☐ EMAX-376.1	3
☐ EMAX-9034	0
☐ EMAX-4500-S2F	1
☑ EMAX-4500-S2H	0
☐ EMAX-	

STANDARDS ID	conc.
LCS SWI-01-902	5.52
Spike NA	NA
$Na_2S_2O_3$ Standard SWPI-01-384	0.0246
Iodine SWPI-01-465	0.0250
HCl SWPI-007-60-03	6N
Indicator SWPI-01-340	—

Analyzed By: NH

Date: 11/10/11

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SM4500-S^{2-} H

LABORATORIES, INC.

ANALYSIS FOR UN-IONIZED HYDROGEN SULFIDE

Method SM4500-S2-H **Analytical Batch:** HSK001

Data File Name	Lab Sample ID	Sulfide	Unit	Date Time	Temp. °C	pH	Conductivity µS/cm	H2S	Unit	COMMENTS
HSK0011	HSK001WB	ND	mg/L	11/10/11 12:40				ND	mg/L	
HSK0012	HSK001WL	4.48	mg/L	11/10/11 12:47				#VALUE!	mg/L	
HSK0013	HSK001WC	4.44	mg/L	11/10/11 12:57				#VALUE!	mg/L	
HSK0014	K035-01	ND	mg/L	11/10/11 13:01	24.8	6.54	4000	ND	mg/L	
HSK0015	K035-02	ND	mg/L	11/10/11 13:02	24.9	6.78	6030	ND	mg/L	
HSK0016	K035-02D	ND	mg/L	11/10/11 13:09	25	6.76	5980	ND	mg/L	
HSK0017	K035-03	ND	mg/L	11/10/11 13:12	25.1	6.72	9320	ND	mg/L	
HSK0018	K035-04	ND	mg/L	11/10/11 13:15	24.9	6.8	4520	ND	mg/L	
HSK0019	K035-05	ND	mg/L	11/10/11 13:18	24.8	6.73	9390	ND	mg/L	
HSK00110	K063-01	ND	mg/L	11/10/11 13:27	25.1	6.58	1753	ND	mg/L	
HSK00111	K063-02	ND	mg/L	11/10/11 13:33	25.3	7.49	1660	ND	mg/L	
HSK00112	K063-02D	ND	mg/L	11/10/11 13:37	25.3	7.48	1703	ND	mg/L	
HSK00113	K063-03	ND	mg/L	11/10/11 13:52	25.3	6.67	2240	ND	mg/L	
HSK00114	K063-04	ND	mg/L	11/10/11 13:55	25.3	7.62	1518	ND	mg/L	
HSK00115	K063-05	ND	mg/L	11/10/11 14:01	25.3	7.55	2180	ND	mg/L	
HSK00116	K063-06	ND	mg/L	11/10/11 14:04	25.2	7.53	1689	ND	mg/L	

NM 11/10/11

$$pK_1 = 32.5 + 1519.44/T - 15.672\log_{10}T + 0.02722T$$

$$A = 0.7083 - 2.277x10^{-3}T + 5.399x10^{-6}T^2$$

$$I = 1.6x10^{-5}\,Conductivity$$

$$pf_m = A\left(\frac{\sqrt{I}}{1+\sqrt{I}} - 0.3\right)$$

$$K'_1 = 10^{-pK_1+2pf_m} \quad H_2S = \left(\frac{S_T}{1+\frac{K'_1}{H^+}}\right)$$

$$H^+ = 10^{-pH+pf_m}$$

Analyzed by: NM

Reviewed by: NM

Date: 11/10/11

Where: T(°K)= T°C+272.15 pK1=dissociation constant for zero ionic strength A= Debye-Huckel Parameter I= Ionic Strength pfm=negative logarithm of the monovalent ion activity coefficient K'_1=conditional ionization constant H^+=Hydrogen ion concentration S_T=Total Sulfide Concentration

EMAX LABORATORIES, INC.

ANALYSIS FOR SULFIDE

Method: SM4500-S2-H Analytical Batch: HSK001 Book #: ASD-018 Page: 11

Data File Name	Lab Sample ID	V_e (ml)	V_t (ml)	Volume of Titant V_t (ml)	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Sulfide	Sample Result	Flag J	Unit
HSK0011	HSK001WB	100	2.5	2.54	11/10/11	12:40:09	-0.07872	ND		mg/L
HSK0012	HSK001WL	100	2.5	1.39	11/10/11	12:47:40	4.48448	4.48		mg/L
HSK0013	HSK001WC	100	2.5	1.4	11/10/11	12:57:45	4.4448	4.44		mg/L
HSK0014	K035-01	100	2.5	2.48	11/10/11	13:01:03	0.15936	ND		mg/L
HSK0015	K035-02	100	2.5	2.6	11/10/11	13:02:40	-0.3168	ND		mg/L
HSK0016	K035-02D	100	2.5	2.59	11/10/11	13:09:17	-0.27712	ND		mg/L
HSK0017	K035-03	100	2.5	2.73	11/10/11	13:12:29	-0.83264	ND		mg/L
HSK0018	K035-04	100	2.5	2.54	11/10/11	13:15:27	-0.07872	ND		mg/L
HSK0019	K035-05	100	2.5	2.48	11/10/11	13:18:00	0.15936	ND		mg/L
HSK00110	K063-01	100	2.5	2.55	11/10/11	13:27:51	-0.1184	ND		mg/L
HSK00111	K063-02	100	2.5	2.48	11/10/11	13:33:18	0.15936	ND		mg/L
HSK00112	K063-02D	100	2.5	2.52	11/10/11	13:37:15	0.00064	ND		mg/L
HSK00113	K063-03	100	2.5	2.51	11/10/11	13:52:08	0.04032	ND		mg/L
HSK00114	K063-04	100	2.5	2.5	11/10/11	13:55:45	0.08	ND		mg/L
HSK00115	K063-05	100	2.5	2.54	11/10/11	14:01:32	-0.07872	ND		mg/L
HSK00116	K063-06	100	2.5	2.5	11/10/11	14:04:42	0.08	ND		mg/L

Nm 11/10/11

STANDARDIZATION

V_t (ml)	V_{Na2SO3} (ml)	DATE	TIME	Titrant Na_2SO_3 (N)
Average Normality of Iodine (NI)=				**0.025**

☑ Standard Purchased as Certified Solution

$$N_I = \frac{(N * V)_{Na_2SO_3}}{V_I}$$

MISCELLANEOUS INFORMATION

Standard	Concentration		Unit
Iodine	0.025		N
$Na_2S_2O_3$	0.0248		N
LCS [WATER | SOIL]	5.52	55.2	mg/L | mg/Kg
MDL [WATER | SOIL]	1	10	mg/L | mg/Kg
RL	1	20	mg/L | mg/Kg

$$S(mg/L) = \frac{[(V_I * N_I) - (V_t * N_t)](16{,}000)}{V_S}$$

MS/MSD	TV=	5.52	mg/L
ID	Result (mg/L)	%Rec.	RPD

Comments:

Analyzed By: NM

8165

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K063

METHOD SM5310B
TOC

A total of six (6) water samples were received on 11/07/11 for Total Organic Carbon analysis, Method SM5310B in accordance with Standard Methods for the Examination of Water and Wastewater, 18th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TCK005WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample was analyzed at the frequency prescribed by the project.
Percent recoveries for K063-02M/S were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD SM5310B
TOC

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K063

Matrix : WATER
Instrument ID : I62

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TCK005WB	ND	1	NA	1.00	0.500	11/09/1113:59	NA	TCK005-05	TCK005-02	TCK005W	NA	NA
LCS1W	TCK005WL	26.3	1	NA	1.00	0.500	11/09/1114:12	NA	TCK005-06	TCK005-02	TCK005W	NA	NA
LCD1W	TCK005WC	26.1	1	NA	1.00	0.500	11/09/1114:25	NA	TCK005-07	TCK005-02	TCK005W	NA	NA
MW-70-PMW03A-095	K063-01	8.95	1	NA	1.00	0.500	11/09/1114:49	NA	TCK005-09	TCK005-02	TCK005W	11/07/1110:42	11/07/11
MW-70-PMW03B-097	K063-02	1.07	1	NA	1.00	0.500	11/09/1115:00	NA	TCK005-10	TCK005-02	TCK005W	11/07/1112:08	11/07/11
MW-70-PMW03B-097MS	K063-02M	25.7	1	NA	1.00	0.500	11/09/1115:13	NA	TCK005-11	TCK005-02	TCK005W	11/07/1112:08	11/07/11
MW-70-PMW03B-097MSD	K063-02S	25.8	1	NA	1.00	0.500	11/09/1115:26	NA	TCK005-12	TCK005-02	TCK005W	11/07/1112:08	11/07/11
IW-70-SAB06-099	K063-03	27.8	1	NA	1.00	0.500	11/09/1115:39	NA	TCK005-13	TCK005-02	TCK005W	11/07/1114:30	11/07/11
MW-70-PMW02A-100	K063-04	0.948J	1	NA	1.00	0.500	11/09/1116:13	NA	TCK005-16	TCK005-14	TCK005W	11/07/1115:42	11/07/11
MW-70-PMW02B-101	K063-05	1.26	1	NA	1.00	0.500	11/09/1116:24	NA	TCK005-17	TCK005-14	TCK005W	11/07/1116:27	11/07/11
IR-70-FD-098	K063-06	1.09	1	NA	1.00	0.500	11/09/1116:35	NA	TCK005-18	TCK005-14	TCK005W	11/07/1112:25	11/07/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD SM5310B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TCK005WB	TCK005WL	TCK005WC		
LAB FILE ID:	TCK005-05	TCK005-06	TCK005-07		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1113:59	11/09/1114:12	11/09/1114:25	DATE RECEIVED:	NA
PREP. BATCH:	TCK005W	TCK005W	TCK005W		
CALIB. REF:	TCK005-02	TCK005-02	TCK005-02		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	ND	25.0	26.3	105	25.0	26.1	104	1	85-115	20

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EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K063
METHOD: METHOD SM5310B

MATRIX:	WATER			% MOTSTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MW-70-PMW03B-097				
LAB SAMP ID:	K063-02	K063-02M	K063-02S		
LAB FILE ID:	TCK005-10	TCK005-11	TCK005-12		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/07/11 12:08
DATE ANALYZED:	11/09/1115:00	11/09/1115:13	11/09/1115:26	DATE RECEIVED:	11/07/11
PREP. BATCH:	TCK005W	TCK005W	TCK005W		
CALIB. REF:	TCK005-02	TCK005-02	TCK005-02		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	1.07	25.0	25.7	98	25.0	25.8	99	1	75-125	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TOC

	Date	Time
Start	11/9/14	12 11
End	11/9/14	18 20

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

TCK005W
K031 9060
K063 5310B
K035 ↓

2 M HCl SW4-01-223

Book #:	A62-020
Instrument No.:	62
Pipette ID:	039380025
	SW3-01-33
	SI1A-01-4
Balance ID:	40706360
Analytical Sequence:	TCK005
Method File:	TCK005
Analytical Batch:	TCK005W

SOP #	Rev. #
☐ EMAX-415.1	2
☑ EMAX-5310B	1
☑ EMAX-9060	2
☐ EMAX-	

STANDARDS ID	CONC. (mg/L)
S0 nanopure	0
S1 SW10B-04-168	1
S2	5
S3	10
S4	40
S5	80
S6	—
ICV/LCS SW10B-04-172	25
CCV ↓ -173	25

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ TOC	
☐	

Analyzed By: AM

Date: 11/9/14

8170

	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
1	Standard	NPOC	ICAL	TCK005-01	0A-123456-	C:\Program	1.000		
2	Control	NPOC	ICV	TCK005-02	0A-123456-	C:\Program	1.000	NPOC:26.02 mg/L	
3	Unknown	NPOC	ICB	TCK005-03	0A-123456-	C:\Program	1.000	NPOC:0.1274 mg/	
4	Unknown	NPOC	HCO3\CO3	TCK005-04	0A-123456-	C:\Program	1.000	NPOC:0.2322 mg/	
5	Unknown	NPOC	TCK005WB	TCK005-05	0A-123456-	C:\Program	1.000	NPOC:0.1491 mg/	
6	Unknown	NPOC	TCK005WL	TCK005-06	0A-123456-	C:\Program	1.000	NPOC:26.32 mg/L	
7	Unknown	NPOC	TCK005WC	TCK005-07	0A-123456-	C:\Program	1.000	NPOC:26.08 mg/L	
8	Unknown	NPOC	K031-05T	TCK005-08	0A-123456-	C:\Program	4.000	NPOC:77.58 mg/L	DF=4
9	Unknown	NPOC	K063-01	TCK005-09	0A-123456-	C:\Program	1.000	NPOC:8.949 mg/L	PH<2
10	Unknown	NPOC	K063-02	TCK005-10	0A-123456-	C:\Program	1.000	NPOC:1.067 mg/L	PH<2
11	Unknown	NPOC	K063-02M	TCK005-11	0A-123456-	C:\Program	1.000	NPOC:25.69 mg/L	
12	Unknown	NPOC	K063-02S	TCK005-12	0A-123456-	C:\Program	1.000	NPOC:25.84 mg/L	
13	Unknown	NPOC	K063-03	TCK005-13	0A-123456-	C:\Program	1.000	NPOC:27.82 mg/L	PH<2
14	Control	NPOC	CCV1	TCK005-14	0A-123456-	C:\Program	1.000	NPOC:26.36 mg/L	
15	Unknown	NPOC	CCB1	TCK005-15	0A-123456-	C:\Program	1.000	NPOC:0.1295 mg/	
16	Unknown	NPOC	K063-04	TCK005-16	0A-123456-	C:\Program	1.000	NPOC:0.9485 mg/	PH<2
17	Unknown	NPOC	K063-05	TCK005-17	0A-123456-	C:\Program	1.000	NPOC:1.257 mg/L	PH<2
18	Unknown	NPOC	K063-06	TCK005-18	0A-123456-	C:\Program	1.000	NPOC:1.089 mg/L	PH<2
19	Unknown	NPOC	K035-01	TCK005-19	0A-123456-	C:\Program	1.000	NPOC:184.2 mg/L	PH<2
20	Unknown	NPOC	K035-02	TCK005-20	0A-123456-	C:\Program	1.000	NPOC:4.375 mg/L	PH<2
21	Unknown	NPOC	K035-02M	TCK005-21	0A-123456-	C:\Program	1.000	NPOC:30.92 mg/L	
22	Unknown	NPOC	K035-02S	TCK005-22	0A-123456-	C:\Program	1.000	NPOC:30.75 mg/L	
23	Unknown	NPOC	K035-03	TCK005-23	0A-123456-	C:\Program	1.000	NPOC:4.157 mg/L	PH<2
24	Unknown	NPOC	K035-04	TCK005-24	0A-123456-	C:\Program	1.000	NPOC:2.796 mg/L	PH<2
25	Unknown	NPOC	K035-05	TCK005-25	0A-123456-	C:\Program	1.000	NPOC:4.045 mg/L	PH<2
26	Control	NPOC	CCV2	TCK005-26	0A-123456-	C:\Program	1.000	NPOC:26.40 mg/L	
27	Unknown	NPOC	CCB2	TCK005-27	0A-123456-	C:\Program	1.000	NPOC:0.1750 mg/	

FINAL

Am 11/10/11

Instr.Information

System	toc
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Cal. Curve

Sample Name:	ICAL
Sample ID:	TCK005-01
Cal. Curve:	TCK005.2011_11_09_12_04_46.cal

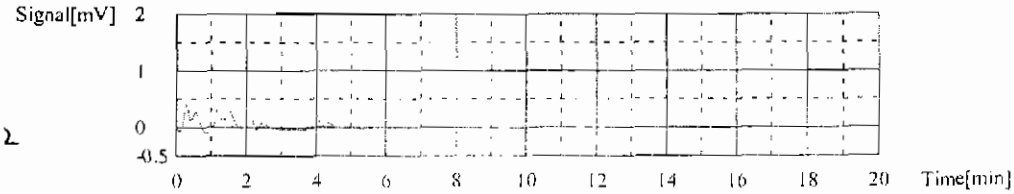
Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.9780	50uL	1	*******		11/09/11 12:11:58 PM
2	0.7512	50uL	1	*******		11/09/11 12:13:04 PM
3	0.000	50uL	1	*******		11/09/11 12:15:09 PM
4	0.000	50uL	1	*******		11/09/11 12:17:13 PM

Acid Add.	2.500%
Sp. Time	90.00sec
Mean Area	0.4323

$$\frac{\text{mean area}}{\text{slope}} = \frac{0.4323}{2.096} = 0.2062$$

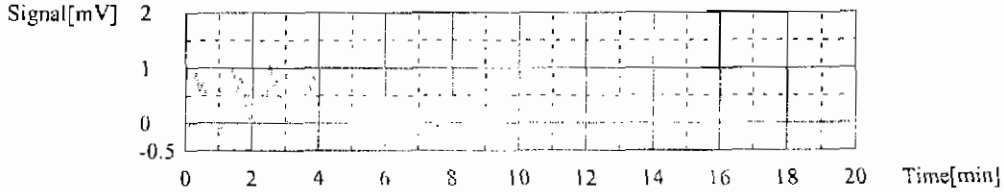


Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	2.258	50uL	10	*******		11/09/11 12:25:31 PM
2	2.388	50uL	10	*******		11/09/11 12:26:48 PM
3	2.326	50uL	10	*******		11/09/11 12:28:05 PM
4	2.268	50uL	10	*******		11/09/11 12:29:18 PM

Acid Add.	2.500%
Sp. Time	90.00sec
Mean Area	2.310

$$\frac{\bar{A}}{m} = \frac{2.310}{2.096} = 1.102$$

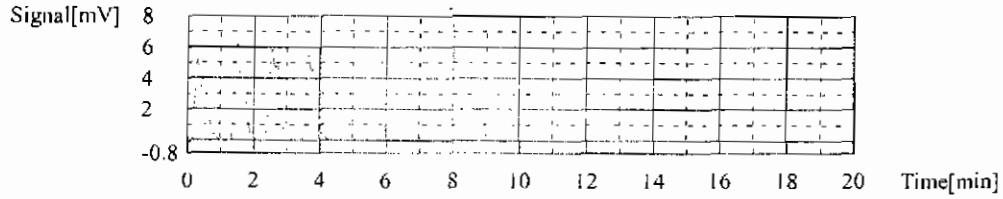


Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	12.01	50uL	2	*******		11/09/11 12:35:45 PM
2	12.05	50uL	2	*******		11/09/11 12:36:58 PM
3	12.19	50uL	2	*******		11/09/11 12:38:15 PM
4	12.17	50uL	2	*******		11/09/11 12:39.33 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 12.11

$\frac{\bar{A}}{m} = \frac{12.11}{2.096} = 5.778$

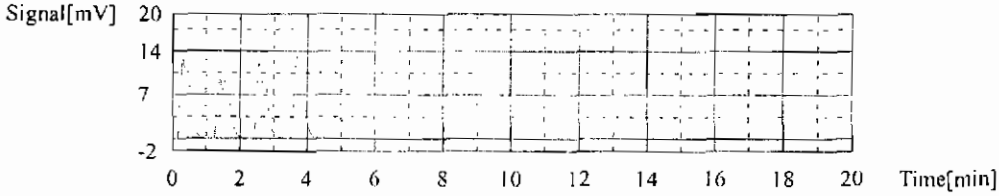


Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	24.51	50uL	1	*******		11/09/11 12:45:12 PM
2	24.45	50uL	1	*******		11/09/11 12:46:32 PM
3	24.78	50uL	1	*******		11/09/11 12:47:50 PM
4	24.95	50uL	1	*******		11/09/11 12:49:07 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 24.67

$\frac{\bar{A}}{m} = \frac{24.67}{2.096} = 11.77$

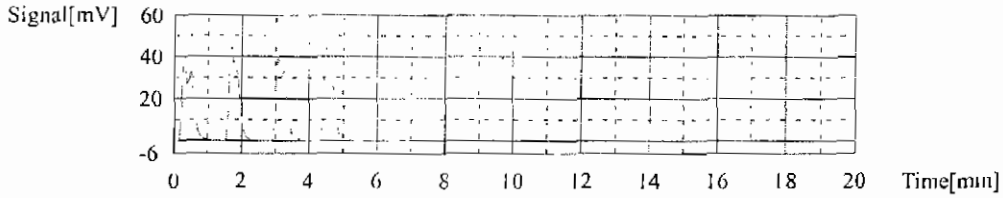


Conc: 40.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	82.52	50uL	2	*******		11/09/11 12:57:41 PM
2	84.11	50uL	2	*******		11/09/11 12:59:15 PM
3	83.36	50uL	2	*******		11/09/11 01:00:52 PM
4	83.07	50uL	2	*******		11/09/11 01:02:24 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 83.27

$\frac{\bar{A}}{m} = \frac{83.27}{2.096} = 39.73$

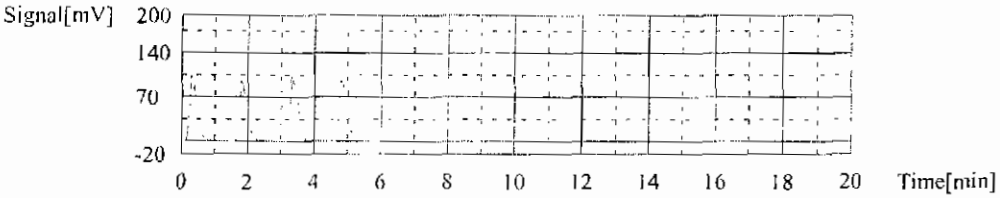


Conc: 80.00mg/L

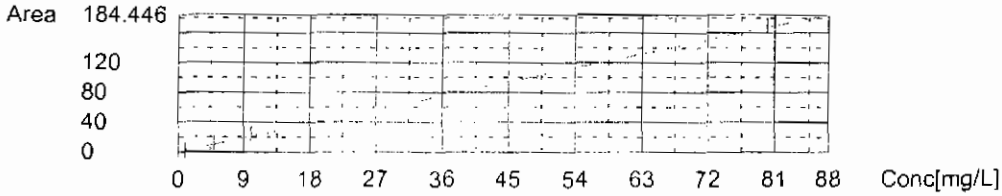
No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	171.1	50uL	1	*******		11/09/11 01:08:27 PM
2	167.2	50uL	1	*******		11/09/11 01:10:09 PM
3	170.6	50uL	1	*******		11/09/11 01:11:49 PM
4	168.8	50uL	1	*******		11/09/11 01:13:28 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 169.4

$\frac{\bar{A}}{m} = \frac{169.4}{2.096} = 80.82$



Slope: 2.096
Intercept 0.000
r^2 0.999481



8173

Control Sample

Sample Name: ICV
Sample ID: TCK005-02
Method: TCK005 tpl
Chk. Result Control value: 26.02 / Control exceeds range!

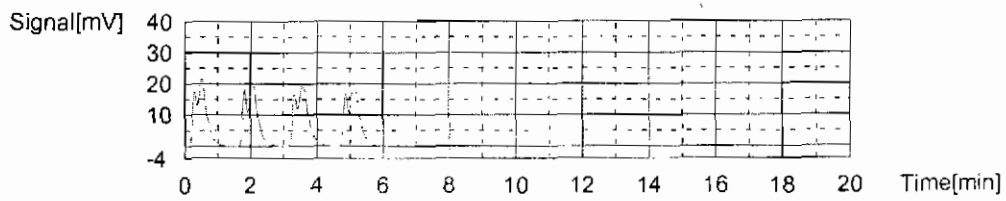
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:26.02 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.22	25.87mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:21:41 PM
2	54.35	25.93mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:23:23 PM
3	54.82	26.15mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:25:06 PM
4	54.76	26.13mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:26:49 PM

Mean Area 54.54
Mean Conc. 26.02mg/L



Sample

Sample Name: ICB
Sample ID: TCK005-03
Origin: TCK005.cal
Chk. Result

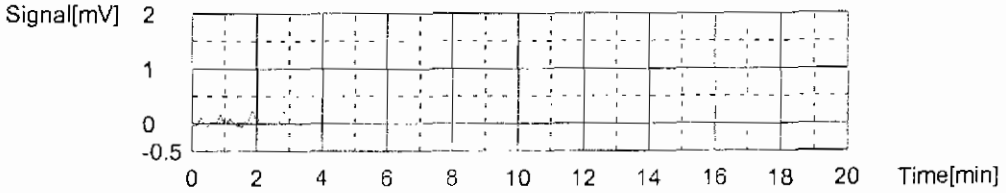
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1274 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.06370	0.03039mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:33:57 PM
2	0.2688	0.1282mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:35:07 PM
3	0.3466	0.1654mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:36:15 PM
4	0.3894	0.1858mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:37:25 PM

Mean Area 0.2671
Mean Conc. 0.1274mg/L



8174

Sample

Sample Name: HCO3\CO3
Sample ID: TCK005-04
Origin: TCK005.cal
Chk. Result

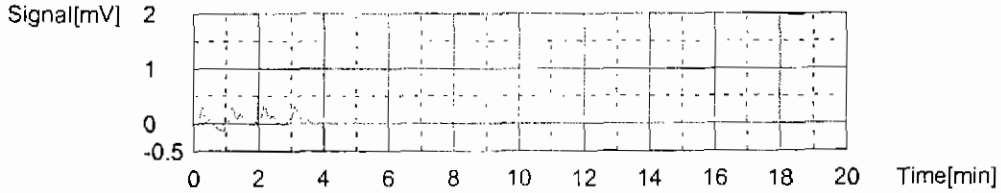
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.2322 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.5425	0.2588mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:44:52 PM
2	0.5309	0.2533mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:46:01 PM
3	0.4249	0.2027mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:47:10 PM
4	0.4485	0.2140mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:48:18 PM

Mean Area 0.4867
Mean Conc. 0.2322mg/L



Sample

Sample Name: TCK005WB
Sample ID: TCK005-05
Origin: TCK005.cal
Chk. Result

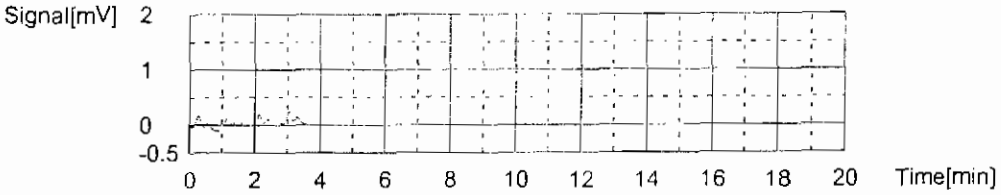
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1491 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2738	0.1306mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:55:42 PM
2	0.3113	0.1485mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:56:49 PM
3	0.2981	0.1422mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:57:56 PM
4	0.3668	0.1750mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 01:59:01 PM

Mean Area 0.3125
Mean Conc. 0.1491mg/L



Sample

8175

Sample Name: TCK005WL
Sample ID: TCK005-06
Origin: TCK005.cal
Chk. Result

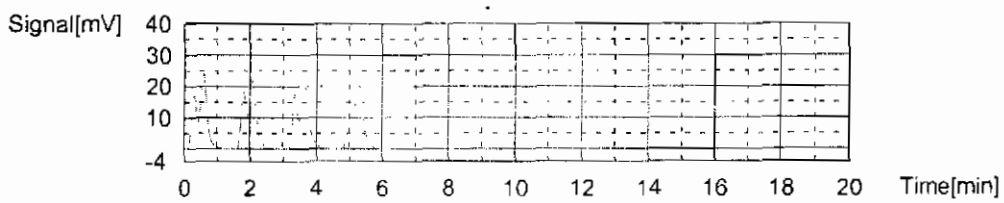
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:26.32 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.88	26.18mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 02:07:00 PM
2	55.10	26.29mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 02:08:44 PM
3	56.08	26.76mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 02:10:34 PM
4	54.61	26.05mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 02:12:18 PM

Mean Area 55.17
Mean Conc. 26.32mg/L



Sample

Sample Name: TCK005WC
Sample ID: TCK005-07
Origin: TCK005.cal
Chk. Result

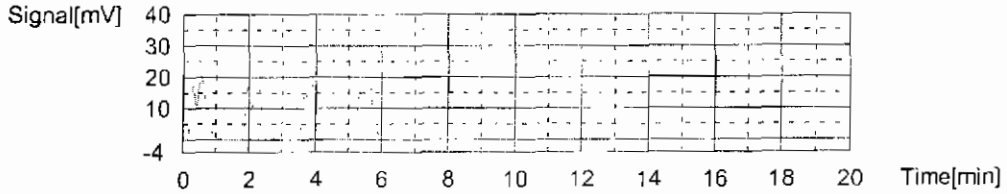
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:26.08 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.01	25.77mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 02:20:26 PM
2	54.61	26.05mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 02:22:20 PM
3	54.82	26.15mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 02:24:11 PM
4	55.19	26.33mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 02:25:58 PM

Mean Area 54.66
Mean Conc. 26.08mg/L



Sample

Sample Name: K031-05T
Sample ID: TCK005-08
Origin: TCK005.cal
Chk. Result

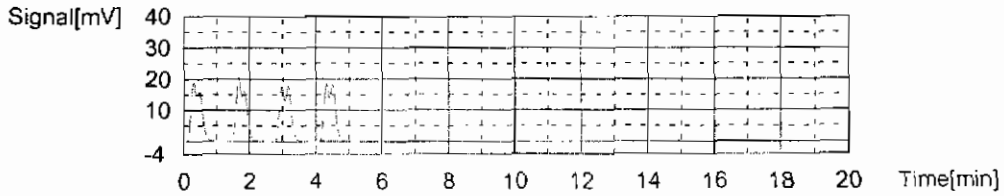
Type	Anal.	Dil.	Result
Unknown	NPOC	4.000	NPOC:77.58 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	39.99	76.32mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 02:33:48 PM
2	40.71	77.69mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 02:35:18 PM
3	41.10	78.44mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 02:36:50 PM
4	40.81	77.88mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 02:38:20 PM

Mean Area 40.65
Mean Conc. 77.58mg/L



Sample

Sample Name: K063-01
Sample ID: TCK005-09
Origin: TCK005.cal
Chk. Result

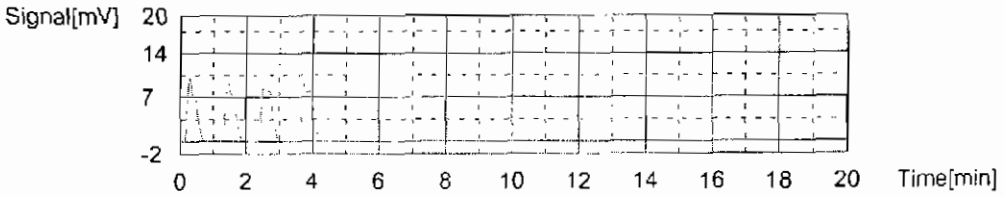
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:8.949 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	18.19	8.679mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 02:45:58 PM
2	18.31	8.736mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 02:47:16 PM
3	19.06	9.094mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 02:48:40 PM
4	19.47	9.289mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 02:49:59 PM

Mean Area 18.76
Mean Conc. 8.949mg/L



Sample

Sample Name: K063-02
Sample ID: TCK005-10
Origin: TCK005.cal
Chk. Result

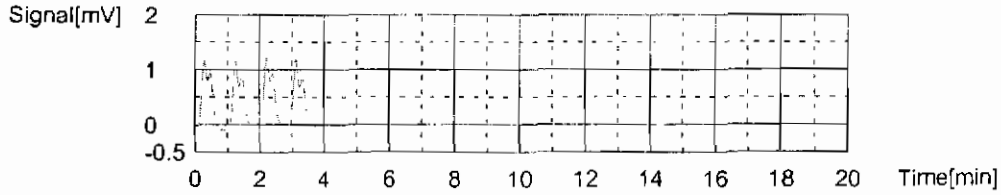
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.067 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.311	1.103mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 02:57:25 PM
2	2.144	1.023mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 02:58:35 PM
3	2.234	1.066mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 02:59:41 PM
4	2.257	1.077mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 03:00:51 PM

Mean Area 2.236
Mean Conc. 1.067mg/L



Sample

Sample Name: K063-02M
Sample ID: TCK005-11
Origin: TCK005.cal
Chk. Result

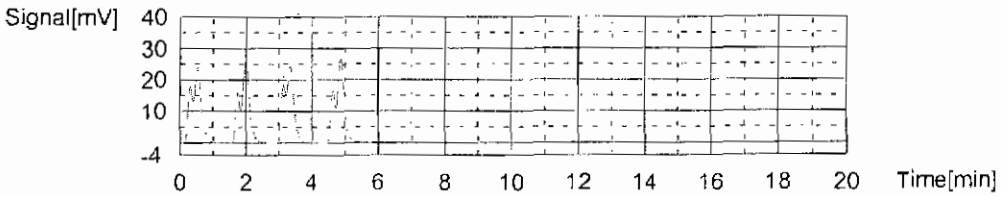
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:25.69 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.38	25.47mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 03:08:47 PM
2	53.96	25.74mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 03:10:21 PM
3	54.01	25.77mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 03:12:03 PM
4	54.02	25.77mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 03:13:41 PM

Mean Area 53.84
Mean Conc. 25.69mg/L



Sample

Sample Name: K063-D2S
Sample ID: TCK005-12
Origin: TCK005.cal
Chk. Result

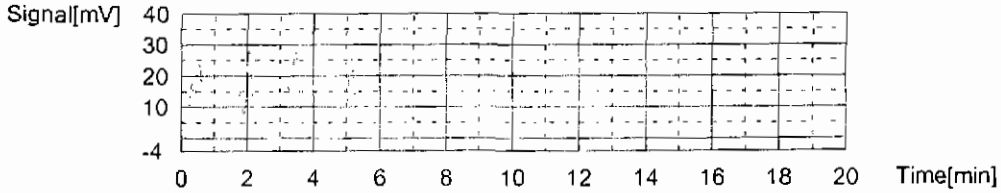
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:25.84 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.75	25.64mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 03:21:39 PM
2	53.79	25.66mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 03:23:18 PM
3	54.83	26.16mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 03:25:09 PM
4	54.24	25.88mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 03:26:50 PM

Mean Area 54.15
Mean Conc. 25.84mg/L



Sample

Sample Name: K063-03
Sample ID: TCK005-13
Origin: TCK005.cal
Chk. Result

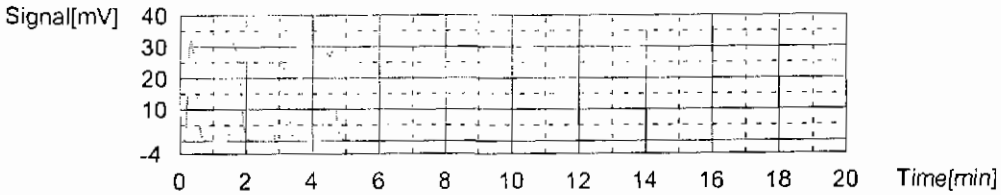
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:27.82 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	57.37	27.37mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 03:34:38 PM
2	58.12	27.73mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 03:36:14 PM
3	58.70	28.01mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 03:37:50 PM
4	59.08	28.19mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 03:39:22 PM

Mean Area 58.32
Mean Conc. 27.82mg/L



Control Sample

Sample Name: CCV1
Sample ID: TCK005-14
Method: TCK005.tpl
Chk. Result Control value: 26.36 / Control exceeds range!

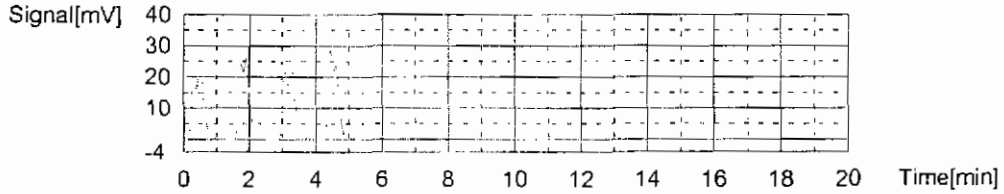
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:26.36 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.47	25.99mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 03:47:16 PM
2	55.88	26.66mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 03:48:49 PM
3	54.94	26.21mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 03:50:22 PM
4	55.67	26.56mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 03:51:55 PM

Mean Area 55.24
Mean Conc. 26.36mg/L



Sample

Sample Name: CCB1
Sample ID: TCK005-15
Origin: TCK005.cal
Chk. Result

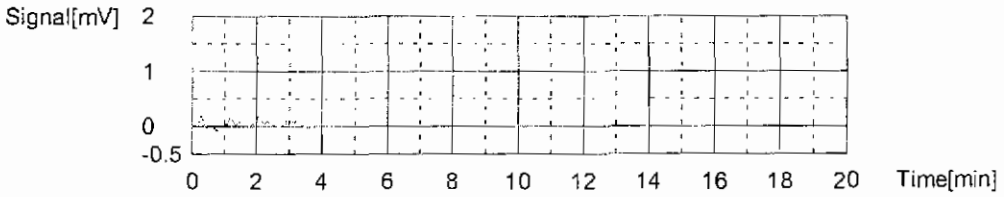
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1295 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3083	0.1471mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 03:59:18 PM
2	0.2615	0.1248mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:00:23 PM
3	0.2261	0.1079mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:01:29 PM
4	0.2894	0.1381mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:02:35 PM

Mean Area 0.2713
Mean Conc. 0.1295mg/L



Sample

Sample Name: K063-04
Sample ID: TCK005-16
Origin: TCK005.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.9485 mg/L

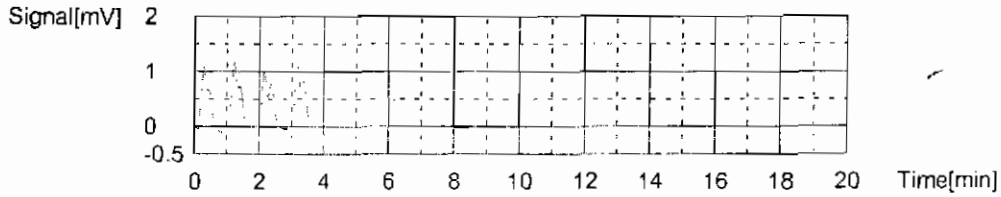
1. Det

Anal.: NPOC

8180

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.873	0.8936mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:09:57 PM
2	2.018	0.9628mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:11:05 PM
3	2.013	0.9604mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:12:17 PM
4	2.048	0.9771mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:13:25 PM

Mean Area 1.988
Mean Conc. 0.9485mg/L



Sample

Sample Name: K063-05
Sample ID: TCK005-17
Origin: TCK005.cal
Chk. Result

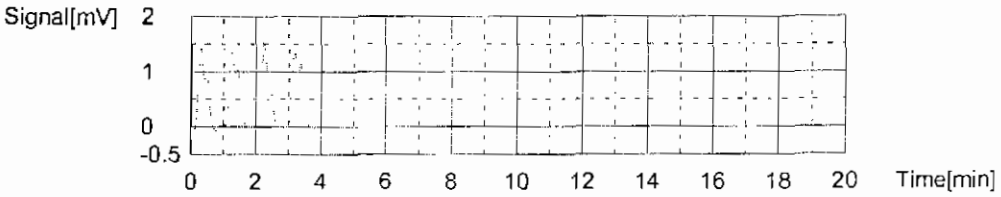
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.257 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.616	1.248mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:20:51 PM
2	2.566	1.224mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:22:02 PM
3	2.628	1.254mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:23:09 PM
4	2.725	1.300mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:24:18 PM

Mean Area 2.634
Mean Conc. 1.257mg/L



Sample

Sample Name: K063-06
Sample ID: TCK005-18
Origin: TCK005.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.089 mg/L

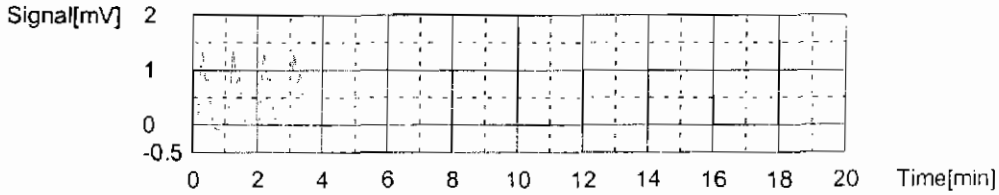
1. Det

Anal.: NPOC

8181

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.277	1.086mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:31:44 PM
2	2.241	1.069mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:32:52 PM
3	2.246	1.072mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:33:59 PM
4	2.366	1.129mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:35:07 PM

Mean Area 2.283
Mean Conc. 1.089mg/L



Sample

Sample Name: K035-01
Sample ID: TCK005-19
Origin: TCK005.cal
Chk. Result

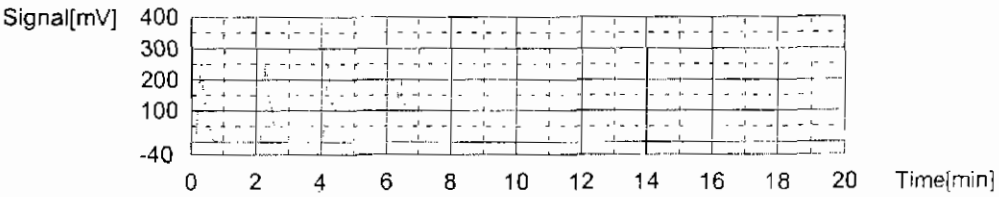
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:184.2 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	385.9	184.1mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:43:36 PM
2	387.0	184.6mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:45:42 PM
3	385.8	184.1mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:48:04 PM
4	385.8	184.1mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:50:18 PM

Mean Area 386.1
Mean Conc. 184.2mg/L



Sample

Sample Name: K035-02
Sample ID: TCK005-20
Origin: TCK005.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:4.375 mg/L

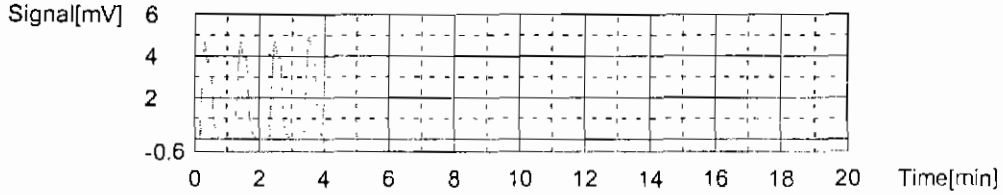
1. Det

Anal.: NPOC

8162

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.281	4.428mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:57:52 PM
2	9.213	4.396mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 04:59:06 PM
3	9.259	4.417mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:00:22 PM
4	8.923	4.257mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:01:40 PM

Mean Area 9.169
Mean Conc. 4.375mg/L



Sample

Sample Name: K035-02M
Sample ID: TCK005-21
Origin: TCK005.cal
Chk. Result

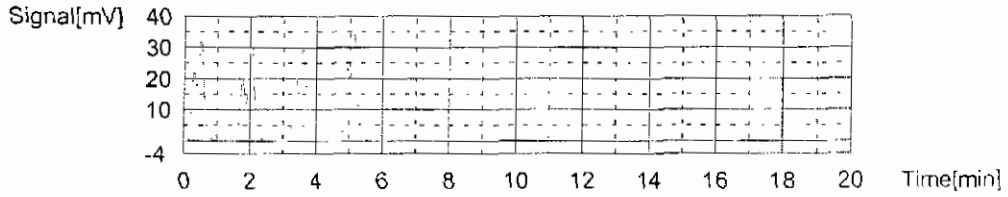
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:30.92 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	64.35	30.70mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:09:38 PM
2	64.65	30.84mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:11:24 PM
3	64.61	30.83mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:13:11 PM
4	65.60	31.30mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:14:52 PM

Mean Area 64.80
Mean Conc. 30.92mg/L



Sample

Sample Name: K035-02S
Sample ID: TCK005-22
Origin: TCK005.cal
Chk. Result

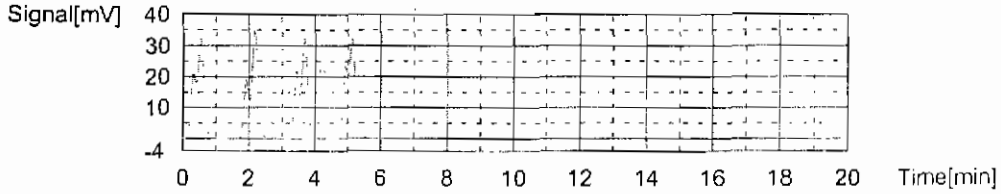
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:30.75 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	63.44	30.27mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:22:57 PM
2	64.62	30.83mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:24:40 PM
3	64.94	30.98mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:26:21 PM
4	64.84	30.94mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:27:59 PM

Mean Area 64.46
Mean Conc. 30.75mg/L



Sample

Sample Name: K035-03
Sample ID: TCK005-23
Origin: TCK005.cal
Chk. Result

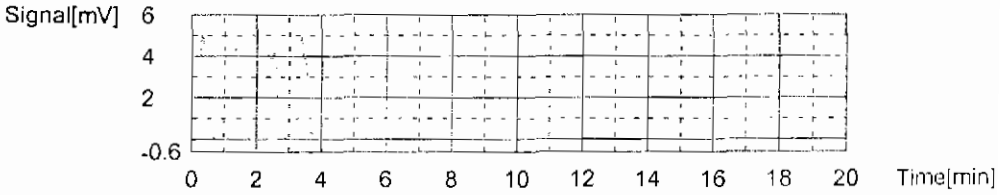
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:4.157 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.654	4.129mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:35:28 PM
2	8.524	4.067mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:36:43 PM
3	8.789	4.193mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:37:54 PM
4	8.881	4.237mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:39:07 PM

Mean Area 8.712
Mean Conc. 4.157mg/L



Sample

Sample Name: K035-04
Sample ID: TCK005-24
Origin: TCK005.cal
Chk. Result

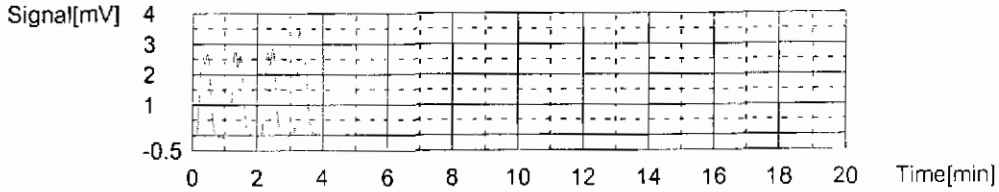
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.796 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.788	2.761mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:46:36 PM
2	5.854	2.793mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:47:47 PM
3	5.776	2.756mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:48:58 PM
4	6.022	2.873mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:50:06 PM

Mean Area 5.860
Mean Conc. 2.796mg/L



Sample

Sample Name: K035-05
Sample ID: TCK005-25
Origin: TCK005.cal
Chk. Result

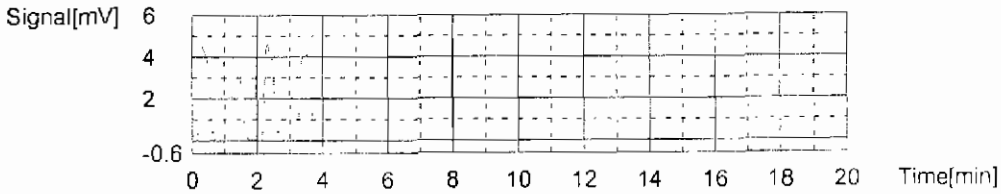
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:4.045 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.310	3.965mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:57:34 PM
2	8.274	3.948mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 05:58:46 PM
3	8.604	4.105mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 06:00:02 PM
4	8.725	4.163mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 06:01:15 PM

Mean Area 8.478
Mean Conc. 4.045mg/L



Control Sample

Sample Name: CCV2
Sample ID: TCK005-26
Method: TCK005.tpl
Chk. Result Control value: 26.40 / Control exceeds range!

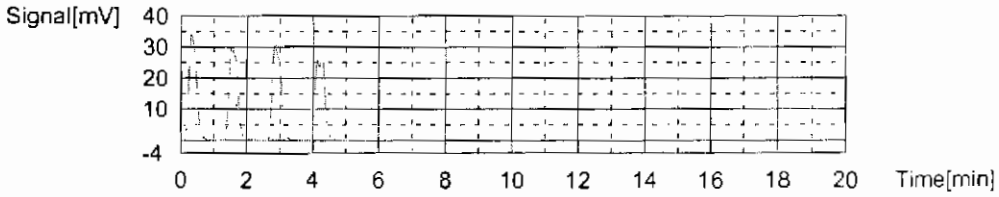
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC 26.40 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.09	26.28mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 06:08:57 PM
2	55.63	26.54mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 06:10:26 PM
3	55.66	26.56mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 06:11:56 PM
4	54.94	26.21mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 06:13:24 PM

Mean Area 55.33
Mean Conc. 26.40mg/L



Sample

Sample Name: CCB2
Sample ID: TCK005-27
Origin: TCK005.cal
Chk. Result

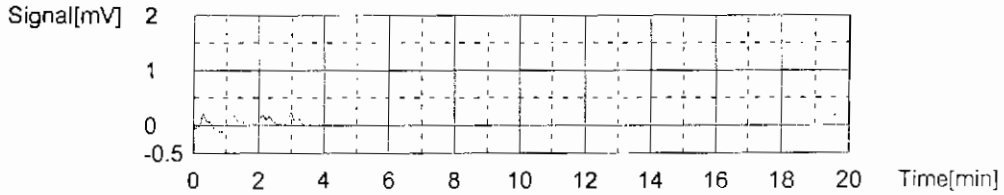
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1750 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4403	0.2101mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 06:20:49 PM
2	0.3119	0.1488mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 06:21:54 PM
3	0.3239	0.1545mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 06:22:58 PM
4	0.3912	0.1866mg/L	50uL	1		TCK005.2011_11_09_12_04_46.cal	11/09/11 06:24:02 PM

Mean Area 0.3668
Mean Conc. 0.1750mg/L



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PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11K070**

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** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 11-30-2011
EMAX Batch No.: 11K070

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 11/08/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
IW-70-SAB11-103	K070-01	11/08/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IW-70-FSB118-104	K070-02	11/08/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-PMW06A-105	K070-03	11/08/11	WATER	ANIONS BY IC

Sample ID	Control #	Col Date	Matrix	Analysis
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-PMW06B-106	K070-04	11/08/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-38-108	K070-05	11/08/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IR-70-FD-107	K070-06	11/08/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IR-70-TB-102	K070-07	11/08/11	WATER	VOLATILE ORGANICS BY GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011068-8042
SAMPLE STORAGE
EMAX CONTROL NO. * 11K070
PROJECT CODE: 4-77101

CLIENT: INSIGHT EEC INC
PROJECT: IR SITE 70 - NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 714-678-6400 FAX: 714-678-6711 EMAIL: NWEINBERGER@IEECI.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT EEC, INC.
ADDRESS: 3010 E. MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: Ye Mint

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	VOCs - EPA 8260B (HC)	DBS HYD GASES - RSK-175 (HC)	WET CHEM (NP)	TCC - SM 5310B (HC)	SULFIDE - SM4500F (ZA/HN)	DBS METALS - EPA 6010B (HN)	VOCs - EPA 8260B (WP)	DBS HYD GASES - RSK-175 (WP)	COMMENTS
1	IW-70-SAB11-103	IR SITE 70 NWS-SB	11-8-11	1035	10	VARY	VARIES	GW	III	X	X	X	X	X	X			
2	IW-70-FSB118-104	IR SITE 70 NWS-SB	11-8-11	1201	10	VARY	VARY	GW	III	X	X	X	X	X	X			
3	MW-70-PMW06A-105	IR SITE 70 NWS-SB	11-8-11	1342	10	VARY	VARY	GW	III	X	X	X	X	X	X			
4	MW-70-PMW06B-106	IR SITE 70 NWS-SB	11-8-11	1448	10	VARY	VARY	GW	III	X	X	X	X	X	X			
5	MW-70-38-108	IR SITE 70 NWS-SB	11-8-11	1603	10	VARY	VARY	GW	III	X	X	X	X	X	X			
6																		
7																		
8																		
6	IR-70-FD-107	IR SITE 70 NWS-SB	11-8-11	1510	10	VARY	VARY	GW	III	X	X	X	X	X	X			DUPLICATE
7	IR-70-TB-102	IR SITE 70 NWS-SB	11-8-11	0830	2	40mL	VOA	GW	III	X								TRIP BLANKS

Instructions: WET CHEM AS FOLLOWS: ANIONS - EPA 300.0, VFA - EPA 300.0M, TDS - SM 2540C, ALKALINITY - SM2320B. UNLESS NOTED OTHERWISE IN COMMENTS.

Cooler #	Temp. (°C)
1	2.8

Sample #s

SAMPLER: CHASE BRODDON
COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-8-11	1810	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin untill all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11K070
☐ EMAX Courier		Recepient I. PATEL
☑ Client Delivery	SEE CUR	Date 11-8-11
☐ Third Party		Time 1810

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☐ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☑ Preservative (if any)	☐ TAT
Safety Issues	☑ None	☐ High concentrations expected	☐ Superfund Site samples	☐ Rad screening required	

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	A ☑ Cooler 1 2.8 °C	☐ Cooler 2 ____ °C	☐ Cooler 3 ____ °C	☐ Cooler 4 ____ °C	☐ Cooler 5 ____ °C
	☐ Cooler 6 ____ °C	☐ Cooler 7 ____ °C	☐ Cooler 8 ____ °C	☐ Cooler 9 ____ °C	☐ Cooler 10 ____ °C
Thermometer:	*A - S/N 101541371*	*B - S/N 101541382*			

Comments: ☐ **PM was informed on non-compliant coolers immediately.**

Note: **pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code
01	009, 010	IR-70-SAB11-403	ID: (IR-70) B3	R2
01	001-006		Rec'd w/ Small Bubble	R6
02	14-15-16		" " "	↓

REVIEWS

Sample Labeling [signature] Date 11-8-11 | SRF [signature] Date 11/8/11 | PM [signature] Date 11/08/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4		E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	Use vial with smallest bubble first.
B3	Sample ID is inconsistent in COC vis-à-vis label	F2	Bubble is> 6mm		
B4		G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1			
C4		H2			

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11K070

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K070

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of seven (7) water samples were received on 11/08/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary form for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for VO06K10L/C were all within QC limits.
Percent recoveries for VO06K13L/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. Vials received for samples K070-01 and -02 has bubbles >6mm. Analysis was performed using vial with the smallest bubbles.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K070
Instrument ID : T-006

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V006K10B	1	NA	11/10/1110:02	11/10/1110:02	RKW177	RKW007	V006K10	Method Blank
LCS1W	V006K10L	1	NA	11/10/1108:28	11/10/1108:28	RKW174	RKW007	V006K10	Lab Control Sample (LCS)
LCD1W	V006K10C	1	NA	11/10/1109:00	11/10/1109:00	RKW175	RKW007	V006K10	LCS Duplicate
IR-70-TB-102	K070-07	1	NA	11/10/1110:34	11/10/1110:34	RKW178	RKW007	V006K10	Field Sample
IW-70-SAB11-103	K070-01	1	NA	11/10/1111:04	11/10/1111:04	RKW179	RKW007	V006K10	Field Sample
IW-70-FSB118-104	K070-02	1	NA	11/10/1111:36	11/10/1111:36	RKW180	RKW007	V006K10	Field Sample
MW-70-PMW06A-105	K070-03	1	NA	11/10/1112:06	11/10/1112:06	RKW181	RKW007	V006K10	Field Sample
MW-70-PMW06B-106	K070-04	1	NA	11/10/1112:36	11/10/1112:36	RKW182	RKW007	V006K10	Field Sample
MW-70-38-108	K070-05	1	NA	11/10/1113:06	11/10/1113:06	RKW183	RKW007	V006K10	Field Sample
IR-70-FD-107	K070-06	1	NA	11/10/1113:36	11/10/1113:36	RKW184	RKW007	V006K10	Field Sample
MBLK2W	V006K13B	1	NA	11/14/1123:42	11/14/1123:42	RKW256	RKW007	V006K13	Method Blank
LCS2W	V006K13L	1	NA	11/14/1122:09	11/14/1122:09	RKW253	RKW007	V006K13	Lab Control Sample (LCS)
LCD2W	V006K13C	1	NA	11/14/1122:40	11/14/1122:40	RKW254	RKW007	V006K13	LCS Duplicate
MW-70-PMW06A-105DL	K070-03T	100	NA	11/15/1100:13	11/15/1100:13	RKW257	RKW007	V006K13	Diluted Sample
MW-70-PMW06B-106DL	K070-04T	100	NA	11/15/1100:44	11/15/1100:44	RKW258	RKW007	V006K13	Diluted Sample
MW-70-38-108DL	K070-05T	100	NA	11/15/1101:16	11/15/1101:16	RKW259	RKW007	V006K13	Diluted Sample
IR-70-FD-107DL	K070-06T	100	NA	11/15/1101:47	11/15/1101:47	RKW260	RKW007	V006K13	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/10/11 11:04
Sample ID:	IW-70-SAB11-103	Date Analyzed:	11/10/11 11:04
Lab Samp ID:	K070-01	Dilution Factor:	1
Lab File ID:	RKW179	Matrix	: WATER
Ext Btch ID:	V006K10	% Moisture	: NA
Calib. Ref.:	RKW007	Instrument ID	: 06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	0.33J	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	2.6	1.0	0.20
TRANS-1,2-DICHLOROETHENE	1.7	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	0.91	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.98	10.00	89.8	70-140
4-BROMOFLUOROBENZENE	9.85	10.00	98.5	70-130
TOLUENE-D8	10.3	10.00	103	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/10/11 11:36
Sample ID:	IW-70-FSB118-104	Date Analyzed:	11/10/11 11:36
Lab Samp ID:	K070-02	Dilution Factor:	1
Lab File ID:	RKW180	Matrix	: WATER
Ext Btch ID:	V006K10	% Moisture	: NA
Calib. Ref.:	RKW007	Instrument ID	: 06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	2.6	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	2.3	1.0	0.20
TRICHLOROETHENE	2.7J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	10	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.97	10.00	89.7	70-140
4-BROMOFLUOROBENZENE	10.2	10.00	102	70-130
TOLUENE-D8	10.4	10.00	104	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/10/11 12:06
Sample ID:	MW-70-PMW06A-105	Date Analyzed:	11/10/11 12:06
Lab Samp ID:	K070-03	Dilution Factor:	1
Lab File ID:	RKW181	Matrix	: WATER
Ext Btch ID:	V006K10	% Moisture	: NA
Calib. Ref.:	RKW007	Instrument ID	: 06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	1.4	1.0	0.20
1,1-DICHLOROETHENE	8.1	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	630E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	16	1.0	0.20
TRICHLOROETHENE	10	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	740E	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.48	10.00	94.8	70-140
4-BROMOFLUOROBENZENE	10.5	10.00	105	70-130
TOLUENE-D8	10.1	10.00	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/15/11 00:13
Sample ID:	MW-70-PMW06A-105DL	Date Analyzed:	11/15/11 00:13
Lab Samp ID:	K070-03T	Dilution Factor:	100
Lab File ID:	RKW257	Matrix :	WATER
Ext Btch ID:	V006K13	% Moisture :	NA
Calib. Ref.:	RKW007	Instrument ID :	06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	100	20
1,1,1,2-TETRACHLOROETHANE	ND	100	20
1,1,2,2-TETRACHLOROETHANE	ND	100	20
1,1,2-TRICHLOROETHANE	ND	100	20
FREON113	ND	100	30
1,1-DICHLOROETHANE	ND	100	20
1,1-DICHLOROETHENE	ND	50	20
1,1-DICHLOROPROPENE	ND	100	20
1,2-DIBROMO-3-CHLOROPROPANE	ND	200	50
1,2-DIBROMOETHANE	ND	100	20
1,2-DICHLOROBENZENE	ND	100	20
1,2-DICHLOROETHANE	ND	50	20
1,2-DICHLOROPROPANE	ND	100	20
1,2,3-TRICHLOROBENZENE	ND	100	30
1,2,3-TRICHLOROPROPANE	ND	100	50
1,2,4-TRICHLOROBENZENE	ND	100	30
1,2,4-TRIMETHYLBENZENE	ND	100	20
1,3-DICHLOROBENZENE	ND	100	20
1,3,5-TRIMETHYLBENZENE	ND	100	20
1,4-DICHLOROBENZENE	ND	100	20
2-BUTANONE	ND	1000	400
2-CHLOROTOLUENE	ND	100	20
2-HEXANONE	ND	1000	400
2,2-DICHLOROPROPANE	ND	100	20
4-CHLOROTOLUENE	ND	100	20
4-METHYL-2-PENTANONE	ND	1000	400
N-BUTYLBENZENE	ND	100	20
N-PROPYLBENZENE	ND	100	20
P-ISOPROPYLTOLUENE	ND	100	20
SEC-BUTYLBENZENE	ND	100	20
TERT-BUTYLBENZENE	ND	100	20
ACETONE	ND	1000	500
BENZENE	ND	100	20
BROMOBENZENE	ND	100	20
BROMODICHLOROMETHANE	ND	100	20
CIS-1,3-DICHLOROPROPENE	ND	100	20
TRANS-1,3-DICHLOROPROPENE	ND	100	20
BROMOMETHANE	ND	200	30
BROMOFORM	ND	100	30
CARBON DISULFIDE	ND	100	20
CARBON TETRACHLORIDE	ND	50	20
CHLOROBENZENE	ND	100	20
CHLOROETHANE	ND	200	30
CHLOROFORM	ND	100	20
CHLOROMETHANE	ND	200	30
CIS-1,2-DICHLOROETHENE	1800	100	20
DICHLORODIFLUOROMETHANE	ND	200	30
DIBROMOCHLOROMETHANE	ND	100	20
DIBROMOMETHANE	ND	100	20
ETHYLBENZENE	ND	100	20
HEXACHLOROBUTADIENE	ND	100	30
ISOPROPYL BENZENE	ND	100	20
METHYLENE CHLORIDE	ND	100	50
MTBE	ND	100	20
STYRENE	ND	100	20
TETRACHLOROETHYLENE	ND	100	20
TOLUENE	ND	100	20
TRANS-1,2-DICHLOROETHENE	ND	100	20
TRICHLOROETHENE	ND	500	20
TRICHLOROFLUOROMETHANE	ND	200	30
VINYL CHLORIDE	790	50	20
XYLENES (TOTAL)	ND	200	60
M/P-XYLENES	ND	100	40
O-XYLENE	ND	100	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	922	1000	92.2	70-140
4-BROMOFLUOROBENZENE	1020	1000	102	70-130
TOLUENE-D8	1010	1000	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/10/11 12:36
Sample ID:	MW-70-PMW06B-106	Date Analyzed:	11/10/11 12:36
Lab Samp ID:	K070-04	Dilution Factor:	1
Lab File ID:	RKW182	Matrix	: WATER
Ext Btch ID:	V006K10	% Moisture	: NA
Calib. Ref.:	RKW007	Instrument ID	: 06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	1.8	1.0	0.20
1,1-DICHLOROETHENE	8.1	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	360E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	49	1.0	0.20
TRICHLOROETHENE	800E	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	9.1	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.68	10.00	96.8	70-140
4-BROMOFLUOROBENZENE	10.3	10.00	103	70-130
TOLUENE-D8	9.88	10.00	98.8	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/15/11 00:44
Sample ID:	MW-70-PMW06B-106DL	Date Analyzed:	11/15/11 00:44
Lab Samp ID:	K070-04T	Dilution Factor:	100
Lab File ID:	RKW258	Matrix	: WATER
Ext Btch ID:	V006K13	% Moisture	: NA
Calib. Ref.:	RKW007	Instrument ID	: 06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	100	20
1,1,1,2-TETRACHLOROETHANE	ND	100	20
1,1,2,2-TETRACHLOROETHANE	ND	100	20
1,1,2-TRICHLOROETHANE	ND	100	20
FREON113	ND	100	30
1,1-DICHLOROETHANE	ND	100	20
1,1-DICHLOROETHENE	ND	50	20
1,1-DICHLOROPROPENE	ND	100	20
1,2-DIBROMO-3-CHLOROPROPANE	ND	200	50
1,2-DIBROMOETHANE	ND	100	20
1,2-DICHLOROBENZENE	ND	100	20
1,2-DICHLOROETHANE	ND	50	20
1,2-DICHLOROPROPANE	ND	100	20
1,2,3-TRICHLOROBENZENE	ND	100	30
1,2,3-TRICHLOROPROPANE	ND	100	50
1,2,4-TRICHLOROBENZENE	ND	100	30
1,2,4-TRIMETHYLBENZENE	ND	100	20
1,3-DICHLOROBENZENE	ND	100	20
1,3,5-TRIMETHYLBENZENE	ND	100	20
1,4-DICHLOROBENZENE	ND	100	20
2-BUTANONE	ND	1000	400
2-CHLOROTOLUENE	ND	100	20
2-HEXANONE	ND	1000	400
2,2-DICHLOROPROPANE	ND	100	20
4-CHLOROTOLUENE	ND	100	20
4-METHYL-2-PENTANONE	ND	1000	400
N-BUTYLBENZENE	ND	100	20
N-PROPYLBENZENE	ND	100	20
P-ISOPROPYLTOLUENE	ND	100	20
SEC-BUTYLBENZENE	ND	100	20
TERT-BUTYLBENZENE	ND	100	20
ACETONE	ND	1000	500
BENZENE	ND	100	20
BROMOBENZENE	ND	100	20
BROMODICHLOROMETHANE	ND	100	20
CIS-1,3-DICHLOROPROPENE	ND	100	20
TRANS-1,3-DICHLOROPROPENE	ND	100	20
BROMOMETHANE	ND	200	30
BROMOFORM	ND	100	30
CARBON DISULFIDE	ND	100	20
CARBON TETRACHLORIDE	ND	50	20
CHLOROBENZENE	ND	100	20
CHLOROETHANE	ND	200	30
CHLOROFORM	ND	100	20
CHLOROMETHANE	ND	200	30
CIS-1,2-DICHLOROETHENE	550	100	20
DICHLORODIFLUOROMETHANE	ND	200	30
DIBROMOCHLOROMETHANE	ND	100	20
DIBROMOMETHANE	ND	100	20
ETHYLBENZENE	ND	100	20
HEXACHLOROBUTADIENE	ND	100	30
ISOPROPYL BENZENE	ND	100	20
METHYLENE CHLORIDE	ND	100	50
MTBE	ND	100	20
STYRENE	ND	100	20
TETRACHLOROETHYLENE	ND	100	20
TOLUENE	ND	100	20
TRANS-1,2-DICHLOROETHENE	51J	100	20
TRICHLOROETHENE	3800	500	20
TRICHLOROFLUOROMETHANE	ND	200	30
VINYL CHLORIDE	ND	50	20
XYLENES (TOTAL)	ND	200	60
M/P-XYLENES	ND	100	40
O-XYLENE	ND	100	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	952	1000	95.2	70-140
4-BROMOFLUOROBENZENE	1020	1000	102	70-130
TOLUENE-D8	1000	1000	100	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/10/11 13:06
Sample ID:	MW-70-38-108	Date Analyzed:	11/10/11 13:06
Lab Samp ID:	K070-05	Dilution Factor:	1
Lab File ID:	RKW183	Matrix	: WATER
Ext Btch ID:	V006K10	% Moisture	: NA
Calib. Ref.:	RKW007	Instrument ID	: 06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.92J	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	8.7	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	7.4	1.0	0.20
TRICHLOROETHENE	6.7	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	760E	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.59	10.00	95.9	70-140
4-BROMOFLUOROBENZENE	10.1	10.00	101	70-130
TOLUENE-D8	10.1	10.00	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/15/11 01:16
Sample ID:	MW-70-38-108DL	Date Analyzed:	11/15/11 01:16
Lab Samp ID:	K070-05T	Dilution Factor:	100
Lab File ID:	RKW259	Matrix	: WATER
Ext Btch ID:	V006K13	% Moisture	: NA
Calib. Ref.:	RKW007	Instrument ID	: 06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	100	20
1,1,1,2-TETRACHLOROETHANE	ND	100	20
1,1,2,2-TETRACHLOROETHANE	ND	100	20
1,1,2-TRICHLOROETHANE	ND	100	20
FREON113	ND	100	30
1,1-DICHLOROETHANE	ND	100	20
1,1-DICHLOROETHENE	ND	50	20
1,1-DICHLOROPROPENE	ND	100	20
1,2-DIBROMO-3-CHLOROPROPANE	ND	200	50
1,2-DIBROMOETHANE	ND	100	20
1,2-DICHLOROBENZENE	ND	100	20
1,2-DICHLOROETHANE	ND	50	20
1,2-DICHLOROPROPANE	ND	100	20
1,2,3-TRICHLOROBENZENE	ND	100	30
1,2,3-TRICHLOROPROPANE	ND	100	50
1,2,4-TRICHLOROBENZENE	ND	100	30
1,2,4-TRIMETHYLBENZENE	ND	100	20
1,3-DICHLOROBENZENE	ND	100	20
1,3,5-TRIMETHYLBENZENE	ND	100	20
1,4-DICHLOROBENZENE	ND	100	20
2-BUTANONE	ND	1000	400
2-CHLOROTOLUENE	ND	100	20
2-HEXANONE	ND	1000	400
2,2-DICHLOROPROPANE	ND	100	20
4-CHLOROTOLUENE	ND	100	20
4-METHYL-2-PENTANONE	ND	1000	400
N-BUTYLBENZENE	ND	100	20
N-PROPYLBENZENE	ND	100	20
P-ISOPROPYLTOLUENE	ND	100	20
SEC-BUTYLBENZENE	ND	100	20
TERT-BUTYLBENZENE	ND	100	20
ACETONE	ND	1000	500
BENZENE	ND	100	20
BROMOBENZENE	ND	100	20
BROMODICHLOROMETHANE	ND	100	20
CIS-1,3-DICHLOROPROPENE	ND	100	20
TRANS-1,3-DICHLOROPROPENE	ND	100	20
BROMOMETHANE	ND	200	30
BROMOFORM	ND	100	30
CARBON DISULFIDE	ND	100	20
CARBON TETRACHLORIDE	ND	50	20
CHLOROBENZENE	ND	100	20
CHLOROETHANE	ND	200	30
CHLOROFORM	ND	100	20
CHLOROMETHANE	ND	200	30
CIS-1,2-DICHLOROETHENE	ND	100	20
DICHLORODIFLUOROMETHANE	ND	200	30
DIBROMOCHLOROMETHANE	ND	100	20
DIBROMOMETHANE	ND	100	20
ETHYLBENZENE	ND	100	20
HEXACHLOROBUTADIENE	ND	100	30
ISOPROPYL BENZENE	ND	100	20
METHYLENE CHLORIDE	ND	100	50
MTBE	ND	100	20
STYRENE	ND	100	20
TETRACHLOROETHYLENE	ND	100	20
TOLUENE	ND	100	20
TRANS-1,2-DICHLOROETHENE	ND	100	20
TRICHLOROETHENE	ND	500	20
TRICHLOROFLUOROMETHANE	ND	200	30
VINYL CHLORIDE	850	50	20
XYLENES (TOTAL)	ND	200	60
M/P-XYLENES	ND	100	40
O-XYLENE	ND	100	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	986	1000	98.6	70-140
4-BROMOFLUOROBENZENE	1020	1000	102	70-130
TOLUENE-D8	1010	1000	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/10/11 13:36
Sample ID:	IR-70-FD-107	Date Analyzed:	11/10/11 13:36
Lab Samp ID:	K070-06	Dilution Factor:	1
Lab File ID:	RKW184	Matrix :	WATER
Ext Btch ID:	V006K10	% Moisture :	NA
Calib. Ref.:	RKW007	Instrument ID :	06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	1.8	1.0	0.20
1,1-DICHLOROETHENE	8.3	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	360E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	50	1.0	0.20
TRICHLOROETHENE	830E	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	9.4	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.77	10.00	97.7	70-140
4-BROMOFLUOROBENZENE	10.3	10.00	103	70-130
TOLUENE-D8	9.89	10.00	98.9	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/15/11 01:47
Sample ID:	IR-70-FD-107DL	Date Analyzed:	11/15/11 01:47
Lab Samp ID:	K070-06T	Dilution Factor:	100
Lab File ID:	RKW260	Matrix :	WATER
Ext Btch ID:	V006K13	% Moisture :	NA
Calib. Ref.:	RKW007	Instrument ID :	06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	100	20
1,1,1,2-TETRACHLOROETHANE	ND	100	20
1,1,2,2-TETRACHLOROETHANE	ND	100	20
1,1,2-TRICHLOROETHANE	ND	100	20
FREON113	ND	100	30
1,1-DICHLOROETHANE	ND	100	20
1,1-DICHLOROETHENE	ND	50	20
1,1-DICHLOROPROPENE	ND	100	20
1,2-DIBROMO-3-CHLOROPROPANE	ND	200	50
1,2-DIBROMOETHANE	ND	100	20
1,2-DICHLOROBENZENE	ND	100	20
1,2-DICHLOROETHANE	ND	50	20
1,2-DICHLOROPROPANE	ND	100	20
1,2,3-TRICHLOROBENZENE	ND	100	30
1,2,3-TRICHLOROPROPANE	ND	100	50
1,2,4-TRICHLOROBENZENE	ND	100	30
1,2,4-TRIMETHYLBENZENE	ND	100	20
1,3-DICHLOROBENZENE	ND	100	20
1,3,5-TRIMETHYLBENZENE	ND	100	20
1,4-DICHLOROBENZENE	ND	100	20
2-BUTANONE	ND	1000	400
2-CHLOROTOLUENE	ND	100	20
2-HEXANONE	ND	1000	400
2,2-DICHLOROPROPANE	ND	100	20
4-CHLOROTOLUENE	ND	100	20
4-METHYL-2-PENTANONE	ND	1000	400
N-BUTYLBENZENE	ND	100	20
N-PROPYLBENZENE	ND	100	20
P-ISOPROPYLTOLUENE	ND	100	20
SEC-BUTYLBENZENE	ND	100	20
TERT-BUTYLBENZENE	ND	100	20
ACETONE	ND	1000	500
BENZENE	ND	100	20
BROMOBENZENE	ND	100	20
BROMODICHLOROMETHANE	ND	100	20
CIS-1,3-DICHLOROPROPENE	ND	100	20
TRANS-1,3-DICHLOROPROPENE	ND	100	20
BROMOMETHANE	ND	200	30
BROMOFORM	ND	100	30
CARBON DISULFIDE	ND	100	20
CARBON TETRACHLORIDE	ND	50	20
CHLOROBENZENE	ND	100	20
CHLOROETHANE	ND	200	30
CHLOROFORM	ND	100	20
CHLOROMETHANE	ND	200	30
CIS-1,2-DICHLOROETHENE	550	100	20
DICHLORODIFLUOROMETHANE	ND	200	30
DIBROMOCHLOROMETHANE	ND	100	20
DIBROMOMETHANE	ND	100	20
ETHYLBENZENE	ND	100	20
HEXACHLOROBUTADIENE	ND	100	30
ISOPROPYL BENZENE	ND	100	20
METHYLENE CHLORIDE	ND	100	50
MTBE	ND	100	20
STYRENE	ND	100	20
TETRACHLOROETHYLENE	ND	100	20
TOLUENE	ND	100	20
TRANS-1,2-DICHLOROETHENE	52J	100	20
TRICHLOROETHENE	3900	500	20
TRICHLOROFLUOROMETHANE	ND	200	30
VINYL CHLORIDE	ND	50	20
XYLENES (TOTAL)	ND	200	60
M/P-XYLENES	ND	100	40
O-XYLENE	ND	100	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	994	1000	99.4	70-140
4-BROMOFLUOROBENZENE	1020	1000	102	70-130
TOLUENE-D8	1010	1000	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/10/11 10:34
Sample ID:	IR-70-TB-102	Date Analyzed:	11/10/11 10:34
Lab Samp ID:	K070-07	Dilution Factor:	1
Lab File ID:	RKW178	Matrix :	WATER
Ext Btch ID:	V006K10	% Moisture :	NA
Calib. Ref.:	RKW007	Instrument ID :	06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.89	10.00	88.9	70-140
4-BROMOFLUOROBENZENE	10.2	10.00	102	70-130
TOLUENE-D8	10.3	10.00	103	70-140

QC SUMMARIES

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/10/11
Batch No.	: 11K070	Date Extracted:	11/10/11 10:02
Sample ID:	MBLK1W	Date Analyzed:	11/10/11 10:02
Lab Samp ID:	V006K10B	Dilution Factor:	1
Lab File ID:	RKW177	Matrix :	WATER
Ext Btch ID:	V006K10	% Moisture :	NA
Calib. Ref.:	RKW007	Instrument ID :	06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.02	10.00	90.2	70-140
4-BROMOFLUOROBENZENE	10.1	10.00	101	70-130
TOLUENE-D8	10.3	10.00	103	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K070
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	V006K10B	V006K10L	V006K10C		
LAB FILE ID:	RKW177	RKW174	RKW175		
DATE EXTRACTED:	11/10/1110:02	11/10/1108:28	11/10/1109:00	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1110:02	11/10/1108:28	11/10/1109:00	DATE RECEIVED:	11/10/11
PREP. BATCH:	V006K10	V006K10	V006K10		
CALIB. REF:	RKW007	RKW007	RKW007		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.86	99	10.0	9.49	95	4	60-130	30
Benzene	ND	10.0	9.78	98	10.0	9.53	95	3	70-130	30
Chlorobenzene	ND	10.0	10.0	100	10.0	9.93	99	1	70-120	30
Toluene	ND	10.0	9.61	96	10.0	9.44	94	2	70-130	30
Trichloroethene	ND	10.0	10.2	102	10.0	9.89	99	3	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.81	88	10.0	8.78	88	70-140
4-Bromofluorobenzene	10.0	10.1	101	10.0	10.0	100	70-130
Toluene-d8	10.0	10.2	102	10.0	10.2	102	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/14/11
Batch No.	: 11K070	Date Extracted:	11/14/11 23:42
Sample ID:	MBLK2W	Date Analyzed:	11/14/11 23:42
Lab Samp ID:	V006K13B	Dilution Factor:	1
Lab File ID:	RKW256	Matrix :	WATER
Ext Btch ID:	V006K13	% Moisture :	NA
Calib. Ref.:	RKW007	Instrument ID :	06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.43	10.00	94.3	70-140
4-BROMOFLUOROBENZENE	9.98	10.00	99.8	70-130
TOLUENE-D8	10.1	10.00	101	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K070
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	V006K13B	V006K13L	V006K13C		
LAB FILE ID:	RKW256	RKW253	RKW254		
DATE EXTRACTED:	11/14/1123:42	11/14/1122:09	11/14/1122:40	DATE COLLECTED:	NA
DATE ANALYZED:	11/14/1123:42	11/14/1122:09	11/14/1122:40	DATE RECEIVED:	11/14/11
PREP. BATCH:	V006K13	V006K13	V006K13		
CALIB. REF:	RKW007	RKW007	RKW007		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.39	94	10.0	9.24	92	2	60-130	30
Benzene	ND	10.0	9.96	100	10.0	9.91	99	0	70-130	30
Chlorobenzene	ND	10.0	10.2	102	10.0	10.1	101	0	70-120	30
Toluene	ND	10.0	9.75	97	10.0	9.63	96	1	70-130	30
Trichloroethene	ND	10.0	10.1	101	10.0	9.92	99	1	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.96	90	10.0	9.36	94	70-140
4-Bromofluorobenzene	10.0	10.1	101	10.0	10.2	102	70-130
Toluene-d8	10.0	10.0	100	10.0	10.0	100	70-130

INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKW001
Instrument ID: 06
GC Column:RTX502.2ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K070
BFB Injection Date : 11/02/11
BFB Injection Time : 14:51
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.11
75	30.0 - 60.0% of mass 95	45.18
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.93
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	81.39
175	5.0 - 9.0% of mass 174	5.97(7.3)1
176	95.0 - 101.0% of mass 174	79.18(97.3)1
177	5.0 - 9.0% of mass 176	5.67(7.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	V006K021	RKW002	11/02/11	15:26
2	VSTD0.5	V006K022	RKW003	11/02/11	15:56
3	VSTD01	V006K023	RKW004	11/02/11	16:26
4	VSTD02	V006K024	RKW005	11/02/11	16:57
5	VSTD05	V006K025	RKW006	11/02/11	17:27
6	VSTD010	V006K026	RKW007	11/02/11	17:57
7	VSTD020	V006K027	RKW008	11/02/11	18:27
8	VSTD040	V006K029	RKW010	11/02/11	19:28
9	VSTD050	V006K0210	RKW011	11/02/11	19:59
10	VSTD100	V006K0211	RKW012	11/02/11	20:30
11	VSTD010	IV006K0201	RKW015	11/02/11	22:02

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :T006
Beginning DateTime :11/02/11 15:26
Spike Units :PPB
IC File :RKW007

Column Spec :RTX502.2 ID :0.25MM
Ending DateTime :11/02/11 20:30
HPChem Method :V006K02

M	IDX	Parameters	.3 15:26 RKW002	.5 15:56 RKW003	1 16:26 RKW004	2 16:57 RKW005	5 17:27 RKW006	10 17:57 RKW007	20 18:27 RKW008	40 19:28 RKW010	50 19:59 RKW011	100 20:30 RKW012	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	0	8.1195
	2	Dichlorodifluoromethane	0.150	0.222	0.182	0.229	0.245	0.228	0.235	0.233	0.229	0.233	0.219	13.43	1.8893
	3	Chloromethane	------	0.253	0.216	0.272	0.293	0.289	0.292	0.295	0.288	0.304	0.278	9.91	2.1408
	4	Vinyl chloride	------	0.226	0.205	0.249	0.277	0.248	0.231	------	------	------	0.239	10.17	2.2840
	5	Bromomethane	------	0.194	0.171	0.191	0.220	0.223	0.212	0.203	0.212	0.179	0.201	9.04	2.7749
	6	Chloroethane	------	0.178	0.132	0.161	0.188	0.187	0.184	0.178	0.170	0.151	0.170	11.04	2.8756
	7	Dichlorofluoromethane	0.574	0.543	0.523	0.540	0.558	0.570	0.559	0.531	0.507	0.460	0.536	6.33	2.9147
	8	Trichlorofluoromethane	------	0.345	0.249	0.327	0.358	0.329	0.330	0.304	0.295	0.276	0.313	11.12	3.1493
5	9	Acrolein	------	------	0.011	0.010	0.011	0.012	0.012	0.011	0.011	0.010	0.011	5.71	3.6501
5	10	Acetone	------	------	0.049	0.039	0.045	0.047	0.048	0.043	0.042	0.041	0.044	7.89	3.7300
	11	1,1,2-Trichloro-1,2,2-trifluoroethane	------	------	0.174	0.190	0.182	0.179	0.171	0.175	0.167	0.158	0.175	5.59	3.6947
	12	1,1-Dichloroethene	0.488	0.488	0.484	0.520	0.498	0.514	0.511	0.490	0.472	0.457	0.492	3.94	3.8871
5	13	tert-Butyl alcohol	------	------	------	0.010	0.012	0.016	0.018	0.018	0.017	------	0.015	23.18	3.9956
	14	Acetonitrile	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	15	Methyl acetate	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	16	Iodomethane	0.545	0.545	0.611	0.663	0.646	0.642	0.634	0.670	------	------	0.620	7.96	4.2797
	17	Methylene chloride	------	0.658	0.564	0.522	0.472	0.475	0.458	0.451	------	------	0.514	14.55	4.4933
5	18	Acrylonitrile	0.066	0.065	0.061	0.059	0.062	0.064	0.066	0.061	0.059	0.059	0.062	4.44	4.6599
	19	Carbon disulfide	0.638	1.028	1.075	1.082	1.110	1.048	1.046	1.077	1.048	1.015	1.017	13.38	4.5083
	20	tert-Butyl methyl ether (MTBE)	0.643	0.573	0.608	0.632	0.632	0.654	0.650	0.658	0.608	0.617	0.627	4.22	4.6911
	21	trans-1,2-Dichloroethene	0.502	0.511	0.509	0.550	0.521	0.557	0.538	0.536	0.512	0.502	0.524	3.83	4.8739
	22	Isopropyl ether (DIPE)	1.112	1.007	1.089	1.212	1.179	1.246	1.246	1.239	1.166	1.156	1.165	6.70	5.2960
	23	Vinyl acetate	------	0.288	0.284	0.329	0.410	0.400	0.412	0.414	0.386	0.383	0.367	14.44	5.4478
	24	1,1-Dichloroethane	0.590	0.594	0.595	0.661	0.610	0.641	0.633	0.622	0.607	0.598	0.615	3.81	5.4446
	25	2-Butanol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	26	tert-Butyl ethyl ether (ETBE)	0.833	0.772	0.842	0.893	0.918	0.943	0.956	0.978	0.914	0.917	0.896	7.05	5.8473
5	27	2-Butanone	0.088	0.073	0.080	0.076	0.084	0.086	0.091	0.087	0.084	0.085	0.083	6.57	6.0242
	28	2,2-Dichloropropane	0.351	0.316	0.331	0.342	0.321	0.317	0.304	0.296	0.280	0.258	0.312	9.07	6.2173
	29	cis-1,2-Dichloroethene	0.406	0.373	0.404	0.409	0.402	0.410	0.404	0.398	0.382	0.374	0.396	3.62	6.2768
	30	Chloroform	0.577	0.542	0.581	0.617	0.594	0.615	0.601	0.598	0.570	0.562	0.586	4.07	6.4997
	31	Bromochloromethane	0.248	0.253	0.277	0.298	0.295	0.308	0.302	0.302	0.287	0.285	0.286	7.19	6.7375
	32	Tetrahydrofuran	------	------	0.044	0.057	0.044	0.048	0.050	0.051	0.047	0.048	0.049	8.55	6.7857
	33	Dibromofluoromethane	------	------	0.335	0.355	0.362	0.349	0.334	0.342	0.329	0.326	0.341	3.75	6.8118
	34	1,1,1-Trichloroethane	0.447	0.405	0.428	0.451	0.431	0.434	0.420	0.438	0.418	0.410	0.428	3.53	7.0778
	35	Cyclohexane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	36	tert-Amyl methyl ether (TAME)	0.132	0.131	0.146	0.147	0.151	0.156	0.157	0.162	0.150	0.151	0.148	6.73	7.4657
	37	1,2-Dichloroethane-d4	------	------	0.292	0.305	0.315	0.303	0.284	0.297	0.283	0.287	0.296	3.81	7.5399
	38	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	0	13.2169
	39	1,1-Dichloropropene	0.162	0.172	0.172	0.176	0.166	0.174	0.171	0.166	0.163	0.171	0.169	2.79	7.3022
	40	Carbon tetrachloride	0.396	0.409	0.414	0.441	0.411	0.416	0.408	0.402	0.392	0.411	0.410	3.29	7.4493
	41	1,2-Dichloroethane	0.345	0.371	0.384	0.392	0.389	0.413	0.406	0.397	0.377	0.400	0.387	5.02	7.6752
	42	Benzene	1.456	1.396	1.407	1.478	1.400	1.451	1.421	1.373	1.334	1.366	1.408	3.18	7.7020
	43	Trichloroethene	0.398	0.383	0.378	0.411	0.396	0.418	0.418	0.410	0.401	0.420	0.403	3.58	8.6263
	44	Methylcyclohexane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	45	1,2-Dichloropropane	0.361	0.373	0.376	0.391	0.380	0.401	0.395	0.390	0.379	0.396	0.384	3.22	8.9072
20	46	1,4-Dioxane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	47	Bromodichloromethane	0.482	0.483	0.481	0.500	0.491	0.519	0.516	0.509	0.493	0.523	0.500	3.22	9.2787
	48	Dibromomethane	0.194	0.185	0.188	0.199	0.194	0.201	0.201	0.201	0.195	0.203	0.196	3.06	9.3679
	49	2-Chloroethyl vinyl ether	------	------	0.048	0.052	0.060	0.060	0.066	0.079	0.077	------	0.063	18.63	9.7754
5	50	4-Methyl-2-pentanone	0.209	0.215	0.221	0.207	0.229	0.236	0.245	0.226	0.224	0.235	0.225	5.44	9.8182
	51	cis-1,3-Dichloropropene	0.530	0.536	0.550	0.590	0.586	0.618	0.611	0.600	0.580	0.606	0.581	5.45	10.1615
	52	Toluene-d8	------	------	1.232	1.304	1.285	1.241	1.159	1.170	1.165	1.185	1.218	4.63	10.5623
	53	Toluene	1.502	1.417	1.483	1.549	1.473	1.522	1.496	1.444	1.402	1.405	1.469	3.44	10.6965
	54	Ethyl methacrylate	0.378	0.339	0.353	0.351	0.341	0.364	0.361	0.361	0.348	0.356	0.355	3.25	10.9981
	55	trans-1,3-Dichloropropene	0.423	0.382	0.408	0.448	0.453	0.475	0.471	0.464	0.447	0.462	0.444	6.79	11.0085
5	56	2-Hexanone	0.146	0.142	0.145	0.137	0.148	0.151	0.157	0.145	0.143	0.147	0.146	3.69	11.2939
	57	1,1,2-Trichloroethane	0.225	0.244	0.243	0.242	0.238	0.256	0.252	0.248	0.236	0.240	0.242	3.56	11.2775
	58	1,3-Dichloropropane	0.416	0.410	0.433	0.450	0.447	0.472	0.474	0.470	0.449	0.464	0.448	5.10	11.7160

SG 11/6/11

59	Tetrachloroethene	0.309	0.318	0.326	0.353	0.336	0.347	0.341	0.330	0.321	0.323	0.330	4.18	11.8200
60	Dibromochloromethane	0.305	0.296	0.328	0.345	0.339	0.361	0.364	0.363	0.350	0.356	0.341	7.07	12.1766
61	2-Ethyl-1-butanol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
62	1,2-Dibromoethane	0.232	0.237	0.260	0.273	0.273	0.293	0.295	0.297	0.286	0.292	0.274	8.68	12.5348
63	1-Chlorohexane	0.561	0.494	0.500	0.566	0.542	0.552	0.547	0.536	0.524	0.501	0.532	4.96	12.8305
64	Chlorobenzene	0.877	0.892	0.936	1.027	0.986	1.018	1.014	0.999	0.969	0.934	0.965	5.52	13.2912
65	1,1,1,2-Tetrachloroethane	0.336	0.332	0.349	0.358	0.350	0.363	0.353	0.346	0.337	0.321	0.344	3.70	13.3714
66	Ethylbenzene	1.636	1.548	1.639	1.737	1.641	1.661	1.633	1.572	1.521	1.408	1.600	5.69	13.3952
2 67	m-Xylene & p-Xylene	1.252	1.209	1.233	1.341	1.254	1.258	1.232	1.174	1.136	1.010	1.210	7.35	13.5290
68	o-Xylene	1.292	1.245	1.273	1.389	1.321	1.365	1.346	1.321	1.284	1.167	1.300	4.93	14.3463
69	Styrene	0.993	0.957	1.025	1.133	1.103	1.135	1.127	1.105	1.074	0.980	1.063	6.43	14.4058
70	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	0	18.4331
71	Isopropylbenzene	3.355	3.042	3.148	3.567	3.383	3.537	3.461	3.419	3.330	3.280	3.352	4.88	15.0151
72	Bromoform	0.401	0.385	0.404	0.443	0.455	0.484	0.483	0.486	0.461	0.500	0.450	9.03	15.0448
73	1,1,2,2-Tetrachloroethane	0.687	0.590	0.624	0.645	0.636	0.687	0.691	0.704	0.662	0.704	0.663	5.79	15.3569
74	4-Bromofluorobenzene	------	------	1.007	1.045	1.039	1.027	0.977	1.004	0.992	1.022	1.014	2.29	15.4943
75	1,2,3-Trichloropropane	0.175	0.150	0.171	0.166	0.168	0.184	0.181	0.185	0.175	0.189	0.174	6.61	15.6407
76	trans-1,4-Dichloro-2-butene	0.126	0.146	0.162	0.171	0.166	0.179	0.181	0.190	0.177	0.190	0.169	11.80	15.7730
77	n-Propylbenzene	4.081	3.959	4.124	4.532	4.340	4.452	4.396	4.338	4.200	4.106	4.253	4.36	15.7879
78	Bromobenzene	0.913	0.872	0.946	1.022	0.963	1.021	1.004	1.001	0.967	0.982	0.969	5.00	15.8622
79	1,3,5-Trimethylbenzene	2.953	2.641	2.799	3.108	2.995	3.064	3.001	2.938	2.846	2.719	2.906	5.21	16.1000
80	2-Chlorotoluene	2.938	2.812	2.825	3.125	2.961	3.044	2.956	2.889	2.787	2.669	2.901	4.58	16.1178
81	4-Chlorotoluene	2.422	2.243	2.305	2.510	2.404	2.468	2.413	2.426	2.337	2.345	2.387	3.34	16.2188
82	tert-Butylbenzene	0.639	0.595	0.610	0.697	0.674	0.705	0.695	0.684	0.670	0.654	0.662	5.66	16.7850
83	1,2,4-Trimethylbenzene	2.885	2.747	2.901	3.135	3.000	3.091	3.012	2.968	2.861	2.763	2.936	4.39	16.8578
84	sec-Butylbenzene	3.642	3.269	3.494	3.974	3.776	3.879	3.773	3.719	3.620	3.503	3.665	5.64	17.1997
85	p-Isopropyltoluene	3.066	2.764	2.935	3.341	3.192	3.286	3.198	3.157	3.080	2.989	3.101	5.57	17.4805
86	1,3-Dichlorobenzene	1.641	1.538	1.604	1.821	1.779	1.829	1.794	1.779	1.721	1.689	1.720	5.76	17.6455
87	1,4-Dichlorobenzene	1.673	1.545	1.607	1.798	1.731	1.801	1.763	1.759	1.690	1.655	1.702	4.94	17.8536
88	Benzyl chloride	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
89	n-Butylbenzene	2.987	2.591	2.769	3.190	3.049	3.080	3.014	2.980	2.890	2.830	2.938	5.88	18.2251
90	1,2-Dichlorobenzene	1.527	1.331	1.416	1.584	1.517	1.574	1.550	1.547	1.494	1.453	1.499	5.28	18.4777
91	1,2-Dibromo-3-chloropropane	0.107	0.112	0.101	0.125	0.120	0.133	0.137	0.146	0.136	0.144	0.126	12.37	19.5982
92	1,2,4-Trichlorobenzene	0.976	0.847	0.986	1.146	1.154	1.243	1.212	1.247	1.188	1.185	1.118	12.05	20.6860
93	Hexachlorobutadiene	0.718	0.594	0.670	0.779	0.727	0.754	0.703	0.733	0.716	0.700	0.709	7.11	20.8555
94	Naphthalene	1.369	1.251	1.300	1.457	1.504	1.683	1.689	1.732	1.641	1.625	1.525	11.41	21.0189
95	1,2,3-Trichlorobenzene	0.772	0.746	0.837	0.950	0.941	1.031	0.994	1.022	0.968	0.952	0.921	10.99	21.3325

Spike Amount = Nominal Amount * M
Ave_%RSD : 6.7 Max_%RSD : 23.2

Use Least Square Linear Regression with weighting factor of inverse concentration for comps with %_RSD > 15
Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
13	tert-Butyl alcohol	-0.00912	0.01764	0.9982
49	2-Chloroethyl vinyl ether	-0.00474	0.07598	0.9964

SS 11/6/11

2023

SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :T006
IC Beginning DateTime :11/02/11 15:26
Spike Amount :10 PPB
CC/CV File :RKW015
IC File :RKW007

Column Spec :RTX502.2 ID :0.25MM
IC Ending DateTime :11/02/11 20:30
HPChem Method :V006K02
Date_Time :11/02/11 22:02

M	IDX	Parameters	CC_Con	CC% D	CC_Resp	CCRRF	AVRRF	CC_Rtm	AVRtm	% RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	1019912	1	1	8.121	8.120	0				
	2	Dichlorodifluoromethane	10.156	1.6	226488	0.222	0.219	1.883	1.889	13.43				
	3	Chloromethane	10.870	8.7	308169	0.302	0.278	2.135	2.141	9.91				
	4	Vinyl chloride	11.451	14.5	279431	0.274	0.239	2.269	2.284	10.17				
	5	Bromomethane	11.404	14.0	233483	0.229	0.201	2.775	2.775	9.04				
	6	Chloroethane	10.962	9.6	189848	0.186	0.170	2.864	2.876	11.04				
	7	Dichlorofluoromethane	11.085	10.9	606561	0.595	0.536	2.908	2.915	6.33				
	8	Trichlorofluoromethane	10.069	0.7	320976	0.315	0.313	3.142	3.149	11.12				
5	9	Acrolein	53.416	6.8	60332	0.012	0.011	3.648	3.650	5.71				
5	10	Acetone	53.263	6.5	241293	0.047	0.044	3.737	3.730	7.89				
	11	1,1,2-Trichloro-1,2,2-trifluoroethane	10.490	4.9	186815	0.183	0.175	3.692	3.695	5.59				
	12	1,1-Dichloroethene	10.917	9.2	548138	0.537	0.492	3.886	3.887	3.94				
5	13	tert-Butyl alcohol	41.378	-17.2	65159	0.013	0.015	3.990	3.996	23.18	-0.0091	0.0176		0.9982
	14	Acetonitrile												
	15	Methyl acetate												
	16	Iodomethane	11.743	17.4	742150	0.728	0.620	4.287	4.280	7.96				
	17	Methylene chloride	9.641	-3.6	505656	0.496	0.514	4.495	4.493	14.55				
5	18	Acrylonitrile	54.565	9.1	346627	0.068	0.062	4.658	4.660	4.44				
	19	Carbon disulfide	11.048	10.5	1145506	1.123	1.017	4.510	4.508	13.38				
	20	tert-Butyl methyl ether (MTBE)	10.925	9.3	699214	0.686	0.627	4.688	4.691	4.22				
	21	trans-1,2-Dichloroethene	11.003	10.0	587776	0.576	0.524	4.866	4.874	3.83				
	22	Isopropyl ether (DIPE)	11.139	11.4	1323744	1.298	1.165	5.297	5.296	6.70				
	23	Vinyl acetate	10.753	7.5	402910	0.395	0.367	5.446	5.448	14.44				
	24	1,1-Dichloroethane	11.286	12.9	707964	0.694	0.615	5.446	5.445	3.81				
	25	2-Butanol												
	26	tert-Butyl ethyl ether (ETBE)	10.981	9.8	1004005	0.984	0.896	5.847	5.847	7.05				
5	27	2-Butanone	54.090	8.2	460060	0.090	0.083	6.026	6.024	6.57				
	28	2,2-Dichloropropane	10.173	1.7	323267	0.317	0.312	6.219	6.217	9.07				
	29	cis-1,2-Dichloroethene	10.931	9.3	441692	0.433	0.396	6.278	6.277	3.62				
	30	Chloroform	11.001	10.0	657183	0.644	0.586	6.501	6.500	4.07				
	31	Bromochloromethane	11.306	13.1	329274	0.323	0.286	6.739	6.738	7.19				
	32	Tetrahydrofuran	10.650	6.5	52821	0.052	0.049	6.784	6.786	8.55				
	33	Dibromofluoromethane	10.762	7.6	374837	0.368	0.341	6.813	6.812	3.75				
	34	1,1,1-Trichloroethane	10.828	8.3	472958	0.464	0.428	7.081	7.078	3.53				
	35	Cyclohexane												
	36	tert-Amyl methyl ether (TAME)	11.256	12.6	170338	0.167	0.148	7.467	7.466	6.73				
	37	1,2-Dichloroethane-d4	10.839	8.4	327031	0.321	0.296	7.541	7.540	3.81				
	38	CHLOROBENZENE-D5	10.000	0	946933	1	1	13.218	13.217	0				
	39	1,1-Dichloropropene	10.599	6.0	169887	0.179	0.169	7.304	7.302	2.79				
	40	Carbon tetrachloride	10.430	4.3	405074	0.428	0.410	7.452	7.449	3.29				
	41	1,2-Dichloroethane	11.020	10.2	404151	0.427	0.387	7.675	7.675	5.02				
	42	Benzene	10.969	9.7	1462874	1.545	1.408	7.690	7.702	3.18				
	43	Trichloroethene	10.935	9.4	417677	0.441	0.403	8.626	8.626	3.58				
	44	Methylcyclohexane												
	45	1,2-Dichloropropane	10.781	7.8	392295	0.414	0.384	8.909	8.907	3.22				
20	46	1,4-Dioxane												
	47	Bromodichloromethane	10.705	7.0	506363	0.535	0.500	9.265	9.279	3.22				
	48	Dibromomethane	11.073	10.7	205558	0.217	0.196	9.354	9.368	3.06				
	49	2-Chloroethyl vinyl ether	10.192	1.9	68846	0.073	0.063	9.771	9.775	18.63	-0.0047	0.0760		0.9964
5	50	4-Methyl-2-pentanone	55.361	10.7	1177958	0.249	0.225	9.815	9.818	5.44				
	51	cis-1,3-Dichloropropene	10.849	8.5	596706	0.630	0.581	10.157	10.161	5.45				
	52	Toluene-d8	10.817	8.2	1247225	1.317	1.218	10.558	10.562	4.63				
	53	Toluene	11.013	10.1	1532386	1.618	1.469	10.692	10.696	3.44				
	54	Ethyl methacrylate	10.878	8.8	366150	0.387	0.355	10.989	10.998	3.25				
	55	trans-1,3-Dichloropropene	11.109	11.1	466576	0.493	0.444	11.004	11.009	6.79				
5	56	2-Hexanone	55.232	10.5	763444	0.161	0.146	11.286	11.294	3.69				
	57	1,1,2-Trichloroethane	10.906	9.1	250404	0.264	0.242	11.271	11.278	3.56				
	58	1,3-Dichloropropane	11.191	11.9	475235	0.502	0.448	11.717	11.716	5.10				
	59	Tetrachloroethene	10.879	8.8	340412	0.359	0.330	11.821	11.820	4.18				
	60	Dibromochloromethane	10.989	9.9	354557	0.374	0.341	12.178	12.177	7.07				
	61	2-Ethyl-1-butanol												
	62	1,2-Dibromoethane	11.327	13.3	293814	0.310	0.274	12.535	12.535	8.68				
	63	1-Chlorohexane	10.914	9.1	550045	0.581	0.532	12.832	12.830	4.96				
	64	Chlorobenzene	11.191	11.9	1022880	1.080	0.965	13.293	13.291	5.52				
	65	1,1,1,2-Tetrachloroethane	10.918	9.2	356158	0.376	0.344	13.367	13.371	3.70				
	66	Ethylbenzene	11.103	11.0	1681999	1.776	1.600	13.382	13.395	5.69				
2	67	m-Xylene & p-Xylene	22.242	11.2	2548210	1.346	1.210	13.530	13.529	7.35				
	68	o-Xylene	11.188	11.9	1377568	1.455	1.300	14.333	14.346	4.93				
	69	Styrene	11.371	13.7	1144835	1.209	1.063	14.407	14.406	6.43				
	70	1,2-DICHLOROBENZENE-D4	10.000	0	425979	1	1	18.435	18.433	0				
	71	Isopropylbenzene	11.028	10.3	1574721	3.697	3.352	15.017	15.015	4.88				
	72	Bromoform	10.995	9.9	210895	0.495	0.450	15.031	15.045	9.03				
	73	1,1,2,2-Tetrachloroethane	10.832	8.3	305910	0.718	0.663	15.358	15.357	5.79				
	74	4-Bromofluorobenzene	10.663	6.6	460609	1.081	1.014	15.492	15.494	2.29				
	75	1,2,3-Trichloropropane	10.649	6.5	79148	0.186	0.174	15.641	15.641	6.61				
	76	trans-1,4-Dichloro-2-butene	10.965	9.7	78795	0.185	0.169	15.774	15.773	11.80				
	77	n-Propylbenzene	11.029	10.3	1998135	4.691	4.253	15.789	15.788	4.36				
	78	Bromobenzene	10.896	9.0	449757	1.056	0.969	15.864	15.862	5.00				
	79	1,3,5-Trimethylbenzene	10.965	9.7	1357596	3.187	2.906	16.101	16.100	5.21				
	80	2-Chlorotoluene	10.419	4.2	1287455	3.022	2.901	16.116	16.118	4.58				
	81	4-Chlorotoluene	11.572	15.7	1176813	2.763	2.387	16.205	16.219	3.34				
	82	tert-Butylbenzene	11.129	11.3	314010	0.737	0.662	16.785	16.785	5.66				
	83	1,2,4-Trimethylbenzene	11.047	10.5	1381913	3.244	2.936	16.859	16.858	4.39				
	84	sec-Butylbenzene	11.000	10.0	1717272	4.031	3.665	17.201	17.200	5.64				
	85	p-Isopropyltoluene	11.022	10.2	1455919	3.418	3.101	17.469	17.480	5.57				
	86	1,3-Dichlorobenzene	11.111	11.1	813894	1.911	1.720	17.647	17.646	5.76				
	87	1,4-Dichlorobenzene	11.056	10.6	801729	1.882	1.702	17.855	17.854	4.94				
	88	Benzyl chloride												
	89	n-Butylbenzene	11.041	10.4	1381807	3.244	2.938	18.226	18.225	5.88				
	90	1,2-Dichlorobenzene	11.063	10.6	706596	1.659	1.499	18.479	18.478	5.28				
	91	1,2-Dibromo-3-chloropropane	11.485	14.8	61756	0.145	0.126	19.594	19.598	12.37				
	92	1,2,4-Trichlorobenzene	11.351	13.5	540802	1.270	1.118	20.679	20.686	12.05				
	93	Hexachlorobutadiene	10.851	8.5	327952	0.770	0.709	20.857	20.855	7.11				
	94	Naphthalene	11.815	18.1	767647	1.802	1.525	21.020	21.019	11.41				
	95	1,2,3-Trichlorobenzene	11.512	15.1	451803	1.061	0.921	21.333	21.333	10.99				

Spike Amount = Nominal Amount * M

SA 11/6/11

2025

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKW172
Instrument ID: 06
GC Column:RTX502.2ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K070
BFB Injection Date : 11/10/11
BFB Injection Time : 07:10
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.36
75	30.0 - 60.0% of mass 95	42.40
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.43
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	91.21
175	5.0 - 9.0% of mass 174	6.82(7.5)1
176	95.0 - 101.0% of mass 174	90.29(99.0)1
177	5.0 - 9.0% of mass 176	5.87(6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV006K0208	RKW173	11/10/11	07:51
2	MBLK1W	V006K10B	RKW177	11/10/11	10:02
3	LCS1W	V006K10L	RKW174	11/10/11	08:28
4	LCD1W	V006K10C	RKW175	11/10/11	09:00
5	IR-70-TB-102	K070-07	RKW178	11/10/11	10:34
6	IW-70-SAB11-103	K070-01	RKW179	11/10/11	11:04
7	IW-70-FSB118-104	K070-02	RKW180	11/10/11	11:36
8	MW-70-PMW06A-105	K070-03	RKW181	11/10/11	12:06
9	MW-70-PMW06B-106	K070-04	RKW182	11/10/11	12:36
10	MW-70-38-108	K070-05	RKW183	11/10/11	13:06
11	IR-70-FD-107	K070-06	RKW184	11/10/11	13:36

FORM V VOA OLM02.0

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RKW007
Instrument ID: 06
GC Column: RTX502.2 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K070
Date Analyzed: 11/02/11
Time Analyzed: 17:57
Heated Purge: (Y/N) N

	IS1(DBF)		IS2(CBZ)		IS3(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	1102015	8.12	1018501	13.22	450060	18.43
UPPER LIMIT	2204030	8.62	2037002	13.72	900120	18.93
LOWER LIMIT	551008	7.62	509251	12.72	225030	17.93
SAMPLE ID						
1 VSTD010	1403031	8.10	1275596	13.20	547975	18.42
2 MBLK1W	1555465	8.10	1379398	13.20	581647	18.42
3 LCS1W	1491563	8.10	1333374	13.20	569463	18.42
4 LCD1W	1495510	8.11	1352965	13.20	586607	18.42
5 IR-70-TB-102	1552461	8.10	1360359	13.20	570314	18.42
6 IW-70-SAB11-103	1424292	8.10	1232792	13.20	519422	18.42
7 IW-70-FSB118-104	1502954	8.11	1303146	13.20	544689	18.42
8 MW-70-PMW06A-105	1451575	8.11	1333947	13.22	556330	18.42
9 MW-70-PMW06B-106	1475839	8.12	1335012	13.22	562356	18.42
10 MW-70-38-108	1410052	8.12	1265040	13.22	539683	18.43
11 IR-70-FD-107	1424866	8.12	1270380	13.22	539289	18.43

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K10\RKW173.D Vial: 2
Acq On : 10 Nov 2011 7:51 am Operator: SD
Sample : CVO06K0208 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	127	-0.01
2	T,M	Dichlorodifluoromethane	10.000	10.196	-2.0	124	-0.01
3	P,T,M	Chloromethane	10.000	10.679	-6.8	131	-0.01
4	C,T,M	Vinyl chloride	10.000	10.431	-4.3	128	-0.01
5	T,M	Bromomethane	10.000	10.422	-4.2	119	-0.01
6	T,M	Chloroethane	10.000	11.065	-10.6	128	0.00
7	T,M	Dichlorofluoromethane	10.000	10.392	-3.9	125	-0.01
8	T,M	Trichlorofluoromethane	10.000	9.439	5.6	114	-0.01
9	T,M	Acrolein	50.000	34.845	30.3#	85	-0.01
10	T,M	Acetone	50.000	44.459	11.1	107	-0.01
11	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.558	4.4	119	-0.03
12	C,T,M	1,1-Dichloroethene	10.000	10.138	-1.4	124	-0.01
13	T,M	tert-Butyl alcohol	50.000	43.706	12.6	108	-0.01
14	T,M	Acetonitrile	-1.000	0.000	0.0	0	0.00
15	T,M	Methyl acetate	-1.000	0.000	0.0	0	0.00
16	T,M	Iodomethane	10.000	9.198	8.0	113	-0.01
17	T,M	Methylene chloride	10.000	8.783	12.2	121	-0.01
18	T,M	Acrylonitrile	50.000	47.521	5.0	117	-0.01
19	T,M	Carbon disulfide	10.000	10.841	-8.4	134	-0.01
20	T,M	tert-Butyl methyl ether (MT	10.000	8.962	10.4	109	-0.01
21	T,M	trans-1,2-Dichloroethene	10.000	10.024	-0.2	120	-0.01
22	T,M	Isopropyl ether (DIPE)	10.000	10.306	-3.1	123	-0.01
23	T,M	Vinyl acetate	10.000	10.395	-3.9	121	-0.01
24	P,T,M	1,1-Dichloroethane	10.000	9.963	0.4	122	-0.01
25	T,M	2-Butanol	-1.000	0.000	0.0	0	-5.87#
26	T,M	tert-Butyl ethyl ether (ETB	10.000	9.190	8.1	111	-0.01
27	T,M	2-Butanone	50.000	46.464	7.1	114	-0.01
28	T,M	2,2-Dichloropropane	10.000	9.587	4.1	120	-0.01
29	T,M	cis-1,2-Dichloroethene	10.000	9.937	0.6	122	-0.01
30	C,T,M	Chloroform	10.000	9.556	4.4	116	-0.01
31	T,M	Bromochloromethane	10.000	10.235	-2.3	121	-0.01
32	T,M	Tetrahydrofuran	10.000	9.719	2.8	124	-0.01
33	S	Dibromofluoromethane	10.000	9.707	2.9	121	-0.01
34	T,M	1,1,1-Trichloroethane	10.000	9.218	7.8	116	-0.01
35	T,M	Cyclohexane	-1.000	0.000	0.0	0	0.00
36	T,M	tert-Amyl methyl ether (TAM	10.000	8.665	13.4	105	-0.01
37	S	1,2-Dichloroethane-d4	10.000	8.944	10.6	111	-0.01
38	I	CHLOROBENZENE-D5	10.000	10.000	0.0	125	-0.01
39	T,M	1,1-Dichloropropene	10.000	10.265	-2.7	125	-0.01
40	T,M	Carbon tetrachloride	10.000	9.205	7.9	114	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K10\RKW173.D Vial: 2
Acq On : 10 Nov 2011 7:51 am Operator: SD
Sample : CVO06K0208 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	1,2-Dichloroethane	10.000	9.229	7.7	108	-0.01
42	T,M	Benzene	10.000	10.178	-1.8	124	-0.01
43	T,M	Trichloroethene	10.000	10.023	-0.2	121	-0.01
44	T,M	Methylcyclohexane	-1.000	0.000	0.0	0	0.00
45	C,T,M	1,2-Dichloropropane	10.000	10.286	-2.9	124	-0.01
46	T,M	1,4-Dioxane	-1.000	0.000	0.0	0	0.00
47	T,M	Bromodichloromethane	10.000	9.303	7.0	112	-0.01
48	T,M	Dibromomethane	10.000	9.445	5.5	115	-0.01
49	T,M	2-Chloroethyl vinyl ether	10.000	8.087	19.1	119	-0.01
50	T,M	4-Methyl-2-pentanone	50.000	48.336	3.3	115	-0.01
51	T,M	cis-1,3-Dichloropropene	10.000	9.854	1.5	116	-0.01
52	S	Toluene-d8	10.000	10.104	-1.0	124	-0.01
53	C,T,M	Toluene	10.000	10.063	-0.6	122	-0.01
54	T,M	Ethyl methacrylate	10.000	9.361	6.4	114	-0.01
55	T,M	trans-1,3-Dichloropropene	10.000	9.401	6.0	110	-0.01
56	T,M	2-Hexanone	50.000	47.232	5.5	114	-0.01
57	T,M	1,1,2-Trichloroethane	10.000	9.852	1.5	117	-0.03
58	T,M	1,3-Dichloropropane	10.000	9.922	0.8	118	-0.01
59	T,M	Tetrachloroethene	10.000	10.135	-1.3	121	-0.01
60	T,M	Dibromochloromethane	10.000	9.106	8.9	108	-0.01
61	T,M	2-Ethyl-1-butanol	-1.000	0.000	0.0	0	0.00
62	T,M	1,2-Dibromoethane	10.000	9.694	3.1	113	-0.01
63	T,M	1-Chlorohexane	10.000	10.589	-5.9	128	-0.01
64	P, T,M	Chlorobenzene	10.000	10.053	-0.5	119	-0.01
65	T,M	1,1,1,2-Tetrachloroethane	10.000	9.458	5.4	112	-0.01
66	C,T,M	Ethylbenzene	10.000	10.109	-1.1	122	-0.01
67	T,M	m-Xylene & p-Xylene	20.000	19.921	0.4	120	-0.01
68	T,M	o-Xylene	10.000	9.914	0.9	118	-0.03
69	T,M	Styrene	10.000	10.012	-0.1	117	-0.01
70	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	122	-0.01
71	T,M	Isopropylbenzene	10.000	10.544	-5.4	122	-0.01
72	P,T,M	Bromoform	10.000	9.165	8.4	104	-0.03
73	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.095	-1.0	119	-0.01
74	S	4-Bromofluorobenzene	10.000	10.116	-1.2	122	-0.01
75	T,M	1,2,3-Trichloropropane	10.000	9.499	5.0	110	-0.01
76	T,M	trans-1,4-Dichloro-2-butene	10.000	9.288	7.1	107	-0.01
77	T,M	n-Propylbenzene	10.000	10.677	-6.8	124	-0.01
78	T,M	Bromobenzene	10.000	9.912	0.9	114	-0.01
79	T,M	1,3,5-Trimethylbenzene	10.000	10.356	-3.6	120	-0.01
80	T,M	2-Chlorotoluene	10.000	9.731	2.7	113	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K10\RKW173.D Vial: 2
Acq On : 10 Nov 2011 7:51 am Operator: SD
Sample : CVO06K0208 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	10.000	10.619	-6.2	125	-0.01
82	T,M	tert-Butylbenzene	10.000	10.725	-7.2	123	-0.01
83	T,M	1,2,4-Trimethylbenzene	10.000	10.218	-2.2	118	-0.01
84	T,M	sec-Butylbenzene	10.000	10.833	-8.3	125	-0.01
85	T,M	p-Isopropyltoluene	10.000	10.559	-5.6	121	-0.01
86	T,M	1,3-Dichlorobenzene	10.000	10.200	-2.0	117	-0.01
87	T,M	1,4-Dichlorobenzene	10.000	10.038	-0.4	116	-0.01
88	T,M	Benzyl chloride	-1.000	0.000	0.0	0	0.00
89	T,M	n-Butylbenzene	10.000	10.766	-7.7	125	-0.01
90	T,M	1,2-Dichlorobenzene	10.000	9.861	1.4	114	-0.01
91	T,M	1,2-Dibromo-3-chloropropane	10.000	9.286	7.1	108	0.00
92	T,M	1,2,4-Trichlorobenzene	10.000	10.066	-0.7	110	-0.01
93	T,M	Hexachlorobutadiene	10.000	9.781	2.2	112	-0.01
94	T,M	Naphthalene	10.000	9.768	2.3	108	-0.01
95	T,M	1,2,3-Trichlorobenzene	10.000	9.897	1.0	108	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K10\RKW173.D Vial: 2
Acq On : 10 Nov 2011 7:51 am Operator: SD
Sample : CVO06K0208 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	127	-0.01
2	T,M	Dichlorodifluoromethane	0.219	0.223	-1.8	124	-0.01
3	P,T,M	Chloromethane	0.278	0.297	-6.8	131	-0.01
4	C,T,M	Vinyl chloride	0.239	0.250	-4.6	128	-0.01
5	T,M	Bromomethane	0.201	0.209	-4.0	119	-0.01
6	T,M	Chloroethane	0.170	0.188	-10.6	128	0.00
7	T,M	Dichlorofluoromethane	0.536	0.557	-3.9	125	-0.01
8	T,M	Trichlorofluoromethane	0.313	0.295	5.8	114	-0.01
9	T,M	Acrolein	0.011	0.008	27.3#	85	-0.01
10	T,M	Acetone	0.044	0.039	11.4	107	-0.01
11	T,M	1,1,2-Trichloro-1,2,2-trifl	0.175	0.167	4.6	119	-0.03
12	C,T,M	1,1-Dichloroethene	0.492	0.499	-1.4	124	-0.01
13	T,M	tert-Butyl alcohol	0.015	0.014	6.7	108	-0.01
14	T,M	Acetonitrile	0.000	0.000	0.0	0#	0.00
15	T,M	Methyl acetate	0.000	0.000	0.0	0#	0.00
16	T,M	Iodomethane	0.620	0.570	8.1	113	-0.01
17	T,M	Methylene chloride	0.514	0.452	12.1	121	-0.01
18	T,M	Acrylonitrile	0.062	0.059	4.8	117	-0.01
19	T,M	Carbon disulfide	1.017	1.102	-8.4	134	-0.01
20	T,M	tert-Butyl methyl ether (MT	0.627	0.562	10.4	109	-0.01
21	T,M	trans-1,2-Dichloroethene	0.524	0.525	-0.2	120	-0.01
22	T,M	Isopropyl ether (DIPE)	1.165	1.201	-3.1	123	-0.01
23	T,M	Vinyl acetate	0.367	0.382	-4.1	121	-0.01
24	P,T,M	1,1-Dichloroethane	0.615	0.613	0.3	122	-0.01
25	T,M	2-Butanol	0.000	0.000	0.0	0#	-5.87#
26	T,M	tert-Butyl ethyl ether (ETB	0.896	0.824	8.0	111	-0.01
27	T,M	2-Butanone	0.083	0.077	7.2	114	-0.01
28	T,M	2,2-Dichloropropane	0.312	0.299	4.2	120	-0.01
29	T,M	cis-1,2-Dichloroethene	0.396	0.394	0.5	122	-0.01
30	C,T,M	Chloroform	0.586	0.560	4.4	116	-0.01
31	T,M	Bromochloromethane	0.286	0.292	-2.1	121	-0.01
32	T,M	Tetrahydrofuran	0.049	0.047	4.1	124	-0.01
33	S	Dibromofluoromethane	0.341	0.331	2.9	121	-0.01
34	T,M	1,1,1-Trichloroethane	0.428	0.395	7.7	116	-0.01
35	T,M	Cyclohexane	0.000	0.000	0.0	0#	0.00
36	T,M	tert-Amyl methyl ether (TAM	0.148	0.129	12.8	105	-0.01
37	S	1,2-Dichloroethane-d4	0.296	0.265	10.5	111	-0.01
38	I	CHLOROBENZENE-D5	1.000	1.000	0.0	125	-0.01
39	T,M	1,1-Dichloropropene	0.169	0.174	-3.0	125	-0.01
40	T,M	Carbon tetrachloride	0.410	0.377	8.0	114	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K10\RKW173.D Vial: 2
Acq On : 10 Nov 2011 7:51 am Operator: SD
Sample : CVO06K0208 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	1,2-Dichloroethane	0.387	0.357	7.8	108	-0.01
42	T,M	Benzene	1.408	1.433	-1.8	124	-0.01
43	T,M	Trichloroethene	0.403	0.404	-0.2	121	-0.01
44	T,M	Methylcyclohexane	0.000	0.000	0.0	0#	0.00
45	C,T,M	1,2-Dichloropropane	0.384	0.395	-2.9	124	-0.01
46	T,M	1,4-Dioxane	0.000	0.000	0.0	0#	0.00
47	T,M	Bromodichloromethane	0.500	0.465	7.0	112	-0.01
48	T,M	Dibromomethane	0.196	0.185	5.6	115	-0.01
49	T,M	2-Chloroethyl vinyl ether	0.063	0.057	9.5	119	-0.01
50	T,M	4-Methyl-2-pentanone	0.225	0.217	3.6	115	-0.01
51	T,M	cis-1,3-Dichloropropene	0.581	0.572	1.5	116	-0.01
52	S	Toluene-d8	1.218	1.230	-1.0	124	-0.01
53	C,T,M	Toluene	1.469	1.479	-0.7	122	-0.01
54	T,M	Ethyl methacrylate	0.355	0.333	6.2	114	-0.01
55	T,M	trans-1,3-Dichloropropene	0.444	0.417	6.1	110	-0.01
56	T,M	2-Hexanone	0.146	0.138	5.5	114	-0.01
57	T,M	1,1,2-Trichloroethane	0.242	0.239	1.2	117	-0.03
58	T,M	1,3-Dichloropropane	0.448	0.445	0.7	118	-0.01
59	T,M	Tetrachloroethene	0.330	0.335	-1.5	121	-0.01
60	T,M	Dibromochloromethane	0.341	0.310	9.1	108	-0.01
61	T,M	2-Ethyl-1-butanol	0.000	0.000	0.0	0#	0.00
62	T,M	1,2-Dibromoethane	0.274	0.266	2.9	113	-0.01
63	T,M	1-Chlorohexane	0.532	0.564	-6.0	128	-0.01
64	P, T,M	Chlorobenzene	0.965	0.970	-0.5	119	-0.01
65	T,M	1,1,1,2-Tetrachloroethane	0.344	0.326	5.2	112	-0.01
66	C,T,M	Ethylbenzene	1.600	1.617	-1.1	122	-0.01
67	T,M	m-Xylene & p-Xylene	1.210	1.205	0.4	120	-0.01
68	T,M	o-Xylene	1.300	1.289	0.8	118	-0.03
69	T,M	Styrene	1.063	1.064	-0.1	117	-0.01
70	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	122	-0.01
71	T,M	Isopropylbenzene	3.352	3.534	-5.4	122	-0.01
72	P,T,M	Bromoform	0.450	0.413	8.2	104	-0.03
73	P,T,M	1,1,2,2-Tetrachloroethane	0.663	0.669	-0.9	119	-0.01
74	S	4-Bromofluorobenzene	1.014	1.026	-1.2	122	-0.01
75	T,M	1,2,3-Trichloropropane	0.174	0.166	4.6	110	-0.01
76	T,M	trans-1,4-Dichloro-2-butene	0.169	0.157	7.1	107	-0.01
77	T,M	n-Propylbenzene	4.253	4.541	-6.8	124	-0.01
78	T,M	Bromobenzene	0.969	0.960	0.9	114	-0.01
79	T,M	1,3,5-Trimethylbenzene	2.906	3.010	-3.6	120	-0.01
80	T,M	2-Chlorotoluene	2.901	2.823	2.7	113	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K10\RKW173.D Vial: 2
Acq On : 10 Nov 2011 7:51 am Operator: SD
Sample : CVO06K0208 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	2.387	2.535	-6.2	125	-0.01
82	T,M	tert-Butylbenzene	0.662	0.710	-7.3	123	-0.01
83	T,M	1,2,4-Trimethylbenzene	2.936	3.000	-2.2	118	-0.01
84	T,M	sec-Butylbenzene	3.665	3.970	-8.3	125	-0.01
85	T,M	p-Isopropyltoluene	3.101	3.274	-5.6	121	-0.01
86	T,M	1,3-Dichlorobenzene	1.720	1.754	-2.0	117	-0.01
87	T,M	1,4-Dichlorobenzene	1.702	1.709	-0.4	116	-0.01
88	T,M	Benzyl chloride	0.000	0.000	0.0	0#	0.00
89	T,M	n-Butylbenzene	2.938	3.163	-7.7	125	-0.01
90	T,M	1,2-Dichlorobenzene	1.499	1.478	1.4	114	-0.01
91	T,M	1,2-Dibromo-3-chloropropane	0.126	0.117	7.1	108	0.00
92	T,M	1,2,4-Trichlorobenzene	1.118	1.126	-0.7	110	-0.01
93	T,M	Hexachlorobutadiene	0.709	0.694	2.1	112	-0.01
94	T,M	Naphthalene	1.525	1.490	2.3	108	-0.01
95	T,M	1,2,3-Trichlorobenzene	0.921	0.912	1.0	108	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKW251
Instrument ID: 06
GC Column:RTX502.2ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K070
BFB Injection Date : 11/14/11
BFB Injection Time : 21:08
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.27
75	30.0 - 60.0% of mass 95	43.53
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.85
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	85.34
175	5.0 - 9.0% of mass 174	6.35(7.4)1
176	95.0 - 101.0% of mass 174	83.32(97.6)1
177	5.0 - 9.0% of mass 176	5.58(6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV006K0211	RKW252	11/14/11	21:37
2	MBLK2W	V006K13B	RKW256	11/14/11	23:42
3	LCS2W	V006K13L	RKW253	11/14/11	22:09
4	LCD2W	V006K13C	RKW254	11/14/11	22:40
5	MW-70-PMW06A-105DL	K070-03T	RKW257	11/15/11	00:13
6	MW-70-PMW06B-106DL	K070-04T	RKW258	11/15/11	00:44
7	MW-70-38-108DL	K070-05T	RKW259	11/15/11	01:16
8	IR-70-FO-107DL	K070-06T	RKW260	11/15/11	01:47

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RKW007
Instrument ID: 06
GC Column: RTX502.2 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K070
Date Analyzed: 11/02/11
Time Analyzed: 17:57
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1102015	8.12	1018501	13.22	450060	18.43
	UPPER LIMIT	2204030	8.62	2037002	13.72	900120	18.93
	LOWER LIMIT	551008	7.62	509251	12.72	225030	17.93
	SAMPLE ID						
1	VSTD010	1467976	8.12	1338639	13.23	574423	18.43
2	MBLK2W	1518357	8.12	1366932	13.23	583887	18.43
3	LCS2W	1457981	8.13	1337085	13.23	576806	18.45
4	LCD2W	1468155	8.12	1353699	13.23	583445	18.43
5	MW-70-PMW06A-105DL	1518604	8.12	1361876	13.23	565280	18.43
6	MW-70-PMW06B-106DL	1475143	8.12	1328027	13.23	560834	18.43
7	MW-70-38-108DL	1385195	8.13	1253497	13.23	528149	18.43
8	IR-70-FD-107DL	1420992	8.12	1276025	13.22	539231	18.43

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW252.D Vial: 2
Acq On : 14 Nov 2011 9:37 pm Operator: SD
Sample : CVO06K0211 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	133	0.00
2	T,M	Dichlorodifluoromethane	10.000	9.101	9.0	116	0.00
3	P,T,M	Chloromethane	10.000	10.544	-5.4	135	0.00
4	C,T,M	Vinyl chloride	10.000	10.014	-0.1	129	0.00
5	T,M	Bromomethane	10.000	10.490	-4.9	126	0.00
6	T,M	Chloroethane	10.000	11.104	-11.0	135	0.00
7	T,M	Dichlorofluoromethane	10.000	10.273	-2.7	129	0.00
8	T,M	Trichlorofluoromethane	10.000	8.969	10.3	113	0.00
9	T,M	Acrolein	50.000	42.312	15.4	108	0.00
10	T,M	Acetone	50.000	44.020	12.0	111	-0.01
11	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	8.191	18.1	107	0.00
12	C,T,M	1,1-Dichloroethene	10.000	9.701	3.0	124	0.00
13	T,M	tert-Butyl alcohol	50.000	44.093	11.8	114	0.00
14	T,M	Acetonitrile	-1.000	0.000	0.0	0	0.00
15	T,M	Methyl acetate	-1.000	0.000	0.0	0	0.00
16	T,M	Iodomethane	10.000	8.936	10.6	115	0.00
17	T,M	Methylene chloride	10.000	9.079	9.2	131	0.00
18	T,M	Acrylonitrile	50.000	50.413	-0.8	130	0.00
19	T,M	Carbon disulfide	10.000	9.988	0.1	129	0.00
20	T,M	tert-Butyl methyl ether (MT	10.000	8.822	11.8	113	0.00
21	T,M	trans-1,2-Dichloroethene	10.000	10.015	-0.2	126	0.00
22	T,M	Isopropyl ether (DIPE)	10.000	10.833	-8.3	135	0.00
23	T,M	Vinyl acetate	10.000	9.905	1.0	121	0.00
24	P,T,M	1,1-Dichloroethane	10.000	10.444	-4.4	134	0.00
25	T,M	2-Butanol	-1.000	0.000	0.0	0	-5.87#
26	T,M	tert-Butyl ethyl ether (ETB	10.000	9.156	8.4	116	0.00
27	T,M	2-Butanone	50.000	47.889	4.2	123	0.00
28	T,M	2,2-Dichloropropane	10.000	8.301	17.0	109	0.00
29	T,M	cis-1,2-Dichloroethene	10.000	10.118	-1.2	130	0.00
30	C,T,M	Chloroform	10.000	9.760	2.4	124	0.00
31	T,M	Bromochloromethane	10.000	10.509	-5.1	130	0.00
32	T,M	Tetrahydrofuran	10.000	9.947	0.5	133	0.00
33	S	Dibromofluoromethane	10.000	9.843	1.6	128	0.00
34	T,M	1,1,1-Trichloroethane	10.000	8.474	15.3	111	0.00
35	T,M	Cyclohexane	-1.000	0.000	0.0	0	0.00
36	T,M	tert-Amyl methyl ether (TAM	10.000	8.443	15.6	107	0.00
37	S	1,2-Dichloroethane-d4	10.000	9.037	9.6	118	0.00
38	I	CHLOROBENZENE-D5	10.000	10.000	0.0	131	0.02
39	T,M	1,1-Dichloropropene	10.000	9.652	3.5	124	0.00
40	T,M	Carbon tetrachloride	10.000	8.194	18.1	106	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW252.D Vial: 2
Acq On : 14 Nov 2011 9:37 pm Operator: SD
Sample : CVO06K0211 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	1,2-Dichloroethane	10.000	9.253	7.5	114	0.00
42	T,M	Benzene	10.000	10.269	-2.7	131	0.00
43	T,M	Trichloroethene	10.000	9.592	4.1	122	0.00
44	T,M	Methylcyclohexane	-1.000	0.000	0.0	0	0.00
45	C,T,M	1,2-Dichloropropane	10.000	10.566	-5.7	133	0.00
46	T,M	1,4-Dioxane	-1.000	0.000	0.0	0	0.00
47	T,M	Bromodichloromethane	10.000	9.423	5.8	119	0.00
48	T,M	Dibromomethane	10.000	9.437	5.6	121	0.00
49	T,M	2-Chloroethyl vinyl ether	10.000	8.834	11.7	137	0.00
50	T,M	4-Methyl-2-pentanone	50.000	49.826	0.3	124	0.00
51	T,M	cis-1,3-Dichloropropene	10.000	9.699	3.0	120	0.02
52	S	Toluene-d8	10.000	10.044	-0.4	129	0.02
53	C,T,M	Toluene	10.000	10.047	-0.5	128	0.02
54	T,M	Ethyl methacrylate	10.000	9.249	7.5	119	0.00
55	T,M	trans-1,3-Dichloropropene	10.000	9.210	7.9	113	0.02
56	T,M	2-Hexanone	50.000	48.207	3.6	122	0.02
57	T,M	1,1,2-Trichloroethane	10.000	9.635	3.7	120	0.00
58	T,M	1,3-Dichloropropane	10.000	9.786	2.1	122	0.00
59	T,M	Tetrachloroethene	10.000	9.307	6.9	116	0.00
60	T,M	Dibromochloromethane	10.000	8.977	10.2	111	0.00
61	T,M	2-Ethyl-1-butanol	-1.000	0.000	0.0	0	0.00
62	T,M	1,2-Dibromoethane	10.000	9.519	4.8	117	0.00
63	T,M	1-Chlorohexane	10.000	9.697	3.0	123	0.00
64	P, T,M	Chlorobenzene	10.000	10.027	-0.3	125	0.00
65	T,M	1,1,1,2-Tetrachloroethane	10.000	9.449	5.5	118	0.02
66	C,T,M	Ethylbenzene	10.000	10.010	-0.1	127	0.00
67	T,M	m-Xylene & p-Xylene	20.000	19.524	2.4	123	0.00
68	T,M	o-Xylene	10.000	9.888	1.1	124	0.00
69	T,M	Styrene	10.000	10.040	-0.4	124	0.02
70	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	128	0.00
71	T,M	Isopropylbenzene	10.000	10.161	-1.6	123	0.02
72	P,T,M	Bromoform	10.000	8.747	12.5	104	0.00
73	P,T,M	1,1,2,2-Tetrachloroethane	10.000	9.802	2.0	121	0.00
74	S	4-Bromofluorobenzene	10.000	10.102	-1.0	127	0.02
75	T,M	1,2,3-Trichloropropane	10.000	9.200	8.0	111	0.00
76	T,M	trans-1,4-Dichloro-2-butene	10.000	8.863	11.4	107	0.02
77	T,M	n-Propylbenzene	10.000	10.276	-2.8	125	0.00
78	T,M	Bromobenzene	10.000	9.803	2.0	119	0.00
79	T,M	1,3,5-Trimethylbenzene	10.000	10.050	-0.5	122	0.00
80	T,M	2-Chlorotoluene	10.000	9.878	1.2	120	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW252.D Vial: 2
Acq On : 14 Nov 2011 9:37 pm Operator: SD
Sample : CVO06K0211 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	10.000	10.189	-1.9	126	0.00
82	T,M	tert-Butylbenzene	10.000	10.308	-3.1	124	0.00
83	T,M	1,2,4-Trimethylbenzene	10.000	10.082	-0.8	122	0.00
84	T,M	sec-Butylbenzene	10.000	10.264	-2.6	124	0.00
85	T,M	p-Isopropyltoluene	10.000	10.072	-0.7	121	0.02
86	T,M	1,3-Dichlorobenzene	10.000	10.076	-0.8	121	0.00
87	T,M	1,4-Dichlorobenzene	10.000	9.868	1.3	119	0.00
88	T,M	Benzyl chloride	-1.000	0.000	0.0	0	0.00
89	T,M	n-Butylbenzene	10.000	10.313	-3.1	126	0.00
90	T,M	1,2-Dichlorobenzene	10.000	9.860	1.4	120	0.00
91	T,M	1,2-Dibromo-3-chloropropane	10.000	9.019	9.8	110	0.02
92	T,M	1,2,4-Trichlorobenzene	10.000	10.114	-1.1	116	0.00
93	T,M	Hexachlorobutadiene	10.000	9.491	5.1	114	0.02
94	T,M	Naphthalene	10.000	9.978	0.2	115	0.00
95	T,M	1,2,3-Trichlorobenzene	10.000	10.139	-1.4	116	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW252.D Vial: 2
Acq On : 14 Nov 2011 9:37 pm Operator: SD
Sample : CVO06K0211 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	133	0.00
2	T,M	Dichlorodifluoromethane	0.219	0.199	9.1	116	0.00
3	P,T,M	Chloromethane	0.278	0.293	-5.4	135	0.00
4	C,T,M	Vinyl chloride	0.239	0.240	-0.4	129	0.00
5	T,M	Bromomethane	0.201	0.211	-5.0	126	0.00
6	T,M	Chloroethane	0.170	0.189	-11.2	135	0.00
7	T,M	Dichlorofluoromethane	0.536	0.551	-2.8	129	0.00
8	T,M	Trichlorofluoromethane	0.313	0.280	10.5	113	0.00
9	T,M	Acrolein	0.011	0.009	18.2	108	0.00
10	T,M	Acetone	0.044	0.039	11.4	111	-0.01
11	T,M	1,1,2-Trichloro-1,2,2-trifl	0.175	0.143	18.3	107	0.00
12	C,T,M	1,1-Dichloroethene	0.492	0.478	2.8	124	0.00
13	T,M	tert-Butyl alcohol	0.015	0.014	6.7	114	0.00
14	T,M	Acetonitrile	0.000	0.000	0.0	0#	0.00
15	T,M	Methyl acetate	0.000	0.000	0.0	0#	0.00
16	T,M	Iodomethane	0.620	0.554	10.6	115	0.00
17	T,M	Methylene chloride	0.514	0.467	9.1	131	0.00
18	T,M	Acrylonitrile	0.062	0.063	-1.6	130	0.00
19	T,M	Carbon disulfide	1.017	1.015	0.2	129	0.00
20	T,M	tert-Butyl methyl ether (MT	0.627	0.554	11.6	113	0.00
21	T,M	trans-1,2-Dichloroethene	0.524	0.525	-0.2	126	0.00
22	T,M	Isopropyl ether (DIPE)	1.165	1.262	-8.3	135	0.00
23	T,M	Vinyl acetate	0.367	0.364	0.8	121	0.00
24	P,T,M	1,1-Dichloroethane	0.615	0.642	-4.4	134	0.00
25	T,M	2-Butanol	0.000	0.000	0.0	0#	-5.87#
26	T,M	tert-Butyl ethyl ether (ETB	0.896	0.821	8.4	116	0.00
27	T,M	2-Butanone	0.083	0.080	3.6	123	0.00
28	T,M	2,2-Dichloropropane	0.312	0.259	17.0	109	0.00
29	T,M	cis-1,2-Dichloroethene	0.396	0.401	-1.3	130	0.00
30	C,T,M	Chloroform	0.586	0.572	2.4	124	0.00
31	T,M	Bromochloromethane	0.286	0.300	-4.9	130	0.00
32	T,M	Tetrahydrofuran	0.049	0.048	2.0	133	0.00
33	S	Dibromofluoromethane	0.341	0.336	1.5	128	0.00
34	T,M	1,1,1-Trichloroethane	0.428	0.363	15.2	111	0.00
35	T,M	Cyclohexane	0.000	0.000	0.0	0#	0.00
36	T,M	tert-Amyl methyl ether (TAM	0.148	0.125	15.5	107	0.00
37	S	1,2-Dichloroethane-d4	0.296	0.267	9.8	118	0.00
38	I	CHLOROBENZENE-D5	1.000	1.000	0.0	131	0.02
39	T,M	1,1-Dichloropropene	0.169	0.163	3.6	124	0.00
40	T,M	Carbon tetrachloride	0.410	0.336	18.0	106	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW252.D Vial: 2
Acq On : 14 Nov 2011 9:37 pm Operator: SD
Sample : CVO06K0211 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	1,2-Dichloroethane	0.387	0.358	7.5	114	0.00
42	T,M	Benzene	1.408	1.446	-2.7	131	0.00
43	T,M	Trichloroethene	0.403	0.387	4.0	122	0.00
44	T,M	Methylcyclohexane	0.000	0.000	0.0	0#	0.00
45	C,T,M	1,2-Dichloropropane	0.384	0.406	-5.7	133	0.00
46	T,M	1,4-Dioxane	0.000	0.000	0.0	0#	0.00
47	T,M	Bromodichloromethane	0.500	0.471	5.8	119	0.00
48	T,M	Dibromomethane	0.196	0.185	5.6	121	0.00
49	T,M	2-Chloroethyl vinyl ether	0.063	0.062	1.6	137	0.00
50	T,M	4-Methyl-2-pentanone	0.225	0.224	0.4	124	0.00
51	T,M	cis-1,3-Dichloropropene	0.581	0.563	3.1	120	0.02
52	S	Toluene-d8	1.218	1.223	-0.4	129	0.02
53	C,T,M	Toluene	1.469	1.476	-0.5	128	0.02
54	T,M	Ethyl methacrylate	0.355	0.329	7.3	119	0.00
55	T,M	trans-1,3-Dichloropropene	0.444	0.408	8.1	113	0.02
56	T,M	2-Hexanone	0.146	0.141	3.4	122	0.02
57	T,M	1,1,2-Trichloroethane	0.242	0.234	3.3	120	0.00
58	T,M	1,3-Dichloropropane	0.448	0.439	2.0	122	0.00
59	T,M	Tetrachloroethene	0.330	0.308	6.7	116	0.00
60	T,M	Dibromochloromethane	0.341	0.306	10.3	111	0.00
61	T,M	2-Ethyl-1-butanol	0.000	0.000	0.0	0#	0.00
62	T,M	1,2-Dibromoethane	0.274	0.261	4.7	117	0.00
63	T,M	1-Chlorohexane	0.532	0.516	3.0	123	0.00
64	P, T,M	Chlorobenzene	0.965	0.968	-0.3	125	0.00
65	T,M	1,1,1,2-Tetrachloroethane	0.344	0.326	5.2	118	0.02
66	C,T,M	Ethylbenzene	1.600	1.601	-0.1	127	0.00
67	T,M	m-Xylene & p-Xylene	1.210	1.181	2.4	123	0.00
68	T,M	o-Xylene	1.300	1.286	1.1	124	0.00
69	T,M	Styrene	1.063	1.067	-0.4	124	0.02
70	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	128	0.00
71	T,M	Isopropylbenzene	3.352	3.406	-1.6	123	0.02
72	P,T,M	Bromoform	0.450	0.394	12.4	104	0.00
73	P,T,M	1,1,2,2-Tetrachloroethane	0.663	0.650	2.0	121	0.00
74	S	4-Bromofluorobenzene	1.014	1.024	-1.0	127	0.02
75	T,M	1,2,3-Trichloropropane	0.174	0.161	7.5	111	0.00
76	T,M	trans-1,4-Dichloro-2-butene	0.169	0.150	11.2	107	0.02
77	T,M	n-Propylbenzene	4.253	4.370	-2.8	125	0.00
78	T,M	Bromobenzene	0.969	0.950	2.0	119	0.00
79	T,M	1,3,5-Trimethylbenzene	2.906	2.921	-0.5	122	0.00
80	T,M	2-Chlorotoluene	2.901	2.865	1.2	120	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW252.D Vial: 2
Acq On : 14 Nov 2011 9:37 pm Operator: SD
Sample : CVO06K0211 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	2.387	2.432	-1.9	126	0.00
82	T,M	tert-Butylbenzene	0.662	0.683	-3.2	124	0.00
83	T,M	1,2,4-Trimethylbenzene	2.936	2.961	-0.9	122	0.00
84	T,M	sec-Butylbenzene	3.665	3.762	-2.6	124	0.00
85	T,M	p-Isopropyltoluene	3.101	3.123	-0.7	121	0.02
86	T,M	1,3-Dichlorobenzene	1.720	1.733	-0.8	121	0.00
87	T,M	1,4-Dichlorobenzene	1.702	1.680	1.3	119	0.00
88	T,M	Benzyl chloride	0.000	0.000	0.0	0#	0.00
89	T,M	n-Butylbenzene	2.938	3.030	-3.1	126	0.00
90	T,M	1,2-Dichlorobenzene	1.499	1.478	1.4	120	0.00
91	T,M	1,2-Dibromo-3-chloropropane	0.126	0.114	9.5	110	0.02
92	T,M	1,2,4-Trichlorobenzene	1.118	1.131	-1.2	116	0.00
93	T,M	Hexachlorobutadiene	0.709	0.673	5.1	114	0.02
94	T,M	Naphthalene	1.525	1.522	0.2	115	0.00
95	T,M	1,2,3-Trichlorobenzene	0.921	0.934	-1.4	116	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/2/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A06 -048

BATCH V006K024

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RAW001	RFB06K01	5mL	N/A	N/A	N/A		2:51pm
02	002	V006K021	.15/.15/.07/.03mL					5268,6425,CS2/40A-A-AN 0.3 / 1.5 ppb
03	003	2	.25/.25/.05/.05mL					0.5 / 2.5
04	004	3	.5/.5/.1/.1mL					1.0 / 5.0
05	005	4	1/1/.2/.2mL					2.0 / 10
06	006	5	2.5/2.5/.5/.5mL					5.0 / 25
07	007	6	5/5/1/1mL					10 / 50
08	008	7	10/10/2/2mL					20 / 100
09	009	8	15/15/3/3mL					bad purge
10	010	9	20/20/4/4mL					sd 11/3/11 ~~20~~ 40 / 200
11	011	10	25/25/5/5mL					50 / 250
12	012	11	50/50/10/10mL					100 / 500
13	013	15/55						
14	014	V006K01W						
15	015	1V006K0201	5/5/1/1					10 / 50 ppb
16	016	RINSE						10:32pm
17	sd 11/3/11 OCT							
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								sd 11/3/11

Instrument No.	06
INITIAL CALIBRATION REFERENCE	
DATE	11/2/11
ICAL ID	V006K02 sd 11/3/11

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC 8260 A-AN	SV1-17-98-01	*	250
DCC 8260	-87-01	*	50/250
DCC 6425	-96-03	*	250
DCC CS_2	-93-01	*	250
BFB	-45-03	1	50
IS/SURR 15/55	-91-01 -92-02 -93-01 sd 11/3/11	1	250
ICV/LCS 8260 A-AN	-88-02	5	250
ICV/LCS 8260	-99-02	5	52/250
ICV/LCS 6425	-97-01	1	250
ICV/LCS CS_2	-97-02	1	250

Date File Folder	11K02

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO06	

Comments: * : varies, see individual calibration level

Analyzed By: sd

Date Disposed: 11/3/11

Disposed By: sd

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EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/10/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A06 -048

BATCH V006K02 08

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RKN172	RFB06K10	1ml					7:10am
02		173	V006K02 08	5/5ml/mL					
03		174	V006K10L						
04		175	C						
05		176	RINSE						
06		177	V006K10B	25mL					
07		178	11K070-07		1.0	✓	✓		
08		179	-01			✓	✓		
09		180	-02			✓	✓		
10		181	-03			✓	✓		100X
11		182	-04			✓	✓		~~VC c/o? RR to cont~~ +100X
12		183	-05			✓	✓		~~cis/trc c/o? RR to cont~~ +100X
13		184	-06			✓	✓		~~VC c/o? RR to cont~~ +100X
14		185	RINSE						
15		186							
16		187	11K084-07	25mL	1.0	✓	✓		c/o. RR
17		188	11K082-01			✓	✓		c/o. RR
18		189	11K093-01			✓	✓		
19		190	11K084-01			✓	✓		100X
20		191	-02			✓	✓		100X
21		192	-04			✓	✓		c/o. RR
22		193	-05			✓	✓		~~c/o? RR to cont~~ +50X confirmed gd 11/12/11
23		194	-06			✓	✓		~~VC c/o? RR to cont~~ +100X 6:41pm confirmed gd 11/12/11
24		195	-03			✓	✓		c/o. RR 1 out of 12 hrs / chk 7:11 pm
25		196-199	RINSE						
26									
27									
28									
29									
30									gd 11/14/11

Instrument No.	06
INITIAL CALIBRATION REFERENCE	
DATE	11/2/11
ICAL ID	V006K02

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-17-98-01	5	200
DCC	-87-01	5	50/200
DCC	-96-03	1	200
DCC	-93-01	1	200
BFB	-45-03	1	50
IS/SURR.	-99-01	1	200
ICV/LCS	-89-02	5	200
ICV/LCS	-99-02	5	50/200
ICV/LCS	-97-01	1	200
ICV/LCS	-97-02	1	200

Date File Folder: 11K10

Electronic Data Archival

Location	Date
HPCHEM_VOA/T006	

Comments:

Analyzed By: gd

Date Disposed: 11/14/11

Disposed By: gd

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EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/14/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A06 -048

BATCH V006K02/11

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RKW251	BFB06K13	1uL					9:08pm
02		252	CV006K0211	5/5/1/1uL					
03		253	V006K13L						
04		254	C						
05		255	RINSE	50 11/15/11					
06		256	V006K13B	25mL					
07		257	11K070-03T	0.25mL	100	✓	✓		
08		258	-04T			✓	✓		
09		259	-05T			✓	✓		
10		260	-06T			✓	✓		
11		261	11K084 ~~-02T~~ 01T			✓	✓		
12		262	50 11/15/11 ~~-03T~~ 02T			✓	✓		
13		263	~~-06T~~ -03T	0.50mL	50	✓	✓		
14		264	-04T	0.25mL	100	✓	✓		
15		265	11K112-01			✓	✓		RR to confirm toluene
16	✓	266	-02			7	✓		Filament burnt out. Run incomplete. 4:55am
17			-03			7	✓		Purged, but not analyzed.
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									sd 11/18/11

Instrument No.	06
INITIAL CALIBRATION REFERENCE	
DATE	11/2/11
ICAL ID	V006K02

STANDARDS

NAME	ID	Amount (uL)	Conc. (mg/L)
DCC	8K1-17-98-01	5	200
DCC	-87-03	5	200
DCC	96-03	1	200
DCC	-98-01	1	200
BFB	-45-03	1	25
IS/SURR.	-99-01	1	200
ICV/LCS	-89-02	5	200
ICV/LCS	-99-02	5	50/200
ICV/LCS	-97-01	1	200
ICV/LCS	-97-02	1	200

Date File Folder	11K14
Electronic Data Archival	
Location	Date
HPCHEM_VOA/TO06	

Comments:

Analyzed By: sd

Date Disposed: 11/15/11

Disposed By: sd

2046

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD RSK-175
DISSOLVED GASES

SDG#: 11K070

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K070

METHOD RSK-175
DISSOLVED GASES

A total of six (6) water samples were received on 11/08/11 for Dissolved Gas analysis, Method RSK-175 in accordance with USEPA at R.S. Kerr Environmental Research Laboratory, Ada, OK 74820 March 15, 1989.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for DGK006WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED GASES

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K070
Instrument ID : GCT010

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DGK006WB	1	NA	11/15/1109:22	11/15/1108:50	FK15003A	FK15002A	DGK006W	Method Blank
LCS1W	DGK006WL	1	NA	11/15/1109:34	11/15/1108:50	FK15004A	FK15002A	DGK006W	Lab Control Sample (LCS)
LCD1W	DGK006WC	1	NA	11/15/1109:47	11/15/1108:50	FK15005A	FK15002A	DGK006W	LCS Duplicate
IW-70-SAB11-103	K070-01	1	NA	11/15/1114:37	11/15/1108:50	FK15025A	FK15024A	DGK006W	Field Sample
IW-70-SAB11-103DL	K070-01I	1000	NA	11/15/1115:03	11/15/1108:50	FK15027A	FK15024A	DGK006W	Diluted Sample
IW-70-FSB118-104	K070-02	1	NA	11/15/1115:26	11/15/1108:50	FK15029A	FK15024A	DGK006W	Field Sample
IW-70-FSB118-104DL	K070-02T	1000	NA	11/15/1116:12	11/15/1108:50	FK15032A	FK15024A	DGK006W	Diluted Sample
MW-70-PMW06A-105	K070-03	1	NA	11/15/1115:41	11/15/1108:50	FK15030A	FK15024A	DGK006W	Field Sample
MW-70-PMW06A-105DL	K070-03T	5	NA	11/15/1117:13	11/15/1108:50	FK15037A	FK15035A	DGK006W	Diluted Sample
MW-70-PMW06A-105DL	K070-03I	400	NA	11/15/1117:52	11/15/1108:50	FK15040A	FK15035A	DGK006W	Diluted Sample
MW-70-PMW06B-106	K070-04	1	NA	11/15/1115:56	11/15/1108:50	FK15031A	FK15024A	DGK006W	Field Sample
MW-70-PMW06B-106DL	K070-04T	5	NA	11/15/1117:00	11/15/1108:50	FK15036A	FK15035A	DGK006W	Diluted Sample
MW-70-38-108	K070-05T	5	NA	11/15/1117:39	11/15/1108:50	FK15039A	FK15035A	DGK006W	Diluted Sample
MW-70-38-108DL	K070-05I	1000	NA	11/15/1118:17	11/15/1108:50	FK15042A	FK15035A	DGK006W	Diluted Sample
IR-70-FD-107	K070-06	1	NA	11/15/1118:04	11/15/1108:50	FK15041A	FK15035A	DGK006W	Field Sample
IR-70-FD-107DL	K070-06T	5	NA	11/15/1118:28	11/15/1108:50	FK15043A	FK15035A	DGK006W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/15/11 08:50
Sample ID:	IW-70-SAB11-103	Date Analyzed:	11/15/11 14:37
Lab Samp ID:	K070-01	Dilution Factor:	1
Lab File ID:	FK15025A	Matrix :	WATER
Ext Btch ID:	DGK006W	% Moisture :	NA
Calib. Ref.:	FK15024A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	2.2	2.0	0.60
METHANE	450E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/08/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/08/11
Batch No. : 11K070	Date Extracted: 11/15/11 08:50
Sample ID: IW-70-SAB11-103DL	Date Analyzed: 11/15/11 15:03
Lab Samp ID: K070-01I	Dilution Factor: 1000
Lab File ID: FK15027A	Matrix : WATER
Ext Btch ID: DGK006W	% Moisture : NA
Calib. Ref.: FK15024A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	15000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/15/11 08:50
Sample ID:	IW-70-FSB118-104	Date Analyzed:	11/15/11 15:26
Lab Samp ID:	K070-02	Dilution Factor:	1
Lab File ID:	FK15029A	Matrix :	WATER
Ext Btch ID:	DGK006W	% Moisture :	NA
Calib. Ref.:	FK15024A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	16	2.0	0.60
METHANE	560E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/15/11 08:50
Sample ID:	1W-70-FSB118-104DL	Date Analyzed:	11/15/11 16:12
Lab Samp ID:	K070-02T	Dilution Factor:	1000
Lab File ID:	FK15032A	Matrix :	WATER
Ext Btch ID:	DGK006W	% Moisture :	NA
Calib. Ref.:	FK15024A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	25000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/08/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/08/11
Batch No. : 11K070	Date Extracted: 11/15/11 08:50
Sample ID: MW-70-PMW06A-105	Date Analyzed: 11/15/11 15:41
Lab Samp ID: K070-03	Dilution Factor: 1
Lab File ID: FK15030A	Matrix : WATER
Ext Btch ID: DGK006W	% Moisture : NA
Calib. Ref.: FK15024A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	2.8	2.0	0.64
ETHENE	69E	2.0	0.60
METHANE	330E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/15/11 08:50
Sample ID:	MW-70-PMW06A-105DL	Date Analyzed:	11/15/11 17:13
Lab Samp ID:	K070-03T	Dilution Factor:	5
Lab File ID:	FK15037A	Matrix :	WATER
Ext Btch ID:	DGK006W	% Moisture :	NA
Calib. Ref.:	FK15035A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	10	3.2
ETHENE	68	10	3.0
METHANE	850E	10	1.7

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, 1R SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/15/11 08:50
Sample ID:	MW-70-PMW06A-105DL	Date Analyzed:	11/15/11 17:52
Lab Samp ID:	K070-031	Dilution Factor:	400
Lab File ID:	FK15040A	Matrix :	WATER
Ext Btch ID:	DGK006W	% Moisture :	NA
Calib. Ref.:	FK15035A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	800	260
ETHENE	ND	800	240
METHANE	3900	800	140

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/15/11 08:50
Sample ID:	MW-70-PMW06B-106	Date Analyzed:	11/15/11 15:56
Lab Samp ID:	K070-04	Dilution Factor:	1
Lab File ID:	FK15031A	Matrix :	WATER
Ext Btch ID:	DGK006W	% Moisture :	NA
Calib. Ref.:	FK15024A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	0.66J	2.0	0.64
ETHENE	0.96J	2.0	0.60
METHANE	56E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/08/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/08/11
Batch No. : 11K070	Date Extracted: 11/15/11 08:50
Sample ID: MW-70-PMW06B-106DL	Date Analyzed: 11/15/11 17:00
Lab Samp ID: K070-04T	Dilution Factor: 5
Lab File ID: FK15036A	Matrix : WATER
Ext Btch ID: DGK006W	% Moisture : NA
Calib. Ref.: FK15035A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	10	3.2
ETHENE	ND	10	3.0
METHANE	64	10	1.7

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/08/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/08/11
Batch No. : 11K070	Date Extracted: 11/15/11 08:50
Sample ID: MW-70-38-108	Date Analyzed: 11/15/11 17:39
Lab Samp ID: K070-05T	Dilution Factor: 5
Lab File ID: FK15039A	Matrix : WATER
Ext Btch ID: DGK006W	% Moisture : NA
Calib. Ref.: FK15035A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	12	10	3.2
ETHENE	130	10	3.0
METHANE	1200E	10	1.7

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/15/11 08:50
Sample ID:	MW-70-38-108DL	Date Analyzed:	11/15/11 18:17
Lab Samp ID:	K070-05I	Dilution Factor:	1000
Lab File ID:	FK15042A	Matrix :	WATER
Ext Btch ID:	DGK006W	% Moisture :	NA
Calib. Ref.:	FK15035A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	13000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/15/11 08:50
Sample ID:	IR-70-FD-107	Date Analyzed:	11/15/11 18:04
Lab Samp ID:	K070-06	Dilution Factor:	1
Lab File ID:	FK15041A	Matrix :	WATER
Ext Btch ID:	DGK006W	% Moisture :	NA
Calib. Ref.:	FK15035A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	0.91J	2.0	0.64
ETHENE	1.7J	2.0	0.60
METHANE	97E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
Batch No.	: 11K070	Date Extracted:	11/15/11 08:50
Sample ID:	IR-70-FD-107DL	Date Analyzed:	11/15/11 18:28
Lab Samp ID:	K070-06T	Dilution Factor:	5
Lab File ID:	FK15043A	Matrix :	WATER
Ext Btch ID:	DGK006W	% Moisture :	NA
Calib. Ref.:	FK15035A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	10	3.2
ETHENE	ND	10	3.0
METHANE	160	10	1.7

QC SUMMARIES

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/15/11
Batch No.	: 11K070	Date Extracted:	11/15/11 08:50
Sample ID:	MBLK1W	Date Analyzed:	11/15/11 09:22
Lab Samp ID:	DGK006WB	Dilution Factor:	1
Lab File ID:	FK15003A	Matrix :	WATER
Ext Btch ID:	DGK006W	% Moisture :	NA
Calib. Ref.:	FK15002A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K070
METHOD: METHOD RSK-175

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	DGK006WB	DGK006WL	DGK006WC		
LAB FILE ID:	FK15003A	FK15004A	FK15005A		
DATE EXTRACTED:	11/15/1108:50	11/15/1108:50	11/15/1108:50	DATE COLLECTED:	NA
DATE ANALYZED:	11/15/1109:22	11/15/1109:34	11/15/1109:47	DATE RECEIVED:	11/15/11
PREP. BATCH:	DGK006W	DGK006W	DGK006W		
CALIB. REF:	FK15002A	FK15002A	FK15002A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	ND	25.4	27.6	109	25.4	27.3	108	1	70-140	30
Ethene	ND	23.7	26.5	112	23.7	26.1	110	1	70-140	30
Methane	ND	13.6	12.9	95	13.6	12.7	94	2	70-130	30

INITIAL CALIBRATIONS

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53
CONC-UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	25.00X	40.00X	75.00X	100.00X	MEAN	%RSD
Methane	0.34	31626	33510	29954	29307	29338	29307	30507.1	5.6
Acetylene	0.55	2465	2595	2723	2744	2716	2643	2647.7	4.0
Ethylene	0.59	14655	16070	16617	16602	17123	16803	16311.8	5.4
Ethane	0.64	22748	24144	25289	25073	26185	26048	24914.4	5.2
Propane	0.93	29887	24871	26520	26214	27735	27800	27171.2	6.3

DG10K01.MET

FORM VI DGAS -2 1/96 Rev 2/2006

11/03/11

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK01008A 11/01/2011 13:45
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	416247	13.64	1		15
Acetylene	2.175	2.149	2.201	22.0	2647.6	66913	25.27	15		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	437326	26.81	13		15
Ethane	3.075	3.025	3.125	25.4	24914.4	691218	27.74	9		15
Propane	5.900	5.824	5.976	37.3	27171.2	1111008	40.89	10		15

DG10K01.MET

AJ
11/3/11

DAILY CALIBRATIONS

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK15002A 11/15/2011 09:10
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	408263	13.38	-1		15
Acetylene	2.192	2.166	2.218	22.0	2647.6	61729	23.32	6		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	403929	24.76	4		15
Ethane	3.067	3.017	3.117	25.4	24914.4	645030	25.89	2		15
Propane	5.875	5.799	5.951	37.3	27171.2	997816	36.72	-2		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK15013A 11/15/2011 11:36
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.083	1.057	1.109	13.6	30507.1	383589	12.57	-7		15
Acetylene	2.200	2.174	2.226	22.0	2647.6	58392	22.05	0		15
Ethylene	2.650	2.599	2.701	23.7	16311.8	378796	23.22	-2		15
Ethane	3.075	3.025	3.125	25.4	24914.4	604599	24.27	-5		15
Propane	5.892	5.816	5.968	37.3	27171.2	1014630	37.34	0		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK15024A 11/15/2011 14:19
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.100	1.074	1.126	13.6	30507.1	369151	12.10	-11		15
Acetylene	2.225	2.199	2.251	22.0	2647.6	58233	21.99	-0		15
Ethylene	2.675	2.624	2.726	23.7	16311.8	370039	22.68	-4		15
Ethane	3.100	3.050	3.150	25.4	24914.4	588716	23.63	-7		15
Propane	5.942	5.866	6.018	37.3	27171.2	896815	33.01	-11		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK15035A 11/15/2011 16:48
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.083	1.057	1.109	13.6	30507.1	387959	12.72	-6		15
Acetylene	2.208	2.182	2.234	22.0	2647.6	60187	22.73	3		15
Ethylene	2.650	2.599	2.701	23.7	16311.8	383839	23.53	-1		15
Ethane	3.075	3.025	3.125	25.4	24914.4	610620	24.51	-4		15
Propane	5.900	5.824	5.976	37.3	27171.2	952836	35.07	-6		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01D05A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK15044A 11/15/2011 18:40
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	379827	12.45	-8		15
Acetylene	2.200	2.174	2.226	22.0	2647.6	60501	22.85	4		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	376890	23.10	-3		15
Ethane	3.067	3.017	3.117	25.4	24914.4	595330	23.90	-6		15
Propane	5.883	5.807	5.959	37.3	27171.2	906717	33.37	-10		15

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGAS ICAL

Book #:	A10-025
Instrument No.:	10
Analytical Sequence:	FK01
Method File:	DG10K01
Analytical Batch:	N/A

SOP #	Rev. #
☐ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGAS ICAL SSSA-05-01-10	500 ppm
DGAS ICV SSSA-05-01-7	500 ppm
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: SC

Date: 11/01/11

Disposed By: SC

Date Disposed: 11/01/11

Method: Dg10k01.met Batch: Fk01.seq Data: Fk01.011 - [Batch: fk01.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Run Type	Sample ID	Method	Filename	Sample Amt	Mult	Description
1	Unknown	IB10K407	dg10k01.met	FK01.001	100ml 1	1	
2	Unknown	DG10K01-01	dg10k01.met	FK01.002	1	1	
3	Unknown	DG10K01-02	dg10k01.met	FK01.003	1	1	
4	Unknown	DG10K01-03	dg10k01.met	FK01.004	1	1	DGAS ICAL
5	Unknown	DG10K01-04	dg10k01.met	FK01.005	1	1	
6	Unknown	DG10K01-05	dg10k01.met	FK01.006	1	1	
7	Unknown	DG10K01-06	dg10k01.met	FK01.007	1	1	
8	Unknown	IDG10K0101	dg10k01.met	FK01.008	1	1	DGAS ICV
9	Unknown	~~IB~~	dg10k01.met	FK01.009	1	1	
10	Unknown	IB	dg10k01.met	FK01.010	1	1	
11	Unknown	IB	dg10k01.met	FK01.011	1	1	
12	Unknown	IB	dg10k01.met	FK01.012	1	1	
13	Unknown	IB	dg10k01.met	FK01.013	1	1	
14	Unknown	IB	dg10k01.met	FK01.014	1	1	
15	Unknown	IB	dg10k01.met	FK01.015	1	1	FINAL
16	Unknown	IB	dg10k01.met	FK01.016	1	1	
17	Unknown	IB	dg10k01.met	FK01.017	1	1	
18	Unknown	IB	dg10k01.met	FK01.018	1	1	
19	Unknown	IB	dg10k01.met	FK01.019	1	1	
20	Unknown	IB	dg10k01.met	FK01.020	1	1	
21	Unknown	IB	dg10k01.met	FK01.021	1	1	
22	Unknown	IB	dg10k01.met	FK01.022	1	1	
23	Unknown	IB	dg10k01.met	FK01.023	1	1	
24	Unknown	IB	dg10k01.met	FK01.024	1	1	
25	Unknown	IB	dg10k01.met	FK01.025	1	1	
26	Unknown	IB	dg10k01.met	FK01.026	1	1	
27	Unknown	IB	dg10k01.met	FK01.027	1	1	
28	Unknown	IB	dg10k01.met	FK01.028	1	1	
29	Unknown	IB	dg10k01.met	FK01.029	1	1	
30	Unknown	IB	dg10k01.met	FK01.030	1	1	
31	Unknown	IB	dg10k01.met	FK01.031	1	1	
32	Unknown	IB	dg10k01.met	FK01.032	1	1	
33	Unknown	IB	dg10k01.met	FK01.033	1	1	
34	Unknown	~~IB~~	dg10k01.met	FK01.034	1	1	

EC 11/01/11

Waiting For Trigger...

Start | Ezchrom Chromatogram | Method: Dg10k01... | Calculator | Method: Dg10k01.met | Untitled - Paint | Exploring | Tuesday, November 01, 2011

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGK006W ; K100, K070

Book #:	A10-026
Instrument No.:	10
Analytical Sequence:	FK15
Method File:	DG10K01
Analytical Batch:	CDG10K01426

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGas Dcc SS5B-07-37-2	200
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: RM

Date: 11/15/11

Disposed By: RM

Date Disposed: 11/15/11

Method: Dg10k01.met Batch: Fk15.seq Data: Fk15.038 - [Batch: fk15.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Sample ID	Method	Filename	Sample Amt.		Mult.	Description
1	IB10K426	dg10k01.met	FK15.001	100uL	1	1	
2	CDG10K01426	dg10k01.met	FK15.002		1	1	
3	DGK006WB	dg10k01.met	FK15.003		1	1	
4	DGK006WL	dg10k01.met	FK15.004		1	1	
5	DGK006WC	dg10k01.met	FK15.005		1	1	
6	11K100-04	dg10k01.met	FK15.006		1	1	
7	11K100-04T DF=10	dg10k01.met	FK15.007	10uL	1	10	
8	11K100-04I DF=400	dg10k01.met	FK15.008	5uL (20x)	1	400	
9	11K100-05	dg10k01.met	FK15.009	100uL	1	1	
10	11K100-05T DF=5	dg10k01.met	FK15.010	20uL	1	5	
11	11K100-06	dg10k01.met	FK15.011	100uL	1	1	
12	11K100-06T DF=20	dg10k01.met	FK15.012	5uL	1	20	
13	CDG10K01427	dg10k01.met	FK15.013	100uL	1	1	
14	11K100-05I DF=400	dg10k01.met	FK15.014	5uL (20x)	1	400	
15	11K100-06I DF=200	dg10k01.met	FK15.015	5uL (10x)	1	200	
16	11K100-07	dg10k01.met	FK15.016	100uL	1	1	
17	11K100-07T DF=20	dg10k01.met	FK15.017	5uL	1	20	
18	11K100-08	dg10k01.met	FK15.018	100uL	1	1	FINAL
19	11K100-08T DF=5	dg10k01.met	FK15.019	20uL	1	5	
20	11K100-14	dg10k01.met	FK15.020	100uL	1	1	
21	11K100-14T DF=25	dg10k01.met	FK15.021	4uL	1	25	
22	11K100-07I DF=400	dg10k01.met	FK15.022	5uL (20x)	1	400	
23	11K100-08I DF=400	dg10k01.met	FK15.023		1	400	
24	CDG10K01428	dg10k01.met	FK15.024	100uL	1	1	
25	11K070-01	dg10k01.met	FK15.025		1	1	
26	11K070-01T DF=400 Not evaluated Conf only	dg10k01.met	FK15.026	5uL (20x)	1	400	
27	11K070-01I DF=1000	dg10k01.met	FK15.027	2uL (20x)	1	1000	
28	11K100-14I DF=200	dg10k01.met	FK15.028	5uL (10x)	1	200	
29	11K070-02	dg10k01.met	FK15.029	100uL	1	1	
30	11K070-03	dg10k01.met	FK15.030		1	1	
31	11K070-04	dg10k01.met	FK15.031		1	1	
32	11K070-02T DF=1000	dg10k01.met	FK15.032	2uL (20x)	1	1000	
33	11K070-05	dg10k01.met	FK15.033		1	1	RT SHIFT
34	TEST	dg10k01.met	FK15.034		1	1	CHANGED SEPTUM

Instrument 2 (TO10) - Running 11K070-05 (Run 38)

Start | EZChrom Chromaleorap... | Method: Dg10k01... | Method: Dg10k01.met | Calculator | Untitled - H | Tuesday, November 15, 2011

Method: Dg10k01.met Batch: Fk15.seq Data: Fk15.044 - [Batch: fk15.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
35	CDG10K01429	dg10k01.met	FK15.035	100mL 1	1	
36	11K070-04T DF=5	dg10k01.met	FK15.036	20mL 1	5	
37	11K070-03T DF=5	dg10k01.met	FK15.037	↓ 1	5	
38	11K070-05	dg10k01.met	FK15.038	100mL 1	1	
39	11K070-05T DF=5	dg10k01.met	FK15.039	20mL 1	5	
40	11K070-03I DF=400	dg10k01.met	FK15.040	5mL (20x) 1	400	
41	11K070-06	dg10k01.met	FK15.041	100mL 1	1	
42	11K070-05I DF=1000	dg10k01.met	FK15.042	2mL (20x) 1	1000	
43	11K070-06T DF=5	dg10k01.met	FK15.043	20mL 1	5	
44	CDG10K01430	dg10k01.met	FK15.044	100mL 1	1	
45	IB	dg10k01.met	FK15.045	1	1	
46	IB	dg10k01.met	FK15.046	1	1	
47	IB	dg10k01.met	FK15.047	1	1	
48	IB	dg10k01.met	FK15.048	1	1	
49	IB	dg10k01.met	FK15.049	1	1	
50	IB	dg10k01.met	FK15.050	1	1	
51	IB	dg10k01.met	FK15.051	1	1	
52	IB	dg10k01.met	FK15.052	1	1	
53	IB	dg10k01.met	FK15.053	1	1	
54	IB	dg10k01.met	FK15.054	1	1	
55	IB	dg10k01.met	FK15.055	1	1	
56	IB	dg10k01.met	FK15.056	1	1	
57	IB	dg10k01.met	FK15.057	1	1	
58	IB	dg10k01.met	FK15.058	1	1	
59	IB	dg10k01.met	FK15.059	1	1	
60	IB	dg10k01.met	FK15.060	1	1	
61						
62						
63						
64						
65						
66						
67						
68						

11/15/11

FINAL

Instrument 2 [TO10] - Running CDG10K01430 [Run 44]

Start | EZ Chrom Chromatograp | Method: Dg10k01... | Tuesday, November 15, 2011

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/01/11 Time: 10:00 End Date: 11/01/11 Time: 10:40

PREPARATION BATCH # N/A

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DG10K01-01	39	4	N/A	
02	-02			N/A	
03	-03			N/A	DGAS ICAL
04	-04			N/A	
05	-05			N/A	
06	-06			N/A	
07	IDG10K01 01			N/A	DGAS ICV
08					
09					
10					
11					
12					
13					SC 11/01/11
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Standards	ID	Amount Added (µl)
LCS/MS / ICV	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic Free
He	Air Gas
ICAL STD (500 ppm)	SSSA-05-01-10 (SPECIALTY AIR)
ICV STD 500 ppm	SSSA-05-01-7 (MATHESON)

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #: (EGS)	28100705

Comments:

1) 0.08 ml ICAL STD + 3.92 ml He
2) 0.4 ml 3.6 ml
3) 1.0 ml 3.0 ml
4) 1.6 ml 2.4 ml
5) 3.0 ml 1.0 ml
6) 4.0 ml 0 ml

Prepared By: SC

Standard Added By: SC

4037

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/15/11 Time: 08:50 End Date: 11/15/11 Time: 09:20

PREPARATION BATCH # DGK006W

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DGK006WB	39	4	NA	
02	"			NA	
03	"			NA	
04	11K100-04			✓	
05	05			✓	
06	06			✓	
07	07			✓	
08	08			✓	
09	14			✓	
10	11K070-01			✓	
11	02			✓	
12	03			✓	
13	04			✓	
14	05			✓	
15	06			✓	
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

RA 11/15/11

Standards	ID	Amount Added (µl)
LCS/MS	555A-05-01-7	1600

Reagent	Source
H_2O	Organic Free
He	AirGas

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #:	28/100705

Comments:

Prepared By: RA

Standard Added By: RA

1038

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

SDG#: 11K070

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K070

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

A total of six (6) water samples were received on 11/08/11 for Dissolved Metals by ICP analysis, Method 3010A/6010B in accordance with Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source. Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for IPK031WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG. Analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED METALS BY TRACE ICP

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K070
Instrument ID : T-I08

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IPK031WB	1	NA	11/18/1116:48	11/17/1111:11	ID8K018049	ID8K018047	IPK031W	Method Blank
LCS1W	IPK031WL	1	NA	11/18/1116:51	11/17/1111:11	ID8K018050	ID8K018047	IPK031W	Lab Control Sample (LCS)
LCD1W	IPK031WC	1	NA	11/18/1116:53	11/17/1111:11	ID8K018051	ID8K018047	IPK031W	LCS Duplicate
44-SP-755-N-111011AS	K108-02A	1	NA	11/18/1116:56	11/17/1111:11	ID8K018052	ID8K018047	IPK031W	Analytical Spike Sample
44-SP-755-N-111011	K108-02	1	NA	11/18/1116:59	11/17/1111:11	ID8K018053	ID8K018047	IPK031W	Field Sample
44-SP-755-N-111011DL	K108-02J	5	NA	11/18/1117:02	11/17/1111:11	ID8K018054	ID8K018047	IPK031W	Diluted Sample
IW-70-SAB11-103	K070-01	1	NA	11/18/1117:39	11/17/1111:11	ID8K018067	ID8K018059	IPK031W	Field Sample
IW-70-FSB118-104	K070-02	1	NA	11/18/1117:43	11/17/1111:11	ID8K018068	ID8K018059	IPK031W	Field Sample
MW-70-PMW06A-105	K070-03	1	NA	11/18/1117:46	11/17/1111:11	ID8K018069	ID8K018059	IPK031W	Field Sample
MW-70-PMW06B-106	K070-04	1	NA	11/18/1117:57	11/17/1111:11	ID8K018073	ID8K018071	IPK031W	Field Sample
MW-70-38-108	K070-05	1	NA	11/18/1118:01	11/17/1111:11	ID8K018074	ID8K018071	IPK031W	Field Sample
IR-70-FD-107	K070-06	1	NA	11/18/1118:04	11/17/1111:11	ID8K018075	ID8K018071	IPK031W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11 10:35
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
SDG NO.	: 11K070	Date Extracted:	11/17/11 11:11
Sample ID:	IW-70-SAB11-103	Date Analyzed:	11/18/11 17:39
Lab Samp ID:	K070-01	Dilution Factor:	1
Lab File ID:	ID8K018067	Matrix :	WATER
Ext Btch ID:	IPK031W	% Moisture :	NA
Calib. Ref.:	ID8K018059	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	0.0316J	0.200	0.00500
Iron	30.8	0.200	0.0400
Manganese	1.08	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11 12:01
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
SDG NO.	: 11K070	Date Extracted:	11/17/11 11:11
Sample ID:	IW-70-FSB118-104	Date Analyzed:	11/18/11 17:43
Lab Samp ID:	K070-02	Dilution Factor:	1
Lab File ID:	ID8K018068	Matrix :	WATER
Ext Btch ID:	IPK031W	% Moisture :	NA
Calib. Ref.:	ID8K018059	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	8.00	0.200	0.0400
Manganese	1.12	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11 13:42
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
SDG NO.	: 11K070	Date Extracted:	11/17/11 11:11
Sample ID:	MW-70-PMW06A-1D5	Date Analyzed:	11/18/11 17:46
Lab Samp ID:	K070-03	Dilution Factor:	1
Lab File ID:	ID8K018069	Matrix :	WATER
Ext Btch ID:	IPK031W	% Moisture :	NA
Calib. Ref.:	ID8K018059	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	0.814	0.200	0.0400
Manganese	0.436	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11 14:48
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
SDG NO.	: 11K070	Date Extracted:	11/17/11 11:11
Sample ID:	MW-70-PMW06B-106	Date Analyzed:	11/18/11 17:57
Lab Samp ID:	K070-04	Dilution Factor:	1
Lab File ID:	ID8K018073	Matrix :	WATER
Ext Btch ID:	IPK031W	% Moisture :	NA
Calib. Ref.:	ID8K018071	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	0.0541J	0.200	0.0400
Manganese	0.334	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11 16:03
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
SDG NO.	: 11K070	Date Extracted:	11/17/11 11:11
Sample ID:	MW-70-38-108	Date Analyzed:	11/18/11 18:01
Lab Samp ID:	K070-05	Dilution Factor:	1
Lab File ID:	ID8K018074	Matrix :	WATER
Ext Btch ID:	IPK031W	% Moisture :	NA
Calib. Ref.:	ID8K018071	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	0.00623J	0.200	0.00500
Iron	14.2	0.200	0.0400
Manganese	1.05	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/08/11 15:10
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/08/11
SDG NO.	: 11K070	Date Extracted:	11/17/11 11:11
Sample ID:	IR-70-FD-107	Date Analyzed:	11/18/11 18:04
Lab Samp ID:	K070-06	Dilution Factor:	1
Lab File ID:	ID8K018075	Matrix :	WATER
Ext Btch ID:	IPK031W	% Moisture :	NA
Calib. Ref.:	ID8K018071	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	0.0628J	0.200	0.0400
Manganese	0.329	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
SDG NO.	: 11K070	Date Extracted:	11/17/11 11:11
Sample ID:	MBLK1W	Date Analyzed:	11/18/11 16:48
Lab Samp ID:	IPK031WB	Dilution Factor:	1
Lab File ID:	ID8K018049	Matrix :	WATER
Ext Btch ID:	IPK031W	% Moisture :	NA
Calib. Ref.:	ID8K018047	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	ND	0.200	0.0400
Manganese	ND	0.200	0.00300

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K070
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	IPK031WB	IPK031WL	IPK031WC		
LAB FILE ID:	ID8K018049	ID8K018050	ID8K018051		
DATIME EXTRCTD:	11/17/1111:11	11/17/1111:11	11/17/1111:11	DATE COLLECTED:	NA
DATIME ANALYZD:	11/18/1116:48	11/18/1116:51	11/18/1116:53	DATE RECEIVED:	11/17/11
PREP. BATCH:	IPK031W	IPK031W	IPK031W		
CALIB. REF:	ID8K018047	ID8K018047	ID8K018047		

ACCESSION:

PARAMETER	BLNK RSLT mg/L	SPIKE AMT mg/L	BS RSLT mg/L	BS % REC	SPIKE AMT mg/L	BSD RSLT mg/L	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	ND	.5	.532	106	.5	.542	108	2	80-120	20
Iron	ND	5	5.2	104	5	5.26	105	1	80-120	20
Manganese	ND	.5	.497	99	.5	.504	101	1	80-120	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K070
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	44-SP-755-N-111011	44-SP-755-N-111011DL		
EMAX SAMP ID:	K108-02	K108-02J		
LAB FILE ID:	ID8K018053	ID8K018054		
DATE EXTRACTED:	11/17/1111:11	11/17/1111:11	DATE COLLECTED:	11/10/11 10:30
DATE ANALYZED:	11/18/1116:59	11/18/1117:02	DATE RECEIVED:	11/11/11
PREP. BATCH:	IPK031W	IPK031W		
CALIB. REF:	ID8K018047	ID8K018047		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SERIAL DIL RSLT (mg/L)	DIF RSLT %	QC LIMIT (%)
Arsenic	ND	ND	0	10
Iron	0.607	0.656J	NA	10
Manganese	0.00779J	ND	NA	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K070
METHOD: METHOD 3010A/6010B (DISSOLVED)

==========

MATRIX: WATER % MOISTURE: NA
DILTN FACTR: 1 1
SAMPLE ID: 44-SP-755-N-111011
CONTROL NO.: K108-02 K108-02A
LAB FILE ID: ID8K018053 ID8K018052
DATIME EXTRCTD: 11/17/1111:11 11/17/1111:11 DATE COLLECTED: 11/10/11 10:30
DATIME ANALYZD: 11/18/1116:59 11/18/1116:56 DATE RECEIVED: 11/11/11
PREP. BATCH: IPK031W IPK031W
CALIB. REF: ID8K018047 ID8K018047

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	AS RSLT (mg/L)	AS % REC	QC LIMIT (%)
Arsenic	ND	.5	.572	114	75-125
Iron	.607	5	5.99	108	75-125
Manganese	.00779J	.5	.537	106	75-125

ICP QC CHECK TABLE

QC	ICV	CCV	ICSAB	ICSA	MLCV
Limit%	90-110	90-110	80-120	80-120	80-120
Comp	mg/L	mg/L	mg/L	mg/L	mg\L
Al	100	100	400	400	200
Sb	1.5	1.5	1	0	5
As	1	1	1	0	1
Ba	2	2	0.5	0	5
Be	1.5	1.5	0.5	0	5
B	2.5	2.5	0.5	0	5
Cd	2	2	1	0	5
Ca	75	75	500	500	250
Cr	2.5	2.5	0.5	0	5
Co	1	1	0.5	0	1
Cu	2.5	2.5	0.5	0	5
Fe	25	25	200	200	200
Pb	2.5	2.5	1	0	5
Li	0.5	0.5	1	0	0.5
Mg	60	60	200	200	100
Mn	2.5	2.5	0.5	0	5
Mo	2.5	2.5	1	0	5
Ni	2.5	2.5	1	0	5
K	60	60	75	0	250
Se	1	1	1	0	1
Ag	0.5	0.5	1	0	0.5
Na	60	60	75	0	150
Sr	0.5	0.5	0.5	0	0.5
Tl	2.5	2.5	1	0	5
Sn	0.5	0.5	1	0	0.5
Ti	0.5	0.5	1	0	0.5
V	1.5	1.5	0.5	0	5
Zn	2.5	2.5	1	0	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 11/18/11 14:26

End Date: 11/18/11 19:05

SOP #	Rev. #
☑ EMAX-6010	7
☐ EMAX-6010C	1
☐ EMAX-200.7	2
☐ EMAX-	

Comments:

CCB3 Ca > 3x IDL However associated sample K063-02 detected > 10x blank conc. level. Thus no corrective action.

CCB4 Ca > 3x IDL. However associated samples K063-06, K063-05, and K039-01 detected > 10x blank conc. level. Thus no corrective action.

CCB5 Ca > 3x IDL. However associated samples K108-01, K108-02 detected > 10x ~~the~~ blank conc. Thus no corrective action

CCB6 Ca > 3x IDL. However associated sample K070-01, K070-02, and K070-03 detected ~~>4x IDL~~ > 10x blank conc. Thus no corrective action.

CCB7 Ca > 3x IDL. However associated sample K101-01 K093-01 and K072-01 detected > 10x blank conc. Thus no corrective action

Book #: AD8-021

Instrument No.: D8

Analytical Batch: 108K018

Analytical Sequence: S-11K6010 (v26)

Method File: 11K6010 (v26)

Database: EMAX 14

	STANDARDS ID		STANDARDS ID
S0	SM1B14-7805	S30	SM1B14-6802
S1	NA	S31	-6803
S2		ICV	-8201
S3		CCV	-8301
S4		ICSA	-8502
S5		ICSAB	-6702
S6		CRI/MRL 1	-8101
S7		MRL2	-7401
S8			
S9			
S10			
S11			
S12			
S16			
S17			
S18			
S20	SM1B14-8401		
S21	-6503		
S22	-~~6504~~ 6504		
S23	-8402		
S24	-6702		
S25	-6703		
S26	-7801		
S27	-7802		
S28	-7803		
S29	-7804		

Analyzed By: MP

Date: 11/18/11

SEQUENCE FILE : ID8K018

4-18	19-33	34-43	44-53	54-63
LFID	LSID	TIME	DATE	DF
ID8K018001	Blank	14:26	11/18/11	1.000
ID8K018002	S20	14:29	11/18/11	1.000
ID8K018003	S21	14:32	11/18/11	1.000
ID8K018004	S22	14:35	11/18/11	1.000
ID8K018005	S23	14:38	11/18/11	1.000
ID8K018006	S24	14:41	11/18/11	1.000
ID8K018007	S25	14:44	11/18/11	1.000
ID8K018008	S26	14:47	11/18/11	1.000
ID8K018009	S27	14:50	11/18/11	1.000
ID8K018010	S28	14:53	11/18/11	1.000
ID8K018011	S29	14:56	11/18/11	1.000
ID8K018012	S30	14:59	11/18/11	1.000
ID8K018013	S31	15:02	11/18/11	1.000
ID8K018014	ICV	15:05	11/18/11	1.000
ID8K018015	ICB	15:08	11/18/11	1.000
ID8K018016	MRLK1801	15:11	11/18/11	1.000
ID8K018017	MRLK1802	15:14	11/18/11	1.000
ID8K018018	ICSA1	15:17	11/18/11	1.000
ID8K018019	ICSAB1	15:20	11/18/11	1.000
ID8K018020	CCV1	15:23	11/18/11	1.000
ID8K018021	CCB1	15:26	11/18/11	1.000
ID8K018022	K467-01A	15:29	11/18/11	1.000
ID8K018023	K467-01W	15:31	11/18/11	1.000
ID8K018024	K467-01J	15:34	11/18/11	5.000
ID8K018025	Blank	15:37	11/18/11	1.000
ID8K018026	CCV2	15:40	11/18/11	1.000
ID8K018027	CCB2	15:43	11/18/11	1.000
ID8K018028	IPK028W8	15:46	11/18/11	1.000
ID8K018029	IPK028WL	15:49	11/18/11	1.000
ID8K018030	IPK028WC	15:52	11/18/11	1.000
ID8K018031	K063-02A	15:54	11/18/11	1.000
ID8K018032	K063-02	15:57	11/18/11	1.000
ID8K018033	K063-02J	16:00	11/18/11	5.000
ID8K018034	K063-02M	16:03	11/18/11	1.000
ID8K018035	K063-02S	16:06	11/18/11	1.000
ID8K018036	K063-01	16:09	11/18/11	1.000
ID8K018037	Blank	16:12	11/18/11	1.000
ID8K018038	CCV3	16:15	11/18/11	1.000
ID8K018039	CCB3	16:18	11/18/11	1.000
ID8K018040	K063-03	16:21	11/18/11	1.000
ID8K018041	K063-04	16:24	11/18/11	1.000
ID8K018042	K063-05	16:27	11/18/11	1.000
ID8K018043	K063-06	16:30	11/18/11	1.000
ID8K018044	K039-01	16.33	11/18/11	1.000
ID8K018045	K039-01D	16:36	11/18/11	1.000
ID8K018046	Blank	16:39	11/18/11	1.000
ID8K018047	CCV4	16:42	11/18/11	1.000
ID8K018048	CCB4	16:45	11/18/11	1.000
ID8K018049	IPK031WB	16:48	11/18/11	1.000
ID8K018050	IPK031WL	16:51	11/18/11	1.000
ID8K018051	IPK031WC	16:53	11/18/11	1.000
ID8K018052	K108-02A	16:56	11/18/11	1.000

1D8K018053	K108-02	16:59	11/18/11	1.000
1D8K018054	K108-02J	17:02	11/18/11	5.000
1D8K018055	K108-02M	17:04	11/18/11	1.000
1D8K018056	K108-02S	17:07	11/18/11	1.000
1D8K018057	K108-01	17:10	11/18/11	1.000
1D8K018058	Blank	17:13	11/18/11	1.000
1D8K018059	CCV5	17:16	11/18/11	1.000
1D8K018060	CCB5	17:19	11/18/11	1.000
1D8K018061	K084-01	17:22	11/18/11	1.000
1D8K018062	K084-02	17:24	11/18/11	1.000
1D8K018063	K084-03	17:27	11/18/11	1.000
1D8K018064	K084-04	17:30	11/18/11	1.000
1D8K018065	K084-05	17:33	11/18/11	1.000
1D8K018066	K084-06	17:37	11/18/11	1.000
1D8K018067	K070-01	17:39	11/18/11	1.000
1D8K018068	K070-02	17:43	11/18/11	1.000
1D8K018069	K070-03	17:46	11/18/11	1.000
1D8K018070	Blank	17:49	11/18/11	1.000
1D8K018071	CCV6	17:52	11/18/11	1.000
1D8K018072	CCB6	17:54	11/18/11	1.000
1D8K018073	K070-04	17:57	11/18/11	1.000
1D8K018074	K070-05	18:01	11/18/11	1.000
1D8K018075	K070-06	18:04	11/18/11	1.000
1D8K018076	K101-01	18:07	11/18/11	1.000
1D8K018077	K093-01	18:10	11/18/11	1.000
1D8K018078	K093-01D	18:12	11/18/11	1.000
1D8K018079	K072-01	18:15	11/18/11	1.000
1D8K018080	K090-03	18:18	11/18/11	1.000
1D8K018081	Blank	18:21	11/18/11	1.000
1D8K018082	CCV7	18:24	11/18/11	1.000
1D8K018083	CCB7	18:27	11/18/11	1.000
1D8K018084	ICSA2	18:30	11/18/11	1.000
1D8K018085	ICSAB2	18:33	11/18/11	1.000
1D8K018086	CCV8	18:36	11/18/11	1.000
1D8K018087	CCB8	18:39	11/18/11	1.000
1D8K018088	1PK032SB	18:42	11/18/11	1.000
1D8K018089	1PK032SL	18:45	11/18/11	1.000
1D8K018090	1PK032SC	18:48	11/18/11	1.000
1D8K018091	K152-01A	18:50	11/18/11	1.000
1D8K018092	K152-01	18:53	11/18/11	1.000
1D8K018093	K152-01J	18:56	11/18/11	5.000
1D8K018094	Blank	18:59	11/18/11	1.000
1D8K018095	CCV9	19:02	11/18/11	1.000
1D8K018096	CCB9	19:05	11/18/11	1.000

VERSON : 11A UNIT : % SUMMARY of ICV and CCV : 1D8K018 DATE : 11/18/11 INST : EMAX1

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S26	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	102	98	105	99	102	102	99	99	97	97	102	101	98	108	97	97	100	96	97	104	101	104	98	93	96	102	101	105
ICB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK1801	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK1802	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA1	98	----	----	----	----	----	----	96	----	----	----	99	----	----	99	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSAB1	95	102	106	97	99	108	95	94	94	96	106	98	96	114	95	94	101	95	102	104	107	109	95	86	94	99	100	105
CCV1	102	101	105	98	98	102	100	99	97	97	103	102	97	100	96	95	99	96	99	104	102	106	98	94	101	99	101	105
CCB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K467-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K467-01W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K467-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	100	99	102	101	102	99	98	99	96	98	101	100	97	104	99	99	101	96	99	101	100	107	98	92	101	102	99	105
CCB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK028WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK028WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK028WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	98	99	103	99	100	99	99	99	97	98	101	101	97	101	97	96	101	96	99	103	100	107	98	92	101	100	100	106
CCB3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K039-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K039-01D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	98	98	103	99	100	99	99	99	97	98	100	100	97	102	98	97	100	96	100	102	100	107	98	92	101	100	100	106
CCB4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK031WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK031WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK031WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K108-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	99	99	102	101	101	98	98	99	95	98	98	99	97	104	99	98	101	97	99	101	98	107	97	91	102	102	99	106
CC85	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	97	98	102	101	101	98	98	99	95	98	98	100	97	104	99	98	101	97	100	102	98	107	97	91	102	102	99	106
CC86	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K101-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K093-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K093-01D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K072-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K090-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	95	98	103	99	99	98	98	99	96	98	99	101	97	101	97	96	101	97	100	102	98	107	97	91	102	100	100	107
CC87	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA2	92	----	----	----	----	----	----	94	----	----	----	96	----	----	96	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSAB2	92	101	105	100	101	105	94	94	92	96	102	96	95	116	97	96	102	95	103	103	104	111	96	85	94	102	98	105
CCV8	95	96	103	99	101	98	98	99	95	97	98	100	98	109	98	97	101	97	98	102	97	105	97	91	96	102	100	106
CC88	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK032SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK032SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK032SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	96	99	108	99	102	101	103	100	98	99	101	102	100	110	98	98	101	98	101	106	101	108	99	95	96	102	101	109
CCB9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

QC limit of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC Limit

VERSON : 11A UNIT : UG/L SUMMARY of CALIBRATION BLANKS : ID8K018 (WATER) DATE : 11/18/11 INST : EMAXT

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S26	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1CV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1CB	5.75	.640	.410	.040	.070	5.32	.040	12.4	.110	.130	.000	1.46	-.750	.840	11.7	.080	.350	-.030	111	-1.58	.110	-10.6	.030	.390	.700	.760	.160	.370
MRLK1801	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK1802	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA1	----	-1.27	1.38	.460	.040	34.8	3.15	----	.760	-.320	1.42	----	-.290	19.3	----	1.46	-1.02	1.54	162	.920	.070	75.9	.830	-.260	1.81	5.56	.730	2.47
ICSAB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB1	16.8	.620	.840	.210	.100	4.57	.120	77.8	-.020	.080	.280	3.74	-.340	1.33	6.74	.180	.410	.040	171	1.33	.270	-2.64	.200	-.040	.410	1.14	.150	3.38
K467-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K467-01W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K467-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB2	9.54	1.93	.820	.250	.120	3.32	.100	75.6	.010	.000	-.050	.770	-.330	.880	24.7	.490	.400	.060	121	-1.01	.140	-20.3	-.010	.680	.520	-.050	.180	3.44
IPK028WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK028WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK028WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB3	8.99	1.10	2.89	.290	.160	2.98	.110	95.9	.190	.020	-.010	2.13	-.360	.980	17.9	.570	.390	.100	120	.760	.360	-2.60	-.040	1.15	.530	.700	.140	4.29
K063-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K039-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K039-01D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB4	6.33	.860	.610	.060	.130	2.19	.130	105	.110	.070	-.170	2.12	-.130	.860	13.1	.200	.410	.070	95.3	-.870	.010	3.04	.030	.600	.200	.410	.160	4.99
IPK031WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK031WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK031WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K108-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB5	4.66	.710	.490	.030	.150	3.66	.110	70.1	.110	.080	-.220	2.49	-.370	1.58	11.3	.420	.330	.080	138	-1.19	.130	-21.9	.040	.490	.830	.550	.080	3.25
K084-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB6	.750	1.50	.020	.090	.100	2.34	.080	50.9	.090	-.060	-.310	.300	-.350	.520	10.7	.290	.360	.070	122	-.310	.230	23.5	.000	.790	.370	.130	.160	2.30
K070-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K101-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K093-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K093-01D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K072-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K090-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB7	9.59	1.11	1.12	-.030	.130	2.34	.080	91.2	.180	-.060	-.490	8.27	-.260	2.45	11.6	.270	.260	.090	95.5	-1.62	.020	8.71	.020	.600	.020	1.34	.200	4.21
ICSA2	----	.330	-2.19	.580	.130	30.9	1.82	----	.660	-.330	.790	----	-1.19	20.6	----	1.27	-1.15	1.52	45.7	.030	.190	118	.770	-.720	.960	5.48	.660	3.33
ICSAB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCVB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB8	.270	-.430	-.020	-.030	.090	3.25	.080	18.9	.060	.020	-.300	-.220	-.710	1.17	1.85	.100	.300	.040	113	.080	.100	-5.47	-.080	.790	.320	.750	-.010	.350
IPK032SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK032SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK032SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB9	-3.43	-.140	1.51	.180	.070	1.91	.080	19.3	.180	.120	-.550	3.22	-.340	1.15	4.79	.040	.370	.040	70.8	-.760	.120	-56.7	-.070	.420	.670	.620	.110	1.75

QC limit of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC Limit

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
1	0	0	0	0	Unk	S0		ID8K018001			1	☒	unk	---
2	0	0	0	0	Unk	S20		ID8K018002			1	☒	unk	---
3	0	0	0	0	Unk	S21		ID8K018003			1	☒	unk	---
4	0	0	0	0	Unk	S22		ID8K018004			1	☒	unk	---
5	0	0	0	0	Unk	S23		ID8K018005			1	☒	unk	---
6	0	0	0	0	Unk	S24		ID8K018006			1	☒	unk	---
7	0	0	0	0	Unk	S25		ID8K018007			1	☒	unk	---
8	0	0	0	0	Unk	S26		ID8K018008			1	☒	unk	---
9	0	0	0	0	Unk	S27		ID8K018009			1	☒	unk	---
10	0	0	0	0	Unk	S28		ID8K018010			1	☒	unk	---
11	0	0	0	0	Unk	S29		ID8K018011			1	☒	unk	---
12	0	0	0	0	Unk	S30		ID8K018012			1	☒	unk	---
13	0	0	0	0	Unk	S31		ID8K018013			1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8K018014			1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8K018015			1	☒	3XIDL	None
16	3	2	3	1	QC	MRLK1801		ID8K018016			1	☒	MRL-EMAX	None
17	4	2	4	1	QC	MRLK1802		ID8K018017			1	☒	MRL-AFCEE	None
18	5	2	5	1	QC	ICSA1		ID8K018018			1	☒	ICSA	None
19	6	2	6	1	QC	ICSAB1		ID8K018019			1	☒	ICSAB	None
20	7	2	7	1	QC	CCV1		ID8K018020			1	☒	CCV	None
21	8	2	8	1	QC	CCB1		ID8K018021			1	☒	3XIDL	None
22	9	2	9	1	Unk	K467-01A		ID8K018022			1	☒	unk	---
23	10	2	10	1	Unk	K467-01W		ID8K018023			1	☒	unk	---
24	11	2	11	1	Unk	K467-01J		ID8K018024			1	☒	unk	---
25	12	2	12	1	Blank	Blank		ID8K018025			1	☐		---
26	13	2	1	2	QC	CCV2		ID8K018026			1	☒	CCV	None
27	14	2	2	2	QC	CCB2		ID8K018027			1	☒	3XIDL	None
28	15	2	3	2	QC	IPK028WB		ID8K018028			1	☒	1/2LOQ	None
29	16	2	4	2	QC	IPK028WL		ID8K018029			1	☒	LCS	None
30	17	2	5	2	QC	IPK028WC		ID8K018030			1	☒	LCS	None
31	18	2	6	2	Unk	K063-02A	DISSOLVED	ID8K018031			1	☒	unk	---
32	19	2	7	2	Unk	K063-02	DISSOLVED	ID8K018032			1	☒	unk	---
33	20	2	8	2	Unk	K063-02J	DISSOLVED	ID8K018033			1	☒	unk	---
34	21	2	9	2	Unk	K063-02M	DISSOLVED	ID8K018034			1	☒	unk	---
35	22	2	10	2	Unk	K063-02S	DISSOLVED	ID8K018035			1	☒	unk	---
36	23	2	11	2	Unk	K063-01	DISSOLVED	ID8K018036			1	☒	unk	---
37	24	2	12	2	Blank	Blank		ID8K018037			1	☐		---
38	25	2	1	3	QC	CCV3		ID8K018038			1	☒	CCV	None
39	26	2	2	3	QC	CCB3		ID8K018039			1	☒	3XIDL	None

7021

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
40	27	2	3	3	Unk	K063-03	DISSOLVED	ID8K018040			1	☒	unk	---
41	28	2	4	3	Unk	K063-04	DISSOLVED	ID8K018041			1	☒	unk	---
42	29	2	5	3	Unk	K063-05	DISSOLVED	ID8K018042			1	☒	unk	---
43	30	2	6	3	Unk	K063-06	DISSOLVED	ID8K018043			1	☒	unk	---
44	31	2	7	3	Unk	K039-01	DISSOLVED	ID8K018044			1	☒	unk	---
45	32	2	8	3	Unk	K039-01D	DISSOLVED	ID8K018045			1	☒	unk	---
46	33	2	9	3	Blank	Blank		ID8K018046			1	☐		---
47	34	2	10	3	QC	CCV4		ID8K018047			1	☒	CCV	None
48	35	2	11	3	QC	CCB4		ID8K018048			1	☒	3XIDL	None
49	36	2	12	3	QC	IPK031WB		ID8K018049			1	☒	1/2LOQ	None
50	37	2	1	4	QC	IPK031WL		ID8K018050			1	☒	LCS	None
51	38	2	2	4	QC	IPK031WC		ID8K018051			1	☒	LCS	None
52	39	2	3	4	Unk	K108-02A		ID8K018052			1	☒	unk	---
53	40	2	4	4	Unk	K108-02		ID8K018053			1	☒	unk	---
54	41	2	5	4	Unk	K108-02J		ID8K018054			1	☒	unk	---
55	42	2	6	4	Unk	K108-02M		ID8K018055			1	☒	unk	---
56	43	2	7	4	Unk	K108-02S		ID8K018056			1	☒	unk	---
57	44	2	8	4	Unk	K108-01		ID8K018057			1	☒	unk	---
58	45	2	9	4	Blank	Blank		ID8K018058			1	☐		---
59	46	2	10	4	QC	CCV5		ID8K018059			1	☒	CCV	None
60	47	2	11	4	QC	CCB5		ID8K018060			1	☒	3XIDL	None
61	48	2	12	4	Unk	K084-01	DISSOLVED	ID8K018061			1	☒	unk	---
62	49	2	1	5	Unk	K084-02	DISSOLVED	ID8K018062			1	☒	unk	---
63	50	2	2	5	Unk	K084-03	DISSOLVED	ID8K018063			1	☒	unk	---
64	51	2	3	5	Unk	K084-04	DISSOLVED	ID8K018064			1	☒	unk	---
65	52	2	4	5	Unk	K084-05	DISSOLVED	ID8K018065			1	☒	unk	---
66	53	2	5	5	Unk	K084-06	DISSOLVED	ID8K018066			1	☒	unk	---
67	54	2	6	5	Unk	K070-01	DISSOLVED	ID8K018067			1	☒	unk	---
68	55	2	7	5	Unk	K070-02	DISSOLVED	ID8K018068			1	☒	unk	---
69	56	2	8	5	Unk	K070-03	DISSOLVED	ID8K018069			1	☒	unk	---
70	57	2	9	5	Blank	Blank		ID8K018070			1	☐		---
71	58	2	10	5	QC	CCV6		ID8K018071			1	☒	CCV	None
72	59	2	11	5	QC	CCB6		ID8K018072			1	☒	3XIDL	None
73	60	2	12	5	Unk	K070-04	DISSOLVED	ID8K018073			1	☒	unk	---
74	61	3	1	1	Unk	K070-05	DISSOLVED	ID8K018074			1	☒	unk	---
75	62	3	2	1	Unk	K070-06	DISSOLVED	ID8K018075			1	☒	unk	---
76	63	3	3	1	Unk	K101-01	DISSOLVED	ID8K018076			1	☒	unk	---
77	64	3	4	1	Unk	K093-01	DISSOLVED	ID8K018077			1	☒	unk	---
78	65	3	5	1	Unk	K093-01D	DISSOLVED	ID8K018078			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
79	66	3	6	1	Unk	K072-01	DISSOLVED	ID8K018079			1	☒	unk	—
80	67	3	7	1	Unk	K090-03	DISSOLVED	ID8K018080			1	☒	unk	—
81	68	3	8	1	Blank	Blank		ID8K018081			1	☐		—
82	69	3	9	1	QC	CCV7		ID8K018082			1	☒	CCV	None
83	70	3	10	1	QC	CCB7		ID8K018083			1	☒	3XIDL	None
84	71	3	11	1	QC	ICSA2		ID8K018084			1	☒	ICSA	None
85	72	3	12	1	QC	ICSAB2		ID8K018085			1	☒	ICSAB	None
86	73	3	1	2	QC	CCV8		ID8K018086			1	☒	CCV	None
87	74	3	2	2	QC	CCB8		ID8K018087			1	☒	3XIDL	None
88	75	3	3	2	QC	IPK032SB		ID8K018088			1	☒	1/2LOQ	None
89	76	3	4	2	QC	IPK032SL		ID8K018089			1	☒	LCS	None
90	77	3	5	2	QC	IPK032SC		ID8K018090			1	☒	LCS	None
91	78	3	6	2	Unk	K152-01A		ID8K018091			1	☒	unk	—
92	79	3	7	2	Unk	K152-01		ID8K018092			1	☒	unk	—
93	80	3	8	2	Unk	K152-01J		ID8K018093			1	☒	unk	—
94	83	3	11	2	Blank	Blank		ID8K018094			1	☐		—
95	84	3	12	2	QC	CCV9		ID8K018095			1	☒	CCV	None
96	85	3	1	3	QC	CCB9		ID8K018096			1	☒	3XIDL	None

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INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID
1	Blank	.00130	.00002	-.00002	.00040	.00009	.00074	-.00005	.00023	-.00008	-.00115	Blank
2	S20					1.0272		.14317				S20
3	S21					10.310		1.3994				S21
4	S22				.57219						.15174	S22
5	S23				5.7640						1.5246	S23
6	S24						.10386					S24
7	S25						1.0501					S25
8	S26	.24775							.98689	.15619		S26
9	S27	8.8712							9.2807	1.5607		S27
10	S28		.00522									S28
11	S29		.05092									S29
12	S30			.00131								S30
13	S31			.00527								S31
14	ICV	101.67	1.4774	1.0462	1.9789	1.5234	2.5379	1.9823	74.283	2.4145	.97000	ICV
15	ICB	.00575	.00064	.00041	.00004	.00007	.00532	.00004	.01245	.00011	.00013	ICB
16	MRLK1801	.22441	.09677	.01157	.01056	.01023	.09909	.01036	1.0118	.00999	.00973	MRLK1801
17	MRLK1802	.21411	.04916	.01020	.00528	.00410	.09799	.00504	.50879	.00959	.00957	MRLK1802
18	ICSA1	393.18	-.00127	.00138	.00046	.00004	.03482	.00315	477.89	.00076	-.00032	ICSA1
19	ICSAB1	381.69	1.0156	1.0609	.48696	.49401	.54160	.95304	470.56	.46925	.48201	ICSA81
20	CCV1	101.93	1.5101	1.0463	1.9564	1.4725	2.5489	1.9909	74.378	2.4316	.96755	CCV1
21	CCB1	.01681	.00062	.00084	.00021	.00010	.00457	.00012	.07778*	-.00002	.00008	CCB1
22	K467-01A	5.7181	2.5802	.57112	.58005	.54312	.65264	.53891	81.520	.52221	.52286	K467-01A
23	K467-01W	.06912	.00170	.00044	.04579	.00002	.12609	.00061	33.259	.00103	.00081	K467-01W
24	K467-01J	.01312	.00216	.00052	.00960	-.00004	.02550	.00016	7.0591	.00023	.00017	K467-01J
25	Blank	.01168	.00023	.00175	.00024	.00017	-.00011	.00017	.06082	.00017	.00005	Blank
26	CCV2	100.24	1.4790	1.0239	2.0197	1.5288	2.4843	1.9607	74.130	2.3972	.97893	CCV2
27	CCB2	.00954	.00193	.00082	.00025	.00012	.00332	.00010	.07563*	.00001	.00000	CCB2
28	IPK028WB	.00083	.00083	.00180	-.00002	.00001	.00063	.00003	.00223	-.00010	.00008	IPK028WB
29	IPK028WL	5.1159	2.5204	.53556	.50373	.51722	.51934	.51718	49.594	.49993	.50154	IPK028WL
30	IPK028WC	5.0110	2.4853	.52715	.49605	.50853	.51331	.51321	48.622	.48782	.49070	IPK028WC
31	K063-02A	5.5900	2.6448	.58986	.72755	.54779	.64279	.53836	247.25	.52610	.53859	K063-02A
32	K063-02	.02026	.00024	.00260	18735	.00006	.10884	-.00006	207.89	.00050	-.00054	K063-02
33	K063-02J	.00503	.00029	.00022	.03957	.00000	.02255	-.00005	44.752	00024	-.00020	K063-02J
34	K063-02M	5.1664	2.5691	.54245	.69180	.51034	.62872	49584	247.22	.48032	.49572	K063-02M
35	K063-02S	5.3275	2.6239	.54932	71028	.52452	.64184	.50540	255.79	.49005	.50456	K063-02S
36	K063-01	.01646	.00027	.00392	.17218	.00013	.10995	-.00003	260.99	.00055	.00074	K063-01
37	Blank	.00958	.00086	.00189	00019	.00019	-.00027	.00024	.06563	.00029	.00011	Blank
38	CCV3	98.478	1.4815	1.0344	1.9732	1.4943	2.4855	1.9746	74.043	2.4133	.97769	CCV3
39	CCB3	.00899	.00110	.00289	.00029	.00016	.00298	.00011	.09593*	.00019	.00002	CCB3
40	K063-03	.02817	-.00082	.00243	.09815	-.00002	.11237	-.00011	294.15	.00065	00058	K063-03
41	K063-04	.01836	-.00084	.00397	.15140	.00003	.10590	-.00007	192.48	.00052	-.00047	K063-04
42	K063-05	.01572	-.00195	.00230	.17829	-.00003	.11349	-.00012	285.89	.00041	-.00047	K063-05
43	K063-06	.00858	-.00163	.00415	.19026	-.00001	.10709	-.00006	209.15	.00045	-.00055	K063-06
44	K039-01	.00694	-.00100	.00083	.10377	.00002	.04588	-.00005	73.533	.00049	.00329	K039-01
45	K039-01D	.00686	-.00055	.00057	.10708	.00000	.04580	-.00003	74.864	.00029	.00317	K039-01D
46	Blank	.00624	.00068	.00156	.00000	.00020	-.00108	.00021	05544	.00017	.00019	Blank
47	CCV4	97.816	1.4716	1.0314	1.9875	1.5063	2.4757	1.9817	74.238	2.4147	.97704	CCV4
48	CCB4	.00633	.00086	.00061	.00006	.00013	.00219	.00013	.10477*	.00011	.00007	CCB4
49	IPK031WB	-.00191	-.00092	-.00019	-.00014	-.00005	-.00015	.00000	.00119	.00009	.00006	IPK031WB
50	IPK031WL	5.0840	2.5350	.53219	50216	.51701	.51841	.51538	49.674	.49771	.50026	IPK031WL
51	IPK031WC	5.1117	2.5730	.54236	.51029	.52563	.52205	.52419	50.460	.50351	.50655	IPK031WC
52	K108-02A	5.3177	2.5388	.57210	.62510	.54876	.56847	.53549	110.02	.52647	.52457	K108-02A

53	K108-02	.00133	.00196	.00238	.08975	.00003	.05556	.00006	62.067	.00947	-.00031	K108-02
54	K108-02J	.00226	.00066	.00171	.01965	-.00001	.01112	-.00002	13.307	.00193	-.00017	K108-02J
55	K108-02M	5.1669	2.5668	.54401	.60494	.52772	.57505	.50847	111.67	.49991	.50055	K108-02M
56	K108-02S	5.0948	2.5797	.54700	.60251	.52508	.57332	.50925	110.72	.49965	.49810	K10B-02S
57	K108-01	.00085	-.00014	.00586	.09003	-.00001	.05427	.00004	62.149	.01119	-.00035	K108-01
58	Blank	.00505	-.00006	.00238	.00005	.00021	-.00053	.00019	.05433	.00009	.00007	Blank
59	CCV5	98.674	1.4800	1.0194	2.0242	1.5213	2.4495	1.9503	74.370	2.3707	.97526	CCV5
60	CCB5	.00466	.00071	.00049	.00003	.00015	.00366	.00011	.07012*	.00011	.00008	CCB5
61	K084-01	.01450	-.00032	.00155	.14518	.00002	.08270	-.00005	136.35	.00037	-.00033	K084-01
62	K084-02	.01570	-.00139	.00230	.08376	-.00002	.08355	-.00002	145.73	.00038	-.00031	K084-02
63	K084-03	.01393	.00063	.05906	.03606	-.00003	.17307	.00039	345.88	.00018	.00106	K084-03
64	K084-04	.01200	-.00181	.00164	.20713	-.00002	.12503	-.00002	202.16	.00053	-.00015	K084-04
65	K0B4-05	.00767	-.00048	-.00102	.23625	.00001	.11162	-.00010	229.47	.00046	-.00054	K084-05
66	K084-06	.01215	-.00107	.00284	.14336	.00001	.08002	-.00005	135.07	.00048	-.00022	K084-06
67	K070-01	.01196	-.00212	.03160	.06237	-.00002	.17774	.00005	498.75	.00034	.00025	K070-01
68	K070-02	.01935	-.00136	.00001	.12083	-.00002	.10397	-.00022	419.56	.00044	-.00031	K070-02
69	K070-03	.02689	-.00128	.00187	.11657	.00000	.11465	-.00016	312.43	.00045	-.00037	K070-03
70	Blank	.00468	.00085	.00144	.00027	.00019	-.00166	.00022	.07243	.00023	.00002	Blank
71	CCV6	97.248	1.4773	1.0224	2.0161	1.5152	2.4464	1.9513	74.378	2.3717	.97595	CCV6
72	CCB6	.00075	.00150	.00002	.00009	.00010	.00234	.00008	.05085*	.00009	-.00006	CCB6
73	K070-04	.00879	-.00222	.00123	.21511	.00006	.08351	-.00010	217.61	.00029	-.00035	K070-04
74	K070-05	.01638	-.00119	.00623	.33496	.00003	.12988	-.00014	321.20	.00047	-.00053	K070-05
75	K070-06	.00635	-.00167	.00087	.21256	-.00001	.08083	-.00005	217.64	.00049	-.00024	K070-06
76	K101-01	.00448	-.00146	.00212	.22012	.00004	.11312	-.00005	181.91	.00037	-.00045	K101-01
77	K093-01	.00247	-.00074	-.00032	.10840	-.00003	.04492	.00000	74.673	.00034	.00276	K093-01
78	K093-01D	.00034	-.00038	.00200	.10851	-.00004	.04477	-.00003	74.676	.00035	.00279	K093-01D
79	K072-01	.01138	.00073	.00151	.10938	.00010	.04197	-.00006	63.894	.00037	.00160	K072-01
80	K090-03	.02535	-.00035	-.00132	.03403	.00023	.19801	.00022	9.7168	.00024	.00002	KD90-03
81	Blank	.00280	.00072	.00000	.00018	.00016	-.00225	.00018	.04622	.00017	.00005	Blank
82	CCV7	95.263	1.4751	1.0304	1.9711	1.4884	2.4506	1.9580	74.381	2.3950	.97776	CCV7
83	CCB7	.00959	.00111	.00112	-.00003	.00013	.00234	.00008	.09124*	.00018	-.00006	CCB7
84	ICSA2	368.55	.00033	-.00219	.00058	.00013	.03089	.00182	469.86	.00066	-.00033	ICSA2
85	ICSAB2	369.14	1.0065	1.0481	.49944	.50461	.52563	.94330	467.76	.46142	.48134	ICSAB2
86	CCV8	95.423	1.4444	1.0312	1.9726	1.5221	2.4464	1.9678	74.50B	2.3841	.97485	CCV8
87	CCB8	.00027	-.00043	-.00002	-.00003	.00009	.00325	.00008	.01894	.00006	.00002	CCB8
88	IPK032SB	-.00560	00025	-.00049	-.00012	-.00003	.00042	-.00004	.01310	.00040	.00000	IPK032SB
B9	IPK032SL	4.8545	2 4950	.52104	.52656	.53816	.48204	.51412	51.806	.50640	.52668	IPK032SL
90	IPK032SC	4 8172	2 4533	.51336	.52408	.53474	.47924	.50772	51.352	.50028	.52145	IPK032SC
91	K152-01A	70.983	2.5175	.63658	2.1809	.55945	.55017	1.1205	361.58	.63593	.59119	K152-01A
92	K152-01	67.990	.02699	.09530	1.6917	.00589	.06939	.65592	326.87	.13405	.05550	K152-01
93	K152-01J	13.732	.00760	.02105	.34200	.00118	.01410	.14297	68 995	.02863	.01108	K152-01J
94	Blank	-.00196	-.00036	.00125	.00023	.00000	-.00132	-.00002	.02644	- 00005	-.00009	Blank
95	CCV9	96.460	1.4884	1.0752	1.9822	1.5334	2.5137	2.0639	75.244	2.4441	.98837	CCV9
96	CCB9	-.00343	-.00014	.00151	.00018	.00007	.00191	.00008	.01931	00018	.00012	CCB9
INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID

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INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID
1	Blank	.00108	.00001	.00019	-.00061	-.00001	.00006	-.00011	-.00057	-.00092	.00001	Blank
2	S20			.20004			.10533					S20
3	S21			2.0153			1.0542					S21
4	S22	.28663	.05391									S22
5	S23	2.7478	2.0913									S23
6	S24							.69431				S24
7	S25							7.0782				S25
8	S26								.75477	.44222		S26
9	S27								7.4278	4.4476		S27
10	S28					.02592						S28
11	S29					.25485						S29
12	S30				.03336						.00147	S30
13	S31				.16786						.00589	S31
14	1CV	2.5588	25.335	2.4568	.54075	58.325	2.4215	2.4979	2.4123	58.366	1.0441	1CV
15	ICB	.00000	.00146	-.00075	.00084	.01173	.00008	.00035	-.00003	.11074	-.00158	ICB
16	MRLK1801	.01052	.21283	.01020	.01130	1.0203	.01053	.01016	.00984	.99412	.00992	MRLK1801
17	MRLK1802	.00999	.10306	.00269	.10419	.20863	.00534	.00937	.00970	.97612	.00922	MRLK1802
18	1CSA1	.00142	197.65	-.00029	.01932	197.71	.00146	-.00102	.00154	.16213	.00092	ICSA1
19	1CSAB1	.53123	195.57	.96189	1.1360	189.85	.46890	1.0119	.95246	76.540	1.0372	ICSAB1
20	CCV1	2.5808	25.412	2.4207	.49776	57.572	2.3700	2.4799	2.3914	59.553	1.0432	CCV1
21	CCB1	.00028	.00374	-.00034	.00133	.00674	.00018	.00041	.00004	.17075	.00133	CCB1
22	K467-01A	.70232	6.2479	.52826	.01661	62.543	.66793	.51770	.46480	52.996	.56477	K467-01A
23	K467-01W	.14675	.82775	.00293	.01491	13.875	.14660	.00733	.00409	3.3280	-.00080	K467-01W
24	K467-01J	.03041	.17789	.00033	.00372	2.9183	.03084	.00157	.00086	.74270	-.00067	K467-01J
25	Blank	.00011	.00574	-.00055	.00085	.00980	.00031	.00032	.00033	.07726	-.00047	Blank
26	CCV2	2.5142	24.901	2.4349	.52058	59.376	2.4653	2.5307	2.4117	59.509	1.0147	CCV2
27	CCB2	-.00005	.00077	-.00033	.00088	.02473	.00049	.00040	.00006	.12105	-.00101	CCB2
28	1PK028WB	-.00012	.00091	-.00039	.00111	.00863	.00009	.00005	-.00026	.02627	- 00044	IPK028WB
29	1PK028WL	.52157	5.1935	.50108	.00303*	48.848	.49578	.52006	.50065	48.949	.52476	IPK028WL
30	IPK028WC	.50777	5.0856	.49691	.00294*	48.177	.48802	.51249	.48915	48.126	.51830	IPK028WC
31	K063-02A	.56836	6.4488	.53993	.01820	84.873	.90527	.53719	.47554	56.516	.57466	K063-02A
32	K063-02	.00098	1.0177	.00109	.01834	36.340	.38709	.00290	.00022	5.0399	-.00089	K063-02
33	K063-02J	.00026	.21615	.00024	.00376	7.7952	.08272	.00057	.00013	1.0648	- 00007	K063-02J
34	K063-02M	.51117	6.0307	.49909	.01893	84.291	.87040	.53380	.49411	54.952	.52591	K063-02M
35	K063-02S	.52305	6.1331	50754	.01905	87.560	.89977	54519	.50245	56.603	.53592	K063-02S
36	K063-01	.00090	13.420	.00137	.02043	31.836	.35770	-.00042	.00194	5.3676	-.00130	K063-01
37	Blank	-.00005	.00235	-.00032	.00127	.00945	.00036	.00031	.00025	.09884	.00069	Blank
38	CCV3	2.5350	25.131	2.4237	.50623	58.271	2.3983	2.5138	2.4124	59.326	1.0252	CCV3
39	CCB3	-.00001	.00213	- 00036	.00098	.01786	.00057	.00039	.00010	.11978	.00076	CCB3
40	K063-03	.00126	.20809	.00207	.02284	43.348	.42920	-.00036	.00034	6.0617	.00063	K063-03
41	K063-04	.00082	.55312	.00194	01506	33.904	.28696	.00350	.00050	4.7425	-.00137	K063-04
42	K063-05	.00072	.50895	.00128	.02221	50.895	.32214	.00291	.00079	5.8228	00034	K063-05
43	K063-06	.00079	1.0305	00099	.01729	37.013	.39523	.00272	.00065	4.9750	.00006	K063-06
44	K039-01	.00042	-.00165	.00151	.03708	26.953	.43085	.03263	.01544	3.3885	.00207	K039-01
45	K039-01D	.00010	-.00395	.00047	.03823	27.710	.44372	.03333	.01574	3.4598	.00165	K039-01D
46	Blank	-.00023	.00409	-.00090	.00041	.02622	.00037	.00019	.00028	.03292	.00044	Blank
47	CCV4	2.5083	25.101	2.4180	.51168	58.898	2.4287	2.5114	2.4078	59.732	1.0213	CCV4
48	CCB4	-.00017	.00212	-.00013	.00086	.01308	.00020	.00041	.00007	.09532	-.00087	CC84
49	1PK031WB	-.00012	.00108	-.00024	.00076	-.00022	-.00022	.00008	.00060	.02068	-.00240	IPK031WB
50	1PK031WL	.51307	5.2003	.49975	.00230*	49.077	.49652	.52349	.49982	49.350	.52288	IPK031WL
51	1PK031WC	.51670	5.2609	.50541	.00374*	50.082	.50397	.52887	.50535	49.867	.53238	IPK031WC
52	K108-02A	.53676	5.9915	52826	.03852	62.107	.53662	.53095	.46286	52.551	.55408	K108-02A

53	K108-02	.00016	.60745	.00163	.03587	12.631	.00779	.01485	.00007	2.3162	.00040	K108-02
54	K108-02J	.00004	.13121	.00063	.00936	2.7372	.00177	.00309	-.00008	.50004	.00028	K108-02J
55	K108-02M	.50921	5.7965	.50457	.03977	62.574	.51241	.54410	.49956	52.308	.52703	K108-02M
56	K108-02S	.50628	5.7780	.50175	.03920	62.378	.50847	.54244	.49664	52.124	.52875	K108-02S
57	K108-01	.00015	.00161	.00200	.03647	12.428	.00020	.01522	.00011	2.3316	.00229	K108-01
58	Blank	-.00016	.00341	-.00057	.00017	.01892	.00035	.00026	.00048	.06036	.00037	Blank
59	CCV5	2.4517	24.830	2.4353	.51951	59.652	2.4595	2.5291	2.4128	59.572	1.0134	CCV5
60	CCB5	-.00022	.00249	-.00037	.00158	.01126	.00042	.00033	.00008	.13814	-.00119	CCB5
61	K084-01	.00037	.10200	.00105	.01092	23.461	.14869	.00362	.00010	3.4649	-.00116	K084-01
62	K084-02	.00108	.39522	.00106	.01137	25.770	.24738	.00486	.00026	3.8328	-.00062	K084-02
63	K084-03	.00051	88.209	.00396	.04195	65.957	2.7479	-.00077	.00451	8.6649	-.00150	K084-03
64	K084-04	.00091	17.986	.00095	.02022	25.203	.80021	-.00014	.00174	4.6523	-.00254	K084-04
65	K084-05	.00053	4.7264	.00140	.02454	43.781	.79340	-.00005	.00053	5.1511	.00034	K084-05
66	K084-06	.00068	.10687	.00203	.01077	22.807	.14707	.00369	.00186	3.5021	-.00166	K084-06
67	K070-01	.00067	30.797	.00485	.05656	88.800	1.0768	-.00070	.00532	11.183	.00020	K070-01
68	K070-02	.00131	7.9987	.00221	.03607	67.065	1.1231	-.00015	.00295	7.1947	-.00046	K070-02
69	K070-03	.00109	.81415	.00149	.02512	62.240	.43632	.00236	.00050	6.2243	.00062	K070-03
70	Blank	-.00036	.00056	-.00016	.00143	.01416	.00052	.00019	.00020	.08439	-.00073	Blank
71	CCV6	2.4438	24.926	2.4316	.51819	59.512	2.4572	2.5275	2.4126	59.794	1.0168	CCV6
72	CCB6	-.00031	.00030	-.00035	.00052	.01074	.00029	.00036	.00007	.12229	-.00031	CCB6
73	K070-04	.00048	.05411	.00193	.01666	39.203	.33377	.00334	.00063	4.8515	.00078	K070-04
74	K070-05	.00033	14.244	.00215	.03435	62.737	1.0472	-.00064	.00040	7.0409	.00013	K070-05
75	K070-06	.00057	.06285	.00133	.01605	38.849	.32930	.00315	.00050	4.8162	-.00030	K070-06
76	K101-01	-.00008	1.0135	.00145	.01906	34.669	.43962	.00009	.00034	4.3773	-.00162	K101-01
77	K093-01	.00011	-.00497	.00098	.04088	27.732	.36014	.01557	.00540	3.7777	.00055	K093-01
78	K093-01D	.00003	-.00021	.00062	.04081	27.844	.36380	.01574	.00541	3.7462	.00100	K093-01D
79	K072-01	.00027	.01835	.00034	.04584	24.523	.43012	.13627	.02282	3.9636	.00048	K072-01
80	K090-03	.00088	.00741	.00342	.01398	10.579	.00138	.00128	.00356	.81804	.00327	K090-03
81	Blank	-.00043	.00309	-.00019	.00094	.01062	.00058	.00036	.00028	.04039	-.00069	Blank
82	CCV7	2.4736	25.209	2.4229	.50355	58.443	2.4002	2.5216	2.4167	59.839	1.0184	CCV7
83	CCB7	-.00049	.00827	-.00026	.00245	.01157	.00027	.00026	.00009	.09550	-.00162	CCB7
84	ICSA2	.00079	192.39	-.00119	.02063	192.43	.00127	-.00115	.00152	.04575	.00003	ICSA2
85	ICSAB2	.50850	192.42	.95477	1.1576	194.74	.48177	1.0161	.95223	77.547	1.0305	ICSAB2
86	CCV8	2.4512	25.082	2.4471	.54372	58.769	2.4229	2.5166	2.4269	59.018	1.0206	CCV8
87	CCB8	-.00030	-.00022	-.00071	.00117	.00185	.00010	.00030	.00004	.11313	.00008	CCB8
88	IPK032S8	-.00042	.00532	-.00046	.00023	.01054	.00007	.00042	.00000	.08370	.00001	IPK032S8
89	IPK032SL	.50361	5.2644	.51820	.00343*	52.065	.52271	.55743	.52455	50.955	.50806	IPK032SL
90	IPK032SC	.49794	5.2111	.51260	.00168*	51.904	.52064	.55269	.51866	50.574	.49783	IPK032SC
91	K152-01A	.97294	128.86	6.6496	.06066	84.504	5.0768	.53858	.61313	60.828	.53607	K152-01A
92	K152-01	.44292	128.27	6.4091	.06051	35.683	4.7471	-.00079	.14907	9.6913	.00422	K152-01
93	K152-01J	.08968	27.376	1.3247	.01178	7.4153	.99004	-.00182	.02971	1.8500	.00240	K152-01J
94	Blank	-.00051	.00298	-.00064	.00080	.00765	.00034	.00000	-.00004	-.03976	-.00045	Blank
95	CCV9	2.5238	25.528	2.4890	.54788	59.076	2.4429	2.5313	2.4529	60.544	1.0571	CCV9
96	CCB9	-.00055	.00322	-.00034	.00115	.00479	.00004	.00037	.00004	.07075	-.00076	CCB9
INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID

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INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID
1	Blank	.00011	.00331	-.00012	-.00002	.00001	.00005	-.00025	.00044	Blank
2	S20									S20
3	S21									S21
4	S22							.12964		S22
5	S23							1.3040		S23
6	S24		1.3358							S24
7	S25		7.7723							S25
8	S26									S26
9	S27									S27
10	S28				.00636					S28
11	S29				.06360					S29
12	S30	.04537		.14907		.02413	.01673		.63640	S30
13	S31	.22325		.73021		.11527	.08932		6.2345	S31
14	ICV	.50281	62.567	.48845	2.3329	.47812	.50801	1.5096	2.6246	ICV
15	ICB	.00011	-.01065	.00003	.00039	.00070	.00076	.00016	.00037	ICB
16	MRLK1801	.01023	.98344	.01031	.01122	.00089	.01063	.01030	.02088	MRLK1801
17	MRLK1802	.00986	.46685	.00988	.01023	.00977	.01063	.00963	.01085	MRLK1802
18	ICSA1	.00007	.07594	.00083	-.00026	.00181	.00556	.00073	.00247	ICSA1
19	ICSAB1	1.0699	82.009	.47722	.86039	.94339	.99405	.50012	1.0498	ICSAB1
20	CCV1	.50901	63.824	.48946	2.3466	.50440	.49426	1.5077	2.6186	CCV1
21	CCB1	.00027	-.00264	.00020	-.00004	.00041	.00114	.00015	.00338	CCB1
22	K467-01A	.51151	111.54	.82632	.51105	.48315	.52347	.54263	.83716	K467-01A
23	K467-01W	.00012	59.600	.35090	.00011	.00062	.00381	.00058	.28042	K467-01W
24	K467-01J	.00012	12.368	.07381	.00081	.00042	.00167	.00026	.05850	K467-01J
25	Blank	.00018	-.02760	.00003	.00011	.00056	.00045	.00021	.00279	Blank
26	CCV2	.49922	64.026	.49088	2.2996	.50725	.51135	1.4875	2.6341	CCV2
27	CCB2	.00014	-.02027	-.00001	.00068	.00052	-.00005	.00018	.00344	CCB2
28	IPK028WB	.00014	-.03569	-.00003	.00023	.00052	.00067	-.00002	.00060	IPK028WB
29	IPK028WL	.51507	53.280	.49953	.49109	.48347	.51555	.51741	.54349	IPK028WL
30	IPK028WC	.51336	52.350	.49178	.49003	.47845	.51157	.50696	.53703	IPK028WC
31	K063-02A	.52611	145.39	2.2797	.49605	.49890	.52568	.55254	.59412	K063-02A
32	K063-02	.00007	92.655	1.8213	.00068	.00081	.00280	-.00005	.00995	K063-02
33	K063-02J	.00010	19.162	.38440	.00012	.00051	.00087	.00004	.00249	K063-02J
34	K063-02M	.51916	143.47	2.2665	.45885	.49338	.52037	.51174	.54314	K063-02M
35	K063-02S	.52890	148.03	2.3399	.46827	.50201	.53546	.52001	.55461	K063-02S
36	K063-01	-.00032	89.754	1.5835	-.00067	.00029	.00375	.00165	.00642	K063-01
37	Blank	.00004	.00275	.00010	.00057	.00056	.00089	.00015	.00220	Blank
38	CCV3	.50073	64.007	.48785	2.2912	.50643	.49967	1.4990	2.6469	CCV3
39	CCB3	.00036	-.00260	-.00004	.00115	.00053	.00070	.00014	.00429	CCB3
40	K063-03	-.00020	129.74	2.0871	-.00057	.00040	.00346	.00079	.01800	K063-03
41	K063-04	-.00005	85.401	1.6505	.00039	.00020	.00238	-.00015	.00589	K063-04
42	K063-05	-.00015	115.32	2.4559	.00014	-.00026	.00310	-.00032	.00594	K063-05
43	K063-06	.00009	93.157	1.8254	-.00027	.00104	.00256	-.00009	.00254	K063-06
44	K039-01	-.00002	93.253	.73912	.00126	.00025	.00271	-.00003	.00814	K039-01
45	K039-01D	-.00003	95.418	.75563	.00185	.00051	.00160	.00016	.00757	K039-01D
46	Blank	.00012	.02336	.00004	.00061	.00051	.00058	.00004	.00247	Blank
47	CCV4	.49862	64.383	.48949	2.2927	.50513	.50117	1.4975	2.6435	CCV4
48	CCB4	.00001	.00304	.00003	.00060	.00020	.00041	.00016	.00499	CCB4
49	IPK031WB	.00014	-.03245	.00000	.00104	.00058	.00091	.00005	.00077	IPK031WB
50	IPK031WL	.50777	53.566	.50222	.48761	.48772	.52129	.51808	.54460	IPK031WL
51	IPK031WC	.51236	54.055	.50431	.49601	.49309	.52891	.52315	.55115	IPK031WC
52	K108-02A	.49734	97.975	1.3104	.49994	.48836	.52242	.54475	.63700	K108-02A

53	K108-02	.00008	44.624	.84434	.00044	.00049	.00140	.00549	.06279	K108-02
54	K108-02J	.00023	9.3457	.18055	.00017	.00079	.00068	.00109	.01432	K108-02J
55	K108-02M	.50876	98.876	1.3438	.47552	.49823	.53022	.52385	.61337	K108-02M
56	K108-02S	.50632	97.815	1.3246	.47508	.49687	.52890	.52009	.60874	K108-02S
57	K108-01	.00010	44.206	.82773	.00072	.00019	.00175	.00598	.02799	K108-01
58	Blank	.00015	-.01248	.00001	.00024	.00009	.00107	.00048	.00248	Blank
59	CCV5	.48876	64.020	.48748	2.2704	.51158	.51104	1.4794	2.6598	CCV5
60	CCB5	.00013	-.02189	.00004	.00049	.00083	.00055	.00008	.00325	CCB5
61	K084-01	.00008	63.466	1.1898	.00001	.00027	.00195	-.00004	.00221	K084-01
62	K084-02	.00008	66.476	1.2320	.00049	.00054	.00258	-.00032	.00595	K084-02
63	K084-03	-.00012	125.87	2.7943	-.00059	.00078	.00286	.00088	.00362	K084-03
64	K084-04	-.00023	79.695	1.3677	-.00001	.00032	.00280	.00034	.00576	K084-04
65	K084-05	-.00017	111.88	2.0054	.00069	.00048	.00311	.00005	.00659	K084-05
66	K084-06	.00003	63.376	1.1947	-.00026	.00000	.00162	-.00004	.00545	K084-06
67	K070-01	-.00029	395.55	4.5010	-.00066	.00074	.00350	.00116	.00433	K070-01
68	K070-02	-.00038	135.29	3.2456	.00008	.00080	.00325	.00064	.01085	K070-02
69	K070-03	-.00013	148.76	2.5450	-.00030	.00021	.00248	.00000	.01739	K070-03
70	Blank	.00014	.08014	.00023	.00022	.00025	.00082	.00028	.00213	Blank
71	CCV6	.48805	64.136	.48710	2.2655	.51185	.51017	1.4866	2.6606	CCV6
72	CCB6	.00023	.02346	.00000	.00079	.00037	.00013	.00016	.00230	CCB6
73	K070-04	.00000	82.694	1.9099	.00022	-.00047	.00295	-.00023	.00503	K070-04
74	K070-05	-.00038	122.43	2.8332	-.00050	-.00015	.00301	-.00015	.00454	K070-05
75	K070-06	-.00004	81.610	1.8884	-.00015	.00001	.00280	.00000	.00588	K070-06
76	K101-01	.00014	72.938	1.6616	.00022	-.00005	.00227	-.00004	.00114	K101-01
77	K093-01	.00019	94.073	.76499	.00138	.00057	.00161	.00006	.07039	K093-01
78	K093-01D	-.00006	94.169	.76454	.00196	.00037	.00143	-.00013	.07059	K093-01D
79	K072-01	.00004	90.679	.66046	.00267	.00073	.00228	-.00006	.00919	K072-01
80	K090-03	.00013	158.45	.11412	.00035	.00001	.00116	.00273	.00988	K090-03
81	Blank	.00019	.05870	.00005	.00019	.00059	.00061	.00016	.00199	Blank
82	CCV7	.49180	64.221	.48690	2.2630	.51144	.49997	1.5025	2.6638	CCV7
83	CCB7	.00002	.00871	.00002	.00060	.00002	.00134	.00020	.00421	CCB7
84	ICSA2	.00019	.11849	.00077	- 00072	.00096	.00548	.00066	.00333	ICSA2
85	ICSAB2	1.0354	82.996	.48095	.84564	.94332	1.0158	.49196	1.0544	ICSAB2
86	CCV8	.48684	63.295	.48531	2 2677	.47913	.50777	1.4983	2.6539	CCV8
87	CCB8	.00010	-.00547	-.00008	.00079	.00032	.00075	-.00001	.00035	CCB8
88	IPK032SB	.00003	.00013	-.00014	.00011	.03369	.00091	00004	00168	IPK032SB
89	IPK032SL	.49336	55.144	.50831	.47973	.54531	.54431	.53226	.57361	IPK032SL
90	IPK032SC	.48884	54.724	.50305	.47247	.53802	.54293	.52624	.56756	IPK032SC
91	K152-01A	.49575	56.325	1.1177	.45734	.58020	1.9838	.71338	117.09*	K152-01A
92	K152-01	.00114	.98259	.65599	-.00144	.09450	1.5013	.18265	119 67*	K152-01
93	K152-01J	.00039	.11742	.13386	.00033	.01913	.30243	.03756	31.088	K152-01J
94	Blank	.00024	-.08136	-.00007	.00013	.00048	.00128	-.00002	.00383	Blank
95	CCV9	.50456	64.783	.49434	2.3639	.48002	.50828	1.5215	2.7131	CCV9
96	CCB9	.00012	-.05667*	-.00007	.00042	.00067	.00062	.00011	.00175	CCB9
INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID

1D8K018 Section 3 of 3

EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP METALS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

All samples pH <2

Book #: EIP-104
Batch: 1PK031W
Matrix: Water
Digestor ID: E

SOP #	Rev. #
☐ EMAX-3005	4
☑ EMAX-3010	5
☐ EMAX-3050	4
☐ EMAX-200.7	2
☐ EMAX-	

Start	Temp	End	Temp
	95 °C		95 °C

Standards	ID	Amount Added (ml)
LCS-1	SMIA-013-04-13	0.25
LCS-2	SMIA-013-03-13	0.25
LCS-3	SMIA-013-04-14	0.5
MS	same spike vol and sol as LCS1, LCS2, LCS3	
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SWIA-04-407	1.5+1.5
HCl	SWIA-04-408	2.5+2.5
H_2O_2	N/A	
HNO3(1:1)	N/A	

Digestate Location	ICP
Extract Location	
☑ Reagent Water ID: SINSA-02-074	
☑ Thermometer ID: 10199 3366	
☑ Pipette ID: ICP-07	
☑ Pipette ID: 142780035	
☐ Pipette ID:	
☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask	
☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask	

Prepared By: GG

Standard Added By: GG Witnessed By: TH

Extract Rcvd By: TH Checked By: TH

7630

EMAX LABORATORIES, INC.

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
11IPK031W01	IPK031WB	50	ml	11/17/11 11:03	50	50	50	1	
11IPK031W02	IPK031WL	50	ml	11/17/11 11:03	50	50	50	1	
11IPK031W03	IPK031WC	50	ml	11/17/11 11:03	50	50	50	1	
11IPK031W04	K084-01	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W05	K084-02	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W06	K084-03	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W07	K084-04	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W08	K084-05	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W09	K084-06	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W10	K070-01	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W11	K070-02	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W12	K070-03	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W13	K070-04	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W14	K070-05	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W15	K070-06	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W16	K101-01	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W17	K093-01	50	ml	11/17/11 11:03	50	50	50	1	*DISSOLVED
11IPK031W18	K093-01D	50	ml	11/17/11 11:03	50	50	50	1	*DISSOLVED
11IPK031W19	K072-01	50	ml	11/17/11 11:03	50	50	50	1	*DISSOLVED
11IPK031W20	K090-03	50	ml	11/17/11 11:03	50	50	50	1	*DISSOLVED
11IPK031W21	K108-01	50	ml	11/17/11 11:03	50	50	50	1	
11IPK031W22	K108-02	50	ml	11/17/11 11:03	50	50	50	1	
11IPK031W23	K108-02M	50	ml	11/17/11 11:03	50	50	50	1	
11IPK031W24	K108-02S	50	ml	11/17/11 11:03	50	50	50	1	

11/17/11 GG

Vd=digestate volume PrepFctr=)ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 11/17/11 11:11 Prepared By: GG

☑ Digestion Ended @ 11/17/11 15:25 Checked By: TH

Comments:*Dissolved end filtered in lab. Date 11/17/11

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

WET CHEMICAL ANALYSES

SDG#: 11K070

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K070

METHOD 300.0
ANIONS BY IC

A total of six (6) water samples were received on 11/08/11 for Anions (Chloride, Nitrate, Nitrite and Sulfate) by IC analysis, Method 300.0 in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary forms for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for ICK025WL/C were all within QC limits.
Percent recoveries for ICK029WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. Sample K070-01 for Nitrate and Nitrite was initially analyzed at DF 2 due to turbidity problem and black color appearance. Samples K070-02, -03 and -05 for Nitrite were reported from DF 2 due to interference from high Chloride level.

SAMPLE RESULTS

METHOD 300.0
CHLORIDE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K070

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICKD29WB	ND	1	NA	0.200	0.100	11/10/1103:10	NA	AK13-63	AK13-61	ICK029W	NA	NA
LCS1W	ICK029WL	1.97	1	NA	0.200	0.100	11/10/1103:27	NA	AK13-64	AK13-61	ICK029W	NA	NA
LCD1W	ICK029WC	1.96	1	NA	0.200	0.100	11/10/1103:43	NA	AK13-65	AK13-61	ICK029W	NA	NA
IW-70-SAB11-103	K070-01	457	50	NA	10.0	5.00	11/10/1103:59	NA	AK13-66	AK13-61	ICK029W	11/08/1110:35	11/08/11
IW-70-FSB118-104	K070-02	589	50	NA	10.0	5.00	11/10/1104:15	NA	AK13-67	AK13-61	ICK029W	11/08/1112:01	11/08/11
MW-70-PMW06A-105	K070-03	501	50	NA	10.0	5.00	11/10/1104:31	NA	AK13-68	AK13-61	ICK029W	11/08/1113:42	11/08/11
MW-70-PMW06B-106	K070-04	314	20	NA	4.00	2.00	11/10/1104:47	NA	AK13-69	AK13-61	ICK029W	11/08/1114:48	11/08/11
MW-70-38-108	K070-05	388	25	NA	5.00	2.50	11/10/1105:03	NA	AK13-70	AK13-61	ICK029W	11/08/1116:03	11/08/11
IR-70-FD-107	K070-06	318	40	NA	8.00	4.00	11/10/1105:20	NA	AK13-71	AK13-61	ICK029W	11/08/1115:10	11/08/11

METHOD 300.0
NITRATE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K070

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFTD	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK025WB	ND	1	NA	0.200	0.0500	11/09/1110:42	NA	AK13-03	AK13-01	ICK025W	NA	NA
LCS1W	ICK025WL	1.00	1	NA	0.200	0.0500	11/09/1110:58	NA	AK13-04	AK13-01	ICK025W	NA	NA
LCD1W	ICK025WC	1.00	1	NA	0.200	0.0500	11/09/1111:15	NA	AK13-05	AK13-01	ICK025W	NA	NA
IW-70-SAB11-103	K070-01	0.135J	2	NA	0.400	0.100	11/09/1111:47	NA	AK13-07	AK13-01	ICK025W	11/08/1110:35	11/08/11
IW-70-FSB118-104	K070-02	0.0693J	1	NA	0.200	0.0500	11/09/1112:03	NA	AK13-08	AK13-01	ICK025W	11/08/1112:01	11/08/11
MW-70-PMW06A-105	K070-03	ND	1	NA	0.200	0.0500	11/09/1112:19	NA	AK13-09	AK13-01	ICK025W	11/08/1113:42	11/08/11
MW-70-PMW06B-106	K070-04	ND	1	NA	0.200	0.0500	11/09/1112:35	NA	AK13-10	AK13-01	ICK025W	11/08/1114:48	11/08/11
MW-70-38-108	K070-05	0.0645J	1	NA	0.200	0.0500	11/09/1112:51	NA	AK13-11	AK13-01	ICK025W	11/08/1116:03	11/08/11
IR-70-FD-107	K070-06	ND	1	NA	0.200	0.0500	11/09/1113:08	NA	AK13-12	AK13-01	ICK025W	11/08/1115:10	11/08/11

METHOD 300.0
NITRITE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K070

Matrix : WATER
Instrument ID : I10D

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK025WB	ND	1	NA	0.200	0.0500	11/09/1110:42	NA	AK13-03	AK13-01	ICK025W	NA	NA
LCS1W	ICK025WL	2.04	1	NA	0.200	0.0500	11/09/1110:58	NA	AK13-04	AK13-01	ICK025W	NA	NA
LCD1W	ICK025WC	2.04	1	NA	0.200	0.0500	11/09/1111:15	NA	AK13-05	AK13-01	ICK025W	NA	NA
IW-70-SAB11-103	K070-01	ND	2	NA	0.400	0.100	11/09/1111:47	NA	AK13-07	AK13-01	ICK025W	11/08/1110:35	11/08/11
IW-70-FSB118-104	K070-02	ND	2	NA	0.400	0.100	11/09/1114:12	NA	AK13-16	AK13-13	ICK025W	11/08/1112:01	11/08/11
MW-70-PMW06A-105	K070-03	ND	2	NA	0.400	0.100	11/09/1114:28	NA	AK13-17	AK13-13	ICK025W	11/08/1113:42	11/08/11
MW-70-PMW06B-106	K070-04	ND	1	NA	0.200	0.0500	11/09/1112:35	NA	AK13-10	AK13-01	ICK025W	11/08/1114:48	11/08/11
MW-70-38-108	K070-05	ND	2	NA	0.400	0.100	11/09/1115:01	NA	AK13-19	AK13-13	ICK025W	11/08/1116:03	11/08/11
IR-70-FD-107	K070-06	ND	1	NA	0.200	0.0500	11/09/1113:08	NA	AK13-12	AK13-01	ICK025W	11/08/1115:10	11/08/11

METHOD 300.0
SULFATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K070

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK025WB	ND	1	NA	0.500	0.250	11/09/1110:42	NA	AK13-03	AK13-01	ICK025W	NA	NA
LCS1W	ICK025WL	5.07	1	NA	0.500	0.250	11/09/1110:58	NA	AK13-04	AK13-01	ICK025W	NA	NA
LCD1W	ICK025WC	5.08	1	NA	0.500	0.250	11/09/1111:15	NA	AK13-05	AK13-01	ICK025W	NA	NA
IW-70-SAB11-103	K070-01	1.43	2	NA	1.00	0.500	11/09/1111:47	NA	AK13-07	AK13-01	ICK025W	11/08/1110:35	11/08/11
MBLK2W	ICK029WB	ND	1	NA	0.500	0.250	11/10/1103:10	NA	AK13-63	AK13-61	ICK029W	NA	NA
LCS2W	ICK029WL	5.07	1	NA	0.500	0.250	11/10/1103:27	NA	AK13-64	AK13-61	ICK029W	NA	NA
LCD2W	ICK029WC	5.04	1	NA	0.500	0.250	11/10/1103:43	NA	AK13-65	AK13-61	ICK029W	NA	NA
IW-70-FSB118-104	K070-02	109	50	NA	25.0	12.5	11/10/1104:15	NA	AK13-67	AK13-61	ICK029W	11/08/1112:01	11/08/11
MW-70-PMW06A-105	K070-03	432	50	NA	25.0	12.5	11/10/1104:31	NA	AK13-68	AK13-61	ICK029W	11/08/1113:42	11/08/11
MW-70-PMW06B-106	K070-04	285	20	NA	10.0	5.00	11/10/1104:47	NA	AK13-69	AK13-61	ICK029W	11/08/1114:48	11/08/11
MW-70-38-108	K070-05	175	25	NA	12.5	6.25	11/10/1105:03	NA	AK13-70	AK13-61	ICK029W	11/08/1116:03	11/08/11
IR-70-FD-107	K070-06	285	40	NA	20.0	10.0	11/10/1105:20	NA	AK13-71	AK13-61	ICK029W	11/08/1115:10	11/08/11

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K070
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK029WB	ICK029WL	ICK029WC		
LAB FILE ID:	AK13-63	AK13-64	AK13-65		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1103:10	11/10/1103:27	11/10/1103:43	DATE RECEIVED:	NA
PREP. BATCH:	ICK029W	ICK029W	ICK029W		
CALIB. REF:	AK13-61	AK13-61	AK13-61		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	ND	2.00	1.97	99	2.00	1.96	98	0	90-110	20

8008

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K070
METHOD: METHOD 300.0

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID:	MBLK1W		
LAB SAMP ID:	ICK025WB	ICK025WL	ICK025WC
LAB FILE ID:	AK13-03	AK13-04	AK13-05
DATE EXTRACTED:	NA	NA	NA
DATE ANALYZED:	11/09/1110:42	11/09/1110:58	11/09/1111:15
PREP. BATCH:	ICK025W	ICK025W	ICK025W
CALIB. REF:	AK13-01	AK13-01	AK13-01

DATE COLLECTED: NA
DATE RECEIVED: NA

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrate-N	ND	1.00	1.00	100	1.00	1.00	100	0	90-110	20

6009

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K070
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	1CK025WB	1CK025WL	1CK025WC		
LAB FILE ID:	AK13-03	AK13-04	AK13-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1110:42	11/09/1110:58	11/09/1111:15	DATE RECEIVED:	NA
PREP. BATCH:	1CK025W	1CK025W	1CK025W		
CALIB. REF:	AK13-01	AK13-01	AK13-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	2.00	2.04	102	2.00	2.04	102	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K070
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK025WB	ICK025WL	ICK025WC		
LAB FILE ID:	AK13-03	AK13-04	AK13-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/09/1110:42	11/09/1110:58	11/09/1111:15	DATE RECEIVED:	NA
PREP. BATCH:	ICK025W	ICK025W	ICK025W		
CALIB. REF:	AK13-01	AK13-01	AK13-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	5.07	101	5.00	5.08	102	0	90-110	20

8011

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K070
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	ICK029WB	ICK029WL	ICK029WC		
LAB FILE ID:	AK13-63	AK13-64	AK13-65		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1103:10	11/10/1103:27	11/10/1103:43	DATE RECEIVED:	NA
PREP. BATCH:	ICK029W	ICK029W	ICK029W		
CALIB. REF:	AK13-61	AK13-61	AK13-61		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	5.07	101	5.00	5.04	101	1	90-110	20

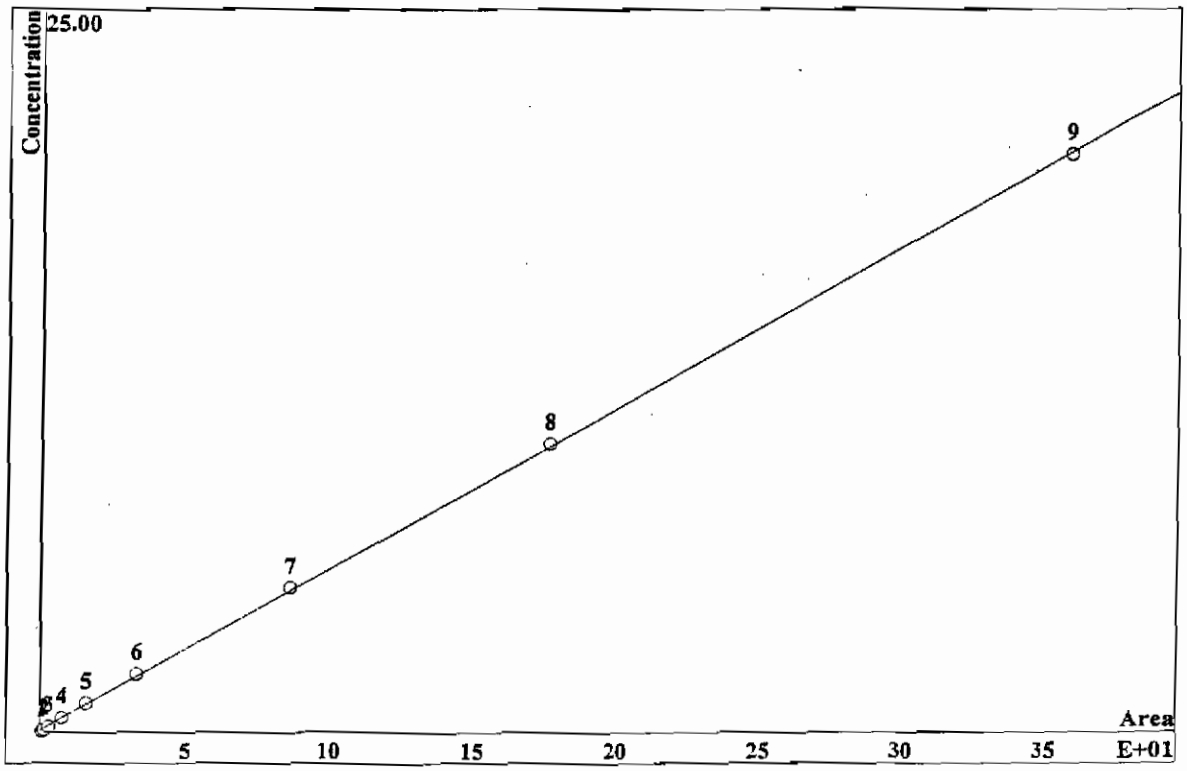
INITIAL CALIBRATIONS

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	nitrite	fluoride	chloride	bromide	nitrate	phosphate	sulfate	RawNetID	DF
AI39-01	IB	IFCBNPS	0	0	0	0	0	0	0	v9301829	1
AI39-02	S0	IFCBNPS	0	0	0	0	0	0	0	v9301845	1
AI39-03	S1	IFCBNPS	0.0402732	0.0794447	0.137238	0.0962101	0.0900188	0.132659	0.181386	v9301901	1
AI39-04	S2	IFCBNPS	0.0827484	0.120657	0.172987	0.138434	0.127411	0.166211	0.219384	v9301917	1
AI39-05	S3	IFCBNPS	0.175829	0.207372	0.255839	0.223376	0.213499	0.241921	0.298411	v9301934	1
AI39-06	S4	IFCBNPS	0.468611	0.487287	0.510168	0.483675	0.481038	0.46682	0.535669	v9301950	1
AI39-07	S5	IFCBNPS	0.987232	0.975831	0.969747	0.947628	0.958434	0.904972	0.974277	v9302006	1
AI39-08	S6	IFCBNPS	2.03579	2.00618	1.92527	1.92275	1.95393	1.87863	1.87805	v9302022	1
AI39-09	S7	IFCBNPS	5.13141	5.00267	4.89791	5.03793	5.02567	5.05879	4.80122	v9302038	1
AI39-10	S8	IFCBNPS	9.9281	9.57748	9.9004	10.4648	10.1254	10.4079	9.8176	v9302054	1
AI39-11	S9	IFCBNPS	18.5849	17.9543	20.0804	21.615	20.3941	21.1232	20.144	v9302111	1
AI39-12	ICV	IFCBNPS	98.6%	100.1%	97.7%	94.1%	98.6%	92.5%	99.9%	v9302127	1
AI39-13	ICB	IFCBNPS	0	0	0	0	0	0	0	v9302143	1

CALIBRATION OF COMPONENT chloride

Method: ICD0-I30.mtw
Equation: Q = 0.0557644·A + 0.0866239
RSD: 1.948 %
Correlation coefficient: 0.999932



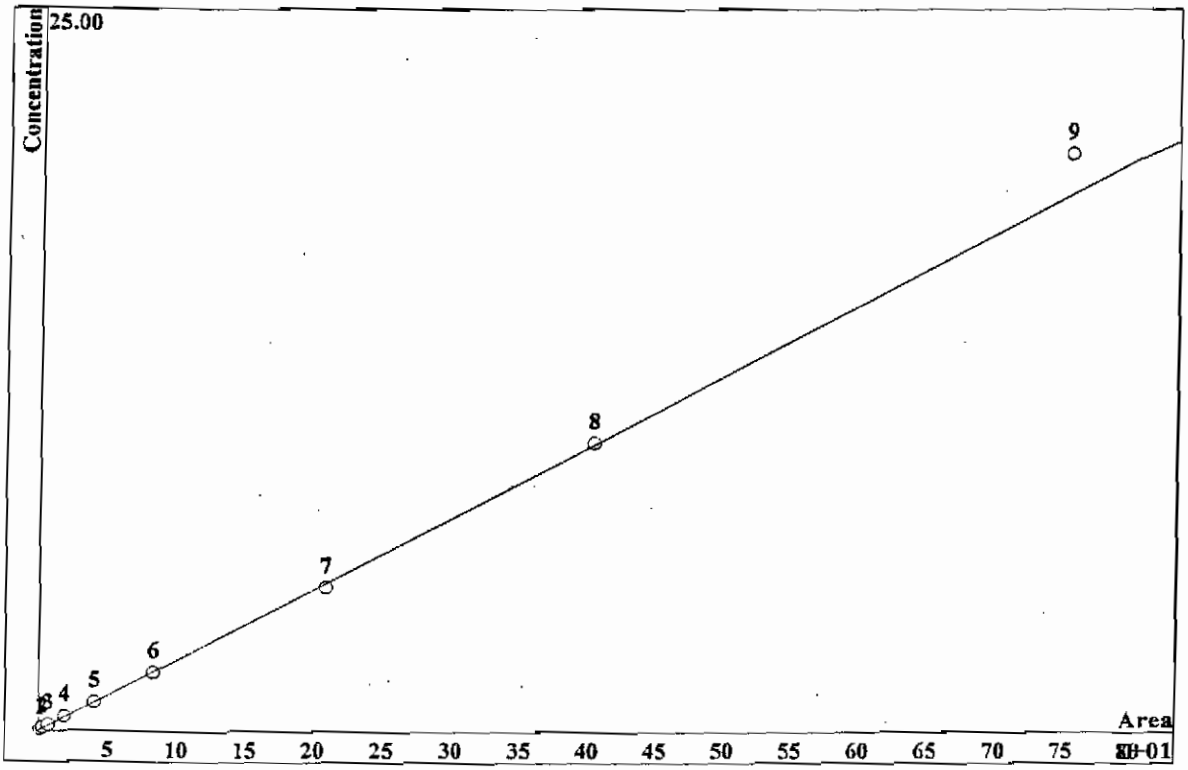
K3 = 0 K2 = 0 K1 = 0.0557644 K0 = 0.0866239
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1035	0.9076	0.05	1	4.26	Yes	v9301901.chw
2	0.1796	1.549	0.1	1	4.26	Yes	v9301917.chw
3	0.354	3.034	0.2	1	4.26	Yes	v9301934.chw
4	0.8921	7.595	0.5	1	4.26	Yes	v9301950.chw
5	1.896	15.84	1	1	4.26	Yes	v9302006.chw
6	3.983	32.97	2	1	4.26	Yes	v9302022.chw
7	10.38	86.28	5	1	4.26	Yes	v9302038.chw
8	21.04	176	10	1	4.26	Yes	v9302054.chw
9	42.24	358.5	20	1	4.26	Yes	v9302111.chw

AS
10/03/11

CALIBRATION OF COMPONENT nitrite

Method: ICD0-I30.mtw
Equation: Q = 0.024644·A + 0.00179217
RSD: 2.785 %
Correlation coefficient: 0.999850



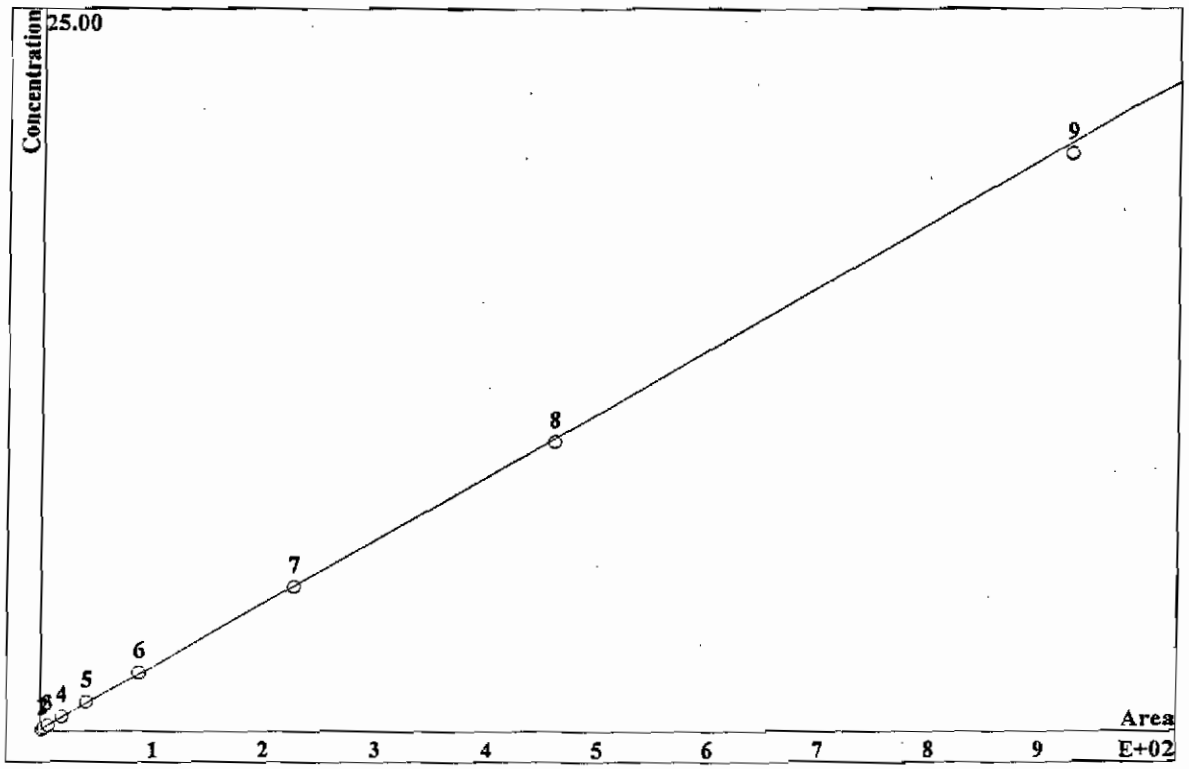
K3 = 0 K2 = 0 K1 = 0.024644 K0 = 0.00179217
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1597	1.561	0.05	1	4.932	Yes	v9301901.chw
2	0.3368	3.285	0.1	1	4.932	Yes	v9301917.chw
3	0.7305	7.062	0.2	1	4.932	Yes	v9301934.chw
4	1.964	18.94	0.5	1	4.932	Yes	v9301950.chw
5	4.115	39.99	1	1	4.932	Yes	v9302006.chw
6	8.392	82.54	2	1	4.932	Yes	v9302022.chw
7	19.91	208.1	5	1	4.932	Yes	v9302038.chw
8	35.83	402.8	10	1	4.932	Yes	v9302054.chw
9	61.98	754.1	20	1	4.932	No	v9302111.chw

RA
10/03/11

CALIBRATION OF COMPONENT nitrate

Method: ICD0-I30.mtw
Equation: Q = 0.0219574·A + 0.0522169
RSD: 3.044 %
Correlation coefficient: 0.999806



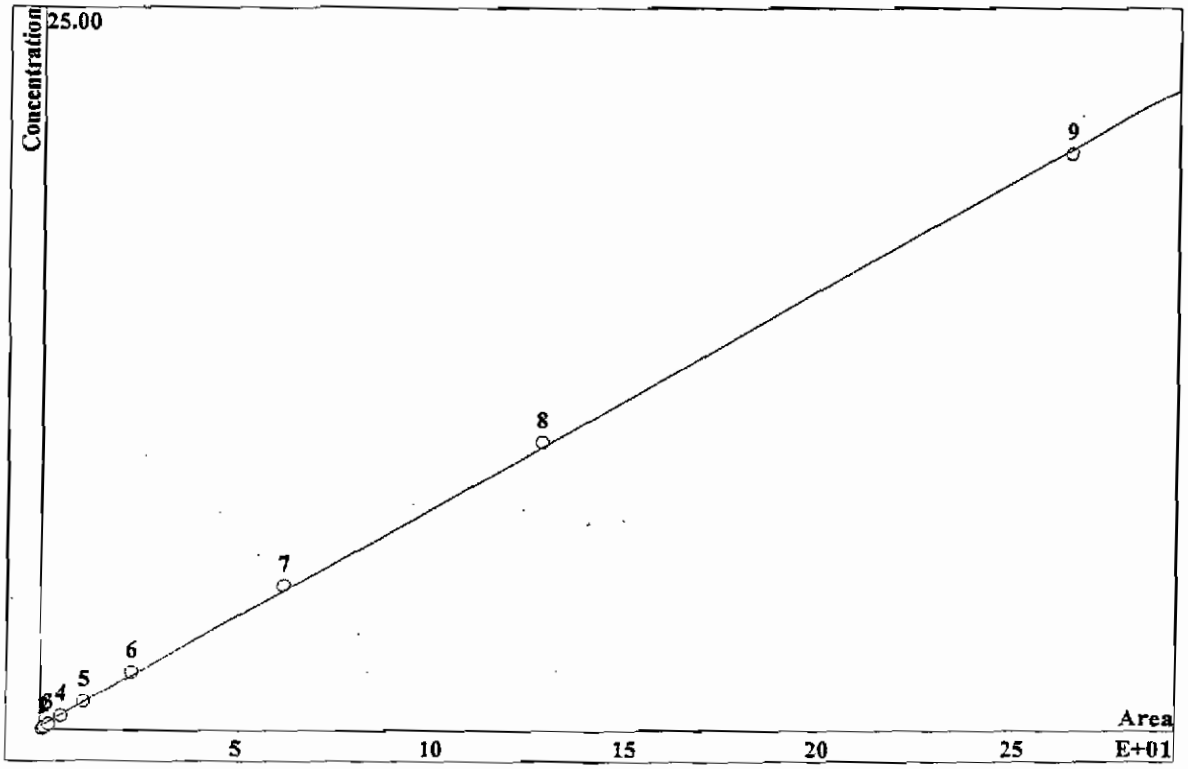
K3 = 0 K2 = 0 K1 = 0.0219574 K0 = 0.0522169
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1416	1.722	0.05	1	6.74	Yes	v9301901.chw
2	0.2866	3.425	0.1	1	6.74	Yes	v9301917.chw
3	0.6179	7.345	0.2	1	6.74	Yes	v9301934.chw
4	1.658	19.53	0.5	1	6.74	Yes	v9301950.chw
5	3.518	41.27	1	1	6.74	Yes	v9302006.chw
6	7.416	86.61	2	1	6.74	Yes	v9302022.chw
7	19.15	226.5	5	1	6.74	Yes	v9302038.chw
8	38.33	458.8	10	1	6.74	No	v9302054.chw
9	74.21	926.4	20	1	6.74	No	v9302111.chw

RS
10/03/11

CALIBRATION OF COMPONENT sulfate

Method: ICD0-I30.mtw ✓ ✓
Equation: Q = 0.0758014·A + 0.128926
RSD: 3.408 %
Correlation coefficient: 0.999791



K3 = 0 K2 = 0 K1 = 0.0758014 K0 = 0.128926
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.03861	0.6921 ✓	0.05	1	10.79	Yes	v9301901.chw
2	0.06635	1.193 ✓	0.1	1	10.79	Yes	v9301917.chw
3	0.1288	2.236 ✓	0.2	1	10.79	Yes	v9301934.chw
4	0.3105	5.366 ✓	0.5	1	10.79	Yes	v9301950.chw
5	0.6333	11.15 ✓	1	1	10.79	Yes	v9302006.chw
6	1.361	23.08 ✓	2	1	10.79	Yes	v9302022.chw
7	3.625	61.64 ✓	5	1	10.79	Yes	v9302038.chw
8	7.471	127.8 ✓	10	1	10.79	Yes	v9302054.chw
9	15.34	264 ✓	20	1	10.79	Yes	v9302111.chw

LA
10/03/11

SECOND SOURCE VERIFICATION

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	nitrite	fluoride	chloride	bromide	nitrate	phosphate	sulfate	RawNetID	DF
AI39-01	IB	IFCBNPS	0	0	0	0	0	0	0	v9301829	1
AI39-12	ICV	IFCBNPS	98.6%	100.1%	97.7%	94.1%	98.6%	92.5%	99.9%	v9302127	1
AI39-13	ICB	IFCBNPS	0	0	0	0	0	0	0	v9302143	1

DAILY CALIBRATIONS

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	bromide	sulfate	nitrite	nitrate	fluoride	chloride	phosphate	RawNetID	DF
AK13-01	CCV365	BSINFCP	99.9%	99.5%	103.3%	98.6%	103%	98%	105.1%	vb091010	1
AK13-02	CCB365	BSINFCP	0	0	0	0	0	0	0	vb091026	1
AK13-13	CCV367	BSINFCP	0%*	97.9%	102.6%	100.6%	101.1%	97.6%	127.3%*	vb091324	1
AK13-14	CCB367	BSINFCP	0	0	0	0	0	0	0	vb091340	1
AK13-25	CCV369	BSINFCP	97.5%	99.3%	103.3%	99%	101.5%	97.5%	127.4%*	vb091656	1
AK13-26	CCB369	BSINFCP	0	0	0	0	0	0	0	vb091712	1
AK13-37	CCV371	BSINFCP	0%*	96.5%	102.4%	99.3%	100%	96.6%	131.1%*	vb092010	1
AK13-38	CCB371	BSINFCP	0	0	0	0	0	0	0	vb092026	1
AK13-49	CCV373	BSINFCP	0%*	97.9%	102.9%	100.8%	99.8%	98.6%	134.8%*	vb092324	1
AK13-50	CCB373	BSINFCP	0	0	0	0	0	0	0	vb092340	1
AK13-61	CCV375	BSINFCP	0%*	101%	104.6%	103.7%	101%	102.9%	132.1%*	vb100238	1
AK13-62	CCB375	BSINFCP	0	0	0	0	0	0	0	vb100254	1
AK13-73	CCV377	BSINFCP	0%*	99.1%	102.7%	99.8%	100.8%	99.6%	134.8%*	vb100552	1
AK13-74	CCB377	BSINFCP	0	0	0	0	0	0	0	vb100608	1
AK13-82	CCV379	BSINFCP	0%*	95.7%	102.1%	98.8%	99.6%	96.1%	129%*	vb100817	1
AK13-83	CCB379	BSINFCP	0	0	0	0	0	0	0	vb100834	1
AK13-92	CCV381	BSINFCP	0%*	97.1%	102.7%	100.1%	100.2%	97.6%	128.8%*	vb101100	1
AK13-93	CCB381	BSINFCP	0	0	0	0	0	0	0	vb101116	1
AK13-94	CCV383	BSINFCP	97.4%	96.8%	101.9%	97.8%	101.8%	94.1%	127%*	vb101132	1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Concentrations of:

S_1 — 0.05 ppm
S_2 — 0.1
S_3 — 0.2
S_4 — 0.5
S_5 — 1.0
S_6 — 2.0
S_7 — 5.0
S_8 — 10.0
S_9 — 20.0

Linearity (ppm)

F^- — 5
Cl^- — 20
NO_2N — 10
Br^- — 5
NO_3N — 5
PO_4P — 5
SO_4^{2-} — 20

Column: Metrosep A Supp 5-100

Flow Rate: 0.70 ml/min

IC Eluent:

SWA-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SWA-01-220 (1000 mM H_2SO_4) 100 ml - 1 L

Book #:	AD0-031
Instrument No.:	D0
Pipette ID's:	039380124
	SWBA-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AI39
Method File:	ICD0-I30.mtw
Analytical Batch:	NA

SOP #	Rev. #
☑ EMAX-300.0	6
☐ EMAX-4110B	0
☑ EMAX-9056	3
☐ EMAX-	

STANDARDS ID	
ICAL	SIB-17-57-02
ICV	SIB-17-57-03
CCV	NA
LCS	
MS	

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 9/30/11

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
v9301829.chw	ICD0-130.mtw	AI39-01 IB	1	1.0	1.0	1.0	100.0	0		
v9301845.chw	ICD0-130.mtw	AI39-02 S0	2	1.0	1.0	1.0	100.0	0		
v9301901.chw	ICD0-130.mtw	AI39-03 S1	3	1.0	1.0	1.0	100.0	1		
v9301917.chw	ICD0-130.mtw	AI39-04 S2	4	1.0	1.0	1.0	100.0	2		
v9301934.chw	ICD0-130.mtw	AI39-05 S3	5	1.0	1.0	1.0	100.0	3		
v9301950.chw	ICD0-130.mtw	AI39-06 S4	6	1.0	1.0	1.0	100.0	4		
v9302006.chw	ICD0-130.mtw	AI39-07 S5	7	1.0	1.0	1.0	100.0	5		
v9302022.chw	ICD0-130.mtw	AI39-08 S6	8	1.0	1.0	1.0	100.0	6		
v9302038.chw	ICD0-130.mtw	AI39-09 S7	9	1.0	1.0	1.0	100.0	7		
v9302054.chw	ICD0-130.mtw	AI39-10 S8	10	1.0	1.0	1.0	100.0	8		
v9302111.chw	ICD0-130.mtw	AI39-11 S9	11	1.0	1.0	1.0	100.0	9	FINAL	
v9302127.chw	ICD0-130.mtw	AI39-12 ICV	12	1.0	1.0	1.0	100.0	0		
v9302143.chw	ICD0-130.mtw	AI39-13 ICB	13	1.0	1.0	1.0	100.0	0		

JC 10/3/11

8625

10/03/11

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

EMAX LABORATORIES, INC.

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

CCV 367 (*)
CCV 371
CCV 373
CCV 375
CCV 377
CCV 379
CCV 381

(*) W/O Br⁻

Book #: AD0-032
Instrument No.: D0
Pipette ID's: 039380124
SW8A-02-12
SW8A-02-13
Balance ID#: 40706360
Analytical Sequence: AK13
Method File: ICD0-I30.mtw
Analytical Batch: ICK025W, ICK027W
ICK029W

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SI IB-17-85-01 SI IB-17-85-03 (*)
LCS	SI IB-17-85-02 SI IB-17-86-01 (*)
MS	Refer to LCS Parent ID.

(*) W/O Br⁻

Column: Metrosep A Supp 5-100 Filter 0.45µm: 21787469
Flow Rate: 0.70 ml/min 0.20µm: 21772726
IC Eluent:
SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:
SW4-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: KHL
Date: 11/9/11

8026

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb091010.chw	ICD0-I30.mtw	AK13-01 CCV365	1	1.0	1.0	1.0	100.0	0		
vb091026.chw	ICD0-I30.mtw	AK13-02 CCB365	2	1.0	1.0	1.0	100.0	0		
vb091042.chw	ICD0-I30.mtw	AK13-03 ICK025WB	3	1.0	1.0	1.0	100.0	0		
vb091058.chw	ICD0-I30.mtw	AK13-04 ICK025WL	4	1.0	1.0	1.0	100.0	0		
vb091115.chw	ICD0-I30.mtw	AK13-05 ICK025WC	5	1.0	1.0	1.0	100.0	0		
vb091131.chw	ICD0-I30.mtw	AK13-06 K072-01	6	1.0	1.0	1.0	100.0	0		
vb091147.chw	ICD0-I30.mtw	AK13-07 K070-01 DF=2	7	1.0	2.0	1.0	100.0	0		
vb091203.chw	ICD0-I30.mtw	AK13-08 K070-02	8	1.0	1.0	1.0	100.0	0		
vb091219.chw	ICD0-I30.mtw	AK13-09 K070-03	9	1.0	1.0	1.0	100.0	0		
vb091235.chw	ICD0-I30.mtw	AK13-10 K070-04	10	1.0	1.0	1.0	100.0	0		
vb091251.chw	ICD0-I30.mtw	AK13-11 K070-05	11	1.0	1.0	1.0	100.0	0		
vb091308.chw	ICD0-I30.mtw	AK13-12 K070-06	12	1.0	1.0	1.0	100.0	0		
vb091324.chw	ICD0-I30.mtw	AK13-13 CCV367	13	1.0	1.0	1.0	100.0	0		
vb091340.chw	ICD0-I30.mtw	AK13-14 CCB367	14	1.0	1.0	1.0	100.0	0		
vb091356.chw	ICD0-I30.mtw	AK13-15 K072-01 DF=20	15	1.0	20.0	1.0	100.0	0		
vb091412.chw	ICD0-I30.mtw	AK13-16 K070-02 DF=2	16	1.0	2.0	1.0	100.0	0		
vb091428.chw	ICD0-I30.mtw	AK13-17 K070-03 DF=2	17	1.0	2.0	1.0	100.0	0		
vb091445.chw	ICD0-I30.mtw	AK13-18 K070-04 DF=2	18	1.0	2.0	1.0	100.0	0		
vb091501.chw	ICD0-I30.mtw	AK13-19 K070-05 DF=2	19	1.0	2.0	1.0	100.0	0		
vb091524.chw	ICD0-I30.mtw	AK13-20 K070-06 DF=2	20	1.0	2.0	1.0	100.0	0		
vb091541.chw	ICD0-I30.mtw	AK13-21 K063-04	21	1.0	1.0	1.0	100.0	0		
vb091557.chw	ICD0-I30.mtw	AK13-22 K063-05	22	1.0	1.0	1.0	100.0	0		
vb091614.chw	ICD0-I30.mtw	AK13-23 K063-05 DF=2	23	1.0	2.0	1.0	100.0	0		
vb091630.chw	ICD0-I30.mtw	AK13-24 K063-03	24	1.0	1.0	1.0	100.0	0		
vb091656.chw	ICD0-I30.mtw	AK13-25 CCV369	25	1.0	1.0	1.0	100.0	0		
vb091712.chw	ICD0-I30.mtw	AK13-26 CCB369	26	1.0	1.0	1.0	100.0	0		
vb091728.chw	ICD0-I30.mtw	AK13-27 K063-06	27	1.0	1.0	1.0	100.0	0		
vb091744.chw	ICD0-I30.mtw	AK13-28 K063-01	28	1.0	1.0	1.0	100.0	0		
vb091801.chw	ICD0-I30.mtw	AK13-29 K063-02	29	1.0	1.0	1.0	100.0	0		
vb091817.chw	ICD0-I30.mtw	AK13-30 K063-02D	30	1.0	1.0	1.0	100.0	0		
vb091833.chw	ICD0-I30.mtw	AK13-31 K063-02M	31	1.0	1.0	1.0	100.0	0		
vb091849.chw	ICD0-I30.mtw	AK13-32 ICK027WL	32	1.0	1.0	1.0	100.0	0		
vb091906.chw	ICD0-I30.mtw	AK13-33 ICK027WC	33	1.0	1.0	1.0	100.0	0		
vb091922.chw	ICD0-I30.mtw	AK13-34 ICK027WB	34	1.0	1.0	1.0	100.0	0		
vb091938.chw	ICD0-I30.mtw	AK13-35 K077-10	35	1.0	1.0	1.0	100.0	0		
vb091954.chw	ICD0-I30.mtw	AK13-36 K077-11	36	1.0	1.0	1.0	100.0	0		
vb092010.chw	ICD0-I30.mtw	AK13-37 CCV371	37	1.0	1.0	1.0	100.0	0		
vb092026.chw	ICD0-I30.mtw	AK13-38 CCB371	38	1.0	1.0	1.0	100.0	0		
vb092042.chw	ICD0-I30.mtw	AK13-39 K077-17	39	1.0	1.0	1.0	100.0	0		
vb092059.chw	ICD0-I30.mtw	AK13-40 K077-02 DF=5	40	1.0	5.0	1.0	100.0	0		
vb092115.chw	ICD0-I30.mtw	AK13-41 K077-18	41	1.0	1.0	1.0	100.0	0		
vb092131.chw	ICD0-I30.mtw	AK13-42 K077-03	42	1.0	1.0	1.0	100.0	0		
vb092147.chw	ICD0-I30.mtw	AK13-43 K077-12	43	1.0	1.0	1.0	100.0	0		
vb092203.chw	ICD0-I30.mtw	AK13-44 K077-19	44	1.0	1.0	1.0	100.0	0		
vb092219.chw	ICD0-I30.mtw	AK13-45 K077-13	45	1.0	1.0	1.0	100.0	0		
vb092236.chw	ICD0-I30.mtw	AK13-46 K077-04 DF=10	46	1.0	10.0	1.0	100.0	0		
vb092252.chw	ICD0-I30.mtw	AK13-47 K077-05 DF=20	47	1.0	20.0	1.0	100.0	0		
vb092308.chw	ICD0-I30.mtw	AK13-48 K077-06 DF=20	48	1.0	20.0	1.0	100.0	0		
vb092324.chw	ICD0-I30.mtw	AK13-49 CCV373	49	1.0	1.0	1.0	100.0	0		
vb092340.chw	ICD0-I30.mtw	AK13-50 CCB373	50	1.0	1.0	1.0	100.0	0		
vb092356.chw	ICD0-I30.mtw	AK13-51 K077-14	51	1.0	1.0	1.0	100.0	0		
vb100013.chw	ICD0-I30.mtw	AK13-52 K077-20	52	1.0	1.0	1.0	100.0	0		
vb100029.chw	ICD0-I30.mtw	AK13-53 K077-21	53	1.0	1.0	1.0	100.0	0		
vb100045.chw	ICD0-I30.mtw	AK13-54 K077-07 DF=10	54	1.0	10.0	1.0	100.0	0		
vb100101.chw	ICD0-I30.mtw	AK13-55 K077-08	55	1.0	1.0	1.0	100.0	0		
vb100117.chw	ICD0-I30.mtw	AK13-56 K077-08D	56	1.0	1.0	1.0	100.0	0		
vb100133.chw	ICD0-I30.mtw	AK13-57 K077-08M	57	1.0	1.0	1.0	100.0	0		

FINAL

8027

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb100150.chw	ICD0-130.mtw	AK13-58 K077-15	58	1.0	1.0	1.0	100.0	0		
vb100206.chw	ICD0-130.mtw	AK13-59 K077-22	59	1.0	1.0	1.0	100.0	0		
vb100222.chw	ICD0-130.mtw	AK13-60 K077-23	60	1.0	1.0	1.0	100.0	0		
vb100238.chw	ICD0-130.mtw	AK13-61 CCV375	61	1.0	1.0	1.0	100.0	0		
vb100254.chw	ICD0-130.mtw	AK13-62 CCB375	62	1.0	1.0	1.0	100.0	0		
vb100310.chw	ICD0-130.mtw	AK13-63 ICK029WB	63	1.0	1.0	1.0	100.0	0		
vb100327.chw	ICD0-130.mtw	AK13-64 ICK029WL	64	1.0	1.0	1.0	100.0	0		
vb100343.chw	ICD0-130.mtw	AK13-65 ICK029WC	65	1.0	1.0	1.0	100.0	0		
vb100359.chw	ICD0-130.mtw	AK13-66 K070-01 DF=50	66	1.0	50.0	1.0	100.0	0		
vb100415.chw	ICD0-130.mtw	AK13-67 K070-02 DF=50	67	1.0	50.0	1.0	100.0	0		
vb100431.chw	ICD0-130.mtw	AK13-68 K070-03 DF=50	68	1.0	50.0	1.0	100.0	0		
vb100447.chw	ICD0-130.mtw	AK13-69 K070-04 DF=20	69	1.0	20.0	1.0	100.0	0		
vb100503.chw	ICD0-130.mtw	AK13-70 K070-05 DF=25	70	1.0	25.0	1.0	100.0	0		
vb100520.chw	ICD0-130.mtw	AK13-71 K070-06 DF=40	71	1.0	40.0	1.0	100.0	0		
vb100536.chw	ICD0-130.mtw	AK13-72 K063-03 DF=20	72	1.0	20.0	1.0	100.0	0		
vb100552.chw	ICD0-130.mtw	AK13-73 CCV377	73	1.0	1.0	1.0	100.0	0		
vb100608.chw	ICD0-130.mtw	AK13-74 CCB377	74	1.0	1.0	1.0	100.0	0		
vb100624.chw	ICD0-130.mtw	AK13-75 K063-04 DF=20	75	1.0	20.0	1.0	100.0	0		
vb100640.chw	ICD0-130.mtw	AK13-76 K063-05 DF=40	76	1.0	40.0	1.0	100.0	0		
vb100657.chw	ICD0-130.mtw	AK13-77 K063-06 DF=20	77	1.0	20.0	1.0	100.0	0		
vb100713.chw	ICD0-130.mtw	AK13-78 K063-01 DF=20	78	1.0	20.0	1.0	100.0	0		
vb100729.chw	ICD0-130.mtw	AK13-79 K063-02 DF=40	79	1.0	40.0	1.0	100.0	0		
vb100745.chw	ICD0-130.mtw	AK13-80 K063-02D DF=40	80	1.0	40.0	1.0	100.0	0		
vb100801.chw	ICD0-130.mtw	AK13-81 K063-02M DF=40	81	1.0	40.0	1.0	100.0	0		
vb100817.chw	ICD0-130.mtw	AK13-82 CCV379	82	1.0	1.0	1.0	100.0	0		
vb100834.chw	ICD0-130.mtw	AK13-83 CCB379	83	1.0	1.0	1.0	100.0	0		
vb100850.chw	ICD0-130.mtw	AK13-84 K084-01	84	1.0	1.0	1.0	100.0	0		
vb100906.chw	ICD0-130.mtw	AK13-85 K084-02	85	1.0	1.0	1.0	100.0	0		
vb100923.chw	ICD0-130.mtw	AK13-86 K084-06	86	1.0	1.0	1.0	100.0	0		
vb100939.chw	ICD0-130.mtw	AK13-87 K084-05	87	1.0	1.0	1.0	100.0	0		
vb100956.chw	ICD0-130.mtw	AK13-88 K084-04	88	1.0	1.0	1.0	100.0	0		FINAL
vb101012.chw	ICD0-130.mtw	AK13-89 K084-03 DF=5	89	1.0	5.0	1.0	100.0	0		
vb101028.chw	ICD0-130.mtw	AK13-90 K077-12 DF=5	90	1.0	5.0	1.0	100.0	0		
vb101044.chw	ICD0-130.mtw	AK13-91 K077-13 DF=10	91	1.0	10.0	1.0	100.0	0		
vb101100.chw	ICD0-130.mtw	AK13-92 CCV381	92	1.0	1.0	1.0	100.0	0		
vb101116.chw	ICD0-130.mtw	AK13-93 CCB381	93	1.0	1.0	1.0	100.0	0		
vb101132.chw	ICD0-130.mtw	AK13-94 CCV383	94	1.0	1.0	1.0	100.0	0		

8928

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K070

METHOD 300.0(M)
ORGANIC ACIDS BY IC

A total of six (6) water samples were received on 11/08/11 for Organic Acids (Acetate, Butyrate, Lactate and Propionate) by IC analysis, Method 300.0(M) in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for OAK008WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

SAMPLE RESULTS

METHOD 300.0(M)
ACETATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, TR SITE 70.
Batch No. : 11K070

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK008WB	ND	1	NA	1.00	0.0500	11/10/1116:00	NA	HK10003	HK10001	OAK008W	NA	NA
LCS1W	OAK008WL	20.9	1	NA	1.00	0.0500	11/10/1116:21	NA	HK10004	HK10001	OAK008W	NA	NA
LCD1W	OAK008WC	20.7	1	NA	1.00	0.0500	11/10/1116:42	NA	HK10005	HK10001	OAK008W	NA	NA
IW-70-SAB11-103	K070-01	ND	1	NA	1.00	0.0500	11/10/1117:03	NA	HK10006	HK10001	OAK008W	11/08/1110:35	11/08/11
IW-70-FSB118-104	K070-02	ND	1	NA	1.00	0.0500	11/10/1118:09	NA	HK10007	HK10001	OAK008W	11/08/1112:01	11/08/11
MW-70-PMW06A-105	K070-03	ND	1	NA	1.00	0.0500	11/10/1119:15	NA	HK10008	HK10001	OAK008W	11/08/1113:42	11/08/11
MW-70-PMW06B-106	K070-04	ND	1	NA	1.00	0.0500	11/10/1120:21	NA	HK10009	HK10001	OAK008W	11/08/1114:48	11/08/11
MW-70-38-108	K070-05	ND	1	NA	1.00	0.0500	11/10/1121:27	NA	HK10010	HK10001	OAK008W	11/08/1116:03	11/08/11
IR-70-FD-107	K070-06	ND	1	NA	1.00	0.0500	11/10/1122:32	NA	HK10011	HK10001	OAK008W	11/08/1115:10	11/08/11

METHOD 300.0(M)
BUTYRATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K070

Matrix : WATER
Instrument ID : 06

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK008WB	ND	1	NA	1.00	0.0500	11/10/1116:00	NA	HK10003	HK10001	OAK008W	NA	NA
LCS1W	OAK008WL	18.5	1	NA	1.00	0.0500	11/10/1116:21	NA	HK10004	HK10001	OAK008W	NA	NA
LCD1W	OAK008WC	18.1	1	NA	1.00	0.0500	11/10/1116:42	NA	HK10005	HK10001	OAK008W	NA	NA
IW-70-SAB11-103	K070-01	ND	1	NA	1.00	0.0500	11/10/1117:03	NA	HK10006	HK10001	OAK008W	11/08/1110:35	11/08/11
IW-70-FSB118-104	K070-02	ND	1	NA	1.00	0.0500	11/10/1118:09	NA	HK10007	HK10001	OAK008W	11/08/1112:01	11/08/11
MW-70-PMW06A-105	K070-03	ND	1	NA	1.00	0.0500	11/10/1119:15	NA	HK10008	HK10001	OAK008W	11/08/1113:42	11/08/11
MW-70-PMW06B-106	K070-04	ND	1	NA	1.00	0.0500	11/10/1120:21	NA	HK10009	HK10001	OAK008W	11/08/1114:48	11/08/11
MW-70-38-108	K070-05	ND	1	NA	1.00	0.0500	11/10/1121:27	NA	HK10010	HK10001	OAK008W	11/08/1116:03	11/08/11
IR-70-FD-107	K070-06	ND	1	NA	1.00	0.0500	11/10/1122:32	NA	HK10011	HK10001	OAK008W	11/08/1115:10	11/08/11

METHOD 300.0(M)
LACTATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K070

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK008WB	ND	1	NA	1.00	0.0500	11/10/1116:00	NA	HK10003	HK10001	OAK008W	NA	NA
LCS1W	OAK008WL	18.9	1	NA	1.00	0.0500	11/10/1116:21	NA	HK10004	HK10001	OAK008W	NA	NA
LCD1W	OAK008WC	18.8	1	NA	1.00	0.0500	11/10/1116:42	NA	HK10005	HK10001	OAK008W	NA	NA
IW-70-SAB11-103	K070-01	ND	1	NA	1.00	0.0500	11/10/1117:03	NA	HK10006	HK10001	OAK008W	11/08/1110:35	11/08/11
IW-70-FSB118-104	K070-02	ND	1	NA	1.00	0.0500	11/10/1118:09	NA	HK10007	HK10001	OAK008W	11/08/1112:01	11/08/11
MW-70-PMW06A-105	K070-03	ND	1	NA	1.00	0.0500	11/10/1119:15	NA	HK10008	HK10001	OAK008W	11/08/1113:42	11/08/11
MW-70-PMW06B-106	K070-04	ND	1	NA	1.00	0.0500	11/10/1120:21	NA	HK10009	HK10001	OAK008W	11/08/1114:48	11/08/11
MW-70-38-108	K070-05	ND	1	NA	1.00	0.0500	11/10/1121:27	NA	HK10010	HK10001	OAK008W	11/08/1116:03	11/08/11
IR-70-FD-107	K070-06	ND	1	NA	1.00	0.0500	11/10/1122:32	NA	HK10011	HK10001	OAK008W	11/08/1115:10	11/08/11

METHOD 300.0(M)
PROPIONATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K070

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK008WB	ND	1	NA	1.00	0.0500	11/10/1116:00	NA	HK10003	HK10001	OAK008W	NA	NA
LCS1W	OAK008WL	21.1	1	NA	1.00	0.0500	11/10/1116:21	NA	HK10004	HK10001	OAK008W	NA	NA
LCD1W	OAK008WC	20.4	1	NA	1.00	0.0500	11/10/1116:42	NA	HK10005	HK10001	OAK008W	NA	NA
IW-70-SAB11-103	K070-01	ND	1	NA	1.00	0.0500	11/10/1117:03	NA	HK10006	HK10001	OAK008W	11/08/1110:35	11/08/11
IW-70-FSB118-104	K070-02	ND	1	NA	1.00	0.0500	11/10/1118:09	NA	HK10007	HK10001	OAK008W	11/08/1112:01	11/08/11
MW-70-PMW06A-105	K070-03	ND	1	NA	1.00	0.0500	11/10/1119:15	NA	HK10008	HK10001	OAK008W	11/08/1113:42	11/08/11
MW-70-PMW06B-106	K070-04	ND	1	NA	1.00	0.0500	11/10/1120:21	NA	HK10009	HK10001	OAK008W	11/08/1114:48	11/08/11
MW-70-38-108	K070-05	ND	1	NA	1.00	0.0500	11/10/1121:27	NA	HK10010	HK10001	OAK008W	11/08/1116:03	11/08/11
IR-70-FD-107	K070-06	ND	1	NA	1.00	0.0500	11/10/1122:32	NA	HK10011	HK10001	OAK008W	11/08/1115:10	11/08/11

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K070
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK008WB	OAK008WL	OAK008WC		
LAB FILE ID:	HK10003	HK10004	HK10005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1116:00	11/10/1116:21	11/10/1116:42	DATE RECEIVED:	NA
PREP. BATCH:	OAK008W	OAK008W	OAK008W		
CALIB. REF:	HK10001	HK10001	HK10001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	20.9	104	20.0	20.7	103	1	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K070
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK008WB	OAK008WL	OAK008WC		
LAB FILE ID:	HK10003	HK10004	HK10005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1116:00	11/10/1116:21	11/10/1116:42	DATE RECEIVED:	NA
PREP. BATCH:	OAK008W	OAK008W	OAK008W		
CALIB. REF:	HK10001	HK10001	HK10001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	20.0	18.5	92	20.0	18.1	90	2	90-110	20

8037

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K070
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK008WB	OAK008WL	OAK008WC		
LAB FILE ID:	HK10003	HK10004	HK10005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1116:00	11/10/1116:21	11/10/1116:42	DATE RECEIVED:	NA
PREP. BATCH:	OAK008W	OAK008W	OAK008W		
CALIB. REF:	HK10001	HK10001	HK10001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	20.0	18.9	94	20.0	18.8	94	1	90-110	20

8638

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K070
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK008WB	OAK008WL	OAK008WC		
LAB FILE ID:	HK10003	HK10004	HK10005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1116:00	11/10/1116:21	11/10/1116:42	DATE RECEIVED:	NA
PREP. BATCH:	OAK008W	OAK008W	OAK008W		
CALIB. REF:	HK10001	HK10001	HK10001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	20.0	21.1	105	20.0	20.4	102	3	9D-110	20

2033

INITIAL CALIBRATIONS

IC SEQ FORM/HI26(2011)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
HI26001	IB	ABLPY	OAD6I26	09/26/1118:09	1
HI26002	S-0	ABLPY	OAD6I26	09/26/1118:30	1
HI26003	S-1	ABLPY	OAD6I26	09/26/1118:51	1
HI26004	S-2	ABLPY	OAD6I26	09/26/1119:12	1
HI26005	S-3	ABLPY	OAD6I26	09/26/1119:33	1
HI26006	S-4	ABLPY	OAD6I26	09/26/1119:54	1
HI26007	S-5	ABLPY	OAD6I26	09/26/1120:15	1
HI26008	ICV	ABLPY	OAD6I26	09/26/1120:36	1
HI26009	ICB	ABLPY	OAD6I26	09/26/1120:57	1
HI26010	CCV2	ABLPY	OAD6I26	09/26/1121:18	1
HI26011	CCB2	ABLPY	OAD6I26	09/26/1121:39	1
HI26012	OAI002WB	ABLPY	OAD6I26	09/26/1122:00	1
HI26013	OAI002WL	ABLPY	OAD6I26	09/26/1122:21	1
HI26014	OAI002WC	ABLPY	OAD6I26	09/26/1122:42	1
HI26015	I159-02	ABLPY	OAD6I26	09/26/1123:03	1
HI26016	I160-02	*BLPY	OAD6I26	09/27/1100:09	1
HI26017	I201-07	ABLPY	OAD6I26	09/27/1101:15	1
HI26018	I202-02	ABLPY	OAD6I26	09/27/1102:21	1
HI26019	CCV4	ABLPY	OAD6I26	09/27/1103:26	1
HI26020	CCB4	ABLPY	OAD6I26	09/27/1103:47	1

No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square	Offset	Slope	Curve
1	4.83	LACTATE	0LOff	5	0.9995	-0.001001	0.0486	0.0000
2	5.16	ACETATE	0LOff	5	0.9998	-0.001213	0.0584	0.0000
3	5.97	PROPIONA	0LOff	5	0.9996	-0.000106	0.0401	0.0000
4	6.82	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	7.44	BUTYRATE	0LOff	5	0.9995	0.000245	0.0335	0.0000
6	8.87	PYRUVATE	0LOff	5	0.9992	-0.001369	0.0562	0.0000
Average:					n.a.	n.a.	n.a.	0.0000

AS
09/30/11

SECOND SOURCE VERIFICATION

IC RESULT FORM CalVersion: 300M.I26/HI26(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HI26001	IB	ABLPY	ND	ND	ND	ND	ND	09/26/1118:09	1
HI26002	S-0	ABLPY	ND	ND	ND	ND	ND	09/26/1118:30	1
HI26003	S-1	ABLPY	.092	.111	.112	.109	.115	09/26/1118:51	1
HI26004	S-2	ABLPY	.483	.487	.481	.497	.495	09/26/1119:12	1
HI26005	S-3	ABLPY	1.013	1.031	.995	1.006	.969	09/26/1119:33	1
HI26006	S-4	ABLPY	1.978	1.962	1.963	1.96	1.957	09/26/1119:54	1
HI26007	S-5	ABLPY	3.014	3.017	3.029	3.025	3.039	09/26/1120:15	1
HI26008	ICV	ABLPY	98.5%	101%	96.4%	100%	95.8%	09/26/1120:36	1
HI26009	ICB	ABLPY	ND	ND	ND	ND	ND	09/26/1120:57	1
HI26010	CCV2	ABLPY	97.2%	91.6%	97.8%	94.7%	96.8%	09/26/1121:18	1
HI26011	CCB2	ABLPY	ND	ND	ND	ND	ND	09/26/1121:39	1
HI26012	OAI002WB	ABLPY	ND	ND	ND	ND	ND	09/26/1122:00	1
HI26013	OAI002WL	ABLPY	1.96	1.89	1.9	1.91	1.92	09/26/1122:21	1
HI26014	OAI002WC	ABLPY	1.98	2.04	1.88	2.03	1.93	09/26/1122:42	1
HI26015	I159-02	ABLPY	ND	ND	ND	ND	ND	09/26/1123:03	1
HI26016	I160-02	*BLPY	3.39E	ND	ND	ND	ND	09/27/1100:09	1
HI26017	I201-07	ABLPY	ND	ND	ND	ND	ND	09/27/1101:15	1
HI26018	I202-02	ABLPY	ND	ND	ND	ND	ND	09/27/1102:21	1
HI26019	CCV4	ABLPY	93.4%	90.3%	93.6%	93%	96.3%	D9/27/1103:26	1
HI26020	CCB4	ABLPY	ND	ND	ND	ND	ND	D9/27/1103:47	1

RS
9/30/11

DAILY CALIBRATIONS

IC RESULT FORM CalVersion: 300M.I26/HI26(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK10001	CCV58	ABLPY	98.4%	94%	93.2%	95.4%	91%	11/10/1115:18	1
HK10002	CCB58	ABLPY	ND	ND	ND	ND	ND	11/10/1115:39	1
HK10003	OAK008WB	ABLPY	ND	ND	ND	ND	ND	11/10/1116:00	1
HK10004	OAK008WL	ABLPY	2.09	1.85	1.89	2.11	1.93	11/10/1116:21	1
HK10005	OAK008WC	ABLPY	2.07	1.81	1.88	2.04	1.85	11/10/1116:42	1
HK10006	K070-01	ABLPY	ND	ND	ND	ND	ND	11/10/1117:03	1
HK10007	K070-02	ABLPY	ND	ND	ND	ND	ND	11/10/1118:09	1
HK10008	K070-03	ABLPY	ND	ND	ND	ND	ND	11/10/1119:15	1
HK10009	K070-04	ABLPY	ND	ND	ND	ND	ND	11/10/1120:21	1
HK10010	K070-05	ABLPY	ND	ND	ND	ND	ND	11/10/1121:27	1
HK10011	K070-06	ABLPY	ND	ND	ND	ND	ND	11/10/1122:32	1
HK10012	CCV60	ABLPY	101%	99.3%	94.2%	94.3%	92.1%	11/10/1123:38	1
HK10013	CCB60	ABLPY	ND	ND	ND	ND	ND	11/10/1123:59	1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-209

0AD6I26.met : 300M ICAL → Passed.

- Linear Range:

S-0: 0.0 ppm S-3: 1.0 ppm

S-1: 0.1 ppm S-4: 2.0 ppm

S-2: 0.5 ppm S-5: 3.0 ppm

- ICV: 2 ppm
- Sample Loop: 25 µL
- Flow Rate: 1.50 ml/min
- Suppressor : ASRS 4mm
- SRS Current: 100 mA
- Column : Ion Pac AS11 HC ; 4x 250 mm
- Guard Column : IonPac AG16 ; 4x 250 mm

0AI002W: I159, I160, I201 & I202

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HI26
Method File:	0AD6I26.met
Analytical Batch:	0AI002W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID		
ICAL	SW12A - 02 - 322	
ICV		323
CCV		320
LCS		321
MS		319

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: ae

Date: 09/26/11

8048

Sequence: HI26
Operator: cmadmin

Printed: 9/27/2011 10:32:03 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 20

Created: 9/26/2011 5:40:12 PM by cmadmin
Last Update: 9/27/2011 10:31:06 AM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor	Comment
1	HI26	001	IB	Unknown	1	25.0	ORG	OAD6I26	Finished	9/26/2011 6:09:42 PM	1.0000	
2	HI26	002	S-0	Standard	2	25.0	ORG	OAD6I26	Finished	9/26/2011 6:30:40 PM	1.0000	
3	HI26	003	S-1	Standard	3	25.0	ORG	OAD6I26	Finished	9/26/2011 6:51:39 PM	1.0000	
4	HI26	004	S-2	Standard	4	25.0	ORG	OAD6I26	Finished	9/26/2011 7:12:38 PM	1.0000	
5	HI26	005	S-3	Standard	5	25.0	ORG	OAD6I26	Finished	9/26/2011 7:33:36 PM	1.0000	
6	HI26	006	S-4	Standard	6	25.0	ORG	OAD6I26	Finished	9/26/2011 7:54:35 PM	1.0000	
7	HI26	007	S-5	Standard	7	25.0	ORG	OAD6I26	Finished	9/26/2011 8:15:34 PM	1.0000	
8	HI26	008	ICV	Unknown	8	25.0	ORG	OAD6I26	Finished	9/26/2011 8:36:33 PM	1.0000	
9	HI26	009	ICB	Unknown	9	25.0	ORG	OAD6I26	Finished	9/26/2011 8:57:31 PM	1.0000	
10	HI26	010	CCV2	Unknown	100	25.0	ORG	OAD6I26	Finished	9/26/2011 9:18:30 PM	1.0000	
11	HI26	011	CCB2	Unknown	99	25.0	ORG	OAD6I26	Finished	9/26/2011 9:39:29 PM	1.0000	
12	HI26	012	OAI002WB	Unknown	98	25.0	ORG	OAD6I26	Finished	9/26/2011 10:00:28 PM	1.0000	
13	HI26	013	OAI002WL	Unknown	97	25.0	ORG	OAD6I26	Finished	9/26/2011 10:21:26 PM	1.0000	
14	HI26	014	OAI002WC	Unknown	96	25.0	ORG	OAD6I26	Finished	9/26/2011 10:42:25 PM	1.0000	
15	HI26	015	I159-02	Unknown	11	25.0	ORG-SAMPLE	OAD6I26	Finished	9/26/2011 11:03:24 PM	1.0000	
16	HI26	016	I160-02	Unknown	12	25.0	ORG-SAMPLE	OAD6I26	Finished	9/27/2011 12:09:18 AM	1.0000	
17	HI26	017	I201-07	Unknown	13	25.0	ORG-SAMPLE	OAD6I26	Finished	9/27/2011 1:15:12 AM	1.0000	
18	HI26	018	I202-02	Unknown	14	25.0	ORG-SAMPLE	OAD6I26	Finished	9/27/2011 2:21:05 AM	1.0000	
19	HI26	019	CCV4	Unknown	100	25.0	ORG	OAD6I26	Finished	9/27/2011 3:26:58 AM	1.0000	
20	HI26	020	CCB4	Unknown	99	25.0	ORG	OAD6I26	Finished	9/27/2011 3:47:57 AM	1.0000	

FINAL

8018

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-221

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK10
Method File:	OAD6126
Analytical Batch:	OAK008W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	–
ICV	–
CCV	SW02A-02-328
LCS	↓ -329
MS	↓ -327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: AM

Date: 11/10/11

8050

Sequence: HK10
Operator: cmadmin

Printed: 11/15/2011 4:46:17 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 22

Created: 11/10/2011 1:50:04 PM by cmadmin
Last Update: 11/14/2011 12:45:18 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK10		IB	Unknown	1	25.0	ORG	OAD6I26	Finished	9/26/2011 6:09:42 PM	1.0000
2	HK10		S-0	Standard	2	25.0	ORG	OAD6I26	Finished	9/26/2011 6:30:40 PM	1.0000
3	HK10		S-1	Standard	3	25.0	ORG	OAD6I26	Finished	9/26/2011 6:51:39 PM	1.0000
4	HK10		S-2	Standard	4	25.0	ORG	OAD6I26	Finished	9/26/2011 7:12:38 PM	1.0000
5	HK10		S-3	Standard	5	25.0	ORG	OAD6I26	Finished	9/26/2011 7:33:36 PM	1.0000
6	HK10		S-4	Standard	6	25.0	ORG	OAD6I26	Finished	9/26/2011 7:54:35 PM	1.0000
7	HK10		S-5	Standard	7	25.0	ORG	OAD6I26	Finished	9/26/2011 8:15:34 PM	1.0000
8	HK10		ICV	Unknown	8	25.0	ORG	OAD6I26	Finished	9/26/2011 8:36:33 PM	1.0000
9	HK10		ICB	Unknown	9	25.0	ORG	OAD6I26	Finished	9/26/2011 8:57:31 PM	1.0000
10	HK10	001	CCV58	Unknown	100	25.0	ORG	OAD6I26	Finished	11/10/2011 3:18:36 PM	1.0000
11	HK10	002	CCB58	Unknown	99	25.0	ORG	OAD6I26	Finished	11/10/2011 3:39:35 PM	1.0000
12	HK10	003	OAK008WB	Unknown	98	25.0	ORG	OAD6I26	Finished	11/10/2011 4:00:33 PM	1.0000
13	HK10	004	OAK008WL	Unknown	97	25.0	ORG	OAD6I26	Finished	11/10/2011 4:21:32 PM	1.0000
14	HK10	005	OAK008WC	Unknown	96	25.0	ORG	OAD6I26	Finished	11/10/2011 4:42:31 PM	1.0000
15	HK10	006	K070-01	Unknown	1	25.0	ORG-SAMPLE	OAD6I26	Finished	11/10/2011 5:03:30 PM	1.0000
16	HK10	007	K070-02	Unknown	2	25.0	ORG-SAMPLE	OAD6I26	Finished	11/10/2011 6:09:23 PM	1.0000
17	HK10	008	K070-03	Unknown	3	25.0	ORG-SAMPLE	OAD6I26	Finished	11/10/2011 7:15:17 PM	1.0000
18	HK10	009	K070-04	Unknown	4	25.0	ORG-SAMPLE	OAD6I26	Finished	11/10/2011 8:21:10 PM	1.0000
19	HK10	010	K070-05	Unknown	5	25.0	ORG-SAMPLE	OAD6I26	Finished	11/10/2011 9:27:04 PM	1.0000
20	HK10	011	K070-06	Unknown	6	25.0	ORG-SAMPLE	OAD6I26	Finished	11/10/2011 10:32:57 PM	1.0000
21	HK10	012	CCV60	Unknown	100	25.0	ORG	OAD6I26	Finished	11/10/2011 11:38:51 PM	1.0000
22	HK10	013	CCB60	Unknown	99	25.0	ORG	OAD6I26	Finished	11/10/2011 11:59:50 PM	1.0000

FINAL

8251

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Sequence: HK10
Operator: cmadmin

Printed: 11/15/2011 4:46:17 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 22

Created: 11/10/2011 1:50:04 PM by cmadmin
Last Update: 11/14/2011 12:45:18 PM by cmadmin

No.	Sequence	Comment
1	HK10	
2	HK10	
3	HK10	
4	HK10	
5	HK10	
6	HK10	
7	HK10	
8	HK10	
9	HK10	
10	HK10	
11	HK10	
12	HK10	
13	HK10	
14	HK10	
15	HK10	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK10	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
17	HK10	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK10	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK10	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK10	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK10	
22	HK10	

FINAL

8052

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CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K070

METHOD 2320B
TOTAL ALKALINITY

A total of six (6) water samples were received on 11/08/11 for Alkalinity analysis, Method 2320B in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for ALK007WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2320B
TOTAL ALKALINITY

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K070

Matrix : WATER
Instrument ID : E5

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ALK007WB	ND	1	NA	5.00	5.00	11/17/1112:30	NA	11E5K04003	NA	ALK007W	NA	NA
LCS1W	ALK007WL	211	1	NA	5.00	5.00	11/17/1112:37	NA	11E5K04004	NA	ALK007W	NA	NA
LCD1W	ALK007WC	211	1	NA	5.00	5.00	11/17/1112:44	NA	11E5K04005	NA	ALK007W	NA	NA
IW-70-SAB11-103	K070-01	1860	1	NA	5.00	5.00	11/17/1113:05	NA	11E5K04006	NA	ALK007W	11/08/1110:35	11/08/11
IW-70-FSB118-104	K070-02	771	1	NA	5.00	5.00	11/17/1113:19	NA	11E5K04007	NA	ALK007W	11/08/1112:01	11/08/11
MW-70-PMW06A-105	K070-03	263	1	NA	5.00	5.00	11/17/1113:27	NA	11E5K04008	NA	ALK007W	11/08/1113:42	11/08/11
MW-70-PMW06B-106	K070-04	170	1	NA	5.00	5.00	11/17/1113:34	NA	11E5K04009	NA	ALK007W	11/08/1114:48	11/08/11
MW-70-38-108	K070-05	631	1	NA	5.00	5.00	11/17/1113:45	NA	11E5K04010	NA	ALK007W	11/08/1116:03	11/08/11
IR-70-FD-107	K070-06	170	1	NA	5.00	5.00	11/17/1113:53	NA	11E5K04011	NA	ALK007W	11/08/1115:10	11/08/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K070
METHOD: METHOD 2320B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ALK007WB	ALK007WL	ALK007WC		
LAB FILE ID:	11E5K04003	11E5K04004	11E5K04005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/17/1112:30	11/17/1112:37	11/17/1112:44	DATE RECEIVED:	NA
PREP. BATCH:	ALK007W	ALK007W	ALK007W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Total Alkalinity	ND	23D	211	92	230	211	92	D	80-120	20

8855

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ALKALINITY

Note: For samples and relevent QCs/Standards analyzed, refer to attached analytical sequence.

☒ Titration end point: pH 4.5 ± 0.04

☒ Low alkalinity: pH 4.2 ± 0.04

MS/MSD amount of spike: NA

Comments: Method 2320B for SDG 11K010, 11K084, and 11K101

Book#: AAL-031

Instrument No.: ☐ 53 ☐ 97 ☒ E5

Analytical Batch: ALK007; ALK008; ALK009; ALK01(

Analytical Sequence: 11E5K04

SOP #	Rev. #
☒ EMAX-310.1	5
☒ EMAX-2320B	3
☐ EMAX-	

STANDARDS ID		CONC. (mg/L)
0.02N HCL	SWRI-01-338 ~~SWI-01-402~~	0.02N
LCS	SWI-01-407 ~~NA~~ RC 11/17/11	230
MS/MSD	NA	NA
ICV	NA	NA

pH Buffer	ID
pH 4	SWI-01-341
pH 7	SWI-01-279
pH 10	SWI-01-396
pH 8.0 (Check)	SWI-01-347

Analyzed By: RC

Date: 11/17/11

8056

PC-TitratION PLUS

pH and Alkalinity In-Run Report

Run Number 545 **Analytical Batch#** 11E5K04

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
1	ICV PH8	11E5K04	11/17/2011	12:21 PM	7.98	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	
2	RINSE	11E5K04	11/17/2011	12:25 PM	5.48	.00	.03	.04	.00	1.12	1.12	.00	.00	
3	ALK007WB	11E5K04	11/17/2011	12:30 PM	4.48	.00	.00	.01	.00	-.37	-.37	.00	.00	
4	ALK007WL	11E5K04	11/17/2011	12:37 PM	8.59	1.53	5.27	-1.00	61.04	210.81	88.72	122.09	.00	
5	ALK007WC	11E5K04	11/17/2011	12:44 PM	8.61	1.57	5.26	-1.00	62.91	210.56	84.74	125.82	.00	
6	K070-01	11E5K04	11/17/2011	1:05 PM	7.09	.00	46.39	-1.00	.00	1,855.69	1,855.69	.00	.00	
7	K070-02	11E5K04	11/17/2011	1:19 PM	6.78	.00	19.27	-1.00	.00	770.85	770.85	.00	.00	
8	K070-03	11E5K04	11/17/2011	1:27 PM	7.65	.00	6.58	-1.00	.00	263.36	263.36	.00	.00	
9	K070-04	11E5K04	11/17/2011	1:34 PM	7.84	.00	4.25	-1.00	.00	169.92	169.92	.00	.00	
10	K070-05	11E5K04	11/17/2011	1:45 PM	7.16	.00	15.79	-1.00	.00	631.41	631.41	.00	.00	
11	K070-06	11E5K04	11/17/2011	1:53 PM	7.85	.00	4.26	-1.00	.00	170.46	170.46	.00	.00	
12	K084-01	11E5K04	11/17/2011	2:00 PM	7.93	.00	4.39	-1.00	.00	175.64	175.64	.00	.00	
13	K084-02	11E5K04	11/17/2011	2:07 PM	7.89	.00	4.34	-1.00	.00	173.63	173.63	.00	.00	
14	K084-03	11E5K04	11/17/2011	2:21 PM	6.73	.00	25.68	-1.00	.00	1,027.11	1,027.11	.00	.00	
15	K084-04	11E5K04	11/17/2011	2:39 PM	7.04	.00	13.31	-1.00	.00	532.34	532.34	.00	.00	
16	K084-05	11E5K04	11/17/2011	2:48 PM	7.31	.00	11.55	-1.00	.00	462.12	462.12	.00	.00	
17	K084-06	11E5K04	11/17/2011	2:55 PM	7.97	.00	4.38	-1.00	.00	175.19	175.19	.00	.00	
18	K090-01	11E5K04	11/17/2011	3:03 PM	6.52	.00	3.28	-1.00	.00	131.29	131.29	.00	.00	

Analyzed by: Rc Reviewed by: Rc Date: 11/18/11

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Run Number 545 **Analytical Batch#** **11E5K04**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
19	K090-02	11E5K04	11/17/2011	3:10 PM	6.76	.00	2.74	-1.00	.00	109.70	109.70	.00	.00	
20	K090-03	11E5K04	11/17/2011	3:16 PM	6.87	.00	1.92	-1.00	.00	76.93	76.93	.00	.00	
21	K093-01	11E5K04	11/17/2011	3:23 PM	7.85	.00	4.83	-1.00	.00	193.24	193.24	.00	.00	
22	K101-01	11E5K04	11/17/2011	3:31 PM	7.63	.00	11.60	-1.00	.00	464.05	464.05	.00	.00	
23	K101-01D	11E5K04	11/17/2011	3:42 PM	7.62	.00	11.64	-1.00	.00	465.44	465.44	.00	.00	
24	RINSE	11E5K04	11/17/2011	3:48 PM	5.79	.00	.06	.11	.00	-.01	-.01	.00	.00	
25	ALK008WB	11E5K04	11/17/2011	3:54 PM	5.30	.00	.04	.09	.00	-.59	-.59	.00	.00	
26	ALK008WL	11E5K04	11/17/2011	4:01 PM	8.89	2.63	5.24	-1.00	105.30	209.69	.00	208.78	.91	
27	ALK008WC	11E5K04	11/17/2011	4:09 PM	8.87	2.59	5.24	-1.00	103.46	209.70	2.79	206.91	.00	
28	K077-02	11E5K04	11/17/2011	4:18 PM	7.24	.00	7.35	-1.00	.00	293.89	293.89	.00	.00	
29	K077-03	11E5K04	11/17/2011	4:25 PM	7.74	.00	7.57	-1.00	.00	302.79	302.79	.00	.00	
30	K077-04	11E5K04	11/17/2011	4:39 PM	8.16	.00	24.58	-1.00	.00	983.02	983.02	.00	.00	
31	K077-04D	11E5K04	11/17/2011	4:53 PM	8.14	.00	24.56	-1.00	.00	982.52	982.52	.00	.00	
32	K077-05	11E5K04	11/17/2011	5:04 PM	7.69	.00	14.13	-1.00	.00	565.29	565.29	.00	.00	
33	K077-06	11E5K04	11/17/2011	5:13 PM	7.75	.00	14.09	-1.00	.00	563.79	563.79	.00	.00	
34	K077-07	11E5K04	11/17/2011	5:20 PM	8.05	.00	2.87	-1.00	.00	114.77	114.77	.00	.00	
35	K077-08	11E5K04	11/17/2011	5:29 PM	8.67	.35	8.13	-1.00	13.82	325.04	297.41	27.63	.00	
36	K077-10	11E5K04	11/17/2011	5:38 PM	8.08	.00	10.46	-1.00	.00	418.27	418.27	.00	.00	
37	K077-11	11E5K04	11/17/2011	5:47 PM	8.07	.00	10.53	-1.00	.00	421.26	421.26	.00	.00	
38	K077-12	11E5K04	11/17/2011	5:59 PM	7.52	.00	18.72	-1.00	.00	748.82	748.82	.00	.00	

Analyzed by: Rc Reviewed by: Rc Date: 11/18/11

Copyright Hinterland Software Ltd.

Run Number 545 **Analytical Batch#** 11E5K04

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
39	K077-13	11E5K04	11/17/2011	6:09 PM	7.13	.00	10.25	-1.00	.00	409.91	409.91	.00	.00	
40	K077-14	11E5K04	11/17/2011	6:17 PM	7.38	.00	8.33	-1.00	.00	333.39	333.39	.00	.00	
41	K077-15	11E5K04	11/17/2011	6:24 PM	7.50	.00	5.54	-1.00	.00	221.68	221.68	.00	.00	
42	K077-17	11E5K04	11/17/2011	6:34 PM	8.13	.00	9.67	-1.00	.00	386.98	386.98	.00	.00	
43	K077-18	11E5K04	11/17/2011	6:43 PM	8.28	.00	9.79	-1.00	.00	391.69	391.69	.00	.00	
44	K077-19	11E5K04	11/17/2011	6:52 PM	8.28	.00	11.93	-1.00	.00	477.05	477.05	.00	.00	
45	K077-20	11E5K04	11/17/2011	7:02 PM	7.58	.00	11.31	-1.00	.00	452.38	452.38	.00	.00	
46	K077-21	11E5K04	11/17/2011	7:10 PM	7.54	.00	7.78	-1.00	.00	311.27	311.27	.00	.00	
47	K077-22	11E5K04	11/17/2011	7:19 PM	7.84	.00	7.30	-1.00	.00	291.89	291.89	.00	.00	
48	K077-23	11E5K04	11/17/2011	7:28 PM	8.62	.40	12.57	-1.00	16.13	502.99	470.73	32.26	.00	
49	RINSE	11E5K04	11/17/2011	7:34 PM	5.76	.00	.06	.13	.00	-.64	-.64	.00	.00	
50	ALK009WB	11E5K04	11/17/2011	7:40 PM	5.46	.00	.05	.11	.00	-.61	-.61	.00	.00	
51	ALK009WL	11E5K04	11/17/2011	7:47 PM	8.97	2.86	5.27	-1.00	114.36	210.92	.00	193.13	17.79	
52	ALK009WC	11E5K04	11/17/2011	7:56 PM	8.94	2.82	5.31	-1.00	112.98	212.52	.00	199.07	13.45	
53	K096-02	11E5K04	11/17/2011	8:04 PM	7.73	.00	6.33	-1.00	.00	253.20	253.20	.00	.00	
54	K096-02D	11E5K04	11/17/2011	8:12 PM	7.75	.00	6.35	-1.00	.00	254.17	254.17	.00	.00	
55	K096-03	11E5K04	11/17/2011	8:19 PM	7.43	.00	6.32	-1.00	.00	252.66	252.66	.00	.00	
56	K096-04	11E5K04	11/17/2011	8:29 PM	8.31	.02	10.18	-1.00	.90	407.36	405.55	1.81	.00	
57	K096-05	11E5K04	11/17/2011	8:38 PM	7.89	.00	10.57	-1.00	.00	422.93	422.93	.00	.00	
58	K096-06	11E5K04	11/17/2011	8:46 PM	7.74	.00	6.14	-1.00	.00	245.55	245.55	.00	.00	

Analyzed by: Rc Reviewed by: Rc Date: 11/18/11

pH AND ALKALINITY IN-RUN REPORT.SRW

PC-TitratION PLUS by Man-Tech Associates, Inc.

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Run Number 545 **Analytical Batch#** **11E5K04**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
59	K096-07	11E5K04	11/17/2011	8:56 PM	8.42	.13	10.84	-1.00	5.08	433.72	423.56	10.16	.00	
60	K096-09	11E5K04	11/17/2011	9:04 PM	8.24	.00	4.55	-1.00	.00	182.18	182.18	.00	.00	
61	K096-10	11E5K04	11/17/2011	9:16 PM	7.65	.00	16.57	-1.00	.00	662.96	662.96	.00	.00	
62	K096-11	11E5K04	11/17/2011	9:23 PM	7.49	.00	8.74	-1.00	.00	349.66	349.66	.00	.00	
63	K096-12	11E5K04	11/17/2011	9:31 PM	7.54	.00	8.62	-1.00	.00	345.00	345.00	.00	.00	
64	K096-13	11E5K04	11/17/2011	9:41 PM	7.59	.00	9.26	-1.00	.00	370.31	370.31	.00	.00	
65	K096-14	11E5K04	11/17/2011	9:49 PM	7.62	.00	9.26	-1.00	.00	370.60	370.60	.00	.00	
66	K096-15	11E5K04	11/17/2011	10:01 PM	8.12	.00	18.66	-1.00	.00	746.52	746.52	.00	.00	
67	K096-16	11E5K04	11/17/2011	10:12 PM	7.85	.00	16.10	-1.00	.00	644.02	644.02	.00	.00	
68	K096-18	11E5K04	11/17/2011	10:21 PM	8.32	.05	9.78	-1.00	1.95	391.21	387.32	3.89	.00	
69	K096-19	11E5K04	11/17/2011	10:32 PM	8.35	.13	15.30	-1.00	5.16	611.93	601.61	10.32	.00	
70	K096-20	11E5K04	11/17/2011	10:40 PM	7.85	.00	5.74	-1.00	.00	229.52	229.52	.00	.00	
71	K096-21	11E5K04	11/17/2011	10:48 PM	7.87	.00	5.75	-1.00	.00	230.14	230.14	.00	.00	
72	K096-22	11E5K04	11/17/2011	10:55 PM	7.80	.00	6.10	-1.00	.00	243.80	243.80	.00	.00	
73	K096-23	11E5K04	11/17/2011	11:04 PM	7.61	.00	6.52	-1.00	.00	260.85	260.85	.00	.00	
74	RINSE	11E5K04	11/17/2011	11:11 PM	6.33	.00	.09	.19	.00	-.45	-.45	.00	.00	
75	ALK010WB	11E5K04	11/17/2011	11:17 PM	5.67	.00	.07	.16	.00	-.83	-.83	.00	.00	
76	ALK010WL	11E5K04	11/17/2011	11:24 PM	9.05	3.06	5.31	-1.00	122.38	212.29	.00	179.82	32.47	
77	ALK010WC	11E5K04	11/17/2011	11:32 PM	9.02	3.00	5.30	-1.00	119.82	212.12	.00	184.61	27.52	
78	K104-02	11E5K04	11/17/2011	11:40 PM	7.76	.00	6.00	-1.00	.00	240.19	240.19	.00	.00	

Analyzed by: RC Reviewed by: RC Date: 11/18/11

pH AND ALKALINITY IN-RUN REPORT.SRW

PC-TitratION PLUS by Man-Tech Associates, Inc.

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Run Number 545 **Analytical Batch#** **11E5K04**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
79	K104-03	11E5K04	11/17/2011	11:49 PM	8.25	.00	7.19	-1.00	.00	287.51	287.51	.00	.00	
80	K104-04	11E5K04	11/17/2011	11:59 PM	8.42	.19	14.66	-1.00	7.77	586.21	570.67	15.54	.00	
81	K104-06	11E5K04	11/18/2011	12:07 AM	7.76	.00	7.57	-1.00	.00	302.95	302.95	.00	.00	
82	K104-07	11E5K04	11/18/2011	12:16 AM	7.79	.00	7.59	-1.00	.00	303.68	303.68	.00	.00	
83	K104-08	11E5K04	11/18/2011	12:24 AM	7.77	.00	8.36	-1.00	.00	334.43	334.43	.00	.00	
84	K104-09	11E5K04	11/18/2011	12:37 AM	7.98	.00	19.75	-1.00	.00	789.95	789.95	.00	.00	
85	K104-10	11E5K04	11/18/2011	12:49 AM	7.73	.00	18.92	-1.00	.00	756.71	756.71	.00	.00	
86	K104-12	11E5K04	11/18/2011	12:58 AM	8.43	.15	13.15	-1.00	5.94	525.84	513.97	11.87	.00	
87	K104-13	11E5K04	11/18/2011	1:07 AM	7.82	.00	6.92	-1.00	.00	276.86	276.86	.00	.00	
88	K104-14	11E5K04	11/18/2011	1:17 AM	7.87	.00	17.64	-1.00	.00	705.74	705.74	.00	.00	
89	K104-14D	11E5K04	11/18/2011	1:29 AM	7.88	.00	17.68	-1.00	.00	707.27	707.27	.00	.00	
90	K072-01	11E5K04	11/18/2011	1:37 AM	8.29	.00	3.87	-1.00	.00	154.74	154.74	.00	.00	
91	RINSE	11E5K04	11/18/2011	1:43 AM	6.03	.00	.06	.13	.00	-.18	-.18	.00	.00	

Analyzed by: Re Reviewed by: Re Date: 11/18/11

pH AND ALKALINITY IN-RUN REPORT.SRW

PC-TitratION PLUS by Man-Tech Associates, Inc.

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PC-Titrate For Windows

Running List Report

Order Number - 11E5K04

	Schedule	Sample Id	Vial	Weight	Volume
1	PH CAL	CAL	1	.00	25.00
2	PH ONLY	ICV PH8	4	.00	25.00
3	PH-ALK	RINSE	5	.00	25.00
4	PH-ALK	ALK007WB	6	.00	25.00
5	PH-ALK	ALK007WL	7	.00	25.00
6	PH-ALK	ALK007WC	8	.00	25.00
7	PH-ALK	K070-01	9	.00	25.00
8	PH-ALK	K070-02	10	.00	25.00
9	PH-ALK	K070-03	11	.00	25.00
10	PH-ALK	K070-04	12	.00	25.00
11	PH-ALK	K070-05	13	.00	25.00
12	PH-ALK	K070-06	14	.00	25.00
13	PH-ALK	K084-01	15	.00	25.00
14	PH-ALK	K084-02	16	.00	25.00
15	PH-ALK	K084-03	17	.00	25.00
16	PH-ALK	K084-04	18	.00	25.00
17	PH-ALK	K084-05	19	.00	25.00
18	PH-ALK	K084-06	20	.00	25.00
19	PH-ALK	K090-01	21	.00	25.00
20	PH-ALK	K090-02	22	.00	25.00
21	PH-ALK	K090-03	23	.00	25.00
22	PH-ALK	K093-01	24	.00	25.00
23	PH-ALK	K101-01	25	.00	25.00
24	PH-ALK	K101-01D	26	.00	25.00
25	PH-ALK	RINSE	27	.00	25.00
26	PH-ALK	ALK008WB	28	.00	25.00
27	PH-ALK	ALK008WL	29	.00	25.00
28	PH-ALK	ALK008WC	30	.00	25.00
29	PH-ALK	K077-02	31	.00	25.00
30	PH-ALK	K077-03	32	.00	25.00
31	PH-ALK	K077-04	33	.00	25.00
32	PH-ALK	K077-04D	34	.00	25.00
33	PH-ALK	K077-05	35	.00	25.00
34	PH-ALK	K077-06	36	.00	25.00
35	PH-ALK	K077-07	37	.00	25.00
36	PH-ALK	K077-08	38	.00	25.00
37	PH-ALK	K077-10	39	.00	25.00
38	PH-ALK	K077-11	40	.00	25.00
39	PH-ALK	K077-12	41	.00	25.00
40	PH-ALK	K077-13	42	.00	25.00

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Running List Report

Order Number - 11E5K04

	Schedule	Sample Id	Vial	Weight	Volume
41	PH-ALK	K077-14	43	.00	25.00
42	PH-ALK	K077-15	44	.00	25.00
43	PH-ALK	K077-17	45	.00	25.00
44	PH-ALK	K077-18	46	.00	25.00
45	PH-ALK	K077-19	47	.00	25.00
46	PH-ALK	K077-20	48	.00	25.00
47	PH-ALK	K077-21	49	.00	25.00
48	PH-ALK	K077-22	50	.00	25.00
49	PH-ALK	K077-23	51	.00	25.00
50	PH-ALK	RINSE	52	.00	25.00
51	PH-ALK	ALK009WB	53	.00	25.00
52	PH-ALK	ALK009WL	54	.00	25.00
53	PH-ALK	ALK009WC	55	.00	25.00
54	PH-ALK	K096-02	56	.00	25.00
55	PH-ALK	K096-02D	57	.00	25.00
56	PH-ALK	K096-03	58	.00	25.00
57	PH-ALK	K096-04	59	.00	25.00
58	PH-ALK	K096-05	60	.00	25.00
59	PH-ALK	K096-06	61	.00	25.00
60	PH-ALK	K096-07	62	.00	25.00
61	PH-ALK	K096-09	63	.00	25.00
62	PH-ALK	K096-10	64	.00	25.00
63	PH-ALK	K096-11	65	.00	25.00
64	PH-ALK	K096-12	66	.00	25.00
65	PH-ALK	K096-13	67	.00	25.00
66	PH-ALK	K096-14	68	.00	25.00
67	PH-ALK	K096-15	69	.00	25.00
68	PH-ALK	K096-16	70	.00	25.00
69	PH-ALK	K096-18	71	.00	25.00
70	PH-ALK	K096-19	72	.00	25.00
71	PH-ALK	K096-20	73	.00	25.00
72	PH-ALK	K096-21	74	.00	25.00
73	PH-ALK	K096-22	75	.00	25.00
74	PH-ALK	K096-23	76	.00	25.00
75	PH-ALK	RINSE	77	.00	25.00
76	PH-ALK	ALK010WB	78	.00	25.00
77	PH-ALK	ALK010WL	79	.00	25.00
78	PH-ALK	ALK010WC	80	.00	25.00
79	PH-ALK	K104-02	81	.00	25.00
80	PH-ALK	K104-03	82	.00	25.00
81	PH-ALK	K104-04	83	.00	25.00
82	PH-ALK	K104-06	84	.00	25.00

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Running List Report

Order Number - 11E5K04

	Schedule	Sample Id	Vial	Weight	Volume
83	PH-ALK	K104-07	85	.00	25.00
84	PH-ALK	K104-08	86	.00	25.00
85	PH-ALK	K104-09	87	.00	25.00
86	PH-ALK	K104-10	88	.00	25.00
87	PH-ALK	K104-12	89	.00	25.00
88	PH-ALK	K104-13	90	.00	25.00
89	PH-ALK	K104-14	91	.00	25.00
90	PH-ALK	K104-14D	92	.00	25.00
91	PH-ALK	K072-01	93	.00	25.00
92	PH-ALK	RINSE	94	.00	25.00

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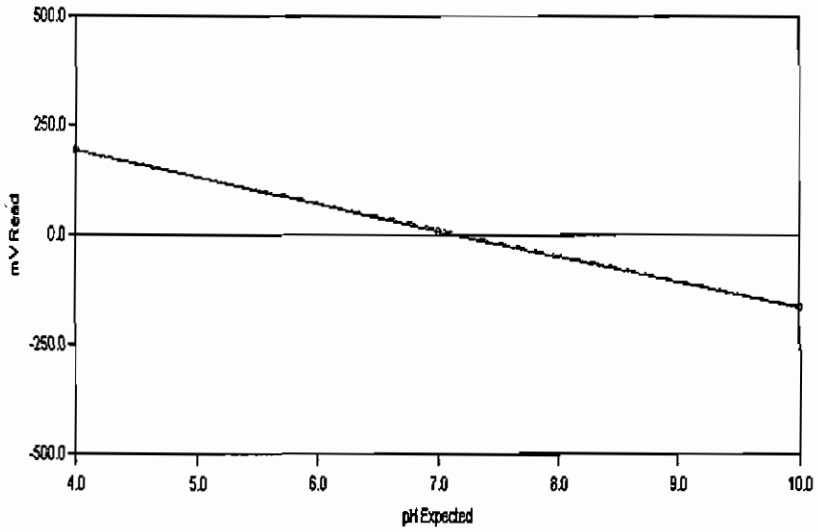
PC-TitratION PLUS
Calibration Report

Calibration Record # 283



Calibration Settings

Calibration ID	PH CAL 4-7-10	Date	11/17/2011	
Channel	1	Time	12:18 PM	
Probe Type	pH	Temperature	296.53 K	23.38 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit	

Calibration Results

Slope	-59.142	CorrCoeff	0.9998
Intercept	12.613	Equation: Y = (-59.142) X + (12.613)	

Calibration Validity True Operator

	Result	Minimum	Maximum
Slope	-59.142	-65.00	-53.00
Intercept	12.613	-40.00	40.00
Correlation Coefficient	0.9998	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	**Standard**	**Reading**
	4.00	191.89
	7.00	8.91
	10.00	-162.96

CALRPRT.SRW
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CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K070

METHOD 2540C
TOTAL DISSOLVED SOLIDS

A total of six (6) water samples were received on 11/08/11 for Total Dissolved Solids analysis, Method 2540C in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Balance calibration was checked as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TDK005WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2540C
TOTAL DISSOLVED SOLIDS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K070

Matrix : WATER
Instrument ID : 40706360

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TDK005WB	ND	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00501	NA	TDK005W	NA	NA
LCS1W	TDK005WL	895	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00502	NA	TDK005W	NA	NA
LCD1W	TDK005WC	880	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00503	NA	TDK005W	NA	NA
IW-70-SAB11-103	K070-01	2540	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00517	NA	TDK005W	11/08/1110:35	11/08/11
IW-70-FSB118-104	K070-02	1870	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00518	NA	TDK005W	11/08/1112:01	11/08/11
MW-70-PMW06A-105	K070-03	1730	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00519	NA	TDK005W	11/08/1113:42	11/08/11
MW-70-PMW06B-106	K070-04	1210	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00520	NA	TDK005W	11/08/1114:48	11/08/11
MW-70-38-108	K070-05	1510	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00521	NA	TDK005W	11/08/1116:03	11/08/11
IR-70-FD-107	K070-06	1200	1	NA	20.0	20.0	11/10/1116:38	NA	TDK00522	NA	TDK005W	11/08/1115:10	11/08/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K070
METHOD: METHOD 2540C

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TDK005WB	TDK005WL	TDK005WC		
LAB FILE ID:	TDK00501	TDK00502	TDK00503		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1116:38	11/10/1116:38	11/10/1116:38	DATE RECEIVED:	NA
PREP. BATCH:	TDK005W	TDK005W	TDK005W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TDS	ND	1000	895	90	1000	880	88	2	80-120	20

8868

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
GRAVIMETRIC

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AGV-047

Balance ID: 40706360

Analytical Batch: TDK005

SOP #	Rev. #
☐ EMAX-160.1	6
☐ EMAX-160.2	4
☐ EMAX-160.3	2
☐ EMAX-2540B	1
☑ EMAX-2540C	5
☐ EMAX-2540D	1

STANDARDS ID	CONC. (mg/L)
LCS SW2-02-914	1000

Micropipette ID:

Analyzed By: NM

Date: 11/14/11

EMAX LABORATORIES

GRAVIMETRIC ANALYSES
RAW DATA

11TDK005.xls

Analytical Batch: TDK005C. Instrument ID: 40706360 Oven Temp IN (°C): 180 Oven Temp OUT (°C): 180 SOP: EMAX-2540C Rev.1

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish #	Dish (g)	Date	Time	1st Dry Weight + Dish (g)	Date	Time	2nd Dry Weight + Dish (g)	Date	Time	3rd Dry Weight + Dish (g)	Date	Time	Difference 1st & 2nd Dry Wt. Rdg.	Difference 2nd & 3rd Dry Wt. Rdg. (<0.5mg)	NOTES
TDK00501	TDK005WB	100	B	71.3230	11/10/11	16:38	71.3226	11/14/11	10:17	71.3226	11/14/11	12:02	71.3226	11/14/11	12:02	0	0.0	
TDK00502	TDK005WL	20	L	21.4860	11/10/11	16:38	21.5038	11/14/11	10:17	21.5039	11/14/11	12:03	21.5039	11/14/11	12:03	0.0001	0.0	
TDK00503	TDK005WC	20	C	21.4203	11/10/11	16:38	21.4378	11/14/11	10:17	21.4379	11/14/11	12:04	21.4379	11/14/11	12:04	1E-04	0.0	
TDK00604	K035-01	20	1	21.6520	11/10/11	16:39	21.6998	11/14/11	10:18	21.6995	11/14/11	12:04	21.6995	11/14/11	12:04	-0.0003	0.0	
TDK00505	K035-02	10	2	21.4904	11/10/11	16:39	21.5326	11/14/11	10:18	21.5328	11/14/11	12:04	21.5328	11/14/11	12:04	0.0002	0.0	
TDK00506	K035-02D	10	3	21.7407	11/10/11	16:39	21.7827	11/14/11	10:18	21.783	11/14/11	12:05	21.783	11/14/11	12:05	0.0003	0.0	
TDK00507	K035-03	10	4	21.5108	11/10/11	16:39	21.5847	11/14/11	10:18	21.5848	11/14/11	12:05	21.5848	11/14/11	12:06	1E-04	0.0	
TDK00508	K035-04	20	5	21.2552	11/10/11	16:39	21.3178	11/14/11	10:19	21.3182	11/14/11	12:06	21.3182	11/14/11	12:06	0.0004	0.0	
TDK00509	K035-05	10	6	21.4821	11/10/11	16:40	21.5552	11/14/11	10.19	21.5553	11/14/11	12:06	21.5553	11/14/11	12:06	1E-04	0.0	
TDK00510	K063-01	20	7	21.5468	11/10/11	16:40	21.5675	11/14/11	10.19	21.5679	11/14/11	12:07	21.5679	11/14/11	12:07	0.0004	0.0	
TDK00511	K063-02	20	8	21.3955	11/10/11	16.40	21.4167	11/14/11	10.20	21.4171	11/14/11	12.07	21.4171	11/14/11	12:07	0.0004	0.0	
TDK00512	K063-02D	20	9	21.5431	11/10/11	16.41	21.5639	11/14/11	10:20	21.5641	11/14/11	12.08	21.5641	11/14/11	12:08	0.0002	0.0	
TDK00513	K063-03	20	10	21.5358	11/10/11	16:41	21.562	11/14/11	10.20	21.5624	11/14/11	12:08	21.5624	11/14/11	12:08	0.0004	0.0	
TDK00514	K063-04	20	11	21.4350	11/10/11	16:41	21.4537	11/14/11	10.20	21.4541	11/14/11	12:09	21.4541	11/14/11	12:09	0.0004	0.0	
TDK00515	K063-05	20	12	21.4642	11/10/11	16:41	21.4925	11/14/11	10.21	21.4929	11/14/11	12:10	21.4929	11/14/11	12:10	0.0004	0.0	
TDK00516	K063-06	20	13	21.3348	11/10/11	16:42	21.3569	11/14/11	10.21	21.3569	11/14/11	12:10	21.3569	11/14/11	12:10	0	0.0	
TDK00517	K070-01	20	14	21.4889	11/10/11	16:42	21.5398	11/14/11	10.21	21.5398	11/14/11	12:10	21.5398	11/14/11	12:10	0	0.0	
TDK00518	K070-02	20	15	21.4706	11/10/11	16:42	21.5078	11/14/11	10.22	21.508	11/14/11	12:11	21.508	11/14/11	12:11	0.0002	0.0	
TDK00519	K070-03	20	16	21.7457	11/10/11	16:42	21.7798	11/14/11	10.22	21.7802	11/14/11	12.11	21.7802	11/14/11	12.11	0.0004	0.0	
TDK00520	K070-04	20	17	21.4787	11/10/11	16:43	21.5027	11/14/11	10.22	21.5028	11/14/11	12:12	21.5028	11/14/11	12:12	1E-04	0.0	
TDK00521	K070-05	20	18	21.3347	11/10/11	16:43	21.365	11/14/11	10:22	21.365	11/14/11	12.12	21.365	11/14/11	12:12	0	0.0	
TDK00522	K070-06	20	19	21.4641	11/10/11	16:43	21.488	11/14/11	10.23	21.488	11/14/11	12:13	21.488	11/14/11	12:13	0	0.0	

Beginning Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/10/11 16.36	PASSED
5	4.9997	11/10/11 16.37	PASSED
100	99.9954	11/10/11 16.37	PASSED

Ending Balance Check

Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/10/11 16:43	PASSED
5	5.0000	11/10/11 16:44	PASSED
100	99.9951	11/10-11 16:44	PASSED

Beginning Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1001	11/14/11 10.16	PASSED
5	5.0000	11/14/11 10:16	PASSED
100	99.9987	11/14/11 10:16	PASSED

Ending Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/14/11 12.13	PASSED
5	5.0000	11/14/11 12:14	PASSED
100	99.9986	11/14/11 12:15	PASSED

Acceptance Criteria. ± 0.1% OR 0.05 mg whichever is greater

LCS Conc. 1000 mg/L MDL 10 mg/L RL: 10 mg/L Initial Rdg by NM Final Rdg by NM Reviewed by NM

Remarks Date 11/14/11

EMAX LABORATORIES INC

GRAVIMETRIC CALCULATION

Analytical Batch: TDK005 Start Date/Time: 11/10/11 16:38 Temp IN(°C): 180

Balance ID: 40706360 End Date/Time: 11/14/11 12:12 Temp Out(°C): 180

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish (g)	Dry Weight + Dish (g)	SOLIDS (mg)	RESULT (mg/L)	NOTES
TDK00501	TDK005WB	100	71.323	71.3226	-0.4000	ND	
TDK00502	TDK005WL	20	21.486	21.5039	17.9000	895	90
TDK00503	TDK005WC	20	21.4203	21.4379	17.6000	880	88
TDK00504	K035-01	20	21.652	21.6995	47.5000	2370	
TDK00505	K035-02	10	21.4904	21.5328	42.4000	4240	
TDK00506	K035-02D	10	21.7407	21.783	42.3000	4230	
TDK00507	K035-03	10	21.5108	21.5846	74.0000	7400	
TDK00508	K035-04	20	21.2552	21.3182	63.0000	3150	
TDK00509	K035-05	10	21.4821	21.5553	73.2000	7320	
TDK00510	K063-01	20	21.5468	21.5679	21.1000	1060	
TDK00511	K063-02	20	21.3955	21.4171	21.6000	1080	
TDK00512	K063-02D	20	21.5431	21.5641	21.0000	1050	
TDK00513	K063-03	20	21.5358	21.5624	26.6000	1330	
TDK00514	K063-04	20	21.435	21.4541	19.1000	955	
TDK00515	K063-05	20	21.4642	21.4929	28.7000	1430	
TDK00516	K063-06	20	21.3348	21.3569	22.1000	1100	
TDK00517	K070-01	20	21.4889	21.5398	50.9000	2540	
TDK00518	K070-02	20	21.4706	21.508	37.4000	1870	
TDK00519	K070-03	20	21.7457	21.7802	34.5000	1730	
TDK00520	K070-04	20	21.4787	21.5028	24.1000	1210	
TDK00521	K070-05	20	21.3347	21.365	30.3000	1510	
TDK00522	K070-06	20	21.4641	21.488	23.9000	1200	

LCS Concentration: 1000 mg/L MDL(mg/L): 10 Initial Reading by: NM

SOP: EMAX-2540C Rev.1 RL (mg/L): 10 Final Reading by: NM

Remarks:

Reviewed by: NM

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K070

METHOD 4500F
DISSOLVED HYDROGEN SULFIDE

A total of six (6) water samples were received on 11/08/11 for Dissolved Hydrogen Sulfide analysis, Method 4500F in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 4500F
Dissolved Hydrogen Sulfide

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K070

Matrix : WATER
Instrument ID : NA

SAMPLE ID	EMAX SAMPLE TD	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	HSK002WB	ND	1	NA	1.00	1.00	11/14/1111:08	NA	HSK00201	NA	HSK002W	NA	NA
IW-70-SAB11-103	K070-01	ND	1	NA	1.00	1.00	11/14/1111:29	NA	HSK00204	NA	HSK002W	11/08/1110:35	11/08/11
IW-70-FSB118-104	K070-02	ND	1	NA	1.00	1.00	11/14/1111:40	NA	HSK00205	NA	HSK002W	11/08/1112:01	11/08/11
MW-70-PMW06A-105	K070-03	ND	1	NA	1.00	1.00	11/14/1111:44	NA	HSK00206	NA	HSK002W	11/08/1113:42	11/08/11
MW-70-PMW06B-106	K070-04	ND	1	NA	1.00	1.00	11/14/1111:49	NA	HSK00207	NA	HSK002W	11/08/1114:48	11/08/11
MW-70-38-108	K070-05	ND	1	NA	1.00	1.00	11/14/1111:52	NA	HSK00208	NA	HSK002W	11/08/1116:03	11/08/11
IR-70-FD-107	K070-06	ND	1	NA	1.00	1.00	11/14/1111:56	NA	HSK00209	NA	HSK002W	11/08/1115:10	11/08/11

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
SULFIDE

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Book #: ASD-018

Analytical Batch: HSK002

Comments:

SOP #	Rev. #
☐ EMAX-376.1	3
☐ EMAX-9034	0
☐ EMAX-4500-S2F	1
☑ EMAX-4500-S2H	0
☐ EMAX-	

STANDARDS ID	conc.
LCS SW1-01-422	8.48
Spike NA	NA
$Na_2S_2O_3$ Standard SWR1-01-384	0.0248
Iodine SWR1-01-465	0.0250
HCl ~~H+~~ NM 11/19 SWP1-007-60-03	6N
Indicator SWP1-01-340	—

Analyzed By: NM

Date: 11/4/11

8074

SM4500-S^2 H

EMAX LABORATORIES, INC.

ANALYSIS FOR UN-IONIZED HYDROGEN SULFIDE

Method SM4500-S2-H

Analytical Batch: HSK002

Data File Name	Lab Sample ID	Sulfide	Unit	Date Time	Temp. °C	pH	Conductivity µS/cm	H2S	Unit	COMMENTS
HSK0021	HSK002WB	ND	mg/L	11/14/11 11:08				ND	mg/L	
HSK0022	HSK002WL	6.83	mg/L	11/14/11 11:19				#VALUE!	mg/L	
HSK0023	HSK002WC	6.79	mg/L	11/14/11 11:23				#VALUE!	mg/L	
HSK0024	K070-01	ND	mg/L	11/14/11 11:29	25.2	6.88	3000	ND	mg/L	
HSK0025	K070-02	ND	mg/L	11/14/11 11:40	25.2	6.56	2830	ND	mg/L	
HSK0026	K070-03	ND	mg/L	11/14/11 11:44	25.1	7.36	2410	ND	mg/L	
HSK0027	K070-04	ND	mg/L	11/14/11 11:49	25.1	7.63	1625	ND	mg/L	
HSK0028	K070-05	ND	mg/L	11/14/11 11:52	25.1	6.73	2160	ND	mg/L	
HSK0029	K070-06	ND	mg/L	11/14/11 11:56	25.1	7.63	1681	ND	mg/L	
HSK00210	K084-01	ND	mg/L	11/14/11 12:27	24.8	7.8	1100	ND	mg/L	
HSK00211	K084-02	ND	mg/L	11/14/11 12:29	25.1	7.61	1134	ND	mg/L	
HSK00212	K084-03	ND	mg/L	11/14/11 12:32	25.2	6.86	2100	ND	mg/L	
HSK00213	K084-04	ND	mg/L	11/14/11 12:36	25	7.01	1367	ND	mg/L	
HSK00214	K084-05	ND	mg/L	11/14/11 13:10	24.8	6.85	1702	ND	mg/L	
HSK00215	K084-06	ND	mg/L	11/14/11 13:12	24.9	7.77	1088	ND	mg/L	
HSK00216	K084-06D	ND	mg/L	11/14/11 13:15	24.9	7.8	1085	ND	mg/L	
HSK00217	KJ01-01	ND	mg/L	11/14/11 13:18	25	7.13	1339	ND	mg/L	
										NM 11/14/11

$$pK_1 = 32.5 + 1519.44/T - 15.672\log_{10}T + 0.02722T$$

$$A = 0.7083 - 2.277x10^{-3}T + 5.399x10^{-6}T^2$$

$$I = 1.6x10^{-5}\,Conductivity$$

$$pf_m = A\left(\frac{\sqrt{I}}{1+\sqrt{I}} - 0.3\right)$$

$$K'_1 = 10^{-pK_1 + 2pf_m}$$

$$H_2S = \left(\frac{S_T}{1 + \frac{K'_1}{H^+}}\right)$$

$$H^+ = 10^{-pH + pf_m}$$

Analyzed by: NM

Reviewed by: NM

Date: 11/14/11

Where: T(°K)= T°C+272.15 pK1=dissociation constant for zero ionic strength A= Debye-Huckel Parameter I= Ionic Strength pfm=negative logarithm of the monovalent ion activity coefficient K'_1=conditional ionization constant H^+=Hydrogen ion concentration S_T=Total Sulfide Concentration

EMAX LABORATORIES, INC.

ANALYSIS FOR SULFIDE

Method: SM4500-S2-H Analytical Batch: HSK002 Book #: ASD-018 Page: 13

Data File Name	Lab Sample ID	V_e (ml)	V_t (ml)	Volume of Titant V_t (ml)	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Sulfide	Sample Result	Flag J	Unit
HSK0021	HSK002WB	100	2.5	2.5	11/14/11	11:08:06	0.08	ND		mg/L
HSK0022	HSK002WL	100	2.5	0.8	11/14/11	11:19:49	6.8256	6.83		mg/L
HSK0023	HSK002WC	100	2.5	0.81	11/14/11	11:23:28	6.78592	6.79		mg/L
HSK0024	K070-01	100	2.5	2.55	11/14/11	11:29:24	-0.1184	ND		mg/L
HSK0025	K070-02	100	2.5	2.6	11/14/11	11:40:44	-0.3168	ND		mg/L
HSK0026	K070-03	100	2.5	2.53	11/14/11	11:44:18	-0.03904	ND		mg/L
HSK0027	K070-04	100	2.5	2.65	11/14/11	11:49:52	-0.5152	ND		mg/L
HSK0028	K070-05	100	2.5	2.7	11/14/11	11:52:47	-0.7136	ND		mg/L
HSK0029	K070-06	100	2.5	2.66	11/14/11	11:56:07	-0.55488	ND		mg/L
HSK00210	K084-01	100	2.5	2.48	11/14/11	12:27:28	0.15936	ND		mg/L
HSK00211	K084-02	100	2.5	2.5	11/14/11	12:29:50	0.08	ND		mg/L
HSK00212	K084-03	100	2.5	2.75	11/14/11	12:32:58	-0.912	ND		mg/L
HSK00213	K084-04	100	2.5	2.6	11/14/11	12:36:11	-0.3168	ND		mg/L
HSK00214	K084-05	100	2.5	2.6	11/14/11	13:10:12	-0.3168	ND		mg/L
HSK00215	K084-06	100	2.5	2.58	11/14/11	13:12:52	-0.23744	ND		mg/L
HSK00216	K084-06D	100	2.5	2.56	11/14/11	13:15:37	-0.15808	ND		mg/L
HSK00217	KI01-01	100	2.5	2.62	11/14/11	13:18:28	-0.39616	ND		mg/L

NM 11/14/11

STANDARDIZATION				
V_I (ml)	V_{Na2S03} (ml)	DATE	TIME	Titrant Na_2SO_3 (N)
Average Normality of Iodine (NI)=				0.025

☑ Standard Purchased as Certified Solution

$$N_I = \frac{(N * V)_{Na_2SO_3}}{V_I}$$

MISCELLANEOUS INFORMATION			
Standard	Concentration		Unit
Iodine	0.025		N
$Na_2S_2O_3$	0.0248		N
LCS [WATER | SOIL]	8.48	84.8	mg/L | mg/Kg
MDL [WATER | SOIL]	1	10	mg/L | mg/Kg
RL	1	10	mg/L | mg/Kg

$$S(mg/L) = \frac{[(V_I * N_I) - (V_t * N_t)](16{,}000)}{V_S}$$

MS/MSD	TV=	8.48	mg/L
ID	Result (mg/L)	%Rec.	RPD

Comments:

Analyzed By: NM

8075

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K070

METHOD SM5310B
TOC

A total of six (6) water samples were received on 11/08/11 for Total Organic Carbon analysis, Method SM5310B in accordance with Standard Methods for the Examination of Water and Wastewater, 18th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary forms for details.

Lab Control Sample
Two sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for TCK006WL/C were all within QC limits.
Percent recoveries for TCK008WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD SM5310B
TOC

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K070

Matrix : WATER
Instrument ID : I62

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TCK006WB	ND	1	NA	1.00	0.500	11/10/1120:11	NA	TCK006-05	TCK006-02	TCK006W	NA	NA
LCS1W	TCK006WL	26.2	1	NA	1.00	0.500	11/10/1120:25	NA	TCK006-06	TCK006-02	TCK006W	NA	NA
LCD1W	TCK006WC	26.3	1	NA	1.00	0.500	11/10/1120:38	NA	TCK006-07	TCK006-02	TCK006W	NA	NA
IW-70-FSB118-104	K070-02	10.3	1	NA	1.00	0.500	11/10/1123:01	NA	TCK006-19	TCK006-14	TCK006W	11/08/1112:01	11/08/11
MW-70-PMW06A-105	K070-03	1.53	1	NA	1.00	0.500	11/10/1123:12	NA	TCK006-20	TCK006-14	TCK006W	11/08/1113:42	11/08/11
MW-70-PMW06B-106	K070-04	0.824J	1	NA	1.00	0.500	11/10/1123:22	NA	TCK006-21	TCK006-14	TCK006W	11/08/1114:48	11/08/11
MW-70-38-108	K070-05	1.95	1	NA	1.00	0.500	11/10/1123:33	NA	TCK006-22	TCK006-14	TCK006W	11/08/1116:03	11/08/11
IR-70-FD-107	K070-06	0.571J	1	NA	1.00	0.500	11/10/1123:44	NA	TCK006-23	TCK006-14	TCK006W	11/08/1115:10	11/08/11
LCS2W	TCK008WL	27.3	1	NA	1.00	0.500	11/15/1100:19	NA	TCK007-33	TCK007-26	TCK008W	NA	NA
LCD2W	TCK008WC	25.6	1	NA	1.00	0.500	11/15/1100:32	NA	TCK007-34	TCK007-26	TCK008W	NA	NA
MBLK2W	TCK008WB	ND	1	NA	1.00	0.500	11/15/1100:44	NA	TCK007-35	TCK007-26	TCK008W	NA	NA
IW-70-SAB11-103	K070-01T	111	4	NA	4.00	2.00	11/15/1102:35	NA	TCK007-44	TCK007-36	TCK008W	11/08/1110:35	11/08/11

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EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K070
METHOD: METHOD SM5310B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TCK006WB	TCK006WL	TCK006WC		
LAB FILE ID:	TCK006-05	TCK006-06	TCK006-07		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1120:11	11/10/1120:25	11/10/1120:38	DATE RECEIVED:	NA
PREP. BATCH:	TCK006W	TCK006W	TCK006W		
CALIB. REF:	TCK006-02	TCK006-02	TCK006-02		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	ND	25.0	26.2	105	25.0	26.3	105	1	85-115	20

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EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K070
METHOD: METHOD SM5310B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	TCK008WB	TCK008WL	TCK008WC		
LAB FILE ID:	TCK007-35	TCK007-33	TCK007-34		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/15/1100:44	11/15/1100:19	11/15/1100:32	DATE RECEIVED:	NA
PREP. BATCH:	TCK008W	TCK008W	TCK008W		
CALIB. REF:	TCK007-26	TCK007-26	TCK007-26		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	ND	25.0	27.3	109	25.0	25.6	103	6	85-115	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TOC

	Date	Time
Start	11/10/11	1823
End	11/11/11	0004

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

TCK006W
K706 415.1
K430 5310B
K035 ↓
K070

Book #:	A62-020
Instrument No.:	62
Pipette ID:	039380025
	SW3-01-33
	SI1A-01-4
Balance ID:	40706360
Analytical Sequence:	TCK006
Method File:	TCK006
Analytical Batch:	TCK006W

SOP #	Rev. #
☐ EMAX-415.1	2
☐ EMAX-5310B	1
☐ EMAX-9060	2
☐ EMAX-	

STANDARDS ID	CONC. (mg/L)
S0 nanopure	0
S1 SW10B-04-174	1
S2 ↓	5
S3	10
S4	40
S5	80
S6 —	—
ICV/LCS SW10B-04-172	
CCV ↓ -173	

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ TOC	
☐	

Analyzed By: lm

Date: 11/10/11

2 M HCl SW4-01-223

	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
1	Standard	NPOC	ICAL	TCK006-01	0A-123456-	C:\Program	1.000		
2	Control	NPOC	ICV	TCK006-02	0A-123456-	C:\Program	1.000	NPOC:25.92 mg/L	
3	Unknown	NPOC	ICB	TCK006-03	0A-123456-	C:\Program	1.000	NPOC:0.1709 mg/	
4	Unknown	NPOC	HCO3\CO3	TCK006-04	0A-123456-	C:\Program	1.000	NPOC:0.2802 mg/	
5	Unknown	NPOC	TCK006WB	TCK006-05	0A-123456-	C:\Program	1.000	NPOC:0.1457 mg/	
6	Unknown	NPOC	TCK006WL	TCK006-06	0A-123456-	C:\Program	1.000	NPOC:26.16 mg/L	
7	Unknown	NPOC	TCK006WC	TCK006-07	0A-123456-	C:\Program	1.000	NPOC:26.33 mg/L	
8	Unknown	NPOC	K706-01	TCK006-08	0A-123456-	C:\Program	1.000	NPOC:5.360 mg/L	PH<2
9	Unknown	NPOC	K706-01D	TCK006-09	0A-123456-	C:\Program	1.000	NPOC:5.315 mg/L	
10	Unknown	NPOC	K706-01M	TCK006-10	0A-123456-	C:\Program	1.000	NPOC:31.67 mg/L	
11	Unknown	NPOC	K706-01S	TCK006-11	0A-123456-	C:\Program	1.000	NPOC:31.59 mg/L	
12	Unknown	NPOC	K430-01	TCK006-12	0A-123456-	C:\Program	1.000	NPOC:1.501 mg/L	PH<2
13	Unknown	NPOC	K430-02	TCK006-13	0A-123456-	C:\Program	1.000	NPOC:1.299 mg/L	PH<2
14	Control	NPOC	CCV1	TCK006-14	0A-123456-	C:\Program	1.000	NPOC:26.26 mg/L	
15	Unknown	NPOC	CCB1	TCK006-15	0A-123456-	C:\Program	1.000	NPOC:0.1063 mg/	
16	Unknown	NPOC	K430-03	TCK006-16	0A-123456-	C:\Program	1.000	NPOC:1.099 mg/L	PH<2
17	Unknown	NPOC	K035-01T	TCK006-17	0A-123456-	C:\Program	10.00	NPOC:174.5 mg/L	DF=10
18	Unknown	NPOC	K070-01	TCK006-18	0A-123456-	C:\Program	1.000	NPOC:106.3 mg/L	PH<2
19	Unknown	NPOC	K070-02	TCK006-19	0A-123456-	C:\Program	1.000	NPOC:10.29 mg/L	PH<2
20	Unknown	NPOC	K070-03	TCK006-20	0A-123456-	C:\Program	1.000	NPOC:1.529 mg/L	PH<2
21	Unknown	NPOC	K070-04	TCK006-21	0A-123456-	C:\Program	1.000	NPOC:0.8240 mg/	PH<2
22	Unknown	NPOC	K070-05	TCK006-22	0A-123456-	C:\Program	1.000	NPOC:1.951 mg/L	PH<2
23	Unknown	NPOC	K070-06	TCK006-23	0A-123456-	C:\Program	1.000	NPOC:0.5709 mg/	PH<2
24	Control	NPOC	CCV2	TCK006-24	0A-123456-	C:\Program	1.000	NPOC:26.38 mg/L	
25	Unknown	NPOC	CCB2	TCK006-25	0A-123456-	C:\Program	1.000	NPOC:0.1086 mg/	
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11/14/11

Instr.Information

System	toc
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Cal. Curve

Sample Name:	ICAL
Sample ID:	TCK006-01
Cal. Curve:	TCK006.2011_11_10_18_15_02.cal

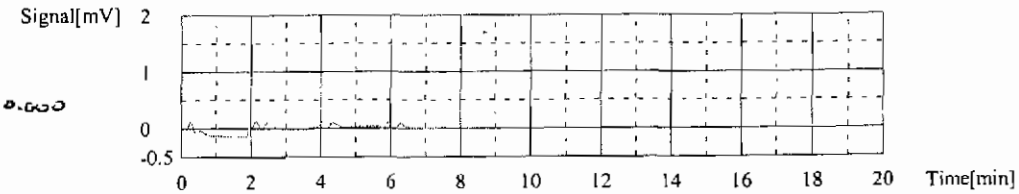
Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.000	50uL	1	*******		11/10/11 06:23:09 PM
2	0.000	50uL	1	*******		11/10/11 06:25:14 PM
3	0.000	50uL	1	*******		11/10/11 06:27:19 PM
4	0.000	50uL	1	*******		11/10/11 06:29:24 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 0.000

$$\frac{\text{Mean area}}{\text{slope}} = \frac{\bar{A}}{m} = \frac{0.000}{2.118} = 0.000$$

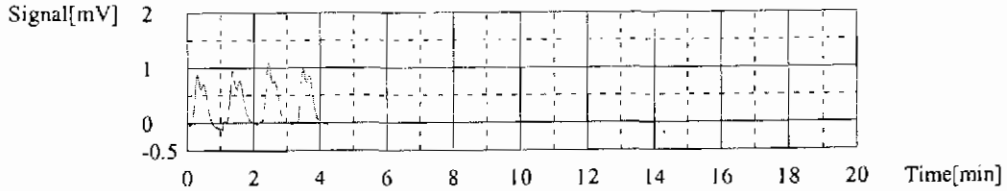


Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	2.051	50uL	10	*******		11/10/11 06:37:40 PM
2	2.125	50uL	10	*******		11/10/11 06:38:55 PM
3	2.257	50uL	10	*******		11/10/11 06:40:09 PM
4	2.243	50uL	10	*******		11/10/11 06:41:23 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 2.169

$$\frac{\bar{A}}{m} = \frac{2.169}{2.118} = 1.024$$

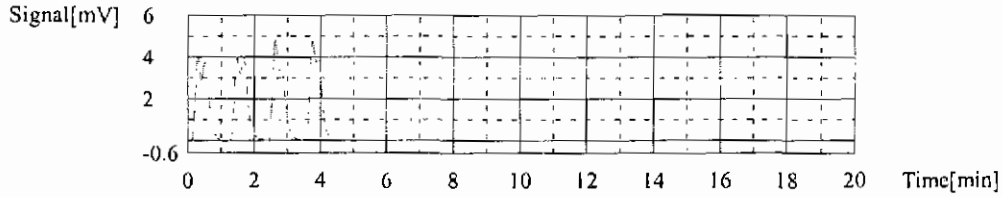


Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	10.20	50uL	2	*******		11/10/11 06:47:49 PM
2	10.38	50uL	2	*******		11/10/11 06:49:09 PM
3	10.43	50uL	2	*******		11/10/11 06:50:28 PM
4	10.48	50uL	2	*******		11/10/11 06:51:43 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 10.37

$\frac{\bar{A}}{m} = \frac{10.37}{2.118} = 4.896$

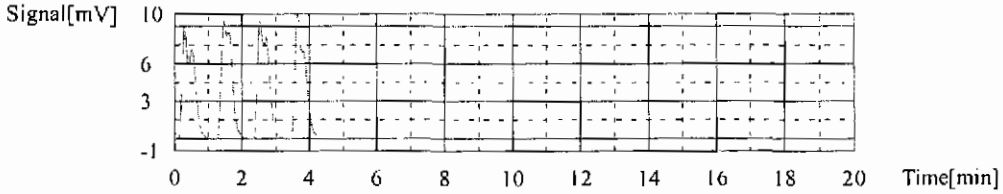


Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	20.58	50uL	1	*******		11/10/11 06:57:26 PM
2	20.68	50uL	1	*******		11/10/11 06:58:42 PM
3	20.86	50uL	1	*******		11/10/11 06:59:59 PM
4	20.65	50uL	1	*******		11/10/11 07:01:19 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 20.69

$\frac{\bar{A}}{m} = \frac{20.69}{2.118} = 9.769$

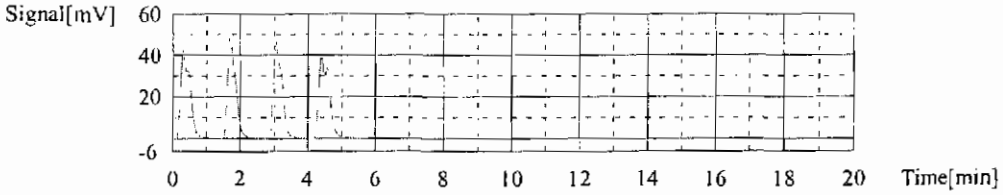


Conc: 40.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	81.82	50uL	2	*******		11/10/11 07:09:54 PM
2	83.76	50uL	2	*******		11/10/11 07:11:26 PM
3	83.55	50uL	2	*******		11/10/11 07:12:58 PM
4	84.36	50uL	2	*******		11/10/11 07:14.37 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 83.37

$\frac{\bar{A}}{m} = \frac{83.37}{2.118} = 39.36$

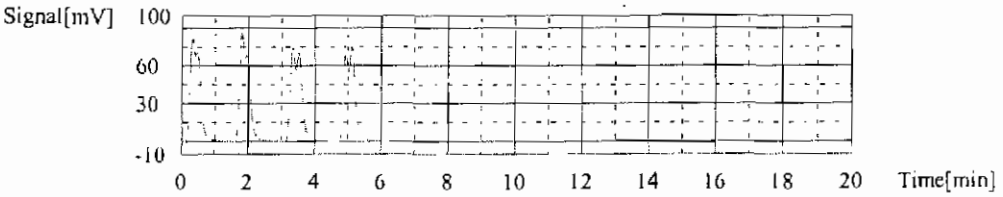


Conc: 80.00mg/L

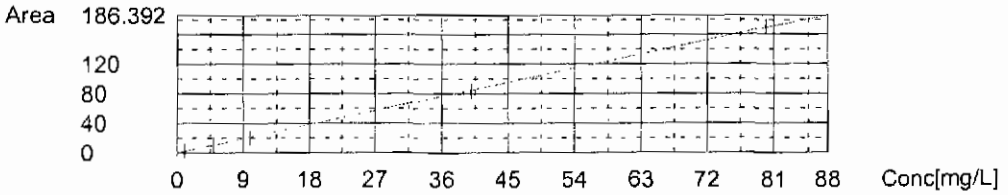
No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	168.2	50uL	1	*******		11/10/11 07:20:41 PM
2	170.1	50uL	1	*******		11/10/11 07:22:23 PM
3	171.2	50uL	1	*******		11/10/11 07:24:11 PM
4	169.3	50uL	1	*******		11/10/11 07:25:56 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 169.7

$\frac{\bar{A}}{m} = \frac{169.7}{2.118} = 80.12$



Slope: 2.118
Intercept 0.000
r^2 0.999926



8084

Control Sample

Sample Name: ICV
Sample ID: TCK006-02
Method: TCK006.tpl
Chk. Result Control value: 25.92 / Control exceeds range!

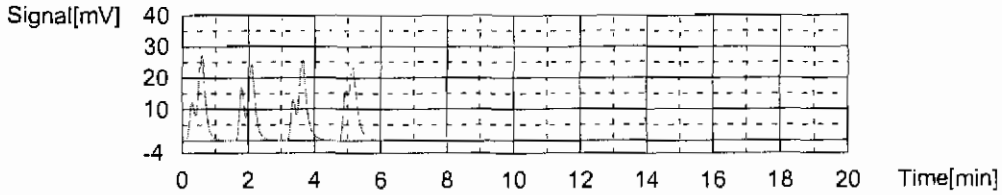
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:25.92 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.31	25.64mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 07:34:10 PM
2	55.03	25.98mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 07:35:55 PM
3	55.23	26.08mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 07:37:40 PM
4	55.01	25.97mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 07:39:21 PM

Mean Area 54.89
Mean Conc. 25.92mg/L



Sample

Sample Name: ICB
Sample ID: TCK006-03
Origin: TCK006.cal
Chk. Result

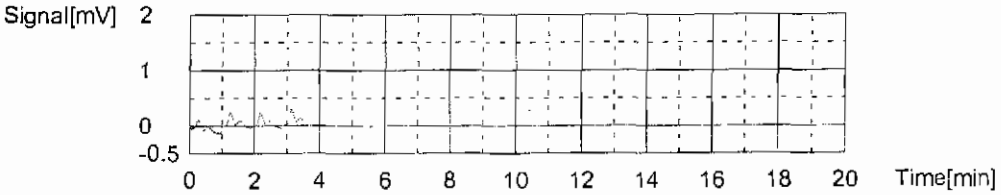
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1709 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2093	0.09882mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 07:46:52 PM
2	0.3876	0.1830mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 07:47:59 PM
3	0.4114	0.1942mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 07:49:07 PM
4	0.4397	0.2076mg/L	50uL	1		TCK006.2011_11_10_18_15_02.cal	11/10/11 07:50:15 PM

Mean Area 0.3620
Mean Conc. 0.1709mg/L



8085

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TOC

	Date	Time
Start	11/14/11	1524
End	11/15/11	0553

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

TCK007W/BW
K090
K077
K070
K469
K470
K472
K473
K474
K475
K084

2 M HCl SW4-01-223

Book #:	A62-020
Instrument No.:	62
Pipette ID:	039380025
	SW3-01-33
	SI1A-01-4
Balance ID:	40706360
Analytical Sequence:	TCK007
Method File:	TCK007
Analytical Batch:	TCK007W/BW

SOP #	Rev. #
☑ EMAX-415.1	2
☑ EMAX-5310B	1
☐ EMAX-9060	2
☐ EMAX-	

STANDARDS ID		CONC. (mg/L)
S0	nanopure	0
S1	SW10B-04-1784 AM 11/14/11	1
S2		5
S3		10
S4		40
S5		80
S6	—	—
ICV/LCS	SW10B-04-1785 AM 11/14/11	25
CCV	-173	25

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ TOC	
☐	

Analyzed By: Am

Date: 11/14/11

	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
1	Standard	NPOC	ICAL	TCK007-01	0A-123456-	C:\Program	1.000		
2	Control	NPOC	ICV	TCK007-02	0A-123456-	C:\Program	1.000	NPOC:26.30 mg/L	
3	Unknown	NPOC	ICB	TCK007-03	0A-123456-	C:\Program	1.000	NPOC:0.08747 mg	
4	Unknown	NPOC	HCO3\CO3	TCK007-04	0A-123456-	C:\Program	1.000	NPOC:0.2966 mg/	
5	Unknown	NPOC	TCK007WB	TCK007-05	0A-123456-	C:\Program	1.000	NPOC:0.2698 mg/	
6	Unknown	NPOC	TCK007WL	TCK007-06	0A-123456-	C:\Program	1.000	NPOC:26.91 mg/L	
7	Unknown	NPOC	TCK007WC	TCK007-07	0A-123456-	C:\Program	1.000	NPOC:26.91 mg/L	
8	Unknown	NPOC	K090-01	TCK007-08	0A-123456-	C:\Program	1.000	NPOC:29.25 mg/L	PH<2
9	Unknown	NPOC	K090-02	TCK007-09	0A-123456-	C:\Program	1.000	NPOC:4.290 mg/L	PH<2
10	Unknown	NPOC	K090-03	TCK007-10	0A-123456-	C:\Program	1.000	NPOC:6.202 mg/L	PH<2
11	Unknown	NPOC	K077-02	TCK007-11	0A-123456-	C:\Program	1.000	NPOC:5.147 mg/L	PH<2
12	Unknown	NPOC	K077-02M	TCK007-12	0A-123456-	C:\Program	1.000	NPOC:31.32 mg/L	PH<2
13	Unknown	NPOC	K077-02S	TCK007-13	0A-123456-	C:\Program	1.000	NPOC:31.21 mg/L	PH<2
14	Control	NPOC	CCV1	TCK007-14	0A-123456-	C:\Program	1.000	NPOC:27.13 mg/L	
15	Unknown	NPOC	CCB1	TCK007-15	0A-123456-	C:\Program	1.000	NPOC:0.1794 mg/	
16	Unknown	NPOC	K077-03	TCK007-16	0A-123456-	C:\Program	1.000	NPOC:4.613 mg/L	PH<2
17	Unknown	NPOC	K077-04	TCK007-17	0A-123456-	C:\Program	1.000	NPOC:30.84 mg/L	PH<2
18	Unknown	NPOC	K077-05	TCK007-18	0A-123456-	C:\Program	1.000	NPOC:7.053 mg/L	PH<2
19	Unknown	NPOC	K077-06	TCK007-19	0A-123456-	C:\Program	1.000	NPOC:6.959 mg/L	PH<2
20	Unknown	NPOC	K077-07	TCK007-20	0A-123456-	C:\Program	1.000	NPOC:4.534 mg/L	PH<2
21	Unknown	NPOC	K077-08	TCK007-21	0A-123456-	C:\Program	1.000	NPOC:2.843 mg/L	PH<2
22	Unknown	NPOC	K077-10	TCK007-22	0A-123456-	C:\Program	1.000	NPOC:23.39 mg/L	PH<2
23	Unknown	NPOC	K077-11	TCK007-23	0A-123456-	C:\Program	1.000	NPOC:23.12 mg/L	PH<2
24	Unknown	NPOC	K077-12	TCK007-24	0A-123456-	C:\Program	1.000	NPOC:3.832 mg/L	PH<2
25	Unknown	NPOC	K077-13	TCK007-25	0A-123456-	C:\Program	1.000	NPOC:28.56 mg/L	PH<2
26	Control	NPOC	CCV2	TCK007-26	0A-123456-	C:\Program	1.000	NPOC:27.39 mg/L	
27	Unknown	NPOC	CCB2	TCK007-27	0A-123456-	C:\Program	1.000	NPOC:0.3656 mg/	
28	Unknown	NPOC	K077-14	TCK007-28	0A-123456-	C:\Program	1.000	NPOC:2.781 mg/L	PH<2
29	Unknown	NPOC	K077-15	TCK007-29	0A-123456-	C:\Program	1.000	NPOC:1.927 mg/L	PH<2
30	Unknown	NPOC	K077-17	TCK007-30	0A-123456-	C:\Program	1.000	NPOC:6.059 mg/L	PH<2
31	Unknown	NPOC	K077-18	TCK007-31	0A-123456-	C:\Program	1.000	NPOC:9.375 mg/L	PH<2
32	Unknown	NPOC	K077-19	TCK007-32	0A-123456-	C:\Program	1.000	NPOC:8.534 mg/L	PH<2
33	Unknown	NPOC	TCK008WL	TCK007-33	0A-123456-	C:\Program	1.000	NPOC:27.25 mg/L	
34	Unknown	NPOC	TCK008WC	TCK007-34	0A-123456-	C:\Program	1.000	NPOC:25.65 mg/L	
35	Unknown	NPOC	TCK008WB	TCK007-35	0A-123456-	C:\Program	1.000	NPOC:0.3851 mg/	
36	Control	NPOC	CCV3	TCK007-36	0A-123456-	C:\Program	1.000	NPOC:27.48 mg/L	
37	Unknown	NPOC	CCB3	TCK007-37	0A-123456-	C:\Program	1.000	NPOC:0.2064 mg/	
38	Unknown	NPOC	K077-20	TCK007-38	0A-123456-	C:\Program	1.000	NPOC:3.822 mg/L	PH<2
39	Unknown	NPOC	K077-21	TCK007-39	0A-123456-	C:\Program	1.000	NPOC:2.043 mg/L	PH<2
40	Unknown	NPOC	K077-22	TCK007-40	0A-123456-	C:\Program	1.000	NPOC:3.340 mg/L	PH<2
41	Unknown	NPOC	K077-23	TCK007-41	0A-123456-	C:\Program	1.000	NPOC:3.982 mg/L	PH<2
42	Unknown	NPOC	K077-23M	TCK007-42	0A-123456-	C:\Program	1.000	NPOC:30.79 mg/L	PH<2
43	Unknown	NPOC	K077-23S	TCK007-43	0A-123456-	C:\Program	1.000	NPOC:31.34 mg/L	PH<2
44	Unknown	NPOC	K070-01T	TCK007-44	0A-123456-	C:\Program	4.000	NPOC:110.6 mg/L	DF=4
45	Unknown	NPOC	K070-02R	TCK007-45	0A-123456-	C:\Program	1.000	NPOC:10.29 mg/L	confirm only
46	Unknown	NPOC	K469-02	TCK007-46	0A-123456-	C:\Program	1.000	NPOC:12.29 mg/L	PH<2
47	Unknown	NPOC	K470-02	TCK007-47	0A-123456-	C:\Program	1.000	NPOC:10.57 mg/L	PH<2
48	Control	NPOC	CCV4	TCK007-48	0A-123456-	C:\Program	1.000	NPOC:27.33 mg/L	
49	Unknown	NPOC	CCB4	TCK007-49	0A-123456-	C:\Program	1.000	NPOC:0.2688 mg/	
50	Unknown	NPOC	K472-02	TCK007-50	0A-123456-	C:\Program	1.000	NPOC:9.245 mg/L	PH<2
51	Unknown	NPOC	K473-02	TCK007-51	0A-123456-	C:\Program	1.000	NPOC:14.05 mg/L	PH<2
52	Unknown	NPOC	K474-02	TCK007-52	0A-123456-	C:\Program	1.000	NPOC:12.56 mg/L	PH<2
53	Unknown	NPOC	K475-02	TCK007-53	0A-123456-	C:\Program	1.000	NPOC:14.82 mg/L	PH<2
54	Unknown	NPOC	K084-01	TCK007-54	0A-123456-	C:\Program	1.000	NPOC:0.8580 mg/	PH<2
55	Unknown	NPOC	K084-02	TCK007-55	0A-123456-	C:\Program	1.000	NPOC:0.9192 mg/	PH<2
56	Unknown	NPOC	K084-03	TCK007-56	0A-123456-	C:\Program	1.000	NPOC:142.0 mg/L	PH<2 over
57	Unknown	NPOC	K084-04	TCK007-57	0A-123456-	C:\Program	1.000	NPOC:3.797 mg/L	PH<2
58	Unknown	NPOC	K084-05	TCK007-58	0A-123456-	C:\Program	1.000	NPOC:1.411 mg/L	PH<2
59	Unknown	NPOC	K084-06	TCK007-59	0A-123456-	C:\Program	1.000	NPOC:0.8922 mg/	PH<2
60	Control	NPOC	CCV5	TCK007-60	0A-123456-	C:\Program	1.000	NPOC:27.07 mg/L	
61	Unknown	NPOC	CCB5	TCK007-61	0A-123456-	C:\Program	1.000	NPOC:0.1927 mg/	
62									
63								FINAL	
64									
65									
66									
67							Dan	11/15/11	

Instr.Information

System	toc
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Cal. Curve

Sample Name:	ICAL
Sample ID:	TCK007-01
Cal. Curve:	TCK007.2011_11_14_15_17_38.cal

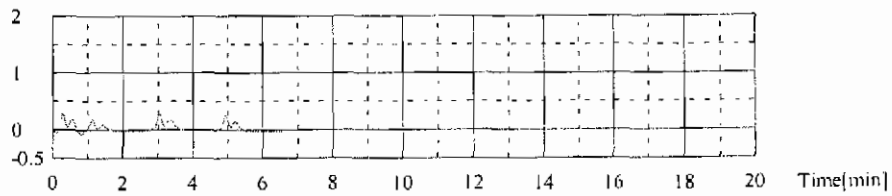
Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.6632	50uL	1	*******		11/14/11 03:24:45 PM
2	0.000	50uL	1	*******		11/14/11 03:26:48 PM
3	0.000	50uL	1	*******		11/14/11 03:28:52 PM
4	0.000	50uL	1	*******		11/14/11 03:30:55 PM

Acid Add.	2.500%
Sp. Time	90.00sec
Mean Area	0.1658

$\frac{\text{mean area}}{\text{slope}} = \frac{\bar{x}}{m} = \frac{0.1658}{2.108} = 0.07865$

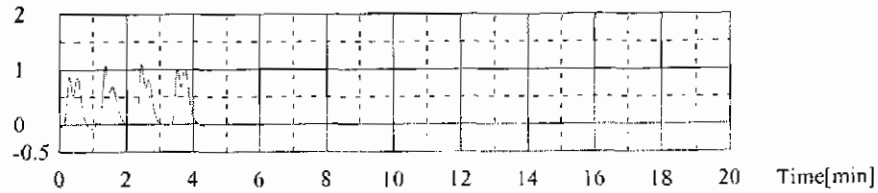


Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	2.309	50uL	10	*******		11/14/11 03:39:08 PM
2	2.153	50uL	10	*******		11/14/11 03:40:22 PM
3	2.315	50uL	10	*******		11/14/11 03:41:37 PM
4	2.647	50uL	10	*******		11/14/11 03:42:54 PM

Acid Add.	2.500%
Sp. Time	90.00sec
Mean Area	2.356

$\frac{\bar{x}}{m} = \frac{2.356}{2.108} = 1.118$



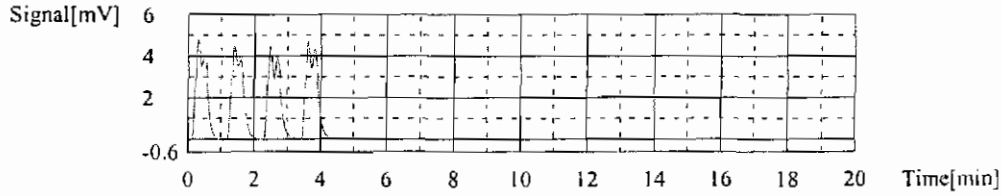
Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	10.92	50uL	2	*******		11/14/11 03:49:13 PM
2	10.50	50uL	2	*******		11/14/11 03:50:29 PM
3	10.38	50uL	2	*******		11/14/11 03:51:47 PM
4	10.98	50uL	2	*******		11/14/11 03:53:03 PM

8088

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 10.70

$\frac{\bar{A}}{m} = \frac{10.70}{2.108} = 5.076$

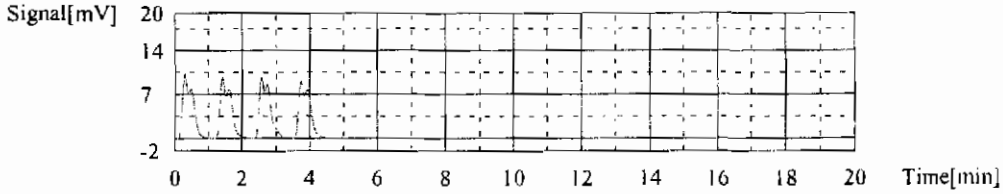


Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	21.20	50uL	1	*******		11/14/11 03:58:42 PM
2	20.94	50uL	1	*******		11/14/11 04:00:01 PM
3	21.80	50uL	1	*******		11/14/11 04:01:21 PM
4	20.51	50uL	1	*******		11/14/11 04:02:39 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 21.11

$\frac{\bar{A}}{m} = \frac{21.11}{2.108} = 10.01$

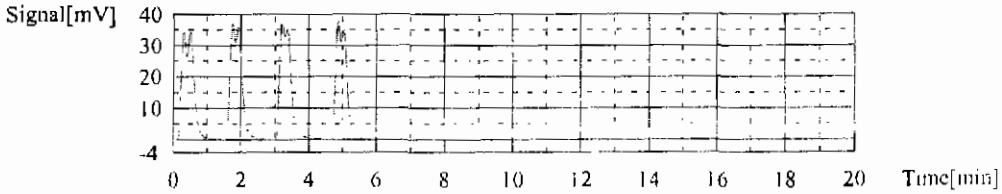


Conc: 40.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem	Ex	Date / Time
1	84.23	50uL	2	*******		11/14/11 04:11:16 PM
2	86.28	50uL	2	*******		11/14/11 04:12:53 PM
3	85.53	50uL	2	*******		11/14/11 04:14:29 PM
4	82.34	50uL	2	*******		11/14/11 04:16:04 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 84.59

$\frac{\bar{A}}{m} = \frac{84.59}{2.108} = 40.13$

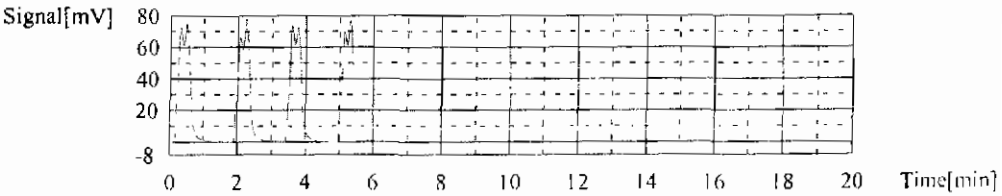


Conc: 80.00mg/L

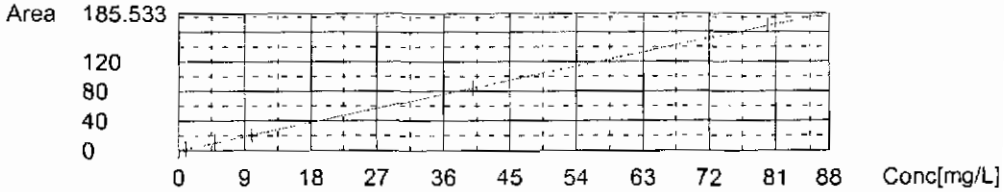
No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	173.8	50uL	1	*******		11/14/11 04:22:22 PM
2	169.8	50uL	1	*******		11/14/11 04:24:04 PM
3	167.0	50uL	1	*******		11/14/11 04:25:47 PM
4	164.6	50uL	1	*******		11/14/11 04:27:27 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 168.8

$\frac{\bar{A}}{m} = \frac{168.8}{2.108} = 80.08$



Slope: 2.108
Intercept 0.000
r^2 0.999998



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Control Sample

Sample Name: ICV
Sample ID: TCK007-02
Method: TCK007.tpl
Chk. Result Control value: 26.30 / Control exceeds range!

Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:26.30 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.27	25.74mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 04:35:38 PM
2	55.23	26.20mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 04:37:19 PM
3	56.15	26.63mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 04:39:02 PM
4	56.18	26.65mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 04:40:46 PM

Mean Area 55.46
Mean Conc. 26.30mg/L

Sample

Sample Name: ICB
Sample ID: TCK007-03
Origin: TCK007.cal
Chk. Result

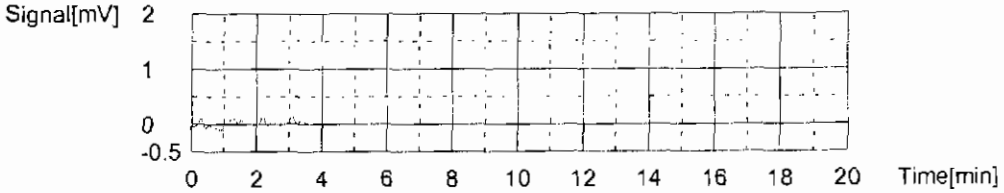
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.08747 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1689	0.08011mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 04:48:16 PM
2	0.2113	0.1002mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 04:49:21 PM
3	0.1372	0.06508mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 04:50:25 PM
4	0.2203	0.1045mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 04:51:30 PM

Mean Area 0.1844
Mean Conc. 0.08747mg/L



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CLIENT: **INSIGHT EEC, INC.**

PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11K084**

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GC-SVOA	**	5000 –
HPLC	**	6000 –
METALS	METHOD 3010A/6010B	7000 – 7099
WET	METHOD 300.0	8000 – 8068
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	METHOD 2320B	8113 – 8125
	METHOD 2540C	8126 – 8132
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** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 11-30-2011
EMAX Batch No.: 11K084

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 11/09/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW-70-PMW04A-110	K084-01	11/09/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-PMW04B-112	K084-02	11/09/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IW-70-FSB118-113	K084-03	11/09/11	WATER	ANIONS BY IC

Sample ID	Control #	Col Date	Matrix	Analysis
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-PMW05A-114	K084-04	11/09/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-PMW05B-115	K084-05	11/09/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IR-70-FD-111	K084-06	11/09/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IR-70-TB-109	K084-07	11/09/11	WATER	VOLATILE ORGANICS BY GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

INS-0801

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011068-8042
SAMPLE STORAGE
EMAX CONTROL NO. * 11K084
PROJECT CODE: 4-77101

CLIENT: INSIGHT EEC, INC.
PROJECT: IR SITE 70 - NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 714 678 6700 FAX: 714 678 6711 EMAIL: NWEINBERGER@IEECI.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT EEC, INC.
ADDRESS: 3010 E. MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: Lee Mint

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	VOCs - EPA 8260B	DISS HYD GASES - RSK-175	WET CHEM	TOC - SM 5310B	SULFIDE - SM4500F	DISS METALS - EPA 6010B	VOCs - EPA 8260B	DISS HYD GASES - RSK-175	COMMENTS
										PRESERVATIVE CODE: HC	HC	HN	HC	ZA	HN	HC	HP	
1	MW-70-PMW04A-110	IR SITE 70 NWS-SB	11-9-11	1036	10	VARIOUS	VARIOUS	GW	III	X	X	X	X	X	X			
2	MW-70-PMW04B-112	IR-SITE 70 NWS-SB	11-9-11	1140	10	MANY	MANY	GW	III	X	X	X	X	X	X			
3	IW-70-FSB118-113	IR-SITE 70 NWS-SB	11-9-11	1259	10	MANY	MANY	GW	III			X	X	X	X	X	X	ABANDONED WELL
4	MW-70-PMW05A-114	IR SITE 70 NWS-SB	11-9-11	1444	10	MANY	MANY	GW	III	X	X	X	X	X	X			
5	MW-70-PMW05B-115	IR SITE 70 NWS-SB	11-9-11	1551	10	MANY	MANY	GW	III	X	X	X	X	X	X			
6																		
7																		
8																		
9	IR-70-FD-111	IR SITE 70 NWS-SB	11-9-11	1100	10	MANY	MANY	GW	III	X	X	X	X	X	X			DUPLICATE
10	IR-70-TB-109	IR SITE 70 NWS-SB	11-9-11	0900	2	40mL	VOA	GW	III	X								TRIP BLANKS.

Instructions: WET CHEM ANALYSIS AS FOLLOWS: ANIONS - EPA 300.0, VFA - EPA 300.0M, TDS - SM 2540C, ALKALINITY - SM 2320B. UNLESS NOTED OTHERWISE IN COMMENTS. INCLUDE DISSOLVED HYDROGEN SULFIDE (DHS - SM4500) WITH WET CHEM.

Cooler #	Temp. (°C)	Sample #s
1	2.7°C	

SAMPLER: CHASE BROGDON
COURIER/AIRBILL:

RELINQUISHED BY	Date	Time	RECEIVED BY
	11-9-11	1745	

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

1002

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11 Kosy
☐ EMAX Courier		Recepient I Butler
☑ Client Delivery	SEE COC	Date 11-9-11
☐ Third Party		Time 1745

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☑ Preservative (if any)	☑ TAT
Safety Issues	☑ None	☐ High concentrations expected	☐ Superfund Site samples	☐ Rad screening required	

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ Plastic Bag
Temperatures (Cool, ≤6 °C but not frozen)	A ☑ Cooler 1 2.7 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C
Thermometer:	***A - S/N 101541371***	***B - S/N 101541382***			

Comments: ☐ **PM was informed on non-compliant coolers immediately.**

Note: **pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time .**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code
05		Time 1550 on	D3	R2
		labels		
03			COC reads VOC	R2
			& RSK-175 vials	
			ran Pres. But	
			label reads Pres/HCl.	

REVIEWS

Sample Labeling [signature] Date 11-9-11

SRF [signature] Date 11/9/11

PM LP for YO Date 11/10/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4	_____	E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	_____
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	_____
B3	Sample ID is inconsistent in COC vis-à-vis label	F2	Bubble is> 6mm		
B4	_____	G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	_____		
C4	_____	H2	_____		

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11K084

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K084

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of seven (7) water samples were received on 11/09/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, three (3) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary form for details.

Lab Control Sample
Three (3) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for VO06K10L/C were all within QC limits.
Percent recoveries for VO06K12L/C were all within QC limits.
Percent recoveries for VO06K13L/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K084
Instrument ID : T-006

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V006K10B	1	NA	11/10/1110:02	11/10/1110:02	RKW177	RKW007	V006K10	Method Blank
LCS1W	V006K10L	1	NA	11/10/1108:28	11/10/1108:28	RKW174	RKW007	V006K10	Lab Control Sample (LCS)
LCD1W	V006K10C	1	NA	11/10/1109:00	11/10/1109:00	RKW175	RKW007	V006K10	LCS Duplicate
MW-70-PMW04A-110	K084-01	1	NA	11/10/1116:40	11/10/1116:40	RKW190	RKW007	V006K10	Field Sample
MW-70-PMW04B-112	K084-02	1	NA	11/10/1117:09	11/10/1117:09	RKW191	RKW007	V006K10	Field Sample
MW-70-PMW05B-115	K084-05	1	NA	11/10/1118:09	11/10/1118:09	RKW193	RKW007	V006K10	Field Sample
IR-70-FD-111	K084-06	1	NA	11/10/1118:41	11/10/1118:41	RKW194	RKW007	V006K10	Field Sample
MBLK2W	V006K12B	1	NA	11/14/1110:23	11/14/1110:23	RKW230	RKW007	V006K12	Method Blank
LCS2W	V006K12L	1	NA	11/14/1108:48	11/14/1108:48	RKW227	RKW007	V006K12	Lab Control Sample (LCS)
LCD2W	V006K12C	1	NA	11/14/1109:20	11/14/1109:20	RKW228	RKW007	V006K12	LCS Duplicate
IR-70-TB-109	K084-07R	1	NA	11/14/1111:25	11/14/1111:25	RKW232	RKW007	V006K12	Field Sample
IW-70-FSB118-113	K084-03R	1	NA	11/14/1111:57	11/14/1111:57	RKW233	RKW007	V006K12	Field Sample
MW-70-PMW05A-114	K084-04R	1	NA	11/14/1112:27	11/14/1112:27	RKW234	RKW007	V006K12	Field Sample
MBLK3W	V006K13B	1	NA	11/14/1123:42	11/14/1123:42	RKW256	RKW007	V006K13	Method Blank
LCS3W	V006K13L	1	NA	11/14/1122:09	11/14/1122:09	RKW253	RKW007	V006K13	Lab Control Sample (LCS)
LCD3W	V006K13C	1	NA	11/14/1122:40	11/14/1122:40	RKW254	RKW007	V006K13	LCS Duplicate
MW-70-PMW04A-110DL	K084-01T	100	NA	11/15/1102:20	11/15/1102:20	RKW261	RKW007	V006K13	Diluted Sample
MW-70-PMW04B-112DL	K084-02T	100	NA	11/15/1102:51	11/15/1102:51	RKW262	RKW007	V006K13	Diluted Sample
MW-70-PMW05B-115DL	K084-05T	50	NA	11/15/1103:22	11/15/1103:22	RKW263	RKW007	V006K13	Diluted Sample
IR-70-FD-111DL	K084-06T	100	NA	11/15/1103:52	11/15/1103:52	RKW264	RKW007	V006K13	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/10/11 16:40
Sample ID:	MW-70-PMW04A-110	Date Analyzed:	11/10/11 16:40
Lab Samp ID:	K084-01	Dilution Factor:	1
Lab File ID:	RKW190	Matrix :	WATER
Ext Btch ID:	V006K10	% Moisture :	NA
Calib. Ref.:	RKW007	Instrument ID :	06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	1.1	1.0	0.20
1,1-DICHLOROETHENE	11	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	650E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	9.4	1.0	0.20
TRICHLOROETHENE	27	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	4.3	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.7	10.00	107	70-140
4-BROMOFLUOROBENZENE	10.4	10.00	104	70-130
TOLUENE-D8	10.1	10.00	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/15/11 02:20
Sample ID:	MW-70-PMW04A-110DL	Date Analyzed:	11/15/11 02:20
Lab Samp ID:	K084-01T	Dilution Factor:	100
Lab File ID:	RKW261	Matrix	: WATER
Ext Btch ID:	V006K13	% Moisture	: NA
Calib. Ref.:	RKW007	Instrument ID	: 06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	100	20
1,1,1,2-TETRACHLOROETHANE	ND	100	20
1,1,2,2-TETRACHLOROETHANE	ND	100	20
1,1,2-TRICHLOROETHANE	ND	100	20
FREON113	ND	100	30
1,1-DICHLOROETHANE	ND	100	20
1,1-DICHLOROETHENE	ND	50	20
1,1-DICHLOROPROPENE	ND	100	20
1,2-DIBROMO-3-CHLOROPROPANE	ND	200	50
1,2-DIBROMOETHANE	ND	100	20
1,2-DICHLOROBENZENE	ND	100	20
1,2-DICHLOROETHANE	ND	50	20
1,2-DICHLOROPROPANE	ND	100	20
1,2,3-TRICHLOROBENZENE	ND	100	30
1,2,3-TRICHLOROPROPANE	ND	100	50
1,2,4-TRICHLOROBENZENE	ND	100	30
1,2,4-TRIMETHYLBENZENE	ND	100	20
1,3-DICHLOROBENZENE	ND	100	20
1,3,5-TRIMETHYLBENZENE	ND	100	20
1,4-DICHLOROBENZENE	ND	100	20
2-BUTANONE	ND	1000	400
2-CHLOROTOLUENE	ND	100	20
2-HEXANONE	ND	1000	400
2,2-DICHLOROPROPANE	ND	100	20
4-CHLOROTOLUENE	ND	100	20
4-METHYL-2-PENTANONE	ND	1000	400
N-BUTYLBENZENE	ND	100	20
N-PROPYLBENZENE	ND	100	20
P-ISOPROPYLTOLUENE	ND	100	20
SEC-BUTYLBENZENE	ND	100	20
TERT-BUTYLBENZENE	ND	100	20
ACETONE	ND	1000	500
BENZENE	ND	100	20
BROMOBENZENE	ND	100	20
BROMODICHLOROMETHANE	ND	100	20
CIS-1,3-DICHLOROPROPENE	ND	100	20
TRANS-1,3-DICHLOROPROPENE	ND	100	20
BROMOMETHANE	ND	200	30
BROMOFORM	ND	100	30
CARBON DISULFIDE	ND	100	20
CARBON TETRACHLORIDE	ND	50	20
CHLOROBENZENE	ND	100	20
CHLOROETHANE	ND	200	30
CHLOROFORM	ND	100	20
CHLOROMETHANE	ND	200	30
CIS-1,2-DICHLOROETHENE	1400	100	20
DICHLORODIFLUOROMETHANE	ND	200	30
DIBROMOCHLOROMETHANE	ND	100	20
DIBROMOMETHANE	ND	100	20
ETHYLBENZENE	ND	100	20
HEXACHLOROBUTADIENE	ND	100	30
ISOPROPYL BENZENE	ND	100	20
METHYLENE CHLORIDE	ND	100	50
MTBE	ND	100	20
STYRENE	ND	100	20
TETRACHLOROETHYLENE	ND	100	20
TOLUENE	ND	100	20
TRANS-1,2-DICHLOROETHENE	ND	100	20
TRICHLOROETHENE	29J	500	20
TRICHLOROFLUOROMETHANE	ND	200	30
VINYL CHLORIDE	ND	50	20
XYLENES (TOTAL)	ND	200	60
M/P-XYLENES	ND	100	40
O-XYLENE	ND	100	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	975	1000	97.5	70-140
4-BROMOFLUOROBENZENE	1040	1000	104	70-130
TOLUENE-D8	1030	1000	103	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/10/11 17:09
Sample ID:	MW-70-PMW04B-112	Date Analyzed:	11/10/11 17:09
Lab Samp ID:	K084-02	Dilution Factor:	1
Lab File ID:	RKW191	Matrix	: WATER
Ext Btch ID:	V006K10	% Moisture	: NA
Calib. Ref.:	RKW007	Instrument ID	: 06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	1.3	1.0	0.20
1,1-DICHLOROETHENE	11	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	670E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	21	1.0	0.20
TRICHLOROETHENE	4.2J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	3.7	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.0	10.00	110	70-140
4-BROMOFLUOROBENZENE	10.1	10.00	101	70-130
TOLUENE-D8	10.1	10.00	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/15/11 02:51
Sample ID:	MW-70-PMW04B-112DL	Date Analyzed:	11/15/11 02:51
Lab Samp ID:	K084-02T	Dilution Factor:	100
Lab File ID:	RKW262	Matrix	: WATER
Ext Btch ID:	V006K13	% Moisture	: NA
Calib. Ref.:	RKW007	Instrument ID	: 06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	100	20
1,1,1,2-TETRACHLOROETHANE	ND	100	20
1,1,2,2-TETRACHLOROETHANE	ND	100	20
1,1,2-TRICHLOROETHANE	ND	100	20
FREON113	ND	100	30
1,1-DICHLOROETHANE	ND	100	20
1,1-DICHLOROETHENE	ND	50	20
1,1-DICHLOROPROPENE	ND	100	20
1,2-DIBROMO-3-CHLOROPROPANE	ND	200	50
1,2-DIBROMOETHANE	ND	100	20
1,2-DICHLOROBENZENE	ND	100	20
1,2-DICHLOROETHANE	ND	50	20
1,2-DICHLOROPROPANE	ND	100	20
1,2,3-TRICHLOROBENZENE	ND	100	30
1,2,3-TRICHLOROPROPANE	ND	100	50
1,2,4-TRICHLOROBENZENE	ND	100	30
1,2,4-TRIMETHYLBENZENE	ND	100	20
1,3-DICHLOROBENZENE	ND	100	20
1,3,5-TRIMETHYLBENZENE	ND	100	20
1,4-DICHLOROBENZENE	ND	100	20
2-BUTANONE	ND	1000	400
2-CHLOROTOLUENE	ND	100	20
2-HEXANONE	ND	1000	400
2,2-DICHLOROPROPANE	ND	100	20
4-CHLOROTOLUENE	ND	100	20
4-METHYL-2-PENTANONE	ND	1000	400
N-BUTYLBENZENE	ND	100	20
N-PROPYLBENZENE	ND	100	20
P-ISOPROPYLTOLUENE	ND	100	20
SEC-BUTYLBENZENE	ND	100	20
TERT-BUTYLBENZENE	ND	100	20
ACETONE	ND	1000	500
BENZENE	ND	100	20
BROMOBENZENE	ND	100	20
BROMODICHLOROMETHANE	ND	100	20
CIS-1,3-DICHLOROPROPENE	ND	100	20
TRANS-1,3-DICHLOROPROPENE	ND	100	20
BROMOMETHANE	ND	200	30
BROMOFORM	ND	100	30
CARBON DISULFIDE	ND	100	20
CARBON TETRACHLORIDE	ND	50	20
CHLOROBENZENE	ND	100	20
CHLOROETHANE	ND	200	30
CHLOROFORM	ND	100	20
CHLOROMETHANE	ND	200	30
CIS-1,2-DICHLOROETHENE	1500	100	20
DICHLORODIFLUOROMETHANE	ND	200	30
DIBROMOCHLOROMETHANE	ND	100	20
DIBROMOMETHANE	ND	100	20
ETHYLBENZENE	ND	100	20
HEXACHLOROBUTADIENE	ND	100	30
ISOPROPYL BENZENE	ND	100	20
METHYLENE CHLORIDE	ND	100	50
MTBE	ND	100	20
STYRENE	ND	100	20
TETRACHLOROETHYLENE	ND	100	20
TOLUENE	ND	100	20
TRANS-1,2-DICHLOROETHENE	21J	100	20
TRICHLOROETHENE	ND	500	20
TRICHLOROFLUOROMETHANE	ND	200	30
VINYL CHLORIDE	ND	50	20
XYLENES (TOTAL)	ND	200	60
M/P-XYLENES	ND	100	40
O-XYLENE	ND	100	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	1000	1000	100	70-140
4-BROMOFLUOROBENZENE	1040	1000	104	70-130
TOLUENE-D8	1020	1000	102	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/14/11 11:57
Sample ID:	IW-70-FSB118-113	Date Analyzed:	11/14/11 11:57
Lab Samp ID:	K084-03R	Dilution Factor:	1
Lab File ID:	RKW233	Matrix	: WATER
Ext Btch ID:	V006K12	% Moisture	: NA
Calib. Ref.:	RKW007	Instrument ID	: 06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	8.7J	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	0.23J	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	0.22J	1.0	0.20
TRANS-1,2-DICHLOROETHENE	0.44J	1.0	0.20
TRICHLOROETHENE	0.21J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	3.4	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.00	10.00	90.0	70-140
4-BROMOFLUOROBENZENE	9.82	10.00	98.2	70-130
TOLUENE-D8	10.4	10.00	104	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/14/11 12:27
Sample ID:	MW-70-PMW05A-114	Date Analyzed:	11/14/11 12:27
Lab Samp ID:	K084-04R	Dilution Factor:	1
Lab File ID:	RKW234	Matrix	: WATER
Ext Btch ID:	V006K12	% Moisture	: NA
Calib. Ref.:	RKW007	Instrument ID	: 06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	1.0	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	1.3	1.0	0.20
TRICHLOROETHENE	0.55J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	4.1	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.88	10.00	98.8	70-140
4-BROMOFLUOROBENZENE	10.0	10.00	100	70-130
TOLUENE-D8	10.2	10.00	102	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/10/11 18:09
Sample ID:	MW-70-PMW05B-115	Date Analyzed:	11/10/11 18:09
Lab Samp ID:	K084-05	Dilution Factor:	1
Lab File ID:	RKW193	Matrix :	WATER
Ext Btch ID:	V006K10	% Moisture :	NA
Calib. Ref.:	RKW007	Instrument ID :	06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.64J	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	2.0	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	4.1	1.0	0.20
TRICHLOROETHENE	0.77J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	340E	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.1	10.00	111	70-140
4-BROMOFLUOROBENZENE	10.2	10.00	102	70-130
TOLUENE-D8	10.2	10.00	102	70-140

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K10\RKW193.D Vial: 22
Acq On : 10 Nov 2011 6:09 pm Operator: SD
Sample : 11K084-05 25mL Inst : TO06
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 14 10:21 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.12	114	1150024	10.00	ug/l	0.00
38) CHLOROBENZENE-D5	13.22	117	1044460	10.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	18.43	152	456333	10.00	ug/l	0.00
System Monitoring Compounds						
33) Dibromofluoromethane	6.81	111	413476	10.53	ug/l	0.00
Spiked Amount 10.000			Recovery	=	105.30%	
37) 1,2-Dichloroethane-d4	7.54	65	377562	11.10	ug/l	0.00
Spiked Amount 10.000			Recovery	=	111.00%	
52) Toluene-d8	10.57	98	1295823	10.19	ug/l	0.02
Spiked Amount 10.000			Recovery	=	101.90%	
74) 4-Bromofluorobenzene	15.49	95	472269	10.21	ug/l	0.00
Spiked Amount 10.000			Recovery	=	102.10%	
Target Compounds						Qvalue
4) Vinyl chloride	2.30	62	9430350	342.73	ug/l E	99
7) Dichlorofluoromethane	2.94	67	1275583	20.68	ug/l	99
21) trans-1,2-Dichloroethene	4.88	61	248108	4.12	ug/l	95
24) 1,1-Dichloroethane	5.44	63	45612	0.64	ug/l	98
29) cis-1,2-Dichloroethene	6.29	96	91998	2.02	ug/l	98
32) Tetrahydrofuran	6.80	42	4502	0.81	ug/l	71
43) Trichloroethene	8.62	130	32425	0.77	ug/l	94

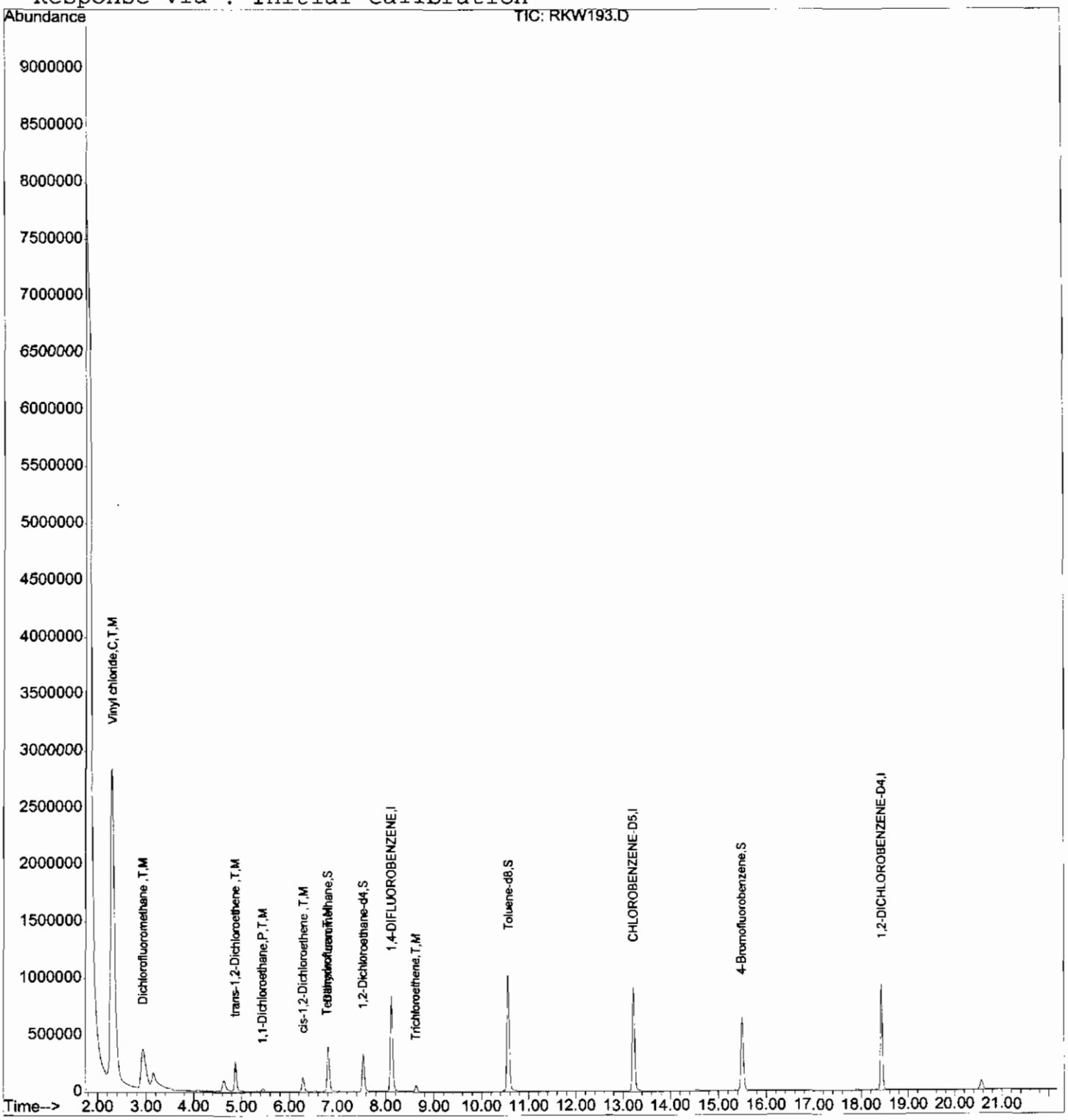
(#) = qualifier out of range (m) = manual integration

2011

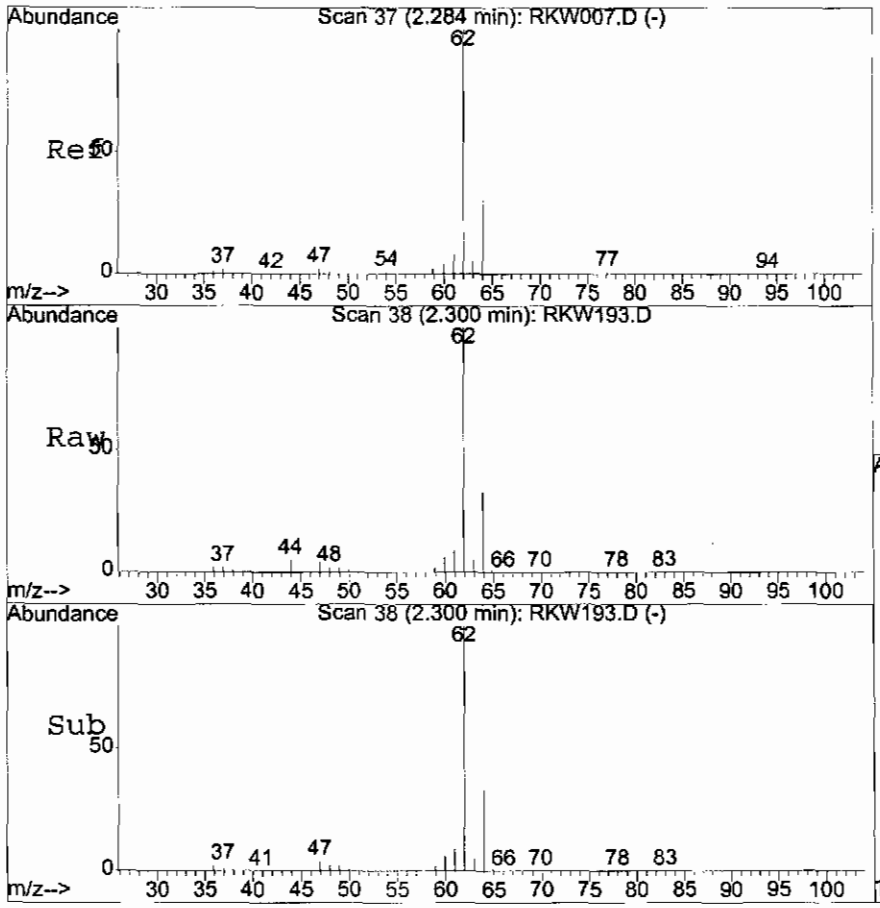
Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K10\RKW193.D Vial: 22
Acq On : 10 Nov 2011 6:09 pm Operator: SD
Sample : 11K084-05 25mL Inst : TO06
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 14 10:21 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



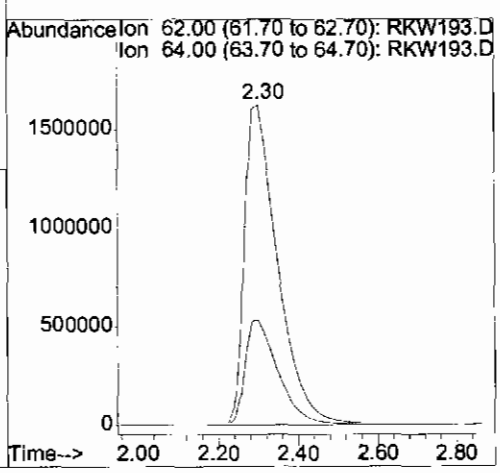
2012

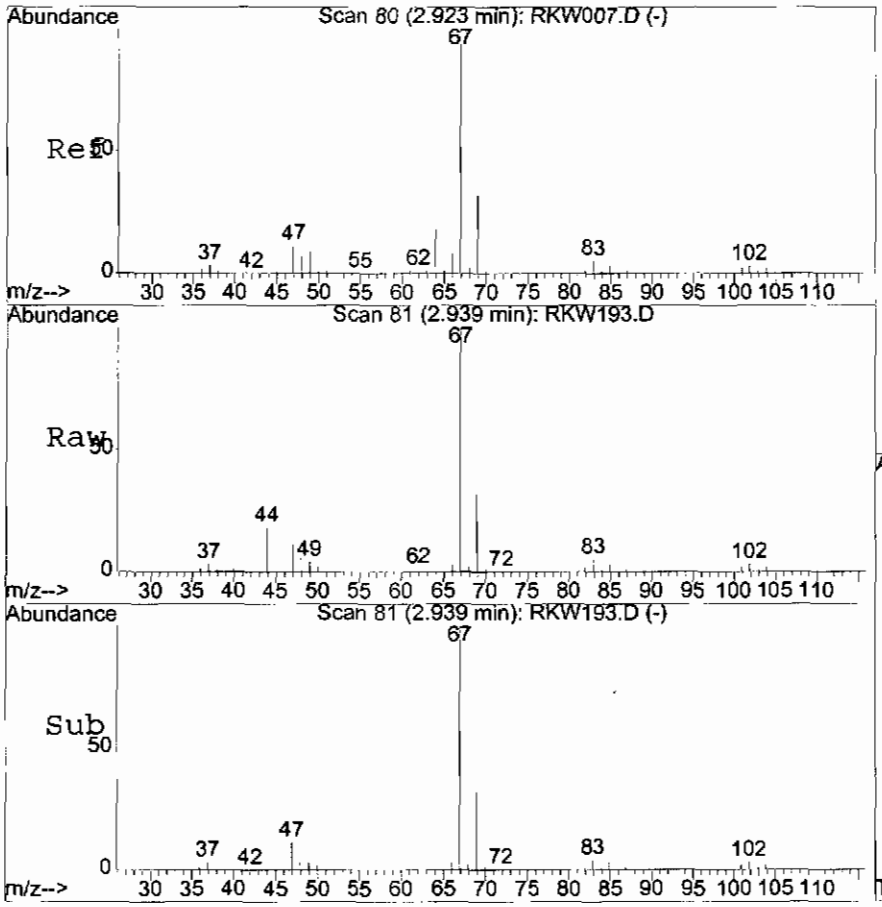


#4
Vinyl chloride
Concen: 342.73 ug/l
RT: 2.30 min Scan# 38
Delta R.T. 0.02 min
Lab File: RKW193.D
Acq: 10 Nov 2011 6:09 pm

Tgt Ion: 62 Resp: 9430350

Ion	Ratio	Lower	Upper
62	100		
64	32.6	1.8	61.8

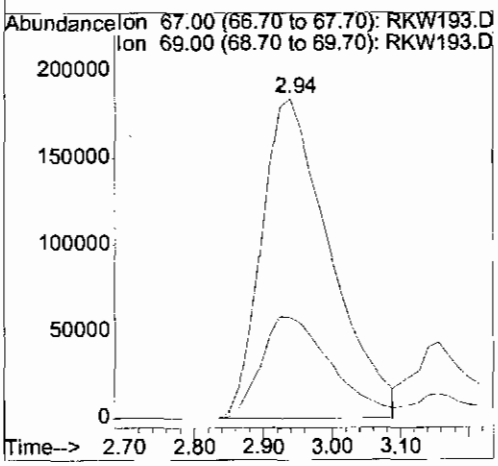


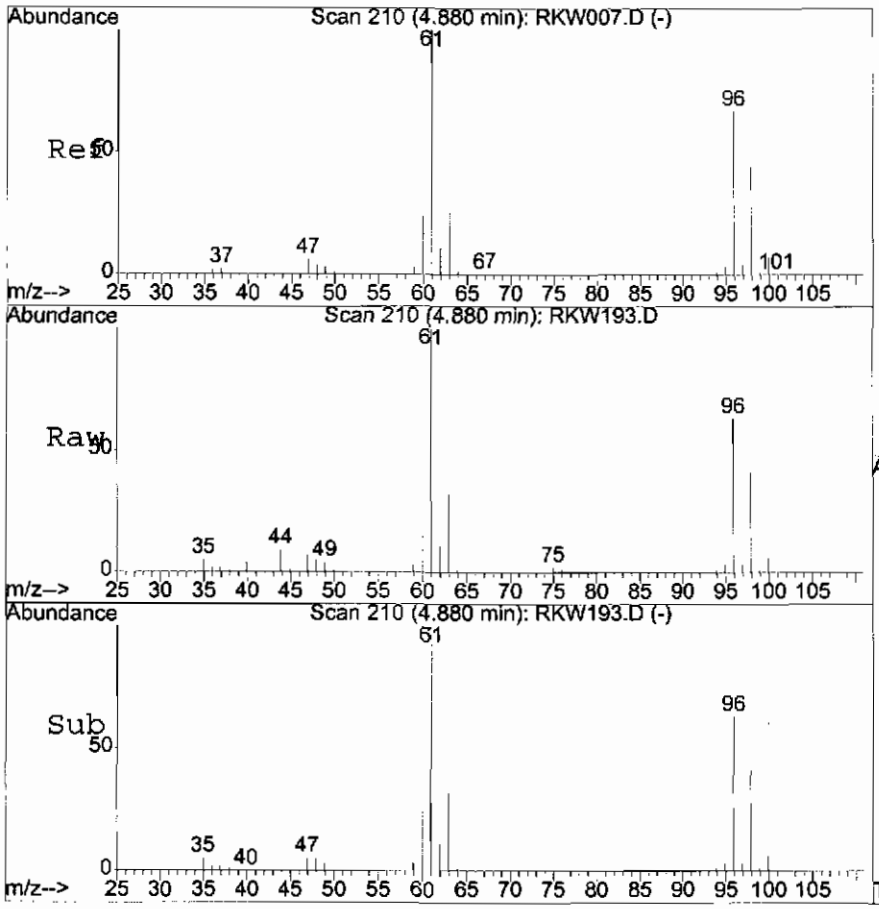


#7
Dichlorofluoromethane
Concen: 20.68 ug/l
RT: 2.94 min Scan# 81
Delta R.T. 0.02 min
Lab File: RKW193.D
Acq: 10 Nov 2011 6:09 pm

Tgt Ion: 67 Resp: 1275583

Ion	Ratio	Lower	Upper
67	100		
69	32.6	1.9	61.9

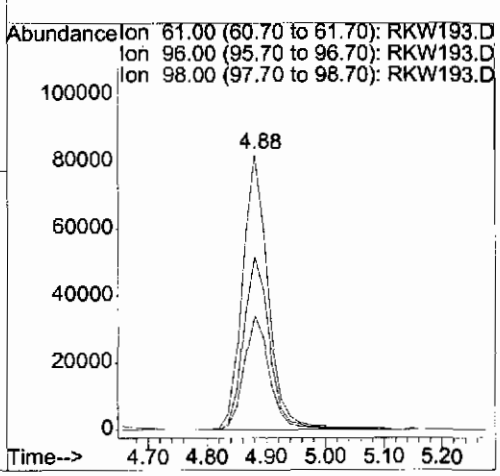


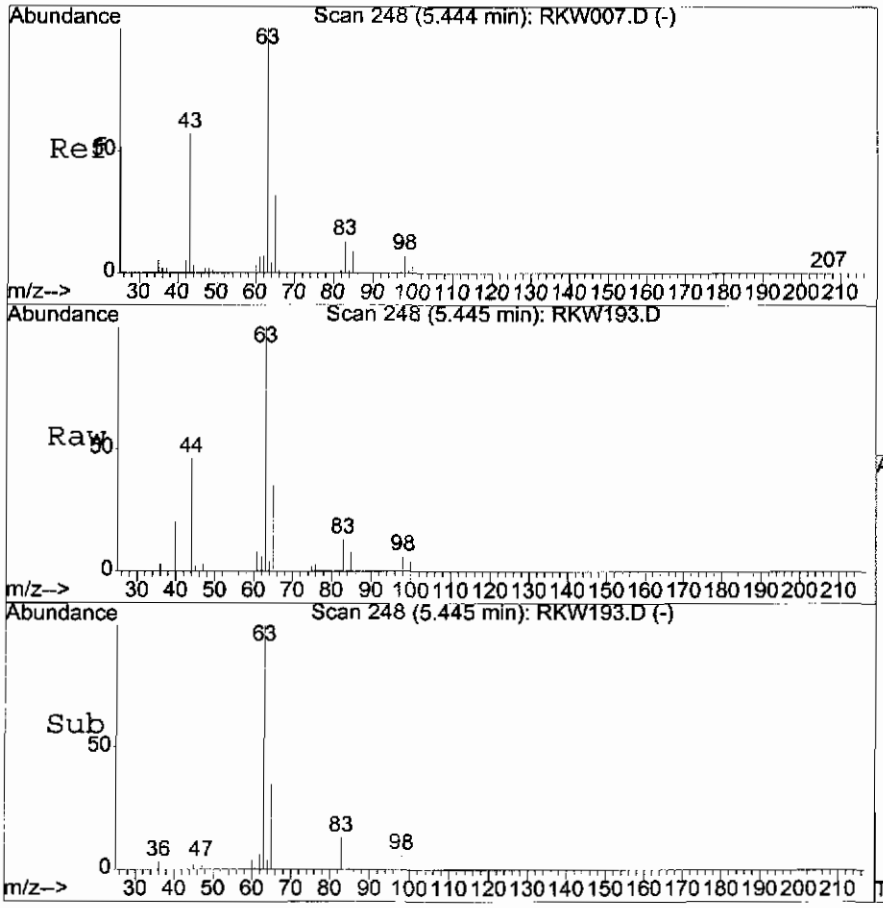


#21
trans-1,2-Dichloroethene
Concen: 4.12 ug/l
RT: 4.88 min Scan# 210
Delta R.T. 0.00 min
Lab File: RKW193.D
Acq: 10 Nov 2011 6:09 pm

Tgt Ion: 61 Resp: 248108

Ion	Ratio	Lower	Upper
61	100		
96	63.0	37.5	97.5
98	41.0	13.0	73.0

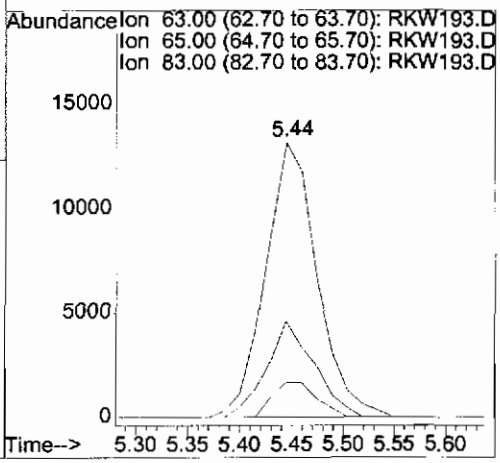


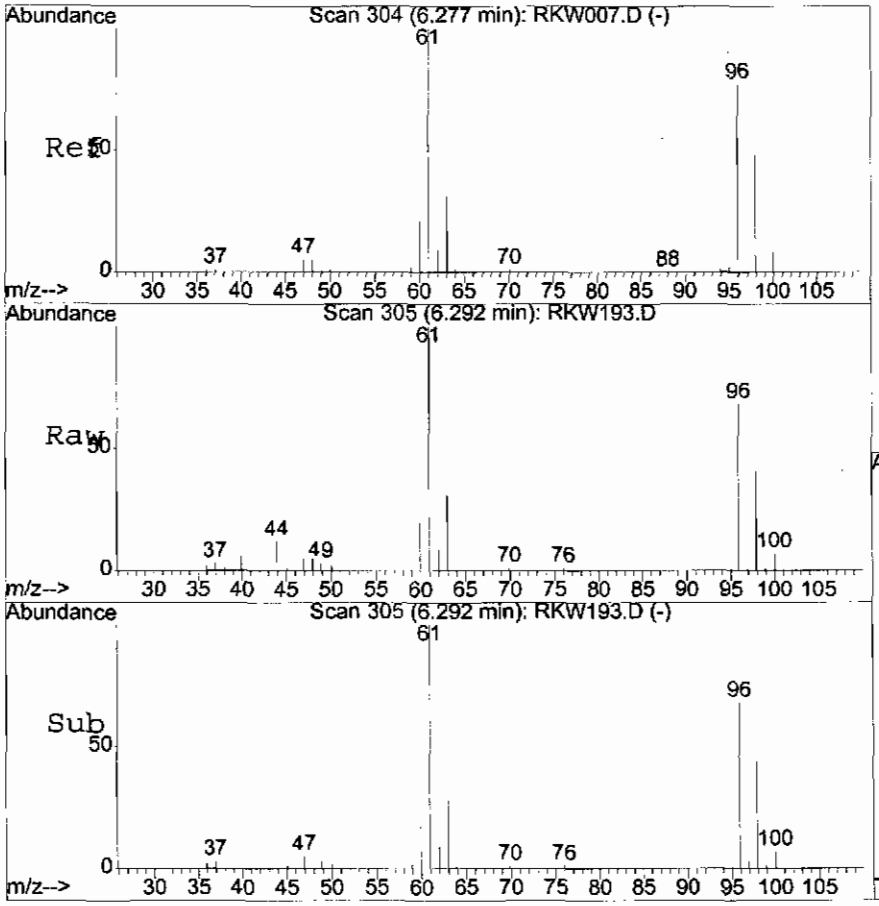


#24
1,1-Dichloroethane
Concen: 0.64 ug/l
RT: 5.44 min Scan# 248
Delta R.T. 0.00 min
Lab File: RKW193.D
Acq: 10 Nov 2011 6:09 pm

Tgt Ion: 63 Resp: 45612

Ion	Ratio	Lower	Upper
63	100		
65	32.1	1.8	61.8
83	10.9	0.0	43.1

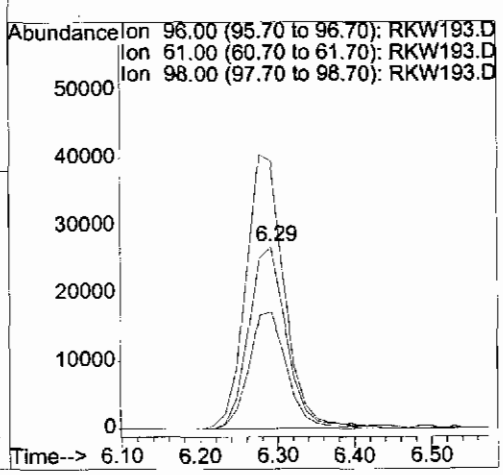


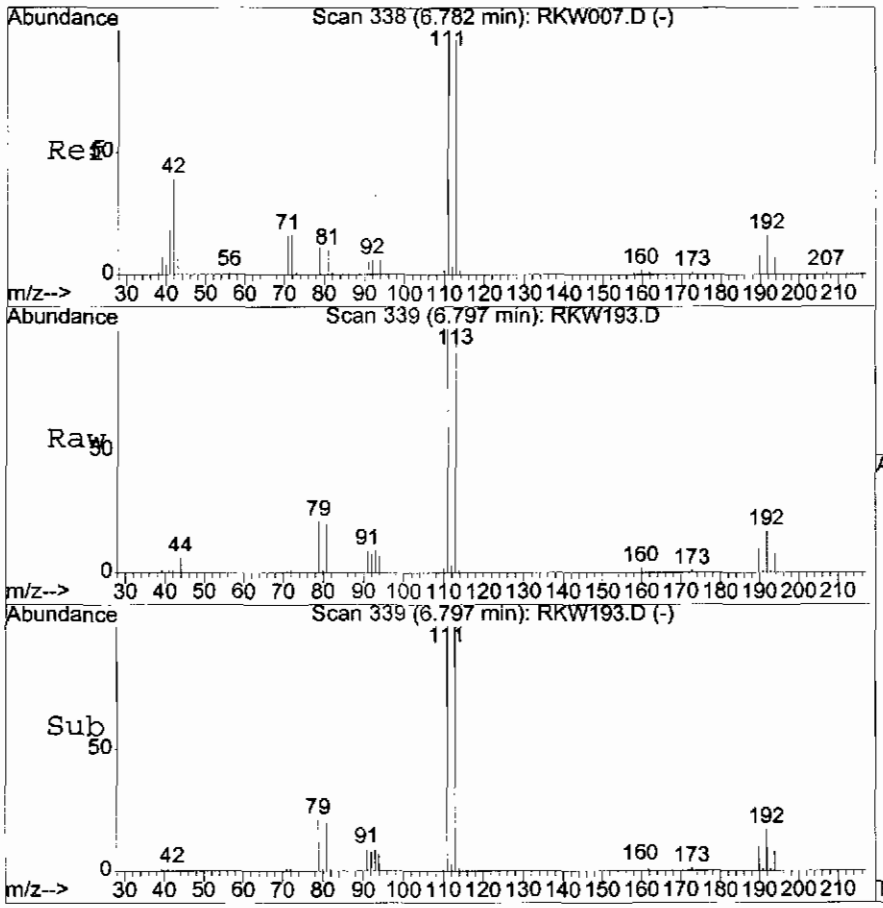


#29
cis-1,2-Dichloroethene
Concen: 2.02 ug/l
RT: 6.29 min Scan# 305
Delta R.T. 0.02 min
Lab File: RKW193.D
Acq: 10 Nov 2011 6:09 pm

Tgt Ion: 96 Resp: 91998

Ion	Ratio	Lower	Upper
96	100		
61	151.9	119.3	179.3
98	63.7	35.7	95.7

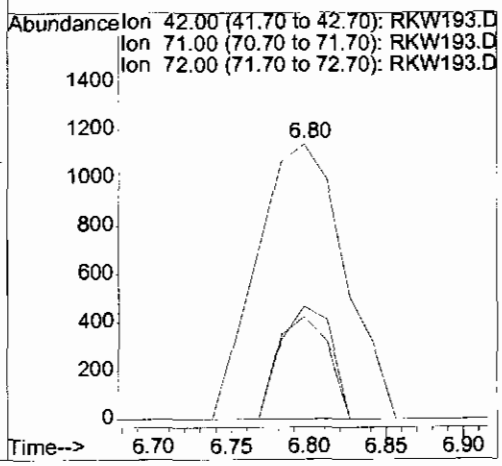


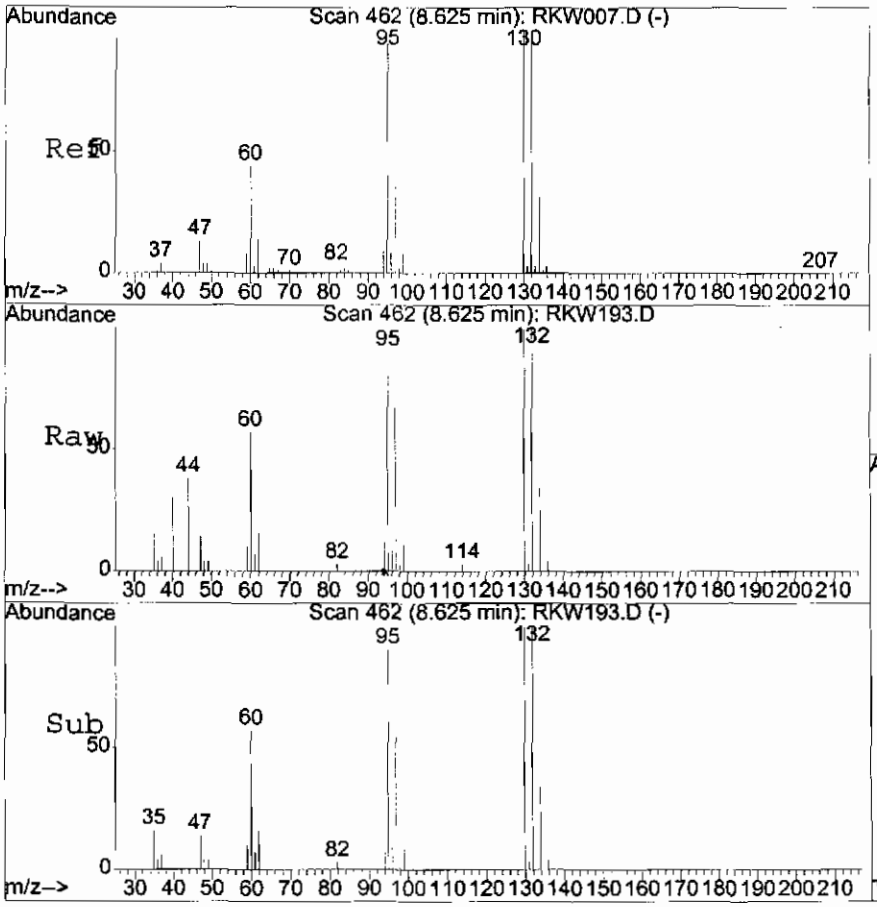


#32
Tetrahydrofuran
Concen: 0.81 ug/l
RT: 6.80 min Scan# 339
Delta R.T. 0.02 min
Lab File: RKW193.D
Acq: 10 Nov 2011 6:09 pm

Tgt Ion: 42 Resp: 4502

Ion	Ratio	Lower	Upper
42	100		
71	23.9	10.5	70.5
72	21.7	11.9	71.9

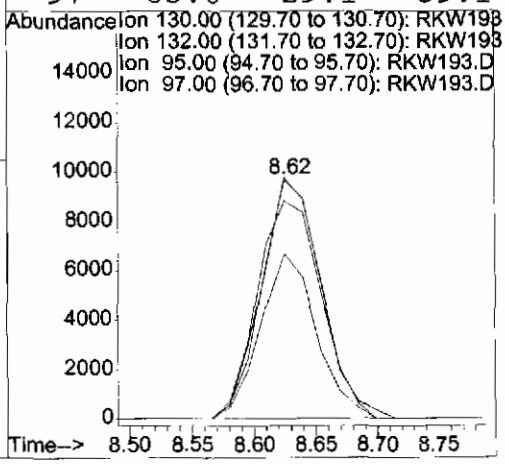




#43
Trichloroethene
Concen: 0.77 ug/l
RT: 8.62 min Scan# 462
Delta R.T. 0.00 min
Lab File: RKW193.D
Acq: 10 Nov 2011 6:09 pm

Tgt Ion:130 Resp: 32425

Ion	Ratio	Lower	Upper
130	100		
132	101.3	66.0	126.0
95	98.3	62.3	122.3
97	65.0	29.1	89.1



METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/15/11 03:22
Sample ID:	MW-70-PMW05B-115DL	Date Analyzed:	11/15/11 03:22
Lab Samp ID:	K084-05T	Dilution Factor:	50
Lab File ID:	RKW263	Matrix :	WATER
Ext Btch ID:	V006K13	% Moisture :	NA
Calib. Ref.:	RKW007	Instrument ID :	06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	50	10
1,1,1,2-TETRACHLOROETHANE	ND	50	10
1,1,2,2-TETRACHLOROETHANE	ND	50	10
1,1,2-TRICHLOROETHANE	ND	50	10
FREON113	ND	50	15
1,1-DICHLOROETHANE	ND	50	10
1,1-DICHLOROETHENE	ND	25	10
1,1-DICHLOROPROPENE	ND	50	10
1,2-DIBROMO-3-CHLOROPROPANE	ND	100	25
1,2-DIBROMOETHANE	ND	50	10
1,2-DICHLOROBENZENE	ND	50	10
1,2-DICHLOROETHANE	ND	25	10
1,2-DICHLOROPROPANE	ND	50	10
1,2,3-TRICHLOROBENZENE	ND	50	15
1,2,3-TRICHLOROPROPANE	ND	50	25
1,2,4-TRICHLOROBENZENE	ND	50	15
1,2,4-TRIMETHYLBENZENE	ND	50	10
1,3-DICHLOROBENZENE	ND	50	10
1,3,5-TRIMETHYLBENZENE	ND	50	10
1,4-DICHLOROBENZENE	ND	50	10
2-BUTANONE	ND	500	200
2-CHLOROTOLUENE	ND	50	10
2-HEXANONE	ND	500	200
2,2-DICHLOROPROPANE	ND	50	10
4-CHLOROTOLUENE	ND	50	10
4-METHYL-2-PENTANONE	ND	500	200
N-BUTYLBENZENE	ND	50	10
N-PROPYLBENZENE	ND	50	10
P-ISOPROPYLTOLUENE	ND	50	10
SEC-BUTYLBENZENE	ND	50	10
TERT-BUTYLBENZENE	ND	50	10
ACETONE	ND	500	250
BENZENE	ND	50	10
BROMOBENZENE	ND	50	10
BROMODICHLOROMETHANE	ND	50	10
CIS-1,3-DICHLOROPROPENE	ND	50	10
TRANS-1,3-DICHLOROPROPENE	ND	50	10
BROMOMETHANE	ND	100	15
BROMOFORM	ND	50	15
CARBON DISULFIDE	ND	50	10
CARBON TETRACHLORIDE	ND	25	10
CHLOROBENZENE	ND	50	10
CHLOROETHANE	ND	100	15
CHLOROFORM	ND	50	10
CHLOROMETHANE	ND	100	15
CIS-1,2-DICHLOROETHENE	ND	50	10
DICHLORODIFLUOROMETHANE	ND	100	15
DIBROMOCHLOROMETHANE	ND	50	10
DIBROMOMETHANE	ND	50	10
ETHYLBENZENE	ND	50	10
HEXACHLOROBUTADIENE	ND	50	15
ISOPROPYL BENZENE	ND	50	10
METHYLENE CHLORIDE	ND	50	25
MTBE	ND	50	10
STYRENE	ND	50	10
TETRACHLOROETHYLENE	ND	50	10
TOLUENE	ND	50	10
TRANS-1,2-DICHLOROETHENE	ND	50	10
TRICHLOROETHENE	ND	250	10
TRICHLOROFLUOROMETHANE	ND	100	15
VINYL CHLORIDE	340	25	10
XYLENES (TOTAL)	ND	100	30
M/P-XYLENES	ND	50	20
O-XYLENE	ND	50	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	522	500.0	104	70-140
4-BROMOFLUOROBENZENE	527	500.0	105	70-130
TOLUENE-D8	512	500.0	102	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/10/11 18:41
Sample ID:	IR-70-FD-111	Date Analyzed:	11/10/11 18:41
Lab Samp ID:	K084-06	Dilution Factor:	1
Lab File ID:	RKW194	Matrix	: WATER
Ext Btch ID:	V006K10	% Moisture	: NA
Calib. Ref.:	RKW007	Instrument ID	: 06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	1.1	1.0	0.20
1,1-DICHLOROETHENE	11	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	680E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	9.3	1.0	0.20
TRICHLOROETHENE	26	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	4.5	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.2	10.00	112	70-140
4-BROMOFLUOROBENZENE	10.4	10.00	104	70-130
TOLUENE-D8	10.1	10.00	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/15/11 03:52
Sample ID:	IR-70-FD-111DL	Date Analyzed:	11/15/11 03:52
Lab Samp ID:	K084-06T	Dilution Factor:	100
Lab File ID:	RKW264	Matrix	: WATER
Ext Btch ID:	V006K13	% Moisture	: NA
Calib. Ref.:	RKW007	Instrument ID	: 06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	100	20
1,1,1,2-TETRACHLOROETHANE	ND	100	20
1,1,2,2-TETRACHLOROETHANE	ND	100	20
1,1,2-TRICHLOROETHANE	ND	100	20
FREON113	ND	100	30
1,1-DICHLOROETHANE	ND	100	20
1,1-DICHLOROETHENE	ND	50	20
1,1-DICHLOROPROPENE	ND	100	20
1,2-DIBROMO-3-CHLOROPROPANE	ND	200	50
1,2-DIBROMOETHANE	ND	100	20
1,2-DICHLOROBENZENE	ND	100	20
1,2-DICHLOROETHANE	ND	50	20
1,2-DICHLOROPROPANE	ND	100	20
1,2,3-TRICHLOROBENZENE	ND	100	30
1,2,3-TRICHLOROPROPANE	ND	100	50
1,2,4-TRICHLOROBENZENE	ND	100	30
1,2,4-TRIMETHYLBENZENE	ND	100	20
1,3-DICHLOROBENZENE	ND	100	20
1,3,5-TRIMETHYLBENZENE	ND	100	20
1,4-DICHLOROBENZENE	ND	100	20
2-BUTANONE	ND	1000	400
2-CHLOROTOLUENE	ND	100	20
2-HEXANONE	ND	1000	400
2,2-DICHLOROPROPANE	ND	100	20
4-CHLOROTOLUENE	ND	100	20
4-METHYL-2-PENTANONE	ND	1000	400
N-BUTYLBENZENE	ND	100	20
N-PROPYLBENZENE	ND	100	20
P-ISOPROPYLTOLUENE	ND	100	20
SEC-BUTYLBENZENE	ND	100	20
TERT-BUTYLBENZENE	ND	100	20
ACETONE	ND	1000	500
BENZENE	ND	100	20
BROMOBENZENE	ND	100	20
BROMODICHLOROMETHANE	ND	100	20
CIS-1,3-DICHLOROPROPENE	ND	100	20
TRANS-1,3-DICHLOROPROPENE	ND	100	20
BROMOMETHANE	ND	200	30
BROMOFORM	ND	100	30
CARBON DISULFIDE	ND	100	20
CARBON TETRACHLORIDE	ND	50	20
CHLOROBENZENE	ND	100	20
CHLOROETHANE	ND	200	30
CHLOROFORM	ND	100	20
CHLOROMETHANE	ND	200	30
CIS-1,2-DICHLOROETHENE	1500	100	20
DICHLORODIFLUOROMETHANE	ND	200	30
DIBROMOCHLOROMETHANE	ND	100	20
DIBROMOMETHANE	ND	100	20
ETHYLBENZENE	ND	100	20
HEXACHLOROBUTADIENE	ND	100	30
ISOPROPYL BENZENE	ND	100	20
METHYLENE CHLORIDE	ND	100	50
MTBE	ND	100	20
STYRENE	ND	100	20
TETRACHLOROETHYLENE	ND	100	20
TOLUENE	ND	100	20
TRANS-1,2-DICHLOROETHENE	ND	100	20
TRICHLOROETHENE	27J	500	20
TRICHLOROFLUOROMETHANE	ND	200	30
VINYL CHLORIDE	ND	50	20
XYLENES (TOTAL)	ND	200	60
M/P-XYLENES	ND	100	40
O-XYLENE	ND	100	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	1070	1000	107	70-140
4-BROMOFLUOROBENZENE	1040	1000	104	70-130
TOLUENE-D8	1010	1000	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/14/11 11:25
Sample ID:	IR-70-TB-109	Date Analyzed:	11/14/11 11:25
Lab Samp ID:	K084-07R	Dilution Factor:	1
Lab File ID:	RKW232	Matrix	: WATER
Ext Btch ID:	V006K12	% Moisture	: NA
Calib. Ref.:	RKW007	Instrument ID	: 06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	D.20
BROMODICHLOROMETHANE	ND	1.0	D.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.30	10.00	93.0	70-140
4-BROMOFLUOROBENZENE	10.3	10.00	103	70-130
TOLUENE-D8	10.2	10.00	102	70-140

QC SUMMARIES

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/10/11
Batch No.	: 11K084	Date Extracted:	11/10/11 10:02
Sample ID:	MBLK1W	Date Analyzed:	11/10/11 10:02
Lab Samp ID:	V006K10B	Dilution Factor:	1
Lab File ID:	RKW177	Matrix :	WATER
Ext Btch ID:	V006K10	% Moisture :	NA
Calib. Ref.:	RKW007	Instrument ID :	06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.02	10.00	90.2	70-140
4-BROMOFLUOROBENZENE	10.1	10.00	101	70-130
TOLUENE-D8	10.3	10.00	103	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K084
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	V006K10B	V006K10L	V006K10C		
LAB FILE ID:	RKW177	RKW174	RKW175		
DATE EXTRACTED:	11/10/1110:02	11/10/1108:28	11/10/1109:00	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1110:02	11/10/1108:28	11/10/1109:00	DATE RECEIVED:	11/10/11
PREP. BATCH:	V006K10	V006K10	V006K10		
CALIB. REF:	RKW007	RKW007	RKW007		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.86	99	10.0	9.49	95	4	60-130	30
Benzene	ND	10.0	9.78	98	10.0	9.53	95	3	70-130	30
Chlorobenzene	ND	10.0	10.0	100	10.0	9.93	99	1	70-120	30
Toluene	ND	10.0	9.61	96	10.0	9.44	94	2	70-130	30
Trichloroethene	ND	10.0	10.2	102	10.0	9.89	99	3	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.81	88	10.0	8.78	88	70-140
4-Bromofluorobenzene	10.0	10.1	101	10.0	10.0	100	70-130
Toluene-d8	10.0	10.2	102	10.0	10.2	102	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/14/11
Batch No.	: 11K084	Date Extracted:	11/14/11 10:23
Sample ID:	MBLK2W	Date Analyzed:	11/14/11 10:23
Lab Samp ID:	V006K12B	Dilution Factor:	1
Lab File ID:	RKW230	Matrix :	WATER
Ext Btch ID:	V006K12	% Moisture :	NA
Calib. Ref.:	RKW007	Instrument ID :	06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.1	10.00	101	70-140
4-BROMOFLUOROBENZENE	9.76	10.00	97.6	70-130
TOLUENE-D8	10.0	10.00	100	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K084
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	V006K12B	V006K12L	V006K12C		
LAB FILE ID:	RKW230	RKW227	RKW228		
DATE EXTRACTED:	11/14/1110:23	11/14/1108:48	11/14/1109:20	DATE COLLECTED:	NA
DATE ANALYZED:	11/14/1110:23	11/14/1108:48	11/14/1109:20	DATE RECEIVED:	11/14/11
PREP. BATCH:	V006K12	V006K12	V006K12		
CALIB. REF:	RKW007	RKW007	RKW007		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	10.1	101	10.0	9.53	95	6	60-130	30
Benzene	ND	10.0	9.77	98	10.0	9.32	93	5	70-130	30
Chlorobenzene	ND	10.0	10.0	100	10.0	9.63	96	4	70-120	30
Toluene	ND	10.0	9.56	96	10.0	9.21	92	4	70-130	30
Trichloroethene	ND	10.0	10.3	103	10.0	9.73	97	5	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.87	89	10.0	9.13	91	70-140
4-Bromofluorobenzene	10.0	10.3	103	10.0	9.97	100	70-130
Toluene-d8	10.0	10.2	102	10.0	10.1	101	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/14/11
Batch No.	: 11K084	Date Extracted:	11/14/11 23:42
Sample ID:	MBLK3W	Date Analyzed:	11/14/11 23:42
Lab Samp ID:	V0D6K13B	Dilution Factor:	1
Lab File ID:	RKW256	Matrix :	WATER
Ext Btch ID:	V006K13	% Moisture :	NA
Calib. Ref.:	RKW007	Instrument ID :	06

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.43	10.00	94.3	70-140
4-BROMOFLUOROBENZENE	9.98	10.00	99.8	70-130
TOLUENE-D8	10.1	10.00	101	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K084
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK3W				
LAB SAMP ID:	V006K13B	V006K13L	V006K13C		
LAB FILE ID:	RKW256	RKW253	RKW254		
DATE EXTRACTED:	11/14/1123:42	11/14/1122:09	11/14/1122:40	DATE COLLECTED:	NA
DATE ANALYZED:	11/14/1123:42	11/14/1122:09	11/14/1122:40	DATE RECEIVED:	11/14/11
PREP. BATCH:	V006K13	V006K13	V006K13		
CALIB. REF:	RKW007	RKW007	RKW007		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.39	94	10.0	9.24	92	2	60-130	30
Benzene	ND	10.0	9.96	100	10.0	9.91	99	0	70-130	30
Chlorobenzene	ND	10.0	10.2	102	10.0	10.1	101	0	70-120	30
Toluene	ND	10.0	9.75	97	10.0	9.63	96	1	70-130	30
Trichloroethene	ND	10.0	10.1	101	10.0	9.92	99	1	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.96	90	10.0	9.36	94	70-140
4-Bromofluorobenzene	10.0	10.1	101	10.0	10.2	102	70-130
Toluene-d8	10.0	10.0	100	10.0	10.0	100	70-130

QC DATA

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K10\RKW177.D Vial: 6
Acq On : 10 Nov 2011 10:02 am Operator: SD
Sample : VO06K10B Inst : TO06
Misc : BLANK Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 14 8:57 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.11	114	1555465	10.00	ug/l	-0.01
38) CHLOROBENZENE-D5	13.20	117	1379398	10.00	ug/l	-0.01
70) 1,2-DICHLOROBENZENE-D4	18.42	152	581647	10.00	ug/l	-0.01
System Monitoring Compounds						
33) Dibromofluoromethane	6.80	111	515641	9.71	ug/l	-0.01
Spiked Amount 10.000			Recovery = 97.10%			
37) 1,2-Dichloroethane-d4	7.53	65	415146	9.02	ug/l	-0.01
Spiked Amount 10.000			Recovery = 90.20%			
52) Toluene-d8	10.56	98	1724369	10.27	ug/l	0.00
Spiked Amount 10.000			Recovery = 102.70%			
74) 4-Bromofluorobenzene	15.48	95	598347	10.14	ug/l	-0.01
Spiked Amount 10.000			Recovery = 101.40%			

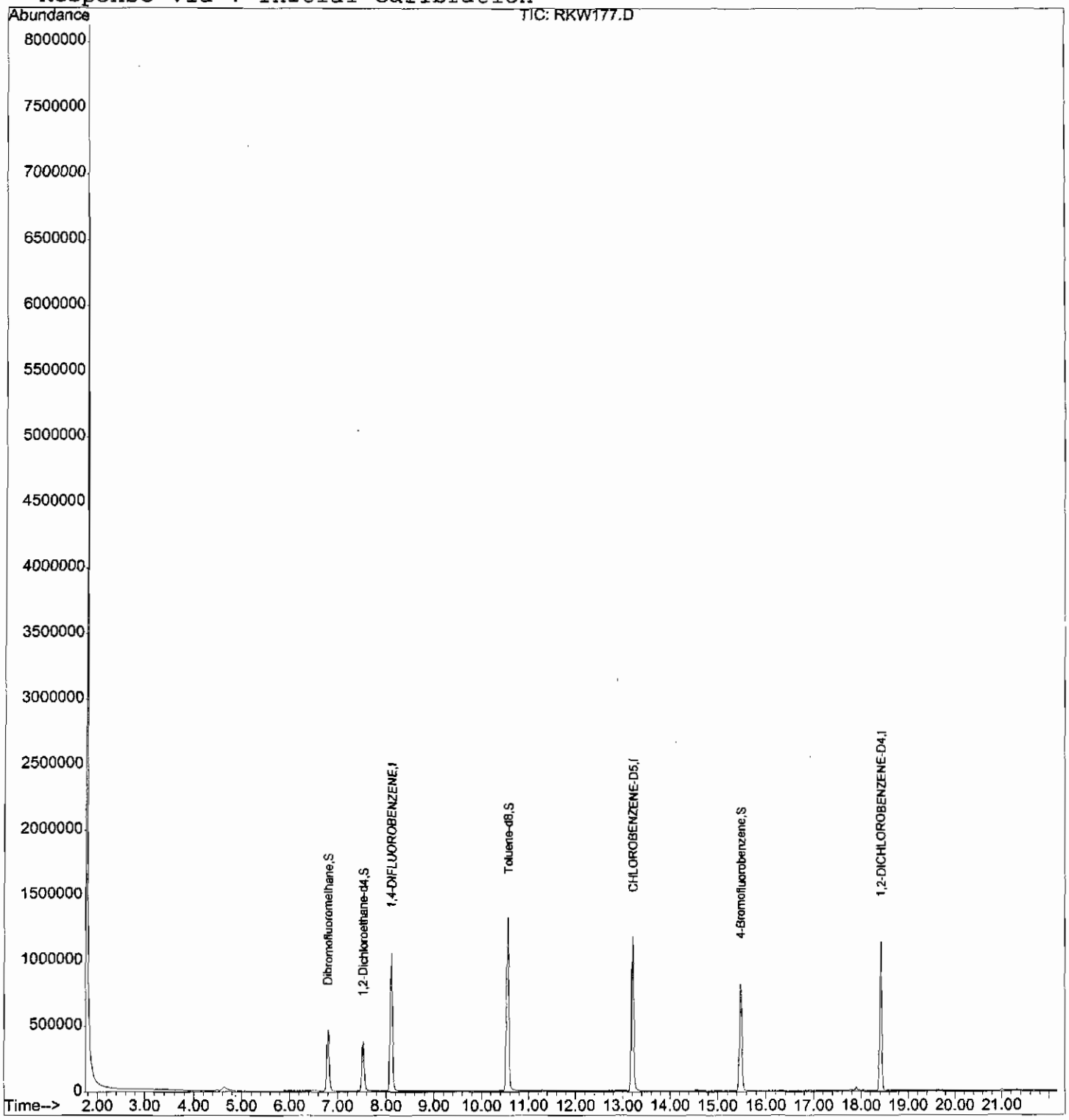
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K10\RKW177.D Vial: 6
Acq On : 10 Nov 2011 10:02 am Operator: SD
Sample : VO06K10B Inst : TO06
Misc : BLANK Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 14 8:57 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K10\RKW174.D Vial: 3
Acq On : 10 Nov 2011 8:28 am Operator: SD
Sample : VO06K10L Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 10 8:50 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.10	114	1491563	10.00	ug/l	-0.01
38) CHLOROBENZENE-D5	13.20	117	1333374	10.00	ug/l	-0.01
70) 1,2-DICHLOROBENZENE-D4	18.42	152	569463	10.00	ug/l	-0.01
System Monitoring Compounds						
33) Dibromofluoromethane	6.80	111	490404	9.63	ug/l	-0.01
Spiked Amount 10.000			Recovery = 96.30%			
37) 1,2-Dichloroethane-d4	7.53	65	388639	8.81	ug/l	-0.01
Spiked Amount 10.000			Recovery = 88.10%			
52) Toluene-d8	10.54	98	1660732	10.23	ug/l	-0.01
Spiked Amount 10.000			Recovery = 102.30%			
74) 4-Bromofluorobenzene	15.48	95	583991	10.11	ug/l	-0.01
Spiked Amount 10.000			Recovery = 101.10%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.89	85	299454	9.18	ug/l	99
3) Chloromethane	2.15	50	414742	10.00	ug/l	99
4) Vinyl chloride	2.28	62	362915	10.17	ug/l	99
5) Bromomethane	2.78	94	275858	9.21	ug/l	92
6) Chloroethane	2.89	64	242271	9.57	ug/l	98
7) Dichlorofluoromethane	2.92	67	768949	9.61	ug/l	99
8) Trichlorofluoromethane	3.14	101	383424	8.23	ug/l	99
9) Acrolein	3.65	56	53784	32.56	ug/l	89
10) Acetone	3.72	43	283896	42.85	ug/l	99
11) 1,1,2-Trichloro-1,2,2-trif	3.68	151	59923	2.30	ug/l #	1
12) 1,1-Dichloroethene	3.87	61	723987	9.86	ug/l	97
13) tert-Butyl alcohol	3.97	59	95332	41.39	ug/l #	1
16) Iodomethane	4.26	142	859030	9.29	ug/l	98
17) Methylene chloride	4.48	49	660868	8.62	ug/l	99
18) Acrylonitrile	4.64	53	414310	44.60	ug/l	99
19) Carbon disulfide	4.49	76	1346730	8.88	ug/l	100
20) tert-Butyl methyl ether (M	4.67	73	786901	8.41	ug/l	99
21) trans-1,2-Dichloroethene	4.87	61	732613	9.38	ug/l	97
22) Isopropyl ether (DIPE)	5.28	45	1700096	9.78	ug/l	97
23) Vinyl acetate	5.43	43	563260	10.28	ug/l	99
24) 1,1-Dichloroethane	5.43	63	909471	9.91	ug/l	100
26) tert-Butyl ethyl ether (ET	5.83	59	1160563	8.68	ug/l	99
27) 2-Butanone	6.01	43	553575	44.50	ug/l	99
28) 2,2-Dichloropropane	6.20	77	426427	9.18	ug/l	98
29) cis-1,2-Dichloroethene	6.26	96	526776	8.92	ug/l	98
30) Chloroform	6.49	83	837983	9.59	ug/l	96
31) Bromochloromethane	6.72	49	413130	9.70	ug/l	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K10\RKW174.D Vial: 3
Acq On : 10 Nov 2011 8:28 am Operator: SD
Sample : VO06K10L Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 10 8:50 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
32)	Tetrahydrofuran	6.77	42	66609	9.18 ug/l	93
34)	1,1,1-Trichloroethane	7.06	97	566692	8.87 ug/l	98
36)	tert-Amyl methyl ether (TA	7.45	87	182737	8.26 ug/l	98
39)	1,1-Dichloropropene	7.29	110	231731	10.27 ug/l	98
40)	Carbon tetrachloride	7.44	119	489549	8.95 ug/l	100
41)	1,2-Dichloroethane	7.66	62	479669	9.29 ug/l	100
42)	Benzene	7.69	78	1836373	9.78 ug/l	99
43)	Trichloroethene	8.61	130	547784	10.19 ug/l	99
45)	1,2-Dichloropropane	8.89	63	515593	10.06 ug/l	97
47)	Bromodichloromethane	9.26	83	603155	9.06 ug/l	100
48)	Dibromomethane	9.34	93	234423	8.97 ug/l	97
49)	2-Chloroethyl vinyl ether	9.75	63	72428	7.77 ug/l	99
50)	4-Methyl-2-pentanone	9.80	43	1382936	46.16 ug/l	99
51)	cis-1,3-Dichloropropene	10.14	75	742699	9.59 ug/l	99
53)	Toluene	10.68	91	1883560	9.61 ug/l	100
54)	Ethyl methacrylate	10.97	69	396139	8.36 ug/l	98
55)	trans-1,3-Dichloropropene	10.99	75	552105	9.34 ug/l	95
56)	2-Hexanone	11.27	43	884403	45.44 ug/l	100
57)	1,1,2-Trichloroethane	11.26	97	306446	9.48 ug/l	99
58)	1,3-Dichloropropane	11.70	76	562333	9.40 ug/l	99
59)	Tetrachloroethene	11.81	164	437465	9.93 ug/l	99
60)	Dibromochloromethane	12.16	129	390910	8.60 ug/l	100
62)	1,2-Dibromoethane	12.52	107	309688	8.48 ug/l	100
63)	1-Chlorohexane	12.82	91	730320	10.29 ug/l	99
64)	Chlorobenzene	13.28	112	1287491	10.00 ug/l	99
65)	1,1,1,2-Tetrachloroethane	13.35	131	416553	9.07 ug/l	96
66)	Ethylbenzene	13.38	91	2053887	9.63 ug/l	100
67)	m-Xylene & p-Xylene	13.51	91	3078826	19.09 ug/l	99
68)	o-Xylene	14.32	91	1646593	9.50 ug/l	99
69)	Styrene	14.39	104	1293835	9.13 ug/l	98
71)	Isopropylbenzene	15.00	105	2033218	10.65 ug/l	99
72)	Bromoform	15.02	173	223557	8.72 ug/l	99
73)	1,1,2,2-Tetrachloroethane	15.34	83	353766	9.37 ug/l	99
75)	1,2,3-Trichloropropane	15.62	110	86899	8.75 ug/l	97
76)	trans-1,4-Dichloro-2-buten	15.76	53	78500	8.17 ug/l	96
77)	n-Propylbenzene	15.77	91	2467167	10.19 ug/l	100
78)	Bromobenzene	15.85	156	498024	9.03 ug/l	91
79)	1,3,5-Trimethylbenzene	16.09	105	1570693	9.49 ug/l	100
80)	2-Chlorotoluene	16.10	91	1508873	9.13 ug/l	96
81)	4-Chlorotoluene	16.20	91	1418223	10.43 ug/l	96
82)	tert-Butylbenzene	16.77	134	389109	10.32 ug/l	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K10\RKW174.D Vial: 3
Acq On : 10 Nov 2011 8:28 am Operator: SD
Sample : VO06K10L Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 10 8:50 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

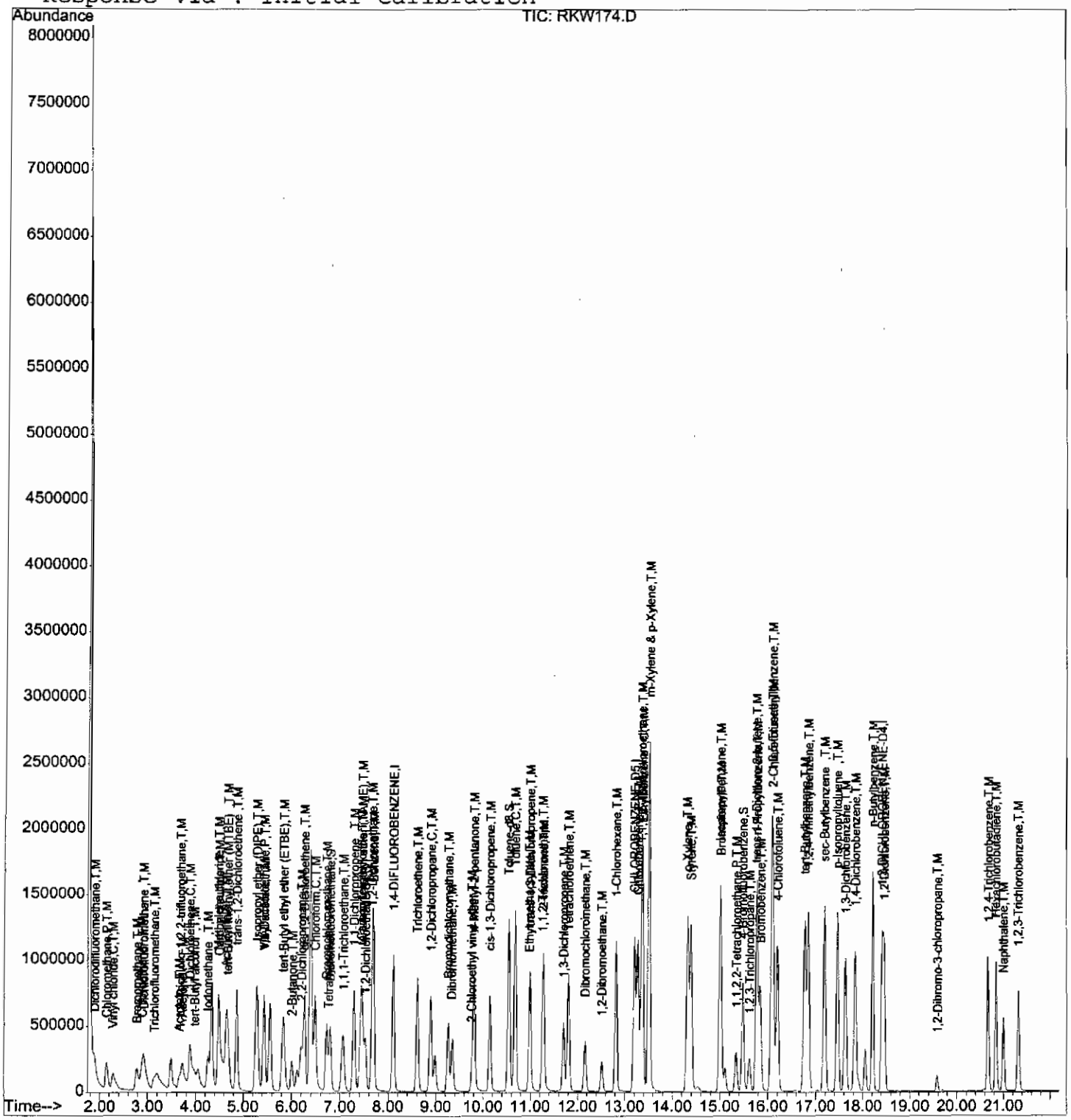
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
83)	1,2,4-Trimethylbenzene	16.84	105	1615274	9.66 ug/l	88
84)	sec-Butylbenzene	17.18	105	2179977	10.45 ug/l	100
85)	p-Isopropyltoluene	17.45	119	1745510	9.89 ug/l	99
86)	1,3-Dichlorobenzene	17.63	146	969532	9.90 ug/l	99
87)	1,4-Dichlorobenzene	17.84	146	948008	9.78 ug/l	99
89)	n-Butylbenzene	18.21	91	1659784	9.92 ug/l	100
90)	1,2-Dichlorobenzene	18.46	146	827254	9.69 ug/l	100
91)	1,2-Dibromo-3-chloropropan	19.59	157	58354	8.12 ug/l	98
92)	1,2,4-Trichlorobenzene	20.68	180	615057	9.66 ug/l	100
93)	Hexachlorobutadiene	20.84	225	369521	9.15 ug/l	99
94)	Naphthalene	21.00	128	776410	8.94 ug/l	100
95)	1,2,3-Trichlorobenzene	21.32	180	478150	9.11 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K10\RKW174.D Vial: 3
Acq On : 10 Nov 2011 8:28 am Operator: SD
Sample : VO06K10L Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 10 8:50 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K10\RKW175.D Vial: 4
Acq On : 10 Nov 2011 9:00 am Operator: SD
Sample : VO06K10C Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 10 9:22 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.11	114	1495510	10.00	ug/l	-0.01
38) CHLOROBENZENE-D5	13.20	117	1352965	10.00	ug/l	-0.01
70) 1,2-DICHLOROBENZENE-D4	18.42	152	586607	10.00	ug/l	-0.01
System Monitoring Compounds						
33) Dibromofluoromethane	6.80	111	495929	9.71	ug/l	-0.01
Spiked Amount 10.000			Recovery = 97.10%			
37) 1,2-Dichloroethane-d4	7.53	65	388430	8.78	ug/l	-0.01
Spiked Amount 10.000			Recovery = 87.80%			
52) Toluene-d8	10.54	98	1674479	10.16	ug/l	-0.01
Spiked Amount 10.000			Recovery = 101.60%			
74) 4-Bromofluorobenzene	15.48	95	595634	10.01	ug/l	-0.01
Spiked Amount 10.000			Recovery = 100.10%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.88	85	299481	9.16	ug/l	99
3) Chloromethane	2.14	50	416477	10.02	ug/l	99
4) Vinyl chloride	2.27	62	360844	10.08	ug/l	99
5) Bromomethane	2.76	94	289347	9.64	ug/l	96
6) Chloroethane	2.87	64	238910	9.41	ug/l	98
7) Dichlorofluoromethane	2.91	67	761515	9.49	ug/l	99
8) Trichlorofluoromethane	3.14	101	372794	7.98	ug/l	99
9) Acrolein	3.65	56	55076	33.26	ug/l	96
10) Acetone	3.72	43	269581	40.58	ug/l	99
11) 1,1,2-Trichloro-1,2,2-trif	3.69	151	261808	10.03	ug/l	97
12) 1,1-Dichloroethene	3.88	61	698421	9.49	ug/l	98
13) tert-Butyl alcohol	3.99	59	78789	35.03	ug/l #	69
16) Iodomethane	4.27	142	945236	10.20	ug/l	97
17) Methylene chloride	4.48	49	644359	8.38	ug/l	99
18) Acrylonitrile	4.64	53	412223	44.25	ug/l	98
19) Carbon disulfide	4.49	76	1288715	8.48	ug/l	99
20) tert-Butyl methyl ether (M	4.67	73	766878	8.17	ug/l	99
21) trans-1,2-Dichloroethene	4.87	61	722084	9.22	ug/l	99
22) Isopropyl ether (DIPE)	5.28	45	1690276	9.70	ug/l	98
23) Vinyl acetate	5.43	43	582464	10.60	ug/l	99
24) 1,1-Dichloroethane	5.43	63	900841	9.79	ug/l	99
26) tert-Butyl ethyl ether (ET	5.83	59	1163420	8.68	ug/l	100
27) 2-Butanone	6.01	43	534411	42.85	ug/l	99
28) 2,2-Dichloropropane	6.20	77	430605	9.24	ug/l	99
29) cis-1,2-Dichloroethene	6.26	96	524609	8.85	ug/l	99
30) Chloroform	6.49	83	830462	9.48	ug/l	96
31) Bromochloromethane	6.72	49	405008	9.48	ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K10\RKW175.D Vial: 4
Acq On : 10 Nov 2011 9:00 am Operator: SD
Sample : VO06K10C Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 10 9:22 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
32)	Tetrahydrofuran	6.77	42	69331	9.53 ug/l	91
34)	1,1,1-Trichloroethane	7.07	97	584133	9.12 ug/l	98
36)	tert-Amyl methyl ether (TA	7.45	87	183344	8.26 ug/l	98
39)	1,1-Dichloropropene	7.29	110	232402	10.15 ug/l	99
40)	Carbon tetrachloride	7.44	119	492306	8.87 ug/l	100
41)	1,2-Dichloroethane	7.66	62	473327	9.03 ug/l	99
42)	Benzene	7.69	78	1816383	9.53 ug/l	100
43)	Trichloroethene	8.61	130	539947	9.89 ug/l	100
45)	1,2-Dichloropropane	8.89	63	519797	10.00 ug/l	96
47)	Bromodichloromethane	9.26	83	601115	8.89 ug/l	100
48)	Dibromomethane	9.35	93	236477	8.92 ug/l	95
49)	2-Chloroethyl vinyl ether	9.75	63	77992	8.21 ug/l	97
50)	4-Methyl-2-pentanone	9.80	43	1373290	45.17 ug/l	100
51)	cis-1,3-Dichloropropene	10.14	75	746828	9.50 ug/l	98
53)	Toluene	10.68	91	1876528	9.44 ug/l	99
54)	Ethyl methacrylate	10.97	69	389753	8.10 ug/l	98
55)	trans-1,3-Dichloropropene	10.99	75	548703	9.14 ug/l	96
56)	2-Hexanone	11.27	43	867809	43.94 ug/l	100
57)	1,1,2-Trichloroethane	11.26	97	302510	9.22 ug/l	99
58)	1,3-Dichloropropane	11.70	76	562407	9.27 ug/l	99
59)	Tetrachloroethene	11.81	164	427946	9.57 ug/l	99
60)	Dibromochloromethane	12.16	129	393687	8.54 ug/l	99
62)	1,2-Dibromoethane	12.52	107	304195	8.21 ug/l	98
63)	1-Chlorohexane	12.82	91	726329	10.09 ug/l	99
64)	Chlorobenzene	13.28	112	1297077	9.93 ug/l	99
65)	1,1,1,2-Tetrachloroethane	13.35	131	424245	9.10 ug/l	98
66)	Ethylbenzene	13.38	91	2073894	9.58 ug/l	100
67)	m-Xylene & p-Xylene	13.51	91	3101248	18.95 ug/l	99
68)	o-Xylene	14.32	91	1670885	9.50 ug/l	98
69)	Styrene	14.39	104	1311585	9.12 ug/l	98
71)	Isopropylbenzene	15.00	105	2041912	10.38 ug/l	99
72)	Bromoform	15.02	173	218565	8.27 ug/l	99
73)	1,1,2,2-Tetrachloroethane	15.34	83	349916	9.00 ug/l	99
75)	1,2,3-Trichloropropane	15.63	110	88639	8.66 ug/l	96
76)	trans-1,4-Dichloro-2-buten	15.76	53	78913	7.97 ug/l	95
77)	n-Propylbenzene	15.77	91	2494879	10.00 ug/l	100
78)	Bromobenzene	15.85	156	504398	8.87 ug/l	97
79)	1,3,5-Trimethylbenzene	16.09	105	1589260	9.32 ug/l	100
80)	2-Chlorotoluene	16.10	91	1540242	9.05 ug/l	96
81)	4-Chlorotoluene	16.20	91	1420713	10.15 ug/l	97
82)	tert-Butylbenzene	16.77	134	389400	10.02 ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K10\RKW175.D Vial: 4
Acq On : 10 Nov 2011 9:00 am Operator: SD
Sample : VO06K10C Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 10 9:22 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

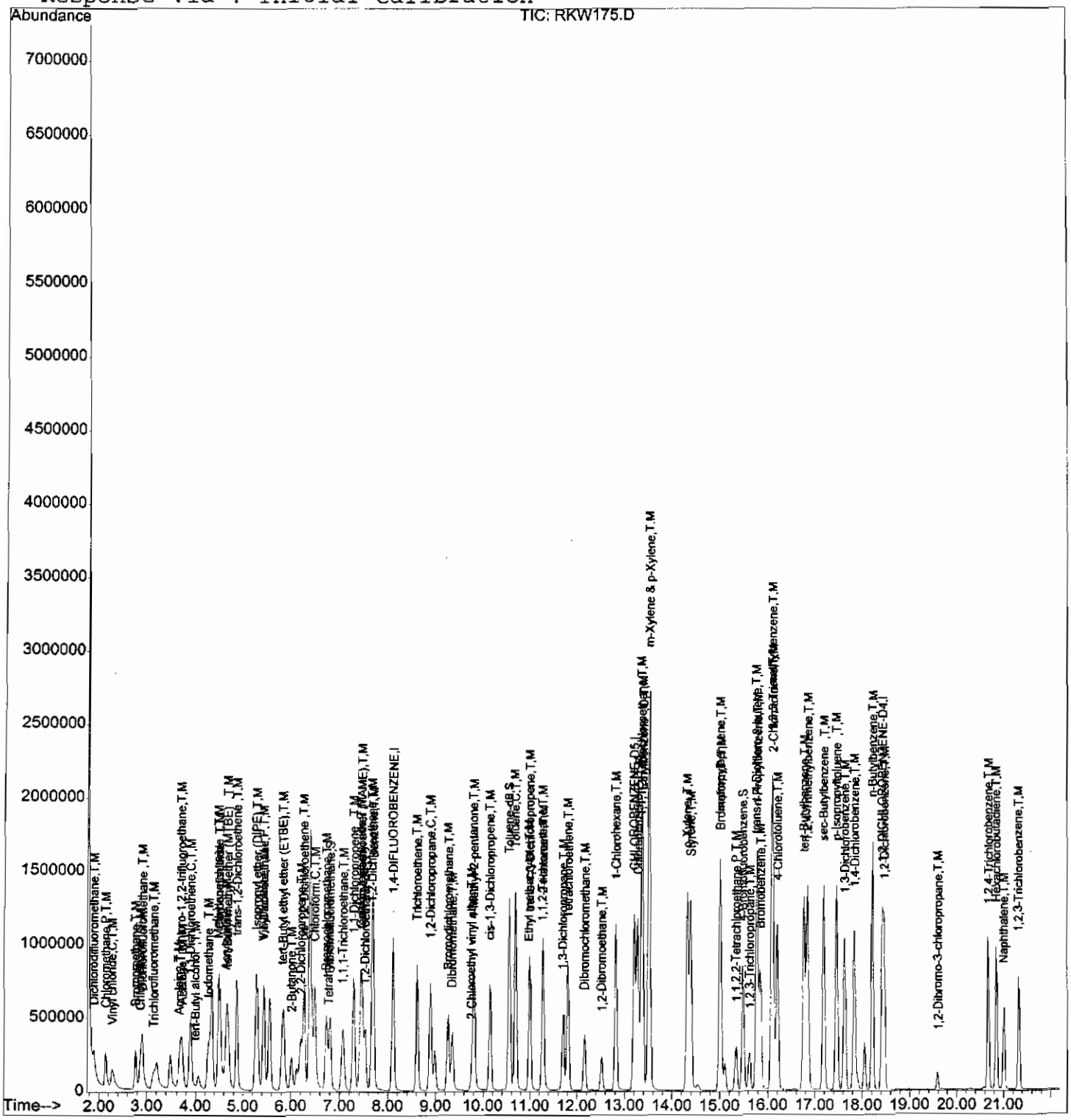
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
83)	1,2,4-Trimethylbenzene	16.84	105	1633336	9.48 ug/l	99
84)	sec-Butylbenzene	17.19	105	2181983	10.15 ug/l	100
85)	p-Isopropyltoluene	17.45	119	1772221	9.74 ug/l	99
86)	1,3-Dichlorobenzene	17.63	146	992268	9.84 ug/l	99
87)	1,4-Dichlorobenzene	17.84	146	973103	9.74 ug/l	99
89)	n-Butylbenzene	18.21	91	1665872	9.67 ug/l	100
90)	1,2-Dichlorobenzene	18.46	146	840703	9.56 ug/l	99
91)	1,2-Dibromo-3-chloropropan	19.59	157	57945	7.83 ug/l	95
92)	1,2,4-Trichlorobenzene	20.68	180	628506	9.58 ug/l	99
93)	Hexachlorobutadiene	20.84	225	368554	8.86 ug/l	99
94)	Naphthalene	21.00	128	784452	8.77 ug/l	100
95)	1,2,3-Trichlorobenzene	21.32	180	478842	8.86 ug/l	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K10\RKW175.D Vial: 4
Acq On : 10 Nov 2011 9:00 am Operator: SD
Sample : VO06K10C Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 10 9:22 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKW256.D Vial: 6
Acq On : 14 Nov 2011 11:42 pm Operator: SD
Sample : VO06K13B Inst : TO06
Misc : BLANK Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 15 8:58 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.12	114	1518357	10.00	ug/l	0.00
38) CHLOROBENZENE-D5	13.23	117	1366932	10.00	ug/l	0.02
70) 1,2-DICHLOROBENZENE-D4	18.43	152	583887	10.00	ug/l	0.00
System Monitoring Compounds						
33) Dibromofluoromethane	6.81	111	526450	10.15	ug/l	0.00
Spiked Amount 10.000			Recovery	=	101.50%	
37) 1,2-Dichloroethane-d4	7.54	65	423772	9.43	ug/l	0.00
Spiked Amount 10.000			Recovery	=	94.30%	
52) Toluene-d8	10.57	98	1673087	10.05	ug/l	0.02
Spiked Amount 10.000			Recovery	=	100.50%	
74) 4-Bromofluorobenzene	15.51	95	591020	9.98	ug/l	0.02
Spiked Amount 10.000			Recovery	=	99.80%	

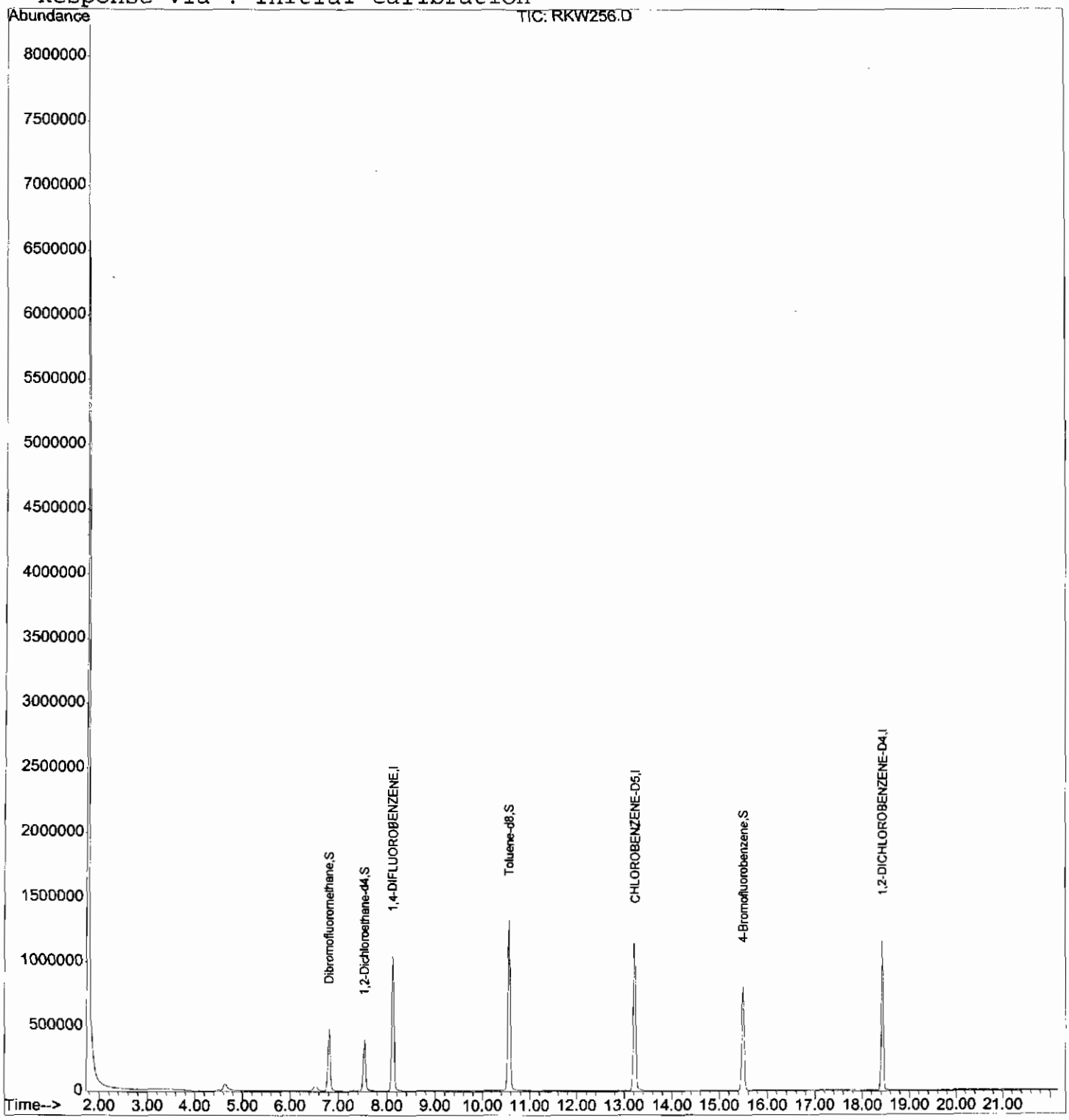
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW256.D Vial: 6
Acq On : 14 Nov 2011 11:42 pm Operator: SD
Sample : VO06K13B Inst : TO06
Misc : BLANK Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 15 8:58 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKW253.D Vial: 3
Acq On : 14 Nov 2011 10:09 pm Operator: SD
Sample : VO06K13L Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 14 22:32 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.13	114	1457981	10.00	ug/l	0.02
38) CHLOROBENZENE-D5	13.23	117	1337085	10.00	ug/l	0.02
70) 1,2-DICHLOROBENZENE-D4	18.45	152	576806	10.00	ug/l	0.02
System Monitoring Compounds						
33) Dibromofluoromethane	6.83	111	488667	9.81	ug/l	0.02
Spiked Amount 10.000			Recovery = 98.10%			
37) 1,2-Dichloroethane-d4	7.55	65	386565	8.96	ug/l	0.02
Spiked Amount 10.000			Recovery = 89.60%			
52) Toluene-d8	10.57	98	1628010	10.00	ug/l	0.02
Spiked Amount 10.000			Recovery = 100.00%			
74) 4-Bromofluorobenzene	15.51	95	590190	10.09	ug/l	0.02
Spiked Amount 10.000			Recovery = 100.90%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.90	85	264735	8.30	ug/l	99
3) Chloromethane	2.14	50	415678	10.26	ug/l	96
4) Vinyl chloride	2.28	62	348026	9.98	ug/l	99
5) Bromomethane	2.77	94	282601	9.66	ug/l	95
6) Chloroethane	2.88	64	240424	9.71	ug/l	97
7) Dichlorofluoromethane	2.91	67	768834	9.83	ug/l	98
8) Trichlorofluoromethane	3.16	101	351630	7.72	ug/l	98
9) Acrolein	3.65	56	52086	32.26	ug/l	100
10) Acetone	3.74	43	276535	42.70	ug/l	99
11) 1,1,2-Trichloro-1,2,2-trif	3.69	151	231629	9.10	ug/l	98
12) 1,1-Dichloroethene	3.90	61	673680	9.39	ug/l	98
13) tert-Butyl alcohol	4.00	59	86028	38.61	ug/l #	1
16) Iodomethane	4.29	142	961420	10.64	ug/l	96
17) Methylene chloride	4.49	49	692263	9.23	ug/l	99
18) Acrylonitrile	4.66	53	440796	48.54	ug/l	98
19) Carbon disulfide	4.51	76	1271419	8.58	ug/l	100
20) tert-Butyl methyl ether (M	4.70	73	794675	8.69	ug/l	99
21) trans-1,2-Dichloroethene	4.88	61	720402	9.43	ug/l	98
22) Isopropyl ether (DIPE)	5.30	45	1795099	10.57	ug/l	97
23) Vinyl acetate	5.46	43	592870	11.07	ug/l	99
24) 1,1-Dichloroethane	5.44	63	937548	10.46	ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	1192596	9.12	ug/l	99
27) 2-Butanone	6.02	43	560641	46.11	ug/l	100
28) 2,2-Dichloropropane	6.22	77	371136	8.17	ug/l	98
29) cis-1,2-Dichloroethene	6.29	96	543051	9.40	ug/l	97
30) Chloroform	6.51	83	851205	9.97	ug/l	100
31) Bromochloromethane	6.74	49	432177	10.38	ug/l	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKW253.D Vial: 3
Acq On : 14 Nov 2011 10:09 pm Operator: SD
Sample : VO06K13L Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 14 22:32 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
32)	Tetrahydrofuran	6.80	42	71933	10.15 ug/l	92
34)	1,1,1-Trichloroethane	7.08	97	554318	8.88 ug/l	98
36)	tert-Amyl methyl ether (TA	7.48	87	188929	8.73 ug/l	98
39)	1,1-Dichloropropene	7.32	110	216650	9.57 ug/l	99
40)	Carbon tetrachloride	7.47	119	462067	8.43 ug/l	100
41)	1,2-Dichloroethane	7.69	62	488835	9.44 ug/l	99
42)	Benzene	7.70	78	1875842	9.96 ug/l	100
43)	Trichloroethene	8.64	130	542499	10.06 ug/l	99
45)	1,2-Dichloropropane	8.92	63	545279	10.61 ug/l	96
47)	Bromodichloromethane	9.29	83	619216	9.27 ug/l	100
48)	Dibromomethane	9.38	93	237613	9.06 ug/l	96
49)	2-Chloroethyl vinyl ether	9.78	63	87341	9.22 ug/l	99
50)	4-Methyl-2-pentanone	9.83	43	1464517	48.74 ug/l	99
51)	cis-1,3-Dichloropropene	10.17	75	760706	9.80 ug/l	98
53)	Toluene	10.71	91	1914787	9.75 ug/l	100
54)	Ethyl methacrylate	11.02	69	411172	8.65 ug/l	100
55)	trans-1,3-Dichloropropene	11.03	75	557465	9.40 ug/l	96
56)	2-Hexanone	11.30	43	918923	47.08 ug/l	100
57)	1,1,2-Trichloroethane	11.30	97	317228	9.79 ug/l	98
58)	1,3-Dichloropropane	11.73	76	593865	9.90 ug/l	100
59)	Tetrachloroethene	11.83	164	408214	9.24 ug/l	99
60)	Dibromochloromethane	12.19	129	406297	8.92 ug/l	98
62)	1,2-Dibromoethane	12.55	107	318891	8.71 ug/l	99
63)	1-Chlorohexane	12.85	91	684340	9.62 ug/l	99
64)	Chlorobenzene	13.31	112	1311626	10.16 ug/l	99
65)	1,1,1,2-Tetrachloroethane	13.40	131	433555	9.41 ug/l	97
66)	Ethylbenzene	13.41	91	2077591	9.71 ug/l	100
67)	m-Xylene & p-Xylene	13.54	91	3124616	19.32 ug/l	99
68)	o-Xylene	14.36	91	1688098	9.71 ug/l	98
69)	Styrene	14.42	104	1342450	9.44 ug/l	98
71)	Isopropylbenzene	15.04	105	2027465	10.49 ug/l	99
72)	Bromoform	15.06	173	228677	8.80 ug/l	99
73)	1,1,2,2-Tetrachloroethane	15.37	83	366978	9.60 ug/l	100
75)	1,2,3-Trichloropropane	15.65	110	89963	8.94 ug/l	95
76)	trans-1,4-Dichloro-2-buten	15.79	53	81961	8.42 ug/l	96
77)	n-Propylbenzene	15.80	91	2471647	10.08 ug/l	99
78)	Bromobenzene	15.88	156	516495	9.24 ug/l	96
79)	1,3,5-Trimethylbenzene	16.11	105	1590018	9.48 ug/l	100
80)	2-Chlorotoluene	16.13	91	1634779	9.77 ug/l	99
81)	4-Chlorotoluene	16.23	91	1366807	9.93 ug/l	99
82)	tert-Butylbenzene	16.80	134	383851	10.05 ug/l	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKW253.D Vial: 3
Acq On : 14 Nov 2011 10:09 pm Operator: SD
Sample : VO06K13L Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 14 22:32 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

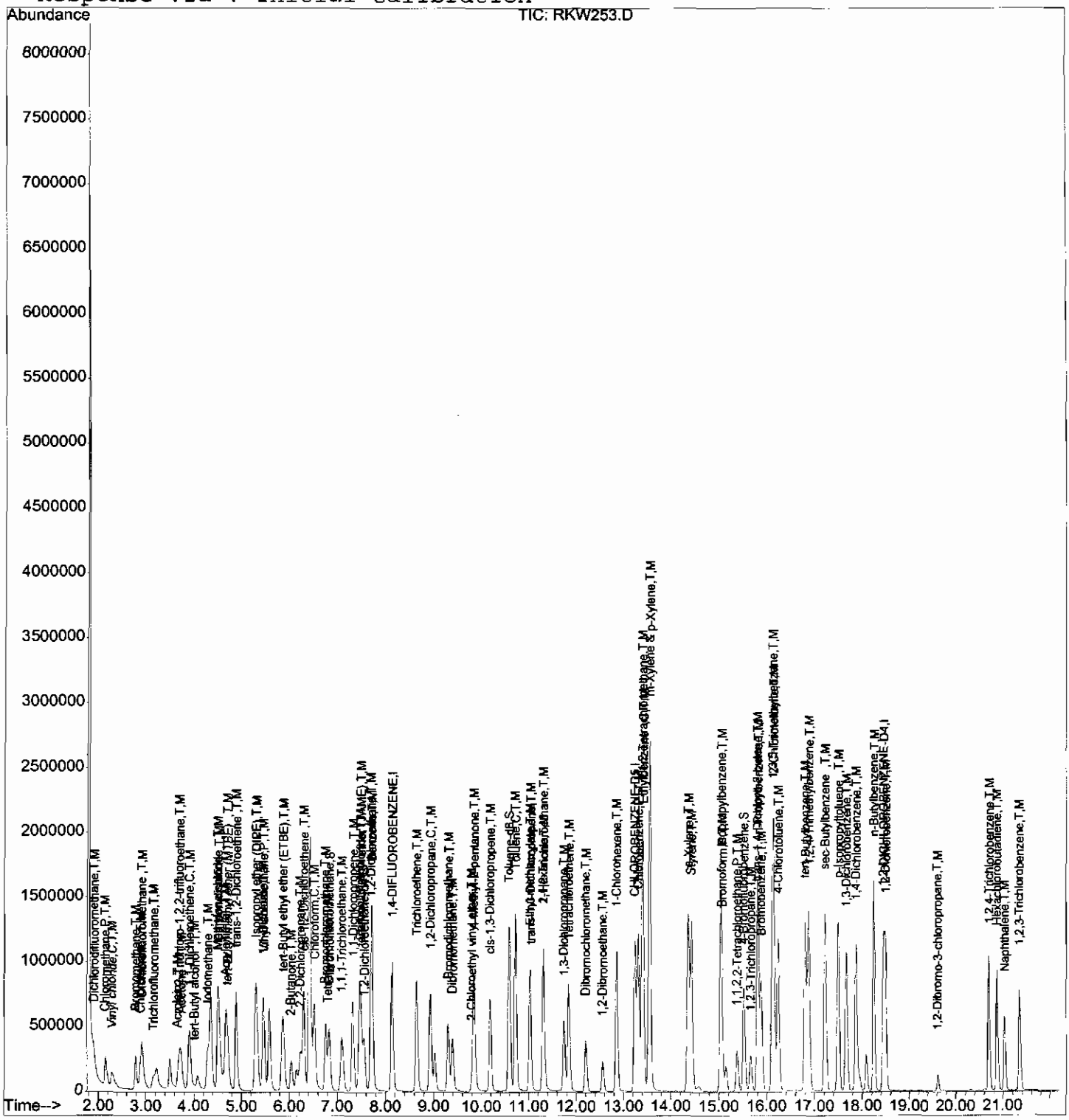
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
83)	1,2,4-Trimethylbenzene	16.87	105	1629572	9.62 ug/l	98
84)	sec-Butylbenzene	17.21	105	2141649	10.13 ug/l	100
85)	p-Isopropyltoluene	17.50	119	1722756	9.63 ug/l	100
86)	1,3-Dichlorobenzene	17.66	146	988289	9.96 ug/l	99
87)	1,4-Dichlorobenzene	17.87	146	973832	9.92 ug/l	99
89)	n-Butylbenzene	18.24	91	1613321	9.52 ug/l	100
90)	1,2-Dichlorobenzene	18.49	146	851287	9.84 ug/l	100
91)	1,2-Dibromo-3-chloropropan	19.61	157	57622	7.91 ug/l	99
92)	1,2,4-Trichlorobenzene	20.71	180	617904	9.58 ug/l	100
93)	Hexachlorobutadiene	20.87	225	350352	8.56 ug/l	100
94)	Naphthalene	21.03	128	816500	9.28 ug/l	100
95)	1,2,3-Trichlorobenzene	21.35	180	494503	9.31 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW253.D Vial: 3
Acq On : 14 Nov 2011 10:09 pm Operator: SD
Sample : VO06K13L Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 14 22:32 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKW254.D
Acq On : 14 Nov 2011 10:40 pm
Sample : VO06K13C
Misc : 10ppb 8260/50ppb KET-A-AN-TBA
MS Integration Params: RTE.P
Quant Time: Nov 14 23:03 2011

Vial: 4
Operator: SD
Inst : TO06
Multiplr: 1.00
Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.12	114	1468155	10.00 ug/l	0.00
38) CHLOROBENZENE-D5	13.23	117	1353699	10.00 ug/l	0.02
70) 1,2-DICHLOROBENZENE-D4	18.43	152	583445	10.00 ug/l	0.00
System Monitoring Compounds					
33) Dibromofluoromethane	6.81	111	500543	9.98 ug/l	0.00
Spiked Amount 10.000			Recovery = 99.80%		
37) 1,2-Dichloroethane-d4	7.54	65	406429	9.36 ug/l	0.00
Spiked Amount 10.000			Recovery = 93.60%		
52) Toluene-d8	10.57	98	1649986	10.01 ug/l	0.02
Spiked Amount 10.000			Recovery = 100.10%		
74) 4-Bromofluorobenzene	15.51	95	601204	10.16 ug/l	0.02
Spiked Amount 10.000			Recovery = 101.60%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.88	85	275866	8.59 ug/l	99
3) Chloromethane	2.14	50	440236	10.79 ug/l	98
4) Vinyl chloride	2.29	62	374362	10.66 ug/l	99
5) Bromomethane	2.78	94	290480	9.86 ug/l	94
6) Chloroethane	2.88	64	266402	10.69 ug/l	98
7) Dichlorofluoromethane	2.91	67	771818	9.80 ug/l	98
8) Trichlorofluoromethane	3.16	101	366803	7.99 ug/l	99
9) Acrolein	3.65	56	55093	33.89 ug/l	96
10) Acetone	3.74	43	291641	44.72 ug/l	98
11) 1,1,2-Trichloro-1,2,2-trif	3.69	151	236093	9.21 ug/l	97
12) 1,1-Dichloroethene	3.90	61	667709	9.24 ug/l	98
13) tert-Butyl alcohol	3.99	59	81209	36.52 ug/l #	1
16) Iodomethane	4.29	142	954313	10.49 ug/l	97
17) Methylene chloride	4.49	49	699764	9.27 ug/l	99
18) Acrylonitrile	4.66	53	464154	50.76 ug/l	98
19) Carbon disulfide	4.51	76	1329447	8.91 ug/l	99
20) tert-Butyl methyl ether (M	4.69	73	840339	9.12 ug/l	98
21) trans-1,2-Dichloroethene	4.88	61	721773	9.39 ug/l	99
22) Isopropyl ether (DIPE)	5.30	45	1834568	10.72 ug/l	98
23) Vinyl acetate	5.45	43	640143	11.87 ug/l	100
24) 1,1-Dichloroethane	5.45	63	954912	10.58 ug/l	98
26) tert-Butyl ethyl ether (ET	5.85	59	1249447	9.49 ug/l	100
27) 2-Butanone	6.02	43	604229	49.35 ug/l	100
28) 2,2-Dichloropropane	6.22	77	363200	7.94 ug/l	98
29) cis-1,2-Dichloroethene	6.29	96	542355	9.33 ug/l	98
30) Chloroform	6.50	83	857319	9.97 ug/l	100
31) Bromochloromethane	6.74	49	440514	10.51 ug/l	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKW254.D Vial: 4
Acq On : 14 Nov 2011 10:40 pm Operator: SD
Sample : VO06K13C Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 14 23:03 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
32)	Tetrahydrofuran	6.78	42	73756	10.33 ug/l	95
34)	1,1,1-Trichloroethane	7.08	97	558007	8.88 ug/l	98
36)	tert-Amyl methyl ether (TA	7.47	87	197058	9.05 ug/l	94
39)	1,1-Dichloropropene	7.30	110	219187	9.57 ug/l	98
40)	Carbon tetrachloride	7.45	119	461827	8.32 ug/l	100
41)	1,2-Dichloroethane	7.67	62	502938	9.59 ug/l	100
42)	Benzene	7.70	78	1890120	9.91 ug/l	99
43)	Trichloroethene	8.63	130	541711	9.92 ug/l	100
45)	1,2-Dichloropropane	8.91	63	548297	10.54 ug/l	95
47)	Bromodichloromethane	9.28	83	632193	9.35 ug/l	100
48)	Dibromomethane	9.37	93	248302	9.36 ug/l	96
49)	2-Chloroethyl vinyl ether	9.78	63	97234	10.08 ug/l	98
50)	4-Methyl-2-pentanone	9.81	43	1597645	52.52 ug/l	99
51)	cis-1,3-Dichloropropene	10.17	75	774702	9.85 ug/l	98
53)	Toluene	10.71	91	1916351	9.63 ug/l	100
54)	Ethyl methacrylate	11.00	69	431954	8.98 ug/l	98
55)	trans-1,3-Dichloropropene	11.02	75	565583	9.42 ug/l	97
56)	2-Hexanone	11.30	43	1011467	51.19 ug/l	98
57)	1,1,2-Trichloroethane	11.29	97	327828	9.99 ug/l	98
58)	1,3-Dichloropropane	11.72	76	607476	10.01 ug/l	99
59)	Tetrachloroethene	11.82	164	408532	9.13 ug/l	99
60)	Dibromochloromethane	12.18	129	417924	9.06 ug/l	98
62)	1,2-Dibromoethane	12.53	107	333214	8.99 ug/l	100
63)	1-Chlorohexane	12.83	91	681614	9.46 ug/l	99
64)	Chlorobenzene	13.29	112	1324844	10.14 ug/l	99
65)	1,1,1,2-Tetrachloroethane	13.38	131	439576	9.43 ug/l	97
66)	Ethylbenzene	13.40	91	2098732	9.69 ug/l	100
67)	m-Xylene & p-Xylene	13.53	91	3087727	18.85 ug/l	99
68)	o-Xylene	14.35	91	1696656	9.64 ug/l	98
69)	Styrene	14.41	104	1350257	9.38 ug/l	93
71)	Isopropylbenzene	15.03	105	2016818	10.31 ug/l	99
72)	Bromoform	15.05	173	239634	9.12 ug/l	98
73)	1,1,2,2-Tetrachloroethane	15.36	83	392402	10.14 ug/l	99
75)	1,2,3-Trichloropropane	15.64	110	96657	9.50 ug/l	98
76)	trans-1,4-Dichloro-2-buten	15.79	53	86842	8.82 ug/l	96
77)	n-Propylbenzene	15.79	91	2453835	9.89 ug/l	99
78)	Bromobenzene	15.86	156	519356	9.19 ug/l	97
79)	1,3,5-Trimethylbenzene	16.10	105	1577463	9.30 ug/l	99
80)	2-Chlorotoluene	16.13	91	1616685	9.55 ug/l	100
81)	4-Chlorotoluene	16.22	91	1380338	9.91 ug/l	100
82)	tert-Butylbenzene	16.78	134	380800	9.85 ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKW254.D Vial: 4
Acq On : 14 Nov 2011 10:40 pm Operator: SD
Sample : VO06K13C Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 14 23:03 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

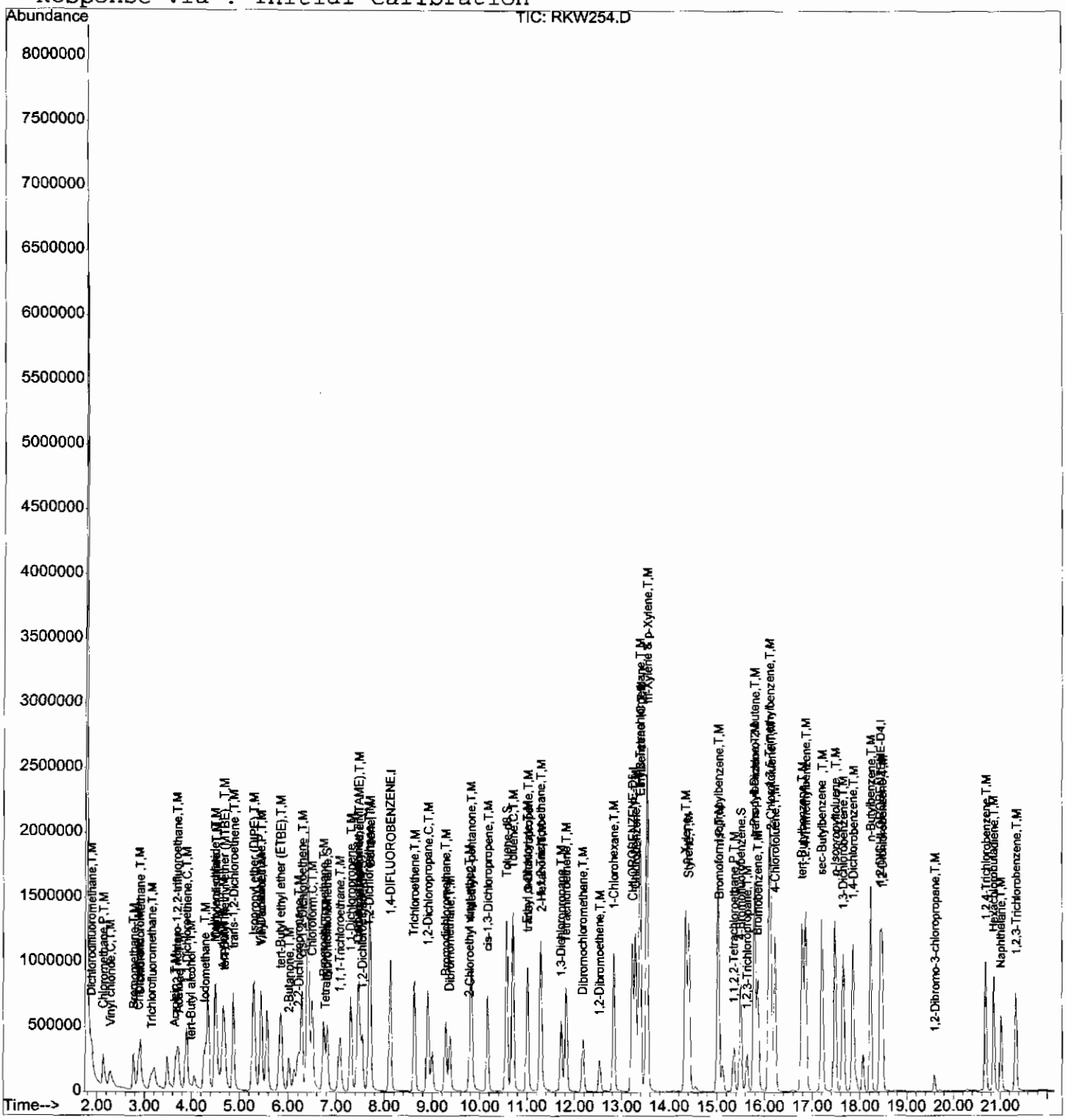
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
83)	1,2,4-Trimethylbenzene	16.86	105	1635260	9.54 ug/l	99
84)	sec-Butylbenzene	17.20	105	2107363	9.86 ug/l	100
85)	p-Isopropyltoluene	17.48	119	1708734	9.45 ug/l	99
86)	1,3-Dichlorobenzene	17.65	146	991809	9.89 ug/l	100
87)	1,4-Dichlorobenzene	17.85	146	966098	9.73 ug/l	99
89)	n-Butylbenzene	18.23	91	1604635	9.36 ug/l	99
90)	1,2-Dichlorobenzene	18.48	146	859896	9.83 ug/l	99
91)	1,2-Dibromo-3-chloropropan	19.61	157	61156	8.30 ug/l	99
92)	1,2,4-Trichlorobenzene	20.69	180	616145	9.44 ug/l	99
93)	Hexachlorobutadiene	20.86	225	339295	8.20 ug/l	99
94)	Naphthalene	21.02	128	849924	9.55 ug/l	100
95)	1,2,3-Trichlorobenzene	21.35	180	491184	9.14 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW254.D Vial: 4
Acq On : 14 Nov 2011 10:40 pm Operator: SD
Sample : VO06K13C Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 14 23:03 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKW001
Instrument ID: 06
GC Column:RTX502.2ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR ISTE 70.
SAS No.: SDG No.: 11K084
BFB Injection Date : 11/02/11
BFB Injection Time : 14:51
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.11
75	30.0 - 60.0% of mass 95	45.18
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.93
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	81.39
175	5.0 - 9.0% of mass 174	5.97(7.3)1
176	95.0 - 101.0% of mass 174	79.18(97.3)1
177	5.0 - 9.0% of mass 176	5.67(7.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSO,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	V006K021	RKW002	11/02/11	15:26
2	VSTD0.5	V006K022	RKW003	11/02/11	15:56
3	VSTD01	V006K023	RKW004	11/02/11	16:26
4	VSTD02	V006K024	RKW005	11/02/11	16:57
5	VSTD05	V006K025	RKW006	11/02/11	17:27
6	VSTD010	V006K026	RKW007	11/02/11	17:57
7	VSTD020	V006K027	RKW008	11/02/11	18:27
8	VSTD040	V006K029	RKW010	11/02/11	19:28
9	VSTD050	V006K0210	RKW011	11/02/11	19:59
10	VSTD100	V006K0211	RKW012	11/02/11	20:30
11	VSTD010	IV006K0201	RKW015	11/02/11	22:02

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :T006
Beginning DateTime :11/02/11 15:26
Spike Units :PPB
IC File :RKW007

Column Spec :RTX502.2 ID :0.25MM
Ending DateTime :11/02/11 20:30
HPChem Method :V006K02

M	IDX	Parameters	.3 15:26 RKW002	.5 15:56 RKW003	1 16:26 RKW004	2 16:57 RKW005	5 17:27 RKW006	10 17:57 RKW007	20 18:27 RKW008	40 19:28 RKW010	50 19:59 RKW011	100 20:30 RKW012	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	0	8.1195
	2	Dichlorodifluoromethane	0.150	0.222	0.182	0.229	0.245	0.228	0.235	0.233	0.229	0.233	0.219	13.43	1.8893
	3	Chloromethane	------	0.253	0.216	0.272	0.293	0.289	0.292	0.295	0.288	0.304	0.278	9.91	2.1408
	4	Vinyl chloride	------	0.226	0.205	0.249	0.277	0.248	0.231	------	------	------	0.239	10.17	2.2840
	5	Bromomethane	------	0.194	0.171	0.191	0.220	0.223	0.212	0.203	0.212	0.179	0.201	9.04	2.7749
	6	Chloroethane	------	0.178	0.132	0.161	0.188	0.187	0.184	0.178	0.170	0.151	0.170	11.04	2.8756
	7	Dichlorofluoromethane	0.574	0.543	0.523	0.540	0.558	0.570	0.559	0.531	0.507	0.460	0.536	6.33	2.9147
	8	Trichlorofluoromethane	------	0.345	0.249	0.327	0.358	0.329	0.330	0.304	0.295	0.276	0.313	11.12	3.1493
5	9	Acrolein	------	------	0.011	0.010	0.011	0.012	0.012	0.011	0.011	0.010	0.011	5.71	3.6501
5	10	Acetone	------	------	0.049	0.039	0.045	0.047	0.048	0.043	0.042	0.041	0.044	7.89	3.7300
	11	1,1,2-Trichloro-1,2,2-trifluoroethane	------	------	0.174	0.190	0.182	0.179	0.171	0.175	0.167	0.158	0.175	5.59	3.6947
	12	1,1-Dichloroethene	0.488	0.488	0.484	0.520	0.498	0.514	0.511	0.490	0.472	0.457	0.492	3.94	3.8871
5	13	tert-Butyl alcohol	------	------	------	0.010	0.012	0.016	0.018	0.018	0.017	------	0.015	23.18	3.9956
	14	Acetonitrile	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	15	Methyl acetate	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	16	Iodomethane	0.545	0.545	0.611	0.663	0.646	0.642	0.634	0.670	------	------	0.620	7.96	4.2797
	17	Methylene chloride	------	0.658	0.564	0.522	0.472	0.475	0.458	0.451	------	------	0.514	14.55	4.4933
5	18	Acrylonitrile	0.066	0.065	0.061	0.059	0.062	0.064	0.066	0.061	0.059	0.059	0.062	4.44	4.6599
	19	Carbon disulfide	0.638	1.028	1.075	1.082	1.110	1.048	1.046	1.077	1.048	1.015	1.017	13.38	4.5083
	20	tert-Butyl methyl ether (MTBE)	0.643	0.573	0.608	0.632	0.632	0.654	0.650	0.658	0.608	0.617	0.627	4.22	4.6911
	21	trans-1,2-Dichloroethene	0.502	0.511	0.509	0.550	0.521	0.557	0.538	0.536	0.512	0.502	0.524	3.83	4.8739
	22	Isopropyl ether (DIPE)	1.112	1.007	1.089	1.212	1.179	1.246	1.246	1.239	1.166	1.156	1.165	6.70	5.2960
	23	Vinyl acetate	------	0.288	0.284	0.329	0.410	0.400	0.412	0.414	0.386	0.383	0.367	14.44	5.4478
	24	1,1-Dichloroethane	0.590	0.594	0.595	0.661	0.610	0.641	0.633	0.622	0.607	0.598	0.615	3.81	5.4446
	25	2-Butanol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	26	tert-Butyl ethyl ether (ETBE)	0.833	0.772	0.842	0.893	0.918	0.943	0.956	0.978	0.914	0.917	0.896	7.05	5.8473
5	27	2-Butanone	0.088	0.073	0.080	0.076	0.084	0.086	0.091	0.087	0.084	0.085	0.083	6.57	6.0242
	28	2,2-Dichloropropane	0.351	0.316	0.331	0.342	0.321	0.317	0.304	0.296	0.280	0.258	0.312	9.07	6.2173
	29	cis-1,2-Dichloroethene	0.406	0.373	0.404	0.409	0.402	0.410	0.404	0.398	0.382	0.374	0.396	3.62	6.2768
	30	Chloroform	0.577	0.542	0.581	0.617	0.594	0.615	0.601	0.598	0.570	0.562	0.586	4.07	6.4997
	31	Bromochloromethane	0.248	0.253	0.277	0.298	0.295	0.308	0.302	0.302	0.287	0.285	0.286	7.19	6.7375
	32	Tetrahydrofuran	------	------	0.044	0.057	0.044	0.048	0.050	0.051	0.047	0.048	0.049	8.55	6.7857
	33	Dibromofluoromethane	------	------	0.335	0.355	0.362	0.349	0.334	0.342	0.329	0.326	0.341	3.75	6.8118
	34	1,1,1-Trichloroethane	0.447	0.405	0.428	0.451	0.431	0.434	0.420	0.438	0.418	0.410	0.428	3.53	7.0778
	35	Cyclohexane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	36	tert-Amyl methyl ether (TAME)	0.132	0.131	0.146	0.147	0.151	0.156	0.157	0.162	0.150	0.151	0.148	6.73	7.4657
	37	1,2-Dichloroethane-d4	------	------	0.292	0.305	0.315	0.303	0.284	0.297	0.283	0.287	0.296	3.81	7.5399
	38	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	0	13.2169
	39	1,1-Dichloropropene	0.162	0.172	0.172	0.176	0.166	0.174	0.171	0.166	0.163	0.171	0.169	2.79	7.3022
	40	Carbon tetrachloride	0.396	0.409	0.414	0.441	0.411	0.416	0.408	0.402	0.392	0.411	0.410	3.29	7.4493
	41	1,2-Dichloroethane	0.345	0.371	0.384	0.392	0.389	0.413	0.406	0.397	0.377	0.400	0.387	5.02	7.6752
	42	Benzene	1.456	1.396	1.407	1.478	1.400	1.451	1.421	1.373	1.334	1.366	1.408	3.18	7.7020
	43	Trichloroethene	0.398	0.383	0.378	0.411	0.396	0.418	0.418	0.410	0.401	0.420	0.403	3.58	8.6263
	44	Methylcyclohexane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	45	1,2-Dichloropropane	0.361	0.373	0.376	0.391	0.380	0.401	0.395	0.390	0.379	0.396	0.384	3.22	8.9072
20	46	1,4-Dioxane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	47	Bromodichloromethane	0.482	0.483	0.481	0.500	0.491	0.519	0.516	0.509	0.493	0.523	0.500	3.22	9.2787
	48	Dibromomethane	0.194	0.185	0.188	0.199	0.194	0.201	0.201	0.201	0.195	0.203	0.196	3.06	9.3679
	49	2-Chloroethyl vinyl ether	------	------	0.048	0.052	0.060	0.060	0.066	0.079	0.077	------	0.063	18.63	9.7754
5	50	4-Methyl-2-pentanone	0.209	0.215	0.221	0.207	0.229	0.236	0.245	0.226	0.224	0.235	0.225	5.44	9.8182
	51	cis-1,3-Dichloropropene	0.530	0.536	0.550	0.590	0.586	0.618	0.611	0.600	0.580	0.606	0.581	5.45	10.1615
	52	Toluene-d8	------	------	1.232	1.304	1.285	1.241	1.159	1.170	1.165	1.185	1.218	4.63	10.5623
	53	Toluene	1.502	1.417	1.483	1.549	1.473	1.522	1.496	1.444	1.402	1.405	1.469	3.44	10.6965
	54	Ethyl methacrylate	0.378	0.339	0.353	0.351	0.341	0.364	0.361	0.361	0.348	0.356	0.355	3.25	10.9981
	55	trans-1,3-Dichloropropene	0.423	0.382	0.408	0.448	0.453	0.475	0.471	0.464	0.447	0.462	0.444	6.79	11.0085
5	56	2-Hexanone	0.146	0.142	0.145	0.137	0.148	0.151	0.157	0.145	0.143	0.147	0.146	3.69	11.2939
	57	1,1,2-Trichloroethane	0.225	0.244	0.243	0.242	0.238	0.256	0.252	0.248	0.236	0.240	0.242	3.56	11.2775
	58	1,3-Dichloropropane	0.416	0.410	0.433	0.450	0.447	0.472	0.474	0.470	0.449	0.464	0.448	5.10	11.7160

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59	Tetrachloroethene	0.309	0.318	0.326	0.353	0.336	0.347	0.341	0.330	0.321	0.323	0.330	4.18	11.8200
60	Dibromochloromethane	0.305	0.296	0.328	0.345	0.339	0.361	0.364	0.363	0.350	0.356	0.341	7.07	12.1766
61	2-Ethyl-1-butanol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
62	1,2-Dibromoethane	0.232	0.237	0.260	0.273	0.273	0.293	0.295	0.297	0.286	0.292	0.274	8.68	12.5348
63	1-Chlorohexane	0.561	0.494	0.500	0.566	0.542	0.552	0.547	0.536	0.524	0.501	0.532	4.96	12.8305
64	Chlorobenzene	0.877	0.892	0.936	1.027	0.986	1.018	1.014	0.999	0.969	0.934	0.965	5.52	13.2912
65	1,1,1,2-Tetrachloroethane	0.336	0.332	0.349	0.358	0.350	0.363	0.353	0.346	0.337	0.321	0.344	3.70	13.3714
66	Ethylbenzene	1.636	1.548	1.639	1.737	1.641	1.661	1.633	1.572	1.521	1.408	1.600	5.69	13.3952
2 67	m-Xylene & p-Xylene	1.252	1.209	1.233	1.341	1.254	1.258	1.232	1.174	1.136	1.010	1.210	7.35	13.5290
68	o-Xylene	1.292	1.245	1.273	1.389	1.321	1.365	1.346	1.321	1.284	1.167	1.300	4.93	14.3463
69	Styrene	0.993	0.957	1.025	1.133	1.103	1.135	1.127	1.105	1.074	0.980	1.063	6.43	14.4058
70	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	0	18.4331
71	Isopropylbenzene	3.355	3.042	3.148	3.567	3.383	3.537	3.461	3.419	3.330	3.280	3.352	4.88	15.0151
72	Bromoform	0.401	0.385	0.404	0.443	0.455	0.484	0.483	0.486	0.461	0.500	0.450	9.03	15.0448
73	1,1,2,2-Tetrachloroethane	0.687	0.590	0.624	0.645	0.636	0.687	0.691	0.704	0.662	0.704	0.663	5.79	15.3569
74	4-Bromofluorobenzene	------	------	1.007	1.045	1.039	1.027	0.977	1.004	0.992	1.022	1.014	2.29	15.4943
75	1,2,3-Trichloropropane	0.175	0.150	0.171	0.166	0.168	0.184	0.181	0.185	0.175	0.189	0.174	6.61	15.6407
76	trans-1,4-Dichloro-2-butene	0.126	0.146	0.162	0.171	0.166	0.179	0.181	0.190	0.177	0.190	0.169	11.80	15.7730
77	n-Propylbenzene	4.081	3.959	4.124	4.532	4.340	4.452	4.396	4.338	4.200	4.106	4.253	4.36	15.7879
78	Bromobenzene	0.913	0.872	0.946	1.022	0.963	1.021	1.004	1.001	0.967	0.982	0.969	5.00	15.8622
79	1,3,5-Trimethylbenzene	2.953	2.641	2.799	3.108	2.995	3.064	3.001	2.938	2.846	2.719	2.906	5.21	16.1000
80	2-Chlorotoluene	2.938	2.812	2.825	3.125	2.961	3.044	2.956	2.889	2.787	2.669	2.901	4.58	16.1178
81	4-Chlorotoluene	2.422	2.243	2.305	2.510	2.404	2.468	2.413	2.426	2.337	2.345	2.387	3.34	16.2188
82	tert-Butylbenzene	0.639	0.595	0.610	0.697	0.674	0.705	0.695	0.684	0.670	0.654	0.662	5.66	16.7850
83	1,2,4-Trimethylbenzene	2.885	2.747	2.901	3.135	3.000	3.091	3.012	2.968	2.861	2.763	2.936	4.39	16.8578
84	sec-Butylbenzene	3.642	3.269	3.494	3.974	3.776	3.879	3.773	3.719	3.620	3.503	3.665	5.64	17.1997
85	p-Isopropyltoluene	3.066	2.764	2.935	3.341	3.192	3.286	3.198	3.157	3.080	2.989	3.101	5.57	17.4805
86	1,3-Dichlorobenzene	1.641	1.538	1.604	1.821	1.779	1.829	1.794	1.779	1.721	1.689	1.720	5.76	17.6455
87	1,4-Dichlorobenzene	1.673	1.545	1.607	1.798	1.731	1.801	1.763	1.759	1.690	1.655	1.702	4.94	17.8536
88	Benzyl chloride	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
89	n-Butylbenzene	2.987	2.591	2.769	3.190	3.049	3.080	3.014	2.980	2.890	2.830	2.938	5.88	18.2251
90	1,2-Dichlorobenzene	1.527	1.331	1.416	1.584	1.517	1.574	1.550	1.547	1.494	1.453	1.499	5.28	18.4777
91	1,2-Dibromo-3-chloropropane	0.107	0.112	0.101	0.125	0.120	0.133	0.137	0.146	0.136	0.144	0.126	12.37	19.5982
92	1,2,4-Trichlorobenzene	0.976	0.847	0.986	1.146	1.154	1.243	1.212	1.247	1.188	1.185	1.118	12.05	20.6860
93	Hexachlorobutadiene	0.718	0.594	0.670	0.779	0.727	0.754	0.703	0.733	0.716	0.700	0.709	7.11	20.8555
94	Naphthalene	1.369	1.251	1.300	1.457	1.504	1.683	1.689	1.732	1.641	1.625	1.525	11.41	21.0189
95	1,2,3-Trichlorobenzene	0.772	0.746	0.837	0.950	0.941	1.031	0.994	1.022	0.968	0.952	0.921	10.99	21.3325

Spike Amount = Nominal Amount * M
Ave_%RSD : 6.7 Max_%RSD : 23.2

Use Least Square Linear Regression with weighting factor of inverse concentration for comps with %_RSD > 15
Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
13	tert-Butyl alcohol	-0.00912	0.01764	0.9982
49	2-Chloroethyl vinyl ether	-0.00474	0.07598	0.9964

SS 11/6/11

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Compound List Report TO06

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
Total Cpnds : 95

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-DIFLUOROBENZENE	114	8.12	1.000	A	1	A	B
2	T	Dichlorodifluoromethane	85	1.90	0.234	A	1	A	B
3	T	Chloromethane	50	2.15	0.265	A	1	A	B
4	T	Vinyl chloride	62	2.28	0.281	A	1	A	B
5	T	Bromomethane	94	2.79	0.344	A	1	A	B
6	T	Chloroethane	64	2.88	0.354	A	2	A	B
7	T	Dichlorofluoromethane	67	2.92	0.360	A	1	A	B
8	T	Trichlorofluoromethane	101	3.15	0.389	A	1	A	B
9	T	Acrolein	56	3.65	0.449	A	1	A	B
10	T	Acetone	43	3.73	0.460	A	2	A	B
11	T	1,1,2-Trichloro-1,2,2-trifluor	151	3.71	0.456	A	1	A	B
12	T	1,1-Dichloroethene	61	3.88	0.478	A	2	A	B
13	T	tert-Butyl alcohol	59	3.99	0.491	L	1	A	B
14	T	Acetonitrile	41	0.00	0.000	A	2	A	B
15	T	Methyl acetate	43	0.00	0.000	A	1	A	B
16	T	Iodomethane	142	4.27	0.526	A	1	A	B
17	T	Methylene chloride	49	4.49	0.553	A	2	A	B
18	T	Acrylonitrile	53	4.66	0.574	A	2	A	B
19	T	Carbon disulfide	76	4.51	0.555	A	1	A	B
20	T	tert-Butyl methyl ether (MTBE)	73	4.69	0.577	A	1	A	B
21	T	trans-1,2-Dichloroethene	61	4.88	0.601	A	2	A	B
22	T	Isopropyl ether (DIPE)	45	5.30	0.652	A	1	A	B
23	T	Vinyl acetate	43	5.44	0.671	A	1	A	B
24	T	1,1-Dichloroethane	63	5.44	0.671	A	2	A	B
25	T	2-Butanol	45	5.87	0.723	A	1	A	B
26	T	tert-Butyl ethyl ether (ETBE)	59	5.85	0.720	A	1	A	B
27	T	2-Butanone	43	6.02	0.742	A	1	A	B
28	T	2,2-Dichloropropane	77	6.22	0.766	A	2	A	B
29	T	cis-1,2-Dichloroethene	96	6.28	0.773	A	2	A	B
30	T	Chloroform	83	6.50	0.800	A	2	A	B
31	T	Bromochloromethane	49	6.74	0.830	A	2	A	B
32	T	Tetrahydrofuran	42	6.78	0.835	A	2	A	B
33	S	Dibromofluoromethane	111	6.81	0.839	A	2	A	B
34	T	1,1,1-Trichloroethane	97	7.08	0.872	A	2	A	B
35	T	Cyclohexane	56	0.00	0.000	A	2	A	B
36	T	tert-Amyl methyl ether (TAME)	87	7.47	0.919	A	2	A	B
37	S	1,2-Dichloroethane-d4	65	7.54	0.929	A	1	A	B
38	I	CHLOROBENZENE-D5	117	13.22	1.000	A	2	A	B
39	T	1,1-Dichloropropene	110	7.30	0.552	A	1	A	B
40	T	Carbon tetrachloride	119	7.45	0.564	A	1	A	B
41	T	1,2-Dichloroethane	62	7.67	0.581	A	1	A	B
42	T	Benzene	78	7.70	0.583	A	2	A	B
43	T	Trichloroethene	130	8.62	0.653	A	3	A	B
44	T	Methylcyclohexane	83	0.00	0.000	A	2	A	B
45	T	1,2-Dichloropropane	63	8.91	0.674	A	2	A	B
46	T	1,4-Dioxane	88	0.00	0.000	A	1	A	B
47	T	Bromodichloromethane	83	9.28	0.702	A	1	A	B
48	T	Dibromomethane	93	9.37	0.709	A	2	A	B
49	T	2-Chloroethyl vinyl ether	63	9.77	0.739	L	2	A	B
50	T	4-Methyl-2-pentanone	43	9.81	0.743	A	3	A	B
51	T	cis-1,3-Dichloropropene	75	10.16	0.768	A	3	A	B
52	S	Toluene-d8	98	10.56	0.799	A	1	A	B

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53		T	Toluene	91	10.69	0.809	A	1	A	B
54		T	Ethyl methacrylate	69	11.00	0.832	A	2	A	B
55		T	trans-1,3-Dichloropropene	75	11.00	0.832	A	2	A	B
56		T	2-Hexanone	43	11.28	0.854	A	2	A	B
57		T	1,1,2-Trichloroethane	97	11.28	0.854	A	3	A	B
58		T	1,3-Dichloropropane	76	11.72	0.886	A	1	A	B
59		T	Tetrachloroethene	164	11.82	0.894	A	3	A	B
60		T	Dibromochloromethane	129	12.18	0.921	A	1	A	B
61		T	2-Ethyl-1-butanol	43	0.00	0.000	A	3	A	B
62		T	1,2-Dibromoethane	107	12.53	0.948	A	1	A	B
63		T	1-Chlorohexane	91	12.83	0.971	A	3	A	B
64		T	Chlorobenzene	112	13.29	1.006	A	3	A	B
65		T	1,1,1,2-Tetrachloroethane	131	13.37	1.011	A	3	A	B
66		T	Ethylbenzene	91	13.39	1.013	A	1	A	B
67		T	m-Xylene & p-Xylene	91	13.53	1.024	A	1	A	B
68		T	o-Xylene	91	14.35	1.085	A	1	A	B
69		T	Styrene	104	14.41	1.090	A	2	A	B
70	I		1,2-DICHLOROBENZENE-D4	152	18.43	1.000	A	1	A	B
71		T	Isopropylbenzene	105	15.01	0.815	A	3	A	B
72		T	Bromoform	173	15.04	0.816	A	2	A	B
73		T	1,1,2,2-Tetrachloroethane	83	15.36	0.833	A	1	A	B
74		S	4-Bromofluorobenzene	95	15.49	0.840	A	2	A	B
75		T	1,2,3-Trichloropropane	110	15.64	0.848	A	2	A	B
76		T	trans-1,4-Dichloro-2-butene	53	15.77	0.856	A	1	A	B
77		T	n-Propylbenzene	91	15.79	0.856	A	2	A	B
78		T	Bromobenzene	156	15.86	0.861	A	2	A	B
79		T	1,3,5-Trimethylbenzene	105	16.10	0.873	A	2	A	B
80		T	2-Chlorotoluene	91	16.11	0.874	A	1	A	B
81		T	4-Chlorotoluene	91	16.22	0.880	A	1	A	B
82		T	tert-Butylbenzene	134	16.78	0.911	A	2	A	B
83		T	1,2,4-Trimethylbenzene	105	16.86	0.915	A	1	A	B
84		T	sec-Butylbenzene	105	17.20	0.933	A	1	A	B
85		T	p-Isopropyltoluene	119	17.47	0.948	A	2	A	B
86		T	1,3-Dichlorobenzene	146	17.65	0.957	A	2	A	B
87		T	1,4-Dichlorobenzene	146	17.85	0.969	A	2	A	B
88		T	Benzyl chloride	91	0.00	0.000	A	3	A	B
89		T	n-Butylbenzene	91	18.22	0.989	A	2	A	B
90		T	1,2-Dichlorobenzene	146	18.48	1.002	A	2	A	B
91		T	1,2-Dibromo-3-chloropropane	157	19.59	1.063	A	2	A	B
92		T	1,2,4-Trichlorobenzene	180	20.69	1.123	A	2	A	B
93		T	Hexachlorobutadiene	225	20.86	1.131	A	2	A	B
94		T	Naphthalene	128	21.02	1.140	A	1	A	B
95		T	1,2,3-Trichlorobenzene	180	21.33	1.157	A	2	A	B

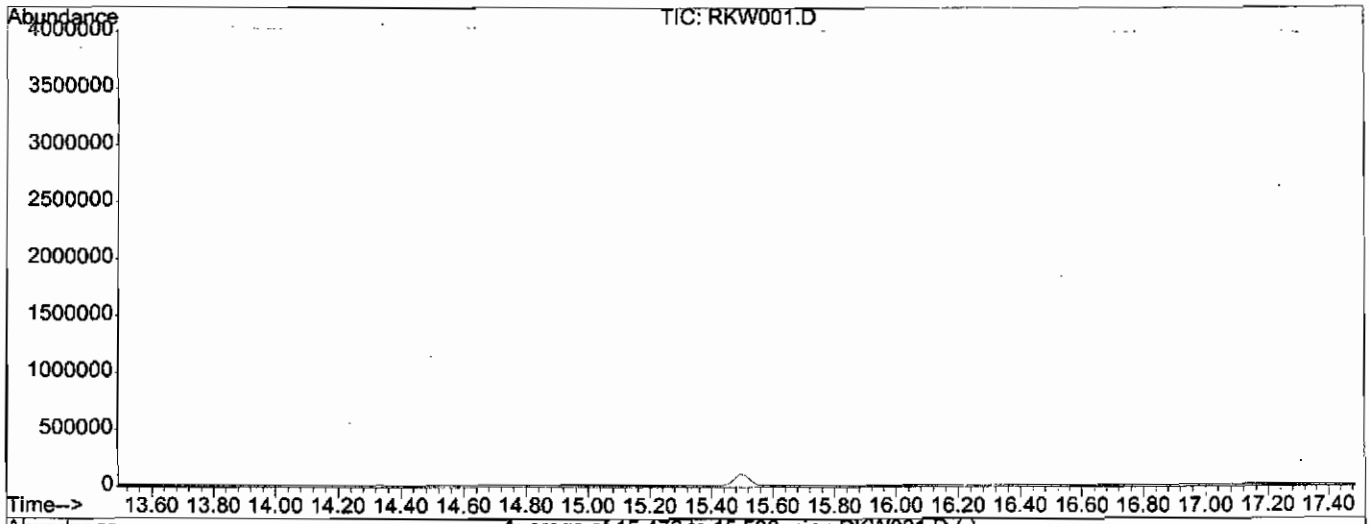
Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

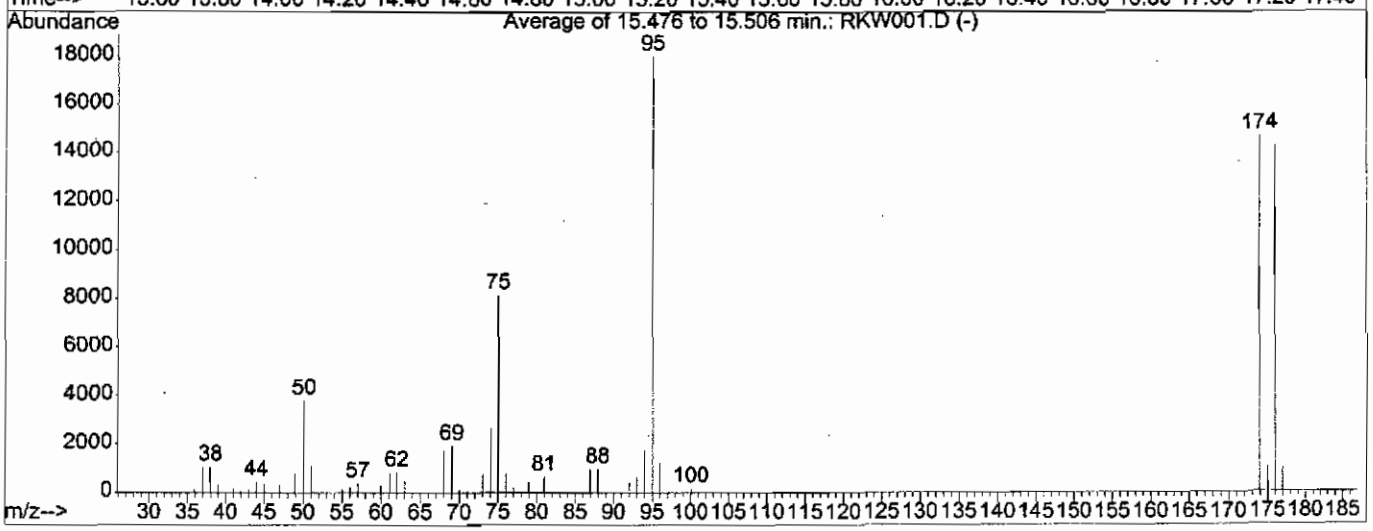
VO06K02.M Fri Nov 04 11:24:05 2011

SA 11/16/11

BFB

Data File : D:\HPCHEM\1\DATA\11K02\RKW001.D Vial: 1
Acq On : 2 Nov 2011 2:51 pm Operator: SD
Sample : BFB06K01 Inst : TO06
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: RTE.P
Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260





AutoFind: Scans 924, 925, 926; Background Corrected with Scan 919

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.1	3806	PASS
75	95	30	60	45.2	8146	PASS
95	95	100	100	100.0	18029	PASS
96	95	5	9	6.9	1249	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	81.4	14673	PASS
175	174	5	9	7.3	1077	PASS
176	174	95	101	97.3	14275	PASS
177	176	5	9	7.2	1022	PASS

RKW001.D VO06K02.M Fri Nov 04 09:34:31 2011

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW002.D Vial: 2
Acq On : 2 Nov 2011 3:26 pm Operator: SD
Sample : VO06K021 Inst : TO06
Misc : 0.3ppb 8260/1.5ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:49 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.12	114	1121067	10.00 ug/l	0.00
38) CHLOROBENZENE-D5	13.22	117	1005363	10.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	18.43	152	442696	10.00 ug/l	0.00
System Monitoring Compounds					
33) Dibromofluoromethane	0.00	111	0d	0.00 ug/l	
Spiked Amount 10.000			Recovery	= 0.00%	
37) 1,2-Dichloroethane-d4	7.54	65	8144	0.25 ug/l	0.00
Spiked Amount 10.000			Recovery	= 2.50%	
52) Toluene-d8	0.00	98	0d	0.00 ug/l	
Spiked Amount 10.000			Recovery	= 0.00%	
74) 4-Bromofluorobenzene	0.00	95	0d	0.00 ug/l	
Spiked Amount 10.000			Recovery	= 0.00%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.90	85	5033	0.21 ug/l	73
7) Dichlorofluoromethane	2.92	67	19300	0.32 ug/l	87
12) 1,1-Dichloroethene	3.88	61	16429	0.30 ug/l	98
16) Iodomethane	4.27	142	18339	0.26 ug/l	99
18) Acrylonitrile	4.66	53	11167	1.60 ug/l	91
19) Carbon disulfide	4.51	76	21444	0.19 ug/l	89
20) tert-Butyl methyl ether (M	4.70	73	21642	0.31 ug/l	93
21) trans-1,2-Dichloroethene	4.87	61	16878	0.29 ug/l	96
22) Isopropyl ether (DIPE)	5.30	45	37396	0.29 ug/l	99
24) 1,1-Dichloroethane	5.45	63	19855	0.29 ug/l	95
26) tert-Butyl ethyl ether (ET	5.85	59	28001	0.28 ug/l	98
27) 2-Butanone	6.02	43	14806	1.58 ug/l	84
28) 2,2-Dichloropropane	6.22	77	11797	0.34 ug/l	94
29) cis-1,2-Dichloroethene	6.28	96	13656	0.31 ug/l	89
30) Chloroform	6.50	83	19402	0.30 ug/l	96
31) Bromochloromethane	6.74	49	8354	0.26 ug/l	97
34) 1,1,1-Trichloroethane	7.08	97	15034	0.31 ug/l	93
39) 1,1-Dichloropropene	7.30	110	4875	0.29 ug/l	99
40) Carbon tetrachloride	7.45	119	11941	0.29 ug/l	100
41) 1,2-Dichloroethane	7.67	62	10417	0.27 ug/l	97
42) Benzene	7.69	78	43921	0.31 ug/l	98
43) Trichloroethene	8.63	130	12011	0.30 ug/l	96
45) 1,2-Dichloropropane	8.91	63	10892	0.28 ug/l	97
47) Bromodichloromethane	9.28	83	14527	0.29 ug/l	94
48) Dibromomethane	9.37	93	5841	0.30 ug/l	88
50) 4-Methyl-2-pentanone	9.83	43	31586	1.40 ug/l	96
51) cis-1,3-Dichloropropene	10.17	75	16000	0.27 ug/l	95

(#) = qualifier out of range (m) = manual integration

SS 11/6/11

2056

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW002.D Vial: 2
Acq On : 2 Nov 2011 3:26 pm Operator: SD
Sample : VO06K021 Inst : TO06
Misc : 0.3ppb 8260/1.5ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:49 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

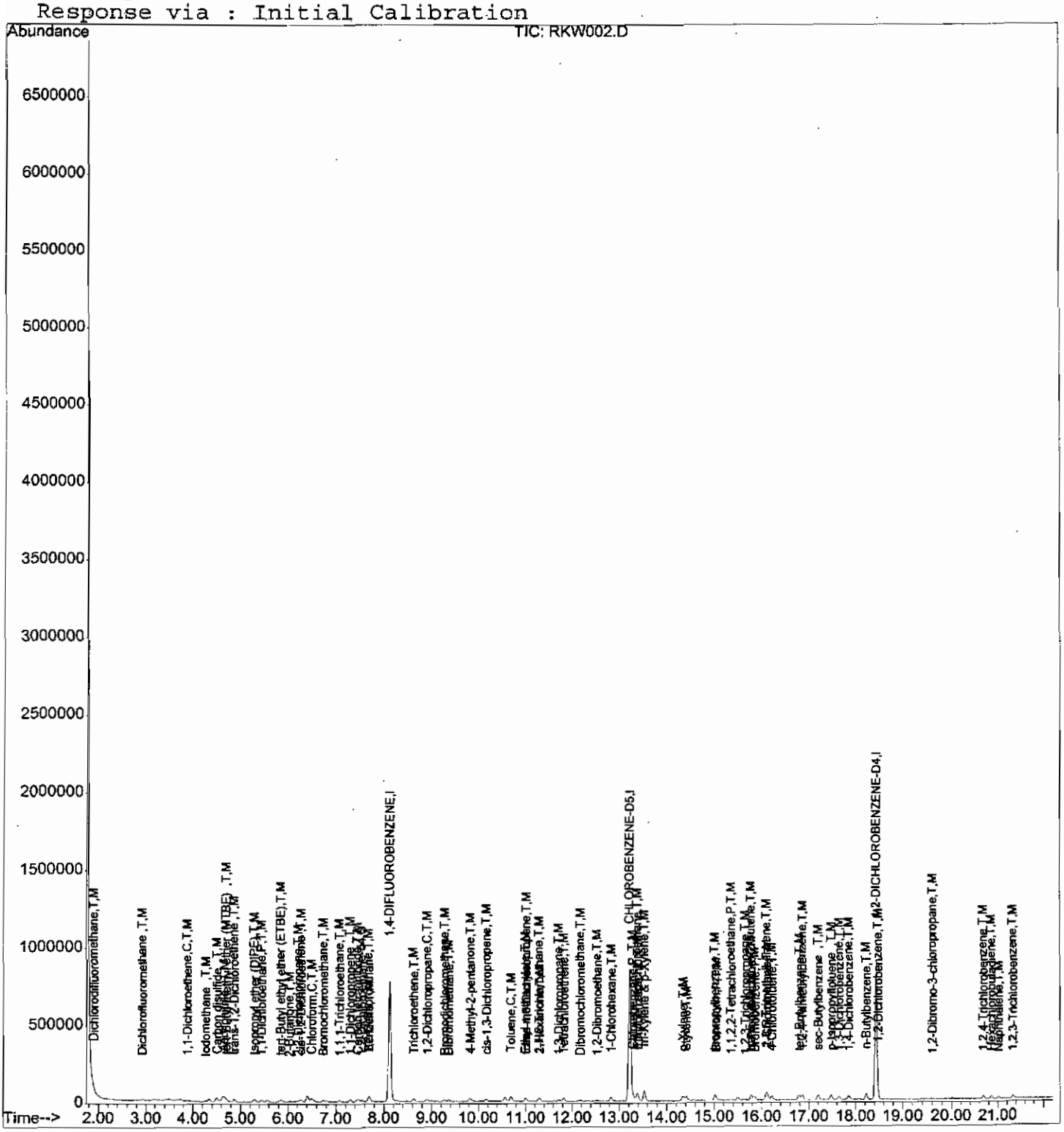
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
53)	Toluene	10.69	91	45301	0.31 ug/l		96
54)	Ethyl methacrylate	11.00	69	11410	0.32 ug/l		89
55)	trans-1,3-Dichloropropene	11.02	75	12755	0.29 ug/l		91
56)	2-Hexanone	11.30	43	22056	1.50 ug/l		87
57)	1,1,2-Trichloroethane	11.29	97	6792	0.28 ug/l		90
58)	1,3-Dichloropropane	11.72	76	12536	0.28 ug/l		96
59)	Tetrachloroethene	11.82	164	9319	0.28 ug/l		91
60)	Dibromochloromethane	12.18	129	9207	0.27 ug/l		95
62)	1,2-Dibromoethane	12.53	107	6996	0.25 ug/l		91
63)	1-Chlorohexane	12.83	91	16929	0.32 ug/l		91
64)	Chlorobenzene	13.29	112	26445	0.27 ug/l		97
65)	1,1,1,2-Tetrachloroethane	13.38	131	10130	0.29 ug/l	#	1
66)	Ethylbenzene	13.40	91	49357	0.31 ug/l		96
67)	m-Xylene & p-Xylene	13.53	91	75515	0.62 ug/l		98
68)	o-Xylene	14.35	91	38953	0.30 ug/l		99
69)	Styrene	14.41	104	29953	0.28 ug/l		92
71)	Isopropylbenzene	15.02	105	44551	0.30 ug/l		98
72)	Bromoform	15.05	173	5329	0.27 ug/l		89
73)	1,1,2,2-Tetrachloroethane	15.36	83	9127	0.31 ug/l		93
75)	1,2,3-Trichloropropane	15.65	110	2324	0.30 ug/l		89
76)	trans-1,4-Dichloro-2-buten	15.77	53	1680	0.22 ug/l	#	35
77)	n-Propylbenzene	15.79	91	54203	0.29 ug/l		98
78)	Bromobenzene	15.86	156	12123	0.28 ug/l		89
79)	1,3,5-Trimethylbenzene	16.10	105	39214	0.30 ug/l		99
80)	2-Chlorotoluene	16.12	91	39022	0.30 ug/l		96
81)	4-Chlorotoluene	16.22	91	32163	0.30 ug/l		97
82)	tert-Butylbenzene	16.80	134	8488	0.29 ug/l	#	87
83)	1,2,4-Trimethylbenzene	16.86	105	38314	0.29 ug/l		98
84)	sec-Butylbenzene	17.20	105	48368	0.30 ug/l		99
85)	p-Isopropyltoluene	17.48	119	40717	0.30 ug/l		97
86)	1,3-Dichlorobenzene	17.65	146	21798	0.29 ug/l		99
87)	1,4-Dichlorobenzene	17.85	146	22213	0.29 ug/l		98
89)	n-Butylbenzene	18.23	91	39673	0.31 ug/l		97
90)	1,2-Dichlorobenzene	18.48	146	20278	0.31 ug/l		84
91)	1,2-Dibromo-3-chloropropan	19.61	157	1423	0.25 ug/l	#	53
92)	1,2,4-Trichlorobenzene	20.68	180	12959	0.26 ug/l		100
93)	Hexachlorobutadiene	20.86	225	9534	0.30 ug/l		96
94)	Naphthalene	21.02	128	18188	0.27 ug/l		97
95)	1,2,3-Trichlorobenzene	21.33	180	10247	0.25 ug/l		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K02\RKW002.D Vial: 2
Acq On : 2 Nov 2011 3:26 pm Operator: SD
Sample : VO06K021 Inst : TO06
Misc : 0.3ppb 8260/1.5ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:49 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



SY 11/16/11

2058

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW003.D Vial: 3
Acq On : 2 Nov 2011 3:56 pm Operator: SD
Sample : VO06K022 Inst : TO06
Misc : 0.5ppb 8260/2.5ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:50 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.12	114	1127976	10.00 ug/l	0.00
38) CHLOROBENZENE-D5	13.22	117	991782	10.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	18.43	152	447684	10.00 ug/l	0.00

System Monitoring Compounds					
33) Dibromofluoromethane	0.00	111	0d	0.00 ug/l	
Spiked Amount 10.000			Recovery	= 0.00%	
37) 1,2-Dichloroethane-d4	0.00	65	0d	0.00 ug/l	
Spiked Amount 10.000			Recovery	= 0.00%	
52) Toluene-d8	0.00	98	0d	0.00 ug/l	
Spiked Amount 10.000			Recovery	= 0.00%	
74) 4-Bromofluorobenzene	0.00	95	0d	0.00 ug/l	
Spiked Amount 10.000			Recovery	= 0.00%	

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.88	85	12547	0.51 ug/l	84
3) Chloromethane	2.15	50	14279	0.46 ug/l	93
4) Vinyl chloride	2.29	62	12755	0.47 ug/l	90
5) Bromomethane	2.79	94	10966	0.48 ug/l	97
6) Chloroethane	2.89	64	10050	0.52 ug/l #	61
7) Dichlorofluoromethane	2.92	67	30629	0.51 ug/l	74
8) Trichlorofluoromethane	3.16	101	19445	0.55 ug/l	95
12) 1,1-Dichloroethene	3.88	61	27495	0.50 ug/l	94
16) Iodomethane	4.29	142	30739	0.44 ug/l	97
17) Methylene chloride	4.49	49	37092	0.64 ug/l	99
18) Acrylonitrile	4.67	53	18213	2.59 ug/l	90
19) Carbon disulfide	4.51	76	57988	0.51 ug/l	96
20) tert-Butyl methyl ether (M	4.70	73	32318	0.46 ug/l	79
21) trans-1,2-Dichloroethene	4.88	61	28819	0.49 ug/l	96
22) Isopropyl ether (DIPE)	5.30	45	56776	0.43 ug/l	99
23) Vinyl acetate	5.46	43	16221	0.39 ug/l	99
24) 1,1-Dichloroethane	5.44	63	33480	0.48 ug/l	100
26) tert-Butyl ethyl ether (ET	5.86	59	43560	0.43 ug/l	100
27) 2-Butanone	6.04	43	20614	2.19 ug/l	91
28) 2,2-Dichloropropane	6.22	77	17846	0.51 ug/l	97
29) cis-1,2-Dichloroethene	6.28	96	21013	0.47 ug/l	93
30) Chloroform	6.50	83	30547	0.46 ug/l	95
31) Bromochloromethane	6.74	49	14278	0.44 ug/l	97
34) 1,1,1-Trichloroethane	7.08	97	22823	0.47 ug/l	97
36) tert-Amyl methyl ether (TA	7.47	87	7415	0.44 ug/l #	90
39) 1,1-Dichloropropene	7.30	110	8536	0.51 ug/l	97
40) Carbon tetrachloride	7.44	119	20285	0.50 ug/l	99

(#) = qualifier out of range (m) = manual integration
RKW003.D VO06K02.M Fri Nov 04 11:52:21 2011 SW 11/6/11

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW003.D Vial: 3
Acq On : 2 Nov 2011 3:56 pm Operator: SD
Sample : VO06K022 Inst : TO06
Misc : 0.5ppb 8260/2.5ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:50 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
41)	1,2-Dichloroethane	7.69	62	18393	0.48 ug/l		98
42)	Benzene	7.70	78	69248	0.50 ug/l		99
43)	Trichloroethene	8.64	130	19017	0.48 ug/l		98
45)	1,2-Dichloropropane	8.91	63	18520	0.49 ug/l		99
47)	Bromodichloromethane	9.28	83	23950	0.48 ug/l		93
48)	Dibromomethane	9.37	93	9158	0.47 ug/l		94
50)	4-Methyl-2-pentanone	9.83	43	53199	2.39 ug/l		94
51)	cis-1,3-Dichloropropene	10.17	75	26555	0.46 ug/l		88
53)	Toluene	10.71	91	70263	0.48 ug/l		99
54)	Ethyl methacrylate	11.00	69	16830	0.48 ug/l		90
55)	trans-1,3-Dichloropropene	11.02	75	18962	0.43 ug/l		97
56)	2-Hexanone	11.30	43	35120	2.43 ug/l		95
57)	1,1,2-Trichloroethane	11.27	97	12123	0.50 ug/l		96
58)	1,3-Dichloropropane	11.72	76	20324	0.46 ug/l		95
59)	Tetrachloroethene	11.82	164	15784	0.48 ug/l		97
60)	Dibromochloromethane	12.18	129	14669	0.43 ug/l		98
62)	1,2-Dibromoethane	12.55	107	11773	0.43 ug/l		95
63)	1-Chlorohexane	12.83	91	24485	0.46 ug/l		96
64)	Chlorobenzene	13.29	112	44238	0.46 ug/l		92
65)	1,1,1,2-Tetrachloroethane	13.38	131	16483	0.48 ug/l	#	68
66)	Ethylbenzene	13.40	91	76778	0.48 ug/l		99
67)	m-Xylene & p-Xylene	13.53	91	119931	1.00 ug/l		99
68)	o-Xylene	14.35	91	61717	0.48 ug/l		97
69)	Styrene	14.41	104	47466	0.45 ug/l		89
71)	Isopropylbenzene	15.01	105	68096	0.45 ug/l		98
72)	Bromoform	15.04	173	8627	0.43 ug/l		96
73)	1,1,2,2-Tetrachloroethane	15.36	83	13197	0.44 ug/l		100
75)	1,2,3-Trichloropropane	15.64	110	3357	0.43 ug/l		86
76)	trans-1,4-Dichloro-2-buten	15.77	53	3259	0.43 ug/l		87
77)	n-Propylbenzene	15.79	91	88620	0.47 ug/l		98
78)	Bromobenzene	15.86	156	19512	0.45 ug/l		95
79)	1,3,5-Trimethylbenzene	16.10	105	59114	0.45 ug/l		100
80)	2-Chlorotoluene	16.13	91	62954	0.48 ug/l		99
81)	4-Chlorotoluene	16.22	91	50199	0.47 ug/l		97
82)	tert-Butylbenzene	16.78	134	13322	0.45 ug/l		98
83)	1,2,4-Trimethylbenzene	16.86	105	61498	0.47 ug/l		99
84)	sec-Butylbenzene	17.20	105	73164	0.45 ug/l		99
85)	p-Isopropyltoluene	17.48	119	61870	0.45 ug/l		98
86)	1,3-Dichlorobenzene	17.65	146	34419	0.45 ug/l		99
87)	1,4-Dichlorobenzene	17.85	146	34584	0.45 ug/l		98
89)	n-Butylbenzene	18.22	91	58007	0.44 ug/l		97

(#) = qualifier out of range (m) = manual integration

SY 11/6/11

2060

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW003.D Vial: 3
Acq On : 2 Nov 2011 3:56 pm Operator: SD
Sample : VO06K022 Inst : TO06
Misc : 0.5ppb 8260/2.5ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:50 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
90)	1,2-Dichlorobenzene	18.48	146	29785	0.44 ug/l	85
91)	1,2-Dibromo-3-chloropropan	19.61	157	2518	0.45 ug/l	95
92)	1,2,4-Trichlorobenzene	20.69	180	18959	0.38 ug/l	99
93)	Hexachlorobutadiene	20.86	225	13288	0.42 ug/l	98
94)	Naphthalene	21.02	128	28010	0.41 ug/l	100
95)	1,2,3-Trichlorobenzene	21.33	180	16693	0.40 ug/l	99

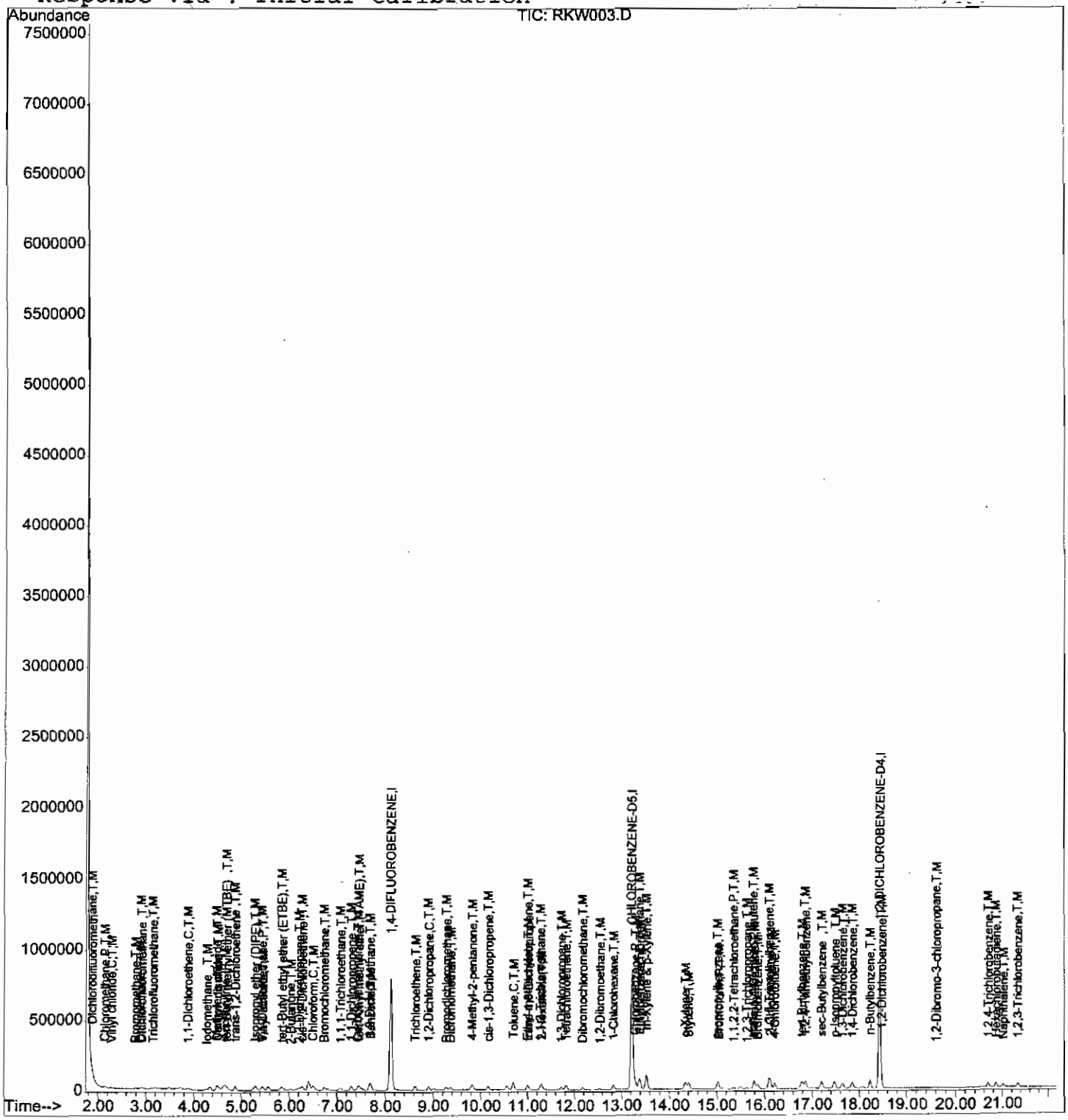
SH 11/6/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K02\RKW003.D Vial: 3
Acq On : 2 Nov 2011 3:56 pm Operator: SD
Sample : VO06K022 Inst : TO06
Misc : 0.5ppb 8260/2.5ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:50 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



11/6/11

2062

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW004.D Vial: 4
Acq On : 2 Nov 2011 4:26 pm Operator: SD
Sample : VO06K023 Inst : TO06
Misc : 1.0ppb 8260/5.0ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:50 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.12	114	1117976	10.00 ug/l	0.00
38) CHLOROBENZENE-D5	13.22	117	1010879	10.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	18.43	152	460589	10.00 ug/l	0.00
System Monitoring Compounds					
33) Dibromofluoromethane	6.81	111	37468	0.98 ug/l	0.00
Spiked Amount 10.000			Recovery	= 9.80%	
37) 1,2-Dichloroethane-d4	7.54	65	32626	0.99 ug/l	0.00
Spiked Amount 10.000			Recovery	= 9.90%	
52) Toluene-d8	10.57	98	124585	1.01 ug/l	0.02
Spiked Amount 10.000			Recovery	= 10.10%	
74) 4-Bromofluorobenzene	15.50	95	46359	0.99 ug/l	0.01
Spiked Amount 10.000			Recovery	= 9.90%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.89	85	20387	0.83 ug/l	95
3) Chloromethane	2.13	50	24162	0.78 ug/l	100
4) Vinyl chloride	2.28	62	22947	0.86 ug/l	94
5) Bromomethane	2.77	94	19131	0.85 ug/l	99
6) Chloroethane	2.88	64	14738	0.78 ug/l	76
7) Dichlorofluoromethane	2.90	67	58448	0.97 ug/l	98
8) Trichlorofluoromethane	3.16	101	27811	0.80 ug/l	96
9) Acrolein	3.66	56	6294	5.08 ug/l	69
10) Acetone	3.73	43	27305	5.50 ug/l	90
11) 1,1,2-Trichloro-1,2,2-trif	3.69	151	19492	1.00 ug/l	100
12) 1,1-Dichloroethene	3.88	61	54118	0.98 ug/l	98
16) Iodomethane	4.28	142	68360	0.99 ug/l	99
17) Methylene chloride	4.49	49	63019	1.10 ug/l	99
18) Acrylonitrile	4.67	53	33863	4.86 ug/l	96
19) Carbon disulfide	4.51	76	120150	1.06 ug/l	99
20) tert-Butyl methyl ether (M	4.70	73	67968	0.97 ug/l	92
21) trans-1,2-Dichloroethene	4.88	61	56861	0.97 ug/l	97
22) Isopropyl ether (DIPE)	5.30	45	121723	0.93 ug/l	99
23) Vinyl acetate	5.46	43	31740	0.77 ug/l	99
24) 1,1-Dichloroethane	5.44	63	66570	0.97 ug/l	99
26) tert-Butyl ethyl ether (ET	5.85	59	94085	0.94 ug/l	100
27) 2-Butanone	6.04	43	44648	4.79 ug/l	99
28) 2,2-Dichloropropane	6.22	77	36969	1.06 ug/l	99
29) cis-1,2-Dichloroethene	6.28	96	45158	1.02 ug/l	88
30) Chloroform	6.50	83	64993	0.99 ug/l	97
31) Bromochloromethane	6.74	49	30937	0.97 ug/l	99
32) Tetrahydrofuran	6.80	42	4871	0.90 ug/l	96

(#) = qualifier out of range (m) = manual integration

2063

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW004.D Vial: 4
Acq On : 2 Nov 2011 4:26 pm Operator: SD
Sample : VO06K023 Inst : TO06
Misc : 1.0ppb 8260/5.0ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:50 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
34)	1,1,1-Trichloroethane	7.06	97	47825	1.00 ug/l		98
36)	tert-Amyl methyl ether (TA	7.47	87	16286	0.98 ug/l		97
39)	1,1-Dichloropropene	7.30	110	17376	1.02 ug/l		98
40)	Carbon tetrachloride	7.45	119	41894	1.01 ug/l		98
41)	1,2-Dichloroethane	7.67	62	38831	0.99 ug/l		97
42)	Benzene	7.70	78	142222	1.00 ug/l		100
43)	Trichloroethene	8.62	130	38258	0.94 ug/l		95
45)	1,2-Dichloropropane	8.91	63	38028	0.98 ug/l		98
47)	Bromodichloromethane	9.28	83	48628	0.96 ug/l		99
48)	Dibromomethane	9.37	93	19042	0.96 ug/l		98
49)	2-Chloroethyl vinyl ether	9.78	63	4884	1.26 ug/l	#	76
50)	4-Methyl-2-pentanone	9.83	43	111522	4.91 ug/l		97
51)	cis-1,3-Dichloropropene	10.17	75	55553	0.95 ug/l		93
53)	Toluene	10.70	91	149930	1.01 ug/l		99
54)	Ethyl methacrylate	11.00	69	35676	0.99 ug/l		93
55)	trans-1,3-Dichloropropene	11.02	75	41202	0.92 ug/l		85
56)	2-Hexanone	11.30	43	73355	4.97 ug/l		98
57)	1,1,2-Trichloroethane	11.28	97	24584	1.00 ug/l		98
58)	1,3-Dichloropropane	11.72	76	43786	0.97 ug/l		98
59)	Tetrachloroethene	11.82	164	32923	0.99 ug/l		96
60)	Dibromochloromethane	12.18	129	33150	0.96 ug/l		95
62)	1,2-Dibromoethane	12.53	107	26315	0.95 ug/l		96
63)	1-Chlorohexane	12.83	91	50511	0.94 ug/l		96
64)	Chlorobenzene	13.29	112	94616	0.97 ug/l		93
65)	1,1,1,2-Tetrachloroethane	13.36	131	35234	1.01 ug/l		95
66)	Ethylbenzene	13.39	91	165716	1.02 ug/l		98
67)	m-Xylene & p-Xylene	13.53	91	249360	2.04 ug/l		99
68)	o-Xylene	14.35	91	128715	0.98 ug/l		98
69)	Styrene	14.41	104	103609	0.96 ug/l		93
71)	Isopropylbenzene	15.01	105	145002	0.94 ug/l		99
72)	Bromoform	15.04	173	18612	0.90 ug/l		97
73)	1,1,2,2-Tetrachloroethane	15.36	83	28751	0.94 ug/l		99
75)	1,2,3-Trichloropropane	15.64	110	7860	0.98 ug/l		94
76)	trans-1,4-Dichloro-2-buten	15.77	53	7476	0.96 ug/l		96
77)	n-Propylbenzene	15.79	91	189928	0.97 ug/l		99
78)	Bromobenzene	15.86	156	43563	0.98 ug/l		98
79)	1,3,5-Trimethylbenzene	16.10	105	128898	0.96 ug/l		98
80)	2-Chlorotoluene	16.11	91	130124	0.97 ug/l		99
81)	4-Chlorotoluene	16.22	91	106153	0.97 ug/l		99
82)	tert-Butylbenzene	16.78	134	28108	0.92 ug/l		93
83)	1,2,4-Trimethylbenzene	16.86	105	133600	0.99 ug/l		95

(#) = qualifier out of range (m) = manual integration

2064

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW004.D Vial: 4
Acq On : 2 Nov 2011 4:26 pm Operator: SD
Sample : VO06K023 Inst : TO06
Misc : 1.0ppb 8260/5.0ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:50 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

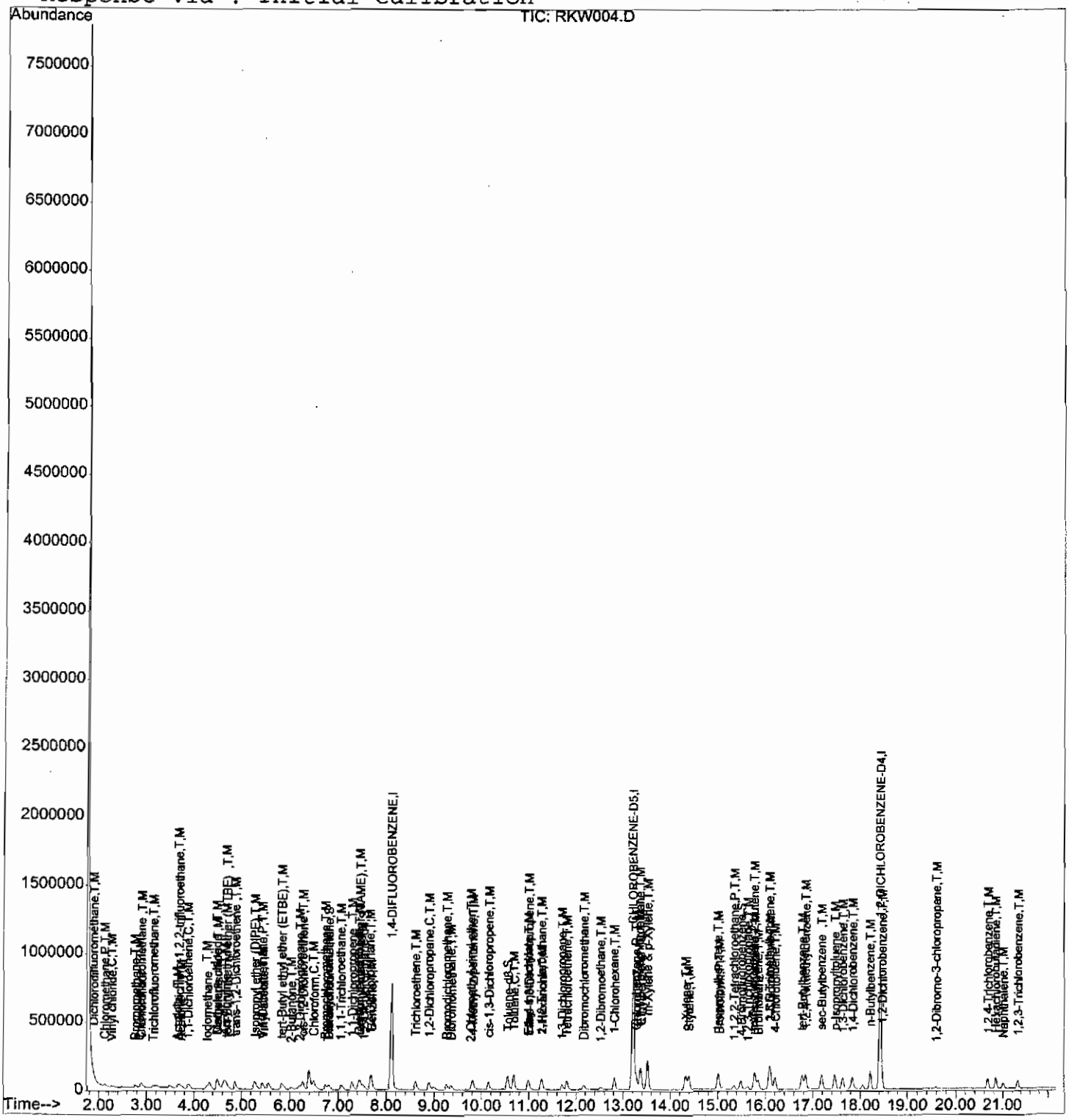
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84)	sec-Butylbenzene	17.20	105	160907	0.95 ug/l	100
85)	p-Isopropyltoluene	17.48	119	135178	0.95 ug/l	100
86)	1,3-Dichlorobenzene	17.64	146	73893	0.93 ug/l	97
87)	1,4-Dichlorobenzene	17.85	146	74034	0.94 ug/l	99
89)	n-Butylbenzene	18.22	91	127524	0.94 ug/l	99
90)	1,2-Dichlorobenzene	18.48	146	65214	0.94 ug/l	93
91)	1,2-Dibromo-3-chloropropan	19.61	157	4650	0.80 ug/l	92
92)	1,2,4-Trichlorobenzene	20.69	180	45423	0.88 ug/l	99
93)	Hexachlorobutadiene	20.85	225	30880	0.94 ug/l	98
94)	Naphthalene	21.02	128	59892	0.85 ug/l	99
95)	1,2,3-Trichlorobenzene	21.35	180	38545	0.91 ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K02\RKW004.D Vial: 4
Acq On : 2 Nov 2011 4:26 pm Operator: SD
Sample : VO06K023 Inst : TO06
Misc : 1.0ppb 8260/5.0ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:50 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



5/11/11

2066

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW005.D Vial: 5
Acq On : 2 Nov 2011 4:57 pm Operator: SD
Sample : VO06K024 Inst : TO06
Misc : 2.0ppb 8260/10ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 9:32 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.12	114	1105106	10.00 ug/l	0.00
38) CHLOROBENZENE-D5	13.22	117	1010548	10.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	18.43	152	458515	10.00 ug/l	0.00
System Monitoring Compounds					
33) Dibromofluoromethane	6.81	111	78428	2.08 ug/l	0.00
Spiked Amount 10.000			Recovery	= 20.80%	
37) 1,2-Dichloroethane-d4	7.54	65	67353	2.06 ug/l	0.00
Spiked Amount 10.000			Recovery	= 20.60%	
52) Toluene-d8	10.56	98	263485	2.14 ug/l	0.00
Spiked Amount 10.000			Recovery	= 21.40%	
74) 4-Bromofluorobenzene	15.51	95	95786	2.06 ug/l	0.02
Spiked Amount 10.000			Recovery	= 20.60%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.88	85	50632	2.10 ug/l	99
3) Chloromethane	2.14	50	60132	1.96 ug/l	99
4) Vinyl chloride	2.28	62	55114	2.08 ug/l	96
5) Bromomethane	2.78	94	42321	1.91 ug/l	96
6) Chloroethane	2.86	64	35545	1.89 ug/l	85
7) Dichlorofluoromethane	2.91	67	119443	2.01 ug/l	98
8) Trichlorofluoromethane	3.16	101	72369	2.10 ug/l	97
9) Acrolein	3.66	56	11520	9.41 ug/l	91
10) Acetone	3.74	43	42888	8.74 ug/l	77
11) 1,1,2-Trichloro-1,2,2-trif	3.69	151	42101	2.18 ug/l	98
12) 1,1-Dichloroethene	3.90	61	114907	2.11 ug/l	98
13) tert-Butyl alcohol	4.02	59	10608	10.61 ug/l #	67
16) Iodomethane	4.29	142	146484	2.14 ug/l	100
17) Methylene chloride	4.49	49	115413	2.03 ug/l	99
18) Acrylonitrile	4.66	53	65504	9.52 ug/l	98
19) Carbon disulfide	4.51	76	239075	2.13 ug/l	98
20) tert-Butyl methyl ether (M	4.69	73	139598	2.01 ug/l	94
21) trans-1,2-Dichloroethene	4.88	61	121634	2.10 ug/l	99
22) Isopropyl ether (DIPE)	5.30	45	267918	2.08 ug/l	100
23) Vinyl acetate	5.44	43	72670	1.79 ug/l	100
24) 1,1-Dichloroethane	5.44	63	146019	2.15 ug/l	98
26) tert-Butyl ethyl ether (ET	5.85	59	197437	1.99 ug/l	100
27) 2-Butanone	6.02	43	84134	9.13 ug/l	99
28) 2,2-Dichloropropane	6.22	77	75698	2.20 ug/l	99
29) cis-1,2-Dichloroethene	6.28	96	90460	2.07 ug/l	97
30) Chloroform	6.50	83	136312	2.11 ug/l	96
31) Bromochloromethane	6.74	49	65927	2.09 ug/l	97

(#) = qualifier out of range (m) = manual integration
RKW005.D VO06K02.M Fri Nov 04 11:52:41 2011 Page 1

2067

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW005.D Vial: 5
Acq On : 2 Nov 2011 4:57 pm Operator: SD
Sample : VO06K024 Inst : TO06
Misc : 2.0ppb 8260/10ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 9:32 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
32)	Tetrahydrofuran	6.80	42	12517	2.33 ug/l	88
34)	1,1,1-Trichloroethane	7.08	97	99748	2.11 ug/l	99
36)	tert-Amyl methyl ether (TA	7.47	87	32516	1.98 ug/l	94
39)	1,1-Dichloropropene	7.30	110	35560	2.08 ug/l	98
40)	Carbon tetrachloride	7.45	119	89190	2.15 ug/l	98
41)	1,2-Dichloroethane	7.67	62	79168	2.02 ug/l	96
42)	Benzene	7.70	78	298805	2.10 ug/l	100
43)	Trichloroethene	8.62	130	83077	2.04 ug/l	98
45)	1,2-Dichloropropane	8.91	63	79045	2.04 ug/l	98
47)	Bromodichloromethane	9.28	83	100984	2.00 ug/l	100
48)	Dibromomethane	9.37	93	40164	2.03 ug/l	96
49)	2-Chloroethyl vinyl ether	9.78	63	10531	2.00 ug/l	90
50)	4-Methyl-2-pentanone	9.81	43	209221	9.21 ug/l	97
51)	cis-1,3-Dichloropropene	10.16	75	119324	2.03 ug/l	99
53)	Toluene	10.71	91	313061	2.11 ug/l	100
54)	Ethyl methacrylate	11.00	69	70895	1.97 ug/l	96
55)	trans-1,3-Dichloropropene	11.00	75	90629	2.02 ug/l	98
56)	2-Hexanone	11.30	43	138206	9.37 ug/l	98
57)	1,1,2-Trichloroethane	11.28	97	48812	1.99 ug/l	98
58)	1,3-Dichloropropane	11.72	76	90972	2.01 ug/l	96
59)	Tetrachloroethene	11.82	164	71393	2.14 ug/l	98
60)	Dibromochloromethane	12.18	129	69763	2.03 ug/l	98
62)	1,2-Dibromoethane	12.53	107	55191	1.99 ug/l	99
63)	1-Chlorohexane	12.83	91	114350	2.13 ug/l	97
64)	Chlorobenzene	13.29	112	207618	2.13 ug/l	97
65)	1,1,1,2-Tetrachloroethane	13.37	131	72268	2.08 ug/l	93
66)	Ethylbenzene	13.40	91	351026	2.17 ug/l	99
67)	m-Xylene & p-Xylene	13.53	91	542204	4.43 ug/l	99
68)	o-Xylene	14.35	91	280642	2.14 ug/l	98
69)	Styrene	14.41	104	228966	2.13 ug/l	96
71)	Isopropylbenzene	15.01	105	327071	2.13 ug/l	99
72)	Bromoform	15.04	173	40645	1.97 ug/l	97
73)	1,1,2,2-Tetrachloroethane	15.36	83	59171	1.95 ug/l	99
75)	1,2,3-Trichloropropane	15.64	110	15222	1.90 ug/l	94
76)	trans-1,4-Dichloro-2-buten	15.77	53	15684	2.03 ug/l	97
77)	n-Propylbenzene	15.79	91	415607	2.13 ug/l	100
78)	Bromobenzene	15.86	156	93694	2.11 ug/l	99
79)	1,3,5-Trimethylbenzene	16.10	105	285035	2.14 ug/l	99
80)	2-Chlorotoluene	16.11	91	286527	2.15 ug/l	99
81)	4-Chlorotoluene	16.22	91	230145	2.10 ug/l	99
82)	tert-Butylbenzene	16.78	134	63953	2.11 ug/l	95

(#) = qualifier out of range (m) = manual integration

2068

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW005.D Vial: 5
Acq On : 2 Nov 2011 4:57 pm Operator: SD
Sample : VO06K024 Inst : TO06
Misc : 2.0ppb 8260/10ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 9:32 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
83) 1,2,4-Trimethylbenzene	16.86	105	287489	2.14 ug/l	100
84) sec-Butylbenzene	17.20	105	364466	2.17 ug/l	100
85) p-Isopropyltoluene	17.48	119	306370	2.15 ug/l	99
86) 1,3-Dichlorobenzene	17.65	146	167000	2.12 ug/l	99
87) 1,4-Dichlorobenzene	17.85	146	164911	2.11 ug/l	99
89) n-Butylbenzene	18.22	91	292490	2.17 ug/l	99
90) 1,2-Dichlorobenzene	18.48	146	145245	2.11 ug/l	97
91) 1,2-Dibromo-3-chloropropan	19.61	157	11497	1.99 ug/l	96
92) 1,2,4-Trichlorobenzene	20.69	180	105137	2.05 ug/l	99
93) Hexachlorobutadiene	20.86	225	71480	2.20 ug/l	98
94) Naphthalene	21.02	128	133604	1.91 ug/l	100
95) 1,2,3-Trichlorobenzene	21.33	180	87124	2.06 ug/l	100

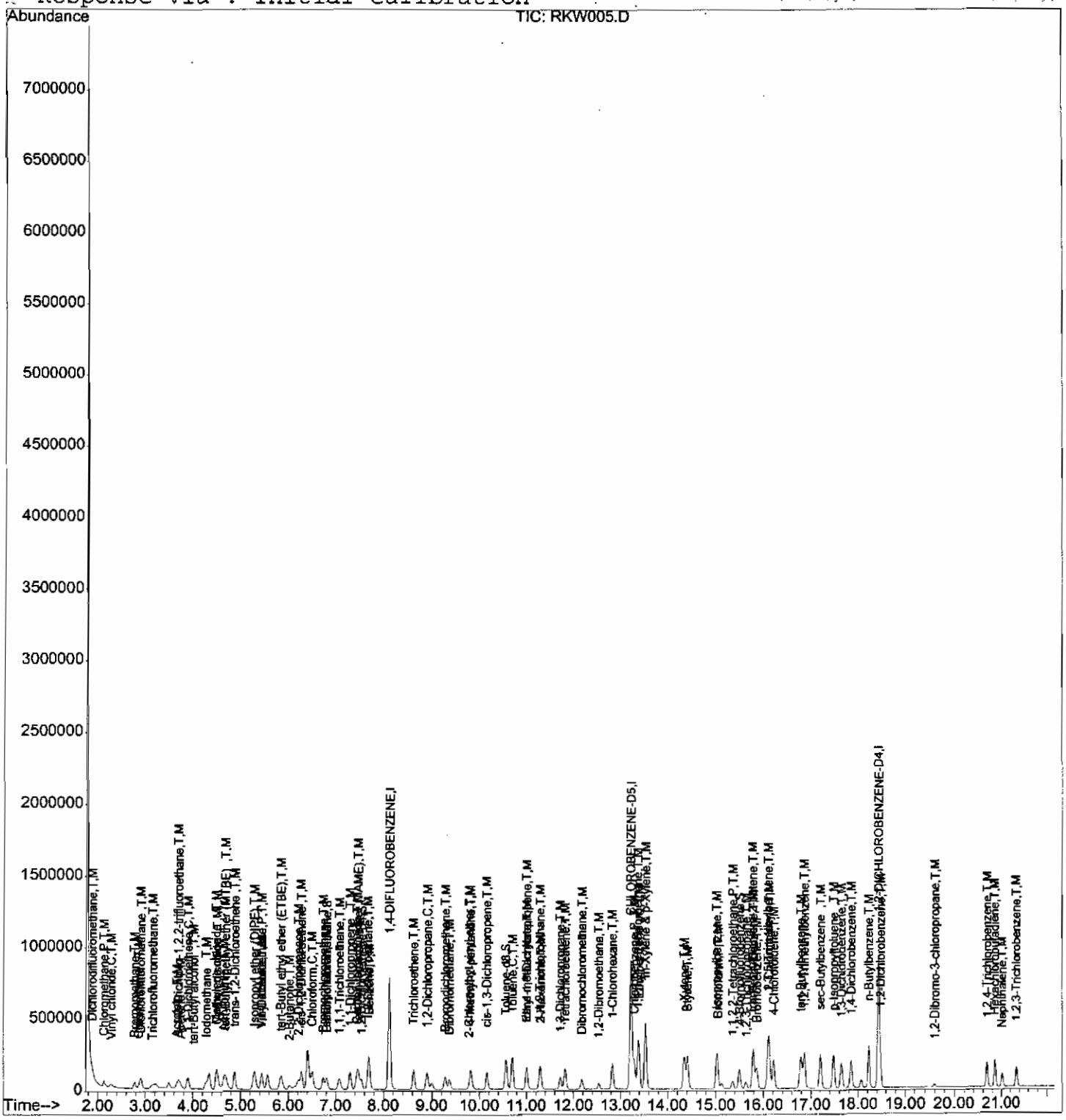
(#) = qualifier out of range (m) = manual integration
RKW005.D VO06K02.M Fri Nov 04 11:52:42 2011

2069

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K02\RKW005.D Vial: 5
Acq On : 2 Nov 2011 4:57 pm Operator: SD
Sample : VO06K024 Inst : TO06
Misc : 2.0ppb 8260/10ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 9:32 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



11/6/11

2070

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW006.D Vial: 6
Acq On : 2 Nov 2011 5:27 pm Operator: SD
Sample : VO06K025 Inst : TO06
Misc : 5.0ppb 8260/25ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 9:32 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.12	114	1115262	10.00 ug/l	0.00
38) CHLOROBENZENE-D5	13.22	117	1032952	10.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	18.43	152	466523	10.00 ug/l	0.00
System Monitoring Compounds					
33) Dibromofluoromethane	6.81	111	201931	5.30 ug/l	0.00
Spiked Amount 10.000			Recovery	= 53.00%	
37) 1,2-Dichloroethane-d4	7.54	65	175930	5.33 ug/l	0.00
Spiked Amount 10.000			Recovery	= 53.30%	
52) Toluene-d8	10.57	98	663534	5.28 ug/l	0.02
Spiked Amount 10.000			Recovery	= 52.80%	
74) 4-Bromofluorobenzene	15.49	95	242295	5.12 ug/l	0.00
Spiked Amount 10.000			Recovery	= 51.20%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.88	85	136382	5.59 ug/l	100
3) Chloromethane	2.14	50	163225	5.27 ug/l	99
4) Vinyl chloride	2.28	62	154194	5.78 ug/l	99
5) Bromomethane	2.78	94	122866	5.49 ug/l	95
6) Chloroethane	2.88	64	104719	5.53 ug/l	97
7) Dichlorofluoromethane	2.91	67	310975	5.20 ug/l	99
8) Trichlorofluoromethane	3.16	101	199404	5.72 ug/l	98
9) Acrolein	3.65	56	30216	24.47 ug/l	89
10) Acetone	3.74	43	126622	25.56 ug/l	94
11) 1,1,2-Trichloro-1,2,2-trif	3.69	151	101450	5.21 ug/l	98
12) 1,1-Dichloroethene	3.90	61	277539	5.06 ug/l	99
13) tert-Butyl alcohol	4.00	59	32517	21.69 ug/l #	1
16) Iodomethane	4.29	142	360489	5.22 ug/l	100
17) Methylene chloride	4.49	49	263300	4.59 ug/l	99
18) Acrylonitrile	4.66	53	173374	24.96 ug/l	99
19) Carbon disulfide	4.51	76	618787	5.46 ug/l	99
20) tert-Butyl methyl ether (M	4.69	73	352270	5.03 ug/l	99
21) trans-1,2-Dichloroethene	4.88	61	290359	4.97 ug/l	98
22) Isopropyl ether (DIPE)	5.30	45	657641	5.06 ug/l	100
23) Vinyl acetate	5.44	43	228786	5.58 ug/l	99
24) 1,1-Dichloroethane	5.44	63	339934	4.96 ug/l	99
26) tert-Butyl ethyl ether (ET	5.85	59	511689	5.12 ug/l	100
27) 2-Butanone	6.02	43	233945	25.15 ug/l	99
28) 2,2-Dichloropropane	6.22	77	178912	5.15 ug/l	100
29) cis-1,2-Dichloroethene	6.28	96	224118	5.07 ug/l	97
30) Chloroform	6.50	83	331128	5.07 ug/l	95
31) Bromochloromethane	6.74	49	164320	5.16 ug/l	99

(#) = qualifier out of range (m) = manual integration

2071

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW006.D Vial: 6
Acq On : 2 Nov 2011 5:27 pm Operator: SD
Sample : VO06K025 Inst : TO06
Misc : 5.0ppb 8260/25ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 9:32 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
32)	Tetrahydrofuran	6.78	42	24654	4.55 ug/l	91
34)	1,1,1-Trichloroethane	7.08	97	240354	5.03 ug/l	97
36)	tert-Amyl methyl ether (TA	7.47	87	84211	5.09 ug/l	98
39)	1,1-Dichloropropene	7.30	110	85505	4.89 ug/l	99
40)	Carbon tetrachloride	7.45	119	212450	5.01 ug/l	97
41)	1,2-Dichloroethane	7.67	62	200667	5.02 ug/l	98
42)	Benzene	7.70	78	722823	4.97 ug/l	100
43)	Trichloroethene	8.62	130	204761	4.91 ug/l	99
45)	1,2-Dichloropropane	8.91	63	196151	4.94 ug/l	99
47)	Bromodichloromethane	9.28	83	253549	4.91 ug/l	100
48)	Dibromomethane	9.37	93	100410	4.96 ug/l	97
49)	2-Chloroethyl vinyl ether	9.78	63	30791	4.55 ug/l	98
50)	4-Methyl-2-pentanone	9.81	43	590696	25.45 ug/l	99
51)	cis-1,3-Dichloropropene	10.17	75	302596	5.04 ug/l	99
53)	Toluene	10.69	91	760984	5.01 ug/l	99
54)	Ethyl methacrylate	11.00	69	176376	4.80 ug/l	99
55)	trans-1,3-Dichloropropene	11.00	75	234186	5.11 ug/l	99
56)	2-Hexanone	11.30	43	381153	25.28 ug/l	100
57)	1,1,2-Trichloroethane	11.27	97	123029	4.91 ug/l	97
58)	1,3-Dichloropropane	11.72	76	230735	4.98 ug/l	99
59)	Tetrachloroethene	11.82	164	173726	5.09 ug/l	99
60)	Dibromochloromethane	12.18	129	175202	4.98 ug/l	100
62)	1,2-Dibromoethane	12.53	107	141171	4.99 ug/l	100
63)	1-Chlorohexane	12.83	91	279888	5.09 ug/l	99
64)	Chlorobenzene	13.29	112	509407	5.11 ug/l	99
65)	1,1,1,2-Tetrachloroethane	13.37	131	180764	5.08 ug/l	98
66)	Ethylbenzene	13.39	91	847419	5.13 ug/l	100
67)	m-Xylene & p-Xylene	13.53	91	1295231	10.36 ug/l	99
68)	o-Xylene	14.35	91	682394	5.08 ug/l	100
69)	Styrene	14.41	104	569529	5.19 ug/l	94
71)	Isopropylbenzene	15.01	105	789103	5.05 ug/l	99
72)	Bromoform	15.04	173	106074	5.05 ug/l	99
73)	1,1,2,2-Tetrachloroethane	15.36	83	148289	4.79 ug/l	98
75)	1,2,3-Trichloropropane	15.64	110	39289	4.83 ug/l	100
76)	trans-1,4-Dichloro-2-buten	15.77	53	38689	4.92 ug/l	94
77)	n-Propylbenzene	15.79	91	1012445	5.10 ug/l	100
78)	Bromobenzene	15.86	156	224522	4.97 ug/l	98
79)	1,3,5-Trimethylbenzene	16.10	105	698505	5.15 ug/l	99
80)	2-Chlorotoluene	16.11	91	690794	5.10 ug/l	99
81)	4-Chlorotoluene	16.22	91	560755	5.04 ug/l	99
82)	tert-Butylbenzene	16.78	134	157165	5.09 ug/l	98

(#) = qualifier out of range (m) = manual integration

2072

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW006.D
Acq On : 2 Nov 2011 5:27 pm
Sample : VO06K025
Misc : 5.0ppb 8260/25ppb KET-A-AN-TBA
MS Integration Params: RTE.P
Quant Time: Nov 4 9:32 2011

Vial: 6
Operator: SD
Inst : TO06
Multiplr: 1.00
Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
83)	1,2,4-Trimethylbenzene	16.86	105	699888	5.11 ug/l	99
84)	sec-Butylbenzene	17.20	105	880733	5.15 ug/l	100
85)	p-Isopropyltoluene	17.48	119	744481	5.15 ug/l	99
86)	1,3-Dichlorobenzene	17.65	146	414981	5.17 ug/l	99
87)	1,4-Dichlorobenzene	17.85	146	403883	5.09 ug/l	100
89)	n-Butylbenzene	18.22	91	711118	5.19 ug/l	99
90)	1,2-Dichlorobenzene	18.48	146	353964	5.06 ug/l	99
91)	1,2-Dibromo-3-chloropropan	19.59	157	28086	4.77 ug/l	97
92)	1,2,4-Trichlorobenzene	20.69	180	269142	5.16 ug/l	99
93)	Hexachlorobutadiene	20.86	225	169470	5.12 ug/l	98
94)	Naphthalene	21.02	128	350857	4.93 ug/l	100
95)	1,2,3-Trichlorobenzene	21.33	180	219507	5.11 ug/l	99

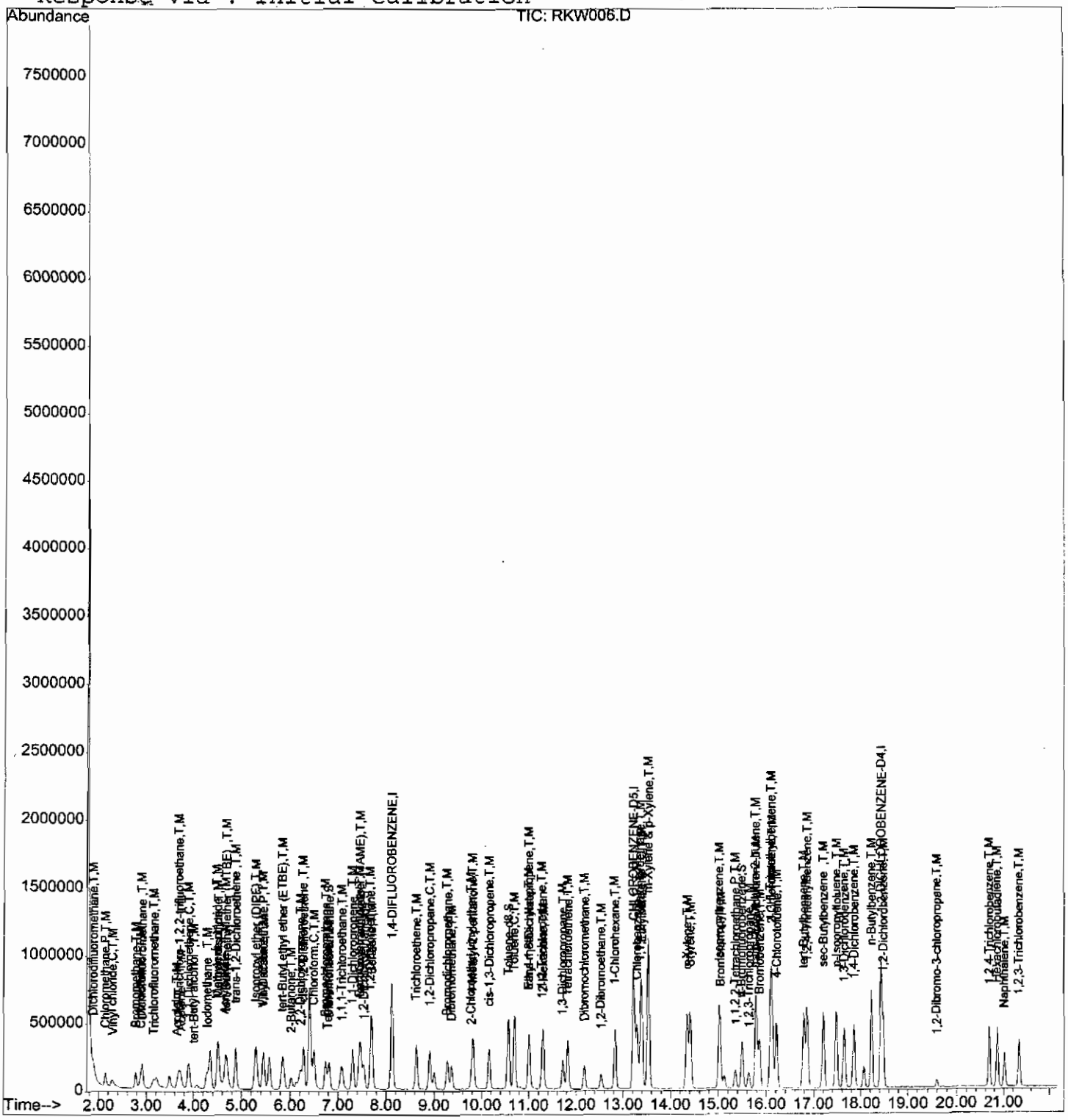
SG 11/6/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K02\RKW006.D Vial: 6
Acq On : 2 Nov 2011 5:27 pm Operator: SD
Sample : VO06K025 Inst : TO06
Misc : 5.0ppb 8260/25ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 9:32 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



SW 11/6/11

2074

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW007.D Vial: 7
Acq On : 2 Nov 2011 5:57 pm Operator: SD
Sample : VO06K026 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 9:33 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.12	114	1102015	10.00	ug/l	0.00
38) CHLOROBENZENE-D5	13.22	117	1018501	10.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	18.43	152	450060	10.00	ug/l	0.00
System Monitoring Compounds						
33) Dibromofluoromethane	6.81	111	384282	10.21	ug/l	0.00
Spiked Amount 10.000			Recovery	=	102.10%	
37) 1,2-Dichloroethane-d4	7.54	65	333589	10.23	ug/l	0.00
Spiked Amount 10.000			Recovery	=	102.30%	
52) Toluene-d8	10.56	98	1264305	10.19	ug/l	0.00
Spiked Amount 10.000			Recovery	=	101.90%	
74) 4-Bromofluorobenzene	15.49	95	462303	10.13	ug/l	0.00
Spiked Amount 10.000			Recovery	=	101.30%	
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.90	85	251725	10.45	ug/l	100
3) Chloromethane	2.15	50	317959	10.38	ug/l	100
4) Vinyl chloride	2.28	62	272790	10.35	ug/l	100
5) Bromomethane	2.79	94	246030	11.12	ug/l	100
6) Chloroethane	2.88	64	205584	10.99	ug/l	100
7) Dichlorofluoromethane	2.92	67	627836	10.62	ug/l	100
8) Trichlorofluoromethane	3.16	101	362826	10.53	ug/l	100
9) Acrolein	3.65	56	63691	52.19	ug/l	100
10) Acetone	3.74	43	258109	52.73	ug/l	100
11) 1,1,2-Trichloro-1,2,2-trif	3.71	151	196984	10.24	ug/l	100
12) 1,1-Dichloroethene	3.88	61	566912	10.45	ug/l	100
13) tert-Butyl alcohol	3.99	59	88690	50.78	ug/l	91
16) Iodomethane	4.27	142	707390	10.36	ug/l	100
17) Methylene chloride	4.49	49	523670	9.24	ug/l	100
18) Acrylonitrile	4.66	53	354329	51.62	ug/l	100
19) Carbon disulfide	4.51	76	1154682	10.31	ug/l	100
20) tert-Butyl methyl ether (M	4.69	73	721228	10.43	ug/l	100
21) trans-1,2-Dichloroethene	4.88	61	613363	10.63	ug/l	100
22) Isopropyl ether (DIPE)	5.30	45	1372878	10.69	ug/l	100
23) Vinyl acetate	5.44	43	441355	10.90	ug/l	100
24) 1,1-Dichloroethane	5.44	63	706233	10.42	ug/l	100
26) tert-Butyl ethyl ether (ET	5.85	59	1038695	10.51	ug/l	100
27) 2-Butanone	6.02	43	475956	51.79	ug/l	100
28) 2,2-Dichloropropane	6.22	77	349062	10.17	ug/l	100
29) cis-1,2-Dichloroethene	6.28	96	451426	10.34	ug/l	100
30) Chloroform	6.50	83	677781	10.50	ug/l	100
31) Bromochloromethane	6.74	49	339162	10.78	ug/l	100

(#) = qualifier out of range (m) = manual integration

2075

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW007.D Vial: 7
Acq On : 2 Nov 2011 5:57 pm Operator: SD
Sample : VO06K026 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 9:33 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
32)	Tetrahydrofuran	6.78	42	53433	9.97 ug/l	100
34)	1,1,1-Trichloroethane	7.08	97	478615	10.14 ug/l	100
36)	tert-Amyl methyl ether (TA	7.47	87	171861	10.51 ug/l	100
39)	1,1-Dichloropropene	7.30	110	176892	10.26 ug/l	100
40)	Carbon tetrachloride	7.45	119	424105	10.15 ug/l	100
41)	1,2-Dichloroethane	7.67	62	420590	10.66 ug/l	100
42)	Benzene	7.70	78	1478141	10.31 ug/l	100
43)	Trichloroethene	8.62	130	425789	10.36 ug/l	100
45)	1,2-Dichloropropane	8.91	63	407972	10.42 ug/l	100
47)	Bromodichloromethane	9.28	83	528469	10.39 ug/l	100
48)	Dibromomethane	9.37	93	205127	10.27 ug/l	100
49)	2-Chloroethyl vinyl ether	9.77	63	60974	8.50 ug/l	100
50)	4-Methyl-2-pentanone	9.81	43	1204100	52.61 ug/l	100
51)	cis-1,3-Dichloropropene	10.16	75	629196	10.64 ug/l	100
53)	Toluene	10.69	91	1549689	10.35 ug/l	100
54)	Ethyl methacrylate	11.00	69	371125	10.25 ug/l	100
55)	trans-1,3-Dichloropropene	11.00	75	484123	10.72 ug/l	100
56)	2-Hexanone	11.28	43	769943	51.79 ug/l	100
57)	1,1,2-Trichloroethane	11.28	97	260979	10.57 ug/l	100
58)	1,3-Dichloropropane	11.72	76	480862	10.53 ug/l	100
59)	Tetrachloroethene	11.82	164	353593	10.51 ug/l	100
60)	Dibromochloromethane	12.18	129	368045	10.61 ug/l	100
62)	1,2-Dibromoethane	12.53	107	298826	10.71 ug/l	100
63)	1-Chlorohexane	12.83	91	562092	10.37 ug/l	100
64)	Chlorobenzene	13.29	112	1037015	10.55 ug/l	100
65)	1,1,1,2-Tetrachloroethane	13.37	131	369551	10.53 ug/l	100
66)	Ethylbenzene	13.39	91	1691442	10.38 ug/l	100
67)	m-Xylene & p-Xylene	13.53	91	2562184	20.79 ug/l	100
68)	o-Xylene	14.35	91	1390688	10.50 ug/l	100
69)	Styrene	14.41	104	1156129	10.68 ug/l	100
71)	Isopropylbenzene	15.01	105	1591823	10.55 ug/l	100
72)	Bromoform	15.04	173	217706	10.74 ug/l	100
73)	1,1,2,2-Tetrachloroethane	15.36	83	309365	10.37 ug/l	100
75)	1,2,3-Trichloropropane	15.64	110	82933	10.56 ug/l	100
76)	trans-1,4-Dichloro-2-buten	15.77	53	80430	10.59 ug/l	100
77)	n-Propylbenzene	15.79	91	2003697	10.47 ug/l	100
78)	Bromobenzene	15.86	156	459659	10.54 ug/l	100
79)	1,3,5-Trimethylbenzene	16.10	105	1378858	10.54 ug/l	100
80)	2-Chlorotoluene	16.11	91	1370028	10.49 ug/l	100
81)	4-Chlorotoluene	16.22	91	1110609	10.34 ug/l	100
82)	tert-Butylbenzene	16.78	134	317324	10.64 ug/l	100

(#) = qualifier out of range (m) = manual integration

2076

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW007.D
Acq On : 2 Nov 2011 5:57 pm
Sample : VO06K026
Misc : 10ppb 8260/50ppb KET-A-AN-TBA
MS Integration Params: RTE.P
Quant Time: Nov 4 9:33 2011

Vial: 7
Operator: SD
Inst : TO06
Multiplr: 1.00
Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
83)	1,2,4-Trimethylbenzene	16.86	105	1390939	10.52 ug/l	100
84)	sec-Butylbenzene	17.20	105	1745871	10.58 ug/l	100
85)	p-Isopropyltoluene	17.47	119	1479012	10.60 ug/l	100
86)	1,3-Dichlorobenzene	17.65	146	823001	10.63 ug/l	100
87)	1,4-Dichlorobenzene	17.85	146	810477	10.58 ug/l	100
89)	n-Butylbenzene	18.22	91	1386170	10.48 ug/l	100
90)	1,2-Dichlorobenzene	18.48	146	708450	10.50 ug/l	100
91)	1,2-Dibromo-3-chloropropan	19.59	157	59646	10.50 ug/l	100
92)	1,2,4-Trichlorobenzene	20.69	180	559476	11.12 ug/l	100
93)	Hexachlorobutadiene	20.86	225	339365	10.63 ug/l	100
94)	Naphthalene	21.02	128	757249	11.03 ug/l	100
95)	1,2,3-Trichlorobenzene	21.33	180	463913	11.19 ug/l	100

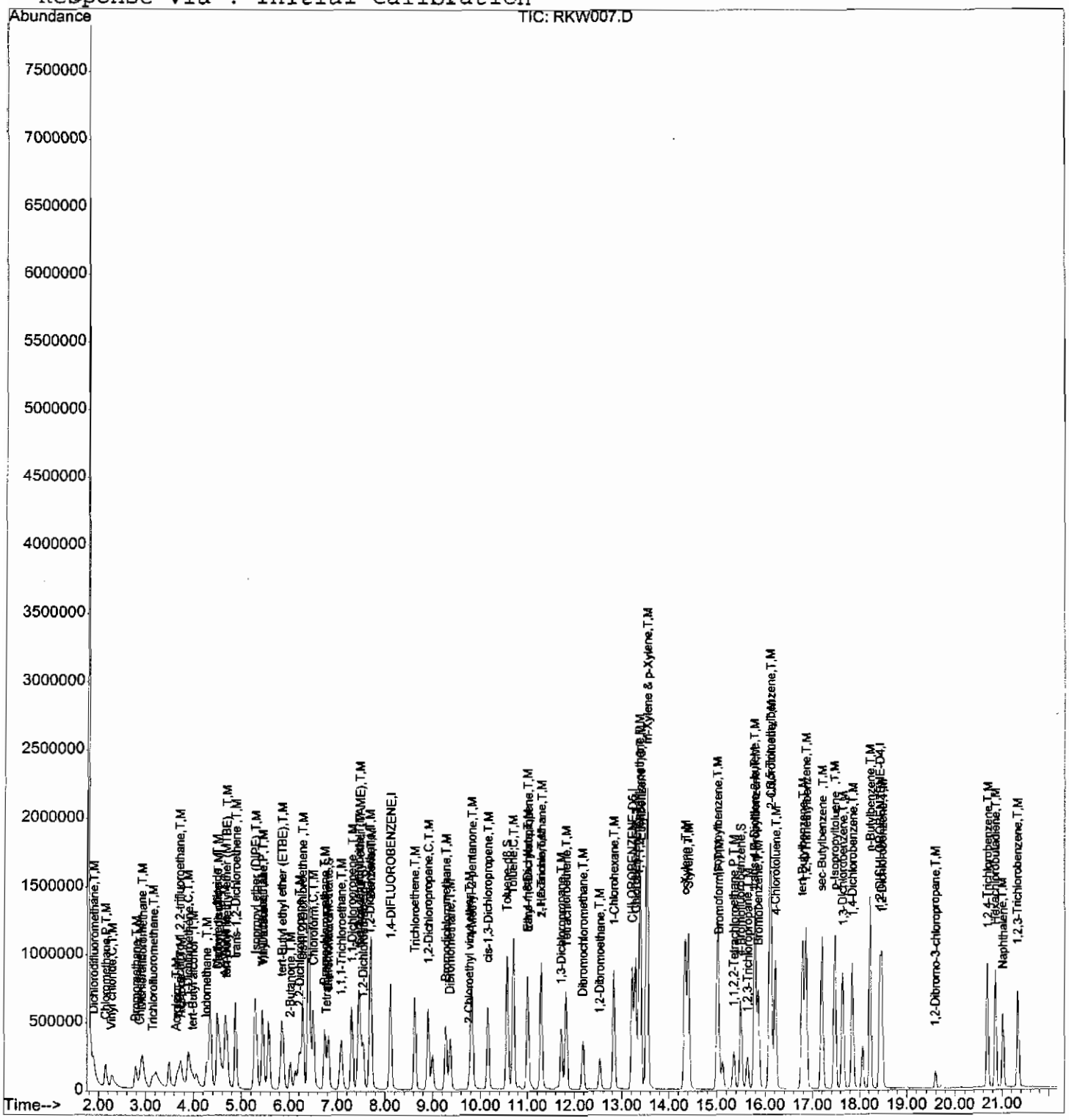
(#) = qualifier out of range (m) = manual integration

2077

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K02\RKW007.D Vial: 7
Acq On : 2 Nov 2011 5:57 pm Operator: SD
Sample : VO06K026 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 9:33 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



11/6/11

2078

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW008.D Vial: 8
Acq On : 2 Nov 2011 6:27 pm Operator: SD
Sample : VO06K027 Inst : TO06
Misc : 20ppb 8260/100ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 9:33 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.12	114	1060734	10.00 ug/l	0.00
38) CHLOROBENZENE-D5	13.22	117	979780	10.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	18.43	152	433808	10.00 ug/l	0.00
System Monitoring Compounds					
33) Dibromofluoromethane	6.81	111	707849	19.54 ug/l	0.00
Spiked Amount 10.000			Recovery	= 195.40%	
37) 1,2-Dichloroethane-d4	7.54	65	603455	19.23 ug/l	0.00
Spiked Amount 10.000			Recovery	= 192.30%	
52) Toluene-d8	10.56	98	2270646	19.03 ug/l	0.00
Spiked Amount 10.000			Recovery	= 190.30%	
74) 4-Bromofluorobenzene	15.49	95	847711	19.27 ug/l	0.00
Spiked Amount 10.000			Recovery	= 192.70%	

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.90	85	499159	21.52 ug/l	99
3) Chloromethane	2.15	50	619487	21.01 ug/l	96
4) Vinyl chloride	2.28	62	489483	19.29 ug/l	99
5) Bromomethane	2.79	94	450431	21.15 ug/l	88
6) Chloroethane	2.89	64	389687	21.64 ug/l	99
7) Dichlorofluoromethane	2.92	67	1185345	20.83 ug/l	97
8) Trichlorofluoromethane	3.14	101	700001	21.12 ug/l	99
9) Acrolein	3.65	56	130303	110.93 ug/l	99
10) Acetone	3.74	43	511268	108.52 ug/l	97
11) 1,1,2-Trichloro-1,2,2-trif	3.71	151	363473	19.63 ug/l	96
12) 1,1-Dichloroethene	3.88	61	1084725	20.77 ug/l	99
13) tert-Butyl alcohol	3.99	59	190665	107.04 ug/l #	1
16) Iodomethane	4.27	142	1344377	20.45 ug/l	100
17) Methylene chloride	4.49	49	971417	17.81 ug/l	99
18) Acrylonitrile	4.66	53	696970	105.49 ug/l	99
19) Carbon disulfide	4.51	76	2219047	20.58 ug/l	100
20) tert-Butyl methyl ether (M	4.69	73	1378163	20.71 ug/l	99
21) trans-1,2-Dichloroethene	4.88	61	1141208	20.54 ug/l	98
22) Isopropyl ether (DIPE)	5.30	45	2642987	21.39 ug/l	100
23) Vinyl acetate	5.44	43	874181	22.43 ug/l	100
24) 1,1-Dichloroethane	5.44	63	1342921	20.58 ug/l	100
26) tert-Butyl ethyl ether (ET	5.85	59	2027424	21.32 ug/l	100
27) 2-Butanone	6.02	43	962158	108.77 ug/l	99
28) 2,2-Dichloropropane	6.22	77	644171	19.49 ug/l	99
29) cis-1,2-Dichloroethene	6.28	96	856491	20.38 ug/l	99
30) Chloroform	6.50	83	1274898	20.52 ug/l	99
31) Bromochloromethane	6.74	49	640545	21.15 ug/l	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW008.D Vial: 8
Acq On : 2 Nov 2011 6:27 pm Operator: SD
Sample : VO06K027 Inst : TO06
Misc : 20ppb 8260/100ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 9:33 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
32)	Tetrahydrofuran	6.78	42	105637	20.48 ug/l	99
34)	1,1,1-Trichloroethane	7.08	97	890951	19.61 ug/l	100
36)	tert-Amyl methyl ether (TA	7.47	87	333135	21.17 ug/l	98
39)	1,1-Dichloropropene	7.30	110	334788	20.19 ug/l	98
40)	Carbon tetrachloride	7.45	119	799423	19.89 ug/l	99
41)	1,2-Dichloroethane	7.67	62	794907	20.95 ug/l	98
42)	Benzene	7.70	78	2785452	20.19 ug/l	100
43)	Trichloroethene	8.62	130	818543	20.71 ug/l	99
45)	1,2-Dichloropropane	8.91	63	774793	20.58 ug/l	98
47)	Bromodichloromethane	9.28	83	1010615	20.65 ug/l	100
48)	Dibromomethane	9.37	93	393539	20.49 ug/l	100
49)	2-Chloroethyl vinyl ether	9.77	63	128582	17.90 ug/l	100
50)	4-Methyl-2-pentanone	9.81	43	2403817	109.19 ug/l	99
51)	cis-1,3-Dichloropropene	10.16	75	1198174	21.06 ug/l	100
53)	Toluene	10.69	91	2932315	20.37 ug/l	99
54)	Ethyl methacrylate	10.99	69	707935	20.33 ug/l	100
55)	trans-1,3-Dichloropropene	11.00	75	923705	21.26 ug/l	99
56)	2-Hexanone	11.28	43	1535708	107.38 ug/l	99
57)	1,1,2-Trichloroethane	11.27	97	492850	20.75 ug/l	98
58)	1,3-Dichloropropane	11.72	76	927972	21.12 ug/l	100
59)	Tetrachloroethene	11.82	164	668092	20.64 ug/l	99
60)	Dibromochloromethane	12.18	129	713089	21.36 ug/l	99
62)	1,2-Dibromoethane	12.53	107	577656	21.52 ug/l	100
63)	1-Chlorohexane	12.83	91	1070975	20.54 ug/l	99
64)	Chlorobenzene	13.29	112	1986315	21.00 ug/l	99
65)	1,1,1,2-Tetrachloroethane	13.37	131	692297	20.51 ug/l	99
66)	Ethylbenzene	13.40	91	3200339	20.42 ug/l	100
67)	m-Xylene & p-Xylene	13.53	91	4828597	40.73 ug/l	100
68)	o-Xylene	14.35	91	2637171	20.70 ug/l	99
69)	Styrene	14.41	104	2207673	21.19 ug/l	95
71)	Isopropylbenzene	15.02	105	3002601	20.65 ug/l	99
72)	Bromoform	15.04	173	419191	21.46 ug/l	99
73)	1,1,2,2-Tetrachloroethane	15.36	83	599795	20.85 ug/l	99
75)	1,2,3-Trichloropropane	15.64	110	157388	20.80 ug/l	97
76)	trans-1,4-Dichloro-2-buten	15.77	53	156787	21.43 ug/l	96
77)	n-Propylbenzene	15.79	91	3814379	20.67 ug/l	100
78)	Bromobenzene	15.86	156	871078	20.72 ug/l	99
79)	1,3,5-Trimethylbenzene	16.10	105	2604132	20.65 ug/l	99
80)	2-Chlorotoluene	16.11	91	2564597	20.38 ug/l	100
81)	4-Chlorotoluene	16.22	91	2093966	20.22 ug/l	100
82)	tert-Butylbenzene	16.78	134	603106	20.99 ug/l	99

(#) = qualifier out of range (m) = manual integration

SY 11/6/11

2080

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW008.D
Acq On : 2 Nov 2011 6:27 pm
Sample : VO06K027
Misc : 20ppb 8260/100ppb KET-A-AN-TBA
MS Integration Params: RTE.P
Quant Time: Nov 4 9:33 2011

Vial: 8
Operator: SD
Inst : TO06
Multiplr: 1.00
Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
83)	1,2,4-Trimethylbenzene	16.86	105	2613430	20.52 ug/l	100
84)	sec-Butylbenzene	17.20	105	3273719	20.59 ug/l	100
85)	p-Isopropyltoluene	17.48	119	2774530	20.63 ug/l	99
86)	1,3-Dichlorobenzene	17.65	146	1556296	20.86 ug/l	99
87)	1,4-Dichlorobenzene	17.85	146	1529688	20.71 ug/l	100
89)	n-Butylbenzene	18.23	91	2615410	20.52 ug/l	100
90)	1,2-Dichlorobenzene	18.48	146	1345163	20.68 ug/l	99
91)	1,2-Dibromo-3-chloropropan	19.59	157	119244	21.78 ug/l	100
92)	1,2,4-Trichlorobenzene	20.69	180	1051395	21.67 ug/l	100
93)	Hexachlorobutadiene	20.86	225	610177	19.83 ug/l	100
94)	Naphthalene	21.02	128	1465230	22.14 ug/l	100
95)	1,2,3-Trichlorobenzene	21.33	180	862230	21.57 ug/l	98

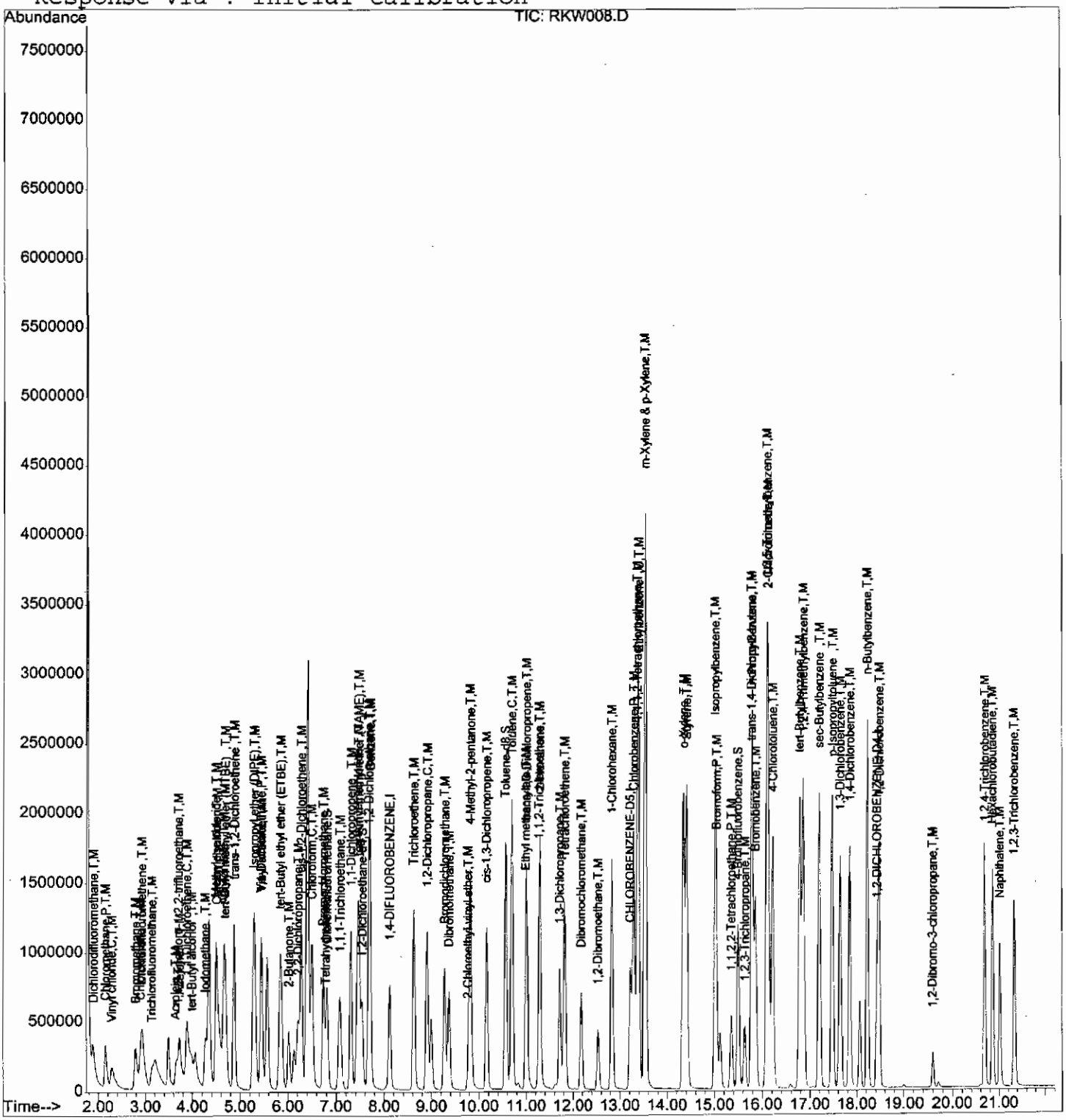
11/6/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K02\RKW008.D Vial: 8
Acq On : 2 Nov 2011 6:27 pm Operator: SD
Sample : VO06K027 Inst : TO06
Misc : 20ppb 8260/100ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 9:33 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



2082

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW010.D Vial: 10
Acq On : 2 Nov 2011 7:28 pm Operator: SD
Sample : VO06K029 Inst : TO06
Misc : 40ppb 8260/200ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:51 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.12	114	1049059	10.00 ug/l	0.00
38) CHLOROBENZENE-D5	13.22	117	986500	10.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	18.43	152	429435	10.00 ug/l	0.00
System Monitoring Compounds					
33) Dibromofluoromethane	6.81	111	1436426	40.10 ug/l	0.00
Spiked Amount 10.000			Recovery	= 401.00%	
37) 1,2-Dichloroethane-d4	7.54	65	1245742	40.14 ug/l	0.00
Spiked Amount 10.000			Recovery	= 401.40%	
52) Toluene-d8	10.56	98	4616142	38.43 ug/l	0.00
Spiked Amount 10.000			Recovery	= 384.30%	
74) 4-Bromofluorobenzene	15.49	95	1724254	39.60 ug/l	0.00
Spiked Amount 10.000			Recovery	= 396.00%	

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.88	85	975728	42.54 ug/l	99
3) Chloromethane	2.14	50	1235879	42.39 ug/l	96
5) Bromomethane	2.76	94	850429	40.38 ug/l	95
6) Chloroethane	2.86	64	747075	41.94 ug/l	99
7) Dichlorofluoromethane	2.91	67	2228020	39.59 ug/l	98
8) Trichlorofluoromethane	3.14	101	1276155	38.92 ug/l	100
9) Acrolein	3.65	56	232894	200.47 ug/l	96
10) Acetone	3.72	43	908862	195.05 ug/l	97
11) 1,1,2-Trichloro-1,2,2-trif	3.69	151	733240	40.03 ug/l	97
12) 1,1-Dichloroethene	3.88	61	2056278	39.82 ug/l	99
13) tert-Butyl alcohol	3.99	59	370984	205.59 ug/l #	1
16) Iodomethane	4.29	142	2813116	43.28 ug/l	100
17) Methylene chloride	4.49	49	1890721	35.05 ug/l	98
18) Acrylonitrile	4.66	53	1282282	196.25 ug/l	100
19) Carbon disulfide	4.51	76	4517766	42.36 ug/l	99
20) tert-Butyl methyl ether (M	4.69	73	2762942	41.97 ug/l	99
21) trans-1,2-Dichloroethene	4.87	61	2250149	40.95 ug/l	100
22) Isopropyl ether (DIPE)	5.30	45	5199897	42.54 ug/l	100
23) Vinyl acetate	5.44	43	1735800	45.04 ug/l	100
24) 1,1-Dichloroethane	5.44	63	2608756	40.43 ug/l	99
26) tert-Butyl ethyl ether (ET	5.85	59	4102605	43.63 ug/l	100
27) 2-Butanone	6.01	43	1822580	208.33 ug/l	100
28) 2,2-Dichloropropane	6.22	77	1242162	38.01 ug/l	99
29) cis-1,2-Dichloroethene	6.28	96	1671396	40.22 ug/l	99
30) Chloroform	6.50	83	2510961	40.87 ug/l	100
31) Bromochloromethane	6.74	49	1268271	42.34 ug/l	98
32) Tetrahydrofuran	6.78	42	215313	42.21 ug/l	99

(#) = qualifier out of range (m) = manual integration

SW 11/6/11

2083

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW010.D Vial: 10
Acq On : 2 Nov 2011 7:28 pm Operator: SD
Sample : VO06K029 Inst : TO06
Misc : 40ppb 8260/200ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:51 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	1,1,1-Trichloroethane	7.08	97	1836071	40.87 ug/l	99
36)	tert-Amyl methyl ether (TA	7.47	87	680054	43.69 ug/l	97
39)	1,1-Dichloropropene	7.30	110	655843	39.28 ug/l	100
40)	Carbon tetrachloride	7.45	119	1586666	39.22 ug/l	99
41)	1,2-Dichloroethane	7.67	62	1565843	40.98 ug/l	99
42)	Benzene	7.70	78	5417156	38.99 ug/l	100
43)	Trichloroethene	8.63	130	1616048	40.61 ug/l	99
45)	1,2-Dichloropropane	8.91	63	1538239	40.58 ug/l	98
47)	Bromodichloromethane	9.28	83	2008792	40.76 ug/l	100
48)	Dibromomethane	9.37	93	793164	41.01 ug/l	99
49)	2-Chloroethyl vinyl ether	9.77	63	313420	42.44 ug/l	98
50)	4-Methyl-2-pentanone	9.81	43	4462151	201.30 ug/l	99
51)	cis-1,3-Dichloropropene	10.16	75	2369012	41.35 ug/l	99
53)	Toluene	10.69	91	5696683	39.30 ug/l	100
54)	Ethyl methacrylate	10.99	69	1426331	40.68 ug/l	99
55)	trans-1,3-Dichloropropene	11.00	75	1832877	41.89 ug/l	98
56)	2-Hexanone	11.29	43	2851632	198.03 ug/l	99
57)	1,1,2-Trichloroethane	11.27	97	978916	40.93 ug/l	99
58)	1,3-Dichloropropane	11.72	76	1855990	41.95 ug/l	100
59)	Tetrachloroethene	11.82	164	1301070	39.91 ug/l	99
60)	Dibromochloromethane	12.18	129	1431220	42.58 ug/l	100
62)	1,2-Dibromoethane	12.53	107	1170613	43.32 ug/l	99
63)	1-Chlorohexane	12.83	91	2116203	40.31 ug/l	99
64)	Chlorobenzene	13.29	112	3940542	41.39 ug/l	99
65)	1,1,1,2-Tetrachloroethane	13.38	131	1366779	40.22 ug/l	99
66)	Ethylbenzene	13.40	91	6202227	39.30 ug/l	99
67)	m-Xylene & p-Xylene	13.53	91	9262002	77.60 ug/l	99
68)	o-Xylene	14.35	91	5211464	40.63 ug/l	99
69)	Styrene	14.41	104	4362091	41.59 ug/l	99
71)	Isopropylbenzene	15.02	105	5872662	40.80 ug/l	99
72)	Bromoform	15.05	173	834969	43.18 ug/l	99
73)	1,1,2,2-Tetrachloroethane	15.36	83	1208552	42.45 ug/l	99
75)	1,2,3-Trichloropropane	15.64	110	318307	42.49 ug/l	97
76)	trans-1,4-Dichloro-2-buten	15.77	53	325530	44.94 ug/l	96
77)	n-Propylbenzene	15.79	91	7451026	40.80 ug/l	100
78)	Bromobenzene	15.86	156	1719487	41.32 ug/l	99
79)	1,3,5-Trimethylbenzene	16.10	105	5047100	40.44 ug/l	99
80)	2-Chlorotoluene	16.12	91	4962394	39.84 ug/l	99
81)	4-Chlorotoluene	16.22	91	4167887	40.66 ug/l	99
82)	tert-Butylbenzene	16.78	134	1175494	41.33 ug/l	99
83)	1,2,4-Trimethylbenzene	16.86	105	5098424	40.43 ug/l	99

(#) = qualifier out of range (m) = manual integration

2084

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW010.D
Acq On : 2 Nov 2011 7:28 pm
Sample : VO06K029
Misc : 40ppb 8260/200ppb KET-A-AN-TBA
MS Integration Params: RTE.P
Quant Time: Nov 4 11:51 2011

Vial: 10
Operator: SD
Inst : TO06
Multiplr: 1.00
Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84)	sec-Butylbenzene	17.20	105	6389131	40.60 ug/l	99
85)	p-Isopropyltoluene	17.48	119	5423603	40.73 ug/l	99
86)	1,3-Dichlorobenzene	17.65	146	3056668	41.39 ug/l	99
87)	1,4-Dichlorobenzene	17.85	146	3022086	41.34 ug/l	100
89)	n-Butylbenzene	18.23	91	5118163	40.57 ug/l	100
90)	1,2-Dichlorobenzene	18.48	146	2656724	41.26 ug/l	100
91)	1,2-Dibromo-3-chloropropan	19.59	157	250919	46.29 ug/l	97
92)	1,2,4-Trichlorobenzene	20.68	180	2141538	44.59 ug/l	99
93)	Hexachlorobutadiene	20.86	225	1259459	41.34 ug/l	100
94)	Naphthalene	21.02	128	2975633	45.43 ug/l	99
95)	1,2,3-Trichlorobenzene	21.33	180	1756271	44.39 ug/l	98

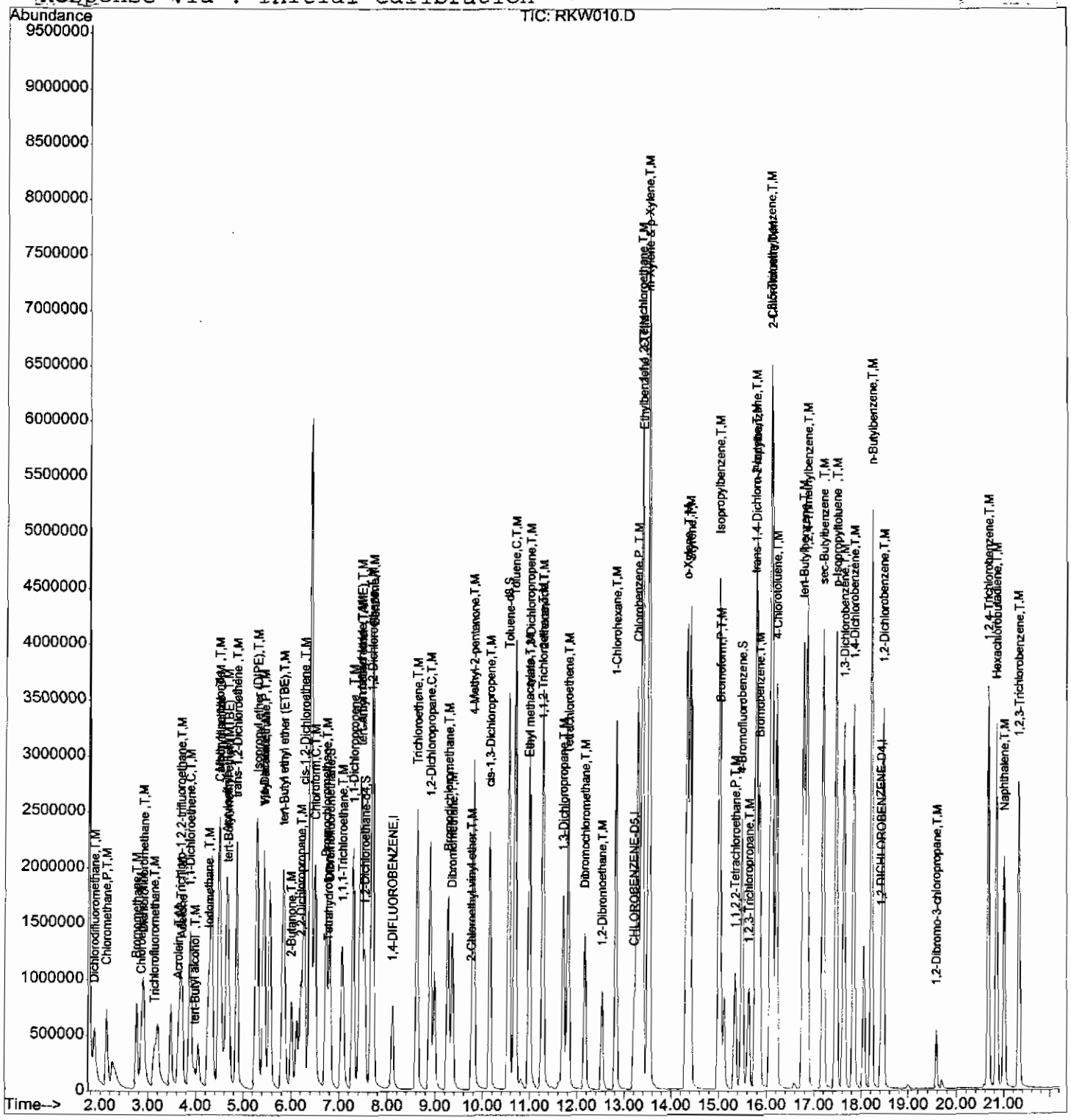
SG 11/6/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K02\RKW010.D Vial: 10
Acq On : 2 Nov 2011 7:28 pm Operator: SD
Sample : VO06K029 Inst : TO06
Misc : 40ppb 8260/200ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:51 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



SY 11/6/11

2086

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW011.D Vial: 11
Acq On : 2 Nov 2011 7:59 pm Operator: SD
Sample : VO06K0210 Inst : TO06
Misc : 50ppb 8260/250ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:51 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.12	114	1061870	10.00 ug/l	0.00
38) CHLOROBENZENE-D5	13.22	117	980416	10.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	18.43	152	426224	10.00 ug/l	0.00
System Monitoring Compounds					
33) Dibromofluoromethane	6.81	111	1746934	48.17 ug/l	0.00
Spiked Amount 10.000			Recovery	= 481.70%	
37) 1,2-Dichloroethane-d4	7.54	65	1505016	47.91 ug/l	0.00
Spiked Amount 10.000			Recovery	= 479.10%	
52) Toluene-d8	10.56	98	5709819	47.83 ug/l	0.00
Spiked Amount 10.000			Recovery	= 478.30%	
74) 4-Bromofluorobenzene	15.49	95	2114364	48.92 ug/l	0.00
Spiked Amount 10.000			Recovery	= 489.20%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.88	85	1214486	52.31 ug/l	98
3) Chloromethane	2.14	50	1529457	51.82 ug/l	96
5) Bromomethane	2.76	94	1125796	52.82 ug/l	97
6) Chloroethane	2.86	64	904560	50.17 ug/l	100
7) Dichlorofluoromethane	2.91	67	2691857	47.25 ug/l	98
8) Trichlorofluoromethane	3.14	101	1566222	47.19 ug/l	99
9) Acrolein	3.65	56	285079	242.43 ug/l	95
10) Acetone	3.72	43	1126285	238.80 ug/l	96
11) 1,1,2-Trichloro-1,2,2-trif	3.69	151	888864	47.94 ug/l	98
12) 1,1-Dichloroethene	3.88	61	2507677	47.97 ug/l	99
13) tert-Butyl alcohol	3.99	59	438639	239.28 ug/l #	1
18) Acrylonitrile	4.66	53	1577002	238.44 ug/l	100
19) Carbon disulfide	4.51	76	5565649	51.56 ug/l	100
20) tert-Butyl methyl ether (M	4.69	73	3227813	48.44 ug/l	100
21) trans-1,2-Dichloroethene	4.87	61	2718325	48.88 ug/l	99
22) Isopropyl ether (DIPE)	5.30	45	6189950	50.03 ug/l	100
23) Vinyl acetate	5.44	43	2051753	52.60 ug/l	100
24) 1,1-Dichloroethane	5.44	63	3224121	49.37 ug/l	100
26) tert-Butyl ethyl ether (ET	5.85	59	4851276	50.96 ug/l	100
27) 2-Butanone	6.01	43	2233276	252.20 ug/l	100
28) 2,2-Dichloropropane	6.22	77	1486424	44.93 ug/l	99
29) cis-1,2-Dichloroethene	6.28	96	2028836	48.23 ug/l	99
30) Chloroform	6.50	83	3026685	48.67 ug/l	100
31) Bromochloromethane	6.74	49	1525361	50.31 ug/l	99
32) Tetrahydrofuran	6.78	42	248844	48.19 ug/l	99
34) 1,1,1-Trichloroethane	7.08	97	2221384	48.85 ug/l	99
36) tert-Amyl methyl ether (TA	7.47	87	798750	50.70 ug/l	96

(#) = qualifier out of range (m) = manual integration

2087

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW011.D Vial: 11
Acq On : 2 Nov 2011 7:59 pm Operator: SD
Sample : VO06K0210 Inst : TO06
Misc : 50ppb 8260/250ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:51 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	1,1-Dichloropropene	7.30	110	801213	48.28 ug/l	99
40)	Carbon tetrachloride	7.45	119	1920302	47.76 ug/l	99
41)	1,2-Dichloroethane	7.67	62	1848841	48.69 ug/l	99
42)	Benzene	7.70	78	6537282	47.35 ug/l	100
43)	Trichloroethene	8.63	130	1965264	49.70 ug/l	99
45)	1,2-Dichloropropane	8.91	63	1857003	49.29 ug/l	98
47)	Bromodichloromethane	9.28	83	2414555	49.30 ug/l	100
48)	Dibromomethane	9.37	93	954937	49.68 ug/l	98
49)	2-Chloroethyl vinyl ether	9.77	63	377930	51.36 ug/l	98
50)	4-Methyl-2-pentanone	9.81	43	5489512	249.18 ug/l	100
51)	cis-1,3-Dichloropropene	10.16	75	2844299	49.95 ug/l	99
53)	Toluene	10.69	91	6875068	47.72 ug/l	99
54)	Ethyl methacrylate	10.99	69	1708255	49.02 ug/l	100
55)	trans-1,3-Dichloropropene	11.00	75	2191528	50.40 ug/l	99
56)	2-Hexanone	11.29	43	3506978	245.05 ug/l	99
57)	1,1,2-Trichloroethane	11.27	97	1159043	48.76 ug/l	99
58)	1,3-Dichloropropane	11.72	76	2201329	50.07 ug/l	100
59)	Tetrachloroethene	11.82	164	1575483	48.63 ug/l	99
60)	Dibromochloromethane	12.18	129	1715010	51.34 ug/l	100
62)	1,2-Dibromoethane	12.53	107	1401828	52.20 ug/l	100
63)	1-Chlorohexane	12.83	91	2568917	49.23 ug/l	99
64)	Chlorobenzene	13.29	112	4749936	50.20 ug/l	99
65)	1,1,1,2-Tetrachloroethane	13.37	131	1650776	48.88 ug/l	100
66)	Ethylbenzene	13.40	91	7458450	47.56 ug/l	99
67)	m-Xylene & p-Xylene	13.53	91	11135049	93.87 ug/l	99
68)	o-Xylene	14.35	91	6296543	49.39 ug/l	99
69)	Styrene	14.41	104	5266676	50.52 ug/l	99
71)	Isopropylbenzene	15.02	105	7095621	49.66 ug/l	99
72)	Bromoform	15.05	173	983019	51.22 ug/l	99
73)	1,1,2,2-Tetrachloroethane	15.36	83	1409966	49.90 ug/l	100
75)	1,2,3-Trichloropropane	15.64	110	372155	50.05 ug/l	97
76)	trans-1,4-Dichloro-2-buten	15.77	53	376161	52.32 ug/l	94
77)	n-Propylbenzene	15.79	91	8951682	49.38 ug/l	99
78)	Bromobenzene	15.86	156	2059839	49.88 ug/l	99
79)	1,3,5-Trimethylbenzene	16.10	105	6065358	48.96 ug/l	100
80)	2-Chlorotoluene	16.12	91	5939873	48.04 ug/l	100
81)	4-Chlorotoluene	16.22	91	4980711	48.95 ug/l	99
82)	tert-Butylbenzene	16.78	134	1427454	50.56 ug/l	99
83)	1,2,4-Trimethylbenzene	16.86	105	6097976	48.72 ug/l	99
84)	sec-Butylbenzene	17.20	105	7713736	49.38 ug/l	99
85)	p-Isopropyltoluene	17.48	119	6562841	49.66 ug/l	99

(#) = qualifier out of range (m) = manual integration

2088

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW011.D Vial: 11
Acq On : 2 Nov 2011 7:59 pm Operator: SD
Sample : VO06K0210 Inst : TO06
Misc : 50ppb 8260/250ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:51 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
86)	1,3-Dichlorobenzene	17.65	146	3666962	50.03 ug/l	99
87)	1,4-Dichlorobenzene	17.85	146	3601148	49.63 ug/l	99
89)	n-Butylbenzene	18.23	91	6158991	49.18 ug/l	100
90)	1,2-Dichlorobenzene	18.48	146	3184138	49.83 ug/l	99
91)	1,2-Dibromo-3-chloropropan	19.59	157	289251	53.76 ug/l	98
92)	1,2,4-Trichlorobenzene	20.68	180	2532196	53.12 ug/l	99
93)	Hexachlorobutadiene	20.86	225	1526038	50.46 ug/l	100
94)	Naphthalene	21.02	128	3498099	53.81 ug/l	99
95)	1,2,3-Trichlorobenzene	21.33	180	2062845	52.53 ug/l	98

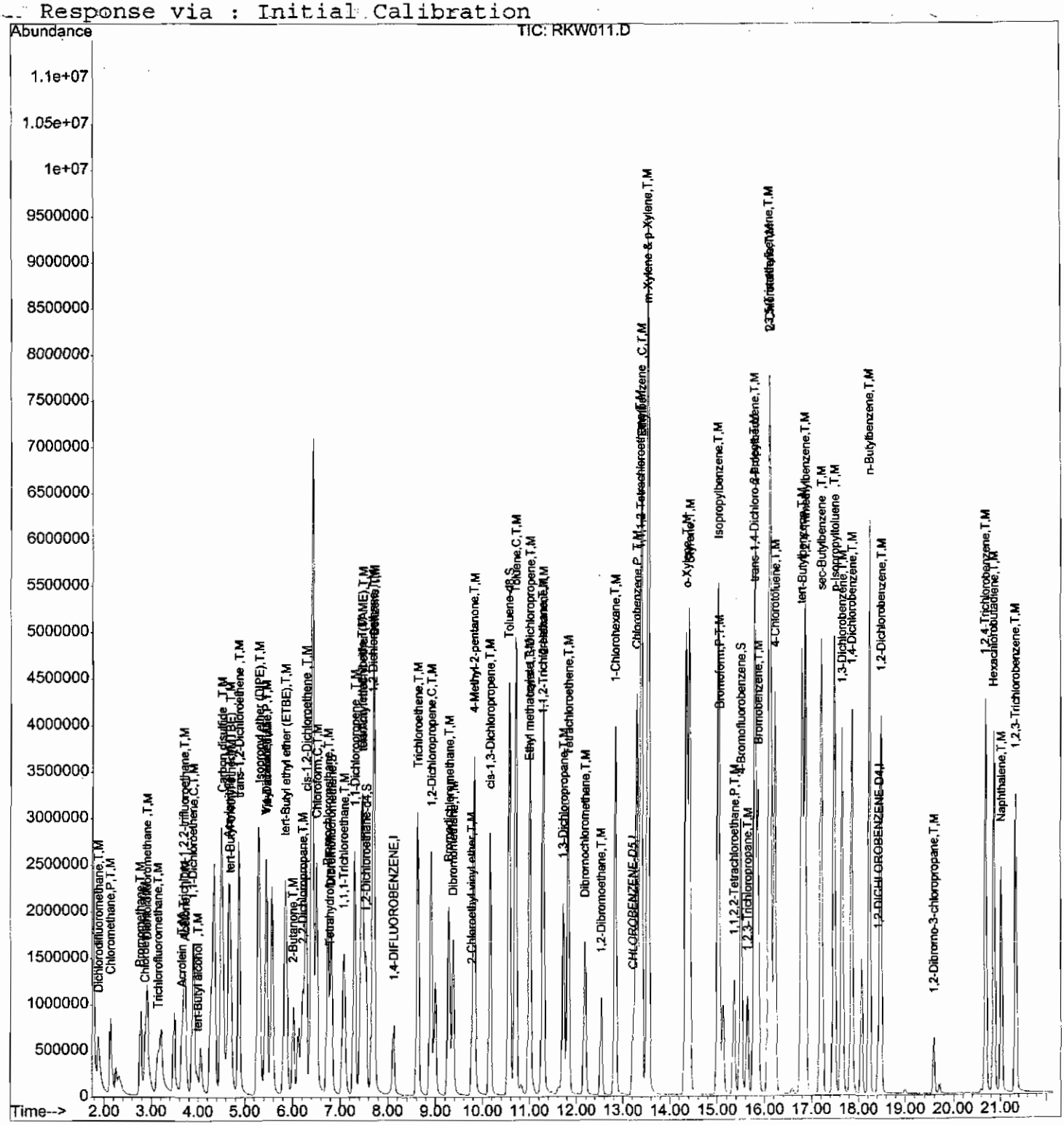
SU 11/6/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K02\RKW011.D Vial: 11
Acq On : 2 Nov 2011 7:59 pm Operator: SD
Sample : VO06K0210 Inst : TO06
Misc : 50ppb 8260/250ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:51 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



2090

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW012.D Vial: 12
Acq On : 2 Nov 2011 8:30 pm Operator: SD
Sample : VO06K0211 Inst : TO06
Misc : 100ppb 8260/500ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:51 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.12	114	1028757	10.00 ug/l	0.00
38) CHLOROBENZENE-D5	13.22	117	883183	10.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	18.43	152	342789	10.00 ug/l	0.00
System Monitoring Compounds					
33) Dibromofluoromethane	6.81	111	3355193	95.50 ug/l	0.00
Spiked Amount 10.000			Recovery	= 955.00%	
37) 1,2-Dichloroethane-d4	7.54	65	2952144	97.01 ug/l	0.00
Spiked Amount 10.000			Recovery	= 970.10%	
52) Toluene-d8	10.57	98	10469539	97.36 ug/l	0.02
Spiked Amount 10.000			Recovery	= 973.60%	
74) 4-Bromofluorobenzene	15.49	95	3504555	100.82 ug/l	0.00
Spiked Amount 10.000			Recovery	= 1008.20%	

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.88	85	2400906	106.74 ug/l	98
3) Chloromethane	2.14	50	3130644	109.49 ug/l	97
5) Bromomethane	2.76	94	1841133	89.16 ug/l	94
6) Chloroethane	2.87	64	1552906	88.90 ug/l	99
7) Dichlorofluoromethane	2.91	67	4736231	85.82 ug/l	99
8) Trichlorofluoromethane	3.14	101	2838267	88.28 ug/l	100
9) Acrolein	3.65	56	534395	469.08 ug/l	98
10) Acetone	3.72	43	2133627	466.93 ug/l	94
11) 1,1,2-Trichloro-1,2,2-trif	3.69	151	1623615	90.39 ug/l	97
12) 1,1-Dichloroethene	3.88	61	4703345	92.87 ug/l	100
18) Acrylonitrile	4.66	53	3049676	475.95 ug/l	99
19) Carbon disulfide	4.51	76	10446294	99.89 ug/l	99
20) tert-Butyl methyl ether (M	4.69	73	6342470	98.25 ug/l	99
21) trans-1,2-Dichloroethene	4.87	61	5166718	95.89 ug/l	99
22) Isopropyl ether (DIPE)	5.30	45	11890662	99.20 ug/l	99
23) Vinyl acetate	5.45	43	3941302	104.28 ug/l	100
24) 1,1-Dichloroethane	5.45	63	6149826	97.20 ug/l	100
26) tert-Butyl ethyl ether (ET	5.85	59	9437003	102.33 ug/l	99
27) 2-Butanone	6.02	43	4361258	508.36 ug/l	100
28) 2,2-Dichloropropane	6.22	77	2652503	82.76 ug/l	99
29) cis-1,2-Dichloroethene	6.28	96	3847421	94.40 ug/l	98
30) Chloroform	6.50	83	5783287	95.98 ug/l	95
31) Bromochloromethane	6.74	49	2931681	99.80 ug/l	98
32) Tetrahydrofuran	6.78	42	495076	98.97 ug/l	97
34) 1,1,1-Trichloroethane	7.08	97	4221266	95.82 ug/l	100
36) tert-Amyl methyl ether (TA	7.47	87	1551945	101.68 ug/l #	93
39) 1,1-Dichloropropene	7.30	110	1512750	101.19 ug/l	99

(#) = qualifier out of range (m) = manual integration

SU 11/6/11

2091

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW012.D Vial: 12
Acq On : 2 Nov 2011 8:30 pm Operator: SD
Sample : VO06K0211 Inst : TO06
Misc : 100ppb 8260/500ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:51 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
40)	Carbon tetrachloride	7.45	119	3629671	100.21 ug/l	100
41)	1,2-Dichloroethane	7.67	62	3529852	103.20 ug/l	98
42)	Benzene	7.70	78	12064527	97.00 ug/l	99
43)	Trichloroethene	8.63	130	3705341	104.02 ug/l	99
45)	1,2-Dichloropropane	8.91	63	3499252	103.11 ug/l	97
47)	Bromodichloromethane	9.28	83	4616916	104.65 ug/l	100
48)	Dibromomethane	9.37	93	1788556	103.30 ug/l	100
50)	4-Methyl-2-pentanone	9.81	43	10362644	522.17 ug/l	100
51)	cis-1,3-Dichloropropene	10.16	75	5355558	104.41 ug/l	98
53)	Toluene	10.71	91	12412109	95.64 ug/l	99
54)	Ethyl methacrylate	11.00	69	3144478	100.17 ug/l	100
55)	trans-1,3-Dichloropropene	11.02	75	4082528	104.22 ug/l	99
56)	2-Hexanone	11.30	43	6481503	502.76 ug/l	99
57)	1,1,2-Trichloroethane	11.29	97	2116599	98.85 ug/l	98
58)	1,3-Dichloropropane	11.72	76	4095645	103.41 ug/l	99
59)	Tetrachloroethene	11.82	164	2849006	97.62 ug/l	99
60)	Dibromochloromethane	12.18	129	3143147	104.45 ug/l	100
62)	1,2-Dibromoethane	12.53	107	2581197	106.70 ug/l	99
63)	1-Chlorohexane	12.83	91	4422999	94.10 ug/l	98
64)	Chlorobenzene	13.29	112	8249424	96.77 ug/l	99
65)	1,1,1,2-Tetrachloroethane	13.38	131	2836224	93.22 ug/l	99
66)	Ethylbenzene	13.40	91	12434827	88.01 ug/l	98
67)	m-Xylene & p-Xylene	13.53	91	17833394	166.90 ug/l	98
68)	o-Xylene	14.35	91	10302572	89.72 ug/l	98
69)	Styrene	14.41	104	8653790	92.16 ug/l	94
71)	Isopropylbenzene	15.02	105	11244186	97.86 ug/l	98
72)	Bromoform	15.05	173	1713395	111.01 ug/l	99
73)	1,1,2,2-Tetrachloroethane	15.36	83	2412795	106.17 ug/l	99
75)	1,2,3-Trichloropropane	15.64	110	647907	108.34 ug/l	97
76)	trans-1,4-Dichloro-2-buten	15.77	53	651741	112.71 ug/l	94
77)	n-Propylbenzene	15.79	91	14076552	96.56 ug/l	98
78)	Bromobenzene	15.86	156	3366019	101.34 ug/l	99
79)	1,3,5-Trimethylbenzene	16.10	105	9320629	93.56 ug/l	100
80)	2-Chlorotoluene	16.13	91	9149849	92.02 ug/l	99
81)	4-Chlorotoluene	16.22	91	8038225	98.23 ug/l	99
82)	tert-Butylbenzene	16.78	134	2240547	98.68 ug/l	99
83)	1,2,4-Trimethylbenzene	16.86	105	9472900	94.11 ug/l	98
84)	sec-Butylbenzene	17.20	105	12008362	95.59 ug/l	99
85)	p-Isopropyltoluene	17.48	119	10246338	96.40 ug/l	98
86)	1,3-Dichlorobenzene	17.65	146	5790405	98.24 ug/l	99
87)	1,4-Dichlorobenzene	17.85	146	5673519	97.23 ug/l	99

(#) = qualifier out of range (m) = manual integration
RKW012.D VO06K02.M Fri Nov 04 11:53:53 2011

5/11/11

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW012.D Vial: 12
Acq On : 2 Nov 2011 8:30 pm Operator: SD
Sample : VO06K0211 Inst : TO06
Misc : 100ppb 8260/500ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:51 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
89)	n-Butylbenzene	18.23	91	9701984	96.33	ug/l	99
90)	1,2-Dichlorobenzene	18.48	146	4979477	96.89	ug/l	99
91)	1,2-Dibromo-3-chloropropan	19.59	157	493922	114.15	ug/l	98
92)	1,2,4-Trichlorobenzene	20.68	180	4061536	105.94	ug/l	100
93)	Hexachlorobutadiene	20.86	225	2400385	98.70	ug/l	100
94)	Naphthalene	21.02	128	5570061	106.54	ug/l	99
95)	1,2,3-Trichlorobenzene	21.33	180	3264662	103.38	ug/l	98

(#) = qualifier out of range (m) = manual integration

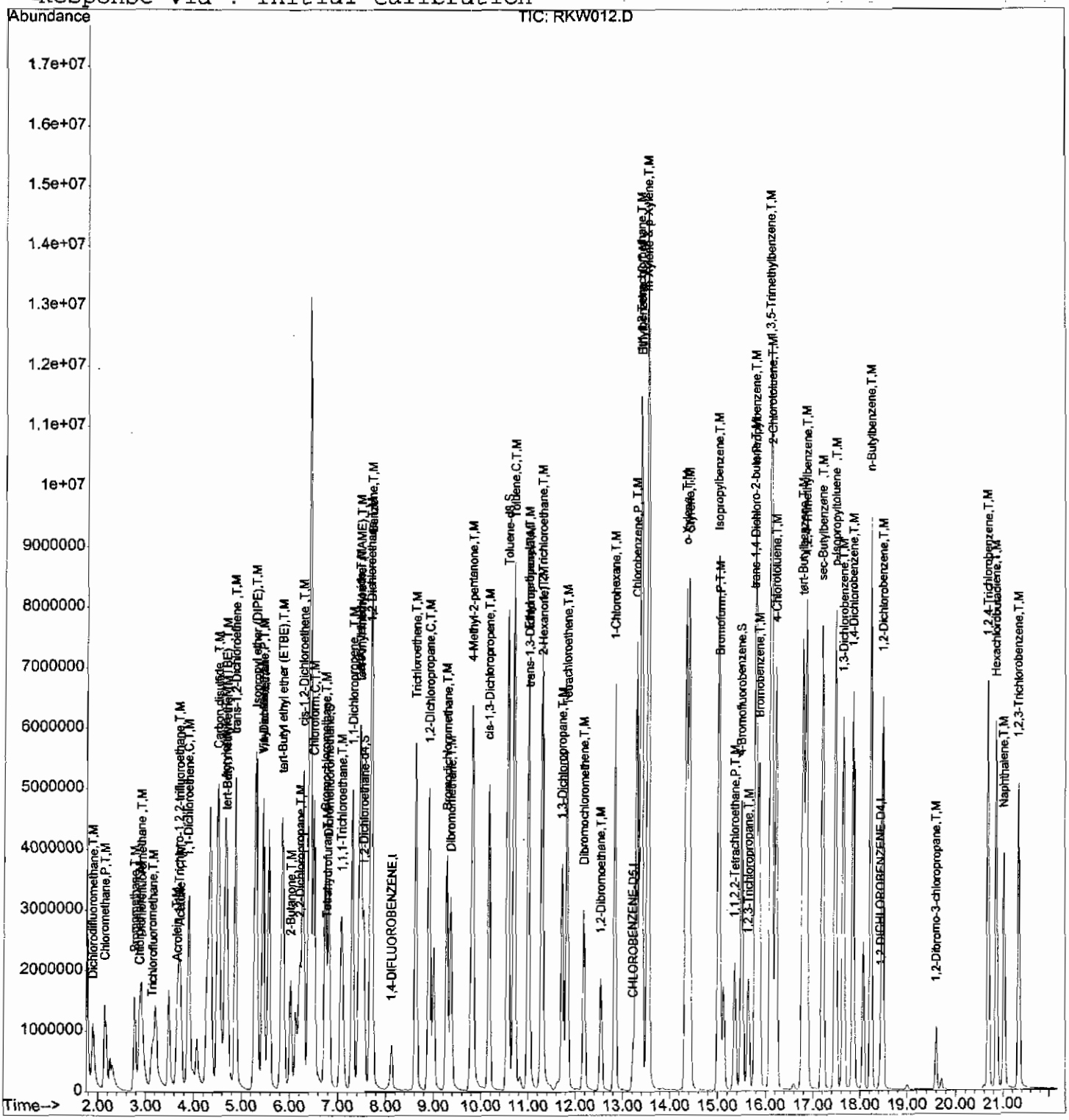
Sa 11/6/11

2093

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K02\RKW012.D Vial: 12
Acq On : 2 Nov 2011 8:30 pm Operator: SD
Sample : VO06K0211 Inst : TO06
Misc : 100ppb 8260/500ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:51 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



SA 11/6/11

2094

SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :T006
IC Beginning DateTime :11/02/11 15:26
SpTke Amount :10 PPB
CC/CV File :RKW015
IC File :RKW007

Column Spec :RTX502.2 ID :0.25MM
IC Ending DateTime :11/02/11 20:30
HPChem Method :V006K02
Date_Time :11/02/11 22:02

M	IDX	Parameters	CC_Con	CC% D	CC_Resp	CCRRF	AVRRF	CC_Rtm	AVRtm	% RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	1019912	1	1	8.121	8.120	0				
	2	Dichlorodifluoromethane	10.156	1.6	226488	0.222	0.219	1.883	1.889	13.43				
	3	Chloromethane	10.870	8.7	308169	0.302	0.278	2.135	2.141	9.91				
	4	Vinyl chloride	11.451	14.5	279431	0.274	0.239	2.269	2.284	10.17				
	5	Bromomethane	11.404	14.0	233483	0.229	0.201	2.775	2.775	9.04				
	6	Chloroethane	10.962	9.6	189848	0.186	0.170	2.864	2.876	11.04				
	7	Dichlorofluoromethane	11.085	10.9	606561	0.595	0.536	2.908	2.915	6.33				
	8	Trichlorofluoromethane	10.069	0.7	320976	0.315	0.313	3.142	3.149	11.12				
5	9	Acrolein	53.416	6.8	60332	0.012	0.011	3.648	3.650	5.71				
5	10	Acetone	53.263	6.5	241293	0.047	0.044	3.737	3.730	7.89				
	11	1,1,2-Trichloro-1,2,2-trifluoroethane	10.490	4.9	186815	0.183	0.175	3.692	3.695	5.59				
	12	1,1-Dichloroethene	10.917	9.2	548138	0.537	0.492	3.886	3.887	3.94				
5	13	tert-Butyl alcohol	41.378	-17.2	65159	0.013	0.015	3.990	3.996	23.18	-0.0091	0.0176		0.9982
	14	Acetonitrile												
	15	Methyl acetate												
	16	Iodomethane	11.743	17.4	742150	0.728	0.620	4.287	4.280	7.96				
	17	Methylene chloride	9.641	-3.6	505656	0.496	0.514	4.495	4.493	14.55				
5	18	Acrylonitrile	54.565	9.1	346627	0.068	0.062	4.658	4.660	4.44				
	19	Carbon disulfide	11.048	10.5	1145506	1.123	1.017	4.510	4.508	13.38				
	20	tert-Butyl methyl ether (MTBE)	10.925	9.3	699214	0.686	0.627	4.688	4.691	4.22				
	21	trans-1,2-Dichloroethene	11.003	10.0	587776	0.576	0.524	4.866	4.874	3.83				
	22	Isopropyl ether (DIPE)	11.139	11.4	1323744	1.298	1.165	5.297	5.296	6.70				
	23	Vinyl acetate	10.753	7.5	402910	0.395	0.367	5.446	5.448	14.44				
	24	1,1-Dichloroethane	11.286	12.9	707964	0.694	0.615	5.446	5.445	3.81				
	25	2-Butanol												
	26	tert-Butyl ethyl ether (ETBE)	10.981	9.8	1004005	0.984	0.896	5.847	5.847	7.05				
5	27	2-Butanone	54.090	8.2	460060	0.090	0.083	6.026	6.024	6.57				
	28	2,2-Dichloropropane	10.173	1.7	323267	0.317	0.312	6.219	6.217	9.07				
	29	cis-1,2-Dichloroethene	10.931	9.3	441692	0.433	0.396	6.278	6.277	3.62				
	30	Chloroform	11.001	10.0	657183	0.644	0.586	6.501	6.500	4.07				
	31	Bromochloromethane	11.306	13.1	329274	0.323	0.286	6.739	6.738	7.19				
	32	Tetrahydrofuran	10.650	6.5	52821	0.052	0.049	6.784	6.786	8.55				
	33	Dibromofluoromethane	10.762	7.6	374837	0.368	0.341	6.813	6.812	3.75				
	34	1,1,1-Trichloroethane	10.828	8.3	472958	0.464	0.428	7.081	7.078	3.53				
	35	Cyclohexane												
	36	tert-Amyl methyl ether (TAME)	11.256	12.6	170338	0.167	0.148	7.467	7.466	6.73				
	37	1,2-Dichloroethane-d4	10.839	8.4	327031	0.321	0.296	7.541	7.540	3.81				
	38	CHLOROBENZENE-D5	10.000	0	946933	1	1	13.218	13.217	0				
	39	1,1-Dichloropropene	10.599	6.0	169887	0.179	0.169	7.304	7.302	2.79				
	40	Carbon tetrachloride	10.430	4.3	405074	0.428	0.410	7.452	7.449	3.29				
	41	1,2-Dichloroethane	11.020	10.2	404151	0.427	0.387	7.675	7.675	5.02				
	42	Benzene	10.969	9.7	1462874	1.545	1.408	7.690	7.702	3.18				
	43	Trichloroethene	10.935	9.4	417677	0.441	0.403	8.626	8.626	3.58				
	44	Methylcyclohexane												
	45	1,2-Dichloropropane	10.781	7.8	392295	0.414	0.384	8.909	8.907	3.22				
20	46	1,4-Dioxane												
	47	Bromodichloromethane	10.705	7.0	506363	0.535	0.500	9.265	9.279	3.22				
	48	Dibromomethane	11.073	10.7	205558	0.217	0.196	9.354	9.368	3.06				
	49	2-Chloroethyl vinyl ether	10.192	1.9	68846	0.073	0.063	9.771	9.775	18.63	-0.0047	0.0760		0.9964
5	50	4-Methyl-2-pentanone	55.361	10.7	1177958	0.249	0.225	9.815	9.818	5.44				
	51	cis-1,3-Dichloropropene	10.849	8.5	596706	0.630	0.581	10.157	10.161	5.45				
	52	Toluene-d8	10.817	8.2	1247225	1.317	1.218	10.558	10.562	4.63				
	53	Toluene	11.013	10.1	1532386	1.618	1.469	10.692	10.696	3.44				
	54	Ethyl methacrylate	10.878	8.8	366150	0.387	0.355	10.989	10.998	3.25				
	55	trans-1,3-Dichloropropene	11.109	11.1	466576	0.493	0.444	11.004	11.009	6.79				
5	56	2-Hexanone	55.232	10.5	763444	0.161	0.146	11.286	11.294	3.69				
	57	1,1,2-Trichloroethane	10.906	9.1	250404	0.264	0.242	11.271	11.278	3.56				
	58	1,3-Dichloropropane	11.191	11.9	475235	0.502	0.448	11.717	11.716	5.10				
	59	Tetrachloroethene	10.879	8.8	340412	0.359	0.330	11.821	11.820	4.18				
	60	Dibromochloromethane	10.989	9.9	354557	0.374	0.341	12.178	12.177	7.07				
	61	2-Ethyl-1-butanol												
	62	1,2-Dibromoethane	11.327	13.3	293814	0.310	0.274	12.535	12.535	8.68				
	63	1-Chlorohexane	10.914	9.1	550045	0.581	0.532	12.832	12.830	4.96				
	64	Chlorobenzene	11.191	11.9	1022880	1.080	0.965	13.293	13.291	5.52				
	65	1,1,1,2-Tetrachloroethane	10.918	9.2	356158	0.376	0.344	13.367	13.371	3.70				
	66	Ethylbenzene	11.103	11.0	1681999	1.776	1.600	13.382	13.395	5.69				
2	67	m-Xylene & p-Xylene	22.242	11.2	2548210	1.346	1.210	13.530	13.529	7.35				
	68	o-Xylene	11.188	11.9	1377568	1.455	1.300	14.333	14.346	4.93				
	69	Styrene	11.371	13.7	1144835	1.209	1.063	14.407	14.406	6.43				
	70	1,2-DICHLOROBENZENE-D4	10.000	0	425979	1	1	18.435	18.433	0				
	71	Isopropylbenzene	11.028	10.3	1574721	3.697	3.352	15.017	15.015	4.88				
	72	Bromoform	10.995	9.9	210895	0.495	0.450	15.031	15.045	9.03				
	73	1,1,2,2-Tetrachloroethane	10.832	8.3	305910	0.718	0.663	15.358	15.357	5.79				
	74	4-Bromofluorobenzene	10.663	6.6	460609	1.081	1.014	15.492	15.494	2.29				
	75	1,2,3-Trichloropropane	10.649	6.5	79148	0.186	0.174	15.641	15.641	6.61				
	76	trans-1,4-Dichloro-2-butene	10.965	9.7	78795	0.185	0.169	15.774	15.773	11.80				
	77	n-Propylbenzene	11.029	10.3	1998135	4.691	4.253	15.789	15.788	4.36				
	78	Bromobenzene	10.896	9.0	449757	1.056	0.969	15.864	15.862	5.00				
	79	1,3,5-Trimethylbenzene	10.965	9.7	1357596	3.187	2.906	16.101	16.100	5.21				
	80	2-Chlorotoluene	10.419	4.2	1287455	3.022	2.901	16.116	16.118	4.58				
	81	4-Chlorotoluene	11.572	15.7	1176813	2.763	2.387	16.205	16.219	3.34				
	82	tert-Butylbenzene	11.129	11.3	314010	0.737	0.662	16.785	16.785	5.66				
	83	1,2,4-Trimethylbenzene	11.047	10.5	1381913	3.244	2.936	16.859	16.858	4.39				
	84	sec-Butylbenzene	11.000	10.0	1717272	4.031	3.665	17.201	17.200	5.64				
	85	p-Isopropyltoluene	11.022	10.2	1455919	3.418	3.101	17.469	17.480	5.57				
	86	1,3-Dichlorobenzene	11.111	11.1	813894	1.911	1.720	17.647	17.646	5.76				
	87	1,4-Dichlorobenzene	11.056	10.6	801729	1.882	1.702	17.855	17.854	4.94				
	88	Benzyl chloride												
	89	n-Butylbenzene	11.041	10.4	1381807	3.244	2.938	18.226	18.225	5.88				
	90	1,2-Dichlorobenzene	11.063	10.6	706596	1.659	1.499	18.479	18.478	5.28				
	91	1,2-Dibromo-3-chloropropane	11.485	14.8	61756	0.145	0.126	19.594	19.598	12.37				
	92	1,2,4-Trichlorobenzene	11.351	13.5	540802	1.270	1.118	20.679	20.686	12.05				
	93	Hexachlorobutadiene	10.851	8.5	327952	0.770	0.709	20.857	20.855	7.11				
	94	Naphthalene	11.815	18.1	767647	1.802	1.525	21.020	21.019	11.41				
	95	1,2,3-Trichlorobenzene	11.512	15.1	451803	1.061	0.921	21.333	21.333	10.99				

Spike Amount = Nominal Amount * M

SA 1146 111

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKW015.D Vial: 15
Acq On : 2 Nov 2011 10:02 pm Operator: SD
Sample : IVO06K0201 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	93	0.00
2	T,M	Dichlorodifluoromethane	10.000	10.156	-1.6	90	-0.01
3	P,T,M	Chloromethane	10.000	10.871	-8.7	97	-0.01
4	C,T,M	Vinyl chloride	10.000	11.451	-14.5	102	-0.01
5	T,M	Bromomethane	10.000	11.404	-14.0	95	-0.01
6	T,M	Chloroethane	10.000	10.962	-9.6	92	-0.01
7	T,M	Dichlorofluoromethane	10.000	11.086	-10.9	97	-0.01
8	T,M	Trichlorofluoromethane	10.000	10.070	-0.7	88	-0.01
9	T,M	Acrolein	50.000	53.417	-6.8	95	0.00
10	T,M	Acetone	50.000	53.264	-6.5	93	0.00
11	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	10.491	-4.9	95	-0.01
12	C,T,M	1,1-Dichloroethene	10.000	10.917	-9.2	97	0.00
13	T,M	tert-Butyl alcohol	50.000	41.378	17.2	73	0.00
14	T,M	Acetonitrile	-1.000	0.000	0.0	0	0.00
15	T,M	Methyl acetate	-1.000	0.000	0.0	0	0.00
16	T,M	Iodomethane	10.000	11.744	-17.4	105	0.02
17	T,M	Methylene chloride	10.000	9.642	3.6	97	0.00
18	T,M	Acrylonitrile	50.000	54.565	-9.1	98	0.00
19	T,M	Carbon disulfide	10.000	11.048	-10.5	99	0.00
20	T,M	tert-Butyl methyl ether (MT	10.000	10.926	-9.3	97	0.00
21	T,M	trans-1,2-Dichloroethene	10.000	11.004	-10.0	96	-0.01
22	T,M	Isopropyl ether (DIPE)	10.000	11.139	-11.4	96	0.00
23	T,M	Vinyl acetate	10.000	10.753	-7.5	91	0.00
24	P,T,M	1,1-Dichloroethane	10.000	11.286	-12.9	100	0.00
25	T,M	2-Butanol	-1.000	0.000	0.0	0	-5.87#
26	T,M	tert-Butyl ethyl ether (ETB	10.000	10.981	-9.8	97	0.00
27	T,M	2-Butanone	50.000	54.091	-8.2	97	0.00
28	T,M	2,2-Dichloropropane	10.000	10.174	-1.7	93	0.00
29	T,M	cis-1,2-Dichloroethene	10.000	10.932	-9.3	98	0.00
30	C,T,M	Chloroform	10.000	11.001	-10.0	97	0.00
31	T,M	Bromochloromethane	10.000	11.306	-13.1	97	0.00
32	T,M	Tetrahydrofuran	10.000	10.651	-6.5	99	0.00
33	S	Dibromofluoromethane	10.000	10.762	-7.6	98	0.00
34	T,M	1,1,1-Trichloroethane	10.000	10.829	-8.3	99	0.00
35	T,M	Cyclohexane	-1.000	0.000	0.0	0	0.00
36	T,M	tert-Amyl methyl ether (TAM	10.000	11.257	-12.6	99	0.00
37	S	1,2-Dichloroethane-d4	10.000	10.839	-8.4	98	0.00
38	I	CHLOROBENZENE-D5	10.000	10.000	0.0	93	0.00
39	T,M	1,1-Dichloropropene	10.000	10.599	-6.0	96	0.00
40	T,M	Carbon tetrachloride	10.000	10.430	-4.3	96	0.00

SU 11/6/11

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKW015.D Vial: 15
Acq On : 2 Nov 2011 10:02 pm Operator: SD
Sample : IVO06K0201 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	1,2-Dichloroethane	10.000	11.020	-10.2	96	0.00
42	T,M	Benzene	10.000	10.970	-9.7	99	-0.01
43	T,M	Trichloroethene	10.000	10.936	-9.4	98	0.00
44	T,M	Methylcyclohexane	-1.000	0.000	0.0	0	0.00
45	C,T,M	1,2-Dichloropropane	10.000	10.782	-7.8	96	0.00
46	T,M	1,4-Dioxane	-1.000	0.000	0.0	0	0.00
47	T,M	Bromodichloromethane	10.000	10.705	-7.1	96	-0.01
48	T,M	Dibromomethane	10.000	11.073	-10.7	100	-0.01
49	T,M	2-Chloroethyl vinyl ether	10.000	10.193	-1.9	113	0.00
50	T,M	4-Methyl-2-pentanone	50.000	55.361	-10.7	98	0.00
51	T,M	cis-1,3-Dichloropropene	10.000	10.850	-8.5	95	0.00
52	S	Toluene-d8	10.000	10.817	-8.2	99	0.00
53	C,T,M	Toluene	10.000	11.013	-10.1	99	0.00
54	T,M	Ethyl methacrylate	10.000	10.878	-8.8	99	-0.01
55	T,M	trans-1,3-Dichloropropene	10.000	11.109	-11.1	96	0.00
56	T,M	2-Hexanone	50.000	55.232	-10.5	99	0.00
57	T,M	1,1,2-Trichloroethane	10.000	10.907	-9.1	96	-0.01
58	T,M	1,3-Dichloropropane	10.000	11.192	-11.9	99	0.00
59	T,M	Tetrachloroethene	10.000	10.879	-8.8	96	0.00
60	T,M	Dibromochloromethane	10.000	10.990	-9.9	96	0.00
61	T,M	2-Ethyl-1-butanol	-1.000	0.000	0.0	0	0.00
62	T,M	1,2-Dibromoethane	10.000	11.328	-13.3	98	0.00
63	T,M	1-Chlorohexane	10.000	10.915	-9.1	98	0.00
64	P, T,M	Chlorobenzene	10.000	11.192	-11.9	99	0.00
65	T,M	1,1,1,2-Tetrachloroethane	10.000	10.919	-9.2	96	0.00
66	C,T,M	Ethylbenzene	10.000	11.104	-11.0	99	-0.01
67	T,M	m-Xylene & p-Xylene	20.000	22.242	-11.2	99	0.00
68	T,M	o-Xylene	10.000	11.189	-11.9	99	-0.01
69	T,M	Styrene	10.000	11.371	-13.7	99	0.00
70	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	95	0.00
71	T,M	Isopropylbenzene	10.000	11.028	-10.3	99	0.00
72	P,T,M	Bromoform	10.000	10.995	-9.9	97	-0.01
73	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.832	-8.3	99	0.00
74	S	4-Bromofluorobenzene	10.000	10.663	-6.6	100	0.00
75	T,M	1,2,3-Trichloropropane	10.000	10.650	-6.5	95	0.00
76	T,M	trans-1,4-Dichloro-2-butene	10.000	10.966	-9.7	98	0.00
77	T,M	n-Propylbenzene	10.000	11.029	-10.3	100	0.00
78	T,M	Bromobenzene	10.000	10.897	-9.0	98	0.00
79	T,M	1,3,5-Trimethylbenzene	10.000	10.966	-9.7	98	0.00
80	T,M	2-Chlorotoluene	10.000	10.419	-4.2	94	0.00

(#) = Out of Range

3/11/11

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Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKW015.D Vial: 15
Acq On : 2 Nov 2011 10:02 pm Operator: SD
Sample : IVO06K0201 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	10.000	11.572	-15.7	106	-0.01
82	T,M	tert-Butylbenzene	10.000	11.129	-11.3	99	0.00
83	T,M	1,2,4-Trimethylbenzene	10.000	11.048	-10.5	99	0.00
84	T,M	sec-Butylbenzene	10.000	11.000	-10.0	98	0.00
85	T,M	p-Isopropyltoluene	10.000	11.023	-10.2	98	0.00
86	T,M	1,3-Dichlorobenzene	10.000	11.112	-11.1	99	0.00
87	T,M	1,4-Dichlorobenzene	10.000	11.056	-10.6	99	0.00
88	T,M	Benzyl chloride	-1.000	0.000	0.0	0	0.00
89	T,M	n-Butylbenzene	10.000	11.041	-10.4	100	0.00
90	T,M	1,2-Dichlorobenzene	10.000	11.064	-10.6	100	0.00
91	T,M	1,2-Dibromo-3-chloropropane	10.000	11.486	-14.9	104	0.00
92	T,M	1,2,4-Trichlorobenzene	10.000	11.352	-13.5	97	-0.01
93	T,M	Hexachlorobutadiene	10.000	10.851	-8.5	97	0.00
94	T,M	Naphthalene	10.000	11.815	-18.1	101	0.00
95	T,M	1,2,3-Trichlorobenzene	10.000	11.513	-15.1	97	0.00

SA 11/6/11

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKW015.D Vial: 15
Acq On : 2 Nov 2011 10:02 pm Operator: SD
Sample : IVO06K0201 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	93	0.00
2	T,M	Dichlorodifluoromethane	0.219	0.222	-1.4	90	-0.01
3	P,T,M	Chloromethane	0.278	0.302	-8.6	97	-0.01
4	C,T,M	Vinyl chloride	0.239	0.274	-14.6	102	-0.01
5	T,M	Bromomethane	0.201	0.229	-13.9	95	-0.01
6	T,M	Chloroethane	0.170	0.186	-9.4	92	-0.01
7	T,M	Dichlorofluoromethane	0.536	0.595	-11.0	97	-0.01
8	T,M	Trichlorofluoromethane	0.313	0.315	-0.6	88	-0.01
9	T,M	Acrolein	0.011	0.012	-9.1	95	0.00
10	T,M	Acetone	0.044	0.047	-6.8	93	0.00
11	T,M	1,1,2-Trichloro-1,2,2-trifl	0.175	0.183	-4.6	95	-0.01
12	C,T,M	1,1-Dichloroethene	0.492	0.537	-9.1	97	0.00
13	T,M	tert-Butyl alcohol	0.015	0.013	13.3	73	0.00
14	T,M	Acetonitrile	0.000	0.000	0.0	0#	0.00
15	T,M	Methyl acetate	0.000	0.000	0.0	0#	0.00
16	T,M	Iodomethane	0.620	0.728	-17.4	105	0.02
17	T,M	Methylene chloride	0.514	0.496	3.5	97	0.00
18	T,M	Acrylonitrile	0.062	0.068	-9.7	98	0.00
19	T,M	Carbon disulfide	1.017	1.123	-10.4	99	0.00
20	T,M	tert-Butyl methyl ether (MT	0.627	0.686	-9.4	97	0.00
21	T,M	trans-1,2-Dichloroethene	0.524	0.576	-9.9	96	-0.01
22	T,M	Isopropyl ether (DIPE)	1.165	1.298	-11.4	96	0.00
23	T,M	Vinyl acetate	0.367	0.395	-7.6	91	0.00
24	P,T,M	1,1-Dichloroethane	0.615	0.694	-12.8	100	0.00
25	T,M	2-Butanol	0.000	0.000	0.0	0#	-5.87#
26	T,M	tert-Butyl ethyl ether (ETB	0.896	0.984	-9.8	97	0.00
27	T,M	2-Butanone	0.083	0.090	-8.4	97	0.00
28	T,M	2,2-Dichloropropane	0.312	0.317	-1.6	93	0.00
29	T,M	cis-1,2-Dichloroethene	0.396	0.433	-9.3	98	0.00
30	C,T,M	Chloroform	0.586	0.644	-9.9	97	0.00
31	T,M	Bromochloromethane	0.286	0.323	-12.9	97	0.00
32	T,M	Tetrahydrofuran	0.049	0.052	-6.1	99	0.00
33	S	Dibromofluoromethane	0.341	0.368	-7.9	98	0.00
34	T,M	1,1,1-Trichloroethane	0.428	0.464	-8.4	99	0.00
35	T,M	Cyclohexane	0.000	0.000	0.0	0#	0.00
36	T,M	tert-Amyl methyl ether (TAM	0.148	0.167	-12.8	99	0.00
37	S	1,2-Dichloroethane-d4	0.296	0.321	-8.4	98	0.00
38	I	CHLOROBENZENE-D5	1.000	1.000	0.0	93	0.00
39	T,M	1,1-Dichloropropene	0.169	0.179	-5.9	96	0.00
40	T,M	Carbon tetrachloride	0.410	0.428	-4.4	96	0.00

(#) = Out of Range

SG 11/6/11

2100

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKW015.D Vial: 15
Acq On : 2 Nov 2011 10:02 pm Operator: SD
Sample : IVO06K0201 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	1,2-Dichloroethane	0.387	0.427	-10.3	96	0.00
42	T,M	Benzene	1.408	1.545	-9.7	99	-0.01
43	T,M	Trichloroethene	0.403	0.441	-9.4	98	0.00
44	T,M	Methylcyclohexane	0.000	0.000	0.0	0#	0.00
45	C,T,M	1,2-Dichloropropane	0.384	0.414	-7.8	96	0.00
46	T,M	1,4-Dioxane	0.000	0.000	0.0	0#	0.00
47	T,M	Bromodichloromethane	0.500	0.535	-7.0	96	-0.01
48	T,M	Dibromomethane	0.196	0.217	-10.7	100	-0.01
49	T,M	2-Chloroethyl vinyl ether	0.063	0.073	-15.9	113	0.00
50	T,M	4-Methyl-2-pentanone	0.225	0.249	-10.7	98	0.00
51	T,M	cis-1,3-Dichloropropene	0.581	0.630	-8.4	95	0.00
52	S	Toluene-d8	1.218	1.317	-8.1	99	0.00
53	C,T,M	Toluene	1.469	1.618	-10.1	99	0.00
54	T,M	Ethyl methacrylate	0.355	0.387	-9.0	99	-0.01
55	T,M	trans-1,3-Dichloropropene	0.444	0.493	-11.0	96	0.00
56	T,M	2-Hexanone	0.146	0.161	-10.3	99	0.00
57	T,M	1,1,2-Trichloroethane	0.242	0.264	-9.1	96	-0.01
58	T,M	1,3-Dichloropropane	0.448	0.502	-12.1	99	0.00
59	T,M	Tetrachloroethene	0.330	0.359	-8.8	96	0.00
60	T,M	Dibromochloromethane	0.341	0.374	-9.7	96	0.00
61	T,M	2-Ethyl-1-butanol	0.000	0.000	0.0	0#	0.00
62	T,M	1,2-Dibromoethane	0.274	0.310	-13.1	98	0.00
63	T,M	1-Chlorohexane	0.532	0.581	-9.2	98	0.00
64	P, T,M	Chlorobenzene	0.965	1.080	-11.9	99	0.00
65	T,M	1,1,1,2-Tetrachloroethane	0.344	0.376	-9.3	96	0.00
66	C,T,M	Ethylbenzene	1.600	1.776	-11.0	99	-0.01
67	T,M	m-Xylene & p-Xylene	1.210	1.346	-11.2	99	0.00
68	T,M	o-Xylene	1.300	1.455	-11.9	99	-0.01
69	T,M	Styrene	1.063	1.209	-13.7	99	0.00
70	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	95	0.00
71	T,M	Isopropylbenzene	3.352	3.697	-10.3	99	0.00
72	P,T,M	Bromoform	0.450	0.495	-10.0	97	-0.01
73	P,T,M	1,1,2,2-Tetrachloroethane	0.663	0.718	-8.3	99	0.00
74	S	4-Bromofluorobenzene	1.014	1.081	-6.6	100	0.00
75	T,M	1,2,3-Trichloropropane	0.174	0.186	-6.9	95	0.00
76	T,M	trans-1,4-Dichloro-2-butene	0.169	0.185	-9.5	98	0.00
77	T,M	n-Propylbenzene	4.253	4.691	-10.3	100	0.00
78	T,M	Bromobenzene	0.969	1.056	-9.0	98	0.00
79	T,M	1,3,5-Trimethylbenzene	2.906	3.187	-9.7	98	0.00
80	T,M	2-Chlorotoluene	2.901	3.022	-4.2	94	0.00

SU 11/6/11

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K02\RKW015.D Vial: 15
Acq On : 2 Nov 2011 10:02 pm Operator: SD
Sample : IVO06K0201 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	2.387	2.763	-15.8	106	-0.01
82	T,M	tert-Butylbenzene	0.662	0.737	-11.3	99	0.00
83	T,M	1,2,4-Trimethylbenzene	2.936	3.244	-10.5	99	0.00
84	T,M	sec-Butylbenzene	3.665	4.031	-10.0	98	0.00
85	T,M	p-Isopropyltoluene	3.101	3.418	-10.2	98	0.00
86	T,M	1,3-Dichlorobenzene	1.720	1.911	-11.1	99	0.00
87	T,M	1,4-Dichlorobenzene	1.702	1.882	-10.6	99	0.00
88	T,M	Benzyl chloride	0.000	0.000	0.0	0#	0.00
89	T,M	n-Butylbenzene	2.938	3.244	-10.4	100	0.00
90	T,M	1,2-Dichlorobenzene	1.499	1.659	-10.7	100	0.00
91	T,M	1,2-Dibromo-3-chloropropane	0.126	0.145	-15.1	104	0.00
92	T,M	1,2,4-Trichlorobenzene	1.118	1.270	-13.6	97	-0.01
93	T,M	Hexachlorobutadiene	0.709	0.770	-8.6	97	0.00
94	T,M	Naphthalene	1.525	1.802	-18.2	101	0.00
95	T,M	1,2,3-Trichlorobenzene	0.921	1.061	-15.2	97	0.00

SU 11/6/11

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW015.D Vial: 15
Acq On : 2 Nov 2011 10:02 pm Operator: SD
Sample : IVO06K0201 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:05 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.12	114	1019912	10.00 ug/l	0.00
38) CHLOROBENZENE-D5	13.22	117	946933	10.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	18.43	152	425979	10.00 ug/l	0.00
System Monitoring Compounds					
33) Dibromofluoromethane	6.81	111	374837	10.76 ug/l	0.00
Spiked Amount 10.000			Recovery	= 107.60%	
37) 1,2-Dichloroethane-d4	7.54	65	327031	10.84 ug/l	0.00
Spiked Amount 10.000			Recovery	= 108.40%	
52) Toluene-d8	10.56	98	1247225	10.82 ug/l	0.00
Spiked Amount 10.000			Recovery	= 108.20%	
74) 4-Bromofluorobenzene	15.49	95	460609	10.66 ug/l	0.00
Spiked Amount 10.000			Recovery	= 106.60%	

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.88	85	226488	10.16 ug/l	98
3) Chloromethane	2.14	50	308169	10.87 ug/l	95
4) Vinyl chloride	2.27	62	279431	11.45 ug/l	99
5) Bromomethane	2.77	94	233483	11.40 ug/l	96
6) Chloroethane	2.86	64	189848	10.96 ug/l	95
7) Dichlorofluoromethane	2.91	67	606561	11.09 ug/l	97
8) Trichlorofluoromethane	3.14	101	320976	10.07 ug/l	99
9) Acrolein	3.65	56	60332	53.42 ug/l	98
10) Acetone	3.74	43	241293	53.26 ug/l	96
11) 1,1,2-Trichloro-1,2,2-trif	3.69	151	186815	10.49 ug/l	97
12) 1,1-Dichloroethene	3.89	61	548138	10.92 ug/l	99
13) tert-Butyl alcohol	3.99	59	65159	41.38 ug/l #	27
16) Iodomethane	4.29	142	742150	11.74 ug/l	99
17) Methylene chloride	4.49	49	505656	9.64 ug/l	99
18) Acrylonitrile	4.66	53	346627	54.57 ug/l	99
19) Carbon disulfide	4.51	76	1145506	11.05 ug/l	100
20) tert-Butyl methyl ether (M	4.69	73	699214	10.93 ug/l	100
21) trans-1,2-Dichloroethene	4.87	61	587776	11.00 ug/l	98
22) Isopropyl ether (DIPE)	5.30	45	1323744	11.14 ug/l	100
23) Vinyl acetate	5.45	43	402910	10.75 ug/l	99
24) 1,1-Dichloroethane	5.45	63	707964	11.29 ug/l	99
26) tert-Butyl ethyl ether (ET	5.85	59	1004005	10.98 ug/l	100
27) 2-Butanone	6.03	43	460060	54.09 ug/l	99
28) 2,2-Dichloropropane	6.22	77	323267	10.17 ug/l	99
29) cis-1,2-Dichloroethene	6.28	96	441692	10.93 ug/l	98
30) Chloroform	6.50	83	657183	11.00 ug/l	96
31) Bromochloromethane	6.74	49	329274	11.31 ug/l	99

(#) = qualifier out of range (m) = manual integration

SU 11/16/11

2163

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW015.D Vial: 15
Acq On : 2 Nov 2011 10:02 pm Operator: SD
Sample : IVO06K0201 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:05 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
32)	Tetrahydrofuran	6.78	42	52821	10.65 ug/l	97
34)	1,1,1-Trichloroethane	7.08	97	472958	10.83 ug/l	99
36)	tert-Amyl methyl ether (TA	7.47	87	170338	11.26 ug/l	95
39)	1,1-Dichloropropene	7.30	110	169887	10.60 ug/l	100
40)	Carbon tetrachloride	7.45	119	405074	10.43 ug/l	100
41)	1,2-Dichloroethane	7.68	62	404151	11.02 ug/l	99
42)	Benzene	7.69	78	1462874	10.97 ug/l	100
43)	Trichloroethene	8.63	130	417677	10.94 ug/l	99
45)	1,2-Dichloropropane	8.91	63	392295	10.78 ug/l	97
47)	Bromodichloromethane	9.27	83	506363	10.71 ug/l	100
48)	Dibromomethane	9.35	93	205558	11.07 ug/l	98
49)	2-Chloroethyl vinyl ether	9.77	63	68846	10.19 ug/l	99
50)	4-Methyl-2-pentanone	9.82	43	1177958	55.36 ug/l	100
51)	cis-1,3-Dichloropropene	10.16	75	596706	10.85 ug/l	99
53)	Toluene	10.69	91	1532386	11.01 ug/l	99
54)	Ethyl methacrylate	10.99	69	366150	10.88 ug/l	98
55)	trans-1,3-Dichloropropene	11.00	75	466576	11.11 ug/l	99
56)	2-Hexanone	11.29	43	763444	55.23 ug/l	99
57)	1,1,2-Trichloroethane	11.27	97	250404	10.91 ug/l	99
58)	1,3-Dichloropropane	11.72	76	475235	11.19 ug/l	99
59)	Tetrachloroethene	11.82	164	340412	10.88 ug/l	100
60)	Dibromochloromethane	12.18	129	354557	10.99 ug/l	100
62)	1,2-Dibromoethane	12.53	107	293814	11.33 ug/l	100
63)	1-Chlorohexane	12.83	91	550045	10.91 ug/l	99
64)	Chlorobenzene	13.29	112	1022880	11.19 ug/l	100
65)	1,1,1,2-Tetrachloroethane	13.37	131	356158	10.92 ug/l	98
66)	Ethylbenzene	13.38	91	1681999	11.10 ug/l	100
67)	m-Xylene & p-Xylene	13.53	91	2548210	22.24 ug/l	100
68)	o-Xylene	14.33	91	1377568	11.19 ug/l	100
69)	Styrene	14.41	104	1144835	11.37 ug/l	99
71)	Isopropylbenzene	15.02	105	1574721	11.03 ug/l	100
72)	Bromoform	15.03	173	210895	11.00 ug/l	99
73)	1,1,2,2-Tetrachloroethane	15.36	83	305910	10.83 ug/l	99
75)	1,2,3-Trichloropropane	15.64	110	79148	10.65 ug/l	99
76)	trans-1,4-Dichloro-2-buten	15.77	53	78795	10.97 ug/l	96
77)	n-Propylbenzene	15.79	91	1998135	11.03 ug/l	100
78)	Bromobenzene	15.86	156	449757	10.90 ug/l	100
79)	1,3,5-Trimethylbenzene	16.10	105	1357596	10.97 ug/l	100
80)	2-Chlorotoluene	16.12	91	1287455	10.42 ug/l	96
81)	4-Chlorotoluene	16.21	91	1176813	11.57 ug/l	96
82)	tert-Butylbenzene	16.78	134	314010	11.13 ug/l	99

(#) = qualifier out of range (m) = manual integration

2104

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K02\RKW015.D Vial: 15
Acq On : 2 Nov 2011 10:02 pm Operator: SD
Sample : IVO06K0201 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:05 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
83) 1,2,4-Trimethylbenzene	16.86	105	1381913	11.05 ug/l	100
84) sec-Butylbenzene	17.20	105	1717272	11.00 ug/l	100
85) p-Isopropyltoluene	17.47	119	1455919	11.02 ug/l	99
86) 1,3-Dichlorobenzene	17.65	146	813894	11.11 ug/l	99
87) 1,4-Dichlorobenzene	17.85	146	801729	11.06 ug/l	100
89) n-Butylbenzene	18.23	91	1381807	11.04 ug/l	99
90) 1,2-Dichlorobenzene	18.48	146	706596	11.06 ug/l	99
91) 1,2-Dibromo-3-chloropropan	19.59	157	61756	11.49 ug/l	96
92) 1,2,4-Trichlorobenzene	20.68	180	540802	11.35 ug/l	99
93) Hexachlorobutadiene	20.86	225	327952	10.85 ug/l	99
94) Naphthalene	21.02	128	767647	11.82 ug/l	99
95) 1,2,3-Trichlorobenzene	21.33	180	451803	11.51 ug/l	100

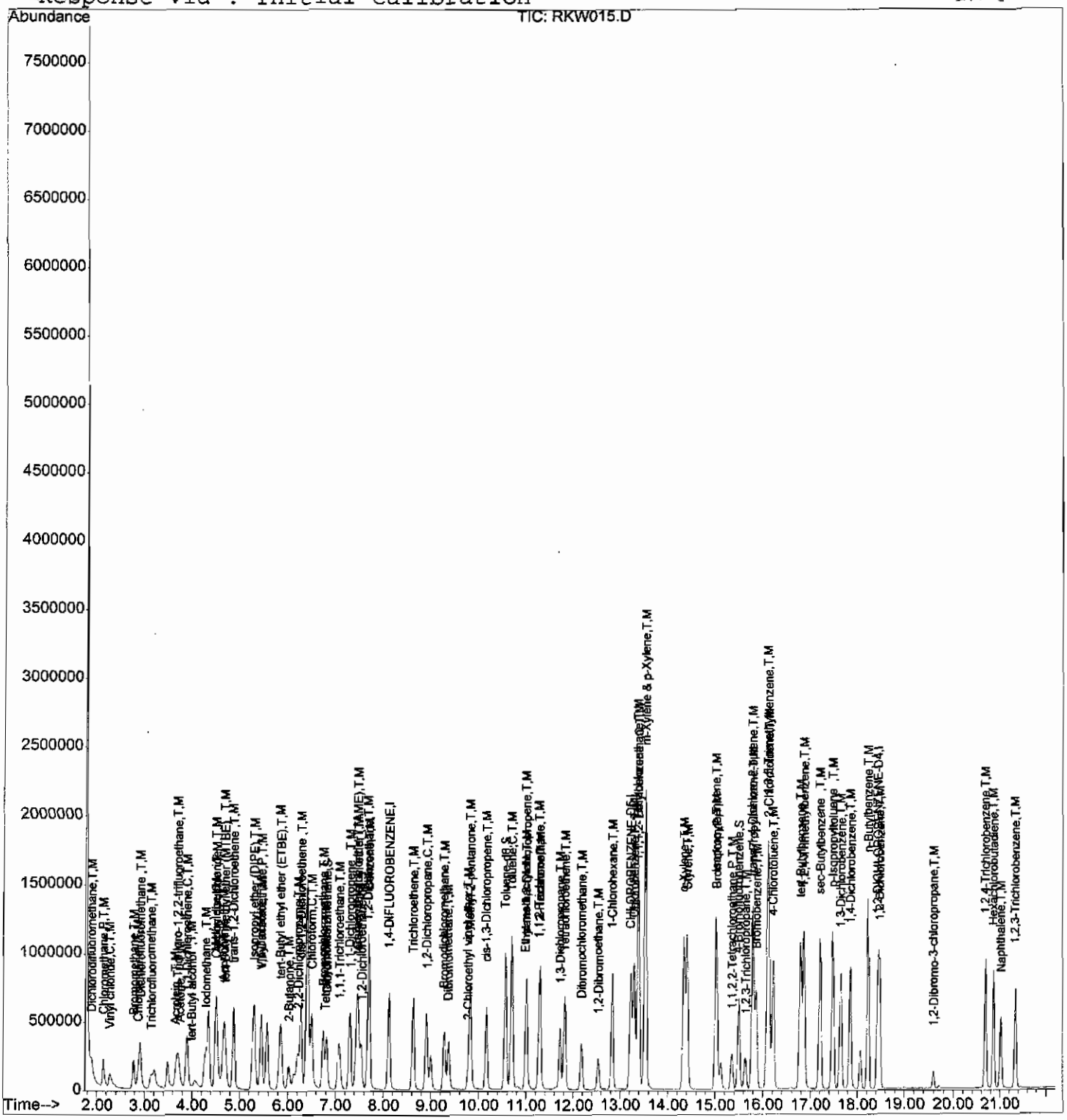
SU 11/6/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K02\RKW015.D Vial: 15
Acq On : 2 Nov 2011 10:02 pm Operator: SD
Sample : IVO06K0201 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 4 11:05 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



SW 11/6/11

2106

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKW172
Instrument ID: 06
GC Column:RTX502.2ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K084
BFB Injection Date : 11/10/11
BFB Injection Time : 07:10
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.36
75	30.0 - 60.0% of mass 95	42.40
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.43
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	91.21
175	5.0 - 9.0% of mass 174	6.82(7.5)1
176	95.0 - 101.0% of mass 174	90.29(99.0)1
177	5.0 - 9.0% of mass 176	5.87(6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV006K0208	RKW173	11/10/11	07:51
2	MBLK1W	V006K10B	RKW177	11/10/11	10:02
3	LCS1W	V006K10L	RKW174	11/10/11	08:28
4	LCD1W	V006K10C	RKW175	11/10/11	09:00
5	MW-70-PMW04A-110	K084-01	RKW190	11/10/11	16:40
6	MW-70-PMW04B-112	K084-02	RKW191	11/10/11	17:09
7	MW-70-PMW05B-115	K084-05	RKW193	11/10/11	18:09
8	IR-70-FD-111	K084-06	RKW194	11/10/11	18:41

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RKW007
Instrument ID: 06
GC Column: RTX502.2 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K084
Date Analyzed: 11/02/11
Time Analyzed: 17:57
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1102015	8.12	1018501	13.22	450060	18.43
	UPPER LIMIT	2204030	8.62	2037002	13.72	900120	18.93
	LOWER LIMIT	551008	7.62	509251	12.72	225030	17.93
	SAMPLE ID						
1	VSTD010	1403031	8.10	1275596	13.20	547975	18.42
2	MBLK1W	1555465	8.10	1379398	13.20	581647	18.42
3	LCS1W	1491563	8.10	1333374	13.20	569463	18.42
4	LCD1W	1495510	8.11	1352965	13.20	586607	18.42
5	MW-70-PMW04A-110	1234397	8.12	1143591	13.22	490006	18.43
6	MW-70-PMW04B-112	1204043	8.12	1123380	13.22	488420	18.43
7	MW-70-PMW05B-115	1150024	8.12	1044460	13.22	456333	18.43
8	IR-70-FD-111	1160692	8.12	1083340	13.23	459370	18.43

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

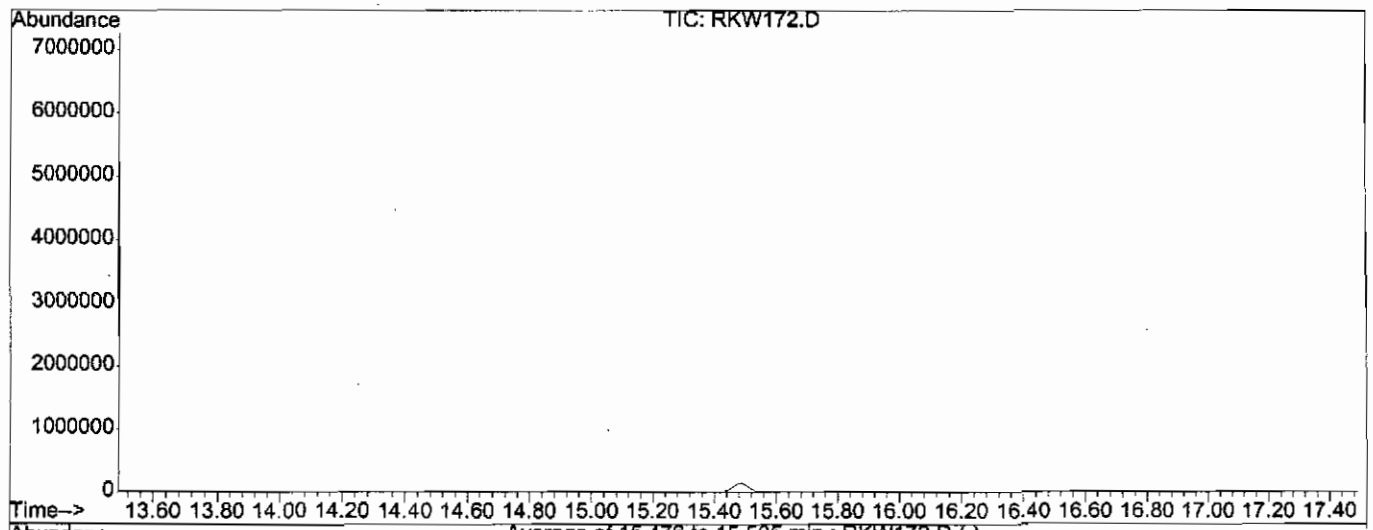
Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

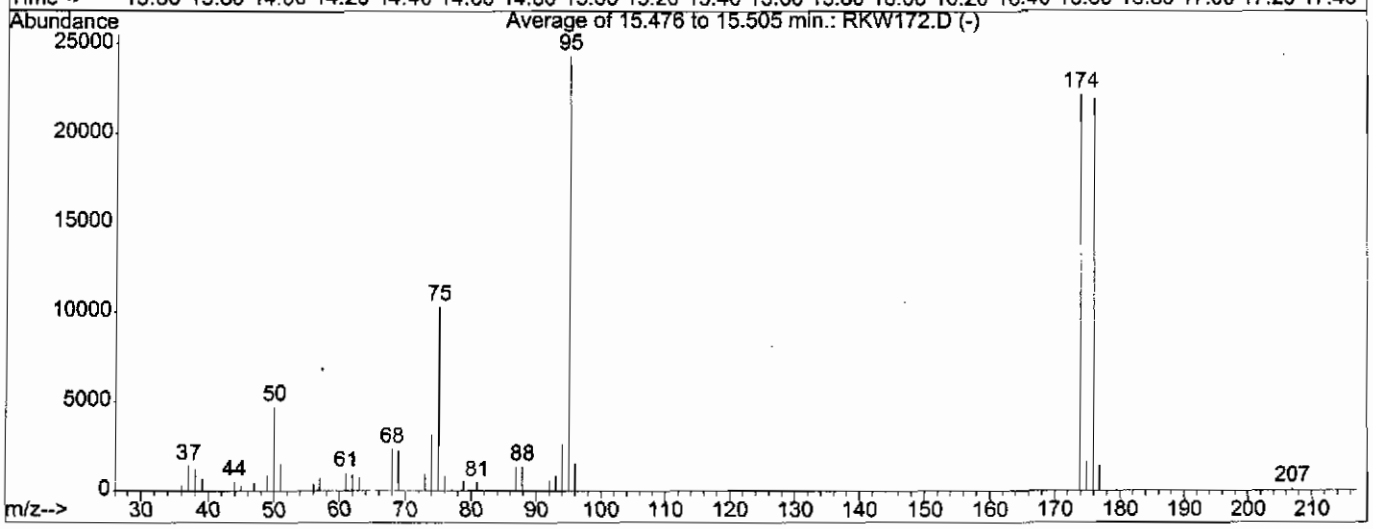
FORM VIII VOA-8260 1/2000

BFB

Data File : D:\HPCHEM\1\DATA\11K10\RKW172.D
Acq On : 10 Nov 2011 7:10 am
Sample : BFB06K10
Misc : DF=1.0
MS Integration Params: RTE.P
Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260

Vial: 1
Operator: SD
Inst : TO06
Multiplr: 1.00





AutoFind: Scans 924, 925, 926; Background Corrected with Scan 919

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.4	4711	PASS
75	95	30	60	42.4	10317	PASS
95	95	100	100	100.0	24333	PASS
96	95	5	9	6.4	1564	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	91.2	22195	PASS
175	174	5	9	7.5	1659	PASS
176	174	95	101	99.0	21971	PASS
177	176	5	9	6.5	1429	PASS

RKW172.D VO06K02.M Mon Nov 14 08:56:57 2011

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K10\RKW173.D Vial: 2
Acq On : 10 Nov 2011 7:51 am Operator: SD
Sample : CV006K0208 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	127	-0.01
2	T,M	Dichlorodifluoromethane	10.000	10.196	-2.0	124	-0.01
3	P,T,M	Chloromethane	10.000	10.679	-6.8	131	-0.01
4	C,T,M	Vinyl chloride	10.000	10.431	-4.3	128	-0.01
5	T,M	Bromomethane	10.000	10.422	-4.2	119	-0.01
6	T,M	Chloroethane	10.000	11.065	-10.6	128	0.00
7	T,M	Dichlorofluoromethane	10.000	10.392	-3.9	125	-0.01
8	T,M	Trichlorofluoromethane	10.000	9.439	5.6	114	-0.01
9	T,M	Acrolein	50.000	34.845	30.3#	85	-0.01
10	T,M	Acetone	50.000	44.459	11.1	107	-0.01
11	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.558	4.4	119	-0.03
12	C,T,M	1,1-Dichloroethene	10.000	10.138	-1.4	124	-0.01
13	T,M	tert-Butyl alcohol	50.000	43.706	12.6	108	-0.01
14	T,M	Acetonitrile	-1.000	0.000	0.0	0	0.00
15	T,M	Methyl acetate	-1.000	0.000	0.0	0	0.00
16	T,M	Iodomethane	10.000	9.198	8.0	113	-0.01
17	T,M	Methylene chloride	10.000	8.783	12.2	121	-0.01
18	T,M	Acrylonitrile	50.000	47.521	5.0	117	-0.01
19	T,M	Carbon disulfide	10.000	10.841	-8.4	134	-0.01
20	T,M	tert-Butyl methyl ether (MT	10.000	8.962	10.4	109	-0.01
21	T,M	trans-1,2-Dichloroethene	10.000	10.024	-0.2	120	-0.01
22	T,M	Isopropyl ether (DIPE)	10.000	10.306	-3.1	123	-0.01
23	T,M	Vinyl acetate	10.000	10.395	-3.9	121	-0.01
24	P,T,M	1,1-Dichloroethane	10.000	9.963	0.4	122	-0.01
25	T,M	2-Butanol	-1.000	0.000	0.0	0	-5.87#
26	T,M	tert-Butyl ethyl ether (ETB	10.000	9.190	8.1	111	-0.01
27	T,M	2-Butanone	50.000	46.464	7.1	114	-0.01
28	T,M	2,2-Dichloropropane	10.000	9.587	4.1	120	-0.01
29	T,M	cis-1,2-Dichloroethene	10.000	9.937	0.6	122	-0.01
30	C,T,M	Chloroform	10.000	9.556	4.4	116	-0.01
31	T,M	Bromochloromethane	10.000	10.235	-2.3	121	-0.01
32	T,M	Tetrahydrofuran	10.000	9.719	2.8	124	-0.01
33	S	Dibromofluoromethane	10.000	9.707	2.9	121	-0.01
34	T,M	1,1,1-Trichloroethane	10.000	9.218	7.8	116	-0.01
35	T,M	Cyclohexane	-1.000	0.000	0.0	0	0.00
36	T,M	tert-Amyl methyl ether (TAM	10.000	8.665	13.4	105	-0.01
37	S	1,2-Dichloroethane-d4	10.000	8.944	10.6	111	-0.01
38	I	CHLOROBENZENE-D5	10.000	10.000	0.0	125	-0.01
39	T,M	1,1-Dichloropropene	10.000	10.265	-2.7	125	-0.01
40	T,M	Carbon tetrachloride	10.000	9.205	7.9	114	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K10\RKW173.D Vial: 2
Acq On : 10 Nov 2011 7:51 am Operator: SD
Sample : CVO06K0208 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	1,2-Dichloroethane	10.000	9.229	7.7	108	-0.01
42	T,M	Benzene	10.000	10.178	-1.8	124	-0.01
43	T,M	Trichloroethene	10.000	10.023	-0.2	121	-0.01
44	T,M	Methylcyclohexane	-1.000	0.000	0.0	0	0.00
45	C,T,M	1,2-Dichloropropane	10.000	10.286	-2.9	124	-0.01
46	T,M	1,4-Dioxane	-1.000	0.000	0.0	0	0.00
47	T,M	Bromodichloromethane	10.000	9.303	7.0	112	-0.01
48	T,M	Dibromomethane	10.000	9.445	5.5	115	-0.01
49	T,M	2-Chloroethyl vinyl ether	10.000	8.087	19.1	119	-0.01
50	T,M	4-Methyl-2-pentanone	50.000	48.336	3.3	115	-0.01
51	T,M	cis-1,3-Dichloropropene	10.000	9.854	1.5	116	-0.01
52	S	Toluene-d8	10.000	10.104	-1.0	124	-0.01
53	C,T,M	Toluene	10.000	10.063	-0.6	122	-0.01
54	T,M	Ethyl methacrylate	10.000	9.361	6.4	114	-0.01
55	T,M	trans-1,3-Dichloropropene	10.000	9.401	6.0	110	-0.01
56	T,M	2-Hexanone	50.000	47.232	5.5	114	-0.01
57	T,M	1,1,2-Trichloroethane	10.000	9.852	1.5	117	-0.03
58	T,M	1,3-Dichloropropane	10.000	9.922	0.8	118	-0.01
59	T,M	Tetrachloroethene	10.000	10.135	-1.3	121	-0.01
60	T,M	Dibromochloromethane	10.000	9.106	8.9	108	-0.01
61	T,M	2-Ethyl-1-butanol	-1.000	0.000	0.0	0	0.00
62	T,M	1,2-Dibromoethane	10.000	9.694	3.1	113	-0.01
63	T,M	1-Chlorohexane	10.000	10.589	-5.9	128	-0.01
64	P, T,M	Chlorobenzene	10.000	10.053	-0.5	119	-0.01
65	T,M	1,1,1,2-Tetrachloroethane	10.000	9.458	5.4	112	-0.01
66	C,T,M	Ethylbenzene	10.000	10.109	-1.1	122	-0.01
67	T,M	m-Xylene & p-Xylene	20.000	19.921	0.4	120	-0.01
68	T,M	o-Xylene	10.000	9.914	0.9	118	-0.03
69	T,M	Styrene	10.000	10.012	-0.1	117	-0.01
70	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	122	-0.01
71	T,M	Isopropylbenzene	10.000	10.544	-5.4	122	-0.01
72	P,T,M	Bromoform	10.000	9.165	8.4	104	-0.03
73	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.095	-1.0	119	-0.01
74	S	4-Bromofluorobenzene	10.000	10.116	-1.2	122	-0.01
75	T,M	1,2,3-Trichloropropane	10.000	9.499	5.0	110	-0.01
76	T,M	trans-1,4-Dichloro-2-butene	10.000	9.288	7.1	107	-0.01
77	T,M	n-Propylbenzene	10.000	10.677	-6.8	124	-0.01
78	T,M	Bromobenzene	10.000	9.912	0.9	114	-0.01
79	T,M	1,3,5-Trimethylbenzene	10.000	10.356	-3.6	120	-0.01
80	T,M	2-Chlorotoluene	10.000	9.731	2.7	113	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K10\RKW173.D Vial: 2
Acq On : 10 Nov 2011 7:51 am Operator: SD
Sample : CVO06K0208 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	10.000	10.619	-6.2	125	-0.01
82	T,M	tert-Butylbenzene	10.000	10.725	-7.2	123	-0.01
83	T,M	1,2,4-Trimethylbenzene	10.000	10.218	-2.2	118	-0.01
84	T,M	sec-Butylbenzene	10.000	10.833	-8.3	125	-0.01
85	T,M	p-Isopropyltoluene	10.000	10.559	-5.6	121	-0.01
86	T,M	1,3-Dichlorobenzene	10.000	10.200	-2.0	117	-0.01
87	T,M	1,4-Dichlorobenzene	10.000	10.038	-0.4	116	-0.01
88	T,M	Benzyl chloride	-1.000	0.000	0.0	0	0.00
89	T,M	n-Butylbenzene	10.000	10.766	-7.7	125	-0.01
90	T,M	1,2-Dichlorobenzene	10.000	9.861	1.4	114	-0.01
91	T,M	1,2-Dibromo-3-chloropropane	10.000	9.286	7.1	108	0.00
92	T,M	1,2,4-Trichlorobenzene	10.000	10.066	-0.7	110	-0.01
93	T,M	Hexachlorobutadiene	10.000	9.781	2.2	112	-0.01
94	T,M	Naphthalene	10.000	9.768	2.3	108	-0.01
95	T,M	1,2,3-Trichlorobenzene	10.000	9.897	1.0	108	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K10\RKW173.D Vial: 2
Acq On : 10 Nov 2011 7:51 am Operator: SD
Sample : CVO06K0208 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	127	-0.01
2	T,M	Dichlorodifluoromethane	0.219	0.223	-1.8	124	-0.01
3	P,T,M	Chloromethane	0.278	0.297	-6.8	131	-0.01
4	C,T,M	Vinyl chloride	0.239	0.250	-4.6	128	-0.01
5	T,M	Bromomethane	0.201	0.209	-4.0	119	-0.01
6	T,M	Chloroethane	0.170	0.188	-10.6	128	0.00
7	T,M	Dichlorofluoromethane	0.536	0.557	-3.9	125	-0.01
8	T,M	Trichlorofluoromethane	0.313	0.295	5.8	114	-0.01
9	T,M	Acrolein	0.011	0.008	27.3#	85	-0.01
10	T,M	Acetone	0.044	0.039	11.4	107	-0.01
11	T,M	1,1,2-Trichloro-1,2,2-trifl	0.175	0.167	4.6	119	-0.03
12	C,T,M	1,1-Dichloroethene	0.492	0.499	-1.4	124	-0.01
13	T,M	tert-Butyl alcohol	0.015	0.014	6.7	108	-0.01
14	T,M	Acetonitrile	0.000	0.000	0.0	0#	0.00
15	T,M	Methyl acetate	0.000	0.000	0.0	0#	0.00
16	T,M	Iodomethane	0.620	0.570	8.1	113	-0.01
17	T,M	Methylene chloride	0.514	0.452	12.1	121	-0.01
18	T,M	Acrylonitrile	0.062	0.059	4.8	117	-0.01
19	T,M	Carbon disulfide	1.017	1.102	-8.4	134	-0.01
20	T,M	tert-Butyl methyl ether (MT	0.627	0.562	10.4	109	-0.01
21	T,M	trans-1,2-Dichloroethene	0.524	0.525	-0.2	120	-0.01
22	T,M	Isopropyl ether (DIPE)	1.165	1.201	-3.1	123	-0.01
23	T,M	Vinyl acetate	0.367	0.382	-4.1	121	-0.01
24	P,T,M	1,1-Dichloroethane	0.615	0.613	0.3	122	-0.01
25	T,M	2-Butanol	0.000	0.000	0.0	0#	-5.87#
26	T,M	tert-Butyl ethyl ether (ETB	0.896	0.824	8.0	111	-0.01
27	T,M	2-Butanone	0.083	0.077	7.2	114	-0.01
28	T,M	2,2-Dichloropropane	0.312	0.299	4.2	120	-0.01
29	T,M	cis-1,2-Dichloroethene	0.396	0.394	0.5	122	-0.01
30	C,T,M	Chloroform	0.586	0.560	4.4	116	-0.01
31	T,M	Bromochloromethane	0.286	0.292	-2.1	121	-0.01
32	T,M	Tetrahydrofuran	0.049	0.047	4.1	124	-0.01
33	S	Dibromofluoromethane	0.341	0.331	2.9	121	-0.01
34	T,M	1,1,1-Trichloroethane	0.428	0.395	7.7	116	-0.01
35	T,M	Cyclohexane	0.000	0.000	0.0	0#	0.00
36	T,M	tert-Amyl methyl ether (TAM	0.148	0.129	12.8	105	-0.01
37	S	1,2-Dichloroethane-d4	0.296	0.265	10.5	111	-0.01
38	I	CHLOROBENZENE-D5	1.000	1.000	0.0	125	-0.01
39	T,M	1,1-Dichloropropene	0.169	0.174	-3.0	125	-0.01
40	T,M	Carbon tetrachloride	0.410	0.377	8.0	114	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K10\RKW173.D Vial: 2
Acq On : 10 Nov 2011 7:51 am Operator: SD
Sample : CVO06K0208 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	1,2-Dichloroethane	0.387	0.357	7.8	108	-0.01
42	T,M	Benzene	1.408	1.433	-1.8	124	-0.01
43	T,M	Trichloroethene	0.403	0.404	-0.2	121	-0.01
44	T,M	Methylcyclohexane	0.000	0.000	0.0	0#	0.00
45	C,T,M	1,2-Dichloropropane	0.384	0.395	-2.9	124	-0.01
46	T,M	1,4-Dioxane	0.000	0.000	0.0	0#	0.00
47	T,M	Bromodichloromethane	0.500	0.465	7.0	112	-0.01
48	T,M	Dibromomethane	0.196	0.185	5.6	115	-0.01
49	T,M	2-Chloroethyl vinyl ether	0.063	0.057	9.5	119	-0.01
50	T,M	4-Methyl-2-pentanone	0.225	0.217	3.6	115	-0.01
51	T,M	cis-1,3-Dichloropropene	0.581	0.572	1.5	116	-0.01
52	S	Toluene-d8	1.218	1.230	-1.0	124	-0.01
53	C,T,M	Toluene	1.469	1.479	-0.7	122	-0.01
54	T,M	Ethyl methacrylate	0.355	0.333	6.2	114	-0.01
55	T,M	trans-1,3-Dichloropropene	0.444	0.417	6.1	110	-0.01
56	T,M	2-Hexanone	0.146	0.138	5.5	114	-0.01
57	T,M	1,1,2-Trichloroethane	0.242	0.239	1.2	117	-0.03
58	T,M	1,3-Dichloropropane	0.448	0.445	0.7	118	-0.01
59	T,M	Tetrachloroethene	0.330	0.335	-1.5	121	-0.01
60	T,M	Dibromochloromethane	0.341	0.310	9.1	108	-0.01
61	T,M	2-Ethyl-1-butanol	0.000	0.000	0.0	0#	0.00
62	T,M	1,2-Dibromoethane	0.274	0.266	2.9	113	-0.01
63	T,M	1-Chlorohexane	0.532	0.564	-6.0	128	-0.01
64	P, T,M	Chlorobenzene	0.965	0.970	-0.5	119	-0.01
65	T,M	1,1,1,2-Tetrachloroethane	0.344	0.326	5.2	112	-0.01
66	C,T,M	Ethylbenzene	1.600	1.617	-1.1	122	-0.01
67	T,M	m-Xylene & p-Xylene	1.210	1.205	0.4	120	-0.01
68	T,M	o-Xylene	1.300	1.289	0.8	118	-0.03
69	T,M	Styrene	1.063	1.064	-0.1	117	-0.01
70	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	122	-0.01
71	T,M	Isopropylbenzene	3.352	3.534	-5.4	122	-0.01
72	P,T,M	Bromoform	0.450	0.413	8.2	104	-0.03
73	P,T,M	1,1,2,2-Tetrachloroethane	0.663	0.669	-0.9	119	-0.01
74	S	4-Bromofluorobenzene	1.014	1.026	-1.2	122	-0.01
75	T,M	1,2,3-Trichloropropane	0.174	0.166	4.6	110	-0.01
76	T,M	trans-1,4-Dichloro-2-butene	0.169	0.157	7.1	107	-0.01
77	T,M	n-Propylbenzene	4.253	4.541	-6.8	124	-0.01
78	T,M	Bromobenzene	0.969	0.960	0.9	114	-0.01
79	T,M	1,3,5-Trimethylbenzene	2.906	3.010	-3.6	120	-0.01
80	T,M	2-Chlorotoluene	2.901	2.823	2.7	113	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K10\RKW173.D Vial: 2
Acq On : 10 Nov 2011 7:51 am Operator: SD
Sample : CVO06K0208 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : *METHOD 8260*
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	2.387	2.535	-6.2	125	-0.01
82	T,M	tert-Butylbenzene	0.662	0.710	-7.3	123	-0.01
83	T,M	1,2,4-Trimethylbenzene	2.936	3.000	-2.2	118	-0.01
84	T,M	sec-Butylbenzene	3.665	3.970	-8.3	125	-0.01
85	T,M	p-Isopropyltoluene	3.101	3.274	-5.6	121	-0.01
86	T,M	1,3-Dichlorobenzene	1.720	1.754	-2.0	117	-0.01
87	T,M	1,4-Dichlorobenzene	1.702	1.709	-0.4	116	-0.01
88	T,M	Benzyl chloride	0.000	0.000	0.0	0#	0.00
89	T,M	n-Butylbenzene	2.938	3.163	-7.7	125	-0.01
90	T,M	1,2-Dichlorobenzene	1.499	1.478	1.4	114	-0.01
91	T,M	1,2-Dibromo-3-chloropropane	0.126	0.117	7.1	108	0.00
92	T,M	1,2,4-Trichlorobenzene	1.118	1.126	-0.7	110	-0.01
93	T,M	Hexachlorobutadiene	0.709	0.694	2.1	112	-0.01
94	T,M	Naphthalene	1.525	1.490	2.3	108	-0.01
95	T,M	1,2,3-Trichlorobenzene	0.921	0.912	1.0	108	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K10\RKW173.D Vial: 2
Acq On : 10 Nov 2011 7:51 am Operator: SD
Sample : CVO06K0208 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 10 8:13 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.10	114	1403031	10.00	ug/l	-0.01
38) CHLOROBENZENE-D5	13.20	117	1275596	10.00	ug/l	-0.01
70) 1,2-DICHLOROBENZENE-D4	18.42	152	547975	10.00	ug/l	-0.01
System Monitoring Compounds						
33) Dibromofluoromethane	6.80	111	465068	9.71	ug/l	-0.01
Spiked Amount 10.000			Recovery	=	97.10%	
37) 1,2-Dichloroethane-d4	7.53	65	371215	8.94	ug/l	-0.01
Spiked Amount 10.000			Recovery	=	89.40%	
52) Toluene-d8	10.54	98	1569391	10.10	ug/l	-0.01
Spiked Amount 10.000			Recovery	=	101.00%	
74) 4-Bromofluorobenzene	15.48	95	562092	10.12	ug/l	-0.01
Spiked Amount 10.000			Recovery	=	101.20%	
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.88	85	312770	10.20	ug/l	100
3) Chloromethane	2.14	50	416434	10.68	ug/l	97
4) Vinyl chloride	2.27	62	350170	10.43	ug/l	100
5) Bromomethane	2.78	94	293515	10.42	ug/l	95
6) Chloroethane	2.88	64	263616	11.07	ug/l	98
7) Dichlorofluoromethane	2.91	67	782142	10.39	ug/l	99
8) Trichlorofluoromethane	3.14	101	413870	9.44	ug/l	99
9) Acrolein	3.63	56	54139	34.84	ug/l	95
10) Acetone	3.72	43	277061	44.46	ug/l	95
11) 1,1,2-Trichloro-1,2,2-trif	3.68	151	234133	9.56	ug/l	93
12) 1,1-Dichloroethene	3.87	61	700259	10.14	ug/l	97
13) tert-Butyl alcohol	3.97	59	95399	43.71	ug/l	95
16) Iodomethane	4.26	142	799595	9.20	ug/l	96
17) Methylene chloride	4.48	49	633640	8.78	ug/l	99
18) Acrylonitrile	4.64	53	415273	47.52	ug/l	99
19) Carbon disulfide	4.49	76	1546320	10.84	ug/l	100
20) tert-Butyl methyl ether (M	4.67	73	788970	8.96	ug/l	99
21) trans-1,2-Dichloroethene	4.87	61	736555	10.02	ug/l	97
22) Isopropyl ether (DIPE)	5.28	45	1684758	10.31	ug/l	98
23) Vinyl acetate	5.43	43	535805	10.40	ug/l	99
24) 1,1-Dichloroethane	5.43	63	859703	9.96	ug/l	99
26) tert-Butyl ethyl ether (ET	5.83	59	1155909	9.19	ug/l	100
27) 2-Butanone	6.01	43	543640	46.46	ug/l	100
28) 2,2-Dichloropropane	6.20	77	419049	9.59	ug/l	98
29) cis-1,2-Dichloroethene	6.26	96	552292	9.94	ug/l	98
30) Chloroform	6.48	83	785288	9.56	ug/l	99
31) Bromochloromethane	6.72	49	410048	10.24	ug/l	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K10\RKW173.D Vial: 2
Acq On : 10 Nov 2011 7:51 am Operator: SD
Sample : CVO06K0208 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 10 8:13 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
32)	Tetrahydrofuran	6.77	42	66305	9.72 ug/l	93
34)	1,1,1-Trichloroethane	7.06	97	553851	9.22 ug/l	98
36)	tert-Amyl methyl ether (TA	7.45	87	180372	8.66 ug/l	97
39)	1,1-Dichloropropene	7.29	110	221623	10.26 ug/l	98
40)	Carbon tetrachloride	7.44	119	481537	9.20 ug/l	99
41)	1,2-Dichloroethane	7.66	62	455920	9.23 ug/l	99
42)	Benzene	7.69	78	1828450	10.18 ug/l	100
43)	Trichloroethene	8.61	130	515671	10.02 ug/l	100
45)	1,2-Dichloropropane	8.89	63	504170	10.29 ug/l	96
47)	Bromodichloromethane	9.26	83	592793	9.30 ug/l	100
48)	Dibromomethane	9.35	93	236177	9.44 ug/l	98
49)	2-Chloroethyl vinyl ether	9.75	63	72331	8.09 ug/l	98
50)	4-Methyl-2-pentanone	9.80	43	1385440	48.34 ug/l	99
51)	cis-1,3-Dichloropropene	10.14	75	730042	9.85 ug/l	98
53)	Toluene	10.68	91	1886069	10.06 ug/l	100
54)	Ethyl methacrylate	10.99	69	424436	9.36 ug/l	99
55)	trans-1,3-Dichloropropene	10.99	75	531856	9.40 ug/l	99
56)	2-Hexanone	11.27	43	879460	47.23 ug/l	100
57)	1,1,2-Trichloroethane	11.26	97	304676	9.85 ug/l	99
58)	1,3-Dichloropropane	11.70	76	567530	9.92 ug/l	99
59)	Tetrachloroethene	11.81	164	427180	10.13 ug/l	99
60)	Dibromochloromethane	12.16	129	395748	9.11 ug/l	100
62)	1,2-Dibromoethane	12.52	107	338717	9.69 ug/l	100
63)	1-Chlorohexane	12.82	91	718845	10.59 ug/l	99
64)	Chlorobenzene	13.28	112	1237696	10.05 ug/l	99
65)	1,1,1,2-Tetrachloroethane	13.35	131	415602	9.46 ug/l	97
66)	Ethylbenzene	13.38	91	2062727	10.11 ug/l	99
67)	m-Xylene & p-Xylene	13.51	91	3074434	19.92 ug/l	98
68)	o-Xylene	14.32	91	1644361	9.91 ug/l	98
69)	Styrene	14.39	104	1357839	10.01 ug/l	93
71)	Isopropylbenzene	15.00	105	1936734	10.54 ug/l	99
72)	Bromoform	15.02	173	226132	9.16 ug/l	99
73)	1,1,2,2-Tetrachloroethane	15.34	83	366752	10.10 ug/l	100
75)	1,2,3-Trichloropropane	15.62	110	90817	9.50 ug/l	99
76)	trans-1,4-Dichloro-2-buten	15.76	53	85856	9.29 ug/l	94
77)	n-Propylbenzene	15.77	91	2488244	10.68 ug/l	100
78)	Bromobenzene	15.85	156	526296	9.91 ug/l	98
79)	1,3,5-Trimethylbenzene	16.09	105	1649323	10.36 ug/l	100
80)	2-Chlorotoluene	16.10	91	1546838	9.73 ug/l	96
81)	4-Chlorotoluene	16.20	91	1389109	10.62 ug/l	97
82)	tert-Butylbenzene	16.77	134	389287	10.73 ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K10\RKW173.D Vial: 2
Acq On : 10 Nov 2011 7:51 am Operator: SD
Sample : CVO06K0208 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 10 8:13 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

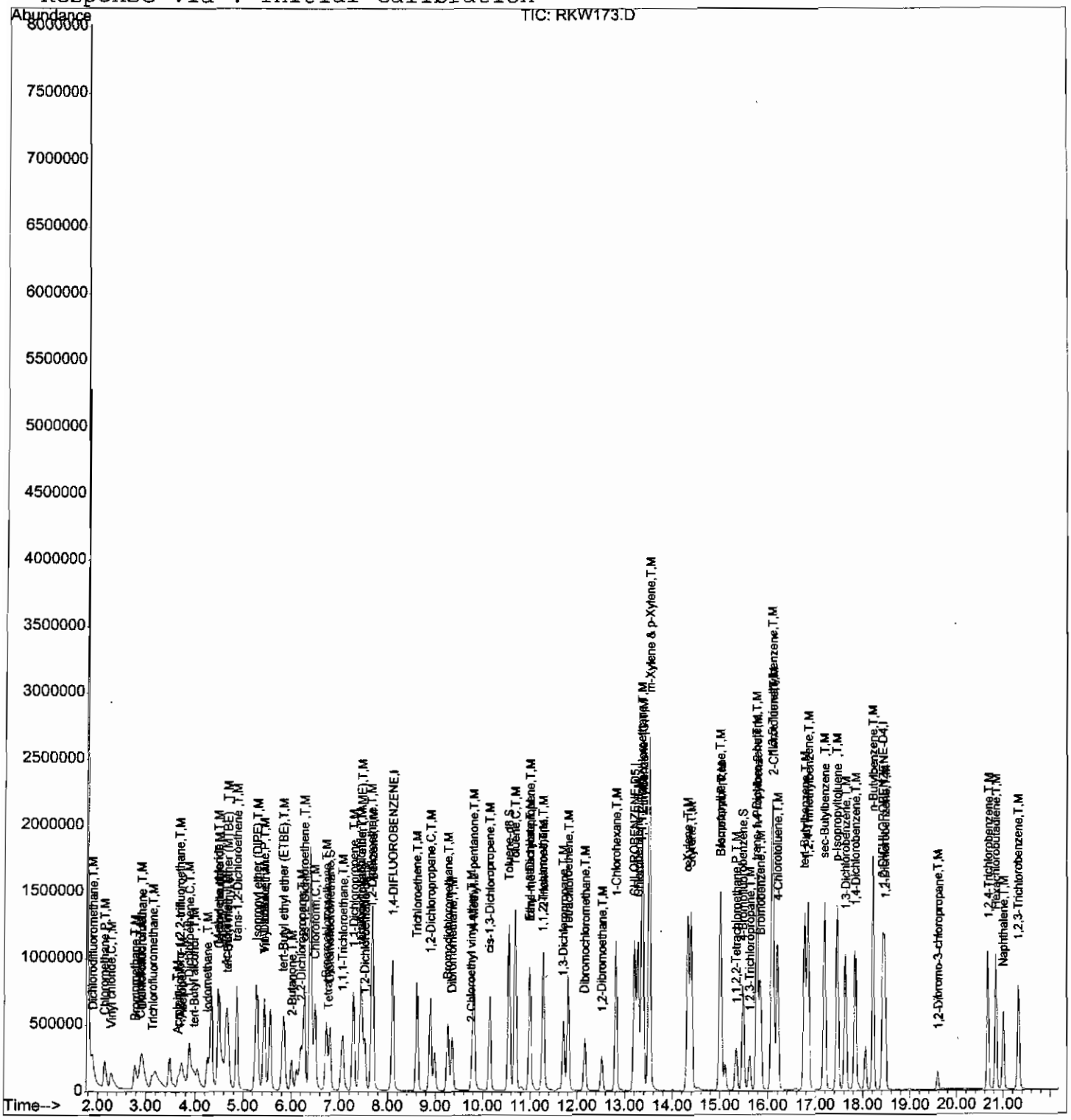
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
83)	1,2,4-Trimethylbenzene	16.84	105	1644102	10.22 ug/l	99
84)	sec-Butylbenzene	17.18	105	2175485	10.83 ug/l	100
85)	p-Isopropyltoluene	17.45	119	1794188	10.56 ug/l	99
86)	1,3-Dichlorobenzene	17.63	146	961081	10.20 ug/l	99
87)	1,4-Dichlorobenzene	17.84	146	936357	10.04 ug/l	100
89)	n-Butylbenzene	18.21	91	1733220	10.77 ug/l	99
90)	1,2-Dichlorobenzene	18.46	146	810114	9.86 ug/l	99
91)	1,2-Dibromo-3-chloropropan	19.59	157	64226	9.29 ug/l	99
92)	1,2,4-Trichlorobenzene	20.68	180	616904	10.07 ug/l	100
93)	Hexachlorobutadiene	20.84	225	380276	9.78 ug/l	100
94)	Naphthalene	21.00	128	816357	9.77 ug/l	100
95)	1,2,3-Trichlorobenzene	21.32	180	499651	9.90 ug/l	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K10\RKW173.D Vial: 2
Acq On : 10 Nov 2011 7:51 am Operator: SD
Sample : CVO06K0208 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 10 8:13 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKW225
Instrument ID: 06
GC Column:RTX502.2ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K084
BFB Injection Date : 11/14/11
BFB Injection Time : 07:43
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.45
75	30.0 - 60.0% of mass 95	42.04
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.54
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	85.22
175	5.0 - 9.0% of mass 174	6.52(7.7)1
176	95.0 - 101.0% of mass 174	82.48(96.8)1
177	5.0 - 9.0% of mass 176	5.50(6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV006K0210	RKW226	11/14/11	08:16
2	MBLK2W	V006K12B	RKW230	11/14/11	10:23
3	LCS2W	V006K12L	RKW227	11/14/11	08:48
4	LCD2W	V006K12C	RKW228	11/14/11	09:20
5	IR-70-TB-109	K084-07R	RKW232	11/14/11	11:25
6	IW-70-FSB118-113	K084-03R	RKW233	11/14/11	11:57
7	MW-70-PMW05A-114	K084-04R	RKW234	11/14/11	12:27

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RKW007
Instrument ID: 06
GC Column: RTX502.2 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K084
Date Analyzed: 11/02/11
Time Analyzed: 17:57
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1102015	8.12	1018501	13.22	450060	18.43
	UPPER LIMIT	2204030	8.62	2037002	13.72	900120	18.93
	LOWER LIMIT	551008	7.62	509251	12.72	225030	17.93
	SAMPLE ID						
1	VSTD010	1417468	8.12	1273188	13.23	549593	18.43
2	MBLK2W	1498188	8.12	1361450	13.23	606854	18.43
3	LCS2W	1455569	8.12	1303211	13.23	555436	18.43
4	LCD2W	1506736	8.12	1364510	13.23	600239	18.43
5	IR-70-TB-109	1571463	8.12	1383025	13.23	575922	18.43
6	IW-70-FSB11B-113	1430947	8.13	1239161	13.23	533894	18.45
7	MW-70-PMW05A-114	1453942	8.13	1301305	13.23	569090	18.45

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.
page 1 of 1

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW226.D Vial: 2
Acq On : 14 Nov 2011 8:16 am Operator: SD
Sample : CVO06K0210 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	129	0.00
2	T,M	Dichlorodifluoromethane	10.000	10.728	-7.3	132	0.00
3	P,T,M	Chloromethane	10.000	10.395	-3.9	129	0.00
4	C,T,M	Vinyl chloride	10.000	11.005	-10.1	137	0.00
5	T,M	Bromomethane	10.000	10.289	-2.9	119	0.00
6	T,M	Chloroethane	10.000	10.715	-7.1	125	0.01
7	T,M	Dichlorofluoromethane	10.000	10.098	-1.0	122	0.00
8	T,M	Trichlorofluoromethane	10.000	10.511	-5.1	128	0.00
9	T,M	Acrolein	50.000	45.792	8.4	113	0.01
10	T,M	Acetone	50.000	45.138	9.7	110	0.00
11	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.605	3.9	121	-0.01
12	C,T,M	1,1-Dichloroethene	10.000	10.418	-4.2	128	0.00
13	T,M	tert-Butyl alcohol	50.000	40.266	19.5	99	0.00
14	T,M	Acetonitrile	-1.000	0.000	0.0	0	0.00
15	T,M	Methyl acetate	-1.000	0.000	0.0	0	0.00
16	T,M	Iodomethane	10.000	8.717	12.8	108	0.00
17	T,M	Methylene chloride	10.000	8.562	14.4	119	0.00
18	T,M	Acrylonitrile	50.000	49.191	1.6	123	0.00
19	T,M	Carbon disulfide	10.000	11.385	-13.8	142	0.00
20	T,M	tert-Butyl methyl ether (MT	10.000	8.867	11.3	109	0.00
21	T,M	trans-1,2-Dichloroethene	10.000	10.021	-0.2	121	0.00
22	T,M	Isopropyl ether (DIPE)	10.000	10.253	-2.5	123	0.00
23	T,M	Vinyl acetate	10.000	10.028	-0.3	118	0.00
24	P,T,M	1,1-Dichloroethane	10.000	9.993	0.1	123	0.00
25	T,M	2-Butanol	-1.000	0.000	0.0	0	-5.87#
26	T,M	tert-Butyl ethyl ether (ETB	10.000	9.174	8.3	112	0.00
27	T,M	2-Butanone	50.000	47.281	5.4	117	0.00
28	T,M	2,2-Dichloropropane	10.000	9.917	0.8	125	0.00
29	T,M	cis-1,2-Dichloroethene	10.000	9.803	2.0	122	0.01
30	C,T,M	Chloroform	10.000	9.608	3.9	118	0.00
31	T,M	Bromochloromethane	10.000	9.926	0.7	118	0.00
32	T,M	Tetrahydrofuran	10.000	9.533	4.7	123	0.00
33	S	Dibromofluoromethane	10.000	9.714	2.9	122	0.00
34	T,M	1,1,1-Trichloroethane	10.000	9.199	8.0	117	0.00
35	T,M	Cyclohexane	-1.000	0.000	0.0	0	0.00
36	T,M	tert-Amyl methyl ether (TAM	10.000	8.690	13.1	106	0.01
37	S	1,2-Dichloroethane-d4	10.000	9.090	9.1	114	0.00
38	I	CHLOROBENZENE-D5	10.000	10.000	0.0	125	0.01
39	T,M	1,1-Dichloropropene	10.000	10.607	-6.1	129	0.00
40	T,M	Carbon tetrachloride	10.000	9.467	5.3	117	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW226.D Vial: 2
Acq On : 14 Nov 2011 8:16 am Operator: SD
Sample : CVO06K0210 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	1,2-Dichloroethane	10.000	9.332	6.7	109	0.01
42	T,M	Benzene	10.000	10.244	-2.4	124	0.00
43	T,M	Trichloroethene	10.000	10.147	-1.5	122	0.01
44	T,M	Methylcyclohexane	-1.000	0.000	0.0	0	0.00
45	C,T,M	1,2-Dichloropropane	10.000	10.302	-3.0	124	0.00
46	T,M	1,4-Dioxane	-1.000	0.000	0.0	0	0.00
47	T,M	Bromodichloromethane	10.000	9.475	5.3	114	0.00
48	T,M	Dibromomethane	10.000	9.325	6.8	113	0.00
49	T,M	2-Chloroethyl vinyl ether	10.000	8.985	10.2	133	0.02
50	T,M	4-Methyl-2-pentanone	50.000	49.570	0.9	118	0.01
51	T,M	cis-1,3-Dichloropropene	10.000	9.885	1.2	116	0.01
52	S	Toluene-d8	10.000	10.237	-2.4	126	0.01
53	C,T,M	Toluene	10.000	10.138	-1.4	122	0.01
54	T,M	Ethyl methacrylate	10.000	9.214	7.9	112	0.00
55	T,M	trans-1,3-Dichloropropene	10.000	9.722	2.8	113	0.01
56	T,M	2-Hexanone	50.000	48.582	2.8	117	0.01
57	T,M	1,1,2-Trichloroethane	10.000	9.715	2.9	115	0.00
58	T,M	1,3-Dichloropropane	10.000	9.840	1.6	117	0.01
59	T,M	Tetrachloroethene	10.000	10.392	-3.9	124	0.01
60	T,M	Dibromochloromethane	10.000	9.220	7.8	109	0.00
61	T,M	2-Ethyl-1-butanol	-1.000	0.000	0.0	0	0.00
62	T,M	1,2-Dibromoethane	10.000	9.752	2.5	114	0.01
63	T,M	1-Chlorohexane	10.000	10.974	-9.7	132	0.01
64	P, T,M	Chlorobenzene	10.000	10.207	-2.1	121	0.00
65	T,M	1,1,1,2-Tetrachloroethane	10.000	9.648	3.5	115	0.01
66	C,T,M	Ethylbenzene	10.000	10.251	-2.5	123	0.00
67	T,M	m-Xylene & p-Xylene	20.000	20.342	-1.7	122	0.01
68	T,M	o-Xylene	10.000	10.086	-0.9	120	0.00
69	T,M	Styrene	10.000	10.069	-0.7	118	0.01
70	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	122	0.00
71	T,M	Isopropylbenzene	10.000	10.728	-7.3	124	0.01
72	P,T,M	Bromoform	10.000	9.252	7.5	105	0.00
73	P,T,M	1,1,2,2-Tetrachloroethane	10.000	9.930	0.7	117	0.00
74	S	4-Bromofluorobenzene	10.000	10.047	-0.5	121	0.01
75	T,M	1,2,3-Trichloropropane	10.000	9.175	8.2	106	0.00
76	T,M	trans-1,4-Dichloro-2-butene	10.000	9.554	4.5	110	0.01
77	T,M	n-Propylbenzene	10.000	10.786	-7.9	126	0.01
78	T,M	Bromobenzene	10.000	9.883	1.2	114	0.00
79	T,M	1,3,5-Trimethylbenzene	10.000	10.424	-4.2	121	0.00
80	T,M	2-Chlorotoluene	10.000	9.998	0.0	116	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW226.D Vial: 2
Acq On : 14 Nov 2011 8:16 am Operator: SD
Sample : CVO06K0210 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	10.000	10.720	-7.2	127	0.00
82	T,M	tert-Butylbenzene	10.000	10.762	-7.6	123	0.01
83	T,M	1,2,4-Trimethylbenzene	10.000	10.327	-3.3	120	0.00
84	T,M	sec-Butylbenzene	10.000	11.017	-10.2	127	0.01
85	T,M	p-Isopropyltoluene	10.000	10.799	-8.0	124	0.01
86	T,M	1,3-Dichlorobenzene	10.000	10.240	-2.4	118	0.01
87	T,M	1,4-Dichlorobenzene	10.000	10.126	-1.3	117	0.00
88	T,M	Benzyl chloride	-1.000	0.000	0.0	0	0.00
89	T,M	n-Butylbenzene	10.000	10.978	-9.8	128	0.00
90	T,M	1,2-Dichlorobenzene	10.000	9.944	0.6	116	0.00
91	T,M	1,2-Dibromo-3-chloropropane	10.000	9.271	7.3	108	0.01
92	T,M	1,2,4-Trichlorobenzene	10.000	10.192	-1.9	112	0.00
93	T,M	Hexachlorobutadiene	10.000	10.159	-1.6	117	0.01
94	T,M	Naphthalene	10.000	9.772	2.3	108	0.00
95	T,M	1,2,3-Trichlorobenzene	10.000	9.960	0.4	109	0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW226.D Vial: 2
Acq On : 14 Nov 2011 8:16 am Operator: SD
Sample : CVO06K0210 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	129	0.00
2	T,M	Dichlorodifluoromethane	0.219	0.235	-7.3	132	0.00
3	P,T,M	Chloromethane	0.278	0.289	-4.0	129	0.00
4	C,T,M	Vinyl chloride	0.239	0.263	-10.0	137	0.00
5	T,M	Bromomethane	0.201	0.207	-3.0	119	0.00
6	T,M	Chloroethane	0.170	0.182	-7.1	125	0.01
7	T,M	Dichlorofluoromethane	0.536	0.542	-1.1	122	0.00
8	T,M	Trichlorofluoromethane	0.313	0.328	-4.8	128	0.00
9	T,M	Acrolein	0.011	0.010	9.1	113	0.01
10	T,M	Acetone	0.044	0.040	9.1	110	0.00
11	T,M	1,1,2-Trichloro-1,2,2-trifl	0.175	0.168	4.0	121	-0.01
12	C,T,M	1,1-Dichloroethene	0.492	0.513	-4.3	128	0.00
13	T,M	tert-Butyl alcohol	0.015	0.012	20.0	99	0.00
14	T,M	Acetonitrile	0.000	0.000	0.0	0#	0.00
15	T,M	Methyl acetate	0.000	0.000	0.0	0#	0.00
16	T,M	Iodomethane	0.620	0.540	12.9	108	0.00
17	T,M	Methylene chloride	0.514	0.440	14.4	119	0.00
18	T,M	Acrylonitrile	0.062	0.061	1.6	123	0.00
19	T,M	Carbon disulfide	1.017	1.157	-13.8	142	0.00
20	T,M	tert-Butyl methyl ether (MT	0.627	0.556	11.3	109	0.00
21	T,M	trans-1,2-Dichloroethene	0.524	0.525	-0.2	121	0.00
22	T,M	Isopropyl ether (DIPE)	1.165	1.195	-2.6	123	0.00
23	T,M	Vinyl acetate	0.367	0.368	-0.3	118	0.00
24	P,T,M	1,1-Dichloroethane	0.615	0.615	0.0	123	0.00
25	T,M	2-Butanol	0.000	0.000	0.0	0#	-5.87#
26	T,M	tert-Butyl ethyl ether (ETB	0.896	0.822	8.3	112	0.00
27	T,M	2-Butanone	0.083	0.079	4.8	117	0.00
28	T,M	2,2-Dichloropropane	0.312	0.309	1.0	125	0.00
29	T,M	cis-1,2-Dichloroethene	0.396	0.388	2.0	122	0.01
30	C,T,M	Chloroform	0.586	0.563	3.9	118	0.00
31	T,M	Bromochloromethane	0.286	0.283	1.0	118	0.00
32	T,M	Tetrahydrofuran	0.049	0.046	6.1	123	0.00
33	S	Dibromofluoromethane	0.341	0.332	2.6	122	0.00
34	T,M	1,1,1-Trichloroethane	0.428	0.394	7.9	117	0.00
35	T,M	Cyclohexane	0.000	0.000	0.0	0#	0.00
36	T,M	tert-Amyl methyl ether (TAM	0.148	0.129	12.8	106	0.01
37	S	1,2-Dichloroethane-d4	0.296	0.269	9.1	114	0.00
38	I	CHLOROBENZENE-D5	1.000	1.000	0.0	125	0.01
39	T,M	1,1-Dichloropropene	0.169	0.180	-6.5	129	0.00
40	T,M	Carbon tetrachloride	0.410	0.388	5.4	117	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW226.D Vial: 2
Acq On : 14 Nov 2011 8:16 am Operator: SD
Sample : CVO06K0210 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	1,2-Dichloroethane	0.387	0.361	6.7	109	0.01
42	T,M	Benzene	1.408	1.443	-2.5	124	0.00
43	T,M	Trichloroethene	0.403	0.409	-1.5	122	0.01
44	T,M	Methylcyclohexane	0.000	0.000	0.0	0#	0.00
45	C,T,M	1,2-Dichloropropane	0.384	0.396	-3.1	124	0.00
46	T,M	1,4-Dioxane	0.000	0.000	0.0	0#	0.00
47	T,M	Bromodichloromethane	0.500	0.473	5.4	114	0.00
48	T,M	Dibromomethane	0.196	0.183	6.6	113	0.00
49	T,M	2-Chloroethyl vinyl ether	0.063	0.064	-1.6	133	0.02
50	T,M	4-Methyl-2-pentanone	0.225	0.223	0.9	118	0.01
51	T,M	cis-1,3-Dichloropropene	0.581	0.574	1.2	116	0.01
52	S	Toluene-d8	1.218	1.246	-2.3	126	0.01
53	C,T,M	Toluene	1.469	1.490	-1.4	122	0.01
54	T,M	Ethyl methacrylate	0.355	0.328	7.6	112	0.00
55	T,M	trans-1,3-Dichloropropene	0.444	0.431	2.9	113	0.01
56	T,M	2-Hexanone	0.146	0.142	2.7	117	0.01
57	T,M	1,1,2-Trichloroethane	0.242	0.236	2.5	115	0.00
58	T,M	1,3-Dichloropropane	0.448	0.441	1.6	117	0.01
59	T,M	Tetrachloroethene	0.330	0.343	-3.9	124	0.01
60	T,M	Dibromochloromethane	0.341	0.314	7.9	109	0.00
61	T,M	2-Ethyl-1-butanol	0.000	0.000	0.0	0#	0.00
62	T,M	1,2-Dibromoethane	0.274	0.267	2.6	114	0.01
63	T,M	1-Chlorohexane	0.532	0.584	-9.8	132	0.01
64	P, T,M	Chlorobenzene	0.965	0.985	-2.1	121	0.00
65	T,M	1,1,1,2-Tetrachloroethane	0.344	0.332	3.5	115	0.01
66	C,T,M	Ethylbenzene	1.600	1.640	-2.5	123	0.00
67	T,M	m-Xylene & p-Xylene	1.210	1.231	-1.7	122	0.01
68	T,M	o-Xylene	1.300	1.311	-0.8	120	0.00
69	T,M	Styrene	1.063	1.071	-0.8	118	0.01
70	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	122	0.00
71	T,M	Isopropylbenzene	3.352	3.596	-7.3	124	0.01
72	P,T,M	Bromoform	0.450	0.417	7.3	105	0.00
73	P,T,M	1,1,2,2-Tetrachloroethane	0.663	0.658	0.8	117	0.00
74	S	4-Bromofluorobenzene	1.014	1.019	-0.5	121	0.01
75	T,M	1,2,3-Trichloropropane	0.174	0.160	8.0	106	0.00
76	T,M	trans-1,4-Dichloro-2-butene	0.169	0.161	4.7	110	0.01
77	T,M	n-Propylbenzene	4.253	4.587	-7.9	126	0.01
78	T,M	Bromobenzene	0.969	0.958	1.1	114	0.00
79	T,M	1,3,5-Trimethylbenzene	2.906	3.030	-4.3	121	0.00
80	T,M	2-Chlorotoluene	2.901	2.900	0.0	116	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW226.D Vial: 2
Acq On : 14 Nov 2011 8:16 am Operator: SD
Sample : CVO06K0210 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	2.387	2.559	-7.2	127	0.00
82	T,M	tert-Butylbenzene	0.662	0.713	-7.7	123	0.01
83	T,M	1,2,4-Trimethylbenzene	2.936	3.032	-3.3	120	0.00
84	T,M	sec-Butylbenzene	3.665	4.038	-10.2	127	0.01
85	T,M	p-Isopropyltoluene	3.101	3.349	-8.0	124	0.01
86	T,M	1,3-Dichlorobenzene	1.720	1.761	-2.4	118	0.01
87	T,M	1,4-Dichlorobenzene	1.702	1.724	-1.3	117	0.00
88	T,M	Benzyl chloride	0.000	0.000	0.0	0#	0.00
89	T,M	n-Butylbenzene	2.938	3.225	-9.8	128	0.00
90	T,M	1,2-Dichlorobenzene	1.499	1.491	0.5	116	0.00
91	T,M	1,2-Dibromo-3-chloropropane	0.126	0.117	7.1	108	0.01
92	T,M	1,2,4-Trichlorobenzene	1.118	1.140	-2.0	112	0.00
93	T,M	Hexachlorobutadiene	0.709	0.721	-1.7	117	0.01
94	T,M	Naphthalene	1.525	1.490	2.3	108	0.00
95	T,M	1,2,3-Trichlorobenzene	0.921	0.918	0.3	109	0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKW251
Instrument ID: 06
GC Column:RTX502.2ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K084
BFB Injection Date : 11/14/11
BFB Injection Time : 21:08
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.27
75	30.0 - 60.0% of mass 95	43.53
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.85
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	85.34
175	5.0 - 9.0% of mass 174	6.35(7.4)1
176	95.0 - 101.0% of mass 174	83.32(97.6)1
177	5.0 - 9.0% of mass 176	5.58(6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV006K0211	RKW252	11/14/11	21:37
2	MBLK3W	V006K13B	RKW256	11/14/11	23:42
3	LCS3W	V006K13L	RKW253	11/14/11	22:09
4	LCD3W	V006K13C	RKW254	11/14/11	22:40
5	MW-70-PMW04A-110DL	K084-01T	RKW261	11/15/11	02:20
6	MW-70-PMW04B-112DL	K084-02T	RKW262	11/15/11	02:51
7	MW-70-PMW05B-115DL	K084-05T	RKW263	11/15/11	03:22
8	IR-70-FD-111DL	K084-06T	RKW264	11/15/11	03:52

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RKW007
Instrument ID: 06
GC Column: RTX502.2 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K084
Date Analyzed: 11/02/11
Time Analyzed: 17:57
Heated Purge: (Y/N) N

		IS1(DFB)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1102015	8.12	1018501	13.22	450060	18.43
	UPPER LIMIT	2204030	8.62	2037002	13.72	900120	18.93
	LOWER LIMIT	551008	7.62	509251	12.72	225030	17.93
	SAMPLE ID						
1	VSTD010	1467976	8.12	1338639	13.23	574423	18.43
2	MBLK3W	1518357	8.12	1366932	13.23	583887	18.43
3	LCS3W	1457981	8.13	1337085	13.23	576806	18.45
4	LCD3W	1468155	8.12	1353699	13.23	583445	18.43
5	MW-70-PMW04A-110DL	1403880	8.12	1238855	13.22	527669	18.43
6	MW-70-PMW04B-112DL	1377582	8.12	1256749	13.23	520161	18.43
7	MW-70-PMW05B-115DL	1358644	8.12	1226896	13.22	514947	18.43
8	IR-70-FD-111DL	1309479	8.12	1196296	13.22	504534	18.43

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

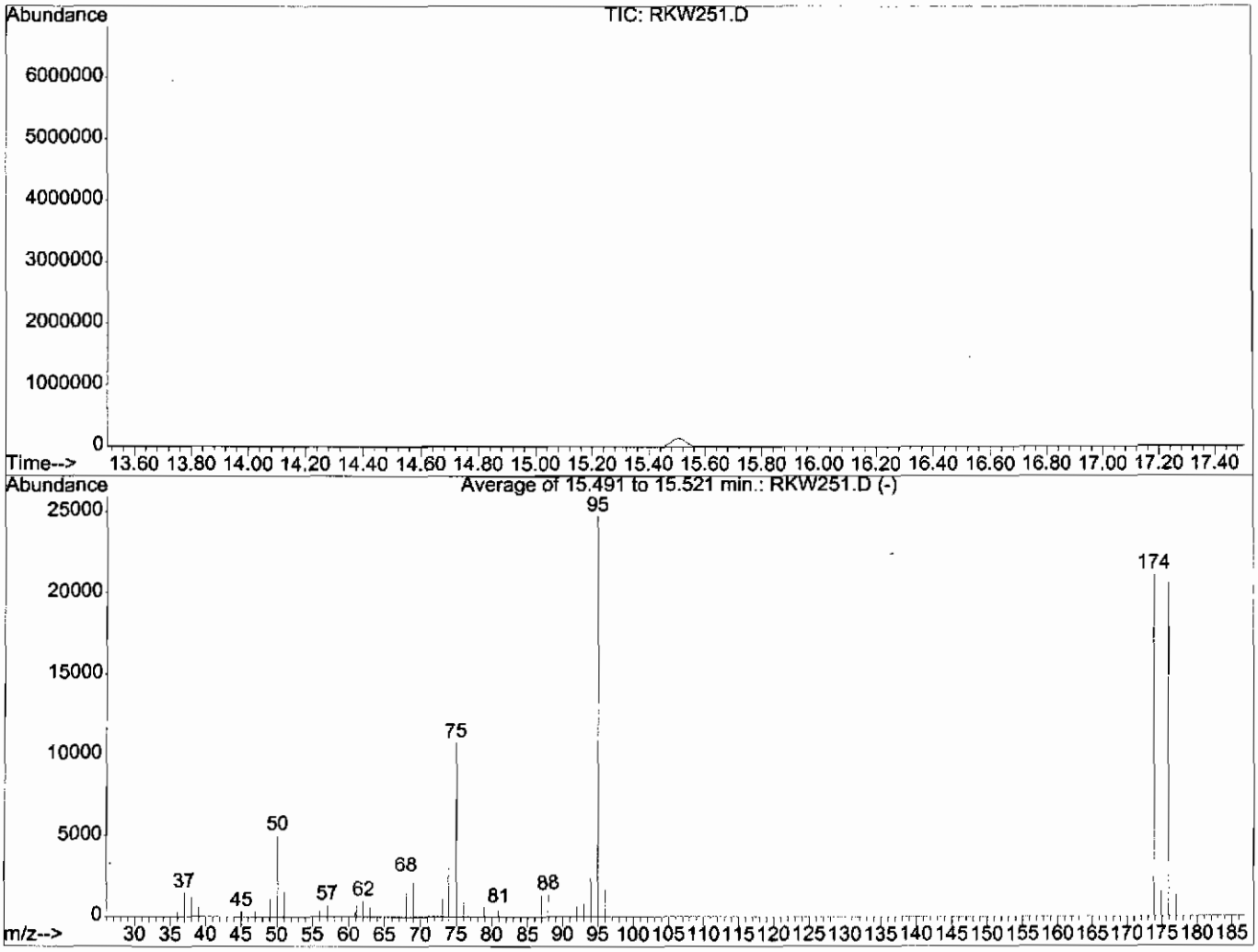
AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

BFB

Data File : D:\HPCHEM\1\DATA\11K14\RKW251.D Vial: 1
Acq On : 14 Nov 2011 9:08 pm Operator: SD
Sample : BFB06K13 Inst : TO06
Misc : T/CHK Multiplr: 1.00
MS Integration Params: RTE.P
Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260



AutoFind: Scans 924, 925, 926; Background Corrected with Scan 919

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.3	5012	PASS
75	95	30	60	43.5	10761	PASS
95	95	100	100	100.0	24723	PASS
96	95	5	9	6.8	1693	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	85.3	21099	PASS
175	174	5	9	7.4	1569	PASS
176	174	95	101	97.6	20600	PASS
177	176	5	9	6.7	1379	PASS

RKW251.D VO06K02.M Tue Nov 15 08:57:31 2011

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW252.D Vial: 2
Acq On : 14 Nov 2011 9:37 pm Operator: SD
Sample : CVO06K0211 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	133	0.00
2	T,M	Dichlorodifluoromethane	10.000	9.101	9.0	116	0.00
3	P,T,M	Chloromethane	10.000	10.544	-5.4	135	0.00
4	C,T,M	Vinyl chloride	10.000	10.014	-0.1	129	0.00
5	T,M	Bromomethane	10.000	10.490	-4.9	126	0.00
6	T,M	Chloroethane	10.000	11.104	-11.0	135	0.00
7	T,M	Dichlorofluoromethane	10.000	10.273	-2.7	129	0.00
8	T,M	Trichlorofluoromethane	10.000	8.969	10.3	113	0.00
9	T,M	Acrolein	50.000	42.312	15.4	108	0.00
10	T,M	Acetone	50.000	44.020	12.0	111	-0.01
11	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	8.191	18.1	107	0.00
12	C,T,M	1,1-Dichloroethene	10.000	9.701	3.0	124	0.00
13	T,M	tert-Butyl alcohol	50.000	44.093	11.8	114	0.00
14	T,M	Acetonitrile	-1.000	0.000	0.0	0	0.00
15	T,M	Methyl acetate	-1.000	0.000	0.0	0	0.00
16	T,M	Iodomethane	10.000	8.936	10.6	115	0.00
17	T,M	Methylene chloride	10.000	9.079	9.2	131	0.00
18	T,M	Acrylonitrile	50.000	50.413	-0.8	130	0.00
19	T,M	Carbon disulfide	10.000	9.988	0.1	129	0.00
20	T,M	tert-Butyl methyl ether (MT	10.000	8.822	11.8	113	0.00
21	T,M	trans-1,2-Dichloroethene	10.000	10.015	-0.2	126	0.00
22	T,M	Isopropyl ether (DIPE)	10.000	10.833	-8.3	135	0.00
23	T,M	Vinyl acetate	10.000	9.905	1.0	121	0.00
24	P,T,M	1,1-Dichloroethane	10.000	10.444	-4.4	134	0.00
25	T,M	2-Butanol	-1.000	0.000	0.0	0	-5.87#
26	T,M	tert-Butyl ethyl ether (ETB	10.000	9.156	8.4	116	0.00
27	T,M	2-Butanone	50.000	47.889	4.2	123	0.00
28	T,M	2,2-Dichloropropane	10.000	8.301	17.0	109	0.00
29	T,M	cis-1,2-Dichloroethene	10.000	10.118	-1.2	130	0.00
30	C,T,M	Chloroform	10.000	9.760	2.4	124	0.00
31	T,M	Bromochloromethane	10.000	10.509	-5.1	130	0.00
32	T,M	Tetrahydrofuran	10.000	9.947	0.5	133	0.00
33	S	Dibromofluoromethane	10.000	9.843	1.6	128	0.00
34	T,M	1,1,1-Trichloroethane	10.000	8.474	15.3	111	0.00
35	T,M	Cyclohexane	-1.000	0.000	0.0	0	0.00
36	T,M	tert-Amyl methyl ether (TAM	10.000	8.443	15.6	107	0.00
37	S	1,2-Dichloroethane-d4	10.000	9.037	9.6	118	0.00
38	I	CHLOROBENZENE-D5	10.000	10.000	0.0	131	0.02
39	T,M	1,1-Dichloropropene	10.000	9.652	3.5	124	0.00
40	T,M	Carbon tetrachloride	10.000	8.194	18.1	106	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW252.D Vial: 2
Acq On : 14 Nov 2011 9:37 pm Operator: SD
Sample : CVO06K0211 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	1,2-Dichloroethane	10.000	9.253	7.5	114	0.00
42	T,M	Benzene	10.000	10.269	-2.7	131	0.00
43	T,M	Trichloroethene	10.000	9.592	4.1	122	0.00
44	T,M	Methylcyclohexane	-1.000	0.000	0.0	0	0.00
45	C,T,M	1,2-Dichloropropane	10.000	10.566	-5.7	133	0.00
46	T,M	1,4-Dioxane	-1.000	0.000	0.0	0	0.00
47	T,M	Bromodichloromethane	10.000	9.423	5.8	119	0.00
48	T,M	Dibromomethane	10.000	9.437	5.6	121	0.00
49	T,M	2-Chloroethyl vinyl ether	10.000	8.834	11.7	137	0.00
50	T,M	4-Methyl-2-pentanone	50.000	49.826	0.3	124	0.00
51	T,M	cis-1,3-Dichloropropene	10.000	9.699	3.0	120	0.02
52	S	Toluene-d8	10.000	10.044	-0.4	129	0.02
53	C,T,M	Toluene	10.000	10.047	-0.5	128	0.02
54	T,M	Ethyl methacrylate	10.000	9.249	7.5	119	0.00
55	T,M	trans-1,3-Dichloropropene	10.000	9.210	7.9	113	0.02
56	T,M	2-Hexanone	50.000	48.207	3.6	122	0.02
57	T,M	1,1,2-Trichloroethane	10.000	9.635	3.7	120	0.00
58	T,M	1,3-Dichloropropane	10.000	9.786	2.1	122	0.00
59	T,M	Tetrachloroethene	10.000	9.307	6.9	116	0.00
60	T,M	Dibromochloromethane	10.000	8.977	10.2	111	0.00
61	T,M	2-Ethyl-1-butanol	-1.000	0.000	0.0	0	0.00
62	T,M	1,2-Dibromoethane	10.000	9.519	4.8	117	0.00
63	T,M	1-Chlorohexane	10.000	9.697	3.0	123	0.00
64	P, T,M	Chlorobenzene	10.000	10.027	-0.3	125	0.00
65	T,M	1,1,1,2-Tetrachloroethane	10.000	9.449	5.5	118	0.02
66	C,T,M	Ethylbenzene	10.000	10.010	-0.1	127	0.00
67	T,M	m-Xylene & p-Xylene	20.000	19.524	2.4	123	0.00
68	T,M	o-Xylene	10.000	9.888	1.1	124	0.00
69	T,M	Styrene	10.000	10.040	-0.4	124	0.02
70	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	128	0.00
71	T,M	Isopropylbenzene	10.000	10.161	-1.6	123	0.02
72	P,T,M	Bromoform	10.000	8.747	12.5	104	0.00
73	P,T,M	1,1,2,2-Tetrachloroethane	10.000	9.802	2.0	121	0.00
74	S	4-Bromofluorobenzene	10.000	10.102	-1.0	127	0.02
75	T,M	1,2,3-Trichloropropane	10.000	9.200	8.0	111	0.00
76	T,M	trans-1,4-Dichloro-2-butene	10.000	8.863	11.4	107	0.02
77	T,M	n-Propylbenzene	10.000	10.276	-2.8	125	0.00
78	T,M	Bromobenzene	10.000	9.803	2.0	119	0.00
79	T,M	1,3,5-Trimethylbenzene	10.000	10.050	-0.5	122	0.00
80	T,M	2-Chlorotoluene	10.000	9.878	1.2	120	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW252.D Vial: 2
Acq On : 14 Nov 2011 9:37 pm Operator: SD
Sample : CVO06K0211 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	10.000	10.189	-1.9	126	0.00
82	T,M	tert-Butylbenzene	10.000	10.308	-3.1	124	0.00
83	T,M	1,2,4-Trimethylbenzene	10.000	10.082	-0.8	122	0.00
84	T,M	sec-Butylbenzene	10.000	10.264	-2.6	124	0.00
85	T,M	p-Isopropyltoluene	10.000	10.072	-0.7	121	0.02
86	T,M	1,3-Dichlorobenzene	10.000	10.076	-0.8	121	0.00
87	T,M	1,4-Dichlorobenzene	10.000	9.868	1.3	119	0.00
88	T,M	Benzyl chloride	-1.000	0.000	0.0	0	0.00
89	T,M	n-Butylbenzene	10.000	10.313	-3.1	126	0.00
90	T,M	1,2-Dichlorobenzene	10.000	9.860	1.4	120	0.00
91	T,M	1,2-Dibromo-3-chloropropane	10.000	9.019	9.8	110	0.02
92	T,M	1,2,4-Trichlorobenzene	10.000	10.114	-1.1	116	0.00
93	T,M	Hexachlorobutadiene	10.000	9.491	5.1	114	0.02
94	T,M	Naphthalene	10.000	9.978	0.2	115	0.00
95	T,M	1,2,3-Trichlorobenzene	10.000	10.139	-1.4	116	0.02

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW252.D Vial: 2
Acq On : 14 Nov 2011 9:37 pm Operator: SD
Sample : CVO06K0211 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	133	0.00
2	T,M	Dichlorodifluoromethane	0.219	0.199	9.1	116	0.00
3	P,T,M	Chloromethane	0.278	0.293	-5.4	135	0.00
4	C,T,M	Vinyl chloride	0.239	0.240	-0.4	129	0.00
5	T,M	Bromomethane	0.201	0.211	-5.0	126	0.00
6	T,M	Chloroethane	0.170	0.189	-11.2	135	0.00
7	T,M	Dichlorofluoromethane	0.536	0.551	-2.8	129	0.00
8	T,M	Trichlorofluoromethane	0.313	0.280	10.5	113	0.00
9	T,M	Acrolein	0.011	0.009	18.2	108	0.00
10	T,M	Acetone	0.044	0.039	11.4	111	-0.01
11	T,M	1,1,2-Trichloro-1,2,2-trifl	0.175	0.143	18.3	107	0.00
12	C,T,M	1,1-Dichloroethene	0.492	0.478	2.8	124	0.00
13	T,M	tert-Butyl alcohol	0.015	0.014	6.7	114	0.00
14	T,M	Acetonitrile	0.000	0.000	0.0	0#	0.00
15	T,M	Methyl acetate	0.000	0.000	0.0	0#	0.00
16	T,M	Iodomethane	0.620	0.554	10.6	115	0.00
17	T,M	Methylene chloride	0.514	0.467	9.1	131	0.00
18	T,M	Acrylonitrile	0.062	0.063	-1.6	130	0.00
19	T,M	Carbon disulfide	1.017	1.015	0.2	129	0.00
20	T,M	tert-Butyl methyl ether (MT	0.627	0.554	11.6	113	0.00
21	T,M	trans-1,2-Dichloroethene	0.524	0.525	-0.2	126	0.00
22	T,M	Isopropyl ether (DIPE)	1.165	1.262	-8.3	135	0.00
23	T,M	Vinyl acetate	0.367	0.364	0.8	121	0.00
24	P,T,M	1,1-Dichloroethane	0.615	0.642	-4.4	134	0.00
25	T,M	2-Butanol	0.000	0.000	0.0	0#	-5.87#
26	T,M	tert-Butyl ethyl ether (ETB	0.896	0.821	8.4	116	0.00
27	T,M	2-Butanone	0.083	0.080	3.6	123	0.00
28	T,M	2,2-Dichloropropane	0.312	0.259	17.0	109	0.00
29	T,M	cis-1,2-Dichloroethene	0.396	0.401	-1.3	130	0.00
30	C,T,M	Chloroform	0.586	0.572	2.4	124	0.00
31	T,M	Bromochloromethane	0.286	0.300	-4.9	130	0.00
32	T,M	Tetrahydrofuran	0.049	0.048	2.0	133	0.00
33	S	Dibromofluoromethane	0.341	0.336	1.5	128	0.00
34	T,M	1,1,1-Trichloroethane	0.428	0.363	15.2	111	0.00
35	T,M	Cyclohexane	0.000	0.000	0.0	0#	0.00
36	T,M	tert-Amyl methyl ether (TAM	0.148	0.125	15.5	107	0.00
37	S	1,2-Dichloroethane-d4	0.296	0.267	9.8	118	0.00
38	I	CHLOROBENZENE-D5	1.000	1.000	0.0	131	0.02
39	T,M	1,1-Dichloropropene	0.169	0.163	3.6	124	0.00
40	T,M	Carbon tetrachloride	0.410	0.336	18.0	106	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW252.D Vial: 2
Acq On : 14 Nov 2011 9:37 pm Operator: SD
Sample : CVO06K0211 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	1,2-Dichloroethane	0.387	0.358	7.5	114	0.00
42	T,M	Benzene	1.408	1.446	-2.7	131	0.00
43	T,M	Trichloroethene	0.403	0.387	4.0	122	0.00
44	T,M	Methylcyclohexane	0.000	0.000	0.0	0#	0.00
45	C,T,M	1,2-Dichloropropane	0.384	0.406	-5.7	133	0.00
46	T,M	1,4-Dioxane	0.000	0.000	0.0	0#	0.00
47	T,M	Bromodichloromethane	0.500	0.471	5.8	119	0.00
48	T,M	Dibromomethane	0.196	0.185	5.6	121	0.00
49	T,M	2-Chloroethyl vinyl ether	0.063	0.062	1.6	137	0.00
50	T,M	4-Methyl-2-pentanone	0.225	0.224	0.4	124	0.00
51	T,M	cis-1,3-Dichloropropene	0.581	0.563	3.1	120	0.02
52	S	Toluene-d8	1.218	1.223	-0.4	129	0.02
53	C,T,M	Toluene	1.469	1.476	-0.5	128	0.02
54	T,M	Ethyl methacrylate	0.355	0.329	7.3	119	0.00
55	T,M	trans-1,3-Dichloropropene	0.444	0.408	8.1	113	0.02
56	T,M	2-Hexanone	0.146	0.141	3.4	122	0.02
57	T,M	1,1,2-Trichloroethane	0.242	0.234	3.3	120	0.00
58	T,M	1,3-Dichloropropane	0.448	0.439	2.0	122	0.00
59	T,M	Tetrachloroethene	0.330	0.308	6.7	116	0.00
60	T,M	Dibromochloromethane	0.341	0.306	10.3	111	0.00
61	T,M	2-Ethyl-1-butanol	0.000	0.000	0.0	0#	0.00
62	T,M	1,2-Dibromoethane	0.274	0.261	4.7	117	0.00
63	T,M	1-Chlorohexane	0.532	0.516	3.0	123	0.00
64	P, T,M	Chlorobenzene	0.965	0.968	-0.3	125	0.00
65	T,M	1,1,1,2-Tetrachloroethane	0.344	0.326	5.2	118	0.02
66	C,T,M	Ethylbenzene	1.600	1.601	-0.1	127	0.00
67	T,M	m-Xylene & p-Xylene	1.210	1.181	2.4	123	0.00
68	T,M	o-Xylene	1.300	1.286	1.1	124	0.00
69	T,M	Styrene	1.063	1.067	-0.4	124	0.02
70	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	128	0.00
71	T,M	Isopropylbenzene	3.352	3.406	-1.6	123	0.02
72	P,T,M	Bromoform	0.450	0.394	12.4	104	0.00
73	P,T,M	1,1,2,2-Tetrachloroethane	0.663	0.650	2.0	121	0.00
74	S	4-Bromofluorobenzene	1.014	1.024	-1.0	127	0.02
75	T,M	1,2,3-Trichloropropane	0.174	0.161	7.5	111	0.00
76	T,M	trans-1,4-Dichloro-2-butene	0.169	0.150	11.2	107	0.02
77	T,M	n-Propylbenzene	4.253	4.370	-2.8	125	0.00
78	T,M	Bromobenzene	0.969	0.950	2.0	119	0.00
79	T,M	1,3,5-Trimethylbenzene	2.906	2.921	-0.5	122	0.00
80	T,M	2-Chlorotoluene	2.901	2.865	1.2	120	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW252.D Vial: 2
Acq On : 14 Nov 2011 9:37 pm Operator: SD
Sample : CVO06K0211 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	2.387	2.432	-1.9	126	0.00
82	T,M	tert-Butylbenzene	0.662	0.683	-3.2	124	0.00
83	T,M	1,2,4-Trimethylbenzene	2.936	2.961	-0.9	122	0.00
84	T,M	sec-Butylbenzene	3.665	3.762	-2.6	124	0.00
85	T,M	p-Isopropyltoluene	3.101	3.123	-0.7	121	0.02
86	T,M	1,3-Dichlorobenzene	1.720	1.733	-0.8	121	0.00
87	T,M	1,4-Dichlorobenzene	1.702	1.680	1.3	119	0.00
88	T,M	Benzyl chloride	0.000	0.000	0.0	0#	0.00
89	T,M	n-Butylbenzene	2.938	3.030	-3.1	126	0.00
90	T,M	1,2-Dichlorobenzene	1.499	1.478	1.4	120	0.00
91	T,M	1,2-Dibromo-3-chloropropane	0.126	0.114	9.5	110	0.02
92	T,M	1,2,4-Trichlorobenzene	1.118	1.131	-1.2	116	0.00
93	T,M	Hexachlorobutadiene	0.709	0.673	5.1	114	0.02
94	T,M	Naphthalene	1.525	1.522	0.2	115	0.00
95	T,M	1,2,3-Trichlorobenzene	0.921	0.934	-1.4	116	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKW252.D Vial: 2
Acq On : 14 Nov 2011 9:37 pm Operator: SD
Sample : CVO06K0211 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 14 22:00 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	8.12	114	1467976	10.00 ug/l	0.00
38) CHLOROBENZENE-D5	13.23	117	1338639	10.00 ug/l	0.02
70) 1,2-DICHLOROBENZENE-D4	18.43	152	574423	10.00 ug/l	0.00
System Monitoring Compounds					
33) Dibromofluoromethane	6.81	111	493444	9.84 ug/l	0.00
Spiked Amount 10.000			Recovery = 98.40%		
37) 1,2-Dichloroethane-d4	7.54	65	392431	9.04 ug/l	0.00
Spiked Amount 10.000			Recovery = 90.40%		
52) Toluene-d8	10.57	98	1637076	10.04 ug/l	0.02
Spiked Amount 10.000			Recovery = 100.40%		
74) 4-Bromofluorobenzene	15.51	95	588410	10.10 ug/l	0.02
Spiked Amount 10.000			Recovery = 101.00%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.90	85	292125	9.10 ug/l	100
3) Chloromethane	2.15	50	430198	10.54 ug/l	97
4) Vinyl chloride	2.29	62	351715	10.01 ug/l	100
5) Bromomethane	2.79	94	309110	10.49 ug/l	96
6) Chloroethane	2.88	64	276793	11.10 ug/l	96
7) Dichlorofluoromethane	2.93	67	808993	10.27 ug/l	98
8) Trichlorofluoromethane	3.16	101	411478	8.97 ug/l	99
9) Acrolein	3.65	56	68784	42.31 ug/l	92
10) Acetone	3.72	43	287026	44.02 ug/l	97
11) 1,1,2-Trichloro-1,2,2-trif	3.71	151	209947	8.19 ug/l	99
12) 1,1-Dichloroethene	3.89	61	701094	9.70 ug/l	98
13) tert-Butyl alcohol	3.99	59	100818	44.09 ug/l #	1
16) Iodomethane	4.27	142	812807	8.94 ug/l	96
17) Methylene chloride	4.49	49	685285	9.08 ug/l	99
18) Acrylonitrile	4.66	53	460938	50.41 ug/l	98
19) Carbon disulfide	4.51	76	1490604	9.99 ug/l	99
20) tert-Butyl methyl ether (M	4.69	73	812596	8.82 ug/l	98
21) trans-1,2-Dichloroethene	4.88	61	770032	10.02 ug/l	98
22) Isopropyl ether (DIPE)	5.30	45	1852911	10.83 ug/l	97
23) Vinyl acetate	5.45	43	534167	9.90 ug/l	98
24) 1,1-Dichloroethane	5.45	63	942979	10.44 ug/l	99
26) tert-Butyl ethyl ether (ET	5.85	59	1204882	9.16 ug/l	99
27) 2-Butanone	6.03	43	586251	47.89 ug/l	100
28) 2,2-Dichloropropane	6.22	77	379625	8.30 ug/l	98
29) cis-1,2-Dichloroethene	6.28	96	588417	10.12 ug/l	98
30) Chloroform	6.50	83	839201	9.76 ug/l	99
31) Bromochloromethane	6.74	49	440518	10.51 ug/l	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKW252.D Vial: 2
Acq On : 14 Nov 2011 9:37 pm Operator: SD
Sample : CVO06K0211 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 14 22:00 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
32)	Tetrahydrofuran	6.78	42	71001	9.95 ug/l	91
34)	1,1,1-Trichloroethane	7.08	97	532719	8.47 ug/l	98
36)	tert-Amyl methyl ether (TA	7.47	87	183897	8.44 ug/l	97
39)	1,1-Dichloropropene	7.30	110	218702	9.65 ug/l	100
40)	Carbon tetrachloride	7.45	119	449829	8.19 ug/l	99
41)	1,2-Dichloroethane	7.67	62	479730	9.25 ug/l	100
42)	Benzene	7.70	78	1935931	10.27 ug/l	99
43)	Trichloroethene	8.63	130	517914	9.59 ug/l	98
45)	1,2-Dichloropropane	8.91	63	543501	10.57 ug/l	95
47)	Bromodichloromethane	9.28	83	630108	9.42 ug/l	100
48)	Dibromomethane	9.37	93	247659	9.44 ug/l	96
49)	2-Chloroethyl vinyl ether	9.77	63	83509	8.83 ug/l	99
50)	4-Methyl-2-pentanone	9.81	43	1498727	49.83 ug/l	99
51)	cis-1,3-Dichloropropene	10.17	75	754050	9.70 ug/l	98
53)	Toluene	10.71	91	1976246	10.05 ug/l	100
54)	Ethyl methacrylate	11.00	69	440075	9.25 ug/l	99
55)	trans-1,3-Dichloropropene	11.02	75	546791	9.21 ug/l	99
56)	2-Hexanone	11.30	43	941982	48.21 ug/l	99
57)	1,1,2-Trichloroethane	11.29	97	312714	9.64 ug/l	98
58)	1,3-Dichloropropane	11.72	76	587453	9.79 ug/l	99
59)	Tetrachloroethene	11.82	164	411692	9.31 ug/l	99
60)	Dibromochloromethane	12.18	129	409427	8.98 ug/l	99
62)	1,2-Dibromoethane	12.53	107	349040	9.52 ug/l	99
63)	1-Chlorohexane	12.83	91	690823	9.70 ug/l	99
64)	Chlorobenzene	13.29	112	1295529	10.03 ug/l	99
65)	1,1,1,2-Tetrachloroethane	13.38	131	435730	9.45 ug/l	96
66)	Ethylbenzene	13.40	91	2143498	10.01 ug/l	100
67)	m-Xylene & p-Xylene	13.53	91	3161995	19.52 ug/l	99
68)	o-Xylene	14.35	91	1720936	9.89 ug/l	98
69)	Styrene	14.42	104	1428968	10.04 ug/l	92
71)	Isopropylbenzene	15.03	105	1956410	10.16 ug/l	99
72)	Bromoform	15.05	173	226254	8.75 ug/l	98
73)	1,1,2,2-Tetrachloroethane	15.36	83	373271	9.80 ug/l	99
75)	1,2,3-Trichloropropane	15.64	110	92200	9.20 ug/l	97
76)	trans-1,4-Dichloro-2-buten	15.79	53	85881	8.86 ug/l	97
77)	n-Propylbenzene	15.79	91	2510304	10.28 ug/l	99
78)	Bromobenzene	15.86	156	545597	9.80 ug/l	97
79)	1,3,5-Trimethylbenzene	16.10	105	1677784	10.05 ug/l	99
80)	2-Chlorotoluene	16.13	91	1645917	9.88 ug/l	100
81)	4-Chlorotoluene	16.22	91	1397220	10.19 ug/l	99
82)	tert-Butylbenzene	16.78	134	392198	10.31 ug/l	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K14\RKW252.D Vial: 2
Acq On : 14 Nov 2011 9:37 pm Operator: SD
Sample : CVO06K0211 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 14 22:00 2011 Quant Results File: VO06K02.RES

Quant Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration
DataAcq Meth : VO06K02

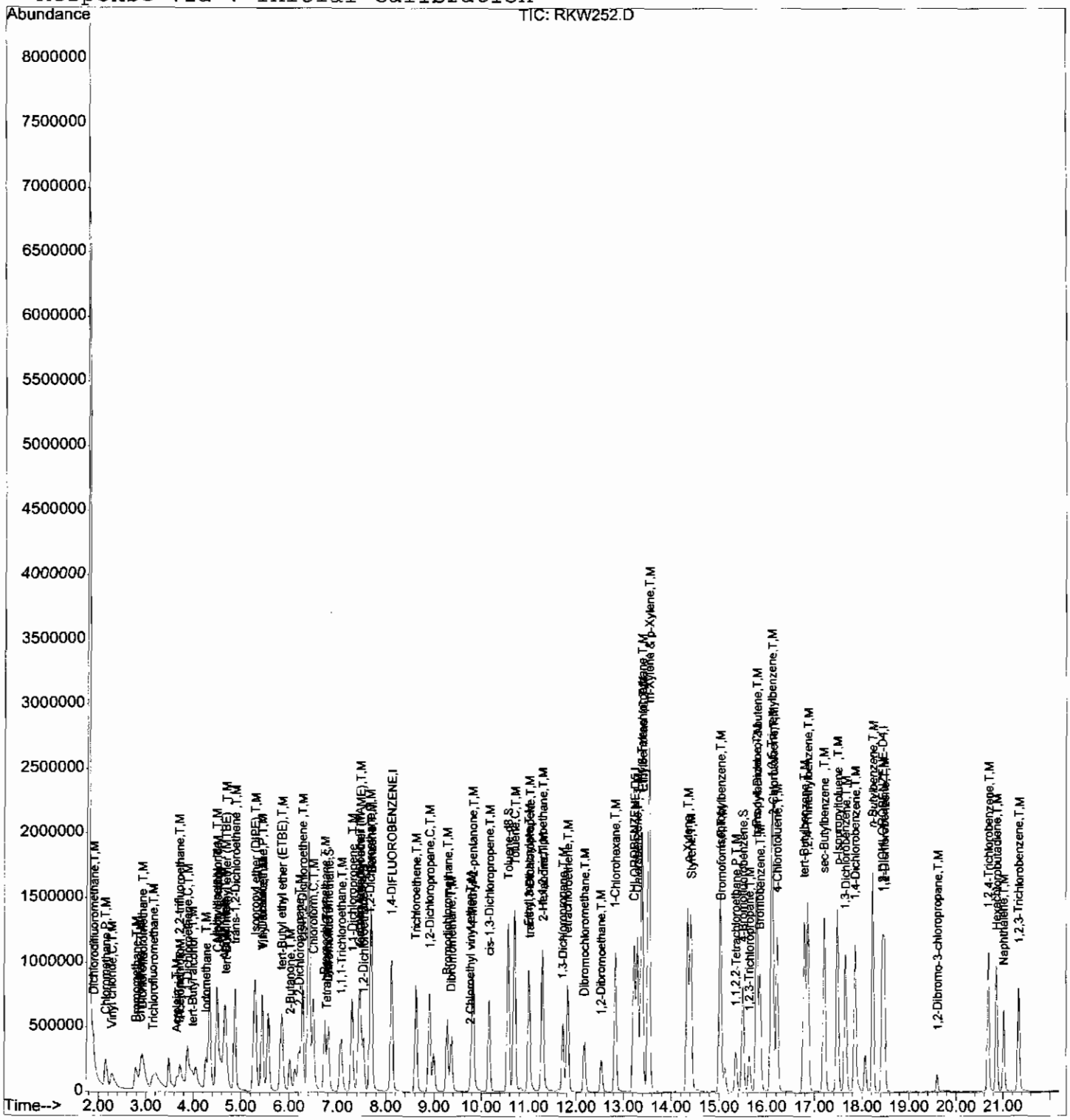
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
83) 1,2,4-Trimethylbenzene	16.86	105	1700632	10.08 ug/l	98
84) sec-Butylbenzene	17.20	105	2160834	10.26 ug/l	100
85) p-Isopropyltoluene	17.48	119	1794030	10.07 ug/l	99
86) 1,3-Dichlorobenzene	17.65	146	995271	10.08 ug/l	100
87) 1,4-Dichlorobenzene	17.85	146	964909	9.87 ug/l	100
89) n-Butylbenzene	18.23	91	1740542	10.31 ug/l	99
90) 1,2-Dichlorobenzene	18.48	146	849195	9.86 ug/l	100
91) 1,2-Dibromo-3-chloropropan	19.61	157	65395	9.02 ug/l	97
92) 1,2,4-Trichlorobenzene	20.69	180	649781	10.11 ug/l	100
93) Hexachlorobutadiene	20.87	225	386799	9.49 ug/l	100
94) Naphthalene	21.02	128	874234	9.98 ug/l	99
95) 1,2,3-Trichlorobenzene	21.35	180	536562	10.14 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K14\RKW252.D Vial: 2
Acq On : 14 Nov 2011 9:37 pm Operator: SD
Sample : CVO06K0211 Inst : TO06
Misc : 10ppb 8260/50ppb KET-A-AN-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 14 22:00 2011 Quant Results File: VO06K02.RES

Method : D:\HPCHEM\1\METHODS\VO06K02.M (RTE Integrator)
Title : METHOD 8260
Last Update : Fri Nov 04 09:13:59 2011
Response via : Initial Calibration



ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/2/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A06 -048

BATCH V006K02

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKW001	BFB06K01	1µL	N/A	N/A	N/A		2:51pm
02	002	V006K021	.15/.15/.07/.03mL					5260, GASES, CS2 / 70A-A-AN 0.3 / 1.5 ppb
03	003	2	.25/.25/.05/.05mL					0.5 / 2.5
04	004	3	.5/.5/.1/.1mL					1.0 / 5.0
05	005	4	1/1/.2/.2mL					2.0 / 10
06	006	5	2.5/2.5/.5/.5mL					5.0 / 25
07	007	6	5/5/1/1mL					10 / 50
08	008	7	10/10/2/2mL					20 / 100
09	009	8	15/15/3/3mL					bad purge
10	010	9	20/20/4/4mL					sd 11/3/11 ~~40~~ 40 / 200
11	011	10	25/25/5/5mL					50 / 250
12	012	11	50/50/10/10mL					100 / 500
13	013	15/55						
14	014	V006K01R						
15	015	V006K0201	5/5/1/1					10 / 50 ppb
16	016	RINSE						10:32pm
17	sd 11/3/11 OK							
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								sd 11/3/11

Instrument No.	06
INITIAL CALIBRATION REFERENCE	
DATE	11/2/11
ICAL ID	V006K02 sd 11/2/11

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC KET-A-AN	SV1-17-98-01	*	250
DCC 8260	-87-01	*	50/250
DCC GASES	-96-03	*	250
DCC CS_2	-98-01	*	250
BFB	-45-07	1	50
IS/SURR 15 55	-97-01 / -96-02 / -99-01	1 / 1 / 1	250
ICV/LCS KET A-AN	-88-02 sd 11/3/11	5	250
ICV/LCS 8260	-99-02	5	50/250
ICV/LCS GASES	-97-01	1	250
ICV/LCS CS_2	-97-02	1	250

Date File Folder: 11K02

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO06	

Comments: * : varies, see individual calibration level

Analyzed By: sd

Date Disposed: 11/3/11

Disposed By: sd

2143

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/10/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge Book # A06 -048

BATCH V006K02 08

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RKW172	DFB06K10	1µL					7:10am
02		173	V006K02 08	5/5/1/1 µL					
03		174	V006K10L						
04		175	C						
05		176	RINSE						
06		177	V006K10B	25mL					
07		178	11K070-07		1.0	✓	✓		
08		179	-01			✓	✓		
09		180	-02			✓	✓		
10		181	-03			✓	✓		100X
11		182	-04			✓	✓		~~VC c/o: RR to cont~~ +100X
12		183	-05			✓	✓		~~cis/trc c/o: RR to cont~~ +100X
13		184	-06			✓	✓		~~VC c/o: RR to cont~~ +100X
14		185	RINSE						
15		186							
16		187	11K084-07	25mL	1.0	✓	✓		c/o. RR
17		188	11K082-01			✓	✓		c/o. RR
18		189	11K093-01			✓	✓		
19		190	11K084-01			✓	✓		100X
20		191	-02			✓	✓		100X
21		192	-04			✓	✓		c/o. RR
22		193	-05			✓	✓		~~c/o: RR to cont~~ +100X conformed gd 11/22/11
23		194	-06			✓	✓		~~VC c/o: RR to cont~~ +100X conformed gd 11/22/11 6:41pm
24		195	-03			✓	✓		c/o. RR; out of 12hr +/- clk 7:11pm
25		196-197	RINSE						
26									
27									
28									
29									
30									gd 11/14/11

Instrument No.	06
INITIAL CALIBRATION REFERENCE	
DATE	11/2/11
ICAL ID	V006K02

STANDARDS

NAME	ID	Amount (uL)	Conc. (mg/L)
DCC	SV1-17-98-01	5	250
DCC	-87-01	5	50/250
DCC	-96-03	1	250
DCC	-93-01	1	250
BFB	-45-03	1	50
IS/SURR.	-99-01	1	250
ICV/LCS	-89-02	5	250
ICV/LCS	-99-02	5	50/250
ICV/LCS	-97-01	1	250
ICV/LCS	-97-02	1	250

Date File Folder	11K10
Electronic Data Archival	
Location	Date
HPCHEM_VOA/TO06	

Comments:

Analyzed By: gd

Date Disposed: 11/14/11

Disposed By: gd

21144

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/14/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A06 -048

BATCH CV006K021D

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RKW225	BFB06K12	1mL					7:43am
02		226	CV006K021D	5/5/1/1mL					
03		227	V006K12L						
04		228	C						
05		229	RINSE						
06		230	V006K12B	25mL					
07		231	11K082-01R		10	✓	✓		
08		232	11K084-02R			✓	✓		
09		233	-03R			7	✓		vial labeled pre-preserved w/HCl
10		234	-04R			✓	✓		
11		235	11K082-04R			✓	✓		
12		236	11K103-02			✓	✓		
13		237	-01			✓	✓		
14		238	11K099-10			✓	✓		
15		239	-01			✓	✓		
16		240	-02			✓	✓		
17		241	-03			✓	✓		
18		242	-04			✓	✓		
19		243	-04			✓	✓		
20		244	-05			✓	✓		
21		245	-06			✓	✓		
22		246	-07			✓	✓		
23		247	-08			✓	✓		7:04pm
24		248-250	RINSE						
25									
26									
27									
28									
29									
30									sd 11/15/11

Instrument No.	06
INITIAL CALIBRATION REFERENCE	
DATE	11/2/11
ICAL ID	V006K02

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-17-98-01	5	250
DCC	-87-01	5	50/250
DCC	-96-03	1	250
DCC	-93-01	1	250
BFB	-45-03	1	50
IS/SURR.	-99-01	1	250
ICV/LCS	-89-02	5	250
ICV/LCS	-99-02	5	50/250
ICV/LCS	-97-01	1	250
ICV/LCS	-97-02	1	250

Date File Folder: 11K14

Electronic Data Archival

Location	Date
HPCHEM_VOA/T006	

Comments:

Analyzed By: sd

Date Disposed: 11/15/11

Disposed By: sd

2145

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/14/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A06 -048

BATCH cv006K02/11

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKW251	RFB06K13	1mL					9:08pm
02	252	CV006K0211	5/5/1/1mL					
03	253	V006K13L						
04	254	C						
05	255	RIN58	5g 11/15/11					
06	256	V006K13B	25mL					
07	257	11K070-03T	0.25mL	100	✓	✓		
08	258	-04T			✓	✓		
09	259	-05T			✓	✓		
10	260	-06T			✓	✓		
11	261	11K084 ~~-02T~~ 01T			✓	✓		
12	262	5g 11/15/11 ~~-05T~~ 02T			✓	✓		
13	263	~~-06T~~ -03T	0.50mL	50	✓	✓		
14	264	-06T	0.25mL	100	✓	✓		
15	265	11K112-01			✓	✓		RR to confirm toluene
16	266	-02			7	✓		filament burnt out: run incomplete. 4:55am
17		-03			7	✓		Purge 4, but not analyzed.
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								GD 11/15/11

Instrument No.	06
INITIAL CALIBRATION REFERENCE	
DATE	11/2/11
ICAL ID	V006K02

STANDARDS

NAME	ID	Amount (uL)	Conc. (mg/L)
DCC	SV1-17-98-06	5	250
DCC	-87-01	5	50/250
DCC	-96-03		
DCC	-93-01		
BFB	-45-03	1	50
IS/SURR.	-99-01	1	250
ICV/LCS	-89-02	5	250
ICV/LCS	-99-02	5	50/250
ICV/LCS	-97-01	1	250
ICV/LCS	-97-02	1	250

Date File Folder	11K14
Electronic Data Archival	
Location	Date
HPCHEM_VOA/TO06	

Comments:

Analyzed By: GD

Date Disposed: 11/15/11

Disposed By: GD

2146

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD RSK-175
DISSOLVED GASES

SDG#: 11K084

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K084

METHOD RSK-175
DISSOLVED GASES

A total of six (6) water samples were received on 11/09/11 for Dissolved Gas analysis, Method RSK-175 in accordance with USEPA at R.S. Kerr Environmental Research Laboratory, Ada, OK 74820 March 15, 1989.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for DGK005WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED GASES

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K084
Instrument ID : GCT010

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DGK005WB	1	NA	11/14/1110:15	11/14/1109:45	FK14003A	FK14002A	DGK005W	Method Blank
LCS1W	DGK005WL	1	NA	11/14/1110:26	11/14/1109:45	FK14004A	FK14002A	DGK005W	Lab Control Sample (LCS)
LCD1W	DGK005WC	1	NA	11/14/1110:39	11/14/1109:45	FK14005A	FK14002A	DGK005W	LCS Duplicate
MW-70-PMW04A-110	K084-01	1	NA	11/14/1112:42	11/14/1109:45	FK14013A	FK14012A	DGK005W	Field Sample
MW-70-PMW04A-110DL	K084-01T	400	NA	11/14/1113:56	11/14/1109:45	FK14018A	FK14012A	DGK005W	Diluted Sample
MW-70-PMW04B-112	K084-02	1	NA	11/14/1112:56	11/14/1109:45	FK14014A	FK14012A	DGK005W	Field Sample
MW-70-PMW04B-112DL	K084-02T	50	NA	11/14/1113:23	11/14/1109:45	FK14016A	FK14012A	DGK005W	Diluted Sample
IW-70-FSB118-113	K084-03	1	NA	11/14/1113:09	11/14/1109:45	FK14015A	FK14012A	DGK005W	Field Sample
IW-70-FSB118-113DL	K084-03T	1000	NA	11/14/1114:36	11/14/1109:45	FK14021A	FK14012A	DGK005W	Diluted Sample
MW-70-PMW05A-114	K084-04	1	NA	11/14/1113:38	11/14/1109:45	FK14017A	FK14012A	DGK005W	Field Sample
MW-70-PMW05A-114DL	K084-04T	1000	NA	11/14/1114:50	11/14/1109:45	FK14022A	FK14012A	DGK005W	Diluted Sample
MW-70-PMW05B-115	K084-05	1	NA	11/14/1114:08	11/14/1109:45	FK14019A	FK14012A	DGK005W	Field Sample
MW-70-PMW05B-115DL	K084-05T	5	NA	11/14/1114:22	11/14/1109:45	FK14020A	FK14012A	DGK005W	Diluted Sample
MW-70-PMW05B-115DL	K084-05I	1000	NA	11/14/1115:36	11/14/1109:45	FK14025A	FK14023A	DGK005W	Diluted Sample
IR-70-FD-111	K084-06	1	NA	11/14/1115:18	11/14/1109:45	FK14024A	FK14023A	DGK005W	Field Sample
IR-70-FD-111DL	K084-06T	500	NA	11/14/1116:45	11/14/1109:45	FK14029A	FK14023A	DGK005W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/14/11 09:45
Sample ID:	MW-7D-PMW04A-110	Date Analyzed:	11/14/11 12:42
Lab Samp ID:	K084-01	Dilution Factor:	1
Lab File ID:	FK14013A	Matrix :	WATER
Ext Btch ID:	DGK005W	% Moisture :	NA
Calib. Ref.:	FK14012A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	1.7J	2.0	0.60
METHANE	340E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/14/11 09:45
Sample ID:	MW-70-PMW04A-110DL	Date Analyzed:	11/14/11 13:56
Lab Samp ID:	K084-01T	Dilution Factor:	400
Lab File ID:	FK14018A	Matrix :	WATER
Ext Btch ID:	DGK005W	% Moisture :	NA
Calib. Ref.:	FK14012A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	800	260
ETHENE	ND	800	240
METHANE	5100	800	140

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/14/11 09:45
Sample ID:	MW-70-PMW04B-112	Date Analyzed:	11/14/11 12:56
Lab Samp ID:	K084-D2	Dilution Factor:	1
Lab File ID:	FK14014A	Matrix :	WATER
Ext Btch ID:	DGK005W	% Moisture :	NA
Calib. Ref.:	FK14012A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	0.71J	2.0	0.64
ETHENE	4.3	2.0	0.60
METHANE	170E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/14/11 09:45
Sample ID:	MW-70-PMW04B-112DL	Date Analyzed:	11/14/11 13:23
Lab Samp ID:	K084-02T	Dilution Factor:	50
Lab File ID:	FK14016A	Matrix :	WATER
Ext Btch ID:	DGK005W	% Moisture :	NA
Calib. Ref.:	FK14012A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	100	32
ETHENE	ND	100	30
METHANE	790	100	17

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/14/11 09:45
Sample ID:	IW-70-FSB11B-113	Date Analyzed:	11/14/11 13:09
Lab Samp ID:	K084-03	Dilution Factor:	1
Lab File ID:	FK14015A	Matrix :	WATER
Ext Btch ID:	DGK005W	% Moisture :	NA
Calib. Ref.:	FK14012A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	1.4J	2.0	0.60
METHANE	610E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/14/11 09:45
Sample ID:	IW-70-FSB118-113DL	Date Analyzed:	11/14/11 14:36
Lab Samp ID:	K084-03T	Dilution Factor:	1D00
Lab File ID:	FK14021A	Matrix :	WATER
Ext Btch ID:	DGK005W	% Moisture :	NA
Calib. Ref.:	FK14012A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	25000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/14/11 09:45
Sample ID:	MW-70-PMW05A-114	Date Analyzed:	11/14/11 13:38
Lab Samp ID:	K084-04	Dilution Factor:	1
Lab File ID:	FK14017A	Matrix :	WATER
Ext Btch ID:	DGK005W	% Moisture :	NA
Calib. Ref.:	FK14012A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	0.74J	2.0	0.64
ETHENE	8.3	2.0	0.60
METHANE	600E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/14/11 09:45
Sample ID:	MW-70-PMW05A-114DL	Date Analyzed:	11/14/11 14:50
Lab Samp ID:	K084-04T	Dilution Factor:	1000
Lab File ID:	FK14022A	Matrix :	WATER
Ext Btch ID:	DGK005W	% Moisture :	NA
Calib. Ref.:	FK14012A	Instrument ID :	GCTD10

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	25000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/14/11 09:45
Sample ID:	MW-70-PMW05B-115	Date Analyzed:	11/14/11 14:08
Lab Samp ID:	K084-05	Dilution Factor:	1
Lab File ID:	FK14019A	Matrix :	WATER
Ext Btch ID:	DGK005W	% Moisture :	NA
Calib. Ref.:	FK14012A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	74E	2.0	0.60
METHANE	620E	2.0	0.34

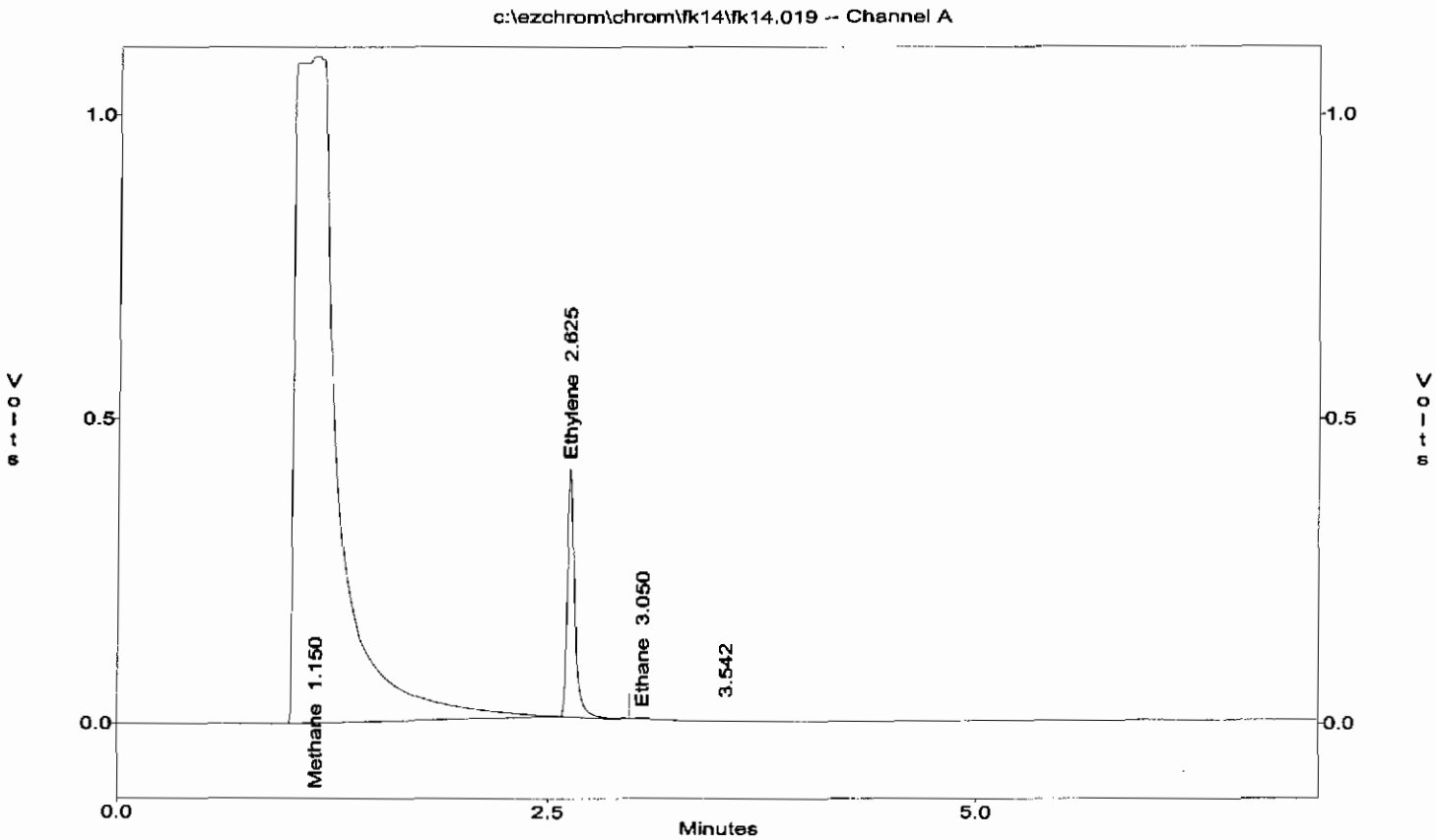
EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk14\fk14.019
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : 11K084-05
Acquired : Nov 14, 2011 14:08:59
Printed : Nov 29, 2011 11:47:50
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.150	18855638.0	30507.1	618.07
--	Acetylene	2.233	0.0	0.0	0.00
2	Ethylene	2.625	1214634.0	16311.8	74.46
3	Ethane	3.050	11470.0	24914.4	0.46
--	Propane	5.942	0.0	0.0	0.00

☐ Incorrect Retention Time
☐ Incorrect Baseline
☑ Incorrect Integration
☐ Other
Initials RA
Date 11/29/11

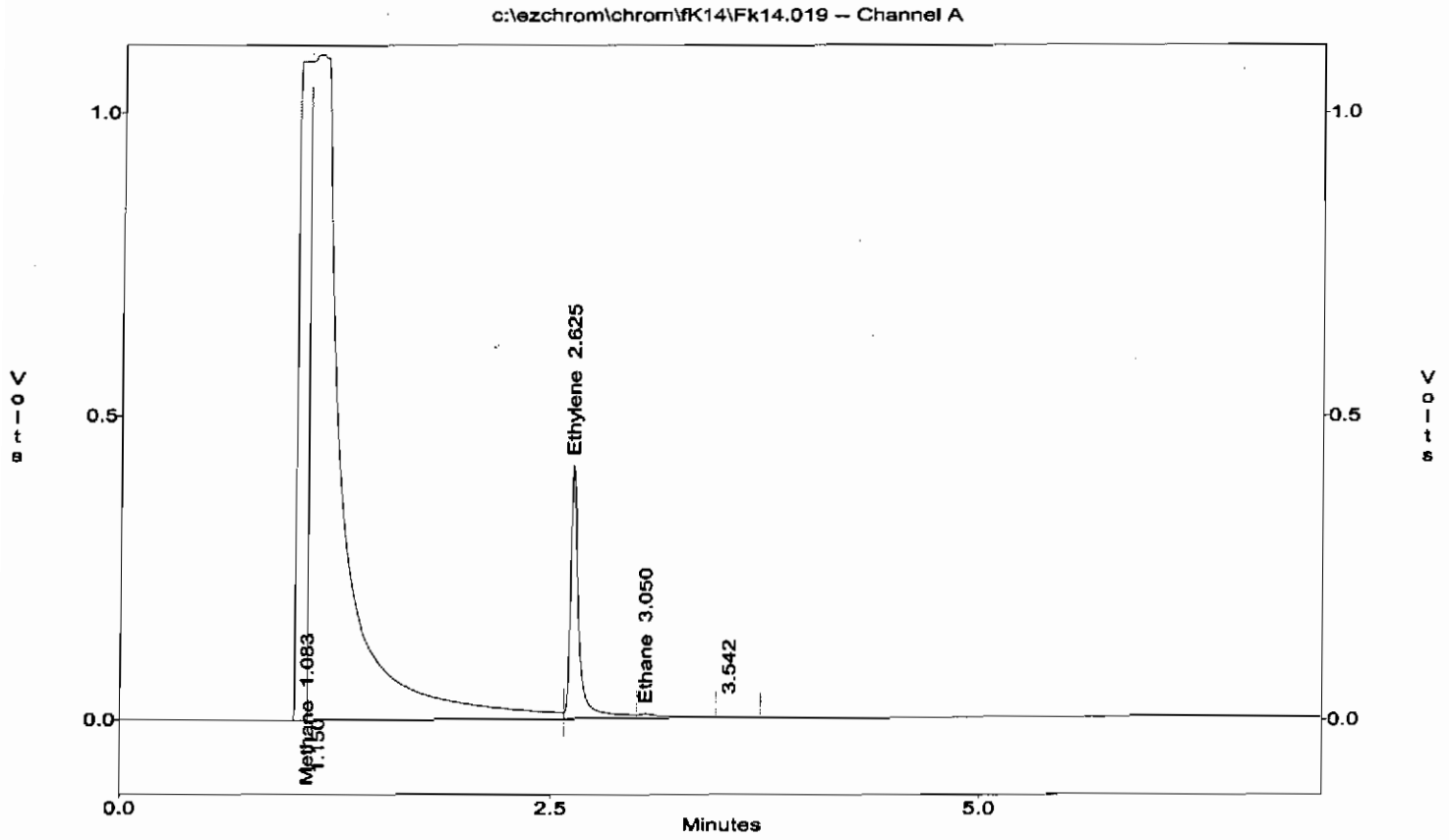


EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK14\Fk14.019
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : 11K084-05
Acquired : Nov 14, 2011 14:08:59
Printed : Nov 14, 2011 14:16:00
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	4593294.0	30507.1	150.56
--	Acetylene	2.233	0.0	0.0	0.00
3	Ethylene	2.625	1402885.0	16311.8	86.00
4	Ethane	3.050	95229.0	24914.4	3.82
--	Propane	5.942	0.0	0.0	0.00



METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/14/11 09:45
Sample ID:	MW-70-PMW05B-115DL	Date Analyzed:	11/14/11 14:22
Lab Samp ID:	K084-05T	Dilution Factor:	5
Lab File ID:	FK14020A	Matrix :	WATER
Ext Btch ID:	DGK005W	% Moisture :	NA
Calib. Ref.:	FK14012A	Instrument ID :	GCT010

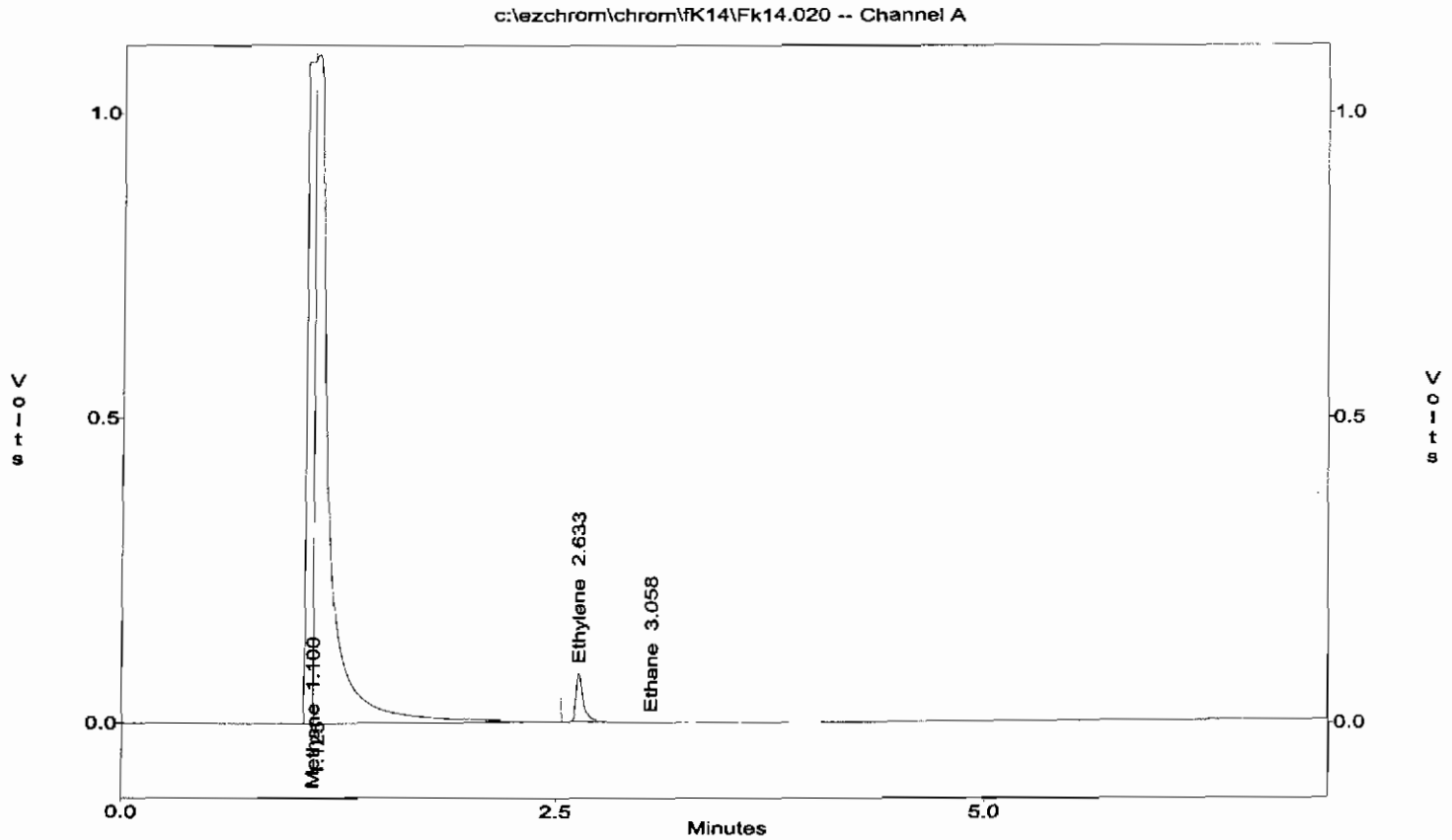
PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	10	3.2
ETHENE	72	10	3.0
METHANE	500E	10	1.7

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK14\Fk14.020
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : 11K084-05T DF=5
Acquired : Nov 14, 2011 14:22:32
Printed : Nov 14, 2011 14:29:34
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.100	3051186.0	30507.1	500.08
--	Acetylene	2.233	0.0	0.0	0.00
3	Ethylene	2.633	236066.0	16311.8	72.36
4	Ethane	3.058	2811.0	24914.4	0.56
--	Propane	5.942	0.0	0.0	0.00



METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/14/11 09:45
Sample ID:	MW-70-PMW05B-115DL	Date Analyzed:	11/14/11 15:36
Lab Samp ID:	K084-05I	Dilution Factor:	1000
Lab File ID:	FK14025A	Matrix :	WATER
Ext Btch ID:	DGK005W	% Moisture :	NA
Calib. Ref.:	FK14023A	Instrument ID :	GCT010

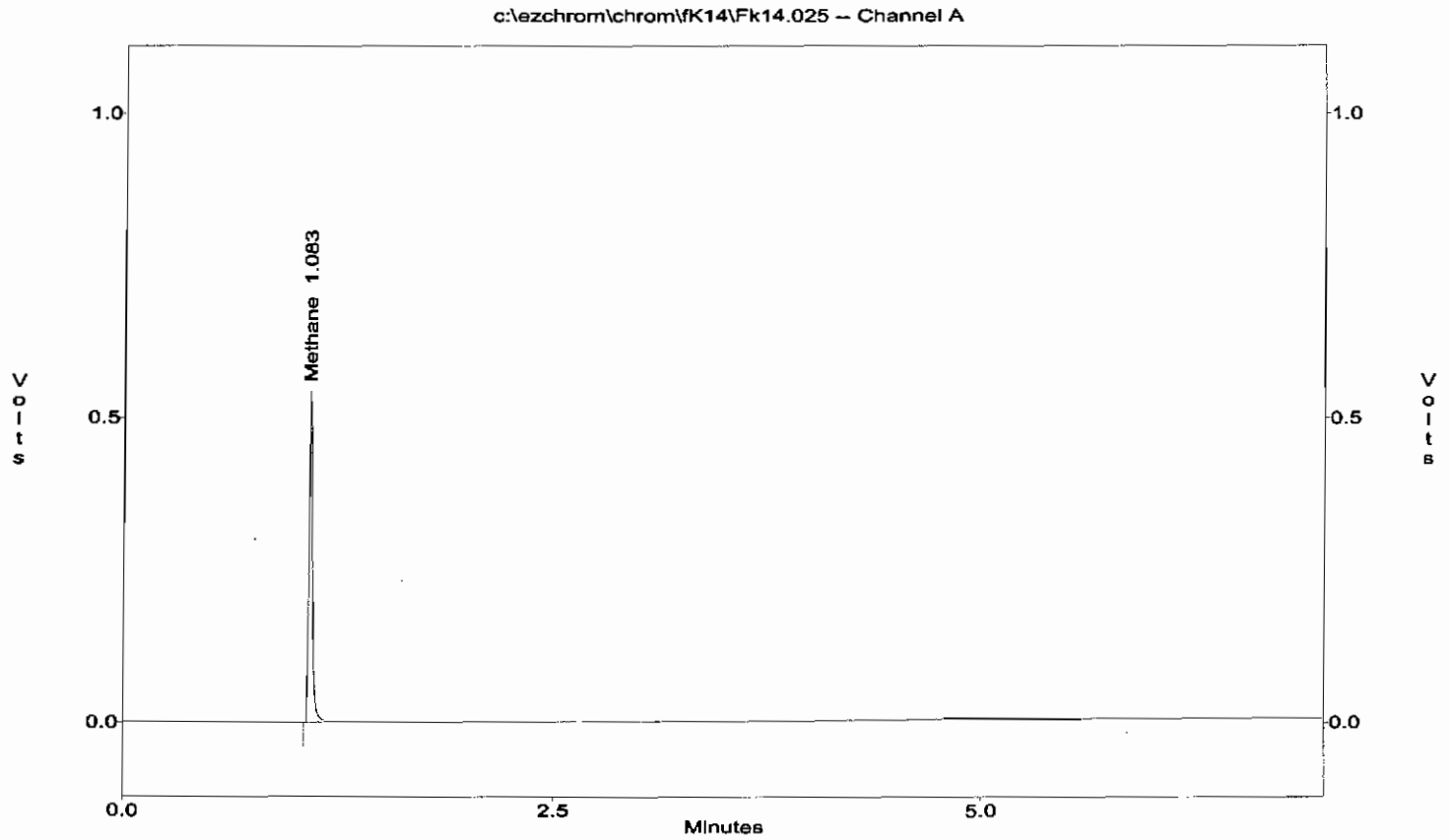
PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	26000	2000	340

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK14\Fk14.025
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : 11K084-05I DF=1000
Acquired : Nov 14, 2011 15:36:33
Printed : Nov 14, 2011 15:43:35
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	780780.0	30507.1	25593.41
--	Acetylene	2.233	0.0	0.0	0.00
--	Ethylene	2.667	0.0	0.0	0.00
--	Ethane	3.100	0.0	0.0	0.00
--	Propane	5.942	0.0	0.0	0.00



METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/14/11 09:45
Sample ID:	IR-70-FD-111	Date Analyzed:	11/14/11 15:18
Lab Samp ID:	K084-06	Dilution Factor:	1
Lab File ID:	FK14024A	Matrix :	WATER
Ext Btch ID:	DGK005W	% Moisture :	NA
Calib. Ref.:	FK14023A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	1.7J	2.0	0.60
METHANE	330E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
Batch No.	: 11K084	Date Extracted:	11/14/11 09:45
Sample ID:	IR-70-FD-111DL	Date Analyzed:	11/14/11 16:45
Lab Samp ID:	K084-06T	Dilution Factor:	500
Lab File ID:	FK14029A	Matrix :	WATER
Ext Btch ID:	DGK005W	% Moisture :	NA
Calib. Ref.:	FK14023A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	1000	320
ETHENE	ND	1000	300
METHANE	5000	1000	170

QC SUMMARIES

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/14/11
Batch No.	: 11K084	Date Extracted:	11/14/11 09:45
Sample ID:	MBLK1W	Date Analyzed:	11/14/11 10:15
Lab Samp ID:	DGK005WB	Dilution Factor:	1
Lab File ID:	FK14003A	Matrix :	WATER
Ext Btch ID:	DGK005W	% Moisture :	NA
Calib. Ref.:	FK14002A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K084
METHOD: METHOD RSK-175

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	DGK005WB	DGK005WL	DGK005WC		
LAB FILE ID:	FK14003A	FK14004A	FK14005A		
DATE EXTRACTED:	11/14/1109:45	11/14/1109:45	11/14/1109:45	DATE COLLECTED:	NA
DATE ANALYZED:	11/14/1110:15	11/14/1110:26	11/14/1110:39	DATE RECEIVED:	11/14/11
PREP. BATCH:	DGK005W	DGK005W	DGK005W		
CALIB. REF:	FK14002A	FK14002A	FK14002A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	ND	25.4	28.8	114	25.4	28.3	111	2	70-140	30
Ethene	ND	23.7	27.9	118	23.7	27.1	114	3	70-140	30
Methane	ND	13.6	13.9	103	13.6	13.8	102	1	70-130	30

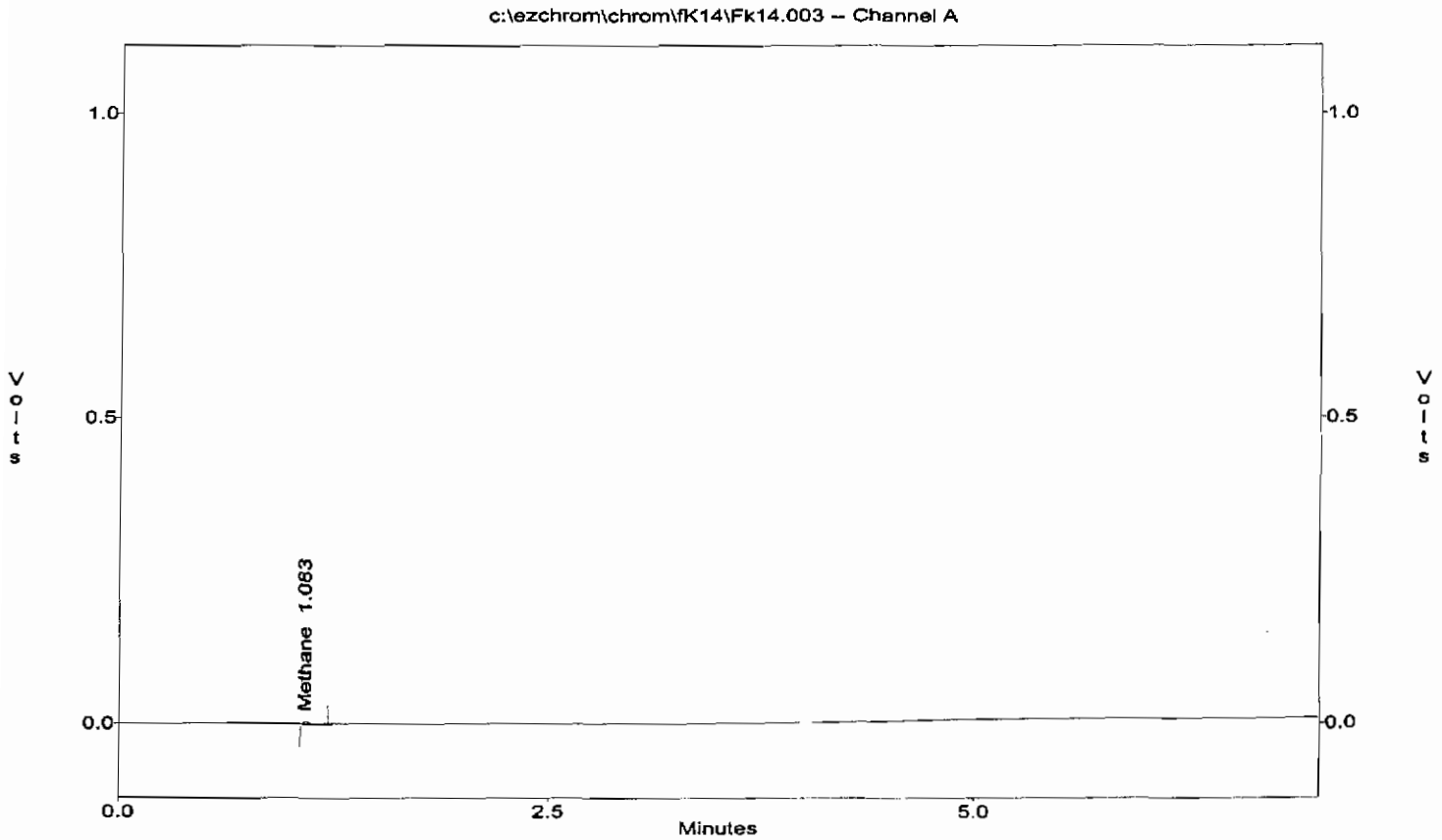
QC DATA

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK14\Fk14.003
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK005WB
Acquired : Nov 14, 2011 10:15:09
Printed : Nov 14, 2011 10:22:10
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	8005.0	30507.1	0.26
--	Acetylene	2.233	0.0	0.0	0.00
--	Ethylene	2.667	0.0	0.0	0.00
--	Ethane	3.100	0.0	0.0	0.00
--	Propane	5.942	0.0	0.0	0.00

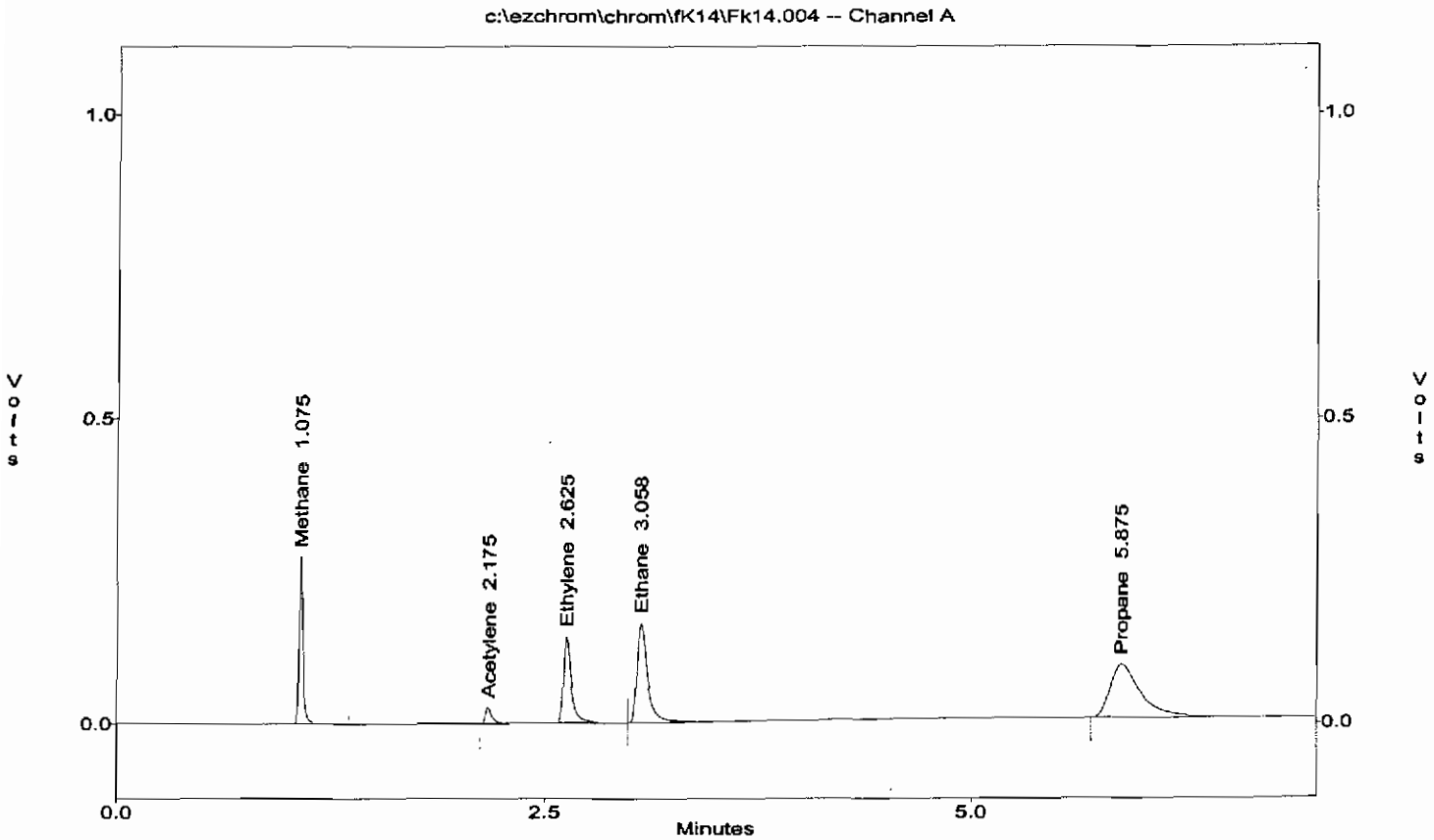


EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK14\Fk14.004
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK005WL
Acquired : Nov 14, 2011 10:26:42
Printed : Nov 14, 2011 10:33:43
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	425339.0	30507.1	13.94
2	Acetylene	2.175	68905.0	2647.6	26.02
3	Ethylene	2.625	455310.0	16311.8	27.91
4	Ethane	3.058	718467.0	24914.4	28.84
5	Propane	5.875	1113041.0	27171.2	40.96

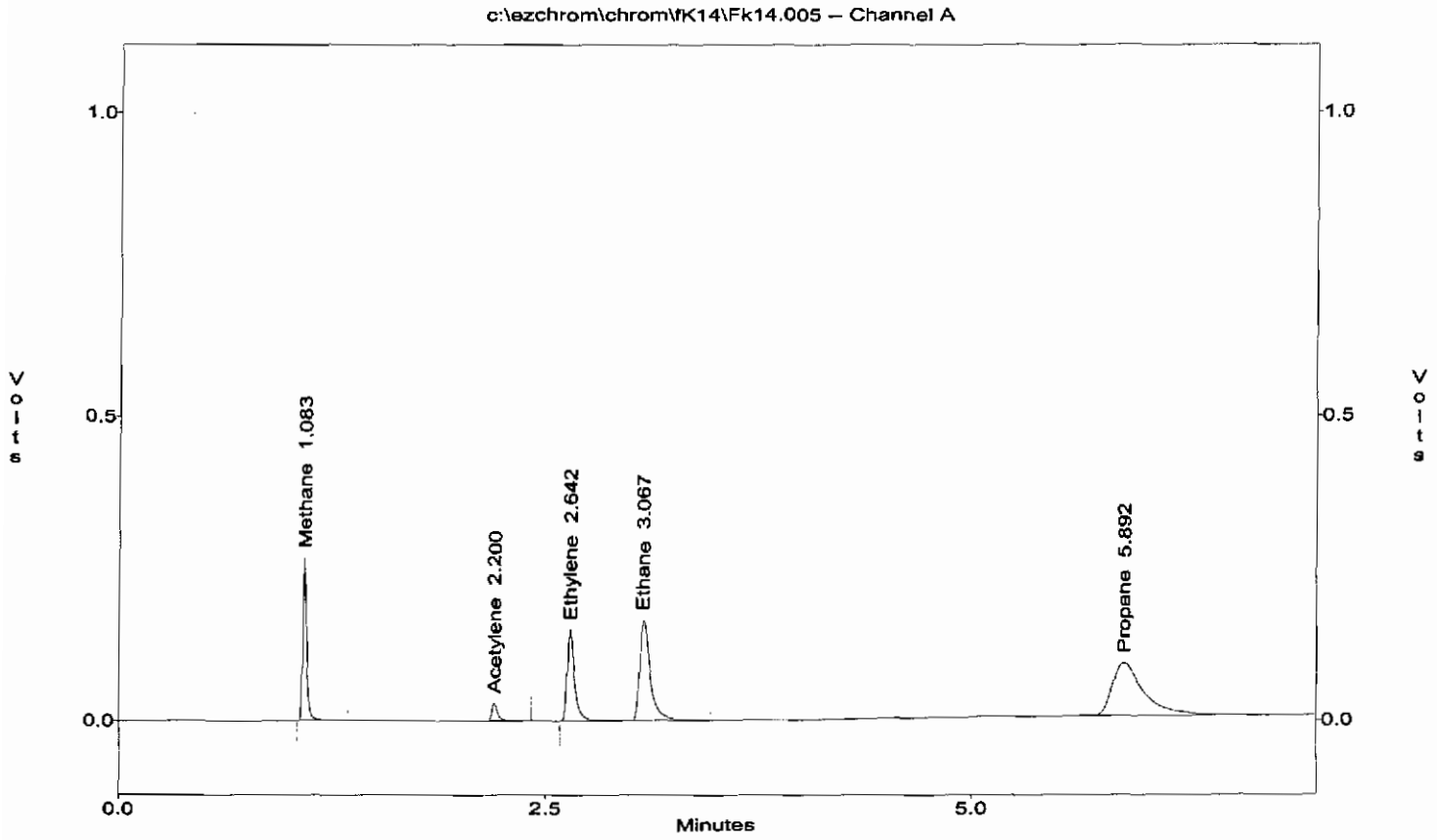


EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK14\Fk14.005
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK005WC
Acquired : Nov 14, 2011 10:39:46
Printed : Nov 14, 2011 10:46:48
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	421935.0	30507.1	13.83
2	Acetylene	2.200	68579.0	2647.6	25.90
3	Ethylene	2.642	441760.0	16311.8	27.08
4	Ethane	3.067	703922.0	24914.4	28.25
5	Propane	5.892	1118527.0	27171.2	41.17



INITIAL CALIBRATIONS

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	25.00X	40.00X	75.00X	100.00X	MEAN	%RSD
Methane	0.34	31626	33510	29954	29307	29338	29307	30507.1	5.6
Acetylene	0.55	2465	2595	2723	2744	2716	2643	2647.7	4.0
Ethylene	0.59	14655	16070	16617	16602	17123	16803	16311.8	5.4
Ethane	0.64	22748	24144	25289	25073	26185	26048	24914.4	5.2
Propane	0.93	29887	24871	26520	26214	27735	27800	27171.2	6.3

DG10K01.MET

FORM VI DGAS -2 1/96 Rev 2/2006

11/03/11

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53

COMPOUND	RT OF STANDARDS (MIN)						MEAN	RT WINDOW		RTWINDOW
	2.0X	10.0X	25.0X	40.0X	75.0X	100.0X	RT	FROM	TO	WIDTH
Methane	1.083	1.075	1.083	1.083	1.083	1.083	1.082	1.056	1.108	0.026
Acetylene	2.208	2.192	2.208	2.217	2.217	2.217	2.210	2.184	2.236	0.026
Ethylene	2.642	2.633	2.650	2.658	2.658	2.658	2.650	2.599	2.701	0.051
Ethane	3.067	3.067	3.075	3.083	3.092	3.083	3.078	3.028	3.128	0.050
Propane	5.942	5.883	5.900	5.917	5.917	5.908	5.911	5.835	5.987	0.076

DG10K01.MET

AS 11/03/11

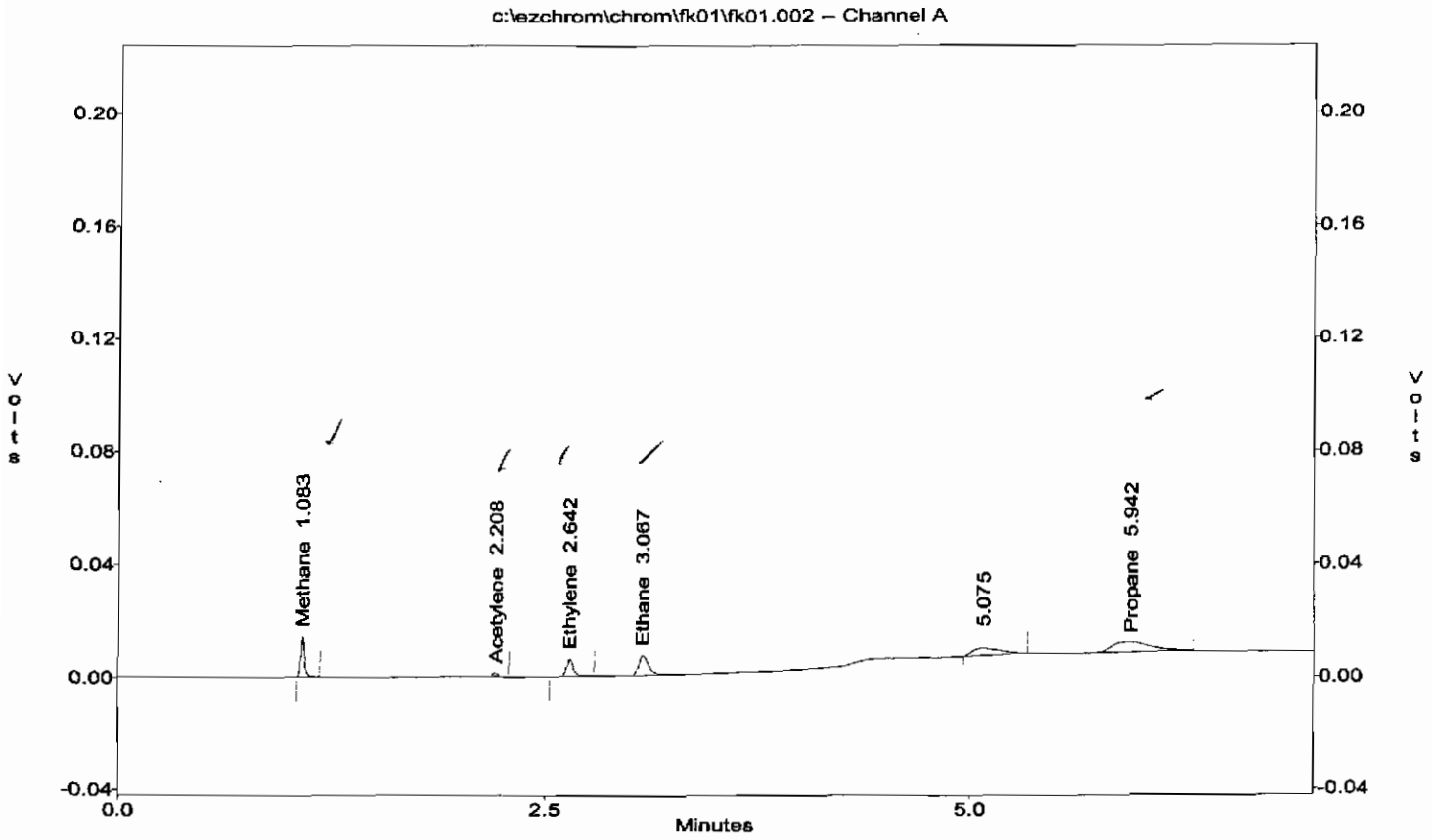
FORM VI DGAS -1 1/96 Rev 2/2006

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.002
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-01
Acquired : Nov 01, 2011 11:28:48
Printed : Nov 01, 2011 16:46:40
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	21439.0	30507.1	0.68
2	Acetylene	2.208	2712.0	2647.6	1.10
3	Ethylene	2.642	17381.0	16311.8	1.19
4	Ethane	3.067	28913.0	24914.4	1.27
6	Propane	5.942	55710.0	27171.2	1.86



AS 11/03/11

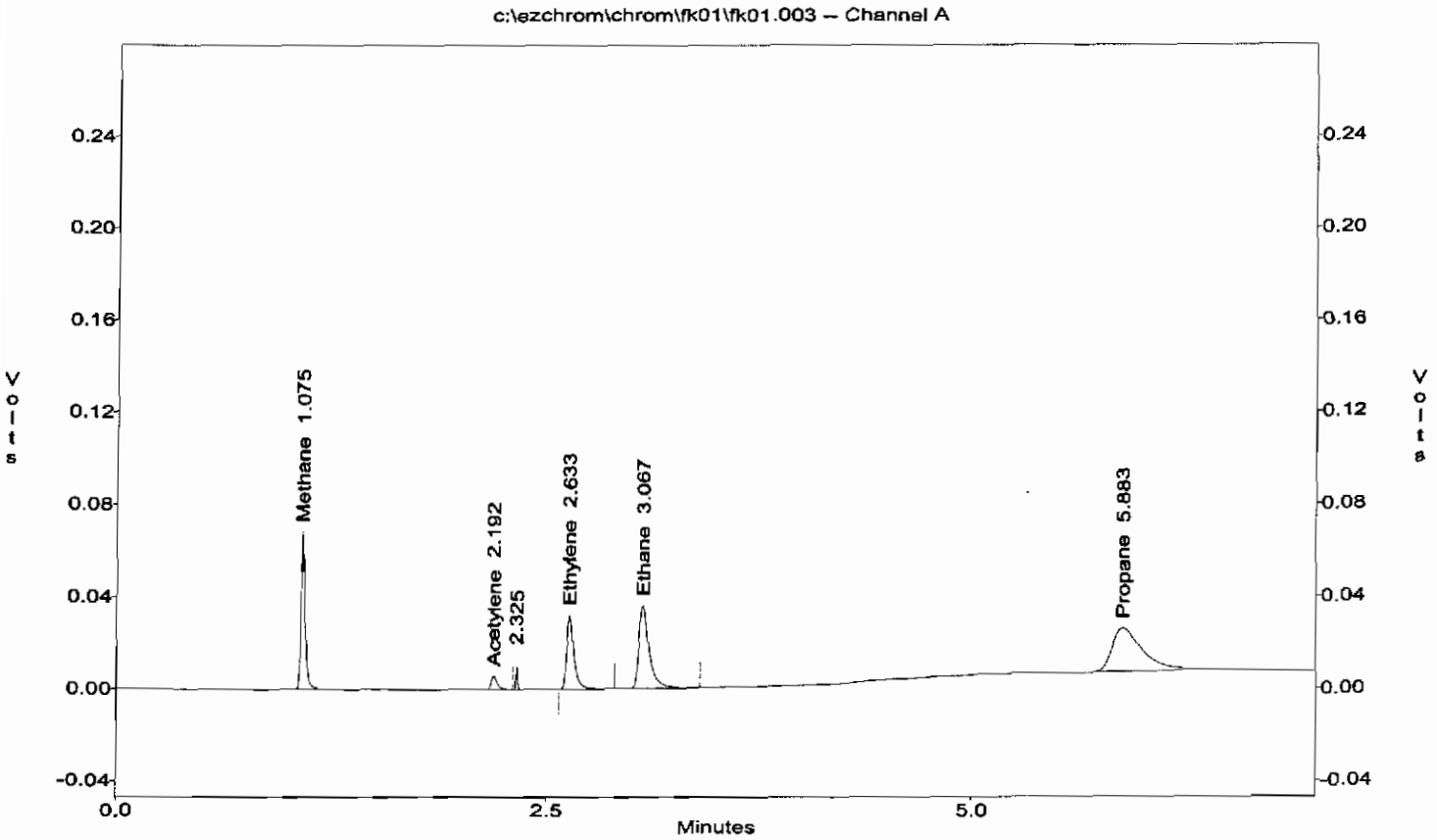
4031

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.003
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-02
Acquired : Nov 01, 2011 11:41:49
Printed : Nov 01, 2011 16:46:57
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	113600.0	30507.1	3.39
2	Acetylene	2.192	14297.0	2647.6	5.51
4	Ethylene	2.633	95326.0	16311.8	5.93
5	Ethane	3.067	153436.0	24914.4	6.36
6	Propane	5.883	231819.0	27171.2	9.32



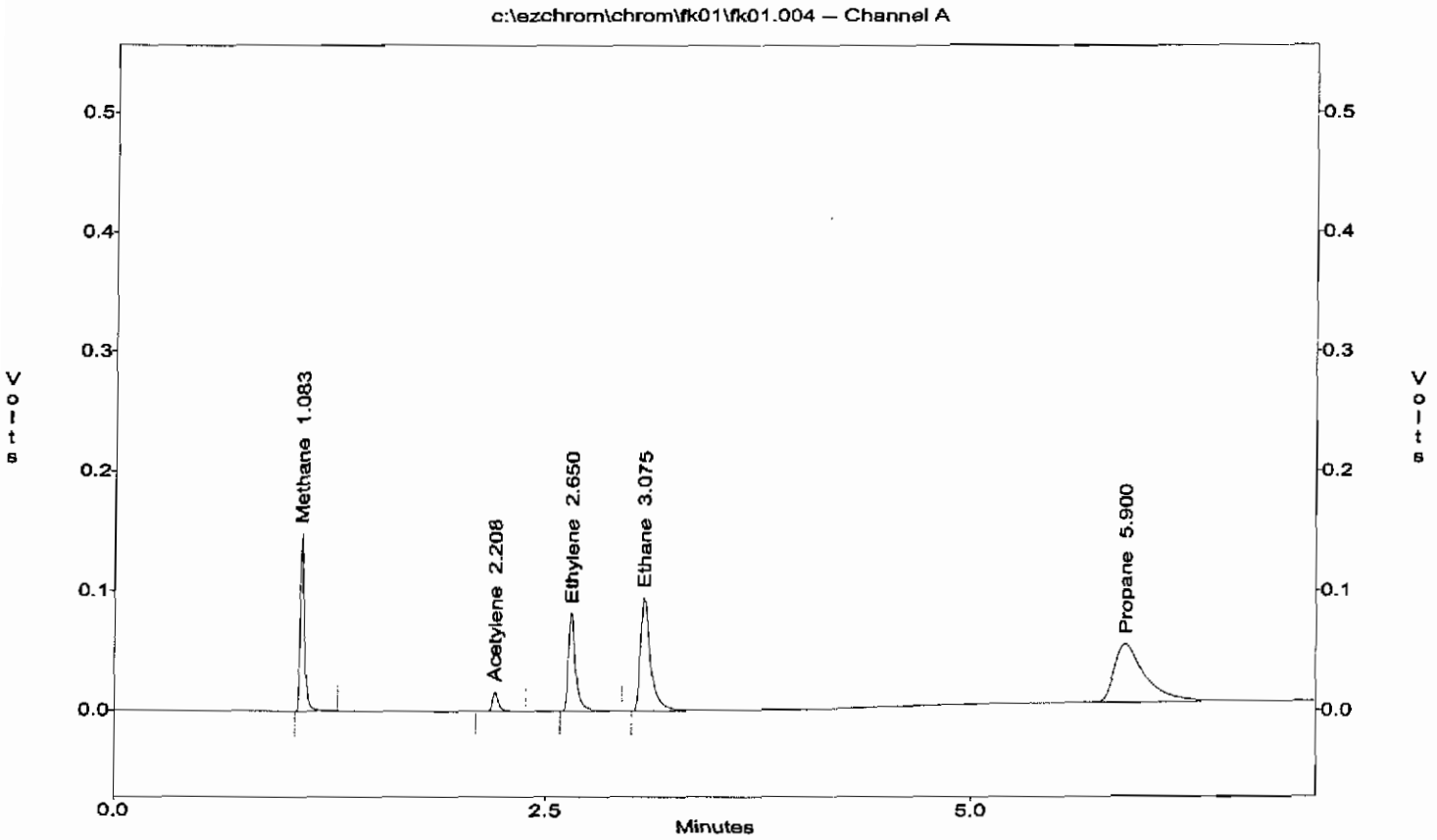
AS
11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.004
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-03
Acquired : Nov 01, 2011 11:55:36
Printed : Nov 01, 2011 16:47:09
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	253836.0	30507.1	8.47
2	Acetylene	2.208	37503.0	2647.6	13.77
3	Ethylene	2.650	246435.0	16311.8	14.83
4	Ethane	3.075	401839.0	24914.4	15.89
5	Propane	5.900	617912.0	27171.2	23.30



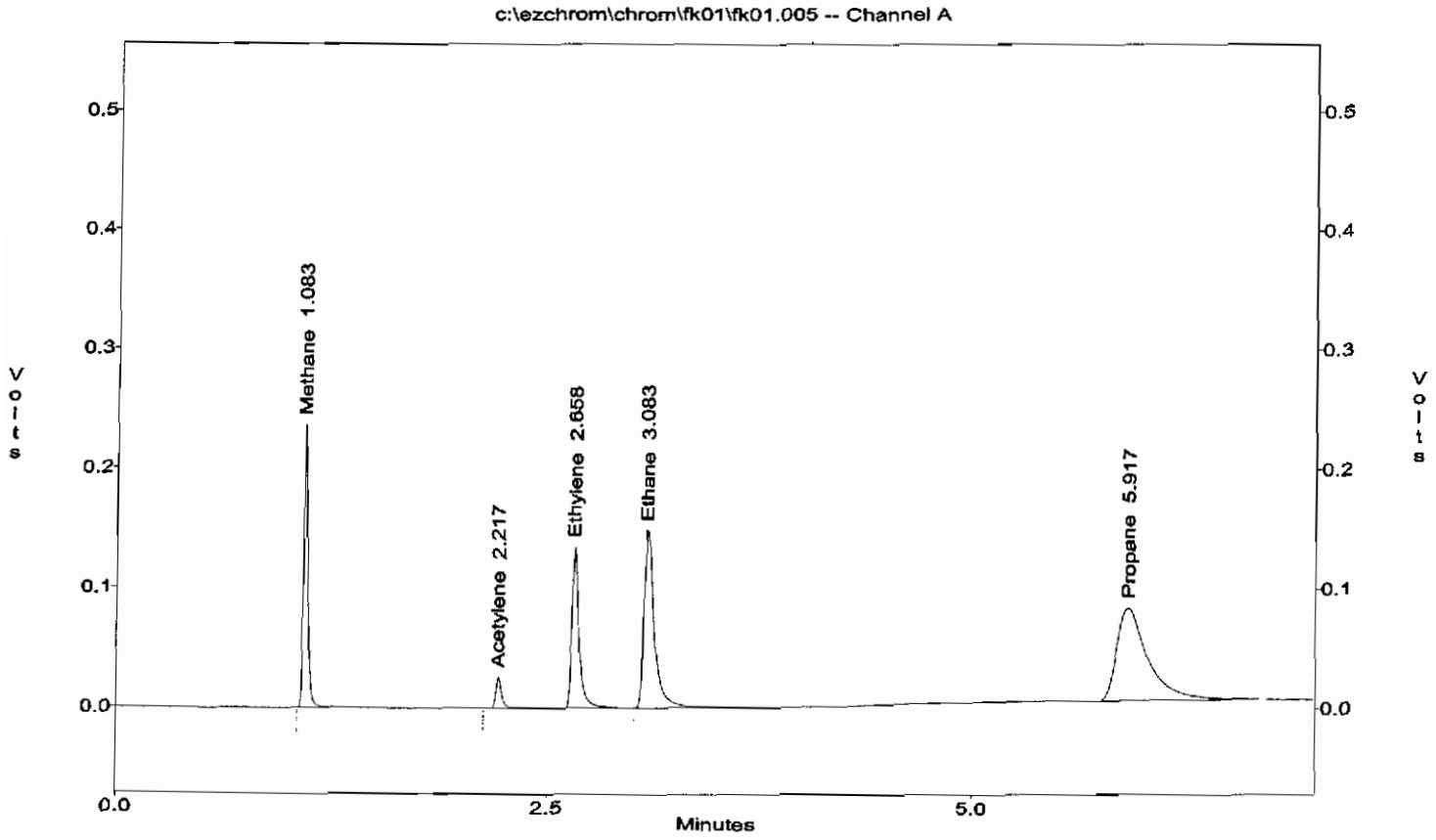
11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.005
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-04
Acquired : Nov 01, 2011 12:09:18
Printed : Nov 01, 2011 16:47:15
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	397403.0	30507.1	13.56
2	Acetylene	2.217	60362.0	2647.6	22.00
3	Ethylene	2.658	393970.0	16311.8	23.73
4	Ethane	3.083	637350.0	24914.4	25.42
5	Propane	5.917	977274.0	27171.2	37.28



AS
11/03/11

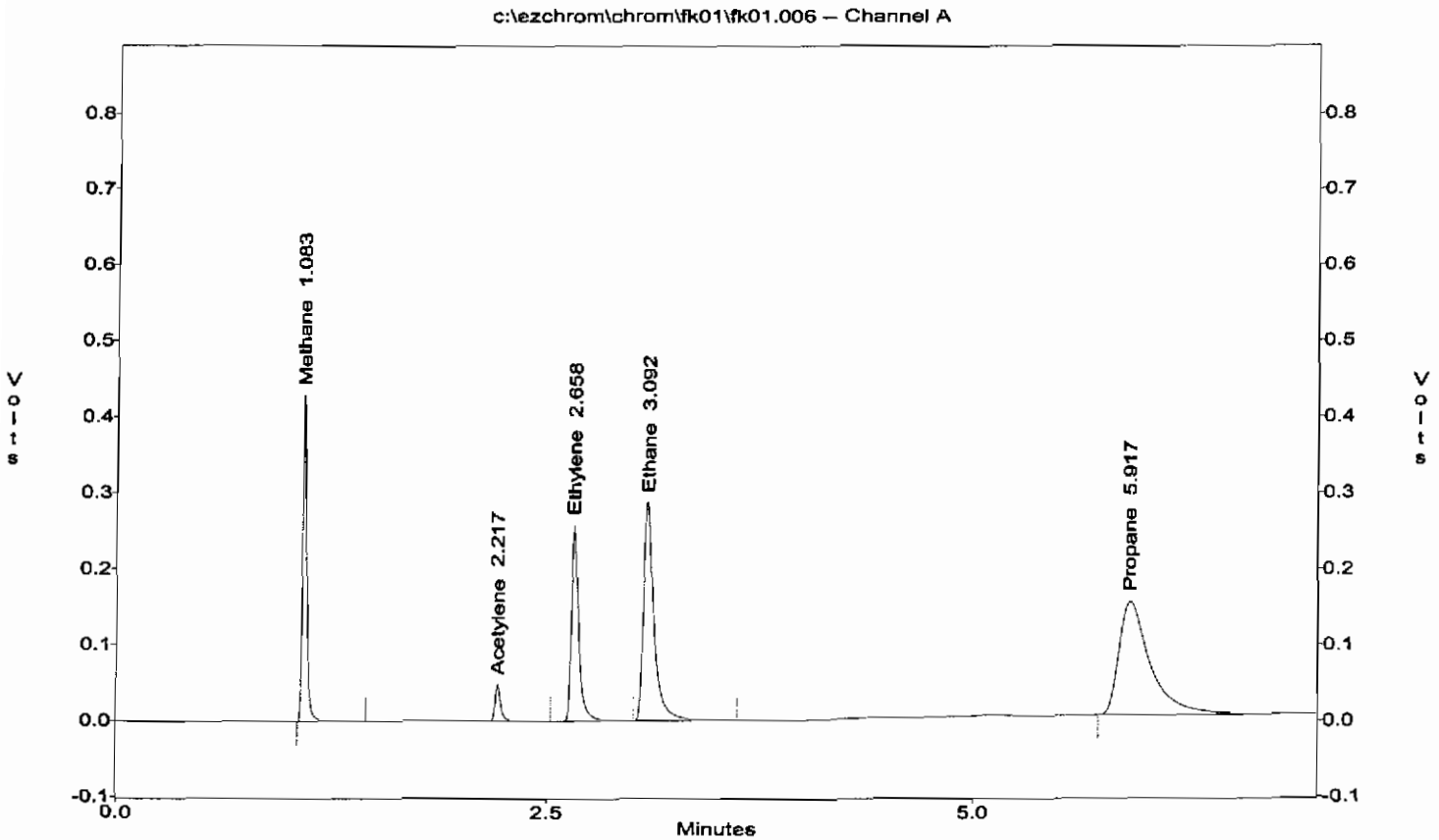
4034

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.006
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-05
Acquired : Nov 01, 2011 12:38:25
Printed : Nov 01, 2011 16:47:32
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	745775.0	30507.1	25.42
2	Acetylene	2.217	112175.0	2647.6	41.30
3	Ethylene	2.658	761815.0	16311.8	44.49
4	Ethane	3.092	1248240.0	24914.4	47.67
5	Propane	5.917	1938976.0	27171.2	69.91



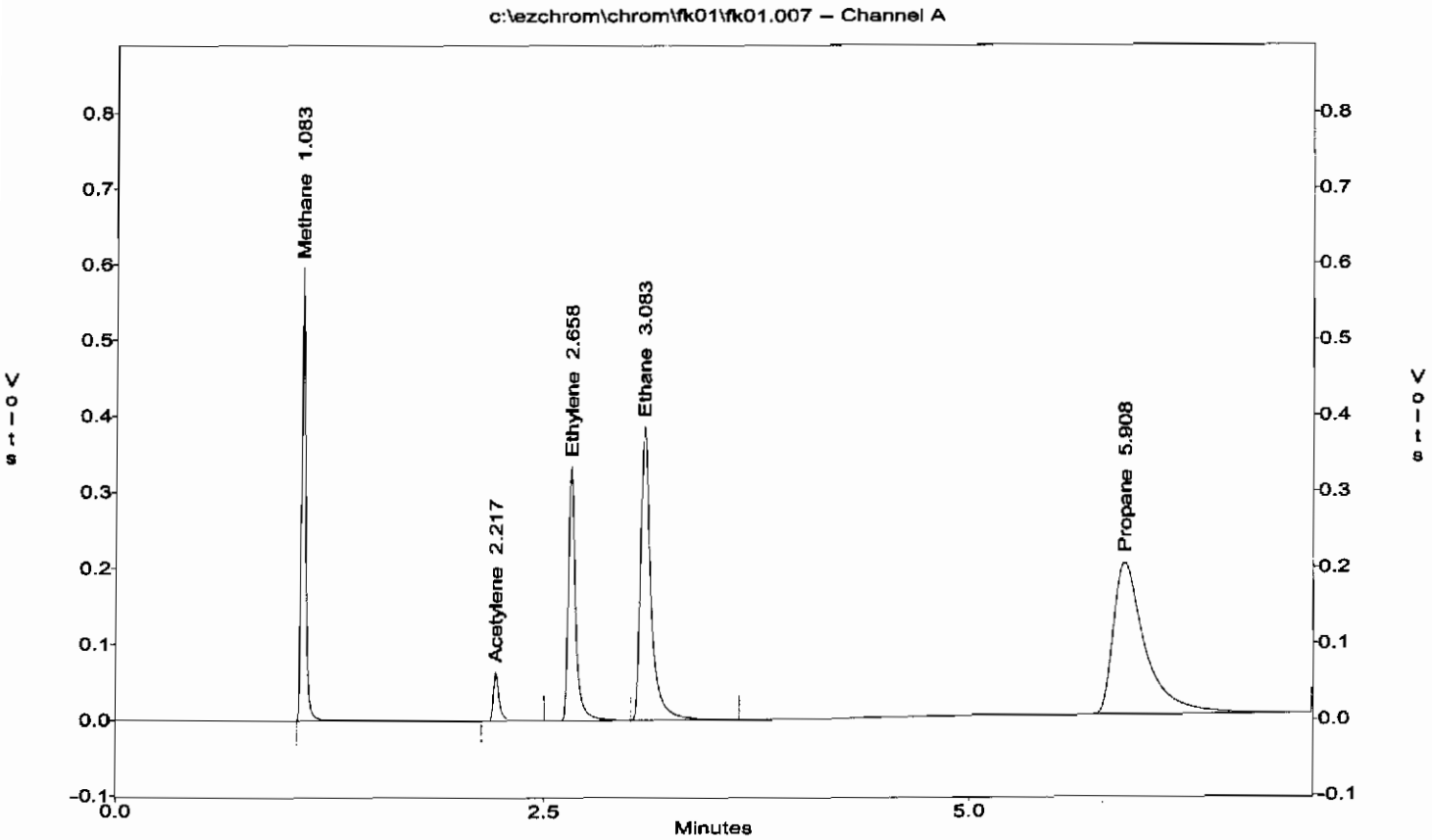
11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.007
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-06
Acquired : Nov 01, 2011 12:53:24
Printed : Nov 01, 2011 16:47:38
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	993496.0	30507.1	33.90
2	Acetylene	2.217	145648.0	2647.6	55.10
3	Ethylene	2.658	996770.0	16311.8	59.32
4	Ethane	3.083	1655327.0	24914.4	63.55
5	Propane	5.908	2591233.0	27171.2	93.21



AS 11/3/11

4036

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK01008A 11/01/2011 13:45
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	416247	13.64	1		15
Acetylene	2.175	2.149	2.201	22.0	2647.6	66913	25.27	15		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	437326	26.81	13		15
Ethane	3.075	3.025	3.125	25.4	24914.4	691218	27.74	9		15
Propane	5.900	5.824	5.976	37.3	27171.2	1111008	40.89	10		15

DG10K01.MET

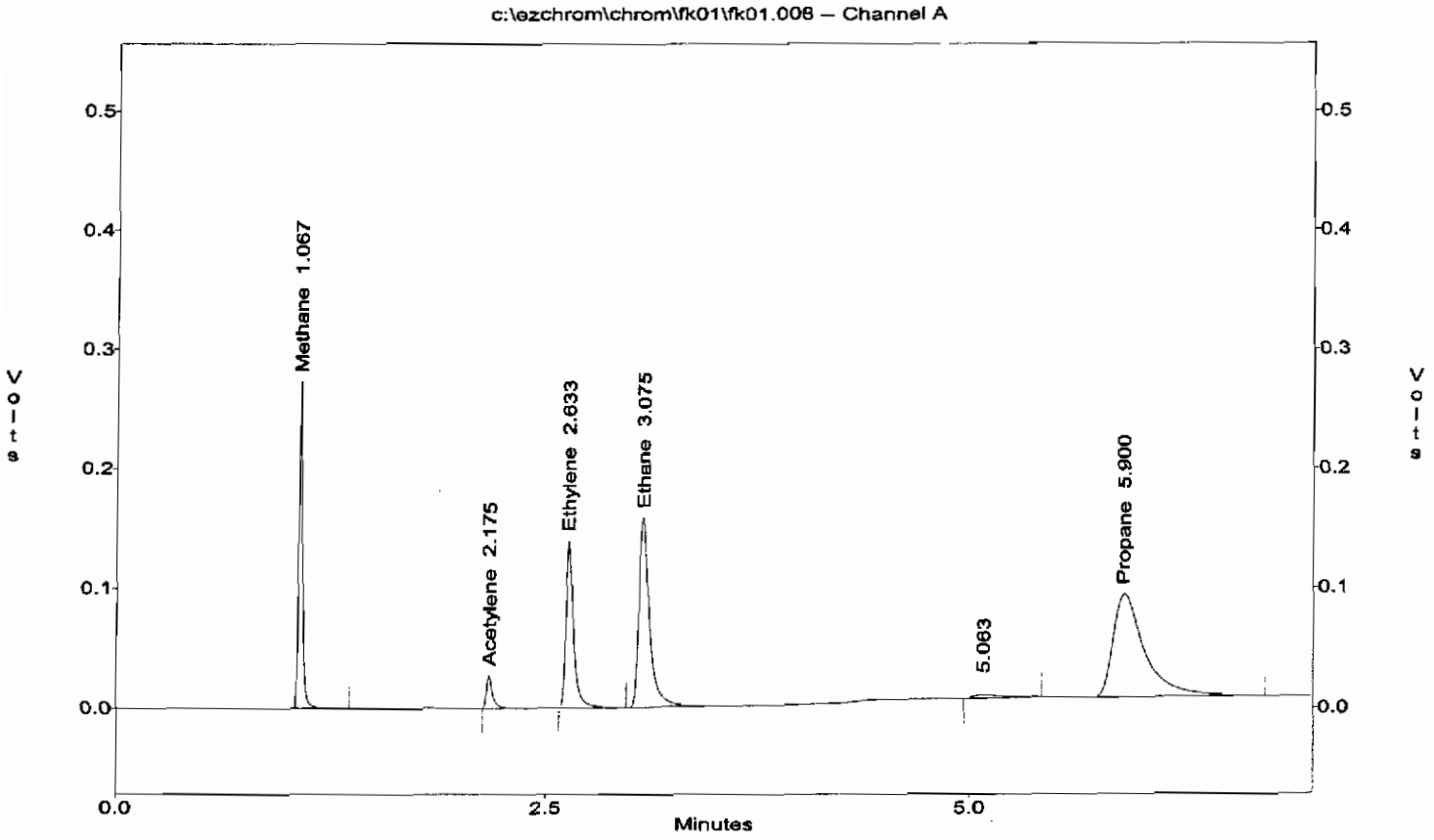
AJ
11/3/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.008
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : IDG10K0101
Acquired : Nov 01, 2011 13:45:55
Printed : Nov 01, 2011 16:47:55
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.067	416247.0	30507.1	13.64
2	Acetylene	2.175	66913.0	2647.6	25.27
3	Ethylene	2.633	437326.0	16311.8	26.81
4	Ethane	3.075	691218.0	24914.4	27.74
6	Propane	5.900	1111008.0	27171.2	40.89



11/3/11

DAILY CALIBRATIONS

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK14002A 11/14/2011 10:02
CONC UNIT : ppb

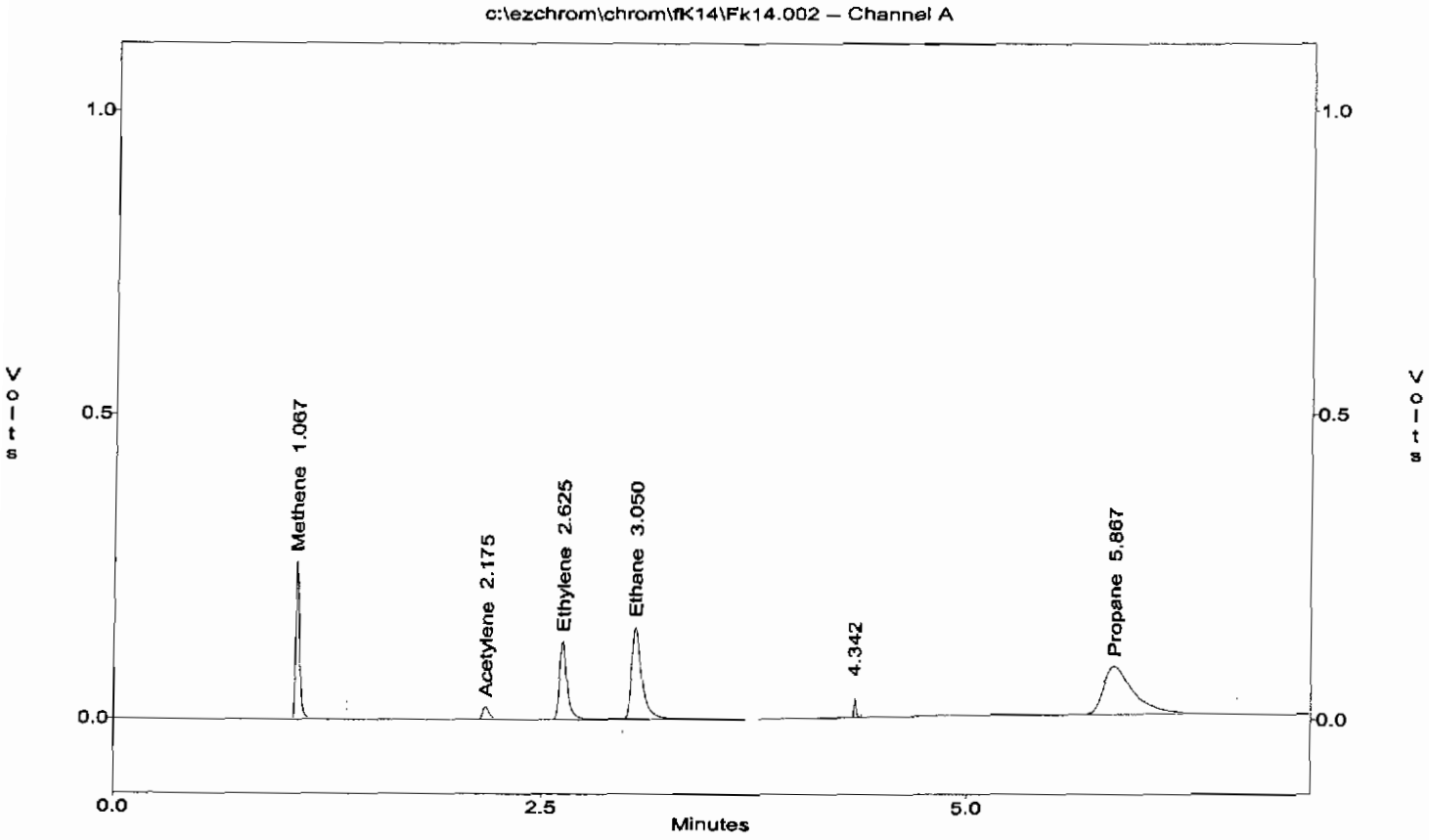
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	415987	13.64	1		15
Acetylene	2.175	2.149	2.201	22.0	2647.6	59980	22.65	3		15
Ethylene	2.625	2.574	2.676	23.7	16311.8	397121	24.35	3		15
Ethane	3.050	3.000	3.100	25.4	24914.4	653763	26.24	3		15
Propane	5.867	5.791	5.943	37.3	27171.2	993689	36.57	-2		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK14\Fk14.002
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01421
Acquired : Nov 14, 2011 10:02:10
Printed : Nov 14, 2011 10:09:12
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.067	415987.0	30507.1	13.64
2	Acetylene	2.175	59980.0	2647.6	22.65
3	Ethylene	2.625	397121.0	16311.8	24.35
4	Ethane	3.050	653763.0	24914.4	26.24
6	Propane	5.867	993689.0	27171.2	36.57



CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK010D5A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK14012A 11/14/2011 12:26
CONC UNIT : ppb

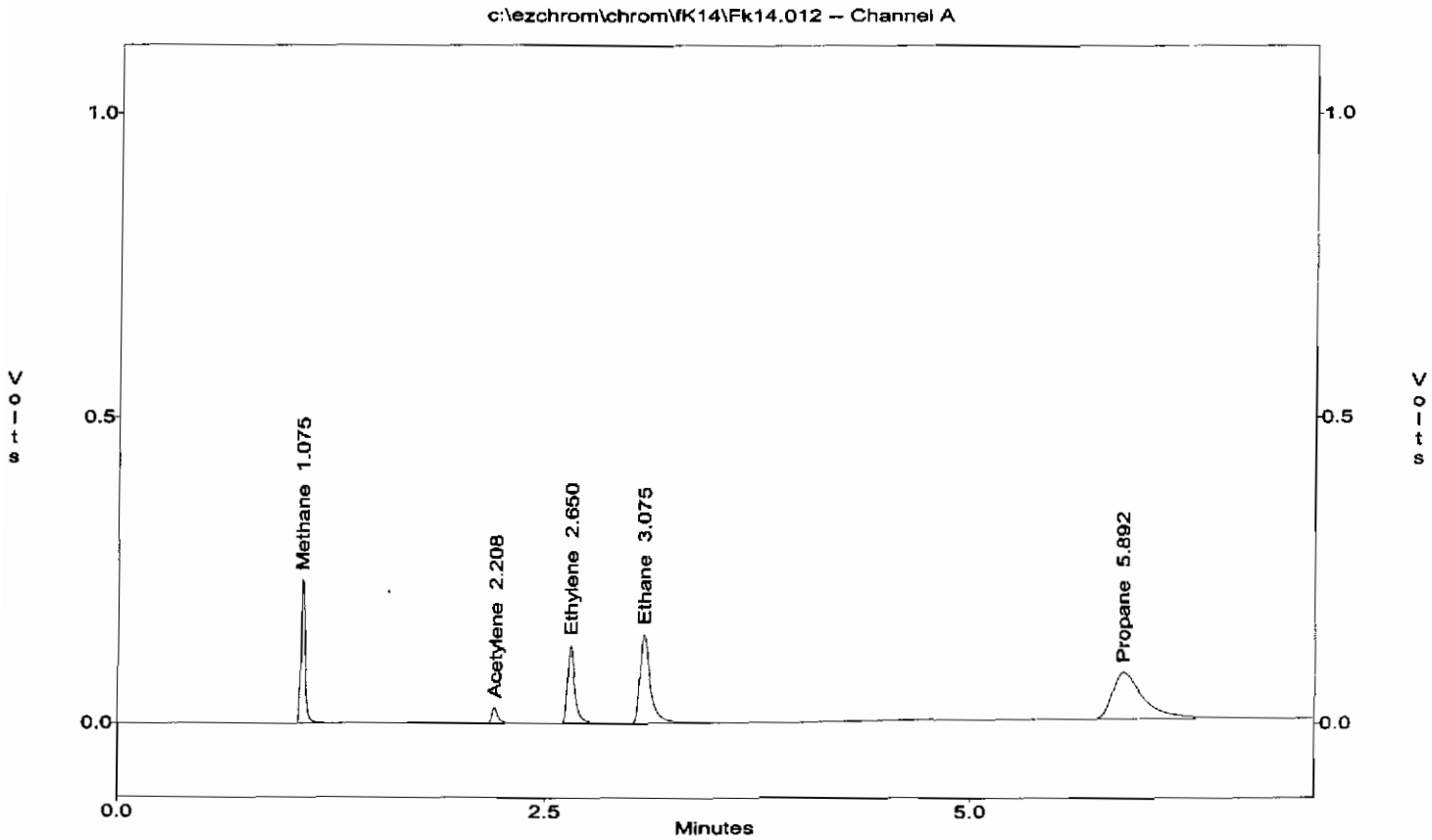
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	398149	13.05	-4		15
Acetylene	2.208	2.182	2.234	22.0	2647.6	58120	21.95	-0		15
Ethylene	2.650	2.599	2.701	23.7	16311.8	384276	23.56	-1		15
Ethane	3.075	3.025	3.125	25.4	24914.4	623321	25.02	-2		15
Propane	5.892	5.816	5.968	37.3	27171.2	967283	35.60	-5		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK14\Fk14.012
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01422
Acquired : Nov 14, 2011 12:26:11
Printed : Nov 14, 2011 12:33:12
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	398149.0	30507.1	13.05
2	Acetylene	2.208	58120.0	2647.6	21.95
3	Ethylene	2.650	384276.0	16311.8	23.56
4	Ethane	3.075	623321.0	24914.4	25.02
5	Propane	5.892	967283.0	27171.2	35.60



CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK14023A 11/14/2011 15:02
CONC UNIT : ppb

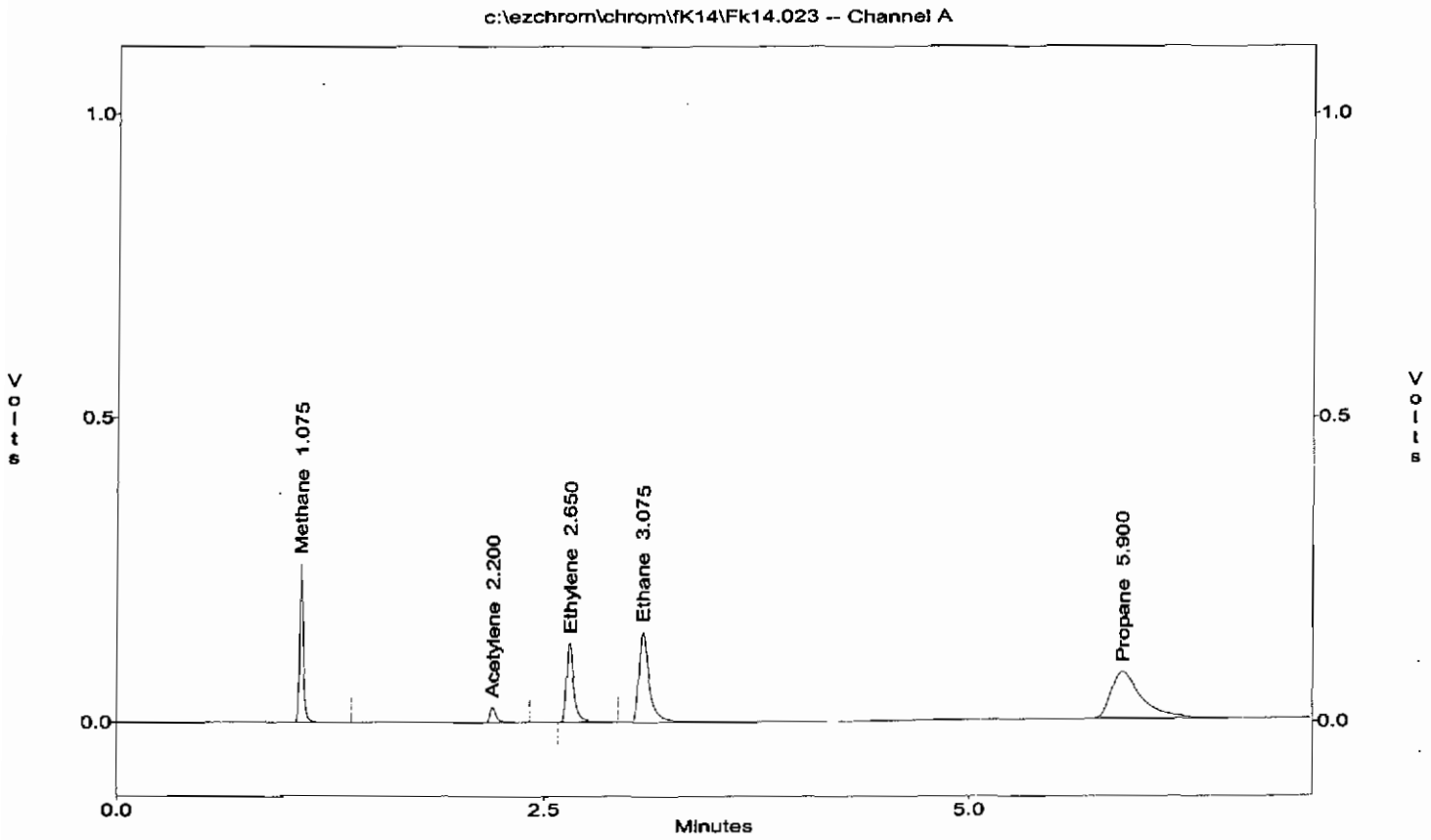
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	402398	13.19	-3		15
Acetylene	2.200	2.174	2.226	22.0	2647.6	60485	22.84	4		15
Ethylene	2.650	2.599	2.701	23.7	16311.8	396065	24.28	2		15
Ethane	3.075	3.025	3.125	25.4	24914.4	638518	25.63	1		15
Propane	5.900	5.824	5.976	37.3	27171.2	962736	35.43	-5		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK14\Fk14.023
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01423
Acquired : Nov 14, 2011 15:02:39
Printed : Nov 14, 2011 15:09:40
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	402398.0	30507.1	13.19
2	Acetylene	2.200	60485.0	2647.6	22.84
3	Ethylene	2.650	396065.0	16311.8	24.28
4	Ethane	3.075	638518.0	24914.4	25.63
5	Propane	5.900	962736.0	27171.2	35.43



CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK14034A 11/14/2011 17:47
CONC UNIT : ppb

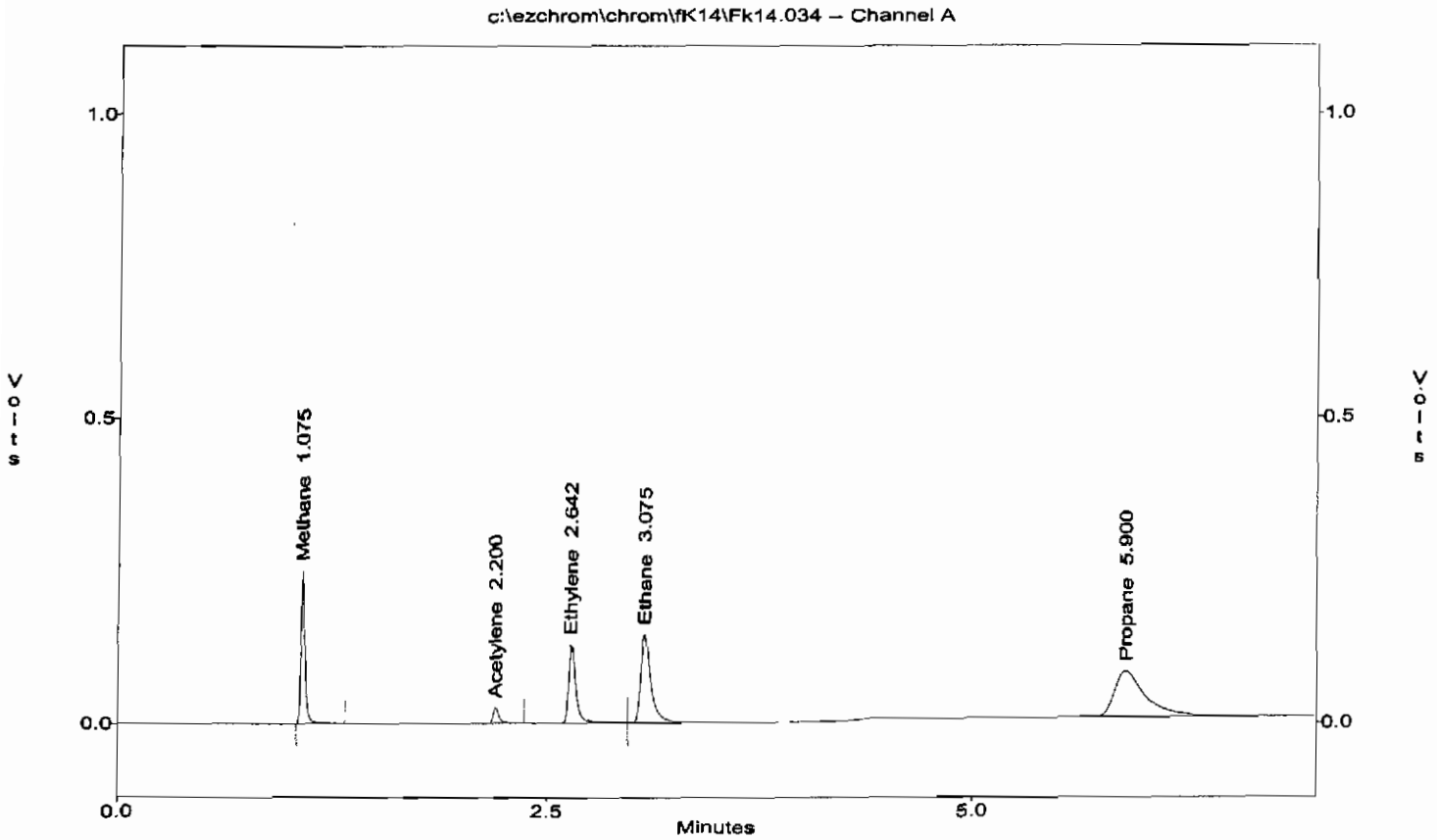
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	391577	12.84	-5		15
Acetylene	2.200	2.174	2.226	22.0	2647.6	59501	22.47	2		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	386745	23.71	-0		15
Ethane	3.075	3.025	3.125	25.4	24914.4	617366	24.78	-3		15
Propane	5.900	5.824	5.976	37.3	27171.2	962546	35.42	-5		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK14\Fk14.034
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01424
Acquired : Nov 14, 2011 17:47:03
Printed : Nov 14, 2011 17:54:05
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	391577.0	30507.1	12.84
2	Acetylene	2.200	59501.0	2647.6	22.47
3	Ethylene	2.642	386745.0	16311.8	23.71
4	Ethane	3.075	617366.0	24914.4	24.78
5	Propane	5.900	962546.0	27171.2	35.43



ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGAS ICAL

Book #:	A10-025
Instrument No.:	10
Analytical Sequence:	FK01
Method File:	DG10K01
Analytical Batch:	N/A

SOP #	Rev. #
☐ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGAS ICAL SSSA-05-01-10	500 ppm
DGAS ICV SSSA-05-01-7	500 ppm
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: SC

Date: 11/01/11

Disposed By: SC

Date Disposed: 11/01/11

Method: Dg10k01.met Batch: Fk01.seq Data: Fk01.011 - (Batch: fk01.SEQ)

File Edit Method Batch Options Analysis Control Window Help

Run	Run Type	Sample ID	Method	Filename	Sample Amt	Mult	Description
1	Unknown	IB10K407	dg10k01.met	FK01.001	100ml 1	1	
2	Unknown	DG10K01-01	dg10k01.met	FK01.002	1	1	
3	Unknown	DG10K01-02	dg10k01.met	FK01.003	1	1	
4	Unknown	DG10K01-03	dg10k01.met	FK01.004	1	1	DGAS 1CML
5	Unknown	DG10K01-04	dg10k01.met	FK01.005	1	1	
6	Unknown	DG10K01-05	dg10k01.met	FK01.006	1	1	
7	Unknown	DG10K01-06	dg10k01.met	FK01.007	1	1	
8	Unknown	IDG10K0101	dg10k01.met	FK01.008	1	1	DGAS ICV
9	Unknown	IB	dg10k01.met	FK01.009	1	1	
10	Unknown	IB	dg10k01.met	FK01.010	1	1	
11	Unknown	IB	dg10k01.met	FK01.011	1	1	
12	Unknown	IB	dg10k01.met	FK01.012	1	1	
13	Unknown	IB	dg10k01.met	FK01.013	1	1	
14	Unknown	IB	dg10k01.met	FK01.014	1	1	
15	Unknown	IB	dg10k01.met	FK01.015	1	1	FINAL
16	Unknown	IB	dg10k01.met	FK01.016	1	1	
17	Unknown	IB	dg10k01.met	FK01.017	1	1	
18	Unknown	IB	dg10k01.met	FK01.018	1	1	
19	Unknown	IB	dg10k01.met	FK01.019	1	1	
20	Unknown	IB	dg10k01.met	FK01.020	1	1	
21	Unknown	IB	dg10k01.met	FK01.021	1	1	
22	Unknown	IB	dg10k01.met	FK01.022	1	1	
23	Unknown	IB	dg10k01.met	FK01.023	1	1	
24	Unknown	IB	dg10k01.met	FK01.024	1	1	
25	Unknown	IB	dg10k01.met	FK01.025	1	1	
26	Unknown	IB	dg10k01.met	FK01.026	1	1	
27	Unknown	IB	dg10k01.met	FK01.027	1	1	
28	Unknown	IB	dg10k01.met	FK01.028	1	1	
29	Unknown	IB	dg10k01.met	FK01.029	1	1	
30	Unknown	IB	dg10k01.met	FK01.030	1	1	
31	Unknown	IB	dg10k01.met	FK01.031	1	1	
32	Unknown	IB	dg10k01.met	FK01.032	1	1	
33	Unknown	IB	dg10k01.met	FK01.033	1	1	
34	Unknown	IB	dg10k01.met	FK01.034	1	1	

EC 11/01/11

Waiting for Trigger...

Start | EZChrom Chromatograp | Method: Dg10k01... | Batchlist | Method: Dg10k01.met | Untitled - Paint | Explorer | Tuesday, November 01, 2011

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGK005W: K083, K084, K101

Book #: A10-025

Instrument No.: 10

Analytical Sequence: FK14

Method File: DG10K01

Analytical Batch: CDG10K01421

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/l
DGas DCC SSSB-07-17-1	200
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: RH

Date: 11/14/11

Disposed By: RH

Date Disposed: 11/14/11

Method: Dg10k01.met Batch: Fk14.seq Data: Fk14.039 - [Batch: fk14.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Sample ID	Method	Filename	Sample Amt		Mult.	Description
1	IB10K421	dg10k01.met	FK14.001	100mL	1	1	
2	CDG10K01421	dg10k01.met	FK14.002	↓	1	1	
3	DGK005WB	dg10k01.met	FK14.003		1	1	
4	DGK005WL	dg10k01.met	FK14.004		1	1	
5	DGK005WC	dg10k01.met	FK14.005		1	1	
6	11K083-19	dg10k01.met	FK14.006		1	1	
7	11K083-19T DF=20	dg10k01.met	FK14.007	5mL	1	20	
8	11K083-19I DF=200	dg10k01.met	FK14.008	5mL (10x)	1	200	
9	11K083-21	dg10k01.met	FK14.009	100mL	1	1	
10	11K083-21T DF=10	dg10k01.met	FK14.010	10mL	1	10	
11	11K083-21I DF=400	dg10k01.met	FK14.011	5mL (20x)	1	400	
12	CDG10K01422	dg10k01.met	FK14.012	100mL	1	1	
13	11K084-01	dg10k01.met	FK14.013	↓	1	1	
14	11K084-02	dg10k01.met	FK14.014		1	1	
15	11K084-03	dg10k01.met	FK14.015		1	1	
16	11K084-02T DF=50	dg10k01.met	FK14.016	2mL	1	50	
17	11K084-04	dg10k01.met	FK14.017	100mL	1	1	RH 11/14/11
18	11K084-01T DF=400	dg10k01.met	FK14.018	5mL (20x)	1	400	~~RECORD ONLY~~
19	11K084-05	dg10k01.met	FK14.019	100mL	1	1	
20	11K084-05T DF=5	dg10k01.met	FK14.020	20mL	1	5	
21	11K084-03T DF=1000	dg10k01.met	FK14.021	2mL (20x)	1	1000	FINAL
22	11K084-04T DF=1000	dg10k01.met	FK14.022	↓	1	1000	
23	CDG10K01423	dg10k01.met	FK14.023	100mL	1	1	
24	11K084-06	dg10k01.met	FK14.024	↓	1	1	
25	11K084-05I DF=1000	dg10k01.met	FK14.025	2mL (20x)	1	1000	
26	11K101-01	dg10k01.met	FK14.026	100mL	1	1	
27	11K101-01T DF=1000	dg10k01.met	FK14.027	2mL (20x)	1	1000	
28	TEST	dg10k01.met	FK14.028	100mL	1	1	
29	11K084-06T DF=500	dg10k01.met	FK14.029	4mL (20x)	1	500	
30	11K101-02	dg10k01.met	FK14.030	100mL	1	1	
31	11K101-03	dg10k01.met	FK14.031	↓	1	1	
32	11K101-04	dg10k01.met	FK14.032		1	1	
33	11K101-03T DF=200	dg10k01.met	FK14.033	5mL (10x)	1	200	
34	CDG10K01424	dg10k01.met	FK14.034	100mL	1	1	

Instrument 2: TO10

Start | EZChrom Chromatography | Method: Dg10k01.me... | Method: Dg10k01.met | Explorer - fk14 | Calculator | Monday, November 14, 2011 6:43 PM

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/01/11 Time: 10:00 End Date: 11/01/11 Time: 10:40

PREPARATION BATCH # N/A

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DG10K01-01	39	4	N/A	
02	-02			N/A	
03	-03			N/A	DGAS ICAL
04	-04			N/A	
05	-05			N/A	
06	-06			N/A	
07	IDG10K01 01			N/A	DGAS ICV
08					
09					
10					
11					
12					
13					SC 11/01/11
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Standards	ID	Amount Added (µl)
LCS/MS/ICV	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic free
He	Air Gas
ICAL STD (500 ppm)	SSSA-05-01-10 (SPECIALTY AIR)
ICV STD 500 ppm	SSSA-05-01-7 (MATHESON)

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #: (ESS)	18100705

Comments:

1) 0.08 ml ICAL STD + 3.92 ml He
2) 0.4 ml 3.6 ml
3) 1.0 ml 3.0 ml
4) 1.6 ml 2.4 ml
5) 3.0 ml 1.0 ml
6) 4.0 ml 0 ml

Prepared By: SC

Standard Added By: SC

1055

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/14/11 Time: 09:45 End Date: 11/14/11 Time: 10:15

PREPARATION BATCH # DGK005W

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (< 2)	Notes
01	DGK005WB	39	4	N/A	
02	L			N/A	
03	C			N/A	
04	11K083-19			✓	
05	21			✓	
06	11K084-01			✓	
07	02			✓	
08	03			✓	
09	04			✓	
10	05			✓	
11	06			✓	
12	11K101-01			✓	
13	02			✓	
14	03			✓	
15	04			✓	
16	05			✓	
17					
18					
19					
20					
21					
22					
23					
24					
25					

PN 11/14/11

Standards	ID	Amount Added (µl)
LCS/MS	SSA-05-047	1600

Reagent	Source
H_2O	Organic Free
He	AirGas

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #:	28100705

Comments:

Prepared By: PN

Standard Added By: PN

1056

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

SDG#: 11K084

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K084

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

A total of six (6) water samples were received on 11/09/11 for Dissolved Metals by ICP analysis, Method 3010A/6010B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source. Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for IPK031WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG. Analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED METALS BY TRACE ICP

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K084
Instrument ID : T-ID8

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IPK031WB	1	NA	11/18/1116:48	11/17/1111:11	ID8K018049	ID8K018047	IPK031W	Method Blank
LCS1W	IPK031WL	1	NA	11/18/1116:51	11/17/1111:11	ID8K018050	ID8K018047	IPK031W	Lab Control Sample (LCS)
LCD1W	IPK031WC	1	NA	11/18/1116:53	11/17/1111:11	ID8K018051	ID8K018047	IPK031W	LCS Duplicate
44-SP-755-N-111011AS	K108-02A	1	NA	11/18/1116:56	11/17/1111:11	ID8K018052	ID8K018047	IPK031W	Analytical Spike Sample
44-SP-755-N-111011	K108-02	1	NA	11/18/1116:59	11/17/1111:11	ID8K018053	ID8K018047	IPK031W	Field Sample
44-SP-755-N-111011DL	K108-02J	5	NA	11/18/1117:02	11/17/1111:11	ID8K018054	ID8K018047	IPK031W	Diluted Sample
MW-70-PMW04A-110	K084-01	1	NA	11/18/1117:22	11/17/1111:11	ID8K018061	ID8K018059	IPK031W	Field Sample
MW-70-PMW04B-112	K084-02	1	NA	11/18/1117:24	11/17/1111:11	ID8K018062	ID8K018059	IPK031W	Field Sample
IW-70-FSB118-113	K084-03	1	NA	11/18/1117:27	11/17/1111:11	ID8K018063	ID8K018059	IPK031W	Field Sample
MW-70-PMW05A-114	K084-04	1	NA	11/18/1117:30	11/17/1111:11	ID8K018064	ID8K018059	IPK031W	Field Sample
MW-70-PMW05B-115	K084-05	1	NA	11/18/1117:33	11/17/1111:11	ID8K018065	ID8K018059	IPK031W	Field Sample
IR-70-FD-111	K084-06	1	NA	11/18/1117:37	11/17/1111:11	ID8K018066	ID8K018059	IPK031W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11 10:36
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
SDG NO.	: 11K084	Date Extracted:	11/17/11 11:11
Sample ID:	MW-70-PMW04A-110	Date Analyzed:	11/18/11 17:22
Lab Samp ID:	K084-01	Dilution Factor:	1
Lab File ID:	ID8K018061	Matrix :	WATER
Ext Btch ID:	IPK031W	% Moisture :	NA
Calib. Ref.:	ID8K018059	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	D.200	0.00500
Iron	0.102J	0.200	0.0400
Manganese	0.149J	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11 11:40
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
SDG NO.	: 11K084	Date Extracted:	11/17/11 11:11
Sample ID:	MW-70-PMW04B-112	Date Analyzed:	11/18/11 17:24
Lab Samp ID:	K084-02	Dilution Factor:	1
Lab File ID:	ID8K018062	Matrix :	WATER
Ext Btch ID:	IPK031W	% Moisture :	NA
Calib. Ref.:	ID8K018059	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	0.395	0.200	0.0400
Manganese	0.247	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11 12:59
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
SDG NO.	: 11K084	Date Extracted:	11/17/11 11:11
Sample ID:	IW-70-FSB118-113	Date Analyzed:	11/18/11 17:27
Lab Samp ID:	K084-03	Dilution Factor:	1
Lab File ID:	ID8K018063	Matrix :	WATER
Ext Btch ID:	IPK031W	% Moisture :	NA
Calib. Ref.:	ID8K018059	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	0.0591J	0.200	0.00500
Iron	88.2	0.200	0.0400
Manganese	2.75	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11 14:44
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
SDG NO.	: 11K084	Date Extracted:	11/17/11 11:11
Sample ID:	MW-70-PMW05A-114	Date Analyzed:	11/18/11 17:30
Lab Samp ID:	K084-04	Dilution Factor:	1
Lab File ID:	ID8K018064	Matrix :	WATER
Ext Btch ID:	IPK031W	% Moisture :	NA
Calib. Ref.:	ID8K018059	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	18.0	0.200	0.0400
Manganese	0.800	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11 15:51
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
SDG NO.	: 11K084	Date Extracted:	11/17/11 11:11
Sample ID:	MW-70-PMW05B-115	Date Analyzed:	11/18/11 17:33
Lab Samp ID:	K084-05	Dilution Factor:	1
Lab File ID:	ID8K018065	Matrix :	WATER
Ext Btch ID:	IPK031W	% Moisture :	NA
Calib. Ref.:	ID8K018059	Instrument ID :	EMAXT1D8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	4.73	0.200	0.0400
Manganese	0.793	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/09/11 11:00
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/09/11
SDG NO.	: 11K084	Date Extracted:	11/17/11 11:11
Sample ID:	IR-70-FD-111	Date Analyzed:	11/18/11 17:37
Lab Samp ID:	K084-06	Dilution Factor:	1
Lab File ID:	ID8K018066	Matrix :	WATER
Ext Btch ID:	IPK031W	% Moisture :	NA
Calib. Ref.:	ID8K018059	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	0.107J	0.200	0.0400
Manganese	0.147J	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
SDG NO.	: 11K084	Date Extracted:	11/17/11 11:11
Sample ID:	MBLK1W	Date Analyzed:	11/18/11 16:48
Lab Samp ID:	IPK031WB	Dilution Factor:	1
Lab File ID:	ID8K018049	Matrix :	WATER
Ext Btch ID:	IPK031W	% Moisture :	NA
Calib. Ref.:	ID8K018047	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	ND	0.200	0.0400
Manganese	ND	0.200	0.00300

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K084
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	IPK031WB	IPK031WL	IPK031WC		
LAB FILE ID:	ID8K018049	ID8K018050	ID8K018051		
DATIME EXTRCTD:	11/17/1111:11	11/17/1111:11	11/17/1111:11	DATE COLLECTED:	NA
DATIME ANALYZD:	11/18/1116:48	11/18/1116:51	11/18/1116:53	DATE RECEIVED:	11/17/11
PREP. BATCH:	IPK031W	IPK031W	IPK031W		
CALIB. REF:	ID8K018047	ID8K018047	ID8K018047		

ACCESSION:

PARAMETER	BLNK RSLT mg/L	SPIKE AMT mg/L	BS RSLT mg/L	BS % REC	SPIKE AMT mg/L	BSD RSLT mg/L	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	ND	.5	.532	106	.5	.542	108	2	80-120	20
Iron	ND	5	5.2	104	5	5.26	105	1	80-120	20
Manganese	ND	.5	.497	99	.5	.504	101	1	80-120	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K084
METHOD: METHOD 3010A/6010B (DISSOLVED)

==========

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	44-SP-755-N-111011	44-SP-755-N-111011DL		
EMAX SAMP ID:	K108-02	K108-02J		
LAB FILE ID:	ID8K018053	ID8K018054		
DATE EXTRACTED:	11/17/1111:11	11/17/1111:11	DATE COLLECTED:	11/10/11 10:30
DATE ANALYZED:	11/18/1116:59	11/18/1117:02	DATE RECEIVED:	11/11/11
PREP. BATCH:	IPK031W	IPK031W		
CALIB. REF:	ID8K018047	ID8K018047		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SERIAL DIL RSLT (mg/L)	DIF RSLT %	QC LIMIT (%)
Arsenic	ND	ND	0	10
Iron	0.607	0.656J	NA	10
Manganese	0.00779J	ND	NA	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K084
METHOD: METHOD 3010A/6010B (DISSOLVED)

==========

MATRIX: WATER % MOISTURE: NA
DILTN FACTR: 1 1
SAMPLE ID: 44-SP-755-N-111011
CONTROL NO.: K108-02 K108-02A
LAB FILE ID: ID8K018053 ID8K018052
DATIME EXTRCTD: 11/17/1111:11 11/17/1111:11 DATE COLLECTED: 11/10/11 10:30
DATIME ANALYZD: 11/18/1116:59 11/18/1116:56 DATE RECEIVED: 11/11/11
PREP. BATCH: IPK031W IPK031W
CALIB. REF: ID8K018047 ID8K018047

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	AS RSLT (mg/L)	AS % REC	QC LIMIT (%)
Arsenic	ND	.5	.572	114	75-125
Iron	.607	5	5.99	108	75-125
Manganese	.00779J	.5	.537	106	75-125

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	NA
SDG NO.	: 11K084	Date Extracted:	NA
Sample ID:	MRLK1801	Date Analyzed:	11/18/11 15:11
Lab Samp ID:	MRLK1801	Dilution Factor:	1
Lab File ID:	ID8K018016	Matrix :	WATER
Ext Btch ID:	NA	% Moisture :	NA
Calib. Ref.:	ID8K018014	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	0.0116J	0.200	0.00500
Iron	0.213	0.200	0.0400
Manganese	0.0105J	0.200	0.00300

ICP QC CHECK TABLE

QC	ICV	CCV	ICSAB	ICSA	MLCV
Limit%	90-110	90-110	80-120	80-120	80-120
Comp	mg/L	mg/L	mg/L	mg/L	mg\L
Al	100	100	400	400	200
Sb	1.5	1.5	1	0	5
As	1	1	1	0	1
Ba	2	2	0.5	0	5
Be	1.5	1.5	0.5	0	5
B	2.5	2.5	0.5	0	5
Cd	2	2	1	0	5
Ca	75	75	500	500	250
Cr	2.5	2.5	0.5	0	5
Co	1	1	0.5	0	1
Cu	2.5	2.5	0.5	0	5
Fe	25	25	200	200	200
Pb	2.5	2.5	1	0	5
Li	0.5	0.5	1	0	0.5
Mg	60	60	200	200	100
Mn	2.5	2.5	0.5	0	5
Mo	2.5	2.5	1	0	5
Ni	2.5	2.5	1	0	5
K	60	60	75	0	250
Se	1	1	1	0	1
Ag	0.5	0.5	1	0	0.5
Na	60	60	75	0	150
Sr	0.5	0.5	0.5	0	0.5
Tl	2.5	2.5	1	0	5
Sn	0.5	0.5	1	0	0.5
Ti	0.5	0.5	1	0	0.5
V	1.5	1.5	0.5	0	5
Zn	2.5	2.5	1	0	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 11/18/11 14:26

End Date: 11/18/11 19:05

SOP #	Rev. #
☑ EMAX-6010	7
☐ EMAX-6010C	1
☐ EMAX-200.7	2
☐ EMAX-	

Comments:

CCB3 Ca > 3x IDL. However associated sample K063-02 detected > 10x blank conc. level. Thus no corrective action.

CCB4 Ca > 3x IDL. However associated samples K063-06 K063-05 and K034-01 detected > 10x blank conc. level. Thus no corrective action.

CCB5 Ca > 3x IDL. However associated samples K108-01, K108-02 detected > 10x blank conc. Thus no corrective action

CCB6 Ca > 3x IDL. However associated sample K070-01, K070-02, and K070-03 detected > 10x blank conc. Thus no correction action.

CCB7 Ca > 3x IDL. However associated sample K101-01 K093-01 and K072-01 detected > 10x blank conc. Thus no corrective action.

Book #: AD8-021

Instrument No.: D8

Analytical Batch: 108K018

Analytical Sequence: S-11K6010 (v26)

Method File: 11K6010 (v26)

Database: EMAX 14

	STANDARDS ID		STANDARDS ID
S0	SM1814-7805	S30	SM1814-6802
S1	NA	S31	-6803
S2		ICV	-8204
S3		CCV	-8301
S4		ICSA	-8502
S5		ICSAB	-6702
S6		CRI/MRL 1	-8101
S7		MRL2	-7401
S8			
S9			
S10			
S11			
S12			
S16			
S17			
S18			
S20	SM1814-8401		
S21	-6503		
S22	-6504		
S23	-8402		
S24	-6702		
S25	-6703		
S26	-704		
S27	-7802		
S28	-7803		
S29	-7804		

Analyzed By: PP

Date: 11/18/11

SEQUENCE FILE : 1D8K018

4-18	19-33	34-43	44-53	54-63
LFID	LSID	TIME	DATE	DF
1D8K018001	Blank	14:26	11/18/11	1.000
1D8K018002	S20	14:29	11/18/11	1.000
1D8K018003	S21	14:32	11/18/11	1.000
1D8K018004	S22	14:35	11/18/11	1.000
1D8K018005	S23	14:38	11/18/11	1.000
1D8K018006	S24	14:41	11/18/11	1.000
1D8K018007	S25	14:44	11/18/11	1.000
1D8K018008	S26	14:47	11/18/11	1.000
1D8K018009	S27	14:50	11/18/11	1.000
1D8K018010	S28	14:53	11/18/11	1.000
1D8K018011	S29	14:56	11/18/11	1.000
1D8K018012	S30	14:59	11/18/11	1.000
1D8K018013	S31	15:02	11/18/11	1.000
1D8K018014	1CV	15:05	11/18/11	1.000
1D8K018015	1CB	15:08	11/18/11	1.000
1D8K018016	MRLK1801	15:11	11/18/11	1.000
1D8K018017	MRLK1802	15:14	11/18/11	1.000
1D8K018018	1CSA1	15:17	11/18/11	1.000
1D8K018019	1CSA81	15:20	11/18/11	1.000
1D8K018020	CCV1	15:23	11/18/11	1.000
1D8K018021	CC81	15:26	11/18/11	1.000
1D8K018022	K467-01A	15:29	11/18/11	1.000
1D8K018023	K467-01W	15:31	11/18/11	1.000
1D8K018024	K467-01J	15:34	11/18/11	5.000
1D8K018025	Blank	15:37	11/18/11	1.000
1D8K018026	CCV2	15:40	11/18/11	1.000
1D8K018027	CC82	15:43	11/18/11	1.000
1D8K018028	1PK028WB	15:46	11/18/11	1.000
1D8K018029	1PK028WL	15:49	11/18/11	1.000
1D8K018030	1PK028WC	15:52	11/18/11	1.000
1D8K018031	K063-02A	15:54	11/18/11	1.000
1D8K018032	K063-02	15:57	11/18/11	1.000
1D8K018033	K063-02J	16:00	11/18/11	5.000
1D8K018034	K063-02M	16:03	11/18/11	1.000
1D8K018035	K063-02S	16:06	11/18/11	1.000
1D8K018036	K063-01	16.09	11/18/11	1 000
1D8K018037	Blank	16·12	11/18/11	1.000
1D8K018038	CCV3	16:15	11/18/11	1.000
1D8K018039	CC83	16:18	11/18/11	1.000
1D8K018040	K063-03	16:21	11/18/11	1.000
1D8K018041	K063-04	16:24	11/18/11	1.000
1D8K018042	K063-05	16.27	11/18/11	1.000
1D8K018043	K063-06	16:30	11/18/11	1.000
1D8K018044	K039-01	16:33	11/18/11	1.000
1D8K018045	K039-01D	16:36	11/18/11	1.000
1D8K018046	Blank	16.39	11/18/11	1.000
1D8K018047	CCV4	16:42	11/18/11	1.000
1D8K018048	CC84	16:45	11/18/11	1.000
1D8K018049	1PK031W8	16:48	11/18/11	1.000
1D8K018050	1PK031WL	16:51	11/18/11	1.000
1D8K018051	1PK031WC	16:53	11/18/11	1.000
1D8K018052	K108-02A	16:56	11/18/11	1.000

1D8K018053	K108-02	16:59	11/18/11	1.000
1D8K018054	K108-02J	17:02	11/18/11	5.000
1D8K018055	K108-02M	17:04	11/18/11	1.000
1D8K018056	K108-02S	17:07	11/18/11	1.000
1D8K018057	K108-01	17:10	11/18/11	1.000
1D8K018058	Blank	17:13	11/18/11	1.000
1D8K018059	CCV5	17:16	11/18/11	1.000
1D8K018060	CCB5	17:19	11/18/11	1.000
1D8K018061	K0B4-01	17:22	11/18/11	1.000
1D8K018062	K084-02	17:24	11/18/11	1.000
1D8K018063	K084-03	17:27	11/18/11	1.000
1D8K018064	K084-04	17:30	11/18/11	1.000
1D8K018065	K084-05	17:33	11/18/11	1.000
1D8K018066	K084-06	17:37	11/18/11	1.000
1D8K018067	K070-01	17:39	11/18/11	1.000
1D8K018068	K070-02	17:43	11/18/11	1.000
1D8K018069	K070-03	17:46	11/18/11	1.000
1D8K018070	Blank	17:49	11/18/11	1.000
1D8K018071	CCV6	17:52	11/18/11	1.000
1D8K018072	CCB6	17:54	11/18/11	1.000
1D8K018073	K070-04	17:57	11/18/11	1.000
1D8K018074	K070-05	18:01	11/18/11	1.000
1D8K018075	K070-06	18:04	11/18/11	1.000
1D8K018076	K101-01	18:07	11/18/11	1.000
1D8K018077	K093-01	18:10	11/18/11	1.000
1D8K018078	K093-01D	18:12	11/18/11	1.000
1D8K018079	K072-01	18:15	11/18/11	1.000
1D8K018080	K090-03	18:18	11/18/11	1.000
1D8K018081	Blank	18:21	11/18/11	1.000
1D8K018082	CCV7	18:24	11/18/11	1.000
1D8K018083	CCB7	18:27	11/18/11	1.000
1D8K018084	ICSA2	18:30	11/18/11	1.000
1D8K018085	ICSA82	18:33	11/18/11	1.000
1D8K018086	CCV8	18:36	11/18/11	1.000
1D8K018087	CCB8	18:39	11/18/11	1.000
1D8K018088	1PK032SB	18:42	11/18/11	1.000
1D8K018089	1PK032SL	18:45	11/18/11	1.000
1D8K018090	1PK032SC	18:48	11/18/11	1.000
1D8K018091	K152-01A	18:50	11/18/11	1.000
1D8K018092	K152-01	18:53	11/18/11	1.000
1D8K018093	K152-01J	18:56	11/18/11	5.000
1D8K018094	Blank	18:59	11/18/11	1.000
1D8K018095	CCV9	19:02	11/18/11	1.000
1D8K018096	CCB9	19:05	11/18/11	1.000

VERSON : 11A UNIT : % SUMMARY of ICV and CCV : 1D8K01B DATE : 11/18/11 INST : EMAXT

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S26	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1CV	102	98	105	99	102	102	99	99	97	97	102	101	98	108	97	97	100	96	97	104	101	104	98	93	96	102	101	105
1CB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK1801	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK1802	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA1	98	----	----	----	----	----	----	96	----	----	----	99	----	----	99	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSAB1	95	102	106	97	99	108	95	94	94	96	106	98	96	114	95	94	101	95	102	104	107	109	95	86	94	99	100	105
CCV1	102	101	105	98	98	102	100	99	97	97	103	102	97	100	96	95	99	96	99	104	102	106	98	94	101	99	101	105
CCB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K467-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K467-01W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K467-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	100	99	102	101	102	99	98	99	96	98	101	100	97	104	99	99	101	96	99	101	100	107	98	92	101	102	99	105
CCB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK028WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK02BWL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK02BWC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	98	99	103	99	100	99	99	99	97	98	101	101	97	101	97	96	101	96	99	103	100	107	98	92	101	100	100	106
CCB3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K039-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K039-01D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	98	98	103	99	100	99	99	99	97	98	100	100	97	102	98	97	100	96	100	102	100	107	98	92	101	100	100	106
CCB4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK031WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK031WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK031WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K108-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	99	99	102	101	101	98	98	99	95	98	98	99	97	104	99	98	101	97	99	101	98	107	97	91	102	102	99	106
CCB5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	97	98	102	101	101	98	98	99	95	98	98	100	97	104	99	98	101	97	100	102	98	107	97	91	102	102	99	106
CCB6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K101-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K093-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K093-01D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K072-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K090-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	95	98	103	99	99	98	98	99	96	98	99	101	97	101	97	96	101	97	100	102	98	107	97	91	102	100	100	107
CCB7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA2	92	----	----	----	----	----	----	94	----	----	----	96	----	----	96	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSAB2	92	101	105	100	101	105	94	94	92	96	102	96	95	116	97	96	102	95	103	103	104	111	96	85	94	102	98	105
CCV8	95	96	103	99	101	98	98	99	95	97	98	100	98	109	98	97	101	97	98	102	97	105	97	91	96	102	100	106
CCB8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK032SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK032SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK032SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	96	99	108	99	102	101	103	100	98	99	101	102	100	110	98	98	101	98	101	106	101	108	99	95	96	102	101	109
CCB9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

QC limit of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC Limit

VERSON : 11A UNIT : UG/L SUMMARY of CALIBRATION BLANKS : ID8K018 (WATER) DATE : 11/18/11 INST : EMAXT

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S26	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICB	5.75	.640	.410	.040	.070	5.32	.040	12.4	.110	.130	.000	1.46	-.750	.840	11.7	.080	.350	-.030	111	-1.58	.110	-10.6	.030	.390	.700	.760	.160	.370
MRLK1801	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK1802	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA1	----	-1.27	1.38	.460	.040	34.8	3.15	----	.760	-.320	1.42	----	-.290	19.3	----	1.46	-1.02	1.54	162	.920	.070	75.9	.830	-.260	1.81	5.56	.730	2.47
ICSA81	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB1	16.8	.620	.840	.210	.100	4.57	.120	77.8	-.020	.080	.280	3.74	-.340	1.33	6.74	.180	.410	.040	171	1.33	.270	-2.64	.200	-.040	.410	1.14	.150	3.38
K467-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K467-01W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K467-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB2	9.54	1.93	.820	.250	.120	3.32	.100	75.6	.010	.000	-.050	.770	-.330	.880	24.7	.490	.400	.060	121	-1.01	.140	-20.3	-.010	.680	.520	-.050	.180	3.44
1PK028WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK028WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK028WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB3	8.99	1.10	2.89	.290	.160	2.98	.110	95.9	.190	.020	-.010	2.13	-.360	.980	17.9	.570	.390	.100	120	.760	.360	-2.60	-.040	1.15	.530	.700	.140	4.29
K063-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K063-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K039-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K039-01D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
8LANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB4	6.33	.860	.610	.060	.130	2.19	130	105	.110	.070	-170	2.12	-.130	.860	13.1	.200	.410	.070	95.3	-.870	.010	3.04	.030	.600	.200	.410	.160	4.99
1PK031WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK031WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK031WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K108-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB5	4.66	.710	.490	.030	.150	3.66	.110	70.1	.110	.080	-.220	2.49	-.370	1.58	11.3	.420	.330	.080	138	-1.19	.130	-21.9	.040	.490	.830	.550	.080	3.25
K084-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB6	.750	1.50	.020	.090	.100	2.34	.080	50.9	.090	-.060	-.310	.300	-.350	.520	10.7	.290	.360	.070	122	-.310	.230	23.5	.000	.790	.370	.130	.160	2.30
K070-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K101-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K093-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K093-01D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K072-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K090-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB7	9.59	1.11	1.12	-.030	.130	2.34	.080	91.2	.180	-.060	-.490	8.27	-.260	2.45	11.6	.270	.260	.090	95.5	-1.62	.020	8.71	.020	.600	.020	1.34	.200	4.21
ICSA2	----	.330	-2.19	.580	.130	30.9	1.82	----	.660	-.330	.790	----	-1.19	20.6	----	1.27	-1.15	1.52	45.7	.030	.190	118	.770	-.720	.960	5.48	.660	3.33
ICSAB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB8	.270	-.430	-.020	-.030	.090	3.25	.080	18.9	.060	.020	-.300	-.220	-.710	1.17	1.85	.100	.300	.040	113	.080	.100	-5.47	-.080	.790	.320	.750	-.010	.350
IPK032SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK032SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK032SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB9	-3.43	-.140	1.51	.180	.070	1.91	.080	19.3	.180	.120	-.550	3.22	-.340	1.15	4.79	.040	.370	.040	70.8	-.760	.120	-56.7	-.070	.420	.670	.620	.110	1.75

QC limit of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC Limit

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
1	0	0	0	0	Unk	S0		ID8K018001			1	☒	unk	---
2	0	0	0	0	Unk	S20		ID8K018002			1	☒	unk	---
3	0	0	0	0	Unk	S21		ID8K018003			1	☒	unk	---
4	0	0	0	0	Unk	S22		ID8K018004			1	☒	unk	---
5	0	0	0	0	Unk	S23		ID8K018005			1	☒	unk	---
6	0	0	0	0	Unk	S24		ID8K018006			1	☒	unk	---
7	0	0	0	0	Unk	S25		ID8K018007			1	☒	unk	---
8	0	0	0	0	Unk	S26		ID8K018008			1	☒	unk	---
9	0	0	0	0	Unk	S27		ID8K018009			1	☒	unk	---
10	0	0	0	0	Unk	S28		ID8K018010			1	☒	unk	---
11	0	0	0	0	Unk	S29		ID8K018011			1	☒	unk	---
12	0	0	0	0	Unk	S30		ID8K018012			1	☒	unk	---
13	0	0	0	0	Unk	S31		ID8K018013			1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8K018014			1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8K018015			1	☒	3XIDL	None
16	3	2	3	1	QC	MRLK1801		ID8K018016			1	☒	MRL-EMAX	None
17	4	2	4	1	QC	MRLK1802		ID8K018017			1	☒	MRL-AFCEE	None
18	5	2	5	1	QC	ICSA1		ID8K018018			1	☒	ICSA	None
19	6	2	6	1	QC	ICSAB1		ID8K018019			1	☒	ICSAB	None
20	7	2	7	1	QC	CCV1		ID8K018020			1	☒	CCV	None
21	8	2	8	1	QC	CCB1		ID8K018021			1	☒	3XIDL	None
22	9	2	9	1	Unk	K467-01A		ID8K018022			1	☒	unk	---
23	10	2	10	1	Unk	K467-01W		ID8K018023			1	☒	unk	---
24	11	2	11	1	Unk	K467-01J		ID8K018024			1	☒	unk	---
25	12	2	12	1	Blank	Blank		ID8K018025			1	☐		---
26	13	2	1	2	QC	CCV2		ID8K018026			1	☒	CCV	None
27	14	2	2	2	QC	CCB2		ID8K018027			1	☒	3XIDL	None
28	15	2	3	2	QC	IPK028WB		ID8K018028			1	☒	1/2LOQ	None
29	16	2	4	2	QC	IPK028WL		ID8K018029			1	☒	LCS	None
30	17	2	5	2	QC	IPK028WC		ID8K018030			1	☒	LCS	None
31	18	2	6	2	Unk	K063-02A	DISSOLVED	ID8K018031			1	☒	unk	---
32	19	2	7	2	Unk	K063-02	DISSOLVED	ID8K018032			1	☒	unk	---
33	20	2	8	2	Unk	K063-02J	DISSOLVED	ID8K018033			1	☒	unk	---
34	21	2	9	2	Unk	K063-02M	DISSOLVED	ID8K018034			1	☒	unk	---
35	22	2	10	2	Unk	K063-02S	DISSOLVED	ID8K018035			1	☒	unk	---
36	23	2	11	2	Unk	K063-01	DISSOLVED	ID8K018036			1	☒	unk	---
37	24	2	12	2	Blank	Blank		ID8K018037			1	☐		---
38	25	2	1	3	QC	CCV3		ID8K018038			1	☒	CCV	None
39	26	2	2	3	QC	CCB3		ID8K018039			1	☒	3XIDL	None

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
40	27	2	3	3	Unk	K063-03	DISSOLVED	ID8K018040			1	☒	unk	---
41	28	2	4	3	Unk	K063-04	DISSOLVED	ID8K018041			1	☒	unk	---
42	29	2	5	3	Unk	K063-05	DISSOLVED	ID8K018042			1	☒	unk	---
43	30	2	6	3	Unk	K063-06	DISSOLVED	ID8K018043			1	☒	unk	---
44	31	2	7	3	Unk	K039-01	DISSOLVED	ID8K018044			1	☒	unk	---
45	32	2	8	3	Unk	K039-01D	DISSOLVED	ID8K018045			1	☒	unk	---
46	33	2	9	3	Blank	Blank		ID8K018046			1	☐		---
47	34	2	10	3	QC	CCV4		ID8K018047			1	☒	CCV	None
48	35	2	11	3	QC	CCB4		ID8K018048			1	☒	3XIDL	None
49	36	2	12	3	QC	IPK031WB		ID8K018049			1	☒	1/2LOQ	None
50	37	2	1	4	QC	IPK031WL		ID8K018050			1	☒	LCS	None
51	38	2	2	4	QC	IPK031WC		ID8K018051			1	☒	LCS	None
52	39	2	3	4	Unk	K108-02A		ID8K018052			1	☒	unk	---
53	40	2	4	4	Unk	K108-02		ID8K018053			1	☒	unk	---
54	41	2	5	4	Unk	K108-02J		ID8K018054			1	☒	unk	---
55	42	2	6	4	Unk	K108-02M		ID8K018055			1	☒	unk	---
56	43	2	7	4	Unk	K108-02S		ID8K018056			1	☒	unk	---
57	44	2	8	4	Unk	K108-01		ID8K018057			1	☒	unk	---
58	45	2	9	4	Blank	Blank		ID8K018058			1	☐		---
59	46	2	10	4	QC	CCV5		ID8K018059			1	☒	CCV	None
60	47	2	11	4	QC	CCB5		ID8K018060			1	☒	3XIDL	None
61	48	2	12	4	Unk	K084-01	DISSOLVED	ID8K018061			1	☒	unk	---
62	49	2	1	5	Unk	K084-02	DISSOLVED	ID8K018062			1	☒	unk	---
63	50	2	2	5	Unk	K084-03	DISSOLVED	ID8K018063			1	☒	unk	---
64	51	2	3	5	Unk	K084-04	DISSOLVED	ID8K018064			1	☒	unk	---
65	52	2	4	5	Unk	K084-05	DISSOLVED	ID8K018065			1	☒	unk	---
66	53	2	5	5	Unk	K084-06	DISSOLVED	ID8K018066			1	☒	unk	---
67	54	2	6	5	Unk	K070-01	DISSOLVED	ID8K018067			1	☒	unk	---
68	55	2	7	5	Unk	K070-02	DISSOLVED	ID8K018068			1	☒	unk	---
69	56	2	8	5	Unk	K070-03	DISSOLVED	ID8K018069			1	☒	unk	---
70	57	2	9	5	Blank	Blank		ID8K018070			1	☐		---
71	58	2	10	5	QC	CCV6		ID8K018071			1	☒	CCV	None
72	59	2	11	5	QC	CCB6		ID8K018072			1	☒	3XIDL	None
73	60	2	12	5	Unk	K070-04	DISSOLVED	ID8K018073			1	☒	unk	---
74	61	3	1	1	Unk	K070-05	DISSOLVED	ID8K018074			1	☒	unk	---
75	62	3	2	1	Unk	K070-06	DISSOLVED	ID8K018075			1	☒	unk	---
76	63	3	3	1	Unk	K101-01	DISSOLVED	ID8K018076			1	☒	unk	---
77	64	3	4	1	Unk	K093-01	DISSOLVED	ID8K018077			1	☒	unk	---
78	65	3	5	1	Unk	K093-01D	DISSOLVED	ID8K018078			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
79	66	3	6	1	Unk	K072-01	DISSOLVED	ID8K018079			1	☒	unk	—
80	67	3	7	1	Unk	K090-03	DISSOLVED	ID8K018080			1	☒	unk	—
81	68	3	8	1	Blank	Blank		ID8K018081			1	☐		—
82	69	3	9	1	QC	CCV7		ID8K018082			1	☒	CCV	None
83	70	3	10	1	QC	CCB7		ID8K018083			1	☒	3XIDL	None
84	71	3	11	1	QC	ICSA2		ID8K018084			1	☒	ICSA	None
85	72	3	12	1	QC	ICSAB2		ID8K018085			1	☒	ICSAB	None
86	73	3	1	2	QC	CCV8		ID8K018086			1	☒	CCV	None
87	74	3	2	2	QC	CCB8		ID8K018087			1	☒	3XIDL	None
88	75	3	3	2	QC	IPK032SB		ID8K018088			1	☒	1/2LOQ	None
89	76	3	4	2	QC	IPK032SL		ID8K018089			1	☒	LCS	None
90	77	3	5	2	QC	IPK032SC		ID8K018090			1	☒	LCS	None
91	78	3	6	2	Unk	K152-01A		ID8K018091			1	☒	unk	—
92	79	3	7	2	Unk	K152-01		ID8K018092			1	☒	unk	—
93	80	3	8	2	Unk	K152-01J		ID8K018093			1	☒	unk	—
94	83	3	11	2	Blank	Blank		ID8K018094			1	☐		—
95	84	3	12	2	QC	CCV9		ID8K018095			1	☒	CCV	None
96	85	3	1	3	QC	CCB9		ID8K018096			1	☒	3XIDL	None

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INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID
1	Blank	.00130	.00002	-.00002	.00040	.00009	.00074	-.00005	.00023	-.00008	-.00115	Blank
2	S20					1.0272		.14317				S20
3	S21					10.310		1.3994				S21
4	S22				.57219						.15174	S22
5	S23				5.7640						1.5246	S23
6	S24						.10386					S24
7	S25						1.0501					S25
8	S26	.24775							.98689	.15619		S26
9	S27	8.8712							9.2807	1.5607		S27
10	S28		.00522									S28
11	S29		.05092									S29
12	S30			.00131								S30
13	S31			.00527								S31
14	1CV	101.67	1.4774	1.0462	1.9789	1.5234	2.5379	1.9823	74.283	2.4145	.97000	1CV
15	1C8	.00575	.00064	.00041	.00004	.00007	.00532	.00004	.01245	.00011	.00013	1C8
16	MRLK1801	.22441	.09677	.01157	.01056	.01023	.09909	.01036	1.0118	.00999	.00973	MRLK1801
17	MRLK1802	.21411	.04916	.01020	.00528	.00410	.09799	.00504	.50879	.00959	.00957	MRLK1802
18	ICSA1	393.18	-.00127	.00138	.00046	.00004	.03482	.00315	477.89	.00076	-.00032	ICSA1
19	1CSAB1	381.69	1.0156	1.0609	.48696	.49401	.54160	.95304	470.56	.46925	.48201	1CSAB1
20	CCV1	101.93	1.5101	1.0463	1.9564	1.4725	2.5489	1.9909	74.378	2.4316	.96755	CCV1
21	CCB1	.01681	.00062	.00084	.00021	.00010	.00457	.00012	.07778*	-.00002	.00008	CCB1
22	K467-01A	5.7181	2.5802	.57112	.58005	.54312	.65264	.53891	81.520	.52221	.52286	K467-01A
23	K467-01W	.06912	.00170	.00044	.04579	.00002	.12609	.00061	33.259	.00103	.00081	K467-01W
24	K467-01J	.01312	.00216	.00052	.00960	-.00004	.02550	.00016	7.0591	.00023	.00017	K467-01J
25	Blank	.01168	.00023	.00175	.00024	.00017	-.00011	.00017	.06082	.00017	.00005	Blank
26	CCV2	100.24	1.4790	1.0239	2.0197	1.5288	2.4843	1.9607	74.130	2.3972	.97893	CCV2
27	CCB2	.00954	.00193	.00082	.00025	.00012	.00332	.00010	.07563*	.00001	.00000	CCB2
28	1PK028WB	.00083	.00083	.00180	-.00002	.00001	.00063	.00003	.00223	-.00010	.00008	1PK028W8
29	1PK028WL	5.1159	2.5204	.53556	50373	.51722	.51934	.51718	49.594	.49993	.50154	1PK028WL
30	1PK028WC	5.0110	2.4853	.52715	.49605	.50853	.51331	.51321	48.622	.48782	.49070	1PK028WC
31	K063-02A	5.5900	2.6448	.58986	.72755	.54779	.64279	.53836	247.25	.52610	.53859	K063-02A
32	K063-02	.02026	.00024	.00260	.18735	.00006	.10884	-.00006	207.89	.00050	-.00054	K063-02
33	K063-02J	.00503	.00029	.00022	.03957	.00000	.02255	-.00005	44.752	.00024	-.00020	K063-02J
34	K063-02M	5.1664	2.5691	.54245	.69180	.51034	.62872	.49584	247.22	.48032	.49572	K063-02M
35	K063-02S	5.3275	2.6239	.54932	.71028	.52452	.64184	.50540	255.79	.49005	.50456	K063-02S
36	K063-01	.01646	.00027	.00392	17218	.00013	.10995	-.00003	260 99	.00055	.00074	K063-01
37	Blank	.00958	.00086	.00189	.00019	.00019	-.00027	.00024	.06563	.00029	.00011	Blank
38	CCV3	98.478	1.4815	1.0344	1.9732	1.4943	2.4855	1.9746	74.043	2.4133	.97769	CCV3
39	CCB3	.00899	.00110	.00289	.00029	.00016	.00298	.00011	.09593*	.00019	.00002	CCB3
40	K063-03	.02817	-.00082	.00243	09815	-.00002	.11237	-.00011	294.15	.00065	0005B	K063-03
41	K063-04	.01836	-.00084	00397	.15140	.00003	.10590	-.00007	192 48	.00052	-.00047	K063-04
42	K063-05	.01572	-.00195	.00230	.17829	-.00003	.11349	-.00012	285.89	.00041	-.00047	K063-05
43	K063-06	.00858	-.00163	.00415	.19026	-.00001	.10709	-.00006	209 15	.00045	-.00055	K063-06
44	K039-01	.00694	-.00100	.00083	.10377	.00002	.04588	-.00005	73.533	.00049	.00329	K039-01
45	K039-01D	.00686	-.00055	.00057	.10708	.00000	.04580	-.00003	74.864	.00029	.00317	K039-01D
46	Blank	.00624	.00068	.00156	.00000	.00020	-.00108	.00021	.05544	.00017	.00019	Blank
47	CCV4	97.816	1.4716	1.0314	1.9875	1.5063	2.4757	1.9817	74.238	2.4147	.97704	CCV4
48	CCB4	.00633	.00086	.00061	.00006	.00013	.00219	.00013	.10477*	.00011	.00007	CCB4
49	1PK031WB	-.00191	-.00092	-.00019	-.00014	-.00005	-.00015	.00000	.00119	.00009	.00006	1PK031WB
50	1PK031WL	5.0840	2.5350	.53219	.50216	.51701	.51841	.51538	49.674	.49771	.50026	1PK031WL
51	1PK031WC	5.1117	2.5730	.54236	.51029	.52563	.52205	.52419	50.460	.50351	.50655	1PK031WC
52	K108-02A	5.3177	2.5388	.57210	.62510	.54876	.56847	.53549	110.02	.52647	.52457	K108-02A

53	K108-02	.00133	.00196	00238	.08975	.00003	.05556	.00006	62.067	.00947	-.00031	K108-02
54	K108-02J	.00226	.00066	.00171	.01965	-.00001	.01112	-.00002	13.307	.00193	-.00017	K108-02J
55	K108-02M	5.1669	2.5668	.54401	.60494	.52772	.57505	.50847	111.67	.49991	.50055	K108-02M
56	K108-02S	5.0948	2.5797	.54700	.60251	.52508	.57332	.50925	110.72	.49965	.49810	K108-02S
57	K108-01	.00085	-.00014	.00586	.09003	-.00001	.05427	.00004	62.149	.01119	-.00035	K108-01
58	Blank	.00505	-.00006	.00238	.00005	.00021	-.00053	.00019	.05433	.00009	.00007	Blank
59	CCV5	98.674	1.4800	1.0194	2.0242	1.5213	2.4495	1.9503	74.370	2.3707	.97526	CCV5
60	CCB5	.00466	.00071	.00049	.00003	.00015	.00366	.00011	.07012*	.00011	.00008	CCB5
61	K084-01	.01450	-.00032	.00155	.14518	.00002	.08270	-.00005	136.35	.00037	-.00033	K084-01
62	K084-02	.01570	-.00139	.00230	.08376	-.00002	.08355	-.00002	145.73	.00038	-.00031	K084-02
63	K084-03	.01393	.00063	.05906	.03606	-.00003	.17307	.00039	345.88	.00018	.00106	K084-03
64	K084-04	.01200	-.00181	.00164	.20713	-.00002	.12503	-.00002	202.16	.00053	-.00015	K084-04
65	K084-05	.00767	-.00048	-.00102	.23625	.00001	.11162	-.00010	229.47	.00046	-.00054	K084-05
66	K084-06	.01215	-.00107	.00284	.14336	.00001	.08002	-.00005	135.07	.00048	-.00022	K084-06
67	K070-01	.01196	-.00212	.03160	.06237	-.00002	.17774	.00005	498.75	.00034	.00025	K070-01
68	K070-02	.01935	-.00136	.00001	.12083	-.00002	.10397	-.00022	419.56	.00044	-.00031	K070-02
69	K070-03	.02689	-.00128	.00187	.11657	.00000	.11465	-.00016	312.43	.00045	-.00037	K070-03
70	Blank	.00468	.00085	.00144	.00027	.00019	-.00166	.00022	.07243	.00023	.00002	Blank
71	CCV6	97.248	1.4773	1.0224	2.0161	1.5152	2.4464	1.9513	74.378	2.3717	.97595	CCV6
72	CCB6	.00075	.00150	.00002	.00009	.00010	.00234	.00008	.05085*	.00009	-.00006	CCB6
73	K070-04	.00879	-.00222	.00123	.21511	.00006	.08351	-.00010	217.61	.00029	-.00035	K070-04
74	K070-05	.01638	-.00119	.00623	.33496	.00003	.12988	-.00014	321.20	.00047	-.00053	K070-05
75	K070-06	.00635	-.00167	.00087	.21256	-.00001	.08083	-.00005	217.64	.00049	-.00024	K070-06
76	K101-01	.00448	-.00146	.00212	.22012	.00004	.11312	-.00005	181.91	.00037	-.00045	K101-01
77	K093-01	.00247	-.00074	-.00032	.10840	-.00003	.04492	.00000	74.673	.00034	.00276	K093-01
78	K093-01D	.00034	-.00038	.00200	.10851	-.00004	.04477	-.00003	74.676	.00035	.00279	K093-01D
79	K072-01	.01138	.00073	.00151	.10938	.00010	.04197	-.00006	63.894	.00037	.00160	K072-01
80	K090-03	.02535	-.00035	-.00132	.03403	.00023	.19801	.00022	9.7168	.00024	.00002	K090-03
81	Blank	.00280	.00072	.00000	.00018	.00016	-.00225	.00018	.04622	.00017	.00005	Blank
82	CCV7	95.263	1.4751	1.0304	1.9711	1.4884	2.4506	1.9580	74.381	2.3950	.97776	CCV7
83	CCB7	.00959	.00111	.00112	-.00003	.00013	.00234	.00008	.09124*	.00018	-.00006	CCB7
84	1CSA2	368.55	.00033	-.00219	.00058	.00013	.03089	.00182	469.86	.00066	-.00033	1CSA2
85	ICSAB2	369.14	1.0065	1.0481	.49944	.50461	.52563	.94330	467.76	.46142	.48134	1CSAB2
86	CCV8	95.423	1.4444	1.0312	1.9726	1.5221	2.4464	1.9678	74.508	2.3841	.97485	CCV8
87	CCB8	.00027	-.00043	-.00002	-.00003	.00009	.00325	.00008	.01894	.00006	.00002	CCB8
88	1PK032SB	-.00560	.00025	-.00049	-.00012	-.00003	.00042	-.00004	.01310	00040	.00000	1PK032SB
89	IPK032SL	4.8545	2.4950	.52104	.52656	.53816	48204	.51412	51.806	.50640	.5266B	1PK032SL
90	IPK032SC	4.8172	2.4533	.51336	.52408	.53474	.47924	.50772	51.352	.50028	.52145	1PK032SC
91	K152-01A	70.983	2.5175	.63658	2.1809	.55945	.55017	1.1205	361.58	.63593	.59119	K152-01A
92	K152-01	67.990	.02699	.09530	1.6917	.00589	.06939	.65592	326.87	.13405	.05550	K152-01
93	K152-01J	13.732	.00760	.02105	.34200	.00118	.01410	.14297	68.995	.02863	.01108	K152-01J
94	Blank	-.00196	-.00036	.00125	.00023	.00000	-.00132	-.00002	.02644	-.00005	-.00009	Blank
95	CCV9	96.460	1.4884	1.0752	1.9822	1 5334	2.5137	2.0639	75.244	2.4441	.98837	CCV9
96	CCB9	-.00343	-.00014	.00151	.00018	.00007	.00191	.00008	.01931	.00018	.00012	CCB9
INDX	LS1D	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LS1D

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INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID
1	Blank	.00108	.00001	.00019	-.00061	-.00001	.00006	-.00011	-.00057	-.00092	.00001	Blank
2	S20			.20004			.10533					S20
3	S21			2.0153			1.0542					S21
4	S22	.28663	.05391									S22
5	S23	2.7478	2.0913									S23
6	S24							.69431				S24
7	S25							7.0782				S25
8	S26								.75477	.44222		S26
9	S27								7.4278	4.4476		S27
10	S28					.02592						S28
11	S29					.25485						S29
12	S30				.03336						.00147	S30
13	S31				.16786						.00589	S31
14	ICV	2.5588	25.335	2.4568	.54075	58.325	2.4215	2.4979	2.4123	58.366	1.0441	ICV
15	ICB	.00000	.00146	-.00075	.00084	.01173	.00008	.00035	-.00003	.11074	-.00158	ICB
16	MRLK1B01	.01052	.21283	.01020	.01130	1.0203	.01053	.01016	.00984	.99412	.00992	MRLK1B01
17	MRLK1802	.00999	.10306	.00269	.10419	.20863	.00534	.00937	.00970	.97612	.00922	MRLK1802
18	ICSA1	.00142	197.65	-.00029	.01932	197.71	.00146	-.00102	.00154	.16213	.00092	ICSA1
19	ICSAB1	.53123	195.57	.96189	1.1360	189.85	.46890	1.0119	.95246	76.540	1.0372	ICSAB1
20	CCV1	2.5808	25.412	2.4207	.49776	57.572	2.3700	2.4799	2.3914	59.553	1.0432	CCV1
21	CCB1	.00028	.00374	-.00034	.00133	.00674	.00018	.00041	.00004	.17075	.00133	CCB1
22	K467-01A	.70232	6.2479	.52826	.01661	62.543	.66793	.51770	.46480	52.996	.56477	K467-01A
23	K467-01W	.14675	.82775	.00293	.01491	13.875	.14660	.00733	.00409	3.3280	-.00080	K467-01W
24	K467-01J	.03041	.17789	.00033	.00372	2.9183	.03084	.00157	.00086	.74270	-.00067	K467-01J
25	Blank	.00011	.00574	-.00055	.00085	.00980	.00031	.00032	.00033	.07726	-.00047	Blank
26	CCV2	2.5142	24.901	2.4349	.52058	59.376	2.4653	2.5307	2.4117	59.509	1.0147	CCV2
27	CCB2	-.00005	.00077	-.00033	.00088	.02473	.00049	.00040	.00006	.12105	-.00101	CCB2
28	1PK028WB	-.00012	.00091	-.00039	.00111	.00863	.00009	.00005	-.00026	.02627	-.00044	IPK028WB
29	1PK028WL	.52157	5.1935	.50108	.00303*	48.848	.49578	.52006	.50065	48.949	.52476	1PK028WL
30	1PK028WC	.50777	5.0856	.49691	.00294*	48.177	.48802	.51249	.48915	48.126	.51830	IPK028WC
31	K063-02A	.56836	6.4488	.53993	.01820	84.873	.90527	.53719	.47554	56.516	.57466	K063-02A
32	K063-02	.00098	1.0177	.00109	.01834	36.340	.38709	.00290	.00022	5.0399	-.00089	K063-02
33	K063-02J	.00026	.21615	.00024	.00376	7.7952	.08272	.00057	.00013	1.0648	-.00007	K063-02J
34	K063-02M	.51117	6.0307	.49909	.01893	84.291	.87040	.53380	.49411	54.952	.52591	K063-02M
35	K063-02S	.52305	6.1331	.50754	.01905	87.560	.89977	.54519	.50245	56.603	.53592	K063-02S
36	K063-01	.00090	13.420	.00137	.02043	31.836	.35770	-.00042	.00194	5.3676	-.00130	K063-01
37	Blank	-.00005	.00235	-.00032	.00127	.00945	.00036	.00031	.00025	.09884	.00069	Blank
38	CCV3	2.5350	25.131	2.4237	.50623	58.271	2.3983	2.5138	2.4124	59.326	1.0252	CCV3
39	CCB3	-.00001	.00213	-.00036	.00098	.01786	.00057	.00039	.00010	.11978	.00076	CCB3
40	K063-03	.00126	.20809	.00207	.02284	43.348	.42920	-.00036	.00034	6.0617	.00063	K063-03
41	K063-04	.00082	.55312	.00194	.01506	33.904	.28696	.00350	.00050	4.7425	-.00137	K063-04
42	K063-05	.00072	.50895	.00128	.02221	50.895	.32214	.00291	.00079	5.8228	.00034	K063-05
43	K063-06	.00079	1.0305	.00099	.01729	37.013	.39523	.00272	.00065	4.9750	.00006	K063-06
44	K039-01	.00042	-.00165	.00151	.03708	26.953	.43085	.03263	.01544	3.3885	.00207	K039-01
45	K039-01D	.00010	-.00395	.00047	.03823	27.710	.44372	.03333	.01574	3.4598	.00165	K039-01D
46	Blank	-.00023	.00409	-.00090	.00041	.02622	.00037	.00019	.00028	.03292	.00044	Blank
47	CCV4	2.5083	25.101	2.4180	.51168	58.898	2.4287	2.5114	2.4078	59.732	1.0213	CCV4
48	CCB4	-.00017	.00212	-.00013	.00086	.01308	.00020	.00041	.00007	.09532	-.00087	CCB4
49	1PK031WB	-.00012	.00108	-.00024	.00076	-.00022	-.00022	.00008	.00060	.02068	-.00240	IPK031WB
50	1PK031WL	.51307	5.2003	.49975	.00230*	49.077	.49652	.52349	.49982	49.350	.52288	IPK031WL
51	IPK031WC	.51670	5.2609	.50541	.00374*	50.082	.50397	.52887	.50535	49.867	.53238	IPK031WC
52	K108-02A	.53676	5.9915	.52826	.03852	62.107	.53662	.53095	.46286	52.551	.55408	K108-02A

53	K108-02	.00016	.60745	.00163	.03587	12.631	.00779	.01485	.00007	2.3162	.00040	K108-02
54	K108-02J	.00004	.13121	.00063	.00936	2.7372	.00177	.00309	-.00008	.50004	.00028	K108-02J
55	K108-02M	.50921	5.7965	.50457	.03977	62.574	.51241	.54410	.49956	52.308	.52703	K108-02M
56	K108-02S	.50628	5.7780	.50175	.03920	62.378	.50847	.54244	.49664	52.124	.52875	K108-02S
57	K108-01	.00015	.00161	.00200	.03647	12.428	.00020	.01522	.00011	2.3316	.00229	K108-01
58	Blank	-.00016	.00341	-.00057	.00017	.01892	.00035	.00026	.00048	.06036	.00037	Blank
59	CCV5	2.4517	24.830	2.4353	.51951	59.652	2.4595	2.5291	2.4128	59.572	1.0134	CCV5
60	CCB5	-.00022	.00249	-.00037	.00158	.01126	.00042	.00033	.00008	.13814	-.00119	CCB5
61	K084-01	.00037	.10200	.00105	.01092	23.461	.14869	.00362	.00010	3.4649	-.00116	K084-01
62	K084-02	.00108	.39522	.00106	.01137	25.770	.24738	.00486	.00026	3.8328	-.00062	K084-02
63	K084-03	.00051	88.209	.00396	.04195	65.957	2.7479	-.00077	.00451	8.6649	-.00150	K084-03
64	K084-04	.00091	17.986	.00095	.02022	25.203	.80021	-.00014	.00174	4.6523	-.00254	K084-04
65	K084-05	.00053	4.7264	.00140	.02454	43.781	.79340	-.00005	.00053	5.1511	.00034	K084-05
66	K084-06	.00068	.10687	.00203	.01077	22.807	.14707	.00369	.00186	3.5021	-.00166	K084-06
67	K070-01	.00067	30.797	.00485	.05656	88.800	1.0768	-.00070	.00532	11.183	.00020	K070-01
68	K070-02	.00131	7.9987	.00221	.03607	67.065	1.1231	-.00015	.00295	7.1947	-.00046	K070-02
69	K070-03	.00109	.81415	.00149	.02512	62.240	.43632	.00236	.00050	6.2243	.00062	K070-03
70	Blank	-.00036	.00056	-.00016	.00143	.01416	.00052	.00019	.00020	.08439	-.00073	Blank
71	CCV6	2.4438	24.926	2.4316	.51819	59.512	2.4572	2.5275	2.4126	59.794	1.0168	CCV6
72	CCB6	-.00031	.00030	-.00035	.00052	.01074	.00029	.00036	.00007	.12229	-.00031	CCB6
73	K070-04	.00048	.05411	.00193	.01666	39.203	.33377	.00334	.00063	4.8515	.00078	K070-04
74	K070-05	.00033	14.244	.00215	.03435	62.737	1.0472	-.00064	.00040	7.0409	.00013	K070-05
75	K070-06	.00057	.06285	.00133	.01605	38.849	.32930	.00315	.00050	4.8162	-.00030	K070-06
76	K101-01	-.00008	1.0135	.00145	.01906	34.669	.43962	.00009	.00034	4.3773	-.00162	K101-01
77	K093-01	.00011	-.00497	.00098	.04088	27.732	.36014	.01557	.00540	3.7777	.00055	K093-01
78	K093-01D	.00003	-.00021	.00062	.04081	27.844	.36380	.01574	.00541	3.7462	.00100	K093-01D
79	K072-01	.00027	.01835	.00034	.04584	24.523	.43012	.13627	.02282	3.9636	.00048	K072-01
80	K090-03	.00088	.00741	.00342	.01398	10.579	.00138	.00128	.00356	.81804	.00327	K090-03
81	Blank	-.00043	.00309	-.00019	.00094	.01062	.00058	.00036	.00028	.04039	-.00069	Blank
82	CCV7	2.4736	25.209	2.4229	.50355	58.443	2.4002	2.5216	2.4167	59.839	1.0184	CCV7
83	CCB7	-.00049	.00827	-.00026	.00245	.01157	.00027	.00026	.00009	.09550	-.00162	CCB7
84	ICSA2	.00079	192.39	-.00119	02063	192.43	.00127	-.00115	00152	.04575	.00003	ICSA2
85	ICSAB2	.50850	192.42	.95477	1.1576	194.74	.48177	1.0161	.95223	77.547	1.0305	ICSAB2
86	CCV8	2.4512	25.082	2.4471	.54372	58.769	2.4229	2.5166	2.4269	59.018	1.0206	CCV8
87	CCB8	-.00030	-.00022	-.00071	.00117	.00185	.00010	.00030	.00004	.11313	.00008	CCB8
88	IPK032SB	-.00042	.00532	-.00046	.00023	.01054	.00007	.00042	.00000	08370	.00001	IPK032SB
89	IPK032SL	.50361	5.2644	.51820	.00343*	52.065	.52271	.55743	.52455	50.955	.50806	IPK032SL
90	IPK032SC	.49794	5.2111	.51260	.00168*	51.904	.52064	.55269	.51866	50.574	49783	IPK032SC
91	K152-01A	.97294	128.86	6.6496	.06066	84.504	5.0768	.53858	.61313	60.828	.53607	K152-01A
92	K152-01	.44292	128.27	6.4091	.06051	35 683	4.7471	-.00079	.14907	9.6913	.00422	K152-01
93	K152-01J	.08968	27.376	1.3247	.01178	7.4153	.99004	-.00182	.02971	1.8500	.00240	K152-01J
94	Blank	-.00051	.00298	-.00064	.00080	.00765	.00034	.00000	-.00004	- 03976	-.00045	Blank
95	CCV9	2.5238	25.528	2.4890	.54788	59.076	2.4429	2.5313	2.4529	60.544	1.0571	CCV9
96	CCB9	-.00055	.00322	-.00034	.00115	.00479	.00004	.00037	.00004	.07075	-.00076	CCB9
INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID

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INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID
1	Blank	.00011	.00331	-.00012	-.00002	.00001	.00005	-.00025	.00044	Blank
2	S20									S20
3	S21									S21
4	S22							.12964		S22
5	S23							1.3040		S23
6	S24		1.3358							S24
7	S25		7.7723							S25
8	S26									S26
9	S27									S27
10	S28				.00636					S28
11	S29				.06360					S29
12	S30	.04537		.14907		.02413	.01673		.63640	S30
13	S31	.22325		.73021		.11527	.08932		6.2345	S31
14	ICV	.50281	62.567	.48845	2.3329	.47812	.50801	1.5096	2.6246	ICV
15	ICB	.00011	-.01065	.00003	.00039	.00070	.00076	.00016	.00037	ICB
16	MRLK1801	.01023	.98344	.01031	.01122	.00089	.01063	.01030	.02088	MRLK1801
17	MRLK1802	.00986	.46685	.00988	.01023	.00977	.01063	.00963	.01085	MRLK1802
18	ICSA1	.00007	.07594	.00083	-.00026	.00181	.00556	.00073	.00247	ICSA1
19	ICSAB1	1.0699	82.009	.47722	.86039	.94339	.99405	.50012	1.0498	ICSAB1
20	CCV1	.50901	63.824	.48946	2.3466	.50440	.49426	1.5077	2.6186	CCV1
21	CCB1	.00027	-.00264	.00020	-.00004	.00041	.00114	.00015	.00338	CCB1
22	K467-01A	.51151	111.54	.82632	.51105	.48315	.52347	.54263	.83716	K467-01A
23	K467-01W	.00012	59.600	.35090	.00011	.00062	.00381	.00058	.28042	K467-01W
24	K467-01J	.00012	12.368	.07381	.00081	.00042	.00167	.00026	.05850	K467-01J
25	Blank	.00018	-.02760	.00003	.00011	.00056	.00045	.00021	.00279	Blank
26	CCV2	.49922	64.026	.49088	2.2996	.50725	.51135	1.4875	2.6341	CCV2
27	CCB2	.00014	-.02027	-.00001	.00068	.00052	-.00005	.00018	.00344	CCB2
28	IPK028WB	.00014	-.03569	-.00003	.00023	.00052	.00067	-.00002	.00060	IPK028WB
29	IPK028WL	.51507	53.280	.49953	.49109	.48347	.51555	.51741	.54349	IPK028WL
30	IPK028WC	.51336	52.350	.49178	.49003	.47845	.51157	.50696	.53703	IPK028WC
31	K063-02A	.52611	145.39	2.2797	.49605	.49890	.52568	.55254	.59412	K063-02A
32	K063-02	.00007	92.655	1.8213	.00068	.00081	.00280	-.00005	.00995	K063-02
33	K063-02J	.00010	19.162	.38440	.00012	.00051	00087	.00004	.00249	K063-02J
34	K063-02M	.51916	143.47	2.2665	.45885	.49338	52037	.51174	.54314	K063-02M
35	K063-02S	.52890	148.03	2.3399	.46827	.50201	.53546	.52001	.55461	K063-02S
36	K063-01	-.00032	89.754	1.5835	-.00067	.00029	.00375	.00165	.00642	K063-01
37	Blank	.00004	00275	.00010	.00057	.00056	.00089	.00015	.00220	Blank
38	CCV3	.50073	64.007	.48785	2.2912	.50643	.49967	1.4990	2.6469	CCV3
39	CCB3	.00036	-.00260	-.00004	.00115	.00053	.00070	.00014	.00429	CCB3
40	K063-03	-.00020	129.74	2.0871	-.00057	.00040	.00346	.00079	.01800	K063-03
41	K063-04	-.00005	85.401	1.6505	.00039	.00020	00238	-.00015	.00589	K063-04
42	K063-05	-.00015	115.32	2.4559	.00014	-.00026	.00310	-.00032	.00594	K063-05
43	K063-06	.00009	93.157	1.8254	-.00027	.00104	.00256	-.00009	.00254	K063-06
44	K039-01	-.00002	93.253	.73912	.00126	.00025	.00271	-.00003	.00814	K039-01
45	K039-01D	-.00003	95.418	.75563	.00185	.00051	.00160	.00016	.00757	K039-01D
46	Blank	.00012	.02336	.00004	.00061	.00051	.00058	.00004	.00247	Blank
47	CCV4	.49862	64.383	.48949	2.2927	.50513	.50117	1.4975	2.6435	CCV4
48	CCB4	.00001	.00304	.00003	.00060	.00020	00041	.00016	.00499	CCB4
49	IPK031WB	.00014	-.03245	.00000	.00104	.00058	.00091	.00005	.00077	IPK031WB
50	IPK031WL	.50777	53.566	.50222	.48761	.48772	.52129	.51808	.54460	IPK031WL
51	IPK031WC	.51236	54.055	.50431	.49601	.49309	.52891	.52315	.55115	IPK031WC
52	K108-02A	.49734	97.975	1.3104	.49994	.48836	.52242	.54475	.63700	K108-02A

53	K108-02	.00008	44.624	.84434	.00044	.00049	.00140	.00549	.06279	K108-02
54	K108-02J	.00023	9.3457	.18055	.00017	.00079	.00068	.00109	.01432	K108-02J
55	K108-02M	.50876	98.876	1.3438	.47552	.49823	.53022	.52385	.61337	K108-02M
56	K108-02S	.50632	97.815	1.3246	.47508	.49687	.52890	.52009	.60874	K108-02S
57	K108-01	.00010	44.206	.82773	.00072	.00019	.00175	.00598	.02799	K108-01
58	Blank	.00015	-.01248	.00001	.00024	.00009	.00107	.00048	.00248	Blank
59	CCV5	.48876	64.020	.48748	2.2704	.51158	.51104	1.4794	2.6598	CCV5
60	CCB5	.00013	-.02189	.00004	.00049	.00083	.00055	.00008	.00325	CCB5
61	K084-01	.00008	63.466	1.1898	.00001	.00027	.00195	-.00004	.00221	K084-01
62	K084-02	.00008	66.476	1.2320	.00049	.00054	.00258	-.00032	.00595	K084-02
63	K084-03	-.00012	125.87	2.7943	-.00059	.00078	.00286	.00088	.00362	K084-03
64	K084-04	-.00023	79.695	1.3677	-.00001	.00032	.00280	.00034	.00576	K084-04
65	K084-05	-.00017	111.88	2.0054	.00069	.00048	.00311	.00005	.00659	K084-05
66	K084-06	.00003	63.376	1.1947	-.00026	.00000	.00162	-.00004	.00545	K084-06
67	K070-01	-.00029	395.55	4.5010	-.00066	.00074	.00350	.00116	.00433	K070-01
68	K070-02	-.00038	135.29	3.2456	.00008	.00080	.00325	.00064	.01085	K070-02
69	K070-03	-.00013	148.76	2.5450	-.00030	.00021	.00248	.00000	.01739	K070-03
70	Blank	.00014	.08014	.00023	.00022	.00025	.00082	.00028	.00213	Blank
71	CCV6	.48805	64.136	.48710	2.2655	.51185	.51017	1.4866	2.6606	CCV6
72	CCB6	.00023	.02346	.00000	.00079	.00037	.00013	.00016	.00230	CCB6
73	K070-04	.00000	82.694	1.9099	.00022	-.00047	.00295	-.00023	.00503	K070-04
74	K070-05	-.00038	122.43	2.8332	-.00050	-.00015	.00301	-.00015	.00454	K070-05
75	K070-06	-.00004	81.610	1.8884	-.00015	.00001	.00280	.00000	.00588	K070-06
76	K101-01	.00014	72.938	1.6616	.00022	-.00005	.00227	-.00004	.00114	K101-01
77	K093-01	.00019	94.073	.76499	.00138	.00057	.00161	.00006	.07039	K093-01
78	K093-01D	-.00006	94.169	.76454	.00196	.00037	.00143	-.00013	.07059	K093-01D
79	K072-01	.00004	90.679	.66046	.00267	.00073	.00228	-.00006	.00919	K072-01
80	K090-03	.00013	158.45	.11412	.00035	.00001	.00116	.00273	.00988	K090-03
81	Blank	.00019	.05870	.00005	00019	.00059	.00061	.00016	.00199	Blank
82	CCV7	.49180	64.221	.48690	2.2630	.51144	.49997	1.5025	2 6638	CCV7
83	CCB7	.00002	.00871	.00002	.00060	.00002	.00134	.00020	.00421	CCB7
84	ICSA2	.00019	.11849	.00077	-.00072	.00096	.00548	.00066	.00333	ICSA2
85	ICSAB2	1.0354	82.996	.48095	84564	.94332	1.0158	.49196	1.0544	ICSAB2
86	CCV8	.48684	63.295	.48531	2.2677	.47913	.50777	1.4983	2.6539	CCV8
87	CCB8	.00010	-.00547	-.00008	00079	.00032	.00075	-.00001	00035	CCB8
88	IPK032SB	.00003	.00013	-.00014	.00011	.03369	.00091	00004	.00168	IPK032SB
89	IPK032SL	.49336	55.144	.50831	.47973	.54531	.54431	53226	.57361	IPK032SL
90	IPK032SC	.48884	54.724	.50305	.47247	.53802	.54293	52624	.56756	IPK032SC
91	K152-01A	.49575	56.325	1.1177	.45734	.58020	1.9838	71338	117.09*	K152-01A
92	K152-01	.00114	.98259	.65599	- 00144	.09450	1.5013	.18265	119.67*	K152-01
93	K152-01J	.00039	.11742	.13386	00033	.01913	.30243	03756	31.088	K152-01J
94	Blank	.00024	-.08136	-.00007	.00013	.00048	.00128	-.00002	.00383	Blank
95	CCV9	.50456	64.783	.49434	2.3639	.48002	.50828	1.5215	2.7131	CCV9
96	CCB9	.00012	-.05667*	-.00007	.00042	.00067	.00062	.00011	.00175	CCB9
INDX	LS1D	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LS1D

1D8K018 Section 3 of 3

7838

Sample Name: Blank Acquired: 11/18/2011 14:26:25 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00130	.00002	-.00002	.00040	.00009	.00074	-.00005
Stddev	.00001	.00000	.00000	.00010	.00002	.00001	.00000
%RSD	1.0959	16.718	15.688	25.409	21.272	1.7349	8.4720
#1	.00132	.00002	-.00002	.00029	.00010	.00072	-.00004
#2	.00130	.00002	-.00002	.00041	.00007	.00075	-.00005
#3	.00129	.00002	-.00002	.00049	.00010	.00074	-.00005

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00023	-.00008	-.00115	.00108	.00001	.00019	-.00061
Stddev	.00002	.00001	.00012	.00003	.00001	.00001	.00015
%RSD	9.6906	9.5937	10.525	2.4442	78.090	5.9323	23.841
#1	.00025	-.00009	-.00102	.00107	.00002	.00020	-.00072
#2	.00024	-.00007	-.00125	.00110	.00000	.00018	-.00068
#3	.00021	-.00009	-.00118	.00105	.00002	.00020	-.00045

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00001	.00006	-.00011	-.00057	-.00092	.00001	.00011
Stddev	.00002	.00002	.00004	.00013	.00023	.00000	.00003
%RSD	324.08	33.237	35.193	22.211	24.791	7.9492	26.471
#1	.00001	.00005	-.00006	-.00043	-.00096	.00001	.00009
#2	.00000	.00004	-.00013	-.00068	-.00067	.00001	.00014
#3	-.00004	.00008	-.00013	-.00058	-.00112	.00001	.00009

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00331	-.00012	-.00002	.00001	.00005	-.00025	.00044
Stddev	.00003	.00004	.00001	.00008	.00005	.00003	.00002
%RSD	.95540	34.398	28.728	699.15	89.314	10.820	4.9498
#1	.00333	-.00015	-.00003	-.00004	.00008	-.00022	.00044
#2	.00332	-.00007	-.00002	.00010	.00000	-.00025	.00045
#3	.00327	-.00013	-.00002	-.00002	.00008	-.00027	.00041

Sample Name: Blank Acquired: 11/18/2011 14:26:25 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8682.2	60633.	162850.
Stddev	6.4	746.	730.
%RSD	.07332	1.2306	.44850
#1	8678.5	61225.	163390.
#2	8678.6	60878.	162020.
#3	8689.6	59795.	163130.

Sample Name: S20 Acquired: 11/18/2011 14:29:25 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Be	Cd	Pb	Mn
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.0272**	**.14317**	**.20004**	**.10533**
Stddev	.0032	.00112	.00031	.00043
%RSD	.31111	.77994	.15646	.40395
#1	1.0238	.14189	.20007	.10484
#2	1.0301	.14391	.19971	.10558
#3	1.0277	.14373	.20034	.10557

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8799.4**	**61559.**	**163750.**
Stddev	36.8	790.	709.
%RSD	.41850	1.2838	.43310
#1	8762.5	62431.	164550.
#2	8836.1	61355.	163200.
#3	8799.7	60891.	163500.

Sample Name: S21 Acquired: 11/18/2011 14:32:20 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Be	Cd	Pb	Mn
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**10.310**	**1.3994**	**2.0153**	**1.0542**
Stddev	.144	.0043	.0022	.0026
%RSD	1.4011	.30622	.10675	.24833
#1	10.398	1.3972	2.0133	1.0529
#2	10.143	1.4043	2.0149	1.0572
#3	10.388	1.3966	2.0176	1.0525

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8777.4**	**62519.**	**165270.**
Stddev	31.5	273.	380.
%RSD	.35841	.43623	.23012
#1	8794.7	62834.	165680.
#2	8796.5	62377.	164940.
#3	8741.1	62347.	165170.

Sample Name: S22 Acquired: 11/18/2011 14:35:25 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Ba	Co	Cu	Fe	V
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.57219**	**.15174**	**.28663**	**.05391**	**.12964**
Stddev	.00211	.00029	.00143	.00015	.00028
%RSD	.36809	.18987	.49731	.27669	.21798
#1	.57232	.15193	.28612	.05405	.12980
#2	.57001	.15141	.28552	.05375	.12931
#3	.57422	.15188	.28824	.05394	.12981

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8850.8**	**63095.**	**165430.**
Stddev	9.4	769.	504.
%RSD	.10571	1.2189	.30452
#1	8850.5	63789.	165460.
#2	8860.3	63229.	165920.
#3	8841.6	62268.	164910.

Sample Name: S23 Acquired: 11/18/2011 14:38:23 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Ba	Co	Cu	Fe	V
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5.7640**	**1.5246**	**2.7478**	**2.0913**	**1.3040**
Stddev	.0603	.0005	.0370	.0195	.0023
%RSD	1.0463	.03460	1.3461	.93382	.17655
#1	5.7543	1.5242	2.7836	2.1138	1.3066
#2	5.8286	1.5245	2.7097	2.0821	1.3028
#3	5.7092	1.5252	2.7502	2.0782	1.3025

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8186.3**	**62791.**	**160900.**
Stddev	10.5	706.	946.
%RSD	.12871	1.1245	.58764
#1	8184.3	63579.	159810.
#2	8197.7	62576.	161470.
#3	8177.0	62216.	161420.

Sample Name: S24 Acquired: 11/18/2011 14:41:42 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	B	Mo	Na
Units	Cts/S	Cts/S	Cts/S
Avg	**.10386**	**.69431**	**1.3358**
Stddev	.00027	.00085	.0009
%RSD	.26275	.12208	.06414
#1	.10417	.69334	1.3353
#2	.10380	.69465	1.3368
#3	.10363	.69492	1.3353

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8558.6**	**63487.**	**162520.**
Stddev	19.6	321.	963.
%RSD	.22952	.50566	.59268
#1	8577.6	63850.	161870.
#2	8559.8	63370.	162060.
#3	8538.3	63241.	163620.

Sample Name: S25 Acquired: 11/18/2011 14:44:39 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	B	Mo	Na
Units	Cts/S	Cts/S	Cts/S
Avg	**1.0501**	**7.0782**	**7.7723**
Stddev	.0023	.0088	.1188
%RSD	.21837	.12446	1.5289
#1	1.0485	7.0684	7.9093
#2	1.0490	7.0855	7.6981
#3	1.0527	7.0807	7.7093

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7884.3**	**62656.**	**152790.**
Stddev	12.4	381.	79.
%RSD	.15724	.60739	.05200
#1	7898.5	63001.	152830.
#2	7875.9	62719.	152840.
#3	7878.4	62248.	152700.

Sample Name: S26 Acquired: 11/18/2011 14:47:44 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Al	Ca	Cr	Ni	K
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.24775**	**.98689**	**.15619**	**.75477**	**.44222**
Stddev	.00066	.00119	.00033	.00127	.00096
%RSD	.26832	.12088	.21274	.16786	.21621
#1	.24850	.98612	.15593	.75603	.44323
#2	.24724	.98628	.15608	.75480	.44133
#3	.24751	.98826	.15657	.75349	.44209

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7876.7**	**60367.**	**152040.**
Stddev	16.6	351.	270.
%RSD	.21113	.58091	.17727
#1	7884.2	60765.	152350.
#2	7888.3	60233.	151840.
#3	7857.7	60103.	151940.

Sample Name: S27 Acquired: 11/18/2011 14:50:41 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Al	Ca	Cr	Ni	K
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**8.8712**	**9.2807**	**1.5607**	**7.4278**	**4.4476**
Stddev	.0362	.0872	.0037	.0073	.0028
%RSD	.40827	.93946	.23506	.09758	.06285
#1	8.9121	9.3525	1.5630	7.4276	4.4505
#2	8.8432	9.1837	1.5565	7.4351	4.4450
#3	8.8584	9.3061	1.5627	7.4206	4.4472

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6732.8**	**57388.**	**133730.**
Stddev	2.9	311.	200.
%RSD	.04308	.54191	.14964
#1	6735.1	57605.	133500.
#2	6733.6	57527.	133890.
#3	6729.5	57031.	133780.

Sample Name: S28 Acquired: 11/18/2011 14:53:54 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Sb	Mg	Tl
Units	Cts/S	Cts/S	Cts/S
Avg	**.00522**	**.02592**	**.00636**
Stddev	.00001	.00014	.00002
%RSD	.21063	.53320	.35384
#1	.00523	.02592	.00635
#2	.00523	.02606	.00639
#3	.00521	.02579	.00634

Int. Std.	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S
Avg	**62889.**	**163930.**
Stddev	338.	462.
%RSD	.53781	.28184
#1	63181.	163960.
#2	62967.	163450.
#3	62518.	164370.

Sample Name: S29 Acquired: 11/18/2011 14:56:50 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Sb	Mg	Tl
Units	Cts/S	Cts/S	Cts/S
Avg	**.05092**	**.25485**	**.06360**
Stddev	.00023	.00075	.00023
%RSD	.44651	.29574	.36917
#1	.05117	.25490	.06383
#2	.05089	.25558	.06362
#3	.05072	.25408	.06336

Int. Std.	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S
Avg	**63640.**	**159640.**
Stddev	440.	325.
%RSD	.69189	.20365
#1	64146.	159860.
#2	63433.	159260.
#3	63342.	159790.

Sample Name: S30 Acquired: 11/18/2011 14:59:49 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	As	Li	Se	Ag	Sr	Sn	Ti	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00131	.03336	.00147	.04537	.14907	.02413	.01673	.63640
Stddev	.00001	.00007	.00001	.00011	.00026	.00012	.00010	.00108
%RSD	.60823	.21785	.61690	.23492	.17267	.49353	.58530	.17027
#1	.00130	.03338	.00146	.04531	.14925	.02420	.01673	.63611
#2	.00131	.03342	.00147	.04530	.14919	.02399	.01683	.63550
#3	.00132	.03328	.00148	.04549	.14878	.02419	.01663	.63760

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8752.7	63093.	164860.
Stddev	12.1	450.	671.
%RSD	.13865	.71314	.40676
#1	8741.1	63547.	165590.
#2	8765.3	63085.	164720.
#3	8751.6	62647.	164270.

Sample Name: S31 Acquired: 11/18/2011 15:02:47 Type: Cal
Method: 11K6010(v26) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	As	Li	Se	Ag	Sr	Sn	Ti	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00527**	**.16786**	**.00589**	**.22325**	**.73021**	**.11527**	**.08932**	**6.2345**
Stddev	.00001	.00078	.00002	.00116	.00171	.00027	.00025	.0051
%RSD	.10601	.46611	.36734	.51827	.23405	.23211	.27463	.08214
#1	.00526	.16796	.00590	.22301	.73177	.11545	.08937	6.2297
#2	.00527	.16859	.00587	.22223	.73049	.11539	.08953	6.2399
#3	.00527	.16704	.00591	.22451	.72838	.11496	.08905	6.2338

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8877.0**	**63908.**	**165560.**
Stddev	17.0	297.	108.
%RSD	.19094	.46493	.06523
#1	8882.0	64191.	165440.
#2	8858.2	63933.	165590.
#3	8891.0	63599.	165650.

Sample Name: ICV Acquired: 11/18/2011 15:05:41 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018014 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**101.67**	**1.4774**	**1.0462**	**1.9789**	**1.5234**	**2.5379**	**1.9823**	**74.283**
Stddev	.67	.0048	.0037	.0041	.0044	.0082	.0034	.218
%RSD	.65959	.32377	.35210	.20717	.28989	.32404	.16900	.29412
#1	101.20	1.4804	1.0474	1.9747	1.5184	2.5350	1.9788	74.066
#2	102.44	1.4719	1.0420	1.9829	1.5270	2.5315	1.9827	74.280
#3	101.37	1.4799	1.0491	1.9791	1.5247	2.5472	1.9854	74.503
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4145**	**.97000**	**2.5588**	**25.335**	**2.4568**	**.54075**	**58.325**	**2.4215**
Stddev	.0069	.00102	.0067	.053	.0030	.00218	.295	.0074
%RSD	.28626	.10507	.26096	.20894	.12073	.40366	.50531	.30386
#1	2.4138	.97113	2.5575	25.308	2.4543	.53828	57.997	2.4130
#2	2.4080	.96916	2.5530	25.302	2.4560	.54242	58.410	2.4256
#3	2.4217	.96970	2.5661	25.396	2.4601	.54156	58.567	2.4259
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4979**	**2.4123**	**58.366**	**1.0441**	**.50281**	**62.567**	**.48845**	**2.3329**
Stddev	.0020	.0004	.238	.0045	.00163	.190	.00128	.0067
%RSD	.07985	.01668	.40725	.42658	.32372	.30287	.26239	.28555
#1	2.5000	2.4124	58.125	1.0446	.50218	62.364	.48719	2.3292
#2	2.4960	2.4119	58.372	1.0394	.50160	62.599	.48840	2.3289
#3	2.4977	2.4127	58.600	1.0482	.50466	62.739	.48975	2.3406
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: ICV Acquired: 11/18/2011 15:05:41 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018014 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	.47812	.50801	1.5096	2.6246
Stddev	.00067	.00141	.0031	.0071
%RSD	.13910	.27828	.20733	.27039
#1	.47747	.50856	1.5080	2.6191
#2	.47811	.50641	1.5076	2.6220
#3	.47880	.50907	1.5132	2.6326
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7763.1	62681.	152470.
Stddev	12.5	705.	330.
%RSD	.16131	1.1254	.21664
#1	7754.9	63365.	152570.
#2	7777.5	62723.	152740.
#3	7756.9	61956.	152100.

Sample Name: ICB Acquired: 11/18/2011 15:08:32 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018015 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00575	.00064	.00041	.00004	.00007	.00532	.00004	.01245
Stddev	.00024	.00093	.00070	.00015	.00004	.00041	.00008	.00095
%RSD	4.1162	143.54	169.42	375.58	58.601	7.6972	205.84	7.6521
#1	.00551	.00155	.00057	.00014	.00012	.00578	-.00002	.01175
#2	.00598	-.00030	.00101	-.00013	.00005	.00518	.00012	.01206
#3	.00575	.00068	-.00035	.00010	.00004	.00500	.00000	.01354
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00011	.00013	.00000	.00146	-.00075	.00084	.01173	.00008
Stddev	.00008	.00010	.00013	.00042	.00032	.00048	.01085	.00014
%RSD	69.097	71.342	32461.	28.812	43.548	57.345	92.465	172.52
#1	.00014	.00012	.00015	.00193	-.00112	.00114	.02307	.00022
#2	.00002	.00024	-.00007	.00112	-.00055	.00108	.01069	.00008
#3	.00017	.00005	-.00008	.00133	-.00056	.00028	.00144	-.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00035	-.00003	.11074	-.00158	.00011	-.01065	.00003	.00039
Stddev	.00013	.00013	.01456	.00094	.00019	.00743	.00008	.00010
%RSD	39.003	436.04	13.152	59.649	179.01	69.833	288.16	24.407
#1	.00039	.00003	.12718	-.00209	.00024	-.00235	-.00005	.00029
#2	.00045	.00006	.09946	-.00049	.00018	-.01288	.00003	.00043
#3	.00019	-.00018	.10557	-.00215	-.00011	-.01671	.00010	.00047
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: ICB Acquired: 11/18/2011 15:08:32 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018015 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00070**	**.00076**	**.00016**	**.00037**
Stddev	.00019	.00007	.00015	.00017
%RSD	27.333	9.2949	93.360	45.126
#1	.00087	.00068	.00019	.00023
#2	.00072	.00078	.00030	.00033
#3	.00050	.00081	.00000	.00056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8923.2**	**63453.**	**166000.**
Stddev	26.8	430.	136.
%RSD	.30055	.67816	.08163
#1	8951.1	63879.	165950.
#2	8921.1	63462.	165890.
#3	8897.6	63019.	166150.

Sample Name: MRLK1801 Acquired: 11/18/2011 15:11:31 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018016 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.22441	.09677	.01157	.01056	.01023	.09909	.01036	1.0118
Stddev	.00206	.00138	.00040	.00026	.00008	.00079	.00003	.0038
%RSD	.91776	1.4226	3.4364	2.4221	.77648	.79990	.33502	.37350
#1	.22210	.09607	.01112	.01083	.01015	.09849	.01035	1.0155
#2	.22510	.09588	.01176	.01052	.01031	.09878	.01040	1.0079
#3	.22604	.09836	.01185	.01032	.01022	.09998	.01034	1.0120
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00999	.00973	.01052	.21283	.01020	.01130	1.0203	.01053
Stddev	.00016	.00005	.00014	.00259	.00055	.00125	.0065	.00029
%RSD	1.6045	.48983	1.3673	1.2192	5.3691	11.040	.63299	2.7637
#1	.00990	.00978	.01039	.21538	.00986	.01219	1.0268	.01080
#2	.00990	.00970	.01067	.21293	.00991	.01184	1.0139	.01056
#3	.01018	.00970	.01049	.21019	.01083	.00987	1.0200	.01022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.01016	.00984	.99412	.00992	.01023	.98344	.01031	.01122
Stddev	.00003	.00019	.02370	.00081	.00013	.00569	.00004	.00062
%RSD	.31929	1.9014	2.3844	8.1648	1.2232	.57848	.41255	5.4958
#1	.01020	.01005	1.0053	.01085	.01009	.99000	.01033	.01060
#2	.01014	.00970	1.0101	.00937	.01033	.97993	.01027	.01123
#3	.01015	.00976	.96689	.00955	.01027	.98038	.01035	.01183
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: MRLK1801 Acquired: 11/18/2011 15:11:31 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018016 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00089**	**.01063**	**.01030**	**.02088**
Stddev	.00013	.00023	.00020	.00007
%RSD	14.772	2.2019	1.9177	.33697
#1	.00086	.01036	.01016	.02093
#2	.00103	.01075	.01022	.02080
#3	.00078	.01078	.01053	.02092
Check ?	None	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8829.5**	**63049.**	**164180.**
Stddev	8.0	306.	558.
%RSD	.09045	.48591	.33994
#1	8823.8	63354.	164710.
#2	8838.6	63051.	164230.
#3	8826.2	62742.	163600.

Sample Name: MRLK1802 Acquired: 11/18/2011 15:14:27 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018017 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.21411	.04916	.01020	.00528	.00410	.09799	.00504	.50879
Stddev	.00054	.00084	.00123	.00018	.00005	.00006	.00001	.00556
%RSD	.25093	1.7096	12.043	3.4384	1.1492	.06414	.15604	1.0935
#1	.21459	.05013	.00878	.00510	.00413	.09804	.00504	.50393
#2	.21353	.04874	.01100	.00529	.00412	.09792	.00504	.50757
#3	.21421	.04862	.01080	.00546	.00404	.09801	.00503	.51486
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00959	.00957	.00999	.10306	.00269	.10419	.20863	.00534
Stddev	.00012	.00013	.00018	.00166	.00015	.00077	.01636	.00035
%RSD	1.2956	1.3250	1.7560	1.6149	5.7518	.73827	7.8400	6.5519
#1	.00966	.00958	.00998	.10135	.00259	.10331	.19581	.00500
#2	.00944	.00944	.00982	.10315	.00262	.10472	.20303	.00533
#3	.00966	.00969	.01017	.10468	.00287	.10454	.22705	.00570
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00937	.00970	.97612	.00922	.00986	.46685	.00988	.01023
Stddev	.00012	.00010	.01482	.00140	.00021	.00571	.00006	.00087
%RSD	1.2645	1.0708	1.5182	15.139	2.1085	1.2238	.59727	8.4954
#1	.00933	.00980	.99012	.01062	.00962	.47342	.00986	.00926
#2	.00950	.00959	.97765	.00783	.00995	.46301	.00994	.01051
#3	.00927	.00971	.96060	.00921	.01001	.46412	.00983	.01093
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: MRLK1802 Acquired: 11/18/2011 15:14:27 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018017 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00977**	**.01063**	**.00963**	**.01085**
Stddev	.00012	.00041	.00020	.00012
%RSD	1.2065	3.8109	2.0250	1.1280
#1	.00965	.01068	.00969	.01072
#2	.00977	.01020	.00979	.01088
#3	.00988	.01100	.00942	.01096
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8866.9**	**62722.**	**164620.**
Stddev	6.6	717.	554.
%RSD	.07403	1.1424	.33676
#1	8874.3	63453.	165120.
#2	8864.3	62692.	164020.
#3	8861.9	62021.	164720.

Sample Name: ICSA1 Acquired: 11/18/2011 15:17:25 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018018 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	393.18	-.00127	.00138	.00046	.00004	.03482	.00315	477.89
Stddev	5.16	.00196	.00479	.00011	.00004	.00076	.00018	9.01
%RSD	1.3128	154.15	346.26	23.889	95.794	2.1936	5.6776	1.8858
#1	398.86	-.00076	-.00408	.00037	.00001	.03482	.00328	486.02
#2	391.87	.00038	.00489	.00058	.00003	.03405	.00323	468.20
#3	388.79	-.00344	.00334	.00042	.00008	.03558	.00295	479.45
Check ?	Chk Pass	None	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00076	-.00032	.00142	197.65	-.00029	.01932	197.71	.00146
Stddev	.00009	.00011	.00031	.14	.00015	.00046	1.13	.00057
%RSD	11.742	33.354	21.843	.07241	53.329	2.3982	.57038	38.935
#1	.00066	-.00044	.00158	197.67	-.00025	.01892	197.13	.00181
#2	.00079	-.00022	.00162	197.50	-.00016	.01922	196.99	.00177
#3	.00083	-.00031	.00106	197.78	-.00046	.01983	199.01	.00080
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.00102	.00154	.16213	.00092	.00007	.07594	.00083	-.00026
Stddev	.00011	.00035	.01773	.00259	.00013	.00545	.00022	.00106
%RSD	10.308	22.873	10.937	280.42	178.01	7.1744	26.902	414.31
#1	-.00109	.00123	.14504	-.00196	.00017	.07726	.00066	-.00058
#2	-.00107	.00192	.16092	.00169	-.00008	.06995	.00109	.00093
#3	-.00090	.00148	.18044	.00304	.00013	.08061	.00075	-.00111
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Sample Name: ICSA1 Acquired: 11/18/2011 15:17:25 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018018 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	.00181	.00556	.00073	.00247
Stddev	.00029	.00085	.00036	.00034
%RSD	16.210	15.323	50.101	13.740
#1	.00176	.00608	.00065	.00285
#2	.00154	.00601	.00112	.00223
#3	.00213	.00458	.00040	.00232
Check ?	None	None	None	None
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	6766.3	58858.	137780.
Stddev	14.4	574.	396.
%RSD	.21225	.97592	.28765
#1	6764.7	59336.	137320.
#2	6781.3	59017.	137980.
#3	6752.8	58221.	138030.

Sample Name: ICSAB1 Acquired: 11/18/2011 15:20:35 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018019 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**381.69**	**1.0156**	**1.0609**	**.48696**	**.49401**	**.54160**	**.95304**	**470.56**
Stddev	2.93	.0015	.0006	.00158	.00229	.00067	.00149	3.39
%RSD	.76837	.14830	.05570	.32429	.46287	.12451	.15626	.71942
#1	383.76	1.0139	1.0615	.48876	.49656	.54141	.95133	472.62
#2	378.34	1.0169	1.0603	.48628	.49213	.54235	.95405	472.41
#3	382.99	1.0158	1.0610	.48583	.49335	.54105	.95373	466.65
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.46925**	**.48201**	**.53123**	**195.57**	**.96189**	**1.1360**	**189.85**	**.46890**
Stddev	.00053	.00110	.00061	.53	.00244	.0066	.44	.00287
%RSD	.11360	.22888	.11566	.27329	.25321	.58273	.23250	.61149
#1	.46910	.48075	.53190	196.15	.96446	1.1432	190.33	.47150
#2	.46881	.48246	.53070	195.10	.95962	1.1346	189.76	.46939
#3	.46984	.48281	.53109	195.45	.96159	1.1301	189.46	.46582
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**1.0119**	**.95246**	**76.540**	**1.0372**	**1.0699**	**82.009**	**.47722**	**.86039**
Stddev	.0006	.00176	.153	.0013	.0010	.094	.00092	.00126
%RSD	.06262	.18495	.20050	.12155	.09702	.11469	.19247	.14644
#1	1.0113	.95170	76.570	1.0376	1.0687	81.955	.47736	.86075
#2	1.0118	.95121	76.373	1.0382	1.0702	81.954	.47624	.86143
#3	1.0126	.95448	76.676	1.0358	1.0707	82.117	.47806	.85899
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: ICSAB1 Acquired: 11/18/2011 15:20:35 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018019 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.94339**	**.99405**	**.50012**	**1.0498**
Stddev	.00194	.00793	.00162	.0014
%RSD	.20609	.79813	.32334	.13469
#1	.94453	1.0032	.50195	1.0499
#2	.94115	.98919	.49887	1.0484
#3	.94450	.98976	.49955	1.0512
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6816.1**	**59928.**	**138780.**
Stddev	18.0	371.	223.
%RSD	.26360	.61945	.16048
#1	6820.1	60301.	138900.
#2	6831.7	59924.	138920.
#3	6796.4	59558.	138520.

Sample Name: CCV1 Acquired: 11/18/2011 15:23:30 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018020 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**101.93**	**1.5101**	**1.0463**	**1.9564**	**1.4725**	**2.5489**	**1.9909**	**74.378**
Stddev	.95	.0006	.0041	.0107	.0062	.0037	.0038	.334
%RSD	.92785	.03950	.39352	.54841	.41991	.14432	.19187	.44876
#1	100.97	1.5103	1.0471	1.9533	1.4683	2.5447	1.9906	74.107
#2	102.86	1.5106	1.0500	1.9684	1.4796	2.5513	1.9949	74.277
#3	101.97	1.5094	1.0418	1.9476	1.4696	2.5507	1.9872	74.751
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4316**	**.96755**	**2.5808**	**25.412**	**2.4207**	**.49776**	**57.572**	**2.3700**
Stddev	.0060	.00041	.0057	.046	.0013	.00552	.393	.0196
%RSD	.24624	.04214	.21943	.17912	.05301	1.1080	.68303	.82743
#1	2.4277	.96718	2.5761	25.389	2.4202	.49951	57.127	2.3557
#2	2.4385	.96799	2.5871	25.464	2.4222	.50220	57.874	2.3924
#3	2.4286	.96748	2.5791	25.382	2.4198	.49159	57.714	2.3620
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4799**	**2.3914**	**59.553**	**1.0432**	**.50901**	**63.824**	**.48946**	**2.3466**
Stddev	.0015	.0029	.143	.0025	.00123	.078	.00074	.0044
%RSD	.06133	.12172	.23945	.24064	.24158	.12154	.15191	.18700
#1	2.4782	2.3880	59.411	1.0444	.50818	63.734	.48946	2.3509
#2	2.4810	2.3927	59.552	1.0448	.51042	63.869	.48872	2.3466
#3	2.4806	2.3934	59.696	1.0403	.50843	63.868	.49021	2.3421
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV1 Acquired: 11/18/2011 15:23:30 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018020 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.50440**	**.49426**	**1.5077**	**2.6186**
Stddev	.00188	.00271	.0032	.0038
%RSD	.37197	.54908	.21154	.14444
#1	.50263	.49286	1.5052	2.6144
#2	.50420	.49739	1.5113	2.6196
#3	.50637	.49253	1.5067	2.6218
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7811.1**	**62105.**	**150960.**
Stddev	17.8	830.	479.
%RSD	.22827	1.3370	.31699
#1	7828.2	62992.	151070.
#2	7792.6	61978.	150440.
#3	7812.5	61346.	151380.

Sample Name: CCB1 Acquired: 11/18/2011 15:26:17 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018021 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01681**	**.00062**	**.00084**	**.00021**	**.00010**	**.00457**	**.00012**
Stddev	.00059	.00035	.00165	.00017	.00012	.00053	.00005
%RSD	3.4812	57.057	197.93	81.998	119.87	11.656	44.200
#1	.01745	.00098	.00223	.00033	-.00002	.00494	.00013
#2	.01666	.00061	.00127	.00001	.00022	.00481	.00006
#3	.01631	.00028	-.00099	.00030	.00010	.00396	.00017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.07778**	**-.00002**	**.00008**	**.00028**	**.00374**	**-.00034**	**.00133**
Stddev	.00138	.00004	.00012	.00006	.00500	.00047	.00132
%RSD	1.7717	184.55	150.99	22.594	133.92	135.95	98.883
#1	.07904	.00001	.00019	.00029	.00062	.00010	.00272
#2	.07798	-.00006	.00009	.00034	.00108	-.00083	.00011
#3	.07631	-.00002	-.00005	.00021	.00951	-.00030	.00116
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.03240						
Low Limit	-.03240						

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00674**	**.00018**	**.00041**	**.00004**	**.17075**	**.00133**	**.00027**
Stddev	.00373	.00049	.00007	.00011	.01741	.00276	.00017
%RSD	55.344	271.73	16.417	272.19	10.194	207.35	63.074
#1	.00378	.00028	.00045	-.00008	.15070	-.00072	.00038
#2	.00551	-.00035	.00033	.00014	.18204	.00025	.00007
#3	.01093	.00061	.00044	.00006	.17950	.00446	.00036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB1 Acquired: 11/18/2011 15:26:17 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018021 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00264**	**.00020**	**-.00004**	**.00041**	**.00114**	**.00015**	**.00338**
Stddev	.00152	.00008	.00056	.00042	.00077	.00020	.00014
%RSD	57.676	40.458	1431.8	102.91	66.834	137.41	4.1857
#1	-.00092	.00020	-.00044	.00077	.00119	.00031	.00353
#2	-.00321	.00012	-.00028	.00051	.00188	-.00008	.00333
#3	-.00381	.00029	.00061	-.00005	.00036	.00022	.00326
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8830.7**	**62061.**	**161700.**
Stddev	20.9	368.	256.
%RSD	.23657	.59241	.15824
#1	8838.6	62398.	161630.
#2	8846.4	62116.	161490.
#3	8807.0	61669.	161980.

Sample Name: CCV4 Acquired: 11/18/2011 16:42:14 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018047 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**97.816**	**1.4716**	**1.0314**	**1.9875**	**1.5063**	**2.4757**	**1.9817**	**74.238**
Stddev	.329	.0050	.0045	.0047	.0037	.0031	.0029	.231
%RSD	.33684	.34051	.43309	.23649	.24544	.12317	.14786	.31139
#1	97.939	1.4721	1.0284	1.9889	1.5053	2.4727	1.9820	73.988
#2	98.066	1.4763	1.0365	1.9823	1.5032	2.4755	1.9845	74.281
#3	97.443	1.4663	1.0291	1.9914	1.5104	2.4788	1.9786	74.444
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4147**	**.97704**	**2.5083**	**25.101**	**2.4180**	**.51168**	**58.898**	**2.4287**
Stddev	.0038	.00191	.0071	.038	.0059	.00200	.239	.0112
%RSD	.15806	.19553	.28215	.15331	.24369	.39050	.40581	.46015
#1	2.4114	.97854	2.5027	25.094	2.4195	.51204	58.797	2.4265
#2	2.4189	.97489	2.5060	25.142	2.4115	.50952	58.726	2.4187
#3	2.4140	.97769	2.5162	25.066	2.4230	.51347	59.171	2.4408
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.5114**	**2.4078**	**59.732**	**1.0213**	**.49862**	**64.383**	**.48949**	**2.2927**
Stddev	.0044	.0037	.048	.0042	.00054	.101	.00057	.0043
%RSD	.17478	.15448	.08104	.41086	.10826	.15660	.11590	.18945
#1	2.5139	2.4113	59.717	1.0200	.49801	64.268	.48936	2.2919
#2	2.5063	2.4039	59.786	1.0260	.49880	64.457	.49011	2.2974
#3	2.5140	2.4082	59.693	1.0179	.49904	64.424	.48899	2.2889
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV4 Acquired: 11/18/2011 16:42:14 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018047 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.50513**	**.50117**	**1.4975**	**2.6435**
Stddev	.00119	.00179	.0016	.0036
%RSD	.23470	.35812	.10836	.13576
#1	.50507	.50040	1.4965	2.6452
#2	.50635	.49989	1.4994	2.6394
#3	.50398	.50322	1.4967	2.6459
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7567.7	59471.	**148580.**
Stddev	9.5	507.	399.
%RSD	.12611	.85268	.26846
#1	7558.7	60006.	148440.
#2	7577.7	59410.	148270.
#3	7566.7	58998.	149030.

Sample Name: CCB4 Acquired: 11/18/2011 16:45:03 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018048 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00633	.00086	.00061	.00006	.00013	.00219	.00013
Stddev	.00283	.00050	.00098	.00021	.00003	.00029	.00004
%RSD	44.678	57.969	162.01	347.65	26.233	13.143	33.875
#1	.00953	.00037	.00171	.00017	.00009	.00252	.00016
#2	.00529	.00084	.00027	.00020	.00016	.00206	.00014
#3	.00417	.00137	-.00016	-.00018	.00015	.00199	.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F .10477	.00011	.00007	-.00017	.00212	-.00013	.00086
Stddev	.00286	.00002	.00031	.00004	.00591	.00056	.00047
%RSD	2.7332	22.108	456.12	23.965	278.99	418.87	54.248
#1	.10435	.00011	.00026	-.00014	.00790	-.00047	.00047
#2	.10782	.00009	.00024	-.00021	.00237	-.00044	.00138
#3	.10213	.00014	-.00029	-.00015	-.00391	.00051	.00073
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.03240						
Low Limit	-.03240						

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.01308	.00020	.00041	.00007	.09532	-.00087	.00001
Stddev	.01544	.00035	.00006	.00025	.04512	.00070	.00013
%RSD	118.02	172.94	13.512	364.28	47.338	80.557	2287.5
#1	-.00464	-.00016	.00047	-.00021	.13528	-.00046	.00012
#2	.02360	.00023	.00040	.00014	.10429	-.00168	.00004
#3	.02028	.00053	.00036	.00027	.04639	-.00047	-.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB4 Acquired: 11/18/2011 16:45:03 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018048 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00304	.00003	.00060	.00020	.00041	.00016	.00499
Stddev	.00356	.00014	.00034	.00041	.00098	.00025	.00013
%RSD	117.16	451.05	55.515	199.66	236.71	154.65	2.6008
#1	.00371	.00000	.00057	-.00003	.00091	.00005	.00487
#2	.00623	-.00009	.00029	.00067	.00104	-.00001	.00497
#3	-.00081	.00018	.00095	-.00004	-.00071	.00045	.00512
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8432.1	59570.	158570.
Stddev	2.4	428.	260.
%RSD	.02822	.71882	.16416
#1	8434.5	60063.	158500.
#2	8429.8	59293.	158860.
#3	8432.0	59353.	158360.

Sample Name: IPK031WB Acquired: 11/18/2011 16:48:04 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018049 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00191**	**-.00092**	**-.00019**	**-.00014**	**-.00005**	**-.00015**	**.00000**	**.00119**
Stddev	.00032	.00078	.00124	.00012	.00003	.00019	.00002	.00275
%RSD	16.659	84.057	646.24	84.728	60.484	130.79	724.96	230.46
#1	-.00211	-.00124	-.00142	-.00019	-.00007	-.00005	.00000	-.00022
#2	-.00154	-.00004	.00106	-.00022	-.00001	-.00002	-.00002	-.00056
#3	-.00208	-.00149	-.00022	.00000	-.00007	-.00037	.00003	.00437
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00009**	**.00006**	**-.00012**	**.00108**	**-.00024**	**.00076**	**-.00022**	**-.00022**
Stddev	.00008	.00009	.00013	.00162	.00017	.00074	.00707	.00043
%RSD	95.632	144.77	108.79	149.63	69.936	97.451	3285.2	199.81
#1	.00008	.00002	-.00002	.00286	-.00033	.00003	.00394	-.00043
#2	.00017	.00016	-.00008	-.00031	-.00033	.00151	-.00838	.00028
#3	.00001	.00000	-.00026	.00070	-.00005	.00073	.00380	-.00050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00008**	**.00060**	**.02068**	**-.00240**	**.00014**	**-.03245**	**.00000**	**.00104**
Stddev	.00023	.00005	.00578	.00028	.00012	.00577	.00019	.00032
%RSD	298.99	8.0226	27.963	11.626	86.988	17.784	6548.6	30.462
#1	.00024	.00064	.02467	-.00264	.00004	-.02588	-.00013	.00069
#2	-.00019	.00061	.01405	-.00209	.00011	-.03670	.00022	.00131
#3	.00018	.00055	.02331	-.00247	.00028	-.03477	-.00008	.00113
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: IPK031WB Acquired: 11/18/2011 16:48:04 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018049 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	.00058	.00091	.00005	.00077
Stddev	.00037	.00052	.00013	.00004
%RSD	64.927	56.920	235.75	5.0397
#1	.00056	.00034	-.00004	.00082
#2	.00095	.00135	.00020	.00074
#3	.00021	.00105	.00000	.00076
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8615.6	61761.	163350.
Stddev	259.8	322.	1363.
%RSD	3.0156	.52177	.83459
#1	8587.0	62076.	162700.
#2	8888.5	61774.	162440.
#3	8371.3	61432.	164920.

Sample Name: IPK031WL Acquired: 11/18/2011 16:51:05 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018050 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.0840	2.5350	.53219	.50216	.51701	.51841	.51538
Stddev	.0023	.0172	.00338	.00261	.00097	.00182	.00328
%RSD	.04494	.67904	.63580	.51882	.18728	.35070	.63636
#1	5.0818	2.5162	.52995	.50486	.51799	.51736	.51359
#2	5.0838	2.5387	.53055	.50195	.51699	.51736	.51339
#3	5.0864	2.5500	.53609	.49967	.51605	.52051	.51917
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	49.674	.49771	.50026	.51307	5.2003	.49975	F .00230
Stddev	.174	.00577	.00067	.00335	.0539	.00116	.00080
%RSD	.34963	1.1583	.13315	.65222	1.0365	.23232	34.683
#1	49.475	.49670	.49988	.51243	5.2021	.50076	.00146
#2	49.795	.49252	.50103	.51669	5.1456	.49849	.00240
#3	49.753	.50392	.49988	.51009	5.2533	.50001	.00305
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							.50000
Range							-20.000%

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	49.077	.49652	.52349	.49982	49.350	.52288	.50777
Stddev	.025	.00103	.00106	.00065	.069	.00621	.00033
%RSD	.05092	.20703	.20197	.13077	.14046	1.1868	.06486
#1	49.056	.49770	.52311	.50034	49.325	.51781	.50744
#2	49.069	.49586	.52468	.50003	49.428	.52103	.50776
#3	49.105	.49599	.52266	.49909	49.297	.52980	.50810
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: IPK031WL Acquired: 11/18/2011 16:51:05 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018050 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**53.566**	**.50222**	**.48761**	.48772	**.52129**	**.51808**	**.54460**
Stddev	.022	.00115	.00401	.00188	.00183	.00254	.00197
%RSD	.04021	.22920	.82179	.38507	.35054	.49117	.36129
#1	53.568	.50288	.48349	.48868	.52067	.51782	.54535
#2	53.587	.50288	.48784	.48556	.52335	.51568	.54237
#3	53.544	.50089	.49150	.48893	.51985	.52075	.54609
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7804.9**	**61376.**	**152230.**
Stddev	75.8	651.	836.
%RSD	.97139	1.0605	.54913
#1	7797.4	62120.	152690.
#2	7733.1	61094.	151260.
#3	7884.2	60913.	152720.

Sample Name: IPK031WC Acquired: 11/18/2011 16:53:47 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018051 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**5.1117**	**2.5730**	**.54236**	**.51029**	**.52563**	**.52205**	**.52419**
Stddev	.0077	.0046	.00082	.00073	.00115	.00172	.00025
%RSD	.15142	.17863	.15043	.14375	.21962	.33016	.04702
#1	5.1056	2.5691	.54323	.51052	.52449	.52100	.52443
#2	5.1092	2.5718	.54161	.50947	.52680	.52112	.52393
#3	5.1204	2.5780	.54224	.51088	.52560	.52404	.52419
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**50.460**	**.50351**	**.50655**	**.51670**	**5.2609**	**.50541**	F **.00374**
Stddev	.113	.00119	.00067	.00151	.0110	.00039	.00076
%RSD	.22480	.23655	.13316	.29229	.20868	.07629	20.390
#1	50.402	.50352	.50733	.51574	5.2725	.50560	.00442
#2	50.387	.50231	.50607	.51592	5.2594	.50497	.00388
#3	50.591	.50469	.50626	.51844	5.2507	.50567	.00292
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							.50000
Range							-20.000%

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**50.082**	**.50397**	**.52887**	**.50535**	**49.867**	**.53238**	**.51236**
Stddev	.026	.00048	.00084	.00097	.197	.00391	.00112
%RSD	.05253	.09571	.15933	.19229	.39448	.73494	.21798
#1	50.053	.50362	.52895	.50497	49.784	.53110	.51134
#2	50.090	.50377	.52968	.50645	49.726	.52927	.51219
#3	50.104	.50452	.52800	.50462	50.092	.53677	.51355
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: IPK031WC Acquired: 11/18/2011 16:53:47 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018051 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**54.055**	**.50431**	**.49601**	**.49309**	**.52891**	**.52315**	**.55115**
Stddev	.178	.00217	.00173	.00065	.00261	.00027	.00127
%RSD	.32886	.43065	.34946	.13260	.49424	.05251	.22990
#1	53.973	.50392	.49473	.49257	.52942	.52347	.54984
#2	53.933	.50236	.49798	.49382	.53123	.52301	.55237
#3	54.259	.50665	.49531	.49287	.52608	.52297	.55123
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7764.6**	**60340.**	**150870.**
Stddev	15.3	639.	198.
%RSD	.19673	1.0587	.13128
#1	7764.0	60849.	150650.
#2	7749.6	60548.	150910.
#3	7780.1	59623.	151040.

Sample Name: K108-02A Acquired: 11/18/2011 16:56:28 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018052 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**5.3177**	**2.5388**	**.57210**	**.62510**	**.54876**	**.56847**	**.53549**	**110.02**
Stddev	.0188	.0073	.00050	.00169	.00114	.00009	.00169	.29
%RSD	.35286	.28948	.08761	.27069	.20758	.01634	.31537	.26705
#1	5.3312	2.5303	.57268	.62705	.54932	.56838	.53354	109.73
#2	5.2962	2.5435	.57178	.62403	.54745	.56856	.53646	109.99
#3	5.3256	2.5425	.57184	.62423	.54951	.56846	.53647	110.32

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.52647**	**.52457**	**.53676**	**5.9915**	**.52826**	**.03852**	**62.107**	**.53662**
Stddev	.00025	.00034	.00197	.0208	.00119	.00101	.207	.00143
%RSD	.04669	.06491	.36774	.34634	.22467	2.6151	.33371	.26583
#1	.52621	.52430	.53900	5.9795	.52917	.03808	61.984	.53746
#2	.52670	.52446	.53601	6.0155	.52692	.03782	61.990	.53742
#3	.52648	.52496	.53528	5.9796	.52869	.03968	62.346	.53497

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.53095**	**.46286**	**52.551**	**.55408**	**.49734**	**97.975**	**1.3104**	**.49994**
Stddev	.00046	.00077	.071	.00258	.00076	.096	.0022	.00197
%RSD	.08656	.16558	.13584	.46491	.15316	.09784	.16932	.39446
#1	.53042	.46208	52.476	.55163	.49817	97.867	1.3092	.49810
#2	.53126	.46361	52.618	.55677	.49668	98.007	1.3130	.49971
#3	.53116	.46289	52.560	.55386	.49716	98.051	1.3091	.50202

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.48836**	**.52242**	**.54475**	**.63700**
Stddev	.00250	.00053	.00194	.00034
%RSD	.51191	.10164	.35563	.05324
#1	.48692	.52196	.54472	.63701
#2	.48691	.52300	.54671	.63666
#3	.49125	.52230	.54283	.63734

Sample Name: K108-02A Acquired: 11/18/2011 16:56:28 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018052 Type: Diln Factor:
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7605.2**	**60717.**	**150300.**
Stddev	6.4	449.	261.
%RSD	.08378	.73961	.17334
#1	7599.0	61234.	150580.
#2	7611.7	60492.	150270.
#3	7605.0	60425.	150060.

Sample Name: K108-02 Acquired: 11/18/2011 16:59:09 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018053 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00133	.00196	.00238	.08975	.00003	.05556	.00006	62.067
Stddev	.00104	.00107	.00081	.00032	.00001	.00031	.00001	.004
%RSD	77.737	54.458	33.956	.35913	42.161	.55642	21.989	.00714
#1	.00014	.00316	.00329	.09001	.00002	.05592	.00006	62.069
#2	.00205	.00111	.00206	.08984	.00002	.05541	.00005	62.069
#3	.00180	.00162	.00178	.08939	.00004	.05536	.00008	62.061

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00947	-.00031	.00016	.60745	.00163	.03587	12.631	.00779
Stddev	.00010	.00006	.00012	.00721	.00043	.00082	.021	.00041
%RSD	1.0964	20.367	79.934	1.1876	26.630	2.2925	.16262	5.2049
#1	.00957	-.00024	.00001	.61127	.00208	.03597	12.638	.00753
#2	.00946	-.00034	.00021	.61195	.00121	.03663	12.608	.00826
#3	.00936	-.00036	.00024	.59913	.00160	.03500	12.648	.00758

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.01485	.00007	2.3162	.00040	.00008	44.624	.84434	.00044
Stddev	.00008	.00005	.0314	.00039	.00002	.040	.00112	.00059
%RSD	.56061	71.224	1.3536	98.033	24.609	.08859	.13221	133.89
#1	.01494	.00005	2.3311	.00083	.00008	44.579	.84476	.00066
#2	.01483	.00003	2.3374	.00007	.00010	44.645	.84519	.00089
#3	.01478	.00013	2.2802	.00029	.00006	44.649	.84308	-.00023

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	.00049	.00140	.00549	.06279
Stddev	.00056	.00005	.00005	.00011
%RSD	113.53	3.4832	.90482	.18131
#1	-.00014	.00135	.00554	.06269
#2	.00090	.00145	.00550	.06277
#3	.00071	.00139	.00544	.06291

Sample Name: K108-02 Acquired: 11/18/2011 16:59:09 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018053 Type: Diln Factor:
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8068.5**	**61508.**	**156360.**
Stddev	7.9	248.	311.
%RSD	.09736	.40359	.19906
#1	8065.6	61761.	156030.
#2	8077.4	61498.	156660.
#3	8062.5	61265.	156380.

Sample Name: K108-02J Acquired: 11/18/2011 17:02:03 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018054 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00226**	**.00066**	**.00171**	**.01965**	**-.00001**	**.01112**	**-.00002**	**13.307**
Stddev	.00085	.00081	.00059	.00021	.00001	.00034	.00004	.009
%RSD	37.424	123.42	34.389	1.0516	90.951	3.0941	248.62	.06505
#1	.00321	.00112	.00112	.01954	-.00001	.01149	-.00001	13.299
#2	.00196	-.00028	.00172	.01989	-.00002	.01080	-.00006	13.305
#3	.00160	.00114	.00229	.01952	.00000	.01108	.00002	13.316

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00193**	**-.00017**	**.00004**	**.13121**	**.00063**	**.00936**	**2.7372**	**.00177**
Stddev	.00014	.00017	.00017	.00525	.00026	.00107	.0231	.00018
%RSD	7.0380	100.05	451.41	3.9977	40.898	11.422	.84283	10.221
#1	.00209	-.00036	.00023	.13262	.00056	.00836	2.7258	.00167
#2	.00183	-.00010	-.00001	.12540	.00042	.00923	2.7220	.00198
#3	.00189	-.00005	-.00010	.13561	.00092	.01049	2.7637	.00166

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00309**	**-.00008**	**.50004**	**.00028**	**.00023**	**9.3457**	**.18055**	**.00017**
Stddev	.00006	.00013	.01882	.00092	.00017	.0054	.00027	.00016
%RSD	1.9257	158.18	3.7637	333.66	75.976	.05768	.14928	95.852
#1	.00316	-.00021	.47839	.00062	.00009	9.3403	.18081	.00036
#2	.00306	-.00010	.51251	.00097	.00017	9.3457	.18027	.00006
#3	.00305	.00006	.50922	-.00077	.00042	9.3510	.18057	.00009

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00079**	**.00068**	**.00109**	**.01432**
Stddev	.00004	.00015	.00011	.00007
%RSD	4.7852	22.520	10.505	.46942
#1	.00083	.00061	.00117	.01426
#2	.00076	.00086	.00113	.01431
#3	.00079	.00058	.00096	.01440

Sample Name: K108-02J Acquired: 11/18/2011 17:02:03 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018054 Type: Diln Factor:
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8340.8**	**60514.**	**158530.**
Stddev	7.6	184.	327.
%RSD	.09160	.30380	.20634
#1	8344.2	60719.	158910.
#2	8332.1	60458.	158380.
#3	8346.1	60364.	158310.

Sample Name: CCV5 Acquired: 11/18/2011 17:16:13 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018059 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**98.674**	**1.4800**	**1.0194**	**2.0242**	**1.5213**	**2.4495**	**1.9503**	**74.370**
Stddev	.465	.0154	.0096	.0121	.0074	.0174	.0135	.158
%RSD	.47174	1.0401	.93894	.59967	.48533	.70949	.69269	.21197
#1	98.204	1.4811	1.0192	2.0314	1.5246	2.4512	1.9497	74.234
#2	98.684	1.4949	1.0290	2.0102	1.5129	2.4314	1.9640	74.332
#3	99.135	1.4641	1.0099	2.0309	1.5265	2.4661	1.9370	74.543
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.3707**	**.97526**	**2.4517**	**24.830**	**2.4353**	**.51951**	**59.652**	**2.4595**
Stddev	.0328	.00047	.0131	.374	.0024	.00269	.268	.0152
%RSD	1.3822	.04867	.53550	1.5071	.09636	.51791	.44890	.61901
#1	2.3700	.97522	2.4601	24.823	2.4326	.52117	59.632	2.4601
#2	2.3382	.97576	2.4584	24.460	2.4363	.51641	59.394	2.4440
#3	2.4038	.97481	2.4366	25.208	2.4370	.52097	59.929	2.4744
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.5291**	**2.4128**	**59.572**	**1.0134**	**.48876**	**64.020**	**.48748**	**2.2704**
Stddev	.0022	.0019	.195	.0118	.00047	.137	.00170	.0194
%RSD	.08646	.07935	.32772	1.1655	.09530	.21408	.34804	.85402
#1	2.5280	2.4149	59.547	1.0117	.48916	64.024	.48846	2.2675
#2	2.5316	2.4111	59.390	1.0260	.48825	63.881	.48552	2.2912
#3	2.5277	2.4125	59.778	1.0025	.48888	64.155	.48846	2.2527
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV5 Acquired: 11/18/2011 17:16:13 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018059 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.51158**	**.51104**	**1.4794**	**2.6598**
Stddev	.00257	.00346	.0109	.0050
%RSD	.50322	.67763	.73360	.18716
#1	.50881	.51386	1.4804	2.6540
#2	.51389	.50718	1.4681	2.6625
#3	.51206	.51209	1.4897	2.6628
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7565.7	**60752.**	**151560.**
Stddev	18.6	717.	1078.
%RSD	.24550	1.1795	.71147
#1	7587.1	61133.	151960.
#2	7555.2	61197.	150340.
#3	7554.7	59925.	152380.

Sample Name: CCB5 Acquired: 11/18/2011 17:19:02 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018060 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00466**	**.00071**	**.00049**	**.00003**	**.00015**	**.00366**	**.00011**
Stddev	.00047	.00134	.00102	.00003	.00003	.00035	.00006
%RSD	10.024	189.22	208.55	101.58	19.230	9.6337	55.995
#1	.00514	.00002	.00155	.00001	.00015	.00399	.00006
#2	.00421	.00225	.00042	.00006	.00018	.00369	.00018
#3	.00463	-.00015	-.00049	.00001	.00012	.00329	.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.07012**	**.00011**	**.00008**	**-.00022**	**.00249**	**-.00037**	**.00158**
Stddev	.00178	.00017	.00007	.00013	.00272	.00024	.00083
%RSD	2.5414	151.43	98.170	56.863	109.48	64.827	52.486
#1	.07212	.00023	-.00001	-.00021	.00563	-.00021	.00155
#2	.06870	-.00008	.00014	-.00036	.00076	-.00026	.00242
#3	.06954	.00017	.00009	-.00011	.00108	-.00065	.00077
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.03240						
Low Limit	-.03240						

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01126**	**.00042**	**.00033**	**.00008**	**.13814**	**-.00119**	**.00013**
Stddev	.01831	.00021	.00013	.00010	.03348	.00087	.00022
%RSD	162.61	50.301	38.837	124.96	24.233	73.120	171.08
#1	.02629	.00029	.00046	.00019	.17667	-.00035	.00038
#2	.01661	.00030	.00021	.00003	.11623	-.00208	-.00003
#3	-.00913	.00066	.00030	.00002	.12151	-.00112	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB5 Acquired: 11/18/2011 17:19:02 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018060 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.02189**	**.00004**	**.00049**	**.00083**	**.00055**	**.00008**	**.00325**
Stddev	.00246	.00004	.00007	.00037	.00087	.00008	.00008
%RSD	11.234	94.085	15.042	44.901	158.97	105.38	2.3389
#1	-.01953	.00008	.00057	.00084	-.00046	-.00001	.00325
#2	-.02169	.00000	.00043	.00045	.00108	.00011	.00317
#3	-.02444	.00004	.00047	.00120	.00102	.00014	.00332
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8357.9**	**59930.**	**159870.**
Stddev	25.2	521.	298.
%RSD	.30134	.86981	.18637
#1	8371.3	60528.	160080.
#2	8373.6	59577.	159990.
#3	8328.9	59683.	159530.

Sample Name: K084-01 Acquired: 11/18/2011 17:22:02 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018061 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.01450	-.00032	.00155	.14518	.00002	.08270	-.00005	136.35
Stddev	.00118	.00166	.00007	.00102	.00004	.00042	.00007	.41
%RSD	8.1543	516.69	4.3518	.70173	228.05	.51160	129.55	.30094
#1	.01570	-.00222	.00154	.14614	.00005	.08317	-.00003	135.92
#2	.01333	.00083	.00162	.14529	-.00003	.08256	.00000	136.39
#3	.01446	.00042	.00149	.14411	.00004	.08236	-.00013	136.73

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00037	-.00033	.00037	.10200	.00105	.01092	23.461	.14869
Stddev	.00012	.00010	.00005	.00530	.00016	.00160	.039	.00130
%RSD	32.342	31.373	14.106	5.2003	15.254	14.630	.16818	.87465
#1	.00024	-.00042	.00037	.10802	.00121	.01083	23.418	.14919
#2	.00042	-.00034	.00042	.10000	.00089	.01256	23.495	.14966
#3	.00046	-.00022	.00032	.09799	.00107	.00937	23.470	.14721

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00362	.00010	3.4649	-.00116	.00008	63.466	1.1898	.00001
Stddev	.00016	.00004	.0416	.00175	.00019	.036	.0035	.00014
%RSD	4.4631	37.347	1.2000	150.43	219.59	.05597	.29593	1038.8
#1	.00362	.00008	3.4321	.00050	.00019	63.507	1.1928	.00017
#2	.00345	.00014	3.5117	-.00101	.00019	63.444	1.1908	-.00010
#3	.00378	.00007	3.4511	-.00298	-.00013	63.446	1.1859	-.00002

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	.00027	.00195	-.00004	.00221
Stddev	.00026	.00068	.00021	.00017
%RSD	96.224	34.709	483.21	7.5861
#1	.00009	.00118	.00009	.00211
#2	.00015	.00245	.00007	.00211
#3	.00057	.00221	-.00029	.00240

Sample Name: K084-01 Acquired: 11/18/2011 17:22:02 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018061 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7591.4**	**59667.**	**151080.**
Stddev	8.7	536.	651.
%RSD	.11430	.89814	.43064
#1	7597.0	60286.	150330.
#2	7595.8	59369.	151480.
#3	7581.4	59347.	151430.

Sample Name: K084-02 Acquired: 11/18/2011 17:24:59 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018062 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01570**	**-.00139**	**.00230**	**.08376**	**-.00002**	**.08355**	**-.00002**	**145.73**
Stddev	.00058	.00112	.00163	.00016	.00004	.00035	.00008	.63
%RSD	3.6811	80.336	70.719	.19600	261.55	.41879	423.56	.43172
#1	.01637	-.00015	.00117	.08384	.00000	.08395	.00001	145.00
#2	.01532	-.00170	.00416	.08357	-.00006	.08329	.00004	146.11
#3	.01543	-.00232	.00157	.08387	.00001	.08341	-.00012	146.08

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00038**	**-.00031**	**.00108**	**.39522**	**.00106**	**.01137**	**25.770**	**.24738**
Stddev	.00004	.00019	.00016	.00399	.00114	.00062	.136	.00105
%RSD	9.3350	61.326	15.097	1.0083	107.76	5.4138	.52774	.42637
#1	.00034	-.00023	.00101	.39713	.00175	.01186	25.627	.24859
#2	.00040	-.00053	.00097	.39064	-.00026	.01068	25.784	.24672
#3	.00040	-.00017	.00127	.39789	.00169	.01158	25.898	.24682

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00486**	**.00026**	**3.8328**	**-.00062**	**.00008**	**66.476**	**1.2320**	**.00049**
Stddev	.00015	.00011	.0061	.00192	.00009	.068	.0042	.00069
%RSD	3.0248	42.748	.15946	309.03	112.73	.10253	.33822	141.04
#1	.00493	.00037	3.8262	-.00090	.00018	66.522	1.2366	-.00027
#2	.00469	.00025	3.8339	-.00239	.00003	66.398	1.2285	.00067
#3	.00496	.00015	3.8383	.00142	.00002	66.509	1.2310	.00107

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00054**	**.00258**	**-.00032**	**.00595**
Stddev	.00035	.00016	.00007	.00023
%RSD	65.391	6.1886	21.568	3.8252
#1	.00022	.00249	-.00031	.00581
#2	.00047	.00277	-.00039	.00583
#3	.00092	.00249	-.00025	.00621

Sample Name: K084-02 Acquired: 11/18/2011 17:24:59 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018062 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7631.8	60311.	151220.
Stddev	17.3	534.	390.
%RSD	.22637	.88484	.25801
#1	7620.6	60838.	150830.
#2	7623.1	60324.	151610.
#3	7651.7	59771.	151210.

Sample Name: K084-03 Acquired: 11/18/2011 17:27:54 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018063 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01393**	**.00063**	**.05906**	**.03606**	**-.00003**	**.17307**	**.00039**	**345.88**
Stddev	.00131	.00057	.00112	.00011	.00001	.00069	.00004	5.02
%RSD	9.3934	90.032	1.8923	.31761	41.858	.39937	9.9647	1.4524
#1	.01301	.00037	.06022	.03611	-.00003	.17387	.00035	351.22
#2	.01543	.00129	.05896	.03592	-.00002	.17265	.00039	341.24
#3	.01336	.00024	.05799	.03614	-.00005	.17269	.00042	345.19

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00018**	**.00106**	**.00051**	**88.209**	**.00396**	**.04195**	**65.957**	**2.7479**
Stddev	.00007	.00013	.00006	.206	.00025	.00163	.280	.0133
%RSD	40.453	12.453	12.617	.23403	6.2832	3.8884	.42376	.48516
#1	.00017	.00093	.00043	88.315	.00375	.04115	65.646	2.7326
#2	.00026	.00106	.00053	88.341	.00423	.04382	66.035	2.7548
#3	.00011	.00119	.00055	87.971	.00391	.04087	66.189	2.7565

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00077**	**.00451**	**8.6649**	**-.00150**	**-.00012**	**125.87**	**2.7943**	**-.00059**
Stddev	.00016	.00020	.0343	.00279	.00015	.37	.0062	.00084
%RSD	21.355	4.4700	.39593	186.20	124.15	.29469	.22244	143.25
#1	-.00082	.00427	8.6297	-.00293	-.00021	125.46	2.7873	-.00059
#2	-.00091	.00464	8.6668	.00172	-.00019	125.96	2.7966	-.00143
#3	-.00059	.00461	8.6982	-.00328	.00005	126.18	2.7990	.00026

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00078**	**.00286**	**.00088**	**.00362**
Stddev	.00017	.00048	.00009	.00011
%RSD	22.336	16.654	9.8708	3.0545
#1	.00092	.00309	.00081	.00361
#2	.00059	.00318	.00097	.00374
#3	.00083	.00232	.00086	.00352

Sample Name: K084-03 Acquired: 11/18/2011 17:27:54 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018063 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7105.9	59598.	143850.
Stddev	4.7	455.	173.
%RSD	.06645	.76310	.11992
#1	7111.3	60122.	143810.
#2	7102.7	59368.	143700.
#3	7103.7	59304.	144040.

Sample Name: K084-04 Acquired: 11/18/2011 17:30:55 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018064 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.01200	-.00181	.00164	.20713	-.00002	.12503	-.00002	202.16
Stddev	.00080	.00169	.00172	.00080	.00005	.00011	.00005	.09
%RSD	6.6450	93.163	104.84	.38659	365.75	.08953	187.41	.04363
#1	.01276	-.00372	.00010	.20665	-.00004	.12513	-.00004	202.06
#2	.01206	-.00052	.00350	.20668	.00005	.12506	-.00006	202.23
#3	.01117	-.00119	.00134	.20805	-.00005	.12491	.00003	202.18

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00053	-.00015	.00091	17.986	.00095	.02022	25.203	.80021
Stddev	.00010	.00007	.00011	.021	.00086	.00055	.174	.00631
%RSD	17.940	47.459	11.800	.11592	89.798	2.7003	.69193	.78890
#1	.00062	-.00021	.00079	18.010	.00124	.02005	25.028	.79390
#2	.00056	-.00007	.00101	17.972	-.00001	.02083	25.206	.80020
#3	.00043	-.00016	.00092	17.976	.00163	.01978	25.376	.80653

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.00014	.00174	4.6523	-.00254	-.00023	79.695	1.3677	-.00001
Stddev	.00015	.00020	.0056	.00259	.00025	.147	.0026	.00062
%RSD	102.86	11.470	.12084	101.98	108.83	.18508	.18673	10234.
#1	-.00007	.00153	4.6536	.00019	-.00002	79.546	1.3657	.00058
#2	-.00031	.00192	4.6461	-.00284	-.00051	79.699	1.3669	-.00066
#3	-.00004	.00176	4.6571	-.00496	-.00016	79.841	1.3706	.00007

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	.00032	.00280	.00034	.00576
Stddev	.00019	.00023	.00006	.00011
%RSD	60.011	8.2694	17.194	1.8835
#1	.00024	.00287	.00040	.00586
#2	.00054	.00298	.00029	.00564
#3	.00019	.00254	.00032	.00577

Sample Name: K084-04 Acquired: 11/18/2011 17:30:55 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018064 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7620.0**	**61118.**	**151180.**
Stddev	6.2	634.	514.
%RSD	.08164	1.0381	.33995
#1	7624.3	61764.	150810.
#2	7612.9	61094.	151760.
#3	7622.8	60496.	150950.

Sample Name: K084-05 Acquired: 11/18/2011 17:33:58 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018065 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00767	-.00048	-.00102	.23625	.00001	.11162	-.00010	229.47
Stddev	.00127	.00015	.00058	.00044	.00001	.00011	.00004	2.08
%RSD	16.619	31.414	57.182	.18486	83.772	.09696	36.990	.90826
#1	.00683	-.00044	-.00035	.23609	.00002	.11152	-.00010	231.37
#2	.00705	-.00036	-.00134	.23591	.00000	.11173	-.00007	229.80
#3	.00914	-.00065	-.00138	.23674	.00002	.11162	-.00014	227.24

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00046	-.00054	.00053	4.7264	.00140	.02454	43.781	.79340
Stddev	.00007	.00008	.00010	.0160	.00039	.00030	.075	.00180
%RSD	14.765	15.635	19.592	.33954	27.915	1.2243	.17087	.22733
#1	.00052	-.00062	.00060	4.7355	.00148	.02467	43.699	.79503
#2	.00038	-.00054	.00041	4.7079	.00098	.02476	43.846	.79146
#3	.00047	-.00046	.00057	4.7358	.00175	.02420	43.799	.79369

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.00005	.00053	5.1511	.00034	-.00017	111.88	2.0054	.00069
Stddev	.00016	.00005	.0224	.00023	.00013	.18	.0045	.00114
%RSD	342.28	10.022	.43419	69.334	79.288	.15676	.22421	166.25
#1	.00011	.00047	5.1453	.00040	-.00029	112.08	2.0095	.00182
#2	-.00021	.00054	5.1322	.00053	-.00019	111.75	2.0006	-.00046
#3	-.00004	.00057	5.1758	.00008	-.00002	111.80	2.0062	.00070

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	.00048	.00311	.00005	.00659
Stddev	.00026	.00016	.00015	.00010
%RSD	54.445	5.3006	285.39	1.4522
#1	.00078	.00293	.00022	.00661
#2	.00029	.00325	.00002	.00667
#3	.00037	.00315	-.00008	.00648

Sample Name: K084-05 Acquired: 11/18/2011 17:33:58 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018065 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7474.7**	**60640.**	**149050.**
Stddev	2.5	110.	246.
%RSD	.03333	.18138	.16491
#1	7475.0	60754.	149100.
#2	7472.0	60534.	149270.
#3	7476.9	60632.	148790.

Sample Name: K084-06 Acquired: 11/18/2011 17:37:00 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018066 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01215**	**-.00107**	**.00284**	**.14336**	**.00001**	**.08002**	**-.00005**	**135.07**
Stddev	.00149	.00110	.00168	.00030	.00002	.00026	.00003	.25
%RSD	12.271	102.47	59.317	.20718	303.71	.32050	68.056	.18549
#1	.01353	.00018	.00339	.14333	-.00002	.07973	-.00001	134.97
#2	.01235	-.00150	.00095	.14308	.00002	.08019	-.00007	134.88
#3	.01057	-.00189	.00418	.14367	.00002	.08015	-.00007	135.35

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00048**	**-.00022**	**.00068**	**.10687**	**.00203**	**.01077**	**22.807**	**.14707**
Stddev	.00021	.00002	.00017	.00183	.00086	.00061	.101	.00108
%RSD	42.797	8.5661	25.088	1.7084	42.504	5.6234	.44329	.73193
#1	.00037	-.00024	.00086	.10574	.00106	.01143	22.807	.14629
#2	.00035	-.00022	.00066	.10897	.00232	.01024	22.705	.14663
#3	.00072	-.00020	.00052	.10588	.00270	.01064	22.907	.14830

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00369**	**.00186**	**3.5021**	**-.00166**	**.00003**	**63.376**	**1.1947**	**-.00026**
Stddev	.00007	.00012	.0231	.00056	.00005	.060	.0005	.00053
%RSD	2.0239	6.2752	.65965	33.508	207.61	.09541	.04036	205.78
#1	.00361	.00176	3.4821	-.00177	.00009	63.383	1.1943	-.00060
#2	.00376	.00199	3.5274	-.00215	.00001	63.312	1.1946	.00035
#3	.00370	.00183	3.4970	-.00106	-.00002	63.432	1.1952	-.00052

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00000**	**.00162**	**-.00004**	**.00545**
Stddev	.00052	.00028	.00004	.00002
%RSD	13396.	17.482	93.891	.28707
#1	.00059	.00158	.00000	.00543
#2	-.00038	.00193	-.00006	.00544
#3	-.00020	.00136	-.00006	.00546

Sample Name: K084-06 Acquired: 11/18/2011 17:37:00 Type: Unk
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018066 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7751.8	61914.	153420.
Stddev	16.5	416.	98.
%RSD	.21315	.67215	.06358
#1	7760.3	62253.	153420.
#2	7762.4	62041.	153510.
#3	7732.8	61450.	153320.

Sample Name: CCV6 Acquired: 11/18/2011 17:52:10 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018071 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**97.248**	**1.4773**	**1.0224**	**2.0161**	**1.5152**	**2.4464**	**1.9513**	**74.378**
Stddev	.186	.0026	.0008	.0106	.0134	.0019	.0011	.296
%RSD	.19110	.17458	.07412	.52727	.88132	.07720	.05665	.39819
#1	97.042	1.4753	1.0215	2.0061	1.5013	2.4445	1.9519	74.079
#2	97.402	1.4802	1.0227	2.0148	1.5163	2.4463	1.9521	74.386
#3	97.300	1.4765	1.0230	2.0273	1.5279	2.4483	1.9501	74.671
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.3717**	**.97595**	**2.4438**	**24.926**	**2.4316**	**.51819**	**59.512**	**2.4572**
Stddev	.0021	.00141	.0029	.031	.0011	.00316	.625	.0264
%RSD	.08817	.14460	.11760	.12524	.04633	.60986	1.0500	1.0755
#1	2.3693	.97583	2.4440	24.912	2.4319	.51558	58.861	2.4340
#2	2.3728	.97461	2.4466	24.962	2.4304	.51729	59.571	2.4517
#3	2.3730	.97742	2.4409	24.904	2.4326	.52170	60.106	2.4860
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.5275**	**2.4126**	**59.794**	**1.0168**	**.48805**	**64.136**	**.48710**	**2.2655**
Stddev	.0026	.0005	.204	.0009	.00003	.158	.00096	.0008
%RSD	.10133	.01896	.34067	.09005	.00706	.24641	.19779	.03333
#1	2.5260	2.4132	59.560	1.0167	.48802	64.053	.48672	2.2660
#2	2.5304	2.4125	59.887	1.0159	.48804	64.037	.48639	2.2647
#3	2.5259	2.4123	59.933	1.0177	.48809	64.318	.48820	2.2660
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV6 Acquired: 11/18/2011 17:52:10 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018071 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.51185**	**.51017**	**1.4866**	**2.6606**
Stddev	.00254	.00648	.0011	.0013
%RSD	.49628	1.2693	.07335	.04871
#1	.50930	.50479	1.4861	2.6600
#2	.51438	.50835	1.4879	2.6597
#3	.51187	.51736	1.4859	2.6621
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7630.8**	**61090.**	**152820.**
Stddev	6.2	965.	86.
%RSD	.08068	1.5798	.05648
#1	7630.3	62105.	152790.
#2	7624.9	60980.	152760.
#3	7637.2	60185.	152920.

Sample Name: CCB6 Acquired: 11/18/2011 17:54:59 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018072 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00075	.00150	.00002	.00009	.00010	.00234	.00008
Stddev	.00032	.00120	.00300	.00024	.00004	.00020	.00003
%RSD	42.658	80.365	17863.	270.31	43.887	8.7083	40.106
#1	.00056	.00158	.00260	.00026	.00005	.00258	.00009
#2	.00112	.00266	.00073	-.00019	.00013	.00220	.00010
#3	.00057	.00026	-.00327	.00019	.00010	.00225	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F .05085	.00009	-.00006	-.00031	.00030	-.00035	.00052
Stddev	.00284	.00013	.00004	.00010	.00249	.00058	.00045
%RSD	5.5899	143.64	68.667	32.412	842.53	167.44	85.363
#1	.05379	.00007	-.00005	-.00027	-.00196	.00030	.00104
#2	.04812	-.00003	-.00011	-.00042	-.00012	-.00054	.00022
#3	.05063	.00022	-.00003	-.00023	.00297	-.00081	.00031
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.03240						
Low Limit	-.03240						

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.01074	.00029	.00036	.00007	.12229	-.00031	.00023
Stddev	.00369	.00032	.00003	.00008	.01364	.00076	.00018
%RSD	34.366	110.76	7.7053	123.94	11.157	241.14	78.007
#1	.01345	.00051	.00034	.00002	.13769	-.00029	.00008
#2	.00654	.00043	.00034	.00002	.11745	-.00108	.00042
#3	.01224	-.00008	.00039	.00016	.11172	.00043	.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB6 Acquired: 11/18/2011 17:54:59 Type: QC
Method: 11K6010(v26) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K018072 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.02346	.00000	.00079	.00037	.00013	.00016	.00230
Stddev	.00747	.00006	.00054	.00014	.00039	.00004	.00007
%RSD	31.861	1682.3	69.334	38.223	295.12	24.391	3.1008
#1	.03080	.00000	.00064	.00021	.00019	.00020	.00228
#2	.02372	-.00006	.00139	.00045	-.00028	.00014	.00237
#3	.01586	.00006	.00033	.00045	.00049	.00013	.00223
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8476.7	60994.	162650.
Stddev	10.6	754.	195.
%RSD	.12522	1.2354	.11961
#1	8484.4	61830.	162560.
#2	8481.2	60784.	162530.
#3	8464.6	60367.	162880.

EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP METALS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

All samples pH <2

Book #: EIP-104
Batch: 1PK031W
Matrix: Water
Digestor ID: E

SOP #	Rev. #
☐ EMAX-3005	4
☑ EMAX-3010	5
☐ EMAX-3050	4
☐ EMAX-200.7	2
☐ EMAX-	

Start	Temp	End	Temp
	95 °C		95 °C

Standards	ID	Amount Added (ml)
LCS-1	SM1A-013-04-13	0.25
LCS-2	SM1A-013-03-13	0.25
LCS-3	SM1A-013-04-14	0.5
MS	sample spike 001 and 501 as LCS1, LCS2, LCS3	
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SW1A-04-407	1.5+1.5
HCl	SW1A-04-408	2.5+2.5
H_2O_2	N/A	
HNO3(1:1)	N/A	

Digestate Location	ICP
Extract Location	

☑ Reagent Water ID: SM5A-02-074
☑ Thermometer ID: 101993366
☑ Pipette ID: ICP-07
☑ Pipette ID: 142780035
☐ Pipette ID:
☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask
☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask

Prepared By: GG
Standard Added By: GG Witnessed By: TH
Extract Rcvd By: TH Checked By: TH

FileID: IPK031W

EMAX LABORATORIES INC

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
11IPK031W01	IPK031WB	50	ml	11/17/11 11:03	50	50	50	1	
11IPK031W02	IPK031WL	50	ml	11/17/11 11:03	50	50	50	1	
11IPK031W03	IPK031WC	50	ml	11/17/11 11:03	50	50	50	1	
11IPK031W04	K084-01	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W05	K084-02	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W06	K084-03	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W07	K084-04	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W08	K084-05	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W09	K084-06	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W10	K070-01	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W11	K070-02	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W12	K070-03	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W13	K070-04	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W14	K070-05	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W15	K070-06	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W16	K101-01	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W17	K093-01	50	ml	11/17/11 11:03	50	50	50	1	*DISSOLVED
11IPK031W18	K093-01D	50	ml	11/17/11 11:03	50	50	50	1	*DISSOLVED
11IPK031W19	K072-01	50	ml	11/17/11 11:03	50	50	50	1	*DISSOLVED
11IPK031W20	K090-03	50	ml	11/17/11 11:03	50	50	50	1	*DISSOLVED
11IPK031W21	K108-01	50	ml	11/17/11 11:03	50	50	50	1	
11IPK031W22	K108-02	50	ml	11/17/11 11:03	50	50	50	1	
11IPK031W23	K108-02M	50	ml	11/17/11 11:03	50	50	50	1	
11IPK031W24	K108-02S	50	ml	11/17/11 11:03	50	50	50	1	

11/17/11 GG

Vd=digestate volume PrepFctr=)ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 11/17/11 11:11 Prepared By GG

☑ Digestion Ended @ 11/17/11 15:25 Checked By: TH

Comments:*Dissolved and filtered in lab. Date 11/17/11

7098

MRL ID: MALK1801

Analytes	True Values	
	Water (mg/L)	Soil (mg/kg)
Aluminum	0.200	20.0
Antimony	0.100	10.0
Arsenic	0.010	1.00
Barium	0.010	1.00
Beryllium	0.010	1.00
Boron	0.100	10.0
Cadmium	0.010	1.00
Calcium	1.00	100
Chromium	0.010	1.00
Cobalt	0.010	1.00
Copper	0.010	1.00
Iron	0.200	20.0
Lead	0.010	1.00
Lithium	0.010	1.00
Magnesium	1.00	100
Manganese	0.010	1.00
Molybdenum	0.010	1.00
Nickel	0.010	1.00
Potassium	1.00	100
Selenium	0.010	1.00
Silver	0.010	1.00
Strontium	0.010	1.00
Sodium	1.00	100
Thallium	0.010	1.00
Titanium	0.010	1.00
Vanadium	0.010	1.00
Zinc	0.020	2.00

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

WET CHEMICAL ANALYSES

SDG#: 11K084

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K084

METHOD 300.0
ANIONS BY IC

A total of six (6) water samples were received on 11/09/11 for Anions (Chloride, Nitrate, Nitrite and Sulfate) by IC analysis, Method 300.0 in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary forms for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for ICK029WL/C were all within QC limits.
Percent recoveries for ICK043WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. Sample K084-03 for Nitrate and Nitrite was initially analyzed at DF5 due to turbidity problem and strong odor.

SAMPLE RESULTS

METHOD 300.0
CHLORIDE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K084

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
LCS1W	ICK043WL	1.93	1	NA	0.200	0.100	11/12/1118:40	NA	AK19-31	AK19-25	ICK043W	NA	NA
LCD1W	ICK043WC	1.92	1	NA	0.200	0.100	11/12/1118:56	NA	AK19-32	AK19-25	ICK043W	NA	NA
MBLK1W	ICK043WB	ND	1	NA	0.200	0.100	11/12/1119:12	NA	AK19-33	AK19-25	ICK043W	NA	NA
MW-70-PMW04A-110	K084-01	152	20	NA	4.00	2.00	11/12/1119:28	NA	AK19-34	AK19-25	ICK043W	11/09/1110:36	11/09/11
MW-70-PMW04B-112	K084-02	164	10	NA	2.00	1.00	11/12/1119:44	NA	AK19-35	AK19-25	ICK043W	11/09/1111:40	11/09/11
IW-70-FSB118-113	K084-03	287	50	NA	10.0	5.00	11/12/1120:49	NA	AK19-39	AK19-37	ICK043W	11/09/1112:59	11/09/11
MW-70-PMW05A-114	K084-04	133	10	NA	2.00	1.00	11/12/1121:05	NA	AK19-40	AK19-37	ICK043W	11/09/1114:44	11/09/11
MW-70-PMW05B-115	K084-05	279	20	NA	4.00	2.00	11/12/1121:21	NA	AK19-41	AK19-37	ICK043W	11/09/1115:51	11/09/11
IR-70-FD-111	K084-06	159	20	NA	4.00	2.00	11/12/1121:37	NA	AK19-42	AK19-37	ICK043W	11/09/1111:00	11/09/11

METHOD 300.0
NITRATE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K084

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK029WB	ND	1	NA	0.200	0.0500	11/10/1103:10	NA	AK13-63	AK13-61	ICK029W	NA	NA
LCS1W	ICK029WL	1.01	1	NA	0.200	0.0500	11/10/1103:27	NA	AK13-64	AK13-61	ICK029W	NA	NA
LCD1W	ICK029WC	1.00	1	NA	0.200	0.0500	11/10/1103:43	NA	AK13-65	AK13-61	ICK029W	NA	NA
MW-70-PMW04A-110	K084-01	0.0590J	1	NA	0.200	0.0500	11/10/1108:50	NA	AK13-84	AK13-82	ICK029W	11/09/1110:36	11/09/11
MW-70-PMW04B-112	K084-02	0.0609J	1	NA	0.200	0.0500	11/10/1109:06	NA	AK13-85	AK13-82	ICK029W	11/09/1111:40	11/09/11
IR-70-FD-111	K084-06	0.0567J	1	NA	0.200	0.0500	11/10/1109:23	NA	AK13-86	AK13-82	ICK029W	11/09/1111:00	11/09/11
MW-70-PMW05B-115	K084-05	0.0638J	1	NA	0.200	0.0500	11/10/1109:39	NA	AK13-87	AK13-82	ICK029W	11/09/1115:51	11/09/11
MW-70-PMW05A-114	K084-04	0.0638J	1	NA	0.200	0.0500	11/10/1109:56	NA	AK13-88	AK13-82	ICK029W	11/09/1114:44	11/09/11
IW-70-FSB118-113	K084-03	0.386J	5	NA	1.00	0.250	11/10/1110:12	NA	AK13-89	AK13-82	ICK029W	11/09/1112:59	11/09/11

METHOD 300.0
NITRITE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K084

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK029WB	ND	1	NA	0.200	0.0500	11/10/1103:10	NA	AK13-63	AK13-61	ICK029W	NA	NA
LCS1W	ICK029WL	2.06	1	NA	0.200	0.0500	11/10/1103:27	NA	AK13-64	AK13-61	ICK029W	NA	NA
LCD1W	ICK029WC	2.05	1	NA	0.200	0.0500	11/10/1103:43	NA	AK13-65	AK13-61	ICK029W	NA	NA
MW-70-PMW04A-110	K084-01	ND	1	NA	0.200	0.0500	11/10/1108:50	NA	AK13-84	AK13-82	ICK029W	11/09/1110:36	11/09/11
MW-70-PMW04B-112	K084-02	ND	1	NA	0.200	0.0500	11/10/1109:06	NA	AK13-85	AK13-82	ICK029W	11/09/1111:40	11/09/11
IR-70-FD-111	K084-06	ND	1	NA	0.200	0.0500	11/10/1109:23	NA	AK13-86	AK13-82	ICK029W	11/09/1111:00	11/09/11
MW-70-PMW05B-115	K084-05	ND	1	NA	0.200	0.0500	11/10/1109:39	NA	AK13-87	AK13-82	ICK029W	11/09/1115:51	11/09/11
MW-70-PMW05A-114	K084-04	ND	1	NA	0.200	0.0500	11/10/1109:56	NA	AK13-88	AK13-82	ICK029W	11/09/1114:44	11/09/11
IW-70-FSB118-113	K084-03	ND	5	NA	1.00	0.250	11/10/1110:12	NA	AK13-89	AK13-82	ICK029W	11/09/1112:59	11/09/11

METHOD 300.0
SULFATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K084

Matrix : WATER
Instrument ID : DO

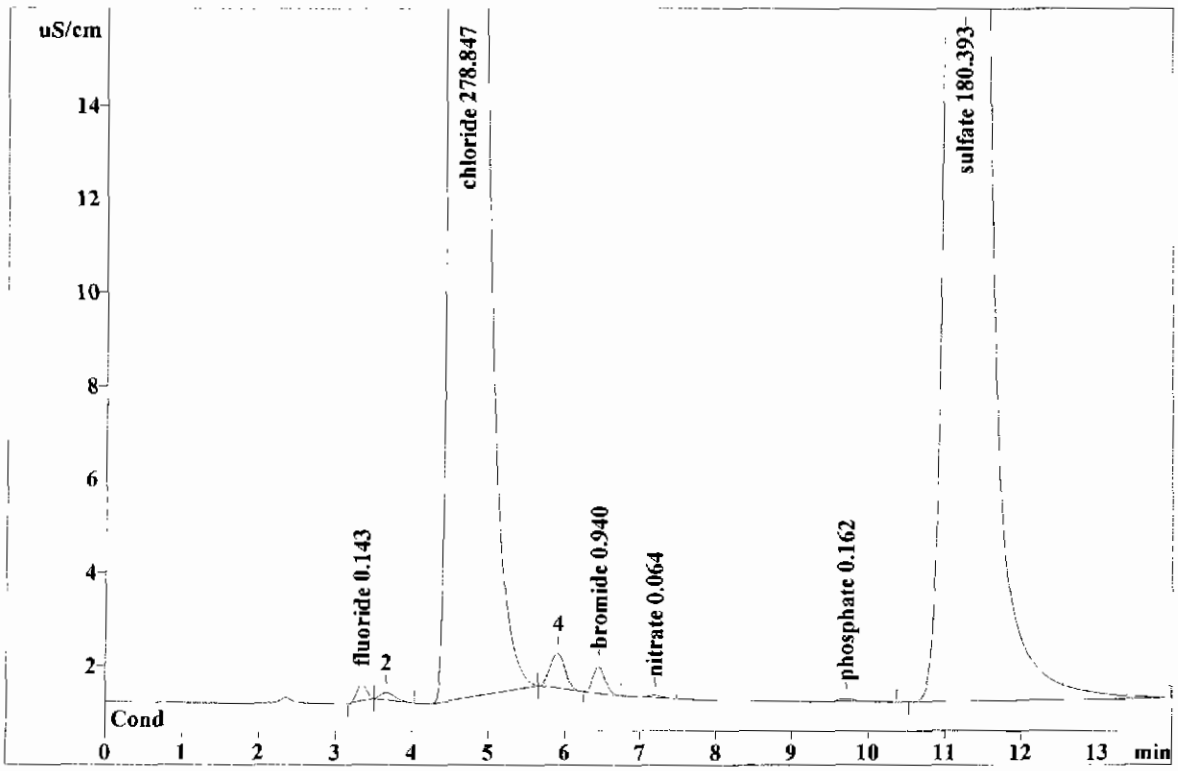
SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK029WB	ND	1	NA	0.500	0.250	11/10/1103:10	NA	AK13-63	AK13-61	ICK029W	NA	NA
LCS1W	ICK029WL	5.07	1	NA	0.500	0.250	11/10/1103:27	NA	AK13-64	AK13-61	ICK029W	NA	NA
LCD1W	ICK029WC	5.04	1	NA	0.500	0.250	11/10/1103:43	NA	AK13-65	AK13-61	ICK029W	NA	NA
1W-70-FSB118-113	K084-03	1.98J	5	NA	2.50	1.25	11/10/1110:12	NA	AK13-89	AK13-82	ICK029W	11/09/1112:59	11/09/11
LCS2W	ICK043WL	4.99	1	NA	0.500	0.250	11/12/1118:40	NA	AK19-31	AK19-25	ICK043W	NA	NA
LCD2W	ICK043WC	4.97	1	NA	0.500	0.250	11/12/1118:56	NA	AK19-32	AK19-25	ICK043W	NA	NA
MBLK2W	ICK043WB	ND	1	NA	0.500	0.250	11/12/1119:12	NA	AK19-33	AK19-25	ICK043W	NA	NA
MW-70-PMW04A-110	K084-01	189	20	NA	10.0	5.00	11/12/1119:28	NA	AK19-34	AK19-25	ICK043W	11/09/1110:36	11/09/11
MW-70-PMW04B-112	K084-02	202	20	NA	10.0	5.00	11/12/1120:01	NA	AK19-36	AK19-25	ICK043W	11/09/1111:40	11/09/11
MW-70-PMW05A-114	K084-04	58.0	10	NA	5.00	2.50	11/12/1121:05	NA	AK19-40	AK19-37	ICK043W	11/09/1114:44	11/09/11
MW-70-PMW05B-115	K084-05	174	20	NA	10.0	5.00	11/12/1121:21	NA	AK19-41	AK19-37	ICK043W	11/09/1115:51	11/09/11
IR-70-FD-111	K084-06	190	20	NA	10.0	5.00	11/12/1121:37	NA	AK19-42	AK19-37	ICK043W	11/09/1111:00	11/09/11

Report date: 11/10/2011 10:58:53 AM
Printed by: Jadelyn Chun

Ident: AK13-87 K084-05
Analysis from: 11/10/2011 9:39:51 AM
File: vb100939.chw Last save: 11/10/2011 9:53:48 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71252

SAMPLE:
:
Vial number: 87
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.34	0.35	3.092	0.143	fluoride
2	3.67	0.15	2.028	0.000	
3	4.70	337.03	4998.891	278.847	chloride
4	5.91	0.74	10.207	0.000	
5	6.46	0.57	6.295	0.940	bromide
6	7.20	0.05	0.526	0.064	nitrate ✓
7	9.69	0.05	1.059	0.162	phosphate
8	11.25	105.09	2378.104	180.393	sulfate
8	14.00	444.03	7400.202	460.549	

NO2N ✓

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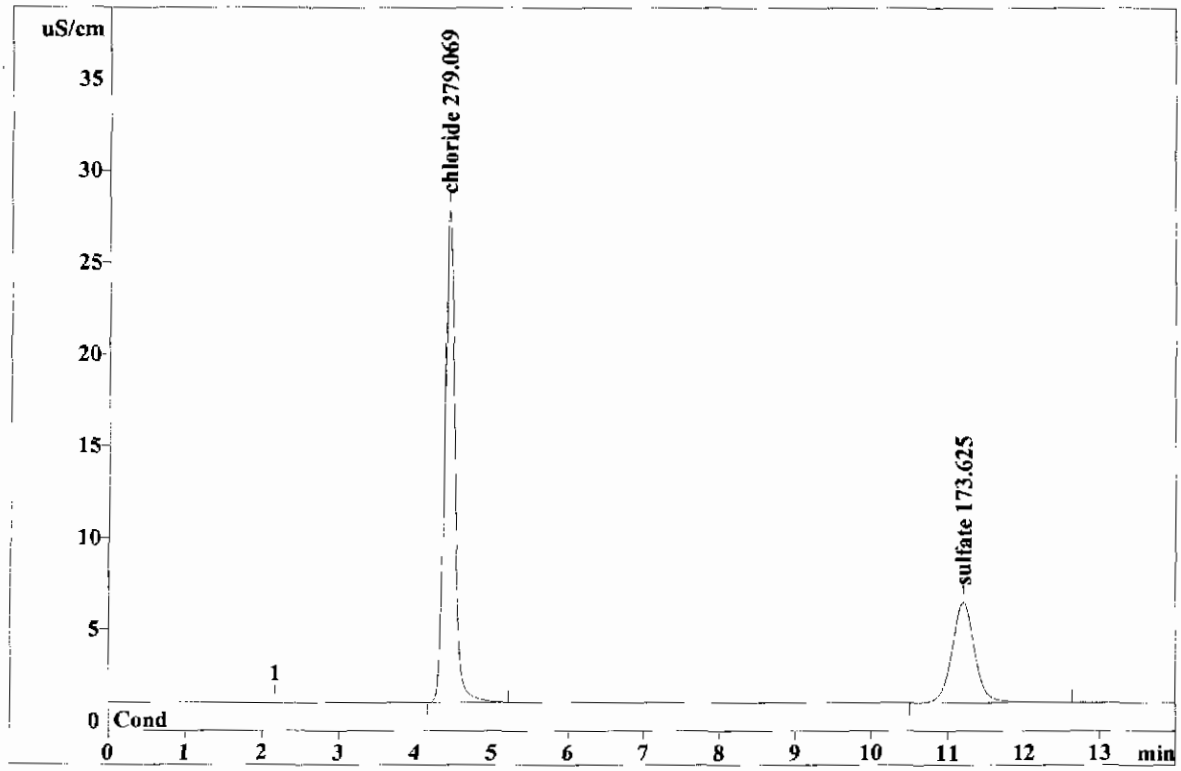
Report date: 11/14/2011 12:08:07 PM
Printed by: Jadelyn Chun

Ident: AK19-41 K084-05 DF=20
Analysis from: 11/12/2011 9:21:50 PM
File: vb122121.chw Last save: 11/12/2011 9:35:47 PM

Method: ICD0-I30.mtw Last save: 11/12/2011 10:52:35 AM
Run operator: Lucita Arzadon
Analysis number: 71438

SAMPLE:
:
Vial number: 41
Volume: 1.0 µL
Dilution: 20.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.16	0.05	0.955	0.000	
2	4.44	26.81	248.668	279.069	chloride ✓
3	11.20	5.49	112.825	173.625	sulfate ✓
3	14.00	32.35	362.449	452.694	

This report has been created by IC Net
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QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K084
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK043WB	ICK043WL	ICK043WC		
LAB FILE ID:	AK19-33	AK19-31	AK19-32		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/12/1119:12	11/12/1118:40	11/12/1118:56	DATE RECEIVED:	NA
PREP. BATCH:	ICK043W	ICK043W	ICK043W		
CALIB. REF:	AK19-25	AK19-25	AK19-25		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	ND	2.00	1.93	96	2.00	1.92	96	1	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K084
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK029WB	ICK029WL	ICK029WC		
LAB FILE ID:	AK13-63	AK13-64	AK13-65		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1103:10	11/10/1103:27	11/10/1103:43	DATE RECEIVED:	NA
PREP. BATCH:	ICK029W	ICK029W	ICK029W		
CALIB. REF:	AK13-61	AK13-61	AK13-61		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrate-N	ND	1.00	1.01	101	1.00	1.00	100	1	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K084
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK029WB	ICK029WL	ICK029WC		
LAB FILE ID:	AK13-63	AK13-64	AK13-65		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1103:10	11/10/1103:27	11/10/1103:43	DATE RECEIVED:	NA
PREP. BATCH:	ICK029W	ICK029W	ICK029W		
CALIB. REF:	AK13-61	AK13-61	AK13-61		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	2.00	2.06	103	2.00	2.05	102	0	90-110	20

8012

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K084
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK029WB	ICK029WL	ICK029WC		
LAB FILE ID:	AK13-63	AK13-64	AK13-65		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1103:10	11/10/1103:27	11/10/1103:43	DATE RECEIVED:	NA
PREP. BATCH:	ICK029W	ICK029W	ICK029W		
CALIB. REF:	AK13-61	AK13-61	AK13-61		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LTMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	5.07	101	5.00	5.04	101	1	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K084
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	ICK043WB	ICK043WL	ICK043WC		
LAB FILE ID:	AK19-33	AK19-31	AK19-32		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/12/1119:12	11/12/1118:40	11/12/1118:56	DATE RECEIVED:	NA
PREP. BATCH:	ICK043W	ICK043W	ICK043W		
CALIB. REF:	AK19-25	AK19-25	AK19-25		

ACCESSION:

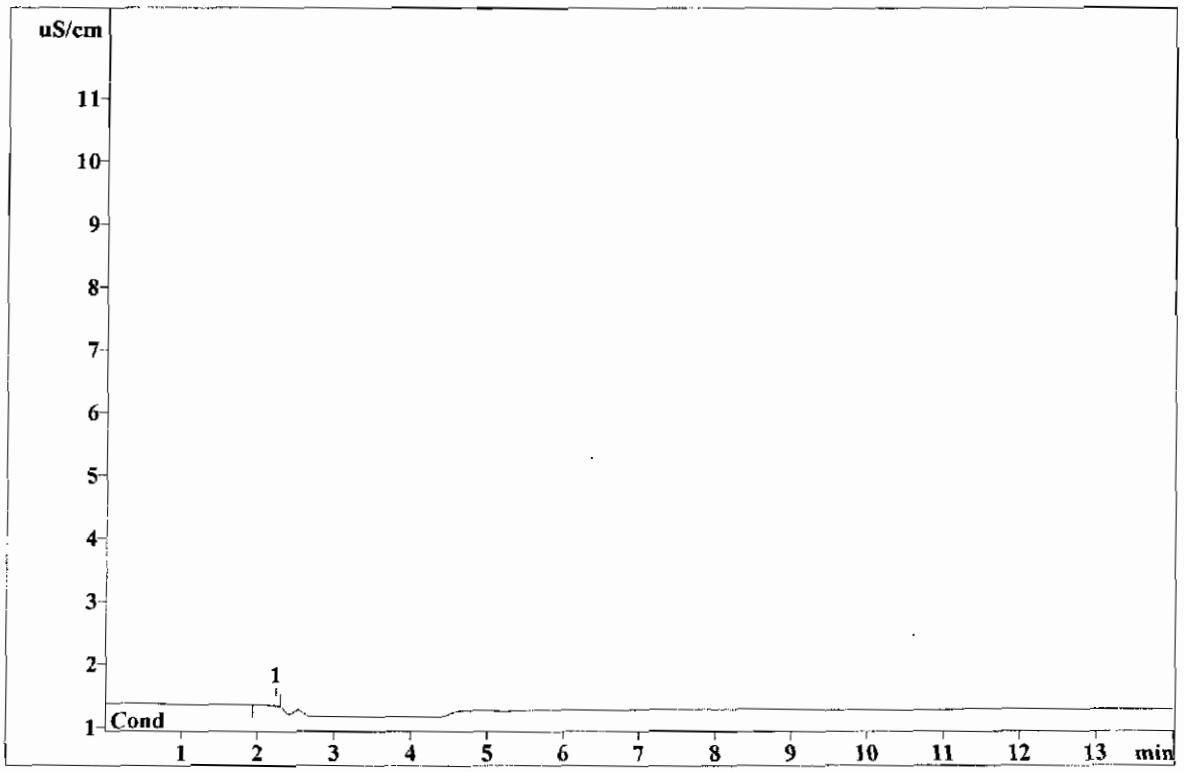
PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	4.99	100	5.00	4.97	99	0	90-110	20

QC DATA

Report date: 11/14/2011 5:26:41 PM
Printed by: Jadelyn Chun

Ident: AK13-63 ICK029WB
Analysis from: 11/10/2011 3:10:51 AM
File: vb100310.chw Last save: 11/10/2011 10:49:30 AM
Modified!
Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71228

SAMPLE:
:
Vial number: 63
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.24	0.02	0.204	0.000	

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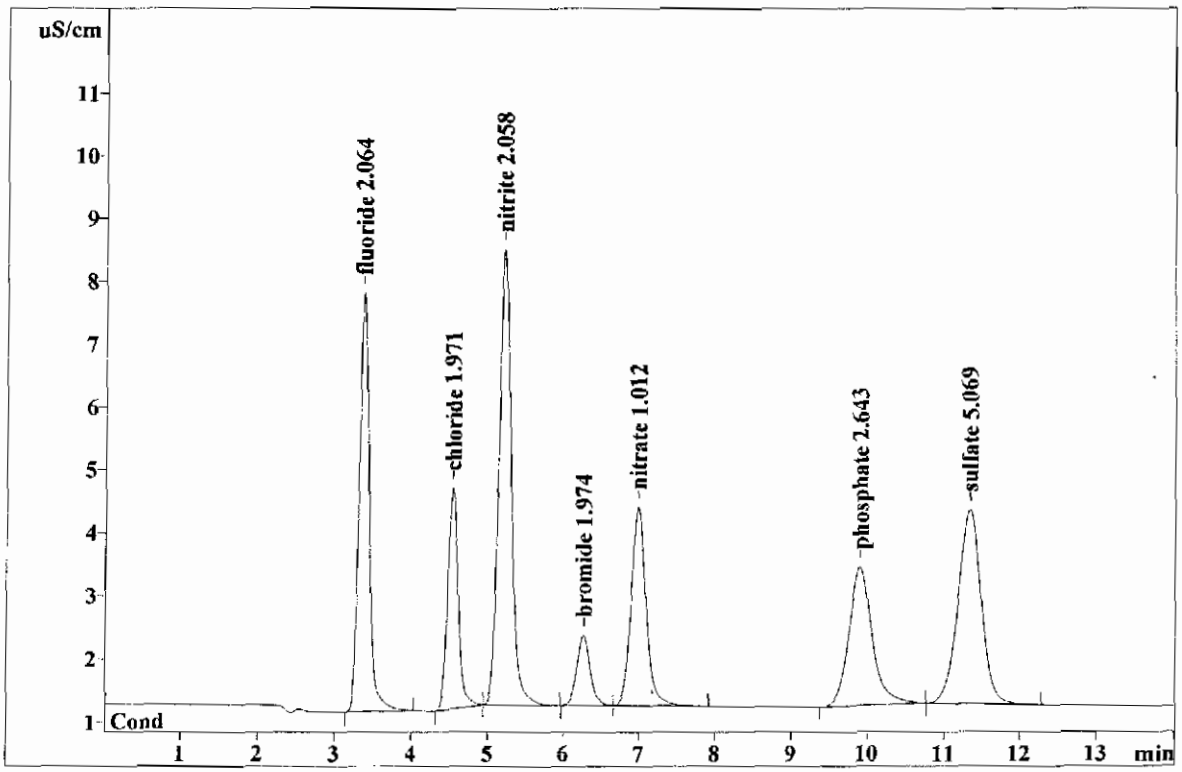
Report date: 11/14/2011 5:27:03 PM
Printed by: Jadelyn Chun

Ident: AK13-64 ICK029WL
Analysis from: 11/10/2011 3:27:01 AM
File: vb100327.chw Last save: 11/10/2011 3:40:58 AM
Modified!
Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71229

SAMPLE:
:
Vial number: 64
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.37	6.64	60.608	2.064	fluoride
2	4.54	3.49	33.790	1.971	chloride
3	5.21	7.24	83.438	2.058	nitrite
4	6.26	1.11	13.637	1.974	bromide
5	6.98	3.14	43.717	1.012	nitrate
6	9.90	2.19	46.487	2.643	phosphate
7	11.34	3.07	65.172	5.069	sulfate
7	14.00	26.89	346.849	16.791	

This report has been created by IC Net
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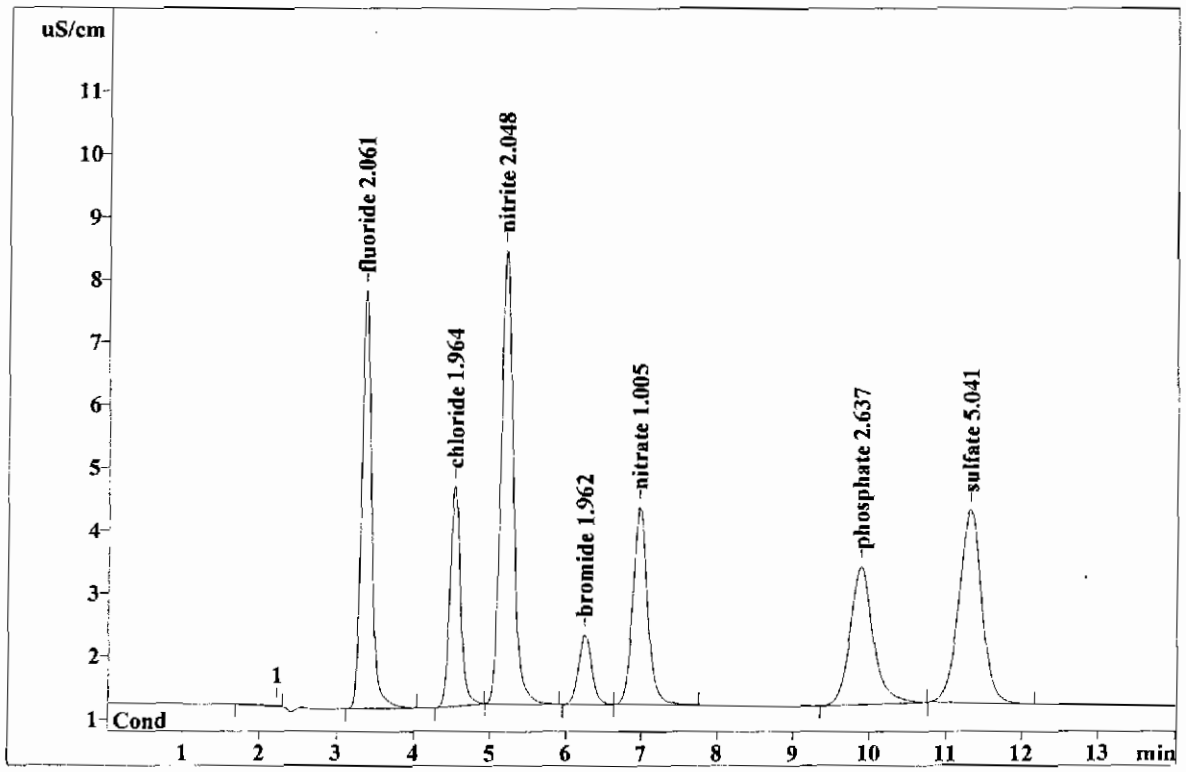
Report date: 11/14/2011 5:27:21 PM
Printed by: Jadelyn Chun

Ident: AK13-65 ICK029WC
Analysis from: 11/10/2011 3:43:10 AM
File: vb100343.chw Last save: 11/10/2011 3:57:07 AM
Modified!
Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71230

SAMPLE:
:
Vial number: 65
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.22	0.01	0.368	0.000	
2	3.36	6.66	60.515	2.061	fluoride
3	4.53	3.50	33.663	1.964	chloride
4	5.20	7.23	83.031	2.048	nitrite
5	6.24	1.10	13.550	1.962	bromide
6	6.96	3.14	43.392	1.005	nitrate
7	9.88	2.19	46.382	2.637	phosphate
8	11.31	3.07	64.795	5.041	sulfate
8	14.00	26.91	345.697	16.717	

This report has been created by IC Net
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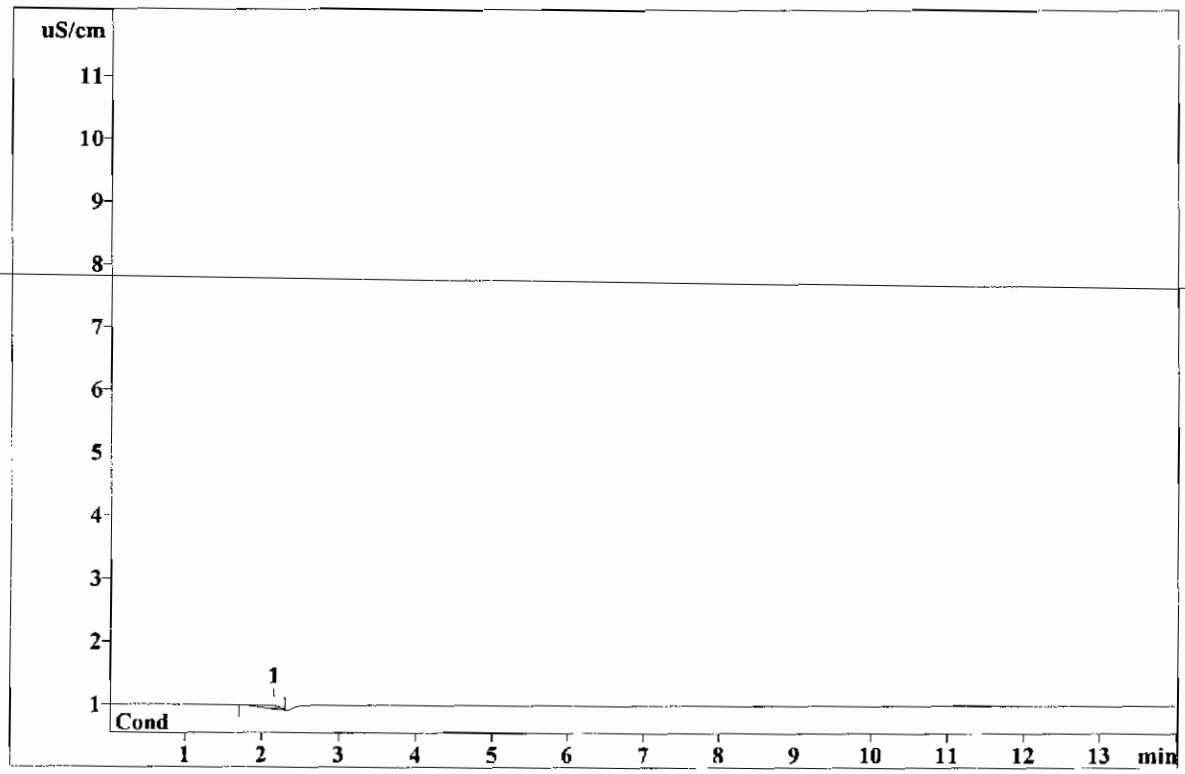
Report date: 11/14/2011 11:15:15 AM
Printed by: Jadelyn Chun

Ident: AK19-33 ICK043WB
Analysis from: 11/12/2011 7:12:33 PM
File: vb121912.chw Last save: 11/12/2011 7:26:30 PM

Method: ICD0-I30.mtw Last save: 11/12/2011 10:52:35 AM
Run operator: Lucita Arzadon
Analysis number: 71430

SAMPLE:
:
Vial number: 33
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.05	0.998	0.000	

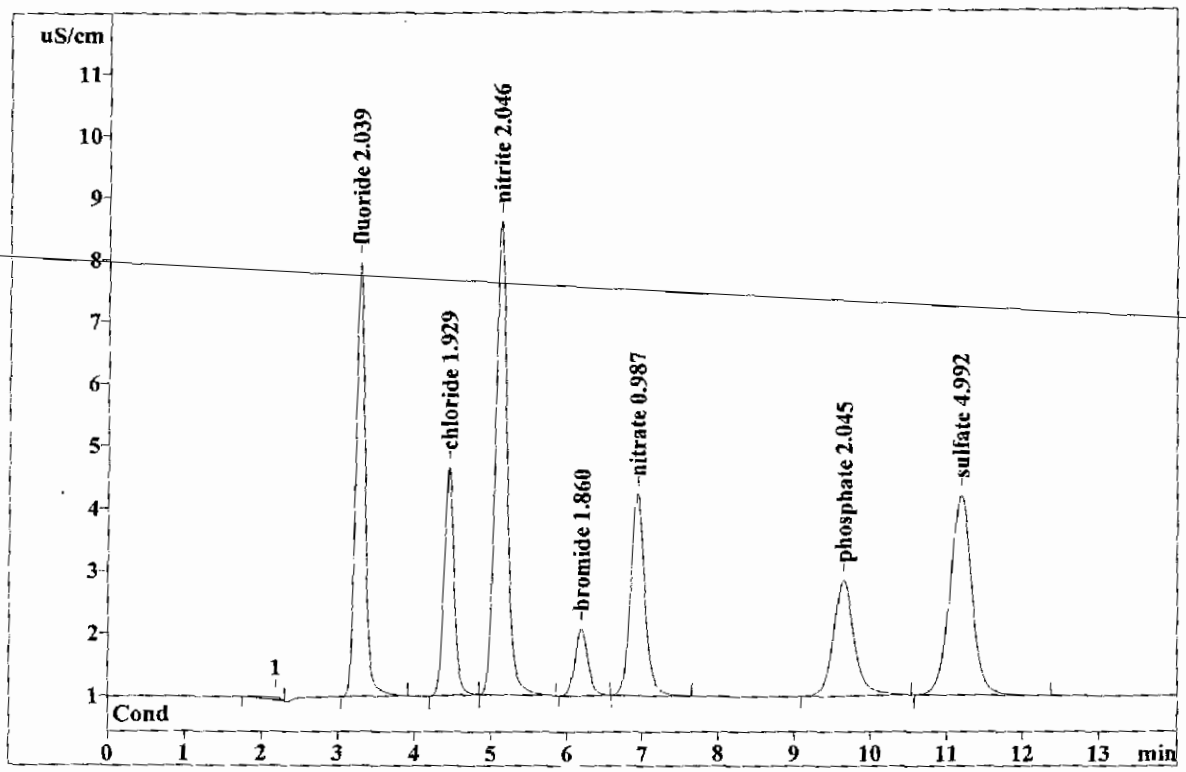
This report has been created by IC Net
METROHM LTD

Report date: 11/12/2011 6:54:11 PM
Printed by: Lucita Arzadon

Ident: AK19-31 ICK043WL
Analysis from: 11/12/2011 6:40:14 PM
File: VB121840.CHW Last save: 11/12/2011 6:54:11 PM

Method: ICD0-I30.mtw Last save: 11/12/2011 10:52:35 AM
Run operator: Lucita Arzadon
Analysis number: 71428

SAMPLE:
:
Vial number: 31
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.18	0.04	0.816	0.000	
2	3.28	6.97	59.868	2.039	fluoride
3	4.44	3.66	33.037	1.929	chloride
4	5.12	7.61	82.966	2.046	nitrite
5	6.19	1.08	12.823	1.860	bromide
6	6.93	3.22	42.569	0.987	nitrate
7	9.65	1.86	35.535	2.045	phosphate
8	11.18	3.20	64.155	4.992	sulfate
8	14.00	27.64	331.770	15.898	

This report has been created by IC Net
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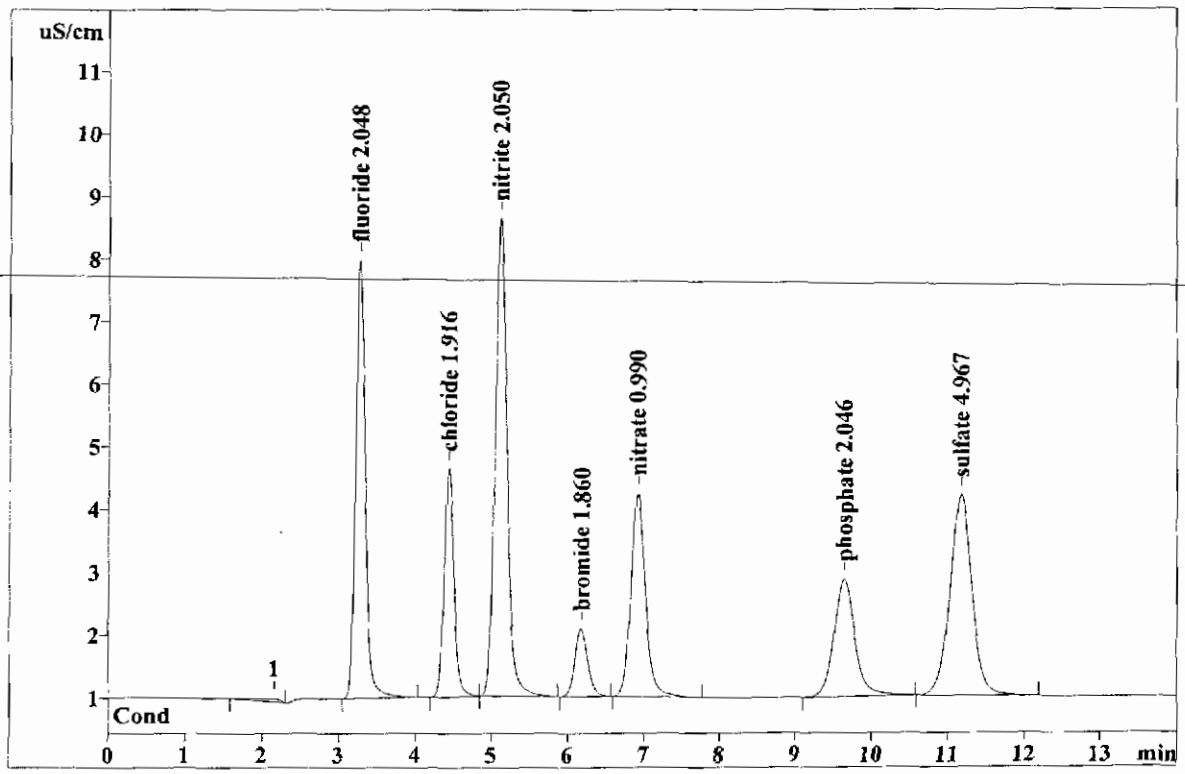
Report date: 11/12/2011 7:10:20 PM
Printed by: Lucita Arzadon

Ident: AK19-32 ICK043WC
Analysis from: 11/12/2011 6:56:23 PM
File: VB121856.CHW Last save: 11/12/2011 7:10:20 PM

Method: ICD0-I30.mtw Last save: 11/12/2011 10:52:35 AM
Run operator: Lucita Arzadon
Analysis number: 71429

SAMPLE:
:
Vial number: 32
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.16	0.05	1.237	0.000	
2	3.27	7.00	60.124	2.048	fluoride
3	4.44	3.63	32.803	1.916	chloride
4	5.11	7.62	83.109	2.050	nitrite
5	6.18	1.08	12.825	1.860	bromide
6	6.92	3.23	42.712	0.990	nitrate
7	9.65	1.86	35.552	2.046	phosphate
8	11.18	3.19	63.830	4.967	sulfate
8	14.00	27.66	332.194	15.877	

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INITIAL CALIBRATIONS

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	nitrite	fluoride	chloride	bromide	nitrate	phosphate	sulfate	RawNetID	DF
AI39-01	IB	IFCBNPS	0	0	0	0	0	0	0	v9301829	1
AI39-02	S0	IFCBNPS	0	0	0	0	0	0	0	v9301845	1
AI39-03	S1	IFCBNPS	0.0402732	0.0794447	0.137238	0.0962101	0.0900188	0.132659	0.181386	v9301901	1
AI39-04	S2	IFCBNPS	0.0827484	0.120657	0.172987	0.138434	0.127411	0.166211	0.219384	v9301917	1
AI39-05	S3	IFCBNPS	0.175829	0.207372	0.255839	0.223376	0.213499	0.241921	0.298411	v9301934	1
AI39-06	S4	IFCBNPS	0.468611	0.487287	0.510168	0.483675	0.481038	0.46682	0.535669	v9301950	1
AI39-07	S5	IFCBNPS	0.987232	0.975831	0.969747	0.947628	0.958434	0.904972	0.974277	v9302006	1
AI39-08	S6	IFCBNPS	2.03579	2.00618	1.92527	1.92275	1.95393	1.87863	1.87805	v9302022	1
AI39-09	S7	IFCBNPS	5.13141	5.00267	4.89791	5.03793	5.02567	5.05879	4.80122	v9302038	1
AI39-10	S8	IFCBNPS	9.9281	9.57748	9.9004	10.4648	10.1254	10.4079	9.8176	v9302054	1
AI39-11	S9	IFCBNPS	18.5849	17.9543	20.0804	21.615	20.3941	21.1232	20.144	v9302111	1
AI39-12	ICV	IFCBNPS	98.6%	100.1%	97.7%	94.1%	98.6%	92.5%	99.9%	v9302127	1
AI39-13	ICB	IFCBNPS	0	0	0	0	0	0	0	v9302143	1

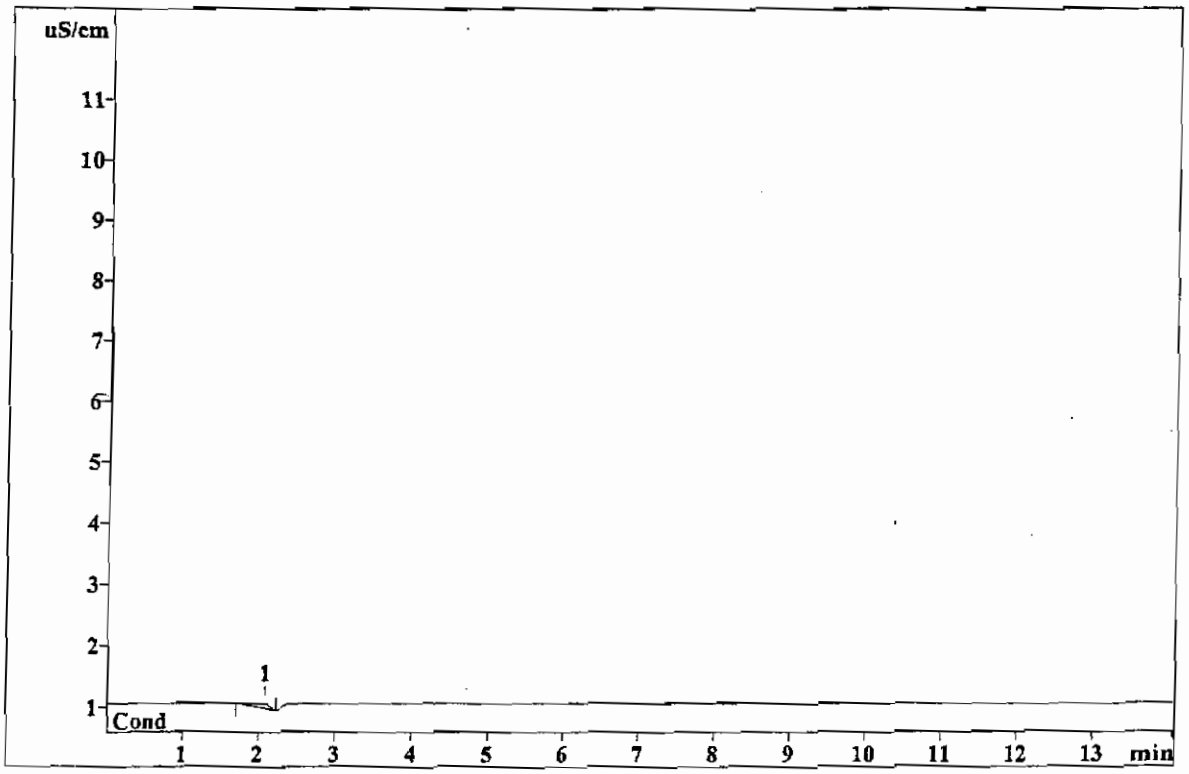
Report date: 10/3/2011 10:48:38 AM
Printed by: Jadelyn Chun

Ident: AI39-02 S0
Analysis from: 9/30/2011 6:45:36 PM
File: v9301845.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69483

SAMPLE:

Vial number: 2
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.07	1.184	0.000	

This report has been created by IC Net
METROHM LTD

AS
10/03/11

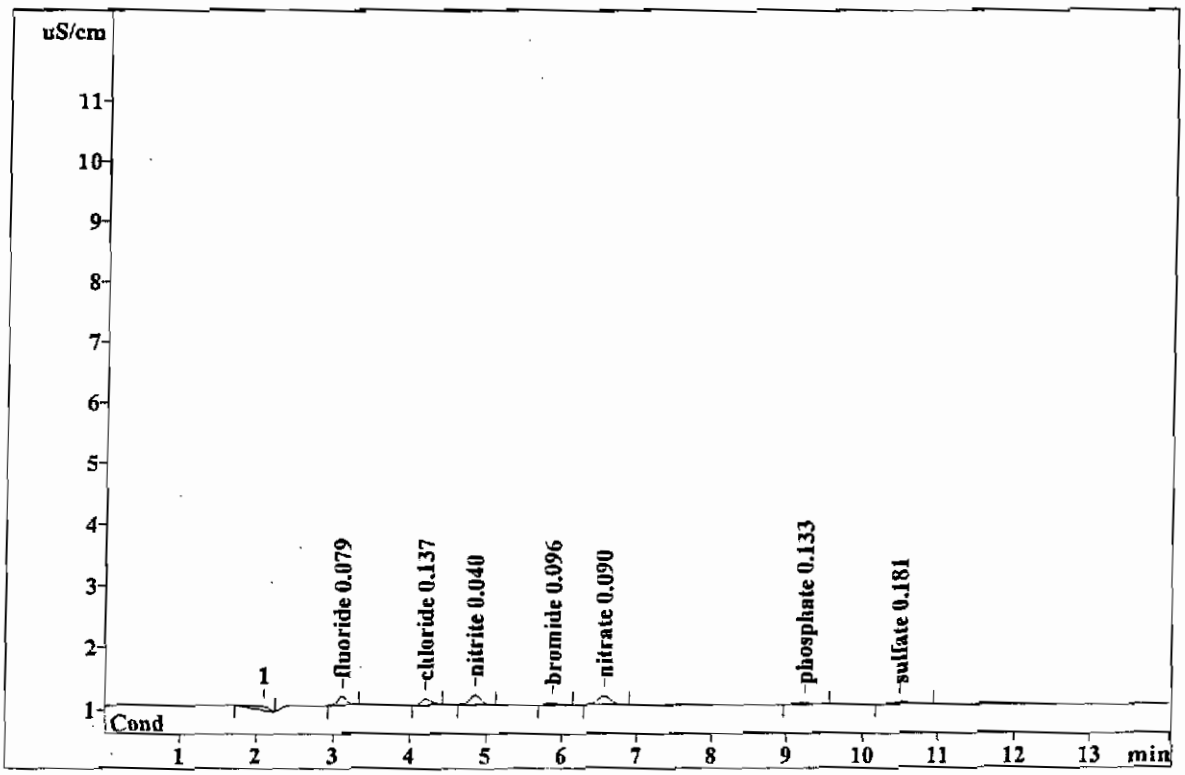
8024

Report date: 10/3/2011 10:48:46 AM
Printed by: Jadelyn Chun

Ident: AI39-03 S1
Analysis from: 9/30/2011 7:01:46 PM
File: v9301901.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69484

SAMPLE:
:
Vial number: 3
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.07	1.147	0.000	
2	3.12	0.14	1.182 ✓	0.079	fluoride
3	4.23	0.10	0.908 ✓	0.137	chloride
4	4.87	0.16	1.561 ✓	0.040	nitrite
5	5.87	0.03	0.301 ✓	0.096	bromide
6	6.57	0.14	1.722 ✓	0.090 ✓	nitrate
7	9.23	0.03	0.520 ✓	0.133 ✓	phosphate
8	10.50	0.04	0.692 ✓	0.181 ✓	sulfate
8	14.00	0.71	8.034	0.757	

This report has been created by IC Net
METROHM LTD

AS 10/03/11

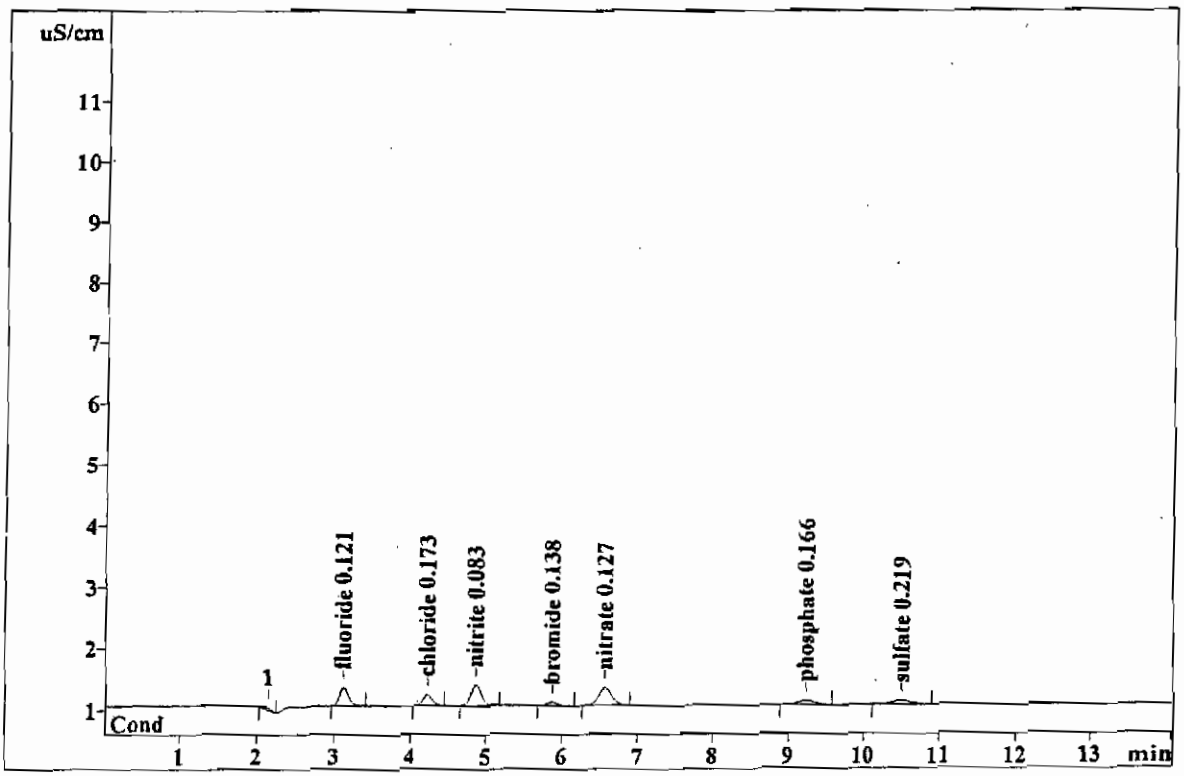
8025

Report date: 10/3/2011 10:49:06 AM
Printed by: Jadelyn Chun

Ident: AI39-04 S2
Analysis from: 9/30/2011 7:17:56 PM
File: v9301917.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69485

SAMPLE:
:
Vial number: 4
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.13	0.04	0.262	0.000	
2	3.12	0.30	2.417	0.121	fluoride
3	4.22	0.18	1.549	0.173	chloride
4	4.86	0.34	3.285	0.083	nitrite
5	5.87	0.05	0.601	0.138	bromide
6	6.56	0.29	3.425	0.127	nitrate
7	9.24	0.07	1.135	0.166	phosphate
8	10.51	0.07	1.193	0.219	sulfate
8	14.00	1.32	13.866	1.028	

This report has been created by IC Net
METROHM LTD

AS
10/03/11

8026

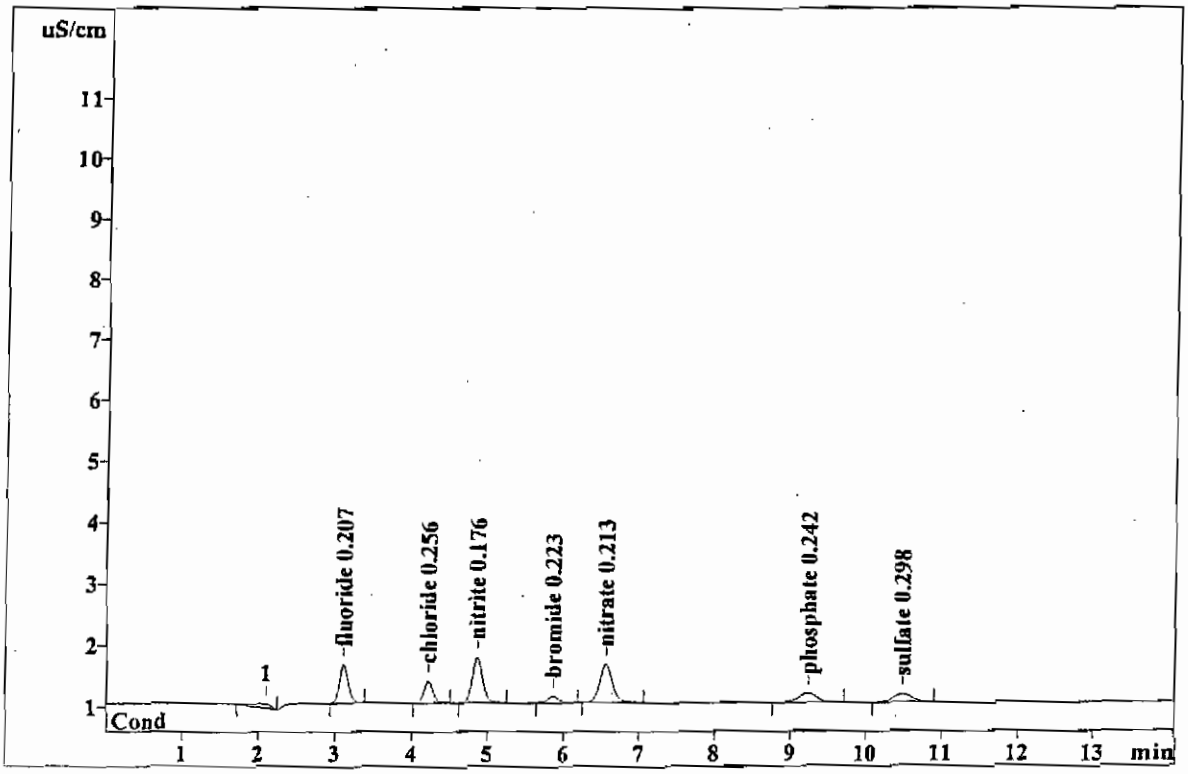
Report date: 10/3/2011 10:49:15 AM
Printed by: Jadelyn Chun

Ident: AI39-05 S3
Analysis from: 9/30/2011 7:34:06 PM
File: v9301934.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69486

SAMPLE:

Vial number: 5
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.07	1.155	0.000	
2	3.12	0.62	5.014	0.207	fluoride
3	4.22	0.35	3.034	0.256	chloride ✓
4	4.87	0.73	7.062	0.176	nitrite
5	5.87	0.11	1.204	0.223	bromide
6	6.56	0.62	7.345	0.213	nitrate
7	9.24	0.15	2.521	0.242	phosphate
8	10.50	0.13	2.236 ✓	0.298	sulfate
8	14.00	2.78	29.572	1.616	

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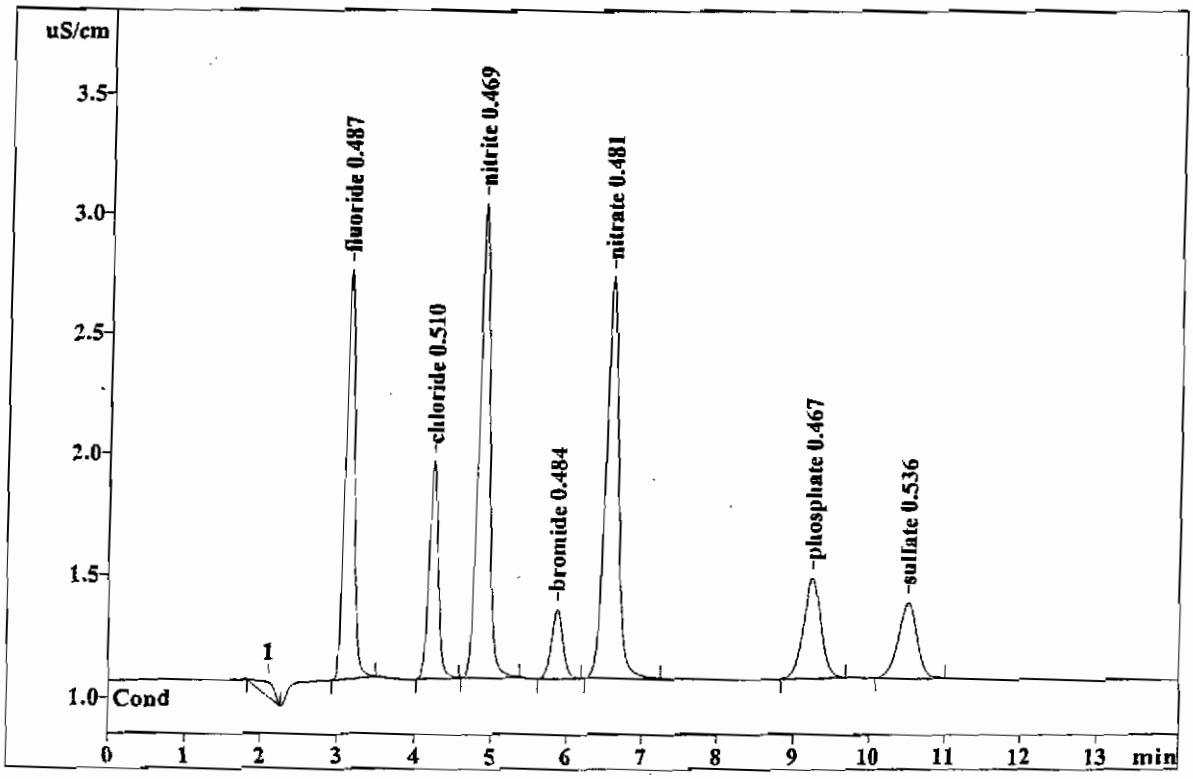
8027

Report date: 10/3/2011 10:49:34 AM
Printed by: Jadelyn Chun

Ident: AI39-06 S4
Analysis from: 9/30/2011 7:50:16 PM
File: v9301950.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69487

SAMPLE:
:
Vial number: 6
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.06	0.880	0.000	
2	3.12	1.69	13.397	0.487	fluoride
3	4.23	0.89	7.595	0.510	chloride ✓
4	4.87	1.96	18.943	0.469	nitrite
5	5.87	0.28	3.053	0.484	bromide ✓
6	6.55	1.66	19.530	0.481	nitrate
7	9.24	0.41	6.640	0.467	phosphate ✓
8	10.51	0.31	5.366 ✓	0.536	sulfate ✓
8	14.00	7.26	75.402	3.433	

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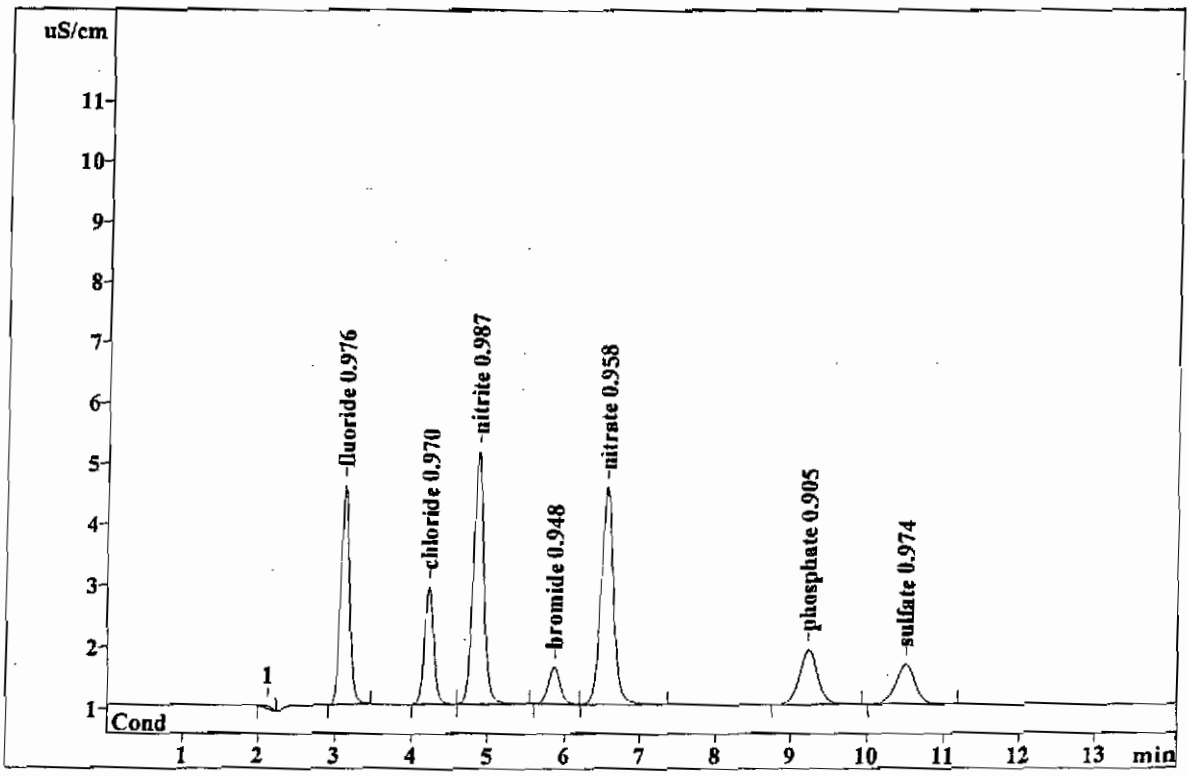
Report date: 10/3/2011 10:49:41 AM
Printed by: Jadelyn Chun

Ident: AI39-07 S5
Analysis from: 9/30/2011 8:06:26 PM
File: v9302006.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69488

SAMPLE:

Vial number: 7
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.13	0.04	0.341	0.000	
2	3.12	3.57	28.028	0.976	fluoride
3	4.22	1.90	15.837	0.970	chloride
4	4.86	4.12	39.987	0.987	nitrite
5	5.86	0.59	6.347	0.948	bromide
6	6.54	3.52	41.272	0.958	nitrate
7	9.24	0.88	14.663	0.905	phosphate
8	10.50	0.63	11.152	0.974	sulfate
8	14.00	15.25	157.627	6.718	

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8029

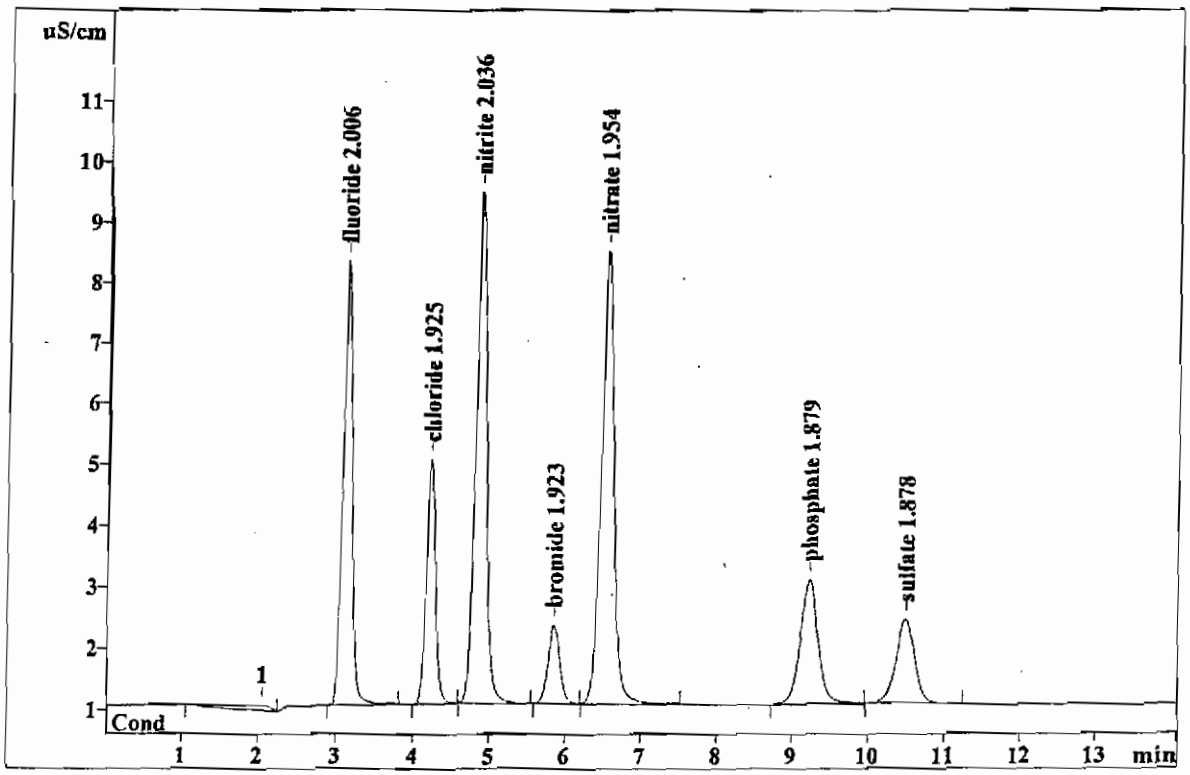
Report date: 10/3/2011 10:49:51 AM
Printed by: Jadelyn Chun

Ident: AI39-08 S6
Analysis from: 9/30/2011 8:22:36 PM
File: v9302022.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69489

SAMPLE:

Vial number: 8
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.08	0.08	3.161	0.000	
2	3.12	7.28	58.886	2.006	fluoride
3	4.22	3.98	32.972	1.925	chloride
4	4.86	8.39	82.536	2.036	nitrite
5	5.86	1.27	13.271	1.923	bromide
6	6.53	7.42	86.609	1.954	nitrate
7	9.23	2.01	32.493	1.879	phosphate
8	10.50	1.36	23.075 ✓	1.878	sulfate
8	14.00	31.79	333.001	13.601	

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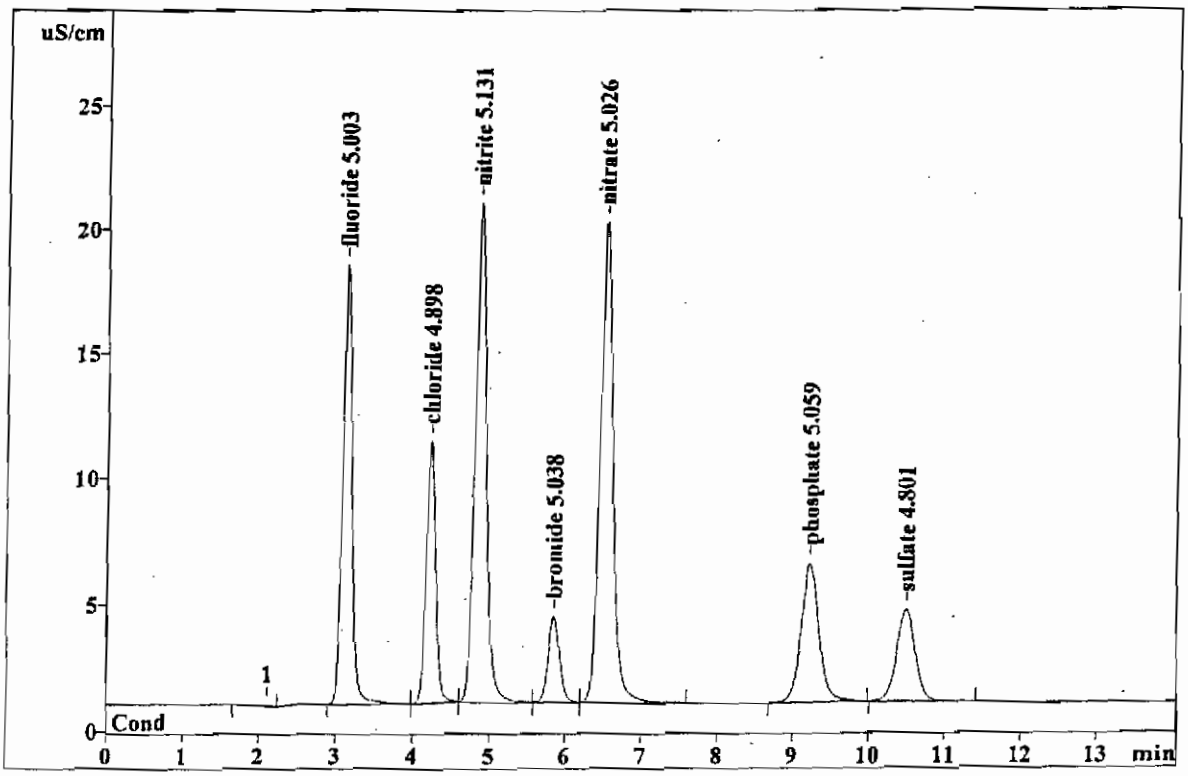
Report date: 10/3/2011 10:49:56 AM
Printed by: Jadelyn Chun

Ident: AI39-09 S7
Analysis from: 9/30/2011 8:38:46 PM
File: v9302038.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69490

SAMPLE:

Vial number: 9
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.06	1.110	0.000	
2	3.13	17.51	148.626	5.003	fluoride
3	4.23	10.38	86.279	4.898	chloride
4	4.86	19.91	208.149	5.131	nitrite
5	5.86	3.40	35.390	5.038	bromide
6	6.53	19.15	226.504	5.026	nitrate
7	9.23	5.51	90.728	5.059	phosphate
8	10.50	3.62	61.639 ✓	4.801	sulfate
8	14.00	79.53	858.424	34.956	

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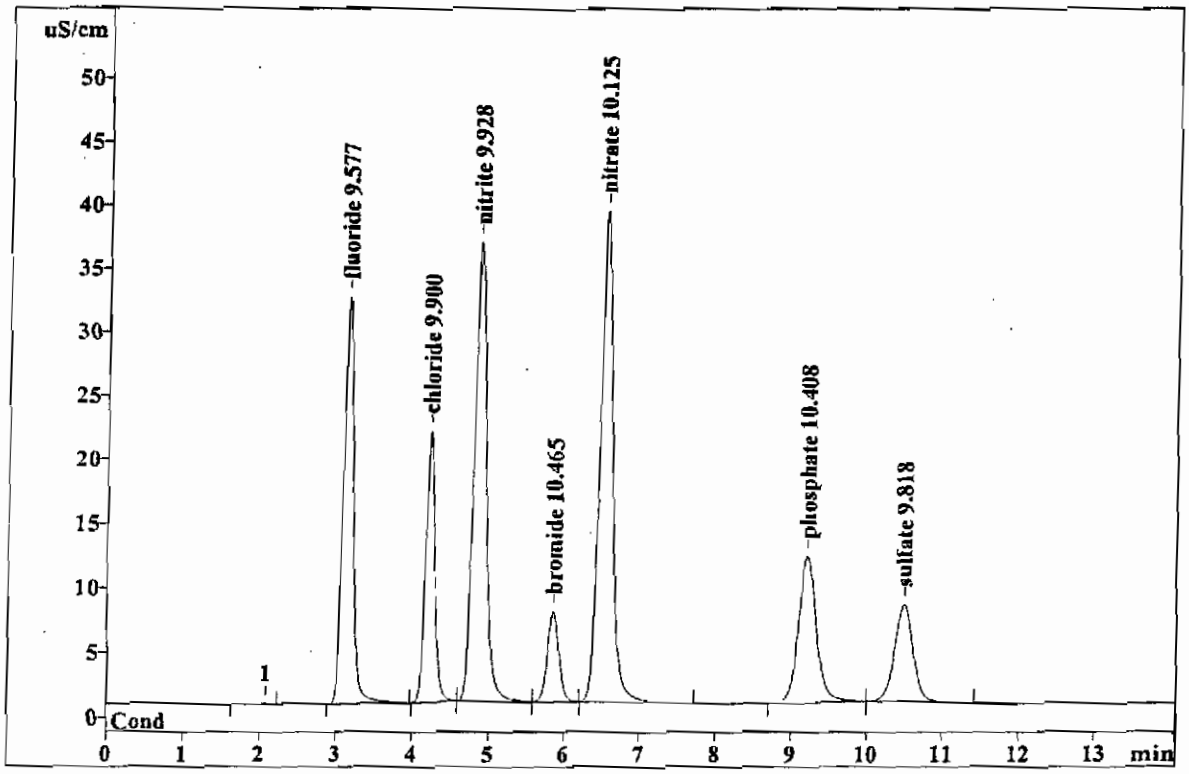
Report date: 10/3/2011 10:50:01 AM
Printed by: Jadelyn Chun

Ident: AI39-10 S8
Analysis from: 9/30/2011 8:54:55 PM
File: v9302054.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69491

SAMPLE:
:
Vial number: 10
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.09	0.04	0.883	0.000	
2	3.14	31.68	285.635	9.577	fluoride
3	4.22	21.04	175.986	9.900	chloride
4	4.86	35.83	402.789	9.928	nitrite
5	5.85	6.92	73.923	10.465	bromide
6	6.52	38.33	458.760	10.125	nitrate
7	9.21	11.30	188.680	10.408	phosphate
8	10.49	7.47	127.816	9.818	sulfate
8	14.00	152.61	1714.471	70.222	

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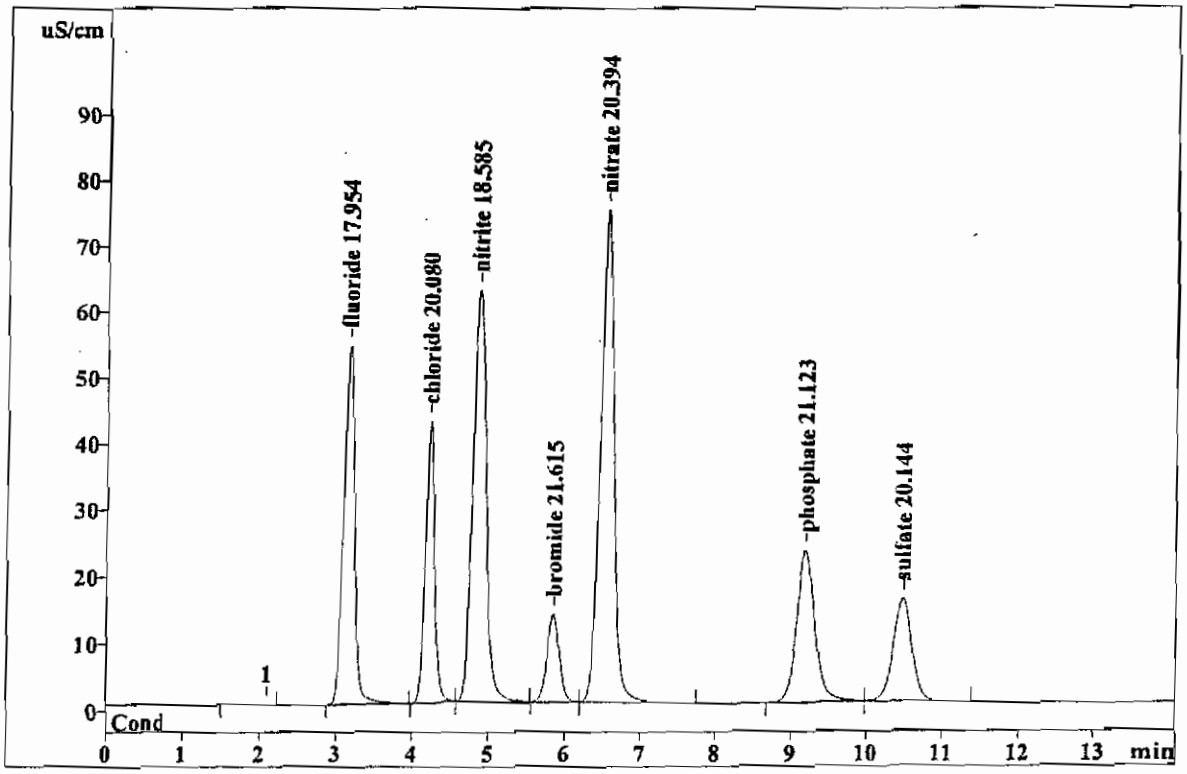
Report date: 10/3/2011 10:50:10 AM
Printed by: Jadelyn Chun

Ident: AI39-11 S9
Analysis from: 9/30/2011 9:11:05 PM
File: v9302111.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69492

SAMPLE:
:
Vial number: 11
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.09	0.02	0.447	0.000	
2	3.16	53.88	536.509	17.954	fluoride
3	4.23	42.24	358.541	20.080	chloride
4	4.86	61.98	754.064	18.585	nitrite
5	5.85	13.02	153.094	21.615	bromide
6	6.54	74.20	926.425	20.394	nitrate
7	9.19	22.65	384.898	21.123	phosphate
8	10.49	15.33	264.046	20.144	sulfate
8	14.00	283.33	3378.024	139.896	

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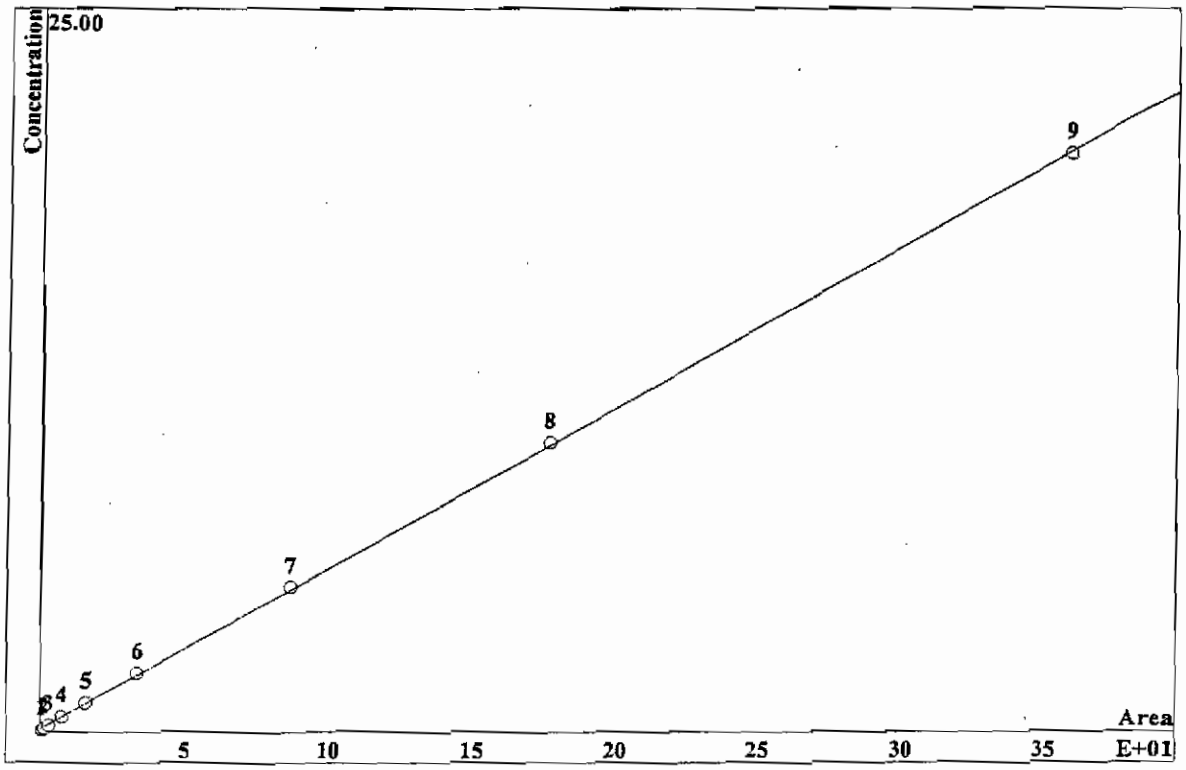
CALIBRATION OF COMPONENT chloride

Method: ICD0-I30.mtw
Equation: Q = 0.0557644·A + 0.0866239
RSD: 1.948 %
Correlation coefficient: 0.999932



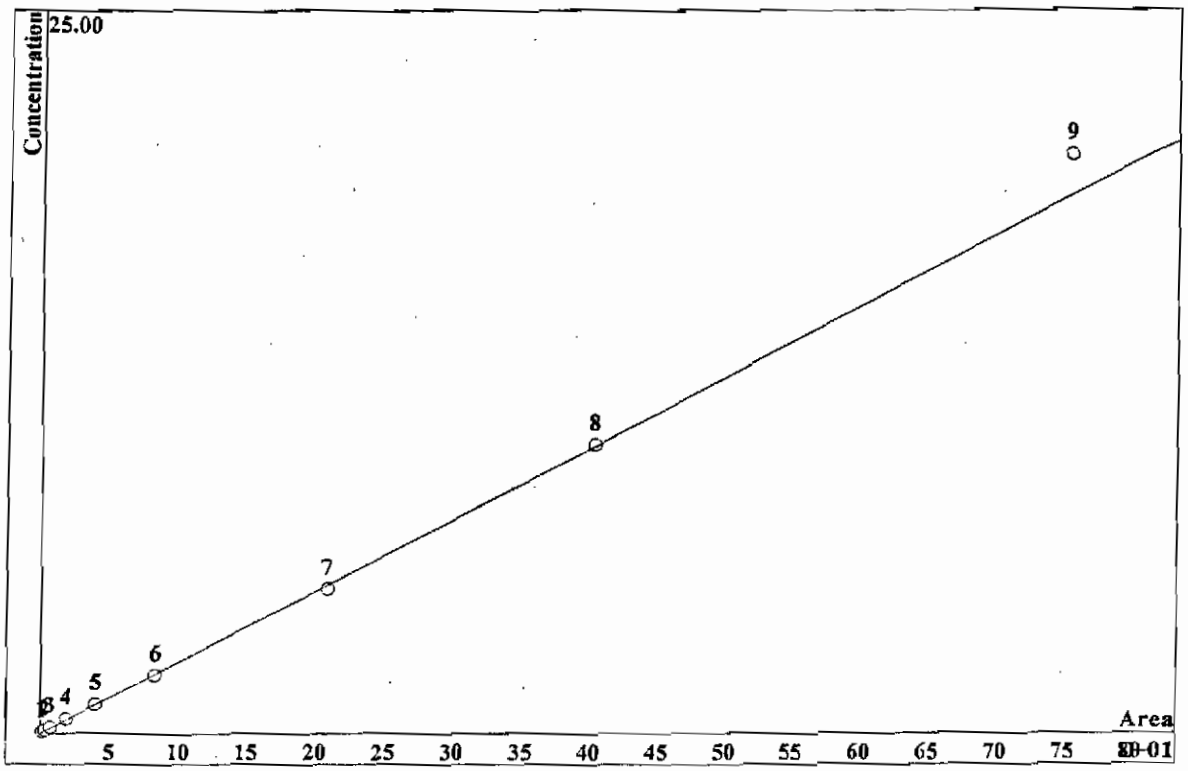
K3 = 0 K2 = 0 K1 = 0.0557644 K0 = 0.0866239
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1035	0.9076	0.05	1	4.26	Yes	v9301901.chw
2	0.1796	1.549	0.1	1	4.26	Yes	v9301917.chw
3	0.354	3.034	0.2	1	4.26	Yes	v9301934.chw
4	0.8921	7.595	0.5	1	4.26	Yes	v9301950.chw
5	1.896	15.84	1	1	4.26	Yes	v9302006.chw
6	3.983	32.97	2	1	4.26	Yes	v9302022.chw
7	10.38	86.28	5	1	4.26	Yes	v9302038.chw
8	21.04	176	10	1	4.26	Yes	v9302054.chw
9	42.24	358.5	20	1	4.26	Yes	v9302111.chw

AA
10/03/11

CALIBRATION OF COMPONENT nitrite

Method: ICD0-I30.mtw
Equation: Q = 0.024644·A + 0.00179217
RSD: 2.785 %
Correlation coefficient: 0.999850



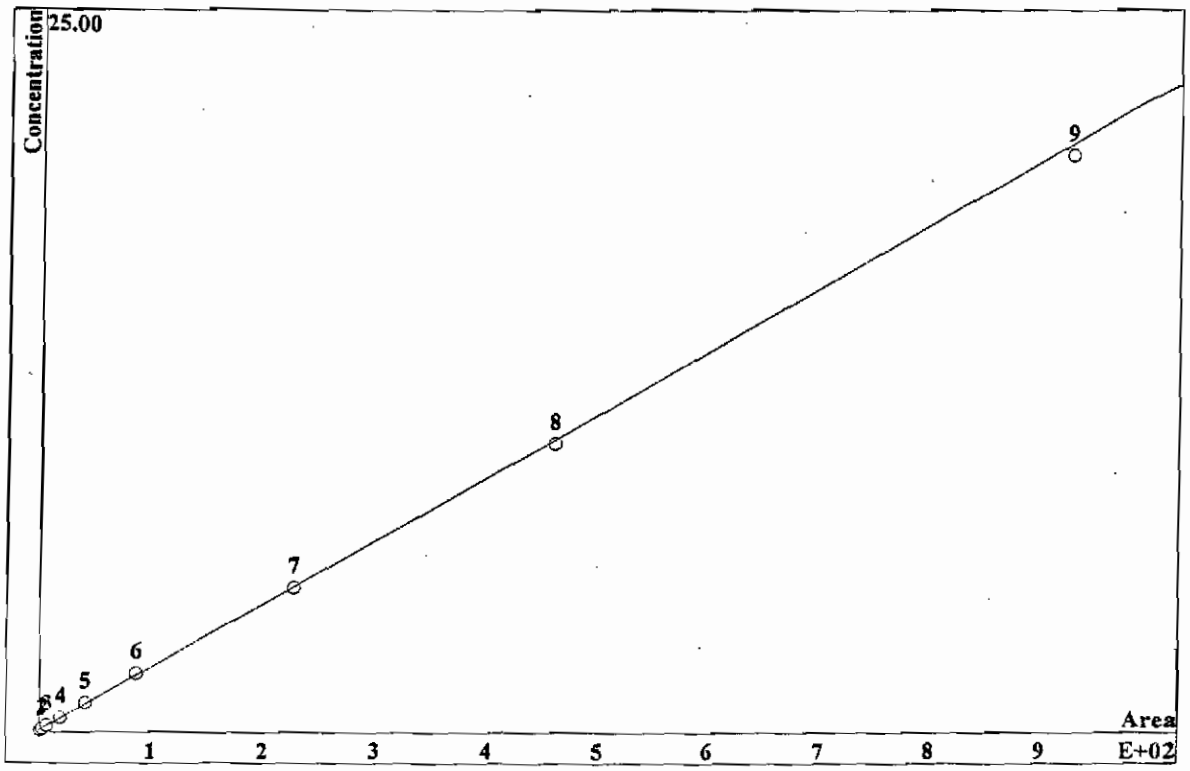
K3 = 0 K2 = 0 K1 = 0.024644 K0 = 0.00179217
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1597	1.561	0.05	1	4.932	Yes	v9301901.chw
2	0.3368	3.285	0.1	1	4.932	Yes	v9301917.chw
3	0.7305	7.062	0.2	1	4.932	Yes	v9301934.chw
4	1.964	18.94	0.5	1	4.932	Yes	v9301950.chw
5	4.115	39.99	1	1	4.932	Yes	v9302006.chw
6	8.392	82.54	2	1	4.932	Yes	v9302022.chw
7	19.91	208.1	5	1	4.932	Yes	v9302038.chw
8	35.83	402.8	10	1	4.932	Yes	v9302054.chw
9	61.98	754.1	20	1	4.932	No	v9302111.chw

DA
10/13/11

CALIBRATION OF COMPONENT nitrate

Method: ICD0-I30.mtw
Equation: Q = 0.0219574·A + 0.0522169
RSD: 3.044 %
Correlation coefficient: 0.999806



K3 = 0 K2 = 0 K1 = 0.0219574 K0 = 0.0522169
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1416	1.722	0.05	1	6.74	Yes	v9301901.chw
2	0.2866	3.425	0.1	1	6.74	Yes	v9301917.chw
3	0.6179	7.345	0.2	1	6.74	Yes	v9301934.chw
4	1.658	19.53	0.5	1	6.74	Yes	v9301950.chw
5	3.518	41.27	1	1	6.74	Yes	v9302006.chw
6	7.416	86.61	2	1	6.74	Yes	v9302022.chw
7	19.15	226.5	5	1	6.74	Yes	v9302038.chw
8	38.33	458.8	10	1	6.74	No	v9302054.chw
9	74.21	926.4	20	1	6.74	No	v9302111.chw

ps
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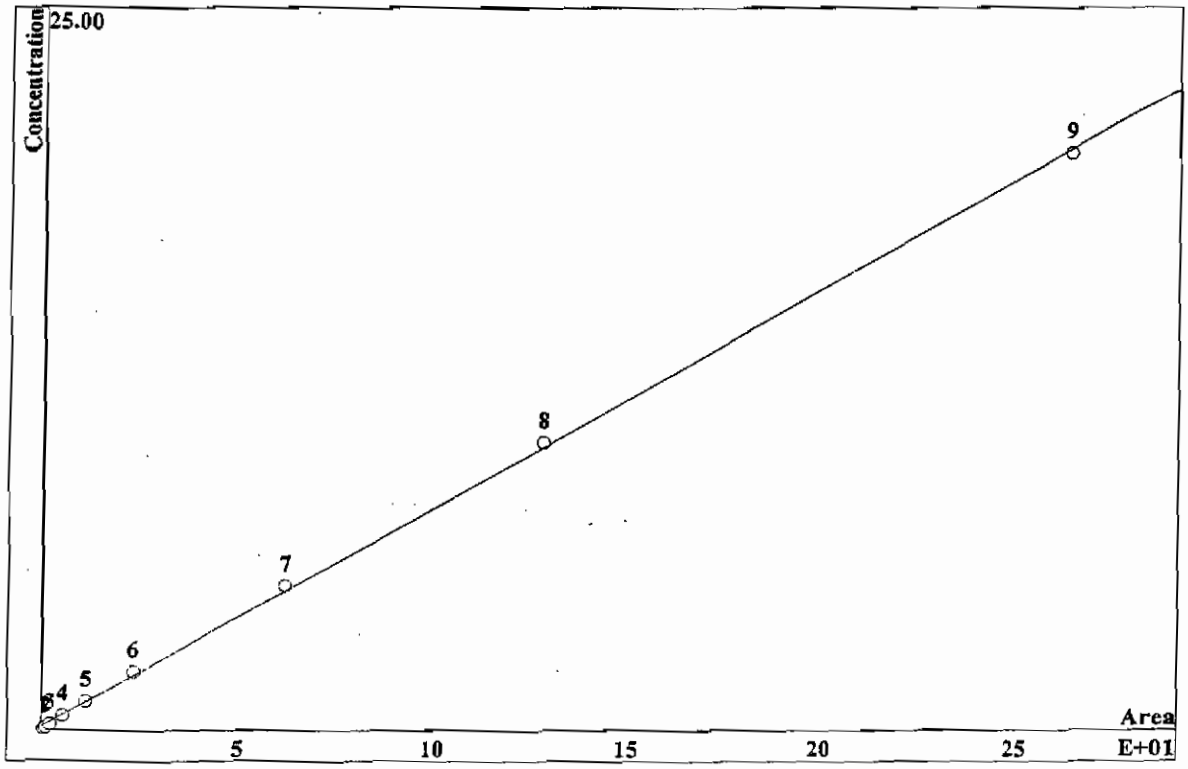
CALIBRATION OF COMPONENT sulfate

Method: ICD0-I30.mtw ✓ ✓
Equation: Q = 0.0758014·A + 0.128926
RSD: 3.408 %
Correlation coefficient: 0.999791



K3 = 0 K2 = 0 K1 = 0.0758014 K0 = 0.128926
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.03861	0.6921 ✓	0.05	1	10.79	Yes	v9301901.chw
2	0.06635	1.193 ✓	0.1	1	10.79	Yes	v9301917.chw
3	0.1288	2.236 ✓	0.2	1	10.79	Yes	v9301934.chw
4	0.3105	5.366 ✓	0.5	1	10.79	Yes	v9301950.chw
5	0.6333	11.15 ✓	1	1	10.79	Yes	v9302006.chw
6	1.361	23.08 ✓	2	1	10.79	Yes	v9302022.chw
7	3.625	61.64 ✓	5	1	10.79	Yes	v9302038.chw
8	7.471	127.8 ✓	10	1	10.79	Yes	v9302054.chw
9	15.34	264 ✓	20	1	10.79	Yes	v9302111.chw

LA
10/03/11

SECOND SOURCE VERIFICATION

IC Result Check FormVersion : I30/AI39

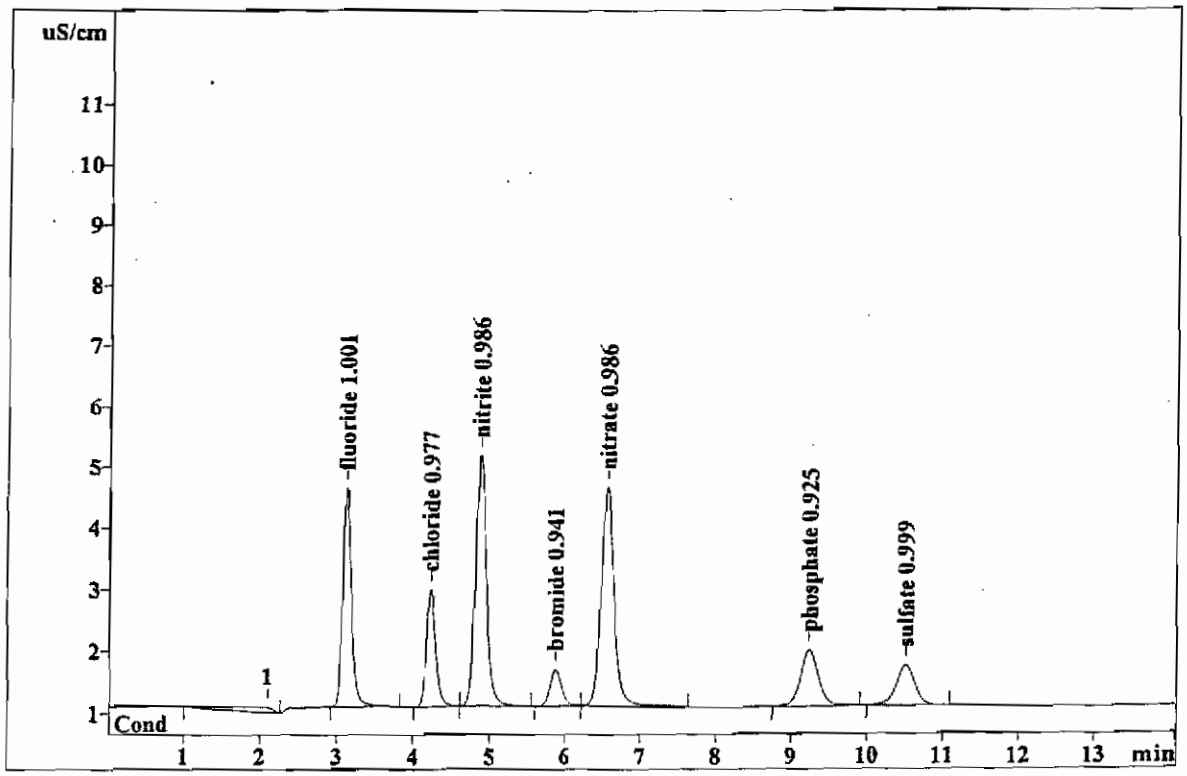
LFID	LSID	Selection	nitrite	fluoride	chloride	bromide	nitrate	phosphate	sulfate	RawNetID	DF
AI39-01	IB	IFCBNPS	0	0	0	0	0	0	0	v9301829	1
AI39-12	ICV	IFCBNPS	98.6%	100.1%	97.7%	94.1%	98.6%	92.5%	99.9%	v9302127	1
AI39-13	ICB	IFCBNPS	0	0	0	0	0	0	0	v9302143	1

Report date: 10/3/2011 10:50:13 AM
Printed by: Jadelyn Chun

Ident: AI39-12 ICV
Analysis from: 9/30/2011 9:27:15 PM
File: v9302127.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69493

SAMPLE:
:
Vial number: 12
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.08	0.09	3.575	0.000	
2	3.12	3.55	28.790 ✓	1.001 ✓	fluoride
3	4.23	1.89	15.958 ✓	0.977 ✓	chloride
4	4.87	4.07	39.941 ✓	0.986 ✓	nitrite
5	5.87	0.58	6.302 ✓	0.941 ✓	bromide
6	6.55	3.55	42.546 ✓	0.986 ✓	nitrate
7	9.24	0.91	15.033 ✓	0.925 ✓	phosphate
8	10.51	0.65	11.474 ✓	0.999 ✓	sulfate
8	14.00	15.29	163.619	6.815	

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8040

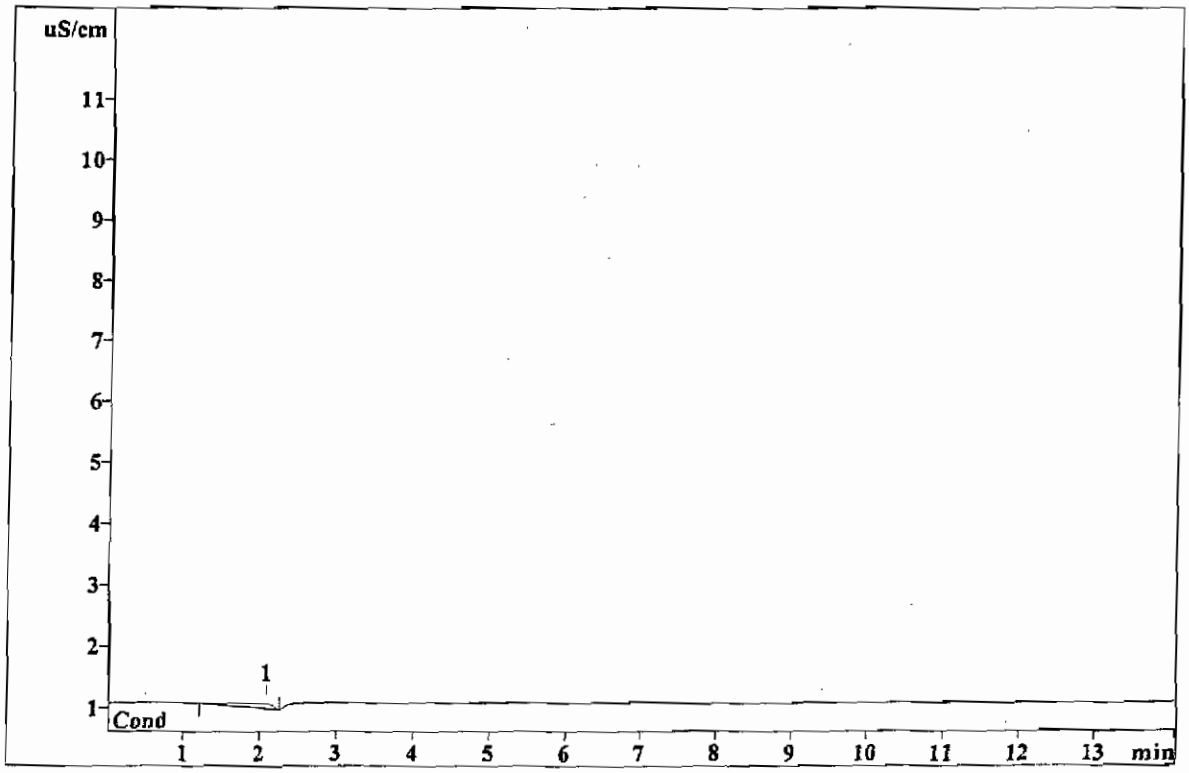
Report date: 10/3/2011 10:50:20 AM
Printed by: Jadelyn Chun

Ident: AI39-13 ICB
Analysis from: 9/30/2011 9:43:24 PM
File: v9302143.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69494

SAMPLE:

Vial number: 13
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.08	0.08	2.935	0.000	

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10/03/11

8041

DAILY CALIBRATIONS

IC Result Check FormVersion : 130/A139

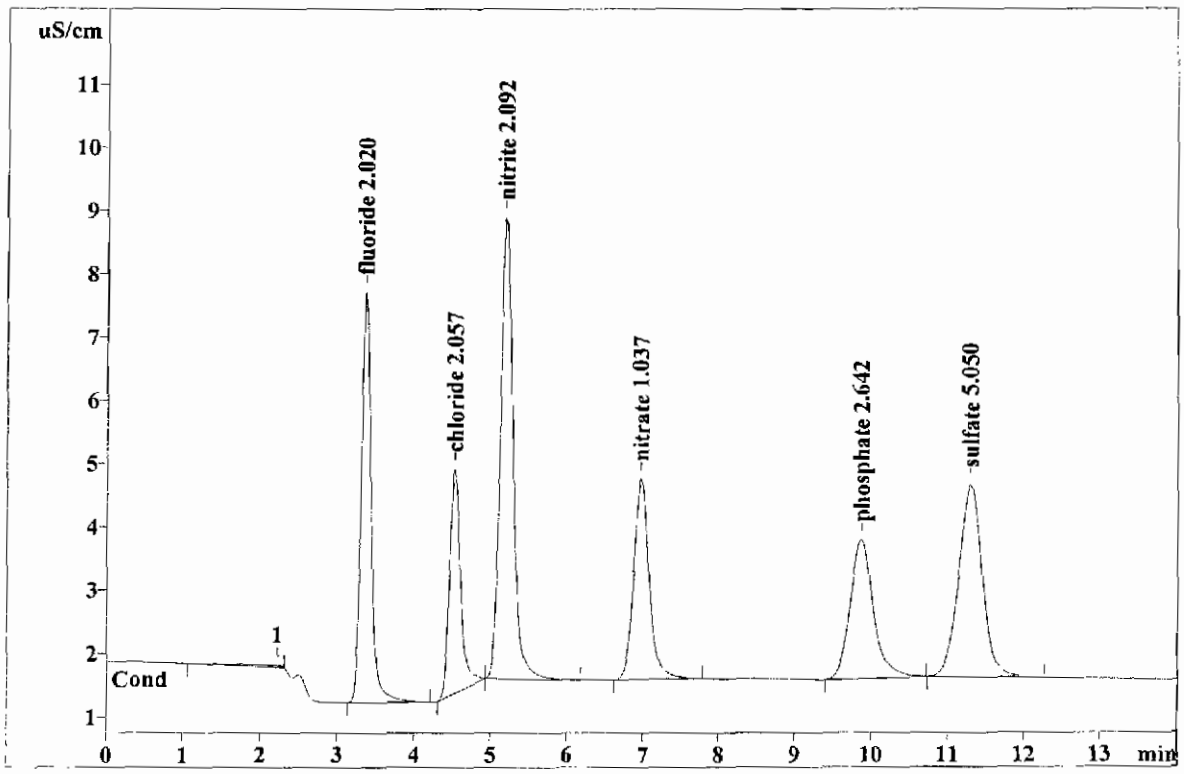
LFID	LSID	Selection	bromide	sulfate	nitrite	nitrate	fluoride	chloride	phosphate	RawNetID	DF
AK13-01	CCV365	BSINFCP	99.9%	99.5%	103.3%	98.6%	103%	98%	105.1%	vb091010	1
AK13-02	CCB365	BSINFCP	0	0	0	0	0	0	0	vb091026	1
AK13-13	CCV367	BSINFCP	0%*	97.9%	102.6%	100.6%	101.1%	97.6%	127.3%*	vb091324	1
AK13-14	CCB367	BSINFCP	0	0	0	0	0	0	0	vb091340	1
AK13-25	CCV369	BSINFCP	97.5%	99.3%	103.3%	99%	101.5%	97.5%	127.4%*	vb091656	1
AK13-26	CCB369	BSINFCP	0	0	0	0	0	0	0	vb091712	1
AK13-37	CCV371	BSINFCP	0%*	96.5%	102.4%	99.3%	100%	96.6%	131.1%*	vb092010	1
AK13-38	CCB371	BSINFCP	0	0	0	0	0	0	0	vb092026	1
AK13-49	CCV373	BSINFCP	0%*	97.9%	102.9%	100.8%	99.8%	98.6%	134.8%*	vb092324	1
AK13-50	CCB373	BSINFCP	0	0	0	0	0	0	0	vb092340	1
AK13-61	CCV375	BSINFCP	0%*	101%	104.6%	103.7%	101%	102.9%	132.1%*	vb100238	1
AK13-62	CCB375	BSINFCP	0	0	0	0	0	0	0	vb100254	1
AK13-73	CCV377	BSINFCP	0%*	99.1%	102.7%	99.8%	100.8%	99.6%	134.8%*	vb100552	1
AK13-74	CCB377	BSINFCP	0	0	0	0	0	0	0	vb100608	1
AK13-82	CCV379	BSINFCP	0%*	95.7%	102.1%	98.8%	99.6%	96.1%	129%*	vb100817	1
AK13-83	CCB379	BSINFCP	0	0	0	0	0	0	0	vb100834	1
AK13-92	CCV381	BSINFCP	0%*	97.1%	102.7%	100.1%	100.2%	97.6%	128.8%*	vb101100	1
AK13-93	CCB381	BSINFCP	0	0	0	0	0	0	0	vb101116	1
AK13-94	CCV383	BSINFCP	97.4%	96.8%	101.9%	97.8%	101.8%	94.1%	127%*	vb101132	1

Report date: 11/10/2011 2:52:29 AM
Printed by: Jadelyn Chun

Ident: AK13-61 CCV375
Analysis from: 11/10/2011 2:38:32 AM
File: VB100238.CHW Last save: 11/10/2011 2:52:29 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71226

SAMPLE:
:
Vial number: 61
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.21	0.03	1.261	0.000	
2	3.36	6.47	59.310	2.020	fluoride
3	4.53	3.53	35.343	2.057	chloride
4	5.20	7.29	84.831	2.092	nitrite
5	6.97	3.16	44.871	1.037	nitrate
6	9.87	2.19	46.470	2.642	phosphate
7	11.29	3.03	64.927	5.050	sulfate
7	14.00	25.70	337.014	14.900	

This report has been created by IC Net
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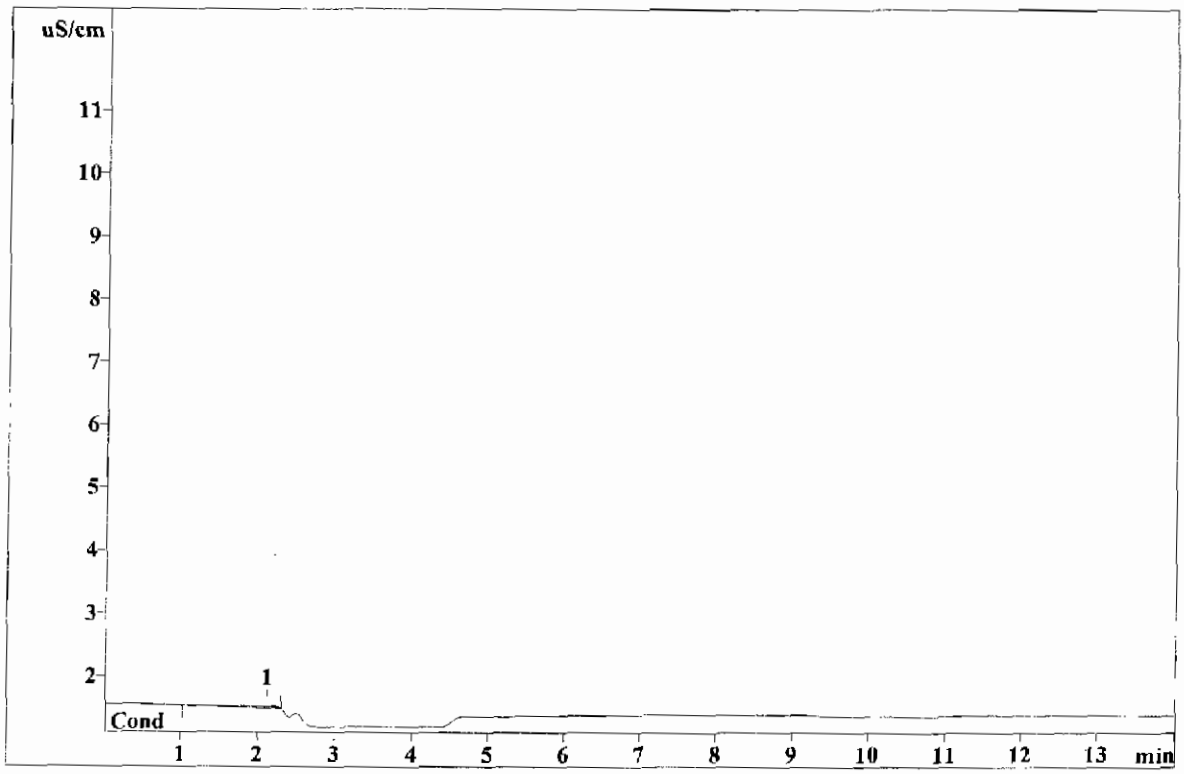
Report date: 11/10/2011 10:49:01 AM
Printed by: Jadelyn Chun

Ident: AK13-62 CCB375
Analysis from: 11/10/2011 2:54:41 AM
File: vb100254.chw Last save: 11/10/2011 3:08:38 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71227

SAMPLE:
:
Vial number: 62
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.12	0.03	1.443	0.000	

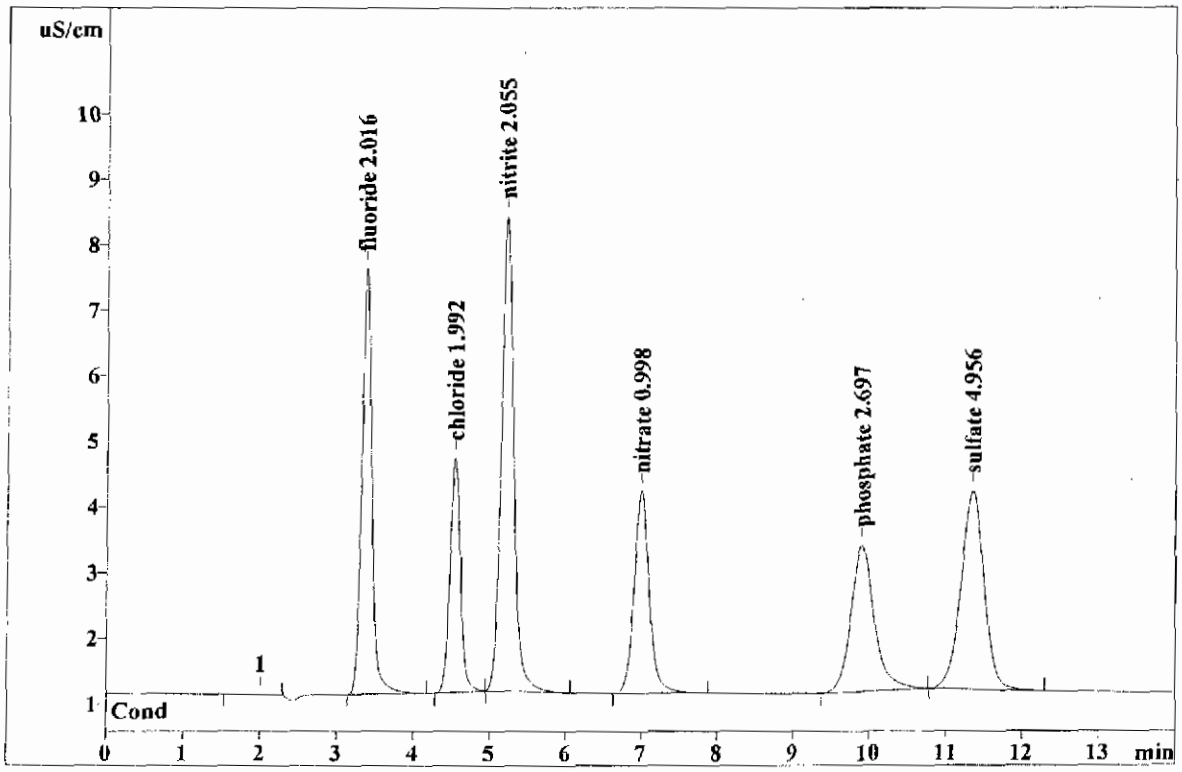
This report has been created by IC Net
METROHM LTD

Report date: 11/10/2011 6:06:26 AM
Printed by: Jadelyn Chun

Ident: AK13-73 CCV377
Analysis from: 11/10/2011 5:52:29 AM
File: VB100552.CHW Last save: 11/10/2011 6:06:26 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71238

SAMPLE:
:
Vial number: 73
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	1.98	0.01	0.332	0.000	
2	3.37	6.47	59.188	2.016	fluoride
3	4.54	3.56	34.164	1.992	chloride
4	5.22	7.24	83.310	2.055	nitrite
5	6.99	3.08	43.079	0.998	nitrate
6	9.91	2.22	47.472	2.697	phosphate
7	11.34	3.02	63.676	4.956	sulfate
7	14.00	25.61	331.220	14.713	

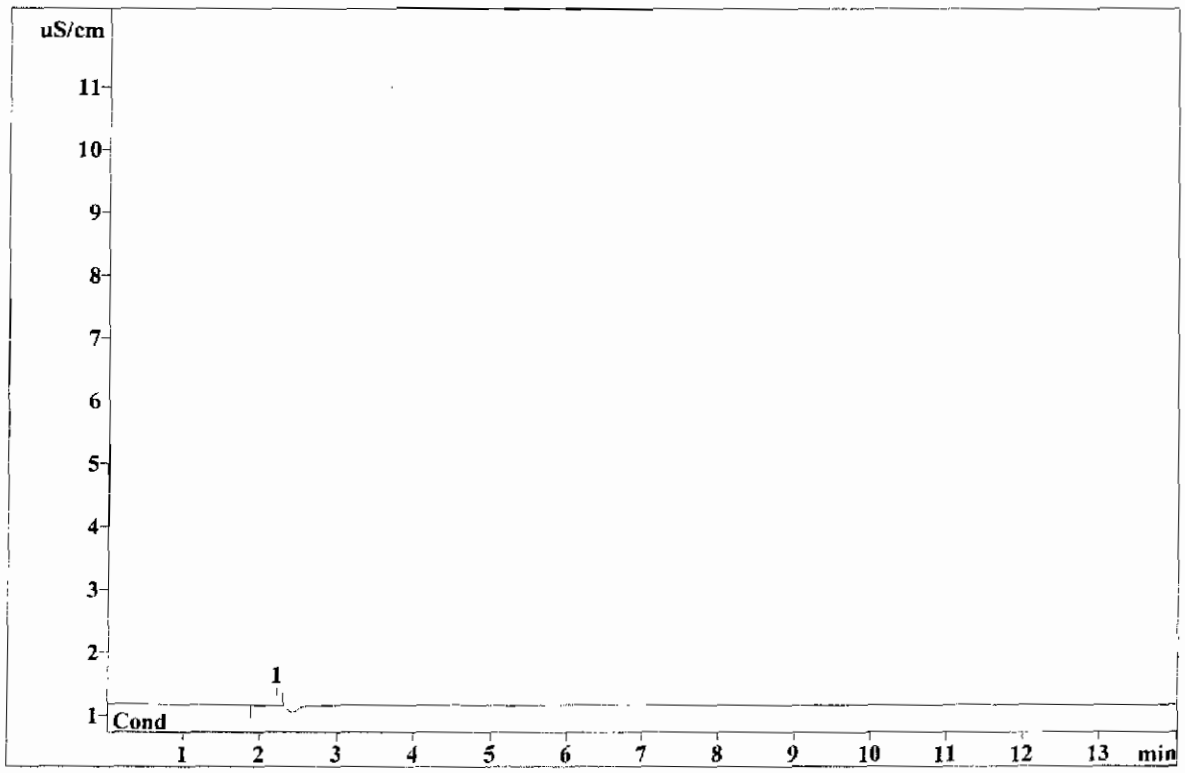
This report has been created by IC Net
METROHM LTD

Report date: 11/10/2011 10:49:33 AM
Printed by: Jadelyn Chun

Ident: AK13-74 CCB377
Analysis from: 11/10/2011 6:08:39 AM
File: vb100608.chw Last save: 11/10/2011 6:22:36 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71239

SAMPLE:
:
Vial number: 74
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.22	0.01	0.169	0.000	

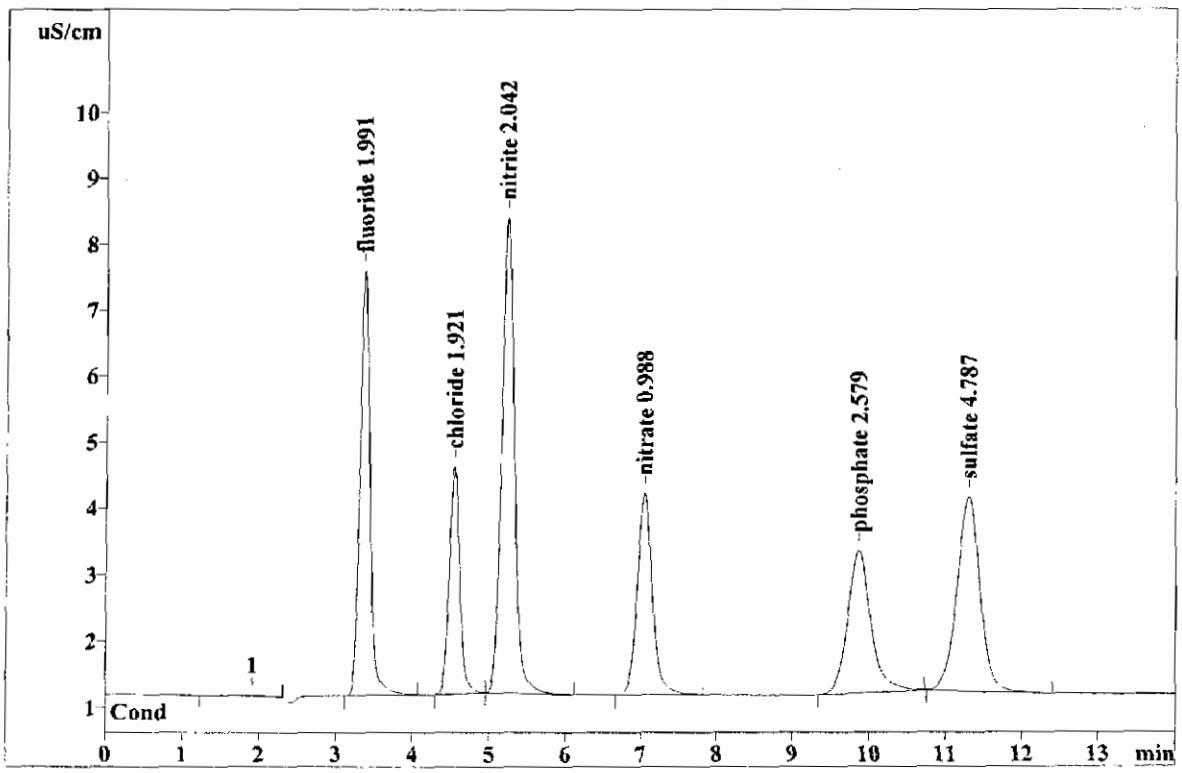
This report has been created by IC Net
METROHM LTD

Report date: 11/10/2011 8:31:54 AM
Printed by: Jadelyn Chun

Ident: AK13-82 CCV379
Analysis from: 11/10/2011 8:17:57 AM
File: VB100817.CHW Last save: 11/10/2011 8:31:54 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71247

SAMPLE:
:
Vial number: 82
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	1.92	0.02	0.642	0.000	
2	3.36	6.43	58.432	1.991	fluoride
3	4.54	3.43	32.899	1.921	chloride
4	5.22	7.19	82.798	2.042	nitrite
5	7.03	3.04	42.613	0.988	nitrate
6	9.86	2.15	45.319	2.579	phosphate
7	11.30	2.93	61.454	4.787	sulfate
7	14.00	25.18	324.157	14.309	

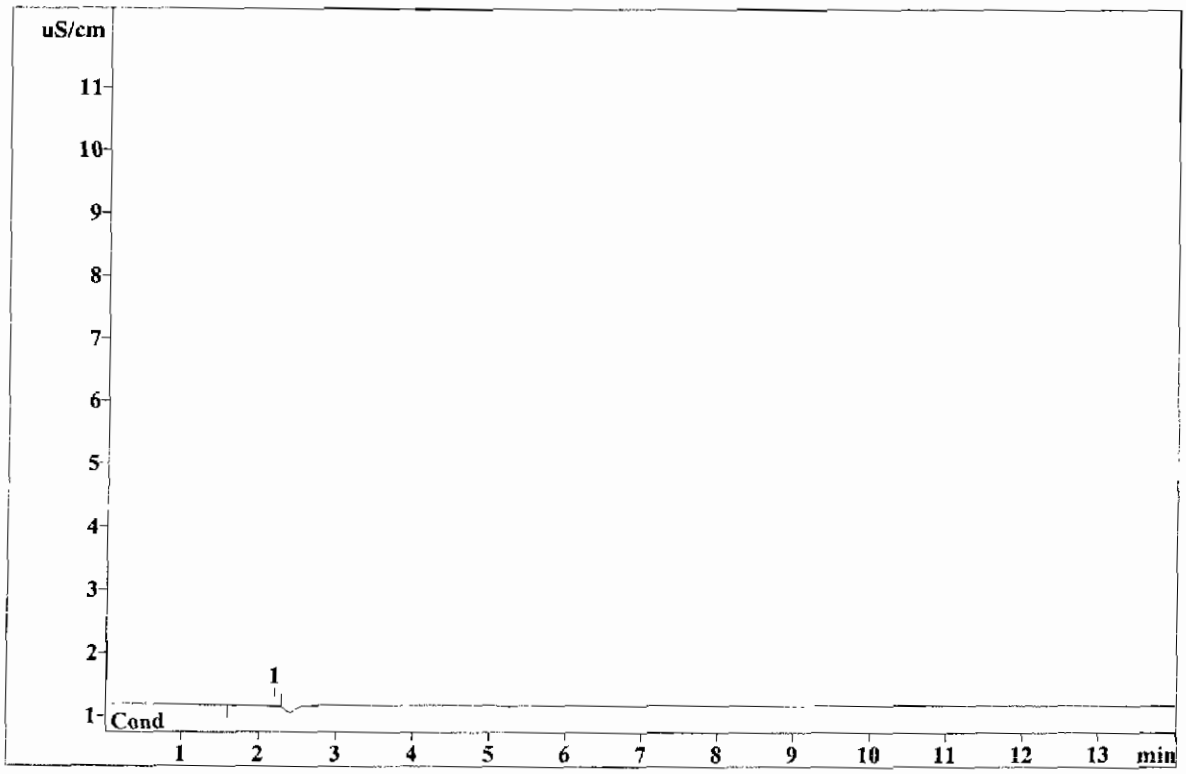
This report has been created by IC Net
METROHM LTD

Report date: 11/10/2011 10:51:32 AM
Printed by: Jadelyn Chun

Ident: AK13-83 CCB379
Analysis from: 11/10/2011 8:34:07 AM
File: vb100834.chw Last save: 11/10/2011 8:48:04 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71248

SAMPLE:
:
Vial number: 83
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

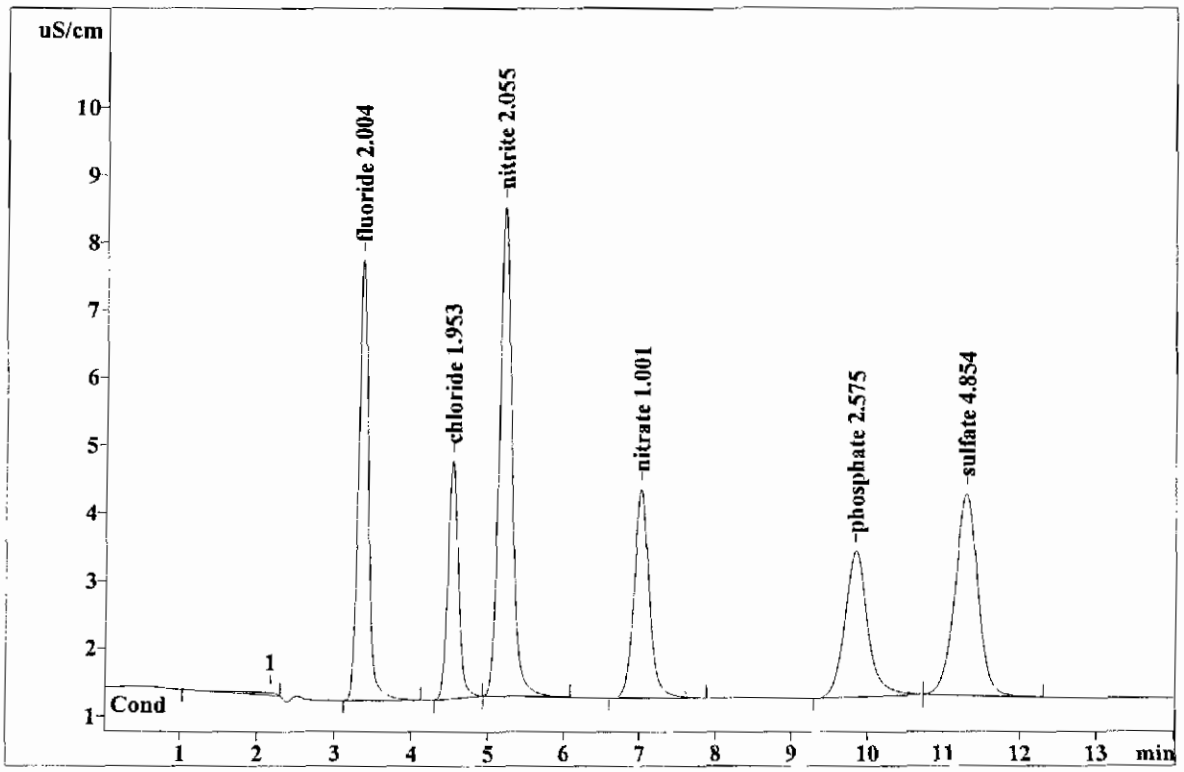
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.21	0.02	0.477	0.000	

This report has been created by IC Net
METROHM LTD

Report date: 11/10/2011 11:21:53 AM
Printed by: Jadelyn Chun

Ident: AK13-92 CCV381
Analysis from: 11/10/2011 11:00:39 AM
File: vb101100.chw Last save: 11/10/2011 11:14:36 AM
Modified!
Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71257

SAMPLE:
:
Vial number: 92
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.04	1.632	0.000	
2	3.35	6.52	58.818	2.004	fluoride
3	4.53	3.51	33.466	1.953	chloride
4	5.21	7.24	83.307	2.055	nitrite
5	7.01	3.08	43.210	1.001	nitrate
6	9.83	2.16	45.254	2.575	phosphate
7	11.29	2.98	62.340	4.854	sulfate
7	14.00	25.52	328.026	14.442	

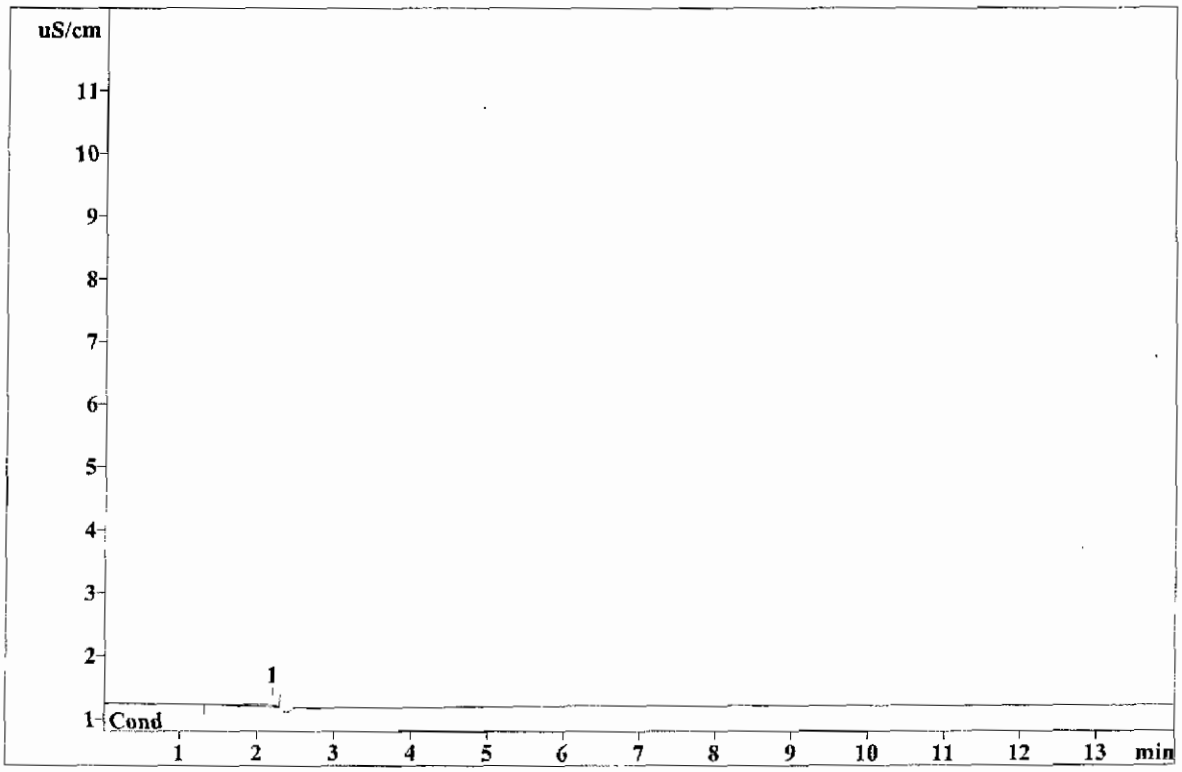
This report has been created by IC Net
METROHM LTD

Report date: 11/10/2011 11:49:34 AM
Printed by: Jadelyn Chun

Ident: AK13-93 CCB381
Analysis from: 11/10/2011 11:16:49 AM
File: vb101116.chw Last save: 11/10/2011 11:30:46 AM

Method: ICD0-I30.mtw Last save: 11/9/2011 10:33:11 AM
Run operator: Jadelyn Chun
Analysis number: 71258

SAMPLE:
:
Vial number: 93
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.19	0.03	1.174	0.000	

This report has been created by IC Net
METROHM LTD

IC Result Check FormVersion : I30/AI39

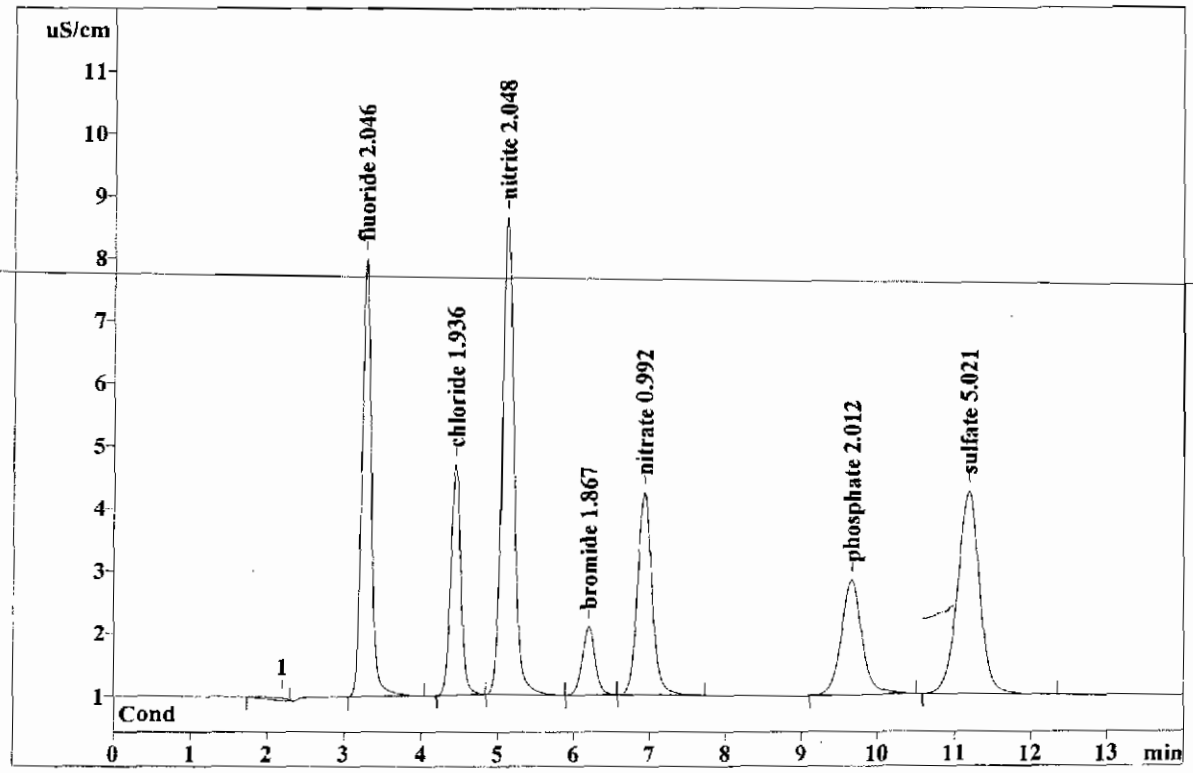
LFID	LSID	Selection	nitrite	sulfate	fluoride	chloride	bromide	nitrate	phosphate	RawNetID	DF
AK19-01	CCV411	ISFCBNP	102.6%	99.4%	101.4%	99.8%	93.7%	99.3%	99.7%	vb121034	1
AK19-02	CCB411	ISFCBNP	0	0	0	0	0	0	0	vb121050	1
AK19-13	CCV413	ISFCBNP	102.6%	99.2%	102.6%	95.7%	93.9%	99%	103.5%	vb121349	1
AK19-14	CCB413	ISFCBNP	0	0	0	0	0	0	0	vb121405	1
AK19-25	CCV415	ISFCBNP	102.4%	100.4%	102.3%	96.8%	93.3%	99.2%	100.6%	vb121703	1
AK19-26	CCB415	ISFCBNP	0	0	0	0	0	0	0	vb121719	1
AK19-37	CCV417	ISFCBNP	103.3%	99.8%	102.5%	95.9%	93.9%	99.8%	102.2%	vb122017	1
AK19-38	CCB417	ISFCBNP	0	0	0	0	0	0	0	vb122033	1
AK19-49	CCV419	ISFCBNP	102.6%	100.2%	102.3%	97.1%	95.2%	97.5%	102.5%	vb122331	1
AK19-50	CCB419	ISFCBNP	0	0	0	0	0	0	0	vb122347	1
AK19-56	CCV421	ISFCBNP	102.5%	99.4%	102.7%	96.7%	94.7%	97.2%	99.6%	vb130124	1
AK19-57	CCB421	ISFCBNP	0	0	0	0	0	0	0	vb130140	1

Report date: 11/12/2011 5:17:14 PM
Printed by: Lucita Arzadon

Ident: AK19-25 CCV415
Analysis from: 11/12/2011 5:03:17 PM
File: VB121703.CHW Last save: 11/12/2011 5:17:14 PM

Method: ICD0-I30.mtw Last save: 11/12/2011 10:52:35 AM
Run operator: Lucita Arzadon
Analysis number: 71422

SAMPLE:
:
Vial number: 25
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.18	0.04	0.844	0.000	
2	3.28	6.99	60.068	2.046	fluoride
3	4.44	3.68	33.163	1.936	chloride
4	5.12	7.64	83.020	2.048	nitrite
5	6.19	1.08	12.872	1.867	bromide
6	6.93	3.23	42.800	0.992	nitrate
7	9.66	1.83	34.936	2.012	phosphate
8	11.18	3.22	64.538	5.021	sulfate
8	14.00	27.72	332.242	15.921	

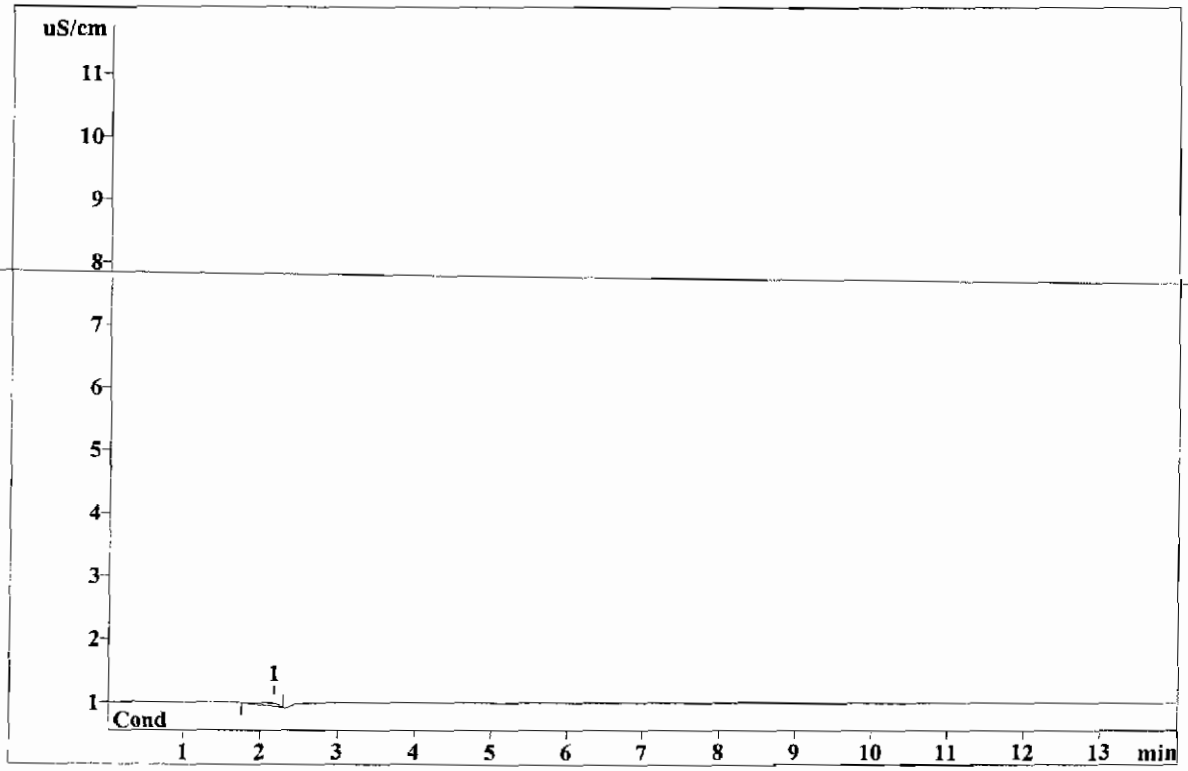
This report has been created by IC Net
METROHM LTD

Report date: 11/14/2011 11:14:53 AM
Printed by: Jadelyn Chun

Ident: AK19-26 CCB415
Analysis from: 11/12/2011 5:19:26 PM
File: vb121719.chw Last save: 11/12/2011 5:33:23 PM

Method: ICD0-I30.mtw Last save: 11/12/2011 10:52:35 AM
Run operator: Lucita Arzadon
Analysis number: 71423

SAMPLE:
:
Vial number: 26
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.18	0.05	0.882	0.000	

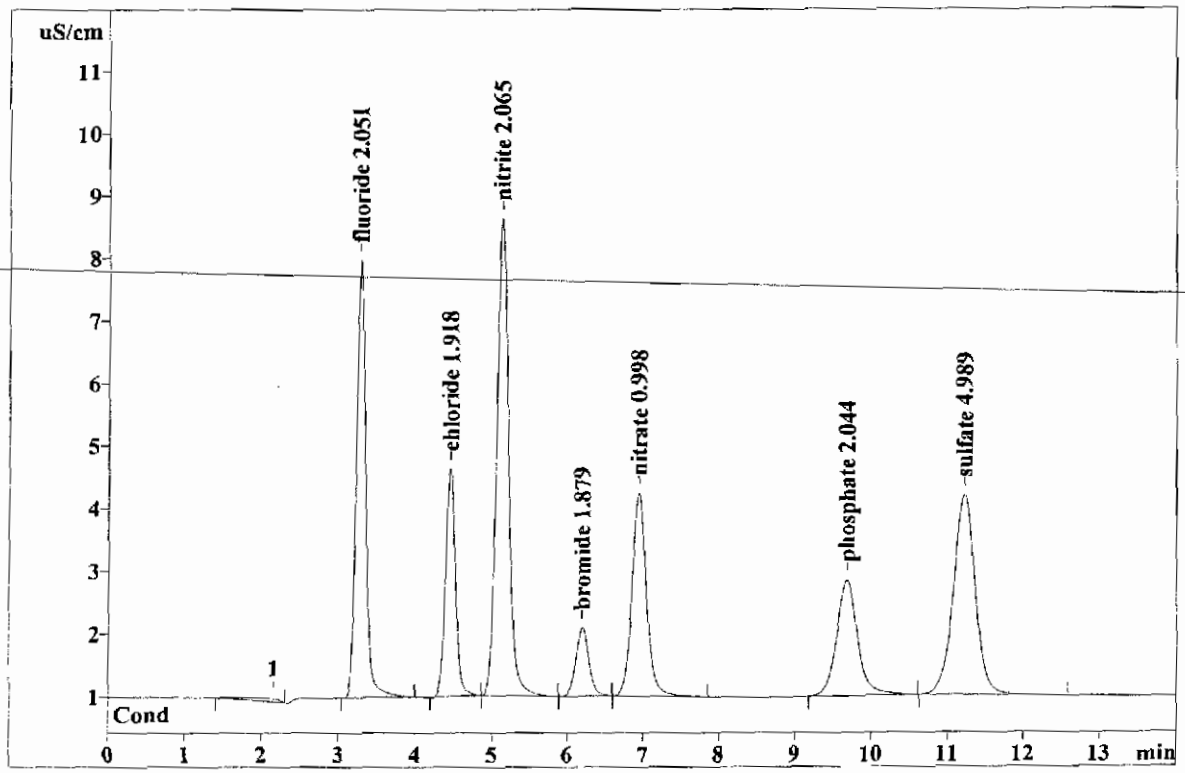
This report has been created by IC Net
METROHM LTD

Report date: 11/12/2011 8:31:09 PM
Printed by: Lucita Arzadon

Ident: AK19-37 CCV417
Analysis from: 11/12/2011 8:17:12 PM
File: VB122017.CHW Last save: 11/12/2011 8:31:09 PM

Method: ICD0-I30.mtw Last save: 11/12/2011 10:52:35 AM
Run operator: Lucita Arzadon
Analysis number: 71434

SAMPLE:
:
Vial number: 37
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.16	0.05	1.566	0.000	
2	3.28	6.99	60.220	2.051	fluoride
3	4.45	3.63	32.838	1.918	chloride
4	5.12	7.63	83.726	2.065	nitrite
5	6.20	1.08	12.960	1.879	bromide
6	6.94	3.24	43.062	0.998	nitrate
7	9.68	1.85	35.519	2.044	phosphate
8	11.22	3.18	64.115	4.989	sulfate
8	14.00	27.65	334.006	15.943	

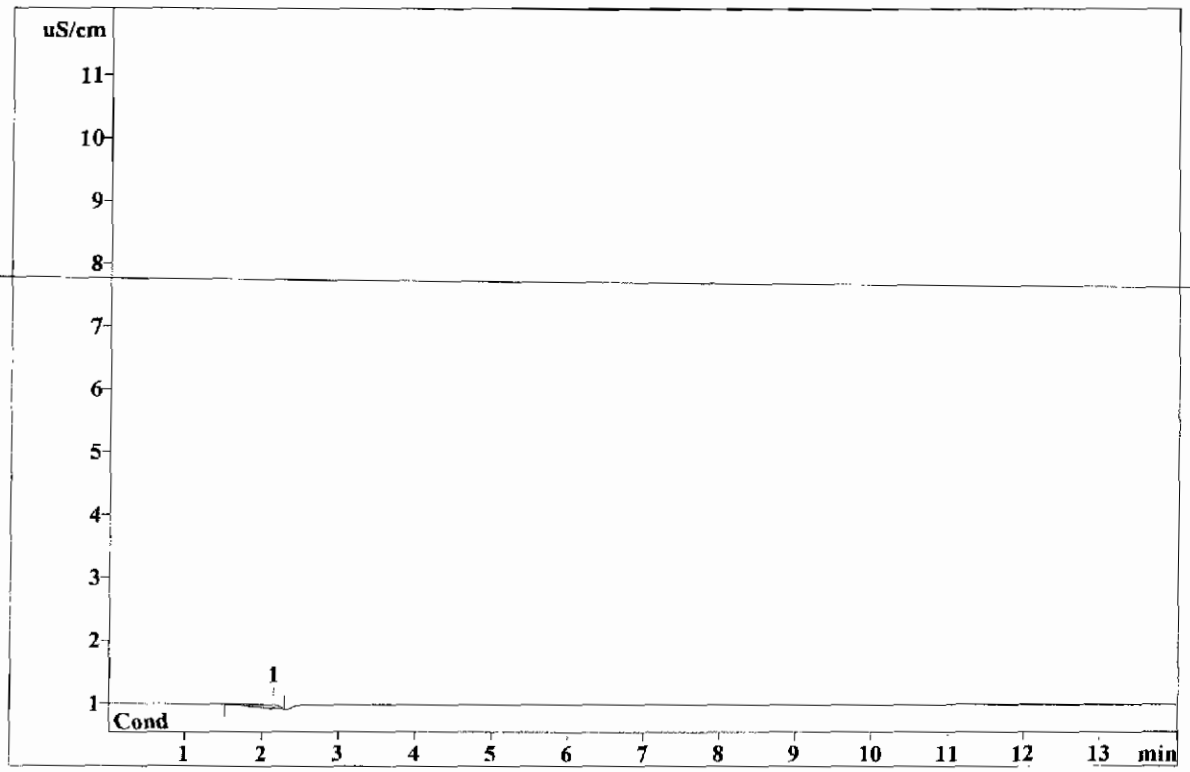
This report has been created by IC Net
METROHM LTD

Report date: 11/14/2011 11:15:29 AM
Printed by: Jadelyn Chun

Ident: AK19-38 CCB417
Analysis from: 11/12/2011 8:33:21 PM
File: vb122033.chw Last save: 11/12/2011 8:47:19 PM

Method: ICD0-I30.mtw Last save: 11/12/2011 10:52:35 AM
Run operator: Lucita Arzadon
Analysis number: 71435

SAMPLE:
:
Vial number: 38
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.15	0.05	1.427	0.000	

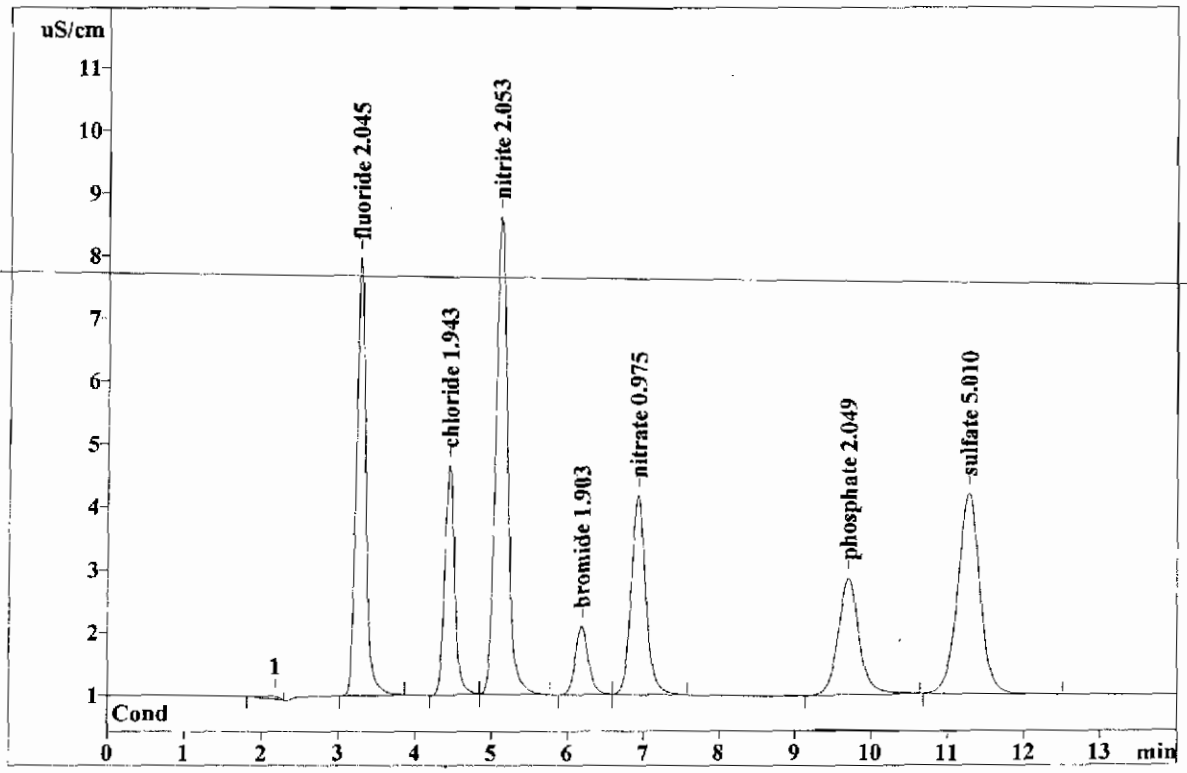
This report has been created by IC Net
METROHM LTD

Report date: 11/12/2011 11:45:04 PM
Printed by: Lucita Arzadon

Ident: AK19-49 CCV419
Analysis from: 11/12/2011 11:31:07 PM
File: VB122331.CHW Last save: 11/12/2011 11:45:04 PM

Method: ICD0-I30.mtw Last save: 11/12/2011 10:52:35 AM
Run operator: Lucita Arzadon
Analysis number: 71446

SAMPLE:
:
Vial number: 49
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.04	0.718	0.000	
2	3.28	6.97	60.051	2.045	fluoride
3	4.45	3.66	33.281	1.943	chloride
4	5.12	7.61	83.222	2.053	nitrite
5	6.19	1.09	13.131	1.903	bromide
6	6.93	3.16	42.019	0.975	nitrate
7	9.70	1.85	35.619	2.049	phosphate
8	11.28	3.18	64.394	5.010	sulfate
8	14.00	27.57	332.435	15.978	

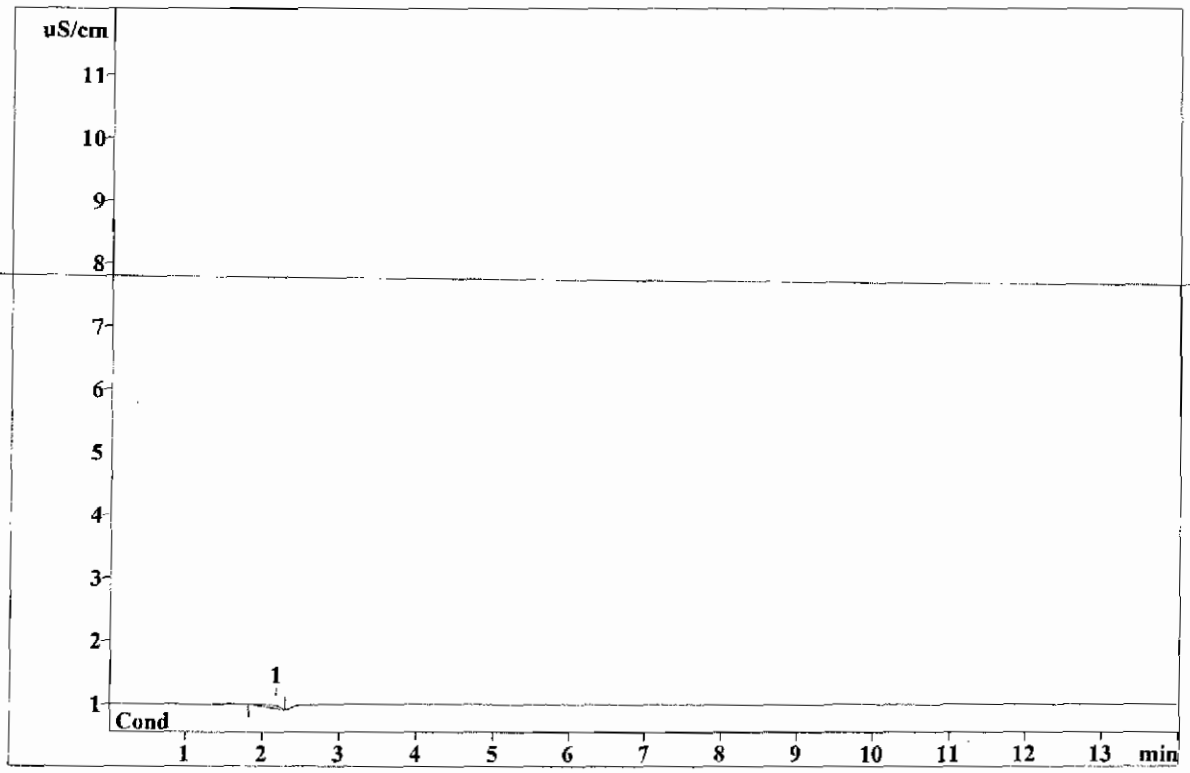
This report has been created by IC Net
METROHM LTD

Report date: 11/14/2011 11:15:43 AM
Printed by: Jadelyn Chun

Ident: AK19-50 CCB419
Analysis from: 11/12/2011 11:47:16 PM
File: vb122347.chw Last save: 11/13/2011 12:01:13 AM

Method: ICD0-I30.mtw Last save: 11/12/2011 10:52:35 AM
Run operator: Lucita Arzadon
Analysis number: 71447

SAMPLE:
:
Vial number: 50
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.05	0.786	0.000	

This report has been created by IC Net
METROHM LTD

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Concentrations of:

S_1 — 0.05 ppm
S_2 — 0.1
S_3 — 0.2
S_4 — 0.5
S_5 — 1.0
S_6 — 2.0
S_7 — 5.0
S_8 — 10.0
S_9 — 20.0

Linearity (ppm)

F^- — 5
Cl^- — 20
NO_2N — 10
Br^- — 5
NO_3N — 5
PO_4P — 5
SO_4^{2-} — 20

Column: Metrosep A Supp 5-100

Flow Rate: 0.70 ml/min

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-220 (1000 mM H_2SO_4) 100 ml - 1 L

Book #:	AD0-031
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AI39
Method File:	ICD0-I30.mtw
Analytical Batch:	NA

SOP #	Rev. #
☑ EMAX-300.0	6
☐ EMAX-4110B	0
☑ EMAX-9056	3
☐ EMAX-	

STANDARDS ID	
ICAL	SI1B-17-67-02
ICV	SI1B-17-57-03
CCV	NA
LCS	
MS	

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 9/30/11

8060

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
v9301829.chw	ICD0-130.mtw	AI39-01 IB	1	1.0	1.0	1.0	100.0	0		
v9301845.chw	ICD0-130.mtw	AI39-02 S0	2	1.0	1.0	1.0	100.0	0		
v9301901.chw	ICD0-130.mtw	AI39-03 S1	3	1.0	1.0	1.0	100.0	1		
v9301917.chw	ICD0-130.mtw	AI39-04 S2	4	1.0	1.0	1.0	100.0	2		
v9301934.chw	ICD0-130.mtw	AI39-05 S3	5	1.0	1.0	1.0	100.0	3		
v9301950.chw	ICD0-130.mtw	AI39-06 S4	6	1.0	1.0	1.0	100.0	4		
v9302006.chw	ICD0-130.mtw	AI39-07 S5	7	1.0	1.0	1.0	100.0	5		
v9302022.chw	ICD0-130.mtw	AI39-08 S6	8	1.0	1.0	1.0	100.0	6		
v9302038.chw	ICD0-130.mtw	AI39-09 S7	9	1.0	1.0	1.0	100.0	7		
v9302054.chw	ICD0-130.mtw	AI39-10 S8	10	1.0	1.0	1.0	100.0	8		
v9302111.chw	ICD0-130.mtw	AI39-11 S9	11	1.0	1.0	1.0	100.0	9	FINAL	
v9302127.chw	ICD0-130.mtw	AI39-12 ICV	12	1.0	1.0	1.0	100.0	0		
v9302143.chw	ICD0-130.mtw	AI39-13 ICB	13	1.0	1.0	1.0	100.0	0		

JC 10/3/11

10/03/11

8061

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

CCV 367 (*)
CCV 371
CCV 373
CCV 375
CCV 377
CCV 379
CCV 381
(*) W/O BE

Book #:	AD0-032
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AK 13
Method File:	ICD0-130.mtw
Analytical Batch:	ICK025W, ICK027W ICK029W

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SI IB-17-85-01 SI IB-17-85-03 (*)
LCS	SI IB-17-85-02 SI IB-17-86-01 (*)
MS	Refer to LCS Parent ID.

(*) W/O BE

Column: Metrosep A Supp 5-100 Filter 0.45µm: 21787469

Flow Rate: 0.70 ml/min 0.20µm: 21772726

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: KHL

Date: 11/9/11

8062

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb091010.chw	ICD0-I30.mtw	AK13-01 CCV365	1	1.0	1.0	1.0	100.0	0		
vb091026.chw	ICD0-I30.mtw	AK13-02 CCB365	2	1.0	1.0	1.0	100.0	0		
vb091042.chw	ICD0-I30.mtw	AK13-03 ICK025WB	3	1.0	1.0	1.0	100.0	0		
vb091058.chw	ICD0-I30.mtw	AK13-04 ICK025WL	4	1.0	1.0	1.0	100.0	0		
vb091115.chw	ICD0-I30.mtw	AK13-05 ICK025WC	5	1.0	1.0	1.0	100.0	0		
vb091131.chw	ICD0-I30.mtw	AK13-06 K072-01	6	1.0	1.0	1.0	100.0	0		
vb091147.chw	ICD0-I30.mtw	AK13-07 K070-01 DF=2	7	1.0	2.0	1.0	100.0	0		
vb091203.chw	ICD0-I30.mtw	AK13-08 K070-02	8	1.0	1.0	1.0	100.0	0		
vb091219.chw	ICD0-I30.mtw	AK13-09 K070-03	9	1.0	1.0	1.0	100.0	0		
vb091235.chw	ICD0-I30.mtw	AK13-10 K070-04	10	1.0	1.0	1.0	100.0	0		
vb091251.chw	ICD0-I30.mtw	AK13-11 K070-05	11	1.0	1.0	1.0	100.0	0		
vb091308.chw	ICD0-I30.mtw	AK13-12 K070-06	12	1.0	1.0	1.0	100.0	0		
vb091324.chw	ICD0-I30.mtw	AK13-13 CCV367	13	1.0	1.0	1.0	100.0	0		
vb091340.chw	ICD0-I30.mtw	AK13-14 CCB367	14	1.0	1.0	1.0	100.0	0		
vb091356.chw	ICD0-I30.mtw	AK13-15 K072-01 DF=20	15	1.0	20.0	1.0	100.0	0		
vb091412.chw	ICD0-I30.mtw	AK13-16 K070-02 DF=2	16	1.0	2.0	1.0	100.0	0		
vb091428.chw	ICD0-I30.mtw	AK13-17 K070-03 DF=2	17	1.0	2.0	1.0	100.0	0		
vb091445.chw	ICD0-I30.mtw	AK13-18 K070-04 DF=2	18	1.0	2.0	1.0	100.0	0		
vb091501.chw	ICD0-I30.mtw	AK13-19 K070-05 DF=2	19	1.0	2.0	1.0	100.0	0		
vb091524.chw	ICD0-I30.mtw	AK13-20 K070-06 DF=2	20	1.0	2.0	1.0	100.0	0		
vb091541.chw	ICD0-I30.mtw	AK13-21 K063-04	21	1.0	1.0	1.0	100.0	0		
vb091557.chw	ICD0-I30.mtw	AK13-22 K063-05	22	1.0	1.0	1.0	100.0	0		
vb091614.chw	ICD0-I30.mtw	AK13-23 K063-05 DF=2	23	1.0	2.0	1.0	100.0	0		
vb091630.chw	ICD0-I30.mtw	AK13-24 K063-03	24	1.0	1.0	1.0	100.0	0		
vb091656.chw	ICD0-I30.mtw	AK13-25 CCV369	25	1.0	1.0	1.0	100.0	0		
vb091712.chw	ICD0-I30.mtw	AK13-26 CCB369	26	1.0	1.0	1.0	100.0	0		
vb091728.chw	ICD0-I30.mtw	AK13-27 K063-06	27	1.0	1.0	1.0	100.0	0		
vb091744.chw	ICD0-I30.mtw	AK13-28 K063-01	28	1.0	1.0	1.0	100.0	0		
vb091801.chw	ICD0-I30.mtw	AK13-29 K063-02	29	1.0	1.0	1.0	100.0	0		
vb091817.chw	ICD0-I30.mtw	AK13-30 K063-02D	30	1.0	1.0	1.0	100.0	0		
vb091833.chw	ICD0-I30.mtw	AK13-31 K063-02M	31	1.0	1.0	1.0	100.0	0		
vb091849.chw	ICD0-I30.mtw	AK13-32 ICK027WL	32	1.0	1.0	1.0	100.0	0		
vb091906.chw	ICD0-I30.mtw	AK13-33 ICK027WC	33	1.0	1.0	1.0	100.0	0		
vb091922.chw	ICD0-I30.mtw	AK13-34 ICK027WB	34	1.0	1.0	1.0	100.0	0		
vb091938.chw	ICD0-I30.mtw	AK13-35 K077-10	35	1.0	1.0	1.0	100.0	0		
vb091954.chw	ICD0-I30.mtw	AK13-36 K077-11	36	1.0	1.0	1.0	100.0	0		
vb092010.chw	ICD0-I30.mtw	AK13-37 CCV371	37	1.0	1.0	1.0	100.0	0		
vb092026.chw	ICD0-I30.mtw	AK13-38 CCB371	38	1.0	1.0	1.0	100.0	0		
vb092042.chw	ICD0-I30.mtw	AK13-39 K077-17	39	1.0	1.0	1.0	100.0	0		
vb092059.chw	ICD0-I30.mtw	AK13-40 K077-02 DF=5	40	1.0	5.0	1.0	100.0	0		
vb092115.chw	ICD0-I30.mtw	AK13-41 K077-18	41	1.0	1.0	1.0	100.0	0		
vb092131.chw	ICD0-I30.mtw	AK13-42 K077-03	42	1.0	1.0	1.0	100.0	0		
vb092147.chw	ICD0-I30.mtw	AK13-43 K077-12	43	1.0	1.0	1.0	100.0	0		
vb092203.chw	ICD0-I30.mtw	AK13-44 K077-19	44	1.0	1.0	1.0	100.0	0		
vb092219.chw	ICD0-I30.mtw	AK13-45 K077-13	45	1.0	1.0	1.0	100.0	0		
vb092236.chw	ICD0-I30.mtw	AK13-46 K077-04 DF=10	46	1.0	10.0	1.0	100.0	0		
vb092252.chw	ICD0-I30.mtw	AK13-47 K077-05 DF=20	47	1.0	20.0	1.0	100.0	0		
vb092308.chw	ICD0-I30.mtw	AK13-48 K077-06 DF=20	48	1.0	20.0	1.0	100.0	0		
vb092324.chw	ICD0-I30.mtw	AK13-49 CCV373	49	1.0	1.0	1.0	100.0	0		
vb092340.chw	ICD0-I30.mtw	AK13-50 CCB373	50	1.0	1.0	1.0	100.0	0		
vb092356.chw	ICD0-I30.mtw	AK13-51 K077-14	51	1.0	1.0	1.0	100.0	0		
vb100013.chw	ICD0-I30.mtw	AK13-52 K077-20	52	1.0	1.0	1.0	100.0	0		
vb100029.chw	ICD0-I30.mtw	AK13-53 K077-21	53	1.0	1.0	1.0	100.0	0		
vb100045.chw	ICD0-I30.mtw	AK13-54 K077-07 DF=10	54	1.0	10.0	1.0	100.0	0		
vb100101.chw	ICD0-I30.mtw	AK13-55 K077-08	55	1.0	1.0	1.0	100.0	0		
vb100117.chw	ICD0-I30.mtw	AK13-56 K077-08D	56	1.0	1.0	1.0	100.0	0		
vb100133.chw	ICD0-I30.mtw	AK13-57 K077-08M	57	1.0	1.0	1.0	100.0	0		

FINAL

vm 11/14/10

8953

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb100150.chw	ICD0-130.mtw	AK13-58 K077-15	58	1.0	1.0	1.0	100.0	0		
vb100206.chw	ICD0-130.mtw	AK13-59 K077-22	59	1.0	1.0	1.0	100.0	0		
vb100222.chw	ICD0-130.mtw	AK13-60 K077-23	60	1.0	1.0	1.0	100.0	0		
vb100238.chw	ICD0-130.mtw	AK13-61 CCV375	61	1.0	1.0	1.0	100.0	0		
vb100254.chw	ICD0-130.mtw	AK13-62 CCB375	62	1.0	1.0	1.0	100.0	0		
vb100310.chw	ICD0-130.mtw	AK13-63 ICK029WB	63	1.0	1.0	1.0	100.0	0		
vb100327.chw	ICD0-130.mtw	AK13-64 ICK029WL	64	1.0	1.0	1.0	100.0	0		
vb100343.chw	ICD0-130.mtw	AK13-65 ICK029WC	65	1.0	1.0	1.0	100.0	0		
vb100359.chw	ICD0-130.mtw	AK13-66 K070-01 DF=50	66	1.0	50.0	1.0	100.0	0		
vb100415.chw	ICD0-130.mtw	AK13-67 K070-02 DF=50	67	1.0	50.0	1.0	100.0	0		
vb100431.chw	ICD0-130.mtw	AK13-68 K070-03 DF=50	68	1.0	50.0	1.0	100.0	0		
vb100447.chw	ICD0-130.mtw	AK13-69 K070-04 DF=20	69	1.0	20.0	1.0	100.0	0		
vb100503.chw	ICD0-130.mtw	AK13-70 K070-05 DF=25	70	1.0	25.0	1.0	100.0	0		
vb100520.chw	ICD0-130.mtw	AK13-71 K070-06 DF=40	71	1.0	40.0	1.0	100.0	0		
vb100536.chw	ICD0-130.mtw	AK13-72 K063-03 DF=20	72	1.0	20.0	1.0	100.0	0		
vb100552.chw	ICD0-130.mtw	AK13-73 CCV377	73	1.0	1.0	1.0	100.0	0		
vb100608.chw	ICD0-130.mtw	AK13-74 CCB377	74	1.0	1.0	1.0	100.0	0		
vb100624.chw	ICD0-130.mtw	AK13-75 K063-04 DF=20	75	1.0	20.0	1.0	100.0	0		
vb100640.chw	ICD0-130.mtw	AK13-76 K063-05 DF=40	76	1.0	40.0	1.0	100.0	0		
vb100657.chw	ICD0-130.mtw	AK13-77 K063-06 DF=20	77	1.0	20.0	1.0	100.0	0		
vb100713.chw	ICD0-130.mtw	AK13-78 K063-01 DF=20	78	1.0	20.0	1.0	100.0	0		
vb100729.chw	ICD0-130.mtw	AK13-79 K063-02 DF=40	79	1.0	40.0	1.0	100.0	0		
vb100745.chw	ICD0-130.mtw	AK13-80 K063-02D DF=40	80	1.0	40.0	1.0	100.0	0		
vb100801.chw	ICD0-130.mtw	AK13-81 K063-02M DF=40	81	1.0	40.0	1.0	100.0	0		
vb100817.chw	ICD0-130.mtw	AK13-82 CCV379	82	1.0	1.0	1.0	100.0	0		
vb100834.chw	ICD0-130.mtw	AK13-83 CCB379	83	1.0	1.0	1.0	100.0	0		
vb100850.chw	ICD0-130.mtw	AK13-84 K084-01	84	1.0	1.0	1.0	100.0	0		
vb100906.chw	ICD0-130.mtw	AK13-85 K084-02	85	1.0	1.0	1.0	100.0	0		
vb100923.chw	ICD0-130.mtw	AK13-86 K084-06	86	1.0	1.0	1.0	100.0	0		
vb100939.chw	ICD0-130.mtw	AK13-87 K084-05	87	1.0	1.0	1.0	100.0	0		
vb100956.chw	ICD0-130.mtw	AK13-88 K084-04	88	1.0	1.0	1.0	100.0	0		FINAL
vb101012.chw	ICD0-130.mtw	AK13-89 K084-03 DF=5	89	1.0	5.0	1.0	100.0	0		
vb101028.chw	ICD0-130.mtw	AK13-90 K077-12 DF=5	90	1.0	5.0	1.0	100.0	0		
vb101044.chw	ICD0-130.mtw	AK13-91 K077-13 DF=10	91	1.0	10.0	1.0	100.0	0		
vb101100.chw	ICD0-130.mtw	AK13-92 CCV381	92	1.0	1.0	1.0	100.0	0		
vb101116.chw	ICD0-130.mtw	AK13-93 CCB381	93	1.0	1.0	1.0	100.0	0		
vb101132.chw	ICD0-130.mtw	AK13-94 CCV383	94	1.0	1.0	1.0	100.0	0		

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #:	AD0-032
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AK19
Method File:	ICDD-230.mtn
Analytical Batch:	ICK041W, ICK043W

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SZ1B-17-87-03
LCS	SZ1B-17-88-01
MS	Refer to LCS Parent ID

Filter 0.45µm 21787469
0.20µm 21772726

Column: Metrosep A Supp 5-100

Flow Rate: 0.70 ml/min

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: [illegible]

Date: 11/12/11

f1

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb121034.chw	ICD0-I30.mtw	AK19-01 CCV411	1	1.0	1.0	1.0	100.0	0		
vb121050.chw	ICD0-I30.mtw	AK19-02 CCB411	2	1.0	1.0	1.0	100.0	0		
vb121107.chw	ICD0-I30.mtw	AK19-03 ICK041WB	3	1.0	1.0	1.0	100.0	0		
vb121123.chw	ICD0-I30.mtw	AK19-04 K112-02	4	1.0	1.0	1.0	100.0	0		
vb121139.chw	ICD0-I30.mtw	AK19-05 K112-03	5	1.0	1.0	1.0	100.0	0		
vb121155.chw	ICD0-I30.mtw	AK19-06 K112-04	6	1.0	1.0	1.0	100.0	0		
vb121211.chw	ICD0-I30.mtw	AK19-07 ICK041WL	7	1.0	1.0	1.0	100.0	0		
vb121227.chw	ICD0-I30.mtw	AK19-08 ICK041WC	8	1.0	1.0	1.0	100.0	0		
vb121243.chw	ICD0-I30.mtw	AK19-09 K112-02 DF=2	9	1.0	2.0	1.0	100.0	0		
vb121300.chw	ICD0-I30.mtw	AK19-10 K112-04 DF=2	10	1.0	2.0	1.0	100.0	0		
vb121317.chw	ICD0-I30.mtw	AK19-11 K112-02 DF=400	11	1.0	400.0	1.0	100.0	0		
vb121333.chw	ICD0-I30.mtw	AK19-12 K112-03 DF=10	12	1.0	10.0	1.0	100.0	0		
vb121349.chw	ICD0-I30.mtw	AK19-13 CCV413	13	1.0	1.0	1.0	100.0	0		
vb121405.chw	ICD0-I30.mtw	AK19-14 CCB413	14	1.0	1.0	1.0	100.0	0		
vb121421.chw	ICD0-I30.mtw	AK19-15 K112-04 DF=100	15	1.0	100.0	1.0	100.0	0		
vb121437.chw	ICD0-I30.mtw	AK19-16 K093-01 DF=10	16	1.0	10.0	1.0	100.0	0		
vb121454.chw	ICD0-I30.mtw	AK19-17 K101-01 DF=10	17	1.0	10.0	1.0	100.0	0		
vb121510.chw	ICD0-I30.mtw	AK19-18 K098-01	18	1.0	1.0	1.0	100.0	0		
vb121526.chw	ICD0-I30.mtw	AK19-19 K098-02 DF=50	19	1.0	50.0	1.0	100.0	0		
vb121542.chw	ICD0-I30.mtw	AK19-20 K098-03 DF=20	20	1.0	20.0	1.0	100.0	0		
vb121558.chw	ICD0-I30.mtw	AK19-21 K098-04	21	1.0	1.0	1.0	100.0	0		
vb121614.chw	ICD0-I30.mtw	AK19-22 K098-05 DF=50	22	1.0	50.0	1.0	100.0	0		
vb121630.chw	ICD0-I30.mtw	AK19-23 K098-06 DF=50	23	1.0	50.0	1.0	100.0	0		
vb121647.chw	ICD0-I30.mtw	AK19-24 K098-08	24	1.0	1.0	1.0	100.0	0		
vb121703.chw	ICD0-I30.mtw	AK19-25 CCV415	25	1.0	1.0	1.0	100.0	0		
vb121719.chw	ICD0-I30.mtw	AK19-26 CCB415	26	1.0	1.0	1.0	100.0	0		
vb121735.chw	ICD0-I30.mtw	AK19-27 K098-07 DF=100	27	1.0	100.0	1.0	100.0	0		
vb121751.chw	ICD0-I30.mtw	AK19-28 K098-07M DF=100	28	1.0	100.0	1.0	100.0	0		
vb121807.chw	ICD0-I30.mtw	AK19-29 K098-07S DF=100	29	1.0	100.0	1.0	100.0	0		
vb121824.chw	ICD0-I30.mtw	AK19-30 K098-09 DF=100	30	1.0	100.0	1.0	100.0	0		
vb121840.chw	ICD0-I30.mtw	AK19-31 ICK043WL	31	1.0	1.0	1.0	100.0	0		
vb121856.chw	ICD0-I30.mtw	AK19-32 ICK043WC	32	1.0	1.0	1.0	100.0	0		
vb121912.chw	ICD0-I30.mtw	AK19-33 ICK043WB	33	1.0	1.0	1.0	100.0	0		
vb121928.chw	ICD0-I30.mtw	AK19-34 K084-01 DF=20	34	1.0	20.0	1.0	100.0	0		
vb121944.chw	ICD0-I30.mtw	AK19-35 K084-02 DF=10	35	1.0	10.0	1.0	100.0	0		
vb122001.chw	ICD0-I30.mtw	AK19-36 K084-02 DF=20	36	1.0	20.0	1.0	100.0	0		
vb122017.chw	ICD0-I30.mtw	AK19-37 CCV417	37	1.0	1.0	1.0	100.0	0		
vb122033.chw	ICD0-I30.mtw	AK19-38 CCB417	38	1.0	1.0	1.0	100.0	0		
vb122049.chw	ICD0-I30.mtw	AK19-39 K084-03 DF=50	39	1.0	50.0	1.0	100.0	0		
vb122105.chw	ICD0-I30.mtw	AK19-40 K084-04 DF=10	40	1.0	10.0	1.0	100.0	0		
vb122121.chw	ICD0-I30.mtw	AK19-41 K084-05 DF=20	41	1.0	20.0	1.0	100.0	0		
vb122137.chw	ICD0-I30.mtw	AK19-42 K084-06 DF=20	42	1.0	20.0	1.0	100.0	0		
vb122154.chw	ICD0-I30.mtw	AK19-43 K092-02 DF=50	43	1.0	50.0	1.0	100.0	0		
vb122210.chw	ICD0-I30.mtw	AK19-44 K092-03 DF=5	44	1.0	5.0	1.0	100.0	0		
vb122226.chw	ICD0-I30.mtw	AK19-45 K092-04 DF=5	45	1.0	5.0	1.0	100.0	0		
vb122242.chw	ICD0-I30.mtw	AK19-46 K092-07 DF=200	46	1.0	200.0	1.0	100.0	0		
vb122258.chw	ICD0-I30.mtw	AK19-47 K092-07M DF=200	47	1.0	200.0	1.0	100.0	0		
vb122314.chw	ICD0-I30.mtw	AK19-48 K092-07S DF=200	48	1.0	200.0	1.0	100.0	0		
vb122331.chw	ICD0-I30.mtw	AK19-49 CCV419	49	1.0	1.0	1.0	100.0	0		
vb122347.chw	ICD0-I30.mtw	AK19-50 CCB419	50	1.0	1.0	1.0	100.0	0		
vb130003.chw	ICD0-I30.mtw	AK19-51 ICK043WQ	51	1.0	1.0	1.0	100.0	0		
vb130019.chw	ICD0-I30.mtw	AK19-52 ICK043WX	52	1.0	1.0	1.0	100.0	0		
vb130035.chw	ICD0-I30.mtw	AK19-53 ICK043WY	53	1.0	1.0	1.0	100.0	0		
vb130051.chw	ICD0-I30.mtw	AK19-54 K092-06	54	1.0	1.0	1.0	100.0	0		
vb130108.chw	ICD0-I30.mtw	AK19-55 K092-05 DF=100	55	1.0	100.0	1.0	100.0	0		
vb130124.chw	ICD0-I30.mtw	AK19-56 CCV421	56	1.0	1.0	1.0	100.0	0		
vb130140.chw	ICD0-I30.mtw	AK19-57 CCB421	57	1.0	1.0	1.0	100.0	0		

FINAL

Je 11/19/11

8066

RETENTION TIME WINDOW

RETENTION TIME WINDOW
METHOD 300.0

Lab name:	**EMAX**	**Method:**	**EMAX-300.0**
Instrument ID:	IC100 (761 IC)	IC column:	METROSEP A SUPP 5
		Column size:	100X4.0mm

Compound	Retention time Window
FLUORIDE	**0.234**
CHLORIDE	**0.407**
NTIRITE	**0.52**
BROMIDE	**0.688**
NTIRATE	**0.836**
PHOSPHATE	**0.678**
SULFATE	**0.915**
IODIDE	**1.078**

10-17-01

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K084

METHOD 300.0(M)
ORGANIC ACIDS BY IC

A total of six (6) water samples were received on 11/09/11 for Organic Acids (Acetate, Butyrate, Lactate and Propionate) by IC analysis, Method 300.0(M) in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for OAK010WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

SAMPLE RESULTS

METHOD 300.0(M)
ACETATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K084

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK010WB	ND	1	NA	1.00	0.0500	11/16/1100:33	NA	HK15012	HK15010	OAK010W	NA	NA
LCS1W	OAK010WL	20.7	1	NA	1.00	0.0500	11/16/1100:54	NA	HK15013	HK15010	OAK010W	NA	NA
LCD1W	OAK010WC	20.7	1	NA	1.00	0.0500	11/16/1101:15	NA	HK15014	HK15010	OAK010W	NA	NA
MW-70-PMW04A-110	K084-01	ND	1	NA	1.00	0.0500	11/16/1107:05	NA	HK15024	HK15022	OAK010W	11/09/1110:36	11/09/11
MW-70-PMW04B-112	K084-02	ND	1	NA	1.00	0.0500	11/16/1107:46	NA	HK15025	HK15022	OAK010W	11/09/1111:40	11/09/11
IW-70-FSB118-113	K084-03	ND	1	NA	1.00	0.0500	11/16/1108:26	NA	HK15026	HK15022	OAK010W	11/09/1112:59	11/09/11
MW-70-PMW05A-114	K084-04	ND	1	NA	1.00	0.0500	11/16/1109:10	NA	HK15027	HK15022	OAK010W	11/09/1114:44	11/09/11
MW-70-PMW05B-115	K084-05	ND	1	NA	1.00	0.0500	11/16/1112:53	NA	HK15030	HK15028	OAK010W	11/09/1115:51	11/09/11
IR-70-FD-111	K084-06	ND	1	NA	1.00	0.0500	11/16/1113:34	NA	HK15031	HK15028	OAK010W	11/09/1111:00	11/09/11

METHOD 300.0(M)
BUTYRATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K084

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK010WB	ND	1	NA	1.00	0.0500	11/16/1100:33	NA	HK15012	HK15010	OAK010W	NA	NA
LCS1W	OAK010WL	21.0	1	NA	1.00	0.0500	11/16/1100:54	NA	HK15013	HK15010	OAK010W	NA	NA
LCD1W	OAK010WC	20.2	1	NA	1.00	0.0500	11/16/1101:15	NA	HK15014	HK15010	OAK010W	NA	NA
MW-70-PMW04A-110	K084-01	ND	1	NA	1.00	0.0500	11/16/1107:05	NA	HK15024	HK15022	OAK010W	11/09/1110:36	11/09/11
MW-70-PMW04B-112	K084-02	ND	1	NA	1.00	0.0500	11/16/1107:46	NA	HK15025	HK15022	OAK010W	11/09/1111:40	11/09/11
IW-70-FSB118-113	K084-03	ND	1	NA	1.00	0.0500	11/16/1108:26	NA	HK15026	HK15022	OAK010W	11/09/1112:59	11/09/11
MW-70-PMW05A-114	K084-04	ND	1	NA	1.00	0.0500	11/16/1109:10	NA	HK15027	HK15022	OAK010W	11/09/1114:44	11/09/11
MW-70-PMW05B-115	K084-05	ND	1	NA	1.00	0.0500	11/16/1112:53	NA	HK15030	HK15028	OAK010W	11/09/1115:51	11/09/11
IR-70-FD-111	K084-06	ND	1	NA	1.00	0.0500	11/16/1113:34	NA	HK15031	HK15028	OAK010W	11/09/1111:00	11/09/11

METHOD 300.0(M)
LACTATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, TR STTE 70.
Batch No. : 11K084

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK010WB	ND	1	NA	1.00	0.0500	11/16/1100:33	NA	HK15012	HK15010	OAK010W	NA	NA
LCS1W	OAK010WL	20.2	1	NA	1.00	0.0500	11/16/1100:54	NA	HK15013	HK15010	OAK010W	NA	NA
LCD1W	OAK010WC	20.4	1	NA	1.00	0.0500	11/16/1101:15	NA	HK15014	HK15010	OAK010W	NA	NA
MW-70-PMW04A-110	K084-01	ND	1	NA	1.00	0.0500	11/16/1107:05	NA	HK15024	HK15022	OAK010W	11/09/1110:36	11/09/11
MW-70-PMW04B-112	K084-02	ND	1	NA	1.00	0.0500	11/16/1107:46	NA	HK15025	HK15022	OAK010W	11/09/1111:40	11/09/11
IW-70-FSB118-113	K084-03	ND	1	NA	1.00	0.0500	11/16/1108:26	NA	HK15026	HK15022	OAK010W	11/09/1112:59	11/09/11
MW-70-PMW05A-114	K084-04	ND	1	NA	1.00	0.0500	11/16/1109:10	NA	HK15027	HK15022	OAK010W	11/09/1114:44	11/09/11
MW-70-PMW05B-115	K084-05	ND	1	NA	1.00	0.0500	11/16/1112:53	NA	HK15030	HK15028	OAK010W	11/09/1115:51	11/09/11
TR-70-FD-111	K084-06	ND	1	NA	1.00	0.0500	11/16/1113:34	NA	HK15031	HK15028	OAK010W	11/09/1111:00	11/09/11

METHOD 300.0(M)
PROPIONATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K084

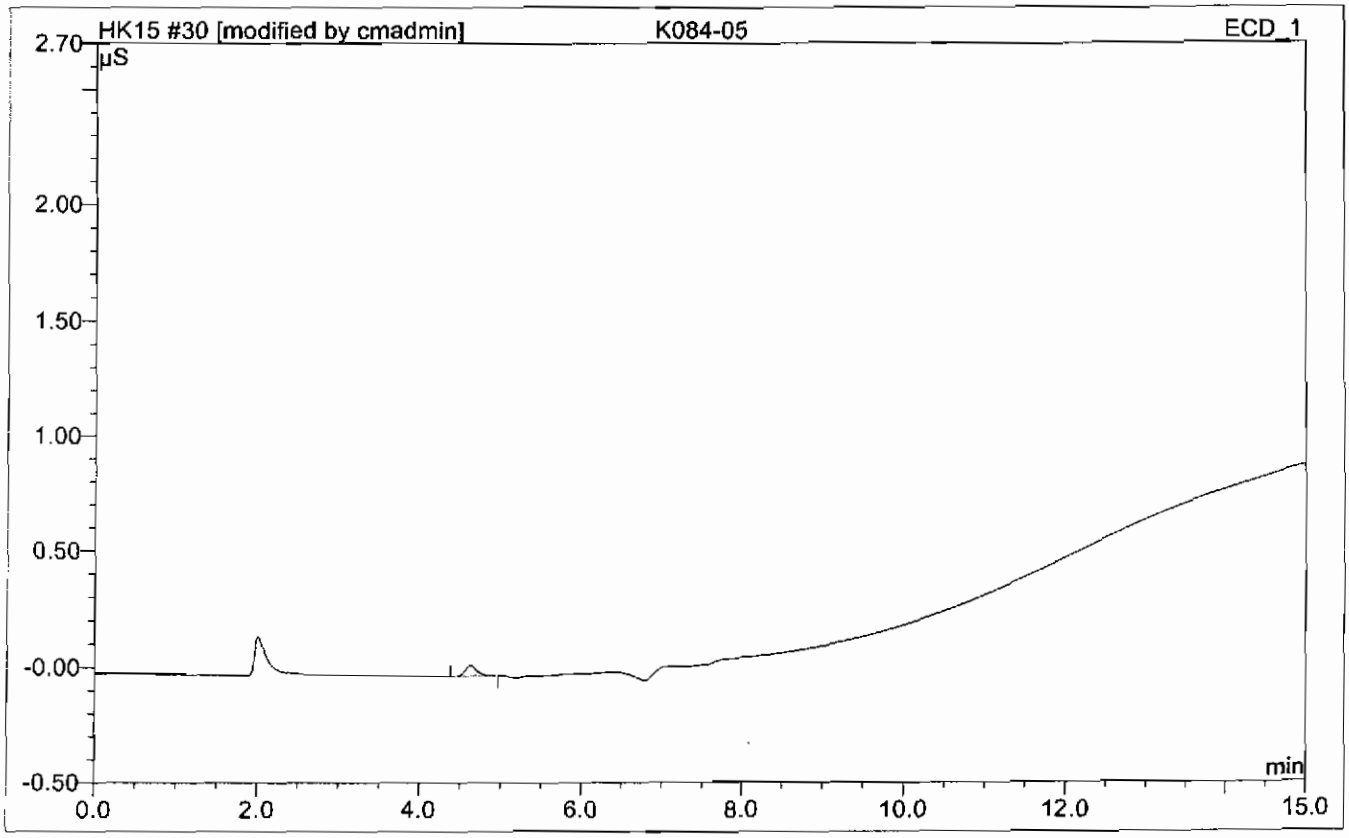
Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK010WB	ND	1	NA	1.00	0.0500	11/16/1100:33	NA	HK15012	HK15010	OAK010W	NA	NA
LCS1W	OAK010WL	20.0	1	NA	1.00	0.0500	11/16/1100:54	NA	HK15013	HK15010	OAK010W	NA	NA
LCD1W	OAK010WC	21.0	1	NA	1.00	0.0500	11/16/1101:15	NA	HK15014	HK15010	OAK010W	NA	NA
MW-70-PMW04A-110	K084-01	ND	1	NA	1.00	0.0500	11/16/1107:05	NA	HK15024	HK15022	OAK010W	11/09/1110:36	11/09/11
MW-70-PMW04B-112	K084-02	ND	1	NA	1.00	0.0500	11/16/1107:46	NA	HK15025	HK15022	OAK010W	11/09/1111:40	11/09/11
IW-70-FSB118-113	K084-03	ND	1	NA	1.00	0.0500	11/16/1108:26	NA	HK15026	HK15022	OAK010W	11/09/1112:59	11/09/11
MW-70-PMW05A-114	K084-04	ND	1	NA	1.00	0.0500	11/16/1109:10	NA	HK15027	HK15022	OAK010W	11/09/1114:44	11/09/11
MW-70-PMW05B-115	K084-05	ND	1	NA	1.00	0.0500	11/16/1112:53	NA	HK15030	HK15028	OAK010W	11/09/1115:51	11/09/11
TR-70-FD-111	K084-06	ND	1	NA	1.00	0.0500	11/16/1113:34	NA	HK15031	HK15028	OAK010W	11/09/1111:00	11/09/11

HK15 030 K084-05

SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

Sample Name:	**K084-05**	*Injection Volume:*	**25.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/16/2011 12:53**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.62	n.a.	0.044320	0.007388	100.00	n.a.	BMB
Total:			0.044	0.007	100.00	0.000	

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K084
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK010WB	OAK010WL	OAK010WC		
LAB FILE ID:	HK15012	HK15013	HK15014		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/16/1100:33	11/16/1100:54	11/16/1101:15	DATE RECEIVED:	NA
PREP. BATCH:	OAK010W	OAK010W	OAK010W		
CALIB. REF:	HK15010	HK15010	HK15010		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	20.7	103	20.0	20.7	103	0	90-110	20

8077

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K084
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK010WB	OAK010WL	OAK010WC		
LAB FILE ID:	HK15012	HK15013	HK15014		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/16/1100:33	11/16/1100:54	11/16/1101:15	DATE RECEIVED:	NA
PREP. BATCH:	OAK010W	OAK010W	OAK010W		
CALIB. REF:	HK15010	HK15010	HK15010		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	20.0	21.0	105	20.0	20.2	101	4	90-110	20

8078

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K084
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK010WB	OAK010WL	OAK010WC		
LAB FILE ID:	HK15012	HK15013	HK15014		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/16/1100:33	11/16/1100:54	11/16/1101:15	DATE RECEIVED:	NA
PREP. BATCH:	OAK010W	OAK010W	OAK010W		
CALIB. REF:	HK15010	HK15010	HK15010		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	20.0	20.2	101	20.0	20.4	102	1	90-110	20

8079

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSTGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K084
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK010WB	OAK010WL	OAK010WC		
LAB FILE ID:	HK15012	HK15013	HK15014		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/16/1100:33	11/16/1100:54	11/16/1101:15	DATE RECEIVED:	NA
PREP. BATCH:	OAK010W	OAK010W	OAK010W		
CALIB. REF:	HK15010	HK15010	HK15010		

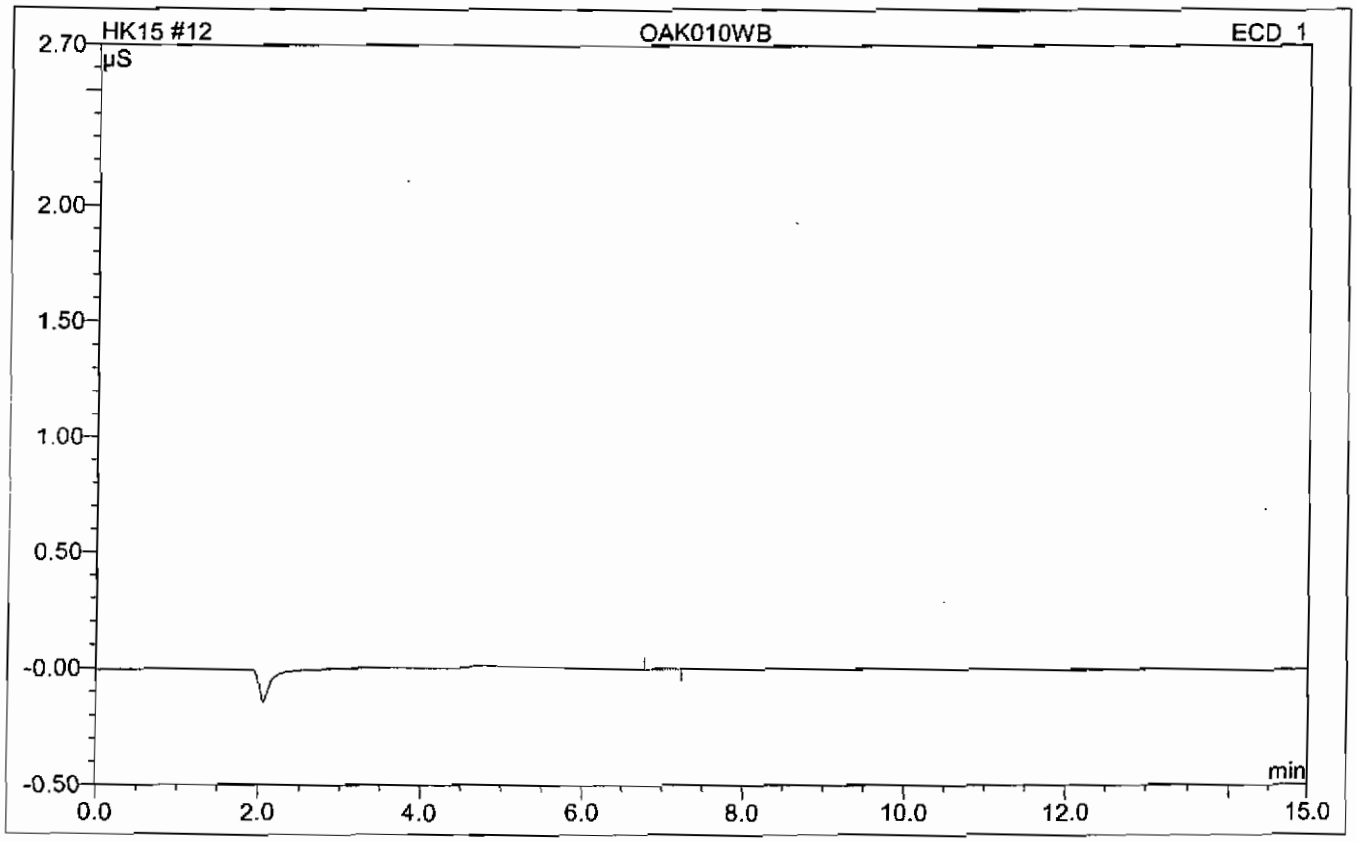
ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	20.0	20.0	100	20.0	21.0	105	5	90-110	20

QC DATA

HK15 012 OAK010WB

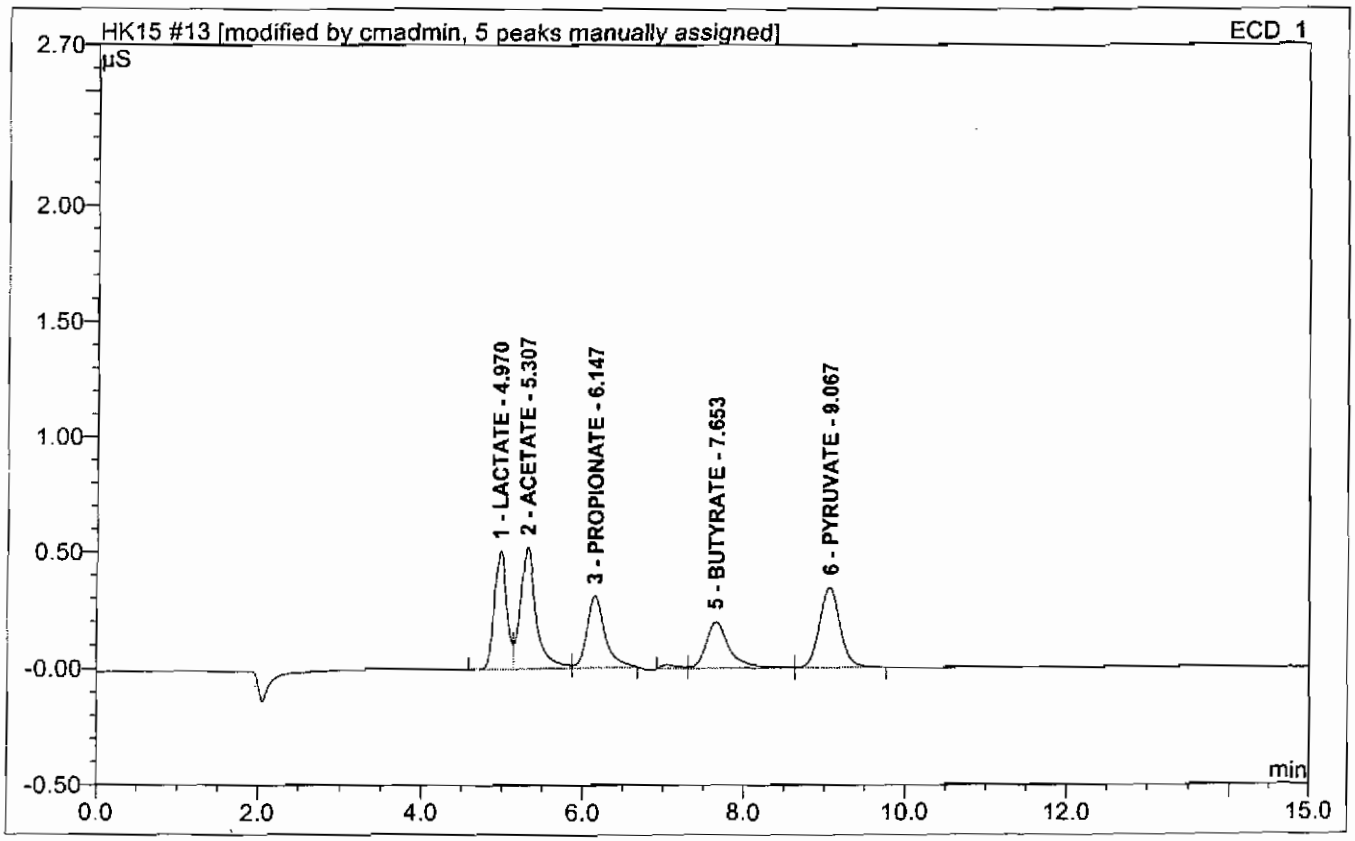
Sample Name:	**OAK010WB**	*Injection Volume:*	**25.0**
Vial Number:	**98**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/16/2011 0:33**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	6.97	n.a.	0.005030	0.001119	100.00	n.a.	BMB
Total:			0.005	0.001	100.00	0.000	

HK15 013 OAK010WL

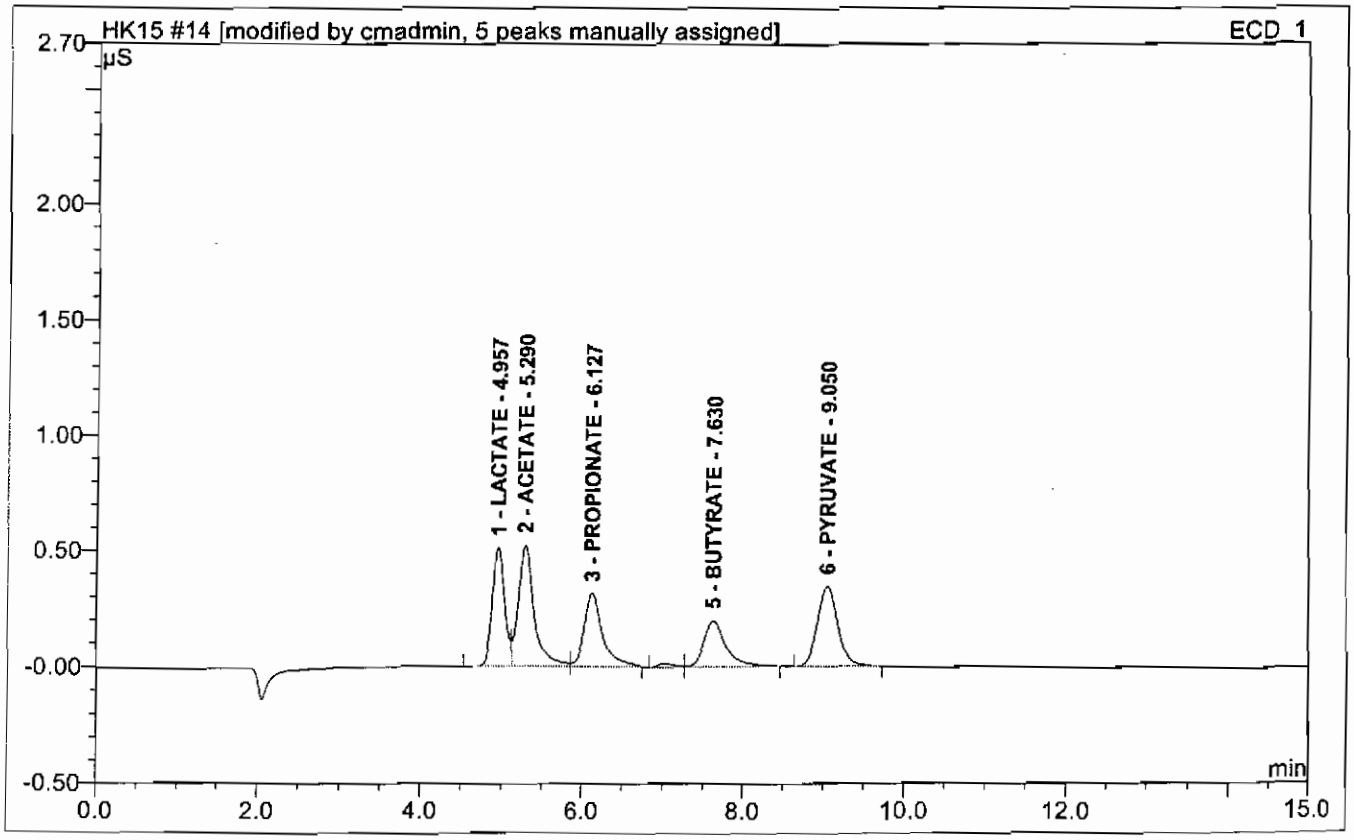
Sample Name:	**OAK010WL**	*Injection Volume:*	**25.0**
Vial Number:	**97**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/16/2011 0:54**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.97	LACTATE	0.508818	0.089446	19.63	2.022 ✓	BM *^
2	5.31	ACETATE	0.523628	0.117931	25.88	2.070 ✓	M *^
3	6.15	PROPIONATE	0.306508	0.078469	17.22	1.998 ✓	MB*^
4	7.03	n.a.	0.016416	0.003874	0.85	n.a.	BM *
5	7.65	BUTYRATE	0.196350	0.065269	14.32	2.102 ✓	M *^
6	9.07	PYRUVATE	0.343880	0.100766	22.11	1.958	MB*^
Total:			1.896	0.456	100.00	10.151	

HK15 014 OAK010WC

Sample Name:	**OAK010WC**	*Injection Volume:*	**25.0**
Vial Number:	**96**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/16/2011 1:15**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.96	LACTATE	0.512242	0.090222	19.71	2.040	BM *^
2	5.29	ACETATE	0.522326	0.118041	25.79	2.072	M *^
3	6.13	PROPIONATE	0.312746	0.082584	18.04	2.103	MB*^
4	7.01	n.a.	0.015544	0.003880	0.85	n.a.	BM
5	7.63	BUTYRATE	0.195754	0.062578	13.67	2.017	MB^
6	9.05	PYRUVATE	0.344506	0.100449	21.94	1.952	BMB^
Total:			1.903	0.458	100.00	10.183	

INITIAL CALIBRATIONS

IC SEQ FORM/HK15(2011)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
HK15001	IB	ABLPY	OAD6K15	11/15/1117:34	1
HK15002	S-0	ABLPY	OAD6K15	11/15/1117:55	1
HK15003	S-1	ABLPY	OAD6K15	11/15/1118:16	1
HK15004	S-2	ABLPY	OAD6K15	11/15/1118:37	1
HK15005	S-3	ABLPY	OAD6K15	11/15/1118:58	1
HK15006	S-4	ABLPY	OAD6K15	11/15/1119:19	1
HK15007	S-5	ABLPY	OAD6K15	11/15/1119:40	1
HK15008	ICV	ABLPY	OAD6K15	11/15/1120:01	1
HK15009	ICB	ABLPY	OAD6K15	11/15/1120:22	1
HK15010	CCV2	ABLPY	OAD6K15	11/15/1123:52	1
HK15011	CCB2	ABLPY	OAD6K15	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	OAD6K15	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	OAD6K15	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	OAD6K15	11/16/1101:15	1
HK15015	K101-01	ABLPY	OAD6K15	11/16/1101:36	1
HK15016	K101-02	ABLPY	OAD6K15	11/16/1102:17	1
HK15017	K101-03	ABLPY	OAD6K15	11/16/1102:58	1
HK15018	K101-04	ABLPY	OAD6K15	11/16/1103:39	1
HK15019	K101-05	ABLPY	OAD6K15	11/16/1104:20	1
HK15020	K101-05M	ABLPY	OAD6K15	11/16/1105:01	1
HK15021	K101-05S	ABLPY	OAD6K15	11/16/1105:42	1
HK15022	CCV4	ABLPY	OAD6K15	11/16/1106:23	1
HK15023	CCB4	ABLPY	OAD6K15	11/16/1106:44	1
HK15024	K084-01	ABLPY	OAD6K15	11/16/1107:05	1
HK15025	K084-02	ABLPY	OAD6K15	11/16/1107:46	1
HK15026	K084-03	ABLPY	OAD6K15	11/16/1108:26	1
HK15027	K084-04	ABLPY	OAD6K15	11/16/1109:10	1
HK15028	CCV6	ABLPY	OAD6K15	11/16/1111:30	1
HK15029	CCB6	ABLPY	OAD6K15	11/16/1112:32	1
HK15030	K084-05	ABLPY	OAD6K15	11/16/1112:53	1
HK15031	K084-06	ABLPY	OAD6K15	11/16/1113:34	1
HK15032	K035-01	*BLPY	OAD6K15	11/16/1114:15	5
HK15033	K035-01A	*BLPY	OAD6K15	11/16/1114:55	5
HK15034	CCV8	ABLPY	OAD6K15	11/16/1115:36	1
HK15035	CCB8	ABLPY	OAD6K15	11/16/1115:57	1

AJ
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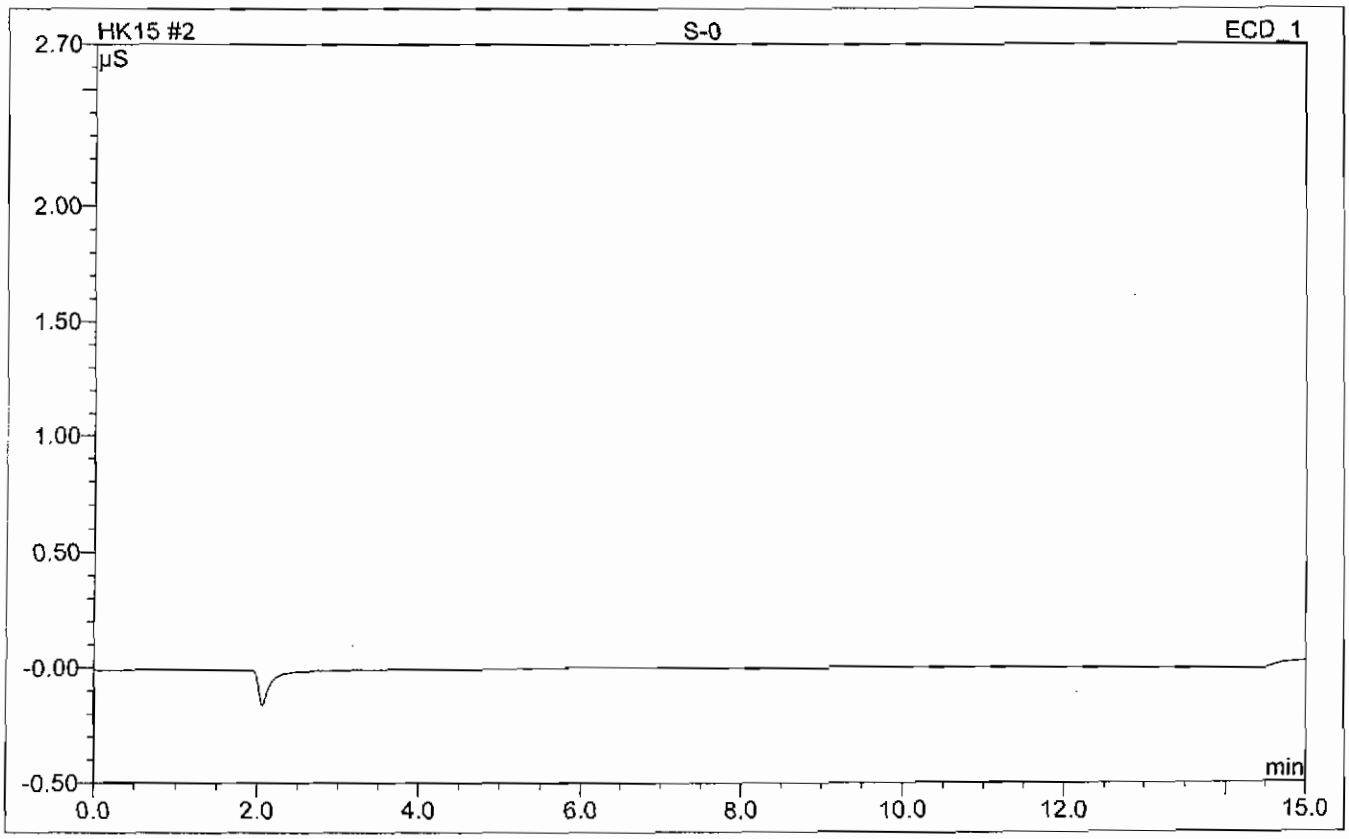
HK15 002 S-0

Sample Name:	**S-0**	*Injection Volume:*	**25.0**
Vial Number:	**32**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 17:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

RS
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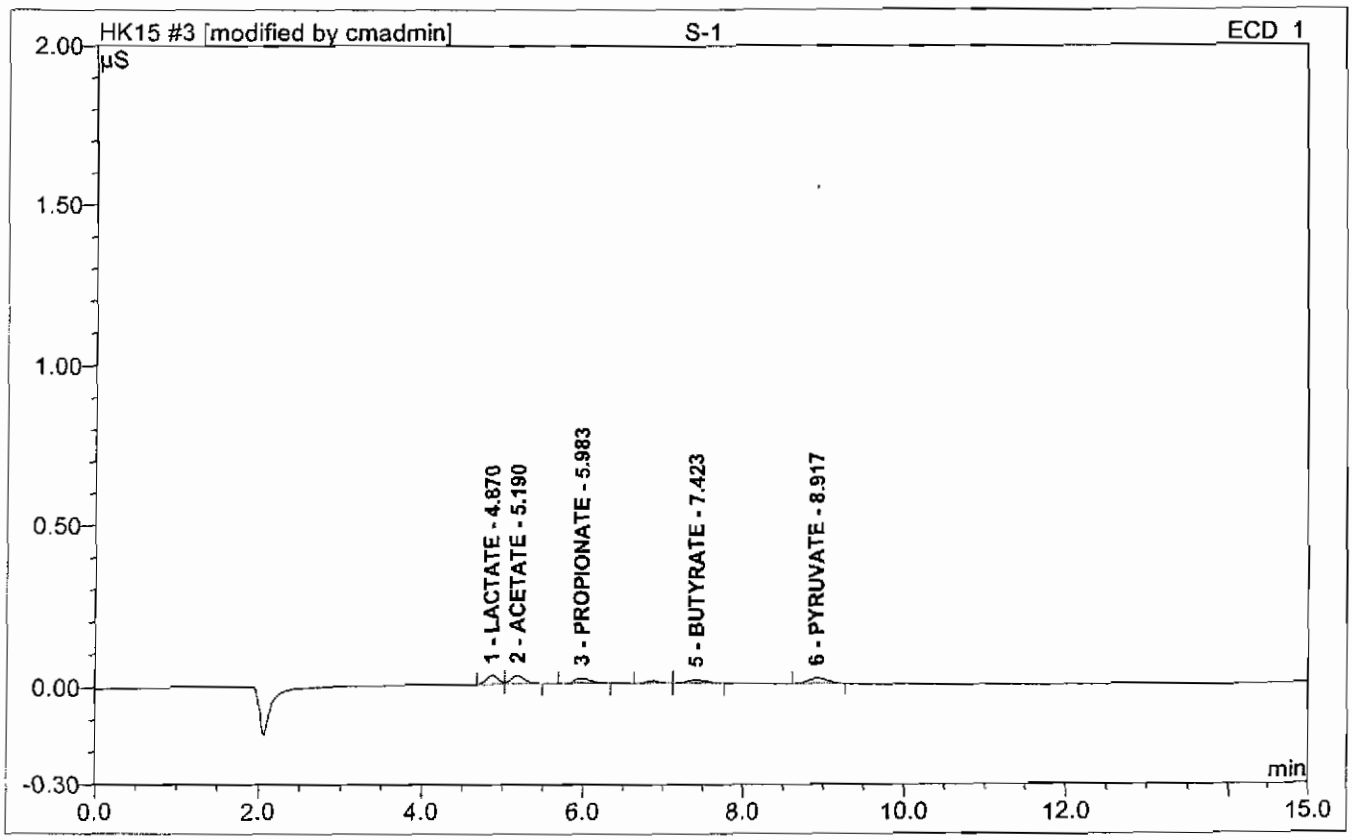
HK15 003 S-1

Sample Name:	**S-1**	*Injection Volume:*	**25.0**
Vial Number:	**33**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 18:16**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

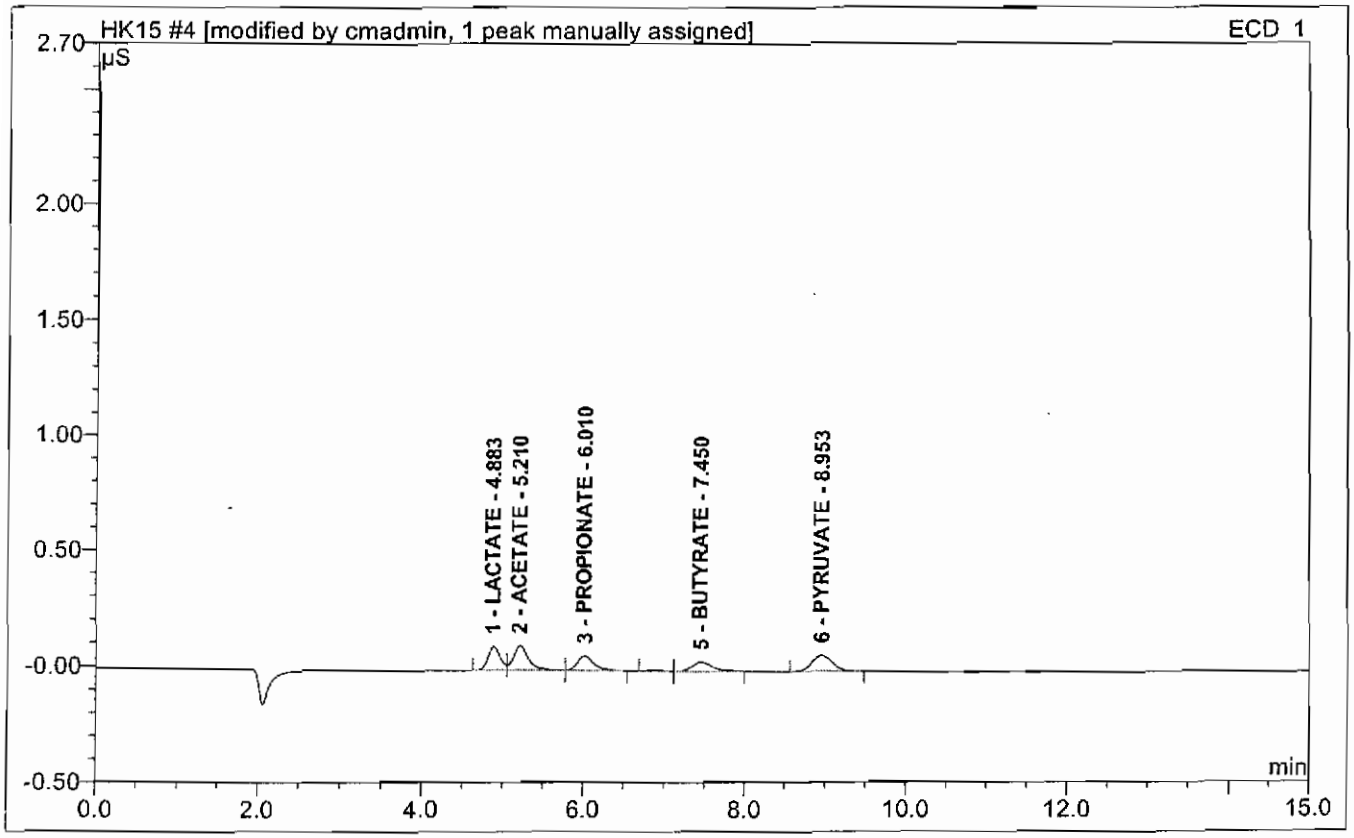


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.87	LACTATE	0.026174	0.004401	20.69	0.104	BM
2	5.19	ACETATE	0.024918	0.004820	22.66	0.083	MB
3	5.98	PROPIONATE	0.015232	0.003572	16.79	0.096	BMB
4	6.87	n.a.	0.006552	0.001302	6.12	n.a.	BMb*
5	7.42	BUTYRATE	0.009554	0.002586	12.16	0.101	bMB*
6	8.92	PYRUVATE	0.016650	0.004592	21.58	0.103	BMB
Total:			0.099	0.021	100.00	0.488	

AK 11/29/11

HK15 004 S-2

Sample Name:	**S-2**	*Injection Volume:*	**25.0**
Vial Number:	**34**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 18:37**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.88	LACTATE	0.100086	0.017358	19.88	0.396	BM
2	5.21	ACETATE	0.105524	0.022908	26.23	0.401	M
3	6.01	PROPIONATE	0.061798	0.014840	16.99	0.382	MB
4	6.87	n.a.	0.005038	0.001008	1.15	n.a.	BMB
5	7.45	BUTYRATE	0.038386	0.011480	13.14	0.385	BMB*
6	8.95	PYRUVATE	0.067030	0.019737	22.60	0.395	BMB^
Total:			0.378	0.087	100.00	1.960	

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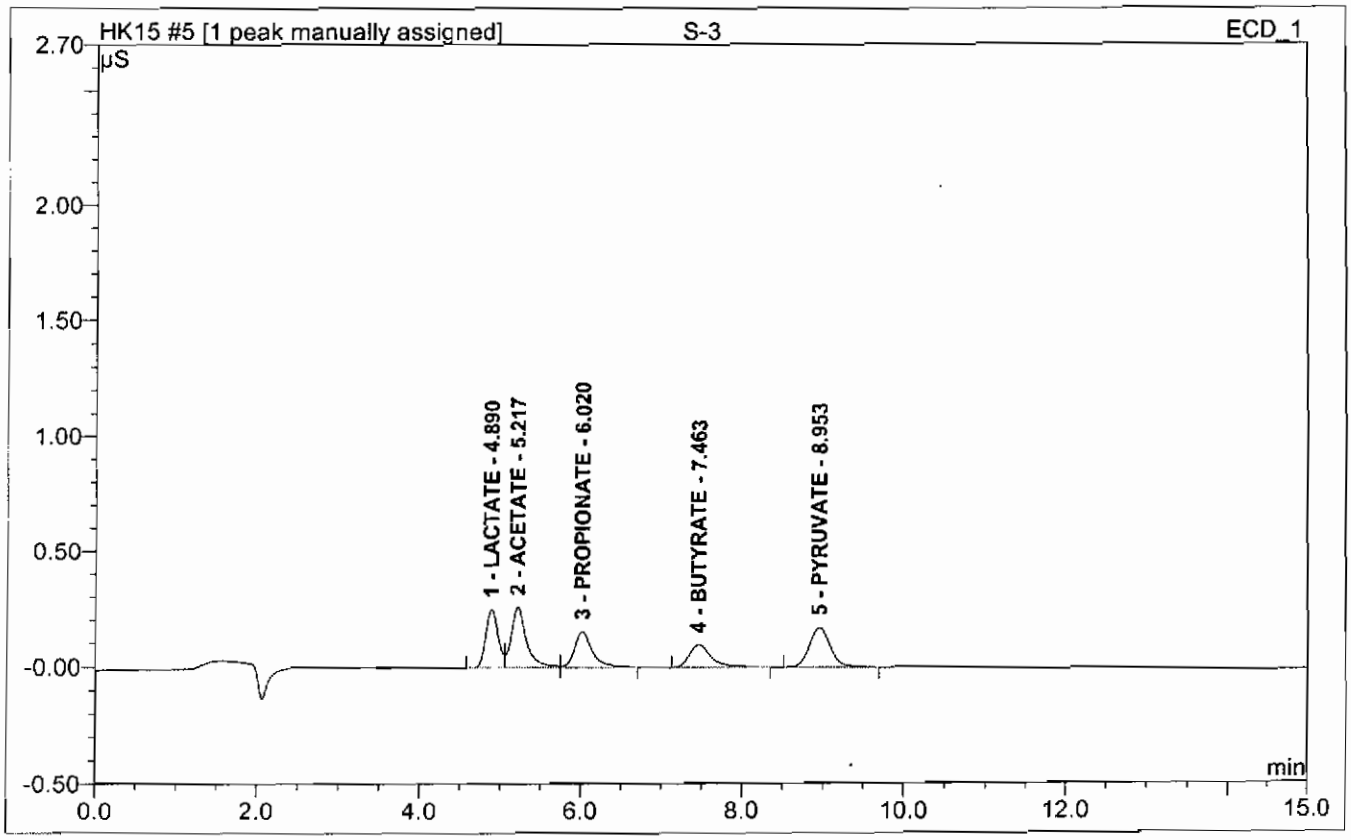
HK15 005 S-3

Sample Name:	**S-3**	*Injection Volume:*	**25.0**
Vial Number:	**35**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 18:58**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

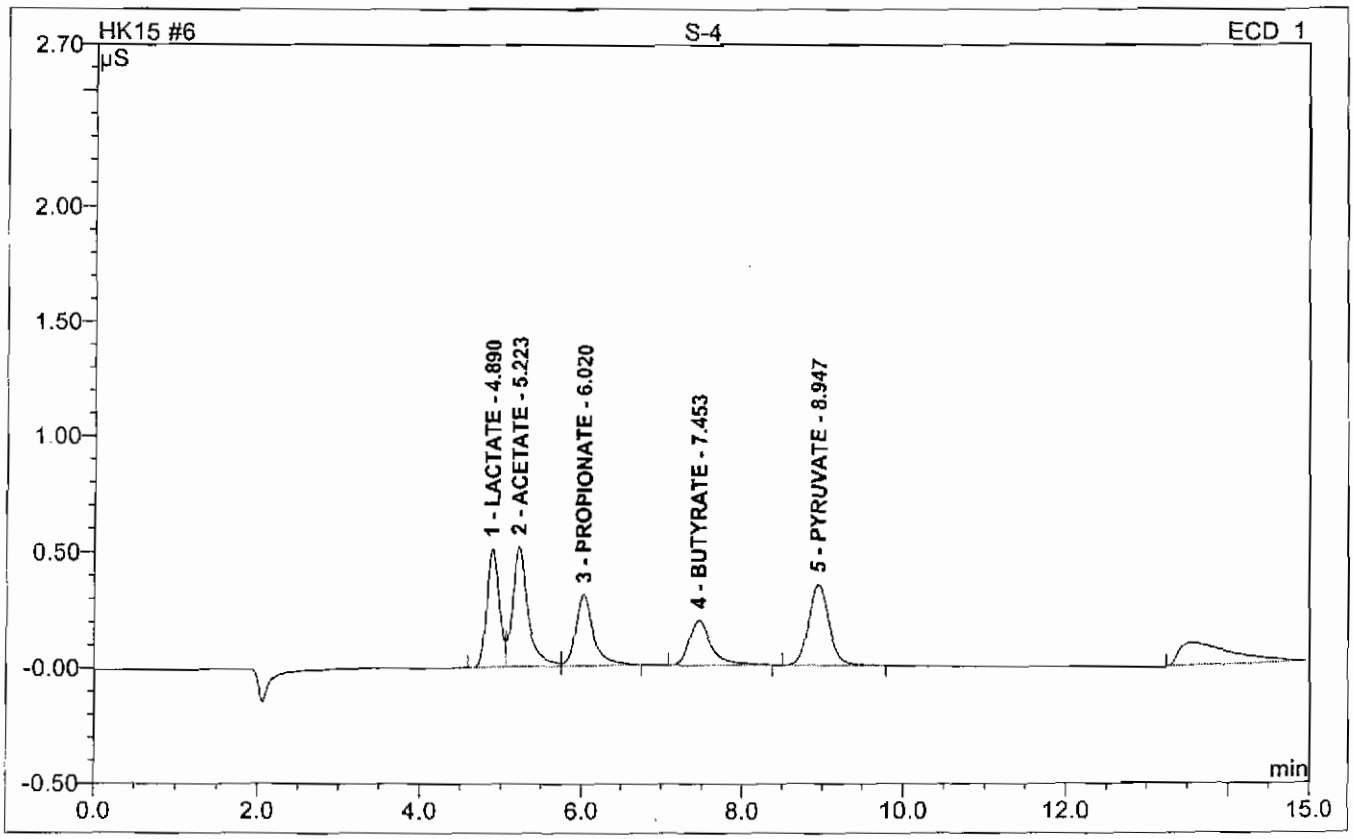


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.89	LACTATE	0.251224 ✓	0.043840 ✓	19.76	0.993 ✓	BM
2	5.22	ACETATE	0.260248 ✓	0.057600 ✓	25.96	1.010 ✓	M
3	6.02	PROPIONATE	0.154006 ✓	0.039548 ✓	17.83	1.010 ✓	MB
4	7.46	BUTYRATE	0.096982 ✓	0.030610 ✓	13.80	0.996 ✓	BMB
5	8.95	PYRUVATE	0.169390 ✓	0.050249 ✓	22.65	0.984 ✓	BMB^
Total:			0.932	0.222	100.00	4.993	

AS 11/29/11

HK15 006 S-4

Sample Name:	**S-4**	*Injection Volume:*	**25.0**
Vial Number:	**36**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 19:19**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.89	LACTATE	0.507630 ✓	0.088426 ✓	16.99	1.999 ✓	BM
2	5.22	ACETATE	0.513976 ✓	0.115562 ✓	22.21	2.028 ✓	M
3	6.02	PROPIONATE	0.306558 ✓	0.079442 ✓	15.27	2.023 ✓	MB
4	7.45	BUTYRATE	0.194514 ✓	0.061661 ✓	11.85	1.987 ✓	BMB
5	8.95	PYRUVATE	0.348296 ✓	0.102505 ✓	19.70	1.992 ✓	BMB
6	13.54	n.a.	0.097046	0.072730	13.98	n.a.	BMB
Total:			1.968	0.520	100.00	10.029	

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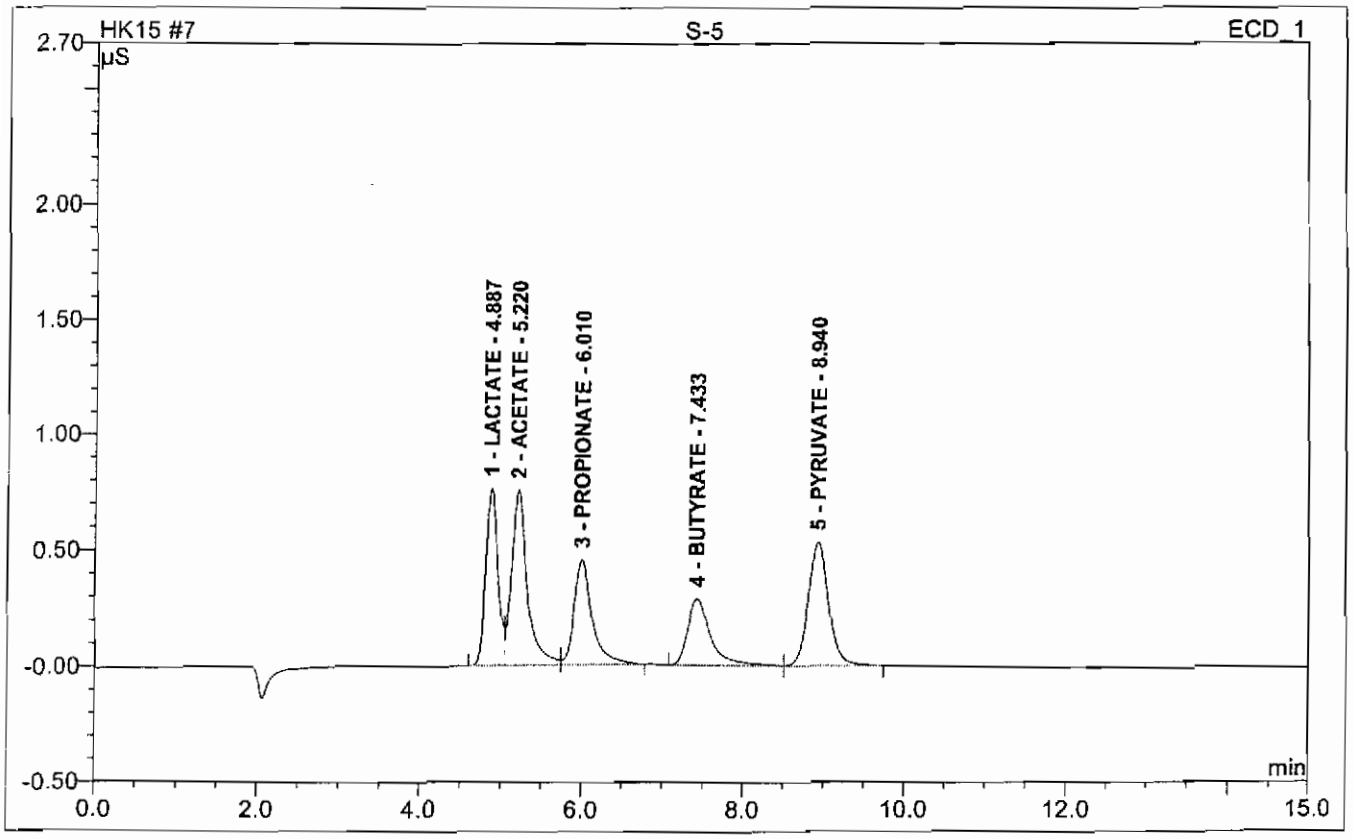
HK15 007 S-5

Sample Name:	**S-5**	*Injection Volume:*	**25.0**
Vial Number:	**37**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 19:40**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.89	LACTATE	0.759794 ✓	0.132927 ✓	19.87	3.003 ✓	BM
2	5.22	ACETATE	0.750282 ✓	0.169666 ✓	25.36	2.978 ✓	M
3	6.01	PROPIONATE	0.448824 ✓	0.117298 ✓	17.53	2.984 ✓	MB
4	7.43	BUTYRATE	0.286108 ✓	0.093750 ✓	14.01	3.012 ✓	BM
5	8.94	PYRUVATE	0.527514 ✓	0.155355 ✓	23.22	3.011 ✓	MB
Total:			2.773	0.669	100.00	14.989	

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No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square	Offset	Slope	Curve
1	4.88	LACTATE	0LOff	5	1.0000	-0.000198	0.0443	0.0000
2	5.21	ACETATE	0LOff	5	0.9997	0.000068	0.0569	0.0000
3	6.00	PROPIONA⁻	0LOff	5	0.9998	-0.000209	0.0394	0.0000
4	7.42	BUTYRATE	0LOff	5	0.9999	-0.000584	0.0313	0.0000
5	8.93	PYRUVATE	0LOff	5	0.9999	-0.000755	0.0518	0.0000
Average:					n.a.	n.a.	n.a.	0.0000

$$\text{conc} = \frac{\text{area} - \text{offset}}{\text{slope}}$$

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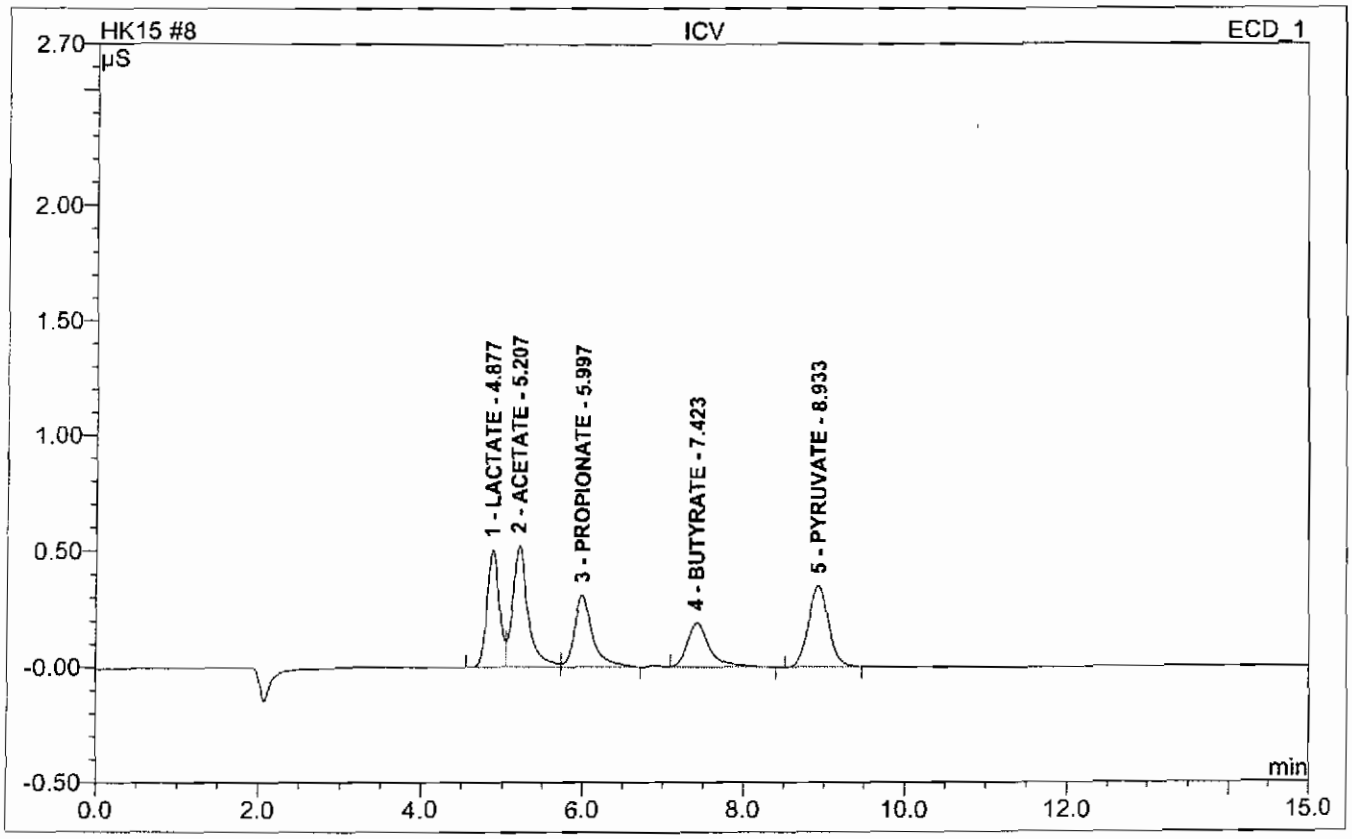
SECOND SOURCE VERIFICATION

HK15 008 ICV

Sample Name:	**ICV**	*Injection Volume:*	**25.0**
Vial Number:	**38**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 20:01**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

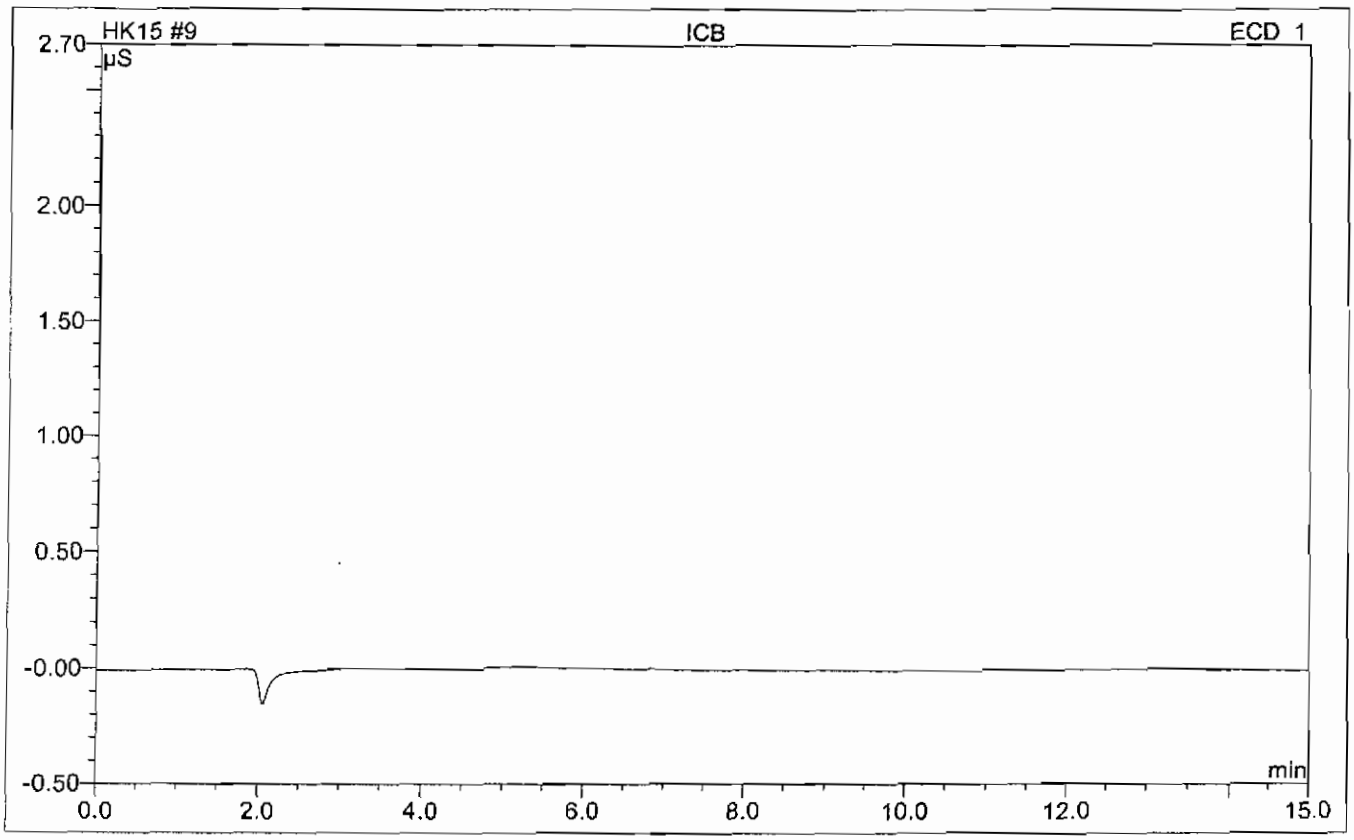


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.88	LACTATE	0.504694	0.088011	19.68	1.990	BM
2	5.21	ACETATE	0.520464	0.117058	26.18	2.054	M
3	6.00	PROPIONATE	0.309202	0.081457	18.22	2.074	MB
4	7.42	BUTYRATE	0.190046	0.060090	13.44	1.937	BMB
5	8.93	PYRUVATE	0.347528	0.100546	22.49	1.954	BMB
Total:			1.872	0.447	100.00	10.009	

DA 11/29/11

HK15 009 ICB

Sample Name:	**ICB**	*Injection Volume:*	**25.0**
Vial Number:	**39**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 20:22**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

AS 11/29/11

DAILY CALIBRATIONS

IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK15001	IB	ABLPY	ND	ND	ND	ND	ND	11/15/1117:34	1
HK15002	S-0	ABLPY	ND	ND	ND	ND	ND	11/15/1117:55	1
HK15003	S-1	ABLPY	.083	.101	.104	.096	.103	11/15/1118:16	1
HK15004	S-2	ABLPY	.401	.385	.396	.382	.395	11/15/1118:37	1
HK15005	S-3	ABLPY	1.01	.996	.993	1.01	.984	11/15/1118:58	1
HK15006	S-4	ABLPY	2.028	1.987	1.999	2.023	1.992	11/15/1119:19	1
HK15007	S-5	ABLPY	2.978	3.012	3.003	2.984	3.011	11/15/1119:40	1
HK15008	ICV	ABLPY	103%	96.8%	99.5%	104%	97.7%	11/15/1120:01	1
HK15009	ICB	ABLPY	ND	ND	ND	ND	ND	11/15/1120:22	1
HK15010	CCV2	ABLPY	103%	103%	101%	104%	93.9%	11/15/1123:52	1
HK15011	CCB2	ABLPY	ND	ND	ND	ND	ND	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	ND	ND	ND	ND	ND	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	2.07	2.1	2.02	2	1.96	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	2.07	2.02	2.04	2.1	1.95	11/16/1101:15	1
HK15015	K101-01	ABLPY	ND	ND	ND	ND	ND	11/16/1101:36	1
HK15016	K101-02	ABLPY	ND	ND	ND	ND	ND	11/16/1102:17	1
HK15017	K101-03	ABLPY	ND	ND	ND	ND	ND	11/16/1102:58	1
HK15018	K101-04	ABLPY	ND	ND	ND	ND	ND	11/16/1103:39	1
HK15019	K101-05	ABLPY	ND	ND	ND	ND	ND	11/16/1104:20	1
HK15020	K101-05M	ABLPY	.83	.826	.959	.922	.904	11/16/1105:01	1
HK15021	K101-05S	ABLPY	.878	.826	.985	1.01	.882	11/16/1105:42	1
HK15022	CCV4	ABLPY	101%	103%	99.3%	99.1%	92.6%	11/16/1106:23	1
HK15023	CCB4	ABLPY	ND	ND	ND	ND	ND	11/16/1106:44	1
HK15024	K084-01	ABLPY	ND	ND	ND	ND	ND	11/16/1107:05	1
HK15025	K084-02	ABLPY	ND	ND	ND	ND	ND	11/16/1107:46	1
HK15026	K084-03	ABLPY	ND	ND	ND	ND	ND	11/16/1108:26	1
HK15027	K084-04	ABLPY	ND	ND	ND	ND	ND	11/16/1109:10	1
HK15028	CCV6	ABLPY	101%	90.7%	99.7%	103%	92.5%	11/16/1111:30	1
HK15029	CCB6	ABLPY	ND	ND	ND	ND	ND	11/16/1112:32	1
HK15030	K084-05	ABLPY	ND	ND	ND	ND	ND	11/16/1112:53	1
HK15031	K084-06	ABLPY	ND	ND	ND	ND	ND	11/16/1113:34	1
HK15032	K035-01	*BLPY	28.1E	ND	ND	1.13	ND	11/16/1114:15	5
HK15033	K035-01A	*BLPY	32.4E	5.38	4.35	6.28	4.73	11/16/1114:55	5
HK15034	CCV8	ABLPY	102%	97%	99.6%	109%	93.8%	11/16/1115:36	1
HK15035	CCB8	ABLPY	ND	ND	ND	ND	ND	11/16/1115:57	1

AS
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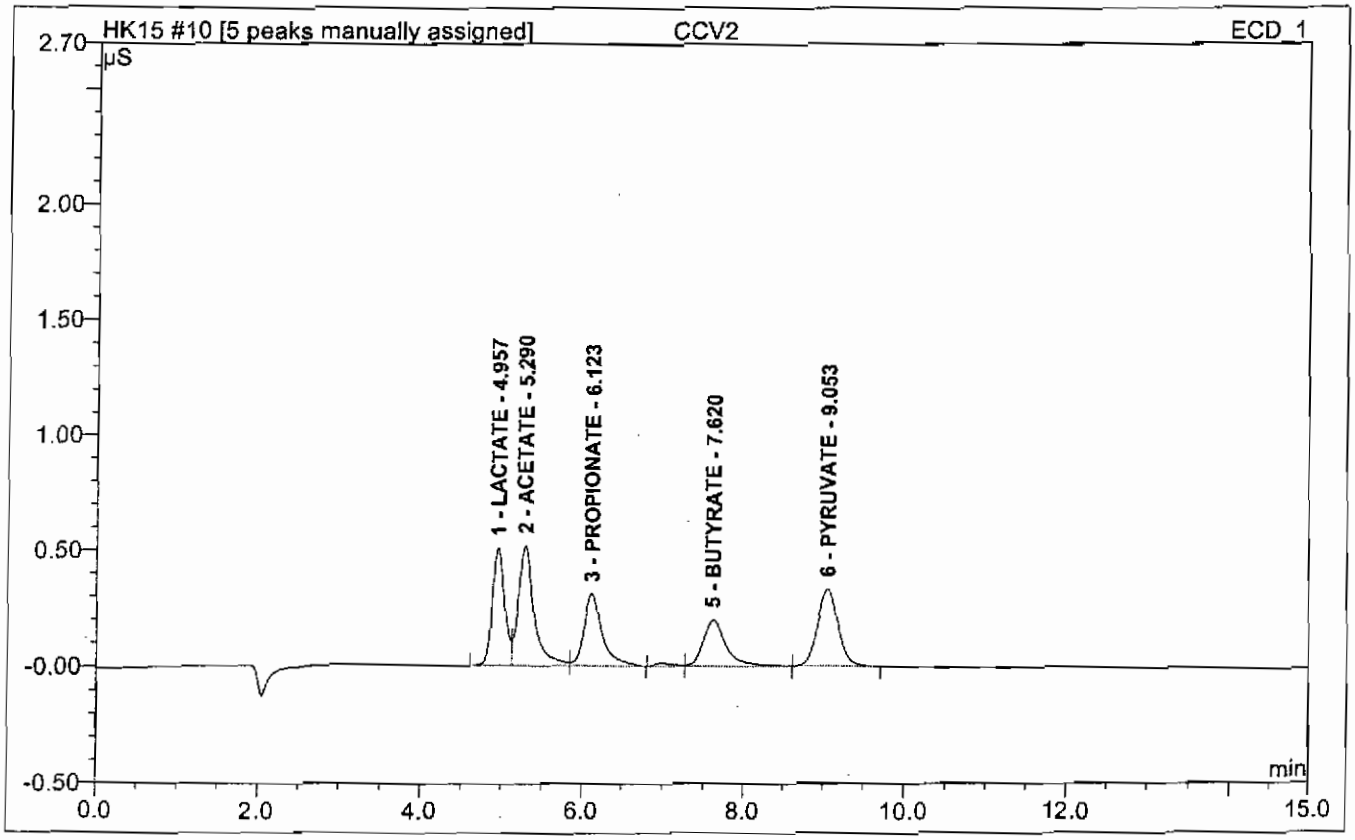
HK15 010 CCV2

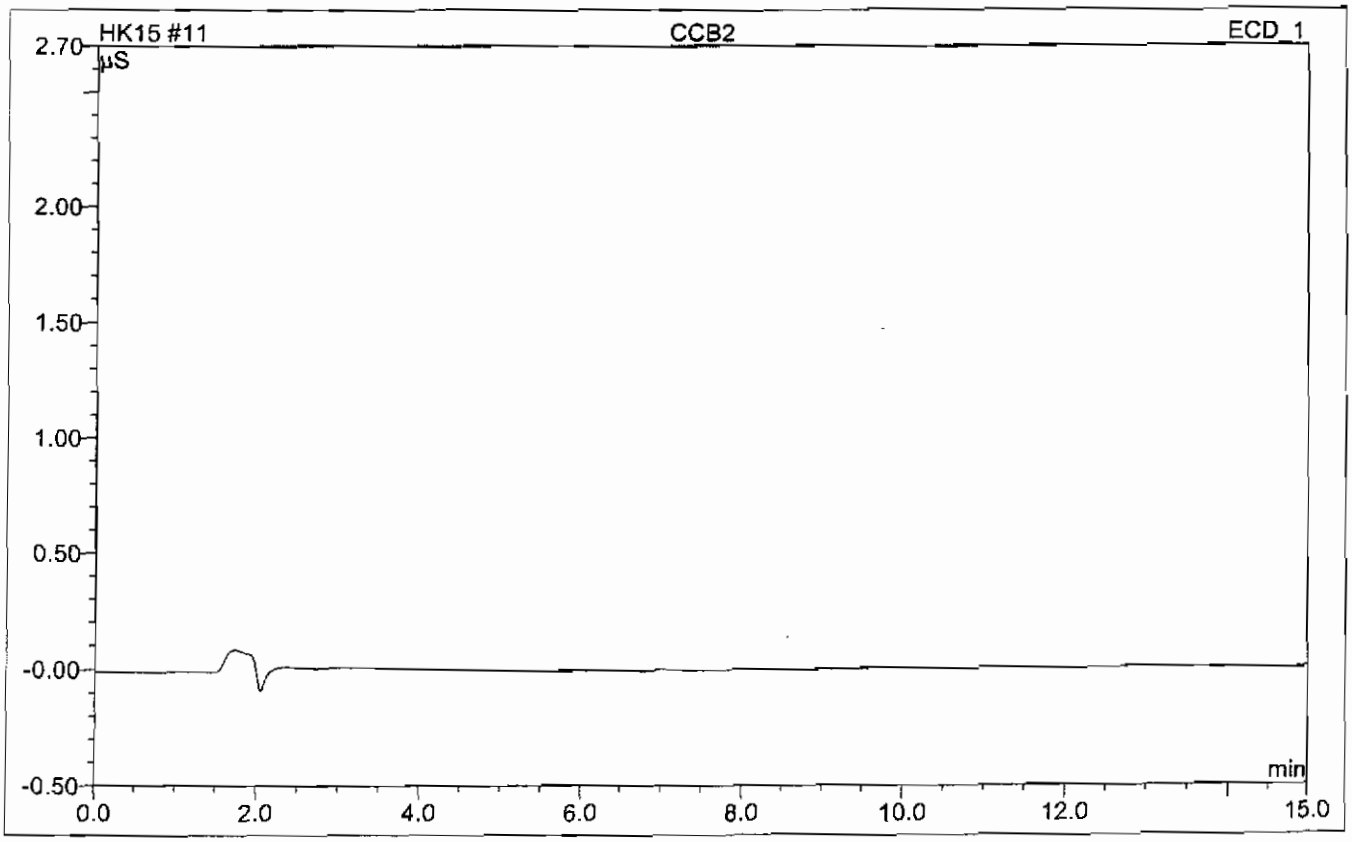
Sample Name:	**CCV2**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 23:52**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.96	LACTATE	0.506446	0.089326	19.72	2.020	BM ^
2	5.29	ACETATE	0.517668	0.117343	25.90	2.059	M ^
3	6.12	PROPIONATE	0.309144	0.081844	18.07	2.084	MB^
4	6.99	n.a.	0.015998	0.003938	0.87	n.a.	BM
5	7.62	BUTYRATE	0.196862	0.063870	14.10	2.058	MB^
6	9.05	PYRUVATE	0.330670	0.096675	21.34	1.879	BMB^
Total:			1.877	0.453	100.00	10.100	

HK15 011 CCB2

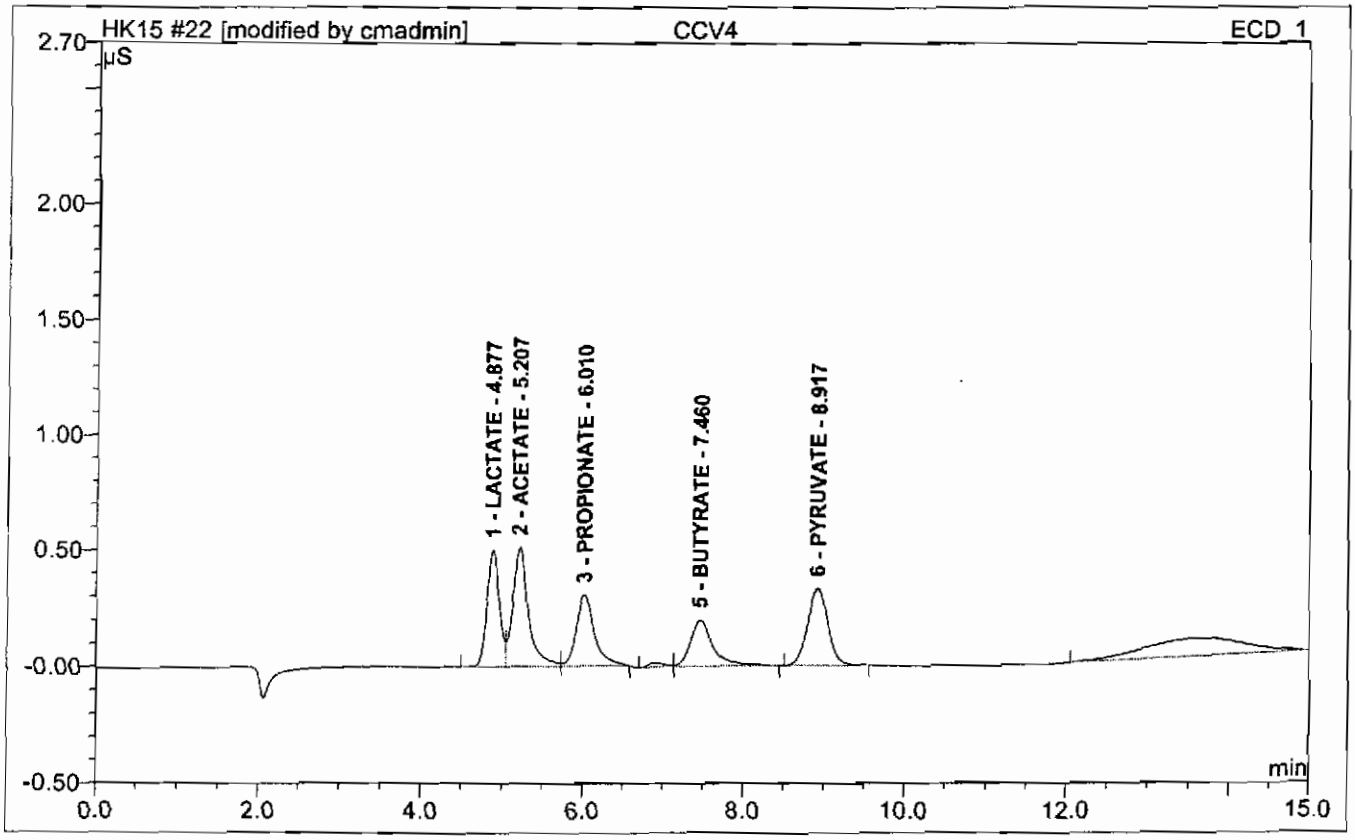
Sample Name:	**CCB2**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/16/2011 0:13**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

HK15 022 CCV4

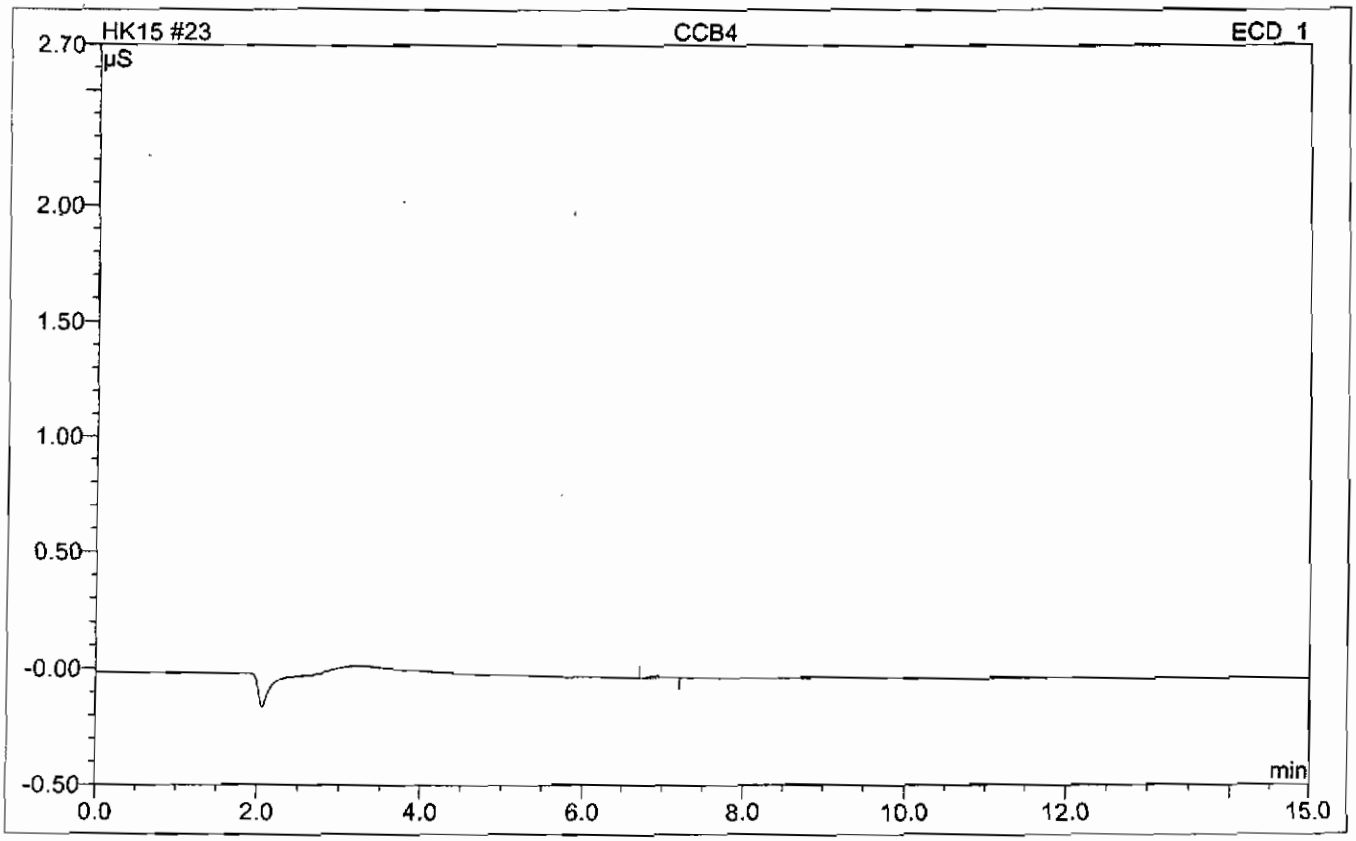
Sample Name:	**CCV4**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/16/2011 6:23**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.88	LACTATE	0.501626	0.087836	15.91	1.986	BM *
2	5.21	ACETATE	0.510784	0.114664	20.77	2.012	M *
3	6.01	PROPIONATE	0.302558	0.077861	14.10	1.983	MB*
4	6.90	n.a.	0.017822	0.004369	0.79	n.a.	BM
5	7.46	BUTYRATE	0.197622	0.064103	11.61	2.065	MB
6	8.92	PYRUVATE	0.328402	0.095180	17.24	1.851	BMB
7	13.65	n.a.	0.075630	0.108059	19.57	n.a.	BMB
Total:			1.934	0.552	100.00	9.897	

HK15 023 CCB4

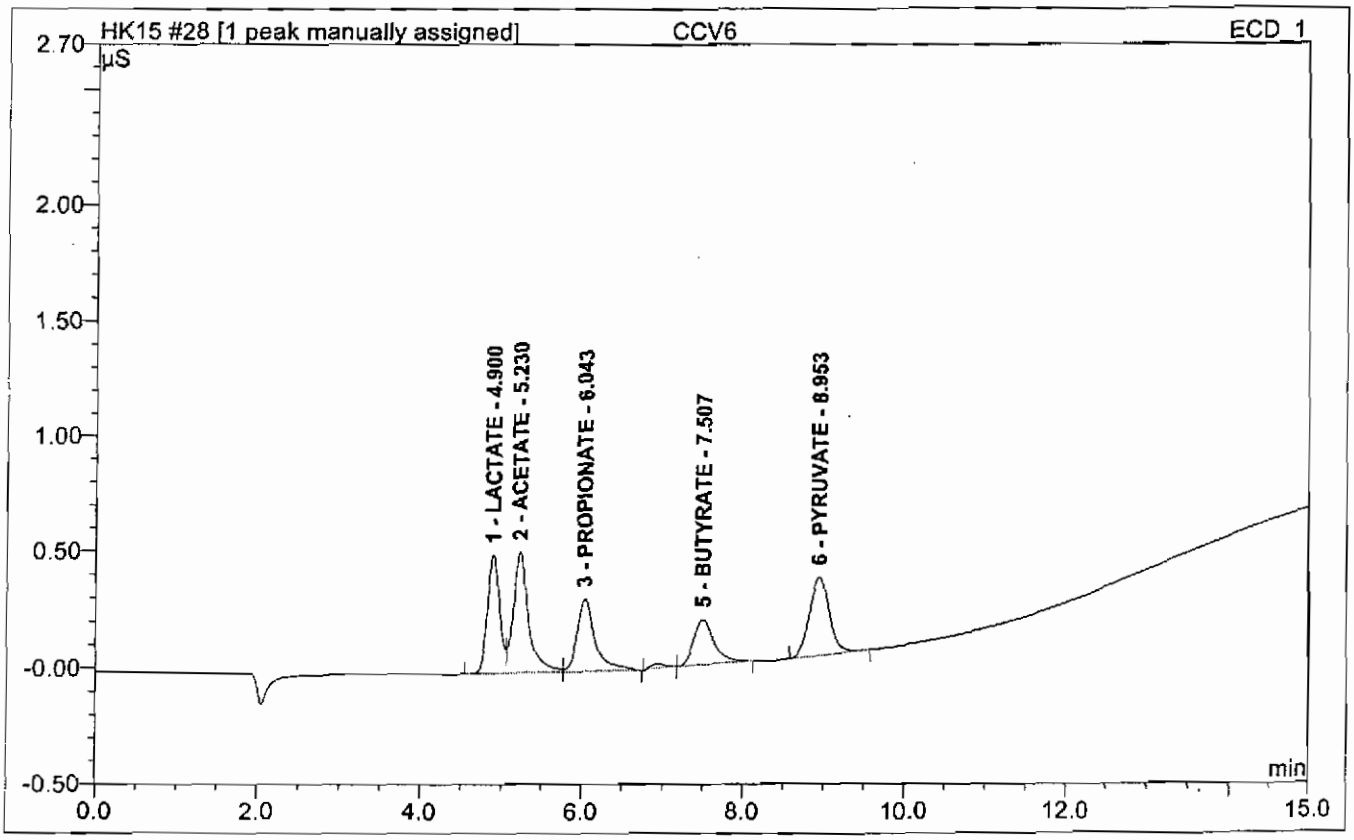
Sample Name:	**CCB4**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/16/2011 6:44**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	6.89	n.a.	0.007066	0.001686	100.00	n.a.	BMB
Total:			0.007	0.002	100.00	0.000	

HK15 028 CCV6

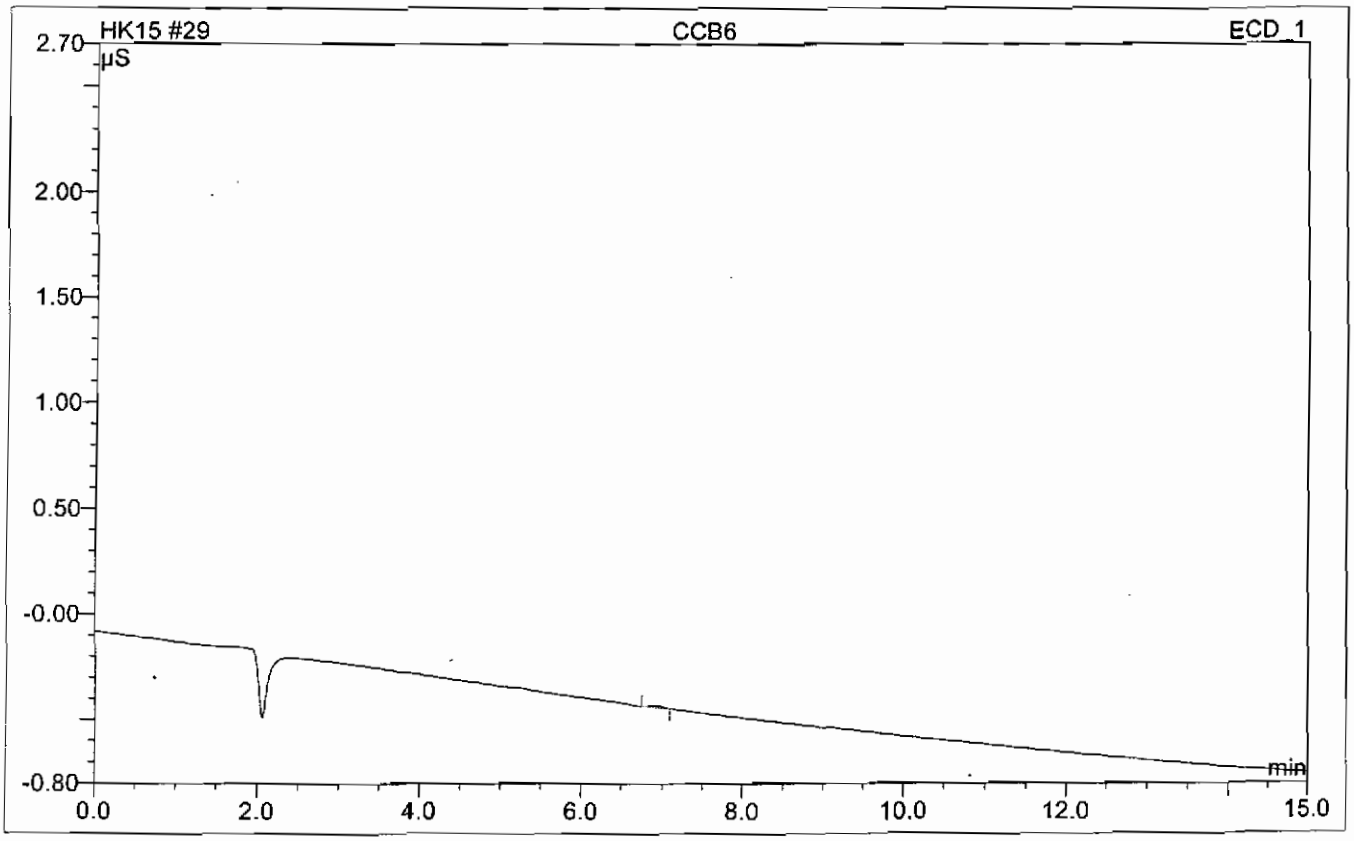
Sample Name:	**CCV6**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/16/2011 11:30**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.90	LACTATE	0.507236	0.088201	20.11	1.994	BM
2	5.23	ACETATE	0.515956	0.114658	26.14	2.012	M
3	6.04	PROPIONATE	0.306354	0.080800	18.42	2.057	MB
4	6.94	n.a.	0.017644	0.003612	0.82	n.a.	BMB
5	7.51	BUTYRATE	0.192564	0.056223	12.82	1.814	bMB
6	8.95	PYRUVATE	0.334846	0.095162	21.69	1.850	BMB^
Total:			1.875	0.439	100.00	9.728	

HK15 029 CCB6

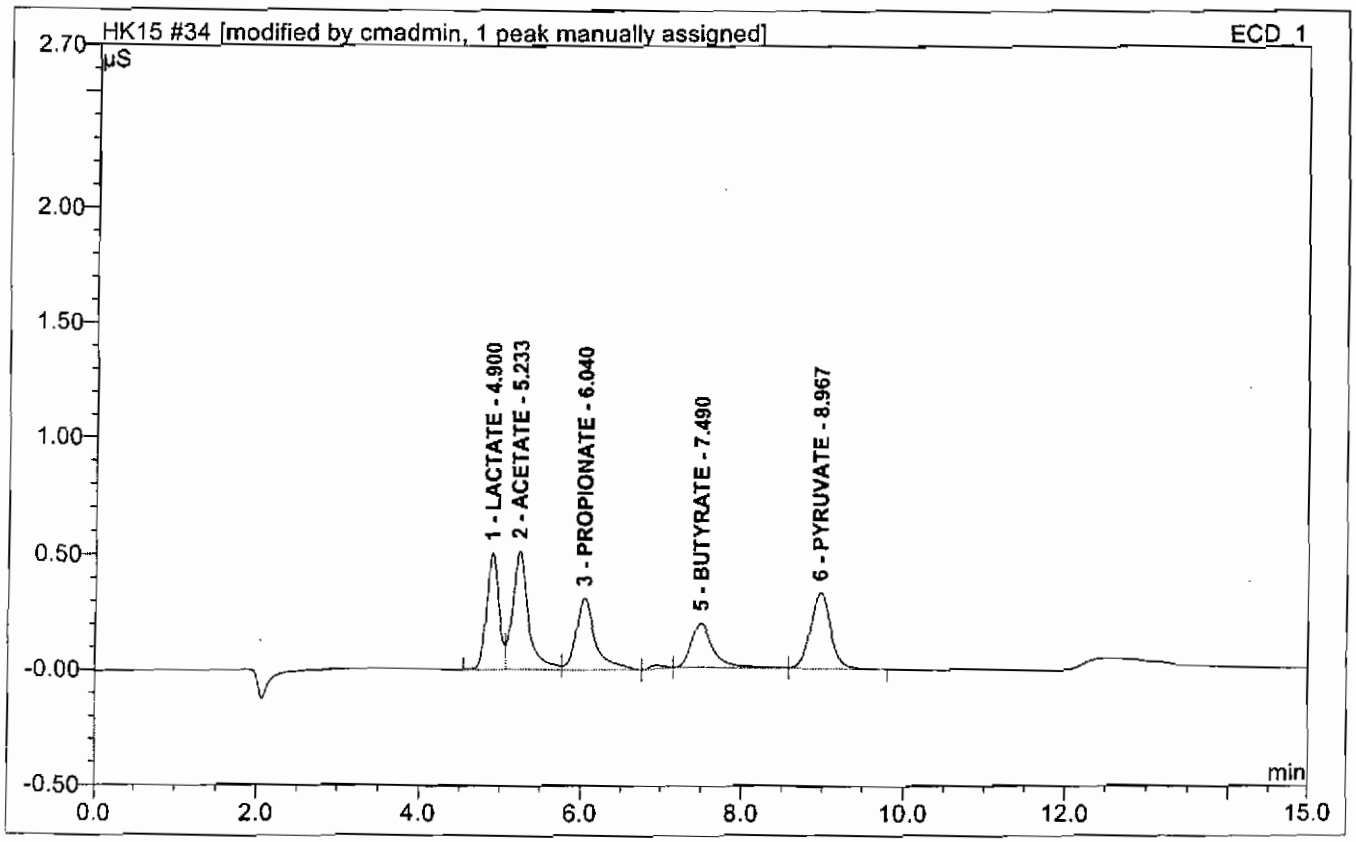
Sample Name:	**CCB6**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/16/2011 12:32**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	6.92	n.a.	0.008984	0.001515	100.00	n.a.	BMB
Total:			0.009	0.002	100.00	0.000	

HK15 034 CCV8

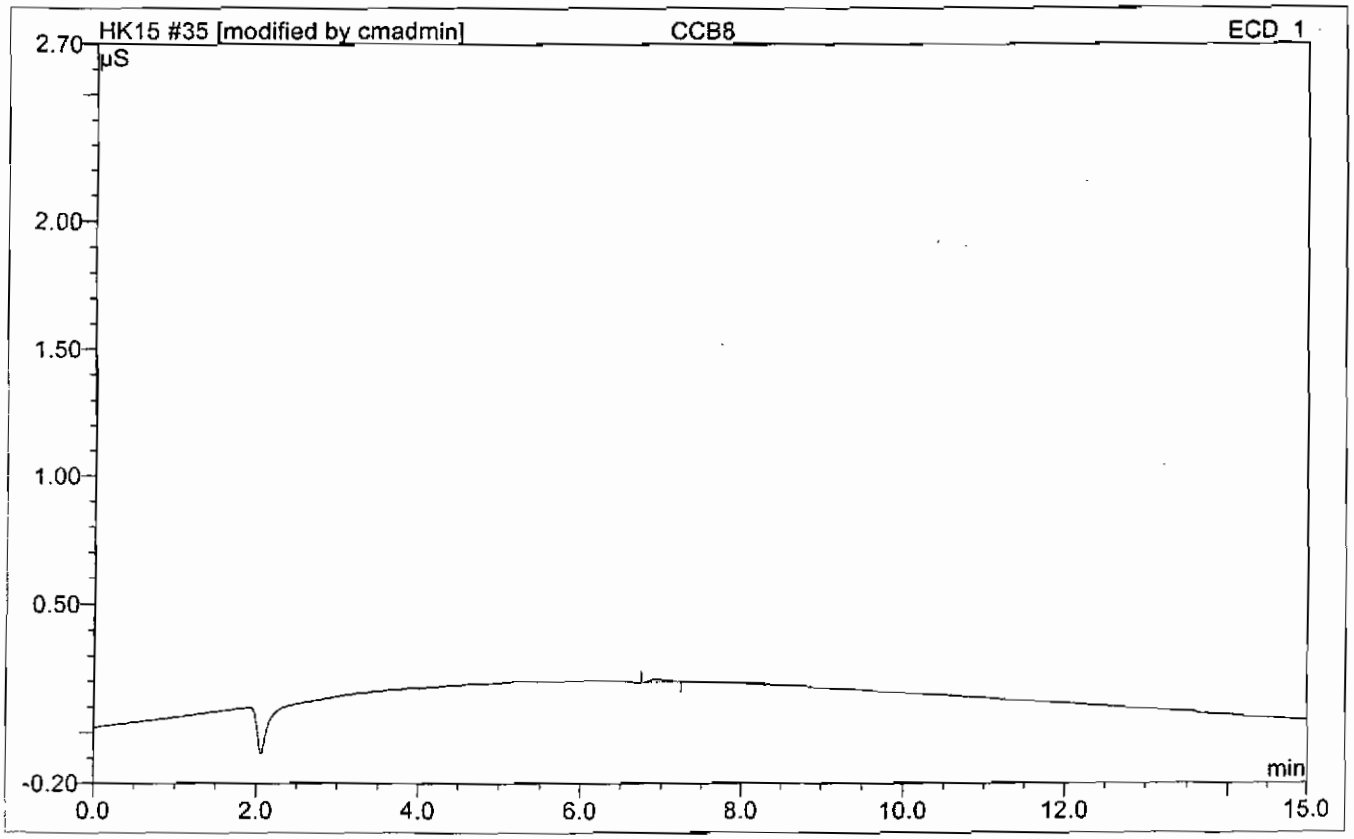
Sample Name:	**CCV8**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/16/2011 15:36**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.90	LACTATE	0.502726	0.088091	19.57	1.992	BM
2	5.23	ACETATE	0.511228	0.116251	25.83	2.040	M
3	6.04	PROPIONATE	0.310294	0.085782	19.06	2.184	MB
4	6.95	n.a.	0.016754	0.003229	0.72	n.a.	BMb*
5	7.49	BUTYRATE	0.192172	0.060164	13.37	1.939	bM *
6	8.97	PYRUVATE	0.330268	0.096523	21.45	1.876	MB*^
Total:			1.863	0.450	100.00	10.032	

HK15 035 CCB8

Sample Name:	**CCB8**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/16/2011 15:57**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	6.94	n.a.	0.010940	0.002523	100.00	n.a.	BMB
Total:			0.011	0.003	100.00	0.000	

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-22

0AD6K15.met : 300M ICAL → Passed

-Linear Range :

S-0 → 0.0 ppm S-3 → 1.0 ppm

S-1 → 0.1 S-4 → 2.0

S-2 → 0.4 S-5 → 3.0

- ICV : 2ppm
- Sample Loop : 25µL
- Flow Rate : 1.50 mL/min
- Suppressor : ASRS 4mm
- SRS Current : 100 mA
- Column: Ion Pac AS11 HC, 4x250 mm
- Guard Column : Ion Pac AG16 ; 4x250mm

0AK010W: K101 , K084 & K035 (conf. only)

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK15
Method File:	0AD6K15.met
Analytical Batch:	0AK010W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID		
ICAL	SW12A-02-330	
ICV		332
CCV		331
LCS		332
MS	↓	327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: ca / AM

Date: 11/15/11

8108

Sequence: HK15
Operator: cmadmin

Printed: 11/17/2011 3:52:16 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK15	001	IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK15	002	S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK15	003	S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK15	004	S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK15	005	S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK15	006	S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK15	007	S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK15	008	ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK15	009	ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK15	010	CCV2	Unknown	100	25.0	ORG	OAD6K15	Finished	11/15/2011 11:52:01 PM	1.0000
11	HK15	011	CCB2	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 12:13:00 AM	1.0000
12	HK15	012	OAK010WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/16/2011 12:33:58 AM	1.0000
13	HK15	013	OAK010WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/16/2011 12:54:57 AM	1.0000
14	HK15	014	OAK010WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/16/2011 1:15:56 AM	1.0000
15	HK15	015	K101-01	Unknown	1	25.0	ORG	OAD6K15	Finished	11/16/2011 1:36:54 AM	1.0000
16	HK15	016	K101-02	Unknown	2	25.0	ORG	OAD6K15	Finished	11/16/2011 2:17:49 AM	1.0000
17	HK15	017	K101-03	Unknown	3	25.0	ORG	OAD6K15	Finished	11/16/2011 2:58:42 AM	1.0000
18	HK15	018	K101-04	Unknown	4	25.0	ORG	OAD6K15	Finished	11/16/2011 3:39:37 AM	1.0000
19	HK15	019	K101-05	Unknown	5	25.0	ORG	OAD6K15	Finished	11/16/2011 4:20:31 AM	1.0000
20	HK15	020	K101-05M	Unknown	6	25.0	ORG	OAD6K15	Finished	11/16/2011 5:01:24 AM	1.0000
21	HK15	021	K101-05S	Unknown	7	25.0	ORG	OAD6K15	Finished	11/16/2011 5:42:18 AM	1.0000
22	HK15	022	CCV4	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 6:23:12 AM	1.0000
23	HK15	023	CCB4	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 6:44:11 AM	1.0000
24	HK15	024	K084-01	Unknown	8	25.0	ORG	OAD6K15	Finished	11/16/2011 7:05:09 AM	1.0000
25	HK15	025	K084-02	Unknown	9	25.0	ORG	OAD6K15	Finished	11/16/2011 7:46:03 AM	1.0000
26	HK15	026	K084-03	Unknown	10	25.0	ORG	OAD6K15	Finished	11/16/2011 8:26:57 AM	1.0000
27	HK15	027	K084-04	Unknown	11	25.0	ORG	OAD6K15	Finished	11/16/2011 9:10:16 AM	1.0000

8195

FINAL

Sequence: HK15
Operator: cmadmin
Printed: 11/17/2011 3:35:11 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Comment
1	HK15	
2	HK15	
3	HK15	
4	HK15	
5	HK15	
6	HK15	
7	HK15	
8	HK15	
9	HK15	
10	HK15	
11	HK15	
12	HK15	
13	HK15	
14	HK15	
15	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
17	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK15	
23	HK15	
24	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
25	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
26	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
27	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

8110

Chromeleon © Dionex Corporation, Version 6.70 Build 1820

FINAL

Sequence: HK15
Operator: cmadmin

Printed: 11/17/2011 3:35:11 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK15	028	CCV6	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 11:30:24 AM	1.0000
29	HK15	029	CCB6	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 12:32:17 PM	1.0000
30	HK15	030	K084-05	Unknown	12	25.0	ORG	OAD6K15	Finished	11/16/2011 12:53:15 PM	1.0000
31	HK15	031	K084-06	Unknown	13	25.0	ORG	OAD6K15	Finished	11/16/2011 1:34:09 PM	1.0000
32	HK15	032	K035-01	Unknown	14	25.0	ORG	OAD6K15	Finished	11/16/2011 2:15:03 PM	5.0000
33	HK15	033	K035-01A	Unknown	15	25.0	ORG	OAD6K15	Finished	11/16/2011 2:55:56 PM	5.0000
34	HK15	034	CCV8	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 3:36:50 PM	1.0000
35	HK15	035	CCB8	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 3:57:49 PM	1.0000

FINAL

Sequence: HK15
Operator: cmadmin
Printed: 11/17/2011 3:35:11 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Comment
28	HK15	
29	HK15	
30	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
31	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
32	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
33	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
34	HK15	
35	HK15	

8112

FINAL

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K084

METHOD 2320B
TOTAL ALKALINITY

A total of six (6) water samples were received on 11/09/11 for Alkalinity analysis, Method 2320B in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for ALK007WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2320B
TOTAL ALKALINITY

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K084

Matrix : WATER
Instrument ID : E5

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ALK007WB	ND	1	NA	5.00	5.00	11/17/1112:30	NA	11E5K04003	NA	ALK007W	NA	NA
LCS1W	ALK007WL	211	1	NA	5.00	5.00	11/17/1112:37	NA	11E5K04004	NA	ALK007W	NA	NA
LCD1W	ALK007WC	211	1	NA	5.00	5.00	11/17/1112:44	NA	11E5K04005	NA	ALK007W	NA	NA
MW-70-PMW04A-110	K084-01	176	1	NA	5.00	5.00	11/17/1114:00	NA	11E5K04012	NA	ALK007W	11/09/1110:36	11/09/11
MW-70-PMW04B-112	K084-02	174	1	NA	5.00	5.00	11/17/1114:07	NA	11E5K04013	NA	ALK007W	11/09/1111:40	11/09/11
IW-70-FSB118-113	K084-03	1030	1	NA	5.00	5.00	11/17/1114:21	NA	11E5K04014	NA	ALK007W	11/09/1112:59	11/09/11
MW-70-PMW05A-114	K084-04	532	1	NA	5.00	5.00	11/17/1114:39	NA	11E5K04015	NA	ALK007W	11/09/1114:44	11/09/11
MW-70-PMW05B-115	K084-05	462	1	NA	5.00	5.00	11/17/1114:48	NA	11E5K04016	NA	ALK007W	11/09/1115:51	11/09/11
IR-70-FD-111	K084-06	175	1	NA	5.00	5.00	11/17/1114:55	NA	11E5K04017	NA	ALK007W	11/09/1111:00	11/09/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K084
METHOD: METHOD 2320B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ALK007WB	ALK007WL	ALK007WC		
LAB FILE ID:	11E5K04003	11E5K04004	11E5K04005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/17/1112:30	11/17/1112:37	11/17/1112:44	DATE RECEIVED:	NA
PREP. BATCH:	ALK007W	ALK007W	ALK007W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Total Alkalinity	ND	230	211	92	230	211	92	0	80-120	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ALKALINITY

Note: For samples and relevent QCs/Standards analyzed, refer to attached analytical sequence.

☒ Titration end point: pH 4.5 ± 0.04

☒ Low alkalinity: pH 4.2 ± 0.04

MS/MSD amount of spike: NA

Comments: Method 2320B for SDG 11K070, 11K084, and 11K101

Book#: AAL-031

Instrument No.: ☐ 53 ☐ 97 ☒ E5

Analytical Batch: ALK007; ALK008; ALK009; ALK01(

Analytical Sequence: 11E5K04

SOP #	Rev. #
☒ EMAX-310.1	5
☒ EMAX-2320B	3
☐ EMAX-	

STANDARDS ID		CONC. (mg/L)
0.02N HCL	SWR1-01-338 ~~SW1-01-402~~	0.02N
LCS	SW1-01-407 ~~NA~~ RC 11/17/11	230
MS/MSD	NA	NA
ICV	NA	NA

pH Buffer	ID
pH 4	SW1-01-341
pH 7	SW1-01-279
pH 10	SW1-01-396
pH 8.0 (Check)	SW1-01-347

Analyzed By: RC

Date: 11/17/11

8116

PC-TitratION PLUS

pH and Alkalinity In-Run Report

Run Number 545 **Analytical Batch#** 11E5K04

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
1	ICV PH8	11E5K04	11/17/2011	12:21 PM	7.98	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	
2	RINSE	11E5K04	11/17/2011	12:25 PM	5.48	.00	.03	.04	.00	1.12	1.12	.00	.00	
3	ALK007WB	11E5K04	11/17/2011	12:30 PM	4.48	.00	.00	.01	.00	-.37	-.37	.00	.00	
4	ALK007WL	11E5K04	11/17/2011	12:37 PM	8.59	1.53	5.27	-1.00	61.04	210.81	88.72	122.09	.00	
5	ALK007WC	11E5K04	11/17/2011	12:44 PM	8.61	1.57	5.26	-1.00	62.91	210.56	84.74	125.82	.00	
6	K070-01	11E5K04	11/17/2011	1:05 PM	7.09	.00	46.39	-1.00	.00	1,855.69	1,855.69	.00	.00	
7	K070-02	11E5K04	11/17/2011	1:19 PM	6.78	.00	19.27	-1.00	.00	770.85	770.85	.00	.00	
8	K070-03	11E5K04	11/17/2011	1:27 PM	7.65	.00	6.58	-1.00	.00	263.36	263.36	.00	.00	
9	K070-04	11E5K04	11/17/2011	1:34 PM	7.84	.00	4.25	-1.00	.00	169.92	169.92	.00	.00	
10	K070-05	11E5K04	11/17/2011	1:45 PM	7.16	.00	15.79	-1.00	.00	631.41	631.41	.00	.00	
11	K070-06	11E5K04	11/17/2011	1:53 PM	7.85	.00	4.26	-1.00	.00	170.46	170.46	.00	.00	
12	K084-01	11E5K04	11/17/2011	2:00 PM	7.93	.00	4.39	-1.00	.00	175.64	175.64	.00	.00	
13	K084-02	11E5K04	11/17/2011	2:07 PM	7.89	.00	4.34	-1.00	.00	173.63	173.63	.00	.00	
14	K084-03	11E5K04	11/17/2011	2:21 PM	6.73	.00	25.68	-1.00	.00	1,027.11	1,027.11	.00	.00	
15	K084-04	11E5K04	11/17/2011	2:39 PM	7.04	.00	13.31	-1.00	.00	532.34	532.34	.00	.00	
16	K084-05	11E5K04	11/17/2011	2:48 PM	7.31	.00	11.55	-1.00	.00	462.12	462.12	.00	.00	
17	K084-06	11E5K04	11/17/2011	2:55 PM	7.97	.00	4.38	-1.00	.00	175.19	175.19	.00	.00	
18	K090-01	11E5K04	11/17/2011	3:03 PM	6.52	.00	3.28	-1.00	.00	131.29	131.29	.00	.00	

Analyzed by: Rc Reviewed by: Rc Date: 11/18/11

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Run Number 545 **Analytical Batch#** **11E5K04**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
19	K090-02	11E5K04	11/17/2011	3:10 PM	6.76	.00	2.74	-1.00	.00	109.70	109.70	.00	.00	
20	K090-03	11E5K04	11/17/2011	3:16 PM	6.87	.00	1.92	-1.00	.00	76.93	76.93	.00	.00	
21	K093-01	11E5K04	11/17/2011	3:23 PM	7.85	.00	4.83	-1.00	.00	193.24	193.24	.00	.00	
22	K101-01	11E5K04	11/17/2011	3:31 PM	7.63	.00	11.60	-1.00	.00	464.05	464.05	.00	.00	
23	K101-01D	11E5K04	11/17/2011	3:42 PM	7.62	.00	11.64	-1.00	.00	465.44	465.44	.00	.00	
24	RINSE	11E5K04	11/17/2011	3:48 PM	5.79	.00	.06	.11	.00	-.01	-.01	.00	.00	
25	ALK008WB	11E5K04	11/17/2011	3:54 PM	5.30	.00	.04	.09	.00	-.59	-.59	.00	.00	
26	ALK008WL	11E5K04	11/17/2011	4:01 PM	8.89	2.63	5.24	-1.00	105.30	209.69	.00	208.78	.91	
27	ALK008WC	11E5K04	11/17/2011	4:09 PM	8.87	2.59	5.24	-1.00	103.46	209.70	2.79	206.91	.00	
28	K077-02	11E5K04	11/17/2011	4:18 PM	7.24	.00	7.35	-1.00	.00	293.89	293.89	.00	.00	
29	K077-03	11E5K04	11/17/2011	4:25 PM	7.74	.00	7.57	-1.00	.00	302.79	302.79	.00	.00	
30	K077-04	11E5K04	11/17/2011	4:39 PM	8.16	.00	24.58	-1.00	.00	983.02	983.02	.00	.00	
31	K077-04D	11E5K04	11/17/2011	4:53 PM	8.14	.00	24.56	-1.00	.00	982.52	982.52	.00	.00	
32	K077-05	11E5K04	11/17/2011	5:04 PM	7.69	.00	14.13	-1.00	.00	565.29	565.29	.00	.00	
33	K077-06	11E5K04	11/17/2011	5:13 PM	7.75	.00	14.09	-1.00	.00	563.79	563.79	.00	.00	
34	K077-07	11E5K04	11/17/2011	5:20 PM	8.05	.00	2.87	-1.00	.00	114.77	114.77	.00	.00	
35	K077-08	11E5K04	11/17/2011	5:29 PM	8.67	.35	8.13	-1.00	13.82	325.04	297.41	27.63	.00	
36	K077-10	11E5K04	11/17/2011	5:38 PM	8.08	.00	10.46	-1.00	.00	418.27	418.27	.00	.00	
37	K077-11	11E5K04	11/17/2011	5:47 PM	8.07	.00	10.53	-1.00	.00	421.26	421.26	.00	.00	
38	K077-12	11E5K04	11/17/2011	5:59 PM	7.52	.00	18.72	-1.00	.00	748.82	748.82	.00	.00	

Analyzed by: Rc Reviewed by: Rc Date: 11/18/11

pH AND ALKALINITY IN-RUN REPORT.SRW

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Run Number 545 **Analytical Batch#** 11E5K04

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
39	K077-13	11E5K04	11/17/2011	6:09 PM	7.13	.00	10.25	-1.00	.00	409.91	409.91	.00	.00	
40	K077-14	11E5K04	11/17/2011	6:17 PM	7.38	.00	8.33	-1.00	.00	333.39	333.39	.00	.00	
41	K077-15	11E5K04	11/17/2011	6:24 PM	7.50	.00	5.54	-1.00	.00	221.68	221.68	.00	.00	
42	K077-17	11E5K04	11/17/2011	6:34 PM	8.13	.00	9.67	-1.00	.00	386.98	386.98	.00	.00	
43	K077-18	11E5K04	11/17/2011	6:43 PM	8.28	.00	9.79	-1.00	.00	391.69	391.69	.00	.00	
44	K077-19	11E5K04	11/17/2011	6:52 PM	8.28	.00	11.93	-1.00	.00	477.05	477.05	.00	.00	
45	K077-20	11E5K04	11/17/2011	7:02 PM	7.58	.00	11.31	-1.00	.00	452.38	452.38	.00	.00	
46	K077-21	11E5K04	11/17/2011	7:10 PM	7.54	.00	7.78	-1.00	.00	311.27	311.27	.00	.00	
47	K077-22	11E5K04	11/17/2011	7:19 PM	7.84	.00	7.30	-1.00	.00	291.89	291.89	.00	.00	
48	K077-23	11E5K04	11/17/2011	7:28 PM	8.62	.40	12.57	-1.00	16.13	502.99	470.73	32.26	.00	
49	RINSE	11E5K04	11/17/2011	7:34 PM	5.76	.00	.06	.13	.00	-.64	-.64	.00	.00	
50	ALK009WB	11E5K04	11/17/2011	7:40 PM	5.46	.00	.05	.11	.00	-.61	-.61	.00	.00	
51	ALK009WL	11E5K04	11/17/2011	7:47 PM	8.97	2.86	5.27	-1.00	114.36	210.92	.00	193.13	17.79	
52	ALK009WC	11E5K04	11/17/2011	7:56 PM	8.94	2.82	5.31	-1.00	112.98	212.52	.00	199.07	13.45	
53	K096-02	11E5K04	11/17/2011	8:04 PM	7.73	.00	6.33	-1.00	.00	253.20	253.20	.00	.00	
54	K096-02D	11E5K04	11/17/2011	8:12 PM	7.75	.00	6.35	-1.00	.00	254.17	254.17	.00	.00	
55	K096-03	11E5K04	11/17/2011	8:19 PM	7.43	.00	6.32	-1.00	.00	252.66	252.66	.00	.00	
56	K096-04	11E5K04	11/17/2011	8:29 PM	8.31	.02	10.18	-1.00	.90	407.36	405.55	1.81	.00	
57	K096-05	11E5K04	11/17/2011	8:38 PM	7.89	.00	10.57	-1.00	.00	422.93	422.93	.00	.00	
58	K096-06	11E5K04	11/17/2011	8:46 PM	7.74	.00	6.14	-1.00	.00	245.55	245.55	.00	.00	

Analyzed by: Re Reviewed by: Rc Date: 11/18/11

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Run Number 545 **Analytical Batch#** **11E5K04**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
59	K096-07	11E5K04	11/17/2011	8:56 PM	8.42	.13	10.84	-1.00	5.08	433.72	423.56	10.16	.00	
60	K096-09	11E5K04	11/17/2011	9:04 PM	8.24	.00	4.55	-1.00	.00	182.18	182.18	.00	.00	
61	K096-10	11E5K04	11/17/2011	9:16 PM	7.65	.00	16.57	-1.00	.00	662.96	662.96	.00	.00	
62	K096-11	11E5K04	11/17/2011	9:23 PM	7.49	.00	8.74	-1.00	.00	349.66	349.66	.00	.00	
63	K096-12	11E5K04	11/17/2011	9:31 PM	7.54	.00	8.62	-1.00	.00	345.00	345.00	.00	.00	
64	K096-13	11E5K04	11/17/2011	9:41 PM	7.59	.00	9.26	-1.00	.00	370.31	370.31	.00	.00	
65	K096-14	11E5K04	11/17/2011	9:49 PM	7.62	.00	9.26	-1.00	.00	370.60	370.60	.00	.00	
66	K096-15	11E5K04	11/17/2011	10:01 PM	8.12	.00	18.66	-1.00	.00	746.52	746.52	.00	.00	
67	K096-16	11E5K04	11/17/2011	10:12 PM	7.85	.00	16.10	-1.00	.00	644.02	644.02	.00	.00	
68	K096-18	11E5K04	11/17/2011	10:21 PM	8.32	.05	9.78	-1.00	1.95	391.21	387.32	3.89	.00	
69	K096-19	11E5K04	11/17/2011	10:32 PM	8.35	.13	15.30	-1.00	5.16	611.93	601.61	10.32	.00	
70	K096-20	11E5K04	11/17/2011	10:40 PM	7.85	.00	5.74	-1.00	.00	229.52	229.52	.00	.00	
71	K096-21	11E5K04	11/17/2011	10:48 PM	7.87	.00	5.75	-1.00	.00	230.14	230.14	.00	.00	
72	K096-22	11E5K04	11/17/2011	10:55 PM	7.80	.00	6.10	-1.00	.00	243.80	243.80	.00	.00	
73	K096-23	11E5K04	11/17/2011	11:04 PM	7.61	.00	6.52	-1.00	.00	260.85	260.85	.00	.00	
74	RINSE	11E5K04	11/17/2011	11:11 PM	6.33	.00	.09	.19	.00	-.45	-.45	.00	.00	
75	ALK010WB	11E5K04	11/17/2011	11:17 PM	5.67	.00	.07	.16	.00	-.83	-.83	.00	.00	
76	ALK010WL	11E5K04	11/17/2011	11:24 PM	9.05	3.06	5.31	-1.00	122.38	212.29	.00	179.82	32.47	
77	ALK010WC	11E5K04	11/17/2011	11:32 PM	9.02	3.00	5.30	-1.00	119.82	212.12	.00	184.61	27.52	
78	K104-02	11E5K04	11/17/2011	11:40 PM	7.76	.00	6.00	-1.00	.00	240.19	240.19	.00	.00	

Analyzed by: RC Reviewed by: RC Date: 11/18/11

pH AND ALKALINITY IN-RUN REPORT.SRW

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Run Number 545 **Analytical Batch#** **11E5K04**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
79	K104-03	11E5K04	11/17/2011	11:49 PM	8.25	.00	7.19	-1.00	.00	287.51	287.51	.00	.00	
80	K104-04	11E5K04	11/17/2011	11:59 PM	8.42	.19	14.66	-1.00	7.77	586.21	570.67	15.54	.00	
81	K104-06	11E5K04	11/18/2011	12:07 AM	7.76	.00	7.57	-1.00	.00	302.95	302.95	.00	.00	
82	K104-07	11E5K04	11/18/2011	12:16 AM	7.79	.00	7.59	-1.00	.00	303.68	303.68	.00	.00	
83	K104-08	11E5K04	11/18/2011	12:24 AM	7.77	.00	8.36	-1.00	.00	334.43	334.43	.00	.00	
84	K104-09	11E5K04	11/18/2011	12:37 AM	7.98	.00	19.75	-1.00	.00	789.95	789.95	.00	.00	
85	K104-10	11E5K04	11/18/2011	12:49 AM	7.73	.00	18.92	-1.00	.00	756.71	756.71	.00	.00	
86	K104-12	11E5K04	11/18/2011	12:58 AM	8.43	.15	13.15	-1.00	5.94	525.84	513.97	11.87	.00	
87	K104-13	11E5K04	11/18/2011	1:07 AM	7.82	.00	6.92	-1.00	.00	276.86	276.86	.00	.00	
88	K104-14	11E5K04	11/18/2011	1:17 AM	7.87	.00	17.64	-1.00	.00	705.74	705.74	.00	.00	
89	K104-14D	11E5K04	11/18/2011	1:29 AM	7.88	.00	17.68	-1.00	.00	707.27	707.27	.00	.00	
90	K072-01	11E5K04	11/18/2011	1:37 AM	8.29	.00	3.87	-1.00	.00	154.74	154.74	.00	.00	
91	RINSE	11E5K04	11/18/2011	1:43 AM	6.03	.00	.06	.13	.00	-.18	-.18	.00	.00	

Analyzed by: Re Reviewed by: Re Date: 11/18/11

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PC-Titrate For Windows

Running List Report

Order Number - 11E5K04

	Schedule	Sample Id	Vial	Weight	Volume
1	PH CAL	CAL	1	.00	25.00
2	PH ONLY	ICV PH8	4	.00	25.00
3	PH-ALK	RINSE	5	.00	25.00
4	PH-ALK	ALK007WB	6	.00	25.00
5	PH-ALK	ALK007WL	7	.00	25.00
6	PH-ALK	ALK007WC	8	.00	25.00
7	PH-ALK	K070-01	9	.00	25.00
8	PH-ALK	K070-02	10	.00	25.00
9	PH-ALK	K070-03	11	.00	25.00
10	PH-ALK	K070-04	12	.00	25.00
11	PH-ALK	K070-05	13	.00	25.00
12	PH-ALK	K070-06	14	.00	25.00
13	PH-ALK	K084-01	15	.00	25.00
14	PH-ALK	K084-02	16	.00	25.00
15	PH-ALK	K084-03	17	.00	25.00
16	PH-ALK	K084-04	18	.00	25.00
17	PH-ALK	K084-05	19	.00	25.00
18	PH-ALK	K084-06	20	.00	25.00
19	PH-ALK	K090-01	21	.00	25.00
20	PH-ALK	K090-02	22	.00	25.00
21	PH-ALK	K090-03	23	.00	25.00
22	PH-ALK	K093-01	24	.00	25.00
23	PH-ALK	K101-01	25	.00	25.00
24	PH-ALK	K101-01D	26	.00	25.00
25	PH-ALK	RINSE	27	.00	25.00
26	PH-ALK	ALK008WB	28	.00	25.00
27	PH-ALK	ALK008WL	29	.00	25.00
28	PH-ALK	ALK008WC	30	.00	25.00
29	PH-ALK	K077-02	31	.00	25.00
30	PH-ALK	K077-03	32	.00	25.00
31	PH-ALK	K077-04	33	.00	25.00
32	PH-ALK	K077-04D	34	.00	25.00
33	PH-ALK	K077-05	35	.00	25.00
34	PH-ALK	K077-06	36	.00	25.00
35	PH-ALK	K077-07	37	.00	25.00
36	PH-ALK	K077-08	38	.00	25.00
37	PH-ALK	K077-10	39	.00	25.00
38	PH-ALK	K077-11	40	.00	25.00
39	PH-ALK	K077-12	41	.00	25.00
40	PH-ALK	K077-13	42	.00	25.00

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Running List Report

Order Number - 11E5K04

	Schedule	Sample Id	Vial	Weight	Volume
41	PH-ALK	K077-14	43	.00	25.00
42	PH-ALK	K077-15	44	.00	25.00
43	PH-ALK	K077-17	45	.00	25.00
44	PH-ALK	K077-18	46	.00	25.00
45	PH-ALK	K077-19	47	.00	25.00
46	PH-ALK	K077-20	48	.00	25.00
47	PH-ALK	K077-21	49	.00	25.00
48	PH-ALK	K077-22	50	.00	25.00
49	PH-ALK	K077-23	51	.00	25.00
50	PH-ALK	RINSE	52	.00	25.00
51	PH-ALK	ALK009WB	53	.00	25.00
52	PH-ALK	ALK009WL	54	.00	25.00
53	PH-ALK	ALK009WC	55	.00	25.00
54	PH-ALK	K096-02	56	.00	25.00
55	PH-ALK	K096-02D	57	.00	25.00
56	PH-ALK	K096-03	58	.00	25.00
57	PH-ALK	K096-04	59	.00	25.00
58	PH-ALK	K096-05	60	.00	25.00
59	PH-ALK	K096-06	61	.00	25.00
60	PH-ALK	K096-07	62	.00	25.00
61	PH-ALK	K096-09	63	.00	25.00
62	PH-ALK	K096-10	64	.00	25.00
63	PH-ALK	K096-11	65	.00	25.00
64	PH-ALK	K096-12	66	.00	25.00
65	PH-ALK	K096-13	67	.00	25.00
66	PH-ALK	K096-14	68	.00	25.00
67	PH-ALK	K096-15	69	.00	25.00
68	PH-ALK	K096-16	70	.00	25.00
69	PH-ALK	K096-18	71	.00	25.00
70	PH-ALK	K096-19	72	.00	25.00
71	PH-ALK	K096-20	73	.00	25.00
72	PH-ALK	K096-21	74	.00	25.00
73	PH-ALK	K096-22	75	.00	25.00
74	PH-ALK	K096-23	76	.00	25.00
75	PH-ALK	RINSE	77	.00	25.00
76	PH-ALK	ALK010WB	78	.00	25.00
77	PH-ALK	ALK010WL	79	.00	25.00
78	PH-ALK	ALK010WC	80	.00	25.00
79	PH-ALK	K104-02	81	.00	25.00
80	PH-ALK	K104-03	82	.00	25.00
81	PH-ALK	K104-04	83	.00	25.00
82	PH-ALK	K104-06	84	.00	25.00

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Running List Report

Order Number - 11E5K04

	Schedule	Sample Id	Vial	Weight	Volume
83	PH-ALK	K104-07	85	.00	25.00
84	PH-ALK	K104-08	86	.00	25.00
85	PH-ALK	K104-09	87	.00	25.00
86	PH-ALK	K104-10	88	.00	25.00
87	PH-ALK	K104-12	89	.00	25.00
88	PH-ALK	K104-13	90	.00	25.00
89	PH-ALK	K104-14	91	.00	25.00
90	PH-ALK	K104-14D	92	.00	25.00
91	PH-ALK	K072-01	93	.00	25.00
92	PH-ALK	RINSE	94	.00	25.00

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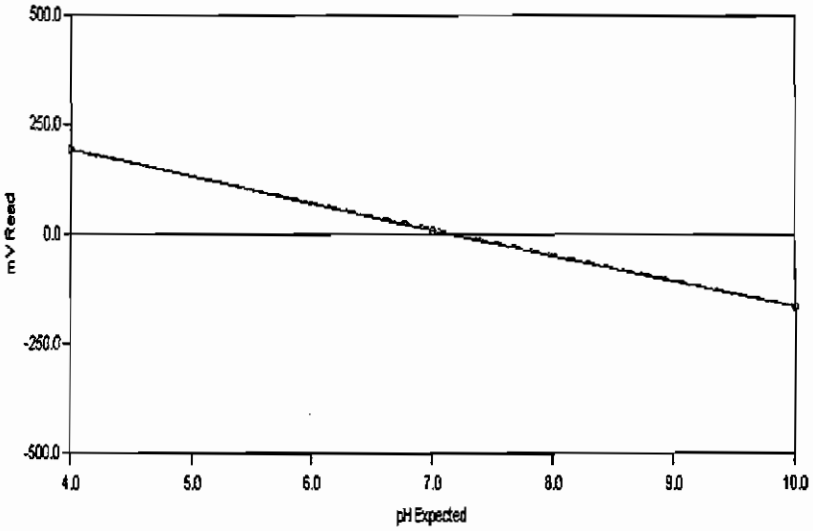
PC-TitratION PLUS
Calibration Report

Calibration Record # 283



Calibration Settings

Calibration ID	PH CAL 4-7-10	Date	11/17/2011	
Channel	1	Time	12:18 PM	
Probe Type	pH	Temperature	296.53 K	23.38 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit	

Calibration Results

Slope	-59.142	CorrCoeff	0.9998
Intercept	12.613	Equation: Y = (-59.142) X + (12.613)	

Calibration Validity **True** Operator

	Result	Minimum	Maximum
Slope	-59.142	-65.00	-53.00
Intercept	12.613	-40.00	40.00
Correlation Coefficient	0.9998	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	**Standard**	**Reading**
	4.00	191.89
	7.00	8.91
	10.00	-162.96

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CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K084

METHOD 2540C
TOTAL DISSOLVED SOLIDS

A total of six (6) water samples were received on 11/09/11 for Total Dissolved Solids analysis, Method 2540C in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Balance calibration was checked as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TDK009WL/C were all within QC limits.

Matrix QC Sample
Sample duplicate was analyzed with the samples in this SDG. RPD was within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2540C
TOTAL DISSOLVED SOLIDS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K084

Matrix : WATER
Instrument ID : 40706360

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TDK009WB	ND	1	NA	20.0	20.0	11/15/1117:23	NA	TDK00901	NA	TDK009W	NA	NA
LCS1W	TDK009WL	1050	1	NA	20.0	20.0	11/15/1117:23	NA	TDK00902	NA	TDK009W	NA	NA
LCD1W	TDK009WC	1040	1	NA	20.0	20.0	11/15/1117:23	NA	TDK00903	NA	TDK009W	NA	NA
MW-70-PMW04A-110	K084-01	780	1	NA	20.0	20.0	11/15/1117:23	NA	TDK00915	NA	TDK009W	11/09/1110:36	11/09/11
MW-70-PMW04B-112	K084-02	830	1	NA	20.0	20.0	11/15/1117:23	NA	TDK00916	NA	TDK009W	11/09/1111:40	11/09/11
IW-70-FSB118-113	K084-03	1870	1	NA	20.0	20.0	11/15/1117:23	NA	TDK00917	NA	TDK009W	11/09/1112:59	11/09/11
MW-70-PMW05A-114	K084-04	895	1	NA	20.0	20.0	11/15/1117:23	NA	TDK00918	NA	TDK009W	11/09/1114:44	11/09/11
MW-70-PMW05B-115	K084-05	1280	1	NA	20.0	20.0	11/15/1117:23	NA	TDK00919	NA	TDK009W	11/09/1115:51	11/09/11
IR-70-FD-111	K084-06	750	1	NA	20.0	20.0	11/15/1117:23	NA	TDK00920	NA	TDK009W	11/09/1111:00	11/09/11
IR-70-FD-111DUP	K084-06D	770	1	NA	20.0	20.0	11/15/1117:23	NA	TDK00921	NA	TDK009W	11/09/1111:00	11/09/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K084
METHOD: METHOD 2540C

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TDK009WB	TDK009WL	TDK009WC		
LAB FILE ID:	TDK00901	TDK00902	TDK00903		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/15/1117:23	11/15/1117:23	11/15/1117:23	DATE RECEIVED:	NA
PREP. BATCH:	TDK009W	TDK009W	TDK009W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPTKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TDS	ND	1000	1050	105	1000	1040	104	1	80-120	20

8128

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K084
METHOD: METHOD 2540C

==========

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	IR-70-FD-111			
EMAX SAMP ID:	K084-06	K084-06D		
LAB FILE ID:	TDK00920	TDK00921		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/09/11 11:00
DATE ANALYZED:	11/15/1117:23	11/15/1117:23	DATE RECEIVED:	11/09/11
PREP. BATCH:	TDK009W	TDK009W		
CALIB. REF:	NA	NA		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
TDS	750	770	3	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
GRAVIMETRIC

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AGV-047

Balance ID: 40706360

Analytical Batch: TDK009

SOP #	Rev. #
☐ EMAX-160.1	6
☐ EMAX-160.2	4
☐ EMAX-160.3	2
☐ EMAX-2540B	1
☑ EMAX-2540C	5
☐ EMAX-2540D	1

STANDARDS ID	CONC. (mg/L)
LCS SW2-02-914	1000

Micropipette ID: 438481331

Analyzed By: MM

Date: 11/14/4

GRAVIMETRIC ANALYSES
RAW DATA

11TDK009.xls

EMAX LABORATORIES

Analytical Batch: TDK009C. Instrument ID: 40706360 Oven Temp IN (°C): 180 Oven Temp OUT (°C): 180 SOP: EMAX-2540C Rev.1

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish #	Dish (g)	Date	Time	1st Dry Weight + Dish (g)	Date	Time	2nd Dry Weight + Dish (g)	Date	Time	3rd Dry Weight + Dish (g)	Date	Time	Difference 1st & 2nd Dry Wt. Rdg.	Difference 2nd & 3rd Dry Wt. Rdg. (<0.5mg)	NOTES
TDK00901	TDK009WB	100	B	70.7032	11/15/11	17:23	70.7037	11/16/11	11:27	70.7033	11/16/11	13:50	70.7033	11/16/11	13:50	-0.0004	0.0	
TDK00902	TDK009WL	20	L	21.5528	11/15/11	17:23	21.5739	11/16/11	11:28	21.5738	11/16/11	13:51	21.5738	11/16/11	13:51	-1E-04	0.0	
TDK00903	TDK009WC	20	C	21.5928	11/15/11	17:23	21.6136	11/16/11	11:28	21.6136	11/16/11	13:52	21.6136	11/16/11	13:52	0	0.0	
TDK00904	K511-01	20	1	21.6046	11/15/11	17:24	21.623	11/16/11	11:28	21.623	11/16/11	13:52	21.623	11/16/11	13:52	0	0.0	
TDK00905	K511-03	20	2	21.5437	11/15/11	17:24	21.6025	11/16/11	11:29	21.6028	11/16/11	13:52	21.6028	11/16/11	13:52	0.0003	0.0	
TDK00906	K511-02	20	3	21.5194	11/15/11	17:24	21.5382	11/16/11	11:29	21.5381	11/16/11	13:52	21.5381	11/16/11	13:52	-1E-04	0.0	
TDK00907	K511-04	20	4	21.6291	11/15/11	17:25	21.7224	11/16/11	11:29	21.7222	11/16/11	13:53	21.7222	11/16/11	13:53	-0.0002	0.0	
TDK00908	K511-05	20	5	21.4605	11/15/11	17:25	21.5193	11/16/11	11:29	21.5194	11/16/11	13:53	21.5194	11/16/11	13:53	1E-04	0.0	
TDK00909	K511-06	20	6	21.5116	11/15/11	17:25	21.5288	11/16/11	11:30	21.5287	11/16/11	13:53	21.5287	11/16/11	13:53	-1E-04	0.0	
TDK00910	K511-07	20	7	21.5718	11/15/11	17:25	21.589	11/16/11	11:30	21.5891	11/16/11	13:53	21.5891	11/16/11	13:53	1E-04	0.0	
TDK00911	K511-08	20	8	21.3260	11/15/11	17:26	21.3447	11/16/11	11:30	21.3447	11/16/11	13:54	21.3447	11/16/11	13:54	0	0.0	
TDK00912	K511-09	20	9	21.3737	11/15/11	17:26	21.4118	11/16/11	11:31	21.4119	11/16/11	13:54	21.4119	11/16/11	13:54	1E-04	0.0	
TDK00913	K511-10	20	10	21.4680	11/15/11	17:26	21.5446	11/16/11	11:31	21.5449	11/16/11	13:54	21.5449	11/16/11	13:54	0.0003	0.0	
TDK00914	K511-10D	20	11	21.4292	11/15/11	17:26	21.5048	11/16/11	11:31	21.5051	11/16/11	13:54	21.5051	11/16/11	13:54	0.0003	0.0	
TDK00915	K084-01	20	12	21.4988	11/15/11	17:27	21.5143	11/16/11	11:31	21.5144	11/16/11	13:55	21.5144	11/16/11	13:55	1E-04	0.0	
TDK00916	K084-02	20	13	21.4513	11/15/11	17:27	21.4675	11/16/11	11:32	21.4679	11/16/11	13:55	21.4679	11/16/11	13:55	0.0004	0.0	
TDK00917	K084-03	20	14	21.5444	11/15/11	17:27	21.5816	11/16/11	11:32	21.5818	11/16/11	13:55	21.5818	11/16/11	13:55	0.0002	0.0	
TDK00918	K084-04	20	15	21.5271	11/15/11	17:27	21.5449	11/16/11	11:32	21.545	11/16/11	13:55	21.545	11/16/11	13:55	0.0001	0.0	
TDK00919	K084-05	20	16	21.7030	11/15/11	17:28	21.7287	11/16/11	11:32	21.7285	11/16/11	13:56	21.7285	11/16/11	13:56	-0.0002	0.0	
TDK00920	K084-06	20	17	21.6224	11/15/11	17:28	21.6374	11/16/11	11:33	21.6374	11/16/11	13:56	21.6374	11/16/11	13:56	0	0.0	
TDK00921	K084-06D	20	18	21.5688	11/15/11	17:28	21.5842	11/16/11	11:33	21.5842	11/16/11	13:56	21.5842	11/16/11	13:56	0	0.0	
TDK00922	K101-01	20	19	21.6311	11/15/11	17:28	21.6487	11/16/11	11:33	21.649	11/16/11	13:57	21.649	11/16/11	13:57	0.0003	0.0	
TDK00923	K101-02	100	20	71.4557	11/15/11	17:29	71.4999	11/16/11	11:34	71.4995	11/16/11	13:57	71.4995	11/16/11	13:57	-0.0004	0.0	
TDK00924	K101-03	5	21	21.4890	11/15/11	17:29	21.5009	11/16/11	11:34	21.501	11/16/11	13:57	21.501	11/16/11	13:57	1E-04	0.0	
TDK00925	K101-04	10	22	21.5458	11/15/11	17:29	21.6725	11/16/11	11:34	21.6727	11/16/11	13:57	21.6727	11/16/11	13:57	0.0002	0.0	

Beginning Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/15/11 17:22	PASSED
5	4.9998	11/15/11 17:22	PASSED
100	99.9974	11/15/11 17:23	PASSED

Ending Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.0996	11/15/11 17:29	PASSED
5	4.9995	11/15/11 17:30	PASSED
100	99.9972	11/15/11 17:30	PASSED

Beginning Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/16/11 11:27	PASSED
5	4.9999	11/16/11 11:27	PASSED
100	99.9990	11/16/11 11:27	PASSED

Ending Balance Check

Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/16/11 13:57	PASSED
5	5.0000	11/16/11 13:58	PASSED
100	99.9980	11/16/11 13:58	PASSED

Acceptance Criteria: ± 0.1% OR 0.05 mg whichever is greater

LCS Conc. 1000 mg/L MDL 10 mg/L RL 10 mg/L Initial Rdg by: NM Final Rdg by: NM Reviewed by: NM

Remarks: Date:

EMAX LABORATORIES, INC

GRAVIMETRIC CALCULATION

Analytical Batch: TDK009 Start Date/Time: 11/15/11 17:23 Temp IN(°C): 180

Balance ID: 40706360 End Date/Time: 11/16/11 13:56 Temp Out(°C): 180

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish (g)	Dry Weight + Dish (g)	SOLIDS (mg)	RESULT (mg/L)	NOTES
TDK00901	TDK009WB	100	70.7032	70.7033	0.1000	ND	
TDK00902	TDK009WL	20	21.5528	21.5738	21.0000	1050	105
TDK00903	TDK009WC	20	21.5928	21.6136	20.8000	1040	104
TDK00904	K511-01	20	21.6046	21.623	18.4000	920	
TDK00905	K511-03	20	21.5437	21.6028	59.1000	2950	
TDK00906	K511-02	20	21.5194	21.5381	18.7000	935	
TDK00907	K511-04	20	21.6291	21.7222	93.1000	4650	
TDK00908	K511-05	20	21.4605	21.5194	58.9000	2950	
TDK00909	K511-06	20	21.5116	21.5287	17.1000	855	
TDK00910	K511-07	20	21.5718	21.5891	17.3000	865	
TDK00911	K511-08	20	21.326	21.3447	18.7000	935	
TDK00912	K511-09	20	21.3737	21.4119	38.2000	1910	
TDK00913	K511-10	20	21.468	21.5449	76.9000	3840	
TDK00914	K511-10D	20	21.4292	21.5051	75.9000	3790	
TDK00915	K084-01	20	21.4988	21.5144	15.6000	780	
TDK00916	K084-02	20	21.4513	21.4679	16.6000	830	
TDK00917	K084-03	20	21.5444	21.5818	37.4000	1870	
TDK00918	K084-04	20	21.5271	21.545	17.9000	895	
TDK00919	K084-05	20	21.703	21.7285	25.5000	1280	
TDK00920	K084-06	20	21.6224	21.6374	15.0000	750	
TDK00921	K084-06D	20	21.5688	21.5842	15.4000	770	
TDK00922	K101-01	20	21.6311	21.649	17.9000	895	
TDK00923	K101-02	100	71.4557	71.4995	43.8000	438	
TDK00924	K101-03	5	21.489	21.501	12.0000	2400	
TDK00925	K101-04	10	21.5458	21.6727	126.9000	12700	

LCS Concentration: 1000 mg/L MDL(mg/L): 10 Initial Reading by: NM

SOP: EMAX-2540C Rev.1 RL (mg/L): 10 Final Reading by: NM

Remarks:

Reviewed by: NM

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K084

METHOD 4500F
DISSOLVED HYDROGEN SULFIDE

A total of six (6) water samples were received on 11/09/11 for Dissolved Hydrogen Sulfide analysis, Method 4500F in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Matrix QC Sample
Sample duplicate was analyzed with the samples. RPD was within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 4500F
Dissolved Hydrogen Sulfide

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K084

Matrix : WATER
Instrument ID : NA

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	HSK002WB	ND	1	NA	1.00	1.00	11/14/1111:08	NA	HSK00201	NA	HSK002W	NA	NA
MW-70-PMW04A-110	K084-01	ND	1	NA	1.00	1.00	11/14/1112:27	NA	HSK00210	NA	HSK002W	11/09/1110:36	11/09/11
MW-70-PMW04B-112	K084-02	ND	1	NA	1.00	1.00	11/14/1112:29	NA	HSK00211	NA	HSK002W	11/09/1111:40	11/09/11
IW-70-FSB118-113	K084-03	ND	1	NA	1.00	1.00	11/14/1112:32	NA	HSK00212	NA	HSK002W	11/09/1112:59	11/09/11
MW-70-PMW05A-114	K084-04	ND	1	NA	1.00	1.00	11/14/1112:36	NA	HSK00213	NA	HSK002W	11/09/1114:44	11/09/11
MW-70-PMW05B-115	K084-05	ND	1	NA	1.00	1.00	11/14/1113:10	NA	HSK00214	NA	HSK002W	11/09/1115:51	11/09/11
IR-70-FD-111	K084-06	ND	1	NA	1.00	1.00	11/14/1113:12	NA	HSK00215	NA	HSK002W	11/09/1111:00	11/09/11
IR-70-FD-111DUP	K084-06D	ND	1	NA	1.00	1.00	11/14/1113:15	NA	HSK00216	NA	HSK002W	11/09/1111:00	11/09/11

EMAX QUALITY CONTROL DATA
DUPLICATE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
METHOD: METHOD 4500F (DISSOLVED)
MATRIX: WATER
% MOISTURE: NA

BATCH NO.: 11K084
SAMPLE ID: IR-70-FD-111DUP
CONTROL NO.: K084-06D

DATE RECEIVED: 11/09/11
DATE EXTRACTED: NA
DATE ANALYZED: 11/14/11 13:15

ACCESSION:

PARAMETER	SAMPLE (mg/L)	DUP. SAMPLE (mg/L)	RPD (%)	RPD LIMIT (%)
Hydrogen Sulfide	ND	ND	0	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
SULFIDE

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Book #: ASD-018

Analytical Batch: HSK002

Comments:

SOP #	Rev. #
☐ EMAX-376.1	3
☐ EMAX-9034	0
☐ EMAX-4500-S2F	1
☑ EMAX-4500-S2H	0
☐ EMAX-	

STANDARDS ID	conc.
LCS SWI-01-422	8.48
Spike NA	NA
$Na_2S_2O_3$ Standard SWP1-01-354	0.0248
Iodine SWP1-01-465	0.0250
HCl ~~HH~~ NM 11/19 SWP1-007-60-03	6N
Indicator SWP1-01-340	—

Analyzed By: NM

Date: 11/14/11

SM4500-S^{2-} H

EMAX LABORATORIES, INC.

ANALYSIS FOR UN-IONIZED HYDROGEN SULFIDE

Method SM4500-S2-H

Analytical Batch: HSK002

Data File Name	Lab Sample ID	Sulfide	Unit	Date Time	Temp. °C	pH	Conductivity µS/cm	H2S	Unit	COMMENTS
HSK0021	HSK002WB	ND	mg/L	11/14/11 11:08				ND	mg/L	
HSK0022	HSK002WL	6.83	mg/L	11/14/11 11:19				#VALUE!	mg/L	
HSK0023	HSK002WC	6.79	mg/L	11/14/11 11:23				#VALUE!	mg/L	
HSK0024	K070-01	ND	mg/L	11/14/11 11:29	25.2	6.88	3000	ND	mg/L	
HSK0025	K070-02	ND	mg/L	11/14/11 11:40	25.2	6.56	2830	ND	mg/L	
HSK0026	K070-03	ND	mg/L	11/14/11 11:44	25.1	7.36	2410	ND	mg/L	
HSK0027	K070-04	ND	mg/L	11/14/11 11:49	25.1	7.63	1625	ND	mg/L	
HSK0028	K070-05	ND	mg/L	11/14/11 11:52	25.1	6.73	2160	ND	mg/L	
HSK0029	K070-06	ND	mg/L	11/14/11 11:56	25.1	7.63	1681	ND	mg/L	
HSK00210	K084-01	ND	mg/L	11/14/11 12:27	24.8	7.8 ✓	1100 ✓	ND	mg/L	
HSK00211	K084-02	ND	mg/L	11/14/11 12:29	25.1	7.61 ✓	1134 ✓	ND	mg/L	
HSK00212	K084-03	ND	mg/L	11/14/11 12:32	25.2	6.86 ✓	2100 ✓	ND	mg/L	
HSK00213	K084-04	ND	mg/L	11/14/11 12:36	25	7.01 ✓	1367 ✓	ND	mg/L	
HSK00214	K084-05	ND	mg/L	11/14/11 13:10	24.8	6.85 ✓	1702 ✓	ND	mg/L	
HSK00215	K084-06	ND	mg/L	11/14/11 13:12	24.9	7.77 ✓	1088 ✓	ND	mg/L	
HSK00216	K084-06D	ND	mg/L	11/14/11 13:15	24.9	7.8 ✓	1085 ✓	ND	mg/L	
HSK00217	K101-01	ND	mg/L	11/14/11 13:18	25	7.13	1339	ND	mg/L	
										MM 11/14/11

$$pK_1 = 32.5 + 1519.44/T - 15.672\log_{10}T + 0.02722T$$

$$A = 0.7083 - 2.277x10^{-3}T + 5.399x10^{-6}T^2$$

$$I = 1.6x10^{-5}\,Conductivity$$

$$pf_m = A\left(\frac{\sqrt{I}}{1+\sqrt{I}} - 0.3\right)$$

$$K'_1 = 10^{-pK_1+2pf_m}$$

$$H^+ = 10^{-pH+pf_m}$$

$$H_2S = \left(\frac{S_T}{1+\frac{K'_1}{H^+}}\right)$$

Analyzed by: NM

Reviewed by: NM

Date: 11/14/11

Where: T(°K)= T°C+272.15 pK1=dissociation constant for zero ionic strength A= Debye-Huckel Parameter I= Ionic Strength pfm=negative logarithm of the monovalent ion activity coefficient K'$_1$=conditional ionization constant H$^+$=Hydrogen ion concentration S$_T$=Total Sulfide Concentration

EMAX LABORATORIES, INC.

ANALYSIS FOR SULFIDE

Method: SM4500-S2-H Analytical Batch: HSK002 Book #: ASD-018 Page: 13

Data File Name	Lab Sample ID	V_e (ml)	V_t (ml)	Volume of Titant V_t (ml)	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Sulfide	Sample Result	Flag J	Unit
HSK0021	HSK002WB	100	2.5	2.5	11/14/11	11:08:06	0.08	ND		mg/L
HSK0022	HSK002WL	100	2.5	0.8	11/14/11	11:19:49	6.8256	6.83		mg/L
HSK0023	HSK002WC	100	2.5	0.81	11/14/11	11:23:28	6.78592	6.79		mg/L
HSK0024	K070-01	100	2.5	2.55	11/14/11	11:29:24	-0.1184	ND		mg/L
HSK0025	K070-02	100	2.5	2.6	11/14/11	11:40:44	-0.3168	ND		mg/L
HSK0026	K070-03	100	2.5	2.53	11/14/11	11:44:18	-0.03904	ND		mg/L
HSK0027	K070-04	100	2.5	2.65	11/14/11	11:49:52	-0.5152	ND		mg/L
HSK0028	K070-05	100	2.5	2.7	11/14/11	11:52:47	-0.7136	ND		mg/L
HSK0029	K070-06	100	2.5	2.66	11/14/11	11:56:07	-0.55488	ND		mg/L
HSK00210	K084-01	100	2.5	2.48	11/14/11	12:27:28	0.15936	ND		mg/L
HSK00211	K084-02	100	2.5	2.5	11/14/11	12:29:50	0.08	ND		mg/L
HSK00212	K084-03	100	2.5	2.75	11/14/11	12:32:58	-0.912	ND		mg/L
HSK00213	K084-04	100	2.5	2.6	11/14/11	12:36:11	-0.3168	ND		mg/L
HSK00214	K084-05	100	2.5	2.6	11/14/11	13:10:12	-0.3168	ND		mg/L
HSK00215	K084-06	100	2.5	2.58	11/14/11	13:12:52	-0.23744	ND		mg/L
HSK00216	K084-06D	100	2.5	2.56	11/14/11	13:15:37	-0.15808	ND		mg/L
HSK00217	KI01-01	100	2.5	2.62	11/14/11	13:18:28	-0.39616	ND		mg/L

NLA 11/14/11

STANDARDIZATION

V_I (ml)	$V_{Na_2SO_3}$ (ml)	DATE	TIME	Titrant Na_2SO_3 (N)
Average Normality of Iodine (NI)=				**0.025**

☑ Standard Purchased as Certified Solution

$$N_I = \frac{(N * V)_{Na_2SO_3}}{V_I}$$

MISCELLANEOUS INFORMATION

Standard	Concentration		Unit
Iodine	0.025		N
$Na_2S_2O_3$	0.0248		N
LCS [WATER | SOIL]	8.48	84.8	mg/L | mg/Kg
MDL [WATER | SOIL]	1	10	mg/L | mg/Kg
RL	1	10	mg/L | mg/Kg

$$S(mg/L) = \frac{[(V_I * N_I) - (V_t * N_t)](16{,}000)}{V_S}$$

MS/MSD	TV=	8.48	mg/L
ID	Result (mg/L)	%Rec.	RPD

Comments:

Analyzed By: NM

8139

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K084

METHOD SM5310B
TOC

A total of six (6) water samples were received on 11/09/11 for Total Organic Carbon analysis, Method SM5310B in accordance with Standard Methods for the Examination of Water and Wastewater, 18th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary forms for details.

Lab Control Sample
Two sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for TCK008WL/C were all within QC limits.
Percent recoveries for TCK009WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD SM5310B
TOC

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K084

Matrix : WATER
Instrument ID : 162

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
LCS1W	TCK008WL	27.3	1	NA	1.00	0.500	11/15/1100:19	NA	TCK007-33	TCK007-26	TCK008W	NA	NA
LCD1W	TCK008WC	25.6	1	NA	1.00	0.500	11/15/1100:32	NA	TCK007-34	TCK007-26	TCK008W	NA	NA
MBLK1W	TCK008WB	ND	1	NA	1.00	0.500	11/15/1100:44	NA	TCK007-35	TCK007-26	TCK008W	NA	NA
MW-70-PMW04A-110	K084-01	0.858J	1	NA	1.00	0.500	11/15/1104:35	NA	TCK007-54	TCK007-48	TCK008W	11/09/1110:36	11/09/11
MW-70-PMW04B-112	K084-02	0.919J	1	NA	1.00	0.500	11/15/1104:45	NA	TCK007-55	TCK007-48	TCK008W	11/09/1111:40	11/09/11
MW-70-PMW05A-114	K084-04	3.80	1	NA	1.00	0.500	11/15/1105:12	NA	TCK007-57	TCK007-48	TCK008W	11/09/1114:44	11/09/11
MW-70-PMW05B-115	K084-05	1.41	1	NA	1.00	0.500	11/15/1105:23	NA	TCK007-58	TCK007-48	TCK008W	11/09/1115:51	11/09/11
IR-70-FD-111	K084-06	0.892J	1	NA	1.00	0.500	11/15/1105:34	NA	TCK007-59	TCK007-48	TCK008W	11/09/1111:00	11/09/11
MBLK2W	TCK009WB	ND	1	NA	1.00	0.500	11/16/1116:38	NA	TCK008-05	TCK008-02	TCK009W	NA	NA
LCS2W	TCK009WL	24.5	1	NA	1.00	0.500	11/16/1116:51	NA	TCK008-06	TCK008-02	TCK009W	NA	NA
LCD2W	TCK009WC	24.5	1	NA	1.00	0.500	11/16/1117:03	NA	TCK008-07	TCK008-02	TCK009W	NA	NA
IW-70-FSB118-113	K084-03T	129	5	NA	5.00	2.50	11/16/1117:16	NA	TCK008-08	TCK008-02	TCK009W	11/09/1112:59	11/09/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K084
METHOD: METHOD SM5310B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TCK008WB	TCK008WL	TCK008WC		
LAB FILE ID:	TCK007-35	TCK007-33	TCK007-34		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/15/1100:44	11/15/1100:19	11/15/1100:32	DATE RECEIVED:	NA
PREP. BATCH:	TCK008W	TCK008W	TCK008W		
CALIB. REF:	TCK007-26	TCK007-26	TCK007-26		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	ND	25.0	27.3	109	25.0	25.6	103	6	85-115	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K084
METHOD: METHOD SM5310B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	TCK009WB	TCK009WL	TCK009WC		
LAB FILE ID:	TCK008-05	TCK008-06	TCK008-07		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/16/1116:38	11/16/1116:51	11/16/1117:03	DATE RECEIVED:	NA
PREP. BATCH:	TCK009W	TCK009W	TCK009W		
CALIB. REF:	TCK008-02	TCK008-02	TCK008-02		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	ND	25.0	24.5	98	25.0	24.5	98	0	85-115	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TOC

	Date	Time
Start	11/14/11	1524
End	11/15/11	0553

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

TCK007W/8W
K090
K077
K070
K469
K470
K472
K473
K474
K475
K084

2 M HCl SW4-01-223

Book #:	A62-020
Instrument No.:	62
Pipette ID:	039380025
	SW3-01-33
	SI1A-01-4
Balance ID:	40706360
Analytical Sequence:	TCK007
Method File:	TCK007
Analytical Batch:	TCK007W/8W

SOP #	Rev. #
☑ EMAX-415.1	2
☑ EMAX-5310B	1
☐ EMAX-9060	2
☐ EMAX-	

STANDARDS ID		CONC. (mg/L)
S0	nanopure	0
S1	SW10B-04-1784 AM 11/14/11	1
S2	↓	5
S3	↓	10
S4	↓	40
S5	↓	80
S6	←	—
ICV/LCS	SW10B-04-1785 AM 11/14/11	25
CCV	↓ -173	25

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ TOC	
☐	

Analyzed By: AM

Date: 11/14/11

8143

	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
1	Standard	NPOC	ICAL	TCK007-01	0A-123456-	C:\Program	1.000		
2	Control	NPOC	ICV	TCK007-02	0A-123456-	C:\Program	1.000	NPOC:26.30 mg/L	
3	Unknown	NPOC	ICB	TCK007-03	0A-123456-	C:\Program	1.000	NPOC:0.08747 mg	
4	Unknown	NPOC	HCO3\CO3	TCK007-04	0A-123456-	C:\Program	1.000	NPOC:0.2966 mg/	
5	Unknown	NPOC	TCK007WB	TCK007-05	0A-123456-	C:\Program	1.000	NPOC:0.2698 mg/	
6	Unknown	NPOC	TCK007WL	TCK007-06	0A-123456-	C:\Program	1.000	NPOC:26.91 mg/L	
7	Unknown	NPOC	TCK007WC	TCK007-07	0A-123456-	C:\Program	1.000	NPOC:26.91 mg/L	
8	Unknown	NPOC	K090-01	TCK007-08	0A-123456-	C:\Program	1.000	NPOC:29.25 mg/L	PH<2
9	Unknown	NPOC	K090-02	TCK007-09	0A-123456-	C:\Program	1.000	NPOC:4.290 mg/L	PH<2
10	Unknown	NPOC	K090-03	TCK007-10	0A-123456-	C:\Program	1.000	NPOC:6.202 mg/L	PH<2
11	Unknown	NPOC	K077-02	TCK007-11	0A-123456-	C:\Program	1.000	NPOC:5.147 mg/L	PH<2
12	Unknown	NPOC	K077-02M	TCK007-12	0A-123456-	C:\Program	1.000	NPOC:31.32 mg/L	PH<2
13	Unknown	NPOC	K077-02S	TCK007-13	0A-123456-	C:\Program	1.000	NPOC:31.21 mg/L	PH<2
14	Control	NPOC	CCV1	TCK007-14	0A-123456-	C:\Program	1.000	NPOC:27.13 mg/L	
15	Unknown	NPOC	CCB1	TCK007-15	0A-123456-	C:\Program	1.000	NPOC:0.1794 mg/	
16	Unknown	NPOC	K077-03	TCK007-16	0A-123456-	C:\Program	1.000	NPOC:4.613 mg/L	PH<2
17	Unknown	NPOC	K077-04	TCK007-17	0A-123456-	C:\Program	1.000	NPOC:30.84 mg/L	PH<2
18	Unknown	NPOC	K077-05	TCK007-18	0A-123456-	C:\Program	1.000	NPOC:7.053 mg/L	PH<2
19	Unknown	NPOC	K077-06	TCK007-19	0A-123456-	C:\Program	1.000	NPOC:6.959 mg/L	PH<2
20	Unknown	NPOC	K077-07	TCK007-20	0A-123456-	C:\Program	1.000	NPOC:4.534 mg/L	PH<2
21	Unknown	NPOC	K077-08	TCK007-21	0A-123456-	C:\Program	1.000	NPOC:2.843 mg/L	PH<2
22	Unknown	NPOC	K077-10	TCK007-22	0A-123456-	C:\Program	1.000	NPOC:23.39 mg/L	PH<2
23	Unknown	NPOC	K077-11	TCK007-23	0A-123456-	C:\Program	1.000	NPOC:23.12 mg/L	PH<2
24	Unknown	NPOC	K077-12	TCK007-24	0A-123456-	C:\Program	1.000	NPOC:3.832 mg/L	PH<2
25	Unknown	NPOC	K077-13	TCK007-25	0A-123456-	C:\Program	1.000	NPOC:28.56 mg/L	PH<2
26	Control	NPOC	CCV2	TCK007-26	0A-123456-	C:\Program	1.000	NPOC:27.39 mg/L	
27	Unknown	NPOC	CCB2	TCK007-27	0A-123456-	C:\Program	1.000	NPOC:0.3656 mg/	
28	Unknown	NPOC	K077-14	TCK007-28	0A-123456-	C:\Program	1.000	NPOC:2.781 mg/L	PH<2
29	Unknown	NPOC	K077-15	TCK007-29	0A-123456-	C:\Program	1.000	NPOC:1.927 mg/L	PH<2
30	Unknown	NPOC	K077-17	TCK007-30	0A-123456-	C:\Program	1.000	NPOC:6.059 mg/L	PH<2
31	Unknown	NPOC	K077-18	TCK007-31	0A-123456-	C:\Program	1.000	NPOC:9.375 mg/L	PH<2
32	Unknown	NPOC	K077-19	TCK007-32	0A-123456-	C:\Program	1.000	NPOC:8.534 mg/L	PH<2
33	Unknown	NPOC	TCK008WL	TCK007-33	0A-123456-	C:\Program	1.000	NPOC:27.25 mg/L	
34	Unknown	NPOC	TCK008WC	TCK007-34	0A-123456-	C:\Program	1.000	NPOC:25.65 mg/L	
35	Unknown	NPOC	TCK008WB	TCK007-35	0A-123456-	C:\Program	1.000	NPOC:0.3851 mg/	
36	Control	NPOC	CCV3	TCK007-36	0A-123456-	C:\Program	1.000	NPOC:27.48 mg/L	
37	Unknown	NPOC	CCB3	TCK007-37	0A-123456-	C:\Program	1.000	NPOC:0.2064 mg/	
38	Unknown	NPOC	K077-20	TCK007-38	0A-123456-	C:\Program	1.000	NPOC:3.822 mg/L	PH<2
39	Unknown	NPOC	K077-21	TCK007-39	0A-123456-	C:\Program	1.000	NPOC:2.043 mg/L	PH<2
40	Unknown	NPOC	K077-22	TCK007-40	0A-123456-	C:\Program	1.000	NPOC:3.340 mg/L	PH<2
41	Unknown	NPOC	K077-23	TCK007-41	0A-123456-	C:\Program	1.000	NPOC:3.982 mg/L	PH<2
42	Unknown	NPOC	K077-23M	TCK007-42	0A-123456-	C:\Program	1.000	NPOC:30.79 mg/L	PH<2
43	Unknown	NPOC	K077-23S	TCK007-43	0A-123456-	C:\Program	1.000	NPOC:31.34 mg/L	PH<2
44	Unknown	NPOC	K070-01T	TCK007-44	0A-123456-	C:\Program	4.000	NPOC:110 6 mg/L	DF=4
45	Unknown	NPOC	K070-02R	TCK007-45	0A-123456-	C:\Program	1.000	NPOC:10.29 mg/L	
46	Unknown	NPOC	K469-02	TCK007-46	0A-123456-	C:\Program	1.000	NPOC:12.29 mg/L	PH<2
47	Unknown	NPOC	K470-02	TCK007-47	0A-123456-	C:\Program	1.000	NPOC:10.57 mg/L	PH<2
48	Control	NPOC	CCV4	TCK007-48	0A-123456-	C:\Program	1.000	NPOC:27.33 mg/L	
49	Unknown	NPOC	CCB4	TCK007-49	0A-123456-	C:\Program	1.000	NPOC:0.2688 mg/	
50	Unknown	NPOC	K472-02	TCK007-50	0A-123456-	C:\Program	1.000	NPOC:9.245 mg/L	PH<2
51	Unknown	NPOC	K473-02	TCK007-51	0A-123456-	C:\Program	1.000	NPOC:14.05 mg/L	PH<2
52	Unknown	NPOC	K474-02	TCK007-52	0A-123456-	C:\Program	1.000	NPOC:12.56 mg/L	PH<2
53	Unknown	NPOC	K475-02	TCK007-53	0A-123456-	C:\Program	1.000	NPOC:14.82 mg/L	PH<2
54	Unknown	NPOC	K084-01	TCK007-54	0A-123456-	C:\Program	1.000	NPOC:0.8580 mg/	PH<2
55	Unknown	NPOC	K084-02	TCK007-55	0A-123456-	C:\Program	1.000	NPOC:0.9192 mg/	PH<2
56	Unknown	NPOC	K084-03	TCK007-56	0A-123456-	C:\Program	1.000	NPOC:142.0 mg/L	PH<2 — OOR
57	Unknown	NPOC	K084-04	TCK007-57	0A-123456-	C:\Program	1.000	NPOC:3.797 mg/L	PH<2
58	Unknown	NPOC	K084-05	TCK007-58	0A-123456-	C:\Program	1.000	NPOC:1.411 mg/L	PH<2
59	Unknown	NPOC	K084-06	TCK007-59	0A-123456-	C:\Program	1.000	NPOC:0.8922 mg/	PH<2
60	Control	NPOC	CCV5	TCK007-60	0A-123456-	C:\Program	1.000	NPOC:27.07 mg/L	
61	Unknown	NPOC	CCB5	TCK007-61	0A-123456-	C:\Program	1.000	NPOC:0.1927 mg/	
62									
63								FINAL	
64									
65									
66									
67								11/15/4	

Instr.Information

System	toc
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Cal. Curve

Sample Name:	ICAL
Sample ID:	TCK007-01
Cal. Curve:	TCK007.2011_11_14_15_17_38.cal

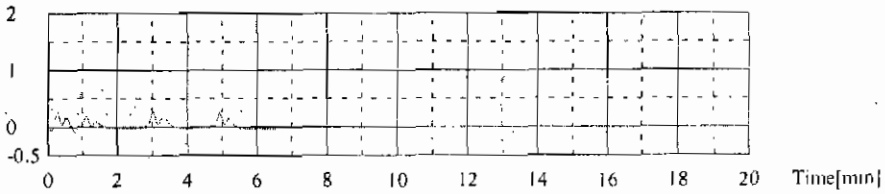
Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.6632	50uL	1	*******		11/14/11 03:24:45 PM
2	0.000	50uL	1	*******		11/14/11 03:26:48 PM
3	0.000	50uL	1	*******		11/14/11 03:28:52 PM
4	0.000	50uL	1	*******		11/14/11 03:30:55 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 0.1658

$\frac{\text{Mean area}}{\text{slope}} = \frac{\bar{A}}{m} = \frac{0.1658}{2.108} = 0.07865$

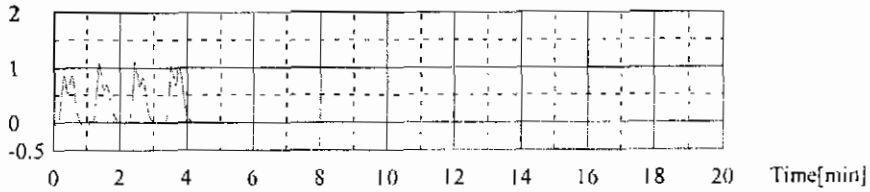


Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	2.309	50uL	10	*******		11/14/11 03:39:08 PM
2	2.153	50uL	10	*******		11/14/11 03:40:22 PM
3	2.315	50uL	10	*******		11/14/11 03:41:37 PM
4	2.647	50uL	10	*******		11/14/11 03:42:54 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 2.356

$\frac{\bar{A}}{m} = \frac{2.356}{2.108} = 1.118$

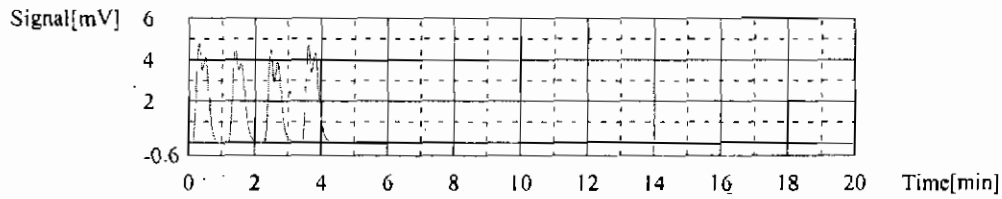


Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	10.92	50uL	2	*******		11/14/11 03:49:13 PM
2	10.50	50uL	2	*******		11/14/11 03:50:29 PM
3	10.38	50uL	2	*******		11/14/11 03:51:47 PM
4	10.98	50uL	2	*******		11/14/11 03:53:03 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 10.70

$\frac{\bar{A}}{m} = \frac{10.70}{2.108} = 5.076$



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	21.20	50uL	1	*******		11/14/11 03:58:42 PM
2	20.94	50uL	1	*******		11/14/11 04:00:01 PM
3	21.80	50uL	1	*******		11/14/11 04:01:21 PM
4	20.51	50uL	1	*******		11/14/11 04:02:39 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 21.11

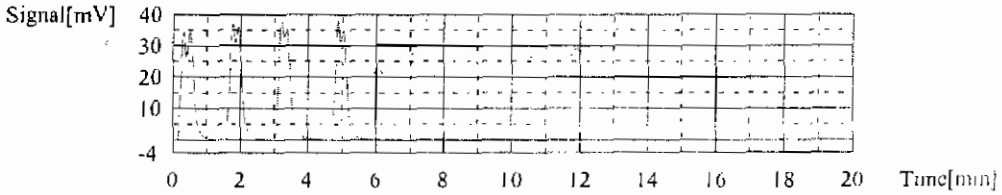
$\frac{\bar{A}}{m} = \frac{21.11}{2.108} = 10.01$

Conc: 40.00mg/L

No.	Area	Inj. Vol	Aut. Dil.	Rem	Ex	Date / Time
1	84.23	50uL	2	*******		11/14/11 04:11:16 PM
2	86.28	50uL	2	*******		11/14/11 04:12:53 PM
3	85.53	50uL	2	*******		11/14/11 04:14:29 PM
4	82.34	50uL	2	*******		11/14/11 04:16:04 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 84.59

$\frac{\bar{A}}{m} = \frac{84.59}{2.108} = 40.13$

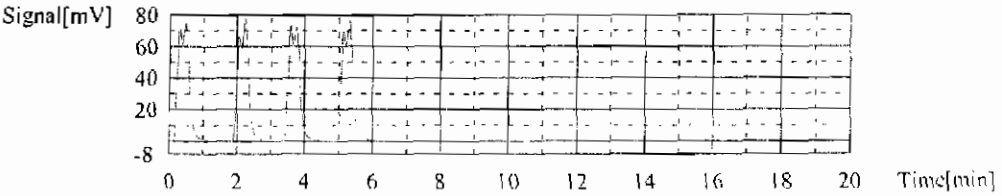


Conc: 80.00mg/L

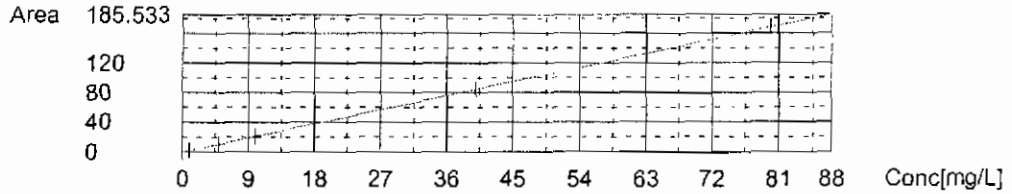
No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	173.8	50uL	1	*******		11/14/11 04:22:22 PM
2	169.8	50uL	1	*******		11/14/11 04:24:04 PM
3	167.0	50uL	1	*******		11/14/11 04:25:47 PM
4	164.6	50uL	1	*******		11/14/11 04:27:27 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 168.8

$\frac{\bar{A}}{m} = \frac{168.8}{2.108} = 80.08$



Slope: 2.108
Intercept 0.000
r^2 0.999998



8146

Control Sample

Sample Name: ICV
Sample ID: TCK007-02
Method: TCK007.tpl
Chk. Result Control value: 26.30 / Control exceeds range!

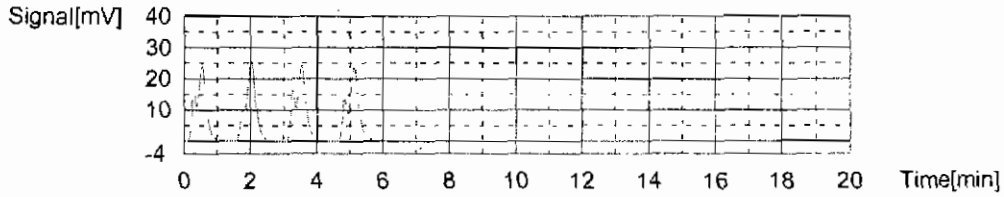
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:26.30 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.27	25.74mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 04:35:38 PM
2	55.23	26.20mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 04:37:19 PM
3	56.15	26.63mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 04:39:02 PM
4	56.18	26.65mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 04:40:46 PM

Mean Area 55.46
Mean Conc. 26.30mg/L



Sample

Sample Name: ICB
Sample ID. TCK007-03
Origin: TCK007.cal
Chk. Result

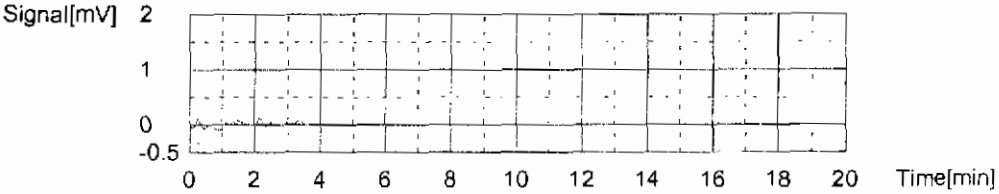
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.08747 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1689	0.08011mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 04:48:16 PM
2	0.2113	0.1002mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 04:49:21 PM
3	0.1372	0.06508mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 04:50:25 PM
4	0.2203	0.1045mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 04:51:30 PM

Mean Area 0.1844
Mean Conc. 0.08747mg/L



8147

Sample

Sample Name: HCO3\CO3
Sample ID: TCK007-04
Origin: TCK007.cal
Chk. Result

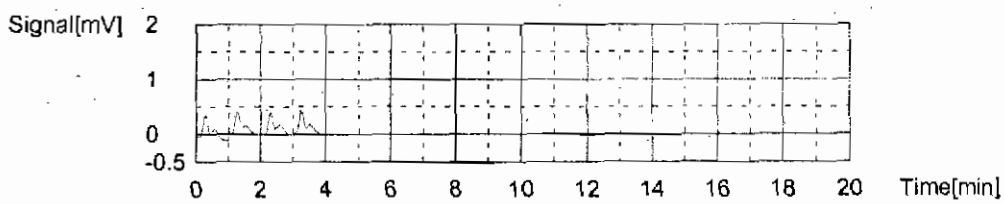
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.2966 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0 5866	0.2782mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 06:18:02 PM
2	0.6099	0.2893mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 06:19 16 PM
3	0.6434	0.3052mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 06:20:24 PM
4	0.6618	0.3139mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 06:21.38 PM

Mean Area 0.6254
Mean Conc. 0.2966mg/L



Sample

Sample Name: TCK007WB
Sample ID: TCK007-05
Origin: TCK007.cal
Chk. Result

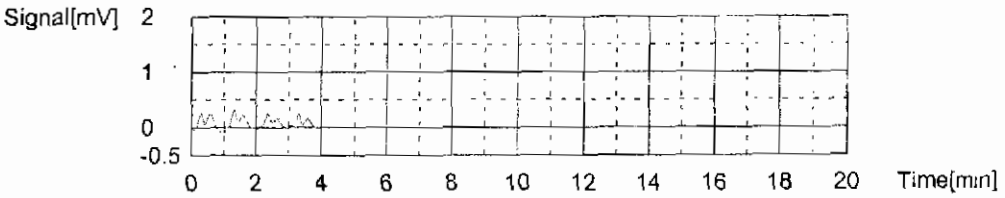
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.2698 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.7690	0.3647mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 06:29:09 PM
2	0.6050	0.2870mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 06.30:23 PM
3	0.4983	0.2363mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 06:31:32 PM
4	0.4026	0.1910mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 06:32:43 PM

Mean Area 0.5687
Mean Conc. 0.2698mg/L



Sample

8148

Sample Name: TCK007WL
Sample ID: TCK007-06
Origin: TCK007.cal
Chk. Result

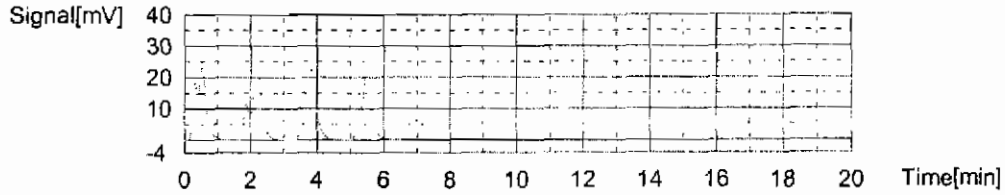
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC.26.91 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	56.36	26.73mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 06:40:48 PM
2	56.48	26.79mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 06:42:40 PM
3	58.23	27.62mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 06:44:32 PM
4	55.83	26.48mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 06:46:19 PM

Mean Area 56.73
Mean Conc. 26.91mg/L



Sample

Sample Name: TCK007WC
Sample ID: TCK007-07
Origin: TCK007.cal
Chk. Result

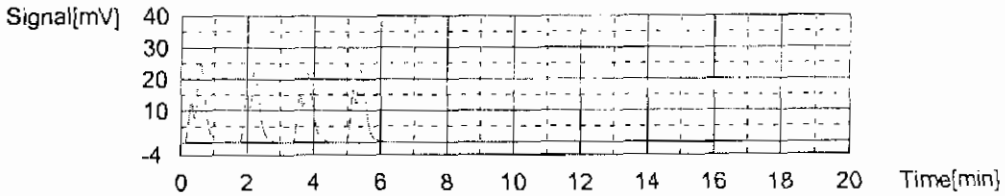
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC.26.91 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	57.99	27.51mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 06:54:28 PM
2	56.94	27.01mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 06:56:15 PM
3	55.04	26.11mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 06:58:03 PM
4	56.98	27.03mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 06:59:50 PM

Mean Area 56.74
Mean Conc. 26.91mg/L



Sample

Sample Name: K090-01
Sample ID: TCK007-08
Origin: TCK007.cal
Chk. Result

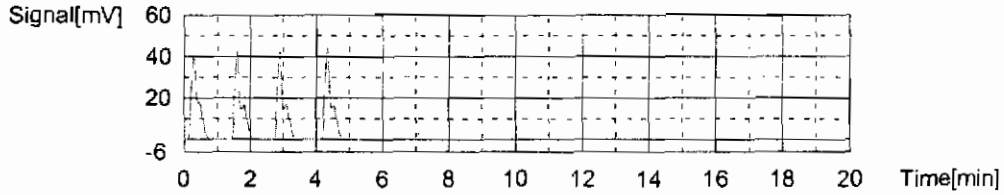
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:29.25 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	60.99	28.93mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:07:38 PM
2	61.36	29.10mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:09:07 PM
3	61.82	29.32mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:10:45 PM
4	62.49	29.64mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:12:15 PM

Mean Area 61.66
Mean Conc. 29.25mg/L



Sample

Sample Name: K090-02
Sample ID: TCK007-09
Origin: TCK007.cal
Chk. Result

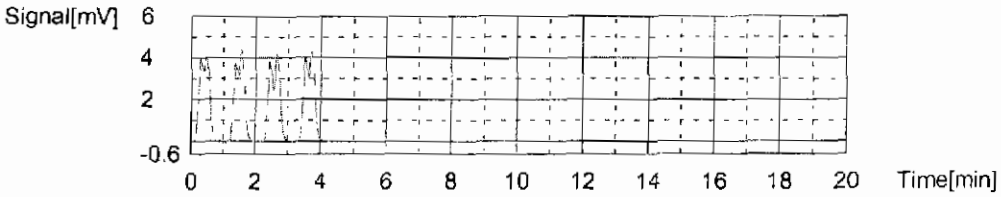
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:4.290 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.995	4.266mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:19:50 PM
2	8.945	4.243mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:21:05 PM
3	9.099	4.316mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:22:22 PM
4	9.143	4.337mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:23:38 PM

Mean Area 9.046
Mean Conc. 4.290mg/L



Sample

Sample Name: K090-03
Sample ID: TCK007-10
Origin: TCK007.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:6.202 mg/L

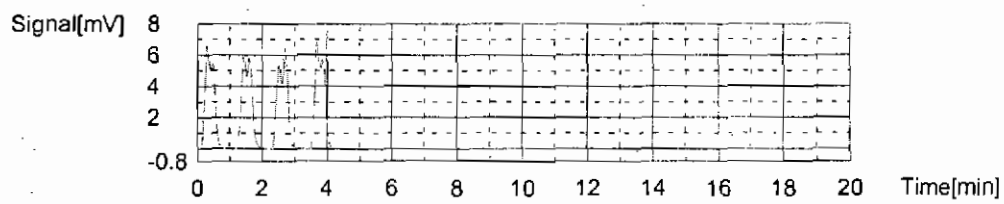
8150

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	12.76	6.052mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:31:15 PM
2	13.17	6.247mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:32:32 PM
3	13.14	6.232mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:33:55 PM
4	13.23	6.275mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:35:08 PM

Mean Area 13.07
Mean Conc. 6.202mg/L



Sample

Sample Name: K077-02
Sample ID: TCK007-11
Origin: TCK007.cal
Chk. Result

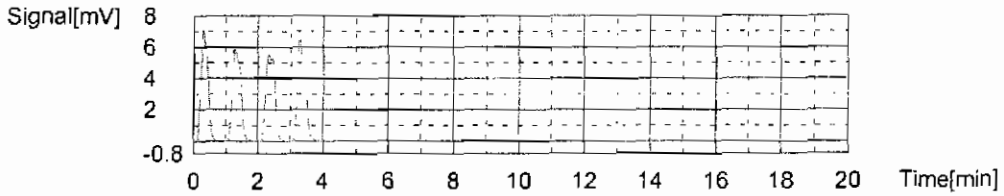
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:5.147 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.64	5.047mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:42:36 PM
2	10.80	5.123mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:43:49 PM
3	10.87	5.156mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:45:00 PM
4	11.10	5.265mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:46:15 PM

Mean Area 10.85
Mean Conc. 5.147mg/L



Sample

Sample Name: K077-02M
Sample ID: TCK007-12
Origin: TCK007.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC 31.32 mg/L

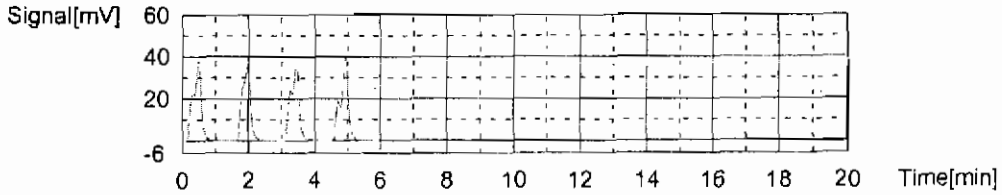
1. Det

Anal.: NPOC

8151

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	65.91	31.26mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:54:16 PM
2	65.28	30.96mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:55:54 PM
3	66.60	31.59mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:57:34 PM
4	66.38	31.48mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 07:59:17 PM

Mean Area 66.04
Mean Conc. 31.32mg/L



Sample

Sample Name: K077-02S
Sample ID: TCK007-13
Origin: TCK007.cal
Chk. Result

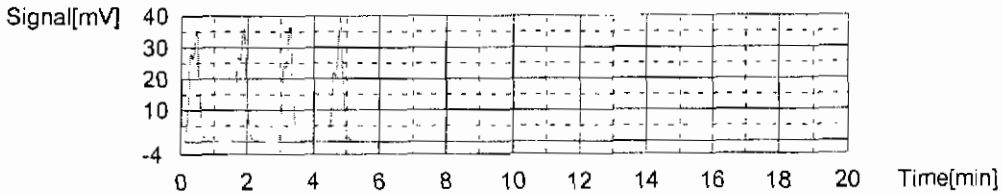
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:31.21 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	65.02	30.84mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:07:12 PM
2	65.70	31.16mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:08:46 PM
3	66.26	31.43mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:10:29 PM
4	66.25	31.42mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:12:08 PM

Mean Area 65.81
Mean Conc. 31.21mg/L



Control Sample

Sample Name: CCV1
Sample ID: TCK007-14
Method: TCK007.tpl
Chk. Result Control value: 27.13 / Control exceeds range!

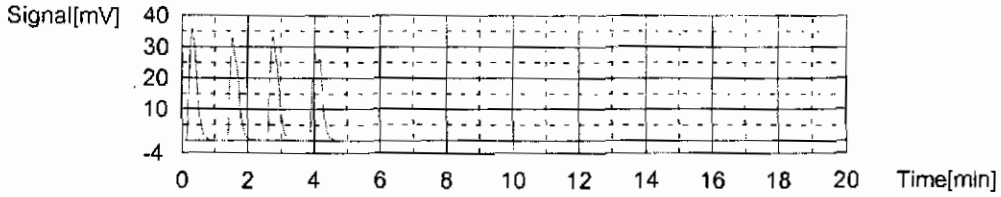
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:27.13 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	56.89	26.98mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:19:52 PM
2	57.10	27.08mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:21:16 PM
3	57.93	27.48mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:22:44 PM
4	56.87	26.97mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:24:16 PM

Mean Area 57.20
Mean Conc. 27.13mg/L



Sample

Sample Name: CCB1
Sample ID: TCK007-15
Origin: TCK007.cal
Chk. Result

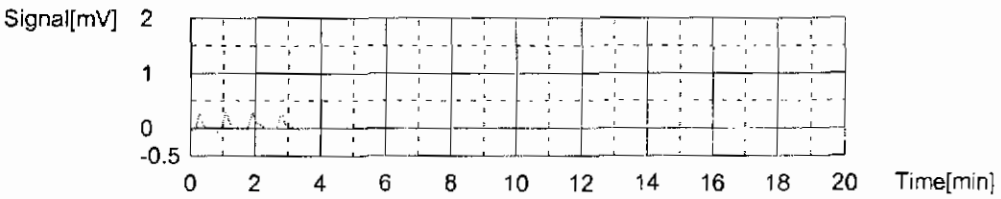
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1794 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3922	0.1860mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:31:34 PM
2	0.3935	0.1866mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:32:34 PM
3	0.3526	0.1672mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:33:38 PM
4	0.3743	0.1775mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:34:40 PM

Mean Area 0.3782
Mean Conc. 0.1794mg/L



Sample

Sample Name: K077-03
Sample ID: TCK007-16
Origin: TCK007.cal
Chk. Result

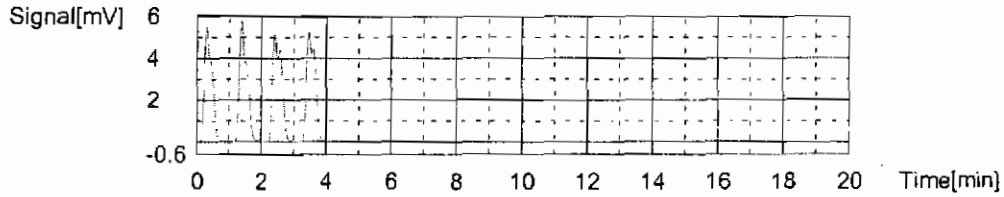
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:4.613 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.474	4.494mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:42:14 PM
2	9.603	4.555mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:43:27 PM
3	9.976	4.732mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:44:40 PM
4	9.849	4.671mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:45:51 PM

Mean Area 9.726
Mean Conc. 4.613mg/L



Sample

Sample Name: K077-04
Sample ID: TCK007-17
Origin: TCK007.cal
Chk. Result

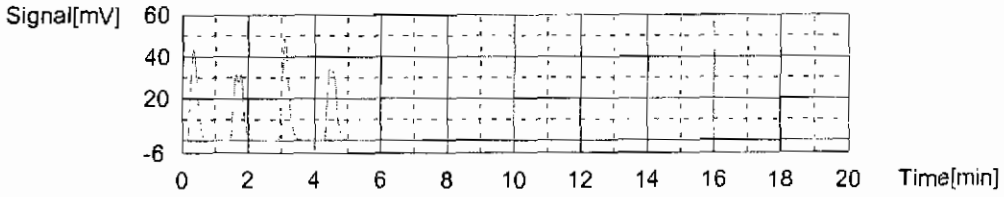
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:30.84 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	63.73	30.23mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:53:39 PM
2	63.75	30.24mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:55:18 PM
3	67.28	31.91mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:56:51 PM
4	65.36	31.00mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 08:58:31 PM

Mean Area 65.03
Mean Conc. 30.84mg/L



Sample

Sample Name: K077-05
Sample ID: TCK007-18
Origin: TCK007.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:7.053 mg/L

1. Det

Anal.: NPOC

8154

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	14.86	7.048mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:06:07 PM
2	14.84	7.039mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:07:27 PM
3	14.97	7.100mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:08:50 PM
4	14.81	7.025mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:10:05 PM

Mean Area 14.87
Mean Conc. 7.053mg/L

Sample

Sample Name: K077-06
Sample ID: TCK007-19
Origin: TCK007.cal
Chk. Result

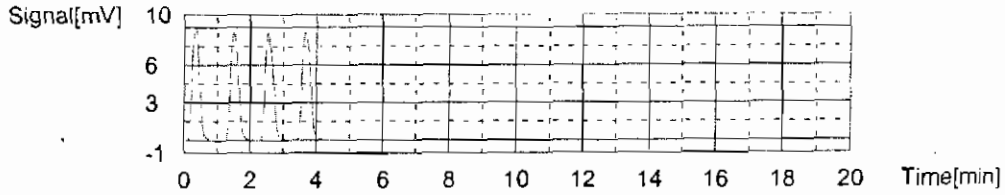
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:6.959 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	14.52	6.887mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:17:42 PM
2	14.52	6.887mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:18:58 PM
3	14.81	7.025mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:20:16 PM
4	14.84	7.039mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:21:37 PM

Mean Area 14.67
Mean Conc. 6.959mg/L



Sample

Sample Name: K077-07
Sample ID: TCK007-20
Origin: TCK007.cal
Chk. Result

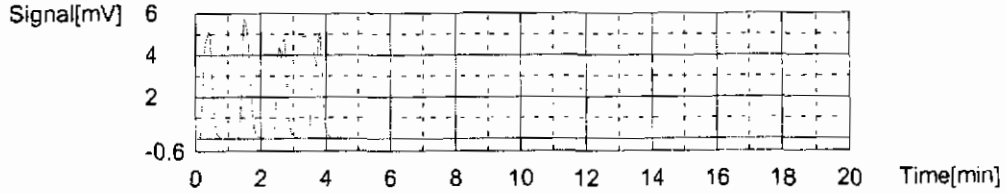
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:4.534 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.475	4.494mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:29:16 PM
2	9.511	4.511mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:30:32 PM
3	9.546	4.528mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:31:48 PM
4	9.708	4.605mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:33:18 PM

Mean Area 9.560
Mean Conc. 4.534mg/L



Sample

Sample Name: K077-08
Sample ID: TCK007-21
Origin: TCK007.cal
Chk. Result

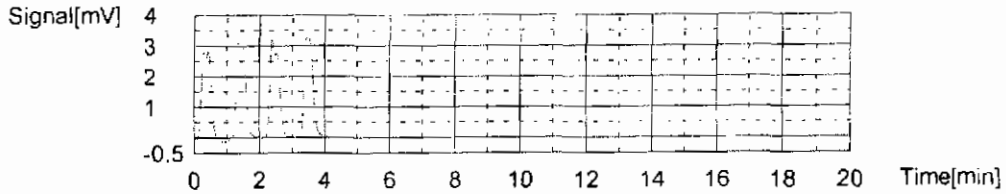
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.843 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.931	2.813mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:40:50 PM
2	5.854	2.777mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:42:02 PM
3	6.057	2.873mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:43:17 PM
4	6.133	2.909mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:44:28 PM

Mean Area 5.994
Mean Conc. 2.843mg/L



Sample

Sample Name: K077-10
Sample ID: TCK007-22
Origin: TCK007.cal
Chk. Result

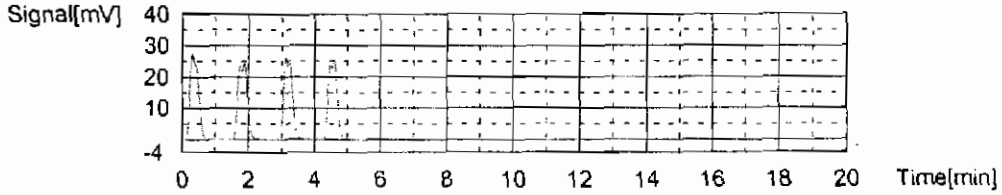
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:23.39 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	49.35	23.41mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:52:22 PM
2	48.83	23.16mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:53:56 PM
3	49.53	23.49mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:55:29 PM
4	49.53	23.49mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 09:57:01 PM

Mean Area 49.31
Mean Conc. 23.39mg/L



Sample

Sample Name: K077-11
Sample ID: TCK007-23
Origin: TCK007.cal
Chk. Result

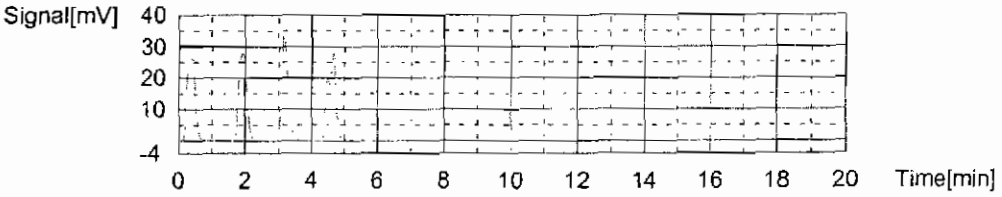
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:23.12 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	47.98	22.76mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:05:02 PM
2	48.54	23.02mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:06:30 PM
3	49.47	23.46mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:08:04 PM
4	48.95	23.22mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:09:53 PM

Mean Area 48.73
Mean Conc. 23.12mg/L



Sample

Sample Name: K077-12
Sample ID: TCK007-24
Origin: TCK007.cal
Chk. Result

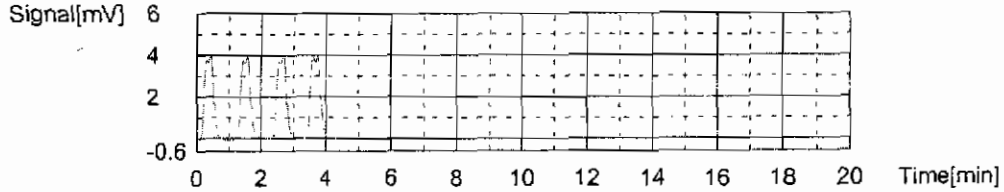
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:3.832 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.982	3.786mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:17:29 PM
2	7.896	3.745mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:18:47 PM
3	8.152	3.867mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:20:01 PM
4	8.290	3.932mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:21:17 PM

Mean Area 8.080
Mean Conc. 3.832mg/L



Sample

Sample Name: K077-13
Sample ID: TCK007-25
Origin: TCK007.cal
Chk. Result

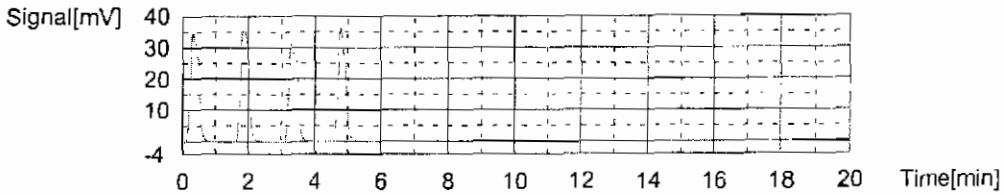
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:28.56 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	62.32	29.56mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:29:16 PM
2	64.31	30.50mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:30:55 PM
3	57.18	27.12mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:32:36 PM
4	57.07	27.07mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:34:10 PM

Mean Area 60.22
Mean Conc. 28.56mg/L



Control Sample

Sample Name: CCV2
Sample ID: TCK007-26
Method: TCK007.tpl
Chk. Result Control value: 27.39 / Control exceeds range!

Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:27.39 mg/L

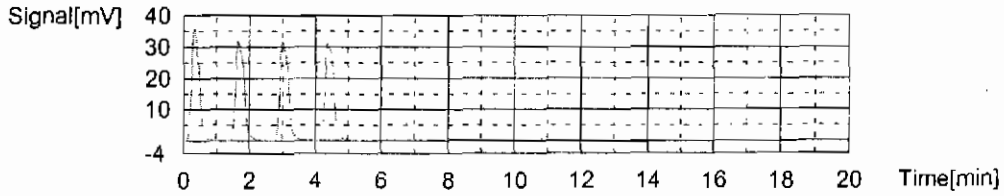
1. Det.

Anal.: NPOC

8158

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	57.37	27.21mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:41:58 PM
2	58.02	27.52mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:43:29 PM
3	57.70	27.37mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:45:04 PM
4	57.94	27.48mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:46:37 PM

Mean Area 57.76
Mean Conc. 27.39mg/L



Sample

Sample Name: CCB2
Sample ID: TCK007-27
Origin: TCK007.cal
Chk. Result

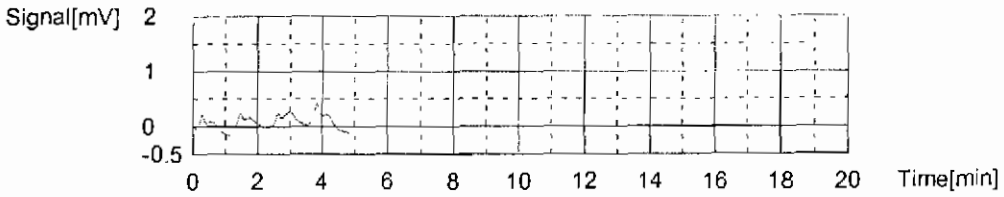
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.3656 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6444	0.3056mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:54:16 PM
2	0.6179	0.2931mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:55:36 PM
3	0.8092	0.3838mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:57:00 PM
4	1.012	0.4800mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 10:58:30 PM

Mean Area 0.7709
Mean Conc. 0.3656mg/L



Sample

Sample Name: K077-14
Sample ID: TCK007-28
Origin: TCK007.cal
Chk. Result

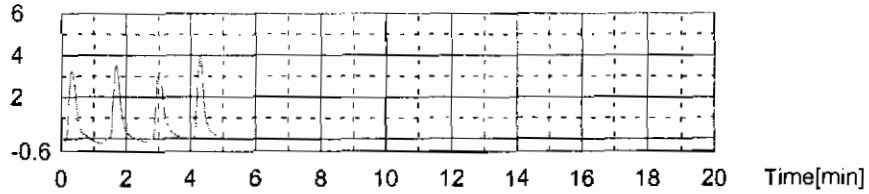
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.781 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.650	2.680mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 11:06:20 PM
2	5.761	2.732mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 11:07:50 PM
3	5.900	2.798mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 11:09:18 PM
4	6.142	2.913mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 11:10:47 PM

Mean Area 5.863
Mean Conc. 2.781mg/L



Sample

Sample Name: K077-15
Sample ID: TCK007-29
Origin: TCK007.cal
Chk. Result

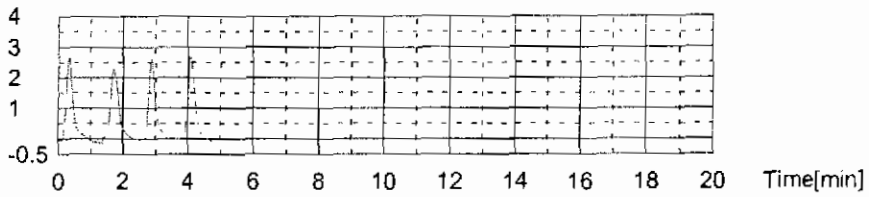
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.927 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.181	1.983mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 11:18:37 PM
2	4.020	1.907mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 11:19:58 PM
3	3.999	1.897mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 11:21:23 PM
4	4.047	1.920mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 11:22:47 PM

Mean Area 4.062
Mean Conc. 1.927mg/L



Sample

Sample Name: K077-17
Sample ID: TCK007-30
Origin: TCK007.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:6.059 mg/L

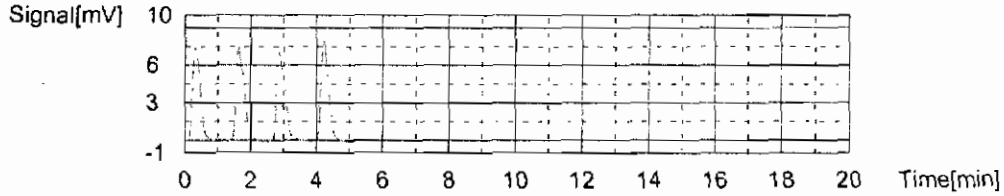
1. Det

Anal.: NPOC

8166

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	12.76	6.052mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 11:30:34 PM
2	12.84	6.090mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 11:31:59 PM
3	12.72	6.033mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 11:33:31 PM
4	12.78	6.062mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 11:35:02 PM

Mean Area 12.78
Mean Conc. 6.059mg/L



Sample

Sample Name: K077-18
Sample ID: TCK007-31
Origin: TCK007.cal
Chk. Result

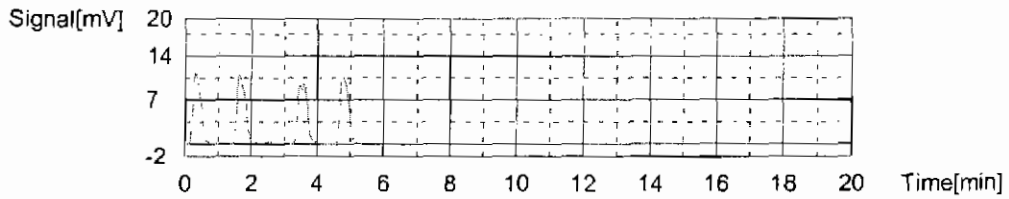
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:9.375 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	19.45	9.225mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 11:43:55 PM
2	20.35	9.652mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 11:45:56 PM
3	19.57	9.282mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 11:47:25 PM
4	19.69	9.339mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 11:48:59 PM

Mean Area 19.77
Mean Conc. 9.375mg/L



Sample

Sample Name: K077-19
Sample ID: TCK007-32
Origin: TCK007.cal
Chk. Result

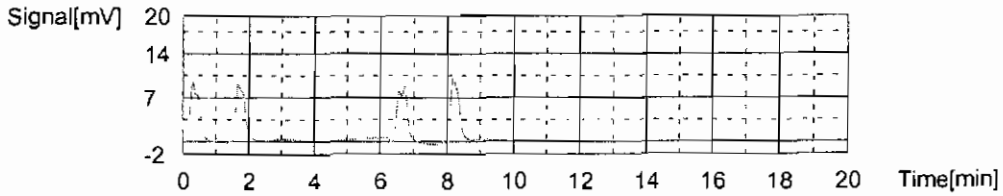
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:8.534 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	17.95	8.514mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/14/11 11:56:50 PM
2	15.93	7.556mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 12:01:55 AM
3	18.66	8.851mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 12:03:42 AM
4	19.43	9.216mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 12:05:50 AM

Mean Area 17.99
Mean Conc. 8.534mg/L



Sample

Sample Name: TCK008WL
Sample ID: TCK007-33
Origin: TCK007.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:27.25 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	56.88	26.98mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 12:13:50 AM
2	57.51	27.28mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 12:15:35 AM
3	57.67	27.35mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 12:17:22 AM
4	57.77	27.40mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 12:19:03 AM

Mean Area 57.46
Mean Conc. 27.25mg/L

Sample

Sample Name: TCK008WC
Sample ID: TCK007-34
Origin: TCK007.cal
Chk. Result

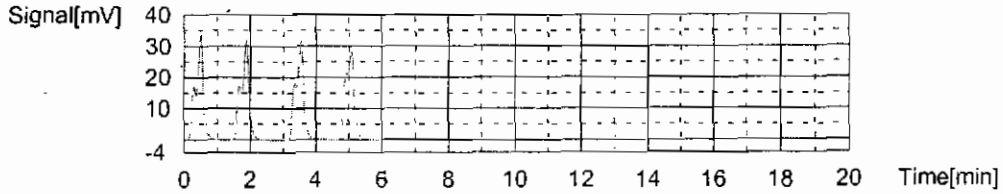
Type	Anal	Dil.	Result
Unknown	NPOC	1.000	NPOC:25.65 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.59	25.42mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 12:26:54 AM
2	54.16	25.69mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 12:28:45 AM
3	55.08	26.12mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 12:30:29 AM
4	53.51	25.38mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 12:32:06 AM

Mean Area 54.09
Mean Conc. 25.65mg/L



Sample

Sample Name: TCK008WB
Sample ID: TCK007-35
Origin: TCK007.cal
Chk. Result

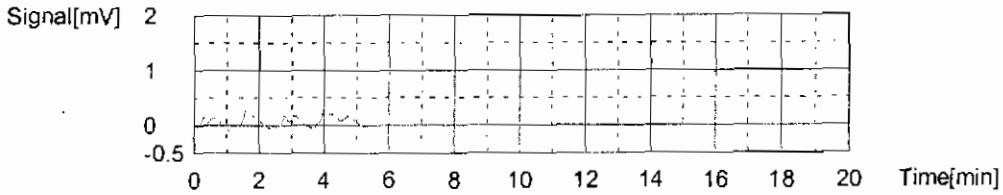
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.3851 mg/L

1. Del

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6868	0.3258mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 12:39:54 AM
2	0.7562	0.3587mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 12:41:17 AM
3	0.6179	0.2931mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 12:42:41 AM
4	1.187	0.5630mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 12:44:32 AM

Mean Area 0.8120
Mean Conc. 0.3851mg/L



Control Sample

Sample Name: CCV3
Sample ID: TCK007-36
Method: TCK007.tpl
Chk. Result Control value: 27.48 / Control exceeds range!

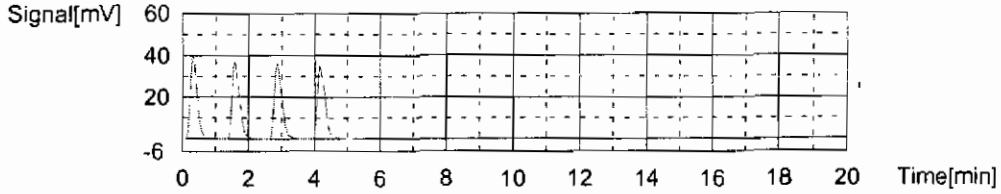
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:27.48 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	57.35	27.20mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 12:52:16 AM
2	58.33	27.67mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 12:53:44 AM
3	57.88	27.45mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 12:55:13 AM
4	58.15	27.58mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 12:56:44 AM

Mean Area 57.93
Mean Conc. 27.48mg/L



Sample

Sample Name: CCB3
Sample ID: TCK007-37
Origin: TCK007.cal
Chk. Result

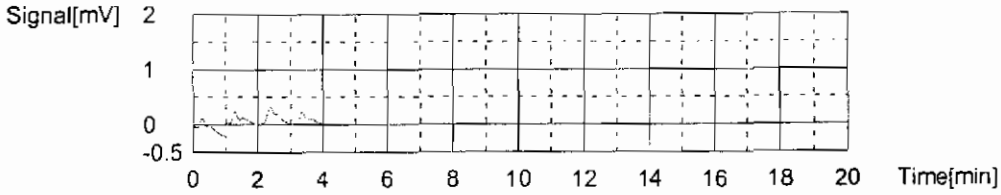
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.2064 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3255	0.1544mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:04:14 AM
2	0.4102	0.1946mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:05:29 AM
3	0.6312	0.2994mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:06:40 AM
4	0.3741	0.1774mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:07:47 AM

Mean Area 0.4353
Mean Conc. 0.2064mg/L



Sample

Sample Name: K077-20
Sample ID: TCK007-38
Origin: TCK007.cal
Chk. Result

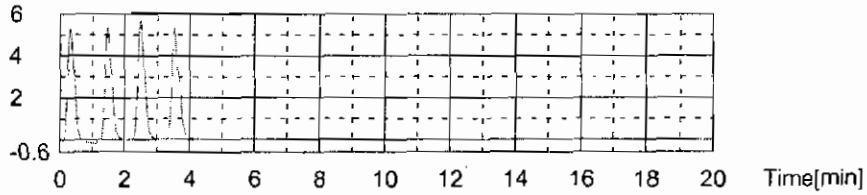
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:3.822 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.013	3.801mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:15:26 AM
2	7.960	3.776mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:16:38 AM
3	8.123	3.853mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:17:52 AM
4	8.135	3.859mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:19:09 AM

Mean Area 8.058
Mean Conc. 3.822mg/L



Sample

Sample Name: K077-21
Sample ID: TCK007-39
Origin: TCK007.cal
Chk. Result

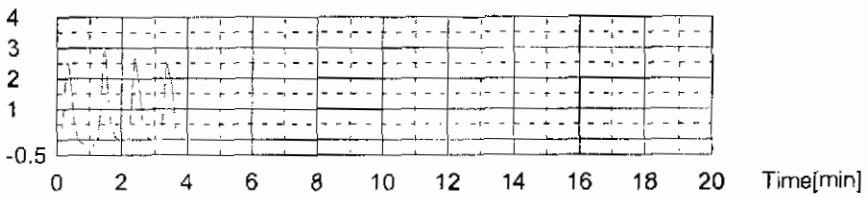
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.043 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.154	1.970mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:26:46 AM
2	4.365	2.070mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:27:54 AM
3	4.351	2.064mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:29:04 AM
4	4.359	2.068mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:30:15 AM

Mean Area 4.307
Mean Conc. 2.043mg/L



Sample

Sample Name: K077-22
Sample ID: TCK007-40
Origin: TCK007.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:3.340 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.030	3.334mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:37:50 AM
2	6.976	3.309mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:39:04 AM
3	7.036	3.337mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:40:15 AM
4	7.124	3.379mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:41:28 AM

Mean Area 7.042
Mean Conc. 3.340mg/L

Sample

Sample Name: K077-23
Sample ID: TCK007-41
Origin: TCK007.cal
Chk. Result

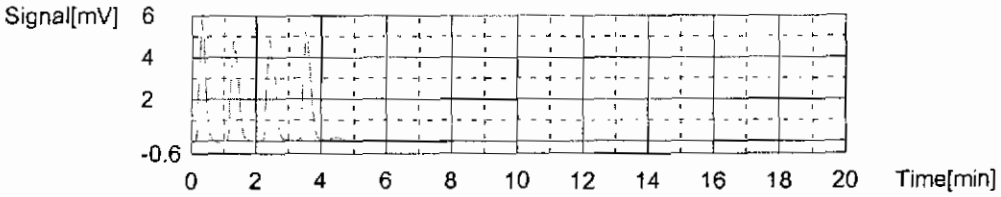
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:3.982 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.133	3.858mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:48:57 AM
2	8.228	3.903mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:50:15 AM
3	8.564	4.062mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:51:33 AM
4	8.657	4.106mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 01:53:27 AM

Mean Area 8.396
Mean Conc. 3.982mg/L



Sample

Sample Name: K077-23M
Sample ID: TCK007-42
Origin: TCK007.cal
Chk. Result

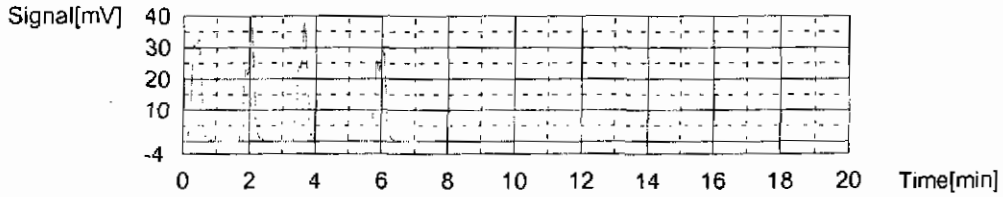
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:30.79 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	64.22	30.46mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 02:01:30 AM
2	65.15	30.90mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 02:03:19 AM
3	66.39	31.49mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 02:05:51 AM
4	63.92	30.32mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 02:07:33 AM

Mean Area 64.92
Mean Conc. 30.79mg/L



Sample

Sample Name: K077-23S
Sample ID: TCK007-43
Origin: TCK007.cal
Chk. Result

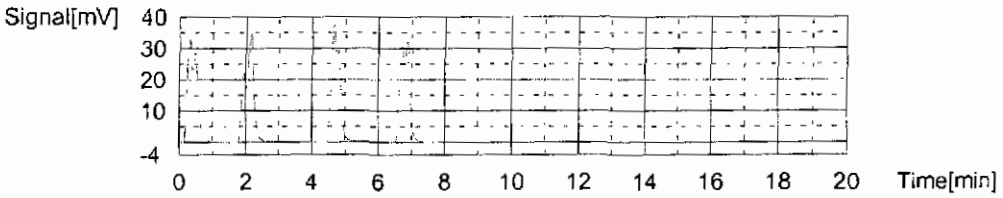
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:31.34 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	64.68	30.68mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 02:15:41 AM
2	67.46	32.00mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 02:18:34 AM
3	66.96	31.76mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 02:20:48 AM
4	65.19	30.92mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 02:22:24 AM

Mean Area 66.07
Mean Conc. 31.34mg/L



Sample

Sample Name: K070-01T
Sample ID: TCK007-44
Origin: TCK007.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	4.000	NPOC:110.6 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	56.77	107.7mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 02:30:10 AM
2	58.13	110.3mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 02:31:52 AM
3	58.42	110.8mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 02:33:34 AM
4	59.83	113.5mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 02:35:33 AM

Mean Area 58.29
Mean Conc. 110.6mg/L

Sample

Sample Name: K070-02R
Sample ID: TCK007-45
Origin: TCK007.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:10.29 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	21.99	10.43mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 02:44:35 AM
2	21.36	10.13mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 02:45:54 AM
3	21.10	10.01mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 02:47:18 AM
4	22.31	10.58mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 02:48:40 AM

Mean Area 21.69
Mean Conc. 10.29mg/L

Sample

Sample Name: K469-02
Sample ID: TCK007-46
Origin: TCK007.cal
Chk. Result

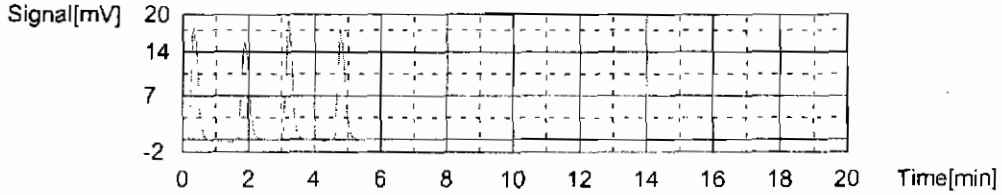
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:12.29 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	24.91	11.82mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 02:56:41 AM
2	25.85	12.26mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 02:58:13 AM
3	26.51	12.57mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 02:59:59 AM
4	26.36	12.50mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:01:30 AM

Mean Area 25.91
Mean Conc. 12.29mg/L



Sample

Sample Name: K470-02
Sample ID: TCK007-47
Origin: TCK007.cal
Chk. Result

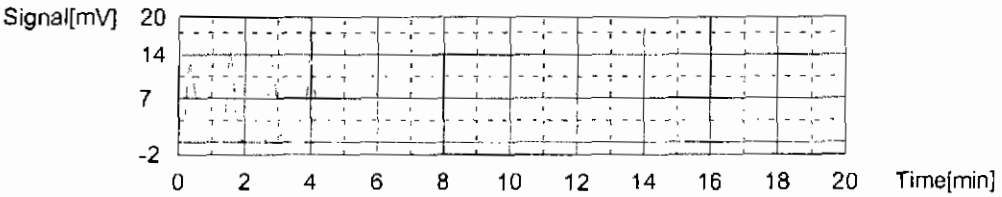
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:10.57 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	21.98	10.43mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:09:13 AM
2	22.25	10.55mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:10:39 AM
3	22.42	10.63mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:12:01 AM
4	22.46	10.65mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:13:25 AM

Mean Area 22.28
Mean Conc. 10.57mg/L



Control Sample

Sample Name: CCV4
Sample ID: TCK007-48
Method: TCK007.tpl
Chk. Result Control value. 27.33 / Control exceeds range!

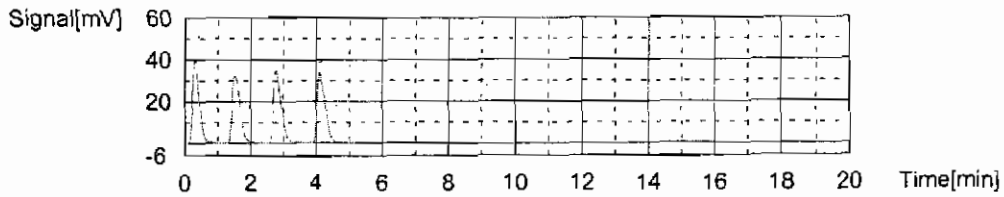
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:27.33 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	57.34	27.20mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:21:06 AM
2	57.55	27.30mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:22:33 AM
3	58.07	27.54mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:24:04 AM
4	57.51	27.28mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:25:37 AM

Mean Area 57.62
Mean Conc. 27.33mg/L



Sample

Sample Name: CCB4
Sample ID: TCK007-49
Origin: TCK007.cal
Chk. Result

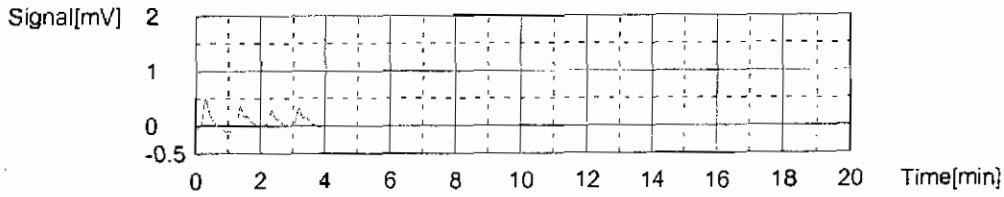
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.2688 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.8627	0.4092mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:33:12 AM
2	0.5147	0.2441mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:34:22 AM
3	0.3960	0.1878mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:35:23 AM
4	0.4934	0.2340mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:36:32 AM

Mean Area 0.5667
Mean Conc. 0.2688mg/L



Sample

Sample Name: K472-02
Sample ID: TCK007-50
Origin: TCK007.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:9.245 mg/L

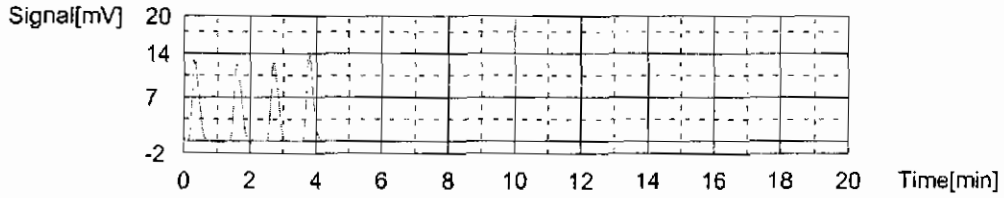
1. Det

Anal.: NPOC

8170

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	18.80	8.917mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:44:18 AM
2	19.56	9.277mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:45:36 AM
3	19.68	9.334mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:46:52 AM
4	19.93	9.453mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:48:12 AM

Mean Area 19.49
Mean Conc. 9.245mg/L



Sample

Sample Name: K473-02
Sample ID: TCK007-51
Origin: TCK007.cal
Chk. Result

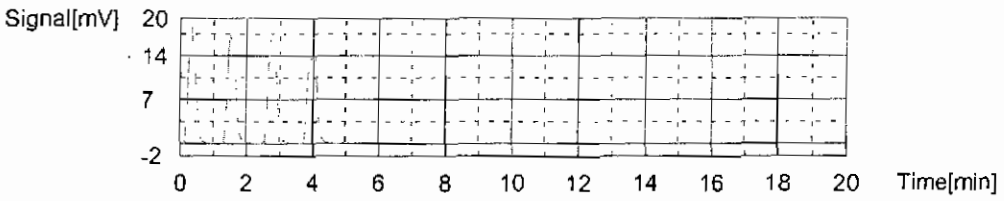
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:14.05 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	29.18	13.84mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:55:53 AM
2	29.34	13.92mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:57:17 AM
3	29.97	14.22mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 03:58:39 AM
4	30.00	14.23mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:00:06 AM

Mean Area 29.62
Mean Conc. 14.05mg/L



Sample

Sample Name: K474-02
Sample ID: TCK007-52
Origin: TCK007.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:12.56 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	25.66	12.17mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:07:44 AM
2	26.12	12.39mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:09:07 AM
3	27.22	12.91mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:10:33 AM
4	26.89	12.75mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:11:59 AM

Mean Area 26.47
Mean Conc. 12.56mg/L

Sample

Sample Name: K475-02
Sample ID: TCK007-53
Origin: TCK007.cal
Chk. Result

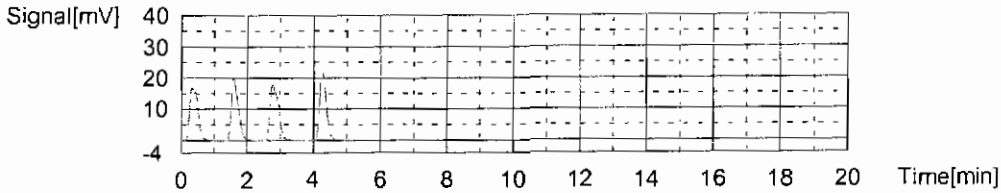
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:14.82 mg/L

1. Det

Anal.. NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	30.95	14.68mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:19:45 AM
2	30.68	14.55mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:21:07 AM
3	31.78	15.07mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:22:47 AM
4	31.59	14.98mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:24:15 AM

Mean Area 31.25
Mean Conc. 14.82mg/L



Sample

Sample Name: K084-01
Sample ID: TCK007-54
Origin: TCK007.cal
Chk. Result

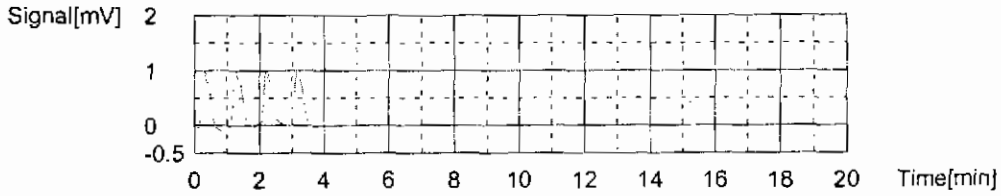
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.8580 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.831	0.8685mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:31:42 AM
2	1.761	0.8353mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:32:50 AM
3	1.788	0.8481mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:33:59 AM
4	1.856	0.8803mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:35:06 AM

Mean Area 1.809
Mean Conc. 0.8580mg/L



Sample

Sample Name: K084-02
Sample ID: TCK007-55
Origin: TCK007.cal
Chk. Result

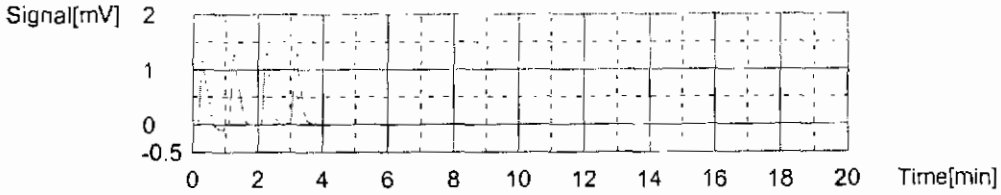
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.9192 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.902	0.9021mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:42:34 AM
2	1.932	0.9164mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:43:44 AM
3	1.943	0.9216mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:44:50 AM
4	1.975	0.9368mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:45:58 AM

Mean Area 1.938
Mean Conc. 0.9192mg/L



Sample

Sample Name: K084-03
Sample ID: TCK007-56
Origin: TCK007.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:142.0 mg/L

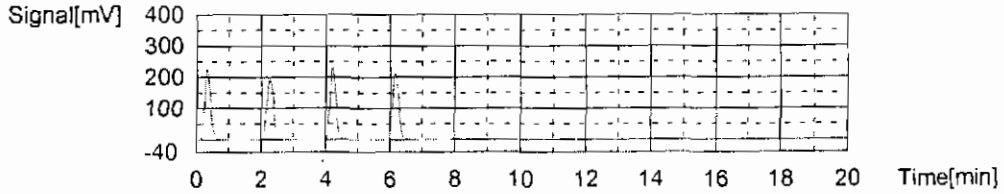
1. Det

Anal.: NPOC

8173

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	296.6	140.7mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:54:23 AM
2	298.8	141.7mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:56:32 AM
3	300.9	142.7mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 04:58:40 AM
4	301.4	143.0mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:00:54 AM

Mean Area 299.4
Mean Conc. 142.0mg/L



Sample

Sample Name: K084-04
Sample ID: TCK007-57
Origin: TCK007.cal
Chk. Result

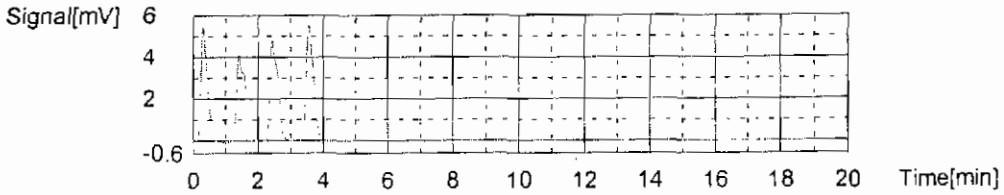
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:3.797 mg/L

1 Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.701	3.653mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:08:30 AM
2	7.594	3.602mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:09:43 AM
3	8.095	3.840mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:11:01 AM
4	8.628	4.092mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:12:16 AM

Mean Area 8.005
Mean Conc. 3.797mg/L



Sample

Sample Name: K084-05
Sample ID: TCK007-58
Origin: TCK007.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.411 mg/L

1. Det

Anal.: NPOC

8174

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.756	1.307mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:19:48 AM
2	2.933	1.391mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:20:57 AM
3	3.021	1.433mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:22:09 AM
4	3.191	1.514mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:23:22 AM

Mean Area 2.975
Mean Conc. 1.411mg/L

Sample

Sample Name: K084-06
Sample ID: TCK007-59
Origin: TCK007.cal
Chk. Result

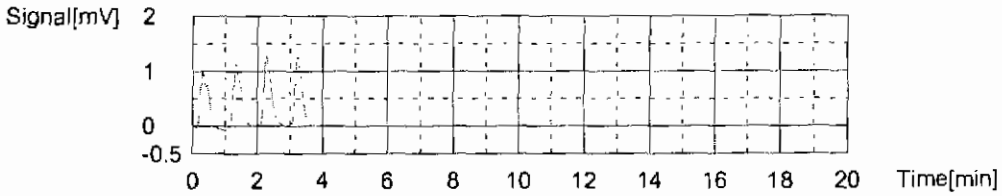
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.8922 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.828	0.8670mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:30:50 AM
2	1.854	0.8794mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:31:58 AM
3	1.946	0.9230mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:33:06 AM
4	1.896	0.8993mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:34:13 AM

Mean Area 1.881
Mean Conc. 0.8922mg/L



Control Sample

Sample Name: CCV5
Sample ID: TCK007-60
Method: TCK007.tpl
Chk. Result Control value: 27.07 / Control exceeds range!

Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:27.07 mg/L

1. Det.

Anal.: NPOC

8175

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	56.41	26.76mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:41:57 AM
2	57.00	27.04mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:43:22 AM
3	58.03	27.52mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:44:51 AM
4	56.85	26.96mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:46:18 AM

Mean Area 57.07
Mean Conc. 27.07mg/L

Sample

Sample Name: CCB5
Sample ID: TCK007-61
Origin: TCK007.cal
Chk. Result

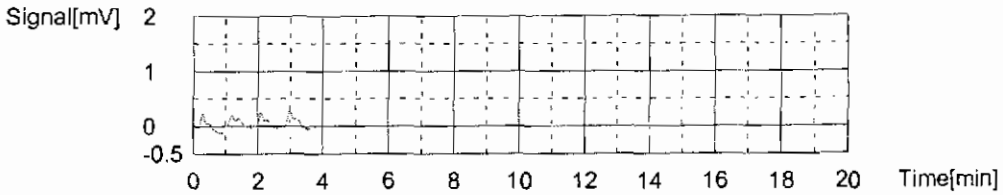
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1927 mg/L

1. Det

Anal.. NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3854	0.1828mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:53:42 AM
2	0.3538	0.1678mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:54:47 AM
3	0.3886	0.1843mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:55:53 AM
4	0.4976	0.2360mg/L	50uL	1		TCK007.2011_11_14_15_17_38.cal	11/15/11 05:56:58 AM

Mean Area 0.4064
Mean Conc. 0.1927mg/L



EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TOC

	Date	Time
Start	11/16/11	1450
End	11/17/11	729

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

TCK009W/10W/11W
K084 5310B
K101
K505
K136 415.1
K468 5310B
K104 415.1 DOC
K096
K116

Samples K468-02, 05, & 06 were diluted prior to analysis due to their yellow color. Samples were still yellow after dilutions.

* All samples associated with batches TCK010W & TCK011W needs to be re analyzed due to failing WB

2 M HCl SW4-01-223

Book #:	A62-020
Instrument No.:	62
Pipette ID:	039380025
	SW3-01-33
	SI1A-01-4
Balance ID:	40706360
Analytical Sequence:	TCK008
Method File:	TCK008
Analytical Batch:	TCK009W/10W/11W

SOP #	Rev. #
☑ EMAX-415.1	2
☑ EMAX-5310B	1
☐ EMAX-9060	2
☐ EMAX-	

STANDARDS ID		CONC. (mg/L)
S0	nanopure	0
S1	SW10B-04-174	1
S2		5
S3		10
S4		40
S5		80
S6	—	—
ICV/LCS	SW10B-04-175	25
CCV	-176	25

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ TOC	
☐	

Analyzed By: [illegible]

Date: 11/16/11

8177

	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
1	Standard	NPOC	ICAL	TCK008-01	0A-123456	C:\Program	1.000		
2	Control	NPOC	ICV	TCK008-02	0A-123456	C:\Program	1.000	NPOC:24.88 mg/L	
3	Unknown	NPOC	ICB	TCK008-03	0A-123456	C:\Program	1.000	NPOC:0.1713 mg/	
4	Unknown	NPOC	HCO3\CO3	TCK008-04	0A-123456	C:\Program	1.000	NPOC:0.1505 mg/	
5	Unknown	NPOC	TCK009WB	TCK008-05	0A-123456	C:\Program	1.000	NPOC:0.1036 mg/	
6	Unknown	NPOC	TCK009WL	TCK008-06	0A-123456	C:\Program	1.000	NPOC:24.48 mg/L	
7	Unknown	NPOC	TCK009WC	TCK008-07	0A-123456	C:\Program	1.000	NPOC:24.54 mg/L	
8	Unknown	NPOC	K084-03T	TCK008-08	0A-123456	C:\Program	5.000	NPOC:129.4 mg/L	DF=5
9	Unknown	NPOC	K101-01	TCK008-09	0A-123456	C:\Program	1.000	NPOC:1.121 mg/L	PH<2
10	Unknown	NPOC	K101-01D	TCK008-10	0A-123456	C:\Program	1.000	NPOC:1.019 mg/L	
11	Unknown	NPOC	K101-01M	TCK008-11	0A-123456	C:\Program	1.000	NPOC:26.21 mg/L	
12	Unknown	NPOC	K505-01	TCK008-12	0A-123456	C:\Program	1.000	NPOC:14.83 mg/L	PH<2
13	Unknown	NPOC	K736-01	TCK008-13	0A-123456	C:\Program	1.000	NPOC:4.747 mg/L	PH<2
14	Control	NPOC	CCV1	TCK008-14	0A-123456	C:\Program	1.000	NPOC:25.29 mg/L	
15	Unknown	NPOC	CCB1	TCK008-15	0A-123456	C:\Program	1.000	NPOC:0.1135 mg/	
16	Unknown	NPOC	K468-01	TCK008-16	0A-123456	C:\Program	1.000	NPOC:5.433 mg/L	PH<2
17	Unknown	NPOC	K468-02	TCK008-17	0A-123456	C:\Program	2.000	NPOC:94.67 mg/L	PH<2; DF=2
18	Unknown	NPOC	K468-05	TCK008-18	0A-123456	C:\Program	2.000	NPOC:88.97 mg/L	PH<2; DF=2
19	Unknown	NPOC	K468-06	TCK008-19	0A-123456	C:\Program	2.000	NPOC:49.69 mg/L	PH<2; DF=2
20	Unknown	NPOC	K104-02	TCK008-20	0A-123456	C:\Program	1.000	NPOC:1.555 mg/L	PH<2
21	Unknown	NPOC	K104-03	TCK008-21	0A-123456	C:\Program	1.000	NPOC:7.615 mg/L	PH<2
22	Unknown	NPOC	K104-04	TCK008-22	0A-123456	C:\Program	1.000	NPOC:3.082 mg/L	PH<2
23	Unknown	NPOC	K104-06	TCK008-23	0A-123456	C:\Program	1.000	NPOC:1.871 mg/L	PH<2
24	Unknown	NPOC	K104-07	TCK008-24	0A-123456	C:\Program	1.000	NPOC:1.867 mg/L	PH<2
25	Unknown	NPOC	K104-08	TCK008-25	0A-123456	C:\Program	1.000	NPOC:1.791 mg/L	PH<2
26	Control	NPOC	CCV2	TCK008-26	0A-123456	C:\Program	1.000	NPOC:~~28.19~~ mg/L	24.92 mg/L An. 11/17/11
27	Unknown	NPOC	CCB2	TCK008-27	0A-123456	C:\Program	1.000	NPOC:0.3737 mg/	
28	Unknown	NPOC	K104-09	TCK008-28	0A-123456	C:\Program	1.000	NPOC:33.49 mg/L	PH<2
29	Unknown	NPOC	K104-10	TCK008-29	0A-123456	C:\Program	1.000	NPOC:55.98 mg/L	PH<2
30	Unknown	NPOC	K104-12	TCK008-30	0A-123456	C:\Program	1.000	NPOC:8.892 mg/L	PH<2
31	Unknown	NPOC	K104-13	TCK008-31	0A-123456	C:\Program	1.000	NPOC:4.177 mg/L	PH<2
32	Unknown	NPOC	TCK010WL	TCK008-32	0A-123456	C:\Program	1.000	NPOC:25.13 mg/L	
33	Unknown	NPOC	TCK010WC	TCK008-33	0A-123456	C:\Program	1.000	NPOC:25.82 mg/L	
34	Unknown	NPOC	TCK010WB	TCK008-34	0A-123456	C:\Program	1.000	NPOC:0.5371 mg/	
35	Unknown	NPOC	K104-14	TCK008-35	0A-123456	C:\Program	1.000	NPOC:32.52 mg/L	PH<2
36	Unknown	NPOC	K104-14M	TCK008-36	0A-123456	C:\Program	1.000	NPOC:57.27 mg/L	
37	Unknown	NPOC	K104-14S	TCK008-37	0A-123456	C:\Program	1.000	NPOC:57.12 mg/L	
38	Control	NPOC	CCV3	TCK008-38	0A-123456	C:\Program	1.000	NPOC:24.87 mg/L	
39	Unknown	NPOC	CCB3	TCK008-39	0A-123456	C:\Program	1.000	NPOC:0.3947 mg/	
40	Unknown	NPOC	K096-02	TCK008-40	0A-123456	C:\Program	1.000	NPOC:2.292 mg/L	PH<2
41	Unknown	NPOC	K096-03	TCK008-41	0A-123456	C:\Program	1.000	NPOC:2.137 mg/L	PH<2
42	Unknown	NPOC	K096-04	TCK008-42	0A-123456	C:\Program	1.000	NPOC:12.73 mg/L	PH<2
43	Unknown	NPOC	K096-05	TCK008-43	0A-123456	C:\Program	1.000	NPOC:5.613 mg/L	PH<2
44	Unknown	NPOC	K096-06	TCK008-44	0A-123456	C:\Program	1.000	NPOC:1.950 mg/L	PH<2
45	Unknown	NPOC	K096-07	TCK008-45	0A-123456	C:\Program	1.000	NPOC:2.697 mg/L	PH<2
46	Unknown	NPOC	K096-09	TCK008-46	0A-123456	C:\Program	1.000	NPOC:2.908 mg/L	PH<2
47	Unknown	NPOC	K096-10	TCK008-47	0A-123456	C:\Program	1.000	NPOC:3.558 mg/L	PH<2
48	Unknown	NPOC	K096-11	TCK008-48	0A-123456	C:\Program	1.000	NPOC:4.061 mg/L	PH<2
49	Unknown	NPOC	K096-12	TCK008-49	0A-123456	C:\Program	1.000	NPOC:2.801 mg/L	PH<2
50	Control	NPOC	CCV4	TCK008-50	0A-123456	C:\Program	1.000	NPOC:25.63 mg/L	
51	Unknown	NPOC	CCB4	TCK008-51	0A-123456	C:\Program	1.000	NPOC:1.110 mg/L	
52	Unknown	NPOC	K096-13	TCK008-52	0A-123456	C:\Program	1.000	NPOC:2.574 mg/L	PH<2
53	Unknown	NPOC	K096-14	TCK008-53	0A-123456	C:\Program	1.000	NPOC:2.624 mg/L	PH<2
54	Unknown	NPOC	K096-15	TCK008-54	0A-123456	C:\Program	1.000	NPOC:28.88 mg/L	PH<2
55	Unknown	NPOC	K096-16	TCK008-55	0A-123456	C:\Program	1.000	NPOC:15.98 mg/L	PH<2
56	Unknown	NPOC	K096-18	TCK008-56	0A-123456	C:\Program	1.000	NPOC:8.389 mg/L	PH<2
57	Unknown	NPOC	K096-19	TCK008-57	0A-123456	C:\Program	1.000	NPOC:9.464 mg/L	PH<2
58	Unknown	NPOC	K096-20	TCK008-58	0A-123456	C:\Program	1.000	NPOC:3.496 mg/L	PH<2
59	Unknown	NPOC	TCK011WL	TCK008-59	0A-123456	C:\Program	1.000	NPOC:26.02 mg/L	
60	Unknown	NPOC	TCK011WC	TCK008-60	0A-123456	C:\Program	1.000	NPOC:26.13 mg/L	
61	Unknown	NPOC	TCK011WB	TCK008-61	0A-123456	C:\Program	1.000	NPOC:0.9702 mg/	
62	Control	NPOC	CCV5	TCK008-62	0A-123456	C:\Program	1.000	NPOC:26.48 mg/L	
63	Unknown	NPOC	CCB5	TCK008-63	0A-123456	C:\Program	1.000	NPOC:0.3652 mg/	
64	Unknown	NPOC	K096-21	TCK008-64	0A-123456	C:\Program	1.000	NPOC:2.642 mg/L	PH<2
65	Unknown	NPOC	K096-22	TCK008-65	0A-123456	C:\Program	1.000	NPOC:1.513 mg/L	PH<2
66	Unknown	NPOC	K096-23	TCK008-66	0A-123456	C:\Program	1.000	NPOC:2.186 mg/L	PH<2
67	Unknown	NPOC	K116-02	TCK008-67	0A-123456	C:\Program	1.000	NPOC:228.5 mg/L	PH<2

RR

RR

RR

FINAL

	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
68	Unknown	NPOC	K116-04	TCK008-68	0A-123456-	C:\Program	1.000	NPOC:3.241 mg/L	PH<2
69	Unknown	NPOC	K116-04M	TCK008-69	0A-123456-	C:\Program	1.000	NPOC:28.95 mg/L	
70	Unknown	NPOC	K116-04S	TCK008-70	0A-123456-	C:\Program	1.000	NPOC:29.34 mg/L	
71	Unknown	NPOC	K116-06	TCK008-71	0A-123456-	C:\Program	1.000	NPOC:19.17 mg/L	PH<2
72	Unknown	NPOC	K116-07	TCK008-72	0A-123456-	C:\Program	1.000	NPOC:19.14 mg/L	PH<2
73	Control	NPOC	CCV6	TCK008-73	0A-123456-	C:\Program	1.000	NPOC:26.26 mg/L	
74	Unknown	NPOC	CCB6	TCK008-74	0A-123456-	C:\Program	1.000	NPOC:0.4256 mg/	
75									
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133									
134									

RR

FINAL

Instr.Information

System	loc
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Cal. Curve

Sample Name:	ICAL
Sample ID:	TCK008-01
Cal. Curve:	TCK008.2011_11_16_14_42_12.cal

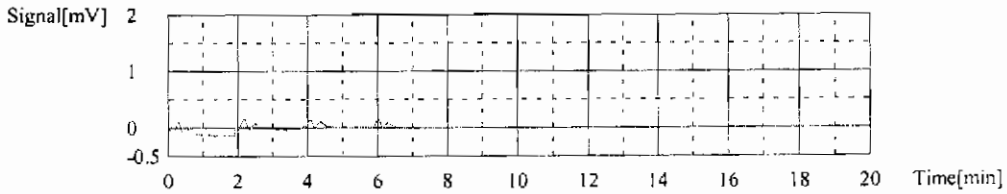
Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.000	50uL	1	*******		11/16/11 02:50:23 PM
2	0.000	50uL	1	*******		11/16/11 02:52:29 PM
3	0.000	50uL	1	*******		11/16/11 02:54:35 PM
4	0.000	50uL	1	*******		11/16/11 02:56:41 PM

Acid Add.	2.500%
Sp. Time	90.00sec
Mean Area	0.000

$\frac{\text{mean area}}{\text{slope}} = \frac{0.000}{2.151} = 0.000$

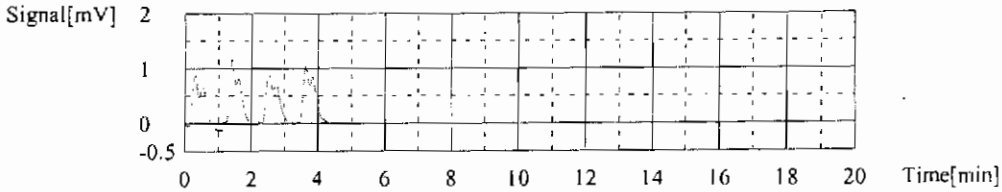


Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	2.102	50uL	10	*******		11/16/11 03:05:00 PM
2	2.255	50uL	10	*******		11/16/11 03:06:19 PM
3	2.186	50uL	10	*******		11/16/11 03:07:38 PM
4	2.283	50uL	10	*******		11/16/11 03:08:55 PM

Acid Add.	2.500%
Sp. Time	90.00sec
Mean Area	2.207

$\frac{\bar{A}}{m} = \frac{2.207}{2.151} = 1.026$



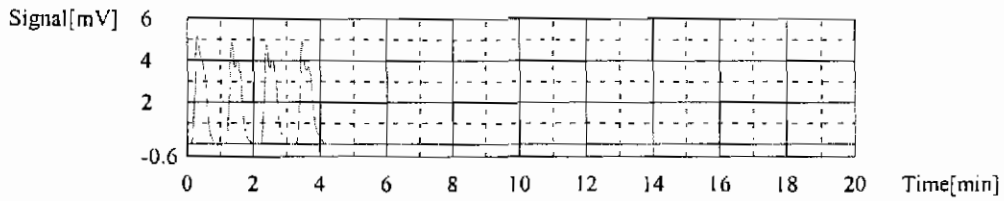
Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	10.25	50uL	2	*******		11/16/11 03:15:13 PM
2	10.56	50uL	2	*******		11/16/11 03:16:30 PM
3	10.65	50uL	2	*******		11/16/11 03:17:46 PM
4	10.66	50uL	2	*******		11/16/11 03:19:06 PM

$\frac{\bar{A}}{m} = \frac{10.53}{2.151} = 4.895$

8180

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 10.53

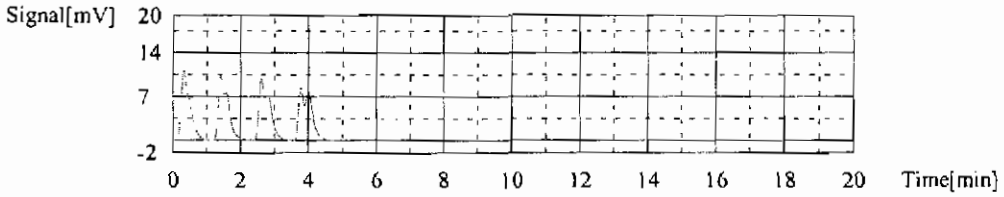


Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	20.87	50uL	1	*******		11/16/11 03:24:46 PM
2	20.91	50uL	1	*******		11/16/11 03:26:12 PM
3	21.28	50uL	1	*******		11/16/11 03:27:34 PM
4	21.38	50uL	1	*******		11/16/11 03:29:01 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 21.11

$\frac{\bar{A}}{m} = \frac{21.11}{2.151} = 9.814$

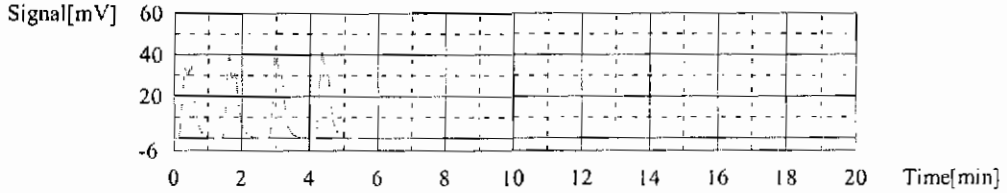


Conc: 40.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	83.04	50uL	2	*******		11/16/11 03:37:31 PM
2	84.33	50uL	2	*******		11/16/11 03:39:07 PM
3	83.76	50uL	2	*******		11/16/11 03:40:40 PM
4	84.67	50uL	2	*******		11/16/11 03:42:14 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 83.95

$\frac{\bar{A}}{m} = \frac{83.95}{2.151} = 39.03$

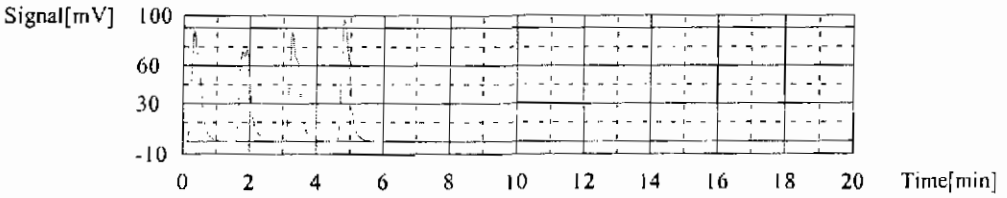


Conc: 80.00mg/L

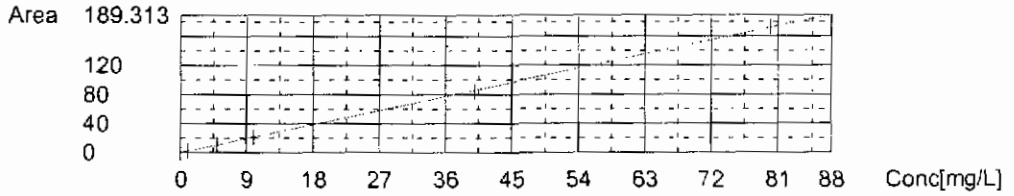
No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	168.5	50uL	1	*******		11/16/11 03:48:15 PM
2	172.6	50uL	1	*******		11/16/11 03:49:58 PM
3	175.4	50uL	1	*******		11/16/11 03:51:42 PM
4	173.9	50uL	1	*******		11/16/11 03:53:20 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 172.6

$\frac{\bar{A}}{m} = \frac{172.6}{2.151} = 80.24$



Slope: 2.151
Intercept 0.000
r^2 0.999825



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Control Sample

Sample Name: ICV
Sample ID: TCK008-02
Method: TCK008.tpl
Chk. Result Control value: 24.88 / Control exceeds range!

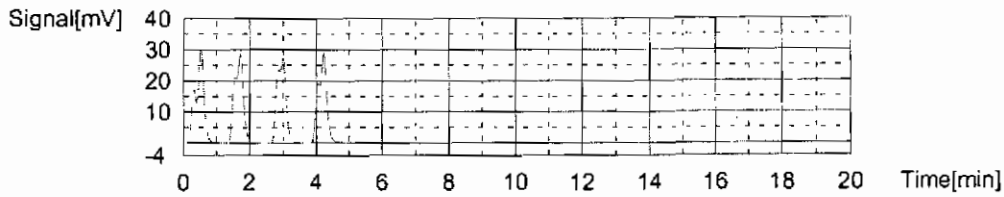
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:24.88 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.17	24.72mg/L	50uL	1		TCK008.2011_11_16_14_42_12.cal	11/16/11 04:01:18 PM
2	54.02	25.11mg/L	50uL	1		TCK008.2011_11_16_14_42_12.cal	11/16/11 04:02:48 PM
3	53.28	24.77mg/L	50uL	1		TCK008.2011_11_16_14_42_12.cal	11/16/11 04:04:13 PM
4	53.62	24.92mg/L	50uL	1		TCK008.2011_11_16_14_42_12.cal	11/16/11 04:05:39 PM

Mean Area 53.52
Mean Conc. 24.88mg/L



Sample

Sample Name: ICB
Sample ID: TCK008-03
Origin: TCK008 cal
Chk. Result

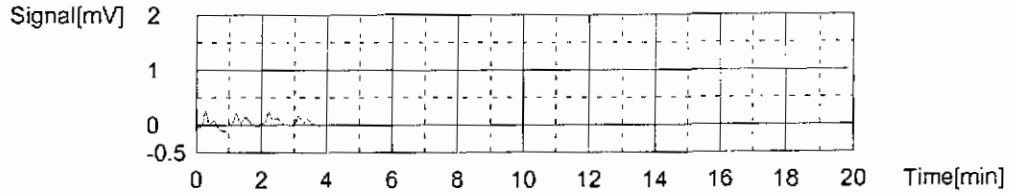
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1713 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4347	0.2021mg/L	50uL	1		TCK008.2011_11_16_14_42_12.cal	11/16/11 04:13:09 PM
2	0.3797	0.1765mg/L	50uL	1		TCK008.2011_11_16_14_42_12.cal	11/16/11 04:14:21 PM
3	0.3493	0.1624mg/L	50uL	1		TCK008.2011_11_16_14_42_12.cal	11/16/11 04:15:28 PM
4	0.3107	0.1444mg/L	50uL	1		TCK008.2011_11_16_14_42_12.cal	11/16/11 04:16:37 PM

Mean Area 0.3686
Mean Conc. 0.1713mg/L



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PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11K101**

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GC-VOA	METHOD RSK-175	4000 – 4034
GC-SVOA	**	5000 –
HPLC	**	6000 –
METALS	METHOD 3010A/6010B	7000 – 7026
WET	METHOD 300.0	8000 – 8030
	METHOD 300.0 (M)	8031 – 8068
	METHOD 2320B	8069 – 8082
	METHOD 2540C	8083 – 8088
	METHOD 4500F	8089 – 8093
	METHOD SM5310B	8094 – 8104
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 11-30-2011
EMAX Batch No.: 11K101

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 11/10/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
IR-70-RD0-5-117	K101-01	11/10/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-MNA06-118	K101-02	11/10/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
MW-70-MNA08-119	K101-03	11/10/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
MW-70-MNA09-120	K101-04	11/10/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
MW-70-MNA13-121	K101-05	11/10/11	WATER	DISSOLVED GAS

Sample ID	Control #	Col Date	Matrix	Analysis
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
IR-70-TB-116	K101-06	11/10/11	WATER	VOLATILE ORGANICS BY GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

INS_0801

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011068-8042
SAMPLE STORAGE
EMAX CONTROL NO. * 11K101
PROJECT CODE: 4-77101

CLIENT: INSIGHT EEC, INC.
PROJECT: IR SITE 70 - NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 7146786700 FAX: 7146786711 EMAIL: NWEINBERGER@IEECI.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT EEC, INC.
ADDRESS: 3010 E. MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: Ye Mint

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	CLIENT	LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	VOCs - EPA 8260B (HC)	DISS. HYD. GASES - RSK-175 (HC)	WET CHEM (NO)	TOC - SM5310B (HC)	SULFIDE - SM4500S (SH/ZA)	DIS. METALS - EPA 6010B (HN)	VOCs - EPA 8260B (NO)	DISS. HYD. GASES - RSK-175 (NO)	COMMENTS
1	IR-70-RD0-5-117	IR SITE 70 NWS SB	11-10-11	1107	10	VARIES	VARIES	GW	III			X	X	X	X	X	X	EFFLUENT WELL FOR WET CHEM ANALYSIS.
2	MW-70-MNA06-118	IR SITE 70 NWS SB	11-10-11	1218	7	VARY	VARY	GW	III	X	X	X						RUN ONLY VFAs.
3	MW-70-MNA08-119	IR SITE 70 NWS-SB	11-10-11	1342	7	VARY	VARY	GW	III	X	X	X						FOR WET CHEM ANALYSIS. RUN ONLY VFAs.
4	MW-70-MNA09-120	IR SITE 70 NWS-SB.	11-10-11	1445	7	VARY	VARY	GW	III	X	X	X						FOR WET CHEM ANALYSIS RUN ONLY VFAs.
5	MW-70-MNA13-121	IR SITE 70 NWS-SB	11-10-11	1553	7	VARY	VARY	GW	III	X	X	X						FOR WET CHEM ANALYSIS. RUN ONLY VFAS
6																		
7																		
8																		
9																		
6	IR-70-TB-116	IR SITE 70 NWS SB	11-10-11	0845	2	40mL	VOA	GW	III	X								TRIP BLANKS.

Instructions: WET CHEM ANALYSIS AS FOLLOWS: ANIONS - EPA 300.0, VFAs - EPA 300.0M, TDS - SM2540C, ALKALINITY - SM2320B, DHS - SM4500. UNLESS NOTED OTHERWISE IN COMMENTS.

Cooler #	Temp. (°C)	Sample #s
1	2.6	

SAMPLER: CHASE BROGDON

COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-10-11	1747	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin untill all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

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EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11K101
☐ EMAX Courier	See Coc	Recepient J-LUNA
☑ Client Delivery		Date 11-10-11
☐ Third Party		Time 1747

COC Inspection

☑ Client Name ☑ Client PM/FC ☑ Sampler Name ☑ Sampling Date/Time/Location ☑ Sample ID ☑ Matrix
☑ Address ☑ Tel # / Fax # ☑ Courier Signature ☑ Analysis Required ☑ Preservative (if any) ☑ TAT
Safety Issues ☑ None ☐ High concentrations expected ☐ Superfund Site samples ☐ Rad screening required
Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☑ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	☑ Cooler 1 2.6 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C

Comments: ☐ **PM was informed on non-compliant coolers imediately.**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code

REVIEWS

Sample Labeling _____ Date 11/10/11 EC

SRF _____ Date 11/11/11

PM LP for YO Date 11/14/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4	_____	E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	_____
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	_____
B3	Sample ID is inconsistent in COC vis-à-vis label	F2	Bubble is> 6mm		
B4	_____	G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	_____		
C4	_____	H2	_____		

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11K101

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K101

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of six (6) water samples were received on 11/10/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied except for Bromoform in CVOF3J2824 was not within 20% of expected value (biased high). However, analyte was not one of analytes required dilution and was not detected in associated diluted samples. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, three (3) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary form for details.

Lab Control Sample
Three (3) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for VOF3K21L/C were all within QC limits.
Percent recoveries for VOF3K22L/C were all within QC limits.
Percent recoveries for VOF3K25L/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K101
Instrument ID : F3

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VOF3K21B	1	NA	11/17/1100:09	11/17/1100:09	RKR378	RJR172	VOF3K21	Method Blank
LCS1W	VOF3K21L	1	NA	11/16/1122:25	11/16/1122:25	RKR375	RJR172	VOF3K21	Lab Control Sample (LCS)
LCD1W	VOF3K21C	1	NA	11/16/1123:00	11/16/1123:00	RKR376	RJR172	VOF3K21	LCS Duplicate
IR-70-RDO-5-117	K101-01	1	NA	11/17/1105:23	11/17/1105:23	RKR387	RJR172	VOF3K21	Field Sample
MW-70-MNA06-118	K101-02	1	NA	11/17/1105:58	11/17/1105:58	RKR388	RJR172	VOF3K21	Field Sample
MBLK2W	VOF3K22B	1	NA	11/17/1109:44	11/17/1109:44	RKR394	RJR172	VOF3K22	Method Blank
LCS2W	VOF3K22L	1	NA	11/17/1107:54	11/17/1107:54	RKR391	RJR172	VOF3K22	Lab Control Sample (LCS)
LCD2W	VOF3K22C	1	NA	11/17/1108:28	11/17/1108:28	RKR392	RJR172	VOF3K22	LCS Duplicate
MW-70-MNA08-119	K101-03	1	NA	11/17/1110:55	11/17/1110:55	RKR396	RJR172	VOF3K22	Field Sample
MW-70-MNA09-120	K101-04	1	NA	11/17/1111:30	11/17/1111:30	RKR397	RJR172	VOF3K22	Field Sample
MW-70-MNA13-121	K101-05	1	NA	11/17/1112:05	11/17/1112:05	RKR398	RJR172	VOF3K22	Field Sample
IR-70-TB-116	K101-06	1	NA	11/17/1112:42	11/17/1112:42	RKR399	RJR172	VOF3K22	Field Sample
MBLK3W	VOF3K25B	1	NA	11/21/1112:07	11/21/1112:07	RKR458	RJR172	VOF3K25	Method Blank
LCS3W	VOF3K25L	1	NA	11/21/1110:17	11/21/1110:17	RKR455	RJR172	VOF3K25	Lab Control Sample (LCS)
LCD3W	VOF3K25C	1	NA	11/21/1110:51	11/21/1110:51	RKR456	RJR172	VOF3K25	LCS Duplicate
MW-70-MNA08-119DL	K101-03T	100	NA	11/21/1113:47	11/21/1113:47	RKR461	RJR172	VOF3K25	Diluted Sample
MW-70-MNA13-121DL	K101-05T	10	NA	11/21/1115:27	11/21/1115:27	RKR464	RJR172	VOF3K25	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/10/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/10/11
Batch No. : 11K101	Date Extracted: 11/17/11 05:23
Sample ID: IR-70-RDO-5-117	Date Analyzed: 11/17/11 05:23
Lab Samp ID: K101-01	Dilution Factor: 1
Lab File ID: RKR387	Matrix : WATER
Ext Btch ID: VOF3K21	% Moisture : NA
Calib. Ref.: RJR172	Instrument ID : F3

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	3.2	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	0.91J	1.0	0.20
TRICHLOROETHENE	1.3J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	3.3	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.5	10.00	105	70-140
4-BROMOFLUOROBENZENE	9.85	10.00	98.5	70-130
TOLUENE-D8	9.94	10.00	99.4	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/10/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/10/11
Batch No. : 11K101	Date Extracted: 11/17/11 05:58
Sample ID: MW-70-MNA06-118	Date Analyzed: 11/17/11 05:58
Lab Samp ID: K101-02	Dilution Factor: 1
Lab File ID: RKR388	Matrix : WATER
Ext Btch ID: VOF3K21	% Moisture : NA
Calib. Ref.: RJR172	Instrument ID : F3

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	18	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	0.29J	1.0	0.20
TRICHLOROETHENE	3.0J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.5	10.00	105	70-140
4-BROMOFLUOROBENZENE	9.87	10.00	98.7	70-130
TOLUENE-D8	9.72	10.00	97.2	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/10/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/10/11
Batch No. : 11K101	Date Extracted: 11/17/11 10:55
Sample ID: MW-70-MNA08-119	Date Analyzed: 11/17/11 10:55
Lab Samp ID: K101-03	Dilution Factor: 1
Lab File ID: RKR396	Matrix : WATER
Ext Btch ID: VOF3K22	% Moisture : NA
Calib. Ref.: RJR172	Instrument ID : F3

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	1.5	1.0	0.20
1,1-DICHLOROETHENE	4.9	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	640E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	15	1.0	0.20
TRICHLOROETHENE	11	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	97	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.0	10.00	100	70-140
4-BROMOFLUOROBENZENE	10.4	10.00	104	70-130
TOLUENE-D8	9.93	10.00	99.3	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/10/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/10/11
Batch No.	: 11K101	Date Extracted:	11/21/11 13:47
Sample ID:	MW-70-MNA08-119DL	Date Analyzed:	11/21/11 13:47
Lab Samp ID:	K101-03T	Dilution Factor:	100
Lab File ID:	RKR461	Matrix	: WATER
Ext Btch ID:	VOF3K25	% Moisture	: NA
Calib. Ref.:	RJR172	Instrument ID	: F3

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	100	20
1,1,1,2-TETRACHLOROETHANE	ND	100	20
1,1,2,2-TETRACHLOROETHANE	ND	100	20
1,1,2-TRICHLOROETHANE	ND	100	20
FREON113	ND	100	30
1,1-DICHLOROETHANE	ND	100	20
1,1-DICHLOROETHENE	ND	50	20
1,1-DICHLOROPROPENE	ND	100	20
1,2-DIBROMO-3-CHLOROPROPANE	ND	200	50
1,2-DIBROMOETHANE	ND	100	20
1,2-DICHLOROBENZENE	ND	100	20
1,2-DICHLOROETHANE	ND	50	20
1,2-DICHLOROPROPANE	ND	100	20
1,2,3-TRICHLOROBENZENE	ND	100	30
1,2,3-TRICHLOROPROPANE	ND	100	50
1,2,4-TRICHLOROBENZENE	ND	100	30
1,2,4-TRIMETHYLBENZENE	ND	100	20
1,3-DICHLOROBENZENE	ND	100	20
1,3,5-TRIMETHYLBENZENE	ND	100	20
1,4-DICHLOROBENZENE	ND	100	20
2-BUTANONE	ND	1000	400
2-CHLOROTOLUENE	ND	100	20
2-HEXANONE	ND	1000	400
2,2-DICHLOROPROPANE	ND	100	20
4-CHLOROTOLUENE	ND	100	20
4-METHYL-2-PENTANONE	ND	1000	400
N-BUTYLBENZENE	ND	100	20
N-PROPYLBENZENE	ND	100	20
P-ISOPROPYLTOLUENE	ND	100	20
SEC-BUTYLBENZENE	ND	100	20
TERT-BUTYLBENZENE	ND	100	20
ACETONE	ND	1000	500
BENZENE	ND	100	20
BROMOBENZENE	ND	100	20
BROMODICHLOROMETHANE	ND	100	20
CIS-1,3-DICHLOROPROPENE	ND	100	20
TRANS-1,3-DICHLOROPROPENE	ND	100	20
BROMOMETHANE	ND	200	30
BROMOFORM	ND	100	30
CARBON DISULFIDE	ND	100	20
CARBON TETRACHLORIDE	ND	50	20
CHLOROBENZENE	ND	100	20
CHLOROETHANE	ND	200	30
CHLOROFORM	ND	100	20
CHLOROMETHANE	ND	200	30
CIS-1,2-DICHLOROETHENE	1600	100	20
DICHLORODIFLUOROMETHANE	ND	200	30
DIBROMOCHLOROMETHANE	ND	100	20
DIBROMOMETHANE	ND	100	20
ETHYLBENZENE	ND	100	20
HEXACHLOROBUTADIENE	ND	100	30
ISOPROPYL BENZENE	ND	100	20
METHYLENE CHLORIDE	ND	100	50
MTBE	ND	100	20
STYRENE	ND	100	20
TETRACHLOROETHYLENE	ND	100	20
TOLUENE	ND	100	20
TRANS-1,2-DICHLOROETHENE	ND	100	20
TRICHLOROETHENE	ND	500	20
TRICHLOROFLUOROMETHANE	ND	200	30
VINYL CHLORIDE	130	50	20
XYLENES (TOTAL)	ND	200	60
M/P-XYLENES	ND	100	40
O-XYLENE	ND	100	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	990	1000	99.0	70-140
4-BROMOFLUOROBENZENE	974	1000	97.4	70-130
TOLUENE-D8	1010	1000	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/10/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/10/11
Batch No. : 11K101	Date Extracted: 11/17/11 11:30
Sample ID: MW-70-MNA09-120	Date Analyzed: 11/17/11 11:30
Lab Samp ID: K101-04	Dilution Factor: 1
Lab File ID: RKR397	Matrix : WATER
Ext Btch ID: VOF3K22	% Moisture : NA
Calib. Ref.: RJR172	Instrument ID : F3

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	13	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	1.0	1.0	0.20
TRICHLOROETHENE	2.8J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.2	10.00	102	70-140
4-BROMOFLUOROBENZENE	10.2	10.00	102	70-130
TOLUENE-D8	9.71	10.00	97.1	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/10/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/10/11
Batch No.	: 11K101	Date Extracted:	11/17/11 12:05
Sample ID:	MW-70-MNA13-121	Date Analyzed:	11/17/11 12:05
Lab Samp ID:	K101-05	Dilution Factor:	1
Lab File ID:	RKR398	Matrix :	WATER
Ext Btch ID:	VOF3K22	% Moisture :	NA
Calib. Ref.:	RJR172	Instrument ID :	F3

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	1.3	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	120E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	4.0	1.0	0.20
TRICHLOROETHENE	12	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	0.26J	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.7	10.00	107	70-140
4-BROMOFLUOROBENZENE	10.4	10.00	104	70-130
TOLUENE-D8	10.1	10.00	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/10/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/10/11
Batch No. : 11K101	Date Extracted: 11/21/11 15:27
Sample ID: MW-70-MNA13-121DL	Date Analyzed: 11/21/11 15:27
Lab Samp ID: K101-05T	Dilution Factor: 10
Lab File ID: RKR464	Matrix : WATER
Ext Btch ID: VOF3K25	% Moisture : NA
Calib. Ref.: RJR172	Instrument ID : F3

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	10	2.0
1,1,1,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2-TRICHLOROETHANE	ND	10	2.0
FREON113	ND	10	3.0
1,1-DICHLOROETHANE	ND	10	2.0
1,1-DICHLOROETHENE	ND	5.0	2.0
1,1-DICHLOROPROPENE	ND	10	2.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	20	5.0
1,2-DIBROMOETHANE	ND	10	2.0
1,2-DICHLOROBENZENE	ND	10	2.0
1,2-DICHLOROETHANE	ND	5.0	2.0
1,2-DICHLOROPROPANE	ND	10	2.0
1,2,3-TRICHLOROBENZENE	ND	10	3.0
1,2,3-TRICHLOROPROPANE	ND	10	5.0
1,2,4-TRICHLOROBENZENE	ND	10	3.0
1,2,4-TRIMETHYLBENZENE	ND	10	2.0
1,3-DICHLOROBENZENE	ND	10	2.0
1,3,5-TRIMETHYLBENZENE	ND	10	2.0
1,4-DICHLOROBENZENE	ND	10	2.0
2-BUTANONE	ND	100	40
2-CHLOROTOLUENE	ND	10	2.0
2-HEXANONE	ND	100	40
2,2-DICHLOROPROPANE	ND	10	2.0
4-CHLOROTOLUENE	ND	10	2.0
4-METHYL-2-PENTANONE	ND	100	40
N-BUTYLBENZENE	ND	10	2.0
N-PROPYLBENZENE	ND	10	2.0
P-ISOPROPYLTOLUENE	ND	10	2.0
SEC-BUTYLBENZENE	ND	10	2.0
TERT-BUTYLBENZENE	ND	10	2.0
ACETONE	ND	100	50
BENZENE	ND	10	2.0
BROMOBENZENE	ND	10	2.0
BROMODICHLOROMETHANE	ND	10	2.0
CIS-1,3-DICHLOROPROPENE	ND	10	2.0
TRANS-1,3-DICHLOROPROPENE	ND	10	2.0
BROMOMETHANE	ND	20	3.0
BROMOFORM	ND	10	3.0
CARBON DISULFIDE	ND	10	2.0
CARBON TETRACHLORIDE	ND	5.0	2.0
CHLOROBENZENE	ND	10	2.0
CHLOROETHANE	ND	20	3.0
CHLOROFORM	ND	10	2.0
CHLOROMETHANE	ND	20	3.0
CIS-1,2-DICHLOROETHENE	160	10	2.0
DICHLORODIFLUOROMETHANE	ND	20	3.0
DIBROMOCHLOROMETHANE	ND	10	2.0
DIBROMOMETHANE	ND	10	2.0
ETHYLBENZENE	ND	10	2.0
HEXACHLOROBUTADIENE	ND	10	3.0
ISOPROPYL BENZENE	ND	10	2.0
METHYLENE CHLORIDE	ND	10	5.0
MTBE	ND	10	2.0
STYRENE	ND	10	2.0
TETRACHLOROETHYLENE	ND	10	2.0
TOLUENE	ND	10	2.0
TRANS-1,2-DICHLOROETHENE	4.2J	10	2.0
TRICHLOROETHENE	16J	50	2.0
TRICHLOROFLUOROMETHANE	ND	20	3.0
VINYL CHLORIDE	ND	5.0	2.0
XYLENES (TOTAL)	ND	20	6.0
M/P-XYLENES	ND	10	4.0
O-XYLENE	ND	10	2.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	100	100.0	100	70-140
4-BROMOFLUOROBENZENE	97.7	100.0	97.7	70-130
TOLUENE-D8	97.0	100.0	97.0	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/10/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/10/11
Batch No. : 11K101	Date Extracted: 11/17/11 12:42
Sample ID: IR-70-TB-116	Date Analyzed: 11/17/11 12:42
Lab Samp ID: K101-06	Dilution Factor: 1
Lab File ID: RKR399	Matrix : WATER
Ext Btch ID: VOF3K22	% Moisture : NA
Calib. Ref.: RJR172	Instrument ID : F3

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.4	10.00	104	70-140
4-BROMOFLUOROBENZENE	10.1	10.00	101	70-130
TOLUENE-D8	10.0	10.00	100	70-140

QC SUMMARIES

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/17/11
Batch No. : 11K101	Date Extracted: 11/17/11 00:09
Sample ID: MBLK1W	Date Analyzed: 11/17/11 00:09
Lab Samp ID: VOF3K21B	Dilution Factor: 1
Lab File ID: RKR378	Matrix : WATER
Ext Btch ID: VOF3K21	% Moisture : NA
Calib. Ref.: RJR172	Instrument ID : F3

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.1	10.00	101	70-140
4-BROMOFLUOROBENZENE	10.3	10.00	103	70-130
TOLUENE-D8	9.78	10.00	97.8	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	VOF3K21B	VOF3K21L	VOF3K21C		
LAB FILE ID:	RKR378	RKR375	RKR376		
DATE EXTRACTED:	11/17/1100:09	11/16/1122:25	11/16/1123:00	DATE COLLECTED:	NA
DATE ANALYZED:	11/17/1100:09	11/16/1122:25	11/16/1123:00	DATE RECEIVED:	11/16/11
PREP. BATCH:	VOF3K21	VOF3K21	VOF3K21		
CALIB. REF:	RJR172	RJR172	RJR172		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	8.77	88	10.0	8.69	87	1	60-130	30
Benzene	ND	10.0	9.41	94	10.0	9.62	96	2	70-130	30
Chlorobenzene	ND	10.0	9.99	100	10.0	10.5	105	5	70-120	30
Toluene	ND	10.0	8.88	89	10.0	9.46	95	6	70-130	30
Trichloroethene	ND	10.0	10.0	100	10.0	10.5	105	4	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	10.1	101	10.0	9.81	98	70-140
4-Bromofluorobenzene	10.0	10.2	102	10.0	9.93	99	70-130
Toluene-d8	10.0	9.79	98	10.0	10.3	103	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/17/11
Batch No. : 11K101	Date Extracted: 11/17/11 09:44
Sample ID: MBLK2W	Date Analyzed: 11/17/11 09:44
Lab Samp ID: VOF3K22B	Dilution Factor: 1
Lab File ID: RKR394	Matrix : WATER
Ext Btch ID: VOF3K22	% Moisture : NA
Calib. Ref.: RJR172	Instrument ID : F3

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.85	10.00	98.5	70-140
4-BROMOFLUOROBENZENE	10.0	10.00	100	70-130
TOLUENE-D8	9.96	10.00	99.6	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	VOF3K22B	VOF3K22L	VOF3K22C		
LAB FILE ID:	RKR394	RKR391	RKR392		
DATE EXTRACTED:	11/17/1109:44	11/17/1107:54	11/17/1108:28	DATE COLLECTED:	NA
DATE ANALYZED:	11/17/1109:44	11/17/1107:54	11/17/1108:28	DATE RECEIVED:	11/17/11
PREP. BATCH:	VOF3K22	VOF3K22	VOF3K22		
CALIB. REF:	RJR172	RJR172	RJR172		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.33	93	10.0	9.07	91	3	60-130	30
Benzene	ND	10.0	10.1	101	10.0	9.46	95	6	70-130	30
Chlorobenzene	ND	10.0	10.5	105	10.0	10.1	101	5	70-120	30
Toluene	ND	10.0	9.66	97	10.0	9.14	91	6	70-130	30
Trichloroethene	ND	10.0	10.7	107	10.0	10.1	101	6	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	10.0	100	10.0	9.97	100	70-140
4-Bromofluorobenzene	10.0	10.2	102	10.0	10.0	100	70-130
Toluene-d8	10.0	10.3	103	10.0	10.1	101	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/21/11
Batch No. : 11K101	Date Extracted: 11/21/11 12:07
Sample ID: MBLK3W	Date Analyzed: 11/21/11 12:07
Lab Samp ID: VOF3K25B	Dilution Factor: 1
Lab File ID: RKR458	Matrix : WATER
Ext Btch ID: VOF3K25	% Moisture : NA
Calib. Ref.: RJR172	Instrument ID : F3

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.1	10.00	101	70-140
4-BROMOFLUOROBENZENE	9.66	10.00	96.6	70-130
TOLUENE-D8	9.87	10.00	98.7	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK3W				
LAB SAMP ID:	VOF3K25B	VOF3K25L	VOF3K25C		
LAB FILE ID:	RKR458	RKR455	RKR456		
DATE EXTRACTED:	11/21/1112:07	11/21/1110:17	11/21/1110:51	DATE COLLECTED:	NA
DATE ANALYZED:	11/21/1112:07	11/21/1110:17	11/21/1110:51	DATE RECEIVED:	11/21/11
PREP. BATCH:	VOF3K25	VOF3K25	VOF3K25		
CALIB. REF:	RJR172	RJR172	RJR172		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	8.40	84	10.0	8.59	86	2	60-130	30
Benzene	ND	10.0	10.1	101	10.0	10.6	106	4	70-130	30
Chlorobenzene	ND	10.0	10.9	109	10.0	10.8	108	1	70-120	30
Toluene	ND	10.0	9.88	99	10.0	10.4	104	5	70-130	30
Trichloroethene	ND	10.0	10.9	109	10.0	11.3	113	4	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	9.54	95	10.0	9.53	95	70-140
4-Bromofluorobenzene	10.0	9.98	100	10.0	10.3	103	70-130
Toluene-d8	10.0	10.2	102	10.0	10.4	104	70-130

INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RJR166
Instrument ID: F3
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K101
BFB Injection Date : 10/28/11
BFB Injection Time : 08:53
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.90
75	30.0 - 60.0% of mass 95	41.18
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.47
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	77.46
175	5.0 - 9.0% of mass 174	6.57(8.5)1
176	95.0 - 101.0% of mass 174	73.98(95.5)1
177	5.0 - 9.0% of mass 176	5.67(7.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	VOF3J281	RJR167	10/28/11	09:29
2	VSTD0.5	VOF3J282	RJR168	10/28/11	10:05
3	VSTD01	VOF3J283	RJR169	10/28/11	10:42
4	VSTD02	VOF3J284	RJR170	10/28/11	11:17
5	VSTD05	VOF3J285	RJR171	10/28/11	11:52
6	VSTD010	VOF3J286	RJR172	10/28/11	12:27
7	VSTD020	VOF3J287	RJR173	10/28/11	13:03
8	VSTD030	VOF3J288	RJR174	10/28/11	13:39
9	VSTD050	VOF3J289	RJR175	10/28/11	14:14
10	VSTD100	VOF3J2810	RJR176	10/28/11	14:49
11	VSTD010	IVOF3J281	RJR179	10/28/11	16:38

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :F3
Beginning DateTime :10/28/11 09:29
Spike Units :PPB
IC File :RJR172

Column Spec :ZB-624 ID :0.25MM
Ending DateTime :10/28/11 14:49
HPChem Method :VOF3J28

M	IDX	Parameters	.3 09:29 RJR167	.5 10:05 RJR168	1 10:42 RJR169	2 11:17 RJR170	5 11:52 RJR171	10 12:27 RJR172	20 13:03 RJR173	30 13:39 RJR174	50 14:14 RJR175	100 14:49 RJR176	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	0	15.7750
	2	Chlorotrifluoroethylene	------	0.186	0.186	0.194	0.198	0.200	0.202	0.210	0.196	0.204	0.197	4.04	4.5851
	3	Dichlorodifluoromethane	0.276	0.339	0.323	0.320	0.332	0.356	0.314	0.330	0.293	0.304	0.319	7.27	4.6930
	4	Chloromethane	0.406	0.441	0.487	0.477	0.502	0.533	0.469	0.500	0.443	0.471	0.473	7.67	5.2641
	5	2-Chloro-1,1,1-trifluoroethane	------	0.347	0.349	0.351	0.357	0.363	0.363	0.371	0.343	0.358	0.356	2.54	5.9301
	6	Vinyl chloride	0.333	0.395	0.425	0.428	0.443	0.472	0.416	0.433	0.376	0.399	0.412	9.32	5.6151
	7	Bromomethane	0.212	0.246	0.275	0.273	0.279	0.301	0.263	0.273	0.230	0.190	0.254	13.47	6.5906
	8	Chloroethane	0.178	0.201	0.210	0.215	0.214	0.231	0.202	0.200	0.167	0.156	0.197	11.74	6.8835
	9	Dichlorofluoromethane	0.642	0.662	0.670	0.594	0.668	0.683	0.624	0.621	0.577	0.564	0.631	6.60	7.4412
	10	Trichlorofluoromethane	0.319	0.400	0.414	0.410	0.431	0.459	0.400	0.427	0.373	0.393	0.403	9.33	7.5275
5	11	Acrolein	------	------	0.015	0.013	0.014	0.014	0.013	0.013	0.012	0.012	0.013	8.79	8.6850
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	0.198	0.212	0.230	0.215	0.228	0.240	0.221	0.225	0.215	0.220	0.220	5.29	8.8421
	13	1,1-Dichloroethene	0.564	0.628	0.599	0.534	0.585	0.596	0.536	0.541	0.512	0.521	0.562	6.92	8.9016
5	14	Acetone	------	0.047	0.042	0.038	0.041	0.039	0.039	0.039	0.036	0.034	0.039	9.15	9.0696
	15	Iodomethane	0.515	0.494	0.568	0.513	0.546	0.585	0.551	0.556	0.525	0.539	0.539	5.14	9.3506
	16	Methyl acetate	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	17	Carbon disulfide	0.927	1.172	1.151	1.180	1.230	1.235	1.183	1.145	1.113	1.118	1.146	7.58	9.5053
	18	Methylene chloride	0.506	0.501	0.483	0.440	0.471	0.475	0.427	0.429	0.397	0.396	0.453	8.89	10.1522
5	19	tert-Butyl alcohol	------	0.010	0.010	0.011	0.012	0.011	0.012	0.012	0.012	0.010	0.011	7.17	10.3931
	20	tert-Butyl methyl ether (MTBE)	0.508	0.507	0.517	0.477	0.526	0.518	0.487	0.507	0.456	0.460	0.496	4.99	10.6876
	21	trans-1,2-Dichloroethene	0.580	0.590	0.625	0.557	0.604	0.611	0.546	0.555	0.503	0.499	0.567	7.60	10.7753
5	22	Acrylonitrile	0.043	0.046	0.049	0.048	0.049	0.051	0.048	0.050	0.046	0.044	0.047	5.46	10.8140
	23	Isopropyl ether (DIPE)	1.202	1.294	1.297	1.245	1.336	1.337	1.224	1.231	1.097	1.045	1.231	7.86	11.8222
	24	1,1-Dichloroethane	0.658	0.666	0.694	0.626	0.682	0.680	0.619	0.622	0.562	0.544	0.635	8.02	11.8579
	25	Vinyl acetate	------	0.240	0.317	0.375	0.456	0.442	0.400	0.433	0.368	0.376	0.379	17.90	11.8967
	26	tert-Butyl ethyl ether (ETBE)	0.778	0.798	0.810	0.770	0.842	0.852	0.787	0.808	0.743	0.724	0.791	5.07	12.7338
	27	2,2-Dichloropropane	0.350	0.334	0.312	0.272	0.284	0.279	0.240	0.233	------	------	0.288	14.48	13.2800
5	28	2-Butanone	------	0.058	0.064	0.061	0.071	0.072	0.068	0.069	0.062	0.059	0.065	7.89	13.3441
	29	cis-1,2-Dichloroethene	0.459	0.457	0.446	0.389	0.428	0.438	0.394	0.401	0.372	0.376	0.416	8.05	13.3331
	30	Bromochloromethane	0.263	0.293	0.293	0.271	0.290	0.296	0.263	0.263	0.241	0.233	0.271	8.27	13.9250
	31	Tetrahydrofurane	------	------	0.055	0.041	0.043	0.043	0.044	0.041	0.040	0.039	0.043	11.83	13.9939
	32	Chloroform	0.572	0.607	0.596	0.536	0.583	0.598	0.535	0.539	0.501	0.504	0.557	7.05	14.0648
	33	Dibromofluoromethane	0.302	0.308	0.299	0.321	0.265	0.288	0.301	0.313	0.293	0.295	0.299	5.11	14.4172
	34	1,1,1-Trichloroethane	0.437	0.427	0.439	0.406	0.431	0.433	0.396	0.399	0.361	0.346	0.407	8.03	14.4172
	35	Cyclohexane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	36	1,2-Dichloroethane-d4	------	------	------	------	0.177	0.199	0.200	0.205	0.193	0.187	0.193	5.26	15.0903
	37	tert-Amyl methyl ether (TAME)	0.124	0.126	0.126	0.113	0.130	0.135	0.123	0.125	0.115	0.116	0.123	5.64	15.2321
	38	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	0	19.8035
	39	1,1-Dichloropropene	0.216	0.245	0.238	0.221	0.234	0.239	0.225	0.229	0.211	0.215	0.227	5.09	14.7354
	40	Carbon tetrachloride	0.397	0.428	0.455	0.417	0.443	0.458	0.440	0.444	0.406	0.415	0.430	4.88	14.7369
	41	Benzene	1.740	1.830	1.800	1.641	1.751	1.760	1.593	1.620	1.484	1.455	1.667	7.80	15.1504
	42	1,2-Dichloroethane	0.300	0.319	0.316	0.300	0.313	0.322	0.299	0.302	0.272	0.273	0.302	5.87	15.2292
	43	Trichloroethene	0.440	0.477	0.452	0.434	0.452	0.466	0.442	0.457	0.428	0.428	0.448	3.60	16.2300
	44	Methylcyclohexane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	45	1,2-Dichloropropane	0.407	0.416	0.428	0.397	0.435	0.428	0.401	0.410	0.374	0.369	0.407	5.44	16.6122
20	46	1,4-Dioxane	------	------	------	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8.90	16.7990
	47	Dibromomethane	0.173	0.180	0.179	0.170	0.181	0.187	0.175	0.179	0.169	0.171	0.176	3.25	16.8323
	48	Bromodichloromethane	0.470	0.467	0.470	0.449	0.485	0.494	0.472	0.469	0.433	0.433	0.464	4.40	17.0286
	49	2-Chloroethyl vinyl ether	------	0.101	0.099	0.098	0.110	0.119	0.119	0.121	0.114	0.115	0.110	8.19	17.3775
	50	cis-1,3-Dichloropropene	0.532	0.549	0.560	0.529	0.568	0.589	0.543	0.550	0.504	0.503	0.543	4.99	17.6278
5	51	4-Methyl-2-pentanone	0.164	0.181	0.182	0.189	0.207	0.210	0.205	0.205	0.179	0.174	0.190	8.55	17.7751
	52	Toluene-d8	1.532	1.487	1.435	1.533	1.187	1.334	1.376	------	------	------	1.412	8.82	17.9630
	53	Toluene	1.834	1.919	1.801	1.708	1.775	1.774	1.652	1.626	------	------	1.761	5.48	18.0555
	54	Ethyl methacrylate	0.266	0.294	0.297	0.287	0.316	0.318	0.295	0.307	0.282	0.271	0.293	5.97	18.3565
	55	trans-1,3-Dichloropropene	0.359	0.379	0.387	0.375	0.410	0.410	0.373	0.388	0.353	0.344	0.378	5.85	18.3595
	56	1,1,2-Trichloroethane	0.213	0.239	0.223	0.221	0.231	0.235	0.223	0.229	0.210	0.214	0.224	4.33	18.6168
	57	Tetrachloroethene	0.381	0.400	0.392	0.363	0.380	0.394	0.380	0.388	0.366	0.367	0.381	3.34	18.7685
5	58	2-Hexanone	0.090	0.107	0.116	0.122	0.131	0.133	0.130	0.133	0.119	0.110	0.119	11.61	18.8443

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	59	1,3-Dichloropropane	0.375	0.394	0.384	0.366	0.394	0.391	0.366	0.373	0.339	0.332	0.371	5.82	18.8324
	60	Dibromochloromethane	0.237	0.258	0.254	0.250	0.274	0.282	0.276	0.285	0.268	0.269	0.265	5.79	19.1477
	61	1,2-Dibromoethane	0.221	0.223	0.235	0.237	0.247	0.245	0.243	0.253	0.237	0.235	0.238	4.26	19.3113
	62	1-Chlorohexane	0.756	0.770	0.759	0.693	0.736	0.764	0.691	0.700	0.645	0.614	0.713	7.51	19.6905
	63	Chlorobenzene	0.967	1.007	0.988	0.928	0.996	1.032	0.976	0.983	0.908	0.901	0.969	4.47	19.8347
	64	Ethylbenzene	1.894	2.042	1.969	1.836	1.946	1.949	1.817	1.764	------	------	1.902	4.83	19.8939
	65	1,1,1,2-Tetrachloroethane	0.292	0.314	0.312	0.297	0.312	0.325	0.310	0.312	0.286	0.288	0.305	4.25	19.9195
2	66	m-Xylene & p-Xylene	1.420	1.490	1.439	1.351	1.419	1.401	1.272	1.258	------	------	1.381	5.90	20.0129
	67	o-Xylene	1.439	1.514	1.410	1.313	1.385	1.406	1.314	1.304	1.161	1.011	1.326	11.01	20.4876
	68	Styrene	1.094	1.130	1.105	1.078	1.141	1.155	1.105	1.108	1.011	0.907	1.084	6.79	20.5054
	69	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	0	22.7688
	70	Bromoform	0.304	0.346	0.372	0.347	0.396	0.423	0.414	0.452	0.424	0.453	0.393	12.61	20.8296
	71	Isopropylbenzene	4.634	4.916	4.796	4.318	4.673	4.755	4.308	4.478	------	------	4.610	4.84	20.8587
	72	4-Bromofluorobenzene	------	------	1.196	1.236	0.951	1.072	1.141	1.177	1.075	1.080	1.116	8.11	21.0967
	73	1,1,2,2-Tetrachloroethane	0.680	0.680	0.694	0.642	0.683	0.682	0.651	0.666	0.611	0.605	0.659	4.73	21.2311
	74	trans-1,4-Dichloro-2-butene	0.164	0.159	0.162	0.151	0.163	0.168	0.161	0.159	0.147	0.146	0.158	4.61	21.2653
	75	n-Propylbenzene	6.056	6.367	6.346	5.535	5.901	6.027	5.477	5.380	------	------	5.886	6.54	21.2936
	76	1,2,3-Trichloropropane	0.125	0.154	0.142	0.139	0.147	0.151	0.143	0.146	0.135	0.131	0.141	6.36	21.3055
	77	Bromobenzene	1.011	1.097	1.067	0.970	1.035	1.068	1.010	1.039	0.972	0.969	1.024	4.41	21.3084
	78	1,3,5-Trimethylbenzene	3.677	4.026	4.002	3.503	3.671	3.889	3.604	3.479	3.318	2.950	3.612	9.06	21.4482
	79	2-Chlorotoluene	3.503	3.718	3.584	3.204	3.392	3.574	3.251	3.244	2.952	2.753	3.318	9.05	21.4631
	80	4-Chlorotoluene	3.087	3.179	3.162	2.826	3.039	3.105	2.902	2.912	2.702	2.581	2.949	6.83	21.5732
	81	tert-Butylbenzene	0.776	0.841	0.791	0.721	0.785	0.792	0.762	0.782	0.730	0.721	0.770	4.88	21.8260
	82	1,2,4-Trimethylbenzene	3.707	3.953	3.810	3.386	3.687	3.697	3.406	3.477	3.224	2.897	3.524	8.84	21.8706
	83	sec-Butylbenzene	5.168	5.383	5.377	4.787	5.216	5.182	4.858	4.967	4.544	------	5.053	5.62	22.0388
	84	p-Isopropyltoluene	3.826	4.116	3.971	3.553	3.847	3.839	3.728	3.740	3.443	3.074	3.714	7.94	22.1591
	85	1,3-Dichlorobenzene	1.856	2.011	1.955	1.724	1.896	1.950	1.810	1.872	1.785	1.764	1.862	4.97	22.2721
	86	1,4-Dichlorobenzene	1.741	1.885	1.853	1.699	1.790	1.844	1.733	1.765	1.650	1.672	1.763	4.51	22.3613
	87	Benzyl Chloride	------	1.006	0.843	0.779	0.855	0.852	0.814	------	------	------	0.858	9.06	22.4813
	88	n-Butylbenzene	3.974	4.175	4.184	3.761	3.907	4.125	3.771	3.783	3.442	3.127	3.825	8.77	22.6007
	89	1,2-Dichlorobenzene	1.493	1.599	1.537	1.390	1.521	1.511	1.460	1.491	1.406	1.417	1.482	4.39	22.7926
	90	1,2-Dibromo-3-chloropropane	------	0.094	0.086	0.092	0.096	0.104	0.102	0.110	0.104	0.107	0.099	7.93	23.6861
	91	1,2,4-Trichlorobenzene	0.893	0.971	0.975	0.899	0.995	1.053	0.974	1.049	1.029	1.091	0.993	6.52	24.6842
	92	Hexachlorobutadiene	0.552	0.604	0.608	0.561	0.608	0.662	0.585	0.626	0.614	0.652	0.607	5.77	24.8002
	93	Naphthalene	1.277	1.303	1.300	1.209	1.284	1.381	1.287	------	------	------	1.292	3.93	25.0841
	94	1,2,3-Trichlorobenzene	0.672	0.753	0.751	0.702	0.802	0.847	0.757	0.836	0.822	0.867	0.781	8.22	25.4248

Spike Amount = Nominal Amount * M
Ave_%RSD : 7 Max_%RSD : 17.9

Use Least Square Linear Regression with weighting factor of inverse concentration for comps with %_RSD > 15
Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
25	Vinyl acetate	-0.00248	0.38937	0.9973

Sa

SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :F3
IC_Beginning DateTime :10/28/11 09:29
Spike Amount :10 PPB
CC/CV File :RJR179
IC File :RJR172

Column Spec :ZB-624 ID :0.25MM
IC_Ending DateTime :10/28/11 14:49
HPChem Method :VOF3J28
Date_Time :10/28/11 16:38

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	2012890	1	1	15.790	15.775	0				
	2	Chlorotrifluoroethylene	9.505	-4.9	377604	0.188	0.197	4.592	4.585	4.04				
	3	Dichlorodifluoromethane	9.353	-6.5	600155	0.298	0.319	4.696	4.693	7.27				
	4	Chloromethane	9.322	-6.8	887497	0.441	0.473	5.276	5.264	7.67				
	5	2-Chloro-1,1,1-trifluoroethane	9.517	-4.8	681524	0.339	0.356	5.945	5.930	2.54				
	6	Vinyl chloride	9.306	-6.9	771685	0.383	0.412	5.618	5.615	9.32				
	7	Bromomethane	9.648	-3.5	493573	0.245	0.254	6.600	6.591	13.47				
	8	Chloroethane	9.365	-6.4	372296	0.185	0.197	6.897	6.884	11.74				
	9	Dichlorofluoromethane	9.693	-3.1	1230211	0.611	0.631	7.447	7.441	6.60				
	10	Trichlorofluoromethane	9.743	-2.6	789386	0.392	0.403	7.537	7.528	9.33				
5	11	Acrolein	46.583	-6.8	124491	0.012	0.013	8.697	8.685	8.79				
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	10.477	4.8	464706	0.231	0.220	8.875	8.842	5.29				
	13	1,1-Dichloroethene	9.536	-4.6	1077906	0.536	0.562	8.890	8.902	6.92				
5	14	Acetone	41.147	-17.7	325627	0.032	0.039	9.068	9.070	9.15				
	15	Iodomethane	10.347	3.5	1123271	0.558	0.539	9.336	9.351	5.14				
	16	Methyl acetate												
	17	Carbon disulfide	10.531	5.3	2428455	1.206	1.146	9.514	9.505	7.58				
	18	Methylene chloride	8.879	-11.2	808972	0.402	0.453	10.154	10.152	8.89				
5	19	tert-Butyl alcohol	43.080	-13.8	96419	0.010	0.011	10.392	10.393	7.17				
	20	tert-Butyl methyl ether (MTBE)	8.683	-13.2	867551	0.431	0.496	10.704	10.688	4.99				
	21	trans-1,2-Dichloroethene	9.531	-4.7	1088124	0.541	0.567	10.778	10.775	7.60				
5	22	Acrylonitrile	44.535	-10.9	424525	0.042	0.047	10.823	10.814	5.46				
	23	Isopropyl ether (DIPE)	9.095	-9.0	2253553	1.120	1.231	11.834	11.822	7.86				
	24	1,1-Dichloroethane	9.546	-4.5	1220900	0.607	0.635	11.864	11.858	8.02				
	25	Vinyl acetate	9.897	-1.0	770751	0.383	0.379	11.909	11.897	17.90	-0.0025	0.3894		0.9973
	26	tert-Butyl ethyl ether (ETBE)	8.957	-10.4	1426593	0.709	0.791	12.741	12.734	5.07				
	27	2,2-Dichloropropane	9.830	-1.7	569787	0.283	0.288	13.292	13.280	14.48				
5	28	2-Butanone	44.150	-11.7	577455	0.057	0.065	13.351	13.344	7.89				
	29	cis-1,2-Dichloroethene	9.439	-5.6	790508	0.393	0.416	13.336	13.333	8.05				
	30	Bromochloromethane	9.180	-8.2	500059	0.248	0.271	13.931	13.925	8.27				
	31	Tetrahydrofurane	8.305	-16.9	72178	0.036	0.043	13.991	13.994	11.83				
	32	Chloroform	9.426	-5.7	1056971	0.525	0.557	14.080	14.065	7.05				
	33	Dibromofluoromethane	9.670	-3.3	581283	0.289	0.299	14.422	14.417	5.11				
	34	1,1,1-Trichloroethane	9.803	-2.0	803885	0.399	0.407	14.422	14.417	8.03				
	35	Cyclohexane												
	36	1,2-Dichloroethane-d4	9.268	-7.3	360824	0.179	0.193	15.091	15.090	5.26				
	37	tert-Amyl methyl ether (TAME)	8.892	-11.1	220814	0.110	0.123	15.240	15.232	5.64				
	38	CHLOROBENZENE-D5	10.000	0	1532962	1	1	19.805	19.803	0				
	39	1,1-Dichloropropene	10.319	3.2	359793	0.235	0.227	14.734	14.735	5.09				
	40	Carbon tetrachloride	10.288	2.9	678799	0.443	0.430	14.749	14.737	4.88				
	41	Benzene	9.947	-0.5	2542602	1.659	1.667	15.151	15.150	7.80				
	42	1,2-Dichloroethane	9.652	-3.5	446447	0.291	0.302	15.240	15.229	5.87				
	43	Trichloroethene	10.300	3.0	706738	0.461	0.448	16.236	16.230	3.60				
	44	Methylcyclohexane												
	45	1,2-Dichloropropane	9.824	-1.8	612274	0.399	0.407	16.623	16.612	5.44				
20	46	1,4-Dioxane	195.792	-2.1	37776	0.001	0.001	16.801	16.799	8.90				
	47	Dibromomethane	9.607	-3.9	259845	0.170	0.176	16.846	16.832	3.25				
	48	Bromodichloromethane	9.870	-1.3	702434	0.458	0.464	17.039	17.029	4.40				
	49	2-Chloroethyl vinyl ether	9.017	-9.8	152737	0.100	0.110	17.381	17.378	8.19				
	50	cis-1,3-Dichloropropene	9.753	-2.5	811314	0.529	0.543	17.634	17.628	4.99				
5	51	4-Methyl-2-pentanone	45.890	-8.2	1334515	0.174	0.190	17.783	17.775	8.55				
	52	Toluene-d8	10.164	1.6	2200117	1.435	1.412	17.976	17.963	8.82				
	53	Toluene	9.686	-3.1	2615147	1.706	1.761	18.065	18.056	5.48				
	54	Ethyl methacrylate	9.402	-6.0	422751	0.276	0.293	18.363	18.357	5.97				
	55	trans-1,3-Dichloropropene	9.874	-1.3	571930	0.373	0.378	18.363	18.360	5.85				
	56	1,1,2-Trichloroethane	9.533	-4.7	327169	0.213	0.224	18.616	18.617	4.33				
	57	Tetrachloroethene	10.569	5.7	617316	0.403	0.381	18.779	18.768	3.34				
5	58	2-Hexanone	47.819	-4.4	872907	0.114	0.119	18.839	18.844	11.61				
	59	1,3-Dichloropropane	9.548	-4.5	543517	0.355	0.371	18.839	18.832	5.82				

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	60	Dibromochloromethane	10.088	0.9	410242	0.268	0.265	19.151	19.148	5.79				
	61	1,2-Dibromoethane	9.992	-0.1	364096	0.238	0.238	19.315	19.311	4.26				
	62	1-Chlorohexane	10.118	1.2	1105870	0.721	0.713	19.701	19.691	7.51				
	63	Chlorobenzene	10.126	1.3	1503588	0.981	0.969	19.835	19.835	4.47				
	64	Ethylbenzene	9.880	-1.2	2880813	1.879	1.902	19.895	19.894	4.83				
	65	1,1,1,2-Tetrachloroethane	10.191	1.9	476367	0.311	0.305	19.924	19.920	4.25				
2	66	m-Xylene & p-Xylene	19.576	-2.1	4145694	1.352	1.381	20.013	20.013	5.90				
	67	o-Xylene	10.036	0.4	2039637	1.331	1.326	20.489	20.488	11.01				
	68	Styrene	10.228	2.3	1698928	1.108	1.084	20.504	20.505	6.79				
	69	1,2-DICHLOROBENZENE-D4	10.000	0	567325	1	1	22.765	22.769	0				
	70	Bromoform	10.252	2.5	228627	0.403	0.393	20.831	20.830	12.61				
	71	Isopropylbenzene	10.051	0.5	2628516	4.633	4.610	20.861	20.859	4.84				
	72	4-Bromofluorobenzene	10.204	2.0	646152	1.139	1.116	21.099	21.097	8.11				
	73	1,1,2,2-Tetrachloroethane	9.128	-8.7	341521	0.602	0.659	21.233	21.231	4.73				
	74	trans-1,4-Dichloro-2-butene	9.618	-3.8	86253	0.152	0.158	21.263	21.265	4.61				
	75	n-Propylbenzene	9.999	-0.0	3339059	5.886	5.886	21.292	21.294	6.54				
	76	1,2,3-Trichloropropane	9.709	-2.9	77905	0.137	0.141	21.307	21.306	6.36				
	77	Bromobenzene	10.244	2.4	595100	1.049	1.024	21.307	21.308	4.41				
	78	1,3,5-Trimethylbenzene	10.695	6.9	2191775	3.863	3.612	21.456	21.448	9.06				
	79	2-Chlorotoluene	10.510	5.1	1978303	3.487	3.318	21.471	21.463	9.05				
	80	4-Chlorotoluene	10.196	2.0	1706128	3.007	2.949	21.575	21.573	6.83				
	81	tert-Butylbenzene	10.603	6.0	463252	0.817	0.770	21.828	21.826	4.88				
	82	1,2,4-Trimethylbenzene	10.235	2.3	2046513	3.607	3.524	21.872	21.871	8.84				
	83	sec-Butylbenzene	10.276	2.8	2946187	5.193	5.053	22.036	22.039	5.62				
	84	p-Isopropyltoluene	10.439	4.4	2199425	3.877	3.714	22.170	22.159	7.94				
	85	1,3-Dichlorobenzene	10.192	1.9	1076848	1.898	1.862	22.274	22.272	4.97				
	86	1,4-Dichlorobenzene	10.067	0.7	1007100	1.775	1.763	22.363	22.361	4.51				
	87	Benzyl Chloride	10.574	5.7	514777	0.907	0.858	22.482	22.481	9.06				
	88	n-Butylbenzene	10.619	6.2	2304402	4.062	3.825	22.601	22.601	8.77				
	89	1,2-Dichlorobenzene	10.087	0.9	848364	1.495	1.482	22.794	22.793	4.39				
	90	1,2-Dibromo-3-chloropropane	9.595	-4.0	54140	0.095	0.099	23.701	23.686	7.93				
	91	1,2,4-Trichlorobenzene	10.636	6.4	599193	1.056	0.993	24.683	24.684	6.52				
	92	Hexachlorobutadiene	10.992	9.9	378712	0.668	0.607	24.802	24.800	5.77				
	93	Naphthalene	9.602	-4.0	703686	1.240	1.292	25.084	25.084	3.93				
	94	1,2,3-Trichlorobenzene	10.196	2.0	451791	0.796	0.781	25.427	25.425	8.22				

Spike Amount = Nominal Amount * M

Su
11/11

2025

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKR373
Instrument ID: F3
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K101
BFB Injection Date : 11/16/11
BFB Injection Time : 21:16
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.44
75	30.0 - 60.0% of mass 95	39.72
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.06
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	94.97
175	5.0 - 9.0% of mass 174	8.43(8.9)1
176	95.0 - 101.0% of mass 174	90.67(95.5)1
177	5.0 - 9.0% of mass 176	6.22(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CVOF3J2820	RKR374	11/16/11	21:51
2	MBLK1W	VOF3K21B	RKR378	11/17/11	00:09
3	LCS1W	VOF3K21L	RKR375	11/16/11	22:25
4	LCD1W	VOF3K21C	RKR376	11/16/11	23:00
5	IR-70-RDO-5-117	K101-01	RKR387	11/17/11	05:23
6	MW-70-MNA06-118	K101-02	RKR388	11/17/11	05:58

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RJR172
Instrument ID: F3
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K101
Date Analyzed: 10/28/11
Time Analyzed: 12:27
Heated Purge: (Y/N) N

	IS1(DBF)		IS2(CBZ)		IS3(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	1826316	15.77	1483166	19.80	565088	22.76
UPPER LIMIT	3652632	16.27	2966332	20.30	1130176	23.26
LOWER LIMIT	913158	15.27	741583	19.30	282544	22.26
SAMPLE ID						
1 VSTD010	1747073	15.77	1351327	19.80	501825	22.76
2 MBLK1W	1855026	15.77	1426371	19.80	518196	22.76
3 LCS1W	1752572	15.77	1393657	19.80	512077	22.76
4 LCD1W	1722530	15.77	1291286	19.80	484667	22.76
5 IR-70-RDO-5-117	1511665	15.77	1200555	19.80	461835	22.76
6 MW-70-MNA06-118	1714749	15.78	1380484	19.79	524645	22.77

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11K16\RKR374.D Vial: 2
Acq On : 16 Nov 2011 9:51 pm Operator: MW
Sample : CVOF3J2820 Inst : F3
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : C:\HPCHEM\1\METHODS\VOF3J28.M (RTE Integrator)
Title : METHOD 8260 25ML
Last Update : Mon Oct 31 09:14:46 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	96	0.00
2	T,M	Chlorotrifluoroethylene	10.000	0.000	100.0#	0	-4.59#
3	T,M	Dichlorodifluoromethane	10.000	9.080	9.2	78	0.00
4	P,T,M	Chloromethane	10.000	9.097	9.0	77	0.00
5	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	0.000	100.0#	0	-5.93#
6	C,T,M	Vinyl chloride	10.000	8.800	12.0	74	-0.02
7	T,M	Bromomethane	10.000	9.144	8.6	74	0.00
8	T,M	Chloroethane	10.000	9.664	3.4	79	-0.02
9	T,M	Dichlorofluoromethane	10.000	9.656	3.4	85	0.00
10	T,M	Trichlorofluoromethane	10.000	10.954	-9.5	92	0.00
11	T,M	Acrolein	50.000	34.955	30.1#	63	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	10.411	-4.1	91	0.01
13	C,T,M	1,1-Dichloroethene	10.000	9.040	9.6	81	-0.02
14	T,M	Acetone	50.000	45.167	9.7	86	0.00
15	T,M	Iodomethane	10.000	9.342	6.6	82	-0.02
16	T,M	Methyl acetate	-1.000	0.000	0.0	143	-0.02
17	T,M	Carbon disulfide	10.000	10.032	-0.3	89	-0.02
18	T,M	Methylene chloride	10.000	8.966	10.3	82	-0.02
19	T,M	tert-Butyl alcohol	50.000	37.760	24.5#	70	0.00
20	T,M	tert-Butyl methyl ether (MT	10.000	8.723	12.8	80	-0.02
21	T,M	trans-1,2-Dichloroethene	10.000	9.031	9.7	80	-0.02
22	T,M	Acrylonitrile	50.000	48.443	3.1	86	0.00
23	T,M	Isopropyl ether (DIPE)	10.000	9.314	6.9	82	0.00
24	P,T,M	1,1-Dichloroethane	10.000	9.532	4.7	85	-0.02
25	T,M	Vinyl acetate	10.000	9.705	2.9	81	0.00
26	T,M	tert-Butyl ethyl ether (ETB	10.000	8.935	10.6	79	-0.02
27	T,M	2,2-Dichloropropane	10.000	9.661	3.4	95	0.00
28	T,M	2-Butanone	50.000	48.645	2.7	84	0.00
29	T,M	cis-1,2-Dichloroethene	10.000	9.460	5.4	86	-0.02
30	T,M	Bromochloromethane	10.000	9.311	6.9	81	-0.02
31	T,M	Tetrahydrofurane	10.000	8.272	17.3	79	0.00
32	C,T,M	Chloroform	10.000	9.636	3.6	86	0.00
33	S	Dibromofluoromethane	10.000	10.231	-2.3	101	-0.02
34	T,M	1,1,1-Trichloroethane	10.000	9.966	0.3	90	-0.02
35	T,M	Cyclohexane	-1.000	0.000	0.0	94	0.01
36	S	1,2-Dichloroethane-d4	10.000	9.869	1.3	92	0.00
37	T,M	tert-Amyl methyl ether (TAM	10.000	9.021	9.8	79	0.00
38	I	CHLOROBENZENE-D5	10.000	10.000	0.0	91	0.00
39	T,M	1,1-Dichloropropene	10.000	9.835	1.6	85	0.00
40	T,M	Carbon tetrachloride	10.000	9.901	1.0	85	0.00

(#) = Out of Range

2029

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11K16\RKR374.D Vial: 2
Acq On : 16 Nov 2011 9:51 pm Operator: MW
Sample : CVOF3J2820 Inst : F3
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : C:\HPCHEM\1\METHODS\VOF3J28.M (RTE Integrator)
Title : METHOD 8260 25ML
Last Update : Mon Oct 31 09:14:46 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Benzene	10.000	9.601	4.0	83	0.00
42	T,M	1,2-Dichloroethane	10.000	9.502	5.0	81	0.00
43	T,M	Trichloroethene	10.000	10.335	-3.4	90	-0.02
44	T,M	Methylcyclohexane	-1.000	0.000	0.0	88	-0.02
45	C,T,M	1,2-Dichloropropane	10.000	9.828	1.7	85	0.00
46	T,M	1,4-Dioxane	200.000	166.165	16.9	79	0.00
47	T,M	Dibromomethane	10.000	9.534	4.7	82	0.00
48	T,M	Bromodichloromethane	10.000	9.980	0.2	85	0.00
49	T,M	2-Chloroethyl vinyl ether	10.000	9.592	4.1	81	-0.02
50	T,M	cis-1,3-Dichloropropene	10.000	9.671	3.3	81	0.00
51	T,M	4-Methyl-2-pentanone	50.000	50.843	-1.7	84	0.00
52	S	Toluene-d8	10.000	9.965	0.4	96	0.00
53	C,T,M	Toluene	10.000	9.309	6.9	84	0.00
54	T,M	Ethyl methacrylate	10.000	9.192	8.1	77	0.00
55	T,M	trans-1,3-Dichloropropene	10.000	9.584	4.2	80	-0.02
56	T,M	1,1,2-Trichloroethane	10.000	9.721	2.8	84	0.00
57	T,M	Tetrachloroethene	10.000	10.155	-1.5	89	0.00
58	T,M	2-Hexanone	50.000	52.010	-4.0	85	0.00
59	T,M	1,3-Dichloropropane	10.000	9.687	3.1	84	0.00
60	T,M	Dibromochloromethane	10.000	10.085	-0.9	87	-0.02
61	T,M	1,2-Dibromoethane	10.000	9.836	1.6	87	-0.02
62	T,M	1-Chlorohexane	10.000	9.713	2.9	83	0.00
63	P,M	Chlorobenzene	10.000	10.141	-1.4	87	0.00
64	C,T,M	Ethylbenzene	10.000	9.345	6.5	83	0.00
65	T,M	1,1,1,2-Tetrachloroethane	10.000	10.091	-0.9	86	-0.02
66	T,M	m-Xylene & p-Xylene	20.000	18.714	6.4	84	0.00
67	T,M	o-Xylene	10.000	9.764	2.4	84	0.00
68	T,M	Styrene	10.000	10.122	-1.2	87	0.00
69	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	89	0.00
70	P,T,M	Bromoform	10.000	10.437	-4.4	86	-0.02
71	T,M	Isopropylbenzene	10.000	9.931	0.7	86	0.00
72	S	4-Bromofluorobenzene	10.000	10.067	-0.7	93	0.00
73	P,T,M	1,1,2,2-Tetrachloroethane	10.000	9.239	7.6	79	0.00
74	T,M	trans-1,4-Dichloro-2-butene	10.000	8.357	16.4	70	0.00
75	T,M	n-Propylbenzene	10.000	9.564	4.4	83	0.00
76	T,M	1,2,3-Trichloropropane	10.000	9.668	3.3	80	0.00
77	T,M	Bromobenzene	10.000	10.117	-1.2	86	0.00
78	T,M	1,3,5-Trimethylbenzene	10.000	10.153	-1.5	84	0.00
79	T,M	2-Chlorotoluene	10.000	10.127	-1.3	83	0.00
80	T,M	4-Chlorotoluene	10.000	9.972	0.3	84	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11K16\RKR374.D Vial: 2
Acq On : 16 Nov 2011 9:51 pm Operator: MW
Sample : CVOF3J2820 Inst : F3
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : C:\HPCHEM\1\METHODS\VOF3J28.M (RTE Integrator)
Title : METHOD 8260 25ML
Last Update : Mon Oct 31 09:14:46 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	tert-Butylbenzene	10.000	10.182	-1.8	88	-0.02
82	T,M	1,2,4-Trimethylbenzene	10.000	9.936	0.6	84	-0.02
83	T,M	sec-Butylbenzene	10.000	10.061	-0.6	87	0.00
84	T,M	p-Isopropyltoluene	10.000	10.239	-2.4	88	0.00
85	T,M	1,3-Dichlorobenzene	10.000	10.045	-0.4	85	-0.02
86	T,M	1,4-Dichlorobenzene	10.000	10.108	-1.1	86	-0.02
87	T,M	Benzyl Chloride	10.000	9.205	7.9	82	0.00
88	T,M	n-Butylbenzene	10.000	10.156	-1.6	84	0.00
89	T,M	1,2-Dichlorobenzene	10.000	10.004	-0.0	87	0.00
90	T,M	1,2-Dibromo-3-chloropropane	10.000	9.392	6.1	80	0.00
91	T,M	1,2,4-Trichlorobenzene	10.000	10.525	-5.3	88	0.00
92	T,M	Hexachlorobutadiene	10.000	11.047	-10.5	90	-0.02
93	T,M	Naphthalene	10.000	9.908	0.9	82	0.00
94	T,M	1,2,3-Trichlorobenzene	10.000	10.174	-1.7	83	-0.02

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11K16\RKR374.D Vial: 2
Acq On : 16 Nov 2011 9:51 pm Operator: MW
Sample : CVOF3J2820 Inst : F3
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : C:\HPCHEM\1\METHODS\VOF3J28.M (RTE Integrator)
Title : METHOD 8260 25ML
Last Update : Mon Oct 31 09:14:46 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	96	0.00
2	T,M	Chlorotrifluoroethylene	0.197	0.000	100.0#	0#	-4.59#
3	T,M	Dichlorodifluoromethane	0.319	0.289	9.4	78	0.00
4	P,T,M	Chloromethane	0.473	0.430	9.1	77	0.00
5	T,M	2-Chloro-1,1,1-trifluoroeth	0.356	0.000	100.0#	0#	-5.93#
6	C,T,M	Vinyl chloride	0.412	0.363	11.9	74	-0.02
7	T,M	Bromomethane	0.254	0.232	8.7	74	0.00
8	T,M	Chloroethane	0.197	0.191	3.0	79	-0.02
9	T,M	Dichlorofluoromethane	0.631	0.609	3.5	85	0.00
10	T,M	Trichlorofluoromethane	0.403	0.441	-9.4	92	0.00
11	T,M	Acrolein	0.013	0.009	30.8#	63	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.220	0.229	-4.1	91	0.01
13	C,T,M	1,1-Dichloroethene	0.562	0.508	9.6	81	-0.02
14	T,M	Acetone	0.039	0.036	7.7	86	0.00
15	T,M	Iodomethane	0.539	0.504	6.5	82	-0.02
16	T,M	Methyl acetate	0.000	0.000	0.0	143	-0.02
17	T,M	Carbon disulfide	1.146	1.149	-0.3	89	-0.02
18	T,M	Methylene chloride	0.453	0.406	10.4	82	-0.02
19	T,M	tert-Butyl alcohol	0.011	0.008	27.3#	70	0.00
20	T,M	tert-Butyl methyl ether (MT	0.496	0.433	12.7	80	-0.02
21	T,M	trans-1,2-Dichloroethene	0.567	0.512	9.7	80	-0.02
22	T,M	Acrylonitrile	0.047	0.046	2.1	86	0.00
23	T,M	Isopropyl ether (DIPE)	1.231	1.146	6.9	82	0.00
24	P,T,M	1,1-Dichloroethane	0.635	0.606	4.6	85	-0.02
25	T,M	Vinyl acetate	0.379	0.375	1.1	81	0.00
26	T,M	tert-Butyl ethyl ether (ETB	0.791	0.707	10.6	79	-0.02
27	T,M	2,2-Dichloropropane	0.288	0.278	3.5	95	0.00
28	T,M	2-Butanone	0.065	0.063	3.1	84	0.00
29	T,M	cis-1,2-Dichloroethene	0.416	0.394	5.3	86	-0.02
30	T,M	Bromochloromethane	0.271	0.252	7.0	81	-0.02
31	T,M	Tetrahydrofurane	0.043	0.036	16.3	79	0.00
32	C,T,M	Chloroform	0.557	0.537	3.6	86	0.00
33	S	Dibromofluoromethane	0.299	0.306	-2.3	101	-0.02
34	T,M	1,1,1-Trichloroethane	0.407	0.406	0.2	90	-0.02
35	T,M	Cyclohexane	0.000	0.000	0.0	94	0.01
36	S	1,2-Dichloroethane-d4	0.193	0.191	1.0	92	0.00
37	T,M	tert-Amyl methyl ether (TAM	0.123	0.111	9.8	79	0.00
38	I	CHLOROBENZENE-D5	1.000	1.000	0.0	91	0.00
39	T,M	1,1-Dichloropropene	0.227	0.224	1.3	85	0.00
40	T,M	Carbon tetrachloride	0.430	0.426	0.9	85	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11K16\RKR374.D
Acq On : 16 Nov 2011 9:51 pm
Sample : CVOF3J2820
Misc : 10ppb 8260/50ppb TBA-KET-AA
MS Integration Params: 524INT.P

Vial: 2
Operator: MW
Inst : F3
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VOF3J28.M (RTE Integrator)
Title : METHOD 8260 25ML
Last Update : Mon Oct 31 09:14:46 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Benzene	1.667	1.601	4.0	83	0.00
42	T,M	1,2-Dichloroethane	0.302	0.287	5.0	81	0.00
43	T,M	Trichloroethene	0.448	0.463	-3.3	90	-0.02
44	T,M	Methylcyclohexane	0.000	0.000	0.0	88	-0.02
45	C,T,M	1,2-Dichloropropane	0.407	0.400	1.7	85	0.00
46	T,M	1,4-Dioxane	0.001	0.001	0.0	79	0.00
47	T,M	Dibromomethane	0.176	0.168	4.5	82	0.00
48	T,M	Bromodichloromethane	0.464	0.463	0.2	85	0.00
49	T,M	2-Chloroethyl vinyl ether	0.110	0.106	3.6	81	-0.02
50	T,M	cis-1,3-Dichloropropene	0.543	0.525	3.3	81	0.00
51	T,M	4-Methyl-2-pentanone	0.190	0.193	-1.6	84	0.00
52	S	Toluene-d8	1.412	1.407	0.4	96	0.00
53	C,T,M	Toluene	1.761	1.640	6.9	84	0.00
54	T,M	Ethyl methacrylate	0.293	0.270	7.8	77	0.00
55	T,M	trans-1,3-Dichloropropene	0.378	0.362	4.2	80	-0.02
56	T,M	1,1,2-Trichloroethane	0.224	0.218	2.7	84	0.00
57	T,M	Tetrachloroethene	0.381	0.387	-1.6	89	0.00
58	T,M	2-Hexanone	0.119	0.124	-4.2	85	0.00
59	T,M	1,3-Dichloropropane	0.371	0.360	3.0	84	0.00
60	T,M	Dibromochloromethane	0.265	0.268	-1.1	87	-0.02
61	T,M	1,2-Dibromoethane	0.238	0.234	1.7	87	-0.02
62	T,M	1-Chlorohexane	0.713	0.692	2.9	83	0.00
63	P,M	Chlorobenzene	0.969	0.982	-1.3	87	0.00
64	C,T,M	Ethylbenzene	1.902	1.777	6.6	83	0.00
65	T,M	1,1,1,2-Tetrachloroethane	0.305	0.308	-1.0	86	-0.02
66	T,M	m-Xylene & p-Xylene	1.381	1.293	6.4	84	0.00
67	T,M	o-Xylene	1.326	1.294	2.4	84	0.00
68	T,M	Styrene	1.084	1.097	-1.2	87	0.00
69	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	89	0.00
70	P,T,M	Bromoform	0.393	0.410	-4.3	86	-0.02
71	T,M	Isopropylbenzene	4.610	4.578	0.7	86	0.00
72	S	4-Bromofluorobenzene	1.116	1.124	-0.7	93	0.00
73	P,T,M	1,1,2,2-Tetrachloroethane	0.659	0.609	7.6	79	0.00
74	T,M	trans-1,4-Dichloro-2-butene	0.158	0.132	16.5	70	0.00
75	T,M	n-Propylbenzene	5.886	5.630	4.3	83	0.00
76	T,M	1,2,3-Trichloropropane	0.141	0.137	2.8	80	0.00
77	T,M	Bromobenzene	1.024	1.036	-1.2	86	0.00
78	T,M	1,3,5-Trimethylbenzene	3.612	3.667	-1.5	84	0.00
79	T,M	2-Chlorotoluene	3.318	3.360	-1.3	83	0.00
80	T,M	4-Chlorotoluene	2.949	2.941	0.3	84	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11K16\RKR374.D Vial: 2
Acq On : 16 Nov 2011 9:51 pm Operator: MW
Sample : CVOF3J2820 Inst : F3
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : C:\HPCHEM\1\METHODS\VOF3J28.M (RTE Integrator)
Title : METHOD 8260 25ML
Last Update : Mon Oct 31 09:14:46 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	tert-Butylbenzene	0.770	0.784	-1.8	88	-0.02
82	T,M	1,2,4-Trimethylbenzene	3.524	3.502	0.6	84	-0.02
83	T,M	sec-Butylbenzene	5.053	5.084	-0.6	87	0.00
84	T,M	p-Isopropyltoluene	3.714	3.802	-2.4	88	0.00
85	T,M	1,3-Dichlorobenzene	1.862	1.870	-0.4	85	-0.02
86	T,M	1,4-Dichlorobenzene	1.763	1.782	-1.1	86	-0.02
87	T,M	Benzyl Chloride	0.858	0.790	7.9	82	0.00
88	T,M	n-Butylbenzene	3.825	3.885	-1.6	84	0.00
89	T,M	1,2-Dichlorobenzene	1.482	1.483	-0.1	87	0.00
90	T,M	1,2-Dibromo-3-chloropropane	0.099	0.093	6.1	80	0.00
91	T,M	1,2,4-Trichlorobenzene	0.993	1.045	-5.2	88	0.00
92	T,M	Hexachlorobutadiene	0.607	0.671	-10.5	90	-0.02
93	T,M	Naphthalene	1.292	1.280	0.9	82	0.00
94	T,M	1,2,3-Trichlorobenzene	0.781	0.795	-1.8	83	-0.02

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKR389
Instrument ID: F3
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K101
BFB Injection Date : 11/17/11
BFB Injection Time : 06:33
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.68
75	30.0 - 60.0% of mass 95	40.11
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.41
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	86.10
175	5.0 - 9.0% of mass 174	7.59(8.8)1
176	95.0 - 101.0% of mass 174	83.11(96.5)1
177	5.0 - 9.0% of mass 176	6.08(7.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CVOF3J2821	RKR390	11/17/11	07:11
2	MBLK2W	VOF3K22B	RKR394	11/17/11	09:44
3	LCS2W	VOF3K22L	RKR391	11/17/11	07:54
4	LCD2W	VOF3K22C	RKR392	11/17/11	08:28
5	MW-70-MNA08-119	K101-03	RKR396	11/17/11	10:55
6	MW-70-MNA09-120	K101-04	RKR397	11/17/11	11:30
7	MW-70-MNA13-121	K101-05	RKR398	11/17/11	12:05
8	IR-70-TB-116	K101-06	RKR399	11/17/11	12:42

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RJR172
Instrument ID: F3
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K101
Date Analyzed: 10/28/11
Time Analyzed: 12:27
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1826316	15.77	1483166	19.80	565088	22.76
	UPPER LIMIT	3652632	16.27	2966332	20.30	1130176	23.26
	LOWER LIMIT	913158	15.27	741583	19.30	282544	22.26
	SAMPLE ID						
1	VSTD010	1631457	15.78	1258305	19.79	468581	22.77
2	MBLK2W	1805763	15.77	1428039	19.80	528907	22.76
3	LCS2W	1691046	15.78	1270581	19.79	469242	22.77
4	LCD2W	1734143	15.77	1353480	19.80	490505	22.76
5	MW-70-MNA08-119	1706214	15.78	1349319	19.81	488121	22.77
6	MW-70-MNA09-120	1753680	15.78	1403566	19.81	499344	22.77
7	MW-70-MNA13-121	1687371	15.77	1340831	19.80	471963	22.76
8	IR-70-TB-116	1702256	15.78	1367353	19.81	493334	22.77

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11K17\RKR390.D Vial: 2
Acq On : 17 Nov 2011 7:11 am Operator: MW
Sample : CVOF3J2821 Inst : F3
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : C:\HPCHEM\1\METHODS\VOF3J28.M (RTE Integrator)
Title : METHOD 8260 25ML
Last Update : Mon Oct 31 09:14:46 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	89	0.00
2	T,M	Chlorotrifluoroethylene	10.000	0.000	100.0#	0	-4.59#
3	T,M	Dichlorodifluoromethane	10.000	9.188	8.1	73	0.00
4	P,T,M	Chloromethane	10.000	9.294	7.1	74	0.00
5	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	0.000	100.0#	0	-5.93#
6	C,T,M	Vinyl chloride	10.000	8.773	12.3	68	-0.01
7	T,M	Bromomethane	10.000	9.132	8.7	69	0.00
8	T,M	Chloroethane	10.000	10.221	-2.2	78	-0.01
9	T,M	Dichlorofluoromethane	10.000	10.043	-0.4	83	0.00
10	T,M	Trichlorofluoromethane	10.000	11.261	-12.6	88	-0.03
11	T,M	Acrolein	50.000	38.588	22.8#	65	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	10.047	-0.5	82	0.00
13	C,T,M	1,1-Dichloroethene	10.000	9.319	6.8	78	-0.01
14	T,M	Acetone	50.000	48.700	2.6	87	-0.01
15	T,M	Iodomethane	10.000	9.163	8.4	75	-0.03
16	T,M	Methyl acetate	-1.000	0.000	0.0	129	-0.01
17	T,M	Carbon disulfide	10.000	9.545	4.6	79	-0.03
18	T,M	Methylene chloride	10.000	9.350	6.5	80	-0.01
19	T,M	tert-Butyl alcohol	50.000	44.579	10.8	77	-0.01
20	T,M	tert-Butyl methyl ether (MT	10.000	9.370	6.3	80	0.00
21	T,M	trans-1,2-Dichloroethene	10.000	9.358	6.4	78	-0.01
22	T,M	Acrylonitrile	50.000	52.514	-5.0	87	0.00
23	T,M	Isopropyl ether (DIPE)	10.000	9.770	2.3	80	-0.01
24	P,T,M	1,1-Dichloroethane	10.000	9.880	1.2	83	-0.01
25	T,M	Vinyl acetate	10.000	10.007	-0.1	78	-0.01
26	T,M	tert-Butyl ethyl ether (ETB	10.000	9.256	7.4	77	-0.01
27	T,M	2,2-Dichloropropane	10.000	10.260	-2.6	95	-0.01
28	T,M	2-Butanone	50.000	51.649	-3.3	83	0.00
29	T,M	cis-1,2-Dichloroethene	10.000	9.800	2.0	83	-0.01
30	T,M	Bromochloromethane	10.000	9.566	4.3	78	-0.01
31	T,M	Tetrahydrofurane	10.000	8.338	16.6	74	-0.01
32	C,T,M	Chloroform	10.000	9.989	0.1	83	0.00
33	S	Dibromofluoromethane	10.000	10.362	-3.6	96	-0.01
34	T,M	1,1,1-Trichloroethane	10.000	9.968	0.3	84	-0.01
35	T,M	Cyclohexane	-1.000	0.000	0.0	81	0.00
36	S	1,2-Dichloroethane-d4	10.000	10.107	-1.1	88	-0.01
37	T,M	tert-Amyl methyl ether (TAM	10.000	9.388	6.1	77	0.00
38	I	CHLOROBENZENE-D5	10.000	10.000	0.0	85	-0.01
39	T,M	1,1-Dichloropropene	10.000	10.078	-0.8	81	-0.01
40	T,M	Carbon tetrachloride	10.000	9.932	0.7	79	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11K17\RKR390.D Vial: 2
Acq On : 17 Nov 2011 7:11 am Operator: MW
Sample : CVOF3J2821 Inst : F3
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : C:\HPCHEM\1\METHODS\VOF3J28.M (RTE Integrator)
Title : METHOD 8260 25ML
Last Update : Mon Oct 31 09:14:46 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Benzene	10.000	10.063	-0.6	81	0.00
42	T,M	1,2-Dichloroethane	10.000	9.939	0.6	79	0.00
43	T,M	Trichloroethene	10.000	10.335	-3.4	84	-0.01
44	T,M	Methylcyclohexane	-1.000	0.000	0.0	70	-0.01
45	C,T,M	1,2-Dichloropropane	10.000	10.176	-1.8	82	0.00
46	T,M	1,4-Dioxane	200.000	195.560	2.2	87	0.00
47	T,M	Dibromomethane	10.000	9.936	0.6	80	0.00
48	T,M	Bromodichloromethane	10.000	10.474	-4.7	83	0.00
49	T,M	2-Chloroethyl vinyl ether	10.000	10.812	-8.1	85	-0.01
50	T,M	cis-1,3-Dichloropropene	10.000	10.290	-2.9	80	0.00
51	T,M	4-Methyl-2-pentanone	50.000	52.944	-5.9	81	0.00
52	S	Toluene-d8	10.000	10.026	-0.3	90	0.00
53	C,T,M	Toluene	10.000	9.548	4.5	80	0.00
54	T,M	Ethyl methacrylate	10.000	9.566	4.3	75	0.00
55	T,M	trans-1,3-Dichloropropene	10.000	10.231	-2.3	80	-0.01
56	T,M	1,1,2-Trichloroethane	10.000	10.268	-2.7	83	0.00
57	T,M	Tetrachloroethene	10.000	10.662	-6.6	87	0.00
58	T,M	2-Hexanone	50.000	53.279	-6.6	81	-0.01
59	T,M	1,3-Dichloropropane	10.000	9.896	1.0	80	0.00
60	T,M	Dibromochloromethane	10.000	10.970	-9.7	88	-0.01
61	T,M	1,2-Dibromoethane	10.000	10.162	-1.6	84	-0.01
62	T,M	1-Chlorohexane	10.000	9.929	0.7	79	0.00
63	P,M	Chlorobenzene	10.000	10.520	-5.2	84	0.00
64	C,T,M	Ethylbenzene	10.000	9.646	3.5	80	0.00
65	T,M	1,1,1,2-Tetrachloroethane	10.000	10.664	-6.6	85	-0.01
66	T,M	m-Xylene & p-Xylene	20.000	19.595	2.0	82	0.00
67	T,M	o-Xylene	10.000	10.255	-2.6	82	-0.01
68	T,M	Styrene	10.000	10.346	-3.5	82	0.00
69	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	83	0.00
70	P,T,M	Bromoform	10.000	11.059	-10.6	85	-0.01
71	T,M	Isopropylbenzene	10.000	10.169	-1.7	82	-0.01
72	S	4-Bromofluorobenzene	10.000	10.204	-2.0	88	-0.01
73	P,T,M	1,1,2,2-Tetrachloroethane	10.000	9.698	3.0	78	-0.01
74	T,M	trans-1,4-Dichloro-2-butene	10.000	9.189	8.1	72	0.00
75	T,M	n-Propylbenzene	10.000	9.878	1.2	80	0.00
76	T,M	1,2,3-Trichloropropane	10.000	10.168	-1.7	79	0.00
77	T,M	Bromobenzene	10.000	10.676	-6.8	85	0.00
78	T,M	1,3,5-Trimethylbenzene	10.000	10.220	-2.2	79	0.00
79	T,M	2-Chlorotoluene	10.000	10.224	-2.2	79	0.00
80	T,M	4-Chlorotoluene	10.000	10.134	-1.3	80	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11K17\RKR390.D Vial: 2
Acq On : 17 Nov 2011 7:11 am Operator: MW
Sample : CVOF3J2821 Inst : F3
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : C:\HPCHEM\1\METHODS\VOF3J28.M (RTE Integrator)
Title : METHOD 8260 25ML
Last Update : Mon Oct 31 09:14:46 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	tert-Butylbenzene	10.000	10.675	-6.8	86	-0.01
82	T,M	1,2,4-Trimethylbenzene	10.000	10.289	-2.9	81	-0.01
83	T,M	sec-Butylbenzene	10.000	10.136	-1.4	82	0.00
84	T,M	p-Isopropyltoluene	10.000	10.404	-4.0	83	0.00
85	T,M	1,3-Dichlorobenzene	10.000	10.383	-3.8	82	-0.01
86	T,M	1,4-Dichlorobenzene	10.000	10.414	-4.1	83	-0.01
87	T,M	Benzyl Chloride	10.000	10.699	-7.0	89	0.00
88	T,M	n-Butylbenzene	10.000	10.381	-3.8	80	0.00
89	T,M	1,2-Dichlorobenzene	10.000	10.398	-4.0	85	-0.01
90	T,M	1,2-Dibromo-3-chloropropane	10.000	10.168	-1.7	81	0.00
91	T,M	1,2,4-Trichlorobenzene	10.000	10.350	-3.5	81	0.00
92	T,M	Hexachlorobutadiene	10.000	10.873	-8.7	83	-0.01
93	T,M	Naphthalene	10.000	9.548	4.5	74	0.00
94	T,M	1,2,3-Trichlorobenzene	10.000	10.078	-0.8	77	-0.01

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11K17\RKR390.D Vial: 2
Acq On : 17 Nov 2011 7:11 am Operator: MW
Sample : CVOF3J2821 Inst : F3
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : C:\HPCHEM\1\METHODS\VOF3J28.M (RTE Integrator)
Title : METHOD 8260 25ML
Last Update : Mon Oct 31 09:14:46 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	89	0.00
2	T,M	Chlorotrifluoroethylene	0.197	0.000	100.0#	0#	-4.59#
3	T,M	Dichlorodifluoromethane	0.319	0.293	8.2	73	0.00
4	P,T,M	Chloromethane	0.473	0.440	7.0	74	0.00
5	T,M	2-Chloro-1,1,1-trifluoroeth	0.356	0.000	100.0#	0#	-5.93#
6	C,T,M	Vinyl chloride	0.412	0.361	12.4	68	-0.01
7	T,M	Bromomethane	0.254	0.232	8.7	69	0.00
8	T,M	Chloroethane	0.197	0.202	-2.5	78	-0.01
9	T,M	Dichlorofluoromethane	0.631	0.633	-0.3	83	0.00
10	T,M	Trichlorofluoromethane	0.403	0.453	-12.4	88	-0.03
11	T,M	Acrolein	0.013	0.010	23.1#	65	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.220	0.221	-0.5	82	0.00
13	C,T,M	1,1-Dichloroethene	0.562	0.523	6.9	78	-0.01
14	T,M	Acetone	0.039	0.038	2.6	87	-0.01
15	T,M	Iodomethane	0.539	0.494	8.3	75	-0.03
16	T,M	Methyl acetate	0.000	0.000	0.0	129	-0.01
17	T,M	Carbon disulfide	1.146	1.093	4.6	79	-0.03
18	T,M	Methylene chloride	0.453	0.423	6.6	80	-0.01
19	T,M	tert-Butyl alcohol	0.011	0.010	9.1	77	-0.01
20	T,M	tert-Butyl methyl ether (MT	0.496	0.465	6.2	80	0.00
21	T,M	trans-1,2-Dichloroethene	0.567	0.531	6.3	78	-0.01
22	T,M	Acrylonitrile	0.047	0.050	-6.4	87	0.00
23	T,M	Isopropyl ether (DIPE)	1.231	1.203	2.3	80	-0.01
24	P,T,M	1,1-Dichloroethane	0.635	0.628	1.1	83	-0.01
25	T,M	Vinyl acetate	0.379	0.387	-2.1	78	-0.01
26	T,M	tert-Butyl ethyl ether (ETB	0.791	0.732	7.5	77	-0.01
27	T,M	2,2-Dichloropropane	0.288	0.295	-2.4	95	-0.01
28	T,M	2-Butanone	0.065	0.067	-3.1	83	0.00
29	T,M	cis-1,2-Dichloroethene	0.416	0.408	1.9	83	-0.01
30	T,M	Bromochloromethane	0.271	0.259	4.4	78	-0.01
31	T,M	Tetrahydrofurane	0.043	0.036	16.3	74	-0.01
32	C,T,M	Chloroform	0.557	0.556	0.2	83	0.00
33	S	Dibromofluoromethane	0.299	0.309	-3.3	96	-0.01
34	T,M	1,1,1-Trichloroethane	0.407	0.406	0.2	84	-0.01
35	T,M	Cyclohexane	0.000	0.000	0.0	81	0.00
36	S	1,2-Dichloroethane-d4	0.193	0.195	-1.0	88	-0.01
37	T,M	tert-Amyl methyl ether (TAM	0.123	0.116	5.7	77	0.00
38	I	CHLOROBENZENE-D5	1.000	1.000	0.0	85	-0.01
39	T,M	1,1-Dichloropropene	0.227	0.229	-0.9	81	-0.01
40	T,M	Carbon tetrachloride	0.430	0.427	0.7	79	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11K17\RKR390.D Vial: 2
Acq On : 17 Nov 2011 7:11 am Operator: MW
Sample : CVOF3J2821 Inst : F3
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : C:\HPCHEM\1\METHODS\VOF3J28.M (RTE Integrator)
Title : METHOD 8260 25ML
Last Update : Mon Oct 31 09:14:46 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Benzene	1.667	1.678	-0.7	81	0.00
42	T,M	1,2-Dichloroethane	0.302	0.300	0.7	79	0.00
43	T,M	Trichloroethene	0.448	0.463	-3.3	84	-0.01
44	T,M	Methylcyclohexane	0.000	0.000	0.0	70	-0.01
45	C,T,M	1,2-Dichloropropane	0.407	0.414	-1.7	82	0.00
46	T,M	1,4-Dioxane	0.001	0.001	0.0	87	0.00
47	T,M	Dibromomethane	0.176	0.175	0.6	80	0.00
48	T,M	Bromodichloromethane	0.464	0.486	-4.7	83	0.00
49	T,M	2-Chloroethyl vinyl ether	0.110	0.119	-8.2	85	-0.01
50	T,M	cis-1,3-Dichloropropene	0.543	0.558	-2.8	80	0.00
51	T,M	4-Methyl-2-pentanone	0.190	0.201	-5.8	81	0.00
52	S	Toluene-d8	1.412	1.416	-0.3	90	0.00
53	C,T,M	Toluene	1.761	1.682	4.5	80	0.00
54	T,M	Ethyl methacrylate	0.293	0.281	4.1	75	0.00
55	T,M	trans-1,3-Dichloropropene	0.378	0.387	-2.4	80	-0.01
56	T,M	1,1,2-Trichloroethane	0.224	0.230	-2.7	83	0.00
57	T,M	Tetrachloroethene	0.381	0.406	-6.6	87	0.00
58	T,M	2-Hexanone	0.119	0.127	-6.7	81	-0.01
59	T,M	1,3-Dichloropropane	0.371	0.367	1.1	80	0.00
60	T,M	Dibromochloromethane	0.265	0.291	-9.8	88	-0.01
61	T,M	1,2-Dibromoethane	0.238	0.242	-1.7	84	-0.01
62	T,M	1-Chlorohexane	0.713	0.708	0.7	79	0.00
63	P,M	Chlorobenzene	0.969	1.019	-5.2	84	0.00
64	C,T,M	Ethylbenzene	1.902	1.835	3.5	80	0.00
65	T,M	1,1,1,2-Tetrachloroethane	0.305	0.325	-6.6	85	-0.01
66	T,M	m-Xylene & p-Xylene	1.381	1.353	2.0	82	0.00
67	T,M	o-Xylene	1.326	1.359	-2.5	82	-0.01
68	T,M	Styrene	1.084	1.121	-3.4	82	0.00
69	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	83	0.00
70	P,T,M	Bromoform	0.393	0.435	-10.7	85	-0.01
71	T,M	Isopropylbenzene	4.610	4.688	-1.7	82	-0.01
72	S	4-Bromofluorobenzene	1.116	1.139	-2.1	88	-0.01
73	P,T,M	1,1,2,2-Tetrachloroethane	0.659	0.640	2.9	78	-0.01
74	T,M	trans-1,4-Dichloro-2-butene	0.158	0.145	8.2	72	0.00
75	T,M	n-Propylbenzene	5.886	5.815	1.2	80	0.00
76	T,M	1,2,3-Trichloropropane	0.141	0.144	-2.1	79	0.00
77	T,M	Bromobenzene	1.024	1.093	-6.7	85	0.00
78	T,M	1,3,5-Trimethylbenzene	3.612	3.691	-2.2	79	0.00
79	T,M	2-Chlorotoluene	3.318	3.392	-2.2	79	0.00
80	T,M	4-Chlorotoluene	2.949	2.989	-1.4	80	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11K17\RKR390.D Vial: 2
Acq On : 17 Nov 2011 7:11 am Operator: MW
Sample : CVOF3J2821 Inst : F3
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : C:\HPCHEM\1\METHODS\VOF3J28.M (RTE Integrator)
Title : METHOD 8260 25ML
Last Update : Mon Oct 31 09:14:46 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	tert-Butylbenzene	0.770	0.822	-6.8	86	-0.01
82	T,M	1,2,4-Trimethylbenzene	3.524	3.626	-2.9	81	-0.01
83	T,M	sec-Butylbenzene	5.053	5.122	-1.4	82	0.00
84	T,M	p-Isopropyltoluene	3.714	3.864	-4.0	83	0.00
85	T,M	1,3-Dichlorobenzene	1.862	1.934	-3.9	82	-0.01
86	T,M	1,4-Dichlorobenzene	1.763	1.836	-4.1	83	-0.01
87	T,M	Benzyl Chloride	0.858	0.918	-7.0	89	0.00
88	T,M	n-Butylbenzene	3.825	3.971	-3.8	80	0.00
89	T,M	1,2-Dichlorobenzene	1.482	1.541	-4.0	85	-0.01
90	T,M	1,2-Dibromo-3-chloropropane	0.099	0.101	-2.0	81	0.00
91	T,M	1,2,4-Trichlorobenzene	0.993	1.028	-3.5	81	0.00
92	T,M	Hexachlorobutadiene	0.607	0.660	-8.7	83	-0.01
93	T,M	Naphthalene	1.292	1.233	4.6	74	0.00
94	T,M	1,2,3-Trichlorobenzene	0.781	0.787	-0.8	77	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKR452
Instrument ID: F3
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K101
BFB Injection Date : 11/21/11
BFB Injection Time : 07:34
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.31
75	30.0 - 60.0% of mass 95	41.45
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.86
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	84.62
175	5.0 - 9.0% of mass 174	4.36(5.2)1
176	95.0 - 101.0% of mass 174	81.49(96.3)1
177	5.0 - 9.0% of mass 176	5.34(6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CVOF3J2824	RKR454	11/21/11	09:29
2	MBLK3W	VOF3K25B	RKR458	11/21/11	12:07
3	LCS3W	VOF3K25L	RKR455	11/21/11	10:17
4	LCD3W	VOF3K25C	RKR456	11/21/11	10:51
5	MW-70-MNA08-119DL	K101-03T	RKR461	11/21/11	13:47
6	MW-70-MNA13-121DL	K101-05T	RKR464	11/21/11	15:27

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RJR172
Instrument ID: F3
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K101
Date Analyzed: 10/28/11
Time Analyzed: 12:27
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1826316	15.77	1483166	19.80	565088	22.76
	UPPER LIMIT	3652632	16.27	2966332	20.30	1130176	23.26
	LOWER LIMIT	913158	15.27	741583	19.30	282544	22.26
	SAMPLE ID						
1	VSTD010	1755163	15.77	1321804	19.80	448111	22.76
2	MBLK3W	1830447	15.77	1404876	19.80	554440	22.76
3	LCS3W	1665675	15.76	1247430	19.79	445736	22.77
4	LCD3W	1700537	15.77	1234494	19.80	446625	22.76
5	MW-70-MNA08-119DL	1687778	15.77	1309424	19.80	491739	22.76
6	MW-70-MNA13-121DL	1699495	15.77	1313697	19.79	505375	22.76

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11K21\RKR454.D Vial: 3
Acq On : 21 Nov 2011 9:29 am Operator: MW
Sample : CVOF3J2824 Inst : F3
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : C:\HPCHEM\1\METHODS\VOF3J28.M (RTE Integrator)
Title : METHOD 8260 25ML
Last Update : Mon Oct 31 09:14:46 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	96	0.00
2	T,M	Chlorotrifluoroethylene	10.000	0.000	100.0#	0	-4.59#
3	T,M	Dichlorodifluoromethane	10.000	9.754	2.5	84	0.00
4	P,T,M	Chloromethane	10.000	9.726	2.7	83	0.01
5	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	0.000	100.0#	0	-5.93#
6	C,T,M	Vinyl chloride	10.000	9.457	5.4	79	0.00
7	T,M	Bromomethane	10.000	9.948	0.5	81	0.00
8	T,M	Chloroethane	10.000	10.416	-4.2	86	-0.02
9	T,M	Dichlorofluoromethane	10.000	8.805	12.0	78	0.00
10	T,M	Trichlorofluoromethane	10.000	10.039	-0.4	85	-0.02
11	T,M	Acrolein	50.000	71.903	-43.8#	130	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.983	0.2	88	0.01
13	C,T,M	1,1-Dichloroethene	10.000	8.723	12.8	79	-0.02
14	T,M	Acetone	50.000	47.274	5.5	91	0.00
15	T,M	Iodomethane	10.000	9.718	2.8	86	-0.02
16	T,M	Methyl acetate	-1.000	0.000	0.0	146	0.00
17	T,M	Carbon disulfide	10.000	9.851	1.5	88	-0.02
18	T,M	Methylene chloride	10.000	9.122	8.8	83	0.00
19	T,M	tert-Butyl alcohol	50.000	43.451	13.1	81	-0.02
20	T,M	tert-Butyl methyl ether (MT	10.000	9.430	5.7	87	0.00
21	T,M	trans-1,2-Dichloroethene	10.000	9.175	8.2	82	0.00
22	T,M	Acrylonitrile	50.000	50.886	-1.8	91	0.00
23	T,M	Isopropyl ether (DIPE)	10.000	9.559	4.4	85	0.00
24	P,T,M	1,1-Dichloroethane	10.000	9.741	2.6	88	0.00
25	T,M	Vinyl acetate	10.000	9.056	9.4	76	0.00
26	T,M	tert-Butyl ethyl ether (ETB	10.000	9.141	8.6	82	-0.02
27	T,M	2,2-Dichloropropane	10.000	10.193	-1.9	101	0.00
28	T,M	2-Butanone	50.000	50.254	-0.5	87	0.00
29	T,M	cis-1,2-Dichloroethene	10.000	10.048	-0.5	92	0.00
30	T,M	Bromochloromethane	10.000	9.500	5.0	84	0.00
31	T,M	Tetrahydrofurane	10.000	8.056	19.4	77	0.00
32	C,T,M	Chloroform	10.000	9.957	0.4	89	0.00
33	S	Dibromofluoromethane	10.000	10.379	-3.8	103	0.00
34	T,M	1,1,1-Trichloroethane	10.000	9.915	0.9	90	0.00
35	T,M	Cyclohexane	-1.000	0.000	0.0	37	0.00
36	S	1,2-Dichloroethane-d4	10.000	9.901	1.0	92	0.00
37	T,M	tert-Amyl methyl ether (TAM	10.000	9.194	8.1	81	0.00
38	I	CHLOROBENZENE-D5	10.000	10.000	0.0	89	0.00
39	T,M	1,1-Dichloropropene	10.000	10.220	-2.2	87	0.00
40	T,M	Carbon tetrachloride	10.000	10.162	-1.6	85	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11K21\RKR454.D Vial: 3
Acq On : 21 Nov 2011 9:29 am Operator: MW
Sample : CVOF3J2824 Inst : F3
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : C:\HPCHEM\1\METHODS\VOF3J28.M (RTE Integrator)
Title : METHOD 8260 25ML
Last Update : Mon Oct 31 09:14:46 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Benzene	10.000	9.913	0.9	84	0.00
42	T,M	1,2-Dichloroethane	10.000	10.226	-2.3	85	0.00
43	T,M	Trichloroethene	10.000	10.641	-6.4	91	0.00
44	T,M	Methylcyclohexane	-1.000	0.000	0.0	69	0.00
45	C,T,M	1,2-Dichloropropane	10.000	10.196	-2.0	86	0.00
46	T,M	1,4-Dioxane	200.000	178.880	10.6	84	0.00
47	T,M	Dibromomethane	10.000	10.385	-3.8	88	0.00
48	T,M	Bromodichloromethane	10.000	10.492	-4.9	88	0.00
49	T,M	2-Chloroethyl vinyl ether	10.000	9.579	4.2	79	0.00
50	T,M	cis-1,3-Dichloropropene	10.000	10.207	-2.1	84	0.00
51	T,M	4-Methyl-2-pentanone	50.000	51.914	-3.8	83	0.00
52	S	Toluene-d8	10.000	10.131	-1.3	96	0.00
53	C,T,M	Toluene	10.000	9.962	0.4	88	0.00
54	T,M	Ethyl methacrylate	10.000	9.423	5.8	77	0.00
55	T,M	trans-1,3-Dichloropropene	10.000	10.227	-2.3	84	0.00
56	T,M	1,1,2-Trichloroethane	10.000	10.507	-5.1	89	0.00
57	T,M	Tetrachloroethene	10.000	10.531	-5.3	91	0.00
58	T,M	2-Hexanone	50.000	51.153	-2.3	82	0.00
59	T,M	1,3-Dichloropropane	10.000	10.052	-0.5	85	0.00
60	T,M	Dibromochloromethane	10.000	11.203	-12.0	94	0.00
61	T,M	1,2-Dibromoethane	10.000	10.347	-3.5	89	0.00
62	T,M	1-Chlorohexane	10.000	9.828	1.7	82	0.00
63	P,M	Chlorobenzene	10.000	10.695	-7.0	89	0.00
64	C,T,M	Ethylbenzene	10.000	9.732	2.7	85	0.00
65	T,M	1,1,1,2-Tetrachloroethane	10.000	10.801	-8.0	90	-0.02
66	T,M	m-Xylene & p-Xylene	20.000	19.165	4.2	84	0.00
67	T,M	o-Xylene	10.000	9.965	0.4	84	0.00
68	T,M	Styrene	10.000	9.988	0.1	84	0.00
69	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	79	0.00
70	P,T,M	Bromoform	10.000	12.053	-20.5#	89	-0.02
71	T,M	Isopropylbenzene	10.000	10.807	-8.1	83	0.00
72	S	4-Bromofluorobenzene	10.000	10.549	-5.5	87	0.00
73	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.283	-2.8	79	0.00
74	T,M	trans-1,4-Dichloro-2-butene	10.000	9.335	6.6	70	0.00
75	T,M	n-Propylbenzene	10.000	10.374	-3.7	80	0.00
76	T,M	1,2,3-Trichloropropane	10.000	10.741	-7.4	80	0.00
77	T,M	Bromobenzene	10.000	11.531	-15.3	88	0.00
78	T,M	1,3,5-Trimethylbenzene	10.000	10.514	-5.1	77	0.00
79	T,M	2-Chlorotoluene	10.000	10.674	-6.7	79	0.00
80	T,M	4-Chlorotoluene	10.000	10.552	-5.5	79	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11K21\RKR454.D Vial: 3
Acq On : 21 Nov 2011 9:29 am Operator: MW
Sample : CVOF3J2824 Inst : F3
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : C:\HPCHEM\1\METHODS\VOF3J28.M (RTE Integrator)
Title : METHOD 8260 25ML
Last Update : Mon Oct 31 09:14:46 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	tert-Butylbenzene	10.000	10.765	-7.7	83	0.00
82	T,M	1,2,4-Trimethylbenzene	10.000	10.177	-1.8	77	0.00
83	T,M	sec-Butylbenzene	10.000	10.173	-1.7	79	0.00
84	T,M	p-Isopropyltoluene	10.000	10.469	-4.7	80	0.00
85	T,M	1,3-Dichlorobenzene	10.000	10.717	-7.2	81	0.00
86	T,M	1,4-Dichlorobenzene	10.000	10.352	-3.5	78	0.00
87	T,M	Benzyl Chloride	10.000	10.619	-6.2	85	0.00
88	T,M	n-Butylbenzene	10.000	10.110	-1.1	74	0.00
89	T,M	1,2-Dichlorobenzene	10.000	10.385	-3.8	81	0.00
90	T,M	1,2-Dibromo-3-chloropropane	10.000	9.927	0.7	75	0.00
91	T,M	1,2,4-Trichlorobenzene	10.000	9.677	3.2	72	0.00
92	T,M	Hexachlorobutadiene	10.000	10.431	-4.3	76	0.00
93	T,M	Naphthalene	10.000	9.146	8.5	68	0.00
94	T,M	1,2,3-Trichlorobenzene	10.000	9.280	7.2	68	-0.02

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11K21\RKR454.D Vial: 3
Acq On : 21 Nov 2011 9:29 am Operator: MW
Sample : CVOF3J2824 Inst : F3
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : C:\HPCHEM\1\METHODS\VOF3J28.M (RTE Integrator)
Title : METHOD 8260 25ML
Last Update : Mon Oct 31 09:14:46 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	96	0.00
2	T,M	Chlorotrifluoroethylene	0.197	0.000	100.0#	0#	-4.59#
3	T,M	Dichlorodifluoromethane	0.319	0.311	2.5	84	0.00
4	P,T,M	Chloromethane	0.473	0.460	2.7	83	0.01
5	T,M	2-Chloro-1,1,1-trifluoroeth	0.356	0.000	100.0#	0#	-5.93#
6	C,T,M	Vinyl chloride	0.412	0.390	5.3	79	0.00
7	T,M	Bromomethane	0.254	0.253	0.4	81	0.00
8	T,M	Chloroethane	0.197	0.206	-4.6	86	-0.02
9	T,M	Dichlorofluoromethane	0.631	0.555	12.0	78	0.00
10	T,M	Trichlorofluoromethane	0.403	0.404	-0.2	85	-0.02
11	T,M	Acrolein	0.013	0.019	-46.2#	130	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.220	0.220	0.0	88	0.01
13	C,T,M	1,1-Dichloroethene	0.562	0.490	12.8	79	-0.02
14	T,M	Acetone	0.039	0.037	5.1	91	0.00
15	T,M	Iodomethane	0.539	0.524	2.8	86	-0.02
16	T,M	Methyl acetate	0.000	0.000	0.0	146	0.00
17	T,M	Carbon disulfide	1.146	1.128	1.6	88	-0.02
18	T,M	Methylene chloride	0.453	0.413	8.8	83	0.00
19	T,M	tert-Butyl alcohol	0.011	0.010	9.1	81	-0.02
20	T,M	tert-Butyl methyl ether (MT	0.496	0.468	5.6	87	0.00
21	T,M	trans-1,2-Dichloroethene	0.567	0.520	8.3	82	0.00
22	T,M	Acrylonitrile	0.047	0.048	-2.1	91	0.00
23	T,M	Isopropyl ether (DIPE)	1.231	1.177	4.4	85	0.00
24	P,T,M	1,1-Dichloroethane	0.635	0.619	2.5	88	0.00
25	T,M	Vinyl acetate	0.379	0.350	7.7	76	0.00
26	T,M	tert-Butyl ethyl ether (ETB	0.791	0.723	8.6	82	-0.02
27	T,M	2,2-Dichloropropane	0.288	0.294	-2.1	101	0.00
28	T,M	2-Butanone	0.065	0.065	0.0	87	0.00
29	T,M	cis-1,2-Dichloroethene	0.416	0.418	-0.5	92	0.00
30	T,M	Bromochloromethane	0.271	0.257	5.2	84	0.00
31	T,M	Tetrahydrofurane	0.043	0.035	18.6	77	0.00
32	C,T,M	Chloroform	0.557	0.555	0.4	89	0.00
33	S	Dibromofluoromethane	0.299	0.310	-3.7	103	0.00
34	T,M	1,1,1-Trichloroethane	0.407	0.404	0.7	90	0.00
35	T,M	Cyclohexane	0.000	0.000	0.0	37#	0.00
36	S	1,2-Dichloroethane-d4	0.193	0.191	1.0	92	0.00
37	T,M	tert-Amyl methyl ether (TAM	0.123	0.113	8.1	81	0.00
38	I	CHLOROBENZENE-D5	1.000	1.000	0.0	89	0.00
39	T,M	1,1-Dichloropropene	0.227	0.232	-2.2	87	0.00
40	T,M	Carbon tetrachloride	0.430	0.437	-1.6	85	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11K21\RKR454.D Vial: 3
Acq On : 21 Nov 2011 9:29 am Operator: MW
Sample : CVOF3J2824 Inst : F3
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : C:\HPCHEM\1\METHODS\VOF3J28.M (RTE Integrator)
Title : METHOD 8260 25ML
Last Update : Mon Oct 31 09:14:46 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Benzene	1.667	1.653	0.8	84	0.00
42	T,M	1,2-Dichloroethane	0.302	0.309	-2.3	85	0.00
43	T,M	Trichloroethene	0.448	0.476	-6.2	91	0.00
44	T,M	Methylcyclohexane	0.000	0.000	0.0	69	0.00
45	C,T,M	1,2-Dichloropropane	0.407	0.415	-2.0	86	0.00
46	T,M	1,4-Dioxane	0.001	0.001	0.0	84	0.00
47	T,M	Dibromomethane	0.176	0.183	-4.0	88	0.00
48	T,M	Bromodichloromethane	0.464	0.487	-5.0	88	0.00
49	T,M	2-Chloroethyl vinyl ether	0.110	0.106	3.6	79	0.00
50	T,M	cis-1,3-Dichloropropene	0.543	0.554	-2.0	84	0.00
51	T,M	4-Methyl-2-pentanone	0.190	0.197	-3.7	83	0.00
52	S	Toluene-d8	1.412	1.431	-1.3	96	0.00
53	C,T,M	Toluene	1.761	1.755	0.3	88	0.00
54	T,M	Ethyl methacrylate	0.293	0.276	5.8	77	0.00
55	T,M	trans-1,3-Dichloropropene	0.378	0.386	-2.1	84	0.00
56	T,M	1,1,2-Trichloroethane	0.224	0.235	-4.9	89	0.00
57	T,M	Tetrachloroethene	0.381	0.401	-5.2	91	0.00
58	T,M	2-Hexanone	0.119	0.122	-2.5	82	0.00
59	T,M	1,3-Dichloropropane	0.371	0.373	-0.5	85	0.00
60	T,M	Dibromochloromethane	0.265	0.297	-12.1	94	0.00
61	T,M	1,2-Dibromoethane	0.238	0.246	-3.4	89	0.00
62	T,M	1-Chlorohexane	0.713	0.701	1.7	82	0.00
63	P,M	Chlorobenzene	0.969	1.036	-6.9	89	0.00
64	C,T,M	Ethylbenzene	1.902	1.851	2.7	85	0.00
65	T,M	1,1,1,2-Tetrachloroethane	0.305	0.329	-7.9	90	-0.02
66	T,M	m-Xylene & p-Xylene	1.381	1.324	4.1	84	0.00
67	T,M	o-Xylene	1.326	1.321	0.4	84	0.00
68	T,M	Styrene	1.084	1.082	0.2	84	0.00
69	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	79	0.00
70	P,T,M	Bromoform	0.393	0.474	-20.6#	89	-0.02
71	T,M	Isopropylbenzene	4.610	4.982	-8.1	83	0.00
72	S	4-Bromofluorobenzene	1.116	1.177	-5.5	87	0.00
73	P,T,M	1,1,2,2-Tetrachloroethane	0.659	0.678	-2.9	79	0.00
74	T,M	trans-1,4-Dichloro-2-butene	0.158	0.148	6.3	70	0.00
75	T,M	n-Propylbenzene	5.886	6.106	-3.7	80	0.00
76	T,M	1,2,3-Trichloropropane	0.141	0.152	-7.8	80	0.00
77	T,M	Bromobenzene	1.024	1.181	-15.3	88	0.00
78	T,M	1,3,5-Trimethylbenzene	3.612	3.798	-5.1	77	0.00
79	T,M	2-Chlorotoluene	3.318	3.541	-6.7	79	0.00
80	T,M	4-Chlorotoluene	2.949	3.112	-5.5	79	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11K21\RKR454.D Vial: 3
Acq On : 21 Nov 2011 9:29 am Operator: MW
Sample : CVOF3J2824 Inst : F3
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : C:\HPCHEM\1\METHODS\VOF3J28.M (RTE Integrator)
Title : METHOD 8260 25ML
Last Update : Mon Oct 31 09:14:46 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	tert-Butylbenzene	0.770	0.829	-7.7	83	0.00
82	T,M	1,2,4-Trimethylbenzene	3.524	3.587	-1.8	77	0.00
83	T,M	sec-Butylbenzene	5.053	5.141	-1.7	79	0.00
84	T,M	p-Isopropyltoluene	3.714	3.888	-4.7	80	0.00
85	T,M	1,3-Dichlorobenzene	1.862	1.996	-7.2	81	0.00
86	T,M	1,4-Dichlorobenzene	1.763	1.825	-3.5	78	0.00
87	T,M	Benzyl Chloride	0.858	0.911	-6.2	85	0.00
88	T,M	n-Butylbenzene	3.825	3.867	-1.1	74	0.00
89	T,M	1,2-Dichlorobenzene	1.482	1.539	-3.8	81	0.00
90	T,M	1,2-Dibromo-3-chloropropane	0.099	0.099	0.0	75	0.00
91	T,M	1,2,4-Trichlorobenzene	0.993	0.961	3.2	72	0.00
92	T,M	Hexachlorobutadiene	0.607	0.633	-4.3	76	0.00
93	T,M	Naphthalene	1.292	1.181	8.6	68	0.00
94	T,M	1,2,3-Trichlorobenzene	0.781	0.725	7.2	68	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/16/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge Book # AF3 -004

BATCH VOF3J2820

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	BKR373	BFBF3K21	1mL					9:16pm
02	374	VOF3J2820	1.5mL					
03	375	VOF3K21L						
04	376	C						
05	377	RINSE	25mL					
06	378	VOF3K21R						
07	379	11K077-13T	2.5mL	10	✓			
08	380	-14T	0.5mL	50	✓			
09	381	-18	25mL	1.0	✓			
10	382	-19			✓			
11	383	-20			✓	✓		
12	384	-21			✓	✓		
13	385	-22			✓	✓		
14	386	-23			✓	✓		
15	387	11K101-01			x	✓		
16	388	-02			✓	✓		11/17/11 5:57am
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30			MW	11/17/11				

Instrument No.	F3
INITIAL CALIBRATION REFERENCE	
DATE	10/28/11
ICAL ID	VOF3J28

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-17-96-3	1	
DCC	-92-3	1	
DCC	-86-2	5	
DCC	-98-1	5	
BFB	-45-3	1	50/250
IS/SURR.	-99-1	1	
ICV/LCS	-97-1	1	
ICV/LCS	-97-2	1	
ICV/LCS	-99-2	5	
ICV/LCS	-89-2	5	

DATA FILE FOLDER	11K16
Electronic Data Archival	
Location	Date
HPCHEM_VOA/TOF3	

Comments:

Analyzed By: MW

Date Disposed: 11/17/11

Disposed By: MW

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/17/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # AF3 -004

BATCH (VOF3J2821)

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKR389	BFBF3K22	1mL					6:33am
02	390	CVOF3J2821	115mL					
03	391	VOF3K22L						
04	392							
05	393	RINSE	25mL					
06	394	VOF3K22B						
07	395	11K077-LOR		1.0	✓			
08	396	11K101-03			✓	✓		10ux
09	397	-04			✓	✓		-WLPO (DIC)
10	398	-05			✓	✓		-10X
11	399	-06			✓	✓		
12	400	11K131-04			✓	✓		-4X
13	401	-01			✓	✓		mn/po
14	402	-02			✓	✓		-1X/10°X
15	403	-03			✓	✓		
16	404	-05			✓	✓		3:38pm
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MW 11/18/11

Instrument No.	F3
INITIAL CALIBRATION REFERENCE	
DATE	10/28/11
ICAL ID	VOF3J28

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	CVI 17-96-3	1	
DCC	-92-3	1	
DCC	-86-2	5	
DCC	-98-1	5	
BFB	-45-3	1	
IS/SURR.	-99-1	1	50/50
ICV/LCS	-97-1	1	
ICV/LCS	-97-2	1	
ICV/LCS	-99-2	5	
ICV/LCS	-79-2	5	
DATA FILE FOLDER	11K1+		

Electronic Data Archival

Location	Date
HPCHEM_VOA/TOF3	

Comments: -

Analyzed By: MW

Date Disposed: 11/18/11

Disposed By: MW

2053

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/21/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge Book # AF3 -004

BATCH CVOF3J2824

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKR452	BFBF3K25	1mL					7:34pm
02	453	STD TEST	1/5/5 mL					
03	454	CVOF3J2824						
04	455	VOF3K25L						
05	456	C						
06	457	RINSE	25mL					
07	458	VOF3K25B						
08	459	11K131-04J	250mL	100	7			
09	460	-04I	10mL	25	7			
10	461	11K101-03T	250mL	100	/			
11	462	11K131-04T	5.0mL	5.0	7			
12	463	RINSE	25mL					
13	464	11K101-05T	25mL	10	/			
14	465	11K131-02T	250mL	100	/			
15	466	-06I	25mL	1000	/			
16	467	-06T	250mL	100	/			
17	468	RINSE	25mL	✓ MW 11/21/11				
18	469	11K131-08T	10mL	2500	/			
19	470	-09T			/			
20	471	RINSE						7:18pm
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29								
30			MW 11/22/11					

Instrument No.	F3
INITIAL CALIBRATION REFERENCE	
DATE	10/28/11
ICAL ID	VOF3J28

STANDARDS

NAME	ID	Amount (uL)	Conc. (mg/L)
DCC	SV1-17-96-3	1	
DCC	-92-3	1	
DCC	-86-2	5	
DCC	-98-1	5	
BFB	-45-3	1	50/250
IS/SURR.	-99-1	1	
ICV/LCS	-97-1	1	
ICV/LCS	-97-2	1	
ICV/LCS	-99-2	5	
ICV/LCS	-89-2	5	

DATA FILE FOLDER	11K21
Electronic Data Archival	
Location	Date
HPCHEM_VOA/TOF3	

Comments:

Analyzed By: MW

Date Disposed: 11/22/11

Disposed By: MW

2554

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☐ EMAX-8260 Rev.No. 6 ☐ EMAX-524.2 Rev.No. 5 ☐ EMAX-CLP-VOA ☐ EMAX-624 Rev.No. 2 ☐ EMAX-8260SIM Rev.No.0 ☐ EMAX-TCPSIM Rev.No.1 ☐ EMAX-M8260SIM Rev.No.0 ☐

Start Date: 10/28/11 ☐ 5-ml Purge ☐ 15-ml Purge ☐ 25-ml Purge

Book # AF3 -002

BATCH VOF3J28P6

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount A/B/C	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RJR166	BFBF3J13	1mL	N/A	N/A	N/A	N/A	8:53am
02	167	VOF3J281	.01/.5/.5mL					0.3/1.5/1.5ppb
03	168	2	.05/.5/.5mL					0.5/2.5/2.5ppb
04	169	3	.1/.5/.5mL					1.0/5.0/5.0ppb
05	170	4	.2/1/1mL					2.0/10/10ppb
06	171	5	.5/2.5/2.5mL					5.0/25/25ppb
07	172	6	1/5/5mL					10/50/50ppb
08	173	7	2/10/10mL					20/100/100ppb
09	174	8	4/15/15mL					30/150/150ppb
10	175	9	5/25/25mL					50/250/250ppb
11	176	10	10/50/50mL					100/500/500ppb
12	177	IS/SS	25mL					
13	178	VOF3J13B	↓					
14	179	VOF3J281	1/5/5mL					10/50/50ppb
15	180	RINSE	25mL					
16	181	↓	↓	↓	↓	↓	↓	5:51pm
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MW 10/31/11

Instrument No.	F3
INITIAL CALIBRATION REFERENCE	
DATE	10/28/11
ICAL ID	VOF3J28

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC (GASES)	SV1-17-96-3	*	
DCC CS2	-92-3		
DCC 8260	-86-2		
DCC KETONES	-98-1 -100-3	↓	
BFB	-45-3	1	
IS/SURR.	-99-1	1	50/250/100
ICV/LCS (GASES)	-97-1	1	
ICV/LCS CS2	-97-2	1	
ICV/LCS 8260	-99-2	5	
ICV/LCS KETONES	-99-2	5	
ICV/LCS GASES	SV1-12-26-6 -26-7	0.5 0.5	
DATA FILE	1J28		

Electronic Data Archival

Location	Date
HPCHEM_VOA/TOF3	

Comments: IS: SV1-17-91-1 1 } 50ppm
SS: ↓ -91-2 * }

*Please refer to sample amount
A: SS, GASES, CS2, KETONES
B: 8260
C: KETONES

Analyzed By: MW
Date Disposed: 10/31/11
Disposed By: MW

20055

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD RSK-175
DISSOLVED GASES

SDG#: 11K101

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K101

METHOD RSK-175
DISSOLVED GASES

A total of five (5) water samples were received on 11/10/11 for Dissolved Gas analysis, Method RSK-175 in accordance with USEPA at R.S. Kerr Environmental Research Laboratory, Ada, OK 74820 March 15, 1989.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for DGK005WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED GASES

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K101
Instrument ID : GCT010

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DGK005WB	1	NA	11/14/1110:15	11/14/1109:45	FK14003A	FK14002A	DGK005W	Method Blank
LCS1W	DGK005WL	1	NA	11/14/1110:26	11/14/1109:45	FK14004A	FK14002A	DGK005W	Lab Control Sample (LCS)
LCD1W	DGK005WC	1	NA	11/14/1110:39	11/14/1109:45	FK14005A	FK14002A	DGK005W	LCS Duplicate
IR-70-RDO-5-117	K101-01	1	NA	11/14/1115:49	11/14/1109:45	FK14026A	FK14023A	DGK005W	Field Sample
IR-70-RDO-5-117DL	K101-01T	1000	NA	11/14/1116:18	11/14/1109:45	FK14027A	FK14023A	DGK005W	Diluted Sample
MW-70-MNA06-118	K101-02	1	NA	11/14/1116:59	11/14/1109:45	FK14030A	FK14023A	DGK005W	Field Sample
MW-70-MNA08-119	K101-03	1	NA	11/14/1117:10	11/14/1109:45	FK14031A	FK14023A	DGK005W	Field Sample
MW-70-MNA08-119DL	K101-03T	200	NA	11/14/1117:33	11/14/1109:45	FK14033A	FK14023A	DGK005W	Diluted Sample
MW-70-MNA09-120	K101-04	1	NA	11/14/1117:22	11/14/1109:45	FK14032A	FK14023A	DGK005W	Field Sample
MW-70-MNA09-120DL	K101-04T	400	NA	11/14/1118:24	11/14/1109:45	FK14037A	FK14034A	DGK005W	Diluted Sample
MW-70-MNA13-121	K101-05	1	NA	11/14/1117:58	11/14/1109:45	FK14035A	FK14034A	DGK005W	Field Sample
MW-70-MNA13-121DL	K101-05T	20	NA	11/14/1118:11	11/14/1109:45	FK14036A	FK14034A	DGK005W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/10/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/10/11
Batch No.	: 11K101	Date Extracted:	11/14/11 09:45
Sample ID:	IR-70-RDO-5-117	Date Analyzed:	11/14/11 15:49
Lab Samp ID:	K101-01	Dilution Factor:	1
Lab File ID:	FK14026A	Matrix :	WATER
Ext Btch ID:	DGK005W	% Moisture :	NA
Calib. Ref.:	FK14023A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	5.1	2.0	0.60
METHANE	600E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/10/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/10/11
Batch No. : 11K101	Date Extracted: 11/14/11 09:45
Sample ID: IR-70-RDO-5-117DL	Date Analyzed: 11/14/11 16:18
Lab Samp ID: K101-01T	Dilution Factor: 1000
Lab File ID: FK14027A	Matrix : WATER
Ext Btch ID: DGK005W	% Moisture : NA
Calib. Ref.: FK14023A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	16000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/10/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/10/11
Batch No.	: 11K101	Date Extracted:	11/14/11 09:45
Sample ID:	MW-70-MNA06-118	Date Analyzed:	11/14/11 16:59
Lab Samp ID:	K101-02	Dilution Factor:	1
Lab File ID:	FK14030A	Matrix :	WATER
Ext Btch ID:	DGK005W	% Moisture :	NA
Calib. Ref.:	FK14023A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	5.9	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/10/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/10/11
Batch No. : 11K101	Date Extracted: 11/14/11 09:45
Sample ID: MW-70-MNA08-119	Date Analyzed: 11/14/11 17:10
Lab Samp ID: K101-03	Dilution Factor: 1
Lab File ID: FK14031A	Matrix : WATER
Ext Btch ID: DGK005W	% Moisture : NA
Calib. Ref.: FK14023A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	1.8J	2.0	0.64
ETHENE	48	2.0	0.60
METHANE	230E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/10/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/10/11
Batch No. : 11K101	Date Extracted: 11/14/11 09:45
Sample ID: MW-70-MNA08-119DL	Date Analyzed: 11/14/11 17:33
Lab Samp ID: K101-03T	Dilution Factor: 200
Lab File ID: FK14033A	Matrix : WATER
Ext Btch ID: DGK005W	% Moisture : NA
Calib. Ref.: FK14023A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	400	130
ETHENE	ND	400	120
METHANE	1700	400	68

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/10/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/10/11
Batch No.	: 11K101	Date Extracted:	11/14/11 09:45
Sample ID:	MW-70-MNA09-120	Date Analyzed:	11/14/11 17:22
Lab Samp ID:	K101-04	Dilution Factor:	1
Lab File ID:	FK14032A	Matrix :	WATER
Ext Btch ID:	DGK005W	% Moisture :	NA
Calib. Ref.:	FK14023A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	370E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/10/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/10/11
Batch No. : 11K101	Date Extracted: 11/14/11 09:45
Sample ID: MW-70-MNA09-120DL	Date Analyzed: 11/14/11 18:24
Lab Samp ID: K101-04T	Dilution Factor: 400
Lab File ID: FK14037A	Matrix : WATER
Ext Btch ID: DGK005W	% Moisture : NA
Calib. Ref.: FK14034A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	800	260
ETHENE	ND	800	240
METHANE	5800	800	140

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/10/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/10/11
Batch No. : 11K101	Date Extracted: 11/14/11 09:45
Sample ID: MW-70-MNA13-121	Date Analyzed: 11/14/11 17:58
Lab Samp ID: K101-05	Dilution Factor: 1
Lab File ID: FK14035A	Matrix : WATER
Ext Btch ID: DGK005W	% Moisture : NA
Calib. Ref.: FK14034A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	130E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/10/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/10/11
Batch No. : 11K101	Date Extracted: 11/14/11 09:45
Sample ID: MW-70-MNA13-121DL	Date Analyzed: 11/14/11 18:11
Lab Samp ID: K101-05T	Dilution Factor: 20
Lab File ID: FK14036A	Matrix : WATER
Ext Btch ID: DGK005W	% Moisture : NA
Calib. Ref.: FK14034A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	40	13
ETHENE	ND	40	12
METHANE	420	40	6.8

QC SUMMARIES

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/14/11
Batch No. : 11K101	Date Extracted: 11/14/11 09:45
Sample ID: MBLK1W	Date Analyzed: 11/14/11 10:15
Lab Samp ID: DGK005WB	Dilution Factor: 1
Lab File ID: FK14003A	Matrix : WATER
Ext Btch ID: DGK005W	% Moisture : NA
Calib. Ref.: FK14002A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD RSK-175

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	DGK005WB	DGK005WL	DGK005WC		
LAB FILE ID:	FK14003A	FK14004A	FK14005A		
DATE EXTRACTED:	11/14/1109:45	11/14/1109:45	11/14/1109:45	DATE COLLECTED:	NA
DATE ANALYZED:	11/14/1110:15	11/14/1110:26	11/14/1110:39	DATE RECEIVED:	11/14/11
PREP. BATCH:	DGK005W	DGK005W	DGK005W		
CALIB. REF:	FK14002A	FK14002A	FK14002A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	ND	25.4	28.8	114	25.4	28.3	111	2	70-140	30
Ethene	ND	23.7	27.9	118	23.7	27.1	114	3	70-140	30
Methane	ND	13.6	13.9	103	13.6	13.8	102	1	70-130	30

INITIAL CALIBRATIONS

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	25.00X	40.00X	75.00X	100.00X	MEAN	%RSD
Methane	0.34	31626	33510	29954	29307	29338	29307	30507.1	5.6
Acetylene	0.55	2465	2595	2723	2744	2716	2643	2647.7	4.0
Ethylene	0.59	14655	16070	16617	16602	17123	16803	16311.8	5.4
Ethane	0.64	22748	24144	25289	25073	26185	26048	24914.4	5.2
Propane	0.93	29887	24871	26520	26214	27735	27800	27171.2	6.3

DG10K01.MET

FORM VI DGAS -2 1/96 Rev 2/2006

11/03/11

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK01008A 11/01/2011 13:45
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	416247	13.64	1		15
Acetylene	2.175	2.149	2.201	22.0	2647.6	66913	25.27	15		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	437326	26.81	13		15
Ethane	3.075	3.025	3.125	25.4	24914.4	691218	27.74	9		15
Propane	5.900	5.824	5.976	37.3	27171.2	1111008	40.89	10		15

DG10K01.MET

AJ
11/3/11

DAILY CALIBRATIONS

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK14002A 11/14/2011 10:02
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	415987	13.64	1		15
Acetylene	2.175	2.149	2.201	22.0	2647.6	59980	22.65	3		15
Ethylene	2.625	2.574	2.676	23.7	16311.8	397121	24.35	3		15
Ethane	3.050	3.000	3.100	25.4	24914.4	653763	26.24	3		15
Propane	5.867	5.791	5.943	37.3	27171.2	993689	36.57	-2		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK14012A 11/14/2011 12:26
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	398149	13.05	-4		15
Acetylene	2.208	2.182	2.234	22.0	2647.6	58120	21.95	-0		15
Ethylene	2.650	2.599	2.701	23.7	16311.8	384276	23.56	-1		15
Ethane	3.075	3.025	3.125	25.4	24914.4	623321	25.02	-2		15
Propane	5.892	5.816	5.968	37.3	27171.2	967283	35.60	-5		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK14023A 11/14/2011 15:02
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	402398	13.19	-3		15
Acetylene	2.200	2.174	2.226	22.0	2647.6	60485	22.84	4		15
Ethylene	2.650	2.599	2.701	23.7	16311.8	396065	24.28	2		15
Ethane	3.075	3.025	3.125	25.4	24914.4	638518	25.63	1		15
Propane	5.900	5.824	5.976	37.3	27171.2	962736	35.43	-5		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK14034A 11/14/2011 17:47
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	391577	12.84	-5		15
Acetylene	2.200	2.174	2.226	22.0	2647.6	59501	22.47	2		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	386745	23.71	-0		15
Ethane	3.075	3.025	3.125	25.4	24914.4	617366	24.78	-3		15
Propane	5.900	5.824	5.976	37.3	27171.2	962546	35.42	-5		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK14039A 11/14/2011 18:48
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	380107	12.46	-8		15
Acetylene	2.208	2.182	2.234	22.0	2647.6	59289	22.39	2		15
Ethylene	2.650	2.599	2.701	23.7	16311.8	377373	23.14	-2		15
Ethane	3.075	3.025	3.125	25.4	24914.4	602407	24.18	-5		15
Propane	5.892	5.816	5.968	37.3	27171.2	907938	33.42	-10		15

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGAS ICAL

Book #:	A10-025
Instrument No.:	10
Analytical Sequence:	FK01
Method File:	DG10K01
Analytical Batch:	N/A

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGAS ICAL SSSA-05-01-10	500 ppm
DGAS ICV SSSA-05-01-7	500ppm
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: SC

Date: 11/01/11

Disposed By: SC

Date Disposed: 11/01/11

Method: Dg10k01.met Batch: Fk01.seq Data: Fk01.011 - [Batch: fk01.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Run Type	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
1	Unknown	IB10K407	dg10k01.met	FK01.001	100ml 1	1	
2	Unknown	DG10K01-01	dg10k01.met	FK01.002	1	1	
3	Unknown	DG10K01-02	dg10k01.met	FK01.003	1	1	
4	Unknown	DG10K01-03	dg10k01.met	FK01.004	1	1	DGAS 10ML
5	Unknown	DG10K01-04	dg10k01.met	FK01.005	1	1	
6	Unknown	DG10K01-05	dg10k01.met	FK01.006	1	1	
7	Unknown	DG10K01-06	dg10k01.met	FK01.007	1	1	
8	Unknown	IDG10K0101	dg10k01.met	FK01.008	1	1	DGAS 10V
9	Unknown	IB	dg10k01.met	FK01.009	1	1	
10	Unknown	IB	dg10k01.met	FK01.010	1	1	
11	Unknown	IB	dg10k01.met	FK01.011	1	1	
12	Unknown	IB	dg10k01.met	FK01.012	1	1	
13	Unknown	IB	dg10k01.met	FK01.013	1	1	
14	Unknown	IB	dg10k01.met	FK01.014	1	1	
15	Unknown	IB	dg10k01.met	FK01.015	1	1	FINAL
16	Unknown	IB	dg10k01.met	FK01.016	1	1	
17	Unknown	IB	dg10k01.met	FK01.017	1	1	
18	Unknown	IB	dg10k01.met	FK01.018	1	1	
19	Unknown	IB	dg10k01.met	FK01.019	1	1	
20	Unknown	IB	dg10k01.met	FK01.020	1	1	
21	Unknown	IB	dg10k01.met	FK01.021	1	1	
22	Unknown	IB	dg10k01.met	FK01.022	1	1	
23	Unknown	IB	dg10k01.met	FK01.023	1	1	
24	Unknown	IB	dg10k01.met	FK01.024	1	1	
25	Unknown	IB	dg10k01.met	FK01.025	1	1	
26	Unknown	IB	dg10k01.met	FK01.026	1	1	
27	Unknown	IB	dg10k01.met	FK01.027	1	1	
28	Unknown	IB	dg10k01.met	FK01.028	1	1	
29	Unknown	IB	dg10k01.met	FK01.029	1	1	
30	Unknown	IB	dg10k01.met	FK01.030	1	1	
31	Unknown	IB	dg10k01.met	FK01.031	1	1	
32	Unknown	IB	dg10k01.met	FK01.032	1	1	
33	Unknown	IB	dg10k01.met	FK01.033	1	1	
34	Unknown	IB	dg10k01.met	FK01.034	1	1	

EC 11/01/11

Waiting For Trigger...

Start | EZChrom Chromatograp... | Method: Dg10k01.... | Calculator | Method: Dg10k01.met | untitled - Paint | Exploring | Tuesday, November 01, 2011

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EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGK005W: K083, K084, K101

Book #:	A10-025
Instrument No.:	10
Analytical Sequence:	FK14
Method File:	DG10K01
Analytical Batch:	CDG10K01421

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGas DCC SS5B-07-37-1	200
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: RH

Date: 11/14/11

Disposed By: RH

Date Disposed: 11/14/11

Method: Dg10k01.met Batch: FK14.seq Data: FK14.039 - [Batch: fk14.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Method | Data | Batch | Setup | Batch | Preview | Single | STOP | Recalib | Analyze | Reports

Run	Sample ID	Method	Filename	Sample Amt.		Mult.	Description
1	IB10K421	dg10k01.met	FK14.001	100uL	1	1	
2	CDG10K01421	dg10k01.met	FK14.002		1	1	
3	DGK005WB	dg10k01.met	FK14.003		1	1	
4	DGK005WL	dg10k01.met	FK14.004		1	1	
5	DGK005WC	dg10k01.met	FK14.005		1	1	
6	11K083-19	dg10k01.met	FK14.006		1	1	
7	11K083-19T DF=20	dg10k01.met	FK14.007	5uL	1	20	
8	11K083-19I DF=200	dg10k01.met	FK14.008	5uL (10x)	1	200	
9	11K083-21	dg10k01.met	FK14.009	100uL	1	1	
10	11K083-21T DF=10	dg10k01.met	FK14.010	10uL	1	10	
11	11K083-21I DF=400	dg10k01.met	FK14.011	5uL (20x)	1	400	
12	CDG10K01422	dg10k01.met	FK14.012	100uL	1	1	
13	11K084-01	dg10k01.met	FK14.013		1	1	
14	11K084-02	dg10k01.met	FK14.014		1	1	
15	11K084-03	dg10k01.met	FK14.015		1	1	
16	11K084-02T DF=50	dg10k01.met	FK14.016	2uL	1	50	
17	11K084-04	dg10k01.met	FK14.017	100uL	1	1	RM 11/14/11
18	11K084-01T DF=400	dg10k01.met	FK14.018	5uL (20x)	1	400	
19	11K084-05	dg10k01.met	FK14.019	100uL	1	1	
20	11K084-05T DF=5	dg10k01.met	FK14.020	20uL	1	5	
21	11K084-03T DF=1000	dg10k01.met	FK14.021	2uL (20x)	1	1000	FINAL
22	11K084-04T DF=1000	dg10k01.met	FK14.022		1	1000	
23	CDG10K01423	dg10k01.met	FK14.023	100uL	1	1	
24	11K084-06	dg10k01.met	FK14.024		1	1	
25	11K084-05I DF=1000	dg10k01.met	FK14.025	2uL (20x)	1	1000	
26	11K101-01	dg10k01.met	FK14.026	100uL	1	1	
27	11K101-01T DF=1000	dg10k01.met	FK14.027	2uL (20x)	1	1000	
28	TEST	dg10k01.met	FK14.028	100uL	1	1	
29	11K084-06T DF=500	dg10k01.met	FK14.029	4uL (20x)	1	500	
30	11K101-02	dg10k01.met	FK14.030	100uL	1	1	
31	11K101-03	dg10k01.met	FK14.031		1	1	
32	11K101-04	dg10k01.met	FK14.032		1	1	
33	11K101-03T DF=200	dg10k01.met	FK14.033	5uL (10x)	1	200	
34	CDG10K01424	dg10k01.met	FK14.034	100uL	1	1	

Instrument 2: TO10

Start | EZChrom Chromatography | Method: Dg10k01.me... | Method: Dg10k01.met - B... | Exploring - Fk14 | Calculator

Monday, November 14, 2011 6:43 PM

Method: Dg10k01.met Batch: Fk14.seq Data: Fk14.039 - [Batch: fk14.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
35	11K101-05	dg10k01.met	FK14.035	100mL 1	1	
36	11K101-05T DF=20	dg10k01.met	FK14.036	5mL 1	20	
37	11K101-04T DF=400	dg10k01.met	FK14.037	5mL (20x) 1	400	
38	IB	dg10k01.met	FK14.038	1	1	
39	CDG10K01425	dg10k01.met	FK14.039	100mL 1	1	
40	IB	dg10k01.met	FK14.040	1	1	
41	IB	dg10k01.met	FK14.041	1	1	
42	IB	dg10k01.met	FK14.042	1	1	
43	IB	dg10k01.met	FK14.043	1	1	
44	IB	dg10k01.met	FK14.044	1	1	
45	IB	dg10k01.met	FK14.045	1	1	
46	IB	dg10k01.met	FK14.046	1	1	
47	IB	dg10k01.met	FK14.047	1	1	
48	IB	dg10k01.met	FK14.048	1	1	
49	IB	dg10k01.met	FK14.049	1	1	
50	IB	dg10k01.met	FK14.050	1	1	
51	IB	dg10k01.met	FK14.051	1	1	
52	IB	dg10k01.met	FK14.052	1	1	
53	IB	dg10k01.met	FK14.053	1	1	
54	IB	dg10k01.met	FK14.054	1	1	
55	IB	dg10k01.met	FK14.055	1	1	FINAL
56	IB	dg10k01.met	FK14.056	1	1	
57	IB	dg10k01.met	FK14.057	1	1	
58	IB	dg10k01.met	FK14.058	1	1	
59	IB	dg10k01.met	FK14.059	1	1	
60	IB	dg10k01.met	FK14.060	1	1	
61						
62						
63						
64						
65						
66						
67						
68						

RN 11/14/11

Instrument 2: TO10

Start | EZChrom Chromatogra... | Method: Dg10k01.... | Method: Dg10k01.met... | Exploring - Fk14 | Calculator | untitled - Paint | Monday, November 14, 2011 6:44 PM

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/01/11 Time: 10:00 End Date: 11/01/11 Time: 10:40

PREPARATION BATCH # N/A

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (< 2)	Notes
01	DG10K01-01	39	4	N/A	
02	-02			N/A	
03	-03			N/A	DGAS ICAL
04	-04			N/A	
05	-05			N/A	
06	-06			N/A	
07	IDG10K01 01			N/A	DGAS ICV
08					
09					
10					
11					
12					
13					SC 11/01/11
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Standards	ID	Amount Added (µl)
LCS/MS / ICV	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic free
He	Air Gas
ICAL STD (500 ppm)	SSSA-05-01-10 (SPECIALTY AIR)
ICV STD 500 ppm	SSSA-05-01-7 (MATHESON)

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #: (ESS)	28100705

Comments:

1) 0.08 ml ICAL STD + 3.92 ml He
2) 0.4 ml 3.6 ml
3) 1.0 ml 3.0 ml
4) 1.6 ml 2.4 ml
5) 3.0 ml 1.0 ml
6) 4.0 ml 0 ml

Prepared By: SC

Standard Added By: SC

1033

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/14/11 Time: 09:45 End Date: 11/14/11 Time: 10:15

PREPARATION BATCH # DGK005W

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DGK005WB	39	4	N/A	
02	L			N/A	
03	C			N/A	
04	11K083-19			✓	
05	21			✓	
06	11K084-01			✓	
07	02			✓	
08	03			✓	
09	04			✓	
10	05			✓	
11	06			✓	
12	11K101-01			✓	
13	02			✓	
14	03			✓	
15	04			✓	
16	05			✓	
17					
18					
19					
20					
21					
22					
23					
24					
25					

PM 11/14/11

Standards	ID	Amount Added (µl)
LCS/MS	SSSA-05-047	1600

Reagent	Source
H_2O	Organic Free
He	AirGas

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #:	28100705

Comments:

Prepared By: PM

Standard Added By: PM

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

SDG#: 11K101

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K101

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

One (1) water sample was received on 11/10/11 for Dissolved Metals by ICP analysis, Method 3010A/6010B in accordance with Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source. Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for IPK031WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG. Analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE

DISSOLVED METALS BY TRACE ICP

Client: INSIGHT [illegible], INC.
Project: NWS SEAL BEACH IR SITE [illegible]

SDG NO: [illegible]
Instrument ID: T [illegible]

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep Batch	Notes
MB[illegible]	IPK031WB	1	NA	[illegible]	[illegible]	ID8K018049	ID8K018047	IPK031W	Method Blank
LCS[illegible]	IPK031W	1	NA	[illegible]	[illegible]	ID8K018050	ID8K018047	IPK031W	Lab Control Sample (LCS)
MD[illegible]	IPK031WC	1	NA	[illegible]	[illegible]	ID8K018051	ID8K018047	IPK031W	MS Duplicate
[illegible]	[illegible]	1	NA	[illegible]	[illegible]	ID8K018052	ID8K018047	IPK031W	Analytical Spike Sample
[illegible]	[illegible]	1	NA	[illegible]	[illegible]	ID8K018053	ID8K018047	IPK031W	Field Sample
[illegible]	[illegible]	5	NA	[illegible]	[illegible]	ID8K018054	ID8K018047	IPK031W	Diluted Sample
[illegible]	[illegible]	1	NA	[illegible]	[illegible]	ID8K018056	ID8K018071	IPK037W	Field Sample

FN: Filename
% Moist: Percent Moisture

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/10/11 11:07
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/10/11
SDG NO.	: 11K101	Date Extracted:	11/17/11 11:11
Sample ID:	IR-70-RDO-5-117	Date Analyzed:	11/18/11 18:07
Lab Samp ID:	K101-01	Dilution Factor:	1
Lab File ID:	ID8K018076	Matrix :	WATER
Ext Btch ID:	IPK031W	% Moisture :	NA
Calib. Ref.:	ID8K018071	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	1.01	0.200	0.0400
Manganese	0.440	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
SDG NO.	: 11K101	Date Extracted:	11/17/11 11:11
Sample ID:	MBLK1W	Date Analyzed:	11/18/11 16:48
Lab Samp ID:	IPK031WB	Dilution Factor:	1
Lab File ID:	ID8K018049	Matrix :	WATER
Ext Btch ID:	IPK031W	% Moisture :	NA
Calib. Ref.:	ID8K018047	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	ND	0.200	0.0400
Manganese	ND	0.200	0.00300

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K101
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	IPK031WB	IPK031WL	IPK031WC		
LAB FILE ID:	ID8K018049	ID8K018050	ID8K018051		
DATIME EXTRCTD:	11/17/1111:11	11/17/1111:11	11/17/1111:11	DATE COLLECTED:	NA
DATIME ANALYZD:	11/18/1116:48	11/18/1116:51	11/18/1116:53	DATE RECEIVED:	11/17/11
PREP. BATCH:	IPK031W	IPK031W	IPK031W		
CALIB. REF:	ID8K018047	ID8K018047	ID8K018047		

ACCESSION:

PARAMETER	BLNK RSLT mg/L	SPIKE AMT mg/L	BS RSLT mg/L	BS % REC	SPIKE AMT mg/L	BSD RSLT mg/L	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	ND	.5	.532	106	.5	.542	108	2	80-120	20
Iron	ND	5	5.2	104	5	5.26	105	1	80-120	20
Manganese	ND	.5	.497	99	.5	.504	101	1	80-120	20

[illegible]

CLIENT [illegible]
PROJECT [illegible]
BATCH NO [illegible]
METHOD METHOD 30/MA/6010B (DISSOLVED)

MATRIX WATER / MOISTURE %
DILUTION FACTOR 1 5
SAMPLE ID: [illegible] [illegible]
FMAX SAMP ID: [illegible] [illegible]
LAB FILE ID: [illegible] [illegible]
DATE EXTRACTED: [illegible] [illegible] DATE [illegible]
DATE ANALYZED: [illegible] [illegible] DATE [illegible]
PREP BATCH: [illegible] [illegible]
CALIB. REF: [illegible] [illegible]

ACCESSION

PARAMETER	SMPL RSLT (mg/L)	SERIAL DIL RSLT (mg/L)	DIF RSLT (%)	QC LIMIT (%)
Arsenic	ND	ND	0	[illegible]
Iron	0.[illegible]07	0.[illegible]	NA	[illegible]
Manganese	0.00[illegible]	ND	NA	[illegible]

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K101
METHOD: METHOD 3010A/6010B (DISSOLVED)

==========

MATRIX:	WATER		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	44-SP-755-N-111011			
CONTROL NO.:	K108-02	K108-02A		
LAB FILE ID:	ID8K018053	ID8K018052		
DATIME EXTRCTD:	11/17/1111:11	11/17/1111:11	DATE COLLECTED:	11/10/11 10:30
DATIME ANALYZD:	11/18/1116:59	11/18/1116:56	DATE RECEIVED:	11/11/11
PREP. BATCH:	IPK031W	IPK031W		
CALIB. REF:	ID8K018047	ID8K018047		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	AS RSLT (mg/L)	AS % REC	QC LIMIT (%)
Arsenic	ND	.5	.572	114	75-125
Iron	.607	5	5.99	108	75-125
Manganese	.00779J	.5	.537	106	75-125

ICP QC CHECK TABLE

QC	ICV	CCV	ICSAB	ICSA	MLCV
Limit%	90-110	90-110	80-120	80-120	80-120
Comp	mg/L	mg/L	mg/L	mg/L	mg\L
Al	100	100	400	400	200
Sb	1.5	1.5	1	0	5
As	1	1	1	0	1
Ba	2	2	0.5	0	5
Be	1.5	1.5	0.5	0	5
B	2.5	2.5	0.5	0	5
Cd	2	2	1	0	5
Ca	75	75	500	500	250
Cr	2.5	2.5	0.5	0	5
Co	1	1	0.5	0	1
Cu	2.5	2.5	0.5	0	5
Fe	25	25	200	200	200
Pb	2.5	2.5	1	0	5
Li	0.5	0.5	1	0	0.5
Mg	60	60	200	200	100
Mn	2.5	2.5	0.5	0	5
Mo	2.5	2.5	1	0	5
Ni	2.5	2.5	1	0	5
K	60	60	75	0	250
Se	1	1	1	0	1
Ag	0.5	0.5	1	0	0.5
Na	60	60	75	0	150
Sr	0.5	0.5	0.5	0	0.5
Tl	2.5	2.5	1	0	5
Sn	0.5	0.5	1	0	0.5
Ti	0.5	0.5	1	0	0.5
V	1.5	1.5	0.5	0	5
Zn	2.5	2.5	1	0	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 11/18/11 14:26

End Date: 11/18/11 19:05

SOP #	Rev. #
☑ EMAX-6010	7
☐ EMAX-6010C	1
☐ EMAX-200.7	2
☐ EMAX-	

Comments:

CCB3 Ca > 3x IDL However associated sample K063-02 detected > 10x blank conc. level. Thus no corrective action.

CCB4 Ca > 3x IDL. However associated samples K063-06, K063-05, and K034-01 detected > 10x blank conc. level. Thus no corrective action.

CCB5 Ca > 3x IDL. However associated samples K108-01, K108-02 detected > 10x ~~the~~ 11/18/11 AP blank conc. Thus no corrective action

CCB6 Ca > 3x IDL. However associated sample K070-01, K070-02, and K070-03 detected ~~>4x IDL~~ > 10x blank conc. Thus no corrective action.

CCB7 Ca > 3x IDL. However associated sample K101-01 K093-01 and K072-01 detected > 10x blank conc. Thus no corrective action

Book #: AD8-021

Instrument No.: D8

Analytical Batch: 108K018

Analytical Sequence: S-11K6010 (v26)

Method File: 11K6010 (v26)

Database: EMAX 14

	STANDARDS ID		STANDARDS ID
S0	SM1B14-7805	S30	SM1B14-6802
S1	NA	S31	-6803
S2		ICV	-8201
S3		CCV	-8301
S4		ICSA	-8502
S5		ICSAB	-6702
S6		CRI/MRL (	-8101
S7		MRL2	-7401
S8			
S9			
S10			
S11			
S12			
S16			
S17			
S18			
S20	SM1B14-8401		
S21	-6503		
S22	-~~6503~~ 6504 11/18/11		
S23	-8402		
S24	-6702		
S25	-6703		
S26	-7801		
S27	-7802		
S28	-7803		
S29	-7804		

Analyzed By: PP

Date: 11/18/11

SEQUENCE FILE : ID8K018

4-18 LFID	19-33 LSID	34-43 TIME	44-53 DATE	54-63 DF
ID8K018001	Blank	14:26	11/18/11	1.000
ID8K018002	S20	14:29	11/18/11	1.000
ID8K018003	S21	14:32	11/18/11	1.000
ID8K018004	S22	14:35	11/18/11	1.000
ID8K018005	S23	14:38	11/18/11	1.000
ID8K018006	S24	14:41	11/18/11	1.000
ID8K018007	S25	14:44	11/18/11	1.000
ID8K018008	S26	14:47	11/18/11	1.000
ID8K018009	S27	14:50	11/18/11	1.000
ID8K018010	S28	14:53	11/18/11	1.000
ID8K018011	S29	14:56	11/18/11	1.000
ID8K018012	S30	14:59	11/18/11	1.000
ID8K018013	S31	15:02	11/18/11	1.000
ID8K018014	ICV	15:05	11/18/11	1.000
ID8K018015	ICB	15:08	11/18/11	1.000
ID8K018016	MRLK1801	15:11	11/18/11	1.000
ID8K018017	MRLK1802	15:14	11/18/11	1.000
ID8K018018	ICSA1	15:17	11/18/11	1.000
ID8K018019	ICSAB1	15:20	11/18/11	1.000
ID8K018020	CCV1	15:23	11/18/11	1.000
ID8K018021	CCB1	15:26	11/18/11	1.000
ID8K018022	K467-01A	15:29	11/18/11	1.000
ID8K018023	K467-01W	15:31	11/18/11	1.000
ID8K018024	K467-01J	15:34	11/18/11	5.000
ID8K018025	Blank	15:37	11/18/11	1.000
ID8K018026	CCV2	15.40	11/18/11	1.000
ID8K018027	CCB2	15:43	11/18/11	1.000
ID8K018028	IPK028WB	15:46	11/18/11	1.000
ID8K018029	IPK028WL	15:49	11/18/11	1.000
ID8K018030	IPK028WC	15:52	11/18/11	1.000
ID8K018031	K063-02A	15:54	11/18/11	1.000
ID8K018032	K063-02	15:57	11/18/11	1.000
ID8K018033	K063-02J	16:00	11/18/11	5.000
ID8K018034	K063-02M	16:03	11/18/11	1.000
ID8K018035	K063-02S	16:06	11/18/11	1.000
ID8K018036	K063-01	16:09	11/18/11	1.000
ID8K018037	Blank	16:12	11/18/11	1.000
ID8K018038	CCV3	16.15	11/18/11	1.000
ID8K018039	CCB3	16:18	11/18/11	1.000
ID8K018040	K063-03	16:21	11/18/11	1.000
ID8K018041	K063-04	16:24	11/18/11	1.000
ID8K018042	K063-05	16:27	11/18/11	1.000
ID8K018043	K063-06	16:30	11/18/11	1.000
ID8K018044	K039-01	16:33	11/18/11	1.000
ID8K018045	K039-01D	16:36	11/18/11	1.000
ID8K018046	Blank	16:39	11/18/11	1.000
ID8K018047	CCV4	16:42	11/18/11	1.000
ID8K018048	CCB4	16:45	11/18/11	1.000
ID8K018049	IPK031WB	16:48	11/18/11	1.000
ID8K018050	IPK031WL	16:51	11/18/11	1.000
ID8K018051	IPK031WC	16:53	11/18/11	1.000
ID8K018052	K108-02A	16:56	11/18/11	1.000

ID8K018053	K108-02	16:59	11/18/11	1.000
ID8K018054	K108-02J	17:02	11/18/11	5.000
ID8K018055	K108-02M	17:04	11/18/11	1.000
ID8K018056	K108-02S	17:07	11/18/11	1.000
ID8K018057	K108-01	17:10	11/18/11	1.000
ID8K018058	Blank	17:13	11/18/11	1.000
ID8K018059	CCV5	17:16	11/18/11	1.000
ID8K018060	CCB5	17:19	11/18/11	1.000
ID8K018061	K084-01	17:22	11/18/11	1.000
ID8K018062	K084-02	17:24	11/18/11	1.000
ID8K018063	K084-03	17:27	11/18/11	1.000
ID8K018064	K084-04	17:30	11/18/11	1.000
ID8K018065	K084-05	17:33	11/18/11	1.000
ID8K018066	K084-06	17:37	11/18/11	1.000
ID8K018067	K070-01	17:39	11/18/11	1.000
ID8K018068	K070-02	17:43	11/18/11	1.000
ID8K018069	K070-03	17:46	11/18/11	1.000
ID8K018070	Blank	17:49	11/18/11	1.000
ID8K018071	CCV6	17:52	11/18/11	1.000
ID8K018072	CCB6	17:54	11/18/11	1.000
ID8K018073	K070-04	17:57	11/18/11	1.000
ID8K018074	K070-05	18:01	11/18/11	1.000
ID8K018075	K070-06	18:04	11/18/11	1.000
ID8K018076	K101-01	18:07	11/18/11	1.000
ID8K018077	K093-01	18:10	11/18/11	1.000
ID8K018078	K093-01D	18:12	11/18/11	1.000
ID8K018079	K072-01	18:15	11/18/11	1.000
ID8K018080	K090-03	18:18	11/18/11	1.000
ID8K018081	Blank	18:21	11/18/11	1.000
ID8K018082	CCV7	18:24	11/18/11	1.000
ID8K018083	CCB7	18:27	11/18/11	1.000
ID8K018084	ICSA2	18:30	11/18/11	1.000
ID8K018085	ICSAB2	18:33	11/18/11	1.000
ID8K018086	CCV8	18:36	11/18/11	1.000
ID8K018087	CCB8	18:39	11/18/11	1.000
ID8K018088	IPK032SB	18:42	11/18/11	1.000
ID8K018089	IPK032SL	18:45	11/18/11	1.000
ID8K018090	IPK032SC	18:48	11/18/11	1.000
ID8K018091	K152-01A	18:50	11/18/11	1.000
ID8K018092	K152-01	18:53	11/18/11	1.000
ID8K018093	K152-01J	18:56	11/18/11	5.000
ID8K018094	Blank	18:59	11/18/11	1.000
ID8K018095	CCV9	19:02	11/18/11	1.000
ID8K018096	CCB9	19:05	11/18/11	1.000

VERSION : 1.A UNIT : 8 SUMMARY of ICV and CCV : 108K018 DATE : 11/18/11 INST : EMAXT

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
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S31	----	----	- -	----	----	-- -	----	-	----	----	-	----	----	- -	-	--	----	----	----	----	-	----	----	----	----	----	----	--
ICV	102	98	105	99	102	102	99	99	97	97	102	101	98	108	97	97	100	96	97	104	101	104	98	93	96	102	101	105
ICB	----	----	-	-- -	----	--	-	---	----		---	-	----	-	----	---	----	----	-	--	- -	---	--	----	--	--	- -	-
MRLK1801	--	----	----	- -	-	---	--	----	----	- -	----	----	----	-	----	----	----	----	-	----	----	---	- -	----	----	---	- -	----
MRLK1802	----	---	----	----	----	----	----	--	----	----	- -	----	----	----	- --	--	----	----	----	---	-	----	----	----	----	---	----	---
ICSA1	98	----	----	--	---	----	---	96	----	- -	----	99	-	----	99	--	---	---	- --	---	-	----	- -	----	----	--	-	---
ICSAB1	95	102	106	97	99	108	95	94	94	96	106	98	96	114	95	94	101	95	102	104	107	109	95	86	94	99	100	105
CCV1	102	101	105	98	98	102	100	99	97	97	103	102	97	103	96	95	99	96	99	104	102	106	98	94	101	99	101	105
CCB1	----	-	--	-	--	---	- -	----	---		- -	--	----	-	---	---		---	----	--	----	-	----	---	----	--	- --	-
K467-01A		----	----	---	--	---		---	- --	-	-- -	- -	---	- -	--	-	- -	-	- -		----		----	----	- -	----		-
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K467-01C	-	----	----	----		----	- -	---	----	----	-- -	----	----	- -		- -	----	----	----	----	- -	----	----	----	----	---	- --	----
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CCV2	100	99	102	101	102	99	98	99	96	98	101	100	97	104	99	99	101	96	99	101	100	107	98	92	101	102	99	105
CCB2	- -	----	----		----	----	-	----	----		----	----	- -	--	- --	---	----	----	---	---	----	----	---	----	- --	--	-	
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K063-02[illegible]	---	--	-	----	----	-	----	----	-	----	----		---	----	----	--	-	-- -	----	----	- -	--	----	----	-- -	---	-- -	--
K063-02B	-	----	---	-		---		-	- -		----	---		-	- -	- --	----	----	-		----	----	- -	--	----	---		
K063-03	-	--			-	-	- --		-	- --		- -	--	--		--	--	-	---	-	-- -		- --		-		-	
K063-01	----	- --	----	- -		----		----	----	- --	--	----	----				----	---	- -		---	--	--		--	-		
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CCV3	98	99	103	99	100	99	99	99	97	98	101	101	97	101	97	96	101	96	99	103	100	107	98	92	101	100	100	105
CCB3	- -	---	---	-		--		- --	-	-	---	-	-	-	- --	- --	- -	-		----	-	--	-	----	--	-	---	
K063-03	----	-	----	----	--	--	----	-	- -	----	--	----	----	----			-- -	----	---	-	-	--	- --	---	--	---	----	--
K063-04	----	----	-	- --	----		----	---	- -	----	---	-	----	----	----	----	--		--	----	----	--	-	----	----	-- -	----	---	---
K063-05	-	---	--	-	--	-	----	-	-	----	--		----	-		-	- --	-	----	-	---	--	- -		-	- -	---	
K063-06	-	----	----	-	---		- --	----	-- -	---	----	--	--	----	----	----	--	-	----	----	-	-	----	-	----	----		
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K039-01D	- --	----	---	---	-	-	----	-	-	---	--	----		----	- --	- -	---	-	- --	----	- -	--	----	---	----	---	----	
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CCV4	98	98	103	99	100	99	99	99	97	98	100	100	97	102	98	97	100	96	100	102	100	107	98	92	101	100	100	106
CCB4	----	---	----	-- -	--	----	--	- -	----	--	----	- --	--	----	- --	--	----	----	----	--	----	----	--	----	----	----	---	-
IPK031WB	- -	-- -	- --	--		-	----	-		-	---	-	-	----	----	-	----	-	--	--	- -	-	-	--	-	-	----	
IPK031WA	----	----	-	-- -	---	-	----	----	---	----	---		----	----	----	- -	-	----	----	----	-	----	----	-	----	---	-	--
IPK031WC	----	----	---	----	----	-- -	----	--	- -	----		----	----	-- -	-	-	----	----	----	- -	--	----	----		-	----	----	-
K108-02A	--	- --	---	-	- -		---	--	--	-	---	--	-	--	----	-	-	-- -	---	----		----	---	---		---	----	--

K108-02	---	----	-	-- -	----	-	-- -	- -	-	---	---	---	--	- -	---	---	---	-	--	- -	----	---	-	--	----	- -	----
K108-02J	----	----	---	-	----	-	---	----	----		----	--	----	----	-	---	----	----	-	---	---	---	-	----	--	----	-- - -
K108-02M	---	----	- --	- - -	--	----	----	----		----	--	----	----	----	----		----	----	---	----	----	----	----	--	----	-	----
K108-02S	-	- -	-	--	---	- -	---	----	- -	- - -	-	----		- --	----		--	-	- -	----	-	--	----	-	----		-
K108-01	----	- --		----	----	-	----	---	-	----	----	--	----	- -	---	---	----	----	----	----		- --	--	----	--	---	----	- -
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CCV5	99	99	102	101	101	98	98	99	95	98	98	99	97	104	99	98	101	97	99	101	98	107	97	91	102	102	99	106
CCB5	----	----		----	----	---	----	- -		----	--	---	----	-	-	---	----	----	---	- -	----	--	-	--	---	---	- -	-
K084-01	- -	--	-	----	- --	----	----	--	--	----	--	---	----	--	----	----	----	----	----	----	----	----	--	----	-- -	---	----	----
K084-02	----	-- -	--	---	---	-	--	----	---	-- -	- -	- --	--	--	----	-	-- -	----	---	---	----	----	-- -	- -	----	--	-	- -
K084-03	--	- -	- -	---	- -	----	- -	-	----	----	----	--	---	-- -	-	--	----	--	- -	----	--	-- -	----		--	--		---
K084-04	----	-- -	- - -	-- -	----	- -	----	----	--	----	----	--	----	----	-	--	- -	----	----	-- -	----	----	----	---	--	----	-	
K084-05	--	----	----	-	-	----	-	---	----	----	---	----	- -	----	----	----	---	--	----	----	-	- -	----	----	--	---	----	---
K084-06	----	- -	- -	-	---	---		----	- -	----	- --	---	---	----	- -	-	----	--	-	----	-	--	----		-	---	-	-
K070-01	----	-	-	----	- -	---	----	---	----	- --	----	--	----	---		-	----	----	-	----	----	----	-- -	-	----	- -	- --	----
K070-02	----	----	----		--	---	- --	----	----	---	---	---	-	----	----	----	--	- --	----	----	----	----	----	----	----	----	----	
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CCV6	97	98	102	101	101	98	98	99	95	98	98	100	97	104	99	98	101	97	100	102	98	107	97	91	102	102	99	106
CCB6	----	--	-	----	----	---	----	---	-- -	---	----	--	----	----	-- -	--	----	----	----	---	----	----	----	----	-	----	----	- --
K070-04	-	---	----	---		--	----	----	---	--	--	----	----	- -	--	----	- -	----	---	----	-	-	-	--	- -	--	--	-
K070-05	--	-	---	----	---	---	----	----	-	----	-- -	---	----	----	- -	--	-	----	----	----	- -	----	----	----	--	----	----	- -
K070-06	---	----	----	-	----	----		----	----	----	----	----	-	----	----	----	----	--	----	----	----	--	----	----	--	-	-	----
K101-01	--	--	---	-	-	-	----	-	-	---	----	--	-	--	- -		--	- -	----	-	----	-	-	-- -	--	- -	- -	-
K093-01	----	----	----	---	---	----		---	----	----	-	----	---	-	---	----	----	----	----	---		-	-- -		--	- -	-	- -
K093-01D	-	----	----	----	-	----	---	--	----	----	---	---	----	- --	-	-	----	----	--	- -	----	- -	----	-- -	---	----	--	-
K072-01	-	-	--	----	-	-	---	-	---	- -	-- -	- -	- -	----	-	--	- -	----	---	--	----	----	----	----	--	----	----	- - -
K090-03	- -	-	-	--	--	--	-	-	- -	- -	--	-	-	----	-	----	--	----	---	---		--	--	--	-		-- -	- -
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CCV7	96	98	103	99	99	98	98	99	96	98	99	101	97	101	97	96	101	97	100	102	98	107	97	91	102	100	100	107
CCB7		----	-	---		--	-	-		----	-	--	--	- -	---	--		---	----		---	---	-		-	----	----		
ICSA2	92	- -		--	----	-	----	94	---	- -	----	96	----	----	96	-- -	-	- -	----	-		-	----	----	---	----	-- -	-
ICSAB2	92	101	105	100	101	103	94	94	92	96	102	96	95	116	97	96	102	95	103	103	104	111	96	85	94	102	98	106
CCV8	96	96	102	99	101	98	98	99	95	97	98	100	98	109	98	97	101	97	98	102	97	105	97	91	96	102	100	106
CCB8	---	-	-		----	--		--			-	-		--	- -	--	-	-	----		----	- -		---			--	--
IPK0325S		---	--	- -	--	--	----	-	--	----	---	-	----	-	-	-	- --	----		----	----	----	----	-	----	---	-	-
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IPK0325"	-	-		--		-		--	--	---	---	---	--		-		-	----	-- -		----	- --	-	-	- -		-	
K152-01S	-	----	----	-	- -	----		-	--	- --	----	-	----	-	---	----	----	----	--	---	----	- -	---		----	-- -	-	--	---
K152-01	----	--	--	---	- -	---	----	-		----	----	---	----	- -	--		---	----	---	---	----	----	--		---	- --	-	-
K152-01D	---	-	--	- -	- -	--		--	-	---	--	- -		-	--	-	----			-- -		-	-	-	- -	- -	-	-
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CCV9	96	99	109	99	102	101	103	100	98	99	101	102	100	110	98	98	101	98	101	106	101	108	99	95	96	102	101	109
CCB9		-	---	- --			---	- -	----	- -	-	-	----	-	-	- -	----	----	----	----	----	--		----	- -	-	- -	--

QC limits of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC limit

VERSION : 11A UNIT : ug/L SUMMARY of CALIBRATION BLANKS : ID8K018 (WATER) DATE : 11/18/11 INST : EMAX1

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S21	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
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S26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
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S28	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S30	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S31	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ICV	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ICB	5.75	.640	.410	.040	.070	5.32	.040	12.4	.110	.130	.000	1.46	.750	.540	11.7	.080	.350	-.030	111	-1.58	.110	10.6	.030	.390	.700	.760	.160	.370
MRLK180[illegible]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MRLK180[illegible]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ICSA1	---	-1.27	1.38	.460	.040	34.8	3.15	---	.760	-.320	1.42	---	.290	19.3	---	1.46	-1.02	1.54	162	.920	.070	75.9	.830	-.260	1.81	5.56	.730	2.47
ICSAB1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CCV1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CCB1	16.8	.620	.840	.210	.100	4.57	.120	77.8	.020	.080	.250	3.74	.340	1.33	6.74	.180	.410	.040	171	1.33	.270	2.64	.200	-.040	.410	1.14	.150	3.38
K467-01A	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
K467-01B	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
K467-01C	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CCV2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CCB2	9.54	1.93	.820	.250	.120	3.32	.100	75.6	.010	.000	-.050	.770	.330	.880	24.7	.490	.400	.060	121	1.01	.140	20.3	-.010	.680	.520	.050	.180	3.44
IPK028W3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IPK028W4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IPK028W5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
K063-02A	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
K063-02	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
K063-02	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
K063-02	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
K063-02	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
K063-03	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ICV3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ICB3	8.99	1.10	2.89	.290	.160	2.98	.110	95.9	.190	.020	.310	2.13	.360	.950	17.9	.670	.390	.100	120	.760	.360	2.69	.040	1.15	.530	.700	.140	4.29
K063-03	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
K063-04	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
K063-05	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
K063-06	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
K039-01	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
K039-01D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
BLANK	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ICV4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ICB4	6.33	.860	.610	.060	.130	2.19	.130	105	.110	.070	.170	2.12	-.130	.860	13.1	.200	.410	.070	95.3	.870	.010	3.04	.030	.600	.200	.410	.160	4.99
IPK031W3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IPK031W4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IPK031W5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
K108-02A	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

K108-02	----	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K108-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
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CCV5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB5	4.66	.710	.490	.030	.150	3.66	.110	70.1	.110	.080	.220	2.49	.370	1.58	11.3	.420	.330	.080	138	-1.19	.130	-21.9	.040	.490	.830	.550	.080	3.25
K084-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K084-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB6	.750	1.50	.020	.090	.100	2.34	.080	50.9	.090	-.060	.310	.300	-.350	.520	10.7	.290	.360	.070	122	-.310	.230	23.5	.000	.790	.370	.130	.160	2.30
K070-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K070-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K101-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K093-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K093-01L	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K072-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K090-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB7	9.59	1.11	1.12	-.030	.130	2.34	.080	91.2	.180	-.060	.490	8.27	-.260	2.45	11.6	.270	.260	.090	95.5	-1.62	.020	8.71	.020	.600	.020	1.34	.200	4.21
ICSA2	----	.230	2.19	.580	.130	30.9	1.82	----	.660	-.330	.790	----	-1.19	20.6	----	1.27	1.15	1.52	45.7	.030	.190	.118	.770	.720	.960	5.48	.660	3.33
ICSAB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB8	.270	.430	.020	.030	.090	2.25	.080	18.9	.060	.070	.300	.220	-.710	1.17	1.85	.100	.300	.040	.113	.080	.100	5.47	.080	.790	.320	.750	-.010	35.6
ICP<0325B	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICP<0325L	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICP<0325S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K152-01L	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB9	-3.43	-.140	1.51	.180	.070	1.91	.080	19.3	.160	.120	-.560	3.22	.340	1.15	4.79	.040	.370	.040	70.8	-.760	.120	-56.7	-.070	.420	.670	.620	.110	1.75

QC limit of each parameter are listed in a table attached next to all the ICP check forms

* . Out of QC Limit

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
1	0	0	0	0	Unk	S0		ID8K018001			1	☒	unk	---
2	0	0	0	0	Unk	S20		ID8K018002			1	☒	unk	---
3	0	0	0	0	Unk	S21		ID8K018003			1	☒	unk	---
4	0	0	0	0	Unk	S22		ID8K018004			1	☒	unk	---
5	0	0	0	0	Unk	S23		ID8K018005			1	☒	unk	---
6	0	0	0	0	Unk	S24		ID8K018006			1	☒	unk	---
7	0	0	0	0	Unk	S25		ID8K018007			1	☒	unk	---
8	0	0	0	0	Unk	S26		ID8K018008			1	☒	unk	---
9	0	0	0	0	Unk	S27		ID8K018009			1	☒	unk	---
10	0	0	0	0	Unk	S28		ID8K018010			1	☒	unk	---
11	0	0	0	0	Unk	S29		ID8K018011			1	☒	unk	---
12	0	0	0	0	Unk	S30		ID8K018012			1	☒	unk	---
13	0	0	0	0	Unk	S31		ID8K018013			1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8K018014			1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8K018015			1	☒	3XIDL	None
16	3	2	3	1	QC	MRLK1801		ID8K018016			1	☒	MRL-EMAX	None
17	4	2	4	1	QC	MRLK1802		ID8K018017			1	☒	MRL-AFCEE	None
18	5	2	5	1	QC	ICSA1		ID8K018018			1	☒	ICSA	None
19	6	2	6	1	QC	ICSAB1		ID8K018019			1	☒	ICSAB	None
20	7	2	7	1	QC	CCV1		ID8K018020			1	☒	CCV	None
21	8	2	8	1	QC	CCB1		ID8K018021			1	☒	3XIDL	None
22	9	2	9	1	Unk	K467-01A		ID8K018022			1	☒	unk	---
23	10	2	10	1	Unk	K467-01W		ID8K018023			1	☒	unk	---
24	11	2	11	1	Unk	K467-01J		ID8K018024			1	☒	unk	---
25	12	2	12	1	Blank	Blank		ID8K018025			1	☐		---
26	13	2	1	2	QC	CCV2		ID8K018026			1	☒	CCV	None
27	14	2	2	2	QC	CCB2		ID8K018027			1	☒	3XIDL	None
28	15	2	3	2	QC	IPK028WB		ID8K018028			1	☒	1/2LOQ	None
29	16	2	4	2	QC	IPK028WL		ID8K018029			1	☒	LCS	None
30	17	2	5	2	QC	IPK028WC		ID8K018030			1	☒	LCS	None
31	18	2	6	2	Unk	K063-02A	DISSOLVED	ID8K018031			1	☒	unk	---
32	19	2	7	2	Unk	K063-02	DISSOLVED	ID8K018032			1	☒	unk	---
33	20	2	8	2	Unk	K063-02J	DISSOLVED	ID8K018033			1	☒	unk	---
34	21	2	9	2	Unk	K063-02M	DISSOLVED	ID8K018034			1	☒	unk	---
35	22	2	10	2	Unk	K063-02S	DISSOLVED	ID8K018035			1	☒	unk	---
36	23	2	11	2	Unk	K063-01	DISSOLVED	ID8K018036			1	☒	unk	---
37	24	2	12	2	Blank	Blank		ID8K018037			1	☐		---
38	25	2	1	3	QC	CCV3		ID8K018038			1	☒	CCV	None
39	26	2	2	3	QC	CCB3		ID8K018039			1	☒	3XIDL	None

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
40	27	2	3	3	Unk	K063-03	DISSOLVED	ID8K018040			1	☒	unk	---
41	28	2	4	3	Unk	K063-04	DISSOLVED	ID8K018041			1	☒	unk	---
42	29	2	5	3	Unk	K063-05	DISSOLVED	ID8K018042			1	☒	unk	---
43	30	2	6	3	Unk	K063-06	DISSOLVED	ID8K018043			1	☒	unk	---
44	31	2	7	3	Unk	K039-01	DISSOLVED	ID8K018044			1	☒	unk	---
45	32	2	8	3	Unk	K039-01D	DISSOLVED	ID8K018045			1	☒	unk	---
46	33	2	9	3	Blank	Blank		ID8K018046			1	☐		---
47	34	2	10	3	QC	CCV4		ID8K018047			1	☒	CCV	None
48	35	2	11	3	QC	CCB4		ID8K018048			1	☒	3XIDL	None
49	36	2	12	3	QC	IPK031WB		ID8K018049			1	☒	1/2LOQ	None
50	37	2	1	4	QC	IPK031WL		ID8K018050			1	☒	LCS	None
51	38	2	2	4	QC	IPK031WC		ID8K018051			1	☒	LCS	None
52	39	2	3	4	Unk	K108-02A		ID8K018052			1	☒	unk	---
53	40	2	4	4	Unk	K108-02		ID8K018053			1	☒	unk	---
54	41	2	5	4	Unk	K108-02J		ID8K018054			1	☒	unk	---
55	42	2	6	4	Unk	K108-02M		ID8K018055			1	☒	unk	---
56	43	2	7	4	Unk	K108-02S		ID8K018056			1	☒	unk	---
57	44	2	8	4	Unk	K108-01		ID8K018057			1	☒	unk	---
58	45	2	9	4	Blank	Blank		ID8K018058			1	☐		---
59	46	2	10	4	QC	CCV5		ID8K018059			1	☒	CCV	None
60	47	2	11	4	QC	CCB5		ID8K018060			1	☒	3XIDL	None
61	48	2	12	4	Unk	K084-01	DISSOLVED	ID8K018061			1	☒	unk	---
62	49	2	1	5	Unk	K084-02	DISSOLVED	ID8K018062			1	☒	unk	---
63	50	2	2	5	Unk	K084-03	DISSOLVED	ID8K018063			1	☒	unk	---
64	51	2	3	5	Unk	K084-04	DISSOLVED	ID8K018064			1	☒	unk	---
65	52	2	4	5	Unk	K084-05	DISSOLVED	ID8K018065			1	☒	unk	---
66	53	2	5	5	Unk	K084-06	DISSOLVED	ID8K018066			1	☒	unk	---
67	54	2	6	5	Unk	K070-01	DISSOLVED	ID8K018067			1	☒	unk	---
68	55	2	7	5	Unk	K070-02	DISSOLVED	ID8K018068			1	☒	unk	---
69	56	2	8	5	Unk	K070-03	DISSOLVED	ID8K018069			1	☒	unk	---
70	57	2	9	5	Blank	Blank		ID8K018070			1	☐		---
71	58	2	10	5	QC	CCV6		ID8K018071			1	☒	CCV	None
72	59	2	11	5	QC	CCB6		ID8K018072			1	☒	3XIDL	None
73	60	2	12	5	Unk	K070-04	DISSOLVED	ID8K018073			1	☒	unk	---
74	61	3	1	1	Unk	K070-05	DISSOLVED	ID8K018074			1	☒	unk	---
75	62	3	2	1	Unk	K070-06	DISSOLVED	ID8K018075			1	☒	unk	---
76	63	3	3	1	Unk	K101-01	DISSOLVED	ID8K018076			1	☒	unk	---
77	64	3	4	1	Unk	K093-01	DISSOLVED	ID8K018077			1	☒	unk	---
78	65	3	5	1	Unk	K093-01D	DISSOLVED	ID8K018078			1	☒	unk	---

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
79	66	3	6	1	Unk	K072-01	DISSOLVED	ID8K018079			1	☒	unk	---
80	67	3	7	1	Unk	K090-03	DISSOLVED	ID8K018080			1	☒	unk	---
81	68	3	8	1	Blank	Blank		ID8K018081			1	☐		---
82	69	3	9	1	QC	CCV7		ID8K018082			1	☒	CCV	None
83	70	3	10	1	QC	CCB7		ID8K018083			1	☒	3XIDL	None
84	71	3	11	1	QC	ICSA2		ID8K018084			1	☒	ICSA	None
85	72	3	12	1	QC	ICSAB2		ID8K018085			1	☒	ICSAB	None
86	73	3	1	2	QC	CCV8		ID8K018086			1	☒	CCV	None
87	74	3	2	2	QC	CCB8		ID8K018087			1	☒	3XIDL	None
88	75	3	3	2	QC	IPK032SB		ID8K018088			1	☒	1/2LOQ	None
89	76	3	4	2	QC	IPK032SL		ID8K018089			1	☒	LCS	None
90	77	3	5	2	QC	IPK032SC		ID8K018090			1	☒	LCS	None
91	78	3	6	2	Unk	K152-01A		ID8K018091			1	☒	unk	---
92	79	3	7	2	Unk	K152-01		ID8K018092			1	☒	unk	---
93	80	3	8	2	Unk	K152-01J		ID8K018093			1	☒	unk	---
94	83	3	11	2	Blank	Blank		ID8K018094			1	☐		---
95	84	3	12	2	QC	CCV9		ID8K018095			1	☒	CCV	None
96	85	3	1	3	QC	CCB9		ID8K018096			1	☒	3XIDL	None

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INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID
1	Blank	.00130	.00002	-.00002	.00040	.00009	.00074	-.00005	.00023	-.00008	-.00115	Blank
2	S20					1.0272		.14317				S20
3	S21					10.310		1.3994				S21
4	S22				.57219						.15174	S22
5	S23				5.7640						1.5246	S23
6	S24						.10386					S24
7	S25						1.0501					S25
8	S26	.24775							.98689	.15619		S26
9	S27	8.8712							9.2807	1.5607		S27
10	S28		.00522									S28
11	S29		.05092									S29
12	S30			.00131								S30
13	S31			.00527								S31
14	ICV	101.67	1.4774	1.0462	1.9789	1.5234	2.5379	1.9823	74.283	2.4145	.97000	ICV
15	ICB	.00575	.00064	.00041	.00004	.00007	.00532	.00004	.01245	.00011	.00013	ICB
16	MRLK1801	.22441	.09677	.01157	.01056	.01023	.09909	.01036	1.0118	.00999	.00973	MRLK1801
17	MRLK1802	.21411	.04916	.01020	.00528	.00410	.09799	.00504	.50879	.00959	.00957	MRLK1802
18	ICSA1	393.18	-.00127	.00138	.00046	.00004	.03482	.00315	477.89	.00076	-.00032	ICSA1
19	ICSAB1	381.69	1.0156	1.0609	.48696	.49401	.54160	.95304	470.56	.46925	.48201	ICSAB1
20	CCV1	101.93	1.5101	1.0463	1.9564	1.4725	2.5489	1.9909	74.378	2.4316	.96755	CCV1
21	CCB1	.01681	.00062	.00084	.00021	.00010	.00457	.00012	.07778*	-.00002	.00008	CCB1
22	K467-01A	5.7181	2.5802	.57112	.58005	.54312	.65264	.53891	81.520	.52221	.52286	K467-01A
23	K467-01W	.06912	.00170	.00044	.04579	.00002	.12609	.00061	33.259	.00103	.00081	K467-01W
24	K467-01J	.01312	.00216	.00052	.00960	-.00004	.02550	.00016	7.0591	.00023	.00017	K467-01J
25	Blank	.01168	.00023	.00175	.00024	.00017	-.00011	.00017	.06082	.00017	.00005	Blank
26	CCV2	100.24	1.4790	1.0239	2.0197	1.5288	2.4843	1.9607	74.130	2.3972	.97893	CCV2
27	CCB2	.00954	.00193	.00082	.00025	.00012	.00332	.00010	.07563*	.00001	.00000	CCB2
28	IPK028WB	.00083	.00083	.00180	-.00002	.00001	.00063	.00003	.00223	-.00010	.00008	IPK028WB
29	IPK028WL	5.1159	2.5204	.53556	.50373	.51722	.51934	.51718	49.594	.49993	.50154	IPK028WL
30	IPK028WC	5.0110	2.4853	.52715	.49605	.50853	.51331	.51321	48.622	.48782	.49070	IPK028WC
31	K063-02A	5.5900	2.6448	.58986	.72755	.54779	.64279	.53836	247.25	.52610	.53859	K063-02A
32	K063-02	.02026	.00024	.00260	.18735	.00006	.10884	-.00006	207.89	.00050	-.00054	K063-02
33	K063-02J	.00503	.00029	.00022	.03957	.00000	.02255	-.00005	44.752	.00024	-.00020	K063-02J
34	K063-02M	5.1664	2.5691	.54245	.69180	.51034	.62872	.49584	247.22	.48032	.49572	K063-02M
35	K063-02S	5.3275	2.6239	.54932	.71028	.52452	.64184	.50540	255.79	.49005	.50456	K063-02S
36	K063-01	.01646	.00027	.00392	.17218	.00013	.10995	-.00003	260.99	.00055	.00074	K063-01
37	Blank	.00958	.00086	.00189	.00019	.00019	-.00027	.00024	.06563	.00029	.00011	Blank
38	CCV3	98.478	1.4815	1.0344	1.9732	1.4943	2.4855	1.9746	74.043	2.4133	.97769	CCV3
39	CCB3	.00899	.00110	.00289	.00029	.00016	.00298	.00011	.09593*	.00019	.00002	CCB3
40	K063-03	.02817	-.00082	.00243	.09815	-.00002	.11237	-.00011	294.15	.00065	.00058	K063-03
41	K063-04	.01836	-.00084	.00397	.15140	.00003	.10590	-.00007	192.48	.00052	-.00047	K063-04
42	K063-05	.01572	-.00195	.00230	.17829	-.00003	.11349	-.00012	285.89	.00041	-.00047	K063-05
43	K063-06	.00858	-.00163	.00415	.19026	-.00001	.10709	-.00006	209.15	.00045	-.00055	K063-06
44	K039-01	.00694	-.00100	.00083	.10377	.00002	.04588	-.00005	73.533	.00049	.00329	K039-01
45	K039-01D	.00686	-.00055	.00057	.10708	.00000	.04580	-.00003	74.864	.00029	.00317	K039-01D
46	Blank	.00624	.00068	.00156	.00000	.00020	-.00108	.00021	.05544	.00017	.00019	Blank
47	CCV4	97.816	1.4716	1.0314	1.9875	1.5063	2.4757	1.9817	74.238	2.4147	.97704	CCV4
48	CCB4	.00633	.00086	.00061	.00006	.00013	.00219	.00013	.10477*	.00011	.00007	CCB4
49	IPK031WB	-.00191	-.00092	-.00019	-.00014	-.00005	-.00015	.00000	.00119	.00009	.00006	IPK031WB
50	IPK031WL	5.0840	2.5350	.53219	.50216	.51701	.51841	.51538	49.674	.49771	.50026	IPK031WL
51	IPK031WC	5.1117	2.5730	.54236	.51029	.52563	.52205	.52419	50.460	.50351	.50655	IPK031WC
52	K108-02A	5.3177	2.5388	.57210	.62510	.54876	.56847	.53549	110.02	.52647	.52457	K108-02A

53	K108-02	.00133	.00196	00238	.08975	.00003	.05556	.00006	62.067	.00947	-.00031	K108-02
54	K108-02J	.00226	.00066	.00171	.01965	-.00001	.01112	-.00002	13.307	.00193	-.00017	K108-02J
55	K108-02M	5.1669	2.5668	.54401	.60494	.52772	.57505	.50847	111.67	.49991	.50055	K108-02M
56	K108-02S	5.0948	2.5797	.54700	.60251	.52508	.57332	.50925	110.72	.49965	.49810	K108-02S
57	K108-01	.00085	-.00014	.00586	.09003	-.00001	.05427	.00004	62.149	.01119	-.00035	K108-01
58	Blank	.00505	-.00006	.00238	.00005	.00021	-.00053	.00019	.05433	.00009	.00007	Blank
59	CCV5	98.674	1.4800	1.0194	2.0242	1.5213	2.4495	1.9503	74.370	2.3707	.97526	CCV5
60	CCB5	.00466	.00071	.00049	.00003	.00015	.00366	.00011	.07012*	.00011	.00008	CCB5
61	K084-01	.01450	-.00032	.00155	.14518	.00002	.08270	-.00005	136.35	.00037	-.00033	K084-01
62	K084-02	.01570	-.00139	.00230	.08376	-.00002	.08355	-.00002	145.73	.00038	-.00031	K084-02
63	K084-03	.01393	.00063	.05906	.03606	-.00003	.17307	.00039	345.88	.00018	.00106	K084-03
64	K084-04	.01200	-.00181	.00164	.20713	-.00002	.12503	-.00002	202.16	.00053	-.00015	K084-04
65	K084-05	.00767	-.00048	-.00102	.23625	.00001	.11162	-.00010	229.47	.00046	-.00054	K084-05
66	K084-06	.01215	-.00107	.00284	.14336	.00001	.08002	-.00005	135.07	.00048	-.00022	K084-06
67	K070-01	.01196	-.00212	.03160	.06237	-.00002	.17774	.00005	498.75	.00034	.00025	K070-01
68	K070-02	.01935	-.00136	.00001	.12083	-.00002	.10397	-.00022	419.56	.00044	-.00031	K070-02
69	K070-03	.02689	-.00128	.00187	.11657	.00000	.11465	-.00016	312.43	.00045	-.00037	K070-03
70	Blank	.00468	.00085	.00144	.00027	.00019	-.00166	.00022	.07243	.00023	.00002	Blank
71	CCV6	97.248	1.4773	1.0224	2.0161	1.5152	2.4464	1.9513	74.378	2.3717	.97595	CCV6
72	CCB6	.00075	.00150	.00002	.00009	.00010	.00234	.00008	.05085*	.00009	-.00006	CCB6
73	K070-04	.00879	-.00222	.00123	.21511	.00006	.08351	-.00010	217.61	.00029	-.00035	K070-04
74	K070-05	.01638	-.00119	.00623	.33496	.00003	.12988	-.00014	321.20	.00047	-.00053	K070-05
75	K070-06	.00635	-.00167	.00087	.21256	-.00001	.08083	-.00005	217.64	.00049	-.00024	K070-06
76	K101-01	.00448	-.00146	.00212	.22012	.00004	.11312	-.00005	181.91	.00037	-.00045	K101-01
77	K093-01	.00247	-.00074	-.00032	.10840	-.00003	.04492	.00000	74.673	.00034	.00276	K093-01
78	K093-01D	.00034	-.00038	.00200	.10851	-.00004	.04477	-.00003	74.676	.00035	.00279	K093-01D
79	K072-01	.01138	.00073	.00151	.10938	.00010	.04197	-.00006	63.894	.00037	.00160	K072-01
80	K090-03	.02535	-.00035	-.00132	.03403	.00023	.19801	.00022	9.7168	.00024	.00002	K090-03
81	Blank	.00280	.00072	.00000	.00018	.00016	-.00225	.00018	.04622	.00017	.00005	Blank
82	CCV7	95.263	1.4751	1.0304	1.9711	1.4884	2.4506	1.9580	74.381	2.3950	.97776	CCV7
83	CCB7	.00959	.00111	.00112	-.00003	.00013	00234	.00008	.09124*	.00018	-.00006	CCB7
84	ICSA2	368.55	.00033	-.00219	.00058	.00013	.03089	.00182	469.86	.00066	-.00033	ICSA2
85	ICSAB2	369.14	1.0065	1.0481	.49944	.50461	.52563	.94330	467.76	.46142	.48134	ICSAB2
86	CCV8	95.423	1.4444	1.0312	1.9726	1.5221	2.4464	1.9678	74.508	2.3841	.97485	CCV8
87	CCB8	.00027	-.00043	-.00002	-.00003	.00009	.00325	.00008	.01894	.00006	.00002	CCB8
88	IPK032SB	-.00560	.00025	-.00049	-.00012	-.00003	00042	-.00004	.01310	.00040	.00000	IPK032SB
89	IPK032SL	4.8545	2.4950	.52104	.52656	.53816	.48204	.51412	51.806	.50640	.52668	IPK032SL
90	IPK032SC	4.8172	2.4533	.51336	.52408	.53474	.47924	.50772	51.352	.50028	.52145	IPK032SC
91	K152-01A	70.983	2.5175	.63658	2.1809	.55945	.55017	1.1205	361.58	.63593	.59119	K152-01A
92	K152-01	67.990	.02699	.09530	1.6917	.00589	.06939	.65592	326.87	.13405	.05550	K152-01
93	K152-01J	13.732	.00760	.02105	.34200	.00118	.01410	.14297	68.995	.02863	.01108	K152-01J
94	Blank	-.00196	-.00036	.00125	.00023	.00000	-.00132	-.00002	.02644	-.00005	-.00009	Blank
95	CCV9	96.460	1.4884	1.0752	1.9822	1.5334	2.5137	2.0639	75.244	2.4441	.98837	CCV9
96	CCB9	-.00343	-.00014	.00151	.00018	.00007	.00191	.00008	.01931	.00018	.00012	CCB9
INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID

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INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID
1	Blank	.00108	.00001	.00019	-.00061	-.00001	.00006	-.00011	-.00057	-.00092	.00001	Blank
2	S20			.20004			.10533					S20
3	S21			2.0153			1.0542					S21
4	S22	.28663	.05391									S22
5	S23	2.7478	2.0913									S23
6	S24							.69431				S24
7	S25							7.0782				S25
8	S26								.75477	.44222		S26
9	S27								7.4278	4.4476		S27
10	S28					.02592						S28
11	S29					.25485						S29
12	S30				.03336						.00147	S30
13	S31				.16786						.00589	S31
14	ICV	2.5588	25.335	2.4568	.54075	58.325	2.4215	2.4979	2.4123	58.366	1.0441	ICV
15	ICB	.00000	.00146	-.00075	.00084	.01173	.00008	.00035	-.00003	.11074	-.00158	ICB
16	MRLK1801	.01052	.21283	.01020	.01130	1.0203	.01053	.01016	.00984	.99412	.00992	MRLK1801
17	MRLK1802	.00999	.10306	.00269	.10419	.20863	.00534	.00937	.00970	.97612	.00922	MRLK1802
18	ICSA1	.00142	197.65	-.00029	.01932	197.71	.00146	-.00102	.00154	.16213	.00092	ICSA1
19	ICSAB1	.53123	195.57	.96189	1.1360	189.85	.46890	1.0119	.95246	76.540	1.0372	ICSAB1
20	CCV1	2.5808	25.412	2.4207	.49776	57.572	2.3700	2.4799	2.3914	59.553	1.0432	CCV1
21	CCB1	.00028	.00374	-.00034	.00133	.00674	.00018	.00041	.00004	.17075	.00133	CCB1
22	K467-01A	.70232	6.2479	.52826	.01661	62.543	.66793	.51770	.46480	52.996	.56477	K467-01A
23	K467-01W	.14675	.82775	.00293	.01491	13.875	.14660	.00733	.00409	3.3280	-.00080	K467-01W
24	K467-01J	.03041	.17789	.00033	.00372	2.9183	.03084	.00157	.00086	.74270	-.00067	K467-01J
25	Blank	.00011	.00574	-.00055	.00085	.00980	.00031	.00032	.00033	.07726	-.00047	Blank
26	CCV2	2.5142	24.901	2.4349	.52058	59.376	2.4653	2.5307	2.4117	59.509	1.0147	CCV2
27	CCB2	-.00005	.00077	-.00033	.00088	.02473	.00049	.00040	.00006	.12105	-.00101	CCB2
28	IPK028WB	-.00012	.00091	-.00039	.00111	.00863	.00009	.00005	-.00026	.02627	-.00044	IPK028WB
29	IPK028WL	.52157	5.1935	.50108	.00303*	48.848	.49578	.52006	.50065	48.949	.52476	IPK028WL
30	IPK028WC	.50777	5.0856	.49691	.00294*	48.177	.48802	.51249	.48915	48.126	.51830	IPK028WC
31	K063-02A	.56836	6.4488	.53993	.01820	84.873	.90527	.53719	.47554	56.516	.57466	K063-02A
32	K063-02	.00098	1.0177	.00109	.01834	36.340	.38709	.00290	.00022	5.0399	-.00089	K063-02
33	K063-02J	.00026	.21615	.00024	.00376	7.7952	.08272	.00057	.00013	1.0648	-.00007	K063-02J
34	K063-02M	.51117	6.0307	.49909	.01893	84.291	.87040	.53380	.49411	54.952	.52591	K063-02M
35	K063-02S	.52305	6.1331	.50754	.01905	87.560	.89977	.54519	.50245	56.603	.53592	K063-02S
36	K063-01	.00090	13.420	.00137	.02043	31.836	.35770	-.00042	.00194	5.3676	-.00130	K063-01
37	Blank	-.00005	.00235	-.00032	.00127	.00945	.00036	.00031	.00025	.09884	.00069	Blank
38	CCV3	2.5350	25.131	2.4237	.50623	58.271	2.3983	2.5138	2.4124	59.326	1.0252	CCV3
39	CCB3	-.00001	.00213	-.00036	.00098	.01786	.00057	.00039	.00010	.11978	.00076	CCB3
40	K063-03	.00126	.20809	.00207	.02284	43.348	.42920	-.00036	.00034	6.0617	.00063	K063-03
41	K063-04	.00082	.55312	.00194	.01506	33.904	.28696	.00350	.00050	4.7425	-.00137	K063-04
42	K063-05	.00072	.50895	.00128	.02221	50.895	.32214	.00291	.00079	5.8228	.00034	K063-05
43	K063-06	.00079	1.0305	.00099	.01729	37.013	.39523	.00272	.00065	4.9750	.00006	K063-06
44	K039-01	.00042	-.00165	.00151	.03708	26.953	.43085	.03263	.01544	3.3885	.00207	K039-01
45	K039-01D	.00010	-.00395	.00047	.03823	27.710	.44372	.03333	.01574	3.4598	.00165	K039-01D
46	Blank	-.00023	.00409	-.00090	.00041	.02622	.00037	.00019	.00028	.03292	.00044	Blank
47	CCV4	2.5083	25.101	2.4180	.51168	58.898	2.4287	2.5114	2.4078	59.732	1.0213	CCV4
48	CCB4	-.00017	.00212	-.00013	.00086	.01308	.00020	.00041	.00007	.09532	-.00087	CCB4
49	IPK031WB	-.00012	.00108	-.00024	.00076	-.00022	-.00022	.00008	.00060	.02068	-.00240	IPK031WB
50	IPK031WL	.51307	5.2003	.49975	.00230*	49.077	.49652	.52349	.49982	49.350	.52288	IPK031WL
51	IPK031WC	.51670	5.2609	.50541	.00374*	50.082	.50397	.52887	.50535	49.867	.53238	IPK031WC
52	K108-02A	.53676	5.9915	.52826	.03852	62.107	.53662	.53095	.46286	52.551	.55408	K108-02A

53	K108-02	.00016	.60745	.00163	.03587	12.631	.00779	.01485	.00007	2.3162	.00040	K108-02
54	K108-02J	.00004	.13121	.00063	.00936	2.7372	.00177	.00309	-.00008	.50004	.00028	K108-02J
55	K108-02M	.50921	5.7965	.50457	.03977	62.574	.51241	.54410	.49956	52.308	.52703	K108-02M
56	K108-02S	.50628	5.7780	.50175	.03920	62.378	.50847	.54244	.49664	52.124	.52875	K108-02S
57	K108-01	.00015	.00161	.00200	.03647	12.428	.00020	.01522	.00011	2.3316	.00229	K108-01
58	Blank	-.00016	.00341	-.00057	.00017	.01892	.00035	.00026	.00048	.06036	.00037	Blank
59	CCV5	2.4517	24.830	2.4353	.51951	59.652	2.4595	2.5291	2.4128	59.572	1.0134	CCV5
60	CCB5	-.00022	.00249	-.00037	.00158	.01126	.00042	.00033	.00008	.13814	-.00119	CCB5
61	K084-01	.00037	.10200	.00105	.01092	23.461	.14869	.00362	.00010	3.4649	-.00116	K084-01
62	K084-02	.00108	.39522	.00106	.01137	25.770	.24738	.00486	.00026	3.8328	-.00062	K084-02
63	K084-03	.00051	88.209	.00396	.04195	65.957	2.7479	-.00077	.00451	8.6649	-.00150	K084-03
64	K084-04	.00091	17.986	.00095	.02022	25.203	.80021	-.00014	.00174	4.6523	-.00254	K084-04
65	K084-05	.00053	4.7264	.00140	.02454	43.781	.79340	-.00005	.00053	5.1511	.00034	K084-05
66	K084-06	.00068	.10687	.00203	.01077	22.807	.14707	.00369	.00186	3.5021	-.00166	K084-06
67	K070-01	.00067	30.797	.00485	.05656	88.800	1.0768	-.00070	.00532	11.183	.00020	K070-01
68	K070-02	.00131	7.9987	.00221	.03607	67.065	1.1231	-.00015	.00295	7.1947	-.00046	K070-02
69	K070-03	.00109	.81415	.00149	.02512	62.240	.43632	.00236	.00050	6.2243	.00062	K070-03
70	Blank	-.00036	.00056	-.00016	.00143	.01416	.00052	.00019	.00020	.08439	-.00073	Blank
71	CCV6	2.4438	24.926	2.4316	.51819	59.512	2.4572	2.5275	2.4126	59.794	1.0168	CCV6
72	CCB6	-.00031	.00030	-.00035	.00052	.01074	.00029	.00036	.00007	.12229	-.00031	CCB6
73	K070-04	.00048	.05411	.00193	.01666	39.203	.33377	.00334	.00063	4.8515	.00078	K070-04
74	K070-05	.00033	14.244	.00215	.03435	62.737	1.0472	-.00064	.00040	7.0409	.00013	K070-05
75	K070-06	.00057	.06285	.00133	.01605	38.849	.32930	.00315	.00050	4.8162	-.00030	K070-06
76	K101-01	-.00008	1.0135	.00145	.01906	34.669	.43962	.00009	.00034	4.3773	-.00162	K101-01
77	K093-01	.00011	-.00497	.00098	.04088	27.732	.36014	.01557	.00540	3.7777	.00055	K093-01
78	K093-01D	.00003	-.00021	.00062	.04081	27.844	.36380	.01574	.00541	3.7462	.00100	K093-01D
79	K072-01	.00027	.01835	.00034	.04584	24.523	.43012	.13627	.02282	3.9636	.00048	K072-01
80	K090-03	.00088	.00741	.00342	.01398	10.579	.00138	.00128	.00356	.81804	.00327	K090-03
81	Blank	-.00043	.00309	-.00019	.00094	.01062	.00058	.00036	.00028	.04039	-.00069	Blank
82	CCV7	2.4736	25.209	2.4229	.50355	58.443	2.4002	2.5216	2.4167	59.839	1.0184	CCV7
83	CCB7	-.00049	.00827	-.00026	.00245	.01157	.00027	.00026	.00009	.09550	-.00162	CCB7
84	ICSA2	.00079	192.39	-.00119	.02063	192.43	.00127	-.00115	.00152	.04575	.00003	ICSA2
85	ICSAB2	.50850	192.42	.95477	1.1576	194.74	.48177	1.0161	.95223	77.547	1.0305	ICSAB2
86	CCV8	2.4512	25.082	2.4471	.54372	58.769	2.4229	2.5166	2.4269	59.018	1.0206	CCV8
87	CCB8	-.00030	-.00022	-.00071	.00117	.00185	.00010	.00030	.00004	.11313	.00008	CCB8
88	IPK032SB	-.00042	.00532	-.00046	.00023	.01054	.00007	.00042	00000	.08370	.00001	IPK032SB
89	IPK032SL	.50361	5.2644	.51820	.00343*	52.065	.52271	.55743	.52455	50.955	.50806	IPK032SL
90	IPK032SC	.49794	5.2111	.51260	.00168*	51.904	.52064	.55269	.51866	50.574	49783	IPK032SC
91	K152-01A	.97294	128.86	6.6496	.06066	84.504	5.0768	.53858	61313	60.828	.53607	K152-01A
92	K152-01	.44292	128.27	6.4091	.06051	35.683	4.7471	-.00079	.14907	9.6913	.00422	K152-01
93	K152-01J	.08968	27.376	1.3247	.01178	7.4153	.99004	-.00182	.02971	1.8500	.00240	K152-01J
94	Blank	-.00051	00298	-.00064	.00080	.00765	.00034	.00000	-.00004	-.03976	-.00045	Blank
95	CCV9	2.5238	25.528	2.4890	.54788	59.076	2.4429	2.5313	2.4529	60.544	1.0571	CCV9
96	CCB9	-.00055	.00322	-.00034	.00115	.00479	.00004	.00037	00004	.07075	-.00076	CCB9
INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID

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INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID
1	Blank	.00011	.00331	-.00012	-.00002	.00001	.00005	-.00025	.00044	Blank
2	S20									S20
3	S21									S21
4	S22							.12964		S22
5	S23							1.3040		S23
6	S24		1.3358							S24
7	S25		7.7723							S25
8	S26									S26
9	S27									S27
10	S28				.00636					S28
11	S29				.06360					S29
12	S30	.04537		.14907		.02413	.01673		.63640	S30
13	S31	.22325		.73021		.11527	.08932		6.2345	S31
14	ICV	.50281	62.567	.48845	2.3329	.47812	.50801	1.5096	2.6246	ICV
15	ICB	.00011	-.01065	.00003	.00039	.00070	.00076	.00016	.00037	ICB
16	MRLK1801	.01023	.98344	.01031	.01122	.00089	.01063	.01030	.02088	MRLK1801
17	MRLK1802	.00986	.46685	.00988	.01023	.00977	.01063	.00963	.01085	MRLK1802
18	ICSA1	.00007	.07594	.00083	-.00026	.00181	.00556	.00073	.00247	ICSA1
19	ICSAB1	1.0699	82.009	.47722	.86039	.94339	.99405	.50012	1.0498	ICSAB1
20	CCV1	.50901	63.824	.48946	2.3466	.50440	.49426	1.5077	2.6186	CCV1
21	CCB1	.00027	-.00264	.00020	-.00004	.00041	.00114	.00015	.00338	CCB1
22	K467-01A	.51151	111.54	.82632	.51105	.48315	.52347	.54263	.83716	K467-01A
23	K467-01W	.00012	59.600	.35090	.00011	.00062	.00381	.00058	.28042	K467-01W
24	K467-01J	.00012	12.368	.07381	.00081	.00042	.00167	.00026	.05850	K467-01J
25	Blank	.00018	-.02760	.00003	.00011	.00056	.00045	.00021	.00279	Blank
26	CCV2	.49922	64.026	.49088	2.2996	.50725	.51135	1.4875	2.6341	CCV2
27	CCB2	.00014	-.02027	-.00001	.00068	.00052	-.00005	.00018	.00344	CCB2
28	IPK028WB	.00014	-.03569	-.00003	.00023	.00052	.00067	-.00002	.00060	IPK028WB
29	IPK028WL	.51507	53.280	.49953	.49109	.48347	.51555	.51741	.54349	IPK028WL
30	IPK028WC	.51336	52.350	.49178	.49003	.47845	.51157	.50696	.53703	IPK028WC
31	K063-02A	.52611	145.39	2.2797	.49605	.49890	.52568	.55254	.59412	K063-02A
32	K063-02	.00007	92.655	1.8213	.00068	.00081	.00280	-.00005	.00995	K063-02
33	K063-02J	.00010	19.162	.38440	.00012	.00051	.00087	.00004	.00249	K063-02J
34	K063-02M	.51916	143.47	2.2665	.45885	.49338	.52037	.51174	.54314	K063-02M
35	K063-02S	.52890	148.03	2.3399	.46827	.50201	.53546	.52001	.55461	K063-02S
36	K063-01	-.00032	89.754	1.5835	-.00067	.00029	.00375	.00165	.00642	K063-01
37	Blank	.00004	.00275	.00010	.00057	.00056	.00089	.00015	.00220	Blank
38	CCV3	.50073	64.007	.48785	2.2912	.50643	.49967	1.4990	2.6469	CCV3
39	CCB3	.00036	-.00260	-.00004	.00115	.00053	.00070	.00014	.00429	CCB3
40	K063-03	-.00020	129.74	2.0871	-.00057	.00040	.00346	.00079	.01800	K063-03
41	K063-04	-.00005	85.401	1.6505	.00039	.00020	.00238	-.00015	.00589	K063-04
42	K063-05	-.00015	115.32	2.4559	.00014	-.00026	.00310	-.00032	.00594	K063-05
43	K063-06	.00009	93.157	1.8254	-.00027	.00104	.00256	-.00009	.00254	K063-06
44	K039-01	-.00002	93.253	.73912	.00126	.00025	.00271	-.00003	.00814	K039-01
45	K039-01D	-.00003	95.418	.75563	.00185	.00051	.00160	.00016	.00757	K039-01D
46	Blank	.00012	.02336	.00004	.00061	.00051	.00058	.00004	.00247	Blank
47	CCV4	.49862	64.383	.48949	2.2927	.50513	.50117	1.4975	2.6435	CCV4
48	CCB4	.00001	.00304	.00003	.00060	.00020	.00041	.00016	.00499	CCB4
49	IPK031WB	.00014	-.03245	.00000	.00104	.00058	.00091	.00005	.00077	IPK031WB
50	IPK031WL	.50777	53.566	.50222	.48761	.48772	.52129	.51808	.54460	IPK031WL
51	IPK031WC	.51236	54.055	.50431	.49601	.49309	.52891	.52315	.55115	IPK031WC
52	K108-02A	.49734	97.975	1.3104	.49994	.48836	.52242	.54475	.63700	K108-02A

53	K108-02	.00008	44.624	.84434	.00044	.00049	.00140	.00549	.06279	K108-02
54	K108-02J	.00023	9.3457	.18055	.00017	.00079	.00068	.00109	.01432	K108-02J
55	K108-02M	.50876	98.876	1.3438	.47552	.49823	.53022	.52385	.61337	K108-02M
56	K108-02S	.50632	97.815	1.3246	.47508	.49687	.52890	.52009	.60874	K108-02S
57	K108-01	.00010	44.206	.82773	.00072	.00019	.00175	.00598	.02799	K108-01
58	Blank	.00015	-.01248	.00001	.00024	.00009	.00107	.00048	.00248	Blank
59	CCV5	.48876	64.020	.48748	2.2704	.51158	.51104	1.4794	2.6598	CCV5
60	CCB5	.00013	-.02189	.00004	.00049	.00083	.00055	.00008	.00325	CCB5
61	K084-01	.00008	63.466	1.1898	.00001	.00027	.00195	-.00004	.00221	K084-01
62	K084-02	.00008	66.476	1.2320	.00049	.00054	.00258	-.00032	.00595	K084-02
63	K084-03	-.00012	125.87	2.7943	-.00059	.00078	.00286	.00088	.00362	K084-03
64	K084-04	-.00023	79.695	1.3677	-.00001	.00032	.00280	.00034	.00576	K084-04
65	K084-05	-.00017	111.88	2.0054	.00069	.00048	.00311	.00005	.00659	K084-05
66	K084-06	.00003	63.376	1.1947	-.00026	.00000	.00162	-.00004	.00545	K084-06
67	K070-01	-.00029	395.55	4.5010	-.00066	.00074	.00350	.00116	.00433	K070-01
68	K070-02	-.00038	135.29	3.2456	.00008	.00080	.00325	.00064	.01085	K070-02
69	K070-03	-.00013	148.76	2.5450	-.00030	.00021	.00248	.00000	.01739	K070-03
70	Blank	.00014	.08014	.00023	.00022	.00025	.00082	.00028	.00213	Blank
71	CCV6	.48805	64.136	.48710	2.2655	.51185	.51017	1.4866	2.6606	CCV6
72	CCB6	.00023	.02346	.00000	.00079	.00037	.00013	.00016	.00230	CCB6
73	K070-04	.00000	82.694	1.9099	.00022	-.00047	.00295	-.00023	.00503	K070-04
74	K070-05	-.00038	122.43	2.8332	-.00050	-.00015	.00301	-.00015	.00454	K070-05
75	K070-06	-.00004	81.610	1.8884	-.00015	.00001	.00280	.00000	.00588	K070-06
76	K101-01	.00014	72.938	1.6616	.00022	-.00005	.00227	-.00004	.00114	K101-01
77	K093-01	.00019	94.073	.76499	.00138	.00057	.00161	.00006	.07039	K093-01
78	K093-01D	-.00006	94.169	.76454	.00196	.00037	.00143	-.00013	.07059	K093-01D
79	K072-01	.00004	90.679	.66046	.00267	.00073	.00228	-.00006	.00919	K072-01
80	K090-03	.00013	158.45	.11412	.00035	.00001	.00116	.00273	.00988	K090-03
81	Blank	.00019	.05870	.00005	.00019	.00059	.00061	.00016	.00199	Blank
82	CCV7	.49180	64.221	.48690	2.2630	.51144	.49997	1.5025	2.6638	CCV7
83	CCB7	.00002	.00871	.00002	.00060	.00002	.00134	.00020	.00421	CCB7
84	ICSA2	.00019	.11849	.00077	-.00072	.00096	.00548	.00066	.00333	ICSA2
85	ICSAB2	1.0354	82.996	.48095	.84564	.94332	1.0158	.49196	1.0544	ICSAB2
86	CCV8	.48684	63.295	.48531	2.2677	.47913	.50777	1.4983	2.6539	CCV8
87	CCB8	.00010	-.00547	-.00008	.00079	.00032	.00075	-.00001	.00035	CCB8
88	IPK032SB	.00003	.00013	-.00014	.00011	.03369	.00091	.00004	.00168	IPK032SB
89	IPK032SL	.49336	55.144	.50831	.47973	.54531	.54431	.53226	.57361	IPK032SL
90	IPK032SC	.48884	54.724	.50305	.47247	.53802	.54293	.52624	.56756	IPK032SC
91	K152-01A	.49575	56.325	1.1177	.45734	.58020	1.9838	.71338	117.09*	K152-01A
92	K152-01	.00114	.98259	.65599	-.00144	.09450	1.5013	.18265	119.67*	K152-01
93	K152-01J	.00039	.11742	.13386	.00033	.01913	.30243	.03756	31.088	K152-01J
94	Blank	.00024	-.08136	-.00007	.00013	.00048	.00128	-.00002	.00383	Blank
95	CCV9	.50456	64.783	.49434	2.3639	.48002	.50828	1.5215	2.7131	CCV9
96	CCB9	.00012	-.05667*	-.00007	.00042	.00067	.00062	.00011	.00175	CCB9
INDX	LS1D	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LS1D

ID8K018 Section 3 of 3

EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP METALS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:
All samples pH <2

Book #: EIP-104
Batch: IPK031W
Matrix: Water
Digestor ID: E

SOP #	Rev. #
☐ EMAX-3005	4
☑ EMAX-3010	5
☐ EMAX-3050	4
☐ EMAX-200.7	2
☐ EMAX-	

Start	Temp	End	Temp
	95 °C		95 °C

Standards	ID	Amount Added (ml)
LCS-1	SM1A-013-04-13	0.25
LCS-2	SM1A-013-03-13	0.25
LCS-3	SM1A-013-04-14	0.5
MS	same spike vol and sol as LCS1, LCS2, LCS3	
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SW1A-04-407	1.5+1.5
HCl	SW1A-04-408	2.5+2.5
H_2O_2	N/A	
HNO3(1:1)	N/A	
Digestate Location	ICP	
Extract Location		
☑ Reagent Water ID: SM5A-02-074		
☑ Thermometer ID: 101993366		
☑ Pipette ID: ICP-07		
☑ Pipette ID: 142780035		
☐ Pipette ID:		
☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask		
☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask		

Prepared By: GG

Standard Added By: GG Witnessed By: TH

Extract Rcvd By: TH Checked By: TH

EMAX LABORATORIES, INC.

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
11IPK031W01	IPK031WB	50	ml	11/17/11 11:03	50	50	50	1	
11IPK031W02	IPK031WL	50	ml	11/17/11 11:03	50	50	50	1	
11IPK031W03	IPK031WC	50	ml	11/17/11 11:03	50	50	50	1	
11IPK031W04	K084-01	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W05	K084-02	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W06	K084-03	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W07	K084-04	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W08	K084-05	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W09	K084-06	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W10	K070-01	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W11	K070-02	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W12	K070-03	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W13	K070-04	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W14	K070-05	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W15	K070-06	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W16	K101-01	50	ml	11/17/11 11:03	50	50	50	1	DISSOLVED
11IPK031W17	K093-01	50	ml	11/17/11 11:03	50	50	50	1	*DISSOLVED
11IPK031W18	K093-01D	50	ml	11/17/11 11:03	50	50	50	1	*DISSOLVED
11IPK031W19	K072-01	50	ml	11/17/11 11:03	50	50	50	1	*DISSOLVED
11IPK031W20	K090-03	50	ml	11/17/11 11:03	50	50	50	1	*DISSOLVED
11IPK031W21	K108-01	50	ml	11/17/11 11:03	50	50	50	1	
11IPK031W22	K108-02	50	ml	11/17/11 11:03	50	50	50	1	
11IPK031W23	K108-02M	50	ml	11/17/11 11:03	50	50	50	1	
11IPK031W24	K108-02S	50	ml	11/17/11 11:03	50	50	50	1	

11/17/11 GG

Vd=digestate volume PrepFctr=)ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 11/17/11 11:11 Prepared By GG

☑ Digestion Ended @ 11/17/11 15:25 Checked By: TH

Comments:*Dissolved and filtered in lab. Date 11/17/11

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

WET CHEMICAL ANALYSES

SDG#: 11K101

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K101

METHOD 300.0
ANIONS BY IC

One (1) water sample was received on 11/10/11 for Anions (Chloride, Nitrate, Nitrite and Sulfate) by IC analysis, Method 300.0 in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. Results were compliant to project requirement.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the sample in this SDG.
Percent recoveries for ICK035WL/C were all within QC limits.
Percent recoveries for ICK041WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

SAMPLE RESULTS

METHOD 300.0
CHLORIDE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K101

Matrix : WATER
Instrument ID : D0

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK041WB	ND	1	NA	0.200	0.100	11/12/1111:07	NA	AK19-03	AK19-01	ICK041W	NA	NA
LCS1W	ICK041WL	1.99	1	NA	0.200	0.100	11/12/1112:11	NA	AK19-07	AK19-01	ICK041W	NA	NA
LCD1W	ICK041WC	1.94	1	NA	0.200	0.100	11/12/1112:27	NA	AK19-08	AK19-01	ICK041W	NA	NA
IR-70-RDO-5-117	K101-01	125	10	NA	2.00	1.00	11/12/1114:54	NA	AK19-17	AK19-13	ICK041W	11/10/1111:07	11/10/11

METHOD 300.0
NITRATE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K101

Matrix : WATER
Instrument ID : D0

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
LCS1W	ICK035WL	0.994	1	NA	0.200	0.0500	11/11/1104:17	NA	AK15-59	AK15-49	ICK035W	NA	NA
LCD1W	ICK035WC	0.985	1	NA	0.200	0.0500	11/11/1104:33	NA	AK15-60	AK15-49	ICK035W	NA	NA
MBLK1W	ICK035WB	ND	1	NA	0.200	0.0500	11/11/1105:22	NA	AK15-63	AK15-61	ICK035W	NA	NA
IR-70-RDO-5-117	K101-01	ND	1	NA	0.200	0.0500	11/11/1109:41	NA	AK15-79	AK15-73	ICK035W	11/10/1111:07	11/10/11

METHOD 300.0
NITRITE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K101

Matrix : WATER
Instrument ID : D0

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
LCS1W	ICK035WL	2.07	1	NA	0.200	0.0500	11/11/1104:17	NA	AK15-59	AK15-49	ICK035W	NA	NA
LCD1W	ICK035WC	2.07	1	NA	0.200	0.0500	11/11/1104:33	NA	AK15-60	AK15-49	ICK035W	NA	NA
MBLK1W	ICK035WB	ND	1	NA	0.200	0.0500	11/11/1105:22	NA	AK15-63	AK15-61	ICK035W	NA	NA
IR-70-RDO-5-117	K101-01	ND	1	NA	0.200	0.0500	11/11/1109:41	NA	AK15-79	AK15-73	ICK035W	11/10/1111:07	11/10/11

METHOD 300.0
SULFATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K101

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK041WB	ND	1	NA	0.500	0.250	11/12/1111:07	NA	AK19-03	AK19-01	ICK041W	NA	NA
LCS1W	ICK041WL	4.99	1	NA	0.500	0.250	11/12/1112:11	NA	AK19-07	AK19-01	ICK041W	NA	NA
LCD1W	ICK041WC	4.96	1	NA	0.500	0.250	11/12/1112:27	NA	AK19-08	AK19-01	ICK041W	NA	NA
IR-70-RDO-5-117	K101-01	115	10	NA	5.00	2.50	11/12/1114:54	NA	AK19-17	AK19-13	ICK041W	11/10/1111:07	11/10/11

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK041WB	ICK041WL	ICK041WC		
LAB FILE ID:	AK19-03	AK19-07	AK19-08		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/12/1111:07	11/12/1112:11	11/12/1112:27	DATE RECEIVED:	NA
PREP. BATCH:	ICK041W	ICK041W	ICK041W		
CALIB. REF:	AK19-01	AK19-01	AK19-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	ND	2.00	1.99	100	2.00	1.94	97	3	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK035WB	ICK035WL	ICK035WC		
LAB FILE ID:	AK15-63	AK15-59	AK15-60		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/11/1105:22	11/11/1104:17	11/11/1104:33	DATE RECEIVED:	NA
PREP. BATCH:	ICK035W	ICK035W	ICK035W		
CALIB. REF:	AK15-61	AK15-49	AK15-49		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrate-N	ND	1.00	0.994	99	1.00	0.985	99	1	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK035WB	ICK035WL	ICK035WC		
LAB FILE ID:	AK15-63	AK15-59	AK15-60		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/11/1105:22	11/11/1104:17	11/11/1104:33	DATE RECEIVED:	NA
PREP. BATCH:	ICK035W	ICK035W	ICK035W		
CALIB. REF:	AK15-61	AK15-49	AK15-49		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	2.00	2.07	104	2.00	2.07	103	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK041WB	ICK041WL	ICK041WC		
LAB FILE ID:	AK19-03	AK19-07	AK19-08		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/12/1111:07	11/12/1112:11	11/12/1112:27	DATE RECEIVED:	NA
PREP. BATCH:	ICK041W	ICK041W	ICK041W		
CALIB. REF:	AK19-01	AK19-01	AK19-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	4.99	100	5.00	4.96	99	1	90-110	20

INITIAL CALIBRATIONS

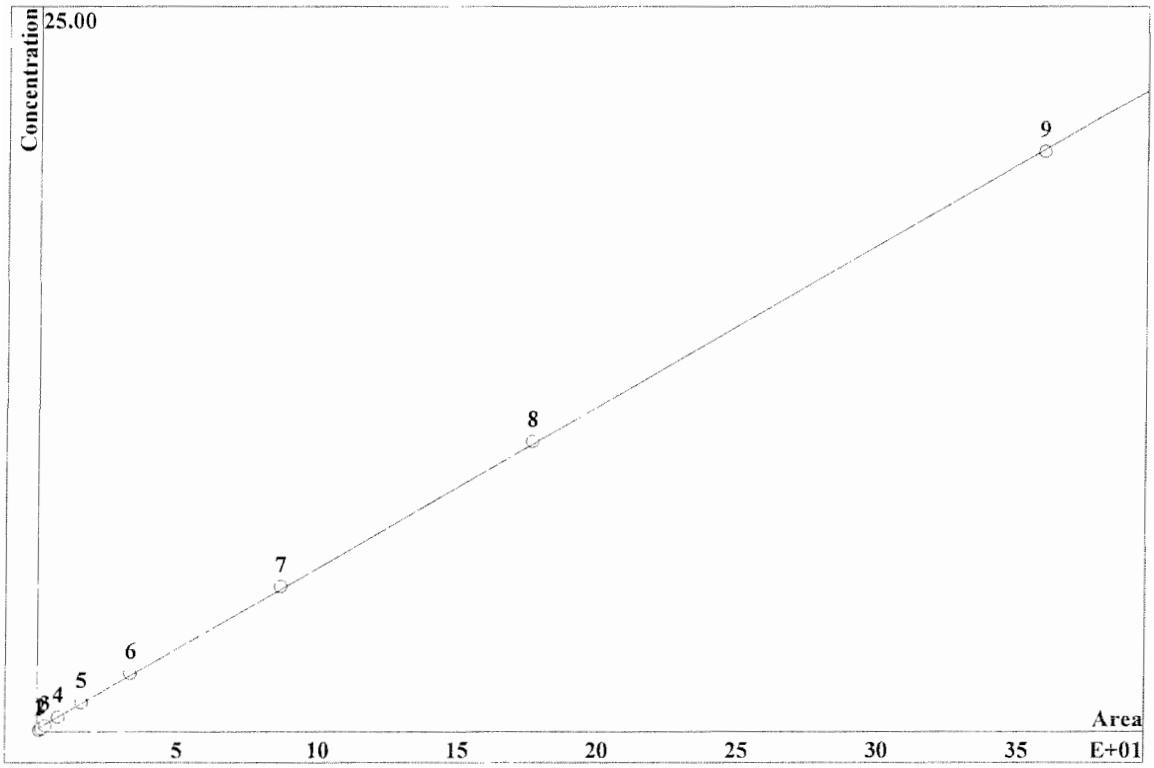
IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	nitrite	fluoride	chloride	bromide	nitrate	phosphate	sulfate	RawNetID	DF
AI39-01	IB	IFCBNPS	0	0	0	0	0	0	0	v9301829	1
AI39-02	S0	IFCBNPS	0	0	0	0	0	0	0	v9301845	1
AI39-03	S1	IFCBNPS	0.0402732	0.0794447	0.137238	0.0962101	0.0900188	0.132659	0.181386	v9301901	1
AI39-04	S2	IFCBNPS	0.0827484	0.120657	0.172987	0.138434	0.127411	0.166211	0.219384	v9301917	1
AI39-05	S3	IFCBNPS	0.175829	0.207372	0.255839	0.223376	0.213499	0.241921	0.298411	v9301934	1
AI39-06	S4	IFCBNPS	0.468611	0.487287	0.510168	0.483675	0.481038	0.46682	0.535669	v9301950	1
AI39-07	S5	IFCBNPS	0.987232	0.975831	0.969747	0.947628	0.958434	0.904972	0.974277	v9302006	1
AI39-08	S6	IFCBNPS	2.03579	2.00618	1.92527	1.92275	1.95393	1.87863	1.87805	v9302022	1
AI39-09	S7	IFCBNPS	5.13141	5.00267	4.89791	5.03793	5.02567	5.05879	4.80122	v9302038	1
AI39-10	S8	IFCBNPS	9.9281	9.57748	9.9004	10.4648	10.1254	10.4079	9.8176	v9302054	1
AI39-11	S9	IFCBNPS	18.5849	17.9543	20.0804	21.615	20.3941	21.1232	20.144	v9302111	1
AI39-12	ICV	IFCBNPS	98.6%	100.1%	97.7%	94.1%	98.6%	92.5%	99.9%	v9302127	1
AI39-13	ICB	IFCBNPS	0	0	0	0	0	0	0	v9302143	1

AJ
10/03/11

CALIBRATION OF COMPONENT chloride

Method: ICD0-I30.mtw
Equation: Q = 0.0557644·A + 0.0866239
RSD: 1.948 %
Correlation coefficient: 0.999932



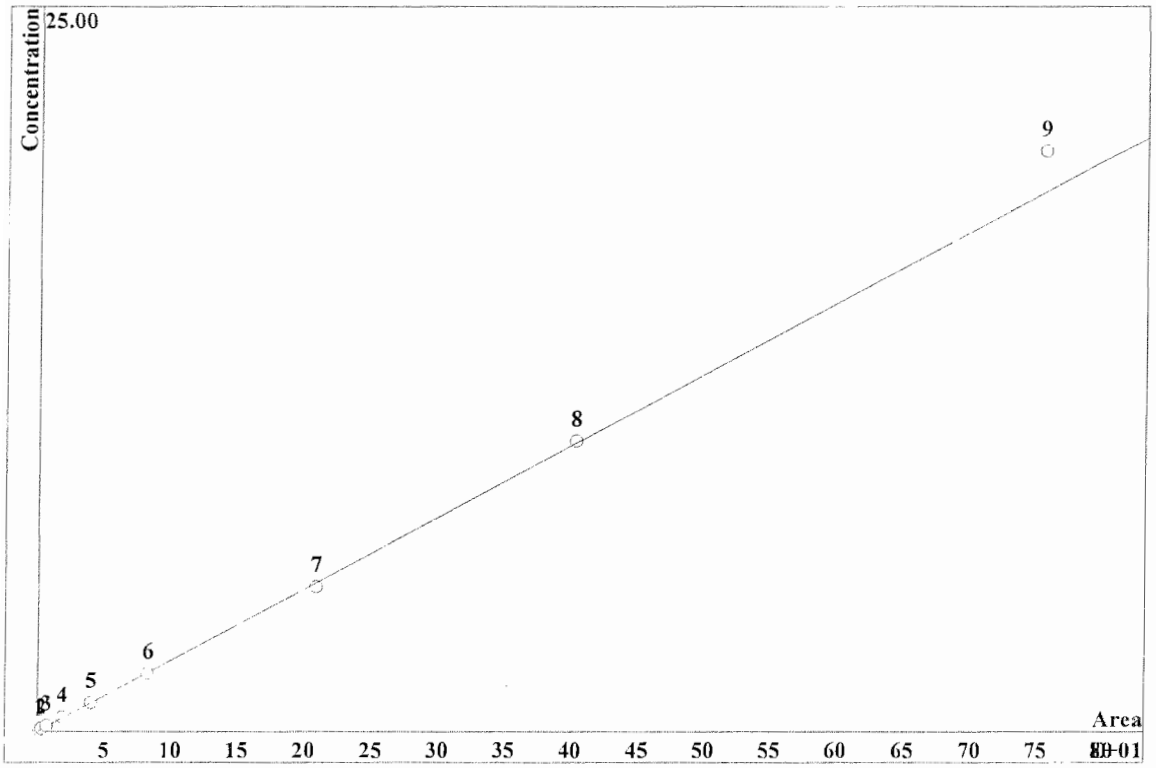
K3 = 0 K2 = 0 K1 = 0.0557644 K0 = 0.0866239
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1035	0.9076	0.05	1	4.26	Yes	v9301901.chw
2	0.1796	1.549	0.1	1	4.26	Yes	v9301917.chw
3	0.354	3.034	0.2	1	4.26	Yes	v9301934.chw
4	0.8921	7.595	0.5	1	4.26	Yes	v9301950.chw
5	1.896	15.84	1	1	4.26	Yes	v9302006.chw
6	3.983	32.97	2	1	4.26	Yes	v9302022.chw
7	10.38	86.28	5	1	4.26	Yes	v9302038.chw
8	21.04	176	10	1	4.26	Yes	v9302054.chw
9	42.24	358.5	20	1	4.26	Yes	v9302111.chw

AA
10/03/11

CALIBRATION OF COMPONENT nitrite

Method: ICD0-I30.mtw
Equation: Q = 0.024644·A + 0.00179217
RSD: 2.785 %
Correlation coefficient: 0.999850



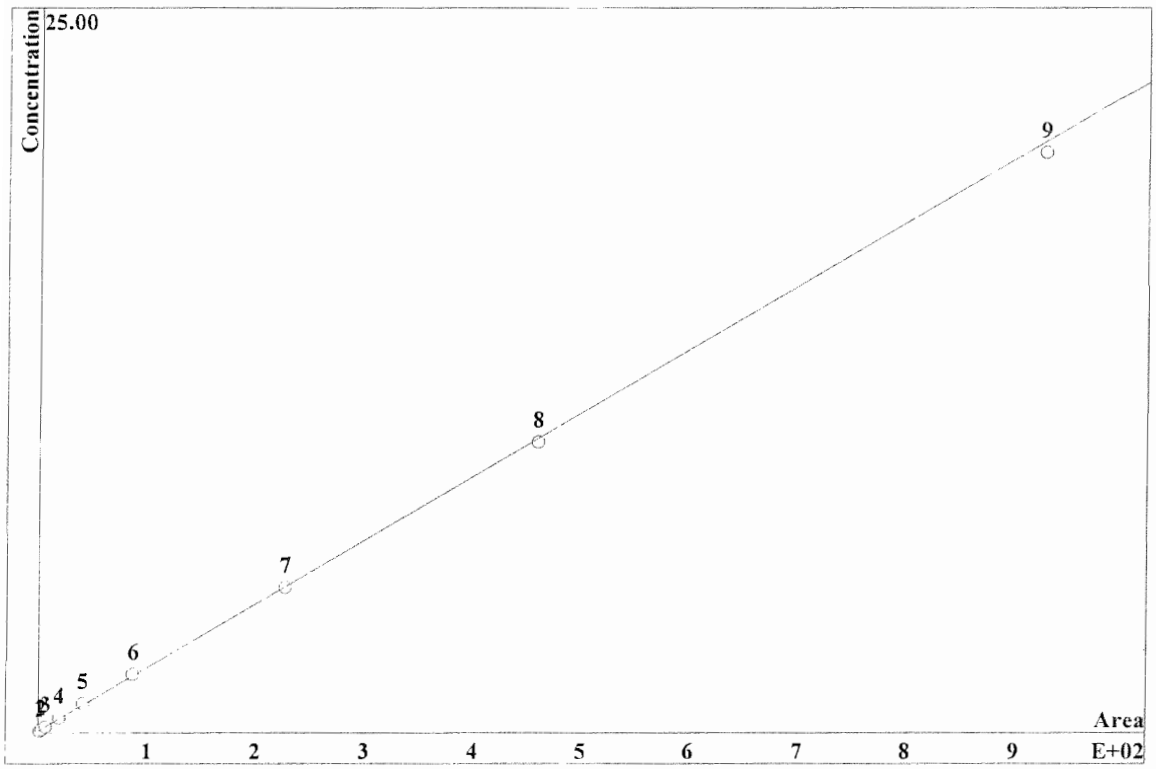
K3 = 0 K2 = 0 K1 = 0.024644 K0 = 0.00179217
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1597	1.561	0.05	1	4.932	Yes	v9301901.chw
2	0.3368	3.285	0.1	1	4.932	Yes	v9301917.chw
3	0.7305	7.062	0.2	1	4.932	Yes	v9301934.chw
4	1.964	18.94	0.5	1	4.932	Yes	v9301950.chw
5	4.115	39.99	1	1	4.932	Yes	v9302006.chw
6	8.392	82.54	2	1	4.932	Yes	v9302022.chw
7	19.91	208.1	5	1	4.932	Yes	v9302038.chw
8	35.83	402.8	10	1	4.932	Yes	v9302054.chw
9	61.98	754.1	20	1	4.932	No	v9302111.chw

RA
10/3/11

CALIBRATION OF COMPONENT nitrate

Method: ICD0-I30.mtw
Equation: Q = 0.0219574·A + 0.0522169
RSD: 3.044 %
Correlation coefficient: 0.999806



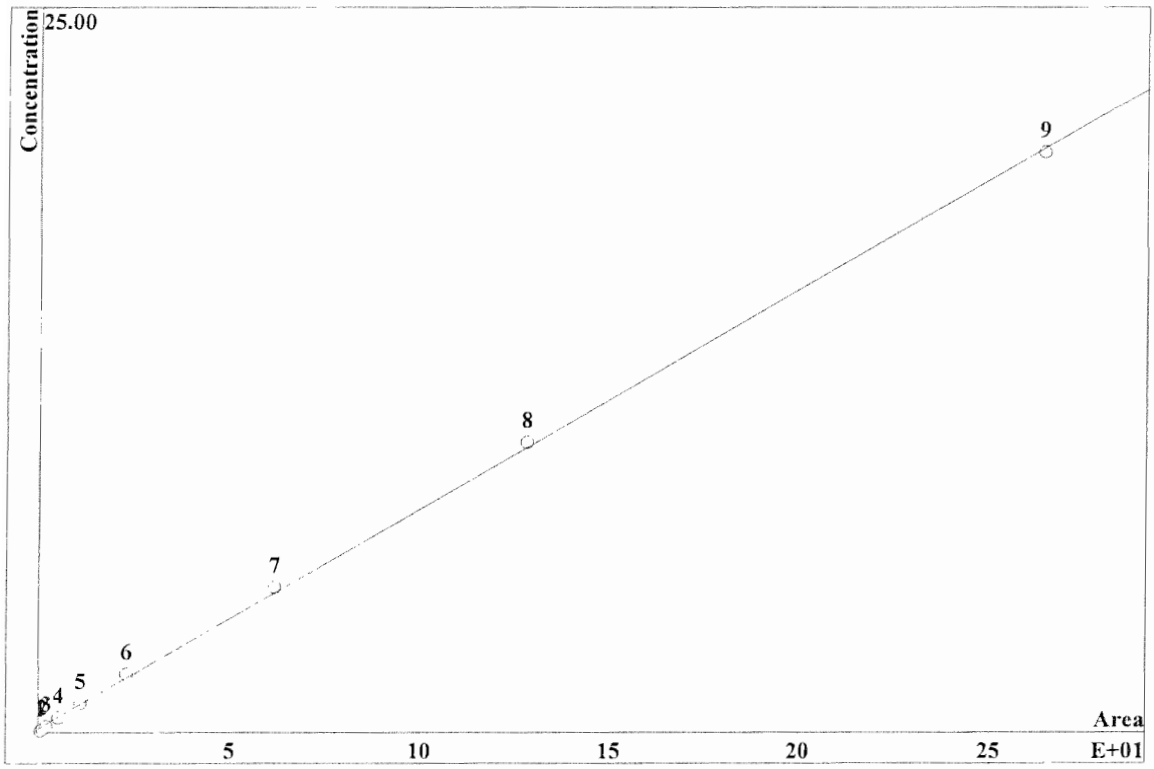
K3 = 0 K2 = 0 K1 = 0.0219574 K0 = 0.0522169
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1416	1.722	0.05	1	6.74	Yes	v9301901.chw
2	0.2866	3.425	0.1	1	6.74	Yes	v9301917.chw
3	0.6179	7.345	0.2	1	6.74	Yes	v9301934.chw
4	1.658	19.53	0.5	1	6.74	Yes	v9301950.chw
5	3.518	41.27	1	1	6.74	Yes	v9302006.chw
6	7.416	86.61	2	1	6.74	Yes	v9302022.chw
7	19.15	226.5	5	1	6.74	Yes	v9302038.chw
8	38.33	458.8	10	1	6.74	No	v9302054.chw
9	74.21	926.4	20	1	6.74	No	v9302111.chw

RS
10/03/11

CALIBRATION OF COMPONENT sulfate

Method: ICD0-I30.mtw ✓ ✓
Equation: Q = 0.0758014·A + 0.128926
RSD: 3.408 %
Correlation coefficient: 0.999791



K3 = 0 K2 = 0 K1 = 0.0758014 K0 = 0.128926
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.03861	0.6921 ✓	0.05	1	10.79	Yes	v9301901.chw
2	0.06635	1.193 ✓	0.1	1	10.79	Yes	v9301917.chw
3	0.1288	2.236 ✓	0.2	1	10.79	Yes	v9301934.chw
4	0.3105	5.366 ✓	0.5	1	10.79	Yes	v9301950.chw
5	0.6333	11.15 ✓	1	1	10.79	Yes	v9302006.chw
6	1.361	23.08 ✓	2	1	10.79	Yes	v9302022.chw
7	3.625	61.64 ✓	5	1	10.79	Yes	v9302038.chw
8	7.471	127.8 ✓	10	1	10.79	Yes	v9302054.chw
9	15.34	264 ✓	20	1	10.79	Yes	v9302111.chw

LA
10/03/11

SECOND SOURCE VERIFICATION

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	bromide	nitrite	sulfate	fluoride	chloride	nitrate	phosphate	RawNetID	DF
AI39-12	ICV	BISFCNP	94.1%	98.6%	99.9%	100.1%	97.7%	98.6%	92.5%	v9302127	1
AI39-13	ICB	BISFCNP	0	0	0	0	0	0	0	v9302143	1

AS 10/05/11

DAILY CALIBRATIONS

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	bromide	sulfate	nitrite	nitrate	fluoride	chloride	phosphate	RawNetID	DF
AK15-01	CCV385	BSINFCP	99.7%	101.3%	103.3%	98.9%	103.7%	97.1%	102.1%	vb101235	1
AK15-02	CCB385	BSINFCP	0	0	0	0	0	0	0	vb101252	1
AK15-13	CCV387	BSINFCP	101.1%	105.5%	105%	100.5%	105.7%	101.6%	102.8%	vb101554	1
AK15-14	CCB387	BSINFCP	0	0	0	0	0	0	0	vb101610	1
AK15-25	CCV389	BSINFCP	100.2%	99.8%	104.6%	99.8%	104.9%	97.1%	102%	vb101908	1
AK15-26	CCB389	BSINFCP	0	0.342336	0	0	0	0	0	vb101924	1
AK15-37	CCV391	BSINFCP	97.6%	99.9%	103.5%	98.9%	104.5%	95.3%	101.9%	vb102222	1
AK15-38	CCB391	BSINFCP	0	0	0	0	0	0	0	vb102238	1
AK15-49	CCV393	BSINFCP	96.7%	99.5%	102.9%	98.3%	103.5%	95.6%	101.7%	vb110135	1
AK15-50	CCB393	BSINFCP	0	0	0	0	0	0	0	vb110152	1
AK15-61	CCV395	BSINFCP	96.1%	98.7%	103%	98.2%	103.4%	94.3%	101.2%	vb110449	1
AK15-62	CCB395	BSINFCP	0	0	0	0	0	0	0	vb110506	1
AK15-73	CCV397	BSINFCP	97.4%	100%	103.7%	98.8%	104.3%	95.6%	101.9%	vb110803	1
AK15-74	CCB397	BSINFCP	0	0	0	0	0	0	0	vb110820	1
AK15-85	CCV399	BSINFCP	98.5%	102.9%	104.8%	100.5%	103.9%	100.3%	101.6%	vb111118	1
AK15-86	CCB399	BSINFCP	0	0	0	0	0	0	0	vb111150	1

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	nitrite	sulfate	fluoride	chloride	bromide	nitrate	phosphate	RawNetID	DF
AK19-01	CCV411	ISFCBNP	102.6%	99.4%	101.4%	99.8%	93.7%	99.3%	99.7%	vb121034	1
AK19-02	CCB411	ISFCBNP	0	0	0	0	0	0	0	vb121050	1
AK19-13	CCV413	ISFCBNP	102.6%	99.2%	102.6%	95.7%	93.9%	99%	103.5%	vb121349	1
AK19-14	CCB413	ISFCBNP	0	0	0	0	0	0	0	vb121405	1
AK19-25	CCV415	ISFCBNP	102.4%	100.4%	102.3%	96.8%	93.3%	99.2%	100.6%	vb121703	1
AK19-26	CCB415	ISFCBNP	0	0	0	0	0	0	0	vb121719	1
AK19-37	CCV417	ISFCBNP	103.3%	99.8%	102.5%	95.9%	93.9%	99.8%	102.2%	vb122017	1
AK19-38	CCB417	ISFCBNP	0	0	0	0	0	0	0	vb122033	1
AK19-49	CCV419	ISFCBNP	102.6%	100.2%	102.3%	97.1%	95.2%	97.5%	102.5%	vb122331	1
AK19-50	CCB419	ISFCBNP	0	0	0	0	0	0	0	vb122347	1
AK19-56	CCV421	ISFCBNP	102.5%	99.4%	102.7%	96.7%	94.7%	97.2%	99.6%	vb130124	1
AK19-57	CCB421	ISFCBNP	0	0	0	0	0	0	0	vb130140	1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Concentrations of:

S_1 — 0.05 ppm
S_2 — 0.1
S_3 — 0.2
S_4 — 0.5
S_5 — 1.0
S_6 — 2.0
S_7 — 5.0
S_8 — 10.0
S_9 — 20.0

Linearity (ppm)

F^- — 5
Cl^- — 20
NO_2N — 10
Br^- — 5
NO_3N — 5
PO_4P — 5
SO_4^{2-} — 20

Column: Metrosep A Supp 5-100

Flow Rate: 0.70 ml/min

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-220 (1000 mM H_2SO_4) 100 ml - 1 L

Book #:	AD0-031
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AI39
Method File:	ICD0-I30.mtw
Analytical Batch:	NA

SOP #	Rev. #
☑ EMAX-300.0	6
☐ EMAX-4110B	0
☑ EMAX-9056	3
☐ EMAX-	

STANDARDS ID	
ICAL	SI1B-17-57-02
ICV	SI1B-17-57-03
CCV	NA
LCS	↓
MS	↓

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 9/30/11

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
v930185[illegible].chw	ICD0-130.mtw	AI39-01 IB	1	1.0	1.0	1.0	100.0	0		
v9301847.chw	ICD0-130.mtw	AI39-02 S0	2	1.0	1.0	1.0	100.0	0		
v930190[illegible].chw	ICD0-130.mtw	AI39-03 S1	3	1.0	1.0	1.0	100.0	1		
v930191[illegible].chw	ICD0-130.mtw	AI39-04 S2	4	1.0	1.0	1.0	100.0	2		
v9301934.chw	ICD0-130.mtw	AI39-05 S3	5	1.0	1.0	1.0	100.0	3		
v9301950.chw	ICD0-130.mtw	AI39-06 S4	6	1.0	1.0	1.0	100.0	4		
v9302006.chw	ICD0-130.mtw	AI39-07 S5	7	1.0	1.0	1.0	100.0	5		
v9302022.chw	ICD0-130.mtw	AI39-08 S6	8	1.0	1.0	1.0	100.0	6		
v9302038.chw	ICD0-130.mtw	AI39-09 S7	9	1.0	1.0	1.0	100.0	7		
v9302054.chw	ICD0-130.mtw	AI39-10 S8	10	1.0	1.0	1.0	100.0	8		
v9302117.chw	ICD0-130.mtw	AI39-11 S9	11	1.0	1.0	1.0	100.0	9		
v9302122.chw	ICD0-130.mtw	AI39-12 ICV	12	1.0	1.0	1.0	100.0	0		
v9302144.chw	ICD0-130.mtw	AI39-13 ICB	13	1.0	1.0	1.0	100.0	0		

FINAL

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Filter 0.45µm 21787469
0.20µm 21772726

Column: Metrosep A Supp 5-100

Flow Rate: 0.70 ml/min

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

Book #: AD0-032

Instrument No.: D0

Pipette ID's: 039380124
SW8A-02-12
SW8A-02-13

Balance ID#: 40706360

Analytical Sequence: AK15

Method File: ICD0-I30.mtw

Analytical Batch: ICK031W, ICK033W
ICK035W

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SIIB-17-86-02
LCS	SIIB-17-86-03
MS	Refer to LCS Parent ID

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: KHL

Date: 11/10/11

8026

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb101235.chw	ICD0-I30.mtw	AK15-01 CCV385	1	1.0	1.0	1.0	100.0	0		
vb101252.chw	ICD0-I30.mtw	AK15-02 CCB385	2	1.0	1.0	1.0	100.0	0		
vb101308.chw	ICD0-I30.mtw	AK15-03 ICK031WB	3	1.0	1.0	1.0	100.0	0		
vb101324.chw	ICD0-I30.mtw	AK15-04 K077-20 DF=5	4	1.0	5.0	1.0	100.0	0		
vb101340.chw	ICD0-I30.mtw	AK15-05 K077-14 DF=10	5	1.0	10.0	1.0	100.0	0		
vb101356.chw	ICD0-I30.mtw	AK15-06 K077-21 DF=10	6	1.0	10.0	1.0	100.0	0		
vb101412.chw	ICD0-I30.mtw	AK15-07 K077-20 DF=10	7	1.0	10.0	1.0	100.0	0		
vb101433.chw	ICD0-I30.mtw	AK15-08 K077-08 DF=5	8	1.0	5.0	1.0	100.0	0		
vb101449.chw	ICD0-I30.mtw	AK15-09 K077-08D DF=5	9	1.0	5.0	1.0	100.0	0		
vb101505.chw	ICD0-I30.mtw	AK15-10 K077-08M DF=5	10	1.0	5.0	1.0	100.0	0		
vb101521.chw	ICD0-I30.mtw	AK15-11 K077-21A DF=10	11	1.0	10.0	1.0	100.0	0		
vb101537.chw	ICD0-I30.mtw	AK15-12 K077-15 DF=10	12	1.0	10.0	1.0	100.0	0		
vb101554.chw	ICD0-I30.mtw	AK15-13 CCV387	13	1.0	1.0	1.0	100.0	0		
vb101610.chw	ICD0-I30.mtw	AK15-14 CCB387	14	1.0	1.0	1.0	100.0	0		
vb101626.chw	ICD0-I30.mtw	AK15-15 ICK031WL	15	1.0	1.0	1.0	100.0	0		
vb101642.chw	ICD0-I30.mtw	AK15-16 ICK031WC	16	1.0	1.0	1.0	100.0	0		
vb101658.chw	ICD0-I30.mtw	AK15-17 K077-22 DF=5	17	1.0	5.0	1.0	100.0	0		
vb101714.chw	ICD0-I30.mtw	AK15-18 K093-01	18	1.0	1.0	1.0	100.0	0		
vb101731.chw	ICD0-I30.mtw	AK15-19 K072-01	19	1.0	1.0	1.0	100.0	0		
vb101747.chw	ICD0-I30.mtw	AK15-20 K092-02 DF=2	20	1.0	2.0	1.0	100.0	0		
vb101803.chw	ICD0-I30.mtw	AK15-21 K092-03	21	1.0	1.0	1.0	100.0	0		
vb101819.chw	ICD0-I30.mtw	AK15-22 K092-04	22	1.0	1.0	1.0	100.0	0		
vb101835.chw	ICD0-I30.mtw	AK15-23 K092-05 DF=2	23	1.0	2.0	1.0	100.0	0		
vb101851.chw	ICD0-I30.mtw	AK15-24 K092-06	24	1.0	1.0	1.0	100.0	0		
vb101908.chw	ICD0-I30.mtw	AK15-25 CCV389	25	1.0	1.0	1.0	100.0	0		
vb101924.chw	ICD0-I30.mtw	AK15-26 CCB389	26	1.0	1.0	1.0	100.0	0		
vb101940.chw	ICD0-I30.mtw	AK15-27 K096-09	27	1.0	1.0	1.0	100.0	0		
vb101956.chw	ICD0-I30.mtw	AK15-28 K096-18	28	1.0	1.0	1.0	100.0	0		
vb102012.chw	ICD0-I30.mtw	AK15-29 K096-10 DF=10	29	1.0	10.0	1.0	100.0	0		
vb102028.chw	ICD0-I30.mtw	AK15-30 K096-02 DF=10	30	1.0	10.0	1.0	100.0	0		
vb102045.chw	ICD0-I30.mtw	AK15-31 ICK033WL	31	1.0	1.0	1.0	100.0	0		
vb102101.chw	ICD0-I30.mtw	AK15-32 ICK033WC	32	1.0	1.0	1.0	100.0	0		
vb102117.chw	ICD0-I30.mtw	AK15-33 ICK033WB	33	1.0	1.0	1.0	100.0	0		
vb102133.chw	ICD0-I30.mtw	AK15-34 K092-07 DF=2	34	1.0	2.0	1.0	100.0	0		
vb102149.chw	ICD0-I30.mtw	AK15-35 K092-07M DF=2	35	1.0	2.0	1.0	100.0	0		
vb102205.chw	ICD0-I30.mtw	AK15-36 K092-07S DF=2	36	1.0	2.0	1.0	100.0	0		
vb102222.chw	ICD0-I30.mtw	AK15-37 CCV391	37	1.0	1.0	1.0	100.0	0		
vb102238.chw	ICD0-I30.mtw	AK15-38 CCB391	38	1.0	1.0	1.0	100.0	0		
vb102254.chw	ICD0-I30.mtw	AK15-39 K098-01	39	1.0	1.0	1.0	100.0	0		
vb102310.chw	ICD0-I30.mtw	AK15-40 K098-02 DF=5	40	1.0	5.0	1.0	100.0	0		
vb102326.chw	ICD0-I30.mtw	AK15-41 K096-19 DF=10	41	1.0	10.0	1.0	100.0	0		
vb102342.chw	ICD0-I30.mtw	AK15-42 K096-11 DF=10	42	1.0	10.0	1.0	100.0	0		
vb102359.chw	ICD0-I30.mtw	AK15-43 K096-03 DF=10	43	1.0	10.0	1.0	100.0	0		
vb110015.chw	ICD0-I30.mtw	AK15-44 K096-12 DF=10	44	1.0	10.0	1.0	100.0	0		
vb110031.chw	ICD0-I30.mtw	AK15-45 K096-20 DF=10	45	1.0	10.0	1.0	100.0	0		
vb110047.chw	ICD0-I30.mtw	AK15-46 K096-21 DF=10	46	1.0	10.0	1.0	100.0	0		
vb110103.chw	ICD0-I30.mtw	AK15-47 K096-22 DF=10	47	1.0	10.0	1.0	100.0	0		
vb110119.chw	ICD0-I30.mtw	AK15-48 K096-04	48	1.0	1.0	1.0	100.0	0		
vb110135.chw	ICD0-I30.mtw	AK15-49 CCV393	49	1.0	1.0	1.0	100.0	0		
vb110152.chw	ICD0-I30.mtw	AK15-50 CCB393	50	1.0	1.0	1.0	100.0	0		
vb110208.chw	ICD0-I30.mtw	AK15-51 K096-23 DF=10	51	1.0	10.0	1.0	100.0	0		
vb110224.chw	ICD0-I30.mtw	AK15-52 K098-03	52	1.0	1.0	1.0	100.0	0	FINAL	
vb110240.chw	ICD0-I30.mtw	AK15-53 K098-04	53	1.0	1.0	1.0	100.0	0		
vb110256.chw	ICD0-I30.mtw	AK15-54 K096-05 DF=10	54	1.0	10.0	1.0	100.0	0		
vb110312.chw	ICD0-I30.mtw	AK15-55 K096-06 DF=10	55	1.0	10.0	1.0	100.0	0		
vb110329.chw	ICD0-I30.mtw	AK15-56 K096-07	56	1.0	1.0	1.0	100.0	0		
vb110345.chw	ICD0-I30.mtw	AK15-57 K096-13 DF=10	57	1.0	10.0	1.0	100.0	0		

F2

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb110401.chw	ICD0-130.mtw	AK15-58 K096-14 DF=10	58	1.0	10.0	1.0	100.0	0		
vb110412.chw	ICD0-130.mtw	AK15-59 ICK035WL	59	1.0	1.0	1.0	100.0	0		
vb110433.chw	ICD0-130.mtw	AK15-60 ICK035WC	60	1.0	1.0	1.0	100.0	0		
vb110449.chw	ICD0-130.mtw	AK15-61 CCV395	61	1.0	1.0	1.0	100.0	0		
vb110506.chw	ICD0-130.mtw	AK15-62 CCB395	62	1.0	1.0	1.0	100.0	0		
vb110522.chw	ICD0-130.mtw	AK15-63 ICK035WB	63	1.0	1.0	1.0	100.0	0		
vb110538.chw	ICD0-130.mtw	AK15-64 K098-05 DF=20	64	1.0	20.0	1.0	100.0	0		
vb110554.chw	ICD0-130.mtw	AK15-65 K098-06 DF=20	65	1.0	20.0	1.0	100.0	0		
vb110610.chw	ICD0-130.mtw	AK15-66 K098-07 DF=20	66	1.0	20.0	1.0	100.0	0		
vb110626.chw	ICD0-130.mtw	AK15-67 K098-07M DF=20	67	1.0	20.0	1.0	100.0	0		
vb110643.chw	ICD0-130.mtw	AK15-68 K098-07S DF=20	68	1.0	20.0	1.0	100.0	0		
vb110659.chw	ICD0-130.mtw	AK15-69 K098-08	69	1.0	1.0	1.0	100.0	0		
vb110715.chw	ICD0-130.mtw	AK15-70 K098-09	70	1.0	1.0	1.0	100.0	0		
vb110731.chw	ICD0-130.mtw	AK15-71 K096-15 DF=10	71	1.0	10.0	1.0	100.0	0		
vb110747.chw	ICD0-130.mtw	AK15-72 K096-16 DF=10	72	1.0	10.0	1.0	100.0	0		
vb110803.chw	ICD0-130.mtw	AK15-73 CCV397	73	1.0	1.0	1.0	100.0	0		
vb110820.chw	ICD0-130.mtw	AK15-74 CCB397	74	1.0	1.0	1.0	100.0	0		
vb110836.chw	ICD0-130.mtw	AK15-75 K092-05 DF=5	75	1.0	5.0	1.0	100.0	0		
vb110852.chw	ICD0-130.mtw	AK15-76 K092-07 DF=5	76	1.0	5.0	1.0	100.0	0		
vb110908.chw	ICD0-130.mtw	AK15-77 K092-07M DF=5	77	1.0	5.0	1.0	100.0	0		
vb110924.chw	ICD0-130.mtw	AK15-78 K092-07S DF=5	78	1.0	5.0	1.0	100.0	0		
vb110941.chw	ICD0-130.mtw	AK15-79 K101-01	79	1.0	1.0	1.0	100.0	0		
vb110957.chw	ICD0-130.mtw	AK15-80 K101-01 DF=5	80	1.0	5.0	1.0	100.0	0		
vb111013.chw	ICD0-130.mtw	AK15-81 K098-02	81	1.0	1.0	1.0	100.0	0		
vb111029.chw	ICD0-130.mtw	AK15-82 K096-13	82	1.0	1.0	1.0	100.0	0		
vb111045.chw	ICD0-130.mtw	AK15-83 K096-16 DF=2	83	1.0	2.0	1.0	100.0	0		
vb111101.chw	ICD0-130.mtw	AK15-84 K096-19	84	1.0	1.0	1.0	100.0	0		
vb111118.chw	ICD0-130.mtw	AK15-85 CCV399	85	1.0	1.0	1.0	100.0	0		
vb111139.chw	ICD0-130.mtw	AK15-86 CCB399	86	1.0	1.0	1.0	100.0	0		

FINAL

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Filter 0.45µm 21787469
0.20µm 21772726

Column: Metrosep A Supp 5-100

Flow Rate: 0.70 ml/min

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

Book #: AD0-032

Instrument No.: D0

Pipette ID's: 039380124
SW8A-02-12
SW8A-02-13

Balance ID#: 40706360

Analytical Sequence: AK19

Method File: ICD0-230.mtw

Analytical Batch: ICK041W, ICK043W

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SZ1B-17-87-03
LCS	SZ1B-17-88-01
MS	Refer to LCS Parent ID

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: [illegible]

Date: 11/12/11

8029

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vh121031.chw	ICD0-130.mtw	AK19-01 CCV411	1	1.0	1.0	1.0	100.0	0		
vh121059.chw	ICD0-130.mtw	AK19-02 CCB411	2	1.0	1.0	1.0	100.0	0		
vh121103.chw	ICD0-130.mtw	AK19-03 ICK041WB	3	1.0	1.0	1.0	100.0	0		
vh121123.chw	ICD0-130.mtw	AK19-04 K112-02	4	1.0	1.0	1.0	100.0	0		
vh121139.chw	ICD0-130.mtw	AK19-05 K112-03	5	1.0	1.0	1.0	100.0	0		
vh121155.chw	ICD0-130.mtw	AK19-06 K112-04	6	1.0	1.0	1.0	100.0	0		
vh121211.chw	ICD0-130.mtw	AK19-07 ICK041WL	7	1.0	1.0	1.0	100.0	0		
vh121227.chw	ICD0-130.mtw	AK19-08 ICK041WC	8	1.0	1.0	1.0	100.0	0		
vh121243.chw	ICD0-130.mtw	AK19-09 K112-02 DF=2	9	1.0	2.0	1.0	100.0	0		
vh121302.chw	ICD0-130.mtw	AK19-10 K112-04 DF=2	10	1.0	2.0	1.0	100.0	0		
vh121317.chw	ICD0-130.mtw	AK19-11 K112-02 DF=400	11	1.0	400.0	1.0	100.0	0		
vh121333.chw	ICD0-130.mtw	AK19-12 K112-03 DF=10	12	1.0	10.0	1.0	100.0	0		
vh121349.chw	ICD0-130.mtw	AK19-13 CCV413	13	1.0	1.0	1.0	100.0	0		
vh121405.chw	ICD0-130.mtw	AK19-14 CCB413	14	1.0	1.0	1.0	100.0	0		
vh121421.chw	ICD0-130.mtw	AK19-15 K112-04 DF=100	15	1.0	100.0	1.0	100.0	0		
vh121437.chw	ICD0-130.mtw	AK19-16 K093-01 DF=10	16	1.0	10.0	1.0	100.0	0		
vh121454.chw	ICD0-130.mtw	AK19-17 K101-01 DF=10	17	1.0	10.0	1.0	100.0	0		
vh121510.chw	ICD0-130.mtw	AK19-18 K098-01	18	1.0	1.0	1.0	100.0	0		
vh121526.chw	ICD0-130.mtw	AK19-19 K098-02 DF=50	19	1.0	50.0	1.0	100.0	0		
vh121542.chw	ICD0-130.mtw	AK19-20 K098-03 DF=20	20	1.0	20.0	1.0	100.0	0		
vh121558.chw	ICD0-130.mtw	AK19-21 K098-04	21	1.0	1.0	1.0	100.0	0		
vh121614.chw	ICD0-130.mtw	AK19-22 K098-05 DF=50	22	1.0	50.0	1.0	100.0	0		
vh121630.chw	ICD0-130.mtw	AK19-23 K098-06 DF=50	23	1.0	50.0	1.0	100.0	0		
vh121647.chw	ICD0-130.mtw	AK19-24 K098-08	24	1.0	1.0	1.0	100.0	0		
vh121703.chw	ICD0-130.mtw	AK19-25 CCV415	25	1.0	1.0	1.0	100.0	0		
vh121719.chw	ICD0-130.mtw	AK19-26 CCB415	26	1.0	1.0	1.0	100.0	0		
vh121735.chw	ICD0-130.mtw	AK19-27 K098-07 DF=100	27	1.0	100.0	1.0	100.0	0		
vh121751.chw	ICD0-130.mtw	AK19-28 K098-07M DF=100	28	1.0	100.0	1.0	100.0	0		
vh121807.chw	ICD0-130.mtw	AK19-29 K098-07S DF=100	29	1.0	100.0	1.0	100.0	0		
vh121824.chw	ICD0-130.mtw	AK19-30 K098-09 DF=100	30	1.0	100.0	1.0	100.0	0		
vh121840.chw	ICD0-130.mtw	AK19-31 ICK043WL	31	1.0	1.0	1.0	100.0	0		
vh121856.chw	ICD0-130.mtw	AK19-32 ICK043WC	32	1.0	1.0	1.0	100.0	0		
vh121912.chw	ICD0-130.mtw	AK19-33 ICK043WB	33	1.0	1.0	1.0	100.0	0		
vh121928.chw	ICD0-130.mtw	AK19-34 K084-01 DF=20	34	1.0	20.0	1.0	100.0	0		
vh121944.chw	ICD0-130.mtw	AK19-35 K084-02 DF=10	35	1.0	10.0	1.0	100.0	0		
vh122001.chw	ICD0-130.mtw	AK19-36 K084-02 DF=20	36	1.0	20.0	1.0	100.0	0		
vh122017.chw	ICD0-130.mtw	AK19-37 CCV417	37	1.0	1.0	1.0	100.0	0		
vh122033.chw	ICD0-130.mtw	AK19-38 CCB417	38	1.0	1.0	1.0	100.0	0		
vh122049.chw	ICD0-130.mtw	AK19-39 K084-03 DF=50	39	1.0	50.0	1.0	100.0	0		
vh122105.chw	ICD0-130.mtw	AK19-40 K084-04 DF=10	40	1.0	10.0	1.0	100.0	0		
vh122121.chw	ICD0-130.mtw	AK19-41 K084-05 DF=20	41	1.0	20.0	1.0	100.0	0		
vh122137.chw	ICD0-130.mtw	AK19-42 K084-06 DF=20	42	1.0	20.0	1.0	100.0	0		
vh122154.chw	ICD0-130.mtw	AK19-43 K092-02 DF=50	43	1.0	50.0	1.0	100.0	0		
vh122210.chw	ICD0-130.mtw	AK19-44 K092-03 DF=5	44	1.0	5.0	1.0	100.0	0		
vh122226.chw	ICD0-130.mtw	AK19-45 K092-04 DF=5	45	1.0	5.0	1.0	100.0	0		
vh122242.chw	ICD0-130.mtw	AK19-46 K092-07 DF=200	46	1.0	200.0	1.0	100.0	0		
vh122258.chw	ICD0-130.mtw	AK19-47 K092-07M DF=200	47	1.0	200.0	1.0	100.0	0		
vh122314.chw	ICD0-130.mtw	AK19-48 K092-07S DF=200	48	1.0	200.0	1.0	100.0	0		
vh122331.chw	ICD0-130.mtw	AK19-49 CCV419	49	1.0	1.0	1.0	100.0	0		
vh122347.chw	ICD0-130.mtw	AK19-50 CCB419	50	1.0	1.0	1.0	100.0	0		
vh130003.chw	ICD0-130.mtw	AK19-51 ICK043WQ	51	1.0	1.0	1.0	100.0	0		
vh130019.chw	ICD0-130.mtw	AK19-52 ICK043WX	52	1.0	1.0	1.0	100.0	0		
vh130035.chw	ICD0-130.mtw	AK19-53 ICK043WY	53	1.0	1.0	1.0	100.0	0		
vh130051.chw	ICD0-130.mtw	AK19-54 K092-96	54	1.0	1.0	1.0	100.0	0		
vh130108.chw	ICD0-130.mtw	AK19-55 K092-05 DF=100	55	1.0	100.0	1.0	100.0	0		
vh130124.chw	ICD0-130.mtw	AK19-56 CCV421	56	1.0	1.0	1.0	100.0	0		
vh130140.chw	ICD0-130.mtw	AK19-57 CCB421	57	1.0	1.0	1.0	100.0	0		

FINAL

Jc 11/19/11

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K101

METHOD 300.0(M)
ORGANIC ACID BY IC

A total of five (5) water samples were received on 11/10/11 for Organic Acids (Acetate, Butyrate, Lactate and Propionate) by IC analysis, Method 300.0(M) in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary forms for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for OAK010WL/C were all within QC limits.
Percent recoveries for OAK016WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample was analyzed at the frequency prescribed by the project.
Percent recoveries for K101-05M/S were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. Sample K101-04 was reported from DF5 due to matrix-interference.

SAMPLE RESULTS

METHOD 300.0(M)
ACETATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K101

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK010WB	ND	1	NA	1.00	0.0500	11/16/1100:33	NA	HK15012	HK15010	OAK010W	NA	NA
LCS1W	OAK010WL	20.7	1	NA	1.00	0.0500	11/16/1100:54	NA	HK15013	HK15010	OAK010W	NA	NA
LCD1W	OAK010WC	20.7	1	NA	1.00	0.0500	11/16/1101:15	NA	HK15014	HK15010	OAK010W	NA	NA
IR-70-RDO-5-117	K101-01	ND	1	NA	1.00	0.0500	11/16/1101:36	NA	HK15015	HK15010	OAK010W	11/10/1111:07	11/10/11
MW-70-MNA06-118	K101-02	ND	1	NA	1.00	0.0500	11/16/1102:17	NA	HK15016	HK15010	OAK010W	11/10/1112:18	11/10/11
MW-70-MNA08-119	K101-03	ND	1	NA	1.00	0.0500	11/16/1102:58	NA	HK15017	HK15010	OAK010W	11/10/1113:42	11/10/11
MW-70-MNA13-121	K101-05	ND	1	NA	1.00	0.0500	11/16/1104:20	NA	HK15019	HK15010	OAK010W	11/10/1115:53	11/10/11
MW-70-MNA13-121MS	K101-05M	8.30	1	NA	1.00	0.0500	11/16/1105:01	NA	HK15020	HK15010	OAK010W	11/10/1115:53	11/10/11
MW-70-MNA13-121MSD	K101-05S	8.78	1	NA	1.00	0.0500	11/16/1105:42	NA	HK15021	HK15010	OAK010W	11/10/1115:53	11/10/11
MBLK2W	OAK016WB	ND	1	NA	1.00	0.0500	11/22/1112:34	NA	HK22003	HK22001	OAK016W	NA	NA
LCS2W	OAK016WL	18.1	1	NA	1.00	0.0500	11/22/1112:55	NA	HK22004	HK22001	OAK016W	NA	NA
LCD2W	OAK016WC	18.0	1	NA	1.00	0.0500	11/22/1113:16	NA	HK22005	HK22001	OAK016W	NA	NA
MW-70-MNA09-120	K101-04	ND	5	NA	5.00	0.250	11/23/1104:44	NA	HK22027	HK22025	OAK016W	11/10/1114:45	11/10/11

8633

METHOD 300.0(M)
BUTYRATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K101

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK010WB	ND	1	NA	1.00	0.0500	11/16/1100:33	NA	HK15012	HK15010	OAK010W	NA	NA
LCS1W	OAK010WL	21.0	1	NA	1.00	0.0500	11/16/1100:54	NA	HK15013	HK15010	OAK010W	NA	NA
LCD1W	OAK010WC	20.2	1	NA	1.00	0.0500	11/16/1101:15	NA	HK15014	HK15010	OAK010W	NA	NA
IR-70-RDO-5-117	K101-01	ND	1	NA	1.00	0.0500	11/16/1101:36	NA	HK15015	HK15010	OAK010W	11/10/1111:07	11/10/11
MW-70-MNA06-118	K101-02	ND	1	NA	1.00	0.0500	11/16/1102:17	NA	HK15016	HK15010	OAK010W	11/10/1112:18	11/10/11
MW-70-MNA08-119	K101-03	ND	1	NA	1.00	0.0500	11/16/1102:58	NA	HK15017	HK15010	OAK010W	11/10/1113:42	11/10/11
MW-70-MNA13-121	K101-05	ND	1	NA	1.00	0.0500	11/16/1104:20	NA	HK15019	HK15010	OAK010W	11/10/1115:53	11/10/11
MW-70-MNA13-121MS	K101-05M	8.26	1	NA	1.00	0.0500	11/16/1105:01	NA	HK15020	HK15010	OAK010W	11/10/1115:53	11/10/11
MW-70-MNA13-121MSD	K101-05S	8.26	1	NA	1.00	0.0500	11/16/1105:42	NA	HK15021	HK15010	OAK010W	11/10/1115:53	11/10/11
MBLK2W	OAK016WB	ND	1	NA	1.00	0.0500	11/22/1112:34	NA	HK22003	HK22001	OAK016W	NA	NA
LCS2W	OAK016WL	18.4	1	NA	1.00	0.0500	11/22/1112:55	NA	HK22004	HK22001	OAK016W	NA	NA
LCD2W	OAK016WC	18.0	1	NA	1.00	0.0500	11/22/1113:16	NA	HK22005	HK22001	OAK016W	NA	NA
MW-70-MNA09-120	K101-04	ND	5	NA	5.00	0.250	11/23/1104:44	NA	HK22027	HK22025	OAK016W	11/10/1114:45	11/10/11

80031

METHOD 300.0(M)
LACTATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K101

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK010WB	ND	1	NA	1.00	0.0500	11/16/1100:33	NA	HK15012	HK15010	OAK010W	NA	NA
LCS1W	OAK010WL	20.2	1	NA	1.00	0.0500	11/16/1100:54	NA	HK15013	HK15010	OAK010W	NA	NA
LCD1W	OAK010WC	20.4	1	NA	1.00	0.0500	11/16/1101:15	NA	HK15014	HK15010	OAK010W	NA	NA
IR-70-RDO-5-117	K101-01	ND	1	NA	1.00	0.0500	11/16/1101:36	NA	HK15015	HK15010	OAK010W	11/10/1111:07	11/10/11
MW-70-MNA06-118	K101-02	ND	1	NA	1.00	0.0500	11/16/1102:17	NA	HK15016	HK15010	OAK010W	11/10/1112:18	11/10/11
MW-70-MNA08-119	K101-03	ND	1	NA	1.00	0.0500	11/16/1102:58	NA	HK15017	HK15010	OAK010W	11/10/1113:42	11/10/11
MW-70-MNA13-121	K101-05	ND	1	NA	1.00	0.0500	11/16/1104:20	NA	HK15019	HK15010	OAK010W	11/10/1115:53	11/10/11
MW-70-MNA13-121MS	K101-05M	9.59	1	NA	1.00	0.0500	11/16/1105:01	NA	HK15020	HK15010	OAK010W	11/10/1115:53	11/10/11
MW-70-MNA13-121MSD	K101-05S	9.85	1	NA	1.00	0.0500	11/16/1105:42	NA	HK15021	HK15010	OAK010W	11/10/1115:53	11/10/11
MBLK2W	OAK016WB	ND	1	NA	1.00	0.0500	11/22/1112:34	NA	HK22003	HK22001	OAK016W	NA	NA
LCS2W	OAK016WL	18.2	1	NA	1.00	0.0500	11/22/1112:55	NA	HK22004	HK22001	OAK016W	NA	NA
LCD2W	OAK016WC	18.1	1	NA	1.00	0.0500	11/22/1113:16	NA	HK22005	HK22001	OAK016W	NA	NA
MW-70-MNA09-120	K101-04	ND	5	NA	5.00	0.250	11/23/1104:44	NA	HK22027	HK22025	OAK016W	11/10/1114:45	11/10/11

METHOD 300.0(M)
PROPIONATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K101

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK010WB	ND	1	NA	1.00	0.0500	11/16/1100:33	NA	HK15012	HK15010	OAK010W	NA	NA
LCS1W	OAK010WL	20.0	1	NA	1.00	0.0500	11/16/1100:54	NA	HK15013	HK15010	OAK010W	NA	NA
LCD1W	OAK010WC	21.0	1	NA	1.00	0.0500	11/16/1101:15	NA	HK15014	HK15010	OAK010W	NA	NA
IR-70-RDO-5-117	K101-01	ND	1	NA	1.00	0.0500	11/16/1101:36	NA	HK15015	HK15010	OAK010W	11/10/1111:07	11/10/11
MW-70-MNA06-118	K101-02	ND	1	NA	1.00	0.0500	11/16/1102:17	NA	HK15016	HK15010	OAK010W	11/10/1112:18	11/10/11
MW-70-MNA08-119	K101-03	ND	1	NA	1.00	0.0500	11/16/1102:58	NA	HK15017	HK15010	OAK010W	11/10/1113:42	11/10/11
MW-70-MNA13-121	K101-05	ND	1	NA	1.00	0.0500	11/16/1104:20	NA	HK15019	HK15010	OAK010W	11/10/1115:53	11/10/11
MW-70-MNA13-121MS	K101-05M	9.22	1	NA	1.00	0.0500	11/16/1105:01	NA	HK15020	HK15010	OAK010W	11/10/1115:53	11/10/11
MW-70-MNA13-121MSD	K101-05S	10.1	1	NA	1.00	0.0500	11/16/1105:42	NA	HK15021	HK15010	OAK010W	11/10/1115:53	11/10/11
MBLK2W	OAK016WB	ND	1	NA	1.00	0.0500	11/22/1112:34	NA	HK22003	HK22001	OAK016W	NA	NA
LCS2W	OAK016WL	19.3	1	NA	1.00	0.0500	11/22/1112:55	NA	HK22004	HK22001	OAK016W	NA	NA
LCD2W	OAK016WC	18.9	1	NA	1.00	0.0500	11/22/1113:16	NA	HK22005	HK22001	OAK016W	NA	NA
MW-70-MNA09-120	K101-04	ND	5	NA	5.00	0.250	11/23/1104:44	NA	HK22027	HK22025	OAK016W	11/10/1114:45	11/10/11

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK010WB	OAK010WL	OAK010WC		
LAB FILE ID:	HK15012	HK15013	HK15014		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/16/1100:33	11/16/1100:54	11/16/1101:15	DATE RECEIVED:	NA
PREP. BATCH:	OAK010W	OAK010W	OAK010W		
CALIB. REF:	HK15010	HK15010	HK15010		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	20.7	103	20.0	20.7	103	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	OAK016WB	OAK016WL	OAK016WC		
LAB FILE ID:	HK22003	HK22004	HK22005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1112:34	11/22/1112:55	11/22/1113:16	DATE RECEIVED:	NA
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22001	HK22001	HK22001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	18.1	90	20.0	18.0	90	1	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD 300.0(M)

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MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID:	MW-70-MNA13-121		
LAB SAMP ID:	K101-05	K101-05M	K101-05S
LAB FILE ID:	HK15019	HK15020	HK15021
DATE EXTRACTED:	NA	NA	NA
DATE ANALYZED:	11/16/1104:20	11/16/1105:01	11/16/1105:42
PREP. BATCH:	OAK010W	OAK010W	OAK010W
CALIB. REF:	HK15010	HK15010	HK15010

DATE COLLECTED: 11/10/11 15:53
DATE RECEIVED: 11/10/11

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	10.0	8.30	83	10.0	8.78	88	6	75-125	20

0108

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK010WB	OAK010WL	OAK010WC		
LAB FILE ID:	HK15012	HK15013	HK15014		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/16/1100:33	11/16/1100:54	11/16/1101:15	DATE RECEIVED:	NA
PREP. BATCH:	OAK010W	OAK010W	OAK010W		
CALIB. REF:	HK15010	HK15010	HK15010		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	20.0	21.0	105	20.0	20.2	101	4	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	OAK016WB	OAK016WL	OAK016WC		
LAB FILE ID:	HK22003	HK22004	HK22005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1112:34	11/22/1112:55	11/22/1113:16	DATE RECEIVED:	NA
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22001	HK22001	HK22001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	20.0	18.4	92	20.0	18.0	90	2	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD 300.0(M)

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MW-70-MNA13-121				
LAB SAMP ID:	K101-05	K101-05M	K101-05S		
LAB FILE ID:	HK15019	HK15020	HK15021		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/10/11 15:53
DATE ANALYZED:	11/16/1104:20	11/16/1105:01	11/16/1105:42	DATE RECEIVED:	11/10/11
PREP. BATCH:	OAK010W	OAK010W	OAK010W		
CALIB. REF:	HK15010	HK15010	HK15010		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	10.0	8.26	83	10.0	8.26	83	0	75-125	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK010WB	OAK010WL	OAK010WC		
LAB FILE ID:	HK15012	HK15013	HK15014		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/16/1100:33	11/16/1100:54	11/16/1101:15	DATE RECEIVED:	NA
PREP. BATCH:	OAK010W	OAK010W	OAK010W		
CALIB. REF:	HK15010	HK15010	HK15010		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	20.0	20.2	101	20.0	20.4	102	1	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	OAK016WB	OAK016WL	OAK016WC		
LAB FILE ID:	HK22003	HK22004	HK22005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1112:34	11/22/1112:55	11/22/1113:16	DATE RECEIVED:	NA
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22001	HK22001	HK22001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	20.0	18.2	91	20.0	18.1	90	1	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD 300.0(M)

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MW-70-MNA13-121
LAB SAMP ID: K101-05 K101-05M K101-05S
LAB FILE ID: HK15019 HK15020 HK15021
DATE EXTRACTED: NA NA NA DATE COLLECTED: 11/10/11 15:53
DATE ANALYZED: 11/16/1104:20 11/16/1105:01 11/16/1105:42 DATE RECEIVED: 11/10/11
PREP. BATCH: OAK010W OAK010W OAK010W
CALIB. REF: HK15010 HK15010 HK15010

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	10.0	9.59	96	10.0	9.85	98	3	75-125	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK010WB	OAK010WL	OAK010WC		
LAB FILE ID:	HK15012	HK15013	HK15014		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/16/1100:33	11/16/1100:54	11/16/1101:15	DATE RECEIVED:	NA
PREP. BATCH:	OAK010W	OAK010W	OAK010W		
CALIB. REF:	HK15010	HK15010	HK15010		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	20.0	20.0	100	20.0	21.0	105	5	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	OAK016WB	OAK016WL	OAK016WC		
LAB FILE ID:	HK22003	HK22004	HK22005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1112:34	11/22/1112:55	11/22/1113:16	DATE RECEIVED:	NA
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22001	HK22001	HK22001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	20.0	19.3	96	20.0	18.9	94	2	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MW-70-MNA13-121				
LAB SAMP ID:	K101-05	K101-05M	K101-05S		
LAB FILE ID:	HK15019	HK15020	HK15021		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/10/11 15:53
DATE ANALYZED:	11/16/1104:20	11/16/1105:01	11/16/1105:42	DATE RECEIVED:	11/10/11
PREP. BATCH:	OAK010W	OAK010W	OAK010W		
CALIB. REF:	HK15010	HK15010	HK15010		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	10.0	9.22	92	10.0	10.1	101	9	75-125	20

INITIAL CALIBRATIONS

IC SEQ FORM/HK15(2011)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
HK15001	IB	ABLPY	OAD6K15	11/15/1117:34	1
HK15002	S-0	ABLPY	OAD6K15	11/15/1117:55	1
HK15003	S-1	ABLPY	OAD6K15	11/15/1118:16	1
HK15004	S-2	ABLPY	OAD6K15	11/15/1118:37	1
HK15005	S-3	ABLPY	OAD6K15	11/15/1118:58	1
HK15006	S-4	ABLPY	OAD6K15	11/15/1119:19	1
HK15007	S-5	ABLPY	OAD6K15	11/15/1119:40	1
HK15008	ICV	ABLPY	OAD6K15	11/15/1120:01	1
HK15009	ICB	ABLPY	OAD6K15	11/15/1120:22	1
HK15010	CCV2	ABLPY	OAD6K15	11/15/1123:52	1
HK15011	CCB2	ABLPY	OAD6K15	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	OAD6K15	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	OAD6K15	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	OAD6K15	11/16/1101:15	1
HK15015	K101-01	ABLPY	OAD6K15	11/16/1101:36	1
HK15016	K101-02	ABLPY	OAD6K15	11/16/1102:17	1
HK15017	K101-03	ABLPY	OAD6K15	11/16/1102:58	1
HK15018	K101-04	*****	OAD6K15	11/16/1103:39	1
HK15019	K101-05	ABLPY	OAD6K15	11/16/1104:20	1
HK15020	K101-05M	ABLPY	OAD6K15	11/16/1105:01	1
HK15021	K101-05S	ABLPY	OAD6K15	11/16/1105:42	1
HK15022	CCV4	ABLPY	OAD6K15	11/16/1106:23	1
HK15023	CCB4	ABLPY	OAD6K15	11/16/1106:44	1
HK15024	K084-01	ABLPY	OAD6K15	11/16/1107:05	1
HK15025	K084-02	ABLPY	OAD6K15	11/16/1107:46	1
HK15026	K084-03	ABLPY	OAD6K15	11/16/1108:26	1
HK15027	K084-04	ABLPY	OAD6K15	11/16/1109:10	1
HK15028	CCV6	ABLPY	OAD6K15	11/16/1111:30	1
HK15029	CCB6	ABLPY	OAD6K15	11/16/1112:32	1
HK15030	K084-05	ABLPY	OAD6K15	11/16/1112:53	1
HK15031	K084-06	ABLPY	OAD6K15	11/16/1113:34	1
HK15032	K035-01	*BLPY	OAD6K15	11/16/1114:15	5
HK15033	K035-01A	*BLPY	OAD6K15	11/16/1114:55	5
HK15034	CCV8	ABLPY	OAD6K15	11/16/1115:36	1
HK15035	CCB8	ABLPY	OAD6K15	11/16/1115:57	1

No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square	Offset	Slope	Curve
1	4.88	LACTATE	0LOff	5	1.0000	-0.000198	0.0443	0.0000
2	5.21	ACETATE	0LOff	5	0.9997	0.000068	0.0569	0.0000
3	6.00	PROPIONA⁻	0LOff	5	0.9998	-0.000209	0.0394	0.0000
4	7.42	BUTYRATE	0LOff	5	0.9999	-0.000584	0.0313	0.0000
5	8.93	PYRUVATE	0LOff	5	0.9999	-0.000755	0.0518	0.0000
Average:					n.a.	n.a.	n.a.	0.0000

$$\text{conc} = \frac{\text{area} - \text{offset}}{\text{slope}}$$

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SECOND SOURCE VERIFICATION

IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK15001	IB	ABLPY	ND	ND	ND	ND	ND	11/15/1117:34	1
HK15002	S-0	ABLPY	ND	ND	ND	ND	ND	11/15/1117:55	1
HK15003	S-1	ABLPY	.083	.101	.104	.096	.103	11/15/1118:16	1
HK15004	S-2	ABLPY	.401	.385	.396	.382	.395	11/15/1118:37	1
HK15005	S-3	ABLPY	1.01	.996	.993	1.01	.984	11/15/1118:58	1
HK15006	S-4	ABLPY	2.028	1.987	1.999	2.023	1.992	11/15/1119:19	1
HK15007	S-5	ABLPY	2.978	3.012	3.003	2.984	3.011	11/15/1119:40	1
HK15008	ICV	ABLPY	103%	96.8%	99.5%	104%	97.7%	11/15/1120:01	1
HK15009	ICB	ABLPY	ND	ND	ND	ND	ND	11/15/1120:22	1
HK15010	CCV2	ABLPY	103%	103%	101%	104%	93.9%	11/15/1123:52	1
HK15011	CCB2	ABLPY	ND	ND	ND	ND	ND	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	ND	ND	ND	ND	ND	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	2.07	2.1	2.02	2	1.96	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	2.07	2.02	2.04	2.1	1.95	11/16/1101:15	1
HK15015	K101-01	ABLPY	ND	ND	ND	ND	ND	11/16/1101:36	1
HK15016	K101-02	ABLPY	ND	ND	ND	ND	ND	11/16/1102:17	1
HK15017	K101-03	ABLPY	ND	ND	ND	ND	ND	11/16/1102:58	1
HK15018	K101-04	*****	ND	ND	ND	ND	ND	11/16/1103:39	1
HK15019	K101-05	ABLPY	ND	ND	ND	ND	ND	11/16/1104:20	1
HK15020	K101-05M	ABLPY	.83	.826	.959	.922	.904	11/16/1105:01	1
HK15021	K101-05S	ABLPY	.878	.826	.985	1.01	.882	11/16/1105:42	1
HK15022	CCV4	ABLPY	101%	103%	99.3%	99.1%	92.6%	11/16/1106:23	1
HK15023	CCB4	ABLPY	ND	ND	ND	ND	ND	11/16/1106:44	1
HK15024	K084-01	ABLPY	ND	ND	ND	ND	ND	11/16/1107:05	1
HK15025	K084-02	ABLPY	ND	ND	ND	ND	ND	11/16/1107:46	1
HK15026	K084-03	ABLPY	ND	ND	ND	ND	ND	11/16/1108:26	1
HK15027	K084-04	ABLPY	ND	ND	ND	ND	ND	11/16/1109:10	1
HK15028	CCV6	ABLPY	101%	90.7%	99.7%	103%	92.5%	11/16/1111:30	1
HK15029	CCB6	ABLPY	ND	ND	ND	ND	ND	11/16/1112:32	1
HK15030	K084-05	ABLPY	ND	ND	ND	ND	ND	11/16/1112:53	1
HK15031	K084-06	ABLPY	ND	ND	ND	ND	ND	11/16/1113:34	1
HK15032	K035-01	*BLPY	28.1E	ND	ND	1.13	ND	11/16/1114:15	5
HK15033	K035-01A	*BLPY	32.4E	5.38	4.35	6.28	4.73	11/16/1114:55	5
HK15034	CCV8	ABLPY	102%	97%	99.6%	109%	93.8%	11/16/1115:36	1
HK15035	CCB8	ABLPY	ND	ND	ND	ND	ND	11/16/1115:57	1

DAILY CALIBRATIONS

IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK15001	IB	ABLPY	ND	ND	ND	ND	ND	11/15/1117:34	1
HK15002	S-0	ABLPY	ND	ND	ND	ND	ND	11/15/1117:55	1
HK15003	S-1	ABLPY	.083	.101	.104	.096	.103	11/15/1118:16	1
HK15004	S-2	ABLPY	.401	.385	.396	.382	.395	11/15/1118:37	1
HK15005	S-3	ABLPY	1.01	.996	.993	1.01	.984	11/15/1118:58	1
HK15006	S-4	ABLPY	2.028	1.987	1.999	2.023	1.992	11/15/1119:19	1
HK15007	S-5	ABLPY	2.978	3.012	3.003	2.984	3.011	11/15/1119:40	1
HK15008	ICV	ABLPY	103%	96.8%	99.5%	104%	97.7%	11/15/1120:01	1
HK15009	ICB	ABLPY	ND	ND	ND	ND	ND	11/15/1120:22	1
HK15010	CCV2	ABLPY	103%	103%	101%	104%	93.9%	11/15/1123:52	1
HK15011	CCB2	ABLPY	ND	ND	ND	ND	ND	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	ND	ND	ND	ND	ND	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	2.07	2.1	2.02	2	1.96	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	2.07	2.02	2.04	2.1	1.95	11/16/1101:15	1
HK15015	K101-01	ABLPY	ND	ND	ND	ND	ND	11/16/1101:36	1
HK15016	K101-02	ABLPY	ND	ND	ND	ND	ND	11/16/1102:17	1
HK15017	K101-03	ABLPY	ND	ND	ND	ND	ND	11/16/1102:58	1
HK15018	K101-04	ABLPY	ND	ND	ND	ND	ND	11/16/1103:39	1
HK15019	K101-05	ABLPY	ND	ND	ND	ND	ND	11/16/1104:20	1
HK15020	K101-05M	ABLPY	.83	.826	.959	.922	.904	11/16/1105:01	1
HK15021	K101-05S	ABLPY	.878	.826	.985	1.01	.882	11/16/1105:42	1
HK15022	CCV4	ABLPY	101%	103%	99.3%	99.1%	92.6%	11/16/1106:23	1
HK15023	CCB4	ABLPY	ND	ND	ND	ND	ND	11/16/1106:44	1
HK15024	K084-01	ABLPY	ND	ND	ND	ND	ND	11/16/1107:05	1
HK15025	K084-02	ABLPY	ND	ND	ND	ND	ND	11/16/1107:46	1
HK15026	K084-03	ABLPY	ND	ND	ND	ND	ND	11/16/1108:26	1
HK15027	K084-04	ABLPY	ND	ND	ND	ND	ND	11/16/1109:10	1
HK15028	CCV6	ABLPY	101%	90.7%	99.7%	103%	92.5%	11/16/1111:30	1
HK15029	CCB6	ABLPY	ND	ND	ND	ND	ND	11/16/1112:32	1
HK15030	K084-05	ABLPY	ND	ND	ND	ND	ND	11/16/1112:53	1
HK15031	K084-06	ABLPY	ND	ND	ND	ND	ND	11/16/1113:34	1
HK15032	K035-01	*BLPY	28.1E	ND	ND	1.13	ND	11/16/1114:15	5
HK15033	K035-01A	*BLPY	32.4E	5.38	4.35	6.28	4.73	11/16/1114:55	5
HK15034	CCV8	ABLPY	102%	97%	99.6%	109%	93.8%	11/16/1115:36	1
HK15035	CCB8	ABLPY	ND	ND	ND	ND	ND	11/16/1115:57	1

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IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK22001	CCV24	ABLPY	91.4%	92.9%	91%	95.4%	91.8%	11/22/1111:31	1
HK22002	CCB24	ABLPY	ND	ND	ND	ND	ND	11/22/1112:13	1
HK22003	OAK016WB	ABLPY	ND	ND	ND	ND	ND	11/22/1112:34	1
HK22004	OAK016WL	ABLPY	1.81	1.84	1.82	1.93	1.87	11/22/1112:55	1
HK22005	OAK016WC	ABLPY	1.8	1.8	1.81	1.89	1.88	11/22/1113:16	1
HK22006	K146-02	ABLPY	ND	ND	ND	ND	ND	11/22/1114:19	5
HK22007	K146-02A	ABLPY	4.88	5.26	5.3	4.92	4.73	11/22/1115:20	5
HK22008	K146-03R	ABLPY	ND	ND	ND	ND	ND	11/22/1116:21	1
HK22009	K174-01	ABLPY	ND	ND	ND	ND	ND	11/22/1117:02	1
HK22010	K174-02	ABLPY	ND	ND	ND	ND	ND	11/22/1117:42	1
HK22011	K174-03	ABLPY	ND	ND	ND	ND	ND	11/22/1118:23	1
HK22012	K174-04	ABLPY	ND	ND	ND	ND	ND	11/22/1119:04	1
HK22013	CCV26	ABLPY	105%	100%	106%	102%	99.8%	11/22/1119:45	1
HK22014	CCB26	ABLPY	ND	ND	ND	ND	ND	11/22/1120:06	1
HK22015	K174-05	ABLPY	ND	ND	ND	ND	ND	11/22/1120:27	1
HK22016	K174-06	ABLPY	.102	ND	ND	ND	ND	11/22/1121:08	1
HK22017	K174-07	ABLPY	ND	ND	ND	ND	ND	11/22/1121:49	1
HK22018	K184-01	ABLPY	ND	ND	ND	ND	ND	11/22/1122:30	1
HK22019	K184-01M	ABLPY	1.05	1.07	1.03	1.1	.98	11/22/1123:11	1
HK22020	K184-01S	ABLPY	1.01	1.04	1.04	.805	1.07	11/22/1123:52	1
HK22021	K184-02	ABLPY	ND	ND	ND	ND	ND	11/23/1100:33	1
HK22022	K184-03	ABLPY	ND	ND	.079	ND	ND	11/23/1101:13	1
HK22023	K184-04	ABLPY	ND	ND	ND	ND	ND	11/23/1101:54	1
HK22024	K184-05	ABLPY	ND	ND	ND	ND	ND	11/23/1102:35	1
HK22025	CCV28	ABLPY	109%	108%	110%	109%	103%	11/23/1103:41	1
HK22026	CCB28	ABLPY	ND	ND	ND	ND	ND	11/23/1104:23	1
HK22027	K101-04	ABLPY	ND	ND	ND	ND	ND	11/23/1104:44	5
HK22028	K101-04A	ABLPY	5.05	5.12	5.01	5.1	4.87	11/23/1105:45	5
HK22029	CCV30	ABLPY	109%	107%	108%	110%	101%	11/23/1107:07	1
HK22030	CCB30	ABLPY	ND	ND	ND	ND	ND	11/23/1107:28	1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-221

0AD6K15.met : 300M ICAL → Passed

- Linear Range :

S-0 → 0.0 ppm S-3 → 1.0 ppm

S-1 → 0.1 S-4 → 2.0

S-2 → 0.4 S-5 → 3.0

- ICV : 2ppm
- Sample Loop : 25uL
- Flow Rate : 1.50 mL/min
- Suppressor : ASRS 4mm
- SRS Current : 100 mA
- Column: Ion Pac AS11 HC, 4x250 mm
- Guard Column : Ion Pac AG16, 4x250mm

0AK010W: K101, K084 & K035 (conf. only)

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK15
Method File:	0AD6K15.met
Analytical Batch:	0AK010W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	SW12A-02-330
ICV	332
CCV	331
LCS	332
MS	327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: ca / AM

Date: 11/15/11

Sequence: HK15
Operator: cmadmin

Printed: 11/17/2011 3:52:16 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK15	001	IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK15	002	S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK15	003	S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK15	004	S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK15	005	S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK15	006	S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK15	007	S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK15	008	ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK15	009	ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK15	010	CCV2	Unknown	100	25.0	ORG	OAD6K15	Finished	11/15/2011 11:52:01 PM	1.0000
11	HK15	011	CCB2	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 12:13:00 AM	1.0000
12	HK15	012	OAK010WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/16/2011 12:33:58 AM	1.0000
13	HK15	013	OAK010WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/16/2011 12:54:57 AM	1.0000
14	HK15	014	OAK010WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/16/2011 1:15:56 AM	1.0000
15	HK15	015	K101-01	Unknown	1	25.0	ORG	OAD6K15	Finished	11/16/2011 1:36:54 AM	1.0000
16	HK15	016	K101-02	Unknown	2	25.0	ORG	OAD6K15	Finished	11/16/2011 2:17:49 AM	1.0000
17	HK15	017	K101-03	Unknown	3	25.0	ORG	OAD6K15	Finished	11/16/2011 2:58:42 AM	1.0000
18	HK15	018	K101-04	Unknown	4	25.0	ORG	OAD6K15	Finished	11/16/2011 3:39:37 AM	1.0000
19	HK15	019	K101-05	Unknown	5	25.0	ORG	OAD6K15	Finished	11/16/2011 4:20:31 AM	1.0000
20	HK15	020	K101-05M	Unknown	6	25.0	ORG	OAD6K15	Finished	11/16/2011 5:01:24 AM	1.0000
21	HK15	021	K101-05S	Unknown	7	25.0	ORG	OAD6K15	Finished	11/16/2011 5:42:18 AM	1.0000
22	HK15	022	CCV4	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 6:23:12 AM	1.0000
23	HK15	023	CCB4	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 6:44:11 AM	1.0000
24	HK15	024	K084-01	Unknown	8	25.0	ORG	OAD6K15	Finished	11/16/2011 7:05:09 AM	1.0000
25	HK15	025	K084-02	Unknown	9	25.0	ORG	OAD6K15	Finished	11/16/2011 7:46:03 AM	1.0000
26	HK15	026	K084-03	Unknown	10	25.0	ORG	OAD6K15	Finished	11/16/2011 8:26:57 AM	1.0000
27	HK15	027	K084-04	Unknown	11	25.0	ORG	OAD6K15	Finished	11/16/2011 9:10:16 AM	1.0000

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FINAL

Sequence: HK15
Operator: cmadmin

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Comment
1	HK15	
2	HK15	
3	HK15	
4	HK15	
5	HK15	
6	HK15	
7	HK15	
8	HK15	
9	HK15	
10	HK15	
11	HK15	
12	HK15	
13	HK15	
14	HK15	
15	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
17	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK15	
23	HK15	
24	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
25	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
26	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
27	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

FINAL

8961

Sequence: HK15
Operator: cmadmin
Printed: 11/17/2011 3:35:11 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK15	028	CCV6	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 11:30:24 AM	1.0000
29	HK15	029	CCB6	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 12:32:17 PM	1.0000
30	HK15	030	K084-05	Unknown	12	25.0	ORG	OAD6K15	Finished	11/16/2011 12:53:15 PM	1.0000
31	HK15	031	K084-06	Unknown	13	25.0	ORG	OAD6K15	Finished	11/16/2011 1:34:09 PM	1.0000
32	HK15	032	K035-01	Unknown	14	25.0	ORG	OAD6K15	Finished	11/16/2011 2:15:03 PM	5.0000
33	HK15	033	K035-01A	Unknown	15	25.0	ORG	OAD6K15	Finished	11/16/2011 2:55:56 PM	5.0000
34	HK15	034	CCV8	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 3:36:50 PM	1.0000
35	HK15	035	CCB8	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 3:57:49 PM	1.0000

FINAL

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Comment
28	HK15	
29	HK15	
30	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
31	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
32	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
33	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
34	HK15	
35	HK15	

FINAL

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4- 01 - 221

0AD6K15.met : 11K146 , 11K174 & 11K184 & 11K101

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	4K22
Method File:	0AD6K15.met
Analytical Batch:	0AK016W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	——
ICV	——
CCV	SW12A - 02 - 331
LCS	332
MS	337

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: a.l

Date: 11/22/11

8064

Sequence: HK22
Operator: cmadmin

Printed: 11/23/2011 9:38:34 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 39

Created: 11/22/2011 10:18:35 AM by cmadmin
Last Update: 11/23/2011 9:36:55 AM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK22		IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK22		S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK22		S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK22		S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK22		S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK22		S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK22		S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK22		ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK22		ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK22	001	CCV24	Unknown	100	25.0	ORG	OAD6K15	Finished	11/22/2011 11:31:44 AM	1.0000
11	HK22	002	CCB24	Unknown	99	25.0	ORG	OAD6K15	Finished	11/22/2011 12:13:41 PM	1.0000
12	HK22	003	OAK016WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/22/2011 12:34:40 PM	1.0000
13	HK22	004	OAK016WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/22/2011 12:55:39 PM	1.0000
14	HK22	005	OAK016WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/22/2011 1:16:38 PM	1.0000
15	HK22	006	K146-02	Unknown	1	25.0	ORG	OAD6K15	Finished	11/22/2011 2:19:34 PM	5.0000
16	HK22	007	K146-02A	Unknown	2	25.0	ORG	OAD6K15	Finished	11/22/2011 3:20:22 PM	5.0000
17	HK22	008	K146-03R	Unknown	3	25.0	ORG	OAD6K15	Finished	11/22/2011 4:21:11 PM	1.0000
18	HK22	009	K174-01	Unknown	4	25.0	ORG	OAD6K15	Finished	11/22/2011 5:02:05 PM	1.0000
19	HK22	010	K174-02	Unknown	5	25.0	ORG	OAD6K15	Finished	11/22/2011 5:42:59 PM	1.0000
20	HK22	011	K174-03	Unknown	6	25.0	ORG	OAD6K15	Finished	11/22/2011 6:23:52 PM	1.0000
21	HK22	012	K174-04	Unknown	7	25.0	ORG	OAD6K15	Finished	11/22/2011 7:04:46 PM	1.0000
22	HK22	013	CCV26	Unknown	100	25.0	ORG	OAD6K15	Finished	11/22/2011 7:45:40 PM	1.0000
23	HK22	014	CCB26	Unknown	99	25.0	ORG	OAD6K15	Finished	11/22/2011 8:06:39 PM	1.0000
24	HK22	015	K174-05	Unknown	8	25.0	ORG	OAD6K15	Finished	11/22/2011 8:27:38 PM	1.0000
25	HK22	016	K174-06	Unknown	9	25.0	ORG	OAD6K15	Finished	11/22/2011 9:08:32 PM	1.0000
26	HK22	017	K174-07	Unknown	10	25.0	ORG	OAD6K15	Finished	11/22/2011 9:49:25 PM	1.0000
27	HK22	018	K184-01	Unknown	11	25.0	ORG	OAD6K15	Finished	11/22/2011 10:30:19 PM	1.0000

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FINAL

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 39

Created: 11/22/2011 10:18:35 AM by cmadmin
Last Update: 11/23/2011 9:36:55 AM by cmadmin

No.	Sequence	Comment
1	HK22	
2	HK22	
3	HK22	
4	HK22	
5	HK22	
6	HK22	
7	HK22	
8	HK22	
9	HK22	
10	HK22	
11	HK22	
12	HK22	
13	HK22	
14	HK22	
15	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
16	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
17	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK22	
23	HK22	
24	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
25	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
26	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
27	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

FINAL

Chromeleon © Dionex Corporation, Version 6.70 Build 1820

Sequence: HK22
Operator: cmadmin

Printed: 11/23/2011 10:12:36 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 39

Created: 11/22/2011 10:18:35 AM by cmadmin
Last Update: 11/23/2011 10:06:22 AM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK22	019	K184-01M	Unknown	12	25.0	ORG	OAD6K15	Finished	11/22/2011 11:11:12 PM	1.0000
29	HK22	020	K184-01S	Unknown	13	25.0	ORG	OAD6K15	Finished	11/22/2011 11:52:06 PM	1.0000
30	HK22	021	K184-02	Unknown	14	25.0	ORG	OAD6K15	Finished	11/23/2011 12:33:00 AM	1.0000
31	HK22	022	K184-03	Unknown	15	25.0	ORG	OAD6K15	Finished	11/23/2011 1:13:54 AM	1.0000
32	HK22	023	K184-04	Unknown	16	25.0	ORG	OAD6K15	Finished	11/23/2011 1:54:48 AM	1.0000
33	HK22	024	K184-05	Unknown	17	25.0	ORG-SAMPLE	OAD6K15	Finished	11/23/2011 2:35:41 AM	1.0000
34	HK22	025	CCV28	Unknown	100	25.0	ORG	OAD6K15	Finished	11/23/2011 3:41:35 AM	1.0000
35	HK22	026	CCB28	Unknown	99	25.0	ORG	OAD6K15	Finished	11/23/2011 4:23:33 AM	1.0000
36	HK22	027	K101-04	Unknown	18	25.0	ORG	OAD6K15	Finished	11/23/2011 4:44:31 AM	5.0000
37	HK22	028	K101-04A	Unknown	19	25.0	ORG	OAD6K15	Finished	11/23/2011 5:45:20 AM	5.0000
38	HK22	029	CCV30	Unknown	100	25.0	ORG	OAD6K15	Finished	11/23/2011 7:07:08 AM	1.0000
39	HK22	030	CCB30	Unknown	99	25.0	ORG	OAD6K15	Finished	11/23/2011 7:28:07 AM	1.0000

FINAL

Chromeleon © Dionex Corporation, Version 6.70 Build 1820

Sequence: HK22
Operator: cmadmin

Printed: 11/23/2011 9:38:34 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 39

Created: 11/22/2011 10:18:35 AM by cmadmin
Last Update: 11/23/2011 9:36:55 AM by cmadmin

No.	Sequence	Comment
28	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
29	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
30	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
31	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
32	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
33	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
34	HK22	
35	HK22	
36	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
37	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
38	HK22	
39	HK22	

FINAL

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CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K101

METHOD 2320B
TOTAL ALKALINITY

One(1) water sample was received on 11/10/11 for Alkalinity analysis, Method 2320B in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for ALK007WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG. However, sample duplicate was analyzed with the samples. RPD was within project limit.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2320B
TOTAL ALKALINITY

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K101

Matrix : WATER
Instrument ID : E5

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ALK007WB	ND	1	NA	5.00	5.00	11/17/1112:30	NA	11E5K04003	NA	ALK007W	NA	NA
LCS1W	ALK007WL	211	1	NA	5.00	5.00	11/17/1112:37	NA	11E5K04004	NA	ALK007W	NA	NA
LCD1W	ALK007WC	211	1	NA	5.00	5.00	11/17/1112:44	NA	11E5K04005	NA	ALK007W	NA	NA
IR-70-RDO-5-117	K101-01	464	1	NA	5.00	5.00	11/17/1115:31	NA	11E5K04022	NA	ALK007W	11/10/1111:07	11/10/11
IR-70-RDO-5-117DUP	K101-01D	465	1	NA	5.00	5.00	11/17/1115:42	NA	11E5K04023	NA	ALK007W	11/10/1111:07	11/10/11

8070

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD 2320B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ALK007WB	ALK007WL	ALK007WC		
LAB FILE ID:	11E5K04003	11E5K04004	11E5K04005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/17/1112:30	11/17/1112:37	11/17/1112:44	DATE RECEIVED:	NA
PREP. BATCH:	ALK007W	ALK007W	ALK007W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Total Alkalinity	ND	230	211	92	230	211	92	0	80-120	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD 2320B

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: IR-70-RDO-5-117
EMAX SAMP ID: K101-01 K101-01D
LAB FILE ID: 11E5K04022 11E5K04023
DATE EXTRACTED: NA NA DATE COLLECTED: 11/10/11 11:07
DATE ANALYZED: 11/17/1115:31 11/17/1115:42 DATE RECEIVED: 11/10/11
PREP. BATCH: ALK007W ALK007W
CALIB. REF: NA NA

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Total Alkalinity	464	465	0	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ALKALINITY

Note: For samples and relevent QCs/Standards analyzed, refer to attached analytical sequence.

☒ Titration end point: pH 4.5 ± 0.04

☒ Low alkalinity: pH 4.2 ± 0.04

MS/MSD amount of spike: NA

Comments: Method 2320B for SDG 11K070, 11K084, and 11K101

Book#: AAL-031

Instrument No.: ☐ 53 ☐ 97 ☒ E5

Analytical Batch: ALK007; ALK008; ALK009; ALK010

Analytical Sequence: 11E5K04

SOP #	Rev. #
☒ EMAX-310.1	5
☒ EMAX-2320B	3
☐ EMAX-	

STANDARDS ID		CONC. (mg/L)
0.02N HCL	SWRI-01-338 ~~SWI-01-402~~	0.02N
LCS	SWI-01-407 ~~NA~~ RC 11/17/11	230
MS/MSD	NA	NA
ICV	NA	NA

pH Buffer	ID
pH 4	SWI-01-341
pH 7	SWI-01-279
pH 10	SWI-01-396
pH 8.0 (Check)	SWI-01-347

Analyzed By: RC

Date: 11/17/11

PC-TitratION PLUS

pH and Alkalinity In-Run Report

Run Number 545 **Analytical Batch#** 11E5K04

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
1	ICV PH8	11E5K04	11/17/2011	12:21 PM	7.98	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	
2	RINSE	11E5K04	11/17/2011	12:25 PM	5.48	.00	.03	.04	.00	1.12	1.12	.00	.00	
3	ALK007WB	11E5K04	11/17/2011	12:30 PM	4.48	.00	.00	.01	.00	-.37	-.37	.00	.00	
4	ALK007WL	11E5K04	11/17/2011	12:37 PM	8.59	1.53	5.27	-1.00	61.04	210.81	88.72	122.09	.00	
5	ALK007WC	11E5K04	11/17/2011	12:44 PM	8.61	1.57	5.26	-1.00	62.91	210.56	84.74	125.82	.00	
6	K070-01	11E5K04	11/17/2011	1:05 PM	7.09	.00	46.39	-1.00	.00	1,855.69	1,855.69	.00	.00	
7	K070-02	11E5K04	11/17/2011	1:19 PM	6.78	.00	19.27	-1.00	.00	770.85	770.85	.00	.00	
8	K070-03	11E5K04	11/17/2011	1:27 PM	7.65	.00	6.58	-1.00	.00	263.36	263.36	.00	.00	
9	K070-04	11E5K04	11/17/2011	1:34 PM	7.84	.00	4.25	-1.00	.00	169.92	169.92	.00	.00	
10	K070-05	11E5K04	11/17/2011	1:45 PM	7.16	.00	15.79	-1.00	.00	631.41	631.41	.00	.00	
11	K070-06	11E5K04	11/17/2011	1:53 PM	7.85	.00	4.26	-1.00	.00	170.46	170.46	.00	.00	
12	K084-01	11E5K04	11/17/2011	2:00 PM	7.93	.00	4.39	-1.00	.00	175.64	175.64	.00	.00	
13	K084-02	11E5K04	11/17/2011	2:07 PM	7.89	.00	4.34	-1.00	.00	173.63	173.63	.00	.00	
14	K084-03	11E5K04	11/17/2011	2:21 PM	6.73	.00	25.68	-1.00	.00	1,027.11	1,027.11	.00	.00	
15	K084-04	11E5K04	11/17/2011	2:39 PM	7.04	.00	13.31	-1.00	.00	532.34	532.34	.00	.00	
16	K084-05	11E5K04	11/17/2011	2:48 PM	7.31	.00	11.55	-1.00	.00	462.12	462.12	.00	.00	
17	K084-06	11E5K04	11/17/2011	2:55 PM	7.97	.00	4.38	-1.00	.00	175.19	175.19	.00	.00	
18	K090-01	11E5K04	11/17/2011	3:03 PM	6.52	.00	3.28	-1.00	.00	131.29	131.29	.00	.00	

Analyzed by: Rc Reviewed by: Rc Date: 11/18/11

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Run Number 545 **Analytical Batch#** **11E5K04**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
19	K090-02	11E5K04	11/17/2011	3:10 PM	6.76	.00	2.74	-1.00	.00	109.70	109.70	.00	.00	
20	K090-03	11E5K04	11/17/2011	3:16 PM	6.87	.00	1.92	-1.00	.00	76.93	76.93	.00	.00	
21	K093-01	11E5K04	11/17/2011	3:23 PM	7.85	.00	4.83	-1.00	.00	193.24	193.24	.00	.00	
22	K101-01	11E5K04	11/17/2011	3:31 PM	7.63	.00	11.60	-1.00	.00	464.05	464.05	.00	.00	
23	K101-01D	11E5K04	11/17/2011	3:42 PM	7.62	.00	11.64	-1.00	.00	465.44	465.44	.00	.00	
24	RINSE	11E5K04	11/17/2011	3:48 PM	5.79	.00	.06	.11	.00	-.01	-.01	.00	.00	
25	ALK008WB	11E5K04	11/17/2011	3:54 PM	5.30	.00	.04	.09	.00	-.59	-.59	.00	.00	
26	ALK008WL	11E5K04	11/17/2011	4:01 PM	8.89	2.63	5.24	-1.00	105.30	209.69	.00	208.78	.91	
27	ALK008WC	11E5K04	11/17/2011	4:09 PM	8.87	2.59	5.24	-1.00	103.46	209.70	2.79	206.91	.00	
28	K077-02	11E5K04	11/17/2011	4:18 PM	7.24	.00	7.35	-1.00	.00	293.89	293.89	.00	.00	
29	K077-03	11E5K04	11/17/2011	4:25 PM	7.74	.00	7.57	-1.00	.00	302.79	302.79	.00	.00	
30	K077-04	11E5K04	11/17/2011	4:39 PM	8.16	.00	24.58	-1.00	.00	983.02	983.02	.00	.00	
31	K077-04D	11E5K04	11/17/2011	4:53 PM	8.14	.00	24.56	-1.00	.00	982.52	982.52	.00	.00	
32	K077-05	11E5K04	11/17/2011	5:04 PM	7.69	.00	14.13	-1.00	.00	565.29	565.29	.00	.00	
33	K077-06	11E5K04	11/17/2011	5:13 PM	7.75	.00	14.09	-1.00	.00	563.79	563.79	.00	.00	
34	K077-07	11E5K04	11/17/2011	5:20 PM	8.05	.00	2.87	-1.00	.00	114.77	114.77	.00	.00	
35	K077-08	11E5K04	11/17/2011	5:29 PM	8.67	.35	8.13	-1.00	13.82	325.04	297.41	27.63	.00	
36	K077-10	11E5K04	11/17/2011	5:38 PM	8.08	.00	10.46	-1.00	.00	418.27	418.27	.00	.00	
37	K077-11	11E5K04	11/17/2011	5:47 PM	8.07	.00	10.53	-1.00	.00	421.26	421.26	.00	.00	
38	K077-12	11E5K04	11/17/2011	5:59 PM	7.52	.00	18.72	-1.00	.00	748.82	748.82	.00	.00	

Analyzed by: Rc Reviewed by: Rc Date: 11/18/11

pH AND ALKALINITY IN-RUN REPORT.SRW

PC-TitratION PLUS by Man-Tech Associates, Inc.

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Run Number 545 **Analytical Batch#** **11E5K04**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
39	K077-13	11E5K04	11/17/2011	6:09 PM	7.13	.00	10.25	-1.00	.00	409.91	409.91	.00	.00	
40	K077-14	11E5K04	11/17/2011	6:17 PM	7.38	.00	8.33	-1.00	.00	333.39	333.39	.00	.00	
41	K077-15	11E5K04	11/17/2011	6:24 PM	7.50	.00	5.54	-1.00	.00	221.68	221.68	.00	.00	
42	K077-17	11E5K04	11/17/2011	6:34 PM	8.13	.00	9.67	-1.00	.00	386.98	386.98	.00	.00	
43	K077-18	11E5K04	11/17/2011	6:43 PM	8.28	.00	9.79	-1.00	.00	391.69	391.69	.00	.00	
44	K077-19	11E5K04	11/17/2011	6:52 PM	8.28	.00	11.93	-1.00	.00	477.05	477.05	.00	.00	
45	K077-20	11E5K04	11/17/2011	7:02 PM	7.58	.00	11.31	-1.00	.00	452.38	452.38	.00	.00	
46	K077-21	11E5K04	11/17/2011	7:10 PM	7.54	.00	7.78	-1.00	.00	311.27	311.27	.00	.00	
47	K077-22	11E5K04	11/17/2011	7:19 PM	7.84	.00	7.30	-1.00	.00	291.89	291.89	.00	.00	
48	K077-23	11E5K04	11/17/2011	7:28 PM	8.62	.40	12.57	-1.00	16.13	502.99	470.73	32.26	.00	
49	RINSE	11E5K04	11/17/2011	7:34 PM	5.76	.00	.06	.13	.00	-.64	-.64	.00	.00	
50	ALK009WB	11E5K04	11/17/2011	7:40 PM	5.46	.00	.05	.11	.00	-.61	-.61	.00	.00	
51	ALK009WL	11E5K04	11/17/2011	7:47 PM	8.97	2.86	5.27	-1.00	114.36	210.92	.00	193.13	17.79	
52	ALK009WC	11E5K04	11/17/2011	7:56 PM	8.94	2.82	5.31	-1.00	112.98	212.52	.00	199.07	13.45	
53	K096-02	11E5K04	11/17/2011	8:04 PM	7.73	.00	6.33	-1.00	.00	253.20	253.20	.00	.00	
54	K096-02D	11E5K04	11/17/2011	8:12 PM	7.75	.00	6.35	-1.00	.00	254.17	254.17	.00	.00	
55	K096-03	11E5K04	11/17/2011	8:19 PM	7.43	.00	6.32	-1.00	.00	252.66	252.66	.00	.00	
56	K096-04	11E5K04	11/17/2011	8:29 PM	8.31	.02	10.18	-1.00	.90	407.36	405.55	1.81	.00	
57	K096-05	11E5K04	11/17/2011	8:38 PM	7.89	.00	10.57	-1.00	.00	422.93	422.93	.00	.00	
58	K096-06	11E5K04	11/17/2011	8:46 PM	7.74	.00	6.14	-1.00	.00	245.55	245.55	.00	.00	

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Analyzed by: Rc Reviewed by: Rc Date: 11/18/11

pH AND ALKALINITY IN-RUN REPORT.SRW

PC-TitratION PLUS by Man-Tech Associates, Inc.

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Run Number 545 **Analytical Batch#** **11E5K04**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
59	K096-07	11E5K04	11/17/2011	8:56 PM	8.42	.13	10.84	-1.00	5.08	433.72	423.56	10.16	.00	
60	K096-09	11E5K04	11/17/2011	9:04 PM	8.24	.00	4.55	-1.00	.00	182.18	182.18	.00	.00	
61	K096-10	11E5K04	11/17/2011	9:16 PM	7.65	.00	16.57	-1.00	.00	662.96	662.96	.00	.00	
62	K096-11	11E5K04	11/17/2011	9:23 PM	7.49	.00	8.74	-1.00	.00	349.66	349.66	.00	.00	
63	K096-12	11E5K04	11/17/2011	9:31 PM	7.54	.00	8.62	-1.00	.00	345.00	345.00	.00	.00	
64	K096-13	11E5K04	11/17/2011	9:41 PM	7.59	.00	9.26	-1.00	.00	370.31	370.31	.00	.00	
65	K096-14	11E5K04	11/17/2011	9:49 PM	7.62	.00	9.26	-1.00	.00	370.60	370.60	.00	.00	
66	K096-15	11E5K04	11/17/2011	10:01 PM	8.12	.00	18.66	-1.00	.00	746.52	746.52	.00	.00	
67	K096-16	11E5K04	11/17/2011	10:12 PM	7.85	.00	16.10	-1.00	.00	644.02	644.02	.00	.00	
68	K096-18	11E5K04	11/17/2011	10:21 PM	8.32	.05	9.78	-1.00	1.95	391.21	387.32	3.89	.00	
69	K096-19	11E5K04	11/17/2011	10:32 PM	8.35	.13	15.30	-1.00	5.16	611.93	601.61	10.32	.00	
70	K096-20	11E5K04	11/17/2011	10:40 PM	7.85	.00	5.74	-1.00	.00	229.52	229.52	.00	.00	
71	K096-21	11E5K04	11/17/2011	10:48 PM	7.87	.00	5.75	-1.00	.00	230.14	230.14	.00	.00	
72	K096-22	11E5K04	11/17/2011	10:55 PM	7.80	.00	6.10	-1.00	.00	243.80	243.80	.00	.00	
73	K096-23	11E5K04	11/17/2011	11:04 PM	7.61	.00	6.52	-1.00	.00	260.85	260.85	.00	.00	
74	RINSE	11E5K04	11/17/2011	11:11 PM	6.33	.00	.09	.19	.00	-.45	-.45	.00	.00	
75	ALK010WB	11E5K04	11/17/2011	11:17 PM	5.67	.00	.07	.16	.00	-.83	-.83	.00	.00	
76	ALK010WL	11E5K04	11/17/2011	11:24 PM	9.05	3.06	5.31	-1.00	122.38	212.29	.00	179.82	32.47	
77	ALK010WC	11E5K04	11/17/2011	11:32 PM	9.02	3.00	5.30	-1.00	119.82	212.12	.00	184.61	27.52	
78	K104-02	11E5K04	11/17/2011	11:40 PM	7.76	.00	6.00	-1.00	.00	240.19	240.19	.00	.00	

Analyzed by: RC Reviewed by: RC Date: 11/18/11

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Run Number 545 **Analytical Batch#** **11E5K04**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
79	K104-03	11E5K04	11/17/2011	11:49 PM	8.25	.00	7.19	-1.00	.00	287.51	287.51	.00	.00	
80	K104-04	11E5K04	11/17/2011	11:59 PM	8.42	.19	14.66	-1.00	7.77	586.21	570.67	15.54	.00	
81	K104-06	11E5K04	11/18/2011	12:07 AM	7.76	.00	7.57	-1.00	.00	302.95	302.95	.00	.00	
82	K104-07	11E5K04	11/18/2011	12:16 AM	7.79	.00	7.59	-1.00	.00	303.68	303.68	.00	.00	
83	K104-08	11E5K04	11/18/2011	12:24 AM	7.77	.00	8.36	-1.00	.00	334.43	334.43	.00	.00	
84	K104-09	11E5K04	11/18/2011	12:37 AM	7.98	.00	19.75	-1.00	.00	789.95	789.95	.00	.00	
85	K104-10	11E5K04	11/18/2011	12:49 AM	7.73	.00	18.92	-1.00	.00	756.71	756.71	.00	.00	
86	K104-12	11E5K04	11/18/2011	12:58 AM	8.43	.15	13.15	-1.00	5.94	525.84	513.97	11.87	.00	
87	K104-13	11E5K04	11/18/2011	1:07 AM	7.82	.00	6.92	-1.00	.00	276.86	276.86	.00	.00	
88	K104-14	11E5K04	11/18/2011	1:17 AM	7.87	.00	17.64	-1.00	.00	705.74	705.74	.00	.00	
89	K104-14D	11E5K04	11/18/2011	1:29 AM	7.88	.00	17.68	-1.00	.00	707.27	707.27	.00	.00	
90	K072-01	11E5K04	11/18/2011	1:37 AM	8.29	.00	3.87	-1.00	.00	154.74	154.74	.00	.00	
91	RINSE	11E5K04	11/18/2011	1:43 AM	6.03	.00	.06	.13	.00	-.18	-.18	.00	.00	

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Analyzed by: Rc Reviewed by: Rc Date: 11/18/11

pH AND ALKALINITY IN-RUN REPORT.SRW

PC-TitratION PLUS by Man-Tech Associates, Inc.

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PC-Titrate For Windows

Running List Report

Order Number - 11E5K04

	Schedule	Sample Id	Vial	Weight	Volume
1	PH CAL	CAL	1	.00	25.00
2	PH ONLY	ICV PH8	4	.00	25.00
3	PH-ALK	RINSE	5	.00	25.00
4	PH-ALK	ALK007WB	6	.00	25.00
5	PH-ALK	ALK007WL	7	.00	25.00
6	PH-ALK	ALK007WC	8	.00	25.00
7	PH-ALK	K070-01	9	.00	25.00
8	PH-ALK	K070-02	10	.00	25.00
9	PH-ALK	K070-03	11	.00	25.00
10	PH-ALK	K070-04	12	.00	25.00
11	PH-ALK	K070-05	13	.00	25.00
12	PH-ALK	K070-06	14	.00	25.00
13	PH-ALK	K084-01	15	.00	25.00
14	PH-ALK	K084-02	16	.00	25.00
15	PH-ALK	K084-03	17	.00	25.00
16	PH-ALK	K084-04	18	.00	25.00
17	PH-ALK	K084-05	19	.00	25.00
18	PH-ALK	K084-06	20	.00	25.00
19	PH-ALK	K090-01	21	.00	25.00
20	PH-ALK	K090-02	22	.00	25.00
21	PH-ALK	K090-03	23	.00	25.00
22	PH-ALK	K093-01	24	.00	25.00
23	PH-ALK	K101-01	25	.00	25.00
24	PH-ALK	K101-01D	26	.00	25.00
25	PH-ALK	RINSE	27	.00	25.00
26	PH-ALK	ALK008WB	28	.00	25.00
27	PH-ALK	ALK008WL	29	.00	25.00
28	PH-ALK	ALK008WC	30	.00	25.00
29	PH-ALK	K077-02	31	.00	25.00
30	PH-ALK	K077-03	32	.00	25.00
31	PH-ALK	K077-04	33	.00	25.00
32	PH-ALK	K077-04D	34	.00	25.00
33	PH-ALK	K077-05	35	.00	25.00
34	PH-ALK	K077-06	36	.00	25.00
35	PH-ALK	K077-07	37	.00	25.00
36	PH-ALK	K077-08	38	.00	25.00
37	PH-ALK	K077-10	39	.00	25.00
38	PH-ALK	K077-11	40	.00	25.00
39	PH-ALK	K077-12	41	.00	25.00
40	PH-ALK	K077-13	42	.00	25.00

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Running List Report

Order Number - 11E5K04

	Schedule	Sample Id	Vial	Weight	Volume
41	PH-ALK	K077-14	43	.00	25.00
42	PH-ALK	K077-15	44	.00	25.00
43	PH-ALK	K077-17	45	.00	25.00
44	PH-ALK	K077-18	46	.00	25.00
45	PH-ALK	K077-19	47	.00	25.00
46	PH-ALK	K077-20	48	.00	25.00
47	PH-ALK	K077-21	49	.00	25.00
48	PH-ALK	K077-22	50	.00	25.00
49	PH-ALK	K077-23	51	.00	25.00
50	PH-ALK	RINSE	52	.00	25.00
51	PH-ALK	ALK009WB	53	.00	25.00
52	PH-ALK	ALK009WL	54	.00	25.00
53	PH-ALK	ALK009WC	55	.00	25.00
54	PH-ALK	K096-02	56	.00	25.00
55	PH-ALK	K096-02D	57	.00	25.00
56	PH-ALK	K096-03	58	.00	25.00
57	PH-ALK	K096-04	59	.00	25.00
58	PH-ALK	K096-05	60	.00	25.00
59	PH-ALK	K096-06	61	.00	25.00
60	PH-ALK	K096-07	62	.00	25.00
61	PH-ALK	K096-09	63	.00	25.00
62	PH-ALK	K096-10	64	.00	25.00
63	PH-ALK	K096-11	65	.00	25.00
64	PH-ALK	K096-12	66	.00	25.00
65	PH-ALK	K096-13	67	.00	25.00
66	PH-ALK	K096-14	68	.00	25.00
67	PH-ALK	K096-15	69	.00	25.00
68	PH-ALK	K096-16	70	.00	25.00
69	PH-ALK	K096-18	71	.00	25.00
70	PH-ALK	K096-19	72	.00	25.00
71	PH-ALK	K096-20	73	.00	25.00
72	PH-ALK	K096-21	74	.00	25.00
73	PH-ALK	K096-22	75	.00	25.00
74	PH-ALK	K096-23	76	.00	25.00
75	PH-ALK	RINSE	77	.00	25.00
76	PH-ALK	ALK010WB	78	.00	25.00
77	PH-ALK	ALK010WL	79	.00	25.00
78	PH-ALK	ALK010WC	80	.00	25.00
79	PH-ALK	K104-02	81	.00	25.00
80	PH-ALK	K104-03	82	.00	25.00
81	PH-ALK	K104-04	83	.00	25.00
82	PH-ALK	K104-06	84	.00	25.00

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Running List Report

Order Number - 11E5K04

	Schedule	Sample Id	Vial	Weight	Volume
83	PH-ALK	K104-07	85	.00	25.00
84	PH-ALK	K104-08	86	.00	25.00
85	PH-ALK	K104-09	87	.00	25.00
86	PH-ALK	K104-10	88	.00	25.00
87	PH-ALK	K104-12	89	.00	25.00
88	PH-ALK	K104-13	90	.00	25.00
89	PH-ALK	K104-14	91	.00	25.00
90	PH-ALK	K104-14D	92	.00	25.00
91	PH-ALK	K072-01	93	.00	25.00
92	PH-ALK	RINSE	94	.00	25.00

PC-TitratION PLUS by Man-Tech Associates, Inc.
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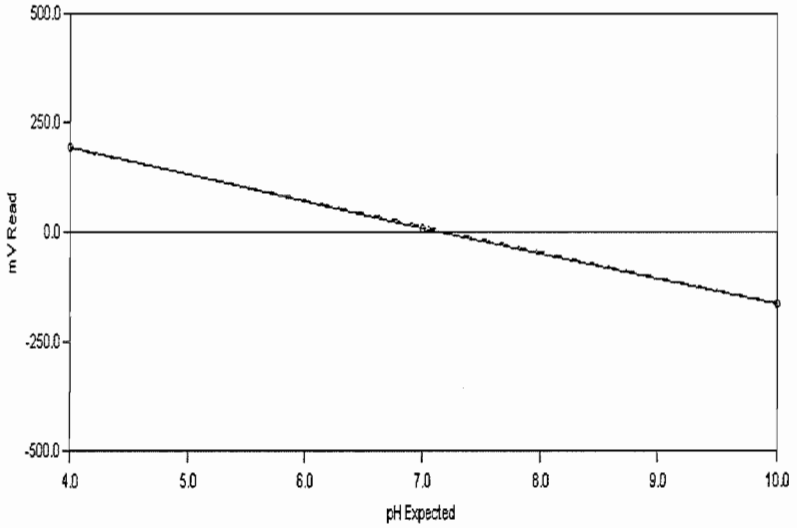
PC-TitratION PLUS
Calibration Report

Calibration Record # 283



Calibration Settings

Calibration ID	PH CAL 4-7-10	Date	11/17/2011	
Channel	1	Time	12:18 PM	
Probe Type	pH	Temperature	296.53 K	23.38 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit	

Calibration Results

Slope	-59.142	CorrCoeff	0.9998
Intercept	12.613	Equation: Y = (-59.142) X + (12.613)	

Calibration Validity **True** Operator

	Result	Minimum	Maximum
Slope	-59.142	-65.00	-53.00
Intercept	12.613	-40.00	40.00
Correlation Coefficient	0.9998	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	**Standard**	**Reading**
	4.00	191.89
	7.00	8.91
	10.00	-162.96

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CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K101

METHOD 2540C
TOTAL DISSOLVED SOLIDS

One(1) water sample was received on 11/10/11 for Total Dissolved Solids analysis, Method 2540C in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Balance calibration was checked as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TDK009WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2540C
TOTAL DISSOLVED SOLIDS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K101

Matrix : WATER
Instrument ID : 40706360

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TDK009WB	ND	1	NA	20.0	20.0	11/15/1117:23	NA	TDK00901	NA	TDK009W	NA	NA
LCS1W	TDK009WL	1050	1	NA	20.0	20.0	11/15/1117:23	NA	TDK00902	NA	TDK009W	NA	NA
LCD1W	TDK009WC	1040	1	NA	20.0	20.0	11/15/1117:23	NA	TDK00903	NA	TDK009W	NA	NA
IR-70-RDO-5-117	K101-01	895	1	NA	20.0	20.0	11/15/1117:23	NA	TDK00922	NA	TDK009W	11/10/1111:07	11/10/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD 2540C

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TDK009WB	TDK009WL	TDK009WC		
LAB FILE ID:	TDK00901	TDK00902	TDK00903		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/15/1117:23	11/15/1117:23	11/15/1117:23	DATE RECEIVED:	NA
PREP. BATCH:	TDK009W	TDK009W	TDK009W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TDS	ND	1000	1050	105	1000	1040	104	1	80-120	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
GRAVIMETRIC

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AGV-047

Balance ID: 40706360

Analytical Batch: TDK009

SOP #	Rev. #
☐ EMAX-160.1	6
☐ EMAX-160.2	4
☐ EMAX-160.3	2
☐ EMAX-2540B	1
☑ EMAX-2540C	5
☐ EMAX-2540D	1

STANDARDS ID	CONC. (mg/L)
LCS SW2-02-914	1000

Micropipette ID: 438481331

Analyzed By: NM

Date: 11/19/14

GRAVIMETRIC ANALYSES
RAW DATA

11TDK009.xls

EMAX LABORATORIES

Analytical Batch: TDK009C Instrument ID: 40706360 Oven Temp IN (°C): 180 Oven Temp OUT (°C): 180 SOP: EMAX-2540C Rev.1

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish #	Dish (g)	Date	Time	1st Dry Weight + Dish (g)	Date	Time	2nd Dry Weight + Dish (g)	Date	Time	3rd Dry Weight + Dish (g)	Date	Time	Difference 1st & 2nd Dry Wt. Rdg.	Difference 2nd & 3rd Dry Wt. Rdg. (<0.5mg)	NOTES
TDK00901	TDK009WB	100	B	70.7032	11/15/11	17:23	70.7037	11/16/11	11:27	70.7033	11/16/11	13:50	70.7033	11/16/11	13:50	-0.0004	0.0	
TDK00902	TDK009WL	20	L	21.5528	11/15/11	17:23	21.5739	11/16/11	11:28	21.5738	11/16/11	13:51	21.5738	11/16/11	13:51	-1E-04	0.0	
TDK00903	TDK009WC	20	C	21.5928	11/15/11	17:23	21.6136	11/16/11	11:28	21.6136	11/16/11	13:52	21.6136	11/16/11	13:52	0	0.0	
TDK00904	K511-01	20	1	21.6046	11/15/11	17:24	21.623	11/16/11	11:28	21.623	11/16/11	13:52	21.623	11/16/11	13:52	0	0.0	
TDK00905	K511-03	20	2	21.5437	11/15/11	17:24	21.6025	11/16/11	11:29	21.6028	11/16/11	13:52	21.6028	11/16/11	13:52	0.0003	0.0	
TDK00906	K511-02	20	3	21.5194	11/15/11	17:24	21.5382	11/16/11	11:29	21.5381	11/16/11	13:52	21.5381	11/16/11	13:52	-1E-04	0.0	
TDK00907	K511-04	20	4	21.6291	11/15/11	17:25	21.7224	11/16/11	11:29	21.7222	11/16/11	13:53	21.7222	11/16/11	13:53	-0.0002	0.0	
TDK00908	K511-05	20	5	21.4605	11/15/11	17:25	21.5193	11/16/11	11:29	21.5194	11/16/11	13:53	21.5194	11/16/11	13:53	1E-04	0.0	
TDK00909	K511-06	20	6	21.5116	11/15/11	17:25	21.5288	11/16/11	11:30	21.5287	11/16/11	13:53	21.5287	11/16/11	13:53	-1E-04	0.0	
TDK00910	K511-07	20	7	21.5718	11/15/11	17:25	21.589	11/16/11	11:30	21.5891	11/16/11	13:53	21.5891	11/16/11	13:53	1E-04	0.0	
TDK00911	K511-08	20	8	21.3260	11/15/11	17:26	21.3447	11/16/11	11:30	21.3447	11/16/11	13:54	21.3447	11/16/11	13:54	0	0.0	
TDK00912	K511-09	20	9	21.3737	11/15/11	17:26	21.4118	11/16/11	11:31	21.4119	11/16/11	13:54	21.4119	11/16/11	13:54	1E-04	0.0	
TDK00913	K511-10	20	10	21.4680	11/15/11	17:26	21.5446	11/16/11	11:31	21.5449	11/16/11	13:54	21.5449	11/16/11	13:54	0.0003	0.0	
TDK00914	K511-10D	20	11	21.4292	11/15/11	17:26	21.5048	11/16/11	11:31	21.5051	11/16/11	13:54	21.5051	11/16/11	13:54	0.0003	0.0	
TDK00915	K084-01	20	12	21.4988	11/15/11	17:27	21.5143	11/16/11	11:31	21.5144	11/16/11	13:55	21.5144	11/16/11	13:55	1E-04	0.0	
TDK00916	K084-02	20	13	21.4513	11/15/11	17:27	21.4675	11/16/11	11:32	21.4679	11/16/11	13:55	21.4679	11/16/11	13:55	0.0004	0.0	
TDK00917	K084-03	20	14	21.5444	11/15/11	17:27	21.5816	11/16/11	11:32	21.5818	11/16/11	13:55	21.5818	11/16/11	13:55	0.0002	0.0	
TDK00918	K084-04	20	15	21.5271	11/15/11	17:27	21.5449	11/16/11	11:32	21.545	11/16/11	13:55	21.545	11/16/11	13:55	0.0001	0.0	
TDK00919	K084-05	20	16	21.7030	11/15/11	17:28	21.7287	11/16/11	11:32	21.7285	11/16/11	13:56	21.7285	11/16/11	13:56	-0.0002	0.0	
TDK00920	K084-06	20	17	21.6224	11/15/11	17:28	21.6374	11/16/11	11:33	21.6374	11/16/11	13:56	21.6374	11/16/11	13:56	0	0.0	
TDK00921	K084-06D	20	18	21.5688	11/15/11	17:28	21.5842	11/16/11	11.33	21.5842	11/16/11	13:56	21.5842	11/16/11	13:56	0	0.0	
TDK00922	K101-01	20	19	21.6311	11/15/11	17:28	21.6487	11/16/11	11:33	21.649	11/16/11	13:57	21.649	11/16/11	13:57	0.0003	0.0	
TDK00923	K101-02	100	20	71.4557	11/15/11	17:29	71.4999	11/16/11	11.34	71.4995	11/16/11	13:57	71.4995	11/16/11	13:57	-0.0004	0.0	
TDK00924	K101-03	5	21	21.4890	11/15/11	17:29	21.5009	11/16/11	11.34	21.501	11/16/11	13:57	21.501	11/16/11	13:57	1E-04	0.0	
TDK00925	K101-04	10	22	21.5458	11/15/11	17:29	21.6725	11/16/11	11.34	21.6727	11/16/11	13:57	21.6727	11/16/11	13:57	0.0002	0.0	

Beginning Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/15/11 17:22	PASSED
5	4.9998	11/15/11 17:22	PASSED
100	99.9974	11/15/11 17:23	PASSED

Ending Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.0996	11/15/11 17:29	PASSED
5	4.9995	11/15/11 17:30	PASSED
100	99.9972	11/15/11 17:30	PASSED

Beginning Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/16/11 11:27	PASSED
5	4.9999	11/16/11 11:27	PASSED
100	99.9990	11/16/11 11:27	PASSED

Ending Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/16/11 13:57	PASSED
5	5.0000	11/16/11 13:58	PASSED
100	99.9980	11/16/11 13:58	PASSED

Acceptance Criteria ± 0.1% OR 0.05 mg whichever is greater

LCS Conc 1000 mg/L MDL 10 mg/L RL 10 mg/L Initial Rdg by: NM Final Rdg by: NM Reviewed by: NM

Remarks Date

6087

EMAX LABORATORIES INC

GRAVIMETRIC CALCULATION

Analytical Batch: TDK009 Start Date/Time: 11/15/11 17:23 Temp IN(°C): 180

Balance ID: 40706360 End Date/Time: 11/16/11 13:56 Temp Out(°C): 180

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish (g)	Dry Weight + Dish (g)	SOLIDS (mg)	RESULT (mg/L)	NOTES
TDK00901	TDK009WB	100	70.7032	70.7033	0.1000	ND	
TDK00902	TDK009WL	20	21.5528	21.5738	21.0000	1050	105
TDK00903	TDK009WC	20	21.5928	21.6136	20.8000	1040	104
TDK00904	K511-01	20	21.6046	21.623	18.4000	920	
TDK00905	K511-03	20	21.5437	21.6028	59.1000	2950	
TDK00906	K511-02	20	21.5194	21.5381	18.7000	935	
TDK00907	K511-04	20	21.6291	21.7222	93.1000	4650	
TDK00908	K511-05	20	21.4605	21.5194	58.9000	2950	
TDK00909	K511-06	20	21.5116	21.5287	17.1000	855	
TDK00910	K511-07	20	21.5718	21.5891	17.3000	865	
TDK00911	K511-08	20	21.326	21.3447	18.7000	935	
TDK00912	K511-09	20	21.3737	21.4119	38.2000	1910	
TDK00913	K511-10	20	21.468	21.5449	76.9000	3840	
TDK00914	K511-10D	20	21.4292	21.5051	75.9000	3790	
TDK00915	K084-01	20	21.4988	21.5144	15.6000	780	
TDK00916	K084-02	20	21.4513	21.4679	16.6000	830	
TDK00917	K084-03	20	21.5444	21.5818	37.4000	1870	
TDK00918	K084-04	20	21.5271	21.545	17.9000	895	
TDK00919	K084-05	20	21.703	21.7285	25.5000	1280	
TDK00920	K084-06	20	21.6224	21.6374	15.0000	750	
TDK00921	K084-06D	20	21.5688	21.5842	15.4000	770	
TDK00922	K101-01	20	21.6311	21.649	17.9000	895	
TDK00923	K101-02	100	71.4557	71.4995	43.8000	438	
TDK00924	K101-03	5	21.489	21.501	12.0000	2400	
TDK00925	K101-04	10	21.5458	21.6727	126.9000	12700	

LCS Concentration: 1000 mg/L MDL(mg/L): 10 Initial Reading by: NM

SOP: EMAX-2540C Rev.1 RL (mg/L): 10 Final Reading by: NM

Remarks:

Reviewed by: NM

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K101

METHOD 4500F
DISSOLVED HYDROGEN SULFIDE

One(1) water sample was received on 11/10/11 for Dissolved Hydrogen Sulfide analysis, Method 4500F in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
The sample was analyzed within the prescribed holding time.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 4500F
Dissolved Hydrogen Sulfide

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K101

Matrix : WATER
Instrument ID : NA

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	HSK002WB	ND	1	NA	1.00	1.00	11/14/1111:08	NA	HSK00201	NA	HSK002W	NA	NA
IR-70-RDO-5-117	K101-01	ND	1	NA	1.00	1.00	11/14/1113:18	NA	HSK00217	NA	HSK002W	11/10/1111:07	11/10/11

0090

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
SULFIDE

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Book #: ASD-018

Analytical Batch: HSK002

Comments:

SOP #	Rev. #
☐ EMAX-376.1	3
☐ EMAX-9034	0
☐ EMAX-4500-S2F	1
☑ EMAX-4500-S2H	0
☐ EMAX-	

STANDARDS ID	conc.
LCS SWI-01-422	8.48
Spike NA	NA
$Na_2S_2O_3$ Standard SWRI-01-384	0.0248
Iodine SWRI-01-465	0.0250
HCl ~~HH~~ NM 11/14 SWPI-007-60-03	6N
Indicator SWRI-01-340	—

Analyzed By: NM

Date: 11/14/11

SM4500-S^{2-} H

EMAX LABORATORIES, INC.

ANALYSIS FOR UN-IONIZED HYDROGEN SULFIDE

Method SM4500-S2-H

Analytical Batch: HSK002

Data File Name	Lab Sample ID	Sulfide	Unit	Date Time	Temp. °C	pH	Conductivity µS/cm	H2S	Unit	COMMENTS
HSK0021	HSK002WB	ND	mg/L	11/14/11 11:08				ND	mg/L	
HSK0022	HSK002WL	6.83	mg/L	11/14/11 11:19				#VALUE!	mg/L	
HSK0023	HSK002WC	6.79	mg/L	11/14/11 11:23				#VALUE!	mg/L	
HSK0024	K070-01	ND	mg/L	11/14/11 11:29	25.2	6.88	3000	ND	mg/L	
HSK0025	K070-02	ND	mg/L	11/14/11 11:40	25.2	6.56	2830	ND	mg/L	
HSK0026	K070-03	ND	mg/L	11/14/11 11:44	25.1	7.36	2410	ND	mg/L	
HSK0027	K070-04	ND	mg/L	11/14/11 11:49	25.1	7.63	1625	ND	mg/L	
HSK0028	K070-05	ND	mg/L	11/14/11 11:52	25.1	6.73	2160	ND	mg/L	
HSK0029	K070-06	ND	mg/L	11/14/11 11:56	25.1	7.63	1681	ND	mg/L	
HSK00210	K084-01	ND	mg/L	11/14/11 12:27	24.8	7.8	1100	ND	mg/L	
HSK00211	K084-02	ND	mg/L	11/14/11 12:29	25.1	7.61	1134	ND	mg/L	
HSK00212	K084-03	ND	mg/L	11/14/11 12:32	25.2	6.86	2100	ND	mg/L	
HSK00213	K084-04	ND	mg/L	11/14/11 12:36	25	7.01	1367	ND	mg/L	
HSK00214	K084-05	ND	mg/L	11/14/11 13:10	24.8	6.85	1702	ND	mg/L	
HSK00215	K084-06	ND	mg/L	11/14/11 13:12	24.9	7.77	1088	ND	mg/L	
HSK00216	K084-06D	ND	mg/L	11/14/11 13:15	24.9	7.8	1085	ND	mg/L	
HSK00217	KI01-01	ND	mg/L	11/14/11 13:18	25	7.13	1339	ND	mg/L	
										NM 11/14/11

$$pK_1 = 32.5 + 1519.44/T - 15.672\log_{10}T + 0.02722T$$

$$A = 0.7083 - 2.277x10^{-3}T + 5.399x10^{-6}T^2$$

$$I = 1.6x10^{-5}\,Conductivity$$

$$pf_m = A\left(\frac{\sqrt{I}}{1+\sqrt{I}} - 0.3\right)$$

$$K'_1 = 10^{-pK_1+2pf_m}$$

$$H^+ = 10^{-pH+pf_m}$$

$$H_2S = \left(\frac{S_T}{1+\frac{K'_1}{H^+}}\right)$$

Analyzed by: NM

Reviewed by: NM

Date: 11/14/11

Where: T(°K)= T°C+272.15 pK1=dissociation constant for zero ionic strength A= Debye-Huckel Parameter I= Ionic Strength pfm=negative logarithm of the monovalent ion activity coefficient K'_1=conditional ionization constant H^+=Hydrogen ion concentration S_T=Total Sulfide Concentration

EMAX LABORATORIES, INC.

ANALYSIS FOR SULFIDE

Method: SM4500-S2-H Analytical Batch: **HSK002** Book #: ASD-018 Page: 13

Data File Name	Lab Sample ID	V_e (ml)	V_I (ml)	Volume of Titant V_t (ml)	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Sulfide	Sample Result	Flag J	Unit
HSK0021	**HSK002WB**	100	2.5	2.5	11/14/11	11:08:06	0.08	ND		mg/L
HSK0022	**HSK002WL**	100	2.5	0.8	11/14/11	11:19:49	6.8256	6.83		mg/L
HSK0023	**HSK002WC**	100	2.5	0.81	11/14/11	11:23:28	6.78592	6.79		mg/L
HSK0024	**K070-01**	100	2.5	2.55	11/14/11	11:29:24	-0.1184	ND		mg/L
HSK0025	**K070-02**	100	2.5	2.6	11/14/11	11:40:44	-0.3168	ND		mg/L
HSK0026	**K070-03**	100	2.5	2.53	11/14/11	11:44:18	-0.03904	ND		mg/L
HSK0027	**K070-04**	100	2.5	2.65	11/14/11	11:49:52	-0.5152	ND		mg/L
HSK0028	**K070-05**	100	2.5	2.7	11/14/11	11:52:47	-0.7136	ND		mg/L
HSK0029	**K070-06**	100	2.5	2.66	11/14/11	11:56:07	-0.55488	ND		mg/L
HSK00210	**K084-01**	100	2.5	2.48	11/14/11	12:27:28	0.15936	ND		mg/L
HSK00211	**K084-02**	100	2.5	2.5	11/14/11	12:29:50	0.08	ND		mg/L
HSK00212	**K084-03**	100	2.5	2.75	11/14/11	12:32:58	-0.912	ND		mg/L
HSK00213	**K084-04**	100	2.5	2.6	11/14/11	12:36:11	-0.3168	ND		mg/L
HSK00214	**K084-05**	100	2.5	2.6	11/14/11	13:10:12	-0.3168	ND		mg/L
HSK00215	**K084-06**	100	2.5	2.58	11/14/11	13:12:52	-0.23744	ND		mg/L
HSK00216	**K084-06D**	100	2.5	2.56	11/14/11	13:15:37	-0.15808	ND		mg/L
HSK00217	**K101-01**	100	2.5	2.62	11/14/11	13:18:28	-0.39616	ND		mg/L

NM 11/14/11

STANDARDIZATION

V_I (ml)	V_{Na2SO3} (ml)	DATE	TIME	Titrant Na_2SO_3 (N)
Average Normality of Iodine (NI)=				**0.025**

☑ Standard Purchased as Certified Solution

$$N_I = \frac{(N * V)_{Na_2SO_3}}{V_I}$$

MISCELLANEOUS INFORMATION

Standard	Concentration		Unit
Iodine	0.025		*N*
$Na_2S_2O_3$	0.0248		*N*
LCS [WATER | SOIL]	8.48	84.8	*mg/L | mg/Kg*
MDL [WATER | SOIL]	1	10	*mg/L | mg/Kg*
RL	1	10	*mg/L | mg/Kg*

$$S(mg/L) = \frac{[(V_I * N_I) - (V_t * N_t)](16{,}000)}{V_S}$$

MS/MSD	TV=	8.48	mg/L
ID	Result (mg/L)	%Rec.	RPD

Comments:

Analyzed By: NM

8093

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K101

METHOD SM5310B
TOC

One(1) water sample was received on 11/10/11 for Total Organic Carbon analysis, Method SM5310B in accordance with Standard Methods for the Examination of Water and Wastewater, 18th Edition.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TCK009WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample was analyzed at the frequency prescribed by the project.
Percent recovery for K101-01M was within project QC limits.
Sample duplicate was also analyzed with the samples. RPD was within project limit.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD SM5310B
TOC

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K101

Matrix : WATER
Instrument ID : I62

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TCK009WB	ND	1	NA	1.00	0.500	11/16/1116:38	NA	TCK008-05	TCK008-02	TCK009W	NA	NA
LCS1W	TCK009WL	24.5	1	NA	1.00	0.500	11/16/1116:51	NA	TCK008-06	TCK008-02	TCK009W	NA	NA
LCD1W	TCK009WC	24.5	1	NA	1.00	0.500	11/16/1117:03	NA	TCK008-07	TCK008-02	TCK009W	NA	NA
IR-70-RDO-5-117	K101-01	1.12	1	NA	1.00	0.500	11/16/1117:27	NA	TCK008-09	TCK008-02	TCK009W	11/10/1111:07	11/10/11
IR-70-RDO-5-117DUP	K101-01D	1.02	1	NA	1.00	0.500	11/16/1117:38	NA	TCK008-10	TCK008-02	TCK009W	11/10/1111:07	11/10/11
IR-70-RDO-5-117MS	K101-01M	26.2	1	NA	1.00	0.500	11/16/1117:51	NA	TCK008-11	TCK008-02	TCK009W	11/10/1111:07	11/10/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD SM5310B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TCK009WB	TCK009WL	TCK009WC		
LAB FILE ID:	TCK008-05	TCK008-06	TCK008-07		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/16/1116:38	11/16/1116:51	11/16/1117:03	DATE RECEIVED:	NA
PREP. BATCH:	TCK009W	TCK009W	TCK009W		
CALIB. REF:	TCK008-02	TCK008-02	TCK008-02		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	ND	25.0	24.5	98	25.0	24.5	98	0	85-115	20

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD SM5310B

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: IR-70-RDO-5-117
LAB SAMP ID: K101-01 K101-01M
LAB FILE ID: TCK008-09 TCK008-11
DATE EXTRACTED: NA NA DATE COLLECTED: 11/10/11 11:07
DATE ANALYZED: 11/16/1117:27 11/16/1117:51 DATE RECEIVED: 11/10/11
PREP. BATCH: TCK009W TCK009W
CALIB. REF: TCK008-02 TCK008-02

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	QC LIMIT (%)
TOC	1.12	25.0	26.2	100	75-125

8097

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K101
METHOD: METHOD SM5310B

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: IR-70-RDO-5-117
EMAX SAMP ID: K101-01 K101-01D
LAB FILE ID: TCK008-09 TCK008-10
DATE EXTRACTED: NA NA DATE COLLECTED: 11/10/11 11:07
DATE ANALYZED: 11/16/1117:27 11/16/1117:38 DATE RECEIVED: 11/10/11
PREP. BATCH: TCK009W TCK009W
CALIB. REF: TCK008-02 TCK008-02

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
TOC	1.12	1.02	10	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TOC

	Date	Time
Start	11/16/11	1450
End	11/17/11	729

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

TCK009W/10W/11W
K084 5310B
K101
K505
K736 415.1
K468 5310B
K104 415.1
K096
K116 DOC

Samples K468-02, 05, & 06 were diluted prior to analysis due to their yellow color. Samples were still yellow after dilution.

* All samples associated with batches TCK010W & TCK011W needs to be re analyzed due to failing WB

2 M HCl SW4-01-223

Book #:	A62-020
Instrument No.:	62
Pipette ID:	039380025
	SW3-01-33
	SI1A-01-4
Balance ID:	40706360
Analytical Sequence:	TCK008
Method File:	TCK008
Analytical Batch:	TCK009W/10W/11W

SOP #	Rev. #
☑ EMAX-415.1	2
☑ EMAX-5310B	1
☐ EMAX-9060	2
☐ EMAX-	

STANDARDS ID		CONC. (mg/L)
S0	nanopure	0
S1	SW10B-04-174	1
S2		5
S3		10
S4		40
S5		80
S6	—	—
ICV/LCS	SW10B-04-175	25
CCV	-176	25

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ TOC	
☐	

Analyzed By: [illegible]

Date: 11/16/11

	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
1	Standard	NPOC	ICAL	TCK008-01	0A-123456-	C:\Program	1.000		
2	Control	NPOC	ICV	TCK008-02	0A-123456-	C:\Program	1.000	NPOC:24.88 mg/L	
3	Unknown	NPOC	ICB	TCK008-03	0A-123456-	C:\Program	1.000	NPOC:0.1713 mg/	
4	Unknown	NPOC	HCO3\CO3	TCK008-04	0A-123456-	C:\Program	1.000	NPOC:0.1505 mg/	
5	Unknown	NPOC	TCK009WB	TCK008-05	0A-123456-	C:\Program	1.000	NPOC:0.1036 mg/	
6	Unknown	NPOC	TCK009WL	TCK008-06	0A-123456-	C:\Program	1.000	NPOC:24.48 mg/L	
7	Unknown	NPOC	TCK009WC	TCK008-07	0A-123456-	C:\Program	1.000	NPOC:24.54 mg/L	
8	Unknown	NPOC	K084-03T	TCK008-08	0A-123456-	C:\Program	5.000	NPOC:129.4 mg/L	DF=5
9	Unknown	NPOC	K101-01	TCK008-09	0A-123456-	C:\Program	1.000	NPOC:1.121 mg/L	PH<2
10	Unknown	NPOC	K101-01D	TCK008-10	0A-123456-	C:\Program	1.000	NPOC:1.019 mg/L	
11	Unknown	NPOC	K101-01M	TCK008-11	0A-123456-	C:\Program	1.000	NPOC:26.21 mg/L	
12	Unknown	NPOC	K505-01	TCK008-12	0A-123456-	C:\Program	1.000	NPOC:14.83 mg/L	PH<2
13	Unknown	NPOC	K736-01	TCK008-13	0A-123456-	C:\Program	1.000	NPOC:4.747 mg/L	PH<2
14	Control	NPOC	CCV1	TCK008-14	0A-123456-	C:\Program	1.000	NPOC:25.29 mg/L	
15	Unknown	NPOC	CCB1	TCK008-15	0A-123456-	C:\Program	1.000	NPOC:0.1135 mg/	
16	Unknown	NPOC	K468-01	TCK008-16	0A-123456-	C:\Program	1.000	NPOC:5.433 mg/L	PH<2
17	Unknown	NPOC	K468-02	TCK008-17	0A-123456-	C:\Program	2.000	NPOC:94.67 mg/L	PH<2; DF=2
18	Unknown	NPOC	K468-05	TCK008-18	0A-123456-	C:\Program	2.000	NPOC:88.97 mg/L	PH<2; DF=2
19	Unknown	NPOC	K468-06	TCK008-19	0A-123456-	C:\Program	2.000	NPOC:49.69 mg/L	PH<2; DF=2
20	Unknown	NPOC	K104-02	TCK008-20	0A-123456-	C:\Program	1.000	NPOC:1.555 mg/L	PH<2
21	Unknown	NPOC	K104-03	TCK008-21	0A-123456-	C:\Program	1.000	NPOC:7.615 mg/L	PH<2
22	Unknown	NPOC	K104-04	TCK008-22	0A-123456-	C:\Program	1.000	NPOC:3.082 mg/L	PH<2
23	Unknown	NPOC	K104-06	TCK008-23	0A-123456-	C:\Program	1.000	NPOC:1.871 mg/L	PH<2
24	Unknown	NPOC	K104-07	TCK008-24	0A-123456-	C:\Program	1.000	NPOC:1.867 mg/L	PH<2
25	Unknown	NPOC	K104-08	TCK008-25	0A-123456-	C:\Program	1.000	NPOC:1.791 mg/L	PH<2
26	Control	NPOC	CCV2	TCK008-26	0A-123456-	C:\Program	1.000	NPOC:~~28.19~~ mg/L	24.92 mg/L Am 11/14
27	Unknown	NPOC	CCB2	TCK008-27	0A-123456-	C:\Program	1.000	NPOC:0.3737 mg/	
28	Unknown	NPOC	K104-09	TCK008-28	0A-123456-	C:\Program	1.000	NPOC:33.49 mg/L	PH<2
29	Unknown	NPOC	K104-10	TCK008-29	0A-123456-	C:\Program	1.000	NPOC:55.98 mg/L	PH<2
30	Unknown	NPOC	K104-12	TCK008-30	0A-123456-	C:\Program	1.000	NPOC:8.892 mg/L	PH<2
31	Unknown	NPOC	K104-13	TCK008-31	0A-123456-	C:\Program	1.000	NPOC:4.177 mg/L	PH<2
32	Unknown	NPOC	TCK010WL	TCK008-32	0A-123456-	C:\Program	1.000	NPOC:25.13 mg/L	
33	Unknown	NPOC	TCK010WC	TCK008-33	0A-123456-	C:\Program	1.000	NPOC:25.82 mg/L	
34	Unknown	NPOC	TCK010WB	TCK008-34	0A-123456-	C:\Program	1.000	NPOC:0.5371 mg/	
35	Unknown	NPOC	K104-14	TCK008-35	0A-123456-	C:\Program	1.000	NPOC:32.52 mg/L	PH<2
36	Unknown	NPOC	K104-14M	TCK008-36	0A-123456-	C:\Program	1.000	NPOC:57.27 mg/L	
37	Unknown	NPOC	K104-14S	TCK008-37	0A-123456-	C:\Program	1.000	NPOC:57.12 mg/L	
38	Control	NPOC	CCV3	TCK008-38	0A-123456-	C:\Program	1.000	NPOC:24.87 mg/L	
39	Unknown	NPOC	CCB3	TCK008-39	0A-123456-	C:\Program	1.000	NPOC:0.3947 mg/	
40	Unknown	NPOC	K096-02	TCK008-40	0A-123456-	C:\Program	1.000	NPOC:2.292 mg/L	PH<2
41	Unknown	NPOC	K096-03	TCK008-41	0A-123456-	C:\Program	1.000	NPOC:2.137 mg/L	PH<2
42	Unknown	NPOC	K096-04	TCK008-42	0A-123456-	C:\Program	1.000	NPOC:12.73 mg/L	PH<2
43	Unknown	NPOC	K096-05	TCK008-43	0A-123456-	C:\Program	1.000	NPOC:5.613 mg/L	PH<2
44	Unknown	NPOC	K096-06	TCK008-44	0A-123456-	C:\Program	1.000	NPOC:1.950 mg/L	PH<2
45	Unknown	NPOC	K096-07	TCK008-45	0A-123456-	C:\Program	1.000	NPOC:2.697 mg/L	PH<2
46	Unknown	NPOC	K096-09	TCK008-46	0A-123456-	C:\Program	1.000	NPOC:2.908 mg/L	PH<2
47	Unknown	NPOC	K096-10	TCK008-47	0A-123456-	C:\Program	1.000	NPOC:3.558 mg/L	PH<2
48	Unknown	NPOC	K096-11	TCK008-48	0A-123456-	C:\Program	1.000	NPOC:4.061 mg/L	PH<2
49	Unknown	NPOC	K096-12	TCK008-49	0A-123456-	C:\Program	1.000	NPOC:2.801 mg/L	PH<2
50	Control	NPOC	CCV4	TCK008-50	0A-123456-	C:\Program	1.000	NPOC:25.63 mg/L	
51	Unknown	NPOC	CCB4	TCK008-51	0A-123456-	C:\Program	1.000	NPOC:1.110 mg/L	
52	Unknown	NPOC	K096-13	TCK008-52	0A-123456-	C:\Program	1.000	NPOC:2.574 mg/L	PH<2
53	Unknown	NPOC	K096-14	TCK008-53	0A-123456-	C:\Program	1.000	NPOC:2.624 mg/L	PH<2
54	Unknown	NPOC	K096-15	TCK008-54	0A-123456-	C:\Program	1.000	NPOC:28.88 mg/L	PH<2
55	Unknown	NPOC	K096-16	TCK008-55	0A-123456-	C:\Program	1.000	NPOC:15.98 mg/L	PH<2
56	Unknown	NPOC	K096-18	TCK008-56	0A-123456-	C:\Program	1.000	NPOC:8.389 mg/L	PH<2
57	Unknown	NPOC	K096-19	TCK008-57	0A-123456-	C:\Program	1.000	NPOC:9.464 mg/L	PH<2
58	Unknown	NPOC	K096-20	TCK008-58	0A-123456-	C:\Program	1.000	NPOC:3.496 mg/L	PH<2
59	Unknown	NPOC	TCK011WL	TCK008-59	0A-123456-	C:\Program	1.000	NPOC:26.02 mg/L	
60	Unknown	NPOC	TCK011WC	TCK008-60	0A-123456-	C:\Program	1.000	NPOC:26.13 mg/L	
61	Unknown	NPOC	TCK011WB	TCK008-61	0A-123456-	C:\Program	1.000	NPOC:0.9702 mg/	
62	Control	NPOC	CCV5	TCK008-62	0A-123456-	C:\Program	1.000	NPOC:26.48 mg/L	
63	Unknown	NPOC	CCB5	TCK008-63	0A-123456-	C:\Program	1.000	NPOC:0.3652 mg/	
64	Unknown	NPOC	K096-21	TCK008-64	0A-123456-	C:\Program	1.000	NPOC:2.642 mg/L	PH<2
65	Unknown	NPOC	K096-22	TCK008-65	0A-123456-	C:\Program	1.000	NPOC:1.513 mg/L	PH<2
66	Unknown	NPOC	K096-23	TCK008-66	0A-123456-	C:\Program	1.000	NPOC:2.186 mg/L	PH<2
67	Unknown	NPOC	K116-02	TCK008-67	0A-123456-	C:\Program	1.000	NPOC:228.5 mg/L	PH<2

RR

RR

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FINAL

	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
68	Unknown	NPOC	K116-04	TCK008-68	0A-123456-	C:\Program	1.000	NPOC:3.241 mg/L	PH<2
69	Unknown	NPOC	K116-04M	TCK008-69	0A-123456-	C:\Program	1.000	NPOC:28.95 mg/L	
70	Unknown	NPOC	K116-04S	TCK008-70	0A-123456-	C:\Program	1.000	NPOC:29.34 mg/L	
71	Unknown	NPOC	K116-06	TCK008-71	0A-123456-	C:\Program	1.000	NPOC:19.17 mg/L	PH<2
72	Unknown	NPOC	K116-07	TCK008-72	0A-123456-	C:\Program	1.000	NPOC:19.14 mg/L	PH<2
73	Control	NPOC	CCV6	TCK008-73	0A-123456-	C:\Program	1.000	NPOC:26.26 mg/L	
74	Unknown	NPOC	CCB6	TCK008-74	0A-123456-	C:\Program	1.000	NPOC:0.4256 mg/	
75									
76									
77									
78									
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RR

FINAL

Instr.Information

System	toc
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Cal. Curve

Sample Name:	ICAL
Sample ID:	TCK008-01
Cal. Curve:	TCK008.2011_11_16_14_42_12.cal

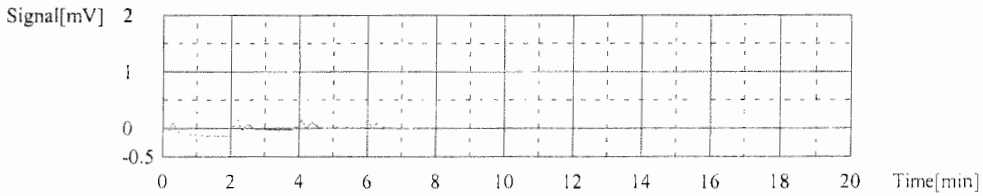
Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.000	50uL	1	*******		11/16/11 02:50:23 PM
2	0.000	50uL	1	*******		11/16/11 02:52:29 PM
3	0.000	50uL	1	*******		11/16/11 02:54:35 PM
4	0.000	50uL	1	*******		11/16/11 02:56:41 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 0.000

$\frac{\text{mean area}}{\text{slope}} = \frac{0.000}{2.151} = 0.000$

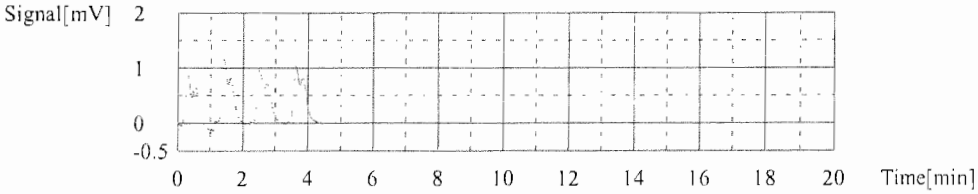


Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	2.102	50uL	10	*******		11/16/11 03:05:00 PM
2	2.255	50uL	10	*******		11/16/11 03:06:19 PM
3	2.186	50uL	10	*******		11/16/11 03:07:38 PM
4	2.283	50uL	10	*******		11/16/11 03:08:55 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 2.207

$\frac{\bar{A}}{m} = \frac{2.207}{2.151} = 1.026$



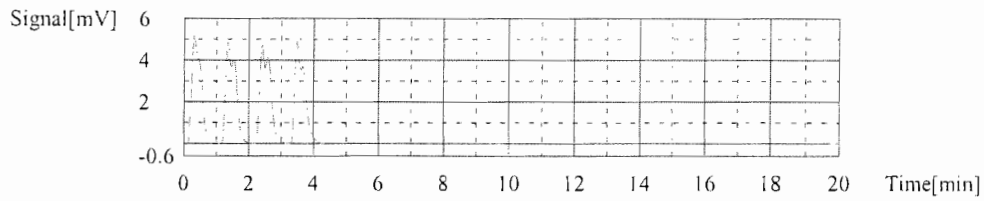
Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	10.25	50uL	2	*******		11/16/11 03:15:13 PM
2	10.56	50uL	2	*******		11/16/11 03:16:30 PM
3	10.65	50uL	2	*******		11/16/11 03:17:46 PM
4	10.66	50uL	2	*******		11/16/11 03:19:06 PM

$\frac{\bar{A}}{m} = \frac{10.53}{2.151} = 4.895$

8102

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 10.53

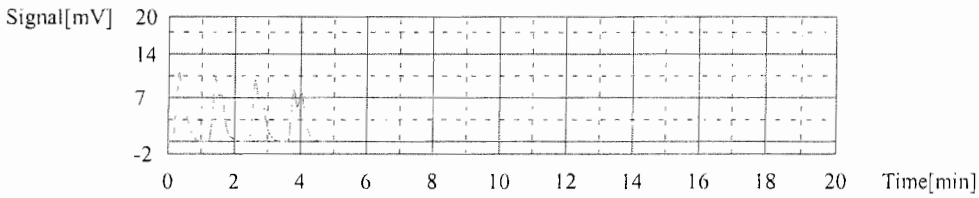


Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	20.87	50uL	1	*******		11/16/11 03:24:46 PM
2	20.91	50uL	1	*******		11/16/11 03:26:12 PM
3	21.28	50uL	1	*******		11/16/11 03:27:34 PM
4	21.38	50uL	1	*******		11/16/11 03:29:01 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 21.11

$\frac{\bar{A}}{m} = \frac{21.11}{2.151} = 9.814$

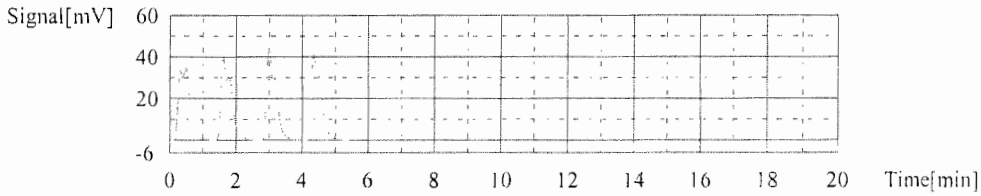


Conc: 40.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	83.04	50uL	2	*******		11/16/11 03:37:31 PM
2	84.33	50uL	2	*******		11/16/11 03:39:07 PM
3	83.76	50uL	2	*******		11/16/11 03:40:40 PM
4	84.67	50uL	2	*******		11/16/11 03:42:14 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 83.95

$\frac{\bar{A}}{m} = \frac{83.95}{2.151} = 39.03$

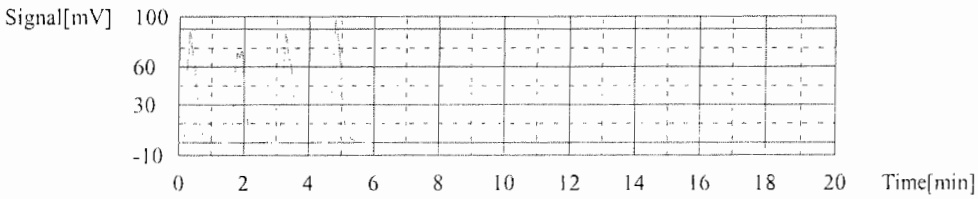


Conc: 80.00mg/L

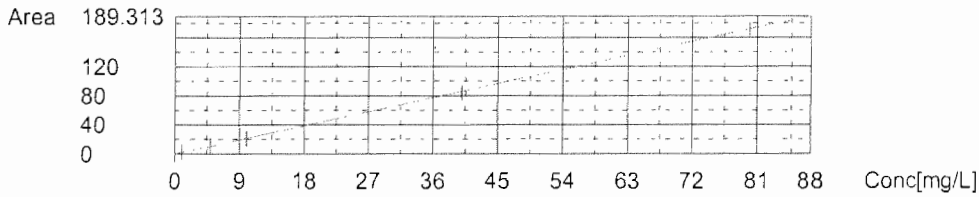
No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	168.5	50uL	1	*******		11/16/11 03:48:15 PM
2	172.6	50uL	1	*******		11/16/11 03:49:58 PM
3	175.4	50uL	1	*******		11/16/11 03:51:42 PM
4	173.9	50uL	1	*******		11/16/11 03:53:20 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 172.6

$\frac{\bar{A}}{m} = \frac{172.6}{2.151} = 80.24$



Slope: 2.151
Intercept 0.000
r^2 0.999825



8103

Control Sample

Sample Name: ICV
Sample ID: TCK008-02
Method: TCK008.tpl
Chk. Result Control value: 24.88 / Control exceeds range!

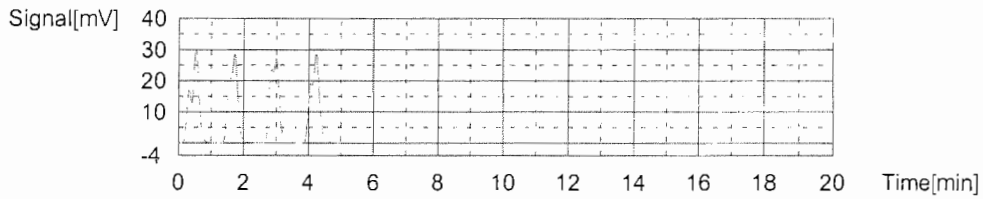
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:24.88 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.17	24.72mg/L	50uL	1		TCK008.2011_11_16_14_42_12.cal	11/16/11 04:01:18 PM
2	54.02	25.11mg/L	50uL	1		TCK008.2011_11_16_14_42_12.cal	11/16/11 04:02:48 PM
3	53.28	24.77mg/L	50uL	1		TCK008.2011_11_16_14_42_12.cal	11/16/11 04:04:13 PM
4	53.62	24.92mg/L	50uL	1		TCK008.2011_11_16_14_42_12.cal	11/16/11 04:05:39 PM

Mean Area 53.52
Mean Conc. 24.88mg/L



Sample

Sample Name: ICB
Sample ID: TCK008-03
Origin: TCK008.cal
Chk. Result

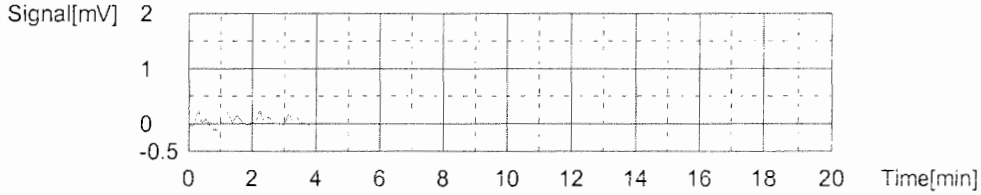
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1713 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4347	0.2021mg/L	50uL	1		TCK008.2011_11_16_14_42_12.cal	11/16/11 04:13:09 PM
2	0.3797	0.1765mg/L	50uL	1		TCK008.2011_11_16_14_42_12.cal	11/16/11 04:14:21 PM
3	0.3493	0.1624mg/L	50uL	1		TCK008.2011_11_16_14_42_12.cal	11/16/11 04:15:28 PM
4	0.3107	0.1444mg/L	50uL	1		TCK008.2011_11_16_14_42_12.cal	11/16/11 04:16:37 PM

Mean Area 0.3686
Mean Conc. 0.1713mg/L



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PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11K110**

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METALS	METHOD 3050B/6010B METHOD 7471A	7000 – 7027 7028 – 7037
WET	**	8000 –
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** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 11-30-2011
EMAX Batch No.: 11K110

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 11/11/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
IR-70-RB-122	K110-01	11/11/11	SOIL	VOLATILE ORGANICS BY GC/MS
				TPH GASOLINE
				TPH DIESEL
				METALS CAM
				MERCURY

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

1 of 1

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 31051
SAMPLE STORAGE
EMAX CONTROL NO. * 11K110
PROJECT CODE:

CLIENT: AMERICAN INTEGRATED SERVICES, INC.
PROJECT: IR SITE 70 - NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 714 678 6700 FAX: 714 678 6711 EMAIL: NWEINBERGER@IRCI.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: AMERICAN INTEGRATED SERVICES, INC.
ADDRESS: 1650 PALMA DRIVE, SUITE 207
VENTURA, CA 93003-5749
EMAX PM: Ye Myint

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	VOCs (np)	TPH-p (np)	TPH-e (np)	TITLE 22 METALS (np)	COMMENTS
1	IR-70-RB-122	IR SITE 70	11-11-11	0943	4	4oz	JAR	SS	III	X	X	X	X	
2														
3														
4														
5														
6														
7														
8														
9														
10														

Instructions: PLEASE BILL THIS TO AIS AT: 1650 PALMA DR. STE. 207
VENTURA, CA 93003-5749
ATTN: STEVE ELLIOTT.

Cooler #	Temp. (°C)	Sample #s
1	2.8	

SAMPLER: CHASE BRAGDON
COURIER/AIRBILL:

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-11-11	1045	[signature]

NOTICE. Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

1001

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11K110
☐ EMAX Courier		Recepient J-LUNA
☑ Client Delivery	See COC	Date 11-11-11
☐ Third Party		Time 1045

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☐ Preservative (if any)	☑ TAT
Safety Issues	☑ None	☐ High concentrations expected	☐ Superfund Site samples	☐ Rad screening required	

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	A ☑ Cooler 1 2.8 °C	☐ Cooler 2 _____ °C	☐ Cooler 3 _____ °C	☐ Cooler 4 _____ °C	☐ Cooler 5 _____ °C
	☐ Cooler 6 _____ °C	☐ Cooler 7 _____ °C	☐ Cooler 8 _____ °C	☐ Cooler 9 _____ °C	☐ Cooler 10 _____ °C

Comments: ☐ **PM was informed on non-compliant coolers imediately.**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code

REVIEWS

Sample Labeling [illegible] /ES Date 11/11/11

SRF [illegible] Date 11/11/11

PM LP for YG Date 11/15/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4	_____	E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	_____
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	_____
B3	Sample ID is inconsistent in COC vis-à-vis label	F2	Bubble is> 6mm		
B4	_____	G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	_____		
C4	_____	H2	_____		

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11K110

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K110

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

One (1) soil sample was received on 11/11/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
The sample was analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied except for Dichlorodifluoromethane in CVO03K0210 was not within 20% of expected value (biased high). However, analyte was not detected in associated sample. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary form for details.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for VO03K12L/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K110
Instrument ID : T-003

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	V003K12B	1	NA	11/14/1116:16	11/14/1116:16	RKB178	RKB022	V003K12	Method Blank
LCS1S	V003K12L	1	NA	11/14/1114:00	11/14/1114:00	RKB174	RKB022	V003K12	Lab Control Sample (LCS)
LCD1S	V003K12C	1	NA	11/14/1114:33	11/14/1114:33	RKB175	RKB022	V003K12	LCS Duplicate
MBLK2S	VSK006SB	1	NA	11/14/1117:25	11/14/1117:25	RKB180	RKB022	V003K12	Method Blank
IR-70-RB-122	K110-01	0.93	20.7	11/14/1119:45	11/14/1119:45	RKB184	RKB022	V003K12	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

Method 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/11/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/11/11
Batch No. : 11K110	Date Extracted: 11/14/11 19:45
Sample ID: IR-70-RB-122	Date Analyzed: 11/14/11 19:45
Lab Samp ID: K110-01	Dilution Factor: 0.93
Lab File ID: RKB184	Matrix : SOIL
Ext Btch ID: V003K12	% Moisture : 20.7
Calib. Ref.: RKB022	Instrument ID : T-003

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.9	1.2
1,1,1,2-TETRACHLOROETHANE	ND	5.9	1.2
1,1,2,2-TETRACHLOROETHANE	ND	5.9	1.2
1,1,2-TRICHLOROETHANE	ND	5.9	1.2
FREON113	ND	5.9	2.3
1,1-DICHLOROETHANE	ND	5.9	1.2
1,1-DICHLOROETHENE	ND	5.9	1.2
1,1-DICHLOROPROPENE	ND	5.9	1.2
1,2-DIBROMO-3-CHLOROPROPANE	ND	12	2.3
1,2-DIBROMOETHANE	ND	5.9	1.2
1,2-DICHLOROBENZENE	ND	5.9	1.2
1,2-DICHLOROETHANE	ND	5.9	1.2
1,2-DICHLOROPROPANE	ND	5.9	1.2
1,2,3-TRICHLOROBENZENE	ND	5.9	2.3
1,2,3-TRICHLOROPROPANE	ND	5.9	2.3
1,2,4-TRICHLOROBENZENE	ND	5.9	2.3
1,2,4-TRIMETHYLBENZENE	ND	5.9	1.2
1,3-DICHLOROBENZENE	ND	5.9	1.2
1,3,5-TRIMETHYLBENZENE	ND	5.9	1.2
1,4-DICHLOROBENZENE	ND	5.9	1.2
2-BUTANONE	ND	12	5.9
2-CHLOROTOLUENE	ND	5.9	1.2
2-HEXANONE	ND	12	5.9
2,2-DICHLOROPROPANE	ND	5.9	2.3
4-CHLOROTOLUENE	ND	5.9	1.2
4-METHYL-2-PENTANONE	ND	12	5.9
N-BUTYLBENZENE	ND	5.9	1.2
N-PROPYLBENZENE	ND	5.9	1.2
P-ISOPROPYLTOLUENE	ND	5.9	1.2
SEC-BUTYLBENZENE	ND	5.9	1.2
TERT-BUTYLBENZENE	ND	5.9	1.2
ACETONE	ND	12	5.9
BENZENE	ND	5.9	1.2
BROMOBENZENE	ND	5.9	1.2
BROMODICHLOROMETHANE	ND	5.9	1.2
CIS-1,3-DICHLOROPROPENE	ND	5.9	1.2
TRANS-1,3-DICHLOROPROPENE	ND	5.9	1.2
BROMOMETHANE	ND	12	2.3
BROMOFORM	ND	5.9	2.3
CARBON DISULFIDE	ND	5.9	1.2
CARBON TETRACHLORIDE	ND	5.9	1.2
CHLOROBENZENE	ND	5.9	1.2
CHLOROETHANE	ND	5.9	2.3
CHLOROFORM	ND	5.9	1.2
CHLOROMETHANE	ND	12	2.3
CIS-1,2-DICHLOROETHENE	ND	5.9	1.2
DICHLORODIFLUOROMETHANE	ND	12	2.3
DIBROMOCHLOROMETHANE	ND	5.9	1.2
DIBROMOMETHANE	ND	5.9	1.2
ETHYLBENZENE	ND	5.9	1.2
HEXACHLOROBUTADIENE	ND	5.9	2.3
ISOPROPYL BENZENE	ND	5.9	1.2
METHYLENE CHLORIDE	ND	12	2.3
MTBE	ND	5.9	1.2
STYRENE	ND	5.9	1.2
TETRACHLOROETHYLENE	ND	5.9	1.2
TOLUENE	ND	5.9	1.2
TRANS-1,2-DICHLOROETHENE	ND	5.9	1.2
TRICHLOROETHENE	ND	5.9	1.2
TRICHLOROFLUOROMETHANE	ND	5.9	2.3
VINYL CHLORIDE	ND	5.9	2.3
XYLENES (TOTAL)	ND	12	3.5
M/P-XYLENES	ND	12	2.3
O-XYLENE	ND	5.9	1.2

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	55.3	58.64	94.3	60-160
4-BROMOFLUOROBENZENE	62.6	58.64	107	70-150
TOLUENE-D8	54.8	58.64	93.4	70-140

QC SUMMARIES

Method 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/14/11
Batch No.	: 11K110	Date Extracted:	11/14/11 16:16
Sample ID:	MBLK1S	Date Analyzed:	11/14/11 16:16
Lab Samp ID:	V003K12B	Dilution Factor:	1
Lab File ID:	RKB178	Matrix	: SOIL
Ext Btch ID:	V003K12	% Moisture	: NA
Calib. Ref.:	RKB022	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.0	1.0
1,1,1,2-TETRACHLOROETHANE	ND	5.0	1.0
1,1,2,2-TETRACHLOROETHANE	ND	5.0	1.0
1,1,2-TRICHLOROETHANE	ND	5.0	1.0
FREON113	ND	5.0	2.0
1,1-DICHLOROETHANE	ND	5.0	1.0
1,1-DICHLOROETHENE	ND	5.0	1.0
1,1-DICHLOROPROPENE	ND	5.0	1.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	10	2.0
1,2-DIBROMOETHANE	ND	5.0	1.0
1,2-DICHLOROBENZENE	ND	5.0	1.0
1,2-DICHLOROETHANE	ND	5.0	1.0
1,2-DICHLOROPROPANE	ND	5.0	1.0
1,2,3-TRICHLOROBENZENE	ND	5.0	2.0
1,2,3-TRICHLOROPROPANE	ND	5.0	2.0
1,2,4-TRICHLOROBENZENE	ND	5.0	2.0
1,2,4-TRIMETHYLBENZENE	ND	5.0	1.0
1,3-DICHLOROBENZENE	ND	5.0	1.0
1,3,5-TRIMETHYLBENZENE	ND	5.0	1.0
1,4-DICHLOROBENZENE	ND	5.0	1.0
2-BUTANONE	ND	10	5.0
2-CHLOROTOLUENE	ND	5.0	1.0
2-HEXANONE	ND	10	5.0
2,2-DICHLOROPROPANE	ND	5.0	2.0
4-CHLOROTOLUENE	ND	5.0	1.0
4-METHYL-2-PENTANONE	ND	10	5.0
N-BUTYLBENZENE	ND	5.0	1.0
N-PROPYLBENZENE	ND	5.0	1.0
P-ISOPROPYLTOLUENE	ND	5.0	1.0
SEC-BUTYLBENZENE	ND	5.0	1.0
TERT-BUTYLBENZENE	ND	5.0	1.0
ACETONE	ND	10	5.0
BENZENE	ND	5.0	1.0
BROMOBENZENE	ND	5.0	1.0
BROMODICHLOROMETHANE	ND	5.0	1.0
CIS-1,3-DICHLOROPROPENE	ND	5.0	1.0
TRANS-1,3-DICHLOROPROPENE	ND	5.0	1.0
BROMOMETHANE	ND	10	2.0
BROMOFORM	ND	5.0	2.0
CARBON DISULFIDE	ND	5.0	1.0
CARBON TETRACHLORIDE	ND	5.0	1.0
CHLOROBENZENE	ND	5.0	1.0
CHLOROETHANE	ND	5.0	2.0
CHLOROFORM	ND	5.0	1.0
CHLOROMETHANE	ND	10	2.0
CIS-1,2-DICHLOROETHENE	ND	5.0	1.0
DICHLORODIFLUOROMETHANE	ND	10	2.0
DIBROMOCHLOROMETHANE	ND	5.0	1.0
DIBROMOMETHANE	ND	5.0	1.0
ETHYLBENZENE	ND	5.0	1.0
HEXACHLOROBUTADIENE	ND	5.0	2.0
ISOPROPYL BENZENE	ND	5.0	1.0
METHYLENE CHLORIDE	ND	10	2.0
MTBE	ND	5.0	1.0
STYRENE	ND	5.0	1.0
TETRACHLOROETHYLENE	ND	5.0	1.0
TOLUENE	ND	5.0	1.0
TRANS-1,2-DICHLOROETHENE	ND	5.0	1.0
TRICHLOROETHENE	ND	5.0	1.0
TRICHLOROFLUOROMETHANE	ND	5.0	2.0
VINYL CHLORIDE	ND	5.0	2.0
XYLENES (TOTAL)	ND	10	3.0
M/P-XYLENES	ND	10	2.0
O-XYLENE	ND	5.0	1.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	41.1	50.00	82.3	70-140
4-BROMOFLUOROBENZENE	51.2	50.00	102	70-130
TOLUENE-D8	47.2	50.00	94.4	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K110
METHOD: SW 5030B/8260B

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	V003K12B	V003K12L	V003K12C		
LAB FILE ID:	RKB178	RKB174	RKB175		
DATE EXTRACTED:	11/14/1116:16	11/14/1114:00	11/14/1114:33	DATE COLLECTED:	NA
DATE ANALYZED:	11/14/1116:16	11/14/1114:00	11/14/1114:33	DATE RECEIVED:	11/14/11
PREP. BATCH:	V003K12	V003K12	V003K12		
CALIB. REF:	RKB022	RKB022	RKB022		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	50.0	47.0	94	50.0	49.7	99	6	60-130	50
Benzene	ND	50.0	47.1	94	50.0	50.3	101	7	70-130	50
Chlorobenzene	ND	50.0	47.5	95	50.0	49.5	99	4	70-130	50
Toluene	ND	50.0	48.2	96	50.0	51.2	102	6	70-130	50
Trichloroethene	ND	50.0	44.8	90	50.0	47.5	95	6	70-130	50

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	50.0	42.8	86	50.0	41.7	83	70-140
4-Bromofluorobenzene	50.0	50.1	100	50.0	50.9	102	70-130
Toluene-d8	50.0	47.0	94	50.0	47.4	95	70-130

Method 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/14/11
Batch No. : 11K110	Date Extracted: 11/14/11 17:25
Sample ID: MBLK2S	Date Analyzed: 11/14/11 17:25
Lab Samp ID: VSK006SB	Dilution Factor: 1
Lab File ID: RKB180	Matrix : SOIL
Ext Btch ID: VO03K12	% Moisture : NA
Calib. Ref.: RKB022	Instrument ID : T-003

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.0	1.0
1,1,1,2-TETRACHLOROETHANE	ND	5.0	1.0
1,1,2,2-TETRACHLOROETHANE	ND	5.0	1.0
1,1,2-TRICHLOROETHANE	ND	5.0	1.0
FREON113	ND	5.0	2.0
1,1-DICHLOROETHANE	ND	5.0	1.0
1,1-DICHLOROETHENE	ND	5.0	1.0
1,1-DICHLOROPROPENE	ND	5.0	1.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	10	2.0
1,2-DIBROMOETHANE	ND	5.0	1.0
1,2-DICHLOROBENZENE	ND	5.0	1.0
1,2-DICHLOROETHANE	ND	5.0	1.0
1,2-DICHLOROPROPANE	ND	5.0	1.0
1,2,3-TRICHLOROBENZENE	ND	5.0	2.0
1,2,3-TRICHLOROPROPANE	ND	5.0	2.0
1,2,4-TRICHLOROBENZENE	ND	5.0	2.0
1,2,4-TRIMETHYLBENZENE	ND	5.0	1.0
1,3-DICHLOROBENZENE	ND	5.0	1.0
1,3,5-TRIMETHYLBENZENE	ND	5.0	1.0
1,4-DICHLOROBENZENE	ND	5.0	1.0
2-BUTANONE	ND	10	5.0
2-CHLOROTOLUENE	ND	5.0	1.0
2-HEXANONE	ND	10	5.0
2,2-DICHLOROPROPANE	ND	5.0	2.0
4-CHLOROTOLUENE	ND	5.0	1.0
4-METHYL-2-PENTANONE	ND	10	5.0
N-BUTYLBENZENE	ND	5.0	1.0
N-PROPYLBENZENE	ND	5.0	1.0
P-ISOPROPYLTOLUENE	ND	5.0	1.0
SEC-BUTYLBENZENE	ND	5.0	1.0
TERT-BUTYLBENZENE	ND	5.0	1.0
ACETONE	ND	10	5.0
BENZENE	ND	5.0	1.0
BROMOBENZENE	ND	5.0	1.0
BROMODICHLOROMETHANE	ND	5.0	1.0
CIS-1,3-DICHLOROPROPENE	ND	5.0	1.0
TRANS-1,3-DICHLOROPROPENE	ND	5.0	1.0
BROMOMETHANE	ND	10	2.0
BROMOFORM	ND	5.0	2.0
CARBON DISULFIDE	ND	5.0	1.0
CARBON TETRACHLORIDE	ND	5.0	1.0
CHLOROBENZENE	ND	5.0	1.0
CHLOROETHANE	ND	5.0	2.0
CHLOROFORM	ND	5.0	1.0
CHLOROMETHANE	ND	10	2.0
CIS-1,2-DICHLOROETHENE	ND	5.0	1.0
DICHLORODIFLUOROMETHANE	ND	10	2.0
DIBROMOCHLOROMETHANE	ND	5.0	1.0
DIBROMOMETHANE	ND	5.0	1.0
ETHYLBENZENE	ND	5.0	1.0
HEXACHLOROBUTADIENE	ND	5.0	2.0
ISOPROPYL BENZENE	ND	5.0	1.0
METHYLENE CHLORIDE	ND	10	2.0
MTBE	ND	5.0	1.0
STYRENE	ND	5.0	1.0
TETRACHLOROETHYLENE	ND	5.0	1.0
TOLUENE	ND	5.0	1.0
TRANS-1,2-DICHLOROETHENE	ND	5.0	1.0
TRICHLOROETHENE	ND	5.0	1.0
TRICHLOROFLUOROMETHANE	ND	5.0	2.0
VINYL CHLORIDE	ND	5.0	2.0
XYLENES (TOTAL)	ND	10	3.0
M/P-XYLENES	ND	10	2.0
O-XYLENE	ND	5.0	1.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	44.8	50.00	89.7	70-140
4-BROMOFLUOROBENZENE	51.7	50.00	103	70-130
TOLUENE-D8	46.8	50.00	93.6	70-130

INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB016
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K110
BFB Injection Date : 11/02/11
BFB Injection Time : 14:02
Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.81
75	30.0 - 60.0% of mass 95	52.64
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.18
173	Less than 2.0% of mass 174	0.27(0.4)1
174	Greater than 50% of mass 95	60.48
175	5.0 - 9.0% of mass 174	4.46(7.4)1
176	95.0 - 101.0% of mass 174	58.12(96.1)1
177	5.0 - 9.0% of mass 176	4.33(7.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD01	V003K021	RKB017	11/02/11	15:03
2	VSTD02	V003K022	RKB018	11/02/11	15:46
3	VSTD04	V003K023	RKB019	11/02/11	16:23
4	VSTD010	V003K024	RKB020	11/02/11	17:03
5	VSTD020	V003K025	RKB021	11/02/11	17:38
6	VSTD050	V003K026	RKB022	11/02/11	18:17
7	VSTD100	V003K027	RKB023	11/02/11	18:57
8	VSTD200	V003K028	RKB024	11/02/11	19:35
9	VSTD300	V003K029	RKB025	11/02/11	20:16
10	VSTD500	V003K0210	RKB026	11/02/11	20:57
11	VSTD050	IV003K021	RKB029	11/02/11	22:52

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :03
Beginning DateTime :11/02/11 15:03
Spike Units :PPB
IC File :RKB022

Column Spec :ZB-624 ID :0.25MM
Ending DateTime :11/02/11 20:57
HPChem Method :V003K02

M	IDX	Parameters	1 15:03 RKB017	2 15:46 RKB018	4 16:23 RKB019	10 17:03 RKB020	20 17:38 RKB021	50 18:17 RKB022	100 18:57 RKB023	200 19:35 RKB024	300 20:16 RKB025	500 20:57 RKB026	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	0	13.1490
	2	Chlorotrifluoroethylene	0.095	0.085	0.096	0.090	0.082	0.085	0.083	0.087	0.085	0.085	0.087	5.63	3.9787
	3	Dichlorodifluoromethane	0.308	0.285	0.296	0.241	0.264	0.245	0.254	0.248	0.249	0.246	0.264	9.15	4.0740
	4	Chloromethane	0.373	0.341	0.380	0.370	0.362	0.357	0.358	0.343	0.331	0.328	0.354	5.05	4.5845
	5	Vinyl chloride	0.273	0.275	0.300	0.280	0.284	0.276	0.287	0.277	0.276	0.278	0.281	2.84	4.9090
	6	2-Chloro-1,1,1-trifluoroethane	0.198	0.170	0.191	0.190	0.177	0.174	0.175	0.185	0.176	0.179	0.182	5.03	5.2037
	7	Bromomethane	0.172	0.234	0.196	0.186	0.189	0.178	0.165	0.143	------	------	0.183	14.49	5.8230
	8	Chloroethane	0.154	0.165	0.173	0.160	0.157	0.151	0.145	0.122	------	------	0.153	9.99	6.0947
	9	Dichlorofluoromethane	0.608	0.665	0.660	0.587	0.651	0.630	0.589	0.604	0.579	0.602	0.618	5.12	6.6311
	10	Trichlorofluoromethane	0.445	0.461	0.498	0.440	0.438	0.427	0.435	0.423	0.427	0.414	0.441	5.41	6.6847
5	11	Acrolein	0.015	0.020	0.013	0.014	0.017	0.018	0.017	0.019	0.017	0.016	0.017	12.22	7.8025
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	0.158	0.183	0.165	0.150	0.162	0.155	0.143	0.150	0.149	0.154	0.157	7.20	7.9275
	13	1,1-Dichloroethene	0.580	0.623	0.604	0.567	0.596	0.565	0.532	0.534	0.529	0.517	0.565	6.38	7.9454
5	14	Acetone	------	0.138	0.107	0.104	0.108	0.099	0.091	0.098	0.094	0.092	0.103	13.93	8.1384
	15	Methyl acetate	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	16	Iodomethane	0.599	0.612	0.632	0.618	0.650	0.622	0.607	0.600	0.596	0.594	0.613	2.91	8.3294
	17	Carbon disulfide	1.307	1.063	1.012	1.090	1.053	0.982	1.025	0.993	0.991	------	1.057	9.51	8.4624
	18	Methylene chloride	0.789	0.651	0.607	0.564	0.587	0.552	0.530	0.525	0.519	0.513	0.584	14.45	9.0260
5	19	tert-Butyl alcohol	0.047	0.036	0.033	0.038	0.037	0.035	0.033	0.037	0.035	0.033	0.036	11.07	9.2463
	20	tert-Butyl methyl ether (MTBE)	0.807	0.803	0.768	0.767	0.815	0.775	0.726	0.735	0.708	0.695	0.760	5.58	9.4591
	21	trans-1,2-Dichloroethene	0.595	0.619	0.611	0.583	0.613	0.583	0.555	0.548	0.535	0.518	0.576	6.12	9.5187
5	22	Acrylonitrile	0.105	0.092	0.088	0.092	0.105	0.099	0.094	0.098	0.095	0.092	0.096	6.01	9.5499
	23	Isopropyl ether (DIPE)	1.378	1.388	1.400	1.388	1.455	1.410	1.338	1.310	1.265	------	1.370	4.17	10.2783
	24	1,1-Dichloroethane	0.744	0.766	0.761	0.736	0.775	0.741	0.702	0.683	0.663	0.631	0.720	6.70	10.3135
	25	Vinyl acetate	0.679	0.619	0.613	0.750	0.695	0.595	0.721	0.562	0.553	0.492	0.628	13.07	10.3328
5	26	2-Butanol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	27	tert-Butyl ethyl ether (ETBE)	1.150	1.169	1.174	1.167	1.211	1.158	1.107	1.096	1.094	------	1.147	3.50	10.8985
	28	2,2-Dichloropropane	0.549	0.589	0.558	0.507	0.519	0.482	0.431	0.403	0.381	------	0.491	14.76	11.2723
5	29	2-Butanone	0.226	0.191	0.184	0.180	0.196	0.188	0.170	0.176	0.165	0.154	0.183	10.74	11.3003
	30	cis-1,2-Dichloroethene	0.627	0.511	0.446	0.384	0.396	0.376	0.353	0.341	0.329	0.315	0.408	23.71	11.3048
	31	Bromochloromethane	0.442	0.445	0.447	0.429	0.449	0.426	0.402	0.390	0.367	0.315	0.411	10.57	11.7141
	32	Tetrahydrofuran	------	------	0.110	0.111	0.117	0.104	0.101	0.108	0.107	0.097	0.107	5.78	11.7588
	33	Chloroform	0.859	0.879	0.848	0.819	0.842	0.807	0.758	0.752	0.736	0.690	0.799	7.75	11.8034
	34	Dibromofluoromethane	------	------	0.395	0.407	0.378	0.374	0.382	0.366	0.344	0.316	0.370	7.77	12.0658
	35	1,1,1-Trichloroethane	0.606	0.625	0.633	0.607	0.623	0.589	0.540	0.525	0.506	0.488	0.574	9.42	12.0713
	36	Cyclohexane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	37	1,2-Dichloroethane-d4	------	------	0.508	0.531	0.472	0.458	0.471	0.459	0.436	0.403	0.467	8.46	12.5942
	38	tert-Amyl methyl ether (TAME)	0.206	0.206	0.196	0.207	0.208	0.204	0.188	0.186	0.177	0.165	0.194	7.64	12.6876
	39	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	0	17.1417
	40	1,1-Dichloropropene	0.145	0.173	0.163	0.151	0.156	0.151	0.143	0.140	0.138	0.130	0.149	8.34	12.3095
	41	Carbon tetrachloride	0.487	0.506	0.501	0.473	0.485	0.461	0.434	0.432	0.438	0.429	0.465	6.40	12.3199
	42	Benzene	1.643	1.547	1.472	1.373	1.413	1.344	1.301	1.262	1.159	------	1.391	10.66	12.6499
	43	1,2-Dichloroethane	0.624	0.624	0.616	0.612	0.620	0.572	0.549	0.537	0.526	0.502	0.578	8.07	12.7099
	44	Trichloroethene	0.407	0.404	0.382	0.359	0.377	0.363	0.352	0.354	0.354	0.354	0.371	5.67	13.5612
	45	Methylcyclohexane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	46	1,2-Dichloropropane	0.526	0.491	0.461	0.430	0.447	0.421	0.413	0.397	0.383	0.374	0.434	11.08	13.9125

SCL
11/6/11

20	47	1,4-Dioxane	------	0.005	0.004	0.004	0.003	0.003	0.003	0.004	0.003	0.003	0.004	13.10	14.0789
	48	Dibromomethane	0.268	0.259	0.265	0.266	0.277	0.261	0.258	0.258	0.257	0.256	0.262	2.48	14.1268
	49	Bromodichloromethane	0.610	0.620	0.610	0.596	0.627	0.594	0.581	0.580	0.576	0.580	0.597	3.07	14.2936
	50	2-Chloroethyl vinyl ether	0.256	0.241	0.237	0.249	0.256	0.249	0.246	0.249	0.250	0.242	0.247	2.42	14.5883
	51	cis-1,3-Dichloropropene	0.685	0.732	0.705	0.693	0.725	0.695	0.679	0.675	0.675	0.649	0.691	3.57	14.8592
5	52	4-Methyl-2-pentanone	0.564	0.469	0.442	0.457	0.496	0.463	0.427	------	------	------	0.474	9.53	14.9795
	53	Toluene-d8	------	------	1.176	1.159	1.080	1.053	1.107	1.090	1.024	------	1.098	4.94	15.2031
	54	Toluene	1.562	1.564	1.494	1.407	1.470	1.385	1.357	1.327	------	------	1.446	6.28	15.2969
	55	Ethyl methacrylate	0.551	0.521	0.486	0.501	0.531	0.511	0.489	0.492	0.484	0.461	0.503	5.23	15.5401
	56	trans-1,3-Dichloropropene	0.637	0.642	0.624	0.624	0.655	0.624	0.605	0.600	0.596	0.578	0.618	3.80	15.5818
	57	1,1,2-Trichloroethane	0.318	0.314	0.308	0.304	0.321	0.302	0.295	0.293	0.290	0.282	0.303	4.20	15.8601
	58	Tetrachloroethene	0.302	0.309	0.293	0.268	0.277	0.260	0.249	0.246	0.243	0.236	0.268	9.76	16.0313
5	59	2-Hexanone	0.416	0.342	0.318	0.340	0.366	0.342	0.310	0.295	------	------	0.341	11.04	16.0560
	60	1,3-Dichloropropane	0.627	0.636	0.634	0.604	0.626	0.598	0.574	0.560	0.546	0.513	0.592	7.12	16.0879
	61	Dibromochloromethane	0.395	0.405	0.381	0.396	0.414	0.398	0.388	0.391	0.393	0.389	0.395	2.35	16.4332
	62	1,2-Dibromoethane	0.330	0.333	0.324	0.337	0.345	0.338	0.328	0.332	0.331	0.326	0.332	1.90	16.6177
	63	1-Chlorohexane	0.682	0.711	0.650	0.578	0.615	0.584	0.550	0.546	0.539	0.516	0.597	10.96	16.9824
	64	Chlorobenzene	1.019	1.025	0.946	0.914	0.952	0.904	0.862	0.853	0.838	------	0.924	7.38	17.1780
	65	Ethylbenzene	2.007	2.045	1.872	1.741	1.824	1.720	1.614	1.475	------	------	1.787	10.73	17.2226
	66	1,1,1,2-Tetrachloroethane	0.355	0.366	0.361	0.348	0.369	0.351	0.335	0.331	0.325	0.307	0.345	5.77	17.2607
2	67	m-Xylene & p-Xylene	1.516	1.526	1.423	1.319	1.377	1.286	1.199	------	------	------	1.378	8.73	17.3546
	68	o-Xylene	1.573	1.568	1.477	1.386	1.453	1.347	1.255	1.219	1.088	------	1.374	11.93	17.8908
	69	Styrene	1.037	1.050	0.987	0.961	1.014	0.960	0.898	0.864	0.821	0.713	0.931	11.47	17.9068
	70	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	0	20.6604
	71	Bromoform	0.508	0.518	0.508	0.519	0.544	0.525	0.524	0.540	0.541	0.532	0.526	2.52	18.2938
	72	Isopropylbenzene	4.043	4.189	3.904	3.499	3.661	3.404	3.263	3.223	------	------	3.648	9.97	18.3073
	73	4-Bromofluorobenzene	------	------	1.289	1.161	1.050	1.012	1.067	------	------	------	1.116	9.97	18.5927
	74	1,1,2,2-Tetrachloroethane	1.218	1.169	1.118	1.082	1.105	1.059	1.029	1.059	1.042	1.012	1.089	5.96	18.7373
	75	trans-1,4-Dichloro-2-butene	0.364	0.365	0.336	0.337	0.347	0.337	0.334	0.344	0.334	0.323	0.342	3.89	18.7730
	76	n-Propylbenzene	5.731	5.926	5.379	4.703	4.968	4.625	4.397	3.880	------	------	4.951	14.00	18.8133
	77	1,2,3-Trichloropropane	0.289	0.291	0.273	0.274	0.272	0.256	0.246	0.242	0.229	0.212	0.258	10.03	18.8385
	78	Bromobenzene	0.921	0.944	0.878	0.802	0.852	0.807	0.783	0.782	0.767	0.736	0.827	8.32	18.8579
	79	1,3,5-Trimethylbenzene	3.339	3.378	3.210	2.775	2.896	2.721	2.599	2.573	2.408	------	2.878	12.28	18.9922
	80	2-Chlorotoluene	3.603	3.616	3.409	3.060	3.182	2.976	2.838	2.824	2.703	------	3.134	10.88	19.0353
	81	4-Chlorotoluene	3.291	3.342	3.066	2.771	2.924	2.731	2.618	2.634	2.505	------	2.876	10.46	19.1559
	82	tert-Butylbenzene	0.641	0.682	0.647	0.574	0.604	0.579	0.553	0.546	0.528	0.503	0.586	9.74	19.4547
	83	1,2,4-Trimethylbenzene	3.322	3.411	3.167	2.798	3.001	2.791	2.664	2.621	2.482	------	2.918	11.16	19.5116
	84	sec-Butylbenzene	4.484	4.643	4.249	3.714	3.916	3.679	3.512	3.422	------	------	3.952	11.54	19.7324
	85	p-Isopropyltoluene	3.242	3.359	3.122	2.780	2.993	2.801	2.640	2.612	2.457	------	2.889	10.63	19.8704
	86	1,3-Dichlorobenzene	1.788	1.793	1.686	1.468	1.566	1.498	1.421	1.431	1.391	1.330	1.537	10.78	20.0337
	87	1,4-Dichlorobenzene	1.761	1.712	1.560	1.434	1.537	1.457	1.373	1.387	1.351	1.302	1.487	10.35	20.1394
	88	n-Butylbenzene	3.369	3.611	3.342	2.958	3.209	3.026	2.825	2.810	2.609	------	3.084	10.43	20.4311
	89	1,2-Dichlorobenzene	1.586	1.583	1.465	1.346	1.441	1.364	1.290	1.306	1.284	1.247	1.391	8.81	20.6901
	90	1,2-Dibromo-3-chloropropane	0.160	0.154	0.149	0.151	0.159	0.159	0.152	0.167	0.168	0.170	0.159	4.77	21.8094
	91	1,2,4-Trichlorobenzene	0.794	0.770	0.679	0.629	0.721	0.697	0.626	0.692	0.673	0.657	0.694	7.95	23.0523
	92	Hexachlorobutadiene	0.506	0.519	0.460	0.417	0.453	0.434	0.381	0.412	0.398	0.390	0.437	10.89	23.1803
	93	Naphthalene	1.927	1.760	1.605	1.607	1.781	1.776	1.638	1.850	1.840	1.820	1.760	6.26	23.5464
	94	1,2,3-Trichlorobenzene	0.710	0.664	0.587	0.561	0.640	0.611	0.547	0.618	0.613	0.592	0.614	7.83	23.9662

Spike Amount = Nominal Amount * M

Ave_%RSD : 8.3 Max_%RSD : 23.7

Use Least Square Linear Regression with weighting factor of inverse concentration for comps with %_RSD > 15

Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
30	cis-1,2-Dichloroethene	0.00820	0.32840	0.9988

SCS 11/16/11

SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :03
IC_Beginning DateTime :11/02/11 15:03
Spike Amount :50 PPB
CC/CV File :RKB029
IC File :RKB022

Column Spec :ZB-624 ID :0.25MM
IC_Ending DateTime :11/02/11 20:57
HPChem Method :VO03K02
Date_Time :11/02/11 22:52

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	50.000	0	2611652	1	1	13.146	13.149	0				
	2	Chlorotrifluoroethylene	53.871	7.7	245413	0.094	0.087	3.978	3.979	5.63				
	3	Dichlorodifluoromethane	48.661	-2.7	670029	0.257	0.264	4.082	4.074	9.15				
	4	Chloromethane	51.845	3.7	959331	0.367	0.354	4.588	4.584	5.05				
	5	Vinyl chloride	50.278	0.6	737121	0.282	0.281	4.915	4.909	2.84				
	6	2-Chloro-1,1,1-trifluoroethane	50.336	0.7	477550	0.183	0.182	5.198	5.204	5.03				
	7	Bromomethane	50.914	1.8	486473	0.186	0.183	5.823	5.823	14.49				
	8	Chloroethane	51.264	2.5	410512	0.157	0.153	6.091	6.095	9.99				
	9	Dichlorofluoromethane	53.174	6.3	1715561	0.657	0.618	6.627	6.631	5.12				
	10	Trichlorofluoromethane	51.036	2.1	1174900	0.450	0.441	6.687	6.685	5.41				
5	11	Acrolein	287.091	14.8	248538	0.019	0.017	7.803	7.802	12.22				
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	53.651	7.3	439803	0.168	0.157	7.937	7.927	7.20				
	13	1,1-Dichloroethene	50.953	1.9	1502847	0.575	0.565	7.952	7.945	6.38				
5	14	Acetone	249.766	-0.1	1347589	0.103	0.103	8.130	8.138	13.93				
	15	Methyl acetate												
	16	Iodomethane	52.873	5.7	1692693	0.648	0.613	8.339	8.329	2.91				
	17	Carbon disulfide	48.872	-2.3	2699059	1.033	1.057	8.473	8.462	9.51				
	18	Methylene chloride	48.119	-3.8	1467056	0.562	0.584	9.038	9.026	14.45				
5	19	tert-Butyl alcohol	258.989	3.6	491314	0.038	0.036	9.232	9.246	11.07				
	20	tert-Butyl methyl ether (MTBE)	52.639	5.3	2088996	0.800	0.760	9.455	9.459	5.58				
	21	trans-1,2-Dichloroethene	52.280	4.6	1572654	0.602	0.576	9.530	9.519	6.12				
5	22	Acrylonitrile	275.898	10.4	1381585	0.106	0.096	9.544	9.550	6.01				
	23	Isopropyl ether (DIPE)	51.935	3.9	3716942	1.423	1.370	10.289	10.278	4.17				
	24	1,1-Dichloroethane	51.639	3.3	1942481	0.744	0.720	10.318	10.314	6.70				
	25	Vinyl acetate	54.095	8.2	1773761	0.679	0.628	10.333	10.333	13.07				
5	26	2-Butanol												
	27	tert-Butyl ethyl ether (ETBE)	50.915	1.8	3051578	1.168	1.147	10.899	10.899	3.50				
	28	2,2-Dichloropropane	49.686	-0.6	1274172	0.488	0.491	11.271	11.272	14.76				
5	29	2-Butanone	271.909	8.8	2598135	0.199	0.183	11.301	11.300	10.74				
	30	cis-1,2-Dichloroethene	57.468	14.9	1007176	0.386	0.408	11.316	11.305	23.71	0.0082	0.3284		0.9988
	31	Bromochloromethane	53.374	6.7	1146139	0.439	0.411	11.717	11.714	10.57				
	32	Tetrahydrofuran	54.784	9.6	305449	0.117	0.107	11.762	11.759	5.78				
	33	Chloroform	51.125	2.2	2133075	0.817	0.799	11.807	11.803	7.75				
	34	Dibromofluoromethane	49.802	-0.4	963308	0.369	0.370	12.075	12.066	7.77				
	35	1,1,1-Trichloroethane	52.663	5.3	1579617	0.605	0.574	12.075	12.071	9.42				
	36	Cyclohexane												
	37	1,2-Dichloroethane-d4	48.386	-3.2	1180526	0.452	0.467	12.596	12.594	8.46				
	38	tert-Amyl methyl ether (TAME)	54.276	8.6	550631	0.211	0.194	12.685	12.688	7.64				
	39	CHLOROBENZENE-D5	50.000	0	2829614	1	1	17.135	17.142	0				
	40	1,1-Dichloropropene	51.852	3.7	437291	0.155	0.149	12.313	12.309	8.34				
	41	Carbon tetrachloride	51.453	2.9	1352692	0.478	0.465	12.328	12.320	6.40				
	42	Benzene	50.132	0.3	3945322	1.394	1.391	12.655	12.650	10.66				
	43	1,2-Dichloroethane	50.664	1.3	1657824	0.586	0.578	12.715	12.710	8.07				
	44	Trichloroethene	50.449	0.9	1057989	0.374	0.371	13.563	13.561	5.67				
	45	Methylcyclohexane												
	46	1,2-Dichloropropane	49.825	-0.3	1224193	0.433	0.434	13.920	13.913	11.08				
20	47	1,4-Dioxane	982.815	-1.7	195610	0.003	0.004	14.084	14.079	13.10				

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	48	Dibromomethane	51.069	2.1	758482	0.268	0.262	14.129	14.127	2.48				
	49	Bromodichloromethane	50.955	1.9	1722800	0.609	0.597	14.292	14.294	3.07				
	50	2-Chloroethyl vinyl ether	52.461	4.9	734788	0.260	0.247	14.590	14.588	2.42				
	51	cis-1,3-Dichloropropene	50.769	1.5	1985975	0.702	0.691	14.858	14.859	3.57				
5	52	4-Methyl-2-pentanone	255.801	2.3	6864293	0.485	0.474	14.977	14.979	9.53				
	53	Toluene-d8	48.958	-2.1	3043307	1.076	1.098	15.200	15.203	4.94				
	54	Toluene	49.719	-0.6	4068279	1.438	1.446	15.305	15.297	6.28				
	55	Ethyl methacrylate	51.343	2.7	1460576	0.516	0.503	15.543	15.540	5.23				
	56	trans-1,3-Dichloropropene	51.334	2.7	1796426	0.635	0.618	15.587	15.582	3.80				
	57	1,1,2-Trichloroethane	52.457	4.9	898562	0.318	0.303	15.870	15.860	4.20				
	58	Tetrachloroethene	51.314	2.6	779047	0.275	0.268	16.034	16.031	9.76				
5	59	2-Hexanone	266.394	6.6	5142896	0.364	0.341	16.049	16.056	11.04				
	60	1,3-Dichloropropane	52.735	5.5	1765981	0.624	0.592	16.094	16.088	7.12				
	61	Dibromochloromethane	51.734	3.5	1156883	0.409	0.395	16.436	16.433	2.35				
	62	1,2-Dibromoethane	52.899	5.8	995136	0.352	0.332	16.614	16.618	1.90				
	63	1-Chlorohexane	51.047	2.1	1725249	0.610	0.597	16.986	16.982	10.96				
	64	Chlorobenzene	49.977	-0.0	2612667	0.923	0.924	17.180	17.178	7.38				
	65	Ethylbenzene	49.296	-1.4	4985803	1.762	1.787	17.225	17.223	10.73				
	66	1,1,1,2-Tetrachloroethane	51.954	3.9	1013293	0.358	0.345	17.254	17.261	5.77				
2	67	m-Xylene & p-Xylene	95.732	-4.3	7465193	1.319	1.378	17.359	17.355	8.73				
	68	o-Xylene	50.583	1.2	3933588	1.390	1.374	17.895	17.891	11.93				
	69	Styrene	52.570	5.1	2768443	0.978	0.931	17.909	17.907	11.47				
	70	1,2-DICHLOROBENZENE-D4	50.000	0	1237189	1	1	20.663	20.660	0				
	71	Bromoform	52.801	5.6	686955	0.555	0.526	18.296	18.294	2.52				
	72	Isopropylbenzene	48.672	-2.7	4393608	3.551	3.648	18.311	18.307	9.97				
	73	4-Bromofluorobenzene	46.027	-7.9	1270759	1.027	1.116	18.594	18.593	9.97				
	74	1,1,2,2-Tetrachloroethane	50.841	1.7	1370423	1.108	1.089	18.743	18.737	5.96				
	75	trans-1,4-Dichloro-2-butene	52.127	4.3	441254	0.357	0.342	18.773	18.773	3.89				
	76	n-Propylbenzene	48.179	-3.6	5902360	4.771	4.951	18.817	18.813	14.00				
	77	1,2,3-Trichloropropane	52.799	5.6	337515	0.273	0.258	18.832	18.838	10.03				
	78	Bromobenzene	50.487	1.0	1033224	0.835	0.827	18.862	18.858	8.32				
	79	1,3,5-Trimethylbenzene	48.662	-2.7	3465095	2.801	2.878	18.996	18.992	12.28				
	80	2-Chlorotoluene	48.727	-2.5	3779194	3.055	3.134	19.041	19.035	10.88				
	81	4-Chlorotoluene	48.356	-3.3	3440840	2.781	2.876	19.160	19.156	10.46				
	82	tert-Butylbenzene	51.410	2.8	745081	0.602	0.586	19.457	19.455	9.74				
	83	1,2,4-Trimethylbenzene	48.883	-2.2	3528982	2.852	2.918	19.517	19.512	11.16				
	84	sec-Butylbenzene	48.454	-3.1	4738714	3.830	3.952	19.725	19.732	11.54				
	85	p-Isopropyltoluene	49.160	-1.7	3514751	2.841	2.889	19.874	19.870	10.63				
	86	1,3-Dichlorobenzene	48.535	-2.9	1846186	1.492	1.537	20.038	20.034	10.78				
	87	1,4-Dichlorobenzene	49.003	-2.0	1803398	1.458	1.487	20.142	20.139	10.35				
	88	n-Butylbenzene	48.301	-3.4	3686288	2.980	3.084	20.425	20.431	10.43				
	89	1,2-Dichlorobenzene	49.197	-1.6	1693444	1.369	1.391	20.693	20.690	8.81				
	90	1,2-Dibromo-3-chloropropane	51.269	2.5	201444	0.163	0.159	21.809	21.809	4.77				
	91	1,2,4-Trichlorobenzene	46.961	-6.1	806091	0.652	0.694	23.044	23.052	7.95				
	92	Hexachlorobutadiene	50.621	1.2	547384	0.442	0.437	23.178	23.180	10.89				
	93	Naphthalene	50.500	1.0	2199700	1.778	1.760	23.551	23.546	6.26				
	94	1,2,3-Trichlorobenzene	48.262	-3.5	733805	0.593	0.614	23.967	23.966	7.83				

Spike Amount = Nominal Amount * M

Sn
11/6/11

2015

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB171
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K110
BFB Injection Date : 11/14/11
BFB Injection Time : 11:50
Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.41
75	30.0 - 60.0% of mass 95	50.76
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.54
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	64.12
175	5.0 - 9.0% of mass 174	4.87(7.6)1
176	95.0 - 101.0% of mass 174	62.03(96.7)1
177	5.0 - 9.0% of mass 176	4.38(7.1)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD050	CV003K0210	RKB173	11/14/11	13:22
2	MBLK1S	V003K12B	RKB178	11/14/11	16:16
3	LCS1S	V003K12L	RKB174	11/14/11	14:00
4	LCD1S	V003K12C	RKB175	11/14/11	14:33
5	MBLK2S	VSK006SB	RKB180	11/14/11	17:25
6	IR-70-RB-122	K110-01	RKB184	11/14/11	19:45

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RKB022
Instrument ID: 03
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K110
Date Analyzed: 11/02/11
Time Analyzed: 18:17
Heated Purge: (Y/N) Y

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2751156	13.16	2982483	17.14	1324118	20.66
	UPPER LIMIT	5502312	13.66	5964966	17.64	2648236	21.16
	LOWER LIMIT	1375578	12.66	1491242	16.64	662059	20.16
	SAMPLE ID						
1	VSTD050	3564653	13.18	3766718	17.17	1549929	20.69
2	MBLK1S	3745180	13.19	3868978	17.17	1505477	20.70
3	LCS1S	3552596	13.19	3787056	17.18	1597573	20.70
4	LCD1S	3729878	13.19	3931633	17.18	1582024	20.70
5	MBLK2S	3574099	13.18	3786510	17.17	1471769	20.69
6	IR-70-RB-122	3050726	13.17	3246898	17.16	1236810	20.69

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKB173.D Vial: 3
Acq On : 14 Nov 2011 1:22 pm Operator: CGM
Sample : CVO03K0210 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03K02.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Fri Nov 04 14:33:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	50.000	50.000	0.0	130	0.02
2	T,M	Chlorotrifluoroethylene	50.000	44.701	10.6	119	0.00
3	T,M	Dichlorodifluoromethane	50.000	60.664	-21.3#	169	0.00
4	P,T,M	Chloromethane	50.000	47.990	4.0	123	0.00
5	C,T,M	Vinyl chloride	50.000	50.762	-1.5	134	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	50.000	46.098	7.8	125	0.00
7	T,M	Bromomethane	50.000	54.544	-9.1	145	0.00
8	T,M	Chloroethane	50.000	52.464	-4.9	138	0.00
9	T,M	Dichlorofluoromethane	50.000	50.542	-1.1	128	0.00
10	T,M	Trichlorofluoromethane	50.000	46.294	7.4	124	0.00
11	T,M	Acrolein	250.000	410.169	-64.1#	193	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	50.000	49.252	1.5	129	0.00
13	C,T,M	1,1-Dichloroethene	50.000	46.016	8.0	119	0.02
14	T,M	Acetone	250.000	204.194	18.3	110	0.00
15	T,M	Methyl acetate	-1.000	0.000	0.0	0	0.00
16	T,M	Iodomethane	50.000	44.150	11.7	113	0.02
17	T,M	Carbon disulfide	50.000	55.817	-11.6	156	0.02
18	T,M	Methylene chloride	50.000	40.136	19.7	110	0.02
19	T,M	tert-Butyl alcohol	250.000	165.983	33.6#	89	0.02
20	T,M	tert-Butyl methyl ether (MT	50.000	43.425	13.2	110	0.02
21	T,M	trans-1,2-Dichloroethene	50.000	48.606	2.8	124	0.02
22	T,M	Acrylonitrile	250.000	232.892	6.8	116	0.02
23	T,M	Isopropyl ether (DIPE)	50.000	45.566	8.9	115	0.02
24	P,T,M	1,1-Dichloroethane	50.000	44.726	10.5	113	0.02
25	T,M	Vinyl acetate	50.000	56.320	-12.6	154	0.02
26	T,M	2-Butanol	-1.000	0.000	0.0	0	0.00
27	T,M	tert-Butyl ethyl ether (ETB	50.000	44.320	11.4	114	0.02
28	T,M	2,2-Dichloropropane	50.000	49.809	0.4	131	0.02
29	T,M	2-Butanone	250.000	217.981	12.8	110	0.02
30	T,M	cis-1,2-Dichloroethene	50.000	53.983	-8.0	125	0.02
31	T,M	Bromochloromethane	50.000	45.223	9.6	113	0.02
32	T,M	Tetrahydrofuran	50.000	34.825	30.3#	92	0.02
33	C,T,M	Chloroform	50.000	43.705	12.6	112	0.02
34	S	Dibromofluoromethane	50.000	44.476	11.0	114	0.02
35	T,M	1,1,1-Trichloroethane	50.000	46.419	7.2	117	0.02
36	T,M	Cyclohexane	-1.000	0.000	0.0	0	0.00
37	S	1,2-Dichloroethane-d4	50.000	41.343	17.3	109	0.02
38	T,M	tert-Amyl methyl ether (TAM	50.000	44.596	10.8	110	0.02
39	I	CHLOROBENZENE-D5	50.000	50.000	0.0	126	0.02
40	T,M	1,1-Dichloropropene	50.000	48.168	3.7	120	0.02

(#) = Out of Range

2019

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKB173.D Vial: 3
Acq On : 14 Nov 2011 1:22 pm Operator: CGM
Sample : CVO03K0210 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03K02.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Fri Nov 04 14:33:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M Carbon tetrachloride	50.000	46.349	7.3	118	0.02
42	T,M Benzene	50.000	46.110	7.8	120	0.04
43	T,M 1,2-Dichloroethane	50.000	40.555	18.9	103	0.04
44	T,M Trichloroethene	50.000	43.875	12.3	113	0.02
45	T,M Methylcyclohexane	-1.000	0.000	0.0	0	0.00
46	C,T,M 1,2-Dichloropropane	50.000	43.912	12.2	114	0.02
47	T,M 1,4-Dioxane	1000.000	763.650	23.6#	104	0.02
48	T,M Dibromomethane	50.000	42.772	14.5	108	0.02
49	T,M Bromodichloromethane	50.000	45.572	8.9	116	0.02
50	T,M 2-Chloroethyl vinyl ether	50.000	42.489	15.0	107	0.02
51	T,M cis-1,3-Dichloropropene	50.000	45.895	8.2	115	0.02
52	T,M 4-Methyl-2-pentanone	250.000	216.886	13.2	112	0.02
53	S Toluene-d8	50.000	47.113	5.8	124	0.02
54	C,T,M Toluene	50.000	46.602	6.8	123	0.02
55	T,M Ethyl methacrylate	50.000	44.979	10.0	112	0.04
56	T,M trans-1,3-Dichloropropene	50.000	44.690	10.6	112	0.02
57	T,M 1,1,2-Trichloroethane	50.000	43.265	13.5	109	0.02
58	T,M Tetrachloroethene	50.000	48.352	3.3	126	0.04
59	T,M 2-Hexanone	250.000	215.856	13.7	109	0.02
60	T,M 1,3-Dichloropropane	50.000	43.439	13.1	109	0.02
61	T,M Dibromochloromethane	50.000	44.776	10.4	112	0.04
62	T,M 1,2-Dibromoethane	50.000	45.899	8.2	114	0.02
63	T,M 1-Chlorohexane	50.000	49.691	0.6	128	0.04
64	P,M Chlorobenzene	50.000	45.778	8.4	118	0.02
65	C,T,M Ethylbenzene	50.000	47.283	5.4	124	0.02
66	T,M 1,1,1,2-Tetrachloroethane	50.000	46.550	6.9	116	0.02
67	T,M m-Xylene & p-Xylene	100.000	92.365	7.6	125	0.04
68	T,M o-Xylene	50.000	47.526	4.9	122	0.04
69	T,M Styrene	50.000	52.214	-4.4	128	0.04
70	I 1,2-DICHLOROBENZENE-D4	50.000	50.000	0.0	117	0.04
71	P,T,M Bromoform	50.000	45.247	9.5	106	0.04
72	T,M Isopropylbenzene	50.000	48.013	4.0	120	0.04
73	S 4-Bromofluorobenzene	50.000	51.005	-2.0	132	0.02
74	P,T,M 1,1,2,2-Tetrachloroethane	50.000	44.295	11.4	107	0.04
75	T,M trans-1,4-Dichloro-2-butene	50.000	45.357	9.3	108	0.02
76	T,M n-Propylbenzene	50.000	51.293	-2.6	129	0.04
77	T,M 1,2,3-Trichloropropane	50.000	42.570	14.9	101	0.02
78	T,M Bromobenzene	50.000	52.470	-4.9	126	0.04
79	T,M 1,3,5-Trimethylbenzene	50.000	53.183	-6.4	132	0.04
80	T,M 2-Chlorotoluene	50.000	51.478	-3.0	127	0.04

(#) = Out of Range

2020

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKB173.D Vial: 3
Acq On : 14 Nov 2011 1:22 pm Operator: CGM
Sample : CVO03K0210 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03K02.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Fri Nov 04 14:33:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	50.000	50.689	-1.4	125	0.04
82	T,M	tert-Butylbenzene	50.000	52.526	-5.1	124	0.04
83	T,M	1,2,4-Trimethylbenzene	50.000	52.475	-5.0	128	0.04
84	T,M	sec-Butylbenzene	50.000	49.806	0.4	125	0.04
85	T,M	p-Isopropyltoluene	50.000	53.719	-7.4	130	0.04
86	T,M	1,3-Dichlorobenzene	50.000	51.946	-3.9	125	0.04
87	T,M	1,4-Dichlorobenzene	50.000	51.111	-2.2	122	0.04
88	T,M	n-Butylbenzene	50.000	56.648	-13.3	135	0.04
89	T,M	1,2-Dichlorobenzene	50.000	48.227	3.5	115	0.04
90	T,M	1,2-Dibromo-3-chloropropane	50.000	40.647	18.7	95	0.02
91	T,M	1,2,4-Trichlorobenzene	50.000	52.002	-4.0	121	0.04
92	T,M	Hexachlorobutadiene	50.000	53.049	-6.1	125	0.04
93	T,M	Naphthalene	50.000	43.044	13.9	100	0.04
94	T,M	1,2,3-Trichlorobenzene	50.000	48.838	2.3	115	0.04

(#) = Out of Range SPCC's out = 0 CCC's out = 0

2021

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKB173.D Vial: 3
Acq On : 14 Nov 2011 1:22 pm Operator: CGM
Sample : CVO03K0210 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03K02.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Fri Nov 04 14:33:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	130	0.02
2	T,M	Chlorotrifluoroethylene	0.087	0.078	10.3	119	0.00
3	T,M	Dichlorodifluoromethane	0.264	0.320	-21.2#	169	0.00
4	P,T,M	Chloromethane	0.354	0.340	4.0	123	0.00
5	C,T,M	Vinyl chloride	0.281	0.285	-1.4	134	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.182	0.167	8.2	125	0.00
7	T,M	Bromomethane	0.183	0.200	-9.3	145	0.00
8	T,M	Chloroethane	0.153	0.161	-5.2	138	0.00
9	T,M	Dichlorofluoromethane	0.618	0.624	-1.0	128	0.00
10	T,M	Trichlorofluoromethane	0.441	0.408	7.5	124	0.00
11	T,M	Acrolein	0.017	0.027	-58.8#	193	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.157	0.155	1.3	129	0.00
13	C,T,M	1,1-Dichloroethene	0.565	0.520	8.0	119	0.02
14	T,M	Acetone	0.103	0.084	18.4	110	0.00
15	T,M	Methyl acetate	0.000	0.000	0.0	0#	0.00
16	T,M	Iodomethane	0.613	0.541	11.7	113	0.02
17	T,M	Carbon disulfide	1.057	1.180	-11.6	156	0.02
18	T,M	Methylene chloride	0.584	0.469	19.7	110	0.02
19	T,M	tert-Butyl alcohol	0.036	0.024	33.3#	89	0.02
20	T,M	tert-Butyl methyl ether (MT	0.760	0.660	13.2	110	0.02
21	T,M	trans-1,2-Dichloroethene	0.576	0.560	2.8	124	0.02
22	T,M	Acrylonitrile	0.096	0.089	7.3	116	0.02
23	T,M	Isopropyl ether (DIPE)	1.370	1.249	8.8	115	0.02
24	P,T,M	1,1-Dichloroethane	0.720	0.644	10.6	113	0.02
25	T,M	Vinyl acetate	0.628	0.707	-12.6	154	0.02
26	T,M	2-Butanol	0.000	0.000	0.0	0#	0.00
27	T,M	tert-Butyl ethyl ether (ETB	1.147	1.017	11.3	114	0.02
28	T,M	2,2-Dichloropropane	0.491	0.489	0.4	131	0.02
29	T,M	2-Butanone	0.183	0.160	12.6	110	0.02
30	T,M	cis-1,2-Dichloroethene	0.408	0.363	11.0	125	0.02
31	T,M	Bromochloromethane	0.411	0.372	9.5	113	0.02
32	T,M	Tetrahydrofuran	0.107	0.074	30.8#	92	0.02
33	C,T,M	Chloroform	0.799	0.698	12.6	112	0.02
34	S	Dibromofluoromethane	0.370	0.329	11.1	114	0.02
35	T,M	1,1,1-Trichloroethane	0.574	0.533	7.1	117	0.02
36	T,M	Cyclohexane	0.000	0.000	0.0	0#	0.00
37	S	1,2-Dichloroethane-d4	0.467	0.386	17.3	109	0.02
38	T,M	tert-Amyl methyl ether (TAM	0.194	0.173	10.8	110	0.02
39	I	CHLOROBENZENE-D5	1.000	1.000	0.0	126	0.02
40	T,M	1,1-Dichloropropene	0.149	0.144	3.4	120	0.02

(#) = Out of Range

2022

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKB173.D Vial: 3
Acq On : 14 Nov 2011 1:22 pm Operator: CGM
Sample : CVO03K0210 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03K02.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Fri Nov 04 14:33:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Carbon tetrachloride	0.465	0.431	7.3	118	0.02
42	T,M	Benzene	1.391	1.282	7.8	120	0.04
43	T,M	1,2-Dichloroethane	0.578	0.469	18.9	103	0.04
44	T,M	Trichloroethene	0.371	0.325	12.4	113	0.02
45	T,M	Methylcyclohexane	0.000	0.000	0.0	0#	0.00
46	C,T,M	1,2-Dichloropropane	0.434	0.381	12.2	114	0.02
47	T,M	1,4-Dioxane	0.004	0.003	25.0#	104	0.02
48	T,M	Dibromomethane	0.262	0.225	14.1	108	0.02
49	T,M	Bromodichloromethane	0.597	0.545	8.7	116	0.02
50	T,M	2-Chloroethyl vinyl ether	0.247	0.210	15.0	107	0.02
51	T,M	cis-1,3-Dichloropropene	0.691	0.634	8.2	115	0.02
52	T,M	4-Methyl-2-pentanone	0.474	0.411	13.3	112	0.02
53	S	Toluene-d8	1.098	1.035	5.7	124	0.02
54	C,T,M	Toluene	1.446	1.348	6.8	123	0.02
55	T,M	Ethyl methacrylate	0.503	0.452	10.1	112	0.04
56	T,M	trans-1,3-Dichloropropene	0.618	0.553	10.5	112	0.02
57	T,M	1,1,2-Trichloroethane	0.303	0.262	13.5	109	0.02
58	T,M	Tetrachloroethene	0.268	0.259	3.4	126	0.04
59	T,M	2-Hexanone	0.341	0.295	13.5	109	0.02
60	T,M	1,3-Dichloropropane	0.592	0.514	13.2	109	0.02
61	T,M	Dibromochloromethane	0.395	0.354	10.4	112	0.04
62	T,M	1,2-Dibromoethane	0.332	0.305	8.1	114	0.02
63	T,M	1-Chlorohexane	0.597	0.594	0.5	128	0.04
64	P,M	Chlorobenzene	0.924	0.846	8.4	118	0.02
65	C,T,M	Ethylbenzene	1.787	1.690	5.4	124	0.02
66	T,M	1,1,1,2-Tetrachloroethane	0.345	0.321	7.0	116	0.02
67	T,M	m-Xylene & p-Xylene	1.378	1.273	7.6	125	0.04
68	T,M	o-Xylene	1.374	1.306	4.9	122	0.04
69	T,M	Styrene	0.931	0.972	-4.4	128	0.04
70	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	117	0.04
71	P,T,M	Bromoform	0.526	0.476	9.5	106	0.04
72	T,M	Isopropylbenzene	3.648	3.503	4.0	120	0.04
73	S	4-Bromofluorobenzene	1.116	1.138	-2.0	132	0.02
74	P,T,M	1,1,2,2-Tetrachloroethane	1.089	0.965	11.4	107	0.04
75	T,M	trans-1,4-Dichloro-2-butene	0.342	0.310	9.4	108	0.02
76	T,M	n-Propylbenzene	4.951	5.079	-2.6	129	0.04
77	T,M	1,2,3-Trichloropropane	0.258	0.220	14.7	101	0.02
78	T,M	Bromobenzene	0.827	0.868	-5.0	126	0.04
79	T,M	1,3,5-Trimethylbenzene	2.878	3.061	-6.4	132	0.04
80	T,M	2-Chlorotoluene	3.134	3.227	-3.0	127	0.04

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K14\RKB173.D Vial: 3
Acq On : 14 Nov 2011 1:22 pm Operator: CGM
Sample : CVO03K0210 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03K02.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Fri Nov 04 14:33:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	2.876	2.915	-1.4	125	0.04
82	T,M	tert-Butylbenzene	0.586	0.615	-4.9	124	0.04
83	T,M	1,2,4-Trimethylbenzene	2.918	3.062	-4.9	128	0.04
84	T,M	sec-Butylbenzene	3.952	3.937	0.4	125	0.04
85	T,M	p-Isopropyltoluene	2.889	3.104	-7.4	130	0.04
86	T,M	1,3-Dichlorobenzene	1.537	1.597	-3.9	125	0.04
87	T,M	1,4-Dichlorobenzene	1.487	1.520	-2.2	122	0.04
88	T,M	n-Butylbenzene	3.084	3.494	-13.3	135	0.04
89	T,M	1,2-Dichlorobenzene	1.391	1.342	3.5	115	0.04
90	T,M	1,2-Dibromo-3-chloropropane	0.159	0.129	18.9	95	0.02
91	T,M	1,2,4-Trichlorobenzene	0.694	0.721	-3.9	121	0.04
92	T,M	Hexachlorobutadiene	0.437	0.464	-6.2	125	0.04
93	T,M	Naphthalene	1.760	1.515	13.9	100	0.04
94	T,M	1,2,3-Trichlorobenzene	0.614	0.600	2.3	115	0.04

(#) = Out of Range SPCC's out = 0 CCC's out = 0

2024

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/2/11 ☑ 5-mL Purge ☐ 10-mL Purge ☐ 25-mL Purge

Book # A03 -048

BATCH V003K026

Sample Prep. ID	Data File Name	Lab Sample ID	* Sample Amount mL	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKB016	BFB03K02	1.0	NA	NA	NA	NA	8260 TBA/Ket/AA 14:02
02	17	V003K021	1.02 .1	1.0				1 5 ppb
03	18	2	1.04 .2					2 10
04	19	3	1.08 .4					4 20
05	20	4	1.2 1					10 50
06	21	5	1.4 2					20 100
07	22	6	1 1 5					50 250
08	23	7	1 2 10					100 500
09	24	8	1 4 20					200 1000
10	25	9	1 6 30					300 1500
11	26	10	1 10 50					500 2500
12	27	IS/SS						
13	28	V003K02B	IS SS					
14	29	V003K021	1 1					50 250 22:52
15	30	Rinse						
16								
17								
18								
19								
20								A = GS, Freons, Gases, CS2
21								B = Ket/AA, 8260
22								
23								
24								
25								
26								
27								
28								
29								
30								CGM 11/2/11

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	11/2/11
ICAL ID	V003K02

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-19-1-2	*	
DCC	SV1-17-87-3 -93-1		
DCC	-98-2		
DCC	-87-2		
BFB	-45-3		50/250/
IS/SURR.	-91-1 -91-2		1000
ICV/LCS	-90-3	1	
ICV/LCS	-97-2 -84-2	1 5	
ICV/LCS	-99-2	5	
ICV/LCS	SV1-12-26.6 26-7	.25 .25	

DATA FILE FOLDER	11K02

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO03	

Comments:

Analyzed By: CGM

Date Disposed: 11/3/11

Disposed By: CGM

20026

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/14/11 ☑ 5-mL Purge ☐ 10-mL Purge ☐ 25-mL Purge

Book # A03 -048

BATCH V003K0210

Sample Prep. ID	Data File Name CGM 11/14/11	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKB1781	BFB03K12						11:50
02	72	STD. CHECK						
03	73	CV003K0210						
04	74	V003K12L		1.0				
05	75	↓ C						
06	76	V003K13L						
07	77	↓ C						
08	78	V003K12B	5.0g					
09	79	V003K13B	5.0mL					
10	80 CGM 11/18/11	VRS0065B	☆	☆				
11	81	11K106-01						
12	82	↓ -02						
13	83	↓ -04						
14	84	11K110-01						
15	85	Rinse						
16	86	11K078-01	5.0mL	1.0				12:58
17	87	Rinse						
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								CGM 11/14/11

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	11/2/11
ICAL ID	V003K02

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-17-87-3	1	
DCC	93-1	1	
DCC	98-2	5	
DCC	87-2	5	50/250
BFB	45-3	1	
IS/SURR.	SV1-19-3-3	1	
ICV/LCS	SV1-17-90-3	1	
ICV/LCS	-87-2	1	
ICV/LCS	-89-2	5	
ICV/LCS	-99-2	5	

DATA FILE FOLDER	11K14

Electronic Data Archival

Location	Date
HPCHEM_VOA/T003	

Comments:

☆ Refer to sample weight log.

Analyzed By: CGM

Date Disposed: 11/15/11

Disposed By: CGM

2027

EXTRACTION LOG(S)

EMAX LABORATORIES, INC.

SAMPLE PREPARATION LOG FOR VOLATILES

FileID: VS11K006

PrepBatchID	Lab Sample ID	ExpW1(g)	W1 (g)	DateTime	ExpVe (ml)	Ve (ml)	DateTime	Prep. Factor	Comment
VS11K00601	VSK006SB	5	5	11/14/11 10:20				1	
VS11K00602	VSK006SQ	5	5	11/14/11 10:21				1	
VS11K00603	11K106-01	5	5.17	11/14/11 10:24				0.97	
VS11K00604	11K106-02	5	5.1	11/14/11 10:25				0.98	
VS11K00605	11K106-03	5	5.28	11/14/11 10:26				0.95	
VS11K00606	11K110-01	5	5.39	11/14/11 10:29				0.93	
							CGM 11/14/11		

- [x] EMAX-5030 Rev. 2
- [x] Balance Calibration Check performed prior to use
- BlankSoil ID: SW1B-002-19-14
- Prepared By: RTORRALBA
- [ ] EMAX- 5035 Rev.
- [x] BalanceID 25451062
- MeOH Lot#:
- Received by: CGM
- Date 11/14/11
- [x] Soil
- [ ] BalanceID 25650797
- Expected W1(g): 5
- Extract Location: N/A
- [ ] Product
- Expected Ve(ml):
- [x] Volumetric dispenser was checked with 5-ml volumetric flask
- W1=Sample Weight
- Ve=Extract Volume

2029

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/M8015
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

SDG#: 11K110

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K110

METHOD 5030B/M8015
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

One (1) soil sample was received on 11/11/11 for TPH Gasoline analysis, Method 5030B/M8015 in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for GMK005SL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogate was added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K110
Instrument ID : GCT039

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	GMK005SB	1	NA	11/18/1115:35	11/18/1115:35	EK18003A	EK18002A	GMK005S	Method Blank
LCS1S	GMK005SL	1	NA	11/18/1116:17	11/18/1116:17	EK18004A	EK18002A	GMK005S	Lab Control Sample (LCS)
LCD1S	GMK005SC	1	NA	11/18/1116:59	11/18/1116:59	EK18005A	EK18002A	GMK005S	LCS Duplicate
IR-70-RB-122	K110-01	0.92	20.7	11/18/1119:46	11/18/1119:46	EK18009A	EK18002A	GMK005S	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/M8015
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: INSIGHT EEC, INC.	Date Collected:	11/11/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/11/11
Batch No.	: 11K110	Date Extracted:	11/18/11 19:46
Sample ID:	IR-70-RB-122	Date Analyzed:	11/18/11 19:46
Lab Samp ID:	K110-01	Dilution Factor:	0.92
Lab File ID:	EK18009A	Matrix :	SOIL
Ext Btch ID:	GMK005S	% Moisture :	20.7
Calib. Ref.:	EK18002A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
GASOLINE	ND	1.2	0.58

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.78	2.320	76.7	70-140

Parameter	H-C Range
Gasoline	C6-C10

QC SUMMARIES

METHOD 5030B/M8015
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
Batch No.	: 11K110	Date Extracted:	11/18/11 15:35
Sample ID:	MBLK1S	Date Analyzed:	11/18/11 15:35
Lab Samp ID:	GMK005SB	Dilution Factor:	1
Lab File ID:	EK18003A	Matrix :	SOIL
Ext Btch ID:	GMK005S	% Moisture :	NA
Calib. Ref.:	EK18002A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
GASOLINE	ND	1.0	0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.79	2.000	89.7	70-140

Parameter	H-C Range
Gasoline	C6-C10

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K110
METHOD: METHOD 5030B/M8015

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	GMK005SB	GMK005SL	GMK005SC		
LAB FILE ID:	EK18003A	EK18004A	EK18005A		
DATE EXTRACTED:	11/18/1115:35	11/18/1116:17	11/18/1116:59	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1115:35	11/18/1116:17	11/18/1116:59	DATE RECEIVED:	11/18/11
PREP. BATCH:	GMK005S	GMK005S	GMK005S		
CALIB. REF:	EK18002A	EK18002A	EK18002A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Gasoline	ND	25.0	20.6	82	25.0	23.0	92	11	60-130	50

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromofluorobenzene	2.00	2.00	100	2.00	2.15	108	70-140

INITIAL CALIBRATIONS

INITIAL CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Columm : DB-5
Column size ID : 30MX.53MM
LFID & Datetime: EJ17008A 10/17/11 17:03
LFID & Datetime: EJ17007A 10/17/11 16:21
LFID & Datetime: EJ17006A 10/17/11 15:40
LFID & Datetime: EJ17005A 10/17/11 14:58
LFID & Datetime: EJ17004A 10/17/11 14:16
LFID & Datetime: EJ17003A 10/17/11 13:34
LFID & Datetime: EJ17002A 10/17/11 12:52
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 1.00X	2.50X	5.00X	25.00X	50.00X	100.00X	125.00X	MEAN	%RSD
Gasoline(TOTAL)	20.00	17466	17199	17453	17230	17338	16756	16810	17178.9	1.7
GRO(C6-C10)	20.00	13678	13780	14482	15139	14748	14598	14567	14427.2	3.6
GRO(2MP-124TMB)	20.00	13678	13939	14682	15318	14918	14633	14609	14539.5	3.9
GRO(C5-C12)	20.00	17466	16837	17428	17193	17203	16689	16721	17076.9	1.9
GRO(C6-C12)	20.00	17359	16620	17174	17003	17022	16528	16556	16894.5	1.9
GRO(C5-C10)	20.00	13784	13998	14737	15328	14929	14759	14732	14609.6	3.7
SURROGATE	**X**	**1.00X**	**2.00X**	**3.00X**	**4.00X**	**5.00X**	**7.50X**	**10.00X**	**MEAN**	**%RSD**
Bromofluorobenzene	10.00	14601	14645	15360	16505	18048	18806	18494	16637.1	10.9
1,1,1-Trifluorotoluene	10.00	21627	20161	21247	22349	23598	24792	24465	22605.6	7.7

VG39J17.MET

FORM VI 8015P -2 1/96

10/18/11

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EJ17004A 10/17/2011 14:16
Conc Cont LFID & Datetime: EJ17009A 10/17/2011 17:45
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	1000.0	17178.9	18020004	1048.96	5		15
GRO(C6-C10)	NA	NA	NA	1000.0	14427.2	14294787	990.82	-1		15
GRO(2MP-124TMB)	NA	NA	NA	1000.0	14539.5	14395050	990.06	-1		15
GRO(C5-C12)	NA	NA	NA	1000.0	17076.9	17797456	1042.19	4		15
GRO(C6-C12)	NA	NA	NA	1000.0	16894.5	17486460	1035.04	4		15
GRO(C5-C10)	NA	NA	NA	1000.0	14609.6	14605786	999.74	-0		15
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
Bromofluorobenzene	10.683	10.657	10.709	50.0	16637.1	870451	52.32	5		15
1,1,1-Trifluorotoluene	3.175	3.137	3.213	50.0	22605.6	1252461	55.40	11		15

VG39J17.MET

10/18/11

4011

DAILY CALIBRATIONS

CONTINUE CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EJ17004A 10/17/2011 14:16
Conc Cont LFID & Datetime: EK18002A 11/18/2011 14:54
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	1000.0	17178.9	15374633	894.97	-11		15
GRO(C6-C10)	NA	NA	NA	1000.0	14427.2	13421815	930.31	-7		15
GRO(2MP-124TMB)	NA	NA	NA	1000.0	14539.5	13546728	931.72	-7		15
GRO(C5-C12)	NA	NA	NA	1000.0	17076.9	15336520	898.09	-10		15
GRO(C6-C12)	NA	NA	NA	1000.0	16894.5	15073303	892.20	-11		15
GRO(C5-C10)	NA	NA	NA	1000.0	14609.6	13685032	936.71	-6		15
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
Bromofluorobenzene	10.667	10.641	10.693	50.0	16637.1	857217	51.52	3		15
1,1,1-Trifluorotoluene	3.167	3.129	3.205	50.0	22605.6	1163844	51.49	3		15

CONTINUE CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EJ17004A 10/17/2011 14:16
Conc Cont LFID & Datetime: EK18014A 11/18/2011 23:14
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	1000.0	17178.9	16289781	948.24	-5		15
GRO(C6-C10)	NA	NA	NA	1000.0	14427.2	14121140	978.78	-2		15
GRO(2MP-124TMB)	NA	NA	NA	1000.0	14539.5	14237994	979.26	-2		15
GRO(C5-C12)	NA	NA	NA	1000.0	17076.9	16270351	952.77	-5		15
GRO(C6-C12)	NA	NA	NA	1000.0	16894.5	15995119	946.76	-5		15
GRO(C5-C10)	NA	NA	NA	1000.0	14609.6	14396372	985.40	-1		15
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
Bromofluorobenzene	10.667	10.641	10.693	50.0	16637.1	891873	53.61	7		15
1,1,1-Trifluorotoluene	3.167	3.129	3.205	50.0	22605.6	1155093	51.10	2		15

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
NONHALOGENATED VOLATILES

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

GASOLINE ICAL

GM JOE3 (Soil) : J178

Book #:	A39- 038
Instrument No.:	39
Analytical Sequence:	EJ17
Method File:	☐ FID Channel A
	☐ PID Channel B
Analytical Batch:	CVG39 J17C01

SOP #	Rev. #
☐ EMAX-5030B	2
☐ EMAX-BTEXM	1
☑ EMAX-8015G	3
☐ EMAX-8015S	1
☐ EMAX-AK101	1
☐ EMAX-	

STANDARDS ID		CONC. (mg/L)
ICAL	V639J17. MET	—
ICV	IVG39 J17C1	—
DCC GAS	SV2-05-48	2500
DCC BTEX	—	—
DCC STODDARD	—	—
BFB/TFT	SV2-06-02-2	100
LCS/LCSD	SV2-05-47	5000
MS/MSD	—	—

Purge Volume	5 ml

SOLVENT	ID
Methanol	

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZC-3-BTEX	
☐	

Analyzed By: SC

Date: 10/17/11

4015

Method: Vg39j17.met Batch: Ej17.seq Data: Ej17.002 - [Batch: ej17.seq]

File Edit Method Batch Options Analysis Window Help

Method | Data | Batch | Integ. | Peaks | Batch | Custom | Review | Reproc | Recalib | Analyze | Reports

Run	Run Type	Sample ID	Method	Filename	Description
1	Unknown	IB39J001	vg39j17.met	EJ17.001	
2	Unknown	VG39J17-07 2500/100 5ml GAS DIL /5ml SOW	vg39j17.met	EJ17.002	
3	Unknown	VG39J17-06 2000/75 4ml / 3.75ml SOW	vg39j17.met	EJ17.003	
4	Unknown	VG39J17-05 1000/50 2ml / 2.5ml SOW	vg39j17.met	EJ17.004	
5	Unknown	VG39J17-04 500/40 1ml / 2ml SOW	vg39j17.met	EJ17.005	GASOLINE ICAL
6	Unknown	VG39J17-03 100/30 0.2ml / 1.5ml SOW	vg39j17.met	EJ17.006	
7	Unknown	VG39J17-02 50/20 0.1ml / 1ml SOW	vg39j17.met	EJ17.007	
8	Unknown	VG39J17-01 20/10 0.04ml / 0.5ml SOW	vg39j17.met	EJ17.008	
9	Unknown	IVG39J1701 1000/50 1ml GAS DIL /2.5ml SOW	vg39j17.met	EJ17.009	GASOLINE ICV
10	Unknown	IVG39J1702 500/40 0.5ml / 2ml SOW	vg39j17.met	EJ17.010	
11	Unknown	GRO	vg39j17.met	EJ17.011	SV2-05 36
12	Unknown	2MP/1,2,4-TMB	vg39j17.met	EJ17.012	2MP (SV2-05-84-1) / 1,2,4-TMB (SV2-05-23)
13	Unknown	PENTANE/NAPHTHALENE	vg39j17.met	EJ17.013	PENTANE LOT # 37165 / NAPHTHALENE (SV2-05-24)
14	Unknown	DRO	vg39j17.met	EJ17.014	SV2-05-31
15	Unknown	RINSE	vg39j17.met	EJ17.015	FINAL
16	Unknown	RINSE	vg39j17.met	EJ17.016	
17	Unknown	PENTANE (SV2-07-01-03)	vg39j17.met	EJ17.017	
18	Unknown	UNDECANE (SV2-07-01-02)	vg39j17.met	EJ17.018	Conf. only
19	Unknown	DODECANE (SV2-07-01-04)	vg39j17.met	EJ17.019	
20	Unknown	RINSE	vg39j17.met	EJ17.020	
21	Unknown	RINSE	vg39j17.met	EJ17.021	
22	Unknown	CVG39J17001 1000/50 2ml GAS DIL /2.5ml SOW	vg39j17.met	EJ17.022	
23	Unknown	GMJ003SL 100UL S	vg39j17.met	EJ17.023	Conc. 500/40
24	Unknown	GMJ003SC 100UL S	vg39j17.met	EJ17.024	
25	Unknown	GMJ003SB 100UL S	vg39j17.met	EJ17.025	
26	Unknown	11J178-01 100UL S	vg39j17.met	EJ17.026	
27	Unknown	11J178-02 100UL S	vg39j17.met	EJ17.027	
28	Unknown	11J178-03 100UL S	vg39j17.met	EJ17.028	
29	Unknown	11J178-04 100UL S	vg39j17.met	EJ17.029	
30	Unknown	11J178-05 100UL S	vg39j17.met	EJ17.030	
31	Unknown	11J178-08 100UL S	vg39j17.met	EJ17.031	
32	Unknown	11J178-09 100UL S	vg39j17.met	EJ17.032	
33	Unknown	11J178-10 100UL S	vg39j17.met	EJ17.033	
34	Unknown	CVG39J17002 1000/50 2ml GAS DIL /2.5ml SOW	vg39j17.met	EJ17.034	

SC 10/18/11

Method Development

Start | EZChrom Chromatogra... | Method: Vg39j17.met | untitled - Paint | Method: Vg39j17... | Exploring - Export | Calculator | Tuesday, October 18, 2011

EMAX LABORATORIES, INC.

ANALYTICAL RUN LOG
for
NONHALOGENATED VOLATILES

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Purge Volume = 5 mL

GMK005(soil): K106, K110

VA39K20(water): K106, K115, K134
K122

VA39K21 (water): K118, K132,
K144

* Refer to standard Logbook #SV2-005

Book #:	A39- 039
Instrument No.:	39
Analytical Sequence:	EK18
Method File:	☑ FID Channel A VG39J17 ~~VG39J12~~
	☑ FID Channel A J439627 11/21/11
	☐ PID Channel B
Analytical Batch:	CVG39J17110

SOP #	Rev. #
☑ EMAX-5030B	2
☐ EMAX-BTEXM	1
☑ EMAX-8015G	3
☐ EMAX-AK101	1
☐ EMAX-	

STANDARDS ID		CONC. (mg/L)
ICAL	—	—
ICAL	—	—
ICV	—	—
ICV	—	—
DCC GAS	SV2-05-48	2500
DCC BTEX	—	—
* DCC JP4	SV2-05-91-2	2500
BFB/TFT	SV2-06-05-2	100
LCS/LCSD GAS	SV2-05-47	5000
MS/MSD GAS	SV2-05-47	5000
* LCS/LCSD JP4	SV2-05-89-1	2500

SOLVENT	ID
Methanol	

ELECTRONIC DATA ARCHIVAL	
Location	Date
☑ EZC-3-BTEX SC	11/21/11
☐	

Analyzed By: SC

Date: 11/18/11

4018

Method: Vg39j17.met Batch: Ek18.seq Data: Ek18.008 - [Batch: ek18.seq]

File Edit Method Batch Options Analysis Control Window Help

Method | Data | Batch | Setup | Batch | Preview | Run Single | STOP | Recalib | Analyze | Reports

Run	Run Type	Sample ID	Method	Filename	Description
1	Unknown	IB39K110	vg39j17.met	EK18.001	
2	Unknown	CVG39J17110 1000/50 2ul GMS Tec /2.5ul SUW	vg39j17.met	EK18.002	
3	Unknown	GMK005SB 100UL S	vg39j17.met	EK18.003	
4	Unknown	GMK005SL 100UL S	vg39j17.met	EK18.004	Conc 500/40
5	Unknown	GMK005SC 100UL S	vg39j17.met	EK18.005	
6	Unknown	11K106-01 100UL S	vg39j17.met	EK18.006	
7	Unknown	11K106-02 100UL S	vg39j17.met	EK18.007	
8	Unknown	11K106-03 100UL S	vg39j17.met	EK18.008	
9	Unknown	11K110-01 100UL S	vg39j17.met	EK18.009	
10	Unknown	VA39K20B 5.0ML W	vg39j17.met	EK18.010	
11	Unknown	VA39K20L 5.0ML W 0.5ul GMS Tec/2ul SUW	vg39j17.met	EK18.011	Conc 500/40
12	Unknown	VA39K20C 5.0ML W ↓	vg39j17.met	EK18.012	
13	Unknown	VA39K20Q 5.0ML W not evaluated	vg39j17.met	EK18.013	
14	Unknown	CVG39J17111 1000/50 2ul GMS Tec /2.5ul SUW	vg39j17.met	EK18.014	FINAL
15	Unknown	SLK001SB 5.0ML W	vg39j17.met	EK18.015	
16	Unknown	11K106-01 5.0ML W	vg39j17.met	EK18.016	PH=7
17	Unknown	11K106-02 5.0ML W	vg39j17.met	EK18.017	PH=7
18	Unknown	11K106-03 5.0ML W	vg39j17.met	EK18.018	PH=7
19	Unknown	11K115-01 5.0ML W	vg39j17.met	EK18.019	PH<2
20	Unknown	11K115-02 5.0ML W	vg39j17.met	EK18.020	PH<2
21	Unknown	11K115-03 5.0ML W	vg39j17.met	EK18.021	PH<2
22	Unknown	11K115-04 5.0ML W	vg39j17.met	EK18.022	PH<2
23	Unknown	11K134-01 5.0ML W	vg39j17.met	EK18.023	PH<2
24	Unknown	11K134-02 5.0ML W	vg39j17.met	EK18.024	PH<2
25	Unknown	CVG39J17112 1000/50 2ul GMS Tec /2.5ul SUW	vg39j17.met	EK18.025	
26	Unknown	11K134-03 5.0ML W	vg39j17.met	EK18.026	PH<2
27	Unknown	11K134-03M 5.0ML W 0.5ul GMS Tec/2ul SUW	vg39j17.met	EK18.027	PH<2
28	Unknown	11K134-03S 5.0ML W ↓	vg39j17.met	EK18.028	PH<2
29	Unknown	11K134-04 5.0ML W	vg39j17.met	EK18.029	PH<2
30	Unknown	11K134-05 5.0ML W	vg39j17.met	EK18.030	PH<2
31	Unknown	11K122-01 5.0ML W	vg39j17.met	EK18.031	PH<2
32	Unknown	11K122-02 5.0ML W	vg39j17.met	EK18.032	PH<2
33	Unknown	11K122-03 5.0ML W	vg39j17.met	EK18.033	PH<2
34	Unknown	11K122-04 5.0ML W	vg39j17.met	EK18.034	PH<2

Instrument 1: T-039

Start | EZChrom Chromat... | Method: Vg39j... | Method: Vg39j17... | Method: Vg55j28... | Calculator... | Exploring - Export | untitled - Pa | Friday, November 18, 2011

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG for NONHALOGENATED VOLATILES

Note: For samples, relevant QCs/Standards extracted, refer to attached extraction sequence.

Comments:

SDG's# K106, K110

Book #.: E39-027

Preparation Batch: GMK005s

Matrix Soil

SOP	Rev. #
☐ EMAX-5035	2
☐ EMAX-AK101	1
☐ EMAX-	

Standards	ID	Amount Added (ml)
Surrogate		
LCS/MS	SV2-05-47	25ml
Methanol		
Methanol w/ Surrogate	SV2-06-03-3	5.0ml

Reagent	Lot # / ID
Silica Sand	SU1A-04-374

Prepared By: SC

Standard Added By: SC Checked By: AJ

Extract Location:

Disposal By: Disposal Date:

FileID: GMK005S

EMAX LABORATORIES, INC.

PRESERVATION LOG FOR HALOGENATED VOLATILES

PrepBatchID	LabSampleID	Wi(g)	DateTime	Wf(g)	DateTime	Aliquot	Unit	Ve(ml)	%Moist	Vec(ml)	ExpAmt	ExpVe(ml)	AliquotFctr	Comments
11GMK005S01	GMK005SB	23.31	11/17/11 17:32	28.33	11/17/11 17:35	5.02	g	5		5	5	5	1	
11GMK005S02	GMK005SL	23.65	11/17/11 17:33	28.63	11/17/11 17:35	4.98	g	5		5	5	5	1	
11GMK005S03	GMK005SC	23.46	11/17/11 17:33	28.46	11/17/11 17:36	5	g	5		5	5	5	1	
11GMK005S04	K106-01	23.45	11/17/11 17:33	28.86	11/17/11 17:37	5.41	g	5		5	5	5	0.92	
11GMK005S05	K106-02	23.63	11/17/11 17:33	28.71	11/17/11 17:39	5.08	g	5		5	5	5	0.98	jars
11GMK005S06	K106-03	23.41	11/17/11 17:34	28.55	11/17/11 17:40	5.14	g	5		5	5	5	0.97	
11GMK005S07	K110-01	23.44	11/17/11 17:34	28.85	11/17/11 17:40	5.41	g	5		5	5	5	0.92	

Balance ID: 25451062. Calibration check was verified prior to use.

Ve=extract volume

AliquotFctr=ExpAmt/Aliquot

☑ Extraction Started @ 11/17/11 17:31 Weight MeOH(g): 3.93

☑ Extraction Ended @ 11/17/11 17:41 Vol MeOH(ml): 5

Prepared By: SC

Checked By: AS

Date 11/17/11

Comments:

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 3550B/8015 MOD
PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 11K110

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K110

METHOD 3550B/8015 MOD
PETROLEUM HYDROCARBONS BY EXTRACTION

One (1) soil sample was received on 11/11/11 for TPH Diesel analysis, Method 3550B/8015 MOD in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for DSK018SL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K110
Instrument ID : GCT105

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	DSK018SB	1	NA	11/16/1104:22	11/15/1111:14	LK15058A	LK15051A	DSK018S	Method Blank
LCS1S	DSK018SL	1	NA	11/16/1103:48	11/15/1111:14	LK15056A	LK15051A	DSK018S	Lab Control Sample (LCS)
LCD1S	DSK018SC	1	NA	11/16/1104:05	11/15/1111:14	LK15057A	LK15051A	DSK018S	LCS Duplicate
IR-70-RB-122	K110-01	1	20.7	11/16/1104:39	11/15/1111:14	LK15059A	LK15051A	DSK018S	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 3550B/8015 Mod
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: INSIGHT EEC, INC.	Date Collected:	11/11/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/11/11
Batch No.	: 11K110	Date Extracted:	11/15/11 11:14
Sample ID:	IR-70-RB-122	Date Analyzed:	11/16/11 04:39
Lab Samp ID:	K110-01	Dilution Factor:	1
Lab File ID:	LK15059A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	20.7
Calib. Ref.:	LK15051A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DIESEL	ND	13	6.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	104	126.1	82.2	50-150
HEXACOSANE	27.4	31.53	86.9	50-150

RL : Reporting Limit

Parameter	H-C Range
Diesel	C10-C24
Motor Oil	C24-C36

QC SUMMARIES

METHOD 3550B/8015 Mod
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/15/11
Batch No.	: 11K110	Date Extracted:	11/15/11 11:14
Sample ID:	MBLK1S	Date Analyzed:	11/16/11 04:22
Lab Samp ID:	DSK018SB	Dilution Factor:	1
Lab File ID:	LK15058A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	NA
Calib. Ref.:	LK15051A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DIESEL	ND	10	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	82.8	100.0	82.8	60-150
HEXACOSANE	21.4	25.00	85.4	60-140

RL : Reporting Limit

Parameter	H-C Range
Diesel	C10-C24
Motor Oil	C24-C36

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K110
METHOD: METHOD 3550B/8015 Mod

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSK018SB	DSK018SL	DSK018SC		
LAB FILE ID:	LK15058A	LK15056A	LK15057A		
DATE EXTRACTED:	11/15/1111:14	11/15/1111:14	11/15/1111:14	DATE COLLECTED:	NA
DATE ANALYZED:	11/16/1104:22	11/16/1103:48	11/16/1104:05	DATE RECEIVED:	11/15/11
PREP. BATCH:	DSK018S	DSK018S	DSK018S		
CALIB. REF:	LK15051A	LK15051A	LK15051A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Diesel	ND	500	564	113	500	566	113	0	60-130	50

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	89.7	90	100	89.0	89	60-150
Hexacosane	25.0	22.0	88	25.0	21.7	87	60-140

INITIAL CALIBRATIONS

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LH31010A 08/31/11 11:12
LFID & Datetime: LH31011A 08/31/11 11:29
LFID & Datetime: LH31012A 08/31/11 11:46
LFID & Datetime: LH31013A 08/31/11 12:03
LFID & Datetime: LH31014A 08/31/11 12:20
LFID & Datetime: LH31015A 08/31/11 12:37
LFID & Datetime: LH31016A 08/31/11 12:54
CONC UNIT: ppm

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 1.00X	2.00X	10.00X	20.00X	100.00X	300.00X	600.00X	MEAN	%RSD	
DIESEL(TOTAL)	5.00	24020	19288	20547	23664	22484	21653	20151	21686.7	8.3	✓
DIESEL(C10-C24)	5.00	23201	18352	19970	22623	21490	20647	19125	20772.4	8.6	✓
DIESEL(C10-C28)	5.00	23370	18465	20006	22688	21580	20740	19191	20862.9	8.6	✓
DIESEL(C10-C25)	5.00	23301	18427	20006	22674	21557	20717	19166	20835.5	8.6	✓
DIESEL(C9-C24)	5.00	23201	19125	20444	23154	22037	21225	19724	21272.9	7.6	✓
DIESEL(C9-C25)	5.00	23301	19201	20480	23205	22104	21295	19765	21335.9	7.6	✓
DIESEL(C10-C36)	5.00	23370	18465	20006	22688	21580	20741	19194	20863.5	8.6	✓
DIESEL(C10-C40)	5.00	23370	18465	20006	22688	21580	20741	19194	20863.5	8.6	✓
SURROGATE	X	0.00X	1.00X	2.00X	3.00X	4.00X	5.00X	11.00X	MEAN	%RSD	
BROMOBENZENE	20.00	0	14659	13825	13557	14342	15310	15002	14449.3	4.7	✓
HEXACOSANE	5.00	0	28787	26197	25368	24972	24459	21791	25262.2	9.0	✓

DSD5H31.MET

AS
08/31/11

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LH31003A 08/31/11 09:10
LFID & Datetime: LH31004A 08/31/11 09:27
LFID & Datetime: LH31005A 08/31/11 09:44
LFID & Datetime: LH31006A 08/31/11 10:01
LFID & Datetime: LH31007A 08/31/11 10:19
LFID & Datetime: LH31008A 08/31/11 10:36
CONC UNIT: ppm

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	20.00X	100.00X	300.00X	600.00X	MEAN	%RSD	
JP5(C8-C18)	5.00	23373	23368	25778	24447	19617	23435	23336.2	8.8	✓
M.OIL(C18-C36)	5.00	18063	18640	22422	21118	19441	20337	20003.5	8.1	✓
M.OIL(C24-C36)	5.00	15514	15945	18762	18010	16294	17280	16967.7	7.5	✓
M.OIL(C24-C40)	5.00	15514	15945	18762	18010	16294	17280	16967.7	7.5	

DSD5H31.MET

FORM VI DIESEL -2 1/96 Rev 2/2006

AS
08/31/11

5010

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LH31014A 08/31/2011 12:20
Conc Cont LFID & Datetime: LH31017A 08/31/2011 13:11
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	21686.7	9605203	442.91	-11		15
DIESEL(C10-C24)	NA	NA	NA	500.0	20772.4	9019809	434.22	-13		15
DIESEL(C10-C28)	NA	NA	NA	500.0	20862.9	9052645	433.91	-13		15
DIESEL(C10-C25)	NA	NA	NA	500.0	20835.5	9045564	434.14	-13		15
DIESEL(C9-C24)	NA	NA	NA	500.0	21272.9	9317458	438.00	-12		15
DIESEL(C9-C25)	NA	NA	NA	500.0	21335.9	9343213	437.91	-12		15
DIESEL(C10-C36)	NA	NA	NA	500.0	20863.5	9052645	433.90	-13		15
DIESEL(C10-C40)	NA	NA	NA	500.0	20863.5	9052645	433.90	-13		15
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
BROMOBENZENE	1.766	1.763	1.769	80.0	14449.3	1130988	78.27	-2		15
HEXACOSANE	5.066	4.916	5.216	20.0	25262.2	508179	20.12	1		15

DSD5H31.MET

AS
08/31/11

5012

INITIAL CALIBRATION VERIFICATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LH31006A 08/31/2011 10:01
Conc Cont LFID & Datetime: LH31009A 08/31/2011 10:53
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	23336.2	11344641	486.14	-3		15
M.OIL(C18-C36)	NA	NA	NA	500.0	20003.5	11140471	556.92	11		15
M.OIL(C24-C36)	NA	NA	NA	500.0	16967.7	9510491	560.51	12		15
M.OIL(C24-C40)	NA	NA	NA	500.0	16967.7	9510491	560.51	12		15

DSD5H31.MET

AS
08/31/11

DAILY CALIBRATIONS

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LH31014A 08/31/2011 12:20
Conc Cont LFID & Datetime: LK15050A 11/16/2011 02:06
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	21686.7	12782796	589.43	18		20
DIESEL(C10-C24)	NA	NA	NA	500.0	20772.4	12018222	578.57	16		20
DIESEL(C10-C28)	NA	NA	NA	500.0	20862.9	12025075	576.39	15		20
DIESEL(C10-C25)	NA	NA	NA	500.0	20835.5	12025075	577.14	15		20
DIESEL(C9-C24)	NA	NA	NA	500.0	21272.9	12498890	587.55	18		20
DIESEL(C9-C25)	NA	NA	NA	500.0	21335.9	12505743	586.14	17		20
DIESEL(C10-C36)	NA	NA	NA	500.0	20863.5	12025075	576.37	15		20
DIESEL(C10-C40)	NA	NA	NA	500.0	20863.5	12025075	576.37	15		20
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
BROMOBENZENE	1.745	1.742	1.748	80.0	14449.3	1241042	85.89	7		20
HEXACOSANE	4.923	4.773	5.073	20.0	25262.2	519097	20.55	3		20

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LH31014A 08/31/2011 12:20
Conc Cont LFID & Datetime: LK15062A 11/16/2011 05:29
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	21686.7	12876183	593.74	19		20
DIESEL(C10-C24)	NA	NA	NA	500.0	20772.4	12106016	582.79	17		20
DIESEL(C10-C28)	NA	NA	NA	500.0	20862.9	12114291	580.66	16		20
DIESEL(C10-C25)	NA	NA	NA	500.0	20835.5	12113919	581.41	16		20
DIESEL(C9-C24)	NA	NA	NA	500.0	21272.9	12570122	590.90	18		20
DIESEL(C9-C25)	NA	NA	NA	500.0	21335.9	12578025	589.52	18		20
DIESEL(C10-C36)	NA	NA	NA	500.0	20863.5	12114291	580.65	16		20
DIESEL(C10-C40)	NA	NA	NA	500.0	20863.5	12114291	580.65	16		20
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
BROMOBENZENE	1.745	1.742	1.748	80.0	14449.3	1315156	91.02	14		20
HEXACOSANE	4.943	4.793	5.093	20.0	25262.2	534913	21.17	6		20

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

H214-02 → -11
H574-01 → -04

DSH026S: H227
H230

DSH025W: WTH004SB: H136 [DIZVET]
H207
H213
H226

DSH028W H229

Book #:	AD5-017
Instrument No.:	D5
Analytical Sequence:	LH31
Method File:	DSD5H31
Analytical Batch:	CDSD5H31120

SOP #	Rev. #
☑ EMAX-8015	4
☐ EMAX-LUFT	3
☐ EMAX-AK102/AK103	3
☐ EMAX-	

STANDARDS ID	Conc (mg/L)
ICAL	
☑ Diesel ☐ Alcohol SS3B-13-56-01	5 → 3000
☑ Motor Oil ☑ JP5 SS3B-13-56-03	10 → 3000
CH_2Cl_2 51154	Pure
DSL DCC SS3B-13-53-02	500/80/20
LCS	
JP5/5W30 DCC SS3B-13-53-03	500/500
~~Alaska DCC~~ DSL ICV SS3B-13-56-02	500/80/20
~~Arizona DCC~~ JP5/5W30 ICV SS3B-13-57-01	500/500
DRO SS3B-13-47-~~02~~ 01 KHL 8/31/11	—
GRO SS3B-13-47-02	—

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZCELITE-11	
☐	

Analyzed By: KHL

Date: 8/31/11

5018

GCT-105 Method: DSD5H31.met Data: LH31030.dat Project: EZC331 [Sequence: D131.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run Type	Level	Vial	Volume	Sample ID	Method	Filename	Sample	Action	Description
1		Unknown	0	99	2	IB	DSD5H31.met	LH31001.dat	1		
2		Unknown	0	100	2	IBD5H31120	DSD5H31.met	LH31002.dat	1		
3		Unknown	0	9	2	DSD5H3108 JP5/5W30 10/10PPM	DSD5H31.met	LH31003.dat	1		
4		Unknown	0	10	2	DSD5H3109 JP5/5W30 50/50PPM	DSD5H31.met	LH31004.dat	1		
5		Unknown	0	11	2	DSD5H3110 JP5/5W30 100/100PPM	DSD5H31.met	LH31005.dat	1		
6		Unknown	0	12	2	DSD5H3111 JP5/5W30 500/500PPM	DSD5H31.met	LH31006.dat	1		
7		Unknown	0	13	2	DSD5H3112 JP5/5W30 1500/1500PPM	DSD5H31.met	LH31007.dat	1		
8		Unknown	0	14	2	DSD5H3113 JP5/5W30 3000/3000PPM	DSD5H31.met	LH31008.dat	1		
9		Unknown	0	15	2	IDSD5H3102 JP5/5W30 500/500PPM	DSD5H31.met	LH31009.dat	1		
10		Unknown	0	1	2	DSD5H3101 DSL 5PPM	DSD5H31.met	LH31010.dat	1		
11		Unknown	0	2	2	DSD5H3102 DSL 10/20/5PPM	DSD5H31.met	LH31011.dat	1		
12		Unknown	0	3	2	DSD5H3103 DSL 50/40/10PPM	DSD5H31.met	LH31012.dat	1		
13		Unknown	0	4	2	DSD5H3104 DSL 100/60/15PPM	DSD5H31.met	LH31013.dat	1		
14		Unknown	0	5	2	DSD5H3105 DSL 500/80/20PPM	DSD5H31.met	LH31014.dat	1		
15		Unknown	0	6	2	DSD5H3106 DSL 1500/100/25PPM	DSD5H31.met	LH31015.dat	1		
16		Unknown	0	7	2	DSD5H3107 DSL 3000/220/55PPM	DSD5H31.met	LH31016.dat	1		
17		Unknown	0	8	2	IDSD5H3101 DSL 500/80/20PPM	DSD5H31.met	LH31017.dat	1		
18		Unknown	0	16	2	DRO(C8-C40)	DSD5H31.met	LH31018.dat	1		
19		Unknown	0	17	2	GRO(C6-C10)	DSD5H31.met	LH31019.dat	1		
20	Complete	Unknown	0	97	2	CDSD5H31121 DSL 500/80/20PPM	DSD5H31.met	LH31020.dat	1		
21	Complete	Unknown	0	98	2	CDSD5H31122 JP5/5W30 500/500PPM	DSD5H31.met	LH31021.dat	1		
22	Complete	Unknown	0	36	2	11H214-07	DSD5H31.met	LH31022.dat	1		
23	Complete	Unknown	0	37	2	11H214-08	DSD5H31.met	LH31023.dat	1		
24	Complete	Unknown	0	38	2	11H214-09	DSD5H31.met	LH31024.dat	1		FINAL
25	Complete	Unknown	0	39	2	11H214-10	DSD5H31.met	LH31025.dat	1		
26	Complete	Unknown	0	40	2	11H214-11	DSD5H31.met	LH31026.dat	1		
27	Complete	Unknown	0	29	2	11H214-02	DSD5H31.met	LH31027.dat	1		
28	Complete	Unknown	0	30	2	11H214-03	DSD5H31.met	LH31028.dat	1		
29	Complete	Unknown	0	31	2	11H214-04	DSD5H31.met	LH31029.dat	1		
30	Acquiring	Unknown	0	32	2	11H214-05	DSD5H31.met	LH31030.dat	1		
31		Unknown	0	33	2	11H214-06	DSD5H31.met	LH31031.dat	1		
32		Unknown	0	34	2	11H214-06M	DSD5H31.met	LH31032.dat	1		
33		Unknown	0	35	2	11H214-06S	DSD5H31.met	LH31033.dat	1		
34		Unknown	0	97	2	CDSD5H31123 DSL 500/80/20PPM	DSD5H31.met	LH31034.dat	1		
35		Unknown	0	98	2	CDSD5H31124 JP5/5W30 500/500PPM	DSD5H31.met	LH31035.dat	1		
36		Unknown	0	78	2	11H574-01T 0.01/1ML	DSD5H31.met	LH31036.dat	1		
37		Unknown	0	79	2	11H574-02T 0.01/1ML	DSD5H31.met	LH31037.dat	1		

VM 8/31/11

For Help, press F1 Running sample 11H214-05 Wednesday, August 31, 2011

Start | EZChrom Elite | GCT-105 Method: ... | GCT-105 (Offline) ... | untitled - Paint | D:\Projects\EZC331\... | 16:54

5019

GCT-105 Method: DSD5H31.met Data: LH31032.dat Project: EZC331 - [Sequence: LH31.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run Type	Level	Vial	Volume	Sample ID	Method	Filename	Sample	Action	Description
37		Unknown	0	79	2	11H574-02T 0.01/1ML	DSD5H31.met	LH31037.dat	1		
38		Unknown	0	80	2	11H574-03T 0.01/1ML	DSD5H31.met	LH31038.dat	1		
39		Unknown	0	81	2	11H574-04T 0.01/1ML	DSD5H31.met	LH31039.dat	1		Purple
40		Unknown	0	61	2	DSH026SL	DSD5H31.met	LH31040.dat	1		
41		Unknown	0	62	2	DSH026SC	DSD5H31.met	LH31041.dat	1		
42		Unknown	0	63	2	DSH026SB	DSD5H31.met	LH31042.dat	1		
43		Unknown	0	64	2	11H227-01	DSD5H31.met	LH31043.dat	1		Yellow
44		Unknown	0	65	2	11H227-02	DSD5H31.met	LH31044.dat	1		Yellow
45		Unknown	0	66	2	11H230-05	DSD5H31.met	LH31045.dat	1		Yellow
46		Unknown	0	97	2	CDSD5H31125 DSL 500/80/20PPM	DSD5H31.met	LH31046.dat	1		
47		Unknown	0	98	2	CDSD5H31126 JP5/5W30 500/500PPM	DSD5H31.met	LH31047.dat	1		
48		Unknown	0	67	2	11H230-01	DSD5H31.met	LH31048.dat	1		
49		Unknown	0	68	2	11H230-01M	DSD5H31.met	LH31049.dat	1		
50		Unknown	0	69	2	11H230-01S	DSD5H31.met	LH31050.dat	1		
51		Unknown	0	70	2	11H230-02	DSD5H31.met	LH31051.dat	1		
52		Unknown	0	71	2	11H230-03	DSD5H31.met	LH31052.dat	1		
53		Unknown	0	72	2	11H230-04	DSD5H31.met	LH31053.dat	1		
54		Unknown	0	73	2	11H230-06	DSD5H31.met	LH31054.dat	1		
55		Unknown	0	74	2	11H230-07	DSD5H31.met	LH31055.dat	1		
56		Unknown	0	75	2	11H230-08	DSD5H31.met	LH31056.dat	1		
57		Unknown	0	76	2	11H230-09	DSD5H31.met	LH31057.dat	1		
58		Unknown	0	97	2	CDSD5H31127 DSL 500/80/20PPM	DSD5H31.met	LH31058.dat	1		
59		Unknown	0	98	2	CDSD5H31128 JP5/5W30 500/500PPM	DSD5H31.met	LH31059.dat	1		
60		Unknown	0	77	2	11H230-10	DSD5H31.met	LH31060.dat	1		FINAL
61		Unknown	0	41	2	DSH025WL	DSD5H31.met	LH31061.dat	1		
62		Unknown	0	42	2	DSH025WC	DSD5H31.met	LH31062.dat	1		
63		Unknown	0	43	2	DSH025WB	DSD5H31.met	LH31063.dat	1		
64		Unknown	0	44	2	WTH004SB	DSD5H31.met	LH31064.dat	1		DI WET EXTRACT
65		Unknown	0	45	2	11H136-04	DSD5H31.met	LH31065.dat	1		DI WET EXTRACT
66		Unknown	0	46	2	11H207-01	DSD5H31.met	LH31066.dat	1		Yellow
67		Unknown	0	53	2	11H207-02	DSD5H31.met	LH31067.dat	1		Yellow
68		Unknown	0	54	2	11H207-04	DSD5H31.met	LH31068.dat	1		Yellow
69		Unknown	0	55	2	11H207-05	DSD5H31.met	LH31069.dat	1		Yellow
70		Unknown	0	97	2	CDSD5H31129 DSL 500/80/20PPM	DSD5H31.met	LH31070.dat	1		
71		Unknown	0	98	2	CDSD5H31130 JP5/5W30 500/500PPM	DSD5H31.met	LH31071.dat	1		
72		Unknown	0	47	2	11H207-03	DSD5H31.met	LH31072.dat	1		
73		Unknown	0	48	2	11H207-06	DSD5H31.met	LH31073.dat	1		

8/31/11

For Help, press F1 Equilibrating method...

Wednesday, August 31, 2011

Start | EZChrom Elite | GCT-105 Metho... | GCT-105 (Offline) ... | untitled - Paint | D:\Projects\EZC331\... | 17:17

5020

GCT-105 Method: D5D5H31.met Data: LH31030.dat Project: EZC331 - [Sequence: LH31.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run Type	Level	Vial	Volume	Sample ID	Method	Filename	Sample	Action	Description
73		Unknown	0	48	2	11H207-06	DSD5H31.met	LH31073.dat	1		
74		Unknown	0	49	2	11H213-01	DSD5H31.met	LH31074.dat	1		
75		Unknown	0	50	2	11H213-02	DSD5H31.met	LH31075.dat	1		
76		Unknown	0	51	2	11H213-03	DSD5H31.met	LH31076.dat	1		
77		Unknown	0	52	2	11H226-07	DSD5H31.met	LH31077.dat	1		
78		Unknown	0	56	2	11H226-01	DSD5H31.met	LH31078.dat	1		Yellow
79		Unknown	0	57	2	11H226-02	DSD5H31.met	LH31079.dat	1		Yellow
80		Unknown	0	58	2	11H226-03	DSD5H31.met	LH31080.dat	1		Yellow
81		Unknown	0	59	2	11H226-04	DSD5H31.met	LH31081.dat	1		Yellow
82		Unknown	0	97	2	CDSD5H31131 DSL 500/80/20PPM	DSD5H31.met	LH31082.dat	1		
83		Unknown	0	98	2	CDSD5H31132 JP5/5W30 500/500PPM	DSD5H31.met	LH31083.dat	1		
84		Unknown	0	60	2	11H226-06	DSD5H31.met	LH31084.dat	1		Yellow
85		Unknown	0	82	2	DSH028WL	DSD5H31.met	LH31085.dat	1		
86		Unknown	0	83	2	DSH028WC	DSD5H31.met	LH31086.dat	1		
87		Unknown	0	84	2	DSH028WB	DSD5H31.met	LH31087.dat	1		
88		Unknown	0	85	2	11H229-01	DSD5H31.met	LH31088.dat	1		
89		Unknown	0	86	2	11H229-02	DSD5H31.met	LH31089.dat	1		
90		Unknown	0	87	2	11H229-04	DSD5H31.met	LH31090.dat	1		
91		Unknown	0	88	2	11H229-05	DSD5H31.met	LH31091.dat	1		
92		Unknown	0	89	2	11H229-06	DSD5H31.met	LH31092.dat	1		
93		Unknown	0	90	2	11H229-03	DSD5H31.met	LH31093.dat	1		Yellow
94		Unknown	0	97	2	CDSD5H31133 DSL 500/80/20PPM	DSD5H31.met	LH31094.dat	1		
95		Unknown	0	98	2	CDSD5H31134 JP5/5W30 500/500PPM	DSD5H31.met	LH31095.dat	1	ANY	
96		Unknown	0		2		DSD5H31.met	LH31096.dat	1		
97		Unknown	0		2		DSD5H31.met	LH31097.dat	1		
98		Unknown	0		2		DSD5H31.met	LH31098.dat	1		
99		Unknown	0		2		DSD5H31.met	LH31099.dat	1		
100		Unknown	0		2		DSD5H31.met	LH31100.dat	1		FINAL
101		Unknown	0		2						
102		Unknown	0		2						
103		Unknown	0		2						
104		Unknown	0		2						
105		Unknown	0		2						
106		Unknown	0		2						
107		Unknown	0		2						
108		Unknown	0		2						
109		Unknown	0		2						

vm 8/31/11

vm 8/31/11

For Help, press F1 Running sample 11H214-05 Wednesday, August 31, 2011

Start | EZChrom Elite | GCT-105 Metho... | GCT-105 (Offline) | untitled - Paint | D:\Projects\EZC331\... | 16:57

5021

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DSK015W: K069

DSK017W: K083

DSK018S: K110
K106
K097

DSK016W: K082 [c.c]

Book #:	AD5-018
Instrument No.:	D5
Analytical Sequence:	LK15
Method File:	DSD5H31/CCDSK02
Analytical Batch:	CDSD5H31/506

SOP #	Rev. #
☑ EMAX-8015D	4
☐ EMAX-LUFTE	3
☐ EMAX-AK102/AK103	3
☐ EMAX-	

STANDARDS ID	Conc (mg/L)
ICAL	
☐ Diesel ☐ Alcohol	
☐ Motor Oil ☐ JP5	
CH_2Cl_2 5115Y	Pure
DSL DCC SS3B-13-64-02	500/80/20
LCS	
JP5/5W30 DCC SS3B-13-64-03	500/500
Alaska DCC	
Arizona DCC	
Carbon Fractions DCC SS3B-13-53-01	20/20/20

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZCELITE-11	
☐	

Analyzed By: [illegible]

Date: 11/15/11

GCT-105 Method: DSD5H31.met Data: LK15021.dat Project: EZC331 [Sequence: LK15.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run Type	Level	Vial	Volume	Sample ID	Method	Filename	Sample	Action	Description
1	Complete	Unknown	0	99	2	IBD5H31566	DSD5H31.met	LK15001.dat	1		
2	Complete	Unknown	0	1	2	CDSD5H31566 DSL 500/80/20PPM	DSD5H31.met	LK15002.dat	1		
3	Complete	Unknown	0	2	2	CDSD5H31567 JP5/5W30 500/500PPM	DSD5H31.met	LK15003.dat	1		
4	Complete	Unknown	0	3	2	11J270-14W	DSD5H31.met	LK15004.dat	1		
5	Complete	Unknown	0	4	2	DSK015WB	DSD5H31.met	LK15005.dat	1		
6	Complete	Unknown	0	5	2	11K069-22	DSD5H31.met	LK15006.dat	1		
7	Complete	Unknown	0	6	2	11K069-10	DSD5H31.met	LK15007.dat	1		Light Yellow
8	Complete	Unknown	0	7	2	11K069-12	DSD5H31.met	LK15008.dat	1		Light Yellow
9	Complete	Unknown	0	8	2	11K069-16	DSD5H31.met	LK15009.dat	1		Light Yellow
10	Complete	Unknown	0	9	2	11K069-17	DSD5H31.met	LK15010.dat	1		Light Yellow
11	Complete	Unknown	0	10	2	11K069-19	DSD5H31.met	LK15011.dat	1		Light Yellow
12	Complete	Unknown	0	11	2	DSK015WL	DSD5H31.met	LK15012.dat	1		
13	Complete	Unknown	0	12	2	DSK015WC	DSD5H31.met	LK15013.dat	1		
14	Complete	Unknown	0	1	2	CDSD5H31568 DSL 500/80/20PPM	DSD5H31.met	LK15014.dat	1		
15	Complete	Unknown	0	2	2	CDSD5H31569 JP5/5W30 500/500PPM	DSD5H31.met	LK15015.dat	1		
16	Complete	Unknown	0	13	2	11K069-02	DSD5H31.met	LK15016.dat	1		Yellow
17	Complete	Unknown	0	14	2	11K069-03	DSD5H31.met	LK15017.dat	1		Yellow
18	Complete	Unknown	0	15	2	11K069-04	DSD5H31.met	LK15018.dat	1		Yellow
19	Complete	Unknown	0	16	2	11K069-05	DSD5H31.met	LK15019.dat	1		Yellow
20	Complete	Unknown	0	17	2	11K069-06	DSD5H31.met	LK15020.dat	1		Yellow
21	Acquiring	Unknown	0	18	2	11K069-08	DSD5H31.met	LK15021.dat	1		Yellow
22		Unknown	0	19	2	11K069-18	DSD5H31.met	LK15022.dat	1		Yellow
23		Unknown	0	20	2	11K069-18M	DSD5H31.met	LK15023.dat	1		Yellow
24		Unknown	0	21	2	11K069-18S	DSD5H31.met	LK15024.dat	1		Yellow
25		Unknown	0	1	2	CDSD5H31570 DSL 500/80/20PPM	DSD5H31.met	LK15025.dat	1		
26		Unknown	0	2	2	CDSD5H31571 JP5/5W30 500/500PPM	DSD5H31.met	LK15026.dat	1		
27		Unknown	0	22	2	DSK017WB	DSD5H31.met	LK15027.dat	1		
28		Unknown	0	23	2	DSK017WL	DSD5H31.met	LK15028.dat	1		FINAL
29		Unknown	0	24	2	DSK017WC	DSD5H31.met	LK15029.dat	1		
30		Unknown	0	25	2	11K083-13	DSD5H31.met	LK15030.dat	1		
31		Unknown	0	26	2	11K083-01	DSD5H31.met	LK15031.dat	1		Light Yellow
32		Unknown	0	27	2	11K083-03	DSD5H31.met	LK15032.dat	1		Light Yellow
33		Unknown	0	28	2	11K083-04	DSD5H31.met	LK15033.dat	1		Light Yellow
34		Unknown	0	29	2	11K083-05	DSD5H31.met	LK15034.dat	1		Light Yellow
35		Unknown	0	30	2	11K083-07	DSD5H31.met	LK15035.dat	1		Light Yellow
36		Unknown	0	31	2	11K083-08	DSD5H31.met	LK15036.dat	1		Light Yellow
37		Unknown	0	1	2	CDSD5H31572 DSL 500/80/20PPM	DSD5H31.met	LK15037.dat	1		

11/15/11

For Help, press F1 GCT-105: Sample ID 11K069-08 Tuesday, November 15, 2011

Start | EZChrom Elite | GCT-105 M... | GCT-105 (Offlin... | untitled - Paint | D:\Projects\EZC... | Calculator | 17:57

5023

GCT-105 Method: DSD5H31.met Data: LK15021.dat Project: EZC331 [Sequence: LK15.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run Type	Level	Vial	Volume	Sample ID	Method	Filename	Sample	Action	Description
37		Unknown	0	1	2	CDSD5H31572 DSL 500/80/20PPM	DSD5H31.met	LK15037.dat	1		
38		Unknown	0	2	2	CDSD5H31573 JP5/5W30 500/500PPM	DSD5H31.met	LK15038.dat	1		
39		Unknown	0	32	2	11K083-09	DSD5H31.met	LK15039.dat	1		
40		Unknown	0	33	2	11K083-10	DSD5H31.met	LK15040.dat	1		
41		Unknown	0	34	2	11K083-11	DSD5H31.met	LK15041.dat	1		
42		Unknown	0	35	2	11K083-12	DSD5H31.met	LK15042.dat	1		
43		Unknown	0	36	2	11K083-02T 0.01/1ML	DSD5H31.met	LK15043.dat	1		
44		Unknown	0	37	2	11K083-21T 0.01/1ML	DSD5H31.met	LK15044.dat	1		
45		Unknown	0	38	2	11K083-15	DSD5H31.met	LK15045.dat	1		Yellow
46		Unknown	0	39	2	11K083-15M	DSD5H31.met	LK15046.dat	1		Yellow
47		Unknown	0	40	2	11K083-15S	DSD5H31.met	LK15047.dat	1		Yellow
48		Unknown	0	41	2	11K083-17	DSD5H31.met	LK15048.dat	1		Yellow
49		Unknown	0	42	2	11K083-19	DSD5H31.met	LK15049.dat	1		Yellow
50		Unknown	0	1	2	CDSD5H31574 DSL 500/80/20PPM	DSD5H31.met	LK15050.dat	1		
51		Unknown	0	2	2	CDSD5H31575 JP5/5W30 500/500PPM	DSD5H31.met	LK15051.dat	1		
52		Unknown	0	57	2	6T1	DSD5H31.met	LK15052.dat	1		
53		Unknown	0	58	2	6T2	DSD5H31.met	LK15053.dat	1		
54		Unknown	0	59	2	9T1	DSD5H31.met	LK15054.dat	1		
55		Unknown	0	60	2	9T2	DSD5H31.met	LK15055.dat	1		
56		Unknown	0	61	2	DSK018SL	DSD5H31.met	LK15056.dat	1		
57		Unknown	0	62	2	DSK018SC	DSD5H31.met	LK15057.dat	1		
58		Unknown	0	63	2	DSK018SB	DSD5H31.met	LK15058.dat	1		
59		Unknown	0	64	2	11K110-01	DSD5H31.met	LK15059.dat	1		
60		Unknown	0	65	2	11K106-04	DSD5H31.met	LK15060.dat	1		
61		Unknown	0	66	2	11K097-01	DSD5H31.met	LK15061.dat	1		Amber
62		Unknown	0	1	2	CDSD5H31576 DSL 500/80/20PPM	DSD5H31.met	LK15062.dat	1		
63		Unknown	0	2	2	CDSD5H31577 JP5/5W30 500/500PPM	DSD5H31.met	LK15063.dat	1		
64		Unknown	0	99	2	IBD5K02578	CCD5K02.met	LK15064.dat	1		
65		Unknown	0	98	2	CCCD5K02578 20/20/20PPM	CCD5K02.met	LK15065.dat	1		
66		Unknown	0	43	2	DSK016WB	CCD5K02.met	LK15066.dat	1		
67		Unknown	0	44	2	DSK016WL	CCD5K02.met	LK15067.dat	1		
68		Unknown	0	45	2	DSK016WC	CCD5K02.met	LK15068.dat	1		
69		Unknown	0	46	2	11K082-10	CCD5K02.met	LK15069.dat	1		
70		Unknown	0	47	2	11K082-02	CCD5K02.met	LK15070.dat	1		Light Yellow
71		Unknown	0	48	2	11K082-03	CCD5K02.met	LK15071.dat	1		Light Yellow
72		Unknown	0	49	2	11K082-07	CCD5K02.met	LK15072.dat	1		Light Yellow
73		Unknown	0	50	2	11K082-04T 0.1/1ML	CCD5K02.met	LK15073.dat	1		Light Yellow

FINAL

For Help, press F1 Running sample 11K069-08

Start | EZChrom Elite | GCT-105 M... | GCT-105 (Offlin... | untitled - Paint | D:\Projects\EZC... | Calculator | Tuesday, November 15, 2011 17:57

5021

GCT-105 Method: DSD5H31.met Data: LK15021.dat Project: EZC331 - [Sequence: LK15.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run Type	Level	Vial	Volume	Sample ID	Method	Filename	Sample	Action	Description
73		Unknown	0	50	2	11K082-04T 0.1/1ML	CCD5K02.met	LK15073.dat	1		Light Yellow
74		Unknown	0	51	2	11K082-04M 0.1/1ML	CCD5K02.met	LK15074.dat	1		Light Yellow
75		Unknown	0	52	2	11K082-04S 0.1/1ML	CCD5K02.met	LK15075.dat	1		Light Yellow
76		Unknown	0	98	2	CCCD5K02579 20/20/20PPM	CCD5K02.met	LK15076.dat	1		
77		Unknown	0	1	2	CDSD5K02580 DSL 500/80/20PPM	CCD5K02.met	LK15077.dat	1		
78		Unknown	0	2	2	CDSD5K02581 JP5/5W30 500/500PPM	CCD5K02.met	LK15078.dat	1		
79		Unknown	0	53	2	11K082-05T 0.1/1ML	CCD5K02.met	LK15079.dat	1		Light Yellow
80		Unknown	0	54	2	11K082-06T 0.1/1ML	CCD5K02.met	LK15080.dat	1		Light Yellow
81		Unknown	0	55	2	11K082-08T 0.1/1ML	CCD5K02.met	LK15081.dat	1		Light Yellow
82		Unknown	0	56	2	11K082-09T 0.1/1ML	CCD5K02.met	LK15082.dat	1		Light Yellow
83		Unknown	0	98	2	CCCD5K02582 20/20/20PPM	CCD5K02.met	LK15083.dat	1	ANY	
84		Unknown	0		2	IB	CCD5K02.met	LK15084.dat	1		
85		Unknown	0		2	IB	CCD5K02.met	LK15085.dat	1		
86		Unknown	0		2	IB	CCD5K02.met	LK15086.dat	1		
87		Unknown	0		2	IB	CCD5K02.met	LK15087.dat	1		
88		Unknown	0		2	IB	CCD5K02.met	LK15088.dat	1		
89		Unknown	0		2	IB	CCD5K02.met	LK15089.dat	1		
90		Unknown	0		2	IB	CCD5K02.met	LK15090.dat	1		
91		Unknown	0		2	IB	CCD5K02.met	LK15091.dat	1		
92		Unknown	0		2	IB	CCD5K02.met	LK15092.dat	1		
93		Unknown	0		2	IB	CCD5K02.met	LK15093.dat	1		
94		Unknown	0		2	IB	CCD5K02.met	LK15094.dat	1		
95		Unknown	0		2	IB	CCD5K02.met	LK15095.dat	1		
96		Unknown	0		2	IB	CCD5K02.met	LK15096.dat	1		
97		Unknown	0		2	IB	CCD5K02.met	LK15097.dat	1		
98		Unknown	0		2	IB	CCD5K02.met	LK15098.dat	1		
99		Unknown	0		2	IB	CCD5K02.met	LK15099.dat	1		
100		Unknown	0		2	IB	CCD5K02.met	LK15100.dat	1		
101		Unknown	0		2	IB	CCD5K02.met	LK15101.dat	1		
102		Unknown	0		2	IB	CCD5K02.met	LK15102.dat	1		
103		Unknown	0		2	IB	CCD5K02.met	LK15103.dat	1		
104		Unknown	0		2	IB	CCD5K02.met	LK15104.dat	1		
105		Unknown	0		2	IB	CCD5K02.met	LK15105.dat	1		
106		Unknown	0		2	IB	CCD5K02.met	LK15106.dat	1		
107		Unknown	0		2	IB	CCD5K02.met	LK15107.dat	1		
108		Unknown	0		2	IB	CCD5K02.met	LK15108.dat	1		
109		Unknown	0		2	IB	CCD5K02.met	LK15109.dat	1		

FINAL

For Help, press F1 Running sample 11K069-08

Start | EZChrom Elite | GCT-105 M... | GCT-105 (Offlin... | untitled - Paint | D:\Projects\EZC... | Calculator | Tuesday, November 15, 2011 17:57

5025

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG
for
TPH

SOP	Rev. #
☐ EMAX-3510	1
☐ EMAX-3520	4
☐ EMAX-3540	1
☑ EMAX-3550	3
☐ EMAX-3580	1
☐ EMAX-8015AZ	0
☐ EMAX-AK 102/103	3
☐ EMAX-LUFT E	3
☐ EMAX-	

Note: For samples and relevant QCs/Standards extracted, refer to attached extraction sequence.

Lab Sample ID	Sonicator #	Concentrator # (35°C)
DSK018-SB	4	1
SL	6	1
-SC	6	1
K097-01	4	1
K106-04	6	1
K110-01	6	1

Book #: EDS-055

Preparation Batch: DSK018S

Matrix: Soil

Micropipette ID: PE00-04 (1000µL)

Micropipette ID: PE97A-01 (200 µL)

STANDARDS	ID	Amount Added (ml)
Surrogate		
Surrogate	SS3-009-05-03	0.5
LCS/MS (diesel)	SS3-009-04-19	0.10
LCS/MS		

Reagent	Lot # / ID
CH_2Cl_2	5115d
Na_2SO_4	SW/B-002-02-02
HCl	-
Silica Sand	89872
Silica Gel	-

TUNING

Sonicator #	Reading
4	227
6	25%

Concentrator Water Bath Temp. (°C)

1	35	35
2	~~35~~ JL 11/15/11	~~35~~
3		
4		
5		
6		

Comments:

Test thermometer = T_1

Prepared By: JL

Standard Added By: JL 11/15/11 ~~ML~~ JL

Witnessed By: ML

Checked By: JM

Extract Received By: JM 11/15/11

Extraction Location: SE06 #05

Disposal Date:

Disposed By:

EMAX LABORATORIES, INC

FileID: DSK018S

EXTRACTION LOG FOR EXTRACTABLE TPH

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Ve(ml)	ExpAmt	ExpVe(ml)	PrepFctr	Comments
11DSK018S01	DSK018SB	10	g	11/15/11 10:34	10	10	10	1	
11DSK018S02	DSK018SL	10	g	11/15/11 10:34	10	10	10	1	
11DSK018S03	DSK018SC	10	g	11/15/11 10:34	10	10	10	1	
11DSK018S04	K097-01	10.01	g	11/15/11 10:36	10	10	10	1	
11DSK018S05	K106-04	10	g	11/15/11 10:36	10	10	10	1	
11DSK018S06	K110-01	10.02	g	11/15/11 10:37	10	10	10	1	

Balance ID: 10203192. Calibration check was verified prior to use.

Ve=extract volume

PrepFctr=(ExpAmt/Aliquot)(Ve/ExpVe)

☐ Extraction Started @ 11/15/11 11:14

Prepared By: jv

☑ Extraction Ended @ 11/15/11 17:26

Checked By: JM

Comments:

Date 11/15/11

5028

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METALS / MERCURY

SDG#: 11K110

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K110

METHOD 3050B/6010B
METALS BY TRACE ICP

One (1) soil sample was received on 11/11/11 for Metals CAM analysis, Method 3050B/6010B in accordance with Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source. Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project. Refer to MRL summary form for details.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for IPK032SL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample was analyzed at the frequency prescribed by the project.
Percent recoveries for K110-01M/S were within project QC limits.
In addition, analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
METALS BY TRACE ICP

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K110
Instrument ID : T-ID8

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	IPK032SB	1	NA	11/22/1119:40	11/18/1112:14	ID8K019022	ID8K019020	IPK032S	Method Blank
LCS1S	IPK032SL	1	NA	11/22/1119:43	11/18/1112:14	ID8K019023	ID8K019020	IPK032S	Lab Control Sample (LCS)
LCD1S	IPK032SC	1	NA	11/22/1119:46	11/18/1112:14	ID8K019024	ID8K019020	IPK032S	LCS Duplicate
IR-70-RB-122AS	K110-01A	0.98	20.7	11/22/1119:48	11/18/1112:14	ID8K019025	ID8K019020	IPK032S	Analytical Spike Sample
IR-70-RB-122	K110-01	0.98	20.7	11/22/1119:51	11/18/1112:14	ID8K019026	ID8K019020	IPK032S	Field Sample
IR-70-RB-122DL	K110-01J	4.9	20.7	11/22/1119:54	11/18/1112:14	ID8K019027	ID8K019020	IPK032S	Diluted Sample
IR-70-RB-122MS	K110-01M	0.926	20.7	11/22/1119:57	11/18/1112:14	ID8K019028	ID8K019020	IPK032S	Matrix Spike Sample (MS)
IR-70-RB-122MSD	K110-01S	0.943	20.7	11/22/1120:00	11/18/1112:14	ID8K019029	ID8K019020	IPK032S	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/11/11 09:43
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/11/11
SDG NO.	: 11K110	Date Extracted:	11/18/1112:14
Sample ID:	IR-70-RB-122	Date Analyzed:	11/22/11 19:51
Lab Samp ID:	K110-01	Dilution Factor:	0.98
Lab File ID:	ID8K019026	Matrix :	SOIL
Ext Btch ID:	IPK032S	% Moisture :	20.7
Calib. Ref.:	ID8K019020	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	12.4	3.71
Arsenic	5.47	1.24	0.494
Barium	57.1	1.24	0.247
Beryllium	0.173J	1.24	0.124
Cadmium	ND	1.24	0.247
Chromium	9.44	1.24	0.371
Cobalt	3.28	1.24	0.247
Copper	3.99	1.24	0.371
Lead	1.81	1.24	0.371
Molybdenum	ND	6.18	0.371
Nickel	6.23	1.24	0.371
Selenium	ND	1.24	0.618
Silver	ND	1.24	0.371
Thallium	ND	1.24	0.618
Vanadium	18.3	1.24	0.185
Zinc	24.6	2.47	1.24

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
SDG NO.	: 11K110	Date Extracted:	11/18/1112:14
Sample ID:	MBLK1S	Date Analyzed:	11/22/11 19:40
Lab Samp ID:	IPK032SB	Dilution Factor:	1
Lab File ID:	ID8K019022	Matrix :	SOIL
Ext Btch ID:	IPK032S	% Moisture :	NA
Calib. Ref.:	ID8K019020	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	10.0	3.00
Arsenic	ND	1.00	0.400
Barium	ND	1.00	0.200
Beryllium	ND	1.00	0.100
Cadmium	ND	1.00	0.200
Chromium	ND	1.00	0.300
Cobalt	ND	1.00	0.200
Copper	ND	1.00	0.300
Lead	ND	1.00	0.300
Molybdenum	ND	5.00	0.300
Nickel	ND	1.00	0.300
Selenium	ND	1.00	0.500
Silver	ND	1.00	0.300
Thallium	ND	1.00	0.500
Vanadium	ND	1.00	0.150
Zinc	ND	2.00	1.00

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K110
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1S				
CONTROL NO.:	IPK032SB	IPK032SL	IPK032SC		
LAB FILE ID:	ID8K019022	ID8K019023	ID8K019024		
DATIME EXTRCTD:	11/18/1112:14	11/18/1112:14	11/18/1112:14	DATE COLLECTED:	NA
DATIME ANALYZD:	11/22/1119:40	11/22/1119:43	11/22/1119:46	DATE RECEIVED:	11/18/11
PREP. BATCH:	IPK032S	IPK032S	IPK032S		
CALIB. REF:	ID8K019020	ID8K019020	ID8K019020		

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Antimony	ND	250	250	100	250	248	99	1	80-120	20
Arsenic	ND	50	52.4	105	50	51.9	104	1	80-120	20
Barium	ND	50	50.6	101	50	50.1	100	1	80-120	20
Beryllium	ND	50	52.1	104	50	51.5	103	1	80-120	20
Cadmium	ND	50	51.3	103	50	50.7	101	1	80-120	20
Chromium	ND	50	50.9	102	50	50.2	100	1	80-120	20
Cobalt	ND	50	51.3	103	50	50.7	101	1	80-120	20
Copper	ND	50	51.4	103	50	50.9	102	1	80-120	20
Lead	ND	50	51.1	102	50	50.4	101	1	80-120	20
Molybdenum	ND	50	54.9	110	50	54.3	109	1	80-120	20
Nickel	ND	50	51.8	104	50	51	102	2	80-120	20
Selenium	ND	50	51.2	102	50	50.6	101	1	80-120	20
Silver	ND	50	50.7	101	50	50.2	100	1	80-120	20
Thallium	ND	50	49.2	98	50	48.6	97	1	80-120	20
Vanadium	ND	50	53.3	107	50	52.5	105	1	80-120	20
Zinc	ND	50	55.3	111	50	54.5	109	1	80-120	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K110
METHOD: METHOD 3050B/6010B

MATRIX: SOIL % MOISTURE: 20.7

DILTN FACTR:	0.98	0.926	0.943
SAMPLE ID:	IR-70-RB-122		
CONTROL NO.:	K110-01	K110-01M	K110-01S
LAB FILE ID:	ID8K019026	ID8K019028	ID8K019029
DATIME EXTRCTD:	11/18/1112:14	11/18/1112:14	11/18/1112:14
DATIME ANALYZD:	11/22/1119:51	11/22/1119:57	11/22/1120:00
PREP. BATCH:	IPK032S	IPK032S	IPK032S
CALIB. REF:	ID8K019020	ID8K019020	ID8K019020

DATE COLLECTED: 11/11/11 09:43
DATE RECEIVED: 11/11/11

ACCESSION:

PARAMETER	SMPL RSLT mg/kg	SPIKE AMT mg/kg	MS RSLT mg/kg	MS % REC	SPIKE AMT mg/kg	MSD RSLT mg/kg	MSD % REC	RPD %	QC LIMIT %	MAX RPD %
Antimony	ND	292	280	96	297	286	96	2	75-125	20
Arsenic	5.47	58.4	66.8	105	59.5	68.1	105	2	75-125	20
Barium	57.1	58.4	108	87	59.5	109	87	1	75-125	20
Beryllium	.173J	58.4	59.5	102	59.5	61	102	3	75-125	20
Cadmium	ND	58.4	58	99	59.5	59.5	100	2	75-125	20
Chromium	9.44	58.4	67.5	99	59.5	68.6	99	2	75-125	20
Cobalt	3.28	58.4	61.7	100	59.5	63.1	101	2	75-125	20
Copper	3.99	58.4	62.5	100	59.5	63.7	100	2	75-125	20
Lead	1.81	58.4	60	100	59.5	61.4	100	2	75-125	20
Molybdenum	ND	58.4	62.6	107	59.5	64.1	108	2	75-125	20
Nickel	6.23	58.4	65.3	101	59.5	66.5	101	2	75-125	20
Selenium	ND	58.4	58.9	101	59.5	60.3	101	2	75-125	20
Silver	ND	58.4	58.7	100	59.5	59.9	101	2	75-125	20
Thallium	ND	58.4	54.5	93	59.5	56	94	3	75-125	20
Vanadium	18.3	58.4	79.5	105	59.5	81.7	107	3	75-125	20
Zinc	24.6	58.4	88.7	110	59.5	90.8	111	2	75-125	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K110
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL		% MOISTURE:	20.7
DILUTION FACTOR:	0.98	4.9		
SAMPLE ID:	IR-70-RB-122	IR-70-RB-122DL		
EMAX SAMP ID:	K110-01	K110-01J		
LAB FILE ID:	ID8K019026	ID8K019027		
DATE EXTRACTED:	11/18/1112:14	11/18/1112:14	DATE COLLECTED:	11/11/11 09:43
DATE ANALYZED:	11/22/1119:51	11/22/1119:54	DATE RECEIVED:	11/11/11
PREP. BATCH:	IPK032S	IPK032S		
CALIB. REF:	ID8K019020	ID8K019020		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Antimony	ND	ND	0	10
Arsenic	5.47	6.23	14*	10
Barium	57.1	60.1	5	10
Beryllium	0.173J	ND	NA	10
Cadmium	ND	ND	0	10
Chromium	9.44	10.0	6	10
Cobalt	3.28	3.41J	NA	10
Copper	3.99	4.36J	NA	10
Lead	1.81	1.89J	NA	10
Molybdenum	ND	ND	0	10
Nickel	6.23	6.43	3	10
Selenium	ND	ND	0	10
Silver	ND	ND	0	10
Thallium	ND	ND	0	10
Vanadium	18.3	19.2	5	10
Zinc	24.6	25.8	5	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K110
METHOD: METHOD 3050B/6010B

==========

MATRIX:	SOIL		% MOISTURE:	20.7
DILTN FACTR:	0.98	0.98		
SAMPLE ID:	IR-70-RB-122			
CONTROL NO.:	K110-01	K110-01A		
LAB FILE ID:	ID8K019026	ID8K019025		
DATIME EXTRCTD:	11/18/1112:14	11/18/1112:14	DATE COLLECTED:	11/11/11 09:43
DATIME ANALYZD:	11/22/1119:51	11/22/1119:48	DATE RECEIVED:	11/11/11
PREP. BATCH:	IPK032S	IPK032S		
CALIB. REF:	ID8K019020	ID8K019020		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Antimony	ND	309	309	100	75-125
Arsenic	5.47	61.8	74	111	75-125
Barium	57.1	61.8	121	103	75-125
Beryllium	.173J	61.8	66.4	107	75-125
Cadmium	ND	61.8	64.9	105	75-125
Chromium	9.44	61.8	73.1	103	75-125
Cobalt	3.28	61.8	68.7	106	75-125
Copper	3.99	61.8	70.7	108	75-125
Lead	1.81	61.8	67.3	106	75-125
Molybdenum	ND	61.8	65.5	106	75-125
Nickel	6.23	61.8	64.5	94	75-125
Selenium	ND	61.8	66.7	108	75-125
Silver	ND	61.8	61.7	100	75-125
Thallium	ND	61.8	61.4	99	75-125
Vanadium	18.3	61.8	85	108	75-125
Zinc	24.6	61.8	94.6	113	75-125

ICP QC CHECK TABLE

QC	ICV	CCV	ICSAB	ICSA	MLCV
Limit%	90-110	90-110	80-120	80-120	80-120
Comp	mg/L	mg/L	mg/L	mg/L	mg\L
Al	100	100	400	400	200
Sb	1.5	1.5	1	0	5
As	1	1	1	0	1
Ba	2	2	0.5	0	5
Be	1.5	1.5	0.5	0	5
B	2.5	2.5	0.5	0	5
Cd	2	2	1	0	5
Ca	75	75	500	500	250
Cr	2.5	2.5	0.5	0	5
Co	1	1	0.5	0	1
Cu	2.5	2.5	0.5	0	5
Fe	25	25	200	200	200
Pb	2.5	2.5	1	0	5
Li	0.5	0.5	1	0	0.5
Mg	60	60	200	200	100
Mn	2.5	2.5	0.5	0	5
Mo	2.5	2.5	1	0	5
Ni	2.5	2.5	1	0	5
K	60	60	75	0	250
Se	1	1	1	0	1
Ag	0.5	0.5	1	0	0.5
Na	60	60	75	0	150
Sr	0.5	0.5	0.5	0	0.5
Tl	2.5	2.5	1	0	5
Sn	0.5	0.5	1	0	0.5
Ti	0.5	0.5	1	0	0.5
V	1.5	1.5	0.5	0	5
Zn	2.5	2.5	1	0	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 11/22/11 18:31

End Date: 11/22/11 23:16

SOP #	Rev. #
☐ EMAX-6010	7
☐ EMAX-6010C	1
☐ EMAX-200.7	2
☐ EMAX-	

Book #: AD8-021

Instrument No.: D8

Analytical Batch: 108K019

Analytical Sequence: S-11K6010 (029)

Method File: 11K6010 (029)

Database: EMAX14

Comments:

IEC update for B, cd.

CCB7, CCB8, 1009 > 3x IDL. Reanalyze K201-02, K201-03, and K575-01.

	STANDARDS ID		STANDARDS ID
S0	SM1B14-7805	S30	SM1B14-6802
S1	NA	S31	-6802
S2		ICV	-8201
S3		CCV	-8301
S4		ICSA	-8502
S5		ICSAB	-6702
S6		CRI/MRL 1	-8101
S7		MRL2	-7401
S8			
S9			
S10			
S11			
S12			
S16			
S17			
S18			
S20	SM1B14-8401		
S21	-6503		
S22	-6504		
S23	-8402		
S24	-6702		
S25	-6703		
S26	-7401		
S27	-7802		
S28	-7803		
S29	-7804		

Analyzed By: [illegible]

Date: 11/22/11

7010

SEQUENCE FILE : ID8K019

4-18	19-33	34-43	44-53	54-63
LFID	LSID	TIME	DATE	DF
ID8K019001	Blank	18:31	11/22/11	1.000
ID8K019002	S20	18:34	11/22/11	1.000
ID8K019003	S21	18:37	11/22/11	1.000
ID8K019004	S22	18:40	11/22/11	1.000
ID8K019005	S23	18:43	11/22/11	1.000
ID8K019006	S24	18:47	11/22/11	1.000
ID8K019007	S25	18:49	11/22/11	1.000
ID8K019008	S26	18:53	11/22/11	1.000
ID8K019009	S27	18:56	11/22/11	1.000
ID8K019010	S28	18:59	11/22/11	1.000
ID8K019011	S29	19:02	11/22/11	1.000
ID8K019012	S30	19:05	11/22/11	1.000
ID8K019013	S31	19:08	11/22/11	1.000
ID8K019014	ICV	19:11	11/22/11	1.000
ID8K019015	ICB	19:14	11/22/11	1.000
ID8K019016	MRLK2201	19:17	11/22/11	1.000
ID8K019017	MRLK2202	19:20	11/22/11	1.000
ID8K019018	ICSA1	19:23	11/22/11	1.000
ID8K019019	ICSAB1	19:31	11/22/11	1.000
ID8K019020	CCV1	19:34	11/22/11	1.000
ID8K019021	CCB1	19:37	11/22/11	1.000
ID8K019022	IPK032SB	19:40	11/22/11	1.000
ID8K019023	IPK032SL	19:43	11/22/11	1.000
ID8K019024	IPK032SC	19:46	11/22/11	1.000
ID8K019025	K110-01A	19:48	11/22/11	1.000
ID8K019026	K110-01	19:51	11/22/11	1.000
ID8K019027	K110-01J	19:54	11/22/11	5.000
ID8K019028	K110-01M	19:57	11/22/11	1.000
ID8K019029	K110-01S	20:00	11/22/11	1.000
ID8K019030	Blank	20:03	11/22/11	1.000
ID8K019031	CCV2	20:06	11/22/11	1.000
ID8K019032	CCB2	20:09	11/22/11	1.000
ID8K019033	IPK033SB	20:12	11/22/11	1.000
ID8K019034	IPK033SL	20:15	11/22/11	1.000
ID8K019035	IPK033SC	20:18	11/22/11	1.000
ID8K019036	K520-01A	20:20	11/22/11	1.000
ID8K019037	K520-01	20:23	11/22/11	1.000
ID8K019038	K520-01J	20:26	11/22/11	5.000
ID8K019039	K520-02	20:29	11/22/11	1.000
ID8K019040	Blank	20:32	11/22/11	1.000
ID8K019041	CCV3	20:35	11/22/11	1.000
ID8K019042	CCB3	20:37	11/22/11	1.000
ID8K019043	IPK034WB	20:40	11/22/11	1.000
ID8K019044	IPK034WL	20:43	11/22/11	1.000
ID8K019045	IPK034WC	20:46	11/22/11	1.000
ID8K019046	K202-03A	20:49	11/22/11	1.000
ID8K019047	K202-03	20:52	11/22/11	1.000
ID8K019048	K202-03J	20:54	11/22/11	5.000
ID8K019049	K202-03M	20:57	11/22/11	1.000
ID8K019050	K202-03S	21:00	11/22/11	1.000
ID8K019051	K202-01	21:03	11/22/11	1.000
ID8K019052	Blank	21:06	11/22/11	1.000

TIOL1

ID8K019053	CCV4	21:09	11/22/11	1.000
ID8K019054	CCB4	21:12	11/22/11	1.000
ID8K019055	K202-02	21:15	11/22/11	1.000
ID8K019056	K202-04	21:18	11/22/11	1.000
ID8K019057	Blank	21:21	11/22/11	1.000
ID8K019058	CCV5	21:24	11/22/11	1.000
ID8K019059	CCB5	21:27	11/22/11	1.000
ID8K019060	IPK035WB	21:30	11/22/11	1.000
ID8K019061	IPK035WL	21:33	11/22/11	1.000
ID8K019062	IPK035WC	21:36	11/22/11	1.000
ID8K019063	K201-04A	21:39	11/22/11	1.000
ID8K019064	K201-04	21:42	11/22/11	1.000
ID8K019065	K201-04J	21:45	11/22/11	5.000
ID8K019066	K201-04M	21:48	11/22/11	1.000
ID8K019067	K201-04S	21:51	11/22/11	1.000
ID8K019068	K201-01	21:53	11/22/11	1.000
ID8K019069	Blank	21:56	11/22/11	1.000
ID8K019070	CCV6	21:59	11/22/11	1.000
ID8K019071	CCB6	22:02	11/22/11	1.000
ID8K019072	K201-02	22:05	11/22/11	1.000
ID8K019073	K201-03	22:08	11/22/11	1.000
ID8K019074	Blank	22:12	11/22/11	1.000
ID8K019075	CCV7	22:15	11/22/11	1.000
ID8K019076	CCB7	22:18	11/22/11	1.000
ID8K019077	IPK036SB	22:21	11/22/11	1.000
ID8K019078	IPK036SL	22:24	11/22/11	1.000
ID8K019079	IPK036SC	22:27	11/22/11	1.000
ID8K019080	K575-01A	22:29	11/22/11	5.000
ID8K019081	K575-01T	22:32	11/22/11	5.000
ID8K019082	K575-01J	22:35	11/22/11	25.00
ID8K019083	K575-01M	22:38	11/22/11	5.000
ID8K019084	K575-01S	22:41	11/22/11	5.000
ID8K019085	Blank	22:44	11/22/11	1.000
ID8K019086	CCV8	22:47	11/22/11	1.000
ID8K019087	CCB8	22:50	11/22/11	1.000
ID8K019088	K575-01A	22:53	11/22/11	1.000
ID8K019089	K575-01	22:57	11/22/11	1.000
ID8K019090	K575-01J	23:00	11/22/11	5.000
ID8K019091	K575-01M	23:03	11/22/11	1.000
ID8K019092	K575-01S	23:06	11/22/11	1.000
ID8K019093	Blank	23:10	11/22/11	1.000
ID8K019094	CCV9	23:13	11/22/11	1.000
ID8K019095	CCB9	23:16	11/22/11	1.000

VERSION 11A UNIT 2 SUMMARY of ICV and CCV ICBK019 DATE 11/22/11 INST FMAX1

Analyte	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	--	---	-	--	- -	-	-	-	- -		- --		-		-	-	-	-	---	-		----	-		--	----	-	-
S20	---	---	-		----	-		-	- -	-	-	-	-		- -			--	--		----	--		- -	--		--	
S21	-		-	-	-	---	- --	-- -	---	- - -	---			-		---	-	-				-	--	-	-		-	-
S22	----	---	----	---	---	-	--	----	--	- - -	- --				-	- -	--		---	-		---	-		-		-	-
S23	-	-	-		--		-	-	-	- -	----				- -	-	- -	-	---	-		---	--		--	- -		-
S24	-	-	-	-	- --	-	----	-		--	- --		-		----	--		---	-	-		----	-		--	--	-	
S25	----	- -	- --	----	- -	--	-	- --	-	-		-	-	-	--		-	----	- --	- --	- -		--	--	-- -	- -	-	- -
S26	--	- -	-	--		--		-	- --	-	--	---	---	---	- -	-	---	--	----	----	-	- -	---	-	---	- -	-	
S27	-			-		---	----	-- -	---	- -	- -	-	---		--	----	----		-	-		--		---	-	- -	--	- --
S28	-	-	----	-	-	- -	- --	----	--	- - -	---	--	-	--	-	--	--	----	- --	----	- -	-	--	----	--	---	--	
S29		-	- -	-- -	- -	-	---	--	-	---	---		-		--			--	--	- -	----		-	- -	-	-	-	
S30	-	----	-			---	---	-- -	--	----	- --	--	-		-	----		-	-	-	-	--		-	-- -	-	-	- -
S31	- -	--	---	---	-				- -	-		----	----	----	---	-	----	----	---	-- -	- --	-	----	---	- --	- -		
ICV	103	101	105	100	100	100	99	99	97	97	101	102	97	102	99	96	101	97	99	105	102	106	99	94	101	102	101	104
ICB	----	---	- --	- -	-				---		-- -	--	---	- --		- -	- --	- -	---			-- -			--	-- -	--	--
MRLK2201	-					-	---	-	--	---			-	-	---	--		----	--	---	----		-	----			-	-
MRLK2202	-	-	--	----	- -		-- -	----			--	-	- -	- -	-	-	-	----	--	----	--		-	--	-	-	-	-
ICSA1	97	---	-	--	---	--	-	93	----	----	- -	97	--	-	96	----	----	- -	---	- --	-	--	-	---	---	--		-
ICSAB1	97	103	107	97	99	97	95	93	93	95	104	98	96	103	96	93	102	96	101	106	107	108	95	88	94	101	100	104
CCV1	99	100	104	96	97	97	98	96	94	94	98	99	95	98	95	92	98	94	95	104	99	102	95	94	99	95	98	102
CCB1	--	-- -	----	----	--	-	-	-	-	---	--	--	---	-		--	-- -	-	----		- -	- --		----	----	--	-	--
IPK0325S	- -	----	- -		-	- -	----	- --	-	--	----	-	--	- -	- --	--		----	-	--	----	--	-	----	- -	---		- -
IPK0325		-	----	-- -	--		----	----		---	- -	- -	-		---	- -	-	----	---	----	-	- -	----		--	--		-
IPK0325	-	-	-	-	- -		--		--	-	- -	---	--	--	-	-		--		---	----		-	- -		- -		---
K120-0[illegible]			-		-				--	-		---	----		-	-		--	--	-	----		- -	--		-		-
K120-0[illegible]	-	-	---	-	- -			-	--	--			-	-	-	- --	- -	----		----	----	--	- -			--	-	---
K120-0[illegible]	---	-	- --		----			-	---	---		--	-		-	--	---	----	-	-		- -	-			- -		---
K120-0[illegible]	---	---	- -	-			-	- -	- -	---	--	---	-	- -		- -	- -	-	---	-			- --	--			---	-
K120-0[illegible]	-	--			-	----	- --	----			--		-		---			----	---	---		--	--	----	---		-		
BLANK	--	- -	-	-			-		----	- --	-	-		-		-	---		--				-		-- -	-		
CCV2	98	100	105	99	97	97	100	97	94	93	94	102	96	99	96	92	98	94	96	105	99	103	95	95	99	99	98	103
CCB2	-	---					----	----	--	- -	--	-			---				-		-	-			-		- -	
IPK[illegible]	- --	-			-							-	- -	--	---			-		---	--			---	----		-	-
IPK[illegible]	-	- -	----	--	-	-		-	--	-	-				-	-	-	- --	-	---	--				-			-
IPK[illegible]	-		--	-	-			-	-					--							-			-			--	
K[illegible]		-	----	- --	-		- -	---			--	-			-			- -	-	--	---						--	
K[illegible]		-	-	-	-		-	---			--			--	- -		-	- -	-		--		-	-	--		--	-
K[illegible]		-	----	-	-	--		- --	-	- -	- -					-		--		---	----						---	
K[illegible]	-	-	- -		-	-	---	---		-	--	--		- -	---		---	-- -		-	-	----	-	-	--		--	
BLANK													----	---	- -		--		---	--		----	-	-		--		-
CCV3	96	99	104	95	96	96	99	97	95	94	96	102	95	97	95	92	98	94	96	103	99	103	95	93	99	97	98	103
CCB3	--	-	- -		--	---	----	- -	----	----	- --	--	--	- -	- -	--	-		- -			- -		-	- -	-- -	--	-
IPK034w5	-	-	- -	-		----	----	----	- --	---	---	-			---				-				-	----	- -	- -	-	
IPK034w	-	- -	---	- --	----			--		-	----	- -	----		-		----	- --	-	- -	--	----	----	---	-			
IPK034w	-	- -	---	- -	- -		---	--	-	----	----	--			- -	----		-	---			-	- -			---	-	- --
K202-034	-	-	- -	--	-	-	- -		-		- -	-	-	- -	--	-	-		----	- -	--		- -	---	--		-	-
K202-034	-	-	--		---			-			---	- -	--	-	---	- -	---	-		---		-					-	
K202-034	-	-	--	--	---	-- -	--	-			---	-				- -			-			-				-	-	
K202-034	- -	-- -		-		-	--	--	-	-	-	---	----	- -	-	--		----	----	----	---	- --	----	- --	--	- -	--	----
K202-034	----	---	-	-	-		--	--		---	----	-		-	---	-	-	-	----	----	----	--		- -	--			-
K202-01	- -	-	-		-	--	---	-	- -	-			---		- -	-	-	----	-	----	- --	-	-			-	--	- -
BLANK	---	-	- -	- -	----	----	-- -	-	-- -	-		--	-	- -	- -	----	-- -	--	---	- --	----	-	- -	----	--			-

CCV6	95	98	103	94	96	96	98	97	95	94	96	100	94	96	94	90	98	94	97	103	98	103	95	92	99	97	99	103
CCB4	----	---		----	---				---	---	---	---			---		---	---	---	----	----		---	---	---	---	----	---
K202-02	---	---	---				---	---			---	----	---	----	---	---	---	---	---	---	---		---	---	---	---		
K202-04	---	---	---	---			---	---				---		---		---	---	---		---	---	---	---	---		---		
BLANK	---		---				---	---		---	---	---	---	---	---	---	---	---	---	---				---	---			---
CCV5	96	97	102	95	96	96	97	97	95	94	96	102	94	97	94	91	98	94	97	101	98	103	95	91	99	97	98	102
CCB5	---		---	---	---		---	---	---	---		---	---	---	---		---	---	---	---	---			---	---			---
IPK035WF	----	---	----	---		---	---	---	---			---				---			---		---	---	---		---	---	---	
IPK035WI	---	----	----	---	----		---	---		----	---	---	---	---			---	---	---	---	---	---	---	---	---	----	---	
IPK035WC	---	----	----	---	---		---		---	---	---	---	---	---	---	---	---	---	---			---	---	---	---	---	---	
K201-04A	---	---	---	---	----				---	---	---	----	---	---		---	---	---	---				---	---	---	---	---	
K201-04	---	---				----	---	---	---					---			---	---	---	---	---	---		---	---	---	---	---
K201-04C						---	----	---	---	---		---	---	---	---	---		---	---			---	---	---	----	---	---	---
K201-04P	---		---	---	---	---	---	---	---		---	---			---	---	---	---	----	---	---		---	---	---	---		
K201-04S	---	---	---	----	---				---	---	----	---	---	---	---	---	----	---	---			---	---	---	---	---	---	
K201-01		----	---	---	---	---	---	---	---	---		---	---	---	---		---	---	---	---			---	---	----	---	---	---
BLANK						---	----	---				---	---	---	---	---	----	---	---	---			----	---	---	---	---	---
CCV6	96	101	106	95	96	97	100	97	95	95	97	101	96	97	95	91	99	95	97	105	99	103	95	95	101	97	100	103
CCB6	----	---	---	---	---				---	---	----	---	---		---	---		---	---	---	---	---	---		---	---		
K201-02		---	---	---	---	---	---	---	---	---		---	----	---	---	---	----	---	---			---	---	---	---	---	---	
K201-03	---	---	----	----	----			----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
BLANK	---	---			---	---	----	---	---	---				---	---			---	---	---	---		----	---	---	---	---	
CCV7	97	101	106	95	96	98	100	98	96	95	98	101	96	98	95	91	100	95	98	105	100	105	96	95	100	98	100	103
CCB7	---	---	---	---	---		---	---	---	---		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IPK036SB	---	----	---	---	---	---			---	----	---	---	----	---		---	---	---	---	----	---		---	---	---		---	
IPK036SA	----	---	---	---		---	---	---	---					----	---	---	---	---			---	---	---	---	---		---	---
IPK036SC	---	---	---	---		---	---	---	----	---	---	----	----	---	---	---	---	---	---	---	---		---	---	---	---	---	
K275-01A	---	---			---	---	----	----	----	---			---	----	---	---		---			---	---	---	---				
K275-01T	---	---	---	---	---			---			---	---	----	---	---	---	---	---	---	----	---		---	---	---	---		
K275-01L		---	---				---	---				---	---	---	---		---	---	---				---	---	---	---	---	
K275-01P	---	---	---		---	---	---	---	---	---	---		---	---	---	---	----	----			---	---	---	---	---	---		
K275-01T	---		---			---	---		---					---	---		---	---	---	---	---		---	---	---	---		---
BLANK	---	---	---	---			---		---	----	---	---	---	---	----		---	---			---		---	---	---	---		
CCV8	97	99	104	95	97	98	100	97	96	94	98	101	95	99	97	91	98	95	99	103	197	105	96	94	98	97	99	103
CCB8	---	---	---	---		---	---	---	---	---	---	---	---	---	---		---			---	---	---	---			---		
K275-02T	---	---	---	---		---	---								---			---	---	---				---	---			---
K275-02L	---	---	---	---											---			---	---	---				---				
K275-02P	---		---	---	---	---	---	---	---	---	---	---	---	---	---		----			---			---	---	---			
K275-02T			---			---	---	---	---		---		---	---	---	---		---					---	---	---	---		
BLANK	---	---	---	---		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CCV9	96	99	105	95	96	136	101	97	97	96	98	102	95	99	98	97	98	95	99	105	100	105	96	95	98	98	99	103
CCB9	---	---	---	---	---						---	---	---			---	---			---	---	---	---	---	---	---		

CC limit of each parameter are listed in a table attached next to all the ICP check forms
* Out of QC Limit

VERSION [illegible] UNIT [illegible] SUMMARY of CALIBRATION BLANKS ID8K019 (SOIL) DATE 1/22/11 INST [illegible]MAX

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	[illegible]	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK																												
S20																												
S21																												
S22																												
S23																												
S24																												
S25																												
S26																												
S27																												
S28																												
S29																												
S30																												
S31																												
ICV																												
ICB	17.7	.020	1.56	.480	.160	8.50	.270	25.0	.270	.110	.490	11.4	1.86	.860	9.48	.380	.640	.220	.166	.020	.210	63.6	.070	.500	.010	1.33	.170	7.37
MRLK2201																												
MRLK2202																												
ICSA1		-.610	-2.74	.750	.120	-14.0	.670		560	-.690	1.04		.540	17.6		1.17	1.09	1.21	.193	2.85	.050	51.3	1.000	1.28	.880	5.60	-.610	2.97
ICSA31																												
CCV1																												
CCB1	19.6	.100	.270	.170	.110	7.34	.100	.102	.670	-.020	.250	-.150	.080	.620	2.81	.030	.520	.170	.177	.010	.160	27.7	.180	.440	.090	.400	.000	4.63
LFK0325B																												
LFK0325L																												
LFK0325C																												
K110 01A																												
K110 01																												
K110 01C																												
K110 01F																												
K110 01S																												
BLANK																												
CCV2																												
ICB2	2.76	.090	.270	.210	.090	5.78	.080	80.4	.270	.110	.010	-1.49	-.260	1.17	4.45	.220	.380	.060	.123	9.3	.070	9.30	.070	.690	.230	.660	.120	4.16
LFK0325A																												
LFK0325L																												
LFK0325C																												
K227 01A																												
K227 01																												
K227 01C																												
K227 02																												
BLANK																												
CCV3																												
CCB3	3.65	.030	1.42	.156	.110	4.98	.100	99.5	.200	.080	.400	.020	.490	1.65	.400	.050	.590	.110	.100	1.37	.210	14.5	.020	.690	.440	1.69	.020	4.88
LFK034WB																												
LFK034WL																												
LFK034WC																												
K202 03A																												
K202-03																												
K202 03C																												
K202 03F																												
K202 03S																												
K202 01																												
BLANK																												

CCV4																												
CC34	-2.32	.730	.400	.170	.020	5.43	.110	90.7	.060	.040	-.500	.190	.080	1.34	8.12	.050	.440	.180	.162	.210	.160	18.7	.000	.540	.050	.220	.090	4.05
K202-02																												
K202-04																												
BLANK																												
CCV5																												
CCB5	-6.32	.910	.360	.210	.082	5.53	.060	86.9	.090	.030	.580	-2.39	.140	.250	8.94	.100	.470	.190	.166	.980	.160	11.3	.150	.910	.160	1.25	.000	4.17
IPK035WB																												
IPK035WL																												
IPK035WC																												
K201-04A																												
K201-04																												
K201-04.1																												
K201-04M																												
K201-04S																												
K201-01																												
BLANK																												
CCV6																												
CCB6	.790	-.040	-1.50	.110	.050	4.37	.060	93.0	.030	.090	.240	.440	.270	-1.27	7.49	.330	.360	.300	.104	.520	.190	13.3	.020	.650	.210	.210	.150	4.56
K201-02																												
K201-03																												
BLANK																												
CCV7																												
CCB7	90.3	6.29	10.7	1.06	.282	17.5	-.450	74.6	-1.03	1.23	5.33	7.78	-.860	7.29	2.76	1.95	.520	.510	90.7	5.90	.940	61.4	-.190	3.17	.130	1.01	1.35	3.32
IPK036SP																												
IPK036SL																												
IPK036SC																												
K575-01A																												
K575-01T																												
K575-01L																												
K575-01M																												
K575-01S																												
BLANK																												
CCV8																												
CCB8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.660	-1.38	5.58	[illegible]	[illegible]	[illegible]	9.03	[illegible]	.730	-.720	82.2	6.55	.610	63.7	.240	2.66	.670	2.97	-1.55	4.13
K575-01A																												
K575-01																												
K575-01L																												
K575-01M																												
K575-01S																												
BLANK																												
CCV9																												
CCB9	99.8	1.76	-1.5	1.080	.230	173	.570	53.3	.590	1.21	5.57	5.29	130	-6.98	32.5	2.45	680	-.230	299	10.4	.720	106	-.620	3.81	1.50	3.43	1.70	5.68

QC limit of each parameter are listed in a table attached next to all the QC check forms
* : Out of QC limit

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
1	0	0	0	0	Unk	S0		ID8K019001			1	☒	unk	---
2	0	0	0	0	Unk	S20		ID8K019002			1	☒	unk	---
3	0	0	0	0	Unk	S21		ID8K019003			1	☒	unk	---
4	0	0	0	0	Unk	S22		ID8K019004			1	☒	unk	---
5	0	0	0	0	Unk	S23		ID8K019005			1	☒	unk	---
6	0	0	0	0	Unk	S24		ID8K019006			1	☒	unk	---
7	0	0	0	0	Unk	S25		ID8K019007			1	☒	unk	---
8	0	0	0	0	Unk	S26		ID8K019008			1	☒	unk	---
9	0	0	0	0	Unk	S27		ID8K019009			1	☒	unk	---
10	0	0	0	0	Unk	S28		ID8K019010			1	☒	unk	---
11	0	0	0	0	Unk	S29		ID8K019011			1	☒	unk	---
12	0	0	0	0	Unk	S30		ID8K019012			1	☒	unk	---
13	0	0	0	0	Unk	S31		ID8K019013			1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8K019014			1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8K019015			1	☒	3XIDL	None
16	3	2	3	1	QC	MRLK2201		ID8K019016			1	☒	MRL-EMAX	None
17	4	2	4	1	QC	MRLK2202		ID8K019017			1	☒	MRL-AFCEE	None
18	5	2	5	1	QC	ICSA1		ID8K019018			1	☒	ICSA-DoD	None
19	6	2	6	1	QC	ICSAB1		ID8K019019			1	☒	ICSAB	None
20	7	2	7	1	QC	CCV1		ID8K019020			1	☒	CCV	None
21	8	2	8	1	QC	CCB1		ID8K019021			1	☒	3XIDL	None
22	9	2	9	1	QC	IPK032SB		ID8K019022			1	☒	ICSAB	None
23	10	2	10	1	QC	IPK032SL		ID8K019023			1	☒	LCS	None
24	11	2	11	1	QC	IPK032SC		ID8K019024			1	☒	LCS	None
25	12	2	12	1	Unk	K110-01A		ID8K019025			1	☒	unk	---
26	13	2	1	2	Unk	K110-01		ID8K019026			1	☒	unk	---
27	14	2	2	2	Unk	K110-01J		ID8K019027			1	☒	unk	---
28	15	2	3	2	Unk	K110-01M		ID8K019028			1	☒	unk	---
29	16	2	4	2	Unk	K110-01S		ID8K019029			1	☒	unk	---
30	17	2	5	2	Blank	Blank		ID8K019030			1	☐		---
31	18	2	6	2	QC	CCV2		ID8K019031			1	☒	CCV	None
32	19	2	7	2	QC	CCB2		ID8K019032			1	☒	3XIDL	None
33	20	2	8	2	QC	IPK033SB		ID8K019033			1	☒	1/2LOQ	None
34	21	2	9	2	QC	IPK033SL		ID8K019034			1	☒	LCS	None
35	22	2	10	2	QC	IPK033SC		ID8K019035			1	☒	LCS	None
36	23	2	11	2	Unk	K520-01A		ID8K019036			1	☒	unk	---
37	24	2	12	2	Unk	K520-01		ID8K019037			1	☒	unk	---
38	25	2	1	3	Unk	K520-01J		ID8K019038			1	☒	unk	---
39	26	2	2	3	Unk	K520-02		ID8K019039			1	☒	unk	---

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
40	27	2	3	3	Blank	Blank		ID8K019040			1	☐		---
41	28	2	4	3	QC	CCV3		ID8K019041			1	☒	CCV	None
42	29	2	5	3	QC	CCB3		ID8K019042			1	☒	3XIDL	None
43	30	2	6	3	QC	IPK034WB		ID8K019043			1	☒	1/2LOQ	None
44	31	2	7	3	QC	IPK034WL		ID8K019044			1	☒	LCS	None
45	32	2	8	3	QC	IPK034WC		ID8K019045			1	☒	LCS	None
46	33	2	9	3	Unk	K202-03A		ID8K019046			1	☒	unk	---
47	34	2	10	3	Unk	K202-03		ID8K019047			1	☒	unk	---
48	35	2	11	3	Unk	K202-03J		ID8K019048			1	☒	unk	---
49	36	2	12	3	Unk	K202-03M		ID8K019049			1	☒	unk	---
50	37	2	1	4	Unk	K202-03S		ID8K019050			1	☒	unk	---
51	38	2	2	4	Unk	K202-01		ID8K019051			1	☒	unk	---
52	39	2	3	4	Blank	Blank		ID8K019052			1	☐		---
53	40	2	4	4	QC	CCV4		ID8K019053			1	☒	CCV	None
54	41	2	5	4	QC	CCB4		ID8K019054			1	☒	3XIDL	None
55	42	2	6	4	Unk	K202-02	DISSOLVED	ID8K019055			1	☒	unk	---
56	43	2	7	4	Unk	K202-04	DISSOLVED	ID8K019056			1	☒	unk	---
57	44	2	8	4	Blank	Blank		ID8K019057			1	☐		---
58	45	2	9	4	QC	CCV5		ID8K019058			1	☒	CCV	None
59	46	2	10	4	QC	CCB5		ID8K019059			1	☒	3XIDL	None
60	47	2	11	4	QC	IPK035WB		ID8K019060			1	☒	1/2LOQ	None
61	48	2	12	4	QC	IPK035WL		ID8K019061			1	☒	LCS	None
62	49	2	1	5	QC	IPK035WC		ID8K019062			1	☒	LCS	None
63	50	2	2	5	Unk	K201-04A		ID8K019063			1	☒	unk	---
64	51	2	3	5	Unk	K201-04		ID8K019064			1	☒	unk	---
65	52	2	4	5	Unk	K201-04J		ID8K019065			1	☒	unk	---
66	53	2	5	5	Unk	K201-04M		ID8K019066			1	☒	unk	---
67	54	2	6	5	Unk	K201-04S		ID8K019067			1	☒	unk	---
68	55	2	7	5	Unk	K201-01		ID8K019068			1	☒	unk	---
69	56	2	8	5	Blank	Blank		ID8K019069			1	☐		---
70	57	2	9	5	QC	CCV6		ID8K019070			1	☒	CCV	None
71	58	2	10	5	QC	CCB6		ID8K019071			1	☒	3XIDL	None
72	59	2	11	5	Unk	K201-02		ID8K019072			1	☒	unk	---
73	60	2	12	5	Unk	K201-03		ID8K019073			1	☒	unk	---
74	61	3	1	1	Blank	Blank		ID8K019074			1	☐		---
75	81	3	9	2	QC	CCV7		ID8K019075			1	☒	CCV	None
76	82	3	10	2	QC	CCB7		ID8K019076			1	☒	3XIDL	None
77	62	3	2	1	QC	IPK036SB		ID8K019077			1	☒	1/2LOQ	None
78	63	3	3	1	QC	IPK036SL		ID8K019078			1	☒	LCS	None

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
79	64	3	4	1	QC	IPK036SC		ID8K019079			1	☒	LCS	None
80	65	3	5	1	Unk	K575-01A	5X	ID8K019080			1	☒	unk	---
81	66	3	6	1	Unk	K575-01T	5X	ID8K019081			1	☒	unk	---
82	67	3	7	1	Unk	K575-01J	25X	ID8K019082			1	☒	unk	---
83	68	3	8	1	Unk	K575-01M	5X	ID8K019083			1	☒	unk	---
84	69	3	9	1	Unk	K575-01S	5X	ID8K019084			1	☒	unk	---
85	70	3	10	1	Blank	Blank		ID8K019085			1	☐		---
86	71	3	11	1	QC	CCV8		ID8K019086			1	☒	CCV	None
87	72	3	12	1	QC	CCB8		ID8K019087			1	☒	3XIDL	None
88	73	3	1	2	Unk	K575-01A		ID8K019088			1	☒	unk	---
89	74	3	2	2	Unk	K575-01		ID8K019089			1	☒	unk	---
90	75	3	3	2	Unk	K575-01J		ID8K019090			1	☒	unk	---
91	76	3	4	2	Unk	K575-01M		ID8K019091			1	☒	unk	---
92	77	3	5	2	Unk	K575-01S		ID8K019092			1	☒	unk	---
93	78	3	6	2	Blank	Blank		ID8K019093			1	☐		---
94	79	3	7	2	QC	CCV9		ID8K019094			1	☒	CCV	None
95	80	3	8	2	QC	CCB9		ID8K019095			1	☒	3XIDL	None

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ID8K019 Section 1 of 3

INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID
1	Blank	.00100	.00002	-.00002	.00036	.00005	.00052	-.00005	.00028	-.00007	-.00121	Blank
2	S20					1.0144		.13270				S20
3	S21					10.195		1.2893				S21
4	S22				.56112						.15252	S22
5	S23				5.6000						1.5337	S23
6	S24						.09902					S24
7	S25						1.0017					S25
8	S26	.22124							1.0044	.14700		S26
9	S27	8.3417							9.4904	1.4396		S27
10	S28		.00525									S28
11	S29		.05117									S29
12	S30			.00125								S30
13	S31			.00502								S31
14	ICV	103.13	1.5168	1.0473	1.9926	1.5068	2.4942	1.9801	74.487	2.4245	.96638	ICV
15	ICB	.01769	.00002	.00156	.00048	.00018	.00850	.00027*	.02503	.00027	.00011	ICB
16	MRLK2201	.21299	.09711	.00899	.01019	.01005	.10012	.01046	1.0125	.01012	.00968	MRLK2201
17	MRLK2202	.20476	.04824	.00938	.00494	.00408	.09960	.00509	.50093	.00989	.00964	MRLK2202
18	ICSA1	388.12	-.00061	-.00274	.00075	.00012	-.01403*	.00067	466.50	.00056	-.00069	ICSA1
19	ICSAB1	388.35	1.0304	1.0693	.48688	.49685	.48586	.95480	465.21	.46608	.47572	ICSAB1
20	CCV1	99.480	1.4962	1.0362	1.9150	1.4511	2.4255	1.9646	72.360	2.3490	.93762	CCV1
21	CCB1	.01055	.00010	-.00021	.00017	.00011	.00734	.00010	.10168*	-.00007	-.00002	CCB1
22	IPK032SB	.00468	.00042	-.00023	.00006	-.00001	.00345	-.00009	.00600	.00040	.00000	IPK032SB
23	IPK032SL	5.1213	2.5033	.52375	.50619	.52086	.48497	.51327	50.870	.50883	.51302	IPK032SL
24	IPK032SC	5.0607	2.4823	.51875	.50109	.51509	.47962	.50698	50.264	.50176	.50655	IPK032SC
25	K110-01A	47.280	2.4977	.59895	.97553	.53746	.47520	.52544	109.16	.59186	.55630	K110-01A
26	K110-01	41.671	-.00759	.04427	.46189	.00140	-.00082	.00007	61.177	.07636	.02657	K110-01
27	K110-01J	8.8423	-.00272	.01009	.09730	.00030	.00093	.00001	13.114	.01624	.00552	K110-01J
28	K110-01M	53.442	2.3988	.57173	.92473	.50920	.46808	.49711	116.80	.57821	.52880	K110-01M
29	K110-01S	53.674	2.4072	.57256	.91428	.51269	.47073	.50033	116.71	.57662	.53096	K110-01S
30	Blank	.09983	-.00006	.00029	-.00006	.00003	.00200	.00004	.20059	-.00007	.00011	Blank
31	CCV2	98.323	1.5018	1.0487	1.9167	1.4534	2.4206	1.9908	72.727	2.3546	.93495	CCV2
32	CCB2	.00276	.00009	-.00002	.00001	.00009	.00598	.00008	.08940*	.00000	.00001	CCB2
33	IPK033SB	.00123	.00115	-.00029	.00121	.00003	.00289	-.00008	.01347	.00048	.00007	IPK033SB
34	IPK033SL	4.8459	2.4281	.50764	.48385	.49905	.46871	.49815	49.339	.49044	.49146	IPK033SL
35	IPK033SC	4.9589	2.4633	.51798	.49725	.51158	.47670	.50839	50.256	.50125	.50242	IPK033SC
36	K520-01A	7.8061	2.5856	3.6839	.59168	.53535	.50651	.54171	67.599	3.5078	.67206	K520-01A
37	K520-01	2.2997	.03694	3.0272	.07571	.00016	.00533	-.00038	18.519	3.0443	.14690	K520-01
38	K520-01J	.40695	.00677	.57373	.01437	.00008	.00175	-.00017	3.5728	.57907	.02746	K520-01J
39	K520-02	3.3170	.00098	.00118	.01036	.00003	.02067	.00061	4.3556	.00725	.00062	K520-02
40	Blank	-.00528	-.00059	-.00138	.00000	.00003	.00021	.00001	.03164	-.00010	.00014	Blank
41	CCV3	96.008	1.4848	1.0376	1.9051	1.4393	2.4023	1.9760	72.730	2.3721	.93887	CCV3
42	CCB3	.00365	-.00003	-.00142	.00015	.00011	.00498	.00010	.09955*	.00020	.00008	CCB3
43	IPK034WB	-.00304	-.00019	-.00039	.00008	-.00002	.00214	.00003	.00403	-.00006	.00014	IPK034WB
44	IPK034WL	5.1960	2.6192	.56187	.50703	.52397	.51777	.54286	50.232	.51308	.50452	IPK034WL
45	IPK034WC	5.1032	2.6136	.54358	.49732	.51393	.52253	.52809	50.451	.50450	.49500	IPK034WC
46	K202-03A	5.5645	2.5823	.59066	.56091	.53375	.52216	.57262	179.03	.53164	.52746	K202-03A
47	K202-03	.16454	.00241	.00015	.03248	-.00002	.00711	.02387	132.49	.00081	.00099	K202-03
48	K202-03J	.03983	.00008	-.00056	.00708	.00007	.00292	.00527	28.159	.00043	.00019	K202-03J
49	K202-03M	5.3292	2.6622	.56255	.53206	.50538	.53028	.54735	179.55	.50286	.50058	K202-03M
50	K202-03S	5.3377	2.6484	.56538	.53220	.50425	.52562	.54818	177.02	.50020	.49993	K202-03S
51	K202-01	.20655	.00050	.00111	.03197	-.00001	.00649	.02359	129.57	.00104	.00107	K202-01
52	Blank	-.00992	-.00025	.00118	-.00006	-.00003	.00101	.00004	.03720	-.00015	-.00003	Blank

7525

53	CCV4	95.016	1.4757	1.0342	1.8895	1.4265	2.4019	1.9657	72.747	2.3640	.93813	CCV4
54	CCB4	-.00232	-.00023	.00040	.00012	.00002	.00543	.00011	.09018*	-.00006	.00004	CCB4
55	K202-02	.01545	-.00079	.00021	.03066	.00003	.00717	.02227	128.24	.00046	.00099	K202-02
56	K202-04	.00824	-.00183	.00162	.02978	-.00001	.00631	.02190	127.23	.00050	.00089	K202-04
57	Blank	-.00921	-.00035	-.00041	-.00011	-.00001	.00086	.00005	.03144	.00000	.00016	Blank
58	CCV5	95.553	1.4616	1.0223	1.8975	1.4329	2.3891	1.9337	72.675	2.3676	.93726	CCV5
59	CCB5	-.00532	.00091	.00036	.00021	.00008	.00553	.00006	.08687*	.00009	.00003	CCB5
60	IPK035WB	-.00780	.00039	-.00097	-.00012	.00000	.00229	-.00007	.00444	.00025	.00007	IPK035WB
61	IPK035WL	4.7502	2.4152	.51086	.48988	.50256	.46849	.50211	49.748	.49884	.50065	IPK035WL
62	IPK035WC	4.7537	2.4286	.51527	.49297	.50499	47190	.50318	49.882	.50190	.50211	IPK035WC
63	K201-04A	88.204	2.4498	.61785	1.6847	.53775	47773	.59116	89.170	.66875	.59153	K201-04A
64	K201-04	85.186	.00277	.06970	1.2243	.00844	.00757	.08277	42.039	.15797	.05989	K201-04
65	K201-04J	18.553	.00043	.01389	.25812	.00192	.00259	.01808	9.0037	.03376	.01247	K201-04J
66	K201-04M	114.50	2.2364	.59109	1.7550	.50571	.44005	.56420	89.036	.66166	.55975	K201-04M
67	K201-04S	124.66	2.2541	.60107	1.8048	.50395	.44772	.57376	90.887	.68220	.56361	K201-04S
68	K201-01	76.757	.00476	.10882	1.2255	.00874	.01333	.05248	22.166	.28511	.11256	K201-01
69	Blank	-.00084	-.00033	.00044	.00012	.00002	.00056	-.00003	.02225	-.00009	.00012	Blank
70	CCV6	96.199	1.5112	1.0599	1.8920	1.4349	2.4196	2.0052	72.811	2.3839	.94727	CCV6
71	CCB6	.00079	-.00004	-.00150	.00011	.00005	.00437	.00006	.09299*	.00000	.00009	CCB6
72	K201-02	95.800	.00515	.07173	.95321	.01727	.00572	.05439	31.362	.14230	.10199	K201-02
73	K201-03	112.14	.00252	.08301	1.0827	.01609	.00453	.05891	26.830	.15186	.08969	K201-03
74	Blank	.00085	-.00086	-.00103	-.00004	.00000	.00017	-.00002	.02142	-.00013	.00006	Blank
75	CCV7	96.725	1.5178	1.0638	1.9048	1.4408	2.4390	2.0020	73.344	2.3913	.95082	CCV7
76	CCB7	.09027*	.00629*	-.01073*	.00106	.00028*	.01754*	-.00045*	.07464*	-.00103*	-.00123*	CCB7
77	IPK036SB	.15738*	-.00034	-.00052	-.00001	-.00006	.00195	-.00011	.00942	.00034	-.00013	IPK036SB
78	IPK036SL	4.8260	2.4790	.52450	.49286	.50438	.47514	.51405	49.695	.50068	.50214	IPK036SL
79	IPK036SC	4.8883	2.5010	.53160	.49587	.50666	.48068	.51944	50.149	.50574	.50725	IPK036SC
80	K575-01A	49.603	7.5369	.59530	3.8573	.53695	5.4422	.53808	291.73	.67341	.71554	K575-01A
81	K575-01T	44.873	5.0782	.01520	3.4270	.00350	5.0391	.00859	252.42	.16429	.20301	K575-01T
82	K575-01J	8.2151	.94019	.00272	.64379	.00075	.93920	.00185	48.487	.03165	.03753	K575-01J
83	K575 01M	55.491	5.1625	.13089	2.3392	.11196	4.9913	.11195	297.41	.26873	.25049	K575-01M
84	K575 01S	49.872	5.5829	.12031	1.7891	.11157	4.2147	.11496	272.16	.24712	.33284	K575-01S
85	Blank	.08834	.01129	-.00908	.00135	.00001	.06016	-.00049	.12635	-.00097	-.00108	Blank
86	CCV8	96.684	1.4834	1.0427	1.8991	1.4400	2.4492	1.9932	72.989	2.4045	.94404	CCV8
87	CCB8	.09731*	.00707*	-.01326*	.00083	.00032*	.04622*	-.00016	08663*	-.00066	-.00138*	CCB8
88	K575 01A	245.91	30.764*	.77911	18.951	61775	27.189*	.62283	1285.6*	1.4251	1.6672	K575-01A
89	K575-01	211.69	24.772*	.08982	16.519	01574	23.762*	.03972	1120 3*	.76603	.96503	K575-01
90	K575 01J	44.955	5.0659	.01681	3 4258	.00353	5.1256	.00868	256.92	16657	.20288	K575-01J
91	K575-01M	253.24	25.166*	.64421	11 014	51028	23 460*	.50034	1293.1*	1.2414	1.1766	K575-01M
92	K575-01S	228.47	26.764*	.59446	8.4703	50613	19.606*	50881	1181.5*	1.1328	1.5582	K575-01S
93	Blank	.12626	.03294	-.01200	.00368	00008	.29493	-.00033	43010	-.00077	-.00118	Blank
94	CCV9	97.582	1.4922	1.0539	1.9025	1.4427	2 5123	2.0258	72.685	2.4223	.94359	CCV9
95	CCB9	.09984*	.01055*	-.01148*	00100	.00023*	.17348*	-.00037*	.09331*	-.00059	-.00121*	CCB9
INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID

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INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID
1	Blank	.00110	.00003	.00011	-.00028	.00001	00006	-.00018	-.00051	-.00082	.00001	Blank
2	S20			.20439			.10345					S20
3	S21			2.0459			1.0316					S21
4	S22	.26596	.05351									S22
5	S23	2.5690	2.0832									S23
6	S24							.72061				S24
7	S25							7.2710				S25
8	S26								.76297	.44393		S26
9	S27								7.4033	4.4547		S27
10	S28					.02553						S28
11	S29					.25332						S29
12	S30				.03284						.00140	S30
13	S31				.16609						.00558	S31
14	ICV	2.5185	25.533	2.4332	.51055	59.277	2.3973	2.5301	2.4218	59.188	1.0489	ICV
15	ICB	.00049	.01142	.00186	-.00086	.00948	.00038	.00064	.00022	.16617	.00002	ICB
16	MRLK2201	.01067	.21598	.01038	.00930	.99789	.01000	.01034	.01026	.99305	.01018	MRLK2201
17	MRLK2202	.00994	.10342	.00341	.10104	.20612	.00508	.00974	.00980	1.0108	.01116	MRLK2202
18	ICSA1	.00104	193.67	-.00054	.01763	192.35	.00117	-.00109	.00121	.19262*	.00285	ICSA1
19	ICSAB1	.51834	196.56	.96011	1.1299	192.14	.46562	1.0174	.95512	75.527	1.0561	ICSAB1
20	CCV1	2.4376	24.828	2.3788	.48914	57.165	2.3055	2.4575	2.3507	57.192	1.0403	CCV1
21	CCB1	.00025	-.00015	.00008	.00062	-.00281	.00003	.00052	.00017	.17684	-.00001	CCB1
22	IPK032SB	.00017	.00592	-.00003	-.00026	-.00651	.00002	.00028	.00021	.14431	.00039	IPK032SB
23	IPK032SL	.51449	5.3228	.51089	.00140*	50.374	.49476	.54931	.51812	49.213	.51212	IPK032SL
24	IPK032SC	.50909	5.2476	.50392	.00060*	49.872	.48916	.54302	.51027	48.836	.50617	IPK032SC
25	K110-01A	.57234	80.673	.54437	.08389	83.687	1.5567	.53031	.52184	63.600	.54002	K110-01A
26	K110-01	.03226	77.181	.01465	.07888	35.757	1.0854	.00114	.05038	14.725	.00023	K110-01
27	K110-01J	.00705	16.734	.00306	.01526	7.6717	.23262	.00030	.01041	3.0682	-.00079	K110-01J
28	K110-01M	.53537	89.704	.51353	.09245	88.966	1.6633	.53649	.55891	64.220	.50468	K110-01M
29	K110-01S	.53529	90.368	.51661	.09506	89.094	1.6739	.53898	.55892	64.532	.50678	K110-01S
30	Blank	-.00019	.08044	-.00059	.00042	.05640	.00029	.00010	.00052	.12895	-.00008	Blank
31	CCV2	2.4053	24.883	2.3770	49277	57.508	2.3113	2.4538	2.3448	57.586	1.0466	CCV2
32	CCB2	.00001	-.00149	-.00026	-.00117	00449	.00022	.00038	.00006	.12815	-.00097	CCB2
33	IPK033SB	.00104	.07837	-.00018	-.00133	.00941	.00051	.00025	00292	.10907	-.00034	IPK033SB
34	IPK033SL	.48999	5.1584	.49042	.00048*	48.682	.47376	.52847	.49719	47.712	.49571	IPK033SL
35	IPK033SC	.50150	5.2583	.50150	00046*	49.771	.48682	.53761	50834	48.615	.50594	IPK033SC
36	K520-01A	1.9054	101.98	1.9323	00801	55.725	.69050	.52123	.48342	48.914	.56281	K520-01A
37	K520-01	1.3813	98.712	1.4367	.00675	7.0481	.19300	.00371	.01155	.51849	.00132	K520-01
38	K520-01J	.25221	18.839	.27132	00017	1.3716	03690	.00063	.00209	.11777	-.00011	K520-01J
39	K520-02	.03152	2.3618	.01655	.00097	1.1963	01656	.00113	.00336	.68097	.00116	K520-02
40	Blank	-.00037	-.00006	-.00017	-.00046	.00135	-.00008	.00008	.00010	.01618	-.00077	Blank
41	CCV3	2.4119	25.069	2.3652	.48581	56.897	2.2884	2.4540	2.3566	57.755	1.0346	CCV3
42	CCB3	-.00040	.00002	-.00049	-.00165	-.00040	.00005	.00059	.00011	.10569	-.00137	CCB3
43	IPK034WB	-.00037	.00139	.00012	-.00151	.00394	-.00021	.00032	.00004	.05090	-.00107	IPK034WB
44	IPK034WL	.51432	5.4181	.51154	.00014*	49.712	.49594	52568	.51076	49.231	.55373	IPK034WL
45	IPK034WC	.50715	5.3218	.50007	.00107*	49.809	.48664	.52957	.50166	49.603	.53457	IPK034WC
46	K202-03A	.54661	5.7579	.55260	.00628	57.161	.69526	.52104	.47636	51.864	.57355	K202-03A
47	K202-03	.00230	.17367	.01960	.00539	8.3698	.18719	-.00004	.00318	1.9297	.00010	K202-03
48	K202-03J	.00034	.04419	.00555	.00098	1.8220	.04100	.00017	.00084	.46998	-.00020	K202-03J
49	K202-03M	.51576	5.5289	.52494	.00695	57.497	.66281	.53754	.50964	52.081	.54723	K202-03M
50	K202-03S	.51032	5.5199	.52514	.00595	56.639	.65911	.53234	.50813	51.646	.55106	K202-03S
51	K202-01	.00257	.27538	.03478	.00418	8.1279	.18334	-.00029	.00320	1.9235	.00085	K202-01
52	Blank	-.00043	-.00283	-.00035	-.00156	-.00392	.00003	.00015	.00013	.08510	-.00043	Blank

53	CCV4	2.4001	24.991	2.3600	.48180	56.381	2.2568	2.4536	2.3557	58.093	1.0272	CCV4
54	CCB4	-.00050	-.00019	.00008	-.00134	.00812	.00005	.00044	.00018	.16284	.00031	CCB4
55	K202-02	.00223	.01810	.00287	.00486	8.0725	.17996	-.00013	.00316	1.7582	.00106	K202-02
56	K202-04	.00267	.01731	.00322	.00489	7.9132	.17622	-.00007	.00462	1.7132	.00143	K202-04
57	Blank	-.00075	-.00232	-.00023	-.00073	-.00355	-.00005	.00010	.00013	.04946	-.00119	Blank
58	CCV5	2.3977	24.939	2.3497	.48613	56.577	2.2697	2.4535	2.3549	58.100	1.0096	CCV5
59	CCB5	-.00058	-.00239	.00014	-.00025	.00894	.00010	.00047	.00019	.16600	.00098	CCB5
60	IPK035WB	-.00036	-.00038	-.00043	-.00074	-.00269	-.00008	.00033	.00021	.12563	.00100	IPK035WB
61	IPK035WL	.49221	5.2020	.49577	.00069*	48.838	.47670	.53444	.50563	48.630	.49745	IPK035WL
62	IPK035WC	.49564	5.2386	.49561	.00050*	49.106	.48156	.53584	.50702	48.839	.49919	IPK035WC
63	K201-04A	.65556	143.35	2.9991	.04367	59.390	4.4948	.53511	.57888	57.418	.54219	K201-04A
64	K201-04	.11812	146.24	2.6609	.04260	11.503	4.2597	.00484	.10762	8.8698	.00661	K201-04
65	K201-04J	.02471	31.564	.56350	.00701	2.4804	.91579	.00116	.02235	1.8313	.00154	K201-04J
66	K201-04M	.62720	161.60	2.8674	.05880	59.382	4.7344	.52968	.62488	57.291	.50492	K201-04M
67	K201-04S	.63198	170.11	3.1627	.06645	60.179	4.9133	.52987	.62783	58.898	.51052	K201-04S
68	K201-01	.16716	244.89	1.2869	.04492	6.1917	5.7755	.01300	.20244	9.2333	.00800	K201-01
69	Blank	-.00053	.01338	-.00002	-.00202	-.00213	.00047	.00010	-.00001	.02853	-.00028	Blank
70	CCV6	2.4210	25.264	2.3907	.48558	56.772	2.2667	2.4844	2.3778	58.154	1.0512	CCV6
71	CCB6	-.00024	.00044	.00027	-.00127	.00749	.00033	.00036	.00030	.10366	-.00052	CCB6
72	K201-02	.08282	140.16	.52772	.04309	5.5714	3.2666	.00358	.32922	8.3292	.00723	K201-02
73	K201-03	.10178	165.35	.41031	.05239	6.6031	2.9699	.00379	.31820	9.1834	.00789	K201-03
74	Blank	-.00035	.00973	-.00049	-.00131	-.00293	-.00003	.00011	.00009	-.00075	.00064	Blank
75	CCV7	2.4477	25.374	2.3945	.48977	56.942	2.2777	2.4917	2.3856	58.964	1.0528	CCV7
76	CCB7	.00533*	.00778	-.00086	-.00729*	.00276	.00195*	.00052	-.00051	.09067	.00590	CCB7
77	IPK036SB	-.00026	-.00027	-.00066	-.00137	-.00799	.00010	.00035	.00003	.08752	.00092	IPK036SB
78	IPK036SL	.49951	5.1974	.49797	.00085*	48.869	.47885	.53897	.50650	49.051	.50919	IPK036SL
79	IPK036SC	.50569	5.2483	.50179	.00060*	49.141	.48188	.54454	.51134	49.394	.51700	IPK036SC
80	K575-01A	.65114	25.226	1.1309	.05496	67.625	1.6808	.52833	.63277	55.055	.56870	K575-01A
81	K575-01T	.10472	20.775	.63108	.05206	19.798	1.2164	.00847	.17699	4.4404	.00112	K575-01T
82	K575-01J	.01926	4.0007	.12009	.00863	3.8169	.23535	.00164	.03294	.84641	-.00054	K575-01J
83	K575-01M	.23076	26.475	.61642	.06129	36.316	1.7635	.12009	.35718	16.717	.10127	K575-01M
84	K575-01S	.20371	23.214	.86829	.05447	32.984	1.5460	.11490	.27635	15.982	.09713	K575-01S
85	Blank	.00500	.01401	-.00103	-.00613	.00816	.00141	-.00034	-.00103	-.03853	.00524	Blank
86	CCV8	2.4527	25.172	2.3666	.49299	56.913	2.2808	2.4598	2.3662	59.334	1.0339	CCV8
87	CCB8	.00558*	.00268	-.00046	-.00566	-.00963	.00143*	.00073*	-.00072*	.08223	.00655	CCB8
88	K575-01A	1.2424	110.94	3.8339	.31007	158.30	6.8792	.66804	1.4503	86.078	.68337	K575-01A
89	K575-01	.51080	95.077	2.9300	.27570	94.198	5.7095	.04691	.83328	22.344	.00768	K575-01
90	K575-01J	.10359	20.950	.63477	.05269	20.232	1.2343	.00815	.17705	4.4010	.00077	K575-01J
91	K575-01M	1.1472	121.26	2.8267	.30525	168.20	7.9551	.59050	1.6617	84.188	.50620	K575-01M
92	K575-01S	.99989	104.75	3.9567	.27809	151.98	6.9819	.56615	1.2832	79.777	.48097	K575-01S
93	Blank	.00546	.02299	-.00021	-.00802	.04956	.00307	-.00003	-.00075	.35995	.00451	Blank
94	CCV9	2.4470	25.194	2.3724	.49651	57.084	2.2862	2.4559	2.3641	59.501	1.0475	CCV9
95	CCB9	.00557*	.00529	-.00013	-.00698*	.03245	.00245*	.00068	-.00023	.29926*	.01042*	CCB9
INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID

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INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID
1	Blank	.00011	.00087	-.00012	-.00002	.00007	.00006	-.00022	.00045	Blank
2	S20									S20
3	S21									S21
4	S22							.12972		S22
5	S23							1.3118		S23
6	S24		1.3283							S24
7	S25		7.7987							S25
8	S26									S26
9	S27									S27
10	S28				.00596					S28
11	S29				.05931					S29
12	S30	.04176		.14094		.02653	.01681		.65473	S30
13	S31	.20587		.68865		.12707	.08922		6.4495	S31
14	ICV	.50785	63.491	.49267	2.3613	.50711	.50903	1.5093	2.6028	ICV
15	ICB	.00021	.06362*	.00007	.00050	-.00001	.00133	.00017	.00737*	ICB
16	MRLK2201	.01035	1.0049	.01029	.01095	.00024	.01109	.01024	.02152	MRLK2201
17	MRLK2202	.00999	.50326	.01001	.01051	.00899	.01109	.00971	.01104	MRLK2202
18	ICSA1	.00005	.05131	.00100*	-.00128	.00088	.00560*	-.00061	.00297	ICSA1
19	ICSAB1	1.0701	80.784	.47702	.88292	.93889	1.0071	.49796	1.0388	ICSAB1
20	CCV1	.49563	61.317	.47404	2.3553	.49522	.49021	1.4665	2.5537	CCV1
21	CCB1	.00016	.02771	.00018	.00044	.00009	.00040	.00000	.00463	CCB1
22	IPK032SB	-.00011	.02849	-.00001	-.00053	.03330	.00086	.00014	.00126	IPK032SB
23	IPK032SL	.50669	53.268	.50173	.49161	.53133	.53027	.53288	.55317	IPK032SL
24	IPK032SC	.50158	52.819	.49651	.48650	.52663	.52315	.52538	.54499	IPK032SC
25	K110-01A	.49954	54.549	.71581	.49670	.51187	5.7862	.68791	.76585	K110-01A
26	K110-01	-.00050	1.7631	.23957	-.00162	.02642	5.3635	.14768	.19904	K110-01
27	K110-01J	-.00013	.35765	.05048	-.00099	.00565	1.1349	.03111	.04171	K110-01J
28	K110-01M	.50237	55.071	.75981	.46656	.51680	6.9679	.68117	.75953	K110-01M
29	K110-01S	.50400	55.414	.76344	.47067	.51912	7.0839	.68668	.76355	K110-01S
30	Blank	00027	.01069	.00008	-.00005	.00046	.00153	.00006	.00297	Blank
31	CCV2	.49498	61.524	.47391	2.3762	.49478	.49285	1.4697	2.5670	CCV2
32	CCB2	.00007	.00930	.00007	.00069	-.00023	.00066	-.00012	00416	CCB2
33	IPK033SB	- 00006	.00390	.00009	- 00009	03360	.00032	-.00003	.00342	IPK033SB
34	IPK033SL	48792	51 723	.48220	.47474	.51467	50886	.51566	.53339	IPK033SL
35	IPK033SC	.49806	52.660	.49212	.48510	.52205	52059	.52561	54513	IPK033SC
36	K520-01A	.51212	53.914	50605	.52263	.53358	75556	.55944	12.974	K520-01A
37	K520-01	.00062	1.5733	.02760	.00034	.04804	25031	.00814	12.289	K520-01
38	K520-01J	.00014	.28794	.00526	.00114	.00880	.04756	.00164	2.3686	K520-01J
39	K520-02	- 00003	3.6295	.01331	-.00016	.01055	35535	.00485	.80905	K520-02
40	Blank	.00010	-.01471	.00008	.00032	.00010	.00111	-.00005	.00167	Blank
41	CCV3	.49268	61.687	.47542	2.3339	.49484	.48612	1.4771	2.5731	CCV3
42	CCB3	.00021	.01464	-.00002	.00069	-.00044	.00169	-.00002	.00488	CCB3
43	IPK034WB	-.00006	-.00854	.00008	.00103	-.00036	.00044	.00008	.00126	IPK034WB
44	IPK034WL	.52778	52.995	.50034	.52257	.48990	.52459	.53462	.55436	IPK034WL
45	IPK034WC	.51817	53.369	.50475	.50810	.49091	.52695	.52560	.54489	IPK034WC
46	K202-03A	.51408	54.757	.58580	.52259	.48725	.52122	.55694	3.2643	K202-03A
47	K202-03	-.00004	1.0509	.10220	.00059	-.00003	.00801	.00041	2.7311	K202-03
48	K202-03J	-.00002	.25397	.02167	.00110	-.00035	.00133	.00007	.57951	K202-03J
49	K202-03M	.52503	55.093	.60368	.49649	.50209	.53161	.53251	3.2501	K202-03M
50	K202-03S	.52401	54.527	59634	.49902	49564	.52721	.53013	3.2091	K202-03S
51	K202 01	.00003	1.0310	.09960	-.00016	.00004	.00851	.00042	2.7580	K202-01
52	Blank	.00012	-.00206	-.00007	.00084	.00011	.00084	-.00001	.00133	Blank

53	CCV4	.49170	61.703	.47399	2.3112	.49486	.48431	1.4781	2.5764	CCV4
54	CCB4	.00016	.01871	.00000	.00054	-.00005	.00022	.00009	.00405	CCB4
55	K202-02	.00001	1.0395	.09864	.00008	-.00007	.00278	.00011	2.5232	K202-02
56	K202-04	-.00002	1.0465	.09754	.00078	-.00014	.00252	.00000	2.4952	K202-04
57	Blank	.00006	-.00175	-.00004	.00073	-.00023	.00051	.00007	.00118	Blank
58	CCV5	.48767	61.856	.47553	2.2762	.49505	.48466	1.4754	2.5610	CCV5
59	CCB5	.00016	.01133	.00015	.00091	.00016	.00125	.00000	.00417	CCB5
60	1PK035WB	.00009	.01292	-.00008	-.00001	.03352	.00044	.00005	.00150	IPK035WB
61	IPK035WL	.48924	52.413	.48774	.47460	.51592	.51047	.52200	.54110	IPK035WL
62	IPK035WC	.49199	52.582	.49000	.47535	.51860	.51488	.52535	.54369	IPK035WC
63	K201-04A	.49216	52.844	.60854	.48070	.52073	1.9908	.79525	13.626	K201-04A
64	K201-04	-.00047	.19816	.13440	-.00123	.03821	1.5473	.26466	13.793	K201-04
65	K201-04J	-.00012	.06474	.02833	.00058	.00776	.32561	.05550	2.8894	K201-04J
66	K201-04M	.49945	52.461	.62541	.45627	.51694	1.9303	.78655	13.077	K201-04M
67	K201-04S	.50015	52.808	.64120	.45789	.51741	2.0511	.81515	14.229	K201-04S
68	K201-01	.00053	.45927	.21040	-.00120	.07496	2.0979	.32023	7.6477	K201-01
69	Blank	.00011	-.01648	.00006	.00063	-.00034	.00074	.00002	.00136	Blank
70	CCV6	.49725	61.939	.47464	2.3767	.50291	.48706	1.4940	2.5823	CCV6
71	CCB6	.00019	.01330	.00002	.00065	.00021	.00021	.00015	.00456	CCB6
72	K201-02	-.00059	.14009	.23943	-.00084	.03714	.99922	.20599	8.1615	K201-02
73	K201-03	-.00062	.20416	.27626	-.00085	.06258	1.1644	.22415	8.0421	K201-03
74	Blank	.00013	-.01771	.00004	.00015	.00020	.00133	-.00004	.00107	Blank
75	CCV7	.50064	62.797	.47898	2.3743	.50250	.48834	1.5013	2.5835	CCV7
76	CCB7	.00094*	.06140*	-.00019	-.00317*	-.00013	.00101	-.00135*	.00331	CCB7
77	1PK036SB	-.00005	.00453	-.00008	.00059	.03467	.00029	.00010	.00169	IPK036SB
78	IPK036SL	.49896	52.939	.49555	.48825	.51843	.51641	.52015	.54045	IPK036SL
79	IPK036SC	.50427	53.375	.49812	.49312	.52279	.51663	.52644	.54570	IPK036SC
80	K575-01A	.52089	59.860	1.0368	.50091	.49626	1.7752	.59596	27.394	K575-01A
81	K575-01T	.00070	5.6354	.57742	-.00005	.01980	1.2932	.05698	27.500	K575-01T
82	K575-01J	.00012	1.0402	.10871	.00078	.00368	.24449	.01035	5.3547	K575-01J
83	K575-01M	.11221	20.967	.79294	.10024	.11906	1.6217	.17801	16.396	K575-01M
84	K575-01S	.11149	19.307	.62293	.09974	.12693	1.4360	.16996	29.136	K575-01S
85	Blank	.00051	.02078	-.00017	-.00257	.00131	00318	-.00156	00699	Blank
86	CCV8	50058	63.068	.48008	2.3442	.49162	48494	1.4873	2 5631	CCV8
87	CCB8	.00061	.08771*	-.00024	- 00365*	00067	00297	-.00155*	00410	CCB8
88	K575-01A	.63576	96.345	3.6643	.52350	64810	7.5047	.91415	118.56*	K575-01A
89	K575-01	.00388	28.105	2.7703	-.00535*	09520	6.2050	.26942	106.28*	K575-01
90	K575-01J	.00068	5.6375	.57648	- 00030	02014	1 3056	.05743	27.983	K575-01J
91	K575-01M	.57114	103.30	3.7799	.42318	.55920	7.5545	.84048	68 836*	K575-01M
92	K575-01S	.56066	94.409	2.9467	41593	58679	6 6527	79089	110.18*	K575-01S
93	Blank	.00075	.13077	.00042	-.00375	.00141	.00614	-.00191	.01969	Blank
94	CCV9	.50133	63.134	.47871	2.3863	.48891	.48787	1.4861	2.5699	CCV9
95	CCB9	.00072	.10562*	-.00062*	- 00381*	00150	.00343	-.00170*	.00560	CCB9
INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID

1D8K019 Section 3 of 3

EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP METALS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

Book #: EIP-104
Batch: 1PK032S
Matrix: Soil
Digestor ID: D

SOP #	Rev. #
☐ EMAX-3005	4
☐ EMAX-3010	5
☑ EMAX-3050	4
☐ EMAX-200.7	2
☐ EMAX-	

Start	Temp	End	Temp
	95 °C		95 °C

Standards	ID	Amount Added (ml)
LCS-1	SM1A-013-04-13	0.5
LCS-2	SM1A-013-03-13	0.5
LCS-3	SM1A-013-04-14	1.0
MS	same spike vol and sol as LCS1, LCS2, LCS3.	
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SW1A-04-407	10
HCl	SW1A-04-408	5+5
H_2O_2	SW1A-04-421	10
HNO3(1:1)	SM5B-02-212	10

Digestate Location	ICP
Extract Location	
☑ Reagent Water ID:	SM5A-02-074
☑ Thermometer ID:	101993394
☑ Pipette ID:	ICP-07
☑ Pipette ID:	142780035
☐ Pipette ID:	
☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask	
☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask	

Prepared By: GG

Standard Added By: GG Witnessed By: NT

Extract Rcvd By: TH Checked By: TH

FileID: IPK032S

EMAX LABORATORIES INC

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
11IPK032S01	IPK032SB	1	g	11/18/11 11:59	100	1	100	1	
11IPK032S02	IPK032SL	1	g	11/18/11 11:59	100	1	100	1	
11IPK032S03	IPK032SC	1	g	11/18/11 11:59	100	1	100	1	
11IPK032S04	K110-01	1.02	g	11/18/11 12:00	100	1	100	0.98	
11IPK032S05	K110-01M	1.08	g	11/18/11 12:01	100	1	100	0.926	
11IPK032S06	K110-01S	1.06	g	11/18/11 12:02	100	1	100	0.943	
11IPK032S07	K152-01	1.04	g	11/18/11 12:02	100	1	100	0.962	DRIED AND SIEVED

11/18/11 GG

Balance ID: 10203192. Calibration check was verified prior to use.

Vd=digestate volume

PrepFctr=)ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 11/18/11 12:14

Prepared By: GG

☑ Digestion Ended @ 11/18/11 13:55

Checked By: TH

Comments:

Date 11/18/11

7027

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K110

METHOD 7471A
MERCURY BY COLD VAPOR

One (1) soil sample was received on 11/11/11 for Mercury analysis, Method 7471A in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for HGK028SL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample was analyzed at the frequency prescribed by the project.
Percent recoveries for K110-01M/S were within project QC limits.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LOW CONCENTRATION
MERCURY BY COLD VAPOR

Client : INSIGHT ENG. INC SDG NO : [illegible]
Project : WA SEAL BEACH - IR [illegible] Instrument ID : [illegible]

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis Date/Time	Extraction Date/Time	Sample Data FN	Calibration Date FN	Prep Batch	Notes
MB-[illegible]	HGK0285B	1	NA	11/23/1112:26	11/23/1110:47	M4/K019010	M4/K019008	HGK028S	Method Blank
LCS[illegible]	HGK0285L	1	NA	11/23/1112:29	11/23/1110:47	M4/K019011	M4/K019008	HGK028S	Lab Control Sample (LCS)
LCD[illegible]	HGK0285C	1	NA	11/23/1112:31	11/23/1110:47	M4/K019012	M4/K019008	HGK028S	LCS Duplicate
IR-[illegible]-122	K[illegible]	0.960	23.7	11/23/1112:36	11/23/1110:47	M4/K019014	M4/K019008	HGK028S	Field Sample
IR-[illegible]-122MS	K[illegible]	0.988	23.7	11/23/1112:39	11/23/1110:47	M4/K019016	M4/K019008	HGK028S	Matrix Spike Sample (MS)
IR-[illegible]-122MSD	K[illegible]	1.00	23.7	11/23/1112:42	11/23/1110:47	M4/K019017	M4/K019008	HGK028S	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

METHOD 7471A
MERCURY BY COLD VAPOR

Client : INSIGHT ENG. INC
Project : WWS SEA. BEACH [illegible]
Work Order : [illegible]

Matrix : SOIL
Instrument ID : [illegible]

SAMPLE ID	FMAX SAMPLE ID	RESULTS (mg/kg)	ICP MDLS		RL (mg/kg)	MDL (mg/kg)	Analysis DATE TIME	Extraction DATE TIME	LIID	CAL REF	PREP BATCH	Collection DATE TIME	Received DATE TIME
MBLKS	HGK028SB	ND	1	NA	0.100	0.0209	11/23/1112:36	11/23/1110:47	M47K019C10	M47K019008	HGK028S	NA	11/23/11
LCSIS	HGK029SI	0.841	1	NA	0.100	0.0209	11/23/1112:29	11/23/1110:47	M47K019011	M47K019008	HGK028S	NA	11/23/11
LCDIS	HGK028SC	0.845	1	NA	0.100	0.0209	11/23/1112:31	11/23/1110:47	M47K019012	M47K019008	HGK028S	NA	11/23/11
IR-70-EB-122	<110.0[illegible]	ND	0.968	20.7	0.126	0.0262	11/23/1112:35	11/23/1110:47	M47K019014	M47K019008	HGK028S	11/11/11	11/11/11
IR-70-EB-122MS	<110.0[illegible]	1.05	0.986	20.7	0.126	0.0249	11/23/1112:39	11/23/1110:47	M47K019016	M47K019008	HGK028S	11/11/11	11/11/11
IR-70-EB-122MSD	<110.0[illegible]	1.10	1.32	20.7	0.126	0.0262	11/23/1112:42	11/23/1110:47	M47K019017	M47K019008	HGK028S	11/11/11	11/11/11

[illegible] QUALITY CONTROL DATA
[illegible] ANALYSIS

CLIENT: INSIGHT ENV. INC.
PROJECT: NWS STA. BEACH - BP SITE #2
SAMPLE NO: [illegible]
METHOD: Method [illegible]

MATRIX: SOIL — MOISTURE: NA

DILUTION FACTOR	1	1	1
SAMPLE ID	MSCKIS		
CONTROL NO.	MGK0285B	MGK0285.	MGK0285C
LAB FILE ID	M4/K019010	M4/K019011	M4/K019012
DATE/TIME EXTRACTED	11/23/1110-47	11/23/1110 47	11/23/1110 [illegible]
DATE/TIME ANALYZED	11/23/1112 26	11/23/1112 29	11/23/1112 31
PREP BATCH	MGK0285	MGK0285	MGK0285
ALIQUOT REF	M4/K019008	M4/K019008	M4/K019008

DATE COLLECTED: NA
DATE RECEIVED: 11/23/[illegible]

ALIPHATICS

PARAMETER	SPIKE RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMITS % REC	QC LIMITS RPD
Methanol	NA	1833	847	102	833	849	101	0	50-120	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K110
METHOD: Method 7471A

MATRIX:	SOIL			% MOISTURE:	20.7
DILTN FACTR:	0.990	0.988	1.00		
SAMPLE ID:	IR-70-RB-122				
CONTROL NO.:	K110-01	K110-01M	K110-01S		
LAB FILE ID:	M47K019014	M47K019016	M47K019017		
DATIME EXTRCTD:	11/23/1110:47	11/23/1110:47	11/23/1110:47	DATE COLLECTED:	11/11/11
DATIME ANALYZD:	11/23/1112:35	11/23/1112:39	11/23/1112:42	DATE RECEIVED:	11/11/11
PREP. BATCH:	HGK028S	HGK028S	HGK028S		
CALIB. REF:	M47K019008	M47K019008	M47K019008		

ACCESSION:

PARAMETER	SMPL RSLT mg/kg	SPIKE AMT mg/kg	MS RSLT mg/kg	MS % REC	SPIKE AMT mg/kg	MSD RSLT mg/kg	MSD % REC	RPD %	QC LIMIT %	MAX RPD %
Mercury	ND	1.04	1.09	105	1.05	1.1	104	1	75-125	20

7032

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
MERCURY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 11/23/11 **Start Time:** 12:05

End Date: 11/23/11 **End Time:** 12:51

Comments:

QC OK

Book #: A47-079

Instrument No.: 47

Analytical Sequence/Batch: M47K019

Method File: Hg

SOP #	Rev. #
☐ EMAX-7470	5
☑ EMAX-7471	5
☐ EMAX-245.1	2
☐ EMAX-	

STANDARDS ID	
S1	BLANK
S2	SM3B-10-~~08~~ 07-~~06~~ 01
S3	NT 11/23/11
S4	
S5	
S6	
CCV	
ICV	SM3B-10-~~08~~ 07-~~07~~ 02
LCS	
Analytical Spike	
	SM3B-10-05-08

Analyzed By: NT

Date: 11/23/11

"M47K019"

EMAXlfid	EMAXlsid	conc	Raw_resp	rsd/rf	adatetime	DF
M47K019000	STD1REP1	0	9269		11/23/1112:05	1
M47K019001	STD2REP1	.2	42144		11/23/1112:07	1
M47K019002	STD3REP1	1	159687		11/23/1112:09	1
M47K019003	STD4REP1	2	315041		11/23/1112:12	1
M47K019004	STD5REP1	5	773756		11/23/1112:14	1
M47K019005	STD6REP1	10	1530763		11/23/1112:16	1
M47K019006	ICV	2.03	318561	0	11/23/1112:18	1
M47K019007	ICB	-.028	5874	0	11/23/1112:20	1
M47K019008	CCV1	5.05	778073	0	11/23/1112:22	1
M47K019009	CCB1	-.012	8272	0	11/23/1112:24	1
M47K019010	HGK028SB	-.053	2103	0	11/23/1112:26	1
M47K019011	HGK028SL	5.08	784006	0	11/23/1112:29	1
M47K019012	HGK028SC	5.07	781477	0	11/23/1112:31	1
M47K019013	K110-01A	4.88	753553	0	11/23/1112:33	1
M47K019014	K110-01	.054	18316	0	11/23/1112:35	1
M47K019015	K110-01J	-.005	9432	0	11/23/1112:37	5
M47K019016	K110-01M	5.24	807265	0	11/23/1112:39	1
M47K019017	K110-01S	5.21	802681	0	11/23/1112:42	1
M47K019018	K197-01	-.025	6291	0	11/23/1112:44	1
M47K019019	K575-01	.034	15323	0	11/23/1112:46	1
M47K019020	CCV2	5.04	776398	0	11/23/1112:49	1
M47K019021	CCB2	-.078	-1710	0	11/23/1112:51	1
**********	**********	**********	**********	**********	**********	***
EMAXlfid	EMAXlsid	Xint	Yint	rrf	adatetime	DF
M47K019000	BLANK	-.0667524	10158.5	.9999945	11/23/1112:51	1

RunProt: HGCOM

RunFold: M47K019 Seq: 6 Batch:

Prnt: R/T On Pump: On

Rev: 4.2 12:16:26 23 Nov 2011 Xmit: Off Gas: 0.35 LPM

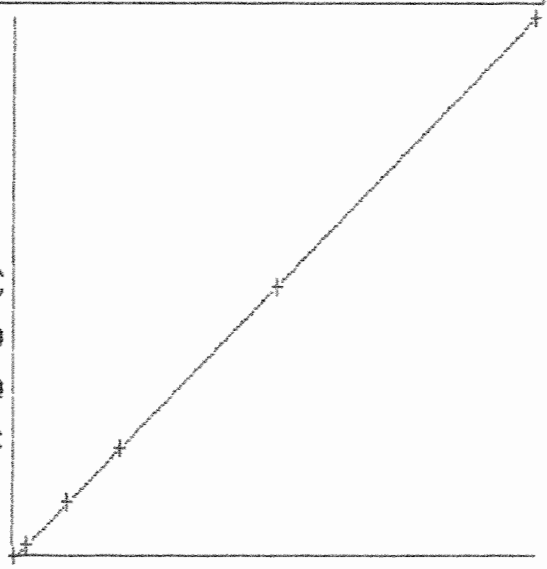
State: Idle User: NT A/S: On

CALIBRATION: Line proto: HGCOM

	Hg Conc.	Calc.	Dev.	Accepted ->linear	
S1	.000	-.006	-.006	Quadratic	
S2	.200	.210	.010	Wtdlinear	
S3	1.00	.983	-.017		C
S4	2.00	2.00	.003	Accept	o
S5	5.00	5.02	.018		n
S6	10.0	9.99	-.008		c

A .0000000 r .999995

B 6.57101e-6 C -6.67180e-2



Relative Absorbance

	Mean		SD	
S1	9269	0	SD	9269
S2	42144	0	%RSD	42144
S3	159687	0	%RSD	159687
S4	315041	0	%RSD	315041
S5	773756	0	%RSD	773756
S6	1530763	0	%RSD	1530763

New cal coefficients stored

EMAX LABORATORIES, INC.

DIGESTION LOG
for
MERCURY

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

Book #: E47-085
Batch No.: HGK028S
Matrix: Soil

SOP #	Rev. #
☐ EMAX-7470	5
☑ EMAX-7471	5
☐ EMAX-245.1	2
☐ EMAX-	

Standards	ID	Conc. (µg/L)	Amount Added (ml)
ICAL	SM38-10-07-01	100	0.2, 1, 2, 5, 10
CCV	↓	↓	5
ICV	SM38-10-07-02	↓	2
LCS/MS	↓	↓	5

Reagent	ID
HNO_3/aqua	SW1A-04-407
HCl/regia	SW1A-04-408
H_2SO_4	N/A
$KMnO_4$	SM5B-02-214
$K_2S_2O_8$	N/A
$NH_2OH.HCl$	SM5B-02-211
$SnCl_2$	↓ 212
Silica Sand	SW1B-002-19-15

Temp of Digestion Bath: 95 °C A Digestor

Thermometer ID: 11241125

Pipette ID: ICP DOE-1, HG03, HG04

☐ H_2SO_4 dispenser checked @ 2.5 ml with Class A graduated cylinder

☑ HCl dispenser checked @ 30 ml with Class A graduated cylinder

☑ HNO_3 dispenser checked @ 10 ml with Class A graduated cylinder

Prepared By: NT

Standard Added By: NT Witnessed By: TH

EMAX LABORATORIES, INC.

DIGESTION LOG FOR MERCURY

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
11HGK028S01	HGK028SB	0.6	g	11/23/11 10:18	100	0.6	100	1	
11HGK028S02	HGK028SL	0.6	g	11/23/11 10:18	100	0.6	100	1	
11HGK028S03	HGK028SC	0.6	g	11/23/11 10:18	100	0.6	100	1	
11HGK028S04	K110-01	0.606	g	11/23/11 10:20	100	0.6	100	0.99	
11HGK028S05	K110-01M	0.607	g	11/23/11 10:21	100	0.6	100	0.988	
11HGK028S06	K110-01S	0.6	g	11/23/11 10:21	100	0.6	100	1	
11HGK028S07	K197-01	0.607	g	11/23/11 10:22	100	0.6	100	0.988	
11HGK028S08	K575-01	0.601	g	11/23/11 10:24	100	0.6	100	0.998	
11HGK028S09	S-0	0.6	g	11/23/11 10:18	100	0.6	100	1	
11HGK028S10	S-0.2	0.6	g	11/23/11 10:18	100	0.6	100	1	
11HGK028S11	S-1	0.6	g	11/23/11 10:18	100	0.6	100	1	
11HGK028S12	S-2	0.6	g	11/23/11 10:18	100	0.6	100	1	
11HGK028S13	S-5	0.6	g	11/23/11 10:18	100	0.6	100	1	
11HGK028S14	S-10	0.6	g	11/23/11 10:18	100	0.6	100	1	
11HGK028S15	ICV	0.6	g	11/23/11 10:18	100	0.6	100	1	
11HGK028S16	CCV	0.6	g	11/23/11 10:18	100	0.6	100	1	
11HGK028S17	ICB/CCB	0.6	g	11/23/11 10:18	100	0.6	100	1	

NT
11/23/11

Balance ID: 10601202. Calibration check was verified prior to use. Vd=digestate volume PrepFctr=(ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 11/23/11 10:47 Prepared By NT NT

☑ Digestion Ended @ 11/23/11 11:46 Checked By: TH

Comments: Date 11/23/11

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CLIENT: **INSIGHT EEC, INC.**

PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11K119**

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GC-SVOA	**	5000 –
HPLC	**	6000 –
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OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 12-05-2011
EMAX Batch No.: 11K119

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 11/14/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW-70-PMW09-124	K119-01	11/14/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IR-70-SHB113-125	K119-02	11/14/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-PMW10-126	K119-03	11/14/11	WATER	ANIONS BY IC

Sample ID	Control #	Col Date	Matrix	Analysis
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-MNA11-127	K119-04	11/14/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
MW-70-MNA07-128	K119-05	11/14/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
IR-70-TB-123	K119-06	11/14/11	WATER	VOLATILE ORGANICS BY GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

INS-0801

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011068-8042
SAMPLE STORAGE
EMAX CONTROL NO. * 11K119
PROJECT CODE: 4-77101

CLIENT: INSIGHT GEO, INC.
PROJECT: IR SITE 70 - NWS SEAL BEACH
COORDINATOR: NICK VAN BERGEN
TEL: 7146786700 FAX: 7146786711 EMAIL: NVANBERGEN@IGEO.COM
SEND REPORT TO: NICK VAN BERGEN
COMPANY: INSIGHT GEO, INC.
ADDRESS: 3010 E. MIRALOMA AVE., ANAHEIM, CA 92806
EMAX PM: Ye Myint

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: VOCs - EPA 8260B; DISS Mtl CASSES - RSK-175; WET CHEM; TOC-SM5310B; S/HDE - SM4500F; DISS METALS - EPA 6010B; VOCs - EPA 8260B; DISS Mtl CASSES - RSK-175

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	HC	HC	NP	HC	SH/ZA	HN	NP	NP	COMMENTS
1	MW-70-PMW09-124	IR SITE 70 NWS SB	11-14-11	1049	10	VAry	VAry	GW	IV	X	X	X	X	X	X			
2	IR-70-SHB13-125	IR SITE 70 NWS SB	11-14-11	1203	10	VAry	VAry	GW	III			X	X	X	X	X	X	EFFLUENT WELL
3	MW-70-PMW10-126	IR SITE 70 NWS SB	11-14-11	1307	10	VAry	VAry	GW	III	X	X	X	X	X	X			
4	MW-70-MNA11-127	IR SITE 70 NWS SB	11-14-11	1410	7	VAry	VAry	GW	III	X	X	X						FOR WET CHEM ANALYSIS. RUN ONLY VFA's
5	MW-70-MNA07-128	IR SITE 70 NWS SB	11-14-11	1533	7	VAry	VAry	GW	III			X				X	X	FOR WET CHEM, RUN ONLY VFA's. MNA 07 EFFLUENT WELL
6																		
7																		
8																		
9																		
10																		
6	IR-70-TB-123	IR SITE 70 NWS SB	11-14-11	0845	2	40ml	VOA	GW	III	X								TRIP BLANKS

Instructions: WET CHEM ANALYSIS AS FOLLOWS: ANIONS - EPA 300.0, VFA's - EPA-300.0M, TDS - SM 2540C, ALKALINITY - SM2320B, DHS - SM4500. UNLESS NOTED OTHERWISE IN COMMENTS.

Cooler #	Temp. (°C)
1	3.4

Sample #s

SAMPLER: CHASE BROGDON

COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11/14/11	1700	[signature]
	11/14/11	1745	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associated with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

1082

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11K119
☑ EMAX Courier	SEE COC	Recepient J-LUNA
☐ Client Delivery		Date 11-14-11
☐ Third Party		Time 1745

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☑ Preservative (if any)	☑ TAT
Safety Issues	☑ None	☐ High concentrations expected	☐ Superfund Site samples	☐ Rad screening required	

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	A ☑ Cooler 1 3.4 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C

Comments: ☐ **PM was informed on non-compliant coolers imediately.**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code

REVIEWS

Sample Labeling _____ Date 11/14/11

SRP _____ Date 11-14-11

PM LP for YC Date 11/14/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4	_____	E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	_____
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	_____
B3	Sample ID is inconsistent in COC vis-à-vis label	F2	Bubble is> 6mm		
B4	_____	G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	_____		
C4	_____	H2	_____		

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11K119

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K119

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of six (6) water samples were received on 11/14/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary form for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for VO01K20L/C were all within QC limits.
Percent recoveries for VO01K22L/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K119
Instrument ID : T-001

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V001K20Q	1	NA	11/18/1112:36	11/18/1112:36	RKV450	RJV602	V001K20	Method Blank
LCS1W	V001K20L	1	NA	11/18/1109:19	11/18/1109:19	RKV443	RJV602	V001K20	Lab Control Sample (LCS)
LCD1W	V001K20C	1	NA	11/18/1109:47	11/18/1109:47	RKV444	RJV602	V001K20	LCS Duplicate
MW-70-PMW09-124	K119-01	1	NA	11/18/1118:21	11/18/1118:21	RKV461	RJV602	V001K20	Field Sample
MW-70-MNA07-128	K119-05	1	NA	11/18/1118:49	11/18/1118:49	RKV462	RJV602	V001K20	Field Sample
IR-70-SHB113-125	K119-02	1	NA	11/18/1119:17	11/18/1119:17	RKV463	RJV602	V001K20	Field Sample
MW-70-PMW10-126	K119-03	1	NA	11/18/1119:45	11/18/1119:45	RKV464	RJV602	V001K20	Field Sample
MBLK2W	V001K22B	1	NA	11/21/1111:28	11/21/1111:28	RKV503	RJV602	V001K22	Method Blank
LCS2W	V001K22L	1	NA	11/21/1110:04	11/21/1110:04	RKV500	RJV602	V001K22	Lab Control Sample (LCS)
LCD2W	V001K22C	1	NA	11/21/1110:32	11/21/1110:32	RKV501	RJV602	V001K22	LCS Duplicate
MW-70-PMW09-124DL	K119-01T	50	NA	11/21/1112:59	11/21/1112:59	RKV506	RJV602	V001K22	Diluted Sample
MW-70-PMW10-126DL	K119-03T	100	NA	11/21/1113:28	11/21/1113:28	RKV507	RJV602	V001K22	Diluted Sample
MW-70-MNA11-127	K119-04	1	NA	11/21/1113:55	11/21/1113:55	RKV508	RJV602	V001K22	Field Sample
IR-70-TB-123	K119-06	1	NA	11/21/1114:24	11/21/1114:24	RKV509	RJV602	V001K22	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/14/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/14/11
Batch No.	: 11K119	Date Extracted:	11/18/11 18:21
Sample ID:	MW-70-PMW09-124	Date Analyzed:	11/18/11 18:21
Lab Samp ID:	K119-01	Dilution Factor:	1
Lab File ID:	RKV461	Matrix :	WATER
Ext Btch ID:	V001K20	% Moisture :	NA
Calib. Ref.:	RJV602	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.41J	1.0	0.20
1,1-DICHLOROETHENE	3.4	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.31J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	340E	1.0	0.20
DICHLORODIFLUOROMETHANE	0.42J	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	6.3	1.0	0.20
TRICHLOROETHENE	12	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	0.65	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.0	10.00	100	70-140
4-BROMOFLUOROBENZENE	10.6	10.00	106	70-130
TOLUENE-D8	10.3	10.00	103	70-140

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV461.D Vial: 21
Acq On : 18 Nov 2011 6:21 pm Operator: MW
Sample : 11K119-01 25mL Inst : TO01
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 21 8:54 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

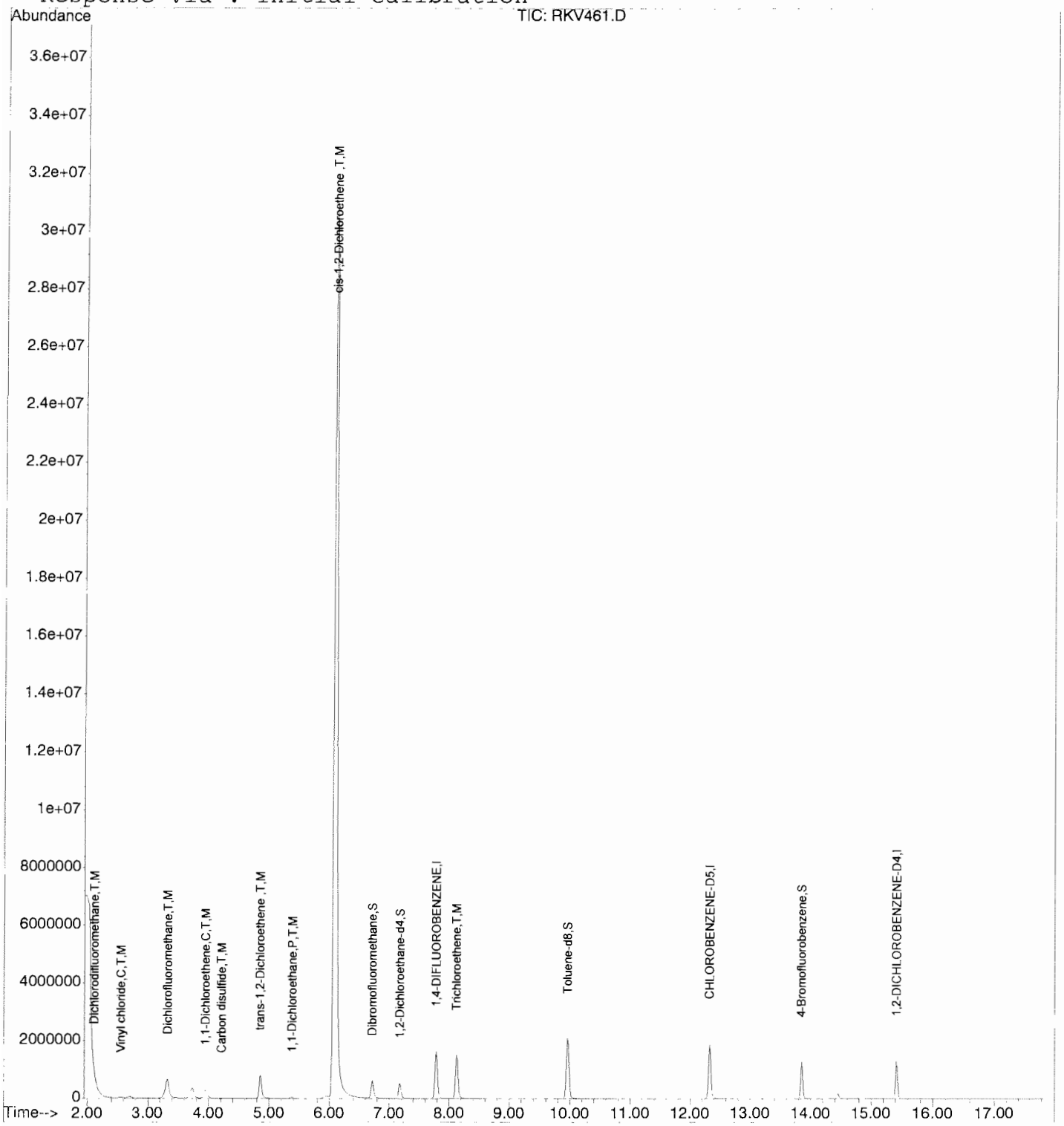
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1998147	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1636176	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	497954	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.72	111	572580	10.47	ug/l	0.00
Spiked Amount 10.000			Recovery	=	104.70%	
35) 1,2-Dichloroethane-d4	7.17	65	586401	10.04	ug/l	0.02
Spiked Amount 10.000			Recovery	=	100.40%	
49) Toluene-d8	9.96	98	2328418	10.29	ug/l	0.00
Spiked Amount 10.000			Recovery	=	102.90%	
69) 4-Bromofluorobenzene	13.85	95	650483	10.60	ug/l	0.00
Spiked Amount 10.000			Recovery	=	106.00%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	2.11	85	30329	0.42	ug/l	97
5) Vinyl chloride	2.56	62	60128	0.65	ug/l	92
9) Dichlorofluoromethane	3.33	67	1632920	11.48	ug/l	99
14) 1,1-Dichloroethene	3.95	61	443035	3.37	ug/l	98
16) Carbon disulfide	4.22	76	67484	0.31	ug/l	97
21) trans-1,2-Dichloroethene	4.85	61	838294	6.28	ug/l	97
23) 1,1-Dichloroethane	5.38	63	62418	0.41	ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	25606520	337.80	ug/l #	64
41) Trichloroethene	8.12	130	849656	11.74	ug/l	99

(#) = qualifier out of range (m) = manual integration

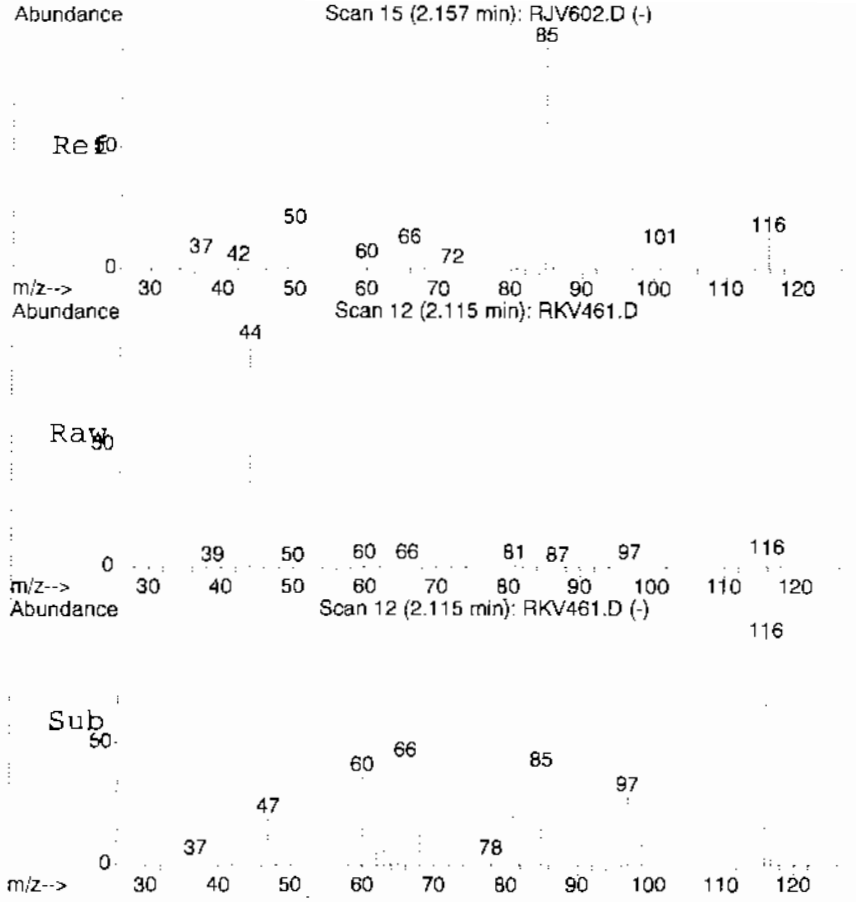
Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV461.D Vial: 21
Acq On : 18 Nov 2011 6:21 pm Operator: MW
Sample : 11K119-01 25mL Inst : TO01
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 21 8:54 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



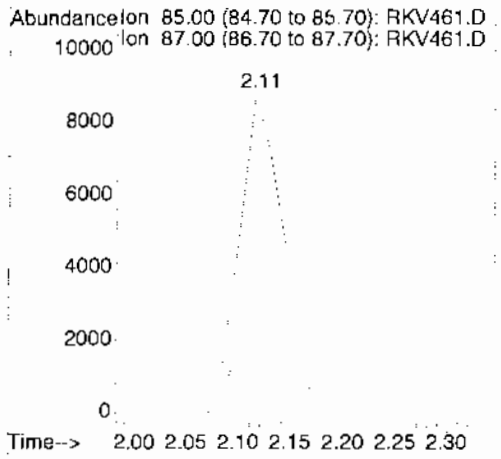
2006

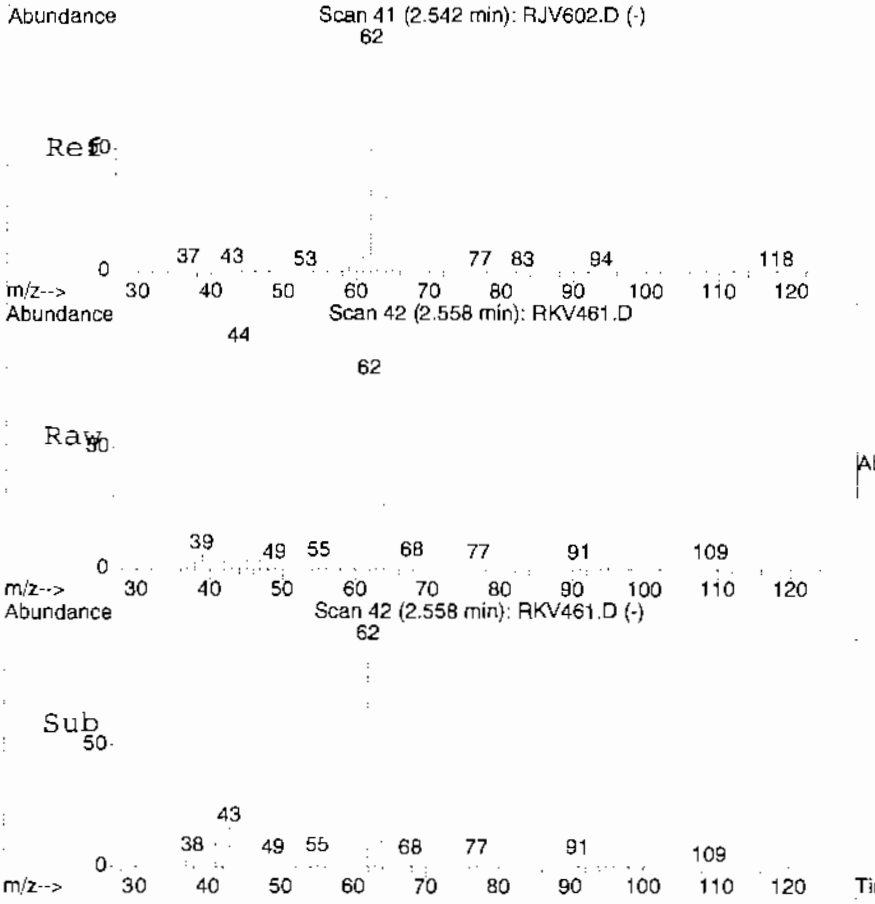


#3
Dichlorodifluoromethane
Concen: 0.42 ug/l
RT: 2.11 min Scan# 12
Delta R.T. -0.04 min
Lab File: RKV461.D
Acq: 18 Nov 2011 6:21 pm

Tgt Ion: 85 Resp: 30329

Ion	Ratio	Lower	Upper
85	100		
87	30.4	1.9	61.9

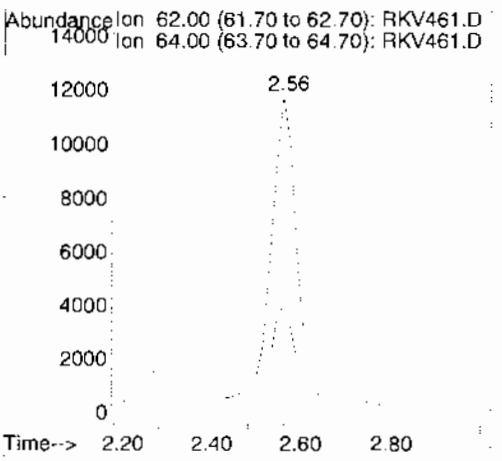


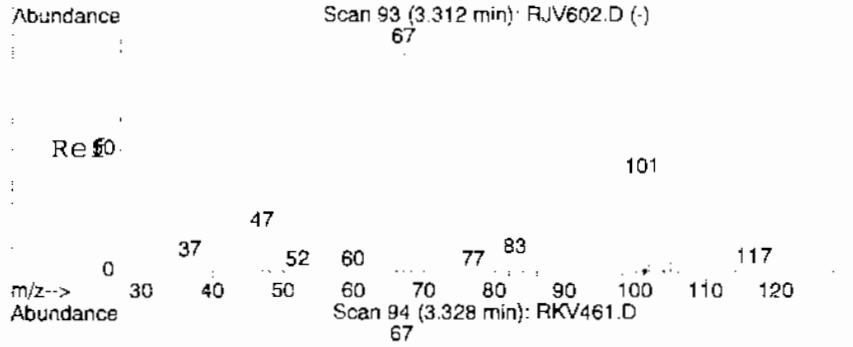


#5
Vinyl chloride
Concen: 0.65 ug/l
RT: 2.56 min Scan# 42
Delta R.T. 0.02 min
Lab File: RKV461.D
Acq: 18 Nov 2011 6:21 pm

Tgt Ion: 62 Resp: 60128

Ion	Ratio	Lower	Upper
62	100		
64	41.7	7.2	67.2

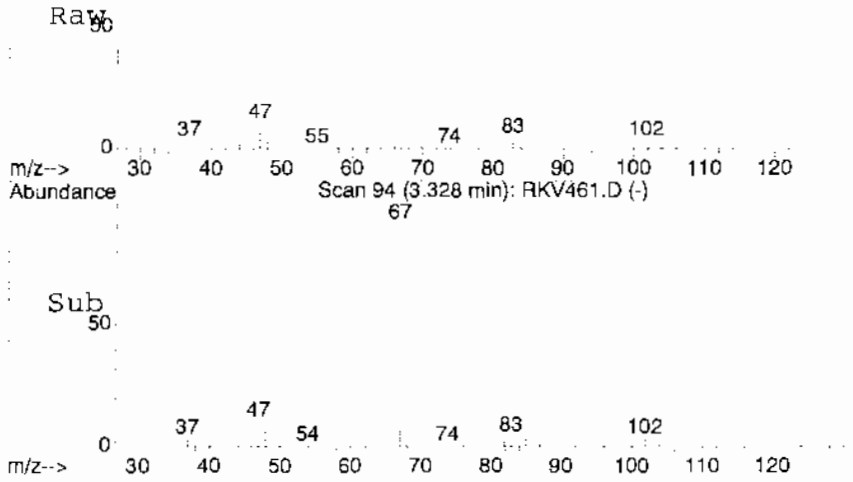


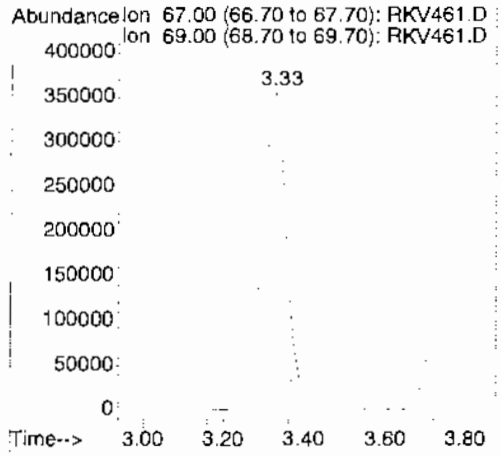


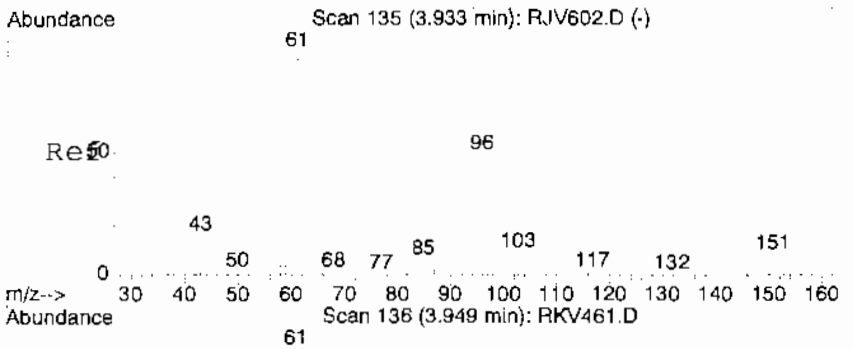
#9
Dichlorofluoromethane
Concen: 11.48 ug/l
RT: 3.33 min Scan# 94
Delta R.T. 0.02 min
Lab File: RKV461.D
Acq: 18 Nov 2011 6:21 pm

Tgt Ion: 67 Resp: 1632920

Ion	Ratio	Lower	Upper
67	100		
69	32.2	1.6	61.6



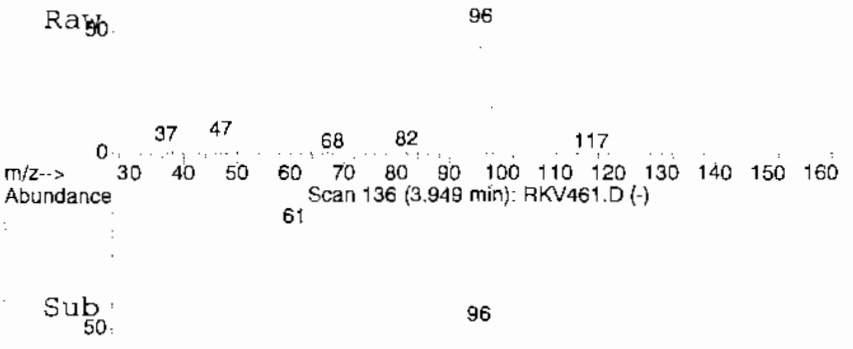


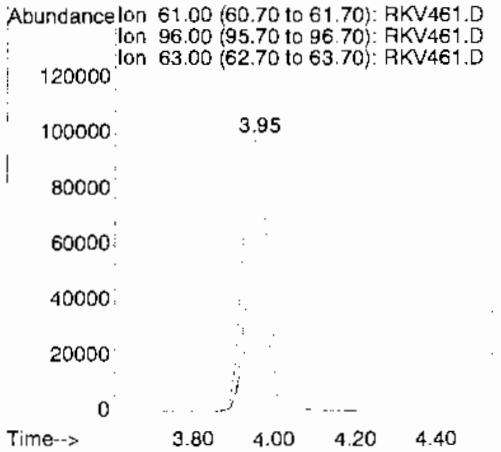


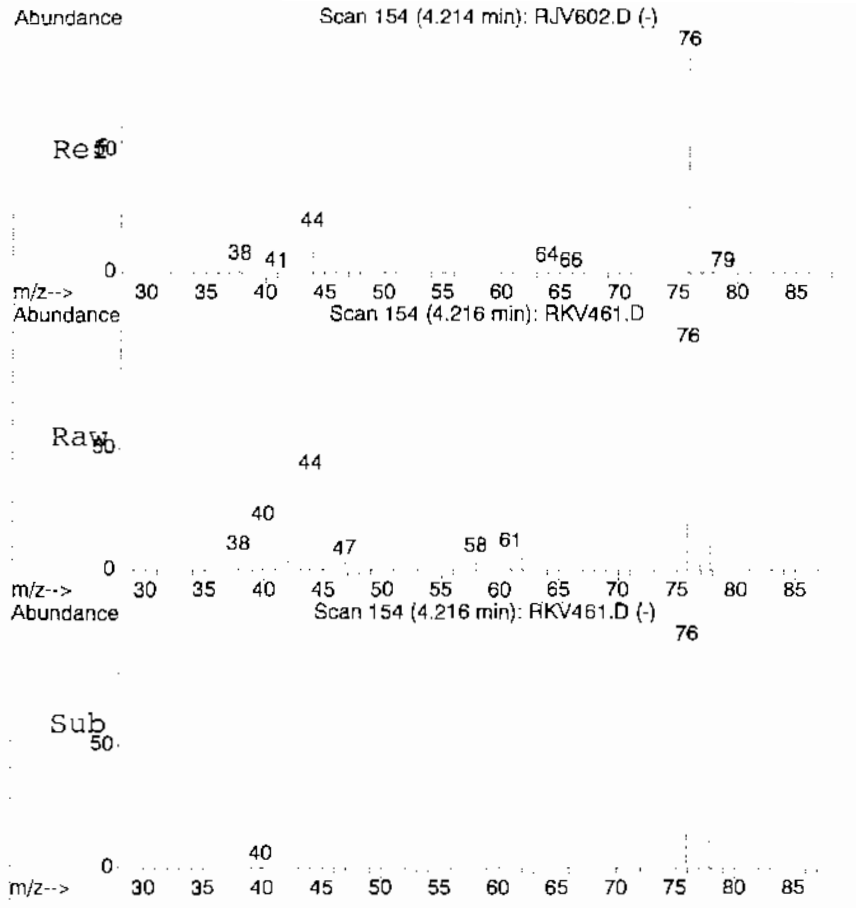
#14
1,1-Dichloroethene
Concen: 3.37 ug/l
RT: 3.95 min Scan# 136
Delta R.T. 0.02 min
Lab File: RKV461.D
Acq: 18 Nov 2011 6:21 pm

Tgt Ion: 61 Resp: 443035

Ion	Ratio	Lower	Upper
61	100		
96	50.7	18.5	78.5
63	31.7	1.3	61.3



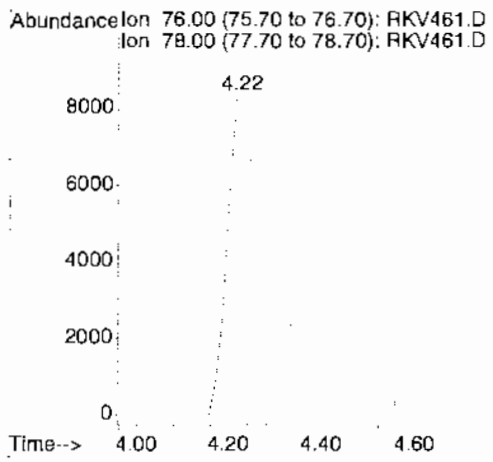


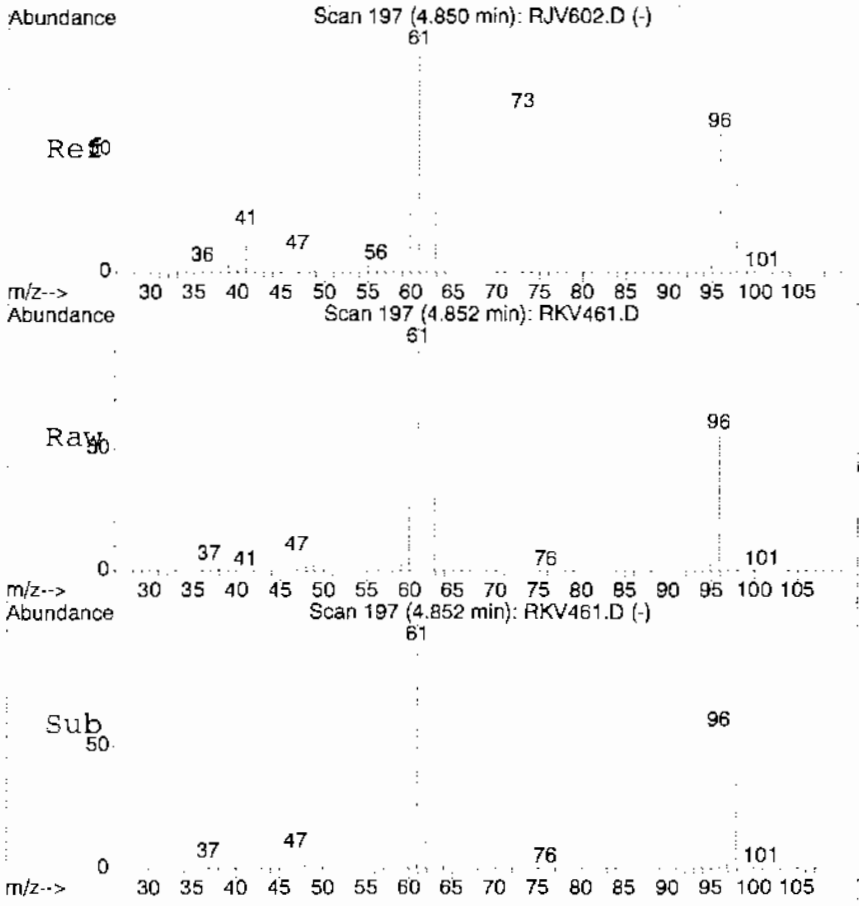


#16
Carbon disulfide
Concen: 0.31 ug/l
RT: 4.22 min Scan# 154
Delta R.T. 0.00 min
Lab File: RKV461.D
Acq: 18 Nov 2011 6:21 pm

Tgt Ion: 76 Resp: 67484

Ion	Ratio	Lower	Upper
76	100		
78	7.7	0.0	38.9

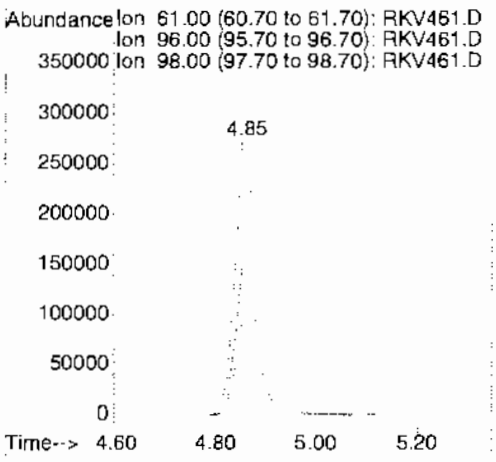


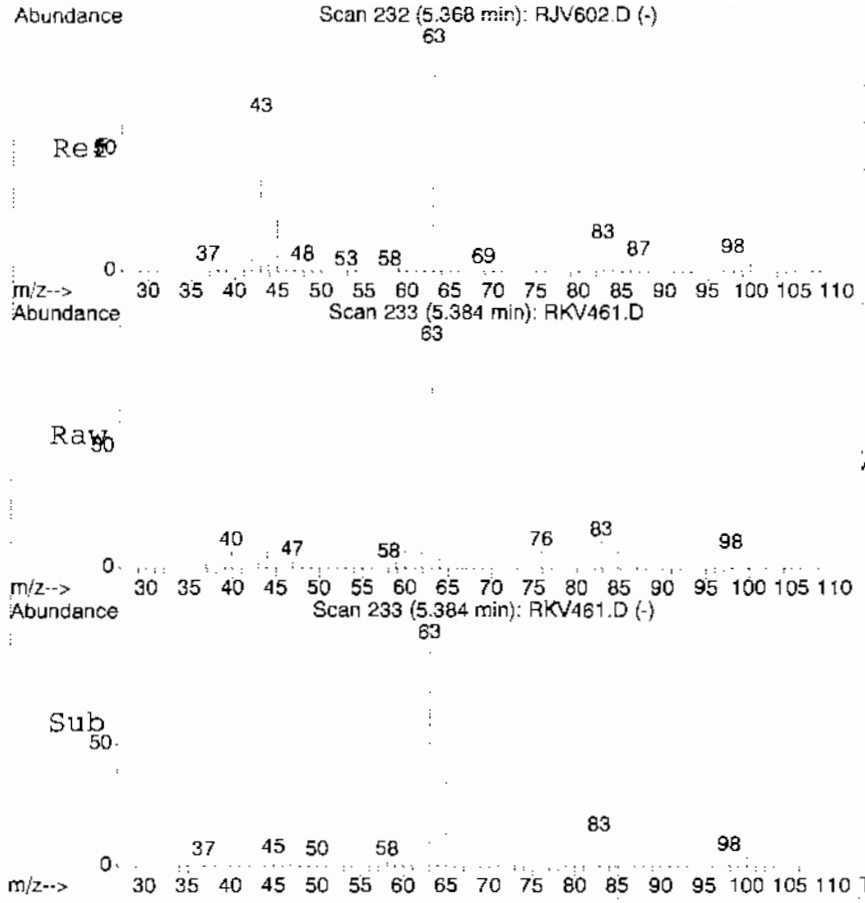


#21
trans-1,2-Dichloroethene
Concen: 6.28 ug/l
RT: 4.85 min Scan# 197
Delta R.T. 0.00 min
Lab File: RKV461.D
Acq: 18 Nov 2011 6:21 pm

Tgt Ion: 61 Resp: 838294

Ion	Ratio	Lower	Upper
61	100		
96	58.6	26.1	86.1
98	37.0	5.2	65.2

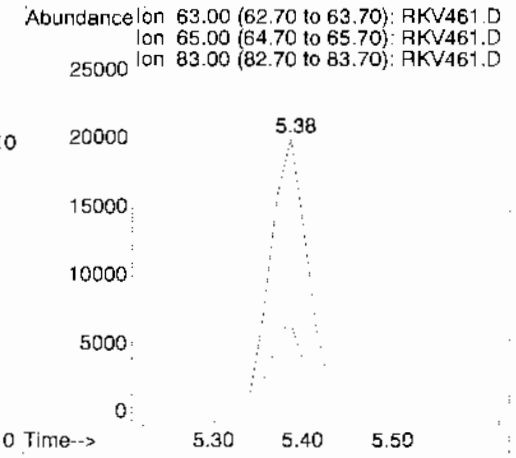


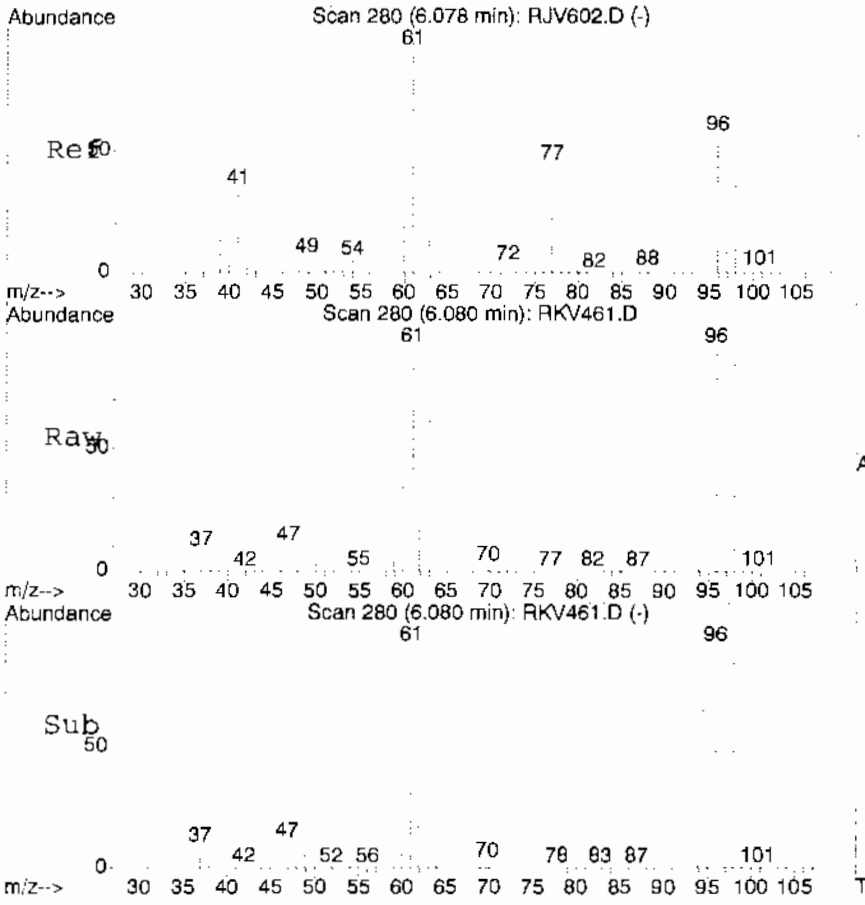


#23
1,1-Dichloroethane
Concen: 0.41 ug/l
RT: 5.38 min Scan# 233
Delta R.T. 0.02 min
Lab File: RKV461.D
Acq: 18 Nov 2011 6:21 pm

Tgt Ion: 63 Resp: 62418

Ion	Ratio	Lower	Upper
63	100		
65	31.1	1.3	61.3
83	11.1	0.0	41.5

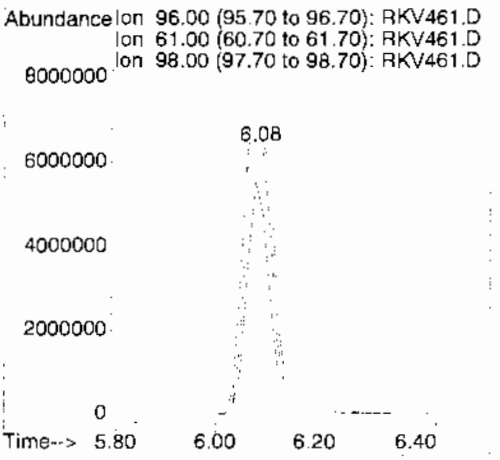


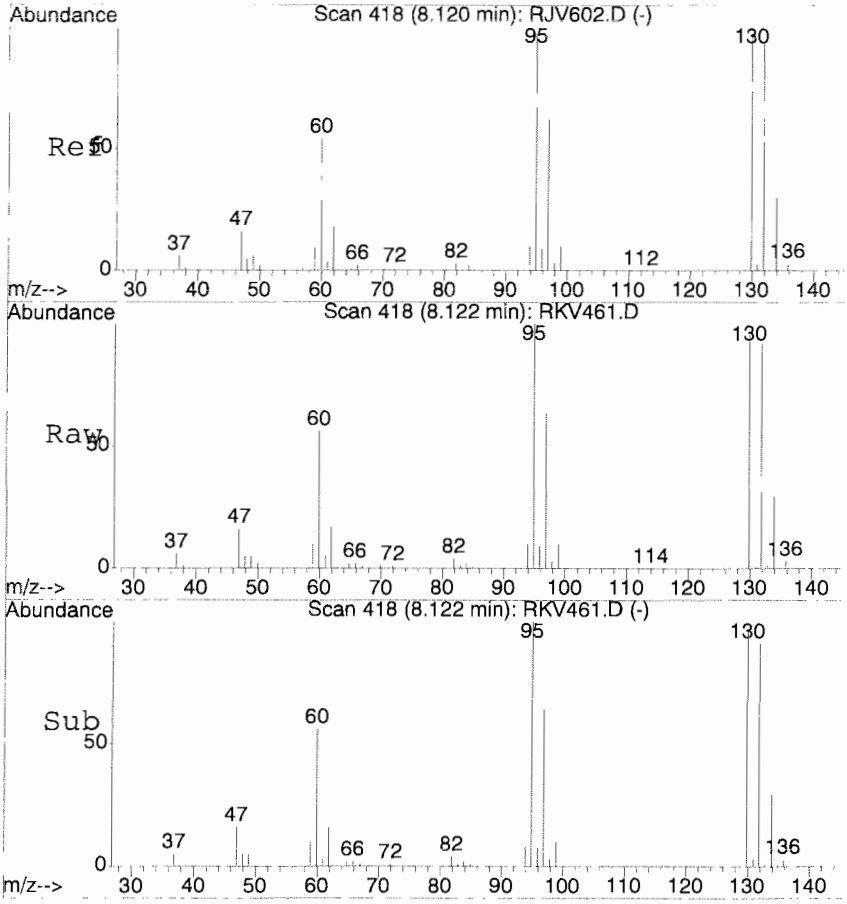


#28
cis-1,2-Dichloroethene
Concen: 337.80 ug/l
RT: 6.08 min Scan# 280
Delta R.T. 0.00 min
Lab File: RKV461.D
Acq: 18 Nov 2011 6:21 pm

Tgt Ion: 96 Resp:25606520

Ion	Ratio	Lower	Upper
96	100		
61	120.8	157.0	217.0#
98	71.3	33.8	93.8

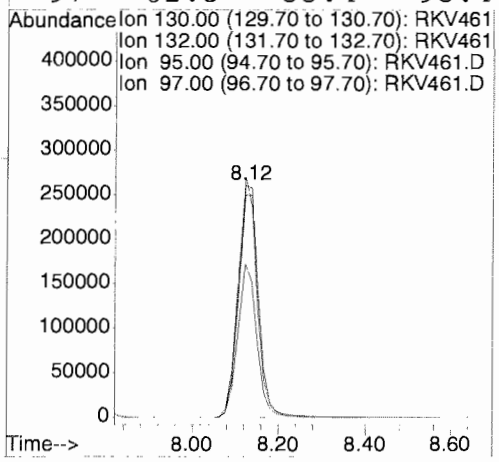




#41
Trichloroethene
Concen: 11.74 ug/l
RT: 8.12 min Scan# 418
Delta R.T. 0.00 min
Lab File: RKV461.D
Acq: 18 Nov 2011 6:21 pm

Tgt Ion:130 Resp: 849656

Ion	Ratio	Lower	Upper
130	100		
132	95.7	64.6	124.6
95	97.9	69.6	129.6
97	62.5	33.4	93.4



2011

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/14/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/14/11
Batch No.	: 11K119	Date Extracted:	11/21/11 12:59
Sample ID:	MW-70-PMW09-124DL	Date Analyzed:	11/21/11 12:59
Lab Samp ID:	K119-01T	Dilution Factor:	50
Lab File ID:	RKV506	Matrix :	WATER
Ext Btch ID:	VO01K22	% Moisture :	NA
Calib. Ref.:	RJV602	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	50	10
1,1,1,2-TETRACHLOROETHANE	ND	50	10
1,1,2,2-TETRACHLOROETHANE	ND	50	10
1,1,2-TRICHLOROETHANE	ND	50	10
FREON113	ND	50	15
1,1-DICHLOROETHANE	ND	50	10
1,1-DICHLOROETHENE	ND	25	10
1,1-DICHLOROPROPENE	ND	50	10
1,2-DIBROMO-3-CHLOROPROPANE	ND	100	25
1,2-DIBROMOETHANE	ND	50	10
1,2-DICHLOROBENZENE	ND	50	10
1,2-DICHLOROETHANE	ND	25	10
1,2-DICHLOROPROPANE	ND	50	10
1,2,3-TRICHLOROBENZENE	ND	50	15
1,2,3-TRICHLOROPROPANE	ND	50	25
1,2,4-TRICHLOROBENZENE	ND	50	15
1,2,4-TRIMETHYLBENZENE	ND	50	10
1,3-DICHLOROBENZENE	ND	50	10
1,3,5-TRIMETHYLBENZENE	ND	50	10
1,4-DICHLOROBENZENE	ND	50	10
2-BUTANONE	ND	500	200
2-CHLOROTOLUENE	ND	50	10
2-HEXANONE	ND	500	200
2,2-DICHLOROPROPANE	ND	50	10
4-CHLOROTOLUENE	ND	50	10
4-METHYL-2-PENTANONE	ND	500	200
N-BUTYLBENZENE	ND	50	10
N-PROPYLBENZENE	ND	50	10
P-ISOPROPYLTOLUENE	ND	50	10
SEC-BUTYLBENZENE	ND	50	10
TERT-BUTYLBENZENE	ND	50	10
ACETONE	ND	500	250
BENZENE	ND	50	10
BROMOBENZENE	ND	50	10
BROMODICHLOROMETHANE	ND	50	10
CIS-1,3-DICHLOROPROPENE	ND	50	10
TRANS-1,3-DICHLOROPROPENE	ND	50	10
BROMOMETHANE	ND	100	15
BROMOFORM	ND	50	15
CARBON DISULFIDE	ND	50	10
CARBON TETRACHLORIDE	ND	25	10
CHLOROBENZENE	ND	50	10
CHLOROETHANE	ND	100	15
CHLOROFORM	ND	50	10
CHLOROMETHANE	ND	100	15
CIS-1,2-DICHLOROETHENE	430	50	10
DICHLORODIFLUOROMETHANE	ND	100	15
DIBROMOCHLOROMETHANE	ND	50	10
DIBROMOMETHANE	ND	50	10
ETHYLBENZENE	ND	50	10
HEXACHLOROBUTADIENE	ND	50	15
ISOPROPYL BENZENE	ND	50	10
METHYLENE CHLORIDE	ND	50	25
MTBE	ND	50	10
STYRENE	ND	50	10
TETRACHLOROETHYLENE	ND	50	10
TOLUENE	ND	50	10
TRANS-1,2-DICHLOROETHENE	ND	50	10
TRICHLOROETHENE	11J	250	10
TRICHLOROFLUOROMETHANE	ND	100	15
VINYL CHLORIDE	ND	25	10
XYLENES (TOTAL)	ND	100	30
M/P-XYLENES	ND	50	20
O-XYLENE	ND	50	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	509	500.0	102	70-140
4-BROMOFLUOROBENZENE	549	500.0	110	70-130
TOLUENE-D8	505	500.0	101	70-140

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K21\RKV506.D Vial: 10
Acq On : 21 Nov 2011 12:59 pm Operator: MW
Sample : 11K119-01T 0.5mL Inst : TO01
Misc : DF=50 Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 21 13:32 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.75	114	1719518	10.00	ug/l	-0.03
36) CHLOROBENZENE-D5	12.29	117	1368267	10.00	ug/l	-0.03
66) 1,2-DICHLOROBENZENE-D4	15.40	152	405965	10.00	ug/l	-0.01
System Monitoring Compounds						
32) Dibromofluoromethane	6.69	111	486242	10.33	ug/l	-0.03
Spiked Amount 10.000			Recovery	=	103.30%	
35) 1,2-Dichloroethane-d4	7.15	65	511857	10.19	ug/l	-0.01
Spiked Amount 10.000			Recovery	=	101.90%	
49) Toluene-d8	9.93	98	1913417	10.11	ug/l	-0.03
Spiked Amount 10.000			Recovery	=	101.10%	
69) 4-Bromofluorobenzene	13.83	95	549143	10.98	ug/l	-0.01
Spiked Amount 10.000			Recovery	=	109.80%	
Target Compounds						Qvalue
9) Dichlorofluoromethane	3.30	67	29074	0.24	ug/l	93
28) cis-1,2-Dichloroethene	6.05	96	559983	8.58	ug/l	87
41) Trichloroethene	8.09	130	13358	0.22	ug/l	92

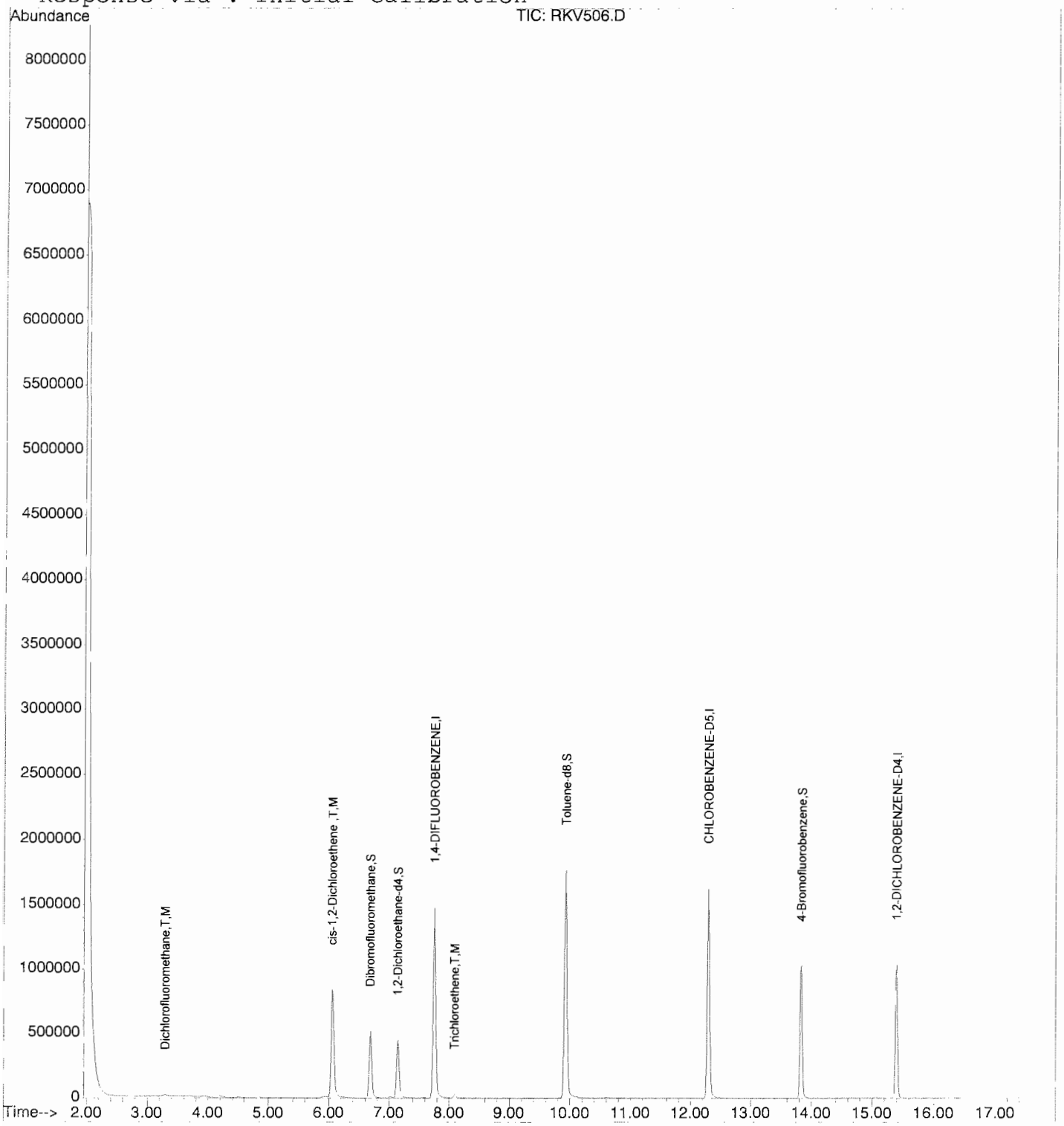
(#) = qualifier out of range (m) = manual integration

2013

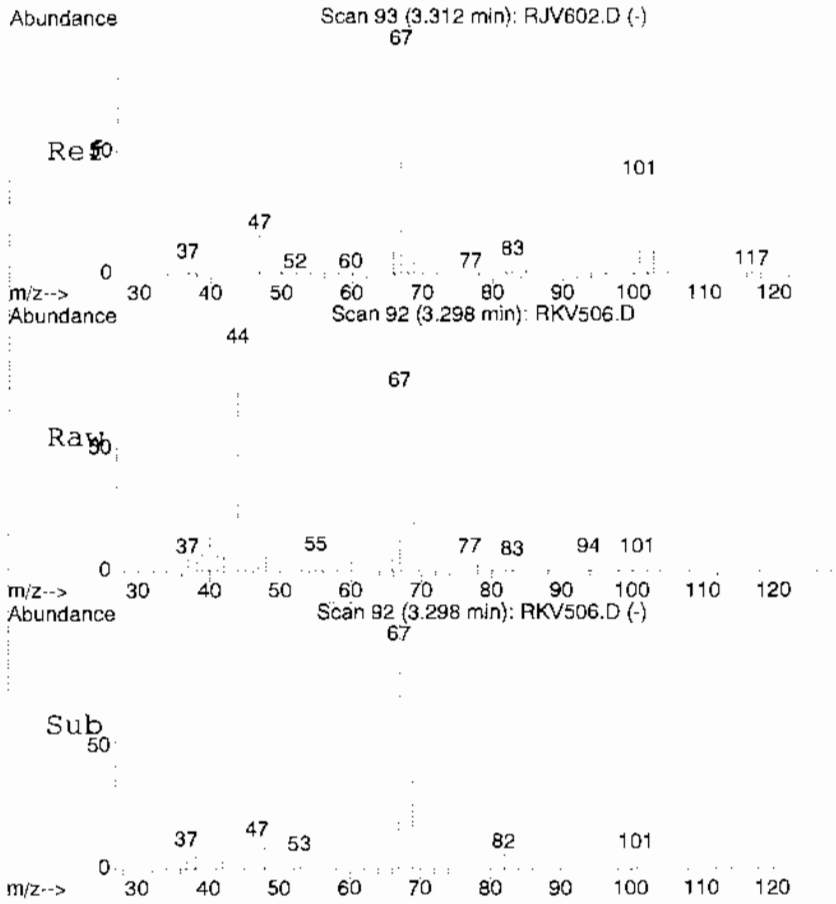
Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K21\RKV506.D Vial: 10
Acq On : 21 Nov 2011 12:59 pm Operator: MW
Sample : 11K119-01T 0.5mL Inst : TO01
Misc : DF=50 Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 21 13:32 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



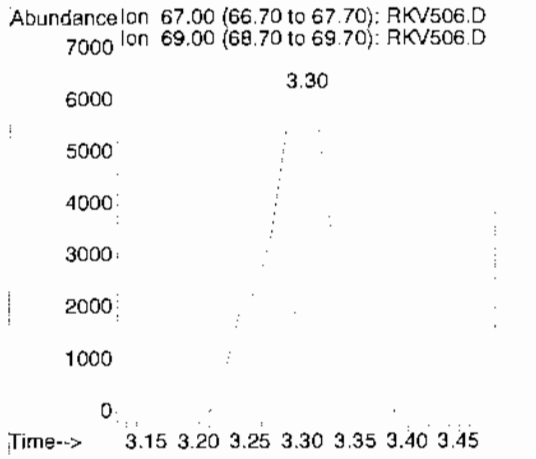
2014

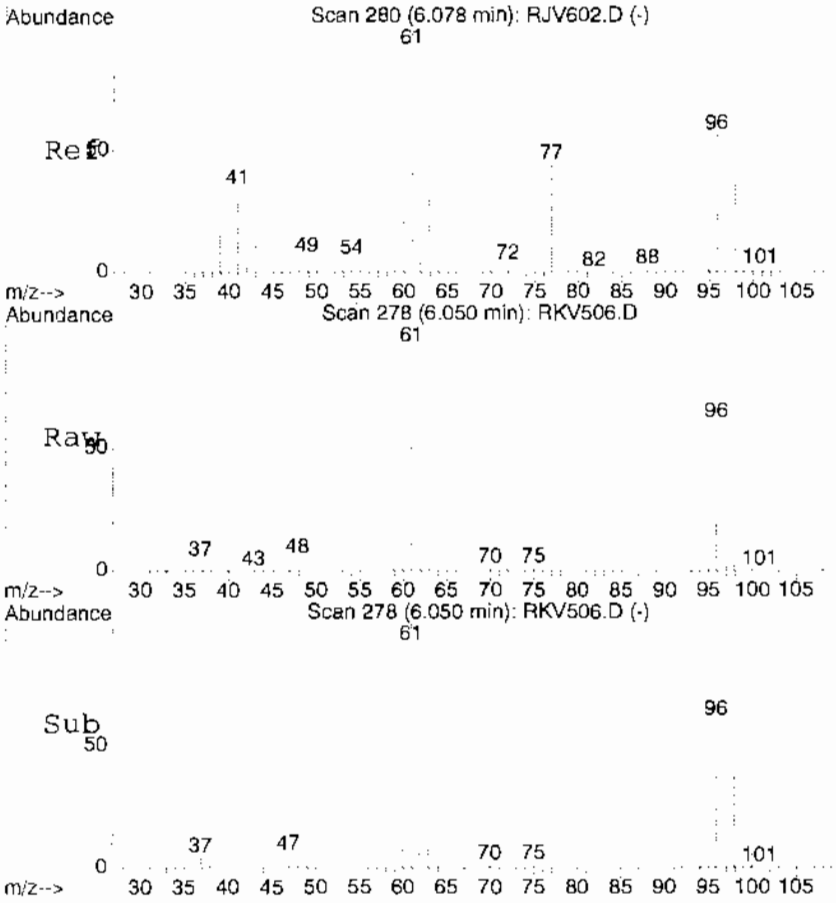


#9
Dichlorofluoromethane
Concen: 0.24 ug/l
RT: 3.30 min Scan# 92
Delta R.T. -0.01 min
Lab File: RKV506.D
Acq: 21 Nov 2011 12:59 pm

Tgt Ion: 67 Resp: 29074

Ion	Ratio	Lower	Upper
67	100		
69	35.6	1.6	61.6

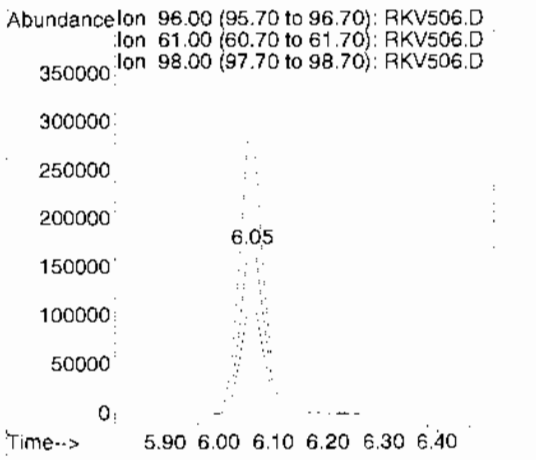


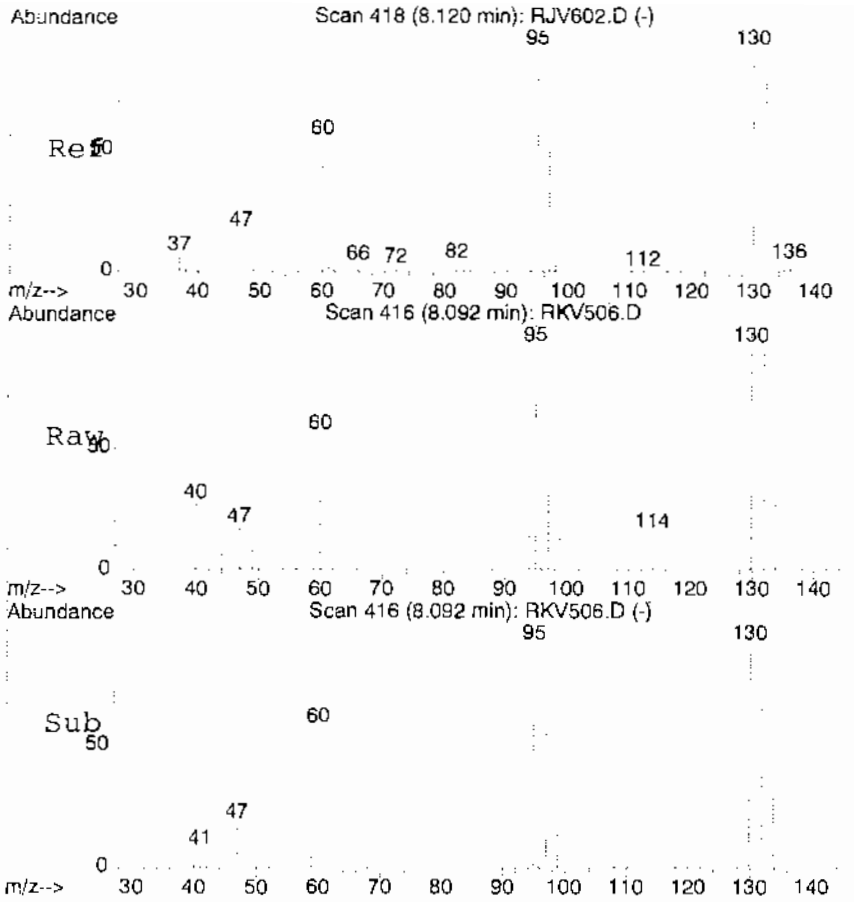


#28
cis-1,2-Dichloroethene
Concen: 8.58 ug/l
RT: 6.05 min Scan# 278
Delta R.T. -0.03 min
Lab File: RKV506.D
Acq: 21 Nov 2011 12:59 pm

Tgt Ion: 96 Resp: 559983

Ion	Ratio	Lower	Upper
96	100		
61	162.9	157.0	217.0
98	64.3	33.8	93.8

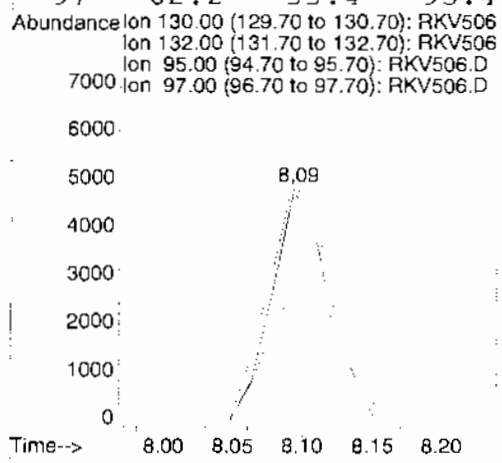




#41
Trichloroethene
Concen: 0.22 ug/l
RT: 8.09 min Scan# 416
Delta R.T. -0.03 min
Lab File: RKV506.D
Acq: 21 Nov 2011 12:59 pm

Tgt Ion:130 Resp: 13358

Ion	Ratio	Lower	Upper
130	100		
132	104.4	64.6	124.6
95	109.7	69.6	129.6
97	62.2	33.4	93.4



METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/14/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/14/11
Batch No.	: 11K119	Date Extracted:	11/18/11 19:17
Sample ID:	IR-70-SHB113-125	Date Analyzed:	11/18/11 19:17
Lab Samp ID:	K119-02	Dilution Factor:	1
Lab File ID:	RKV463	Matrix	: WATER
Ext Btch ID:	VO01K20	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.23J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	0.38J	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	0.85J	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	4.8	1.0	0.20
TRICHLOROETHENE	0.92J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	2.2	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.9	10.00	109	70-140
4-BROMOFLUOROBENZENE	10.5	10.00	105	70-130
TOLUENE-D8	10.0	10.00	100	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/14/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/14/11
Batch No. : 11K119	Date Extracted: 11/18/11 19:45
Sample ID: MW-70-PMW10-126	Date Analyzed: 11/18/11 19:45
Lab Samp ID: K119-03	Dilution Factor: 1
Lab File ID: RKV464	Matrix : WATER
Ext Btch ID: VO01K20	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	1.6	1.0	0.20
1,1-DICHLOROETHENE	11	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.27J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	670E	1.0	0.20
DICHLORODIFLUOROMETHANE	2.3	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	48	1.0	0.20
TRICHLOROETHENE	45	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	25	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.5	10.00	105	70-140
4-BROMOFLUOROBENZENE	11.1	10.00	111	70-130
TOLUENE-D8	9.87	10.00	98.7	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/14/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/14/11
Batch No. : 11K119	Date Extracted: 11/21/11 13:28
Sample ID: MW-70-PMW10-126DL	Date Analyzed: 11/21/11 13:28
Lab Samp ID: K119-03T	Dilution Factor: 100
Lab File ID: RKV507	Matrix : WATER
Ext Btch ID: V001K22	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	100	20
1,1,1,2-TETRACHLOROETHANE	ND	100	20
1,1,2,2-TETRACHLOROETHANE	ND	100	20
1,1,2-TRICHLOROETHANE	ND	100	20
FREON113	ND	100	30
1,1-DICHLOROETHANE	ND	100	20
1,1-DICHLOROETHENE	ND	50	20
1,1-DICHLOROPROPENE	ND	100	20
1,2-DIBROMO-3-CHLOROPROPANE	ND	200	50
1,2-DIBROMOETHANE	ND	100	20
1,2-DICHLOROBENZENE	ND	100	20
1,2-DICHLOROETHANE	ND	50	20
1,2-DICHLOROPROPANE	ND	100	20
1,2,3-TRICHLOROBENZENE	ND	100	30
1,2,3-TRICHLOROPROPANE	ND	100	50
1,2,4-TRICHLOROBENZENE	ND	100	30
1,2,4-TRIMETHYLBENZENE	ND	100	20
1,3-DICHLOROBENZENE	ND	100	20
1,3,5-TRIMETHYLBENZENE	ND	100	20
1,4-DICHLOROBENZENE	ND	100	20
2-BUTANONE	ND	1000	400
2-CHLOROTOLUENE	ND	100	20
2-HEXANONE	ND	1000	400
2,2-DICHLOROPROPANE	ND	100	20
4-CHLOROTOLUENE	ND	100	20
4-METHYL-2-PENTANONE	ND	1000	400
N-BUTYLBENZENE	ND	100	20
N-PROPYLBENZENE	ND	100	20
P-ISOPROPYLTOLUENE	ND	100	20
SEC-BUTYLBENZENE	ND	100	20
TERT-BUTYLBENZENE	ND	100	20
ACETONE	ND	1000	500
BENZENE	ND	100	20
BROMOBENZENE	ND	100	20
BROMODICHLOROMETHANE	ND	100	20
CIS-1,3-DICHLOROPROPENE	ND	100	20
TRANS-1,3-DICHLOROPROPENE	ND	100	20
BROMOMETHANE	ND	200	30
BROMOFORM	ND	100	30
CARBON DISULFIDE	ND	100	20
CARBON TETRACHLORIDE	ND	50	20
CHLOROBENZENE	ND	100	20
CHLOROETHANE	ND	200	30
CHLOROFORM	ND	100	20
CHLOROMETHANE	ND	200	30
CIS-1,2-DICHLOROETHENE	290Q	100	20
DICHLORODIFLUOROMETHANE	ND	200	30
DIBROMOCHLOROMETHANE	ND	100	20
DIBROMOMETHANE	ND	100	20
ETHYLBENZENE	ND	100	20
HEXACHLOROBUTADIENE	ND	100	30
ISOPROPYL BENZENE	ND	100	20
METHYLENE CHLORIDE	ND	100	50
MTBE	ND	100	20
STYRENE	ND	100	20
TETRACHLOROETHYLENE	ND	100	20
TOLUENE	ND	100	20
TRANS-1,2-DICHLOROETHENE	52J	100	20
TRICHLOROETHENE	55J	500	20
TRICHLOROFLUOROMETHANE	ND	200	30
VINYL CHLORIDE	28J	50	20
XYLENES (TOTAL)	ND	200	60
M/P-XYLENES	ND	100	40
O-XYLENE	ND	100	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	1110	1000	111	70-140
4-BROMOFLUOROBENZENE	1090	1000	109	70-130
TOLUENE-D8	997	1000	99.7	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/14/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/14/11
Batch No. : 11K119	Date Extracted: 11/21/11 13:55
Sample ID: MW-70-MNA11-127	Date Analyzed: 11/21/11 13:55
Lab Samp ID: K119-04	Dilution Factor: 1
Lab File ID: RKV508	Matrix : WATER
Ext Btch ID: VO01K22	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	2.2	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	0.21J	1.0	0.20
TRICHLOROETHENE	1.8J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.7	10.00	107	70-140
4-BROMOFLUOROBENZENE	10.8	10.00	108	70-130
TOLUENE-D8	10.1	10.00	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/14/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/14/11
Batch No.	: 11K119	Date Extracted:	11/18/11 18:49
Sample ID:	MW-70-MNA07-128	Date Analyzed:	11/18/11 18:49
Lab Samp ID:	K119-05	Dilution Factor:	1
Lab File ID:	RKV462	Matrix	: WATER
Ext Btch ID:	V001K20	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.34J	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.23J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	0.52J	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	7.8	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	2.6	1.0	0.20
TRICHLOROETHENE	1.8J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	4.6	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.2	10.00	102	70-140
4-BROMOFLUOROBENZENE	10.7	10.00	107	70-130
TOLUENE-D8	10.3	10.00	103	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/14/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/14/11
Batch No. : 11K119	Date Extracted: 11/21/11 14:24
Sample ID: IR-70-TB-123	Date Analyzed: 11/21/11 14:24
Lab Samp ID: K119-06	Dilution Factor: 1
Lab File ID: RKV509	Matrix : WATER
Ext Btch ID: VO01K22	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.3	10.00	103	70-140
4-BROMOFLUOROBENZENE	11.2	10.00	112	70-130
TOLUENE-D8	10.1	10.00	101	70-140

QC SUMMARIES

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/18/11
Batch No. : 11K119	Date Extracted: 11/18/11 12:36
Sample ID: MBLK1W	Date Analyzed: 11/18/11 12:36
Lab Samp ID: V001K20Q	Dilution Factor: 1
Lab File ID: RKV450	Matrix : WATER
Ext Btch ID: V001K20	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.40	10.00	94.0	70-140
4-BROMOFLUOROBENZENE	10.8	10.00	108	70-130
TOLUENE-D8	10.4	10.00	104	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K119
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	V001K20Q	V001K20L	V001K20C		
LAB FILE ID:	RKV450	RKV443	RKV444		
DATE EXTRACTED:	11/18/1112:36	11/18/1109:19	11/18/1109:47	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1112:36	11/18/1109:19	11/18/1109:47	DATE RECEIVED:	11/18/11
PREP. BATCH:	V001K20	V001K20	V001K20		
CALIB. REF:	RJV602	RJV602	RJV602		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	10.0	100	10.0	9.30	93	8	60-130	30
Benzene	ND	10.0	11.5	115	10.0	10.7	107	7	70-130	30
Chlorobenzene	ND	10.0	11.7	117	10.0	10.9	109	7	70-120	30
Toluene	ND	10.0	11.5	115	10.0	10.6	106	9	70-130	30
Trichloroethene	ND	10.0	11.5	115	10.0	10.6	106	8	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.82	88	10.0	9.11	91	70-140
4-Bromofluorobenzene	10.0	9.85	99	10.0	9.71	97	70-130
Toluene-d8	10.0	10.1	101	10.0	10.1	101	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/21/11
Batch No. : 11K119	Date Extracted: 11/21/11 11:28
Sample ID: MBLK2W	Date Analyzed: 11/21/11 11:28
Lab Samp ID: V001K22B	Dilution Factor: 1
Lab File ID: RKV503	Matrix : WATER
Ext Btch ID: V001K22	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.59	10.00	95.9	70-140
4-BROMOFLUOROBENZENE	10.9	10.00	109	70-130
TOLUENE-D8	10.2	10.00	102	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K119
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	V001K22B	V001K22L	V001K22C		
LAB FILE ID:	RKV503	RKV500	RKV501		
DATE EXTRACTED:	11/21/1111:28	11/21/1110:04	11/21/1110:32	DATE COLLECTED:	NA
DATE ANALYZED:	11/21/1111:28	11/21/1110:04	11/21/1110:32	DATE RECEIVED:	11/21/11
PREP. BATCH:	V001K22	V001K22	V001K22		
CALIB. REF:	RJV602	RJV602	RJV602		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	8.86	89	10.0	8.62	86	3	60-130	30
Benzene	ND	10.0	9.84	98	10.0	9.50	95	4	70-130	30
Chlorobenzene	ND	10.0	10.2	102	10.0	9.85	99	4	70-120	30
Toluene	ND	10.0	9.86	99	10.0	9.59	96	3	70-130	30
Trichloroethene	ND	10.0	9.85	99	10.0	9.47	95	4	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	9.32	93	10.0	9.65	96	70-140
4-Bromofluorobenzene	10.0	9.53	95	10.0	9.38	94	70-130
Toluene-d8	10.0	9.89	99	10.0	9.81	98	70-130

QC DATA

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV450.D Vial: 10
Acq On : 18 Nov 2011 12:36 pm Operator: MW
Sample : VO01K20Q 25mL Inst : TO01
Misc : BLANK Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 13:48 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	2155290	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1690340	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	498815	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.72	111	591675	10.03	ug/l	0.00
Spiked Amount 10.000			Recovery = 100.30%			
35) 1,2-Dichloroethane-d4	7.18	65	592181	9.40	ug/l	0.02
Spiked Amount 10.000			Recovery = 94.00%			
49) Toluene-d8	9.96	98	2420311	10.35	ug/l	0.00
Spiked Amount 10.000			Recovery = 103.50%			
69) 4-Bromofluorobenzene	13.85	95	664573	10.81	ug/l	0.00
Spiked Amount 10.000			Recovery = 108.10%			

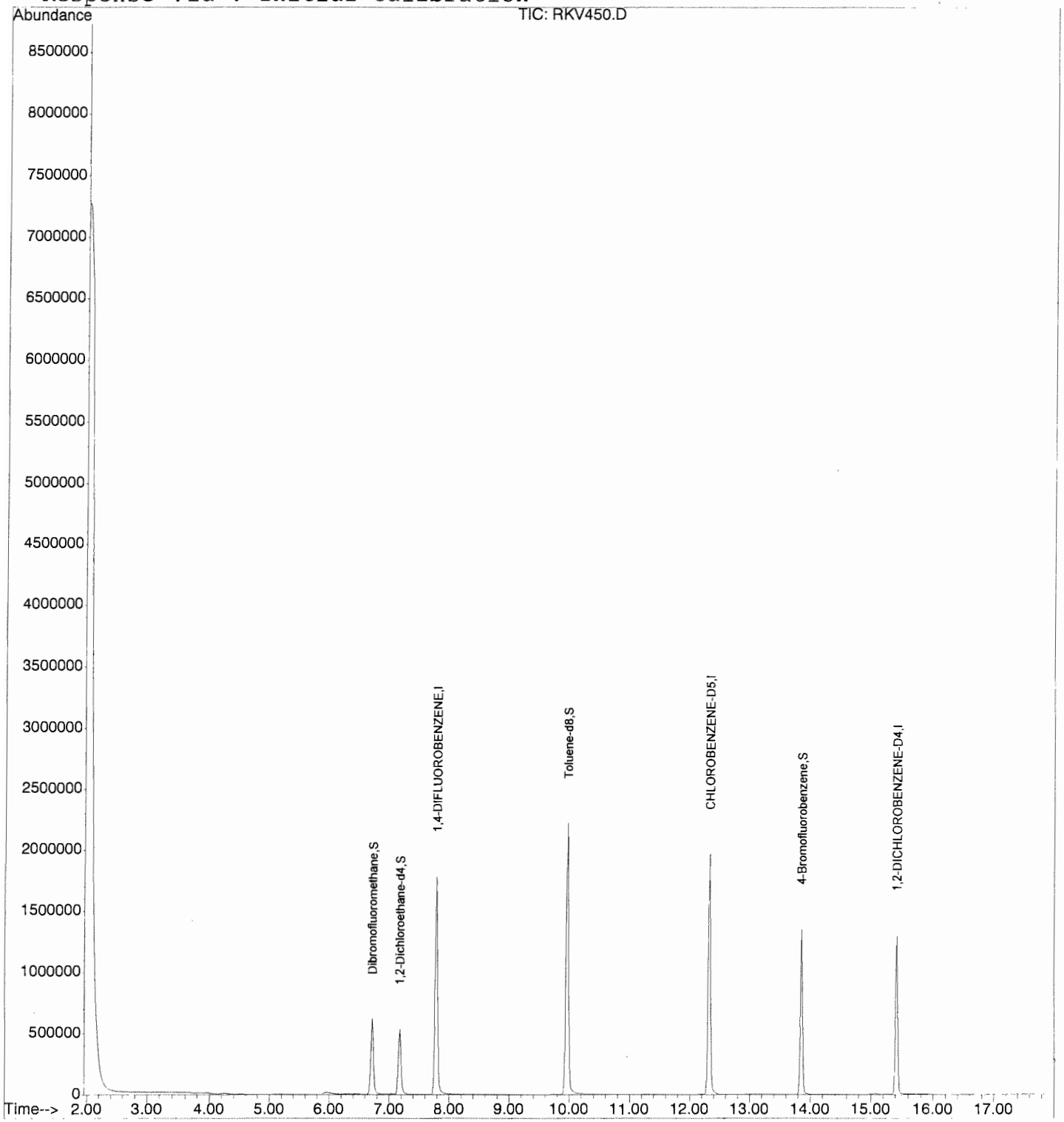
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV450.D Vial: 10
Acq On : 18 Nov 2011 12:36 pm Operator: MW
Sample : VO01K20Q 25mL Inst : TO01
Misc : BLANK Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 13:48 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



2030

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV443.D Vial: 3
Acq On : 18 Nov 2011 9:19 am Operator: MW
Sample : VO01K20L Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 9:37 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.77	114	1911840	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.31	117	1568117	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	659298	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.71	111	516014	9.86	ug/l	0.00
Spiked Amount 10.000			Recovery = 98.60%			
35) 1,2-Dichloroethane-d4	7.17	65	492503	8.82	ug/l	0.00
Spiked Amount 10.000			Recovery = 88.20%			
49) Toluene-d8	9.95	98	2195713	10.12	ug/l	0.00
Spiked Amount 10.000			Recovery = 101.20%			
69) 4-Bromofluorobenzene	13.84	95	800300	9.85	ug/l	0.00
Spiked Amount 10.000			Recovery = 98.50%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	2.16	85	676364	9.74	ug/l	99
4) Chloromethane	2.39	50	901656	10.84	ug/l	100
5) Vinyl chloride	2.55	62	967880	10.97	ug/l	89
6) 2-Chloro-1,1,1-trifluoroet	2.67	118	7435	0.11	ug/l	85
7) Bromomethane	2.93	94	477274	10.92	ug/l	99
8) Chloroethane	3.04	64	551393	10.22	ug/l	98
9) Dichlorofluoromethane	3.32	67	1418267	10.42	ug/l	99
10) Trichlorofluoromethane	3.38	101	804049	9.80	ug/l	100
11) Acrolein	3.81	56	80933	37.42	ug/l	83
12) 1,1,2-Trichloro-1,2,2-trif	3.97	151	454290	10.86	ug/l	99
13) Acetone	3.95	43	426900	50.91	ug/l	95
14) 1,1-Dichloroethene	3.94	61	1261349	10.03	ug/l	95
15) Iodomethane	4.12	142	998526	10.91	ug/l	92
16) Carbon disulfide	4.21	76	2180311	10.62	ug/l	100
17) Methylene chloride	4.52	49	1021139	10.59	ug/l	96
18) tert-Butyl alcohol	4.64	59	111042	49.21	ug/l	94
19) Acrylonitrile	4.77	53	627165	60.95	ug/l	97
20) tert-Butyl methyl ether (M	4.84	73	1156013	10.27	ug/l	99
21) trans-1,2-Dichloroethene	4.84	61	1349784	10.57	ug/l	94
22) Vinyl acetate	5.36	43	785362	8.63	ug/l	96
23) 1,1-Dichloroethane	5.37	63	1558634	10.78	ug/l	100
24) Isopropyl ether (DIPE)	5.40	45	2788765	10.86	ug/l	98
26) tert-Butyl ethyl ether (ET	5.86	59	1840248	9.96	ug/l	97
27) 2-Butanone	6.04	43	771728	57.12	ug/l	98
28) cis-1,2-Dichloroethene	6.07	96	839244	11.57	ug/l	93
29) 2,2-Dichloropropane	6.10	77	1119748	10.89	ug/l	99
30) Bromochloromethane	6.38	49	627547	10.76	ug/l	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV443.D Vial: 3
Acq On : 18 Nov 2011 9:19 am Operator: MW
Sample : VO01K20L Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 9:37 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) Chloroform	6.50	83	1339555	11.01 ug/l	98
33) 1,1,1-Trichloroethane	6.74	97	1017927	10.53 ug/l	99
34) tert-Amyl methyl ether (TA	7.37	87	277902	10.24 ug/l	96
37) 1,1-Dichloropropene	6.94	110	369531	11.33 ug/l	99
38) Carbon tetrachloride	6.96	119	796900	10.20 ug/l	99
39) Benzene	7.21	78	3183959	11.49 ug/l	98
40) 1,2-Dichloroethane	7.27	62	710107	10.33 ug/l	100
41) Trichloroethene	8.11	130	800966	11.54 ug/l	99
42) 1,2-Dichloropropane	8.48	63	838369	11.65 ug/l	87
44) Dibromomethane	8.62	93	265768	11.37 ug/l	97
45) Bromodichloromethane	8.87	83	905194	11.27 ug/l	100
46) 2-Chloroethyl vinyl ether	9.27	63	10067	0.54 ug/l	95
47) cis-1,3-Dichloropropene	9.52	75	1082096	11.24 ug/l	93
48) 4-Methyl-2-pentanone	9.73	43	1760471	55.83 ug/l	99
50) Toluene	10.07	91	3170468	11.53 ug/l	99
51) Ethyl methacrylate	10.49	69	559409	10.82 ug/l	96
52) trans-1,3-Dichloropropene	10.42	75	756397	10.62 ug/l	96
53) 1,1,2-Trichloroethane	10.75	97	384160	11.34 ug/l	100
54) Tetrachloroethene	10.91	164	642735	11.51 ug/l	98
55) 1,3-Dichloropropane	11.01	76	795917	11.30 ug/l	100
56) 2-Hexanone	11.09	43	1049907	50.95 ug/l	98
57) Dibromochloromethane	11.38	129	460404	11.43 ug/l	100
58) 1,2-Dibromoethane	11.59	107	370210	11.51 ug/l	99
59) 1-Chlorohexane	12.33	91	1286897	11.32 ug/l	95
60) Chlorobenzene	12.36	112	1845731	11.66 ug/l	98
61) 1,1,1,2-Tetrachloroethane	12.49	131	611982	11.68 ug/l	99
62) Ethylbenzene	12.51	91	3682837	11.51 ug/l	99
63) m-Xylene & p-Xylene	12.68	91	5419230	22.45 ug/l	98
64) o-Xylene	13.19	91	2689008	11.32 ug/l	98
65) Styrene	13.22	104	1912943	11.26 ug/l	98
67) Bromoform	13.44	173	219671	10.10 ug/l	100
68) Isopropylbenzene	13.63	105	3339767	10.20 ug/l	99
70) 1,1,2,2-Tetrachloroethane	13.99	83	458903	10.24 ug/l	99
71) Bromobenzene	14.00	156	673536	9.98 ug/l	96
72) trans-1,4-Dichloro-2-buten	14.02	53	50831	4.43 ug/l	99
73) 1,2,3-Trichloropropane	14.05	110	112545	9.82 ug/l	95
74) n-Propylbenzene	14.12	91	4296077	10.18 ug/l	99
75) 1,3,5-Trimethylbenzene	14.31	105	2675087	9.88 ug/l	99
76) 2-Chlorotoluene	14.21	91	2349892	10.08 ug/l	100
77) 4-Chlorotoluene	14.34	91	2572400	10.01 ug/l	98
78) tert-Butylbenzene	14.64	134	610601	10.07 ug/l	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV443.D Vial: 3
Acq On : 18 Nov 2011 9:19 am Operator: MW
Sample : VO01K20L Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 9:37 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

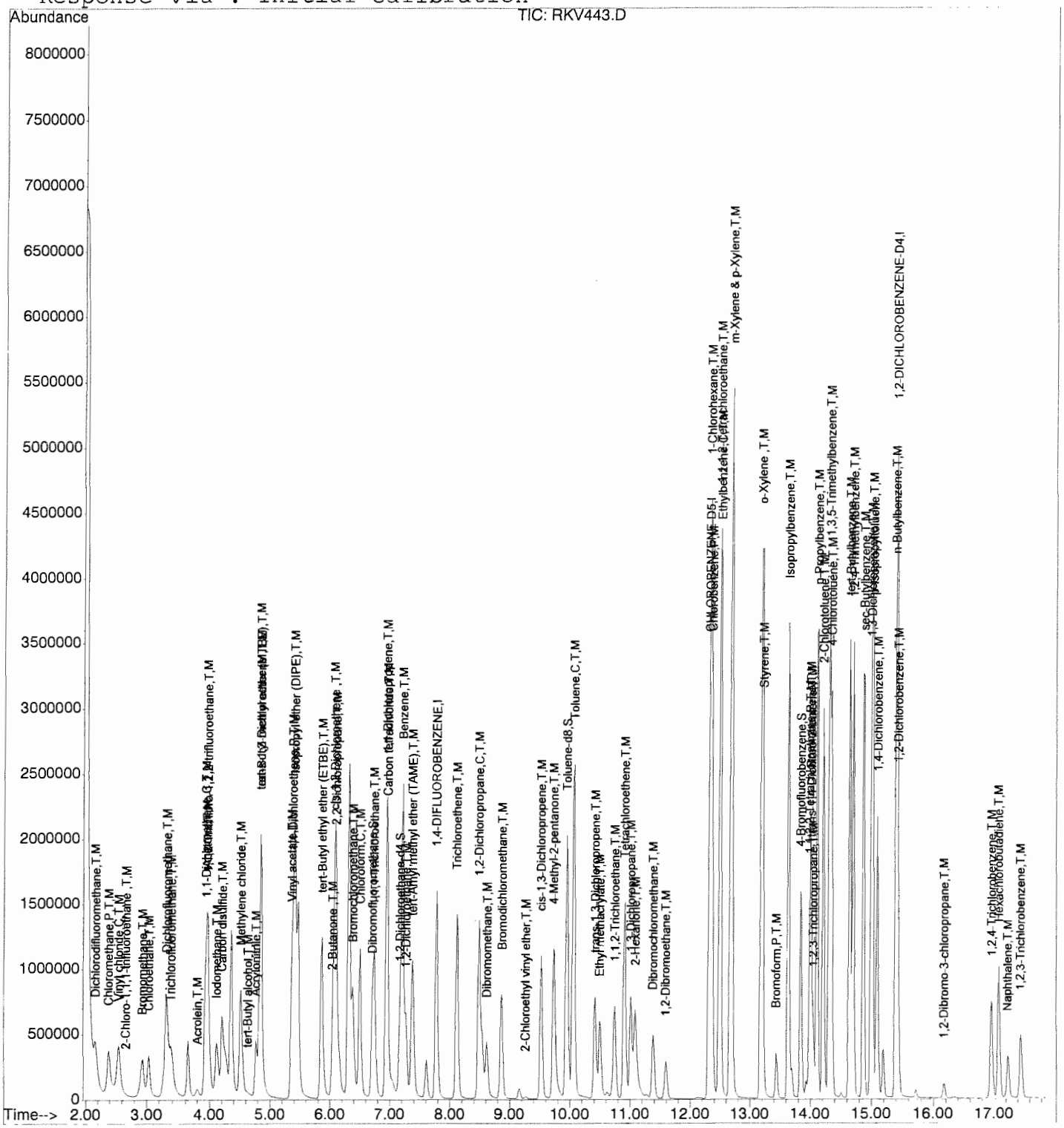
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79)	1,2,4-Trimethylbenzene	14.70	105	2534301	9.86 ug/l	99
80)	sec-Butylbenzene	14.87	105	3407102	9.90 ug/l	99
81)	p-Isopropyltoluene	15.02	119	2705527	10.14 ug/l	99
82)	1,3-Dichlorobenzene	14.99	146	1342559	10.38 ug/l	99
83)	1,4-Dichlorobenzene	15.10	146	1248219	10.16 ug/l	100
84)	n-Butylbenzene	15.39	91	2464158	9.55 ug/l	100
85)	1,2-Dichlorobenzene	15.44	146	1038713	10.09 ug/l	99
86)	1,2-Dibromo-3-chloropropan	16.18	157	48555	9.40 ug/l	93
87)	1,2,4-Trichlorobenzene	16.96	180	427504	8.26 ug/l	99
88)	Hexachlorobutadiene	17.08	225	353892	9.66 ug/l	99
89)	Naphthalene	17.23	128	484839	8.49 ug/l	100
90)	1,2,3-Trichlorobenzene	17.45	180	295818	8.73 ug/l	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV443.D Vial: 3
Acq On : 18 Nov 2011 9:19 am Operator: MW
Sample : VO01K20L Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 9:37 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV444.D Vial: 4
Acq On : 18 Nov 2011 9:47 am Operator: MW
Sample : VO01K20C Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 10:05 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	2080865	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1721978	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	653761	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.70	111	566895	9.95	ug/l	-0.01
Spiked Amount 10.000			Recovery = 99.50%			
35) 1,2-Dichloroethane-d4	7.16	65	553643	9.11	ug/l	0.00
Spiked Amount 10.000			Recovery = 91.10%			
49) Toluene-d8	9.96	98	2397437	10.06	ug/l	0.00
Spiked Amount 10.000			Recovery = 100.60%			
69) 4-Bromofluorobenzene	13.85	95	782631	9.71	ug/l	0.00
Spiked Amount 10.000			Recovery = 97.10%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	2.16	85	782501	10.35	ug/l	100
4) Chloromethane	2.38	50	1034884	11.43	ug/l	100
5) Vinyl chloride	2.54	62	1102767	11.48	ug/l	90
6) 2-Chloro-1,1,1-trifluoroet	2.66	118	6756	0.10	ug/l	86
7) Bromomethane	2.93	94	543875	11.43	ug/l	99
8) Chloroethane	3.03	64	623140	10.61	ug/l	98
9) Dichlorofluoromethane	3.31	67	1393957	9.41	ug/l	99
10) Trichlorofluoromethane	3.37	101	917940	10.28	ug/l	99
11) Acrolein	3.80	56	89150	37.87	ug/l	88
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	468559	10.29	ug/l	99
13) Acetone	3.96	43	473999	51.94	ug/l	96
14) 1,1-Dichloroethene	3.94	61	1273409	9.30	ug/l	96
15) Iodomethane	4.11	142	1012026	10.16	ug/l	92
16) Carbon disulfide	4.20	76	2131491	9.54	ug/l	100
17) Methylene chloride	4.51	49	1044498	9.95	ug/l	96
18) tert-Butyl alcohol	4.63	59	126403	51.47	ug/l	96
19) Acrylonitrile	4.76	53	671236	59.94	ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	1255953	10.25	ug/l	100
21) trans-1,2-Dichloroethene	4.85	61	1350678	9.72	ug/l	94
22) Vinyl acetate	5.36	43	1113411	11.24	ug/l	99
23) 1,1-Dichloroethane	5.37	63	1574846	10.01	ug/l	100
24) Isopropyl ether (DIPE)	5.41	45	2951929	10.56	ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	1932291	9.61	ug/l	98
27) 2-Butanone	6.04	43	842578	57.30	ug/l	98
28) cis-1,2-Dichloroethene	6.08	96	857360	10.86	ug/l	91
29) 2,2-Dichloropropane	6.10	77	1122561	10.03	ug/l	98
30) Bromochloromethane	6.38	49	652510	10.27	ug/l	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV444.D Vial: 4
Acq On : 18 Nov 2011 9:47 am Operator: MW
Sample : VO01K20C Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 10:05 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) Chloroform	6.51	83	1355890	10.24 ug/l	98
33) 1,1,1-Trichloroethane	6.75	97	1008365	9.59 ug/l	98
34) tert-Amyl methyl ether (TA	7.38	87	291520	9.87 ug/l	94
37) 1,1-Dichloropropene	6.95	110	372340	10.39 ug/l	99
38) Carbon tetrachloride	6.95	119	786042	9.16 ug/l	100
39) Benzene	7.21	78	3263156	10.72 ug/l	99
40) 1,2-Dichloroethane	7.26	62	746127	9.89 ug/l	98
41) Trichloroethene	8.12	130	808216	10.61 ug/l	98
42) 1,2-Dichloropropane	8.49	63	846875	10.72 ug/l	90
44) Dibromomethane	8.61	93	279568	10.89 ug/l	96
45) Bromodichloromethane	8.86	83	929182	10.54 ug/l	99
46) 2-Chloroethyl vinyl ether	9.26	63	15921	0.78 ug/l	91
47) cis-1,3-Dichloropropene	9.53	75	1093607	10.35 ug/l	93
48) 4-Methyl-2-pentanone	9.74	43	1915245	55.31 ug/l	99
50) Toluene	10.06	91	3188320	10.56 ug/l	99
51) Ethyl methacrylate	10.50	69	606891	10.69 ug/l	96
52) trans-1,3-Dichloropropene	10.42	75	791963	10.12 ug/l	95
53) 1,1,2-Trichloroethane	10.74	97	409178	11.00 ug/l	99
54) Tetrachloroethene	10.90	164	647805	10.56 ug/l	98
55) 1,3-Dichloropropane	11.01	76	844748	10.92 ug/l	99
56) 2-Hexanone	11.08	43	1147360	50.71 ug/l	97
57) Dibromochloromethane	11.38	129	486077	10.99 ug/l	100
58) 1,2-Dibromoethane	11.60	107	389091	11.02 ug/l	100
59) 1-Chlorohexane	12.34	91	1269793	10.17 ug/l	95
60) Chlorobenzene	12.37	112	1887469	10.86 ug/l	97
61) 1,1,1,2-Tetrachloroethane	12.49	131	607880	10.56 ug/l	98
62) Ethylbenzene	12.50	91	3630286	10.33 ug/l	99
63) m-Xylene & p-Xylene	12.68	91	5389970	20.33 ug/l	99
64) o-Xylene	13.18	91	2692495	10.32 ug/l	98
65) Styrene	13.21	104	1890168	10.13 ug/l	99
67) Bromoform	13.43	173	230955	10.71 ug/l	100
68) Isopropylbenzene	13.64	105	3330742	10.26 ug/l	99
70) 1,1,2,2-Tetrachloroethane	13.98	83	497028	11.18 ug/l	99
71) Bromobenzene	14.01	156	697226	10.41 ug/l	96
72) trans-1,4-Dichloro-2-buten	14.03	53	51141	4.50 ug/l	97
73) 1,2,3-Trichloropropane	14.06	110	117077	10.30 ug/l	87
74) n-Propylbenzene	14.11	91	4238984	10.13 ug/l	99
75) 1,3,5-Trimethylbenzene	14.31	105	2659216	9.90 ug/l	99
76) 2-Chlorotoluene	14.22	91	2335947	10.11 ug/l	100
77) 4-Chlorotoluene	14.34	91	2559794	10.04 ug/l	98
78) tert-Butylbenzene	14.65	134	615585	10.23 ug/l	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV444.D Vial: 4
Acq On : 18 Nov 2011 9:47 am Operator: MW
Sample : VO01K20C Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 10:05 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

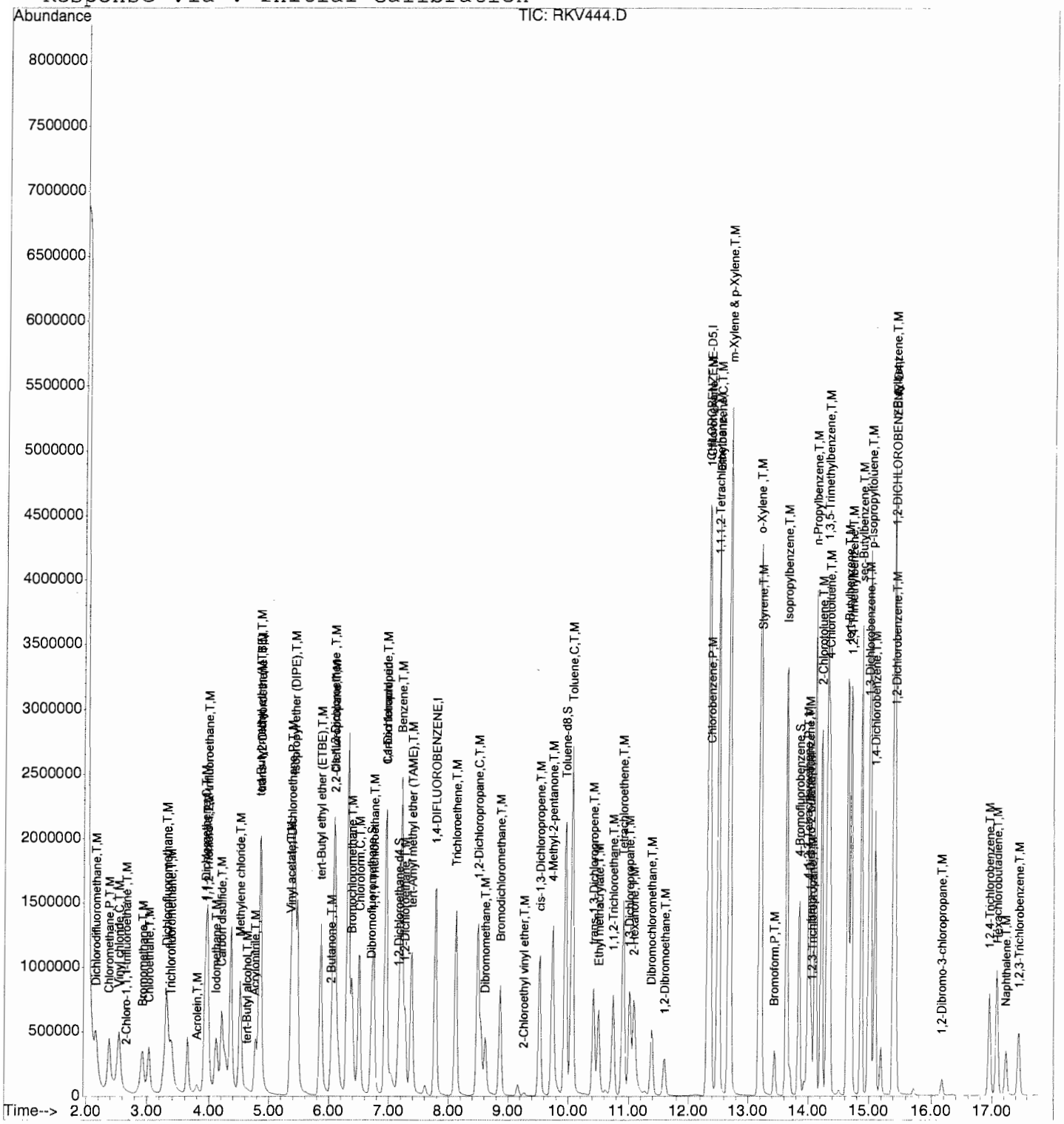
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79) 1,2,4-Trimethylbenzene	14.71	105	2550955	10.01 ug/l	99
80) sec-Butylbenzene	14.87	105	3415102	10.01 ug/l	100
81) p-Isopropyltoluene	15.02	119	2648584	10.01 ug/l	98
82) 1,3-Dichlorobenzene	14.99	146	1329407	10.36 ug/l	99
83) 1,4-Dichlorobenzene	15.09	146	1264189	10.38 ug/l	99
84) n-Butylbenzene	15.40	91	2373975	9.28 ug/l	99
85) 1,2-Dichlorobenzene	15.43	146	1054163	10.33 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.17	157	52507	10.25 ug/l	95
87) 1,2,4-Trichlorobenzene	16.96	180	436514	8.50 ug/l	100
88) Hexachlorobutadiene	17.09	225	347598	9.57 ug/l	99
89) Naphthalene	17.24	128	504236	8.90 ug/l	100
90) 1,2,3-Trichlorobenzene	17.46	180	306158	9.11 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV444.D Vial: 4
Acq On : 18 Nov 2011 9:47 am Operator: MW
Sample : VO01K20C Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 10:05 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K21\RKV503.D Vial: 7
Acq On : 21 Nov 2011 11:28 am Operator: MW
Sample : VO01K22B 25mL Inst : TO01
Misc : BLANK Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 21 13:26 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.76	114	2127427	10.00	ug/l	-0.02
36) CHLOROBENZENE-D5	12.30	117	1672507	10.00	ug/l	-0.02
66) 1,2-DICHLOROBENZENE-D4	15.39	152	503406	10.00	ug/l	-0.02
System Monitoring Compounds						
32) Dibromofluoromethane	6.69	111	596390	10.24	ug/l	-0.02
Spiked Amount 10.000			Recovery	=	102.40%	
35) 1,2-Dichloroethane-d4	7.15	65	596120	9.59	ug/l	0.00
Spiked Amount 10.000			Recovery	=	95.90%	
49) Toluene-d8	9.93	98	2370730	10.25	ug/l	-0.02
Spiked Amount 10.000			Recovery	=	102.50%	
69) 4-Bromofluorobenzene	13.82	95	675609	10.89	ug/l	-0.02
Spiked Amount 10.000			Recovery	=	108.90%	

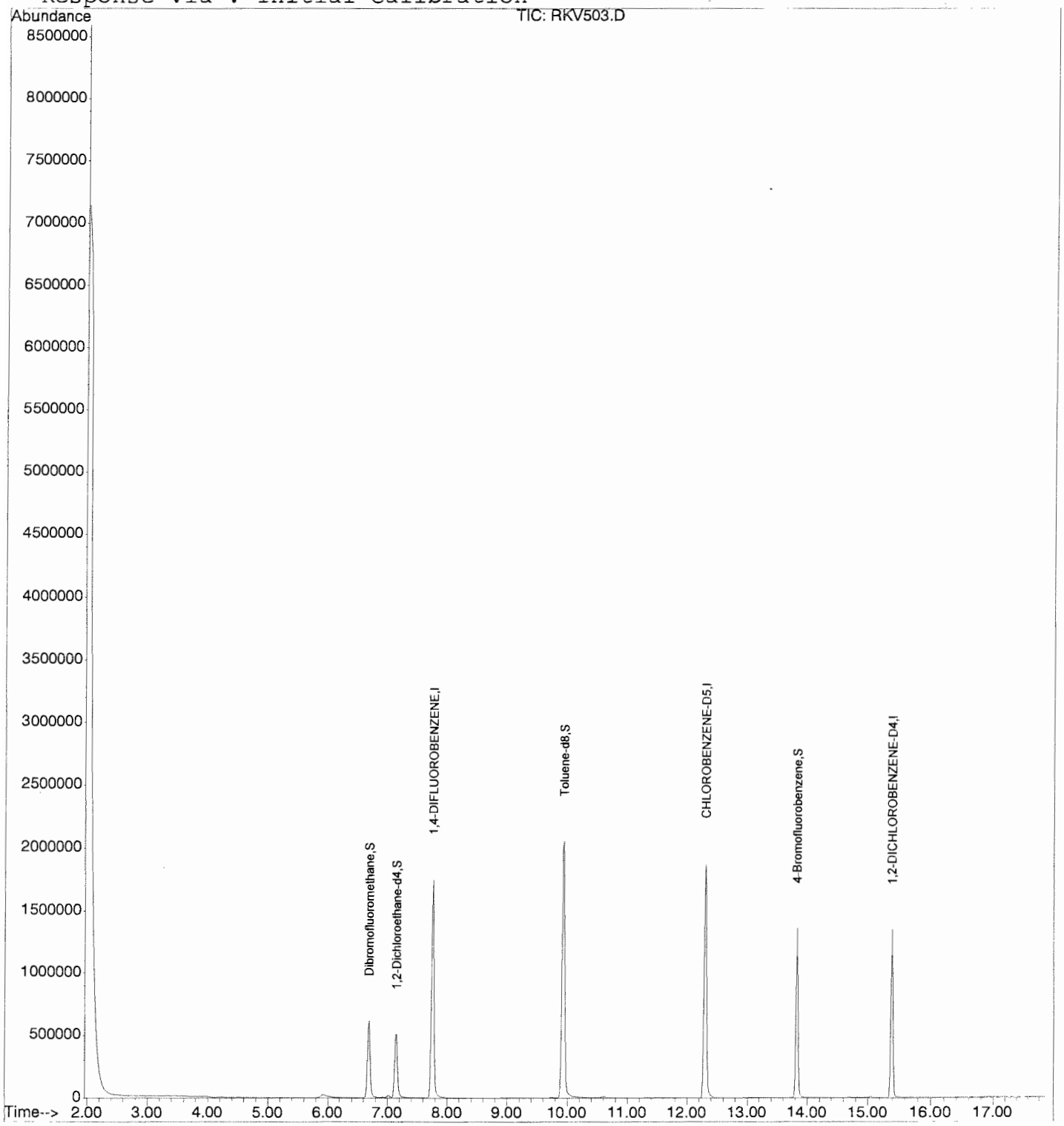
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K21\RKV503.D Vial: 7
Acq On : 21 Nov 2011 11:28 am Operator: MW
Sample : VO01K22B 25mL Inst : TO01
Misc : BLANK Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 21 13:26 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K21\RKV500.D Vial: 4
Acq On : 21 Nov 2011 10:04 am Operator: MW
Sample : VO01K22L Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 21 10:22 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.76	114	2000894	10.00	ug/l	-0.02
36) CHLOROBENZENE-D5	12.30	117	1675521	10.00	ug/l	-0.02
66) 1,2-DICHLOROBENZENE-D4	15.39	152	625804	10.00	ug/l	-0.02
System Monitoring Compounds						
32) Dibromofluoromethane	6.68	111	542061	9.90	ug/l	-0.04
Spiked Amount 10.000			Recovery	=	99.00%	
35) 1,2-Dichloroethane-d4	7.14	65	544776	9.32	ug/l	-0.02
Spiked Amount 10.000			Recovery	=	93.20%	
49) Toluene-d8	9.93	98	2291876	9.89	ug/l	-0.02
Spiked Amount 10.000			Recovery	=	98.90%	
69) 4-Bromofluorobenzene	13.82	95	734792	9.53	ug/l	-0.02
Spiked Amount 10.000			Recovery	=	95.30%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	2.15	85	693147	9.53	ug/l	100
4) Chloromethane	2.36	50	908854	10.44	ug/l	100
5) Vinyl chloride	2.53	62	952685	10.32	ug/l	90
7) Bromomethane	2.89	94	507663	11.10	ug/l	100
8) Chloroethane	3.01	64	549469	9.73	ug/l	98
9) Dichlorofluoromethane	3.29	67	1288631	9.05	ug/l	99
10) Trichlorofluoromethane	3.36	101	843601	9.82	ug/l	99
11) Acrolein	3.78	56	135429	59.83	ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	3.95	151	420613	9.61	ug/l	97
13) Acetone	3.94	43	356742	40.65	ug/l	96
14) 1,1-Dichloroethene	3.91	61	1166583	8.86	ug/l	97
15) Iodomethane	4.10	142	906393	9.47	ug/l	96
16) Carbon disulfide	4.19	76	1926952	8.97	ug/l	100
17) Methylene chloride	4.49	49	911130	9.02	ug/l	97
18) tert-Butyl alcohol	4.62	59	109214	46.25	ug/l	97
19) Acrylonitrile	4.75	53	487849	45.30	ug/l	98
20) tert-Butyl methyl ether (M	4.81	73	1098987	9.33	ug/l	98
21) trans-1,2-Dichloroethene	4.83	61	1228698	9.20	ug/l	96
22) Vinyl acetate	5.33	43	868393	9.12	ug/l	96
23) 1,1-Dichloroethane	5.35	63	1452873	9.60	ug/l	99
24) Isopropyl ether (DIPE)	5.39	45	2553584	9.50	ug/l	98
26) tert-Butyl ethyl ether (ET	5.83	59	1705133	8.82	ug/l	98
27) 2-Butanone	6.03	43	624829	44.19	ug/l	98
28) cis-1,2-Dichloroethene	6.06	96	756018	9.96	ug/l	94
29) 2,2-Dichloropropane	6.07	77	1081706	10.05	ug/l	99
30) Bromochloromethane	6.35	49	567228	9.29	ug/l	94
31) Chloroform	6.49	83	1244636	9.77	ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K21\RKV500.D Vial: 4
Acq On : 21 Nov 2011 10:04 am Operator: MW
Sample : VO01K22L Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 21 10:22 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
33) 1,1,1-Trichloroethane	6.72	97	957326	9.46 ug/l	99
34) tert-Amyl methyl ether (TA	7.36	87	259050	9.12 ug/l	96
37) 1,1-Dichloropropene	6.93	110	342526	9.83 ug/l	98
38) Carbon tetrachloride	6.93	119	776984	9.31 ug/l	99
39) Benzene	7.18	78	2913301	9.84 ug/l	99
40) 1,2-Dichloroethane	7.24	62	690437	9.40 ug/l	99
41) Trichloroethene	8.10	130	730356	9.85 ug/l	99
42) 1,2-Dichloropropane	8.47	63	765350	9.95 ug/l	93
44) Dibromomethane	8.59	93	242594	9.71 ug/l	98
45) Bromodichloromethane	8.84	83	854050	9.96 ug/l	99
46) 2-Chloroethyl vinyl ether	9.25	63	25910	1.31 ug/l	100
47) cis-1,3-Dichloropropene	9.50	75	1016772	9.89 ug/l	95
48) 4-Methyl-2-pentanone	9.71	43	1471639	43.68 ug/l	99
50) Toluene	10.04	91	2897637	9.86 ug/l	99
51) Ethyl methacrylate	10.48	69	528962	9.58 ug/l	97
52) trans-1,3-Dichloropropene	10.39	75	742240	9.75 ug/l	96
53) 1,1,2-Trichloroethane	10.72	97	365799	10.11 ug/l	99
54) Tetrachloroethene	10.88	164	592578	9.93 ug/l	98
55) 1,3-Dichloropropane	10.98	76	746984	9.93 ug/l	100
56) 2-Hexanone	11.06	43	913620	41.50 ug/l	99
57) Dibromochloromethane	11.35	129	444864	10.33 ug/l	99
58) 1,2-Dibromoethane	11.56	107	342787	9.98 ug/l	100
59) 1-Chlorohexane	12.31	91	1198287	9.86 ug/l	96
60) Chlorobenzene	12.34	112	1731501	10.24 ug/l	98
61) 1,1,1,2-Tetrachloroethane	12.46	131	572088	10.22 ug/l	99
62) Ethylbenzene	12.48	91	3389172	9.91 ug/l	99
63) m-Xylene & p-Xylene	12.66	91	5051416	19.58 ug/l	98
64) o-Xylene	13.16	91	2498478	9.84 ug/l	99
65) Styrene	13.19	104	1854107	10.21 ug/l	98
67) Bromoform	13.42	173	211506	10.24 ug/l	99
68) Isopropylbenzene	13.62	105	3144876	10.12 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.96	83	435586	10.24 ug/l	100
71) Bromobenzene	13.99	156	631822	9.86 ug/l	97
72) trans-1,4-Dichloro-2-buten	14.00	53	76687	7.04 ug/l	99
73) 1,2,3-Trichloropropane	14.03	110	103603	9.52 ug/l	94
74) n-Propylbenzene	14.09	91	4049456	10.11 ug/l	99
75) 1,3,5-Trimethylbenzene	14.30	105	2560912	9.96 ug/l	99
76) 2-Chlorotoluene	14.19	91	2207479	9.98 ug/l	100
77) 4-Chlorotoluene	14.33	91	2401767	9.84 ug/l	98
78) tert-Butylbenzene	14.62	134	591496	10.27 ug/l	95
79) 1,2,4-Trimethylbenzene	14.68	105	2449170	10.04 ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K21\RKV500.D Vial: 4
Acq On : 21 Nov 2011 10:04 am Operator: MW
Sample : VO01K22L Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 21 10:22 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

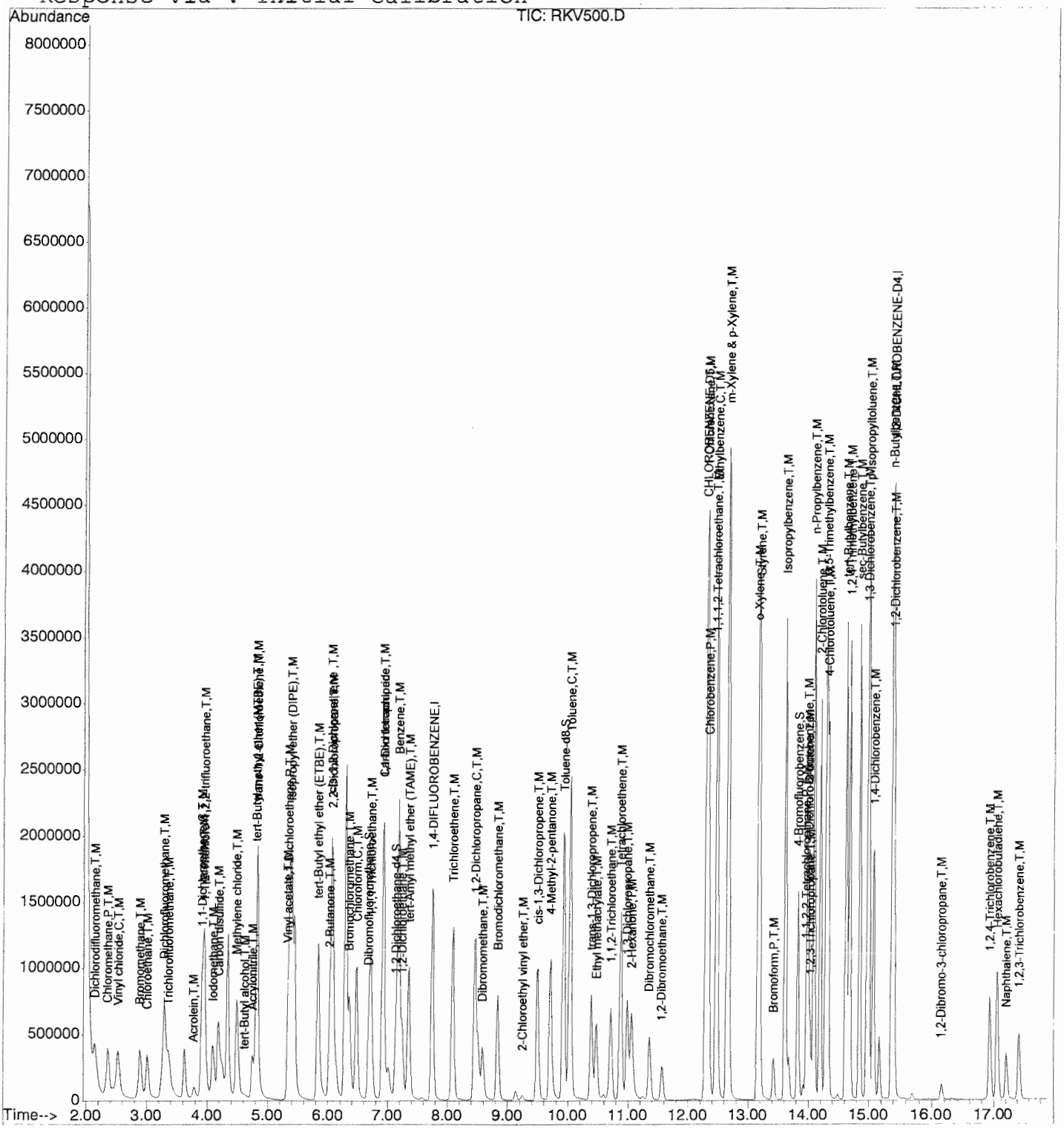
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
80) sec-Butylbenzene	14.84	105	3325107	10.18 ug/l	99
81) p-Isopropyltoluene	14.99	119	2614590	10.32 ug/l	99
82) 1,3-Dichlorobenzene	14.98	146	1246090	10.15 ug/l	99
83) 1,4-Dichlorobenzene	15.08	146	1180165	10.12 ug/l	99
84) n-Butylbenzene	15.38	91	2387401	9.75 ug/l	99
85) 1,2-Dichlorobenzene	15.41	146	985395	10.08 ug/l	100
86) 1,2-Dibromo-3-chloropropan	16.15	157	46908	9.57 ug/l	97
87) 1,2,4-Trichlorobenzene	16.93	180	425514	8.66 ug/l	99
88) Hexachlorobutadiene	17.06	225	358723	10.32 ug/l	99
89) Naphthalene	17.21	128	503566	9.29 ug/l	99
90) 1,2,3-Trichlorobenzene	17.43	180	301919	9.39 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K21\RKV500.D Vial: 4
Acq On : 21 Nov 2011 10:04 am Operator: MW
Sample : VO01K22L Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 21 10:22 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K21\RKV501.D Vial: 5
Acq On : 21 Nov 2011 10:32 am Operator: MW
Sample : VO01K22C Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 21 10:50 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.75	114	2119159	10.00 ug/l	-0.03
36) CHLOROBENZENE-D5	12.29	117	1804753	10.00 ug/l	-0.03
66) 1,2-DICHLOROBENZENE-D4	15.40	152	696539	10.00 ug/l	-0.01
System Monitoring Compounds					
32) Dibromofluoromethane	6.69	111	585457	10.09 ug/l	-0.03
Spiked Amount 10.000			Recovery	= 100.90%	
35) 1,2-Dichloroethane-d4	7.14	65	597164	9.65 ug/l	-0.01
Spiked Amount 10.000			Recovery	= 96.50%	
49) Toluene-d8	9.93	98	2449792	9.81 ug/l	-0.03
Spiked Amount 10.000			Recovery	= 98.10%	
69) 4-Bromofluorobenzene	13.82	95	805006	9.38 ug/l	-0.03
Spiked Amount 10.000			Recovery	= 93.80%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	2.16	85	611511	7.94 ug/l	99
4) Chloromethane	2.37	50	818973	8.88 ug/l	100
5) Vinyl chloride	2.54	62	862618	8.82 ug/l	90
7) Bromomethane	2.90	94	458863	9.47 ug/l	99
8) Chloroethane	3.02	64	486173	8.13 ug/l	98
9) Dichlorofluoromethane	3.30	67	1329253	8.81 ug/l	99
10) Trichlorofluoromethane	3.37	101	749137	8.24 ug/l	99
11) Acrolein	3.79	56	161847	67.51 ug/l	98
12) 1,1,2-Trichloro-1,2,2-trif	3.96	151	425581	9.18 ug/l	98
13) Acetone	3.95	43	403606	43.42 ug/l	97
14) 1,1-Dichloroethene	3.92	61	1201882	8.62 ug/l	97
15) Iodomethane	4.10	142	947139	9.34 ug/l	94
16) Carbon disulfide	4.19	76	2055988	9.03 ug/l	99
17) Methylene chloride	4.50	49	970098	9.07 ug/l	96
18) tert-Butyl alcohol	4.61	59	122772	49.09 ug/l	96
19) Acrylonitrile	4.76	53	566815	49.70 ug/l	98
20) tert-Butyl methyl ether (M	4.82	73	1221736	9.79 ug/l	100
21) trans-1,2-Dichloroethene	4.84	61	1247019	8.81 ug/l	96
22) Vinyl acetate	5.34	43	700176	6.94 ug/l	91
23) 1,1-Dichloroethane	5.35	63	1498980	9.35 ug/l	99
24) Isopropyl ether (DIPE)	5.40	45	2754574	9.68 ug/l	99
26) tert-Butyl ethyl ether (ET	5.84	59	1905762	9.31 ug/l	98
27) 2-Butanone	6.02	43	733103	48.95 ug/l	98
28) cis-1,2-Dichloroethene	6.06	96	865039	10.76 ug/l	92
29) 2,2-Dichloropropane	6.08	77	1073713	9.42 ug/l	99
30) Bromochloromethane	6.36	49	617724	9.55 ug/l	96
31) Chloroform	6.48	83	1297085	9.62 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K21\RKV501.D Vial: 5
Acq On : 21 Nov 2011 10:32 am Operator: MW
Sample : VO01K22C Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 21 10:50 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
33) 1,1,1-Trichloroethane	6.73	97	987826	9.22 ug/l	98
34) tert-Amyl methyl ether (TA	7.35	87	295702	9.83 ug/l	97
37) 1,1-Dichloropropene	6.92	110	345164	9.19 ug/l	100
38) Carbon tetrachloride	6.94	119	787195	8.76 ug/l	100
39) Benzene	7.19	78	3028686	9.50 ug/l	99
40) 1,2-Dichloroethane	7.25	62	734340	9.28 ug/l	100
41) Trichloroethene	8.09	130	756092	9.47 ug/l	99
42) 1,2-Dichloropropane	8.46	63	791923	9.56 ug/l #	61
44) Dibromomethane	8.59	93	267329	9.94 ug/l	97
45) Bromodichloromethane	8.83	83	910172	9.85 ug/l	100
46) 2-Chloroethyl vinyl ether	9.25	63	37597	1.76 ug/l	99
47) cis-1,3-Dichloropropene	9.50	75	1090789	9.85 ug/l	94
48) 4-Methyl-2-pentanone	9.70	43	1765294	48.64 ug/l	99
50) Toluene	10.03	91	3034261	9.59 ug/l	99
51) Ethyl methacrylate	10.47	69	613350	10.31 ug/l	96
52) trans-1,3-Dichloropropene	10.39	75	817239	9.97 ug/l	94
53) 1,1,2-Trichloroethane	10.73	97	402487	10.33 ug/l	99
54) Tetrachloroethene	10.89	164	605986	9.43 ug/l	99
55) 1,3-Dichloropropane	10.99	76	841607	10.38 ug/l	100
56) 2-Hexanone	11.07	43	1099002	46.34 ug/l	96
57) Dibromochloromethane	11.36	129	489058	10.55 ug/l	100
58) 1,2-Dibromoethane	11.57	107	388902	10.51 ug/l	98
59) 1-Chlorohexane	12.31	91	1229554	9.39 ug/l	96
60) Chlorobenzene	12.34	112	1794789	9.85 ug/l	98
61) 1,1,1,2-Tetrachloroethane	12.47	131	593089	9.83 ug/l	98
62) Ethylbenzene	12.49	91	3512575	9.54 ug/l	100
63) m-Xylene & p-Xylene	12.66	91	5198538	18.71 ug/l	98
64) o-Xylene	13.17	91	2650283	9.69 ug/l	99
65) Styrene	13.20	104	2021640	10.34 ug/l	98
67) Bromoform	13.42	173	240330	10.46 ug/l	99
68) Isopropylbenzene	13.61	105	3267505	9.45 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.97	83	513497	10.85 ug/l	99
71) Bromobenzene	14.00	156	682853	9.57 ug/l	97
72) trans-1,4-Dichloro-2-buten	14.01	53	91507	7.55 ug/l	98
73) 1,2,3-Trichloropropane	14.04	110	120580	9.95 ug/l	90
74) n-Propylbenzene	14.10	91	4157797	9.32 ug/l	99
75) 1,3,5-Trimethylbenzene	14.29	105	2680069	9.37 ug/l	99
76) 2-Chlorotoluene	14.19	91	2328721	9.46 ug/l	100
77) 4-Chlorotoluene	14.32	91	2557333	9.42 ug/l	98
78) tert-Butylbenzene	14.63	134	610288	9.52 ug/l	96
79) 1,2,4-Trimethylbenzene	14.68	105	2582044	9.51 ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11K21\RKV501.D Vial: 5
Acq On : 21 Nov 2011 10:32 am Operator: MW
Sample : VO01K22C Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 21 10:50 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

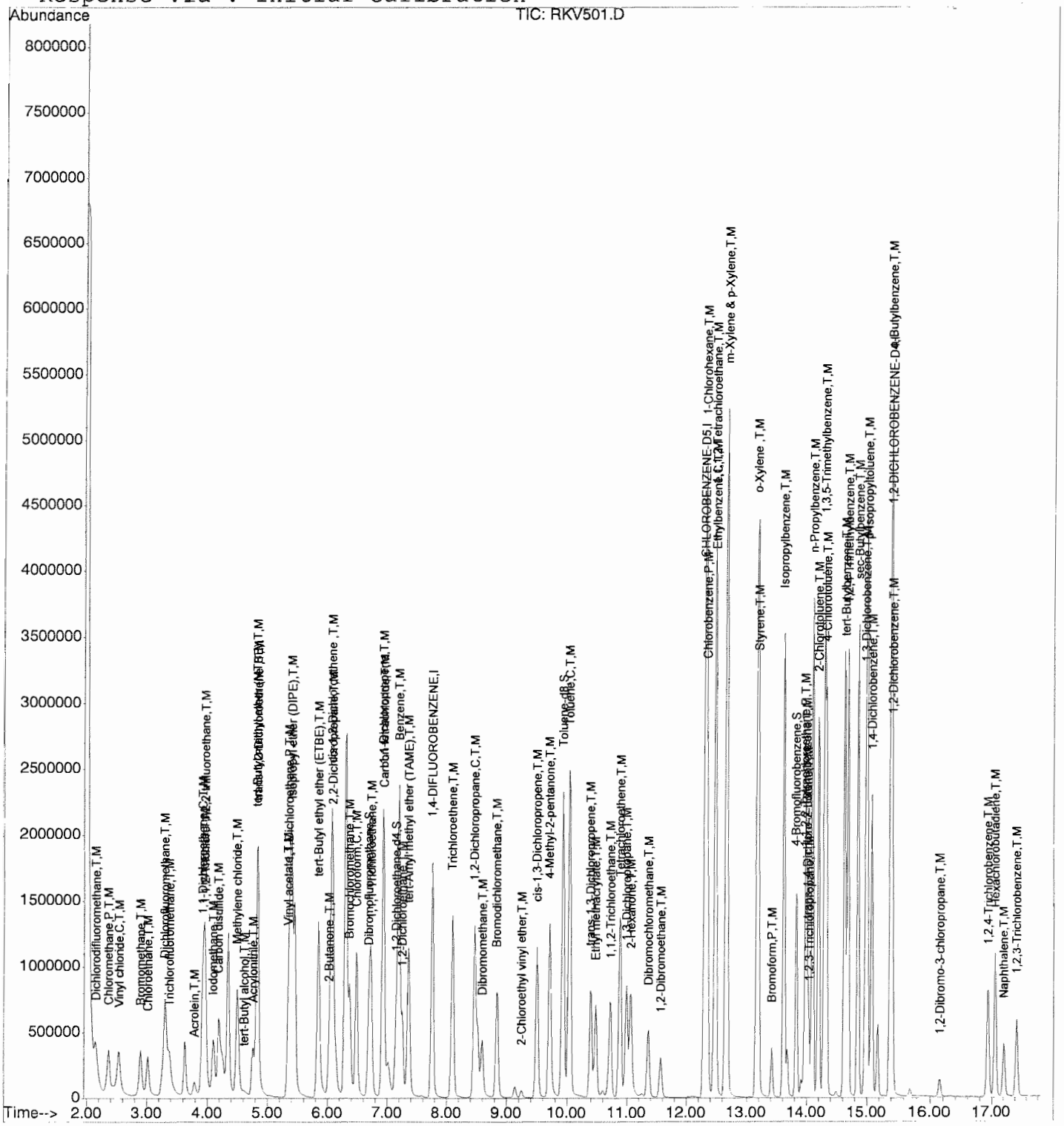
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
80) sec-Butylbenzene	14.85	105	3497746	9.62 ug/l	99
81) p-Isopropyltoluene	15.00	119	2749774	9.75 ug/l	98
82) 1,3-Dichlorobenzene	14.97	146	1353215	9.90 ug/l	99
83) 1,4-Dichlorobenzene	15.08	146	1285687	9.91 ug/l	99
84) n-Butylbenzene	15.39	91	2531311	9.29 ug/l	100
85) 1,2-Dichlorobenzene	15.42	146	1083270	9.96 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.16	157	58322	10.68 ug/l	95
87) 1,2,4-Trichlorobenzene	16.94	180	475103	8.68 ug/l	99
88) Hexachlorobutadiene	17.06	225	381069	9.85 ug/l	99
89) Naphthalene	17.21	128	584862	9.69 ug/l	99
90) 1,2,3-Trichlorobenzene	17.43	180	346153	9.67 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K21\RKV501.D Vial: 5
Acq On : 21 Nov 2011 10:32 am Operator: MW
Sample : VO01K22C Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 21 10:50 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



2048

INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RJV596
Instrument ID: T001
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K119
BFB Injection Date : 10/31/11
BFB Injection Time : 09:18
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.79
75	30.0 - 60.0% of mass 95	51.84
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.73
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	73.40
175	5.0 - 9.0% of mass 174	5.20(7.1)1
176	95.0 - 101.0% of mass 174	72.01(98.1)1
177	5.0 - 9.0% of mass 176	4.99(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	VO01J311	RJV597	10/31/11	09:59
2	VSTD0.5	VO01J312	RJV598	10/31/11	10:30
3	VSTD01	VO01J313	RJV599	10/31/11	11:01
4	VSTD02	VO01J314	RJV600	10/31/11	11:32
5	VSTD05	VO01J315	RJV601	10/31/11	12:03
6	VSTD010	VO01J316	RJV602	10/31/11	12:33
7	VSTD020	VO01J317	RJV603	10/31/11	13:04
8	VSTD030	VO01J318	RJV604	10/31/11	13:35
9	VSTD050	VO01J319	RJV605	10/31/11	14:05
10	VSTD100	VO01J3110	RJV606	10/31/11	14:36
11	VSTD010	IVO01J311	RJV609	10/31/11	16:07

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :TO01
Beginning DateTime :10/31/11 09:59
Spike Units :PPB
IC File :RJV602

Column Spec :RTX502.2 ID :0.32MM
Ending DateTime :10/31/11 14:36
HPChem Method :VO01J31

M	IDX	Parameters	.3 09:59 RJV597	.5 10:30 RJV598	1 11:01 RJV599	2 11:32 RJV600	5 12:03 RJV601	10 12:33 RJV602	20 13:04 RJV603	30 13:35 RJV604	50 14:05 RJV605	100 14:36 RJV606	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	0	7.7772
	2	Chlorotrifluoroethylene	------	0.109	0.142	0.158	0.161	0.161	0.174	0.164	0.169	0.164	0.156	12.57	2.1081
	3	Dichlorodifluoromethane	0.309	0.336	0.351	0.390	0.390	0.404	0.374	0.355	0.365	0.359	0.363	7.72	2.1576
	4	Chloromethane	0.424	0.438	0.439	0.437	0.442	0.478	0.432	0.422	0.420	0.418	0.435	4.03	2.3766
	5	Vinyl chloride	0.390	0.428	0.455	0.475	0.480	0.515	0.481	0.460	0.478	0.455	0.461	7.36	2.5408
	6	2-Chloro-1,1,1-trifluoroethane	0.267	0.292	0.352	0.405	0.357	0.346	0.367	0.343	0.340	0.315	0.338	11.52	2.6548
	7	Bromomethane	0.218	0.243	0.243	0.252	0.251	0.264	0.237	0.222	0.213	0.143	0.229	14.94	2.9004
	8	Chloroethane	0.371	0.316	0.291	0.288	0.275	0.285	0.269	0.252	0.251	0.223	0.282	14.40	3.0217
	9	Dichlorofluoromethane	0.808	0.730	0.755	0.724	0.730	0.705	0.722	0.671	0.654	0.622	0.712	7.42	3.3088
	10	Trichlorofluoromethane	------	0.394	0.410	0.439	0.446	0.459	0.428	------	------	------	0.429	5.60	3.3129
5	11	Acrolein	------	------	0.015	0.012	0.011	0.011	0.011	0.011	0.011	0.010	0.011	12.29	3.8010
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	0.227	0.210	0.222	0.216	0.226	0.217	0.224	0.216	0.216	0.214	0.219	2.60	3.9761
5	13	Acetone	------	------	0.054	0.046	0.045	0.046	0.044	0.040	0.039	0.036	0.044	12.62	3.9619
	14	1,1-Dichloroethene	0.682	0.667	0.685	0.687	0.691	0.670	0.668	0.631	0.616	0.584	0.658	5.45	3.9272
	15	Iodomethane	0.473	0.447	0.475	0.470	0.485	0.478	0.497	0.482	0.491	0.488	0.479	2.89	4.1122
	16	Carbon disulfide	1.104	0.866	0.961	0.999	1.070	0.991	1.192	1.135	1.223	1.201	1.074	10.99	4.2084
	17	Methylene chloride	0.589	0.509	0.526	0.494	0.501	0.484	0.501	0.484	0.485	0.473	0.505	6.57	4.5117
5	18	tert-Butyl alcohol	------	------	0.011	0.010	0.011	0.012	0.014	0.013	0.012	0.012	0.012	10.38	4.6333
5	19	Acrylonitrile	0.057	0.049	0.054	0.049	0.054	0.054	0.056	0.055	0.055	0.054	0.054	4.68	4.7766
	20	tert-Butyl methyl ether (MTBE)	0.581	0.545	0.619	0.597	0.611	0.595	0.636	0.580	0.573	0.550	0.589	4.92	4.8372
	21	trans-1,2-Dichloroethene	0.705	0.636	0.678	0.676	0.683	0.672	0.685	0.661	0.654	0.626	0.668	3.56	4.8505
	22	Vinyl acetate	------	0.362	0.399	0.481	0.527	0.523	0.516	0.523	0.507	0.446	0.476	12.74	5.3567
	23	1,1-Dichloroethane	0.823	0.707	0.773	0.758	0.764	0.745	0.768	0.750	0.748	0.727	0.756	4.05	5.3714
	24	Isopropyl ether (DIPE)	1.407	1.255	1.338	1.339	1.359	1.324	1.393	1.341	1.334	------	1.343	3.23	5.4144
5	25	2-Butanol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	26	tert-Butyl ethyl ether (ETBE)	1.023	0.928	1.019	0.963	0.989	0.968	1.012	0.923	0.924	0.912	0.966	4.44	5.8596
5	27	2-Butanone	0.072	0.064	0.071	0.064	0.072	0.073	0.077	0.073	0.072	0.069	0.071	5.82	6.0416
	28	cis-1,2-Dichloroethene	0.393	0.357	0.386	0.385	0.379	0.374	0.391	0.380	0.379	0.368	0.379	2.86	6.0801
	29	2,2-Dichloropropane	0.598	0.568	0.573	0.560	0.561	0.534	0.532	0.496	0.488	0.469	0.538	7.77	6.0993
	30	Bromochloromethane	0.309	0.297	0.317	0.305	0.307	0.309	0.319	0.301	0.297	0.289	0.305	3.06	6.3775
	31	Chloroform	0.660	0.608	0.644	0.641	0.661	0.654	0.655	0.620	0.616	0.606	0.636	3.47	6.5047
	32	Dibromofluoromethane	0.282	0.250	0.254	0.287	0.283	0.277	0.288	0.274	0.275	0.266	0.274	4.90	6.7089
	33	1,1,1-Trichloroethane	0.511	0.499	0.523	0.513	0.526	0.516	0.513	0.485	0.488	0.482	0.506	3.15	6.7459
	34	tert-Amyl methyl ether (TAME)	0.134	0.128	0.146	0.142	0.146	0.148	0.155	0.144	0.141	0.136	0.142	5.46	7.3807
	35	1,2-Dichloroethane-d4	0.295	0.293	0.281	0.319	0.317	0.298	0.304	0.276	0.273	0.266	0.292	6.16	7.1646
	36	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	0	12.3211
	37	1,1-Dichloropropene	0.235	0.213	0.208	0.199	0.205	0.203	0.202	0.208	0.204	0.202	0.208	4.86	6.9486
	38	Carbon tetrachloride	0.524	0.459	0.480	0.500	0.518	0.514	0.503	0.498	0.487	0.498	0.498	3.89	6.9546
	39	Benzene	1.929	1.746	1.769	1.711	1.749	1.714	1.733	1.752	1.800	------	1.767	3.77	7.2081
	40	1,2-Dichloroethane	0.464	0.438	0.454	0.442	0.456	0.445	0.441	0.417	0.415	0.410	0.438	4.24	7.2697
	41	Trichloroethene	0.487	0.420	0.428	0.433	0.441	0.435	0.444	0.437	0.449	0.451	0.442	4.13	8.1205
	42	1,2-Dichloropropane	0.496	0.463	0.451	0.450	0.461	0.447	0.455	0.452	0.461	0.455	0.459	3.08	8.4889
20	43	1,4-Dioxane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	44	Dibromomethane	0.151	0.142	0.151	0.143	0.152	0.151	0.153	0.147	0.150	0.151	0.149	2.57	8.6117
	45	Bromodichloromethane	0.536	0.466	0.498	0.506	0.523	0.517	0.528	0.510	0.518	0.519	0.512	3.82	8.8633
	46	2-Chloroethyl vinyl ether	0.106	0.092	0.109	0.108	0.117	0.121	0.135	0.127	0.132	0.135	0.118	12.09	9.2716
	47	cis-1,3-Dichloropropene	0.638	0.563	0.591	0.602	0.617	0.610	0.632	0.618	0.632	0.634	0.614	3.83	9.5247
5	48	4-Methyl-2-pentanone	0.209	0.181	0.188	0.176	0.198	0.205	0.219	0.209	0.215	0.212	0.201	7.38	9.7348
	49	Toluene-d8	1.537	1.362	1.194	1.412	1.388	1.334	1.400	1.406	1.417	------	1.383	6.52	9.9520
	50	Toluene	1.907	1.740	1.719	1.699	1.743	1.702	1.724	1.760	1.786	------	1.753	3.65	10.0604
	51	Ethyl methacrylate	0.317	0.261	0.296	0.297	0.326	0.344	0.371	0.359	0.362	0.362	0.330	11.06	10.5042
	52	trans-1,3-Dichloropropene	0.446	0.396	0.447	0.443	0.471	0.468	0.480	0.460	0.466	0.467	0.454	5.28	10.4169
	53	1,1,2-Trichloroethane	0.243	0.203	0.217	0.208	0.215	0.211	0.222	0.214	0.215	0.212	0.216	4.93	10.7439
	54	Tetrachloroethene	0.381	0.340	0.352	0.348	0.357	0.356	0.357	0.352	0.358	0.361	0.356	2.94	10.9066
	55	1,3-Dichloropropane	0.467	0.414	0.447	0.441	0.452	0.455	0.468	0.449	0.457	0.442	0.449	3.40	11.0161
5	56	2-Hexanone	0.139	0.115	0.119	0.111	0.126	0.135	0.144	0.141	0.143	0.141	0.131	9.50	11.0857
	57	Dibromochloromethane	0.232	0.231	0.244	0.250	0.264	0.269	0.280	0.265	0.266	0.268	0.257	6.52	11.3816
	58	1,2-Dibromoethane	0.199	0.179	0.201	0.204	0.210	0.209	0.221	0.209	0.210	0.209	0.205	5.44	11.5946

SG
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	59	1-Chlorohexane	0.816	0.718	0.707	0.695	0.728	0.717	0.725	0.721	0.722	0.703	0.725	4.61	12.3360
	60	Chlorobenzene	1.034	0.946	0.995	0.993	1.039	1.037	1.038	1.023	1.017	0.974	1.010	3.12	12.3641
	61	1,1,1,2-Tetrachloroethane	0.350	0.301	0.326	0.332	0.346	0.344	0.351	0.335	0.334	0.322	0.334	4.52	12.4898
	62	Ethylbenzene	2.164	1.945	1.977	1.991	2.089	2.054	2.104	2.054	1.984	------	2.040	3.49	12.5018
2	63	m-Xylene & p-Xylene	1.610	1.482	1.470	1.505	1.572	1.573	1.567	1.538	------	------	1.540	3.23	12.6812
	64	o-Xylene	1.589	1.453	1.476	1.474	1.569	1.547	1.546	1.502	1.481	------	1.515	3.19	13.1841
	65	Styrene	1.016	0.911	1.000	1.022	1.143	1.156	1.192	1.187	1.174	1.038	1.084	9.03	13.2134
	66	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	0	15.4150
	67	Bromoform	0.300	0.296	0.320	0.305	0.327	0.327	0.344	0.343	0.359	0.377	0.330	7.98	13.4427
	68	Isopropylbenzene	5.486	4.993	4.975	4.842	4.950	4.869	4.800	4.988	4.786	------	4.966	4.25	13.6379
	69	4-Bromofluorobenzene	1.481	1.312	1.095	1.243	1.225	1.133	1.166	1.195	1.226	1.246	1.232	8.67	13.8452
	70	1,1,2,2-Tetrachloroethane	0.708	0.641	0.683	0.668	0.684	0.663	0.694	0.682	0.687	0.686	0.680	2.70	13.9828
	71	Bromobenzene	1.217	0.984	1.027	0.976	0.999	0.987	0.997	1.005	------	------	1.024	7.74	14.0073
	72	trans-1,4-Dichloro-2-butene	0.150	0.153	0.174	0.160	0.173	0.179	0.189	0.184	0.186	0.192	0.174	8.64	14.0272
	73	1,2,3-Trichloropropane	0.208	0.163	0.191	0.169	0.172	0.165	0.171	0.165	0.166	0.171	0.174	8.18	14.0538
	74	n-Propylbenzene	6.681	6.426	6.296	6.295	6.395	6.353	6.300	6.476	------	------	6.403	2.04	14.1128
	75	1,3,5-Trimethylbenzene	4.223	4.025	4.069	4.018	4.178	4.115	4.097	4.107	4.142	------	4.108	1.64	14.3070
	76	2-Chlorotoluene	3.930	3.660	3.570	3.417	3.531	3.421	3.367	3.429	3.495	------	3.536	4.91	14.2149
	77	4-Chlorotoluene	4.164	3.976	3.937	3.805	3.928	3.864	3.769	3.804	3.846	------	3.899	3.11	14.3481
	78	tert-Butylbenzene	0.968	0.910	0.914	0.906	0.922	0.915	0.906	0.923	0.918	0.917	0.920	1.93	14.6442
	79	1,2,4-Trimethylbenzene	4.266	3.870	3.910	3.868	3.983	4.040	3.945	3.951	3.974	3.171	3.898	7.18	14.7033
	80	sec-Butylbenzene	5.313	4.991	5.022	5.120	5.427	5.421	5.317	5.421	4.953	------	5.221	3.80	14.8692
	81	p-Isopropyltoluene	4.020	3.777	3.939	4.070	4.305	4.382	4.330	4.345	4.239	3.076	4.048	9.79	15.0185
	82	1,3-Dichlorobenzene	2.001	1.931	1.924	1.887	1.975	1.984	1.970	1.966	1.997	1.986	1.962	1.87	14.9948
	83	1,4-Dichlorobenzene	1.937	1.762	1.795	1.801	1.875	1.890	1.897	1.889	1.897	1.885	1.863	3.02	15.0954
	84	n-Butylbenzene	3.778	3.544	3.535	3.722	3.974	4.177	4.224	4.173	4.098	------	3.914	7.03	15.4019
	85	1,2-Dichlorobenzene	1.623	1.514	1.544	1.533	1.578	1.581	1.583	1.550	1.545	1.563	1.561	2.00	15.4328
	86	1,2-Dibromo-3-chloropropane	------	0.054	0.073	0.074	0.076	0.081	0.086	0.084	0.086	0.090	0.078	14.04	16.1711
	87	1,2,4-Trichlorobenzene	0.599	0.558	0.592	0.622	0.706	0.786	0.817	0.793	0.802	------	0.697	15.05	16.9571
	88	Hexachlorobutadiene	0.532	0.483	0.519	0.518	0.581	0.602	0.586	0.560	0.550	0.625	0.556	7.87	17.0855
	89	Naphthalene	------	0.848	0.785	0.727	0.815	0.969	1.054	------	------	------	0.866	14.11	17.2361
	90	1,2,3-Trichlorobenzene	0.465	0.412	0.437	0.448	0.513	0.579	0.599	0.581	0.590	------	0.514	14.54	17.4553

Spike Amount = Nominal Amount * M
Ave_%RSD : 6.3 Max_%RSD : 15

Use Least Square Linear Regression with weighting factor of inverse concentration for comps with %_RSD > 15
Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
87	1,2,4-Trichlorobenzene	-0.01281	0.80017	0.9994

SG
11/4/11

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Compound List Report TO01

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
Total Cpnds : 90

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-DIFLUOROBENZENE	114	7.78	1.000	A	1	A	B
2	T	Chlorotrifluoroethylene	116	2.11	0.272	A	2	A	B
3	T	Dichlorodifluoromethane	85	2.16	0.277	A	1	A	B
4	T	Chloromethane	50	2.38	0.306	A	1	A	B
5	T	Vinyl chloride	62	2.54	0.327	A	1	A	B
6	T	2-Chloro-1,1,1-trifluoroethane	118	2.66	0.342	A	2	A	B
7	T	Bromomethane	94	2.91	0.374	A	1	A	B
8	T	Chloroethane	64	3.03	0.390	A	2	A	B
9	T	Dichlorofluoromethane	67	3.31	0.426	A	1	A	B
10	T	Trichlorofluoromethane	101	3.31	0.426	A	1	A	B
11	T	Acrolein	56	3.80	0.488	A	1	A	B
12	T	1,1,2-Trichloro-1,2,2-trifluor	151	3.98	0.511	A	1	A	B
13	T	Acetone	43	3.96	0.509	A	2	A	B
14	T	1,1-Dichloroethene	61	3.93	0.506	A	2	A	B
15	T	Iodomethane	142	4.11	0.528	A	1	A	B
16	T	Carbon disulfide	76	4.21	0.542	A	1	A	B
17	T	Methylene chloride	49	4.51	0.580	A	2	A	B
18	T	tert-Butyl alcohol	59	4.63	0.595	A	1	A	B
19	T	Acrylonitrile	53	4.78	0.614	A	2	A	B
20	T	tert-Butyl methyl ether (MTBE)	73	4.84	0.622	A	1	A	B
21	T	trans-1,2-Dichloroethene	61	4.85	0.623	A	2	A	B
22	T	Vinyl acetate	43	5.35	0.688	A	1	A	B
23	T	1,1-Dichloroethane	63	5.37	0.690	A	2	A	B
24	T	Isopropyl ether (DIPE)	45	5.41	0.696	A	1	A	B
25	T	2-Butanol	45	5.41	0.696	A	1	A	B
26	T	tert-Butyl ethyl ether (ETBE)	59	5.86	0.753	A	1	A	B
27	T	2-Butanone	43	6.03	0.776	A	1	A	B
28	T	cis-1,2-Dichloroethene	96	6.08	0.781	A	2	A	B
29	T	2,2-Dichloropropane	77	6.09	0.783	A	2	A	B
30	T	Bromochloromethane	49	6.37	0.819	A	2	A	B
31	T	Chloroform	83	6.51	0.836	A	2	A	B
32	S	Dibromofluoromethane	111	6.71	0.863	A	2	A	B
33	T	1,1,1-Trichloroethane	97	6.74	0.867	A	2	A	B
34	T	tert-Amyl methyl ether (TAME)	87	7.38	0.949	A	2	A	B
35	S	1,2-Dichloroethane-d4	65	7.16	0.920	A	1	A	B
36	I	CHLOROBENZENE-D5	117	12.32	1.000	A	2	A	B
37	T	1,1-Dichloropropene	110	6.95	0.564	A	1	A	B
38	T	Carbon tetrachloride	119	6.95	0.564	A	1	A	B
39	T	Benzene	78	7.20	0.584	A	2	A	B
40	T	1,2-Dichloroethane	62	7.26	0.589	A	1	A	B
41	T	Trichloroethene	130	8.12	0.659	A	3	A	B
42	T	1,2-Dichloropropane	63	8.49	0.689	A	2	A	B
43	T	1,4-Dioxane	88	8.58	0.696	A	1	A	B
44	T	Dibromomethane	93	8.61	0.699	A	2	A	B
45	T	Bromodichloromethane	83	8.86	0.719	A	1	A	B
46	T	2-Chloroethyl vinyl ether	63	9.27	0.753	A	2	A	B
47	T	cis-1,3-Dichloropropene	75	9.53	0.773	A	3	A	B
48	T	4-Methyl-2-pentanone	43	9.73	0.790	A	3	A	B
49	S	Toluene-d8	98	9.96	0.808	A	1	A	B
50	T	Toluene	91	10.06	0.816	A	1	A	B
51	T	Ethyl methacrylate	69	10.50	0.852	A	2	A	B
52	T	trans-1,3-Dichloropropene	75	10.41	0.845	A	2	A	B

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53	T	1,1,2-Trichloroethane	97	10.74	0.872	A	3	A	B
54	T	Tetrachloroethene	164	10.90	0.885	A	3	A	B
55	T	1,3-Dichloropropane	76	11.02	0.894	A	1	A	B
56	T	2-Hexanone	43	11.08	0.899	A	2	A	B
57	T	Dibromochloromethane	129	11.38	0.923	A	1	A	B
58	T	1,2-Dibromoethane	107	11.60	0.941	A	1	A	B
59	T	1-Chlorohexane	91	12.34	1.001	A	3	A	B
60	P,M	Chlorobenzene	112	12.37	1.004	A	3	A	B
61	T	1,1,1,2-Tetrachloroethane	131	12.49	1.013	A	3	A	B
62	T	Ethylbenzene	91	12.50	1.014	A	1	A	B
63	T	m-Xylene & p-Xylene	91	12.68	1.029	A	1	A	B
64	T	o-Xylene	91	13.18	1.070	A	1	A	B
65	T	Styrene	104	13.21	1.072	A	2	A	B
66	I	1,2-DICHLOROBENZENE-D4	152	15.41	1.000	A	1	A	B
67	T	Bromoform	173	13.45	0.872	A	2	A	B
68	T	Isopropylbenzene	105	13.64	0.885	A	3	A	B
69	S	4-Bromofluorobenzene	95	13.85	0.898	A	2	A	B
70	T	1,1,2,2-Tetrachloroethane	83	13.98	0.907	A	1	A	B
71	T	Bromobenzene	156	14.01	0.909	A	2	A	B
72	T	trans-1,4-Dichloro-2-butene	53	14.02	0.910	A	1	A	B
73	T	1,2,3-Trichloropropane	110	14.05	0.912	A	2	A	B
74	T	n-Propylbenzene	91	14.11	0.915	A	2	A	B
75	T	1,3,5-Trimethylbenzene	105	14.31	0.928	A	2	A	B
76	T	2-Chlorotoluene	91	14.22	0.922	A	1	A	B
77	T	4-Chlorotoluene	91	14.35	0.931	A	1	A	B
78	T	tert-Butylbenzene	134	14.65	0.950	A	2	A	B
79	T	1,2,4-Trimethylbenzene	105	14.70	0.954	A	1	A	B
80	T	sec-Butylbenzene	105	14.87	0.964	A	1	A	B
81	T	p-Isopropyltoluene	119	15.02	0.974	A	2	A	B
82	T	1,3-Dichlorobenzene	146	15.00	0.973	A	2	A	B
83	T	1,4-Dichlorobenzene	146	15.09	0.979	A	2	A	B
84	T	n-Butylbenzene	91	15.40	0.999	A	2	A	B
85	T	1,2-Dichlorobenzene	146	15.43	1.001	A	2	A	B
86	T	1,2-Dibromo-3-chloropropane	157	16.17	1.049	A	2	A	B
87	T	1,2,4-Trichlorobenzene	180	16.95	1.100	L	2	A	B
88	T	Hexachlorobutadiene	225	17.09	1.108	A	2	A	B
89	T	Naphthalene	128	17.23	1.118	A	1	A	B
90	T	1,2,3-Trichlorobenzene	180	17.46	1.132	A	2	A	B

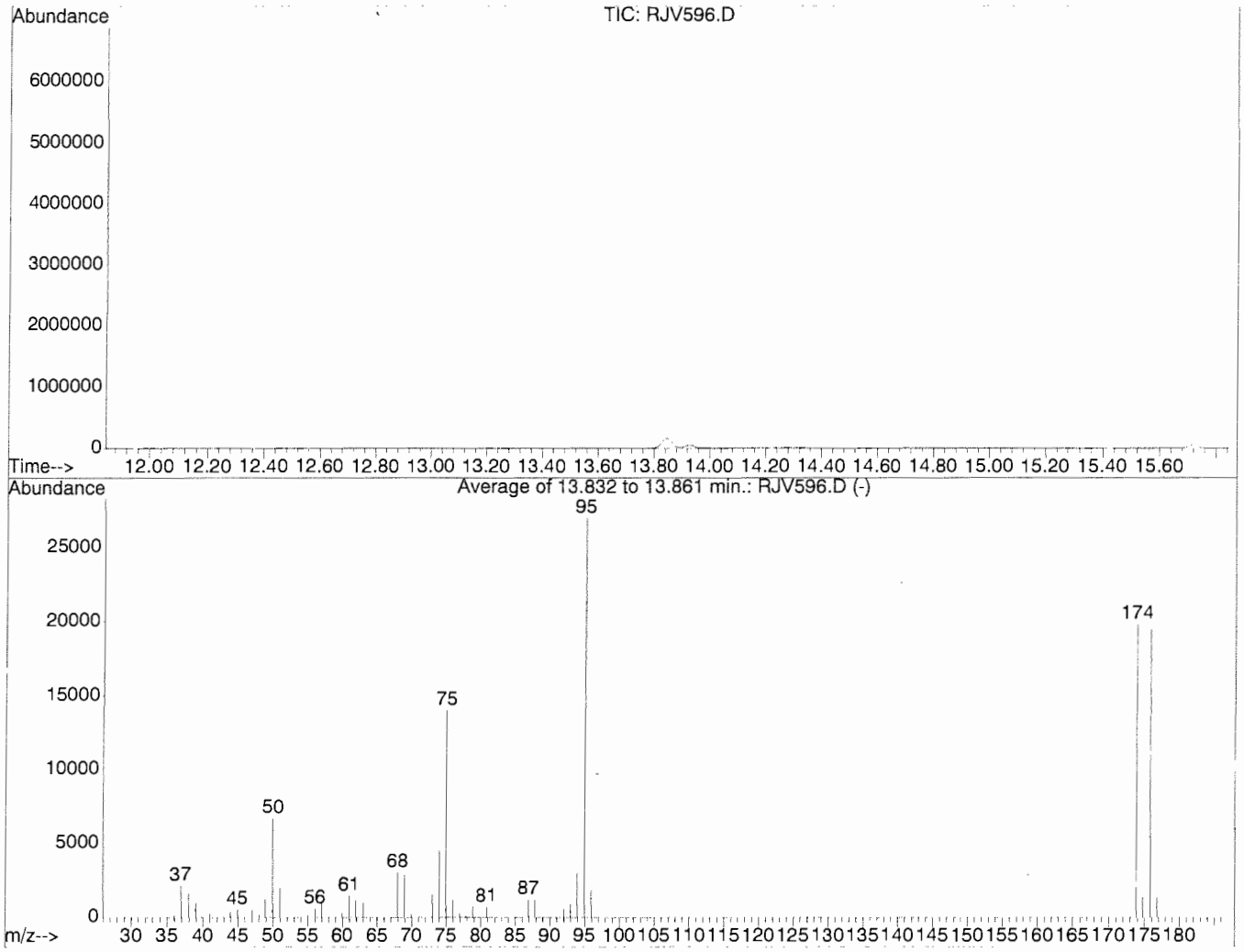
Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

VO01J31.M Thu Nov 03 11:02:03 2011

Su
11/4/11

BFB

Data File : D:\HPCHEM\1\DATA\11J31\RJV596.D Vial: 1
Acq On : 31 Oct 2011 9:18 am Operator: MW
Sample : BFB01J29 Inst : TO01
Misc : T/CHK Multiplr: 1.00
MS Integration Params: 524C.P
Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls



AutoFind: Scans 804, 805, 806; Background Corrected with Scan 799

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.8	6686	PASS
75	95	30	60	51.8	13984	PASS
95	95	100	100	100.0	26973	PASS
96	95	5	9	6.7	1815	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	73.4	19798	PASS
175	174	5	9	7.1	1403	PASS
176	174	95	101	98.1	19424	PASS
177	176	5	9	6.9	1345	PASS

RJV596.D VO01J31.M Thu Nov 03 11:02:30 2011

Sa 11/4/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV597.D Vial: 2
Acq On : 31 Oct 2011 9:59 am Operator: MW
Sample : VO01J311 0.3ppb Inst : TO01
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:00 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.77	114	1597901	10.00 ug/l	-0.01
36) CHLOROBENZENE-D5	12.32	117	1291317	10.00 ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	438784	10.00 ug/l	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	6.70	111	13529	0.31 ug/l	-0.01
Spiked Amount 10.000			Recovery	= 3.10%	
35) 1,2-Dichloroethane-d4	7.16	65	14144	0.30 ug/l	0.00
Spiked Amount 10.000			Recovery	= 3.00%	
49) Toluene-d8	9.94	98	59550	0.33 ug/l	-0.01
Spiked Amount 10.000			Recovery	= 3.30%	
69) 4-Bromofluorobenzene	13.85	95	19493	0.36 ug/l	0.00
Spiked Amount 10.000			Recovery	= 3.60%	

Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.11	116	3975	0.16 ug/l #	59
3) Dichlorodifluoromethane	2.16	85	14832	0.26 ug/l	86
4) Chloromethane	2.37	50	20345	0.29 ug/l	99
5) Vinyl chloride	2.54	62	18701	0.25 ug/l	63
6) 2-Chloro-1,1,1-trifluoroet	2.66	118	12791	0.24 ug/l	97
7) Bromomethane	2.90	94	10453	0.29 ug/l	91
8) Chloroethane	3.02	64	17790	0.39 ug/l	91
9) Dichlorofluoromethane	3.30	67	38711	0.34 ug/l	100
10) Trichlorofluoromethane	3.37	101	17234	0.26 ug/l	97
11) Acrolein	3.82	56	5860	3.24 ug/l #	1
12) 1,1,2-Trichloro-1,2,2-trif	3.96	151	10894	0.31 ug/l	99
13) Acetone	3.96	43	23943	3.42 ug/l	50
14) 1,1-Dichloroethene	3.93	61	32714	0.31 ug/l	97
15) Iodomethane	4.11	142	22694	0.30 ug/l	98
16) Carbon disulfide	4.22	76	52902	0.31 ug/l	97
17) Methylene chloride	4.51	49	28220	0.35 ug/l	98
18) tert-Butyl alcohol	4.66	59	2113	1.12 ug/l #	1
19) Acrylonitrile	4.78	53	13601	1.58 ug/l	89
20) tert-Butyl methyl ether (M	4.84	73	27869	0.30 ug/l	89
21) trans-1,2-Dichloroethene	4.85	61	33804	0.32 ug/l	99
22) Vinyl acetate	5.36	43	13717	0.18 ug/l #	81
23) 1,1-Dichloroethane	5.37	63	39453	0.33 ug/l	99
24) Isopropyl ether (DIPE)	5.41	45	67434	0.31 ug/l	98
26) tert-Butyl ethyl ether (ET	5.86	59	49028	0.32 ug/l	95
27) 2-Butanone	6.05	43	17373	1.54 ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	18858	0.31 ug/l	98
29) 2,2-Dichloropropane	6.10	77	28653	0.33 ug/l	99

(#) = qualifier out of range (m) = manual integration

SU 11/4/11

2056

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV597.D Vial: 2
Acq On : 31 Oct 2011 9:59 am Operator: MW
Sample : VO01J311 0.3ppb Inst : TO01
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:00 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.38	49	14834	0.30 ug/l	99
31) Chloroform	6.49	83	31656	0.31 ug/l	97
33) 1,1,1-Trichloroethane	6.75	97	24482	0.30 ug/l	97
34) tert-Amyl methyl ether (TA	7.38	87	6444	0.28 ug/l	88
37) 1,1-Dichloropropene	6.94	110	9085	0.34 ug/l	93
38) Carbon tetrachloride	6.95	119	20312	0.32 ug/l	95
39) Benzene	7.20	78	74724	0.33 ug/l	98
40) 1,2-Dichloroethane	7.26	62	17969	0.32 ug/l	99
41) Trichloroethene	8.12	130	18857	0.33 ug/l	96
42) 1,2-Dichloropropane	8.49	63	19229	0.32 ug/l	90
44) Dibromomethane	8.61	93	5833	0.30 ug/l	91
45) Bromodichloromethane	8.86	83	20755	0.31 ug/l	97
46) 2-Chloroethyl vinyl ether	9.28	63	4107	0.27 ug/l	85
47) cis-1,3-Dichloropropene	9.53	75	24706	0.31 ug/l	94
48) 4-Methyl-2-pentanone	9.73	43	40434	1.56 ug/l	95
50) Toluene	10.06	91	73881	0.33 ug/l	99
51) Ethyl methacrylate	10.50	69	12283	0.29 ug/l	77
52) trans-1,3-Dichloropropene	10.42	75	17269	0.29 ug/l	79
53) 1,1,2-Trichloroethane	10.74	97	9396	0.34 ug/l	91
54) Tetrachloroethene	10.90	164	14742	0.32 ug/l	98
55) 1,3-Dichloropropane	11.01	76	18089	0.31 ug/l	100
56) 2-Hexanone	11.10	43	26882	1.58 ug/l	86
57) Dibromochloromethane	11.38	129	9001	0.27 ug/l	93
58) 1,2-Dibromoethane	11.60	107	7709	0.29 ug/l	90
59) 1-Chlorohexane	12.32	91	31597	0.34 ug/l #	62
60) Chlorobenzene	12.37	112	40039	0.31 ug/l #	66
61) 1,1,1,2-Tetrachloroethane	12.49	131	13572	0.31 ug/l #	80
62) Ethylbenzene	12.50	91	83818	0.32 ug/l	98
63) m-Xylene & p-Xylene	12.68	91	124746	0.63 ug/l	99
64) o-Xylene	13.18	91	61563	0.31 ug/l	98
65) Styrene	13.21	104	39369	0.28 ug/l	97
67) Bromoform	13.45	173	3953	0.27 ug/l	95
68) Isopropylbenzene	13.64	105	72221	0.33 ug/l	97
70) 1,1,2,2-Tetrachloroethane	13.98	83	9319	0.31 ug/l	95
71) Bromobenzene	14.01	156	16014	0.36 ug/l	90
72) trans-1,4-Dichloro-2-buten	14.03	53	1978	0.26 ug/l #	34
73) 1,2,3-Trichloropropane	14.06	110	2735	0.36 ug/l	83
74) n-Propylbenzene	14.11	91	87952	0.31 ug/l	98
75) 1,3,5-Trimethylbenzene	14.31	105	55592	0.31 ug/l	97
76) 2-Chlorotoluene	14.22	91	51738	0.33 ug/l	95
77) 4-Chlorotoluene	14.35	91	54817	0.32 ug/l	98

(#) = qualifier out of range (m) = manual integration

3a 11/4/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV597.D Vial: 2
Acq On : 31 Oct 2011 9:59 am Operator: MW
Sample : VO01J311 0.3ppb Inst : TO01
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:00 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.65	134	12737	0.32 ug/l	99
79) 1,2,4-Trimethylbenzene	14.71	105	56160	0.33 ug/l	96
80) sec-Butylbenzene	14.87	105	69944	0.31 ug/l	99
81) p-Isopropyltoluene	15.02	119	52918	0.30 ug/l	98
82) 1,3-Dichlorobenzene	14.99	146	26346	0.31 ug/l	95
83) 1,4-Dichlorobenzene	15.09	146	25494	0.31 ug/l	97
84) n-Butylbenzene	15.40	91	49733	0.29 ug/l	97
85) 1,2-Dichlorobenzene	15.43	146	21367	0.31 ug/l	82
87) 1,2,4-Trichlorobenzene	16.97	180	7883	0.38 ug/l	96
88) Hexachlorobutadiene	17.09	225	7003	0.29 ug/l	96
89) Naphthalene	17.24	128	15693	0.41 ug/l	95
90) 1,2,3-Trichlorobenzene	17.46	180	6124	0.27 ug/l	99

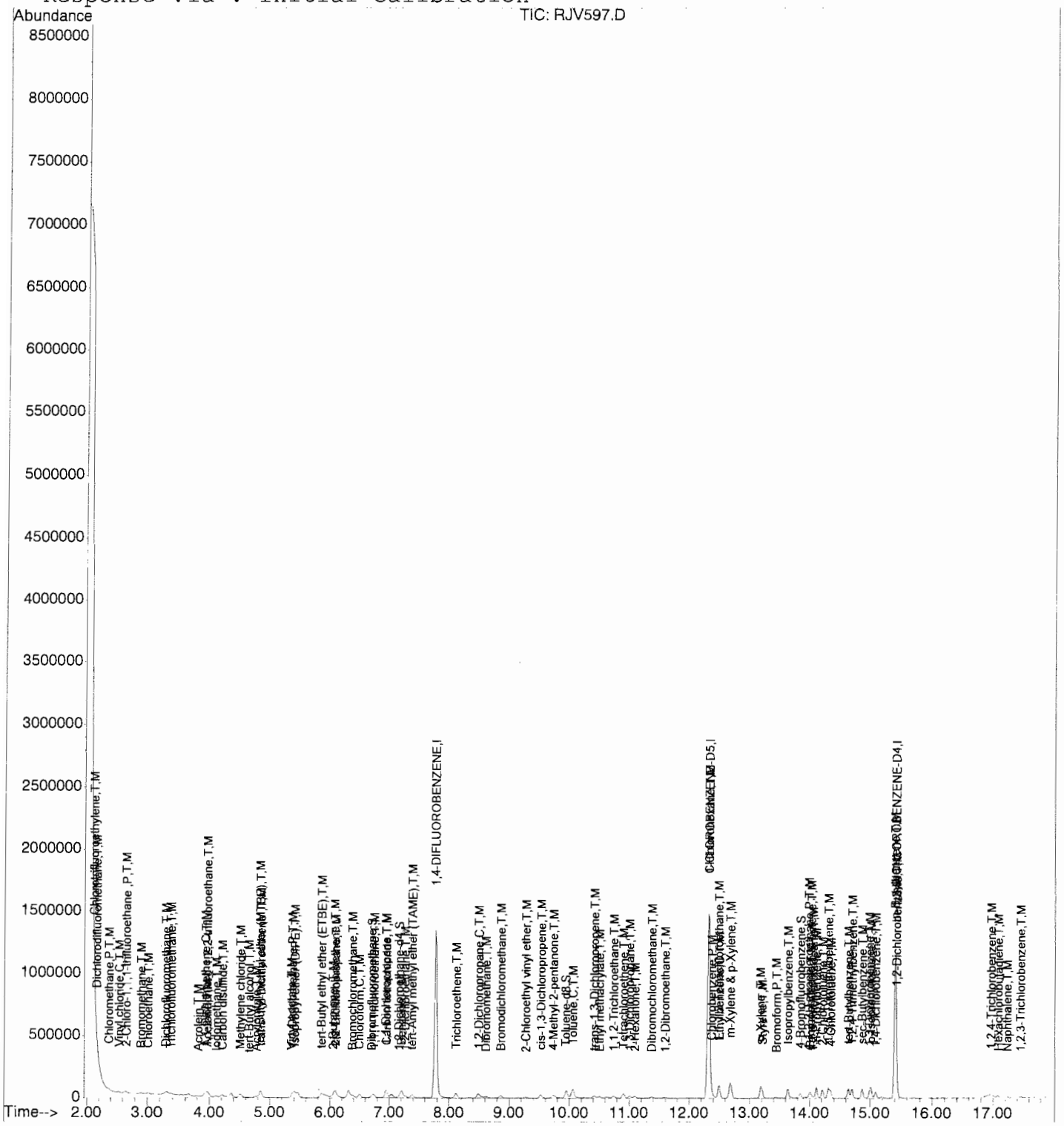
SA 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV597.D Vial: 2
Acq On : 31 Oct 2011 9:59 am Operator: MW
Sample : VO01J311 0.3ppb Inst : TO01
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:00 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



SA 11/4/11

2059

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV598.D Vial: 3
Acq On : 31 Oct 2011 10:30 am Operator: MW
Sample : VO01J312 0.5ppb Inst : TO01
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.77	114	1727883	10.00 ug/l	0.00
36) CHLOROBENZENE-D5	12.31	117	1429122	10.00 ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	485773	10.00 ug/l	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	6.71	111	21577	0.46 ug/l	0.00
Spiked Amount 10.000			Recovery	= 4.60%	
35) 1,2-Dichloroethane-d4	7.16	65	25297	0.50 ug/l	0.00
Spiked Amount 10.000			Recovery	= 5.00%	
49) Toluene-d8	9.95	98	97312	0.49 ug/l	0.00
Spiked Amount 10.000			Recovery	= 4.90%	
69) 4-Bromofluorobenzene	13.84	95	31867	0.53 ug/l	0.00
Spiked Amount 10.000			Recovery	= 5.30%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.10	116	9448	0.35 ug/l	90
3) Dichlorodifluoromethane	2.16	85	29008	0.46 ug/l	94
4) Chloromethane	2.37	50	37807	0.50 ug/l	100
5) Vinyl chloride	2.53	62	36936	0.46 ug/l	81
6) 2-Chloro-1,1,1-trifluoroet	2.65	118	25267	0.43 ug/l	96
7) Bromomethane	2.89	94	20968	0.53 ug/l	95
8) Chloroethane	3.02	64	27326	0.56 ug/l	91
9) Dichlorofluoromethane	3.30	67	63070	0.51 ug/l	100
10) Trichlorofluoromethane	3.32	101	34050	0.48 ug/l	99
11) Acrolein	3.81	56	9208	4.71 ug/l #	67
12) 1,1,2-Trichloro-1,2,2-trif	3.97	151	18127	0.48 ug/l	99
13) Acetone	3.97	43	29230	3.86 ug/l	66
14) 1,1-Dichloroethene	3.92	61	57632	0.51 ug/l	99
15) Iodomethane	4.12	142	38640	0.47 ug/l	97
16) Carbon disulfide	4.20	76	74790	0.40 ug/l	96
17) Methylene chloride	4.52	49	43986	0.50 ug/l	98
18) tert-Butyl alcohol	4.66	59	3692	1.81 ug/l #	1
19) Acrylonitrile	4.78	53	21328	2.29 ug/l	96
20) tert-Butyl methyl ether (M	4.84	73	47093	0.46 ug/l	93
21) trans-1,2-Dichloroethene	4.84	61	54955	0.48 ug/l	99
22) Vinyl acetate	5.36	43	31294	0.38 ug/l	99
23) 1,1-Dichloroethane	5.37	63	61102	0.47 ug/l	98
24) Isopropyl ether (DIPE)	5.42	45	108418	0.47 ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	80199	0.48 ug/l	98
27) 2-Butanone	6.05	43	27609	2.26 ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	30866	0.47 ug/l	100
29) 2,2-Dichloropropane	6.10	77	49030	0.53 ug/l	99

(#) = qualifier out of range (m) = manual integration

SA 11/4/11

2060

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV598.D Vial: 3
Acq On : 31 Oct 2011 10:30 am Operator: MW
Sample : VO01J312 0.5ppb Inst : TO01
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.38	49	25664	0.49 ug/l	92
31) Chloroform	6.50	83	52486	0.48 ug/l	99
33) 1,1,1-Trichloroethane	6.75	97	43108	0.49 ug/l	98
34) tert-Amyl methyl ether (TA	7.39	87	11033	0.45 ug/l	92
37) 1,1-Dichloropropene	6.94	110	15207	0.51 ug/l	92
38) Carbon tetrachloride	6.96	119	32771	0.46 ug/l	92
39) Benzene	7.21	78	124786	0.49 ug/l	99
40) 1,2-Dichloroethane	7.27	62	31316	0.50 ug/l	99
41) Trichloroethene	8.11	130	29985	0.47 ug/l	95
42) 1,2-Dichloropropane	8.48	63	33053	0.50 ug/l	95
44) Dibromomethane	8.61	93	10159	0.48 ug/l	94
45) Bromodichloromethane	8.87	83	33266	0.45 ug/l	99
46) 2-Chloroethyl vinyl ether	9.27	63	6603	0.39 ug/l	94
47) cis-1,3-Dichloropropene	9.52	75	40214	0.46 ug/l	96
48) 4-Methyl-2-pentanone	9.74	43	64614	2.25 ug/l	98
50) Toluene	10.06	91	124314	0.50 ug/l	99
51) Ethyl methacrylate	10.51	69	18630	0.40 ug/l	78
52) trans-1,3-Dichloropropene	10.42	75	28270	0.44 ug/l	88
53) 1,1,2-Trichloroethane	10.74	97	14487	0.47 ug/l	97
54) Tetrachloroethene	10.91	164	24280	0.48 ug/l	96
55) 1,3-Dichloropropane	11.01	76	29611	0.46 ug/l	99
56) 2-Hexanone	11.08	43	41247	2.20 ug/l	94
57) Dibromochloromethane	11.38	129	16485	0.45 ug/l	99
58) 1,2-Dibromoethane	11.59	107	12758	0.44 ug/l	95
59) 1-Chlorohexane	12.33	91	51324	0.50 ug/l #	75
60) Chlorobenzene	12.36	112	67631	0.47 ug/l	78
61) 1,1,1,2-Tetrachloroethane	12.49	131	21520	0.45 ug/l	86
62) Ethylbenzene	12.51	91	138999	0.48 ug/l	99
63) m-Xylene & p-Xylene	12.68	91	211809	0.96 ug/l	98
64) o-Xylene	13.19	91	103832	0.48 ug/l	99
65) Styrene	13.22	104	65089	0.42 ug/l	97
67) Bromoform	13.44	173	7198	0.45 ug/l	89
68) Isopropylbenzene	13.63	105	121282	0.50 ug/l	99
70) 1,1,2,2-Tetrachloroethane	13.99	83	15572	0.47 ug/l	92
71) Bromobenzene	14.00	156	23911	0.48 ug/l	98
72) trans-1,4-Dichloro-2-buten	14.03	53	3707	0.44 ug/l	97
73) 1,2,3-Trichloropropane	14.06	110	3961	0.47 ug/l	90
74) n-Propylbenzene	14.10	91	156081	0.50 ug/l	98
75) 1,3,5-Trimethylbenzene	14.31	105	97755	0.49 ug/l	99
76) 2-Chlorotoluene	14.21	91	88893	0.52 ug/l	100
77) 4-Chlorotoluene	14.34	91	96574	0.51 ug/l	99

(#) = qualifier out of range (m) = manual integration

SK 11/4/11

2061

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV598.D Vial: 3
Acq On : 31 Oct 2011 10:30 am Operator: MW
Sample : VO01J312 0.5ppb Inst : TO01
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.64	134	22107	0.49 ug/l	96
79) 1,2,4-Trimethylbenzene	14.70	105	93988	0.50 ug/l	97
80) sec-Butylbenzene	14.87	105	121225	0.48 ug/l	99
81) p-Isopropyltoluene	15.02	119	91733	0.47 ug/l	98
82) 1,3-Dichlorobenzene	14.99	146	46912	0.49 ug/l	99
83) 1,4-Dichlorobenzene	15.09	146	42807	0.47 ug/l	99
84) n-Butylbenzene	15.41	91	86074	0.45 ug/l	97
85) 1,2-Dichlorobenzene	15.44	146	36768	0.48 ug/l	83
86) 1,2-Dibromo-3-chloropropan	16.17	157	1311	0.34 ug/l #	74
87) 1,2,4-Trichlorobenzene	16.96	180	13546	0.51 ug/l	99
88) Hexachlorobutadiene	17.08	225	11728	0.43 ug/l	95
89) Naphthalene	17.24	128	20591	0.49 ug/l	95
90) 1,2,3-Trichlorobenzene	17.45	180	10019	0.40 ug/l	98

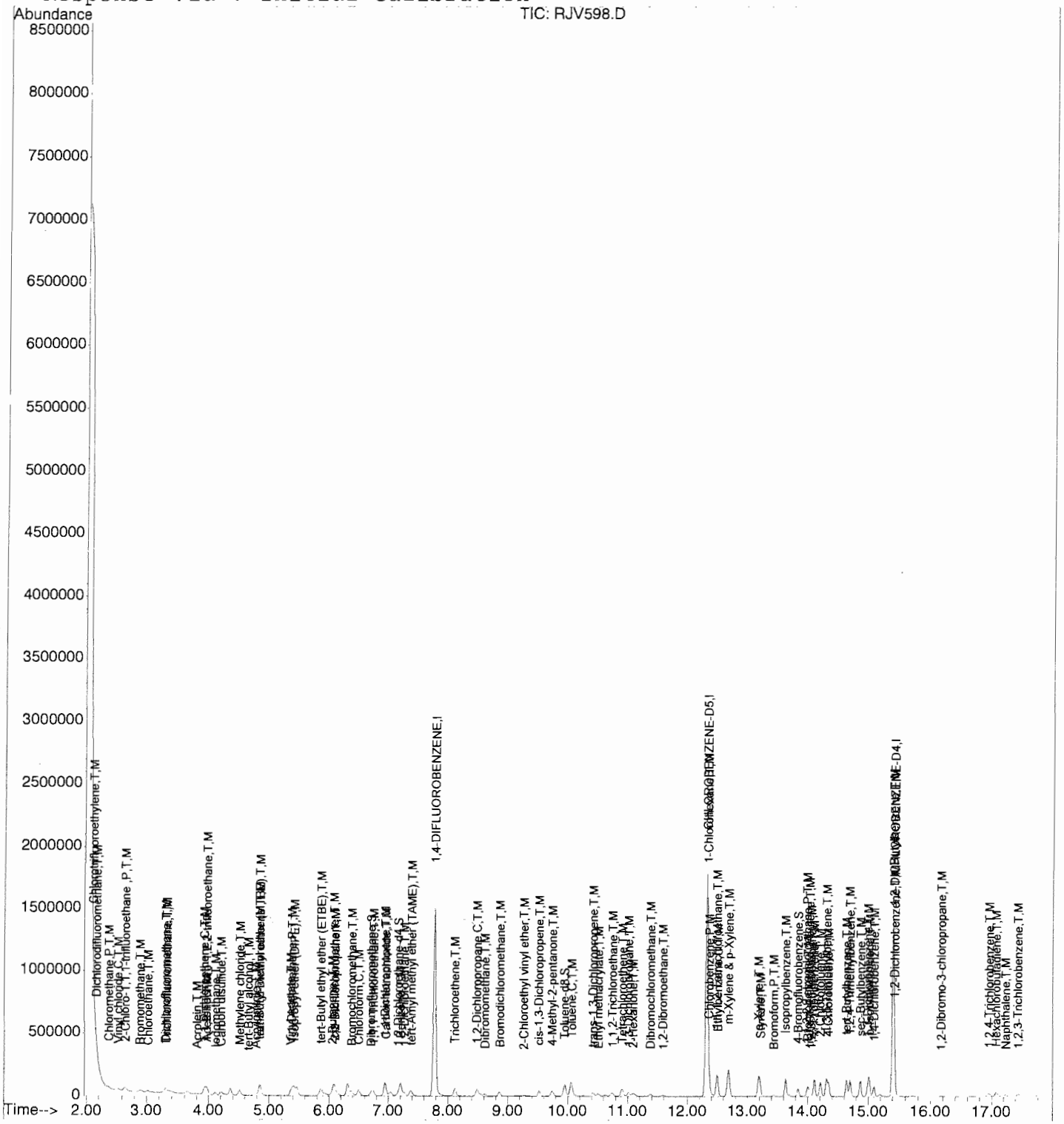
SU
11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV598.D Vial: 3
Acq On : 31 Oct 2011 10:30 am Operator: MW
Sample : VO01J312 0.5ppb Inst : TO01
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



SW 11/4/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV599.D Vial: 4
Acq On : 31 Oct 2011 11:01 am Operator: MW
Sample : VO01J313 1.0ppb Inst : TO01
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.77	114	1653051	10.00 ug/l	-0.01
36) CHLOROBENZENE-D5	12.31	117	1414639	10.00 ug/l	-0.01
66) 1,2-DICHLOROBENZENE-D4	15.40	152	497896	10.00 ug/l	-0.01
System Monitoring Compounds					
32) Dibromofluoromethane	6.70	111	41935	0.93 ug/l	-0.01
Spiked Amount 10.000			Recovery	= 9.30%	
35) 1,2-Dichloroethane-d4	7.16	65	46376	0.96 ug/l	0.00
Spiked Amount 10.000			Recovery	= 9.60%	
49) Toluene-d8	9.94	98	168950	0.86 ug/l	-0.01
Spiked Amount 10.000			Recovery	= 8.60%	
69) 4-Bromofluorobenzene	13.84	95	54541	0.89 ug/l	-0.01
Spiked Amount 10.000			Recovery	= 8.90%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.10	116	23413	0.91 ug/l	94
3) Dichlorodifluoromethane	2.15	85	58088	0.97 ug/l	98
4) Chloromethane	2.37	50	72520	1.01 ug/l	100
5) Vinyl chloride	2.53	62	75133	0.98 ug/l	90
6) 2-Chloro-1,1,1-trifluoroet	2.65	118	58142	1.04 ug/l	98
7) Bromomethane	2.90	94	40211	1.06 ug/l	98
8) Chloroethane	3.02	64	48159	1.03 ug/l	97
9) Dichlorofluoromethane	3.30	67	124758	1.06 ug/l	99
10) Trichlorofluoromethane	3.32	101	67764	0.99 ug/l	99
11) Acrolein	3.80	56	12009	6.42 ug/l	75
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	36643	1.01 ug/l	99
13) Acetone	3.97	43	44886	6.19 ug/l	77
14) 1,1-Dichloroethene	3.92	61	113267	1.04 ug/l	98
15) Iodomethane	4.12	142	78566	0.99 ug/l	100
16) Carbon disulfide	4.20	76	158780	0.89 ug/l	100
17) Methylene chloride	4.51	49	86920	1.04 ug/l	99
18) tert-Butyl alcohol	4.63	59	9456	4.85 ug/l	83
19) Acrylonitrile	4.78	53	44604	5.01 ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	102377	1.05 ug/l	99
21) trans-1,2-Dichloroethene	4.85	61	112079	1.02 ug/l	99
22) Vinyl acetate	5.36	43	65922	0.84 ug/l	99
23) 1,1-Dichloroethane	5.37	63	127810	1.02 ug/l	99
24) Isopropyl ether (DIPE)	5.42	45	221146	1.00 ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	168367	1.05 ug/l	97
27) 2-Butanone	6.04	43	58365	5.00 ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	63787	1.02 ug/l	98
29) 2,2-Dichloropropane	6.10	77	94719	1.07 ug/l	99

(#) = qualifier out of range (m) = manual integration

2064

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV599.D
Acq On : 31 Oct 2011 11:01 am
Sample : VO01J313 1.0ppb
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011

Vial: 4
Operator: MW
Inst : TO01
Multiplr: 1.00

Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.38	49	52446	1.04 ug/l	97
31) Chloroform	6.50	83	106408	1.01 ug/l	99
33) 1,1,1-Trichloroethane	6.75	97	86446	1.03 ug/l	97
34) tert-Amyl methyl ether (TA	7.37	87	24076	1.03 ug/l	90
37) 1,1-Dichloropropene	6.94	110	29469	1.00 ug/l	97
38) Carbon tetrachloride	6.96	119	67909	0.96 ug/l	98
39) Benzene	7.21	78	250194	1.00 ug/l	100
40) 1,2-Dichloroethane	7.27	62	64243	1.04 ug/l	98
41) Trichloroethene	8.12	130	60510	0.97 ug/l	97
42) 1,2-Dichloropropane	8.48	63	63783	0.98 ug/l	99
44) Dibromomethane	8.61	93	21414	1.02 ug/l	96
45) Bromodichloromethane	8.86	83	70477	0.97 ug/l	100
46) 2-Chloroethyl vinyl ether	9.26	63	15483	0.93 ug/l	97
47) cis-1,3-Dichloropropene	9.52	75	83650	0.96 ug/l	96
48) 4-Methyl-2-pentanone	9.74	43	132949	4.67 ug/l	95
50) Toluene	10.06	91	243151	0.98 ug/l	100
51) Ethyl methacrylate	10.51	69	41920	0.90 ug/l	89
52) trans-1,3-Dichloropropene	10.42	75	63213	0.98 ug/l	94
53) 1,1,2-Trichloroethane	10.74	97	30647	1.00 ug/l	97
54) Tetrachloroethene	10.91	164	49834	0.99 ug/l	99
55) 1,3-Dichloropropane	11.01	76	63265	1.00 ug/l	99
56) 2-Hexanone	11.08	43	84028	4.52 ug/l	97
57) Dibromochloromethane	11.38	129	34460	0.95 ug/l	97
58) 1,2-Dibromoethane	11.59	107	28366	0.98 ug/l	98
59) 1-Chlorohexane	12.33	91	100066	0.98 ug/l	88
60) Chlorobenzene	12.36	112	140798	0.99 ug/l	89
61) 1,1,1,2-Tetrachloroethane	12.49	131	46148	0.98 ug/l	92
62) Ethylbenzene	12.50	91	279734	0.97 ug/l	100
63) m-Xylene & p-Xylene	12.68	91	415869	1.91 ug/l	100
64) o-Xylene	13.19	91	208745	0.97 ug/l	100
65) Styrene	13.21	104	141430	0.92 ug/l	99
67) Bromoform	13.44	173	15913	0.97 ug/l	98
68) Isopropylbenzene	13.63	105	247705	1.00 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	34020	1.01 ug/l	95
71) Bromobenzene	14.00	156	51125	1.00 ug/l	98
72) trans-1,4-Dichloro-2-buten	14.03	53	8663	1.00 ug/l	92
73) 1,2,3-Trichloropropane	14.04	110	9487	1.10 ug/l	94
74) n-Propylbenzene	14.12	91	313488	0.98 ug/l	99
75) 1,3,5-Trimethylbenzene	14.31	105	202589	0.99 ug/l	98
76) 2-Chlorotoluene	14.21	91	177728	1.01 ug/l	98
77) 4-Chlorotoluene	14.34	91	196039	1.01 ug/l	99

(#) = qualifier out of range (m) = manual integration

2065

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV599.D Vial: 4
Acq On : 31 Oct 2011 11:01 am Operator: MW
Sample : VO01J313 1.0ppb Inst : TO01
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.64	134	45521	0.99 ug/l	99
79) 1,2,4-Trimethylbenzene	14.69	105	194664	1.00 ug/l	99
80) sec-Butylbenzene	14.87	105	250065	0.96 ug/l	100
81) p-Isopropyltoluene	15.02	119	196143	0.97 ug/l	99
82) 1,3-Dichlorobenzene	14.99	146	95806	0.98 ug/l	99
83) 1,4-Dichlorobenzene	15.09	146	89357	0.96 ug/l	99
84) n-Butylbenzene	15.40	91	175983	0.90 ug/l	98
85) 1,2-Dichlorobenzene	15.43	146	76886	0.99 ug/l	93
86) 1,2-Dibromo-3-chloropropan	16.17	157	3617	0.93 ug/l	91
87) 1,2,4-Trichlorobenzene	16.96	180	29497	0.90 ug/l	100
88) Hexachlorobutadiene	17.08	225	25832	0.93 ug/l	98
89) Naphthalene	17.24	128	39086	0.91 ug/l	100
90) 1,2,3-Trichlorobenzene	17.45	180	21778	0.85 ug/l	98

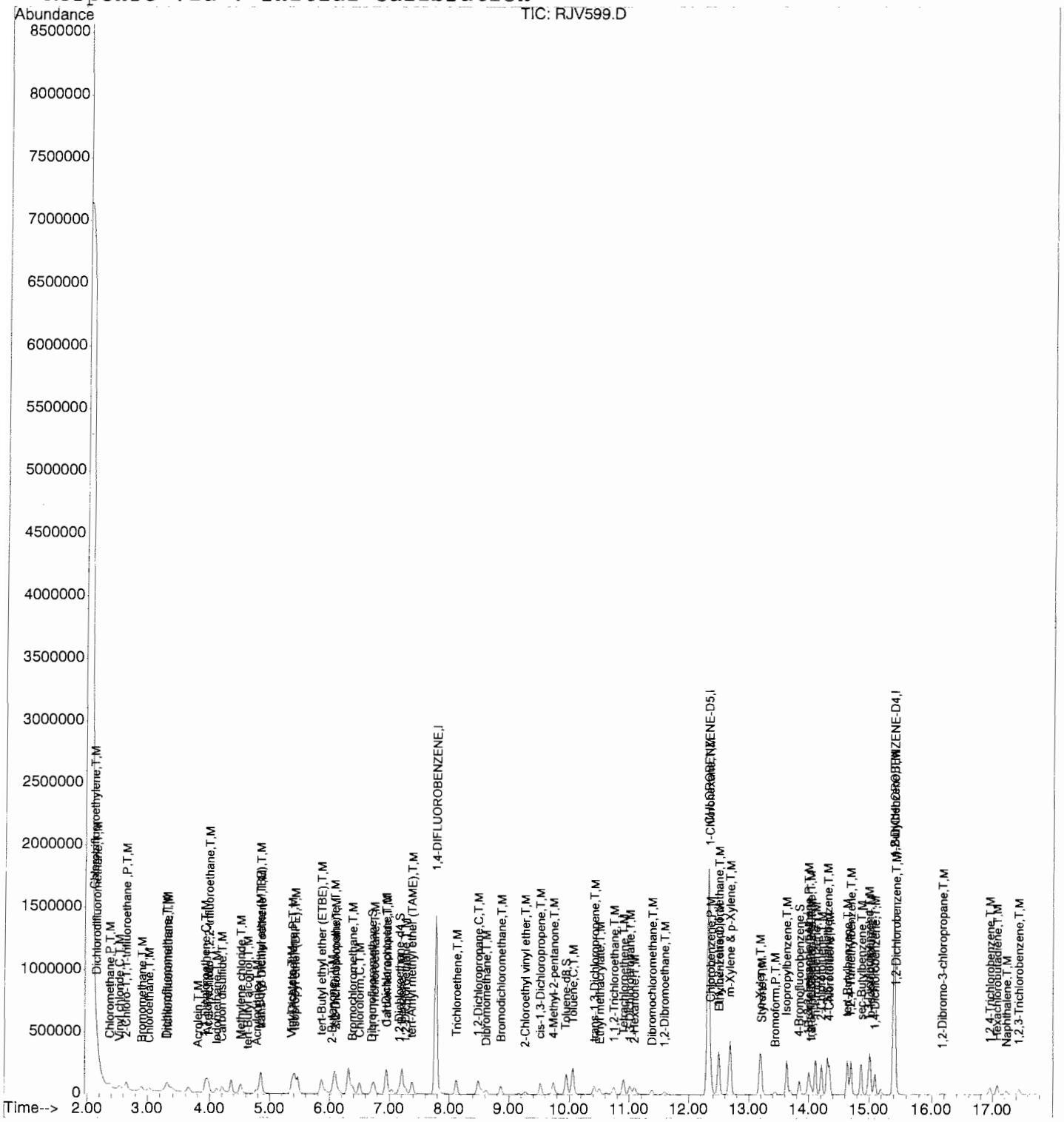
SA 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV599.D Vial: 4
Acq On : 31 Oct 2011 11:01 am Operator: MW
Sample : VO01J313 1.0ppb Inst : TO01
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



SU 11/4/11

2067

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV600.D Vial: 5
Acq On : 31 Oct 2011 11:32 am Operator: MW
Sample : VO01J314 2.0ppb Inst : TO01
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1659793	10.00 ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1409102	10.00 ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	526243	10.00 ug/l	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	6.71	111	95425	2.10 ug/l	0.00
Spiked Amount 10.000			Recovery	= 21.00%	
35) 1,2-Dichloroethane-d4	7.16	65	105900	2.18 ug/l	0.00
Spiked Amount 10.000			Recovery	= 21.80%	
49) Toluene-d8	9.95	98	397792	2.04 ug/l	0.00
Spiked Amount 10.000			Recovery	= 20.40%	
69) 4-Bromofluorobenzene	13.85	95	130871	2.02 ug/l	0.00
Spiked Amount 10.000			Recovery	= 20.20%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.11	116	52459	2.03 ug/l	98
3) Dichlorodifluoromethane	2.16	85	129344	2.14 ug/l	96
4) Chloromethane	2.38	50	145196	2.01 ug/l	100
5) Vinyl chloride	2.54	62	157743	2.06 ug/l	94
6) 2-Chloro-1,1,1-trifluoroet	2.66	118	134546	2.39 ug/l	97
7) Bromomethane	2.90	94	83534	2.20 ug/l	100
8) Chloroethane	3.03	64	95730	2.04 ug/l	98
9) Dichlorofluoromethane	3.31	67	240255	2.03 ug/l	99
10) Trichlorofluoromethane	3.31	101	145641	2.12 ug/l	97
11) Acrolein	3.80	56	19656	10.47 ug/l	89
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	71749	1.98 ug/l	99
13) Acetone	3.96	43	76089	10.45 ug/l	91
14) 1,1-Dichloroethene	3.93	61	228124	2.09 ug/l	99
15) Iodomethane	4.11	142	155936	1.96 ug/l	100
16) Carbon disulfide	4.21	76	331745	1.86 ug/l	100
17) Methylene chloride	4.51	49	163839	1.96 ug/l	99
18) tert-Butyl alcohol	4.64	59	16072	8.20 ug/l	80
19) Acrylonitrile	4.78	53	82078	9.19 ug/l	99
20) tert-Butyl methyl ether (M	4.84	73	198136	2.03 ug/l	96
21) trans-1,2-Dichloroethene	4.85	61	224517	2.03 ug/l	100
22) Vinyl acetate	5.37	43	159811	2.02 ug/l	99
23) 1,1-Dichloroethane	5.37	63	251579	2.00 ug/l	99
24) Isopropyl ether (DIPE)	5.41	45	444531	1.99 ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	319736	1.99 ug/l	100
27) 2-Butanone	6.05	43	106068	9.04 ug/l	98
28) cis-1,2-Dichloroethene	6.08	96	127887	2.03 ug/l	97
29) 2,2-Dichloropropane	6.09	77	185866	2.08 ug/l	99

(#) = qualifier out of range (m) = manual integration
RJV600.D VO01J31.M Tue Nov 01 12:01:27 2011 SU 11/4/11

2068

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV600.D
Acq On : 31 Oct 2011 11:32 am
Sample : VO01J314 2.0ppb
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011

Vial: 5
Operator: MW
Inst : TO01
Multiplr: 1.00

Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.37	49	101219	2.00 ug/l	98
31) Chloroform	6.51	83	212631	2.01 ug/l	99
33) 1,1,1-Trichloroethane	6.74	97	170234	2.03 ug/l	99
34) tert-Amyl methyl ether (TA	7.38	87	47130	2.00 ug/l	97
37) 1,1-Dichloropropene	6.95	110	56040	1.91 ug/l	99
38) Carbon tetrachloride	6.95	119	140805	2.01 ug/l	99
39) Benzene	7.20	78	482089	1.94 ug/l	99
40) 1,2-Dichloroethane	7.28	62	124588	2.02 ug/l	99
41) Trichloroethene	8.12	130	122054	1.96 ug/l	98
42) 1,2-Dichloropropane	8.49	63	126895	1.96 ug/l	98
44) Dibromomethane	8.61	93	40194	1.91 ug/l	96
45) Bromodichloromethane	8.86	83	142513	1.98 ug/l	98
46) 2-Chloroethyl vinyl ether	9.27	63	30321	1.82 ug/l	98
47) cis-1,3-Dichloropropene	9.53	75	169572	1.96 ug/l	98
48) 4-Methyl-2-pentanone	9.73	43	247990	8.75 ug/l	98
50) Toluene	10.06	91	478930	1.94 ug/l	100
51) Ethyl methacrylate	10.50	69	83836	1.80 ug/l	91
52) trans-1,3-Dichloropropene	10.41	75	124857	1.95 ug/l	96
53) 1,1,2-Trichloroethane	10.74	97	58618	1.93 ug/l	98
54) Tetrachloroethene	10.90	164	98196	1.96 ug/l	99
55) 1,3-Dichloropropane	11.02	76	124246	1.96 ug/l	97
56) 2-Hexanone	11.09	43	156142	8.43 ug/l	98
57) Dibromochloromethane	11.38	129	70448	1.95 ug/l	100
58) 1,2-Dibromoethane	11.60	107	57452	1.99 ug/l	99
59) 1-Chlorohexane	12.34	91	195834	1.92 ug/l	93
60) Chlorobenzene	12.37	112	279822	1.97 ug/l	96
61) 1,1,1,2-Tetrachloroethane	12.48	131	93699	1.99 ug/l	97
62) Ethylbenzene	12.50	91	561030	1.95 ug/l	100
63) m-Xylene & p-Xylene	12.68	91	848308	3.91 ug/l	100
64) o-Xylene	13.18	91	415516	1.95 ug/l	100
65) Styrene	13.21	104	288140	1.89 ug/l	98
67) Bromoform	13.45	173	32107	1.85 ug/l	98
68) Isopropylbenzene	13.64	105	509635	1.95 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	70351	1.97 ug/l	99
71) Bromobenzene	14.01	156	102733	1.91 ug/l	98
72) trans-1,4-Dichloro-2-buten	14.02	53	16867	1.84 ug/l	95
73) 1,2,3-Trichloropropane	14.05	110	17780	1.94 ug/l #	1
74) n-Propylbenzene	14.11	91	662553	1.97 ug/l	99
75) 1,3,5-Trimethylbenzene	14.30	105	422840	1.96 ug/l	99
76) 2-Chlorotoluene	14.22	91	359621	1.93 ug/l	100
77) 4-Chlorotoluene	14.35	91	400467	1.95 ug/l	100

(#) = qualifier out of range (m) = manual integration

SU 11/4/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV600.D Vial: 5
Acq On : 31 Oct 2011 11:32 am Operator: MW
Sample : VO01J314 2.0ppb Inst : TO01
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.65	134	95388	1.97 ug/l	99
79) 1,2,4-Trimethylbenzene	14.70	105	407124	1.98 ug/l	99
80) sec-Butylbenzene	14.87	105	538840	1.96 ug/l	100
81) p-Isopropyltoluene	15.01	119	428339	2.01 ug/l	100
82) 1,3-Dichlorobenzene	15.00	146	198564	1.92 ug/l	99
83) 1,4-Dichlorobenzene	15.09	146	189542	1.93 ug/l	99
84) n-Butylbenzene	15.40	91	391749	1.90 ug/l	99
85) 1,2-Dichlorobenzene	15.43	146	161308	1.96 ug/l	97
86) 1,2-Dibromo-3-chloropropan	16.17	157	7789	1.89 ug/l	92
87) 1,2,4-Trichlorobenzene	16.95	180	65483	1.72 ug/l	100
88) Hexachlorobutadiene	17.09	225	54522	1.86 ug/l	97
89) Naphthalene	17.23	128	76516	1.68 ug/l	100
90) 1,2,3-Trichlorobenzene	17.46	180	47107	1.74 ug/l	98

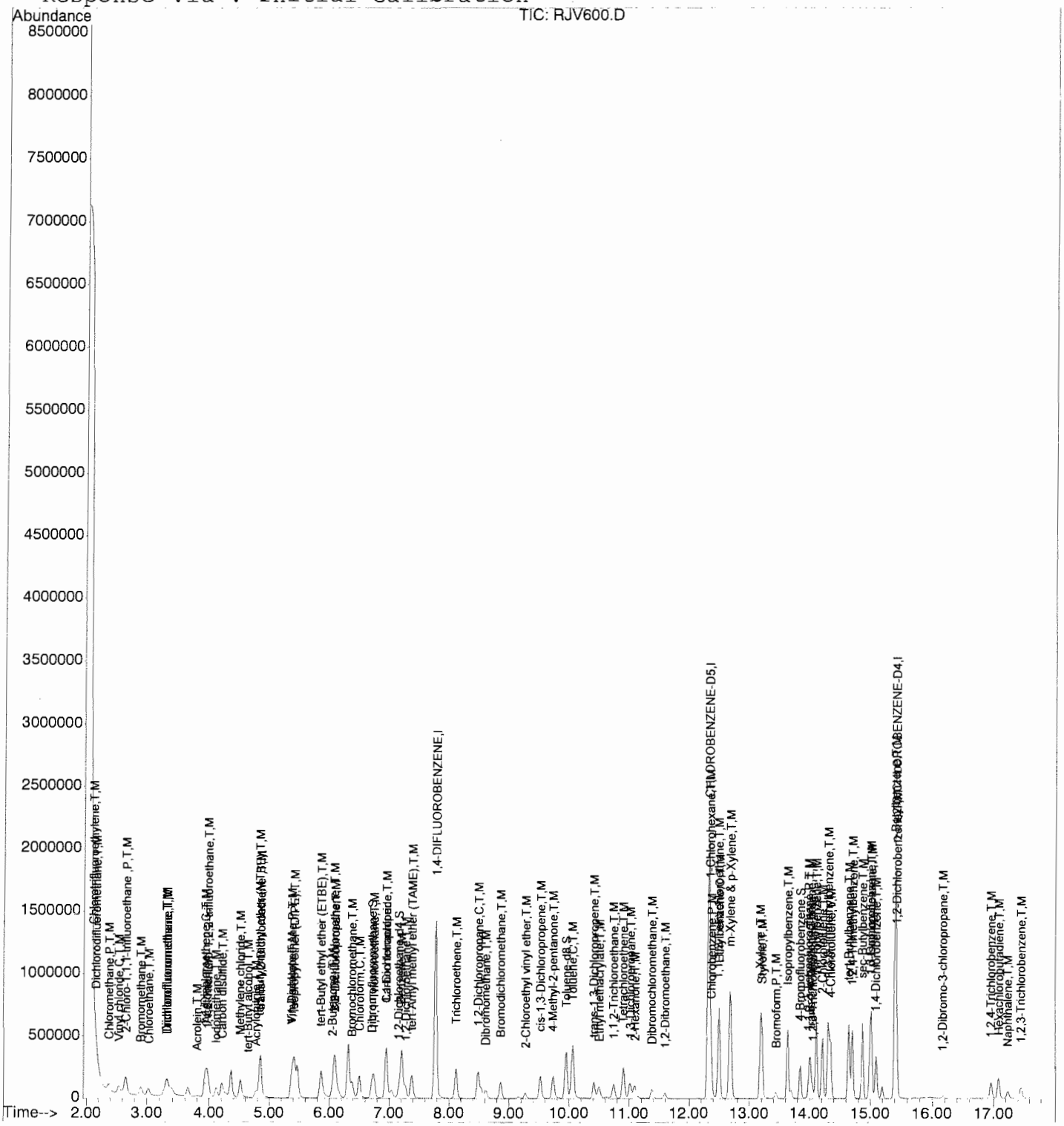
SO 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV600.D Vial: 5
Acq On : 31 Oct 2011 11:32 am Operator: MW
Sample : VO01J314 2.0ppb Inst : TO01
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



SS 11/4/11

2071

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV601.D Vial: 6
Acq On : 31 Oct 2011 12:03 pm Operator: MW
Sample : VO01J315 5.0ppb Inst : TO01
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1667331	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1424999	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	552274	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.70	111	236318	5.18	ug/l	-0.02
Spiked Amount 10.000			Recovery	=	51.80%	
35) 1,2-Dichloroethane-d4	7.16	65	264223	5.42	ug/l	0.00
Spiked Amount 10.000			Recovery	=	54.20%	
49) Toluene-d8	9.95	98	989286	5.02	ug/l	0.00
Spiked Amount 10.000			Recovery	=	50.20%	
69) 4-Bromofluorobenzene	13.85	95	338251	4.97	ug/l	0.00
Spiked Amount 10.000			Recovery	=	49.70%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	2.11	116	134595	5.18	ug/l	98
3) Dichlorodifluoromethane	2.16	85	325453	5.37	ug/l	99
4) Chloromethane	2.38	50	368498	5.08	ug/l	99
5) Vinyl chloride	2.54	62	399995	5.20	ug/l	97
6) 2-Chloro-1,1,1-trifluoroet	2.66	118	297845	5.28	ug/l	99
7) Bromomethane	2.91	94	209299	5.49	ug/l	99
8) Chloroethane	3.03	64	229435	4.88	ug/l	99
9) Dichlorofluoromethane	3.31	67	608227	5.12	ug/l	99
10) Trichlorofluoromethane	3.31	101	371747	5.39	ug/l	100
11) Acrolein	3.80	56	46969	24.90	ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	188794	5.17	ug/l	100
13) Acetone	3.96	43	185663	25.39	ug/l	94
14) 1,1-Dichloroethene	3.93	61	575697	5.25	ug/l	100
15) Iodomethane	4.11	142	404101	5.06	ug/l	100
16) Carbon disulfide	4.21	76	891940	4.98	ug/l	100
17) Methylene chloride	4.51	49	417583	4.96	ug/l	99
18) tert-Butyl alcohol	4.64	59	44384	22.55	ug/l	98
19) Acrylonitrile	4.78	53	225949	25.18	ug/l	100
20) tert-Butyl methyl ether (M	4.83	73	509598	5.19	ug/l	100
21) trans-1,2-Dichloroethene	4.85	61	569608	5.12	ug/l	99
22) Vinyl acetate	5.35	43	439621	5.54	ug/l	100
23) 1,1-Dichloroethane	5.37	63	636880	5.05	ug/l	99
24) Isopropyl ether (DIPE)	5.41	45	1133034	5.06	ug/l	100
26) tert-Butyl ethyl ether (ET	5.86	59	824253	5.12	ug/l	100
27) 2-Butanone	6.03	43	300798	25.53	ug/l	100
28) cis-1,2-Dichloroethene	6.08	96	315546	4.99	ug/l	99
29) 2,2-Dichloropropane	6.09	77	467665	5.21	ug/l	99

(#) = qualifier out of range (m) = manual integration

SU 11/4/11

2072

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV601.D
Acq On : 31 Oct 2011 12:03 pm
Sample : VO01J315 5.0ppb
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011

Vial: 6
Operator: MW
Inst : TO01
Multiplr: 1.00
Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.37	49	256279	5.04 ug/l	100
31) Chloroform	6.51	83	550815	5.19 ug/l	100
33) 1,1,1-Trichloroethane	6.74	97	438220	5.20 ug/l	99
34) tert-Amyl methyl ether (TA	7.38	87	121788	5.15 ug/l	97
37) 1,1-Dichloropropene	6.95	110	146381	4.94 ug/l	99
38) Carbon tetrachloride	6.95	119	369280	5.20 ug/l	99
39) Benzene	7.20	78	1245836	4.95 ug/l	99
40) 1,2-Dichloroethane	7.26	62	324993	5.20 ug/l	98
41) Trichloroethene	8.12	130	314478	4.99 ug/l	99
42) 1,2-Dichloropropane	8.49	63	328257	5.02 ug/l	99
44) Dibromomethane	8.61	93	108195	5.09 ug/l	99
45) Bromodichloromethane	8.86	83	372868	5.11 ug/l	100
46) 2-Chloroethyl vinyl ether	9.26	63	83401	4.95 ug/l	99
47) cis-1,3-Dichloropropene	9.53	75	439962	5.03 ug/l	99
48) 4-Methyl-2-pentanone	9.73	43	705512	24.62 ug/l	99
50) Toluene	10.06	91	1241598	4.97 ug/l	100
51) Ethyl methacrylate	10.50	69	232579	4.95 ug/l	99
52) trans-1,3-Dichloropropene	10.41	75	335582	5.18 ug/l	99
53) 1,1,2-Trichloroethane	10.74	97	153329	4.98 ug/l	99
54) Tetrachloroethene	10.90	164	254088	5.01 ug/l	99
55) 1,3-Dichloropropane	11.01	76	322220	5.03 ug/l	100
56) 2-Hexanone	11.08	43	449574	24.01 ug/l	100
57) Dibromochloromethane	11.37	129	188230	5.14 ug/l	98
58) 1,2-Dibromoethane	11.58	107	149657	5.12 ug/l	100
59) 1-Chlorohexane	12.34	91	519053	5.02 ug/l	99
60) Chlorobenzene	12.35	112	740263	5.15 ug/l	98
61) 1,1,1,2-Tetrachloroethane	12.48	131	246215	5.17 ug/l	99
62) Ethylbenzene	12.50	91	1488142	5.12 ug/l	100
63) m-Xylene & p-Xylene	12.68	91	2240668	10.21 ug/l	100
64) o-Xylene	13.18	91	1117820	5.18 ug/l	100
65) Styrene	13.21	104	814121	5.27 ug/l	99
67) Bromoform	13.43	173	90333	4.96 ug/l	99
68) Isopropylbenzene	13.64	105	1366963	4.98 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	188971	5.03 ug/l	100
71) Bromobenzene	14.01	156	275792	4.88 ug/l	98
72) trans-1,4-Dichloro-2-buten	14.02	53	47739	4.97 ug/l	99
73) 1,2,3-Trichloropropane	14.05	110	47417	4.94 ug/l	99
74) n-Propylbenzene	14.11	91	1765872	4.99 ug/l	100
75) 1,3,5-Trimethylbenzene	14.30	105	1153676	5.08 ug/l	100
76) 2-Chlorotoluene	14.22	91	975106	4.99 ug/l	99
77) 4-Chlorotoluene	14.35	91	1084599	5.04 ug/l	100

(#) = qualifier out of range (m) = manual integration

SM 11/14/11

2073

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV601.D Vial: 6
Acq On : 31 Oct 2011 12:03 pm Operator: MW
Sample : VO01J315 5.0ppb Inst : TO01
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.64	134	254622	5.01 ug/l	99
79) 1,2,4-Trimethylbenzene	14.70	105	1099833	5.11 ug/l	99
80) sec-Butylbenzene	14.87	105	1498680	5.20 ug/l	100
81) p-Isopropyltoluene	15.01	119	1188883	5.32 ug/l	99
82) 1,3-Dichlorobenzene	14.99	146	545388	5.03 ug/l	100
83) 1,4-Dichlorobenzene	15.09	146	517635	5.03 ug/l	98
84) n-Butylbenzene	15.40	91	1097417	5.08 ug/l	99
85) 1,2-Dichlorobenzene	15.43	146	435689	5.05 ug/l	98
86) 1,2-Dibromo-3-chloropropan	16.17	157	20984	4.85 ug/l	99
87) 1,2,4-Trichlorobenzene	16.95	180	195083	4.57 ug/l	99
88) Hexachlorobutadiene	17.09	225	160479	5.23 ug/l	99
89) Naphthalene	17.23	128	225188	4.71 ug/l	98
90) 1,2,3-Trichlorobenzene	17.46	180	141603	4.99 ug/l	99

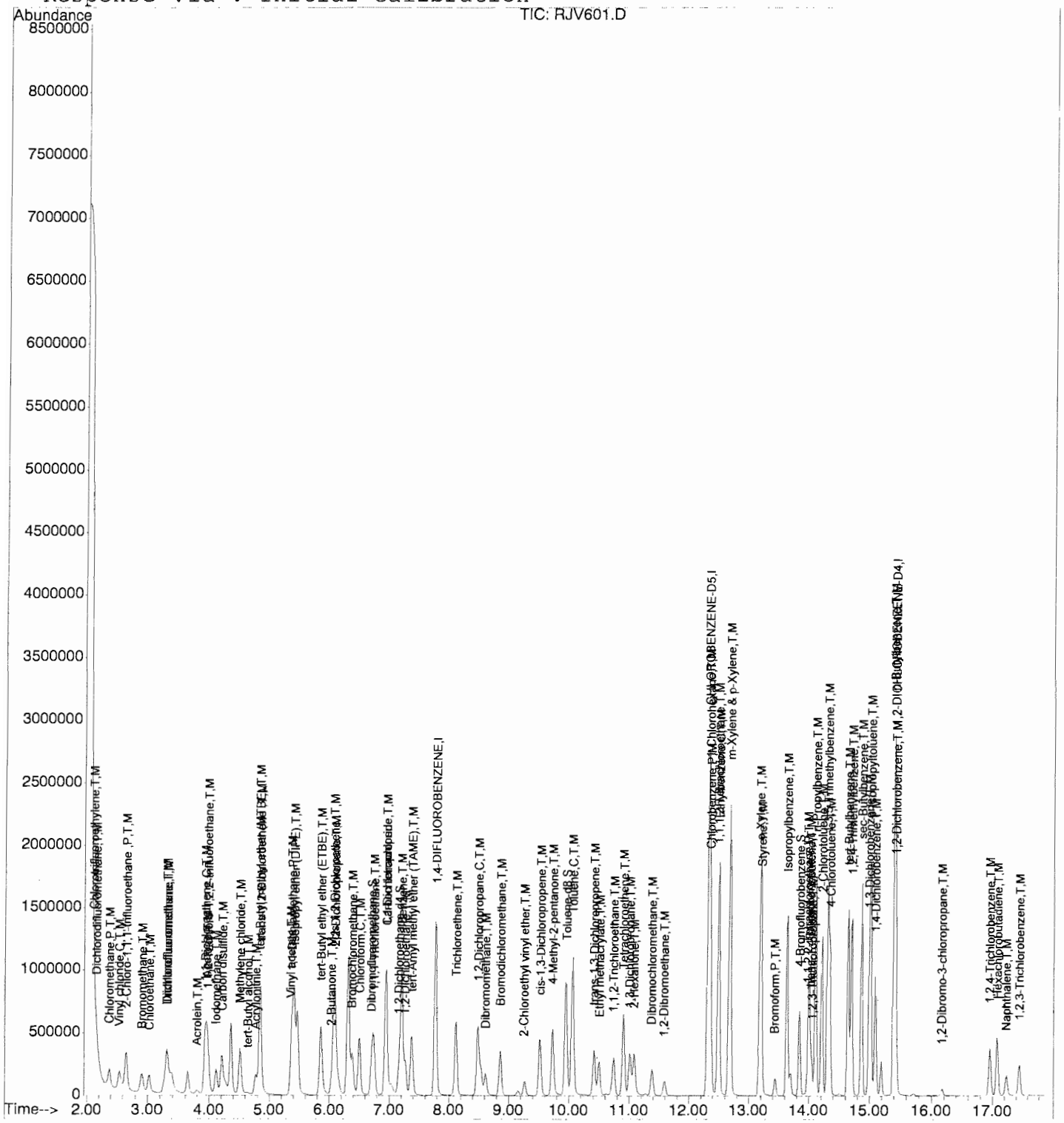
Sa 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV601.D Vial: 6
Acq On : 31 Oct 2011 12:03 pm Operator: MW
Sample : VO01J315 5.0ppb Inst : TO01
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



Su 11/4/11

2075

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV602.D Vial: 7
Acq On : 31 Oct 2011 12:33 pm Operator: MW
Sample : VO01J316 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1719891	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1480141	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	584394	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.71	111	476891	10.13	ug/l	0.00
Spiked Amount 10.000			Recovery = 101.30%			
35) 1,2-Dichloroethane-d4	7.16	65	511956	10.19	ug/l	0.00
Spiked Amount 10.000			Recovery = 101.90%			
49) Toluene-d8	9.96	98	1975217	9.65	ug/l	0.00
Spiked Amount 10.000			Recovery = 96.50%			
69) 4-Bromofluorobenzene	13.85	95	662153	9.19	ug/l	0.00
Spiked Amount 10.000			Recovery = 91.90%			
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	2.11	116	276100	10.30	ug/l	100
3) Dichlorodifluoromethane	2.16	85	694418	11.11	ug/l	100
4) Chloromethane	2.38	50	822931	11.00	ug/l	100
5) Vinyl chloride	2.54	62	885921	11.16	ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	2.66	118	595620	10.23	ug/l	100
7) Bromomethane	2.91	94	453924	11.55	ug/l	100
8) Chloroethane	3.03	64	490375	10.11	ug/l	100
9) Dichlorofluoromethane	3.31	67	1212411	9.90	ug/l	100
10) Trichlorofluoromethane	3.31	101	790130	11.10	ug/l	100
11) Acrolein	3.80	56	91113	46.83	ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	372713	9.90	ug/l	100
13) Acetone	3.96	43	398149	52.78	ug/l	100
14) 1,1-Dichloroethene	3.93	61	1151902	10.18	ug/l	100
15) Iodomethane	4.11	142	821311	9.98	ug/l	100
16) Carbon disulfide	4.21	76	1704059	9.23	ug/l	100
17) Methylene chloride	4.51	49	832134	9.59	ug/l	100
18) tert-Butyl alcohol	4.63	59	104663	51.56	ug/l	100
19) Acrylonitrile	4.78	53	460761	49.78	ug/l	100
20) tert-Butyl methyl ether (M	4.84	73	1023725	10.11	ug/l	100
21) trans-1,2-Dichloroethene	4.85	61	1155912	10.07	ug/l	100
22) Vinyl acetate	5.35	43	898961	10.98	ug/l	100
23) 1,1-Dichloroethane	5.37	63	1281558	9.85	ug/l	100
24) Isopropyl ether (DIPE)	5.41	45	2277211	9.86	ug/l	100
26) tert-Butyl ethyl ether (ET	5.86	59	1664323	10.02	ug/l	100
27) 2-Butanone	6.03	43	627685	51.64	ug/l	100
28) cis-1,2-Dichloroethene	6.08	96	643660	9.86	ug/l	100
29) 2,2-Dichloropropane	6.09	77	918750	9.93	ug/l	100

(#) = qualifier out of range (m) = manual integration

SM 11/4/11

2076

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV602.D Vial: 7
Acq On : 31 Oct 2011 12:33 pm Operator: MW
Sample : VO01J316 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.37	49	531689	10.13 ug/l	100
31) Chloroform	6.51	83	1125479	10.28 ug/l	100
33) 1,1,1-Trichloroethane	6.74	97	887340	10.21 ug/l	100
34) tert-Amyl methyl ether (TA	7.38	87	254430	10.42 ug/l	100
37) 1,1-Dichloropropene	6.95	110	300394	9.76 ug/l	100
38) Carbon tetrachloride	6.95	119	761006	10.32 ug/l	100
39) Benzene	7.20	78	2536787	9.70 ug/l	100
40) 1,2-Dichloroethane	7.26	62	658788	10.16 ug/l	100
41) Trichloroethene	8.12	130	643696	9.83 ug/l	100
42) 1,2-Dichloropropane	8.49	63	660977	9.73 ug/l	100
44) Dibromomethane	8.61	93	223027	10.11 ug/l	100
45) Bromodichloromethane	8.86	83	765516	10.10 ug/l	100
46) 2-Chloroethyl vinyl ether	9.27	63	179170	10.24 ug/l	100
47) cis-1,3-Dichloropropene	9.53	75	902904	9.94 ug/l	100
48) 4-Methyl-2-pentanone	9.73	43	1515324	50.91 ug/l	100
50) Toluene	10.06	91	2519020	9.71 ug/l	100
51) Ethyl methacrylate	10.50	69	509535	10.44 ug/l	100
52) trans-1,3-Dichloropropene	10.41	75	692433	10.30 ug/l	100
53) 1,1,2-Trichloroethane	10.74	97	312834	9.79 ug/l	100
54) Tetrachloroethene	10.90	164	527228	10.00 ug/l	100
55) 1,3-Dichloropropane	11.02	76	672790	10.12 ug/l	100
56) 2-Hexanone	11.08	43	1001577	51.50 ug/l	100
57) Dibromochloromethane	11.38	129	398755	10.49 ug/l	100
58) 1,2-Dibromoethane	11.60	107	309125	10.19 ug/l	100
59) 1-Chlorohexane	12.34	91	1061481	9.89 ug/l	100
60) Chlorobenzene	12.37	112	1534459	10.27 ug/l	100
61) 1,1,1,2-Tetrachloroethane	12.49	131	509033	10.29 ug/l	100
62) Ethylbenzene	12.50	91	3039684	10.07 ug/l	100
63) m-Xylene & p-Xylene	12.68	91	4657557	20.44 ug/l	100
64) o-Xylene	13.18	91	2289498	10.21 ug/l	100
65) Styrene	13.21	104	1710763	10.66 ug/l	100
67) Bromoform	13.45	173	191250	9.92 ug/l	100
68) Isopropylbenzene	13.64	105	2845236	9.80 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	387320	9.75 ug/l	100
71) Bromobenzene	14.01	156	576797	9.64 ug/l	100
72) trans-1,4-Dichloro-2-buten	14.02	53	104528	10.28 ug/l	100
73) 1,2,3-Trichloropropane	14.05	110	96348	9.48 ug/l	100
74) n-Propylbenzene	14.11	91	3712779	9.92 ug/l	100
75) 1,3,5-Trimethylbenzene	14.31	105	2404528	10.02 ug/l	100
76) 2-Chlorotoluene	14.22	91	1999464	9.68 ug/l	100
77) 4-Chlorotoluene	14.35	91	2257893	9.91 ug/l	100

(#) = qualifier out of range (m) = manual integration

Su 11/4/11

2077

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV602.D Vial: 7
Acq On : 31 Oct 2011 12:33 pm Operator: MW
Sample : VO01J316 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.65	134	534932	9.95 ug/l	100
79) 1,2,4-Trimethylbenzene	14.70	105	2360716	10.36 ug/l	100
80) sec-Butylbenzene	14.87	105	3168241	10.38 ug/l	100
81) p-Isopropyltoluene	15.02	119	2560910	10.82 ug/l	100
82) 1,3-Dichlorobenzene	15.00	146	1159223	10.11 ug/l	100
83) 1,4-Dichlorobenzene	15.09	146	1104230	10.14 ug/l	100
84) n-Butylbenzene	15.40	91	2441091	10.67 ug/l	100
85) 1,2-Dichlorobenzene	15.43	146	923829	10.12 ug/l	100
86) 1,2-Dibromo-3-chloropropan	16.17	157	47396	10.35 ug/l	100
87) 1,2,4-Trichlorobenzene	16.95	180	459079	9.98 ug/l	100
88) Hexachlorobutadiene	17.09	225	351615	10.83 ug/l	100
89) Naphthalene	17.23	128	566222	11.18 ug/l	100
90) 1,2,3-Trichlorobenzene	17.46	180	338329	11.27 ug/l	100

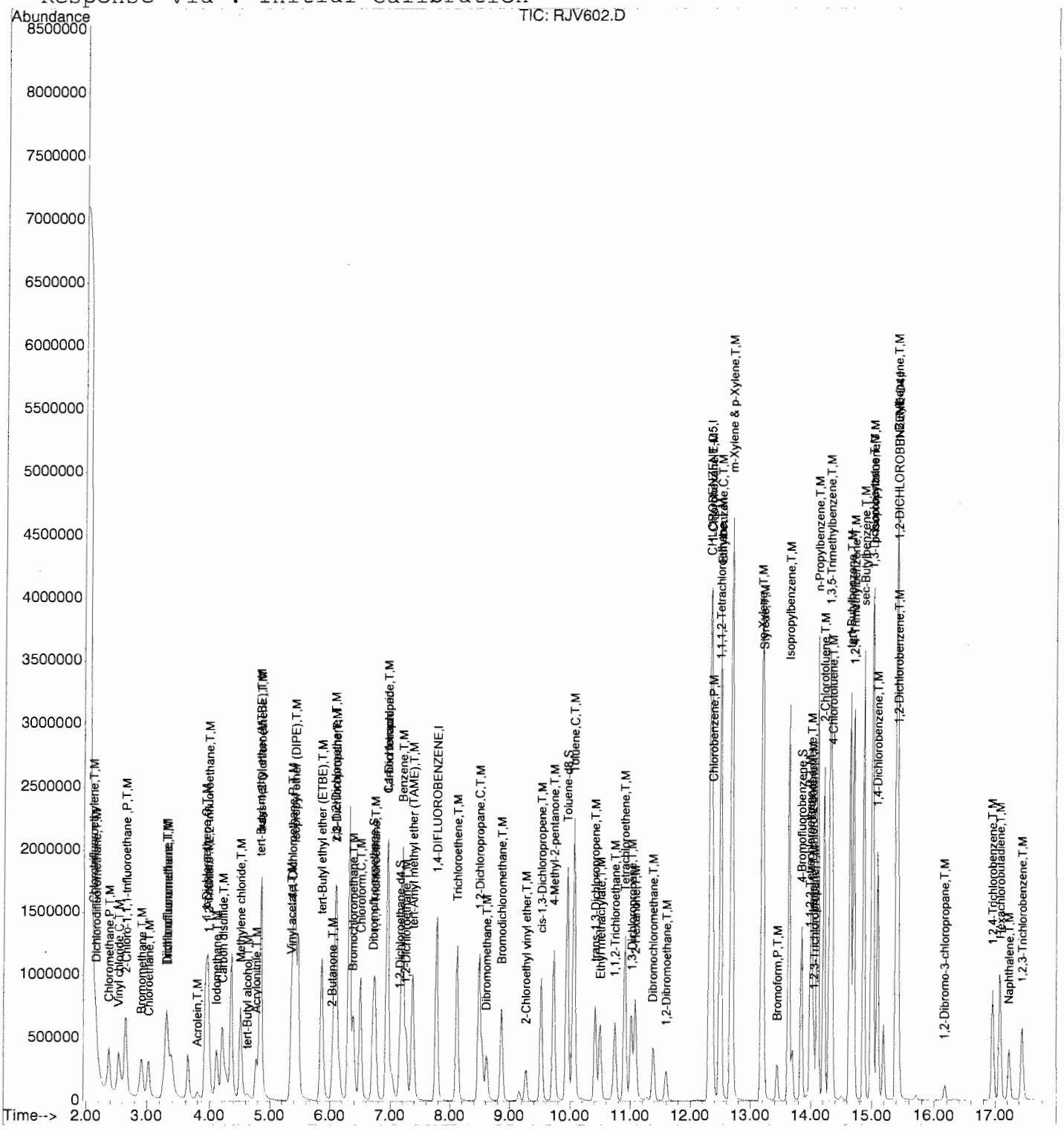
SW
11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV602.D Vial: 7
Acq On : 31 Oct 2011 12:33 pm Operator: MW
Sample : VO01J316 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



Sen 11/4/11

2079

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV603.D Vial: 8
Acq On : 31 Oct 2011 1:04 pm Operator: MW
Sample : VO01J317 20.0ppb Inst : TO01
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1779518	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1549810	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	625052	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.71	111	1025767	21.06	ug/l	0.00
Spiked Amount 10.000			Recovery = 210.60%			
35) 1,2-Dichloroethane-d4	7.17	65	1080974	20.79	ug/l	0.01
Spiked Amount 10.000			Recovery = 207.90%			
49) Toluene-d8	9.95	98	4337966	20.23	ug/l	0.00
Spiked Amount 10.000			Recovery = 202.30%			
69) 4-Bromofluorobenzene	13.85	95	1458130	18.93	ug/l	0.00
Spiked Amount 10.000			Recovery = 189.30%			
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	2.11	116	619157	22.32	ug/l	97
3) Dichlorodifluoromethane	2.16	85	1332729	20.61	ug/l	99
4) Chloromethane	2.38	50	1536794	19.85	ug/l	99
5) Vinyl chloride	2.54	62	1711387	20.84	ug/l	99
6) 2-Chloro-1,1,1-trifluoroet	2.66	118	1306611	21.69	ug/l	99
7) Bromomethane	2.91	94	845037	20.77	ug/l	100
8) Chloroethane	3.03	64	956239	19.05	ug/l	99
9) Dichlorofluoromethane	3.31	67	2569689	20.28	ug/l	99
10) Trichlorofluoromethane	3.31	101	1521533	20.66	ug/l	100
11) Acrolein	3.80	56	191956	95.35	ug/l	94
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	796334	20.45	ug/l	100
13) Acetone	3.96	43	790572	101.29	ug/l	99
14) 1,1-Dichloroethene	3.93	61	2377378	20.30	ug/l	99
15) Iodomethane	4.11	142	1769507	20.78	ug/l	98
16) Carbon disulfide	4.21	76	4242746	22.20	ug/l	100
17) Methylene chloride	4.51	49	1783638	19.87	ug/l	100
18) tert-Butyl alcohol	4.63	59	243093	115.74	ug/l	94
19) Acrylonitrile	4.78	53	999525	104.36	ug/l	98
20) tert-Butyl methyl ether (M	4.83	73	2261970	21.59	ug/l	99
21) trans-1,2-Dichloroethene	4.85	61	2436914	20.51	ug/l	99
22) Vinyl acetate	5.35	43	1835696	21.67	ug/l	100
23) 1,1-Dichloroethane	5.38	63	2732458	20.30	ug/l	100
24) Isopropyl ether (DIPE)	5.41	45	4958183	20.74	ug/l	100
26) tert-Butyl ethyl ether (ET	5.86	59	3601366	20.95	ug/l	100
27) 2-Butanone	6.03	43	1369537	108.90	ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	1393330	20.64	ug/l	97
29) 2,2-Dichloropropane	6.11	77	1893188	19.78	ug/l	99

(#) = qualifier out of range (m) = manual integration
RJV603.D VO01J31.M Tue Nov 01 12:02:00 2011 11/4/11 Page 1

2080

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV603.D Vial: 8
Acq On : 31 Oct 2011 1:04 pm Operator: MW
Sample : VO01J317 20.0ppb Inst : TO01
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.37	49	1135905	20.92 ug/l	100
31) Chloroform	6.51	83	2332870	20.60 ug/l	99
33) 1,1,1-Trichloroethane	6.74	97	1826203	20.30 ug/l	100
34) tert-Amyl methyl ether (TA	7.38	87	551721	21.84 ug/l	98
37) 1,1-Dichloropropene	6.95	110	626975	19.45 ug/l	100
38) Carbon tetrachloride	6.95	119	1558491	20.19 ug/l	99
39) Benzene	7.22	78	5373072	19.62 ug/l	100
40) 1,2-Dichloroethane	7.28	62	1368426	20.15 ug/l	99
41) Trichloroethene	8.12	130	1374856	20.05 ug/l	99
42) 1,2-Dichloropropane	8.49	63	1410225	19.83 ug/l	99
44) Dibromomethane	8.61	93	474846	20.55 ug/l	99
45) Bromodichloromethane	8.86	83	1635177	20.61 ug/l	100
46) 2-Chloroethyl vinyl ether	9.27	63	417426	22.78 ug/l	99
47) cis-1,3-Dichloropropene	9.53	75	1959642	20.60 ug/l	98
48) 4-Methyl-2-pentanone	9.73	43	3397594	109.02 ug/l	99
50) Toluene	10.06	91	5342633	19.66 ug/l	99
51) Ethyl methacrylate	10.50	69	1151317	22.54 ug/l	99
52) trans-1,3-Dichloropropene	10.41	75	1489122	21.15 ug/l	99
53) 1,1,2-Trichloroethane	10.74	97	687671	20.55 ug/l	100
54) Tetrachloroethene	10.90	164	1106278	20.04 ug/l	99
55) 1,3-Dichloropropane	11.02	76	1450831	20.84 ug/l	99
56) 2-Hexanone	11.08	43	2231750	109.59 ug/l	99
57) Dibromochloromethane	11.39	129	867364	21.78 ug/l	99
58) 1,2-Dibromoethane	11.60	107	685662	21.58 ug/l	100
59) 1-Chlorohexane	12.34	91	2246704	19.99 ug/l	98
60) Chlorobenzene	12.37	112	3217343	20.56 ug/l	99
61) 1,1,1,2-Tetrachloroethane	12.48	131	1086418	20.98 ug/l	100
62) Ethylbenzene	12.50	91	6520501	20.62 ug/l	100
63) m-Xylene & p-Xylene	12.69	91	9711209	40.70 ug/l	99
64) o-Xylene	13.18	91	4791780	20.41 ug/l	100
65) Styrene	13.21	104	3693235	21.99 ug/l	99
67) Bromoform	13.45	173	430525	20.87 ug/l	100
68) Isopropylbenzene	13.64	105	6000625	19.33 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	867417	20.42 ug/l	99
71) Bromobenzene	14.01	156	1246515	19.47 ug/l	99
72) trans-1,4-Dichloro-2-buten	14.02	53	236469	21.74 ug/l	99
73) 1,2,3-Trichloropropane	14.05	110	213892	19.68 ug/l	95
74) n-Propylbenzene	14.11	91	7875979	19.68 ug/l	100
75) 1,3,5-Trimethylbenzene	14.30	105	5121879	19.95 ug/l	100
76) 2-Chlorotoluene	14.22	91	4208913	19.05 ug/l	100
77) 4-Chlorotoluene	14.35	91	4712246	19.33 ug/l	99

(#) = qualifier out of range (m) = manual integration

2081

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV603.D Vial: 8
Acq On : 31 Oct 2011 1:04 pm Operator: MW
Sample : VO01J317 20.0ppb Inst : TO01
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.64	134	1132771	19.70 ug/l	98
79) 1,2,4-Trimethylbenzene	14.70	105	4931279	20.24 ug/l	100
80) sec-Butylbenzene	14.87	105	6646646	20.37 ug/l	100
81) p-Isopropyltoluene	15.01	119	5412692	21.39 ug/l	99
82) 1,3-Dichlorobenzene	15.00	146	2462860	20.08 ug/l	100
83) 1,4-Dichlorobenzene	15.10	146	2371037	20.36 ug/l	100
84) n-Butylbenzene	15.40	91	5280613	21.59 ug/l	100
85) 1,2-Dichlorobenzene	15.43	146	1979099	20.28 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.17	157	108025	22.05 ug/l	96
87) 1,2,4-Trichlorobenzene	16.95	180	1021088	20.58 ug/l	99
88) Hexachlorobutadiene	17.09	225	732172	21.08 ug/l	100
89) Naphthalene	17.23	128	1317521	24.33 ug/l	99
90) 1,2,3-Trichlorobenzene	17.46	180	748982	23.32 ug/l	99

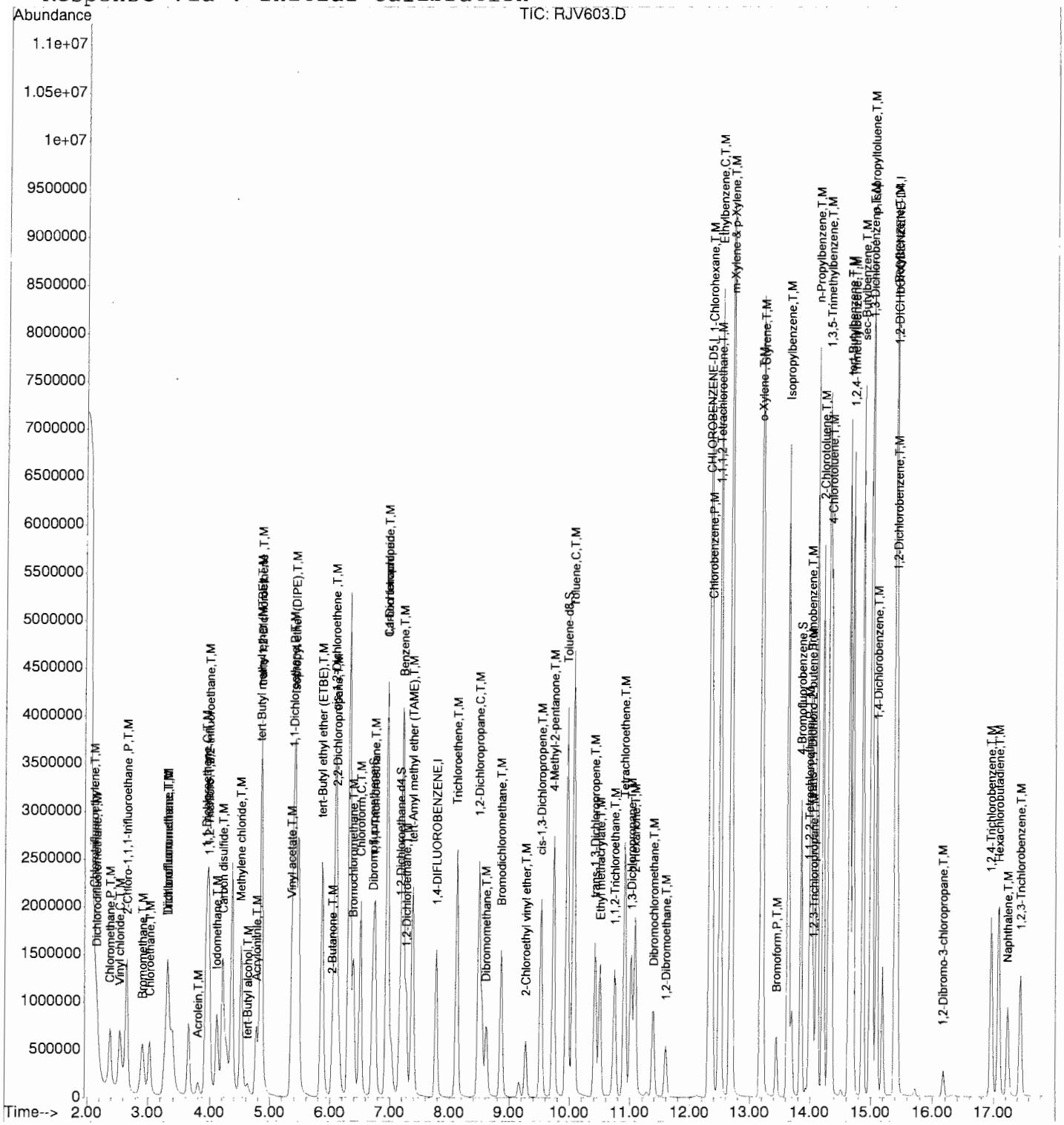
Sa 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV603.D Vial: 8
Acq On : 31 Oct 2011 1:04 pm Operator: MW
Sample : VO01J317 20.0ppb Inst : TO01
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:01 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



Su 11/4/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV604.D Vial: 9
Acq On : 31 Oct 2011 1:35 pm Operator: MW
Sample : VO01J318 30.0ppb Inst : TO01
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	1944105	10.00 ug/l	0.00
36) CHLOROBENZENE-D5	12.33	117	1642533	10.00 ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	623118	10.00 ug/l	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	6.70	111	1600153	30.07 ug/l	-0.01
Spiked Amount 10.000			Recovery	= 300.70%	
35) 1,2-Dichloroethane-d4	7.16	65	1611045	28.36 ug/l	0.00
Spiked Amount 10.000			Recovery	= 283.60%	
49) Toluene-d8	9.96	98	6927928	30.49 ug/l	0.00
Spiked Amount 10.000			Recovery	= 304.90%	
69) 4-Bromofluorobenzene	13.85	95	2234361	29.10 ug/l	0.00
Spiked Amount 10.000			Recovery	= 291.00%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.10	116	959090	31.65 ug/l	97
3) Dichlorodifluoromethane	2.16	85	2071610	29.32 ug/l	99
4) Chloromethane	2.38	50	2459072	29.08 ug/l	100
5) Vinyl chloride	2.55	62	2680047	29.87 ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	2.65	118	1998069	30.36 ug/l	99
7) Bromomethane	2.90	94	1296227	29.17 ug/l	99
8) Chloroethane	3.02	64	1467399	26.75 ug/l	97
9) Dichlorofluoromethane	3.32	67	3913511	28.28 ug/l	99
10) Trichlorofluoromethane	3.38	101	2362974	29.37 ug/l	99
11) Acrolein	3.80	56	309344	140.66 ug/l	93
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	1257372	29.56 ug/l	99
13) Acetone	3.95	43	1175036	137.81 ug/l	99
14) 1,1-Dichloroethene	3.92	61	3679949	28.76 ug/l	98
15) Iodomethane	4.12	142	2809158	30.20 ug/l	96
16) Carbon disulfide	4.20	76	6618018	31.70 ug/l	99
17) Methylene chloride	4.51	49	2820351	28.75 ug/l	98
18) tert-Butyl alcohol	4.62	59	370690	161.55 ug/l	90
19) Acrylonitrile	4.77	53	1614225	154.28 ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	3380669	29.54 ug/l	99
21) trans-1,2-Dichloroethene	4.85	61	3856033	29.71 ug/l	97
22) Vinyl acetate	5.36	43	3051479	32.98 ug/l	100
23) 1,1-Dichloroethane	5.37	63	4375129	29.76 ug/l	100
24) Isopropyl ether (DIPE)	5.42	45	7821803	29.95 ug/l	100
26) tert-Butyl ethyl ether (ET	5.86	59	5385324	28.67 ug/l	99
27) 2-Butanone	6.04	43	2132827	155.24 ug/l	100
28) cis-1,2-Dichloroethene	6.08	96	2218715	30.08 ug/l	94
29) 2,2-Dichloropropane	6.10	77	2894614	27.68 ug/l	99

(#) = qualifier out of range (m) = manual integration

SU 11/14/11

2084

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV604.D Vial: 9
Acq On : 31 Oct 2011 1:35 pm Operator: MW
Sample : VO01J318 30.0ppb Inst : TO01
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.38	49	1757164	29.62 ug/l	100
31) Chloroform	6.51	83	3616890	29.23 ug/l	99
33) 1,1,1-Trichloroethane	6.75	97	2831129	28.81 ug/l	99
34) tert-Amyl methyl ether (TA	7.39	87	837280	30.34 ug/l	97
37) 1,1-Dichloropropene	6.96	110	1027036	30.06 ug/l	100
38) Carbon tetrachloride	6.96	119	2452549	29.98 ug/l	100
39) Benzene	7.21	78	8635600	29.75 ug/l	99
40) 1,2-Dichloroethane	7.27	62	2052805	28.52 ug/l	100
41) Trichloroethene	8.12	130	2152986	29.62 ug/l	99
42) 1,2-Dichloropropane	8.49	63	2226456	29.53 ug/l	95
44) Dibromomethane	8.61	93	725022	29.61 ug/l	98
45) Bromodichloromethane	8.86	83	2511280	29.86 ug/l	99
46) 2-Chloroethyl vinyl ether	9.28	63	626988	32.28 ug/l	99
47) cis-1,3-Dichloropropene	9.53	75	3047283	30.22 ug/l	96
48) 4-Methyl-2-pentanone	9.74	43	5147126	155.83 ug/l	100
50) Toluene	10.06	91	8672793	30.12 ug/l	99
51) Ethyl methacrylate	10.51	69	1769262	32.68 ug/l	99
52) trans-1,3-Dichloropropene	10.42	75	2265119	30.35 ug/l	98
53) 1,1,2-Trichloroethane	10.74	97	1053999	29.71 ug/l	99
54) Tetrachloroethene	10.91	164	1734669	29.65 ug/l	99
55) 1,3-Dichloropropane	11.03	76	2210603	29.96 ug/l	100
56) 2-Hexanone	11.08	43	3468558	160.71 ug/l	99
57) Dibromochloromethane	11.38	129	1306686	30.96 ug/l	100
58) 1,2-Dibromoethane	11.60	107	1031679	30.63 ug/l	100
59) 1-Chlorohexane	12.34	91	3552970	29.83 ug/l	96
60) Chlorobenzene	12.37	112	5041374	30.40 ug/l	98
61) 1,1,1,2-Tetrachloroethane	12.49	131	1651646	30.09 ug/l	99
62) Ethylbenzene	12.50	91	10122986	30.21 ug/l	99
63) m-Xylene & p-Xylene	12.68	91	15158450	59.94 ug/l	100
64) o-Xylene	13.19	91	7399756	29.73 ug/l	99
65) Styrene	13.21	104	5848025	32.85 ug/l	98
67) Bromoform	13.44	173	641572	31.20 ug/l	99
68) Isopropylbenzene	13.64	105	9324644	30.14 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	1275187	30.11 ug/l	100
71) Bromobenzene	14.01	156	1879383	29.45 ug/l	99
72) trans-1,4-Dichloro-2-buten	14.03	53	344575	31.78 ug/l	98
73) 1,2,3-Trichloropropane	14.06	110	307702	28.39 ug/l	97
74) n-Propylbenzene	14.12	91	12105235	30.34 ug/l	99
75) 1,3,5-Trimethylbenzene	14.31	105	7677402	29.99 ug/l	100
76) 2-Chlorotoluene	14.22	91	6409822	29.09 ug/l	100
77) 4-Chlorotoluene	14.35	91	7110939	29.27 ug/l	99

(#) = qualifier out of range (m) = manual integration

Sa 11/14/11

2085

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV604.D Vial: 9
Acq On : 31 Oct 2011 1:35 pm Operator: MW
Sample : VO01J318 30.0ppb Inst : TO01
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.65	134	1726031	30.11 ug/l	97
79) 1,2,4-Trimethylbenzene	14.71	105	7386704	30.41 ug/l	100
80) sec-Butylbenzene	14.87	105	10134115	31.15 ug/l	100
81) p-Isopropyltoluene	15.02	119	8122945	32.20 ug/l	99
82) 1,3-Dichlorobenzene	14.99	146	3674932	30.06 ug/l	100
83) 1,4-Dichlorobenzene	15.09	146	3531924	30.43 ug/l	99
84) n-Butylbenzene	15.40	91	7800996	31.99 ug/l	100
85) 1,2-Dichlorobenzene	15.43	146	2898081	29.79 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.17	157	157656	32.29 ug/l	94
87) 1,2,4-Trichlorobenzene	16.96	180	1481504	29.87 ug/l	99
88) Hexachlorobutadiene	17.09	225	1047559	30.26 ug/l	100
89) Naphthalene	17.24	128	1974632	36.58 ug/l	100
90) 1,2,3-Trichlorobenzene	17.46	180	1086525	33.94 ug/l	99

(#) = qualifier out of range (m) = manual integration

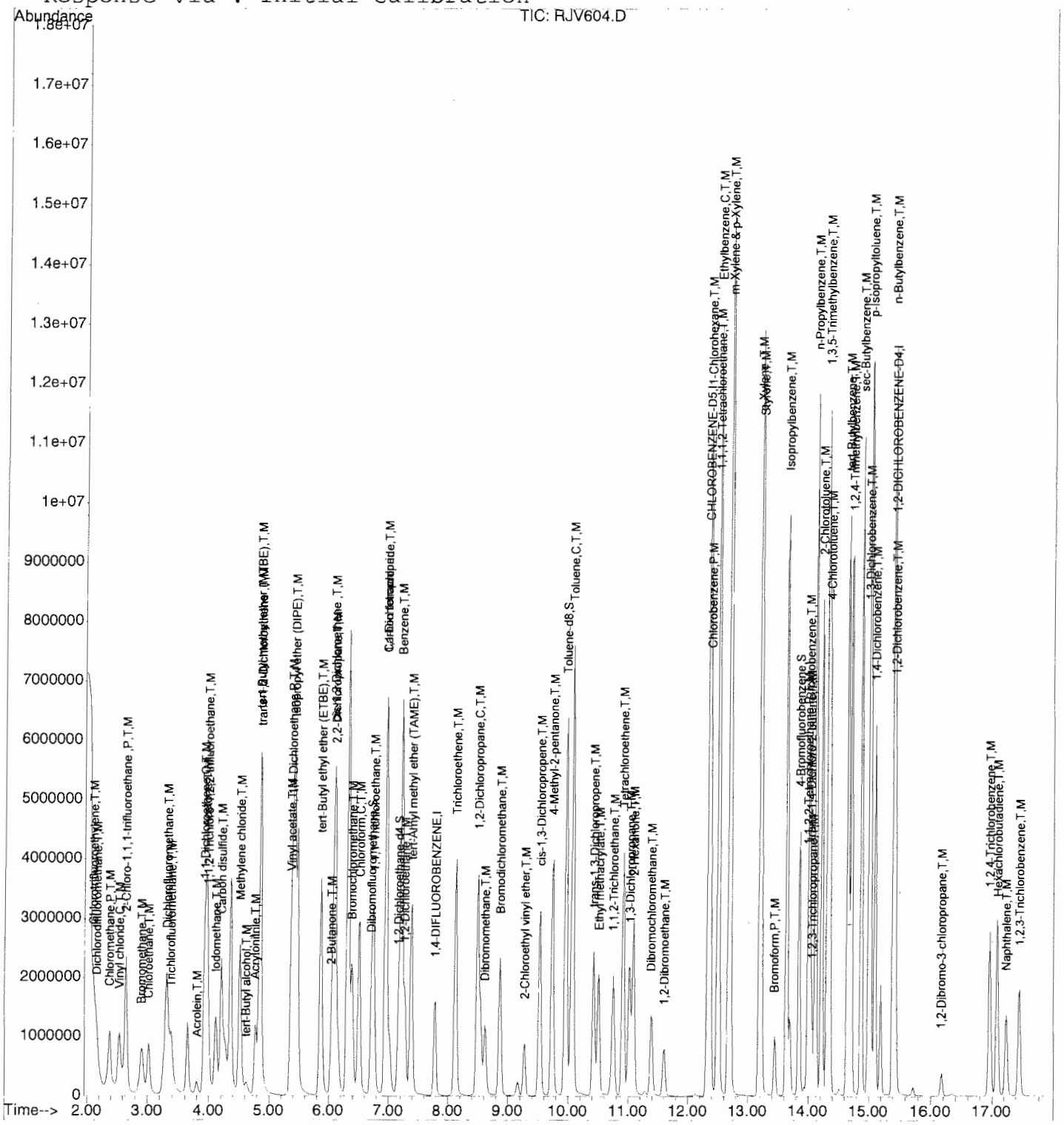
Sa 11/4/11

2086

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV604.D Vial: 9
Acq On : 31 Oct 2011 1:35 pm Operator: MW
Sample : VO01J318 30.0ppb Inst : TO01
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



SW 11/4/11

2087

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV605.D Vial: 11
Acq On : 31 Oct 2011 2:05 pm Operator: MW
Sample : VO01J319 50.0ppb Inst : TO01
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	2009420	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1673368	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	609594	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.72	111	2760567	50.19	ug/l	0.00
Spiked Amount 10.000			Recovery	=	501.90%	
35) 1,2-Dichloroethane-d4	7.18	65	2744499	46.75	ug/l	0.02
Spiked Amount 10.000			Recovery	=	467.50%	
49) Toluene-d8	9.96	98	11858124	51.22	ug/l	0.00
Spiked Amount 10.000			Recovery	=	512.20%	
69) 4-Bromofluorobenzene	13.85	95	3735684	49.73	ug/l	0.00
Spiked Amount 10.000			Recovery	=	497.30%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	2.10	116	1702770	54.37	ug/l	97
3) Dichlorodifluoromethane	2.16	85	3668635	50.24	ug/l	100
4) Chloromethane	2.38	50	4222194	48.30	ug/l	99
5) Vinyl chloride	2.54	62	4799083	51.75	ug/l	99
6) 2-Chloro-1,1,1-trifluoroet	2.65	118	3415291	50.21	ug/l	99
7) Bromomethane	2.90	94	2135280	46.49	ug/l	99
8) Chloroethane	3.02	64	2518778	44.43	ug/l	97
9) Dichlorofluoromethane	3.31	67	6568593	45.92	ug/l	99
10) Trichlorofluoromethane	3.37	101	4112056	49.45	ug/l	99
11) Acrolein	3.80	56	534262	235.03	ug/l	91
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	2174084	49.44	ug/l	99
13) Acetone	3.96	43	1952617	221.56	ug/l	98
14) 1,1-Dichloroethene	3.92	61	6186662	46.78	ug/l	97
15) Iodomethane	4.11	142	4929746	51.27	ug/l	95
16) Carbon disulfide	4.20	76	12286394	56.93	ug/l	99
17) Methylene chloride	4.51	49	4877164	48.10	ug/l	98
18) tert-Butyl alcohol	4.63	59	603415	254.43	ug/l	90
19) Acrylonitrile	4.78	53	2761953	255.39	ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	5759400	48.68	ug/l	99
21) trans-1,2-Dichloroethene	4.85	61	6566876	48.95	ug/l	96
22) Vinyl acetate	5.36	43	5089972	53.22	ug/l	99
23) 1,1-Dichloroethane	5.37	63	7517951	49.47	ug/l	100
24) Isopropyl ether (DIPE)	5.41	45	13401731	49.65	ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	9283442	47.82	ug/l	99
27) 2-Butanone	6.04	43	3598371	253.40	ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	3806666	49.94	ug/l	93
29) 2,2-Dichloropropane	6.11	77	4905534	45.39	ug/l	99

(#) = qualifier out of range (m) = manual integration

SW 11/4/11

2088

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV605.D Vial: 11
Acq On : 31 Oct 2011 2:05 pm Operator: MW
Sample : VO01J319 50.0ppb Inst : TO01
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.38	49	2983317	48.65 ug/l	99
31) Chloroform	6.51	83	6188584	48.39 ug/l	99
33) 1,1,1-Trichloroethane	6.75	97	4900213	48.24 ug/l	99
34) tert-Amyl methyl ether (TA	7.38	87	1421634	49.84 ug/l	97
37) 1,1-Dichloropropene	6.95	110	1709663	49.11 ug/l	100
38) Carbon tetrachloride	6.95	119	4075850	48.90 ug/l	100
39) Benzene	7.22	78	15061821	50.94 ug/l	99
40) 1,2-Dichloroethane	7.28	62	3468505	47.30 ug/l	99
41) Trichloroethene	8.12	130	3759638	50.78 ug/l	99
42) 1,2-Dichloropropane	8.49	63	3854263	50.18 ug/l	93
44) Dibromomethane	8.61	93	1258398	50.45 ug/l	98
45) Bromodichloromethane	8.86	83	4332390	50.57 ug/l	99
46) 2-Chloroethyl vinyl ether	9.28	63	1103296	55.76 ug/l	100
47) cis-1,3-Dichloropropene	9.53	75	5290073	51.50 ug/l	96
48) 4-Methyl-2-pentanone	9.74	43	8986510	267.06 ug/l	100
50) Toluene	10.06	91	14946793	50.94 ug/l	99
51) Ethyl methacrylate	10.50	69	3027427	54.88 ug/l	98
52) trans-1,3-Dichloropropene	10.42	75	3900084	51.30 ug/l	97
53) 1,1,2-Trichloroethane	10.76	97	1799649	49.80 ug/l	99
54) Tetrachloroethene	10.92	164	2996227	50.26 ug/l	98
55) 1,3-Dichloropropane	11.02	76	3820354	50.83 ug/l	100
56) 2-Hexanone	11.08	43	5961741	271.14 ug/l	99
57) Dibromochloromethane	11.39	129	2229241	51.85 ug/l	99
58) 1,2-Dibromoethane	11.60	107	1758612	51.26 ug/l	100
59) 1-Chlorohexane	12.34	91	6038065	49.76 ug/l	94
60) Chlorobenzene	12.37	112	8506064	50.35 ug/l	98
61) 1,1,1,2-Tetrachloroethane	12.50	131	2794766	49.98 ug/l	100
62) Ethylbenzene	12.50	91	16600587	48.63 ug/l	98
63) m-Xylene & p-Xylene	12.69	91	22426784	87.05 ug/l	90
64) o-Xylene	13.20	91	12391328	48.87 ug/l	100
65) Styrene	13.21	104	9819196	54.14 ug/l	97
67) Bromoform	13.45	173	1095097	54.44 ug/l	100
68) Isopropylbenzene	13.64	105	14588321	48.19 ug/l	98
70) 1,1,2,2-Tetrachloroethane	13.98	83	2094516	50.55 ug/l	100
71) Bromobenzene	14.01	156	3147518	50.42 ug/l	98
72) trans-1,4-Dichloro-2-buten	14.03	53	566772	53.43 ug/l	99
73) 1,2,3-Trichloropropane	14.06	110	505221	47.66 ug/l	99
74) n-Propylbenzene	14.11	91	16939080	43.40 ug/l	94
75) 1,3,5-Trimethylbenzene	14.31	105	12624805	50.41 ug/l	100
76) 2-Chlorotoluene	14.22	91	10653400	49.43 ug/l	100
77) 4-Chlorotoluene	14.35	91	11722235	49.32 ug/l	99

(#) = qualifier out of range (m) = manual integration

SA 11/14/11

2089

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV605.D Vial: 11
Acq On : 31 Oct 2011 2:05 pm Operator: MW
Sample : VO01J319 50.0ppb Inst : TO01
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.65	134	2799133	49.91 ug/l	98
79) 1,2,4-Trimethylbenzene	14.71	105	12111871	50.98 ug/l	100
80) sec-Butylbenzene	14.87	105	15097959	47.44 ug/l	96
81) p-Isopropyltoluene	15.02	119	12920168	52.35 ug/l	99
82) 1,3-Dichlorobenzene	15.00	146	6085296	50.88 ug/l	99
83) 1,4-Dichlorobenzene	15.11	146	5782196	50.92 ug/l	99
84) n-Butylbenzene	15.40	91	12489996	52.35 ug/l	99
85) 1,2-Dichlorobenzene	15.43	146	4708100	49.47 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.17	157	263605	55.18 ug/l	94
87) 1,2,4-Trichlorobenzene	16.96	180	2445232	50.29 ug/l	99
88) Hexachlorobutadiene	17.09	225	1676790	49.51 ug/l	99
89) Naphthalene	17.24	128	3325101	62.96 ug/l	100
90) 1,2,3-Trichlorobenzene	17.46	180	1796843	57.37 ug/l	99

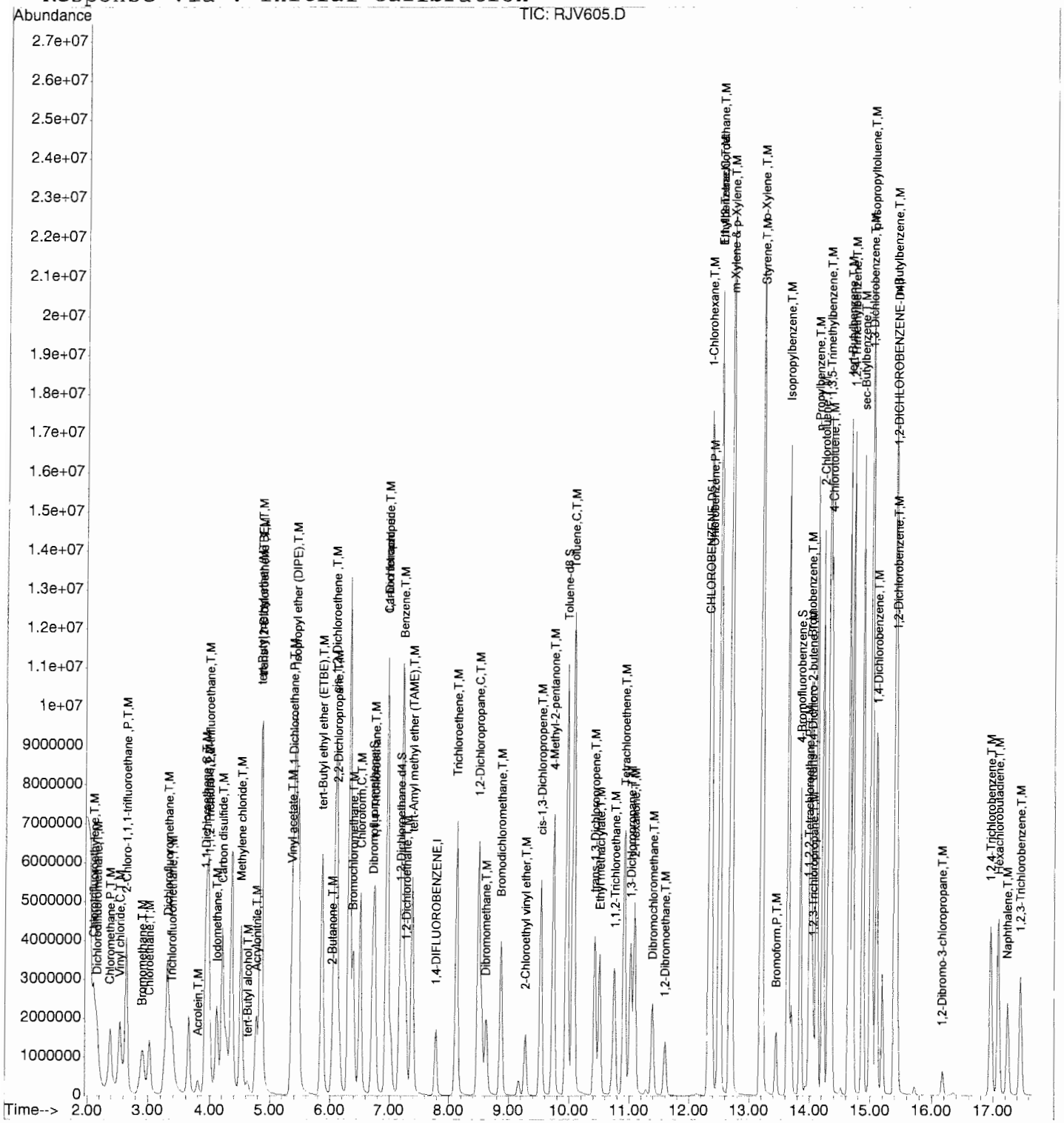
Su 11/4/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV605.D Vial: 11
Acq On : 31 Oct 2011 2:05 pm Operator: MW
Sample : VO01J319 50.0ppb Inst : TO01
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



SU 11/4/11

2091

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV606.D Vial: 12
Acq On : 31 Oct 2011 2:36 pm Operator: MW
Sample : VO01J3110 100.0ppb Inst : TO01
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.78	114	2019193	10.00 ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1632197	10.00 ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	556773	10.00 ug/l	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	6.71	111	5371213	97.18 ug/l	0.00
Spiked Amount 10.000			Recovery	= 971.80%	
35) 1,2-Dichloroethane-d4	7.17	65	5380561	91.21 ug/l	0.02
Spiked Amount 10.000			Recovery	= 912.10%	
49) Toluene-d8	9.97	98	21895188	96.97 ug/l	0.02
Spiked Amount 10.000			Recovery	= 969.70%	
69) 4-Bromofluorobenzene	13.85	95	6937717	101.12 ug/l	0.00
Spiked Amount 10.000			Recovery	= 1011.20%	

Target Compounds					Qvalue
2) Chlorotrifluoroethylene	2.11	116	3307943	105.11 ug/l	97
3) Dichlorodifluoromethane	2.16	85	7241206	98.69 ug/l	100
4) Chloromethane	2.38	50	8441047	96.09 ug/l	99
5) Vinyl chloride	2.54	62	9180163	98.52 ug/l	99
6) 2-Chloro-1,1,1-trifluoroet	2.65	118	6369347	93.19 ug/l	100
7) Bromomethane	2.88	94	2888542	62.58 ug/l	99
8) Chloroethane	3.00	64	4504311	79.06 ug/l	97
9) Dichlorofluoromethane	3.31	67	12550063	87.31 ug/l	100
10) Trichlorofluoromethane	3.37	101	7857297	94.02 ug/l	99
11) Acrolein	3.80	56	1033441	452.42 ug/l	91
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	4329449	97.99 ug/l	99
13) Acetone	3.96	43	3664542	413.79 ug/l	98
14) 1,1-Dichloroethene	3.92	61	11790148	88.73 ug/l	97
15) Iodomethane	4.11	142	9846958	101.91 ug/l	94
16) Carbon disulfide	4.20	76	24241123	111.78 ug/l	99
17) Methylene chloride	4.51	49	9560645	93.84 ug/l	98
18) tert-Butyl alcohol	4.64	59	1220902	512.31 ug/l	91
19) Acrylonitrile	4.78	53	5489606	505.15 ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	11101894	93.39 ug/l	100
21) trans-1,2-Dichloroethene	4.85	61	12650206	93.83 ug/l	95
22) Vinyl acetate	5.35	43	8995610	93.60 ug/l	97
23) 1,1-Dichloroethane	5.37	63	14671188	96.07 ug/l	100
24) Isopropyl ether (DIPE)	5.41	45	23978854	88.40 ug/l	96
26) tert-Butyl ethyl ether (ET	5.87	59	18416161	94.41 ug/l	98
27) 2-Butanone	6.05	43	6955853	487.46 ug/l	98
28) cis-1,2-Dichloroethene	6.08	96	7437489	97.09 ug/l	92
29) 2,2-Dichloropropane	6.11	77	9465387	87.16 ug/l	99

(#) = qualifier out of range (m) = manual integration

Sa 11/4/11

2092

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV606.D Vial: 12
Acq On : 31 Oct 2011 2:36 pm Operator: MW
Sample : VO01J3110 100.0ppb Inst : TO01
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.39	49	5840370	94.78 ug/l	98
31) Chloroform	6.51	83	12230633	95.17 ug/l	98
33) 1,1,1-Trichloroethane	6.74	97	9727196	95.30 ug/l	98
34) tert-Amyl methyl ether (TA	7.38	87	2737844	95.52 ug/l	96
37) 1,1-Dichloropropene	6.95	110	3303413	97.29 ug/l	100
38) Carbon tetrachloride	6.97	119	8133170	100.04 ug/l	99
39) Benzene	7.22	78	25072109	86.93 ug/l	94
40) 1,2-Dichloroethane	7.28	62	6697859	93.64 ug/l	99
41) Trichloroethene	8.12	130	7367105	102.01 ug/l	99
42) 1,2-Dichloropropane	8.49	63	7424707	99.11 ug/l	94
44) Dibromomethane	8.62	93	2459610	101.09 ug/l	98
45) Bromodichloromethane	8.88	83	8475930	101.43 ug/l	99
46) 2-Chloroethyl vinyl ether	9.27	63	2205665	114.28 ug/l	99
47) cis-1,3-Dichloropropene	9.53	75	10350306	103.31 ug/l	95
48) 4-Methyl-2-pentanone	9.73	43	17269595	526.16 ug/l	100
50) Toluene	10.07	91	24557608	85.81 ug/l	84
51) Ethyl methacrylate	10.50	69	5907227	109.79 ug/l	98
52) trans-1,3-Dichloropropene	10.43	75	7622995	102.80 ug/l	98
53) 1,1,2-Trichloroethane	10.75	97	3464697	98.29 ug/l	99
54) Tetrachloroethene	10.92	164	5898802	101.45 ug/l	98
55) 1,3-Dichloropropane	11.02	76	7220281	98.48 ug/l	100
56) 2-Hexanone	11.09	43	11533837	537.79 ug/l	99
57) Dibromochloromethane	11.39	129	4368849	104.18 ug/l	99
58) 1,2-Dibromoethane	11.60	107	3406871	101.80 ug/l	99
59) 1-Chlorohexane	12.35	91	11468060	96.89 ug/l	92
60) Chlorobenzene	12.37	112	15904879	96.52 ug/l	97
61) 1,1,1,2-Tetrachloroethane	12.50	131	5256896	96.39 ug/l	99
62) Ethylbenzene	12.52	91	22246127	66.81 ug/l	77
63) m-Xylene & p-Xylene	12.69	91	28613530	113.86 ug/l	61
64) o-Xylene	13.20	91	19704910	79.68 ug/l	88
65) Styrene	13.23	104	16944312	95.79 ug/l	97
67) Bromoform	13.45	173	2100489	114.33 ug/l	100
68) Isopropylbenzene	13.64	105	20115159	72.76 ug/l	83
70) 1,1,2,2-Tetrachloroethane	13.99	83	3821795	100.98 ug/l	100
71) Bromobenzene	14.01	156	5960940	104.55 ug/l	96
72) trans-1,4-Dichloro-2-buten	14.04	53	1068405	110.27 ug/l	98
73) 1,2,3-Trichloropropane	14.05	110	950447	98.16 ug/l	94
74) n-Propylbenzene	14.13	91	21314579	59.79 ug/l	72
75) 1,3,5-Trimethylbenzene	14.32	105	17714898	77.45 ug/l	81
76) 2-Chlorotoluene	14.22	91	16708507	84.88 ug/l	91
77) 4-Chlorotoluene	14.35	91	19557394	90.08 ug/l	93

(#) = qualifier out of range (m) = manual integration
RJV606.D VO01J31.M Tue Nov 01 12:02:41 2011 SA 11/4/11 Page 2

2093

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV606.D Vial: 12
Acq On : 31 Oct 2011 2:36 pm Operator: MW
Sample : VO01J3110 100.0ppb Inst : TO01
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) tert-Butylbenzene	14.65	134	5105325	99.66 ug/l #	86
79) 1,2,4-Trimethylbenzene	14.70	105	17652572	81.34 ug/l	82
80) sec-Butylbenzene	14.88	105	19491707	67.06 ug/l	77
81) p-Isopropyltoluene	15.03	119	17127519	75.99 ug/l	81
82) 1,3-Dichlorobenzene	15.00	146	11055385	101.20 ug/l	99
83) 1,4-Dichlorobenzene	15.10	146	10497852	101.22 ug/l	99
84) n-Butylbenzene	15.40	91	17802076	81.69 ug/l	80
85) 1,2-Dichlorobenzene	15.44	146	8701945	100.10 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.17	157	502864	115.25 ug/l	93
87) 1,2,4-Trichlorobenzene	16.97	180	4889343	109.91 ug/l	99
88) Hexachlorobutadiene	17.09	225	3481664	112.55 ug/l	99
89) Naphthalene	17.23	128	6641092	137.68 ug/l	100
90) 1,2,3-Trichlorobenzene	17.46	180	3592189	125.57 ug/l	99

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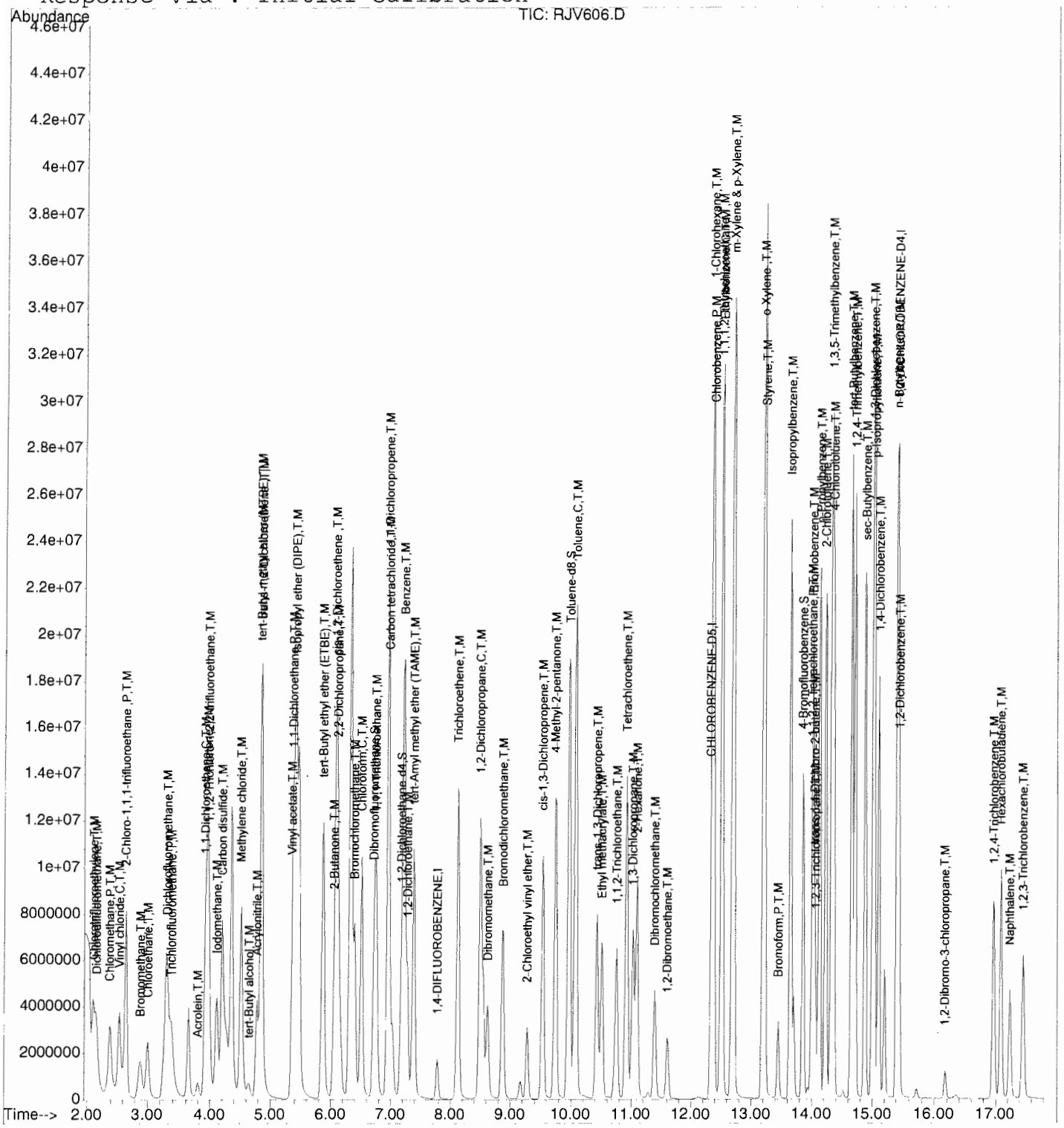
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV606.D Vial: 12
Acq On : 31 Oct 2011 2:36 pm Operator: MW
Sample : VO01J3110 100.0ppb Inst : TO01
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 1 12:02 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Tue Nov 01 12:00:17 2011
Response via : Initial Calibration



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SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :TO01
IC_Beginning DateTime :10/31/11 09:59
Spike Amount :10 PPB
CC/CV File :RJV609
IC File :RJV602

Column Spec :RTX502.2 ID :0.32MM
IC_Ending DateTime :10/31/11 14:36
HPChem Method :VO01J31
Date_Time :10/31/11 16:07

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	2078216	1	1	7.785	7.777	0				
	2	Chlorotrifluoroethylene	10.337	3.4	334837	0.161	0.156	2.118	2.108	12.57				
	3	Dichlorodifluoromethane	8.998	-10.0	679552	0.327	0.363	2.163	2.158	7.72				
	4	Chloromethane	9.368	-6.3	847031	0.408	0.435	2.385	2.377	4.03				
	5	Vinyl chloride	9.570	-4.3	917897	0.442	0.461	2.547	2.541	7.36				
	6	2-Chloro-1,1,1-trifluoroethane	10.198	2.0	717414	0.345	0.338	2.666	2.655	11.52				
	7	Bromomethane	10.172	1.7	483272	0.233	0.229	2.917	2.900	14.94				
	8	Chloroethane	9.111	-8.9	534262	0.257	0.282	3.036	3.022	14.40				
	9	Dichlorofluoromethane	9.679	-3.2	1432022	0.689	0.712	3.317	3.309	7.42				
	10	Trichlorofluoromethane	8.656	-13.4	772218	0.372	0.429	3.317	3.313	5.60				
5	11	Acrolein	50.524	1.0	118784	0.011	0.011	3.805	3.801	12.29				
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	9.899	-1.0	450197	0.217	0.219	3.983	3.976	2.60				
5	13	Acetone	48.877	-2.2	445516	0.043	0.044	3.968	3.962	12.62				
	14	1,1-Dichloroethene	9.655	-3.5	1320508	0.635	0.658	3.938	3.927	5.45				
	15	Iodomethane	10.262	2.6	1020558	0.491	0.479	4.116	4.112	2.89				
	16	Carbon disulfide	10.377	3.8	2316232	1.115	1.074	4.219	4.208	10.99				
	17	Methylene chloride	9.852	-1.5	1033145	0.497	0.505	4.515	4.512	6.57				
5	18	tert-Butyl alcohol	49.112	-1.8	120463	0.012	0.012	4.634	4.633	10.38				
5	19	Acrylonitrile	52.562	5.1	587908	0.057	0.054	4.781	4.777	4.68				
	20	tert-Butyl methyl ether (MTBE)	10.014	0.1	1225298	0.590	0.589	4.841	4.837	4.92				
	21	trans-1,2-Dichloroethene	9.877	-1.2	1370568	0.659	0.668	4.856	4.851	3.56				
	22	Vinyl acetate	10.093	0.9	998377	0.480	0.476	5.359	5.357	12.74				
	23	1,1-Dichloroethane	10.049	0.5	1579616	0.760	0.756	5.373	5.371	4.05				
	24	Isopropyl ether (DIPE)	10.337	3.4	2886019	1.389	1.343	5.418	5.414	3.23				
5	25	2-Butanol												
	26	tert-Butyl ethyl ether (ETBE)	9.749	-2.5	1957252	0.942	0.966	5.862	5.860	4.44				
5	27	2-Butanone	52.537	5.1	771595	0.074	0.071	6.039	6.042	5.82				
	28	cis-1,2-Dichloroethene	10.308	3.1	812742	0.391	0.379	6.084	6.080	2.86				
	29	2,2-Dichloropropane	9.670	-3.3	1080913	0.520	0.538	6.098	6.099	7.77				
	30	Bromochloromethane	9.920	-0.8	629180	0.303	0.305	6.379	6.378	3.06				
	31	Chloroform	9.731	-2.7	1287132	0.619	0.636	6.513	6.505	3.47				
	32	Dibromofluoromethane	9.632	-3.7	547922	0.264	0.274	6.720	6.709	4.90				
	33	1,1,1-Trichloroethane	9.429	-5.7	990643	0.477	0.506	6.749	6.746	3.15				
	34	tert-Amyl methyl ether (TAME)	10.176	1.8	300183	0.144	0.142	7.386	7.381	5.46				
	35	1,2-Dichloroethane-d4	8.932	-10.7	542346	0.261	0.292	7.179	7.165	6.16				
	36	CHLOROBENZENE-D5	10.000	0	1765489	1	1	12.328	12.321	0				
	37	1,1-Dichloropropene	9.645	-3.5	354243	0.201	0.208	6.957	6.949	4.86				
	38	Carbon tetrachloride	9.552	-4.5	840066	0.476	0.498	6.957	6.955	3.89				
	39	Benzene	10.189	1.9	3178606	1.800	1.767	7.223	7.208	3.77				
	40	1,2-Dichloroethane	9.335	-6.6	722336	0.409	0.438	7.282	7.270	4.24				
	41	Trichloroethene	10.044	0.4	784620	0.444	0.442	8.125	8.120	4.13				
	42	1,2-Dichloropropane	10.004	0.0	810670	0.459	0.459	8.495	8.489	3.08				
20	43	1,4-Dioxane												
	44	Dibromomethane	10.144	1.4	266983	0.151	0.149	8.614	8.612	2.57				
	45	Bromodichloromethane	9.799	-2.0	885837	0.502	0.512	8.865	8.863	3.82				
	46	2-Chloroethyl vinyl ether	10.396	4.0	217043	0.123	0.118	9.280	9.272	12.09				
	47	cis-1,3-Dichloropropene	10.050	0.5	1089123	0.617	0.614	9.531	9.525	3.83				
5	48	4-Methyl-2-pentanone	51.482	3.0	1827746	0.207	0.201	9.738	9.735	7.38				
	49	Toluene-d8	9.543	-4.6	2330918	1.320	1.383	9.960	9.952	6.52				
	50	Toluene	10.051	0.5	3111412	1.762	1.753	10.064	10.060	3.65				
	51	Ethyl methacrylate	10.418	4.2	606348	0.343	0.330	10.508	10.504	11.06				
	52	trans-1,3-Dichloropropene	10.018	0.2	803608	0.455	0.454	10.419	10.417	5.28				
	53	1,1,2-Trichloroethane	9.987	-0.1	380807	0.216	0.216	10.744	10.744	4.93				
	54	Tetrachloroethene	9.960	-0.4	626428	0.355	0.356	10.922	10.907	2.94				
	55	1,3-Dichloropropane	10.067	0.7	798400	0.452	0.449	11.026	11.016	3.40				
5	56	2-Hexanone	50.570	1.1	1173148	0.133	0.131	11.085	11.086	9.50				
	57	Dibromochloromethane	10.095	1.0	457958	0.259	0.257	11.395	11.382	6.52				
	58	1,2-Dibromoethane	10.098	1.0	365541	0.207	0.205	11.603	11.595	5.44				
	59	1-Chlorohexane	9.938	-0.6	1272480	0.721	0.725	12.342	12.336	4.61				

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60	Chlorobenzene	10.114	1.1	1802805	1.021	1.010	12.372	12.364	3.12				
61	1,1,1,2-Tetrachloroethane	10.026	0.3	591491	0.335	0.334	12.490	12.490	4.52				
62	Ethylbenzene	10.043	0.4	3617689	2.049	2.040	12.505	12.502	3.49				
2 63	m-Xylene & p-Xylene	19.918	-0.4	5414517	1.533	1.540	12.683	12.681	3.23				
64	o-Xylene	9.951	-0.5	2662138	1.508	1.515	13.186	13.184	3.19				
65	Styrene	10.684	6.8	2044347	1.158	1.084	13.215	13.213	9.03				
66	1,2-DICHLOROBENZENE-D4	10.000	0	676620	1	1	15.420	15.415	0				
67	Bromoform	9.880	-1.2	220603	0.326	0.330	13.452	13.443	7.98				
68	Isopropylbenzene	9.790	-2.1	3289549	4.862	4.966	13.644	13.638	4.25				
69	4-Bromofluorobenzene	8.942	-10.6	745615	1.102	1.232	13.852	13.845	8.67				
70	1,1,2,2-Tetrachloroethane	9.932	-0.7	456807	0.675	0.680	13.985	13.983	2.70				
71	Bromobenzene	9.698	-3.0	672008	0.993	1.024	14.014	14.007	7.74				
72	trans-1,4-Dichloro-2-butene	10.164	1.6	119681	0.177	0.174	14.029	14.027	8.64				
73	1,2,3-Trichloropropane	9.577	-4.2	112697	0.167	0.174	14.059	14.054	8.18				
74	n-Propylbenzene	9.990	-0.1	4328062	6.397	6.403	14.118	14.113	2.04				
75	1,3,5-Trimethylbenzene	9.868	-1.3	2743150	4.054	4.108	14.310	14.307	1.64				
76	2-Chlorotoluene	9.609	-3.9	2298732	3.397	3.536	14.222	14.215	4.91				
77	4-Chlorotoluene	9.834	-1.7	2594676	3.835	3.899	14.355	14.348	3.11				
78	tert-Butylbenzene	9.925	-0.7	617877	0.913	0.920	14.651	14.644	1.93				
79	1,2,4-Trimethylbenzene	10.070	0.7	2655963	3.925	3.898	14.710	14.703	7.18				
80	sec-Butylbenzene	10.152	1.5	3586389	5.300	5.221	14.873	14.869	3.80				
81	p-Isopropyltoluene	10.463	4.6	2866222	4.236	4.048	15.021	15.019	9.79				
82	1,3-Dichlorobenzene	9.960	-0.4	1322269	1.954	1.962	15.006	14.995	1.87				
83	1,4-Dichlorobenzene	9.877	-1.2	1244915	1.840	1.863	15.094	15.095	3.02				
84	n-Butylbenzene	10.295	3.0	2726374	4.029	3.914	15.405	15.402	7.03				
85	1,2-Dichlorobenzene	9.923	-0.8	1048344	1.549	1.561	15.435	15.433	2.00				
86	1,2-Dibromo-3-chloropropane	9.989	-0.1	52967	0.078	0.078	16.175	16.171	14.04				
87	1,2,4-Trichlorobenzene	9.584	-4.2	510233	0.754	0.697	16.959	16.957	15.05	-0.0128	0.8002		0.9994
88	Hexachlorobutadiene	10.265	2.7	385907	0.570	0.556	17.092	17.086	7.87				
89	Naphthalene	10.703	7.0	627450	0.927	0.866	17.240	17.236	14.11				
90	1,2,3-Trichlorobenzene	10.574	5.7	367640	0.543	0.514	17.462	17.455	14.54				

Spike Amount = Nominal Amount * M

5a
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Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	121	0.00
2	T,M	Chlorotrifluoroethylene	10.000	10.337	-3.4	121	0.00
3	T,M	Dichlorodifluoromethane	10.000	8.999	10.0	98	0.00
4	P,T,M	Chloromethane	10.000	9.369	6.3	103	0.00
5	C,T,M	Vinyl chloride	10.000	9.571	4.3	104	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	10.198	-2.0	120	0.00
7	T,M	Bromomethane	10.000	10.173	-1.7	106	0.00
8	T,M	Chloroethane	10.000	9.111	8.9	109	0.00
9	T,M	Dichlorofluoromethane	10.000	9.679	3.2	118	0.00
10	T,M	Trichlorofluoromethane	10.000	8.656	13.4	98	0.00
11	T,M	Acrolein	50.000	50.524	-1.0	130	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.900	1.0	121	0.00
13	T,M	Acetone	50.000	48.877	2.2	112	0.00
14	C,T,M	1,1-Dichloroethene	10.000	9.655	3.5	115	0.00
15	T,M	Iodomethane	10.000	10.263	-2.6	124	0.00
16	T,M	Carbon disulfide	10.000	10.377	-3.8	136	0.00
17	T,M	Methylene chloride	10.000	9.853	1.5	124	0.00
18	T,M	tert-Butyl alcohol	50.000	49.112	1.8	115	0.00
19	T,M	Acrylonitrile	50.000	52.562	-5.1	128	0.00
20	T,M	tert-Butyl methyl ether (MT	10.000	10.014	-0.1	120	0.00
21	T,M	trans-1,2-Dichloroethene	10.000	9.877	1.2	119	0.00
22	T,M	Vinyl acetate	10.000	10.094	-0.9	111	0.00
23	P,T,M	1,1-Dichloroethane	10.000	10.050	-0.5	123	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	10.338	-3.4	127	0.00
25	T,M	2-Butanol	-1.000	0.000	0.0	126	0.00
26	T,M	tert-Butyl ethyl ether (ETB	10.000	9.749	2.5	118	0.00
27	T,M	2-Butanone	50.000	52.537	-5.1	123	0.00
28	T,M	cis-1,2-Dichloroethene	10.000	10.309	-3.1	126	0.00
29	T,M	2,2-Dichloropropane	10.000	9.670	3.3	118	0.00
30	T,M	Bromochloromethane	10.000	9.920	0.8	118	0.00
31	C,T,M	Chloroform	10.000	9.731	2.7	114	0.00
32	S	Dibromofluoromethane	10.000	9.632	3.7	115	0.00
33	T,M	1,1,1-Trichloroethane	10.000	9.430	5.7	112	0.00
34	T,M	tert-Amyl methyl ether (TAM	10.000	10.176	-1.8	118	0.00
35	S	1,2-Dichloroethane-d4	10.000	8.932	10.7	106	0.02
36	I	CHLOROBENZENE-D5	10.000	10.000	0.0	119	0.00
37	T,M	1,1-Dichloropropene	10.000	9.645	3.6	118	0.00
38	T,M	Carbon tetrachloride	10.000	9.553	4.5	110	0.00
39	T,M	Benzene	10.000	10.189	-1.9	125	0.02
40	T,M	1,2-Dichloroethane	10.000	9.336	6.6	110	0.02

(#) = Out of Range

SU 11/4/11

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Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	10.000	10.044	-0.4	122	0.00
42	C,T,M	1,2-Dichloropropane	10.000	10.004	-0.0	123	0.00
43	T,M	1,4-Dioxane	-1.000	0.000	0.0	127	0.00
44	T,M	Dibromomethane	10.000	10.144	-1.4	120	0.00
45	T,M	Bromodichloromethane	10.000	9.800	2.0	116	0.00
46	T,M	2-Chloroethyl vinyl ether	10.000	10.397	-4.0	121	0.00
47	T,M	cis-1,3-Dichloropropene	10.000	10.050	-0.5	121	0.00
48	T,M	4-Methyl-2-pentanone	50.000	51.482	-3.0	121	0.00
49	S	Toluene-d8	10.000	9.544	4.6	118	0.00
50	C,T,M	Toluene	10.000	10.052	-0.5	124	0.00
51	T,M	Ethyl methacrylate	10.000	10.418	-4.2	119	0.00
52	T,M	trans-1,3-Dichloropropene	10.000	10.018	-0.2	116	0.00
53	T,M	1,1,2-Trichloroethane	10.000	9.988	0.1	122	0.00
54	T,M	Tetrachloroethene	10.000	9.960	0.4	119	0.02
55	T,M	1,3-Dichloropropane	10.000	10.068	-0.7	119	0.00
56	T,M	2-Hexanone	50.000	50.570	-1.1	117	0.00
57	T,M	Dibromochloromethane	10.000	10.096	-1.0	115	0.02
58	T,M	1,2-Dibromoethane	10.000	10.098	-1.0	118	0.00
59	T,M	1-Chlorohexane	10.000	9.939	0.6	120	0.00
60	P,M	Chlorobenzene	10.000	10.114	-1.1	117	0.00
61	T,M	1,1,1,2-Tetrachloroethane	10.000	10.026	-0.3	116	0.00
62	C,T,M	Ethylbenzene	10.000	10.044	-0.4	119	0.00
63	T,M	m-Xylene & p-Xylene	20.000	19.919	0.4	116	0.00
64	T,M	o-Xylene	10.000	9.952	0.5	116	0.00
65	T,M	Styrene	10.000	10.684	-6.8	119	0.00
66	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	116	0.00
67	P,T,M	Bromoform	10.000	9.880	1.2	115	0.00
68	T,M	Isopropylbenzene	10.000	9.791	2.1	116	0.00
69	S	4-Bromofluorobenzene	10.000	8.942	10.6	113	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	10.000	9.932	0.7	118	0.00
71	T,M	Bromobenzene	10.000	9.699	3.0	117	0.00
72	T,M	trans-1,4-Dichloro-2-butene	10.000	10.164	-1.6	114	0.00
73	T,M	1,2,3-Trichloropropane	10.000	9.577	4.2	117	0.00
74	T,M	n-Propylbenzene	10.000	9.990	0.1	117	0.00
75	T,M	1,3,5-Trimethylbenzene	10.000	9.869	1.3	114	0.00
76	T,M	2-Chlorotoluene	10.000	9.609	3.9	115	0.00
77	T,M	4-Chlorotoluene	10.000	9.835	1.6	115	0.00
78	T,M	tert-Butylbenzene	10.000	9.925	0.7	116	0.00
79	T,M	1,2,4-Trimethylbenzene	10.000	10.071	-0.7	113	0.00
80	T,M	sec-Butylbenzene	10.000	10.153	-1.5	113	0.00

(#) = Out of Range

Sa 11/4/11 2100

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	10.000	10.464	-4.6	112	0.00
82	T,M	1,3-Dichlorobenzene	10.000	9.960	0.4	114	0.00
83	T,M	1,4-Dichlorobenzene	10.000	9.877	1.2	113	0.00
84	T,M	n-Butylbenzene	10.000	10.295	-2.9	112	0.00
85	T,M	1,2-Dichlorobenzene	10.000	9.923	0.8	113	0.00
86	T,M	1,2-Dibromo-3-chloropropane	10.000	9.990	0.1	112	0.00
87	T,M	1,2,4-Trichlorobenzene	10.000	9.584	4.2	111	0.00
88	T,M	Hexachlorobutadiene	10.000	10.265	-2.7	110	0.00
89	T,M	Naphthalene	10.000	10.704	-7.0	111	0.00
90	T,M	1,2,3-Trichlorobenzene	10.000	10.575	-5.7	109	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

11/4/11 2101

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	121	0.00
2	T,M	Chlorotrifluoroethylene	0.156	0.161	-3.2	121	0.00
3	T,M	Dichlorodifluoromethane	0.363	0.327	9.9	98	0.00
4	P,T,M	Chloromethane	0.435	0.408	6.2	103	0.00
5	C,T,M	Vinyl chloride	0.461	0.442	4.1	104	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.338	0.345	-2.1	120	0.00
7	T,M	Bromomethane	0.229	0.233	-1.7	106	0.00
8	T,M	Chloroethane	0.282	0.257	8.9	109	0.00
9	T,M	Dichlorofluoromethane	0.712	0.689	3.2	118	0.00
10	T,M	Trichlorofluoromethane	0.429	0.372	13.3	98	0.00
11	T,M	Acrolein	0.011	0.011	0.0	130	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.219	0.217	0.9	121	0.00
13	T,M	Acetone	0.044	0.043	2.3	112	0.00
14	C,T,M	1,1-Dichloroethene	0.658	0.635	3.5	115	0.00
15	T,M	Iodomethane	0.479	0.491	-2.5	124	0.00
16	T,M	Carbon disulfide	1.074	1.115	-3.8	136	0.00
17	T,M	Methylene chloride	0.505	0.497	1.6	124	0.00
18	T,M	tert-Butyl alcohol	0.012	0.012	0.0	115	0.00
19	T,M	Acrylonitrile	0.054	0.057	-5.6	128	0.00
20	T,M	tert-Butyl methyl ether (MT	0.589	0.590	-0.2	120	0.00
21	T,M	trans-1,2-Dichloroethene	0.668	0.659	1.3	119	0.00
22	T,M	Vinyl acetate	0.476	0.480	-0.8	111	0.00
23	P,T,M	1,1-Dichloroethane	0.756	0.760	-0.5	123	0.00
24	T,M	Isopropyl ether (DIPE)	1.343	1.389	-3.4	127	0.00
25	T,M	2-Butanol	0.000	0.000	0.0	126	0.00
26	T,M	tert-Butyl ethyl ether (ETB	0.966	0.942	2.5	118	0.00
27	T,M	2-Butanone	0.071	0.074	-4.2	123	0.00
28	T,M	cis-1,2-Dichloroethene	0.379	0.391	-3.2	126	0.00
29	T,M	2,2-Dichloropropane	0.538	0.520	3.3	118	0.00
30	T,M	Bromochloromethane	0.305	0.303	0.7	118	0.00
31	C,T,M	Chloroform	0.636	0.619	2.7	114	0.00
32	S	Dibromofluoromethane	0.274	0.264	3.6	115	0.00
33	T,M	1,1,1-Trichloroethane	0.506	0.477	5.7	112	0.00
34	T,M	tert-Amyl methyl ether (TAM	0.142	0.144	-1.4	118	0.00
35	S	1,2-Dichloroethane-d4	0.292	0.261	10.6	106	0.02
36	I	CHLOROBENZENE-D5	1.000	1.000	0.0	119	0.00
37	T,M	1,1-Dichloropropene	0.208	0.201	3.4	118	0.00
38	T,M	Carbon tetrachloride	0.498	0.476	4.4	110	0.00
39	T,M	Benzene	1.767	1.800	-1.9	125	0.02
40	T,M	1,2-Dichloroethane	0.438	0.409	6.6	110	0.02

(#) = Out of Range

Sa 11/4/11

2102

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	0.442	0.444	-0.5	122	0.00
42	C,T,M	1,2-Dichloropropane	0.459	0.459	0.0	123	0.00
43	T,M	1,4-Dioxane	0.000	0.000	0.0	127	0.00
44	T,M	Dibromomethane	0.149	0.151	-1.3	120	0.00
45	T,M	Bromodichloromethane	0.512	0.502	2.0	116	0.00
46	T,M	2-Chloroethyl vinyl ether	0.118	0.123	-4.2	121	0.00
47	T,M	cis-1,3-Dichloropropene	0.614	0.617	-0.5	121	0.00
48	T,M	4-Methyl-2-pentanone	0.201	0.207	-3.0	121	0.00
49	S	Toluene-d8	1.383	1.320	4.6	118	0.00
50	C,T,M	Toluene	1.753	1.762	-0.5	124	0.00
51	T,M	Ethyl methacrylate	0.330	0.343	-3.9	119	0.00
52	T,M	trans-1,3-Dichloropropene	0.454	0.455	-0.2	116	0.00
53	T,M	1,1,2-Trichloroethane	0.216	0.216	0.0	122	0.00
54	T,M	Tetrachloroethene	0.356	0.355	0.3	119	0.02
55	T,M	1,3-Dichloropropane	0.449	0.452	-0.7	119	0.00
56	T,M	2-Hexanone	0.131	0.133	-1.5	117	0.00
57	T,M	Dibromochloromethane	0.257	0.259	-0.8	115	0.02
58	T,M	1,2-Dibromoethane	0.205	0.207	-1.0	118	0.00
59	T,M	1-Chlorohexane	0.725	0.721	0.6	120	0.00
60	P,M	Chlorobenzene	1.010	1.021	-1.1	117	0.00
61	T,M	1,1,1,2-Tetrachloroethane	0.334	0.335	-0.3	116	0.00
62	C,T,M	Ethylbenzene	2.040	2.049	-0.4	119	0.00
63	T,M	m-Xylene & p-Xylene	1.540	1.533	0.5	116	0.00
64	T,M	o-Xylene	1.515	1.508	0.5	116	0.00
65	T,M	Styrene	1.084	1.158	-6.8	119	0.00
66	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	116	0.00
67	P,T,M	Bromoform	0.330	0.326	1.2	115	0.00
68	T,M	Isopropylbenzene	4.966	4.862	2.1	116	0.00
69	S	4-Bromofluorobenzene	1.232	1.102	10.6	113	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	0.680	0.675	0.7	118	0.00
71	T,M	Bromobenzene	1.024	0.993	3.0	117	0.00
72	T,M	trans-1,4-Dichloro-2-butene	0.174	0.177	-1.7	114	0.00
73	T,M	1,2,3-Trichloropropane	0.174	0.167	4.0	117	0.00
74	T,M	n-Propylbenzene	6.403	6.397	0.1	117	0.00
75	T,M	1,3,5-Trimethylbenzene	4.108	4.054	1.3	114	0.00
76	T,M	2-Chlorotoluene	3.536	3.397	3.9	115	0.00
77	T,M	4-Chlorotoluene	3.899	3.835	1.6	115	0.00
78	T,M	tert-Butylbenzene	0.920	0.913	0.8	116	0.00
79	T,M	1,2,4-Trimethylbenzene	3.898	3.925	-0.7	113	0.00
80	T,M	sec-Butylbenzene	5.221	5.300	-1.5	113	0.00

(#) = Out of Range

Su 11/4/11

2103

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	4.048	4.236	-4.6	112	0.00
82	T,M	1,3-Dichlorobenzene	1.962	1.954	0.4	114	0.00
83	T,M	1,4-Dichlorobenzene	1.863	1.840	1.2	113	0.00
84	T,M	n-Butylbenzene	3.914	4.029	-2.9	112	0.00
85	T,M	1,2-Dichlorobenzene	1.561	1.549	0.8	113	0.00
86	T,M	1,2-Dibromo-3-chloropropane	0.078	0.078	0.0	112	0.00
87	T,M	1,2,4-Trichlorobenzene	0.697	0.754	-8.2	111	0.00
88	T,M	Hexachlorobutadiene	0.556	0.570	-2.5	110	0.00
89	T,M	Naphthalene	0.866	0.927	-7.0	111	0.00
90	T,M	1,2,3-Trichlorobenzene	0.514	0.543	-5.6	109	0.00

Sa 11/4/11

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 3 11:03 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.79	114	2078216	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.33	117	1765489	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.42	152	676620	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.72	111	547922	9.63	ug/l	0.00
Spiked Amount 10.000			Recovery	=	96.30%	
35) 1,2-Dichloroethane-d4	7.18	65	542346	8.93	ug/l	0.02
Spiked Amount 10.000			Recovery	=	89.30%	
49) Toluene-d8	9.96	98	2330918	9.54	ug/l	0.00
Spiked Amount 10.000			Recovery	=	95.40%	
69) 4-Bromofluorobenzene	13.85	95	745615	8.94	ug/l	0.00
Spiked Amount 10.000			Recovery	=	89.40%	

Target Compounds						Qvalue
2) Chlorotrifluoroethylene	2.12	116	334837	10.34	ug/l	98
3) Dichlorodifluoromethane	2.16	85	679552	9.00	ug/l	98
4) Chloromethane	2.38	50	847031	9.37	ug/l	100
5) Vinyl chloride	2.55	62	917897	9.57	ug/l	98
6) 2-Chloro-1,1,1-trifluoroet	2.67	118	717414	10.20	ug/l	99
7) Bromomethane	2.92	94	483272	10.17	ug/l	100
8) Chloroethane	3.04	64	534262	9.11	ug/l	97
9) Dichlorofluoromethane	3.32	67	1432022	9.68	ug/l	99
10) Trichlorofluoromethane	3.32	101	772218	8.66	ug/l	100
11) Acrolein	3.80	56	118784	50.52	ug/l	89
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	450197	9.90	ug/l	99
13) Acetone	3.97	43	445516	48.88	ug/l	97
14) 1,1-Dichloroethene	3.94	61	1320508	9.66	ug/l	97
15) Iodomethane	4.12	142	1020558	10.26	ug/l	95
16) Carbon disulfide	4.22	76	2316232	10.38	ug/l	99
17) Methylene chloride	4.52	49	1033145	9.85	ug/l	97
18) tert-Butyl alcohol	4.63	59	120463	49.11	ug/l	97
19) Acrylonitrile	4.78	53	587908	52.56	ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	1225298	10.01	ug/l	99
21) trans-1,2-Dichloroethene	4.86	61	1370568	9.88	ug/l	96
22) Vinyl acetate	5.36	43	998377	10.09	ug/l	98
23) 1,1-Dichloroethane	5.37	63	1579616	10.05	ug/l	100
24) Isopropyl ether (DIPE)	5.42	45	2886019	10.34	ug/l	100
26) tert-Butyl ethyl ether (ET	5.86	59	1957252	9.75	ug/l	98
27) 2-Butanone	6.04	43	771595	52.54	ug/l	99
28) cis-1,2-Dichloroethene	6.08	96	812742	10.31	ug/l	94
29) 2,2-Dichloropropane	6.10	77	1080913	9.67	ug/l	98

(#) = qualifier out of range (m) = manual integration
RJV609.D VO01J31.M Thu Nov 03 11:03:52 2011 Sa 11/4/11 Page 1

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 3 11:03 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) Bromochloromethane	6.38	49	629180	9.92 ug/l	99
31) Chloroform	6.51	83	1287132	9.73 ug/l	99
33) 1,1,1-Trichloroethane	6.75	97	990643	9.43 ug/l	99
34) tert-Amyl methyl ether (TA	7.39	87	300183	10.18 ug/l	96
37) 1,1-Dichloropropene	6.96	110	354243	9.65 ug/l	98
38) Carbon tetrachloride	6.96	119	840066	9.55 ug/l	100
39) Benzene	7.22	78	3178606	10.19 ug/l	99
40) 1,2-Dichloroethane	7.28	62	722336	9.34 ug/l	99
41) Trichloroethene	8.13	130	784620	10.04 ug/l	99
42) 1,2-Dichloropropane	8.50	63	810670	10.00 ug/l	92
44) Dibromomethane	8.61	93	266983	10.14 ug/l	99
45) Bromodichloromethane	8.87	83	885837	9.80 ug/l	100
46) 2-Chloroethyl vinyl ether	9.28	63	217043	10.40 ug/l	99
47) cis-1,3-Dichloropropene	9.53	75	1089123	10.05 ug/l	95
48) 4-Methyl-2-pentanone	9.74	43	1827746	51.48 ug/l	100
50) Toluene	10.06	91	3111412	10.05 ug/l	98
51) Ethyl methacrylate	10.51	69	606348	10.42 ug/l	98
52) trans-1,3-Dichloropropene	10.42	75	803608	10.02 ug/l	96
53) 1,1,2-Trichloroethane	10.74	97	380807	9.99 ug/l	99
54) Tetrachloroethene	10.92	164	626428	9.96 ug/l	99
55) 1,3-Dichloropropane	11.03	76	798400	10.07 ug/l	100
56) 2-Hexanone	11.08	43	1173148	50.57 ug/l	98
57) Dibromochloromethane	11.40	129	457958	10.10 ug/l	99
58) 1,2-Dibromoethane	11.60	107	365541	10.10 ug/l	100
59) 1-Chlorohexane	12.34	91	1272480	9.94 ug/l	96
60) Chlorobenzene	12.37	112	1802805	10.11 ug/l	99
61) 1,1,1,2-Tetrachloroethane	12.49	131	591491	10.03 ug/l	99
62) Ethylbenzene	12.51	91	3617689	10.04 ug/l	99
63) m-Xylene & p-Xylene	12.68	91	5414517	19.92 ug/l	99
64) o-Xylene	13.19	91	2662138	9.95 ug/l	99
65) Styrene	13.22	104	2044347	10.68 ug/l	98
67) Bromoform	13.45	173	220603	9.88 ug/l	100
68) Isopropylbenzene	13.64	105	3289549	9.79 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.98	83	456807	9.93 ug/l	100
71) Bromobenzene	14.01	156	672008	9.70 ug/l	99
72) trans-1,4-Dichloro-2-buten	14.03	53	119681	10.16 ug/l	97
73) 1,2,3-Trichloropropane	14.06	110	112697	9.58 ug/l	94
74) n-Propylbenzene	14.12	91	4328062	9.99 ug/l	99
75) 1,3,5-Trimethylbenzene	14.31	105	2743150	9.87 ug/l	99
76) 2-Chlorotoluene	14.22	91	2298732	9.61 ug/l	100
77) 4-Chlorotoluene	14.35	91	2594676	9.83 ug/l	99

(#) = qualifier out of range (m) = manual integration

Sa 11/4/11

2106

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 3 11:03 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78)	tert-Butylbenzene	14.65	134	617877	9.93 ug/l	96
79)	1,2,4-Trimethylbenzene	14.71	105	2655963	10.07 ug/l	100
80)	sec-Butylbenzene	14.87	105	3586389	10.15 ug/l	99
81)	p-Isopropyltoluene	15.02	119	2866222	10.46 ug/l	99
82)	1,3-Dichlorobenzene	15.01	146	1322269	9.96 ug/l	100
83)	1,4-Dichlorobenzene	15.09	146	1244915	9.88 ug/l	99
84)	n-Butylbenzene	15.41	91	2726374	10.30 ug/l	99
85)	1,2-Dichlorobenzene	15.43	146	1048344	9.92 ug/l	100
86)	1,2-Dibromo-3-chloropropan	16.17	157	52967	9.99 ug/l	97
87)	1,2,4-Trichlorobenzene	16.96	180	510233	9.58 ug/l	99
88)	Hexachlorobutadiene	17.09	225	385907	10.27 ug/l	100
89)	Naphthalene	17.24	128	627450	10.70 ug/l	100
90)	1,2,3-Trichlorobenzene	17.46	180	367640	10.57 ug/l	98

(#) = qualifier out of range (m) = manual integration
RJV609.D VO01J31.M Thu Nov 03 11:03:53 2011

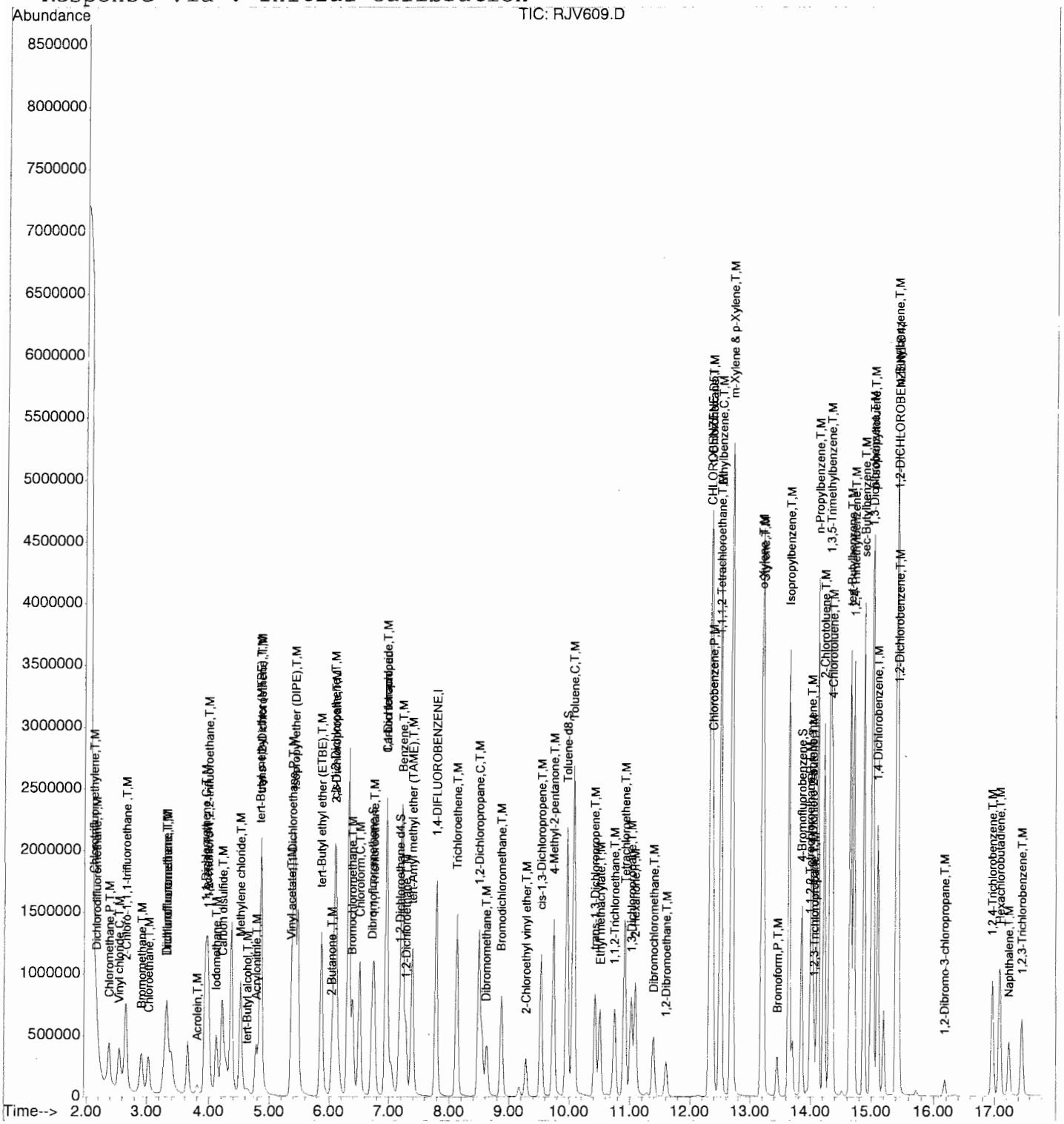
SCA 11/4/11

2107

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11J31\RJV609.D Vial: 15
Acq On : 31 Oct 2011 4:07 pm Operator: MW
Sample : IVO01J311 10.0ppb Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 3 11:03 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



SW 11/4/11

2108

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKV441
Instrument ID: T001
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K119
BFB Injection Date : 11/18/11
BFB Injection Time : 08:16
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.99
75	30.0 - 60.0% of mass 95	53.42
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.72
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	76.43
175	5.0 - 9.0% of mass 174	5.44(7.1)1
176	95.0 - 101.0% of mass 174	74.53(97.5)1
177	5.0 - 9.0% of mass 176	4.98(6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV001J3121	RKV442	11/18/11	08:41
2	MBLK1W	V001K20Q	RKV450	11/18/11	12:36
3	LCS1W	V001K20L	RKV443	11/18/11	09:19
4	LCD1W	V001K20C	RKV444	11/18/11	09:47
5	MW-70-PMW09-124	K119-01	RKV461	11/18/11	18:21
6	MW-70-MNA07-128	K119-05	RKV462	11/18/11	18:49
7	IR-70-SHB113-125	K119-02	RKV463	11/18/11	19:17
8	MW-70-PMW10-126	K119-03	RKV464	11/18/11	19:45

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RJV602
Instrument ID: T001
GC Column: RTX502.2 ID: 0.32mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K119
Date Analyzed: 10/31/11
Time Analyzed: 12:33
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1719891	7.78	1480141	12.32	584394	15.41
	UPPER LIMIT	3439782	8.28	2960282	12.82	1168788	15.91
	LOWER LIMIT	859946	7.28	740071	11.82	292197	14.91
	SAMPLE ID						
1	VSTD010	2031597	7.77	1677234	12.32	604047	15.41
2	MBLK1W	2155290	7.78	1690340	12.32	498815	15.42
3	LCS1W	1911840	7.77	1568117	12.31	659298	15.41
4	LCD1W	2080865	7.78	1721978	12.32	653761	15.42
5	MW-70-PMW09-124	1998147	7.78	1636176	12.32	497954	15.42
6	MW-70-MNA07-128	1883009	7.78	1506966	12.32	458670	15.42
7	IR-70-SHB113-125	1841982	7.80	1517723	12.32	471653	15.42
8	MW-70-PMW10-126	1860862	7.79	1545946	12.33	451920	15.42

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

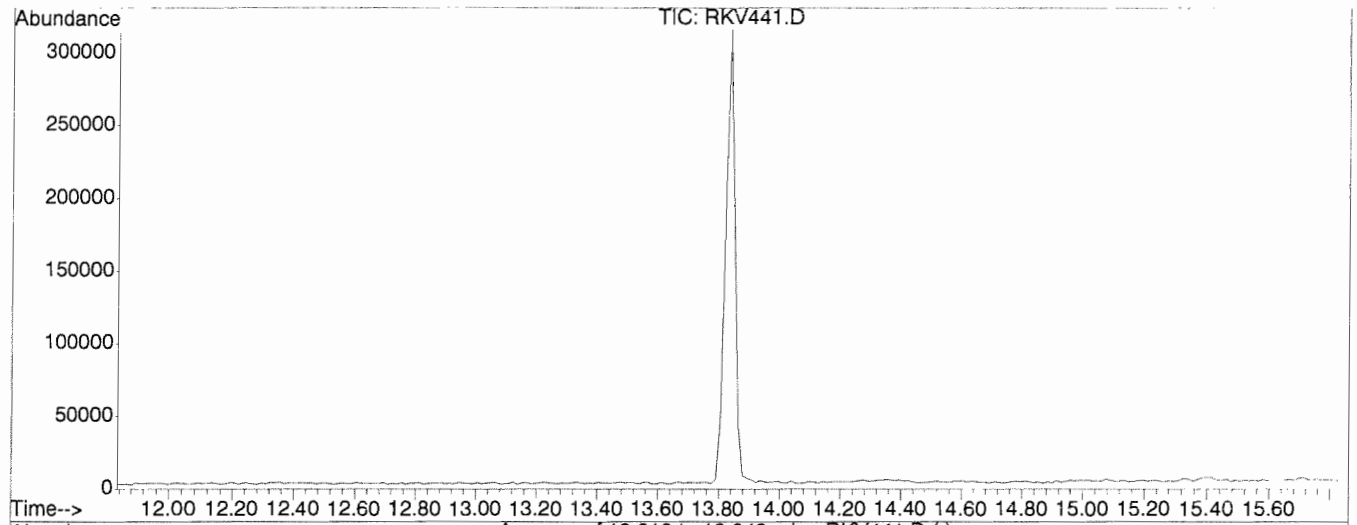
AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

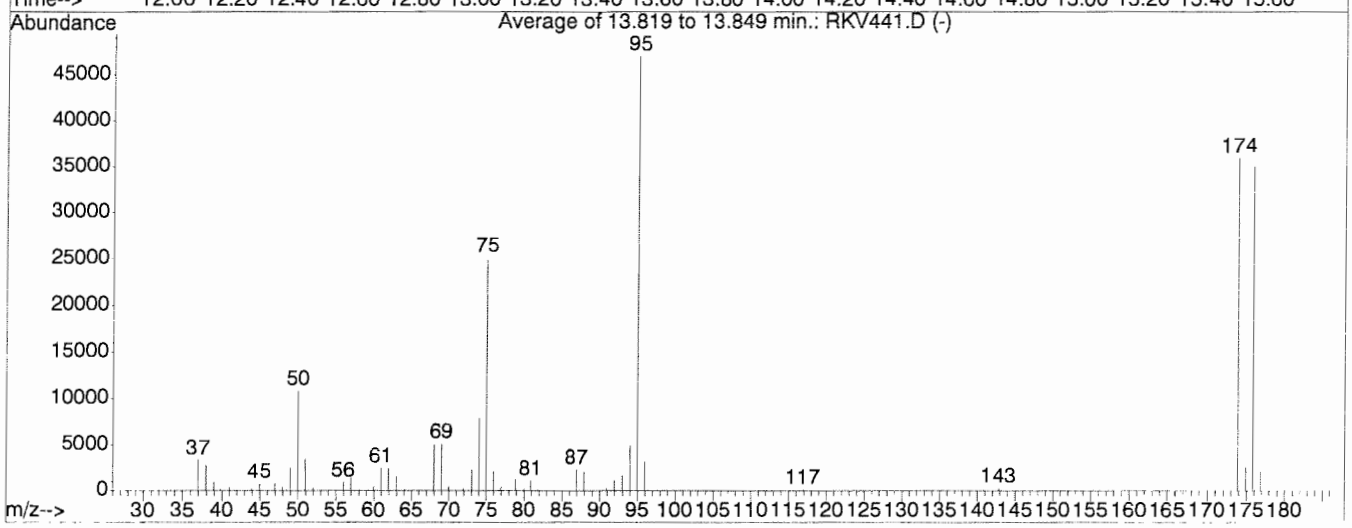
Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

BFB

Data File : D:\HPCHEM\1\DATA\11K18\RKV441.D Vial: 1
Acq On : 18 Nov 2011 8:16 am Operator: MW
Sample : BFB01K20 Inst : TO01
Misc : T/CHK Multiplr: 1.00
MS Integration Params: 524C.P
Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls





AutoFind: Scans 803, 804, 805; Background Corrected with Scan 796

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.0	10802	PASS
75	95	30	60	53.4	25099	PASS
95	95	100	100	100.0	46989	PASS
96	95	5	9	6.7	3160	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	76.4	35912	PASS
175	174	5	9	7.1	2556	PASS
176	174	95	101	97.5	35019	PASS
177	176	5	9	6.7	2341	PASS

RKV441.D VO01J31.M Fri Nov 18 13:28:17 2011

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D Vial: 2
Acq On : 18 Nov 2011 8:41 am Operator: MW
Sample : CVO01J3121 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	118	0.00
2	T,M	Chlorotrifluoroethylene	10.000	0.037	99.6#	0	0.00
3	T,M	Dichlorodifluoromethane	10.000	9.614	3.9	102	0.00
4	P,T,M	Chloromethane	10.000	10.555	-5.5	113	0.00
5	C,T,M	Vinyl chloride	10.000	10.509	-5.1	111	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	0.111	98.9#	1	0.00
7	T,M	Bromomethane	10.000	10.754	-7.5	110	0.02
8	T,M	Chloroethane	10.000	9.781	2.2	114	0.00
9	T,M	Dichlorofluoromethane	10.000	9.723	2.8	116	0.00
10	T,M	Trichlorofluoromethane	10.000	9.501	5.0	105	0.07
11	T,M	Acrolein	50.000	39.244	21.5#	99	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	10.252	-2.5	122	0.00
13	T,M	Acetone	50.000	50.627	-1.3	113	0.00
14	C,T,M	1,1-Dichloroethene	10.000	9.325	6.8	108	0.00
15	T,M	Iodomethane	10.000	10.317	-3.2	122	0.00
16	T,M	Carbon disulfide	10.000	9.985	0.2	128	0.00
17	T,M	Methylene chloride	10.000	10.072	-0.7	124	0.00
18	T,M	tert-Butyl alcohol	50.000	47.505	5.0	109	0.00
19	T,M	Acrylonitrile	50.000	60.315	-20.6#	143	0.00
20	T,M	tert-Butyl methyl ether (MT	10.000	10.081	-0.8	118	0.00
21	T,M	trans-1,2-Dichloroethene	10.000	9.927	0.7	116	0.00
22	T,M	Vinyl acetate	10.000	10.675	-6.8	115	0.00
23	P,T,M	1,1-Dichloroethane	10.000	10.209	-2.1	122	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	10.508	-5.1	126	0.00
25	T,M	2-Butanol	-1.000	0.000	0.0	125	0.00
26	T,M	tert-Butyl ethyl ether (ETB	10.000	9.588	4.1	113	0.00
27	T,M	2-Butanone	50.000	54.825	-9.7	125	0.00
28	T,M	cis-1,2-Dichloroethene	10.000	10.834	-8.3	130	0.00
29	T,M	2,2-Dichloropropane	10.000	10.266	-2.7	122	0.00
30	T,M	Bromochloromethane	10.000	10.222	-2.2	119	0.00
31	C,T,M	Chloroform	10.000	10.347	-3.5	119	0.00
32	S	Dibromofluoromethane	10.000	9.924	0.8	116	0.00
33	T,M	1,1,1-Trichloroethane	10.000	9.828	1.7	114	0.00
34	T,M	tert-Amyl methyl ether (TAM	10.000	9.830	1.7	111	0.00
35	S	1,2-Dichloroethane-d4	10.000	9.086	9.1	105	0.00
36	I	CHLOROBENZENE-D5	10.000	10.000	0.0	113	0.00
37	T,M	1,1-Dichloropropene	10.000	10.611	-6.1	123	0.00
38	T,M	Carbon tetrachloride	10.000	9.481	5.2	104	0.00
39	T,M	Benzene	10.000	10.847	-8.5	127	0.00
40	T,M	1,2-Dichloroethane	10.000	9.808	1.9	109	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D
Acq On : 18 Nov 2011 8:41 am
Sample : CVO01J3121
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA
MS Integration Params: 524C.P

Vial: 2
Operator: MW
Inst : TO01
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	10.000	10.627	-6.3	123	0.00
42	C,T,M	1,2-Dichloropropane	10.000	10.814	-8.1	126	0.00
43	T,M	1,4-Dioxane	-1.000	0.000	0.0	106	0.00
44	T,M	Dibromomethane	10.000	10.752	-7.5	121	0.00
45	T,M	Bromodichloromethane	10.000	10.606	-6.1	119	0.00
46	T,M	2-Chloroethyl vinyl ether	10.000	0.504	95.0#	6	0.00
47	T,M	cis-1,3-Dichloropropene	10.000	10.577	-5.8	121	0.00
48	T,M	4-Methyl-2-pentanone	50.000	53.912	-7.8	120	0.00
49	S	Toluene-d8	10.000	10.066	-0.7	118	0.00
50	C,T,M	Toluene	10.000	10.721	-7.2	125	0.00
51	T,M	Ethyl methacrylate	10.000	10.596	-6.0	115	0.00
52	T,M	trans-1,3-Dichloropropene	10.000	10.425	-4.3	115	0.00
53	T,M	1,1,2-Trichloroethane	10.000	11.090	-10.9	128	0.00
54	T,M	Tetrachloroethene	10.000	10.711	-7.1	121	0.00
55	T,M	1,3-Dichloropropane	10.000	10.968	-9.7	123	0.00
56	T,M	2-Hexanone	50.000	49.677	0.6	109	0.00
57	T,M	Dibromochloromethane	10.000	11.122	-11.2	120	0.00
58	T,M	1,2-Dibromoethane	10.000	10.993	-9.9	122	0.00
59	T,M	1-Chlorohexane	10.000	10.426	-4.3	119	0.00
60	P,M	Chlorobenzene	10.000	10.832	-8.3	120	0.00
61	T,M	1,1,1,2-Tetrachloroethane	10.000	10.846	-8.5	119	0.00
62	C,T,M	Ethylbenzene	10.000	10.606	-6.1	119	0.00
63	T,M	m-Xylene & p-Xylene	20.000	21.069	-5.3	117	0.00
64	T,M	o-Xylene	10.000	10.477	-4.8	116	0.00
65	T,M	Styrene	10.000	10.280	-2.8	109	0.00
66	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	103	0.00
67	P,T,M	Bromoform	10.000	11.282	-12.8	118	0.00
68	T,M	Isopropylbenzene	10.000	10.869	-8.7	115	0.00
69	S	4-Bromofluorobenzene	10.000	9.915	0.9	111	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	10.000	11.710	-17.1	124	0.00
71	T,M	Bromobenzene	10.000	10.964	-9.6	118	0.00
72	T,M	trans-1,4-Dichloro-2-butene	10.000	4.657	53.4#	47	0.00
73	T,M	1,2,3-Trichloropropane	10.000	11.049	-10.5	120	0.00
74	T,M	n-Propylbenzene	10.000	10.888	-8.9	113	0.00
75	T,M	1,3,5-Trimethylbenzene	10.000	10.513	-5.1	108	0.00
76	T,M	2-Chlorotoluene	10.000	10.823	-8.2	116	0.00
77	T,M	4-Chlorotoluene	10.000	10.416	-4.2	109	0.00
78	T,M	tert-Butylbenzene	10.000	10.772	-7.7	112	0.00
79	T,M	1,2,4-Trimethylbenzene	10.000	10.493	-4.9	105	0.00
80	T,M	sec-Butylbenzene	10.000	10.643	-6.4	106	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D Vial: 2
Acq On : 18 Nov 2011 8:41 am Operator: MW
Sample : CVO01J3121 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	10.000	10.635	-6.3	102	0.00
82	T,M	1,3-Dichlorobenzene	10.000	10.994	-9.9	112	0.00
83	T,M	1,4-Dichlorobenzene	10.000	10.747	-7.5	110	0.00
84	T,M	n-Butylbenzene	10.000	9.849	1.5	95	0.00
85	T,M	1,2-Dichlorobenzene	10.000	10.801	-8.0	110	0.00
86	T,M	1,2-Dibromo-3-chloropropane	10.000	10.528	-5.3	105	0.00
87	T,M	1,2,4-Trichlorobenzene	10.000	8.324	16.8	86	0.00
88	T,M	Hexachlorobutadiene	10.000	9.547	4.5	91	0.00
89	T,M	Naphthalene	10.000	7.861	21.4#	73	0.00
90	T,M	1,2,3-Trichlorobenzene	10.000	8.628	13.7	79	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D Vial: 2
Acq On : 18 Nov 2011 8:41 am Operator: MW
Sample : CVO01J3121 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	118	0.00
2	T,M	Chlorotrifluoroethylene	0.156	0.001	99.4#	0#	0.00
3	T,M	Dichlorodifluoromethane	0.363	0.349	3.9	102	0.00
4	P,T,M	Chloromethane	0.435	0.459	-5.5	113	0.00
5	C,T,M	Vinyl chloride	0.461	0.485	-5.2	111	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.338	0.004	98.8#	1#	0.00
7	T,M	Bromomethane	0.229	0.246	-7.4	110	0.02
8	T,M	Chloroethane	0.282	0.276	2.1	114	0.00
9	T,M	Dichlorofluoromethane	0.712	0.692	2.8	116	0.00
10	T,M	Trichlorofluoromethane	0.429	0.408	4.9	105	0.07
11	T,M	Acrolein	0.011	0.009	18.2	99	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.219	0.224	-2.3	122	0.00
13	T,M	Acetone	0.044	0.044	0.0	113	0.00
14	C,T,M	1,1-Dichloroethene	0.658	0.614	6.7	108	0.00
15	T,M	Iodomethane	0.479	0.494	-3.1	122	0.00
16	T,M	Carbon disulfide	1.074	1.072	0.2	128	0.00
17	T,M	Methylene chloride	0.505	0.508	-0.6	124	0.00
18	T,M	tert-Butyl alcohol	0.012	0.011	8.3	109	0.00
19	T,M	Acrylonitrile	0.054	0.065	-20.4#	143	0.00
20	T,M	tert-Butyl methyl ether (MT	0.589	0.594	-0.8	118	0.00
21	T,M	trans-1,2-Dichloroethene	0.668	0.663	0.7	116	0.00
22	T,M	Vinyl acetate	0.476	0.508	-6.7	115	0.00
23	P,T,M	1,1-Dichloroethane	0.756	0.772	-2.1	122	0.00
24	T,M	Isopropyl ether (DIPE)	1.343	1.412	-5.1	126	0.00
25	T,M	2-Butanol	0.000	0.000	0.0	125	0.00
26	T,M	tert-Butyl ethyl ether (ETB	0.966	0.926	4.1	113	0.00
27	T,M	2-Butanone	0.071	0.077	-8.5	125	0.00
28	T,M	cis-1,2-Dichloroethene	0.379	0.411	-8.4	130	0.00
29	T,M	2,2-Dichloropropane	0.538	0.552	-2.6	122	0.00
30	T,M	Bromochloromethane	0.305	0.312	-2.3	119	0.00
31	C,T,M	Chloroform	0.636	0.659	-3.6	119	0.00
32	S	Dibromofluoromethane	0.274	0.272	0.7	116	0.00
33	T,M	1,1,1-Trichloroethane	0.506	0.497	1.8	114	0.00
34	T,M	tert-Amyl methyl ether (TAM	0.142	0.140	1.4	111	0.00
35	S	1,2-Dichloroethane-d4	0.292	0.265	9.2	105	0.00
36	I	CHLOROBENZENE-D5	1.000	1.000	0.0	113	0.00
37	T,M	1,1-Dichloropropene	0.208	0.221	-6.3	123	0.00
38	T,M	Carbon tetrachloride	0.498	0.472	5.2	104	0.00
39	T,M	Benzene	1.767	1.917	-8.5	127	0.00
40	T,M	1,2-Dichloroethane	0.438	0.430	1.8	109	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D Vial: 2
Acq On : 18 Nov 2011 8:41 am Operator: MW
Sample : CV001J3121 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	0.442	0.470	-6.3	123	0.00
42	C,T,M	1,2-Dichloropropane	0.459	0.496	-8.1	126	0.00
43	T,M	1,4-Dioxane	0.000	0.000	0.0	106	0.00
44	T,M	Dibromomethane	0.149	0.160	-7.4	121	0.00
45	T,M	Bromodichloromethane	0.512	0.543	-6.1	119	0.00
46	T,M	2-Chloroethyl vinyl ether	0.118	0.006	94.9#	6#	0.00
47	T,M	cis-1,3-Dichloropropene	0.614	0.649	-5.7	121	0.00
48	T,M	4-Methyl-2-pentanone	0.201	0.217	-8.0	120	0.00
49	S	Toluene-d8	1.383	1.392	-0.7	118	0.00
50	C,T,M	Toluene	1.753	1.880	-7.2	125	0.00
51	T,M	Ethyl methacrylate	0.330	0.349	-5.8	115	0.00
52	T,M	trans-1,3-Dichloropropene	0.454	0.474	-4.4	115	0.00
53	T,M	1,1,2-Trichloroethane	0.216	0.239	-10.6	128	0.00
54	T,M	Tetrachloroethene	0.356	0.382	-7.3	121	0.00
55	T,M	1,3-Dichloropropane	0.449	0.493	-9.8	123	0.00
56	T,M	2-Hexanone	0.131	0.131	0.0	109	0.00
57	T,M	Dibromochloromethane	0.257	0.286	-11.3	120	0.00
58	T,M	1,2-Dibromoethane	0.205	0.225	-9.8	122	0.00
59	T,M	1-Chlorohexane	0.725	0.756	-4.3	119	0.00
60	P,M	Chlorobenzene	1.010	1.094	-8.3	120	0.00
61	T,M	1,1,1,2-Tetrachloroethane	0.334	0.362	-8.4	119	0.00
62	C,T,M	Ethylbenzene	2.040	2.164	-6.1	119	0.00
63	T,M	m-Xylene & p-Xylene	1.540	1.622	-5.3	117	0.00
64	T,M	o-Xylene	1.515	1.587	-4.8	116	0.00
65	T,M	Styrene	1.084	1.114	-2.8	109	0.00
66	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	103	0.00
67	P,T,M	Bromoform	0.330	0.372	-12.7	118	0.00
68	T,M	Isopropylbenzene	4.966	5.397	-8.7	115	0.00
69	S	4-Bromofluorobenzene	1.232	1.222	0.8	111	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	0.680	0.796	-17.1	124	0.00
71	T,M	Bromobenzene	1.024	1.123	-9.7	118	0.00
72	T,M	trans-1,4-Dichloro-2-butene	0.174	0.081	53.4#	47#	0.00
73	T,M	1,2,3-Trichloropropane	0.174	0.192	-10.3	120	0.00
74	T,M	n-Propylbenzene	6.403	6.971	-8.9	113	0.00
75	T,M	1,3,5-Trimethylbenzene	4.108	4.319	-5.1	108	0.00
76	T,M	2-Chlorotoluene	3.536	3.826	-8.2	116	0.00
77	T,M	4-Chlorotoluene	3.899	4.061	-4.2	109	0.00
78	T,M	tert-Butylbenzene	0.920	0.991	-7.7	112	0.00
79	T,M	1,2,4-Trimethylbenzene	3.898	4.090	-4.9	105	0.00
80	T,M	sec-Butylbenzene	5.221	5.556	-6.4	106	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D Vial: 2
Acq On : 18 Nov 2011 8:41 am Operator: MW
Sample : CVO01J3121 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	4.048	4.306	-6.4	102	0.00
82	T,M	1,3-Dichlorobenzene	1.962	2.157	-9.9	112	0.00
83	T,M	1,4-Dichlorobenzene	1.863	2.002	-7.5	110	0.00
84	T,M	n-Butylbenzene	3.914	3.855	1.5	95	0.00
85	T,M	1,2-Dichlorobenzene	1.561	1.686	-8.0	110	0.00
86	T,M	1,2-Dibromo-3-chloropropane	0.078	0.083	-6.4	105	0.00
87	T,M	1,2,4-Trichlorobenzene	0.697	0.653	6.3	86	0.00
88	T,M	Hexachlorobutadiene	0.556	0.530	4.7	91	0.00
89	T,M	Naphthalene	0.866	0.681	21.4#	73	0.00
90	T,M	1,2,3-Trichlorobenzene	0.514	0.443	13.8	79	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D Vial: 2
Acq On : 18 Nov 2011 8:41 am Operator: MW
Sample : CVO01J3121 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 8:59 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.77	114	2031597	10.00	ug/l	0.00
36) CHLOROBENZENE-D5	12.32	117	1677234	10.00	ug/l	0.00
66) 1,2-DICHLOROBENZENE-D4	15.41	152	604047	10.00	ug/l	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	6.71	111	551874	9.92	ug/l	0.00
Spiked Amount 10.000			Recovery = 99.20%			
35) 1,2-Dichloroethane-d4	7.17	65	539303	9.09	ug/l	0.00
Spiked Amount 10.000			Recovery = 90.90%			
49) Toluene-d8	9.95	98	2335473	10.07	ug/l	0.00
Spiked Amount 10.000			Recovery = 100.70%			
69) 4-Bromofluorobenzene	13.84	95	738054	9.92	ug/l	0.00
Spiked Amount 10.000			Recovery = 99.20%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	2.16	85	709734	9.61	ug/l	99
4) Chloromethane	2.39	50	932838	10.55	ug/l	99
5) Vinyl chloride	2.55	62	985248	10.51	ug/l	91
6) 2-Chloro-1,1,1-trifluoroet	2.65	118	7611	0.11	ug/l	95
7) Bromomethane	2.93	94	499427	10.75	ug/l	99
8) Chloroethane	3.04	64	560652	9.78	ug/l	98
9) Dichlorofluoromethane	3.32	67	1406158	9.72	ug/l	98
10) Trichlorofluoromethane	3.38	101	828569	9.50	ug/l	99
11) Acrolein	3.81	56	90194	39.24	ug/l	85
12) 1,1,2-Trichloro-1,2,2-trif	3.98	151	455774	10.25	ug/l	98
13) Acetone	3.96	43	451108	50.63	ug/l	94
14) 1,1-Dichloroethene	3.94	61	1246723	9.33	ug/l	96
15) Iodomethane	4.12	142	1002920	10.32	ug/l	92
16) Carbon disulfide	4.21	76	2178691	9.99	ug/l	100
17) Methylene chloride	4.52	49	1032465	10.07	ug/l	95
18) tert-Butyl alcohol	4.64	59	113907	47.51	ug/l	89
19) Acrylonitrile	4.77	53	659484	60.31	ug/l	98
20) tert-Butyl methyl ether (M	4.84	73	1205784	10.08	ug/l	99
21) trans-1,2-Dichloroethene	4.86	61	1346523	9.93	ug/l	94
22) Vinyl acetate	5.36	43	1032225	10.68	ug/l	97
23) 1,1-Dichloroethane	5.38	63	1568680	10.21	ug/l	100
24) Isopropyl ether (DIPE)	5.42	45	2867703	10.51	ug/l	99
26) tert-Butyl ethyl ether (ET	5.86	59	1881724	9.59	ug/l	97
27) 2-Butanone	6.04	43	787130	54.82	ug/l	98
28) cis-1,2-Dichloroethene	6.09	96	834995	10.83	ug/l	92
29) 2,2-Dichloropropane	6.10	77	1121755	10.27	ug/l	99
30) Bromochloromethane	6.38	49	633796	10.22	ug/l	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D
Acq On : 18 Nov 2011 8:41 am
Sample : CVO01J3121
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA
MS Integration Params: 524C.P
Quant Time: Nov 18 8:59 2011

Vial: 2
Operator: MW
Inst : TO01
Multiplr: 1.00
Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) Chloroform	6.50	83	1337893	10.35 ug/l	98
33) 1,1,1-Trichloroethane	6.75	97	1009353	9.83 ug/l	98
34) tert-Amyl methyl ether (TA	7.39	87	283459	9.83 ug/l	95
37) 1,1-Dichloropropene	6.94	110	370253	10.61 ug/l	100
38) Carbon tetrachloride	6.96	119	792085	9.48 ug/l	100
39) Benzene	7.21	78	3214812	10.85 ug/l	99
40) 1,2-Dichloroethane	7.27	62	720973	9.81 ug/l	99
41) Trichloroethene	8.13	130	788645	10.63 ug/l	99
42) 1,2-Dichloropropane	8.48	63	832445	10.81 ug/l	88
44) Dibromomethane	8.62	93	268839	10.75 ug/l	97
45) Bromodichloromethane	8.87	83	910803	10.61 ug/l	99
46) 2-Chloroethyl vinyl ether	9.27	63	9993	0.50 ug/l	98
47) cis-1,3-Dichloropropene	9.52	75	1088931	10.58 ug/l	93
48) 4-Methyl-2-pentanone	9.74	43	1818317	53.91 ug/l	99
50) Toluene	10.07	91	3152722	10.72 ug/l	99
51) Ethyl methacrylate	10.50	69	585847	10.60 ug/l	96
52) trans-1,3-Dichloropropene	10.42	75	794439	10.43 ug/l	95
53) 1,1,2-Trichloroethane	10.75	97	401686	11.09 ug/l	99
54) Tetrachloroethene	10.91	164	639956	10.71 ug/l	98
55) 1,3-Dichloropropane	11.01	76	826310	10.97 ug/l	100
56) 2-Hexanone	11.09	43	1094816	49.68 ug/l	98
57) Dibromochloromethane	11.38	129	479264	11.12 ug/l	99
58) 1,2-Dibromoethane	11.59	107	378035	10.99 ug/l	100
59) 1-Chlorohexane	12.33	91	1268146	10.43 ug/l	95
60) Chlorobenzene	12.36	112	1834272	10.83 ug/l	98
61) 1,1,1,2-Tetrachloroethane	12.49	131	607827	10.85 ug/l	99
62) Ethylbenzene	12.51	91	3629327	10.61 ug/l	99
63) m-Xylene & p-Xylene	12.68	91	5440952	21.07 ug/l	99
64) o-Xylene	13.19	91	2662594	10.48 ug/l	98
65) Styrene	13.20	104	1868688	10.28 ug/l	98
67) Bromoform	13.44	173	224887	11.28 ug/l	99
68) Isopropylbenzene	13.63	105	3260154	10.87 ug/l	99
70) 1,1,2,2-Tetrachloroethane	13.99	83	480826	11.71 ug/l	99
71) Bromobenzene	14.00	156	678182	10.96 ug/l	96
72) trans-1,4-Dichloro-2-buten	14.02	53	48955	4.66 ug/l	100
73) 1,2,3-Trichloropropane	14.05	110	116068	11.05 ug/l	89
74) n-Propylbenzene	14.11	91	4211064	10.89 ug/l	99
75) 1,3,5-Trimethylbenzene	14.31	105	2608811	10.51 ug/l	100
76) 2-Chlorotoluene	14.21	91	2311347	10.82 ug/l	100
77) 4-Chlorotoluene	14.34	91	2453214	10.42 ug/l	96
78) tert-Butylbenzene	14.64	134	598676	10.77 ug/l	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D Vial: 2
Acq On : 18 Nov 2011 8:41 am Operator: MW
Sample : CVO01J3121 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 8:59 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

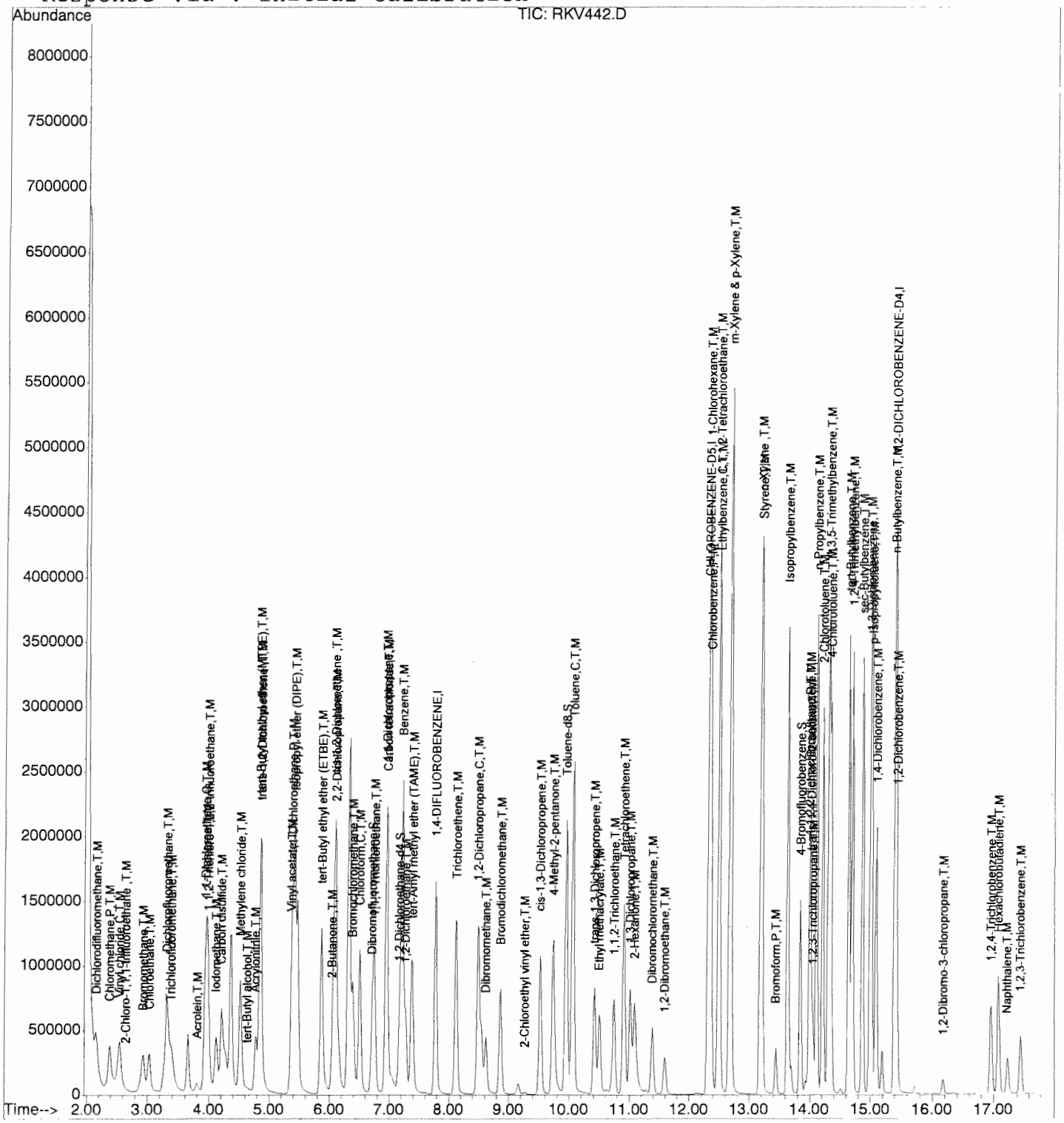
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79) 1,2,4-Trimethylbenzene	14.70	105	2470555	10.49 ug/l	100
80) sec-Butylbenzene	14.86	105	3356210	10.64 ug/l	99
81) p-Isopropyltoluene	15.02	119	2600802	10.64 ug/l	98
82) 1,3-Dichlorobenzene	14.99	146	1302929	10.99 ug/l	99
83) 1,4-Dichlorobenzene	15.10	146	1209255	10.75 ug/l	99
84) n-Butylbenzene	15.39	91	2328519	9.85 ug/l	100
85) 1,2-Dichlorobenzene	15.44	146	1018681	10.80 ug/l	99
86) 1,2-Dibromo-3-chloropropan	16.18	157	49837	10.53 ug/l	92
87) 1,2,4-Trichlorobenzene	16.96	180	394605	8.32 ug/l	98
88) Hexachlorobutadiene	17.08	225	320425	9.55 ug/l	99
89) Naphthalene	17.23	128	411357	7.86 ug/l	100
90) 1,2,3-Trichlorobenzene	17.45	180	267776	8.63 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K18\RKV442.D Vial: 2
Acq On : 18 Nov 2011 8:41 am Operator: MW
Sample : CVO01J3121 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 18 8:59 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKV497
Instrument ID: T001
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K119
BFB Injection Date : 11/21/11
BFB Injection Time : 08:30
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.00
75	30.0 - 60.0% of mass 95	51.48
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.80
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	73.13
175	5.0 - 9.0% of mass 174	5.24(7.2)1
176	95.0 - 101.0% of mass 174	73.49(100.5)1
177	5.0 - 9.0% of mass 176	4.67(6.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV001J3123	RKV499	11/21/11	09:26
2	MBLK2W	V001K22B	RKV503	11/21/11	11:28
3	LCS2W	V001K22L	RKV500	11/21/11	10:04
4	LCD2W	V001K22C	RKV501	11/21/11	10:32
5	MW-70-PMW09-124DL	K119-01T	RKV506	11/21/11	12:59
6	MW-70-PMW10-126DL	K119-03T	RKV507	11/21/11	13:28
7	MW-70-MNA11-127	K119-04	RKV508	11/21/11	13:55
8	IR-70-TB-123	K119-06	RKV509	11/21/11	14:24

FORM V VOA OLM02.0

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RJV602
Instrument ID: T001
GC Column: RTX502.2 ID: 0.32mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K119
Date Analyzed: 10/31/11
Time Analyzed: 12:33
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1719891	7.78	1480141	12.32	584394	15.41
	UPPER LIMIT	3439782	8.28	2960282	12.82	1168788	15.91
	LOWER LIMIT	859946	7.28	740071	11.82	292197	14.91
	SAMPLE ID						
1	VSTD010	1959391	7.76	1634800	12.30	630679	15.39
2	MBLK2W	2127427	7.76	1672507	12.30	503406	15.39
3	LCS2W	2000894	7.76	1675521	12.30	625804	15.39
4	LCD2W	2119159	7.75	1804753	12.29	696539	15.40
5	MW-70-PMW09-124DL	1719518	7.75	1368267	12.29	405965	15.40
6	MW-70-PMW10-126DL	1649886	7.75	1343990	12.30	406721	15.40
7	MW-70-MNA11-127	1698483	7.76	1384473	12.30	424925	15.39
8	IR-70-TB-123	1727706	7.76	1387872	12.30	395675	15.39

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

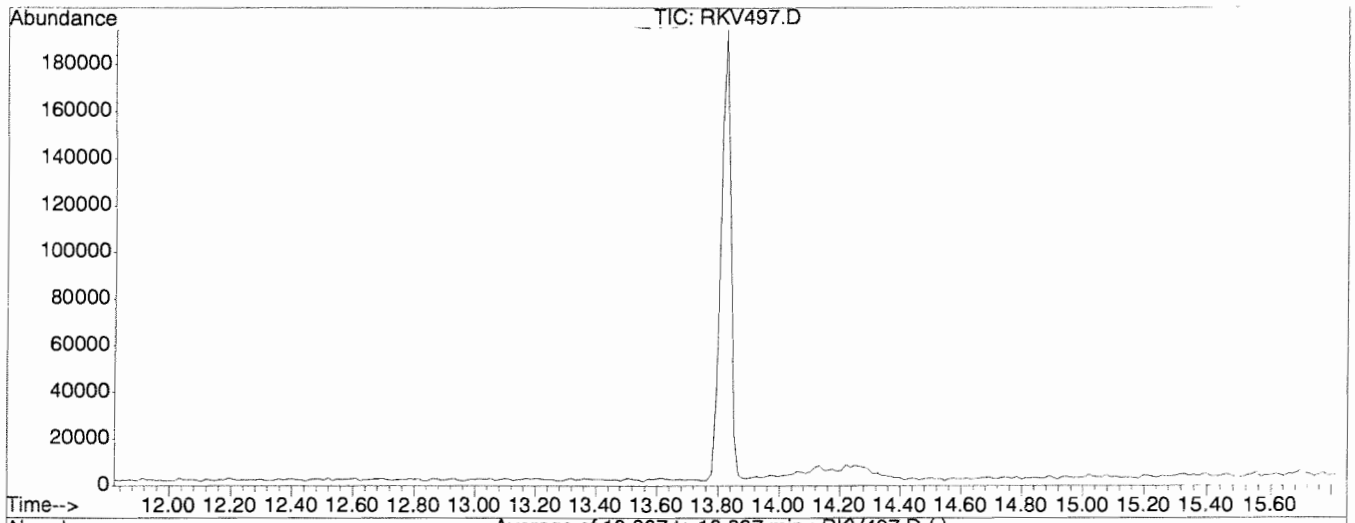
AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

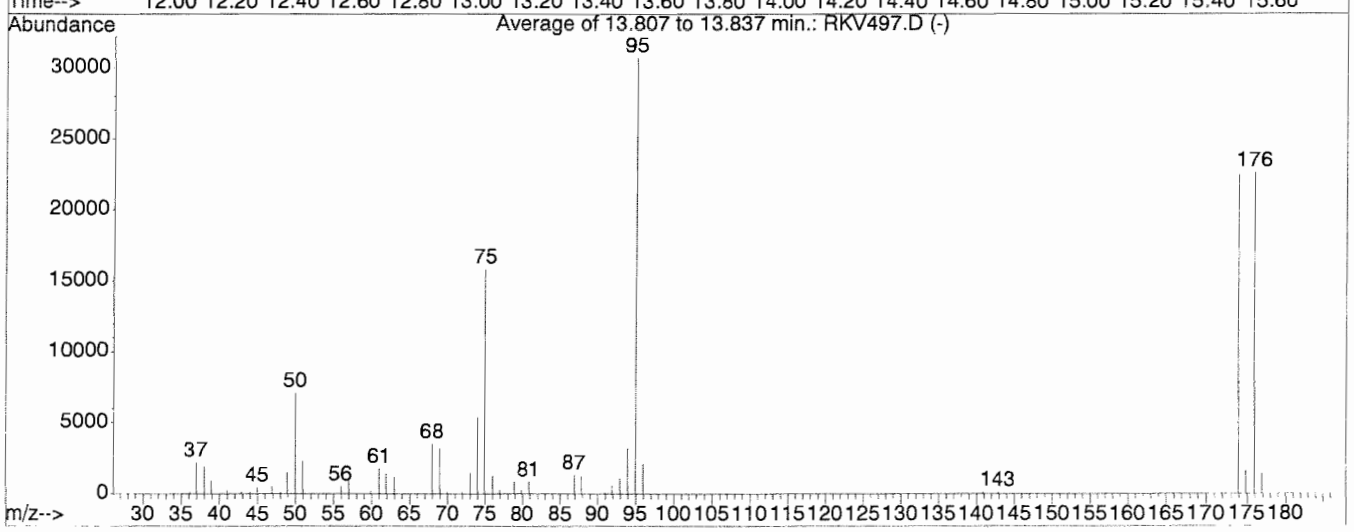
Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

BFB

Data File : D:\HPCHEM\1\DATA\11K21\RKV497.D Vial: 1
Acq On : 21 Nov 2011 8:30 am Operator: MW
Sample : BFB01K22 Inst : TO01
Misc : T/CHK Multiplr: 1.00
MS Integration Params: 524C.P
Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls





AutoFind: Scans 802, 803, 804; Background Corrected with Scan 797

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.0	7066	PASS
75	95	30	60	51.5	15813	PASS
95	95	100	100	100.0	30717	PASS
96	95	5	9	6.8	2089	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	73.1	22464	PASS
175	174	5	9	7.2	1611	PASS
176	174	95	101	100.5	22574	PASS
177	176	5	9	6.4	1434	PASS

RKV497.D VO01J31.M Mon Nov 21 13:24:09 2011

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKV499.D Vial: 3
Acq On : 21 Nov 2011 9:26 am Operator: MW
Sample : CVO01J3123 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	114	-0.02
2	T,M	Chlorotrifluoroethylene	10.000	0.000	100.0#	0	-2.11#
3	T,M	Dichlorodifluoromethane	10.000	8.552	14.5	88	-0.01
4	P,T,M	Chloromethane	10.000	9.315	6.9	96	-0.01
5	C,T,M	Vinyl chloride	10.000	9.007	9.9	92	-0.01
6	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	0.000	100.0#	0	-2.66#
7	T,M	Bromomethane	10.000	9.904	1.0	98	-0.01
8	T,M	Chloroethane	10.000	8.503	15.0	96	-0.01
9	T,M	Dichlorofluoromethane	10.000	9.027	9.7	104	-0.01
10	T,M	Trichlorofluoromethane	10.000	8.785	12.1	94	0.05
11	T,M	Acrolein	50.000	63.500	-27.0#	154	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.163	8.4	105	-0.01
13	T,M	Acetone	50.000	43.739	12.5	94	-0.02
14	C,T,M	1,1-Dichloroethene	10.000	8.689	13.1	97	-0.01
15	T,M	Iodomethane	10.000	9.205	7.9	105	-0.01
16	T,M	Carbon disulfide	10.000	8.874	11.3	110	-0.02
17	T,M	Methylene chloride	10.000	9.048	9.5	107	-0.01
18	T,M	tert-Butyl alcohol	50.000	47.603	4.8	105	0.00
19	T,M	Acrylonitrile	50.000	47.548	4.9	109	-0.02
20	T,M	tert-Butyl methyl ether (MT	10.000	9.833	1.7	111	-0.01
21	T,M	trans-1,2-Dichloroethene	10.000	8.948	10.5	101	-0.02
22	T,M	Vinyl acetate	10.000	7.786	22.1#	81	0.00
23	P,T,M	1,1-Dichloroethane	10.000	9.431	5.7	109	-0.01
24	T,M	Isopropyl ether (DIPE)	10.000	9.695	3.0	112	-0.02
25	T,M	2-Butanol	-1.000	0.000	0.0	112	-0.02
26	T,M	tert-Butyl ethyl ether (ETB	10.000	9.434	5.7	107	-0.01
27	T,M	2-Butanone	50.000	46.997	6.0	104	-0.01
28	T,M	cis-1,2-Dichloroethene	10.000	9.801	2.0	113	-0.02
29	T,M	2,2-Dichloropropane	10.000	9.840	1.6	113	-0.01
30	T,M	Bromochloromethane	10.000	9.714	2.9	109	-0.01
31	C,T,M	Chloroform	10.000	9.696	3.0	107	-0.02
32	S	Dibromofluoromethane	10.000	10.155	-1.5	114	-0.02
33	T,M	1,1,1-Trichloroethane	10.000	9.388	6.1	105	-0.03
34	T,M	tert-Amyl methyl ether (TAM	10.000	9.849	1.5	108	-0.02
35	S	1,2-Dichloroethane-d4	10.000	9.874	1.3	110	-0.01
36	I	CHLOROBENZENE-D5	10.000	10.000	0.0	110	-0.02
37	T,M	1,1-Dichloropropene	10.000	9.419	5.8	107	-0.02
38	T,M	Carbon tetrachloride	10.000	9.126	8.7	98	-0.01
39	T,M	Benzene	10.000	9.623	3.8	110	0.00
40	T,M	1,2-Dichloroethane	10.000	9.989	0.1	109	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKV499.D Vial: 3
Acq On : 21 Nov 2011 9:26 am Operator: MW
Sample : CVO01J3123 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	10.000	9.739	2.6	109	-0.03
42	C,T,M	1,2-Dichloropropane	10.000	9.774	2.3	111	-0.02
43	T,M	1,4-Dioxane	-1.000	0.000	0.0	79	-0.03
44	T,M	Dibromomethane	10.000	10.298	-3.0	113	-0.02
45	T,M	Bromodichloromethane	10.000	10.122	-1.2	111	-0.02
46	T,M	2-Chloroethyl vinyl ether	10.000	1.560	84.4#	17	-0.02
47	T,M	cis-1,3-Dichloropropene	10.000	10.118	-1.2	112	-0.02
48	T,M	4-Methyl-2-pentanone	50.000	47.969	4.1	104	-0.03
49	S	Toluene-d8	10.000	9.790	2.1	112	-0.02
50	C,T,M	Toluene	10.000	9.627	3.7	110	-0.02
51	T,M	Ethyl methacrylate	10.000	10.172	-1.7	108	-0.02
52	T,M	trans-1,3-Dichloropropene	10.000	10.105	-1.1	108	-0.02
53	T,M	1,1,2-Trichloroethane	10.000	10.467	-4.7	118	-0.03
54	T,M	Tetrachloroethene	10.000	9.547	4.5	105	-0.02
55	T,M	1,3-Dichloropropane	10.000	10.247	-2.5	112	-0.02
56	T,M	2-Hexanone	50.000	45.899	8.2	98	-0.02
57	T,M	Dibromochloromethane	10.000	10.766	-7.7	113	-0.01
58	T,M	1,2-Dibromoethane	10.000	10.651	-6.5	115	-0.02
59	T,M	1-Chlorohexane	10.000	9.536	4.6	107	-0.02
60	P,M	Chlorobenzene	10.000	10.154	-1.5	109	-0.03
61	T,M	1,1,1,2-Tetrachloroethane	10.000	10.363	-3.6	111	-0.01
62	C,T,M	Ethylbenzene	10.000	9.737	2.6	107	-0.02
63	T,M	m-Xylene & p-Xylene	20.000	19.404	3.0	105	0.00
64	T,M	o-Xylene	10.000	9.922	0.8	107	0.00
65	T,M	Styrene	10.000	10.186	-1.9	105	-0.02
66	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	108	-0.02
67	P,T,M	Bromoform	10.000	10.507	-5.1	114	-0.02
68	T,M	Isopropylbenzene	10.000	9.647	3.5	106	-0.02
69	S	4-Bromofluorobenzene	10.000	9.560	4.4	112	-0.02
70	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.710	-7.1	119	-0.01
71	T,M	Bromobenzene	10.000	9.713	2.9	109	-0.02
72	T,M	trans-1,4-Dichloro-2-butene	10.000	7.279	27.2#	76	-0.02
73	T,M	1,2,3-Trichloropropane	10.000	10.307	-3.1	117	-0.02
74	T,M	n-Propylbenzene	10.000	9.633	3.7	105	0.00
75	T,M	1,3,5-Trimethylbenzene	10.000	9.712	2.9	105	-0.01
76	T,M	2-Chlorotoluene	10.000	9.704	3.0	108	-0.02
77	T,M	4-Chlorotoluene	10.000	9.622	3.8	105	-0.02
78	T,M	tert-Butylbenzene	10.000	9.773	2.3	106	-0.02
79	T,M	1,2,4-Trimethylbenzene	10.000	9.795	2.1	102	-0.02
80	T,M	sec-Butylbenzene	10.000	9.771	2.3	102	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKV499.D Vial: 3
Acq On : 21 Nov 2011 9:26 am Operator: MW
Sample : CVO01J3123 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	10.000	9.996	0.0	100	-0.01
82	T,M	1,3-Dichlorobenzene	10.000	10.007	-0.1	107	-0.03
83	T,M	1,4-Dichlorobenzene	10.000	9.894	1.1	105	-0.01
84	T,M	n-Butylbenzene	10.000	9.336	6.6	94	-0.02
85	T,M	1,2-Dichlorobenzene	10.000	10.039	-0.4	107	-0.01
86	T,M	1,2-Dibromo-3-chloropropane	10.000	10.259	-2.6	107	-0.01
87	T,M	1,2,4-Trichlorobenzene	10.000	8.289	17.1	89	0.00
88	T,M	Hexachlorobutadiene	10.000	9.808	1.9	98	-0.02
89	T,M	Naphthalene	10.000	8.781	12.2	85	-0.02
90	T,M	1,2,3-Trichlorobenzene	10.000	8.831	11.7	85	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKV499.D Vial: 3
Acq On : 21 Nov 2011 9:26 am Operator: MW
Sample : CVO01J3123 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	114	-0.02
2	T,M	Chlorotrifluoroethylene	0.156	0.000	100.0#	0#	-2.11#
3	T,M	Dichlorodifluoromethane	0.363	0.311	14.3	88	-0.01
4	P,T,M	Chloromethane	0.435	0.405	6.9	96	-0.01
5	C,T,M	Vinyl chloride	0.461	0.416	9.8	92	-0.01
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.338	0.000	100.0#	0#	-2.66#
7	T,M	Bromomethane	0.229	0.226	1.3	98	-0.01
8	T,M	Chloroethane	0.282	0.240	14.9	96	-0.01
9	T,M	Dichlorofluoromethane	0.712	0.643	9.7	104	-0.01
10	T,M	Trichlorofluoromethane	0.429	0.377	12.1	94	0.05
11	T,M	Acrolein	0.011	0.014	-27.3#	154	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.219	0.201	8.2	105	-0.01
13	T,M	Acetone	0.044	0.038	13.6	94	-0.02
14	C,T,M	1,1-Dichloroethene	0.658	0.572	13.1	97	-0.01
15	T,M	Iodomethane	0.479	0.440	8.1	105	-0.01
16	T,M	Carbon disulfide	1.074	0.953	11.3	110	-0.02
17	T,M	Methylene chloride	0.505	0.457	9.5	107	-0.01
18	T,M	tert-Butyl alcohol	0.012	0.011	8.3	105	0.00
19	T,M	Acrylonitrile	0.054	0.051	5.6	109	-0.02
20	T,M	tert-Butyl methyl ether (MT	0.589	0.579	1.7	111	-0.01
21	T,M	trans-1,2-Dichloroethene	0.668	0.597	10.6	101	-0.02
22	T,M	Vinyl acetate	0.476	0.371	22.1#	81	0.00
23	P,T,M	1,1-Dichloroethane	0.756	0.713	5.7	109	-0.01
24	T,M	Isopropyl ether (DIPE)	1.343	1.302	3.1	112	-0.02
25	T,M	2-Butanol	0.000	0.000	0.0	112	-0.02
26	T,M	tert-Butyl ethyl ether (ETB	0.966	0.911	5.7	107	-0.01
27	T,M	2-Butanone	0.071	0.066	7.0	104	-0.01
28	T,M	cis-1,2-Dichloroethene	0.379	0.372	1.8	113	-0.02
29	T,M	2,2-Dichloropropane	0.538	0.529	1.7	113	-0.01
30	T,M	Bromochloromethane	0.305	0.296	3.0	109	-0.01
31	C,T,M	Chloroform	0.636	0.617	3.0	107	-0.02
32	S	Dibromofluoromethane	0.274	0.278	-1.5	114	-0.02
33	T,M	1,1,1-Trichloroethane	0.506	0.475	6.1	105	-0.03
34	T,M	tert-Amyl methyl ether (TAM	0.142	0.140	1.4	108	-0.02
35	S	1,2-Dichloroethane-d4	0.292	0.288	1.4	110	-0.01
36	I	CHLOROBENZENE-D5	1.000	1.000	0.0	110	-0.02
37	T,M	1,1-Dichloropropene	0.208	0.196	5.8	107	-0.02
38	T,M	Carbon tetrachloride	0.498	0.455	8.6	98	-0.01
39	T,M	Benzene	1.767	1.700	3.8	110	0.00
40	T,M	1,2-Dichloroethane	0.438	0.438	0.0	109	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKV499.D Vial: 3
Acq On : 21 Nov 2011 9:26 am Operator: MW
Sample : CVO01J3123 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	0.442	0.431	2.5	109	-0.03
42	C,T,M	1,2-Dichloropropane	0.459	0.449	2.2	111	-0.02
43	T,M	1,4-Dioxane	0.000	0.000	0.0	79	-0.03
44	T,M	Dibromomethane	0.149	0.154	-3.4	113	-0.02
45	T,M	Bromodichloromethane	0.512	0.518	-1.2	111	-0.02
46	T,M	2-Chloroethyl vinyl ether	0.118	0.018	84.7#	17#	-0.02
47	T,M	cis-1,3-Dichloropropene	0.614	0.621	-1.1	112	-0.02
48	T,M	4-Methyl-2-pentanone	0.201	0.193	4.0	104	-0.03
49	S	Toluene-d8	1.383	1.354	2.1	112	-0.02
50	C,T,M	Toluene	1.753	1.688	3.7	110	-0.02
51	T,M	Ethyl methacrylate	0.330	0.335	-1.5	108	-0.02
52	T,M	trans-1,3-Dichloropropene	0.454	0.459	-1.1	108	-0.02
53	T,M	1,1,2-Trichloroethane	0.216	0.226	-4.6	118	-0.03
54	T,M	Tetrachloroethene	0.356	0.340	4.5	105	-0.02
55	T,M	1,3-Dichloropropane	0.449	0.460	-2.4	112	-0.02
56	T,M	2-Hexanone	0.131	0.121	7.6	98	-0.02
57	T,M	Dibromochloromethane	0.257	0.277	-7.8	113	-0.01
58	T,M	1,2-Dibromoethane	0.205	0.218	-6.3	115	-0.02
59	T,M	1-Chlorohexane	0.725	0.692	4.6	107	-0.02
60	P,M	Chlorobenzene	1.010	1.025	-1.5	109	-0.03
61	T,M	1,1,1,2-Tetrachloroethane	0.334	0.346	-3.6	111	-0.01
62	C,T,M	Ethylbenzene	2.040	1.987	2.6	107	-0.02
63	T,M	m-Xylene & p-Xylene	1.540	1.494	3.0	105	0.00
64	T,M	o-Xylene	1.515	1.503	0.8	107	0.00
65	T,M	Styrene	1.084	1.104	-1.8	105	-0.02
66	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	108	-0.02
67	P,T,M	Bromoform	0.330	0.347	-5.2	114	-0.02
68	T,M	Isopropylbenzene	4.966	4.791	3.5	106	-0.02
69	S	4-Bromofluorobenzene	1.232	1.178	4.4	112	-0.02
70	P,T,M	1,1,2,2-Tetrachloroethane	0.680	0.728	-7.1	119	-0.01
71	T,M	Bromobenzene	1.024	0.995	2.8	109	-0.02
72	T,M	trans-1,4-Dichloro-2-butene	0.174	0.127	27.0#	76	-0.02
73	T,M	1,2,3-Trichloropropane	0.174	0.179	-2.9	117	-0.02
74	T,M	n-Propylbenzene	6.403	6.168	3.7	105	0.00
75	T,M	1,3,5-Trimethylbenzene	4.108	3.990	2.9	105	-0.01
76	T,M	2-Chlorotoluene	3.536	3.431	3.0	108	-0.02
77	T,M	4-Chlorotoluene	3.899	3.752	3.8	105	-0.02
78	T,M	tert-Butylbenzene	0.920	0.899	2.3	106	-0.02
79	T,M	1,2,4-Trimethylbenzene	3.898	3.818	2.1	102	-0.02
80	T,M	sec-Butylbenzene	5.221	5.101	2.3	102	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKV499.D Vial: 3
Acq On : 21 Nov 2011 9:26 am Operator: MW
Sample : CVO01J3123 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	4.048	4.047	0.0	100	-0.01
82	T,M	1,3-Dichlorobenzene	1.962	1.963	-0.1	107	-0.03
83	T,M	1,4-Dichlorobenzene	1.863	1.843	1.1	105	-0.01
84	T,M	n-Butylbenzene	3.914	3.654	6.6	94	-0.02
85	T,M	1,2-Dichlorobenzene	1.561	1.568	-0.4	107	-0.01
86	T,M	1,2-Dibromo-3-chloropropane	0.078	0.080	-2.6	107	-0.01
87	T,M	1,2,4-Trichlorobenzene	0.697	0.650	6.7	89	0.00
88	T,M	Hexachlorobutadiene	0.556	0.545	2.0	98	-0.02
89	T,M	Naphthalene	0.866	0.761	12.1	85	-0.02
90	T,M	1,2,3-Trichlorobenzene	0.514	0.454	11.7	85	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K21\RKV499.D Vial: 3
Acq On : 21 Nov 2011 9:26 am Operator: MW
Sample : CVO01J3123 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 21 9:44 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.75	114	1959391	10.00	ug/l	-0.02
36) CHLOROBENZENE-D5	12.30	117	1634800	10.00	ug/l	-0.02
66) 1,2-DICHLOROBENZENE-D4	15.39	152	630679	10.00	ug/l	-0.02
System Monitoring Compounds						
32) Dibromofluoromethane	6.69	111	544633	10.15	ug/l	-0.02
Spiked Amount 10.000			Recovery	=	101.50%	
35) 1,2-Dichloroethane-d4	7.15	65	565269	9.87	ug/l	-0.01
Spiked Amount 10.000			Recovery	=	98.70%	
49) Toluene-d8	9.93	98	2214051	9.79	ug/l	-0.02
Spiked Amount 10.000			Recovery	=	97.90%	
69) 4-Bromofluorobenzene	13.82	95	742979	9.56	ug/l	-0.02
Spiked Amount 10.000			Recovery	=	95.60%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	2.15	85	608883	8.55	ug/l	100
4) Chloromethane	2.37	50	794048	9.32	ug/l	100
5) Vinyl chloride	2.53	62	814459	9.01	ug/l	91
7) Bromomethane	2.90	94	443578	9.90	ug/l	98
8) Chloroethane	3.02	64	470090	8.50	ug/l	99
9) Dichlorofluoromethane	3.30	67	1259143	9.03	ug/l	99
10) Trichlorofluoromethane	3.36	101	738921	8.79	ug/l	99
11) Acrolein	3.79	56	140754	63.50	ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	3.97	151	392863	9.16	ug/l	99
13) Acetone	3.94	43	375888	43.74	ug/l	98
14) 1,1-Dichloroethene	3.92	61	1120447	8.69	ug/l	98
15) Iodomethane	4.10	142	863014	9.20	ug/l	96
16) Carbon disulfide	4.19	76	1867376	8.87	ug/l	100
17) Methylene chloride	4.50	49	894464	9.05	ug/l	98
18) tert-Butyl alcohol	4.62	59	110084	47.60	ug/l	88
19) Acrylonitrile	4.75	53	501414	47.55	ug/l	97
20) tert-Butyl methyl ether (M	4.83	73	1134313	9.83	ug/l	98
21) trans-1,2-Dichloroethene	4.83	61	1170585	8.95	ug/l	98
22) Vinyl acetate	5.34	43	726146	7.79	ug/l	95
23) 1,1-Dichloroethane	5.36	63	1397563	9.43	ug/l	100
24) Isopropyl ether (DIPE)	5.39	45	2551889	9.70	ug/l	99
26) tert-Butyl ethyl ether (ET	5.85	59	1785771	9.43	ug/l	98
27) 2-Butanone	6.02	43	650769	47.00	ug/l	98
28) cis-1,2-Dichloroethene	6.05	96	728516	9.80	ug/l	95
29) 2,2-Dichloropropane	6.08	77	1036985	9.84	ug/l	99
30) Bromochloromethane	6.36	49	580873	9.71	ug/l	98
31) Chloroform	6.48	83	1209197	9.70	ug/l	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K21\RKV499.D Vial: 3
Acq On : 21 Nov 2011 9:26 am Operator: MW
Sample : CVO01J3123 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 21 9:44 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
33) 1,1,1-Trichloroethane	6.72	97	929838	9.39 ug/l	99
34) tert-Amyl methyl ether (TA	7.36	87	273921	9.85 ug/l	98
37) 1,1-Dichloropropene	6.93	110	320319	9.42 ug/l	98
38) Carbon tetrachloride	6.94	119	743132	9.13 ug/l	100
39) Benzene	7.19	78	2779933	9.62 ug/l	99
40) 1,2-Dichloroethane	7.25	62	715671	9.99 ug/l	99
41) Trichloroethene	8.10	130	704490	9.74 ug/l	99
42) 1,2-Dichloropropane	8.47	63	733381	9.77 ug/l	96
44) Dibromomethane	8.58	93	250952	10.30 ug/l	97
45) Bromodichloromethane	8.84	83	847194	10.12 ug/l	100
46) 2-Chloroethyl vinyl ether	9.25	63	30163	1.56 ug/l	96
47) cis-1,3-Dichloropropene	9.50	75	1015330	10.12 ug/l	95
48) 4-Methyl-2-pentanone	9.71	43	1576951	47.97 ug/l	99
50) Toluene	10.03	91	2759500	9.63 ug/l	99
51) Ethyl methacrylate	10.48	69	548210	10.17 ug/l	98
52) trans-1,3-Dichloropropene	10.39	75	750544	10.10 ug/l	96
53) 1,1,2-Trichloroethane	10.71	97	369537	10.47 ug/l	98
54) Tetrachloroethene	10.88	164	555974	9.55 ug/l	99
55) 1,3-Dichloropropane	11.00	76	752465	10.25 ug/l	100
56) 2-Hexanone	11.05	43	985967	45.90 ug/l	99
57) Dibromochloromethane	11.37	129	452189	10.77 ug/l	99
58) 1,2-Dibromoethane	11.57	107	356994	10.65 ug/l	98
59) 1-Chlorohexane	12.31	91	1130526	9.54 ug/l	97
60) Chlorobenzene	12.34	112	1675864	10.15 ug/l	98
61) 1,1,1,2-Tetrachloroethane	12.47	131	566105	10.36 ug/l	100
62) Ethylbenzene	12.47	91	3247608	9.74 ug/l	100
63) m-Xylene & p-Xylene	12.67	91	4884052	19.40 ug/l	99
64) o-Xylene	13.17	91	2457625	9.92 ug/l	100
65) Styrene	13.19	104	1804654	10.19 ug/l	99
67) Bromoform	13.42	173	218657	10.51 ug/l	100
68) Isopropylbenzene	13.61	105	3021285	9.65 ug/l	100
70) 1,1,2,2-Tetrachloroethane	13.97	83	459154	10.71 ug/l	100
71) Bromobenzene	13.98	156	627309	9.71 ug/l	97
72) trans-1,4-Dichloro-2-buten	14.00	53	79888	7.28 ug/l	99
73) 1,2,3-Trichloropropane	14.03	110	113047	10.31 ug/l	88
74) n-Propylbenzene	14.10	91	3889904	9.63 ug/l	99
75) 1,3,5-Trimethylbenzene	14.29	105	2516382	9.71 ug/l	100
76) 2-Chlorotoluene	14.19	91	2163911	9.70 ug/l	100
77) 4-Chlorotoluene	14.32	91	2366215	9.62 ug/l	98
78) tert-Butylbenzene	14.62	134	567102	9.77 ug/l	96
79) 1,2,4-Trimethylbenzene	14.68	105	2407739	9.79 ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K21\RKV499.D Vial: 3
Acq On : 21 Nov 2011 9:26 am Operator: MW
Sample : CVO01J3123 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 21 9:44 2011 Quant Results File: VO01J31.RES

Quant Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration
DataAcq Meth : VO01J31

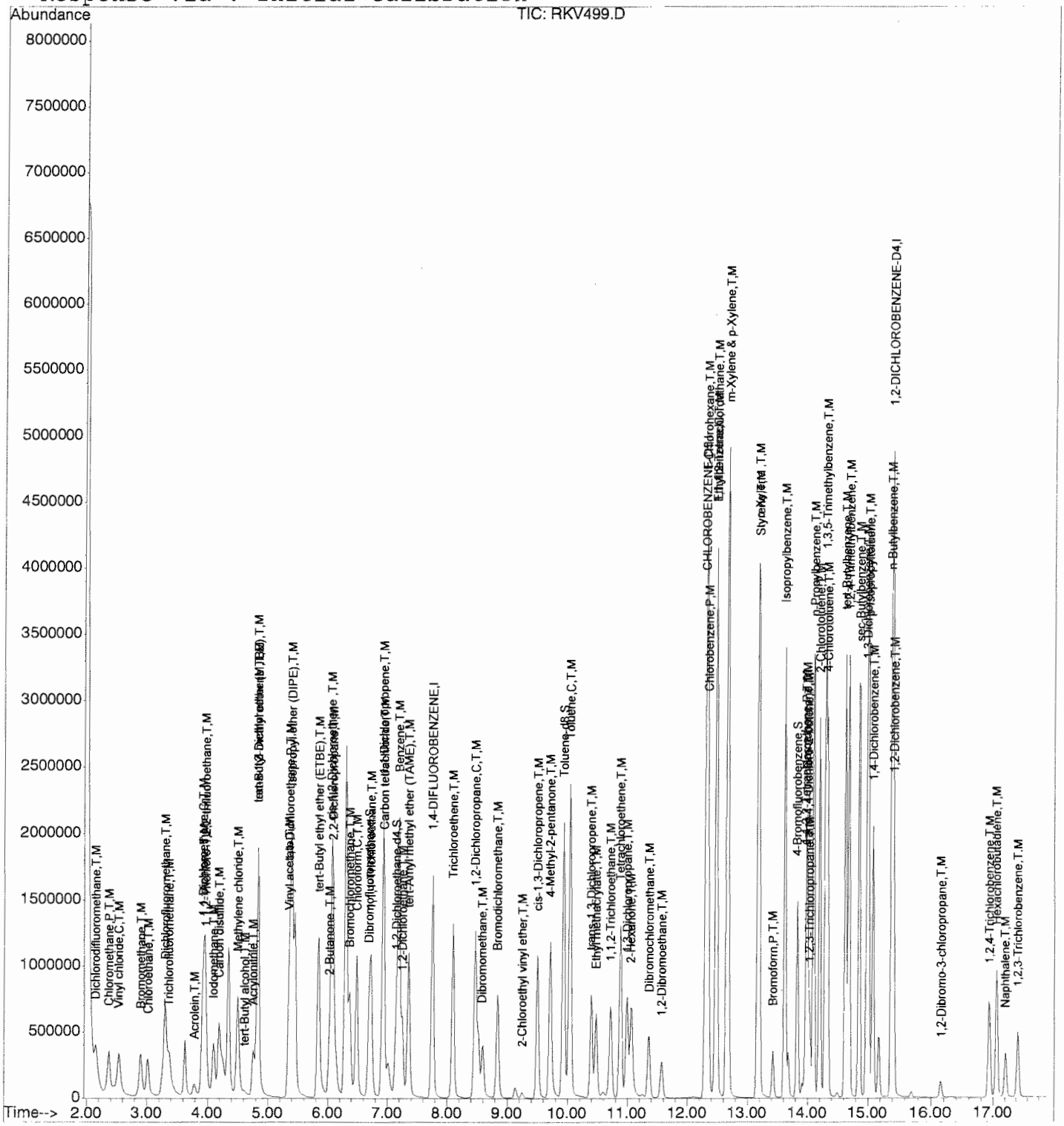
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
80) sec-Butylbenzene	14.86	105	3217068	9.77 ug/l	100
81) p-Isopropyltoluene	15.01	119	2552116	10.00 ug/l	99
82) 1,3-Dichlorobenzene	14.98	146	1238267	10.01 ug/l	100
83) 1,4-Dichlorobenzene	15.08	146	1162332	9.89 ug/l	99
84) n-Butylbenzene	15.38	91	2304615	9.34 ug/l	100
85) 1,2-Dichlorobenzene	15.42	146	988600	10.04 ug/l	100
86) 1,2-Dibromo-3-chloropropan	16.16	157	50700	10.26 ug/l	96
87) 1,2,4-Trichlorobenzene	16.94	180	410240	8.29 ug/l	99
88) Hexachlorobutadiene	17.06	225	343678	9.81 ug/l	99
89) Naphthalene	17.21	128	479775	8.78 ug/l	100
90) 1,2,3-Trichlorobenzene	17.43	180	286177	8.83 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K21\RKV499.D Vial: 3
Acq On : 21 Nov 2011 9:26 am Operator: MW
Sample : CVO01J3123 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P
Quant Time: Nov 21 9:44 2011 Quant Results File: VO01J31.RES

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Initial Calibration



ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 10/31/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A01 -038

BATCH V001J316

	Sample Prep. ID	Data File Name	Lab Sample ID	* Sample Amount A/B/C	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RJU596	BFB01J29	1 ml	NA	NA	NA	NA	9:18am
02		597	V001J311	.01/.1/1.1-ml					0.3/1.5/1.5 ppb
03		598	2	.01/.4/1.5-ml					0.5/2.5/2.5 ppb
04		599	3	.1/.5/1.5-ml					1.0/5.0/5.0 ppb
05		600	4	.4/1/1-ml					2.0/10/10 ppb
06		601	5	.5/2.5/2.5-ml					5.0/25/25 ppb
07		602	6	1/5/5-ml					10/50/50 ppb
08		603	7	2/10/10-ml					20/100/100 ppb
09		604	8	4/15/15-ml					30/150/150 ppb
10		605	9	5/25/25-ml					50/250/250 ppb
11		606	10	10/50/50-ml					100/500/500 ppb
12		607	IS/SS	25 mL					
13		608	V001J29B	↓					
14		609	V001J311	1/5/5-ml					10/50/50 ppb
15		610	RINSE	25 mL					4:51pm
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30				NW	11/1/11				

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC (Gases)	SV1-17-96-3	*	
DCC Cl_2	-92-3		
DCC 8260	-86-2		
DCC 624/1624 Freons	-95-1 -100-3		1/2/20/1000
BFB	-45-3	1	
IS/SURR.	-99-1	1	
ICV/LCS (Gases)	-97-1	1	
ICV/LCS Cl_2	-97-2	1	
ICV/LCS 8260	-99-2	5	
ICV/LCS 624/1624	-99-2	5	
ICV/LCS Cl_2 Freons	SV1-12-26-2 -26-1	0.4 0.4	
IS SS	SV1-17-91-1 -91-2	1 1	20ppm
DATA FILE FOLDER	11J31		

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO01	

Comments: Please refer to sample amount
A: SS, gases, Cl_2, Freons
B: 8260
C: 624/1624
NW 11/1/11

Analyzed By: NW
Date Disposed: 11/1/11
Disposed By: NW

2137

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/8/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge Book # A01 -038

BATCH V001J3121

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RFV441	BFB01K20	1mL					8:16am
02	442	CV001J3121	1.5mL					
03	443	V001K20L						
04	444	C						
05	445	RINSE	25mL					
06	446	V001K20B						
07	447	11K083-03R		1.0	/			
08	448	11K083-03N			/			
09	449	TEST						
10	450	V001K20Q						
11	451	11K063-06T	0.5mL	50	/			
12	452	11K113-03	250mL	100	/			
13	453	RINSE	25mL					
14	454	11K113-01R		1.0	/			
15	455	RINSE						
16	456	11K113-02T	2.5mL	10	/			
17	457	-04T	250mL	100	/			
18	458	-03I	5.0mL	5000	/			
19	459	-04R	25mL	1.0	/			
20	460	RINSE						
21	461	11K119-01		1.0	/	/		-50X
22	462	-05			7	/		1mL/10
23	463	-02			7	/		
24	464	-03			/	/		-100X
25	465	RINSE						8:13pm
26								
27								
28								
29								
30								

MW 11/21/11

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-17-96-9	1	
DCC	-92-9	1	
DCC	-86-2	5	
DCC	-98-1	5	
BFB	-45-3	1	
IS/SURR.	-99-1	1	50/150
ICV/LCS	-97-1	1	
ICV/LCS	-97-2	1	
ICV/LCS	-99-2	5	
ICV/LCS	-89-2	5	

DATA FILE FOLDER	11K18
Electronic Data Archival	
Location	Date
HPCHEM_VOA/TO01	

Comments:

Analyzed By: MW

Date Disposed: 11/21/11

Disposed By: MW

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/21/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A01 -038

BATCH V001J3123

	Sample Prep ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RKV497	BFB01K22	1mL					8:30am
02		498	STD TEST	1/5/5mL					
03		499	Q1001J3123						
04		500	V001K22L						
05		501	C						
06		502	RINSE	25mL					
07		503	V001K22B						
08		504	11K119-02R		1.0	✓			
09		505	-05R			✓			
10		506	-01T MW 11/22/11	0.5mL	50	✓			
11		507	-03R/T	250mL	100	✓			
12		508	-04	25mL	10	✓			
13		509	-06			✓			
14		510	11K143-01R			✓			
15		511	-09R			✓			
16		512	-07T	2.5mL	10	✓			
17		513	-17	25mL	1.0	✓	✓		
18		514	-18			✓	✓		
19		515	-20			✓	✓		
20		516	-21			✓	✓		
21		517	-22			✓	✓		
22		518	-23			✓	✓		
23		519	-24			✓	✓		
24		520	-25			✓	✓		
25		521	RINSE						8:00pm
26									
27									
28									
29									
30			MW 11/22/11						

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-17-96-3	1	
DCC	-92-3	1	
DCC	-86-2	5	
DCC	-98-1	5	
BFB	-45-3	1	
IS/SURR.	-99-1	1	50/250
ICV/LCS	-97-1	1	
ICV/LCS	-97-2	1	
ICV/LCS	-99-2	5	
ICV/LCS	-89-2	5	

DATA FILE FOLDER	11K21

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO01	

Comments:

Analyzed By: MW

Date Disposed: 11/22/11

Disposed By: MW

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD RSK-175
DISSOLVED GASES

SDG#: 11K119

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K119

METHOD RSK-175
DISSOLVED GASES

A total of five (5) water samples were received on 11/14/11 for Dissolved Gas analysis, Method RSK-175 in accordance with USEPA at R.S. Kerr Environmental Research Laboratory, Ada, OK 74820 March 15, 1989.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for DGK007WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED GASES

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K119
Instrument ID : GCT010

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DGK007WB	1	NA	11/16/1108:57	11/16/1108:15	FK16004A	FK16003A	DGK007W	Method Blank
LCS1W	DGK007WL	1	NA	11/16/1109:08	11/16/1108:15	FK16005A	FK16003A	DGK007W	Lab Control Sample (LCS)
LCD1W	DGK007WC	1	NA	11/16/1109:20	11/16/1108:15	FK16006A	FK16003A	DGK007W	LCS Duplicate
MW-70-PMW09-124	K119-01	1	NA	11/16/1111:35	11/16/1108:15	FK16016A	FK16014A	DGK007W	Field Sample
IR-70-SHB113-125	K119-02	1	NA	11/16/1111:51	11/16/1108:15	FK16017A	FK16014A	DGK007W	Field Sample
IR-70-SHB113-125DL	K119-02I	1000	NA	11/16/1112:17	11/16/1108:15	FK16019A	FK16014A	DGK007W	Diluted Sample
MW-70-PMW10-126	K119-03	1	NA	11/16/1112:29	11/16/1108:15	FK16020A	FK16014A	DGK007W	Field Sample
MW-70-PMW10-126DL	K119-03T	400	NA	11/16/1113:16	11/16/1108:15	FK16023A	FK16014A	DGK007W	Diluted Sample
MW-70-MNA11-127	K119-04	1	NA	11/16/1112:46	11/16/1108:15	FK16021A	FK16014A	DGK007W	Field Sample
MW-70-MNA07-128	K119-05	1	NA	11/16/1113:01	11/16/1108:15	FK16022A	FK16014A	DGK007W	Field Sample
MW-70-MNA07-128DL	K119-05T	1000	NA	11/16/1113:29	11/16/1108:15	FK16024A	FK16014A	DGK007W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

40022

SAMPLE RESULTS

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/14/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/14/11
Batch No. : 11K119	Date Extracted: 11/16/11 08:15
Sample ID: MW-70-PMW09-124	Date Analyzed: 11/16/11 11:35
Lab Samp ID: K119-01	Dilution Factor: 1
Lab File ID: FK16016A	Matrix : WATER
Ext Btch ID: DGK007W	% Moisture : NA
Calib. Ref.: FK16014A	Instrument ID : GCT010

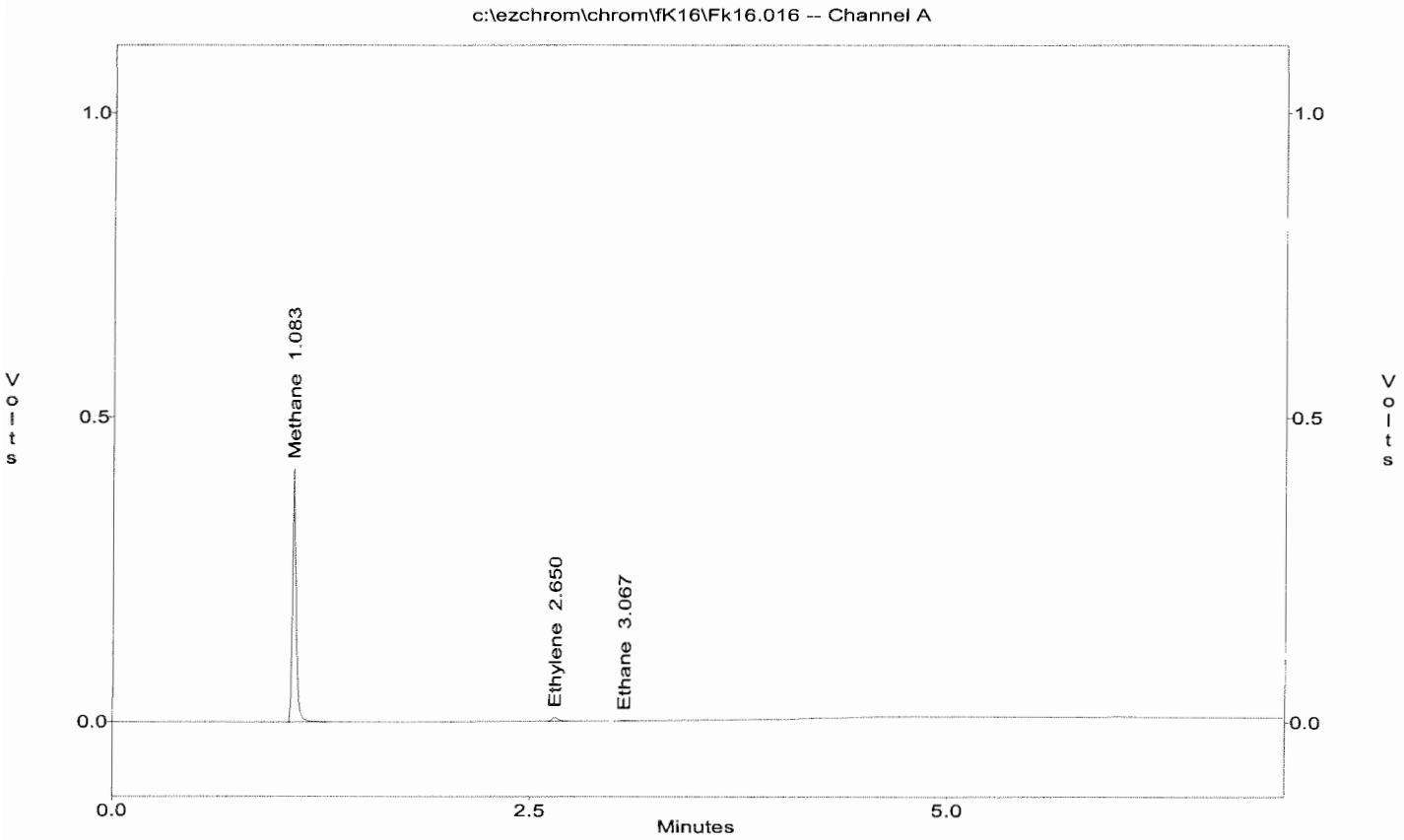
PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	1.2J	2.0	0.60
METHANE	21	2.0	0.34

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK16\Fk16.016
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : 11K119-01
Acquired : Nov 16, 2011 11:35:03
Printed : Nov 16, 2011 11:42:04
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	638367.0	30507.1	20.93
--	Acetylene	2.233	0.0	0.0	0.00
2	Ethylene	2.650	19644.0	16311.8	1.20
3	Ethane	3.067	4565.0	24914.4	0.18
--	Propane	5.942	0.0	0.0	0.00



METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/14/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/14/11
Batch No.	: 11K119	Date Extracted:	11/16/11 08:15
Sample ID:	IR-70-SHB113-125	Date Analyzed:	11/16/11 11:51
Lab Samp ID:	K119-02	Dilution Factor:	1
Lab File ID:	FK16017A	Matrix :	WATER
Ext Btch ID:	DGK007W	% Moisture :	NA
Calib. Ref.:	FK16014A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	18	2.0	0.60
METHANE	740E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/14/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/14/11
Batch No. : 11K119	Date Extracted: 11/16/11 08:15
Sample ID: IR-70-SHB113-125DL	Date Analyzed: 11/16/11 12:17
Lab Samp ID: K119-02I	Dilution Factor: 1000
Lab File ID: FK16019A	Matrix : WATER
Ext Btch ID: DGK007W	% Moisture : NA
Calib. Ref.: FK16014A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	24000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/14/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/14/11
Batch No. : 11K119	Date Extracted: 11/16/11 08:15
Sample ID: MW-70-PMW10-126	Date Analyzed: 11/16/11 12:29
Lab Samp ID: K119-03	Dilution Factor: 1
Lab File ID: FK16020A	Matrix : WATER
Ext Btch ID: DGK007W	% Moisture : NA
Calib. Ref.: FK16014A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	0.84J	2.0	0.64
ETHENE	14	2.0	0.60
METHANE	110E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/14/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/14/11
Batch No.	: 11K119	Date Extracted:	11/16/11 08:15
Sample ID:	MW-70-PMW10-126DL	Date Analyzed:	11/16/11 13:16
Lab Samp ID:	K119-03T	Dilution Factor:	400
Lab File ID:	FK16023A	Matrix :	WATER
Ext Btch ID:	DGK007W	% Moisture :	NA
Calib. Ref.:	FK16014A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	800	260
ETHENE	ND	800	240
METHANE	4000	800	140

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/14/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/14/11
Batch No. : 11K119	Date Extracted: 11/16/11 08:15
Sample ID: MW-70-MNA11-127	Date Analyzed: 11/16/11 12:46
Lab Samp ID: K119-04	Dilution Factor: 1
Lab File ID: FK16021A	Matrix : WATER
Ext Btch ID: DGK007W	% Moisture : NA
Calib. Ref.: FK16014A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	15	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/14/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/14/11
Batch No. : 11K119	Date Extracted: 11/16/11 08:15
Sample ID: MW-70-MNA07-128	Date Analyzed: 11/16/11 13:01
Lab Samp ID: K119-05	Dilution Factor: 1
Lab File ID: FK16022A	Matrix : WATER
Ext Btch ID: DGK007W	% Moisture : NA
Calib. Ref.: FK16014A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	4.0	2.0	0.64
ETHENE	5.7	2.0	0.60
METHANE	740E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/14/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/14/11
Batch No. : 11K119	Date Extracted: 11/16/11 08:15
Sample ID: MW-70-MNA07-128DL	Date Analyzed: 11/16/11 13:29
Lab Samp ID: K119-05T	Dilution Factor: 1000
Lab File ID: FK16024A	Matrix : WATER
Ext Btch ID: DGK007W	% Moisture : NA
Calib. Ref.: FK16014A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	24000	2000	340

QC SUMMARIES

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/16/11
Batch No. : 11K119	Date Extracted: 11/16/11 08:15
Sample ID: MBLK1W	Date Analyzed: 11/16/11 08:57
Lab Samp ID: DGK007WB	Dilution Factor: 1
Lab File ID: FK16004A	Matrix : WATER
Ext Btch ID: DGK007W	% Moisture : NA
Calib. Ref.: FK16003A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K119
METHOD: METHOD RSK-175

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	DGK007WB	DGK007WL	DGK007WC		
LAB FILE ID:	FK16004A	FK16005A	FK16006A		
DATE EXTRACTED:	11/16/1108:15	11/16/1108:15	11/16/1108:15	DATE COLLECTED:	NA
DATE ANALYZED:	11/16/1108:57	11/16/1109:08	11/16/1109:20	DATE RECEIVED:	11/16/11
PREP. BATCH:	DGK007W	DGK007W	DGK007W		
CALIB. REF:	FK16003A	FK16003A	FK16003A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	ND	25.4	26.9	106	25.4	26.0	102	3	70-140	30
Ethene	ND	23.7	26.1	110	23.7	25.2	106	4	70-140	30
Methane	ND	13.6	13.3	98	13.6	12.8	94	4	70-130	30

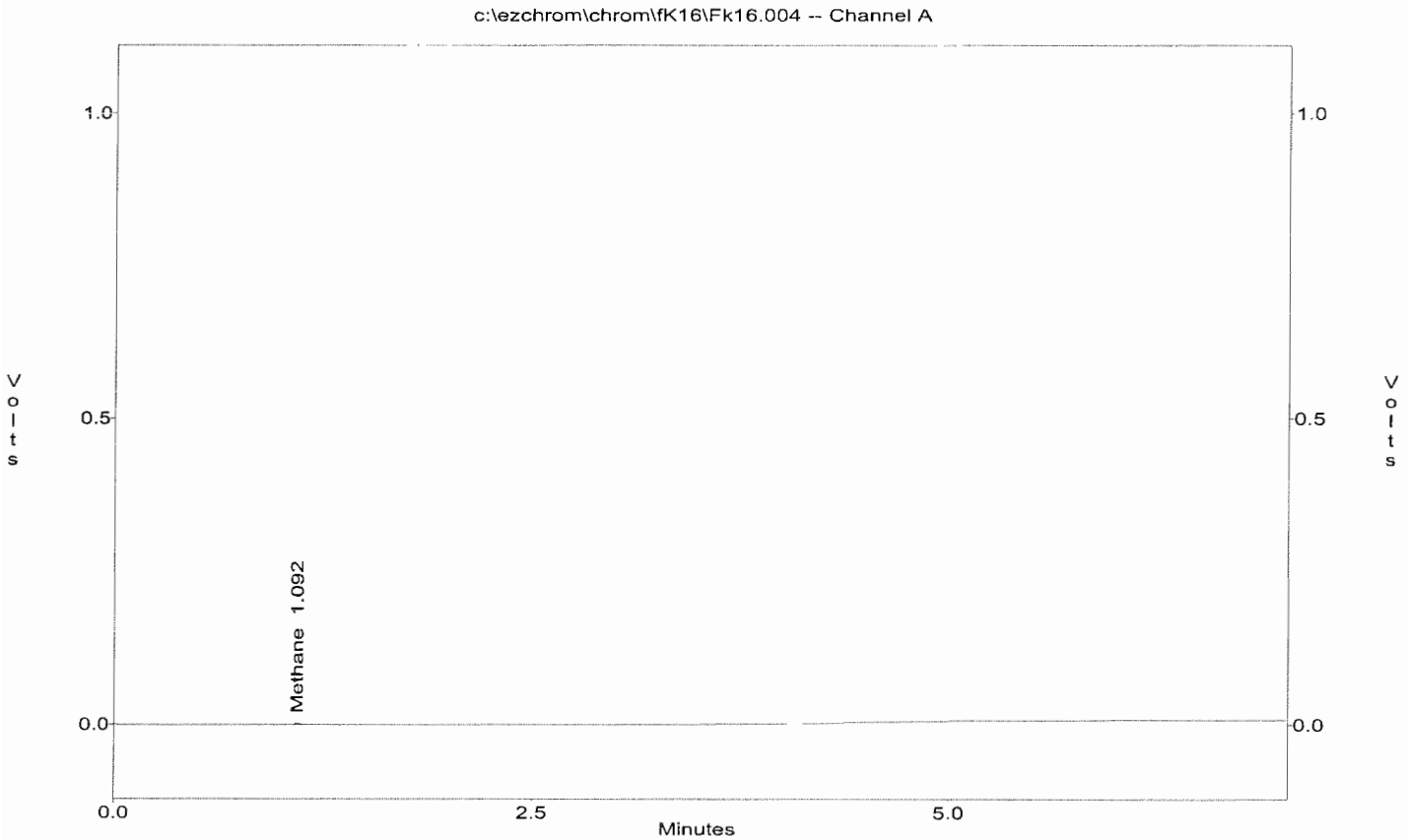
QC DATA

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK16\Fk16.004
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK007WB
Acquired : Nov 16, 2011 08:57:25
Printed : Nov 16, 2011 09:04:27
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.092	5567.0	30507.1	0.18
--	Acetylene	2.233	0.0	0.0	0.00
--	Ethylene	2.667	0.0	0.0	0.00
--	Ethane	3.100	0.0	0.0	0.00
--	Propane	5.942	0.0	0.0	0.00

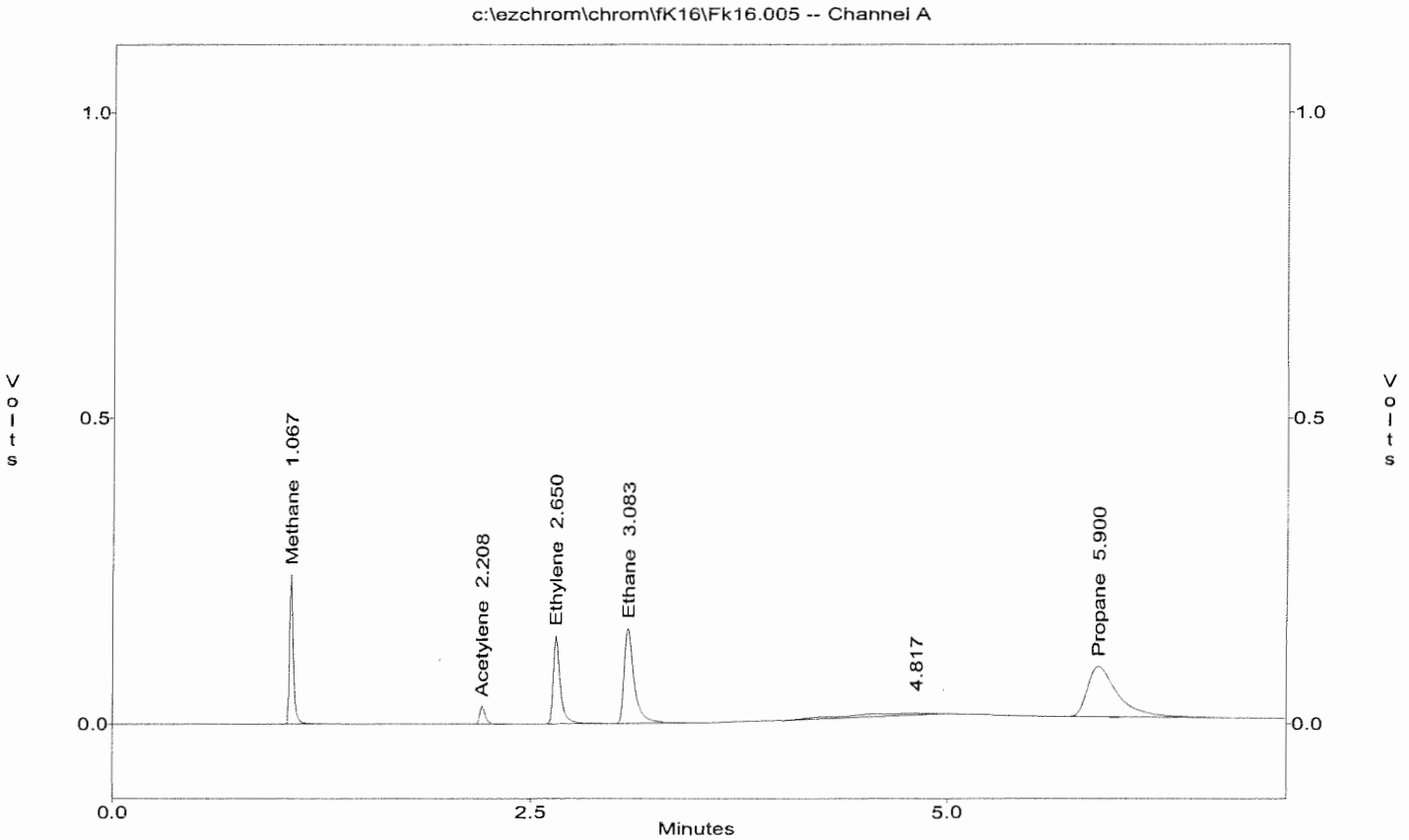


EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK16\Fk16.005
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK007WL
Acquired : Nov 16, 2011 09:08:58
Printed : Nov 16, 2011 09:15:59
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.067	405157.0	30507.1	13.28
2	Acetylene	2.208	67661.0	2647.6	25.56
3	Ethylene	2.650	426311.0	16311.8	26.14
4	Ethane	3.083	669729.0	24914.4	26.88
6	Propane	5.900	1032511.0	27171.2	38.00

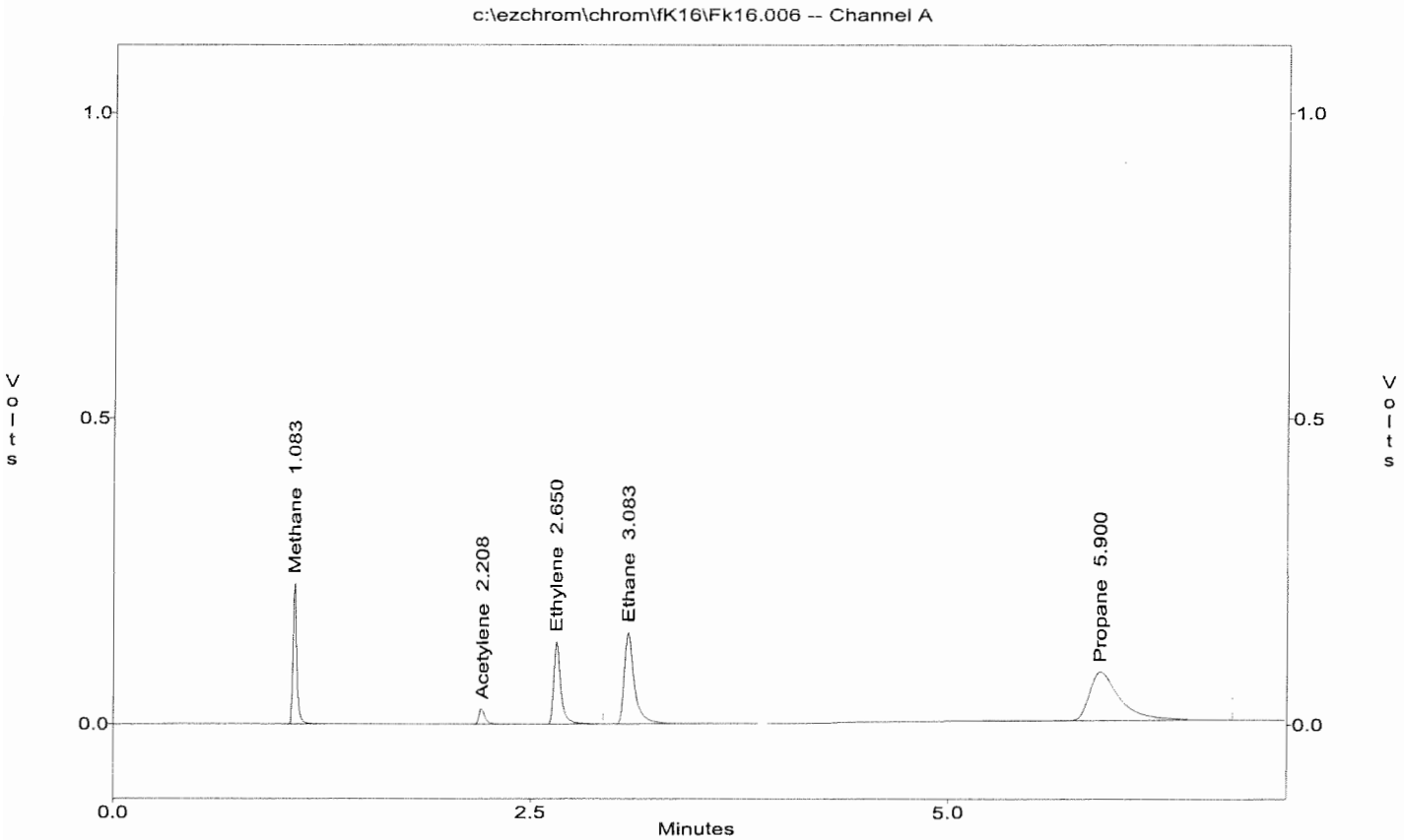


EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK16\Fk16.006
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK007WC
Acquired : Nov 16, 2011 09:20:36
Printed : Nov 16, 2011 09:27:37
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	389913.0	30507.1	12.78
2	Acetylene	2.208	64685.0	2647.6	24.43
3	Ethylene	2.650	410919.0	16311.8	25.19
4	Ethane	3.083	647051.0	24914.4	25.97
5	Propane	5.900	1038793.0	27171.2	38.23



INITIAL CALIBRATIONS

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	25.00X	40.00X	75.00X	100.00X	MEAN	%RSD
Methane	0.34	31626	33510	29954	29307	29338	29307	30507.1	5.6
Acetylene	0.55	2465	2595	2723	2744	2716	2643	2647.7	4.0
Ethylene	0.59	14655	16070	16617	16602	17123	16803	16311.8	5.4
Ethane	0.64	22748	24144	25289	25073	26185	26048	24914.4	5.2
Propane	0.93	29887	24871	26520	26214	27735	27800	27171.2	6.3

DG10K01.MET

FORM VI DGAS -2 1/96 Rev 2/2006

11/03/11

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53

COMPOUND	RT OF STANDARDS (MIN)						MEAN	RT WINDOW		RTWINDOW
	2.0X	10.0X	25.0X	40.0X	75.0X	100.0X	RT	FROM	TO	WIDTH
Methane	1.083	1.075	1.083	1.083	1.083	1.083	1.082	1.056	1.108	0.026
Acetylene	2.208	2.192	2.208	2.217	2.217	2.217	2.210	2.184	2.236	0.026
Ethylene	2.642	2.633	2.650	2.658	2.658	2.658	2.650	2.599	2.701	0.051
Ethane	3.067	3.067	3.075	3.083	3.092	3.083	3.078	3.028	3.128	0.050
Propane	5.942	5.883	5.900	5.917	5.917	5.908	5.911	5.835	5.987	0.076

DG10K01.MET

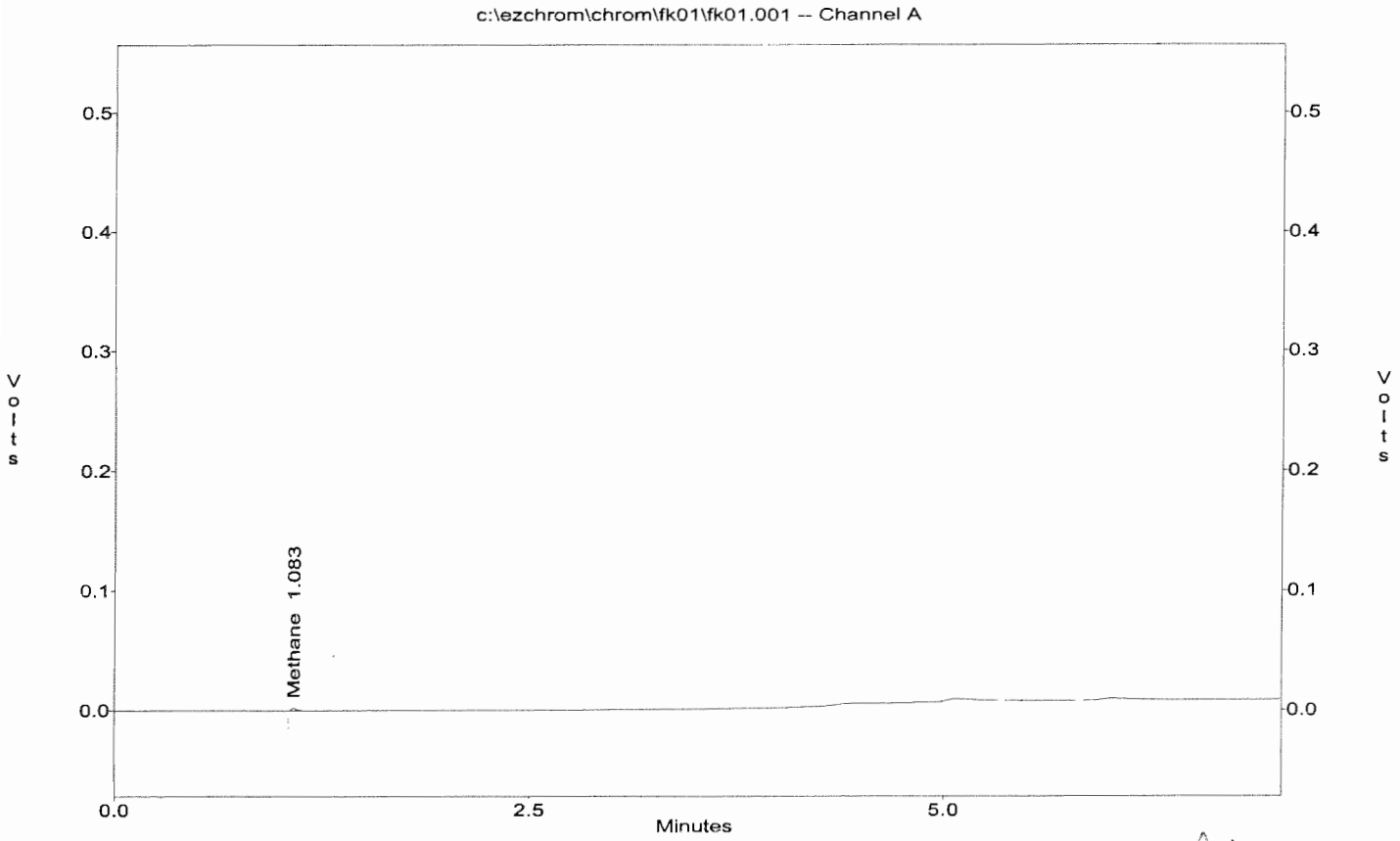
AS 11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.001
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : IB10J407
Acquired : Nov 01, 2011 10:52:41
Printed : Nov 01, 2011 16:47:49
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	4527.0	30507.1	0.15
--	Acetylene	2.233	0.0	0.0	0.00
--	Ethylene	2.667	0.0	0.0	0.00
--	Ethane	3.100	0.0	0.0	0.00
--	Propane	5.942	0.0	0.0	0.00



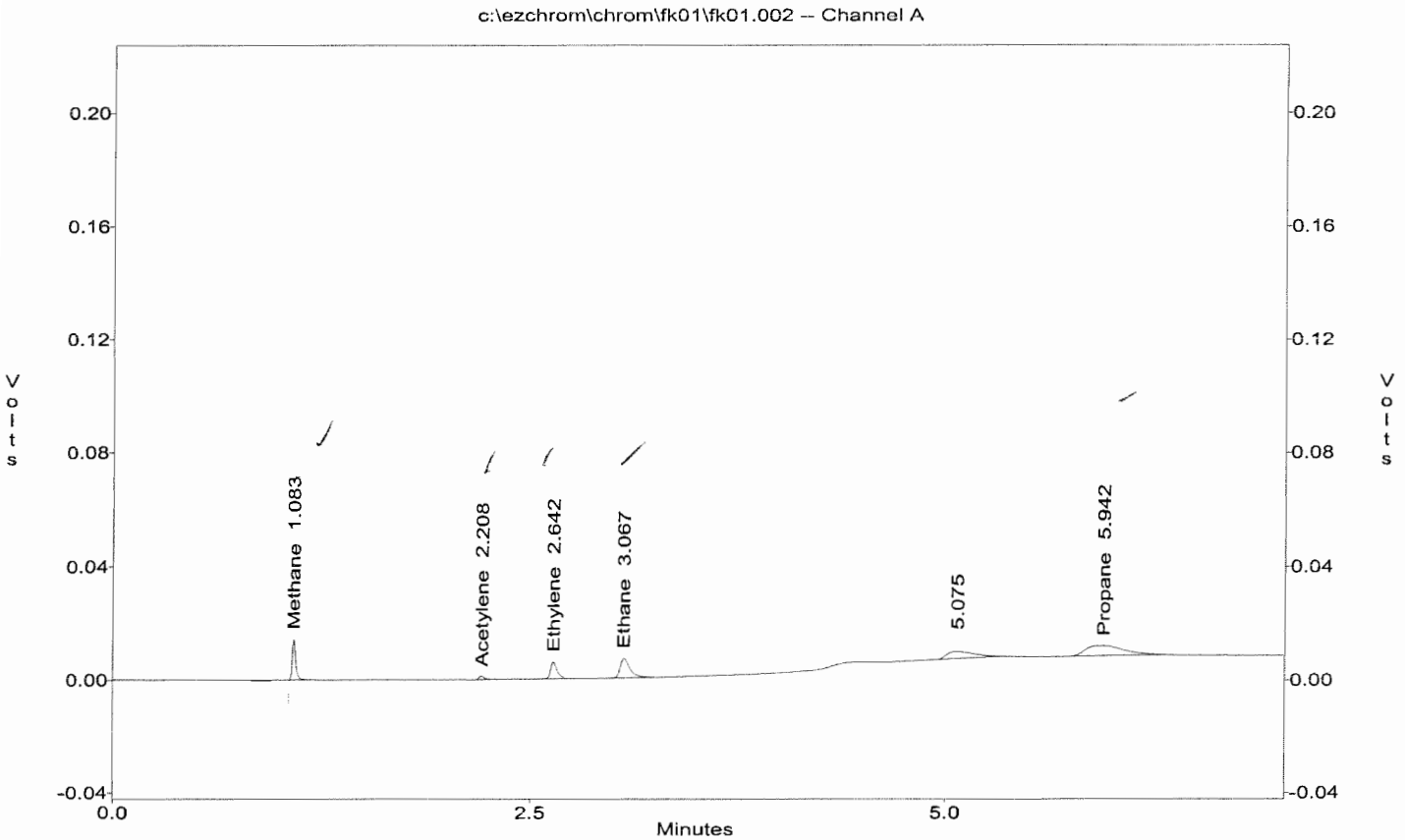
AS 11/3/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.002
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-01
Acquired : Nov 01, 2011 11:28:48
Printed : Nov 01, 2011 16:46:40
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	21439.0	30507.1	0.68
2	Acetylene	2.208	2712.0	2647.6	1.10
3	Ethylene	2.642	17381.0	16311.8	1.19
4	Ethane	3.067	28913.0	24914.4	1.27
6	Propane	5.942	55710.0	27171.2	1.86



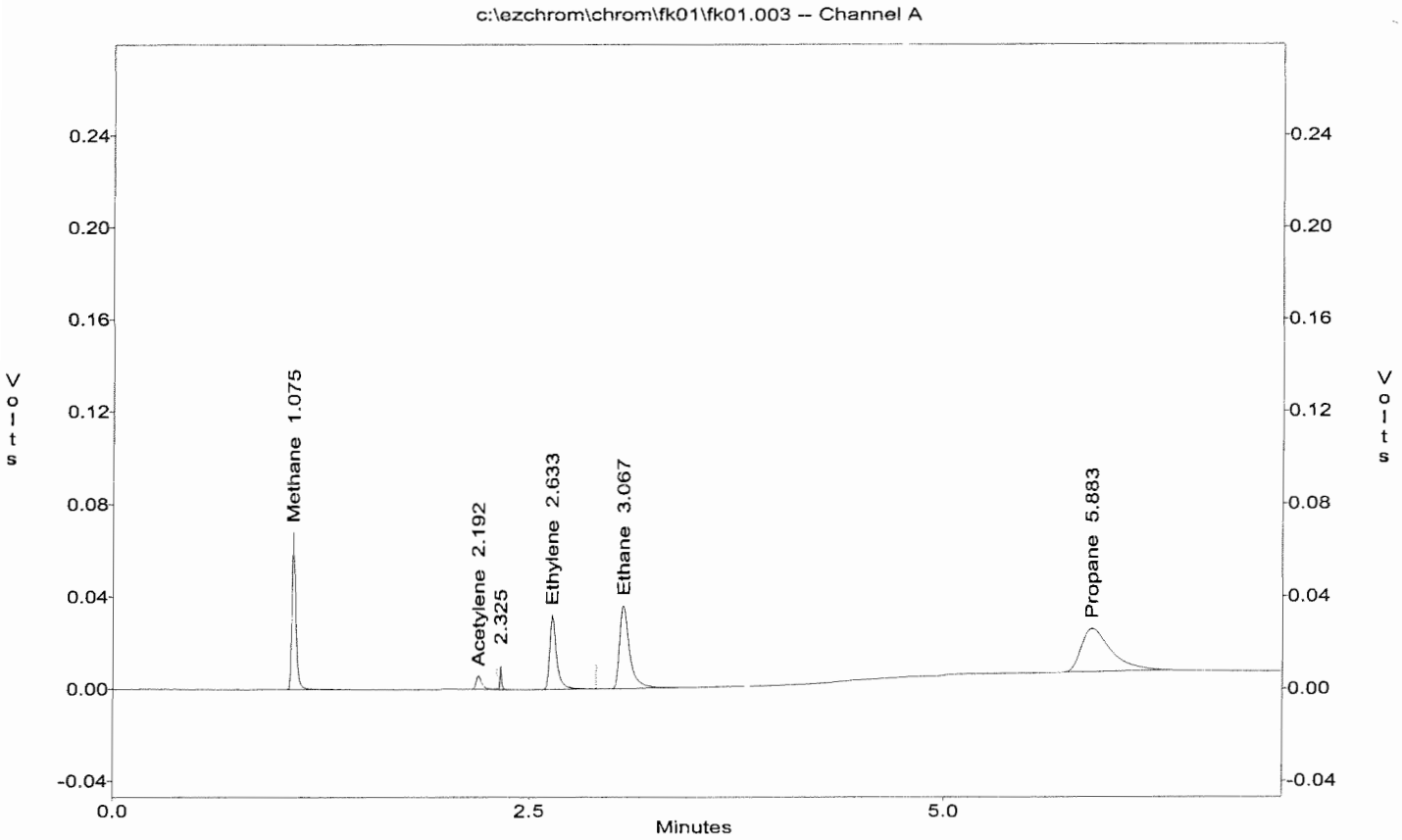
RX 11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.003
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-02
Acquired : Nov 01, 2011 11:41:49
Printed : Nov 01, 2011 16:46:57
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	113600.0	30507.1	3.39
2	Acetylene	2.192	14297.0	2647.6	5.51
4	Ethylene	2.633	95326.0	16311.8	5.93
5	Ethane	3.067	153436.0	24914.4	6.36
6	Propane	5.883	231819.0	27171.2	9.32



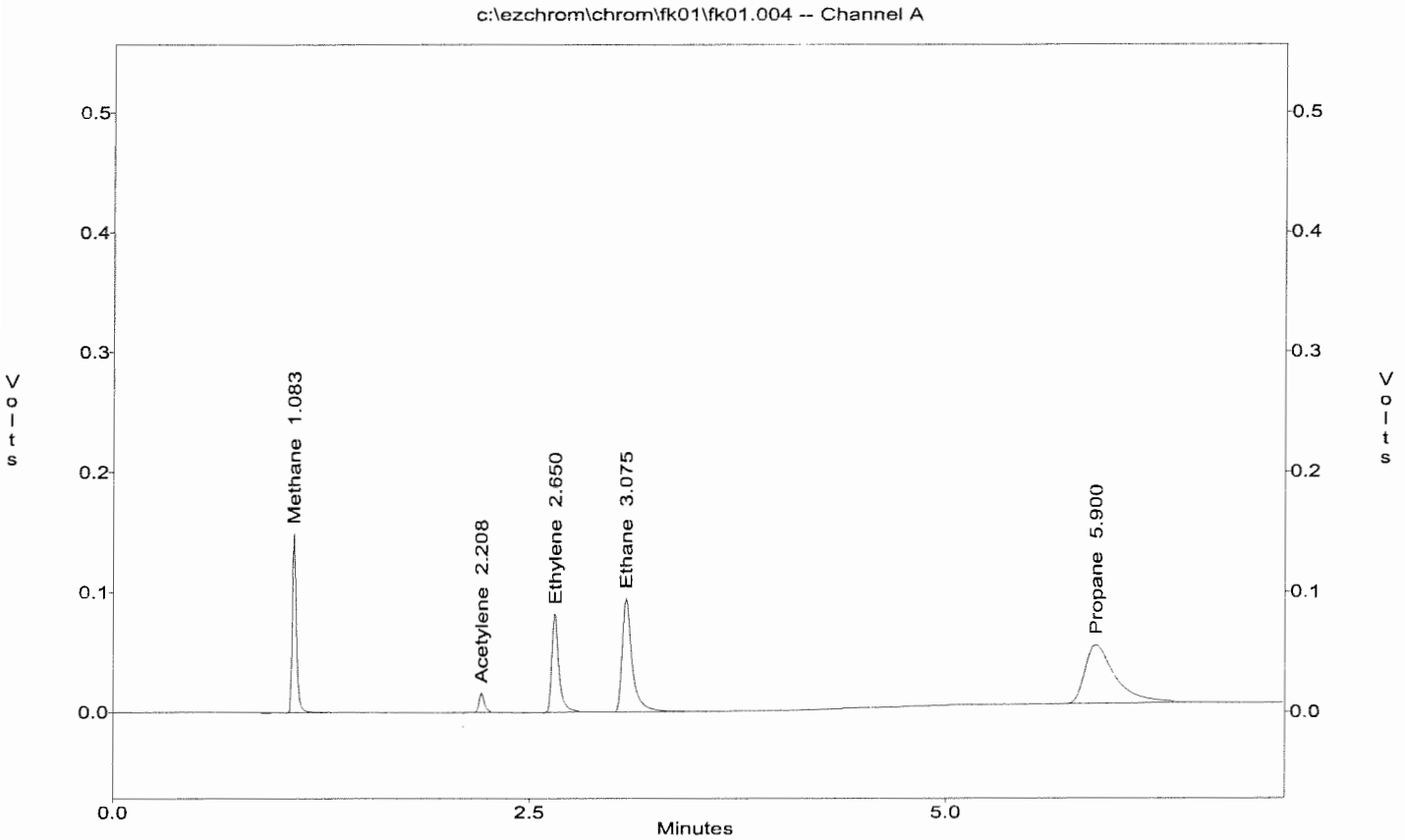
RA
11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.004
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-03
Acquired : Nov 01, 2011 11:55:36
Printed : Nov 01, 2011 16:47:09
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	253836.0	30507.1	8.47
2	Acetylene	2.208	37503.0	2647.6	13.77
3	Ethylene	2.650	246435.0	16311.8	14.83
4	Ethane	3.075	401839.0	24914.4	15.89
5	Propane	5.900	617912.0	27171.2	23.30



11/03/11

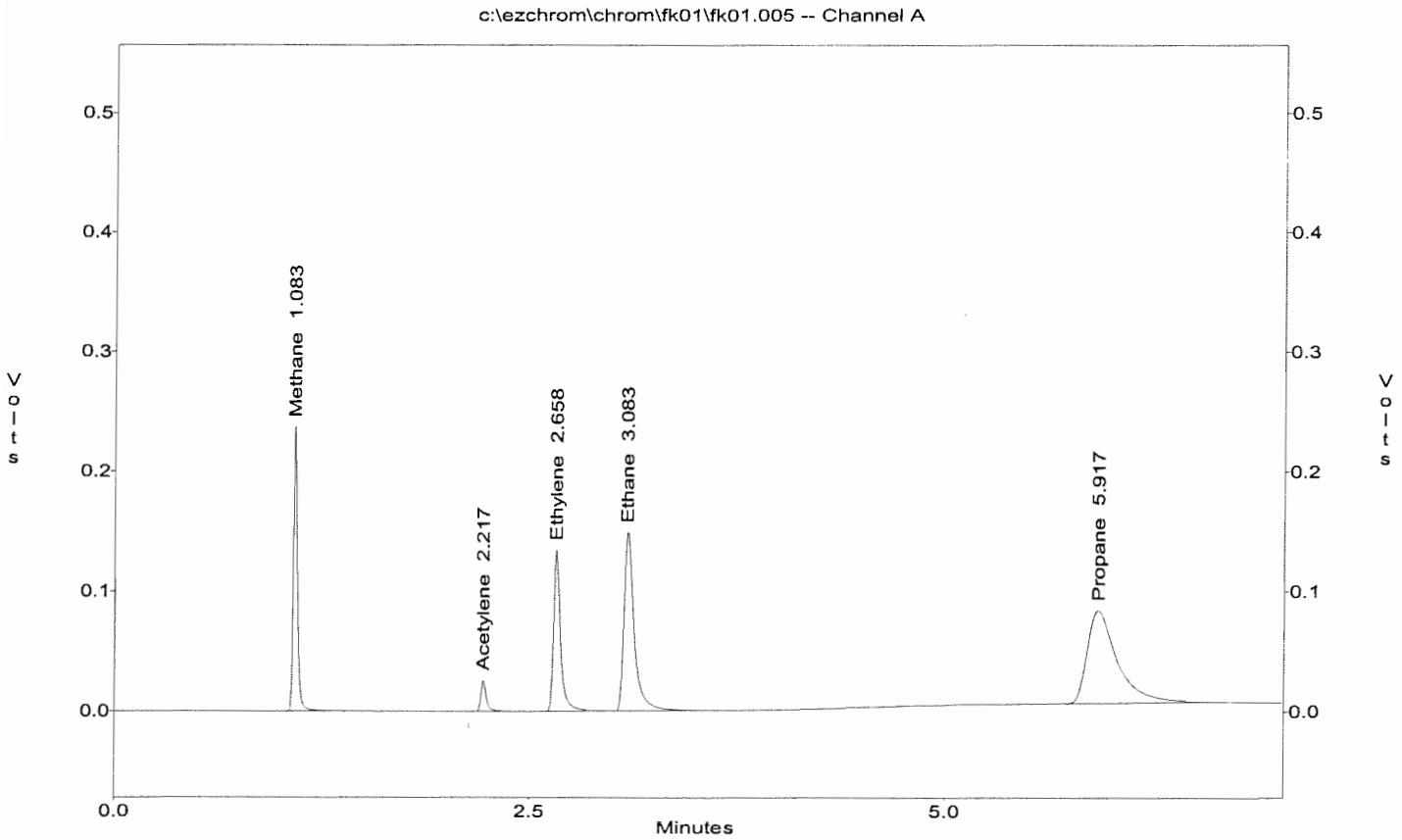
4026

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.005
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-04
Acquired : Nov 01, 2011 12:09:18
Printed : Nov 01, 2011 16:47:15
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	397403.0	30507.1	13.56
2	Acetylene	2.217	60362.0	2647.6	22.00
3	Ethylene	2.658	393970.0	16311.8	23.73
4	Ethane	3.083	637350.0	24914.4	25.42
5	Propane	5.917	977274.0	27171.2	37.28



AS
11/03/11

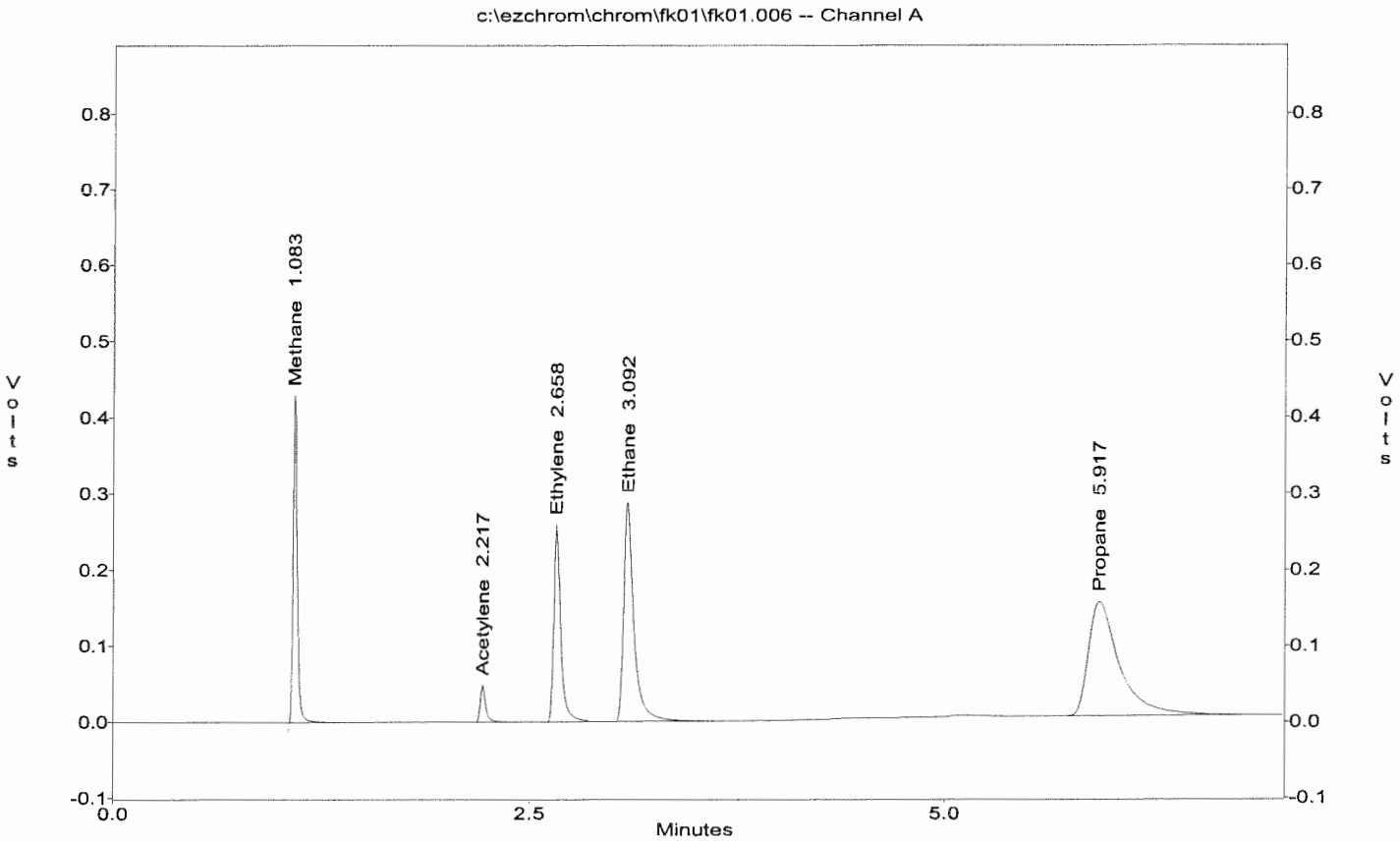
4027

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.006
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-05
Acquired : Nov 01, 2011 12:38:25
Printed : Nov 01, 2011 16:47:32
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	745775.0	30507.1	25.42
2	Acetylene	2.217	112175.0	2647.6	41.30
3	Ethylene	2.658	761815.0	16311.8	44.49
4	Ethane	3.092	1248240.0	24914.4	47.67
5	Propane	5.917	1938976.0	27171.2	69.91



AY
11/03/11

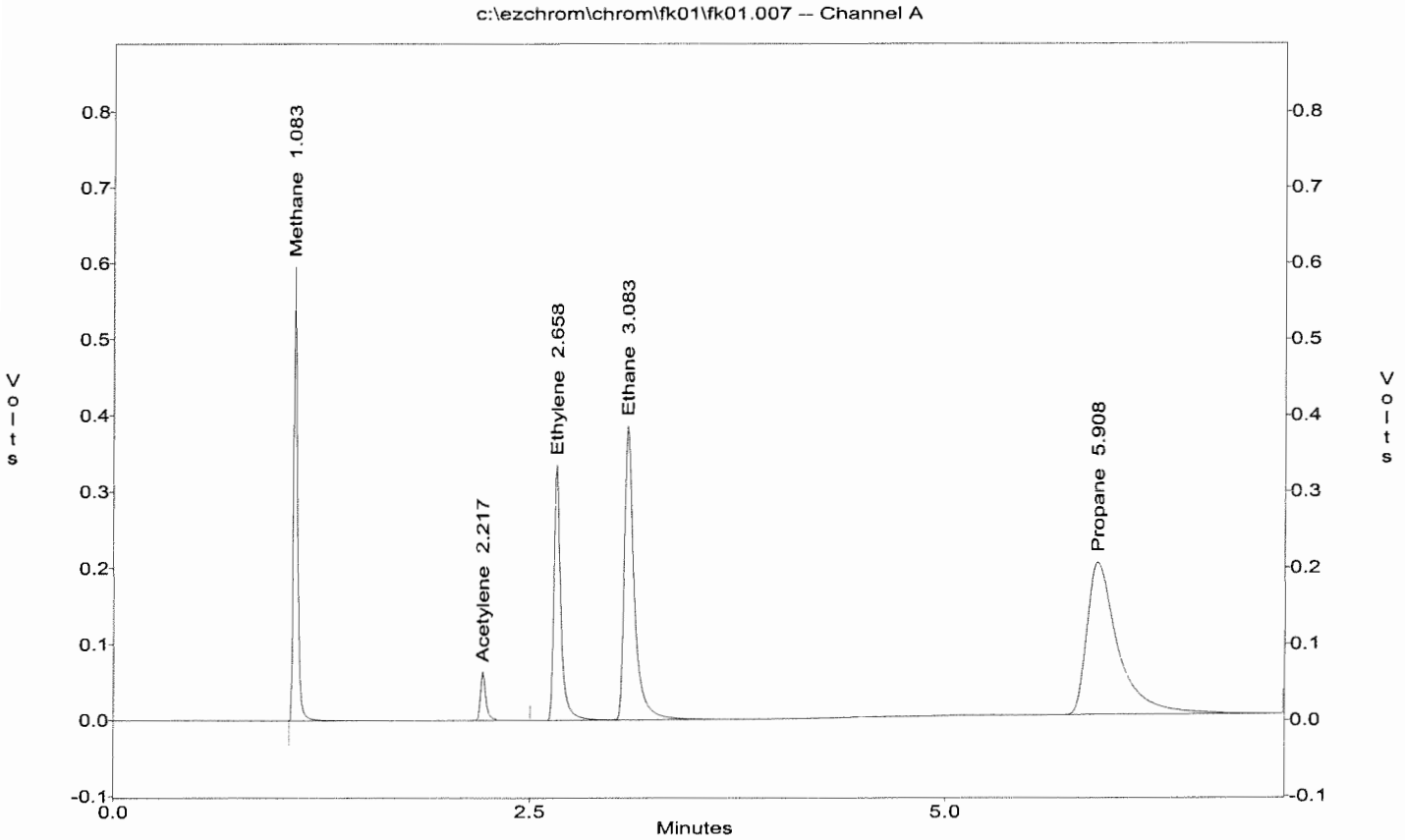
4028

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.007
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-06
Acquired : Nov 01, 2011 12:53:24
Printed : Nov 01, 2011 16:47:38
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	993496.0	30507.1	33.90
2	Acetylene	2.217	145648.0	2647.6	55.10
3	Ethylene	2.658	996770.0	16311.8	59.32
4	Ethane	3.083	1655327.0	24914.4	63.55
5	Propane	5.908	2591233.0	27171.2	93.21



AS 11/3/11

4029

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK01008A 11/01/2011 13:45
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	416247	13.64	1		15
Acetylene	2.175	2.149	2.201	22.0	2647.6	66913	25.27	15		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	437326	26.81	13		15
Ethane	3.075	3.025	3.125	25.4	24914.4	691218	27.74	9		15
Propane	5.900	5.824	5.976	37.3	27171.2	1111008	40.89	10		15

DG10K01.MET

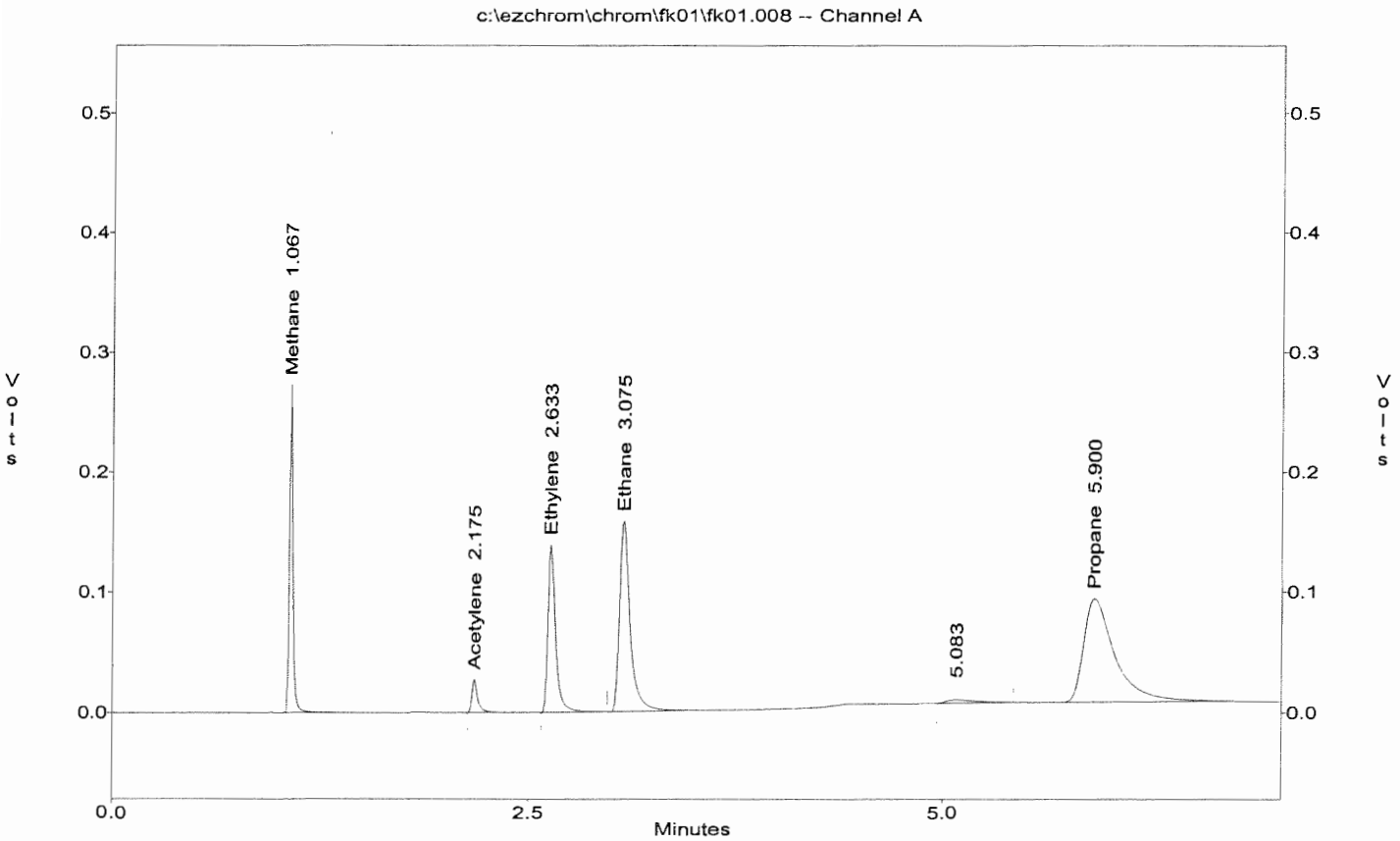
AJ
11/3/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.008
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : IDG10K0101
Acquired : Nov 01, 2011 13:45:55
Printed : Nov 01, 2011 16:47:55
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time (Min)	Area	Ave. CF	ESTD Conc. (ppb)
1	Methane	1.067	416247.0	30507.1	13.64
2	Acetylene	2.175	66913.0	2647.6	25.27
3	Ethylene	2.633	437326.0	16311.8	26.81
4	Ethane	3.075	691218.0	24914.4	27.74
6	Propane	5.900	1111008.0	27171.2	40.89



11/3/11

DAILY CALIBRATIONS

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK16003A 11/16/2011 08:44
CONC UNIT : ppb

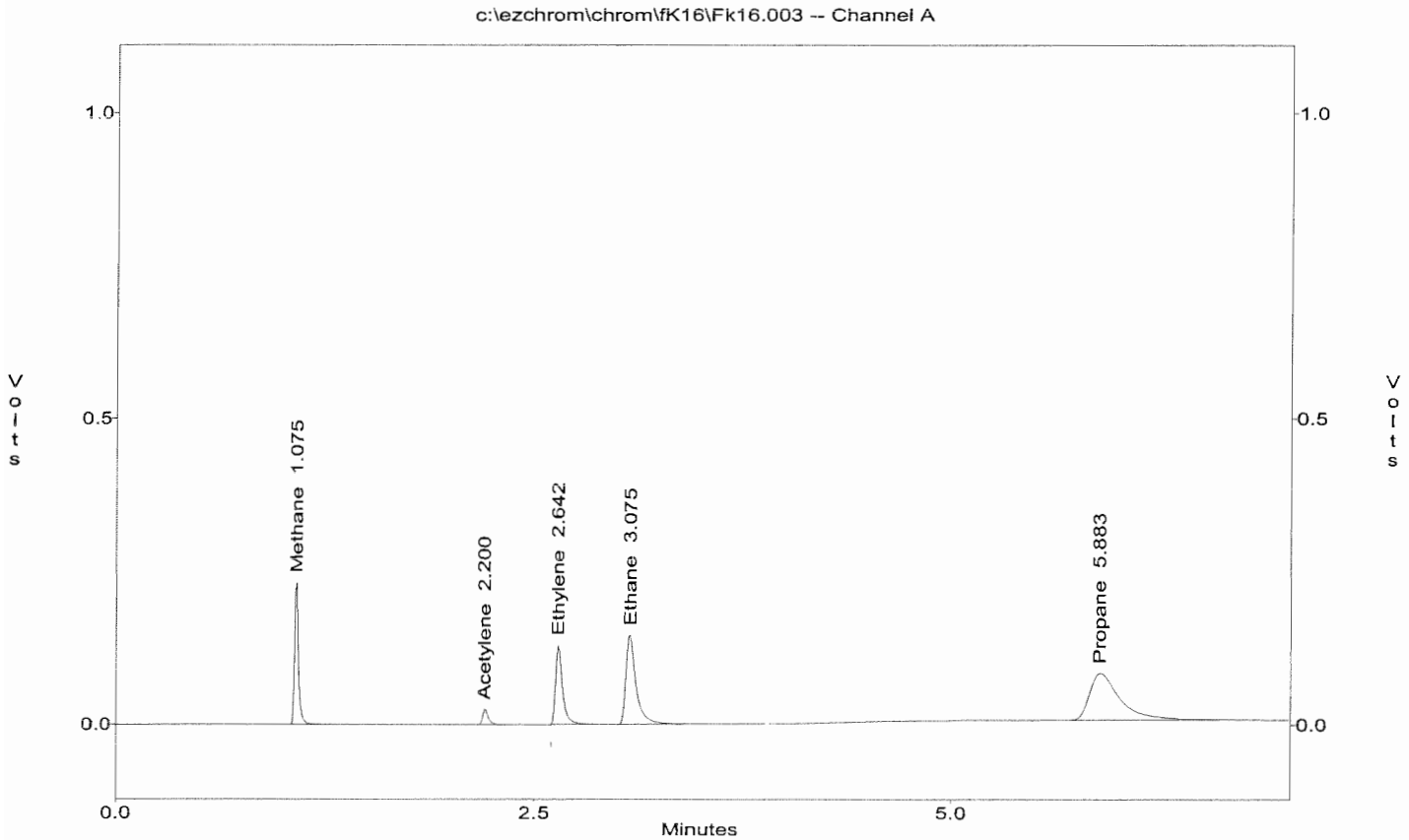
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	403575	13.23	-2		15
Acetylene	2.200	2.174	2.226	22.0	2647.6	58722	22.18	1		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	380618	23.33	-2		15
Ethane	3.075	3.025	3.125	25.4	24914.4	624791	25.08	-1		15
Propane	5.883	5.807	5.959	37.3	27171.2	973991	35.85	-4		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK16\Fk16.003
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01431
Acquired : Nov 16, 2011 08:44:26
Printed : Nov 16, 2011 08:51:28
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	403575.0	30507.1	13.23
2	Acetylene	2.200	58722.0	2647.6	22.18
3	Ethylene	2.642	380618.0	16311.8	23.33
4	Ethane	3.075	624791.0	24914.4	25.08
5	Propane	5.883	973991.0	27171.2	35.85



CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK16014A 11/16/2011 11:08
CONC UNIT : ppb

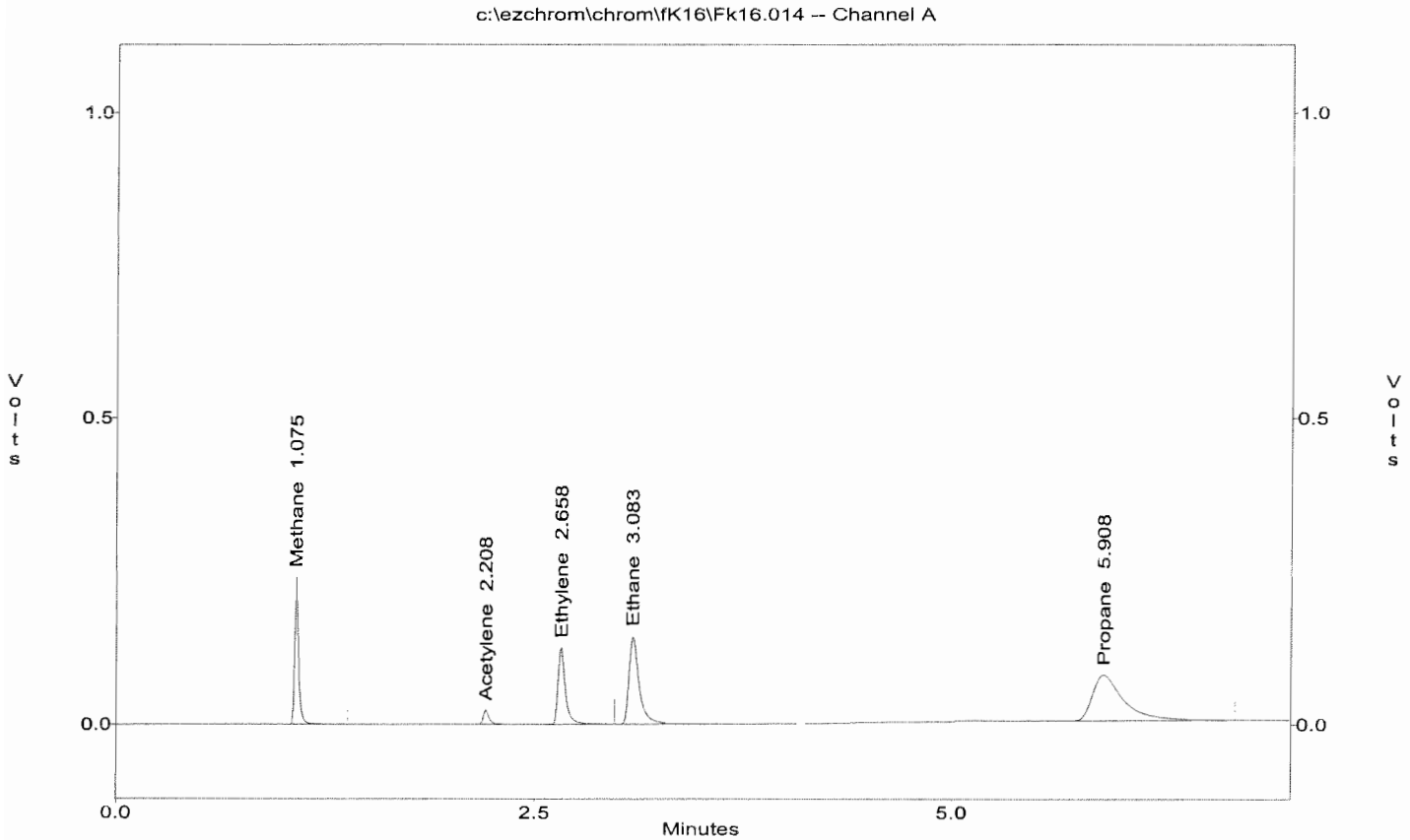
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	386222	12.66	-7		15
Acetylene	2.208	2.182	2.234	22.0	2647.6	57934	21.88	-1		15
Ethylene	2.658	2.607	2.709	23.7	16311.8	380694	23.34	-2		15
Ethane	3.083	3.033	3.133	25.4	24914.4	614897	24.68	-3		15
Propane	5.908	5.832	5.984	37.3	27171.2	978799	36.02	-3		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK16\Fk16.014
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01432
Acquired : Nov 16, 2011 11:08:33
Printed : Nov 16, 2011 11:15:34
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	386222.0	30507.1	12.66
2	Acetylene	2.208	57934.0	2647.6	21.88
3	Ethylene	2.658	380694.0	16311.8	23.34
4	Ethane	3.083	614897.0	24914.4	24.68
5	Propane	5.908	978799.0	27171.2	36.02



CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK16025A 11/16/2011 13:41
CONC UNIT : ppb

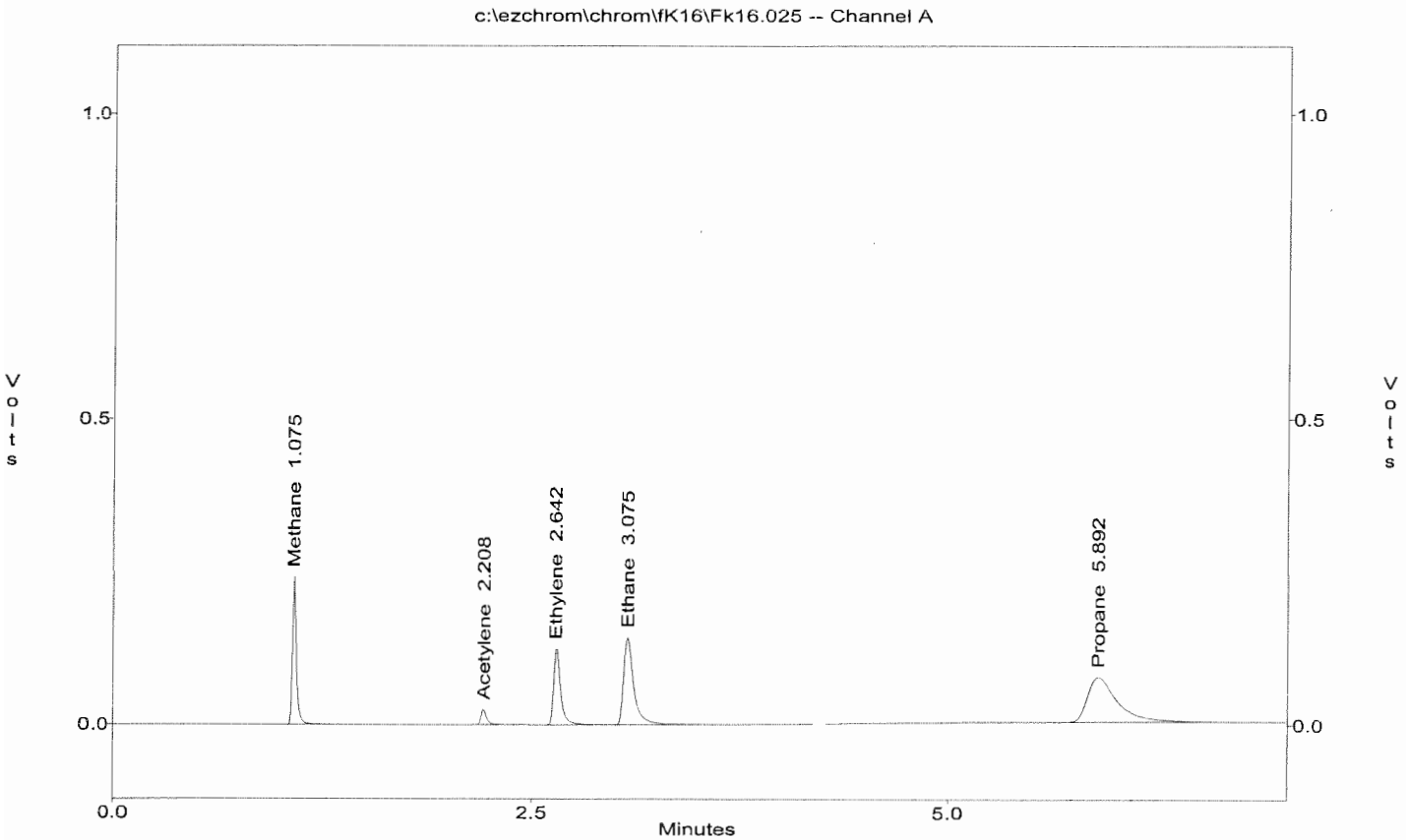
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	392256	12.86	-5		15
Acetylene	2.208	2.182	2.234	22.0	2647.6	58670	22.16	1		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	377723	23.16	-2		15
Ethane	3.075	3.025	3.125	25.4	24914.4	610331	24.50	-4		15
Propane	5.892	5.816	5.968	37.3	27171.2	928134	34.16	-8		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK16\Fk16.025
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01433
Acquired : Nov 16, 2011 13:41:32
Printed : Nov 16, 2011 13:48:34
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	392256.0	30507.1	12.86
2	Acetylene	2.208	58670.0	2647.6	22.16
3	Ethylene	2.642	377723.0	16311.8	23.16
4	Ethane	3.075	610331.0	24914.4	24.50
5	Propane	5.892	928134.0	27171.2	34.16



ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGAS ICAL

Book #:	A10-025
Instrument No.:	10
Analytical Sequence:	FKC1
Method File:	DG1CKC1
Analytical Batch:	N/A

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGAS ICAL SSSA-05-01-10	500 ppm
DGAS ICV SSSA-05-01-7	500 ppm
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: SC

Date: 11/01/11

Disposed By: SC

Date Disposed: 11/01/11

Method: Dg10k01.met Batch: Fk01.seq Data: Fk01.011 - [Batch: fk01.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Run Type	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
1	Unknown	IB10K407	dg10k01.met	FK01.001	100ml 1	1	
2	Unknown	DG10K01-01	dg10k01.met	FK01.002	1	1	
3	Unknown	DG10K01-02	dg10k01.met	FK01.003	1	1	
4	Unknown	DG10K01-03	dg10k01.met	FK01.004	1	1	DGAS ICAL
5	Unknown	DG10K01-04	dg10k01.met	FK01.005	1	1	
6	Unknown	DG10K01-05	dg10k01.met	FK01.006	1	1	
7	Unknown	DG10K01-06	dg10k01.met	FK01.007	1	1	
8	Unknown	IDG10K0101	dg10k01.met	FK01.008	1	1	DGAS ICV
9	Unknown	IB	dg10k01.met	FK01.009	1	1	
10	Unknown	IB	dg10k01.met	FK01.010	1	1	
11	Unknown	IB	dg10k01.met	FK01.011	1	1	
12	Unknown	IB	dg10k01.met	FK01.012	1	1	
13	Unknown	IB	dg10k01.met	FK01.013	1	1	
14	Unknown	IB	dg10k01.met	FK01.014	1	1	
15	Unknown	IB	dg10k01.met	FK01.015	1	1	FINAL
16	Unknown	IB	dg10k01.met	FK01.016	1	1	
17	Unknown	IB	dg10k01.met	FK01.017	1	1	
18	Unknown	IB	dg10k01.met	FK01.018	1	1	
19	Unknown	IB	dg10k01.met	FK01.019	1	1	
20	Unknown	IB	dg10k01.met	FK01.020	1	1	
21	Unknown	IB	dg10k01.met	FK01.021	1	1	
22	Unknown	IB	dg10k01.met	FK01.022	1	1	
23	Unknown	IB	dg10k01.met	FK01.023	1	1	
24	Unknown	IB	dg10k01.met	FK01.024	1	1	
25	Unknown	IB	dg10k01.met	FK01.025	1	1	
26	Unknown	IB	dg10k01.met	FK01.026	1	1	
27	Unknown	IB	dg10k01.met	FK01.027	1	1	
28	Unknown	IB	dg10k01.met	FK01.028	1	1	
29	Unknown	IB	dg10k01.met	FK01.029	1	1	
30	Unknown	IB	dg10k01.met	FK01.030	1	1	
31	Unknown	IB	dg10k01.met	FK01.031	1	1	
32	Unknown	IB	dg10k01.met	FK01.032	1	1	
33	Unknown	IB	dg10k01.met	FK01.033	1	1	
34	Unknown	IB	dg10k01.met	FK01.034	1	1	

EC 11/01/11

Waiting For Trigger...

Start | EZChrom Chromatograp... | Method: Dg10k01.... | Calculator | Method: Dg10k01.met | untitled - Paint | Exploring | Tuesday, November 01, 2011

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGK007W: K113, K119, K122, K077

Book #:	A10-026
Instrument No.:	10
Analytical Sequence:	FK16
Method File:	DG10K01
Analytical Batch:	CDG10K01431

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGas DCC 555B-07-37-3	200
Temperature (°C) RN 11/16/11 ~~20~~ 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: RN

Date: 11/16/11

Disposed By: RN

Date Disposed: 11/16/11

Method: Dg10k01.met Batch: Fk16.seq Data: Fk16.050 - [Batch: fk16.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Sample ID	Method	Filename	Sample Amt.		Mult.	Description
1	IB	dg10k01.met	FK16.001	100mL	1	1	
2	IB10K431	dg10k01.met	FK16.002		1	1	
3	CDG10K01431	dg10k01.met	FK16.003		1	1	
4	DGK007WB	dg10k01.met	FK16.004		1	1	
5	DGK007WL	dg10k01.met	FK16.005		1	1	
6	DGK007WC	dg10k01.met	FK16.006		1	1	
7	11K113-03	dg10k01.met	FK16.007		1	1	
8	11K113-03T DF=20 Conf only	dg10k01.met	FK16.008	5mL	1	20	
9	11K113-03I DF=40	dg10k01.met	FK16.009	2.5mL	1	40	
10	11K113-04	dg10k01.met	FK16.010	100mL	1	1	
11	TEST	dg10k01.met	FK16.011		1	1	
12	11K113-04I DF=200	dg10k01.met	FK16.012	5mL (10x)	1	200	
13	IB	dg10k01.met	FK16.013	—	1	1	
14	CDG10K01432	dg10k01.met	FK16.014	100mL	1	1	
15	11K113-04T DF=5	dg10k01.met	FK16.015	20mL	1	5	
16	11K119-01	dg10k01.met	FK16.016	100mL	1	1	
17	11K119-02	dg10k01.met	FK16.017		1	1	
18	11K119-02T DF=800 Conf only	dg10k01.met	FK16.018	2.5mL (20x)	1	800	
19	11K119-02I DF=1000	dg10k01.met	FK16.019	2mL (20x)	1	1000	
20	11K119-03	dg10k01.met	FK16.020	100mL	1	1	
21	11K119-04	dg10k01.met	FK16.021		1	1	
22	11K119-05	dg10k01.met	FK16.022		1	1	
23	11K119-03T DF=400	dg10k01.met	FK16.023	5mL (20x)	1	400	
24	11K119-05T DF=1000	dg10k01.met	FK16.024	2mL (20x)	1	1000	
25	CDG10K01433	dg10k01.met	FK16.025	100mL	1	1	
26	11K122-02	dg10k01.met	FK16.026		1	1	FINAL
27	11K122-03	dg10k01.met	FK16.027		1	1	
28	11K122-03T DF=5	dg10k01.met	FK16.028	20mL	1	5	
29	11K122-03I DF=500	dg10k01.met	FK16.029	4mL (20x)	1	500	
30	11K122-04	dg10k01.met	FK16.030	100mL	1	1	
31	11K122-04T DF=10	dg10k01.met	FK16.031	10mL	1	10	
32	11K122-04I DF=500	dg10k01.met	FK16.032	4mL (20x)	1	500	
33	11K077-02	dg10k01.met	FK16.033	100mL	1	1	
34	11K077-03	dg10k01.met	FK16.034		1	1	

Waiting For Trigger...

Start | EZChrom Chromatograp... | Method: Dg10k01.... | Method: Dg10k01.met ... | Exploring - Export | Calculator | untitled | Wednesday, November 16, 2011

Method: Dg10k01.met Batch: Fk16.seq Data: Fk16.050 - [Batch: fk16.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Method Data Batch Setup Batch Preview Single STOP Recalib Analyze Reports

Run	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
35	11K077-03T DF=50	dg10k01.met	FK16.035	2uL 1	50	
36	11K077-04	dg10k01.met	FK16.036	100uL 1	1	
37	11K077-05	dg10k01.met	FK16.037	1	1	
38	11K077-06	dg10k01.met	FK16.038	1	1	
39	CDG10K01434	dg10k01.met	FK16.039	1	1	
40	11K077-07	dg10k01.met	FK16.040	1	1	
41	11K077-08	dg10k01.met	FK16.041	1	1	
42	11K077-10	dg10k01.met	FK16.042	1	1	
43	11K077-11	dg10k01.met	FK16.043	1	1	
44	11K077-12	dg10k01.met	FK16.044	1	1	
45	11K077-11W Conf only	dg10k01.met	FK16.045	1	1	
46	11K119-01W } Conf only	dg10k01.met	FK16.046	1	1	
47	11K119-04W	dg10k01.met	FK16.047	1	1	
48	CDG10K01435 Not evaluated	dg10k01.met	FK16.048	1	1	
49	CDG10K01435	dg10k01.met	FK16.049	1	1	
50	IB	dg10k01.met	FK16.050	1	1	
51	IB	dg10k01.met	FK16.051	1	1	
52	IB	dg10k01.met	FK16.052	1	1	FINAL
53	IB	dg10k01.met	FK16.053	1	1	
54	IB	dg10k01.met	FK16.054	1	1	
55	IB	dg10k01.met	FK16.055	1	1	
56	IB	dg10k01.met	FK16.056	1	1	
57	IB	dg10k01.met	FK16.057	1	1	
58	IB	dg10k01.met	FK16.058	1	1	
59	IB	dg10k01.met	FK16.059	1	1	
60	IB	dg10k01.met	FK16.060	1	1	
61						
62						
63						
64						
65						
66						
67						
68						

RN 11/16/11

Instrument 2: TO10

Start | EZChrom Chromatogra... | Method: Dg10k01.... | Method: Dg10k01.met... | Exploring - Export | Calculator | untitled - P... | Wednesday, November 16, 201

Sheet

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/01/11 Time: 10:00 End Date: 11/01/11 Time: 10:40

PREPARATION BATCH # N/A

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DG10K01-01	39	4	N/A	
02	-02			N/A	
03	-03			N/A	DGAS ICAL
04	-04			N/A	
05	-05			N/A	
06	-06			N/A	
07	IDG10K01 01			N/A	DGAS ICV
08					
09					
10					
11					
12					
13					SC 11/01/11
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Standards	ID	Amount Added (µl)
LCS/MS / ICV	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic free
He	Air Gas
ICAL STD (500 ppm)	SSSA-05-01-10 (SPECIALTY AIR)
ICV STD 500 ppm	SSSA-05-01-7 (MATHESON)

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #: (ESS)	28100705

Comments:

1) 0.08 ml ICAL STD + 3.92 ml He
2) 0.4 ml 3.6 ml
3) 1.0 ml 3.0 ml
4) 1.6 ml 2.4 ml
5) 3.0 ml 1.0 ml
6) 4.0 ml 0 ml

Prepared By: SC

Standard Added By: SC

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/16/11 Time: 08:15 End Date: 11/16/11 Time: 08:50

PREPARATION BATCH # DCK007W

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DCK007WB	39	4	NA	
02	↓ C	↓	↓	N/A	
03	↓ C	↓	↓	N/A	
04	11K1B-03	↓	↓	✓	
05	↓ 04	↓	↓	✓	
06	11K119-01	↓	↓	✓	
07	↓ 02	↓	↓	~7	
08	↓ 03	↓	↓	✓	
09	↓ 04	↓	↓	✓	
10	↓ 05	↓	↓	~7	
11	11K122-02	↓	↓	✓	
12	↓ 03	↓	↓	~7	
13	↓ 04	↓	↓	~7	
14	11K077 ~~11K097~~-02	↓	↓	✓	
15	RA 11/16/11 ↓ 03	↓	↓	✓	
16	↓ 04	↓	↓	✓	
17	↓ 05	↓	↓	✓	
18	↓ 06	↓	↓	✓	
19	↓ 07	↓	↓	✓	
20	↓ 08	↓	↓	✓	
21	↓ 10	↓	↓	✓	
22	↓ 12	↓	↓	✓	
23	↓ 11	↓	↓	✓	
24					
25			RA 11/16/11		

Standards	ID	Amount Added (µl)
LCS/MS	SSSA-05-017	1600

Reagent	Source
H_2O	Organic Free
He	AirGas

Thermometer ID #:	~~28~~ RSK175-01 RA 11/16/11
Tedlar Bag Lot #:	28100705

Comments:

Prepared By: RA

Standard Added By: RA

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

SDG#: 11K119

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K119

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

A total of three (3) water samples were received on 11/14/11 for Dissolved Metals by ICP analysis, Method 3010A/6010B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source. Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for IPK034WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG. Analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED METALS BY TRACE ICP

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K119
Instrument ID : T-ID8

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IPK034WB	1	NA	11/23/1113:29	11/22/1113:00	ID8K020063	ID8K020061	IPK034W	Method Blank
LCS1W	IPK034WL	1	NA	11/23/1113:32	11/22/1113:00	ID8K020064	ID8K020061	IPK034W	Lab Control Sample (LCS)
LCD1W	IPK034WC	1	NA	11/23/1113:34	11/22/1113:00	ID8K020065	ID8K020061	IPK034W	LCS Duplicate
MW-70-PMW09-124AS	K119-01A	1	NA	12/01/1116:33	11/22/1113:00	ID8L001066	ID8L001064	IPK034W	Analytical Spike Sample
MW-70-PMW09-124	K119-01W	1	NA	12/01/1116:37	11/22/1113:00	ID8L001067	ID8L001064	IPK034W	Field Sample
MW-70-PMW09-124DL	K119-01J	5	NA	12/01/1116:40	11/22/1113:00	ID8L001068	ID8L001064	IPK034W	Diluted Sample
IR-70-SHB113-125	K119-02	1	NA	11/23/1114:18	11/22/1113:00	ID8K020079	ID8K020073	IPK034W	Field Sample
MW-70-PMW10-126	K119-03	1	NA	11/23/1114:21	11/22/1113:00	ID8K020080	ID8K020073	IPK034W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/14/11 10:49
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/14/11
SDG NO.	: 11K119	Date Extracted:	11/22/11 13:00
Sample ID:	MW-70-PMW09-124	Date Analyzed:	12/01/11 16:37
Lab Samp ID:	K119-01W	Dilution Factor:	1
Lab File ID:	ID8L001067	Matrix :	WATER
Ext Btch ID:	IPK034W	% Moisture :	NA
Calib. Ref.:	ID8L001064	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	0.436	0.200	0.0400
Manganese	0.0988J	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/14/11 12:03
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/14/11
SDG NO.	: 11K119	Date Extracted:	11/22/11 13:00
Sample ID:	IR-70-SHB113-125	Date Analyzed:	11/23/11 14:18
Lab Samp ID:	K119-02	Dilution Factor:	1
Lab File ID:	ID8K020079	Matrix :	WATER
Ext Btch ID:	IPK034W	% Moisture :	NA
Calib. Ref.:	ID8K020073	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	0.0176J	0.200	0.00500
Iron	3.64	0.200	0.0400
Manganese	1.08	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/14/11 13:07
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/14/11
SDG NO.	: 11K119	Date Extracted:	11/22/11 13:00
Sample ID:	MW-70-PMW10-126	Date Analyzed:	11/23/11 14:21
Lab Samp ID:	K119-03	Dilution Factor:	1
Lab File ID:	ID8K020080	Matrix :	WATER
Ext Btch ID:	IPK034W	% Moisture :	NA
Calib. Ref.:	ID8K020073	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	0.774	0.200	0.0400
Manganese	0.324	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/22/11
SDG NO.	: 11K119	Date Extracted:	11/22/11 13:00
Sample ID:	MBLK1W	Date Analyzed:	11/23/11 13:29
Lab Samp ID:	IPK034WB	Dilution Factor:	1
Lab File ID:	ID8K020063	Matrix :	WATER
Ext Btch ID:	IPK034W	% Moisture :	NA
Calib. Ref.:	ID8K020061	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	ND	0.200	0.0400
Manganese	ND	0.200	0.00300

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K119
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	IPK034WB	IPK034WL	IPK034WC		
LAB FILE ID:	ID8K020063	ID8K020064	ID8K020065		
DATIME EXTRCTD:	11/22/1113:00	11/22/1113:00	11/22/1113:00	DATE COLLECTED:	NA
DATIME ANALYZD:	11/23/1113:29	11/23/1113:32	11/23/1113:34	DATE RECEIVED:	11/22/11
PREP. BATCH:	IPK034W	IPK034W	IPK034W		
CALIB. REF:	ID8K020061	ID8K020061	ID8K020061		

ACCESSION:

PARAMETER	BLNK RSLT mg/L	SPIKE AMT mg/L	BS RSLT mg/L	BS % REC	SPIKE AMT mg/L	BSD RSLT mg/L	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	ND	.5	.535	107	.5	.532	106	1	80-120	20
Iron	ND	5	5.2	104	5	5.11	102	2	80-120	20
Manganese	ND	.5	.502	100	.5	.502	100	0	80-120	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K119
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	MW-70-PMW09-124	MW-70-PMW09-124DL		
EMAX SAMP ID:	K119-01W	K119-01J		
LAB FILE ID:	ID8L001067	ID8L001068		
DATE EXTRACTED:	11/22/1113:00	11/22/1113:00	DATE COLLECTED:	11/14/11 10:49
DATE ANALYZED:	12/01/1116:37	12/01/1116:40	DATE RECEIVED:	11/14/11
PREP. BATCH:	IPK034W	IPK034W		
CALIB. REF:	ID8L001064	ID8L001064		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SERIAL DIL RSLT (mg/L)	DIF RSLT %	QC LIMIT (%)
Arsenic	ND	ND	0	10
Iron	0.436	0.452J	NA	10
Manganese	0.0988J	0.110J	NA	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K119
METHOD: METHOD 3010A/6010B (DISSOLVED)

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MATRIX: WATER % MOISTURE: NA
DILTN FACTR: 1 1
SAMPLE ID: MW-70-PMW09-124
CONTROL NO.: K119-01W K119-01A
LAB FILE ID: ID8L001067 ID8L001066
DATIME EXTRCTD: 11/22/1113:00 11/22/1113:00 DATE COLLECTED: 11/14/11 10:49
DATIME ANALYZD: 12/01/1116:37 12/01/1116:33 DATE RECEIVED: 11/14/11
PREP. BATCH: IPK034W IPK034W
CALIB. REF: ID8L001064 ID8L001064

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	AS RSLT (mg/L)	AS % REC	QC LIMIT (%)
Arsenic	ND	.5	.587	117	75-125
Iron	.436	5	6.15	114	75-125
Manganese	.0988J	.5	.595	99	75-125

ICP QC CHECK TABLE

QC	ICV	CCV	ICSAB	ICSA	MLCV
Limit%	90-110	90-110	80-120	80-120	80-120
Comp	mg/L	mg/L	mg/L	mg/L	mg\L
Al	100	100	400	400	200
Sb	1.5	1.5	1	0	5
As	1	1	1	0	1
Ba	2	2	0.5	0	5
Be	1.5	1.5	0.5	0	5
B	2.5	2.5	0.5	0	5
Cd	2	2	1	0	5
Ca	75	75	500	500	250
Cr	2.5	2.5	0.5	0	5
Co	1	1	0.5	0	1
Cu	2.5	2.5	0.5	0	5
Fe	25	25	200	200	200
Pb	2.5	2.5	1	0	5
Li	0.5	0.5	1	0	0.5
Mg	60	60	200	200	100
Mn	2.5	2.5	0.5	0	5
Mo	2.5	2.5	1	0	5
Ni	2.5	2.5	1	0	5
K	60	60	75	0	250
Se	1	1	1	0	1
Ag	0.5	0.5	1	0	0.5
Na	60	60	75	0	150
Sr	0.5	0.5	0.5	0	0.5
Tl	2.5	2.5	1	0	5
Sn	0.5	0.5	1	0	0.5
Ti	0.5	0.5	1	0	0.5
V	1.5	1.5	0.5	0	5
Zn	2.5	2.5	1	0	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 11/23/11 10:19

End Date: 11/23/11 17:15

SOP #	Rev. #
☑ EMAX-6010	7
☐ EMAX-6010C	1
☐ EMAX-200.7	2
☐ EMAX-	

Book #: AD8-021

Instrument No.: D8

Analytical Batch: 108K020

Analytical Sequence: S-11K6010 (v30)

Method File: 11K6010 (v30)

Database: EMAX14

Comments:

CCB3 Zn > 3x IDL. However associated sample K575-01 detected 10x > than blank conc. Thus not corrective action ~~sample~~ 11/29/11

CCB4 Zn > 3x IDL. However associated sample K201-02 and K201-03 detected 10x > than blank conc. Thus no corrective action.

	STANDARDS ID		STANDARDS ID
S0	SM1B14-7805	S30	SM1B14-6802
S1	NA	S31	-6803
S2		ICV	-8201
S3		CCV	-8201
S4		ICSA	-8502
S5		ICSAB	-6702
S6		CRI/MRL 1	-8104
S7		MRL2	-7401
S8			
S9			
S10			
S11			
S12			
S16			
S17			
S18			
S20	SM1B14-8461		
S21	-6503		
S22	-6504		
S23	-8402		
S24	-6702		
S25	-6703		
S26	-7401		
S27	-7402		
S28	-7403		
S29	-7404		

Analyzed By: pn

Date: 11/23/11

SEQUENCE FILE : ID8K020

4-18	19-33	34-43	44-53	54-63
LFID	LSID	TIME	DATE	DF
ID8K020001	Blank	10:19	11/23/11	1.000
ID8K020002	S20	10:22	11/23/11	1.000
ID8K020003	S21	10:25	11/23/11	1.000
ID8K020004	S22	10:28	11/23/11	1.000
ID8K020005	S23	10:31	11/23/11	1.000
ID8K020006	S24	10:34	11/23/11	1.000
ID8K020007	S25	10:37	11/23/11	1.000
ID8K020008	S26	10:40	11/23/11	1.000
ID8K020009	S27	10:43	11/23/11	1.000
ID8K020010	S28	10:47	11/23/11	1.000
ID8K020011	S29	10:50	11/23/11	1.000
ID8K020012	S30	10:53	11/23/11	1.000
ID8K020013	S31	10:56	11/23/11	1.000
ID8K020014	ICV	10:58	11/23/11	1.000
ID8K020015	ICB	11:01	11/23/11	1.000
ID8K020016	MRLK2301	11:05	11/23/11	1.000
ID8K020017	MRLK2302	11:08	11/23/11	1.000
ID8K020018	ICSA1	11:10	11/23/11	1.000
ID8K020019	ICSAB1	11:14	11/23/11	1.000
ID8K020020	CCV1	11:17	11/23/11	1.000
ID8K020021	CCB1	11:19	11/23/11	1.000
ID8K020021	IPK036SQ	11:23	11/23/11	1.000
ID8K020021	IPK036SX	11:26	11/23/11	1.000
ID8K020021	IPK036SY	11:28	11/23/11	1.000
ID8K020025	K575-01A	11:31	11/23/11	5.000
ID8K020026	K575-01T	11:34	11/23/11	25.00
ID8K020027	K575-01J	11:37	11/23/11	5.000
ID8K020028	K575-01M	11:40	11/23/11	5.000
ID8K020029	K575-01S	11:43	11/23/11	5.000
ID8K020030	Blank	11:46	11/23/11	1.000
ID8K020031	CCV2	11:49	11/23/11	1.000
ID8K020032	CCB2	11:54	11/23/11	1.000
ID8K020033	K575-01A	11:57	11/23/11	1.000
ID8K020034	K575-01W	12:00	11/23/11	1.000
ID8K020035	K575-01J	12:04	11/23/11	5.000
ID8K020036	K575-01M	12:06	11/23/11	1.000
ID8K020037	K575-01S	12:10	11/23/11	1.000
ID8K020038	Blank	12:13	11/23/11	1.000
ID8K020039	CCV3	12:16	11/23/11	1.000
ID8K020040	CCB3	12:19	11/23/11	1.000
ID8K020041	K201-02W	12:22	11/23/11	1.000
ID8K020042	K201-03W	12:27	11/23/11	1.000
ID8K020043	Blank	12:30	11/23/11	1.000
ID8K020044	CCV4	12:33	11/23/11	1.000
ID8K020045	CCB4	12:36	11/23/11	1.000
ID8K020046	IPK035SB	12:39	11/23/11	1.000
ID8K020047	IPK035SL	12:42	11/23/11	1.000
ID8K020048	IPK035SC	12:45	11/23/11	1.000
ID8K020049	K203-17A	12:47	11/23/11	1.000
ID8K020050	K203-17	12:50	11/23/11	1.000
ID8K020051	K203-17J	12:54	11/23/11	5.000
ID8K020052	K203-18	12:56	11/23/11	1.000

ID8K020053	K203-19	12:59	11/23/11	1.000
ID8K020054	K203-20	13:02	11/23/11	1.000
ID8K020055	Blank	13:05	11/23/11	1.000
ID8K020056	CCV5	13:08	11/23/11	1.000
ID8K020057	CCB5	13:11	11/23/11	1.000
ID8K020058	K203-21	13:14	11/23/11	1.000
ID8K020059	K203-22	13:17	11/23/11	1.000
ID8K020060	Blank	13:20	11/23/11	1.000
ID8K020061	CCV6	13:23	11/23/11	1.000
ID8K020062	CCB6	13:26	11/23/11	1.000
ID8K020063	IPK034WB	13:29	11/23/11	1.000
ID8K020064	IPK034WL	13:32	11/23/11	1.000
ID8K020065	IPK034WC	13:34	11/23/11	1.000
ID8K020066	K133-01A	13:37	11/23/11	1.000
ID8K020067	K133-01	13:40	11/23/11	1.000
ID8K020068	K133-01J	13:44	11/23/11	5.000
ID8K020069	K133-01M	13:47	11/23/11	1.000
ID8K020070	K133-01S	13:50	11/23/11	1.000
ID8K020071	K133-02	13:53	11/23/11	1.000
ID8K020072	Blank	13:56	11/23/11	1.000
ID8K020073	CCV7	13:59	11/23/11	1.000
ID8K020074	CCB7	14:02	11/23/11	1.000
ID8K020075	K133-03	14:05	11/23/11	1.000
ID8K020076	K133-04	14:08	11/23/11	1.000
ID8K020077	K133-05	14:12	11/23/11	1.000
ID8K020078	K119-01	14:15	11/23/11	1.000
ID8K020079	K119-02	14:18	11/23/11	1.000
ID8K020080	K119-03	14:21	11/23/11	1.000
ID8K020081	K146-02	14:24	11/23/11	1.000
ID8K020082	K146-03	14:27	11/23/11	1.000
ID8K020083	K146-04	14:30	11/23/11	1.000
ID8K020084	Blank	14:34	11/23/11	1.000
ID8K020085	CCV8	14:37	11/23/11	1.000
ID8K020086	CCB8	14:39	11/23/11	1.000
ID8K020087	K146-05	14:42	11/23/11	1.000
ID8K020088	K146-06	14:46	11/23/11	1.000
ID8K020089	Blank	14:49	11/23/11	1.000
ID8K020090	CCV9	14:52	11/23/11	1.000
ID8K020091	CCB9	14:55	11/23/11	1.000
ID8K020092	TXK007SB	14:58	11/23/11	1.000
ID8K020093	K521-01A	15:01	11/23/11	1.000
ID8K020094	K521-01	15:04	11/23/11	1.000
ID8K020095	K521-01J	15:07	11/23/11	5.000
ID8K020096	K521-01M	15:10	11/23/11	1.000
ID8K020097	K521-01S	15:13	11/23/11	1.000
ID8K020098	K520-03	15:16	11/23/11	1.000
ID8K020099	Blank	15:19	11/23/11	1.000
ID8K020100	CCV10	15:22	11/23/11	1.000
ID8K020101	CCB10	15:25	11/23/11	1.000
ID8K020102	Blank	16:34	11/23/11	1.000
ID8K020103	CCV11	16:37	11/23/11	1.000
ID8K020104	CCB11	16:39	11/23/11	1.000
ID8K020105	IPK037WB	16:42	11/23/11	1.000
ID8K020106	IPK037WL	16:45	11/23/11	1.000
ID8K020107	IPK037WC	16:48	11/23/11	1.000

ID8K020108	TXK008SB	16:51	11/23/11	1.000
ID8K020109	K543-01A	16:54	11/23/11	1.000
ID8K020110	K543-01	16:57	11/23/11	1.000
ID8K020111	K543-01J	17:00	11/23/11	5.000
ID8K020112	K543-01M	17:03	11/23/11	1.000
ID8K020113	K543-01S	17:06	11/23/11	1.000
ID8K020114	Blank	17:09	11/23/11	1.000
ID8K020115	CCV12	17:12	11/23/11	1.000
ID8K020116	CCB12	17:15	11/23/11	1.000

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	---	---	---	---	-	-	--	-	-	--	---	- -	- -	--	-	--	-	- --	----	- --	---		-	-	-	----		
S20	-					---	- -	--	- -					-	-	-			-	----		-	-	-			-	----
S21	-	- -	---	----	----						-	-	----		--	----	--	-	---	----	- --	---				--		
S22	-	---		-	- - -	-	- - -		-	-- -	- --	---	----	----	---	- -	---					--	----	---	- --	----	-	
S23	---	- --		---	- -	-	-	--		-	-	-					---	--	---	----		-	-	-- -	--		---	
S24	- - -	----			-			--				-			-	-		-- -	---	- -	-	-	-	- --	-	- - -	- -	
S25	----	---	---	----	----			-		- -	-	-		-	- -	----	-			--	--			----	-- -	---	- - -	
S26	---	- - -	-	-	-	- --	- -		--				-	----	-	-	-	---	--	- -	-	- -	----	- --	-	----		
S27		-			-			---		--		-	- -	--	- -	-	--	----		-	-	--	----	-	-	---	-	
S28	----	----	- -	- -	-	--	----	- --	----	----	-- -	- -	---	----	----	----	-	-		-	---	---		-	--			
S29	---	-	- -	-	- --	-	-	-		-	- -	-	-	-			--	----	---		-		- -	- -	-	-		- -
S30	----	----	---	- -	----					-		-	-	-	- -	-	--	---			--	---	----	- -	--			-
S31	--	- -		-- -	- -	-						---	---	--	-- -	----	----				-	-	----		--	-		-
ICV	103	100	104	103	102	97	100	101	98	97	103	103	97	105	97	96	101	99	102	104	102	107	98	92	101	101	103	103
ICB	--	- -	--	---	--			-	--	- -	- -		--	--	-		-	----	---	-		--		-	- - -			--
MB,K23C	- -	- -	---	- -	----					---	-	----	-	--	-	-	--	--	-		-	-	----	-	-	-		-
MB,K23C2	---	----	----	-	-	- - -	----	----	---	---	- -	- -	---	- --	-	-		- -	---	---	--		---	-	- - -	-		-
ICSA1	98	- -		- -	-	- --	----	96	---	- - -	-	95	- - -	-	97	-	--	- --	--	--		- -	---	-	-	- -		--
ICSAB1	98	102	106	103	102	88	95	94	94	95	109	96	95	120	97	95	102	97	107	104	109	112	97	83	93	101	99	102
CCV1	104	101	104	103	102	99	100	102	99	98	105	101	97	104	97	96	101	99	103	105	103	108	99	92	101	100	101	104
CCB1	---	----	-	- -	-	---	---			-				---	- -	---	---			--	- -	--	-	-- -	----	----		-
IPK036S1	--	---					- - -	-- -	- -	- - -	- -	----					- -	- -	-		- --	----	-		-- -	--	- - -	
IPK036S2	--	- -	--	-- -	--					-		-	---	- --	----		-		--	-- -	--		-	----	- - -	-		
IPK036S3	---	----	----	----	---			-		-	--	-	----	-- -	--	---	- -	-	-	----	-		-	----	----	-		- -
K575 01A	----	----	-- -	-		--	--	---	---	-	---	- -	----	-	-	-	-	--	--			-	- -	-	--	-		- -
K575 01B	-	-	----	-	- -							-	-	-	-	-	-	- -		-						-		
K575 01C	-				-	-	----		-		--	-	- -	-	- -	- -	-	-		-			-	--	--	- - -		
K575 01D		- - -	- --	-	-	-					---				--			- - -	- -			--	-	--	--	- -		
K575 01E	--				-	-	- - - -	-			-	-			-			- - -	--	--			-	---	-- -	- -	- -	-
BLANK		- - -	----	-	----			-							--	--							-	----	----		- -	-	
ICV2	103	101	104	104	102	100	102	102	99	98	105	101	98	106	97	97	101	102	104	106	104	109	99	92	101	101	101	104
CCB2	-	----	----	----	-		-	--	-					---	--	-	---	- - -		- -	--	-	--		-			
K575 01A					-					-						-		- - -	--					-				
K575 01B		-	-			-	- -	- -	- -	-					-	----	-											
K575 01C	----	----	- - -	---	--	- - -	-	- -				-	-		--		--	--	-		- - -	- - -	--	----	---	----	--	
K575 01D	-		---	--	-																				-			
K575 01E	- -	- -	- -	-	-	-		-	-	-			-- -	-	-	-							- -	----	----			
BLANK									-									---					--					
ICV3	103	102	106	106	103	101	101	101	97	99	102	99	95	106	97	98	102	103	106	107	104	110	100	92	101	102	102	103
CCB3	--	-	-	- -		-	-	--	- -	-	--		-	---	---	--	-	- -	-		-	--	--	-				
K281 02A	---	---				----	- -	- -	- -	-	----	- --	- -	- -		-	- --			----	- -	----	--					
K281 02B	-	-		- -														--	--	- -		-				- -		
BLANK	- -	---	- - -			-	-	- -	- - -	--		-	-	---	-	- -	---		-		-		---	-	----		
ICV4	103	101	104	106	102	99	99	101	97	98	105	100	98	107	97	97	103	103	106	105	103	110	99	91	102	101	100	103
CCB4	---	---	- - -	---		--	----		-	----	----	---	- --	----	-	- --			-	--	----	- - -	----	---	----	-	--	----	-
IPK036S3	---	----	----	---	--						---	---		-				- - -	----	--	--	---	----	- --	-- -	---		- -
IPK036S	---	-				-	--			-		--	- --	---	---					--	--				-	---	-	
IPK036S2	--	-	-- -	-- -	---						---					---	- -	---	---	--		-	- -		--	---		-
K203-17A		--		-	-	-			-			---	-	---	-	--	-		--		-	-		--	-			
K203-17B	----	----	-- -	--			-	-- -	----	----	-				--		-		-				-		-	- -		
K203-17C		-				-	-	-- -		-	--		--	--	---	---	---	----			--			- -	--		-	
K203-18	-			---	-			- -	----	-							- -		-		-		-		- -			

K203-19																												
K203-20																												
BLANK																												
CCV5	104	100	104	106	103	99	99	100	97	99	106	99	98	109	97	98	103	100	106	104	103	110	100	91	101	102	100	103
CCB6																												
K203-21																												
K203-22																												
BLANK																												
CCV6	104	100	103	106	102	98	98	100	96	99	105	99	98	109	95	98	103	100	106	103	103	110	100	90	101	101	99	102
CCB6																												
IPK034-01																												
IPK034-02																												
IPK034-03																												
K133-01A																												
K133-01																												
K133-01A																												
K133-01M																												
K133-01S																												
K133-02																												
BLANK																												
CCV7	104	100	103	107	102	98	98	99	96	99	106	98	98	110	96	97	103	100	108	104	103	112*	101	93	101	102	99	102
CCB7																												
K133-03																												
K133-04																												
K133-05																												
K119-01																												
K119-02																												
K119-03																												
K146-02																												
K146-03																												
K146-04																												
BLANK																												
CCV8	104	99	103	107	101	97	97	97	95	98	104	97	97	110	94	96	102	99	106	103	102	111*	100	90	100	101	98	101
CCB8																												
K146-05																												
K146-06																												
BLANK																												
CCV9	104	99	103	107	101	97	97	97	95	98	104	97	97	110	94	96	102	99	106	103	102	111*	100	89*	99	100	98	101
CCB9																												
IPK037-01																												
K521-01A																												
K521-01																												
K521-01A																												
K521-01M																												
K521-01S																												
K520-03																												
BLANK																												
CCV10	103	99	103	107	101	97	98	97	95	98	104	97	97	110	95	96	102	99	108	104	102	110	100	90	100	101	98	101
CCB10																												
BLANK																												
CCV11	104	98	101	107	100	96	95	96	94	98	104	96	97	112*	93	95	102	99	109	101	101	112*	100	88*	100	100	97	100
CCB11																												
IPK037-03																												
IPK037-04																												
IPK037-05																												

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S.ANK	--					--		- -		--	--	-	-	----		---	--			-	- --	-	- -	--	- -			- -		-
TTV12	104	98	101	108	101	97	96	96	95	98	105	97	96	113*	94	96	101	99	110	102	107	112*	101	88*	99	101	98	101
TCB12		-- -		--	----	- -					-			-	---		--	--	- --	--	-	-	--	- -	---	- -	----		

IC limits of each parameter are listed in a table attached next to all the QC check forms
* = Out of QC limit

VERSION 1.0 (AIT - 1672) SUMMARY OF CALIBRATION BLANKS - ID8K020 (WATER) DATE : 11/23/11 INST : HYAX

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK																												
S20																												
S21																												
S22																												
S23																												
S24																												
S25																												
S26																												
S27																												
S28																												
S29																												
S30																												
S31																												
CCV																												
ICB	3.63	940	400	110	010	4.70	070	8.96	.600	090	180	2.47	230	490	1.80	110	280	.170	107	.190	.100	13.6	.080	.730	120	690	120	780
MB K230																												
MB K230.2																												
ICSA1		1.01	960	750	030	69.7	4.14		.520	760	1.50		4.81	18.4		1.12	1.31	1.05	80.6	860	.270	43.7	840	3.68	1.72	5.51	600	1.67
ICSAB1																												
CCV1																												
CCB1	10.8	700	990	440	050	4.53	030	153	.070	030	.330	.470	100	160	3.04	.100	.380	120	157	.010	.150	24.8	170	.430	060	180	010	9.63
IPK036S2																												
IPK036S0																												
IPK036S7																												
K575-01A																												
K575-01B																												
K575-01C																												
K575-01D																												
K575-01E																												
BLANK																												
CCV2																												
ICSA2	9.03	1.000	510	340	030	11.7	030	146	040	050	200	1.70	190	310	10.7	010	190	040	97.6	.910	110	9.77	160	.140	130	.850	190	5.83
K575-01A																												
K575-01B																												
K575-01C																												
K575-01D																												
K575-01E																												
BLANK																												
CCV3																												
ICSA3	9.89	1.25	.230	470	060	42.1	000	156	040	190	240	.71	.72	560	10.8	140	370	170	186	160	080	27.8	150	.610	100	1.12	140	6.78
K201-02A																												
K201-02B																												
BLANK																												
CCV4																												
ICSA4	8.34	1.23	1.54	.460	090	18.4	060	.173	100	060	.270	2.81	.280	030	-9.60	290	390	.170	97.1	.720	.060	11.5	190	470	.200	.640	160	6.82
IPK035S8																												
IPK035S1																												
IPK035S7																												
K203-17A																												
K203-1B																												
K203-1C																												
K203-1D																												

K203-19	--	---				-																						
K203-20																												
BLANK																												
CCV5																												
CCB5	8.03	980	-.930	.470	.850	7.49	.050	.158	.050	.030	.210	1.98	.170	.230	4.56	.190	.360	.070	47.1	.080	-.010	3.64	.120	.300	.140	.650	.190	6.28
K203-21																												
K203-22																												
BLANK																												
CCV6																												
CCB6	12.6	1.29	1.38	.410	.090	6.87	.060	.167	-.030	-.050	.270	.900	.100	.530	7.24	.160	.440	.060	52.3	.050	.110	7.98	.210	.300	.170	.420	.060	6.45
IPK034K3																												
IPK034K																												
IPK034K7																												
K133-01A																												
K133-01																												
K133-01B																												
K133-01M																												
K133-01S																												
K133-02																												
BLANK																												
CCV7																												
CCB7	9.93	620	-.470	.640	.090	6.81	.030	.172	.150	-.030	.260	1.27	-.370	.770	7.09	.170	.430	.030	729	-.050	.130	.614	.210	.370	-.210	.190	.140	6.30
K133-03																												
K133-04																												
K133-05																												
K119-01																												
K119-02																												
K119-03																												
K146-07																												
K146-08																												
K146-13																												
BLANK																												
CCV8																												
CCB8	9.54	.470	-1.37	.420	.040	8.03	.210	96.8	.190	.070	.301	.880	-.110	.600	8.63	.410	.430	.160	.210	.210	.180	.942	.230	.240	.200	.650	.240	8.07
K146-15																												
K146-16																												
BLANK																												
CCV9																												
CCB9	1.6	1.28	.410	.360	.050	5.32	.020	97.5	.120	.060	.117	2.53	.362	1.73	1.28	.250	.450	.023	.157	.670	.030	.470	.210	.130	.570	.340	.190	3.16
K521-15																												
K521-01																												
K521-01A																												
K521-01M																												
K521-01S																												
K521-02																												
BLANK																												
CCV10																												
CCB10	9.72	1.61	.470	.360	.070	4.90	.030	91.2	.230	-.050	.050	.530	-.270	.530	7.37	.080	.480	.170	.184	.750	.070	.352	.040	.290	.190	.490	.110	3.70
BLANK																												
CCV11																												
CCB11	9.64	.930	-1.12	.340	.110	3.68	.010	88.5	.160	.170	.191	1.17	.140	.070	12.7	.220	.690	.150	.126	.020	.060	.222	.160	.130	-.190	.370	.240	3.46
IPK037KB																												
IPK037K																												
IPK037K																												

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BLANK																												
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[illegible]	11.2	1.46	350	420	080	3.74	010	88.5	.230	- 070	170	1.60	.236	610	6.69	.280	780	.250	180	.400	220	212	190	.230	180	.430	.290	3.52

QC limits of each parameter are listed in a table attached next to all the ICP check forms
* - Out of QC Limit

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
1	0	0	0	0	Unk	S0		ID8K020001			1	☒	unk	---
2	0	0	0	0	Unk	S1		ID8K020002			1	☒	unk	---
3	0	0	0	0	Unk	S2		ID8K020003			1	☒	unk	---
4	0	0	0	0	Unk	S3		ID8K020004			1	☒	unk	---
5	0	0	0	0	Unk	S4		ID8K020005			1	☒	unk	---
6	0	0	0	0	Unk	S5		ID8K020006			1	☒	unk	---
7	0	0	0	0	Unk	S6		ID8K020007			1	☒	unk	---
8	0	0	0	0	Unk	S7		ID8K020008			1	☒	unk	---
9	0	0	0	0	Unk	S8		ID8K020009			1	☒	unk	---
10	0	0	0	0	Unk	S9		ID8K020010			1	☒	unk	---
11	0	0	0	0	Unk	S10		ID8K020011			1	☒	unk	---
12	0	0	0	0	Unk	S11		ID8K020012			1	☒	unk	---
13	0	0	0	0	Unk	S12		ID8K020013			1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8K020014			1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8K020015			1	☒	3XIDL	None
16	3	2	3	1	QC	MRLK2301		ID8K020016			1	☒	MRL-EMAX	None
17	4	2	4	1	QC	MRLK2302		ID8K020017			1	☒	MRL-AFCEE	None
18	5	2	5	1	QC	ICSA1		ID8K020018			1	☒	ICSA-DoD	None
19	6	2	6	1	QC	ICSAB1		ID8K020019			1	☒	ICSAB	None
20	7	2	7	1	QC	CCV1		ID8K020020			1	☒	CCV	None
21	8	2	8	1	QC	CCB1		ID8K020021			1	☒	3XIDL	None
22	9	2	9	1	Unk	IPK036SQ		ID8K020022			1	☒	unk	---
23	10	2	10	1	Unk	IPK036SX		ID8K020023			1	☒	unk	---
24	11	2	11	1	Unk	IPK036SY		ID8K020024			1	☒	unk	---
25	12	2	12	1	Unk	K575-01A	5X	ID8K020025			1	☒	unk	---
26	13	2	1	2	Unk	K575-01T	5X	ID8K020026			1	☒	unk	---
27	14	2	2	2	Unk	K575-01J	25X	ID8K020027			1	☒	unk	---
28	15	2	3	2	Unk	K575-01M	5X	ID8K020028			1	☒	unk	---
29	16	2	4	2	Unk	K575-01S	5X	ID8K020029			1	☒	unk	---
30	17	2	5	2	Blank	Blank		ID8K020030			1	☐		---
31	18	2	6	2	QC	CCV2		ID8K020031			1	☒	CCV	None
32	19	2	7	2	QC	CCB2		ID8K020032			1	☒	3XIDL	None
33	25	2	1	3	Unk	K575-01A		ID8K020033			1	☒	unk	---
34	26	2	2	3	Unk	K575-01W		ID8K020034			1	☒	unk	---
35	27	2	3	3	Unk	K575-01J		ID8K020035			1	☒	unk	---
36	28	2	4	3	Unk	K575-01M		ID8K020036			1	☒	unk	---
37	29	2	5	3	Unk	K575-01S		ID8K020037			1	☒	unk	---
38	22	2	10	2	Blank	Blank		ID8K020038			1	☐		---
39	23	2	11	2	QC	CCV3		ID8K020039			1	☒	CCV	None

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
40	24	2	12	2	QC	CCB3		ID8K020040			1	☒	3XIDL	None
41	20	2	8	2	Unk	K201-02W		ID8K020041			1	☒	unk	---
42	21	2	9	2	Unk	K201-03W		ID8K020042			1	☒	unk	---
43	30	2	6	3	Blank	Blank		ID8K020043			1	☐		---
44	31	2	7	3	QC	CCV4		ID8K020044			1	☒	CCV	None
45	32	2	8	3	QC	CCB4		ID8K020045			1	☒	3XIDL	None
46	33	2	9	3	QC	IPK035SB		ID8K020046			1	☒	1/2LOQ	None
47	34	2	10	3	QC	IPK035SL		ID8K020047			1	☒	LCS	None
48	35	2	11	3	QC	IPK035SC		ID8K020048			1	☒	LCS	None
49	36	2	12	3	Unk	K203-17A		ID8K020049			1	☒	unk	---
50	37	2	1	4	Unk	K203-17		ID8K020050			1	☒	unk	---
51	38	2	2	4	Unk	K203-17J		ID8K020051			1	☒	unk	---
52	39	2	3	4	Unk	K203-18		ID8K020052			1	☒	unk	---
53	40	2	4	4	Unk	K203-19		ID8K020053			1	☒	unk	---
54	41	2	5	4	Unk	K203-20		ID8K020054			1	☒	unk	---
55	42	2	6	4	Blank	Blank		ID8K020055			1	☐		---
56	43	2	7	4	QC	CCV5		ID8K020056			1	☒	CCV	None
57	44	2	8	4	QC	CCB5		ID8K020057			1	☒	3XIDL	None
58	45	2	9	4	Unk	K203-21		ID8K020058			1	☒	unk	---
59	46	2	10	4	Unk	K203-22		ID8K020059			1	☒	unk	---
60	47	2	11	4	Blank	Blank		ID8K020060			1	☐		---
61	48	2	12	4	QC	CCV6		ID8K020061			1	☒	CCV	None
62	49	2	1	5	QC	CCB6		ID8K020062			1	☒	3XIDL	None
63	50	2	2	5	QC	IPK034WB		ID8K020063			1	☒	1/2LOQ	None
64	51	2	3	5	QC	IPK034WL		ID8K020064			1	☒	LCS	None
65	52	2	4	5	QC	IPK034WC		ID8K020065			1	☒	LCS	None
66	53	2	5	5	Unk	K133-01A	DISSOLVED	ID8K020066			1	☒	unk	---
67	54	2	6	5	Unk	K133-01	DISSOLVED	ID8K020067			1	☒	unk	---
68	55	2	7	5	Unk	K133-01J	DISSOLVED	ID8K020068			1	☒	unk	---
69	56	2	8	5	Unk	K133-01M	DISSOLVED	ID8K020069			1	☒	unk	---
70	57	2	9	5	Unk	K133-01S	DISSOLVED	ID8K020070			1	☒	unk	---
71	58	2	10	5	Unk	K133-02	DISSOLVED	ID8K020071			1	☒	unk	---
72	59	2	11	5	Blank	Blank		ID8K020072			1	☐		---
73	60	2	12	5	QC	CCV7		ID8K020073			1	☒	CCV	None
74	61	3	1	1	QC	CCB7		ID8K020074			1	☒	3XIDL	None
75	62	3	2	1	Unk	K133-03	DISSOLVED	ID8K020075			1	☒	unk	---
76	63	3	3	1	Unk	K133-04	DISSOLVED	ID8K020076			1	☒	unk	---
77	64	3	4	1	Unk	K133-05	DISSOLVED	ID8K020077			1	☒	unk	---
78	65	3	5	1	Unk	K119-01	DISSOLVED	ID8K020078			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
79	66	3	6	1	Unk	K119-02	DISSOLVED	ID8K020079			1	☒	unk	---
80	67	3	7	1	Unk	K119-03	DISSOLVED	ID8K020080			1	☒	unk	---
81	68	3	8	1	Unk	K146-02	DISSOLVED	ID8K020081			1	☒	unk	---
82	69	3	9	1	Unk	K146-03	DISSOLVED	ID8K020082			1	☒	unk	---
83	70	3	10	1	Unk	K146-04	DISSOLVED	ID8K020083			1	☒	unk	---
84	71	3	11	1	Blank	Blank		ID8K020084			1	☐		---
85	72	3	12	1	QC	CCV8		ID8K020085			1	☒	CCV	None
86	73	3	1	2	QC	CCB8		ID8K020086			1	☒	3XIDL	None
87	74	3	2	2	Unk	K146-05	DISSOLVED	ID8K020087			1	☒	unk	---
88	75	3	3	2	Unk	K146-06	DISSOLVED	ID8K020088			1	☒	unk	---
89	76	3	4	2	Blank	Blank		ID8K020089			1	☐		---
90	77	3	5	2	QC	CCV9		ID8K020090			1	☒	CCV	None
91	78	3	6	2	QC	CCB9		ID8K020091			1	☒	3XIDL	None
92	79	3	7	2	QC	TXK007SB	TCLP	ID8K020092			1	☒	1/2LOQ	None
93	80	3	8	2	Unk	K521-01A	TCLP	ID8K020093			1	☒	unk	---
94	81	3	9	2	Unk	K521-01	TCLP	ID8K020094			1	☒	unk	---
95	82	3	10	2	Unk	K521-01J	TCLP	ID8K020095			1	☒	unk	---
96	83	3	11	2	Unk	K521-01M	TCLP	ID8K020096			1	☒	unk	---
97	84	3	12	2	Unk	K521-01S	TCLP	ID8K020097			1	☒	unk	---
98	85	3	1	3	Unk	K520-03	TCLP	ID8K020098			1	☒	unk	---
99	86	3	2	3	Blank	Blank		ID8K020099			1	☐		---
100	87	3	3	3	QC	CCV10		ID8K020100			1	☒	CCV	None
101	88	3	4	3	QC	CCB10		ID8K020101			1	☒	3XIDL	None
102	89	3	5	3	Blank	Blank		ID8K020102			1	☐		---
103	90	3	6	3	QC	CCV11		ID8K020103			1	☒	CCV	None
104	91	3	7	3	QC	CCB11		ID8K020104			1	☒	3XIDL	None
105	92	3	8	3	QC	IPK037WB		ID8K020105			1	☒	1/2LOQ	None
106	93	3	9	3	QC	IPK037WL		ID8K020106			1	☒	LCS	None
107	94	3	10	3	QC	IPK037WC		ID8K020107			1	☒	LCS	None
108	95	3	11	3	QC	TXK008SB	TCLP	ID8K020108			1	☒	1/2LOQ	None
109	96	3	12	3	Unk	K543-01A	TCLP	ID8K020109			1	☒	unk	---
110	97	3	1	4	Unk	K543-01	TCLP	ID8K020110			1	☒	unk	---
111	98	3	2	4	Unk	K543-01J	TCLP	ID8K020111			1	☒	unk	---
112	99	3	3	4	Unk	K543-01M	TCLP	ID8K020112			1	☒	unk	---
113	100	3	4	4	Unk	K543-01S	TCLP	ID8K020113			1	☒	unk	---
114	101	3	5	4	Blank	Blank		ID8K020114			1	☐		---
115	102	3	6	4	QC	CCV12		ID8K020115			1	☒	CCV	None
116	103	3	7	4	QC	CCB12		ID8K020116			1	☒	3XIDL	None

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INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID
1	Blank	.00115	.00002	-.00001	.00023	.00007	.00044	-.00003	.00055	-.00004	-.00096	Blank
2	S20					.97416		.11980				S20
3	S21					9.5846		1.1513				S21
4	S22				.56884						.15986	S22
5	S23				5.5784						1.5980	S23
6	S24						.09734					S24
7	S25						1.0039					S25
8	S26	.21700							.85491	.13199		S26
9	S27	8.2903							8.1923	1.3230		S27
10	S28		.00517									S28
11	S29		.05004									S29
12	S30			.00121								S30
13	S31			.00483								S31
14	ICV	103.23	1.5006	1.0390	2.0612	1.5320	2.4359	2.0052	75.997	2.4512	.96720	ICV
15	ICB	.00363	.00094	-.00040	.00011	-.00001	.00470	-.00007	-.00896	.00000	-.00009	ICB
16	MRLK2301	.21505	.09834	.00993	.01055	.01049	.09719	.01064	1.0269	.01058	.00973	MRLK2301
17	MRLK2302	.20364	.04865	.01004	.00505	.00412	.09656	.00521	.50327	.01004	.00968	MRLK2302
18	ICSA1	391.69	-.00101	-.00096	.00075	.00003	-.05970	.00414	478.89	.00052	-.00076	ICSA1
19	ICSAB1	393.08	1.0181	1.0606	.51281	.51123	.43755	.94970	471.23	.46989	.47750	ICSAB1
20	CCV1	103.62	1.5084	1.0448	2.0546	1.5274	2.4675	2.0081	76.529	2.4653	.97550	CCV1
21	CCB1	.01082	.00020	-.00099	.00044	.00005	.00453	.00003	.15308*	.00007	-.00003	CCB1
22	IPK036SQ	.14392*	.00097	-.00157	-.00002	.00000	.00171	-.00018	-.00995	.00026	-.00017	IPK036SQ
23	IPK036SX	5.0387	2.4672	.51662	.51893	.52267	.47220	.51504	51.237	.50725	.50819	IPK036SX
24	IPK036SY	5.1148	2.4887	.52019	.52603	.53295	.47958	.52256	52.252	.51858	.51667	IPK036SY
25	K575-01A	54.817	7.5442	.58599	4.4494	.56409	5.6303	.53952	308.60	.69279	.73739	K575-01A
26	K575-01T	47.959	4.9167	.01741	3.8682	.00356	5.0115	.00863	258.68	.16432	.20517	K575-01T
27	K575-01J	8.6541	.91925	.00258	.71959	.00069	.93932	.00162	50.202	.03203	.03827	K575-01J
28	K575-01M	59.694	5.1932	.12962	2.5902	.11860	5.0629	.11330	305.43	.27556	.25845	K575-01M
29	K575-01S	52.326	5.4038	.11851	1.9453	.11503	4.1565	.11323	273.22	.24451	.33689	K575-01S
30	Blank	00589	.00302	.00051	.00017	-.00003	.01643	-.00008	.04128	-.00008	-.00018	Blank
31	CCV2	103.39	1.5133	1.0556	2.0758	1.5350	2.4887	2.0312	76.373	2.4742	.97846	CCV2
32	CCB2	.00903	.00153	-.00051	.00034	.00003	01100*	.00000	.14565*	.00004	-.00005	CCB2
33	K575-01A	222.44	25.854*	.66781	18.755	55340	23.138*	.52595	1106.3*	1.2124	1.4679	K575-01A
34	K575-01W	221.75	23.665*	.08307	18.836	.01607	23.321*	.04004	1100.3*	.74344	.97688	K575-01W
35	K575-01J	47 270	4.8285	.01724	3.9313	00343	5.0274	.00849	252.65	.16170	.20500	K575-01J
36	K575-01M	267.52	24.602*	.62318	12.038	.52606	22.887*	.47205	1251.3*	1.1934	1.1788	K575-01M
37	K575-01S	235.00	25.414*	.56771	9.1956	51261	18.812*	.47460	1124 2*	1.0698	1.5418	K575-01S
38	Blank	.01646	.01123	-.00072	.00076	-.00001	.08119	-.00005	.12914	-.00001	-.00010	Blank
39	CCV3	104.34	1.5331	1.0574	2.1130	1.5382	2.5281	2.0114	75.400	2.4312	.98508	CCV3
40	CCB3	.00989	.00325	-.00023	.00042	.00005	.04197*	.00000	.16766*	.00004	-.00015	CCB3
41	K201-02W	103.13	.00782	.07241	1.0441	.01828	.00616	.05714	31.953	.14562	.10684	K201-02W
42	K201-03W	118.13	.00404	.08190	1.1882	.01711	-.01302	.06169	27.322	.15469	.09331	K201-03W
43	Blank	.00806	.00141	.00069	.00012	-.00004	.01911	-.00005	.02434	-.00004	-.00004	Blank
44	CCV4	103.12	1.5191	1.0443	2.0950	1.5294	2.4783	1.9762	75.545	2.4189	.98469	CCV4
45	CCB4	.00834	.00123	-.00154	.00046	.00009	.01837*	.00005	.17339*	.00010	-.00006	CCB4
46	IPK035SB	.00519	.00248	-.00150	-.00004	-.00003	.01521	-.00015	-.01467	.00036	-.00015	IPK035SB
47	IPK035SL	5.1594	2.5041	.52475	.53795	.53159	.49170	.51745	51.687	.51327	.52737	IPK035SL
48	IPK035SC	5.1150	2.5050	.52394	.53576	.53095	.48990	.51652	51.373	.51030	.52510	IPK035SC
49	K203-17A	174.37	2.4617	.66715	1.7782	.55432	.39600	.51537	73.721	.77538	.59198	K203-17A
50	K203-17	176.34	.00037	.13194	1.2961	.00980	-.05750*	.00512	25.454	.28138	.05548	K203-17
51	K203-17J	37.300	.00030	.02833	.26103	.00200	-.01275	00027	5.3160	.05742	.01097	K203-17J
52	K203-18	111.91	.00063	.06452	1.5841	.00853	-.03360*	.03333	22.754	.22731	.10854	K203-18

53	K203-19	96.766	-.00024	.10124	1.5318	.00996	-.04575*	.00515	14.267	.24145	.21109	K203-19
54	K203-20	102.33	-.00007	.06097	1.4079	.00748	-.02636*	.01835	18.831	.19715	.08904	K203-20
55	Blank	.00890	.00046	-.00018	.00010	-.00001	.00340	-.00003	.02540	-.00006	-.00007	Blank
56	CCV5	104.16	1.5056	1.0358	2.1222	1.5382	2.4642	1.9728	75.146	2.4221	.98579	CCV5
57	CCB5	.00801	.00098	-.00093	.00047	.00005	.00749	.00005	.15782*	-.00005	.00003	CCB5
58	K203-21	73.820	.00014	.05900	.88193	.00583	-.03193*	.00595	7.9567	.18904	.07990	K203-21
59	K203-22	82.873	.00071	.08588	1.0887	.00873	-.03564*	.00660	19.817	.21859	.11354	K203-22
60	Blank	.00737	.00019	.00026	.00011	-.00003	.00299	-.00008	.02303	-.00013	-.00011	Blank
61	CCV6	103.93	1.4926	1.0303	2.1184	1.5298	2.4525	1.9542	74.789	2.4119	.98833	CCV6
62	CCB6	.01263	.00129	.00138	.00041	.00009	.00687	.00006	.16678*	-.00003	-.00005	CCB6
63	IPK034WB	.00560	.00044	.00114	.00014	-.00004	.00409	-.00006	-.01672	.00004	-.00008	IPK034WB
64	IPK034WL	5.4397	2.5335	.53489	.53877	.53023	.51226	.51533	49.575	.50218	.51311	IPK034WL
65	IPK034WC	5.4196	2.5786	.53161	.53747	.52764	.52267	.51430	50.118	.49811	.50917	IPK034WC
66	K133-01A	7.4399	3.1296	.70518	.73313	.52954	1.6791	.49424	1282.4*	.50511	.53681	K133-01A
67	K133-01	.04242	-.00102	.00016	.13439	-.00005	1.1203	-.00071	1266.8*	.00027	-.00217	K133-01
68	K133-01J	.02437	.00013	-.00162	.02742	.00002	.22113	-.00021	304.91	.00052	-.00060	K133-01J
69	K133-01M	7.0268	3.1123	.66174	.69464	.49340	1.7065	.46237	1307.1*	.47423	.50173	K133-01M
70	K133-01S	7.1086	3.1350	.66252	.70512	.49701	1.7323	.46319	1323.8*	.47577	.50462	K133-01S
71	K133-02	.04326	.00027	-.00141	.06348	.00001	.26267	-.00024	397.79	.00045	-.00094	K133-02
72	Blank	.00454	.00071	-.00026	.00002	-.00003	.00385	-.00004	.05951	-.00011	.00002	Blank
73	CCV7	103.70	1.4939	1.0292	2.1334	1.5269	2.4564	1.9514	74.349	2.4054	.99010	CCV7
74	CCB7	.00993	.00052	-.00047	.00054	.00009	.00681	.00003	.17250*	.00015	-.00003	CCB7
75	K133-03	.05409	-.00318	.01675	.47556	-.00012	1.2084	-.00098	1637.9*	.00000	-.00196	K133-03
76	K133-04	.03221	-.00144	-.00031	.10086	-.00006	.42869	-.00050	912.52*	.00018	-.00141	K133-04
77	K133-05	.02270	.00058	-.00111	.15765	.00000	.22191	-.00024	460.22	.00035	-.00088	K133-05
78	K119-01	.01928	-.00023	.00196	.05119	.00001	.08829	-.00012	76.171	.00051	-.00023	K119-01
79	K119-02	.02809	-.00097	.01762	.08773	-.00008	.12204	-.00022	437.79	.00042	-.00061	K119-02
80	K119-03	.03765	.00005	.00414	.16433	.00001	.12122	-.00016	233.05	.00047	-.00082	K119-03
81	K146-02	.03414	-.00263	-.00015	.18317	-.00004	1.9593	-.00049	1181.8*	.00010	-.00179	K146-02
82	K146-03	.03606	-.00103	.00597	.33025	-.00003	.16456	-.00032	620.75	.00050	-.00108	K146-03
83	K146-04	.03551	-.00121	.00252	.21422	.00002	.14050	-.00019	376.52	.00058	-.00083	K146-04
84	Blank	.00559	.00066	.00005	.00013	-.00001	.00209	-.00001	.11103	-.00004	-.00007	Blank
85	CCV8	102.89	1.4797	1.0265	2.1334	1.5082	2.4226	1.9434	72.620	2.3765	.98011	CCV8
86	CCB8	.00954	.00047	-.00132	.00042	.00004	.00563	.00001	.09684*	.00019	-.00002	CCB8
87	K146-05	.03465	-.00087	.01150	.37726	-.00005	.14774	-.00015	573.82	.00039	-.00103	K146-05
88	K146-06	.03821	-.00062	.00230	.21683	-.00002	.14239	-.00014	377.21	.00062	-.00076	K146-06
89	Blank	.00724	.00033	.00092	.00004	-.00002	.00179	-.00004	.06580	.00006	-.00012	Blank
90	CCV9	103.54	1.4658	1.0169	2.1329	1.5042	2.4298	1.9374	72.685	2.3886	.97871	CCV9
91	CCB9	.01155	.00118	.00051	.00036	.00005	.00532	.00002	.09754*	.00012	.00005	CCB9
92	TXK007SB	.03586	.00067	.00035	.05695*	.00001	.07310*	-.00013	.01292	.00017	-.00006	TXK007SB
93	K521-01A	5.9864	2.6192	.59532	.61312	.55704	.62026	.53459	183.30	.52367	.54951	K521-01A
94	K521-01	.02515	.00026	-.00018	.02598	.00002	.10132	.00019	143.19	.00053	.00147	K521-01
95	K521-01J	.01504	.00124	.00049	.00537	.00000	.02198	.00000	30.278	.00030	.00021	K521-01J
96	K521-01M	5.7284	2.6815	.57544	.58163	.52813	.63490	.51418	190.45	.49480	.52019	K521-01M
97	K521-01S	5.6589	2.6383	.56591	.57517	.52444	.62229	.50733	183.03	.48947	.51581	K521-01S
98	K520-03	.09754	.00837	.21086	.06107	.00004	.10898	.00038	20.597	.06416	.00688	K520-03
99	Blank	.00562	.00108	.00019	.00010	.00002	.00145	-.00002	.04546	.00003	-.00009	Blank
100	CCV10	103.24	1.4855	1.0288	2.1344	1.5100	2.4258	1.9571	72.678	2.3840	.97902	CCV10
101	CCB10	.00972	.00151	.00047	.00036	.00007	.00490	.00003	.09119*	.00023	-.00005	CCB10
102	Blank	.00196	.00035	-.00012	-.00004	-.00004	-.00018	-.00005	.05083	.00013	-.00011	Blank
103	CCV11	103.77	1.4714	1.0054	2.1463	1.5031	2.4088	1.8968	72.236	2.3483	.97619	CCV11
104	CCB11	.00934	.00093	-.00112	.00034	.00011	.00368	.00001	.08845*	.00018	-.00017	CCB11
105	IPK037WB	.00654	.00020	.00093	.00001	-.00001	.00130	-.00005	-.01525	.00008	-.00010	IPK037WB
106	IPK037WL	5.4606	2.5048	.52242	.55348	.52931	.50602	.50323	48.867	.49401	.51005	IPK037WL
107	IPK037WC	5.5119	2.5262	.52567	.56266	.53787	.51161	.50826	49.124	.49767	.51076	IPK037WC

108	TXK008SB	.05069	.00103	-.00011	.00083	-.00001	.04257	-.00009	-.00954	.00023	-.00011	TXK008SB
109	K543-01A	6.0227	2.5869	.59156	1.0243	.55609	.63972	.52712	207.70	.52318	.54584	K543-01A
110	K543-01	.02501	.00062	.00229	.44269	.00001	.12279	-.00008	167.42	.00254	-.00002	K543-01
111	K543-01J	.01221	.00071	.00049	.09141	-.00003	.02449	-.00002	35.276	.00073	.00003	K543-01J
112	K543-01M	5.7843	2.6407	.56449	1.0177	53094	.65680	.50377	213.93	.49985	.52023	K543-01M
113	K543-01S	5.7242	2.6250	.56210	.97518	.52437	.64618	.50091	202.85	.49898	.51956	K543-01S
114	Blank	.00404	.00109	.00051	.00018	.00001	.00097	.00001	.05382	.00012	-.00007	Blank
115	CCV12	103.56	1.4631	1.0093	2.1587	1.5082	2.4266	1.9177	72.335	2.3825	.97674	CCV12
116	CCB12	.01116	.00140	.00035	.00042	.00008	.00374	.00001	.08846*	.00023	-.00007	CCB12
INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID

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INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID
1	Blank	.00108	.00001	.00009	-.00019	.00002	.00004	-.00006	-.00060	-.00030	.00001	Blank
2	S20			.20556			.09605					S20
3	S21			2.0570			.96075					S21
4	S22	.27945	.04811									S22
5	S23	2.6915	1.8656									S23
6	S24							.76817				S24
7	S25							7.6522				S25
8	S26								.75595	.41573		S26
9	S27								7.5181	4.2088		S27
10	S28					.02236						S28
11	S29					.22033						S29
12	S30				.03398						.00139	S30
13	S31				.16919						.00556	S31
14	ICV	2.5704	25.052	2.4211	.52317	58.311	2.4109	2.5181	2.4628	61.223	1.0431	ICV
15	ICB	.00018	.00247	.00020	.00049	.00180	.00011	.00028	.00017	.10656	-.00019	ICB
16	MRLK2301	.01083	.21774	.01038	.01033	.98703	.01058	.01042	.01043	.99840	.00931	MRLK2301
17	MRLK2302	.01061	.10469	.00293	.10222	.19121	.00502	.00977	.01011	.99127	.01009	MRLK2302
18	ICSA1	.00150	190.29	.00481	.01836	193.48	.00112	-.00131	.00105	.08058	.00086	ICSA1
19	ICSAB1	.54547	192.04	.95309	1.1979	193.20	.47385	1.0162	.97195	80.564	1.0434	ICSAB1
20	CCV1	2.6250	25.307	2.4341	.51998	58.216	2.4018	2.5329	2.4848	62.084	1.0488	CCV1
21	CCB1	.00033	.00032	-.00010	.00016	.00304	.00010	.00038	.00012	.15687	-.00001	CCB1
22	IPK036SQ	.00020	.00407	.00005	.00016	-.00139	.00000	.00032	-.00020	.12761	.00080	IPK036SQ
23	IPK036SX	.52189	5.1470	.50014	.00178*	48.975	.49555	.54420	.52044	50.788	.50744	IPK036SX
24	IPK036SY	.53177	5.2557	.50627	.00188*	50.069	.50424	.55239	.53062	51.596	.51264	IPK036SY
25	K575-01A	.69842	25.815	1.1733	.05870	69.400	1.7943	.53480	.66338	57.895	.56650	K575-01A
26	K575-01T	.11054	20.364	.63994	.05453	19.865	1.2705	.00873	.18154	4.6066	.00084	K575-01T
27	K575-01J	.02056	4.0035	.12223	.00888	3.8091	.24387	.00152	.03407	.87583	.00047	K575-01J
28	K575-01M	.25017	26.552	.63513	.06249	36.775	1.8473	.12394	.37498	17.661	.10374	K575-01M
29	K575-01S	.21524	22.476	.87169	.05588	32.378	1.5752	.11624	.28378	16.549	.09768	K575-01S
30	Blank	-.00001	-.00318	-.00038	.00033	.00121	-.00001	.00014	-.00004	.05244	-.00013	Blank
31	CCV2	2.6343	25.267	2.4414	.52799	58.390	2.4301	2.5313	2.4880	62.632	1.0585	CCV2
32	CCB2	.00020	.00120	.00018	-.00001	-.01072	.00001	.00018	.00004	.09762	.00091	CCB2
33	K575-01A	1.1595	92.390	3.3465	.28067	137.28	6.0793	.59042	1.2935	78.336	.59854	K575-01A
34	K575-01W	.55325	91.023	2.9340	.28261	91.573	5.7189	.05003	.85467	23.509	.00876	K575-01W
35	K575-01J	.11019	19.975	.63602	.05494	19.432	1.2489	.00868	.18101	4.6569	.00121	K575-01J
36	K575-01M	1.2365	113.26	2.7836	.32194	166.93	8.1679	.59770	1.6836	88.349	.50102	K575-01M
37	K575-01S	1.0561	96.886	3.8449	.28528	148.87	7.0477	.56658	1.2861	82.218	.47221	K575-01S
38	Blank	.00006	.00761	-.00022	.00002	.01328	.00047	.00019	-.00010	.18553	-.00011	Blank
39	CCV3	2.6502	24.837	2.4490	.54093	58.132	2.4523	2.5593	2.5025	63.873	1.0652	CCV3
40	CCB3	.00024	.00071	-.00032	.00056	.01083	.00014	.00037	.00017	.18607	-.00016	CCB3
41	K201-02W	.09126	138.93	.54580	.04734	5.4654	3.4244	.00396	.35091	8.9659	.00626	K201-02W
42	K201-03W	.11030	163.78	.42098	.05666	6.5112	3.1482	.00399	.33599	9.7852	.00787	K201-03W
43	Blank	-.00002	.00561	-.00040	.00018	-.00075	.00030	.00011	.00007	.02265	-.00024	Blank
44	CCV4	2.6331	24.899	2.4485	.53524	57.991	2.4310	2.5661	2.4997	63.494	1.0537	CCV4
45	CCB4	.00027	.00287	-.00028	-.00003	-.00960	.00029	.00039	.00017	.09706	.00072	CCB4
46	IPK035SB	.00021	.00103	-.00008	.00009	.01163	.00008	.00038	.00000	.07469	.00143	IPK035SB
47	IPK035SL	.53757	5.2068	.51546	.00162*	49.665	.50996	.56287	.53948	52.733	.51911	IPK035SL
48	IPK035SC	.53537	5.1911	.50953	.00142*	49.613	.50808	.56119	.53659	52.654	.51653	IPK035SC
49	K203-17A	.65843	302.51	.68165	.09419	60.484	2.1584	.55433	.58245	63.129	.54325	K203-17A
50	K203-17	.08932	320.49	.17242	.09446	12.959	1.7612	.01348	.10323	11.267	.01174	K203-17
51	K203-17J	.01800	68.397	.03572	.01870	2.6762	.36210	.00257	.02069	2.2041	.00231	K203-17J
52	K203-18	.10672	165.16	.76134	.05708	8.6185	6.0649	.00541	.12282	9.4057	.00306	K203-18

53	K203-19	.08840	200.95	.34584	.04976	6.5277	9.0954	.00971	.13920	7.5680	.00551	K203-19
54	K203-20	.08898	140.73	.36352	.05065	7.3338	5.0731	.00586	.09922	9.0238	.00523	K203-20
55	Blank	-.00010	.00708	.00013	.00020	-.00453	.00042	.00006	-.00003	-.01353	.00058	Blank
56	CCV5	2.6323	24.792	2.4503	.54455	58.254	2.4537	2.5647	2.4983	63.808	1.0407	CCV5
57	CCB5	.00021	.00198	.00017	-.00023	-.00486	.00019	.00036	.00007	.04713	.00008	CCB5
58	K203-21	.06138	140.46	.24829	.03605	5.0067	4.2715	.00638	.07506	6.6341	.00375	K203-21
59	K203-22	.08865	159.60	.36607	.04115	6.2017	5.2640	.00785	.11383	7.9026	.00459	K203-22
60	Blank	-.00005	.00572	.00011	-.00057	-.00284	.00040	.00007	-.00009	-.00567	-.00004	Blank
61	CCV6	2.6391	24.638	2.4481	.54385	57.791	2.4387	2.5693	2.5061	63.689	1.0339	CCV6
62	CCB6	.00027	.00096	-.00010	.00063	.00724	.00016	.00044	.00006	.05234	-.00005	CCB6
63	IPK034WB	.00029	.00144	-.00048	.00039	-.02202	.00007	.00009	.00011	.01214	.00096	IPK034WB
64	IPK034WL	.54678	5.2049	.51243	.00171*	47.670	.50228	.53348	.52656	52.143	.53433	IPK034WL
65	IPK034WC	.54217	5.1139	.50773	.00216*	48.621	.50183	.54171	.52116	52.936	.52887	IPK034WC
66	K133-01A	.72000	5.2687	.52720	.13226	542.44	3.5109	.56104	.47776	105.88	.72681	K133-01A
67	K133-01	.00390	.25938	.00286	.13303	501.98	3.0653	-.00183	.00025	39.854	.00485	K133-01
68	K133-01J	.00171	.03939	-.00008	.02467	107.31	.67897	-.00035	-.00015	7.4524	-.00021	K133-01J
69	K133-01M	.67242	4.9888	.49105	.13532	549.27	3.5206	.56805	.50466	106.89	.56030	K133-01M
70	K133-01S	.68217	5.0239	.49457	.13985	554.58	3.5559	.57209	.50737	108.71	.56150	K133-01S
71	K133-02	.00320	.42054	.00198	.03767	101.85	.61788	.00191	.00022	12.054	.00109	K133-02
72	Blank	-.00004	-.00103	-.00001	.00086	.00569	.00008	.00004	-.00004	.27479	.00037	Blank
73	CCV7	2.6424	24.535	2.4510	.54807	57.413	2.4370	2.5796	2.5104	64.776	1.0392	CCV7
74	CCB7	.00026	.00127	-.00032	.00077	.00209	.00017	.00043	.00003	.22872*	-.00005	CCB7
75	K133-03	.00938	.22700	.00451	.18372	663.45	4.5875	-.00332	.00192	42.837	.00686	K133-03
76	K133-04	.00174	2.7705	.00260	.08212	263.93	1.8535	-.00052	.00053	23.565	.00228	K133-04
77	K133-05	.00222	3.4476	.00337	.04453	114.25	.93330	-.00029	.00067	12.566	.00053	K133-05
78	K119-01	.00091	.41056	.00146	.01018	13.573	.10717	.00747	.00058	3.7747	.00050	K119-01
79	K119-02	.00120	3.6366	.00339	.03277	54.533	1.0796	-.00054	.00181	7.3882	-.00042	K119-02
80	K119-03	.00305	.77418	.00271	.01718	40.507	.32390	.00353	.00028	6.6003	-.00058	K119-03
81	K146-02	.00235	4.4186	.00337	.14576	695.09	4.3012	-.00120	.00163	49.326	.00274	K146-02
82	K146-03	.00171	1.8306	.00237	.04854	124.68	.53265	.00113	.00083	19.011	.00156	K146-03
83	K146-04	.00183	3.6050	.00264	.03749	81.882	.71621	.00087	.00233	12.745	-.00143	K146-04
84	Blank	-.00003	-.00319	-.00016	.00030	.00648	.00023	.00016	-.00017	.24061	-.00050	Blank
85	CCV8	2.6121	24.224	2.4261	.54881	56.613	2.4062	2.5511	2.4794	64.509	1.0292	CCV8
86	CCB8	.00033	.00088	-.00011	.00060	-.00363	.00041	.00043	.00018	.20976	.00021	CCB8
87	K146-05	.00180	8.8088	.00267	.04815	112.93	.41949	-.00037	.00044	15.520	.00230	K146-05
88	K146-06	.00525	3.6464	.00231	.03759	82.677	.72211	.00096	.00029	12.742	.00039	K146-06
89	Blank	.00014	-.00147	-.00051	.00066	.01026	.00015	.00016	.00006	.16489	-.00020	Blank
90	CCV9	2.6359	24.266	2.4158	.54850	56.345	2.3993	2.5416	2.4812	64.966	1.0264	CCV9
91	CCB9	.00044	-.00283	.00038	.00103	.00778	.00025	.00045	.00002	.18733	.00067	CCB9
92	TXK007SB	.00111	.00250	.00000	-.00038	.00649	.00014	.00051	-.00006	.30867	.00216	TXK007SB
93	K521-01A	.61593	5.4887	.53793	.00804	63.137	.88892	.54539	.51784	59.235	.60942	K521-01A
94	K521-01	.02141	.25415	.00107	.00642	15.789	.36573	.00131	.02508	.82009	.00188	K521-01
95	K521-01J	.00487	.05384	.00012	.00114	3.3648	.07844	.00034	.00510	.26541	-.00031	K521-01J
96	K521-01M	.58130	5.0181	.50942	.00892	64.336	.87087	.55938	.55246	59.531	.58720	K521-01M
97	K521-01S	.57253	4.9707	.50631	.00841	62.906	.84671	.55410	.54657	58.318	.57705	K521-01S
98	K520-03	.08345	.13061	.00073	.00196	3.5989	.35765	-.00001	.00754	4.2192	.00100	K520-03
99	Blank	-.00008	-.00012	-.00002	.00102	-.00426	.00001	.00012	-.00003	.15957	.00023	Blank
100	CCV10	2.6088	24.259	2.4268	.55086*	56.777	2.4072	2.5449	2.4782	64.650	1.0354	CCV10
101	CCB10	.00008	.00053	-.00027	.00053	.00737	.00008	.00048	.00017	.18373	.00025	CCB10
102	Blank	-.00004	-.00210	-.00023	-.00076	.00373	-.00010	.00004	.00005	.02514	.00031	Blank
103	CCV11	2.5916	24.065	2.4171	.56243*	56.093	2.3658	2.5558	2.4735	65.534	1.0149	CCV11
104	CCB11	.00019	.00112	.00014	.00007	-.01224	.00022	.00069	.00015	.12650	.00002	CCB11
105	IPK037WB	.00022	-.00155	-.00003	.00135	.00018	-.00012	.00017	.00004	.07447	-.00013	IPK037WB
106	IPK037WL	.53725	5.0600	.50648	.00180*	47.803	.49771	.53802	.52093	54.706	.52026	IPK037WL
107	IPK037WC	.53810	5.0555	.50871	.00178*	48.730	.50708	.53931	.52274	55.178	.52342	IPK037WC

108	TXK008SB	.00086	.00157	-.00041	-.00006	.00844	-.00012	.00063	-.00005	.26656	.00182	TXK008SB
109	K543-01A	.59770	5.2214	.53679	.01022	50.167	.54207	.54476	.49454	63.064	.59930	K543-01A
110	K543-01	.00527	.00727	.00032	.00767	2.9332	.01844	.00100	.00129	3.5968	.00152	K543-01
111	K543-01J	.00135	.00086	.00007	.00105	.62298	.00414	.00021	.00018	.73195	.00023	K543-01J
112	K543-01M	.56796	5.0056	.51013	.00946	50.809	.51592	.55887	.53075	63.819	.57183	K543-01M
113	K543-01S	.56829	5.0322	.50840	.00922	49.795	.50618	.55735	.53091	63.083	.57195	K543-01S
114	Blank	-.00008	-.00097	-.00013	.00056	.00401	-.00005	.00030	-.00006	.18368	-.00019	Blank
115	CCV12	2.6285	24.203	2.4106	.56306*	56.390	2.3880	2.5347	2.4747	66.204*	1.0215	CCV12
116	CCB12	.00012	-.00160	.00023	.00061	.00869	.00028	.00078*	.00025	.17956	.00040	CCB12
INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID

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INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID
1	Blank	.00008	.00079	-.00011	-.00002	.00014	.00003	-.00016	.00117	Blank
2	S20									S20
3	S21									S21
4	S22							.12298		S22
5	S23							1.2265		S23
6	S24		1.3193							S24
7	S25		7.6101							S25
8	S26									S26
9	S27									S27
10	S28				.00568					S28
11	S29				.05587					S29
12	S30	.04188		.14662		.02596	.01647		.61813	S30
13	S31	.20598		.71346		.12272	.08792		5.9578	S31
14	ICV	.50937	64.106	.48985	2.2943	.50286	.50393	1.4964	2.5847	ICV
15	ICB	.00010	.01358	.00008	-.00023	-.00012	.00069	.00012	-.00078	ICB
16	MRLK2301	.01034	1.0343	.01036	.01095	-.00017	.01029	.01051	.02079	MRLK2301
17	MRLK2302	.01004	.51560	.00996	.01089	.00920	.01051	.01018	.00965	MRLK2302
18	ICSA1	.00027	.04367	.00084	-.00368	.00172	.00551	.00060	.00167	ICSA1
19	ICSAB1	1.0927	83.716	.48379	.83361	.92767	1.0111	.49360	1.0245	ICSAB1
20	CCV1	.51689	64.887	.49349	2.3000	.50565	.50083	1.5132	2.5935	CCV1
21	CCB1	.00015	.02481	00017	-.00033	-.00006	.00018	00001	.00563	CCB1
22	IPK036SQ	.00005	.01928	.00021	-.00146	.03407	.00054	.00007	.00005	IPK036SQ
23	IPK036SX	.50265	53.637	.49747	.46726	.52312	.52091	.52152	.54372	IPK036SX
24	IPK036SY	.50897	54.444	.50376	.47294	.52885	.52831	.53161	.55276	IPK036SY
25	K575-01A	.53700	61.718	1.0810	.48137	.49767	1.8372	.60112	28.211	K575-01A
26	K575-01T	.00069	5.7267	.58762	-.00227	.01971	1.3018	.05659	27.142	K575-01T
27	K575-01J	.00005	1.0166	.11082	-.00032	.00361	.24441	.01065	5.3718	K575-01J
28	K575-01M	.11556	21.727	.82183	.09631	.12118	1.6657	.17988	16.452	K575-01M
29	K575-01S	.11210	19.554	.62898	.09190	.12540	1.4288	.16702	28.350	K575-01S
30	Blank	-.00001	-.00366	.00007	-.00004	-.00040	.00022	.00012	00164	Blank
31	CCV2	.52011	65.310	.49673	2.3125	.50347	.50438	1.5079	2.5990	CCV2
32	CCB2	.00011	.00977	00016	-.00004	-.00013	.00035	.00010	00583	CCB2
33	K575-01A	.55925	85.510	3.2193	.42197	.55539	6.4451	77806	95.372*	K575-01A
34	K575-01W	.00393	28.820	2.8153	-.00724*	.09365	6.0633	.26372	97.772*	K575-01W
35	K575-01J	00074	5.6866	.58301	-.00111	.01961	1.2843	.05577	26.529	K575-01J
36	K575-01M	.58379	105.71	3.8238	.37907	.54360	7.5711	.80517	63.980*	K575-01M
37	K575-01S	.56313	94.690	2.9243	.36687	.56553	6.5569	74993	98.832*	K575-01S
38	Blank	.00012	.03130	.00033	.00017	-.00048	.00165	.00010	.00524	Blank
39	CCV3	52018	66.131*	.50203	2.3035	.50352	.50854	1.4959	2.5775	CCV3
40	CCB3	.00008	.02780	.00015	-.00001	-.00010	.00112	.00014	.00678*	CCB3
41	K201-02W	-.00069	.16966	.25153	-.00392	.03738	1.0223	.20901	8.2481	K201-02W
42	K201-03W	-.00035	.22328	.28850	-.00362	.06368	1.1927	.22619	8.0604	K201-03W
43	Blank	.00005	-.00808	.00005	-.00020	-.00030	.00003	.00005	.00090	Blank
44	CCV4	51580	65.789	.49611	2.2784	.50826	.50663	1.4979	2.5697	CCV4
45	CCB4	.00006	.01147	.00019	.00047	-.00020	.00064	.00018	.00680*	CCB4
46	IPK035SB	-.00007	.01285	.00004	-.00116	.03427	.00023	.00012	00053	IPK035SB
47	IPK035SL	.51418	55.306	.50984	.47193	.53279	.53165	.53209	.55160	IPK035SL
48	IPK035SC	.51228	55.205	.50839	.46999	.52953	.53176	.52838	.54928	IPK035SC
49	K203-17A	.50476	55.380	.59631	.45069	.51846	1.8295	1.0753	1.9428	K203-17A
50	K203-17	-.00004	.75614	.11063	-.00578*	.04212	1.3870	.57617	1.4776	K203-17
51	K203-17J	-.00002	.14504	.02229	-.00028	.00795	.27851	.11741	.29436	K203-17J
52	K203-18	-.00074	.62180	.13181	-.00601*	.03819	1.7654	.33937	4.5269	K203-18

53	K203-19	-.00075	.16505	.11490	-.00571*	.03672	1.5467	.33527	55242	K203-19
54	K203-20	-.00073	.20151	.09857	-.00538*	.03821	1.8365	.29714	2.6482	K203-20
55	Blank	.00006	-.01043	.00007	.00014	-.00021	.00049	.00002	.00041	Blank
56	CCV5	.51552	66.084*	.50055	2.2707	.50522	.51106	1.4949	2.5714	CCV5
57	CCB5	-.00001	.00369	.00012	.00030	.00014	.00065	.00019	.00628	CCB5
58	K203-21	-.00033	.13080	.05454	-.00398	.03549	1.5059	.26403	.69210	K203-21
59	K203-22	-.00032	.11309	.11241	-.00470	.03705	1.4477	.28220	79511	K203-22
60	Blank	.00014	-.01859	.00016	-.00072	-.00040	.00075	.00004	.00042	Blank
61	CCV6	.51309	66.052*	.50068	2.2464*	.50319	.50718	1.4883	2.5566	CCV6
62	CCB6	.00011	.00798	.00021	.00030	.00012	.00042	.00006	.00645*	CCB6
63	IPK034WB	.00005	-.01045	.00010	.00010	-.00021	.00010	.00008	.00001	IPK034WB
64	IPK034WL	.52839	54.610	.50848	.48536	.48502	.52289	.52293	.53106	IPK034WL
65	IPK034WC	.52442	55.548	.51731	.48348	.49173	.53244	.51530	.52767	IPK034WC
66	K133-01A	.73399	2967.7*	13.128	.41765	.47155	.52077	.54885	.56854	K133-01A
67	K133-01	-.00069	3003.7*	12.790	-.00286	-.00142	.00029	-.00065	.00750	K133-01
68	K133-01J	-.00014	829.66*	2.7430	-.00106	-.00024	.00304	-.00033	.00169	K133-01J
69	K133-01M	.74123	2989.0*	13.328	.39549	.47544	.52059	.51760	.52804	K133-01M
70	K133-01S	.74576	2987.3*	13.559	.39291	.47941	.52642	.52127	.53420	K133-01S
71	K133-02	-.00026	698.57*	3.3542	-.00090	-.00011	.00293	-.00039	.01756	K133-02
72	Blank	-.00003	.97598	.00042	-.00026	-.00016	.00037	.00013	.00033	Blank
73	CCV7	.51363	67.008*	.50351	2.2556	.50471	.50857	1.4852	2.5557	CCV7
74	CCB7	.00013	.51408*	.00021	.00037	-.00021	.00019	.00014	.00630*	CCB7
75	K133-03	-.00066	*****	18.408	-.00205	-.00136	.00187	.00279	.00957	K133-03
76	K133-04	-.00054	1484.3*	8.5462	-.00173	-.00095	.00188	-.00047	.00619	K133-04
77	K133-05	-.00044	653.41	4.1492	-.00086	-.00023	.00316	-.00038	.00192	K133-05
78	K119-01	.00000	76.682	.68732	-.00011	-.00094	.00151	-.00007	.00430	K119-01
79	K119-02	-.00042	126.13	2.7702	-.00100	-.00043	.00590	.00289	.00368	K119-02
80	K119-03	-.00020	126.36	2.2121	-.00077	-.00031	.00317	-.00011	.00566	K119-03
81	K146-02	-.00070	*****	12.975	-.00382	-.00138	.00014	-.00115	.00460	K146-02
82	K146-03	-.00042	573.34	5.3725	-.00083	-.00134	.00273	-.00015	.00238	K146-03
83	K146-04	-.00036	391.48	3.6863	-.00126	-.00083	.00349	.00062	.01058	K146-04
84	Blank	-.00002	.89724	.00034	-.00020	-.00034	.00057	.00020	.00296	Blank
85	CCV8	.50813	66.339*	.50075	2.2459*	.50030	.50538	1.4651	2.5285	CCV8
86	CCB8	.00018	.54173*	.00023	-.00024	-.00020	.00065	.00024	.00367	CCB8
87	K146-05	-.00049	528.98	4.9240	-.00096	-.00019	.00278	-.00032	.00649	K146-05
88	K146-06	-.00037	398.35	3.7328	-.00120	-.00082	.00330	.00086	.00795	K146-06
89	Blank	-.00006	.58819	.00036	.00013	-.00057	.00023	.00003	.00124	Blank
90	CCV9	.50983	66.560*	.50387	2.2249*	.49643	.50202	1.4674	2.5205	CCV9
91	CCB9	.00003	.42900*	.00021	.00013	-.00057	.00034	.00019	.00374	CCB9
92	TXK007SB	.00002	337.58*	.00196	-.00166	.00021	.00011	.00015	.03940*	TXK007SB
93	K521-01A	.54404	380.47	.91073	.47702	.48421	.52914	.54122	.64264	K521-01A
94	K521-01	.00000	330.17	.41619	-.00136	.00068	.00232	.00018	.07658	K521-01
95	K521-01J	-.00019	70.936	.08706	-.00028	-.00008	.00069	.00006	.01586	K521-01J
96	K521-01M	.55862	395.59	.94398	.45694	.49577	.53574	.51783	.61692	K521-01M
97	K521-01S	.55129	377.75	.91488	.45283	.48953	.53180	.51316	.61428	K521-01S
98	K520-03	-.00002	325.83	.12292	-.00142	.00054	.00272	.00072	1.0056	K520-03
99	Blank	.00007	.44939	.00007	-.00032	.00005	.00001	.00009	.00146	Blank
100	CCV10	.50879	66.265*	.50022	2.2573	.49875	.50495	1.4655	2.5371	CCV10
101	CCB10	.00002	.35178*	.00004	.00029	-.00019	.00049	.00011	.00370	CCB10
102	Blank	-.00003	.21390	.00022	.00049	-.00033	.00019	.00013	.00139	Blank
103	CCV11	.50253	66.969*	.49906	2.2029*	.50146	.50225	1.4610	2.5108	CCV11
104	CCB11	.00006	.22153*	.00016	-.00013	-.00019	.00037	.00024	.00346	CCB11
105	IPK037WB	.00008	.20309	.00007	.00004	-.00039	.00034	.00024	-.00063	IPK037WB
106	IPK037WL	.51705	56.475	.51689	.47597	.48607	.52840	.51238	.52154	IPK037WL
107	IPK037WC	.52023	56.899	.52162	.48016	.48697	.53856	.51182	.52423	IPK037WC

108	TXK008SB	.00013	341.89*	.00158	-.00149	.00046	.00029	.00026	.00143	TXK008SB
109	K543-01A	.53920	411.84	1.1488	.46700	.48146	.53068	.54499	.66730	K543-01A
110	K543-01	-.00010	365.87	.65720	-.00152	.00010	.00317	.00391	.10218	K543-01
111	K543-01J	.00003	77.352	.13687	.00013	.00000	.00103	.00087	.02019	K543-01J
112	K543-01M	.55971	427.86	1.1938	.44503	.49324	.53821	.52323	.65862	K543-01M
113	K543-01S	.55673	403.78	1.1447	.44384	.49331	.53131	.52534	.66366	K543-01S
114	Blank	.00004	.29436	.00023	.00017	-.00007	.00028	.00019	.00131	Blank
115	CCV12	.50775	67.423*	.50597	2.2068*	.49426	.50258	1.4666	2.5138	CCV12
116	CCB12	.00022	.21210*	.00019	-.00023	.00018	.00043	.00029	.00352	CCB12
INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID

ID8K020 Section 3 of 3

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 12/1/11 13:01

End Date: 12/1/11 16:55

SOP #	Rev. #
☑ EMAX-6010	7
☐ EMAX-6010C	1
☐ EMAX-200.7	2
☐ EMAX-	

Comments:

Book #: AD8-022

Instrument No.: D8

Analytical Batch: ~~12/8~~ 12/1/11 1D8L001

Analytical Sequence: S-11L6010 (v3)

Method File: 11L6010 (v3)

Database: EMAX

	STANDARDS ID		STANDARDS ID
S0	SM1B14-7805	S30	SM1B14-6802
S1	NA	S31	-6803
S2		ICV	-824
S3		CCV	-8301
S4		ICSA	-8502
S5		ICSAB	-6704
S6		CRI/MRL1	-8104
S7		MRL2	-7401
S8			
S9			
S10			
S11			
S12			
S16			
S17			
S18			
S20	SM1B14-8401		
S21	-6503		
S22	-6504		
S23	-8402		
S24	-6702		
S25	-6703		
S26	-7801		
S27	-7802		
S28	-7803		
S29	-7804		

Analyzed By: M

Date: 12/1/11

7033

SEQ.FMC File = IDB.001

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	CSIC	TIME	[illegible]	[illegible]
IDB.001001	Blank	[illegible]	[illegible]	1.000
IDB.001002	S20	[illegible]	[illegible]	1.000
IDB.001003	S21	[illegible]	[illegible]	1.000
IDB.001004	S22	[illegible]	[illegible]	1.000
IDB.001005	S23	[illegible]	[illegible]	1.000
IDB.001006	S24	[illegible]	[illegible]	1.000
IDB.001007	S25	[illegible]	[illegible]	1.000
IDB.001008	S26	[illegible]	[illegible]	1.000
IDB.001009	S27	[illegible]	[illegible]	1.000
IDB.001010	S28	[illegible]	[illegible]	1.000
IDB.001011	S29	[illegible]	[illegible]	1.000
IDB.001012	S30	[illegible]	[illegible]	1.000
IDB.001013	S31	[illegible]	[illegible]	1.000
IDB.001014	ICV	[illegible]	[illegible]	1.000
IDB.001015	ICB	[illegible]	[illegible]	1.000
IDB.001016	MRL.C1C1	[illegible]	[illegible]	1.000
IDB.001017	MRL.C1C2	[illegible]	[illegible]	1.000
IDB.001018	ICSAI	[illegible]	[illegible]	1.000
IDB.001019	ICSAB1	[illegible]	[illegible]	1.000
IDB.001020	CCV.	[illegible]	[illegible]	1.000
IDB.001021	CCB1	[illegible]	[illegible]	1.000
IDB.001022	K542 DoA	[illegible]	[illegible]	15.00
IDB.001023	K542 DoA	[illegible]	[illegible]	15.00
IDB.001024	K542 DoA	[illegible]	[illegible]	15.00
IDB.001025	K542 DoA	[illegible]	[illegible]	90.00
IDB.001026	Blank	[illegible]	[illegible]	1.000
IDB.001027	CCV2	[illegible]	[illegible]	1.000
IDB.001028	CCB2	[illegible]	[illegible]	1.000
IDB.001029	IPK046wk	[illegible]	[illegible]	1.000
IDB.001030	IPK046wk	[illegible]	[illegible]	1.000
IDB.001031	IPK046wk	[illegible]	[illegible]	1.000
IDB.001032	[illegible]	[illegible]	[illegible]	1.000
IDB.001033	[illegible]	[illegible]	[illegible]	1.000
IDB.001034	[illegible]	[illegible]	[illegible]	1.000
IDB.001035	[illegible]	[illegible]	[illegible]	1.000
IDB.001036	[illegible]	[illegible]	[illegible]	1.000
IDB.001037	[illegible]	[illegible]	[illegible]	1.000
IDB.001038	Blank	[illegible]	[illegible]	1.000
IDB.001039	CCV3	[illegible]	[illegible]	1.000
IDB.001040	CCB3	[illegible]	[illegible]	1.000
IDB.001041	K133 01A	[illegible]	[illegible]	13.00
IDB.001042	K133 01A	[illegible]	[illegible]	13.00
IDB.001043	K133 01A	[illegible]	[illegible]	10.00
IDB.001044	K133 01A	[illegible]	[illegible]	20.00
IDB.001045	Blank	[illegible]	[illegible]	1.000
IDB.001046	CCV4	[illegible]	[illegible]	1.000
IDB.001047	CCB4	[illegible]	[illegible]	1.000
IDB.001048	IPK002wk	[illegible]	[illegible]	1.000
IDB.001049	IPK002wk	[illegible]	[illegible]	1.000
IDB.001050	IPK002wk	[illegible]	[illegible]	1.000
IDB.001051	K203 03A	[illegible]	[illegible]	1.000
IDB.001052	K203 03	[illegible]	[illegible]	1.000

[illegible]	K233-03L	15:47	12/01/11	5.000
1085.001054	K233-03M	15:50	12/01/11	1.000
1086.001056	K233-03N	15:53	12/01/11	1.000
1087.001056	K233-03	15:55	12/01/11	1.000
1088.001057	Blank	15:58	12/01/11	1.000
1089.001058	CCV5	16:01	12/01/11	1.000
1090.001059	CCB5	16:04	12/01/11	1.000
1091.001061	K233-04	16:07	12/01/11	1.000
1092.001061	K229-02	16:10	12/01/11	1.000
1093.001062	K229-04	16:14	12/01/11	1.000
1094.001063	Blank	16:17	12/01/11	1.000
1095.001064	CCV6	16:20	12/01/11	1.000
1096.001065	CCB6	16:23	12/01/11	1.000
1097.001066	KJ19-01A	16:33	12/01/11	1.000
1098.001067	KJ19-01W	16:37	12/01/11	1.000
1099.001068	KJ19-01J	16:40	12/01/11	5.000
1100.001069	KJ19-02W	16:43	12/01/11	1.000
1101.001070	KJ19-03W	16:46	12/01/11	1.000
1102.001071	Blank	16:49	12/01/11	1.000
1103.001072	CCV7	16:52	12/01/11	1.000
1104.001073	CCB7	16:55	12/01/11	1.000

ANALYTE	Al	Si	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	[illegible]	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK																												
S01																												
S02																												
S03																												
S04																												
S05																												
S06																												
S07																												
S08																												
S09																												
S10																												
S11																												
LCS	103	104	108	101	101	101	104	102	99	97	105	103	98	97	97	95	103	99	97	107	103	104	98	98	101	101	103	104
LCB																												
MS[illegible]																												
MSD[illegible]																												
[illegible]	97							94				97			98													
[illegible]	96	102	100	98	100	98	98	93	96	96	108	97	95	109	96	93	102	96	101	105	109	107	95	97	91	101	103	102
[illegible]	103	104	106	101	101	102	105	107	101	97	106	104	97	98	97	95	103	99	95	107	104	105	98	96	102	101	105	104
[illegible]																												
[illegible]																												
[illegible]																												
[illegible]																												
[illegible]	106	103	105	99	97	101	104	107	103	97	104	104	97	98	97	94	103	99	99	105	103	106	98	95	101	101	104	104
[illegible]																											

K232-03	..	.		.	.	...		.	..		...	..		...	...		...	..	..	.	..		..	.	.	.			
K232-04		..	..	...	....	....	..			.	....	....	....	..	.	....	..		.	....	..	.		..	...		...			
K233-05		....	...	..	..	....	....	.			.	..	....	.		....	..	.		....	..	.			..	.	.	.	.	
K233-06	.	....	.	....	...	....	..					.	....	.	.	....	...		.	....	..	..			....	..	...			
B.ANK	.	....	...	...	..	....	....			.	..	...	..			..	.		....	....	..	.		....	....	..	.			
CIV5	102	104	110	98	98	102	105	103	102	97	108	105	97	98	95	97	101	99	97	105	106	105	97	95	102	98	101	104		
CIP5	...	....	..	.			.			..	..	.			..		..	.	..	.			...							
K232-04		..	....	...				..	..	..	....	.		..	.		.		..		..	.	.	..	.			...		
K229-07	..	.		..	.	.	.			..		...	.		....	..	.	....	...	....		.	...	....	..	..				
K229-04	...				..	..	....	....	.. .	...	.	..	....	....	..	...	....	....		....	....	....	....						....	
BLANK	.	....	...	....	.	....	....	..	.		....	...	....	..	.	....	..		.	....	....			..	....	.	.	....	....	
CIV6	101	102	106	96	99	103	105	103	103	97	107	104	97	104	94	97	102	99	97	104	105	103	97	95	94	98	107	103		
CIP6	...	..						....	....	....	.			...	....		...	....	....	.		...	....	..		.			..	
K219-01A	..	. .	..	..	. .		.	. .		....	....		...	.	..				...		...	. .		..		.	.. .	.		
K219-01B	.		.					..	. .	.	.	.	.	.	.		....			. .		....	.				.	.		
K219-02A	. .	.. .	.		.			.	.	. .	...	..		.	.		.	..	..	..	.	..	...	. .	..		.	..		
K219-02B	.		....	...	. .	....	. ..	. .				...	....	.. .		....	. ..		.	.	....	.	. .	.	.			. . .	.	
K219-03B	....	....	...	.		..		..	.	....	....	..			..	....		...	....	.		.. .	....	....	.	...				
B.ANK	.		...	...	....	..	....	....	.. .			...	....	. .	..		..	....	.. .			.. .	....	.		..		. .	....	
CIV7	99	98	102	96	99	95	100	101	99	96	106	103	95	102	93	97	99	98	96	100	102	103	96	91	93	98	105	101		
CIP7		..	.	.		..	.	....	.. .			..		..	..			. ..				...	...	.	.	.			..	

SC limit of each parameter are listed in a table attached next to all the IC2 check forms
* out of QC limit

ANALYTE	Al	Sb	As	Ba	Be	B	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]

K293 D07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
K292-D29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
K293 D05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
K293 D1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B/AN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CIV8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
K288	15.1	1.56	490	280	.130	2.30	.190	35.8	120	050	080	-2.30	510	-.460	2.34	290	430	240	130	700	120	75.4	060	540	180	310	.130	1.27
K222 D4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
K220 D2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
K225 D4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B/AN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CIV6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LB9	8.06	.040	1.24	.330	.170	2.19	.090	35.7	290	020	070	3.29	-.360	330	2.83	240	283	.130	114	150	540	63.9	000	320	.020	220	.160	1.03
K219 D1A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
K219 D1A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
K219-D1A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
K219 D2A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
K219-D2A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B/AN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CIV7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LB9	4.31	.320	.540	.210	.070	1.26	.080	37.6	270	-.080	.020	-6.13	.340	.020	1.83	.370	.410	.250	.147	-1.23	-.050	81.4	.070	.020	-.150	.250	.160	.580

CC limit of each parameter are listed in a table attached next to all the CCP check forms
* : out of CC Limit

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Facto	CorrFa	Check	Check Table	Fail Action
1	0	0	0	0	Unk	S0		ID8L001001			1	☒	unk	---
2	0	0	0	0	Unk	S1		ID8L001002			1	☒	unk	---
3	0	0	0	0	Unk	S2		ID8L001003			1	☒	unk	---
4	0	0	0	0	Unk	S3		ID8L001004			1	☒	unk	---
5	0	0	0	0	Unk	S4		ID8L001005			1	☒	unk	---
6	0	0	0	0	Unk	S5		ID8L001006			1	☒	unk	---
7	0	0	0	0	Unk	S6		ID8L001007			1	☒	unk	---
8	0	0	0	0	Unk	S7		ID8L001008			1	☒	unk	---
9	0	0	0	0	Unk	S8		ID8L001009			1	☒	unk	---
10	0	0	0	0	Unk	S9		ID8L001010			1	☒	unk	---
11	0	0	0	0	Unk	S10		ID8L001011			1	☒	unk	---
12	0	0	0	0	Unk	S11		ID8L001012			1	☒	unk	---
13	0	0	0	0	Unk	S12		ID8L001013			1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8L001014			1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8L001015			1	☒	3XIDL	None
16	3	2	3	1	QC	MRLL0101		ID8L001016			1	☒	MRL-EMAX	None
17	4	2	4	1	QC	MRLL0102		ID8L001017			1	☒	MRL-AFCEE	None
18	5	2	5	1	QC	ICSA1		ID8L001018			1	☒	ICSA-DoD	None
19	6	2	6	1	QC	ICSAB1		ID8L001019			1	☒	ICSAB	None
20	7	2	7	1	QC	CCV1		ID8L001020			1	☒	CCV	None
21	8	2	8	1	QC	CCB1		ID8L001021			1	☒	3XIDL	None
22	36	2	12	3	Unk	K542-06A	TCLP 18X	ID8L001022			1	☒	unk	---
23	37	2	1	4	Unk	K542-06A	TCLP 18X DLB SPI	ID8L001023			1	☒	unk	---
24	38	2	2	4	Unk	K542-06K	TCLP 18X	ID8L001024			1	☒	unk	---
25	39	2	3	4	Unk	K542-06J	TCLP 90X	ID8L001025			1	☒	unk	---
26	40	2	4	4	Blank	Blank		ID8L001026			1	☐		---
27	41	2	5	4	QC	CCV2		ID8L001027			1	☒	CCV	None
28	42	2	6	4	QC	CCB2		ID8L001028			1	☒	3XIDL	None
29	18	2	6	2	QC	IPK045WB		ID8L001029			1	☒	1/2LOQ	None
30	19	2	7	2	QC	IPK045WL		ID8L001030			1	☒	LCS	None
31	20	2	8	2	QC	IPK045WC		ID8L001031			1	☒	LCS	None
32	21	2	9	2	Unk	K227-01A		ID8L001032			1	☒	unk	---
33	22	2	10	2	Unk	K227-01		ID8L001033			1	☒	unk	---
34	23	2	11	2	Unk	K227-01J		ID8L001034			1	☒	unk	---
35	24	2	12	2	Unk	K227-01M		ID8L001035			1	☒	unk	---
36	25	2	1	3	Unk	K227-01S		ID8L001036			1	☒	unk	---
37	26	2	2	3	Unk	K217-01		ID8L001037			1	☒	unk	---
38	15	2	3	2	Blank	Blank		ID8L001038			1	☐		---
39	16	2	4	2	QC	CCV3		ID8L001039			1	☒	CCV	None

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Facto	CorrFa	Check	Check Table	Fail Action
40	17	2	5	2	QC	CCB3		ID8L001040			1	☒	3XIDL	None
41	9	2	9	1	Unk	K133-01A	DLB SPIKE 10X	ID8L001041			1	☒	unk	---
42	30	2	6	3	Unk	K133-01A		ID8L001042			1	☒	unk	---
43	31	2	7	3	Unk	K133-01I	10X	ID8L001043			1	☒	unk	---
44	32	2	8	3	Unk	K133-01J	25X	ID8L001044			1	☒	unk	---
45	27	2	3	3	Blank	Blank		ID8L001045			1	☐		---
46	28	2	4	3	QC	CCV4		ID8L001046			1	☒	CCV	None
47	29	2	5	3	QC	CCB4		ID8L001047			1	☒	3XIDL	None
48	10	2	10	1	QC	IPL001WB		ID8L001048			1	☒	1/2LOQ	None
49	11	2	11	1	QC	IPL001WL		ID8L001049			1	☒	LCS	None
50	12	2	12	1	QC	IPL001WC		ID8L001050			1	☒	LCS	None
51	13	2	1	2	Unk	K233-03A		ID8L001051			1	☒	unk	---
52	14	2	2	2	Unk	K233-03		ID8L001052			1	☒	unk	---
53	33	2	9	3	Unk	K233-03J		ID8L001053			1	☒	unk	---
54	34	2	10	3	Unk	K233-03M		ID8L001054			1	☒	unk	---
55	35	2	11	3	Unk	K233-03S		ID8L001055			1	☒	unk	---
56	43	2	7	4	Unk	K233-01		ID8L001056			1	☒	unk	---
57	44	2	8	4	Blank	Blank		ID8L001057			1	☐		---
58	45	2	9	4	QC	CCV5		ID8L001058			1	☒	CCV	None
59	46	2	10	4	QC	CCB5		ID8L001059			1	☒	3XIDL	None
60	47	2	11	4	Unk	K233-04		ID8L001060			1	☒	unk	---
61	48	2	12	4	Unk	K229-02		ID8L001061			1	☒	unk	---
62	49	2	1	5	Unk	K229-04		ID8L001062			1	☒	unk	---
63	50	2	2	5	Blank	Blank		ID8L001063			1	☐		---
64	51	2	3	5	QC	CCV6		ID8L001064			1	☒	CCV	None
65	52	2	4	5	QC	CCB6		ID8L001065			1	☒	3XIDL	None
66	53	2	5	5	Unk	K119-01A	DISSOLVED	ID8L001066			1	☒	unk	---
67	54	2	6	5	Unk	K119-01W	DISSOLVED	ID8L001067			1	☒	unk	---
68	55	2	7	5	Unk	K119-01J	DISSOLVED	ID8L001068			1	☒	unk	---
69	56	2	8	5	Unk	K119-02W	DISSOLVED	ID8L001069			1	☒	unk	---
70	57	2	9	5	Unk	K119-03W	DISSOLVED	ID8L001070			1	☒	unk	---
71	58	2	10	5	Blank	Blank		ID8L001071			1	☐		---
72	59	2	11	5	QC	CCV7		ID8L001072			1	☒	CCV	None
73	60	2	12	5	QC	CCB7		ID8L001073			1	☒	3XIDL	None

[illegible]	[illegible]	A'	[illegible]	A[illegible]	[illegible]	[illegible]	B	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	Blank	.00248	00001	-.00001	00013	00015	00037	00002	.00055	00003	00092	Blank
2	S20					9.0255		12.16				S20
3	S21					1.4761		1.2216				S21
4	S22				.02[illegible]						.15986	S22
5	S23				5.1384						1.5894	S23
6	S24						.09926					S24
7	S25						1.0383					S25
8	S26	.2.876							.06663	1.8851		S26
9	S27	8.2969							4.2847	1.4103		S27
10	S28		.03539									S28
11	S29		.05273									S29
12	S30			.03174								S30
13	S31			.03496								S31
14	TCV	133.37	1.3530	1.7686	2.0104	1.5088	2.5364	2.0842	76.592	2.4869	9.168	TCV
15	TCB	.03927	.00336	.00371	.00025	.00017	.00665	.00035	.01927	.00017	.00103	TCB
16	MR..0101	.71854	.09683	.01626	.01086	.01355	.09893	.01099	1.0509	.01050	.00905	MR..0101
17	MR..0102	.28703	.34908	.01047	.00523	.00423	.09761	.00536	.571.5	.01095	.00964	MR..0102
18	ICSAI	387.45	.00548	.00109	.00132	.00012	.07026	.00099	470.52	.00056	.00025	ICSAI
19	ICSAB1	383.64	1.6727	1.3617	.59146	.49984	.43638	.98351	467.43	.47371	.47667	ICSAB1
20	ICVI	102.60	1.5604	1.0624	1.9961	1.5088	2.5568	2.0965	76.893	2.5149	.57447	ICVI
21	ICBI	.01390	.00005	.00.97	.00025	.00013	.00414	.00006	.06296*	.00019	.00005	ICBI
22	K542-06A	5.3136	2.5152	.59472	.53409	.55713	.51354	.5758	5.1277	.54402	.53977	K542-06A
23	K542-06A	10.649	4.9979	1.1765	1.0554	1.1176	1.0001	1.1290	51.221	1.0745	1.0680	K542-06A
24	K542-06K	.30842	.30784	.03536	.00077	.00012	.00511	.01268	.84728	.00022	.00068	K542-06K
25	K542-06L	.30092	.00300	.00134	.01325	.00004	.00187	.00268	.18350	.00014	.00011	K542-06L
26	Blank	.00245	.03138	.00047	.00024	.00006	.00751	.00002	.05053	.00003	.00066	Blank
27	TCV2	103.43	1.5654	1.0583	1.9994	1.5137	2.1226	2.0751	76.935	2.4987	.57351	TCV2
28	TCB2	.06625	.00026	.00135	.00015	.00011	.00459	.00006	.04059*	.00021	.00005	TCB2
29	TPK0456B	.01519	.00177	.00385	.00049	.00014	.03178	.00006	.008.7	.00015	.00004	TPK0456B
30	TPK0456L	5.1287	2.4464	.57[illegible]	.50665	.52728	.51184	.52337	50.011	.50667	.51[illegible]	TPK0456L
31	TPK0456T	5.1587	2.5[illegible]	.57[illegible]	.49920	.52037	.49[illegible]	.52730	50.41[illegible]	.5[illegible]	.57254	TPK0456T
32	K232-01A	5.4759	2.5[illegible]	.61[illegible]	.57[illegible]	.5[illegible]	.51[illegible]	.52139	54.4[illegible]	.5[illegible]	.5[illegible]	K232-01A
33	K232-01[illegible]	.03309	.02483	.00[illegible]	.00[illegible]	.00014	.03[illegible]	.00[illegible]	1.2[illegible]	.0[illegible]	.0[illegible]	K232-01[illegible]
34	K232-02	.01109	.00[illegible]		.00248	.00037	.01[illegible]	.00044	.1.4[illegible]	.00047	.0[illegible]	K232-02
35	K232-02[illegible]	1.2066	1.[illegible]	.5[illegible]	.5[illegible]	.5[illegible]	1.[illegible]	.5[illegible]	5[illegible].52	.5[illegible]	.5[illegible]	K232-02[illegible]
36	K232-03	5.1[illegible]	2.[illegible]	.5[illegible]	.5[illegible]	.49811	.5[illegible]	.53[illegible]	50.1[illegible]	.5[illegible]	.5[illegible]	K232-03
37	K232-03[illegible]	.1.844	.0[illegible]	.0[illegible]	.0[illegible]	.00[illegible]	.07[illegible]	.01[illegible]	.0[illegible]6	.01[illegible]	.0[illegible]	K232-03[illegible]
38	Blank	.02621	.00.5	.0[illegible]	.00.8	.00021	.0013	.01334	1.[illegible]6	.00015	.0[illegible]	Blank
39	[illegible]	1.03.1	1.6193	.[illegible]	1.5[illegible]	1.1[illegible]	2.5[illegible]	2.1402	7.[illegible]26	2.5587	.58[illegible]	[illegible]
40	[illegible]	.03896	.0038[illegible]	.0[illegible]	.00[illegible]	.00011	.00193	.00010	.04310*	.0.017	.0[illegible]	.0093
41	K132-01A	1.4.4	5.4924	1.5[illegible]	1.0781	1.0310	1.1.894	1.14[illegible]	.[illegible]4.32	1.1092	1.[illegible]62	K132-01A
42	K132-01A	5.7177	2.7[illegible]	.[illegible]	.5[illegible]	.5511	.4.79	.57647	203.07	.56[illegible]	.55[illegible]	K132-01A
43	K133-01[illegible]	.01[illegible]	.00215	.00[illegible]	.01[illegible]	.03628	.03441	.0300[illegible]	150.27	.0005[illegible]	.003.7	K133-01[illegible]
44	K133-0[illegible]	.00097	.00304	.00[illegible]	.0[illegible]5[illegible]	.00015	.0[illegible]9[illegible]	.03309	31.115	.00051	.0[illegible]9	K133-0[illegible]
45	Blank	.03609	.00137	.00[illegible]	.07[illegible]3	.00005	.00071	.00308	.05683	.00017	.0[illegible]	Blank
46	[illegible]	1.[illegible]4	1.[illegible]45	1.5355	1.0[illegible]	1.4967	1.4277	2.1[illegible]38	2.1[illegible]5	76.617	2.5[illegible]	.57600	.1[illegible]4
47	[illegible]84	.0393[illegible]	.00379	.00[illegible]84	.00[illegible]	.00010	.00212	.00306	.04692*	.00031	.00[illegible]	.0[illegible]84
48	IP.001W8	.01638	.00159	.0[illegible]	.00[illegible]	.00016	.0009[illegible]	.00315	.05492	.00024	.00020	IP.001W8
49	IP.001W[illegible]	5.2298	2.6371	.5[illegible]	.48093	.49[illegible]	.5[illegible]	.54724	51.256	.5[illegible]	.49[illegible]	IP.001W[illegible]
50	IP.001W[illegible]	5.2602	2.[illegible]85	.5[illegible]	.48322	.49477	.52698	.53856	51.242	.51[illegible]	.44[illegible]	IP.001W[illegible]
51	K233-09A	5.7319	2.6562	.58[illegible]	.5[illegible]	.5[illegible]	.54[illegible]	.54[illegible]	.57518	43.913	.56384	.53[illegible]	K233-09A
52	K233-0[illegible]	.02623	.0079[illegible]	.0[illegible]	.0[illegible]	.00[illegible]	.0[illegible]6	.00026	12.941	30.15	.0[illegible]	K233-0[illegible]

INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID
53	K233-03J	.00799	.00143	.00031	.01521	.00018	00161	.00019	2.8087	.00049	.00083	K233-03J
54	K233-03M	5.3482	2.5870	.53891	.56731	.51373	.53427	.53038	64.452	.51206	.49431	K233-03M
55	K233-03S	5.3781	2.6479	.55203	.56514	.51093	.54523	.53853	64.868	.52123	.50121	K233-03S
56	K233-01	.03179	.00209	.00008	.26812	.00017	.03063	.00021	25.646	.00111	.00071	K233-01
57	Blank	.00382	.00045	.00131	00017	.00010	-.00095	-.00001	.04458	00004	.00008	Blank
58	CCV5	103.17	1.5646	1.0499	1.9552	1.4712	2.5700	2.0904	77.405	2.5599	.97023	CCV5
59	CCB5	.01061	.00156	.00049	.00028	.00010	.00236	.00010	.03575*	.00012	-.00005	CCB5
60	K233-04	.01344	.00157	.00052	.00122	.00015	.00281	.00014	.46242	.00093	.00023	K233-04
61	K229-02	.02494	.00237	.00170	.02321	.00021	.00252	.01608	156.90	.00060	.00729	K229-02
62	K229-04	.11356	.00134	.00060	.04236	.00018	.00256	.00653	102.15	.00089	.00058	K229-04
63	Blank	.01629	-.00011	.00079	.00012	.00006	-.00118	-.00002	.04241	.00027	.00017	Blank
64	CCV6	100.89	1.5217	1.0585	1.9119	1.4856	2.5654	2.1019	76.974	2.5627	.96846	CCV6
65	CCB6	.00806	-.00004	.00124	.00033	.00012	.00219	.00009	.03572*	.00029	.00002	CCB6
66	K119-01A	5.4874	2.6163	.58685	.55829	.53479	.61586	.56346	126.67	.55156	.52372	K119-01A
67	K119-01W	.01443	.00206	.00360	.04520	.00018	.08684	.00011	79.291	.00062	-.00008	K119-01W
68	K119-01J	.00757	.00220	.00185	.00990	.00017	.01677	.00014	16.911	.00053	.00016	K119-01J
69	K119-02W	.02376	.00049	.01955	.08011	.00016	.12162	-.00015	455.66	.00062	-.00028	K119-02W
70	K119-03W	.02273	.00185	.00355	.13697	.00017	.10934	.00001	225.81	.00080	-.00034	K119-03W
71	Blank	-.00173	.00062	.00035	.00011	.00005	-.00157	.00005	.05918	00012	.00004	Blank
72	CCV7	98.592	1.4701	1.0206	1.9022	1.4797	2.4859	2.0000	75.515	2.4850	.96012	CCV7
73	CCB7	.00401	-.00032	.00054	.00021	.00007	.00128	.00008	.03756*	.00027	-.00008	CCB7

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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	[illegible]	3.0112	0.0303	0.0038	[illegible]	3.0004	0.0004	0.0006	0.0061	0.0052	0.0001	Blank
2	523			2.7532			.3996					523
3	521			1.3206			1.1.56					521
4	522	29075	24704									522
5	523	2.9157	1.6696									523
6	524							72908				524
7	525							7.1013				525
8	526								.4724	32726		526
9	527								7.5286	3.3263		527
10	528					024.4						528
11	529					23400						529
12	530				02604						00143	530
13	531				12154						00370	531
14	TCV	2.0183	35.6.0	2.4448	48.4..	57.517	2.3761	2.5.59	2.4829	58.222	1.0701	TCV
15	.7b	03018	00196	03045	00001	-.00448	.00053	.00027	10018	08111	.00107	TCB
16	MR..0101	31063	21556	0101	0106	1.01.4	.01080	01030	0.036	.9.425	03993	MR..0101
17	MR.0102	21006	10772	00301	.3234	20865	.00533	.00975	0.008	97704	00998	MR..0102
18	TCSA.	32093	193 08	00497	0.329	196.81	.00.41	00171	00134	03985	.00731	TCSA1
19	TCSA1	53987	.94 81	95000	1.7937	.92 14	46438	1.0.70	96317	75 558	1 0457	TCSA1.
20	TCV1	2.6415	25.936	2.4.75	49804	58 003	2.3086	2.5665	2.4866	59 029	1.0689	TCV1
21	T.5.	02017	00102	00047	00033	.00344	00023	00026	00016	14914	00026	CCB1
22	K542 .06	57117	5.7467	52.50	10474	49 832	52857	.5327	5.175	48 525	03547	K542 06A
23	K542 .06A	1.1185	.1 1068	1.3884	0057	50 526	1.0565	1.0517	1.1341	48 555	1.2541	K542 06A
24	K542 .06	30856	20786	00080	00460	1.7187	01413	000.2	0.175	68045	00996	K542 06B
25	K542 .06.	30163	04355	00059	00.06	.36548	.00305	00001	1.1.24	.1854.	00196	K542 06C
26	Blank	-.00015	00707	00.69	13.72	00088	03028	00017	0.0.1	04336	00034	Blank
27	TCV1	1.4.94	25.942	2.4.5	34275	58 154	-.3569	2.5646	2.4866	59 567	1.0945	TCV1
28	.7b.	30019	30458	00002	.3955	00580	03040	00034	0.7.2	.1845	30264	CCB1
29	IPK.06..	.3040	02707	3.9..	-.0.0.	00299	03.41	00.3.	-.0.0.	-.0459	00016	IPK.06..
30	IPK.06..	5.1.6	5.1575	4.0.5	5012*	16 776	4852.	.03034	1.1..	48 251	52576	IPK.06..
31	IPK.06..	.3224	-.2.0.	3.0..	.0.1.*	48 792	48186	03827	1.2.	46 .29	5.894	IPK.06..
32	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
33	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
34	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13833	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
35	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
38	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
39	[illegible]	2.7482	25.9.4	2.1.1	48125	54 381	2.2340*	2.5.7	1.4943	[illegible]	1.0646	CTV4
40	[illegible]	.0013	.2164	00.17	00.23	-.00900	00039	30048	30.07	1.9.3	00000	[illegible]
41	[illegible]	30023	0.740	00.38	00.48	03560	0003.	00024	0.1.6	.6526	00004	IP 0010
42	[illegible]	54904	5.3.00	49.01	0.21b*	46 341	46.7	.5.854	5.7..	48 387	03650	IPL0010
43	[illegible]	54560	5.7.0	49119	00056*	46 582	46372	.5154	50.49	48 .02	52401	IP.P0100
44	K233-23A	58613	5.6424	5.0.5	00013	58 019	5.617	52041	45.7.	51 443	54827	K233-23A
45	K233-17	03380	07485	0.7.8	00025	10 .95	1.720	00047	.0562	2.5234	07741	K233 03

53	K233-03J	.00087	.00282	.00114	- 00006	2.3165	.03413	.00032	.00137	61968	.00018	K233-03J
54	K233-03M	.53831	5.3223	.49153	00035	59.881	63558	.52210	.51021	52.227	.52200	K233-03M
55	K233-03S	.55216	5 4019	49476	.00143	59.193	.63318	.52747	.51683	52.524	53243	K233-03S
56	K233-01	.00280	.89914	.00206	.01410	10.719	.21215	.00168	.00457	5.3186	-.00044	K233-01
57	Blank	-.00005	- 00673	-.00001	-.00042	-.00352	.00025	.00008	- 00008	.11340	-.00008	Blank
58	CCV5	2.6941	26.161	2.4209	.48997	56.768	2.3033	2.5289	2.4774	59.431	1.0475	CCV5
59	CCB5	-.00008	- 00338	.00001	-.00096	-.00234	.00029	.00043	.00024	.13855	-.00020	CCB5
60	K233-04	.00188	.00683	.00046	-.00025	.05667	.00074	.00058	.00121	.13939	-.00118	K233-04
61	K229-02	.00125	.00437	.00240	.00275	17.643	.58411	-.00001	.01224	1.1110	.00067	K229-02
62	K229-04	.00263	.01454	.00232	.00116	7.2423	.07498	.00060	.00171	1.7638	.00030	K229-04
63	Blank	-.00025	-.00480	.00031	.00005	-.00531	.00015	.00004	-.00004	.05598	-.00017	Blank
64	CCV6	2.6861	26.082	2.4134	.52242	56.277	2.2898	2.4934	2.4702	58.331	1.0367	CCV6
65	CCB6	-.00007	-.00309	-.00006	-.00033	-.00283	.00024	.00028	.00013	.11365	.00015	CCB6
66	K119-01A	.58475	6.1535	.52152	.00756	60.907	.59475	.52257	.47792	53.354	.56631	K119-01A
67	K119-01W	.00064	.43635	.00151	.00738	13.340	.09882	.00728	.00069	3.3561	-.00089	K119-01W
68	K119-01J	.00011	.09047	.00081	.00175	2.8985	.02193	.00173	.00013	.77120	-.00120	K119-01J
69	K119-02W	.00080	3.8211	.00322	.01645	55.156	1.0364	-.00038	.00194	6.6147	-.00083	K119-02W
70	K119-03W	.00121	.73855	.00189	.00833	37.591	.28474	.00322	.00066	5.4898	-.00078	K119-03W
71	Blank	-.00017	-.00185	.00062	-.00036	.00142	.00015	.00001	-.00002	.12652	-.00093	Blank
72	CCV7	2.6492	25.656	2.3828	.52340	55.688	2.2645	2.4868	2.4546	57.892	.99825	CCV7
73	CCB7	-.00002	-.00813	.00034	-.00002	.00183	.00037	.00041	.00005	.14654	-.00123	CCB7
INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID

ID8L001 Section 2 of 3

TOB.3[1 Se[*]on 3 [illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	B [illegible]	.0001[illegible]	00345	00000	00007	0001[illegible]	00005	-.00026	00085	B [illegible]
2	S[illegible]									S[illegible]
3	S[illegible]									S[illegible]
4	S[illegible]							1[illegible]		S[illegible]
5	S[illegible]							1.3299		S[illegible]
6	S[illegible]		1.0562							S[illegible]
7	S[illegible]		6.1375							S[illegible]
8	S[illegible]									S[illegible]
9	S[illegible]									S[illegible]
10	S[illegible]					00673				S[illegible]
11	S[illegible]					35644				S[illegible]
12	S[illegible]	.04392		.4009			02[illegible]	01587		[illegible]
13	S[illegible]	.[illegible]		6869[illegible]			.2012	08460		5 9[illegible]
14	[illegible]	5[illegible]	62 [illegible]	.4896[illegible]	7 4362		53693	5[illegible]	1 5483	7 5[illegible]
15	[illegible]	.00[illegible]	03696	00008	00057		.00011	00368	00003	00157
16	MR[illegible]	01021	1 5457	.01044	01107		00001	01069	01055	02148
17	MR[illegible]	03990	521.7	.0398[illegible]	01090		00925	01138	00996	01027
18	[illegible]SA[illegible]	00017	3[illegible]917	.00090	.00336		00028	00338	00495	00243
19	[illegible]5A[illegible]	1 0658	8[illegible].136	4767	86904		91724	1 0119	.49886	1 0158
20	[illegible]	51091	62 979	48925	2.3956		50784	60528	1 5897	2 6071
21	[illegible]	00316	05778*	.00505	00326		00009	00024	- 00013	00150
22	K542 [illegible]	48658	64 667	49310	61704		48018	57104	5666.	1 [illegible]
23	K542 [illegible]	5688[illegible]	64 [illegible]	.96753	1 0274		94036	1 0433	1 1.54	2.0775
24	K542 [illegible]	00367	13 [illegible]	01147	03507*		00198	00056	.00019	[illegible]
25	K542 [illegible]	- 00[illegible]	3 8790	00739	00081		00071	00077	.00006	19806
26	Blank	00004	03149	05601	00030		00004	00012	- 00002	[illegible]
27	[illegible]	01351	[illegible] 54[illegible]	49744	7 3543		5[illegible]	[illegible]458	1.5658	[illegible]
28	[illegible]	[illegible]	3[illegible]6[illegible]	00309	0053*		[illegible]	00031	.00017	[illegible]
29	IP[illegible]	[illegible]	02948	00018	[illegible]		[illegible]	00033	00017	[illegible]
30	IP[illegible]	01293	5.[illegible]215	49542	[illegible]		4[illegible]	77[illegible]	53212	[illegible]
31	IP[illegible]	[illegible]	[illegible]	49[illegible]	48[illegible]		4[illegible]	[illegible]	54[illegible]	[illegible]
32	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
33	[illegible]	[illegible]	[illegible]	[illegible]	5034		[illegible]	5[illegible]05	[illegible]	[illegible]
34	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
35	[illegible]	1288*	[illegible]	.7938	4512		[illegible]	[illegible]	[illegible]	[illegible]
36	[illegible]	[illegible]	[illegible]	[illegible]	49107		[illegible]	[illegible]	[illegible]	[illegible]
37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
38	[illegible]	00001	0[illegible]94	[illegible]	[illegible]		[illegible]	[illegible]	0002[illegible]	[illegible]
39	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	1.6[illegible]	[illegible]
40	[illegible]	00017	0[illegible]	0235[illegible]	00011		[illegible]	[illegible]	00076	[illegible]
41	[illegible]	1 10[illegible]	47[illegible]	7 1[illegible]	[illegible]648		[illegible]	[illegible]	1 18[illegible]	1.[illegible]
42	[illegible]	[illegible]	[illegible]	1 [illegible]	50792		48131	49[illegible]	69284	[illegible]
43	[illegible]	[illegible]	3[illegible]	1 2371	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
44	[illegible]	00001	7[illegible]	24601	00031		[illegible]	00109	00001	[illegible]
45	Blank	00011	[illegible]	00003	- 00032		00012	00012	00006	[illegible]
46	[illegible]	5334[illegible]	5[illegible]	4613[illegible]	2.3867		51[illegible]	47252	1 6377	7 5[illegible]
47	[illegible]	- 00001	[illegible]	[illegible]	00001		00035	00039	00000	[illegible]
48	[illegible]	.00097	0809[illegible]	3[illegible]	0001[illegible]		00026	00117	00007	[illegible]
49	[illegible]	53265	5[illegible]	[illegible]	50152		48590	49911	5644.	53031
50	[illegible]	53064	5[illegible]	48915	49[illegible]		48968	50014	56116	53011
51	[illegible]	51684	[illegible]	58166	52947		48365	51502	58271	56643
52	[illegible]	00036	50[illegible]	10351	- 00014		00037	00041	00009	[illegible]

53	K233-03J	.00007	10.684	.02234	.00013	.00000	.00051	.00009	00559	K233-03J
54	K233-03M	.52689	103.35	.59397	.49041	.48181	.52080	.53693	.54605	K233-03M
55	K233-03S	.53842	104.48	.60188	.49615	.48866	.51898	.55075	.55348	K233-03S
56	K233-01	.00015	29.166	.24323	.00003	.00040	.00112	.00018	.02274	K233-01
57	Blank	.00008	.07715	.00009	-.00064	.00026	.00037	.00009	.00164	Blank
58	CCV5	.52888	62.978	.48634	2.3827	.50892	.48992	1.6046	2.6011	CCV5
59	CCB5	.00012	.07861*	-.00006	.00057	-.00018	.00031	.00010	.00122	CCB5
60	K233-04	.00017	.17098	.00343	.00051	.00043	.00099	.00010	.01800	K233-04
61	K229-02	-.00009	4.5430	.15229	-.00022	.00010	.00181	.00006	3.6301	K229-02
62	K229-04	-.00011	1.8625	.07180	.00017	-.00017	.00209	.00009	.63898	K229-04
63	Blank	.00003	.05048	.00004	-.00016	.00019	.00016	.00007	.00094	Blank
64	CCV6	.52513	61.836	.48343	2.3701	.47163	.49235	1.6109	2.5753	CCV6
65	CCB6	.00004	.06389*	.00000	.00032	-.00002	.00022	.00016	.00105	CCB6
66	K119-01A	.51309	124.43	1.1202	.51206	.48024	.50218	.58398	.56872	K119-01A
67	K119-01W	.00014	72.252	.65199	.00071	-.00009	.00102	.00012	.00535	K119-01W
68	K119-01J	.00005	15.168	.13930	.00057	.00001	.00088	.00022	.00214	K119-01J
69	K119-02W	-.00039	119.85	2.6654	-.00019	-.00028	.00417	.00296	.00506	K119-02W
70	K119-03W	-.00016	109.92	1.9402	-.00001	.00023	.00213	.00004	.00656	K119-03W
71	Blank	-.00003	.09794	.00014	.00033	.00017	-.00006	.00005	.00259	Blank
72	CCV7	.51049	61.615	.48068	2.2705	.46665	.48819	1.5695	2.5260	CCV7
73	CCB7	-.00008	.08185*	.00007	.00002	-.00015	.00025	.00014	.00098	CCB7
INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID

ID8L001 Section 3 of 3

Sample Name: Blank Acquired: 12/1/2011 13:01:30 Type: Cal
Method: 11L6010(v3) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00148**	**.00001**	**-.00001**	**.00019**	**.00018**	**.00037**	**-.00003**
Stddev	.00002	.00000	.00000	.00003	.00003	.00001	.00000
%RSD	1.5790	24.056	17.207	15.887	15.754	1.8281	11.476
#1	.00146	.00001	-.00001	.00019	.00022	.00037	-.00002
#2	.00150	.00001	-.00002	.00016	.00017	.00036	-.00002
#3	.00146	.00001	-.00002	.00022	.00016	.00037	-.00003

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00055**	**-.00003**	**-.00092**	**.00112**	**.00003**	**.00006**	**-.00011**
Stddev	.00004	.00001	.00002	.00005	.00000	.00007	.00001
%RSD	6.9518	48.320	2.5007	4.8564	11.756	118.32	13.273
#1	.00057	-.00004	-.00094	.00113	.00003	.00003	-.00012
#2	.00051	-.00002	-.00091	.00117	.00003	.00014	-.00011
#3	.00058	-.00002	-.00090	.00107	.00004	.00001	-.00009

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00004**	**.00004**	**.00005**	**-.00051**	**-.00052**	**.00001**	**.00012**
Stddev	.00003	.00002	.00002	.00015	.00018	.00000	.00002
%RSD	68.385	55.363	51.689	29.523	34.447	31.084	14.001
#1	.00003	.00006	.00007	-.00067	-.00031	.00001	.00010
#2	.00007	.00005	.00006	-.00037	-.00064	.00001	.00013
#3	.00002	.00002	.00002	-.00050	-.00060	.00001	.00013

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00040**	**.00000**	**-.00002**	**.00001**	**.00005**	**-.00025**	**.00085**
Stddev	.00005	.00001	.00000	.00002	.00001	.00001	.00004
%RSD	12.412	423.09	17.147	180.30	14.352	2.0784	4.4375
#1	.00043	.00001	-.00002	.00003	.00005	-.00024	.00080
#2	.00043	.00000	-.00001	-.00001	.00004	-.00025	.00088
#3	.00034	-.00001	-.00002	.00001	.00005	-.00025	.00086

Sample Name: Blank Acquired: 12/1/2011 13:01:30 Type: Cal
Method: 11L6010(v3) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8139.8	115680.	178750.
Stddev	92.9	83.	472.
%RSD	1.1418	.07147	.26388
#1	8041.3	115770.	179170.
#2	8152.0	115600.	178850.
#3	8226.0	115690.	178240.

Sample Name: S20 Acquired: 12/1/2011 13:04:29 Type: Cal
Method: 11L6010(v3) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Be	Cd	Pb	Mn
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.95255**	**.12616**	**.20132**	**.10996**
Stddev	.00279	.00170	.00032	.00056
%RSD	.29247	1.3472	.15721	.50541
#1	.95015	.12474	.20139	.10973
#2	.95561	.12571	.20097	.11060
#3	.95190	.12804	.20159	.10956

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8179.6**	**117290.**	**178490.**
Stddev	99.6	1203.	527.
%RSD	1.2171	1.0259	.29509
#1	8076.8	118610.	178460.
#2	8186.5	116250.	179030.
#3	8275.6	117020.	177980.

Sample Name: S21 Acquired: 12/1/2011 13:07:25 Type: Cal
Method: 11L6010(v3) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Be	Cd	Pb	Mn
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**9.4761**	**1.2210**	**2.0256**	**1.1156**
Stddev	.0252	.0081	.0009	.0094
%RSD	.26558	.66662	.04405	.84189
#1	9.4501	1.2129	2.0252	1.1050
#2	9.4777	1.2211	2.0267	1.1190
#3	9.5004	1.2292	2.0250	1.1228

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8230.7**	**118460.**	**181180.**
Stddev	95.4	1423.	846.
%RSD	1.1596	1.2011	.46682
#1	8133.9	119990.	180290.
#2	8233.6	118230.	181250.
#3	8324.7	117170.	181980.

Sample Name: S22 Acquired: 12/1/2011 13:10:30 Type: Cal
Method: 11L6010(v3) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Ba	Co	Cu	Fe	V
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.52160**	**.15986**	**.29075**	**.04764**	**.13254**
Stddev	.00289	.00016	.00058	.00007	.00020
%RSD	.55490	.09864	.19956	.13983	.14724
#1	.51827	.15986	.29040	.04760	.13235
#2	.52348	.16001	.29141	.04761	.13274
#3	.52306	.15970	.29042	.04772	.13255

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8244.6**	**116300.**	**180230.**
Stddev	104.7	464.	624.
%RSD	1.2697	.39875	.34610
#1	8138.1	116820.	179840.
#2	8248.3	116150.	179900.
#3	8347.3	115920.	180950.

Sample Name: S23 Acquired: 12/1/2011 13:13:28 Type: Cal
Method: 11L6010(v3) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Ba	Co	Cu	Fe	V
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5.1389**	**1.5894**	**2.8157**	**1.8696**	**1.3299**
Stddev	.0421	.0014	.0085	.0164	.0041
%RSD	.81874	.08496	.30253	.87924	.30867
#1	5.1713	1.5907	2.8136	1.8561	1.3255
#2	5.0914	1.5894	2.8250	1.8879	1.3305
#3	5.1541	1.5880	2.8084	1.8650	1.3337

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7792.5**	**116650.**	**175200.**
Stddev	83.3	431.	689.
%RSD	1.0694	.36917	.39322
#1	7705.4	117140.	175020.
#2	7800.7	116410.	174610.
#3	7871.5	116380.	175960.

Sample Name: S24 Acquired: 12/1/2011 13:16:47 Type: Cal
Method: 11L6010(v3) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	B	Mo	Na
Units	Cts/S	Cts/S	Cts/S
Avg	**.09926**	**.72908**	**1.0562**
Stddev	.00023	.00061	.0050
%RSD	.22700	.08354	.47804
#1	.09905	.72973	1.0505
#2	.09924	.72897	1.0580
#3	.09950	.72853	1.0601

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8208.6**	**115990.**	**176530.**
Stddev	84.9	197.	599.
%RSD	1.0340	.16964	.33918
#1	8120.9	116140.	175970.
#2	8214.6	115770.	176460.
#3	8290.3	116070.	177160.

Sample Name: S25 Acquired: 12/1/2011 13:19:45 Type: Cal
Method: 11L6010(v3) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	B	Mo	Na
Units	Cts/S	Cts/S	Cts/S
Avg	**1.0083**	**7.2013**	**6.1075**
Stddev	.0042	.0136	.0480
%RSD	.41173	.18867	.78571
#1	1.0044	7.2167	6.0565
#2	1.0079	7.1963	6.1143
#3	1.0127	7.1909	6.1518

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7629.9**	**112620.**	**165090.**
Stddev	82.0	1367.	503.
%RSD	1.0750	1.2136	.30450
#1	7550.1	113300.	164930.
#2	7625.6	113510.	164690.
#3	7714.0	111040.	165660.

Sample Name: S26 Acquired: 12/1/2011 13:22:51 Type: Cal
Method: 11L6010(v3) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Al	Ca	Cr	Ni	K
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.21876**	**.96663**	**.13851**	**.74223**	**.32226**
Stddev	.00047	.00189	.00031	.00079	.00110
%RSD	.21328	.19512	.22633	.10698	.34075
#1	.21826	.96483	.13861	.74242	.32138
#2	.21918	.96860	.13816	.74291	.32191
#3	.21885	.96647	.13877	.74135	.32349

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7996.8**	**113440.**	**173590.**
Stddev	72.3	179.	158.
%RSD	.90448	.15785	.09104
#1	7922.7	113640.	173430.
#2	8000.6	113300.	173580.
#3	8067.2	113390.	173750.

Sample Name: S27 Acquired: 12/1/2011 13:25:48 Type: Cal
Method: 11L6010(v3) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Al	Ca	Cr	Ni	K
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**8.2969**	**9.2842**	**1.4103**	**7.5286**	**3.3263**
Stddev	.0378	.0413	.0052	.0121	.0066
%RSD	.45579	.44483	.36535	.16025	.19795
#1	8.2736	9.2507	1.4057	7.5219	3.3187
#2	8.3405	9.2715	1.4093	7.5214	3.3297
#3	8.2766	9.3304	1.4159	7.5426	3.3304

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6547.1**	**103730.**	**146420.**
Stddev	73.6	437.	375.
%RSD	1.1234	.42100	.25609
#1	6468.6	104210.	146240.
#2	6558.1	103360.	146170.
#3	6614.5	103610.	146850.

Sample Name: S28 Acquired: 12/1/2011 13:29:09 Type: Cal
Method: 11L6010(v3) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Sb	Mg	Tl
Units	Cts/S	Cts/S	Cts/S
Avg	**.00539**	**.02414**	**.00573**
Stddev	.00006	.00006	.00006
%RSD	1.0389	.26851	1.0195
#1	.00534	.02418	.00568
#2	.00539	.02418	.00573
#3	.00545	.02407	.00579

Int. Std.	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S
Avg	**112200.**	**173070.**
Stddev	131.	509.
%RSD	.11644	.29422
#1	112330.	172480.
#2	112200.	173420.
#3	112070.	173300.

Sample Name: S29 Acquired: 12/1/2011 13:32:05 Type: Cal
Method: 11L6010(v3) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Sb	Mg	Tl
Units	Cts/S	Cts/S	Cts/S
Avg	**.05273**	**.23400**	**.05644**
Stddev	.00106	.00169	.00120
%RSD	2.0198	.72434	2.1173
#1	.05174	.23556	.05529
#2	.05258	.23425	.05635
#3	.05386	.23220	.05768

Int. Std.	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S
Avg	**108850.**	**144920.**
Stddev	1605.	2457.
%RSD	1.4745	1.6951
#1	110550.	147330.
#2	108640.	145010.
#3	107360.	142420.

Sample Name: S30 Acquired: 12/1/2011 13:34:48 Type: Cal
Method: 11L6010(v3) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	As	Li	Se	Ag	Sr	Sn	Ti	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00124**	**.02564**	**.00143**	**.04392**	**.14002**	**.02500**	**.01587**	**.61547**
Stddev	.00001	.00012	.00001	.00019	.00040	.00007	.00009	.00107
%RSD	.59526	.47674	.59678	.43325	.28751	.29187	.54092	.17405
#1	.00123	.02578	.00142	.04372	.13961	.02507	.01579	.61511
#2	.00124	.02557	.00143	.04393	.14005	.02502	.01586	.61463
#3	.00125	.02556	.00143	.04410	.14041	.02492	.01596	.61668

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8316.7**	**115190.**	**179290.**
Stddev	85.7	113.	398.
%RSD	1.0306	.09826	.22179
#1	8227.2	115170.	178890.
#2	8324.8	115090.	179300.
#3	8398.1	115310.	179680.

Sample Name: S31 Acquired: 12/1/2011 13:37:45 Type: Cal
Method: 11L6010(v3) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	As	Li	Se	Ag	Sr	Sn	Ti	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00496**	**.12594**	**.00570**	**.21707**	**.68695**	**.12012**	**.08460**	**5.9620**
Stddev	.00007	.00031	.00007	.00171	.00064	.00021	.00016	.0089
%RSD	1.3228	.24287	1.2623	.78609	.09309	.17529	.18332	.14949
#1	.00489	.12627	.00563	.21546	.68754	.12016	.08474	5.9517
#2	.00495	.12588	.00570	.21688	.68704	.11989	.08462	5.9671
#3	.00502	.12567	.00577	.21886	.68627	.12031	.08443	5.9672

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8487.2**	**119080.**	**180180.**
Stddev	92.4	460.	580.
%RSD	1.0888	.38615	.32196
#1	8395.4	119280.	180720.
#2	8486.0	119410.	180250.
#3	8580.2	118550.	179560.

Sample Name: ICV Acquired: 12/1/2011 13:40:45 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001014 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**103.37**	**1.5530**	**1.0585**	**2.0104**	**1.5088**	**2.5364**	**2.0842**	**76.592**
Stddev	.78	.0176	.0133	.0105	.0091	.0196	.0219	.301
%RSD	.75660	1.1365	1.2605	.52430	.60601	.77137	1.0517	.39348
#1	103.28	1.5327	1.0431	1.9992	1.4988	2.5138	2.0589	76.250
#2	104.19	1.5649	1.0664	2.0118	1.5110	2.5482	2.0972	76.705
#3	102.63	1.5614	1.0660	2.0202	1.5167	2.5471	2.0966	76.820
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4869**	**.97165**	**2.6183**	**25.630**	**2.4448**	**.48357**	**57.917**	**2.3761**
Stddev	.0122	.00061	.0165	.113	.0037	.00098	.460	.0155
%RSD	.48949	.06230	.62921	.43979	.15158	.20303	.79459	.65155
#1	2.4794	.97095	2.6087	25.528	2.4406	.48247	57.403	2.3591
#2	2.5009	.97195	2.6373	25.751	2.4477	.48387	58.055	2.3796
#3	2.4803	.97204	2.6088	25.613	2.4461	.48436	58.292	2.3895
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.5759**	**2.4829**	**58.272**	**1.0701**	**.51561**	**62.504**	**.48986**	**2.4062**
Stddev	.0031	.0026	.291	.0151	.00467	.330	.00057	.0261
%RSD	.12112	.10652	.49986	1.4103	.90646	.52783	.11670	1.0854
#1	2.5735	2.4800	57.994	1.0527	.51038	62.219	.48920	2.3770
#2	2.5794	2.4851	58.249	1.0781	.51937	62.427	.49012	2.4275
#3	2.5748	2.4836	58.575	1.0796	.51708	62.866	.49026	2.4139
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: ICV Acquired: 12/1/2011 13:40:45 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001014 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.50693**	**.50673**	**1.5483**	**2.5974**
Stddev	.00371	.00342	.0083	.0035
%RSD	.73186	.67447	.53633	.13475
#1	.50720	.50603	1.5423	2.5972
#2	.51050	.50371	1.5578	2.5940
#3	.50310	.51044	1.5449	2.6010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7466.8**	**114170.**	**162620.**
Stddev	71.7	839.	916.
%RSD	.95996	.73456	.56349
#1	7398.1	114840.	162980.
#2	7461.2	114440.	161580.
#3	7541.1	113230.	163300.

Sample Name: ICB Acquired: 12/1/2011 13:43:35 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001015 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00927**	**-.00006**	**.00021**	**.00025**	**.00012**	**.00455**	**.00005**	**.01922**
Stddev	.00098	.00064	.00160	.00009	.00004	.00045	.00005	.00127
%RSD	10.580	998.60	748.04	34.572	30.336	9.9237	105.27	6.5874
#1	.01009	-.00003	.00102	.00015	.00009	.00502	.00001	.01782
#2	.00954	.00056	.00125	.00030	.00016	.00451	.00011	.02028
#3	.00819	-.00072	-.00163	.00030	.00011	.00412	.00003	.01957
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00012**	**.00010**	**.00018**	**.00196**	**.00049**	**-.00001**	**-.00448**	**.00053**
Stddev	.00007	.00004	.00004	.00259	.00022	.00036	.00778	.00016
%RSD	57.945	40.902	23.534	132.19	44.152	2597.6	173.63	31.181
#1	.00020	.00014	.00023	-.00100	.00055	.00035	.00450	.00066
#2	.00005	.00010	.00018	.00381	.00067	-.00003	-.00869	.00057
#3	.00012	.00006	.00014	.00308	.00025	-.00037	-.00925	.00034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00027**	**.00018**	**.08111**	**-.00107**	**.00005**	**.03696**	**.00008**	**.00057**
Stddev	.00007	.00006	.00776	.00075	.00016	.00386	.00006	.00022
%RSD	25.531	36.696	9.5681	70.257	297.30	10.453	82.471	39.138
#1	.00032	.00023	.09002	-.00180	.00016	.04130	.00009	.00083
#2	.00031	.00011	.07583	-.00030	.00013	.03391	.00001	.00048
#3	.00019	.00019	.07748	-.00110	-.00013	.03565	.00013	.00041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: ICB Acquired: 12/1/2011 13:43:35 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001015 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**-.00011**	**.00068**	**-.00003**	**.00157**
Stddev	.00053	.00047	.00013	.00019
%RSD	485.21	69.903	498.51	11.948
#1	-.00041	.00035	-.00006	.00178
#2	.00050	.00122	.00012	.00153
#3	-.00042	.00046	-.00014	.00141
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8527.9**	**116230.**	**179780.**
Stddev	103.8	795.	693.
%RSD	1.2172	.68417	.38553
#1	8421.2	116210.	178990.
#2	8533.9	117040.	180050.
#3	8628.6	115450.	180300.

Sample Name: MRLL0101 Acquired: 12/1/2011 13:46:34 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001016 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.21854**	**.09680**	**.01026**	**.01086**	**.01055**	**.09893**	**.01099**	**1.0509**
Stddev	.00257	.00109	.00181	.00005	.00004	.00080	.00011	.0042
%RSD	1.1771	1.1237	17.662	.43324	.36307	.80974	1.0103	.40094
#1	.22151	.09611	.01026	.01080	.01053	.09832	.01090	1.0544
#2	.21708	.09623	.01207	.01090	.01059	.09864	.01095	1.0462
#3	.21702	.09805	.00845	.01087	.01052	.09984	.01111	1.0521
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01050**	**.00995**	**.01063**	**.21556**	**.01011**	**.01069**	**1.0114**	**.01080**
Stddev	.00010	.00007	.00011	.00125	.00021	.00044	.0137	.00016
%RSD	.91432	.66186	1.0154	.57991	2.0351	4.0838	1.3491	1.5164
#1	.01059	.00993	.01052	.21700	.00987	.01114	.99742	.01092
#2	.01040	.01002	.01073	.21484	.01024	.01027	1.0247	.01061
#3	.01052	.00990	.01063	.21484	.01021	.01065	1.0122	.01085
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01050**	**.01036**	**.96425**	**.00993**	**.01021**	**1.0452**	**.01044**	**.01107**
Stddev	.00011	.00018	.00554	.00166	.00007	.0076	.00002	.00057
%RSD	1.0708	1.7150	.57503	16.734	.66060	.72290	.22707	5.1673
#1	.01055	.01019	.95853	.01019	.01018	1.0503	.01042	.01041
#2	.01037	.01034	.96460	.01145	.01017	1.0365	.01045	.01148
#3	.01058	.01054	.96961	.00816	.01029	1.0487	.01046	.01130
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: MRLL0101 Acquired: 12/1/2011 13:46:34 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001016 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00001**	**.01069**	**.01055**	**.02148**
Stddev	.00043	.00023	.00008	.00009
%RSD	3600.1	2.1541	.73283	.41108
#1	.00049	.01044	.01061	.02157
#2	-.00012	.01075	.01057	.02147
#3	-.00033	.01089	.01046	.02139
Check ?	None	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8513.7**	**114860.**	**179450.**
Stddev	103.0	421.	206.
%RSD	1.2102	.36634	.11497
#1	8408.2	115200.	179220.
#2	8519.0	115000.	179500.
#3	8614.0	114390.	179620.

Sample Name: MRLL0102 Acquired: 12/1/2011 13:49:30 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001017 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.20700**	**.04808**	**.01042**	**.00520**	**.00420**	**.09761**	**.00536**	**.52115**
Stddev	.00205	.00023	.00127	.00018	.00003	.00037	.00009	.00153
%RSD	.99259	.48350	12.150	3.5252	.62311	.38066	1.7651	.29334
#1	.20773	.04790	.01084	.00540	.00421	.09719	.00531	.52251
#2	.20858	.04799	.01143	.00504	.00417	.09791	.00547	.51949
#3	.20468	.04834	.00900	.00516	.00422	.09772	.00530	.52143
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01095**	**.00964**	**.01006**	**.10772**	**.00301**	**.10259**	**.20865**	**.00533**
Stddev	.00013	.00010	.00004	.00377	.00046	.00072	.00649	.00018
%RSD	1.2027	1.0370	.39206	3.5033	15.419	.70557	3.1095	3.3445
#1	.01082	.00975	.01010	.10418	.00262	.10261	.21573	.00542
#2	.01108	.00963	.01007	.10728	.00352	.10186	.20300	.00512
#3	.01094	.00955	.01002	.11169	.00287	.10331	.20722	.00543
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00976**	**.01008**	**.97204**	**.00990**	**.00990**	**.52177**	**.00986**	**.01090**
Stddev	.00008	.00012	.00932	.00080	.00001	.00452	.00004	.00024
%RSD	.86765	1.2032	.95885	8.1071	.14592	.86547	.38110	2.2222
#1	.00984	.01019	.97705	.00949	.00992	.51921	.00990	.01075
#2	.00967	.01008	.96129	.00939	.00990	.51912	.00982	.01118
#3	.00977	.00995	.97779	.01083	.00990	.52698	.00987	.01077
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: MRLL0102 Acquired: 12/1/2011 13:49:30 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001017 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00925**	**.01138**	**.00996**	**.01027**
Stddev	.00028	.00024	.00016	.00010
%RSD	3.0334	2.0724	1.6109	1.0037
#1	.00894	.01165	.00979	.01036
#2	.00935	.01120	.01011	.01016
#3	.00947	.01131	.00998	.01030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8575.5**	**114020.**	**179830.**
Stddev	88.7	160.	438.
%RSD	1.0342	.14055	.24377
#1	8481.6	114010.	179790.
#2	8587.1	114190.	179420.
#3	8657.8	113870.	180290.

Sample Name: ICSA1 Acquired: 12/1/2011 13:52:27 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001018 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**387.45**	**-.00548**	**-.00109**	**.00132**	**.00012**	**-.07026**	**.00099**	**470.52**
Stddev	2.19	.00077	.00032	.00013	.00005	.00040	.00008	5.28
%RSD	.56446	13.994	29.594	9.7043	40.072	.56972	7.7480	1.1224
#1	389.08	-.00480	-.00076	.00118	.00009	-.07064	.00093	464.53
#2	388.31	-.00631	-.00141	.00143	.00017	-.07030	.00097	472.50
#3	384.97	-.00533	-.00110	.00136	.00009	-.06984	.00108	474.52
Check ?	Chk Pass	None	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00056**	**-.00025**	**.00090**	**193.08**	**.00497**	**.00323**	**196.81**	**.00141**
Stddev	.00012	.00018	.00009	.96	.00054	.00095	.93	.00017
%RSD	21.838	71.745	9.7657	.49582	10.905	29.379	.47429	12.395
#1	.00069	-.00022	.00096	191.98	.00523	.00356	195.99	.00121
#2	.00056	-.00044	.00080	193.65	.00435	.00398	196.62	.00152
#3	.00044	-.00008	.00094	193.63	.00533	.00217	197.82	.00151
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00121**	**.00134**	**.03985**	**.00231**	**.00012**	**.05917**	**.00090**	**-.00306**
Stddev	.00013	.00019	.01066	.00369	.00010	.00653	.00007	.00025
%RSD	10.402	13.936	26.748	159.99	82.677	11.037	8.0168	8.2958
#1	-.00130	.00117	.05109	.00571	.00008	.05206	.00095	-.00283
#2	-.00107	.00154	.02989	-.00162	.00024	.06056	.00093	-.00301
#3	-.00127	.00132	.03858	.00284	.00005	.06489	.00082	-.00333
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Sample Name: ICSA1 Acquired: 12/1/2011 13:52:27 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001018 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00028**	**.00308**	**-.00495**	**.00243**
Stddev	.00024	.00063	.00034	.00027
%RSD	87.626	20.565	6.9720	11.102
#1	.00056	.00236	-.00457	.00273
#2	.00012	.00329	-.00504	.00234
#3	.00016	.00358	-.00524	.00221
Check ?	None	None	None	None
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6883.4**	**109550.**	**154830.**
Stddev	57.6	1077.	531.
%RSD	.83752	.98266	.34273
#1	6824.2	110800.	154470.
#2	6886.7	108990.	154580.
#3	6939.3	108880.	155440.

Sample Name: ICSAB1 Acquired: 12/1/2011 13:55:37 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001019 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**383.64**	**1.0222**	**1.0617**	**.49146**	**.49984**	**.43838**	**.98351**	**467.43**
Stddev	.76	.0044	.0088	.00162	.00025	.00178	.00442	1.94
%RSD	.19759	.43470	.82746	.32874	.04957	.40509	.44911	.41462
#1	384.17	1.0171	1.0517	.49093	.49967	.43640	.97860	465.36
#2	382.77	1.0249	1.0681	.49328	.50012	.43891	.98716	467.73
#3	383.99	1.0246	1.0654	.49018	.49973	.43983	.98477	469.20
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.47371**	**.47557**	**.53987**	**194.81**	**.95000**	**1.0937**	**192.14**	**.46448**
Stddev	.00050	.00048	.00174	.39	.00058	.0033	.54	.00048
%RSD	.10595	.10120	.32263	.19942	.06083	.30507	.28011	.10371
#1	.47349	.47502	.54179	194.68	.95058	1.0898	191.59	.46416
#2	.47428	.47576	.53943	195.25	.94999	1.0957	192.16	.46503
#3	.47335	.47593	.53839	194.50	.94943	1.0955	192.67	.46425
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**1.0170**	**.96357**	**75.558**	**1.0457**	**1.0858**	**80.536**	**.47671**	**.86904**
Stddev	.0008	.00057	.489	.0075	.0020	.396	.00112	.00315
%RSD	.07922	.05899	.64711	.71565	.18826	.49127	.23582	.36237
#1	1.0173	.96301	75.037	1.0371	1.0835	80.089	.47541	.86597
#2	1.0161	.96354	75.628	1.0489	1.0871	80.681	.47741	.87226
#3	1.0177	.96415	76.007	1.0511	1.0869	80.840	.47731	.86889
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range								

Sample Name: ICSAB1 Acquired: 12/1/2011 13:55:37 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001019 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.91274**	**1.0119**	**.49888**	**1.0158**
Stddev	.00211	.0035	.00034	.0017
%RSD	.23156	.34580	.06774	.16453
#1	.91455	1.0080	.49853	1.0163
#2	.91326	1.0148	.49920	1.0171
#3	.91042	1.0129	.49890	1.0139
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6792.2**	**110890.**	**153520.**
Stddev	45.2	553.	629.
%RSD	.66600	.49866	.40946
#1	6742.9	111460.	153170.
#2	6801.9	110840.	153150.
#3	6831.8	110360.	154250.

Sample Name: CCV1 Acquired: 12/1/2011 13:58:32 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001020 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**102.60**	**1.5604**	**1.0624**	**1.9961**	**1.5088**	**2.5568**	**2.0955**	**76.893**
Stddev	.60	.0082	.0038	.0080	.0048	.0096	.0087	.140
%RSD	.58561	.52524	.36006	.40222	.31924	.37469	.41395	.18245
#1	103.29	1.5551	1.0581	1.9873	1.5035	2.5471	2.0901	76.822
#2	102.19	1.5563	1.0635	2.0030	1.5128	2.5573	2.0908	76.802
#3	102.32	1.5699	1.0655	1.9981	1.5100	2.5662	2.1055	77.055
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.5149**	**.97447**	**2.6418**	**25.906**	**2.4325**	**.48804**	**58.003**	**2.3686**
Stddev	.0042	.00040	.0068	.037	.0011	.00102	.113	.0109
%RSD	.16543	.04058	.25658	.14296	.04413	.20934	.19492	.45963
#1	2.5185	.97470	2.6465	25.940	2.4335	.48769	57.873	2.3576
#2	2.5103	.97402	2.6341	25.912	2.4326	.48723	58.082	2.3794
#3	2.5160	.97470	2.6449	25.867	2.4314	.48918	58.053	2.3690
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.5659**	**2.4866**	**59.029**	**1.0689**	**.51991**	**62.979**	**.48925**	**2.3990**
Stddev	.0009	.0041	.200	.0029	.00192	.136	.00022	.0099
%RSD	.03555	.16481	.33887	.27300	.36919	.21643	.04440	.41398
#1	2.5649	2.4840	58.944	1.0661	.51932	62.947	.48936	2.3894
#2	2.5667	2.4844	58.886	1.0686	.51836	62.861	.48939	2.3984
#3	2.5662	2.4913	59.258	1.0719	.52206	63.128	.48900	2.4093
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV1 Acquired: 12/1/2011 13:58:32 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001020 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.50789**	**.50528**	**1.5697**	**2.6021**
Stddev	.00054	.00086	.0043	.0037
%RSD	.10557	.17112	.27541	.14331
#1	.50732	.50441	1.5735	2.5985
#2	.50796	.50530	1.5650	2.6019
#3	.50839	.50613	1.5705	2.6059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7598.9**	**114530.**	**164190.**
Stddev	52.6	213.	624.
%RSD	.69206	.18595	.38026
#1	7547.8	114410.	163480.
#2	7596.0	114780.	164440.
#3	7652.9	114410.	164640.

Sample Name: CCB1 Acquired: 12/1/2011 14:01:20 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001021 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01390**	**-.00008**	**.00197**	**.00025**	**.00013**	**.00414**	**.00006**
Stddev	.00087	.00041	.00132	.00002	.00003	.00043	.00004
%RSD	6.2854	486.52	66.902	7.6228	24.652	10.385	71.977
#1	.01416	.00038	.00055	.00025	.00017	.00460	.00011
#2	.01293	-.00024	.00221	.00024	.00011	.00407	.00002
#3	.01462	-.00038	.00316	.00028	.00012	.00375	.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.06296**	**.00019**	**-.00005**	**.00017**	**.00102**	**.00047**	**.00033**
Stddev	.00157	.00004	.00017	.00009	.00403	.00038	.00045
%RSD	2.4866	19.053	314.84	53.078	397.41	81.201	138.81
#1	.06174	.00021	.00006	.00011	.00141	.00008	.00075
#2	.06242	.00015	.00003	.00027	.00484	.00084	-.00015
#3	.06473	.00022	-.00025	.00012	-.00320	.00049	.00038
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.03240						
Low Limit	-.03240						

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00544**	**.00023**	**.00038**	**.00016**	**.14914**	**-.00026**	**.00015**
Stddev	.01053	.00007	.00010	.00013	.01628	.00009	.00013
%RSD	193.71	30.967	26.645	83.188	10.919	33.671	89.875
#1	.01706	.00015	.00041	.00005	.15888	-.00022	.00002
#2	.00273	.00026	.00046	.00031	.13034	-.00019	.00028
#3	-.00348	.00029	.00027	.00012	.15821	-.00035	.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB1 Acquired: 12/1/2011 14:01:20 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001021 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.05728**	**.00005**	**.00020**	**.00009**	**.00024**	**-.00013**	**.00190**
Stddev	.00904	.00007	.00035	.00011	.00056	.00017	.00010
%RSD	15.782	122.57	176.03	115.02	231.55	128.23	5.0110
#1	.06576	-.00001	.00048	.00006	.00069	-.00031	.00179
#2	.04777	.00012	-.00019	.00021	-.00039	.00004	.00197
#3	.05831	.00005	.00031	.00000	.00042	-.00013	.00195
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.05090						
Low Limit	-.05090						

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8248.8**	**111120.**	**171800.**
Stddev	85.3	688.	561.
%RSD	1.0337	.61913	.32646
#1	8160.9	111870.	171280.
#2	8254.3	110990.	171730.
#3	8331.2	110510.	172400.

Sample Name: CCV6 Acquired: 12/1/2011 16:20:18 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001064 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**100.89**	**1.5217**	**1.0585**	**1.9119**	**1.4856**	**2.5654**	**2.1019**	**76.974**
Stddev	.72	.0070	.0025	.0087	.0077	.0043	.0046	.205
%RSD	.71018	.46009	.23344	.45547	.51616	.16631	.21670	.26588
#1	101.07	1.5252	1.0557	1.9035	1.4770	2.5608	2.1044	76.807
#2	101.50	1.5264	1.0600	1.9209	1.4916	2.5692	2.1047	76.912
#3	100.10	1.5137	1.0599	1.9112	1.4883	2.5662	2.0967	77.203
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.5627**	**.96846**	**2.6861**	**26.082**	**2.4134**	**.52242**	**56.277**	**2.2898**
Stddev	.0012	.00314	.0048	.141	.0039	.00144	.336	.0123
%RSD	.04712	.32433	.17793	.53992	.16102	.27624	.59642	.53771
#1	2.5640	.96821	2.6851	26.011	2.4145	.52407	55.890	2.2768
#2	2.5624	.97172	2.6912	25.991	2.4166	.52174	56.475	2.3012
#3	2.5616	.96546	2.6818	26.244	2.4091	.52144	56.467	2.2916
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4934**	**2.4702**	**58.331**	**1.0367**	**.52513**	**61.836**	**.48343**	**2.3701**
Stddev	.0048	.0043	.096	.0028	.00110	.050	.00057	.0056
%RSD	.19120	.17314	.16425	.26751	.20999	.08074	.11808	.23442
#1	2.4946	2.4737	58.221	1.0387	.52534	61.841	.48403	2.3724
#2	2.4974	2.4713	58.378	1.0379	.52612	61.784	.48336	2.3741
#3	2.4881	2.4654	58.395	1.0335	.52394	61.883	.48289	2.3637
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV6 Acquired: 12/1/2011 16:20:18 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001064 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.47163**	**.49235**	**1.6109**	**2.5753**
Stddev	.00070	.00320	.0019	.0047
%RSD	.14889	.64998	.11583	.18172
#1	.47082	.48929	1.6111	2.5712
#2	.47195	.49567	1.6126	2.5804
#3	.47211	.49211	1.6089	2.5742
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7929.5**	**117220.**	**168410.**
Stddev	32.3	176.	702.
%RSD	.40776	.14987	.41661
#1	7894.1	117400.	167700.
#2	7937.1	117050.	168410.
#3	7957.5	117200.	169110.

Sample Name: CCB6 Acquired: 12/1/2011 16:23:14 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001065 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00806**	**-.00004**	**.00124**	**.00033**	**.00012**	**.00219**	**.00009**
Stddev	.00102	.00040	.00150	.00009	.00004	.00027	.00001
%RSD	12.619	1021.3	121.03	27.679	30.212	12.423	8.4865
#1	.00920	.00018	.00255	.00036	.00008	.00250	.00010
#2	.00772	-.00050	-.00039	.00023	.00014	.00209	.00009
#3	.00725	.00020	.00155	.00040	.00014	.00198	.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.03572**	**.00029**	**.00002**	**-.00007**	**-.00309**	**-.00006**	**-.00033**
Stddev	.00127	.00013	.00019	.00012	.00149	.00032	.00043
%RSD	3.5667	46.831	872.08	169.36	48.025	488.58	128.93
#1	.03708	.00021	.00005	-.00005	-.00139	-.00002	.00015
#2	.03554	.00021	.00020	.00004	-.00374	.00022	-.00067
#3	.03455	.00044	-.00018	-.00020	-.00414	-.00040	-.00048
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.03240						
Low Limit	-.03240						

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00283**	**.00024**	**.00028**	**.00013**	**.11365**	**.00015**	**.00004**
Stddev	.00642	.00004	.00014	.00014	.00882	.00112	.00005
%RSD	227.27	16.584	51.122	106.29	7.7625	752.91	134.34
#1	.00255	.00019	.00042	.00016	.10600	-.00044	-.00001
#2	-.00994	.00027	.00027	.00024	.12330	-.00055	.00003
#3	-.00109	.00025	.00014	-.00002	.11165	.00144	.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB6 Acquired: 12/1/2011 16:23:14 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001065 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.06389**	**.00000**	**.00032**	**-.00002**	**.00022**	**.00016**	**.00105**
Stddev	.00567	.00006	.00027	.00022	.00048	.00012	.00010
%RSD	8.8818	10074.	84.164	878.89	221.79	79.823	9.7816
#1	.07036	.00006	.00007	-.00013	.00071	.00005	.00100
#2	.05980	-.00005	.00029	-.00017	.00020	.00029	.00117
#3	.06150	-.00001	.00060	.00023	-.00026	.00012	.00098
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.05090						
Low Limit	-.05090						

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8560.1**	**113140.**	**176850.**
Stddev	29.9	467.	370.
%RSD	.34962	.41254	.20896
#1	8535.6	113680.	176440.
#2	8551.3	112860.	177150.
#3	8593.5	112880.	176950.

Sample Name: K119-01A Acquired: 12/1/2011 16:33:45 Type: Unk
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001066 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**5.4874**	**2.6163**	**.58685**	**.55829**	**.53479**	**.61586**	**.56346**	**126.67**
Stddev	.0215	.0103	.00208	.00218	.00190	.00157	.00219	.86
%RSD	.39083	.39424	.35508	.39063	.35610	.25572	.38799	.67640
#1	5.4743	2.6056	.58478	.55787	.53431	.61486	.56095	125.82
#2	5.5121	2.6172	.58682	.55634	.53316	.61768	.56448	127.53
#3	5.4757	2.6261	.58895	.56064	.53688	.61505	.56495	126.67

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.55156**	**.52372**	**.58475**	**6.1535**	**.52152**	**.00756**	**60.907**	**.59475**
Stddev	.00112	.00029	.00092	.0201	.00131	.00052	.192	.00266
%RSD	.20386	.05508	.15727	.32710	.25177	6.8947	.31470	.44708
#1	.55027	.52339	.58379	6.1305	.52171	.00710	60.812	.59284
#2	.55233	.52394	.58484	6.1677	.52012	.00813	60.782	.59362
#3	.55208	.52383	.58562	6.1624	.52273	.00746	61.128	.59778

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.52257**	**.47792**	**53.354**	**.56631**	**.51309**	**124.43**	**1.1202**	**.51206**
Stddev	.00085	.00041	.122	.00224	.00160	.36	.0011	.00187
%RSD	.16292	.08500	.22841	.39501	.31207	.29042	.09426	.36526
#1	.52235	.47801	53.333	.56375	.51155	124.40	1.1212	.50991
#2	.52186	.47747	53.244	.56732	.51474	124.08	1.1191	.51305
#3	.52351	.47826	53.485	.56787	.51299	124.80	1.1204	.51323

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.48024**	**.50218**	**.58398**	**.56872**
Stddev	.00144	.00230	.00086	.00073
%RSD	.30078	.45878	.14710	.12756
#1	.48054	.50040	.58299	.56819
#2	.47866	.50137	.58441	.56841
#3	.48150	.50478	.58454	.56954

Sample Name: K119-01A Acquired: 12/1/2011 16:33:45 Type: Unk
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001066 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7837.0	117460.	168620.
Stddev	19.7	239.	299.
%RSD	.25092	.20360	.17711
#1	7814.4	117680.	168860.
#2	7849.2	117500.	168290.
#3	7847.5	117200.	168720.

Sample Name: CCV7 Acquired: 12/1/2011 16:52:32 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001072 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**98.592**	**1.4701**	**1.0206**	**1.9022**	**1.4797**	**2.4859**	**2.0000**	**75.515**
Stddev	.363	.0080	.0012	.0084	.0046	.0047	.0098	.136
%RSD	.36840	.54728	.12127	.44390	.31255	.18738	.48732	.18029
#1	98.605	1.4609	1.0204	1.9040	1.4806	2.4812	1.9890	75.379
#2	98.949	1.4755	1.0219	1.9096	1.4839	2.4862	2.0032	75.514
#3	98.223	1.4739	1.0195	1.8930	1.4748	2.4905	2.0077	75.652
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4850**	**.96012**	**2.6492**	**25.656**	**2.3828**	**.52340**	**55.688**	**2.2645**
Stddev	.0040	.00045	.0074	.044	.0036	.00040	.033	.0077
%RSD	.16139	.04676	.27792	.17207	.14940	.07683	.05983	.33854
#1	2.4816	.95960	2.6418	25.683	2.3834	.52298	55.698	2.2671
#2	2.4839	.96030	2.6493	25.605	2.3861	.52378	55.715	2.2705
#3	2.4894	.96044	2.6565	25.679	2.3790	.52345	55.651	2.2558
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4868**	**2.4546**	**57.892**	**.99825**	**.51049**	**61.615**	**.48068**	**2.2705**
Stddev	.0033	.0035	.078	.00457	.00192	.115	.00022	.0079
%RSD	.13225	.14393	.13406	.45745	.37582	.18604	.04652	.34762
#1	2.4881	2.4514	57.861	.99301	.50835	61.596	.48042	2.2618
#2	2.4892	2.4584	57.835	1.0013	.51107	61.511	.48085	2.2723
#3	2.4830	2.4539	57.981	1.0004	.51205	61.737	.48075	2.2773
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: K119-01W Acquired: 12/1/2011 16:37:23 Type: Unk
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001067 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01443**	**.00206**	**.00360**	**.04520**	**.00018**	**.08684**	**.00011**	**79.291**
Stddev	.00058	.00076	.00084	.00034	.00002	.00036	.00002	.205
%RSD	4.0169	36.629	23.390	.75971	9.4278	.42013	22.637	.25908
#1	.01462	.00122	.00454	.04486	.00020	.08693	.00009	79.082
#2	.01490	.00269	.00332	.04555	.00016	.08715	.00009	79.297
#3	.01378	.00227	.00292	.04519	.00019	.08643	.00013	79.493

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00062**	**-.00008**	**.00064**	**.43635**	**.00151**	**.00738**	**13.340**	**.09882**
Stddev	.00018	.00014	.00007	.00143	.00007	.00050	.083	.00084
%RSD	29.344	180.86	10.875	.32756	4.5101	6.8149	.61920	.84833
#1	.00069	-.00001	.00056	.43722	.00156	.00795	13.266	.09847
#2	.00041	-.00023	.00068	.43470	.00155	.00706	13.429	.09978
#3	.00074	.00002	.00067	.43713	.00144	.00711	13.324	.09822

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00728**	**.00069**	**3.3561**	**-.00089**	**.00014**	**72.252**	**.65199**	**.00071**
Stddev	.00012	.00017	.0037	.00143	.00006	.256	.00110	.00058
%RSD	1.7099	24.558	.10975	161.54	43.852	.35441	.16885	81.070
#1	.00718	.00077	3.3600	.00076	.00013	72.163	.65183	.00069
#2	.00742	.00049	3.3557	-.00185	.00020	72.541	.65316	.00130
#3	.00723	.00080	3.3526	-.00157	.00008	72.053	.65097	.00015

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**-.00009**	**.00102**	**.00012**	**.00535**
Stddev	.00029	.00058	.00008	.00012
%RSD	309.17	56.840	72.476	2.2441
#1	-.00038	.00136	.00012	.00525
#2	-.00011	.00136	.00020	.00548
#3	.00020	.00035	.00003	.00531

Sample Name: K119-01W Acquired: 12/1/2011 16:37:23 Type: Unk
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001067 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8339.0	120890.	175760.
Stddev	14.1	140.	869.
%RSD	.16857	.11604	.49434
#1	8329.6	121000.	175150.
#2	8355.2	120730.	175370.
#3	8332.3	120930.	176750.

Sample Name: K119-01J Acquired: 12/1/2011 16:40:25 Type: Unk
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001068 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00757**	**.00220**	**.00185**	**.00990**	**.00017**	**.01677**	**.00014**	**16.911**
Stddev	.00070	.00046	.00034	.00009	.00003	.00007	.00002	.020
%RSD	9.2506	20.961	18.158	.88446	18.725	.41032	17.525	.11947
#1	.00759	.00272	.00174	.00980	.00013	.01671	.00014	16.915
#2	.00686	.00183	.00223	.00994	.00019	.01685	.00016	16.889
#3	.00826	.00207	.00158	.00996	.00019	.01676	.00011	16.929

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00053**	**.00016**	**.00011**	**.09047**	**.00081**	**.00175**	**2.8985**	**.02193**
Stddev	.00001	.00011	.00016	.00458	.00043	.00065	.0301	.00015
%RSD	2.7785	65.957	152.42	5.0576	53.177	36.773	1.0381	.68187
#1	.00052	.00025	.00030	.09456	.00060	.00230	2.8681	.02196
#2	.00055	.00018	.00003	.08553	.00131	.00192	2.8993	.02205
#3	.00053	.00004	-.00001	.09131	.00053	.00104	2.9282	.02176

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00173**	**.00013**	**.77120**	**-.00120**	**.00005**	**15.168**	**.13930**	**.00057**
Stddev	.00008	.00025	.01477	.00081	.00004	.021	.00036	.00006
%RSD	4.6625	196.74	1.9156	67.137	90.724	.13788	.25580	9.8078
#1	.00177	-.00014	.78802	-.00108	.00000	15.180	.13926	.00056
#2	.00163	.00037	.76527	-.00046	.00005	15.181	.13968	.00064
#3	.00178	.00015	.76032	-.00206	.00008	15.144	.13897	.00053

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00001**	**.00088**	**.00022**	**.00214**
Stddev	.00012	.00018	.00006	.00007
%RSD	1242.1	19.988	28.811	3.0508
#1	-.00003	.00095	.00023	.00218
#2	.00015	.00068	.00029	.00206
#3	-.00009	.00101	.00016	.00216

Sample Name: K119-01J Acquired: 12/1/2011 16:40:25 Type: Unk
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001068 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8501.7	119520.	181480.
Stddev	15.1	634.	785.
%RSD	.17739	.53074	.43242
#1	8502.7	119070.	181990.
#2	8486.2	120250.	181870.
#3	8516.3	119250.	180570.

Sample Name: CCV7 Acquired: 12/1/2011 16:52:32 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001072 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.46665**	**.48819**	**1.5695**	**2.5260**
Stddev	.00118	.00197	.0047	.0024
%RSD	.25208	.40371	.29979	.09443
#1	.46532	.48796	1.5647	2.5264
#2	.46704	.49027	1.5696	2.5234
#3	.46758	.48635	1.5741	2.5282
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7848.3**	**120000.**	**172630.**
Stddev	20.1	524.	411.
%RSD	.25660	.43676	.23793
#1	7829.9	120510.	173090.
#2	7845.2	120030.	172500.
#3	7869.8	119470.	172310.

Sample Name: CCB7 Acquired: 12/1/2011 16:55:21 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001073 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00401**	**-.00032**	**.00054**	**.00021**	**.00007**	**.00128**	**.00008**
Stddev	.00067	.00072	.00057	.00007	.00004	.00034	.00003
%RSD	16.582	224.64	104.89	30.572	49.983	26.761	35.169
#1	.00365	-.00104	.00120	.00023	.00011	.00167	.00008
#2	.00360	.00040	.00020	.00014	.00007	.00105	.00005
#3	.00478	-.00033	.00022	.00027	.00003	.00111	.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.03756**	**.00027**	**-.00008**	**-.00002**	**-.00813**	**.00034**	**-.00002**
Stddev	.00170	.00018	.00017	.00010	.00429	.00021	.00082
%RSD	4.5245	67.087	210.09	537.46	52.781	60.621	3448.1
#1	.03772	.00035	.00003	-.00004	-.01198	.00035	.00019
#2	.03578	.00039	-.00027	-.00010	-.00350	.00054	-.00093
#3	.03917	.00006	.00000	.00009	-.00891	.00013	.00067
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.03240						
Low Limit	-.03240						

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00183**	**.00037**	**.00041**	**.00005**	**.14654**	**-.00123**	**-.00008**
Stddev	.00466	.00008	.00010	.00003	.02064	.00052	.00009
%RSD	253.92	22.571	23.387	60.263	14.082	42.574	114.53
#1	.00502	.00042	.00052	.00006	.16876	-.00150	-.00019
#2	.00399	.00042	.00036	.00002	.14286	-.00156	-.00005
#3	-.00351	.00027	.00035	.00008	.12799	-.00063	-.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB7 Acquired: 12/1/2011 16:55:21 Type: QC
Method: 11L6010(v3) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8L001073 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.08185**	**.00007**	**.00002**	**-.00015**	**.00025**	**.00014**	**.00098**
Stddev	.00445	.00006	.00040	.00014	.00016	.00016	.00003
%RSD	5.4363	94.018	1840.9	95.437	62.055	114.02	3.1228
#1	.08083	.00000	-.00031	-.00021	.00036	.00000	.00101
#2	.08673	.00008	.00047	.00001	.00007	.00031	.00098
#3	.07801	.00012	-.00009	-.00025	.00032	.00011	.00095
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.05090						
Low Limit	-.05090						

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8411.2	117290.	179090.
Stddev	7.4	633.	587.
%RSD	.08815	.53947	.32773
#1	8418.1	116740.	179130.
#2	8403.4	117150.	179660.
#3	8412.2	117980.	178480.

EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP METALS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

All samples pH <2

Book #: EIP-104
Batch: 1PK034W
Matrix: Water
Digestor ID: E

SOP #	Rev. #
☐ EMAX-3005	4
☑ EMAX-3010	5
☐ EMAX-3050	4
☐ EMAX-200.7	2
☐ EMAX-	

Start	Temp	End	Temp
	95 °C		95 °C

Standards	ID	Amount Added (ml)
LCS-1	SM1A-053-04-13	0.25
LCS-2	SM1A-013-03-13	0.25
LCS-3	SM1A-013-04-14	0.5
MS	same spike vol and std as LCS1, LCS2, LCS3	
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SW1A-04-407	1.5 + 1.5
HCl	SW1A-04-408	2.5 + 2.5
H_2O_2	N/A	
HNO3(1:1)	N/A	

Digestate Location	ICP
Extract Location	

☐ Reagent Water ID: SM5A-02-076
☐ Thermometer ID: 101993366
☐ Pipette ID: ICP-07
☐ Pipette ID: 142750035
☐ Pipette ID:
☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask
☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask

Prepared By: GG
Standard Added By: GG Witnessed By: PP
Extract Rcvd By: TH Checked By: TH

FileID: IPK034W

EMAX LABORATORIES INC

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
11IPK034W01	IPK034WB	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W02	IPK034WL	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W03	IPK034WC	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W04	TXK007SB	10	ml	11/22/11 12:55	50	50	50	5	TCLP
11IPK034W05	K520-03	10	ml	11/22/11 12:55	50	50	50	5	TCLP
11IPK034W06	K521-01	10	ml	11/22/11 12:55	50	50	50	5	TCLP
11IPK034W07	K521-01M	10	ml	11/22/11 12:55	50	50	50	5	TCLP
11IPK034W08	K521-01S	10	ml	11/22/11 12:55	50	50	50	5	TCLP
11IPK034W09	K119-01	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W10	K119-02	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W11	K119-03	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W12	K133-01	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W13	K133-01M	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W14	K133-01S	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W15	K133-02	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W16	K133-03	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W17	K133-04	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W18	K133-05	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W19	K146-02	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W20	K146-03	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W21	K146-04	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W22	K146-05	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W23	K146-06	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W24	K202-01	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W25	K202-02	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W26	K202-03	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W27	K202-03M	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W28	K202-03S	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W29	K202-04	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED

11/22/11 GG

Vd=digestate volume PrepFctr=)ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 11/22/11 13:00 Prepared By: GG

☑ Digestion Ended @ 11/22/11 17:14 Checked By: TH

Comments: Date 11/22/11

7093

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

WET CHEMICAL ANALYSES

SDG#: 11K119

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K119

METHOD 300.0
ANIONS BY IC

A total of three (3) water samples were received on 11/14/11 for Anions (Chloride, Nitrate, Nitrite and Sulfate) by IC analysis, Method 300.0 in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary forms for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for ICK049WL/C were all within QC limits.
Percent recoveries for ICK051WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. Sample K119-02 was reported from DF2 due to interference from high Chloride concentration.

SAMPLE RESULTS

METHOD 300.0
CHLORIDE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K119

Matrix : WATER
Instrument ID : I100

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
LCS1W	ICK051WL	1.94	1	NA	0.200	0.100	11/15/1114:49	NA	AK21-96	AK21-90	ICK051W	NA	NA
LCD1W	ICK051WC	1.94	1	NA	0.200	0.100	11/15/1115:05	NA	AK21-97	AK21-90	ICK051W	NA	NA
MBLK1W	ICK051WB	ND	1	NA	0.200	0.100	11/15/1115:22	NA	AK21-98	AK21-90	ICK051W	NA	NA
MW-70-PMW09-124	K119-01	114	10	NA	2.00	1.00	11/15/1120:45	NA	AK21-118	AK21-114	ICK051W	11/14/1110:49	11/14/11
IR-70-SHB113-125	K119-02	369	40	NA	8.00	4.00	11/15/1121:01	NA	AK21-119	AK21-114	ICK051W	11/14/1112:03	11/14/11
MW-70-PMW10-126	K119-03	317	40	NA	8.00	4.00	11/15/1121:17	NA	AK21-120	AK21-114	ICK051W	11/14/1113:07	11/14/11

METHOD 300.0
NITRATE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K119

Matrix : WATER
Instrument ID : D0

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK049WB	ND	1	NA	0.200	0.0500	11/15/1107:17	NA	AK21-68	AK21-66	ICK049W	NA	NA
LCS1W	ICK049WL	0.991	1	NA	0.200	0.0500	11/15/1107:33	NA	AK21-69	AK21-66	ICK049W	NA	NA
LCD1W	ICK049WC	0.975	1	NA	0.200	0.0500	11/15/1107:49	NA	AK21-70	AK21-66	ICK049W	NA	NA
MW-70-PMW09-124	K119-01	0.0585J	1	NA	0.200	0.0500	11/15/1108:05	NA	AK21-71	AK21-66	ICK049W	11/14/1110:49	11/14/11
IR-70-SHB113-125	K119-02	0.0753J	1	NA	0.200	0.0500	11/15/1108:21	NA	AK21-72	AK21-66	ICK049W	11/14/1112:03	11/14/11
MW-70-PMW10-126	K119-03	0.0629J	1	NA	0.200	0.0500	11/15/1108:37	NA	AK21-73	AK21-66	ICK049W	11/14/1113:07	11/14/11

METHOD 300.0
NITRITE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K119

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK049WB	ND	1	NA	0.200	0.0500	11/15/1107:17	NA	AK21-68	AK21-66	ICK049W	NA	NA
LCS1W	ICK049WL	2.11	1	NA	0.200	0.0500	11/15/1107:33	NA	AK21-69	AK21-66	ICK049W	NA	NA
LCD1W	ICK049WC	2.07	1	NA	0.200	0.0500	11/15/1107:49	NA	AK21-70	AK21-66	ICK049W	NA	NA
MW-70-PMW09-124	K119-01	ND	1	NA	0.200	0.0500	11/15/1108:05	NA	AK21-71	AK21-66	ICK049W	11/14/1110:49	11/14/11
MW-70-PMW10-126	K119-03	ND	1	NA	0.200	0.0500	11/15/1108:37	NA	AK21-73	AK21-66	ICK049W	11/14/1113:07	11/14/11
IR-70-SHB113-125	K119-02	ND	2	NA	0.400	0.100	11/15/1109:26	NA	AK21-76	AK21-66	ICK049W	11/14/1112:03	11/14/11

METHOD 300.0
SULFATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K119

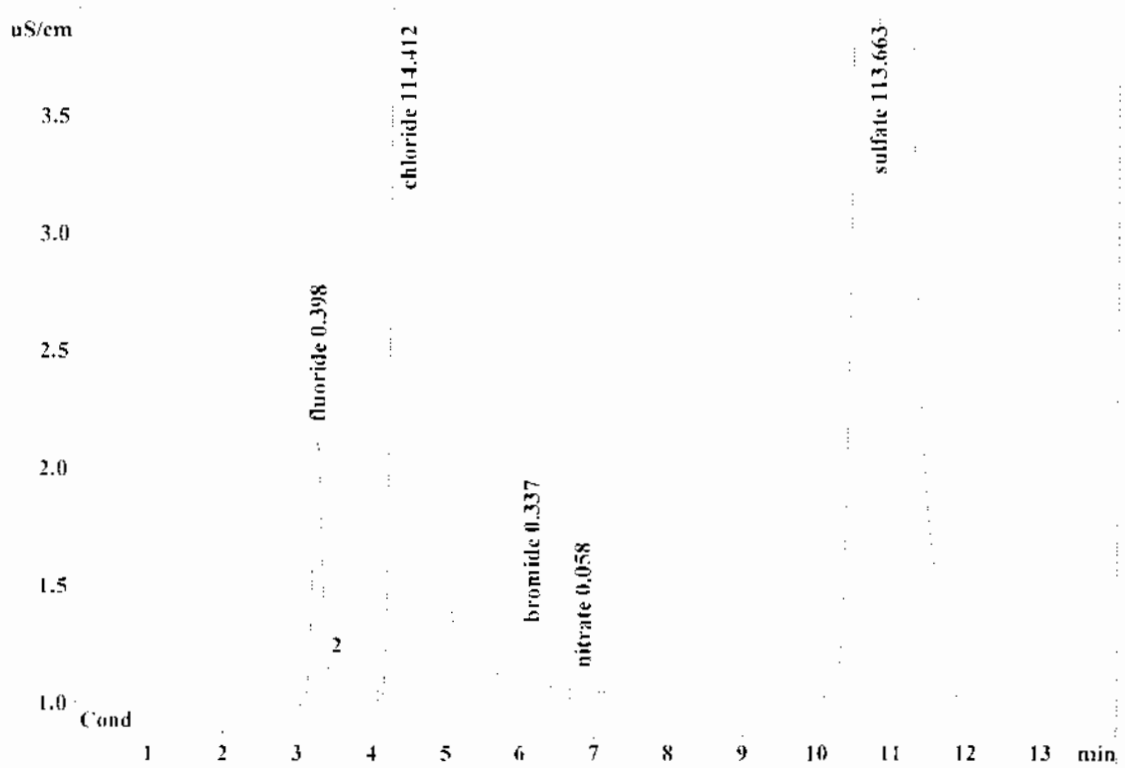
Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK049WB	ND	1	NA	0.500	0.250	11/15/1107:17	NA	AK21-68	AK21-66	ICK049W	NA	NA
LCS1W	ICK049WL	5.00	1	NA	0.500	0.250	11/15/1107:33	NA	AK21-69	AK21-66	ICK049W	NA	NA
LCD1W	ICK049WC	4.92	1	NA	0.500	0.250	11/15/1107:49	NA	AK21-70	AK21-66	ICK049W	NA	NA
IR-70-SRB113-125	K119-02	3.06	1	NA	0.500	0.250	11/15/1108:21	NA	AK21-72	AK21-66	ICK049W	11/14/1112:03	11/14/11
LCS2W	ICK051WL	5.00	1	NA	0.500	0.250	11/15/1114:49	NA	AK21-96	AK21-90	ICK051W	NA	NA
LCD2W	ICK051WC	4.96	1	NA	0.500	0.250	11/15/1115:05	NA	AK21-97	AK21-90	ICK051W	NA	NA
MBLK2W	ICK051WB	ND	1	NA	0.500	0.250	11/15/1115:22	NA	AK21-98	AK21-90	ICK051W	NA	NA
MW-70-PMW09-124	K119-01	109	10	NA	5.00	2.50	11/15/1120:45	NA	AK21-118	AK21-114	ICK051W	11/14/1110:49	11/14/11
MW-70-PMW10-126	K119-03	372	40	NA	20.0	10.0	11/15/1121:17	NA	AK21-120	AK21-114	ICK051W	11/14/1113:07	11/14/11

Report date: 11/15/2011 11:51:20 AM
Printed by: Jadelyn Chun

Ident: AK21-71 K119-01
Analysis from: 11/15/2011 8:05:40 AM
File: vb150805.chw Last save: 11/15/2011 8:19:37 AM
Modified!
Method: ICD0 I30.mtw Last save: 11/14/2011 4:37:01 PM
Run operator: Jadelyn Chun
Analysis number: 71528

SAMPLE:
:
Vial number: 71
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.26	1.13	10.723	0.398	fluoride
2	3.52	0.12	1.772	0.000	
3	4.45	189.47	2050.143	114.412	chloride
4	6.16	0.19	2.012	0.337	bromide ✓
5	6.85	0.02	0.285	0.058	nitrate ✓
6	10.79	72.60	1497.781	113.663	sulfate
6	14.00	263.52	3562.715	228.868	

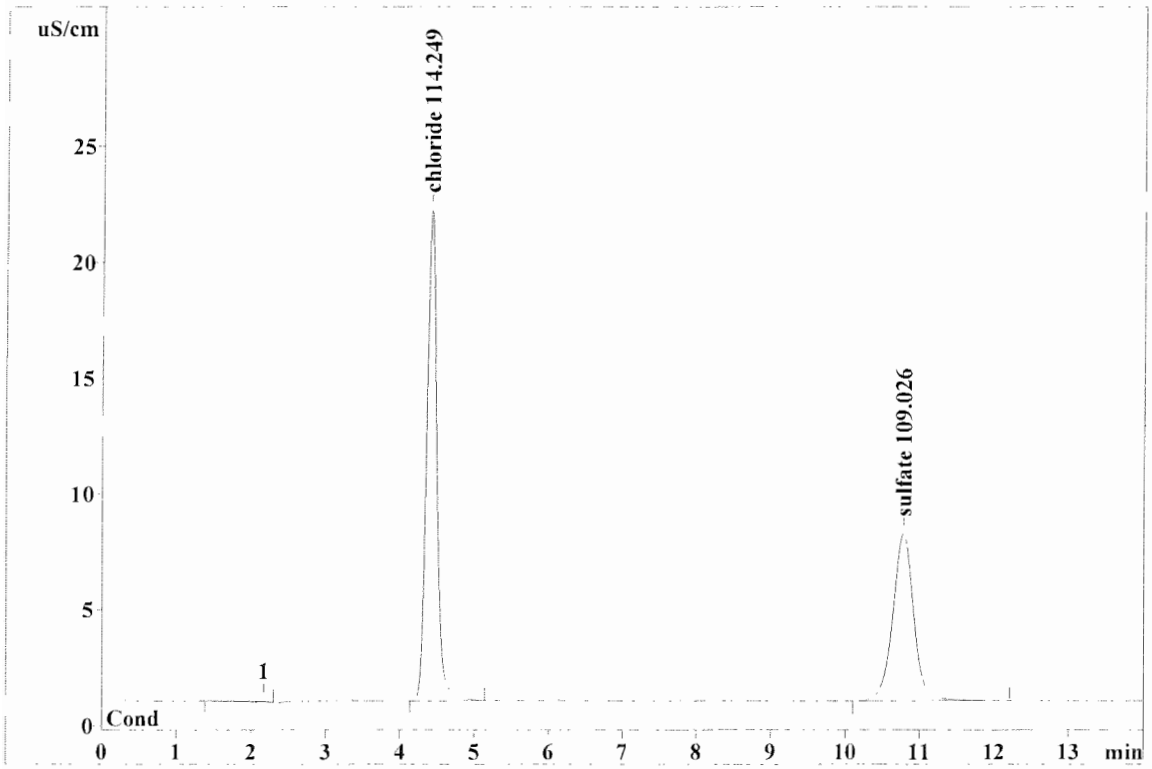
NO_2N ✓

This report has been created by IC Net
METROHM LTD

Report date: 11/16/2011 2:12:57 PM
Printed by: Jadelyn Chun

Ident: AK21-118 K119-01 DF=10
Analysis from: 11/15/2011 8:45:17 PM
File: vb152045.chw Last save: 11/15/2011 8:59:14 PM
Modified!
Method: ICD0-I30.mtw Last save: 11/15/2011 2:09:30 PM
Run operator: Jadelyn Chun
Analysis number: 71575

SAMPLE:
:
Vial number: 18
Volume: 1.0 µL
Dilution: 10.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.18	0.04	1.291	0.000	
2	4.41	21.19	203.325	114.249	chloride
3	10.78	7.22	142.130	109.026	sulfate
3	14.00	28.44	346.746	223.275	

This report has been created by IC Net
METROHM LTD

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K119
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK051WB	ICK051WL	ICK051WC		
LAB FILE ID:	AK21-98	AK21-96	AK21-97		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/15/1115:22	11/15/1114:49	11/15/1115:05	DATE RECEIVED:	NA
PREP. BATCH:	ICK051W	ICK051W	ICK051W		
CALIB. REF:	AK21-90	AK21-90	AK21-90		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	ND	2.00	1.94	97	2.00	1.94	97	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K119
METHOD: METHOD 300.0

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK049WB	ICK049WL	ICK049WC		
LAB FILE ID:	AK21-68	AK21-69	AK21-70		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/15/1107:17	11/15/1107:33	11/15/1107:49	DATE RECEIVED:	NA
PREP. BATCH:	ICK049W	ICK049W	ICK049W		
CALIB. REF:	AK21-66	AK21-66	AK21-66		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrate-N	ND	1.00	0.991	99	1.00	0.975	98	2	90-110	20

8011

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K119
METHOD: METHOD 300.0

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID:	MBLK1W		
LAB SAMP ID:	ICK049WB	ICK049WL	ICK049WC
LAB FILE ID:	AK21-68	AK21-69	AK21-70
DATE EXTRACTED:	NA	NA	NA
DATE ANALYZED:	11/15/1107:17	11/15/1107:33	11/15/1107:49
PREP. BATCH:	ICK049W	ICK049W	ICK049W
CALIB. REF:	AK21-66	AK21-66	AK21-66

DATE COLLECTED: NA
DATE RECEIVED: NA

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	2.00	2.11	105	2.00	2.07	104	2	90-110	20

88122

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K119
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK049WB	ICK049WL	ICK049WC		
LAB FILE ID:	AK21-68	AK21-69	AK21-70		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/15/1107:17	11/15/1107:33	11/15/1107:49	DATE RECEIVED:	NA
PREP. BATCH:	ICK049W	ICK049W	ICK049W		
CALIB. REF:	AK21-66	AK21-66	AK21-66		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	5.00	100	5.00	4.92	98	2	90-110	20

89113

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K119
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	ICK051WB	ICK051WL	ICK051WC		
LAB FILE ID:	AK21-98	AK21-96	AK21-97		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/15/1115:22	11/15/1114:49	11/15/1115:05	DATE RECEIVED:	NA
PREP. BATCH:	ICK051W	ICK051W	ICK051W		
CALIB. REF:	AK21-90	AK21-90	AK21-90		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	5.00	100	5.00	4.96	99	1	90-110	20

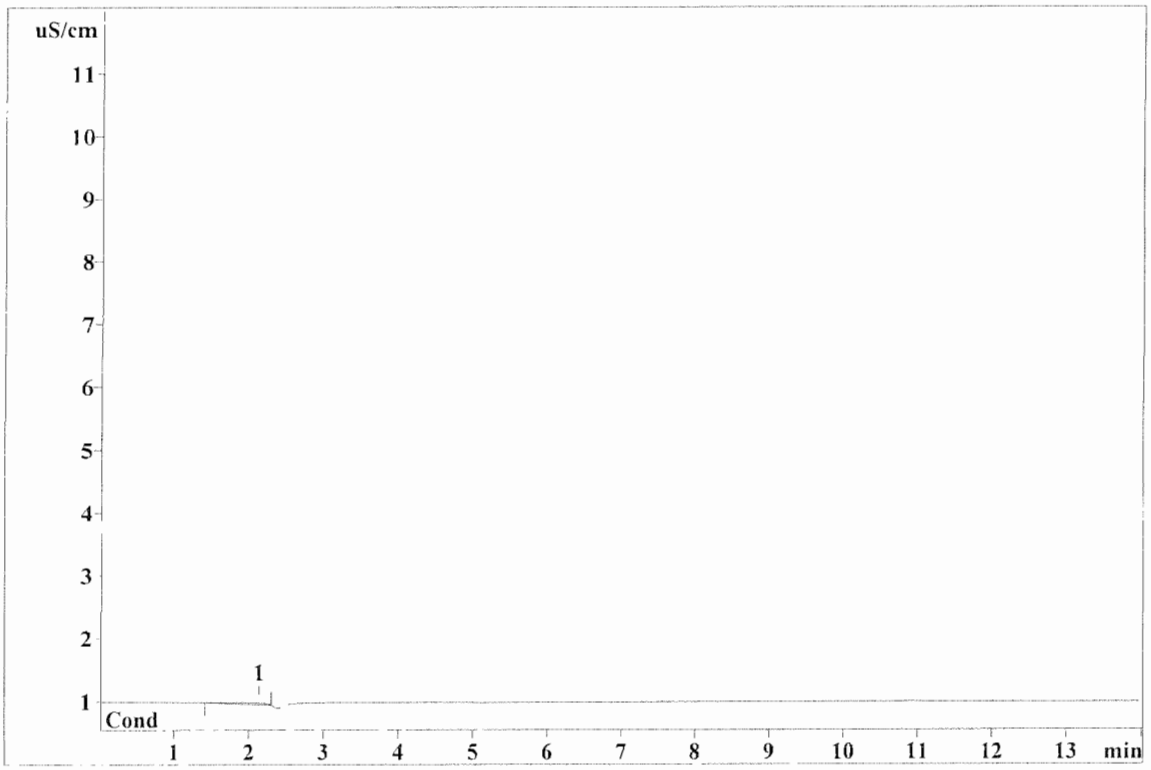
QC DATA

Report date: 11/15/2011 11:33:02 AM
Printed by: Jadelyn Chun

Ident: AK21-68 ICK049WB
Analysis from: 11/15/2011 7:17:12 AM
File: vb150717.chw Last save: 11/15/2011 7:31:09 AM

Method: ICD0-I30.mtw Last save: 11/14/2011 4:37:01 PM
Run operator: Jadelyn Chun
Analysis number: 71525

SAMPLE:
:
Vial number: 68
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.02	0.863	0.000	

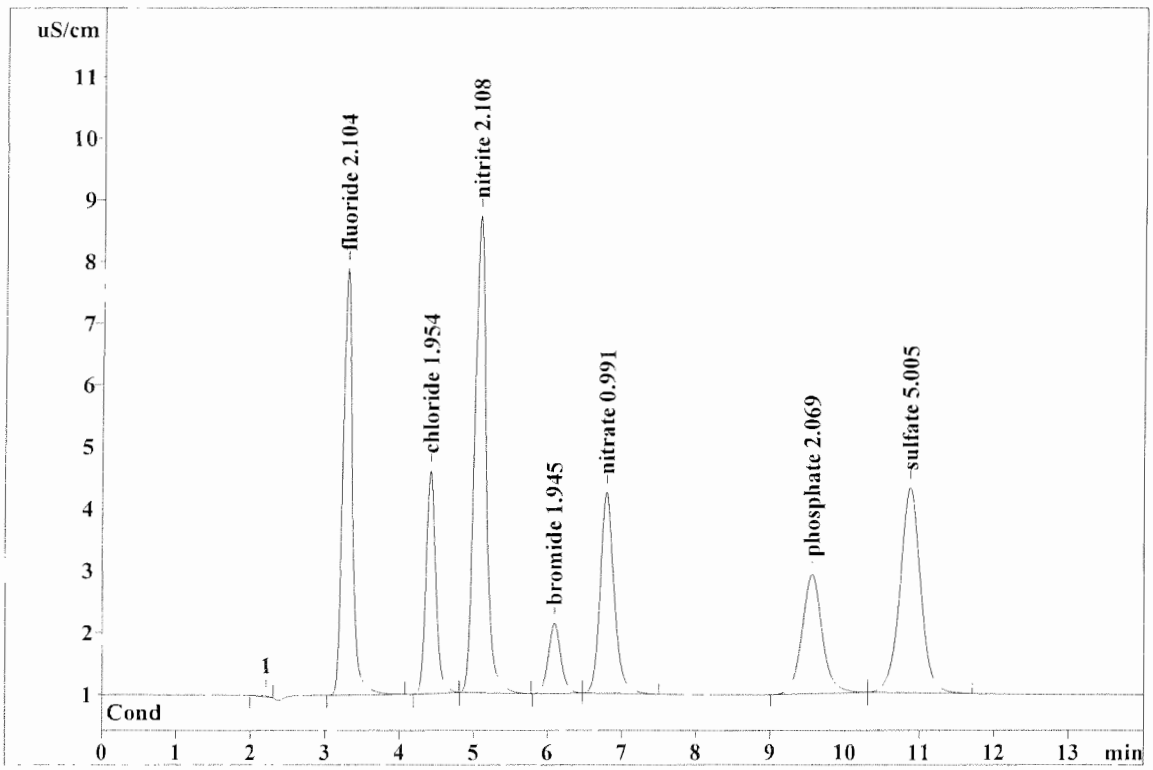
This report has been created by IC Net
METROHM LTD

Report date: 11/15/2011 7:47:18 AM
Printed by: Jadelyn Chun

Ident: AK21-69 ICK049WL
Analysis from: 11/15/2011 7:33:21 AM
File: VB150733.CHW Last save: 11/15/2011 7:47:18 AM

Method: ICD0-I30.mtw Last save: 11/14/2011 4:37:01 PM
Run operator: Jadelyn Chun
Analysis number: 71526

SAMPLE:
:
Vial number: 69
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.21	0.02	0.228	0.000	
2	3.29	6.90	61.819	2.104	fluoride
3	4.42	3.59	33.482	1.954	chloride
4	5.07	7.72	85.484	2.108	nitrite
5	6.09	1.13	13.431	1.945	bromide
6	6.79	3.25	42.772	0.991	nitrate
7	9.56	1.92	35.977	2.069	phosphate
8	10.88	3.31	64.325	5.005	sulfate
8	14.00	27.85	337.517	16.177	

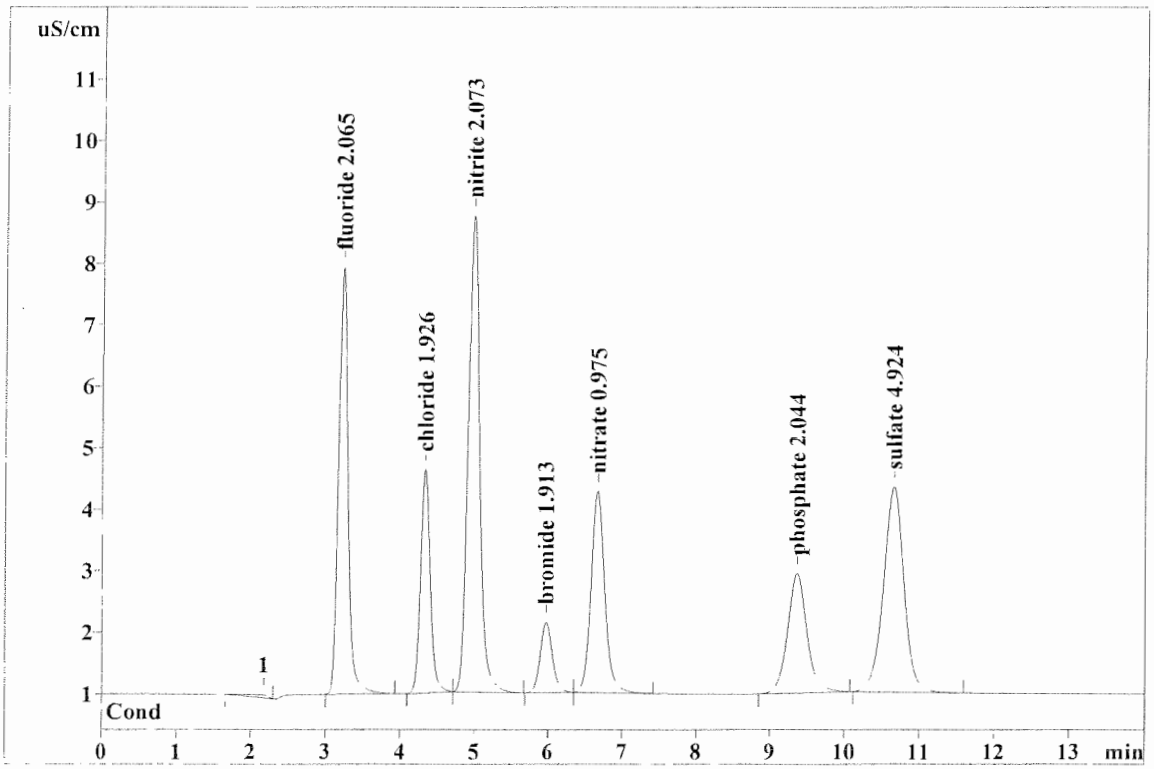
This report has been created by IC Net
METROHM LTD

Report date: 11/15/2011 8:03:28 AM
Printed by: Jadelyn Chun

Ident: AK21-70 ICK049WC
Analysis from: 11/15/2011 7:49:31 AM
File: VB150749.CHW Last save: 11/15/2011 8:03:28 AM

Method: ICD0-I30.mtw Last save: 11/14/2011 4:37:01 PM
Run operator: Jadelyn Chun
Analysis number: 71527

SAMPLE:
:
Vial number: 70
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.05	1.072	0.000	
2	3.22	6.93	60.654	2.065	fluoride
3	4.33	3.63	32.990	1.926	chloride
4	4.97	7.75	84.057	2.073	nitrite
5	5.97	1.14	13.198	1.913	bromide
6	6.66	3.27	42.032	0.975	nitrate
7	9.36	1.94	35.519	2.044	phosphate
8	10.66	3.33	63.264	4.924	sulfate
8	14.00	28.04	332.785	15.921	

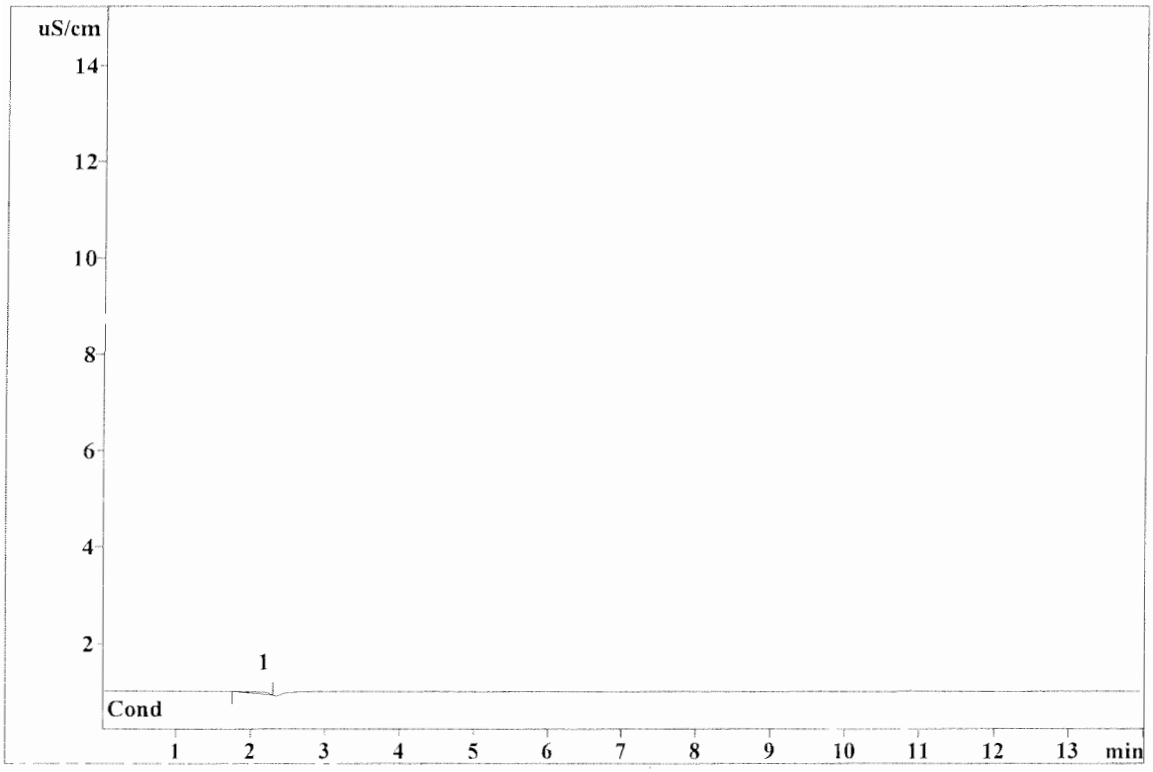
This report has been created by IC Net
METROHM LTD

Report date: 11/15/2011 5:07:07 PM
Printed by: Jadelyn Chun

Ident: AK21-98 ICK051WB
Analysis from: 11/15/2011 3:22:02 PM
File: vb151522.chw Last save: 11/15/2011 3:35:59 PM

Method: ICD0-I30.mtw Last save: 11/15/2011 2:09:30 PM
Run operator: Jadelyn Chun
Analysis number: 71555

SAMPLE:
:
Vial number: 98
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.18	0.04	0.804	0.000	

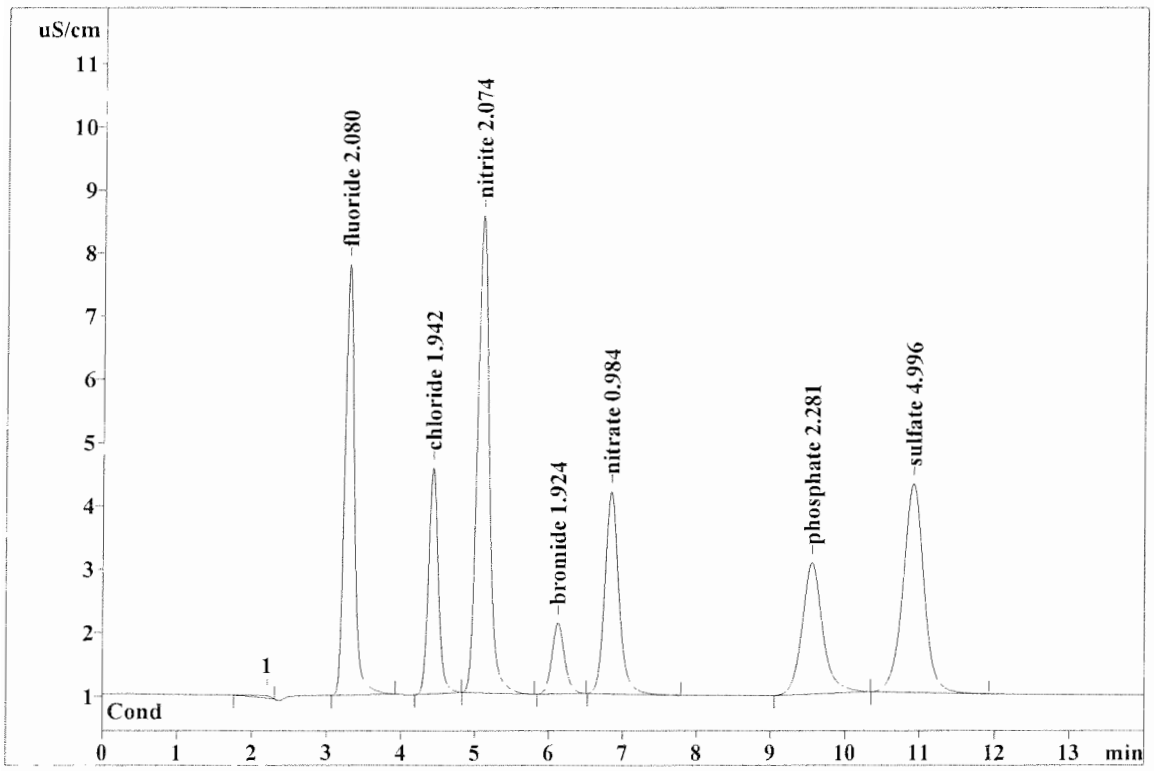
This report has been created by IC Net
METROHM LTD

Report date: 11/15/2011 3:03:40 PM
Printed by: Jadelyn Chun

Ident: AK21-96 ICK051WL
Analysis from: 11/15/2011 2:49:42 PM
File: VB151449.CHW Last save: 11/15/2011 3:03:40 PM

Method: ICD0-I30.mtw Last save: 11/15/2011 2:09:30 PM
Run operator: Jadelyn Chun
Analysis number: 71553

SAMPLE:
:
Vial number: 96
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.20	0.04	0.729	0.000	
2	3.28	6.79	61.101	2.080	fluoride
3	4.43	3.55	33.267	1.942	chloride
4	5.09	7.53	84.100	2.074	nitrite
5	6.13	1.11	13.278	1.924	bromide
6	6.84	3.18	42.432	0.984	nitrate
7	9.56	2.07	39.854	2.281	phosphate
8	10.92	3.29	64.209	4.996	sulfate
8	14.00	27.56	338.971	16.281	

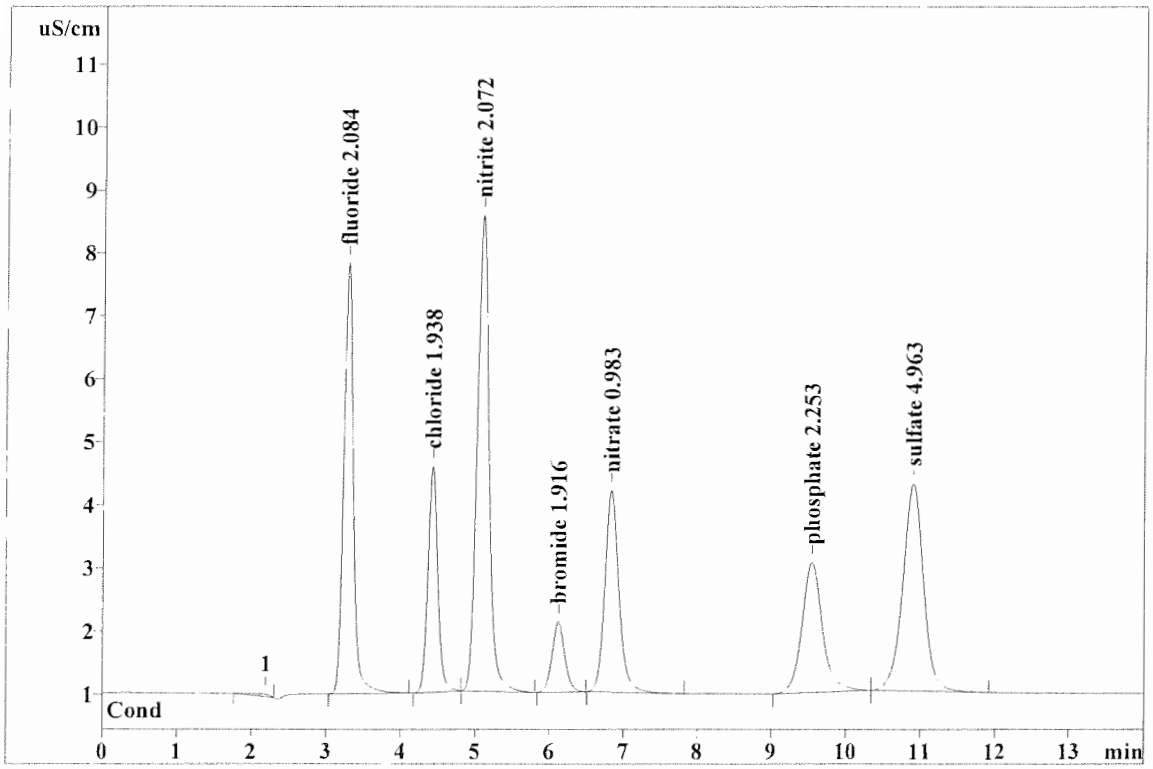
This report has been created by IC Net
METROHM LTD

Report date: 11/15/2011 3:19:49 PM
Printed by: Jadelyn Chun

Ident: AK21-97 ICK051WC
Analysis from: 11/15/2011 3:05:51 PM
File: VB151505.CHW Last save: 11/15/2011 3:19:49 PM

Method: ICD0-I30.mtw Last save: 11/15/2011 2:09:30 PM
Run operator: Jadelyn Chun
Analysis number: 71554

SAMPLE:
:
Vial number: 97
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.19	0.04	0.707	0.000	
2	3.28	6.83	61.224	2.084	fluoride
3	4.42	3.57	33.193	1.938	chloride
4	5.08	7.55	83.985	2.072	nitrite
5	6.12	1.11	13.220	1.916	bromide
6	6.83	3.19	42.397	0.983	nitrate
7	9.55	2.06	39.353	2.253	phosphate
8	10.90	3.28	63.770	4.963	sulfate
8	14.00	27.63	337.850	16.208	

This report has been created by IC Net
METROHM LTD

INITIAL CALIBRATIONS

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	nitrite	fluoride	chloride	bromide	nitrate	phosphate	sulfate	RawNetID	DF
AI39-01	IB	IFCBNPS	0	0	0	0	0	0	0	v9301829	1
AI39-02	S0	IFCBNPS	0	0	0	0	0	0	0	v9301845	1
AI39-03	S1	IFCBNPS	0.0402732	0.0794447	0.137238	0.0962101	0.0900188	0.132659	0.181386	v9301901	1
AI39-04	S2	IFCBNPS	0.0827484	0.120657	0.172987	0.138434	0.127411	0.166211	0.219384	v9301917	1
AI39-05	S3	IFCBNPS	0.175829	0.207372	0.255839	0.223376	0.213499	0.241921	0.298411	v9301934	1
AI39-06	S4	IFCBNPS	0.468611	0.487287	0.510168	0.483675	0.481038	0.46682	0.535669	v9301950	1
AI39-07	S5	IFCBNPS	0.987232	0.975831	0.969747	0.947628	0.958434	0.904972	0.974277	v9302006	1
AI39-08	S6	IFCBNPS	2.03579	2.00618	1.92527	1.92275	1.95393	1.87863	1.87805	v9302022	1
AI39-09	S7	IFCBNPS	5.13141	5.00267	4.89791	5.03793	5.02567	5.05879	4.80122	v9302038	1
AI39-10	S8	IFCBNPS	9.9281	9.57748	9.9004	10.4648	10.1254	10.4079	9.8176	v9302054	1
AI39-11	S9	IFCBNPS	18.5849	17.9543	20.0804	21.615	20.3941	21.1232	20.144	v9302111	1
AI39-12	ICV	IFCBNPS	98.6%	100.1%	97.7%	94.1%	98.6%	92.5%	99.9%	v9302127	1
AI39-13	ICB	IFCBNPS	0	0	0	0	0	0	0	v9302143	1

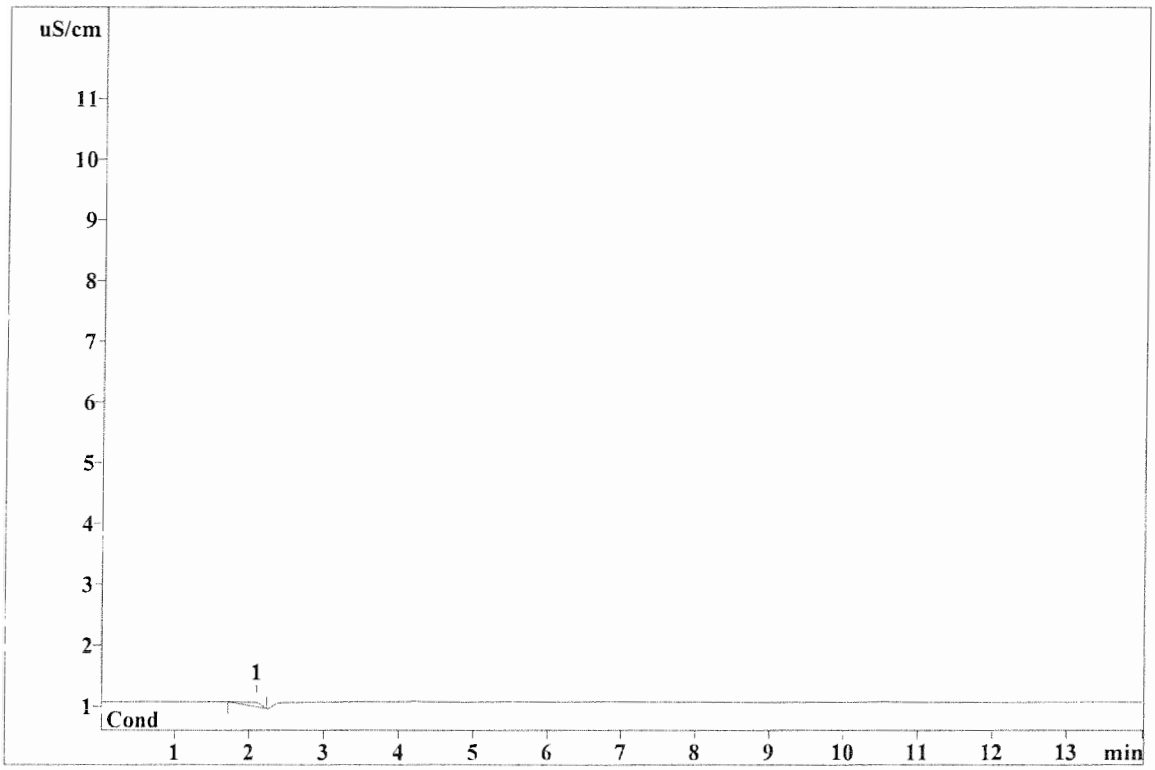
AJ
15/03/11

Report date: 10/3/2011 10:48:38 AM
Printed by: Jadelyn Chun

Ident: AI39-02 S0
Analysis from: 9/30/2011 6:45:36 PM
File: v9301845.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69483

SAMPLE:
:
Vial number: 2
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.07	1.184	0.000	

This report has been created by IC Net
METROHM LTD

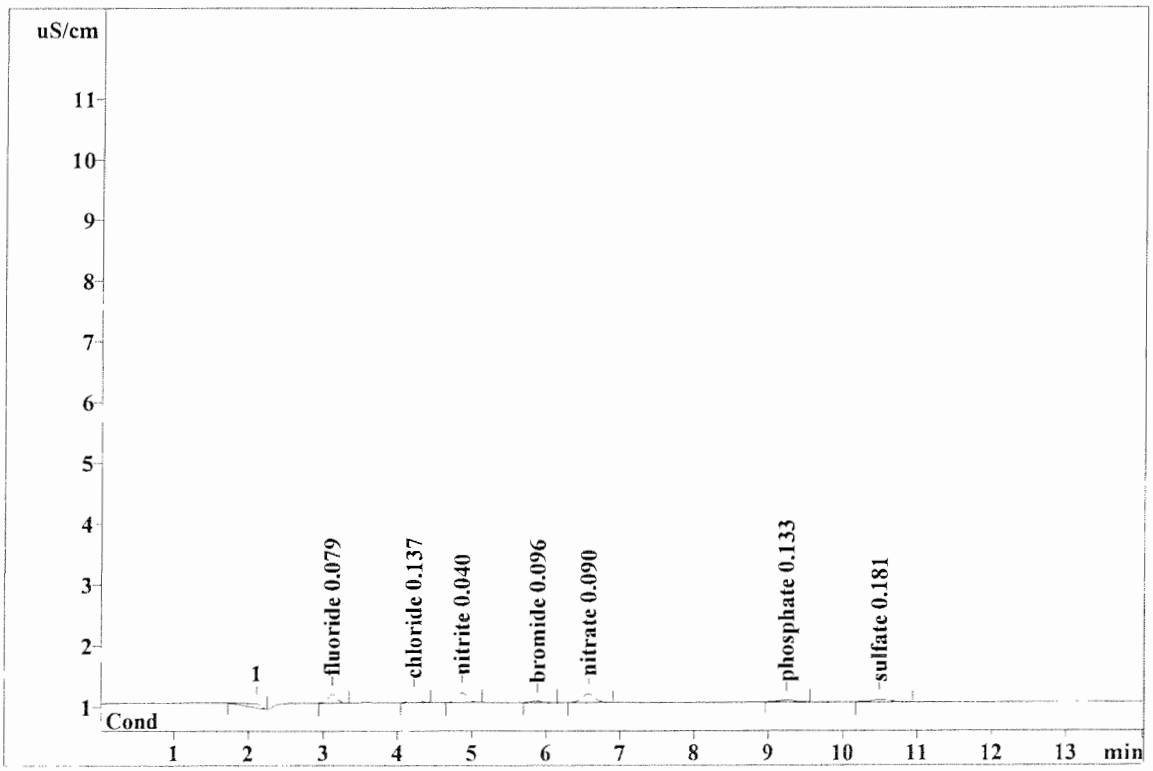
AS
10/03/11

Report date: 10/3/2011 10:48:46 AM
Printed by: Jadelyn Chun

Ident: AI39-03 S1
Analysis from: 9/30/2011 7:01:46 PM
File: v9301901.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69484

SAMPLE:
:
Vial number: 3
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.07	1.147	0.000	
2	3.12	0.14	1.182 ✓	0.079	fluoride
3	4.23	0.10	0.908 ✓	0.137	chloride
4	4.87	0.16	1.561 ✓	0.040	nitrite
5	5.87	0.03	0.301 ✓	0.096	bromide
6	6.57	0.14	1.722 ✓	0.090 ✓	nitrate
7	9.23	0.03	0.520 ✓	0.133 ✓	phosphate
8	10.50	0.04	0.692 ✓	0.181 ✓	sulfate
8	14.00	0.71	8.034	0.757	

This report has been created by IC Net
METROHM LTD

RA
10/03/11

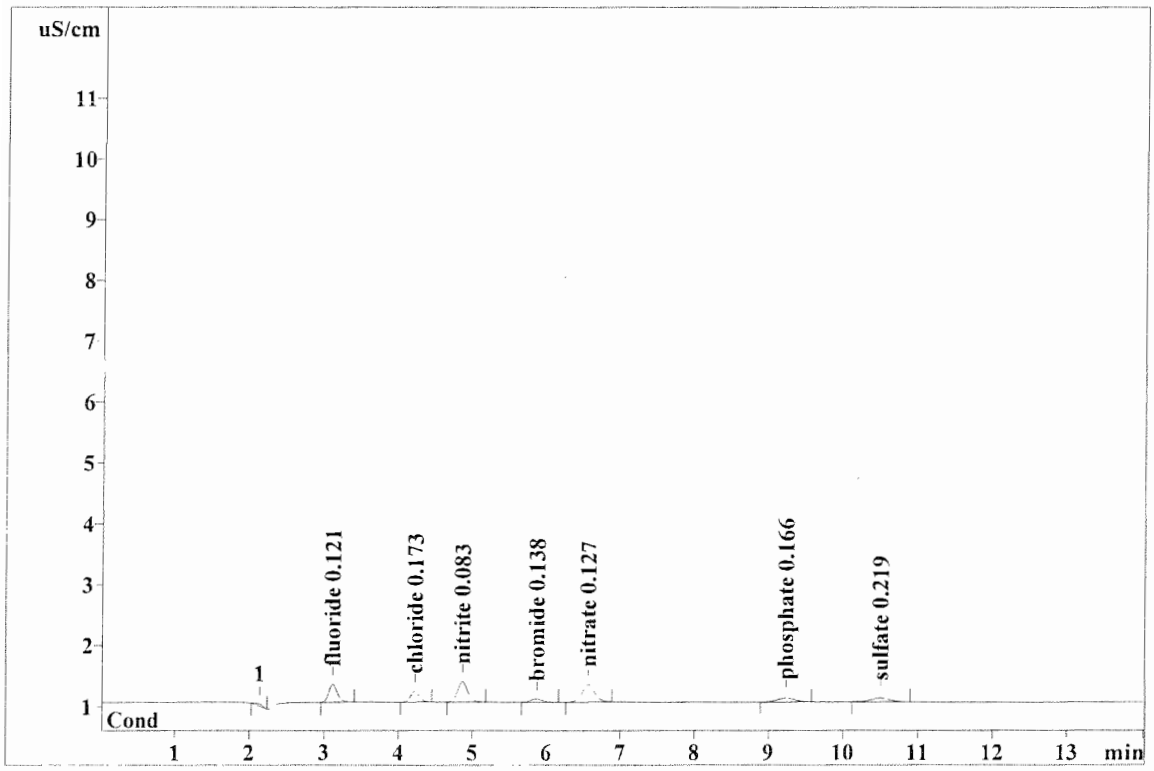
8025

Report date: 10/3/2011 10:49:06 AM
Printed by: Jadelyn Chun

Ident: AI39-04 S2
Analysis from: 9/30/2011 7:17:56 PM
File: v9301917.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69485

SAMPLE:
:
Vial number: 4
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.13	0.04	0.262	0.000	
2	3.12	0.30	2.417	0.121	fluoride
3	4.22	0.18	1.549	0.173	chloride
4	4.86	0.34	3.285	0.083	nitrite
5	5.87	0.05	0.601	0.138	bromide
6	6.56	0.29	3.425	0.127	nitrate
7	9.24	0.07	1.135	0.166	phosphate
8	10.51	0.07	1.193	0.219	sulfate
8	14.00	1.32	13.866	1.028	

This report has been created by IC Net
METROHM LTD

AS
10/03/11

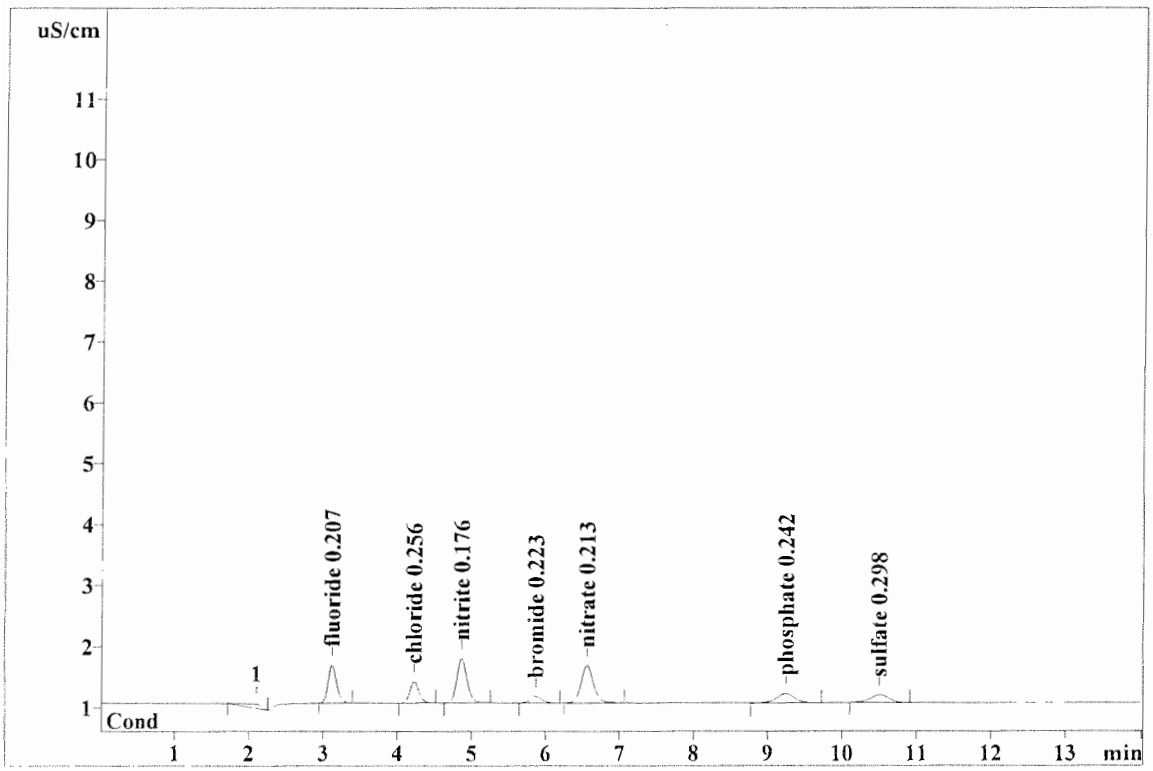
8026

Report date: 10/3/2011 10:49:15 AM
Printed by: Jadelyn Chun

Ident: AI39-05 S3
Analysis from: 9/30/2011 7:34:06 PM
File: v9301934.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69486

SAMPLE:
:
Vial number: 5
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.07	1.155	0.000	
2	3.12	0.62	5.014	0.207	fluoride
3	4.22	0.35	3.034	0.256	chloride ✓
4	4.87	0.73	7.062	0.176	nitrite
5	5.87	0.11	1.204	0.223	bromide
6	6.56	0.62	7.345	0.213	nitrate
7	9.24	0.15	2.521	0.242	phosphate
8	10.50	0.13	2.236 ✓	0.298	sulfate
8	14.00	2.78	29.572	1.616	

This report has been created by IC Net
METROHM LTD

AS
10/03/11

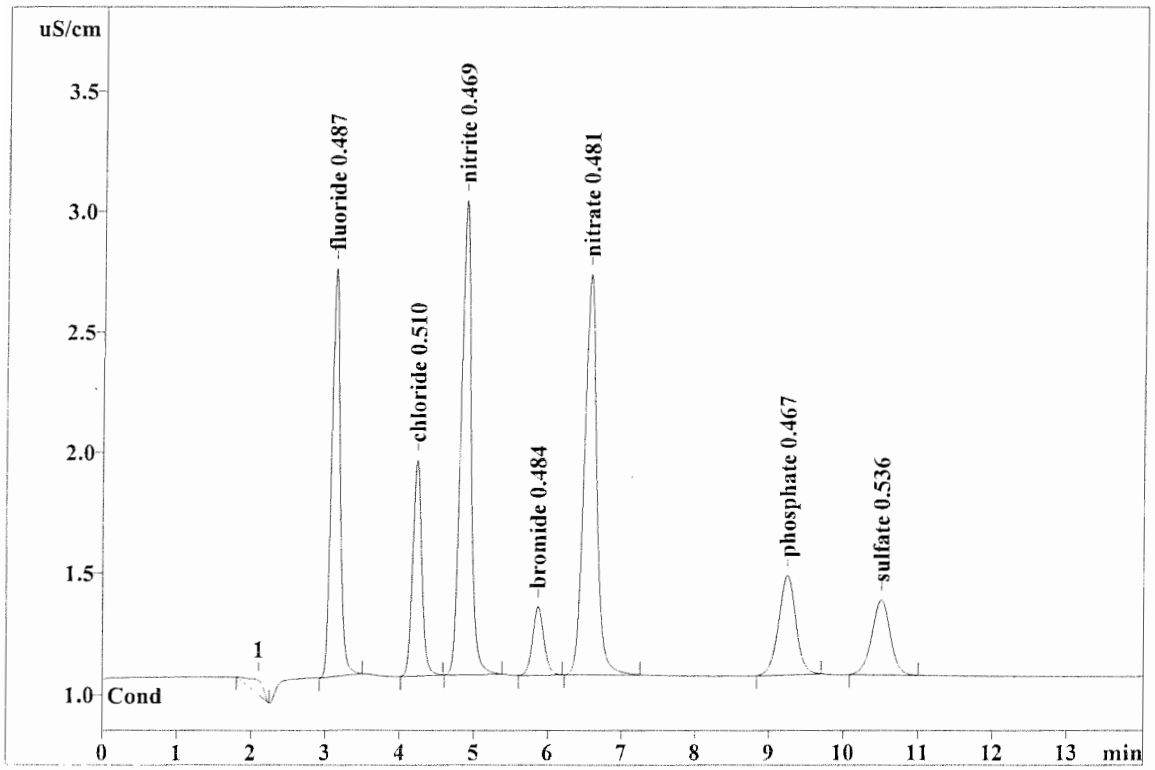
8027

Report date: 10/3/2011 10:49:34 AM
Printed by: Jadelyn Chun

Ident: AI39-06 S4
Analysis from: 9/30/2011 7:50:16 PM
File: v9301950.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69487

SAMPLE:
:
Vial number: 6
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.06	0.880	0.000	
2	3.12	1.69	13.397	0.487	fluoride
3	4.23	0.89	7.595	0.510	chloride ✓
4	4.87	1.96	18.943	0.469	nitrite
5	5.87	0.28	3.053	0.484	bromide ✓
6	6.55	1.66	19.530	0.481	nitrate
7	9.24	0.41	6.640	0.467	phosphate ✓
8	10.51	0.31	5.366 ✓	0.536	sulfate ✓
8	14.00	7.26	75.402	3.433	

This report has been created by IC Net
METROHM LTD

As
10/03/11

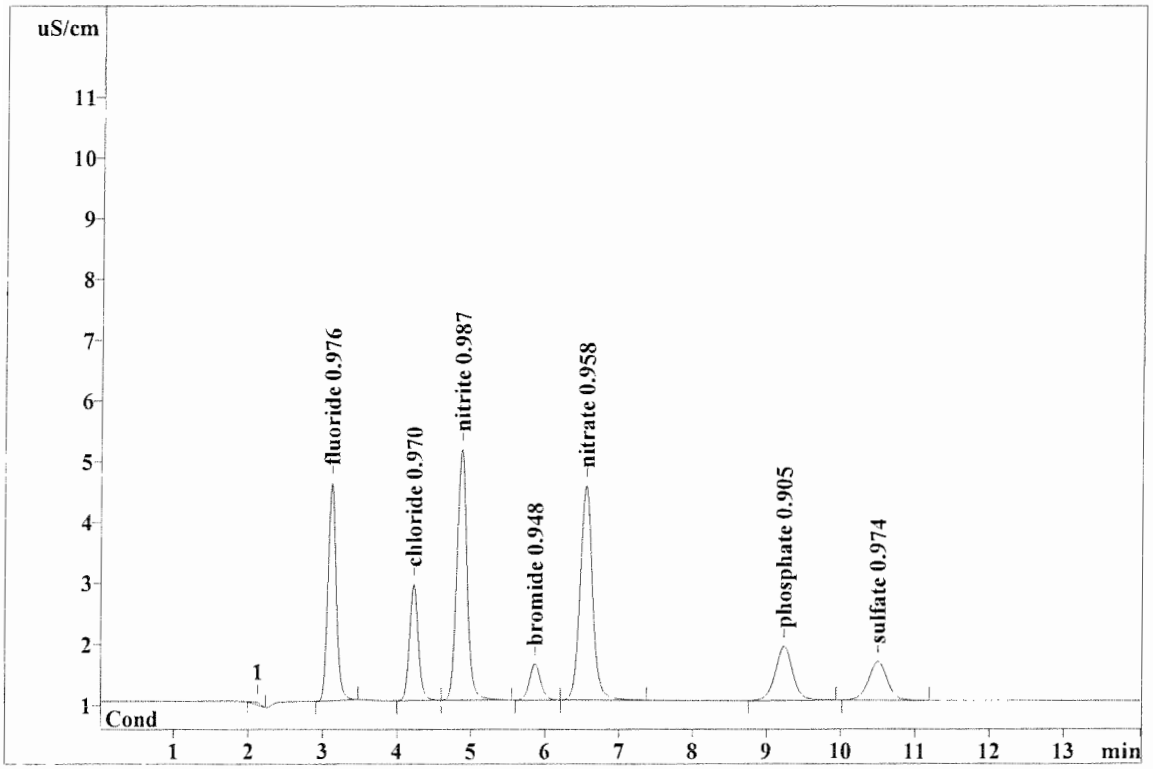
8028

Report date: 10/3/2011 10:49:41 AM
Printed by: Jadelyn Chun

Ident: AI39-07 S5
Analysis from: 9/30/2011 8:06:26 PM
File: v9302006.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69488

SAMPLE:
:
Vial number: 7
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.13	0.04	0.341	0.000	
2	3.12	3.57	28.028	0.976	fluoride
3	4.22	1.90	15.837	0.970	chloride
4	4.86	4.12	39.987	0.987	nitrite
5	5.86	0.59	6.347	0.948	bromide
6	6.54	3.52	41.272	0.958	nitrate
7	9.24	0.88	14.663	0.905	phosphate
8	10.50	0.63	11.152 ✓	0.974	sulfate
8	14.00	15.25	157.627	6.718	

This report has been created by IC Net
METROHM LTD

AS
10/03/11

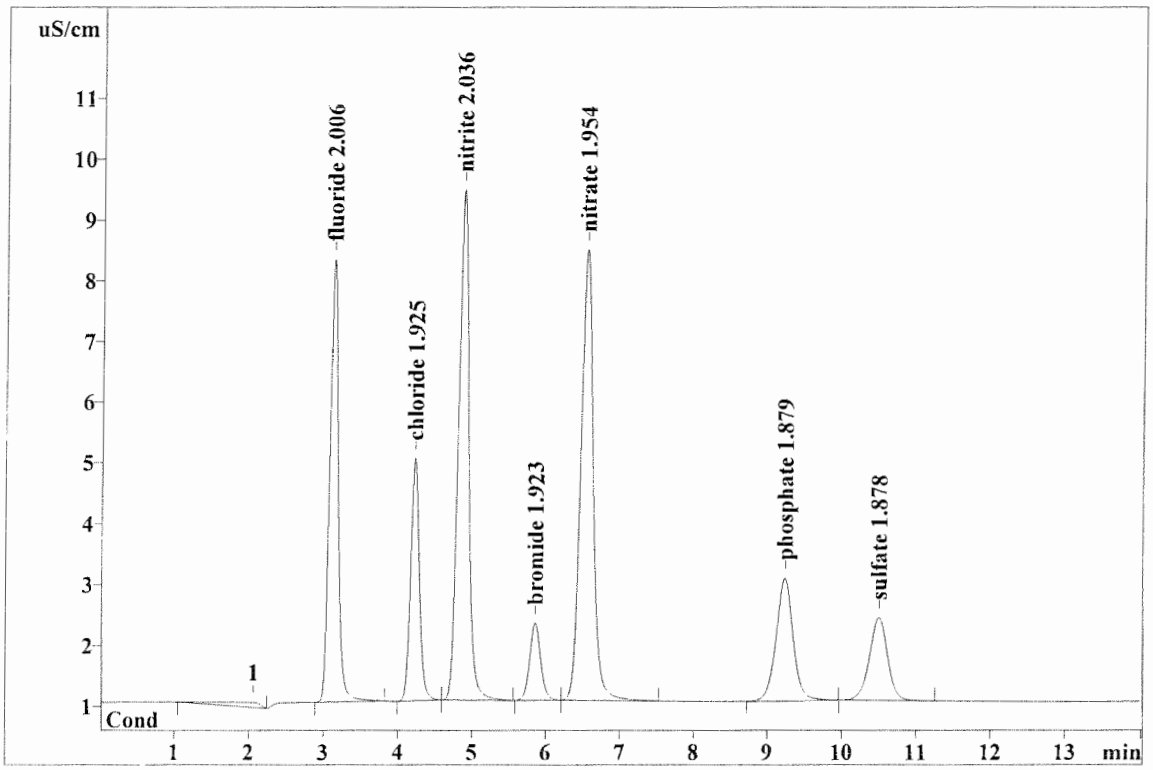
8029

Report date: 10/3/2011 10:49:51 AM
Printed by: Jadelyn Chun

Ident: AI39-08 S6
Analysis from: 9/30/2011 8:22:36 PM
File: v9302022.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69489

SAMPLE:
:
Vial number: 8
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec		Conc. mg/L	Name
1	2.08	0.08	3.161		0.000	
2	3.12	7.28	58.886		2.006	fluoride
3	4.22	3.98	32.972		1.925	chloride
4	4.86	8.39	82.536		2.036	nitrite
5	5.86	1.27	13.271		1.923	bromide
6	6.53	7.42	86.609		1.954	nitrate
7	9.23	2.01	32.493		1.879	phosphate
8	10.50	1.36	23.075	✓	1.878	sulfate
8	14.00	31.79	333.001		13.601	

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AJ
10/03/11

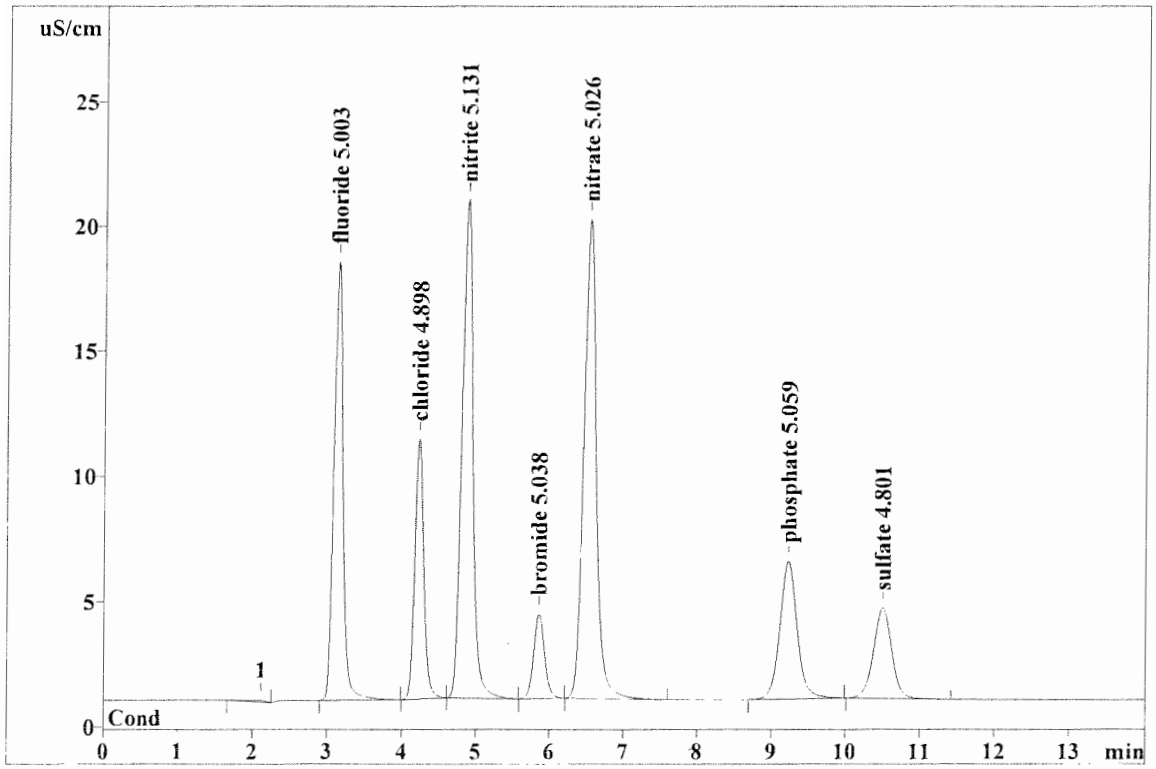
8030

Report date: 10/3/2011 10:49:56 AM
Printed by: Jadelyn Chun

Ident: AI39-09 S7
Analysis from: 9/30/2011 8:38:46 PM
File: v9302038.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69490

SAMPLE:
:
Vial number: 9
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.06	1.110	0.000	
2	3.13	17.51	148.626	5.003	fluoride
3	4.23	10.38	86.279	4.898	chloride
4	4.86	19.91	208.149	5.131	nitrite
5	5.86	3.40	35.390	5.038	bromide
6	6.53	19.15	226.504	5.026	nitrate
7	9.23	5.51	90.728	5.059	phosphate
8	10.50	3.62	61.639 ✓	4.801	sulfate
8	14.00	79.53	858.424	34.956	

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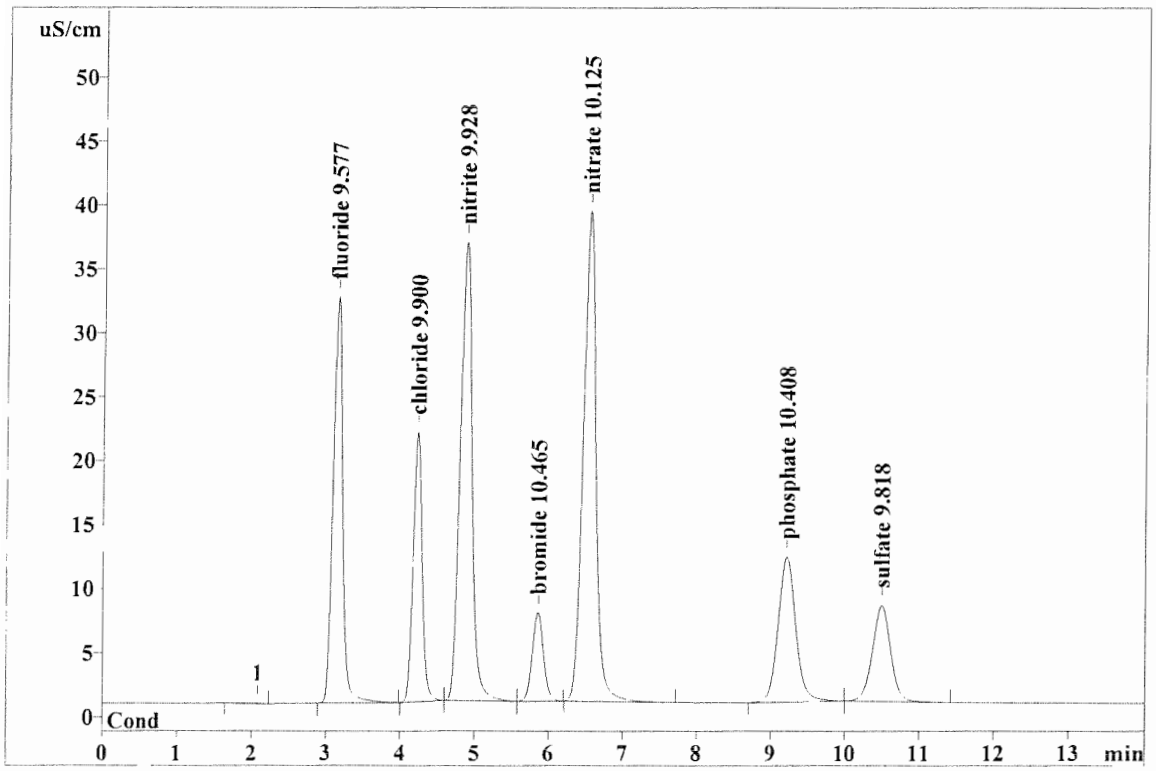
Ay
10/03/11

Report date: 10/3/2011 10:50:01 AM
Printed by: Jadelyn Chun

Ident: AI39-10 S8
Analysis from: 9/30/2011 8:54:55 PM
File: v9302054.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69491

SAMPLE:
:
Vial number: 10
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.09	0.04	0.883	0.000	
2	3.14	31.68	285.635	9.577	fluoride
3	4.22	21.04	175.986	9.900	chloride
4	4.86	35.83	402.789	9.928	nitrite
5	5.85	6.92	73.923	10.465	bromide
6	6.52	38.33	458.760	10.125	nitrate
7	9.21	11.30	188.680	10.408	phosphate
8	10.49	7.47	127.816	9.818	sulfate
8	14.00	152.61	1714.471	70.222	

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AJ
10/03/11

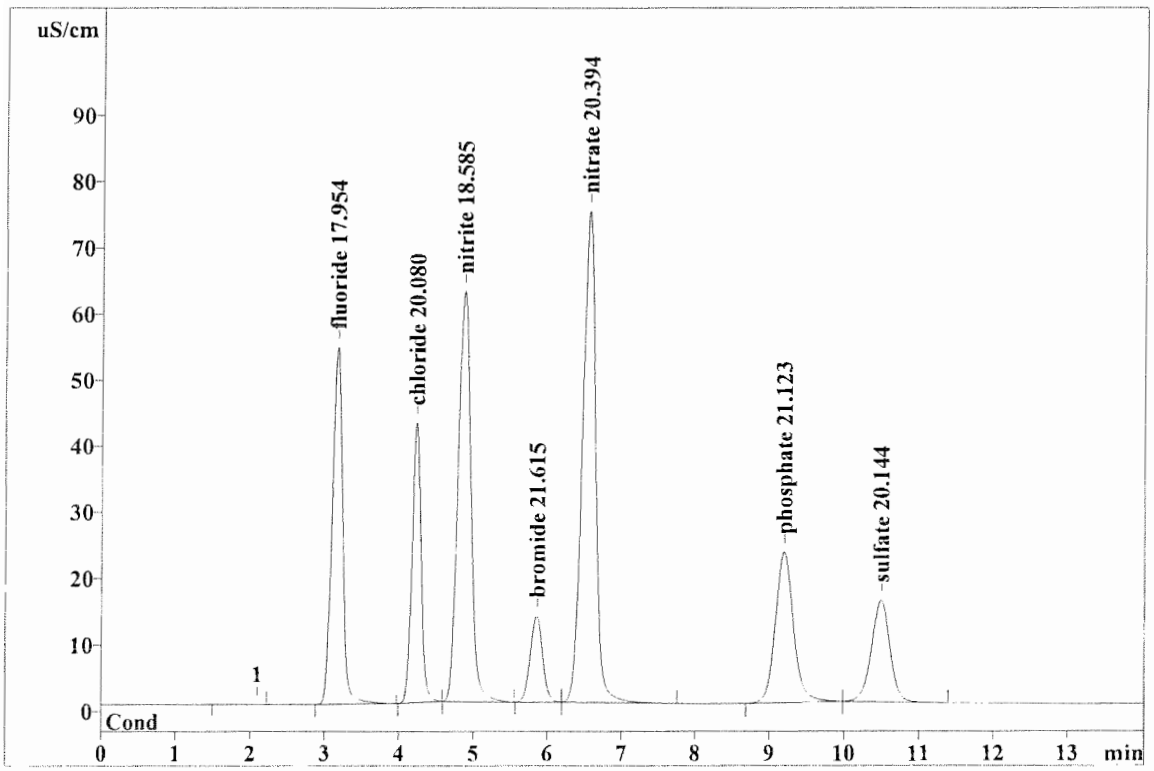
8032

Report date: 10/3/2011 10:50:10 AM
Printed by: Jadelyn Chun

Ident: AI39-11 S9
Analysis from: 9/30/2011 9:11:05 PM
File: v9302111.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69492

SAMPLE:
:
Vial number: 11
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.09	0.02	0.447	0.000	
2	3.16	53.88	536.509	17.954	fluoride
3	4.23	42.24	358.541	20.080	chloride
4	4.86	61.98	754.064	18.585	nitrite
5	5.85	13.02	153.094	21.615	bromide
6	6.54	74.20	926.425	20.394	nitrate
7	9.19	22.65	384.898	21.123	phosphate
8	10.49	15.33	264.046	20.144	sulfate
8	14.00	283.33	3378.024	139.896	

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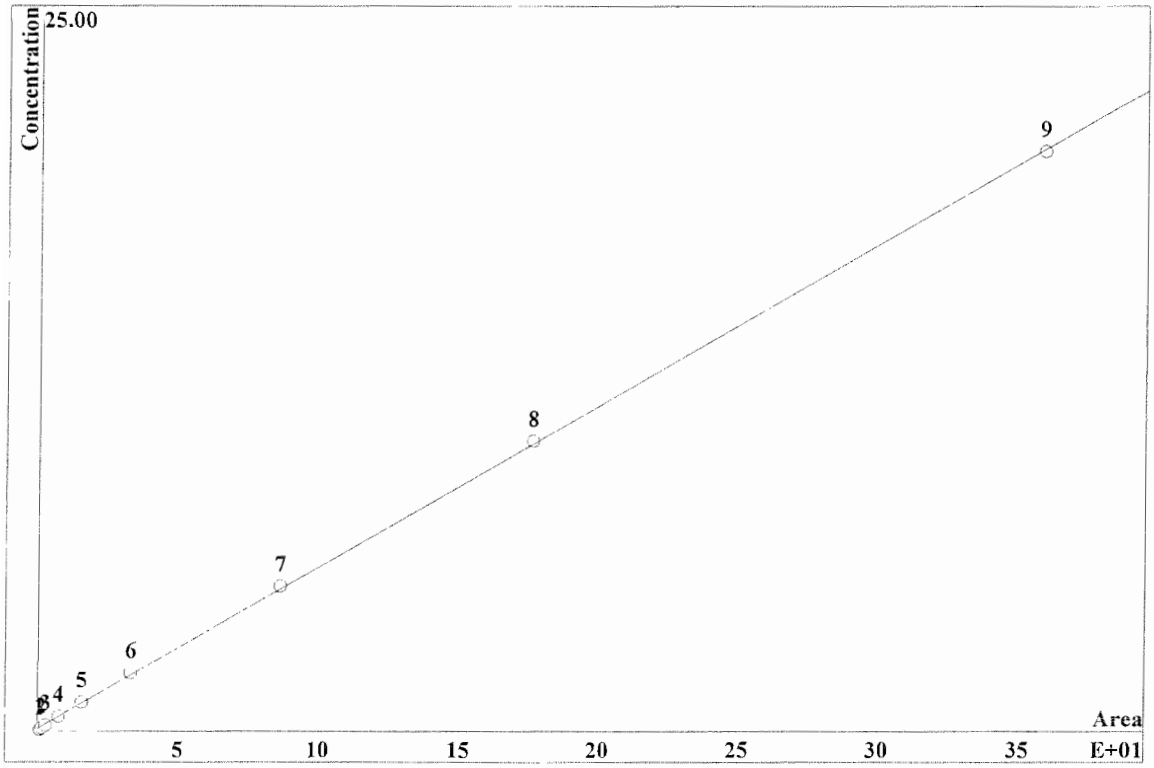
AS
10/03/11

8033

CALIBRATION OF COMPONENT chloride

Method: ICD0-I30.mtw
Equation: Q = 0.0557644·A + 0.0866239
RSD: 1.948 %
Correlation coefficient: 0.999932



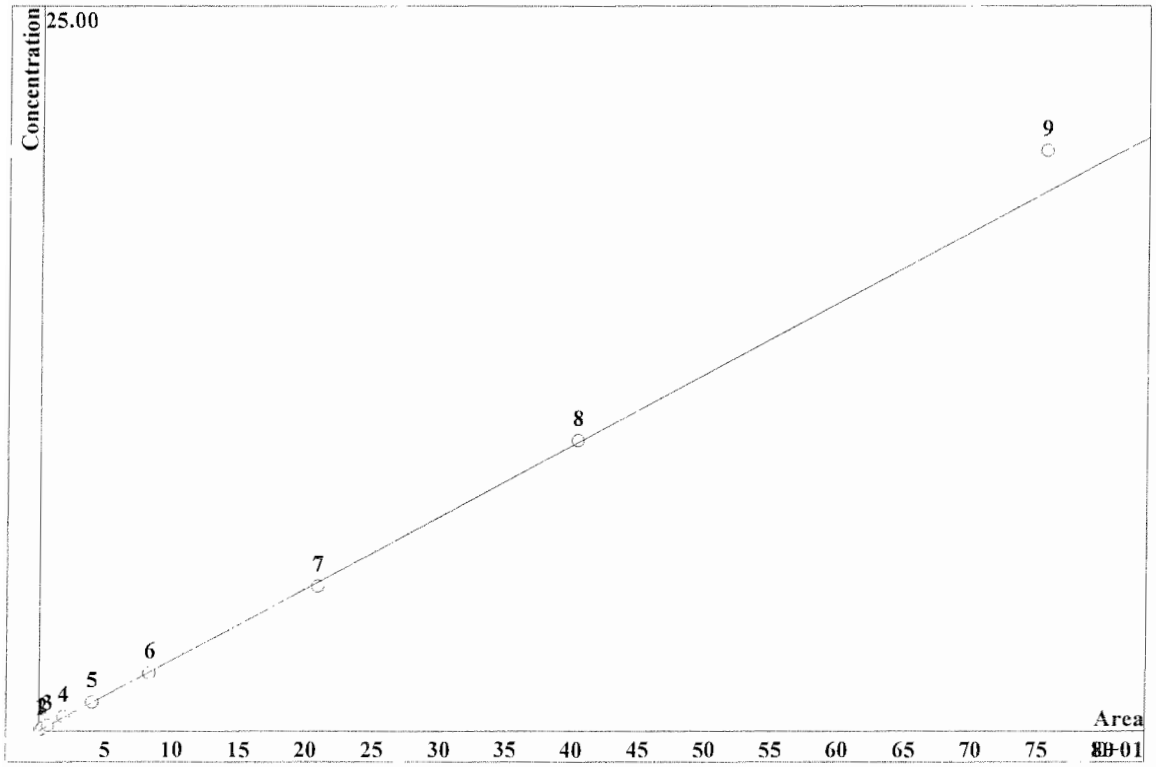
K3 = 0 K2 = 0 K1 = 0.0557644 K0 = 0.0866239
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1035	0.9076	0.05	1	4.26	Yes	v9301901.chw
2	0.1796	1.549	0.1	1	4.26	Yes	v9301917.chw
3	0.354	3.034	0.2	1	4.26	Yes	v9301934.chw
4	0.8921	7.595	0.5	1	4.26	Yes	v9301950.chw
5	1.896	15.84	1	1	4.26	Yes	v9302006.chw
6	3.983	32.97	2	1	4.26	Yes	v9302022.chw
7	10.38	86.28	5	1	4.26	Yes	v9302038.chw
8	21.04	176	10	1	4.26	Yes	v9302054.chw
9	42.24	358.5	20	1	4.26	Yes	v9302111.chw

AA
10/03/11

CALIBRATION OF COMPONENT nitrite

Method: ICD0-I30.mtw ✓ ✓
Equation: Q = 0.024644·A + 0.00179217
RSD: 2.785 %
Correlation coefficient: 0.999850



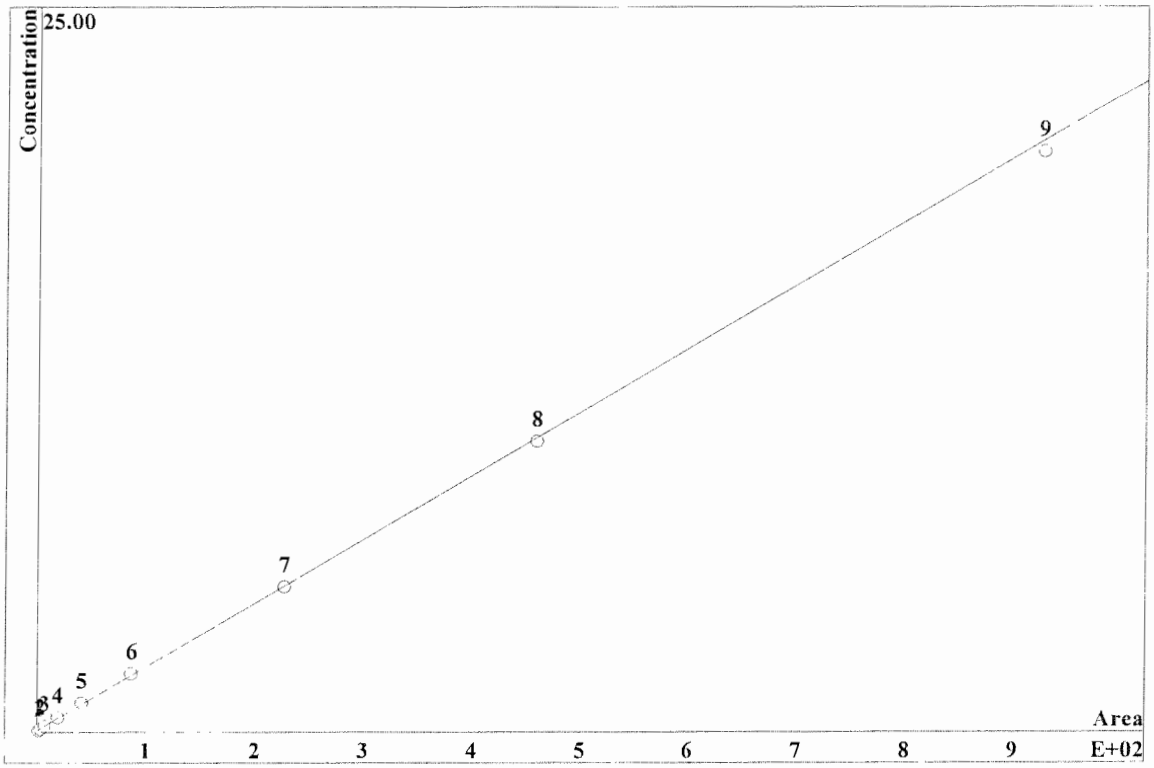
K3 = 0 K2 = 0 K1 = 0.024644 K0 = 0.00179217
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1597	1.561 ✓	0.05	1	4.932	Yes	v9301901.chw
2	0.3368	3.285 ✓	0.1	1	4.932	Yes	v9301917.chw
3	0.7305	7.062 ✓	0.2	1	4.932	Yes	v9301934.chw
4	1.964	18.94 ✓	0.5	1	4.932	Yes	v9301950.chw
5	4.115	39.99 ✓	1	1	4.932	Yes	v9302006.chw
6	8.392	82.54 ✓	2	1	4.932	Yes	v9302022.chw
7	19.91	208.1 ✓	5	1	4.932	Yes	v9302038.chw
8	35.83	402.8 ✓	10	1	4.932	Yes	v9302054.chw
9	61.98	754.1 ✓	20	1	4.932	No	v9302111.chw

DA
10/3/11

CALIBRATION OF COMPONENT nitrate

Method: ICD0-I30.mtw
Equation: Q = 0.0219574·A + 0.0522169
RSD: 3.044 %
Correlation coefficient: 0.999806



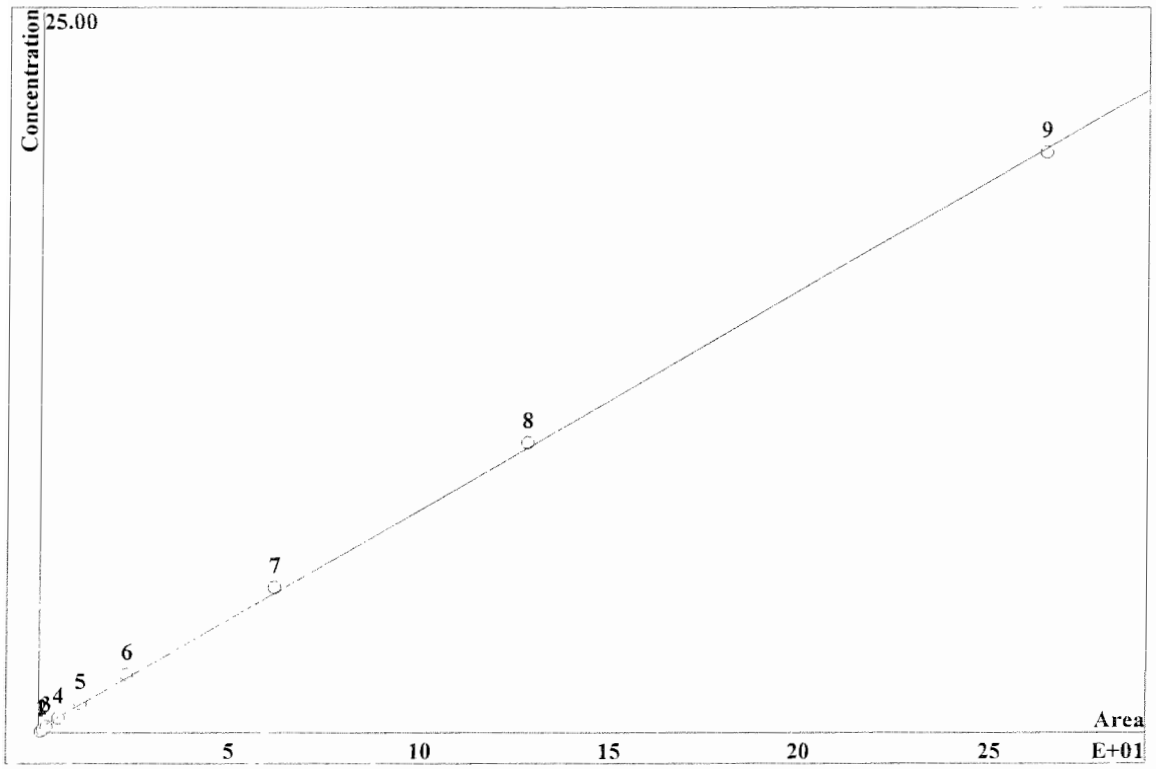
K3 = 0 K2 = 0 K1 = 0.0219574 K0 = 0.0522169
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1416	1.722	0.05	1	6.74	Yes	v9301901.chw
2	0.2866	3.425	0.1	1	6.74	Yes	v9301917.chw
3	0.6179	7.345	0.2	1	6.74	Yes	v9301934.chw
4	1.658	19.53	0.5	1	6.74	Yes	v9301950.chw
5	3.518	41.27	1	1	6.74	Yes	v9302006.chw
6	7.416	86.61	2	1	6.74	Yes	v9302022.chw
7	19.15	226.5	5	1	6.74	Yes	v9302038.chw
8	38.33	458.8	10	1	6.74	No	v9302054.chw
9	74.21	926.4	20	1	6.74	No	v9302111.chw

AS
10/03/11

CALIBRATION OF COMPONENT sulfate

Method: ICD0-I30.mtw ✓ ✓
Equation: Q = 0.0758014·A + 0.128926
RSD: 3.408 %
Correlation coefficient: 0.999791



K3 = 0 K2 = 0 K1 = 0.0758014 K0 = 0.128926
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.03861	0.6921 ✓	0.05	1	10.79	Yes	v9301901.chw
2	0.06635	1.193 ✓	0.1	1	10.79	Yes	v9301917.chw
3	0.1288	2.236 ✓	0.2	1	10.79	Yes	v9301934.chw
4	0.3105	5.366 ✓	0.5	1	10.79	Yes	v9301950.chw
5	0.6333	11.15 ✓	1	1	10.79	Yes	v9302006.chw
6	1.361	23.08 ✓	2	1	10.79	Yes	v9302022.chw
7	3.625	61.64 ✓	5	1	10.79	Yes	v9302038.chw
8	7.471	127.8 ✓	10	1	10.79	Yes	v9302054.chw
9	15.34	264 ✓	20	1	10.79	Yes	v9302111.chw

RA
10/03/11

SECOND SOURCE VERIFICATION

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	bromide	nitrite	sulfate	fluoride	chloride	nitrate	phosphate	RawNetID	DF
AI39-12	ICV	BISFCNP	94.1%	98.6%	99.9%	100.1%	97.7%	98.6%	92.5%	v9302127	1
AI39-13	ICB	BISFCNP	0	0	0	0	0	0	0	v9302143	1

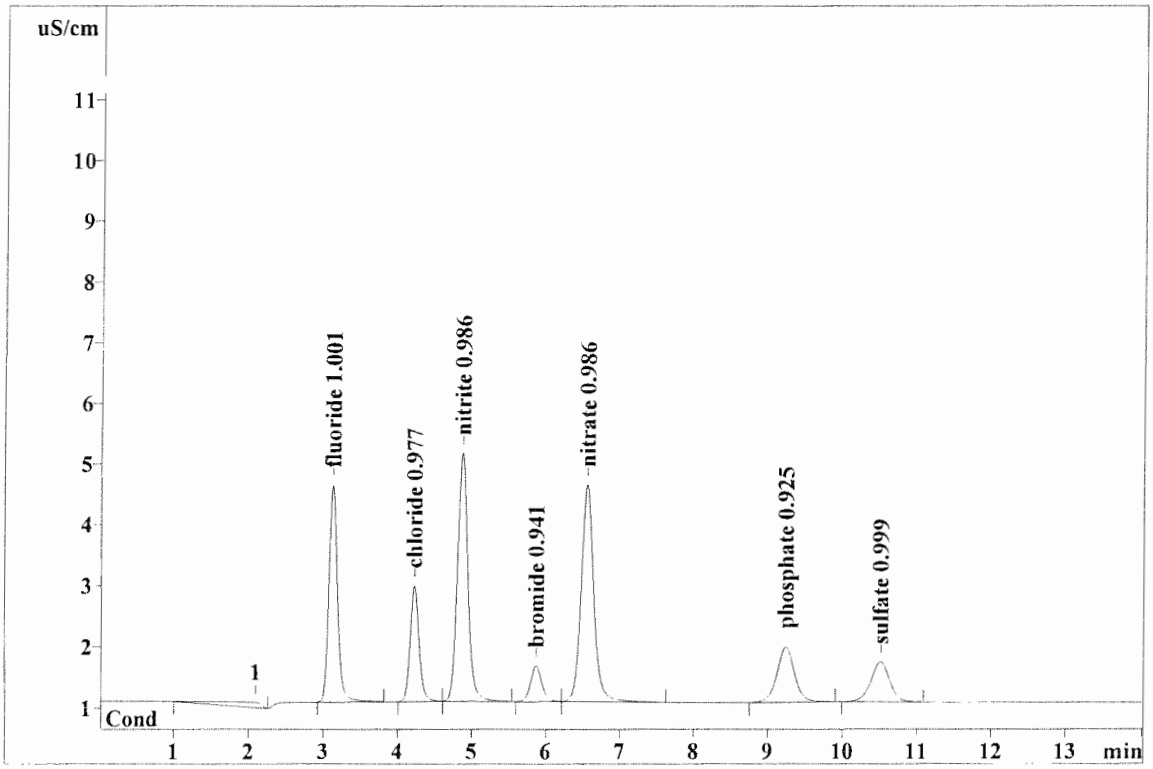
AS 10/03/11

Report date: 10/3/2011 10:50:13 AM
Printed by: Jadelyn Chun

Ident: AI39-12 ICV
Analysis from: 9/30/2011 9:27:15 PM
File: v9302127.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69493

SAMPLE:
:
Vial number: 12
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.08	0.09	3.575	0.000	
2	3.12	3.55	28.790	1.001	fluoride
3	4.23	1.89	15.958	0.977	chloride
4	4.87	4.07	39.941	0.986	nitrite
5	5.87	0.58	6.302	0.941	bromide
6	6.55	3.55	42.546	0.986	nitrate
7	9.24	0.91	15.033	0.925	phosphate
8	10.51	0.65	11.474	0.999	sulfate
8	14.00	15.29	163.619	6.815	

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16/03/11

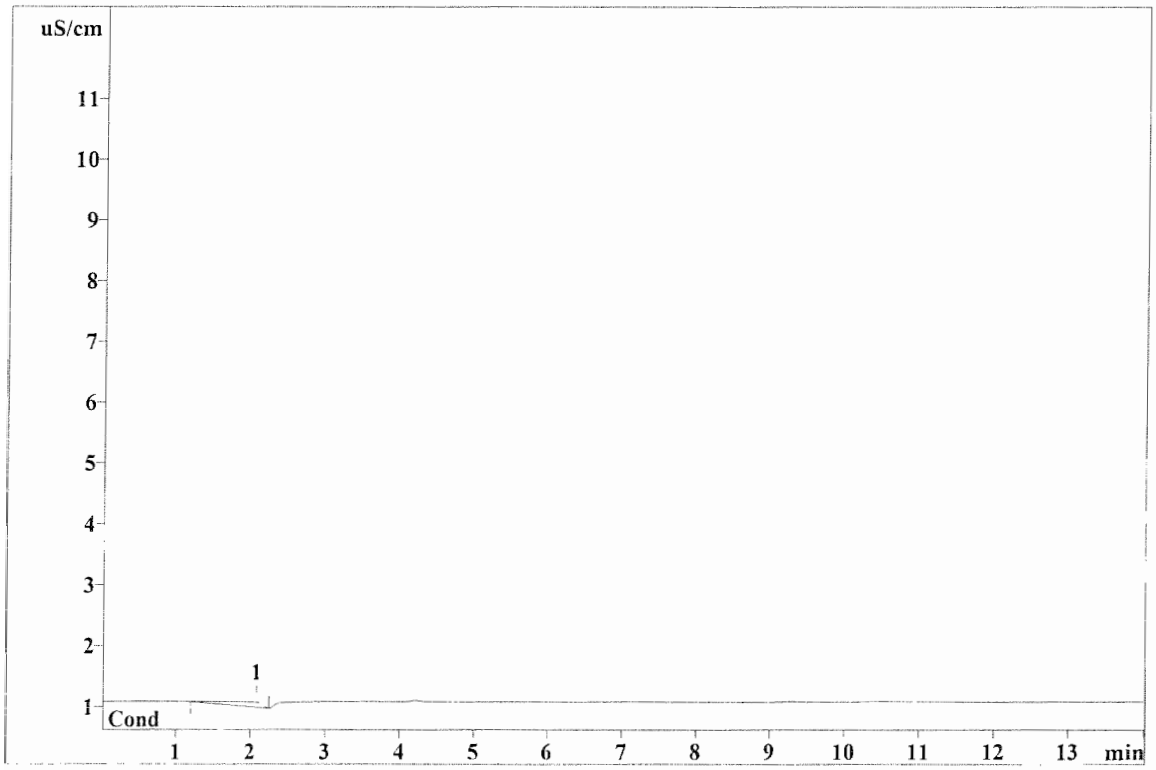
8040

Report date: 10/3/2011 10:50:20 AM
Printed by: Jadelyn Chun

Ident: AI39-13 ICB
Analysis from: 9/30/2011 9:43:24 PM
File: v9302143.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69494

SAMPLE:
:
Vial number: 13
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.08	0.08	2.935	0.000	

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AJ
10/03/11

8041

DAILY CALIBRATIONS

IC Result Check FormVersion : I30/AI39

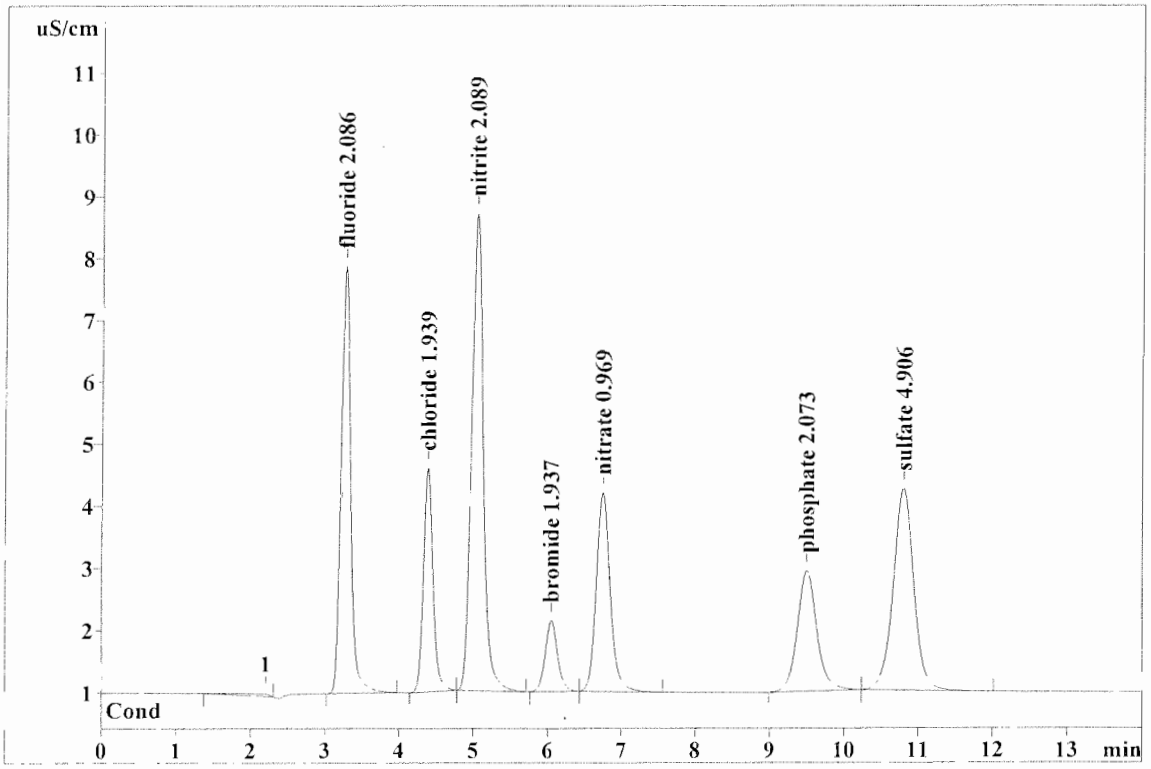
LFID	LSID	Selection	bromide	chloride	fluoride	sulfate	nitrite	nitrate	phosphate	RawNetID	DF
AK21-01	CCV423	BCFSINP	96.1%	96.4%	103.5%	96.6%	103.3%	95.9%	100.2%	vb141314	1
AK21-02	CCB423	BCFSINP	0	0	0	0	0	0	0	vb141330	1
AK21-13	CCV425	BCFSINP	98.4%	98%	104.9%	98.5%	104.5%	97.3%	107.4%	vb141628	1
AK21-14	CCB425	BCFSINP	0	0	0	0	0	0	0	vb141644	1
AK21-25	CCV427	BCFSINP	96.7%	96.9%	103.9%	97%	104.1%	96.5%	104.4%	vb141942	1
AK21-26	CCB427	BCFSINP	0	0	0	0	0	0	0	vb141958	1
AK21-33	CCV429	BCFSINP	97%	97.2%	104.5%	97.9%	104.4%	96.8%	105.2%	vb142151	1
AK21-34	CCB429	BCFSINP	0	0	0	0	0	0	0	vb142207	1
AK21-45	CCV431	BCFSINP	96.3%	96.6%	103.9%	97.6%	104%	96.7%	104.4%	vb150105	1
AK21-46	CCB431	BCFSINP	0	0	0	0	0	0	0	vb150121	1
AK21-57	CCV433	BCFSINP	96.6%	96.6%	104.2%	97.5%	104.2%	96.8%	103%	vb150419	1
AK21-58	CCB433	BCFSINP	0	0	0	0	0	0	0	vb150435	1
AK21-66	CCV435	BCFSINP	96.8%	96.9%	104.3%	98.1%	104.5%	96.9%	103.7%	vb150644	1
AK21-67	CCB435	BCFSINP	0	0	0	0	0	0	0	vb150701	1
AK21-78	CCV437	BCFSINP	98.3%	97.9%	105.4%	98.6%	104.9%	97.6%	109.2%	vb150958	1
AK21-79	CCB437	BCFSINP	0	0	0	0	0	0	0	vb151014	1
AK21-90	CCV439	BCFSINP	96.7%	97.1%	103.9%	97.4%	103.9%	96.4%	110%	vb151312	1
AK21-91	CCB439	BCFSINP	0	0	0	0	0	0	0	vb151328	1
AK21-102	CCV441	BCFSINP	97.9%	97.2%	104.5%	98%	104.4%	97.4%	115.6%*	vb151626	1
AK21-103	CCB441	BCFSINP	0	0	0	0	0	0	0	vb151642	1
AK21-114	CCV443	BCFSINP	97.6%	97.3%	104.6%	97.1%	104.2%	97.2%	113.9%*	vb151940	1
AK21-115	CCB443	BCFSINP	0	0	0	0	0	0	0	vb151956	1
AK21-126	CCV445	BCFSINP	96.9%	96.8%	104.6%	97.2%	103.9%	96.9%	113.3%*	vb152254	1
AK21-127	CCB445	BCFSINP	0	0	0	0	0	0	0	vb152310	1
AK21-138	CCV447	BCFSINP	97.4%	97.3%	104.9%	97.8%	104.1%	97.3%	116.1%*	vb160208	1
AK21-139	CCB447	BCFSINP	0	0	0	0	0	0	0	vb160224	1
AK21-150	CCV449	BCFSINP	97.8%	97.3%	105%	98.1%	104.5%	97.6%	114.2%*	vb160522	1
AK21-151	CCB449	BCFSINP	0	0	0	0	0	0	0	vb160538	1
AK21-158	CCV451	BCFSINP	98.6%	98.1%	105.4%	98.5%	105.1%	98.1%	111.1%*	vb160731	1
AK21-159	CCB451	BCFSINP	0	0	0	0	0	0	0	vb160747	1
AK21-169	CCV453	BCFSINP	98.3%	97.7%	105.1%	98.5%	104.8%	97.8%	114.2%*	vb161029	1
AK21-170	CCB453	BCFSINP	0	0	0	0	0	0	0	vb161045	1

Report date: 11/15/2011 6:58:50 AM
Printed by: Jadelyn Chun

Ident: AK21-66 CCV435
Analysis from: 11/15/2011 6:44:53 AM
File: VB150644.CHW Last save: 11/15/2011 6:58:50 AM

Method: ICD0-I30.mtw Last save: 11/14/2011 4:37:01 PM
Run operator: Jadelyn Chun
Analysis number: 71523

SAMPLE:
:
Vial number: 66
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.19	0.04	1.272	0.000	
2	3.27	6.88	61.265	2.086	fluoride
3	4.39	3.59	33.212	1.939	chloride
4	5.04	7.69	84.702	2.089	nitrite
5	6.05	1.14	13.370	1.937	bromide
6	6.74	3.20	41.768	0.969	nitrate
7	9.50	1.94	36.057	2.073	phosphate
8	10.80	3.25	63.021	4.906	sulfate
8	14.00	27.73	334.668	15.999	

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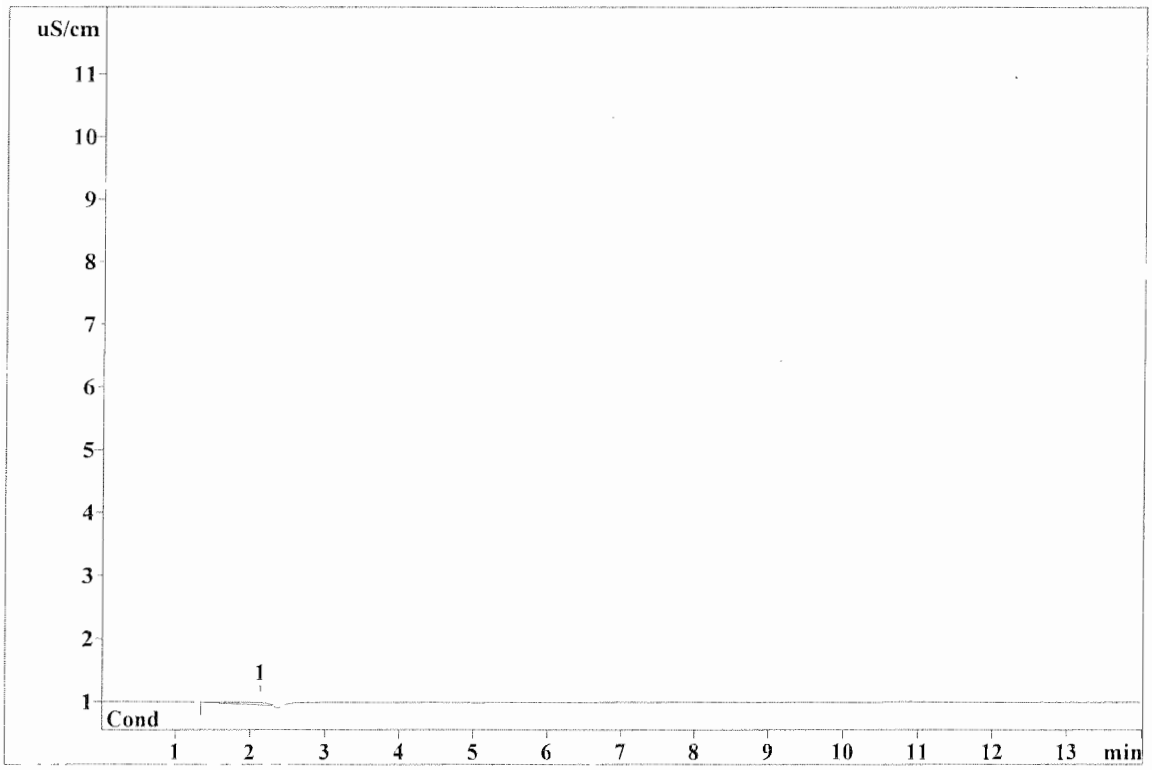
Report date: 11/15/2011 11:32:58 AM
Printed by: Jadelyn Chun

Ident: AK21-67 CCB435
Analysis from: 11/15/2011 7:01:02 AM
File: vb150701.chw Last save: 11/15/2011 7:14:59 AM

Method: ICD0-I30.mtw Last save: 11/14/2011 4:37:01 PM
Run operator: Jadelyn Chun
Analysis number: 71524

SAMPLE:
:
Vial number: 67
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

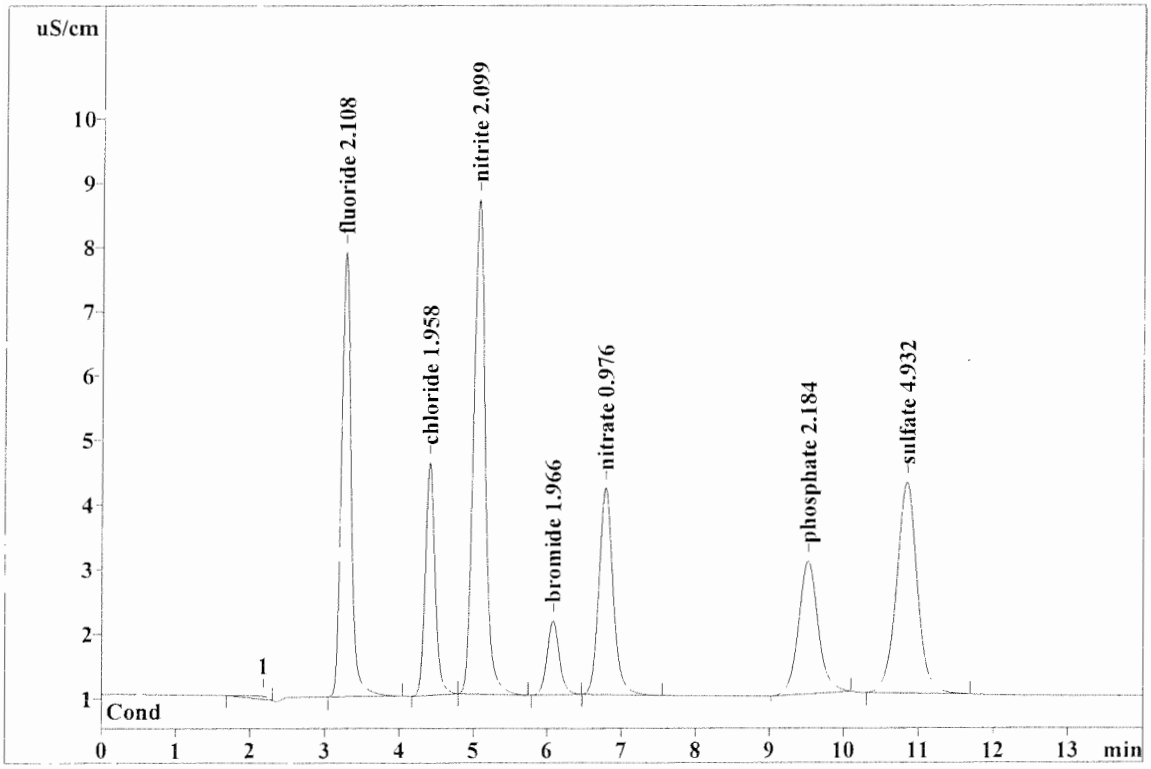
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.15	0.04	1.296	0.000	

This report has been created by IC Net
METROHM LTD

Report date: 11/15/2011 11:48:30 AM
Printed by: Jadelyn Chun

Ident: AK21-78 CCV437
Analysis from: 11/15/2011 9:58:47 AM
File: vb150958.chw Last save: 11/15/2011 10:12:44 AM
Modified!
Method: ICD0-I30.mtw Last save: 11/14/2011 4:37:01 PM
Run operator: Jadelyn Chun
Analysis number: 71535

SAMPLE:
:
Vial number: 78
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

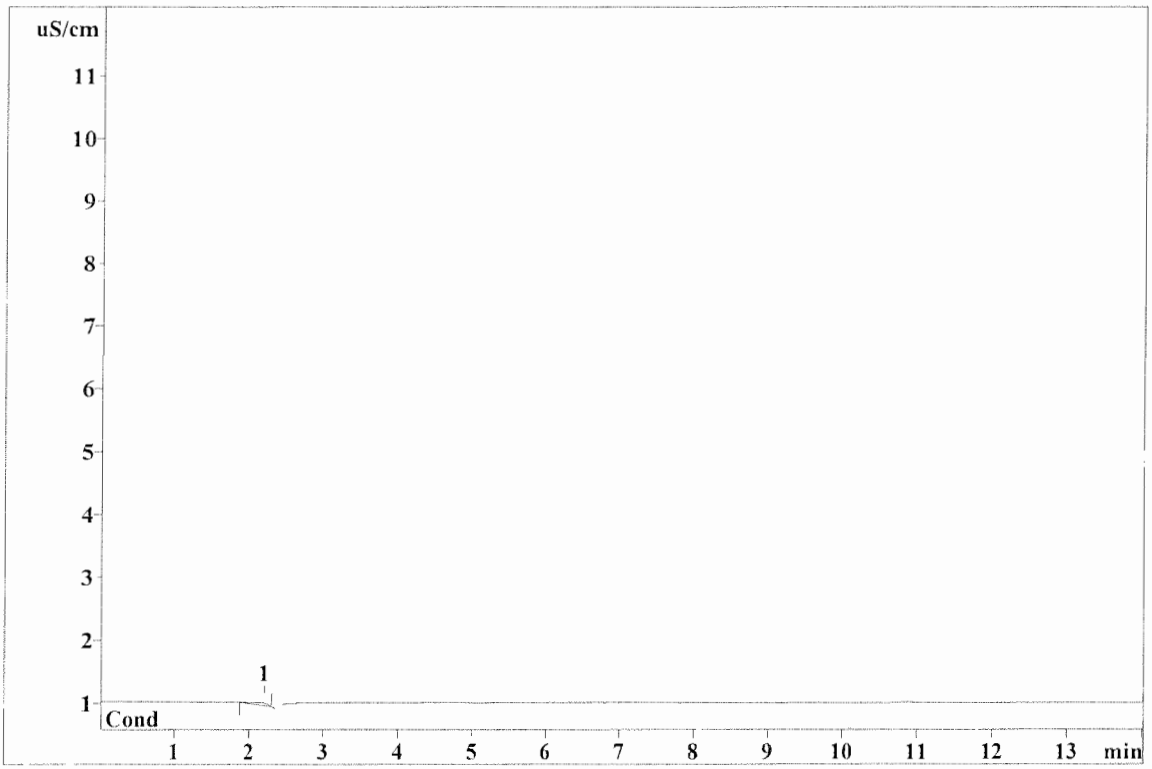
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.18	0.05	0.985	0.000	
2	3.27	6.90	61.936	2.108	fluoride
3	4.41	3.60	33.560	1.958	chloride
4	5.06	7.67	85.091	2.099	nitrite
5	6.08	1.15	13.576	1.966	bromide
6	6.78	3.19	42.059	0.976	nitrate
7	9.52	2.05	38.077	2.184	phosphate
8	10.84	3.26	63.358	4.932	sulfate
8	14.00	27.88	338.641	16.221	

This report has been created by IC Net
METROHM LTD

Report date: 11/15/2011 11:33:19 AM
Printed by: Jadelyn Chun

Ident: AK21-79 CCB437
Analysis from: 11/15/2011 10:14:57 AM
File: vb151014.chw Last save: 11/15/2011 10:28:54 AM
Modified!
Method: ICD0-I30.mtw Last save: 11/14/2011 4:37:01 PM
Run operator: Jadelyn Chun
Analysis number: 71536

SAMPLE:
:
Vial number: 79
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

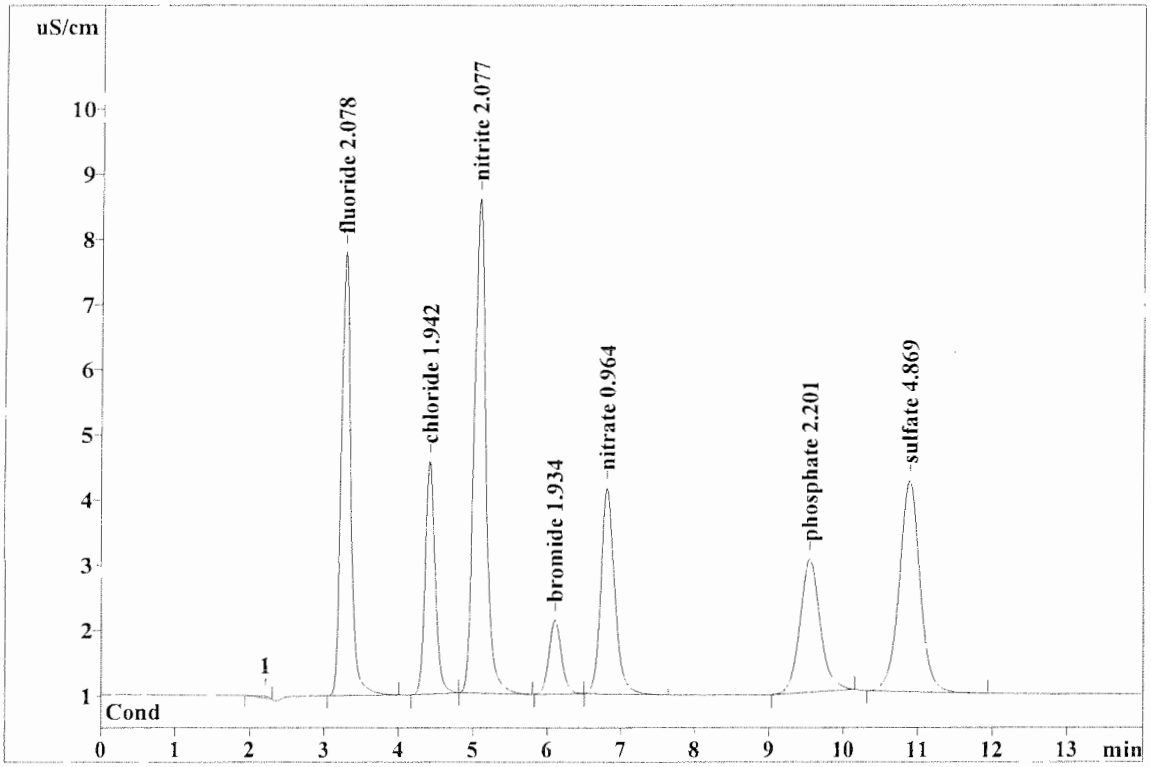
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.20	0.04	0.600	0.000	

This report has been created by IC Net
METROHM LTD

Report date: 11/15/2011 2:10:45 PM
Printed by: Jadelyn Chun

Ident: AK21-90 CCV439
Analysis from: 11/15/2011 1:12:46 PM
File: vb151312.chw Last save: 11/15/2011 2:09:34 PM
Modified!
Method: ICD0-I30.mtw Last save: 11/15/2011 11:48:35 AM
Run operator: Jadelyn Chun
Analysis number: 71547

SAMPLE:
:
Vial number: 90
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.21	0.03	0.417	0.000	
2	3.28	6.80	61.025	2.078	fluoride
3	4.42	3.56	33.267	1.942	chloride
4	5.08	7.58	84.225	2.077	nitrite
5	6.10	1.12	13.349	1.934	bromide
6	6.81	3.14	41.511	0.964	nitrate
7	9.54	2.03	38.388	2.201	phosphate
8	10.89	3.22	62.533	4.869	sulfate
8	14.00	27.50	334.715	16.064	

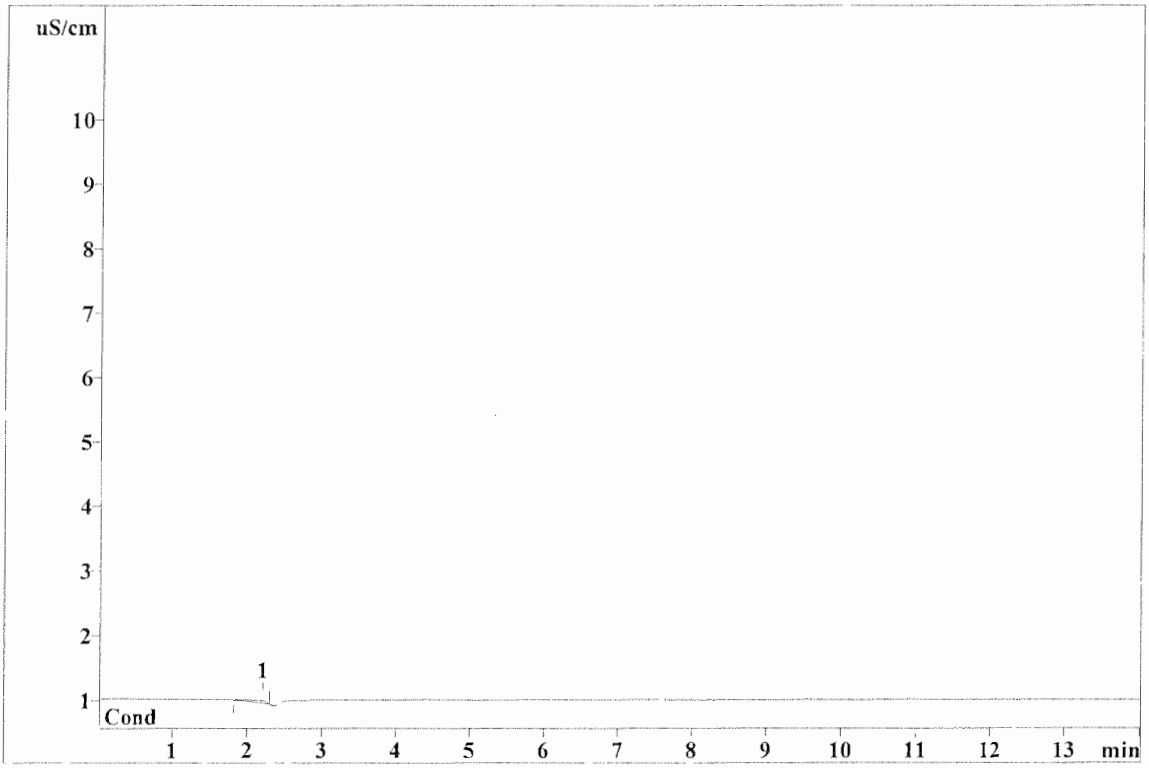
This report has been created by IC Net
METROHM LTD

Report date: 11/15/2011 2:23:35 PM
Printed by: Jadelyn Chun

Ident: AK21-91 CCB439
Analysis from: 11/15/2011 1:28:56 PM
File: vb151328.chw Last save: 11/15/2011 1:42:53 PM

Method: ICD0-I30.mtw Last save: 11/15/2011 11:48:35 AM
Run operator: Jadelyn Chun
Analysis number: 71548

SAMPLE:
:
Vial number: 91
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.20	0.04	0.645	0.000	

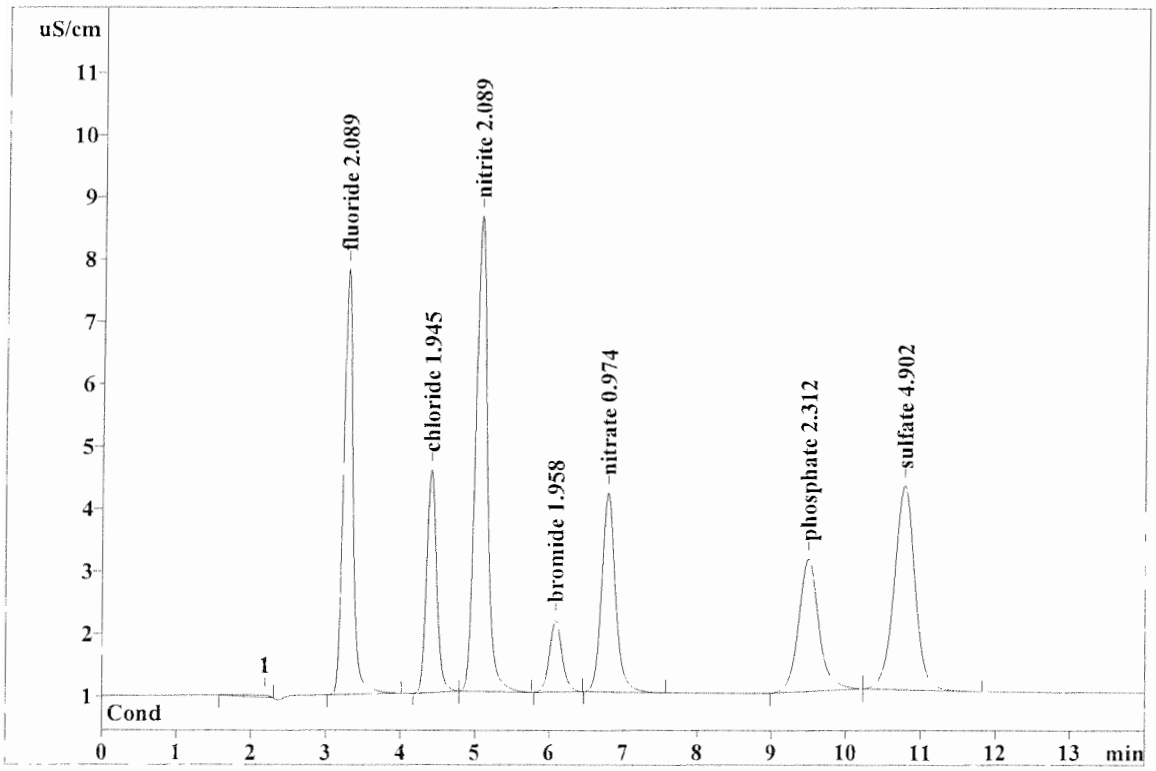
This report has been created by IC Net
METROHM LTD

Report date: 11/15/2011 4:40:37 PM
Printed by: Jadelyn Chun

Ident: AK21-102 CCV441
Analysis from: 11/15/2011 4:26:40 PM
File: VB151626.CHW Last save: 11/15/2011 4:40:37 PM

Method: ICD0-I30.mtw Last save: 11/15/2011 2:09:30 PM
Run operator: Jadelyn Chun
Analysis number: 71559

SAMPLE:
:
Vial number: 2
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.18	0.03	0.877	0.000	
2	3.28	6.82	61.370	2.089	fluoride
3	4.41	3.57	33.317	1.945	chloride
4	5.06	7.62	84.677	2.089	nitrite
5	6.09	1.14	13.518	1.958	bromide
6	6.79	3.18	41.992	0.974	nitrate
7	9.49	2.12	40.437	2.312	phosphate
8	10.78	3.26	62.968	4.902	sulfate
8	14.00	27.74	339.155	16.268	

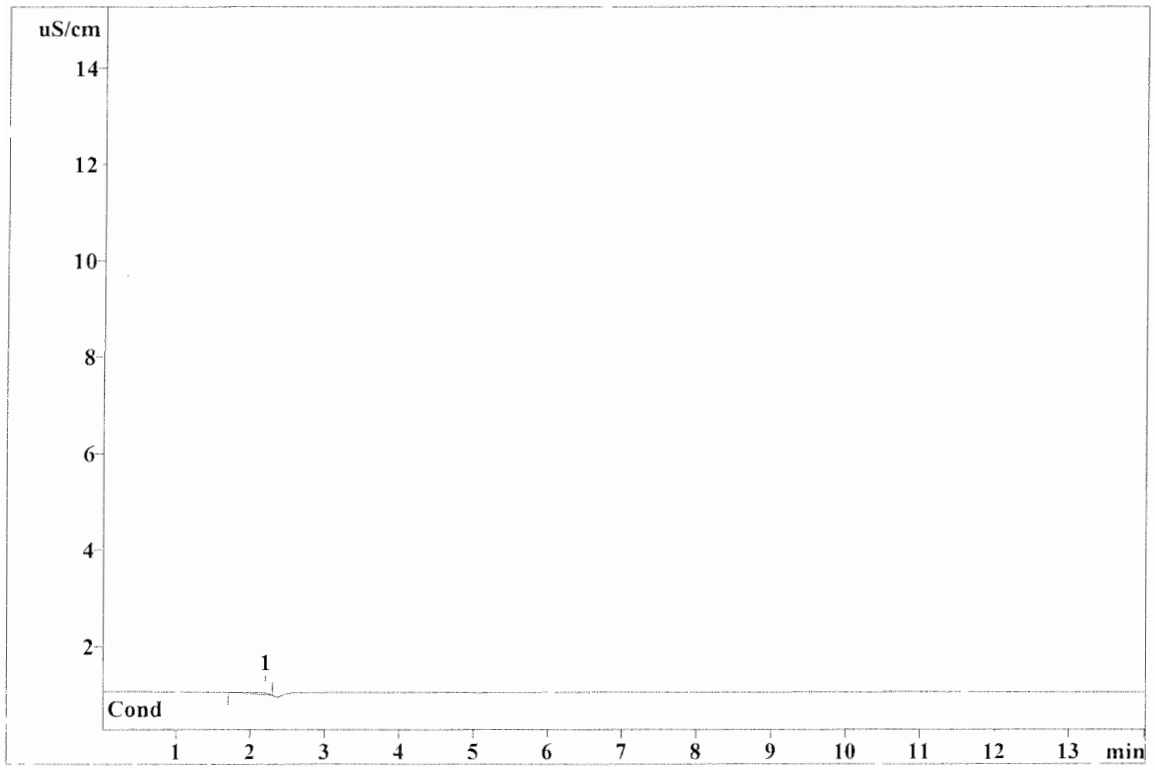
This report has been created by IC Net
METROHM LTD

Report date: 11/15/2011 5:07:19 PM
Printed by: Jadelyn Chun

Ident: AK21-103 CCB441
Analysis from: 11/15/2011 4:42:50 PM
File: vb151642.chw Last save: 11/15/2011 4:56:47 PM

Method: ICD0-I30.mtw Last save: 11/15/2011 2:09:30 PM
Run operator: Jadelyn Chun
Analysis number: 71560

SAMPLE:
:
Vial number: 3
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.19	0.04	0.796	0.000	

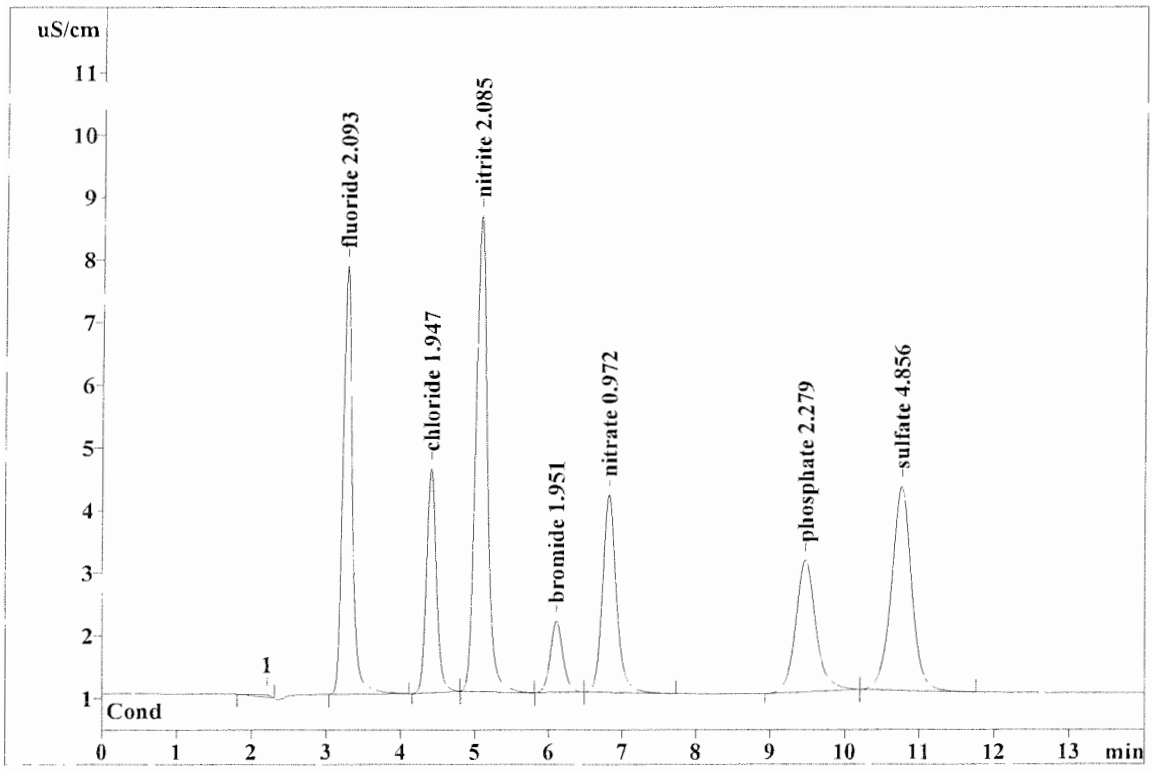
This report has been created by IC Net
METROHM LTD

Report date: 11/15/2011 7:54:35 PM
Printed by: Jadelyn Chun

Ident: AK21-114 CCV443
Analysis from: 11/15/2011 7:40:38 PM
File: VB151940.CHW Last save: 11/15/2011 7:54:35 PM

Method: ICD0-I30.mtw Last save: 11/15/2011 2:09:30 PM
Run operator: Jadelyn Chun
Analysis number: 71571

SAMPLE:
:
Vial number: 14
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.20	0.04	0.618	0.000	
2	3.27	6.83	61.473	2.093	fluoride
3	4.41	3.57	33.356	1.947	chloride
4	5.07	7.61	84.524	2.085	nitrite
5	6.10	1.14	13.472	1.951	bromide
6	6.81	3.16	41.890	0.972	nitrate
7	9.47	2.10	39.817	2.279	phosphate
8	10.76	3.25	62.361	4.856	sulfate
8	14.00	27.69	337.512	16.182	

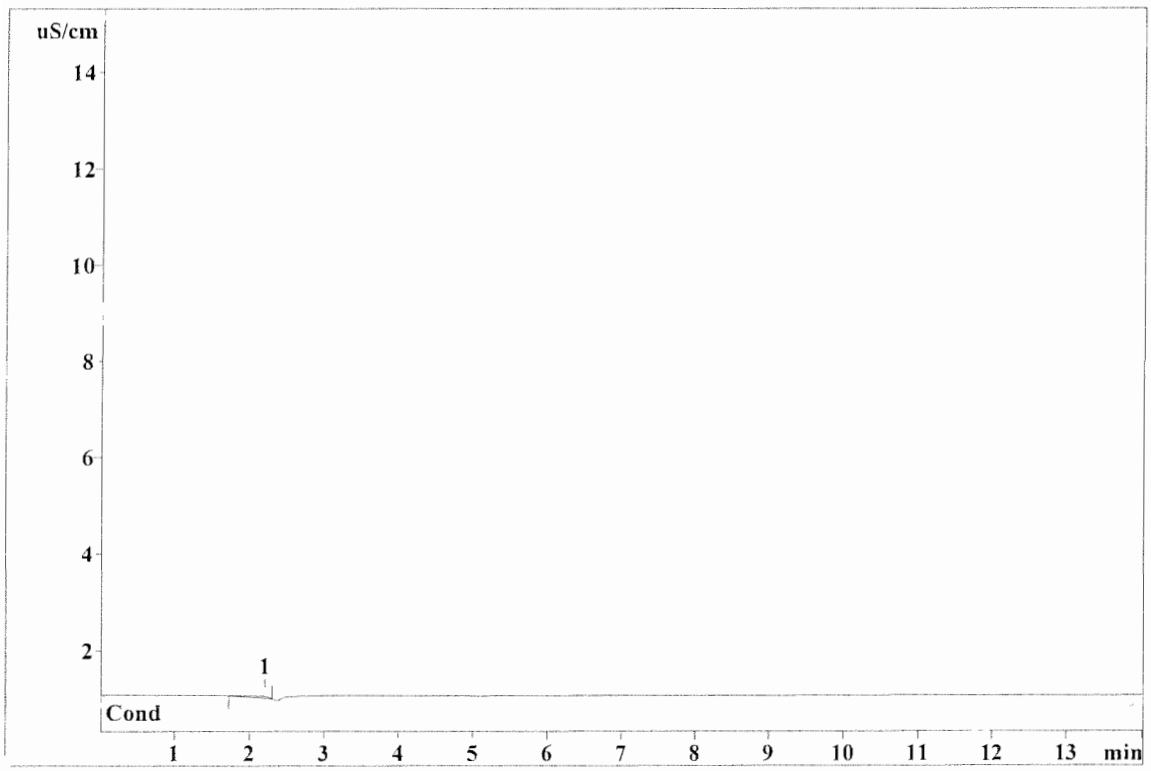
This report has been created by IC Net
METROHM LTD

Report date: 11/16/2011 10:13:47 AM
Printed by: Jadelyn Chun

Ident: AK21-115 CCB443
Analysis from: 11/15/2011 7:56:48 PM
File: vb151956.chw Last save: 11/15/2011 8:10:45 PM

Method: ICD0-I30.mtw Last save: 11/15/2011 2:09:30 PM
Run operator: Jadelyn Chun
Analysis number: 71572

SAMPLE:
:
Vial number: 15
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.20	0.04	0.821	0.000	

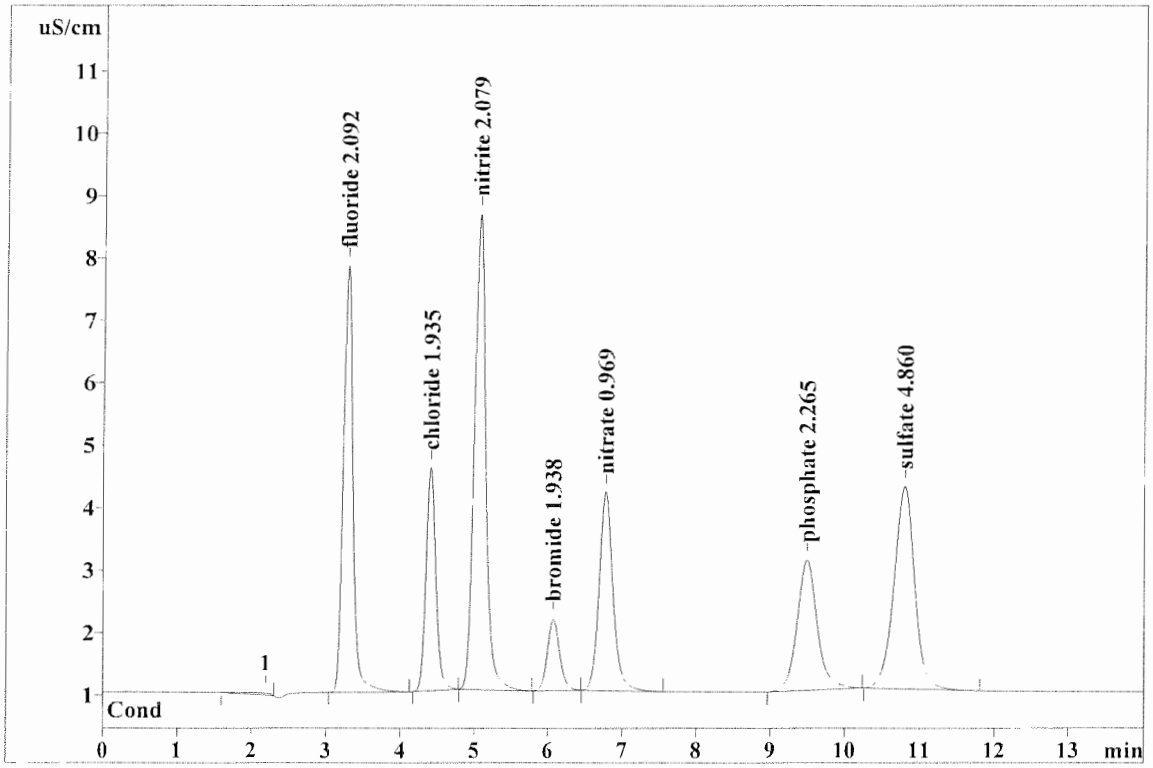
This report has been created by IC Net
METROHM LTD

Report date: 11/15/2011 11:08:32 PM
Printed by: Jadelyn Chun

Ident: AK21-126 CCV445
Analysis from: 11/15/2011 10:54:35 PM
File: VB152254.CHW Last save: 11/15/2011 11:08:32 PM

Method: ICD0-I30.mtw Last save: 11/15/2011 2:09:30 PM
Run operator: Jadelyn Chun
Analysis number: 71583

SAMPLE:
:
Vial number: 26
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.19	0.03	0.862	0.000	
2	3.28	6.83	61.459	2.092	fluoride
3	4.41	3.57	33.152	1.935	chloride
4	5.06	7.62	84.275	2.079	nitrite
5	6.07	1.14	13.382	1.938	bromide
6	6.77	3.18	41.763	0.969	nitrate
7	9.49	2.08	39.571	2.265	phosphate
8	10.79	3.24	62.410	4.860	sulfate
8	14.00	27.70	336.875	16.139	

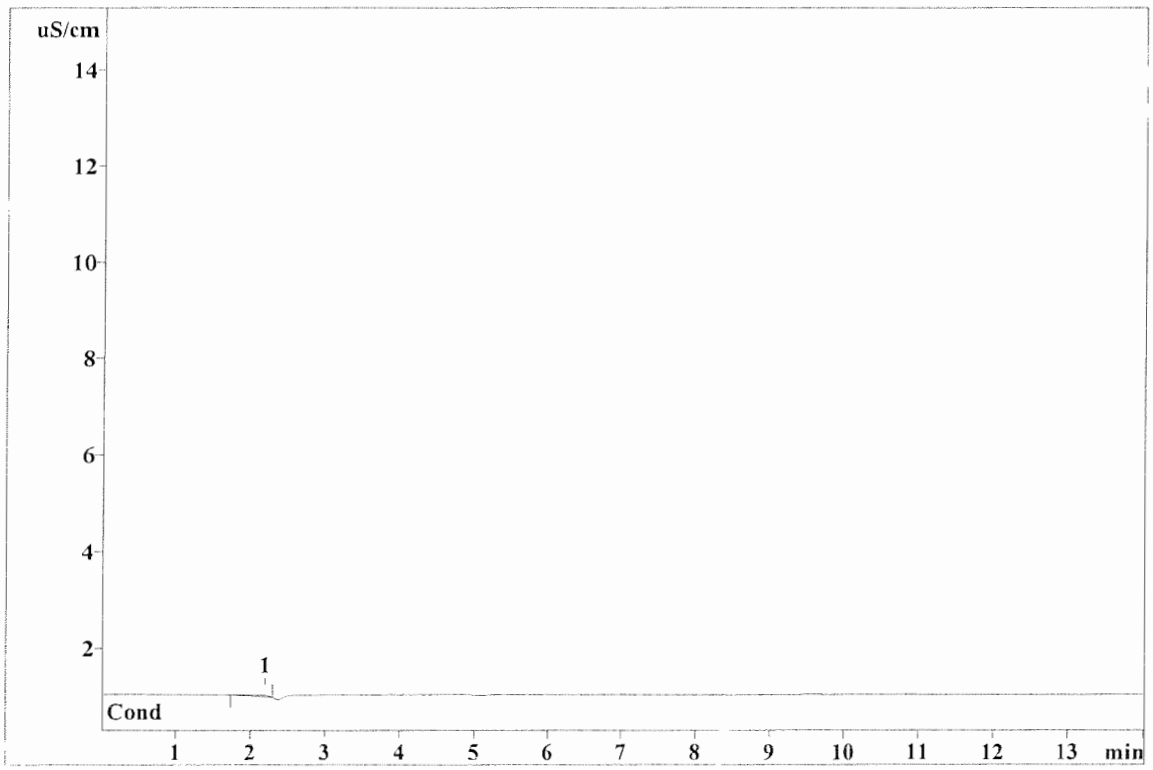
This report has been created by IC Net
METROHM LTD

Report date: 11/16/2011 10:13:52 AM
Printed by: Jadelyn Chun

Ident: AK21-127 CCB445
Analysis from: 11/15/2011 11:10:44 PM
File: vb152310.chw Last save: 11/15/2011 11:24:41 PM

Method: ICD0-I30.mtw Last save: 11/15/2011 2:09:30 PM
Run operator: Jadelyn Chun
Analysis number: 71584

SAMPLE:
:
Vial number: 27
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.20	0.03	0.691	0.000	

This report has been created by IC Net
METROHM LTD

ANALYTICAL LOGS

8256

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Concentrations of:

S_1 — 0.05 ppm
S_2 — 0.1
S_3 — 0.2
S_4 — 0.5
S_5 — 1.0
S_6 — 2.0
S_7 — 5.0
S_8 — 10.0
S_9 — 20.0

Linearity (ppm)

F^- — 5
Cl^- — 20
NO_2N — 10
Br^- — 5
NO_3N — 5
PO_4P — 5
SO_4^{2-} — 20

Column: Metrosep A Supp 5-100

Flow Rate: 0.70 ml/min

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-220 (1000 mM H_2SO_4) 100 ml - 1 L

Book #:	AD0-031
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AI39
Method File:	ICD0-I30.mtw
Analytical Batch:	NA

SOP #	Rev. #
☑ EMAX-300.0	6
☐ EMAX-4110B	0
☑ EMAX-9056	3
☐ EMAX-	

STANDARDS ID	
ICAL	SI1B-17-57-02
ICV	SI1B-17-57-03
CCV	NA
LCS	
MS	

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 9/30/11

F1

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
v9301829.chw	ICD0-130.mtw	AI39-01 IB	1	1.0	1.0	1.0	100.0	0		
v9301845.chw	ICD0-130.mtw	AI39-02 S0	2	1.0	1.0	1.0	100.0	0		
v9301901.chw	ICD0-130.mtw	AI39-03 S1	3	1.0	1.0	1.0	100.0	1		
v9301917.chw	ICD0-130.mtw	AI39-04 S2	4	1.0	1.0	1.0	100.0	2		
v9301934.chw	ICD0-130.mtw	AI39-05 S3	5	1.0	1.0	1.0	100.0	3		
v9301950.chw	ICD0-130.mtw	AI39-06 S4	6	1.0	1.0	1.0	100.0	4		
v9302006.chw	ICD0-130.mtw	AI39-07 S5	7	1.0	1.0	1.0	100.0	5		
v9302022.chw	ICD0-130.mtw	AI39-08 S6	8	1.0	1.0	1.0	100.0	6		
v9302038.chw	ICD0-130.mtw	AI39-09 S7	9	1.0	1.0	1.0	100.0	7		
v9302054.chw	ICD0-130.mtw	AI39-10 S8	10	1.0	1.0	1.0	100.0	8		
v9302111.chw	ICD0-130.mtw	AI39-11 S9	11	1.0	1.0	1.0	100.0	9	FINAL	
v9302127.chw	ICD0-130.mtw	AI39-12 ICV	12	1.0	1.0	1.0	100.0	0		
v9302143.chw	ICD0-130.mtw	AI39-13 ICB	13	1.0	1.0	1.0	100.0	0		

JC 10/3/11

A 10/03/11

8558

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AD0-032

Instrument No.: D0

Pipette ID's: 039380124

SW8A-02-12

SW8A-02-13

Balance ID#: 40706360

Analytical Sequence: AK21

Method File: ICDO - I30.mtw

Analytical Batch: ICK045W; ICK047W
ICK049W; ICK051W
ICK053W; ICK055W

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SIIB-17-88-02 / SIIB-17-89-01
LCS	SIIB-17-88-03 / SIIB-17-89-02
MS	Refer to LCS Parent ID

Column: Metrosep A Supp 5-100 F.Air 0.45µm: 21787469

Flow Rate: 0.70 ml/min 0.2µm: 21772726

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 11/14/11 - 11/15/11

8059

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb141331.chx	ICD9-130.mtx	AK21-92	CCV425	1	1.0	1.0	1.0	100.0	0	
vb141332.chx	ICD9-130.mtx	AK21-92	CCB425	2	1.0	1.0	1.0	100.0	0	
vb141334.chx	ICD9-130.mtx	AK21-93	ICK945WB	3	1.0	1.0	1.0	100.0	0	
vb141402.chx	ICD9-130.mtx	AK21-94	ICK945WL	4	1.0	1.0	1.0	100.0	0	
vb141418.chx	ICD9-130.mtx	AK21-95	ICK945WC	5	1.0	1.0	1.0	100.0	0	
vb141435.chx	ICD9-130.mtx	AK21-96	K084-93 DF=50	6	1.0	50.0	1.0	100.0	0	
vb141451.chx	ICD9-130.mtx	AK21-97	K194-92 DF=1000	7	1.0	1000.0	1.0	100.0	0	
vb141502.chx	ICD9-130.mtx	AK21-98	K084-93R DF=5	8	1.0	5.0	1.0	100.0	0	
vb141523.chx	ICD9-130.mtx	AK21-99	K084-93R DF=50	9	1.0	50.0	1.0	100.0	0	
vb141539.chx	ICD9-130.mtx	AK21-10	K164-96 DF=2000	10	1.0	2000.0	1.0	100.0	0	
vb141555.chx	ICD9-130.mtx	AK21-11	K115-91	11	1.0	1.0	1.0	100.0	0	
vb141612.chx	ICD9-130.mtx	AK21-12	K115-92	12	1.0	1.0	1.0	100.0	0	
vb141628.chx	ICD9-130.mtx	AK21-13	CCV425	13	1.0	1.0	1.0	100.0	0	
vb141644.chx	ICD9-130.mtx	AK21-14	CCB425	14	1.0	1.0	1.0	100.0	0	
vb141701.chx	ICD9-130.mtx	AK21-15	K115-93	15	1.0	1.0	1.0	100.0	0	
vb141716.chx	ICD9-130.mtx	AK21-16	K164-10 DF=1000	16	1.0	1000.0	1.0	100.0	0	
vb141732.chx	ICD9-130.mtx	AK21-17	K194-12	17	1.0	1.0	1.0	100.0	0	
vb141749.chx	ICD9-130.mtx	AK21-18	K194-12 DF=5	18	1.0	5.0	1.0	100.0	0	
vb141805.chx	ICD9-130.mtx	AK21-19	K164-13 DF=1000	19	1.0	1000.0	1.0	100.0	0	
vb141821.chx	ICD9-130.mtx	AK21-20	K194-14 DF=1000	20	1.0	1000.0	1.0	100.0	0	
vb141837.chx	ICD9-130.mtx	AK21-21	K104-14O DF=1000	21	1.0	1000.0	1.0	100.0	0	
vb141853.chx	ICD9-130.mtx	AK21-22	K104-14A1 DF=1000	22	1.0	1000.0	1.0	100.0	0	
vb141909.chx	ICD9-130.mtx	AK21-23	K104-14S DF=1000	23	1.0	1000.0	1.0	100.0	0	
vb141926.chx	ICD9-130.mtx	AK21-24	K164-03 DF=10	24	1.0	10.0	1.0	100.0	0	
vb141942.chx	ICD9-130.mtx	AK21-25	CCV427	25	1.0	1.0	1.0	100.0	0	
vb141958.chx	ICD9-130.mtx	AK21-26	CCB427	26	1.0	1.0	1.0	100.0	0	
vb142014.chx	ICD9-130.mtx	AK21-27	K194-94 DF=2	27	1.0	2.0	1.0	100.0	0	
vb142029.chx	ICD9-130.mtx	AK21-28	K164-97 DF=2000	28	1.0	2000.0	1.0	100.0	0	
vb142046.chx	ICD9-130.mtx	AK21-29	K104-98 DF=2000	29	1.0	2000.0	1.0	100.0	0	
vb142102.chx	ICD9-130.mtx	AK21-30	K104-99 DF=500	30	1.0	500.0	1.0	100.0	0	
vb142117.chx	ICD9-130.mtx	AK21-31	K115-01 DF=100	31	1.0	100.0	1.0	100.0	0	
vb142135.chx	ICD9-130.mtx	AK21-32	K115-02 DF=100	32	1.0	100.0	1.0	100.0	0	
vb142151.chx	ICD9-130.mtx	AK21-33	CCV429	33	1.0	1.0	1.0	100.0	0	
vb142207.chx	ICD9-130.mtx	AK21-34	CCB429	34	1.0	1.0	1.0	100.0	0	
vb142223.chx	ICD9-130.mtx	AK21-35	ICK947WB	35	1.0	1.0	1.0	100.0	0	
vb142239.chx	ICD9-130.mtx	AK21-36	ICK947WL	36	1.0	1.0	1.0	100.0	0	
vb142256.chx	ICD9-130.mtx	AK21-37	ICK947WC	37	1.0	1.0	1.0	100.0	0	
vb142312.chx	ICD9-130.mtx	AK21-38	K077-02 DF=2000	38	1.0	2000.0	1.0	100.0	0	
vb142328.chx	ICD9-130.mtx	AK21-39	K077-03 DF=10	39	1.0	10.0	1.0	100.0	0	
vb142344.chx	ICD9-130.mtx	AK21-40	K077-04 DF=50	40	1.0	50.0	1.0	100.0	0	
vb150000.chx	ICD9-130.mtx	AK21-41	K077-05 DF=2000	41	1.0	1000.0	1.0	100.0	0	
vb150016.chx	ICD9-130.mtx	AK21-42	K077-06 DF=1000	42	1.0	1000.0	1.0	100.0	0	
vb150033.chx	ICD9-130.mtx	AK21-43	K077-07 DF=5	43	1.0	5.0	1.0	100.0	0	
vb150049.chx	ICD9-130.mtx	AK21-44	RINSE	44	1.0	1.0	1.0	100.0	0	
vb150105.chx	ICD9-130.mtx	AK21-45	CCV431	45	1.0	1.0	1.0	100.0	0	
vb150121.chx	ICD9-130.mtx	AK21-46	CCB431	46	1.0	1.0	1.0	100.0	0	
vb150137.chx	ICD9-130.mtx	AK21-47	K077-08 DF=10	47	1.0	10.0	1.0	100.0	0	
vb150153.chx	ICD9-130.mtx	AK21-48	K077-08D DF=10	48	1.0	10.0	1.0	100.0	0	
vb150210.chx	ICD9-130.mtx	AK21-49	K077-08M DF=10	49	1.0	10.0	1.0	100.0	0	
vb150226.chx	ICD9-130.mtx	AK21-50	K077-08S DF=10	50	1.0	10.0	1.0	100.0	0	
vb150242.chx	ICD9-130.mtx	AK21-51	K077-10 DF=50	51	1.0	50.0	1.0	100.0	0	
vb150258.chx	ICD9-130.mtx	AK21-52	K077-11 DF=50	52	1.0	50.0	1.0	100.0	0	
vb150314.chx	ICD9-130.mtx	AK21-53	K077-12 DF=1000	53	1.0	1000.0	1.0	100.0	0	
vb150330.chx	ICD9-130.mtx	AK21-54	K077-13 DF=2000	54	1.0	2000.0	1.0	100.0	0	
vb150347.chx	ICD9-130.mtx	AK21-55	K077-14 DF=2000	55	1.0	2000.0	1.0	100.0	0	
vb150403.chx	ICD9-130.mtx	AK21-56	K077-15 DF=2000	56	1.0	2000.0	1.0	100.0	0	
vb150419.chx	ICD9-130.mtx	AK21-57	CCV433	57	1.0	1.0	1.0	100.0	0	

FINAL

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vh125435.chw	ICD9-130.mtw	AK21-58 CCB435	58	1.0	1.0	1.0	100.0	0		
vh150421.chw	ICD9-130.mtw	AK21-59 K077-18 DF=20	59	1.0	20.0	1.0	100.0	0		
vh150507.chw	ICD9-130.mtw	AK21-60 K077-18 DF=10	60	1.0	10.0	1.0	100.0	0		
vh150521.chw	ICD9-130.mtw	AK21-61 K077-19 DF=10	61	1.0	10.0	1.0	100.0	0		
vh150535.chw	ICD9-130.mtw	AK21-62 K077-20 DF=2000	62	1.0	2000.0	1.0	100.0	0		
vh150555.chw	ICD9-130.mtw	AK21-63 K077-21 DF=2000	63	1.0	2000.0	1.0	100.0	0		
vh150612.chw	ICD9-130.mtw	AK21-64 K077-22 DF=1000	64	1.0	1000.0	1.0	100.0	0		
vh150628.chw	ICD9-130.mtw	AK21-65 K077-23 DF=5	65	1.0	5.0	1.0	100.0	0		
vh150644.chw	ICD9-130.mtw	AK21-66 CCB435	66	1.0	1.0	1.0	100.0	0		
vh150701.chw	ICD9-130.mtw	AK21-67 CCB435	67	1.0	1.0	1.0	100.0	0		
vh150717.chw	ICD9-130.mtw	AK21-68 ICK049WB	68	1.0	1.0	1.0	100.0	0		
vh150733.chw	ICD9-130.mtw	AK21-69 ICK049WL	69	1.0	1.0	1.0	100.0	0		
vh150749.chw	ICD9-130.mtw	AK21-70 ICK049WC	70	1.0	1.0	1.0	100.0	0		
vh150805.chw	ICD9-130.mtw	AK21-71 K119-01	71	1.0	1.0	1.0	100.0	0		
vh150821.chw	ICD9-130.mtw	AK21-72 K119-02	72	1.0	1.0	1.0	100.0	0		
vh150837.chw	ICD9-130.mtw	AK21-73 K119-03	73	1.0	1.0	1.0	100.0	0		
vh150854.chw	ICD9-130.mtw	AK21-74 K119-04	74	1.0	1.0	1.0	100.0	0		
vh150910.chw	ICD9-130.mtw	AK21-75 K119-05	75	1.0	1.0	1.0	100.0	0		
vh150926.chw	ICD9-130.mtw	AK21-76 K119-02 DF=2	76	1.0	2.0	1.0	100.0	0		
vh150942.chw	ICD9-130.mtw	AK21-77 K119-04 DF=2	77	1.0	2.0	1.0	100.0	0		
vh150958.chw	ICD9-130.mtw	AK21-78 CCV435	78	1.0	1.0	1.0	100.0	0		
vh151014.chw	ICD9-130.mtw	AK21-79 CCB435	79	1.0	1.0	1.0	100.0	0		
vh151031.chw	ICD9-130.mtw	AK21-80 K077-23	80	1.0	1.0	1.0	100.0	0		
vh151047.chw	ICD9-130.mtw	AK21-81 K104-04 DF=5	81	1.0	5.0	1.0	100.0	0		
vh151103.chw	ICD9-130.mtw	AK21-82 K077-23 DF=20	82	1.0	20.0	1.0	100.0	0		
vh151119.chw	ICD9-130.mtw	AK21-83 K122-03 DF=2	83	1.0	2.0	1.0	100.0	0		
vh151135.chw	ICD9-130.mtw	AK21-84 K122-04 DF=2	84	1.0	2.0	1.0	100.0	0		
vh151151.chw	ICD9-130.mtw	AK21-85 K122-03 DF=5	85	1.0	5.0	1.0	100.0	0		
vh151208.chw	ICD9-130.mtw	AK21-86 K122-04 DF=5	86	1.0	5.0	1.0	100.0	0		
vh151224.chw	ICD9-130.mtw	AK21-87 K123-01	87	1.0	1.0	1.0	100.0	0		
vh151240.chw	ICD9-130.mtw	AK21-88 K123-03	88	1.0	1.0	1.0	100.0	0		
vh151256.chw	ICD9-130.mtw	AK21-89 K123-04	89	1.0	1.0	1.0	100.0	0		
vh151312.chw	ICD9-130.mtw	AK21-90 CCV439	90	1.0	1.0	1.0	100.0	0		
vh151328.chw	ICD9-130.mtw	AK21-91 CCB439	91	1.0	1.0	1.0	100.0	0		
vh151345.chw	ICD9-130.mtw	AK21-92 K123-05	92	1.0	1.0	1.0	100.0	0		
vh151401.chw	ICD9-130.mtw	AK21-93 K108-01	93	1.0	1.0	1.0	100.0	0		
vh151417.chw	ICD9-130.mtw	AK21-94 K108-01M	94	1.0	1.0	1.0	100.0	0		
vh151433.chw	ICD9-130.mtw	AK21-95 K108-01S	95	1.0	1.0	1.0	100.0	0		
vh151450.chw	ICD9-130.mtw	AK21-96 ICK051WL	96	1.0	1.0	1.0	100.0	0		
vh151505.chw	ICD9-130.mtw	AK21-97 ICK051WC	97	1.0	1.0	1.0	100.0	0		
vh151522.chw	ICD9-130.mtw	AK21-98 ICK051WB	98	1.0	1.0	1.0	100.0	0		
vh151538.chw	ICD9-130.mtw	AK21-99 K105-07 DF=40	99	1.0	40.0	1.0	100.0	0		
vh151554.chw	ICD9-130.mtw	AK21-100 K105-08 DF=50	100	1.0	50.0	1.0	100.0	0		
vh151610.chw	ICD9-130.mtw	AK21-101 K105-03 DF=50	1	1.0	50.0	1.0	100.0	0		
vh151626.chw	ICD9-130.mtw	AK21-102 CCV441	2	1.0	1.0	1.0	100.0	0		
vh151642.chw	ICD9-130.mtw	AK21-103 CCB441	3	1.0	1.0	1.0	100.0	0		
vh151658.chw	ICD9-130.mtw	AK21-104 K105-04 DF=50	4	1.0	50.0	1.0	100.0	0		
vh151715.chw	ICD9-130.mtw	AK21-105 K105-05 DF=100	5	1.0	100.0	1.0	100.0	0		
vh151731.chw	ICD9-130.mtw	AK21-106 K105-06 DF=100	6	1.0	100.0	1.0	100.0	0		
vh151747.chw	ICD9-130.mtw	AK21-107 K105-09 DF=100	7	1.0	100.0	1.0	100.0	0		
vh151803.chw	ICD9-130.mtw	AK21-108 K132-02	8	1.0	1.0	1.0	100.0	0		
vh151819.chw	ICD9-130.mtw	AK21-109 K132-02D	9	1.0	1.0	1.0	100.0	0		
vh151835.chw	ICD9-130.mtw	AK21-110 K132-02M	10	1.0	1.0	1.0	100.0	0		
vh151852.chw	ICD9-130.mtw	AK21-111 K132-02S	11	1.0	1.0	1.0	100.0	0		
vh151908.chw	ICD9-130.mtw	AK21-112 K132-03 DF=5	12	1.0	5.0	1.0	100.0	0		
vh151924.chw	ICD9-130.mtw	AK21-113 K132-04 DF=5	13	1.0	5.0	1.0	100.0	0		
vh151940.chw	ICD9-130.mtw	AK21-114 CCV443	14	1.0	1.0	1.0	100.0	0		

FINAL

JL 4/17/11

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb151[illegible].chw	ICD6-130.mtw	AK21-115	CCB443	15	1.0	1.0	1.0	100.0	0	
vb152017.chw	ICD6-130.mtw	AK21-116	K132-01	16	1.0	1.0	1.0	100.0	0	
vb152029.chw	ICD6-130.mtw	AK21-117	K132-05	17	1.0	1.0	1.0	100.0	0	
vb152045.chw	ICD6-130.mtw	AK21-118	K119-01 DF=10	18	1.0	10.0	1.0	100.0	0	
vb152101.chw	ICD6-130.mtw	AK21-119	K119-02 DF=40	19	1.0	40.0	1.0	100.0	0	
vb152117.chw	ICD6-130.mtw	AK21-120	K119-03 DF=40	20	1.0	40.0	1.0	100.0	0	
vb152135.chw	ICD6-130.mtw	AK21-121	K119-04 DF=40	21	1.0	40.0	1.0	100.0	0	
vb152147.chw	ICD6-130.mtw	AK21-122	K119-05 DF=20	22	1.0	20.0	1.0	100.0	0	
vb152205.chw	ICD6-130.mtw	AK21-123	K122-03 DF=100	23	1.0	100.0	1.0	100.0	0	
vb152222.chw	ICD6-130.mtw	AK21-124	K122-04 DF=100	24	1.0	100.0	1.0	100.0	0	
vb152238.chw	ICD6-130.mtw	AK21-125	RINSE	25	1.0	1.0	1.0	100.0	0	
vb152254.chw	ICD6-130.mtw	AK21-126	CCV445	26	1.0	1.0	1.0	100.0	0	
vb152319.chw	ICD6-130.mtw	AK21-127	CCB445	27	1.0	1.0	1.0	100.0	0	
vb152326.chw	ICD6-130.mtw	AK21-128	ICK953WB	28	1.0	1.0	1.0	100.0	0	
vb152343.chw	ICD6-130.mtw	AK21-129	ICK953WI	29	1.0	1.0	1.0	100.0	0	
vb152359.chw	ICD6-130.mtw	AK21-130	ICK953WC	30	1.0	1.0	1.0	100.0	0	
vb160015.chw	ICD6-130.mtw	AK21-131	K096-02 DF=1000	31	1.0	1000.0	1.0	100.0	0	
vb160031.chw	ICD6-130.mtw	AK21-132	K096-03 DF=2000	32	1.0	2000.0	1.0	100.0	0	
vb160047.chw	ICD6-130.mtw	AK21-133	K096-04 DF=40	33	1.0	40.0	1.0	100.0	0	
vb160103.chw	ICD6-130.mtw	AK21-134	K096-05 DF=1000	34	1.0	1000.0	1.0	100.0	0	
vb160119.chw	ICD6-130.mtw	AK21-135	K096-06 DF=1000	35	1.0	1000.0	1.0	100.0	0	
vb160136.chw	ICD6-130.mtw	AK21-136	K096-07 DF=5	36	1.0	5.0	1.0	100.0	0	
vb160152.chw	ICD6-130.mtw	AK21-137	K096-09 DF=5	37	1.0	5.0	1.0	100.0	0	
vb160208.chw	ICD6-130.mtw	AK21-138	CCV447	38	1.0	1.0	1.0	100.0	0	
vb160224.chw	ICD6-130.mtw	AK21-139	CCB447	39	1.0	1.0	1.0	100.0	0	
vb160240.chw	ICD6-130.mtw	AK21-140	K096-10 DF=2000	40	1.0	2000.0	1.0	100.0	0	
vb160257.chw	ICD6-130.mtw	AK21-141	K096-11 DF=2000	41	1.0	2000.0	1.0	100.0	0	
vb160313.chw	ICD6-130.mtw	AK21-142	K096-12 DF=2000	42	1.0	2000.0	1.0	100.0	0	
vb160329.chw	ICD6-130.mtw	AK21-143	K096-13 DF=2000	43	1.0	2000.0	1.0	100.0	0	
vb160345.chw	ICD6-130.mtw	AK21-144	K096-14 DF=2000	44	1.0	2000.0	1.0	100.0	0	
vb160401.chw	ICD6-130.mtw	AK21-145	K096-15 DF=5	45	1.0	5.0	1.0	100.0	0	
vb160417.chw	ICD6-130.mtw	AK21-146	K096-15D DF=5	46	1.0	5.0	1.0	100.0	0	
vb160434.chw	ICD6-130.mtw	AK21-147	K096-15M DF=5	47	1.0	5.0	1.0	100.0	0	
vb160450.chw	ICD6-130.mtw	AK21-148	K096-15S DF=5	48	1.0	5.0	1.0	100.0	0	
vb160506.chw	ICD6-130.mtw	AK21-149	K096-16 DF=500	49	1.0	500.0	1.0	100.0	0	
vb160522.chw	ICD6-130.mtw	AK21-150	CCV449	50	1.0	1.0	1.0	100.0	0	
vb160538.chw	ICD6-130.mtw	AK21-151	CCB449	51	1.0	1.0	1.0	100.0	0	
vb160554.chw	ICD6-130.mtw	AK21-152	K096-18	52	1.0	1.0	1.0	100.0	0	
vb160611.chw	ICD6-130.mtw	AK21-153	K096-18 DF=10	53	1.0	10.0	1.0	100.0	0	
vb160627.chw	ICD6-130.mtw	AK21-154	K096-19 DF=200	54	1.0	200.0	1.0	100.0	0	
vb160643.chw	ICD6-130.mtw	AK21-155	K096-20 DF=1000	55	1.0	1000.0	1.0	100.0	0	
vb160659.chw	ICD6-130.mtw	AK21-156	K096-21 DF=1000	56	1.0	1000.0	1.0	100.0	0	
vb160715.chw	ICD6-130.mtw	AK21-157	RINSE	57	1.0	1.0	1.0	100.0	0	
vb160731.chw	ICD6-130.mtw	AK21-158	CCV451	58	1.0	1.0	1.0	100.0	0	
vb160747.chw	ICD6-130.mtw	AK21-159	CCB451	59	1.0	1.0	1.0	100.0	0	
vb160804.chw	ICD6-130.mtw	AK21-160	ICK953WB	60	1.0	1.0	1.0	100.0	0	
vb160820.chw	ICD6-130.mtw	AK21-161	ICK953WL	61	1.0	1.0	1.0	100.0	0	
vb160836.chw	ICD6-130.mtw	AK21-162	ICK953WC	62	1.0	1.0	1.0	100.0	0	
vb160852.chw	ICD6-130.mtw	AK21-163	K096-22 DF=1000	63	1.0	1000.0	1.0	100.0	0	
vb160908.chw	ICD6-130.mtw	AK21-164	K096-23 DF=2000	64	1.0	2000.0	1.0	100.0	0	
vb160924.chw	ICD6-130.mtw	AK21-165	K096-15 DF=100	65	1.0	100.0	1.0	100.0	0	
vb160941.chw	ICD6-130.mtw	AK21-166	K096-15D DF=100	66	1.0	100.0	1.0	100.0	0	
vb160957.chw	ICD6-130.mtw	AK21-167	K096-15M DF=100	67	1.0	100.0	1.0	100.0	0	
vb161013.chw	ICD6-130.mtw	AK21-168	K096-15S DF=100	68	1.0	100.0	1.0	100.0	0	
vb161029.chw	ICD6-130.mtw	AK21-169	CCV453	69	1.0	1.0	1.0	100.0	0	
vb161045.chw	ICD6-130.mtw	AK21-170	CCB453	70	1.0	1.0	1.0	100.0	0	

JC 11/17/11

RETENTION TIME WINDOW

RETENTION TIME WINDOW
METHOD 300.0

Lab name:	**EMAX**	**Method:**	**EMAX-300.0**
Instrument ID:	IC100 (761 IC)	IC column:	METROSEP A SUPP 5
		Column size:	100X4.0mm

Compound	Retention time Window
FLUORIDE	0.234
CHLORIDE	0.407
NTIRITE	0.52
BROMIDE	0.688
NTIRATE	0.836
PHOSPHATE	0.678
SULFATE	0.915
IODIDE	1.078

10-17-07

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K119

METHOD 300.0(M)
ORGANIC ACIDS BY IC

A total of five (5) water samples were received on 11/14/11 for Organic Acids by IC analysis, Method 300.0(M) in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for OAK012WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

SAMPLE RESULTS

METHOD 300.0(M)
ACETATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K119

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK012WB	ND	1	NA	1.00	0.0500	11/17/1116:07	NA	HK17003	HK17001	OAK012W	NA	NA
LCS1W	OAK012WL	19.8	1	NA	1.00	0.0500	11/17/1116:49	NA	HK17004	HK17001	OAK012W	NA	NA
LCD1W	OAK012WC	18.7	1	NA	1.00	0.0500	11/17/1117:31	NA	HK17005	HK17001	OAK012W	NA	NA
MW-70-PMW09-124	K119-01	ND	1	NA	1.00	0.0500	11/17/1117:52	NA	HK17006	HK17001	OAK012W	11/14/1110:49	11/14/11
IR-70-SHB113-125	K119-02	1.17	1	NA	1.00	0.0500	11/17/1119:56	NA	HK17009	HK17007	OAK012W	11/14/1112:03	11/14/11
MW-70-PMW10-126	K119-03	ND	1	NA	1.00	0.0500	11/17/1120:37	NA	HK17010	HK17007	OAK012W	11/14/1113:07	11/14/11
MW-70-MNA11-127	K119-04	ND	1	NA	1.00	0.0500	11/17/1121:17	NA	HK17011	HK17007	OAK012W	11/14/1114:10	11/14/11
MW-70-MNA07-128	K119-05	ND	1	NA	1.00	0.0500	11/17/1121:58	NA	HK17012	HK17007	OAK012W	11/14/1115:33	11/14/11

METHOD 300.0(M)
BUTYRATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K119

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK012WB	ND	1	NA	1.00	0.0500	11/17/1116:07	NA	HK17003	HK17001	OAK012W	NA	NA
LCS1W	OAK012WL	18.7	1	NA	1.00	0.0500	11/17/1116:49	NA	HK17004	HK17001	OAK012W	NA	NA
LCD1W	OAK012WC	18.4	1	NA	1.00	0.0500	11/17/1117:31	NA	HK17005	HK17001	OAK012W	NA	NA
MW-70-PMW09-124	K119-01	ND	1	NA	1.00	0.0500	11/17/1117:52	NA	HK17006	HK17001	OAK012W	11/14/1110:49	11/14/11
IR-70-SHB113-125	K119-02	ND	1	NA	1.00	0.0500	11/17/1119:56	NA	HK17009	HK17007	OAK012W	11/14/1112:03	11/14/11
MW-70-PMW10-126	K119-03	ND	1	NA	1.00	0.0500	11/17/1120:37	NA	HK17010	HK17007	OAK012W	11/14/1113:07	11/14/11
MW-70-MNA11-127	K119-04	ND	1	NA	1.00	0.0500	11/17/1121:17	NA	HK17011	HK17007	OAK012W	11/14/1114:10	11/14/11
MW-70-MNA07-128	K119-05	ND	1	NA	1.00	0.0500	11/17/1121:58	NA	HK17012	HK17007	OAK012W	11/14/1115:33	11/14/11

METHOD 300.0(M)
LACTATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K119

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK012WB	ND	1	NA	1.00	0.0500	11/17/1116:07	NA	HK17003	HK17001	OAK012W	NA	NA
LCS1W	OAK012WL	19.7	1	NA	1.00	0.0500	11/17/1116:49	NA	HK17004	HK17001	OAK012W	NA	NA
LCD1W	OAK012WC	19.1	1	NA	1.00	0.0500	11/17/1117:31	NA	HK17005	HK17001	OAK012W	NA	NA
MW-70-PMW09-124	K119-01	ND	1	NA	1.00	0.0500	11/17/1117:52	NA	HK17006	HK17001	OAK012W	11/14/1110:49	11/14/11
IR-70-SHB113-125	K119-02	ND	1	NA	1.00	0.0500	11/17/1119:56	NA	HK17009	HK17007	OAK012W	11/14/1112:03	11/14/11
MW-70-PMW10-126	K119-03	ND	1	NA	1.00	0.0500	11/17/1120:37	NA	HK17010	HK17007	OAK012W	11/14/1113:07	11/14/11
MW-70-MNA11-127	K119-04	ND	1	NA	1.00	0.0500	11/17/1121:17	NA	HK17011	HK17007	OAK012W	11/14/1114:10	11/14/11
MW-70-MNA07-128	K119-05	ND	1	NA	1.00	0.0500	11/17/1121:58	NA	HK17012	HK17007	OAK012W	11/14/1115:33	11/14/11

METHOD 300.0(M)
PROPIONATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K119

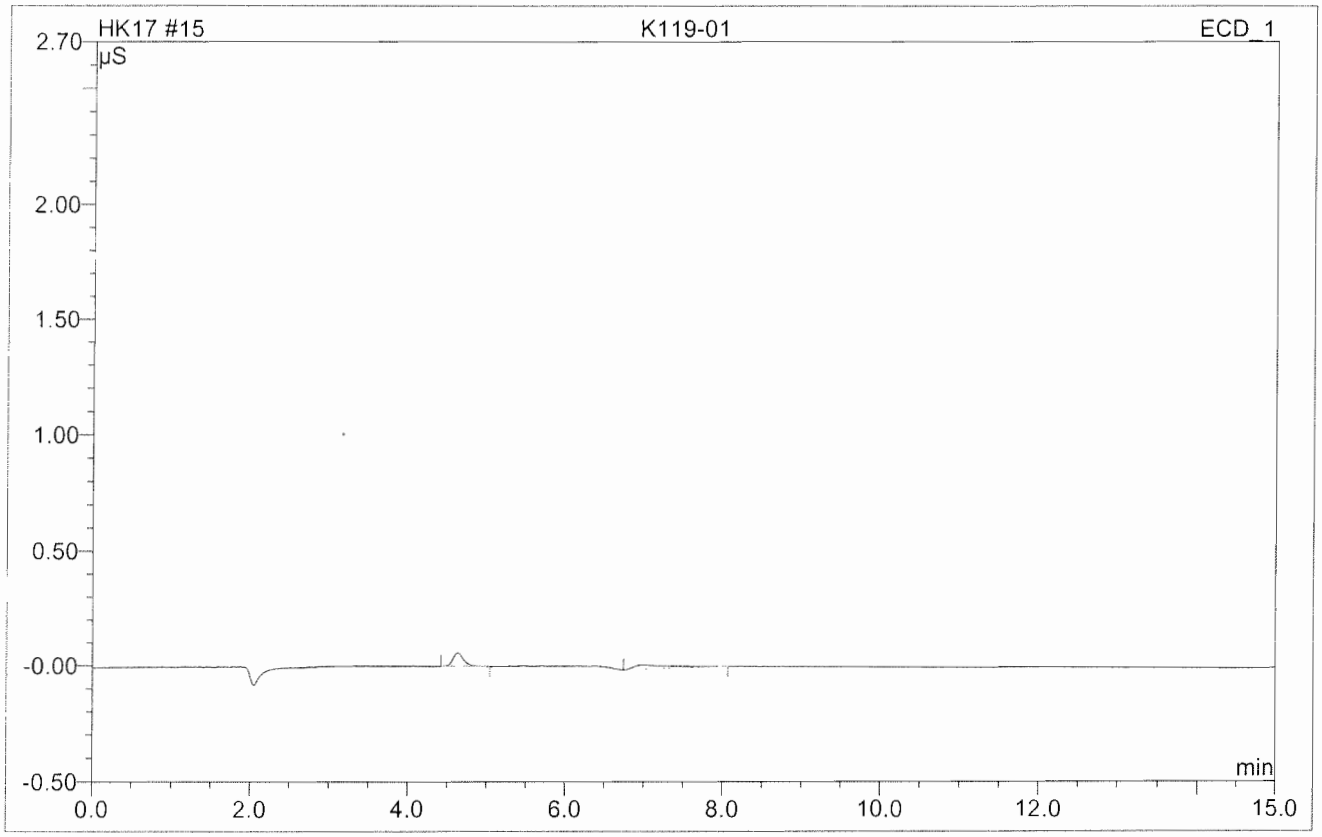
Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK012WB	ND	1	NA	1.00	0.0500	11/17/1116:07	NA	HK17003	HK17001	OAK012W	NA	NA
LCS1W	OAK012WL	19.5	1	NA	1.00	0.0500	11/17/1116:49	NA	HK17004	HK17001	OAK012W	NA	NA
LCD1W	OAK012WC	18.8	1	NA	1.00	0.0500	11/17/1117:31	NA	HK17005	HK17001	OAK012W	NA	NA
MW-70-PMW09-124	K119-01	ND	1	NA	1.00	0.0500	11/17/1117:52	NA	HK17006	HK17001	OAK012W	11/14/1110:49	11/14/11
IR-70-SHB113-125	K119-02	ND	1	NA	1.00	0.0500	11/17/1119:56	NA	HK17009	HK17007	OAK012W	11/14/1112:03	11/14/11
MW-70-PMW10-126	K119-03	ND	1	NA	1.00	0.0500	11/17/1120:37	NA	HK17010	HK17007	OAK012W	11/14/1113:07	11/14/11
MW-70-MNA11-127	K119-04	ND	1	NA	1.00	0.0500	11/17/1121:17	NA	HK17011	HK17007	OAK012W	11/14/1114:10	11/14/11
MW-70-MNA07-128	K119-05	ND	1	NA	1.00	0.0500	11/17/1121:58	NA	HK17012	HK17007	OAK012W	11/14/1115:33	11/14/11

HK17 006 K119-01

SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS ✓

Sample Name:	**K119-01**	*Injection Volume:*	**25.0**
Vial Number:	**1**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/17/2011 17:52**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.63	n.a.	0.058668	0.009318	44.95	n.a.	BMB
2	6.98	n.a.	0.018912	0.011414	55.05	n.a.	BMB
Total:			0.078	0.021	100.00	0.000	

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K119
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK012WB	OAK012WL	OAK012WC		
LAB FILE ID:	HK17003	HK17004	HK17005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/17/1116:07	11/17/1116:49	11/17/1117:31	DATE RECEIVED:	NA
PREP. BATCH:	OAK012W	OAK012W	OAK012W		
CALIB. REF:	HK17001	HK17001	HK17001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	19.8	99	20.0	18.7	94	6	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K119
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK012WB	OAK012WL	OAK012WC		
LAB FILE ID:	HK17003	HK17004	HK17005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/17/1116:07	11/17/1116:49	11/17/1117:31	DATE RECEIVED:	NA
PREP. BATCH:	OAK012W	OAK012W	OAK012W		
CALIB. REF:	HK17001	HK17001	HK17001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	20.0	18.7	94	20.0	18.4	92	2	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K119
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK012WB	OAK012WL	OAK012WC		
LAB FILE ID:	HK17003	HK17004	HK17005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/17/1116:07	11/17/1116:49	11/17/1117:31	DATE RECEIVED:	NA
PREP. BATCH:	OAK012W	OAK012W	OAK012W		
CALIB. REF:	HK17001	HK17001	HK17001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	20.0	19.7	98	20.0	19.1	96	3	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K119
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK012WB	OAK012WL	OAK012WC		
LAB FILE ID:	HK17003	HK17004	HK17005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/17/1116:07	11/17/1116:49	11/17/1117:31	DATE RECEIVED:	NA
PREP. BATCH:	OAK012W	OAK012W	OAK012W		
CALIB. REF:	HK17001	HK17001	HK17001		

ACCESSION:

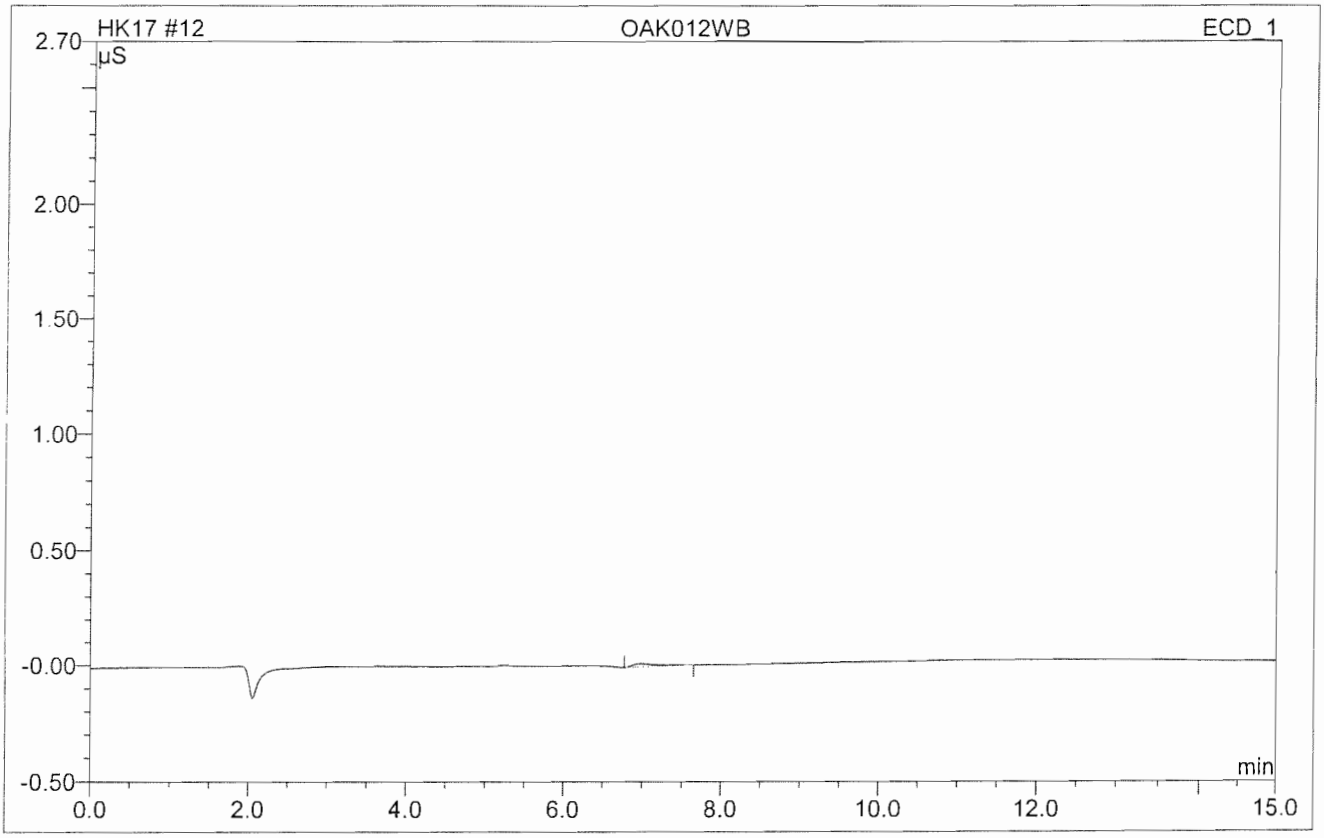
PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	20.0	19.5	98	20.0	18.8	94	4	90-110	20

8076

QC DATA

HK17 003 OAK012WB

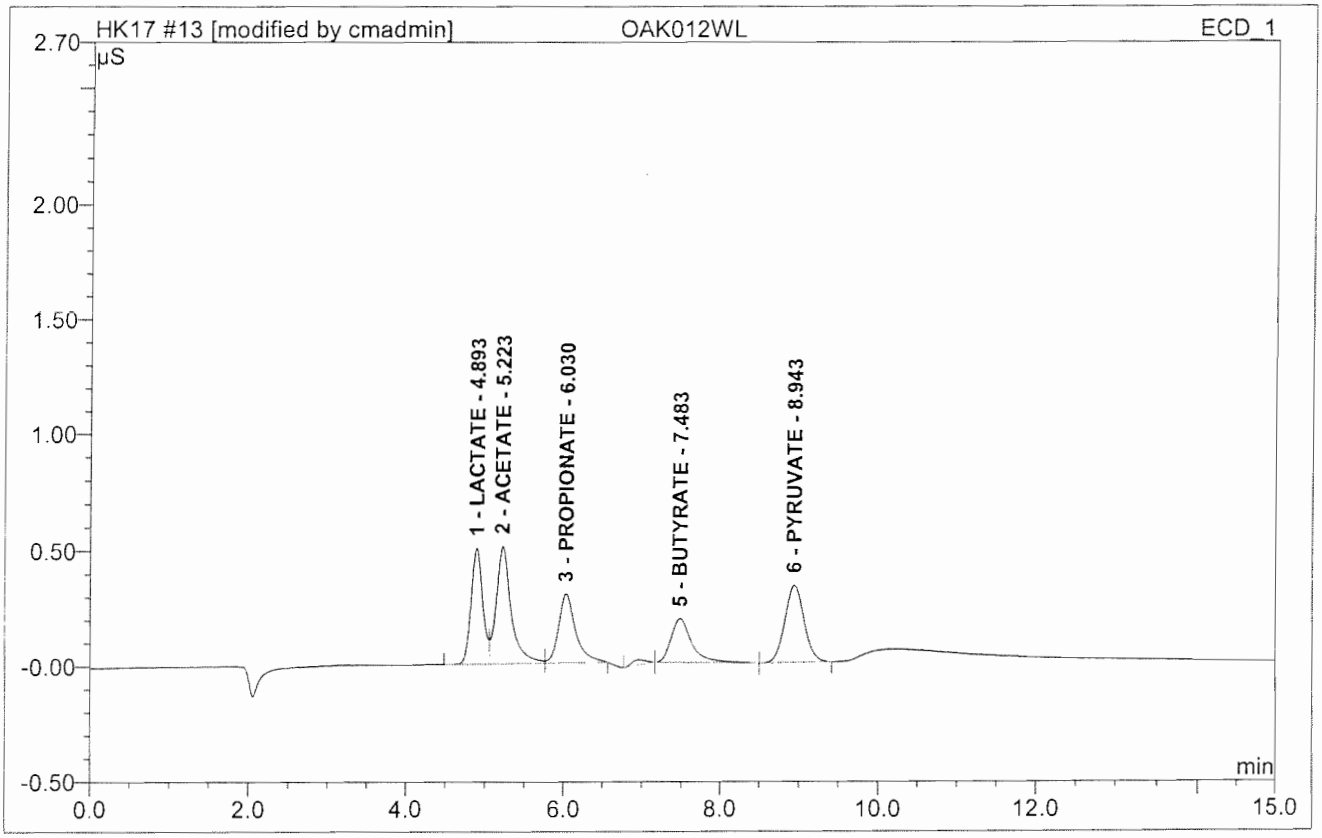
Sample Name:	**OAK012WB**	*Injection Volume:*	**25.0**
Vial Number:	**98**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/17/2011 16:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	6.98	n.a.	0.014662	0.005199	100.00	n.a.	BMB
Total:			0.015	0.005	100.00	0.000	

HK17 004 OAK012WL

Sample Name:	**OAK012WL**	*Injection Volume:*	**25.0**
Vial Number:	**96**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/17/2011 16:49**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.89	LACTATE	0.499616	0.086924	20.06	1.965	BM *
2	5.22	ACETATE	0.507184	0.112933	26.07	1.982	M *
3	6.03	PROPIONATE	0.299720	0.076372	17.63	1.945	MB*
4	6.96	n.a.	0.023768	0.004841	1.12	n.a.	BM *
5	7.48	BUTYRATE	0.189278	0.057964	13.38	1.869	Mb*
6	8.94	PYRUVATE	0.333340	0.094192	21.74	1.832	bMB*
Total:			1.853	0.433	100.00	9.593	

☐ Incorrect Retention Time
☒ Incorrect Baseline
☐ Incorrect Integration
☐ Other _____
Initials al
Date 11/21/11

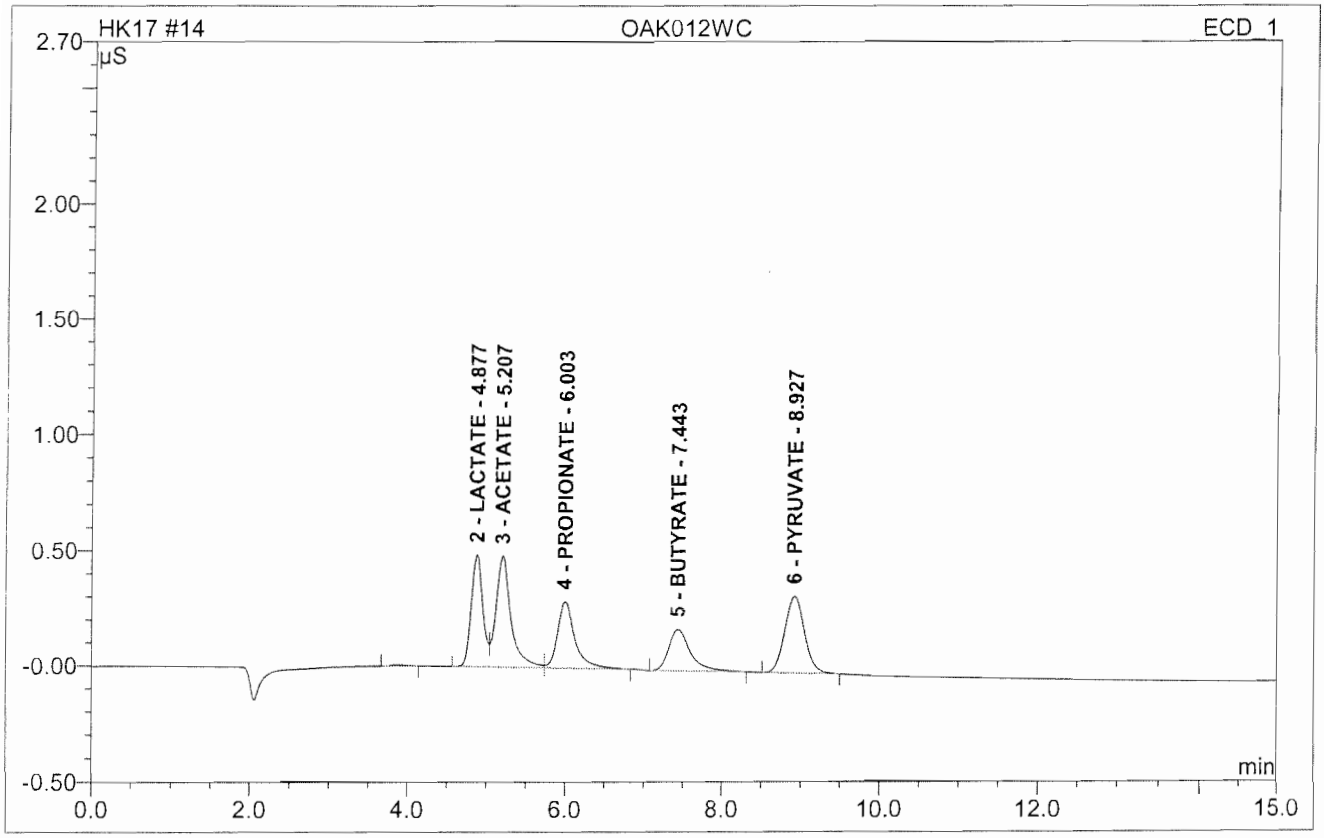
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.70 Build 1820

8079

HK17 005 OAK012WC

Sample Name:	**OAK012WC**	*Injection Volume:*	**25.0**
Vial Number:	**96**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/17/2011 17:31**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.85	n.a.	0.005032	0.001048	0.25	n.a.	BMB
2	4.88	LACTATE	0.486510	0.084312	20.15	1.906	BM
3	5.21	ACETATE	0.481860	0.106489	25.44	1.869	M
4	6.00	PROPIONATE	0.288670	0.073943	17.67	1.883	MB
5	7.44	BUTYRATE	0.179884	0.057130	13.65	1.843	BMB
6	8.93	PYRUVATE	0.331978	0.095597	22.84	1.859	BMB
Total:			1.774	0.419	100.00	9.360	

INITIAL CALIBRATIONS

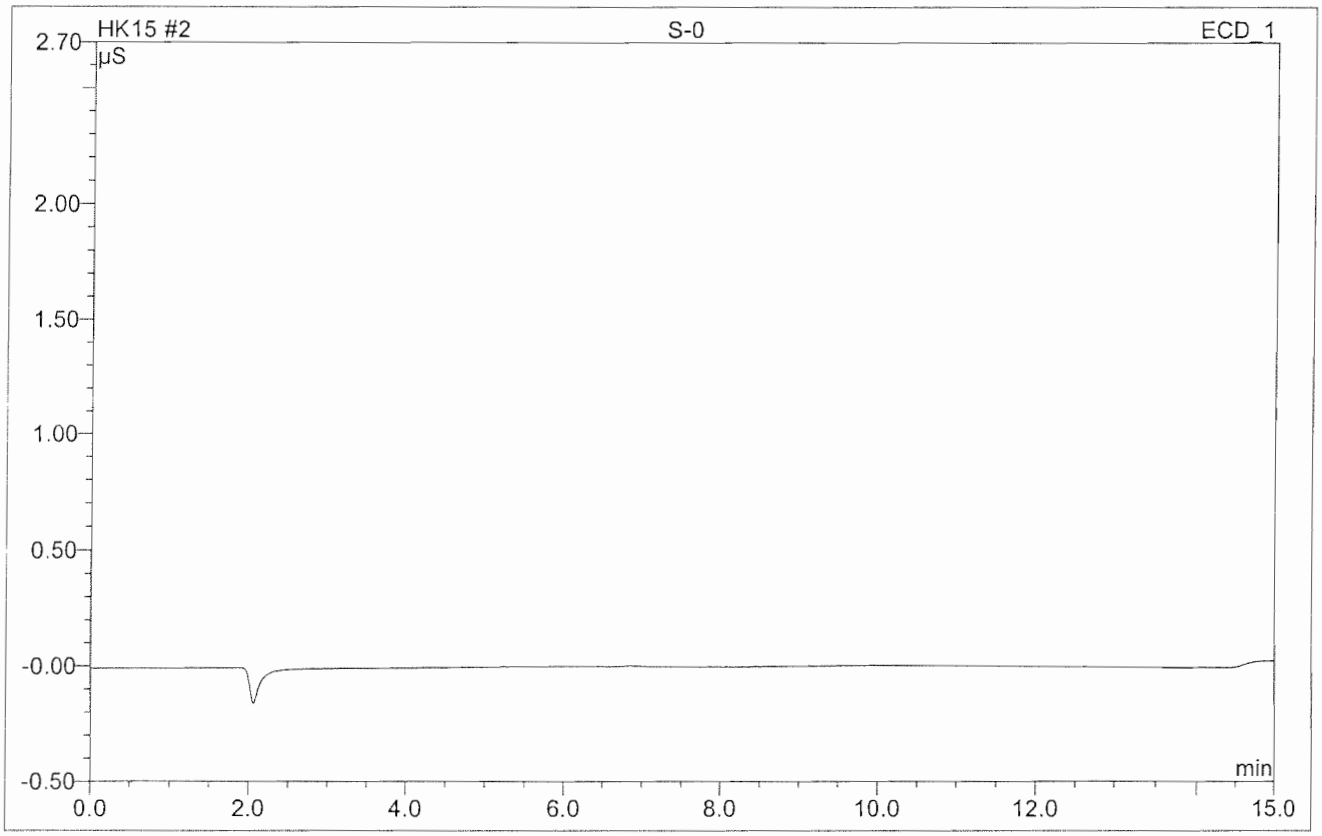
IC SEQ FORM/HK15(2011)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
HK15001	IB	ABLPY	OAD6K15	11/15/1117:34	1
HK15002	S-0	ABLPY	OAD6K15	11/15/1117:55	1
HK15003	S-1	ABLPY	OAD6K15	11/15/1118:16	1
HK15004	S-2	ABLPY	OAD6K15	11/15/1118:37	1
HK15005	S-3	ABLPY	OAD6K15	11/15/1118:58	1
HK15006	S-4	ABLPY	OAD6K15	11/15/1119:19	1
HK15007	S-5	ABLPY	OAD6K15	11/15/1119:40	1
HK15008	ICV	ABLPY	OAD6K15	11/15/1120:01	1
HK15009	ICB	ABLPY	OAD6K15	11/15/1120:22	1
HK15010	CCV2	ABLPY	OAD6K15	11/15/1123:52	1
HK15011	CCB2	ABLPY	OAD6K15	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	OAD6K15	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	OAD6K15	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	OAD6K15	11/16/1101:15	1
HK15015	K101-01	ABLPY	OAD6K15	11/16/1101:36	1
HK15016	K101-02	ABLPY	OAD6K15	11/16/1102:17	1
HK15017	K101-03	ABLPY	OAD6K15	11/16/1102:58	1
HK15018	K101-04	ABLPY	OAD6K15	11/16/1103:39	1
HK15019	K101-05	ABLPY	OAD6K15	11/16/1104:20	1
HK15020	K101-05M	ABLPY	OAD6K15	11/16/1105:01	1
HK15021	K101-05S	ABLPY	OAD6K15	11/16/1105:42	1
HK15022	CCV4	ABLPY	OAD6K15	11/16/1106:23	1
HK15023	CCB4	ABLPY	OAD6K15	11/16/1106:44	1
HK15024	K084-01	ABLPY	OAD6K15	11/16/1107:05	1
HK15025	K084-02	ABLPY	OAD6K15	11/16/1107:46	1
HK15026	K084-03	ABLPY	OAD6K15	11/16/1108:26	1
HK15027	K084-04	ABLPY	OAD6K15	11/16/1109:10	1
HK15028	CCV6	ABLPY	OAD6K15	11/16/1111:30	1
HK15029	CCB6	ABLPY	OAD6K15	11/16/1112:32	1
HK15030	K084-05	ABLPY	OAD6K15	11/16/1112:53	1
HK15031	K084-06	ABLPY	OAD6K15	11/16/1113:34	1
HK15032	K035-01	*BLPY	OAD6K15	11/16/1114:15	5
HK15033	K035-01A	*BLPY	OAD6K15	11/16/1114:55	5
HK15034	CCV8	ABLPY	OAD6K15	11/16/1115:36	1
HK15035	CCB8	ABLPY	OAD6K15	11/16/1115:57	1

AJ
11/29/11

HK15 002 S-0

Sample Name:	**S-0**	*Injection Volume:*	**25.0**
Vial Number:	**32**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 17:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

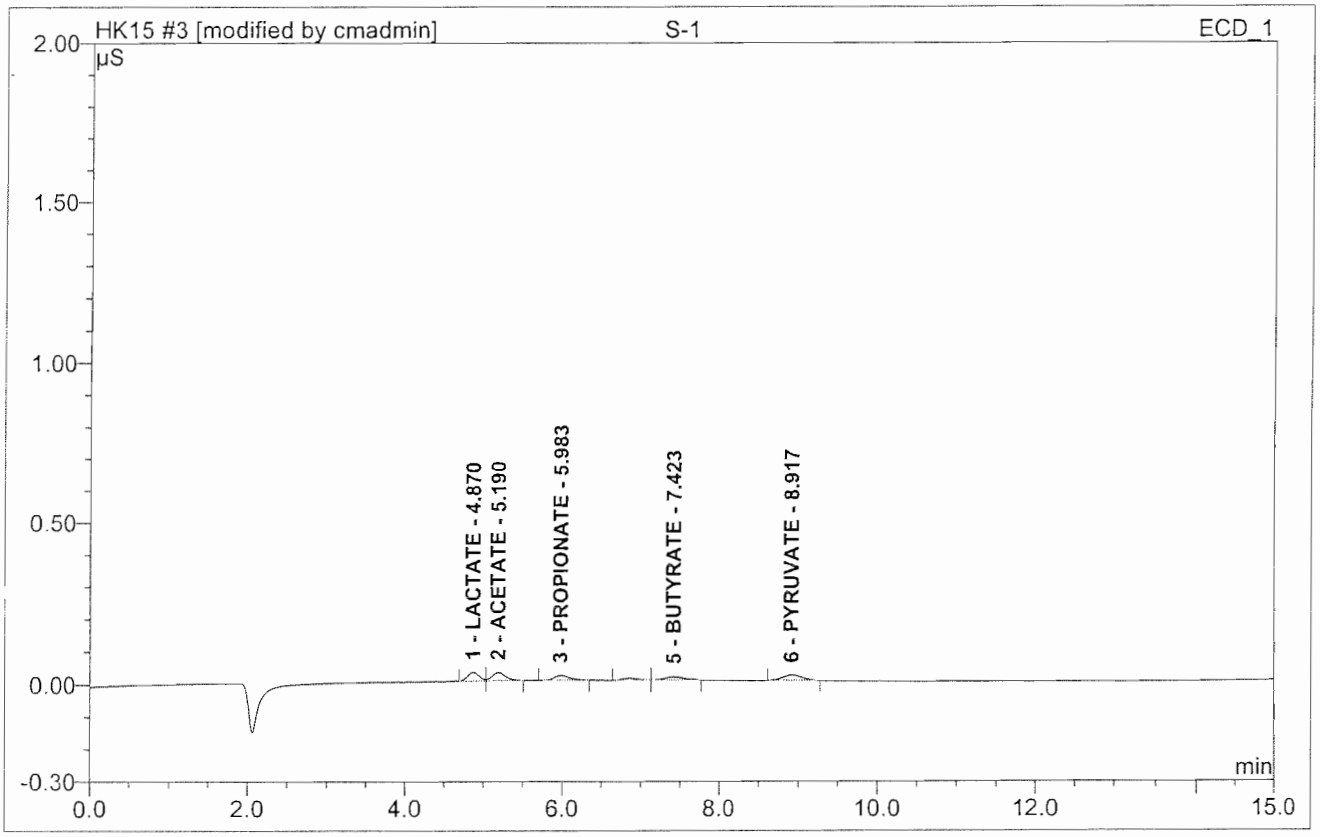


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

RS
11/29/11

HK15 003 S-1

Sample Name:	**S-1**	*Injection Volume:*	**25.0**
Vial Number:	**33**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 18:16**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

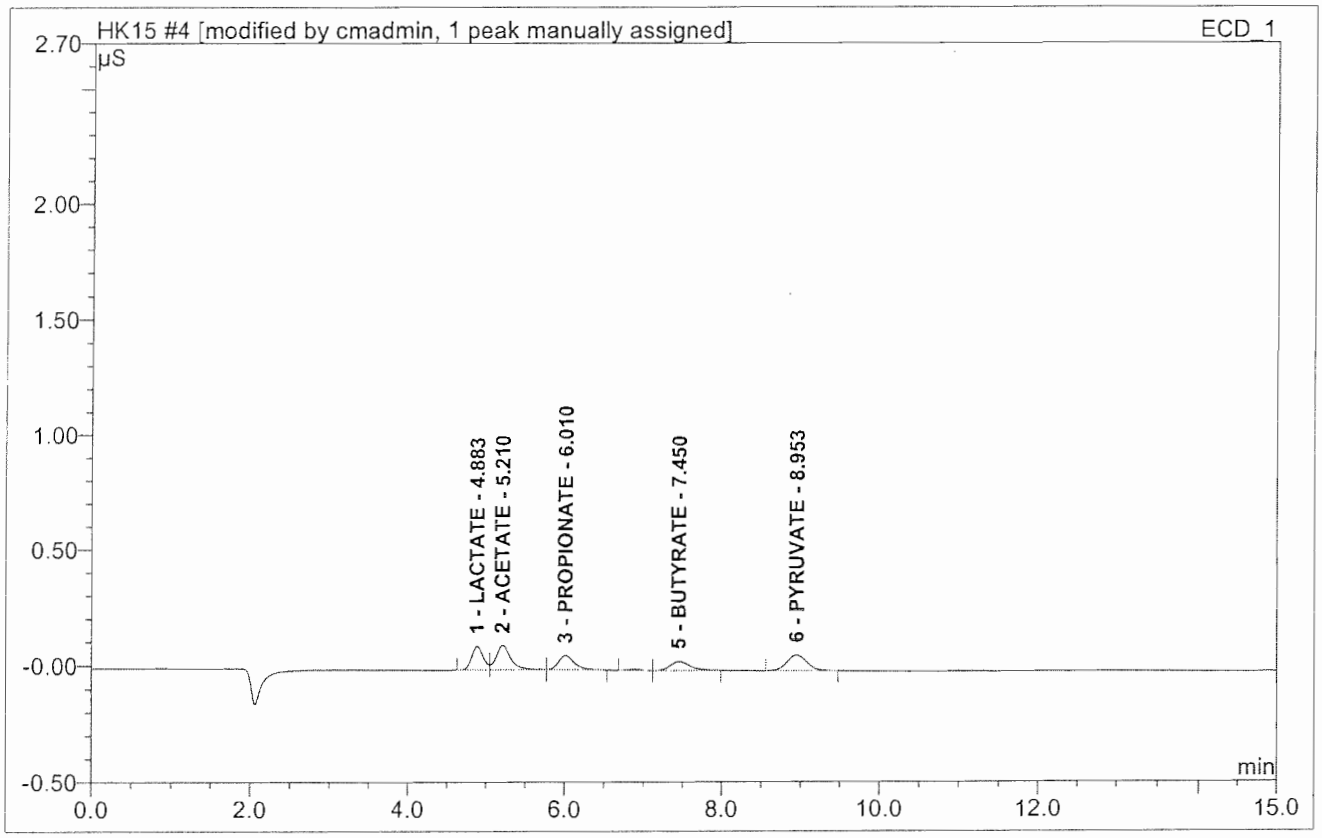


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.87	LACTATE	0.026174	0.004401	20.69	0.104	BM
2	5.19	ACETATE	0.024918	0.004820	22.66	0.083	MB
3	5.98	PROPIONATE	0.015232	0.003572	16.79	0.096	BMB
4	6.87	n.a.	0.006552	0.001302	6.12	n.a.	BMb*
5	7.42	BUTYRATE	0.009554	0.002586	12.16	0.101	bMB*
6	8.92	PYRUVATE	0.016650	0.004592	21.58	0.103	BMB
Total:			0.099	0.021	100.00	0.488	

AS 11/29/11

HK15 004 S-2

Sample Name:	**S-2**	*Injection Volume:*	**25.0**
Vial Number:	**34**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 18:37**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

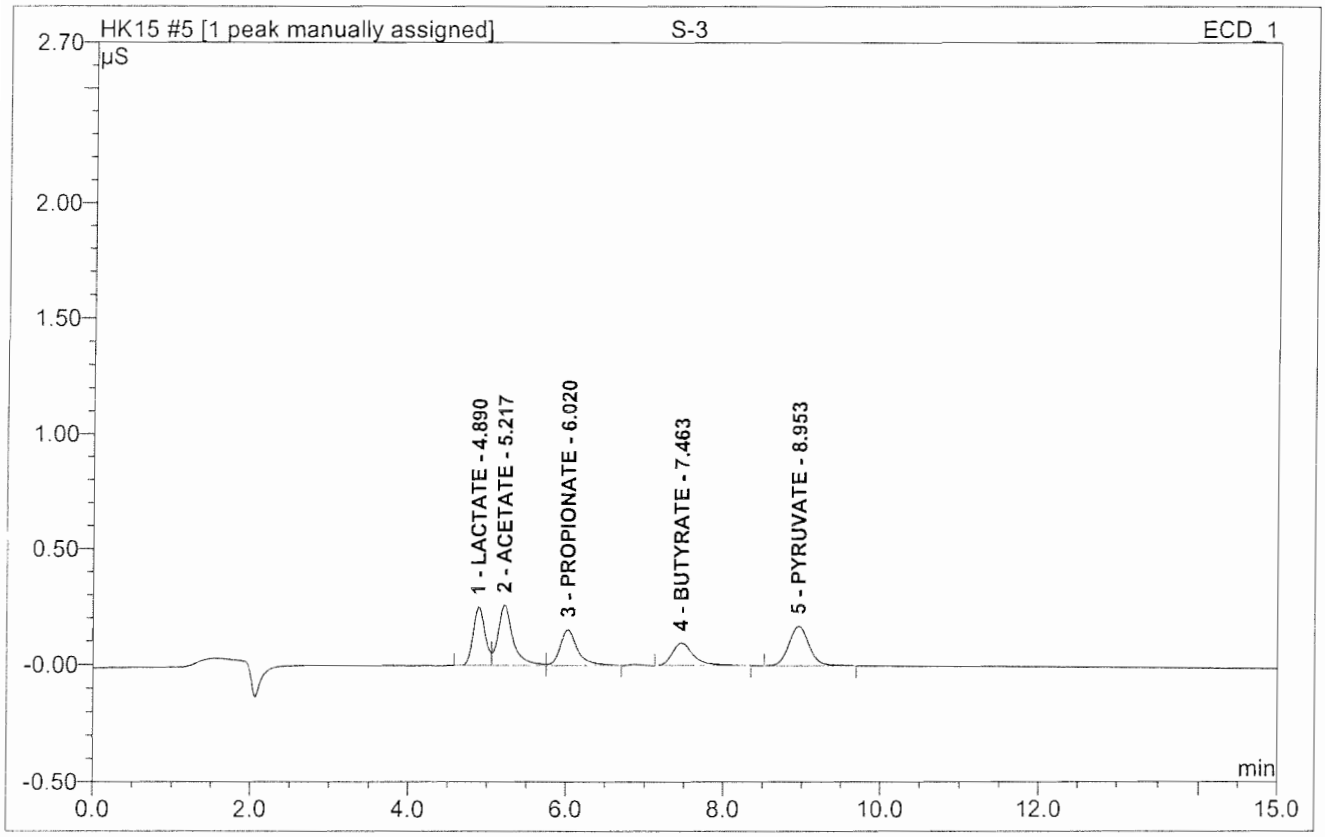


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.88	LACTATE	0.100086	0.017358	19.88	0.396	BM
2	5.21	ACETATE	0.105524	0.022908	26.23	0.401	M
3	6.01	PROPIONATE	0.061798	0.014840	16.99	0.382	MB
4	6.87	n.a.	0.005038	0.001008	1.15	n.a.	BMB
5	7.45	BUTYRATE	0.038386	0.011480	13.14	0.385	BMB*
6	8.95	PYRUVATE	0.067030	0.019737	22.60	0.395	BMB^
Total:			0.378	0.087	100.00	1.960	

RA 11/29/11

HK15 005 S-3

Sample Name:	**S-3**	*Injection Volume:*	**25.0**
Vial Number:	**35**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 18:58**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

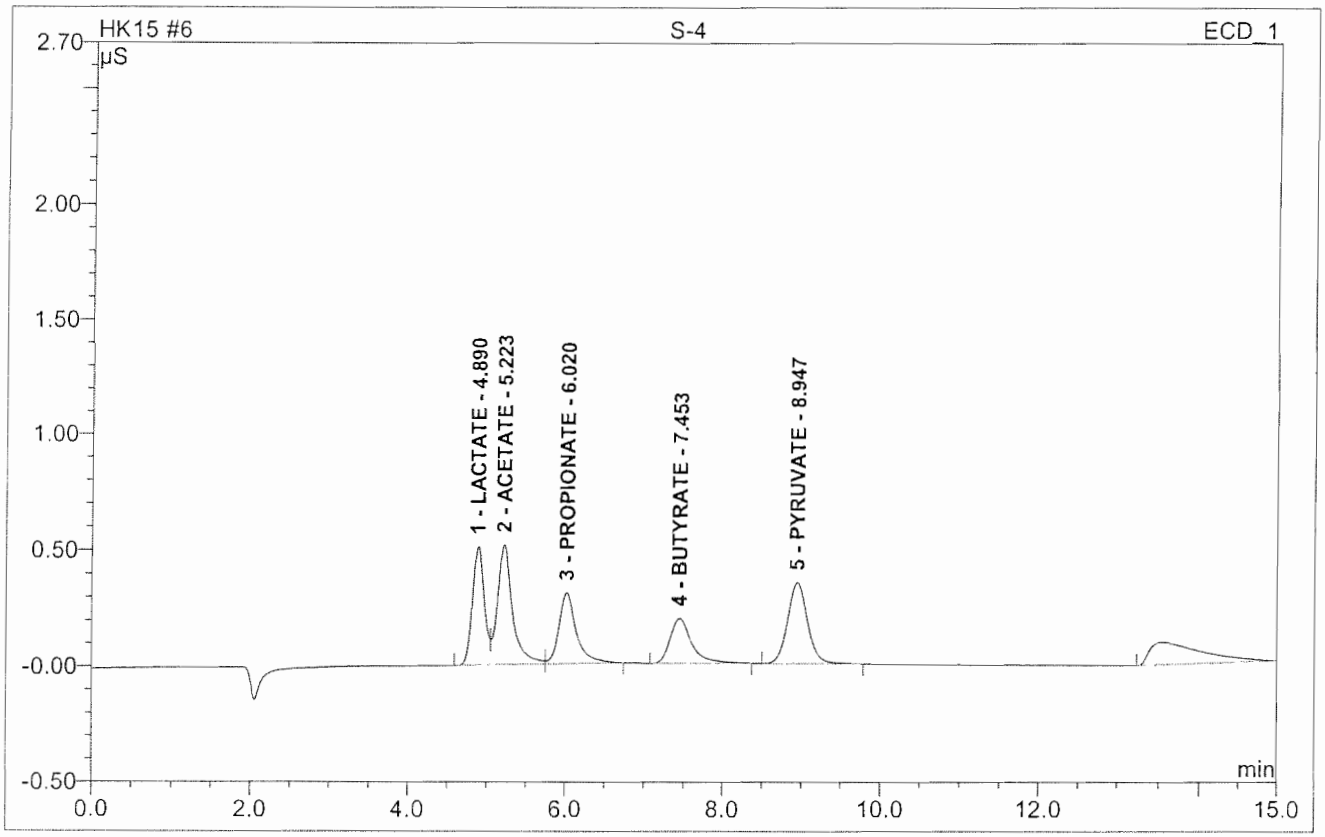


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.89	LACTATE	0.251224 ✓	0.043840 ✓	19.76	0.993 ✓	BM
2	5.22	ACETATE	0.260248 ✓	0.057600 ✓	25.96	1.010 ✓	M
3	6.02	PROPIONATE	0.154006 ✓	0.039548 ✓	17.83	1.010 ✓	MB
4	7.46	BUTYRATE	0.096982 ✓	0.030610 ✓	13.80	0.996 ✓	BMB
5	8.95	PYRUVATE	0.169390 ✓	0.050249 ✓	22.65	0.984 ✓	BMB^
Total:			0.932	0.222	100.00	4.993	

AS 11/29/11

HK15 006 S-4

Sample Name:	**S-4**	*Injection Volume:*	**25.0**
Vial Number:	**36**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 19:19**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

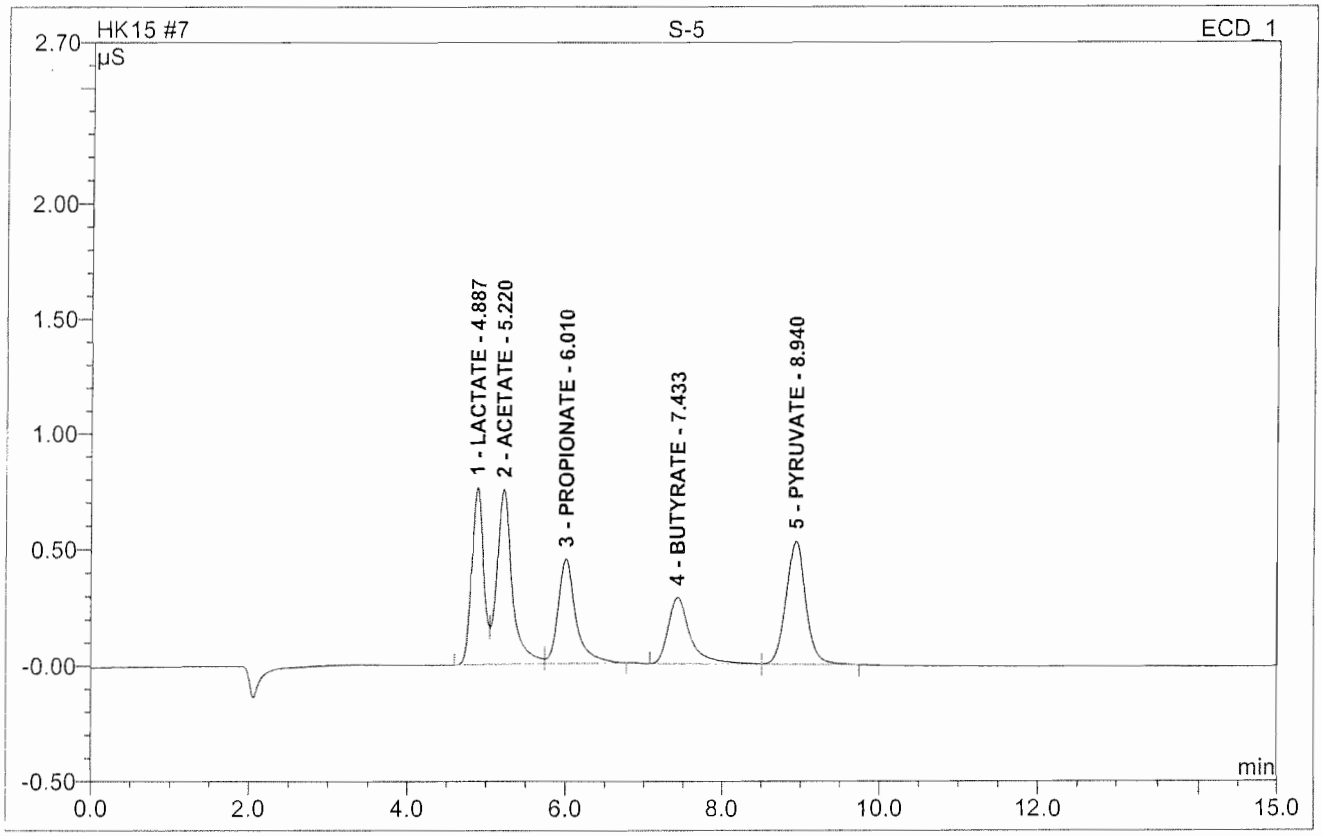


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.89	LACTATE	0.507630	0.088426	16.99	1.999	BM
2	5.22	ACETATE	0.513976	0.115562	22.21	2.028	M
3	6.02	PROPIONATE	0.306558	0.079442	15.27	2.023	MB
4	7.45	BUTYRATE	0.194514	0.061661	11.85	1.987	BMB
5	8.95	PYRUVATE	0.348296	0.102505	19.70	1.992	BMB
6	13.54	n.a.	0.097046	0.072730	13.98	n.a.	BMB
Total:			1.968	0.520	100.00	10.029	

11/29/11.

HK15 007 S-5

Sample Name:	**S-5**	*Injection Volume:*	**25.0**
Vial Number:	**37**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 19:40**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.89	LACTATE	0.759794	0.132927	19.87	3.003	BM
2	5.22	ACETATE	0.750282	0.169666	25.36	2.978	M
3	6.01	PROPIONATE	0.448824	0.117298	17.53	2.984	MB
4	7.43	BUTYRATE	0.286108	0.093750	14.01	3.012	BM
5	8.94	PYRUVATE	0.527514	0.155355	23.22	3.011	MB
Total:			2.773	0.669	100.00	14.989	

AS 11/29/11

No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square	Offset	Slope	Curve
1	4.88	LACTATE	0LOff	5	1.0000	-0.000198	0.0443	0.0000
2	5.21	ACETATE	0LOff	5	0.9997	0.000068	0.0569	0.0000
3	6.00	PROPIONA⁻	0LOff	5	0.9998	-0.000209	0.0394	0.0000
4	7.42	BUTYRATE	0LOff	5	0.9999	-0.000584	0.0313	0.0000
5	8.93	PYRUVATE	0LOff	5	0.9999	-0.000755	0.0518	0.0000
Average:					n.a.	n.a.	n.a.	0.0000

$$conc = \frac{area - offset}{slope}$$

AS
11/29/11

SECOND SOURCE VERIFICATION

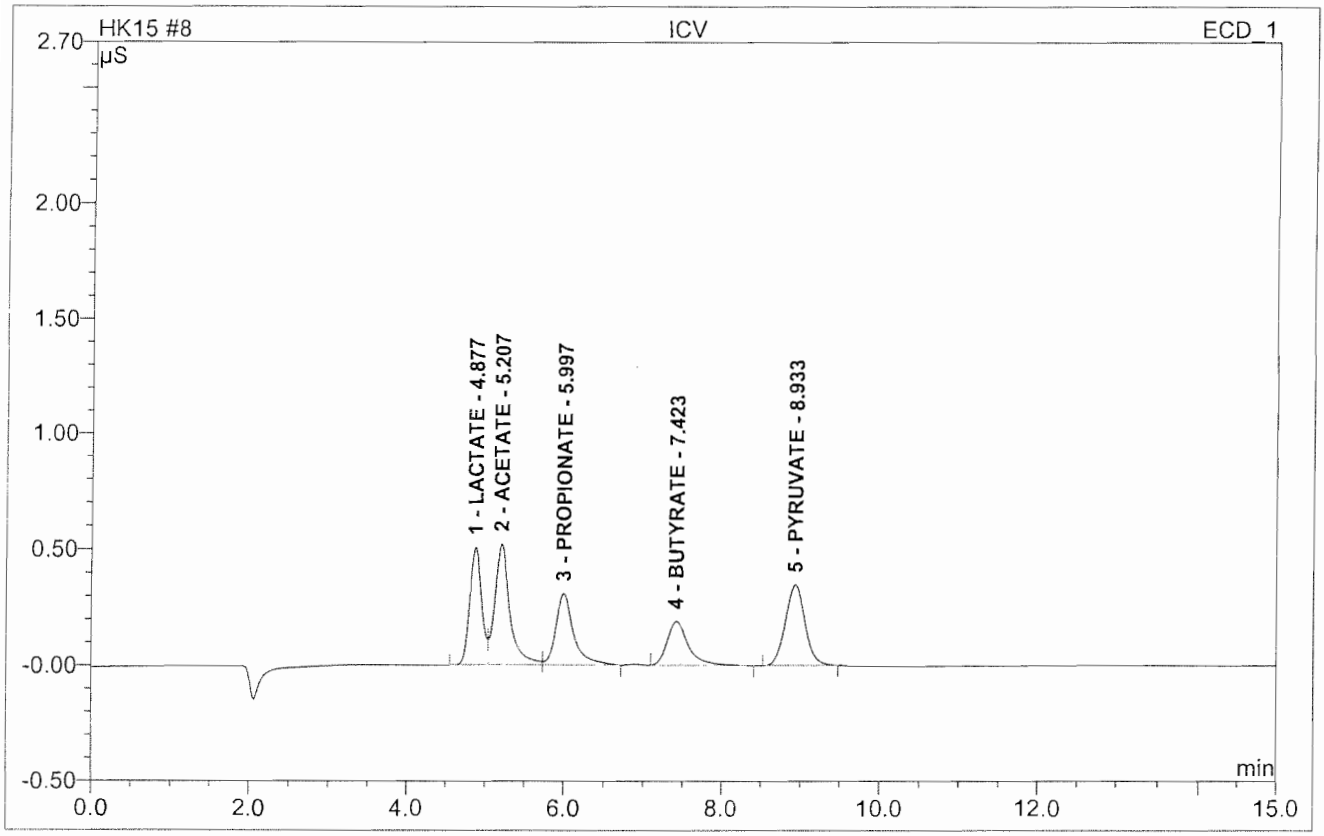
IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK15001	IB	ABLPY	ND	ND	ND	ND	ND	11/15/1117:34	1
HK15002	S-0	ABLPY	ND	ND	ND	ND	ND	11/15/1117:55	1
HK15003	S-1	ABLPY	.083	.101	.104	.096	.103	11/15/1118:16	1
HK15004	S-2	ABLPY	.401	.385	.396	.382	.395	11/15/1118:37	1
HK15005	S-3	ABLPY	1.01	.996	.993	1.01	.984	11/15/1118:58	1
HK15006	S-4	ABLPY	2.028	1.987	1.999	2.023	1.992	11/15/1119:19	1
HK15007	S-5	ABLPY	2.978	3.012	3.003	2.984	3.011	11/15/1119:40	1
HK15008	ICV	ABLPY	103%	96.8%	99.5%	104%	97.7%	11/15/1120:01	1
HK15009	ICB	ABLPY	ND	ND	ND	ND	ND	11/15/1120:22	1
HK15010	CCV2	ABLPY	103%	103%	101%	104%	93.9%	11/15/1123:52	1
HK15011	CCB2	ABLPY	ND	ND	ND	ND	ND	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	ND	ND	ND	ND	ND	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	2.07	2.1	2.02	2	1.96	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	2.07	2.02	2.04	2.1	1.95	11/16/1101:15	1
HK15015	K101-01	ABLPY	ND	ND	ND	ND	ND	11/16/1101:36	1
HK15016	K101-02	ABLPY	ND	ND	ND	ND	ND	11/16/1102:17	1
HK15017	K101-03	ABLPY	ND	ND	ND	ND	ND	11/16/1102:58	1
HK15018	K101-04	ABLPY	ND	ND	ND	ND	ND	11/16/1103:39	1
HK15019	K101-05	ABLPY	ND	ND	ND	ND	ND	11/16/1104:20	1
HK15020	K101-05M	ABLPY	.83	.826	.959	.922	.904	11/16/1105:01	1
HK15021	K101-05S	ABLPY	.878	.826	.985	1.01	.882	11/16/1105:42	1
HK15022	CCV4	ABLPY	101%	103%	99.3%	99.1%	92.6%	11/16/1106:23	1
HK15023	CCB4	ABLPY	ND	ND	ND	ND	ND	11/16/1106:44	1
HK15024	K084-01	ABLPY	ND	ND	ND	ND	ND	11/16/1107:05	1
HK15025	K084-02	ABLPY	ND	ND	ND	ND	ND	11/16/1107:46	1
HK15026	K084-03	ABLPY	ND	ND	ND	ND	ND	11/16/1108:26	1
HK15027	K084-04	ABLPY	ND	ND	ND	ND	ND	11/16/1109:10	1
HK15028	CCV6	ABLPY	101%	90.7%	99.7%	103%	92.5%	11/16/1111:30	1
HK15029	CCB6	ABLPY	ND	ND	ND	ND	ND	11/16/1112:32	1
HK15030	K084-05	ABLPY	ND	ND	ND	ND	ND	11/16/1112:53	1
HK15031	K084-06	ABLPY	ND	ND	ND	ND	ND	11/16/1113:34	1
HK15032	K035-01	*BLPY	28.1E	ND	ND	1.13	ND	11/16/1114:15	5
HK15033	K035-01A	*BLPY	32.4E	5.38	4.35	6.28	4.73	11/16/1114:55	5
HK15034	CCV8	ABLPY	102%	97%	99.6%	109%	93.8%	11/16/1115:36	1
HK15035	CCB8	ABLPY	ND	ND	ND	ND	ND	11/16/1115:57	1

NA
11/29/11

HK15 008 ICV

Sample Name:	**ICV**	*Injection Volume:*	**25.0**
Vial Number:	**38**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 20:01**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.88	LACTATE	0.504694	0.088011	19.68	1.990	BM
2	5.21	ACETATE	0.520464	0.117058	26.18	2.054	M
3	6.00	PROPIONATE	0.309202	0.081457	18.22	2.074	MB
4	7.42	BUTYRATE	0.190046	0.060090	13.44	1.937	BMB
5	8.93	PYRUVATE	0.347528	0.100546	22.49	1.954	BMB
Total:			1.872	0.447	100.00	10.009	

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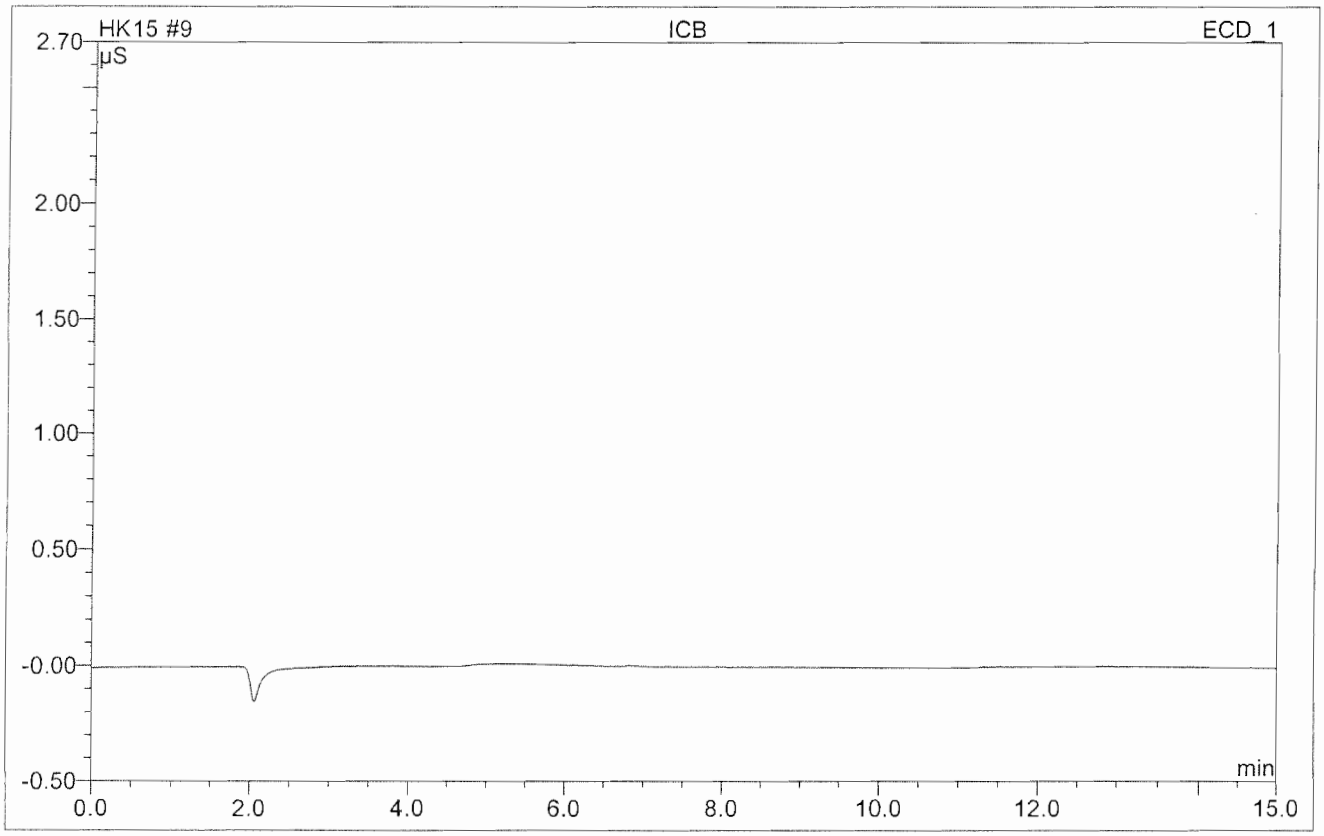
HK15 009 ICB

Sample Name:	**ICB**	*Injection Volume:*	**25.0**
Vial Number:	**39**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 20:22**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

AS 11/29/11

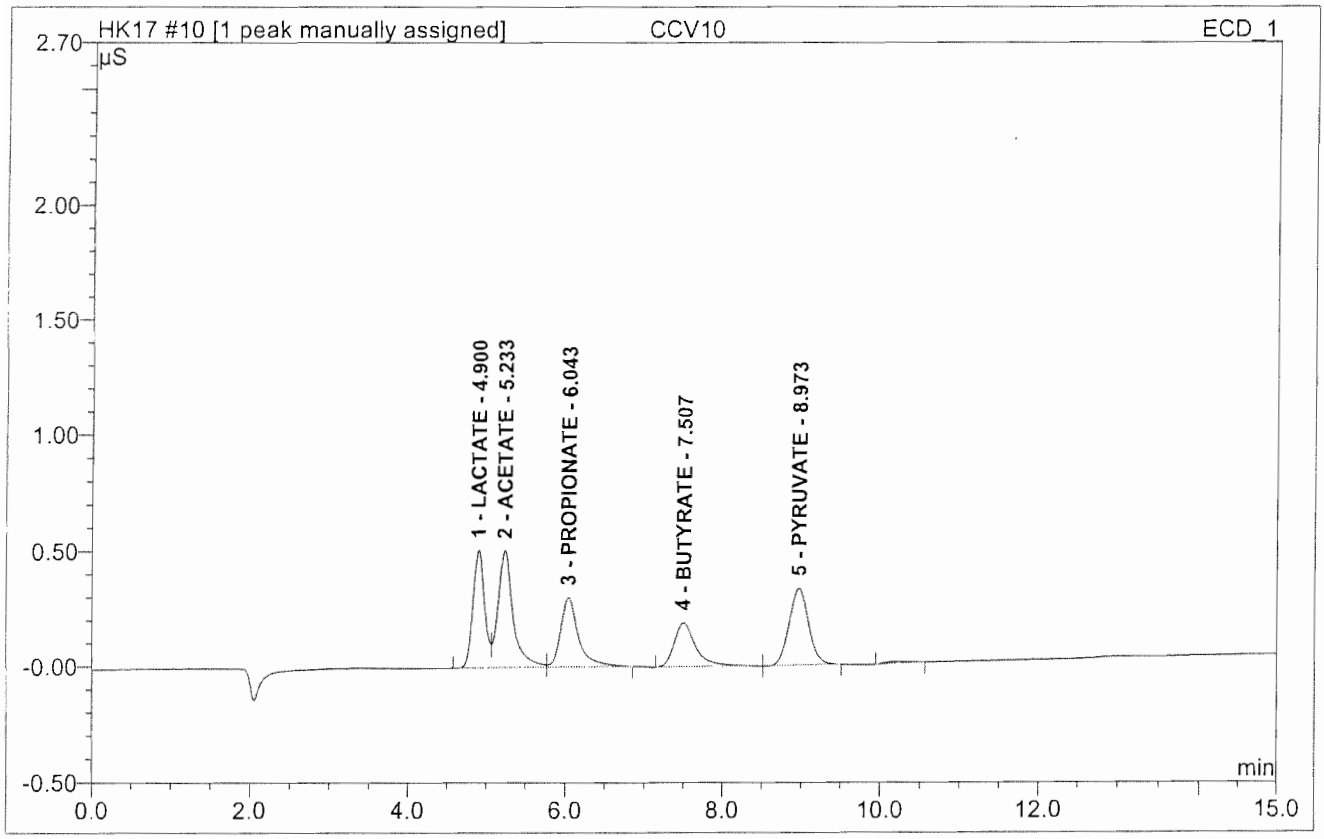
DAILY CALIBRATIONS

IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK17001	CCV10	ABLPY	99%	95.6%	99.8%	99.1%	91.8%	11/17/1115:25	1
HK17002	CCB10	ABLPY	ND	ND	ND	ND	ND	11/17/1115:46	1
HK17003	OAK012WB	ABLPY	ND	ND	ND	ND	ND	11/17/1116:07	1
HK17004	OAK012WL	ABLPY	1.98	1.87	1.97	1.95	1.83	11/17/1116:49	1
HK17005	OAK012WC	ABLPY	1.87	1.84	1.91	1.88	1.86	11/17/1117:31	1
HK17006	K119-01	ABLPY	ND	ND	ND	ND	ND	11/17/1117:52	1
HK17007	CCV12	ABLPY	99.2%	98.4%	99.6%	100%	92.9%	11/17/1119:14	1
HK17008	CCB12	ABLPY	ND	ND	ND	ND	ND	11/17/1119:35	1
HK17009	K119-02	ABLPY	.117	ND	ND	ND	ND	11/17/1119:56	1
HK17010	K119-03	ABLPY	ND	ND	ND	ND	ND	11/17/1120:37	1
HK17011	K119-04	ABLPY	ND	ND	ND	ND	ND	11/17/1121:17	1
HK17012	K119-05	ABLPY	ND	ND	ND	ND	ND	11/17/1121:58	1
HK17013	K133-02	ABLPY	ND	ND	ND	ND	ND	11/17/1122:39	1
HK17014	K133-03	ABLPY	ND	ND	.136	ND	ND	11/17/1123:20	1
HK17015	CCV14	ABLPY	97.9%	97.6%	98.1%	98.1%	92.5%	11/18/1100:01	1
HK17016	CCB14	ABLPY	ND	ND	ND	ND	ND	11/18/1100:22	1
HK17017	K133-04	ABLPY	ND	ND	ND	ND	ND	11/18/1100:43	1
HK17018	K133-05	ABLPY	ND	ND	ND	ND	ND	11/18/1101:24	1
HK17019	K133-06	ABLPY	ND	ND	ND	ND	ND	11/18/1102:05	1
HK17020	K133-01	ABLPY	ND	ND	ND	ND	ND	11/18/1102:46	1
HK17021	K133-01M	ABLPY	.919	1.17	.532	.992	.986	11/18/1103:27	1
HK17022	K133-01S	ABLPY	1.15	1.53	.61	1.38	1.07	11/18/1104:07	1
HK17023	CCV16	ABLPY	96.2%	94.7%	98.6%	104%	92.8%	11/18/1104:48	1
HK17024	CCB16	ABLPY	ND	ND	ND	ND	ND	11/18/1105:09	1

HK17 001 CCV10

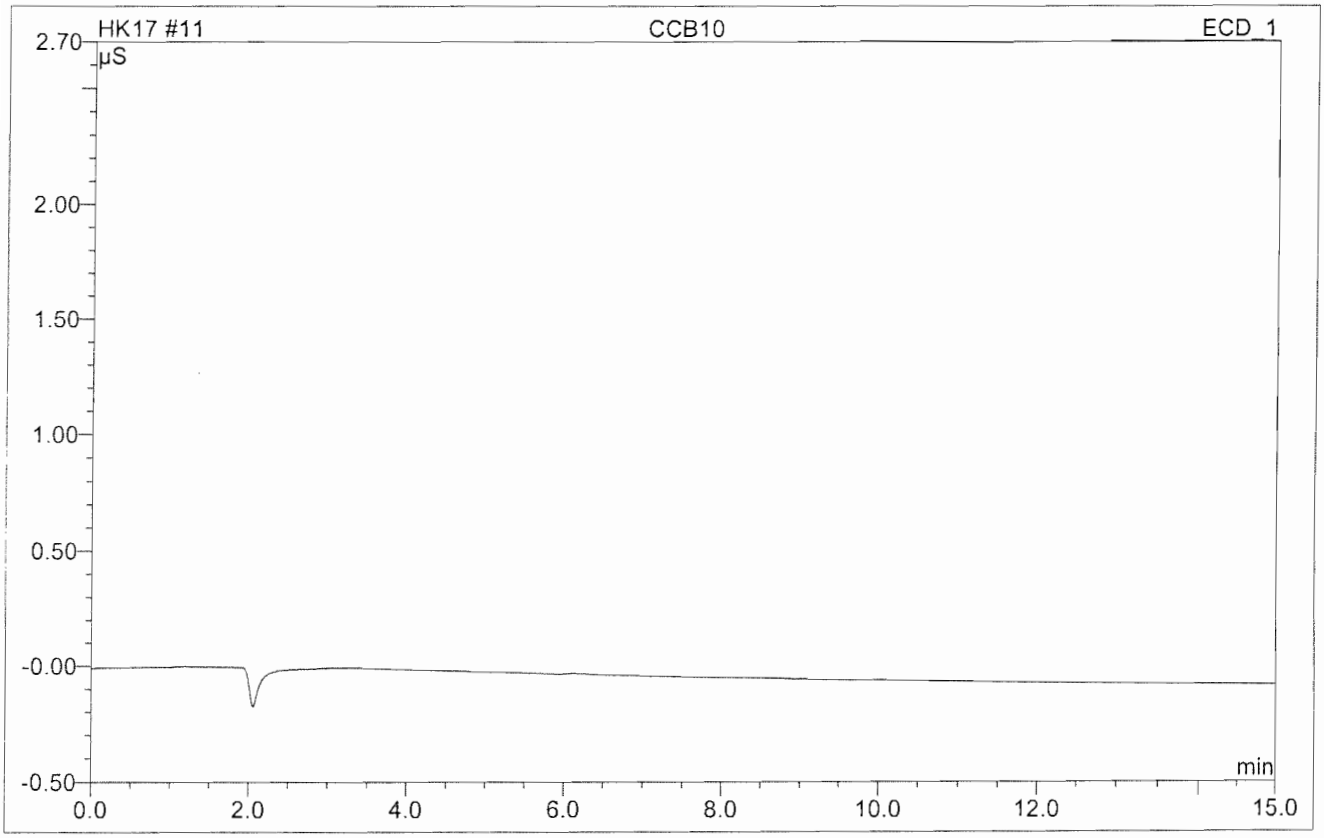
Sample Name:	**CCV10**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/17/2011 15:25**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.90	LACTATE	0.508436	0.088260	20.27	1.995	BM
2	5.23	ACETATE	0.505762	0.112770	25.90	1.979	M
3	6.04	PROPIONATE	0.300956	0.077893	17.89	1.983	MB
4	7.51	BUTYRATE	0.190424	0.059301	13.62	1.912	BM
5	8.97	PYRUVATE	0.331782	0.094435	21.69	1.836	MB^
6	10.24	n.a.	0.007748	0.002690	0.62	n.a.	BMB
Total:			1.845	0.435	100.00	9.706	

HK17 002 CCB10

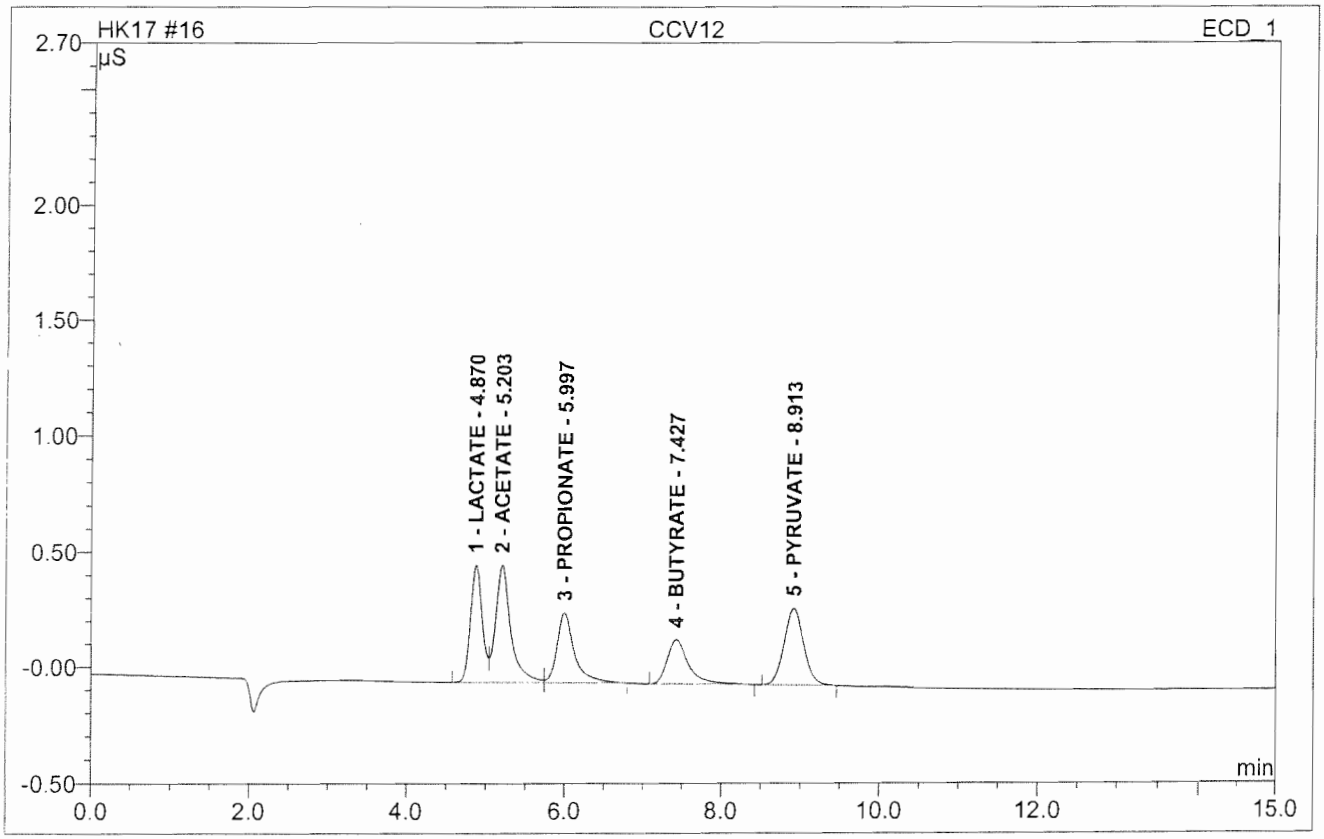
Sample Name:	**CCB10**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/17/2011 15:46**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

HK17 007 CCV12

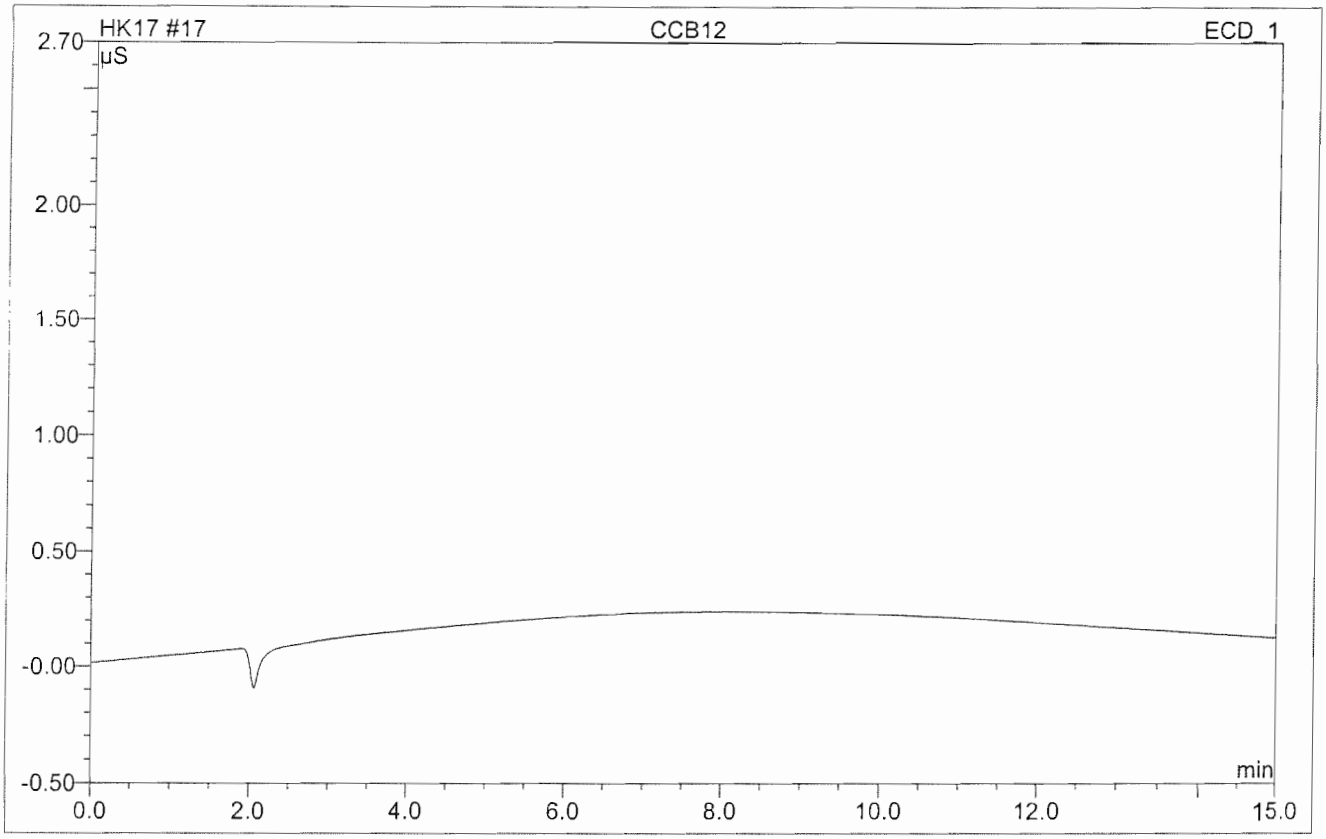
Sample Name:	**CCV12**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/17/2011 19:14**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.87	LACTATE	0.507944	0.088050	20.18	1.991	BM
2	5.20	ACETATE	0.507696	0.113130	25.93	1.985	M
3	6.00	PROPIONATE	0.303196	0.078518	17.99	1.999	MB
4	7.43	BUTYRATE	0.191356	0.061086	14.00	1.969	BMB
5	8.91	PYRUVATE	0.332048	0.095581	21.90	1.858	BMB
Total:			1.842	0.436	100.00	9.803	

HK17 008 CCB12

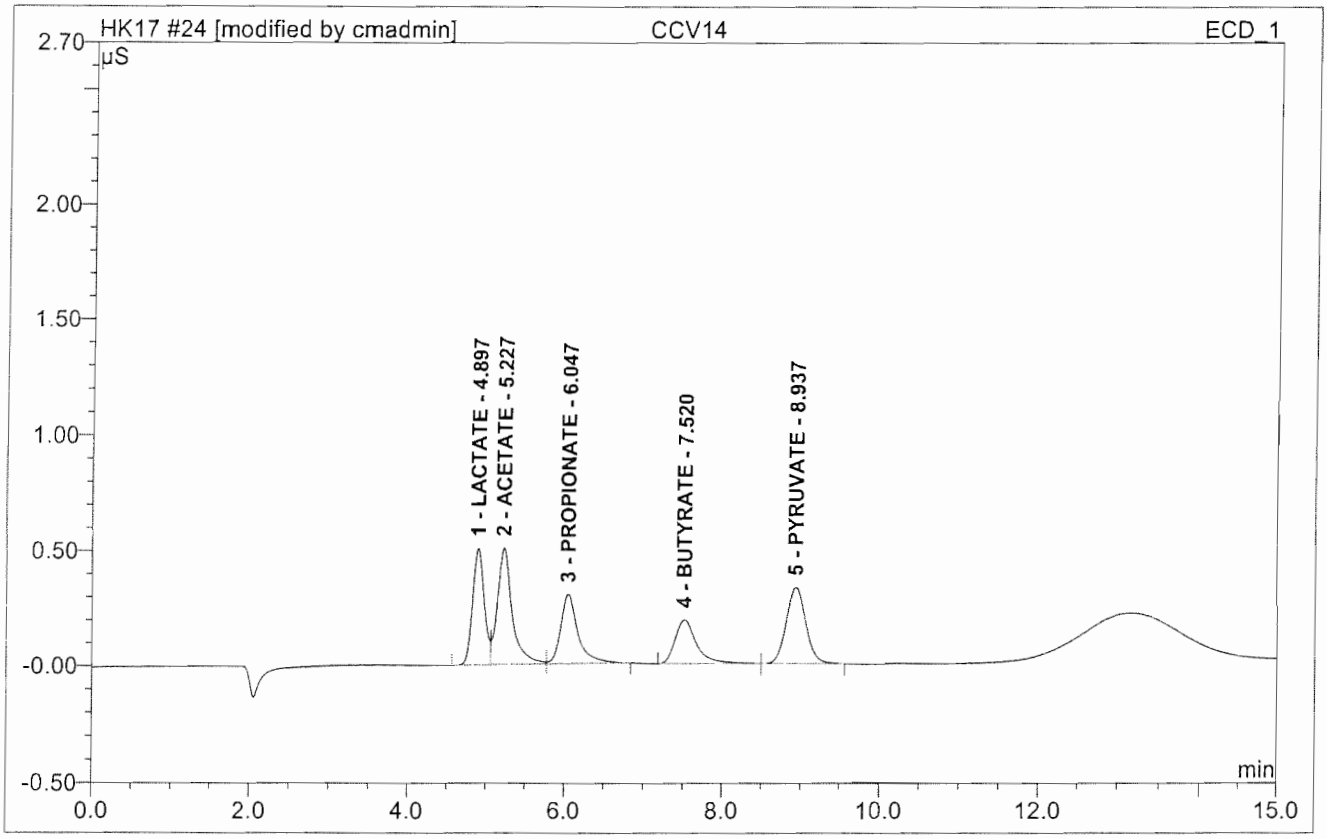
Sample Name:	**CCB12**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/17/2011 19:35**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

HK17 015 CCV14

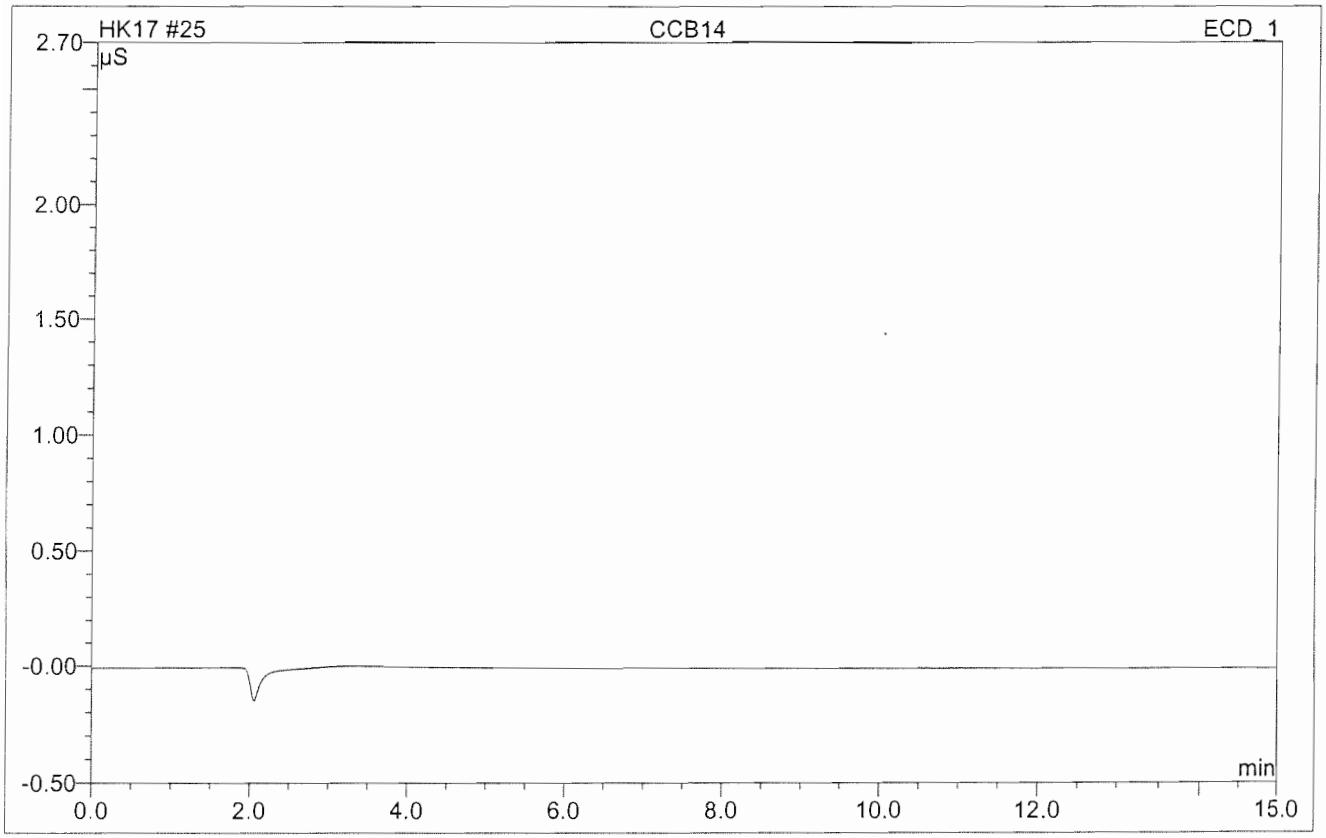
Sample Name:	**CCV14**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/18/2011 0:01**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.90	LACTATE	0.504154	0.086778	20.13	1.962	BM
2	5.23	ACETATE	0.505584	0.111592	25.88	1.958	M
3	6.05	PROPIONATE	0.301346	0.077063	17.87	1.962	MB
4	7.52	BUTYRATE	0.190884	0.060549	14.04	1.952	BM
5	8.94	PYRUVATE	0.331078	0.095171	22.07	1.850	MB
Total:			1.833	0.431	100.00	9.685	

HK17 016 CCB14

Sample Name:	**CCB14**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/18/2011 0:22**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-221

0AD6K15.met : 300M ICAL → Passed

-Linear Range :

S-0 → 0.0 ppm S-3 → 1.0 ppm

S-1 → 0.1 S-4 → 2.0

S-2 → 0.4 S-5 → 3.0

- ICV : 2ppm
- Sample Loop : 25µL
- Flow Rate : 1.50 mL/min
- Suppressor : ASRS 4mm
- SRS Current : 100 mA
- Column: Ion Pac AS11 HC, 4x250 mm
- Guard Column : Ion Pac AG16; 4x250mm

0AK010W: K101 , K084 & K035 (conf. only)

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK15
Method File:	0AD6K15.met
Analytical Batch:	0AK010W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	SW12A-02-330
ICV	332
CCV	331
LCS	332
MS	↓ 327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: ca / AM

Date: 11/15/11

Sequence: HK15
Operator: cmadmin

Printed: 11/17/2011 3:52:16 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK15	001	IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK15	002	S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK15	003	S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK15	004	S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK15	005	S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK15	006	S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK15	007	S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK15	008	ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK15	009	ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK15	010	CCV2	Unknown	100	25.0	ORG	OAD6K15	Finished	11/15/2011 11:52:01 PM	1.0000
11	HK15	011	CCB2	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 12:13:00 AM	1.0000
12	HK15	012	OAK010WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/16/2011 12:33:58 AM	1.0000
13	HK15	013	OAK010WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/16/2011 12:54:57 AM	1.0000
14	HK15	014	OAK010WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/16/2011 1:15:56 AM	1.0000
15	HK15	015	K101-01	Unknown	1	25.0	ORG	OAD6K15	Finished	11/16/2011 1:36:54 AM	1.0000
16	HK15	016	K101-02	Unknown	2	25.0	ORG	OAD6K15	Finished	11/16/2011 2:17:49 AM	1.0000
17	HK15	017	K101-03	Unknown	3	25.0	ORG	OAD6K15	Finished	11/16/2011 2:58:42 AM	1.0000
18	HK15	018	K101-04	Unknown	4	25.0	ORG	OAD6K15	Finished	11/16/2011 3:39:37 AM	1.0000
19	HK15	019	K101-05	Unknown	5	25.0	ORG	OAD6K15	Finished	11/16/2011 4:20:31 AM	1.0000
20	HK15	020	K101-05M	Unknown	6	25.0	ORG	OAD6K15	Finished	11/16/2011 5:01:24 AM	1.0000
21	HK15	021	K101-05S	Unknown	7	25.0	ORG	OAD6K15	Finished	11/16/2011 5:42:18 AM	1.0000
22	HK15	022	CCV4	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 6:23:12 AM	1.0000
23	HK15	023	CCB4	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 6:44:11 AM	1.0000
24	HK15	024	K084-01	Unknown	8	25.0	ORG	OAD6K15	Finished	11/16/2011 7:05:09 AM	1.0000
25	HK15	025	K084-02	Unknown	9	25.0	ORG	OAD6K15	Finished	11/16/2011 7:46:03 AM	1.0000
26	HK15	026	K084-03	Unknown	10	25.0	ORG	OAD6K15	Finished	11/16/2011 8:26:57 AM	1.0000
27	HK15	027	K084-04	Unknown	11	25.0	ORG	OAD6K15	Finished	11/16/2011 9:10:16 AM	1.0000

FINAL

Sequence: HK15
Operator: cmadmin

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Comment
1	HK15	
2	HK15	
3	HK15	
4	HK15	
5	HK15	
6	HK15	
7	HK15	
8	HK15	
9	HK15	
10	HK15	
11	HK15	
12	HK15	
13	HK15	
14	HK15	
15	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
17	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK15	
23	HK15	
24	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
25	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
26	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
27	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

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FINAL

8155

Sequence: HK15
Operator: cmadmin

Printed: 11/17/2011 3:35:11 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK15	028	CCV6	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 11:30:24 AM	1.0000
29	HK15	029	CCB6	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 12:32:17 PM	1.0000
30	HK15	030	K084-05	Unknown	12	25.0	ORG	OAD6K15	Finished	11/16/2011 12:53:15 PM	1.0000
31	HK15	031	K084-06	Unknown	13	25.0	ORG	OAD6K15	Finished	11/16/2011 1:34:09 PM	1.0000
32	HK15	032	K035-01	Unknown	14	25.0	ORG	OAD6K15	Finished	11/16/2011 2:15:03 PM	5.0000
33	HK15	033	K035-01A	Unknown	15	25.0	ORG	OAD6K15	Finished	11/16/2011 2:55:56 PM	5.0000
34	HK15	034	CCV8	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 3:36:50 PM	1.0000
35	HK15	035	CCB8	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 3:57:49 PM	1.0000

FINAL

Sequence: HK15
Operator: cmadmin

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Comment
28	HK15	
29	HK15	
30	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
31	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
32	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
33	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
34	HK15	
35	HK15	

FINAL

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EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-221

OAK012W : 11K119 & 11K133

- HK17.014, -.020 → -.022: Record only ; (RR) @ DF=5X due to matrix-interference, black ppt & strong odor.

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK17
Method File:	OAD6K15.met
Analytical Batch:	OAK012W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SW12A - 02 - 331
LCS	↓ 332
MS	SW12A - 02 - 327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☑ CHROMELEON	
☐	

Analyzed By: ad

Date: 11/17/11

Sequence: HK17
Operator: cmadmin

Printed: 11/21/2011 5:11:21 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 33

Created: 11/17/2011 2:07:54 PM by cmadmin
Last Update: 11/21/2011 2:36:30 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK17		IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK17		S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK17		S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK17		S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK17		S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK17		S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK17		S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK17		ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK17		ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK17	001	CCV10	Unknown	100	25.0	ORG	OAD6K15	Finished	11/17/2011 3:25:34 PM	1.0000
11	HK17	002	CCB10	Unknown	99	25.0	ORG	OAD6K15	Finished	11/17/2011 3:46:33 PM	1.0000
12	HK17	003	OAK012WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/17/2011 4:07:31 PM	1.0000
13	HK17	004	OAK012WL	Unknown	96	25.0	ORG	OAD6K15	Finished	11/17/2011 4:49:29 PM	1.0000
14	HK17	005	OAK012WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/17/2011 5:31:26 PM	1.0000
15	HK17	006	K119-01	Unknown	1	25.0	ORG	OAD6K15	Finished	11/17/2011 5:52:25 PM	1.0000
16	HK17	007	CCV12	Unknown	100	25.0	ORG	OAD6K15	Finished	11/17/2011 7:14:12 PM	1.0000
17	HK17	008	CCB12	Unknown	99	25.0	ORG	OAD6K15	Finished	11/17/2011 7:35:11 PM	1.0000
18	HK17	009	K119-02	Unknown	2	25.0	ORG	OAD6K15	Finished	11/17/2011 7:56:10 PM	1.0000
19	HK17	010	K119-03	Unknown	3	25.0	ORG	OAD6K15	Finished	11/17/2011 8:37:04 PM	1.0000
20	HK17	011	K119-04	Unknown	4	25.0	ORG	OAD6K15	Finished	11/17/2011 9:17:57 PM	1.0000
21	HK17	012	K119-05	Unknown	5	25.0	ORG	OAD6K15	Finished	11/17/2011 9:58:51 PM	1.0000
22	HK17	013	K133-02	Unknown	6	25.0	ORG	OAD6K15	Finished	11/17/2011 10:39:44 PM	1.0000
23	HK17	014 *	K133-03	Unknown	7	25.0	ORG	OAD6K15	Finished	11/17/2011 11:20:38 PM	1.0000
24	HK17	015	CCV14	Unknown	100	25.0	ORG	OAD6K15	Finished	11/18/2011 12:01:32 AM	1.0000
25	HK17	016	CCB14	Unknown	99	25.0	ORG	OAD6K15	Finished	11/18/2011 12:22:31 AM	1.0000
26	HK17	017	K133-04	Unknown	8	25.0	ORG	OAD6K15	Finished	11/18/2011 12:43:30 AM	1.0000
27	HK17	018	K133-05	Unknown	9	25.0	ORG	OAD6K15	Finished	11/18/2011 1:24:23 AM	1.0000

NOTE: * : Record only ; RR @ DF=5X due to matrix-interference, black ppt & strong odor.

FINAL

8159

Sequence: HK17
Operator: cmadmin

Printed: 11/21/2011 5:11:21 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 33

Created: 11/17/2011 2:07:54 PM by cmadmin
Last Update: 11/21/2011 2:36:30 PM by cmadmin

No.	Sequence	Comment
1	HK17	
2	HK17	
3	HK17	
4	HK17	
5	HK17	
6	HK17	
7	HK17	
8	HK17	
9	HK17	
10	HK17	
11	HK17	
12	HK17	
13	HK17	
14	HK17	
15	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK17	
17	HK17	
18	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
23	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
24	HK17	
25	HK17	
26	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
27	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

8116

FINAL

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Sequence: HK17
Operator: cmadmin

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 33

Created: 11/17/2011 2:07:54 PM by cmadmin
Last Update: 11/21/2011 2:36:30 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK17	019	K133-06	Unknown	10	25.0	ORG	OAD6K15	Finished	11/18/2011 2:05:17 AM	1.0000
29	HK17	020 *	K133-01	Unknown	11	25.0	ORG	OAD6K15	Finished	11/18/2011 2:46:11 AM	1.0000
30	HK17	021 *	K133-01M	Unknown	12	25.0	ORG	OAD6K15	Finished	11/18/2011 3:27:06 AM	1.0000
31	HK17	022 *	K133-01S	Unknown	13	25.0	ORG	OAD6K15	Finished	11/18/2011 4:07:59 AM	1.0000
32	HK17	023	CCV16	Unknown	100	25.0	ORG	OAD6K15	Finished	11/18/2011 4:48:53 AM	1.0000
33	HK17	024	CCB16	Unknown	99	25.0	ORG	OAD6K15	Finished	11/18/2011 5:09:52 AM	1.0000

NOTE: * : Record only ; RB @ DF=5X due to matrix-interference, black ppt & strong odor.

FINAL

Sequence: HK17
Operator: cmadmin

Printed: 11/21/2011 5:11:21 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 33

Created: 11/17/2011 2:07:54 PM by cmadmin
Last Update: 11/21/2011 2:36:30 PM by cmadmin

No.	Sequence	Comment
28	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
29	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
30	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
31	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
32	HK17	
33	HK17	

8112

FINAL

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CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K119

METHOD 2320B
TOTAL ALKALINITY

A total of three (3) water samples were received on 11/14/11 for Alkalinity analysis, Method 2320B in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for ALK011WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2320B
TOTAL ALKALINITY

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K119

Matrix : WATER
Instrument ID : E5

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ALK011WB	ND	1	NA	5.00	5.00	11/23/1114:53	NA	11E5K05003	NA	ALK011W	NA	NA
LCS1W	ALK011WL	207	1	NA	5.00	5.00	11/23/1115:00	NA	11E5K05004	NA	ALK011W	NA	NA
LCD1W	ALK011WC	206	1	NA	5.00	5.00	11/23/1115:07	NA	11E5K05005	NA	ALK011W	NA	NA
MW-70-PMW09-124	K119-01	163	1	NA	5.00	5.00	11/23/1116:27	NA	11E5K05014	NA	ALK011W	11/14/1110:49	11/14/11
IR-70-SHB113-125	K119-02	1170	1	NA	5.00	5.00	11/23/1116:41	NA	11E5K05015	NA	ALK011W	11/14/1112:03	11/14/11
MW-70-PMW10-126	K119-03	188	1	NA	5.00	5.00	11/23/1116:49	NA	11E5K05016	NA	ALK011W	11/14/1113:07	11/14/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K119
METHOD: METHOD 2320B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ALK011WB	ALK011WL	ALK011WC		
LAB FILE ID:	11E5K05003	11E5K05004	11E5K05005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1114:53	11/23/1115:00	11/23/1115:07	DATE RECEIVED:	NA
PREP. BATCH:	ALK011W	ALK011W	ALK011W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Total Alkalinity	ND	230	207	90	230	206	90	0	80-120	20

8115

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ALKALINITY

Note: For samples and relevent QCs/Standards analyzed, refer to attached analytical sequence.

☒ Titration end point: pH 4.5 ± 0.04

☒ Low alkalinity: pH 4.2 ± 0.04

MS/MSD amount of spike:

Comments: Method 310.1 for SDG 11K116

Book#: AAL-031

Instrument No.: ☐ 53 ☐ 97 ☒ E5

Analytical Batch: ALK011

Analytical Sequence: 11E5K05

SOP #	Rev. #
☒ EMAX-310.1	5
☒ EMAX-2320B	3
☐ EMAX-	

STANDARDS ID	CONC. (mg/L)
0.02N HCL SWR1-01-338	0.02
LCS SW1-01-402	230
MS/MSD NA	NA
ICV NA	NA

pH Buffer	ID
pH 4	SW1-01-341
pH 7	SW1-01-279
pH 10	SW1-01-396
pH 8.0 (Check)	SW1-01-347

Analyzed By: RC

Date: 11/23/11

8116

Report Date: 11/23/2011 : 5:52 PM

PC-TitratION PLUS

pH and Alkalinity In-Run Report

Run Number 546 **Analytical Batch#** 11E5K05

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
1	ICV PH8	11E5K05	11/23/2011	2:44 PM	7.98	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	
2	RINSE	11E5K05	11/23/2011	2:49 PM	5.53	.00	.03	.04	.00	1.12	1.12	.00	.00	
3	ALK011WB	11E5K05	11/23/2011	2:53 PM	4.46	.00	.00	.01	.00	-.31	-.31	.00	.00	
4	ALK011WL	11E5K05	11/23/2011	3:00 PM	8.62	1.69	5.16	-1.00	67.66	206.59	71.28	135.32	.00	
5	ALK011WC	11E5K05	11/23/2011	3:07 PM	8.64	1.75	5.16	-1.00	69.83	206.49	66.83	139.66	.00	
6	K532-01	11E5K05	11/23/2011	3:15 PM	7.89	.00	2.85	-1.00	.00	114.05	114.05	.00	.00	
7	K532-02	11E5K05	11/23/2011	3:21 PM	7.98	.00	2.87	-1.00	.00	114.66	114.66	.00	.00	
8	K532-03	11E5K05	11/23/2011	3:28 PM	8.01	.00	2.87	-1.00	.00	114.70	114.70	.00	.00	
9	K116-02	11E5K05	11/23/2011	3:41 PM	6.61	.00	17.16	-1.00	.00	686.58	686.58	.00	.00	
10	K116-04	11E5K05	11/23/2011	3:49 PM	8.05	.00	7.64	-1.00	.00	305.61	305.61	.00	.00	
11	K116-04D	11E5K05	11/23/2011	3:59 PM	8.11	.00	7.72	-1.00	.00	308.86	308.86	.00	.00	
12	K116-06	11E5K05	11/23/2011	4:08 PM	7.60	.00	15.15	-1.00	.00	606.19	606.19	.00	.00	
13	K116-07	11E5K05	11/23/2011	4:19 PM	7.62	.00	15.21	-1.00	.00	608.20	608.20	.00	.00	
14	K119-01	11E5K05	11/23/2011	4:27 PM	7.83	.00	4.08	-1.00	.00	163.05	163.05	.00	.00	
15	K119-02	11E5K05	11/23/2011	4:41 PM	7.09	.00	29.27	-1.00	.00	1,170.88	1,170.88	.00	.00	
16	K119-03	11E5K05	11/23/2011	4:49 PM	7.80	.00	4.70	-1.00	.00	187.94	187.94	.00	.00	
17	K146-02	11E5K05	11/23/2011	4:57 PM	7.40	.00	5.37	-1.00	.00	214.93	214.93	.00	.00	
18	K146-03	11E5K05	11/23/2011	5:05 PM	7.63	.00	5.42	-1.00	.00	216.92	216.92	.00	.00	

Analyzed by: Rc Reviewed by: Rc Date: 11/23/11

PC-TitratION PLUS by Man-Tech Associates, Inc.

pH AND ALKALINITY IN-RUN REPORT.SRW

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Run Number 546 **Analytical Batch#** **11E5K05**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
19	K146-04	11E5K05	11/23/2011	5:12 PM	7.51	.00	6.20	-1.00	.00	248.07	248.07	.00	.00	
20	K146-05	11E5K05	11/23/2011	5:19 PM	7.48	.00	5.59	-1.00	.00	223.44	223.44	.00	.00	
21	K146-06	11E5K05	11/23/2011	5:28 PM	7.59	.00	6.24	-1.00	.00	249.62	249.62	.00	.00	
22	K174-01	11E5K05	11/23/2011	5:36 PM	7.61	.00	5.43	-1.00	.00	217.13	217.13	.00	.00	
23	K174-07	11E5K05	11/23/2011	5:43 PM	7.61	.00	5.44	-1.00	.00	217.44	217.44	.00	.00	
24	RINSE	11E5K05	11/23/2011	5:49 PM	6.17	.00	.08	.17	.00	-.22	-.22	.00	.00	

Analyzed by: RC Reviewed by: RC Date: 11/28/11

PC-TitratION PLUS by Man-Tech Associates, Inc.

pH AND ALKALINITY IN-RUN REPORT.SRW

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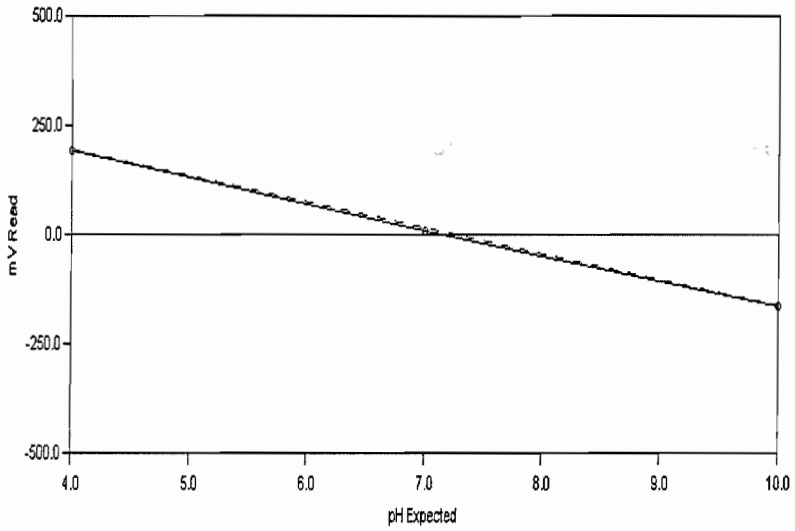
PC-TitratION PLUS
Calibration Report

Calibration Record # 284



Calibration Settings

Calibration ID	PH CAL 4-7-10	Date	11/23/2011	
Channel	1	Time	2:41 PM	
Probe Type	pH	Temperature	296.66 K	23.51 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit	

Calibration Results

Slope	-59.385	CorrCoeff	0.9998
Intercept	13.343	Equation: Y = (-59.385) X + (13.343)	

Calibration Validity **True** Operator

	Result	Minimum	Maximum
Slope	-59.385	-65.00	-53.00
Intercept	13.343	-40.00	40.00
Correlation Coefficient	0.9998	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	**Standard**	**Reading**
	4.00	193.35
	7.00	9.64
	10.00	-162.96

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PC-Titrate For Windows

Running List Report

Order Number - 111E5K05

	Schedule	Sample Id	Vial	Weight	Volume
1	PH CAL	CAL	1	.00	25.00
2	PH ONLY	ICV PH8	4	.00	25.00
3	PH-ALK	RINSE	5	.00	25.00
4	PH-ALK	ALK011WB	6	.00	25.00
5	PH-ALK	ALK011WL	7	.00	25.00
6	PH-ALK	ALK011WC	8	.00	25.00
7	PH-ALK	K532-01	9	.00	25.00
8	PH-ALK	K532-02	10	.00	25.00
9	PH-ALK	K532-03	11	.00	25.00
10	PH-ALK	K116-02	12	.00	25.00
11	PH-ALK	K116-04	13	.00	25.00
12	PH-ALK	K116-04D	14	.00	25.00
13	PH-ALK	K116-06	15	.00	25.00
14	PH-ALK	K116-07	16	.00	25.00
15	PH-ALK	K119-01	17	.00	25.00
16	PH-ALK	K119-02	18	.00	25.00
17	PH-ALK	K119-03	19	.00	25.00
18	PH-ALK	K146-02	20	.00	25.00
19	PH-ALK	K146-03	21	.00	25.00
20	PH-ALK	K146-04	22	.00	25.00
21	PH-ALK	K146-05	23	.00	25.00
22	PH-ALK	K146-06	24	.00	25.00
23	PH-ALK	K174-01	25	.00	25.00
24	PH-ALK	K174-07	26	.00	25.00
25	PH-ALK	RINSE	27	.00	25.00

PC-TitratION PLUS by Man-Tech Associates, Inc.
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8120

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K119

METHOD 2540C
TOTAL DISSOLVED SOLIDS

A total of three (3) water samples were received on 11/14/11 for Total Dissolved Solids analysis, Method 2540C in accordance with Methods for the Chemical Analysis of Water and Wastes (MCAWW) (EPA/600/4-79/020.)

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Balance calibration was checked as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TDK010WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2540C
TOTAL DISSOLVED SOLIDS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K119

Matrix : WATER
Instrument ID : 40706360

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TDK010WB	ND	1	NA	20.0	20.0	11/16/1116:43	NA	TDK01001	NA	TDK010W	NA	NA
LCS1W	TDK010WL	1020	1	NA	20.0	20.0	11/16/1116:43	NA	TDK01002	NA	TDK010W	NA	NA
LCD1W	TDK010WC	1010	1	NA	20.0	20.0	11/16/1116:43	NA	TDK01003	NA	TDK010W	NA	NA
MW-70-PMW09-124	K119-01	525	1	NA	20.0	20.0	11/16/1116:43	NA	TDK01022	NA	TDK010W	11/14/1110:49	11/14/11
IR-70-SHB113-125	K119-02	1890	1	NA	20.0	20.0	11/16/1116:43	NA	TDK01023	NA	TDK010W	11/14/1112:03	11/14/11
MW-70-PMW10-126	K119-03	1300	1	NA	20.0	20.0	11/16/1116:43	NA	TDK01024	NA	TDK010W	11/14/1113:07	11/14/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K119
METHOD: METHOD 2540C

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TDK010WB	TDK010WL	TDK010WC		
LAB FILE ID:	TDK01001	TDK01002	TDK01003		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/16/1116:43	11/16/1116:43	11/16/1116:43	DATE RECEIVED:	NA
PREP. BATCH:	TDK010W	TDK010W	TDK010W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TDS	ND	1000	1020	102	1000	1010	101	1	80-120	20

8123

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
GRAVIMETRIC

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AGV-047

Balance ID: 40706360

Analytical Batch: TDK010

SOP #	Rev. #
☐ EMAX-160.1	6
☐ EMAX-160.2	4
☐ EMAX-160.3	2
☐ EMAX-2540B	1
☐ EMAX-2540C	5
☐ EMAX-2540D	1

STANDARDS ID	CONC. (mg/L)
LCS SW2-02-914	1000

Micropipette ID: 438 481 331

Analyzed By: NW

Date: ~~11/10/11~~ NW 11/17/11 11/17/11

GRAVIMETRIC ANALYSES
RAW DATA

11TDK010.xls

EMAX LABORATORIES, INC.

Analytical Batch: TDK010 | Instrument ID: 40706360 | Oven Temp IN (°C): 180 | Oven Temp OUT (°C): 180 | SOP: EMAX160.1 Rev. 3

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish #	Dish (g)	Date	Time	1st Dry Weight + Dish (g)	Date	Time	2nd Dry Weight + Dish (g)	Date	Time	3rd Dry Weight + Dish (g)	Date	Time	Difference 1st & 2nd Dry Wt. Rdg.	Difference 2nd & 3rd Dry Wt. Rdg. (<0.5mg)	NOTES
TDK01001	TDK010WB	100	B	70.7048	11/16/11	16:43	70.7051	11/17/11	16:54	70.7049	11/17/11	18:38	70.7049	11/17/11	18:38	-0.0002	0.0	
TDK01002	TDK010WL	20	L	21.5173	11/16/11	16:43	21.5378	11/17/11	16:55	21.5376	11/17/11	18:38	21.5376	11/17/11	18:38	-0.0002	0.0	
TDK01003	TDK010WC	20	C	21.526	11/16/11	16:44	21.5467	11/17/11	16:55	21.5463	11/17/11	18:39	21.5463	11/17/11	18:39	-0.0004	0.0	
TDK01004	K104-02	2	1	21.4544	11/16/11	16:44	21.5219	11/17/11	16:55	21.5217	11/17/11	18:39	21.5217	11/17/11	18:39	-0.0002	0.0	
TDK01005	K104-03	20	2	21.5821	11/16/11	16:45	21.5966	11/17/11	16:56	21.5963	11/17/11	18:39	21.5963	11/17/11	18:40	-0.0003	0.0	
TDK01006	K104-04	20	3	21.6193	11/16/11	16:45	21.6356	11/17/11	16:56	21.6352	11/17/11	18:40	21.6352	11/17/11	18:40	-0.0004	0.0	
TDK01007	K104-06	2	5	21.4461	11/16/11	16:46	21.5375	11/17/11	16:56	21.5373	11/17/11	18:40	21.5373	11/17/11	18:40	-0.0002	0.0	
TDK01008	K104-07	2	6	21.5153	11/16/11	16:46	21.6072	11/17/11	16:56	21.6069	11/17/11	18:40	21.6069	11/17/11	18:40	-0.0003	0.0	
TDK01009	K104-08	2	7	21.4680	11/16/11	16:47	21.5649	11/17/11	16:57	21.5647	11/17/11	18:41	21.5647	11/17/11	18:41	-0.0002	0.0	
TDK01010	K104-09	5	8	21.2173	11/16/11	16:47	21.2996	11/17/11	16:57	21.2995	11/17/11	18:41	21.2995	11/17/11	18:41	-0.0001	0.0	
TDK01011	K104-10	2	9	21.5196	11/16/11	16:47	21.5772	11/17/11	16:57	21.5769	11/17/11	18:41	21.5769	11/17/11	18:41	-0.0003	0.0	
TDK01012	K104-12	20	10	21.5056	11/16/11	16:47	21.5186	11/17/11	16:57	21.5182	11/17/11	18:42	21.5182	11/17/11	18:42	-0.0004	0.0	
TDK01013	K104-13	2	11	21.5072	11/16/11	16:48	21.5662	11/17/11	16:58	21.566	11/17/11	18:42	21.566	11/17/11	18:42	-0.0002	0.0	
TDK01014	K104-14	5	12	21.6803	11/16/11	16:49	21.7805	11/17/11	16:58	21.7804	11/17/11	18:42	21.7804	11/17/11	18:42	-1E-04	0.0	
TDK01015	K104-14D	5	13	21.4266	11/16/11	16:49	21.522	11/17/11	16:58	21.5221	11/17/11	18:42	21.5221	11/17/11	18:42	1E-04	0.0	
TDK01016	K116-02	20	14	21.5104	11/16/11	16:49	21.5606	11/17/11	16:58	21.5606	11/17/11	18:43	21.5606	11/17/11	18:43	0	0.0	
TDK01017	K116-04	20	15	21.4312	11/16/11	16:49	21.4466	11/17/11	16:59	21.4464	11/17/11	18:43	21.4464	11/17/11	18:43	-0.0002	0.0	
TDK01018	K116-04D	20	16	21.5832	11/16/11	16:50	21.5989	11/17/11	16:59	21.5986	11/17/11	18:44	21.5986	11/17/11	18:44	-0.0003	0.0	
TDK01019	K116-06	5	17	21.4886	11/16/11	16:50	21.5449	11/17/11	16:59	21.5448	11/17/11	18:44	21.5448	11/17/11	18:44	-1E-04	0.0	
TDK01020	K116-07	5	18	21.4506	11/16/11	16:50	21.5079	11/17/11	17:00	21.5078	11/17/11	18:44	21.5078	11/17/11	18:44	-1E-04	0.0	
TDK01021	K118-01	20	19	21.5490	11/16/11	16:50	21.5727	11/17/11	17:00	21.5724	11/17/11	18:44	21.5724	11/17/11	18:44	-0.0003	0.0	
TDK01022	K119-01	100	20	70.0770	11/16/11	16:51	70.1296	11/17/11	17:00	70.1295	11/17/11	18:45	70.1295	11/17/11	18:45	-0.0001	0.0	
TDK01023	K119-02	20	21	21.4634	11/16/11	16:51	21.5012	11/17/11	17:01	21.5011	11/17/11	18:45	21.5011	11/17/11	18:45	-1E-04	0.0	
TDK01024	K119-03	20	22	21.4777	11/16/11	16:52	21.5037	11/17/11	17:01	21.5037	11/17/11	18:45	21.5037	11/17/11	18:46	0	0.0	

NM 11/17/11

Beginning Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/16/11 16:42	PASSED
5	4.9999	11/16/11 16:42	PASSED
100	99.9975	11/16/11 16:42	PASSED

Ending Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/16/11 16:52	PASSED
5	5.0000	11/16/11 16:52	PASSED
100	99.9980	11/16/11 16:52	PASSED

Beginning Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.0999	11/17/11 16:54	PASSED
5	5.0000	11/17/11 16:54	PASSED
100	99.9980	11/17/11 16:54	PASSED

Ending Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.0998	11/17/11 18:46	PASSED
5	5.0000	11/17/11 18:47	PASSED
100	99.9978	11/17/11 18:47	PASSED

Acceptance Criteria: ± 0.1% OR 0.05 mg whichever is greater

LCS Conc 1000 mg/L MDL: 10 mg/L RL: 10 mg/L Initial Rdg by: NM Final Rdg by: NM Reviewed by: NM

Remarks Date 11/17/11

8125

GRAVIMETRIC CALCULATION

Analytical Batch: TDK010 Start Date/Time: 11/16/11 16:43 Temp IN(°C): 180

Balance ID: 40706360 End Date/Time: 11/17/11 18:44 Temp Out(°C): 180

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish (g)	Dry Weight + Dish (g)	SOLIDS (mg)	RESULT (mg/L)	NOTES
TDK01001	TDK010WB	100	70.7048	70.7049	0.1000	ND	
TDK01002	TDK010WL	20	21.5173	21.5376	20.3000	1020	102
TDK01003	TDK010WC	20	21.526	21.5463	20.3000	1010	101
TDK01004	K104-02	2	21.4544	21.5217	67.3000	33600	
TDK01005	K104-03	20	21.5821	21.5963	14.2000	710	
TDK01006	K104-04	20	21.6193	21.6352	15.9000	795	
TDK01007	K104-06	2	21.4461	21.5373	91.2000	45600	
TDK01008	K104-07	2	21.5153	21.6069	91.6000	45800	
TDK01009	K104-08	2	21.468	21.5647	96.7000	48300	
TDK01010	K104-09	5	21.2173	21.2995	82.2000	16400	
TDK01011	K104-10	2	21.5196	21.5769	57.3000	28600	
TDK01012	K104-12	20	21.5056	21.5182	12.6000	630	
TDK01013	K104-13	2	21.5072	21.566	58.8000	29400	
TDK01014	K104-14	5	21.6803	21.7804	100.1000	20000	
TDK01015	K104-14D	5	21.4266	21.5221	95.5000	19100	
TDK01016	K116-02	20	21.5104	21.5606	50.2000	2510	
TDK01017	K116-04	20	21.4312	21.4464	15.2000	760	
TDK01018	K116-04D	20	21.5832	21.5986	15.4000	770	
TDK01019	K116-06	5	21.4886	21.5448	56.2000	11200	
TDK01020	K116-07	5	21.4506	21.5078	57.2000	11400	
TDK01021	K118-01	20	21.549	21.5724	23.4000	1170	
TDK01022	K119-01	100	70.077	70.1295	52.5000	525	
TDK01023	K119-02	20	21.4634	21.5011	37.7000	1890	
TDK01024	K119-03	20	21.4777	21.5037	26.0000	1300	
							NM 11/17/11

LCS Concentration: 1000 mg/L MDL(mg/L): 10 Initial Reading by: NM

SOP: EMAX160.1 Rev. 3 RL (mg/L): 10 Final Reading by: NM

Remarks:

Reviewed by: NM

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K119

METHOD 4500F
DISSOLVED HYDROGEN SULFIDE

A total of three (3) water samples were received on 11/14/11 for Dissolved Hydrogen Sulfide analysis, Method 4500F in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 4500F
Dissolved Hydrogen Sulfide

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K119

Matrix : WATER
Instrument ID : MA

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	HSK003WB	ND	1	NA	1.00	1.00	11/21/1114:52	NA	HSK00301	NA	HSK003W	NA	NA
MW-70-PMW09-124	K119-01	ND	1	NA	1.00	1.00	11/21/1115:50	NA	HSK00310	NA	HSK003W	11/14/1110:49	11/14/11
IR-70-SHB113-125	K119-02	ND	1	NA	1.00	1.00	11/21/1115:53	NA	HSK00311	NA	HSK003W	11/14/1112:03	11/14/11
MW-70-PMW10-126	K119-03	ND	1	NA	1.00	1.00	11/21/1115:57	NA	HSK00312	NA	HSK003W	11/14/1113:07	11/14/11

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
SULFIDE

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Book #: ASD-018

Analytical Batch: K003

Comments:

Presence of analyte was confirmed using spectrometric method.

Abs @ 664

Blank (0 ppm) = 0

1ppm @ NM 11/21 = 0.688

K133-01 @ 1X = 1.999

K133-01D @ 1X = 1.999

K133-03 @ 1X = 1.999

K133-01 @ 20X = 0.676

K133-01D @ 20X = 0.679

K133-03 @ 20X = 0.684

SOP #	Rev. #
☑ EMAX-376.1	3
☐ EMAX-9034	0
☐ EMAX-4500-S2F	1
☑ EMAX-4500-S2H	0
☐ EMAX-	

STANDARDS ID	conc.
LCS SWI-01-422	8.48
Spike NA	NA
$Na_2S_2O_3$ Standard SWP1-01-384	0.0248
Iodine SWP1-01 ~~465~~ ~~40~~ 465 NM 11/22	0.0250
HCl SWP1-007 ~~60-03~~ 91-01 NM 11/22	6N
Indicator SWP1-01-340	—

Analyzed By: NM

Date: 11/21/22

8129

SM4500-S^2 H

EMAX LABORATORIES, INC.

ANALYSIS FOR UN-IONIZED HYDROGEN SULFIDE

Method SM4500-S2-H

Analytical Batch: HSK003

Data File Name	Lab Sample ID	Sulfide	Unit	Date Time	Temp. °C	pH	Conductivity µS/cm	H2S	Unit	COMMENTS
HSK0031	HSK003WB	ND	mg/L	11/21/11 14:52				ND	mg/L	
HSK0032	HSK003WL	7.38	mg/L	11/21/11 15:00				#VALUE!	mg/L	
HSK0033	HSK003WC	7.18	mg/L	11/21/11 15:05				#VALUE!	mg/L	
HSK0034	K133-01	16.8	mg/L	11/21/11 15:11	24.7	6.88	27400	8.11	mg/L	
HSK0035	K133-01D	17.6	mg/L	11/21/11 15:17	25.2	6.86	27500	8.64	mg/L	
HSK0036	K133-02	ND	mg/L	11/21/11 15:30	25.1	7.28	5800	ND	mg/L	
HSK0037	K133-03	18.7	mg/L	11/21/11 15:34	25.2	6.61	31500	11.8	mg/L	
HSK0038	K133-04	ND	mg/L	11/21/11 15:40	25.2	6.88	14240	ND	mg/L	
HSK0039	K133-05	ND	mg/L	11/21/11 15:43	24.9	7.1	5910	ND	mg/L	
HSK00310	K119-01	ND	mg/L	11/21/11 15:50	24.7	7.57 ✓	847 ✓	ND	mg/L	
HSK00311	K119-02	ND	mg/L	11/21/11 15:53	24.7	6.88 ✓	2420 ✓	ND	mg/L	
HSK00312	K119-03	ND	mg/L	11/21/11 15:57	24.7	7.54 ✓	1816 ✓	ND	mg/L	
HSK00313	K164-01	ND	mg/L	11/21/11 16:04	25.2	7.98	321	ND	mg/L	
HSK00314	K164-02	ND	mg/L	11/21/11 16:10	25.3	8.08	296	ND	mg/L	
HSK00315	K164-03	ND	mg/L	11/21/11 16:14	25.3	8.11	300	ND	mg/L	

NM 11/21/11

$$pK_1 = 32.5 + 1519.44/T - 15.672\log_{10}T + 0.02722T$$

$$A = 0.7083 - 2.277x10^{-3}T + 5.399x10^{-6}T^2$$

$$I = 1.6x10^{-5}\,Conductivity$$

$$pf_m = A\left(\frac{\sqrt{I}}{1+\sqrt{I}} - 0.3\right)$$

$$K'_1 = 10^{-pK_1 + 2pf_m}$$

$$H^+ = 10^{-pH + pf_m}$$

$$H_2S = \left(\frac{S_T}{1 + \frac{K'_1}{H^+}}\right)$$

Analyzed by: NM

Reviewed by: NM

Date: 11/21/11

Where: T(°K)= T°C+272.15 pK1=dissociation constant for zero ionic strength A= Debye-Huckel Parameter I= Ionic Strength pfm=negative logarithm of the monovalent ion activity coefficient K'_1=conditional ionization constant H^+=Hydrogen ion concentration S_T=Total Sulfide Concentration

EMAX LABORATORIES, INC.

ANALYSIS FOR SULFIDE

Method: SM4500-S2-H Analytical Batch: **HSK003** Book #: ASD-018 Page: 14

Data File Name	Lab Sample ID	V_e (ml)	V_I (ml)	Volume of Titant V_t (ml)	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Sulfide	Sample Result	Flag J	Unit
HSK0031	**HSK003WB**	100	2.5	2.48	11/21/11	14:52:40	0.15936	ND		mg/L
HSK0032	**HSK003WL**	100	2.5	0.66	11/21/11	15:00:58	7.38112	7.38		mg/L
HSK0033	**HSK003WC**	100	2.5	0.71	11/21/11	15:05:29	7.18272	7.18		mg/L
HSK0034	**K133-01**	100	5	0.8	11/21/11	15:11:07	16.8256	16.8		mg/L
HSK0035	**K133-01D**	100	5	0.6	11/21/11	15:17:13	17.6192	17.6		mg/L
HSK0036	**K133-02**	100	2.5	2.49	11/21/11	15:30:32	0.11968	ND		mg/L
HSK0037	**K133-03**	100	5	0.32	11/21/11	15:34:50	18.73024	18.7		mg/L
HSK0038	**K133-04**	100	2.5	2.58	11/21/11	15:40:16	-0.23744	ND		mg/L
HSK0039	**K133-05**	100	2.5	2.43	11/21/11	15:43:17	0.35776	ND		mg/L
HSK00310	**K119-01**	100	2.5	2.42	11/21/11	15:50:12	0.39744	ND		mg/L
HSK00311	**K119-02**	100	2.5	2.53	11/21/11	15:53:40	-0.03904	ND		mg/L
HSK00312	**K119-03**	100	2.5	2.43	11/21/11	15:57:13	0.35776	ND		mg/L
HSK00313	**K164-01**	100	2.5	2.48	11/21/11	16:04:29	0.15936	ND		mg/L
HSK00314	**K164-02**	100	2.5	2.45	11/21/11	16:10:34	0.2784	ND		mg/L
HSK00315	**K164-03**	100	2.5	2.48	11/21/11	16:14:07	0.15936	ND		mg/L

NM 11/21/11

STANDARDIZATION

V_I (ml)	V_{Na2SO3} (ml)	DATE	TIME	Titrant Na_2SO_3 (N)
Average Normality of Iodine (NI)=				**0.025**

☑ Standard Purchased as Certified Solution

$$N_I = \frac{(N * V)_{Na_2SO_3}}{V_I}$$

MISCELLANEOUS INFORMATION

Standard	Concentration		Unit
Iodine	0.025		*N*
$Na_2S_2O_3$	0.0248		*N*
LCS [WATER | SOIL]	8.48	84.8	*mg/L | mg/Kg*
MDL [WATER | SOIL]	1	10	*mg/L | mg/Kg*
RL	1	10	*mg/L | mg/Kg*

$$S(mg/L) = \frac{[(V_I * N_I) - (V_t * N_t)](16{,}000)}{V_S}$$

MS/MSD	TV=	8.48	mg/L
ID	Result (mg/L)	%Rec.	RPD

Comments:

Analyzed By: NM

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K119

METHOD SM5310B
TOC

A total of three (3) water samples were received on 11/14/11 for Total Organic Carbon analysis, Method SM5310B in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TCK013WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD SM5310B
TOC

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K119

Matrix : WATER
Instrument ID : I62

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
LCS1W	TCK013WL	25.1	1	NA	1.00	0.500	11/18/1100:05	NA	TCK009-34	TCK009-26	TCK013W	NA	NA
LCD1W	TCK013WC	24.7	1	NA	1.00	0.500	11/18/1100:19	NA	TCK009-35	TCK009-26	TCK013W	NA	NA
MBLK1W	TCK013WB	ND	1	NA	1.00	0.500	11/18/1100:31	NA	TCK009-36	TCK009-26	TCK013W	NA	NA
MW-70-PMW09-124	K119-01	ND	1	NA	1.00	0.500	11/18/1101:28	NA	TCK009-40	TCK009-38	TCK013W	11/14/1110:49	11/14/11
IR-70-SHB113-125	K119-02	4.06	1	NA	1.00	0.500	11/18/1101:39	NA	TCK009-41	TCK009-38	TCK013W	11/14/1112:03	11/14/11
MW-70-PMW10-126	K119-03	ND	1	NA	1.00	0.500	11/18/1101:51	NA	TCK009-42	TCK009-38	TCK013W	11/14/1113:07	11/14/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K119
METHOD: METHOD SM5310B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TCK013WB	TCK013WL	TCK013WC		
LAB FILE ID:	TCK009-36	TCK009-34	TCK009-35		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1100:31	11/18/1100:05	11/18/1100:19	DATE RECEIVED:	NA
PREP. BATCH:	TCK013W	TCK013W	TCK013W		
CALIB. REF:	TCK009-26	TCK009-26	TCK009-26		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	ND	25.0	25.1	100	25.0	24.7	99	2	85-115	20

B1C1

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TOC

	Date	Time
Start	11/17/11	1613
End	11/18/11	0311

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

TCk012W/TCk013W
K116 415.1] DOC
K131 ↓
K119 5310B
K122 ↓
K134 ↓

Samples K131-04, K122-03, K122-04, & K134-04 were diluted prior to analysis due to their yellow coloration.

2 M HCl SW4-01-223

Book #:	A62-020
Instrument No.:	62
Pipette ID:	039380025
	SW3-01-33
	SI1A-01-4
Balance ID:	40706360
Analytical Sequence:	TCk009
Method File:	TCk009
Analytical Batch:	TCk012W/13W

SOP #	Rev. #
☑ EMAX-415.1	2
☑ EMAX-5310B	1
☐ EMAX-9060	2
☐ EMAX-	

STANDARDS ID	CONC. (mg/L)
S0 nanopure	0
S1 SW10B-04-174	1
S2 ↓	5
S3	10
S4	40
S5	80
S6 —	—
ICV/LCS SW10B-04-175	25
CCV ↓ 776	25

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ TOC	
☐	

Analyzed By: AM

Date: 11/17/11

8135

	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
1	Standard	NPOC	ICAL	TCK009-01	0A-123456-	C:\Program	1.000		
2	Control	NPOC	ICV	TCK009-02	0A-123456-	C:\Program	1.000	NPOC:24.47 mg/L	
3	Unknown	NPOC	ICB	TCK009-03	0A-123456-	C:\Program	1.000	NPOC:0.05031 mg	
4	Unknown	NPOC	HCO3\CO3	TCK009-04	0A-123456-	C:\Program	1.000	NPOC:0.1207 mg/	
5	Unknown	NPOC	TCK012WB	TCK009-05	0A-123456-	C:\Program	1.000	NPOC:0.06951 mg	
6	Unknown	NPOC	TCK012WL	TCK009-06	0A-123456-	C:\Program	1.000	NPOC:24.52 mg/L	
7	Unknown	NPOC	TCK012WC	TCK009-07	0A-123456-	C:\Program	1.000	NPOC:24.69 mg/L	
8	Unknown	NPOC	K116-02R	TCK009-08	0A-123456-	C:\Program	10.00	NPOC:205.0 mg/L	DF=10
9	Unknown	NPOC	K116-04R	TCK009-09	0A-123456-	C:\Program	1.000	NPOC:2.356 mg/L	
10	Unknown	NPOC	K116-04M	TCK009-10	0A-123456-	C:\Program	1.000	NPOC:28.17 mg/L	
11	Unknown	NPOC	K116-04S	TCK009-11	0A-123456-	C:\Program	1.000	NPOC:28.12 mg/L	
12	Unknown	NPOC	K116-06R	TCK009-12	0A-123456-	C:\Program	1.000	NPOC:18.23 mg/L	
13	Unknown	NPOC	K116-07R	TCK009-13	0A-123456-	C:\Program	1.000	NPOC:18.30 mg/L	
14	Control	NPOC	CCV1	TCK009-14	0A-123456-	C:\Program	1.000	NPOC:25.74 mg/L	
15	Unknown	NPOC	CCB1	TCK009-15	0A-123456-	C:\Program	1.000	NPOC:0.2644 mg/	
16	Unknown	NPOC	K131-02	TCK009-16	0A-123456-	C:\Program	1.000	NPOC:4.599 mg/L	PH<2
17	Unknown	NPOC	K131-03	TCK009-17	0A-123456-	C:\Program	1.000	NPOC:0.9628 mg/	PH<2
18	Unknown	NPOC	K131-04	TCK009-18	0A-123456-	C:\Program	2.000	NPOC:594.0 mg/L	PH<2; DF=2
19	Unknown	NPOC	K131-05	TCK009-19	0A-123456-	C:\Program	1.000	NPOC:17.86 mg/L	PH<2
20	Unknown	NPOC	K131-06	TCK009-20	0A-123456-	C:\Program	1.000	NPOC:3.151 mg/L	PH<2
21	Unknown	NPOC	K131-08	TCK009-21	0A-123456-	C:\Program	1.000	NPOC:6.225 mg/L	PH<2
22	Unknown	NPOC	K131-09	TCK009-22	0A-123456-	C:\Program	1.000	NPOC:2.064 mg/L	PH<2
23	Unknown	NPOC	K131-10	TCK009-23	0A-123456-	C:\Program	1.000	NPOC:2.593 mg/L	PH<2
24	Unknown	NPOC	K131-11	TCK009-24	0A-123456-	C:\Program	1.000	NPOC:2.594 mg/L	PH<2
25	Unknown	NPOC	K131-13	TCK009-25	0A-123456-	C:\Program	1.000	NPOC:20.06 mg/L	PH<2
26	Control	NPOC	CCV2	TCK009-26	0A-123456-	C:\Program	1.000	NPOC:24.66 mg/L	
27	Unknown	NPOC	CCB2	TCK009-27	0A-123456-	C:\Program	1.000	NPOC:0.3732 mg/	
28	Unknown	NPOC	K131-14	TCK009-28	0A-123456-	C:\Program	1.000	NPOC:4.422 mg/L	PH<2
29	Unknown	NPOC	K131-15	TCK009-29	0A-123456-	C:\Program	1.000	NPOC:4.169 mg/L	PH<2
30	Unknown	NPOC	K131-16	TCK009-30	0A-123456-	C:\Program	1.000	NPOC:3.807 mg/L	PH<2
31	Unknown	NPOC	K131-17	TCK009-31	0A-123456-	C:\Program	1.000	NPOC:30.27 mg/L	PH<2
32	Unknown	NPOC	K131-18	TCK009-32	0A-123456-	C:\Program	1.000	NPOC:1.514 mg/L	PH<2
33	Unknown	NPOC	K131-19	TCK009-33	0A-123456-	C:\Program	1.000	NPOC:4.317 mg/L	PH<2
34	Unknown	NPOC	TCK013WL	TCK009-34	0A-123456-	C:\Program	1.000	NPOC:25.07 mg/L	
35	Unknown	NPOC	TCK013WC	TCK009-35	0A-123456-	C:\Program	1.000	NPOC:24.67 mg/L	
36	Unknown	NPOC	TCK013WB	TCK009-36	0A-123456-	C:\Program	1.000	NPOC:0.4082 mg/	
37	Unknown	NPOC	TCK013WQ	TCK009-37	0A-123456-	C:\Program	1.000	NPOC:0.8078 mg/	Bad inj. - not evaluated
38	Control	NPOC	CCV3	TCK009-38	0A-123456-	C:\Program	1.000	NPOC:25.24 mg/L	
39	Unknown	NPOC	CCB3	TCK009-39	0A-123456-	C:\Program	1.000	NPOC:0.3175 mg/	
40	Unknown	NPOC	K119-01	TCK009-40	0A-123456-	C:\Program	1.000	NPOC:0.8441 mg/	PH<2
41	Unknown	NPOC	K119-02	TCK009-41	0A-123456-	C:\Program	1.000	NPOC:4.059 mg/L	PH<2
42	Unknown	NPOC	K119-03	TCK009-42	0A-123456-	C:\Program	1.000	NPOC:0.9550 mg/	PH<2
43	Unknown	NPOC	K122-03	TCK009-43	0A-123456-	C:\Program	2.000	NPOC:19.89 mg/L	PH<2; DF=2
44	Unknown	NPOC	K122-04	TCK009-44	0A-123456-	C:\Program	2.000	NPOC:19.45 mg/L	PH<2; DF=2
45	Unknown	NPOC	K134-03	TCK009-45	0A-123456-	C:\Program	1.000	NPOC:7.835 mg/L	PH<2
46	Unknown	NPOC	K134-04	TCK009-46	0A-123456-	C:\Program	2.000	NPOC:45.75 mg/L	PH<2; DF=2
47	Unknown	NPOC	K134-05	TCK009-47	0A-123456-	C:\Program	1.000	NPOC:3.824 mg/L	PH<2
48	Control	NPOC	CCV4	TCK009-48	0A-123456-	C:\Program	1.000	NPOC:24.58 mg/L	
49	Unknown	NPOC	CCB4	TCK009-49	0A-123456-	C:\Program	1.000	NPOC:0.09001 mg	
50									
51									
52									
53									
54									
55									
56									
57									
58									
59									
60									
61									FINAL
62									
63									
64									
65									
66									
67								11/18/11	

AM 11/18/11

AM 11/18/11

Instr.Information

System	toc
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Cal. Curve

Sample Name:	ICAL
Sample ID:	TCK009-01
Cal. Curve:	TCK009.2011_11_17_16_05_00.cal

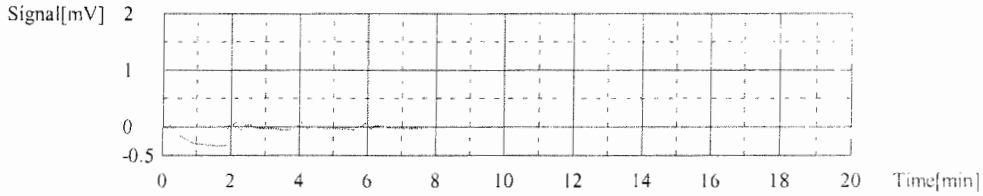
Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.000	50uL	1	*******		11/17/11 04:13:34 PM
2	0.000	50uL	1	*******		11/17/11 04:15:40 PM
3	0.000	50uL	1	*******		11/17/11 04:17:45 PM
4	0.000	50uL	1	*******		11/17/11 04:19:51 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 0.000

$\frac{\text{Mean area}}{\text{slope}} = \frac{0.000}{2.229} = 0.000$

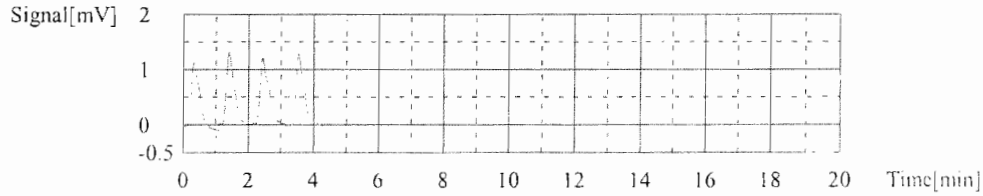


Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	2.089	50uL	10	*******		11/17/11 04:28:07 PM
2	2.174	50uL	10	*******		11/17/11 04:29:21 PM
3	2.214	50uL	10	*******		11/17/11 04:30:39 PM
4	2.249	50uL	10	*******		11/17/11 04:31:55 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 2.182

$\frac{\bar{A}}{m} = \frac{2.182}{2.229} = 0.9789$

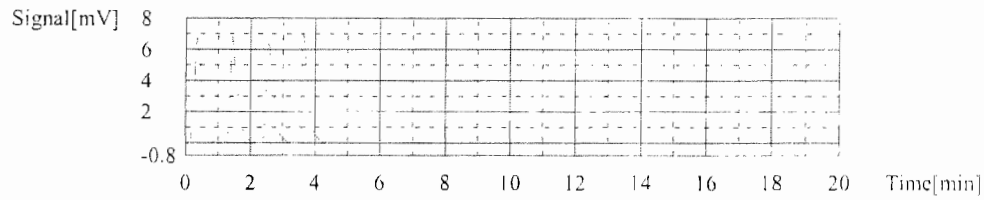


Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	10.73	50uL	2	*******		11/17/11 04:38:17 PM
2	10.93	50uL	2	*******		11/17/11 04:39:36 PM
3	10.81	50uL	2	*******		11/17/11 04:40:53 PM
4	10.92	50uL	2	*******		11/17/11 04:42:07 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 10.85

$\frac{\bar{A}}{m} = \frac{10.85}{2.229} = 4.868$

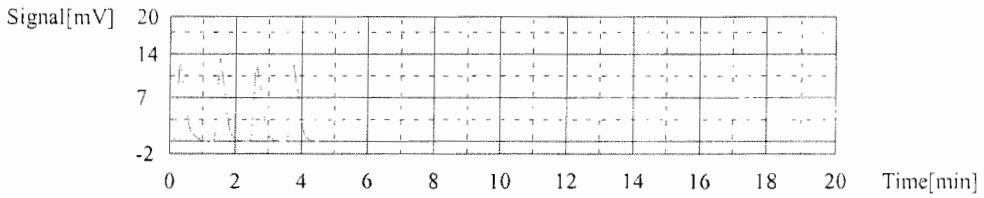


Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	21.70	50uL	1	*******		11/17/11 04:47:54 PM
2	21.82	50uL	1	*******		11/17/11 04:49:12 PM
3	21.77	50uL	1	*******		11/17/11 04:50:31 PM
4	21.70	50uL	1	*******		11/17/11 04:51:48 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 21.75

$\frac{\bar{A}}{m} = \frac{21.75}{2.229} = 9.758$

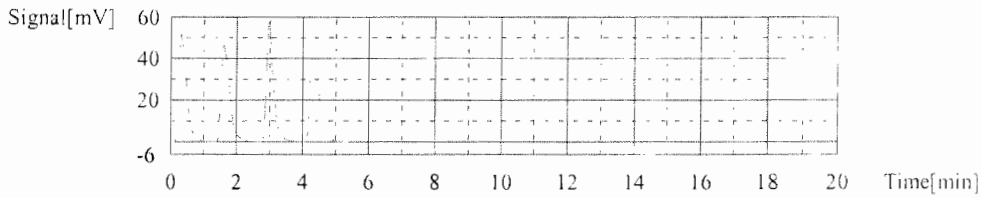


Conc: 40.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	87.08	50uL	2	*******		11/17/11 05:00:17 PM
2	86.42	50uL	2	*******		11/17/11 05:01:52 PM
3	88.17	50uL	2	*******		11/17/11 05:03:23 PM
4	87.02	50uL	2	*******		11/17/11 05:05:00 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 87.17

$\frac{\bar{A}}{m} = \frac{87.17}{2.229} = 39.11$

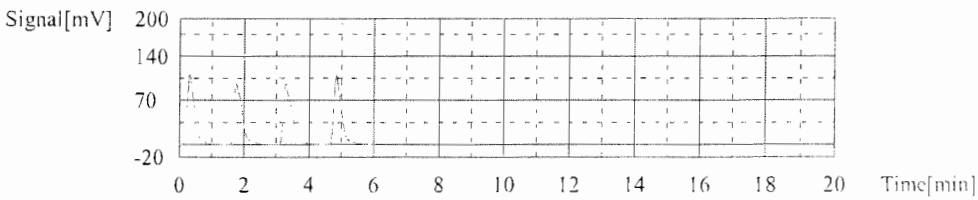


Conc: 80.00mg/L

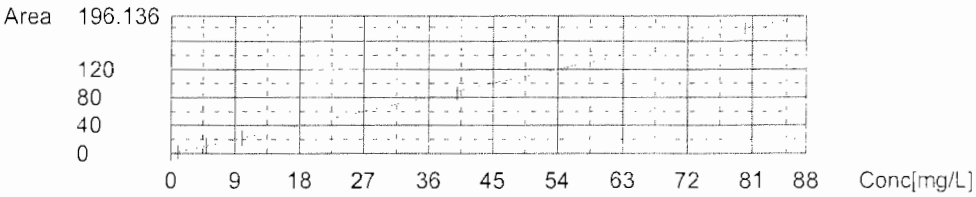
No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	176.6	50uL	1	*******		11/17/11 05:11:00 PM
2	178.8	50uL	1	*******		11/17/11 05:12:44 PM
3	178.5	50uL	1	*******		11/17/11 05:14:29 PM
4	180.8	50uL	1	*******		11/17/11 05:16:12 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 178.7

$\frac{\bar{A}}{m} = \frac{178.7}{2.229} = 80.17$



Slope: 2.229
Intercept 0.000
r^2 0.999864



8138

Control Sample

Sample Name: ICV
Sample ID: TCK009-02
Method: TCK009.tpl
Chk. Result Control value: 24.47 / Control exceeds range!

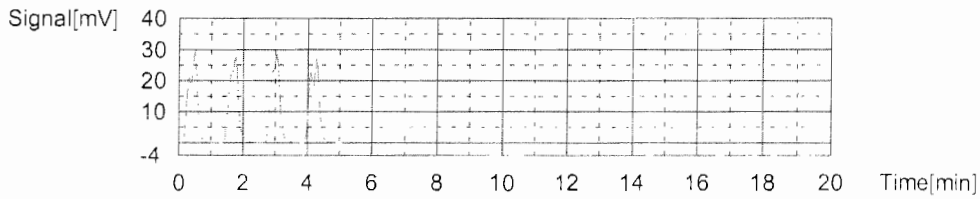
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:24.47 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.13	24.29mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 05:24:09 PM
2	54.50	24.45mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 05:25:39 PM
3	54.97	24.66mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 05:27:04 PM
4	54.57	24.48mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 05:28:32 PM

Mean Area 54.54
Mean Conc. 24.47mg/L



Sample

Sample Name: ICB
Sample ID: TCK009-03
Origin: TCK009.cal
Chk. Result

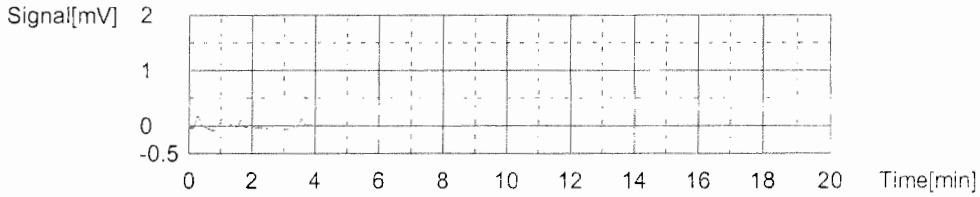
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.05031 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2702	0.1212mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 05:35:53 PM
2	0.08020	0.03598mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 05:36:41 PM
3	0.000	0.000mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 05:38:46 PM
4	0.09810	0.04401mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 05:39:34 PM

Mean Area 0.1121
Mean Conc. 0.05031mg/L



8139

Sample

Sample Name: HCO3\CO3
Sample ID: TCK009-04
Origin: TCK009.cal
Chk. Result

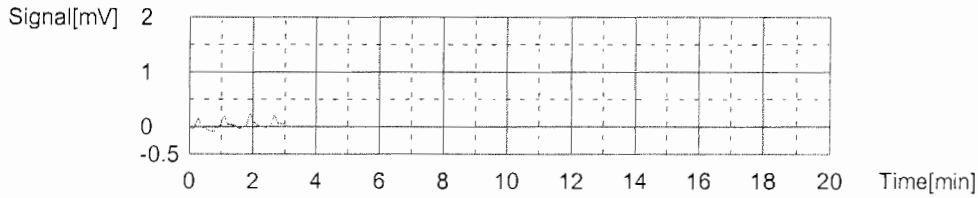
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1207 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2254	0.1011mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 05:46:53 PM
2	0.2711	0.1216mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 05:47:54 PM
3	0.3105	0.1393mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 05:48:51 PM
4	0.2687	0.1206mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 05:49:51 PM

Mean Area 0.2689
Mean Conc. 0.1207mg/L



Sample

Sample Name: TCK012WB
Sample ID: TCK009-05
Origin: TCK009.cal
Chk. Result

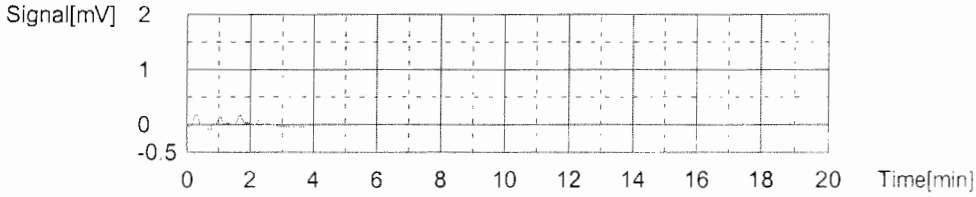
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.06951 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3090	0.1386mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 05:57:06 PM
2	0.1260	0.05653mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 05:57:56 PM
3	0.1847	0.08287mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 05:58:46 PM
4	0.000	0.000mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 06:00:52 PM

Mean Area 0.1549
Mean Conc. 0.06951mg/L



Sample

8140

Sample Name: TCK012WL
Sample ID: TCK009-06
Origin: TCK009.cal
Chk. Result

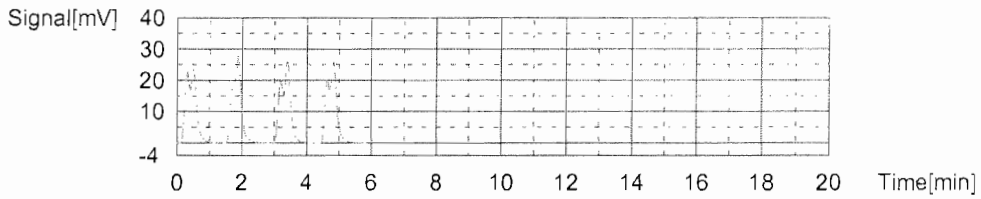
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:24.52 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.23	24.33mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 06:08:44 PM
2	54.54	24.47mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 06:10:26 PM
3	54.61	24.50mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 06:12:04 PM
4	55.20	24.77mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 06:13:46 PM

Mean Area 54.64
Mean Conc. 24.52mg/L



Sample

Sample Name: TCK012WC
Sample ID: TCK009-07
Origin: TCK009.cal
Chk. Result

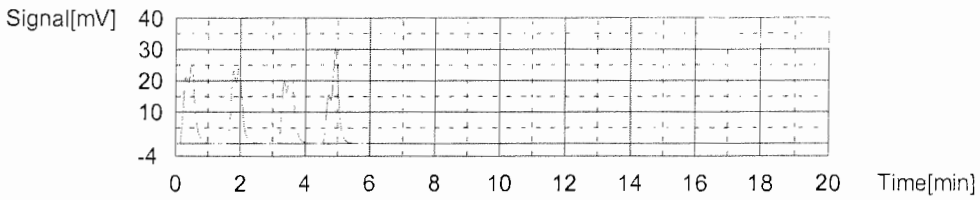
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:24.69 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.84	24.61mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 06:21:44 PM
2	55.08	24.71mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 06:23:30 PM
3	55.01	24.68mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 06:25:05 PM
4	55.15	24.74mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 06:26:44 PM

Mean Area 55.02
Mean Conc. 24.69mg/L



Sample

Sample Name: K116-02R
Sample ID: TCK009-08
Origin: TCK009.cal
Chk. Result

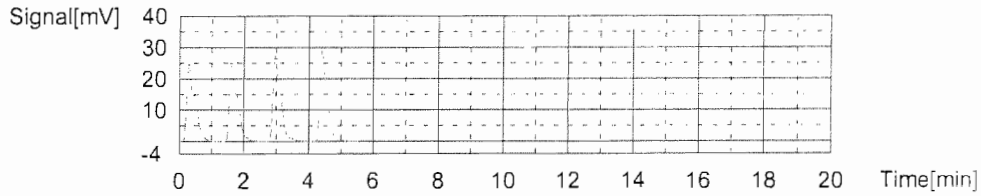
Type	Anal.	Dil.	Result
Unknown	NPOC	10.00	NPOC:205.0 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	44.88	201.4mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 06:34:33 PM
2	45.56	204.4mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 06:36:06 PM
3	46.28	207.6mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 06:37:45 PM
4	46.04	206.6mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 06:39:20 PM

Mean Area 45.69
Mean Conc. 205.0mg/L



Sample

Sample Name: K116-04R
Sample ID: TCK009-09
Origin: TCK009.cal
Chk. Result

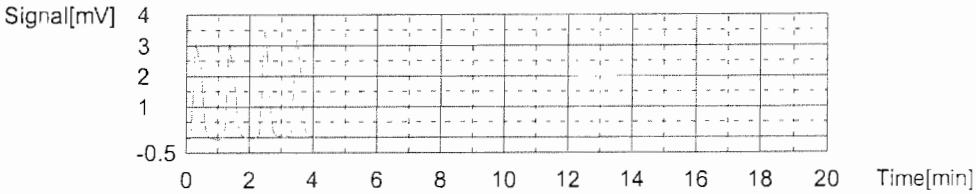
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.356 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.548	2.489mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 06:46:53 PM
2	5.207	2.336mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 06:48:11 PM
3	5.095	2.286mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 06:49:23 PM
4	5.158	2.314mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 06:50:32 PM

Mean Area 5.252
Mean Conc. 2.356mg/L



Sample

Sample Name: K116-04M
Sample ID: TCK009-10
Origin: TCK009.cal
Chk. Result

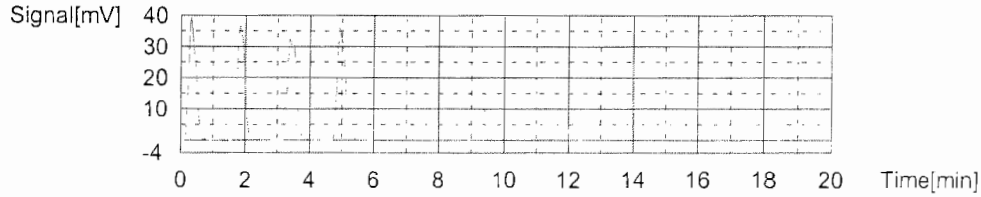
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:28.17 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	62.77	28.16mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 06:58:31 PM
2	62.82	28.19mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 07:00:18 PM
3	62.72	28.14mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 07:02:02 PM
4	62.83	28.19mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 07:03:37 PM

Mean Area 62.79
Mean Conc. 28.17mg/L



Sample

Sample Name: K116-04S
Sample ID: TCK009-11
Origin: TCK009.cal
Chk. Result

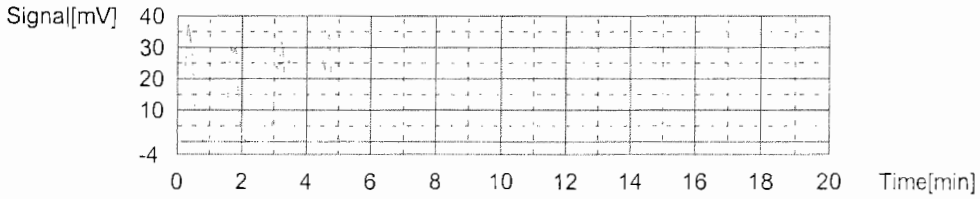
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:28.12 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	62.78	28.17mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 07:11:27 PM
2	62.33	27.97mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 07:13:04 PM
3	62.11	27.87mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 07:14:44 PM
4	63.47	28.48mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 07:16:23 PM

Mean Area 62.67
Mean Conc. 28.12mg/L



Sample

Sample Name: K116-06R
Sample ID: TCK009-12
Origin: TCK009.cal
Chk. Result

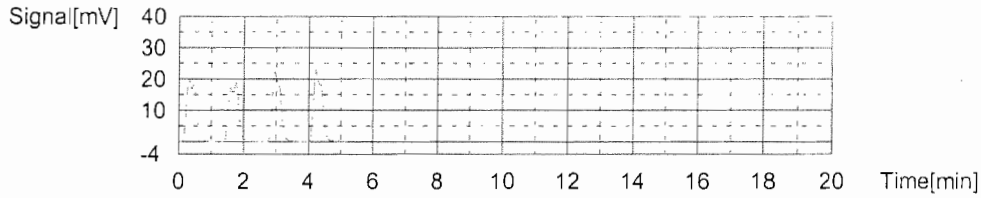
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:18.23 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	39.71	17.82mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 07:24:10 PM
2	40.16	18.02mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 07:25:43 PM
3	41.17	18.47mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 07:27:12 PM
4	41.45	18.60mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 07:28:40 PM

Mean Area 40.62
Mean Conc. 18.23mg/L



Sample

Sample Name: K116-07R
Sample ID: TCK009-13
Origin: TCK009.cal
Chk. Result

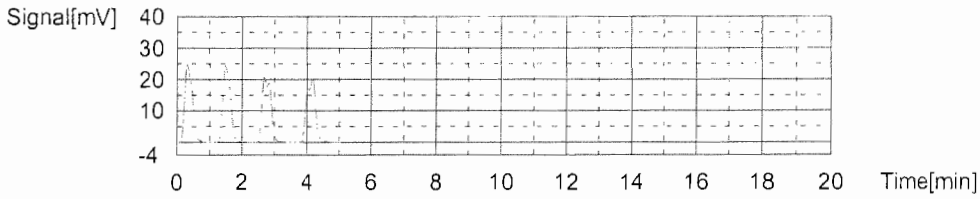
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:18.30 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	40.45	18.15mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 07:36:20 PM
2	40.23	18.05mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 07:37:44 PM
3	41.28	18.52mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 07:39:17 PM
4	41.17	18.47mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 07:40:48 PM

Mean Area 40.78
Mean Conc. 18.30mg/L



Control Sample

Sample Name: CCV1
Sample ID: TCK009-14
Method: TCK009.tpl
Chk. Result Control value: 25.74 / Control exceeds range!

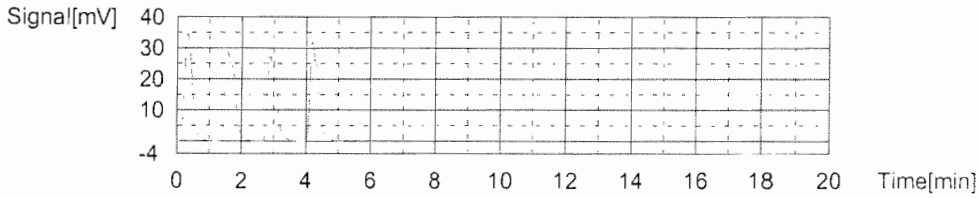
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:25.74 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	56.47	25.34mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 07:48:34 PM
2	57.69	25.88mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 07:50:04 PM
3	57.36	25.74mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 07:51:34 PM
4	57.95	26.00mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 07:53:02 PM

Mean Area 57.37
Mean Conc. 25.74mg/L



Sample

Sample Name: CCB1
Sample ID: TCK009-15
Origin: TCK009.cal
Chk. Result

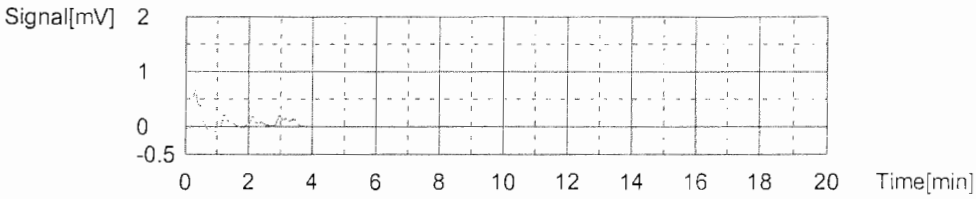
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.2644 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.215	0.5451mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:00:30 PM
2	0.3481	0.1562mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:01:35 PM
3	0.2300	0.1032mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:02:36 PM
4	0.5641	0.2531mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:03:55 PM

Mean Area 0.5893
Mean Conc. 0.2644mg/L



Sample

Sample Name: K131-02
Sample ID: TCK009-16
Origin: TCK009.cal
Chk. Result

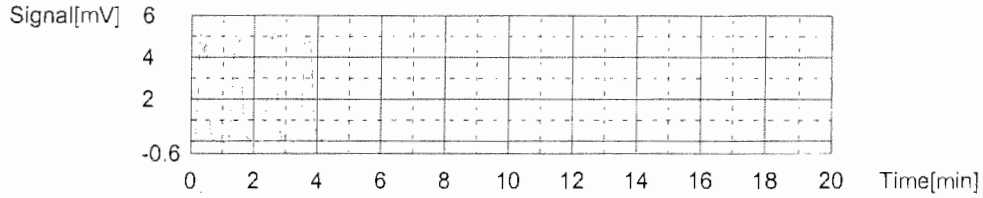
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:4.599 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.12	4.541mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:11:29 PM
2	10.38	4.657mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:12:48 PM
3	10.42	4.675mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:14:07 PM
4	10.08	4.523mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:15:25 PM

Mean Area 10.25
Mean Conc. 4.599mg/L



Sample

Sample Name: K131-03
Sample ID: TCK009-17
Origin: TCK009.cal
Chk. Result

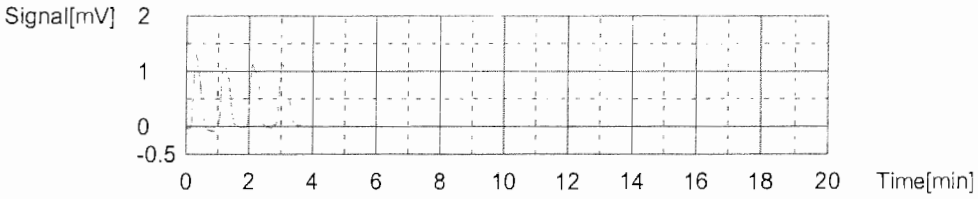
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.9628 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.116	0.9494mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:22:48 PM
2	2.153	0.9660mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:23:55 PM
3	2.166	0.9718mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:25:01 PM
4	2.149	0.9642mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:26:10 PM

Mean Area 2.146
Mean Conc. 0.9628mg/L



Sample

Sample Name: K131-04
Sample ID: TCK009-18
Origin: TCK009.cal
Chk. Result

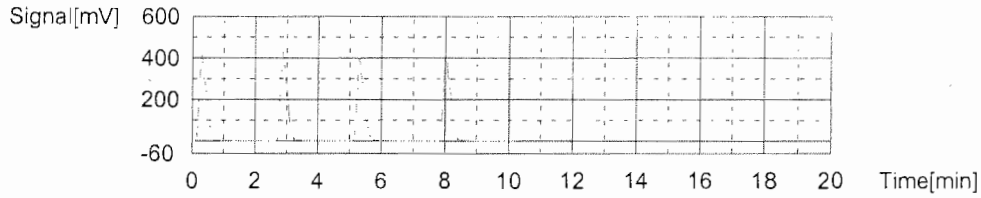
Type	Anal.	Dil.	Result
Unknown	NPOC	2.000	NPOC:594.0 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	651.2	584.3mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:35:14 PM
2	657.9	590.4mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:37:52 PM
3	668.4	599.8mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:40:47 PM
4	670.2	601.4mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:43:28 PM

Mean Area 661.9
Mean Conc. 594.0mg/L



Sample

Sample Name: K131-05
Sample ID: TCK009-19
Origin: TCK009.cal
Chk. Result

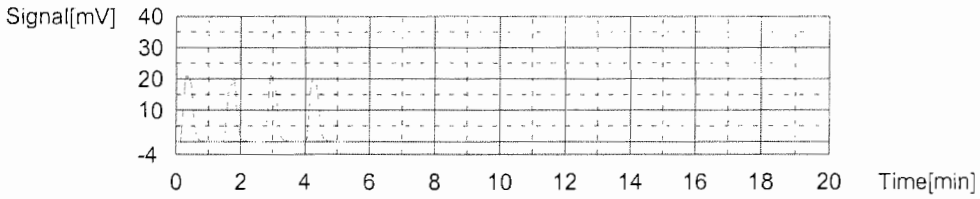
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:17.86 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	40.05	17.97mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:51:18 PM
2	39.41	17.68mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:52:46 PM
3	39.93	17.92mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:54:14 PM
4	39.81	17.86mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 08:55:46 PM

Mean Area 39.80
Mean Conc. 17.86mg/L



Sample

Sample Name: K131-06
Sample ID: TCK009-20
Origin: TCK009.cal
Chk. Result

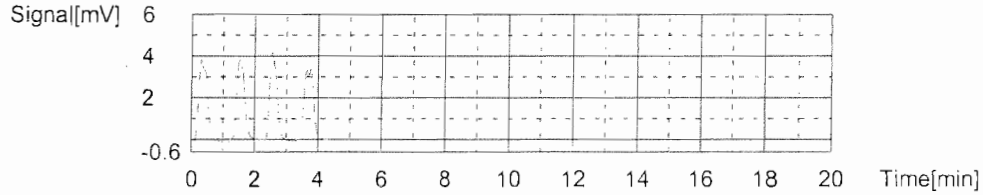
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:3.151 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.235	3.246mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:03:26 PM
2	6.943	3.115mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:04:40 PM
3	6.824	3.062mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:05:56 PM
4	7.089	3.181mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:07:12 PM

Mean Area 7.023
Mean Conc. 3.151mg/L



Sample

Sample Name: K131-08
Sample ID: TCK009-21
Origin: TCK009.cal
Chk. Result

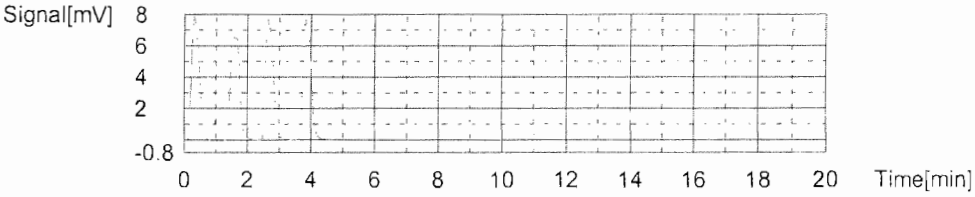
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:6.225 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13.70	6.147mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:14:54 PM
2	13.65	6.124mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:16:11 PM
3	14.05	6.304mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:17:33 PM
4	14.10	6.326mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:18:53 PM

Mean Area 13.88
Mean Conc. 6.225mg/L



Sample

Sample Name: K131-09
Sample ID: TCK009-22
Origin: TCK009.cal
Chk. Result

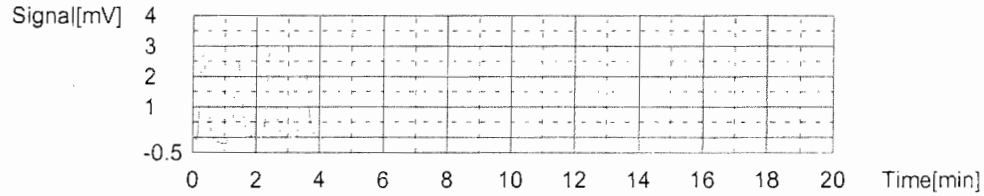
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.064 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.353	1.953mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:26:26 PM
2	4.580	2.055mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:27:39 PM
3	4.796	2.152mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:28:53 PM
4	4.670	2.095mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:30:04 PM

Mean Area 4.600
Mean Conc. 2.064mg/L



Sample

Sample Name: K131-10
Sample ID: TCK009-23
Origin: TCK009.cal
Chk. Result

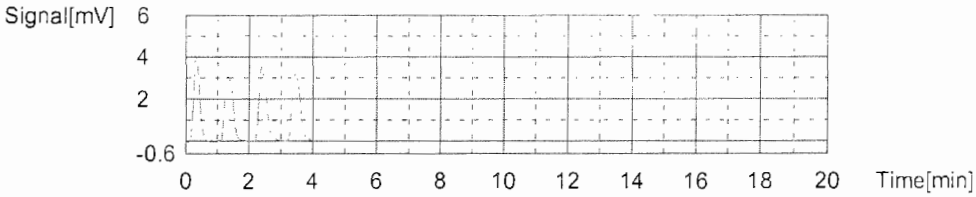
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.593 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.722	2.567mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:37:32 PM
2	5.802	2.603mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:38:48 PM
3	5.748	2.579mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:40:01 PM
4	5.841	2.621mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:41:15 PM

Mean Area 5.778
Mean Conc. 2.593mg/L



Sample

Sample Name: K131-11
Sample ID: TCK009-24
Origin: TCK009.cal
Chk. Result

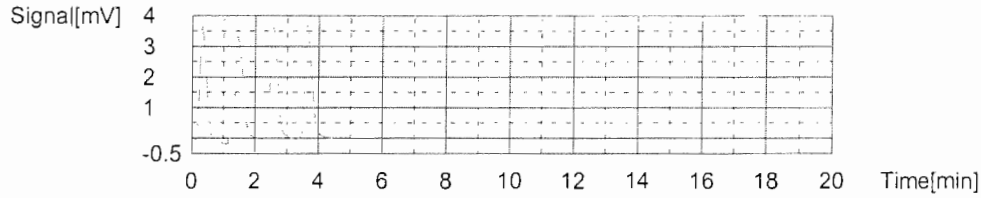
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.594 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.565	2.497mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:48:52 PM
2	5.767	2.587mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:50:10 PM
3	5.873	2.635mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:51:26 PM
4	5.917	2.655mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 09:52:42 PM

Mean Area 5.781
Mean Conc. 2.594mg/L



Sample

Sample Name: K131-13
Sample ID: TCK009-25
Origin: TCK009.cal
Chk. Result

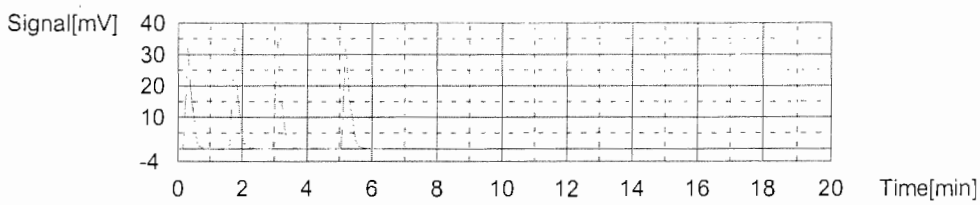
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:20.06 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	43.57	19.55mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:00:38 PM
2	44.35	19.90mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:02:10 PM
3	45.58	20.45mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:04:28 PM
4	45.30	20.32mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:06:02 PM

Mean Area 44.70
Mean Conc. 20.06mg/L



Control Sample

Sample Name: CCV2
Sample ID: TCK009-26
Method: TCK009.tpl
Chk. Result Control value: 24.66 / Control exceeds range!

Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:24.66 mg/L

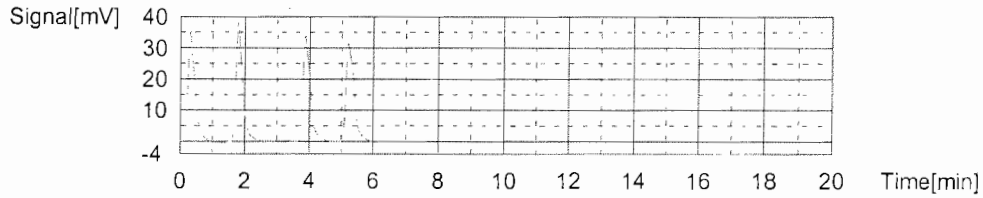
1. Det.

Anal.: NPOC

8150

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.59	24.49mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:13:59 PM
2	55.73	25.00mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:16:15 PM
3	55.36	24.84mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:17:46 PM
4	54.21	24.32mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:19:16 PM

Mean Area 54.97
Mean Conc. 24.66mg/L



Sample

Sample Name: CCB2
Sample ID: TCK009-27
Origin: TCK009.cal
Chk. Result

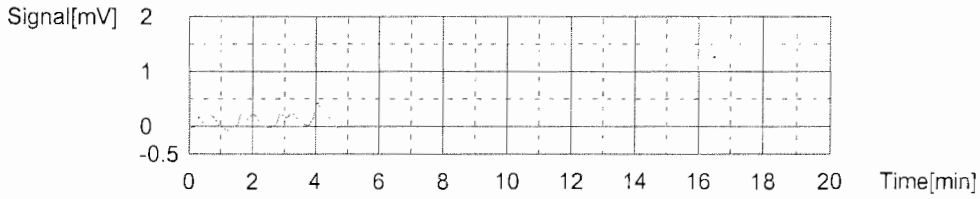
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.3732 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.7875	0.3533mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:27:05 PM
2	0.7969	0.3575mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:28:31 PM
3	0.7937	0.3561mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:29:53 PM
4	0.9493	0.4259mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:31:19 PM

Mean Area 0.8318
Mean Conc. 0.3732mg/L



Sample

Sample Name: K131-14
Sample ID: TCK009-28
Origin: TCK009.cal
Chk. Result

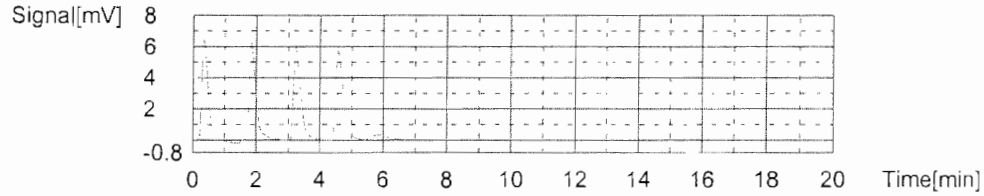
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:4.422 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.521	4.272mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:39:18 PM
2	9.623	4.318mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:40:54 PM
3	9.983	4.479mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:42:25 PM
4	10.30	4.621mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:44:53 PM

Mean Area 9.857
Mean Conc. 4.422mg/L



Sample

Sample Name: K131-15
Sample ID: TCK009-29
Origin: TCK009.cal
Chk. Result

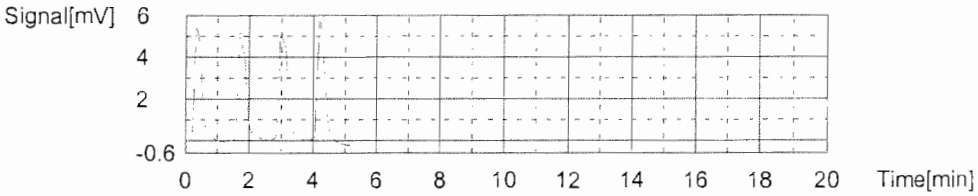
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:4.169 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.132	4.097mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:52:46 PM
2	9.298	4.172mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:54:14 PM
3	9.687	4.346mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:55:38 PM
4	9.051	4.061mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 10:57:08 PM

Mean Area 9.292
Mean Conc. 4.169mg/L



Sample

Sample Name: K131-16
Sample ID: TCK009-30
Origin: TCK009.cal
Chk. Result

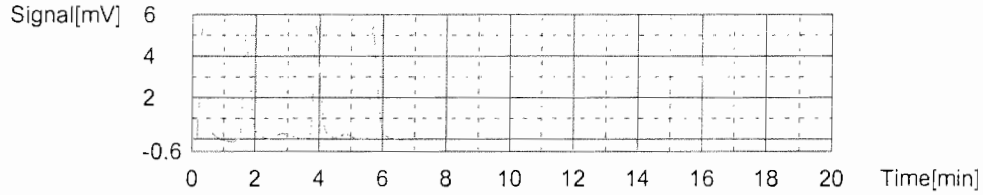
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:3.807 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.013	3.595mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 11:04:59 PM
2	8.944	4.013mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 11:07:23 PM
3	8.679	3.894mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 11:09:22 PM
4	8.301	3.724mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 11:10:49 PM

Mean Area 8.484
Mean Conc. 3.807mg/L



Sample

Sample Name: K131-17
Sample ID: TCK009-31
Origin: TCK009.cal
Chk. Result

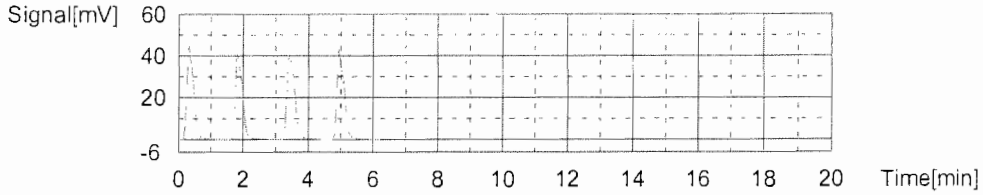
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:30.27 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	67.26	30.18mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 11:18:49 PM
2	67.32	30.20mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 11:20:35 PM
3	67.18	30.14mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 11:22:18 PM
4	68.11	30.56mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 11:24:05 PM

Mean Area 67.47
Mean Conc. 30.27mg/L



Sample

Sample Name: K131-18
Sample ID: TCK009-32
Origin: TCK009.cal
Chk. Result

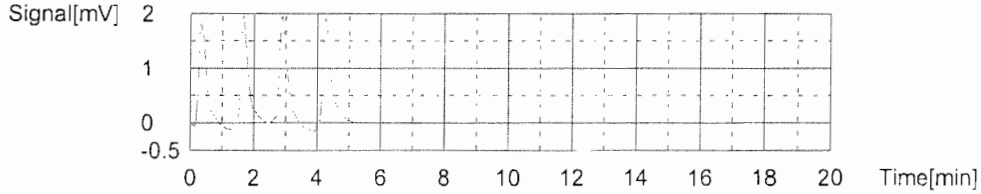
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.514 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.375	1.514mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 11:31:54 PM
2	3.206	1.438mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 11:33:20 PM
3	3.449	1.547mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 11:34:53 PM
4	3.470	1.557mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 11:36:21 PM

Mean Area 3.375
Mean Conc. 1.514mg/L



Sample

Sample Name: K131-19
Sample ID: TCK009-33
Origin: TCK009.cal
Chk. Result

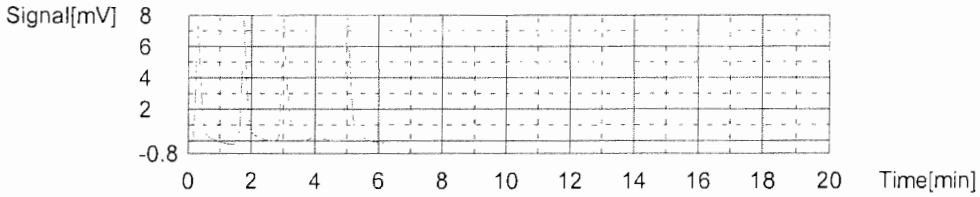
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:4.317 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.977	4.028mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 11:44:17 PM
2	9.276	4.162mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 11:45:45 PM
3	10.14	4.550mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 11:47:57 PM
4	10.09	4.527mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 11:49:35 PM

Mean Area 9.621
Mean Conc. 4.317mg/L



Sample

Sample Name: TCK013WL
Sample ID: TCK009-34
Origin: TCK009.cal
Chk. Result

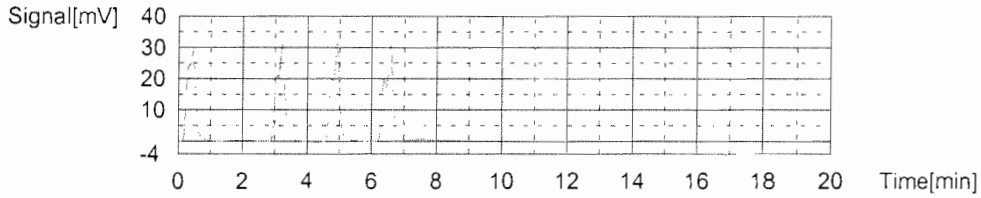
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:25.07 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.13	24.74mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/17/11 11:58:49 PM
2	54.57	24.48mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 12:00:42 AM
3	56.05	25.15mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 12:02:32 AM
4	57.72	25.90mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 12:05:32 AM

Mean Area 55.87
Mean Conc. 25.07mg/L



Sample

Sample Name: TCK013WC
Sample ID: TCK009-35
Origin: TCK009.cal
Chk. Result

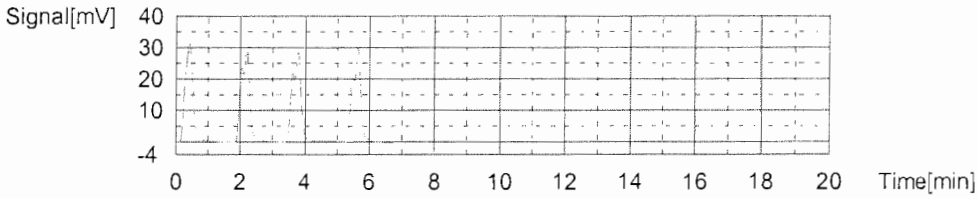
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:24.67 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.22	24.78mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 12:13:45 AM
2	55.44	24.87mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 12:15:31 AM
3	54.71	24.55mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 12:17:34 AM
4	54.54	24.47mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 12:19:22 AM

Mean Area 54.98
Mean Conc. 24.67mg/L



Sample

Sample Name: TCK013WB
Sample ID: TCK009-36
Origin: TCK009.cal
Chk. Result

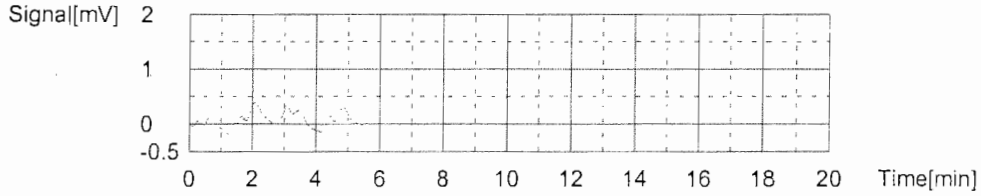
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.4082 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6991	0.3137mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 12:27:14 AM
2	1.088	0.4882mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 12:28:51 AM
3	0.9929	0.4455mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 12:30:24 AM
4	0.8594	0.3856mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 12:31:52 AM

Mean Area 0.9099
Mean Conc. 0.4082mg/L



Sample

Sample Name: TCK013WQ
Sample ID: TCK009-37
Origin: TCK009.cal
Chk. Result

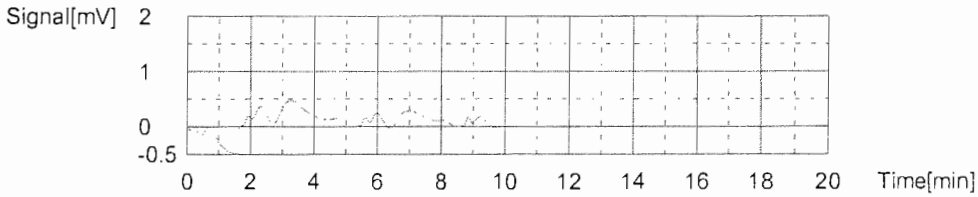
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.8078 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3116	0.1398mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 12:40:00 AM
2	3.656	1.640mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 12:43:53 AM
3	2.554	1.146mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 12:47:19 AM
4	0.6804	0.3053mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 12:48:43 AM

Mean Area 1.801
Mean Conc. 0.8078mg/L



Control Sample

Sample Name: CCV3
Sample ID: TCK009-38
Method: TCK009.tpl
Chk. Result Control value: 25.24 / Control exceeds range!

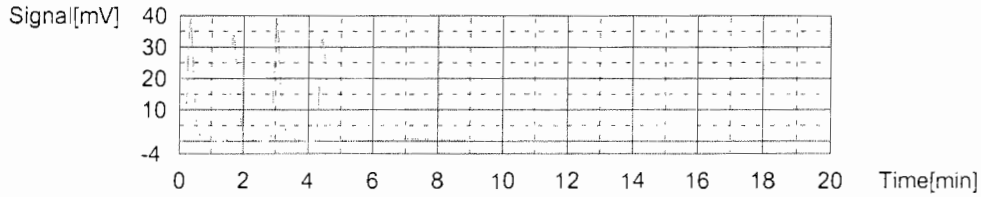
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:25.24 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.66	24.52mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 12:56:33 AM
2	54.93	24.65mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 12:58:05 AM
3	54.77	24.57mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 12:59:40 AM
4	60.70	27.23mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 01:04:38 AM

Mean Area 56.27
Mean Conc. 25.24mg/L



Sample

Sample Name: CCB3
Sample ID: TCK009-39
Origin: TCK009.cal
Chk. Result

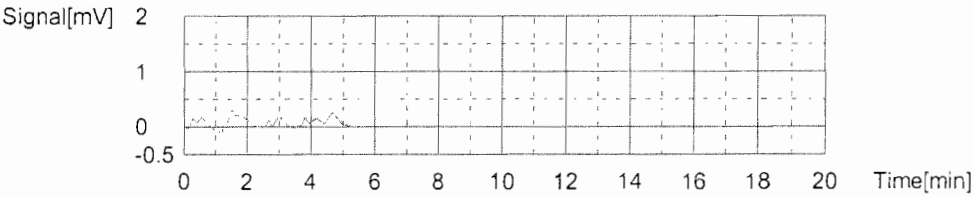
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.3175 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6561	0.2944mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 01:12:20 AM
2	0.7592	0.3406mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 01:13:41 AM
3	0.4976	0.2233mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 01:15:02 AM
4	0.9178	0.4118mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 01:16:55 AM

Mean Area 0.7077
Mean Conc. 0.3175mg/L



Sample

Sample Name: K119-01
Sample ID: TCK009-40
Origin: TCK009.cal
Chk. Result

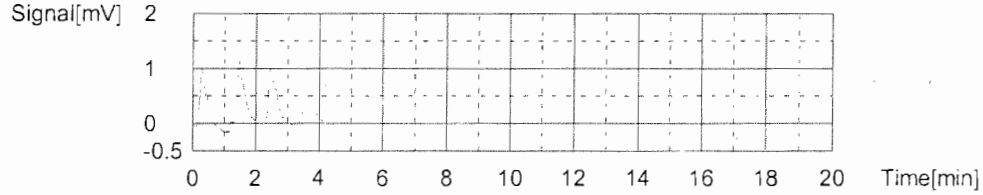
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.8441 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.737	0.7793mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 01:24:34 AM
2	1.885	0.8457mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 01:25:46 AM
3	1.876	0.8417mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 01:27:04 AM
4	2.027	0.9095mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 01:28:24 AM

Mean Area 1.881
Mean Conc. 0.8441mg/L



Sample

Sample Name: K119-02
Sample ID: TCK009-41
Origin: TCK009.cal
Chk. Result

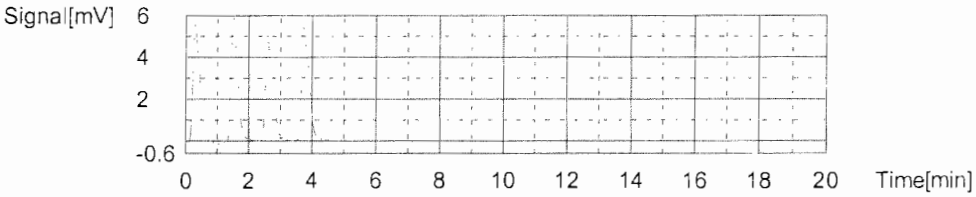
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:4.059 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.994	4.035mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 01:36:06 AM
2	8.891	3.989mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 01:37:23 AM
3	9.112	4.088mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 01:38:43 AM
4	9.191	4.124mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 01:39:58 AM

Mean Area 9.047
Mean Conc. 4.059mg/L



Sample

Sample Name: K119-03
Sample ID: TCK009-42
Origin: TCK009.cal
Chk. Result

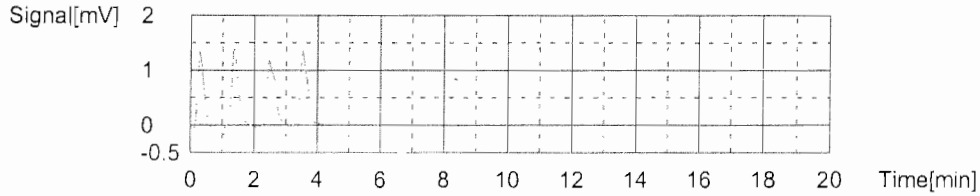
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.9550 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.989	0.8924mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 01:47:32 AM
2	2.164	0.9709mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 01:48:51 AM
3	2.163	0.9705mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 01:50:05 AM
4	2.198	0.9862mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 01:51:17 AM

Mean Area 2.129
Mean Conc. 0.9550mg/L



Sample

Sample Name: K122-03
Sample ID: TCK009-43
Origin: TCK009.cal
Chk. Result

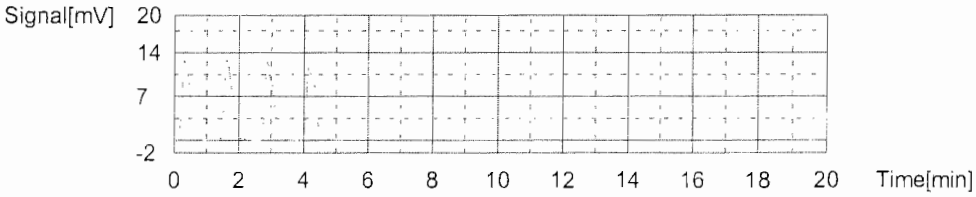
Type	Anal.	Dil.	Result
Unknown	NPOC	2.000	NPOC:19.89 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	21.81	19.57mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 01:59:05 AM
2	21.62	19.40mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:00:33 AM
3	22.63	20.31mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:02:01 AM
4	22.60	20.28mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:03:33 AM

Mean Area 22.16
Mean Conc. 19.89mg/L



Sample

Sample Name: K122-04
Sample ID: TCK009-44
Origin: TCK009.cal
Chk. Result

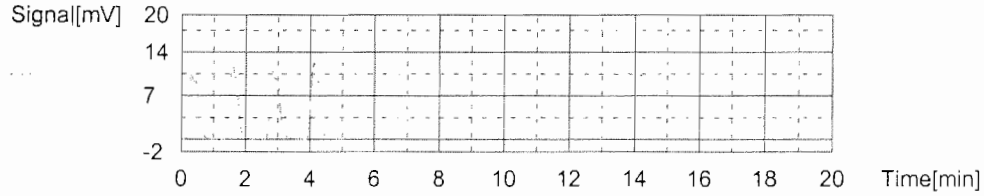
Type	Anal.	Dil.	Result
Unknown	NPOC	2.000	NPOC:19 45 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	21.08	18.92mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:11:18 AM
2	21.46	19.26mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:12:46 AM
3	21.85	19.61mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:14:13 AM
4	22.30	20.01mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:15:37 AM

Mean Area 21.67
Mean Conc. 19.45mg/L



Sample

Sample Name: K134-03
Sample ID: TCK009-45
Origin: TCK009.cal
Chk. Result

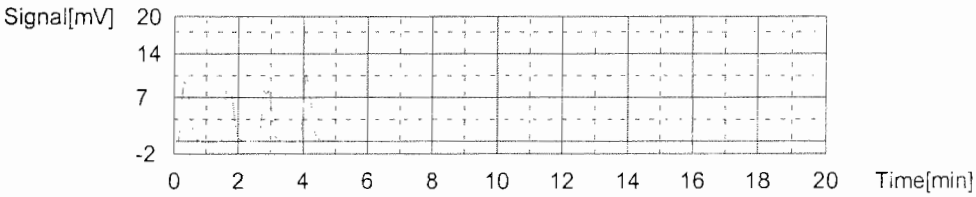
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:7.835 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	17.50	7.852mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:23:27 AM
2	17.24	7.735mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:24:47 AM
3	17.24	7.735mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:26:16 AM
4	17.87	8.018mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:28:00 AM

Mean Area 17.46
Mean Conc. 7.835mg/L



Sample

Sample Name: K134-04
Sample ID: TCK009-46
Origin: TCK009.cal
Chk. Result

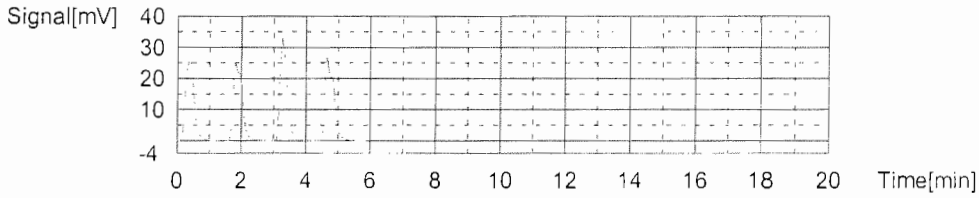
Type	Anal.	Dil.	Result
Unknown	NPOC	2.000	NPOC:45.75 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	48.70	43.70mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:36:00 AM
2	50.22	45.06mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:37:38 AM
3	53.13	47.68mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:39:13 AM
4	51.90	46.57mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:40:55 AM

Mean Area 50.99
Mean Conc. 45.75mg/L



Sample

Sample Name: K134-05
Sample ID: TCK009-47
Origin: TCK009.cal
Chk. Result

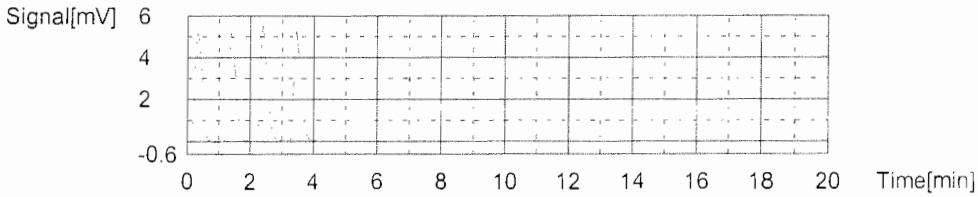
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:3.824 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.516	3.821mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:48:28 AM
2	8.365	3.753mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:49:40 AM
3	8.627	3.871mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:50:55 AM
4	8.584	3.851mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:52:12 AM

Mean Area 8.523
Mean Conc. 3.824mg/L



Control Sample

Sample Name: CCV4
Sample ID: TCK009-48
Method: TCK009.tpl
Chk. Result Control value: 24.58 / Control exceeds range!

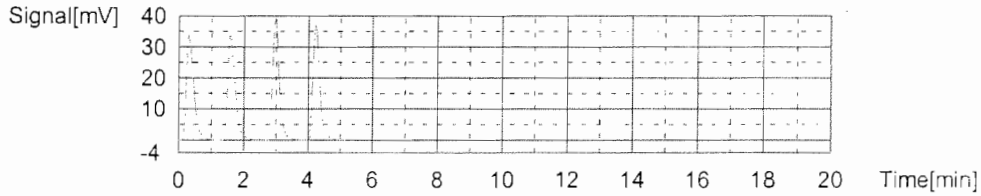
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:24.58 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.87	24.17mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 02:59:58 AM
2	54.95	24.65mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 03:01:32 AM
3	55.31	24.82mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 03:02:58 AM
4	54.97	24.66mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 03:04:25 AM

Mean Area 54.77
Mean Conc. 24.58mg/L



Sample

Sample Name: CCB4
Sample ID: TCK009-49
Origin: TCK009.cal
Chk. Result

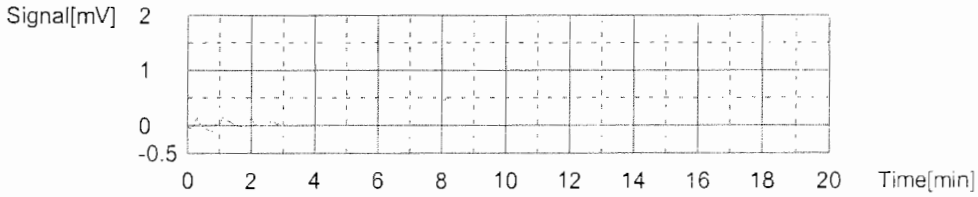
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.09001 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2133	0.09570mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 03:11:45 AM
2	0.2814	0.1263mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 03:12:48 AM
3	0.1696	0.07609mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 03:13:39 AM
4	0.1382	0.06201mg/L	50uL	1		TCK009.2011_11_17_16_05_00.cal	11/18/11 03:14:29 AM

Mean Area 0.2006
Mean Conc. 0.09001mg/L



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CLIENT: **INSIGHT EEC, INC.**

PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11K133**

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** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 12-05-2011
EMAX Batch No.: 11K133

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 11/15/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW-70-PMW07A-130	K133-01	11/15/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-PMW07B-131	K133-02	11/15/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IW-70-FSB216-132	K133-03	11/15/11	WATER	ANIONS BY IC

Sample ID	Control #	Col Date	Matrix	Analysis
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-PMW08A-133	K133-04	11/15/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-PMW08B-134	K133-05	11/15/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-MNA10-135	K133-06	11/15/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
IR-70-TB-129	K133-07	11/15/11	WATER	VOLATILE ORGANICS BY GC/MS
MW-70-PMW07A-130MS	K133-01M	11/15/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
MW-70-PMW07A-130MSD	K133-01S	11/15/11	WATER	DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				TOTAL ORGANIC CARBON
				ORGANIC ACIDS BY IC

Sample ID	Control #	Col Date	Matrix	Analysis
				ANIONS BY IC
MW-70-PMW07A-130DUP	K133-01D	11/15/11	WATER	ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

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EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

INS-0801

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011068-8042
SAMPLE STORAGE
EMAX CONTROL NO. * 11K133
PROJECT CODE: 4-77101

CLIENT: INSIGHT EEC, INC.
PROJECT: IR SITE 70 NWS - SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 714 678 6700 FAX: 714 678 6711 EMAIL: NWEINBERGER@IEECI.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT EEC, INC.
ADDRESS: 3010 E. MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: Ye Myint

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	VOA - EPA 8260B (PBS Hyd. GC/MS - RSK-175)			WET CHEM TOC - SM5310B	Sulfide - SM4500C PBS METALS - EPA 6010B		VOA - EPA 8260B (PBS Hyd. GC/MS - RSK-175)		COMMENTS
										HC	HC	NP	HC	SH/ZA	HN	NP	NP	
1	MW-70-PMW07A-130	IR SITE 70 NWS SB	11-15-11	0947	20	VARY	VARY	GW	III	X	X	X	X	X	X			MS/MSD
2	MW-70-PMW07B-131	IR SITE 70 NWS SB	11-15-11	1103	10	VARY	VARY	GW	III	X	X	X	X	X	X			
3	IW-70-FSB216-132	IR SITE 70 NWS SB	11-15-11	1203	10	VARY	VARY	GW	III			X	X	X	X	X	X	EFFLUENT WELL
4	MW-70-PMW08A-133	IR SITE 70 NWS SB	11-15-11	1319	10	VARY	VARY	GW	III	X	X	X	X	X	X			
5	MW-70-PMW08B-134	IR SITE 70 NWS SB	11-15-11	1418	10	VARY	VARY	GW	III	X	X	X	X	X	X			
6	MW-70-MNA10-135	IR SITE 70 NWS SB	11-15-11	1519	7	VARY	VARY	GW	III	X	X	X						FOR WET CHEM ANALYSIS. RUN ONLY VFA's.
7	IR-70-TB-129	IR SITE 70 NWS SB	11-15-11	0730	2	40mL	VOA	GW	III	X								TRIP BLANK

Instructions: WET CHEM ANALYSIS AS FOLLOWS: ANIONS: EPA 300.0, VFA'S=EPA 300.0M, TDS-SM2540C, ALKALINITY: SM2320B, DHS-SM4500, UNLESS NOTED OTHERWISE IN COMMENTS.

Cooler #	Temp. (°C)	Sample #s
1	2.4	

SAMPLER: CHASE BROGDON
COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
	11-15-11	1700	
	11/15/11	1744	

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

1003

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11K133
☑ EMAX Courier	ALFREDO GALICIA	Recepient J-LUNA
☐ Client Delivery		Date 11-15-11
☐ Third Party		Time 1754

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☐ Preservative (if any)	☐ TAT
Safety Issues	☑ None	☐ High concentrations expected	☐ Superfund Site samples	☐ Rad screening required	

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen) A	☑ Cooler 1 2.4 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C

Thermometer: ***A - S/N 101541371*** ***B - S/N 101541382***

Comments: ☐ **PM was informed on non-compliant coolers immediately.**

Note: **pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time .**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code
-03	036		F2	R5

REVIEWS

Sample Labeling [signature] Date 11/15/11

SRP [signature] Date 11/15/11

PM LP for YG Date 11/17/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4	_____	E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	Use other vial provided
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	_____
B3	Sample ID is inconsistent in COC vis-a-vis label	F2	Bubble is> 6mm		
B4	_____	G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	_____		
C4	_____	H2	_____		

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11K133

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K133

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of seven (7) water samples were received on 11/15/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary forms for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for VO03K19L/C were all within QC limits.
Percent recoveries for VO03K21L/C were all within QC limits.

Matrix QC Sample
A set of MS/MSD was analyzed with the samples in this SDG.
Percent recoveries for K133-01M/S were within project QC limits.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Manual integration was applied to Carbon disulfide in samples K133-01, -03, -04 and -06 because of improper integration. Hence, the original chromatograms were retained with the initialed and dated corrected chromatograms. Manual integrations were concurred by a secondary reviewer. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.
Vials received for sample K133-03 has bubbles >6mm. Analysis was performed using vial with the smallest bubbles.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K133
Instrument ID : T-003

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V003K19B	1	NA	11/18/1116:34	11/18/1116:34	RKB265	RHB444	V003K19	Method Blank
LCS1W	V003K19L	1	NA	11/18/1115:21	11/18/1115:21	RKB263	RHB444	V003K19	Lab Control Sample (LCS)
LCD1W	V003K19C	1	NA	11/18/1115:57	11/18/1115:57	RKB264	RHB444	V003K19	LCS Duplicate
IR-70-TB-129	K133-07	1	NA	11/18/1117:46	11/18/1117:46	RKB267	RHB444	V003K19	Field Sample
IW-70-FSB216-132	K133-03	1	NA	11/18/1118:23	11/18/1118:23	RKB268	RHB444	V003K19	Field Sample
MW-70-PMW07A-130MS	K133-01M	1	NA	11/18/1118:59	11/18/1118:59	RKB269	RHB444	V003K19	Matrix Spike Sample (MS)
MW-70-PMW07A-130MSD	K133-01S	1	NA	11/18/1119:34	11/18/1119:34	RKB270	RHB444	V003K19	MS Duplicate (MSD)
MW-70-PMW07A-130	K133-01	1	NA	11/18/1120:10	11/18/1120:10	RKB271	RHB444	V003K19	Field Sample
MW-70-PMW08A-133	K133-04	1	NA	11/18/1120:46	11/18/1120:46	RKB272	RHB444	V003K19	Field Sample
MW-70-MNA10-135	K133-06	1	NA	11/18/1121:22	11/18/1121:22	RKB273	RHB444	V003K19	Field Sample
MBLK2W	V003K21B	1	NA	11/21/1109:53	11/21/1109:53	RKB312	RHB444	V003K21	Method Blank
LCS2W	V003K21L	1	NA	11/21/1108:47	11/21/1108:47	RKB310	RHB444	V003K21	Lab Control Sample (LCS)
LCD2W	V003K21C	1	NA	11/21/1109:20	11/21/1109:20	RKB311	RHB444	V003K21	LCS Duplicate
MW-70-PMW07B-131DL	K133-02T	50	NA	11/21/1110:31	11/21/1110:31	RKB313	RHB444	V003K21	Diluted Sample
MW-70-PMW08B-134DL	K133-05T	50	NA	11/21/1111:05	11/21/1111:05	RKB314	RHB444	V003K21	Diluted Sample
MW-70-PMW07B-131	K133-02	1	NA	11/21/1117:22	11/21/1117:22	RKB325	RHB444	V003K21	Field Sample
MW-70-PMW08B-134	K133-05	1	NA	11/21/1117:56	11/21/1117:56	RKB326	RHB444	V003K21	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/15/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/15/11
Batch No. : 11K133	Date Extracted: 11/18/11 20:10
Sample ID: MW-70-PMW07A-130	Date Analyzed: 11/18/11 20:10
Lab Samp ID: K133-01	Dilution Factor: 1
Lab File ID: RKB271	Matrix : WATER
Ext Btch ID: V003K19	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	6.9J	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.98J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	11	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	1.1J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.67	10.00	86.7	70-140
4-BROMOFLUOROBENZENE	9.05	10.00	90.5	70-130
TOLUENE-D8	9.24	10.00	92.4	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/15/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/15/11
Batch No.	: 11K133	Date Extracted:	11/21/11 17:22
Sample ID:	MW-70-PMW07B-131	Date Analyzed:	11/21/11 17:22
Lab Samp ID:	K133-02	Dilution Factor:	1
Lab File ID:	RKB325	Matrix	: WATER
Ext Btch ID:	V003K21	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.44J	1.0	0.20
1,1-DICHLOROETHENE	2.3	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	310E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	4.5	1.0	0.20
TRICHLOROETHENE	6.1	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	1.1	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.27	10.00	92.7	70-140
4-BROMOFLUOROBENZENE	9.76	10.00	97.6	70-130
TOLUENE-D8	9.37	10.00	93.7	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/15/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/15/11
Batch No. : 11K133	Date Extracted: 11/21/11 10:31
Sample ID: MW-70-PMW07B-131DL	Date Analyzed: 11/21/11 10:31
Lab Samp ID: K133-02T	Dilution Factor: 50
Lab File ID: RKB313	Matrix : WATER
Ext Btch ID: V003K21	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	50	10
1,1,1,2-TETRACHLOROETHANE	ND	50	10
1,1,2,2-TETRACHLOROETHANE	ND	50	10
1,1,2-TRICHLOROETHANE	ND	50	10
FREON113	ND	50	15
1,1-DICHLOROETHANE	ND	50	10
1,1-DICHLOROETHENE	ND	25	10
1,1-DICHLOROPROPENE	ND	50	10
1,2-DIBROMO-3-CHLOROPROPANE	ND	100	25
1,2-DIBROMOETHANE	ND	50	10
1,2-DICHLOROBENZENE	ND	50	10
1,2-DICHLOROETHANE	ND	25	10
1,2-DICHLOROPROPANE	ND	50	10
1,2,3-TRICHLOROBENZENE	ND	50	15
1,2,3-TRICHLOROPROPANE	ND	50	25
1,2,4-TRICHLOROBENZENE	ND	50	15
1,2,4-TRIMETHYLBENZENE	ND	50	10
1,3-DICHLOROBENZENE	ND	50	10
1,3,5-TRIMETHYLBENZENE	ND	50	10
1,4-DICHLOROBENZENE	ND	50	10
2-BUTANONE	ND	500	200
2-CHLOROTOLUENE	ND	50	10
2-HEXANONE	ND	500	200
2,2-DICHLOROPROPANE	ND	50	10
4-CHLOROTOLUENE	ND	50	10
4-METHYL-2-PENTANONE	ND	500	200
N-BUTYLBENZENE	ND	50	10
N-PROPYLBENZENE	ND	50	10
P-ISOPROPYLTOLUENE	ND	50	10
SEC-BUTYLBENZENE	ND	50	10
TERT-BUTYLBENZENE	ND	50	10
ACETONE	ND	500	250
BENZENE	ND	50	10
BROMOBENZENE	ND	50	10
BROMODICHLOROMETHANE	ND	50	10
CIS-1,3-DICHLOROPROPENE	ND	50	10
TRANS-1,3-DICHLOROPROPENE	ND	50	10
BROMOMETHANE	ND	100	15
BROMOFORM	ND	50	15
CARBON DISULFIDE	ND	50	10
CARBON TETRACHLORIDE	ND	25	10
CHLOROBENZENE	ND	50	10
CHLOROETHANE	ND	100	15
CHLOROFORM	ND	50	10
CHLOROMETHANE	ND	100	15
CIS-1,2-DICHLOROETHENE	550	50	10
DICHLORODIFLUOROMETHANE	ND	100	15
DIBROMOCHLOROMETHANE	ND	50	10
DIBROMOMETHANE	ND	50	10
ETHYLBENZENE	ND	50	10
HEXACHLOROBUTADIENE	ND	50	15
ISOPROPYL BENZENE	ND	50	10
METHYLENE CHLORIDE	ND	50	25
MTBE	ND	50	10
STYRENE	ND	50	10
TETRACHLOROETHYLENE	ND	50	10
TOLUENE	ND	50	10
TRANS-1,2-DICHLOROETHENE	ND	50	10
TRICHLOROETHENE	ND	250	10
TRICHLOROFLUOROMETHANE	ND	100	15
VINYL CHLORIDE	ND	25	10
XYLENES (TOTAL)	ND	100	30
M/P-XYLENES	ND	50	20
O-XYLENE	ND	50	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	435	500.0	87.0	70-140
4-BROMOFLUOROBENZENE	478	500.0	95.6	70-130
TOLUENE-D8	466	500.0	93.3	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/15/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/15/11
Batch No. : 11K133	Date Extracted: 11/18/11 18:23
Sample ID: IW-70-FSB216-132	Date Analyzed: 11/18/11 18:23
Lab Samp ID: K133-03	Dilution Factor: 1
Lab File ID: RKB268	Matrix : WATER
Ext Btch ID: V003K19	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	8.6J	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	5.6J	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.65J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	0.36J	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	0.20J	1.0	0.20
TRANS-1,2-DICHLOROETHENE	0.26J	1.0	0.20
TRICHLOROETHENE	0.38J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	2.9	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.2	10.00	102	70-140
4-BROMOFLUOROBENZENE	9.18	10.00	91.8	70-130
TOLUENE-D8	9.14	10.00	91.4	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/15/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/15/11
Batch No. : 11K133	Date Extracted: 11/18/11 20:46
Sample ID: MW-70-PMW08A-133	Date Analyzed: 11/18/11 20:46
Lab Samp ID: K133-04	Dilution Factor: 1
Lab File ID: RKB272	Matrix : WATER
Ext Btch ID: V003K19	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.28J	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.53J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	33	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	1.4	1.0	0.20
TRICHLOROETHENE	1.0J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	39	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.33	10.00	83.3	70-140
4-BROMOFLUOROBENZENE	9.21	10.00	92.1	70-130
TOLUENE-D8	9.35	10.00	93.5	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/15/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/15/11
Batch No. : 11K133	Date Extracted: 11/21/11 17:56
Sample ID: MW-70-PMW08B-134	Date Analyzed: 11/21/11 17:56
Lab Samp ID: K133-05	Dilution Factor: 1
Lab File ID: RKB326	Matrix : WATER
Ext Btch ID: V003K21	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.70J	1.0	0.20
1,1-DICHLOROETHENE	0.76	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	100E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	8.6	1.0	0.20
TRICHLOROETHENE	4.4J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	350E	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.07	10.00	90.7	70-140
4-BROMOFLUOROBENZENE	9.70	10.00	97.0	70-130
TOLUENE-D8	9.38	10.00	93.8	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/15/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/15/11
Batch No. : 11K133	Date Extracted: 11/21/11 11:05
Sample ID: MW-70-PMW08B-134DL	Date Analyzed: 11/21/11 11:05
Lab Samp ID: K133-05T	Dilution Factor: 50
Lab File ID: RKB314	Matrix : WATER
Ext Btch ID: V003K21	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	50	10
1,1,1,2-TETRACHLOROETHANE	ND	50	10
1,1,2,2-TETRACHLOROETHANE	ND	50	10
1,1,2-TRICHLOROETHANE	ND	50	10
FREON113	ND	50	15
1,1-DICHLOROETHANE	ND	50	10
1,1-DICHLOROETHENE	ND	25	10
1,1-DICHLOROPROPENE	ND	50	10
1,2-DIBROMO-3-CHLOROPROPANE	ND	100	25
1,2-DIBROMOETHANE	ND	50	10
1,2-DICHLOROBENZENE	ND	50	10
1,2-DICHLOROETHANE	ND	25	10
1,2-DICHLOROPROPANE	ND	50	10
1,2,3-TRICHLOROBENZENE	ND	50	15
1,2,3-TRICHLOROPROPANE	ND	50	25
1,2,4-TRICHLOROBENZENE	ND	50	15
1,2,4-TRIMETHYLBENZENE	ND	50	10
1,3-DICHLOROBENZENE	ND	50	10
1,3,5-TRIMETHYLBENZENE	ND	50	10
1,4-DICHLOROBENZENE	ND	50	10
2-BUTANONE	ND	500	200
2-CHLOROTOLUENE	ND	50	10
2-HEXANONE	ND	500	200
2,2-DICHLOROPROPANE	ND	50	10
4-CHLOROTOLUENE	ND	50	10
4-METHYL-2-PENTANONE	ND	500	200
N-BUTYLBENZENE	ND	50	10
N-PROPYLBENZENE	ND	50	10
P-ISOPROPYLTOLUENE	ND	50	10
SEC-BUTYLBENZENE	ND	50	10
TERT-BUTYLBENZENE	ND	50	10
ACETONE	ND	500	250
BENZENE	ND	50	10
BROMOBENZENE	ND	50	10
BROMODICHLOROMETHANE	ND	50	10
CIS-1,3-DICHLOROPROPENE	ND	50	10
TRANS-1,3-DICHLOROPROPENE	ND	50	10
BROMOMETHANE	ND	100	15
BROMOFORM	ND	50	15
CARBON DISULFIDE	ND	50	10
CARBON TETRACHLORIDE	ND	25	10
CHLOROBENZENE	ND	50	10
CHLOROETHANE	ND	100	15
CHLOROFORM	ND	50	10
CHLOROMETHANE	ND	100	15
CIS-1,2-DICHLOROETHENE	120	50	10
DICHLORODIFLUOROMETHANE	ND	100	15
DIBROMOCHLOROMETHANE	ND	50	10
DIBROMOMETHANE	ND	50	10
ETHYLBENZENE	ND	50	10
HEXACHLOROBUTADIENE	ND	50	15
ISOPROPYL BENZENE	ND	50	10
METHYLENE CHLORIDE	ND	50	25
MTBE	ND	50	10
STYRENE	ND	50	10
TETRACHLOROETHYLENE	ND	50	10
TOLUENE	ND	50	10
TRANS-1,2-DICHLOROETHENE	ND	50	10
TRICHLOROETHENE	ND	250	10
TRICHLOROFLUOROMETHANE	ND	100	15
VINYL CHLORIDE	390	25	10
XYLENES (TOTAL)	ND	100	30
M/P-XYLENES	ND	50	20
O-XYLENE	ND	50	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	449	500.0	89.7	70-140
4-BROMOFLUOROBENZENE	490	500.0	98.1	70-130
TOLUENE-D8	465	500.0	93.0	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/15/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/15/11
Batch No. : 11K133	Date Extracted: 11/18/11 21:22
Sample ID: MW-70-MNA10-135	Date Analyzed: 11/18/11 21:22
Lab Samp ID: K133-06	Dilution Factor: 1
Lab File ID: RKB273	Matrix : WATER
Ext Btch ID: V003K19	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.34J	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.37J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	24	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	2.6	1.0	0.20
TRICHLOROETHENE	6.5	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	25	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.23	10.00	82.3	70-140
4-BROMOFLUOROBENZENE	9.42	10.00	94.2	70-130
TOLUENE-D8	9.43	10.00	94.3	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/15/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/15/11
Batch No. : 11K133	Date Extracted: 11/18/11 17:46
Sample ID: IR-70-TB-129	Date Analyzed: 11/18/11 17:46
Lab Samp ID: K133-07	Dilution Factor: 1
Lab File ID: RKB267	Matrix : WATER
Ext Btch ID: V003K19	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.83	10.00	88.3	70-140
4-BROMOFLUOROBENZENE	9.63	10.00	96.3	70-130
TOLUENE-D8	9.44	10.00	94.4	70-140

QC SUMMARIES

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/18/11
Batch No. : 11K133	Date Extracted: 11/18/11 16:34
Sample ID: MBLK1W	Date Analyzed: 11/18/11 16:34
Lab Samp ID: V003K19B	Dilution Factor: 1
Lab File ID: RKB265	Matrix : WATER
Ext Btch ID: V003K19	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.17	10.00	81.7	70-140
4-BROMOFLUOROBENZENE	9.45	10.00	94.5	70-130
TOLUENE-D8	9.56	10.00	95.6	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	V003K19B	V003K19L	V003K19C		
LAB FILE ID:	RKB265	RKB263	RKB264		
DATE EXTRACTED:	11/18/1116:34	11/18/1115:21	11/18/1115:57	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1116:34	11/18/1115:21	11/18/1115:57	DATE RECEIVED:	11/18/11
PREP. BATCH:	V003K19	V003K19	V003K19		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.34	93	10.0	9.18	92	2	60-130	30
Benzene	ND	10.0	9.70	97	10.0	9.85	98	2	70-130	30
Chlorobenzene	ND	10.0	10.2	102	10.0	10.3	103	1	70-120	30
Toluene	ND	10.0	9.50	95	10.0	9.67	97	2	70-130	30
Trichloroethene	ND	10.0	9.83	98	10.0	9.99	100	2	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.66	87	10.0	8.40	84	70-140
4-Bromofluorobenzene	10.0	9.27	93	10.0	9.10	91	70-130
Toluene-d8	10.0	9.25	93	10.0	9.32	93	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/21/11
Batch No. : 11K133	Date Extracted: 11/21/11 09:53
Sample ID: MBLK2W	Date Analyzed: 11/21/11 09:53
Lab Samp ID: V003K21B	Dilution Factor: 1
Lab File ID: RKB312	Matrix : WATER
Ext Btch ID: V003K21	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.36	10.00	83.6	70-140
4-BROMOFLUOROBENZENE	9.52	10.00	95.2	70-130
TOLUENE-D8	9.59	10.00	95.9	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	V003K21B	V003K21L	V003K21C		
LAB FILE ID:	RKB312	RKB310	RKB311		
DATE EXTRACTED:	11/21/1109:53	11/21/1108:47	11/21/1109:20	DATE COLLECTED:	NA
DATE ANALYZED:	11/21/1109:53	11/21/1108:47	11/21/1109:20	DATE RECEIVED:	11/21/11
PREP. BATCH:	V003K21	V003K21	V003K21		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.50	95	10.0	9.16	92	4	60-130	30
Benzene	ND	10.0	9.95	99	10.0	9.57	96	4	70-130	30
Chlorobenzene	ND	10.0	9.97	100	10.0	9.71	97	3	70-120	30
Toluene	ND	10.0	9.58	96	10.0	9.13	91	5	70-130	30
Trichloroethene	ND	10.0	10.0	100	10.0	9.59	96	4	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.44	84	10.0	8.41	84	70-140
4-Bromofluorobenzene	10.0	9.62	96	10.0	9.34	93	70-130
Toluene-d8	10.0	9.54	95	10.0	9.26	93	70-130

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MW-70-PMW07A-130				
LAB SAMP ID:	K133-01	K133-01M	K133-01S		
LAB FILE ID:	RKB271	RKB269	RKB270		
DATE EXTRACTED:	11/18/1120:10	11/18/1118:59	11/18/1119:34	DATE COLLECTED:	11/15/11
DATE ANALYZED:	11/18/1120:10	11/18/1118:59	11/18/1119:34	DATE RECEIVED:	11/15/11
PREP. BATCH:	VO03K19	VO03K19	VO03K19		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	8.78	88	10.0	8.69	87	1	60-140	30
Benzene	ND	10.0	9.01	90	10.0	9.30	93	3	60-140	30
Chlorobenzene	ND	10.0	9.66	97	10.0	9.74	97	1	63-132	30
Toluene	ND	10.0	8.89	89	10.0	9.09	91	2	70-140	30
Trichloroethene	1.07J	10.0	9.95	89	10.0	10.3	92	3	60-140	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	9.37	94	10.0	8.76	88	70-140
4-Bromofluorobenzene	10.0	8.99	90	10.0	9.04	90	70-130
Toluene-d8	10.0	9.18	92	10.0	9.24	92	70-140

INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RHB438
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K133
BFB Injection Date : 08/16/11
BFB Injection Time : 11:15
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	26.25
75	30.0 - 60.0% of mass 95	54.23
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.88
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	60.88
175	5.0 - 9.0% of mass 174	4.93(8.1)1
176	95.0 - 101.0% of mass 174	58.41(96.0)1
177	5.0 - 9.0% of mass 176	4.58(7.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	VO03H161	RHB439	08/16/11	11:49
2	VSTD0.5	VO03H162	RHB440	08/16/11	12:24
3	VSTD01	VO03H163	RHB441	08/16/11	12:57
4	VSTD02	VO03H164	RHB442	08/16/11	13:32
5	VSTD05	VO03H165	RHB443	08/16/11	14:06
6	VSTD010	VO03H166	RHB444	08/16/11	14:40
7	VSTD020	VO03H167	RHB445	08/16/11	15:14
8	VSTD030	VO03H168	RHB446	08/16/11	15:48
9	VSTD040	VO03H169	RHB447	08/16/11	16:21
10	VSTD050	VO03H1610	RHB448	08/16/11	16:56
11	VSTD100	VO03H1611	RHB449	08/16/11	17:30
12	VSTD010	IVO03H161	RHB452	08/16/11	19:13

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :03
Beginning DateTime :08/16/11 11:49
Spike Units :PPB
IC File :RHB444

Column Spec :ZB-624 ID :0.25MM
Ending DateTime :08/16/11 17:30
HPChem Method :V003H16

M	IDX	Parameters	.3 11:49 RHB439	.5 12:24 RHB440	1 12:57 RHB441	2 13:32 RHB442	5 14:06 RHB443	10 14:40 RHB444	20 15:14 RHB445	30 15:48 RHB446	40 16:21 RHB447	50 16:56 RHB448	100 17:30 RHB449	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	1	0	13.2029
	2	Chlorotrifluoroethylene	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	3	Dichlorodifluoromethane	0.333	0.326	0.343	0.357	0.358	0.429	0.335	0.363	0.324	0.341	0.375	0.353	8.52	4.1126
	4	Dichlorotetrafluoroethane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	5	Chloromethane	0.323	0.300	0.336	0.346	0.362	0.430	0.350	0.384	0.342	0.356	0.394	0.357	10.00	4.6120
	6	2-Chloro-1,1,1-trifluoroethane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	7	Vinyl chloride	0.290	0.283	0.319	0.335	0.351	0.415	0.336	0.355	0.320	0.334	0.372	0.337	10.93	4.9340
	8	Bromomethane	0.218	0.200	0.221	0.218	0.234	0.281	0.230	0.245	0.221	0.224	0.202	0.227	9.78	5.8582
	9	Chloroethane	0.155	0.158	0.171	0.167	0.178	0.217	0.174	0.189	0.173	0.178	0.189	0.177	9.63	6.1356
	10	Dichlorofluoromethane	0.720	0.721	0.765	0.755	0.776	0.817	0.754	0.797	0.735	0.750	0.809	0.764	4.35	6.6727
	11	Trichlorofluoromethane	0.483	0.478	0.529	0.539	0.564	0.666	0.530	0.573	0.516	0.533	0.585	0.545	9.58	6.7323
5	12	Acrolein	------	------	0.008	0.007	0.008	0.009	0.009	0.010	0.010	------	------	0.009	13.95	7.8523
	13	1,1,2-Trichloro-1,2,2-trifluoroethane	0.214	0.200	0.199	0.192	0.199	0.213	0.198	0.208	0.194	0.200	0.216	0.203	4.08	7.9826
5	14	Acetone	------	------	0.045	0.038	0.038	0.040	0.036	0.036	0.035	0.037	0.042	0.039	8.41	8.1846
	15	1,1-Dichloroethene	0.666	0.641	0.683	0.681	0.707	0.726	0.649	0.690	0.620	0.646	0.690	0.673	4.65	8.0029
	16	Methyl acetate	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	17	Iodomethane	0.595	0.558	0.625	0.620	0.644	0.683	0.622	0.668	0.610	0.629	0.689	0.631	6.13	8.3899
	18	Carbon disulfide	1.096	1.194	1.329	1.365	1.443	1.326	1.392	1.540	1.350	1.429	1.420	1.353	8.97	8.5144
	19	Methylene chloride	0.499	0.472	0.484	0.467	0.481	0.496	0.455	0.480	0.438	0.456	0.503	0.475	4.30	9.0800
5	20	tert-Butyl alcohol	------	0.011	0.011	0.011	0.012	0.013	0.012	0.012	0.011	0.012	0.014	0.012	6.87	9.2881
	21	tert-Butyl methyl ether (MTBE)	0.490	0.469	0.498	0.473	0.489	0.517	0.482	0.491	0.455	0.480	0.531	0.489	4.37	9.5102
	22	trans-1,2-Dichloroethene	0.675	0.662	0.683	0.699	0.701	0.732	0.668	0.711	0.642	0.662	0.708	0.686	3.87	9.5711
5	23	Acrylonitrile	0.033	0.031	0.034	0.033	0.035	0.038	0.036	0.038	0.035	0.037	0.041	0.036	7.73	9.6022
	24	Isopropyl ether (DIPE)	1.151	1.115	1.209	1.191	1.227	1.299	1.169	1.239	1.128	1.181	1.246	1.196	4.59	10.3302
	25	Vinyl acetate	------	0.309	0.374	0.410	0.409	0.470	0.412	0.419	0.353	0.382	0.476	0.401	12.58	10.3881
	26	1,1-Dichloroethane	0.733	0.691	0.747	0.754	0.775	0.806	0.727	0.770	0.691	0.721	0.755	0.743	4.72	10.3695
5	27	2-Butanol	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	28	tert-Butyl ethyl ether (ETBE)	0.820	0.794	0.868	0.845	0.869	0.915	0.834	0.888	0.805	0.851	0.926	0.856	4.96	10.9486
	29	2,2-Dichloropropane	0.645	0.638	0.680	0.663	0.654	0.651	0.579	0.585	0.526	0.522	0.512	0.605	10.34	11.3261
5	30	2-Butanone	0.080	0.076	0.068	0.060	0.063	0.068	0.062	0.063	0.060	0.062	0.067	0.066	10.11	11.3546
	31	cis-1,2-Dichloroethene	0.374	0.367	0.389	0.395	0.396	0.418	0.383	0.409	0.369	0.382	0.398	0.389	4.16	11.3600
	32	Bromochloromethane	0.290	0.292	0.316	0.301	0.313	0.334	0.301	0.316	0.291	0.302	0.324	0.307	4.66	11.7699
	33	Tetrahydrofuran	------	0.040	0.045	0.038	0.038	0.036	0.036	0.036	0.033	0.035	0.041	0.038	8.93	11.8229
	34	Chloroform	0.779	0.771	0.815	0.825	0.841	0.878	0.785	0.834	0.750	0.776	0.822	0.807	4.69	11.8606
5	35	tert-Amyl alcohol	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	36	Dibromofluoromethane	------	------	------	------	0.389	0.390	0.366	0.381	0.347	0.360	0.368	0.372	4.23	12.1220
	37	1,1,1-Trichloroethane	0.737	0.711	0.742	0.756	0.766	0.787	0.702	0.733	0.656	0.674	0.689	0.723	5.57	12.1312
	38	Cyclohexane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	39	tert-Amyl methyl ether (TAME)	0.119	0.125	0.141	0.132	0.137	0.146	0.130	0.135	0.124	0.128	0.137	0.132	5.96	12.7415
	40	1,2-Dichloroethane-d4	------	------	------	------	0.405	0.399	0.376	0.375	0.347	0.364	0.381	0.378	5.20	12.6515
	41	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	1	0	17.1946
	42	1,1-Dichloropropene	0.194	0.191	0.194	0.202	0.199	0.214	0.195	0.210	0.187	0.194	0.202	0.198	4.08	12.3667
	43	Carbon tetrachloride	0.651	0.632	0.695	0.701	0.694	0.726	0.654	0.705	0.628	0.664	0.700	0.677	4.82	12.3748
	44	Benzene	1.610	1.539	1.609	1.645	1.618	1.728	1.560	1.733	1.533	1.641	------	1.622	4.28	12.7061
	45	1,2-Dichloroethane	0.477	0.486	0.520	0.521	0.517	0.534	0.479	0.506	0.456	0.484	0.524	0.500	5.00	12.7645
	46	Trichloroethene	0.439	0.414	0.425	0.434	0.440	0.469	0.434	0.477	0.426	0.452	0.484	0.445	5.11	13.6183
	47	Methylcyclohexane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	48	1,2-Dichloropropane	0.392	0.391	0.404	0.409	0.418	0.443	0.407	0.444	0.391	0.421	0.444	0.415	5.04	13.9674
20	49	1,4-Dioxane	------	------	------	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	13.98	14.1284
	50	Dibromomethane	0.173	0.185	0.186	0.192	0.196	0.207	0.195	0.208	0.188	0.203	0.223	0.196	7.00	14.1839
	51	Bromodichloromethane	0.568	0.548	0.588	0.615	0.635	0.668	0.614	0.663	0.593	0.639	0.688	0.620	7.03	14.3490
	52	2-Chloroethyl vinyl ether	0.127	0.109	0.107	0.108	0.119	0.128	0.126	0.136	0.125	0.135	0.157	0.125	11.72	14.6453
	53	cis-1,3-Dichloropropene	0.559	0.576	0.607	0.629	0.639	0.692	0.640	0.694	0.622	0.667	0.716	0.640	7.70	14.9159
5	54	4-Methyl-2-pentanone	0.216	0.203	0.202	0.183	0.194	0.211	0.195	0.203	0.189	0.204	0.221	0.202	5.64	15.0350
	55	Toluene-d8	------	------	------	------	1.414	1.463	1.383	1.491	1.335	1.437	------	1.420	3.97	15.2566
	56	Toluene	1.743	1.699	1.754	1.765	1.767	1.866	1.709	1.870	1.659	1.763	------	1.759	3.81	15.3480
	57	Ethyl methacrylate	0.317	0.290	0.311	0.307	0.328	0.349	0.328	0.342	0.314	0.337	0.367	0.326	6.64	15.5912
	58	trans-1,3-Dichloropropene	0.444	0.436	0.476	0.491	0.506	0.549	0.503	0.533	0.486	0.523	0.562	0.501	8.00	15.6345

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	59	1,1,2-Trichloroethane	0.200	0.210	0.215	0.211	0.215	0.232	0.213	0.227	0.205	0.220	0.240	0.217	5.48	15.9132
	60	Tetrachloroethene	0.394	0.381	0.379	0.375	0.383	0.402	0.368	0.401	0.355	0.377	0.390	0.382	3.71	16.0891
5	61	2-Hexanone	0.124	0.136	0.139	0.124	0.131	0.145	0.133	0.136	0.126	0.134	0.139	0.133	4.95	16.1081
	62	1,3-Dichloropropane	0.394	0.407	0.439	0.435	0.440	0.467	0.430	0.451	0.411	0.435	0.468	0.434	5.43	16.1405
	63	Dibromochloromethane	0.269	0.276	0.295	0.307	0.323	0.349	0.331	0.351	0.320	0.343	0.374	0.322	10.17	16.4869
	64	1,2-Dibromoethane	0.219	0.212	0.227	0.229	0.237	0.254	0.241	0.251	0.231	0.246	0.270	0.238	7.10	16.6723
	65	1-Chlorohexane	0.806	0.829	0.818	0.818	0.821	0.858	0.797	0.855	0.760	0.800	0.812	0.816	3.31	17.0363
	66	Chlorobenzene	1.013	0.966	0.986	1.007	1.015	1.077	0.995	1.068	0.945	0.996	1.033	1.009	3.91	17.2366
	67	Ethylbenzene	2.214	2.216	2.257	2.290	2.286	2.401	2.175	2.333	------	------	------	2.272	3.20	17.2809
	68	1,1,1,2-Tetrachloroethane	0.351	0.348	0.375	0.382	0.379	0.408	0.371	0.398	0.352	0.374	0.383	0.375	5.09	17.3137
2	69	m-Xylene & p-Xylene	1.793	1.710	1.756	1.784	1.773	1.830	1.658	1.696	------	------	------	1.750	3.27	17.4093
	70	o-Xylene	1.787	1.675	1.748	1.756	1.739	1.810	1.626	1.732	1.506	1.591	------	1.697	5.67	17.9438
	71	Styrene	1.054	1.000	1.088	1.118	1.153	1.209	1.104	1.164	1.021	1.074	1.058	1.095	5.77	17.9672
	72	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	1	0	20.7222
	73	Isopropylbenzene	5.858	5.671	5.633	5.810	5.728	5.928	5.332	5.949	5.238	5.551	------	5.670	4.24	18.3621
	74	Bromoform	0.324	0.344	0.368	0.382	0.408	0.454	0.425	0.465	0.423	0.454	0.497	0.413	13.02	18.3529
	75	4-Bromofluorobenzene	------	------	------	------	1.571	1.602	1.509	1.625	1.474	------	------	1.556	4.08	18.6495
	76	1,1,2,2-Tetrachloroethane	0.772	0.704	0.722	0.721	0.745	0.787	0.727	0.787	0.711	0.765	0.847	0.753	5.72	18.7926
	77	trans-1,4-Dichloro-2-butene	0.242	0.213	0.220	0.226	0.232	0.251	0.250	0.269	0.242	0.260	0.284	0.244	8.79	18.8292
	78	n-Propylbenzene	8.224	8.356	7.993	8.230	8.165	8.440	7.620	8.477	7.035	------	------	8.060	5.75	18.8738
	79	1,2,3-Trichloropropane	0.148	0.180	0.183	0.183	0.182	0.189	0.172	0.183	0.160	0.171	0.176	0.175	6.81	18.8927
	80	Bromobenzene	1.099	1.123	1.157	1.144	1.155	1.202	1.089	1.207	1.063	1.135	1.187	1.142	4.08	18.9131
	81	1,3,5-Trimethylbenzene	5.021	4.935	4.880	5.015	4.948	5.155	4.658	5.132	4.444	4.689	------	4.888	4.63	19.0498
	82	2-Chlorotoluene	5.177	5.066	5.093	5.142	5.099	5.296	4.742	5.233	4.586	4.857	------	5.029	4.52	19.0899
	83	4-Chlorotoluene	4.375	4.251	4.270	4.354	4.458	4.591	4.187	4.627	4.062	4.288	------	4.346	4.03	19.2165
	84	tert-Butylbenzene	1.029	0.977	0.964	0.977	0.993	1.020	0.928	1.019	0.887	0.930	0.935	0.969	4.68	19.5152
	85	1,2,4-Trimethylbenzene	4.786	4.599	4.661	4.724	4.753	4.900	4.450	4.909	4.270	4.452	------	4.650	4.48	19.5692
	86	sec-Butylbenzene	6.721	6.468	6.448	6.425	6.464	6.693	6.076	6.628	5.748	6.015	------	6.369	5.02	19.7895
	87	p-Isopropyltoluene	4.919	4.972	4.842	4.954	5.082	5.267	4.766	5.175	4.496	4.694	------	4.917	4.68	19.9309
	88	1,3-Dichlorobenzene	2.180	2.099	2.105	2.143	2.217	2.322	2.149	2.351	2.047	2.200	2.279	2.190	4.38	20.0957
	89	1,4-Dichlorobenzene	1.974	1.957	1.960	1.989	2.042	2.192	2.013	2.184	1.927	2.020	2.150	2.037	4.65	20.2012
	90	n-Butylbenzene	5.497	5.378	5.308	5.435	5.582	5.847	5.333	5.742	4.986	5.191	------	5.430	4.68	20.4876
	91	1,2-Dichlorobenzene	1.635	1.630	1.645	1.640	1.673	1.784	1.636	1.768	1.569	1.668	1.777	1.675	4.20	20.7520
	92	1,2-Dibromo-3-chloropropane	------	0.071	0.077	0.076	0.085	0.093	0.090	0.095	0.088	0.094	------	0.085	10.04	21.8756
	93	1,2,4-Trichlorobenzene	0.793	0.757	0.731	0.751	0.832	0.913	0.883	0.926	0.849	0.893	1.017	0.850	10.33	23.1186
	94	Hexachlorobutadiene	0.813	0.765	0.736	0.736	0.774	0.844	0.780	0.806	0.730	0.749	0.825	0.778	5.07	23.2512
	95	Naphthalene	0.985	0.890	0.921	0.924	1.070	1.223	1.223	1.249	1.184	1.282	------	1.095	14.07	23.6207
	96	1,2,3-Trichlorobenzene	0.569	0.526	0.548	0.555	0.608	0.669	0.660	0.675	0.632	0.667	0.753	0.624	11.07	24.0414

Spike Amount = Nominal Amount * M

Ave_%RSD : 6.5 Max_%RSD : 14.1

8/18/11

2022

SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :03
IC_Beginning DateTime :08/16/11 11:49
Spike Amount :10 PPB
CC/CV File :RHB452
IC File :RHB444

Column Spec :ZB-624 ID :0.25MM
IC_Ending DateTime :08/16/11 17:30
HPChem Method :V003H16
Date_Time :08/16/11 19:13

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	1964342	1	1	13.207	13.203	0				
	2	Chlorotrifluoroethylene												
	3	Dichlorodifluoromethane	10.093	0.9	699900	0.356	0.353	4.112	4.113	8.52				
	4	Dichlorotetrafluoroethane												
	5	Chloromethane	10.630	6.3	744562	0.379	0.357	4.618	4.612	10.00				
	6	2-Chloro-1,1,1-trifluoroethane												
	7	Vinyl chloride	10.627	6.3	704186	0.358	0.337	4.931	4.934	10.93				
	8	Bromomethane	11.072	10.7	493194	0.251	0.227	5.869	5.858	9.78				
	9	Chloroethane	10.559	5.6	367718	0.187	0.177	6.151	6.136	9.63				
	10	Dichlorofluoromethane	9.808	-1.9	1471244	0.749	0.764	6.672	6.673	4.35				
	11	Trichlorofluoromethane	10.147	1.5	1086354	0.553	0.545	6.747	6.732	9.58				
5	12	Acrolein	48.279	-3.4	84307	0.009	0.009	7.848	7.852	13.95				
	13	1,1,2-Trichloro-1,2,2-trifluoroethane	9.633	-3.7	384110	0.196	0.203	7.982	7.983	4.08				
5	14	Acetone	45.661	-8.7	346459	0.035	0.039	8.191	8.185	8.41				
	15	1,1-Dichloroethene	9.833	-1.7	1299399	0.661	0.673	8.012	8.003	4.65				
	16	Methyl acetate												
	17	Iodomethane	9.877	-1.2	1224692	0.623	0.631	8.399	8.390	6.13				
	18	Carbon disulfide	9.749	-2.5	2591704	1.319	1.353	8.518	8.514	8.97				
	19	Methylene chloride	9.496	-5.0	886710	0.451	0.475	9.084	9.080	4.30				
5	20	tert-Butyl alcohol	48.030	-3.9	113617	0.012	0.012	9.277	9.288	6.87				
	21	tert-Butyl methyl ether (MTBE)	9.404	-6.0	902635	0.460	0.489	9.500	9.510	4.37				
	22	trans-1,2-Dichloroethene	9.789	-2.1	1318564	0.671	0.686	9.575	9.571	3.87				
5	23	Acrylonitrile	47.722	-4.6	332995	0.034	0.036	9.604	9.602	7.73				
	24	Isopropyl ether (DIPE)	9.920	-0.8	2330749	1.187	1.196	10.334	10.330	4.59				
	25	Vinyl acetate	9.528	-4.7	751324	0.382	0.401	10.378	10.388	12.58				
	26	1,1-Dichloroethane	9.930	-0.7	1448484	0.737	0.743	10.378	10.370	4.72				
5	27	2-Butanol												
	28	tert-Butyl ethyl ether (ETBE)	9.593	-4.1	1613230	0.821	0.856	10.944	10.949	4.96				
	29	2,2-Dichloropropane	9.497	-5.0	1128621	0.575	0.605	11.331	11.326	10.34				
5	30	2-Butanone	45.732	-8.5	593514	0.060	0.066	11.346	11.355	10.11				
	31	cis-1,2-Dichloroethene	9.895	-1.0	756535	0.385	0.389	11.361	11.360	4.16				
	32	Bromochloromethane	9.603	-4.0	579777	0.295	0.307	11.778	11.770	4.66				
	33	Tetrahydrofuran	8.976	-10.2	66683	0.034	0.038	11.822	11.823	8.93				
	34	Chloroform	9.825	-1.8	1557374	0.793	0.807	11.867	11.861	4.69				
5	35	tert-Amyl alcohol												
	36	Dibromofluoromethane	9.783	-2.2	713957	0.363	0.372	12.120	12.122	4.23				
	37	1,1,1-Trichloroethane	10.014	0.1	1422256	0.724	0.723	12.135	12.131	5.57				
	38	Cyclohexane												
	39	tert-Amyl methyl ether (TAME)	9.629	-3.7	250003	0.127	0.132	12.745	12.741	5.96				
	40	1,2-Dichloroethane-d4	9.565	-4.4	710649	0.362	0.378	12.656	12.651	5.20				
	41	CHLOROBENZENE-D5	10.000	0	1798817	1	1	17.196	17.195	0				
	42	1,1-Dichloropropene	10.046	0.5	358644	0.199	0.198	12.373	12.367	4.08				
	43	Carbon tetrachloride	9.973	-0.3	1214995	0.675	0.677	12.373	12.375	4.82				
	44	Benzene	9.859	-1.4	2875933	1.599	1.622	12.700	12.706	4.28				
	45	1,2-Dichloroethane	9.612	-3.9	865253	0.481	0.500	12.760	12.764	5.00				
	46	Trichloroethene	9.753	-2.5	780754	0.434	0.445	13.623	13.618	5.11				
	47	Methylcyclohexane												
	48	1,2-Dichloropropane	9.773	-2.3	729684	0.406	0.415	13.966	13.967	5.04				
20	49	1,4-Dioxane	183.576	-8.2	42494	0.001	0.001	14.129	14.128	13.98				
	50	Dibromomethane	9.611	-3.9	338874	0.188	0.196	14.189	14.184	7.00				
	51	Bromodichloromethane	9.825	-1.8	1095495	0.609	0.620	14.353	14.349	7.03				
	52	2-Chloroethyl vinyl ether	9.067	-9.3	204114	0.113	0.125	14.650	14.645	11.72				
	53	cis-1,3-Dichloropropene	9.692	-3.1	1116066	0.620	0.640	14.918	14.916	7.70				
5	54	4-Methyl-2-pentanone	47.294	-5.4	1718865	0.191	0.202	15.037	15.035	5.64				
	55	Toluene-d8	9.655	-3.5	2466873	1.371	1.420	15.261	15.257	3.97				
	56	Toluene	9.993	-0.1	3162952	1.758	1.759	15.350	15.348	3.81				
	57	Ethyl methacrylate	9.621	-3.8	564739	0.314	0.326	15.588	15.591	6.64				
	58	trans-1,3-Dichloropropene	9.804	-2.0	883251	0.491	0.501	15.633	15.634	8.00				
	59	1,1,2-Trichloroethane	9.563	-4.4	373487	0.208	0.217	15.915	15.913	5.48				

SW
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29024

	60	Tetrachloroethene	9.848	-1.5	677306	0.377	0.382	16.094	16.089	3.71				
5	61	2-Hexanone	48.468	-3.1	1163929	0.129	0.133	16.109	16.108	4.95				
	62	1,3-Dichloropropane	9.655	-3.5	754490	0.419	0.434	16.139	16.140	5.43				
	63	Dibromochloromethane	9.885	-1.1	571900	0.318	0.322	16.481	16.487	10.17				
	64	1,2-Dibromoethane	9.766	-2.3	417971	0.232	0.238	16.675	16.672	7.10				
	65	1-Chlorohexane	9.962	-0.4	1461845	0.813	0.816	17.032	17.036	3.31				
	66	Chlorobenzene	9.849	-1.5	1787931	0.994	1.009	17.240	17.237	3.91				
	67	Ethylbenzene	9.937	-0.6	4060376	2.257	2.272	17.285	17.281	3.20				
	68	1,1,1,2-Tetrachloroethane	10.061	0.6	678042	0.377	0.375	17.315	17.314	5.09				
2	69	m-Xylene & p-Xylene	19.693	-1.5	6198937	1.723	1.750	17.404	17.409	3.27				
	70	o-Xylene	9.947	-0.5	3036203	1.688	1.697	17.940	17.944	5.67				
	71	Styrene	10.236	2.4	2015906	1.121	1.095	17.969	17.967	5.77				
	72	1,2-DICHLOROBENZENE-D4	10.000	0	640128	1	1	20.723	20.722	0				
	73	Isopropylbenzene	9.728	-2.7	3530678	5.516	5.670	18.357	18.362	4.24				
	74	Bromoform	9.443	-5.6	249695	0.390	0.413	18.357	18.353	13.02				
	75	4-Bromofluorobenzene	9.646	-3.5	960964	1.501	1.556	18.654	18.649	4.08				
	76	1,1,2,2-Tetrachloroethane	9.148	-8.5	441198	0.689	0.753	18.788	18.793	5.72				
	77	trans-1,4-Dichloro-2-butene	9.162	-8.4	143359	0.224	0.244	18.833	18.829	8.79				
	78	n-Propylbenzene	9.830	-1.7	5072007	7.923	8.060	18.878	18.874	5.75				
	79	1,2,3-Trichloropropane	9.596	-4.0	107620	0.168	0.175	18.892	18.893	6.81				
	80	Bromobenzene	9.649	-3.5	705287	1.102	1.142	18.907	18.913	4.08				
	81	1,3,5-Trimethylbenzene	9.894	-1.1	3095769	4.836	4.888	19.041	19.050	4.63				
	82	2-Chlorotoluene	9.764	-2.4	3143279	4.910	5.029	19.086	19.090	4.52				
	83	4-Chlorotoluene	9.838	-1.6	2736995	4.276	4.346	19.220	19.216	4.03				
	84	tert-Butylbenzene	9.890	-1.1	613463	0.958	0.969	19.517	19.515	4.68				
	85	1,2,4-Trimethylbenzene	9.958	-0.4	2964568	4.631	4.650	19.562	19.569	4.48				
	86	sec-Butylbenzene	9.913	-0.9	4041314	6.313	6.369	19.785	19.789	5.02				
	87	p-Isopropyltoluene	10.093	0.9	3176708	4.963	4.917	19.934	19.931	4.68				
	88	1,3-Dichlorobenzene	9.880	-1.2	1385302	2.164	2.190	20.098	20.096	4.38				
	89	1,4-Dichlorobenzene	9.945	-0.6	1296892	2.026	2.037	20.202	20.201	4.65				
	90	n-Butylbenzene	10.239	2.4	3559056	5.560	5.430	20.485	20.488	4.68				
	91	1,2-Dichlorobenzene	9.828	-1.7	1053936	1.646	1.675	20.753	20.752	4.20				
	92	1,2-Dibromo-3-chloropropane	9.687	-3.1	53004	0.083	0.085	21.884	21.876	10.04				
	93	1,2,4-Trichlorobenzene	10.206	2.1	555050	0.867	0.850	23.119	23.119	10.33				
	94	Hexachlorobutadiene	10.504	5.0	523217	0.817	0.778	23.253	23.251	5.07				
	95	Naphthalene	10.499	5.0	736086	1.150	1.095	23.626	23.621	14.07				
	96	1,2,3-Trichlorobenzene	10.239	2.4	408911	0.639	0.624	24.042	24.041	11.07				

Spike Amount = Nominal Amount * M

Sw
8/18/11

2025

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB261
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K133
BFB Injection Date : 11/18/11
BFB Injection Time : 14:03
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.44
75	30.0 - 60.0% of mass 95	52.87
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.66
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	63.36
175	5.0 - 9.0% of mass 174	4.66(7.4)1
176	95.0 - 101.0% of mass 174	61.35(96.8)1
177	5.0 - 9.0% of mass 176	4.21(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV003H1652	RKB262	11/18/11	14:40
2	MBLK1W	V003K19B	RKB265	11/18/11	16:34
3	LCS1W	V003K19L	RKB263	11/18/11	15:21
4	LCD1W	V003K19C	RKB264	11/18/11	15:57
5	IR-70-TB-129	K133-07	RKB267	11/18/11	17:46
6	IW-70-FSB216-132	K133-03	RKB268	11/18/11	18:23
7	MW-70-PMW07A-130MS	K133-01M	RKB269	11/18/11	18:59
8	MW-70-PMW07A-130MSD	K133-01S	RKB270	11/18/11	19:34
9	MW-70-PMW07A-130	K133-01	RKB271	11/18/11	20:10
10	MW-70-PMW08A-133	K133-04	RKB272	11/18/11	20:46
11	MW-70-MNA10-135	K133-06	RKB273	11/18/11	21:22

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RHB444
Instrument ID: 03
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K133
Date Analyzed: 08/16/11
Time Analyzed: 14:40
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1861981	13.20	1722743	17.19	603523	20.72
	UPPER LIMIT	3723962	13.70	3445486	17.69	1207046	21.22
	LOWER LIMIT	930991	12.70	861372	16.69	301762	20.22
	SAMPLE ID						
1	VSTD010	2180037	13.16	2089922	17.17	747939	20.68
2	MBLK1W	2540690	13.17	2332742	17.16	769211	20.69
3	LCS1W	2312906	13.17	2198871	17.16	778434	20.69
4	LCD1W	2468781	13.17	2323435	17.16	840552	20.69
5	IR-70-TB-129	2251965	13.18	2084663	17.16	681573	20.68
6	IW-70-FSB216-132	1872491	13.17	1769571	17.16	631964	20.68
7	MW-70-PMW07A-130MS	2295039	13.18	2225558	17.16	825885	20.68
8	MW-70-PMW07A-130MSD	2518544	13.16	2419784	17.15	865515	20.68
9	MW-70-PMW07A-130	2642263	13.16	2510746	17.17	872627	20.68
10	MW-70-PMW08A-133	2499789	13.16	2344544	17.17	792496	20.68
11	MW-70-MNA10-135	2387751	13.18	2231272	17.17	737397	20.68

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKB262.D Vial: 2
Acq On : 18 Nov 2011 2:40 pm Operator: CGM
Sample : CVO03H1652 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	117	0.00
2	T,M	Chlorotrifluoroethylene	-1.000	0.000	0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	11.139	-11.4	107	0.00
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	107	0.00
5	P,T,M	Chloromethane	10.000	10.033	-0.3	97	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000	0.0	0	-5.22#
7	C,T,M	Vinyl chloride	10.000	9.705	2.9	92	0.02
8	T,M	Bromomethane	10.000	10.446	-4.5	99	0.00
9	T,M	Chloroethane	10.000	10.351	-3.5	99	0.00
10	T,M	Dichlorofluoromethane	10.000	9.506	4.9	104	0.02
11	T,M	Trichlorofluoromethane	10.000	8.763	12.4	84	0.00
12	T,M	Acrolein	50.000	46.301	7.4	106	0.02
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	8.997	10.0	101	0.00
14	T,M	Acetone	50.000	49.192	1.6	111	0.02
15	C,T,M	1,1-Dichloroethene	10.000	9.260	7.4	101	0.02
16	T,M	Methyl acetate	-1.000	0.000	0.0	110	0.02
17	T,M	Iodomethane	10.000	8.873	11.3	96	0.02
18	T,M	Carbon disulfide	10.000	10.059	-0.6	120	0.00
19	T,M	Methylene chloride	10.000	9.427	5.7	106	0.00
20	T,M	tert-Butyl alcohol	50.000	43.490	13.0	93	0.02
21	T,M	tert-Butyl methyl ether (MT	10.000	9.795	2.1	108	0.00
22	T,M	trans-1,2-Dichloroethene	10.000	9.475	5.3	104	0.00
23	T,M	Acrylonitrile	50.000	52.998	-6.0	116	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	10.078	-0.8	109	0.00
25	T,M	Vinyl acetate	10.000	9.866	1.3	99	0.02
26	P,T,M	1,1-Dichloroethane	10.000	9.479	5.2	102	0.02
27	T,M	2-Butanol	-1.000	0.000	0.0	99	0.02
28	T,M	tert-Butyl ethyl ether (ETB	10.000	10.498	-5.0	115	0.00
29	T,M	2,2-Dichloropropane	10.000	8.989	10.1	98	0.00
30	T,M	2-Butanone	50.000	50.176	-0.4	114	0.00
31	T,M	cis-1,2-Dichloroethene	10.000	9.579	4.2	104	0.00
32	T,M	Bromochloromethane	10.000	9.651	3.5	104	0.02
33	T,M	Tetrahydrofuran	10.000	10.086	-0.9	124	0.00
34	C,T,M	Chloroform	10.000	9.287	7.1	100	0.00
35	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	29	0.03
36	S	Dibromofluoromethane	10.000	9.615	3.8	107	0.02
37	T,M	1,1,1-Trichloroethane	10.000	8.948	10.5	96	0.00
38	T,M	Cyclohexane	-1.000	0.000	0.0	103	0.02
39	T,M	tert-Amyl methyl ether (TAM	10.000	10.231	-2.3	109	0.00
40	S	1,2-Dichloroethane-d4	10.000	8.956	10.4	100	0.00
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	121	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKB262.D Vial: 2
Acq On : 18 Nov 2011 2:40 pm Operator: CGM
Sample : CVO03H1652 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	9.215	7.9	104	0.02
43	T,M	Carbon tetrachloride	10.000	8.468	15.3	96	0.02
44	T,M	Benzene	10.000	9.379	6.2	107	0.02
45	T,M	1,2-Dichloroethane	10.000	8.479	15.2	96	0.02
46	T,M	Trichloroethene	10.000	9.045	9.6	104	0.00
47	T,M	Methylcyclohexane	-1.000	0.000	0.0	89	0.02
48	C,T,M	1,2-Dichloropropane	10.000	9.867	1.3	112	0.02
49	T,M	1,4-Dioxane	200.000	200.046	-0.0	122	0.02
50	T,M	Dibromomethane	10.000	8.924	10.8	103	0.00
51	T,M	Bromodichloromethane	10.000	9.047	9.5	102	0.00
52	T,M	2-Chloroethyl vinyl ether	10.000	5.218	47.8#	62	0.00
53	T,M	cis-1,3-Dichloropropene	10.000	9.641	3.6	108	0.00
54	T,M	4-Methyl-2-pentanone	50.000	51.051	-2.1	118	0.00
55	S	Toluene-d8	10.000	9.313	6.9	110	0.00
56	C,T,M	Toluene	10.000	9.387	6.1	107	0.02
57	T,M	Ethyl methacrylate	10.000	9.936	0.6	113	0.02
58	T,M	trans-1,3-Dichloropropene	10.000	9.582	4.2	106	0.02
59	T,M	1,1,2-Trichloroethane	10.000	9.400	6.0	107	0.02
60	T,M	Tetrachloroethene	10.000	8.770	12.3	101	0.00
61	T,M	2-Hexanone	50.000	54.937	-9.9	123	0.02
62	T,M	1,3-Dichloropropane	10.000	9.722	2.8	110	0.02
63	T,M	Dibromochloromethane	10.000	9.264	7.4	104	0.02
64	T,M	1,2-Dibromoethane	10.000	9.446	5.5	107	0.00
65	T,M	1-Chlorohexane	10.000	9.646	3.5	111	0.02
66	P,M	Chlorobenzene	10.000	9.578	4.2	109	0.00
67	C,T,M	Ethylbenzene	10.000	9.377	6.2	108	0.00
68	T,M	1,1,1,2-Tetrachloroethane	10.000	9.314	6.9	104	0.02
69	T,M	m-Xylene & p-Xylene	20.000	18.446	7.8	107	0.02
70	T,M	o-Xylene	10.000	9.505	4.9	108	0.02
71	T,M	Styrene	10.000	10.103	-1.0	111	0.00
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	124	0.00
73	T,M	Isopropylbenzene	10.000	9.213	7.9	109	0.02
74	P,T,M	Bromoform	10.000	8.981	10.2	101	0.00
75	S	4-Bromofluorobenzene	10.000	9.294	7.1	112	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.001	-0.0	119	0.02
77	T,M	trans-1,4-Dichloro-2-butene	10.000	9.797	2.0	118	0.00
78	T,M	n-Propylbenzene	10.000	9.547	4.5	113	0.00
79	T,M	1,2,3-Trichloropropane	10.000	9.616	3.8	111	0.02
80	T,M	Bromobenzene	10.000	9.006	9.9	106	0.02
81	T,M	1,3,5-Trimethylbenzene	10.000	9.232	7.7	108	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKB262.D Vial: 2
Acq On : 18 Nov 2011 2:40 pm Operator: CGM
Sample : CVO03H1652 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	9.269	7.3	109	0.02
83	T,M	4-Chlorotoluene	10.000	9.513	4.9	112	0.00
84	T,M	tert-Butylbenzene	10.000	9.455	5.4	111	0.00
85	T,M	1,2,4-Trimethylbenzene	10.000	9.505	4.9	112	0.02
86	T,M	sec-Butylbenzene	10.000	9.435	5.6	111	0.02
87	T,M	p-Isopropyltoluene	10.000	9.662	3.4	112	0.00
88	T,M	1,3-Dichlorobenzene	10.000	9.628	3.7	113	0.02
89	T,M	1,4-Dichlorobenzene	10.000	9.598	4.0	111	0.00
90	T,M	n-Butylbenzene	10.000	10.092	-0.9	116	0.02
91	T,M	1,2-Dichlorobenzene	10.000	9.500	5.0	111	0.00
92	T,M	1,2-Dibromo-3-chloropropane	10.000	10.223	-2.2	116	0.02
93	T,M	1,2,4-Trichlorobenzene	10.000	10.552	-5.5	122	0.02
94	T,M	Hexachlorobutadiene	10.000	8.866	11.3	101	0.02
95	T,M	Naphthalene	10.000	11.276	-12.8	125	0.00
96	T,M	1,2,3-Trichlorobenzene	10.000	10.592	-5.9	122	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKB262.D Vial: 2
Acq On : 18 Nov 2011 2:40 pm Operator: CGM
Sample : CVO03H1652 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	117	0.00
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.393	-11.3	107	0.00
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	107	0.00
5	P,T,M	Chloromethane	0.357	0.358	-0.3	97	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.22#
7	C,T,M	Vinyl chloride	0.337	0.327	3.0	92	0.02
8	T,M	Bromomethane	0.227	0.237	-4.4	99	0.00
9	T,M	Chloroethane	0.177	0.183	-3.4	99	0.00
10	T,M	Dichlorofluoromethane	0.764	0.726	5.0	104	0.02
11	T,M	Trichlorofluoromethane	0.545	0.478	12.3	84	0.00
12	T,M	Acrolein	0.009	0.008	11.1	106	0.02
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.183	9.9	101	0.00
14	T,M	Acetone	0.039	0.038	2.6	111	0.02
15	C,T,M	1,1-Dichloroethene	0.673	0.623	7.4	101	0.02
16	T,M	Methyl acetate	0.000	0.000	0.0	110	0.02
17	T,M	Iodomethane	0.631	0.560	11.3	96	0.02
18	T,M	Carbon disulfide	1.353	1.361	-0.6	120	0.00
19	T,M	Methylene chloride	0.475	0.448	5.7	106	0.00
20	T,M	tert-Butyl alcohol	0.012	0.010	16.7	93	0.02
21	T,M	tert-Butyl methyl ether (MT	0.489	0.479	2.0	108	0.00
22	T,M	trans-1,2-Dichloroethene	0.686	0.650	5.2	104	0.00
23	T,M	Acrylonitrile	0.036	0.038	-5.6	116	0.00
24	T,M	Isopropyl ether (DIPE)	1.196	1.205	-0.8	109	0.00
25	T,M	Vinyl acetate	0.401	0.396	1.2	99	0.02
26	P,T,M	1,1-Dichloroethane	0.743	0.704	5.2	102	0.02
27	T,M	2-Butanol	0.000	0.000	0.0	99	0.02
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.899	-5.0	115	0.00
29	T,M	2,2-Dichloropropane	0.605	0.544	10.1	98	0.00
30	T,M	2-Butanone	0.066	0.066	0.0	114	0.00
31	T,M	cis-1,2-Dichloroethene	0.389	0.373	4.1	104	0.00
32	T,M	Bromochloromethane	0.307	0.297	3.3	104	0.02
33	T,M	Tetrahydrofuran	0.038	0.038	0.0	124	0.00
34	C,T,M	Chloroform	0.807	0.749	7.2	100	0.00
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	29#	0.03
36	S	Dibromofluoromethane	0.372	0.357	4.0	107	0.02
37	T,M	1,1,1-Trichloroethane	0.723	0.647	10.5	96	0.00
38	T,M	Cyclohexane	0.000	0.000	0.0	103	0.02
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.135	-2.3	109	0.00
40	S	1,2-Dichloroethane-d4	0.378	0.339	10.3	100	0.00
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	121	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKB262.D Vial: 2
Acq On : 18 Nov 2011 2:40 pm Operator: CGM
Sample : CVO03H1652 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.198	0.183	7.6	104	0.02
43	T,M	Carbon tetrachloride	0.677	0.573	15.4	96	0.02
44	T,M	Benzene	1.622	1.521	6.2	107	0.02
45	T,M	1,2-Dichloroethane	0.500	0.424	15.2	96	0.02
46	T,M	Trichloroethene	0.445	0.402	9.7	104	0.00
47	T,M	Methylcyclohexane	0.000	0.000	0.0	89	0.02
48	C,T,M	1,2-Dichloropropane	0.415	0.410	1.2	112	0.02
49	T,M	1,4-Dioxane	0.001	0.001	0.0	122	0.02
50	T,M	Dibromomethane	0.196	0.175	10.7	103	0.00
51	T,M	Bromodichloromethane	0.620	0.561	9.5	102	0.00
52	T,M	2-Chloroethyl vinyl ether	0.125	0.065	48.0#	62	0.00
53	T,M	cis-1,3-Dichloropropene	0.640	0.617	3.6	108	0.00
54	T,M	4-Methyl-2-pentanone	0.202	0.206	-2.0	118	0.00
55	S	Toluene-d8	1.420	1.323	6.8	110	0.00
56	C,T,M	Toluene	1.759	1.652	6.1	107	0.02
57	T,M	Ethyl methacrylate	0.326	0.324	0.6	113	0.02
58	T,M	trans-1,3-Dichloropropene	0.501	0.480	4.2	106	0.02
59	T,M	1,1,2-Trichloroethane	0.217	0.204	6.0	107	0.02
60	T,M	Tetrachloroethene	0.382	0.335	12.3	101	0.00
61	T,M	2-Hexanone	0.133	0.147	-10.5	123	0.02
62	T,M	1,3-Dichloropropane	0.434	0.422	2.8	110	0.02
63	T,M	Dibromochloromethane	0.322	0.298	7.5	104	0.02
64	T,M	1,2-Dibromoethane	0.238	0.225	5.5	107	0.00
65	T,M	1-Chlorohexane	0.816	0.787	3.6	111	0.02
66	P,M	Chlorobenzene	1.009	0.967	4.2	109	0.00
67	C,T,M	Ethylbenzene	2.272	2.130	6.2	108	0.00
68	T,M	1,1,1,2-Tetrachloroethane	0.375	0.349	6.9	104	0.02
69	T,M	m-Xylene & p-Xylene	1.750	1.614	7.8	107	0.02
70	T,M	o-Xylene	1.697	1.613	4.9	108	0.02
71	T,M	Styrene	1.095	1.106	-1.0	111	0.00
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	124	0.00
73	T,M	Isopropylbenzene	5.670	5.224	7.9	109	0.02
74	P,T,M	Bromoform	0.413	0.371	10.2	101	0.00
75	S	4-Bromofluorobenzene	1.556	1.446	7.1	112	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	0.753	0.753	0.0	119	0.02
77	T,M	trans-1,4-Dichloro-2-butene	0.244	0.239	2.0	118	0.00
78	T,M	n-Propylbenzene	8.060	7.695	4.5	113	0.00
79	T,M	1,2,3-Trichloropropane	0.175	0.168	4.0	111	0.02
80	T,M	Bromobenzene	1.142	1.028	10.0	106	0.02
81	T,M	1,3,5-Trimethylbenzene	4.888	4.512	7.7	108	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKB262.D Vial: 2
Acq On : 18 Nov 2011 2:40 pm Operator: CGM
Sample : CVO03H1652 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	4.662	7.3	109	0.02
83	T,M	4-Chlorotoluene	4.346	4.134	4.9	112	0.00
84	T,M	tert-Butylbenzene	0.969	0.916	5.5	111	0.00
85	T,M	1,2,4-Trimethylbenzene	4.650	4.420	4.9	112	0.02
86	T,M	sec-Butylbenzene	6.369	6.009	5.7	111	0.02
87	T,M	p-Isopropyltoluene	4.917	4.751	3.4	112	0.00
88	T,M	1,3-Dichlorobenzene	2.190	2.109	3.7	113	0.02
89	T,M	1,4-Dichlorobenzene	2.037	1.955	4.0	111	0.00
90	T,M	n-Butylbenzene	5.430	5.480	-0.9	116	0.02
91	T,M	1,2-Dichlorobenzene	1.675	1.591	5.0	111	0.00
92	T,M	1,2-Dibromo-3-chloropropane	0.085	0.087	-2.4	116	0.02
93	T,M	1,2,4-Trichlorobenzene	0.850	0.896	-5.4	122	0.02
94	T,M	Hexachlorobutadiene	0.778	0.690	11.3	101	0.02
95	T,M	Naphthalene	1.095	1.235	-12.8	125	0.00
96	T,M	1,2,3-Trichlorobenzene	0.624	0.661	-5.9	122	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB307
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K133
BFB Injection Date : 11/21/11
BFB Injection Time : 06:54
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.04
75	30.0 - 60.0% of mass 95	55.14
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.39
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	64.21
175	5.0 - 9.0% of mass 174	4.84(7.5)1
176	95.0 - 101.0% of mass 174	62.11(96.7)1
177	5.0 - 9.0% of mass 176	4.24(6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV003H1654	RKB309	11/21/11	08:07
2	MBLK2W	V003K21B	RKB312	11/21/11	09:53
3	LCS2W	V003K21L	RKB310	11/21/11	08:47
4	LCD2W	V003K21C	RKB311	11/21/11	09:20
5	MW-70-PMW07B-131DL	K133-02T	RKB313	11/21/11	10:31
6	MW-70-PMW08B-134DL	K133-05T	RKB314	11/21/11	11:05
7	MW-70-PMW07B-131	K133-02	RKB325	11/21/11	17:22
8	MW-70-PMW08B-134	K133-05	RKB326	11/21/11	17:56

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RHB444
Instrument ID: 03
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K133
Date Analyzed: 08/16/11
Time Analyzed: 14:40
Heated Purge: (Y/N) N

	IS1(DBF)		IS2(CBZ)		IS3(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	1861981	13.20	1722743	17.19	603523	20.72
UPPER LIMIT	3723962	13.70	3445486	17.69	1207046	21.22
LOWER LIMIT	930991	12.70	861372	16.69	301762	20.22
SAMPLE ID						
1 VSTD010	2132236	13.16	2019485	17.15	672808	20.67
2 MBLK2W	2463110	13.16	2242238	17.15	704811	20.66
3 LCS2W	2152842	13.16	1958957	17.15	630750	20.66
4 LCD2W	2405985	13.15	2254896	17.14	733489	20.67
5 MW-70-PMW07B-131DL	2245724	13.15	2096474	17.14	660042	20.66
6 MW-70-PMW08B-134DL	2260410	13.15	2128342	17.14	657271	20.66
7 MW-70-PMW07B-131	2296017	13.16	2180887	17.15	695708	20.66
8 MW-70-PMW08B-134	2093877	13.16	2001885	17.14	638952	20.66

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKB309.D Vial: 3
Acq On : 21 Nov 2011 8:07 am Operator: CGM
Sample : CVO03H1654 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	115	0.00
2	T,M	Chlorotrifluoroethylene	-1.000	0.000	0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	11.260	-12.6	106	0.01
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	106	0.01
5	P,T,M	Chloromethane	10.000	11.203	-12.0	106	0.01
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000	0.0	0	-5.22#
7	C,T,M	Vinyl chloride	10.000	10.673	-6.7	99	0.01
8	T,M	Bromomethane	10.000	11.681	-16.8	108	0.00
9	T,M	Chloroethane	10.000	11.411	-14.1	107	0.00
10	T,M	Dichlorofluoromethane	10.000	10.252	-2.5	110	-0.02
11	T,M	Trichlorofluoromethane	10.000	9.213	7.9	86	0.00
12	T,M	Acrolein	50.000	36.465	27.1#	82	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.207	7.9	101	0.00
14	T,M	Acetone	50.000	49.361	1.3	109	0.00
15	C,T,M	1,1-Dichloroethene	10.000	9.709	2.9	103	0.01
16	T,M	Methyl acetate	-1.000	0.000	0.0	108	0.00
17	T,M	Iodomethane	10.000	9.331	6.7	99	0.01
18	T,M	Carbon disulfide	10.000	10.944	-9.4	128	0.00
19	T,M	Methylene chloride	10.000	9.816	1.8	108	0.00
20	T,M	tert-Butyl alcohol	50.000	39.544	20.9#	82	0.00
21	T,M	tert-Butyl methyl ether (MT	10.000	9.357	6.4	101	0.00
22	T,M	trans-1,2-Dichloroethene	10.000	9.955	0.4	107	0.00
23	T,M	Acrylonitrile	50.000	55.162	-10.3	118	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	9.883	1.2	104	0.00
25	T,M	Vinyl acetate	10.000	8.821	11.8	86	0.01
26	P,T,M	1,1-Dichloroethane	10.000	9.734	2.7	103	0.01
27	T,M	2-Butanol	-1.000	0.000	0.0	90	0.01
28	T,M	tert-Butyl ethyl ether (ETB	10.000	9.509	4.9	102	0.00
29	T,M	2,2-Dichloropropane	10.000	9.977	0.2	106	0.00
30	T,M	2-Butanone	50.000	48.314	3.4	108	0.00
31	T,M	cis-1,2-Dichloroethene	10.000	10.115	-1.2	108	0.00
32	T,M	Bromochloromethane	10.000	10.036	-0.4	106	0.01
33	T,M	Tetrahydrofuran	10.000	9.733	2.7	117	0.00
34	C,T,M	Chloroform	10.000	9.226	7.7	97	0.00
35	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	63	0.00
36	S	Dibromofluoromethane	10.000	9.646	3.5	105	0.00
37	T,M	1,1,1-Trichloroethane	10.000	9.025	9.7	95	0.00
38	T,M	Cyclohexane	-1.000	0.000	0.0	109	0.01
39	T,M	tert-Amyl methyl ether (TAM	10.000	9.252	7.5	96	0.00
40	S	1,2-Dichloroethane-d4	10.000	9.202	8.0	100	0.00
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	117	0.00

(#) = Out of Range

2037

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKB309.D Vial: 3
Acq On : 21 Nov 2011 8:07 am Operator: CGM
Sample : CVO03H1654 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	9.523	4.8	103	0.01
43	T,M	Carbon tetrachloride	10.000	8.452	15.5	92	0.00
44	T,M	Benzene	10.000	9.745	2.6	107	0.01
45	T,M	1,2-Dichloroethane	10.000	8.506	14.9	93	0.00
46	T,M	Trichloroethene	10.000	9.191	8.1	102	0.00
47	T,M	Methylcyclohexane	-1.000	0.000	0.0	94	0.01
48	C,T,M	1,2-Dichloropropane	10.000	9.949	0.5	109	0.00
49	T,M	1,4-Dioxane	200.000	244.291	-22.1#	144	0.00
50	T,M	Dibromomethane	10.000	8.935	10.6	99	0.00
51	T,M	Bromodichloromethane	10.000	8.905	11.0	97	0.00
52	T,M	2-Chloroethyl vinyl ether	10.000	1.286	87.1#	15	0.00
53	T,M	cis-1,3-Dichloropropene	10.000	9.466	5.3	103	0.00
54	T,M	4-Methyl-2-pentanone	50.000	48.045	3.9	108	0.00
55	S	Toluene-d8	10.000	9.244	7.6	105	0.00
56	C,T,M	Toluene	10.000	9.381	6.2	104	0.00
57	T,M	Ethyl methacrylate	10.000	9.425	5.7	103	0.01
58	T,M	trans-1,3-Dichloropropene	10.000	8.857	11.4	95	0.00
59	T,M	1,1,2-Trichloroethane	10.000	9.218	7.8	101	0.00
60	T,M	Tetrachloroethene	10.000	8.790	12.1	98	0.00
61	T,M	2-Hexanone	50.000	48.699	2.6	105	0.00
62	T,M	1,3-Dichloropropane	10.000	9.784	2.2	107	0.00
63	T,M	Dibromochloromethane	10.000	9.001	10.0	97	0.01
64	T,M	1,2-Dibromoethane	10.000	9.441	5.6	104	0.00
65	T,M	1-Chlorohexane	10.000	9.842	1.6	110	0.01
66	P,M	Chlorobenzene	10.000	9.617	3.8	106	0.00
67	C,T,M	Ethylbenzene	10.000	9.221	7.8	102	0.00
68	T,M	1,1,1,2-Tetrachloroethane	10.000	8.947	10.5	96	0.00
69	T,M	m-Xylene & p-Xylene	20.000	18.166	9.2	102	0.01
70	T,M	o-Xylene	10.000	9.148	8.5	101	0.01
71	T,M	Styrene	10.000	9.712	2.9	103	0.00
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	111	0.00
73	T,M	Isopropylbenzene	10.000	9.562	4.4	102	0.01
74	P,T,M	Bromoform	10.000	9.081	9.2	92	0.00
75	S	4-Bromofluorobenzene	10.000	9.408	5.9	102	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.215	-2.1	109	0.01
77	T,M	trans-1,4-Dichloro-2-butene	10.000	6.365	36.4#	69	0.00
78	T,M	n-Propylbenzene	10.000	9.819	1.8	105	0.00
79	T,M	1,2,3-Trichloropropane	10.000	9.573	4.3	99	0.00
80	T,M	Bromobenzene	10.000	9.323	6.8	99	0.01
81	T,M	1,3,5-Trimethylbenzene	10.000	9.349	6.5	99	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKB309.D Vial: 3
Acq On : 21 Nov 2011 8:07 am Operator: CGM
Sample : CVO03H1654 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	9.432	5.7	100	0.00
83	T,M	4-Chlorotoluene	10.000	9.473	5.3	100	0.00
84	T,M	tert-Butylbenzene	10.000	9.773	2.3	103	0.00
85	T,M	1,2,4-Trimethylbenzene	10.000	9.331	6.7	99	0.01
86	T,M	sec-Butylbenzene	10.000	9.792	2.1	104	0.00
87	T,M	p-Isopropyltoluene	10.000	9.654	3.5	100	0.00
88	T,M	1,3-Dichlorobenzene	10.000	9.372	6.3	99	0.01
89	T,M	1,4-Dichlorobenzene	10.000	9.440	5.6	98	0.00
90	T,M	n-Butylbenzene	10.000	9.913	0.9	103	0.00
91	T,M	1,2-Dichlorobenzene	10.000	9.368	6.3	98	0.00
92	T,M	1,2-Dibromo-3-chloropropane	10.000	9.054	9.5	93	0.00
93	T,M	1,2,4-Trichlorobenzene	10.000	9.135	8.7	95	0.00
94	T,M	Hexachlorobutadiene	10.000	8.291	17.1	85	0.00
95	T,M	Naphthalene	10.000	9.757	2.4	97	0.00
96	T,M	1,2,3-Trichlorobenzene	10.000	9.039	9.6	94	0.00

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKB309.D Vial: 3
Acq On : 21 Nov 2011 8:07 am Operator: CGM
Sample : CVO03H1654 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	115	0.00
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.397	-12.5	106	0.01
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	106	0.01
5	P,T,M	Chloromethane	0.357	0.399	-11.8	106	0.01
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.22#
7	C,T,M	Vinyl chloride	0.337	0.360	-6.8	99	0.01
8	T,M	Bromomethane	0.227	0.265	-16.7	108	0.00
9	T,M	Chloroethane	0.177	0.202	-14.1	107	0.00
10	T,M	Dichlorofluoromethane	0.764	0.783	-2.5	110	-0.02
11	T,M	Trichlorofluoromethane	0.545	0.502	7.9	86	0.00
12	T,M	Acrolein	0.009	0.006	33.3#	82	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.187	7.9	101	0.00
14	T,M	Acetone	0.039	0.038	2.6	109	0.00
15	C,T,M	1,1-Dichloroethene	0.673	0.653	3.0	103	0.01
16	T,M	Methyl acetate	0.000	0.000	0.0	108	0.00
17	T,M	Iodomethane	0.631	0.589	6.7	99	0.01
18	T,M	Carbon disulfide	1.353	1.481	-9.5	128	0.00
19	T,M	Methylene chloride	0.475	0.467	1.7	108	0.00
20	T,M	tert-Butyl alcohol	0.012	0.010	16.7	82	0.00
21	T,M	tert-Butyl methyl ether (MT	0.489	0.457	6.5	101	0.00
22	T,M	trans-1,2-Dichloroethene	0.686	0.683	0.4	107	0.00
23	T,M	Acrylonitrile	0.036	0.039	-8.3	118	0.00
24	T,M	Isopropyl ether (DIPE)	1.196	1.182	1.2	104	0.00
25	T,M	Vinyl acetate	0.401	0.354	11.7	86	0.01
26	P,T,M	1,1-Dichloroethane	0.743	0.723	2.7	103	0.01
27	T,M	2-Butanol	0.000	0.000	0.0	90	0.01
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.814	4.9	102	0.00
29	T,M	2,2-Dichloropropane	0.605	0.604	0.2	106	0.00
30	T,M	2-Butanone	0.066	0.064	3.0	108	0.00
31	T,M	cis-1,2-Dichloroethene	0.389	0.394	-1.3	108	0.00
32	T,M	Bromochloromethane	0.307	0.308	-0.3	106	0.01
33	T,M	Tetrahydrofuran	0.038	0.037	2.6	117	0.00
34	C,T,M	Chloroform	0.807	0.744	7.8	97	0.00
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	63	0.00
36	S	Dibromofluoromethane	0.372	0.358	3.8	105	0.00
37	T,M	1,1,1-Trichloroethane	0.723	0.653	9.7	95	0.00
38	T,M	Cyclohexane	0.000	0.000	0.0	109	0.01
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.122	7.6	96	0.00
40	S	1,2-Dichloroethane-d4	0.378	0.348	7.9	100	0.00
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	117	0.00

(#) = Out of Range

2040

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKB309.D Vial: 3
Acq On : 21 Nov 2011 8:07 am Operator: CGM
Sample : CVO03H1654 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.198	0.189	4.5	103	0.01
43	T,M	Carbon tetrachloride	0.677	0.572	15.5	92	0.00
44	T,M	Benzene	1.622	1.580	2.6	107	0.01
45	T,M	1,2-Dichloroethane	0.500	0.426	14.8	93	0.00
46	T,M	Trichloroethene	0.445	0.409	8.1	102	0.00
47	T,M	Methylcyclohexane	0.000	0.000	0.0	94	0.01
48	C,T,M	1,2-Dichloropropane	0.415	0.413	0.5	109	0.00
49	T,M	1,4-Dioxane	0.001	0.002	-100.0#	144	0.00
50	T,M	Dibromomethane	0.196	0.175	10.7	99	0.00
51	T,M	Bromodichloromethane	0.620	0.552	11.0	97	0.00
52	T,M	2-Chloroethyl vinyl ether	0.125	0.016	87.2#	15#	0.00
53	T,M	cis-1,3-Dichloropropene	0.640	0.606	5.3	103	0.00
54	T,M	4-Methyl-2-pentanone	0.202	0.194	4.0	108	0.00
55	S	Toluene-d8	1.420	1.313	7.5	105	0.00
56	C,T,M	Toluene	1.759	1.651	6.1	104	0.00
57	T,M	Ethyl methacrylate	0.326	0.308	5.5	103	0.01
58	T,M	trans-1,3-Dichloropropene	0.501	0.444	11.4	95	0.00
59	T,M	1,1,2-Trichloroethane	0.217	0.200	7.8	101	0.00
60	T,M	Tetrachloroethene	0.382	0.336	12.0	98	0.00
61	T,M	2-Hexanone	0.133	0.130	2.3	105	0.00
62	T,M	1,3-Dichloropropane	0.434	0.425	2.1	107	0.00
63	T,M	Dibromochloromethane	0.322	0.289	10.2	97	0.01
64	T,M	1,2-Dibromoethane	0.238	0.225	5.5	104	0.00
65	T,M	1-Chlorohexane	0.816	0.803	1.6	110	0.01
66	P,M	Chlorobenzene	1.009	0.970	3.9	106	0.00
67	C,T,M	Ethylbenzene	2.272	2.095	7.8	102	0.00
68	T,M	1,1,1,2-Tetrachloroethane	0.375	0.335	10.7	96	0.00
69	T,M	m-Xylene & p-Xylene	1.750	1.589	9.2	102	0.01
70	T,M	o-Xylene	1.697	1.552	8.5	101	0.01
71	T,M	Styrene	1.095	1.063	2.9	103	0.00
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	111	0.00
73	T,M	Isopropylbenzene	5.670	5.421	4.4	102	0.01
74	P,T,M	Bromoform	0.413	0.375	9.2	92	0.00
75	S	4-Bromofluorobenzene	1.556	1.464	5.9	102	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	0.753	0.770	-2.3	109	0.01
77	T,M	trans-1,4-Dichloro-2-butene	0.244	0.156	36.1#	69	0.00
78	T,M	n-Propylbenzene	8.060	7.914	1.8	105	0.00
79	T,M	1,2,3-Trichloropropane	0.175	0.168	4.0	99	0.00
80	T,M	Bromobenzene	1.142	1.065	6.7	99	0.01
81	T,M	1,3,5-Trimethylbenzene	4.888	4.569	6.5	99	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKB309.D Vial: 3
Acq On : 21 Nov 2011 8:07 am Operator: CGM
Sample : CVO03H1654 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	4.743	5.7	100	0.00
83	T,M	4-Chlorotoluene	4.346	4.117	5.3	100	0.00
84	T,M	tert-Butylbenzene	0.969	0.947	2.3	103	0.00
85	T,M	1,2,4-Trimethylbenzene	4.650	4.339	6.7	99	0.01
86	T,M	sec-Butylbenzene	6.369	6.236	2.1	104	0.00
87	T,M	p-Isopropyltoluene	4.917	4.747	3.5	100	0.00
88	T,M	1,3-Dichlorobenzene	2.190	2.053	6.3	99	0.01
89	T,M	1,4-Dichlorobenzene	2.037	1.923	5.6	98	0.00
90	T,M	n-Butylbenzene	5.430	5.382	0.9	103	0.00
91	T,M	1,2-Dichlorobenzene	1.675	1.569	6.3	98	0.00
92	T,M	1,2-Dibromo-3-chloropropane	0.085	0.077	9.4	93	0.00
93	T,M	1,2,4-Trichlorobenzene	0.850	0.776	8.7	95	0.00
94	T,M	Hexachlorobutadiene	0.778	0.645	17.1	85	0.00
95	T,M	Naphthalene	1.095	1.069	2.4	97	0.00
96	T,M	1,2,3-Trichlorobenzene	0.624	0.564	9.6	94	0.00

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 6 ☐ EMAX-524.2 Rev.No. 5 ☐ EMAX-624 Rev.No. 2 ☐ EMAX-8260SIM Rev.No.0 ☐ EMAX-TCPSIM Rev.No.1 ☐ EMAX-M8260SIM Rev.No.0 ☐

Start Date: 8/16/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -047

BATCH V003H/16

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount (ml/g/ml)	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RHB438	RFB03H23	1mL	N/A	N/A	N/A	N/A	11:15am
02	439	V003H161	.01/1.5/1.5mL					0.3/1.5/1.5ppb 8260
03	440	2	.05/1.5/1.5mL					0.5/2.5/2.5ppb
04	441	3	.1/1.5/1.5mL					1.0/5.0/5.0ppb
05	442	4	.2/1/1mL					2.0/10/10ppb
06	443	5	.5/2.5/2.5mL					5.0/25/25ppb
07	444	6	1/5/5mL					10/50/50ppb
08	445	7	2/10/10mL					20/100/100ppb
09	446	8	3/15/15mL					30/150/150ppb
10	447	9	4/20/20mL					40/200/200ppb
11	448	10	5/25/25mL					50/250/250ppb
12	449	11	10/50/50mL					100/500/500ppb
13	450	IS/SS	25mL					
14	451	V003H238	↓					
15	452	V003H161	1/5/5mL					10/50/50ppb
16	453	RINSE	25mL					7:49pm
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30			NW	8/17/11				

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003H16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC 8260CS	SV1-17-76-1	*	
DCC CSL	-71-1		
DCC 8260	-72-1		
DCC KTMA	-69-3		
BFB	-45-3	1	50/250
IS/SURR.	-73-3	1	
ICV/LCS 8260CS	-69-1	1	
ICV/LCS CSL	-71-2	1	
ICV/LCS 8260	-60-2	5	
ICV/LCS KTMA	-70-2	5	
IS	-51-3	1	
SS	-52-1	*	

DATA FILE FOLDER 11H16

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO03	

Comments: *please refer to sample amount

Analyzed By: NW

Date Disposed: 8/17/11

Disposed By: NW

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/18/11 ☒ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -048

BATCH V0003H1652

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKB261	BFB03K19						14:03
02	62	V0003H1652						
03	63	V0003K19L		1.0				
04	64	C						
05	65	B	25ML					
06	66	11K146-07						
07	67	11K133-07						
08	68	-03						
09	69	-01M						
10	70	-05						
11	71	-01						
12	72	-04						
13	73	-06						
14	74	11K146-01						5X TCE
15	75	-02						
16	76	-03						10X VC
17	77	-04						10X VC
18	78	-05						5X VC
19	79	-06						10X VC 00:55
20	80	Rinse						
21	81							
22								
23								
24								
25								
26								
27								
28								
29								
30								CGM 11/18/11

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V0003H16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-19-6-2	1	
DCC	-6-3	1	
DCC	-7-2	5	
DCC	-8-1	5	
BFB	-3-2	1	50
IS/SURR.	-6-1	1	250
ICV/LCS	SV1-17-90-3	1	
ICV/LCS	-97-2	1	
ICV/LCS	-89-2	5	
ICV/LCS	-99-3	5	

DATA FILE FOLDER 11K19

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO03	11/21/11

Comments:

Analyzed By: CGM

Date Disposed: 11/21/11

Disposed By: CGM

2015

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/21/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -048

BATCH VC03H1654

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKB307	BFB03K21						06:54
02	08	STD CHECK						
03	09	CV003H1654						
04	10	V003K21L		1.0				
05	11	C						
06	12	B	25mL					
07	13	11K133-02T	0.5mL	50				
08	14	-05T						
09	15	11K146-01T	5.0mL	5.0				
10	16	-03T	2.5mL	10				
11	17	-04T						
12	18	-05T	5.0mL	5.0				
13	19	-06T	2.5mL	10				
14	20	11K114-03T	0.25mL	100				
15	21	11K151-09T	5.0mL	5.0				
16	22	11K114-03T	2.5mL	10				
17	23	Rinse						
18	24	11K173-01	25mL	1.0				
19	25	11K133-02						
20	26	-05						17:56
21	27	Rinse						
22								
23								
24								
25								
26								
27								
28								
29								
30								CGM 11/21/11

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	VC03H16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-19-6.2	1	
DCC	6.3	1	
DCC	7.2	5	
DCC	8.1	5	
BFB	3.2	1	50/250
IS/SURR.	6.1	1	
ICV/LCS	SV1-17-90.3	1	
ICV/LCS	97.2	1	
ICV/LCS	89.2	5	
ICV/LCS	99.3	5	

DATA FILE FOLDER	11K21

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO03	

Comments:

Analyzed By: CGM

Date Disposed: 11/22/11

Disposed By: CGM

20016

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD RSK-175
DISSOLVED GASES

SDG#: 11K133

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K133

METHOD RSK-175
DISSOLVED GASES

A total of six (6) water samples were received on 11/15/11 for Dissolved Gas analysis, Method RSK-175 in accordance with USEPA at R.S. Kerr Environmental Research Laboratory, Ada, OK 74820 March 15, 1989.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary form for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for DGK011WL/C were all within QC limits.
Percent recoveries for DGK012WL/C were all within QC limits.

Matrix QC Sample
A set of MS/MSD was analyzed with the samples in this SDG.
Percent recoveries for K133-01M/S were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED GASES

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K133
Instrument ID : GCT010

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DGK011WB	1	NA	11/18/1115:30	11/18/1108:00	FK18038A	FK18035A	DGK011W	Method Blank
LCS1W	DGK011WL	1	NA	11/18/1115:46	11/18/1108:00	FK18039A	FK18035A	DGK011W	Lab Control Sample (LCS)
LCD1W	DGK011WC	1	NA	11/18/1115:57	11/18/1108:00	FK18040A	FK18035A	DGK011W	LCS Duplicate
MBLK2W	DGK012WB	1	NA	11/21/1108:31	11/21/1107:45	FK21004A	FK21003A	DGK012W	Method Blank
LCS2W	DGK012WL	1	NA	11/21/1108:44	11/21/1107:45	FK21005A	FK21003A	DGK012W	Lab Control Sample (LCS)
LCD2W	DGK012WC	1	NA	11/21/1108:55	11/21/1107:45	FK21006A	FK21003A	DGK012W	LCS Duplicate
MW-70-PMW07A-130	K133-01	1	NA	11/18/1116:09	11/18/1108:00	FK18041A	FK18035A	DGK011W	Field Sample
MW-70-PMW07A-130DL	K133-01T	50	NA	11/18/1117:06	11/18/1108:00	FK18045A	FK18035A	DGK011W	Diluted Sample
MW-70-PMW07B-131	K133-02	1	NA	11/18/1116:50	11/18/1108:00	FK18044A	FK18035A	DGK011W	Field Sample
MW-70-PMW07B-131DL	K133-02T	100	NA	11/18/1117:46	11/18/1108:00	FK18048A	FK18046A	DGK011W	Diluted Sample
IW-70-FSB216-132	K133-03	1	NA	11/18/1117:30	11/18/1108:00	FK18047A	FK18046A	DGK011W	Field Sample
IW-70-FSB216-132DL	K133-03T	1000	NA	11/18/1118:11	11/18/1108:00	FK18050A	FK18046A	DGK011W	Diluted Sample
MW-70-PMW08A-133	K133-04	1	NA	11/18/1117:59	11/18/1108:00	FK18049A	FK18046A	DGK011W	Field Sample
MW-70-PMW08A-133DL	K133-04T	1000	NA	11/18/1118:35	11/18/1108:00	FK18052A	FK18046A	DGK011W	Diluted Sample
MW-70-PMW08B-134	K133-05	1	NA	11/18/1118:24	11/18/1108:00	FK18051A	FK18046A	DGK011W	Field Sample
MW-70-PMW08B-134DL	K133-05T	1000	NA	11/18/1118:47	11/18/1108:00	FK18053A	FK18046A	DGK011W	Diluted Sample
MW-70-MNA10-135	K133-06	1	NA	11/21/1109:08	11/21/1107:45	FK21007A	FK21003A	DGK012W	Field Sample
MW-70-MNA10-135DL	K133-06T	1000	NA	11/21/1109:23	11/21/1107:45	FK21008A	FK21003A	DGK012W	Diluted Sample
MW-70-PMW07A-130MS	K133-01M	1	NA	11/18/1116:23	11/18/1108:00	FK18042A	FK18035A	DGK011W	Matrix Spike Sample (MS)
MW-70-PMW07A-130MSD	K133-01S	1	NA	11/18/1116:35	11/18/1108:00	FK18043A	FK18035A	DGK011W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/15/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/15/11
Batch No.	: 11K133	Date Extracted:	11/18/11 08:00
Sample ID:	MW-70-PMW07A-130	Date Analyzed:	11/18/11 16:09
Lab Samp ID:	K133-01	Dilution Factor:	1
Lab File ID:	FK18041A	Matrix :	WATER
Ext Btch ID:	DGK011W	% Moisture :	NA
Calib. Ref.:	FK18035A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	190E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/15/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/15/11
Batch No. : 11K133	Date Extracted: 11/18/11 08:00
Sample ID: MW-70-PMW07A-130DL	Date Analyzed: 11/18/11 17:06
Lab Samp ID: K133-01T	Dilution Factor: 50
Lab File ID: FK18045A	Matrix : WATER
Ext Btch ID: DGK011W	% Moisture : NA
Calib. Ref.: FK18035A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	100	32
ETHENE	ND	100	30
METHANE	1100	100	17

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/15/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/15/11
Batch No.	: 11K133	Date Extracted:	11/18/11 08:00
Sample ID:	MW-70-PMW07B-131	Date Analyzed:	11/18/11 16:50
Lab Samp ID:	K133-02	Dilution Factor:	1
Lab File ID:	FK18044A	Matrix :	WATER
Ext Btch ID:	DGK011W	% Moisture :	NA
Calib. Ref.:	FK18035A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	0.66J	2.0	0.60
METHANE	230E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/15/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/15/11
Batch No. : 11K133	Date Extracted: 11/18/11 08:00
Sample ID: MW-70-PMW07B-131DL	Date Analyzed: 11/18/11 17:46
Lab Samp ID: K133-02T	Dilution Factor: 100
Lab File ID: FK18048A	Matrix : WATER
Ext Btch ID: DGK011W	% Moisture : NA
Calib. Ref.: FK18046A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	200	64
ETHENE	ND	200	60
METHANE	2000	200	34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/15/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/15/11
Batch No.	: 11K133	Date Extracted:	11/18/11 08:00
Sample ID:	IW-70-FSB216-132	Date Analyzed:	11/18/11 17:30
Lab Samp ID:	K133-03	Dilution Factor:	1
Lab File ID:	FK18047A	Matrix :	WATER
Ext Btch ID:	DGK011W	% Moisture :	NA
Calib. Ref.:	FK18046A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	0.61J	2.0	0.60
METHANE	590E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/15/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/15/11
Batch No. : 11K133	Date Extracted: 11/18/11 08:00
Sample ID: IW-70-FSB216-132DL	Date Analyzed: 11/18/11 18:11
Lab Samp ID: K133-03T	Dilution Factor: 1000
Lab File ID: FK18050A	Matrix : WATER
Ext Btch ID: DGK011W	% Moisture : NA
Calib. Ref.: FK18046A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	22000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/15/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/15/11
Batch No. : 11K133	Date Extracted: 11/18/11 08:00
Sample ID: MW-70-PMW08A-133	Date Analyzed: 11/18/11 17:59
Lab Samp ID: K133-04	Dilution Factor: 1
Lab File ID: FK18049A	Matrix : WATER
Ext Btch ID: DGK011W	% Moisture : NA
Calib. Ref.: FK18046A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	6.7	2.0	0.60
METHANE	570E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/15/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/15/11
Batch No.	: 11K133	Date Extracted:	11/18/11 08:00
Sample ID:	MW-70-PMW08A-133DL	Date Analyzed:	11/18/11 18:35
Lab Samp ID:	K133-04T	Dilution Factor:	1000
Lab File ID:	FK18052A	Matrix :	WATER
Ext Btch ID:	DGK011W	% Moisture :	NA
Calib. Ref.:	FK18046A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	17000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/15/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/15/11
Batch No. : 11K133	Date Extracted: 11/18/11 08:00
Sample ID: MW-70-PMW08B-134	Date Analyzed: 11/18/11 18:24
Lab Samp ID: K133-05	Dilution Factor: 1
Lab File ID: FK18051A	Matrix : WATER
Ext Btch ID: DGK011W	% Moisture : NA
Calib. Ref.: FK18046A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	19	2.0	0.60
METHANE	500E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/15/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/15/11
Batch No.	: 11K133	Date Extracted:	11/18/11 08:00
Sample ID:	MW-70-PMW08B-134DL	Date Analyzed:	11/18/11 18:47
Lab Samp ID:	K133-05T	Dilution Factor:	1000
Lab File ID:	FK18053A	Matrix :	WATER
Ext Btch ID:	DGK011W	% Moisture :	NA
Calib. Ref.:	FK18046A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	8200	2000	340

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/15/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/15/11
Batch No. : 11K133	Date Extracted: 11/21/11 07:45
Sample ID: MW-70-MNA10-135	Date Analyzed: 11/21/11 09:08
Lab Samp ID: K133-06	Dilution Factor: 1
Lab File ID: FK21007A	Matrix : WATER
Ext Btch ID: DGK012W	% Moisture : NA
Calib. Ref.: FK21003A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	10	2.0	0.60
METHANE	580E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/15/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/15/11
Batch No. : 11K133	Date Extracted: 11/21/11 07:45
Sample ID: MW-70-MNA10-135DL	Date Analyzed: 11/21/11 09:23
Lab Samp ID: K133-06T	Dilution Factor: 1000
Lab File ID: FK21008A	Matrix : WATER
Ext Btch ID: DGK012W	% Moisture : NA
Calib. Ref.: FK21003A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	15000	2000	340

QC SUMMARIES

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/18/11
Batch No. : 11K133	Date Extracted: 11/18/11 08:00
Sample ID: MBLK1W	Date Analyzed: 11/18/11 15:30
Lab Samp ID: DGK011WB	Dilution Factor: 1
Lab File ID: FK18038A	Matrix : WATER
Ext Btch ID: DGK011W	% Moisture : NA
Calib. Ref.: FK18035A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD RSK-175

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	DGK011WB	DGK011WL	DGK011WC		
LAB FILE ID:	FK18038A	FK18039A	FK18040A		
DATE EXTRACTED:	11/18/1108:00	11/18/1108:00	11/18/1108:00	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1115:30	11/18/1115:46	11/18/1115:57	DATE RECEIVED:	11/18/11
PREP. BATCH:	DGK011W	DGK011W	DGK011W		
CALIB. REF:	FK18035A	FK18035A	FK18035A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	ND	25.4	26.3	104	25.4	26.3	103	0	70-140	30
Ethene	ND	23.7	25.3	107	23.7	25.5	108	1	70-140	30
Methane	ND	13.6	12.7	93	13.6	12.7	93	0	70-130	30

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/21/11
Batch No. : 11K133	Date Extracted: 11/21/11 07:45
Sample ID: MBLK2W	Date Analyzed: 11/21/11 08:31
Lab Samp ID: DGK012WB	Dilution Factor: 1
Lab File ID: FK21004A	Matrix : WATER
Ext Btch ID: DGK012W	% Moisture : NA
Calib. Ref.: FK21003A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD RSK-175

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	DGK012WB	DGK012WL	DGK012WC		
LAB FILE ID:	FK21004A	FK21005A	FK21006A		
DATE EXTRACTED:	11/21/1107:45	11/21/1107:45	11/21/1107:45	DATE COLLECTED:	NA
DATE ANALYZED:	11/21/1108:31	11/21/1108:44	11/21/1108:55	DATE RECEIVED:	11/21/11
PREP. BATCH:	DGK012W	DGK012W	DGK012W		
CALIB. REF:	FK21003A	FK21003A	FK21003A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	ND	25.4	25.5	100	25.4	25.2	99	1	70-140	30
Ethene	ND	23.7	24.0	101	23.7	23.8	101	1	70-140	30
Methane	ND	13.6	12.6	93	13.6	12.2	90	3	70-130	30

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD RSK-175

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID:	MW-70-PMW07A-130		
LAB SAMP ID:	K133-01	K133-01M	K133-01S
LAB FILE ID:	FK18041A	FK18042A	FK18043A
DATE EXTRACTED:	11/18/1108:00	11/18/1108:00	11/18/1108:00
DATE ANALYZED:	11/18/1116:09	11/18/1116:23	11/18/1116:35
PREP. BATCH:	DGK011W	DGK011W	DGK011W
CALIB. REF:	FK18035A	FK18035A	FK18035A

DATE COLLECTED: 11/15/11
DATE RECEIVED: 11/15/11

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	ND	25.4	24.0	94	25.4	23.6	93	2	60-140	30
Ethene	ND	23.7	23.8	100	23.7	23.8	100	0	20-160	30
Methane	187	13.6	201	103	13.6	201	106	0	10-160	30

INITIAL CALIBRATIONS

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	25.00X	40.00X	75.00X	100.00X	MEAN	%RSD
Methane	0.34	31626	33510	29954	29307	29338	29307	30507.1	5.6
Acetylene	0.55	2465	2595	2723	2744	2716	2643	2647.7	4.0
Ethylene	0.59	14655	16070	16617	16602	17123	16803	16311.8	5.4
Ethane	0.64	22748	24144	25289	25073	26185	26048	24914.4	5.2
Propane	0.93	29887	24871	26520	26214	27735	27800	27171.2	6.3

DG10K01.MET

FORM VI DGAS -2 1/96 Rev 2/2006

11/03/11

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK01008A 11/01/2011 13:45
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	416247	13.64	1		15
Acetylene	2.175	2.149	2.201	22.0	2647.6	66913	25.27	15		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	437326	26.81	13		15
Ethane	3.075	3.025	3.125	25.4	24914.4	691218	27.74	9		15
Propane	5.900	5.824	5.976	37.3	27171.2	1111008	40.89	10		15

DG10K01.MET

AJ
11/3/11

DAILY CALIBRATIONS

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK18035A 11/18/2011 14:52
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	378403	12.40	-9		15
Acetylene	2.183	2.157	2.209	22.0	2647.6	59910	22.63	3		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	380551	23.33	-2		15
Ethane	3.075	3.025	3.125	25.4	24914.4	610183	24.49	-4		15
Propane	5.892	5.816	5.968	37.3	27171.2	938953	34.56	-7		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK18046A 11/18/2011 17:17
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	442582	14.51	7		15
Acetylene	2.200	2.174	2.226	22.0	2647.6	59529	22.48	2		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	402986	24.70	4		15
Ethane	3.075	3.025	3.125	25.4	24914.4	663535	26.63	5		15
Propane	5.892	5.816	5.968	37.3	27171.2	1002247	36.89	-1		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK18054A 11/18/2011 18:59
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	429953	14.09	4		15
Acetylene	2.200	2.174	2.226	22.0	2647.6	58465	22.08	0		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	393765	24.14	2		15
Ethane	3.075	3.025	3.125	25.4	24914.4	644826	25.88	2		15
Propane	5.883	5.807	5.959	37.3	27171.2	994048	36.58	-2		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK21003A 11/21/2011 08:15
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	404138	13.25	-2		15
Acetylene	2.200	2.174	2.226	22.0	2647.6	61980	23.41	6		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	406720	24.93	5		15
Ethane	3.067	3.017	3.117	25.4	24914.4	661393	26.55	4		15
Propane	5.883	5.807	5.959	37.3	27171.2	1028088	37.84	1		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK21014A 11/21/2011 10:51
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.083	1.057	1.109	13.6	30507.1	387519	12.70	-6		15
Acetylene	2.217	2.191	2.243	22.0	2647.6	60926	23.01	5		15
Ethylene	2.650	2.599	2.701	23.7	16311.8	386297	23.68	-0		15
Ethane	3.075	3.025	3.125	25.4	24914.4	626993	25.17	-1		15
Propane	5.892	5.816	5.968	37.3	27171.2	955010	35.15	-6		15

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGAS ICAL

Book #:	A10-025
Instrument No.:	10
Analytical Sequence:	FKC1
Method File:	DG1CKC1
Analytical Batch:	N/A

SOP #	Rev. #
☐ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGAS ICAL SSSA-05-01-10	500 ppm
DGAS ICV SSSA-05-01-7	500 ppm
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: SC

Date: 11/01/11

Disposed By: SC

Date Disposed: 11/01/11

Method: Dg10k01.met Batch: Fk01.seq Data: Fk01.011 - [Batch: fk01.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Run Type	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
1	Unknown	IB10K407	dg10k01.met	FK01.001	100ml 1	1	
2	Unknown	DG10K01-01	dg10k01.met	FK01.002	1	1	
3	Unknown	DG10K01-02	dg10k01.met	FK01.003	1	1	
4	Unknown	DG10K01-03	dg10k01.met	FK01.004	1	1	DGAS 1CML
5	Unknown	DG10K01-04	dg10k01.met	FK01.005	1	1	
6	Unknown	DG10K01-05	dg10k01.met	FK01.006	1	1	
7	Unknown	DG10K01-06	dg10k01.met	FK01.007	1	1	
8	Unknown	IDG10K0101	dg10k01.met	FK01.008	1	1	DGAS 1CV
9	Unknown	IB	dg10k01.met	FK01.009	1	1	
10	Unknown	IB	dg10k01.met	FK01.010	1	1	
11	Unknown	IB	dg10k01.met	FK01.011	1	1	
12	Unknown	IB	dg10k01.met	FK01.012	1	1	
13	Unknown	IB	dg10k01.met	FK01.013	1	1	
14	Unknown	IB	dg10k01.met	FK01.014	1	1	
15	Unknown	IB	dg10k01.met	FK01.015	1	1	FINAL
16	Unknown	IB	dg10k01.met	FK01.016	1	1	
17	Unknown	IB	dg10k01.met	FK01.017	1	1	
18	Unknown	IB	dg10k01.met	FK01.018	1	1	
19	Unknown	IB	dg10k01.met	FK01.019	1	1	
20	Unknown	IB	dg10k01.met	FK01.020	1	1	
21	Unknown	IB	dg10k01.met	FK01.021	1	1	
22	Unknown	IB	dg10k01.met	FK01.022	1	1	
23	Unknown	IB	dg10k01.met	FK01.023	1	1	
24	Unknown	IB	dg10k01.met	FK01.024	1	1	
25	Unknown	IB	dg10k01.met	FK01.025	1	1	
26	Unknown	IB	dg10k01.met	FK01.026	1	1	
27	Unknown	IB	dg10k01.met	FK01.027	1	1	
28	Unknown	IB	dg10k01.met	FK01.028	1	1	
29	Unknown	IB	dg10k01.met	FK01.029	1	1	
30	Unknown	IB	dg10k01.met	FK01.030	1	1	
31	Unknown	IB	dg10k01.met	FK01.031	1	1	
32	Unknown	IB	dg10k01.met	FK01.032	1	1	
33	Unknown	IB	dg10k01.met	FK01.033	1	1	
34	Unknown	IB	dg10k01.met	FK01.034	1	1	

EC 11/01/11

Waiting For Trigger...

Start | EZChrom Chromatograp... | Method: Dg10k01.... | Calculator | Method: Dg10k01.met | untitled - Paint | Exploring | Tuesday, November 01, 2011

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGK010W: K096

DGK011W: K133 (1-5)

Book #:	A10-026
Instrument No.:	10
Analytical Sequence:	FK18
Method File:	DG10K01
Analytical Batch:	CDG10K01441

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGas DEC 555B-07-38-2	200
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: RH

Date: 11/18/11

Disposed By: RH

Date Disposed: 11/18/11

Method: Dg10k01.met Batch: Fk18.seq Data: Fk18.055 - [Batch: fk18.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
1	IB10K441	dg10k01.met	FK18.001	100 mL 1	1	
2	CDG10K01441	dg10k01.met	FK18.002	1	1	
3	DGK010WB	dg10k01.met	FK18.003	1	1	
4	DGK010WL	dg10k01.met	FK18.004	1	1	
5	BAD INJECTION	dg10k01.met	FK18.005	1	1	
6	DGK010WC	dg10k01.met	FK18.006	1	1	
7	11K096-02	dg10k01.met	FK18.007	1	1	
8	11K096-03	dg10k01.met	FK18.008	1	1	
9	11K096-04	dg10k01.met	FK18.009	1	1	
10	11K096-04T DF=10 Conf only	dg10k01.met	FK18.010	10 mL 1	10	CONF ONLY
11	11K096-04I DF=20	dg10k01.met	FK18.011	5 mL 1	20	
12	11K096-05	dg10k01.met	FK18.012	100 mL 1	1	
13	CDG10K01442	dg10k01.met	FK18.013	1	1	
14	11K096-06	dg10k01.met	FK18.014	1	1	
15	11K096-07	dg10k01.met	FK18.015	1	1	
16	11K096-09	dg10k01.met	FK18.016	1	1	
17	11K096-09T DF=10	dg10k01.met	FK18.017	10 mL 1	10	
18	11K096-07T DF=200	dg10k01.met	FK18.018	5 mL (10x) 1	200	
19	11K096-10	dg10k01.met	FK18.019	100 mL 1	1	
20	11K096-11	dg10k01.met	FK18.020	1	1	
21	11K096-12	dg10k01.met	FK18.021	1	1	
22	11K096-13	dg10k01.met	FK18.022	1	1	FINAL
23	11K096-14	dg10k01.met	FK18.023	1	1	
24	CDG10K01443	dg10k01.met	FK18.024	1	1	
25	11K096-15	dg10k01.met	FK18.025	1	1	
26	11K096-15T DF=100	dg10k01.met	FK18.026	10 mL (10x) 1	100	
27	11K096-16	dg10k01.met	FK18.027	100 mL 1	1	
28	11K096-18	dg10k01.met	FK18.028	1	1	
29	11K096-16T DF=2	dg10k01.met	FK18.029	50 mL 1	2	
30	11K096-19	dg10k01.met	FK18.030	100 mL 1	1	
31	11K096-20	dg10k01.met	FK18.031	1	1	
32	11K096-19T DF=2	dg10k01.met	FK18.032	50 mL 1	2	
33	11K096-21	dg10k01.met	FK18.033	100 mL 1	1	
34	11K096-18T DF=500	dg10k01.met	FK18.034	4 mL (250x) 1	500	

Instrument 2: TO10

Start | EZChrom Chromat... | Method: Dg10k... | Exploring - Methods | Calculator | Method: Dg10k01... | Method: Vg50k09... | untitled - Paint | Friday, November 18, 2011 7:08 PM

Method: Dg10k01.met Batch: Fk18.seq Data: Fk18.055 - [Batch: fk18.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
35	CDG10K01444	dg10k01.met	FK18.035	100uL 1	1	
36	11K096-22	dg10k01.met	FK18.036	1	1	
37	11K096-23	dg10k01.met	FK18.037	1	1	
38	DGK011WB	dg10k01.met	FK18.038	1	1	
39	DGK011WL	dg10k01.met	FK18.039	1	1	
40	DGK011WC	dg10k01.met	FK18.040	1	1	
41	11K133-01	dg10k01.met	FK18.041	1	1	
42	11K133-01M	dg10k01.met	FK18.042	1	1	
43	11K133-01S	dg10k01.met	FK18.043	1	1	
44	11K133-02	dg10k01.met	FK18.044	1	1	
45	11K133-01T DF=50	dg10k01.met	FK18.045	2uL 1	50	
46	CDG10K01445	dg10k01.met	FK18.046	100uL 1	1	
47	11K133-03	dg10k01.met	FK18.047	100uL 1	1	
48	11K133-02T DF=100	dg10k01.met	FK18.048	10uL (10x) 1	100	
49	11K133-04	dg10k01.met	FK18.049	100uL 1	1	
50	11K133-03T DF=1000	dg10k01.met	FK18.050	2uL (20x) 1	1000	
51	11K133-05	dg10k01.met	FK18.051	100uL 1	1	
52	11K133-04T DF=1000	dg10k01.met	FK18.052	2uL (20x) 1	1000	
53	11K133-05T DF=1000	dg10k01.met	FK18.053	1	1000	
54	CDG10K01446	dg10k01.met	FK18.054	100uL 1	1	
55	IB	dg10k01.met	FK18.055	1	1	
56	IB	dg10k01.met	FK18.056	1	1	FINAL
57	IB	dg10k01.met	FK18.057	1	1	
58	IB	dg10k01.met	FK18.058	1	1	
59	IB	dg10k01.met	FK18.059	1	1	
60	IB	dg10k01.met	FK18.060	1	1	
61						
62						
63						
64						
65						
66						
67						
68						

11/18/11

Waiting For Trigger...

Start | EZChrom Chromat... | Method: Dg10... | Exploring - Methods | Calculator | Method: Dg10k01... | Method: Vg50k09... | untitled - Paint | 7:09 PM

Friday, November 18, 2011

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGK012W: K133, K150
K104, K115

DGK013a: K132

Book #:	A10-026
Instrument No.:	10
Analytical Sequence:	FK21
Method File:	DG10K01
Analytical Batch:	CDG10K01447

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGMS DCC SSSB-07-35-3	200
DGPC DCC SSSB-07-39-1	200
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: RU

Date: 11/21/11

Disposed By: RU

Date Disposed: 11/21/11

Method: Dg10k01.met Batch: Fk21.seq Data: Fk21.040 - [Batch: fk21.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
1	BLANK	dg10k01.met	FK21.001	100ml 1	1	
2	IB10K447	dg10k01.met	FK21.002	1	1	
3	CDG10K01447	dg10k01.met	FK21.003	1	1	
4	DGK012WB	dg10k01.met	FK21.004	1	1	
5	DGK012WL	dg10k01.met	FK21.005	1	1	
6	DGK012WC	dg10k01.met	FK21.006	1	1	
7	11K133-06	dg10k01.met	FK21.007	1	1	
8	11K133-06T DF=1000	dg10k01.met	FK21.008	2ml (20x) 1	1000	
9	11K150-01	dg10k01.met	FK21.009	100ml 1	1	
10	11K150-01M	dg10k01.met	FK21.010	1	1	
11	11K150-01S	dg10k01.met	FK21.011	1	1	
12	11K150-01T DF=25	dg10k01.met	FK21.012	4ml 1	25	
13	11K150-01I DF=500	dg10k01.met	FK21.013	4ml (20x) 1	500	
14	CDG10K01448	dg10k01.met	FK21.014	100ml 1	1	
15	11K104-02	dg10k01.met	FK21.015	1	1	
16	11K104-03	dg10k01.met	FK21.016	1	1	FINAL
17	11K104-04	dg10k01.met	FK21.017	1	1	
18	11K104-04T DF=400	dg10k01.met	FK21.018	5ml (20x) 1	400	
19	11K104-06	dg10k01.met	FK21.019	100ml 1	1	
20	11K104-07	dg10k01.met	FK21.020	1	1	
21	11K104-07T DF=5	dg10k01.met	FK21.021	20ml 1	5	
22	11K104-08	dg10k01.met	FK21.022	100ml 1	1	
23	11K104-10	dg10k01.met	FK21.023	1	1	
24	11K104-10T DF=10	dg10k01.met	FK21.024	10ml 1	10	
25	CDG10K01449	dg10k01.met	FK21.025	100ml 1	1	
26	11K104-09	dg10k01.met	FK21.026	1	1	
27	RINSE CHNGED SEPTUM	dg10k01.met	FK21.027	— 1	1	
28	11K104-12	dg10k01.met	FK21.028	100ml 1	1	
29	11K104-12T DF=50	dg10k01.met	FK21.029	2ml 1	50	
30	11K104-09T DF=20	dg10k01.met	FK21.030	5ml 1	20	
31	11K104-13	dg10k01.met	FK21.031	100ml 1	1	
32	11K104-13T DF=5	dg10k01.met	FK21.032	20ml 1	5	
33	11K104-14	dg10k01.met	FK21.033	100ml 1	1	
34	11K104-14M	dg10k01.met	FK21.034	1	1	

Instrument 2: TO10

Start | EZChrom Chromat... | Method: Dg10k... | Exploring - Export | Calculator | Method: Dg10k01.k... | Method: Dg50k21... | untitled | Monday, November 21, 2011

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/01/11 Time: 10:00 End Date: 11/01/11 Time: 10:40

PREPARATION BATCH # N/A

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DG10K01-01	39	4	N/A	
02	-02			N/A	
03	-03			N/A	DGAS ICAL
04	-04			N/A	
05	-05			N/A	
06	-06			N/A	
07	IDG10K01 01			N/A	DGAS ICV
08					
09					
10					
11					
12					
13					SC 11/01/11
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Standards	ID	Amount Added (µl)
LCS/MS /ICV	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic free
He	Air Gas
ICAL STD (500 ppm)	SSSA-05-01-10 (SPECIALTY AIR)
ICV STD 500 ppm	SSSA-05-01-7 (MATHESON)

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #: (ESS)	28100705

Comments:

1) 0.08 ml ICAL STD + 3.92 ml He
2) 0.4 ml 3.6 ml
3) 1.0 ml 3.0 ml
4) 1.6 ml 2.4 ml
5) 3.0 ml 1.0 ml
6) 4.0 ml 0 ml

Prepared By: SC

Standard Added By: SC

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/18/11 Time: 08:00 End Date: 11/18/11 Time: 08:20

PREPARATION BATCH # DG1K011W

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DG1K011WB	39	4	N/A	
02	L			N/A	
03	L			N/A	
04	11K133-01			✓	
05	01M			✓	
06	01S			✓	
07	02			✓	
08	03			✓	
09	04			✓	
10	05			✓	
11	06			✓	Did not analyze
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

PH 11/18/11

Standards	ID	Amount Added (µl)
LCS/MS	555A-05-01-7	1600

Reagent	Source
H_2O	Organic Free
He	Air Gas

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #:	25100705

Comments:

Prepared By: RH

Standard Added By: RH

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): Book # EDG-025

Start Date: 11/21/11 Time: 07:45 End Date: 11/21/11 Time: 08:30

PREPARATION BATCH * _____

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DGK02WB	39	4	N/A	
02	↓ L	↓	↓	N/A	
03	C			N/A	
04	11K133-06			✓	
05	11K150-01			~7	
06	01M			~7	
07	01S			~7	
08	11K104-02			✓	
09	03			✓	
10	04			✓	
11	06			✓	
12	07			✓	
13	08			✓	
14	09			✓	
15	10			✓	
16	12			✓	
17	13			✓	
18	14			✓	
19	14M			✓	
20	14S			✓	
21	11K115-01			✓	
22	02			✓	
23	03			✓	
24			RA	11/21/11	
25					

Standards	ID	Amount Added (µl)
LCS/MS	SS5A-05-01-7	1600

Reagent	Source
H_2O	Organic Free
He	Air Gas

Thermometer ID #:	RSKMS-01
Tedlar Bag Lot #:	25700705

Comments: _____

Prepared By: RA

Standard Added By: RA

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

SDG#: 11K133

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K133

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

A total of five (5) water samples were received on 11/15/11 for Dissolved Metals by ICP analysis, Method 3010A/6010B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source. Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for IPK034WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample was analyzed at the frequency prescribed by the project. Percent recoveries were within project QC limits except for one result qualified with [*] in K133-01 M/S summary form, most likely due to matrix interference. Check QC summary form for details. In addition, analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE

DISSOLVED METALS BY TRACE ICP

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K133
Instrument ID : T-ID8

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IPK034WB	1	NA	11/23/1113:29	11/22/1113:00	ID8K020063	ID8K020061	IPK034W	Method Blank
LCS1W	IPK034WL	1	NA	11/23/1113:32	11/22/1113:00	ID8K020064	ID8K020061	IPK034W	Lab Control Sample (LCS)
LCD1W	IPK034WC	1	NA	11/23/1113:34	11/22/1113:00	ID8K020065	ID8K020061	IPK034W	LCS Duplicate
MW-70-PMW07A-130AS	K133-01A	1	NA	11/23/1113:37	11/22/1113:00	ID8K020066	ID8K020061	IPK034W	Analytical Spike Sample
MW-70-PMW07A-130	K133-01	1	NA	11/23/1113:40	11/22/1113:00	ID8K020067	ID8K020061	IPK034W	Field Sample
MW-70-PMW07A-130DL	K133-01J	5	NA	11/23/1113:44	11/22/1113:00	ID8K020068	ID8K020061	IPK034W	Diluted Sample
MW-70-PMW07A-130MS	K133-01M	1	NA	11/23/1113:47	11/22/1113:00	ID8K020069	ID8K020061	IPK034W	Matrix Spike Sample (MS)
MW-70-PMW07A-130MSD	K133-01S	1	NA	11/23/1113:50	11/22/1113:00	ID8K020070	ID8K020061	IPK034W	MS Duplicate (MSD)
MW-70-PMW07B-131	K133-02	1	NA	11/23/1113:53	11/22/1113:00	ID8K020071	ID8K020061	IPK034W	Field Sample
IW-70-FSB216-132	K133-03	1	NA	11/23/1114:05	11/22/1113:00	ID8K020075	ID8K020073	IPK034W	Field Sample
MW-70-PMW08A-133	K133-04	1	NA	11/23/1114:08	11/22/1113:00	ID8K020076	ID8K020073	IPK034W	Field Sample
MW-70-PMW08B-134	K133-05	1	NA	11/23/1114:12	11/22/1113:00	ID8K020077	ID8K020073	IPK034W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/15/11 09:47
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/15/11
SDG NO.	: 11K133	Date Extracted:	11/22/11 13:00
Sample ID:	MW-70-PMW07A-130	Date Analyzed:	11/23/11 13:40 # 12/01/11 15:07
Lab Samp ID:	K133-01 #K133-01I	Dilution Factor:	1 # 10
Lab File ID:	ID8K020067#ID8L001043	Matrix :	WATER
Ext Btch ID:	IPK034W	% Moisture :	NA
Calib. Ref.:	ID8K020061#ID8L001039	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
# Arsenic	ND	2.00	0.0500
Iron	0.259	0.200	0.0400
Manganese	3.07	0.200	0.00300

Members of the Associated File

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/15/11 11:03
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/15/11
SDG NO.	: 11K133	Date Extracted:	11/22/11 13:00
Sample ID:	MW-70-PMW07B-131	Date Analyzed:	11/23/11 13:53
Lab Samp ID:	K133-02	Dilution Factor:	1
Lab File ID:	ID8K020071	Matrix :	WATER
Ext Btch ID:	IPK034W	% Moisture :	NA
Calib. Ref.:	ID8K020061	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	0.421	0.200	0.0400
Manganese	0.618	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/15/11 12:03
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/15/11
SDG NO.	: 11K133	Date Extracted:	11/22/11 13:00
Sample ID:	IW-70-FSB216-132	Date Analyzed:	11/23/11 14:05
Lab Samp ID:	K133-03	Dilution Factor:	1
Lab File ID:	ID8K020075	Matrix :	WATER
Ext Btch ID:	IPK034W	% Moisture :	NA
Calib. Ref.:	ID8K020073	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	0.0168J	0.200	0.00500
Iron	0.227	0.200	0.0400
Manganese	4.59	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/15/11 13:19
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/15/11
SDG NO.	: 11K133	Date Extracted:	11/22/11 13:00
Sample ID:	MW-70-PMW08A-133	Date Analyzed:	11/23/11 14:08
Lab Samp ID:	K133-04	Dilution Factor:	1
Lab File ID:	ID8K020076	Matrix :	WATER
Ext Btch ID:	IPK034W	% Moisture :	NA
Calib. Ref.:	ID8K020073	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	2.77	0.200	0.0400
Manganese	1.85	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/15/11 14:18
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/15/11
SDG NO.	: 11K133	Date Extracted:	11/22/11 13:00
Sample ID:	MW-70-PMW08B-134	Date Analyzed:	11/23/11 14:12
Lab Samp ID:	K133-05	Dilution Factor:	1
Lab File ID:	ID8K020077	Matrix :	WATER
Ext Btch ID:	IPK034W	% Moisture :	NA
Calib. Ref.:	ID8K020073	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	3.45	0.200	0.0400
Manganese	0.933	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/22/11
SDG NO.	: 11K133	Date Extracted:	11/22/11 13:00
Sample ID:	MBLK1W	Date Analyzed:	11/23/11 13:29
Lab Samp ID:	IPK034WB	Dilution Factor:	1
Lab File ID:	ID8K020063	Matrix :	WATER
Ext Btch ID:	IPK034W	% Moisture :	NA
Calib. Ref.:	ID8K020061	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	ND	0.200	0.0400
Manganese	ND	0.200	0.00300

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K133
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	IPK034WB	IPK034WL	IPK034WC		
LAB FILE ID:	ID8K020063	ID8K020064	ID8K020065		
DATIME EXTRCTD:	11/22/1113:00	11/22/1113:00	11/22/1113:00	DATE COLLECTED:	NA
DATIME ANALYZD:	11/23/1113:29	11/23/1113:32	11/23/1113:34	DATE RECEIVED:	11/22/11
PREP. BATCH:	IPK034W	IPK034W	IPK034W		
CALIB. REF:	ID8K020061	ID8K020061	ID8K020061		

ACCESSION:

PARAMETER	BLNK RSLT mg/L	SPIKE AMT mg/L	BS RSLT mg/L	BS % REC	SPIKE AMT mg/L	BSD RSLT mg/L	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	ND	.5	.535	107	.5	.532	106	1	80-120	20
Iron	ND	5	5.2	104	5	5.11	102	2	80-120	20
Manganese	ND	.5	.502	100	.5	.502	100	0	80-120	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K133
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MW-70-PMW07A-130				
CONTROL NO.:	K133-01	K133-01M	K133-01S		
LAB FILE ID:	ID8K020067	ID8K020069	ID8K020070		
DATIME EXTRCTD:	11/22/1113:00	11/22/1113:00	11/22/1113:00	DATE COLLECTED:	11/15/11 09:47
DATIME ANALYZD:	11/23/1113:40	11/23/1113:47	11/23/1113:50	DATE RECEIVED:	11/15/11
PREP. BATCH:	IPK034W	IPK034W	IPK034W		
CALIB. REF:	ID8K020061	ID8K020061	ID8K020061		

ACCESSION:

PARAMETER	SMPL RSLT mg/L	SPIKE AMT mg/L	MS RSLT mg/L	MS % REC	SPIKE AMT mg/L	MSD RSLT mg/L	MSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic A	ND	.5	.662	132*	.5	.663	133*	0	75-125	20
Iron	.259	5	4.99	95	5	5.02	95	1	75-125	20
Manganese	3.07	.5	3.52	91	.5	3.56	98	1	75-125	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 3010A/6010B (DISSOLVED)

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MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	MW-70-PMW07A-130	MW-70-PMW07A-130DL		
EMAX SAMP ID:	K133-01	K133-01J		
LAB FILE ID:	ID8K020067	ID8K020068		
DATE EXTRACTED:	11/22/1113:00	11/22/1113:00	DATE COLLECTED:	11/15/11 09:47
DATE ANALYZED:	11/23/1113:40	11/23/1113:44	DATE RECEIVED:	11/15/11
PREP. BATCH:	IPK034W	IPK034W		
CALIB. REF:	ID8K020061	ID8K020061		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SERIAL DIL RSLT (mg/L)	DIF RSLT %	QC LIMIT (%)
Arsenic^	ND	ND	0	10
Iron	0.259	ND	NA	10
Manganese	3.07	3.39	11*	10

^ K133-01J : Analyzed at DF 25 on 12/01/11 15:10 | File ID ID8L001044.

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K133
METHOD: METHOD 3010A/6010B (DISSOLVED)

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MATRIX: WATER % MOISTURE: NA
DILTN FACTR: 1 1
SAMPLE ID: MW-70-PMW07A-130
CONTROL NO.: K133-01 K133-01A
LAB FILE ID: ID8K020067 ID8K020066
DATIME EXTRCTD: 11/22/1113:00 11/22/1113:00 DATE COLLECTED: 11/15/11 09:47
DATIME ANALYZD: 11/23/1113:40 11/23/1113:37 DATE RECEIVED: 11/15/11
PREP. BATCH: IPK034W IPK034W
CALIB. REF: ID8K020061 ID8K020061

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	AS RSLT (mg/L)	AS % REC	QC LIMIT (%)
Arsenic^	ND	5	6.14	123	75-125
Iron	.259	5	5.27	100	75-125
Manganese	3.07	.5	3.51	89	75-125

^ K133-01A : Analyzed at DF 10 on 12/01/11 15:04 | File ID ID8L001042.

ICP QC CHECK TABLE

QC	ICV	CCV	ICSAB	ICSA	MLCV
Limit%	90-110	90-110	80-120	80-120	80-120
Comp	mg/L	mg/L	mg/L	mg/L	mg\L
Al	100	100	400	400	200
Sb	1.5	1.5	1	0	5
As	1	1	1	0	1
Ba	2	2	0.5	0	5
Be	1.5	1.5	0.5	0	5
B	2.5	2.5	0.5	0	5
Cd	2	2	1	0	5
Ca	75	75	500	500	250
Cr	2.5	2.5	0.5	0	5
Co	1	1	0.5	0	1
Cu	2.5	2.5	0.5	0	5
Fe	25	25	200	200	200
Pb	2.5	2.5	1	0	5
Li	0.5	0.5	1	0	0.5
Mg	60	60	200	200	100
Mn	2.5	2.5	0.5	0	5
Mo	2.5	2.5	1	0	5
Ni	2.5	2.5	1	0	5
K	60	60	75	0	250
Se	1	1	1	0	1
Ag	0.5	0.5	1	0	0.5
Na	60	60	75	0	150
Sr	0.5	0.5	0.5	0	0.5
Tl	2.5	2.5	1	0	5
Sn	0.5	0.5	1	0	0.5
Ti	0.5	0.5	1	0	0.5
V	1.5	1.5	0.5	0	5
Zn	2.5	2.5	1	0	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 11/23/11 10:19

End Date: 11/23/11 17:15

SOP #	Rev. #
☑ EMAX-6010	7
☐ EMAX-6010C	1
☐ EMAX-200.7	2
☐ EMAX-	

Book #: AD8-021

Instrument No.: D8

Analytical Batch: 1D8K020

Analytical Sequence: S-11K6010 (v30)

Method File: 11K6010 (v30)

Database: EMAX14

Comments:

CCB3 Zn > 3x IDL. However associated sample K575-01 detected 10x > than blank conc. Thus not corrective action ~~11/23/11 sample~~

CCB4 Zn > 3x IDL. However associated sample K201-02 and K201-03 detected 10x > than blank conc. Thus no corrective action.

	STANDARDS ID		STANDARDS ID
S0	SM1B14-7805	S30	SM1B14-6802
S1	NA	S31	-6803
S2		ICV	-8201
S3		CCV	-8201
S4		ICSA	-8502
S5		ICSAB	-6702
S6		CRI/MRL 1	-8104
S7		MRL 2	-7401
S8			
S9			
S10			
S11			
S12			
S16			
S17			
S18			
S20	SM1B14-8401		
S21	-6503		
S22	-6504		
S23	-8402		
S24	-6702		
S25	-6703		
S26	-7801		
S27	-7802		
S28	-7803		
S29	-7804		

Analyzed By: pp

Date: 11/23/11

SEQUENCE FILE : ID8K020

4-18	19-33	34-43	44-53	54-63
LFID	LSID	TIME	DATE	DF
ID8K020001	Blank	10:19	11/23/11	1.000
ID8K020002	S20	10:22	11/23/11	1.000
ID8K020003	S21	10:25	11/23/11	1.000
ID8K020004	S22	10:28	11/23/11	1.000
ID8K020005	S23	10:31	11/23/11	1.000
ID8K020006	S24	10:34	11/23/11	1.000
ID8K020007	S25	10:37	11/23/11	1.000
ID8K020008	S26	10:40	11/23/11	1.000
ID8K020009	S27	10:43	11/23/11	1.000
ID8K020010	S28	10:47	11/23/11	1.000
ID8K020011	S29	10:50	11/23/11	1.000
ID8K020012	S30	10:53	11/23/11	1.000
ID8K020013	S31	10:56	11/23/11	1.000
ID8K020014	ICV	10:58	11/23/11	1.000
ID8K020015	ICB	11:01	11/23/11	1.000
ID8K020016	MRLK2301	11:05	11/23/11	1.000
ID8K020017	MRLK2302	11:08	11/23/11	1.000
ID8K020018	ICSA1	11:10	11/23/11	1.000
ID8K020019	ICSAB1	11:14	11/23/11	1.000
ID8K020020	CCV1	11:17	11/23/11	1.000
ID8K020021	CCB1	11:19	11/23/11	1.000
ID8K020021	IPK036SQ	11:23	11/23/11	1.000
ID8K020021	IPK036SX	11:26	11/23/11	1.000
ID8K020021	IPK036SY	11:28	11/23/11	1.000
ID8K020025	K575-01A	11:31	11/23/11	5.000
ID8K020026	K575-01T	11:34	11/23/11	25.00
ID8K020027	K575-01J	11:37	11/23/11	5.000
ID8K020028	K575-01M	11:40	11/23/11	5.000
ID8K020029	K575-01S	11:43	11/23/11	5.000
ID8K020030	Blank	11 46	11/23/11	1.000
ID8K020031	CCV2	11:49	11/23/11	1.000
ID8K020032	CCB2	11:54	11/23/11	1.000
ID8K020033	K575-01A	11.57	11/23/11	1.000
ID8K020034	K575-01W	12 00	11/23/11	1.000
ID8K020035	K575-01J	12 04	11/23/11	5.000
ID8K020036	K575-01M	12.06	11/23/11	1.000
ID8K020037	K575-01S	12:10	11/23/11	1.000
ID8K020038	Blank	12:13	11/23/11	1.000
ID8K020039	CCV3	12:16	11/23/11	1.000
ID8K020040	CCB3	12:19	11/23/11	1.000
ID8K020041	K201-02W	12:22	11/23/11	1.000
ID8K020042	K201-03W	12:27	11/23/11	1.000
ID8K020043	Blank	12.30	11/23/11	1.000
ID8K020044	CCV4	12:33	11/23/11	1.000
ID8K020045	CCB4	12:36	11/23/11	1.000
ID8K020046	IPK035SB	12:39	11/23/11	1.000
ID8K020047	IPK035SL	12.42	11/23/11	1.000
ID8K020048	IPK035SC	12:45	11/23/11	1.000
ID8K020049	K203-17A	12:47	11/23/11	1.000
ID8K020050	K203-17	12:50	11/23/11	1.000
ID8K020051	K203-17J	12:54	11/23/11	5.000
ID8K020052	K203-18	12:56	11/23/11	1.000

ID8K020053	K203-19	12:59	11/23/11	1.000
ID8K020054	K203-20	13:02	11/23/11	1.000
ID8K020055	Blank	13:05	11/23/11	1.000
ID8K020056	CCV5	13:08	11/23/11	1.000
ID8K020057	CCB5	13:11	11/23/11	1.000
ID8K020058	K203-21	13:14	11/23/11	1.000
ID8K020059	K203-22	13:17	11/23/11	1.000
ID8K020060	Blank	13:20	11/23/11	1.000
ID8K020061	CCV6	13:23	11/23/11	1.000
ID8K020062	CCB6	13:26	11/23/11	1.000
ID8K020063	IPK034WB	13:29	11/23/11	1.000
ID8K020064	IPK034WL	13:32	11/23/11	1.000
ID8K020065	IPK034WC	13:34	11/23/11	1.000
ID8K020066	K133-01A	13:37	11/23/11	1.000
ID8K020067	K133-01	13:40	11/23/11	1.000
ID8K020068	K133-01J	13:44	11/23/11	5.000
ID8K020069	K133-01M	13:47	11/23/11	1.000
ID8K020070	K133-01S	13:50	11/23/11	1.000
ID8K020071	K133-02	13:53	11/23/11	1.000
ID8K020072	Blank	13:56	11/23/11	1.000
ID8K020073	CCV7	13:59	11/23/11	1.000
ID8K020074	CCB7	14:02	11/23/11	1.000
ID8K020075	K133-03	14:05	11/23/11	1.000
ID8K020076	K133-04	14:08	11/23/11	1.000
ID8K020077	K133-05	14:12	11/23/11	1.000
ID8K020078	K119-01	14:15	11/23/11	1.000
ID8K020079	K119-02	14:18	11/23/11	1.000
ID8K020080	K119-03	14:21	11/23/11	1.000
ID8K020081	K146-02	14:24	11/23/11	1.000
ID8K020082	K146-03	14:27	11/23/11	1.000
ID8K020083	K146-04	14:30	11/23/11	1.000
ID8K020084	Blank	14:34	11/23/11	1.000
ID8K020085	CCV8	14:37	11/23/11	1.000
ID8K020086	CCB8	14:39	11/23/11	1.000
ID8K020087	K146-05	14:42	11/23/11	1.000
ID8K020088	K146-06	14:46	11/23/11	1.000
ID8K020089	Blank	14:49	11/23/11	1.000
ID8K020090	CCV9	14:52	11/23/11	1.000
ID8K020091	CCB9	14:55	11/23/11	1.000
ID8K020092	TXK007SB	14:58	11/23/11	1.000
ID8K020093	K521-01A	15:01	11/23/11	1.000
ID8K020094	K521-01	15:04	11/23/11	1.000
ID8K020095	K521-01J	15:07	11/23/11	5.000
ID8K020096	K521-01M	15:10	11/23/11	1.000
ID8K020097	K521-01S	15:13	11/23/11	1.000
ID8K020098	K520-03	15:16	11/23/11	1.000
ID8K020099	Blank	15:19	11/23/11	1.000
ID8K020100	CCV10	15:22	11/23/11	1.000
ID8K020101	CCB10	15:25	11/23/11	1.000
ID8K020102	Blank	16:34	11/23/11	1.000
ID8K020103	CCV11	16:37	11/23/11	1.000
ID8K020104	CCB11	16:39	11/23/11	1.000
ID8K020105	IPK037WB	16:42	11/23/11	1.000
ID8K020106	IPK037WL	16:45	11/23/11	1.000
ID8K020107	IPK037WC	16:48	11/23/11	1.000

ID8K020108	TXK008SB	16:51	11/23/11	1.000
ID8K020109	K543-01A	16:54	11/23/11	1.000
ID8K020110	K543-01	16:57	11/23/11	1.000
ID8K020111	K543-01J	17:00	11/23/11	5.000
ID8K020112	K543-01M	17:03	11/23/11	1.000
ID8K020113	K543-01S	17:06	11/23/11	1.000
ID8K020114	Blank	17:09	11/23/11	1.000
ID8K020115	CCV12	17:12	11/23/11	1.000
ID8K020116	CCB12	17:15	11/23/11	1.000

VERSION 11A UNIT 4 SUMMARY of ICV and LCV - IDBK020 DATE 11/23/11 INST - GMAX

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	----	----		---		----	----		--	--			--		--	--	-	-	-- -	--	---	-		-	-			
S20	---	---	--	---	----		-			--	-	--	-	-	-	---	----	--		--	-			----		-		
S21	----	----	---	-- -	- -	- --	---	-		-				-	- -	-	----	-	-	---			--	--	-- -	- --	- --	--
S22	---	--	---	----	--		-	--		--	- -	- -		--	- -	----	-		-	-	--	---	---		--	- -	-	
S23		- -		- -		---	----	---	-- -	- --	-	---	---	-- -	-- -		- -	--		-		-	---	--	- -	----	---	
S24	-- -	----	----	- - -	- --		--	-- -	- -		-	-	-- -	--	---		--	- -	-	-	- -	- -	----		--	-		
S25	---	----		-	----	-- -	-			-- -	- --	----	-	-		--		- -	----	----	--	- --		- -	--	---		
S26	---	---		-	---	-	-			----		-		-	- -			----	---	----			--	-		--	- -	- -
S27	--	--		-	-	-	-							-	-	---	----	---		-- -	-	---	- -		----	-	--	--
S28	---	- -	----	--	- -	-- -	----	-	- -	-	-	---	-		--	-- -	----	- -	-	-	--	---	-	- --	--	---	---	
S29	--	- --	---	-	--	----	---	---			- --	-	---	---	---		--	---	-	--	----	----	--	--	- --	--	-	-
S30	-- -	--	---	-	--						-	---	---	---	---	--	-	----		-	--	-	- -		--	- --	--	--
S31	-- -	- --	-- -	----	---		-			-	-			-	---	-	-	---	- -	-		- --	----	---	- --	---	-	
ICV	103	100	104	103	102	97	100	101	98	97	103	100	97	105	97	96	101	99	102	104	102	107	98	92	101	101	100	103
ICB	- -	--				--	- -	-- -		--	-	----	--		-	- --	---			---	---	--			-- -	---	--	
MRLK2301	-- -	- -	- --	---	-					--	- -	--		---	---		-			- -	- -	----	-		--	- --		-
MRLK2302	----	--	----	--		----	----	--	----	----	----	----	-		-	-	-	----	--	-		--	---		--		--	--
ICSA1	98		--	--	--			96	-	--		95	--	---	97	- -	----	-- -	-	-	---	- --	-		-	---	----	----	--
ICSAB1	98	102	106	103	102	88	95	94	94	96	109	96	95	120	97	95	102	97	107	104	109	112	97	83	93	101	99	102
CCV1	104	101	104	103	102	99	100	102	99	98	105	101	97	104	97	96	101	99	103	105	103	108	99	92	101	100	101	104
CCB1	--		-	--		----		-	-	--	-			-	---	-	--	--	-	- -	----	- --	- -	-	- -	--	---	
IPK0365S	-- -	-	- -	---	----		--		-		- -	-	----	---	--		--	- --	- -	-		- -	-- -			---	- -	
IPK0365X	----	---	-			-	-			-		--	-	- -	---			-		-- -	-	- -	- --	- --	--	- -	-	-
IPK0365Y	----	---	- --	--		-	-	---	-	-	-	- -	---	-	-	----	--	-	-	--	-	- -	- --	- -	--	-		
K575-01A	--	----	----	---			-	-	---	----	--	-- -	- -		- --			--	--	-	--	--	---		-			
K575-01B	- -		-		--						-	--									---	---				-		
K575-01C	-- -	-- -	----	---	--		-	-				-	---	----	---		--	-	-	- -	----	----	---			--	-	
K575-01D	-- -	--	- --	--		-	- -	- -	----	---	- -		- --	- -						-- -	--	-				-	---
K575-01E	----	---	-			-	---	----	-	----	----	---	---	-		-			---	---				---	--		-
BLANK	-	-	-			---	-	---	---	-	- -	----	- -		-	----		--	----	- -					--	---	- -
ICV2	103	101	106	104	102	100	102	102	99	98	106	101	98	106	97	97	101	100	104	106	104	109	99	92	101	101	101	104
CCB2	-	- -			-	- -	- -		---		---	--	---	- -	---	--			--	---			-	-	-	--		
K575-01A	--		----	-			-			-			-	--		- -	--	-			----	---	----	- -		-	-	
K575-01B	-	-	-	-	--					-				--			-	----	-	-		-			--	-	--	
K575-01C	--	----	--	--				--	--	- -			--	---	---		-	---		-	--		----		--	----	--	--
K575-01D	--			-		-	-				- -	- -		-	-	--	-- -			---	- -	-	--		--	-	-	
K575-01E	-- -	-	-	---	--	- -	-	- -			-			---	--	-	-	----					--	--	-- -	- --	----	-
BLANK			-	-		-											-	---	----	- -			-		--		---	
ICV3	104	102	106	106	104	101	101	101	97	99	106	99	98	106	97	98	102	100	106	107	104	110	100	92	101	102	100	103
CCB3	--		- --	---	-	- -			- -	-	- -		-- -	--	---		-		--	- -		-- -	---		-	---		
K201-02A	--	--	-	-	-	---	- -	----	-	-	-- -	- --	---	- -	- -	--				----	--		--		---			
K201-02B	-	-	-	-	-				- -				-		-	-	-	----					----		-	-		
BLANK	---	--	-						-	-						---	--	---	-	----	--	---	----	- -			-	
ICV4	103	101	104	105	102	96	99	101	97	98	105	100	98	107	97	97	103	100	106	105	103	110	99	91	102	101	100	103
CCB4	-	--						-	- -	-	-	- -	-	---	-	-	-	--	----					-	---			
IPK0355A	-- -	- -	-	--	---	-		-	-		---	- -	--	---	-	--	-	----		-		-	-	---	-- -			
IPK0355L		--	- -	--	---					-	-- -	-- -	----	----	---				-	----	--			-			---	-	-
IPK0355M	---	-	---	-	- -		-		- -			-- -	- --	-- -	--	-			-	--	----	---	-	-	-- -	---	-- -	---	-
K203-17A	--	-	-	-					-	- --	----	----	- -	- --	---	-	-			--	--				- -	- -	-- -	--	
K203-17	- --	---	---	- -	---		-	- -	---	- -	- -	-	-	-		-			--	----	--	-	-	-	---	-		
K203-17-2	---	--	--	----	- -			-	-		---	- -		-	- -	----	---	---		-	--		- -	---	----		-	
K203-18		--		-	-	-		----	--	--				-		--		----	---	-	- -	-	-	--		--		- -

K203-19																												
K203-20																												
BLANK																												
CCV5	104	100	104	106	103	99	99	100	97	99	105	99	98	103	97	98	103	100	106	104	103	110	100	91	101	102	103	103
CCB5																												
K203-21																												
K203-22																												
BLANK																												
CCV6	104	100	104	106	102	98	98	100	96	99	105	99	98	105	95	98	103	100	106	103	103	110	100	90	101	101	99	102
CCB6																												
IPK034WB																												
IPK034W.																												
IPK034WC																												
K133-01A																												
K133-01																												
K133-0..																												
K133-01M																												
K133-0.N																												
K133-02																												
BLANK																												
CCV7	104	100	103	107	102	98	98	99	96	99	106	98	98	110	96	97	103	100	108	104	103	112*	101	90	101	102	99	102
CCB7																												
K133-03																												
K133-04																												
K133-05																												
K119-01																												
K119-02																												
K119-03																												
K146-02																												
K146-03																												
K146-04																												
BLANK																												
CCV8	104	99	103	107	101	97	97	97	95	98	104	97	97	110	94	96	102	99	108	103	102	111*	100	90	100	101	98	101
CCB8																												
K146-05																												
K146-06																												
BLANK																												
CCV9	104	98	102	107	100	97	97	97	96	98	105	97	97	113	94	96	102	99	108	103	102	111*	101	89*	99	100	98	101
CCB9																												
K521-01																												
K521-01A																												
K521-02																												
K521-03																												
K521-01B																												
K521-01C																												
K520-03																												
BLANK																												
CCV10	103	99	103	107	101	97	98	97	95	98	104	97	97	110	95	96	102	99	108	104	102	110	100	90	100	101	98	101
CCB10																												
BLANK																												
CCV11	104	98	102	107	100	96	95	96	94	98	104	96	97	112*	93	95	102	99	109	101	101	112*	100	88*	100	100	97	100
CCB11																												
IPK037WB																												
IPK037W.																												
IPK037WC																												

TAK0085E																														
K543-01F																														
K543-01																														
K543-01L																														
K543-01N																														
K543-01S																														
BLANK																														
CCV12	104	98	101	108	101	97	96	96	95	98	105	97	96	113*	94	96	101	99	110	102	102	112*	101	88*	99	101	98	101
CCB12																												

QC limit of each parameter are listed in a table attached next to all the KP checks forms
* Out of QC limit

VERSION : IDA UNIT : UG/L SUMMARY of CALIBRATION BLANKS : ID8K020 (WATER) DATE : 11/23/11 INST : EMAX

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	-	- -	-	--		---	----	----	---	-- -	--			--	----	- -	-		-	---	--	----	- -	-	- -	-- -	--	- -
S20		-	--	----	--	-		-	-	- -		--	-	-	--	-	--			----	----	--	-- -	--		---	----	- -
S21	--	-	--	-		- - -	---	- -	- -	--	---	-	- -	-- -	--	-	- -	--	----		---	-			----	----	--	-
S22	-		--	- -	--	-		-		- -			-		----			--	-- -	---	----	-	---		--	--		- -
S23	-					-		- -		-	--			-	--	-	---	----	- -			---	---	--	--	- -	- -	-
S24	--	----	- -	-	-			-	-	-	----	--		-	--	--	-	--		----	----	- -	- -	---		----		-
S25	--	---	- -	- - -	--	-		-	--	-	--	- -	-	-- -	- -	--	- --	----	--	- -		--		---	-		- -	-
S26	----	----	-- -	---	-- -					- -				-	---			-	-	-		--			--		-	--	---
S27	----	--	---	-	- -	-	- -	--	- -	----	----	-- -	-- -	-	- -	- -	-		--	----	---	----	- --	----	- -	-- -	----	-
S28	---	---	- -	---	- -	-		--		- -	---		--	-	- -	----			- -	----	----	-			--	- - -		
S29	----	--	- --	----	---		- --	- -	- -	----	---	-			-	----	-- -	- -		---	---	--	----	-	--	---	-	- -
S30	-			-		-- -	---	----	-- -	----	----	---	---	----	--	-- -	-	- -	-	- --	----	- - -	----	---	--	- --	----	--
S31	-	--	--	- -	--	-	- -	-	--	--	-	--			- -			--	----	----	---					- -	---	---
ICV	- -	---	----	----	----	- -	- -	-	---	--	- -	- -	----	---	-	----	-		- -	--	---			-	-		-
ICB	3.63	.940	- .400	.110	-.010	4.70	.070	-8.96	.000	.090	.180	2.47	.200	.490	1.60	.110	.280	.170	.107	-.190	.100	13.6	.080	.230	.120	.690	.120	.760
MRL<230.	--	----	----	- -	--					- -				-	---	----	- -	- -		--	----	--	-	-		--	-	---
MRL<230.			--	-	--	--	---	---	----	- - -	----			--	----	--			----		- -	---	----	----			----	---	---
ICSA1	----	-1.01	-.960	.750	.030	59.7	4.14	---	.520	- .760	1.50	--	4.81	18.4	-	1.12	-1.31	1.05	80.6	.860	.270	43.7	.840	3.68	1.72	5.51	.600	1.67
ICSAB1	-		-	-	-				---	--	--			--	- -	- -	- -	-	-	----	----	---		-			--	--
CCV1	---	---	-	---	- -		--	--		---	- -	-	-	-	-	---			-	--	-	-		----	----	----	----	- --
CCB1	10.8	.200	.990	.440	.050	4.53	.030	.153	.070	.030	.330	.370	.100	.160	3.04	.110	.380	.120	.157	.010	.150	24.8	.170	.330	- .060	.180	.010	5.63
IPK036SC	---	----	--	---	-	-	---	- -	----	---	----	---	----	--	- -	---		-	- -	-	-- -	---	---	---	--	- --		
IPK036S	- -			--	--	-		-	-	--	- -			--	-	--	- -	----	-		-	--	-			-	---	----
IPK036S	-	--				-		-	- -			-	-	-	---	--	--	-	--	----	- -			- -	-	- - -	- --	--
K575-012	--		---	---	-		-	-		--	--			- -	- -	----	-		-	--	---		-			- -	- -	-
K575-01	--	--	--		-	-	--	-	----	----	--	- -	---	-	-			---	- -		-	- -	----	--		----	- --	--
K575-01		--	---	--	-- -	-	-		-					-	---		-		--		-- -	---	----	-	-	---		
K575-01			-	--	---			-	-	-				-	--		- -	-			--	----	----	-	- --	----	--	-
K575-01	-	-	- -	-			-		--	- -			----				--		- --	--	----							- -
BLANK	----		-			--	-- -	- -	---	----	- --	- -	--		--	--	--	----	- --		-		-			-	- -	
ICV2	-			--	-									--	----	- -	---		-		-	-	-- -	--	-		--		
ICB2	9.23	1.63	1.10	.240	.030	11.3	.020	.156	.040	- .060	.200	1.77	.161	.10	10.7	.010	.180	.040	07.6	.010	.110	9.77	.160	.040	.130	.350	.100	5.83
K575-01	----	--	- -	----		-	- -	-	-	-				---	--	--	--	-- -		- -		--	---	- --	-	----	-- -	-
K575-01	-			-	--	--		-	- -	----	---			- -		-			- --	--	-			-		-	- -	--
K575-01	-		-			---	--	--	- -	-	-- -	---	--	-		-		-	- -	-					--	--	----	--
K575-01						-	---	-- -	- --	-- -	---	-	--	-			-	--			-						-	
K575-01	- --	-		-		-			-	--	-	--	--	-		---	--	-		-- -	- -	-						- -
BLANK	---	- --	---	----		----	- --	----	- --	---	-- -	- -	---	---		-		-		--	- --	----	--	-		-	-	
ICV3	--					-		- -	---	- --	-	--			-			-	---	--	----							
ICB3	4.69	2.24	- .230	.120	.050	42.0	.020	.168	.140	.150	.240	.710	.371	.560	10.8	.140	.370	.170	.186	-.160	.080	27.8	.150	.010	- .100	1.12	.140	6.28
K201-02			-		-									--	---	- -	--	-		- -		---	--		-		-	--
K201-03	-	--	---	--	-	--	--	--	---	---	-		-		--	-		-		---	-	- -	-	-	--		-	-
BLANK	--		-		- -	-				---	-	-			-		----	- -	-		---	-	---		-	----	---	
ICV4					- -					-						-	--	-	---	--	-							--
ICB4	8.34	1.22	1.54	.460	.050	18.4	.050	.173	.100	.060	.270	2.8-	.280	- .030	9.60	.290	.390	.170	97.1	.720	.060	11.5	.190	.470	.230	.640	.180	6.80
IPK035S3		-			--	-	---	----	-	--					--	--	- -	-	-		--	-	-		- -	---		-
IPK035S			- -			- -			- --	---	---		--				- -		-	--	-		-		--	-	---	
IPK035S	-- -	----	----	----					-	----	----				--	- -	----	- -	---	---	-	-- -	-		-	-	---	-
K203-17A	--	---	--	-	--			--	---	---	--	---	-	--	-		- -		-	-	-				- -	---	-	----
K203-17			-		-		---	--		-					-	-	- --	--	- -	----	----	-- -	---	---	--	--	- -	-
K203-17	---	- - -	-	--	- --			--	---	-					-		-	- -	---	---	-- -	---	---	--	--		---	-
K203-18	----	---	----	-		-	----	--	- -					-	---	-	- -		- -	--	--	---	-	-	-- -	--	---	-

K203-19																											
K203-20																											
BLANK																											
CC95																											
CC85	8.01	.980	.930	.470	.050	7.49	.050	.158	.050	.030	.210	1.48	.170	-.270	-4.86	.190	.360	.070	47.1	.080	-.010	3.69	.120	.300	.140	.650	.190	6.28
K203-21																											
K203-22																											
BLANK																											
CC86																											
CC86	12.6	1.29	1.38	.410	.090	6.87	.060	.167	.030	-.050	.270	.960	.100	.630	7.24	.160	.440	.060	52.3	.050	.110	7.98	.210	.300	.120	.420	.060	6.45
IPK834wE																											
IPK834wI																											
IPK834wC																											
K133-01A																											
K133-01																											
K133-01C																											
K133-01F																											
K133-01S																											
K133-02																											
BLANK																											
CC87																											
CC87	9.93	.520	.470	.540	.090	6.81	.030	.172	.150	.030	.260	1.27	.320	.770	2.09	.170	.430	.030	.229	.050	.130	.514	.210	.370	-.210	.190	.140	6.30
K133-03																											
K133-04																											
K133-05																											
K119-01																											
K119-02																											
K119-03																											
K146-02																											
K146-03																											
K146-04																											
BLANK																											
CC88																											
CC88	1.54	.470	1.32	.420	.040	5.63	.010	96.8	.190	.020	.337	.963	.110	.630	-3.63	.410	.430	.180	.210	.210	.180	.642	.220	-.240	-.200	.650	.240	3.67
K149-05																											
K149-06																											
BLANK																											
CC89																											
CC89	12.6	1.26	.610	.360	.050	7.32	.020	97.5	.120	.052	.347	2.02	.900	1.03	7.78	.250	.450	.020	.187	.670	.330	.420	.210	.130	.520	.340	.190	3.12
K521-01A																											
K521-01																											
K521-01C																											
K521-01F																											
K521-01S																											
K521-02																											
BLANK																											
CC910																											
CC910	9.72	1.51	.470	.360	.070	4.90	.030	91.2	.230	-.050	.380	.533	.270	.530	7.37	.080	.480	.170	.184	.750	.020	.392	.040	.290	.190	.490	.110	3.70
BLANK																											
CC911																											
CC911	9.34	.930	1.12	.340	.110	3.68	.010	68.5	.180	.170	.240	1.12	.140	.070	-12.2	.220	.690	.150	.126	.020	.060	.222	.160	.130	.190	.370	.240	3.46
IPK837wE																											
IPK837wI																											
IPK837wC																											

TXCDBSF	--	----	----	-	--	-	--	-	---	-	---	-	--	---	-	- -	--	---										
<543-01A	--	----	-	--	----	---	-	----	----	----	----	----	-- -	- -	-	- -	--	---	---	---	---	---	---	---	---	---	---	---
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<543-01M	-	-		- -	- -		-			-	---	-	---	--	----	---	-	-	----	----	----	---		-	----	----	----	----	--
<543-01S			-	----	--		----	----	----	----	----	----	----	----	---		----	----	----	----	-		- -	---	---	----	----	----	--
BLANK		-	--				-			--		----	----	-	--			---	-		---	--	-	---	---	--	----	--	
CCV12	- -	---	---	----	- -	---	-- -	----	----	---	--			-	--	----			---	-	----	---	----	-	-	-	--	-
CCB12	11 2	1 40	250	.420	080	3.74	610	88.5	.730	070	120	1 60	230	610	8 69	.280	.780	.250	180	400	220	212	190	230	180	.430	290	3.52

QC limit of each parameter are listed in a table attached next to all the LCD check forms
* Out of QC Limit

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	ConFact	Check	Check Table	Fail Action
1	0	0	0	0	Unk	S0		ID8K020001			1	☒	unk	---
2	0	0	0	0	Unk	S1		ID8K020002			1	☒	unk	---
3	0	0	0	0	Unk	S2		ID8K020003			1	☒	unk	---
4	0	0	0	0	Unk	S3		ID8K020004			1	☒	unk	---
5	0	0	0	0	Unk	S4		ID8K020005			1	☒	unk	---
6	0	0	0	0	Unk	S5		ID8K020006			1	☒	unk	---
7	0	0	0	0	Unk	S6		ID8K020007			1	☒	unk	---
8	0	0	0	0	Unk	S7		ID8K020008			1	☒	unk	---
9	0	0	0	0	Unk	S8		ID8K020009			1	☒	unk	---
10	0	0	0	0	Unk	S9		ID8K020010			1	☒	unk	---
11	0	0	0	0	Unk	S10		ID8K020011			1	☒	unk	---
12	0	0	0	0	Unk	S11		ID8K020012			1	☒	unk	---
13	0	0	0	0	Unk	S12		ID8K020013			1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8K020014			1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8K020015			1	☒	3XIDL	None
16	3	2	3	1	QC	MRLK2301		ID8K020016			1	☒	MRL-EMAX	None
17	4	2	4	1	QC	MRLK2302		ID8K020017			1	☒	MRL-AFCEE	None
18	5	2	5	1	QC	ICSA1		ID8K020018			1	☒	ICSA-DoD	None
19	6	2	6	1	QC	ICSAB1		ID8K020019			1	☒	ICSAB	None
20	7	2	7	1	QC	CCV1		ID8K020020			1	☒	CCV	None
21	8	2	8	1	QC	CCB1		ID8K020021			1	☒	3XIDL	None
22	9	2	9	1	Unk	IPK036SQ		ID8K020022			1	☒	unk	---
23	10	2	10	1	Unk	IPK036SX		ID8K020023			1	☒	unk	---
24	11	2	11	1	Unk	IPK036SY		ID8K020024			1	☒	unk	---
25	12	2	12	1	Unk	K575-01A	5X	ID8K020025			1	☒	unk	---
26	13	2	1	2	Unk	K575-01T	5X	ID8K020026			1	☒	unk	---
27	14	2	2	2	Unk	K575-01J	25X	ID8K020027			1	☒	unk	---
28	15	2	3	2	Unk	K575-01M	5X	ID8K020028			1	☒	unk	---
29	16	2	4	2	Unk	K575-01S	5X	ID8K020029			1	☒	unk	---
30	17	2	5	2	Blank	Blank		ID8K020030			1	☐		---
31	18	2	6	2	QC	CCV2		ID8K020031			1	☒	CCV	None
32	19	2	7	2	QC	CCB2		ID8K020032			1	☒	3XIDL	None
33	25	2	1	3	Unk	K575-01A		ID8K020033			1	☒	unk	---
34	26	2	2	3	Unk	K575-01W		ID8K020034			1	☒	unk	---
35	27	2	3	3	Unk	K575-01J		ID8K020035			1	☒	unk	---
36	28	2	4	3	Unk	K575-01M		ID8K020036			1	☒	unk	---
37	29	2	5	3	Unk	K575-01S		ID8K020037			1	☒	unk	---
38	22	2	10	2	Blank	Blank		ID8K020038			1	☐		---
39	23	2	11	2	QC	CCV3		ID8K020039			1	☒	CCV	None

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
40	24	2	12	2	QC	CCB3		ID8K020040			1	☒	3XIDL	None
41	20	2	8	2	Unk	K201-02W		ID8K020041			1	☒	unk	---
42	21	2	9	2	Unk	K201-03W		ID8K020042			1	☒	unk	---
43	30	2	6	3	Blank	Blank		ID8K020043			1	☐		---
44	31	2	7	3	QC	CCV4		ID8K020044			1	☒	CCV	None
45	32	2	8	3	QC	CCB4		ID8K020045			1	☒	3XIDL	None
46	33	2	9	3	QC	IPK035SB		ID8K020046			1	☒	1/2LOQ	None
47	34	2	10	3	QC	IPK035SL		ID8K020047			1	☒	LCS	None
48	35	2	11	3	QC	IPK035SC		ID8K020048			1	☒	LCS	None
49	36	2	12	3	Unk	K203-17A		ID8K020049			1	☒	unk	---
50	37	2	1	4	Unk	K203-17		ID8K020050			1	☒	unk	---
51	38	2	2	4	Unk	K203-17J		ID8K020051			1	☒	unk	---
52	39	2	3	4	Unk	K203-18		ID8K020052			1	☒	unk	---
53	40	2	4	4	Unk	K203-19		ID8K020053			1	☒	unk	---
54	41	2	5	4	Unk	K203-20		ID8K020054			1	☒	unk	---
55	42	2	6	4	Blank	Blank		ID8K020055			1	☐		---
56	43	2	7	4	QC	CCV5		ID8K020056			1	☒	CCV	None
57	44	2	8	4	QC	CCB5		ID8K020057			1	☒	3XIDL	None
58	45	2	9	4	Unk	K203-21		ID8K020058			1	☒	unk	---
59	46	2	10	4	Unk	K203-22		ID8K020059			1	☒	unk	---
60	47	2	11	4	Blank	Blank		ID8K020060			1	☐		---
61	48	2	12	4	QC	CCV6		ID8K020061			1	☒	CCV	None
62	49	2	1	5	QC	CCB6		ID8K020062			1	☒	3XIDL	None
63	50	2	2	5	QC	IPK034WB		ID8K020063			1	☒	1/2LOQ	None
64	51	2	3	5	QC	IPK034WL		ID8K020064			1	☒	LCS	None
65	52	2	4	5	QC	IPK034WC		ID8K020065			1	☒	LCS	None
66	53	2	5	5	Unk	K133-01A	DISSOLVED	ID8K020066			1	☒	unk	---
67	54	2	6	5	Unk	K133-01	DISSOLVED	ID8K020067			1	☒	unk	---
68	55	2	7	5	Unk	K133-01J	DISSOLVED	ID8K020068			1	☒	unk	---
69	56	2	8	5	Unk	K133-01M	DISSOLVED	ID8K020069			1	☒	unk	---
70	57	2	9	5	Unk	K133-01S	DISSOLVED	ID8K020070			1	☒	unk	---
71	58	2	10	5	Unk	K133-02	DISSOLVED	ID8K020071			1	☒	unk	---
72	59	2	11	5	Blank	Blank		ID8K020072			1	☐		---
73	60	2	12	5	QC	CCV7		ID8K020073			1	☒	CCV	None
74	61	3	1	1	QC	CCB7		ID8K020074			1	☒	3XIDL	None
75	62	3	2	1	Unk	K133-03	DISSOLVED	ID8K020075			1	☒	unk	---
76	63	3	3	1	Unk	K133-04	DISSOLVED	ID8K020076			1	☒	unk	---
77	64	3	4	1	Unk	K133-05	DISSOLVED	ID8K020077			1	☒	unk	---
78	65	3	5	1	Unk	K119-01	DISSOLVED	ID8K020078			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
79	66	3	6	1	Unk	K119-02	DISSOLVED	ID8K020079			1	☒	unk	---
80	67	3	7	1	Unk	K119-03	DISSOLVED	ID8K020080			1	☒	unk	---
81	68	3	8	1	Unk	K146-02	DISSOLVED	ID8K020081			1	☒	unk	---
82	69	3	9	1	Unk	K146-03	DISSOLVED	ID8K020082			1	☒	unk	---
83	70	3	10	1	Unk	K146-04	DISSOLVED	ID8K020083			1	☒	unk	---
84	71	3	11	1	Blank	Blank		ID8K020084			1	☐		---
85	72	3	12	1	QC	CCV8		ID8K020085			1	☒	CCV	None
86	73	3	1	2	QC	CCB8		ID8K020086			1	☒	3XIDL	None
87	74	3	2	2	Unk	K146-05	DISSOLVED	ID8K020087			1	☒	unk	---
88	75	3	3	2	Unk	K146-06	DISSOLVED	ID8K020088			1	☒	unk	---
89	76	3	4	2	Blank	Blank		ID8K020089			1	☐		---
90	77	3	5	2	QC	CCV9		ID8K020090			1	☒	CCV	None
91	78	3	6	2	QC	CCB9		ID8K020091			1	☒	3XIDL	None
92	79	3	7	2	QC	TXK007SB	TCLP	ID8K020092			1	☒	1/2LOQ	None
93	80	3	8	2	Unk	K521-01A	TCLP	ID8K020093			1	☒	unk	---
94	81	3	9	2	Unk	K521-01	TCLP	ID8K020094			1	☒	unk	---
95	82	3	10	2	Unk	K521-01J	TCLP	ID8K020095			1	☒	unk	---
96	83	3	11	2	Unk	K521-01M	TCLP	ID8K020096			1	☒	unk	---
97	84	3	12	2	Unk	K521-01S	TCLP	ID8K020097			1	☒	unk	---
98	85	3	1	3	Unk	K520-03	TCLP	ID8K020098			1	☒	unk	---
99	86	3	2	3	Blank	Blank		ID8K020099			1	☐		---
100	87	3	3	3	QC	CCV10		ID8K020100			1	☒	CCV	None
101	88	3	4	3	QC	CCB10		ID8K020101			1	☒	3XIDL	None
102	89	3	5	3	Blank	Blank		ID8K020102			1	☐		---
103	90	3	6	3	QC	CCV11		ID8K020103			1	☒	CCV	None
104	91	3	7	3	QC	CCB11		ID8K020104			1	☒	3XIDL	None
105	92	3	8	3	QC	IPK037WB		ID8K020105			1	☒	1/2LOQ	None
106	93	3	9	3	QC	IPK037WL		ID8K020106			1	☒	LCS	None
107	94	3	10	3	QC	IPK037WC		ID8K020107			1	☒	LCS	None
108	95	3	11	3	QC	TXK008SB	TCLP	ID8K020108			1	☒	1/2LOQ	None
109	96	3	12	3	Unk	K543-01A	TCLP	ID8K020109			1	☒	unk	---
110	97	3	1	4	Unk	K543-01	TCLP	ID8K020110			1	☒	unk	---
111	98	3	2	4	Unk	K543-01J	TCLP	ID8K020111			1	☒	unk	---
112	99	3	3	4	Unk	K543-01M	TCLP	ID8K020112			1	☒	unk	---
113	100	3	4	4	Unk	K543-01S	TCLP	ID8K020113			1	☒	unk	---
114	101	3	5	4	Blank	Blank		ID8K020114			1	☐		---
115	102	3	6	4	QC	CCV12		ID8K020115			1	☒	CCV	None
116	103	3	7	4	QC	CCB12		ID8K020116			1	☒	3XIDL	None

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ID8K020 Section 1 of 3

INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID
1	Blank	.00115	.00002	-.00001	.00023	.00007	.00044	-.00003	.00055	-.00004	-.00096	Blank
2	S20					.97416		.11980				S20
3	S21					9.5846		1.1513				S21
4	S22				.56884						.15986	S22
5	S23				5.5784						1.5980	S23
6	S24						.09734					S24
7	S25						1.0039					S25
8	S26	.21700							.85491	.13199		S26
9	S27	8.2903							8.1923	1.3230		S27
10	S28		.00517									S28
11	S29		.05004									S29
12	S30			.00121								S30
13	S31			.00483								S31
14	ICV	103.23	1.5006	1.0390	2.0612	1.5320	2.4359	2.0052	75.997	2.4512	.96720	ICV
15	ICB	.00363	.00094	-.00040	.00011	-.00001	.00470	-.00007	-.00896	.00000	-.00009	ICB
16	MRLK2301	.21505	.09834	.00993	.01055	.01049	.09719	.01064	1.0269	.01058	.00973	MRLK2301
17	MRLK2302	.20364	.04865	.01004	.00505	.00412	.09656	.00521	.50327	.01004	.00968	MRLK2302
18	ICSA1	391.69	-.00101	-.00096	.00075	.00003	-.05970	.00414	478.89	.00052	-.00076	ICSA1
19	ICSAB1	393.08	1.0181	1.0606	.51281	.51123	.43755	.94970	471.23	.46989	.47750	ICSAB1
20	CCV1	103.62	1.5084	1.0448	2.0546	1.5274	2.4675	2.0081	76.529	2.4653	.97550	CCV1
21	CCB1	.01082	.00020	-.00099	.00044	.00005	.00453	.00003	.15308*	.00007	-.00003	CCB1
22	IPK036SQ	.14392*	.00097	-.00157	-.00002	.00000	.00171	-.00018	-.00995	.00026	-.00017	IPK036SQ
23	IPK036SX	5.0387	2.4672	.51662	.51893	.52267	.47220	.51504	51.237	.50725	.50819	IPK036SX
24	IPK036SY	5.1148	2.4887	.52019	.52603	.53295	.47958	.52256	52.252	.51858	.51667	IPK036SY
25	K575-01A	54.817	7.5442	.58599	4.4494	.56409	5.6303	.53952	308.60	.69279	.73739	K575-01A
26	K575-01T	47.959	4.9167	.01741	3.8682	.00356	5.0115	.00863	258.68	.16432	.20517	K575-01T
27	K575-01J	8.6541	.91925	.00258	.71959	.00069	.93932	.00162	50.202	.03203	.03827	K575-01J
28	K575-01M	59.694	5.1932	.12962	2.5902	.11860	5.0629	.11330	305.43	.27556	.25845	K575-01M
29	K575-01S	52.326	5.4038	.11851	1.9453	.11503	4.1565	.11323	273.22	.24451	.33689	K575-01S
30	Blank	.00589	.00302	.00051	.00017	-.00003	.01643	-.00008	.04128	-.00008	-.00018	Blank
31	CCV2	103.39	1.5133	1.0556	2.0758	1.5350	2.4887	2.0312	76.373	2.4742	.97846	CCV2
32	CCB2	.00903	.00153	-.00051	.00034	.00003	.01100*	.00000	.14565*	.00004	-.00005	CCB2
33	K575-01A	222.44	25.854*	.66781	18.755	.55340	23.138*	.52595	1106.3*	1.2124	1.4679	K575-01A
34	K575-01W	221.75	23.665*	.08307	18.836	.01607	23.321*	.04004	1100.3*	.74344	.97688	K575-01W
35	K575-01J	47.270	4.8285	.01724	3.9313	.00343	5.0274	.00849	252.65	.16170	.20500	K575-01J
36	K575-01M	267.52	24.602*	.62318	12.038	.52606	22.887*	.47205	1251.3*	1.1934	1.1788	K575-01M
37	K575-01S	235.00	25.414*	.56771	9.1956	.51261	18.812*	.47460	1124.2*	1.0698	1.5418	K575-01S
38	Blank	.01646	.01123	-.00072	.00076	-.00001	.08119	-.00005	.12914	-.00001	-.00010	Blank
39	CCV3	104.34	1.5331	1.0574	2.1130	1.5382	2.5281	2.0114	75.400	2.4312	.98508	CCV3
40	CCB3	.00989	.00325	-.00023	.00042	.00005	.04197*	.00000	.16766*	.00004	-.00015	CCB3
41	K201-02W	103.13	.00782	.07241	1.0441	.01828	.00616	.05714	31.953	.14562	.10684	K201-02W
42	K201-03W	118.13	.00404	.08190	1.1882	.01711	-.01302	.06169	27.322	.15469	.09331	K201-03W
43	Blank	.00806	.00141	.00069	.00012	-.00004	.01911	-.00005	.02434	-.00004	-.00004	Blank
44	CCV4	103.12	1.5191	1.0443	2.0950	1.5294	2.4783	1.9762	75.545	2.4189	.98469	CCV4
45	CCB4	.00834	.00123	-.00154	.00046	.00009	.01837*	.00005	.17339*	.00010	-.00006	CCB4
46	IPK035SB	.00519	.00248	-.00150	-.00004	-.00003	.01521	-.00015	-.01467	.00036	-.00015	IPK035SB
47	IPK035SL	5.1594	2.5041	.52475	.53795	.53159	.49170	.51745	51.687	.51327	.52737	IPK035SL
48	IPK035SC	5.1150	2.5050	.52394	.53576	.53095	.48990	.51652	51.373	.51030	.52510	IPK035SC
49	K203-17A	174.37	2.4617	.66715	1.7782	.55432	.39600	.51537	73.721	.77538	.59198	K203-17A
50	K203-17	176.34	.00037	.13194	1.2961	.00980	-.05750*	.00512	25.454	.28138	.05548	K203-17
51	K203-17J	37.300	.00030	.02833	.26103	.00200	-.01275	.00027	5.3160	.05742	.01097	K203-17J
52	K203-18	111.91	.00063	.06452	1.5841	.00853	-.03360*	.03333	22.754	.22731	.10854	K203-18

53	K203-19	96.766	-.00024	.10124	1.5318	.00996	-.04575*	.00515	14.267	.24145	.21109	K203-19
54	K203-20	102.33	-.00007	.06097	1.4079	.00748	-.02636*	.01835	18.831	.19715	.08904	K203-20
55	Blank	.00890	.00046	-.00018	.00010	-.00001	.00340	-.00003	.02540	-.00006	-.00007	Blank
56	CCV5	104.16	1.5056	1.0358	2.1222	1.5382	2.4642	1.9728	75.146	2.4221	.98579	CCV5
57	CCB5	.00801	.00098	-.00093	.00047	.00005	.00749	.00005	.15782*	-.00005	.00003	CCB5
58	K203-21	73.820	.00014	.05900	.88193	.00583	-.03193*	.00595	7.9567	.18904	.07990	K203-21
59	K203-22	82.873	.00071	.08588	1.0887	.00873	-.03564*	.00660	19.817	.21859	.11354	K203-22
60	Blank	.00737	.00019	.00026	.00011	-.00003	.00299	-.00008	.02303	-.00013	-.00011	Blank
61	CCV6	103.93	1.4926	1.0303	2.1184	1.5298	2.4525	1.9542	74.789	2.4119	.98833	CCV6
62	CCB6	.01263	.00129	.00138	.00041	.00009	.00687	.00006	.16678*	-.00003	-.00005	CCB6
63	IPK034WB	.00560	.00044	.00114	.00014	-.00004	.00409	-.00006	-.01672	.00004	-.00008	IPK034WB
64	IPK034WL	5.4397	2.5335	.53489	.53877	.53023	.51226	.51533	49.575	.50218	.51311	IPK034WL
65	IPK034WC	5.4196	2.5786	.53161	.53747	.52764	.52267	.51430	50.118	.49811	.50917	IPK034WC
66	K133-01A	7.4399	3.1296	.70518	.73313	.52954	1.6791	.49424	1282.4*	.50511	.53681	K133-01A
67	K133-01	.04242	-.00102	.00016	.13439	-.00005	1.1203	-.00071	1266.8*	.00027	-.00217	K133-01
68	K133-01J	.02437	.00013	-.00162	.02742	.00002	.22113	-.00021	304.91	.00052	-.00060	K133-01J
69	K133-01M	7.0268	3.1123	.66174	.69464	.49340	1.7065	.46237	1307.1*	.47423	.50173	K133-01M
70	K133-01S	7.1086	3.1350	.66252	.70512	.49701	1.7323	.46319	1323.8*	.47577	.50462	K133-01S
71	K133-02	.04326	.00027	-.00141	.06348	.00001	.26267	-.00024	397.79	.00045	-.00094	K133-02
72	Blank	.00454	.00071	-.00026	.00002	-.00003	.00385	-.00004	.05951	-.00011	.00002	Blank
73	CCV7	103.70	1.4939	1.0292	2.1334	1.5269	2.4564	1.9514	74.349	2.4054	.99010	CCV7
74	CCB7	.00993	.00052	-.00047	.00054	.00009	.00681	.00003	.17250*	.00015	-.00003	CCB7
75	K133-03	.05409	-.00318	.01675	.47556	-.00012	1.2084	-.00098	1637.9*	.00000	-.00196	K133-03
76	K133-04	.03221	-.00144	-.00031	.10086	-.00006	.42869	-.00050	912.52*	.00018	-.00141	K133-04
77	K133-05	.02270	.00058	-.00111	.15765	.00000	.22191	-.00024	460.22	.00035	-.00088	K133-05
78	K119-01	.01928	-.00023	.00196	.05119	.00001	.08829	-.00012	76.171	.00051	-.00023	K119-01
79	K119-02	.02809	-.00097	.01762	.08773	-.00008	.12204	-.00022	437.79	.00042	-.00061	K119-02
80	K119-03	.03765	.00005	.00414	.16433	.00001	.12122	-.00016	233.05	.00047	-.00082	K119-03
81	K146-02	.03414	-.00263	-.00015	.18317	-.00004	1.9593	-.00049	1181.8*	.00010	-.00179	K146-02
82	K146-03	.03606	-.00103	.00597	.33025	-.00003	.16456	-.00032	620.75	.00050	-.00108	K146-03
83	K146-04	.03551	-.00121	.00252	.21422	.00002	.14050	-.00019	376.52	.00058	-.00083	K146-04
84	Blank	.00559	.00066	.00005	.00013	-.00001	.00209	-.00001	.11103	-.00004	-.00007	Blank
85	CCV8	102.89	1.4797	1.0265	2.1334	1.5082	2.4226	1.9434	72.620	2.3765	.98011	CCV8
86	CCB8	.00954	.00047	-.00132	.00042	.00004	.00563	.00001	.09684*	.00019	-.00002	CCB8
87	K146-05	.03465	-.00087	.01150	.37726	-.00005	.14774	-.00015	573.82	.00039	-.00103	K146-05
88	K146-06	.03821	-.00062	.00230	.21683	-.00002	.14239	-.00014	377.21	.00062	-.00076	K146-06
89	Blank	.00724	.00033	.00092	.00004	-.00002	.00179	-.00004	.06580	.00006	-.00012	Blank
90	CCV9	103.54	1.4658	1.0169	2.1329	1.5042	2.4298	1.9374	72.685	2.3886	.97871	CCV9
91	CCB9	.01155	.00118	.00051	.00036	.00005	.00532	.00002	.09754*	.00012	.00005	CCB9
92	TXK007SB	.03586	.00067	.00035	.05695*	.00001	.07310*	-.00013	.01292	.00017	-.00006	TXK007SB
93	K521-01A	5.9864	2.6192	.59532	.61312	.55704	.62026	.53459	183.30	.52367	.54951	K521-01A
94	K521-01	.02515	.00026	-.00018	.02598	.00002	.10132	.00019	143.19	.00053	.00147	K521-01
95	K521-01J	.01504	.00124	.00049	.00537	.00000	.02198	.00000	30.278	.00030	.00021	K521-01J
96	K521-01M	5.7284	2.6815	.57544	.58163	.52813	.63490	.51418	190.45	.49480	.52019	K521-01M
97	K521-01S	5.6589	2.6383	.56591	.57517	.52444	.62229	.50733	183.03	.48947	.51581	K521-01S
98	K520-03	.09754	.00837	.21086	.06107	.00004	.10898	.00038	20.597	.06416	.00688	K520-03
99	Blank	.00562	.00108	.00019	.00010	.00002	.00145	-.00002	.04546	.00003	-.00009	Blank
100	CCV10	103.24	1.4855	1.0288	2.1344	1.5100	2.4258	1.9571	72.678	2.3840	.97902	CCV10
101	CCB10	.00972	.00151	.00047	.00036	.00007	.00490	.00003	.09119*	.00023	-.00005	CCB10
102	Blank	.00196	.00035	.00012	-.00004	-.00004	-.00018	-.00005	.05083	.00013	-.00011	Blank
103	CCV11	103.77	1.4714	1.0054	2.1463	1.5031	2.4088	1.8968	72.236	2.3483	.97619	CCV11
104	CCB11	.00934	.00093	-.00112	.00034	.00011	.00368	.00001	.08845*	.00018	-.00017	CCB11
105	IPK037WB	.00654	.00020	.00093	.00001	-.00001	.00130	-.00005	-.01525	.00008	-.00010	IPK037WB
106	IPK037WL	5.4606	2.5048	.52242	.55348	.52931	.50602	.50323	48.867	.49401	.51005	IPK037WL
107	IPK037WC	5.5119	2.5262	.52567	.56266	.53787	.51161	.50826	49.124	.49767	.51076	IPK037WC

108	TXK008SB	.05069	.00103	-.00011	.00083	-.00001	.04257	-.00009	-.00954	.00023	-.00011	TXK008SB
109	K543-01A	6.0227	2.5869	.59156	1.0243	.55609	.63972	.52712	207.70	.52318	.54584	K543-01A
110	K543-01	.02501	.00062	.00229	.44269	.00001	.12279	-.00008	167.42	.00254	-.00002	K543-01
111	K543-01J	.01221	.00071	.00049	.09141	-.00003	.02449	-.00002	35.276	.00073	.00003	K543-01J
112	K543-01M	5.7843	2.6407	.56449	1.0177	.53094	.65680	.50377	213.93	.49985	.52023	K543-01M
113	K543-01S	5.7242	2.6250	.56210	.97518	.52437	.64618	.50091	202.85	.49898	.51956	K543-01S
114	Blank	.00404	.00109	.00051	.00018	.00001	.00097	.00001	.05382	.00012	-.00007	Blank
115	CCV12	103.56	1.4631	1.0093	2.1587	1.5082	2.4266	1.9177	72.335	2.3825	.97674	CCV12
116	CCB12	.01116	.00140	.00035	.00042	.00008	.00374	.00001	.08846*	.00023	-.00007	CCB12
INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID

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ID8K020 Section 2 of 3

INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID
1	Blank	.00108	.00001	.00009	-.00019	.00002	.00004	-.00006	-.00060	-.00030	.0000I	Blank
2	S20			.20556			.09605					S20
3	S21			2.0570			.96075					S21
4	S22	.27945	.04811									S22
5	S23	2.6915	1.8656									S23
6	S24							.76817				S24
7	S25							7.6522				S25
8	S26								.75595	.41573		S26
9	S27								7.5181	4.2088		S27
10	S28					.02236						S28
11	S29					.22033						S29
12	S30				.03398						.00139	S30
13	S31				.16919						.00556	S31
14	ICV	2.5704	25.052	2.4211	.52317	58.311	2.4109	2.5181	2.4628	61.223	1.0431	ICV
15	ICB	.00018	.00247	.00020	.00049	.00180	.00011	.00028	.00017	.10656	-.00019	ICB
16	MRLK2301	.01083	.21774	.01038	.01033	.98703	.01058	.01042	.01043	.99840	.00931	MRLK2301
17	MRLK2302	.01061	.10469	.00293	.10222	.19121	.00502	.00977	.01011	.99127	.01009	MRLK2302
18	ICSA1	.00150	190.29	.00481	.01836	193.48	.00112	-.00131	.00105	.08058	.00086	ICSA1
19	ICSAB1	.54547	192.04	.95309	1.1979	193.20	.47385	1.0162	.97195	80.564	1.0434	ICSAB1
20	CCV1	2.6250	25.307	2.4341	.51998	58.216	2.4018	2.5329	2.4848	62.084	1.0488	CCV1
21	CCB1	.00033	.00032	-.00010	.00016	.00304	.00010	.00038	.00012	.15687	-.00001	CCB1
22	IPK036SQ	.00020	.00407	.00005	.00016	-.00139	.00000	.00032	-.00020	.12761	.00080	IPK036SQ
23	IPK036SX	.52189	5.1470	.50014	.00178*	48.975	.49555	.54420	.52044	50.788	.50744	IPK036SX
24	IPK036SY	.53177	5.2557	.50627	.00188*	50.069	.50424	.55239	.53062	51.596	.51264	IPK036SY
25	K575-01A	.69842	25.815	1.1733	.05870	69.400	1.7943	.53480	.66338	57.895	.56650	K575-01A
26	K575-01T	.11054	20.364	.63994	.05453	19.865	1.2705	.00873	.18154	4.6066	.00084	K575-01T
27	K575-01J	.02056	4.0035	.12223	.00888	3.8091	.24387	.00152	.03407	.87583	.00047	K575-01J
28	K575-01M	.25017	26.552	.63513	.06249	36.775	1.8473	.12394	.37498	17.661	.10374	K575-01M
29	K575-01S	.21524	22.476	.87169	.05588	32.378	1.5752	.11624	.28378	16.549	.09768	K575-01S
30	Blank	-.00001	-.00318	-.00038	.00033	.00121	-.00001	.00014	-.00004	.05244	-.00013	Blank
31	CCV2	2.6343	25.267	2.4414	.52799	58.390	2.4301	2.5313	2.4880	62.632	1.0585	CCV2
32	CCB2	.00020	.00120	.00018	-.00001	-.01072	.00001	.00018	.00004	.09762	.00091	CCB2
33	K575-01A	1.1595	92.390	3.3465	.28067	137.28	6.0793	.59042	1.2935	78.336	.59854	K575-01A
34	K575-01W	.55325	91.023	2.9340	.28261	91.573	5.7189	.05003	.85467	23.509	.00876	K575-01W
35	K575-01J	.11019	19.975	.63602	.05494	19.432	1.2489	.00868	.18101	4.6569	.00121	K575-01J
36	K575-01M	1.2365	113.26	2.7836	.32194	166.93	8.1679	.59770	1.6836	88.349	.50102	K575-01M
37	K575-01S	1.0561	96.886	3.8449	.28528	148.87	7.0477	.56658	1.2861	82.218	.47221	K575-01S
38	Blank	.00006	.00761	-.00022	.00002	.01328	.00047	.00019	-.00010	.18553	-.00011	Blank
39	CCV3	2.6502	24.837	2.4490	.54093	58.132	2.4523	2.5593	2.5025	63.873	1.0652	CCV3
40	CCB3	.00024	.00071	-.00032	.00056	.01083	.00014	.00037	.00017	.18607	-.00016	CCB3
41	K201-02W	.09126	138.93	.54580	.04734	5.4654	3.4244	.00396	.35091	8.9659	.00626	K201-02W
42	K201-03W	.11030	163.78	.42098	.05666	6.5112	3.1482	.00399	.33599	9.7852	.00787	K201-03W
43	Blank	-.00002	.00561	-.00040	.00018	-.00075	.00030	.00011	.00007	.02265	-.00024	Blank
44	CCV4	2.6331	24.899	2.4485	.53524	57.991	2.4310	2.5661	2.4997	63.494	1.0537	CCV4
45	CCB4	.00027	.00287	-.00028	-.00003	-.00960	.00029	.00039	.00017	.09706	.00072	CCB4
46	IPK035SB	.00021	.00103	-.00008	.00009	.01163	.00008	.00038	.00000	.07469	.00143	IPK035SB
47	IPK035SL	.53757	5.2068	.51546	.00162*	49.665	.50996	.56287	.53948	52.733	.51911	IPK035SL
48	IPK035SC	.53537	5.1911	.50953	.00142*	49.613	.50808	.56119	.53659	52.654	.51653	IPK035SC
49	K203-17A	.65843	302.51	.68165	.09419	60.484	2.1584	.55433	.58245	63.129	.54325	K203-17A
50	K203-17	.08932	320.49	.17242	.09446	12.959	1.7612	.01348	.10323	11.267	.01174	K203-17
51	K203-17J	.01800	68.397	.03572	.01870	2.6762	.36210	.00257	.02069	2.2041	.00231	K203-17J
52	K203-18	.10672	165.16	.76134	.05708	8.6185	6.0649	.00541	.12282	9.4057	.00306	K203-18

53	K203-19	.08840	200.95	.34584	.04976	6.5277	9.0954	.00971	.13920	7.5680	.00551	K203-19
54	K203-20	.08898	140.73	.36352	.05065	7.3338	5.0731	.00586	.09922	9.0238	.00523	K203-20
55	Blank	-.00010	.00708	.00013	.00020	-.00453	.00042	.00006	-.00003	-.01353	.00058	Blank
56	CCV5	2.6323	24.792	2.4503	.54455	58.254	2.4537	2.5647	2.4983	63.808	1.0407	CCV5
57	CCB5	.00021	.00198	.00017	-.00023	-.00486	.00019	.00036	.00007	.04713	.00008	CCB5
58	K203-21	.06138	140.46	.24829	.03605	5.0067	4.2715	.00638	.07506	6.6341	.00375	K203-21
59	K203-22	.08865	159.60	.36607	.04115	6.2017	5.2640	.00785	.11383	7.9026	.00459	K203-22
60	Blank	-.00005	.00572	.00011	-.00057	-.00284	.00040	.00007	-.00009	-.00567	-.00004	Blank
61	CCV6	2.6391	24.638	2.4481	.54385	57.791	2.4387	2.5693	2.5061	63.689	1.0339	CCV6
62	CCB6	.00027	.00096	-.00010	.00063	.00724	.00016	.00044	.00006	.05234	-.00005	CCB6
63	IPK034WB	.00029	.00144	-.00048	.00039	-.02202	.00007	.00009	.00011	.01214	.00096	IPK034WB
64	IPK034WL	.54678	5.2049	.51243	.00171*	47.670	.50228	.53348	.52656	52.143	.53433	IPK034WL
65	IPK034WC	.54217	5.1139	.50773	.00216*	48.621	.50183	.54171	.52116	52.936	.52887	IPK034WC
66	K133-01A	.72000	5.2687	.52720	.13226	542.44	3.5109	.56104	.47776	105.88	.72681	K133-01A
67	K133-01	.00390	.25938	.00286	.13303	501.98	3.0653	-.00183	.00025	39.854	.00485	K133-01
68	K133-01J	.00171	.03939	-.00008	.02467	107.31	.67897	-.00035	-.00015	7.4524	-.00021	K133-01J
69	K133-01M	.67242	4.9888	.49105	.13532	549.27	3.5206	.56805	.50466	106.89	.56030	K133-01M
70	K133-01S	.68217	5.0239	.49457	.13985	554.58	3.5559	.57209	.50737	108.71	.56150	K133-01S
71	K133-02	.00320	.42054	.00198	.03767	101.85	.61788	.00191	.00022	12.054	.00109	K133-02
72	Blank	-.00004	-.00103	-.00001	.00086	.00569	.00008	.00004	-.00004	.27479	.00037	Blank
73	CCV7	2.6424	24.535	2.4510	.54807	57.413	2.4370	2.5796	2.5104	64.776	1.0392	CCV7
74	CCB7	.00026	.00127	-.00032	.00077	.00209	.00017	.00043	.00003	.22872*	-.00005	CCB7
75	K133-03	.00938	.22700	.00451	.18372	663.45	4.5875	-.00332	.00192	42.837	.00686	K133-03
76	K133-04	.00174	2.7705	.00260	.08212	263.93	1.8535	-.00052	.00053	23.565	.00228	K133-04
77	K133-05	.00222	3.4476	.00337	.04453	114.25	.93330	-.00029	.00067	12.566	.00053	K133-05
78	K119-01	.00091	.41056	.00146	.01018	13.573	.10717	.00747	.00058	3.7747	.00050	K119-01
79	K119-02	.00120	3.6366	.00339	.03277	54.533	1.0796	-.00054	.00181	7.3882	-.00042	K119-02
80	K119-03	.00305	.77418	.00271	.01718	40.507	.32390	.00353	.00028	6.6003	-.00058	K119-03
81	K146-02	.00235	4.4186	.00337	.14576	695.09	4.3012	-.00120	.00163	49.326	.00274	K146-02
82	K146-03	.00171	1.8306	.00237	.04854	124.68	.53265	.00113	.00083	19.011	.00156	K146-03
83	K146-04	.00183	3.6050	.00264	.03749	81.882	.71621	.00087	.00233	12.745	-.00143	K146-04
84	Blank	-.00003	-.00319	-.00016	.00030	.00648	.00023	.00016	-.00017	.24061	-.00050	Blank
85	CCV8	2.6121	24.224	2.4261	.54881	56.613	2.4062	2.5511	2.4794	64.509	1.0292	CCV8
86	CCB8	.00033	.00088	-.00011	.00060	-.00363	.00041	.00043	.00018	.20976	.00021	CCB8
87	K146-05	.00180	8.8088	.00267	.04815	112.93	.41949	.00037	.00044	15.520	.00230	K146-05
88	K146-06	.00525	3.6464	.00231	.03759	82.677	.72211	.00096	.00029	12.742	.00039	K146-06
89	Blank	.00014	-.00147	-.00051	.00066	.01026	.00015	.00016	.00006	.16489	-.00020	Blank
90	CCV9	2.6359	24.266	2.4158	.54850	56.345	2.3993	2.5416	2.4812	64.966	1.0264	CCV9
91	CCB9	.00044	-.00283	.00038	.00103	.00778	.00025	.00045	.00002	.18733	.00067	CCB9
92	TXK007SB	.00111	.00250	.00000	-.00038	.00649	.00014	.00051	-.00006	.30867	.00216	TXK007SB
93	K521-01A	.61593	5.4887	.53793	.00804	63.137	.88892	.54539	.51784	59.235	.60942	K521-01A
94	K521-01	.02141	.25415	.00107	.00642	15.789	.36573	.00131	.02508	.82009	.00188	K521-01
95	K521-01J	.00487	.05384	.00012	.00114	3.3648	.07844	.00034	.00510	.26541	-.00031	K521-01J
96	K521-01M	.58130	5.0181	.50942	.00892	64.336	.87087	.55938	.55246	59.531	.58720	K521-01M
97	K521-01S	.57253	4.9707	.50631	.00841	62.906	.84671	.55410	.54657	58.318	.57705	K521-01S
98	K520-03	.08345	.13061	.00073	.00196	3.5989	.35765	-.00001	.00754	4.2192	.00100	K520-03
99	Blank	-.00008	-.00012	-.00002	.00102	-.00426	.00001	.00012	-.00003	.15957	.00023	Blank
100	CCV10	2.6088	24.259	2.4268	.55086*	56.777	2.4072	2.5449	2.4782	64.650	1.0354	CCV10
101	CCB10	.00008	.00053	-.00027	.00053	.00737	.00008	.00048	.00017	.18373	.00025	CCB10
102	Blank	-.00004	-.00210	-.00023	-.00076	.00373	-.00010	.00004	.00005	.02514	.00031	Blank
103	CCV11	2.5916	24.065	2.4171	.56243*	56.093	2.3658	2.5558	2.4735	65.534	1.0149	CCV11
104	CCB11	.00019	.00112	.00014	.00007	-.01224	.00022	.00069	.00015	.12650	.00002	CCB11
105	IPK037WB	.00022	-.00155	-.00003	.00135	.00018	-.00012	.00017	.00004	.07447	-.00013	IPK037WB
106	IPK037WL	.53725	5.0600	.50648	.00180*	47.803	.49771	.53802	.52093	54.706	.52026	IPK037WL
107	IPK037WC	.53810	5.0555	.50871	.00178*	48.730	.50708	.53931	.52274	55.178	.52342	IPK037WC

108	TXK008SB	.00086	.00157	-.00041	-.00006	.00844	-.00012	.00063	-.00005	.26656	.00182	TXK008SB
109	K543-01A	.59770	5.2214	.53679	.01022	50.167	.54207	.54476	.49454	63.064	.59930	K543-01A
110	K543-01	.00527	.00727	.00032	.00767	2.9332	.01844	.00100	.00129	3.5968	.00152	K543-01
111	K543-01J	.00135	.00086	.00007	.00105	.62298	.00414	.00021	.00018	.73195	.00023	K543-01J
112	K543-01M	.56796	5.0056	.51013	.00946	50.809	.51592	.55887	.53075	63.819	.57183	K543-01M
113	K543-01S	.56829	5.0322	.50840	.00922	49.795	.50618	.55735	.53091	63.083	.57195	K543-01S
114	Blank	-.00008	-.00097	-.00013	.00056	.00401	-.00005	.00030	-.00006	.18368	-.00019	Blank
115	CCV12	2.6285	24.203	2.4106	.56306*	56.390	2.3880	2.5347	2.4747	66.204*	1.0215	CCV12
116	CCB12	.00012	-.00160	.00023	.00061	.00869	.00028	.00078*	.00025	.17956	.00040	CCB12
INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID

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INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID
1	Blank	.00008	.00079	-.00011	-.00002	.00014	.00003	-.00016	.00117	Blank
2	S20									S20
3	S21									S21
4	S22							.12298		S22
5	S23							1.2265		S23
6	S24		1.3193							S24
7	S25		7.6101							S25
8	S26									S26
9	S27									S27
10	S28				.00568					S28
11	S29				.05587					S29
12	S30	.04188		.14662		.02596	.01647		.61813	S30
13	S31	.20598		.71346		.12272	.08792		5.9578	S31
14	ICV	.50937	64.106	.48985	2.2943	.50286	.50393	1.4964	2.5847	ICV
15	ICB	.00010	.01358	.00008	-.00023	-.00012	.00069	.00012	-.00078	ICB
16	MRLK2301	.01034	1.0343	.01036	.01095	-.00017	.01029	.01051	.02079	MRLK2301
17	MRLK2302	.01004	.51560	.00996	.01089	.00920	.01051	.01018	.00965	MRLK2302
18	ICSA1	.00027	.04367	.00084	-.00368	.00172	.00551	.00060	.00167	ICSA1
19	ICSAB1	1.0927	83.716	.48379	.83361	.92767	1.0111	.49360	1.0245	ICSAB1
20	CCV1	.51689	64.887	.49349	2.3000	.50565	.50083	1.5132	2.5935	CCV1
21	CCB1	.00015	.02481	.00017	-.00033	-.00006	.00018	.00001	.00563	CCB1
22	IPK036SQ	.00005	.01928	.00021	-.00146	.03407	.00054	.00007	.00005	IPK036SQ
23	IPK036SX	.50265	53.637	.49747	.46726	.52312	.52091	.52152	.54372	IPK036SX
24	IPK036SY	.50897	54.444	.50376	.47294	.52885	.52831	.53161	.55276	IPK036SY
25	K575-01A	.53700	61.718	1.0810	.48137	.49767	1.8372	.60112	28.211	K575-01A
26	K575-01T	.00069	5.7267	.58762	-.00227	.01971	1.3018	.05659	27.142	K575-01T
27	K575-01J	.00005	1.0166	.11082	-.00032	.00361	.24441	.01065	5.3718	K575-01J
28	K575-01M	.11556	21.727	.82183	.09631	.12118	1.6657	.17988	16.452	K575-01M
29	K575-01S	.11210	19.554	.62898	.09190	.12540	1.4288	.16702	28.350	K575-01S
30	Blank	-.00001	-.00366	.00007	-.00004	-.00040	.00022	.00012	.00164	Blank
31	CCV2	.52011	65.310	.49673	2.3125	.50347	.50438	1.5079	2.5990	CCV2
32	CCB2	.00011	.00977	.00016	-.00004	-.00013	.00035	.00010	.00583	CCB2
33	K575-01A	.55925	85.510	3.2193	.42197	.55539	6.4451	.77806	95.372*	K575-01A
34	K575-01W	.00393	28.820	2.8153	-.00724*	.09365	6.0633	.26372	97.772*	K575-01W
35	K575-01J	.00074	5.6866	.58301	-.00111	.01961	1.2843	.05577	26.529	K575-01J
36	K575-01M	.58379	105.71	3.8238	.37907	.54360	7.5711	.80517	63.980*	K575-01M
37	K575-01S	.56313	94.690	2.9243	.36687	.56553	6.5569	.74993	98.832*	K575-01S
38	Blank	.00012	.03130	.00033	.00017	-.00048	.00165	.00010	.00524	Blank
39	CCV3	.52018	66.131*	.50203	2.3035	.50352	.50854	1.4959	2.5775	CCV3
40	CCB3	.00008	.02780	.00015	-.00001	-.00010	.00112	.00014	.00678*	CCB3
41	K201-02W	-.00069	.16966	.25153	-.00392	.03738	1.0223	.20901	8.2481	K201-02W
42	K201-03W	-.00035	.22328	.28850	-.00362	.06368	1.1927	.22619	8.0604	K201-03W
43	Blank	.00005	-.00808	.00005	-.00020	-.00030	.00003	.00005	.00090	Blank
44	CCV4	.51580	65.789	.49611	2.2784	.50826	.50663	1.4979	2.5697	CCV4
45	CCB4	.00006	.01147	.00019	.00047	-.00020	.00064	.00018	.00680*	CCB4
46	IPK035SB	-.00007	.01285	.00004	-.00116	.03427	.00023	.00012	.00053	IPK035SB
47	IPK035SL	.51418	55.306	.50984	.47193	.53279	.53165	.53209	.55160	IPK035SL
48	IPK035SC	.51228	55.205	.50839	.46999	.52953	.53176	.52838	.54928	IPK035SC
49	K203-17A	.50476	55.380	.59631	.45069	.51846	1.8295	1.0753	1.9428	K203-17A
50	K203-17	-.00004	.75614	.11063	-.00578*	.04212	1.3870	.57617	1.4776	K203-17
51	K203-17J	-.00002	.14504	.02229	-.00028	.00795	.27851	.11741	.29436	K203-17J
52	K203-18	-.00074	.62180	.13181	-.00601*	.03819	1.7654	.33937	4.5269	K203-18

53	K203-19	-.00075	.16505	.11490	-.00571*	.03672	1.5467	.33527	.55242	K203-19
54	K203-20	-.00073	.20151	.09857	-.00538*	.03821	1.8365	.29714	2.6482	K203-20
55	Blank	.00006	-.01043	.00007	.00014	-.00021	.00049	.00002	.00041	Blank
56	CCV5	.51552	66.084*	.50055	2.2707	.50522	.51106	1.4949	2.5714	CCV5
57	CCB5	-.00001	.00369	.00012	.00030	.00014	.00065	.00019	.00628	CCB5
58	K203-21	-.00033	.13080	.05454	-.00398	.03549	1.5059	.26403	.69210	K203-21
59	K203-22	-.00032	.11309	.11241	-.00470	.03705	1.4477	.28220	.79511	K203-22
60	Blank	.00014	-.01859	.00016	-.00072	-.00040	.00075	.00004	.00042	Blank
61	CCV6	.51309	66.052*	.50068	2.2464*	.50319	.50718	1.4883	2.5566	CCV6
62	CCB6	.00011	.00798	.00021	.00030	.00012	.00042	.00006	.00645*	CCB6
63	IPK034WB	.00005	-.01045	.00010	.00010	-.00021	.00010	.00008	.00001	IPK034WB
64	IPK034WL	.52839	54.610	.50848	.48536	.48502	.52289	.52293	.53106	IPK034WL
65	IPK034WC	.52442	55.548	.51731	.48348	.49173	.53244	.51530	.52767	IPK034WC
66	K133-01A	.73399	2967.7*	13.128	.41765	.47155	.52077	.54885	.56854	K133-01A
67	K133-01	-.00069	3003.7*	12.790	-.00286	-.00142	.00029	-.00065	.00750	K133-01
68	K133-01J	-.00014	829.66*	2.7430	-.00106	-.00024	.00304	-.00033	.00169	K133-01J
69	K133-01M	.74123	2989.0*	13.328	.39549	.47544	.52059	.51760	.52804	K133-01M
70	K133-01S	.74576	2987.3*	13.559	.39291	.47941	.52642	.52127	.53420	K133-01S
71	K133-02	-.00026	698.57*	3.3542	-.00090	-.00011	.00293	-.00039	.01756	K133-02
72	Blank	-.00003	.97598	.00042	-.00026	-.00016	.00037	.00013	.00033	Blank
73	CCV7	.51363	67.008*	.50351	2.2556	.50471	.50857	1.4852	2.5557	CCV7
74	CCB7	.00013	.51408*	.00021	.00037	-.00021	.00019	.00014	.00630*	CCB7
75	K133-03	-.00066	*****	18.408	-.00205	-.00136	.00187	.00279	.00957	K133-03
76	K133-04	-.00054	1484.3*	8.5462	-.00173	-.00095	.00188	-.00047	.00619	K133-04
77	K133-05	-.00044	653.41	4.1492	-.00086	-.00023	.00316	-.00038	.00192	K133-05
78	K119-01	.00000	76.682	.68732	-.00011	-.00094	.00151	-.00007	.00430	K119-01
79	K119-02	-.00042	126.13	2.7702	-.00100	-.00043	.00590	.00289	.00368	K119-02
80	K119-03	-.00020	126.36	2.2121	-.00077	-.00031	.00317	-.00011	.00566	K119-03
81	K146-02	-.00070	*****	12.975	-.00382	-.00138	.00014	-.00115	.00460	K146-02
82	K146-03	-.00042	573.34	5.3725	-.00083	-.00134	.00273	-.00015	.00238	K146-03
83	K146-04	-.00036	391.48	3.6863	-.00126	-.00083	.00349	.00062	.01058	K146-04
84	Blank	-.00002	.89724	.00034	-.00020	-.00034	.00057	.00020	.00296	Blank
85	CCV8	.50813	66.339*	.50075	2.2459*	.50030	.50538	1.4651	2.5285	CCV8
86	CCB8	.00018	.54173*	.00023	-.00024	-.00020	.00065	.00024	.00367	CCB8
87	K146-05	-.00049	528.98	4.9240	-.00096	-.00019	.00278	-.00032	.00649	K146-05
88	K146-06	-.00037	398.35	3.7328	-.00120	-.00082	.00330	.00086	.00795	K146-06
89	Blank	-.00006	.58819	.00036	.00013	-.00057	.00023	.00003	.00124	Blank
90	CCV9	.50983	66.560*	.50387	2.2249*	.49643	.50202	1.4674	2.5205	CCV9
91	CCB9	.00003	.42900*	.00021	.00013	-.00057	.00034	.00019	.00374	CCB9
92	TXK007SB	.00002	337.58*	.00196	-.00166	.00021	.00011	.00015	.03940*	TXK007SB
93	K521-01A	.54404	380.47	.91073	.47702	.48421	.52914	.54122	.64264	K521-01A
94	K521-01	.00000	330.17	.41619	-.00136	.00068	.00232	.00018	.07658	K521-01
95	K521-01J	-.00019	70.936	.08706	-.00028	-.00008	.00069	.00006	.01586	K521-01J
96	K521-01M	.55862	395.59	.94398	.45694	.49577	.53574	.51783	.61692	K521-01M
97	K521-01S	.55129	377.75	.91488	.45283	.48953	.53180	.51316	.61428	K521-01S
98	K520-03	-.00002	325.83	.12292	-.00142	.00054	.00272	.00072	1.0056	K520-03
99	Blank	.00007	.44939	.00007	-.00032	.00005	.00001	.00009	.00146	Blank
100	CCV10	.50879	66.265*	.50022	2.2573	.49875	.50495	1.4655	2.5371	CCV10
101	CCB10	.00002	.35178*	.00004	.00029	-.00019	.00049	.00011	.00370	CCB10
102	Blank	-.00003	.21390	.00022	.00049	-.00033	.00019	.00013	.00139	Blank
103	CCV11	.50253	66.969*	.49906	2.2029*	.50146	.50225	1.4610	2.5108	CCV11
104	CCB11	.00006	.22153*	.00016	-.00013	-.00019	.00037	.00024	.00346	CCB11
105	IPK037WB	.00008	.20309	.00007	.00004	-.00039	.00034	.00024	-.00063	IPK037WB
106	IPK037WL	.51705	56.475	.51689	.47597	.48607	.52840	.51238	.52154	IPK037WL
107	IPK037WC	.52023	56.899	.52162	.48016	.48697	.53856	.51182	.52423	IPK037WC

108	TXK008SB	.00013	341.89*	.00158	-.00149	.00046	.00029	.00026	.00143	TXK008SB
109	K543-01A	.53920	411.84	1.1488	.46700	.48146	.53068	.54499	.66730	K543-01A
110	K543-01	-.00010	365.87	.65720	-.00152	.00010	.00317	.00391	.10218	K543-01
111	K543-01J	.00003	77.352	.13687	.00013	.00000	.00103	.00087	.02019	K543-01J
112	K543-01M	.55971	427.86	1.1938	.44503	.49324	.53821	.52323	.65862	K543-01M
113	K543-01S	.55673	403.78	1.1447	.44384	.49331	.53131	.52534	.66366	K543-01S
114	Blank	.00004	.29436	.00023	.00017	-.00007	.00028	.00019	.00131	Blank
115	CCV12	.50775	67.423*	.50597	2.2068*	.49426	.50258	1.4666	2.5138	CCV12
116	CCB12	.00022	.21210*	.00019	-.00023	.00018	.00043	.00029	.00352	CCB12
INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID

ID8K020 Section 3 of 3

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 12/1/11 13:01

End Date: 12/1/11 16:55

SOP #	Rev. #
☑ EMAX-6010	7
☐ EMAX-6010C	1
☐ EMAX-200.7	2
☐ EMAX-	

Comments:

Book #: AD8-022

Instrument No.: D8

Analytical Batch: ~~12/01/11~~ 1D8L001

Analytical Sequence: S-11L(010 (v3)

Method File: 11L(010 (v3)

Database: EMAX

	STANDARDS ID		STANDARDS ID
S0	SM1014-7805	S30	SM1014-6802
S1	NA	S31	-6803
S2		ICV	-824
S3		CCV	-8301
S4		ICSA	-8502
S5		ICSAB	-6704
S6		CRI/MRL1	-814
S7		MRL2	-7401
S8			
S9			
S10			
S11			
S12			
S16			
S17			
S18			
S20	SM1014-8401		
S21	-6503		
S22	-6504		
S23	-8402		
S24	-6702		
S25	-6703		
S26	-7801		
S27	-7802		
S28	-7803		
S29	-7804		

Analyzed By: NP

Date: 12/1/11

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[illegible]	FCR1	[illegible]	[illegible]	[illegible]
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K235-J1	.		...		. .		..				. .								--							.		.
K235-J2*	--	.	....	....	..	---	.			..	...				.	....	.			....	.	....	. .	.	....	...	---		
K235-J3		. ..	. . .	..		.		....	---		.	.		....	---			. .	....	. ..	.		---	....	..		..	
K235-J4	.	....	. .				.	....			..	.	.	---	. .	.	. ..	..		... .	..		...	.	.	.		.
BLANK	---	.			..	. ..	....	....		..	..	---	.		.	....	.				....	..			...		. .		
CVF	102	100	101	98	98	105	105	112	112	97	109	105	91	98	95	92	113	99	96	105	102	109	97	95	101	96	101	100
CB6			. . .	..		.	. .		..											.	.		.	---	..			
K232-B1		..		.				---				.	.	---		.		.	.		. . .		. .					.
K232-B2		..		. .		..			.			. . .	.			. ....					....	.			.		..	.
K232-B3	. .	.	. .	---	---	....	. .		....	....	..				..	. -	---			....	....	..	.	..	....	....	....	.
BLANK	---	---	..	.			.	....	....			.	....	....	. .			..	....	....	.. .	.	---	....	..	.		..
CSVC	101	101	106	96	99	103	105	103	103	97	107	104	97	104	94	92	103	94	9	104	105	103	97	95	94	98	107	103
CCB6	- -	-	....	---	---	....	..		....	---	..	.		.	. ..	-			. ..		---	....	.	....	....	....	.		
K119-D1A	--				..	.	....			.	....	.		.		..			..			..	- .	..		.		.
K119-D2A			.	.. .		.	.	.	..		.	.		..				..					.		---	.	---		
K119-D1B		---		.	---		---			..	.			. .	.				..	. .			.	.. .	. .			.
K119-D2B	. .	.	. . .	.. .		.	..	---		....	. . .	.	.			---	. .		..	. .	....	..	.		---	....	. .	. .	
K119-D3B		....	.. .	.					.	---		..	.. .	..	....	..		....	....	....	....			....	....	..			. .
BLANK	....	---		.	. .	....	....	. .			....	---	....	.			.	....	. . .			....		.		..	. .	.	.
CPV2	99	98	102	96	99	99	100	101	99	96	106	103	95	100	93	91	99	98	96	100	102	103	96	91	93	98	107	102
CSV2	....				.		....			. .	. .	--	.			..		.	.		.	. . .	.			.	..	.. .

OK Limit of each parameter are indicated in a table attached next to all the QC check forms
* : Out of QC Limit

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Facto	CorrFa	Check	Check Table	Fail Action
1	0	0	0	0	Unk	S0		ID8L001001			1	☒	unk	---
2	0	0	0	0	Unk	S1		ID8L001002			1	☒	unk	---
3	0	0	0	0	Unk	S2		ID8L001003			1	☒	unk	---
4	0	0	0	0	Unk	S3		ID8L001004			1	☒	unk	---
5	0	0	0	0	Unk	S4		ID8L001005			1	☒	unk	---
6	0	0	0	0	Unk	S5		ID8L001006			1	☒	unk	---
7	0	0	0	0	Unk	S6		ID8L001007			1	☒	unk	---
8	0	0	0	0	Unk	S7		ID8L001008			1	☒	unk	---
9	0	0	0	0	Unk	S8		ID8L001009			1	☒	unk	---
10	0	0	0	0	Unk	S9		ID8L001010			1	☒	unk	---
11	0	0	0	0	Unk	S10		ID8L001011			1	☒	unk	---
12	0	0	0	0	Unk	S11		ID8L001012			1	☒	unk	---
13	0	0	0	0	Unk	S12		ID8L001013			1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8L001014			1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8L001015			1	☒	3XIDL	None
16	3	2	3	1	QC	MRLL0101		ID8L001016			1	☒	MRL-EMAX	None
17	4	2	4	1	QC	MRLL0102		ID8L001017			1	☒	MRL-AFCEE	None
18	5	2	5	1	QC	ICSA1		ID8L001018			1	☒	ICSA-DoD	None
19	6	2	6	1	QC	ICSAB1		ID8L001019			1	☒	ICSAB	None
20	7	2	7	1	QC	CCV1		ID8L001020			1	☒	CCV	None
21	8	2	8	1	QC	CCB1		ID8L001021			1	☒	3XIDL	None
22	36	2	12	3	Unk	K542-06A	TCLP 18X	ID8L001022			1	☒	unk	---
23	37	2	1	4	Unk	K542-06A	TCLP 18X DLB SPI	ID8L001023			1	☒	unk	---
24	38	2	2	4	Unk	K542-06K	TCLP 18X	ID8L001024			1	☒	unk	---
25	39	2	3	4	Unk	K542-06J	TCLP 90X	ID8L001025			1	☒	unk	---
26	40	2	4	4	Blank	Blank		ID8L001026			1	☐		---
27	41	2	5	4	QC	CCV2		ID8L001027			1	☒	CCV	None
28	42	2	6	4	QC	CCB2		ID8L001028			1	☒	3XIDL	None
29	18	2	6	2	QC	IPK045WB		ID8L001029			1	☒	1/2LOQ	None
30	19	2	7	2	QC	IPK045WL		ID8L001030			1	☒	LCS	None
31	20	2	8	2	QC	IPK045WC		ID8L001031			1	☒	LCS	None
32	21	2	9	2	Unk	K227-01A		ID8L001032			1	☒	unk	---
33	22	2	10	2	Unk	K227-01		ID8L001033			1	☒	unk	---
34	23	2	11	2	Unk	K227-01J		ID8L001034			1	☒	unk	---
35	24	2	12	2	Unk	K227-01M		ID8L001035			1	☒	unk	---
36	25	2	1	3	Unk	K227-01S		ID8L001036			1	☒	unk	---
37	26	2	2	3	Unk	K217-01		ID8L001037			1	☒	unk	---
38	15	2	3	2	Blank	Blank		ID8L001038			1	☐		---
39	16	2	4	2	QC	CCV3		ID8L001039			1	☒	CCV	None

70 of 3

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Facto	CorrFa	Check	Check Table	Fail Action
40	17	2	5	2	QC	CCB3		ID8L001040			1	☒	3XIDL	None
41	9	2	9	1	Unk	K133-01A	DLB SPIKE 10X	ID8L001041			1	☒	unk	---
42	30	2	6	3	Unk	K133-01A		ID8L001042			1	☒	unk	---
43	31	2	7	3	Unk	K133-01I	10X	ID8L001043			1	☒	unk	---
44	32	2	8	3	Unk	K133-01J	25X	ID8L001044			1	☒	unk	---
45	27	2	3	3	Blank	Blank		ID8L001045			1	☐		---
46	28	2	4	3	QC	CCV4		ID8L001046			1	☒	CCV	None
47	29	2	5	3	QC	CCB4		ID8L001047			1	☒	3XIDL	None
48	10	2	10	1	QC	IPL001WB		ID8L001048			1	☒	1/2LOQ	None
49	11	2	11	1	QC	IPL001WL		ID8L001049			1	☒	LCS	None
50	12	2	12	1	QC	IPL001WC		ID8L001050			1	☒	LCS	None
51	13	2	1	2	Unk	K233-03A		ID8L001051			1	☒	unk	---
52	14	2	2	2	Unk	K233-03		ID8L001052			1	☒	unk	---
53	33	2	9	3	Unk	K233-03J		ID8L001053			1	☒	unk	---
54	34	2	10	3	Unk	K233-03M		ID8L001054			1	☒	unk	---
55	35	2	11	3	Unk	K233-03S		ID8L001055			1	☒	unk	---
56	43	2	7	4	Unk	K233-01		ID8L001056			1	☒	unk	---
57	44	2	8	4	Blank	Blank		ID8L001057			1	☐		---
58	45	2	9	4	QC	CCV5		ID8L001058			1	☒	CCV	None
59	46	2	10	4	QC	CCB5		ID8L001059			1	☒	3XIDL	None
60	47	2	11	4	Unk	K233-04		ID8L001060			1	☒	unk	---
61	48	2	12	4	Unk	K229-02		ID8L001061			1	☒	unk	---
62	49	2	1	5	Unk	K229-04		ID8L001062			1	☒	unk	---
63	50	2	2	5	Blank	Blank		ID8L001063			1	☐		---
64	51	2	3	5	QC	CCV6		ID8L001064			1	☒	CCV	None
65	52	2	4	5	QC	CCB6		ID8L001065			1	☒	3XIDL	None
66	53	2	5	5	Unk	K119-01A	DISSOLVED	ID8L001066			1	☒	unk	---
67	54	2	6	5	Unk	K119-01W	DISSOLVED	ID8L001067			1	☒	unk	---
68	55	2	7	5	Unk	K119-01J	DISSOLVED	ID8L001068			1	☒	unk	---
69	56	2	8	5	Unk	K119-02W	DISSOLVED	ID8L001069			1	☒	unk	---
70	57	2	9	5	Unk	K119-03W	DISSOLVED	ID8L001070			1	☒	unk	---
71	58	2	10	5	Blank	Blank		ID8L001071			1	☐		---
72	59	2	11	5	QC	CCV7		ID8L001072			1	☒	CCV	None
73	60	2	12	5	QC	CCB7		ID8L001073			1	☒	3XIDL	None

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71	Blank	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Blank
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Table 3 Section 2 of 3

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	37.591	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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44	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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48	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP METALS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

All sampler pH <2

Book #: EIP-104
Batch: 1PK034W
Matrix: Water
Digestor ID: E

SOP #	Rev. #
☐ EMAX-3005	4
☑ EMAX-3010	5
☐ EMAX-3050	4
☐ EMAX-200.7	2
☐ EMAX-	

Start	Temp	End	Temp
	95 °C		95 °C

Standards	ID	Amount Added (ml)
LCS-1	SM1A-013-04-13	0.25
LCS-2	SM1A-013-03-13	0.25
LCS-3	SM1A-013-04-14	0.5
MS	Same spike vol. and sol as LCS1, LCS2, LCS3	
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SW1A-04-407	1.5 + 1.5
HCl	SW1A-04-408	2.5 + 2.5
H_2O_2	N/A	
HNO3(1:1)	N/A	

Digestate Location	ICP
Extract Location	
☒ Reagent Water ID: SM5A-02-076	
☒ Thermometer ID: 101993366	
☒ Pipette ID: ICP-07	
☒ Pipette ID: 142780035	
☐ Pipette ID:	
☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask	
☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask	

Prepared By: GG

Standard Added By: GG Witnessed By: PP

Extract Rcvd By: TH Checked By: TH

FileID: IPK034W

EMAX LABORATORIES, INC.

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
11IPK034W01	IPK034WB	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W02	IPK034WL	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W03	IPK034WC	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W04	TXK007SB	10	ml	11/22/11 12:55	50	50	50	5	TCLP
11IPK034W05	K520-03	10	ml	11/22/11 12:55	50	50	50	5	TCLP
11IPK034W06	K521-01	10	ml	11/22/11 12:55	50	50	50	5	TCLP
11IPK034W07	K521-01M	10	ml	11/22/11 12:55	50	50	50	5	TCLP
11IPK034W08	K521-01S	10	ml	11/22/11 12:55	50	50	50	5	TCLP
11IPK034W09	K119-01	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W10	K119-02	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W11	K119-03	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W12	K133-01	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W13	K133-01M	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W14	K133-01S	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W15	K133-02	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W16	K133-03	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W17	K133-04	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W18	K133-05	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W19	K146-02	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W20	K146-03	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W21	K146-04	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W22	K146-05	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W23	K146-06	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W24	K202-01	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W25	K202-02	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W26	K202-03	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W27	K202-03M	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W28	K202-03S	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W29	K202-04	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED

11/22/11 GG

Vd=digestate volume PrepFctr=)ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 11/22/11 13:00 Prepared By GG

☑ Digestion Ended @ 11/22/11 17:14 Checked By: TH

Comments: Date 11/22/11

7052

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

WET CHEMICAL ANALYSES

SDG#: 11K133

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K133

METHOD 300.0
ANIONS BY IC

A total of five (5) water samples were received on 11/15/11 for Anions (Chloride, Nitrate-N, Nitrite-N and Sulfate) by IC analysis, Method 300.0 in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, three (3) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary forms for details.

Lab Control Sample
Three (3) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for ICK057WL/C were all within QC limits.
Percent recoveries for ICK059WL/C were all within QC limits.
Percent recoveries for ICK071WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample were analyzed at the frequency prescribed by the project.
Percent recoveries for K133-01M/S were within project QC limits.
Sample duplicate were also analyzed with the samples. RPDs were within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. Samples K133-01, -02, -03, -04 and -05 for Nitrite-N were reported at various dilutions due to interference from high chloride concentrations. Samples K133-01 and -03 for Nitrate-N were initially analyzed at 10x due to strong odor and turbidity.

SAMPLE RESULTS

METHOD 300.0
CHLORIDE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K133

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK071WB	ND	1	NA	0.200	0.100	11/19/1107:11	NA	AK27-69	AK27-67	ICK071W	NA	NA
LCS1W	ICK071WL	1.99	1	NA	0.200	0.100	11/19/1107:27	NA	AK27-70	AK27-67	ICK071W	NA	NA
LCD1W	ICK071WC	1.99	1	NA	0.200	0.100	11/19/1107:43	NA	AK27-71	AK27-67	ICK071W	NA	NA
MW-70-PMW07A-130	K133-01	10100	1000	NA	200	100	11/19/1111:29	NA	AK27-85	AK27-79	ICK071W	11/15/1109:47	11/15/11
MW-70-PMW07A-130DUP	K133-01D	9980	1000	NA	200	100	11/19/1111:45	NA	AK27-86	AK27-79	ICK071W	11/15/1109:47	11/15/11
MW-70-PMW07A-130MS	K133-01M	11800	1000	NA	200	100	11/19/1112:01	NA	AK27-87	AK27-79	ICK071W	11/15/1109:47	11/15/11
MW-70-PMW07A-130MSD	K133-01S	11800	1000	NA	200	100	11/19/1112:18	NA	AK27-88	AK27-79	ICK071W	11/15/1109:47	11/15/11
MW-70-PMW07B-131	K133-02	1620	100	NA	20.0	10.0	11/19/1112:34	NA	AK27-89	AK27-79	ICK071W	11/15/1111:03	11/15/11
IW-70-FSB216-132	K133-03	11800	1000	NA	200	100	11/19/1112:50	NA	AK27-90	AK27-79	ICK071W	11/15/1112:03	11/15/11
MW-70-PMW08A-133	K133-04	4840	500	NA	100	50.0	11/19/1114:59	NA	AK27-98	AK27-91	ICK071W	11/15/1113:19	11/15/11
MW-70-PMW08B-134	K133-05	1660	100	NA	20.0	10.0	11/19/1115:15	NA	AK27-99	AK27-91	ICK071W	11/15/1114:18	11/15/11

00003

METHOD 300.0
NITRATE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K133

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK057WB	ND	1	NA	0.200	0.0500	11/16/1112:41	NA	AK23-03	AK23-01	ICK057W	NA	NA
LCS1W	ICK057WL	0.992	1	NA	0.200	0.0500	11/16/1112:57	NA	AK23-04	AK23-01	ICK057W	NA	NA
LCD1W	ICK057WC	0.986	1	NA	0.200	0.0500	11/16/1113:14	NA	AK23-05	AK23-01	ICK057W	NA	NA
MW-70-PMW07B-131	K133-02	ND	1	NA	0.200	0.0500	11/16/1116:11	NA	AK23-16	AK23-13	ICK057W	11/15/1111:03	11/15/11
IW-70-FSB216-132	K133-03	ND	10	NA	2.00	0.500	11/16/1116:28	NA	AK23-17	AK23-13	ICK057W	11/15/1112:03	11/15/11
MW-70-PMW08A-133	K133-04	ND	1	NA	0.200	0.0500	11/16/1116:44	NA	AK23-18	AK23-13	ICK057W	11/15/1113:19	11/15/11
MW-70-PMW08B-134	K133-05	0.374	1	NA	0.200	0.0500	11/16/1117:00	NA	AK23-19	AK23-13	ICK057W	11/15/1114:18	11/15/11
MW-70-PMW07A-130	K133-01	ND	10	NA	2.00	0.500	11/16/1117:16	NA	AK23-20	AK23-13	ICK057W	11/15/1109:47	11/15/11
MW-70-PMW07A-130DUP	K133-01D	ND	10	NA	2.00	0.500	11/16/1117:32	NA	AK23-21	AK23-13	ICK057W	11/15/1109:47	11/15/11
MW-70-PMW07A-130MS	K133-01M	10.3	10	NA	2.00	0.500	11/16/1117:48	NA	AK23-22	AK23-13	ICK057W	11/15/1109:47	11/15/11
MW-70-PMW07A-130MSD	K133-01S	10.4	10	NA	2.00	0.500	11/16/1118:05	NA	AK23-23	AK23-13	ICK057W	11/15/1109:47	11/15/11

METHOD 300.0
NITRITE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K133

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK057WB	ND	1	NA	0.200	0.0500	11/16/1112:41	NA	AK23-03	AK23-01	ICK057W	NA	NA
LCS1W	ICK057WL	2.10	1	NA	0.200	0.0500	11/16/1112:57	NA	AK23-04	AK23-01	ICK057W	NA	NA
LCD1W	ICK057WC	2.09	1	NA	0.200	0.0500	11/16/1113:14	NA	AK23-05	AK23-01	ICK057W	NA	NA
MW-70-PMW07A-130	K133-01	ND	10	NA	2.00	0.500	11/16/1117:16	NA	AK23-20	AK23-13	ICK057W	11/15/1109:47	11/15/11
MW-70-PMW07A-130DUP	K133-01D	ND	10	NA	2.00	0.500	11/16/1117:32	NA	AK23-21	AK23-13	ICK057W	11/15/1109:47	11/15/11
MW-70-PMW07A-130MS	K133-01M	22.3	10	NA	2.00	0.500	11/16/1117:48	NA	AK23-22	AK23-13	ICK057W	11/15/1109:47	11/15/11
MW-70-PMW07A-130MSD	K133-01S	21.6	10	NA	2.00	0.500	11/16/1118:05	NA	AK23-23	AK23-13	ICK057W	11/15/1109:47	11/15/11
MW-70-PMW07B-131	K133-02	ND	5	NA	1.00	0.250	11/16/1120:46	NA	AK23-33	AK23-25	ICK057W	11/15/1111:03	11/15/11
IW-70-FSB216-132	K133-03	ND	25	NA	5.00	1.25	11/16/1121:02	NA	AK23-34	AK23-25	ICK057W	11/15/1112:03	11/15/11
MBLK2W	ICK059WB	ND	1	NA	0.200	0.0500	11/16/1122:23	NA	AK23-39	AK23-37	ICK059W	NA	NA
LCS2W	ICK059WL	2.10	1	NA	0.200	0.0500	11/16/1122:39	NA	AK23-40	AK23-37	ICK059W	NA	NA
LCD2W	ICK059WC	2.09	1	NA	0.200	0.0500	11/16/1122:55	NA	AK23-41	AK23-37	ICK059W	NA	NA
MW-70-PMW08A-133	K133-04	ND	20	NA	4.00	1.00	11/16/1123:12	NA	AK23-42	AK23-37	ICK059W	11/15/1113:19	11/15/11
MW-70-PMW08B-134	K133-05	ND	5	NA	1.00	0.250	11/16/1123:28	NA	AK23-43	AK23-37	ICK059W	11/15/1114:18	11/15/11

METHOD 300.0
SULFATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K133

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK057WB	ND	1	NA	0.500	0.250	11/16/1112:41	NA	AK23-03	AK23-01	ICK057W	NA	NA
LCS1W	ICK057WL	5.01	1	NA	0.500	0.250	11/16/1112:57	NA	AK23-04	AK23-01	ICK057W	NA	NA
LCD1W	ICK057WC	5.00	1	NA	0.500	0.250	11/16/1113:14	NA	AK23-05	AK23-01	ICK057W	NA	NA
IW-70-FSB216-132	K133-03	8.11	10	NA	5.00	2.50	11/16/1116:28	NA	AK23-17	AK23-13	ICK057W	11/15/1112:03	11/15/11
MBLK2W	ICK071WB	ND	1	NA	0.500	0.250	11/19/1107:11	NA	AK27-69	AK27-67	ICK071W	NA	NA
LCS2W	ICK071WL	5.20	1	NA	0.500	0.250	11/19/1107:27	NA	AK27-70	AK27-67	ICK071W	NA	NA
LCD2W	ICK071WC	5.20	1	NA	0.500	0.250	11/19/1107:43	NA	AK27-71	AK27-67	ICK071W	NA	NA
MW-70-PMW07A-130	K133-01	1590	1000	NA	500	250	11/19/1111:29	NA	AK27-85	AK27-79	ICK071W	11/15/1109:47	11/15/11
MW-70-PMW07A-130DUP	K133-01D	1550	1000	NA	500	250	11/19/1111:45	NA	AK27-86	AK27-79	ICK071W	11/15/1109:47	11/15/11
MW-70-PMW07A-130MS	K133-01M	6620	1000	NA	500	250	11/19/1112:01	NA	AK27-87	AK27-79	ICK071W	11/15/1109:47	11/15/11
MW-70-PMW07A-130MSD	K133-01S	6620	1000	NA	500	250	11/19/1112:18	NA	AK27-88	AK27-79	ICK071W	11/15/1109:47	11/15/11
MW-70-PMW07B-131	K133-02	656	100	NA	50.0	25.0	11/19/1112:34	NA	AK27-89	AK27-79	ICK071W	11/15/1111:03	11/15/11
MW-70-PMW08A-133	K133-04	1040	500	NA	250	125	11/19/1114:59	NA	AK27-98	AK27-91	ICK071W	11/15/1113:19	11/15/11
MW-70-PMW08B-134	K133-05	608	100	NA	50.0	25.0	11/19/1115:15	NA	AK27-99	AK27-91	ICK071W	11/15/1114:18	11/15/11

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK071WB	ICK071WL	ICK071WC		
LAB FILE ID:	AK27-69	AK27-70	AK27-71		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/19/1107:11	11/19/1107:27	11/19/1107:43	DATE RECEIVED:	NA
PREP. BATCH:	ICK071W	ICK071W	ICK071W		
CALIB. REF:	AK27-67	AK27-67	AK27-67		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	ND	2.00	1.99	100	2.00	1.99	100	0	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1000	1000	1000		
SAMPLE ID:	MW-70-PMW07A-130				
LAB SAMP ID:	K133-01	K133-01M	K133-01S		
LAB FILE ID:	AK27-85	AK27-87	AK27-88		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/15/11 09:47
DATE ANALYZED:	11/19/1111:29	11/19/1112:01	11/19/1112:18	DATE RECEIVED:	11/15/11
PREP. BATCH:	ICK071W	ICK071W	ICK071W		
CALIB. REF:	AK27-79	AK27-79	AK27-79		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	10100	2000	11800	87	2000	11800	86	0	80-120	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0

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MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1000	1000		
SAMPLE ID:	MW-70-PMW07A-130			
EMAX SAMP ID:	K133-01	K133-01D		
LAB FILE ID:	AK27-85	AK27-86		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/15/11 09:47
DATE ANALYZED:	11/19/1111:29	11/19/1111:45	DATE RECEIVED:	11/15/11
PREP. BATCH:	ICK071W	ICK071W		
CALIB. REF:	AK27-79	AK27-79		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Chloride-Cl	10100	9980	1	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK057WB	ICK057WL	ICK057WC		
LAB FILE ID:	AK23-03	AK23-04	AK23-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/16/1112:41	11/16/1112:57	11/16/1113:14	DATE RECEIVED:	NA
PREP. BATCH:	ICK057W	ICK057W	ICK057W		
CALIB. REF:	AK23-01	AK23-01	AK23-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrate-N	ND	1.00	0.992	99	1.00	0.986	99	1	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	10	10	10		
SAMPLE ID:	MW-70-PMW07A-130				
LAB SAMP ID:	K133-01	K133-01M	K133-01S		
LAB FILE ID:	AK23-20	AK23-22	AK23-23		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/15/11 09:47
DATE ANALYZED:	11/16/1117:16	11/16/1117:48	11/16/1118:05	DATE RECEIVED:	11/15/11
PREP. BATCH:	ICK057W	ICK057W	ICK057W		
CALIB. REF:	AK23-13	AK23-13	AK23-13		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrate-N	ND	10.0	10.3	103	10.0	10.4	104	1	80-120	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0

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MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 10 10
SAMPLE ID: MW-70-PMW07A-130
EMAX SAMP ID: K133-01 K133-01D
LAB FILE ID: AK23-20 AK23-21
DATE EXTRACTED: NA NA DATE COLLECTED: 11/15/11 09:47
DATE ANALYZED: 11/16/1117:16 11/16/1117:32 DATE RECEIVED: 11/15/11
PREP. BATCH: ICK057W ICK057W
CALIB. REF: AK23-13 AK23-13

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Nitrate-N	ND	ND	0	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK057WB	ICK057WL	ICK057WC		
LAB FILE ID:	AK23-03	AK23-04	AK23-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/16/1112:41	11/16/1112:57	11/16/1113:14	DATE RECEIVED:	NA
PREP. BATCH:	ICK057W	ICK057W	ICK057W		
CALIB. REF:	AK23-01	AK23-01	AK23-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	2.00	2.10	105	2.00	2.09	104	1	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	ICK059WB	ICK059WL	ICK059WC		
LAB FILE ID:	AK23-39	AK23-40	AK23-41		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/16/1122:23	11/16/1122:39	11/16/1122:55	DATE RECEIVED:	NA
PREP. BATCH:	ICK059W	ICK059W	ICK059W		
CALIB. REF:	AK23-37	AK23-37	AK23-37		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	2.00	2.10	105	2.00	2.09	104	1	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	10	10	10
SAMPLE ID:	MW-70-PMW07A-130		
LAB SAMP ID:	K133-01	K133-01M	K133-01S
LAB FILE ID:	AK23-20	AK23-22	AK23-23
DATE EXTRACTED:	NA	NA	NA
DATE ANALYZED:	11/16/1117:16	11/16/1117:48	11/16/1118:05
PREP. BATCH:	ICK057W	ICK057W	ICK057W
CALIB. REF:	AK23-13	AK23-13	AK23-13

DATE COLLECTED: 11/15/11 09:47
DATE RECEIVED: 11/15/11

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	20.0	22.3	111	20.0	21.6	108	3	80-120	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	10	10		
SAMPLE ID:	MW-70-PMW07A-130			
EMAX SAMP ID:	K133-01	K133-01D		
LAB FILE ID:	AK23-20	AK23-21		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/15/11 09:47
DATE ANALYZED:	11/16/1117:16	11/16/1117:32	DATE RECEIVED:	11/15/11
PREP. BATCH:	ICK057W	ICK057W		
CALIB. REF:	AK23-13	AK23-13		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Nitrite-N	ND	ND	0	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK057WB	ICK057WL	ICK057WC		
LAB FILE ID:	AK23-03	AK23-04	AK23-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/16/1112:41	11/16/1112:57	11/16/1113:14	DATE RECEIVED:	NA
PREP. BATCH:	ICK057W	ICK057W	ICK057W		
CALIB. REF:	AK23-01	AK23-01	AK23-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	5.01	100	5.00	5.00	100	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	ICK071WB	ICK071WL	ICK071WC		
LAB FILE ID:	AK27-69	AK27-70	AK27-71		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/19/1107:11	11/19/1107:27	11/19/1107:43	DATE RECEIVED:	NA
PREP. BATCH:	ICK071W	ICK071W	ICK071W		
CALIB. REF:	AK27-67	AK27-67	AK27-67		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	5.20	104	5.00	5.20	104	0	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0

MATRIX: WATER
% MOISTURE: NA

DILUTION FACTOR:	1000	1000	1000
SAMPLE ID:	MW-70-PMW07A-130		
LAB SAMP ID:	K133-01	K133-01M	K133-01S
LAB FILE ID:	AK27-85	AK27-87	AK27-88
DATE EXTRACTED:	NA	NA	NA
DATE ANALYZED:	11/19/1111:29	11/19/1112:01	11/19/1112:18
PREP. BATCH:	ICK071W	ICK071W	ICK071W
CALIB. REF:	AK27-79	AK27-79	AK27-79

DATE COLLECTED: 11/15/11 09:47
DATE RECEIVED: 11/15/11

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	1590	5000	6620	101	5000	6620	101	0	80-120	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0

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MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1000	1000		
SAMPLE ID:	MW-70-PMW07A-130			
EMAX SAMP ID:	K133-01	K133-01D		
LAB FILE ID:	AK27-85	AK27-86		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/15/11 09:47
DATE ANALYZED:	11/19/1111:29	11/19/1111:45	DATE RECEIVED:	11/15/11
PREP. BATCH:	ICK071W	ICK071W		
CALIB. REF:	AK27-79	AK27-79		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Sulfate	1590	1550	2	20

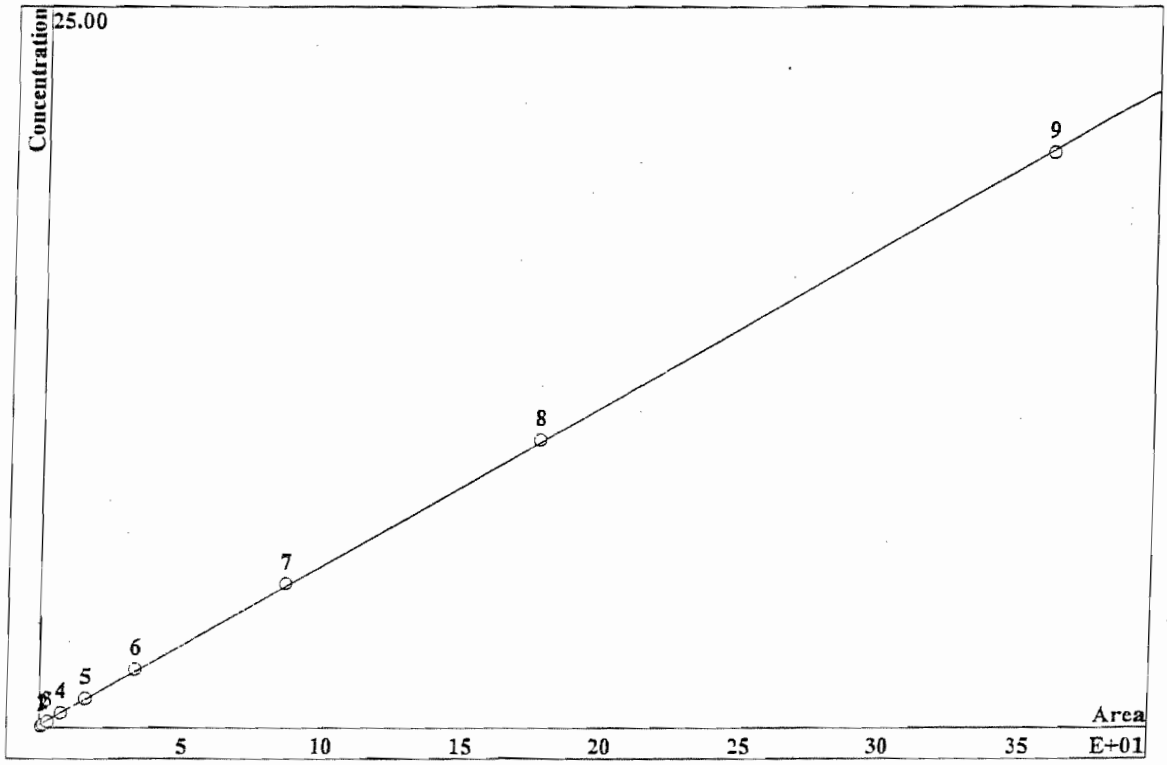
INITIAL CALIBRATIONS

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	nitrite	fluoride	chloride	bromide	nitrate	phosphate	sulfate	RawNetID	DF
AI39-01	IB	IFCBNPS	0	0	0	0	0	0	0	v9301829	1
AI39-02	S0	IFCBNPS	0	0	0	0	0	0	0	v9301845	1
AI39-03	S1	IFCBNPS	0.0402732	0.0794447	0.137238	0.0962101	0.0900188	0.132659	0.181386	v9301901	1
AI39-04	S2	IFCBNPS	0.0827484	0.120657	0.172987	0.138434	0.127411	0.166211	0.219384	v9301917	1
AI39-05	S3	IFCBNPS	0.175829	0.207372	0.255839	0.223376	0.213499	0.241921	0.298411	v9301934	1
AI39-06	S4	IFCBNPS	0.468611	0.487287	0.510168	0.483675	0.481038	0.46682	0.535669	v9301950	1
AI39-07	S5	IFCBNPS	0.987232	0.975831	0.969747	0.947628	0.958434	0.904972	0.974277	v9302006	1
AI39-08	S6	IFCBNPS	2.03579	2.00618	1.92527	1.92275	1.95393	1.87863	1.87805	v9302022	1
AI39-09	S7	IFCBNPS	5.13141	5.00267	4.89791	5.03793	5.02567	5.05879	4.80122	v9302038	1
AI39-10	S8	IFCBNPS	9.9281	9.57748	9.9004	10.4648	10.1254	10.4079	9.8176	v9302054	1
AI39-11	S9	IFCBNPS	18.5849	17.9543	20.0804	21.615	20.3941	21.1232	20.144	v9302111	1
AI39-12	ICV	IFCBNPS	98.6%	100.1%	97.7%	94.1%	98.6%	92.5%	99.9%	v9302127	1
AI39-13	ICB	IFCBNPS	0	0	0	0	0	0	0	v9302143	1

CALIBRATION OF COMPONENT chloride

Method: ICD0-I30.mtw
Equation: Q = 0.0557644·A + 0.0866239
RSD: 1.948 %
Correlation coefficient: 0.999932



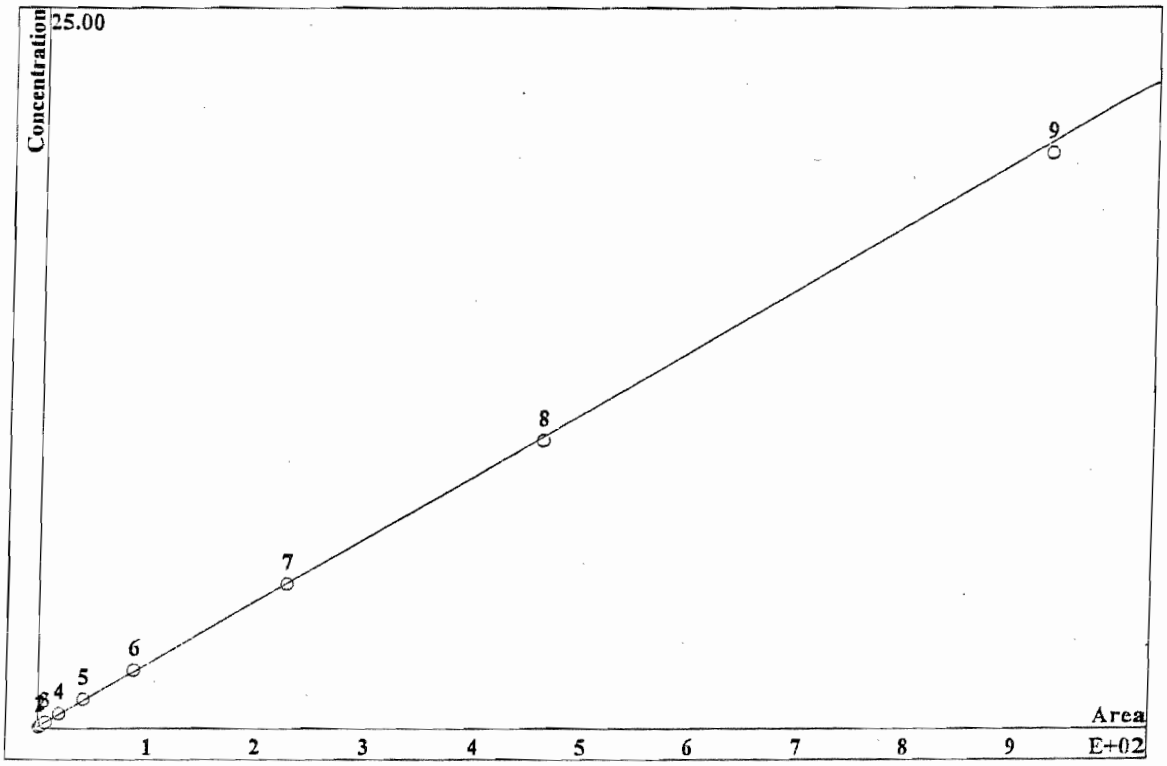
K3 = 0 K2 = 0 K1 = 0.0557644 K0 = 0.0866239
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1035	0.9076	0.05	1	4.26	Yes	v9301901.chw
2	0.1796	1.549	0.1	1	4.26	Yes	v9301917.chw
3	0.354	3.034	0.2	1	4.26	Yes	v9301934.chw
4	0.8921	7.595	0.5	1	4.26	Yes	v9301950.chw
5	1.896	15.84	1	1	4.26	Yes	v9302006.chw
6	3.983	32.97	2	1	4.26	Yes	v9302022.chw
7	10.38	86.28	5	1	4.26	Yes	v9302038.chw
8	21.04	176	10	1	4.26	Yes	v9302054.chw
9	42.24	358.5	20	1	4.26	Yes	v9302111.chw

AA
10/03/11

CALIBRATION OF COMPONENT nitrate

Method: ICD0-I30.mtw
Equation: Q = 0.0219574·A + 0.0522169
RSD: 3.044 %
Correlation coefficient: 0.999806



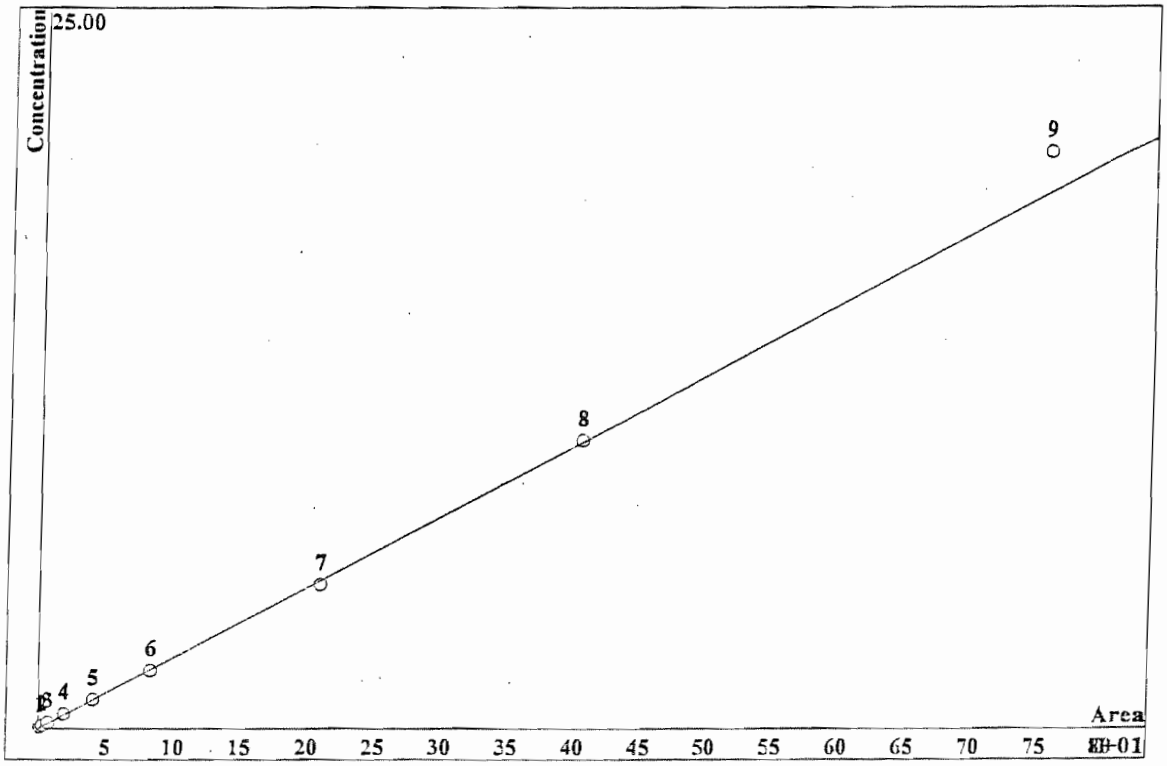
K3 = 0 K2 = 0 K1 = 0.0219574 K0 = 0.0522169
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1416	1.722	0.05	1	6.74	Yes	v9301901.chw
2	0.2866	3.425	0.1	1	6.74	Yes	v9301917.chw
3	0.6179	7.345	0.2	1	6.74	Yes	v9301934.chw
4	1.658	19.53	0.5	1	6.74	Yes	v9301950.chw
5	3.518	41.27	1	1	6.74	Yes	v9302006.chw
6	7.416	86.61	2	1	6.74	Yes	v9302022.chw
7	19.15	226.5	5	1	6.74	Yes	v9302038.chw
8	38.33	458.8	10	1	6.74	No	v9302054.chw
9	74.21	926.4	20	1	6.74	No	v9302111.chw

AS
10/03/11

CALIBRATION OF COMPONENT nitrite

Method: ICD0-I30.mtw
Equation: Q = 0.024644·A + 0.00179217
RSD: 2.785 %
Correlation coefficient: 0.999850



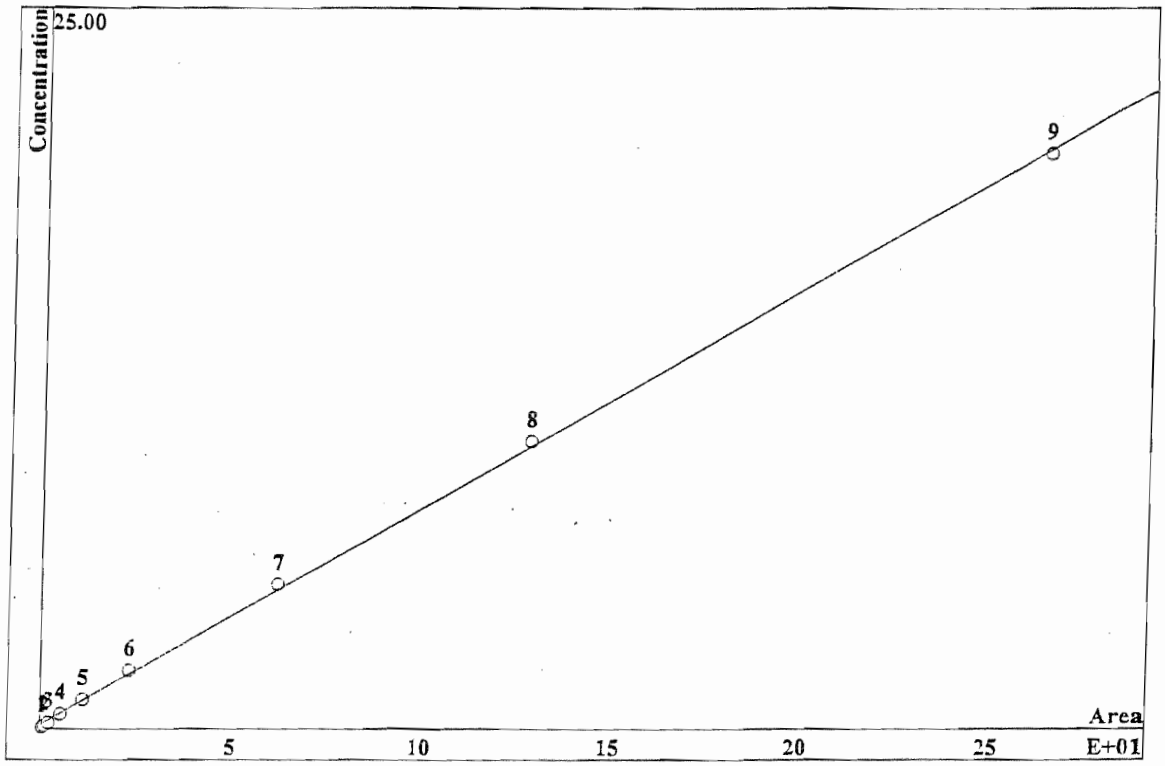
K3 = 0 K2 = 0 K1 = 0.024644 K0 = 0.00179217
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1597	1.561 ✓	0.05	1	4.932	Yes	v9301901.chw
2	0.3368	3.285 ✓	0.1	1	4.932	Yes	v9301917.chw
3	0.7305	7.062 ✓	0.2	1	4.932	Yes	v9301934.chw
4	1.964	18.94 ✓	0.5	1	4.932	Yes	v9301950.chw
5	4.115	39.99 ✓	1	1	4.932	Yes	v9302006.chw
6	8.392	82.54 ✓	2	1	4.932	Yes	v9302022.chw
7	19.91	208.1 ✓	5	1	4.932	Yes	v9302038.chw
8	35.83	402.8 ✓	10	1	4.932	Yes	v9302054.chw
9	61.98	754.1 ✓	20	1	4.932	No	v9302111.chw

RA
10/13/11

CALIBRATION OF COMPONENT sulfate

Method: ICD0-I30.mtw ✓ ✓
Equation: Q = 0.0758014·A + 0.128926
RSD: 3.408 %
Correlation coefficient: 0.999791



K3 = 0 K2 = 0 K1 = 0.0758014 K0 = 0.128926
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.03861	0.6921 ✓	0.05	1	10.79	Yes	v9301901.chw
2	0.06635	1.193 ✓	0.1	1	10.79	Yes	v9301917.chw
3	0.1288	2.236 ✓	0.2	1	10.79	Yes	v9301934.chw
4	0.3105	5.366 ✓	0.5	1	10.79	Yes	v9301950.chw
5	0.6333	11.15 ✓	1	1	10.79	Yes	v9302006.chw
6	1.361	23.08 ✓	2	1	10.79	Yes	v9302022.chw
7	3.625	61.64 ✓	5	1	10.79	Yes	v9302038.chw
8	7.471	127.8 ✓	10	1	10.79	Yes	v9302054.chw
9	15.34	264 ✓	20	1	10.79	Yes	v9302111.chw

LA
10/03/11

SECOND SOURCE VERIFICATION

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	bromide	nitrite	sulfate	fluoride	chloride	nitrate	phosphate	RawNetID	DF
AI39-12	ICV	BISFCNP	94.1%	98.6%	99.9%	100.1%	97.7%	98.6%	92.5%	v9302127	1
AI39-13	ICB	BISFCNP	0	0	0	0	0	0	0	v9302143	1

DAILY CALIBRATIONS

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	sulfate	chloride	phosphate	nitrate	fluoride	nitrite	bromide	RawNetID	DF
AK23-01	CCV455	SCPNFIB	95.7%	97.1%	108.6%	96.9%	103.4%	103.3%	98.1%	vb161209	1
AK23-02	CCB455	SCPNFIB	0	0	0	0	0	0	0	vb161225	1
AK23-13	CCV457	SCPNFIB	96.1%	97.7%	109.1%	97.2%	104.6%	104.3%	98.1%	vb161523	1
AK23-14	CCB457	SCPNFIB	0	0	0	0	0	0	0	vb161539	1
AK23-25	CCV459	SCPNFIB	96.9%	98.2%	107.5%	97.8%	104.5%	104.3%	98.7%	vb161837	1
AK23-26	CCB459	SCPNFIB	0	0	0	0	0	0	0	vb161853	1
AK23-37	CCV461	SCPNFIB	97.6%	98.8%	110.1%*	98.5%	105.6%	105.5%	99.6%	vb162151	1
AK23-38	CCB461	SCPNFIB	0	0	0	0	0	0	0	vb162207	1
AK23-49	CCV463	SCPNFIB	96.7%	97.8%	110.7%*	97.8%	104.7%	104.4%	98.3%	vb170105	1
AK23-50	CCB463	SCPNFIB	0	0	0	0	0	0	0	vb170121	1
AK23-61	CCV465	SCPNFIB	96.7%	98%	109.2%	97.9%	104.3%	104.6%	98.6%	vb170419	1
AK23-62	CCB465	SCPNFIB	0	0	0	0	0	0	0	vb170435	1
AK23-73	CCV467	SCPNFIB	97.2%	98.3%	110%	98.1%	105%	104.9%	99%	vb170733	1
AK23-74	CCB467	SCPNFIB	0	0	0	0	0	0	0	vb170749	1

IC Result Check FormVersion : I30\I39(2011)

LFID	LSID	Selection	phosphate	sulfate	fluoride	chloride	nitrite	bromide	nitrate	RawNetID	DF
AK27-01	CCV489	PSFCIBN	110.3%*	97.9%	103.6%	102.8%	105.2%	102.3%	100.5%	vb181251	1
AK27-02	CCB489	PSFCIBN	0	0	0	0	0	0	0	vb181308	1
AK27-13	CCV491	PSFCIBN	108.5%	98.1%	103.9%	100.5%	104.9%	100.9%	100.3%	vb181605	1
AK27-14	CCB491	PSFCIBN	0	0	0	0	0	0	0	vb181622	1
AK27-25	CCV493	PSFCIBN	109.2%	98.1%	104.1%	100.6%	105%	101.1%	100.4%	vb181919	1
AK27-26	CCB493	PSFCIBN	0	0	0	0	0	0	0	vb181936	1
AK27-34	CCV495	PSFCIBN	110.4%*	98.1%	104.5%	99.6%	105.2%	101.2%	100.2%	vb182145	1
AK27-35	CCB495	PSFCIBN	0	0	0	0	0	0	0	vb182201	1
AK27-46	CCV497	PSFCIBN	111.6%*	98.3%	104.5%	99.5%	105.1%	101.1%	100.2%	vb190059	1
AK27-47	CCB497	PSFCIBN	0	0	0	0	0	0	0	vb190115	1
AK27-58	CCV499	PSFCIBN	110.8%*	98.7%	104.6%	100.1%	105.6%	101.4%	100.7%	vb190413	1
AK27-59	CCB499	PSFCIBN	0	0	0	0	0	0	0	vb190429	1
AK27-67	CCV501	PSFCIBN	110.6%*	98.9%	104.7%	100.5%	105.4%	101.2%	100.8%	vb190638	1
AK27-68	CCB501	PSFCIBN	0	0	0	0	0	0	0	vb190654	1
AK27-79	CCV503	PSFCIBN	116.7%*	99%	104.9%	101.2%	105.5%	101.9%	101.5%	vb190952	1
AK27-80	CCB503	PSFCIBN	0	0	0	0	0	0	0	vb191008	1
AK27-91	CCV505	PSFCIBN	116.1%*	98.7%	105.1%	100.9%	106%	102.3%	101.2%	vb191306	1
AK27-92	CCB505	PSFCIBN	0	0	0	0	0	0	0	vb191322	1
AK27-103	CCV507	PSFCIBN	111.9%*	98.8%	105.2%	101%	105.9%	102%	101.1%	vb191620	1
AK27-104	CCB507	PSFCIBN	0	0	0	0	0	0	0	vb191636	1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Concentrations of:

S_1 — 0.05 ppm
S_2 — 0.1
S_3 — 0.2
S_4 — 0.5
S_5 — 1.0
S_6 — 2.0
S_7 — 5.0
S_8 — 10.0
S_9 — 20.0

Linearity (ppm)

F^- — 5
Cl^- — 20
NO_2N — 10
Br^- — 5
NO_3N — 5
PO_4P — 5
SO_4^{2-} — 20

Column: Metrosep A Supp 5-100

Flow Rate: 0.70 ml/min

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-220 (1000 mM H_2SO_4) 100 ml - 1 L

Book #:	AD0-031
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AI39
Method File:	ICD0-I30.mtw
Analytical Batch:	NA

SOP #	Rev. #
☑ EMAX-300.0	6
☐ EMAX-4110B	0
☑ EMAX-9056	3
☐ EMAX-	

STANDARDS ID	
ICAL	SI1B-17-57-02
ICV	SI1B-17-57-03
CCV	NA
LCS	↓
MS	↓

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 9/30/11

8034

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
v9301829.chw	ICD0-130.mtw	AI39-01 IB	1	1.0	1.0	1.0	100.0	0		
v9301845.chw	ICD0-130.mtw	AI39-02 S0	2	1.0	1.0	1.0	100.0	0		
v9301901.chw	ICD0-130.mtw	AI39-03 S1	3	1.0	1.0	1.0	100.0	1		
v9301917.chw	ICD0-130.mtw	AI39-04 S2	4	1.0	1.0	1.0	100.0	2		
v9301934.chw	ICD0-130.mtw	AI39-05 S3	5	1.0	1.0	1.0	100.0	3		
v9301950.chw	ICD0-130.mtw	AI39-06 S4	6	1.0	1.0	1.0	100.0	4		
v9302006.chw	ICD0-130.mtw	AI39-07 S5	7	1.0	1.0	1.0	100.0	5		
v9302022.chw	ICD0-130.mtw	AI39-08 S6	8	1.0	1.0	1.0	100.0	6		
v9302038.chw	ICD0-130.mtw	AI39-09 S7	9	1.0	1.0	1.0	100.0	7		
v9302054.chw	ICD0-130.mtw	AI39-10 S8	10	1.0	1.0	1.0	100.0	8		
v9302111.chw	ICD0-130.mtw	AI39-11 S9	11	1.0	1.0	1.0	100.0	9	FINAL	
v9302127.chw	ICD0-130.mtw	AI39-12 ICV	12	1.0	1.0	1.0	100.0	0		
v9302143.chw	ICD0-130.mtw	AI39-13 ICB	13	1.0	1.0	1.0	100.0	0		

JC 10/3/11

F1

F 10/3/11

8035

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

AK23-35 K133-03A DF=25 PS NO.N @ 0.5ppm

Book #:	AD0-032
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AK23
Method File:	ICD0 - I30.mtw
Analytical Batch:	ICK057W ; ICK059W

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SIIB-17-90-03
LCS	SIIB-17-91-01
MS	SCP Refer to LCS Parent ID

Column: Metrosep A Supp 5-100 F.A. 0.45µm: 2178469

Flow Rate: 0.70 ml/min 0.20µm: 2177276 2 JC 11/16/11

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 11/16/11

8036

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb161209.chw	ICD0-130.mtw	AK23-01 CCV455	1	1.0	1.0	1.0	100.0	0		
vb161225.chw	ICD0-130.mtw	AK23-02 CCB455	2	1.0	1.0	1.0	100.0	0		
vb161241.chw	ICD0-130.mtw	AK23-03 ICK057WB	3	1.0	1.0	1.0	100.0	0		
vb161257.chw	ICD0-130.mtw	AK23-04 ICK057WL	4	1.0	1.0	1.0	100.0	0		
vb161314.chw	ICD0-130.mtw	AK23-05 ICK057WC	5	1.0	1.0	1.0	100.0	0		
vb161330.chw	ICD0-130.mtw	AK23-06 K134-05 DF=5	6	1.0	5.0	1.0	100.0	0		
vb161346.chw	ICD0-130.mtw	AK23-07 K134-03 DF=5	7	1.0	5.0	1.0	100.0	0		
vb161402.chw	ICD0-130.mtw	AK23-08 K134-04 DF=5	8	1.0	5.0	1.0	100.0	0		
vb161418.chw	ICD0-130.mtw	AK23-09 K142-03	9	1.0	1.0	1.0	100.0	0		
vb161434.chw	ICD0-130.mtw	AK23-10 K142-03M	10	1.0	1.0	1.0	100.0	0		
vb161451.chw	ICD0-130.mtw	AK23-11 K142-03S	11	1.0	1.0	1.0	100.0	0		
vb161507.chw	ICD0-130.mtw	AK23-12 K142-01	12	1.0	1.0	1.0	100.0	0		
vb161523.chw	ICD0-130.mtw	AK23-13 CCV457	13	1.0	1.0	1.0	100.0	0		
vb161539.chw	ICD0-130.mtw	AK23-14 CCB457	14	1.0	1.0	1.0	100.0	0		
vb161555.chw	ICD0-130.mtw	AK23-15 K142-04	15	1.0	1.0	1.0	100.0	0		
vb161611.chw	ICD0-130.mtw	AK23-16 K133-02	16	1.0	1.0	1.0	100.0	0		
vb161628.chw	ICD0-130.mtw	AK23-17 K133-03 DF=10	17	1.0	10.0	1.0	100.0	0		
vb161644.chw	ICD0-130.mtw	AK23-18 K133-04	18	1.0	1.0	1.0	100.0	0		
vb161701.chw	ICD0-130.mtw	AK23-19 K133-05	19	1.0	1.0	1.0	100.0	0		
vb161716.chw	ICD0-130.mtw	AK23-20 K133-01 DF=10	20	1.0	10.0	1.0	100.0	0		
vb161732.chw	ICD0-130.mtw	AK23-21 K133-01D DF=10	21	1.0	10.0	1.0	100.0	0		
vb161748.chw	ICD0-130.mtw	AK23-22 K133-01M DF=10	22	1.0	10.0	1.0	100.0	0		
vb161805.chw	ICD0-130.mtw	AK23-23 K133-01S DF=10	23	1.0	10.0	1.0	100.0	0		
vb161821.chw	ICD0-130.mtw	AK23-24 RINSE	24	1.0	1.0	1.0	100.0	0		
vb161837.chw	ICD0-130.mtw	AK23-25 CCV459	25	1.0	1.0	1.0	100.0	0		
vb161853.chw	ICD0-130.mtw	AK23-26 CCB459	26	1.0	1.0	1.0	100.0	0		
vb161909.chw	ICD0-130.mtw	AK23-27 K134-04 DF=20	27	1.0	20.0	1.0	100.0	0		
vb161925.chw	ICD0-130.mtw	AK23-28 K134-05 DF=20	28	1.0	20.0	1.0	100.0	0		
vb161942.chw	ICD0-130.mtw	AK23-29 K133-01 DF=20	29	1.0	20.0	1.0	100.0	0		
vb161958.chw	ICD0-130.mtw	AK23-30 K133-01D DF=20	30	1.0	20.0	1.0	100.0	0		
vb162014.chw	ICD0-130.mtw	AK23-31 K133-01M DF=20	31	1.0	20.0	1.0	100.0	0		
vb162031.chw	ICD0-130.mtw	AK23-32 K133-01S DF=20	32	1.0	20.0	1.0	100.0	0		
vb162047.chw	ICD0-130.mtw	AK23-33 K133-02 DF=5	33	1.0	5.0	1.0	100.0	0		
vb162103.chw	ICD0-130.mtw	AK23-34 K133-03 DF=25	34	1.0	25.0	1.0	100.0	0		
vb162119.chw	ICD0-130.mtw	AK23-35 K133-05A DF=25	35	1.0	25.0	1.0	100.0	0		
vb162135.chw	ICD0-130.mtw	AK23-36 RINSE	36	1.0	1.0	1.0	100.0	0		
vb162151.chw	ICD0-130.mtw	AK23-37 CCV461	37	1.0	1.0	1.0	100.0	0		
vb162207.chw	ICD0-130.mtw	AK23-38 CCB461	38	1.0	1.0	1.0	100.0	0		
vb162223.chw	ICD0-130.mtw	AK23-39 ICK059WB	39	1.0	1.0	1.0	100.0	0		
vb162239.chw	ICD0-130.mtw	AK23-40 ICK059WL	40	1.0	1.0	1.0	100.0	0		
vb162255.chw	ICD0-130.mtw	AK23-41 ICK059WC	41	1.0	1.0	1.0	100.0	0		
vb162312.chw	ICD0-130.mtw	AK23-42 K133-04 DF=20	42	1.0	20.0	1.0	100.0	0		
vb162328.chw	ICD0-130.mtw	AK23-43 K133-05 DF=5	43	1.0	5.0	1.0	100.0	0		
vb162344.chw	ICD0-130.mtw	AK23-44 K144-01 DF=2	44	1.0	2.0	1.0	100.0	0		
vb170000.chw	ICD0-130.mtw	AK23-45 K144-01D DF=2	45	1.0	2.0	1.0	100.0	0		
vb170016.chw	ICD0-130.mtw	AK23-46 K144-01M DF=2	46	1.0	2.0	1.0	100.0	0		
vb170032.chw	ICD0-130.mtw	AK23-47 K144-01S DF=2	47	1.0	2.0	1.0	100.0	0		
vb170049.chw	ICD0-130.mtw	AK23-48 K134-03 DF=100	48	1.0	100.0	1.0	100.0	0		
vb170105.chw	ICD0-130.mtw	AK23-49 CCV463	49	1.0	1.0	1.0	100.0	0		
vb170121.chw	ICD0-130.mtw	AK23-50 CCB463	50	1.0	1.0	1.0	100.0	0		
vb170137.chw	ICD0-130.mtw	AK23-51 K144-04	51	1.0	1.0	1.0	100.0	0		
vb170153.chw	ICD0-130.mtw	AK23-52 K144-02 DF=5	52	1.0	5.0	1.0	100.0	0		
vb170209.chw	ICD0-130.mtw	AK23-53 K144-03 DF=2	53	1.0	2.0	1.0	100.0	0		
vb170226.chw	ICD0-130.mtw	AK23-54 K134-04 DF=500	54	1.0	500.0	1.0	100.0	0		
vb170242.chw	ICD0-130.mtw	AK23-55 K134-05 DF=500	55	1.0	500.0	1.0	100.0	0		
vb170258.chw	ICD0-130.mtw	AK23-56 K142-03 DF=5	56	1.0	5.0	1.0	100.0	0		
vb170314.chw	ICD0-130.mtw	AK23-57 K142-03D DF=5	57	1.0	5.0	1.0	100.0	0		

FINAL

JC 11/17/11

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vh170336.chw	ICD0-130.mtw	AK23-58	K142-03M DF=5	58	1.0	5.0	1.0	100.0	0	
vh170346.chw	ICD0-130.mtw	AK23-59	K142-03S DF=5	59	1.0	5.0	1.0	100.0	0	
vh170403.chw	ICD0-130.mtw	AK23-60	K142-04 DF=5	60	1.0	5.0	1.0	100.0	0	
vh170419.chw	ICD0-130.mtw	AK23-61	CCV465	61	1.0	1.0	1.0	100.0	0	
vh170435.chw	ICD0-130.mtw	AK23-62	CCB465	62	1.0	1.0	1.0	100.0	0	
vh170451.chw	ICD0-130.mtw	AK23-63	K123-01 DF=5	63	1.0	5.0	1.0	100.0	0	
vh170507.chw	ICD0-130.mtw	AK23-64	K123-03 DF=5	64	1.0	5.0	1.0	100.0	0	
vh170522.chw	ICD0-130.mtw	AK23-65	K123-04 DF=5	65	1.0	5.0	1.0	100.0	0	
vh170546.chw	ICD0-130.mtw	AK23-66	K125-05 DF=5	66	1.0	5.0	1.0	100.0	0	
vh170556.chw	ICD0-130.mtw	AK23-67	K132-02 DF=20	67	1.0	20.0	1.0	100.0	0	
vh170612.chw	ICD0-130.mtw	AK23-68	K132-02D DF=20	68	1.0	20.0	1.0	100.0	0	
vh170628.chw	ICD0-130.mtw	AK23-69	K132-02M DF=20	69	1.0	20.0	1.0	100.0	0	
vh170644.chw	ICD0-130.mtw	AK23-70	K132-02S DF=20	70	1.0	20.0	1.0	100.0	0	FINAL
vh170700.chw	ICD0-130.mtw	AK23-71	K132-03 DF=10	71	1.0	10.0	1.0	100.0	0	
vh170717.chw	ICD0-130.mtw	AK23-72	K132-04 DF=10	72	1.0	10.0	1.0	100.0	0	
vh170733.chw	ICD0-130.mtw	AK23-73	CCV467	73	1.0	1.0	1.0	100.0	0	
vh170749.chw	ICD0-130.mtw	AK23-74	CCB467	74	1.0	1.0	1.0	100.0	0	

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AD0-032

Instrument No.: D0

Pipette ID's: 039380124

SW8A-02-12

SW8A-02-13

Balance ID#: 40706360

Analytical Sequence: AK27

Method File: ICD0-I30.mtw

Analytical Batch: ICK067W ; ICK069W
ICK071W

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	→
ICV	—
CCV	SI18-17-92-01
LCS	SI18-17-92-02
MS	SCP Refer to LCS Parent ID

Column: Metrosep A Supp 5-100 Filter 0.45 µm: 21787469

Flow Rate: 0.70 ml/min 0.2 µm: 21772726

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 11/18/11

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb181251.chw	ICD0-I30.mtw	AK27-01 CCV489	1	1.0	1.0	1.0	100.0	0		
vb181308.chw	ICD0-I30.mtw	AK27-02 CCB489	2	1.0	1.0	1.0	100.0	0		
vb181324.chw	ICD0-I30.mtw	AK27-03 ICK067WB	3	1.0	1.0	1.0	100.0	0		
vb181340.chw	ICD0-I30.mtw	AK27-04 ICK067WL	4	1.0	1.0	1.0	100.0	0		
vb181356.chw	ICD0-I30.mtw	AK27-05 ICK067WC	5	1.0	1.0	1.0	100.0	0		
vb181412.chw	ICD0-I30.mtw	AK27-06 K131-08 DF=200	6	1.0	200.0	1.0	100.0	0		
vb181428.chw	ICD0-I30.mtw	AK27-07 K131-09 DF=2000	7	1.0	2000.0	1.0	100.0	0		
vb181445.chw	ICD0-I30.mtw	AK27-08 K131-10 DF=2000	8	1.0	2000.0	1.0	100.0	0		
vb181501.chw	ICD0-I30.mtw	AK27-09 K131-11 DF=2000	9	1.0	2000.0	1.0	100.0	0		
vb181517.chw	ICD0-I30.mtw	AK27-10 K131-13 DF=2000	10	1.0	2000.0	1.0	100.0	0		
vb181533.chw	ICD0-I30.mtw	AK27-11 K131-14 DF=2000	11	1.0	2000.0	1.0	100.0	0		
vb181549.chw	ICD0-I30.mtw	AK27-12 K131-15 DF=2000	12	1.0	2000.0	1.0	100.0	0		
vb181605.chw	ICD0-I30.mtw	AK27-13 CCV491	13	1.0	1.0	1.0	100.0	0		
vb181622.chw	ICD0-I30.mtw	AK27-14 CCB491	14	1.0	1.0	1.0	100.0	0		
vb181638.chw	ICD0-I30.mtw	AK27-15 K131-16 DF=2000	15	1.0	2000.0	1.0	100.0	0		
vb181654.chw	ICD0-I30.mtw	AK27-16 K131-17 DF=10	16	1.0	10.0	1.0	100.0	0		
vb181710.chw	ICD0-I30.mtw	AK27-17 K131-18 DF=2000	17	1.0	2000.0	1.0	100.0	0		
vb181726.chw	ICD0-I30.mtw	AK27-18 K131-19 DF=2000	18	1.0	2000.0	1.0	100.0	0		
vb181742.chw	ICD0-I30.mtw	AK27-19 K116-02 DF=5	19	1.0	5.0	1.0	100.0	0		
vb181759.chw	ICD0-I30.mtw	AK27-20 K116-02 DF=100	20	1.0	100.0	1.0	100.0	0		
vb181815.chw	ICD0-I30.mtw	AK27-21 K116-04 DF=20	21	1.0	20.0	1.0	100.0	0		
vb181831.chw	ICD0-I30.mtw	AK27-22 K116-04D DF=20	22	1.0	20.0	1.0	100.0	0		
vb181847.chw	ICD0-I30.mtw	AK27-23 K116-04M DF=20	23	1.0	20.0	1.0	100.0	0		
vb181903.chw	ICD0-I30.mtw	AK27-24 K116-04S DF=20	24	1.0	20.0	1.0	100.0	0		
vb181919.chw	ICD0-I30.mtw	AK27-25 CCV493	25	1.0	1.0	1.0	100.0	0		
vb181936.chw	ICD0-I30.mtw	AK27-26 CCB493	26	1.0	1.0	1.0	100.0	0		
vb181952.chw	ICD0-I30.mtw	AK27-27 K116-06 DF=100	27	1.0	100.0	1.0	100.0	0		
vb182008.chw	ICD0-I30.mtw	AK27-28 K116-07 DF=100	28	1.0	100.0	1.0	100.0	0		
vb182024.chw	ICD0-I30.mtw	AK27-29 K166-01 DF=10	29	1.0	10.0	1.0	100.0	0		
vb182040.chw	ICD0-I30.mtw	AK27-30 K166-02 DF=10	30	1.0	10.0	1.0	100.0	0		
vb182056.chw	ICD0-I30.mtw	AK27-31 K166-03 DF=5	31	1.0	5.0	1.0	100.0	0		
vb182112.chw	ICD0-I30.mtw	AK27-32 K166-04 DF=5	32	1.0	5.0	1.0	100.0	0		
vb182129.chw	ICD0-I30.mtw	AK27-33 RINSE	33	1.0	1.0	1.0	100.0	0		
vb182145.chw	ICD0-I30.mtw	AK27-34 CCV495	34	1.0	1.0	1.0	100.0	0		
vb182201.chw	ICD0-I30.mtw	AK27-35 CCB495	35	1.0	1.0	1.0	100.0	0		
vb182217.chw	ICD0-I30.mtw	AK27-36 ICK069WB	36	1.0	1.0	1.0	100.0	0		
vb182233.chw	ICD0-I30.mtw	AK27-37 ICK069WL	37	1.0	1.0	1.0	100.0	0		
vb182249.chw	ICD0-I30.mtw	AK27-38 ICK069WC	38	1.0	1.0	1.0	100.0	0		
vb182306.chw	ICD0-I30.mtw	AK27-39 K146-02 DF=1000	39	1.0	1000.0	1.0	100.0	0		
vb182322.chw	ICD0-I30.mtw	AK27-40 K146-03 DF=200	40	1.0	200.0	1.0	100.0	0		
vb182338.chw	ICD0-I30.mtw	AK27-41 K146-04 DF=100	41	1.0	100.0	1.0	100.0	0		
vb182354.chw	ICD0-I30.mtw	AK27-42 K146-05 DF=100	42	1.0	100.0	1.0	100.0	0		
vb190010.chw	ICD0-I30.mtw	AK27-43 K146-06 DF=100	43	1.0	100.0	1.0	100.0	0		
vb190026.chw	ICD0-I30.mtw	AK27-44 K174-01 DF=400	44	1.0	400.0	1.0	100.0	0		
vb190043.chw	ICD0-I30.mtw	AK27-45 K174-07 DF=400	45	1.0	400.0	1.0	100.0	0		
vb190059.chw	ICD0-I30.mtw	AK27-46 CCV497	46	1.0	1.0	1.0	100.0	0		FINAL
vb190115.chw	ICD0-I30.mtw	AK27-47 CCB497	47	1.0	1.0	1.0	100.0	0		
vb190131.chw	ICD0-I30.mtw	AK27-48 K153-01 DF=5	48	1.0	5.0	1.0	100.0	0		
vb190147.chw	ICD0-I30.mtw	AK27-49 K153-01 DF=20	49	1.0	20.0	1.0	100.0	0		
vb190203.chw	ICD0-I30.mtw	AK27-50 K153-02 DF=5	50	1.0	5.0	1.0	100.0	0		
vb190220.chw	ICD0-I30.mtw	AK27-51 K153-03 DF=5	51	1.0	5.0	1.0	100.0	0		
vb190236.chw	ICD0-I30.mtw	AK27-52 K153-04 DF=10	52	1.0	10.0	1.0	100.0	0		
vb190252.chw	ICD0-I30.mtw	AK27-53 K153-05 DF=5	53	1.0	5.0	1.0	100.0	0		
vb190308.chw	ICD0-I30.mtw	AK27-54 K153-06 DF=10	54	1.0	10.0	1.0	100.0	0		
vb190324.chw	ICD0-I30.mtw	AK27-55 K153-07 DF=10	55	1.0	10.0	1.0	100.0	0		
vb190340.chw	ICD0-I30.mtw	AK27-56 K179-01 DF=5	56	1.0	5.0	1.0	100.0	0		
vb190357.chw	ICD0-I30.mtw	AK27-57 K179-03 DF=10	57	1.0	10.0	1.0	100.0	0		

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File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb190413.chw	ICD0-130.mtw	AK27-58 CCV499	58	1.0	1.0	1.0	100.0	0		
vb190429.chw	ICD0-130.mtw	AK27-59 CCB499	59	1.0	1.0	1.0	100.0	0		
vb190445.chw	ICD0-130.mtw	AK27-60 K144-01 DF=40	60	1.0	40.0	1.0	100.0	0		
vb190501.chw	ICD0-130.mtw	AK27-61 K144-01D DF=40	61	1.0	40.0	1.0	100.0	0		
vb190517.chw	ICD0-130.mtw	AK27-62 K144-01M DF=40	62	1.0	40.0	1.0	100.0	0		
vb190534.chw	ICD0-130.mtw	AK27-63 K144-01S DF=40	63	1.0	40.0	1.0	100.0	0		
vb190550.chw	ICD0-130.mtw	AK27-64 K144-02 DF=10	64	1.0	10.0	1.0	100.0	0		
vb190606.chw	ICD0-130.mtw	AK27-65 K144-03 DF=10	65	1.0	10.0	1.0	100.0	0		
vb190622.chw	ICD0-130.mtw	AK27-66 RINSE	66	1.0	1.0	1.0	100.0	0		
vb190638.chw	ICD0-130.mtw	AK27-67 CCV501	67	1.0	1.0	1.0	100.0	0		
vb190654.chw	ICD0-130.mtw	AK27-68 CCB501	68	1.0	1.0	1.0	100.0	0		
vb190711.chw	ICD0-130.mtw	AK27-69 ICK071WB	69	1.0	1.0	1.0	100.0	0		
vb190727.chw	ICD0-130.mtw	AK27-70 ICK071WL	70	1.0	1.0	1.0	100.0	0		
vb190743.chw	ICD0-130.mtw	AK27-71 ICK071WC	71	1.0	1.0	1.0	100.0	0		
vb190759.chw	ICD0-130.mtw	AK27-72 K184-01	72	1.0	1.0	1.0	100.0	0		
vb190815.chw	ICD0-130.mtw	AK27-73 K184-02	73	1.0	1.0	1.0	100.0	0		
vb190831.chw	ICD0-130.mtw	AK27-74 K184-03	74	1.0	1.0	1.0	100.0	0		
vb190848.chw	ICD0-130.mtw	AK27-75 K184-04	75	1.0	1.0	1.0	100.0	0		
vb190904.chw	ICD0-130.mtw	AK27-76 K184-05 DF=10	76	1.0	10.0	1.0	100.0	0		
vb190920.chw	ICD0-130.mtw	AK27-77 K184-05 DF=20	77	1.0	20.0	1.0	100.0	0		
vb190936.chw	ICD0-130.mtw	AK27-78 RINSE	78	1.0	1.0	1.0	100.0	0		
vb190952.chw	ICD0-130.mtw	AK27-79 CCV503	79	1.0	1.0	1.0	100.0	0		
vb191008.chw	ICD0-130.mtw	AK27-80 CCB503	80	1.0	1.0	1.0	100.0	0		
vb191025.chw	ICD0-130.mtw	AK27-81 K184-01 DF=5	81	1.0	5.0	1.0	100.0	0		
vb191041.chw	ICD0-130.mtw	AK27-82 K184-02 DF=10	82	1.0	10.0	1.0	100.0	0		
vb191057.chw	ICD0-130.mtw	AK27-83 K184-03 DF=5	83	1.0	5.0	1.0	100.0	0		
vb191113.chw	ICD0-130.mtw	AK27-84 K184-04 DF=10	84	1.0	10.0	1.0	100.0	0		
vb191129.chw	ICD0-130.mtw	AK27-85 K133-01 DF=1000	85	1.0	1000.0	1.0	100.0	0		
vb191145.chw	ICD0-130.mtw	AK27-86 K133-01D DF=1000	86	1.0	1000.0	1.0	100.0	0		
vb191201.chw	ICD0-130.mtw	AK27-87 K133-01M DF=1000	87	1.0	1000.0	1.0	100.0	0		
vb191218.chw	ICD0-130.mtw	AK27-88 K133-01S DF=1000	88	1.0	1000.0	1.0	100.0	0		
vb191234.chw	ICD0-130.mtw	AK27-89 K133-02 DF=100	89	1.0	100.0	1.0	100.0	0		
vb191250.chw	ICD0-130.mtw	AK27-90 K133-03 DF=1000	90	1.0	1000.0	1.0	100.0	0		
vb191306.chw	ICD0-130.mtw	AK27-91 CCV505	91	1.0	1.0	1.0	100.0	0		
vb191322.chw	ICD0-130.mtw	AK27-92 CCB505	92	1.0	1.0	1.0	100.0	0		
vb191338.chw	ICD0-130.mtw	AK27-93 K184-01 DF=10	93	1.0	10.0	1.0	100.0	0		
vb191355.chw	ICD0-130.mtw	AK27-94 K184-02 DF=20	94	1.0	20.0	1.0	100.0	0		
vb191411.chw	ICD0-130.mtw	AK27-95 K184-03 DF=10	95	1.0	10.0	1.0	100.0	0		
vb191427.chw	ICD0-130.mtw	AK27-96 K184-04 DF=20	96	1.0	20.0	1.0	100.0	0		
vb191443.chw	ICD0-130.mtw	AK27-97 K184-05 DF=40	97	1.0	40.0	1.0	100.0	0		
vb191459.chw	ICD0-130.mtw	AK27-98 K133-04 DF=500	98	1.0	500.0	1.0	100.0	0		
vb191515.chw	ICD0-130.mtw	AK27-99 K133-05 DF=100	99	1.0	100.0	1.0	100.0	0		FINAL
vb191532.chw	ICD0-130.mtw	AK27-100 ICK071WX	100	1.0	1.0	1.0	100.0	0		
vb191548.chw	ICD0-130.mtw	AK27-101 ICK071WY	101	1.0	1.0	1.0	100.0	0		
vb191604.chw	ICD0-130.mtw	AK27-102 ICK071WQ	102	1.0	1.0	1.0	100.0	0		
vb191620.chw	ICD0-130.mtw	AK27-103 CCV507	103	1.0	1.0	1.0	100.0	0		
vb191636.chw	ICD0-130.mtw	AK27-104 CCB507	104	1.0	1.0	1.0	100.0	0		

Ann 11/21/14

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K133

METHOD 300.0(M)
ORGANIC ACIDS BY IC

A total of six (6) water samples were received on 11/15/11 for Organic Acids (Acetate, Butyrate, Lactate and Propionate) by IC analysis, Method 300.0(M) in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary forms for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for OAK012WL/C were all within QC limits.
Percent recoveries for OAK014WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample was analyzed at the frequency prescribed by the project.
Percent recoveries for K133-01M/S were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. Samples K133-01 and -03 were reported from DF5 due to matrix interference (black color precipitation and strong odor).

SAMPLE RESULTS

METHOD 300.0(M)
ACETATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K133

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK012WB	ND	1	NA	1.00	0.0500	11/17/1116:07	NA	HK17003	HK17001	OAK012W	NA	NA
LCS1W	OAK012WL	19.8	1	NA	1.00	0.0500	11/17/1116:49	NA	HK17004	HK17001	OAK012W	NA	NA
LCD1W	OAK012WC	18.7	1	NA	1.00	0.0500	11/17/1117:31	NA	HK17005	HK17001	OAK012W	NA	NA
MW-70-PMW07B-131	K133-02	ND	1	NA	1.00	0.0500	11/17/1122:39	NA	HK17013	HK17007	OAK012W	11/15/1111:03	11/15/11
MW-70-PMW08A-133	K133-04	ND	1	NA	1.00	0.0500	11/18/1100:43	NA	HK17017	HK17015	OAK012W	11/15/1113:19	11/15/11
MW-70-PMW08B-134	K133-05	ND	1	NA	1.00	0.0500	11/18/1101:24	NA	HK17018	HK17015	OAK012W	11/15/1114:18	11/15/11
MW-70-MNA10-135	K133-06	ND	1	NA	1.00	0.0500	11/18/1102:05	NA	HK17019	HK17015	OAK012W	11/15/1115:19	11/15/11
MBLK2W	OAK014WB	ND	1	NA	1.00	0.0500	11/18/1110:20	NA	HK18003	HK18001	OAK014W	NA	NA
LCS2W	OAK014WL	19.1	1	NA	1.00	0.0500	11/18/1110:41	NA	HK18004	HK18001	OAK014W	NA	NA
LCD2W	OAK014WC	18.9	1	NA	1.00	0.0500	11/18/1111:02	NA	HK18005	HK18001	OAK014W	NA	NA
IW-70-FSB216-132	K133-03	ND	5	NA	5.00	0.250	11/18/1111:23	NA	HK18006	HK18001	OAK014W	11/15/1112:03	11/15/11
MW-70-PMW07A-130MS	K133-01M	46.2	5	NA	5.00	0.250	11/18/1114:06	NA	HK18009	HK18001	OAK014W	11/15/1109:47	11/15/11
MW-70-PMW07A-130MSD	K133-01S	44.9	5	NA	5.00	0.250	11/18/1115:06	NA	HK18010	HK18001	OAK014W	11/15/1109:47	11/15/11
MW-70-PMW07A-130	K133-01R	ND	5	NA	5.00	0.250	11/18/1116:07	NA	HK18011	HK18001	OAK014W	11/15/1109:47	11/15/11

METHOD 300.0(M)
BUTYRATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K133

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK012WB	ND	1	NA	1.00	0.0500	11/17/1116:07	NA	HK17003	HK17001	OAK012W	NA	NA
LCS1W	OAK012WL	18.7	1	NA	1.00	0.0500	11/17/1116:49	NA	HK17004	HK17001	OAK012W	NA	NA
LCD1W	OAK012WC	18.4	1	NA	1.00	0.0500	11/17/1117:31	NA	HK17005	HK17001	OAK012W	NA	NA
MW-70-PMW07B-131	K133-02	ND	1	NA	1.00	0.0500	11/17/1122:39	NA	HK17013	HK17007	OAK012W	11/15/1111:03	11/15/11
MW-70-PMW08A-133	K133-04	ND	1	NA	1.00	0.0500	11/18/1100:43	NA	HK17017	HK17015	OAK012W	11/15/1113:19	11/15/11
MW-70-PMW08B-134	K133-05	ND	1	NA	1.00	0.0500	11/18/1101:24	NA	HK17018	HK17015	OAK012W	11/15/1114:18	11/15/11
MW-70-MNA10-135	K133-06	ND	1	NA	1.00	0.0500	11/18/1102:05	NA	HK17019	HK17015	OAK012W	11/15/1115:19	11/15/11
MBLK2W	OAK014WB	ND	1	NA	1.00	0.0500	11/18/1110:20	NA	HK18003	HK18001	OAK014W	NA	NA
LCS2W	OAK014WL	18.8	1	NA	1.00	0.0500	11/18/1110:41	NA	HK18004	HK18001	OAK014W	NA	NA
LCD2W	OAK014WC	21.0	1	NA	1.00	0.0500	11/18/1111:02	NA	HK18005	HK18001	OAK014W	NA	NA
IW-70-FSB216-132	K133-03	ND	5	NA	5.00	0.250	11/18/1111:23	NA	HK18006	HK18001	OAK014W	11/15/1112:03	11/15/11
MW-70-PMW07A-130MS	K133-01M	45.2	5	NA	5.00	0.250	11/18/1114:06	NA	HK18009	HK18001	OAK014W	11/15/1109:47	11/15/11
MW-70-PMW07A-130MSD	K133-01S	50.6	5	NA	5.00	0.250	11/18/1115:06	NA	HK18010	HK18001	OAK014W	11/15/1109:47	11/15/11
MW-70-PMW07A-130	K133-01R	ND	5	NA	5.00	0.250	11/18/1116:07	NA	HK18011	HK18001	OAK014W	11/15/1109:47	11/15/11

METHOD 300.0(M)
LACTATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K133

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK012WB	ND	1	NA	1.00	0.0500	11/17/1116:07	NA	HK17003	HK17001	OAK012W	NA	NA
LCS1W	OAK012WL	19.7	1	NA	1.00	0.0500	11/17/1116:49	NA	HK17004	HK17001	OAK012W	NA	NA
LCD1W	OAK012WC	19.1	1	NA	1.00	0.0500	11/17/1117:31	NA	HK17005	HK17001	OAK012W	NA	NA
MW-70-PMW07B-131	K133-02	ND	1	NA	1.00	0.0500	11/17/1122:39	NA	HK17013	HK17007	OAK012W	11/15/1111:03	11/15/11
MW-70-PMW08A-133	K133-04	ND	1	NA	1.00	0.0500	11/18/1100:43	NA	HK17017	HK17015	OAK012W	11/15/1113:19	11/15/11
MW-70-PMW08B-134	K133-05	ND	1	NA	1.00	0.0500	11/18/1101:24	NA	HK17018	HK17015	OAK012W	11/15/1114:18	11/15/11
MW-70-MNA10-135	K133-06	ND	1	NA	1.00	0.0500	11/18/1102:05	NA	HK17019	HK17015	OAK012W	11/15/1115:19	11/15/11
MBLK2W	OAK014WB	ND	1	NA	1.00	0.0500	11/18/1110:20	NA	HK18003	HK18001	OAK014W	NA	NA
LCS2W	OAK014WL	19.3	1	NA	1.00	0.0500	11/18/1110:41	NA	HK18004	HK18001	OAK014W	NA	NA
LCD2W	OAK014WC	19.2	1	NA	1.00	0.0500	11/18/1111:02	NA	HK18005	HK18001	OAK014W	NA	NA
IW-70-FSB216-132	K133-03	ND	5	NA	5.00	0.250	11/18/1111:23	NA	HK18006	HK18001	OAK014W	11/15/1112:03	11/15/11
MW-70-PMW07A-130MS	K133-01M	49.4	5	NA	5.00	0.250	11/18/1114:06	NA	HK18009	HK18001	OAK014W	11/15/1109:47	11/15/11
MW-70-PMW07A-130MSD	K133-01S	45.1	5	NA	5.00	0.250	11/18/1115:06	NA	HK18010	HK18001	OAK014W	11/15/1109:47	11/15/11
MW-70-PMW07A-130	K133-01R	ND	5	NA	5.00	0.250	11/18/1116:07	NA	HK18011	HK18001	OAK014W	11/15/1109:47	11/15/11

METHOD 300.0(M)
PROPIONATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K133

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK012WB	ND	1	NA	1.00	0.0500	11/17/1116:07	NA	HK17003	HK17001	OAK012W	NA	NA
LCS1W	OAK012WL	19.5	1	NA	1.00	0.0500	11/17/1116:49	NA	HK17004	HK17001	OAK012W	NA	NA
LCD1W	OAK012WC	18.8	1	NA	1.00	0.0500	11/17/1117:31	NA	HK17005	HK17001	OAK012W	NA	NA
MW-70-PMW07B-131	K133-02	ND	1	NA	1.00	0.0500	11/17/1122:39	NA	HK17013	HK17007	OAK012W	11/15/1111:03	11/15/11
MW-70-PMW08A-133	K133-04	ND	1	NA	1.00	0.0500	11/18/1100:43	NA	HK17017	HK17015	OAK012W	11/15/1113:19	11/15/11
MW-70-PMW08B-134	K133-05	ND	1	NA	1.00	0.0500	11/18/1101:24	NA	HK17018	HK17015	OAK012W	11/15/1114:18	11/15/11
MW-70-MNA10-135	K133-06	ND	1	NA	1.00	0.0500	11/18/1102:05	NA	HK17019	HK17015	OAK012W	11/15/1115:19	11/15/11
MBLK2W	OAK014WB	ND	1	NA	1.00	0.0500	11/18/1110:20	NA	HK18003	HK18001	OAK014W	NA	NA
LCS2W	OAK014WL	19.0	1	NA	1.00	0.0500	11/18/1110:41	NA	HK18004	HK18001	OAK014W	NA	NA
LCD2W	OAK014WC	19.0	1	NA	1.00	0.0500	11/18/1111:02	NA	HK18005	HK18001	OAK014W	NA	NA
1W-70-FSB216-132	K133-03	ND	5	NA	5.00	0.250	11/18/1111:23	NA	HK18006	HK18001	OAK014W	11/15/1112:03	11/15/11
MW-70-PMW07A-130MS	K133-01M	49.1	5	NA	5.00	0.250	11/18/1114:06	NA	HK18009	HK18001	OAK014W	11/15/1109:47	11/15/11
MW-70-PMW07A-130MSD	K133-01S	52.3	5	NA	5.00	0.250	11/18/1115:06	NA	HK18010	HK18001	OAK014W	11/15/1109:47	11/15/11
MW-70-PMW07A-130	K133-01R	ND	5	NA	5.00	0.250	11/18/1116:07	NA	HK18011	HK18001	OAK014W	11/15/1109:47	11/15/11

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK012WB	OAK012WL	OAK012WC		
LAB FILE ID:	HK17003	HK17004	HK17005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/17/1116:07	11/17/1116:49	11/17/1117:31	DATE RECEIVED:	NA
PREP. BATCH:	OAK012W	OAK012W	OAK012W		
CALIB. REF:	HK17001	HK17001	HK17001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	19.8	99	20.0	18.7	94	6	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0(M)

==========

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	OAK014WB	OAK014WL	OAK014WC		
LAB FILE ID:	HK18003	HK18004	HK18005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1110:20	11/18/1110:41	11/18/1111:02	DATE RECEIVED:	NA
PREP. BATCH:	OAK014W	OAK014W	OAK014W		
CALIB. REF:	HK18001	HK18001	HK18001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	19.1	96	20.0	18.9	94	1	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	5	5	5		
SAMPLE ID:	MW-70-PMW07A-130				
LAB SAMP ID:	K133-01R	K133-01M	K133-01S		
LAB FILE ID:	HK18011	HK18009	HK18010		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/15/11 09:47
DATE ANALYZED:	11/18/1116:07	11/18/1114:06	11/18/1115:06	DATE RECEIVED:	11/15/11
PREP. BATCH:	OAK014W	OAK014W	OAK014W		
CALIB. REF:	HK18001	HK18001	HK18001		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	50.0	46.2	92	50.0	44.9	90	3	75-125	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK012WB	OAK012WL	OAK012WC		
LAB FILE ID:	HK17003	HK17004	HK17005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/17/1116:07	11/17/1116:49	11/17/1117:31	DATE RECEIVED:	NA
PREP. BATCH:	OAK012W	OAK012W	OAK012W		
CALIB. REF:	HK17001	HK17001	HK17001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	20.0	18.7	94	20.0	18.4	92	2	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	OAK014WB	OAK014WL	OAK014WC		
LAB FILE ID:	HK18003	HK18004	HK18005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1110:20	11/18/1110:41	11/18/1111:02	DATE RECEIVED:	NA
PREP. BATCH:	OAK014W	OAK014W	OAK014W		
CALIB. REF:	HK18001	HK18001	HK18001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	20.0	18.8	94	20.0	21.0	105	11	90-110	20

0053

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0(M)

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	5	5	5		
SAMPLE ID:	MW-70-PMW07A-130				
LAB SAMP ID:	K133-01R	K133-01M	K133-01S		
LAB FILE ID:	HK18011	HK18009	HK18010		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/15/11 09:47
DATE ANALYZED:	11/18/1116:07	11/18/1114:06	11/18/1115:06	DATE RECEIVED:	11/15/11
PREP. BATCH:	OAK014W	OAK014W	OAK014W		
CALIB. REF:	HK18001	HK18001	HK18001		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	50.0	45.2	90	50.0	50.6	101	11	75-125	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK012WB	OAK012WL	OAK012WC		
LAB FILE ID:	HK17003	HK17004	HK17005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/17/1116:07	11/17/1116:49	11/17/1117:31	DATE RECEIVED:	NA
PREP. BATCH:	OAK012W	OAK012W	OAK012W		
CALIB. REF:	HK17001	HK17001	HK17001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	20.0	19.7	98	20.0	19.1	96	3	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	OAK014WB	OAK014WL	OAK014WC		
LAB FILE ID:	HK18003	HK18004	HK18005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1110:20	11/18/1110:41	11/18/1111:02	DATE RECEIVED:	NA
PREP. BATCH:	OAK014W	OAK014W	OAK014W		
CALIB. REF:	HK18001	HK18001	HK18001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	20.0	19.3	96	20.0	19.2	96	1	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	5	5	5		
SAMPLE ID:	MW-70-PMW07A-130				
LAB SAMP ID:	K133-01R	K133-01M	K133-01S		
LAB FILE ID:	HK18011	HK18009	HK18010		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/15/11 09:47
DATE ANALYZED:	11/18/1116:07	11/18/1114:06	11/18/1115:06	DATE RECEIVED:	11/15/11
PREP. BATCH:	OAK014W	OAK014W	OAK014W		
CALIB. REF:	HK18001	HK18001	HK18001		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	50.0	49.4	99	50.0	45.1	90	9	75-125	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK012WB	OAK012WL	OAK012WC		
LAB FILE ID:	HK17003	HK17004	HK17005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/17/1116:07	11/17/1116:49	11/17/1117:31	DATE RECEIVED:	NA
PREP. BATCH:	OAK012W	OAK012W	OAK012W		
CALIB. REF:	HK17001	HK17001	HK17001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	20.0	19.5	98	20.0	18.8	94	4	90-110	20

8958

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	OAK014WB	OAK014WL	OAK014WC		
LAB FILE ID:	HK18003	HK18004	HK18005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1110:20	11/18/1110:41	11/18/1111:02	DATE RECEIVED:	NA
PREP. BATCH:	OAK014W	OAK014W	OAK014W		
CALIB. REF:	HK18001	HK18001	HK18001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	20.0	19.0	95	20.0	19.0	95	0	90-110	20

8959

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 300.0(M)

==========

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	5	5	5		
SAMPLE ID:	MW-70-PMW07A-130				
LAB SAMP ID:	K133-01R	K133-01M	K133-01S		
LAB FILE ID:	HK18011	HK18009	HK18010		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/15/11 09:47
DATE ANALYZED:	11/18/1116:07	11/18/1114:06	11/18/1115:06	DATE RECEIVED:	11/15/11
PREP. BATCH:	OAK014W	OAK014W	OAK014W		
CALIB. REF:	HK18001	HK18001	HK18001		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	50.0	49.1	98	50.0	52.3	105	6	75-125	20

INITIAL CALIBRATIONS

IC SEQ FORM/HK15(2011)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
HK15001	IB	ABLPY	OAD6K15	11/15/1117:34	1
HK15002	S-0	ABLPY	OAD6K15	11/15/1117:55	1
HK15003	S-1	ABLPY	OAD6K15	11/15/1118:16	1
HK15004	S-2	ABLPY	OAD6K15	11/15/1118:37	1
HK15005	S-3	ABLPY	OAD6K15	11/15/1118:58	1
HK15006	S-4	ABLPY	OAD6K15	11/15/1119:19	1
HK15007	S-5	ABLPY	OAD6K15	11/15/1119:40	1
HK15008	ICV	ABLPY	OAD6K15	11/15/1120:01	1
HK15009	ICB	ABLPY	OAD6K15	11/15/1120:22	1
HK15010	CCV2	ABLPY	OAD6K15	11/15/1123:52	1
HK15011	CCB2	ABLPY	OAD6K15	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	OAD6K15	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	OAD6K15	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	OAD6K15	11/16/1101:15	1
HK15015	K101-01	ABLPY	OAD6K15	11/16/1101:36	1
HK15016	K101-02	ABLPY	OAD6K15	11/16/1102:17	1
HK15017	K101-03	ABLPY	OAD6K15	11/16/1102:58	1
HK15018	K101-04	ABLPY	OAD6K15	11/16/1103:39	1
HK15019	K101-05	ABLPY	OAD6K15	11/16/1104:20	1
HK15020	K101-05M	ABLPY	OAD6K15	11/16/1105:01	1
HK15021	K101-05S	ABLPY	OAD6K15	11/16/1105:42	1
HK15022	CCV4	ABLPY	OAD6K15	11/16/1106:23	1
HK15023	CCB4	ABLPY	OAD6K15	11/16/1106:44	1
HK15024	K084-01	ABLPY	OAD6K15	11/16/1107:05	1
HK15025	K084-02	ABLPY	OAD6K15	11/16/1107:46	1
HK15026	K084-03	ABLPY	OAD6K15	11/16/1108:26	1
HK15027	K084-04	ABLPY	OAD6K15	11/16/1109:10	1
HK15028	CCV6	ABLPY	OAD6K15	11/16/1111:30	1
HK15029	CCB6	ABLPY	OAD6K15	11/16/1112:32	1
HK15030	K084-05	ABLPY	OAD6K15	11/16/1112:53	1
HK15031	K084-06	ABLPY	OAD6K15	11/16/1113:34	1
HK15032	K035-01	*BLPY	OAD6K15	11/16/1114:15	5
HK15033	K035-01A	*BLPY	OAD6K15	11/16/1114:55	5
HK15034	CCV8	ABLPY	OAD6K15	11/16/1115:36	1
HK15035	CCB8	ABLPY	OAD6K15	11/16/1115:57	1

AJ
11/29/11

No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square	Offset	Slope	Curve
1	4.88	LACTATE	0LOff	5	1.0000	-0.000198	0.0443	0.0000
2	5.21	ACETATE	0LOff	5	0.9997	0.000068	0.0569	0.0000
3	6.00	PROPIONA⁻	0LOff	5	0.9998	-0.000209	0.0394	0.0000
4	7.42	BUTYRATE	0LOff	5	0.9999	-0.000584	0.0313	0.0000
5	8.93	PYRUVATE	0LOff	5	0.9999	-0.000755	0.0518	0.0000
Average:					n.a.	n.a.	n.a.	0.0000

$$\text{conc} = \frac{\text{area} - \text{offset}}{\text{slope}}$$

AS
11/29/11

SECOND SOURCE VERIFICATION

IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK15001	IB	ABLPY	ND	ND	ND	ND	ND	11/15/1117:34	1
HK15002	S-0	ABLPY	ND	ND	ND	ND	ND	11/15/1117:55	1
HK15003	S-1	ABLPY	.083	.101	.104	.096	.103	11/15/1118:16	1
HK15004	S-2	ABLPY	.401	.385	.396	.382	.395	11/15/1118:37	1
HK15005	S-3	ABLPY	1.01	.996	.993	1.01	.984	11/15/1118:58	1
HK15006	S-4	ABLPY	2.028	1.987	1.999	2.023	1.992	11/15/1119:19	1
HK15007	S-5	ABLPY	2.978	3.012	3.003	2.984	3.011	11/15/1119:40	1
HK15008	ICV	ABLPY	103%	96.8%	99.5%	104%	97.7%	11/15/1120:01	1
HK15009	ICB	ABLPY	ND	ND	ND	ND	ND	11/15/1120:22	1
HK15010	CCV2	ABLPY	103%	103%	101%	104%	93.9%	11/15/1123:52	1
HK15011	CCB2	ABLPY	ND	ND	ND	ND	ND	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	ND	ND	ND	ND	ND	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	2.07	2.1	2.02	2	1.96	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	2.07	2.02	2.04	2.1	1.95	11/16/1101:15	1
HK15015	K101-01	ABLPY	ND	ND	ND	ND	ND	11/16/1101:36	1
HK15016	K101-02	ABLPY	ND	ND	ND	ND	ND	11/16/1102:17	1
HK15017	K101-03	ABLPY	ND	ND	ND	ND	ND	11/16/1102:58	1
HK15018	K101-04	ABLPY	ND	ND	ND	ND	ND	11/16/1103:39	1
HK15019	K101-05	ABLPY	ND	ND	ND	ND	ND	11/16/1104:20	1
HK15020	K101-05M	ABLPY	.83	.826	.959	.922	.904	11/16/1105:01	1
HK15021	K101-05S	ABLPY	.878	.826	.985	1.01	.882	11/16/1105:42	1
HK15022	CCV4	ABLPY	101%	103%	99.3%	99.1%	92.6%	11/16/1106:23	1
HK15023	CCB4	ABLPY	ND	ND	ND	ND	ND	11/16/1106:44	1
HK15024	K084-01	ABLPY	ND	ND	ND	ND	ND	11/16/1107:05	1
HK15025	K084-02	ABLPY	ND	ND	ND	ND	ND	11/16/1107:46	1
HK15026	K084-03	ABLPY	ND	ND	ND	ND	ND	11/16/1108:26	1
HK15027	K084-04	ABLPY	ND	ND	ND	ND	ND	11/16/1109:10	1
HK15028	CCV6	ABLPY	101%	90.7%	99.7%	103%	92.5%	11/16/1111:30	1
HK15029	CCB6	ABLPY	ND	ND	ND	ND	ND	11/16/1112:32	1
HK15030	K084-05	ABLPY	ND	ND	ND	ND	ND	11/16/1112:53	1
HK15031	K084-06	ABLPY	ND	ND	ND	ND	ND	11/16/1113:34	1
HK15032	K035-01	*BLPY	28.1E	ND	ND	1.13	ND	11/16/1114:15	5
HK15033	K035-01A	*BLPY	32.4E	5.38	4.35	6.28	4.73	11/16/1114:55	5
HK15034	CCV8	ABLPY	102%	97%	99.6%	109%	93.8%	11/16/1115:36	1
HK15035	CCB8	ABLPY	ND	ND	ND	ND	ND	11/16/1115:57	1

NA
11/29/11

DAILY CALIBRATIONS

IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK17001	CCV10	ABLPY	99%	95.6%	99.8%	99.1%	91.8%	11/17/1115:25	1
HK17002	CCB10	ABLPY	ND	ND	ND	ND	ND	11/17/1115:46	1
HK17003	OAK012WB	ABLPY	ND	ND	ND	ND	ND	11/17/1116:07	1
HK17004	OAK012WL	ABLPY	1.98	1.87	1.97	1.95	1.83	11/17/1116:49	1
HK17005	OAK012WC	ABLPY	1.87	1.84	1.91	1.88	1.86	11/17/1117:31	1
HK17006	K119-01	ABLPY	ND	ND	ND	ND	ND	11/17/1117:52	1
HK17007	CCV12	ABLPY	99.2%	98.4%	99.6%	100%	92.9%	11/17/1119:14	1
HK17008	CCB12	ABLPY	ND	ND	ND	ND	ND	11/17/1119:35	1
HK17009	K119-02	ABLPY	.117	ND	ND	ND	ND	11/17/1119:56	1
HK17010	K119-03	ABLPY	ND	ND	ND	ND	ND	11/17/1120:37	1
HK17011	K119-04	ABLPY	ND	ND	ND	ND	ND	11/17/1121:17	1
HK17012	K119-05	ABLPY	ND	ND	ND	ND	ND	11/17/1121:58	1
HK17013	K133-02	ABLPY	ND	ND	ND	ND	ND	11/17/1122:39	1
HK17014	K133-03	*****	ND	ND	.136	ND	ND	11/17/1123:20	1
HK17015	CCV14	ABLPY	97.9%	97.6%	98.1%	98.1%	92.5%	11/18/1100:01	1
HK17016	CCB14	ABLPY	ND	ND	ND	ND	ND	11/18/1100:22	1
HK17017	K133-04	ABLPY	ND	ND	ND	ND	ND	11/18/1100:43	1
HK17018	K133-05	ABLPY	ND	ND	ND	ND	ND	11/18/1101:24	1
HK17019	K133-06	ABLPY	ND	ND	ND	ND	ND	11/18/1102:05	1
HK17020	K133-01	*****	ND	ND	ND	ND	ND	11/18/1102:46	1
HK17021	K133-01M	*****	.919	1.17	.532	.992	.986	11/18/1103:27	1
HK17022	K133-01S	*****	1.15	1.53	.61	1.38	1.07	11/18/1104:07	1
HK17023	CCV16	ABLPY	96.2%	94.7%	98.6%	104%	92.8%	11/18/1104:48	1
HK17024	CCB16	ABLPY	ND	ND	ND	ND	ND	11/18/1105:09	1

IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK18001	CCV18	ABLPY	98.8%	97.5%	97.8%	97.8%	91.2%	11/18/1109:17	1
HK18002	CCB18	ABLPY	ND	ND	ND	ND	ND	11/18/1109:59	1
HK18003	OAK014WB	ABLPY	ND	ND	ND	ND	ND	11/18/1110:20	1
HK18004	OAK014WL	ABLPY	1.91	1.88	1.93	1.9	1.9	11/18/1110:41	1
HK18005	OAK014WC	ABLPY	1.89	2.1	1.92	1.9	1.91	11/18/1111:02	1
HK18006	K133-03	ABLPY	ND	ND	ND	ND	ND	11/18/1111:23	5
HK18007	K133-03A	ABLPY	4.43	4.41	4.82	4.68	4.69	11/18/1112:24	5
HK18008	K133-01	*****	ND	ND	ND	ND	ND	11/18/1113:05	5
HK18009	K133-01M	ABLPY	4.62	4.52	4.94	4.91	4.65	11/18/1114:06	5
HK18010	K133-01S	ABLPY	4.49	5.06	4.51	5.23	4.91	11/18/1115:06	5
HK18011	K133-01R	ABLPY	ND	ND	ND	ND	ND	11/18/1116:07	5
HK18012	CCV20	ABLPY	90.3%	104%	90.7%	94.9%	90%*	11/18/1117:08	1
HK18013	CCB20	ABLPY	ND	ND	ND	ND	ND	11/18/1117:29	1
HK18014	K146-01	ABLPY	ND	ND	ND	ND	ND	11/18/1117:50	1
HK18015	K146-02	ABLPY	.124	ND	ND	ND	ND	11/18/1118:31	1
HK18016	K146-03	ABLPY	ND	ND	ND	ND	ND	11/18/1119:12	1
HK18017	K146-04	ABLPY	ND	ND	ND	ND	ND	11/18/1119:53	1
HK18018	K146-05	ABLPY	ND	ND	ND	ND	ND	11/18/1120:34	1
HK18019	K146-06	ABLPY	ND	ND	ND	ND	ND	11/18/1121:14	1
HK18020	CCV22	ABLPY	91%	96.7%	89.7%*	94.8%	89.7%*	11/18/1121:55	1
HK18021	CCB22	ABLPY	ND	ND	ND	ND	ND	11/18/1122:16	1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-221

OAK012W : 11K119 & 11K133

- HK17.014, -.020 → -.022: Record only ; (RR) @ DF=5X due to matrix-interference, black ppt & strong odor.

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK17
Method File:	OAD6K15.met
Analytical Batch:	OAK012W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SW12A - 02 - 331
LCS	↓ 332
MS	SW12A - 02 - 327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☑ CHROMELEON	
☐	

Analyzed By: ad

Date: 11/17/11

8070

Sequence: HK17
Operator: cmadmin

Printed: 11/21/2011 5:11:21 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 33

Created: 11/17/2011 2:07:54 PM by cmadmin
Last Update: 11/21/2011 2:36:30 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK17		IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK17		S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK17		S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK17		S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK17		S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK17		S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK17		S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK17		ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK17		ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK17	001	CCV10	Unknown	100	25.0	ORG	OAD6K15	Finished	11/17/2011 3:25:34 PM	1.0000
11	HK17	002	CCB10	Unknown	99	25.0	ORG	OAD6K15	Finished	11/17/2011 3:46:33 PM	1.0000
12	HK17	003	OAK012WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/17/2011 4:07:31 PM	1.0000
13	HK17	004	OAK012WL	Unknown	96	25.0	ORG	OAD6K15	Finished	11/17/2011 4:49:29 PM	1.0000
14	HK17	005	OAK012WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/17/2011 5:31:26 PM	1.0000
15	HK17	006	K119-01	Unknown	1	25.0	ORG	OAD6K15	Finished	11/17/2011 5:52:25 PM	1.0000
16	HK17	007	CCV12	Unknown	100	25.0	ORG	OAD6K15	Finished	11/17/2011 7:14:12 PM	1.0000
17	HK17	008	CCB12	Unknown	99	25.0	ORG	OAD6K15	Finished	11/17/2011 7:35:11 PM	1.0000
18	HK17	009	K119-02	Unknown	2	25.0	ORG	OAD6K15	Finished	11/17/2011 7:56:10 PM	1.0000
19	HK17	010	K119-03	Unknown	3	25.0	ORG	OAD6K15	Finished	11/17/2011 8:37:04 PM	1.0000
20	HK17	011	K119-04	Unknown	4	25.0	ORG	OAD6K15	Finished	11/17/2011 9:17:57 PM	1.0000
21	HK17	012	K119-05	Unknown	5	25.0	ORG	OAD6K15	Finished	11/17/2011 9:58:51 PM	1.0000
22	HK17	013	K133-02	Unknown	6	25.0	ORG	OAD6K15	Finished	11/17/2011 10:39:44 PM	1.0000
23	HK17	014 *	K133-03	Unknown	7	25.0	ORG	OAD6K15	Finished	11/17/2011 11:20:38 PM	1.0000
24	HK17	015	CCV14	Unknown	100	25.0	ORG	OAD6K15	Finished	11/18/2011 12:01:32 AM	1.0000
25	HK17	016	CCB14	Unknown	99	25.0	ORG	OAD6K15	Finished	11/18/2011 12:22:31 AM	1.0000
26	HK17	017	K133-04	Unknown	8	25.0	ORG	OAD6K15	Finished	11/18/2011 12:43:30 AM	1.0000
27	HK17	018	K133-05	Unknown	9	25.0	ORG	OAD6K15	Finished	11/18/2011 1:24:23 AM	1.0000

NOTE: * : Record only ; RR @ DF=5x due to matrix-interference, black ppt & strong odor.

FINAL

8071

Sequence: HK17
Operator: cmadmin

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 33

Created: 11/17/2011 2:07:54 PM by cmadmin
Last Update: 11/21/2011 2:36:30 PM by cmadmin

No.	Sequence	Comment
1	HK17	
2	HK17	
3	HK17	
4	HK17	
5	HK17	
6	HK17	
7	HK17	
8	HK17	
9	HK17	
10	HK17	
11	HK17	
12	HK17	
13	HK17	
14	HK17	
15	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK17	
17	HK17	
18	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
23	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
24	HK17	
25	HK17	
26	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
27	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

8872

FINAL

Chromeleon © Dionex Corporation, Version 6.70 Build 1820

Sequence: HK17
Operator: cmadmin

Printed: 11/21/2011 5:11:21 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 33

Created: 11/17/2011 2:07:54 PM by cmadmin
Last Update: 11/21/2011 2:36:30 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK17	019	K133-06	Unknown	10	25.0	ORG	OAD6K15	Finished	11/18/2011 2:05:17 AM	1.0000
29	HK17	020 *	K133-01	Unknown	11	25.0	ORG	OAD6K15	Finished	11/18/2011 2:46:11 AM	1.0000
30	HK17	021 *	K133-01M	Unknown	12	25.0	ORG	OAD6K15	Finished	11/18/2011 3:27:06 AM	1.0000
31	HK17	022 *	K133-01S	Unknown	13	25.0	ORG	OAD6K15	Finished	11/18/2011 4:07:59 AM	1.0000
32	HK17	023	CCV16	Unknown	100	25.0	ORG	OAD6K15	Finished	11/18/2011 4:48:53 AM	1.0000
33	HK17	024	CCB16	Unknown	99	25.0	ORG	OAD6K15	Finished	11/18/2011 5:09:52 AM	1.0000

NOTE: * : Record only ; RR @ DF=5X due to matrix-interference, black ppt & strong odor.

FINAL

Sequence: HK17
Operator: cmadmin
Printed: 11/21/2011 5:11:21 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 33

Created: 11/17/2011 2:07:54 PM by cmadmin
Last Update: 11/21/2011 2:36:30 PM by cmadmin

No.	Sequence	Comment
28	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
29	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
30	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
31	HK17	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
32	HK17	
33	HK17	

8074

FINAL

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EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4 - 01 - 221

DAK014W ; HK133 , HK146

- HK18.008 & -.016 : Bad injection due to carry-over.
- HK18.015 : Reward only, (RR) @ DF = 5X due to matrix - interference.

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK18
Method File:	OAD6K15.met
Analytical Batch:	OAK014W.

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SW12A - 02 - 331
LCS	332
MS	327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: [illegible]

Date: 11/18/11

8075

Sequence: HK18
Operator: cmadmin

Printed: 11/21/2011 5:11:43 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 30

Created: 11/18/2011 8:44:19 AM by cmadmin
Last Update: 11/21/2011 5:09:22 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK18		IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK18		S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK18		S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK18		S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK18		S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK18		S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK18		S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK18		ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK18		ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK18	001	CCV18	Unknown	100	25.0	ORG	OAD6K15	Finished	11/18/2011 9:17:40 AM	1.0000
11	HK18	002	CCB18	Unknown	99	25.0	ORG	OAD6K15	Finished	11/18/2011 9:59:38 AM	1.0000
12	HK18	003	OAK014WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/18/2011 10:20:37 AM	1.0000
13	HK18	004	OAK014WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/18/2011 10:41:35 AM	1.0000
14	HK18	005	OAK014WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/18/2011 11:02:34 AM	1.0000
15	HK18	006	K133-03	Unknown	1	25.0	ORG	OAD6K15	Finished	11/18/2011 11:23:33 AM	5.0000
16	HK18	007	K133-03A	Unknown	2	25.0	ORG	OAD6K15	Finished	11/18/2011 12:24:21 PM	5.0000
17	HK18	008 [*]	K133-01	Unknown	3	25.0	ORG	OAD6K15	Finished	11/18/2011 1:05:15 PM	5.0000
18	HK18	009	K133-01M	Unknown	4	25.0	ORG	OAD6K15	Finished	11/18/2011 2:06:04 PM	5.0000
19	HK18	010	K133-01S	Unknown	5	25.0	ORG	OAD6K15	Finished	11/18/2011 3:06:52 PM	5.0000
20	HK18	011	K133-01R	Unknown	3	25.0	ORG	OAD6K15	Finished	11/18/2011 4:07:41 PM	5.0000
21	HK18	012	CCV20	Unknown	100	25.0	ORG	OAD6K15	Finished	11/18/2011 5:08:30 PM	1.0000
22	HK18	013	CCB20	Unknown	99	25.0	ORG	OAD6K15	Finished	11/18/2011 5:29:29 PM	1.0000
23	HK18	014	K146-01	Unknown	6	25.0	ORG	OAD6K15	Finished	11/18/2011 5:50:27 PM	1.0000
24	HK18	015 (*)	K146-02	Unknown	7	25.0	ORG	OAD6K15	Finished	11/18/2011 6:31:21 PM	1.0000
25	HK18	016 [*]	K146-03	Unknown	8	25.0	ORG	OAD6K15	Finished	11/18/2011 7:12:15 PM	1.0000
26	HK18	017	K146-04	Unknown	9	25.0	ORG	OAD6K15	Finished	11/18/2011 7:53:09 PM	1.0000
27	HK18	018	K146-05	Unknown	10	25.0	ORG	OAD6K15	Finished	11/18/2011 8:34:03 PM	1.0000

NOTE: [*]: Bad injection due to carry-over.
(*): Record only; ~~(*)~~ @ DF=5X due to matrix-interference

FINAL

8976

Sequence: HK18
Operator: cmadmin

Printed: 11/21/2011 5:11:43 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 30

Created: 11/18/2011 8:44:19 AM by cmadmin
Last Update: 11/21/2011 5:09:22 PM by cmadmin

No.	Sequence	Comment
1	HK18	
2	HK18	
3	HK18	
4	HK18	
5	HK18	
6	HK18	
7	HK18	
8	HK18	
9	HK18	
10	HK18	
11	HK18	
12	HK18	
13	HK18	
14	HK18	
15	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
16	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
17	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
18	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
19	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
20	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
21	HK18	
22	HK18	
23	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
24	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
25	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
26	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
27	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5

FINAL

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 30

Created: 11/18/2011 8:44:19 AM by cmadmin
Last Update: 11/21/2011 5:09:22 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK18	019	K146-06	Unknown	11	25.0	ORG	OAD6K15	Finished	11/18/2011 9:14:57 PM	1.0000
29	HK18	020	CCV22	Unknown	100	25.0	ORG	OAD6K15	Finished	11/18/2011 9:55:50 PM	1.0000
30	HK18	021	CCB22	Unknown	99	25.0	ORG	OAD6K15	Finished	11/18/2011 10:16:49 PM	1.0000

8078

FINAL

Sequence: HK18
Operator: cmadmin

Printed: 11/21/2011 5:11:43 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 30

Created: 11/18/2011 8:44:19 AM by cmadmin
Last Update: 11/21/2011 5:09:22 PM by cmadmin

No.	Sequence	Comment
28	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
29	HK18	
30	HK18	

8678

FINAL

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CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K133

METHOD 2320B
TOTAL ALKALINITY

A total of five (5) water samples were received on 11/15/11 for Alkalinity analysis, Method 2320B in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for ALK013WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG. However, sample duplicate was analyzed with the samples. RPD was within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2320B
TOTAL ALKALINITY

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K133

Matrix : WATER
Instrument ID : 53

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ALK013WB	ND	1	NA	5.00	5.00	11/29/1112:42	NA	ALK013-01	NA	ALK013W	NA	NA
LCS1W	ALK013WL	219	1	NA	5.00	5.00	11/29/1112:46	NA	ALK013-02	NA	ALK013W	NA	NA
LCD1W	ALK013WC	215	1	NA	5.00	5.00	11/29/1112:49	NA	ALK013-03	NA	ALK013W	NA	NA
MW-70-PMW07A-130	K133-01	380	1	NA	5.00	5.00	11/29/1112:57	NA	ALK013-04	NA	ALK013W	11/15/1109:47	11/15/11
MW-70-PMW07A-130DUP	K133-01D	380	1	NA	5.00	5.00	11/29/1113:02	NA	ALK013-05	NA	ALK013W	11/15/1109:47	11/15/11
MW-70-PMW07B-131	K133-02	244	1	NA	5.00	5.00	11/29/1113:08	NA	ALK013-06	NA	ALK013W	11/15/1111:03	11/15/11
IW-70-FSB216-132	K133-03	2010	1	NA	5.00	5.00	11/29/1114:02	NA	ALK013-07	NA	ALK013W	11/15/1112:03	11/15/11
MW-70-PMW08A-133	K133-04	326	1	NA	5.00	5.00	11/29/1114:14	NA	ALK013-08	NA	ALK013W	11/15/1113:19	11/15/11
MW-70-PMW08B-134	K133-05	294	1	NA	5.00	5.00	11/29/1114:24	NA	ALK013-09	NA	ALK013W	11/15/1114:18	11/15/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 2320B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ALK013WB	ALK013WL	ALK013WC		
LAB FILE ID:	ALK013-01	ALK013-02	ALK013-03		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/29/1112:42	11/29/1112:46	11/29/1112:49	DATE RECEIVED:	NA
PREP. BATCH:	ALK013W	ALK013W	ALK013W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Total Alkalinity	ND	230	219	95	230	215	93	2	80-120	20

8082

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 2320B

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MW-70-PMW07A-130
EMAX SAMP ID: K133-01 K133-01D
LAB FILE ID: ALK013-04 ALK013-05
DATE EXTRACTED: NA NA DATE COLLECTED: 11/15/11 09:47
DATE ANALYZED: 11/29/1112:57 11/29/1113:02 DATE RECEIVED: 11/15/11
PREP. BATCH: ALK013W ALK013W
CALIB. REF: NA NA

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Total Alkalinity	380	380	0	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ALKALINITY

Note: For samples and relevent QCs/Standards analyzed, refer to attached analytical sequence.

☒ Titration end point: pH 4.5 ± 0.04

☒ Low alkalinity: pH 4.2 ± 0.04

MS/MSD amount of spike: NA

Book#: AAL-031

Instrument No.: ☒ 53 ☐ 97 ☐ E5

Analytical Batch: ALK013

Analytical Sequence: ALK013

SOP #	Rev. #
☒ EMAX-310.1	5
☒ EMAX-2320B	3
☐ EMAX-	

Comments: Method 2320B for SDG 11K145 Samples for batch were analyzed manually even though concentrations were not too high because some of the samples have a strong odor, color, or sand.

STANDARDS ID	CONC. (mg/L)
0.02N HCL SWR1-01-338	0.02
LCS SW1-01-402	230
MS/MSD NA	NA
ICV NA	NA

pH Buffer	ID
pH 4	SW1-01-341
pH 7	-279
pH 10	-396
pH 8.0 (Check)	-347

Analyzed By: RC

Date: 11/29/11

8084

EMAX LABORATORIES, INC.

ALKALINITY RAW DATA

MISCELLANEOUS INFORMATION		
Standard	Concentration	
Acid Titrant, HCl	0.02	N
Na_2CO_3 (Z or Z_N)*	2.63	g/L
LCS	230	mg/L
MS	100	mg/L
MDL	5	mg/L
RL	5	mg/L

pH Meter Calibration			
Instrument ID:		53	
Buffer 4	4.01	11/29/11	12:32:50
Buffer 7	7.01	11/29/11	12:34:01
Buffer 10	10.04	11/29/11	12:35:35
pH Check Buffer (8)	7.96	11/29/11	12:37:04

$$N = \frac{(Z)(V_{Na2CO3})}{(53)(V_{HCl})} \qquad N = \frac{(Z_N)(V_{Na2CO3})}{(V_{HCl})}$$

* Standardization of Acid Titrant(N)
Z=g/L Na_2CO_3. If the concentration of Na_2CO_3 is in N, then Z=Z_N.

STANDARDIZATION				
V_{Na2CO3} / V_b (ml)	V_{HCl} (ml)	DATE	TIME	Acid Titrant HCl (N)
				NA
				#DIV/0!
				#DIV/0!
				#DIV/0!
			Average HCl (N)=	0.02000

☑ Acid Titrant is purchased as certified standard solution

Book #: AAL-031

Page: 4

SOP: EMAX-310.1 Rev. 3

Analytical Batch: **ALK013**

Analyzed By: RC

Data File Name	Lab Sample ID	Sample Amount (ml)	Sample pH	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Volume of Acid Titant (A) ml pH=8.3	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Volume of Acid Titant (B) ml pH=4.5	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Vol.of Acid Titant (C) ml pH=4.2	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Final pH	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	NOTES
ALK013-01	**ALK013WB**	100	6.09	11/29/11	12:40:37	NA	11/29/11	12:41:29	0.15	11/29/11	12:41:42	0.29	11/29/11	12:42:11	4.23	11/29/11	12:42:15	
ALK013-02	**ALK013WL**	10	9.03	11/29/11	12:43:55	1.3	11/29/11	12:45:01	2.19	11/29/11	12:46:12	NA	11/29/11	12:46:14	4.47	11/29/11	12:46:17	
ALK013-03	**ALK013WC**	10	9.07	11/29/11	12:47:30	1.29	11/29/11	12:48:18	2.15	11/29/11	12:48:59	NA	11/29/11	12:49:01	4.52	11/29/11	12:49:07	
ALK013-04	**K133-01**	3	7.14	11/29/11	12:53:30	NA	11/29/11	12:53:35	1.14	11/29/11	12:56:44	NA	11/29/11	12:56:46	4.5	11/29/11	12:57:14	
ALK013-05	**K133-01D**	3	7.08	11/29/11	13:00:37	NA	11/29/11	13:00:39	1.14	11/29/11	13:02:38	NA	11/29/11	13:02:40	4.47	11/29/11	13:02:42	
ALK013-06	**K133-02**	5	7.57	11/29/11	13:06:44	NA	11/29/11	13:06:47	1.22	11/29/11	13:08:34	NA	11/29/11	13:08:36	4.46	11/29/11	13:08:39	
ALK013-07	**K133-03**	1	7.07	11/29/11	13:58:52	NA	11/29/11	13:58:56	2.01	11/29/11	14:02:33	NA	11/29/11	14:02:34	4.5	11/29/11	14:02:38	
ALK013-08	**K133-04**	5	7.17	11/29/11	14:10:04	NA	11/29/11	14:10:06	1.63	11/29/11	14:14:35	NA	11/29/11	14:14:37	4.47	11/29/11	14:14:40	
ALK013-09	**K133-05**	5	7.24	11/29/11	14:22:14	NA	11/29/11	14:22:16	1.47	11/29/11	14:24:15	NA	11/29/11	14:24:18	4.5	11/29/11	14:24:21	
ALK013-10	**K145-02**	3	7.31	11/29/11	14:28:10	NA	11/29/11	14:28:12	1.31	11/29/11	14:29:43	NA	11/29/11	14:29:45	4.47	11/29/11	14:29:47	
ALK013-11	**K145-03**	3	7.34	11/29/11	14:33:40	NA	11/29/11	14:33:42	1.33	11/29/11	14:35:01	NA	11/29/11	14:35:03	4.53	11/29/11	14:35:04	
ALK013-12	**K145-04**	3	7.06	11/29/11	14:38:06	NA	11/29/11	14:38:07	1.4	11/29/11	14:39:05	NA	11/29/11	14:39:07	4.46	11/29/11	14:39:09	
ALK013-13	**K145-05**	10	7.29	11/29/11	14:42:45	NA	11/29/11	14:42:48	2.68	11/29/11	14:44:55	NA	11/29/11	14:44:57	4.47	11/29/11	14:44:59	
ALK013-14	**K145-07**	3	6.84	11/29/11	14:48:08	NA	11/29/11	14:48:10	1.59	11/29/11	14:49:47	NA	11/29/11	14:49:50	4.48	11/29/11	14:49:53	
ALK013-15	**K145-08**	2	7.09	11/29/11	14:52:42	NA	11/29/11	14:52:43	1.55	11/29/11	14:55:45	NA	11/29/11	14:55:47	4.53	11/29/11	14:55:50	
ALK013-16	**K145-08D**	2	7.02	11/29/11	14:59:40	NA	11/29/11	14:59:42	1.56	11/29/11	15:00:54	NA	11/29/11	15:00:56	4.54	11/29/11	15:00:58	
ALK013-17	**K145-09**	1	7.46	11/29/11	15:04:05	NA	11/29/11	15:04:09	1.84	11/29/11	15:08:15	NA	11/29/11	15:08:18	4.46	11/29/11	15:08:19	
ALK013-18	**K145-11**	2	8.02	11/29/11	15:14:05	NA	11/29/11	15:14:07	1.8	11/29/11	15:15:54	NA	11/29/11	15:15:57	4.48	11/29/11	15:15:59	
ALK013-19	**K145-11D**	2	7.94	11/29/11	15:19:57	NA	11/29/11	15:19:59	1.82	11/29/11	15:21:30	NA	11/29/11	15:21:34	4.48	11/29/11	15:21:36	
ALK013-20	**K145-12**	5	7.31	11/29/11	15:24:32	NA	11/29/11	15:24:34	1.51	11/29/11	15:26:41	NA	11/29/11	15:26:43	4.47	11/29/11	15:26:49	
ALK013-21	**K205-01**	2	6.72	11/29/11	15:31:48	NA	11/29/11	15:31:52	2.36	11/29/11	15:34:28	NA	11/29/11	15:34:31	4.54	11/29/11	15:34:33	
ALK013-22	**K205-01D**	2	6.67	11/29/11	15:36:39	NA	11/29/11	15:36:41	2.4	11/29/11	15:38:22	NA	11/29/11	15:38:32	4.49	11/29/11	15:39:02	
ALK013-23	**K205-02**	2	6.67	11/29/11	15:42:46	NA	11/29/11	15:42:48	1.28	11/29/11	15:45:13	NA	11/29/11	15:45:15	4.46	11/29/11	15:45:28	
ALK013-24	**K205-03**	1	7.18	11/29/11	15:48:09	NA	11/29/11	15:48:15	2.64	11/29/11	15:51:39	NA	11/29/11	15:51:55	4.51	11/29/11	15:52:00	
ALK013-25	**K188-03**	3	5.39	11/29/11	16:00:20	NA	11/29/11	16:00:21	2.01	11/29/11	16:04:10	NA	11/29/11	16:04:13	4.53	11/29/11	16:04:15	

COMMENTS:

ALKALINITY REPORT FORM

EMAX LABORATORIES, INC.

SOP: EMAX-310.1 Rev. 3 | Standardized Titrant HCl (N)= 0.02 | Book #: AAL-031

Start Date/Time: 11/29/11 12:32 | End Date/Time: 11/29/11 16:04 | Page: 4

Data File Name	Lab Sample ID	Sample Amount (ml)	Volume of Acid Titant (A) ml pH=8.3	Volume of Acid Titant (B) ml pH=4.5	Vol. of Acid Titant (C) ml pH=4.2	ALKALINITY (mg/L) TOTAL[P]	TOTAL[T]	[OH]	[CO_3]	[HCO_3]	NOTES
ALK013-01	ALK013WB	100	NA	0.15	0.29	ND	ND	ND	ND	ND	
ALK013-02	ALK013WL	10	1.3	2.19	NA	130	219	41	178	ND	
ALK013-03	ALK013WC	10	1.29	2.15	NA	129	215	43	172	ND	
ALK013-04	K133-01	3	NA	1.14	NA	ND	380	ND	ND	380	
ALK013-05	K133-01D	3	NA	1.14	NA	ND	380	ND	ND	380	
ALK013-06	K133-02	5	NA	1.22	NA	ND	244	ND	ND	244	
ALK013-07	K133-03	1	NA	2.01	NA	ND	2010	ND	ND	2010	
ALK013-08	K133-04	5	NA	1.63	NA	ND	326	ND	ND	326	
ALK013-09	K133-05	5	NA	1.47	NA	ND	294	ND	ND	294	
ALK013-10	K145-02	3	NA	1.31	NA	ND	437	ND	ND	437	
ALK013-11	K145-03	3	NA	1.33	NA	ND	443	ND	ND	443	
ALK013-12	K145-04	3	NA	1.4	NA	ND	467	ND	ND	467	
ALK013-13	K145-05	10	NA	2.68	NA	ND	268	ND	ND	268	
ALK013-14	K145-07	3	NA	1.59	NA	ND	530	ND	ND	530	
ALK013-15	K145-08	2	NA	1.55	NA	ND	775	ND	ND	775	
ALK013-16	K145-08D	2	NA	1.56	NA	ND	780	ND	ND	780	
ALK013-17	K145-09	1	NA	1.84	NA	ND	1840	ND	ND	1840	
ALK013-18	K145-11	2	NA	1.8	NA	ND	900	ND	ND	900	
ALK013-19	K145-11D	2	NA	1.82	NA	ND	910	ND	ND	910	
ALK013-20	K145-12	5	NA	1.51	NA	ND	302	ND	ND	302	
ALK013-21	K205-01	2	NA	2.36	NA	ND	1180	ND	ND	1180	
ALK013-22	K205-01D	2	NA	2.4	NA	ND	1200	ND	ND	1200	
ALK013-23	K205-02	2	NA	1.28	NA	ND	640	ND	ND	640	
ALK013-24	K205-03	1	NA	2.64	NA	ND	2640	ND	ND	2640	
ALK013-25	K188-03	3	NA	2.01	NA	ND	670	ND	ND	670	

Re 11/29/11

Analytical Batch: ALK013 Analyzed by: RC

MISCELLANEOUS INFORMATION

Standard	Concentration	
Acid Titrant, HCl	0.02	N
Na_2CO_3 (Zor Z_{25})*	2.63	g/L
LCS	230	mg/L
MS	100	mg/L
MDL	5	mg/L
RL	5	mg/L

ALKALINITY (mg/L)

$$P = \frac{(A)(N)(50,000)}{S}$$

$$T = \frac{(2B-C)(N)(50,000)}{S} \quad for\ T < 20mg/L$$

$$T = \frac{(B)(N)(50,000)}{S} \quad for\ T > 20mg/L$$

Lab Control Sample — QC Limit: 80-120

Sample ID	Result	Rec.	RPD	Comments
ALK013WL	219	95%		%Rec. Passed
ALK013WC	215	93%	2%	%Rec. Passed

Matrix Spike — QC Limit: 75-125

Sample ID	Result	Rec.	RPD	Comments

Sample Duplicate — QC Limit: ≤ 20

Sample ID	Result	RPD	Comments
K133-01	380		
K133-01D	380	0%	Passed
K145-08	775		
K145-08D	780	1%	Passed

Matrix Spike — QC Limit: 75-125

Sample ID	Result	Rec.	RPD	Comments

Sample Duplicate — QC Limit: ≤ 20

Sample ID	Result	RPD	Comments
K145-11	900		Passed
K145-11D	910	1%	
K205-01	1180		Passed
K205-01D	1200	2%	

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70

SDG : 11K133

METHOD 2540C
TOTAL DISSOLVED SOLIDS

A total of five (5) water samples were received on 11/15/11 for Total Dissolved Solids analysis, Method 2540C in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Balance calibration was checked as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TDK012WL/C were all within QC limits.

Matrix QC Sample
Sample duplicate was analyzed with the samples in this SDG. RPD was within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2540C
TOTAL DISSOLVED SOLIDS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K133

Matrix : WATER
Instrument ID : 40706360

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TDK012WB	ND	1	NA	20.0	20.0	11/21/1117:15	NA	TDK01201	NA	TDK012W	NA	NA
LCS1W	TDK012WL	1010	1	NA	20.0	20.0	11/21/1117:15	NA	TDK01202	NA	TDK012W	NA	NA
LCD1W	TDK012WC	985	1	NA	20.0	20.0	11/21/1117:15	NA	TDK01203	NA	TDK012W	NA	NA
MW-70-PMW07A-130	K133-01	18900	1	NA	20.0	20.0	11/21/1117:15	NA	TDK01204	NA	TDK012W	11/15/1109:47	11/15/11
MW-70-PMW07A-130DUP	K133-01D	19200	1	NA	20.0	20.0	11/21/1117:15	NA	TDK01205	NA	TDK012W	11/15/1109:47	11/15/11
MW-70-PMW07B-131	K133-02	4060	1	NA	20.0	20.0	11/21/1117:15	NA	TDK01206	NA	TDK012W	11/15/1111:03	11/15/11
IW-70-FSB216-132	K133-03	21800	1	NA	20.0	20.0	11/21/1117:15	NA	TDK01207	NA	TDK012W	11/15/1112:03	11/15/11
MW-70-PMW08A-133	K133-04	9880	1	NA	20.0	20.0	11/21/1117:15	NA	TDK01208	NA	TDK012W	11/15/1113:19	11/15/11
MW-70-PMW08B-134	K133-05	3900	1	NA	20.0	20.0	11/21/1117:15	NA	TDK01209	NA	TDK012W	11/15/1114:18	11/15/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 2540C

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TDK012WB	TDK012WL	TDK012WC		
LAB FILE ID:	TDK01201	TDK01202	TDK01203		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/21/1117:15	11/21/1117:15	11/21/1117:15	DATE RECEIVED:	NA
PREP. BATCH:	TDK012W	TDK012W	TDK012W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TDS	ND	1000	1010	101	1000	985	98	3	80-120	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD 2540C

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MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MW-70-PMW07A-130			
EMAX SAMP ID:	K133-01	K133-01D		
LAB FILE ID:	TDK01204	TDK01205		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/15/11 09:47
DATE ANALYZED:	11/21/1117:15	11/21/1117:15	DATE RECEIVED:	11/15/11
PREP. BATCH:	TDK012W	TDK012W		
CALIB. REF:	NA	NA		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
TDS	18900	19200	2	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
GRAVIMETRIC

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AGV-047

Balance ID: 40706360

Analytical Batch: TDK 012

SOP #	Rev. #
☐ EMAX-160.1	6
☐ EMAX-160.2	4
☐ EMAX-160.3	2
☐ EMAX-2540B	1
☐ EMAX-2540C	5
☐ EMAX-2540D	1

STANDARDS ID	CONC. (mg/L)
LCS SW2-02-914	1000

Micropipette ID: 43848331

Analyzed By: NM

Date: 11/22/11

GRAVIMETRIC ANALYSES
RAW DATA

EMAX LABORATORIES

Analytical Batch: TDK012C Instrument ID: 40706360 Oven Temp IN (°C): 180 Oven Temp OUT (°C): SOP: EMAX160.1 Rev. 3

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish #	Dish (g)	Date	Time	1st Dry Weight + Dish (g)	Date	Time	2nd Dry Weight + Dish (g)	Date	Time	3rd Dry Weight + Dish (g)	Date	Time	Difference 1st & 2nd Dry Wt. Rdg.	Difference 2nd & 3rd Dry Wt. Rdg. (<0.5mg)	NOTES
TDK01201	TDK012WB	100	B	70.7043	11/21/11	17:15	70.7046	11/22/11	10:16	70.7042	11/22/11	13:07	70.7042	11/22/11	13:07	-0.0004	0.0	
TDK01202	TDK012WL	20	L	21.5853	11/21/11	17:15	21.6056	11/22/11	10:17	21.6055	11/22/11	13:08	21.6055	11/22/11	13:08	-1E-04	0.0	
TDK01203	TDK012WC	20	C	21.3964	11/21/11	17:16	21.4162	11/22/11	10:17	21.4161	11/22/11	13:08	21.4161	11/22/11	13:08	-1E-04	0.0	
TDK01204	K133-01	5	1	21.4421	11/21/11	17:16	21.5369	11/22/11	10:17	21.5366	11/22/11	13:08	21.5366	11/22/11	13:08	-0.0003	0.0	
TDK01205	K133-01D	5	2	21.5316	11/21/11	17:16	21.6276	11/22/11	10:17	21.6275	11/22/11	13:09	21.6275	11/22/11	13:09	-1E-04	0.0	
TDK01206	K133-02	5	3	21.5443	11/21/11	17:16	21.5645	11/22/11	10:18	21.5646	11/22/11	13:09	21.5646	11/22/11	13:09	1E-04	0.0	
TDK01207	K133-03	5	4	21.5660	11/21/11	17:17	21.675	11/22/11	10:18	21.6748	11/22/11	13:10	21.6748	11/22/11	13:10	-0.0002	0.0	
TDK01208	K133-04	5	5	21.3858	11/21/11	17:17	21.4352	11/22/11	10:18	21.4352	11/22/11	13:10	21.4352	11/22/11	13:10	0	0.0	
TDK01209	K133-05	10	6	21.4704	11/21/11	17:17	21.5095	11/22/11	10:18	21.5094	11/22/11	13:10	21.5094	11/22/11	13:10	-1E-04	0.0	
TDK01210	K145-02	5	7	21.5407	11/21/11	17:17	21.6761	11/22/11	10:19	21.676	11/22/11	13:11	21.676	11/22/11	13:11	-0.0001	0.0	
TDK01211	K145-03	5	8	21.4450	11/21/11	17:18	21.58	11/22/11	10:19	21.5797	11/22/11	13:11	21.5797	11/22/11	13:11	-0.0003	0.0	
TDK01212	K145-04	2	9	21.3521	11/21/11	17:18	21.4296	11/22/11	10:19	21.4297	11/22/11	13:11	21.4297	11/22/11	13:11	1E-04	0.0	
TDK01213	K145-05	2	10	21.4281	11/21/11	17:18	21.4888	11/22/11	10:20	21.4891	11/22/11	13:12	21.4891	11/22/11	13:12	0.0003	0.0	
TDK01214	K145-07	2	11	21.4600	11/21/11	17:18	21.5514	11/22/11	10:20	21.5513	11/22/11	13:12	21.5513	11/22/11	13:12	-1E-04	0.0	
TDK01215	K145-08	20	12	21.3646	11/21/11	17:19	21.4095	11/22/11	10:20	21.4098	11/22/11	13:12	21.4098	11/22/11	13:12	0.0003	0.0	
TDK01216	K145-08D	20	13	21.4968	11/21/11	17:19	21.5411	11/22/11	10:20	21.5411	11/22/11	13:12	21.5411	11/22/11	13:12	0	0.0	
TDK01217	K145-09	10	14	21.4796	11/21/11	17:19	21.5337	11/22/11	10:21	21.534	11/22/11	13:13	21.534	11/22/11	13:13	0.0003	0.0	
TDK01218	K145-11	20	15	21.4383	11/21/11	17:19	21.4835	11/22/11	10:21	21.4839	11/22/11	13:13	21.4839	11/22/11	13:13	0.0004	0.0	
TDK01219	K145-11D	20	16	21.3611	11/21/11	17:20	21.4067	11/22/11	10:21	21.4071	11/22/11	13:13	21.4071	11/22/11	13:13	0.0004	0.0	
TDK01220	K145-12	2	17	21.4178	11/21/11	17:20	21.4946	11/22/11	10:22	21.4947	11/22/11	13:14	21.4947	11/22/11	13:14	0.0001	0.0	
TDK01221	K188-03	10	18	21.4938	11/21/11	17:20	21.5724	11/22/11	10:22	21.5728	11/22/11	13:14	21.5728	11/22/11	13:14	0.0004	0.0	

NM 11/22/11

Beginning Balance Check

Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/21/11 17:14	PASSED
5	5.0000	11/21/11 17:14	PASSED
100	99.9978	11/21/11 17:14	PASSED

Ending Balance Check

Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/21/11 17:21	PASSED
5	5.0000	11/21/11 17:21	PASSED
100	99.9978	11/21/11 17:21	PASSED

Beginning Balance Check

Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/22/11 10:15	PASSED
5	5.0000	11/22/11 10:15	PASSED
100	99.9991	11/22/11 10:16	PASSED

Ending Balance Check

Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/22/11 13:14	PASSED
5	5.0000	11/22/11 13:14	PASSED
100	99.9988	11/22/11 13:15	PASSED

Acceptance Criteria ± 0.1% OR 0.05 mg whichever is greater

LCS Conc 1000 mg/L MDL 10 mg/L RL: 10 mg/L Initial Rdg by: NM Final Rdg by: NM Reviewed by NM

Remarks Date 11/22/11

0092

EMAX LABORATORIES INC

GRAVIMETRIC CALCULATION

Analytical Batch: TDK012 Start Date/Time: 11/21/11 17:15 Temp IN(°C): 180

Balance ID: 40706360 End Date/Time: 11/22/11 13:14 Temp Out(°C):

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish (g)	Dry Weight + Dish (g)	SOLIDS (mg)	RESULT (mg/L)	NOTES
TDK01201	TDK012WB	100	70.7043	70.7042	-0.1000	ND	
TDK01202	TDK012WL	20	21.5853	21.6055	20.2000	1010	101
TDK01203	TDK012WC	20	21.3964	21.4161	19.7000	985	99
TDK01204	K133-01	5	21.4421	21.5366	94.5000	18900	
TDK01205	K133-01D	5	21.5316	21.6275	95.9000	19200	
TDK01206	K133-02	5	21.5443	21.5646	20.3000	4060	
TDK01207	K133-03	5	21.566	21.6748	108.8000	21800	
TDK01208	K133-04	5	21.3858	21.4352	49.4000	9880	
TDK01209	K133-05	10	21.4704	21.5094	39.0000	3900	
TDK01210	K145-02	5	21.5407	21.676	135.3000	27100	
TDK01211	K145-03	5	21.445	21.5797	134.7000	26900	
TDK01212	K145-04	2	21.3521	21.4297	77.6000	38800	
TDK01213	K145-05	2	21.4281	21.4891	61.0000	30500	
TDK01214	K145-07	2	21.46	21.5513	91.3000	45700	
TDK01215	K145-08	20	21.3646	21.4098	45.2000	2260	
TDK01216	K145-08D	20	21.4968	21.5411	44.3000	2210	
TDK01217	K145-09	10	21.4796	21.534	54.4000	5440	
TDK01218	K145-11	20	21.4383	21.4839	45.6000	2280	
TDK01219	K145-11D	20	21.3611	21.4071	46.0000	2300	
TDK01220	K145-12	2	21.4178	21.4947	76.9000	38500	
TDK01221	K188-03	10	21.4938	21.5728	79.0000	7900	
				11/22/11 NM			

LCS Concentration: 1000 mg/L MDL(mg/L): 10 Initial Reading by: NM

SOP: EMAX160.1 Rev. 3 RL (mg/L): 10 Final Reading by: NM

Remarks:

Reviewed by: NM

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K133

METHOD 4500F
DISSOLVED HYDROGEN SULFIDE

A total of five (5) water samples were received on 11/15/11 for Dissolved Hydrogen Sulfide analysis, Method 4500F in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Matrix QC Sample
No matrix QC sample was designated for this SDG. However, sample duplicate was analyzed with the samples. RPD was within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 4500F
Dissolved Hydrogen Sulfide

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K133

Matrix : WATER
Instrument ID : NA

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	HSK003WB	ND	1	NA	1.00	1.00	11/21/1114:52	NA	HSK00301	NA	HSK003W	NA	NA
MW-70-PMW07A-130	K133-01	8.11	1	NA	1.00	1.00	11/21/1115:11	NA	HSK00304	NA	HSK003W	11/15/1109:47	11/15/11
MW-70-PMW07A-130DUP	K133-01D	8.64	1	NA	1.00	1.00	11/21/1115:17	NA	HSK00305	NA	HSK003W	11/15/1109:47	11/15/11
MW-70-PMW07B-131	K133-02	ND	1	NA	1.00	1.00	11/21/1115:30	NA	HSK00306	NA	HSK003W	11/15/1111:03	11/15/11
IW-70-FSB216-132	K133-03	11.8	1	NA	1.00	1.00	11/21/1115:34	NA	HSK00307	NA	HSK003W	11/15/1112:03	11/15/11
MW-70-PMW08A-133	K133-04	ND	1	NA	1.00	1.00	11/21/1115:40	NA	HSK00309	NA	HSK003W	11/15/1113:19	11/15/11
MW-70-PMW08B-134	K133-05	ND	1	NA	1.00	1.00	11/21/1115:43	NA	HSK00310	NA	HSK003W	11/15/1114:18	11/15/11

EMAX QUALITY CONTROL DATA
DUPLICATE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
METHOD: METHOD 4500F (DISSOLVED)
MATRIX: WATER
% MOISTURE: NA

BATCH NO.: 11K133
SAMPLE ID: MW-70-PMW07A-130DUP
CONTROL NO.: K133-01D

DATE RECEIVED: 11/15/11
DATE EXTRACTED: NA
DATE ANALYZED: 11/21/11 15:17

ACCESSION:

PARAMETER	SAMPLE (mg/L)	DUP. SAMPLE (mg/L)	RPD (%)	RPD LIMIT (%)
Hydrogen Sulfide	8.11	8.64	6	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
SULFIDE

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Book #: ASD-018

Analytical Batch: 15K003

Comments:

Presence of analyte was confirmed using spectrometric method.

Abs @ 664

Blank (0 ppm) = 0

1ppm @ NM 11/21 = 0.688

K133-01 @ 1X = 1.999

K133-01D @ 1X = 1.999

K133-03 @ 1X = 1.999

K133-01 @ 20X = 0.676

K133-01D @ 20X = 0.679

K133-03 @ 20X = 0.684

SOP #	Rev. #
☑ EMAX-376.1	3
☐ EMAX-9034	0
☐ EMAX-4500-S2F	1
☑ EMAX-4500-S2H	0
☐ EMAX-	

STANDARDS ID	conc.
LCS SWI-01-422	8.48
Spike NA	NA
$Na_2S_2O_3$ Standard SWPI-01-384	0.0248
Iodine SWPI-01 ~~465~~ ~~40~~ 465 (NM 11/22)	0.0250
HCl SWPI-007 ~~60-03~~ 91-01 (NM 11/22)	6N
Indicator SWPI-01-340	—

Analyzed By: NM

Date: 11/21/11

EMAX LABORATORIES, INC.

ANALYSIS FOR SULFIDE

Method: SM4500-S2-H Analytical Batch: **HSK003** Book #: ASD-018 Page: 14

Data File Name	Lab Sample ID	V_c (ml)	V_t (ml)	Volume of Titant V_t (ml)	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Sulfide	Sample Result	Flag J	Unit
HSK0031	**HSK003WB**	100	2.5	2.48	11/21/11	14:52:40	0.15936	ND		mg/L
HSK0032	**HSK003WL**	100	2.5	0.66	11/21/11	15:00:58	7.38112	7.38		mg/L
HSK0033	**HSK003WC**	100	2.5	0.71	11/21/11	15:05:29	7.18272	7.18		mg/L
HSK0034	**K133-01**	100	5	0.8	11/21/11	15:11:07	16.8256	16.8		mg/L
HSK0035	**K133-01D**	100	5	0.6	11/21/11	15:17:13	17.6192	17.6		mg/L
HSK0036	**K133-02**	100	2.5	2.49	11/21/11	15:30:32	0.11968	ND		mg/L
HSK0037	**K133-03**	100	5	0.32	11/21/11	15:34:50	18.73024	18.7		mg/L
HSK0038	**K133-04**	100	2.5	2.58	11/21/11	15:40:16	-0.23744	ND		mg/L
HSK0039	**K133-05**	100	2.5	2.43	11/21/11	15:43:17	0.35776	ND		mg/L
HSK00310	**K119-01**	100	2.5	2.42	11/21/11	15:50:12	0.39744	ND		mg/L
HSK00311	**K119-02**	100	2.5	2.53	11/21/11	15:53:40	-0.03904	ND		mg/L
HSK00312	**K119-03**	100	2.5	2.43	11/21/11	15:57:13	0.35776	ND		mg/L
HSK00313	**K164-01**	100	2.5	2.48	11/21/11	16:04:29	0.15936	ND		mg/L
HSK00314	**K164-02**	100	2.5	2.45	11/21/11	16:10:34	0.2784	ND		mg/L
HSK00315	**K164-03**	100	2.5	2.48	11/21/11	16:14:07	0.15936	ND		mg/L

NM 11/21/11

STANDARDIZATION

V_I (ml)	V_{Na2SO3} (ml)	DATE	TIME	Titrant Na_2SO_3 (N)
Average Normality of Iodine (NI)=				**0.025**

☑ Standard Purchased as Certified Solution

$$N_I = \frac{(N * V)_{Na_2S_2O_3}}{V_I}$$

MISCELLANEOUS INFORMATION

Standard	Concentration		Unit
Iodine	0.025		*N*
$Na_2S_2O_3$	0.0248		*N*
LCS [WATER | SOIL]	8.48	84.8	*mg/L | mg/Kg*
MDL [WATER | SOIL]	1	10	*mg/L | mg/Kg*
RL	1	10	*mg/L | mg/Kg*

$$S(mg/L) = \frac{[(V_I * N_I) - (V_t * N_t)](16{,}000)}{V_S}$$

MS/MSD	TV=	8.48	mg/L
ID	Result (mg/L)	%Rec.	RPD

Comments:

Analyzed By: NM

8698

SM4500-S^2 H

EMAX LABORATORIES, INC.

ANALYSIS FOR UN-IONIZED HYDROGEN SULFIDE

Method SM4500-S2-H

Analytical Batch: HSK003

Data File Name	Lab Sample ID	Sulfide	Unit	Date Time	Temp. °C	pH	Conductivity µS/cm	H2S	Unit	COMMENTS
HSK0031	HSK003WB	ND	mg/L	11/21/11 14:52				ND	mg/L	
HSK0032	HSK003WL	7.38	mg/L	11/21/11 15:00				#VALUE!	mg/L	
HSK0033	HSK003WC	7.18	mg/L	11/21/11 15:05				#VALUE!	mg/L	
HSK0034	K133-01	16.8	mg/L	11/21/11 15:11	24.7	6.88	27400	8.11	mg/L	
HSK0035	K133-01D	17.6	mg/L	11/21/11 15:17	25.2	6.86	27500	8.64	mg/L	
HSK0036	K133-02	ND	mg/L	11/21/11 15:30	25.1	7.28	5800	ND	mg/L	
HSK0037	K133-03	18.7	mg/L	11/21/11 15:34	25.2	6.61	31500	11.8	mg/L	
HSK0038	K133-04	ND	mg/L	11/21/11 15:40	25.2	6.88	14240	ND	mg/L	
HSK0039	K133-05	ND	mg/L	11/21/11 15:43	24.9	7.1	5910	ND	mg/L	
HSK00310	K119-01	ND	mg/L	11/21/11 15:50	24.7	7.57	847	ND	mg/L	
HSK00311	K119-02	ND	mg/L	11/21/11 15:53	24.7	6.88	2420	ND	mg/L	
HSK00312	K119-03	ND	mg/L	11/21/11 15:57	24.7	7.54	1816	ND	mg/L	
HSK00313	K164-01	ND	mg/L	11/21/11 16:04	25.2	7.98	321	ND	mg/L	
HSK00314	K164-02	ND	mg/L	11/21/11 16:10	25.3	8.08	296	ND	mg/L	
HSK00315	K164-03	ND	mg/L	11/21/11 16:14	25.3	8.11	300	ND	mg/L	

NM 11/21/11

$$pK_1 = 32.5 + 1519.44/T - 15.672\log_{10}T + 0.02722T$$

$$A = 0.7083 - 2.277x10^{-3}T + 5.399x10^{-6}T^2$$

$$I = 1.6x10^{-5}\,Conductivity$$

$$pf_m = A\left(\frac{\sqrt{I}}{1+\sqrt{I}} - 0.3\right)$$

$$K'_1 = 10^{-pK_1 + 2pf_m}$$

$$H_2S = \left(\frac{S_T}{1+\frac{K'_1}{H^+}}\right)$$

$$H^+ = 10^{-pH+pf_m}$$

Analyzed by: NM

Reviewed by: NM

Date: 11/21/11

Where: T(°K)= T°C+272.15 pK1=dissociation constant for zero ionic strength A= Debye-Huckel Parameter I= Ionic Strength pfm=negative logarithm of the monovalent ion activity coefficient K'_1=conditional ionization constant H^+=Hydrogen ion concentration S_T=Total Sulfide Concentration

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K133

METHOD SM5310B
TOC

A total of five (5) water samples were received on 11/15/11 for Total Organic Carbon analysis, Method SM5310B in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TCK015WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample was analyzed at the frequency prescribed by the project.
Percent recoveries for K133-01M/S were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD SM5310B
TOC

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K133

Matrix : WATER
Instrument ID : I62

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
LCS1W	TCK015WL	24.4	1	NA	1.00	0.500	11/18/1121:31	NA	TCK010-33	TCK010-26	TCK015W	NA	NA
LCD1W	TCK015WC	25.4	1	NA	1.00	0.500	11/18/1121:48	NA	TCK010-34	TCK010-26	TCK015W	NA	NA
MW-70-PMW07A-130	K133-01	2.37	1	NA	1.00	0.500	11/19/1100:21	NA	TCK010-46	TCK010-38	TCK015W	11/15/1109:47	11/15/11
MW-70-PMW07A-130MS	K133-01M	26.5	1	NA	1.00	0.500	11/19/1100:38	NA	TCK010-47	TCK010-38	TCK015W	11/15/1109:47	11/15/11
MW-70-PMW07A-130MSD	K133-01S	27.1	1	NA	1.00	0.500	11/19/1100:54	NA	TCK010-48	TCK010-38	TCK015W	11/15/1109:47	11/15/11
MW-70-PMW07B-131	K133-02	2.01	1	NA	1.00	0.500	11/19/1101:07	NA	TCK010-49	TCK010-38	TCK015W	11/15/1111:03	11/15/11
IW-70-FSB216-132	K133-03	70.5	5	NA	5.00	2.50	11/19/1101:48	NA	TCK010-52	TCK010-50	TCK015W	11/15/1112:03	11/15/11
MW-70-PMW08A-133	K133-04	1.70	1	NA	1.00	0.500	11/19/1102:00	NA	TCK010-53	TCK010-50	TCK015W	11/15/1113:19	11/15/11
MW-70-PMW08B-134	K133-05	1.60	1	NA	1.00	0.500	11/19/1102:12	NA	TCK010-54	TCK010-50	TCK015W	11/15/1114:18	11/15/11
MBLK1W	TCK015WQ	ND	1	NA	1.00	0.500	11/19/1103:23	NA	TCK010-60	TCK010-50	TCK015W	NA	NA

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD SM5310B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TCK015WQ	TCK015WL	TCK015WC		
LAB FILE ID:	TCK010-60	TCK010-33	TCK010-34		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/19/1103:23	11/18/1121:31	11/18/1121:48	DATE RECEIVED:	NA
PREP. BATCH:	TCK015W	TCK015W	TCK015W		
CALIB. REF:	TCK010-50	TCK010-26	TCK010-26		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	ND	25.0	24.4	98	25.0	25.4	101	4	85-115	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K133
METHOD: METHOD SM5310B

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MW-70-PMW07A-130				
LAB SAMP ID:	K133-01	K133-01M	K133-01S		
LAB FILE ID:	TCK010-46	TCK010-47	TCK010-48		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/15/11 09:47
DATE ANALYZED:	11/19/1100:21	11/19/1100:38	11/19/1100:54	DATE RECEIVED:	11/15/11
PREP. BATCH:	TCK015W	TCK015W	TCK015W		
CALIB. REF:	TCK010-38	TCK010-38	TCK010-38		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	2.37	25.0	26.5	97	25.0	27.1	99	2	75-125	20

8103

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TOC

	Date	Time
Start	11/18/11	1320
End	11/19/11	0344

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

TCK014W/15W
K123 9060
K131 415.1
K104 ↓ DOC
K056 ↓
K133 5310B
K146 ↓

Sample K133-03 was diluted prior to analysis due to its smell

TCK010-35 not evaluated due to bad injection

2 M HCl SW4-01-223

Book #:	A62-020
Instrument No.:	62
Pipette ID:	039380025
	SW3-01-33
	SI1A-01-4
Balance ID:	40706360
Analytical Sequence:	TCK010
Method File:	TCK010
Analytical Batch:	TCK014W/15W

SOP #	Rev. #
☑ EMAX-415.1	2
☑ EMAX-5310B	1
☑ EMAX-9060	2
☐ EMAX-	

STANDARDS ID		CONC. (mg/L)
S0	nanopure	0
S1	SW10B-04-174	1
S2	↓	5
S3		10
S4		40
S5		80
S6	—	—
ICV/LCS	SW10B-04-178	25
CCV	↓ -179	25

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ TOC	
☐	

Analyzed By: AM

Date: 11/18/11

8104

	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
1	Standard	NPOC	ICAL	TCK010-01	0A-123456-	C:\Program	1.000		
2	Control	NPOC	ICV	TCK010-02	0A-123456-	C:\Program	1.000	NPOC:24.67 mg/L	
3	Unknown	NPOC	ICB	TCK010-03	0A-123456-	C:\Program	1.000	NPOC:0.09412 mg	
4	Unknown	NPOC	HCO3\CO3	TCK010-04	0A-123456-	C:\Program	1.000	NPOC:0.1231 mg/	
5	Unknown	NPOC	TCK014WB	TCK010-05	0A-123456-	C:\Program	1.000	NPOC:0.02313 mg	
6	Unknown	NPOC	TCK014WL	TCK010-06	0A-123456-	C:\Program	1.000	NPOC:24.50 mg/L	
7	Unknown	NPOC	TCK014WC	TCK010-07	0A-123456-	C:\Program	1.000	NPOC:24.57 mg/L	
8	Unknown	NPOC	K123-01	TCK010-08	0A-123456-	C:\Program	1.000	NPOC:2.071 mg/L	PH<2
9	Unknown	NPOC	K123-03	TCK010-09	0A-123456-	C:\Program	1.000	NPOC:3.507 mg/L	PH<2
10	Unknown	NPOC	K123-04	TCK010-10	0A-123456-	C:\Program	1.000	NPOC:3.567 mg/L	PH<2
11	Unknown	NPOC	K123-05	TCK010-11	0A-123456-	C:\Program	1.000	NPOC:1.925 mg/L	PH<2
12	Unknown	NPOC	K131-04T	TCK010-12	0A-123456-	C:\Program	20.00	NPOC:534.5 mg/L	DF=20
13	Unknown	NPOC	K131-05R	TCK010-13	0A-123456-	C:\Program	1.000	NPOC:17.44 mg/L	
14	Control	NPOC	CCV1	TCK010-14	0A-123456-	C:\Program	1.000	NPOC:24.53 mg/L	
15	Unknown	NPOC	CCB1	TCK010-15	0A-123456-	C:\Program	1.000	NPOC:0.1076 mg/	
16	Unknown	NPOC	K104-14R	TCK010-16	0A-123456-	C:\Program	1.000	NPOC:31.40 mg/L	
17	Unknown	NPOC	K104-14M	TCK010-17	0A-123456-	C:\Program	1.000	NPOC:56.46 mg/L	
18	Unknown	NPOC	K104-14S	TCK010-18	0A-123456-	C:\Program	1.000	NPOC:56.32 mg/L	
19	Unknown	NPOC	K096-02R	TCK010-19	0A-123456-	C:\Program	1.000	NPOC:1.918 mg/L	
20	Unknown	NPOC	K096-03R	TCK010-20	0A-123456-	C:\Program	1.000	NPOC:1.858 mg/L	
21	Unknown	NPOC	K096-04R	TCK010-21	0A-123456-	C:\Program	1.000	NPOC:12.86 mg/L	
22	Unknown	NPOC	K096-05R	TCK010-22	0A-123456-	C:\Program	1.000	NPOC:5.377 mg/L	
23	Unknown	NPOC	K096-06R	TCK010-23	0A-123456-	C:\Program	1.000	NPOC:1.812 mg/L	
24	Unknown	NPOC	K096-07R	TCK010-24	0A-123456-	C:\Program	1.000	NPOC:2.740 mg/L	
25	Unknown	NPOC	K096-09R	TCK010-25	0A-123456-	C:\Program	1.000	NPOC:2.385 mg/L	
26	Control	NPOC	CCV2	TCK010-26	0A-123456-	C:\Program	1.000	NPOC:23.99 mg/L	
27	Unknown	NPOC	CCB2	TCK010-27	0A-123456-	C:\Program	1.000	NPOC:0.3854 mg/	
28	Unknown	NPOC	K096-10R	TCK010-28	0A-123456-	C:\Program	1.000	NPOC:2.886 mg/L	
29	Unknown	NPOC	K096-11R	TCK010-29	0A-123456-	C:\Program	1.000	NPOC:2.976 mg/L	
30	Unknown	NPOC	K096-12R	TCK010-30	0A-123456-	C:\Program	1.000	NPOC:2.248 mg/L	
31	Unknown	NPOC	K096-13R	TCK010-31	0A-123456-	C:\Program	1.000	NPOC:2.044 mg/L	
32	Unknown	NPOC	K096-14R	TCK010-32	0A-123456-	C:\Program	1.000	NPOC:~~2.129~~ mg/L	2.248 mg/L
33	Unknown	NPOC	TCK015WL	TCK010-33	0A-123456-	C:\Program	1.000	NPOC:24.41 mg/L	
34	Unknown	NPOC	TCK015WC	TCK010-34	0A-123456-	C:\Program	1.000	NPOC:25.35 mg/L	
35	Unknown	NPOC	TCK015WB	TCK010-35	0A-123456-	C:\Program	1.000	NPOC:0.6814 mg/	Bad inj - not evaluated
36	Unknown	NPOC	K096-15R	TCK010-36	0A-123456-	C:\Program	1.000	NPOC:29.23 mg/L	
37	Unknown	NPOC	K096-16R	TCK010-37	0A-123456-	C:\Program	1.000	NPOC:15.46 mg/L	
38	Control	NPOC	CCV3	TCK010-38	0A-123456-	C:\Program	1.000	NPOC:24.88 mg/L	
39	Unknown	NPOC	CCB3	TCK010-39	0A-123456-	C:\Program	1.000	NPOC:0.2095 mg/	
40	Unknown	NPOC	K096-18R	TCK010-40	0A-123456-	C:\Program	1.000	NPOC:7.769 mg/L	
41	Unknown	NPOC	K096-19R	TCK010-41	0A-123456-	C:\Program	1.000	NPOC:8.538 mg/L	
42	Unknown	NPOC	K096-20R	TCK010-42	0A-123456-	C:\Program	1.000	NPOC:2.465 mg/L	
43	Unknown	NPOC	K096-21R	TCK010-43	0A-123456-	C:\Program	1.000	NPOC:2.556 mg/L	
44	Unknown	NPOC	K096-22R	TCK010-44	0A-123456-	C:\Program	1.000	NPOC:1.478 mg/L	
45	Unknown	NPOC	K096-23R	TCK010-45	0A-123456-	C:\Program	1.000	NPOC:2.093 mg/L	
46	Unknown	NPOC	K133-01	TCK010-46	0A-123456-	C:\Program	1.000	NPOC:~~2.241~~ mg/L	2.360 mg/L PH<2
47	Unknown	NPOC	K133-01M	TCK010-47	0A-123456-	C:\Program	1.000	NPOC:26.52 mg/L	
48	Unknown	NPOC	K133-01S	TCK010-48	0A-123456-	C:\Program	1.000	NPOC:27.11 mg/L	
49	Unknown	NPOC	K133-02	TCK010-49	0A-123456-	C:\Program	1.000	NPOC:2.011 mg/L	PH<2
50	Control	NPOC	CCV4	TCK010-50	0A-123456-	C:\Program	1.000	NPOC:24.53 mg/L	
51	Unknown	NPOC	CCB4	TCK010-51	0A-123456-	C:\Program	1.000	NPOC:0.2844 mg/	
52	Unknown	NPOC	K133-03	TCK010-52	0A-123456-	C:\Program	5.000	NPOC:70.51 mg/L	PH<2; DF=5
53	Unknown	NPOC	K133-04	TCK010-53	0A-123456-	C:\Program	1.000	NPOC:1.699 mg/L	PH<2
54	Unknown	NPOC	K133-05	TCK010-54	0A-123456-	C:\Program	1.000	NPOC:1.603 mg/L	PH<2
55	Unknown	NPOC	K146-02	TCK010-55	0A-123456-	C:\Program	1.000	NPOC:2.403 mg/L	PH<2
56	Unknown	NPOC	K146-03	TCK010-56	0A-123456-	C:\Program	1.000	NPOC:2.119 mg/L	PH<2
57	Unknown	NPOC	K146-04	TCK010-57	0A-123456-	C:\Program	1.000	NPOC:4.659 mg/L	PH<2
58	Unknown	NPOC	K146-05	TCK010-58	0A-123456-	C:\Program	1.000	NPOC:1.778 mg/L	PH<2
59	Unknown	NPOC	K146-06	TCK010-59	0A-123456-	C:\Program	1.000	NPOC:4.581 mg/L	PH<2
60	Unknown	NPOC	TCK015WQ	TCK010-60	0A-123456-	C:\Program	1.000	NPOC:0.08472 mg	
61	Control	NPOC	CCV5	TCK010-61	0A-123456-	C:\Program	1.000	NPOC:24.16 mg/L	
62	Unknown	NPOC	CCB5	TCK010-62	0A-123456-	C:\Program	1.000	NPOC:0.07555 mg	
63									
64									
65									
66						FINAL			
67								11/21/11	

Am 11/21/11

Am 11/21/11

Instr.Information

System	toc
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	iong

Cal. Curve

Sample Name:	ICAL
Sample ID:	TCK010-01
Cal. Curve:	TCK010.2011_11_18_13_12_32.cal

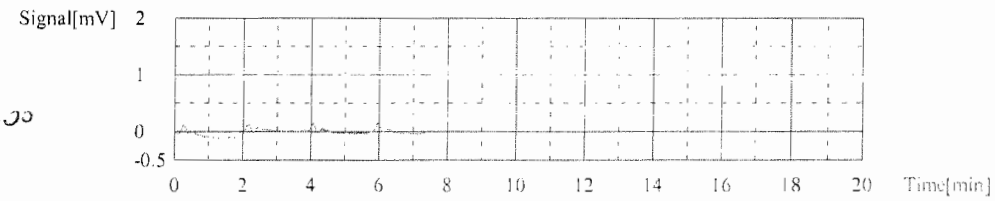
Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.000	50uL	1	*******		11/18/11 01:20:41 PM
2	0.000	50uL	1	*******		11/18/11 01:22:45 PM
3	0.000	50uL	1	*******		11/18/11 01:24:49 PM
4	0.000	50uL	1	*******		11/18/11 01:26:52 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 0.000

$\frac{\text{mean area}}{\text{slope}} = \frac{0.000}{2.218} = 0.0000$

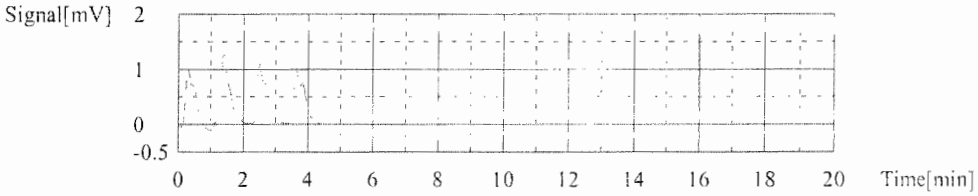


Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	2.178	50uL	10	*******		11/18/11 01:35:07 PM
2	2.293	50uL	10	*******		11/18/11 01:36:24 PM
3	2.171	50uL	10	*******		11/18/11 01:37:42 PM
4	2.226	50uL	10	*******		11/18/11 01:39:01 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 2.217

$\frac{\bar{A}}{m} = \frac{2.217}{2.218} = 0.9995$

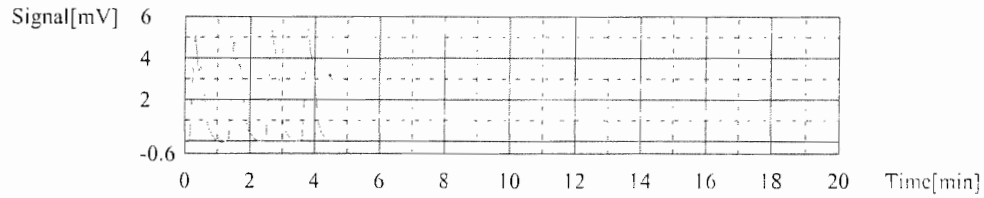


Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	10.74	50uL	2	*******		11/18/11 01:45:26 PM
2	10.76	50uL	2	*******		11/18/11 01:46:46 PM
3	10.94	50uL	2	*******		11/18/11 01:48:03 PM
4	10.88	50uL	2	*******		11/18/11 01:49:21 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 10.83

$\frac{\bar{A}}{m} = \frac{10.83}{2.218} = 4.883$

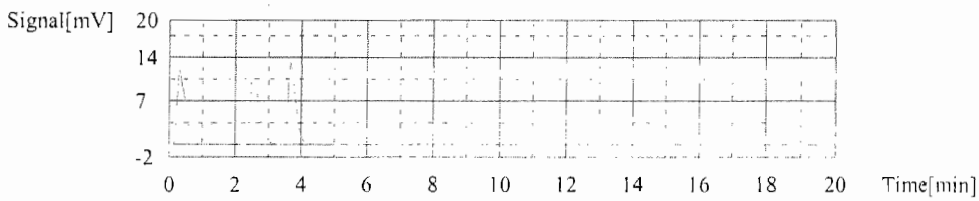


Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	21.49	50uL	1	*******		11/18/11 01:54:57 PM
2	21.63	50uL	1	*******		11/18/11 01:56:16 PM
3	21.52	50uL	1	*******		11/18/11 01:57:34 PM
4	21.66	50uL	1	*******		11/18/11 01:58:49 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 21.57

$\frac{\bar{A}}{m} = \frac{21.57}{2.218} = 9.725$

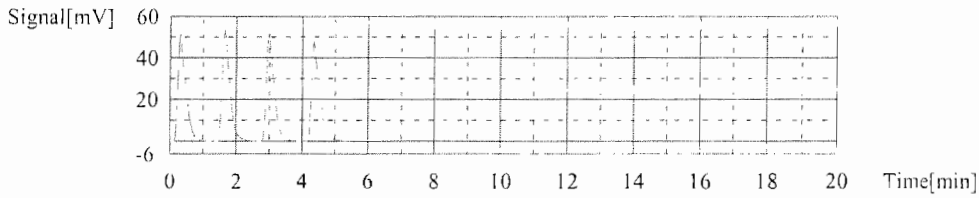


Conc: 40.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	86.67	50uL	2	*******		11/18/11 02:07:19 PM
2	86.34	50uL	2	*******		11/18/11 02:08:49 PM
3	87.24	50uL	2	*******		11/18/11 02:10:22 PM
4	86.54	50uL	2	*******		11/18/11 02:11:54 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 86.70

$\frac{\bar{A}}{m} = \frac{86.70}{2.218} = 39.09$

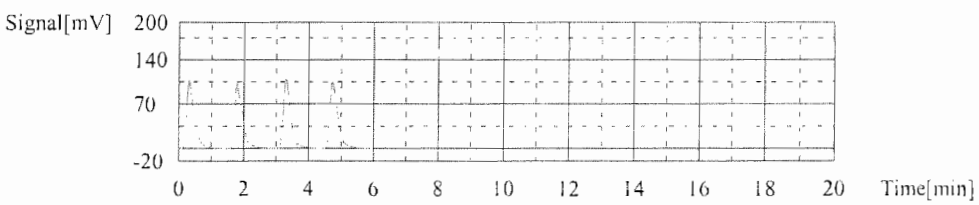


Conc: 80.00mg/L

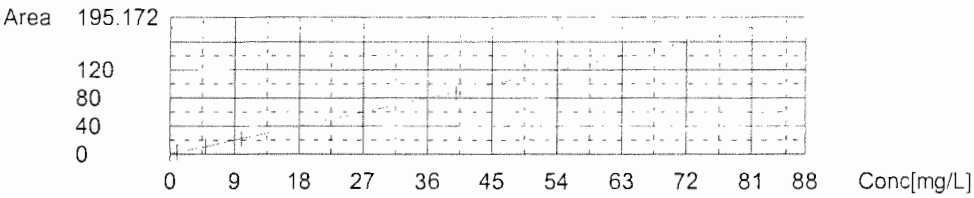
No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	177.7	50uL	1	*******		11/18/11 02:17:55 PM
2	178.5	50uL	1	*******		11/18/11 02:19:34 PM
3	177.2	50uL	1	*******		11/18/11 02:21:11 PM
4	177.9	50uL	1	*******		11/18/11 02:22:53 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 177.8

$\frac{\bar{A}}{m} = \frac{177.8}{2.218} = 80.16$



Slope: 2.218
Intercept 0.000
r^2 0.999854



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Control Sample

Sample Name: ICV
Sample ID: TCK010-02
Method: TCK010.tpl
Chk. Result Control value: 24.67 / Control exceeds range!

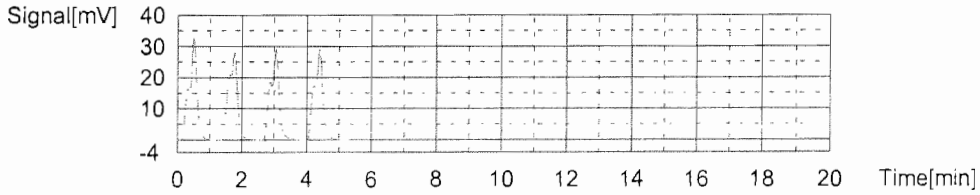
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:24.67 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.33	24.95mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 02:30:51 PM
2	54.60	24.62mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 02:32:18 PM
3	55.12	24.85mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 02:33:49 PM
4	53.85	24.28mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 02:35:15 PM

Mean Area 54.73
Mean Conc. 24.67mg/L



Sample

Sample Name: ICB
Sample ID: TCK010-03
Origin: TCK010.cal
Chk. Result

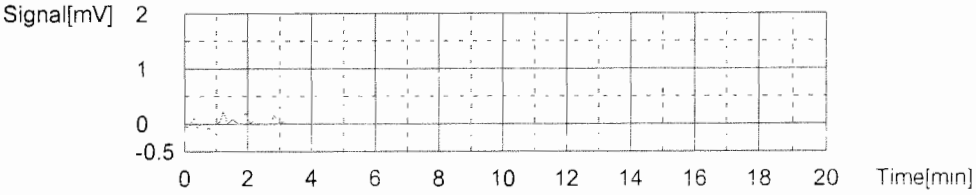
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.09412 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2227	0.1004mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 02:42:43 PM
2	0.1957	0.08824mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 02:43:36 PM
3	0.2984	0.1345mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 02:44:40 PM
4	0.1182	0.05329mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 02:45:28 PM

Mean Area 0.2087
Mean Conc. 0.09412mg/L



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PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11K146**

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HPLC	**	6000 –
METALS	METHOD 3010A/6010B	7000 – 7112
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	METHOD 2320B	8145 – 8152
	METHOD 2540C	8153 – 8159
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** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 12-05-2011
EMAX Batch No.: 11K146

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 11/16/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW-70-43B-137	K146-01	11/16/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
MW-70-PMW11A-138	K146-02	11/16/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-PMW11B-139	K146-03	11/16/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY

Sample ID	Control #	Col Date	Matrix	Analysis
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-PMW12A-140	K146-04	11/16/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-PMW12B-142	K146-05	11/16/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IR-70-FD-141	K146-06	11/16/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IR-70-TB-136	K146-07	11/16/11	WATER	VOLATILE ORGANICS BY GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011068-8042
SAMPLE STORAGE
EMAX CONTROL NO. * 11K146
PROJECT CODE: 4-77101

CLIENT: INSIGHT EEC, INC.
PROJECT: IN SITE 70 NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 7146786700 FAX: 7146786711 EMAIL: NWEINBERGER@IEEC.COM
SEND REPORT TO: NICK WEIN BERGER / IEEC.COM
COMPANY: INSIGHT EEC, INC.
ADDRESS: 3010 E. MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: Ye Myint

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: VOC - EPA 8260B; SVOC HYD. - RSK-175; WET CHEM; TOC - SM5310B; SULFIDE - SM4500F; DISS METALS - EPA 6010B; VOC - EPA 8260B; DISSOLVED GASES - RSK-175

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	HC	HC	NP	HC	SH/ZA	HN	NP	NP	COMMENTS
1	MW-70-433-137	IN SITE 70	11-16-11	0936	7	VARY	VARY	GW	III	X	X	X						FOR WET CHEM ANALYSIS. RUN ONLY VFA's.
2	MW-70-PMW11A-138	IN SITE 70	11-16-11	1042	10	VARY	VARY	GW	IV	X	X	X	X	X	X			
3	MW-70-PMW11B-139	IN SITE 70	11-16-11	1134	10	VARY	VARY	GW	III	X	X	X	X	X	X			
4	MW-70-PMW12A-140	IN SITE 70	11-16-11	1410	10	VARY	VARY	GW	III	X	X	X	X	X	X			
5	MW-70-PMW12B-142	IN SITE 70	11-16-11	1540	10	VARY	VARY	GW	III	X	X	X	X	X	X			
6	IN-70-FD-141	IN SITE 70	11-16-11	1430	10	VARIOUS	VARIOUS	GW	III	X	X	X	X	X	X			DUPLICATE
7	IN-70-TB-136	IN SITE 70	11-16-11	0800	2	40ml	VOA	GW	II	X								TRIP BLANK

Instructions: WET CHEM ANALYSIS AS FOLLOWS: ANIONS: EPA 300.0, VFA's - EPA 300.0M, TDS - SM2540C, ALKALINITY: SM2320B DHS: SM4500. UNLESS NOTED OTHERWISE IN COMMENTS.

Cooler #	Temp. (°C)	Sample #s
1	5.0	

SAMPLER: CHASE BROGDON
COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-16-11	1700	[signature]
[signature]	11/16/11	1750	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11K146
☑ EMAX Courier	See COC	Recepient LUNA
☐ Client Delivery		Date 11-16-11
☐ Third Party		Time 1750

COC Inspection

☑ Client Name ☑ Client PM/FC ☑ Sampler Name ☑ Sampling Date/Time/Location ☑ Sample ID ☑ Matrix
☑ Address ☑ Tel # / Fax # ☑ Courier Signature ☑ Analysis Required ☑ Preservative (if any) ☑ TAT
Safety Issues ☑ None ☐ High concentrations expected ☐ Superfund Site samples ☐ Rad screening required
Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	A ☑ Cooler 1 3.0 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C

Thermometer: ***A - S/N 101541371*** ***B - S/N 101541382***

Comments: ☐ **PM was informed on non-compliant coolers immediately.**

Note: **pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time .**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code

REVIEWS

Sample Labeling [signature] /ES Date 11/16/11

SRF [signature] Date 11/17/11

PM LP for YC Date 11/17/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-a-vis label	D3	Date and/or time is inconsistent in COC vis-a-vis label	R3	Refer to attached instruction
A4	_____	E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicared in COC	E2	Improper preservation	R5	_____
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	_____
B3	Sample ID is inconsistent in COC vis-a-vis label	F2	Bubble is> 6mm		
B4	_____	G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	_____		
C4	_____	H2	_____		

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11K146

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K146

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of seven (7) water samples were received on 11/16/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, three (3) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary form for details.

Lab Control Sample
Three (3) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for VO03K19L/C were all within QC limits.
Percent recoveries for VO03K21L/C were all within QC limits.
Percent recoveries for VO03K23L/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Manual integration was applied to Carbon disulfide in samples K146-01, -02, -03, -04, -05 and -06 because of improper integration. Corrected chromatograms were dated and initialed. Both original and corrected chromatograms were submitted for review. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K146
Instrument ID : T-003

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V003K19B	1	NA	11/18/1116:34	11/18/1116:34	RKB265	RHB444	V003K19	Method Blank
LCS1W	V003K19L	1	NA	11/18/1115:21	11/18/1115:21	RKB263	RHB444	V003K19	Lab Control Sample (LCS)
LCD1W	V003K19C	1	NA	11/18/1115:57	11/18/1115:57	RKB264	RHB444	V003K19	LCS Duplicate
IR-70-TB-136	K146-07	1	NA	11/18/1117:10	11/18/1117:10	RKB266	RHB444	V003K19	Field Sample
MW-70-43B-137	K146-01	1	NA	11/18/1121:58	11/18/1121:58	RKB274	RHB444	V003K19	Field Sample
MW-70-PMW11A-138	K146-02	1	NA	11/18/1122:34	11/18/1122:34	RKB275	RHB444	V003K19	Field Sample
MW-70-PMW11B-139	K146-03	1	NA	11/18/1123:09	11/18/1123:09	RKB276	RHB444	V003K19	Field Sample
MW-70-PMW12A-140	K146-04	1	NA	11/18/1123:44	11/18/1123:44	RKB277	RHB444	V003K19	Field Sample
MW-70-PMW12B-142	K146-05	1	NA	11/19/1100:19	11/19/1100:19	RKB278	RHB444	V003K19	Field Sample
IR-70-FD-141	K146-06	1	NA	11/19/1100:55	11/19/1100:55	RKB279	RHB444	V003K19	Field Sample
MBLK2W	V003K21B	1	NA	11/21/1109:53	11/21/1109:53	RKB312	RHB444	V003K21	Method Blank
LCS2W	V003K21L	1	NA	11/21/1108:47	11/21/1108:47	RKB310	RHB444	V003K21	Lab Control Sample (LCS)
LCD2W	V003K21C	1	NA	11/21/1109:20	11/21/1109:20	RKB311	RHB444	V003K21	LCS Duplicate
MW-70-PMW11B-139DL	K146-03T	10	NA	11/21/1112:12	11/21/1112:12	RKB316	RHB444	V003K21	Diluted Sample
MW-70-PMW12A-140DL	K146-04T	10	NA	11/21/1112:46	11/21/1112:46	RKB317	RHB444	V003K21	Diluted Sample
MW-70-PMW12B-142DL	K146-05T	5	NA	11/21/1113:20	11/21/1113:20	RKB318	RHB444	V003K21	Diluted Sample
IR-70-FD-141DL	K146-06T	10	NA	11/21/1113:55	11/21/1113:55	RKB319	RHB444	V003K21	Diluted Sample
MBLK3W	V003K23B	1	NA	11/22/1109:29	11/22/1109:29	RKB354	RHB444	V003K23	Method Blank
LCS3W	V003K23L	1	NA	11/22/1108:21	11/22/1108:21	RKB352	RHB444	V003K23	Lab Control Sample (LCS)
LCD3W	V003K23C	1	NA	11/22/1108:55	11/22/1108:55	RKB353	RHB444	V003K23	LCS Duplicate
MW-70-43B-137DL	K146-01T	5	NA	11/22/1110:03	11/22/1110:03	RKB355	RHB444	V003K23	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/16/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/16/11
Batch No. : 11K146	Date Extracted: 11/18/11 21:58
Sample ID: MW-70-43B-137	Date Analyzed: 11/18/11 21:58
Lab Samp ID: K146-01	Dilution Factor: 1
Lab File ID: RKB274	Matrix : WATER
Ext Btch ID: V003K19	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	0.38J	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.29J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	16	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	9.3	1.0	0.20
TRICHLOROETHENE	140E	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	0.61	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.76	10.00	87.6	70-140
4-BROMOFLUOROBENZENE	9.40	10.00	94.0	70-130
TOLUENE-D8	9.30	10.00	93.0	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/16/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/16/11
Batch No. : 11K146	Date Extracted: 11/22/11 10:03
Sample ID: MW-70-43B-137DL	Date Analyzed: 11/22/11 10:03
Lab Samp ID: K146-01T	Dilution Factor: 5
Lab File ID: RKB355	Matrix : WATER
Ext Btch ID: V003K23	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5.0	1.0
1,1,1,2-TETRACHLOROETHANE	ND	5.0	1.0
1,1,2,2-TETRACHLOROETHANE	ND	5.0	1.0
1,1,2-TRICHLOROETHANE	ND	5.0	1.0
FREON113	ND	5.0	1.5
1,1-DICHLOROETHANE	ND	5.0	1.0
1,1-DICHLOROETHENE	ND	2.5	1.0
1,1-DICHLOROPROPENE	ND	5.0	1.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	10	2.5
1,2-DIBROMOETHANE	ND	5.0	1.0
1,2-DICHLOROBENZENE	ND	5.0	1.0
1,2-DICHLOROETHANE	ND	2.5	1.0
1,2-DICHLOROPROPANE	ND	5.0	1.0
1,2,3-TRICHLOROBENZENE	ND	5.0	1.5
1,2,3-TRICHLOROPROPANE	ND	5.0	2.5
1,2,4-TRICHLOROBENZENE	ND	5.0	1.5
1,2,4-TRIMETHYLBENZENE	ND	5.0	1.0
1,3-DICHLOROBENZENE	ND	5.0	1.0
1,3,5-TRIMETHYLBENZENE	ND	5.0	1.0
1,4-DICHLOROBENZENE	ND	5.0	1.0
2-BUTANONE	ND	50	20
2-CHLOROTOLUENE	ND	5.0	1.0
2-HEXANONE	ND	50	20
2,2-DICHLOROPROPANE	ND	5.0	1.0
4-CHLOROTOLUENE	ND	5.0	1.0
4-METHYL-2-PENTANONE	ND	50	20
N-BUTYLBENZENE	ND	5.0	1.0
N-PROPYLBENZENE	ND	5.0	1.0
P-ISOPROPYLTOLUENE	ND	5.0	1.0
SEC-BUTYLBENZENE	ND	5.0	1.0
TERT-BUTYLBENZENE	ND	5.0	1.0
ACETONE	ND	50	25
BENZENE	ND	5.0	1.0
BROMOBENZENE	ND	5.0	1.0
BROMODICHLOROMETHANE	ND	5.0	1.0
CIS-1,3-DICHLOROPROPENE	ND	5.0	1.0
TRANS-1,3-DICHLOROPROPENE	ND	5.0	1.0
BROMOMETHANE	ND	10	1.5
BROMOFORM	ND	5.0	1.5
CARBON DISULFIDE	ND	5.0	1.0
CARBON TETRACHLORIDE	ND	2.5	1.0
CHLOROBENZENE	ND	5.0	1.0
CHLOROETHANE	ND	10	1.5
CHLOROFORM	ND	5.0	1.0
CHLOROMETHANE	ND	10	1.5
CIS-1,2-DICHLOROETHENE	21	5.0	1.0
DICHLORODIFLUOROMETHANE	ND	10	1.5
DIBROMOCHLOROMETHANE	ND	5.0	1.0
DIBROMOMETHANE	ND	5.0	1.0
ETHYLBENZENE	ND	5.0	1.0
HEXACHLOROBUTADIENE	ND	5.0	1.5
ISOPROPYL BENZENE	ND	5.0	1.0
METHYLENE CHLORIDE	ND	5.0	2.5
MTBE	ND	5.0	1.0
STYRENE	ND	5.0	1.0
TETRACHLOROETHYLENE	ND	5.0	1.0
TOLUENE	ND	5.0	1.0
TRANS-1,2-DICHLOROETHENE	11	5.0	1.0
TRICHLOROETHENE	180	25	1.0
TRICHLOROFLUOROMETHANE	ND	10	1.5
VINYL CHLORIDE	ND	2.5	1.0
XYLENES (TOTAL)	ND	10	3.0
M/P-XYLENES	ND	5.0	2.0
O-XYLENE	ND	5.0	1.0

SURROGATE PARAMETERS	RESULTS	SPK AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	46.0	50.00	92.1	70-140
4-BROMOFLUOROBENZENE	48.0	50.00	96.1	70-130
TOLUENE-D8	46.5	50.00	92.9	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/16/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/16/11
Batch No. : 11K146	Date Extracted: 11/18/11 22:34
Sample ID: MW-70-PMW11A-138	Date Analyzed: 11/18/11 22:34
Lab Samp ID: K146-02	Dilution Factor: 1
Lab File ID: RKB275	Matrix : WATER
Ext Btch ID: V003K19	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.28J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	14	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	0.98J	1.0	0.20
TRICHLOROETHENE	1.9J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	4.1	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.04	10.00	90.4	70-140
4-BROMOFLUOROBENZENE	9.25	10.00	92.5	70-130
TOLUENE-D8	9.20	10.00	92.0	70-140

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKB275.D Vial: 15
Acq On : 18 Nov 2011 10:34 pm Operator: CGM
Sample : 11K146-02 25mL Inst : 03
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 21 15:48 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.18	114	2388041	10.00 ug/l	0.01
41) CHLOROBENZENE-D5	17.16	117	2289153	10.00 ug/l	0.01
72) 1,2-DICHLOROBENZENE-D4	20.68	152	782869	10.00 ug/l	0.00
System Monitoring Compounds					
36) Dibromofluoromethane	12.09	111	853467	9.62 ug/l	0.01
Spiked Amount 10.000			Recovery	= 96.20%	
40) 1,2-Dichloroethane-d4	12.61	65	816710	9.04 ug/l	0.00
Spiked Amount 10.000			Recovery	= 90.40%	
55) Toluene-d8	15.21	98	2991313	9.20 ug/l	0.00
Spiked Amount 10.000			Recovery	= 92.00%	
75) 4-Bromofluorobenzene	18.61	95	1127549	9.25 ug/l	0.00
Spiked Amount 10.000			Recovery	= 92.50%	
Target Compounds					Qvalue
7) Vinyl chloride	4.93	62	330636	4.10 ug/l	98
9) Chloroethane	6.11	64	8985	0.21 ug/l	89
18) Carbon disulfide	8.49	76	88903m	0.28 ug/l	
22) trans-1,2-Dichloroethene	9.54	61	160874	0.98 ug/l	98
31) cis-1,2-Dichloroethene	11.33	96	1306488	14.06 ug/l	87
46) Trichloroethene	13.58	130	198390	1.95 ug/l	99

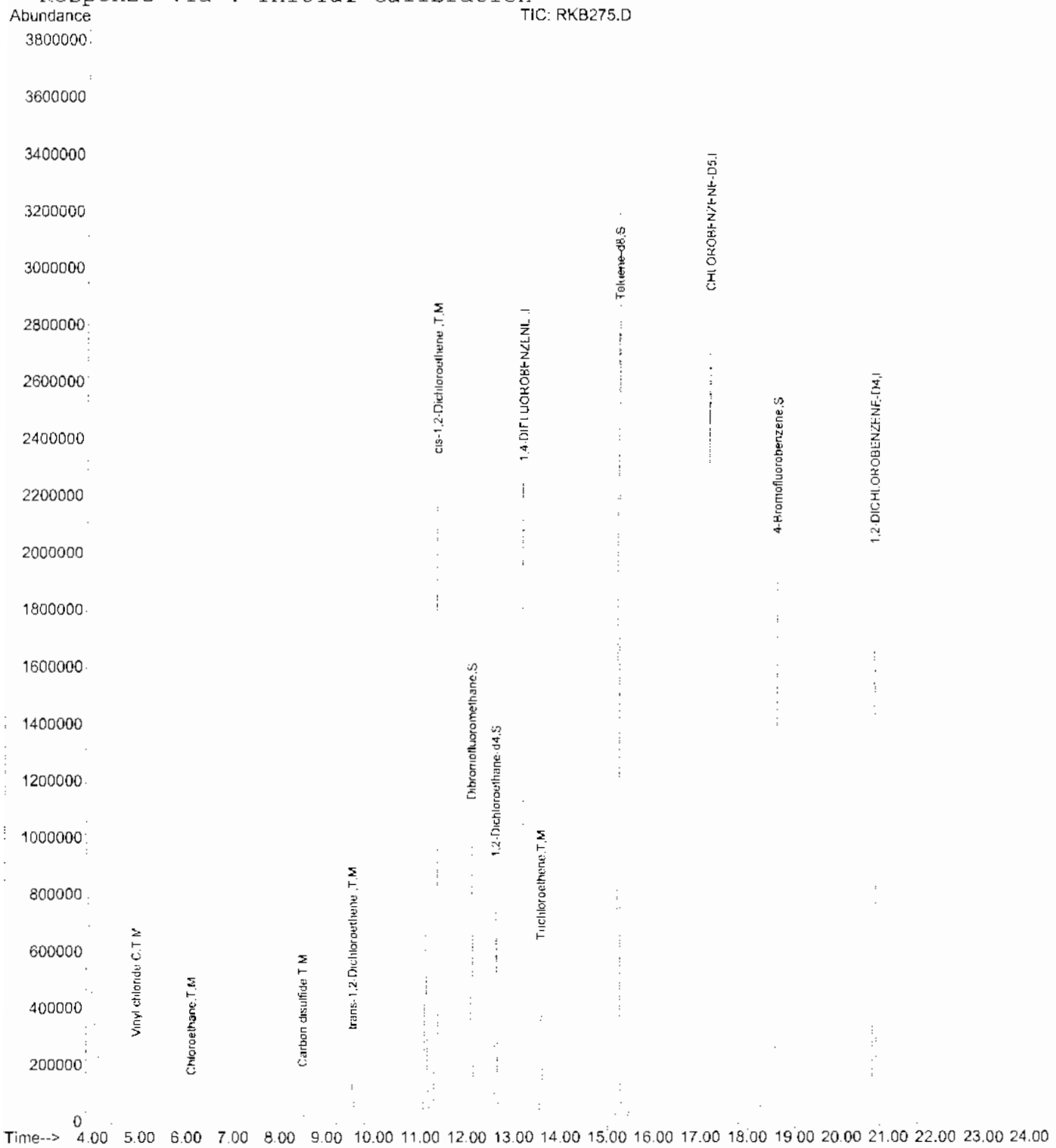
(#) = qualifier out of range (m) = manual integration

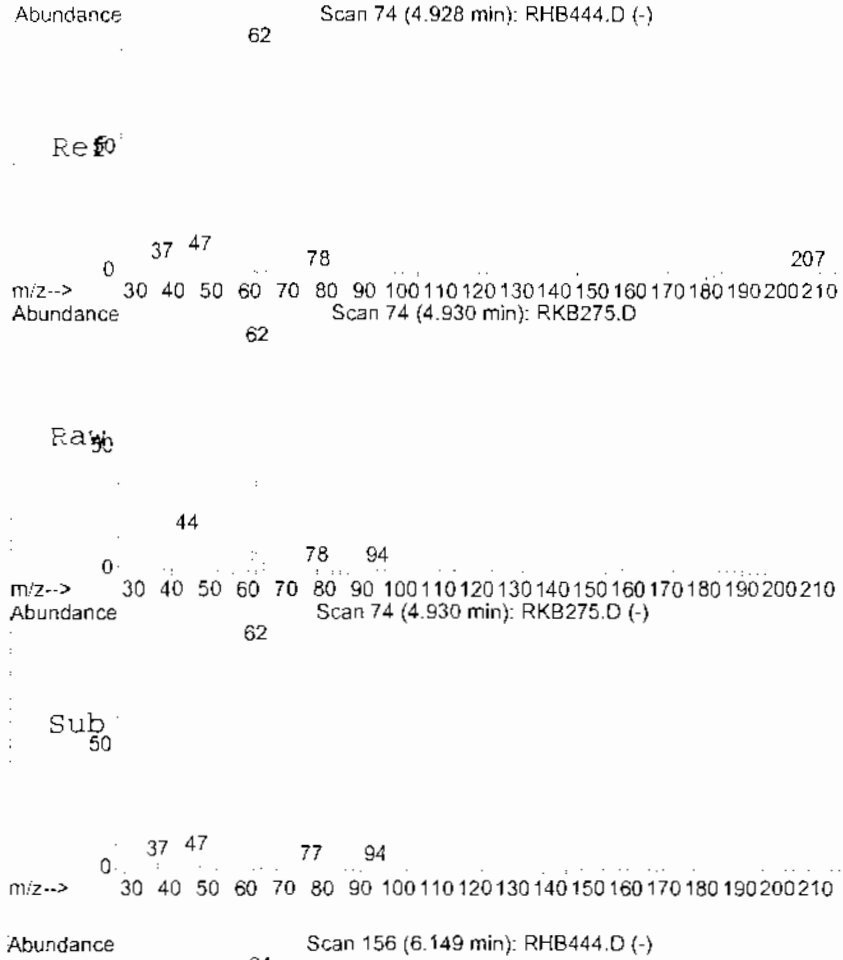
2007

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K18\RKB275.D Vial: 15
Acq On : 18 Nov 2011 10:34 pm Operator: CGM
Sample : 11K146-02 25mL Inst : 03
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 21 15:48 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration

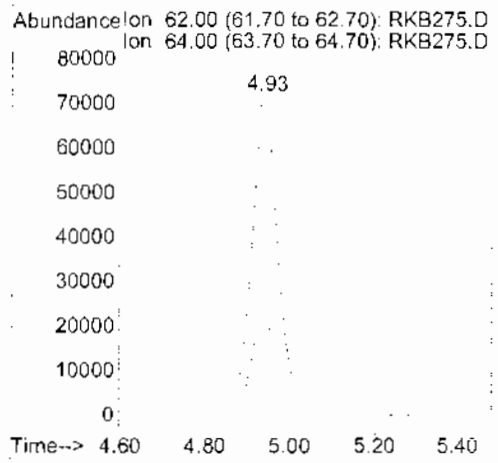


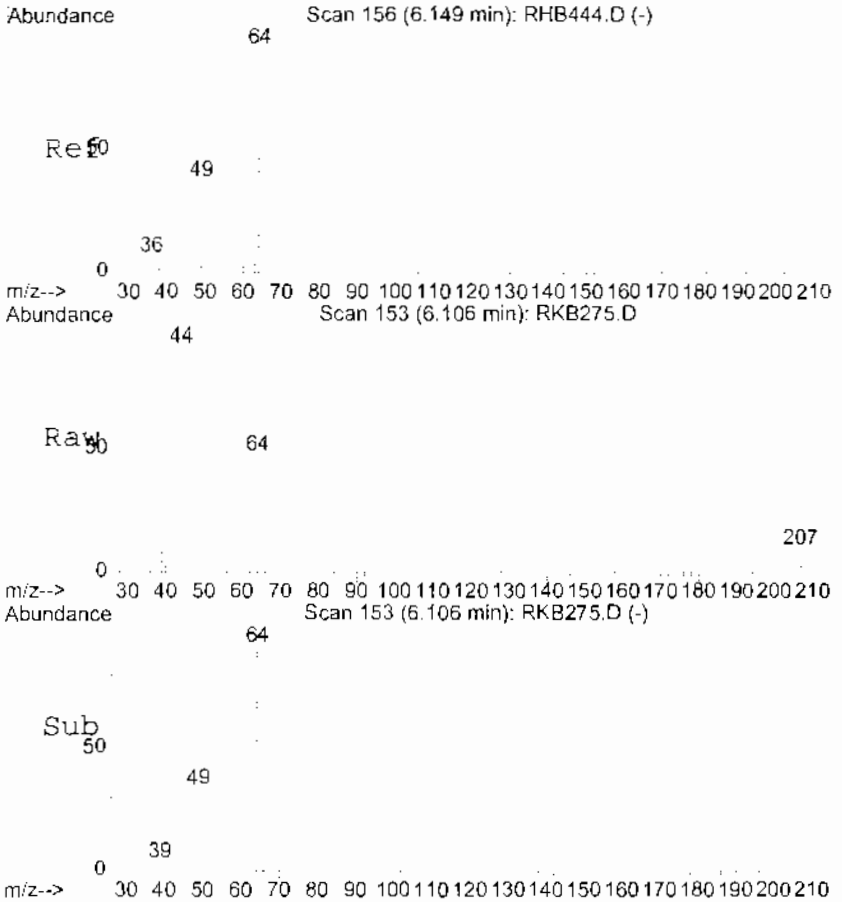


#7
Vinyl chloride
Concen: 4.10 ug/l
RT: 4.93 min Scan# 74
Delta R.T. 0.03 min
Lab File: RKB275.D
Acq: 18 Nov 2011 10:34 pm

Tgt Ion: 62 Resp: 330636

Ion	Ratio	Lower	Upper
62	100		
64	34.3	2.9	62.9

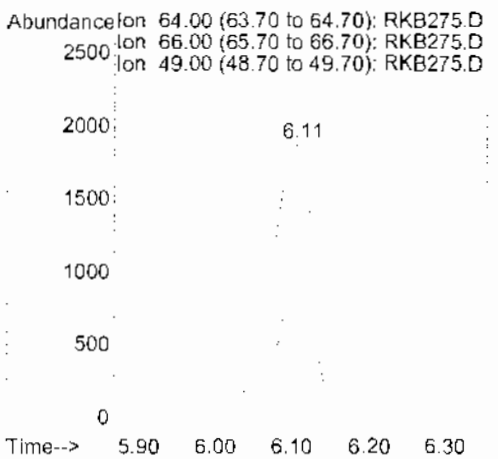


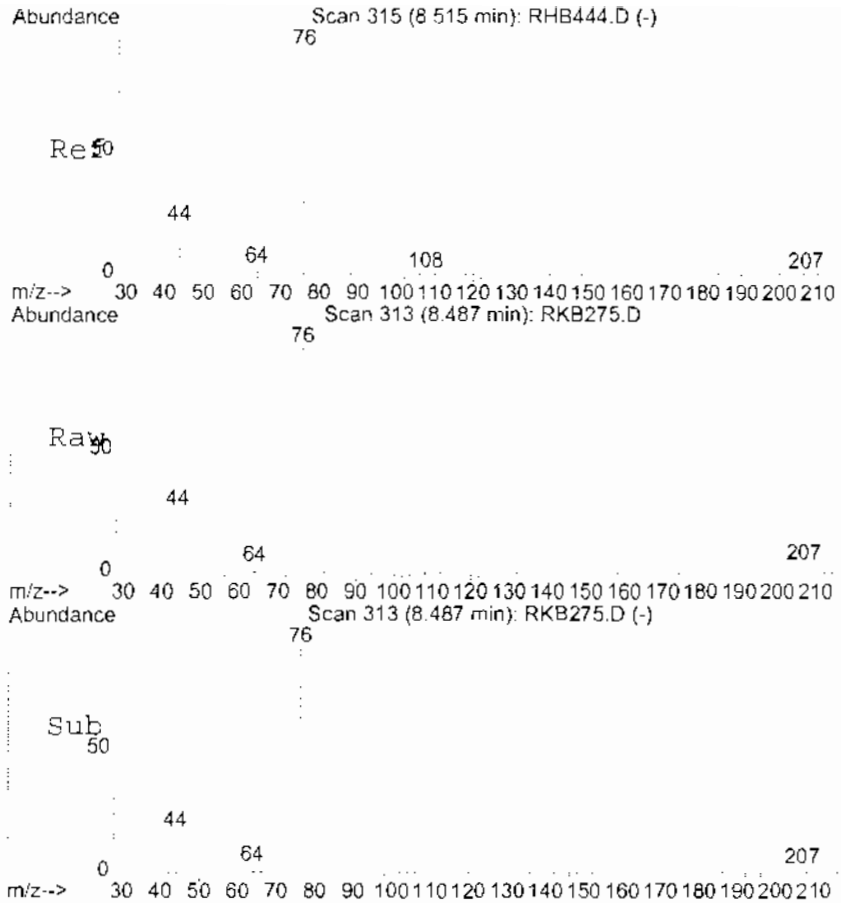


#9
Chloroethane
Concen: 0.21 ug/l
RT: 6.11 min Scan# 153
Delta R.T. 0.01 min
Lab File: RKB275.D
Acq: 18 Nov 2011 10:34 pm

Tgt Ion: 64 Resp: 8985

Ion	Ratio	Lower	Upper
64	100		
66	30.2	2.4	62.4
49	27.6	7.5	67.5

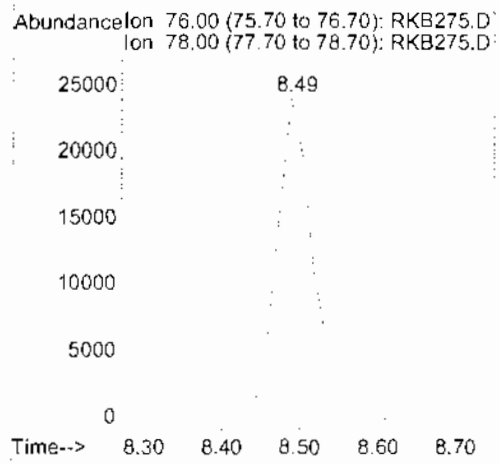


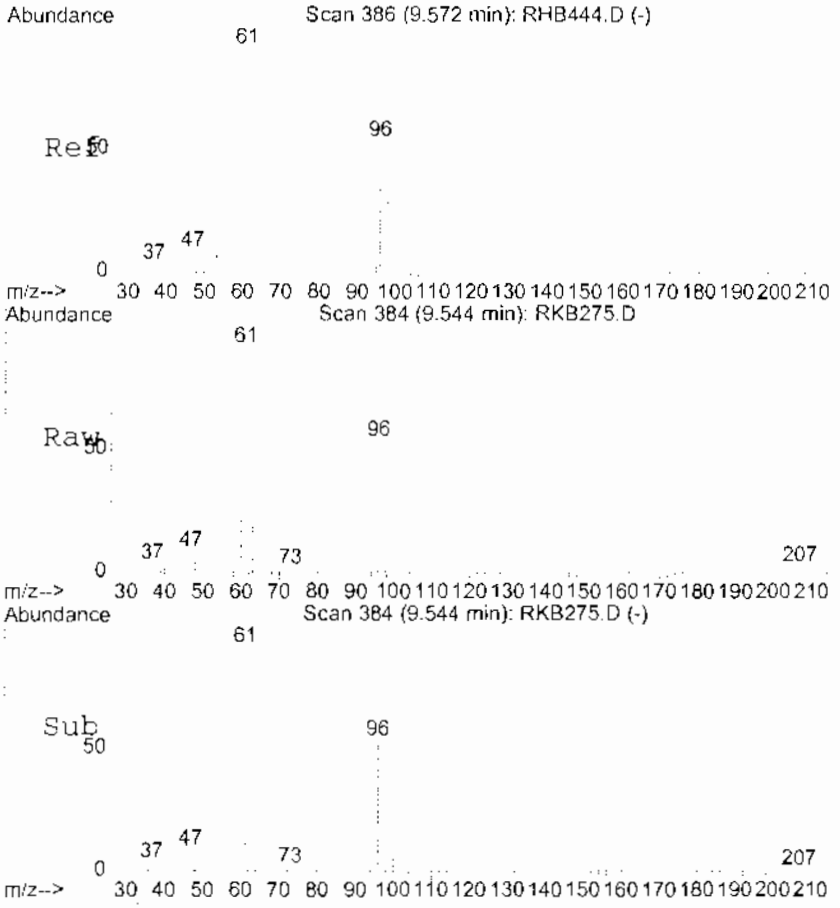


#18
Carbon disulfide
Concen: 0.28 ug/l m
RT: 8.49 min Scan# 313
Delta R.T. 0.01 min
Lab File: RKB275.D
Acq: 18 Nov 2011 10:34 pm

Tgt Ion: 76 Resp: 88903

Ion	Ratio	Lower	Upper
76	100		
78	10.4	0.0	39.0

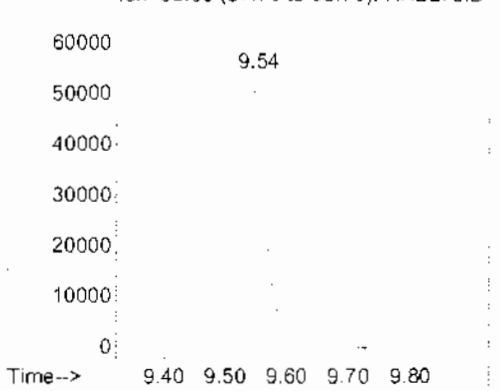


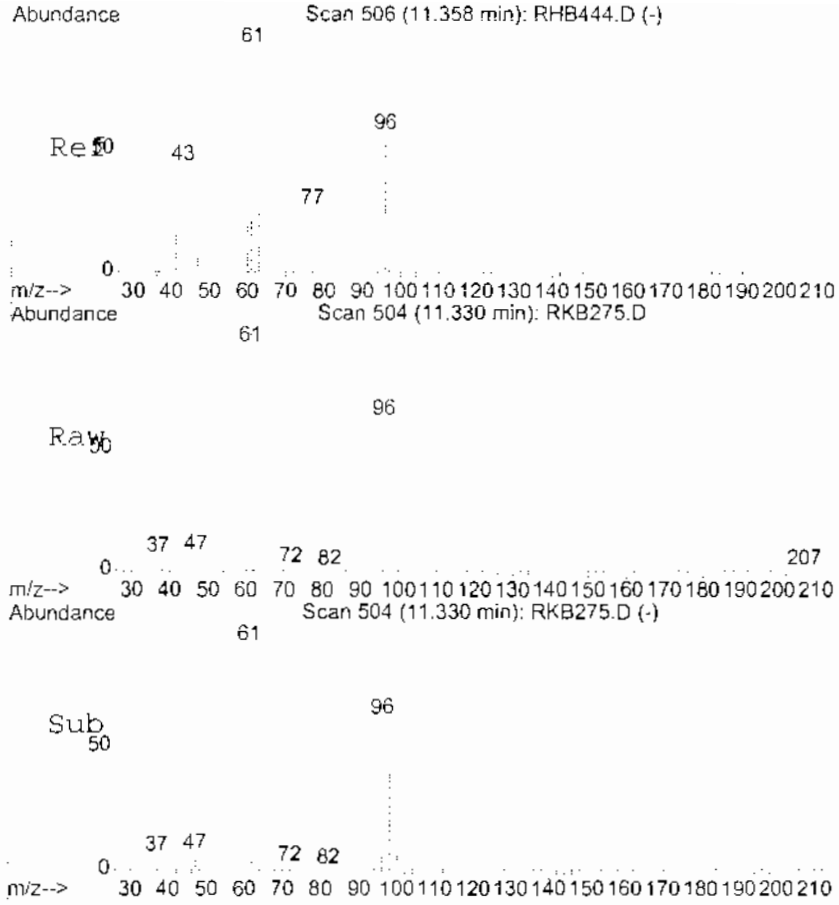


#22
trans-1,2-Dichloroethene
Concen: 0.98 ug/l
RT: 9.54 min Scan# 384
Delta R.T. 0.01 min
Lab File: RKB275.D
Acq: 18 Nov 2011 10:34 pm

Tgt Ion: 61 Resp: 160874

Ion	Ratio	Lower	Upper
61	100		
96	54.2	23.5	83.5
98	32.8	4.2	64.2

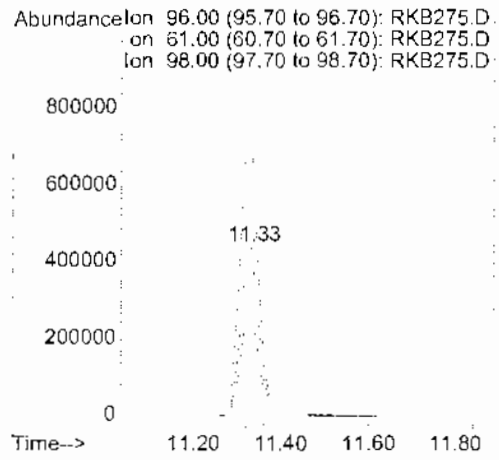


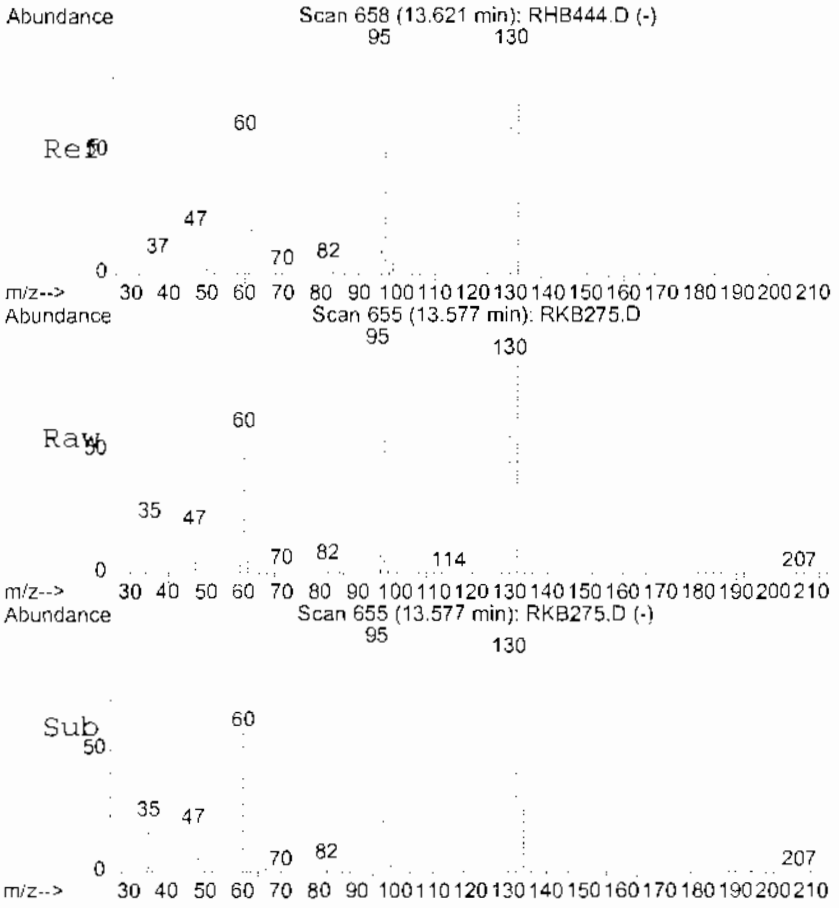


#31
cis-1,2-Dichloroethene
Concen: 14.06 ug/l
RT: 11.33 min Scan# 504
Delta R.T. 0.01 min
Lab File: RKB275.D
Acq: 18 Nov 2011 10:34 pm

Tgt Ion: 96 Resp: 1306488

Ion	Ratio	Lower	Upper
96	100		
61	167.6	162.4	222.4
98	63.5	33.5	93.5

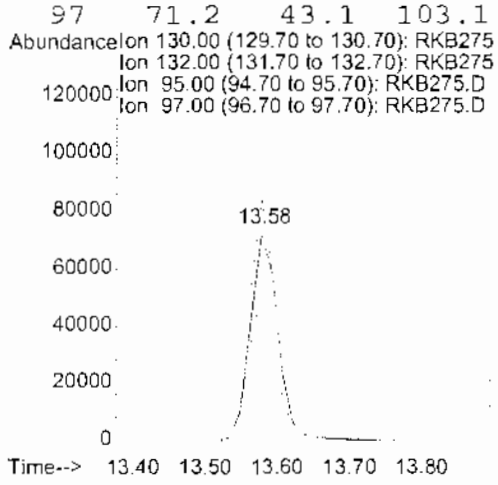




#46
Trichloroethene
Concen: 1.95 ug/l
RT: 13.58 min Scan# 655
Delta R.T. -0.00 min
Lab File: RKB275.D
Acq: 18 Nov 2011 10:34 pm

Tgt Ion:130 Resp: 198390

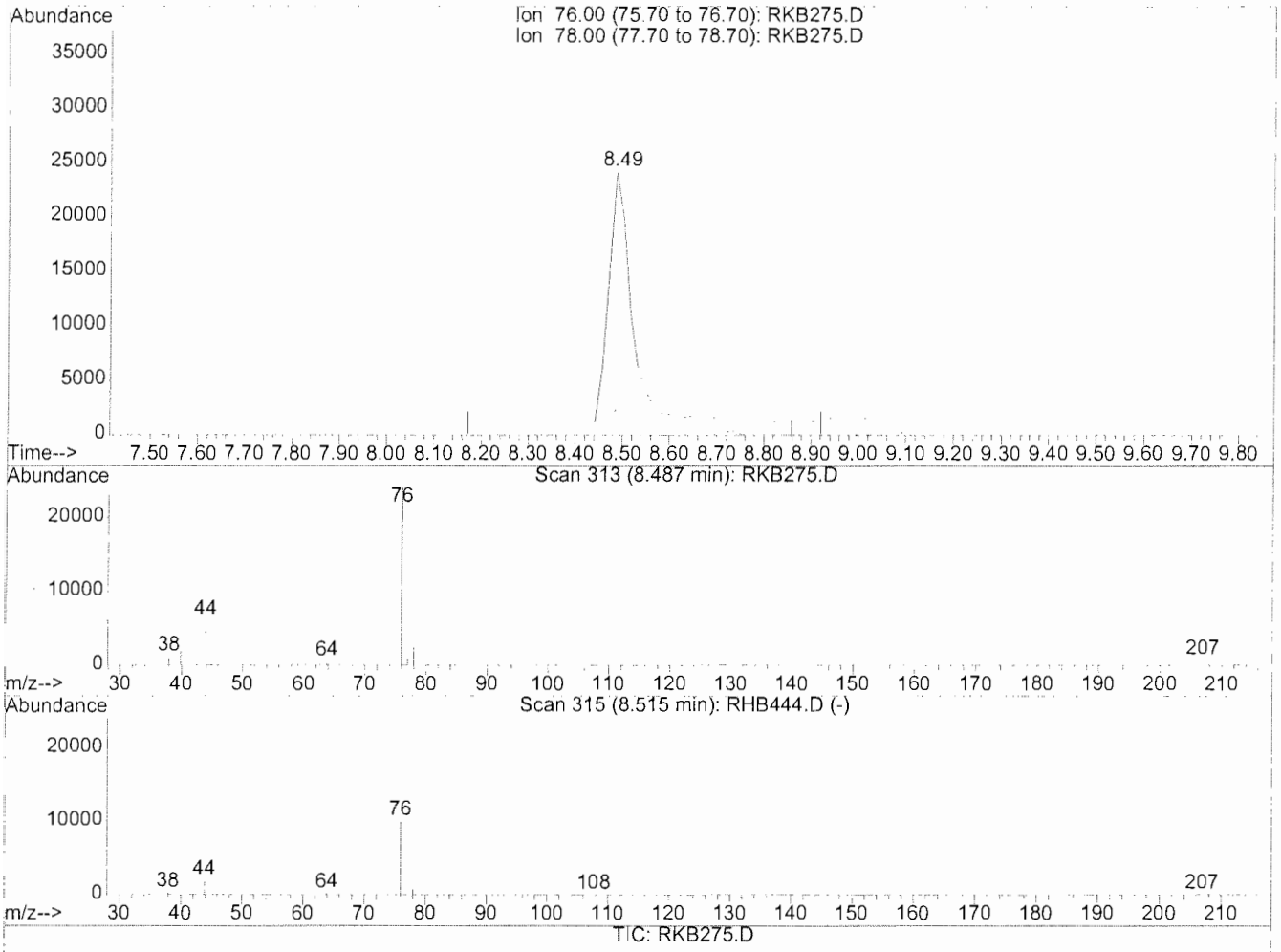
Ion	Ratio	Lower	Upper
130	100		
132	97.9	67.6	127.6
95	112.1	83.6	143.6
97	71.2	43.1	103.1



Quantitation Report (Qedit)

Data File : D:\HPCHEM\1\DATA\11K18\RKB275.D Vial: 15
Acq On : 18 Nov 2011 10:34 pm Operator: CGM
Sample : 11K146-02 25mL Inst : 03
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 21 15:48 2011 Quant Results File: temp.res

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration



(18) Carbon disulfide (T,M)

8.49min 0.34ug/l

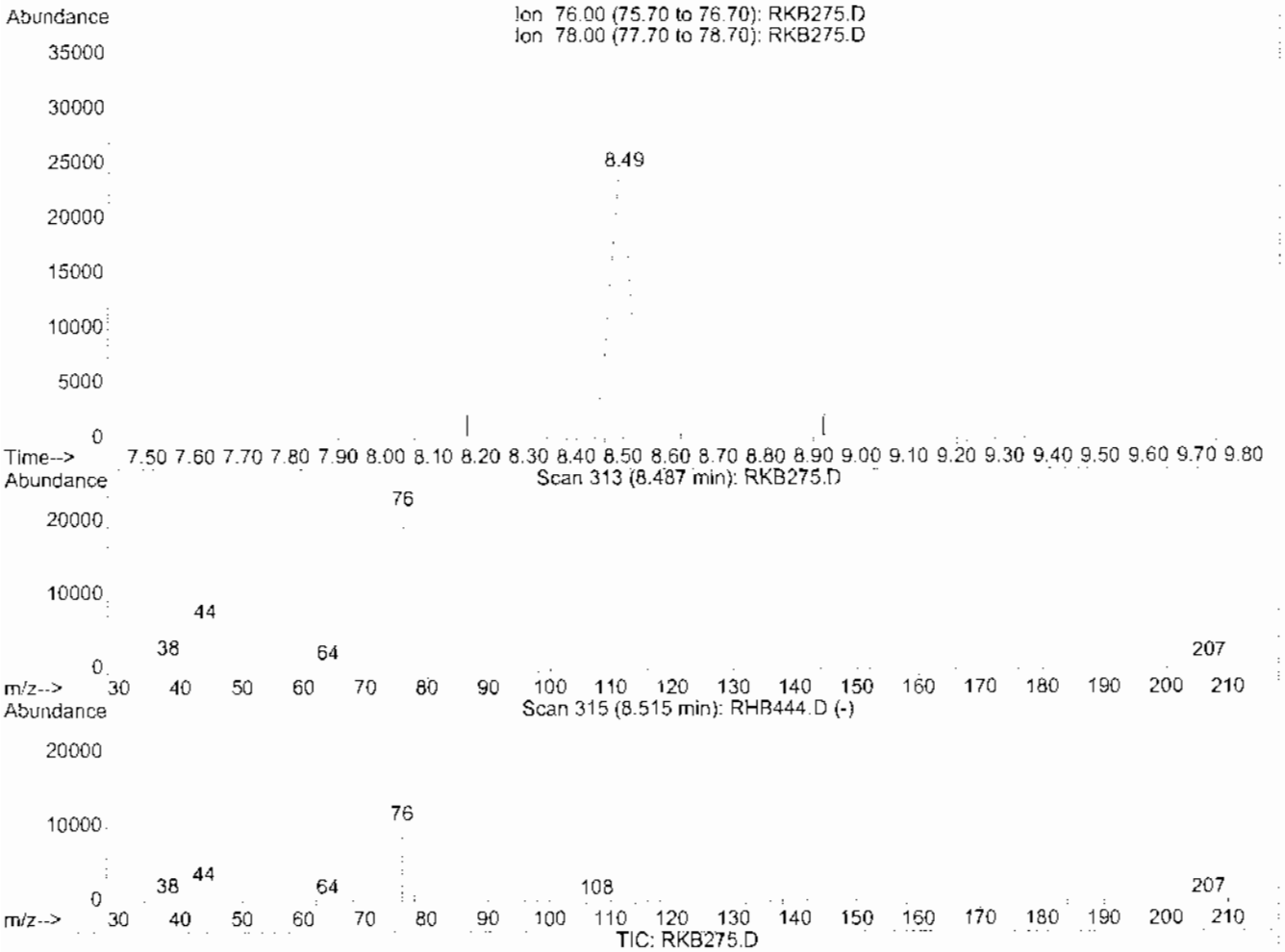
response 109163

Ion	Exp%	Act%
76.00	100	100
78.00	9.00	8.48
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\HPCHEM\1\DATA\11K18\RKB275.D Vial: 15
Acq On : 18 Nov 2011 10:34 pm Operator: CGM
Sample : 11K146-02 25mL Inst : 03
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 21 15:48 2011 Quant Results File: temp.res

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration



(18) Carbon disulfide (T,M)

8.49min 0.28ug/l m

response 88903

Ion	Exp%	Act%
76.00	100	100
78.00	9.00	10.42
0.00	0.00	0.00
0.00	0.00	0.00

CGM 11/21/11

RKB275.D VO03H16.M Mon Nov 21 15:48:31 2011

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/16/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/16/11
Batch No. : 11K146	Date Extracted: 11/18/11 23:09
Sample ID: MW-70-PMW11B-139	Date Analyzed: 11/18/11 23:09
Lab Samp ID: K146-03	Dilution Factor: 1
Lab File ID: RKB276	Matrix : WATER
Ext Btch ID: V003K19	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.47J	1.0	0.20
1,1-DICHLOROETHENE	0.44J	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.26J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	67	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	44	1.0	0.20
TRICHLOROETHENE	5.5	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	290E	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.87	10.00	88.7	70-140
4-BROMOFLUOROBENZENE	9.41	10.00	94.1	70-130
TOLUENE-D8	9.40	10.00	94.0	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/16/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/16/11
Batch No.	: 11K146	Date Extracted:	11/21/11 12:12
Sample ID:	MW-70-PMW11B-139DL	Date Analyzed:	11/21/11 12:12
Lab Samp ID:	K146-03T	Dilution Factor:	10
Lab File ID:	RKB316	Matrix	: WATER
Ext Btch ID:	V003K21	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	10	2.0
1,1,1,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2-TRICHLOROETHANE	ND	10	2.0
FREON113	ND	10	3.0
1,1-DICHLOROETHANE	ND	10	2.0
1,1-DICHLOROETHENE	ND	5.0	2.0
1,1-DICHLOROPROPENE	ND	10	2.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	20	5.0
1,2-DIBROMOETHANE	ND	10	2.0
1,2-DICHLOROBENZENE	ND	10	2.0
1,2-DICHLOROETHANE	ND	5.0	2.0
1,2-DICHLOROPROPANE	ND	10	2.0
1,2,3-TRICHLOROBENZENE	ND	10	3.0
1,2,3-TRICHLOROPROPANE	ND	10	5.0
1,2,4-TRICHLOROBENZENE	ND	10	3.0
1,2,4-TRIMETHYLBENZENE	ND	10	2.0
1,3-DICHLOROBENZENE	ND	10	2.0
1,3,5-TRIMETHYLBENZENE	ND	10	2.0
1,4-DICHLOROBENZENE	ND	10	2.0
2-BUTANONE	ND	100	40
2-CHLOROTOLUENE	ND	10	2.0
2-HEXANONE	ND	100	40
2,2-DICHLOROPROPANE	ND	10	2.0
4-CHLOROTOLUENE	ND	10	2.0
4-METHYL-2-PENTANONE	ND	100	40
N-BUTYLBENZENE	ND	10	2.0
N-PROPYLBENZENE	ND	10	2.0
P-ISOPROPYLTOLUENE	ND	10	2.0
SEC-BUTYLBENZENE	ND	10	2.0
TERT-BUTYLBENZENE	ND	10	2.0
ACETONE	ND	100	50
BENZENE	ND	10	2.0
BROMOBENZENE	ND	10	2.0
BROMODICHLOROMETHANE	ND	10	2.0
CIS-1,3-DICHLOROPROPENE	ND	10	2.0
TRANS-1,3-DICHLOROPROPENE	ND	10	2.0
BROMOMETHANE	ND	20	3.0
BROMOFORM	ND	10	3.0
CARBON DISULFIDE	ND	10	2.0
CARBON TETRACHLORIDE	ND	5.0	2.0
CHLOROBENZENE	ND	10	2.0
CHLOROETHANE	ND	20	3.0
CHLOROFORM	ND	10	2.0
CHLOROMETHANE	ND	20	3.0
CIS-1,2-DICHLOROETHENE	76	10	2.0
DICHLORODIFLUOROMETHANE	ND	20	3.0
DIBROMOCHLOROMETHANE	ND	10	2.0
DIBROMOMETHANE	ND	10	2.0
ETHYLBENZENE	ND	10	2.0
HEXACHLOROBUTADIENE	ND	10	3.0
ISOPROPYL BENZENE	ND	10	2.0
METHYLENE CHLORIDE	ND	10	5.0
MTBE	ND	10	2.0
STYRENE	ND	10	2.0
TETRACHLOROETHYLENE	ND	10	2.0
TOLUENE	ND	10	2.0
TRANS-1,2-DICHLOROETHENE	50	10	2.0
TRICHLOROETHENE	6.0J	50	2.0
TRICHLOROFLUOROMETHANE	ND	20	3.0
VINYL CHLORIDE	330	5.0	2.0
XYLENES (TOTAL)	ND	20	6.0
M/P-XYLENES	ND	10	4.0
O-XYLENE	ND	10	2.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	89.1	100.0	89.1	70-140
4-BROMOFLUOROBENZENE	98.2	100.0	98.2	70-130
TOLUENE-D8	94.7	100.0	94.7	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/16/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/16/11
Batch No. : 11K146	Date Extracted: 11/18/11 23:44
Sample ID: MW-70-PMW12A-140	Date Analyzed: 11/18/11 23:44
Lab Samp ID: K146-04	Dilution Factor: 1
Lab File ID: RKB277	Matrix : WATER
Ext Btch ID: V003K19	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.27J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	13	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	26	1.0	0.20
TRICHLOROETHENE	1.5J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	210E	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.89	10.00	88.9	70-140
4-BROMOFLUOROBENZENE	9.69	10.00	96.9	70-130
TOLUENE-D8	9.46	10.00	94.6	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/16/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/16/11
Batch No.	: 11K146	Date Extracted:	11/21/11 12:46
Sample ID:	MW-70-PMW12A-140DL	Date Analyzed:	11/21/11 12:46
Lab Samp ID:	K146-04T	Dilution Factor:	10
Lab File ID:	RKB317	Matrix :	WATER
Ext Btch ID:	V003K21	% Moisture :	NA
Calib. Ref.:	RHB444	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	10	2.0
1,1,1,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2-TRICHLOROETHANE	ND	10	2.0
FREON113	ND	10	3.0
1,1-DICHLOROETHANE	ND	10	2.0
1,1-DICHLOROETHENE	ND	5.0	2.0
1,1-DICHLOROPROPENE	ND	10	2.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	20	5.0
1,2-DIBROMOETHANE	ND	10	2.0
1,2-DICHLOROBENZENE	ND	10	2.0
1,2-DICHLOROETHANE	ND	5.0	2.0
1,2-DICHLOROPROPANE	ND	10	2.0
1,2,3-TRICHLOROBENZENE	ND	10	3.0
1,2,3-TRICHLOROPROPANE	ND	10	5.0
1,2,4-TRICHLOROBENZENE	ND	10	3.0
1,2,4-TRIMETHYLBENZENE	ND	10	2.0
1,3-DICHLOROBENZENE	ND	10	2.0
1,3,5-TRIMETHYLBENZENE	ND	10	2.0
1,4-DICHLOROBENZENE	ND	10	2.0
2-BUTANONE	ND	100	40
2-CHLOROTOLUENE	ND	10	2.0
2-HEXANONE	ND	100	40
2,2-DICHLOROPROPANE	ND	10	2.0
4-CHLOROTOLUENE	ND	10	2.0
4-METHYL-2-PENTANONE	ND	100	40
N-BUTYLBENZENE	ND	10	2.0
N-PROPYLBENZENE	ND	10	2.0
P-ISOPROPYLTOLUENE	ND	10	2.0
SEC-BUTYLBENZENE	ND	10	2.0
TERT-BUTYLBENZENE	ND	10	2.0
ACETONE	ND	100	50
BENZENE	ND	10	2.0
BROMOBENZENE	ND	10	2.0
BROMODICHLOROMETHANE	ND	10	2.0
CIS-1,3-DICHLOROPROPENE	ND	10	2.0
TRANS-1,3-DICHLOROPROPENE	ND	10	2.0
BROMOMETHANE	ND	20	3.0
BROMOFORM	ND	10	3.0
CARBON DISULFIDE	ND	10	2.0
CARBON TETRACHLORIDE	ND	5.0	2.0
CHLOROBENZENE	ND	10	2.0
CHLOROETHANE	ND	20	3.0
CHLOROFORM	ND	10	2.0
CHLOROMETHANE	ND	20	3.0
CIS-1,2-DICHLOROETHENE	15	10	2.0
DICHLORODIFLUOROMETHANE	ND	20	3.0
DIBROMOCHLOROMETHANE	ND	10	2.0
DIBROMOMETHANE	ND	10	2.0
ETHYLBENZENE	ND	10	2.0
HEXACHLOROBUTADIENE	ND	10	3.0
ISOPROPYL BENZENE	ND	10	2.0
METHYLENE CHLORIDE	ND	10	5.0
MTBE	ND	10	2.0
STYRENE	ND	10	2.0
TETRACHLOROETHYLENE	ND	10	2.0
TOLUENE	ND	10	2.0
TRANS-1,2-DICHLOROETHENE	29	10	2.0
TRICHLOROETHENE	ND	50	2.0
TRICHLOROFLUOROMETHANE	ND	20	3.0
VINYL CHLORIDE	250	5.0	2.0
XYLENES (TOTAL)	ND	20	6.0
M/P-XYLENES	ND	10	4.0
O-XYLENE	ND	10	2.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	92.9	100.0	92.9	70-140
4-BROMOFLUOROBENZENE	95.3	100.0	95.3	70-130
TOLUENE-D8	93.2	100.0	93.2	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/16/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/16/11
Batch No. : 11K146	Date Extracted: 11/19/11 00:19
Sample ID: MW-70-PMW12B-142	Date Analyzed: 11/19/11 00:19
Lab Samp ID: K146-05	Dilution Factor: 1
Lab File ID: RKB278	Matrix : WATER
Ext Btch ID: V003K19	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.39J	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.30J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	0.78J	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	42	1.0	0.20
TRICHLOROETHENE	2.0J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	120E	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.82	10.00	88.2	70-140
4-BROMOFLUOROBENZENE	9.58	10.00	95.8	70-130
TOLUENE-D8	9.46	10.00	94.6	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/16/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/16/11
Batch No. : 11K146	Date Extracted: 11/21/11 13:20
Sample ID: MW-70-PMW12B-142DL	Date Analyzed: 11/21/11 13:20
Lab Samp ID: K146-05T	Dilution Factor: 5
Lab File ID: RKB318	Matrix : WATER
Ext Btch ID: V003K21	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5.0	1.0
1,1,1,2-TETRACHLOROETHANE	ND	5.0	1.0
1,1,2,2-TETRACHLOROETHANE	ND	5.0	1.0
1,1,2-TRICHLOROETHANE	ND	5.0	1.0
FREON113	ND	5.0	1.5
1,1-DICHLOROETHANE	ND	5.0	1.0
1,1-DICHLOROETHENE	ND	2.5	1.0
1,1-DICHLOROPROPENE	ND	5.0	1.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	10	2.5
1,2-DIBROMOETHANE	ND	5.0	1.0
1,2-DICHLOROBENZENE	ND	5.0	1.0
1,2-DICHLOROETHANE	ND	2.5	1.0
1,2-DICHLOROPROPANE	ND	5.0	1.0
1,2,3-TRICHLOROBENZENE	ND	5.0	1.5
1,2,3-TRICHLOROPROPANE	ND	5.0	2.5
1,2,4-TRICHLOROBENZENE	ND	5.0	1.5
1,2,4-TRIMETHYLBENZENE	ND	5.0	1.0
1,3-DICHLOROBENZENE	ND	5.0	1.0
1,3,5-TRIMETHYLBENZENE	ND	5.0	1.0
1,4-DICHLOROBENZENE	ND	5.0	1.0
2-BUTANONE	ND	50	20
2-CHLOROTOLUENE	ND	5.0	1.0
2-HEXANONE	ND	50	20
2,2-DICHLOROPROPANE	ND	5.0	1.0
4-CHLOROTOLUENE	ND	5.0	1.0
4-METHYL-2-PENTANONE	ND	50	20
N-BUTYLBENZENE	ND	5.0	1.0
N-PROPYLBENZENE	ND	5.0	1.0
P-ISOPROPYLTOLUENE	ND	5.0	1.0
SEC-BUTYLBENZENE	ND	5.0	1.0
TERT-BUTYLBENZENE	ND	5.0	1.0
ACETONE	ND	50	25
BENZENE	ND	5.0	1.0
BROMOBENZENE	ND	5.0	1.0
BROMODICHLOROMETHANE	ND	5.0	1.0
CIS-1,3-DICHLOROPROPENE	ND	5.0	1.0
TRANS-1,3-DICHLOROPROPENE	ND	5.0	1.0
BROMOMETHANE	ND	10	1.5
BROMOFORM	ND	5.0	1.5
CARBON DISULFIDE	ND	5.0	1.0
CARBON TETRACHLORIDE	ND	2.5	1.0
CHLOROBENZENE	ND	5.0	1.0
CHLOROETHANE	ND	10	1.5
CHLOROFORM	ND	5.0	1.0
CHLOROMETHANE	ND	10	1.5
CIS-1,2-DICHLOROETHENE	1.0J	5.0	1.0
DICHLORODIFLUOROMETHANE	ND	10	1.5
DIBROMOCHLOROMETHANE	ND	5.0	1.0
DIBROMOMETHANE	ND	5.0	1.0
ETHYLBENZENE	ND	5.0	1.0
HEXACHLOROBUTADIENE	ND	5.0	1.5
ISOPROPYL BENZENE	ND	5.0	1.0
METHYLENE CHLORIDE	ND	5.0	2.5
MTBE	ND	5.0	1.0
STYRENE	ND	5.0	1.0
TETRACHLOROETHYLENE	ND	5.0	1.0
TOLUENE	ND	5.0	1.0
TRANS-1,2-DICHLOROETHENE	45	5.0	1.0
TRICHLOROETHENE	1.9J	25	1.0
TRICHLOROFLUOROMETHANE	ND	10	1.5
VINYL CHLORIDE	130	2.5	1.0
XYLENES (TOTAL)	ND	10	3.0
M/P-XYLENES	ND	5.0	2.0
O-XYLENE	ND	5.0	1.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	44.5	50.00	89.0	70-140
4-BROMOFLUOROBENZENE	49.2	50.00	98.4	70-130
TOLUENE-D8	48.1	50.00	96.3	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/16/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/16/11
Batch No. : 11K146	Date Extracted: 11/19/11 00:55
Sample ID: IR-70-FD-141	Date Analyzed: 11/19/11 00:55
Lab Samp ID: K146-06	Dilution Factor: 1
Lab File ID: RKB279	Matrix : WATER
Ext Btch ID: VO03K19	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.24J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	12	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	25	1.0	0.20
TRICHLOROETHENE	1.5J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	210E	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.72	10.00	87.2	70-140
4-BROMOFLUOROBENZENE	9.57	10.00	95.7	70-130
TOLUENE-D8	9.47	10.00	94.7	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/16/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/16/11
Batch No.	: 11K146	Date Extracted:	11/21/11 13:55
Sample ID:	IR-70-FD-141DL	Date Analyzed:	11/21/11 13:55
Lab Samp ID:	K146-06T	Dilution Factor:	10
Lab File ID:	RKB319	Matrix	: WATER
Ext Btch ID:	V003K21	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	10	2.0
1,1,1,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2-TRICHLOROETHANE	ND	10	2.0
FREON113	ND	10	3.0
1,1-DICHLOROETHANE	ND	10	2.0
1,1-DICHLOROETHENE	ND	5.0	2.0
1,1-DICHLOROPROPENE	ND	10	2.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	20	5.0
1,2-DIBROMOETHANE	ND	10	2.0
1,2-DICHLOROBENZENE	ND	10	2.0
1,2-DICHLOROETHANE	ND	5.0	2.0
1,2-DICHLOROPROPANE	ND	10	2.0
1,2,3-TRICHLOROBENZENE	ND	10	3.0
1,2,3-TRICHLOROPROPANE	ND	10	5.0
1,2,4-TRICHLOROBENZENE	ND	10	3.0
1,2,4-TRIMETHYLBENZENE	ND	10	2.0
1,3-DICHLOROBENZENE	ND	10	2.0
1,3,5-TRIMETHYLBENZENE	ND	10	2.0
1,4-DICHLOROBENZENE	ND	10	2.0
2-BUTANONE	ND	100	40
2-CHLOROTOLUENE	ND	10	2.0
2-HEXANONE	ND	100	40
2,2-DICHLOROPROPANE	ND	10	2.0
4-CHLOROTOLUENE	ND	10	2.0
4-METHYL-2-PENTANONE	ND	100	40
N-BUTYLBENZENE	ND	10	2.0
N-PROPYLBENZENE	ND	10	2.0
P-ISOPROPYLTOLUENE	ND	10	2.0
SEC-BUTYLBENZENE	ND	10	2.0
TERT-BUTYLBENZENE	ND	10	2.0
ACETONE	ND	100	50
BENZENE	ND	10	2.0
BROMOBENZENE	ND	10	2.0
BROMODICHLOROMETHANE	ND	10	2.0
CIS-1,3-DICHLOROPROPENE	ND	10	2.0
TRANS-1,3-DICHLOROPROPENE	ND	10	2.0
BROMOMETHANE	ND	20	3.0
BROMOFORM	ND	10	3.0
CARBON DISULFIDE	ND	10	2.0
CARBON TETRACHLORIDE	ND	5.0	2.0
CHLOROBENZENE	ND	10	2.0
CHLOROETHANE	ND	20	3.0
CHLOROFORM	ND	10	2.0
CHLOROMETHANE	ND	20	3.0
CIS-1,2-DICHLOROETHENE	13	10	2.0
DICHLORODIFLUOROMETHANE	ND	20	3.0
DIBROMOCHLOROMETHANE	ND	10	2.0
DIBROMOMETHANE	ND	10	2.0
ETHYLBENZENE	ND	10	2.0
HEXACHLOROBUTADIENE	ND	10	3.0
ISOPROPYL BENZENE	ND	10	2.0
METHYLENE CHLORIDE	ND	10	5.0
MTBE	ND	10	2.0
STYRENE	ND	10	2.0
TETRACHLOROETHYLENE	ND	10	2.0
TOLUENE	ND	10	2.0
TRANS-1,2-DICHLOROETHENE	27	10	2.0
TRICHLOROETHENE	ND	50	2.0
TRICHLOROFLUOROMETHANE	ND	20	3.0
VINYL CHLORIDE	230	5.0	2.0
XYLENES (TOTAL)	ND	20	6.0
M/P-XYLENES	ND	10	4.0
O-XYLENE	ND	10	2.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	91.4	100.0	91.4	70-140
4-BROMOFLUOROBENZENE	102	100.0	102	70-130
TOLUENE-D8	95.9	100.0	95.9	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/16/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/16/11
Batch No.	: 11K146	Date Extracted:	11/18/11 17:10
Sample ID:	IR-70-TB-136	Date Analyzed:	11/18/11 17:10
Lab Samp ID:	K146-07	Dilution Factor:	1
Lab File ID:	RKB266	Matrix	: WATER
Ext Btch ID:	V003K19	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.46	10.00	84.6	70-140
4-BROMOFLUOROBENZENE	9.54	10.00	95.4	70-130
TOLUENE-D8	9.54	10.00	95.4	70-140

QC SUMMARIES

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
Batch No.	: 11K146	Date Extracted:	11/18/11 16:34
Sample ID:	MBLK1W	Date Analyzed:	11/18/11 16:34
Lab Samp ID:	V003K19B	Dilution Factor:	1
Lab File ID:	RKB265	Matrix :	WATER
Ext Btch ID:	V003K19	% Moisture :	NA
Calib. Ref.:	RHB444	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.17	10.00	81.7	70-140
4-BROMOFLUOROBENZENE	9.45	10.00	94.5	70-130
TOLUENE-D8	9.56	10.00	95.6	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	VO03K19B	VO03K19L	VO03K19C		
LAB FILE ID:	RKB265	RKB263	RKB264		
DATE EXTRACTED:	11/18/1116:34	11/18/1115:21	11/18/1115:57	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1116:34	11/18/1115:21	11/18/1115:57	DATE RECEIVED:	11/18/11
PREP. BATCH:	VO03K19	VO03K19	VO03K19		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.34	93	10.0	9.18	92	2	60-130	30
Benzene	ND	10.0	9.70	97	10.0	9.85	98	2	70-130	30
Chlorobenzene	ND	10.0	10.2	102	10.0	10.3	103	1	70-120	30
Toluene	ND	10.0	9.50	95	10.0	9.67	97	2	70-130	30
Trichloroethene	ND	10.0	9.83	98	10.0	9.99	100	2	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.66	87	10.0	8.40	84	70-140
4-Bromofluorobenzene	10.0	9.27	93	10.0	9.10	91	70-130
Toluene-d8	10.0	9.25	93	10.0	9.32	93	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/21/11
Batch No. : 11K146	Date Extracted: 11/21/11 09:53
Sample ID: MBLK2W	Date Analyzed: 11/21/11 09:53
Lab Samp ID: V003K21B	Dilution Factor: 1
Lab File ID: RKB312	Matrix : WATER
Ext Btch ID: V003K21	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.36	10.00	83.6	70-140
4-BROMOFLUOROBENZENE	9.52	10.00	95.2	70-130
TOLUENE-D8	9.59	10.00	95.9	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	V003K21B	V003K21L	V003K21C		
LAB FILE ID:	RKB312	RKB310	RKB311		
DATE EXTRACTED:	11/21/1109:53	11/21/1108:47	11/21/1109:20	DATE COLLECTED:	NA
DATE ANALYZED:	11/21/1109:53	11/21/1108:47	11/21/1109:20	DATE RECEIVED:	11/21/11
PREP. BATCH:	V003K21	V003K21	V003K21		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.50	95	10.0	9.16	92	4	60-130	30
Benzene	ND	10.0	9.95	99	10.0	9.57	96	4	70-130	30
Chlorobenzene	ND	10.0	9.97	100	10.0	9.71	97	3	70-120	30
Toluene	ND	10.0	9.58	96	10.0	9.13	91	5	70-130	30
Trichloroethene	ND	10.0	10.0	100	10.0	9.59	96	4	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.44	84	10.0	8.41	84	70-140
4-Bromofluorobenzene	10.0	9.62	96	10.0	9.34	93	70-130
Toluene-d8	10.0	9.54	95	10.0	9.26	93	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/22/11
Batch No. : 11K146	Date Extracted: 11/22/11 09:29
Sample ID: MBLK3W	Date Analyzed: 11/22/11 09:29
Lab Samp ID: V003K23B	Dilution Factor: 1
Lab File ID: RKB354	Matrix : WATER
Ext Btch ID: V003K23	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.19	10.00	81.9	70-140
4-BROMOFLUOROBENZENE	9.52	10.00	95.2	70-130
TOLUENE-D8	9.67	10.00	96.7	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK3W				
LAB SAMP ID:	V003K23B	V003K23L	V003K23C		
LAB FILE ID:	RKB354	RKB352	RKB353		
DATE EXTRACTED:	11/22/1109:29	11/22/1108:21	11/22/1108:55	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1109:29	11/22/1108:21	11/22/1108:55	DATE RECEIVED:	11/22/11
PREP. BATCH:	V003K23	V003K23	V003K23		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.21	92	10.0	9.30	93	1	60-130	30
Benzene	ND	10.0	9.41	94	10.0	9.66	97	3	70-130	30
Chlorobenzene	ND	10.0	9.92	99	10.0	9.98	100	1	70-120	30
Toluene	ND	10.0	9.19	92	10.0	9.40	94	2	70-130	30
Trichloroethene	ND	10.0	9.38	94	10.0	9.68	97	3	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.76	88	10.0	8.48	85	70-140
4-Bromofluorobenzene	10.0	9.28	93	10.0	9.30	93	70-130
Toluene-d8	10.0	9.20	92	10.0	9.34	93	70-130

QC DATA

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKB265.D Vial: 5
Acq On : 18 Nov 2011 4:34 pm Operator: CGM
Sample : VO03K19B 25mL Inst : 03
Misc : DF=1.0 MB Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 21 15:04 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.17	114	2540690	10.00 ug/l	0.00
41) CHLOROBENZENE-D5	17.16	117	2332742	10.00 ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.69	152	769211	10.00 ug/l	0.00
System Monitoring Compounds					
36) Dibromofluoromethane	12.08	111	882301	9.35 ug/l	0.00
Spiked Amount 10.000			Recovery	= 93.50%	
40) 1,2-Dichloroethane-d4	12.62	65	785250	8.17 ug/l	0.00
Spiked Amount 10.000			Recovery	= 81.70%	
55) Toluene-d8	15.22	98	3168228	9.56 ug/l	0.00
Spiked Amount 10.000			Recovery	= 95.60%	
75) 4-Bromofluorobenzene	18.62	95	1130985	9.45 ug/l	0.00
Spiked Amount 10.000			Recovery	= 94.50%	

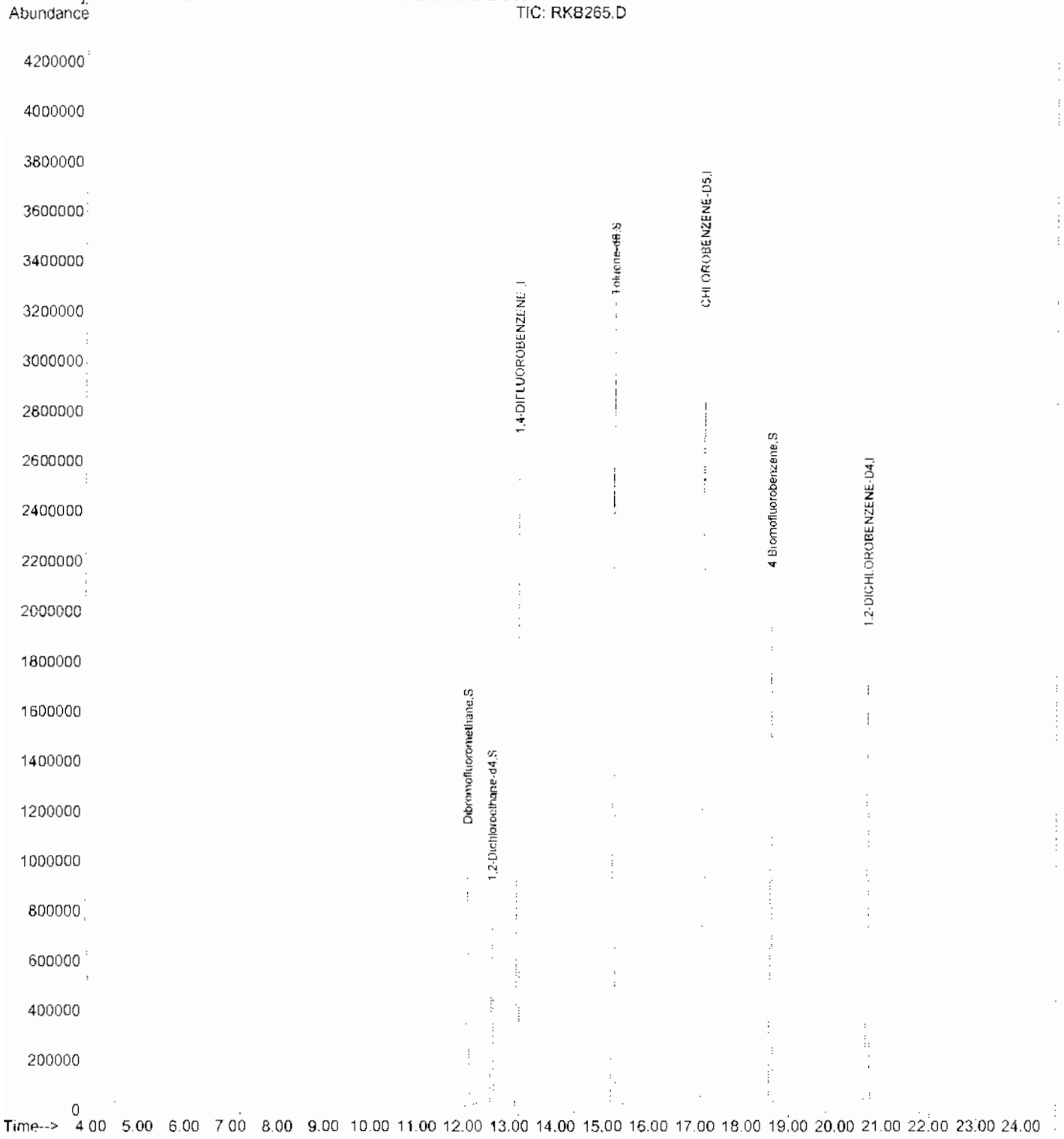
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K18\RKB265.D Vial: 5
Acq On : 18 Nov 2011 4:34 pm Operator: CGM
Sample : VO03K19B 25mL Inst : 03
Misc : DF=1.0 MB Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 21 15:04 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKB263.D Vial: 3
Acq On : 18 Nov 2011 3:21 pm Operator: CGM
Sample : VO03K19L Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 18 15:46 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.17	114	2312906	10.00	ug/l	0.01
41) CHLOROBENZENE-D5	17.16	117	2198871	10.00	ug/l	0.01
72) 1,2-DICHLOROBENZENE-D4	20.69	152	778434	10.00	ug/l	0.01
System Monitoring Compounds						
36) Dibromofluoromethane	12.09	111	812735	9.46	ug/l	0.01
Spiked Amount 10.000			Recovery	=	94.60%	
40) 1,2-Dichloroethane-d4	12.61	65	757472	8.66	ug/l	0.00
Spiked Amount 10.000			Recovery	=	86.60%	
55) Toluene-d8	15.23	98	2889979	9.25	ug/l	0.01
Spiked Amount 10.000			Recovery	=	92.50%	
75) 4-Bromofluorobenzene	18.62	95	1123575	9.27	ug/l	0.01
Spiked Amount 10.000			Recovery	=	92.70%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.08	85	741992	9.09	ug/l	100
5) Chloromethane	4.58	50	905918	10.98	ug/l	99
7) Vinyl chloride	4.91	62	757454	9.71	ug/l	99
8) Bromomethane	5.82	94	567845	10.83	ug/l	98
9) Chloroethane	6.09	64	449225	10.96	ug/l	97
10) Dichlorofluoromethane	6.64	67	1682818	9.53	ug/l	99
11) Trichlorofluoromethane	6.70	101	1207585	9.58	ug/l	100
12) Acrolein	7.81	56	89203	43.38	ug/l	99
13) 1,1,2-Trichloro-1,2,2-trif	7.93	151	444868	9.48	ug/l	97
14) Acetone	8.14	43	415564	46.52	ug/l	96
15) 1,1-Dichloroethene	7.96	61	1452934	9.34	ug/l	99
17) Iodomethane	8.35	142	1439818	9.86	ug/l	94
18) Carbon disulfide	8.48	76	2420999	7.73	ug/l	100
19) Methylene chloride	9.05	49	1114902	10.14	ug/l	99
20) tert-Butyl alcohol	9.24	59	124063	44.54	ug/l	96
21) tert-Butyl methyl ether (M	9.47	73	1142999	10.11	ug/l	97
22) trans-1,2-Dichloroethene	9.54	61	1471346	9.28	ug/l	99
23) Acrylonitrile	9.56	53	409197	49.81	ug/l	97
24) Isopropyl ether (DIPE)	10.29	45	2885402	10.43	ug/l	98
25) Vinyl acetate	10.35	43	980117	10.56	ug/l	97
26) 1,1-Dichloroethane	10.33	63	1713417	9.98	ug/l	99
28) tert-Butyl ethyl ether (ET	10.91	59	2174323	10.98	ug/l	99
29) 2,2-Dichloropropane	11.28	77	1187661	8.49	ug/l	99
30) 2-Butanone	11.31	43	752895	49.27	ug/l	100
31) cis-1,2-Dichloroethene	11.33	96	869487	9.66	ug/l	96
32) Bromochloromethane	11.73	49	734393	10.33	ug/l	98
33) Tetrahydrofuran	11.77	42	97266	11.12	ug/l	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKB263.D Vial: 3
Acq On : 18 Nov 2011 3:21 pm Operator: CGM
Sample : VO03K19L Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 18 15:46 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
34)	Chloroform	11.82	83	1811899	9.71 ug/l		100
37)	1,1,1-Trichloroethane	12.09	97	1474363	8.82 ug/l		99
39)	tert-Amyl methyl ether (TA	12.71	87	323998	10.60 ug/l		93
42)	1,1-Dichloropropene	12.32	110	424290	9.72 ug/l		100
43)	Carbon tetrachloride	12.34	119	1262759	8.48 ug/l		99
44)	Benzene	12.67	78	3459095	9.70 ug/l		99
45)	1,2-Dichloroethane	12.73	62	992855	9.02 ug/l		100
46)	Trichloroethene	13.57	130	961872	9.83 ug/l		98
48)	1,2-Dichloropropane	13.93	63	961196	10.53 ug/l		90
49)	1,4-Dioxane	14.10	88	62406	220.55 ug/l		91
50)	Dibromomethane	14.14	93	403032	9.35 ug/l		98
51)	Bromodichloromethane	14.32	83	1269730	9.32 ug/l		100
52)	2-Chloroethyl vinyl ether	14.60	63	157379	5.72 ug/l		97
53)	cis-1,3-Dichloropropene	14.88	75	1439819	10.23 ug/l		96
54)	4-Methyl-2-pentanone	15.00	43	2248560	50.61 ug/l		99
56)	Toluene	15.32	91	3676138	9.50 ug/l		99
57)	Ethyl methacrylate	15.55	69	682456	9.51 ug/l		99
58)	trans-1,3-Dichloropropene	15.60	75	1108436	10.07 ug/l		95
59)	1,1,2-Trichloroethane	15.88	97	480822	10.07 ug/l		98
60)	Tetrachloroethene	16.05	164	763797	9.09 ug/l		99
61)	2-Hexanone	16.08	43	1578699	53.78 ug/l		98
62)	1,3-Dichloropropane	16.11	76	966535	10.12 ug/l		100
63)	Dibromochloromethane	16.45	129	673512	9.52 ug/l		99
64)	1,2-Dibromoethane	16.64	107	479495	9.17 ug/l		99
65)	1-Chlorohexane	17.00	91	1753382	9.77 ug/l		98
66)	Chlorobenzene	17.19	112	2260170	10.19 ug/l		96
67)	Ethylbenzene	17.24	91	4736246	9.48 ug/l		99
68)	1,1,1,2-Tetrachloroethane	17.28	131	782721	9.50 ug/l		97
69)	m-Xylene & p-Xylene	17.37	91	7105598	18.47 ug/l		98
70)	o-Xylene	17.91	91	3511472	9.41 ug/l		98
71)	Styrene	17.92	104	2358078	9.79 ug/l		97
73)	Isopropylbenzene	18.32	105	4301725	9.75 ug/l		99
74)	Bromoform	18.31	173	304506	9.47 ug/l		100
76)	1,1,2,2-Tetrachloroethane	18.75	83	613924	10.47 ug/l		99
77)	trans-1,4-Dichloro-2-buten	18.80	53	188008	9.88 ug/l		93
78)	n-Propylbenzene	18.83	91	5945554	9.48 ug/l		99
79)	1,2,3-Trichloropropane	18.86	110	134131	9.84 ug/l	#	92
80)	Bromobenzene	18.87	156	791429	8.90 ug/l		95
81)	1,3,5-Trimethylbenzene	19.01	105	3379092	8.88 ug/l		98
82)	2-Chlorotoluene	19.05	91	3545886	9.06 ug/l		98
83)	4-Chlorotoluene	19.17	91	3256077	9.62 ug/l		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKB263.D Vial: 3
Acq On : 18 Nov 2011 3:21 pm Operator: CGM
Sample : VO03K19L Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 18 15:46 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

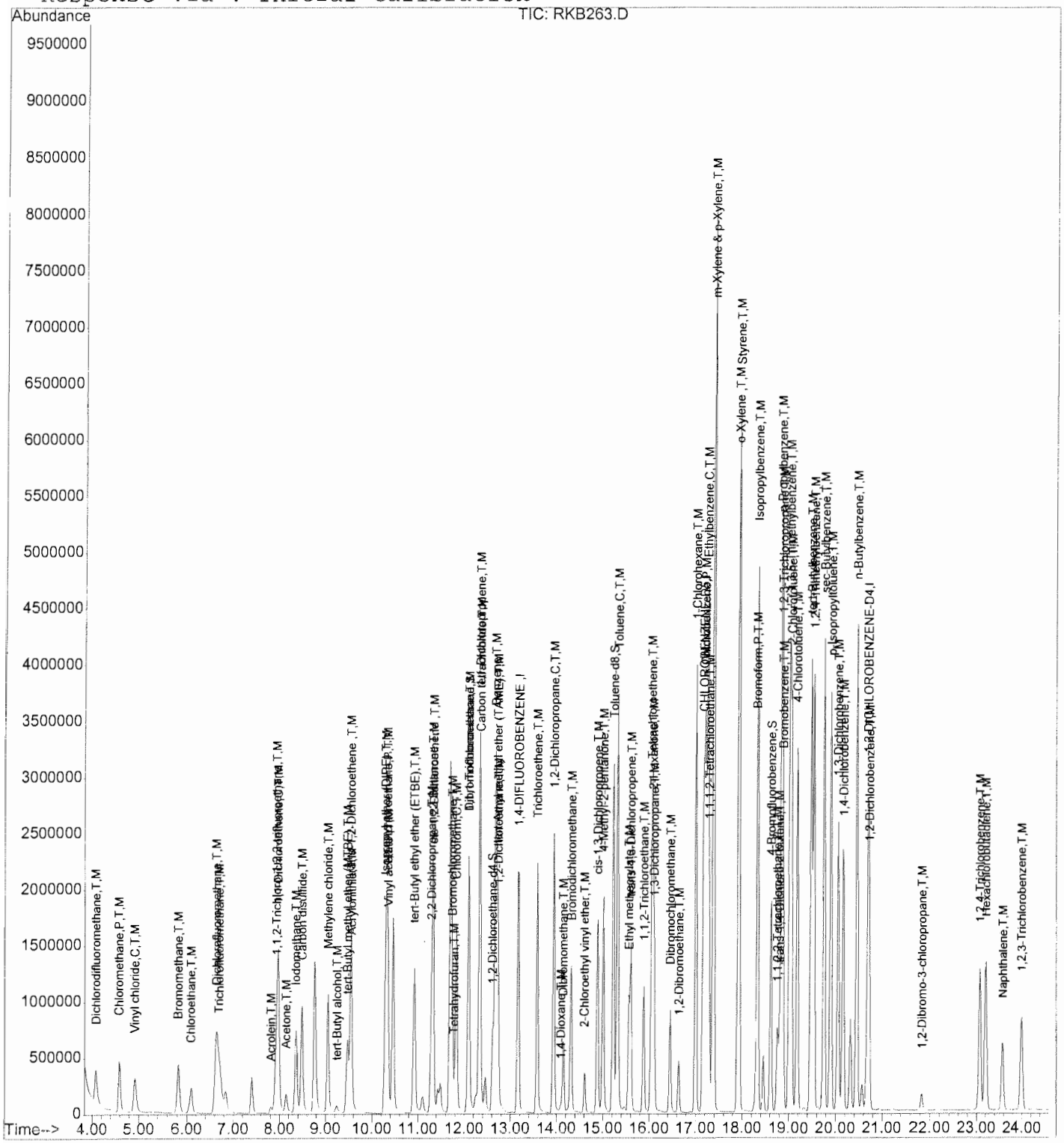
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84)	tert-Butylbenzene	19.47	134	713244	9.46 ug/l	93
85)	1,2,4-Trimethylbenzene	19.53	105	3354418	9.27 ug/l	98
86)	sec-Butylbenzene	19.75	105	4732034	9.54 ug/l	100
87)	p-Isopropyltoluene	19.90	119	3623310	9.47 ug/l	97
88)	1,3-Dichlorobenzene	20.05	146	1674055	9.82 ug/l	99
89)	1,4-Dichlorobenzene	20.17	146	1577423	9.95 ug/l	99
90)	n-Butylbenzene	20.45	91	4067122	9.62 ug/l	99
91)	1,2-Dichlorobenzene	20.72	146	1294631	9.93 ug/l	100
92)	1,2-Dibromo-3-chloropropan	21.84	157	65933	9.91 ug/l	98
93)	1,2,4-Trichlorobenzene	23.07	180	709864	10.73 ug/l	100
94)	Hexachlorobutadiene	23.21	225	515345	8.51 ug/l	99
95)	Naphthalene	23.58	128	981753	11.52 ug/l	100
96)	1,2,3-Trichlorobenzene	23.99	180	517456	10.66 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K18\RKB263.D Vial: 3
Acq On : 18 Nov 2011 3:21 pm Operator: CGM
Sample : VO03K19L Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 18 15:46 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKB264.D Vial: 4
Acq On : 18 Nov 2011 3:57 pm Operator: CGM
Sample : VO03K19C Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 18 16:22 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.17	114	2468781	10.00 ug/l	0.01
41) CHLOROBENZENE-D5	17.16	117	2323435	10.00 ug/l	0.01
72) 1,2-DICHLOROBENZENE-D4	20.69	152	840552	10.00 ug/l	0.01
System Monitoring Compounds					
36) Dibromofluoromethane	12.09	111	849698	9.26 ug/l	0.01
Spiked Amount 10.000			Recovery	= 92.60%	
40) 1,2-Dichloroethane-d4	12.62	65	784097	8.40 ug/l	0.01
Spiked Amount 10.000			Recovery	= 84.00%	
55) Toluene-d8	15.23	98	3077029	9.32 ug/l	0.01
Spiked Amount 10.000			Recovery	= 93.20%	
75) 4-Bromofluorobenzene	18.62	95	1190379	9.10 ug/l	0.01
Spiked Amount 10.000			Recovery	= 91.00%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.08	85	749256	8.60 ug/l	100
5) Chloromethane	4.60	50	944743	10.73 ug/l	100
7) Vinyl chloride	4.93	62	788394	9.47 ug/l	99
8) Bromomethane	5.83	94	596961	10.66 ug/l	97
9) Chloroethane	6.10	64	479545	10.96 ug/l	97
10) Dichlorofluoromethane	6.64	67	1788864	9.49 ug/l	100
11) Trichlorofluoromethane	6.70	101	1234682	9.18 ug/l	100
12) Acrolein	7.81	56	101330	46.17 ug/l	100
13) 1,1,2-Trichloro-1,2,2-trif	7.95	151	484363	9.67 ug/l	99
14) Acetone	8.14	43	426920	44.77 ug/l	96
15) 1,1-Dichloroethene	7.98	61	1523771	9.18 ug/l	97
17) Iodomethane	8.36	142	1529888	9.82 ug/l	94
18) Carbon disulfide	8.48	76	2619727	7.84 ug/l	100
19) Methylene chloride	9.05	49	1195885	10.19 ug/l	99
20) tert-Butyl alcohol	9.24	59	129161	43.44 ug/l	94
21) tert-Butyl methyl ether (M	9.47	73	1221827	10.13 ug/l	97
22) trans-1,2-Dichloroethene	9.54	61	1564789	9.24 ug/l	97
23) Acrylonitrile	9.57	53	438542	50.01 ug/l	97
24) Isopropyl ether (DIPE)	10.30	45	3093109	10.48 ug/l	98
25) Vinyl acetate	10.34	43	842160	8.50 ug/l	99
26) 1,1-Dichloroethane	10.33	63	1827277	9.97 ug/l	99
28) tert-Butyl ethyl ether (ET	10.91	59	2332626	11.04 ug/l	99
29) 2,2-Dichloropropane	11.30	77	1262412	8.45 ug/l	98
30) 2-Butanone	11.31	43	795102	48.75 ug/l	100
31) cis-1,2-Dichloroethene	11.33	96	924194	9.62 ug/l	96
32) Bromochloromethane	11.73	49	768657	10.13 ug/l	98
33) Tetrahydrofuran	11.77	42	99222	10.63 ug/l	94

(#) = qualifier out of range (m) = manual integration

Data File : D:\HPCHEM\1\DATA\11K18\RKB264.D Vial: 4
Acq On : 18 Nov 2011 3:57 pm Operator: CGM
Sample : VO03K19C Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 18 16:22 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
34)	Chloroform	11.82	83	1933417	9.71 ug/l		99
37)	1,1,1-Trichloroethane	12.10	97	1557606	8.73 ug/l		99
39)	tert-Amyl methyl ether (TA	12.71	87	334830	10.26 ug/l	#	89
42)	1,1-Dichloropropene	12.32	110	453280	9.83 ug/l		99
43)	Carbon tetrachloride	12.34	119	1321258	8.40 ug/l		99
44)	Benzene	12.67	78	3710749	9.85 ug/l		99
45)	1,2-Dichloroethane	12.73	62	1016799	8.75 ug/l		99
46)	Trichloroethene	13.59	130	1032585	9.99 ug/l		98
48)	1,2-Dichloropropane	13.93	63	1028783	10.67 ug/l		88
49)	1,4-Dioxane	14.09	88	63474	212.30 ug/l		97
50)	Dibromomethane	14.15	93	428643	9.41 ug/l		98
51)	Bromodichloromethane	14.32	83	1333926	9.26 ug/l		100
52)	2-Chloroethyl vinyl ether	14.62	63	162214	5.58 ug/l		99
53)	cis-1,3-Dichloropropene	14.88	75	1531920	10.30 ug/l		95
54)	4-Methyl-2-pentanone	15.00	43	2429503	51.75 ug/l		99
56)	Toluene	15.32	91	3953578	9.67 ug/l		99
57)	Ethyl methacrylate	15.55	69	728177	9.60 ug/l		100
58)	trans-1,3-Dichloropropene	15.60	75	1165158	10.01 ug/l		94
59)	1,1,2-Trichloroethane	15.88	97	510999	10.13 ug/l		100
60)	Tetrachloroethene	16.04	164	822561	9.26 ug/l		99
61)	2-Hexanone	16.07	43	1675715	54.02 ug/l		97
62)	1,3-Dichloropropane	16.10	76	1035156	10.26 ug/l		99
63)	Dibromochloromethane	16.45	129	714727	9.57 ug/l		99
64)	1,2-Dibromoethane	16.64	107	511490	9.25 ug/l		99
65)	1-Chlorohexane	17.00	91	1868470	9.86 ug/l		98
66)	Chlorobenzene	17.21	112	2404173	10.25 ug/l		96
67)	Ethylbenzene	17.25	91	5020502	9.51 ug/l		99
68)	1,1,1,2-Tetrachloroethane	17.28	131	837806	9.62 ug/l		97
69)	m-Xylene & p-Xylene	17.37	91	7569805	18.62 ug/l		97
70)	o-Xylene	17.91	91	3784730	9.60 ug/l		98
71)	Styrene	17.93	104	2511745	9.87 ug/l		97
73)	Isopropylbenzene	18.32	105	4588274	9.63 ug/l		99
74)	Bromoform	18.32	173	325147	9.37 ug/l		99
76)	1,1,2,2-Tetrachloroethane	18.75	83	655568	10.35 ug/l		98
77)	trans-1,4-Dichloro-2-buten	18.80	53	194734	9.48 ug/l		95
78)	n-Propylbenzene	18.84	91	6459601	9.53 ug/l		99
79)	1,2,3-Trichloropropane	18.86	110	143160	9.72 ug/l	#	92
80)	Bromobenzene	18.87	156	850256	8.86 ug/l		96
81)	1,3,5-Trimethylbenzene	19.01	105	3651701	8.89 ug/l		98
82)	2-Chlorotoluene	19.05	91	3825446	9.05 ug/l		98
83)	4-Chlorotoluene	19.19	91	3492840	9.56 ug/l		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKB264.D Vial: 4
Acq On : 18 Nov 2011 3:57 pm Operator: CGM
Sample : VO03K19C Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 18 16:22 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

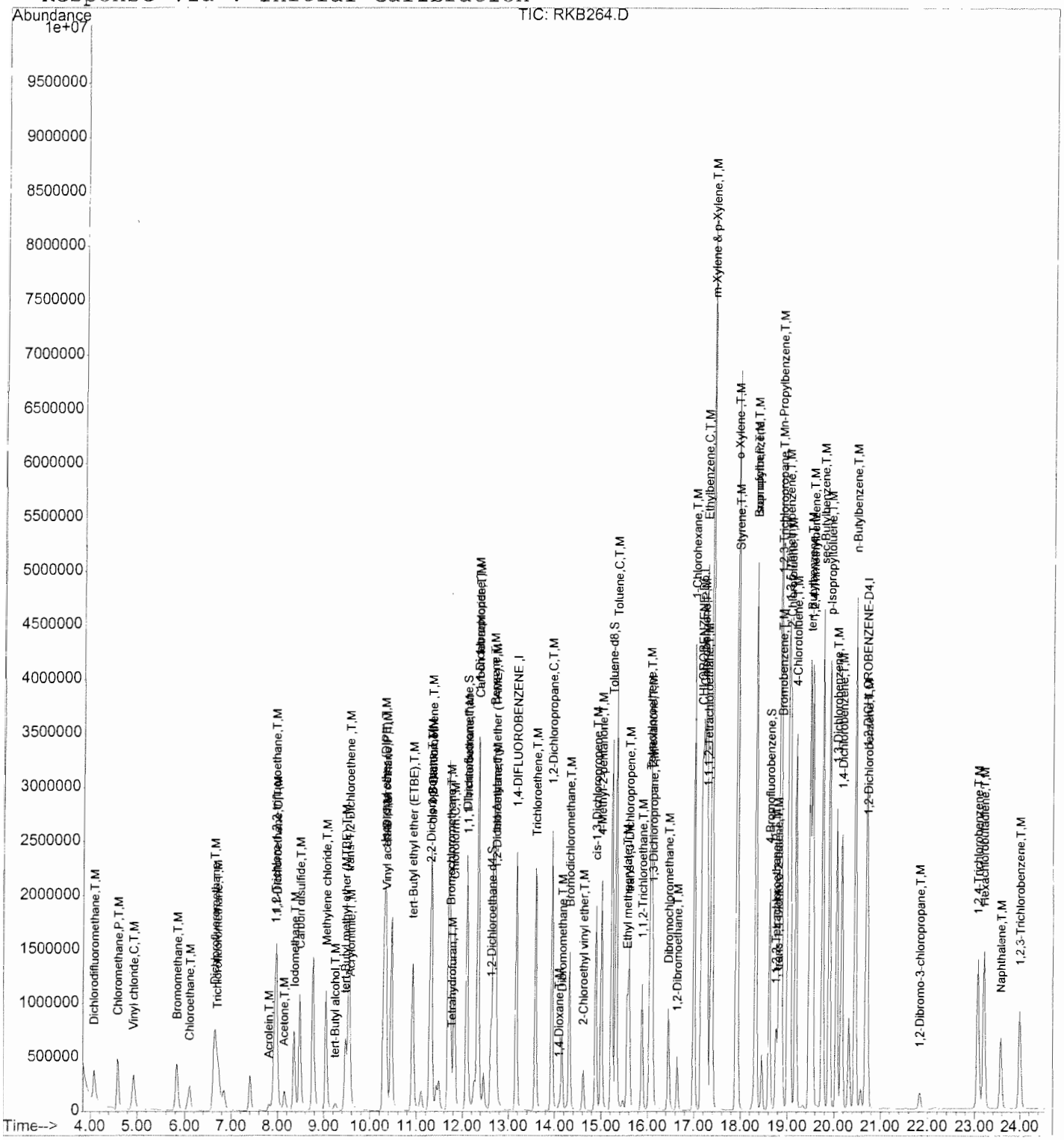
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
84)	tert-Butylbenzene	19.48	134	784092	9.63 ug/l	#	90
85)	1,2,4-Trimethylbenzene	19.53	105	3652023	9.34 ug/l		98
86)	sec-Butylbenzene	19.75	105	5154789	9.63 ug/l		99
87)	p-Isopropyltoluene	19.90	119	3944782	9.55 ug/l		98
88)	1,3-Dichlorobenzene	20.05	146	1821864	9.90 ug/l		99
89)	1,4-Dichlorobenzene	20.17	146	1727274	10.09 ug/l		99
90)	n-Butylbenzene	20.45	91	4450745	9.75 ug/l		100
91)	1,2-Dichlorobenzene	20.72	146	1410337	10.02 ug/l		100
92)	1,2-Dibromo-3-chloropropan	21.83	157	70746	9.85 ug/l		97
93)	1,2,4-Trichlorobenzene	23.07	180	783147	10.97 ug/l		99
94)	Hexachlorobutadiene	23.20	225	566669	8.66 ug/l		99
95)	Naphthalene	23.58	128	1061049	11.53 ug/l		99
96)	1,2,3-Trichlorobenzene	23.99	180	562976	10.74 ug/l		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K18\RKB264.D Vial: 4
Acq On : 18 Nov 2011 3:57 pm Operator: CGM
Sample : VO03K19C Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 18 16:22 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration



INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RHB438
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K146
BFB Injection Date : 08/16/11
BFB Injection Time : 11:15
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	26.25
75	30.0 - 60.0% of mass 95	54.23
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.88
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	60.88
175	5.0 - 9.0% of mass 174	4.93(8.1)1
176	95.0 - 101.0% of mass 174	58.41(96.0)1
177	5.0 - 9.0% of mass 176	4.58(7.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	V003H161	RHB439	08/16/11	11:49
2	VSTD0.5	V003H162	RHB440	08/16/11	12:24
3	VSTD01	V003H163	RHB441	08/16/11	12:57
4	VSTD02	V003H164	RHB442	08/16/11	13:32
5	VSTD05	V003H165	RHB443	08/16/11	14:06
6	VSTD010	V003H166	RHB444	08/16/11	14:40
7	VSTD020	V003H167	RHB445	08/16/11	15:14
8	VSTD030	V003H168	RHB446	08/16/11	15:48
9	VSTD040	V003H169	RHB447	08/16/11	16:21
10	VSTD050	V003H1610	RHB448	08/16/11	16:56
11	VSTD100	V003H1611	RHB449	08/16/11	17:30
12	VSTD010	IV003H161	RHB452	08/16/11	19:13

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :03
Beginning DateTime :08/16/11 11:49
Spike Units :PPB
IC File :RHB444

Column Spec :ZB-624 ID :0.25MM
Ending DateTime :08/16/11 17:30
HPChem Method :V003H16

M	IDX	Parameters	.3 11:49 RHB439	.5 12:24 RHB440	1 12:57 RHB441	2 13:32 RHB442	5 14:06 RHB443	10 14:40 RHB444	20 15:14 RHB445	30 15:48 RHB446	40 16:21 RHB447	50 16:56 RHB448	100 17:30 RHB449	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	1	0	13.2029
	2	Chlorotrifluoroethylene	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	3	Dichlorodifluoromethane	0.333	0.326	0.343	0.357	0.358	0.429	0.335	0.363	0.324	0.341	0.375	0.353	8.52	4.1126
	4	Dichlorotetrafluoroethane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	5	Chloromethane	0.323	0.300	0.336	0.346	0.362	0.430	0.350	0.384	0.342	0.356	0.394	0.357	10.00	4.6120
	6	2-Chloro-1,1,1-trifluoroethane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	7	Vinyl chloride	0.290	0.283	0.319	0.335	0.351	0.415	0.336	0.355	0.320	0.334	0.372	0.337	10.93	4.9340
	8	Bromomethane	0.218	0.200	0.221	0.218	0.234	0.281	0.230	0.245	0.221	0.224	0.202	0.227	9.78	5.8582
	9	Chloroethane	0.155	0.158	0.171	0.167	0.178	0.217	0.174	0.189	0.173	0.178	0.189	0.177	9.63	6.1356
	10	Dichlorofluoromethane	0.720	0.721	0.765	0.755	0.776	0.817	0.754	0.797	0.735	0.750	0.809	0.764	4.35	6.6727
	11	Trichlorofluoromethane	0.483	0.478	0.529	0.539	0.564	0.666	0.530	0.573	0.516	0.533	0.585	0.545	9.58	6.7323
5	12	Acrolein	------	------	0.008	0.007	0.008	0.009	0.009	0.010	0.010	------	------	0.009	13.95	7.8523
	13	1,1,2-Trichloro-1,2,2-trifluoroethane	0.214	0.200	0.199	0.192	0.199	0.213	0.198	0.208	0.194	0.200	0.216	0.203	4.08	7.9826
5	14	Acetone	------	------	0.045	0.038	0.038	0.040	0.036	0.036	0.035	0.037	0.042	0.039	8.41	8.1846
	15	1,1-Dichloroethene	0.666	0.641	0.683	0.681	0.707	0.726	0.649	0.690	0.620	0.646	0.690	0.673	4.65	8.0029
	16	Methyl acetate	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	17	Iodomethane	0.595	0.558	0.625	0.620	0.644	0.683	0.622	0.668	0.610	0.629	0.689	0.631	6.13	8.3899
	18	Carbon disulfide	1.096	1.194	1.329	1.365	1.443	1.326	1.392	1.540	1.350	1.429	1.420	1.353	8.97	8.5144
	19	Methylene chloride	0.499	0.472	0.484	0.467	0.481	0.496	0.455	0.480	0.438	0.456	0.503	0.475	4.30	9.0800
5	20	tert-Butyl alcohol	------	0.011	0.011	0.011	0.012	0.013	0.012	0.012	0.011	0.012	0.014	0.012	6.87	9.2881
	21	tert-Butyl methyl ether (MTBE)	0.490	0.469	0.498	0.473	0.489	0.517	0.482	0.491	0.455	0.480	0.531	0.489	4.37	9.5102
	22	trans-1,2-Dichloroethene	0.675	0.662	0.683	0.699	0.701	0.732	0.668	0.711	0.642	0.662	0.708	0.686	3.87	9.5711
5	23	Acrylonitrile	0.033	0.031	0.034	0.033	0.035	0.038	0.036	0.038	0.035	0.037	0.041	0.036	7.73	9.6022
	24	Isopropyl ether (DIPE)	1.151	1.115	1.209	1.191	1.227	1.299	1.169	1.239	1.128	1.181	1.246	1.196	4.59	10.3302
	25	Vinyl acetate	------	0.309	0.374	0.410	0.409	0.470	0.412	0.419	0.353	0.382	0.476	0.401	12.58	10.3881
	26	1,1-Dichloroethane	0.733	0.691	0.747	0.754	0.775	0.806	0.727	0.770	0.691	0.721	0.755	0.743	4.72	10.3695
5	27	2-Butanol	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	28	tert-Butyl ethyl ether (ETBE)	0.820	0.794	0.868	0.845	0.869	0.915	0.834	0.888	0.805	0.851	0.926	0.856	4.96	10.9486
	29	2,2-Dichloropropane	0.645	0.638	0.680	0.663	0.654	0.651	0.579	0.585	0.526	0.522	0.512	0.605	10.34	11.3261
5	30	2-Butanone	0.080	0.076	0.068	0.060	0.063	0.068	0.062	0.063	0.060	0.062	0.067	0.066	10.11	11.3546
	31	cis-1,2-Dichloroethene	0.374	0.367	0.389	0.395	0.396	0.418	0.383	0.409	0.369	0.382	0.398	0.389	4.16	11.3600
	32	Bromochloromethane	0.290	0.292	0.316	0.301	0.313	0.334	0.301	0.316	0.291	0.302	0.324	0.307	4.66	11.7699
	33	Tetrahydrofuran	------	0.040	0.045	0.038	0.038	0.036	0.036	0.036	0.033	0.035	0.041	0.038	8.93	11.8229
	34	Chloroform	0.779	0.771	0.815	0.825	0.841	0.878	0.785	0.834	0.750	0.776	0.822	0.807	4.69	11.8606
5	35	tert-Amyl alcohol	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	36	Dibromofluoromethane	------	------	------	------	0.389	0.390	0.366	0.381	0.347	0.360	0.368	0.372	4.23	12.1220
	37	1,1,1-Trichloroethane	0.737	0.711	0.742	0.756	0.766	0.787	0.702	0.733	0.656	0.674	0.689	0.723	5.57	12.1312
	38	Cyclohexane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	39	tert-Amyl methyl ether (TAME)	0.119	0.125	0.141	0.132	0.137	0.146	0.130	0.135	0.124	0.128	0.137	0.132	5.96	12.7415
	40	1,2-Dichloroethane-d4	------	------	------	------	0.405	0.399	0.376	0.375	0.347	0.364	0.381	0.378	5.20	12.6515
	41	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	1	0	17.1946
	42	1,1-Dichloropropene	0.194	0.191	0.194	0.202	0.199	0.214	0.195	0.210	0.187	0.194	0.202	0.198	4.08	12.3667
	43	Carbon tetrachloride	0.651	0.632	0.695	0.701	0.694	0.726	0.654	0.705	0.628	0.664	0.700	0.677	4.82	12.3748
	44	Benzene	1.610	1.539	1.609	1.645	1.618	1.728	1.560	1.733	1.533	1.641	------	1.622	4.28	12.7061
	45	1,2-Dichloroethane	0.477	0.486	0.520	0.521	0.517	0.534	0.479	0.506	0.456	0.484	0.524	0.500	5.00	12.7645
	46	Trichloroethene	0.439	0.414	0.425	0.434	0.440	0.469	0.434	0.477	0.426	0.452	0.484	0.445	5.11	13.6183
	47	Methylcyclohexane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	48	1,2-Dichloropropane	0.392	0.391	0.404	0.409	0.418	0.443	0.407	0.444	0.391	0.421	0.444	0.415	5.04	13.9674
20	49	1,4-Dioxane	------	------	------	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	13.98	14.1284
	50	Dibromomethane	0.173	0.185	0.186	0.192	0.196	0.207	0.195	0.208	0.188	0.203	0.223	0.196	7.00	14.1839
	51	Bromodichloromethane	0.568	0.548	0.588	0.615	0.635	0.668	0.614	0.663	0.593	0.639	0.688	0.620	7.03	14.3490
	52	2-Chloroethyl vinyl ether	0.127	0.109	0.107	0.108	0.119	0.128	0.126	0.136	0.125	0.135	0.157	0.125	11.72	14.6453
	53	cis-1,3-Dichloropropene	0.559	0.576	0.607	0.629	0.639	0.692	0.640	0.694	0.622	0.667	0.716	0.640	7.70	14.9159
5	54	4-Methyl-2-pentanone	0.216	0.203	0.202	0.183	0.194	0.211	0.195	0.203	0.189	0.204	0.221	0.202	5.64	15.0350
	55	Toluene-d8	------	------	------	------	1.414	1.463	1.383	1.491	1.335	1.437	------	1.420	3.97	15.2566
	56	Toluene	1.743	1.699	1.754	1.765	1.767	1.866	1.709	1.870	1.659	1.763	------	1.759	3.81	15.3480
	57	Ethyl methacrylate	0.317	0.290	0.311	0.307	0.328	0.349	0.328	0.342	0.314	0.337	0.367	0.326	6.64	15.5912
	58	trans-1,3-Dichloropropene	0.444	0.436	0.476	0.491	0.506	0.549	0.503	0.533	0.486	0.523	0.562	0.501	8.00	15.6345

SM 8/18/11

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	59	1,1,2-Trichloroethane	0.200	0.210	0.215	0.211	0.215	0.232	0.213	0.227	0.205	0.220	0.240	0.217	5.48	15.9132
	60	Tetrachloroethene	0.394	0.381	0.379	0.375	0.383	0.402	0.368	0.401	0.355	0.377	0.390	0.382	3.71	16.0891
5	61	2-Hexanone	0.124	0.136	0.139	0.124	0.131	0.145	0.133	0.136	0.126	0.134	0.139	0.133	4.95	16.1081
	62	1,3-Dichloropropane	0.394	0.407	0.439	0.435	0.440	0.467	0.430	0.451	0.411	0.435	0.468	0.434	5.43	16.1405
	63	Dibromochloromethane	0.269	0.276	0.295	0.307	0.323	0.349	0.331	0.351	0.320	0.343	0.374	0.322	10.17	16.4869
	64	1,2-Dibromoethane	0.219	0.212	0.227	0.229	0.237	0.254	0.241	0.251	0.231	0.246	0.270	0.238	7.10	16.6723
	65	1-Chlorohexane	0.806	0.829	0.818	0.818	0.821	0.858	0.797	0.855	0.760	0.800	0.812	0.816	3.31	17.0363
	66	Chlorobenzene	1.013	0.966	0.986	1.007	1.015	1.077	0.995	1.068	0.945	0.996	1.033	1.009	3.91	17.2366
	67	Ethylbenzene	2.214	2.216	2.257	2.290	2.286	2.401	2.175	2.333	------	------	------	2.272	3.20	17.2809
	68	1,1,1,2-Tetrachloroethane	0.351	0.348	0.375	0.382	0.379	0.408	0.371	0.398	0.352	0.374	0.383	0.375	5.09	17.3137
2	69	m-Xylene & p-Xylene	1.793	1.710	1.756	1.784	1.773	1.830	1.658	1.696	------	------	------	1.750	3.27	17.4093
	70	o-Xylene	1.787	1.675	1.748	1.756	1.739	1.810	1.626	1.732	1.506	1.591	------	1.697	5.67	17.9438
	71	Styrene	1.054	1.000	1.088	1.118	1.153	1.209	1.104	1.164	1.021	1.074	1.058	1.095	5.77	17.9672
	72	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	1	0	20.7222
	73	Isopropylbenzene	5.858	5.671	5.633	5.810	5.728	5.928	5.332	5.949	5.238	5.551	------	5.670	4.24	18.3621
	74	Bromoform	0.324	0.344	0.368	0.382	0.408	0.454	0.425	0.465	0.423	0.454	0.497	0.413	13.02	18.3529
	75	4-Bromofluorobenzene	------	------	------	------	1.571	1.602	1.509	1.625	1.474	------	------	1.556	4.08	18.6495
	76	1,1,2,2-Tetrachloroethane	0.772	0.704	0.722	0.721	0.745	0.787	0.727	0.787	0.711	0.765	0.847	0.753	5.72	18.7926
	77	trans-1,4-Dichloro-2-butene	0.242	0.213	0.220	0.226	0.232	0.251	0.250	0.269	0.242	0.260	0.284	0.244	8.79	18.8292
	78	n-Propylbenzene	8.224	8.356	7.993	8.230	8.165	8.440	7.620	8.477	7.035	------	------	8.060	5.75	18.8738
	79	1,2,3-Trichloropropane	0.148	0.180	0.183	0.183	0.182	0.189	0.172	0.183	0.160	0.171	0.176	0.175	6.81	18.8927
	80	Bromobenzene	1.099	1.123	1.157	1.144	1.155	1.202	1.089	1.207	1.063	1.135	1.187	1.142	4.08	18.9131
	81	1,3,5-Trimethylbenzene	5.021	4.935	4.880	5.015	4.948	5.155	4.658	5.132	4.444	4.689	------	4.888	4.63	19.0498
	82	2-Chlorotoluene	5.177	5.066	5.093	5.142	5.099	5.296	4.742	5.233	4.586	4.857	------	5.029	4.52	19.0899
	83	4-Chlorotoluene	4.375	4.251	4.270	4.354	4.458	4.591	4.187	4.627	4.062	4.288	------	4.346	4.03	19.2165
	84	tert-Butylbenzene	1.029	0.977	0.964	0.977	0.993	1.020	0.928	1.019	0.887	0.930	0.935	0.969	4.68	19.5152
	85	1,2,4-Trimethylbenzene	4.786	4.599	4.661	4.724	4.753	4.900	4.450	4.909	4.270	4.452	------	4.650	4.48	19.5692
	86	sec-Butylbenzene	6.721	6.468	6.448	6.425	6.464	6.693	6.076	6.628	5.748	6.015	------	6.369	5.02	19.7895
	87	p-Isopropyltoluene	4.919	4.972	4.842	4.954	5.082	5.267	4.766	5.175	4.496	4.694	------	4.917	4.68	19.9309
	88	1,3-Dichlorobenzene	2.180	2.099	2.105	2.143	2.217	2.322	2.149	2.351	2.047	2.200	2.279	2.190	4.38	20.0957
	89	1,4-Dichlorobenzene	1.974	1.957	1.960	1.989	2.042	2.192	2.013	2.184	1.927	2.020	2.150	2.037	4.65	20.2012
	90	n-Butylbenzene	5.497	5.378	5.308	5.435	5.582	5.847	5.333	5.742	4.986	5.191	------	5.430	4.68	20.4876
	91	1,2-Dichlorobenzene	1.635	1.630	1.645	1.640	1.673	1.784	1.636	1.768	1.569	1.668	1.777	1.675	4.20	20.7520
	92	1,2-Dibromo-3-chloropropane	------	0.071	0.077	0.076	0.085	0.093	0.090	0.095	0.088	0.094	------	0.085	10.04	21.8756
	93	1,2,4-Trichlorobenzene	0.793	0.757	0.731	0.751	0.832	0.913	0.883	0.926	0.849	0.893	1.017	0.850	10.33	23.1186
	94	Hexachlorobutadiene	0.813	0.765	0.736	0.736	0.774	0.844	0.780	0.806	0.730	0.749	0.825	0.778	5.07	23.2512
	95	Naphthalene	0.985	0.890	0.921	0.924	1.070	1.223	1.223	1.249	1.184	1.282	------	1.095	14.07	23.6207
	96	1,2,3-Trichlorobenzene	0.569	0.526	0.548	0.555	0.608	0.669	0.660	0.675	0.632	0.667	0.753	0.624	11.07	24.0414

Spike Amount = Nominal Amount * M
Ave_%RSD : 6.5 Max_%RSD : 14.1

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Compound List Report 03

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
Total Cpnds : 96

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-DIFLUOROBENZENE	114	13.20	1.000	A	1	A	B
2	T	Chlorotrifluoroethylene	116	3.99	0.302	A	2	A	B
3	T	Dichlorodifluoromethane	85	4.11	0.311	A	1	A	B
4	T	Dichlorotetrafluoroethane	85	4.11	0.311	A	2	A	B
5	T	Chloromethane	50	4.62	0.350	A	1	A	B
6	T	2-Chloro-1,1,1-trifluoroethane	118	5.23	0.396	A	2	A	B
7	T	Vinyl chloride	62	4.93	0.373	A	1	A	B
8	T	Bromomethane	94	5.87	0.444	A	1	A	B
9	T	Chloroethane	64	6.15	0.466	A	2	A	B
10	T	Dichlorofluoromethane	67	6.68	0.506	A	1	A	B
11	T	Trichlorofluoromethane	101	6.73	0.510	A	1	A	B
12	T	Acrolein	56	7.84	0.594	A	1	A	B
13	T	1,1,2-Trichloro-1,2,2-trifluor	151	7.99	0.605	A	1	A	B
14	T	Acetone	43	8.19	0.620	A	2	A	B
15	T	1,1-Dichloroethene	61	7.99	0.605	A	2	A	B
16	T	Methyl acetate	43	8.19	0.620	A	1	A	B
17	T	Iodomethane	142	8.38	0.635	A	1	A	B
18	T	Carbon disulfide	76	8.52	0.645	A	1	A	B
19	T	Methylene chloride	49	9.08	0.688	A	2	A	B
20	T	tert-Butyl alcohol	59	9.27	0.702	A	1	A	B
21	T	tert-Butyl methyl ether (MTBE)	73	9.50	0.719	A	1	A	B
22	T	trans-1,2-Dichloroethene	61	9.57	0.725	A	2	A	B
23	T	Acrylonitrile	53	9.60	0.727	A	2	A	B
24	T	Isopropyl ether (DIPE)	45	10.33	0.782	A	1	A	B
25	T	Vinyl acetate	43	10.39	0.787	A	1	A	B
26	T	1,1-Dichloroethane	63	10.36	0.785	A	2	A	B
27	T	2-Butanol	45	10.94	0.829	A	1	A	B
28	T	tert-Butyl ethyl ether (ETBE)	59	10.94	0.829	A	1	A	B
29	T	2,2-Dichloropropane	77	11.33	0.858	A	2	A	B
30	T	2-Butanone	43	11.36	0.860	A	1	A	B
31	T	cis-1,2-Dichloroethene	96	11.36	0.860	A	2	A	B
32	T	Bromochloromethane	49	11.78	0.892	A	2	A	B
33	T	Tetrahydrofuran	42	11.82	0.895	A	2	A	B
34	T	Chloroform	83	11.86	0.899	A	2	A	B
35	T	tert-Amyl alcohol	59	12.64	0.957	A	2	A	B
36	S	Dibromofluoromethane	111	12.12	0.918	A	2	A	B
37	T	1,1,1-Trichloroethane	97	12.13	0.919	A	2	A	B
38	T	Cyclohexane	56	12.25	0.928	A	2	A	B
39	T	tert-Amyl methyl ether (TAME)	87	12.74	0.965	A	2	A	B
40	S	1,2-Dichloroethane-d4	65	12.65	0.958	A	1	A	B
41	I	CHLOROBENZENE-D5	117	17.19	1.000	A	2	A	B
42	T	1,1-Dichloropropene	110	12.37	0.720	A	1	A	B
43	T	Carbon tetrachloride	119	12.37	0.720	A	1	A	B
44	T	Benzene	78	12.71	0.739	A	2	A	B
45	T	1,2-Dichloroethane	62	12.76	0.742	A	1	A	B
46	T	Trichloroethene	130	13.62	0.792	A	3	A	B
47	T	Methylcyclohexane	83	13.62	0.792	A	2	A	B
48	T	1,2-Dichloropropane	63	13.96	0.812	A	2	A	B
49	T	1,4-Dioxane	88	14.13	0.822	A	1	A	B
50	T	Dibromomethane	93	14.19	0.825	A	2	A	B
51	T	Bromodichloromethane	83	14.35	0.835	A	1	A	B
52	T	2-Chloroethyl vinyl ether	63	14.65	0.852	A	2	A	B

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53	T	cis-1,3-Dichloropropene	75	14.92	0.868	A	3	A	B
54	T	4-Methyl-2-pentanone	43	15.03	0.874	A	3	A	B
55	S	Toluene-d8	98	15.26	0.887	A	1	A	B
56	T	Toluene	91	15.35	0.893	A	1	A	B
57	T	Ethyl methacrylate	69	15.59	0.907	A	2	A	B
58	T	trans-1,3-Dichloropropene	75	15.63	0.909	A	2	A	B
59	T	1,1,2-Trichloroethane	97	15.91	0.926	A	3	A	B
60	T	Tetrachloroethene	164	16.09	0.936	A	3	A	B
61	T	2-Hexanone	43	16.11	0.937	A	2	A	B
62	T	1,3-Dichloropropane	76	16.14	0.939	A	1	A	B
63	T	Dibromochloromethane	129	16.49	0.959	A	1	A	B
64	T	1,2-Dibromoethane	107	16.67	0.970	A	1	A	B
65	T	1-Chlorohexane	91	17.03	0.990	A	3	A	B
66	P,M	Chlorobenzene	112	17.24	1.003	A	3	A	B
67	T	Ethylbenzene	91	17.28	1.005	A	1	A	B
68	T	1,1,1,2-Tetrachloroethane	131	17.31	1.007	A	3	A	B
69	T	m-Xylene & p-Xylene	91	17.42	1.013	A	1	A	B
70	T	o-Xylene	91	17.94	1.043	A	1	A	B
71	T	Styrene	104	17.97	1.045	A	2	A	B
72	I	1,2-DICHLOROBENZENE-D4	152	20.72	1.000	A	1	A	B
73	T	Isopropylbenzene	105	18.37	0.886	A	3	A	B
74	T	Bromoform	173	18.35	0.886	A	2	A	B
75	S	4-Bromofluorobenzene	95	18.65	0.900	A	2	A	B
76	T	1,1,2,2-Tetrachloroethane	83	18.79	0.907	A	1	A	B
77	T	trans-1,4-Dichloro-2-butene	53	18.83	0.909	A	1	A	B
78	T	n-Propylbenzene	91	18.87	0.911	A	2	A	B
79	T	1,2,3-Trichloropropane	110	18.89	0.912	A	2	A	B
80	T	Bromobenzene	156	18.92	0.913	A	2	A	B
81	T	1,3,5-Trimethylbenzene	105	19.05	0.920	A	2	A	B
82	T	2-Chlorotoluene	91	19.08	0.921	A	1	A	B
83	T	4-Chlorotoluene	91	19.22	0.927	A	1	A	B
84	T	tert-Butylbenzene	134	19.51	0.942	A	2	A	B
85	T	1,2,4-Trimethylbenzene	105	19.57	0.945	A	1	A	B
86	T	sec-Butylbenzene	105	19.78	0.955	A	1	A	B
87	T	p-Isopropyltoluene	119	19.93	0.962	A	2	A	B
88	T	1,3-Dichlorobenzene	146	20.10	0.970	A	2	A	B
89	T	1,4-Dichlorobenzene	146	20.20	0.975	A	2	A	B
90	T	n-Butylbenzene	91	20.48	0.988	A	2	A	B
91	T	1,2-Dichlorobenzene	146	20.75	1.001	A	2	A	B
92	T	1,2-Dibromo-3-chloropropane	157	21.88	1.056	A	2	A	B
93	T	1,2,4-Trichlorobenzene	180	23.12	1.116	A	2	A	B
94	T	Hexachlorobutadiene	225	23.25	1.122	A	2	A	B
95	T	Naphthalene	128	23.62	1.140	A	1	A	B
96	T	1,2,3-Trichlorobenzene	180	24.04	1.160	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

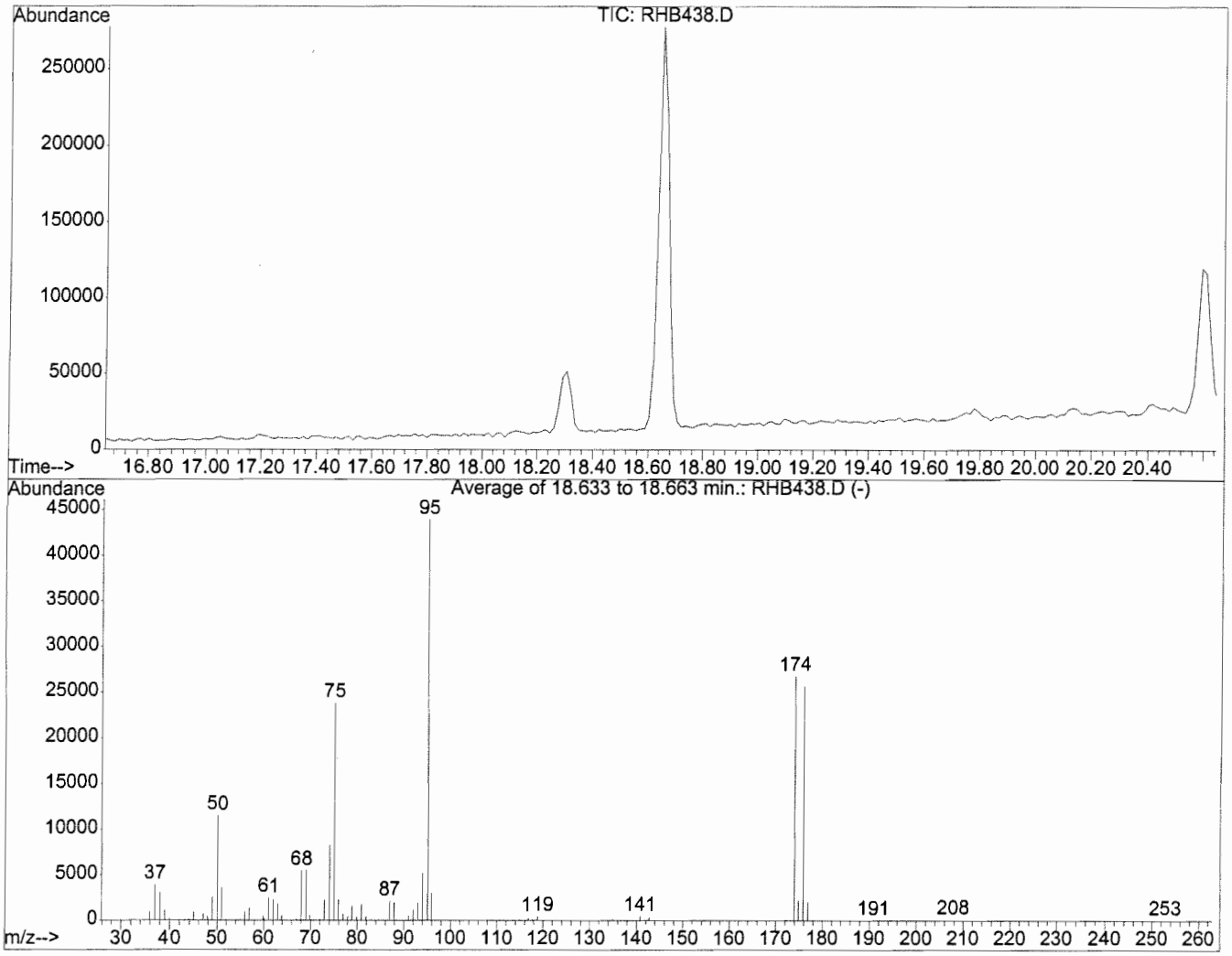
VO03H16.M Thu Aug 18 10:10:38 2011

SW 8/18/11

BFB

Data File : D:\HPCHEM\1\DATA\11H16\RHB438.D
Acq On : 16 Aug 2011 11:15 am
Sample : BFB03H23
Misc : T/CHECK
MS Integration Params: 524TAIL.P
Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL

Vial: 1
Operator: MW
Inst : 03
Multiplr: 1.00



AutoFind: Scans 995, 996, 997; Background Corrected with Scan 990

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	26.2	11522	PASS
75	95	30	60	54.2	23803	PASS
95	95	100	100	100.0	43896	PASS
96	95	5	9	6.9	3022	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	60.9	26723	PASS
175	174	5	9	8.1	2165	PASS
176	174	95	101	96.0	25641	PASS
177	176	5	9	7.8	2009	PASS

SC 8/18/11

RHB438.D VO03H16.M Thu Aug 18 10:10:03 2011

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB439.D Vial: 2
Acq On : 16 Aug 2011 11:49 am Operator: MW
Sample : VO03H161 0.3ppb Inst : 03
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.21	114	1673465	10.00 ug/l	0.00
41) CHLOROBENZENE-D5	17.19	117	1544261	10.00 ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	517939	10.00 ug/l	0.00
System Monitoring Compounds					
36) Dibromofluoromethane	12.12	111	19060	0.31 ug/l	0.00
Spiked Amount 10.000			Recovery	= 3.10%	
40) 1,2-Dichloroethane-d4	12.65	65	19846	0.31 ug/l	0.00
Spiked Amount 10.000			Recovery	= 3.10%	
55) Toluene-d8	15.26	98	71929	0.33 ug/l	0.00
Spiked Amount 10.000			Recovery	= 3.30%	
75) 4-Bromofluorobenzene	18.65	95	30176	0.37 ug/l	0.00
Spiked Amount 10.000			Recovery	= 3.70%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.11	85	16694	0.28 ug/l	93
5) Chloromethane	4.60	50	16217	0.27 ug/l	93
7) Vinyl chloride	4.91	62	14539	0.26 ug/l	75
8) Bromomethane	5.85	94	10921	0.29 ug/l	86
9) Chloroethane	6.12	64	7783	0.26 ug/l	95
10) Dichlorofluoromethane	6.66	67	36137	0.28 ug/l	94
11) Trichlorofluoromethane	6.72	101	24261	0.27 ug/l	100
12) Acrolein	7.85	56	1611	1.08 ug/l #	37
13) 1,1,2-Trichloro-1,2,2-trif	7.98	151	10761	0.32 ug/l	95
14) Acetone	8.20	43	16016	2.48 ug/l #	84
15) 1,1-Dichloroethene	8.00	61	33441	0.30 ug/l	97
17) Iodomethane	8.38	142	29887	0.28 ug/l	98
18) Carbon disulfide	8.52	76	55046	0.24 ug/l	97
19) Methylene chloride	9.08	49	25051	0.31 ug/l	98
20) tert-Butyl alcohol	9.29	59	2910	1.44 ug/l #	14
21) tert-Butyl methyl ether (M	9.51	73	24606	0.30 ug/l	66
22) trans-1,2-Dichloroethene	9.57	61	33865	0.30 ug/l	97
23) Acrylonitrile	9.60	53	8381	1.41 ug/l	95
24) Isopropyl ether (DIPE)	10.33	45	57798	0.29 ug/l	99
25) Vinyl acetate	10.39	43	15731	0.23 ug/l #	81
26) 1,1-Dichloroethane	10.36	63	36786	0.30 ug/l	97
28) tert-Butyl ethyl ether (ET	10.94	59	41189	0.29 ug/l	99
29) 2,2-Dichloropropane	11.31	77	32395	0.32 ug/l	98
30) 2-Butanone	11.36	43	20149	1.82 ug/l	88
31) cis-1,2-Dichloroethene	11.36	96	18769	0.29 ug/l	99
32) Bromochloromethane	11.76	49	14561	0.28 ug/l	98
33) Tetrahydrofuran	11.84	42	2269	0.36 ug/l #	30

(#) = qualifier out of range (m) = manual integration

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Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB439.D Vial: 2
Acq On : 16 Aug 2011 11:49 am Operator: MW
Sample : VO03H161 0.3ppb Inst : 03
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34) Chloroform	11.85	83	39124	0.29 ug/l	97
37) 1,1,1-Trichloroethane	12.13	97	37011	0.31 ug/l	96
39) tert-Amyl methyl ether (TA	12.74	87	5997	0.27 ug/l #	86
42) 1,1-Dichloropropene	12.36	110	9001	0.29 ug/l	90
43) Carbon tetrachloride	12.37	119	30172	0.29 ug/l	99
44) Benzene	12.70	78	74580	0.30 ug/l	98
45) 1,2-Dichloroethane	12.76	62	22104	0.29 ug/l	92
46) Trichloroethene	13.61	130	20355	0.30 ug/l	96
48) 1,2-Dichloropropane	13.96	63	18164	0.28 ug/l	92
49) 1,4-Dioxane	14.14	88	5497	27.66 ug/l	91
50) Dibromomethane	14.17	93	8013	0.26 ug/l	97
51) Bromodichloromethane	14.35	83	26326	0.28 ug/l	98
52) 2-Chloroethyl vinyl ether	14.65	63	5862	0.30 ug/l #	75
53) cis-1,3-Dichloropropene	14.92	75	25875	0.26 ug/l	82
54) 4-Methyl-2-pentanone	15.04	43	50099	1.61 ug/l	93
56) Toluene	15.35	91	80753	0.30 ug/l	98
57) Ethyl methacrylate	15.59	69	14669	0.29 ug/l	98
58) trans-1,3-Dichloropropene	15.63	75	20551	0.27 ug/l	89
59) 1,1,2-Trichloroethane	15.91	97	9272	0.28 ug/l	99
60) Tetrachloroethene	16.09	164	18241	0.31 ug/l	99
61) 2-Hexanone	16.11	43	28802	1.40 ug/l	95
62) 1,3-Dichloropropane	16.14	76	18261	0.27 ug/l	82
63) Dibromochloromethane	16.48	129	12446	0.25 ug/l	100
64) 1,2-Dibromoethane	16.67	107	10128	0.28 ug/l	90
65) 1-Chlorohexane	17.03	91	37339	0.30 ug/l	95
66) Chlorobenzene	17.24	112	46947	0.30 ug/l #	62
67) Ethylbenzene	17.28	91	102571	0.29 ug/l	100
68) 1,1,1,2-Tetrachloroethane	17.31	131	16251	0.28 ug/l	93
69) m-Xylene & p-Xylene	17.40	91	166133	0.61 ug/l	97
70) o-Xylene	17.94	91	82774	0.32 ug/l	95
71) Styrene	17.97	104	48821	0.29 ug/l	92
73) Isopropylbenzene	18.35	105	91024	0.31 ug/l	98
74) Bromoform	18.35	173	5038	0.24 ug/l	94
76) 1,1,2,2-Tetrachloroethane	18.79	83	11995	0.31 ug/l	98
77) trans-1,4-Dichloro-2-buten	18.83	53	3756	0.30 ug/l #	34
78) n-Propylbenzene	18.88	91	127785	0.31 ug/l	99
79) 1,2,3-Trichloropropane	18.89	110	2299	0.25 ug/l #	12
80) Bromobenzene	18.91	156	17077	0.29 ug/l #	83
81) 1,3,5-Trimethylbenzene	19.05	105	78021	0.31 ug/l	98
82) 2-Chlorotoluene	19.08	91	80439	0.31 ug/l	99
83) 4-Chlorotoluene	19.22	91	67978	0.30 ug/l	99

(#) = qualifier out of range (m) = manual integration

SW 8/18/11

2049

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB439.D Vial: 2
Acq On : 16 Aug 2011 11:49 am Operator: MW
Sample : VO03H161 0.3ppb Inst : 03
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84) tert-Butylbenzene	19.52	134	15989	0.32 ug/l	99
85) 1,2,4-Trimethylbenzene	19.56	105	74365	0.31 ug/l	99
86) sec-Butylbenzene	19.78	105	104426	0.32 ug/l	99
87) p-Isopropyltoluene	19.93	119	76431	0.30 ug/l	95
88) 1,3-Dichlorobenzene	20.10	146	33868	0.30 ug/l	97
89) 1,4-Dichlorobenzene	20.20	146	30671	0.29 ug/l	92
90) n-Butylbenzene	20.48	91	85414	0.30 ug/l	99
91) 1,2-Dichlorobenzene	20.75	146	25409	0.29 ug/l #	70
93) 1,2,4-Trichlorobenzene	23.12	180	12315	0.28 ug/l	94
94) Hexachlorobutadiene	23.25	225	12627	0.31 ug/l	92
95) Naphthalene	23.62	128	15312	0.27 ug/l	76
96) 1,2,3-Trichlorobenzene	24.04	180	8840	0.27 ug/l	97

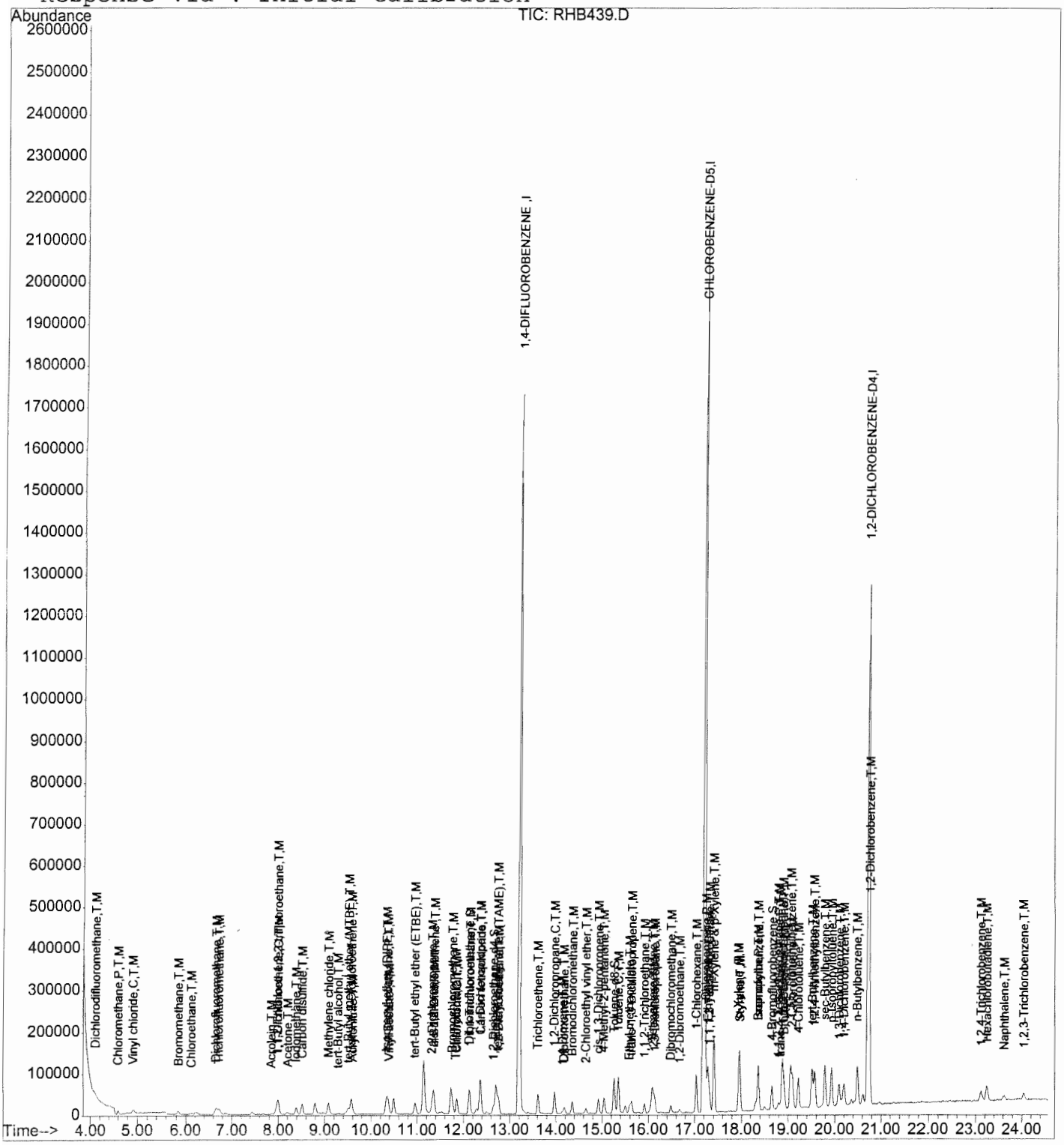
SW 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB439.D Vial: 2
Acq On : 16 Aug 2011 11:49 am Operator: MW
Sample : VO03H161 0.3ppb Inst : 03
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



SW 8/18/11

2051

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB440.D Vial: 3
Acq On : 16 Aug 2011 12:24 pm Operator: MW
Sample : VO03H162 0.5ppb Inst : 03
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.21	114	1841246	10.00 ug/l	0.00
41) CHLOROBENZENE-D5	17.20	117	1695780	10.00 ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	571417	10.00 ug/l	0.00
System Monitoring Compounds					
36) Dibromofluoromethane	12.12	111	34821	0.51 ug/l	0.00
Spiked Amount 10.000			Recovery	= 5.10%	
40) 1,2-Dichloroethane-d4	12.66	65	37847	0.54 ug/l	0.00
Spiked Amount 10.000			Recovery	= 5.40%	
55) Toluene-d8	15.26	98	138197	0.57 ug/l	0.00
Spiked Amount 10.000			Recovery	= 5.70%	
75) 4-Bromofluorobenzene	18.65	95	57795	0.65 ug/l	0.00
Spiked Amount 10.000			Recovery	= 6.50%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.11	85	30002	0.46 ug/l	99
5) Chloromethane	4.60	50	27601	0.42 ug/l	97
7) Vinyl chloride	4.93	62	26067	0.42 ug/l	95
8) Bromomethane	5.87	94	18441	0.44 ug/l	92
9) Chloroethane	6.12	64	14554	0.45 ug/l	96
10) Dichlorofluoromethane	6.67	67	66399	0.47 ug/l	98
11) Trichlorofluoromethane	6.73	101	43971	0.44 ug/l	98
12) Acrolein	7.85	56	3459	2.11 ug/l	74
13) 1,1,2-Trichloro-1,2,2-trif	8.00	151	18454	0.49 ug/l	97
14) Acetone	8.19	43	22293	3.13 ug/l	91
15) 1,1-Dichloroethene	8.00	61	59012	0.48 ug/l	98
17) Iodomethane	8.38	142	51347	0.44 ug/l	95
18) Carbon disulfide	8.52	76	109949	0.44 ug/l	99
19) Methylene chloride	9.08	49	43417	0.50 ug/l	99
20) tert-Butyl alcohol	9.29	59	5110	2.30 ug/l	42
21) tert-Butyl methyl ether (M	9.51	73	43151	0.48 ug/l	84
22) trans-1,2-Dichloroethene	9.57	61	60990	0.48 ug/l	98
23) Acrylonitrile	9.60	53	14245	2.18 ug/l	98
24) Isopropyl ether (DIPE)	10.33	45	102669	0.47 ug/l	99
25) Vinyl acetate	10.39	43	28438	0.38 ug/l	96
26) 1,1-Dichloroethane	10.36	63	63573	0.46 ug/l	99
28) tert-Butyl ethyl ether (ET	10.96	59	73119	0.46 ug/l	99
29) 2,2-Dichloropropane	11.33	77	58731	0.53 ug/l	97
30) 2-Butanone	11.36	43	34859	2.87 ug/l	91
31) cis-1,2-Dichloroethene	11.36	96	33795	0.47 ug/l	97
32) Bromochloromethane	11.76	49	26876	0.47 ug/l	98
33) Tetrahydrofuran	11.87	42	3680	0.53 ug/l #	54

(#) = qualifier out of range (m) = manual integration

SW 8/18/11

2052

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB440.D Vial: 3
Acq On : 16 Aug 2011 12:24 pm Operator: MW
Sample : VO03H162 0.5ppb Inst : 03
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
34)	Chloroform	11.85	83	70938	0.48 ug/l		99
37)	1,1,1-Trichloroethane	12.13	97	65414	0.49 ug/l		99
39)	tert-Amyl methyl ether (TA	12.74	87	11511	0.47 ug/l		91
42)	1,1-Dichloropropene	12.37	110	16194	0.48 ug/l		99
43)	Carbon tetrachloride	12.37	119	53614	0.47 ug/l		99
44)	Benzene	12.70	78	130482	0.47 ug/l		99
45)	1,2-Dichloroethane	12.76	62	41249	0.49 ug/l		97
46)	Trichloroethene	13.62	130	35133	0.47 ug/l		99
48)	1,2-Dichloropropane	13.97	63	33187	0.47 ug/l		88
49)	1,4-Dioxane	14.14	88	6101	27.96 ug/l		93
50)	Dibromomethane	14.19	93	15665	0.47 ug/l		97
51)	Bromodichloromethane	14.35	83	46492	0.44 ug/l		97
52)	2-Chloroethyl vinyl ether	14.65	63	9209	0.43 ug/l		93
53)	cis-1,3-Dichloropropene	14.92	75	48863	0.45 ug/l		91
54)	4-Methyl-2-pentanone	15.04	43	86262	2.52 ug/l		96
56)	Toluene	15.35	91	144020	0.48 ug/l		99
57)	Ethyl methacrylate	15.59	69	24628	0.45 ug/l		81
58)	trans-1,3-Dichloropropene	15.63	75	36978	0.44 ug/l		83
59)	1,1,2-Trichloroethane	15.92	97	17800	0.48 ug/l		98
60)	Tetrachloroethene	16.08	164	32328	0.50 ug/l		99
61)	2-Hexanone	16.11	43	57678	2.55 ug/l		92
62)	1,3-Dichloropropane	16.14	76	34480	0.47 ug/l		94
63)	Dibromochloromethane	16.48	129	23385	0.43 ug/l		97
64)	1,2-Dibromoethane	16.67	107	18009	0.45 ug/l		98
65)	1-Chlorohexane	17.03	91	70282	0.51 ug/l		98
66)	Chlorobenzene	17.24	112	81900	0.48 ug/l		77
67)	Ethylbenzene	17.28	91	187900	0.49 ug/l		98
68)	1,1,1,2-Tetrachloroethane	17.31	131	29545	0.47 ug/l		97
69)	m-Xylene & p-Xylene	17.40	91	290014	0.98 ug/l		100
70)	o-Xylene	17.94	91	141982	0.49 ug/l		97
71)	Styrene	17.97	104	84811	0.46 ug/l		93
73)	Isopropylbenzene	18.36	105	162013	0.50 ug/l		98
74)	Bromoform	18.36	173	9820	0.42 ug/l		92
76)	1,1,2,2-Tetrachloroethane	18.79	83	20104	0.47 ug/l		98
77)	trans-1,4-Dichloro-2-buten	18.82	53	6086	0.44 ug/l		80
78)	n-Propylbenzene	18.88	91	238739	0.52 ug/l		98
79)	1,2,3-Trichloropropane	18.89	110	5154	0.51 ug/l	#	95
80)	Bromobenzene	18.91	156	32082	0.49 ug/l		93
81)	1,3,5-Trimethylbenzene	19.04	105	141010	0.50 ug/l		99
82)	2-Chlorotoluene	19.09	91	144743	0.50 ug/l		100
83)	4-Chlorotoluene	19.22	91	121452	0.49 ug/l		100

(#) = qualifier out of range (m) = manual integration

SC 8/18/11

2053

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB440.D Vial: 3
Acq On : 16 Aug 2011 12:24 pm Operator: MW
Sample : VO03H162 0.5ppb Inst : 03
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84) tert-Butylbenzene	19.52	134	27900	0.50 ug/l	100
85) 1,2,4-Trimethylbenzene	19.56	105	131408	0.49 ug/l	98
86) sec-Butylbenzene	19.79	105	184794	0.51 ug/l	99
87) p-Isopropyltoluene	19.93	119	142044	0.51 ug/l	99
88) 1,3-Dichlorobenzene	20.10	146	59960	0.48 ug/l	97
89) 1,4-Dichlorobenzene	20.20	146	55924	0.48 ug/l	97
90) n-Butylbenzene	20.48	91	153667	0.50 ug/l	98
91) 1,2-Dichlorobenzene	20.75	146	46574	0.49 ug/l	85
92) 1,2-Dibromo-3-chloropropan	21.87	157	2042	0.42 ug/l #	11
93) 1,2,4-Trichlorobenzene	23.12	180	21614	0.45 ug/l	94
94) Hexachlorobutadiene	23.25	225	21848	0.49 ug/l	93
95) Naphthalene	23.61	128	25414	0.41 ug/l	88
96) 1,2,3-Trichlorobenzene	24.04	180	15042	0.42 ug/l	99

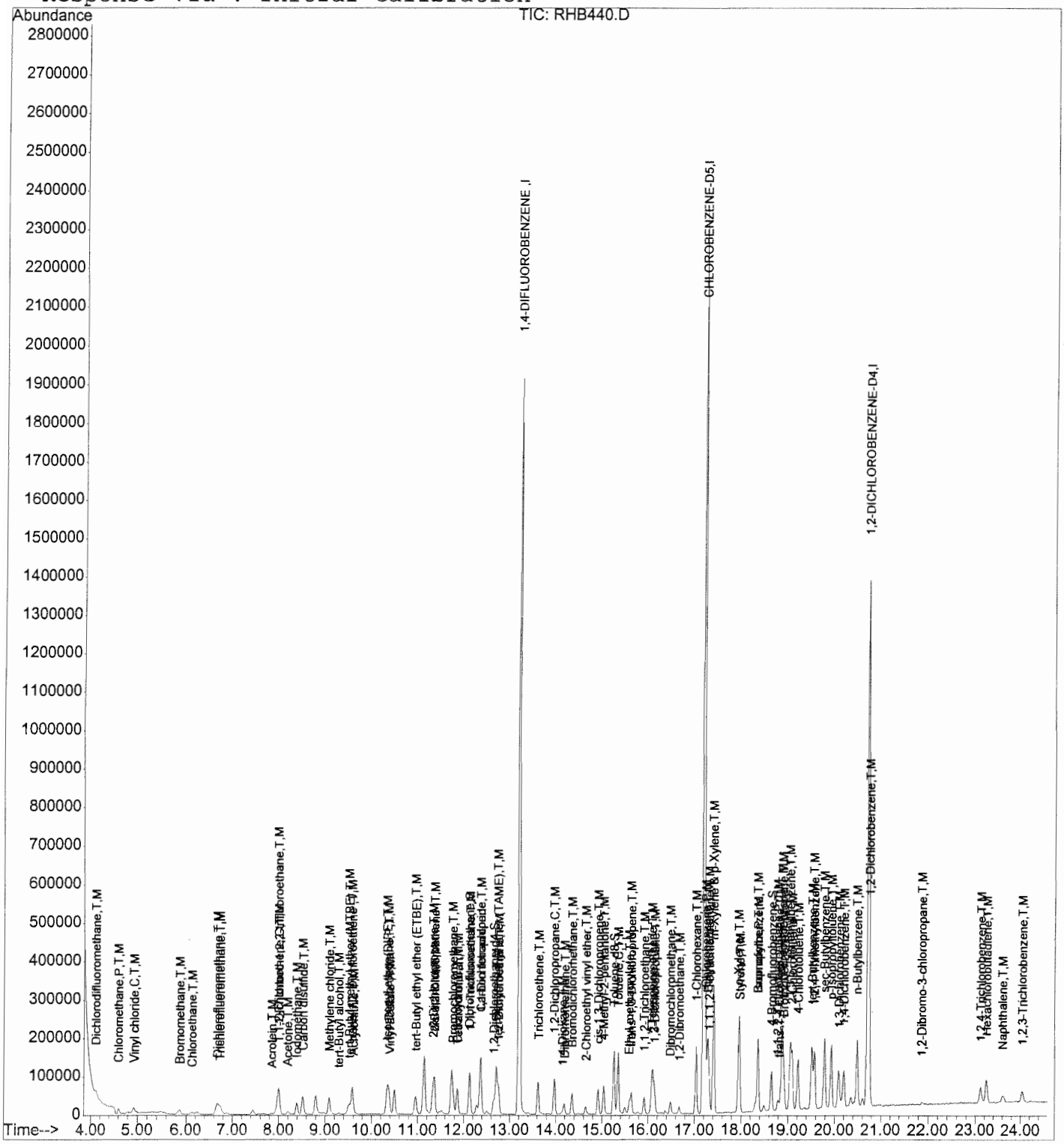
SV 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB440.D Vial: 3
Acq On : 16 Aug 2011 12:24 pm Operator: MW
Sample : VO03H162 0.5ppb Inst : 03
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



SW 8/18/11

2055

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB441.D Vial: 4
Acq On : 16 Aug 2011 12:57 pm Operator: MW
Sample : VO03H163 1.0ppb Inst : 03
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.21	114	1792008	10.00 ug/l	0.00
41) CHLOROBENZENE-D5	17.20	117	1648393	10.00 ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	568390	10.00 ug/l	0.00
System Monitoring Compounds					
36) Dibromofluoromethane	12.12	111	70253	1.06 ug/l	0.00
Spiked Amount 10.000			Recovery	= 10.60%	
40) 1,2-Dichloroethane-d4	12.66	65	75482	1.11 ug/l	0.00
Spiked Amount 10.000			Recovery	= 11.10%	
55) Toluene-d8	15.26	98	237911	1.02 ug/l	0.00
Spiked Amount 10.000			Recovery	= 10.20%	
75) 4-Bromofluorobenzene	18.65	95	93442	1.06 ug/l	0.00
Spiked Amount 10.000			Recovery	= 10.60%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.11	85	61461	0.97 ug/l	100
5) Chloromethane	4.62	50	60129	0.94 ug/l	99
7) Vinyl chloride	4.93	62	57187	0.95 ug/l	98
8) Bromomethane	5.87	94	39668	0.98 ug/l	98
9) Chloroethane	6.15	64	30671	0.97 ug/l	96
10) Dichlorofluoromethane	6.67	67	137014	1.00 ug/l	99
11) Trichlorofluoromethane	6.73	101	94812	0.97 ug/l	100
12) Acrolein	7.86	56	6961	4.37 ug/l	89
13) 1,1,2-Trichloro-1,2,2-trif	7.98	151	35643	0.98 ug/l	98
14) Acetone	8.19	43	40617	5.87 ug/l	92
15) 1,1-Dichloroethene	8.00	61	122371	1.02 ug/l	100
17) Iodomethane	8.38	142	111978	0.99 ug/l	98
18) Carbon disulfide	8.52	76	238217	0.98 ug/l	99
19) Methylene chloride	9.08	49	86708	1.02 ug/l	98
20) tert-Butyl alcohol	9.29	59	10144	4.70 ug/l #	28
21) tert-Butyl methyl ether (M	9.51	73	89157	1.02 ug/l	93
22) trans-1,2-Dichloroethene	9.57	61	122454	1.00 ug/l	97
23) Acrylonitrile	9.60	53	30682	4.82 ug/l	96
24) Isopropyl ether (DIPE)	10.33	45	216743	1.01 ug/l	98
25) Vinyl acetate	10.39	43	67071	0.93 ug/l	98
26) 1,1-Dichloroethane	10.36	63	133820	1.01 ug/l	100
28) tert-Butyl ethyl ether (ET	10.94	59	155633	1.01 ug/l	99
29) 2,2-Dichloropropane	11.33	77	121824	1.12 ug/l	98
30) 2-Butanone	11.36	43	60898	5.14 ug/l	97
31) cis-1,2-Dichloroethene	11.36	96	69770	1.00 ug/l	99
32) Bromochloromethane	11.76	49	56707	1.03 ug/l	98
33) Tetrahydrofuran	11.84	42	8025	1.18 ug/l	77

(#) = qualifier out of range (m) = manual integration

8/18/11

2056

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB441.D Vial: 4
Acq On : 16 Aug 2011 12:57 pm Operator: MW
Sample : VO03H163 1.0ppb Inst : 03
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	Chloroform	11.87	83	145961	1.01 ug/l	98
37)	1,1,1-Trichloroethane	12.13	97	132897	1.03 ug/l	98
39)	tert-Amyl methyl ether (TA	12.74	87	25256	1.07 ug/l	100
42)	1,1-Dichloropropene	12.36	110	32004	0.98 ug/l	99
43)	Carbon tetrachloride	12.37	119	114502	1.03 ug/l	97
44)	Benzene	12.70	78	265268	0.99 ug/l	99
45)	1,2-Dichloroethane	12.76	62	85700	1.04 ug/l	98
46)	Trichloroethene	13.62	130	69975	0.95 ug/l	99
48)	1,2-Dichloropropane	13.97	63	66659	0.97 ug/l	91
49)	1,4-Dioxane	14.14	88	8069	38.04 ug/l	96
50)	Dibromomethane	14.19	93	30717	0.95 ug/l	98
51)	Bromodichloromethane	14.35	83	96844	0.95 ug/l	98
52)	2-Chloroethyl vinyl ether	14.64	63	17658	0.86 ug/l	98
53)	cis-1,3-Dichloropropene	14.92	75	99995	0.95 ug/l	94
54)	4-Methyl-2-pentanone	15.04	43	166673	5.00 ug/l	98
56)	Toluene	15.35	91	289134	1.00 ug/l	100
57)	Ethyl methacrylate	15.59	69	51336	0.95 ug/l	96
58)	trans-1,3-Dichloropropene	15.63	75	78435	0.95 ug/l	88
59)	1,1,2-Trichloroethane	15.92	97	35453	0.99 ug/l	98
60)	Tetrachloroethene	16.09	164	62521	0.99 ug/l	99
61)	2-Hexanone	16.11	43	114894	5.22 ug/l	95
62)	1,3-Dichloropropane	16.14	76	72428	1.01 ug/l	99
63)	Dibromochloromethane	16.48	129	48644	0.92 ug/l	99
64)	1,2-Dibromoethane	16.67	107	37361	0.95 ug/l	100
65)	1-Chlorohexane	17.03	91	134826	1.00 ug/l	97
66)	Chlorobenzene	17.24	112	162511	0.98 ug/l	87
67)	Ethylbenzene	17.28	91	372068	0.99 ug/l	99
68)	1,1,1,2-Tetrachloroethane	17.31	131	61859	1.00 ug/l	99
69)	m-Xylene & p-Xylene	17.40	91	578889	2.01 ug/l	99
70)	o-Xylene	17.94	91	288160	1.03 ug/l	99
71)	Styrene	17.97	104	179278	0.99 ug/l	97
73)	Isopropylbenzene	18.36	105	320199	0.99 ug/l	99
74)	Bromoform	18.36	173	20940	0.89 ug/l	98
76)	1,1,2,2-Tetrachloroethane	18.79	83	41033	0.96 ug/l	98
77)	trans-1,4-Dichloro-2-buten	18.83	53	12504	0.90 ug/l	95
78)	n-Propylbenzene	18.88	91	454308	0.99 ug/l	98
79)	1,2,3-Trichloropropane	18.89	110	10412	1.05 ug/l	96
80)	Bromobenzene	18.91	156	65763	1.01 ug/l	99
81)	1,3,5-Trimethylbenzene	19.04	105	277351	1.00 ug/l	100
82)	2-Chlorotoluene	19.09	91	289472	1.01 ug/l	99
83)	4-Chlorotoluene	19.22	91	242681	0.98 ug/l	100

(#) = qualifier out of range (m) = manual integration

SW 8/18/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB441.D Vial: 4
Acq On : 16 Aug 2011 12:57 pm Operator: MW
Sample : VO03H163 1.0ppb Inst : 03
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
84)	tert-Butylbenzene	19.52	134	54784	0.99 ug/l		96
85)	1,2,4-Trimethylbenzene	19.56	105	264910	1.00 ug/l		98
86)	sec-Butylbenzene	19.79	105	366508	1.01 ug/l		100
87)	p-Isopropyltoluene	19.93	119	275196	0.98 ug/l		99
88)	1,3-Dichlorobenzene	20.10	146	119666	0.96 ug/l		100
89)	1,4-Dichlorobenzene	20.20	146	111408	0.96 ug/l		98
90)	n-Butylbenzene	20.48	91	301690	0.98 ug/l		99
91)	1,2-Dichlorobenzene	20.75	146	93486	0.98 ug/l		94
92)	1,2-Dibromo-3-chloropropan	21.87	157	4390	0.90 ug/l	#	77
93)	1,2,4-Trichlorobenzene	23.12	180	41569	0.86 ug/l		99
94)	Hexachlorobutadiene	23.25	225	41861	0.95 ug/l		98
95)	Naphthalene	23.63	128	52344	0.84 ug/l		93
96)	1,2,3-Trichlorobenzene	24.04	180	31162	0.88 ug/l		96

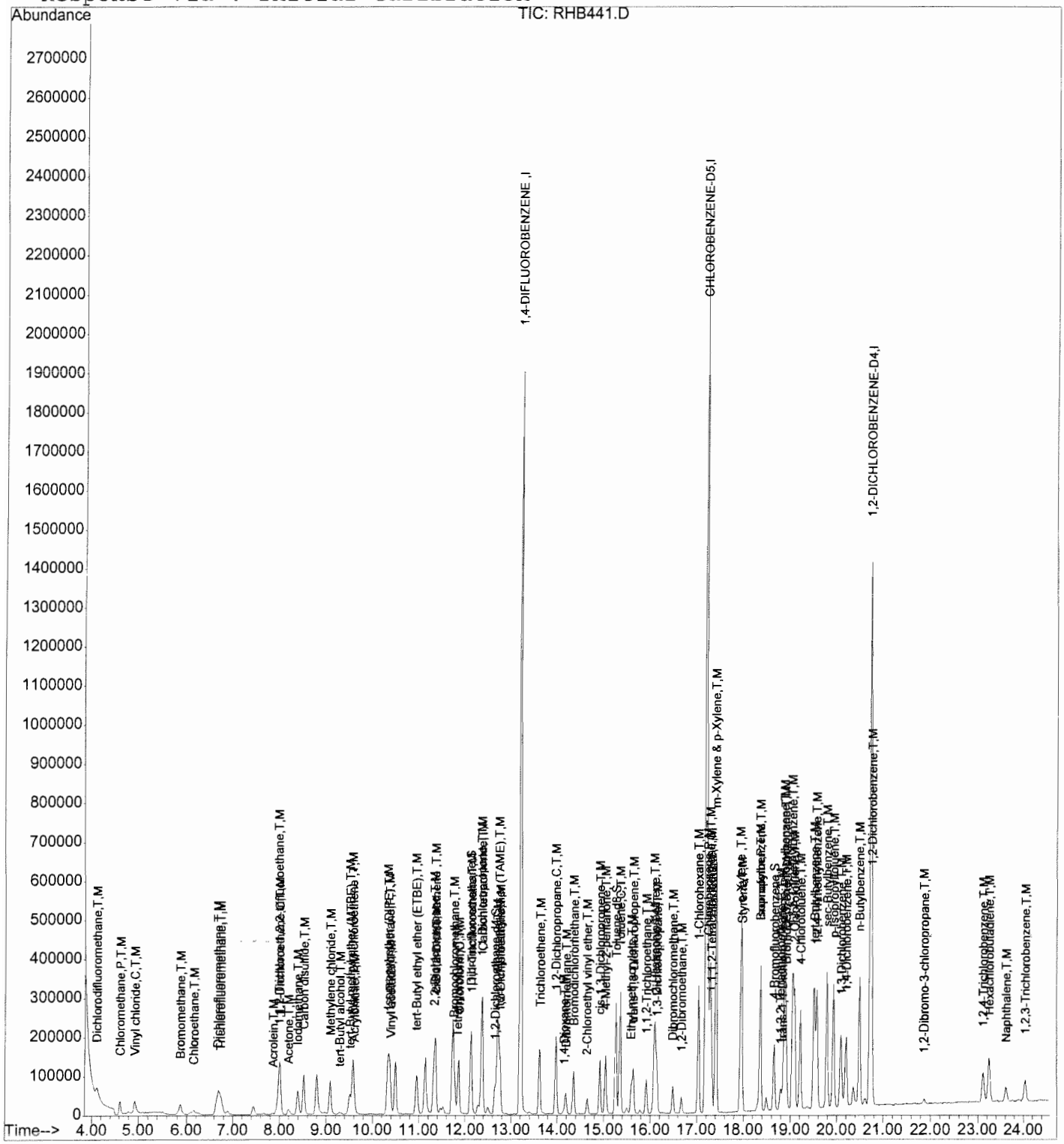
SW 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB441.D Vial: 4
Acq On : 16 Aug 2011 12:57 pm Operator: MW
Sample : VO03H163 1.0ppb Inst : 03
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



Sw 8/18/11

2059

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB442.D Vial: 5
Acq On : 16 Aug 2011 1:32 pm Operator: MW
Sample : VO03H164 2.0ppb Inst : 03
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.20	114	1830259	10.00 ug/l	0.00
41) CHLOROBENZENE-D5	17.19	117	1659145	10.00 ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	572895	10.00 ug/l	0.00
System Monitoring Compounds					
36) Dibromofluoromethane	12.13	111	141758	2.08 ug/l	0.01
Spiked Amount 10.000			Recovery	= 20.80%	
40) 1,2-Dichloroethane-d4	12.65	65	146051	2.11 ug/l	0.00
Spiked Amount 10.000			Recovery	= 21.10%	
55) Toluene-d8	15.25	98	481543	2.04 ug/l	0.00
Spiked Amount 10.000			Recovery	= 20.40%	
75) 4-Bromofluorobenzene	18.65	95	184129	2.07 ug/l	0.00
Spiked Amount 10.000			Recovery	= 20.70%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.12	85	130526	2.02 ug/l	99
5) Chloromethane	4.61	50	126598	1.94 ug/l	100
7) Vinyl chloride	4.94	62	122805	1.99 ug/l	100
8) Bromomethane	5.88	94	79778	1.92 ug/l	97
9) Chloroethane	6.16	64	61311	1.89 ug/l	97
10) Dichlorofluoromethane	6.68	67	276393	1.98 ug/l	100
11) Trichlorofluoromethane	6.74	101	197141	1.98 ug/l	100
12) Acrolein	7.86	56	13015	8.00 ug/l	88
13) 1,1,2-Trichloro-1,2,2-trif	7.99	151	70457	1.90 ug/l	99
14) Acetone	8.20	43	70134	9.92 ug/l	98
15) 1,1-Dichloroethene	8.00	61	249442	2.03 ug/l	99
17) Iodomethane	8.39	142	226841	1.96 ug/l	96
18) Carbon disulfide	8.51	76	499801	2.02 ug/l	99
19) Methylene chloride	9.08	49	170951	1.96 ug/l	99
20) tert-Butyl alcohol	9.28	59	20989	9.52 ug/l	85
21) tert-Butyl methyl ether (M	9.51	73	173260	1.94 ug/l	96
22) trans-1,2-Dichloroethene	9.57	61	255847	2.04 ug/l	98
23) Acrylonitrile	9.61	53	60375	9.29 ug/l	98
24) Isopropyl ether (DIPE)	10.33	45	435966	1.99 ug/l	99
25) Vinyl acetate	10.39	43	149999	2.04 ug/l	98
26) 1,1-Dichloroethane	10.37	63	275858	2.03 ug/l	100
28) tert-Butyl ethyl ether (ET	10.95	59	309494	1.98 ug/l	99
29) 2,2-Dichloropropane	11.32	77	242603	2.19 ug/l	98
30) 2-Butanone	11.35	43	108990	9.01 ug/l	99
31) cis-1,2-Dichloroethene	11.37	96	144604	2.03 ug/l	98
32) Bromochloromethane	11.77	49	110330	1.96 ug/l	99
33) Tetrahydrofuran	11.83	42	14017	2.02 ug/l	89

(#) = qualifier out of range (m) = manual integration

SW 8/18/11

2060

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB442.D
Acq On : 16 Aug 2011 1:32 pm
Sample : VO03H164 2.0ppb
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011

Vial: 5
Operator: MW
Inst : 03
Multiplr: 1.00
Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	Chloroform	11.86	83	302151	2.05 ug/l	99
37)	1,1,1-Trichloroethane	12.13	97	276732	2.09 ug/l	99
39)	tert-Amyl methyl ether (TA	12.74	87	48289	2.00 ug/l	95
42)	1,1-Dichloropropene	12.37	110	67078	2.04 ug/l	97
43)	Carbon tetrachloride	12.38	119	232693	2.07 ug/l	100
44)	Benzene	12.71	78	545908	2.03 ug/l	99
45)	1,2-Dichloroethane	12.77	62	173011	2.08 ug/l	99
46)	Trichloroethene	13.62	130	144006	1.95 ug/l	98
48)	1,2-Dichloropropane	13.97	63	135695	1.97 ug/l	95
49)	1,4-Dioxane	14.14	88	11096	51.97 ug/l	94
50)	Dibromomethane	14.18	93	63754	1.96 ug/l	98
51)	Bromodichloromethane	14.35	83	204021	1.98 ug/l	99
52)	2-Chloroethyl vinyl ether	14.64	63	35881	1.73 ug/l	97
53)	cis-1,3-Dichloropropene	14.91	75	208813	1.97 ug/l	96
54)	4-Methyl-2-pentanone	15.03	43	304036	9.07 ug/l	99
56)	Toluene	15.34	91	585835	2.01 ug/l	100
57)	Ethyl methacrylate	15.60	69	101765	1.88 ug/l	97
58)	trans-1,3-Dichloropropene	15.64	75	162938	1.96 ug/l	97
59)	1,1,2-Trichloroethane	15.91	97	70035	1.94 ug/l	99
60)	Tetrachloroethene	16.09	164	124590	1.96 ug/l	97
61)	2-Hexanone	16.12	43	205889	9.30 ug/l	99
62)	1,3-Dichloropropane	16.15	76	144249	2.00 ug/l	98
63)	Dibromochloromethane	16.49	129	101864	1.91 ug/l	99
64)	1,2-Dibromoethane	16.67	107	75862	1.92 ug/l	99
65)	1-Chlorohexane	17.04	91	271397	2.01 ug/l	99
66)	Chlorobenzene	17.23	112	334235	2.00 ug/l	94
67)	Ethylbenzene	17.28	91	759848	2.02 ug/l	100
68)	1,1,1,2-Tetrachloroethane	17.31	131	126835	2.04 ug/l	99
69)	m-Xylene & p-Xylene	17.41	91	1183767	4.08 ug/l	100
70)	o-Xylene	17.95	91	582600	2.07 ug/l	100
71)	Styrene	17.96	104	371035	2.04 ug/l	98
73)	Isopropylbenzene	18.36	105	665712	2.05 ug/l	99
74)	Bromoform	18.35	173	43808	1.85 ug/l	100
76)	1,1,2,2-Tetrachloroethane	18.80	83	82576	1.91 ug/l	99
77)	trans-1,4-Dichloro-2-buten	18.83	53	25868	1.85 ug/l	97
78)	n-Propylbenzene	18.87	91	942936	2.04 ug/l	99
79)	1,2,3-Trichloropropane	18.90	110	20936	2.09 ug/l	96
80)	Bromobenzene	18.91	156	131072	2.00 ug/l	100
81)	1,3,5-Trimethylbenzene	19.05	105	574657	2.05 ug/l	98
82)	2-Chlorotoluene	19.09	91	589199	2.05 ug/l	100
83)	4-Chlorotoluene	19.21	91	498826	2.00 ug/l	100

(#) = qualifier out of range (m) = manual integration

SC 8/18/11

2061

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB442.D Vial: 5
Acq On : 16 Aug 2011 1:32 pm Operator: MW
Sample : VO03H164 2.0ppb Inst : 03
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84) tert-Butylbenzene	19.51	134	111940	2.02 ug/l	98
85) 1,2,4-Trimethylbenzene	19.57	105	541231	2.03 ug/l	100
86) sec-Butylbenzene	19.79	105	736187	2.02 ug/l	100
87) p-Isopropyltoluene	19.93	119	567594	2.02 ug/l	99
88) 1,3-Dichlorobenzene	20.09	146	245488	1.96 ug/l	99
89) 1,4-Dichlorobenzene	20.19	146	227885	1.95 ug/l	99
90) n-Butylbenzene	20.49	91	622696	2.00 ug/l	99
91) 1,2-Dichlorobenzene	20.75	146	187877	1.96 ug/l	97
92) 1,2-Dibromo-3-chloropropan	21.88	157	8763	1.79 ug/l	84
93) 1,2,4-Trichlorobenzene	23.11	180	85992	1.77 ug/l	98
94) Hexachlorobutadiene	23.25	225	84273	1.89 ug/l	99
95) Naphthalene	23.62	128	105922	1.69 ug/l	96
96) 1,2,3-Trichlorobenzene	24.04	180	63599	1.78 ug/l	97

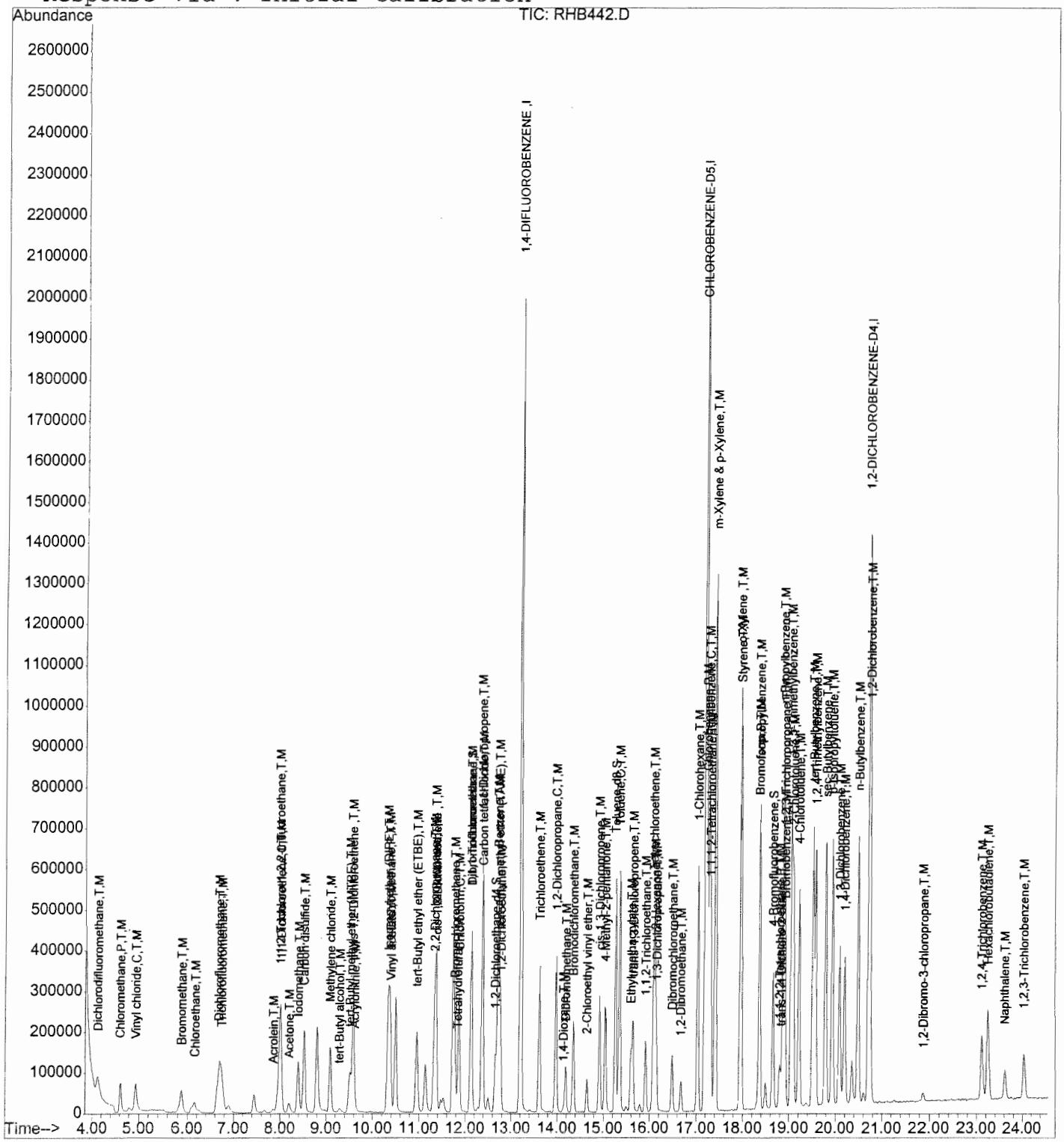
SCT 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB442.D Vial: 5
Acq On : 16 Aug 2011 1:32 pm Operator: MW
Sample : VO03H164 2.0ppb Inst : 03
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



SW 8/18/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB443.D Vial: 6
Acq On : 16 Aug 2011 2:06 pm Operator: MW
Sample : VO03H165 5.0ppb Inst : 03
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.20	114	1833943	10.00 ug/l	0.00
41) CHLOROBENZENE-D5	17.19	117	1719319	10.00 ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	598826	10.00 ug/l	0.00
System Monitoring Compounds					
36) Dibromofluoromethane	12.11	111	356632	5.23 ug/l	0.00
Spiked Amount 10.000			Recovery	= 52.30%	
40) 1,2-Dichloroethane-d4	12.65	65	371660	5.36 ug/l	0.00
Spiked Amount 10.000			Recovery	= 53.60%	
55) Toluene-d8	15.25	98	1215609	4.98 ug/l	0.00
Spiked Amount 10.000			Recovery	= 49.80%	
75) 4-Bromofluorobenzene	18.65	95	470508	5.05 ug/l	0.00
Spiked Amount 10.000			Recovery	= 50.50%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.12	85	328234	5.07 ug/l	99
5) Chloromethane	4.61	50	332191	5.08 ug/l	99
7) Vinyl chloride	4.93	62	321951	5.20 ug/l	99
8) Bromomethane	5.88	94	214699	5.16 ug/l	100
9) Chloroethane	6.15	64	163218	5.02 ug/l	98
10) Dichlorofluoromethane	6.68	67	711368	5.08 ug/l	99
11) Trichlorofluoromethane	6.74	101	516949	5.17 ug/l	99
12) Acrolein	7.86	56	37647	23.09 ug/l	98
13) 1,1,2-Trichloro-1,2,2-trif	7.98	151	182466	4.90 ug/l	98
14) Acetone	8.18	43	173954	24.56 ug/l	98
15) 1,1-Dichloroethene	8.01	61	647975	5.25 ug/l	99
17) Iodomethane	8.39	142	590339	5.10 ug/l	97
18) Carbon disulfide	8.51	76	1323634	5.33 ug/l	100
19) Methylene chloride	9.08	49	441234	5.06 ug/l	98
20) tert-Butyl alcohol	9.29	59	56922	25.77 ug/l	95
21) tert-Butyl methyl ether (M	9.51	73	448348	5.00 ug/l	99
22) trans-1,2-Dichloroethene	9.57	61	642599	5.11 ug/l	100
23) Acrylonitrile	9.60	53	160769	24.68 ug/l	99
24) Isopropyl ether (DIPE)	10.33	45	1125221	5.13 ug/l	100
25) Vinyl acetate	10.39	43	374592	5.09 ug/l	99
26) 1,1-Dichloroethane	10.37	63	710475	5.22 ug/l	100
28) tert-Butyl ethyl ether (ET	10.95	59	796845	5.08 ug/l	100
29) 2,2-Dichloropropane	11.33	77	599642	5.40 ug/l	99
30) 2-Butanone	11.36	43	286955	23.68 ug/l	100
31) cis-1,2-Dichloroethene	11.36	96	363571	5.09 ug/l	98
32) Bromochloromethane	11.77	49	287395	5.10 ug/l	98
33) Tetrahydrofuran	11.82	42	34689	5.00 ug/l	93

(#) = qualifier out of range (m) = manual integration
RHB443.D VO03H16.M Thu Aug 18 09:49:18 2011 SW 8/18/11

2064

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB443.D Vial: 6
Acq On : 16 Aug 2011 2:06 pm Operator: MW
Sample : VO03H165 5.0ppb Inst : 03
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	Chloroform	11.86	83	771591	5.21 ug/l	100
37)	1,1,1-Trichloroethane	12.13	97	702611	5.30 ug/l	100
39)	tert-Amyl methyl ether (TA	12.74	87	125971	5.20 ug/l	99
42)	1,1-Dichloropropene	12.37	110	171310	5.02 ug/l	99
43)	Carbon tetrachloride	12.37	119	596662	5.12 ug/l	100
44)	Benzene	12.71	78	1391289	4.99 ug/l	100
45)	1,2-Dichloroethane	12.77	62	444449	5.17 ug/l	100
46)	Trichloroethene	13.62	130	378497	4.95 ug/l	99
48)	1,2-Dichloropropane	13.96	63	359698	5.04 ug/l	98
49)	1,4-Dioxane	14.14	88	22782	102.97 ug/l	96
50)	Dibromomethane	14.18	93	168213	4.99 ug/l	98
51)	Bromodichloromethane	14.35	83	545645	5.12 ug/l	99
52)	2-Chloroethyl vinyl ether	14.64	63	102041	4.74 ug/l	98
53)	cis-1,3-Dichloropropene	14.91	75	549682	4.99 ug/l	97
54)	4-Methyl-2-pentanone	15.03	43	833358	23.99 ug/l	100
56)	Toluene	15.34	91	1518932	5.02 ug/l	100
57)	Ethyl methacrylate	15.60	69	281565	5.02 ug/l	99
58)	trans-1,3-Dichloropropene	15.63	75	434819	5.05 ug/l	97
59)	1,1,2-Trichloroethane	15.91	97	184443	4.94 ug/l	98
60)	Tetrachloroethene	16.09	164	329192	5.01 ug/l	100
61)	2-Hexanone	16.10	43	564959	24.61 ug/l	100
62)	1,3-Dichloropropane	16.13	76	378578	5.07 ug/l	100
63)	Dibromochloromethane	16.49	129	277860	5.03 ug/l	99
64)	1,2-Dibromoethane	16.67	107	203759	4.98 ug/l	100
65)	1-Chlorohexane	17.04	91	706116	5.03 ug/l	100
66)	Chlorobenzene	17.23	112	872822	5.03 ug/l	98
67)	Ethylbenzene	17.28	91	1964989	5.03 ug/l	100
68)	1,1,1,2-Tetrachloroethane	17.31	131	325505	5.05 ug/l	99
69)	m-Xylene & p-Xylene	17.41	91	3047579	10.13 ug/l	100
70)	o-Xylene	17.95	91	1495060	5.12 ug/l	100
71)	Styrene	17.96	104	991391	5.27 ug/l	99
73)	Isopropylbenzene	18.37	105	1714922	5.05 ug/l	100
74)	Bromoform	18.35	173	122093	4.94 ug/l	99
76)	1,1,2,2-Tetrachloroethane	18.80	83	222938	4.94 ug/l	99
77)	trans-1,4-Dichloro-2-buten	18.83	53	69362	4.74 ug/l	99
78)	n-Propylbenzene	18.87	91	2444813	5.07 ug/l	99
79)	1,2,3-Trichloropropane	18.89	110	54474	5.19 ug/l	98
80)	Bromobenzene	18.92	156	345734	5.06 ug/l	99
81)	1,3,5-Trimethylbenzene	19.05	105	1481394	5.06 ug/l	99
82)	2-Chlorotoluene	19.10	91	1526615	5.07 ug/l	99
83)	4-Chlorotoluene	19.21	91	1334808	5.13 ug/l	99

(#) = qualifier out of range (m) = manual integration

SW 8/18/11

2065

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB443.D Vial: 6
Acq On : 16 Aug 2011 2:06 pm Operator: MW
Sample : VO03H165 5.0ppb Inst : 03
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84) tert-Butylbenzene	19.51	134	297274	5.12 ug/l	99
85) 1,2,4-Trimethylbenzene	19.57	/105	1423178	5.11 ug/l	99
86) sec-Butylbenzene	19.79	105	1935544	5.08 ug/l	100
87) p-Isopropyltoluene	19.93	119	1521705	5.17 ug/l	100
88) 1,3-Dichlorobenzene	20.09	/146	663940	5.06 ug/l	99
89) 1,4-Dichlorobenzene	20.20	/146	611365	5.01 ug/l	98
90) n-Butylbenzene	20.49	91	1671387	5.14 ug/l	100
91) 1,2-Dichlorobenzene	20.75	/146	501022	4.99 ug/l	99
92) 1,2-Dibromo-3-chloropropan	21.88	157	25304	4.94 ug/l	95
93) 1,2,4-Trichlorobenzene	23.11	/180	249247	4.90 ug/l	99
94) Hexachlorobutadiene	23.25	225	231705	4.97 ug/l	100
95) Naphthalene	23.62	128	320389	4.89 ug/l	99
96) 1,2,3-Trichlorobenzene	24.04	/180	182117	4.87 ug/l	100

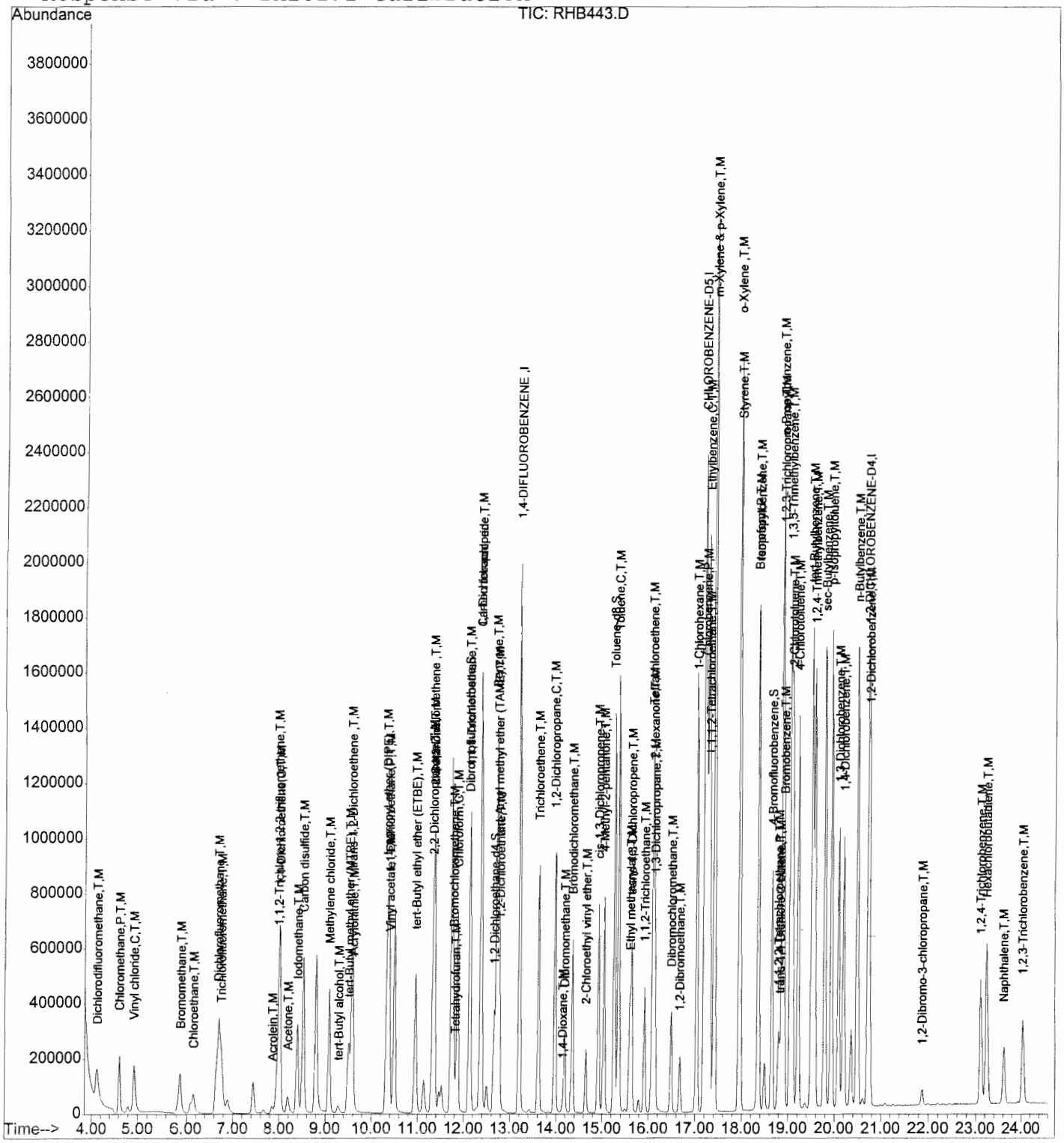
SW 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB443.D Vial: 6
Acq On : 16 Aug 2011 2:06 pm Operator: MW
Sample : VO03H165 5.0ppb Inst : 03
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



8/18/11

2067

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB444.D Vial: 7
Acq On : 16 Aug 2011 2:40 pm Operator: MW
Sample : VO03H166 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.20	114	1861981	10.00 ug/l	0.00
41) CHLOROBENZENE-D5	17.19	117	1722743	10.00 ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	603523	10.00 ug/l	0.00
System Monitoring Compounds					
36) Dibromofluoromethane	12.12	111	725602	10.49 ug/l	0.00
Spiked Amount 10.000			Recovery	= 104.90%	
40) 1,2-Dichloroethane-d4	12.65	65	742017	10.54 ug/l	0.00
Spiked Amount 10.000			Recovery	= 105.40%	
55) Toluene-d8	15.26	98	2521150	10.30 ug/l	0.00
Spiked Amount 10.000			Recovery	= 103.00%	
75) 4-Bromofluorobenzene	18.65	95	966822	10.29 ug/l	0.00
Spiked Amount 10.000			Recovery	= 102.90%	

Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.11	85	799715	12.17 ug/l	100
5) Chloromethane	4.62	50	800664	12.06 ug/l	100
7) Vinyl chloride	4.93	62	772476	12.30 ug/l	100
8) Bromomethane	5.87	94	524049	12.41 ug/l	100
9) Chloroethane	6.15	64	404536	12.26 ug/l	100
10) Dichlorofluoromethane	6.68	67	1520679	10.70 ug/l	100
11) Trichlorofluoromethane	6.73	101	1240385	12.22 ug/l	100
12) Acrolein	7.85	56	84715	51.18 ug/l	100
13) 1,1,2-Trichloro-1,2,2-trif	7.99	151	396018	10.48 ug/l	100
14) Acetone	8.19	43	371650	51.67 ug/l	100
15) 1,1-Dichloroethene	7.99	61	1351158	10.79 ug/l	100
17) Iodomethane	8.38	142	1271057	10.82 ug/l	100
18) Carbon disulfide	8.52	76	2468999	9.80 ug/l	100
19) Methylene chloride	9.08	49	923088	10.43 ug/l	100
20) tert-Butyl alcohol	9.27	59	123162	54.93 ug/l	100
21) tert-Butyl methyl ether (M	9.50	73	962352	10.58 ug/l	100
22) trans-1,2-Dichloroethene	9.57	61	1362225	10.67 ug/l	100
23) Acrylonitrile	9.60	53	354701	53.63 ug/l	100
24) Isopropyl ether (DIPE)	10.33	45	2417849	10.86 ug/l	100
25) Vinyl acetate	10.39	43	875928	11.72 ug/l	100
26) 1,1-Dichloroethane	10.36	63	1500293	10.85 ug/l	100
28) tert-Butyl ethyl ether (ET	10.94	59	1703438	10.69 ug/l	100
29) 2,2-Dichloropropane	11.33	77	1212683	10.77 ug/l	100
30) 2-Butanone	11.36	43	632700	51.43 ug/l	100
31) cis-1,2-Dichloroethene	11.36	96	778768	10.75 ug/l	100
32) Bromochloromethane	11.78	49	621549	10.86 ug/l	100
33) Tetrahydrofuran	11.82	42	67100	9.53 ug/l	100

(#) = qualifier out of range (m) = manual integration
RHB444.D VO03H16.M Thu Aug 18 09:49:28 2011 SU 8/18/11 Page 1

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Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB444.D Vial: 7
Acq On : 16 Aug 2011 2:40 pm Operator: MW
Sample : VO03H166 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34) Chloroform	11.86	83	1634214	10.88 ug/l	100
37) 1,1,1-Trichloroethane	12.13	97	1465347	10.88 ug/l	100
39) tert-Amyl methyl ether (TA	12.74	87	270926	11.01 ug/l	100
42) 1,1-Dichloropropene	12.37	110	368860	10.79 ug/l	100
43) Carbon tetrachloride	12.37	119	1251054	10.72 ug/l	100
44) Benzene	12.71	78	2977258	10.66 ug/l	100
45) 1,2-Dichloroethane	12.76	62	920211	10.67 ug/l	100
46) Trichloroethene	13.62	130	808735	10.55 ug/l	100
48) 1,2-Dichloropropane	13.96	63	763856	10.68 ug/l	100
49) 1,4-Dioxane	14.13	88	44238	199.55 ug/l	100
50) Dibromomethane	14.19	93	355886	10.54 ug/l	100
51) Bromodichloromethane	14.35	83	1150353	10.77 ug/l	100
52) 2-Chloroethyl vinyl ether	14.65	63	220677	10.24 ug/l	100
53) cis-1,3-Dichloropropene	14.92	75	1191656	10.81 ug/l	100
54) 4-Methyl-2-pentanone	15.03	43	1820104	52.29 ug/l	100
56) Toluene	15.35	91	3214817	10.61 ug/l	100
57) Ethyl methacrylate	15.59	69	600987	10.69 ug/l	100
58) trans-1,3-Dichloropropene	15.63	75	946627	10.97 ug/l	100
59) 1,1,2-Trichloroethane	15.91	97	399582	10.68 ug/l	100
60) Tetrachloroethene	16.09	164	692521	10.51 ug/l	100
61) 2-Hexanone	16.11	43	1247334	54.24 ug/l	100
62) 1,3-Dichloropropane	16.14	76	805146	10.76 ug/l	100
63) Dibromochloromethane	16.49	129	601240	10.85 ug/l	100
64) 1,2-Dibromoethane	16.67	107	437998	10.69 ug/l	100
65) 1-Chlorohexane	17.03	91	1477818	10.52 ug/l	100
66) Chlorobenzene	17.24	112	1855116	10.67 ug/l	100
67) Ethylbenzene	17.28	91	4136370	10.57 ug/l	100
68) 1,1,1,2-Tetrachloroethane	17.31	131	703396	10.90 ug/l	100
69) m-Xylene & p-Xylene	17.42	91	6304944	20.91 ug/l	100
70) o-Xylene	17.94	91	3117484	10.66 ug/l	100
71) Styrene	17.97	104	2083302	11.05 ug/l	100
73) Isopropylbenzene	18.37	105	3577979	10.46 ug/l	100
74) Bromoform	18.35	173	273788	10.98 ug/l	100
76) 1,1,2,2-Tetrachloroethane	18.79	83	475240	10.45 ug/l	100
77) trans-1,4-Dichloro-2-buten	18.83	53	151626	10.28 ug/l	100
78) n-Propylbenzene	18.87	91	5093485	10.47 ug/l	100
79) 1,2,3-Trichloropropane	18.89	110	113856	10.77 ug/l	100
80) Bromobenzene	18.92	156	725537	10.53 ug/l	100
81) 1,3,5-Trimethylbenzene	19.05	105	3111139	10.55 ug/l	100
82) 2-Chlorotoluene	19.08	91	3195982	10.53 ug/l	100
83) 4-Chlorotoluene	19.22	91	2770585	10.56 ug/l	100

(#) = qualifier out of range (m) = manual integration

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2069

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB444.D Vial: 7
Acq On : 16 Aug 2011 2:40 pm Operator: MW
Sample : VO03H166 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84)	tert-Butylbenzene	19.51	134	615549	10.53 ug/l	100
85)	1,2,4-Trimethylbenzene	19.57	105	2957308	10.54 ug/l	100
86)	sec-Butylbenzene	19.78	105	4039485	10.51 ug/l	100
87)	p-Isopropyltoluene	19.93	119	3178669	10.71 ug/l	100
88)	1,3-Dichlorobenzene	20.10	146	1401499	10.60 ug/l	100
89)	1,4-Dichlorobenzene	20.20	146	1322708	10.76 ug/l	100
90)	n-Butylbenzene	20.48	91	3528539	10.77 ug/l	100
91)	1,2-Dichlorobenzene	20.75	146	1076911	10.65 ug/l	100
92)	1,2-Dibromo-3-chloropropan	21.88	157	56199	10.89 ug/l	100
93)	1,2,4-Trichlorobenzene	23.12	180	551013	10.75 ug/l	100
94)	Hexachlorobutadiene	23.25	225	509673	10.85 ug/l	100
95)	Naphthalene	23.62	128	738192	11.17 ug/l	100
96)	1,2,3-Trichlorobenzene	24.04	180	403785	10.72 ug/l	100

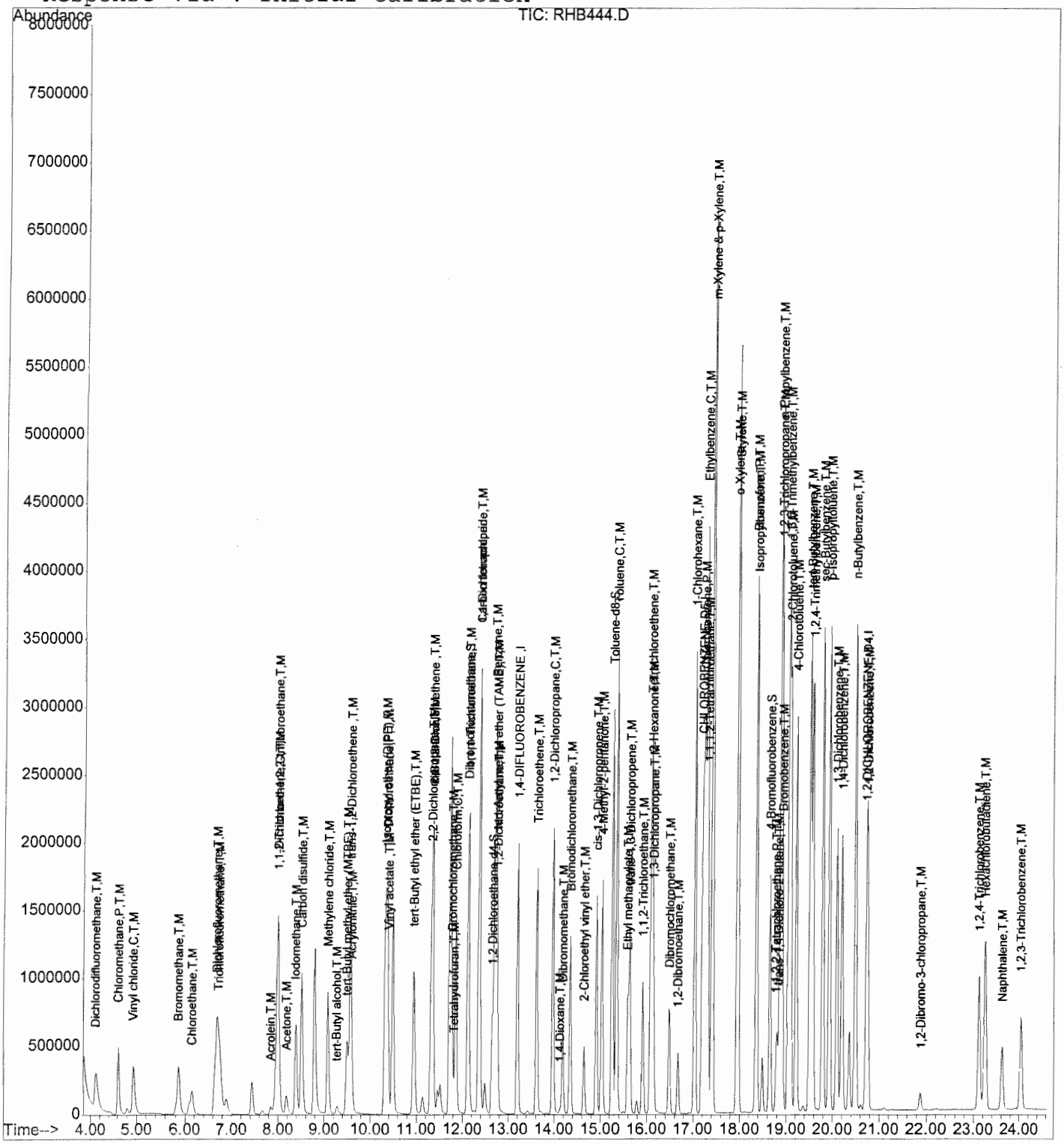
SV 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB444.D Vial: 7
Acq On : 16 Aug 2011 2:40 pm Operator: MW
Sample : VO03H166 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



8/18/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB445.D Vial: 8
Acq On : 16 Aug 2011 3:14 pm Operator: MW
Sample : VO03H167 20.0ppb Inst : 03
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.20	114	2028565	10.00	ug/l	0.00
41) CHLOROBENZENE-D5	17.19	117	1868201	10.00	ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	668366	10.00	ug/l	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	12.13	111	1486703	19.73	ug/l	0.01
Spiked Amount 10.000			Recovery	=	197.30%	
40) 1,2-Dichloroethane-d4	12.65	65	1523826	19.86	ug/l	0.00
Spiked Amount 10.000			Recovery	=	198.60%	
55) Toluene-d8	15.25	98	5166204	19.47	ug/l	0.00
Spiked Amount 10.000			Recovery	=	194.70%	
75) 4-Bromofluorobenzene	18.65	95	2017344	19.39	ug/l	0.00
Spiked Amount 10.000			Recovery	=	193.90%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.12	85	1360540	19.00	ug/l	99
5) Chloromethane	4.61	50	1418699	19.61	ug/l	100
7) Vinyl chloride	4.94	62	1364153	19.94	ug/l	99
8) Bromomethane	5.86	94	933542	20.30	ug/l	99
9) Chloroethane	6.13	64	705923	19.63	ug/l	99
10) Dichlorofluoromethane	6.68	67	3060153	19.75	ug/l	100
11) Trichlorofluoromethane	6.74	101	2151820	19.46	ug/l	99
12) Acrolein	7.86	56	191530	106.21	ug/l	100
13) 1,1,2-Trichloro-1,2,2-trif	7.98	151	802810	19.50	ug/l	99
14) Acetone	8.18	43	728628	92.99	ug/l	99
15) 1,1-Dichloroethene	8.01	61	2633806	19.30	ug/l	99
17) Iodomethane	8.39	142	2522357	19.70	ug/l	100
18) Carbon disulfide	8.51	76	5649052	20.58	ug/l	100
19) Methylene chloride	9.08	49	1844392	19.13	ug/l	100
20) tert-Butyl alcohol	9.29	59	246378	100.86	ug/l	98
21) tert-Butyl methyl ether (M	9.51	73	1954173	19.72	ug/l	99
22) trans-1,2-Dichloroethene	9.57	61	2709710	19.48	ug/l	99
23) Acrylonitrile	9.60	53	723551	100.41	ug/l	100
24) Isopropyl ether (DIPE)	10.33	45	4743102	19.55	ug/l	100
25) Vinyl acetate	10.39	43	1670702	20.52	ug/l	98
26) 1,1-Dichloroethane	10.37	63	2949781	19.58	ug/l	100
28) tert-Butyl ethyl ether (ET	10.95	59	3384401	19.49	ug/l	99
29) 2,2-Dichloropropane	11.32	77	2349657	19.15	ug/l	100
30) 2-Butanone	11.35	43	1249122	93.20	ug/l	99
31) cis-1,2-Dichloroethene	11.35	96	1555875	19.71	ug/l	98
32) Bromochloromethane	11.77	49	1221189	19.59	ug/l	98
33) Tetrahydrofuran	11.82	42	147147	19.18	ug/l	94

(#) = qualifier out of range (m) = manual integration SW 8/18/11

2072

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB445.D Vial: 8
Acq On : 16 Aug 2011 3:14 pm Operator: MW
Sample : VO03H167 20.0ppb Inst : 03
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34) Chloroform	11.86	83	3186045	19.46 ug/l	100
37) 1,1,1-Trichloroethane	12.13	97	2847717	19.42 ug/l	99
39) tert-Amyl methyl ether (TA	12.74	87	528563	19.72 ug/l	99
42) 1,1-Dichloropropene	12.37	110	729821	19.68 ug/l	100
43) Carbon tetrachloride	12.38	119	2443140	19.31 ug/l	100
44) Benzene	12.71	78	5829728	19.24 ug/l	100
45) 1,2-Dichloroethane	12.77	62	1790962	19.16 ug/l	99
46) Trichloroethene	13.62	130	1621808	19.51 ug/l	99
48) 1,2-Dichloropropane	13.97	63	1521825	19.63 ug/l	100
49) 1,4-Dioxane	14.12	88	84018	349.48 ug/l	93
50) Dibromomethane	14.18	93	727609	19.87 ug/l	100
51) Bromodichloromethane	14.35	83	2294527	19.82 ug/l	100
52) 2-Chloroethyl vinyl ether	14.64	63	471027	20.15 ug/l	99
53) cis-1,3-Dichloropropene	14.91	75	2392092	20.00 ug/l	99
54) 4-Methyl-2-pentanone	15.03	43	3638893	96.40 ug/l	100
56) Toluene	15.34	91	6385102	19.42 ug/l	100
57) Ethyl methacrylate	15.60	69	1226896	20.13 ug/l	100
58) trans-1,3-Dichloropropene	15.64	75	1880955	20.10 ug/l	99
59) 1,1,2-Trichloroethane	15.91	97	796125	19.63 ug/l	99
60) Tetrachloroethene	16.09	164	1374504	19.24 ug/l	99
61) 2-Hexanone	16.10	43	2478930	99.39 ug/l	99
62) 1,3-Dichloropropane	16.15	76	1605697	19.79 ug/l	100
63) Dibromochloromethane	16.49	129	1236324	20.58 ug/l	100
64) 1,2-Dibromoethane	16.67	107	899773	20.24 ug/l	98
65) 1-Chlorohexane	17.04	91	2978376	19.54 ug/l	99
66) Chlorobenzene	17.23	112	3716051	19.71 ug/l	98
67) Ethylbenzene	17.28	91	8127057	19.15 ug/l	100
68) 1,1,1,2-Tetrachloroethane	17.31	131	1385377	19.79 ug/l	100
69) m-Xylene & p-Xylene	17.41	91	12390725	37.90 ug/l	100
70) o-Xylene	17.95	91	6074585	19.16 ug/l	100
71) Styrene	17.96	104	4123843	20.16 ug/l	99
73) Isopropylbenzene	18.36	105	7127038	18.81 ug/l	100
74) Bromoform	18.35	173	567800	20.57 ug/l	99
76) 1,1,2,2-Tetrachloroethane	18.80	83	972326	19.31 ug/l	99
77) trans-1,4-Dichloro-2-buten	18.83	53	334378	20.47 ug/l	99
78) n-Propylbenzene	18.87	91	10185382	18.91 ug/l	100
79) 1,2,3-Trichloropropane	18.89	110	229426	19.59 ug/l	98
80) Bromobenzene	18.92	156	1455386	19.07 ug/l	100
81) 1,3,5-Trimethylbenzene	19.05	105	6226213	19.06 ug/l	99
82) 2-Chlorotoluene	19.09	91	6338983	18.86 ug/l	100
83) 4-Chlorotoluene	19.21	91	5596363	19.27 ug/l	100

(#) = qualifier out of range (m) = manual integration
RHB445.D VO03H16.M Thu Aug 18 09:49:38 2011

Su 8/18/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB445.D Vial: 8
Acq On : 16 Aug 2011 3:14 pm Operator: MW
Sample : VO03H167 20.0ppb Inst : 03
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84) tert-Butylbenzene	19.51	134	1240641	19.16 ug/l	97
85) 1,2,4-Trimethylbenzene	19.57	105	5948561	19.14 ug/l	100
86) sec-Butylbenzene	19.79	105	8122175	19.08 ug/l	100
87) p-Isopropyltoluene	19.93	119	6371083	19.39 ug/l	100
88) 1,3-Dichlorobenzene	20.09	146	2872522	19.62 ug/l	99
89) 1,4-Dichlorobenzene	20.20	146	2691065	19.77 ug/l	99
90) n-Butylbenzene	20.49	91	7128365	19.64 ug/l	100
91) 1,2-Dichlorobenzene	20.75	146	2187409	19.54 ug/l	100
92) 1,2-Dibromo-3-chloropropan	21.88	157	119679	20.95 ug/l	98
93) 1,2,4-Trichlorobenzene	23.11	180	1180331	20.79 ug/l	99
94) Hexachlorobutadiene	23.25	225	1042573	20.05 ug/l	100
95) Naphthalene	23.62	128	1635162	22.34 ug/l	100
96) 1,2,3-Trichlorobenzene	24.04	180	881630	21.14 ug/l	99

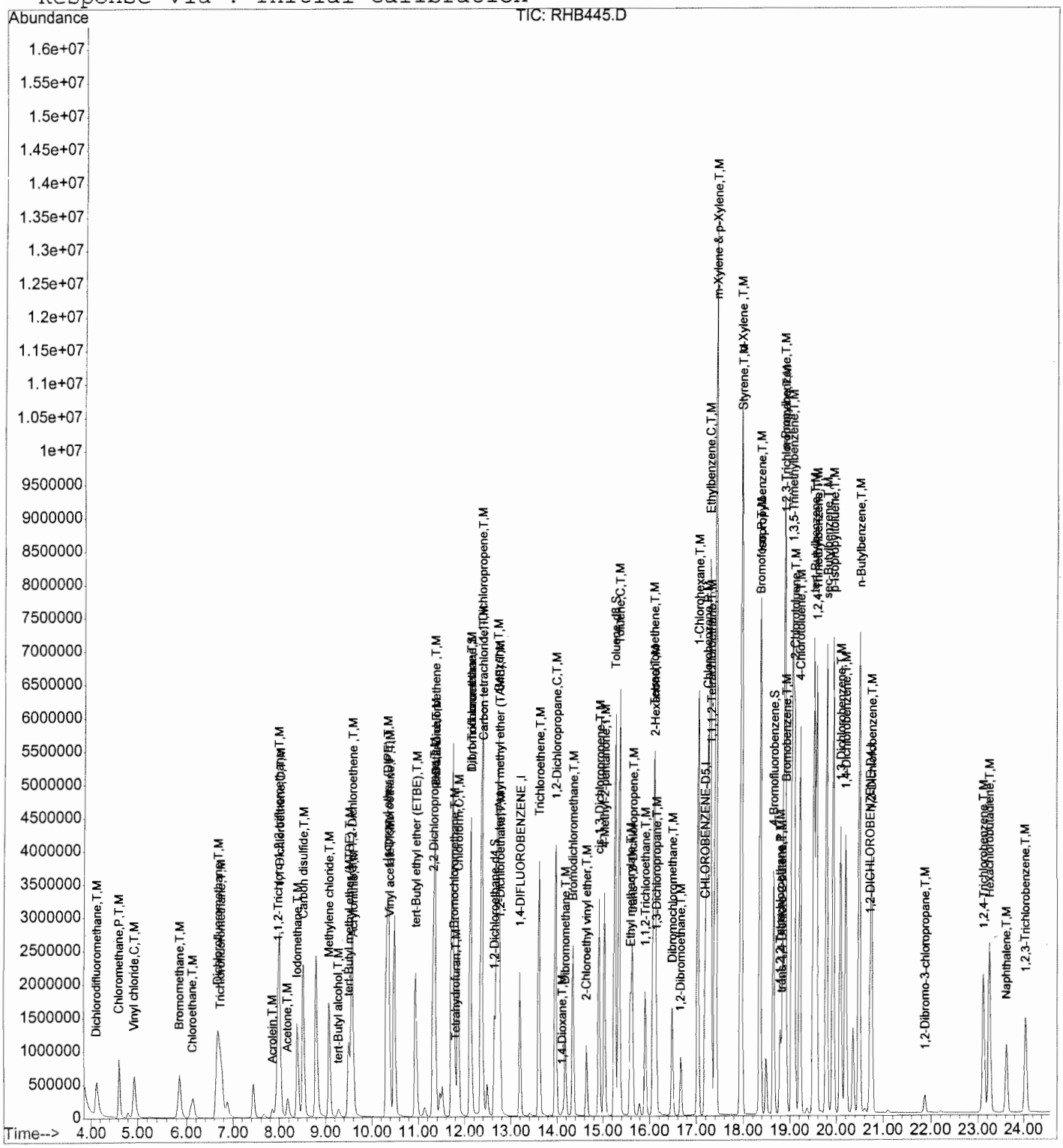
SV 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB445.D Vial: 8
Acq On : 16 Aug 2011 3:14 pm Operator: MW
Sample : VO03H167 20.0ppb Inst : 03
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



8/18/11

2075

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB446.D Vial: 9
Acq On : 16 Aug 2011 3:48 pm Operator: MW
Sample : VO03H168 30.0ppb Inst : 03
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.20	114	1928230	10.00 ug/l	0.00
41) CHLOROBENZENE-D5	17.20	117	1724646	10.00 ug/l	0.01
72) 1,2-DICHLOROBENZENE-D4	20.73	152	583154	10.00 ug/l	0.01
System Monitoring Compounds					
36) Dibromofluoromethane	12.13	111	2201741	30.74 ug/l	0.01
Spiked Amount 10.000			Recovery	= 307.40%	
40) 1,2-Dichloroethane-d4	12.65	65	2171278	29.77 ug/l	0.00
Spiked Amount 10.000			Recovery	= 297.70%	
55) Toluene-d8	15.25	98	7712108	31.48 ug/l	0.00
Spiked Amount 10.000			Recovery	= 314.80%	
75) 4-Bromofluorobenzene	18.65	95	2843272	31.33 ug/l	0.00
Spiked Amount 10.000			Recovery	= 313.30%	

Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.11	85	2098210	30.83 ug/l	99
5) Chloromethane	4.61	50	2221432	32.31 ug/l	100
7) Vinyl chloride	4.94	62	2055006	31.59 ug/l	99
8) Bromomethane	5.85	94	1414372	32.35 ug/l	98
9) Chloroethane	6.13	64	1093076	31.98 ug/l	99
10) Dichlorofluoromethane	6.67	67	4611758	31.32 ug/l	100
11) Trichlorofluoromethane	6.74	101	3312175	31.52 ug/l	100
12) Acrolein	7.84	56	301167	175.70 ug/l	97
13) 1,1,2-Trichloro-1,2,2-trif	7.97	151	1204059	30.76 ug/l	98
14) Acetone	8.18	43	1052874	141.36 ug/l	98
15) 1,1-Dichloroethene	8.00	61	3989691	30.76 ug/l	99
17) Iodomethane	8.39	142	3866904	31.77 ug/l	99
18) Carbon disulfide	8.51	76	8906996	34.13 ug/l	100
19) Methylene chloride	9.08	49	2775209	30.28 ug/l	100
20) tert-Butyl alcohol	9.28	59	341209	146.94 ug/l	98
21) tert-Butyl methyl ether (M	9.51	73	2841185	30.16 ug/l	99
22) trans-1,2-Dichloroethene	9.57	61	4112064	31.10 ug/l	99
23) Acrylonitrile	9.60	53	1092581	159.51 ug/l	97
24) Isopropyl ether (DIPE)	10.33	45	7169314	31.09 ug/l	100
25) Vinyl acetate	10.39	43	2424911	31.33 ug/l	99
26) 1,1-Dichloroethane	10.37	63	4453938	31.11 ug/l	99
28) tert-Butyl ethyl ether (ET	10.95	59	5136602	31.12 ug/l	99
29) 2,2-Dichloropropane	11.32	77	3385644	29.02 ug/l	99
30) 2-Butanone	11.35	43	1809803	142.07 ug/l	99
31) cis-1,2-Dichloroethene	11.35	96	2366627	31.53 ug/l	97
32) Bromochloromethane	11.77	49	1826455	30.82 ug/l	98
33) Tetrahydrofuran	11.82	42	209180	28.68 ug/l	95

(#) = qualifier out of range (m) = manual integration

Sw 8/18/11

2076

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB446.D Vial: 9
Acq On : 16 Aug 2011 3:48 pm Operator: MW
Sample : VO03H168 30.0ppb Inst : 03
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34) Chloroform	11.86	83	4826823	31.02 ug/l	100
37) 1,1,1-Trichloroethane	12.13	97	4237980	30.40 ug/l	99
39) tert-Amyl methyl ether (TA	12.74	87	778664	30.56 ug/l	99
42) 1,1-Dichloropropene	12.37	110	1086595	31.75 ug/l	99
43) Carbon tetrachloride	12.38	119	3645620	31.21 ug/l	100
44) Benzene	12.71	78	8964411	32.05 ug/l	100
45) 1,2-Dichloroethane	12.77	62	2616558	30.32 ug/l	99
46) Trichloroethene	13.62	130	2465508	32.13 ug/l	99
48) 1,2-Dichloropropane	13.97	63	2296842	32.09 ug/l	98
49) 1,4-Dioxane	14.12	88	123953	558.51 ug/l	98
50) Dibromomethane	14.18	93	1074105	31.77 ug/l	100
51) Bromodichloromethane	14.35	83	3429170	32.08 ug/l	100
52) 2-Chloroethyl vinyl ether	14.64	63	702075	32.53 ug/l	99
53) cis-1,3-Dichloropropene	14.91	75	3588325	32.50 ug/l	99
54) 4-Methyl-2-pentanone	15.03	43	5248774	150.63 ug/l	99
56) Toluene	15.36	91	9674780	31.88 ug/l	100
57) Ethyl methacrylate	15.60	69	1768796	31.43 ug/l	100
58) trans-1,3-Dichloropropene	15.64	75	2758054	31.93 ug/l	99
59) 1,1,2-Trichloroethane	15.91	97	1175376	31.39 ug/l	99
60) Tetrachloroethene	16.09	164	2076371	31.49 ug/l	99
61) 2-Hexanone	16.10	43	3508422	152.38 ug/l	99
62) 1,3-Dichloropropane	16.15	76	2335400	31.17 ug/l	100
63) Dibromochloromethane	16.49	129	1817886	32.78 ug/l	99
64) 1,2-Dibromoethane	16.67	107	1300854	31.70 ug/l	99
65) 1-Chlorohexane	17.04	91	4422402	31.43 ug/l	99
66) Chlorobenzene	17.23	112	5523928	31.74 ug/l	97
67) Ethylbenzene	17.28	91	12070741	30.81 ug/l	100
68) 1,1,1,2-Tetrachloroethane	17.32	131	2061689	31.91 ug/l	100
69) m-Xylene & p-Xylene	17.41	91	17547926	58.14 ug/l	98
70) o-Xylene	17.95	91	8962917	30.63 ug/l	100
71) Styrene	17.96	104	6023656	31.90 ug/l	99
73) Isopropylbenzene	18.36	105	10407291	31.48 ug/l	100
74) Bromoform	18.35	173	812657	33.74 ug/l	99
76) 1,1,2,2-Tetrachloroethane	18.80	83	1377399	31.35 ug/l	100
77) trans-1,4-Dichloro-2-buten	18.83	53	470381	33.00 ug/l	98
78) n-Propylbenzene	18.87	91	14830581	31.55 ug/l	100
79) 1,2,3-Trichloropropane	18.90	110	319903	31.31 ug/l #	95
80) Bromobenzene	18.91	156	2111766	31.72 ug/l	98
81) 1,3,5-Trimethylbenzene	19.05	105	8977888	31.50 ug/l	100
82) 2-Chlorotoluene	19.09	91	9154343	31.21 ug/l	100
83) 4-Chlorotoluene	19.21	91	8094145	31.94 ug/l	100

(#) = qualifier out of range (m) = manual integration

SW 8/18/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB446.D Vial: 9
Acq On : 16 Aug 2011 3:48 pm Operator: MW
Sample : VO03H168 30.0ppb Inst : 03
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84) tert-Butylbenzene	19.51	134	1783414	31.56 ug/l	98
85) 1,2,4-Trimethylbenzene	19.57	105	8587859	31.67 ug/l	100
86) sec-Butylbenzene	19.79	105	11596264	31.22 ug/l	100
87) p-Isopropyltoluene	19.93	119	9053036	31.57 ug/l	99
88) 1,3-Dichlorobenzene	20.09	146	4112915	32.20 ug/l	100
89) 1,4-Dichlorobenzene	20.21	146	3820199	32.16 ug/l	99
90) n-Butylbenzene	20.49	91	10046105	31.73 ug/l	100
91) 1,2-Dichlorobenzene	20.76	146	3093008	31.66 ug/l	99
92) 1,2-Dibromo-3-chloropropan	21.88	157	165955	33.29 ug/l	97
93) 1,2,4-Trichlorobenzene	23.13	180	1620789	32.71 ug/l	100
94) Hexachlorobutadiene	23.25	225	1410786	31.09 ug/l	100
95) Naphthalene	23.62	128	2184589	34.21 ug/l	99
96) 1,2,3-Trichlorobenzene	24.05	180	1180890	32.46 ug/l	99

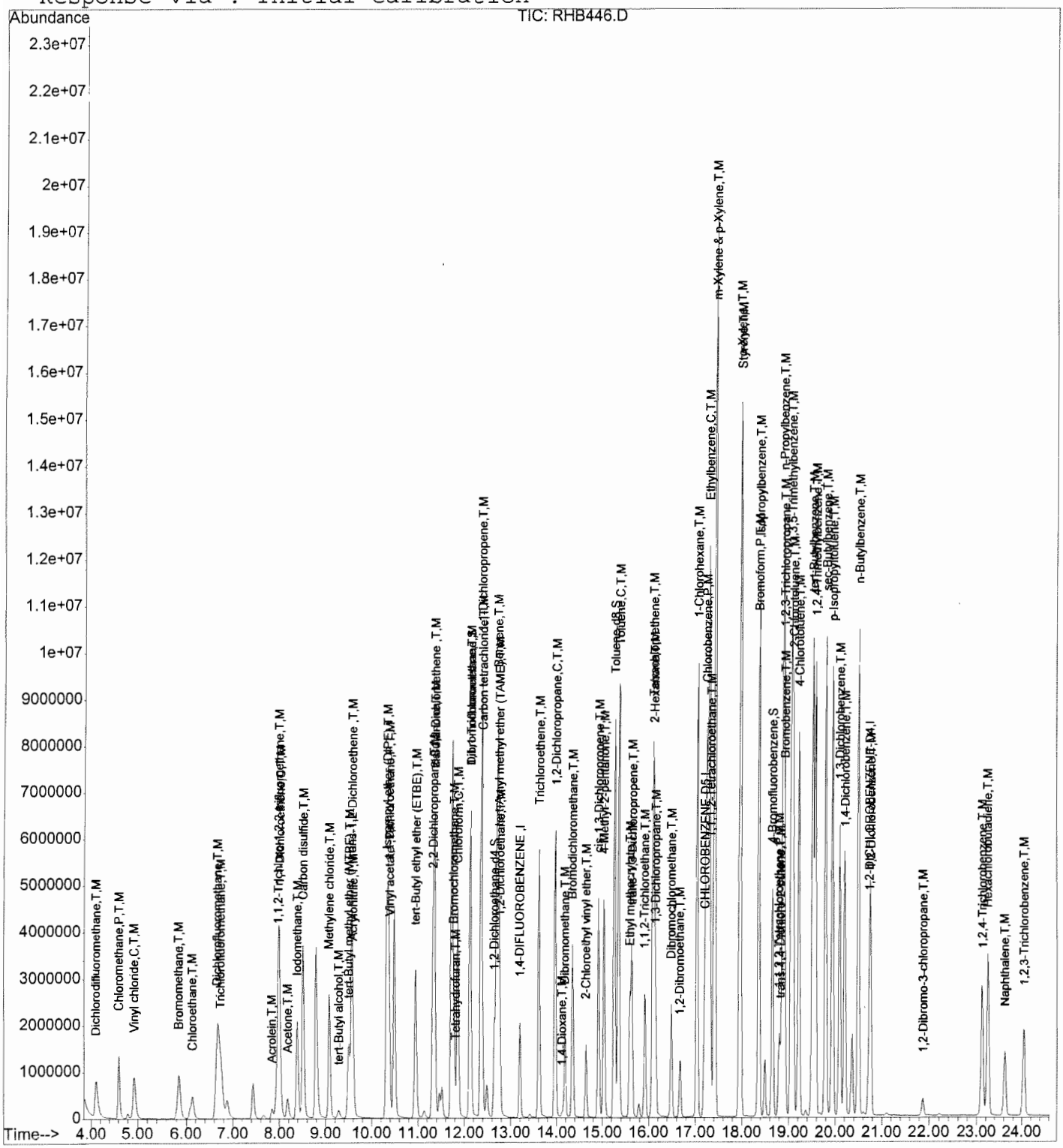
SU 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB446.D Vial: 9
Acq On : 16 Aug 2011 3:48 pm Operator: MW
Sample : VO03H168 30.0ppb Inst : 03
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



SW 8/18/11

2079

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB447.D Vial: 10
Acq On : 16 Aug 2011 4:21 pm Operator: MW
Sample : VO03H169 40.0ppb Inst : 03
Misc : 40.0ppb 8260/200.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.20	114	2093238	10.00	ug/l	0.00
41) CHLOROBENZENE-D5	17.19	117	1898344	10.00	ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	642231	10.00	ug/l	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	12.12	111	2907252	37.38	ug/l	0.00
Spiked Amount 10.000			Recovery	=	373.80%	
40) 1,2-Dichloroethane-d4	12.65	65	2908770	36.74	ug/l	0.00
Spiked Amount 10.000			Recovery	=	367.40%	
55) Toluene-d8	15.26	98	10133955	37.58	ug/l	0.00
Spiked Amount 10.000			Recovery	=	375.80%	
75) 4-Bromofluorobenzene	18.65	95	3785492	37.87	ug/l	0.00
Spiked Amount 10.000			Recovery	=	378.70%	

Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.11	85	2709983	36.68	ug/l	99
5) Chloromethane	4.62	50	2865369	38.39	ug/l	100
7) Vinyl chloride	4.94	62	2678446	37.93	ug/l	99
8) Bromomethane	5.85	94	1853168	39.04	ug/l	99
9) Chloroethane	6.13	64	1445926	38.97	ug/l	100
10) Dichlorofluoromethane	6.67	67	6157354	38.52	ug/l	100
11) Trichlorofluoromethane	6.73	101	4316403	37.84	ug/l	100
12) Acrolein	7.85	56	426317	229.10	ug/l	97
13) 1,1,2-Trichloro-1,2,2-trif	7.98	151	1621388	38.16	ug/l	99
14) Acetone	8.17	43	1480810	183.15	ug/l	98
15) 1,1-Dichloroethene	8.01	61	5191944	36.87	ug/l	98
17) Iodomethane	8.40	142	5106574	38.65	ug/l	98
18) Carbon disulfide	8.52	76	11307633	39.92	ug/l	100
19) Methylene chloride	9.08	49	3665478	36.84	ug/l	99
20) tert-Butyl alcohol	9.29	59	477304	189.35	ug/l	96
21) tert-Butyl methyl ether (M	9.51	73	3808977	37.24	ug/l	99
22) trans-1,2-Dichloroethene	9.57	61	5378121	37.47	ug/l	98
23) Acrylonitrile	9.60	53	1463643	196.84	ug/l	99
24) Isopropyl ether (DIPE)	10.33	45	9448310	37.74	ug/l	100
25) Vinyl acetate	10.38	43	2955602	35.18	ug/l	100
26) 1,1-Dichloroethane	10.38	63	5783631	37.21	ug/l	99
28) tert-Butyl ethyl ether (ET	10.94	59	6739646	37.61	ug/l	99
29) 2,2-Dichloropropane	11.33	77	4400311	34.75	ug/l	99
30) 2-Butanone	11.34	43	2493297	180.29	ug/l	99
31) cis-1,2-Dichloroethene	11.36	96	3089075	37.92	ug/l	96
32) Bromochloromethane	11.78	49	2439389	37.92	ug/l	99
33) Tetrahydrofuran	11.81	42	276937	34.98	ug/l	97

(#) = qualifier out of range (m) = manual integration
RHB447.D VO03H16.M Thu Aug 18 09:49:56 2011

SW 8/18/11

2080

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB447.D Vial: 10
Acq On : 16 Aug 2011 4:21 pm Operator: MW
Sample : VO03H169 40.0ppb Inst : 03
Misc : 40.0ppb 8260/200.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34) Chloroform	11.87	83	6283141	37.20 ug/l	100
37) 1,1,1-Trichloroethane	12.13	97	5495491	36.31 ug/l	100
39) tert-Amyl methyl ether (TA	12.74	87	1034928	37.41 ug/l	100
42) 1,1-Dichloropropene	12.37	110	1418212	37.64 ug/l	99
43) Carbon tetrachloride	12.37	119	4765938	37.07 ug/l	99
44) Benzene	12.70	78	11636914	37.80 ug/l	99
45) 1,2-Dichloroethane	12.76	62	3459631	36.42 ug/l	100
46) Trichloroethene	13.62	130	3236126	38.31 ug/l	98
48) 1,2-Dichloropropane	13.96	63	2969222	37.69 ug/l	98
49) 1,4-Dioxane	14.13	88	170539	698.11 ug/l	100
50) Dibromomethane	14.19	93	1430974	38.46 ug/l	99
51) Bromodichloromethane	14.35	83	4503516	38.27 ug/l	100
52) 2-Chloroethyl vinyl ether	14.65	63	952799	40.11 ug/l	99
53) cis-1,3-Dichloropropene	14.92	75	4726107	38.89 ug/l	99
54) 4-Methyl-2-pentanone	15.04	43	7187440	187.39 ug/l	100
56) Toluene	15.35	91	12593997	37.71 ug/l	100
57) Ethyl methacrylate	15.59	69	2381864	38.45 ug/l	100
58) trans-1,3-Dichloropropene	15.63	75	3687701	38.79 ug/l	99
59) 1,1,2-Trichloroethane	15.91	97	1556716	37.77 ug/l	99
60) Tetrachloroethene	16.09	164	2691941	37.09 ug/l	99
61) 2-Hexanone	16.11	43	4797069	189.29 ug/l	99
62) 1,3-Dichloropropane	16.14	76	3119342	37.83 ug/l	100
63) Dibromochloromethane	16.48	129	2433042	39.85 ug/l	99
64) 1,2-Dibromoethane	16.67	107	1755398	38.87 ug/l	99
65) 1-Chlorohexane	17.03	91	5772301	37.27 ug/l	98
66) Chlorobenzene	17.24	112	7174138	37.45 ug/l	97
67) Ethylbenzene	17.28	91	15417582	35.75 ug/l	100
68) 1,1,1,2-Tetrachloroethane	17.31	131	2671301	37.56 ug/l	100
69) m-Xylene & p-Xylene	17.42	91	20237624	60.92 ug/l	90
70) o-Xylene	17.94	91	11432432	35.49 ug/l	100
71) Styrene	17.97	104	7755591	37.32 ug/l	99
73) Isopropylbenzene	18.35	105	13455983	36.95 ug/l	99
74) Bromoform	18.35	173	1086274	40.95 ug/l	99
76) 1,1,2,2-Tetrachloroethane	18.79	83	1826459	37.75 ug/l	100
77) trans-1,4-Dichloro-2-buten	18.83	53	622127	39.63 ug/l	99
78) n-Propylbenzene	18.88	91	18072916	34.91 ug/l	99
79) 1,2,3-Trichloropropane	18.89	110	412238	36.64 ug/l #	95
80) Bromobenzene	18.91	156	2729482	37.22 ug/l	98
81) 1,3,5-Trimethylbenzene	19.05	105	11415616	36.37 ug/l	99
82) 2-Chlorotoluene	19.08	91	11781396	36.48 ug/l	99
83) 4-Chlorotoluene	19.22	91	10434755	37.38 ug/l	99

(#) = qualifier out of range (m) = manual integration

SW 8/18/11

2081

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB447.D Vial: 10
Acq On : 16 Aug 2011 4:21 pm Operator: MW
Sample : VO03H169 40.0ppb Inst : 03
Misc : 40.0ppb 8260/200.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84) tert-Butylbenzene	19.52	134	2278795	36.62 ug/l	98
85) 1,2,4-Trimethylbenzene	19.58	105	10970377	36.73 ug/l	100
86) sec-Butylbenzene	19.78	105	14766716	36.10 ug/l	100
87) p-Isopropyltoluene	19.93	119	11550268	36.58 ug/l	99
88) 1,3-Dichlorobenzene	20.10	146	5258989	37.39 ug/l	100
89) 1,4-Dichlorobenzene	20.20	146	4950844	37.84 ug/l	99
90) n-Butylbenzene	20.48	91	12808308	36.73 ug/l	100
91) 1,2-Dichlorobenzene	20.75	146	4031441	37.47 ug/l	99
92) 1,2-Dibromo-3-chloropropan	21.87	157	226044	41.18 ug/l	99
93) 1,2,4-Trichlorobenzene	23.12	180	2181209	39.98 ug/l	100
94) Hexachlorobutadiene	23.25	225	1875034	37.52 ug/l	100
95) Naphthalene	23.62	128	3041436	43.24 ug/l	99
96) 1,2,3-Trichlorobenzene	24.04	180	1623955	40.53 ug/l	100

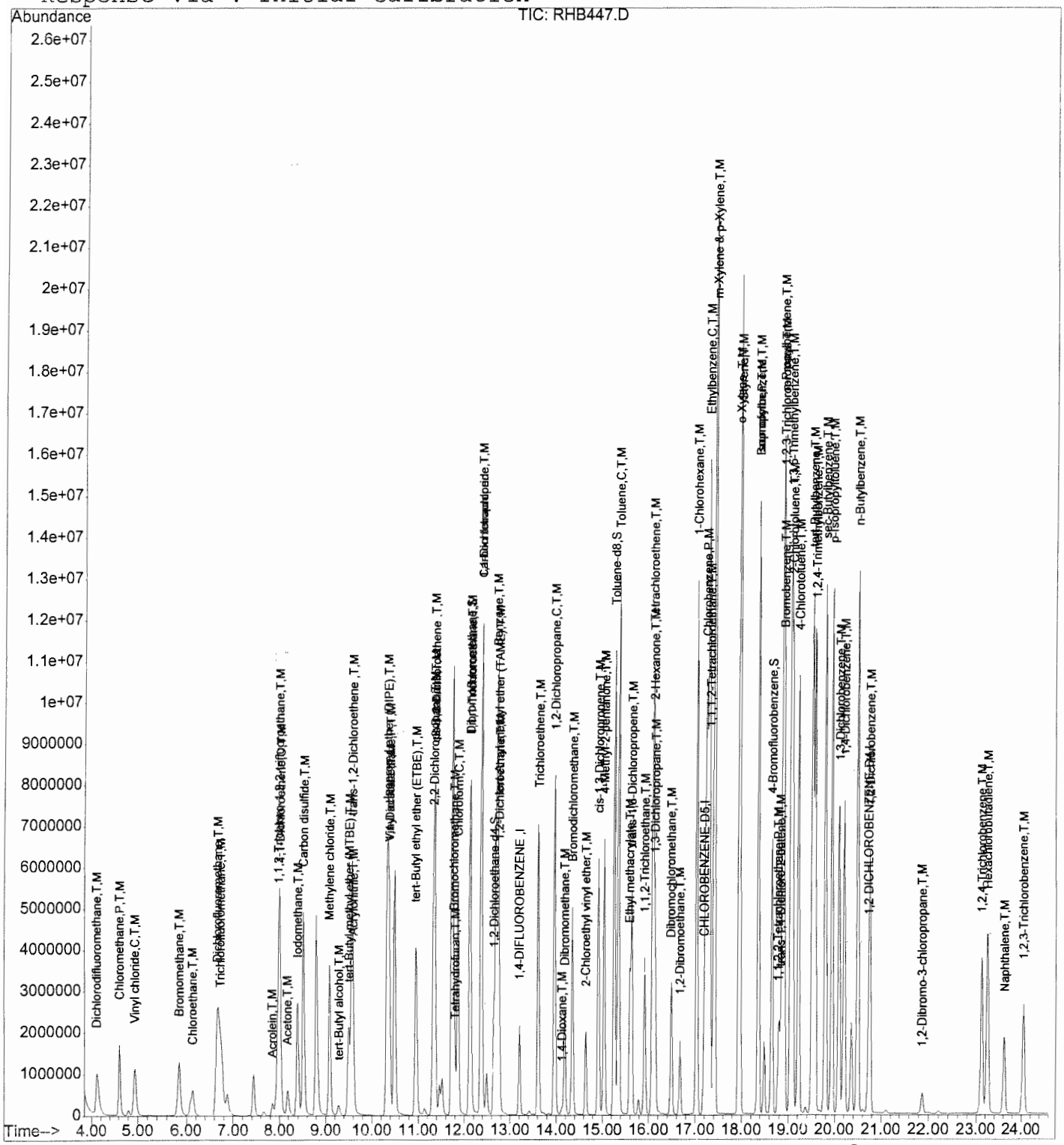
SW 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB447.D Vial: 10
Acq On : 16 Aug 2011 4:21 pm Operator: MW
Sample : VO03H169 40.0ppb Inst : 03
Misc : 40.0ppb 8260/200.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



Su 8/18/11

2083

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB448.D Vial: 11
Acq On : 16 Aug 2011 4:56 pm Operator: MW
Sample : VO03H1610 50.0ppb Inst : 03
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.21	114	1981352	10.00	ug/l	0.00
41) CHLOROBENZENE-D5	17.20	117	1745991	10.00	ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	579998	10.00	ug/l	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	12.12	111	3564050	48.42	ug/l	0.00
Spiked Amount 10.000			Recovery = 484.20%			
40) 1,2-Dichloroethane-d4	12.66	65	3605750	48.12	ug/l	0.00
Spiked Amount 10.000			Recovery = 481.20%			
55) Toluene-d8	15.26	98	12545143	50.59	ug/l	0.00
Spiked Amount 10.000			Recovery = 505.90%			
75) 4-Bromofluorobenzene	18.65	95	4552902	50.44	ug/l	0.00
Spiked Amount 10.000			Recovery = 504.40%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.11	85	3376983	48.28	ug/l	100
5) Chloromethane	4.62	50	3529278	49.96	ug/l	100
7) Vinyl chloride	4.95	62	3307672	49.49	ug/l	99
8) Bromomethane	5.84	94	2215277	49.31	ug/l	99
9) Chloroethane	6.14	64	1762270	50.17	ug/l	99
10) Dichlorofluoromethane	6.67	67	7433212	49.13	ug/l	100
11) Trichlorofluoromethane	6.73	101	5282511	48.92	ug/l	100
12) Acrolein	7.85	56	546302	310.16	ug/l	98
13) 1,1,2-Trichloro-1,2,2-trif	7.98	151	1976741	49.15	ug/l	99
14) Acetone	8.18	43	1812916	236.88	ug/l	98
15) 1,1-Dichloroethene	8.01	61	6403713	48.05	ug/l	98
17) Iodomethane	8.40	142	6234650	49.85	ug/l	98
18) Carbon disulfide	8.52	76	14157162	52.80	ug/l	100
19) Methylene chloride	9.08	49	4512826	47.91	ug/l	99
20) tert-Butyl alcohol	9.29	59	592419	248.29	ug/l	99
21) tert-Butyl methyl ether (M	9.51	73	4759236	49.16	ug/l	99
22) trans-1,2-Dichloroethene	9.57	61	6562731	48.30	ug/l	98
23) Acrylonitrile	9.60	53	1822979	259.02	ug/l	99
24) Isopropyl ether (DIPE)	10.33	45	11700488	49.37	ug/l	100
25) Vinyl acetate	10.39	43	3780726	47.54	ug/l	99
26) 1,1-Dichloroethane	10.38	63	7141766	48.54	ug/l	100
28) tert-Butyl ethyl ether (ET	10.94	59	8429629	49.70	ug/l	99
29) 2,2-Dichloropropane	11.33	77	5173148	43.16	ug/l	99
30) 2-Butanone	11.35	43	3087894	235.89	ug/l	99
31) cis-1,2-Dichloroethene	11.36	96	3783385	49.06	ug/l	96
32) Bromochloromethane	11.78	49	2992505	49.14	ug/l	98
33) Tetrahydrofuran	11.81	42	345326	46.08	ug/l	96

(#) = qualifier out of range (m) = manual integration
RHB448.D VO03H16.M Thu Aug 18 09:50:06 2011 Sw 8/18/11 Page 1

2084

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB448.D Vial: 11
Acq On : 16 Aug 2011 4:56 pm Operator: MW
Sample : VO03H1610 50.0ppb Inst : 03
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	Chloroform	11.87	83	7682972	48.05 ug/l	100
37)	1,1,1-Trichloroethane	12.13	97	6682083	46.65 ug/l	99
39)	tert-Amyl methyl ether (TA	12.74	87	1267100	48.39 ug/l	99
42)	1,1-Dichloropropene	12.37	110	1697391	48.99 ug/l	99
43)	Carbon tetrachloride	12.37	119	5800547	49.05 ug/l	99
44)	Benzene	12.72	78	14323237	50.59 ug/l	99
45)	1,2-Dichloroethane	12.77	62	4226140	48.37 ug/l	99
46)	Trichloroethene	13.62	130	3949008	50.83 ug/l	98
48)	1,2-Dichloropropane	13.97	63	3675605	50.72 ug/l	98
49)	1,4-Dioxane	14.13	88	208885	929.70 ug/l	98
50)	Dibromomethane	14.19	93	1775527	51.88 ug/l	100
51)	Bromodichloromethane	14.35	83	5574912	51.51 ug/l	100
52)	2-Chloroethyl vinyl ether	14.65	63	1182775	54.13 ug/l	99
53)	cis-1,3-Dichloropropene	14.92	75	5824651	52.12 ug/l	99
54)	4-Methyl-2-pentanone	15.04	43	8897005	252.20 ug/l	100
56)	Toluene	15.35	91	15394013	50.11 ug/l	100
57)	Ethyl methacrylate	15.59	69	2939104	51.59 ug/l	100
58)	trans-1,3-Dichloropropene	15.63	75	4564651	52.21 ug/l	99
59)	1,1,2-Trichloroethane	15.92	97	1919829	50.65 ug/l	99
60)	Tetrachloroethene	16.09	164	3290720	49.30 ug/l	99
61)	2-Hexanone	16.11	43	5867642	251.74 ug/l	99
62)	1,3-Dichloropropane	16.14	76	3799318	50.09 ug/l	100
63)	Dibromochloromethane	16.50	129	2991703	53.28 ug/l	99
64)	1,2-Dibromoethane	16.67	107	2145210	51.64 ug/l	98
65)	1-Chlorohexane	17.05	91	6980479	49.01 ug/l	98
66)	Chlorobenzene	17.24	112	8694862	49.35 ug/l	97
67)	Ethylbenzene	17.28	91	17823602	44.94 ug/l	97
68)	1,1,1,2-Tetrachloroethane	17.31	131	3261275	49.86 ug/l	100
69)	m-Xylene & p-Xylene	17.42	91	22278786	72.92 ug/l	84
70)	o-Xylene	17.95	91	13891949	46.89 ug/l	99
71)	Styrene	17.97	104	9376252	49.05 ug/l	99
73)	Isopropylbenzene	18.37	105	16097275	48.95 ug/l	100
74)	Bromoform	18.36	173	1317030	54.98 ug/l	99
76)	1,1,2,2-Tetrachloroethane	18.80	83	2218392	50.77 ug/l	100
77)	trans-1,4-Dichloro-2-buten	18.83	53	753439	53.15 ug/l	97
78)	n-Propylbenzene	18.88	91	20194202	43.20 ug/l	96
79)	1,2,3-Trichloropropane	18.89	110	495653	48.78 ug/l	95
80)	Bromobenzene	18.92	156	3291733	49.71 ug/l	97
81)	1,3,5-Trimethylbenzene	19.06	105	13596651	47.96 ug/l	100
82)	2-Chlorotoluene	19.10	91	14085193	48.29 ug/l	99
83)	4-Chlorotoluene	19.22	91	12435589	49.33 ug/l	99

(#) = qualifier out of range (m) = manual integration
RHB448.D VO03H16.M Thu Aug 18 09:50:07 2011 Sw 8/18/11

2085

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB448.D Vial: 11
Acq On : 16 Aug 2011 4:56 pm Operator: MW
Sample : VO03H1610 50.0ppb Inst : 03
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84) tert-Butylbenzene	19.52	134	2695820	47.97 ug/l	99
85) 1,2,4-Trimethylbenzene	19.58	105	12910417	47.87 ug/l	100
86) sec-Butylbenzene	19.80	105	17442737	47.22 ug/l	100
87) p-Isopropyltoluene	19.93	119	13613368	47.74 ug/l	100
88) 1,3-Dichlorobenzene	20.10	146	6380260	50.23 ug/l	98
89) 1,4-Dichlorobenzene	20.20	146	5858297	49.58 ug/l	99
90) n-Butylbenzene	20.48	91	15053551	47.80 ug/l	100
91) 1,2-Dichlorobenzene	20.75	146	4838187	49.80 ug/l	99
92) 1,2-Dibromo-3-chloropropan	21.88	157	272889	55.04 ug/l	97
93) 1,2,4-Trichlorobenzene	23.12	180	2590139	52.56 ug/l	100
94) Hexachlorobutadiene	23.25	225	2173447	48.16 ug/l	100
95) Naphthalene	23.63	128	3718366	58.54 ug/l	100
96) 1,2,3-Trichlorobenzene	24.04	180	1934896	53.47 ug/l	100

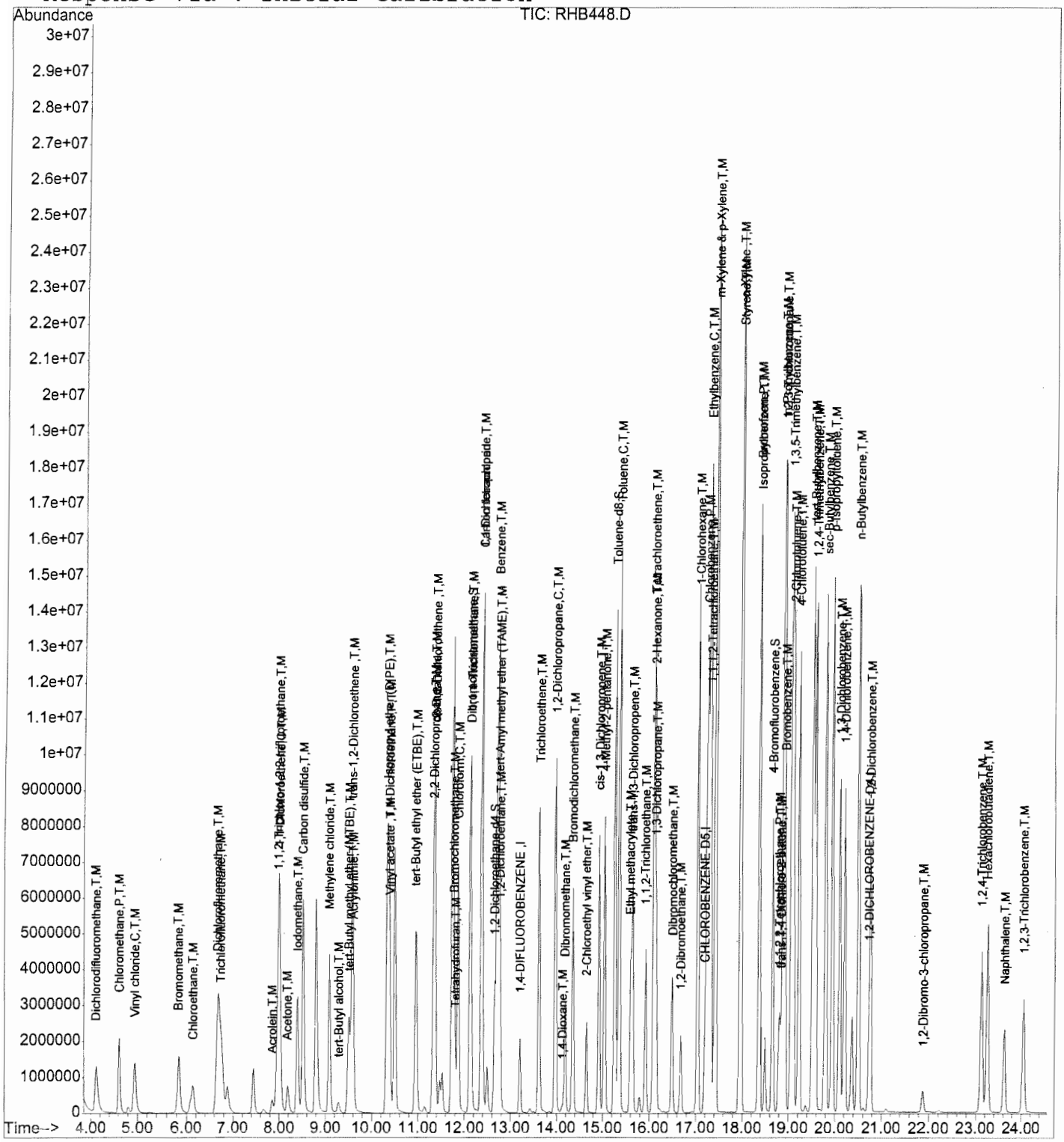
Sa 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB448.D Vial: 11
Acq On : 16 Aug 2011 4:56 pm Operator: MW
Sample : VO03H1610 50.0ppb Inst : 03
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



Sw 8/18/11

2087

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB449.D Vial: 12
Acq On : 16 Aug 2011 5:30 pm Operator: MW
Sample : VO03H1611 100.0ppb Inst : 03
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.20	114	1775262	10.00 ug/l	0.00
41) CHLOROBENZENE-D5	17.20	117	1546679	10.00 ug/l	0.01
72) 1,2-DICHLOROBENZENE-D4	20.73	152	493802	10.00 ug/l	0.01
System Monitoring Compounds					
36) Dibromofluoromethane	12.13	111	6531228	99.03 ug/l	0.01
Spiked Amount 10.000			Recovery	= 990.30%	
40) 1,2-Dichloroethane-d4	12.65	65	6770368	100.83 ug/l	0.00
Spiked Amount 10.000			Recovery	= 1008.30%	
55) Toluene-d8	15.27	98	20262804	92.23 ug/l	0.01
Spiked Amount 10.000			Recovery	= 922.30%	
75) 4-Bromofluorobenzene	18.66	95	8049676	104.75 ug/l	0.01
Spiked Amount 10.000			Recovery	= 1047.50%	

Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.11	85	6655411	106.21 ug/l	99
5) Chloromethane	4.61	50	6987443	110.39 ug/l	100
7) Vinyl chloride	4.94	62	6603040	110.27 ug/l	99
8) Bromomethane	5.83	94	3585086	89.06 ug/l	98
9) Chloroethane	6.12	64	3363757	106.88 ug/l	100
10) Dichlorofluoromethane	6.67	67	14370703	106.01 ug/l	100
11) Trichlorofluoromethane	6.73	101	10383931	107.32 ug/l	100
12) Acrolein	7.86	56	1132541	717.64 ug/l	98
13) 1,1,2-Trichloro-1,2,2-trif	7.98	151	3829565	106.28 ug/l	99
14) Acetone	8.18	43	3713308	541.52 ug/l	98
15) 1,1-Dichloroethene	8.01	61	12257901	102.65 ug/l	98
17) Iodomethane	8.39	142	12238516	109.22 ug/l	98
18) Carbon disulfide	8.51	76	25211220	104.94 ug/l	98
19) Methylene chloride	9.08	49	8926927	105.78 ug/l	100
20) tert-Butyl alcohol	9.30	59	1205893	564.07 ug/l	99
21) tert-Butyl methyl ether (M	9.51	73	9425972	108.67 ug/l	99
22) trans-1,2-Dichloroethene	9.57	61	12562789	103.20 ug/l	98
23) Acrylonitrile	9.60	53	3621867	574.35 ug/l	99
24) Isopropyl ether (DIPE)	10.33	45	22113058	104.15 ug/l	99
25) Vinyl acetate	10.39	43	8457876	118.69 ug/l	98
26) 1,1-Dichloroethane	10.37	63	13402956	101.68 ug/l	100
28) tert-Butyl ethyl ether (ET	10.95	59	16444662	108.21 ug/l	100
29) 2,2-Dichloropropane	11.32	77	9084079	84.58 ug/l	99
30) 2-Butanone	11.35	43	5914561	504.28 ug/l	99
31) cis-1,2-Dichloroethene	11.37	96	7062143	102.21 ug/l	95
32) Bromochloromethane	11.77	49	5745730	105.31 ug/l	99
33) Tetrahydrofuran	11.82	42	726432	108.20 ug/l	92

(#) = qualifier out of range (m) = manual integration

SU 8/18/11

2088

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB449.D Vial: 12
Acq On : 16 Aug 2011 5:30 pm Operator: MW
Sample : VO03H1611 100.0ppb Inst : 03
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34) Chloroform	11.86	83	14586309	101.82 ug/l	100
37) 1,1,1-Trichloroethane	12.13	97	12234915	95.32 ug/l	99
39) tert-Amyl methyl ether (TA	12.74	87	2435098	103.79 ug/l	99
42) 1,1-Dichloropropene	12.37	110	3117094	101.55 ug/l	100
43) Carbon tetrachloride	12.38	119	10819776	103.29 ug/l	99
44) Benzene	12.71	78	22596681	90.10 ug/l	94
45) 1,2-Dichloroethane	12.77	62	8103528	104.70 ug/l	100
46) Trichloroethene	13.62	130	7485273	108.75 ug/l	98
48) 1,2-Dichloropropane	13.97	63	6861627	106.89 ug/l	100
49) 1,4-Dioxane	14.12	88	424484	2132.74 ug/l	99
50) Dibromomethane	14.18	93	3456794	114.02 ug/l	100
51) Bromodichloromethane	14.35	83	10644212	111.03 ug/l	100
52) 2-Chloroethyl vinyl ether	14.64	63	2422795	125.17 ug/l	99
53) cis-1,3-Dichloropropene	14.93	75	11072581	111.84 ug/l	98
54) 4-Methyl-2-pentanone	15.05	43	17112419	547.60 ug/l	100
56) Toluene	15.36	91	22464929	82.55 ug/l	81
57) Ethyl methacrylate	15.60	69	5680993	112.56 ug/l	99
58) trans-1,3-Dichloropropene	15.64	75	8689062	112.18 ug/l	100
59) 1,1,2-Trichloroethane	15.92	97	3715837	110.66 ug/l	100
60) Tetrachloroethene	16.09	164	6033799	102.04 ug/l	98
61) 2-Hexanone	16.12	43	10770543	521.63 ug/l	99
62) 1,3-Dichloropropane	16.15	76	7245237	107.84 ug/l	100
63) Dibromochloromethane	16.49	129	5777736	116.15 ug/l	99
64) 1,2-Dibromoethane	16.68	107	4181515	113.64 ug/l	99
65) 1-Chlorohexane	17.04	91	12556836	99.52 ug/l	98
66) Chlorobenzene	17.23	112	15974181	102.35 ug/l	95
67) Ethylbenzene	17.28	91	23221299	66.10 ug/l	79
68) 1,1,1,2-Tetrachloroethane	17.32	131	5919848	102.16 ug/l	99
69) m-Xylene & p-Xylene	17.41	91	27166956	100.38 ug/l	55
70) o-Xylene	17.95	91	21122348	80.48 ug/l	92
71) Styrene	17.98	104	16358748	96.60 ug/l	98
73) Isopropylbenzene	18.36	105	22387370	79.96 ug/l	90
74) Bromoform	18.35	173	2454521	120.34 ug/l	99
76) 1,1,2,2-Tetrachloroethane	18.80	83	4181295	112.39 ug/l	99
77) trans-1,4-Dichloro-2-buten	18.84	53	1404015	116.32 ug/l	98
78) n-Propylbenzene	18.87	91	25610999	64.35 ug/l	82
79) 1,2,3-Trichloropropane	18.90	110	870964	100.68 ug/l	96
80) Bromobenzene	18.92	156	5859619	103.93 ug/l	96
81) 1,3,5-Trimethylbenzene	19.05	105	20202110	83.70 ug/l	91
82) 2-Chlorotoluene	19.09	91	22735266	91.55 ug/l	97
83) 4-Chlorotoluene	19.23	91	20139977	93.84 ug/l	96

(#) = qualifier out of range (m) = manual integration
RHB449.D VO03H16.M Thu Aug 18 09:50:17 2011

SW 8/18/11

2089

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB449.D Vial: 12
Acq On : 16 Aug 2011 5:30 pm Operator: MW
Sample : VO03H1611 100.0ppb Inst : 03
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84) tert-Butylbenzene	19.53	134	4617398	96.50 ug/l	98
85) 1,2,4-Trimethylbenzene	19.57	105	20294415	88.38 ug/l	93
86) sec-Butylbenzene	19.79	105	23902465	76.00 ug/l	89
87) p-Isopropyltoluene	19.94	119	21028911	86.62 ug/l	94
88) 1,3-Dichlorobenzene	20.11	146	11255719	104.07 ug/l	99
89) 1,4-Dichlorobenzene	20.21	146	10614458	105.52 ug/l	99
90) n-Butylbenzene	20.49	91	22618063	84.36 ug/l	88
91) 1,2-Dichlorobenzene	20.76	146	8773484	106.07 ug/l	99
92) 1,2-Dibromo-3-chloropropan	21.88	157	555489	131.60 ug/l	97
93) 1,2,4-Trichlorobenzene	23.13	180	5023456	119.74 ug/l	100
94) Hexachlorobutadiene	23.26	225	4076267	106.09 ug/l	99
95) Naphthalene	23.62	128	7309598	135.16 ug/l	100
96) 1,2,3-Trichlorobenzene	24.05	180	3716622	120.64 ug/l	99

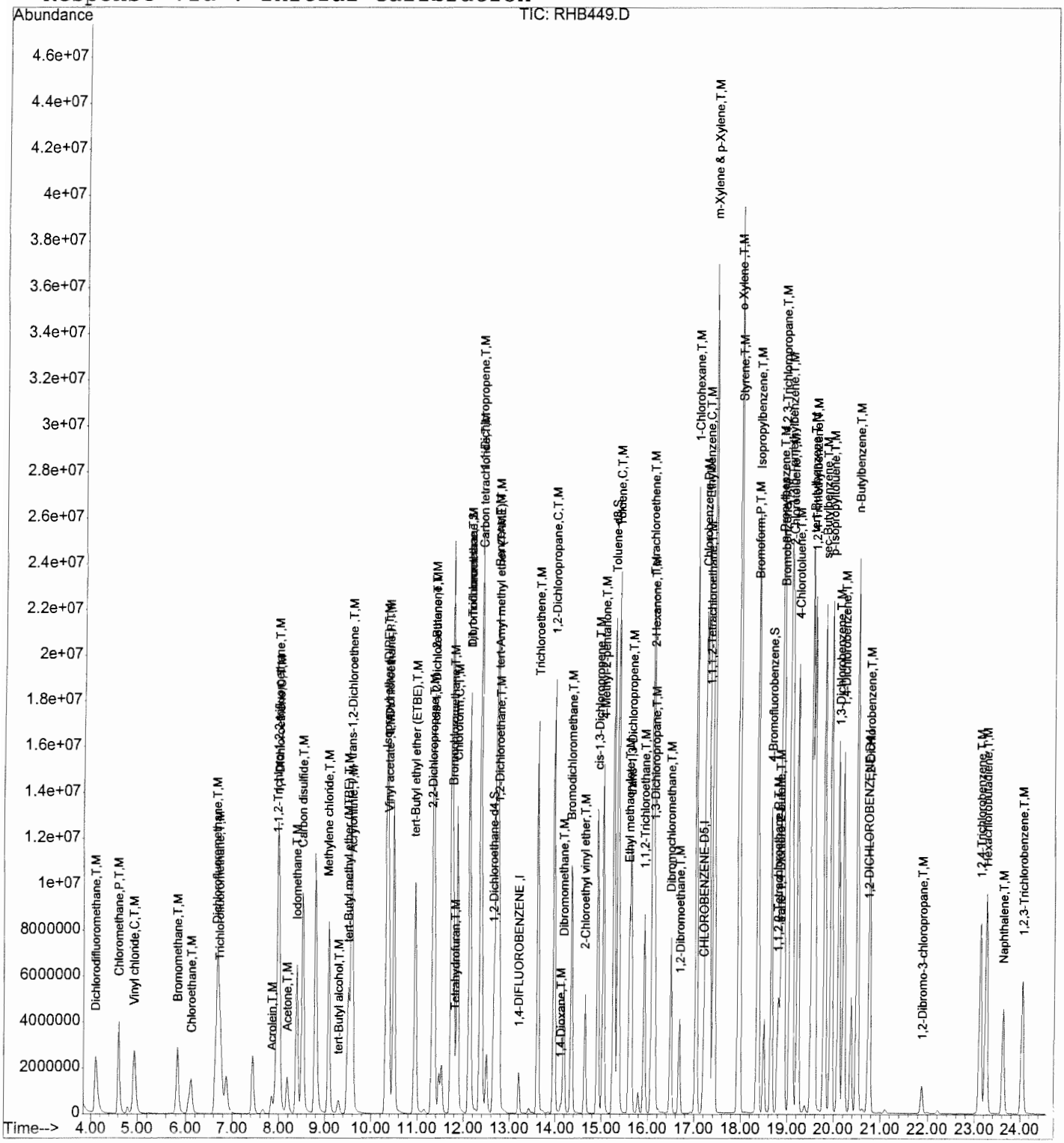
SW 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB449.D Vial: 12
Acq On : 16 Aug 2011 5:30 pm Operator: MW
Sample : VO03H1611 100.0ppb Inst : 03
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



Sw 8/18/11

2091

SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :03
IC_Beginning DateTime :08/16/11 11:49
Spike Amount :10 PPB
CC/CV File :RHB452
IC File :RHB444

Column Spec :ZB-624 ID :0.25MM
IC_Ending DateTime :08/16/11 17:30
HPChem Method :V003H16
Date_Time :08/16/11 19:13

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	1964342	1	1	13.207	13.203	0				
	2	Chlorotrifluoroethylene												
	3	Dichlorodifluoromethane	10.093	0.9	699900	0.356	0.353	4.112	4.113	8.52				
	4	Dichlorotetrafluoroethane												
	5	Chloromethane	10.630	6.3	744562	0.379	0.357	4.618	4.612	10.00				
	6	2-Chloro-1,1,1-trifluoroethane												
	7	Vinyl chloride	10.627	6.3	704186	0.358	0.337	4.931	4.934	10.93				
	8	Bromomethane	11.072	10.7	493194	0.251	0.227	5.869	5.858	9.78				
	9	Chloroethane	10.559	5.6	367718	0.187	0.177	6.151	6.136	9.63				
	10	Dichlorofluoromethane	9.808	-1.9	1471244	0.749	0.764	6.672	6.673	4.35				
	11	Trichlorofluoromethane	10.147	1.5	1086354	0.553	0.545	6.747	6.732	9.58				
5	12	Acrolein	48.279	-3.4	84307	0.009	0.009	7.848	7.852	13.95				
	13	1,1,2-Trichloro-1,2,2-trifluoroethane	9.633	-3.7	384110	0.196	0.203	7.982	7.983	4.08				
5	14	Acetone	45.661	-8.7	346459	0.035	0.039	8.191	8.185	8.41				
	15	1,1-Dichloroethene	9.833	-1.7	1299399	0.661	0.673	8.012	8.003	4.65				
	16	Methyl acetate												
	17	Iodomethane	9.877	-1.2	1224692	0.623	0.631	8.399	8.390	6.13				
	18	Carbon disulfide	9.749	-2.5	2591704	1.319	1.353	8.518	8.514	8.97				
	19	Methylene chloride	9.496	-5.0	886710	0.451	0.475	9.084	9.080	4.30				
5	20	tert-Butyl alcohol	48.030	-3.9	113617	0.012	0.012	9.277	9.288	6.87				
	21	tert-Butyl methyl ether (MTBE)	9.404	-6.0	902635	0.460	0.489	9.500	9.510	4.37				
	22	trans-1,2-Dichloroethene	9.789	-2.1	1318564	0.671	0.686	9.575	9.571	3.87				
5	23	Acrylonitrile	47.722	-4.6	332995	0.034	0.036	9.604	9.602	7.73				
	24	Isopropyl ether (DIPE)	9.920	-0.8	2330749	1.187	1.196	10.334	10.330	4.59				
	25	Vinyl acetate	9.528	-4.7	751324	0.382	0.401	10.378	10.388	12.58				
	26	1,1-Dichloroethane	9.930	-0.7	1448484	0.737	0.743	10.378	10.370	4.72				
5	27	2-Butanol												
	28	tert-Butyl ethyl ether (ETBE)	9.593	-4.1	1613230	0.821	0.856	10.944	10.949	4.96				
	29	2,2-Dichloropropane	9.497	-5.0	1128621	0.575	0.605	11.331	11.326	10.34				
5	30	2-Butanone	45.732	-8.5	593514	0.060	0.066	11.346	11.355	10.11				
	31	cis-1,2-Dichloroethene	9.895	-1.0	756535	0.385	0.389	11.361	11.360	4.16				
	32	Bromochloromethane	9.603	-4.0	579777	0.295	0.307	11.778	11.770	4.66				
	33	Tetrahydrofuran	8.976	-10.2	66683	0.034	0.038	11.822	11.823	8.93				
	34	Chloroform	9.825	-1.8	1557374	0.793	0.807	11.867	11.861	4.69				
5	35	tert-Amyl alcohol												
	36	Dibromofluoromethane	9.783	-2.2	713957	0.363	0.372	12.120	12.122	4.23				
	37	1,1,1-Trichloroethane	10.014	0.1	1422256	0.724	0.723	12.135	12.131	5.57				
	38	Cyclohexane												
	39	tert-Amyl methyl ether (TAME)	9.629	-3.7	250003	0.127	0.132	12.745	12.741	5.96				
	40	1,2-Dichloroethane-d4	9.565	-4.4	710649	0.362	0.378	12.656	12.651	5.20				
	41	CHLOROBENZENE-D5	10.000	0	1798817	1	1	17.196	17.195	0				
	42	1,1-Dichloropropene	10.046	0.5	358644	0.199	0.198	12.373	12.367	4.08				
	43	Carbon tetrachloride	9.973	-0.3	1214995	0.675	0.677	12.373	12.375	4.82				
	44	Benzene	9.859	-1.4	2875933	1.599	1.622	12.700	12.706	4.28				
	45	1,2-Dichloroethane	9.612	-3.9	865253	0.481	0.500	12.760	12.764	5.00				
	46	Trichloroethene	9.753	-2.5	780754	0.434	0.445	13.623	13.618	5.11				
	47	Methylcyclohexane												
	48	1,2-Dichloropropane	9.773	-2.3	729684	0.406	0.415	13.966	13.967	5.04				
20	49	1,4-Dioxane	183.576	-8.2	42494	0.001	0.001	14.129	14.128	13.98				
	50	Dibromomethane	9.611	-3.9	338874	0.188	0.196	14.189	14.184	7.00				
	51	Bromodichloromethane	9.825	-1.8	1095495	0.609	0.620	14.353	14.349	7.03				
	52	2-Chloroethyl vinyl ether	9.067	-9.3	204114	0.113	0.125	14.650	14.645	11.72				
	53	cis-1,3-Dichloropropene	9.692	-3.1	1116066	0.620	0.640	14.918	14.916	7.70				
5	54	4-Methyl-2-pentanone	47.294	-5.4	1718865	0.191	0.202	15.037	15.035	5.64				
	55	Toluene-d8	9.655	-3.5	2466873	1.371	1.420	15.261	15.257	3.97				
	56	Toluene	9.993	-0.1	3162952	1.758	1.759	15.350	15.348	3.81				
	57	Ethyl methacrylate	9.621	-3.8	564739	0.314	0.326	15.588	15.591	6.64				
	58	trans-1,3-Dichloropropene	9.804	-2.0	883251	0.491	0.501	15.633	15.634	8.00				
	59	1,1,2-Trichloroethane	9.563	-4.4	373487	0.208	0.217	15.915	15.913	5.48				

SW
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	60	Tetrachloroethene	9.848	-1.5	677306	0.377	0.382	16.094	16.089	3.71				
5	61	2-Hexanone	48.468	-3.1	1163929	0.129	0.133	16.109	16.108	4.95				
	62	1,3-Dichloropropane	9.655	-3.5	754490	0.419	0.434	16.139	16.140	5.43				
	63	Dibromochloromethane	9.885	-1.1	571900	0.318	0.322	16.481	16.487	10.17				
	64	1,2-Dibromoethane	9.766	-2.3	417971	0.232	0.238	16.675	16.672	7.10				
	65	1-Chlorohexane	9.962	-0.4	1461845	0.813	0.816	17.032	17.036	3.31				
	66	Chlorobenzene	9.849	-1.5	1787931	0.994	1.009	17.240	17.237	3.91				
	67	Ethylbenzene	9.937	-0.6	4060376	2.257	2.272	17.285	17.281	3.20				
	68	1,1,1,2-Tetrachloroethane	10.061	0.6	678042	0.377	0.375	17.315	17.314	5.09				
2	69	m-Xylene & p-Xylene	19.693	-1.5	6198937	1.723	1.750	17.404	17.409	3.27				
	70	o-Xylene	9.947	-0.5	3036203	1.688	1.697	17.940	17.944	5.67				
	71	Styrene	10.236	2.4	2015906	1.121	1.095	17.969	17.967	5.77				
	72	1,2-DICHLOROBENZENE-D4	10.000	0	640128	1	1	20.723	20.722	0				
	73	Isopropylbenzene	9.728	-2.7	3530678	5.516	5.670	18.357	18.362	4.24				
	74	Bromoform	9.443	-5.6	249695	0.390	0.413	18.357	18.353	13.02				
	75	4-Bromofluorobenzene	9.646	-3.5	960964	1.501	1.556	18.654	18.649	4.08				
	76	1,1,2,2-Tetrachloroethane	9.148	-8.5	441198	0.689	0.753	18.788	18.793	5.72				
	77	trans-1,4-Dichloro-2-butene	9.162	-8.4	143359	0.224	0.244	18.833	18.829	8.79				
	78	n-Propylbenzene	9.830	-1.7	5072007	7.923	8.060	18.878	18.874	5.75				
	79	1,2,3-Trichloropropane	9.596	-4.0	107620	0.168	0.175	18.892	18.893	6.81				
	80	Bromobenzene	9.649	-3.5	705287	1.102	1.142	18.907	18.913	4.08				
	81	1,3,5-Trimethylbenzene	9.894	-1.1	3095769	4.836	4.888	19.041	19.050	4.63				
	82	2-Chlorotoluene	9.764	-2.4	3143279	4.910	5.029	19.086	19.090	4.52				
	83	4-Chlorotoluene	9.838	-1.6	2736995	4.276	4.346	19.220	19.216	4.03				
	84	tert-Butylbenzene	9.890	-1.1	613463	0.958	0.969	19.517	19.515	4.68				
	85	1,2,4-Trimethylbenzene	9.958	-0.4	2964568	4.631	4.650	19.562	19.569	4.48				
	86	sec-Butylbenzene	9.913	-0.9	4041314	6.313	6.369	19.785	19.789	5.02				
	87	p-Isopropyltoluene	10.093	0.9	3176708	4.963	4.917	19.934	19.931	4.68				
	88	1,3-Dichlorobenzene	9.880	-1.2	1385302	2.164	2.190	20.098	20.096	4.38				
	89	1,4-Dichlorobenzene	9.945	-0.6	1296892	2.026	2.037	20.202	20.201	4.65				
	90	n-Butylbenzene	10.239	2.4	3559056	5.560	5.430	20.485	20.488	4.68				
	91	1,2-Dichlorobenzene	9.828	-1.7	1053936	1.646	1.675	20.753	20.752	4.20				
	92	1,2-Dibromo-3-chloropropane	9.687	-3.1	53004	0.083	0.085	21.884	21.876	10.04				
	93	1,2,4-Trichlorobenzene	10.206	2.1	555050	0.867	0.850	23.119	23.119	10.33				
	94	Hexachlorobutadiene	10.504	5.0	523217	0.817	0.778	23.253	23.251	5.07				
	95	Naphthalene	10.499	5.0	736086	1.150	1.095	23.626	23.621	14.07				
	96	1,2,3-Trichlorobenzene	10.239	2.4	408911	0.639	0.624	24.042	24.041	11.07				

Spike Amount = Nominal Amount * M

Sw
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Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IVO03H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	105	0.00
2	T,M	Chlorotrifluoroethylene	-1.000	0.000	0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	10.094	-0.9	88	0.00
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	88	0.00
5	P,T,M	Chloromethane	10.000	10.630	-6.3	93	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000	0.0	0	-5.23#
7	C,T,M	Vinyl chloride	10.000	10.627	-6.3	91	0.00
8	T,M	Bromomethane	10.000	11.073	-10.7	94	0.00
9	T,M	Chloroethane	10.000	10.560	-5.6	91	0.00
10	T,M	Dichlorofluoromethane	10.000	9.808	1.9	97	-0.01
11	T,M	Trichlorofluoromethane	10.000	10.147	-1.5	88	0.02
12	T,M	Acrolein	50.000	48.279	3.4	100	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.634	3.7	97	-0.01
14	T,M	Acetone	50.000	45.662	8.7	93	0.00
15	C,T,M	1,1-Dichloroethene	10.000	9.834	1.7	96	0.02
16	T,M	Methyl acetate	-1.000	0.000	0.0	93	0.00
17	T,M	Iodomethane	10.000	9.878	1.2	96	0.02
18	T,M	Carbon disulfide	10.000	9.749	2.5	105	0.00
19	T,M	Methylene chloride	10.000	9.496	5.0	96	0.00
20	T,M	tert-Butyl alcohol	50.000	48.030	3.9	92	0.00
21	T,M	tert-Butyl methyl ether (MT	10.000	9.405	6.0	94	0.00
22	T,M	trans-1,2-Dichloroethene	10.000	9.789	2.1	97	0.00
23	T,M	Acrylonitrile	50.000	47.723	4.6	94	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	9.921	0.8	96	0.00
25	T,M	Vinyl acetate	10.000	9.529	4.7	86	-0.01
26	P,T,M	1,1-Dichloroethane	10.000	9.931	0.7	97	0.02
27	T,M	2-Butanol	-1.000	0.000	0.0	92	0.00
28	T,M	tert-Butyl ethyl ether (ETB	10.000	9.593	4.1	95	0.00
29	T,M	2,2-Dichloropropane	10.000	9.497	5.0	93	0.00
30	T,M	2-Butanone	50.000	45.733	8.5	94	-0.01
31	T,M	cis-1,2-Dichloroethene	10.000	9.895	1.1	97	0.00
32	T,M	Bromochloromethane	10.000	9.603	4.0	93	0.00
33	T,M	Tetrahydrofuran	10.000	8.976	10.2	99	0.00
34	C,T,M	Chloroform	10.000	9.825	1.8	95	0.00
35	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	101	0.00
36	S	Dibromofluoromethane	10.000	9.783	2.2	98	0.00
37	T,M	1,1,1-Trichloroethane	10.000	10.014	-0.1	97	0.00
38	T,M	Cyclohexane	-1.000	0.000	0.0	89	0.00
39	T,M	tert-Amyl methyl ether (TAM	10.000	9.630	3.7	92	0.00
40	S	1,2-Dichloroethane-d4	10.000	9.565	4.4	96	0.00
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	104	0.00

(#) = Out of Range

2095

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IVO03H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	10.046	-0.5	97	0.00
43	T,M	Carbon tetrachloride	10.000	9.973	0.3	97	0.00
44	T,M	Benzene	10.000	9.859	1.4	97	-0.01
45	T,M	1,2-Dichloroethane	10.000	9.612	3.9	94	0.00
46	T,M	Trichloroethene	10.000	9.754	2.5	97	0.00
47	T,M	Methylcyclohexane	-1.000	0.000	0.0	92	-0.01
48	C,T,M	1,2-Dichloropropane	10.000	9.773	2.3	96	0.00
49	T,M	1,4-Dioxane	200.000	183.577	8.2	96	0.00
50	T,M	Dibromomethane	10.000	9.611	3.9	95	0.00
51	T,M	Bromodichloromethane	10.000	9.825	1.8	95	0.00
52	T,M	2-Chloroethyl vinyl ether	10.000	9.067	9.3	92	0.00
53	T,M	cis-1,3-Dichloropropene	10.000	9.693	3.1	94	0.00
54	T,M	4-Methyl-2-pentanone	50.000	47.294	5.4	94	0.00
55	S	Toluene-d8	10.000	9.655	3.5	98	0.00
56	C,T,M	Toluene	10.000	9.994	0.1	98	0.00
57	T,M	Ethyl methacrylate	10.000	9.621	3.8	94	0.00
58	T,M	trans-1,3-Dichloropropene	10.000	9.805	2.0	93	0.00
59	T,M	1,1,2-Trichloroethane	10.000	9.564	4.4	93	0.00
60	T,M	Tetrachloroethene	10.000	9.849	1.5	98	0.00
61	T,M	2-Hexanone	50.000	48.469	3.1	93	0.00
62	T,M	1,3-Dichloropropane	10.000	9.656	3.4	94	0.00
63	T,M	Dibromochloromethane	10.000	9.886	1.1	95	-0.01
64	T,M	1,2-Dibromoethane	10.000	9.767	2.3	95	0.00
65	T,M	1-Chlorohexane	10.000	9.962	0.4	99	0.00
66	P,M	Chlorobenzene	10.000	9.850	1.5	96	0.00
67	C,T,M	Ethylbenzene	10.000	9.937	0.6	98	0.00
68	T,M	1,1,1,2-Tetrachloroethane	10.000	10.061	-0.6	96	0.00
69	T,M	m-Xylene & p-Xylene	20.000	19.693	1.5	98	-0.01
70	T,M	o-Xylene	10.000	9.947	0.5	97	0.00
71	T,M	Styrene	10.000	10.236	-2.4	97	0.00
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	106	0.00
73	T,M	Isopropylbenzene	10.000	9.728	2.7	99	-0.01
74	P,T,M	Bromoform	10.000	9.444	5.6	91	0.00
75	S	4-Bromofluorobenzene	10.000	9.646	3.5	99	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	9.148	8.5	93	0.00
77	T,M	trans-1,4-Dichloro-2-butene	10.000	9.162	8.4	95	0.00
78	T,M	n-Propylbenzene	10.000	9.831	1.7	100	0.00
79	T,M	1,2,3-Trichloropropane	10.000	9.597	4.0	95	0.00
80	T,M	Bromobenzene	10.000	9.650	3.5	97	-0.01
81	T,M	1,3,5-Trimethylbenzene	10.000	9.895	1.1	100	-0.01

(#) = Out of Range

Scr 8/18/11

2096

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IVO03H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	9.764	2.4	98	0.00
83	T,M	4-Chlorotoluene	10.000	9.838	1.6	99	0.00
84	T,M	tert-Butylbenzene	10.000	9.891	1.1	100	0.00
85	T,M	1,2,4-Trimethylbenzene	10.000	9.959	0.4	100	-0.01
86	T,M	sec-Butylbenzene	10.000	9.913	0.9	100	0.00
87	T,M	p-Isopropyltoluene	10.000	10.093	-0.9	100	0.00
88	T,M	1,3-Dichlorobenzene	10.000	9.881	1.2	99	0.00
89	T,M	1,4-Dichlorobenzene	10.000	9.946	0.5	98	0.00
90	T,M	n-Butylbenzene	10.000	10.240	-2.4	101	0.00
91	T,M	1,2-Dichlorobenzene	10.000	9.829	1.7	98	0.00
92	T,M	1,2-Dibromo-3-chloropropane	10.000	9.687	3.1	94	0.00
93	T,M	1,2,4-Trichlorobenzene	10.000	10.206	-2.1	101	0.00
94	T,M	Hexachlorobutadiene	10.000	10.505	-5.1	103	0.00
95	T,M	Naphthalene	10.000	10.500	-5.0	100	0.00
96	T,M	1,2,3-Trichlorobenzene	10.000	10.239	-2.4	101	0.00

Su 8/18/11

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IVO03H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	105	0.00
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.356	-0.8	88	0.00
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	88	0.00
5	P,T,M	Chloromethane	0.357	0.379	-6.2	93	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.23#
7	C,T,M	Vinyl chloride	0.337	0.358	-6.2	91	0.00
8	T,M	Bromomethane	0.227	0.251	-10.6	94	0.00
9	T,M	Chloroethane	0.177	0.187	-5.6	91	0.00
10	T,M	Dichlorofluoromethane	0.764	0.749	2.0	97	-0.01
11	T,M	Trichlorofluoromethane	0.545	0.553	-1.5	88	0.02
12	T,M	Acrolein	0.009	0.009	0.0	100	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.196	3.4	97	-0.01
14	T,M	Acetone	0.039	0.035	10.3	93	0.00
15	C,T,M	1,1-Dichloroethene	0.673	0.661	1.8	96	0.02
16	T,M	Methyl acetate	0.000	0.000	0.0	93	0.00
17	T,M	Iodomethane	0.631	0.623	1.3	96	0.02
18	T,M	Carbon disulfide	1.353	1.319	2.5	105	0.00
19	T,M	Methylene chloride	0.475	0.451	5.1	96	0.00
20	T,M	tert-Butyl alcohol	0.012	0.012	0.0	92	0.00
21	T,M	tert-Butyl methyl ether (MT	0.489	0.460	5.9	94	0.00
22	T,M	trans-1,2-Dichloroethene	0.686	0.671	2.2	97	0.00
23	T,M	Acrylonitrile	0.036	0.034	5.6	94	0.00
24	T,M	Isopropyl ether (DIPE)	1.196	1.187	0.8	96	0.00
25	T,M	Vinyl acetate	0.401	0.382	4.7	86	-0.01
26	P,T,M	1,1-Dichloroethane	0.743	0.737	0.8	97	0.02
27	T,M	2-Butanol	0.000	0.000	0.0	92	0.00
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.821	4.1	95	0.00
29	T,M	2,2-Dichloropropane	0.605	0.575	5.0	93	0.00
30	T,M	2-Butanone	0.066	0.060	9.1	94	-0.01
31	T,M	cis-1,2-Dichloroethene	0.389	0.385	1.0	97	0.00
32	T,M	Bromochloromethane	0.307	0.295	3.9	93	0.00
33	T,M	Tetrahydrofuran	0.038	0.034	10.5	99	0.00
34	C,T,M	Chloroform	0.807	0.793	1.7	95	0.00
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	101	0.00
36	S	Dibromofluoromethane	0.372	0.363	2.4	98	0.00
37	T,M	1,1,1-Trichloroethane	0.723	0.724	-0.1	97	0.00
38	T,M	Cyclohexane	0.000	0.000	0.0	89	0.00
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.127	3.8	92	0.00
40	S	1,2-Dichloroethane-d4	0.378	0.362	4.2	96	0.00
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	104	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IVO03H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.198	0.199	-0.5	97	0.00
43	T,M	Carbon tetrachloride	0.677	0.675	0.3	97	0.00
44	T,M	Benzene	1.622	1.599	1.4	97	-0.01
45	T,M	1,2-Dichloroethane	0.500	0.481	3.8	94	0.00
46	T,M	Trichloroethene	0.445	0.434	2.5	97	0.00
47	T,M	Methylcyclohexane	0.000	0.000	0.0	92	-0.01
48	C,T,M	1,2-Dichloropropane	0.415	0.406	2.2	96	0.00
49	T,M	1,4-Dioxane	0.001	0.001	0.0	96	0.00
50	T,M	Dibromomethane	0.196	0.188	4.1	95	0.00
51	T,M	Bromodichloromethane	0.620	0.609	1.8	95	0.00
52	T,M	2-Chloroethyl vinyl ether	0.125	0.113	9.6	92	0.00
53	T,M	cis-1,3-Dichloropropene	0.640	0.620	3.1	94	0.00
54	T,M	4-Methyl-2-pentanone	0.202	0.191	5.4	94	0.00
55	S	Toluene-d8	1.420	1.371	3.5	98	0.00
56	C,T,M	Toluene	1.759	1.758	0.1	98	0.00
57	T,M	Ethyl methacrylate	0.326	0.314	3.7	94	0.00
58	T,M	trans-1,3-Dichloropropene	0.501	0.491	2.0	93	0.00
59	T,M	1,1,2-Trichloroethane	0.217	0.208	4.1	93	0.00
60	T,M	Tetrachloroethene	0.382	0.377	1.3	98	0.00
61	T,M	2-Hexanone	0.133	0.129	3.0	93	0.00
62	T,M	1,3-Dichloropropane	0.434	0.419	3.5	94	0.00
63	T,M	Dibromochloromethane	0.322	0.318	1.2	95	-0.01
64	T,M	1,2-Dibromoethane	0.238	0.232	2.5	95	0.00
65	T,M	1-Chlorohexane	0.816	0.813	0.4	99	0.00
66	P,M	Chlorobenzene	1.009 ✓	0.994	1.5	96	0.00
67	C,T,M	Ethylbenzene	2.272	2.257	0.7	98	0.00
68	T,M	1,1,1,2-Tetrachloroethane	0.375	0.377	-0.5	96	0.00
69	T,M	m-Xylene & p-Xylene	1.750	1.723	1.5	98	-0.01
70	T,M	o-Xylene	1.697	1.688	0.5	97	0.00
71	T,M	Styrene	1.095	1.121	-2.4	97	0.00
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	106	0.00
73	T,M	Isopropylbenzene	5.670	5.516	2.7	99	-0.01
74	P,T,M	Bromoform	0.413 ✓	0.390	5.6	91	0.00
75	S	4-Bromofluorobenzene	1.556	1.501	3.5	99	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	0.753 ✓	0.689	8.5	93	0.00
77	T,M	trans-1,4-Dichloro-2-butene	0.244	0.224	8.2	95	0.00
78	T,M	n-Propylbenzene	8.060	7.923	1.7	100	0.00
79	T,M	1,2,3-Trichloropropane	0.175	0.168	4.0	95	0.00
80	T,M	Bromobenzene	1.142	1.102	3.5	97	-0.01
81	T,M	1,3,5-Trimethylbenzene	4.888	4.836	1.1	100	-0.01

(#) = Out of Range

SW 8/18/11

2099

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IVO03H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	4.910	2.4	98	0.00
83	T,M	4-Chlorotoluene	4.346	4.276	1.6	99	0.00
84	T,M	tert-Butylbenzene	0.969	0.958	1.1	100	0.00
85	T,M	1,2,4-Trimethylbenzene	4.650	4.631	0.4	100	-0.01
86	T,M	sec-Butylbenzene	6.369	6.313	0.9	100	0.00
87	T,M	p-Isopropyltoluene	4.917	4.963	-0.9	100	0.00
88	T,M	1,3-Dichlorobenzene	2.190	2.164	1.2	99	0.00
89	T,M	1,4-Dichlorobenzene	2.037	2.026	0.5	98	0.00
90	T,M	n-Butylbenzene	5.430	5.560	-2.4	101	0.00
91	T,M	1,2-Dichlorobenzene	1.675	1.646	1.7	98	0.00
92	T,M	1,2-Dibromo-3-chloropropane	0.085	0.083	2.4	94	0.00
93	T,M	1,2,4-Trichlorobenzene	0.850	0.867	-2.0	101	0.00
94	T,M	Hexachlorobutadiene	0.778	0.817	-5.0	103	0.00
95	T,M	Naphthalene	1.095	1.150	-5.0	100	0.00
96	T,M	1,2,3-Trichlorobenzene	0.624	0.639	-2.4	101	0.00

SW 8/18/11

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IVO03H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.21	114	1964342	10.00 ug/l	0.00
41) CHLOROBENZENE-D5	17.20	117	1798817	10.00 ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	640128	10.00 ug/l	0.00
System Monitoring Compounds					
36) Dibromofluoromethane	12.12	111	713957	9.78 ug/l	0.00
Spiked Amount 10.000			Recovery	= 97.80%	
40) 1,2-Dichloroethane-d4	12.66	65	710649	9.57 ug/l	0.00
Spiked Amount 10.000			Recovery	= 95.70%	
55) Toluene-d8	15.26	98	2466873	9.65 ug/l	0.00
Spiked Amount 10.000			Recovery	= 96.50%	
75) 4-Bromofluorobenzene	18.65	95	960964	9.65 ug/l	0.00
Spiked Amount 10.000			Recovery	= 96.50%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.11	85	699900	10.09 ug/l	99
5) Chloromethane	4.62	50	744562	10.63 ug/l	99
7) Vinyl chloride	4.93	62	704186	10.63 ug/l	99
8) Bromomethane	5.87	94	493194	11.07 ug/l	99
9) Chloroethane	6.15	64	367718	10.56 ug/l	99
10) Dichlorofluoromethane	6.67	67	1471244	9.81 ug/l	100
11) Trichlorofluoromethane	6.75	101	1086354	10.15 ug/l	99
12) Acrolein	7.85	56	84307	48.28 ug/l	98
13) 1,1,2-Trichloro-1,2,2-trif	7.98	151	384110	9.63 ug/l	99
14) Acetone	8.19	43	346459	45.66 ug/l	100
15) 1,1-Dichloroethene	8.01 ✓	61	1299399	9.83 ug/l	100
17) Iodomethane	8.40	142	1224692	9.88 ug/l	100
18) Carbon disulfide	8.52	76	2591704	9.75 ug/l	100
19) Methylene chloride	9.08	49	886710	9.50 ug/l	100
20) tert-Butyl alcohol	9.28	59	113617	48.03 ug/l	98
21) tert-Butyl methyl ether (M	9.50	73	902635	9.40 ug/l	98
22) trans-1,2-Dichloroethene	9.57 ✓	61	1318564	9.79 ug/l	99
23) Acrylonitrile	9.60	53	332995	47.72 ug/l	98
24) Isopropyl ether (DIPE)	10.33	45	2330749	9.92 ug/l	100
25) Vinyl acetate	10.38	43	751324	9.53 ug/l	99
26) 1,1-Dichloroethane	10.38 ✓	63	1448484	9.93 ug/l	100
28) tert-Butyl ethyl ether (ET	10.94	59	1613230	9.59 ug/l	99
29) 2,2-Dichloropropane	11.33	77	1128621	9.50 ug/l	99
30) 2-Butanone	11.35 ✓	43	593514	45.73 ug/l	99
31) cis-1,2-Dichloroethene	11.36 ✓	96	756535	9.90 ug/l	98
32) Bromochloromethane	11.78	49	579777	9.60 ug/l	99
33) Tetrahydrofuran	11.82	42	66683	8.98 ug/l	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IVO03H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
34) Chloroform	11.87	83	1557374	9.83 ug/l		99
37) 1,1,1-Trichloroethane	12.13	97	1422256	10.01 ug/l		100
39) tert-Amyl methyl ether (TA	12.75	87	250003	9.63 ug/l		99
42) 1,1-Dichloropropene	12.37	110	358644	10.05 ug/l		99
43) Carbon tetrachloride	12.37	119	1214995	9.97 ug/l		99
44) Benzene	12.70	78	2875933	9.86 ug/l		100
45) 1,2-Dichloroethane	12.76	62	865253	9.61 ug/l		100
46) Trichloroethene	13.62	130	780754	9.75 ug/l		99
48) 1,2-Dichloropropane	13.97	63	729684	9.77 ug/l		99
49) 1,4-Dioxane	14.13	88	42494	183.58 ug/l		99
50) Dibromomethane	14.19	93	338874	9.61 ug/l		99
51) Bromodichloromethane	14.35	83	1095495	9.83 ug/l		99
52) 2-Chloroethyl vinyl ether	14.65	63	204114	9.07 ug/l		100
53) cis-1,3-Dichloropropene	14.92	75	1116066	9.69 ug/l		99
54) 4-Methyl-2-pentanone	15.04	43	1718865	47.29 ug/l		99
56) Toluene	15.35	91	3162952	9.99 ug/l		100
57) Ethyl methacrylate	15.59	69	564739	9.62 ug/l		99
58) trans-1,3-Dichloropropene	15.63	75	883251	9.80 ug/l		99
59) 1,1,2-Trichloroethane	15.92	97	373487	9.56 ug/l		100
60) Tetrachloroethene	16.09	164	677306	9.85 ug/l		99
61) 2-Hexanone	16.11	43	1163929	48.47 ug/l		99
62) 1,3-Dichloropropane	16.14	76	754490	9.66 ug/l		100
63) Dibromochloromethane	16.48	129	571900	9.89 ug/l		99
64) 1,2-Dibromoethane	16.67	107	417971	9.77 ug/l		98
65) 1-Chlorohexane	17.03	91	1461845	9.96 ug/l		99
66) Chlorobenzene	17.24	112	1787931	9.85 ug/l		99
67) Ethylbenzene	17.28	91	4060376	9.94 ug/l		100
68) 1,1,1,2-Tetrachloroethane	17.31	131	678042	10.06 ug/l		99
69) m-Xylene & p-Xylene	17.40	91	6198937	19.69 ug/l		100
70) o-Xylene	17.94	91	3036203	9.95 ug/l		99
71) Styrene	17.97	104	2015906	10.24 ug/l		100
73) Isopropylbenzene	18.36	105	3530678	9.73 ug/l		100
74) Bromoform	18.36	173	249695	9.44 ug/l		99
76) 1,1,2,2-Tetrachloroethane	18.79	83	441198	9.15 ug/l		100
77) trans-1,4-Dichloro-2-buten	18.83	53	143359	9.16 ug/l		99
78) n-Propylbenzene	18.88	91	5072007	9.83 ug/l		100
79) 1,2,3-Trichloropropane	18.89	110	107620	9.60 ug/l	#	94
80) Bromobenzene	18.91	156	705287	9.65 ug/l		99
81) 1,3,5-Trimethylbenzene	19.04	105	3095769	9.89 ug/l		100
82) 2-Chlorotoluene	19.09	91	3143279	9.76 ug/l		100
83) 4-Chlorotoluene	19.22	91	2736995	9.84 ug/l		99

(#) = qualifier out of range (m) = manual integration

SW 8/18/11

2102

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IVO03H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84)	tert-Butylbenzene	19.52	134	613463	9.89 ug/l	100
85)	1,2,4-Trimethylbenzene	19.56	105	2964568	9.96 ug/l	100
86)	sec-Butylbenzene	19.79	105	4041314	9.91 ug/l	100
87)	p-Isopropyltoluene	19.93	119	3176708	10.09 ug/l	100
88)	1,3-Dichlorobenzene	20.10	146	1385302	9.88 ug/l	99
89)	1,4-Dichlorobenzene	20.20	146	1296892	9.95 ug/l	99
90)	n-Butylbenzene	20.48	91	3559056	10.24 ug/l	100
91)	1,2-Dichlorobenzene	20.75	146	1053936	9.83 ug/l	100
92)	1,2-Dibromo-3-chloropropan	21.88	157	53004	9.69 ug/l	93
93)	1,2,4-Trichlorobenzene	23.12	180	555050	10.21 ug/l	100
94)	Hexachlorobutadiene	23.25	225	523217	10.50 ug/l	100
95)	Naphthalene	23.63	128	736086	10.50 ug/l	100
96)	1,2,3-Trichlorobenzene	24.04	180	408911	10.24 ug/l	99

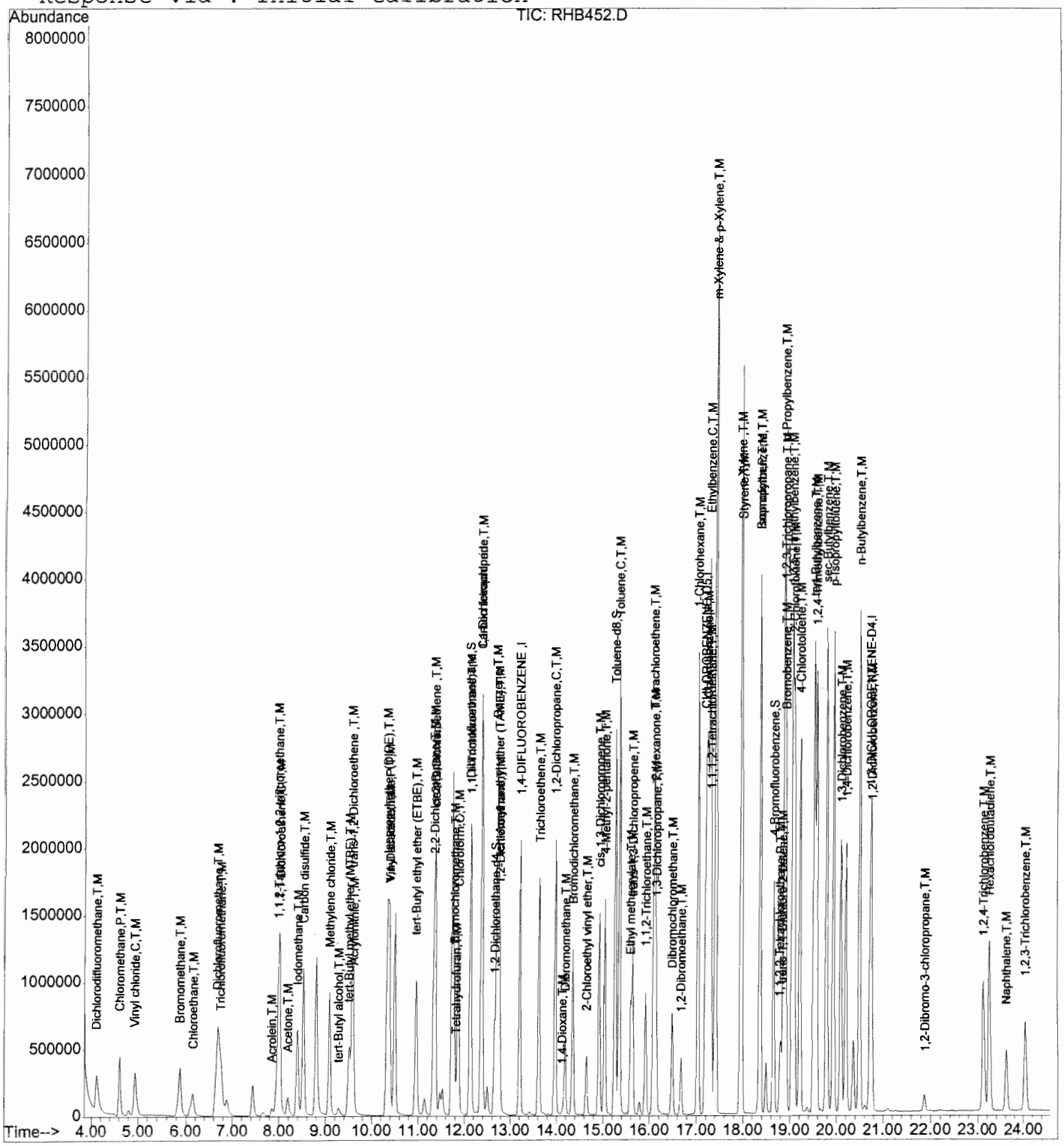
SW 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IVO03H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



Sw 8/18/11

2104

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB261
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K146
BFB Injection Date : 11/18/11
BFB Injection Time : 14:03
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.44
75	30.0 - 60.0% of mass 95	52.87
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.66
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	63.36
175	5.0 - 9.0% of mass 174	4.66(7.4)1
176	95.0 - 101.0% of mass 174	61.35(96.8)1
177	5.0 - 9.0% of mass 176	4.21(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV003H1652	RKB262	11/18/11	14:40
2	MBLK1W	V003K19B	RKB265	11/18/11	16:34
3	LCS1W	V003K19L	RKB263	11/18/11	15:21
4	LCD1W	V003K19C	RKB264	11/18/11	15:57
5	IR-70-TB-136	K146-07	RKB266	11/18/11	17:10
6	MW-70-43B-137	K146-01	RKB274	11/18/11	21:58
7	MW-70-PMW11A-138	K146-02	RKB275	11/18/11	22:34
8	MW-70-PMW11B-139	K146-03	RKB276	11/18/11	23:09
9	MW-70-PMW12A-140	K146-04	RKB277	11/18/11	23:44
10	MW-70-PMW12B-142	K146-05	RKB278	11/19/11	00:19
11	IR-70-FD-141	K146-06	RKB279	11/19/11	00:55

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RHB444
Instrument ID: 03
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K146
Date Analyzed: 08/16/11
Time Analyzed: 14:40
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1861981	13.20	1722743	17.19	603523	20.72
	UPPER LIMIT	3723962	13.70	3445486	17.69	1207046	21.22
	LOWER LIMIT	930991	12.70	861372	16.69	301762	20.22
	SAMPLE ID						
1	VSTD010	2180037	13.16	2089922	17.17	747939	20.68
2	MBLK1W	2540690	13.17	2332742	17.16	769211	20.69
3	LCS1W	2312906	13.17	2198871	17.16	778434	20.69
4	LCD1W	2468781	13.17	2323435	17.16	840552	20.69
5	IR-70-TB-136	2378874	13.18	2205144	17.17	717429	20.69
6	MW-70-43B-137	2350673	13.18	2211809	17.16	745742	20.68
7	MW-70-PMW11A-138	2388041	13.18	2289153	17.16	782869	20.68
8	MW-70-PMW11B-139	2340881	13.18	2208459	17.16	738865	20.68
9	MW-70-PMW12A-140	2325770	13.16	2192102	17.16	716463	20.68
10	MW-70-PMW12B-142	2294946	13.17	2144256	17.16	707611	20.68
11	IR-70-FD-141	2281028	13.17	2126723	17.16	695353	20.68

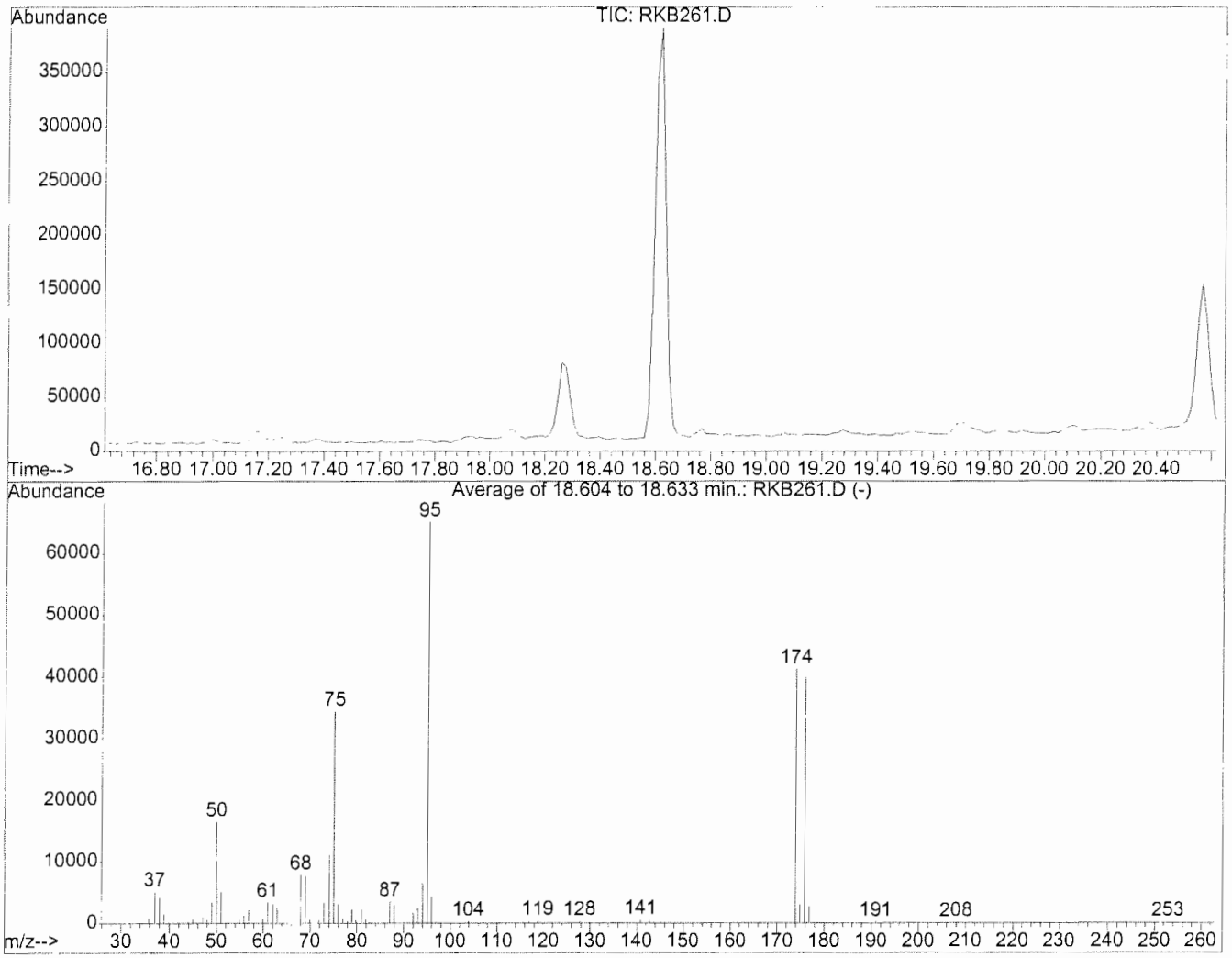
IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

BFB

Data File : D:\HPCHEM\1\DATA\11K18\RKB261.D Vial: 1
Acq On : 18 Nov 2011 2:03 pm Operator: CGM
Sample : BFB03K19 Inst : 03
Misc : T/CHECK Multiplr: 1.00
MS Integration Params: 524TAIL.P
Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL



AutoFind: Scans 993, 994, 995; Background Corrected with Scan 987

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.4	16590	PASS
75	95	30	60	52.9	34477	PASS
95	95	100	100	100.0	65211	PASS
96	95	5	9	6.7	4346	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	63.4	41315	PASS
175	174	5	9	7.4	3037	PASS
176	174	95	101	96.8	40005	PASS
177	176	5	9	6.9	2745	PASS

RKB261.D VO03H16.M Fri Nov 18 16:27:14 2011

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKB262.D Vial: 2
Acq On : 18 Nov 2011 2:40 pm Operator: CGM
Sample : CVO03H1652 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	117	0.00
2	T,M	Chlorotrifluoroethylene	-1.000	0.000	0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	11.139	-11.4	107	0.00
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	107	0.00
5	P,T,M	Chloromethane	10.000	10.033	-0.3	97	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000	0.0	0	-5.22#
7	C,T,M	Vinyl chloride	10.000	9.705	2.9	92	0.02
8	T,M	Bromomethane	10.000	10.446	-4.5	99	0.00
9	T,M	Chloroethane	10.000	10.351	-3.5	99	0.00
10	T,M	Dichlorofluoromethane	10.000	9.506	4.9	104	0.02
11	T,M	Trichlorofluoromethane	10.000	8.763	12.4	84	0.00
12	T,M	Acrolein	50.000	46.301	7.4	106	0.02
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	8.997	10.0	101	0.00
14	T,M	Acetone	50.000	49.192	1.6	111	0.02
15	C,T,M	1,1-Dichloroethene	10.000	9.260	7.4	101	0.02
16	T,M	Methyl acetate	-1.000	0.000	0.0	110	0.02
17	T,M	Iodomethane	10.000	8.873	11.3	96	0.02
18	T,M	Carbon disulfide	10.000	10.059	-0.6	120	0.00
19	T,M	Methylene chloride	10.000	9.427	5.7	106	0.00
20	T,M	tert-Butyl alcohol	50.000	43.490	13.0	93	0.02
21	T,M	tert-Butyl methyl ether (MT	10.000	9.795	2.1	108	0.00
22	T,M	trans-1,2-Dichloroethene	10.000	9.475	5.3	104	0.00
23	T,M	Acrylonitrile	50.000	52.998	-6.0	116	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	10.078	-0.8	109	0.00
25	T,M	Vinyl acetate	10.000	9.866	1.3	99	0.02
26	P,T,M	1,1-Dichloroethane	10.000	9.479	5.2	102	0.02
27	T,M	2-Butanol	-1.000	0.000	0.0	99	0.02
28	T,M	tert-Butyl ethyl ether (ETB	10.000	10.498	-5.0	115	0.00
29	T,M	2,2-Dichloropropane	10.000	8.989	10.1	98	0.00
30	T,M	2-Butanone	50.000	50.176	-0.4	114	0.00
31	T,M	cis-1,2-Dichloroethene	10.000	9.579	4.2	104	0.00
32	T,M	Bromochloromethane	10.000	9.651	3.5	104	0.02
33	T,M	Tetrahydrofuran	10.000	10.086	-0.9	124	0.00
34	C,T,M	Chloroform	10.000	9.287	7.1	100	0.00
35	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	29	0.03
36	S	Dibromofluoromethane	10.000	9.615	3.8	107	0.02
37	T,M	1,1,1-Trichloroethane	10.000	8.948	10.5	96	0.00
38	T,M	Cyclohexane	-1.000	0.000	0.0	103	0.02
39	T,M	tert-Amyl methyl ether (TAM	10.000	10.231	-2.3	109	0.00
40	S	1,2-Dichloroethane-d4	10.000	8.956	10.4	100	0.00
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	121	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKB262.D Vial: 2
Acq On : 18 Nov 2011 2:40 pm Operator: CGM
Sample : CVO03H1652 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	9.215	7.9	104	0.02
43	T,M	Carbon tetrachloride	10.000	8.468	15.3	96	0.02
44	T,M	Benzene	10.000	9.379	6.2	107	0.02
45	T,M	1,2-Dichloroethane	10.000	8.479	15.2	96	0.02
46	T,M	Trichloroethene	10.000	9.045	9.6	104	0.00
47	T,M	Methylcyclohexane	-1.000	0.000	0.0	89	0.02
48	C,T,M	1,2-Dichloropropane	10.000	9.867	1.3	112	0.02
49	T,M	1,4-Dioxane	200.000	200.046	-0.0	122	0.02
50	T,M	Dibromomethane	10.000	8.924	10.8	103	0.00
51	T,M	Bromodichloromethane	10.000	9.047	9.5	102	0.00
52	T,M	2-Chloroethyl vinyl ether	10.000	5.218	47.8#	62	0.00
53	T,M	cis-1,3-Dichloropropene	10.000	9.641	3.6	108	0.00
54	T,M	4-Methyl-2-pentanone	50.000	51.051	-2.1	118	0.00
55	S	Toluene-d8	10.000	9.313	6.9	110	0.00
56	C,T,M	Toluene	10.000	9.387	6.1	107	0.02
57	T,M	Ethyl methacrylate	10.000	9.936	0.6	113	0.02
58	T,M	trans-1,3-Dichloropropene	10.000	9.582	4.2	106	0.02
59	T,M	1,1,2-Trichloroethane	10.000	9.400	6.0	107	0.02
60	T,M	Tetrachloroethene	10.000	8.770	12.3	101	0.00
61	T,M	2-Hexanone	50.000	54.937	-9.9	123	0.02
62	T,M	1,3-Dichloropropane	10.000	9.722	2.8	110	0.02
63	T,M	Dibromochloromethane	10.000	9.264	7.4	104	0.02
64	T,M	1,2-Dibromoethane	10.000	9.446	5.5	107	0.00
65	T,M	1-Chlorohexane	10.000	9.646	3.5	111	0.02
66	P,M	Chlorobenzene	10.000	9.578	4.2	109	0.00
67	C,T,M	Ethylbenzene	10.000	9.377	6.2	108	0.00
68	T,M	1,1,1,2-Tetrachloroethane	10.000	9.314	6.9	104	0.02
69	T,M	m-Xylene & p-Xylene	20.000	18.446	7.8	107	0.02
70	T,M	o-Xylene	10.000	9.505	4.9	108	0.02
71	T,M	Styrene	10.000	10.103	-1.0	111	0.00
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	124	0.00
73	T,M	Isopropylbenzene	10.000	9.213	7.9	109	0.02
74	P,T,M	Bromoform	10.000	8.981	10.2	101	0.00
75	S	4-Bromofluorobenzene	10.000	9.294	7.1	112	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.001	-0.0	119	0.02
77	T,M	trans-1,4-Dichloro-2-butene	10.000	9.797	2.0	118	0.00
78	T,M	n-Propylbenzene	10.000	9.547	4.5	113	0.00
79	T,M	1,2,3-Trichloropropane	10.000	9.616	3.8	111	0.02
80	T,M	Bromobenzene	10.000	9.006	9.9	106	0.02
81	T,M	1,3,5-Trimethylbenzene	10.000	9.232	7.7	108	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKB262.D Vial: 2
Acq On : 18 Nov 2011 2:40 pm Operator: CGM
Sample : CVO03H1652 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	9.269	7.3	109	0.02
83	T,M	4-Chlorotoluene	10.000	9.513	4.9	112	0.00
84	T,M	tert-Butylbenzene	10.000	9.455	5.4	111	0.00
85	T,M	1,2,4-Trimethylbenzene	10.000	9.505	4.9	112	0.02
86	T,M	sec-Butylbenzene	10.000	9.435	5.6	111	0.02
87	T,M	p-Isopropyltoluene	10.000	9.662	3.4	112	0.00
88	T,M	1,3-Dichlorobenzene	10.000	9.628	3.7	113	0.02
89	T,M	1,4-Dichlorobenzene	10.000	9.598	4.0	111	0.00
90	T,M	n-Butylbenzene	10.000	10.092	-0.9	116	0.02
91	T,M	1,2-Dichlorobenzene	10.000	9.500	5.0	111	0.00
92	T,M	1,2-Dibromo-3-chloropropane	10.000	10.223	-2.2	116	0.02
93	T,M	1,2,4-Trichlorobenzene	10.000	10.552	-5.5	122	0.02
94	T,M	Hexachlorobutadiene	10.000	8.866	11.3	101	0.02
95	T,M	Naphthalene	10.000	11.276	-12.8	125	0.00
96	T,M	1,2,3-Trichlorobenzene	10.000	10.592	-5.9	122	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKB262.D Vial: 2
Acq On : 18 Nov 2011 2:40 pm Operator: CGM
Sample : CVO03H1652 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	117	0.00
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.393	-11.3	107	0.00
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	107	0.00
5	P,T,M	Chloromethane	0.357	0.358	-0.3	97	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.22#
7	C,T,M	Vinyl chloride	0.337	0.327	3.0	92	0.02
8	T,M	Bromomethane	0.227	0.237	-4.4	99	0.00
9	T,M	Chloroethane	0.177	0.183	-3.4	99	0.00
10	T,M	Dichlorofluoromethane	0.764	0.726	5.0	104	0.02
11	T,M	Trichlorofluoromethane	0.545	0.478	12.3	84	0.00
12	T,M	Acrolein	0.009	0.008	11.1	106	0.02
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.183	9.9	101	0.00
14	T,M	Acetone	0.039	0.038	2.6	111	0.02
15	C,T,M	1,1-Dichloroethene	0.673	0.623	7.4	101	0.02
16	T,M	Methyl acetate	0.000	0.000	0.0	110	0.02
17	T,M	Iodomethane	0.631	0.560	11.3	96	0.02
18	T,M	Carbon disulfide	1.353	1.361	-0.6	120	0.00
19	T,M	Methylene chloride	0.475	0.448	5.7	106	0.00
20	T,M	tert-Butyl alcohol	0.012	0.010	16.7	93	0.02
21	T,M	tert-Butyl methyl ether (MT	0.489	0.479	2.0	108	0.00
22	T,M	trans-1,2-Dichloroethene	0.686	0.650	5.2	104	0.00
23	T,M	Acrylonitrile	0.036	0.038	-5.6	116	0.00
24	T,M	Isopropyl ether (DIPE)	1.196	1.205	-0.8	109	0.00
25	T,M	Vinyl acetate	0.401	0.396	1.2	99	0.02
26	P,T,M	1,1-Dichloroethane	0.743	0.704	5.2	102	0.02
27	T,M	2-Butanol	0.000	0.000	0.0	99	0.02
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.899	-5.0	115	0.00
29	T,M	2,2-Dichloropropane	0.605	0.544	10.1	98	0.00
30	T,M	2-Butanone	0.066	0.066	0.0	114	0.00
31	T,M	cis-1,2-Dichloroethene	0.389	0.373	4.1	104	0.00
32	T,M	Bromochloromethane	0.307	0.297	3.3	104	0.02
33	T,M	Tetrahydrofuran	0.038	0.038	0.0	124	0.00
34	C,T,M	Chloroform	0.807	0.749	7.2	100	0.00
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	29#	0.03
36	S	Dibromofluoromethane	0.372	0.357	4.0	107	0.02
37	T,M	1,1,1-Trichloroethane	0.723	0.647	10.5	96	0.00
38	T,M	Cyclohexane	0.000	0.000	0.0	103	0.02
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.135	-2.3	109	0.00
40	S	1,2-Dichloroethane-d4	0.378	0.339	10.3	100	0.00
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	121	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKB262.D Vial: 2
Acq On : 18 Nov 2011 2:40 pm Operator: CGM
Sample : CVO03H1652 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.198	0.183	7.6	104	0.02
43	T,M	Carbon tetrachloride	0.677	0.573	15.4	96	0.02
44	T,M	Benzene	1.622	1.521	6.2	107	0.02
45	T,M	1,2-Dichloroethane	0.500	0.424	15.2	96	0.02
46	T,M	Trichloroethene	0.445	0.402	9.7	104	0.00
47	T,M	Methylcyclohexane	0.000	0.000	0.0	89	0.02
48	C,T,M	1,2-Dichloropropane	0.415	0.410	1.2	112	0.02
49	T,M	1,4-Dioxane	0.001	0.001	0.0	122	0.02
50	T,M	Dibromomethane	0.196	0.175	10.7	103	0.00
51	T,M	Bromodichloromethane	0.620	0.561	9.5	102	0.00
52	T,M	2-Chloroethyl vinyl ether	0.125	0.065	48.0#	62	0.00
53	T,M	cis-1,3-Dichloropropene	0.640	0.617	3.6	108	0.00
54	T,M	4-Methyl-2-pentanone	0.202	0.206	-2.0	118	0.00
55	S	Toluene-d8	1.420	1.323	6.8	110	0.00
56	C,T,M	Toluene	1.759	1.652	6.1	107	0.02
57	T,M	Ethyl methacrylate	0.326	0.324	0.6	113	0.02
58	T,M	trans-1,3-Dichloropropene	0.501	0.480	4.2	106	0.02
59	T,M	1,1,2-Trichloroethane	0.217	0.204	6.0	107	0.02
60	T,M	Tetrachloroethene	0.382	0.335	12.3	101	0.00
61	T,M	2-Hexanone	0.133	0.147	-10.5	123	0.02
62	T,M	1,3-Dichloropropane	0.434	0.422	2.8	110	0.02
63	T,M	Dibromochloromethane	0.322	0.298	7.5	104	0.02
64	T,M	1,2-Dibromoethane	0.238	0.225	5.5	107	0.00
65	T,M	1-Chlorohexane	0.816	0.787	3.6	111	0.02
66	P,M	Chlorobenzene	1.009	0.967	4.2	109	0.00
67	C,T,M	Ethylbenzene	2.272	2.130	6.2	108	0.00
68	T,M	1,1,1,2-Tetrachloroethane	0.375	0.349	6.9	104	0.02
69	T,M	m-Xylene & p-Xylene	1.750	1.614	7.8	107	0.02
70	T,M	o-Xylene	1.697	1.613	4.9	108	0.02
71	T,M	Styrene	1.095	1.106	-1.0	111	0.00
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	124	0.00
73	T,M	Isopropylbenzene	5.670	5.224	7.9	109	0.02
74	P,T,M	Bromoform	0.413	0.371	10.2	101	0.00
75	S	4-Bromofluorobenzene	1.556	1.446	7.1	112	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	0.753	0.753	0.0	119	0.02
77	T,M	trans-1,4-Dichloro-2-butene	0.244	0.239	2.0	118	0.00
78	T,M	n-Propylbenzene	8.060	7.695	4.5	113	0.00
79	T,M	1,2,3-Trichloropropane	0.175	0.168	4.0	111	0.02
80	T,M	Bromobenzene	1.142	1.028	10.0	106	0.02
81	T,M	1,3,5-Trimethylbenzene	4.888	4.512	7.7	108	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K18\RKB262.D Vial: 2
Acq On : 18 Nov 2011 2:40 pm Operator: CGM
Sample : CVO03H1652 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	4.662	7.3	109	0.02
83	T,M	4-Chlorotoluene	4.346	4.134	4.9	112	0.00
84	T,M	tert-Butylbenzene	0.969	0.916	5.5	111	0.00
85	T,M	1,2,4-Trimethylbenzene	4.650	4.420	4.9	112	0.02
86	T,M	sec-Butylbenzene	6.369	6.009	5.7	111	0.02
87	T,M	p-Isopropyltoluene	4.917	4.751	3.4	112	0.00
88	T,M	1,3-Dichlorobenzene	2.190	2.109	3.7	113	0.02
89	T,M	1,4-Dichlorobenzene	2.037	1.955	4.0	111	0.00
90	T,M	n-Butylbenzene	5.430	5.480	-0.9	116	0.02
91	T,M	1,2-Dichlorobenzene	1.675	1.591	5.0	111	0.00
92	T,M	1,2-Dibromo-3-chloropropane	0.085	0.087	-2.4	116	0.02
93	T,M	1,2,4-Trichlorobenzene	0.850	0.896	-5.4	122	0.02
94	T,M	Hexachlorobutadiene	0.778	0.690	11.3	101	0.02
95	T,M	Naphthalene	1.095	1.235	-12.8	125	0.00
96	T,M	1,2,3-Trichlorobenzene	0.624	0.661	-5.9	122	0.02

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKB262.D Vial: 2
Acq On : 18 Nov 2011 2:40 pm Operator: CGM
Sample : CVO03H1652 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 18 15:05 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.16	114	2180037	10.00	ug/l	0.00
41) CHLOROBENZENE-D5	17.17	117	2089922	10.00	ug/l	0.02
72) 1,2-DICHLOROBENZENE-D4	20.68	152	747939	10.00	ug/l	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	12.09	111	778695	9.61	ug/l	0.02
Spiked Amount 10.000			Recovery	=	96.10%	
40) 1,2-Dichloroethane-d4	12.61	65	738444	8.96	ug/l	0.00
Spiked Amount 10.000			Recovery	=	89.60%	
55) Toluene-d8	15.22	98	2764684	9.31	ug/l	0.00
Spiked Amount 10.000			Recovery	=	93.10%	
75) 4-Bromofluorobenzene	18.61	95	1081866	9.29	ug/l	0.00
Spiked Amount 10.000			Recovery	=	92.90%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.07	85	857207	11.14	ug/l	100
5) Chloromethane	4.59	50	779902	10.03	ug/l	100
7) Vinyl chloride	4.92	62	713646	9.70	ug/l	99
8) Bromomethane	5.82	94	516385	10.45	ug/l	97
9) Chloroethane	6.09	64	400024	10.35	ug/l	99
10) Dichlorofluoromethane	6.64	67	1582490	9.51	ug/l	100
11) Trichlorofluoromethane	6.69	101	1041107	8.76	ug/l	100
12) Acrolein	7.82	56	89730	46.30	ug/l	99
13) 1,1,2-Trichloro-1,2,2-trif	7.94	151	398128	9.00	ug/l	100
14) Acetone	8.15	43	414229	49.19	ug/l	97
15) 1,1-Dichloroethene	7.97	61	1357991	9.26	ug/l	99
17) Iodomethane	8.35	142	1220852	8.87	ug/l	99
18) Carbon disulfide	8.47	76	2967595	10.06	ug/l	100
19) Methylene chloride	9.04	49	976938	9.43	ug/l	98
20) tert-Butyl alcohol	9.25	59	114173	43.49	ug/l	92
21) tert-Butyl methyl ether (M	9.47	73	1043352	9.80	ug/l	99
22) trans-1,2-Dichloroethene	9.53	61	1416385	9.47	ug/l	98
23) Acrylonitrile	9.56	53	410410	53.00	ug/l	98
24) Isopropyl ether (DIPE)	10.29	45	2627605	10.08	ug/l	98
25) Vinyl acetate	10.35	43	863284	9.87	ug/l	97
26) 1,1-Dichloroethane	10.33	63	1534328	9.48	ug/l	99
28) tert-Butyl ethyl ether (ET	10.91	59	1959269	10.50	ug/l	98
29) 2,2-Dichloropropane	11.29	77	1185595	8.99	ug/l	99
30) 2-Butanone	11.32	43	722671	50.18	ug/l	99
31) cis-1,2-Dichloroethene	11.32	96	812751	9.58	ug/l	99
32) Bromochloromethane	11.73	49	646623	9.65	ug/l	99
33) Tetrahydrofuran	11.78	42	83160	10.09	ug/l	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKB262.D Vial: 2
Acq On : 18 Nov 2011 2:40 pm Operator: CGM
Sample : CVO03H1652 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 18 15:05 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	Chloroform	11.82	83	1633740	9.29 ug/l	99
37)	1,1,1-Trichloroethane	12.09	97	1410422	8.95 ug/l	99
39)	tert-Amyl methyl ether (TA	12.70	87	294761	10.23 ug/l	92
42)	1,1-Dichloropropene	12.33	110	382210	9.22 ug/l	99
43)	Carbon tetrachloride	12.34	119	1198554	8.47 ug/l	100
44)	Benzene	12.67	78	3178419	9.38 ug/l	100
45)	1,2-Dichloroethane	12.73	62	886735	8.48 ug/l	98
46)	Trichloroethene	13.58	130	841170	9.04 ug/l	99
48)	1,2-Dichloropropane	13.94	63	855880	9.87 ug/l	94
49)	1,4-Dioxane	14.10	88	53800	200.05 ug/l	92
50)	Dibromomethane	14.14	93	365549	8.92 ug/l	97
51)	Bromodichloromethane	14.31	83	1171955	9.05 ug/l	100
52)	2-Chloroethyl vinyl ether	14.61	63	136470	5.22 ug/l	97
53)	cis-1,3-Dichloropropene	14.87	75	1289692	9.64 ug/l	98
54)	4-Methyl-2-pentanone	14.99	43	2155697	51.05 ug/l	99
56)	Toluene	15.32	91	3451649	9.39 ug/l	100
57)	Ethyl methacrylate	15.56	69	677621	9.94 ug/l	99
58)	trans-1,3-Dichloropropene	15.60	75	1002819	9.58 ug/l	100
59)	1,1,2-Trichloroethane	15.89	97	426507	9.40 ug/l	98
60)	Tetrachloroethene	16.05	164	700735	8.77 ug/l	99
61)	2-Hexanone	16.08	43	1532752	54.94 ug/l	99
62)	1,3-Dichloropropane	16.11	76	882573	9.72 ug/l	99
63)	Dibromochloromethane	16.45	129	622637	9.26 ug/l	99
64)	1,2-Dibromoethane	16.63	107	469650	9.45 ug/l	99
65)	1-Chlorohexane	17.00	91	1644541	9.65 ug/l	100
66)	Chlorobenzene	17.20	112	2020017	9.58 ug/l	99
67)	Ethylbenzene	17.24	91	4451576	9.38 ug/l	99
68)	1,1,1,2-Tetrachloroethane	17.29	131	729237	9.31 ug/l	98
69)	m-Xylene & p-Xylene	17.37	91	6746066	18.45 ug/l	98
70)	o-Xylene	17.91	91	3370721	9.50 ug/l	99
71)	Styrene	17.93	104	2311695	10.10 ug/l	98
73)	Isopropylbenzene	18.33	105	3907065	9.21 ug/l	99
74)	Bromoform	18.31	173	277449	8.98 ug/l	99
76)	1,1,2,2-Tetrachloroethane	18.76	83	563561	10.00 ug/l	99
77)	trans-1,4-Dichloro-2-buten	18.79	53	179114	9.80 ug/l	95
78)	n-Propylbenzene	18.83	91	5755077	9.55 ug/l	100
79)	1,2,3-Trichloropropane	18.86	110	125994	9.62 ug/l	99
80)	Bromobenzene	18.88	156	769147	9.01 ug/l	95
81)	1,3,5-Trimethylbenzene	19.01	105	3374724	9.23 ug/l	99
82)	2-Chlorotoluene	19.06	91	3486632	9.27 ug/l	99
83)	4-Chlorotoluene	19.18	91	3092242	9.51 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K18\RKB262.D Vial: 2
Acq On : 18 Nov 2011 2:40 pm Operator: CGM
Sample : CV003H1652 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 18 15:05 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

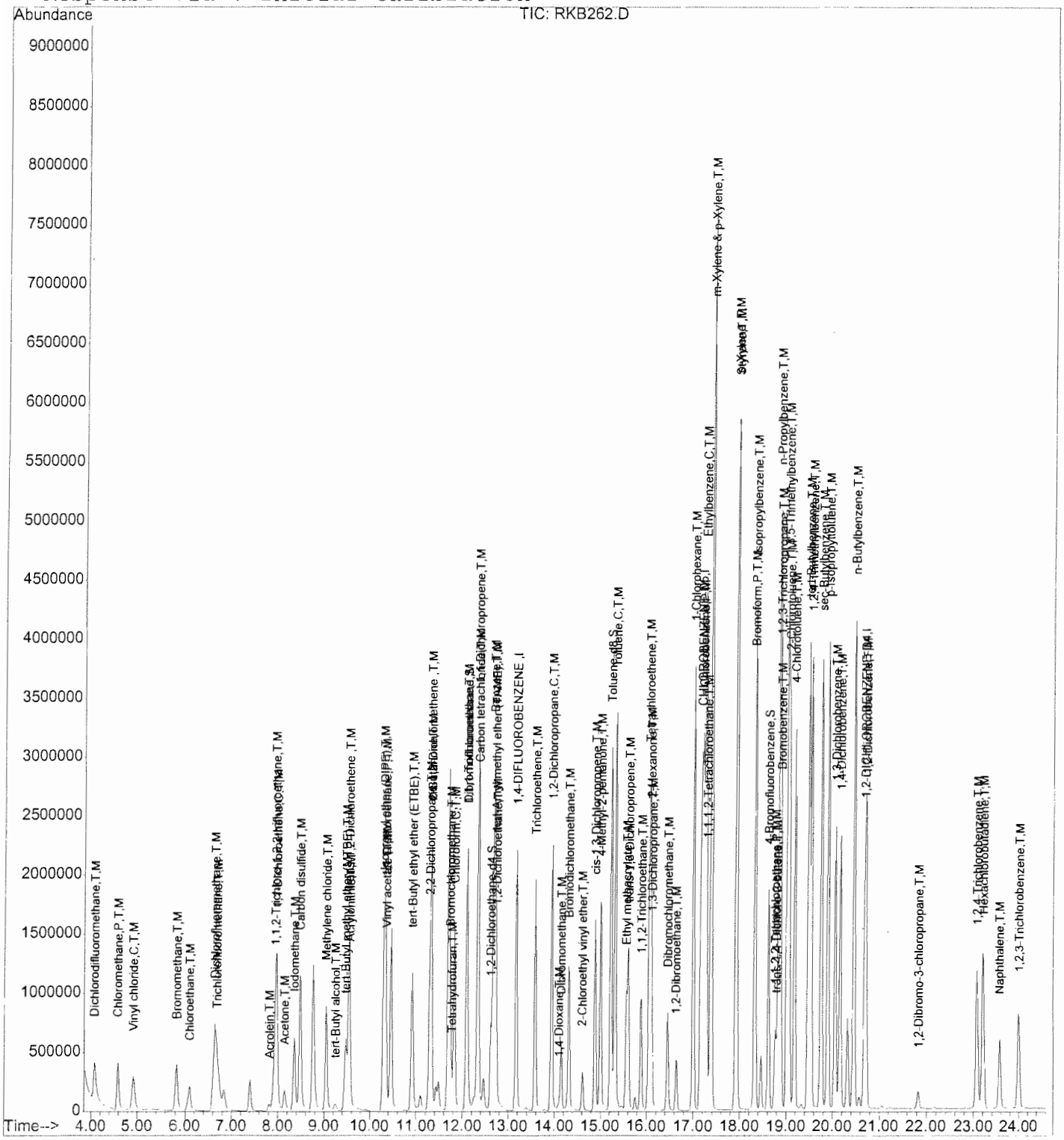
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84)	tert-Butylbenzene	19.47	134	685188	9.45 ug/l	95
85)	1,2,4-Trimethylbenzene	19.53	105	3306214	9.51 ug/l	98
86)	sec-Butylbenzene	19.76	105	4494270	9.43 ug/l	100
87)	p-Isopropyltoluene	19.89	119	3553195	9.66 ug/l	98
88)	1,3-Dichlorobenzene	20.05	146	1577152	9.63 ug/l	99
89)	1,4-Dichlorobenzene	20.16	146	1462327	9.60 ug/l	99
90)	n-Butylbenzene	20.46	91	4098542	10.09 ug/l	99
91)	1,2-Dichlorobenzene	20.71	146	1190214	9.50 ug/l	100
92)	1,2-Dibromo-3-chloropropan	21.84	157	65359	10.22 ug/l	97
93)	1,2,4-Trichlorobenzene	23.08	180	670487	10.55 ug/l	99
94)	Hexachlorobutadiene	23.21	225	515958	8.87 ug/l	99
95)	Naphthalene	23.57	128	923659	11.28 ug/l	99
96)	1,2,3-Trichlorobenzene	24.00	180	494244	10.59 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K18\RKB262.D Vial: 2
Acq On : 18 Nov 2011 2:40 pm Operator: CGM
Sample : CVO03H1652 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 18 15:05 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration



5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB307
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K146
BFB Injection Date : 11/21/11
BFB Injection Time : 06:54
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.04
75	30.0 - 60.0% of mass 95	55.14
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.39
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	64.21
175	5.0 - 9.0% of mass 174	4.84(7.5)1
176	95.0 - 101.0% of mass 174	62.11(96.7)1
177	5.0 - 9.0% of mass 176	4.24(6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV003H1654	RKB309	11/21/11	08:07
2	MBLK2W	V003K21B	RKB312	11/21/11	09:53
3	LCS2W	V003K21L	RKB310	11/21/11	08:47
4	LCD2W	V003K21C	RKB311	11/21/11	09:20
5	MW-70-PMW11B-139DL	K146-03T	RKB316	11/21/11	12:12
6	MW-70-PMW12A-140DL	K146-04T	RKB317	11/21/11	12:46
7	MW-70-PMW12B-142DL	K146-05T	RKB318	11/21/11	13:20
8	IR-70-FD-141DL	K146-06T	RKB319	11/21/11	13:55

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RHB444
Instrument ID: 03
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K146
Date Analyzed: 08/16/11
Time Analyzed: 14:40
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1861981	13.20	1722743	17.19	603523	20.72
	UPPER LIMIT	3723962	13.70	3445486	17.69	1207046	21.22
	LOWER LIMIT	930991	12.70	861372	16.69	301762	20.22
	SAMPLE ID						
1	VSTD010	2132236	13.16	2019485	17.15	672808	20.67
2	MBLK2W	2463110	13.16	2242238	17.15	704811	20.66
3	LCS2W	2152842	13.16	1958957	17.15	630750	20.66
4	LCD2W	2405985	13.15	2254896	17.14	733489	20.67
5	MW-70-PMW11B-139DL	2196231	13.16	2018877	17.14	629362	20.66
6	MW-70-PMW12A-140DL	2138254	13.16	2013728	17.15	650056	20.66
7	MW-70-PMW12B-142DL	2164371	13.16	1980061	17.14	622256	20.66
8	IR-70-FD-141DL	2173877	13.16	1986095	17.14	597780	20.66

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKB309.D Vial: 3
Acq On : 21 Nov 2011 8:07 am Operator: CGM
Sample : CV003H1654 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\V003H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	115	0.00
2	T,M	Chlorotrifluoroethylene	-1.000	0.000	0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	11.260	-12.6	106	0.01
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	106	0.01
5	P,T,M	Chloromethane	10.000	11.203	-12.0	106	0.01
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000	0.0	0	-5.22#
7	C,T,M	Vinyl chloride	10.000	10.673	-6.7	99	0.01
8	T,M	Bromomethane	10.000	11.681	-16.8	108	0.00
9	T,M	Chloroethane	10.000	11.411	-14.1	107	0.00
10	T,M	Dichlorofluoromethane	10.000	10.252	-2.5	110	-0.02
11	T,M	Trichlorofluoromethane	10.000	9.213	7.9	86	0.00
12	T,M	Acrolein	50.000	36.465	27.1#	82	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.207	7.9	101	0.00
14	T,M	Acetone	50.000	49.361	1.3	109	0.00
15	C,T,M	1,1-Dichloroethene	10.000	9.709	2.9	103	0.01
16	T,M	Methyl acetate	-1.000	0.000	0.0	108	0.00
17	T,M	Iodomethane	10.000	9.331	6.7	99	0.01
18	T,M	Carbon disulfide	10.000	10.944	-9.4	128	0.00
19	T,M	Methylene chloride	10.000	9.816	1.8	108	0.00
20	T,M	tert-Butyl alcohol	50.000	39.544	20.9#	82	0.00
21	T,M	tert-Butyl methyl ether (MT	10.000	9.357	6.4	101	0.00
22	T,M	trans-1,2-Dichloroethene	10.000	9.955	0.4	107	0.00
23	T,M	Acrylonitrile	50.000	55.162	-10.3	118	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	9.883	1.2	104	0.00
25	T,M	Vinyl acetate	10.000	8.821	11.8	86	0.01
26	P,T,M	1,1-Dichloroethane	10.000	9.734	2.7	103	0.01
27	T,M	2-Butanol	-1.000	0.000	0.0	90	0.01
28	T,M	tert-Butyl ethyl ether (ETB	10.000	9.509	4.9	102	0.00
29	T,M	2,2-Dichloropropane	10.000	9.977	0.2	106	0.00
30	T,M	2-Butanone	50.000	48.314	3.4	108	0.00
31	T,M	cis-1,2-Dichloroethene	10.000	10.115	-1.2	108	0.00
32	T,M	Bromochloromethane	10.000	10.036	-0.4	106	0.01
33	T,M	Tetrahydrofuran	10.000	9.733	2.7	117	0.00
34	C,T,M	Chloroform	10.000	9.226	7.7	97	0.00
35	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	63	0.00
36	S	Dibromofluoromethane	10.000	9.646	3.5	105	0.00
37	T,M	1,1,1-Trichloroethane	10.000	9.025	9.7	95	0.00
38	T,M	Cyclohexane	-1.000	0.000	0.0	109	0.01
39	T,M	tert-Amyl methyl ether (TAM	10.000	9.252	7.5	96	0.00
40	S	1,2-Dichloroethane-d4	10.000	9.202	8.0	100	0.00
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	117	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKB309.D Vial: 3
Acq On : 21 Nov 2011 8:07 am Operator: CGM
Sample : CVO03H1654 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	9.523	4.8	103	0.01
43	T,M	Carbon tetrachloride	10.000	8.452	15.5	92	0.00
44	T,M	Benzene	10.000	9.745	2.6	107	0.01
45	T,M	1,2-Dichloroethane	10.000	8.506	14.9	93	0.00
46	T,M	Trichloroethene	10.000	9.191	8.1	102	0.00
47	T,M	Methylcyclohexane	-1.000	0.000	0.0	94	0.01
48	C,T,M	1,2-Dichloropropane	10.000	9.949	0.5	109	0.00
49	T,M	1,4-Dioxane	200.000	244.291	-22.1#	144	0.00
50	T,M	Dibromomethane	10.000	8.935	10.6	99	0.00
51	T,M	Bromodichloromethane	10.000	8.905	11.0	97	0.00
52	T,M	2-Chloroethyl vinyl ether	10.000	1.286	87.1#	15	0.00
53	T,M	cis-1,3-Dichloropropene	10.000	9.466	5.3	103	0.00
54	T,M	4-Methyl-2-pentanone	50.000	48.045	3.9	108	0.00
55	S	Toluene-d8	10.000	9.244	7.6	105	0.00
56	C,T,M	Toluene	10.000	9.381	6.2	104	0.00
57	T,M	Ethyl methacrylate	10.000	9.425	5.7	103	0.01
58	T,M	trans-1,3-Dichloropropene	10.000	8.857	11.4	95	0.00
59	T,M	1,1,2-Trichloroethane	10.000	9.218	7.8	101	0.00
60	T,M	Tetrachloroethene	10.000	8.790	12.1	98	0.00
61	T,M	2-Hexanone	50.000	48.699	2.6	105	0.00
62	T,M	1,3-Dichloropropane	10.000	9.784	2.2	107	0.00
63	T,M	Dibromochloromethane	10.000	9.001	10.0	97	0.01
64	T,M	1,2-Dibromoethane	10.000	9.441	5.6	104	0.00
65	T,M	1-Chlorohexane	10.000	9.842	1.6	110	0.01
66	P,M	Chlorobenzene	10.000	9.617	3.8	106	0.00
67	C,T,M	Ethylbenzene	10.000	9.221	7.8	102	0.00
68	T,M	1,1,1,2-Tetrachloroethane	10.000	8.947	10.5	96	0.00
69	T,M	m-Xylene & p-Xylene	20.000	18.166	9.2	102	0.01
70	T,M	o-Xylene	10.000	9.148	8.5	101	0.01
71	T,M	Styrene	10.000	9.712	2.9	103	0.00
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	111	0.00
73	T,M	Isopropylbenzene	10.000	9.562	4.4	102	0.01
74	P,T,M	Bromoform	10.000	9.081	9.2	92	0.00
75	S	4-Bromofluorobenzene	10.000	9.408	5.9	102	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.215	-2.1	109	0.01
77	T,M	trans-1,4-Dichloro-2-butene	10.000	6.365	36.4#	69	0.00
78	T,M	n-Propylbenzene	10.000	9.819	1.8	105	0.00
79	T,M	1,2,3-Trichloropropane	10.000	9.573	4.3	99	0.00
80	T,M	Bromobenzene	10.000	9.323	6.8	99	0.01
81	T,M	1,3,5-Trimethylbenzene	10.000	9.349	6.5	99	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKB309.D Vial: 3
Acq On : 21 Nov 2011 8:07 am Operator: CGM
Sample : CVO03H1654 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	9.432	5.7	100	0.00
83	T,M	4-Chlorotoluene	10.000	9.473	5.3	100	0.00
84	T,M	tert-Butylbenzene	10.000	9.773	2.3	103	0.00
85	T,M	1,2,4-Trimethylbenzene	10.000	9.331	6.7	99	0.01
86	T,M	sec-Butylbenzene	10.000	9.792	2.1	104	0.00
87	T,M	p-Isopropyltoluene	10.000	9.654	3.5	100	0.00
88	T,M	1,3-Dichlorobenzene	10.000	9.372	6.3	99	0.01
89	T,M	1,4-Dichlorobenzene	10.000	9.440	5.6	98	0.00
90	T,M	n-Butylbenzene	10.000	9.913	0.9	103	0.00
91	T,M	1,2-Dichlorobenzene	10.000	9.368	6.3	98	0.00
92	T,M	1,2-Dibromo-3-chloropropane	10.000	9.054	9.5	93	0.00
93	T,M	1,2,4-Trichlorobenzene	10.000	9.135	8.7	95	0.00
94	T,M	Hexachlorobutadiene	10.000	8.291	17.1	85	0.00
95	T,M	Naphthalene	10.000	9.757	2.4	97	0.00
96	T,M	1,2,3-Trichlorobenzene	10.000	9.039	9.6	94	0.00

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKB309.D Vial: 3
Acq On : 21 Nov 2011 8:07 am Operator: CGM
Sample : CVO03H1654 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	115	0.00
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.397	-12.5	106	0.01
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	106	0.01
5	P,T,M	Chloromethane	0.357	0.399	-11.8	106	0.01
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.22#
7	C,T,M	Vinyl chloride	0.337	0.360	-6.8	99	0.01
8	T,M	Bromomethane	0.227	0.265	-16.7	108	0.00
9	T,M	Chloroethane	0.177	0.202	-14.1	107	0.00
10	T,M	Dichlorofluoromethane	0.764	0.783	-2.5	110	-0.02
11	T,M	Trichlorofluoromethane	0.545	0.502	7.9	86	0.00
12	T,M	Acrolein	0.009	0.006	33.3#	82	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.187	7.9	101	0.00
14	T,M	Acetone	0.039	0.038	2.6	109	0.00
15	C,T,M	1,1-Dichloroethene	0.673	0.653	3.0	103	0.01
16	T,M	Methyl acetate	0.000	0.000	0.0	108	0.00
17	T,M	Iodomethane	0.631	0.589	6.7	99	0.01
18	T,M	Carbon disulfide	1.353	1.481	-9.5	128	0.00
19	T,M	Methylene chloride	0.475	0.467	1.7	108	0.00
20	T,M	tert-Butyl alcohol	0.012	0.010	16.7	82	0.00
21	T,M	tert-Butyl methyl ether (MT	0.489	0.457	6.5	101	0.00
22	T,M	trans-1,2-Dichloroethene	0.686	0.683	0.4	107	0.00
23	T,M	Acrylonitrile	0.036	0.039	-8.3	118	0.00
24	T,M	Isopropyl ether (DIPE)	1.196	1.182	1.2	104	0.00
25	T,M	Vinyl acetate	0.401	0.354	11.7	86	0.01
26	P,T,M	1,1-Dichloroethane	0.743	0.723	2.7	103	0.01
27	T,M	2-Butanol	0.000	0.000	0.0	90	0.01
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.814	4.9	102	0.00
29	T,M	2,2-Dichloropropane	0.605	0.604	0.2	106	0.00
30	T,M	2-Butanone	0.066	0.064	3.0	108	0.00
31	T,M	cis-1,2-Dichloroethene	0.389	0.394	-1.3	108	0.00
32	T,M	Bromochloromethane	0.307	0.308	-0.3	106	0.01
33	T,M	Tetrahydrofuran	0.038	0.037	2.6	117	0.00
34	C,T,M	Chloroform	0.807	0.744	7.8	97	0.00
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	63	0.00
36	S	Dibromofluoromethane	0.372	0.358	3.8	105	0.00
37	T,M	1,1,1-Trichloroethane	0.723	0.653	9.7	95	0.00
38	T,M	Cyclohexane	0.000	0.000	0.0	109	0.01
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.122	7.6	96	0.00
40	S	1,2-Dichloroethane-d4	0.378	0.348	7.9	100	0.00
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	117	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKB309.D Vial: 3
Acq On : 21 Nov 2011 8:07 am Operator: CGM
Sample : CVO03H1654 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.198	0.189	4.5	103	0.01
43	T,M	Carbon tetrachloride	0.677	0.572	15.5	92	0.00
44	T,M	Benzene	1.622	1.580	2.6	107	0.01
45	T,M	1,2-Dichloroethane	0.500	0.426	14.8	93	0.00
46	T,M	Trichloroethene	0.445	0.409	8.1	102	0.00
47	T,M	Methylcyclohexane	0.000	0.000	0.0	94	0.01
48	C,T,M	1,2-Dichloropropane	0.415	0.413	0.5	109	0.00
49	T,M	1,4-Dioxane	0.001	0.002	-100.0#	144	0.00
50	T,M	Dibromomethane	0.196	0.175	10.7	99	0.00
51	T,M	Bromodichloromethane	0.620	0.552	11.0	97	0.00
52	T,M	2-Chloroethyl vinyl ether	0.125	0.016	87.2#	15#	0.00
53	T,M	cis-1,3-Dichloropropene	0.640	0.606	5.3	103	0.00
54	T,M	4-Methyl-2-pentanone	0.202	0.194	4.0	108	0.00
55	S	Toluene-d8	1.420	1.313	7.5	105	0.00
56	C,T,M	Toluene	1.759	1.651	6.1	104	0.00
57	T,M	Ethyl methacrylate	0.326	0.308	5.5	103	0.01
58	T,M	trans-1,3-Dichloropropene	0.501	0.444	11.4	95	0.00
59	T,M	1,1,2-Trichloroethane	0.217	0.200	7.8	101	0.00
60	T,M	Tetrachloroethene	0.382	0.336	12.0	98	0.00
61	T,M	2-Hexanone	0.133	0.130	2.3	105	0.00
62	T,M	1,3-Dichloropropane	0.434	0.425	2.1	107	0.00
63	T,M	Dibromochloromethane	0.322	0.289	10.2	97	0.01
64	T,M	1,2-Dibromoethane	0.238	0.225	5.5	104	0.00
65	T,M	1-Chlorohexane	0.816	0.803	1.6	110	0.01
66	P,M	Chlorobenzene	1.009	0.970	3.9	106	0.00
67	C,T,M	Ethylbenzene	2.272	2.095	7.8	102	0.00
68	T,M	1,1,1,2-Tetrachloroethane	0.375	0.335	10.7	96	0.00
69	T,M	m-Xylene & p-Xylene	1.750	1.589	9.2	102	0.01
70	T,M	o-Xylene	1.697	1.552	8.5	101	0.01
71	T,M	Styrene	1.095	1.063	2.9	103	0.00
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	111	0.00
73	T,M	Isopropylbenzene	5.670	5.421	4.4	102	0.01
74	P,T,M	Bromoform	0.413	0.375	9.2	92	0.00
75	S	4-Bromofluorobenzene	1.556	1.464	5.9	102	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	0.753	0.770	-2.3	109	0.01
77	T,M	trans-1,4-Dichloro-2-butene	0.244	0.156	36.1#	69	0.00
78	T,M	n-Propylbenzene	8.060	7.914	1.8	105	0.00
79	T,M	1,2,3-Trichloropropane	0.175	0.168	4.0	99	0.00
80	T,M	Bromobenzene	1.142	1.065	6.7	99	0.01
81	T,M	1,3,5-Trimethylbenzene	4.888	4.569	6.5	99	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKB309.D Vial: 3
Acq On : 21 Nov 2011 8:07 am Operator: CGM
Sample : CVO03H1654 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	4.743	5.7	100	0.00
83	T,M	4-Chlorotoluene	4.346	4.117	5.3	100	0.00
84	T,M	tert-Butylbenzene	0.969	0.947	2.3	103	0.00
85	T,M	1,2,4-Trimethylbenzene	4.650	4.339	6.7	99	0.01
86	T,M	sec-Butylbenzene	6.369	6.236	2.1	104	0.00
87	T,M	p-Isopropyltoluene	4.917	4.747	3.5	100	0.00
88	T,M	1,3-Dichlorobenzene	2.190	2.053	6.3	99	0.01
89	T,M	1,4-Dichlorobenzene	2.037	1.923	5.6	98	0.00
90	T,M	n-Butylbenzene	5.430	5.382	0.9	103	0.00
91	T,M	1,2-Dichlorobenzene	1.675	1.569	6.3	98	0.00
92	T,M	1,2-Dibromo-3-chloropropane	0.085	0.077	9.4	93	0.00
93	T,M	1,2,4-Trichlorobenzene	0.850	0.776	8.7	95	0.00
94	T,M	Hexachlorobutadiene	0.778	0.645	17.1	85	0.00
95	T,M	Naphthalene	1.095	1.069	2.4	97	0.00
96	T,M	1,2,3-Trichlorobenzene	0.624	0.564	9.6	94	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB350
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K146
BFB Injection Date : 11/22/11
BFB Injection Time : 07:12
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.58
75	30.0 - 60.0% of mass 95	52.95
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.49
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	62.14
175	5.0 - 9.0% of mass 174	4.74(7.6)1
176	95.0 - 101.0% of mass 174	60.08(96.7)1
177	5.0 - 9.0% of mass 176	4.18(7.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV003H1656	RKB351	11/22/11	07:48
2	MBLK3W	V003K23B	RKB354	11/22/11	09:29
3	LCS3W	V003K23L	RKB352	11/22/11	08:21
4	LCD3W	V003K23C	RKB353	11/22/11	08:55
5	MW-70-43B-137DL	K146-01T	RKB355	11/22/11	10:03

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RHB444
Instrument ID: 03
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K146
Date Analyzed: 08/16/11
Time Analyzed: 14:40
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1861981	13.20	1722743	17.19	603523	20.72
	UPPER LIMIT	3723962	13.70	3445486	17.69	1207046	21.22
	LOWER LIMIT	930991	12.70	861372	16.69	301762	20.22
	SAMPLE ID						
1	VSTD010	1947743	13.15	1901134	17.14	672511	20.65
2	MBLK3W	2476181	13.14	2249284	17.13	698202	20.64
3	LCS3W	2357416	13.15	2253741	17.14	785298	20.65
4	LCD3W	2475446	13.15	2320335	17.13	784763	20.65
5	MW-70-43B-137DL	2041512	13.15	1945116	17.13	618922	20.65

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.
page 1 of 1

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB351.D Vial: 2
Acq On : 22 Nov 2011 7:48 am Operator: CGM
Sample : CVO03H1656 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	105	-0.01
2	T,M	Chlorotrifluoroethylene	-1.000	0.000	0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	11.791	-17.9	101	0.00
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	101	0.00
5	P,T,M	Chloromethane	10.000	10.390	-3.9	90	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000	0.0	0	-5.22#
7	C,T,M	Vinyl chloride	10.000	10.068	-0.7	86	0.00
8	T,M	Bromomethane	10.000	11.115	-11.2	94	-0.01
9	T,M	Chloroethane	10.000	11.019	-10.2	94	0.00
10	T,M	Dichlorofluoromethane	10.000	10.183	-1.8	100	-0.01
11	T,M	Trichlorofluoromethane	10.000	9.388	6.1	80	-0.01
12	T,M	Acrolein	50.000	33.846	32.3#	69	-0.01
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.198	8.0	92	-0.01
14	T,M	Acetone	50.000	51.769	-3.5	105	-0.01
15	C,T,M	1,1-Dichloroethene	10.000	9.941	0.6	96	-0.01
16	T,M	Methyl acetate	-1.000	0.000	0.0	104	-0.01
17	T,M	Iodomethane	10.000	9.139	8.6	88	-0.01
18	T,M	Carbon disulfide	10.000	10.925	-9.3	117	-0.01
19	T,M	Methylene chloride	10.000	9.955	0.4	100	-0.01
20	T,M	tert-Butyl alcohol	50.000	42.870	14.3	82	-0.01
21	T,M	tert-Butyl methyl ether (MT	10.000	9.775	2.2	97	-0.03
22	T,M	trans-1,2-Dichloroethene	10.000	9.951	0.5	98	-0.01
23	T,M	Acrylonitrile	50.000	55.188	-10.4	108	-0.03
24	T,M	Isopropyl ether (DIPE)	10.000	10.153	-1.5	98	-0.01
25	T,M	Vinyl acetate	10.000	8.274	17.3	74	-0.01
26	P,T,M	1,1-Dichloroethane	10.000	9.967	0.3	96	-0.01
27	T,M	2-Butanol	-1.000	0.000	0.0	94	-0.01
28	T,M	tert-Butyl ethyl ether (ETB	10.000	10.427	-4.3	102	-0.03
29	T,M	2,2-Dichloropropane	10.000	9.940	0.6	97	-0.01
30	T,M	2-Butanone	50.000	50.923	-1.8	104	-0.03
31	T,M	cis-1,2-Dichloroethene	10.000	10.071	-0.7	98	-0.01
32	T,M	Bromochloromethane	10.000	10.599	-6.0	102	-0.01
33	T,M	Tetrahydrofuran	10.000	10.043	-0.4	110	-0.03
34	C,T,M	Chloroform	10.000	9.769	2.3	94	-0.03
35	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	52	-0.01
36	S	Dibromofluoromethane	10.000	9.560	4.4	95	-0.01
37	T,M	1,1,1-Trichloroethane	10.000	9.358	6.4	90	-0.03
38	T,M	Cyclohexane	-1.000	0.000	0.0	94	-0.01
39	T,M	tert-Amyl methyl ether (TAM	10.000	10.038	-0.4	95	-0.01
40	S	1,2-Dichloroethane-d4	10.000	9.539	4.6	95	-0.03
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	110	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB351.D Vial: 2
Acq On : 22 Nov 2011 7:48 am Operator: CGM
Sample : CVO03H1656 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	9.354	6.5	96	-0.01
43	T,M	Carbon tetrachloride	10.000	8.665	13.4	89	-0.01
44	T,M	Benzene	10.000	9.661	3.4	100	-0.01
45	T,M	1,2-Dichloroethane	10.000	9.035	9.6	93	-0.01
46	T,M	Trichloroethene	10.000	9.002	10.0	94	-0.03
47	T,M	Methylcyclohexane	-1.000	0.000	0.0	88	-0.01
48	C,T,M	1,2-Dichloropropane	10.000	10.144	-1.4	105	-0.01
49	T,M	1,4-Dioxane	200.000	213.375	-6.7	118	-0.01
50	T,M	Dibromomethane	10.000	9.430	5.7	99	-0.03
51	T,M	Bromodichloromethane	10.000	9.317	6.8	95	-0.03
52	T,M	2-Chloroethyl vinyl ether	10.000	2.367	76.3#	26	-0.03
53	T,M	cis-1,3-Dichloropropene	10.000	9.660	3.4	99	-0.01
54	T,M	4-Methyl-2-pentanone	50.000	50.220	-0.4	106	-0.01
55	S	Toluene-d8	10.000	9.111	8.9	98	-0.03
56	C,T,M	Toluene	10.000	9.570	4.3	100	-0.01
57	T,M	Ethyl methacrylate	10.000	9.881	1.2	102	-0.01
58	T,M	trans-1,3-Dichloropropene	10.000	9.390	6.1	94	-0.01
59	T,M	1,1,2-Trichloroethane	10.000	9.799	2.0	101	-0.01
60	T,M	Tetrachloroethene	10.000	9.074	9.3	95	-0.03
61	T,M	2-Hexanone	50.000	52.898	-5.8	108	-0.01
62	T,M	1,3-Dichloropropane	10.000	10.212	-2.1	105	-0.01
63	T,M	Dibromochloromethane	10.000	9.512	4.9	97	-0.01
64	T,M	1,2-Dibromoethane	10.000	9.826	1.7	101	-0.01
65	T,M	1-Chlorohexane	10.000	10.019	-0.2	105	-0.01
66	P,M	Chlorobenzene	10.000	9.994	0.1	103	-0.03
67	C,T,M	Ethylbenzene	10.000	9.503	5.0	99	-0.03
68	T,M	1,1,1,2-Tetrachloroethane	10.000	9.442	5.6	96	-0.01
69	T,M	m-Xylene & p-Xylene	20.000	19.060	4.7	101	-0.01
70	T,M	o-Xylene	10.000	9.727	2.7	101	-0.01
71	T,M	Styrene	10.000	10.184	-1.8	102	-0.03
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	111	-0.03
73	T,M	Isopropylbenzene	10.000	9.597	4.0	102	-0.01
74	P,T,M	Bromoform	10.000	9.082	9.2	92	-0.03
75	S	4-Bromofluorobenzene	10.000	9.242	7.6	100	-0.03
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.486	-4.9	112	-0.01
77	T,M	trans-1,4-Dichloro-2-butene	10.000	7.337	26.6#	80	-0.03
78	T,M	n-Propylbenzene	10.000	9.912	0.9	105	-0.03
79	T,M	1,2,3-Trichloropropane	10.000	9.990	0.1	103	-0.03
80	T,M	Bromobenzene	10.000	9.330	6.7	99	-0.01
81	T,M	1,3,5-Trimethylbenzene	10.000	9.552	4.5	101	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB351.D Vial: 2
Acq On : 22 Nov 2011 7:48 am Operator: CGM
Sample : CVO03H1656 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	9.673	3.3	102	-0.01
83	T,M	4-Chlorotoluene	10.000	9.840	1.6	104	-0.03
84	T,M	tert-Butylbenzene	10.000	9.840	1.6	104	-0.03
85	T,M	1,2,4-Trimethylbenzene	10.000	9.784	2.2	103	-0.01
86	T,M	sec-Butylbenzene	10.000	9.950	0.5	105	-0.01
87	T,M	p-Isopropyltoluene	10.000	10.066	-0.7	105	-0.03
88	T,M	1,3-Dichlorobenzene	10.000	9.963	0.4	105	-0.01
89	T,M	1,4-Dichlorobenzene	10.000	9.823	1.8	102	-0.03
90	T,M	n-Butylbenzene	10.000	10.470	-4.7	108	-0.01
91	T,M	1,2-Dichlorobenzene	10.000	9.911	0.9	104	-0.03
92	T,M	1,2-Dibromo-3-chloropropane	10.000	9.631	3.7	99	-0.03
93	T,M	1,2,4-Trichlorobenzene	10.000	10.119	-1.2	105	-0.03
94	T,M	Hexachlorobutadiene	10.000	9.269	7.3	95	-0.03
95	T,M	Naphthalene	10.000	10.952	-9.5	109	-0.03
96	T,M	1,2,3-Trichlorobenzene	10.000	10.150	-1.5	105	-0.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB351.D Vial: 2
Acq On : 22 Nov 2011 7:48 am Operator: CGM
Sample : CVO03H1656 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	105	-0.01
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.416	-17.8	101	0.00
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	101	0.00
5	P,T,M	Chloromethane	0.357	0.370	-3.6	90	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.22#
7	C,T,M	Vinyl chloride	0.337	0.340	-0.9	86	0.00
8	T,M	Bromomethane	0.227	0.252	-11.0	94	-0.01
9	T,M	Chloroethane	0.177	0.195	-10.2	94	0.00
10	T,M	Dichlorofluoromethane	0.764	0.778	-1.8	100	-0.01
11	T,M	Trichlorofluoromethane	0.545	0.512	6.1	80	-0.01
12	T,M	Acrolein	0.009	0.006	33.3#	69	-0.01
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.187	7.9	92	-0.01
14	T,M	Acetone	0.039	0.040	-2.6	105	-0.01
15	C,T,M	1,1-Dichloroethene	0.673	0.669	0.6	96	-0.01
16	T,M	Methyl acetate	0.000	0.000	0.0	104	-0.01
17	T,M	Iodomethane	0.631	0.577	8.6	88	-0.01
18	T,M	Carbon disulfide	1.353	1.479	-9.3	117	-0.01
19	T,M	Methylene chloride	0.475	0.473	0.4	100	-0.01
20	T,M	tert-Butyl alcohol	0.012	0.010	16.7	82	-0.01
21	T,M	tert-Butyl methyl ether (MT	0.489	0.478	2.2	97	-0.03
22	T,M	trans-1,2-Dichloroethene	0.686	0.682	0.6	98	-0.01
23	T,M	Acrylonitrile	0.036	0.039	-8.3	108	-0.03
24	T,M	Isopropyl ether (DIPE)	1.196	1.214	-1.5	98	-0.01
25	T,M	Vinyl acetate	0.401	0.332	17.2	74	-0.01
26	P,T,M	1,1-Dichloroethane	0.743	0.740	0.4	96	-0.01
27	T,M	2-Butanol	0.000	0.000	0.0	94	-0.01
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.893	-4.3	102	-0.03
29	T,M	2,2-Dichloropropane	0.605	0.601	0.7	97	-0.01
30	T,M	2-Butanone	0.066	0.067	-1.5	104	-0.03
31	T,M	cis-1,2-Dichloroethene	0.389	0.392	-0.8	98	-0.01
32	T,M	Bromochloromethane	0.307	0.326	-6.2	102	-0.01
33	T,M	Tetrahydrofuran	0.038	0.038	0.0	110	-0.03
34	C,T,M	Chloroform	0.807	0.788	2.4	94	-0.03
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	52	-0.01
36	S	Dibromofluoromethane	0.372	0.355	4.6	95	-0.01
37	T,M	1,1,1-Trichloroethane	0.723	0.677	6.4	90	-0.03
38	T,M	Cyclohexane	0.000	0.000	0.0	94	-0.01
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.133	-0.8	95	-0.01
40	S	1,2-Dichloroethane-d4	0.378	0.361	4.5	95	-0.03
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	110	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB351.D Vial: 2
Acq On : 22 Nov 2011 7:48 am Operator: CGM
Sample : CVO03H1656 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M 1,1-Dichloropropene	0.198	0.186	6.1	96	-0.01
43	T,M Carbon tetrachloride	0.677	0.587	13.3	89	-0.01
44	T,M Benzene	1.622	1.567	3.4	100	-0.01
45	T,M 1,2-Dichloroethane	0.500	0.452	9.6	93	-0.01
46	T,M Trichloroethene	0.445	0.401	9.9	94	-0.03
47	T,M Methylcyclohexane	0.000	0.000	0.0	88	-0.01
48	C,T,M 1,2-Dichloropropane	0.415	0.421	-1.4	105	-0.01
49	T,M 1,4-Dioxane	0.001	0.001	0.0	118	-0.01
50	T,M Dibromomethane	0.196	0.185	5.6	99	-0.03
51	T,M Bromodichloromethane	0.620	0.578	6.8	95	-0.03
52	T,M 2-Chloroethyl vinyl ether	0.125	0.030	76.0#	26#	-0.03
53	T,M cis-1,3-Dichloropropene	0.640	0.618	3.4	99	-0.01
54	T,M 4-Methyl-2-pentanone	0.202	0.203	-0.5	106	-0.01
55	S Toluene-d8	1.420	1.294	8.9	98	-0.03
56	C,T,M Toluene	1.759	1.684	4.3	100	-0.01
57	T,M Ethyl methacrylate	0.326	0.322	1.2	102	-0.01
58	T,M trans-1,3-Dichloropropene	0.501	0.470	6.2	94	-0.01
59	T,M 1,1,2-Trichloroethane	0.217	0.213	1.8	101	-0.01
60	T,M Tetrachloroethene	0.382	0.347	9.2	95	-0.03
61	T,M 2-Hexanone	0.133	0.141	-6.0	108	-0.01
62	T,M 1,3-Dichloropropane	0.434	0.444	-2.3	105	-0.01
63	T,M Dibromochloromethane	0.322	0.306	5.0	97	-0.01
64	T,M 1,2-Dibromoethane	0.238	0.234	1.7	101	-0.01
65	T,M 1-Chlorohexane	0.816	0.817	-0.1	105	-0.01
66	P,M Chlorobenzene	1.009	1.009	0.0	103	-0.03
67	C,T,M Ethylbenzene	2.272	2.159	5.0	99	-0.03
68	T,M 1,1,1,2-Tetrachloroethane	0.375	0.354	5.6	96	-0.01
69	T,M m-Xylene & p-Xylene	1.750	1.668	4.7	101	-0.01
70	T,M o-Xylene	1.697	1.650	2.8	101	-0.01
71	T,M Styrene	1.095	1.115	-1.8	102	-0.03
72	I 1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	111	-0.03
73	T,M Isopropylbenzene	5.670	5.441	4.0	102	-0.01
74	P,T,M Bromoform	0.413	0.375	9.2	92	-0.03
75	S 4-Bromofluorobenzene	1.556	1.438	7.6	100	-0.03
76	P,T,M 1,1,2,2-Tetrachloroethane	0.753	0.790	-4.9	112	-0.01
77	T,M trans-1,4-Dichloro-2-butene	0.244	0.179	26.6#	80	-0.03
78	T,M n-Propylbenzene	8.060	7.989	0.9	105	-0.03
79	T,M 1,2,3-Trichloropropane	0.175	0.175	0.0	103	-0.03
80	T,M Bromobenzene	1.142	1.065	6.7	99	-0.01
81	T,M 1,3,5-Trimethylbenzene	4.888	4.669	4.5	101	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB351.D Vial: 2
Acq On : 22 Nov 2011 7:48 am Operator: CGM
Sample : CVO03H1656 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	4.865	3.3	102	-0.01
83	T,M	4-Chlorotoluene	4.346	4.277	1.6	104	-0.03
84	T,M	tert-Butylbenzene	0.969	0.953	1.7	104	-0.03
85	T,M	1,2,4-Trimethylbenzene	4.650	4.550	2.2	103	-0.01
86	T,M	sec-Butylbenzene	6.369	6.337	0.5	105	-0.01
87	T,M	p-Isopropyltoluene	4.917	4.949	-0.7	105	-0.03
88	T,M	1,3-Dichlorobenzene	2.190	2.182	0.4	105	-0.01
89	T,M	1,4-Dichlorobenzene	2.037	2.001	1.8	102	-0.03
90	T,M	n-Butylbenzene	5.430	5.685	-4.7	108	-0.01
91	T,M	1,2-Dichlorobenzene	1.675	1.660	0.9	104	-0.03
92	T,M	1,2-Dibromo-3-chloropropane	0.085	0.082	3.5	99	-0.03
93	T,M	1,2,4-Trichlorobenzene	0.850	0.860	-1.2	105	-0.03
94	T,M	Hexachlorobutadiene	0.778	0.721	7.3	95	-0.03
95	T,M	Naphthalene	1.095	1.199	-9.5	109	-0.03
96	T,M	1,2,3-Trichlorobenzene	0.624	0.633	-1.4	105	-0.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 6 ☐ EMAX-524.2 Rev.No. 5 ☐ EMAX-624 Rev.No. 2 ☐ EMAX-8260SIM Rev.No.0 ☐ EMAX-TCPSIM Rev.No.1 ☐ EMAX-M8260SIM Rev.No.0 ☐

Start Date: 8/16/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -047

BATCH V003H/66

Sample Prep. ID	Data File Name	Lab Sample ID	* Sample Amount (g/L/mL) (µL) (µg/L)	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RHB438	BFB03H23	1mL	N/A	N/A	N/A	N/A	11:15am
02	439	V003H161	.01/1/1.5mL					0.5/1.5/1.5 ppb 8260
03	440	2	.05/1/1.5mL					0.5/2.5/2.5 ppb
04	441	3	.1/1/1.5mL					1.0/5.0/5.0 ppb
05	442	4	.2/1/1mL					2.0/10/10 ppb
06	443	5	.5/1/1.5mL					5.0/25/25 ppb
07	444	6	1/5/5mL					10/50/50 ppb
08	445	7	2/10/10mL					20/100/100 ppb
09	446	8	3/15/15mL					30/150/150 ppb
10	447	9	4/20/20mL					40/200/200 ppb
11	448	10	5/25/25mL					50/250/250 ppb
12	449	11	10/50/50mL					100/500/500 ppb
13	450	15/15	25mL					
14	451	V003H238	↓					
15	452	V003H161	1/5/5mL					10/50/50 ppb
16	453	RINSE	25mL					7:49pm
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30			NW	8/17/11				

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003H16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC Fast CS	SV1-17-76-1	*	
DCC CS2	-71-1		
DCC 8260	-72-1		
DCC RTM	-69-3		
BFB	-45-3	1	50/250
IS/SURR.	-73-3	1	
ICV/LCS Fast CS	-69-1	1	
ICV/LCS CS2	-71-2	1	
ICV/LCS 8260	-60-2	5	
ICV/LCS RTM	-70-2	5	
IS	-57-3	1	
SS	-52-1	*	

DATA FILE FOLDER	11H16
Electronic Data Archival	
Location	Date
HPCHEM_VOA/TO03	

Comments: *please refer to sample amount

Analyzed By: NW

Date Disposed: 8/17/11

Disposed By: NW

2136

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☐ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/18/11 ☒ 5-mL Purge ☐ 10-mL Purge ☒ 25-mL Purge

Book # A03 -048

BATCH CV003H1652

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes	
01		RKB261	BFB03K19							14:03
02		62	CV003H1652							
03		63	V003K19L		1.0					
04		64	C							
05		65	B	25ML						
06		66	11K146.07			✓	✓			
07		67	11K133-07			✓	✓			
08		68	-03			✓	✓			
09		69	-01M			✓	✓			
10		70	-05			✓	✓			
11		71	-01			✓	✓			
12		72	-04			✓	✓			
13		73	-06			✓	✓			
14		74	11K146-01			✓	✓		5X TCE	
15		75	-02			✓	✓			
16		76	-03			✓	✓		10X VC	
17		77	-04			✓	✓		10X VC	
18		78	-05			✓	✓		5X VC	
19		79	-06			✓	✓		10X VC	00:55
20		80	Rinse							
21		81								
22										
23										
24										
25										
26										
27										
28										
29										
30									CGM 11/18/11	

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003H16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-19-6-2	1	
DCC	-6-3	1	
DCC	-7-2	5	
DCC	-8-1	5	
BFB	-3-2	1	50
IS/SURR.	-6-1	1	250
ICV/LCS	SV1-17-90-3	1	
ICV/LCS	-97-2	1	
ICV/LCS	-89-2	5	
ICV/LCS	-99-3	5	

DATA FILE FOLDER	11K19

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO03	11/21/11

Comments:

Analyzed By: CGM

Date Disposed: 11/21/11

Disposed By: CGM

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/21/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -048

BATCH VC03H1654

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RKB307	BFB03K21						06:54
02		08	STD CHECK						
03		09	CVC03H1654						
04		10	VC03K21L		1.0				
05		11	C						
06		12	B	25mL					
07		13	11K133-02T	0.5mL	50				
08		14	-05T						
09		15	11K146-01T	5.0mL	5.0				
10		16	-03T	2.5mL	10				
11		17	-04T						
12		18	-05T	5.0mL	5.0				
13		19	-06T	2.5mL	10				
14		20	11K114-03T	0.25mL	100				
15		21	11K151-09T	5.0mL	5.0				
16		22	11K114-03T	2.5mL	10				
17		23	Rinse						
18		24	11K173-01	25mL	1.0				
19		25	11K133-02						
20		26	-05						17:56
21		27	Rinse						
22									
23									
24									
25									
26									
27									
28									
29									
30									CGM 11/21/11

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	VC03H16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-19-6-2	1	
DCC	6.3	1	
DCC	7.2	5	
DCC	8.1	5	
BFB	3.2	1	50/250
IS/SURR.	6.1	1	
ICV/LCS	SV1-17-90.3	1	
ICV/LCS	97.2	1	
ICV/LCS	89.2	5	
ICV/LCS	99.3	5	

DATA FILE FOLDER 11K21

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO03	

Comments:

Analyzed By: CGM

Date Disposed: 11/22/11

Disposed By: CGM

21138

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/22/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -048

BATCH V003H1656

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RKB 300	BFB03K23						07:12
02		51	V003H1656						
03		52	V003K23L		1.0				
04		53	C						
05		54	B	25 mL					
06		55	11K146-01T	5.0 mL	5.0				
07		56	11K151-10R	25 mL	1.0				
08		57	11K173-01T	0.05 mL	500				RR 50X
09		58	11K ~~174-08~~	25 mL	1.0				
10		59	11K ~~174-17~~						
11		60	11K151-1817						
12		61	-1818						
13		62	-7019						
14		63	-20						
15		64	11K174-01						50X
16		65	02						
17		66	03						
18		67	04						50
19		68	05						50X
20		69	06						
21		70	07						19:06
22		71	Rinse						
23									
24									
25									
26									
27									
28									
29									
30									CGM 11/22/11

CGM 11/23/11

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003H16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-19-6.2	1	
DCC	6.3	1	
DCC	7.2	5	
DCC	8.1	5	
BFB	3.2	1	50/250
IS/SURR.	6.1	1	
ICV/LCS	SV1-17-90.3	1	
ICV/LCS	97.2	1	
ICV/LCS	89.2	5	
ICV/LCS	99.3	5	

DATA FILE FOLDER 11K22

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO03	

Comments:

Analyzed By: CGM

Date Disposed: 11/23/11

Disposed By: CGM 11/

21139

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD RSK-175
DISSOLVED GASES

SDG#: 11K146

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K146

METHOD RSK-175
DISSOLVED GASES

A total of six (6) water samples were received on 11/16/11 for Dissolved Gas analysis, Method RSK-175 in accordance with USEPA at R.S. Kerr Environmental Research Laboratory, Ada, OK 74820 March 15, 1989.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for DGK020WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

SAMPLE RESULTS

LAB CHRONICLE
DISSOLVED GASES

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K146
Instrument ID : GCT010

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DGK020WB	1	NA	11/29/1107:38	11/29/1107:10	FK29003A	FK29002A	DGK020W	Method Blank
LCS1W	DGK020WL	1	NA	11/29/1107:51	11/29/1107:10	FK29004A	FK29002A	DGK020W	Lab Control Sample (LCS)
LCD1W	DGK020WC	1	NA	11/29/1108:04	11/29/1107:10	FK29005A	FK29002A	DGK020W	LCS Duplicate
MW-70-43B-137	K146-01	1	NA	11/29/1108:17	11/29/1107:10	FK29006A	FK29002A	DGK020W	Field Sample
MW-70-PMW11A-138	K146-02	1	NA	11/29/1108:31	11/29/1107:10	FK29007A	FK29002A	DGK020W	Field Sample
MW-70-PMW11A-138DL	K146-02I	200	NA	11/29/1108:57	11/29/1107:10	FK29009A	FK29002A	DGK020W	Diluted Sample
MW-70-PMW11B-139	K146-03	1	NA	11/29/1109:09	11/29/1107:10	FK29010A	FK29002A	DGK020W	Field Sample
MW-70-PMW12A-140	K146-04	1	NA	11/29/1109:22	11/29/1107:10	FK29011A	FK29002A	DGK020W	Field Sample
MW-70-PMW12A-140DL	K146-04T	1000	NA	11/29/1109:40	11/29/1107:10	FK29012A	FK29002A	DGK020W	Diluted Sample
MW-70-PMW12B-142	K146-05	1	NA	11/29/1110:05	11/29/1107:10	FK29014A	FK29013A	DGK020W	Field Sample
MW-70-PMW12B-142DL	K146-05T	10	NA	11/29/1110:19	11/29/1107:10	FK29015A	FK29013A	DGK020W	Diluted Sample
MW-70-PMW12B-142DL	K146-05I	400	NA	11/29/1110:31	11/29/1107:10	FK29016A	FK29013A	DGK020W	Diluted Sample
IR-70-FD-141	K146-06	1	NA	11/29/1110:44	11/29/1107:10	FK29017A	FK29013A	DGK020W	Field Sample
IR-70-FD-141DL	K146-06T	1000	NA	11/29/1111:01	11/29/1107:10	FK29018A	FK29013A	DGK020W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/16/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/16/11
Batch No.	: 11K146	Date Extracted:	11/29/11 07:10
Sample ID:	MW-70-43B-137	Date Analyzed:	11/29/11 08:17
Lab Samp ID:	K146-01	Dilution Factor:	1
Lab File ID:	FK29006A	Matrix :	WATER
Ext Btch ID:	DGK020W	% Moisture :	NA
Calib. Ref.:	FK29002A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	10	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/16/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/16/11
Batch No. : 11K146	Date Extracted: 11/29/11 07:10
Sample ID: MW-70-PMW11A-138	Date Analyzed: 11/29/11 08:31
Lab Samp ID: K146-02	Dilution Factor: 1
Lab File ID: FK29007A	Matrix : WATER
Ext Btch ID: DGK020W	% Moisture : NA
Calib. Ref.: FK29002A	Instrument ID : GCT010

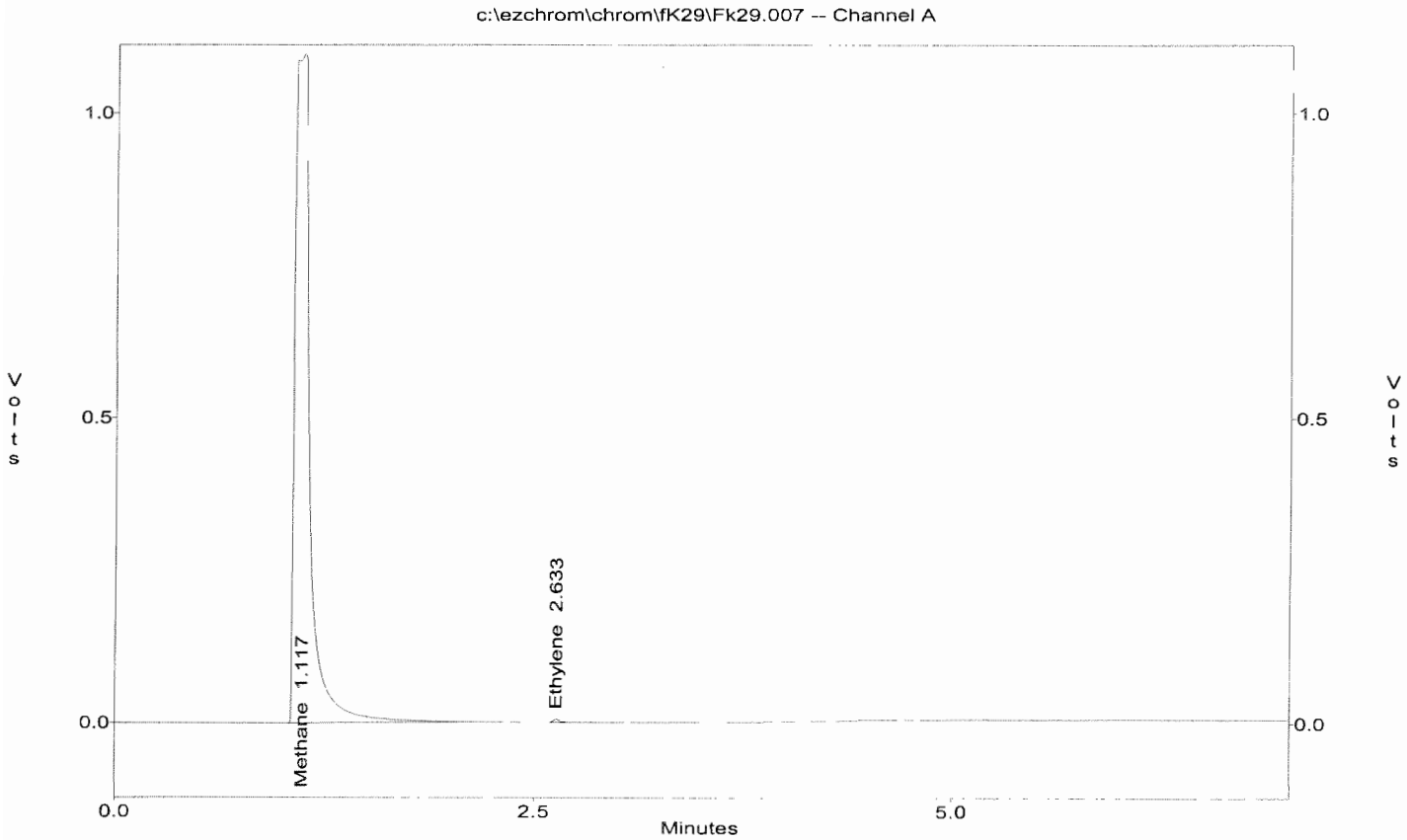
PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	0.90J	2.0	0.60
METHANE	230E	2.0	0.34

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK29\Fk29.007
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : 11K146-02
Acquired : Nov 29, 2011 08:31:09
Printed : Nov 29, 2011 08:38:10
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.117	7060684.0	30507.1	231.44 E
--	Acetylene	2.233	0.0	0.0	0.00
2	Ethylene	2.633	14740.0	16311.8	0.90
--	Ethane	3.100	0.0	0.0	0.00
--	Propane	5.942	0.0	0.0	0.00



METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/16/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/16/11
Batch No. : 11K146	Date Extracted: 11/29/11 07:10
Sample ID: MW-70-PMW11A-138DL	Date Analyzed: 11/29/11 08:57
Lab Samp ID: K146-02I	Dilution Factor: 200
Lab File ID: FK29009A	Matrix : WATER
Ext Btch ID: DGK020W	% Moisture : NA
Calib. Ref.: FK29002A	Instrument ID : GCT010

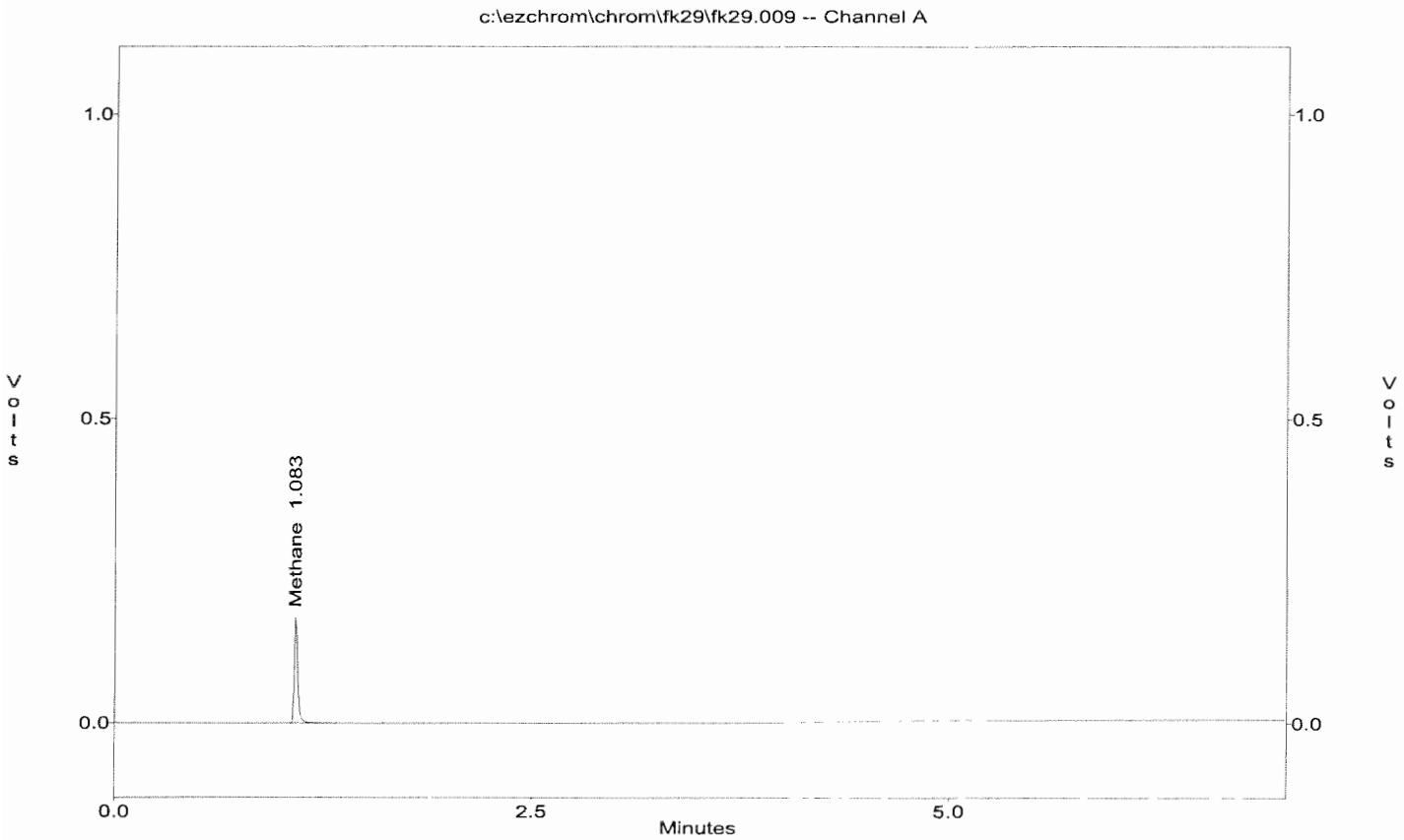
PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	400	130
ETHENE	ND	400	120
METHANE	1700	400	68

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk29\fk29.009
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : 11K146-02I DF=200
Acquired : Nov 29, 2011 08:57:20
Printed : Nov 29, 2011 09:08:18
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	254464.0	30507.1	1668.23
--	Acetylene	2.233	0.0	0.0	0.00
--	Ethylene	2.667	0.0	0.0	0.00
--	Ethane	3.100	0.0	0.0	0.00
--	Propane	5.942	0.0	0.0	0.00



METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/16/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/16/11
Batch No. : 11K146	Date Extracted: 11/29/11 07:10
Sample ID: MW-70-PMW11B-139	Date Analyzed: 11/29/11 09:09
Lab Samp ID: K146-03	Dilution Factor: 1
Lab File ID: FK29010A	Matrix : WATER
Ext Btch ID: DGK020W	% Moisture : NA
Calib. Ref.: FK29002A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	6.3	2.0	0.60
METHANE	27	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/16/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/16/11
Batch No. : 11K146	Date Extracted: 11/29/11 07:10
Sample ID: MW-70-PMW12A-140	Date Analyzed: 11/29/11 09:22
Lab Samp ID: K146-04	Dilution Factor: 1
Lab File ID: FK29011A	Matrix : WATER
Ext Btch ID: DGK020W	% Moisture : NA
Calib. Ref.: FK29002A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	14	2.0	0.60
METHANE	120	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/16/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/16/11
Batch No. : 11K146	Date Extracted: 11/29/11 07:10
Sample ID: MW-70-PMW12A-140DL	Date Analyzed: 11/29/11 09:40
Lab Samp ID: K146-04T	Dilution Factor: 1000
Lab File ID: FK29012A	Matrix : WATER
Ext Btch ID: DGK020W	% Moisture : NA
Calib. Ref.: FK29002A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	15000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/16/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/16/11
Batch No.	: 11K146	Date Extracted:	11/29/11 07:10
Sample ID:	MW-70-PMW12B-142	Date Analyzed:	11/29/11 10:05
Lab Samp ID:	K146-05	Dilution Factor:	1
Lab File ID:	FK29014A	Matrix :	WATER
Ext Btch ID:	DGK020W	% Moisture :	NA
Calib. Ref.:	FK29013A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	0.84J	2.0	0.64
ETHENE	120E	2.0	0.60
METHANE	110E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/16/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/16/11
Batch No. : 11K146	Date Extracted: 11/29/11 07:10
Sample ID: MW-70-PMW12B-142DL	Date Analyzed: 11/29/11 10:19
Lab Samp ID: K146-05T	Dilution Factor: 10
Lab File ID: FK29015A	Matrix : WATER
Ext Btch ID: DGK020W	% Moisture : NA
Calib. Ref.: FK29013A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	20	6.4
ETHENE	110	20	6.0
METHANE	1400E	20	3.4

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/16/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/16/11
Batch No. : 11K146	Date Extracted: 11/29/11 07:10
Sample ID: MW-70-PMW12B-142DL	Date Analyzed: 11/29/11 10:31
Lab Samp ID: K146-05I	Dilution Factor: 400
Lab File ID: FK29016A	Matrix : WATER
Ext Btch ID: DGK020W	% Moisture : NA
Calib. Ref.: FK29013A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	800	260
ETHENE	ND	800	240
METHANE	5100	800	140

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/16/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/16/11
Batch No. : 11K146	Date Extracted: 11/29/11 07:10
Sample ID: IR-70-FD-141	Date Analyzed: 11/29/11 10:44
Lab Samp ID: K146-06	Dilution Factor: 1
Lab File ID: FK29017A	Matrix : WATER
Ext Btch ID: DGK020W	% Moisture : NA
Calib. Ref.: FK29013A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	14	2.0	0.60
METHANE	110E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/16/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/16/11
Batch No. : 11K146	Date Extracted: 11/29/11 07:10
Sample ID: IR-70-FD-141DL	Date Analyzed: 11/29/11 11:01
Lab Samp ID: K146-06T	Dilution Factor: 1000
Lab File ID: FK29018A	Matrix : WATER
Ext Btch ID: DGK020W	% Moisture : NA
Calib. Ref.: FK29013A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	12000	2000	340

QC SUMMARIES

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/29/11
Batch No. : 11K146	Date Extracted: 11/29/11 07:10
Sample ID: MBLK1W	Date Analyzed: 11/29/11 07:38
Lab Samp ID: DGK020WB	Dilution Factor: 1
Lab File ID: FK29003A	Matrix : WATER
Ext Btch ID: DGK020W	% Moisture : NA
Calib. Ref.: FK29002A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: METHOD RSK-175

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	DGK020WB	DGK020WL	DGK020WC		
LAB FILE ID:	FK29003A	FK29004A	FK29005A		
DATE EXTRACTED:	11/29/1107:10	11/29/1107:10	11/29/1107:10	DATE COLLECTED:	NA
DATE ANALYZED:	11/29/1107:38	11/29/1107:51	11/29/1108:04	DATE RECEIVED:	11/29/11
PREP. BATCH:	DGK020W	DGK020W	DGK020W		
CALIB. REF:	FK29002A	FK29002A	FK29002A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	ND	25.4	26.6	105	25.4	25.9	102	3	70-140	30
Ethene	ND	23.7	25.5	108	23.7	25.0	105	2	70-140	30
Methane	ND	13.6	12.8	94	13.6	12.4	91	3	70-130	30

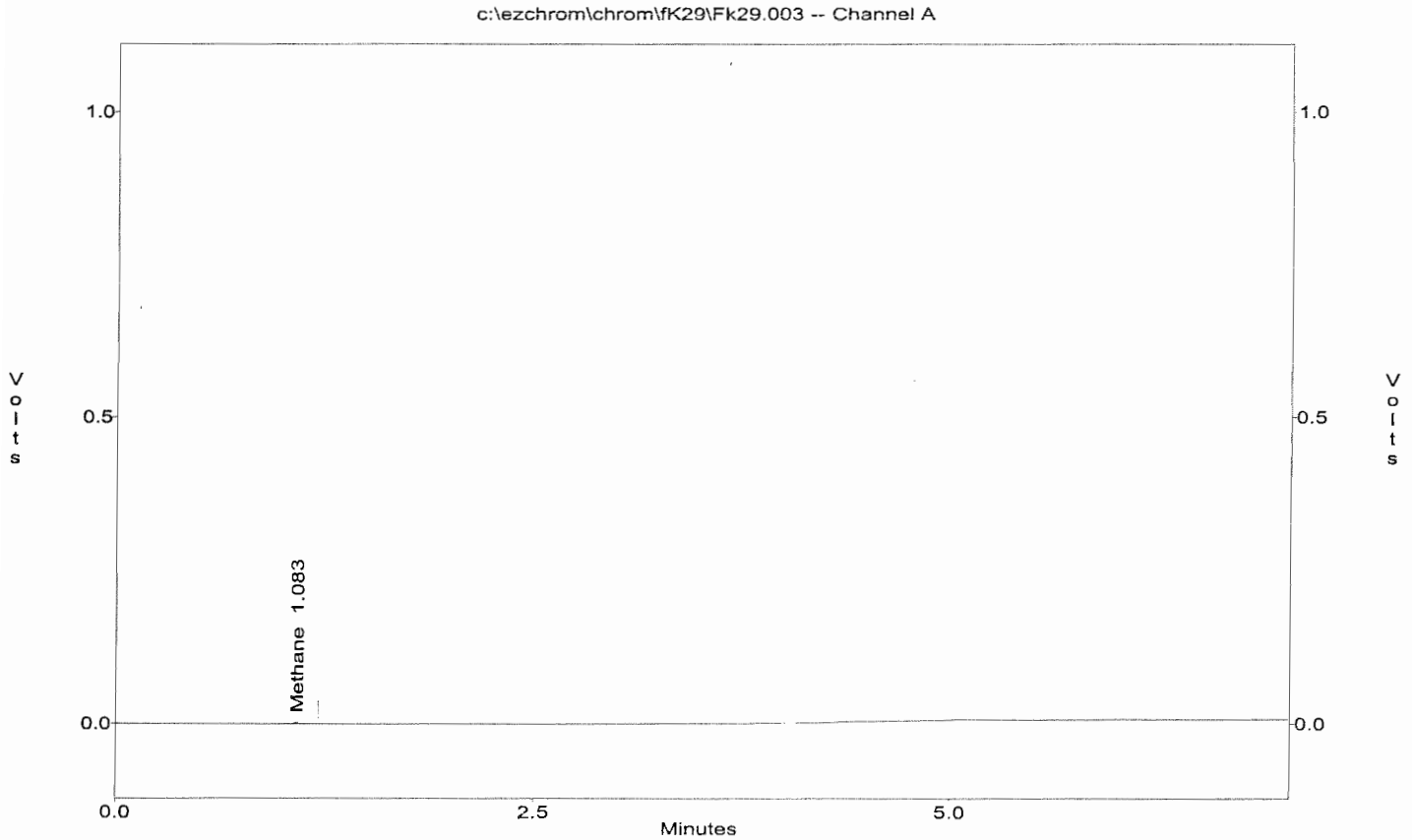
QC DATA

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK29\Fk29.003
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK020WB
Acquired : Nov 29, 2011 07:38:59
Printed : Nov 29, 2011 07:46:01
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	5548.0	30507.1	0.18
--	Acetylene	2.233	0.0	0.0	0.00
--	Ethylene	2.667	0.0	0.0	0.00
--	Ethane	3.100	0.0	0.0	0.00
--	Propane	5.942	0.0	0.0	0.00

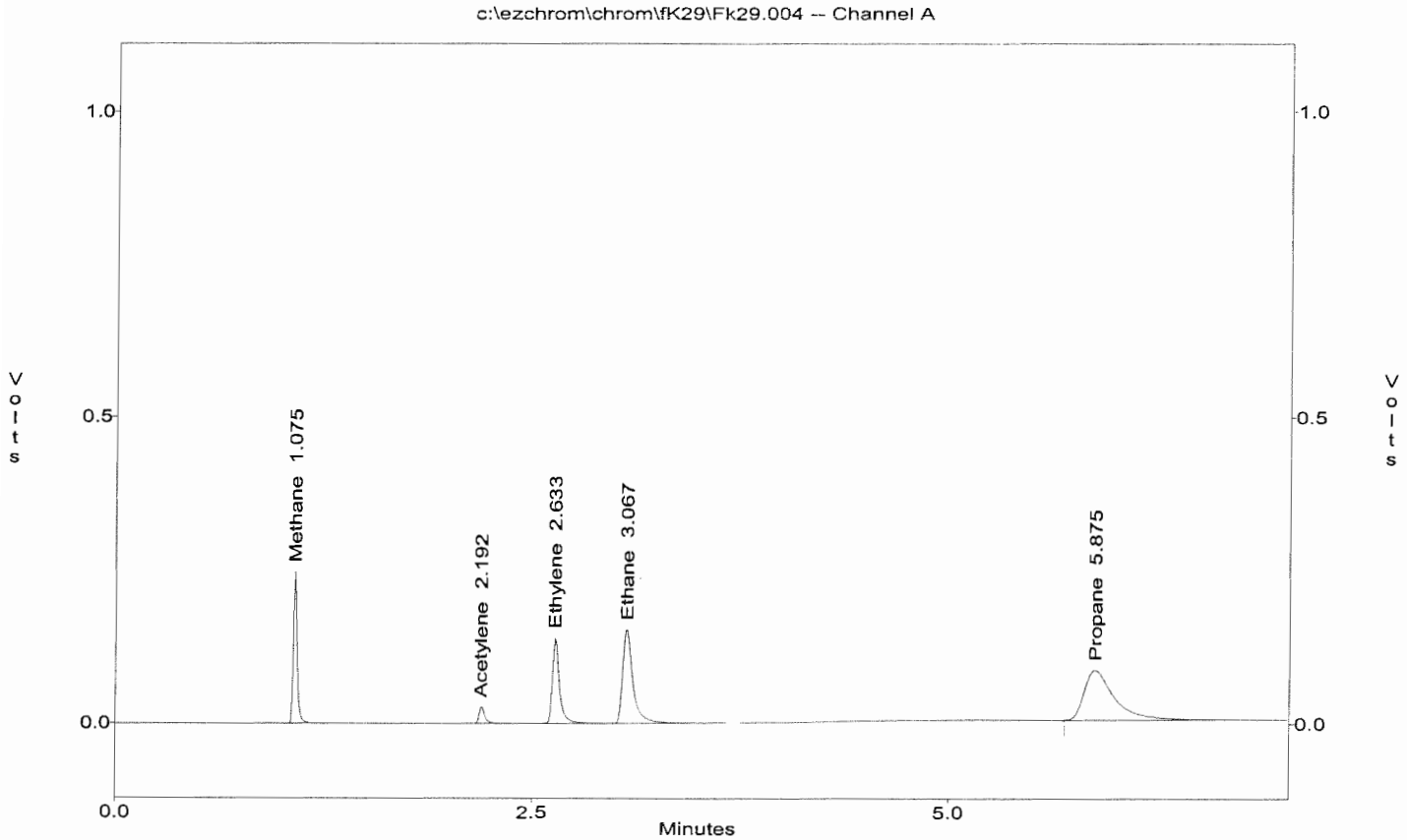


EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK29\Fk29.004
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK020WL
Acquired : Nov 29, 2011 07:51:33
Printed : Nov 29, 2011 07:58:35
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	391803.0	30507.1	12.84
2	Acetylene	2.192	64928.0	2647.6	24.52
3	Ethylene	2.633	416087.0	16311.8	25.51
4	Ethane	3.067	663424.0	24914.4	26.63
5	Propane	5.875	1054281.0	27171.2	38.80

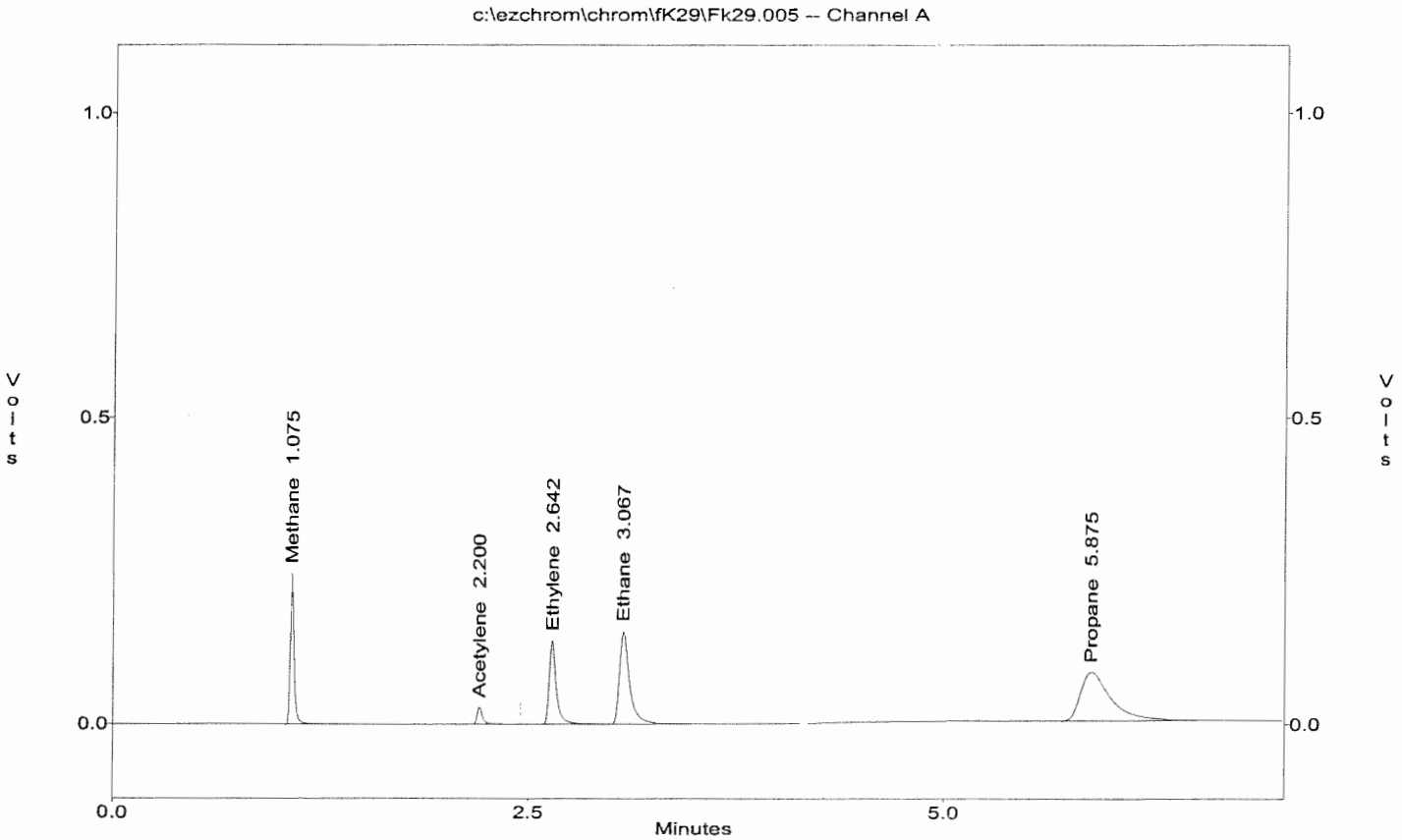


EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK29\Fk29.005
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK020WC
Acquired : Nov 29, 2011 08:04:37
Printed : Nov 29, 2011 08:11:40
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	379255.0	30507.1	12.43
2	Acetylene	2.200	64170.0	2647.6	24.24
3	Ethylene	2.642	407076.0	16311.8	24.96
4	Ethane	3.067	645384.0	24914.4	25.90
5	Propane	5.875	1012022.0	27171.2	37.25



INITIAL CALIBRATIONS

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	25.00X	40.00X	75.00X	100.00X	MEAN	%RSD
Methane	0.34	31626	33510	29954	29307	29338	29307	30507.1	5.6
Acetylene	0.55	2465	2595	2723	2744	2716	2643	2647.7	4.0
Ethylene	0.59	14655	16070	16617	16602	17123	16803	16311.8	5.4
Ethane	0.64	22748	24144	25289	25073	26185	26048	24914.4	5.2
Propane	0.93	29887	24871	26520	26214	27735	27800	27171.2	6.3

DG10K01.MET

FORM VI DGAS -2 1/96 Rev 2/2006

11/03/11

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53

COMPOUND	RT OF STANDARDS (MIN) 2.0X	10.0X	25.0X	40.0X	75.0X	100.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
Methane	1.083	1.075	1.083	1.083	1.083	1.083	1.082	1.056	1.108	0.026
Acetylene	2.208	2.192	2.208	2.217	2.217	2.217	2.210	2.184	2.236	0.026
Ethylene	2.642	2.633	2.650	2.658	2.658	2.658	2.650	2.599	2.701	0.051
Ethane	3.067	3.067	3.075	3.083	3.092	3.083	3.078	3.028	3.128	0.050
Propane	5.942	5.883	5.900	5.917	5.917	5.908	5.911	5.835	5.987	0.076

DG10K01.MET

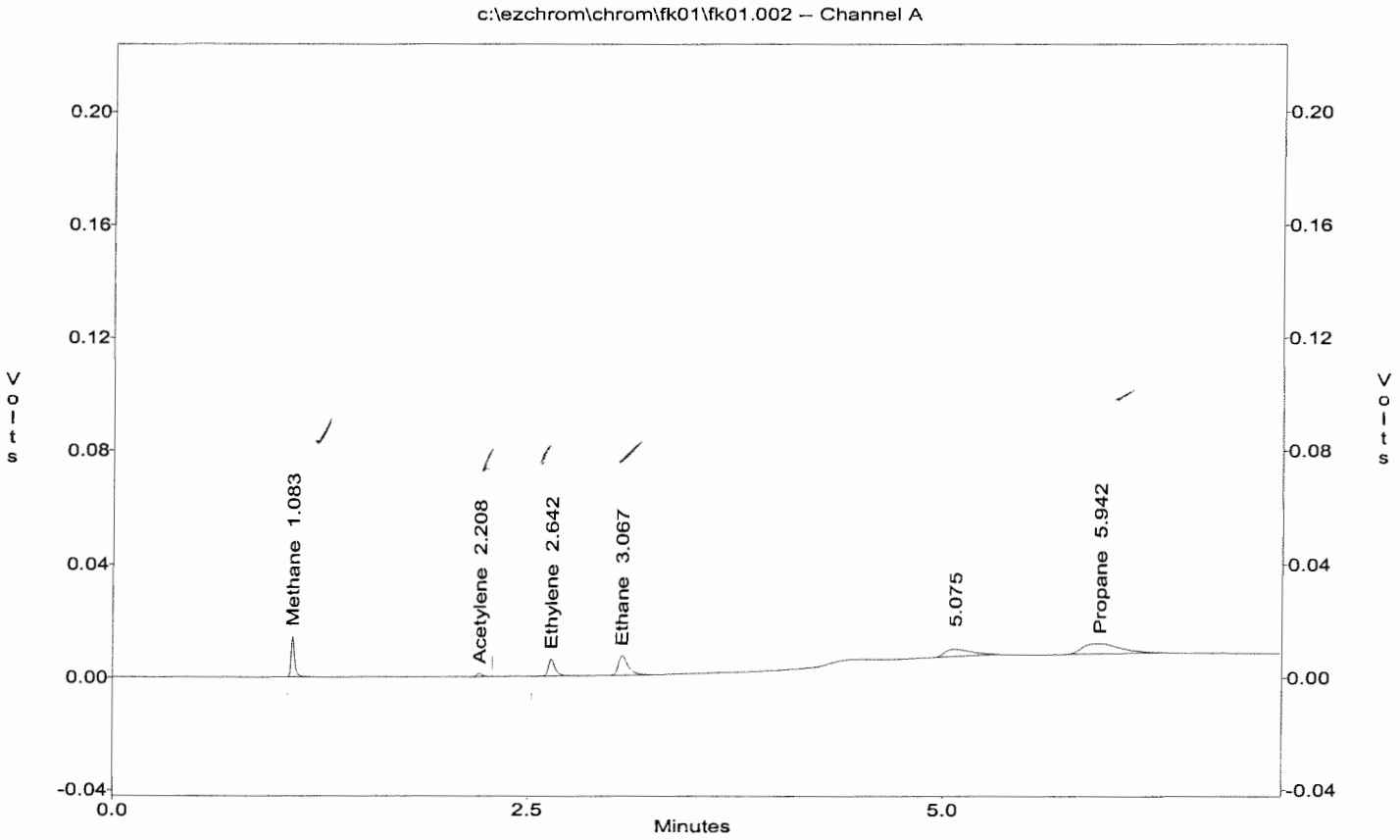
AS 11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.002
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-01
Acquired : Nov 01, 2011 11:28:48
Printed : Nov 01, 2011 16:46:40
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	21439.0	30507.1	0.68
2	Acetylene	2.208	2712.0	2647.6	1.10
3	Ethylene	2.642	17381.0	16311.8	1.19
4	Ethane	3.067	28913.0	24914.4	1.27
6	Propane	5.942	55710.0	27171.2	1.86



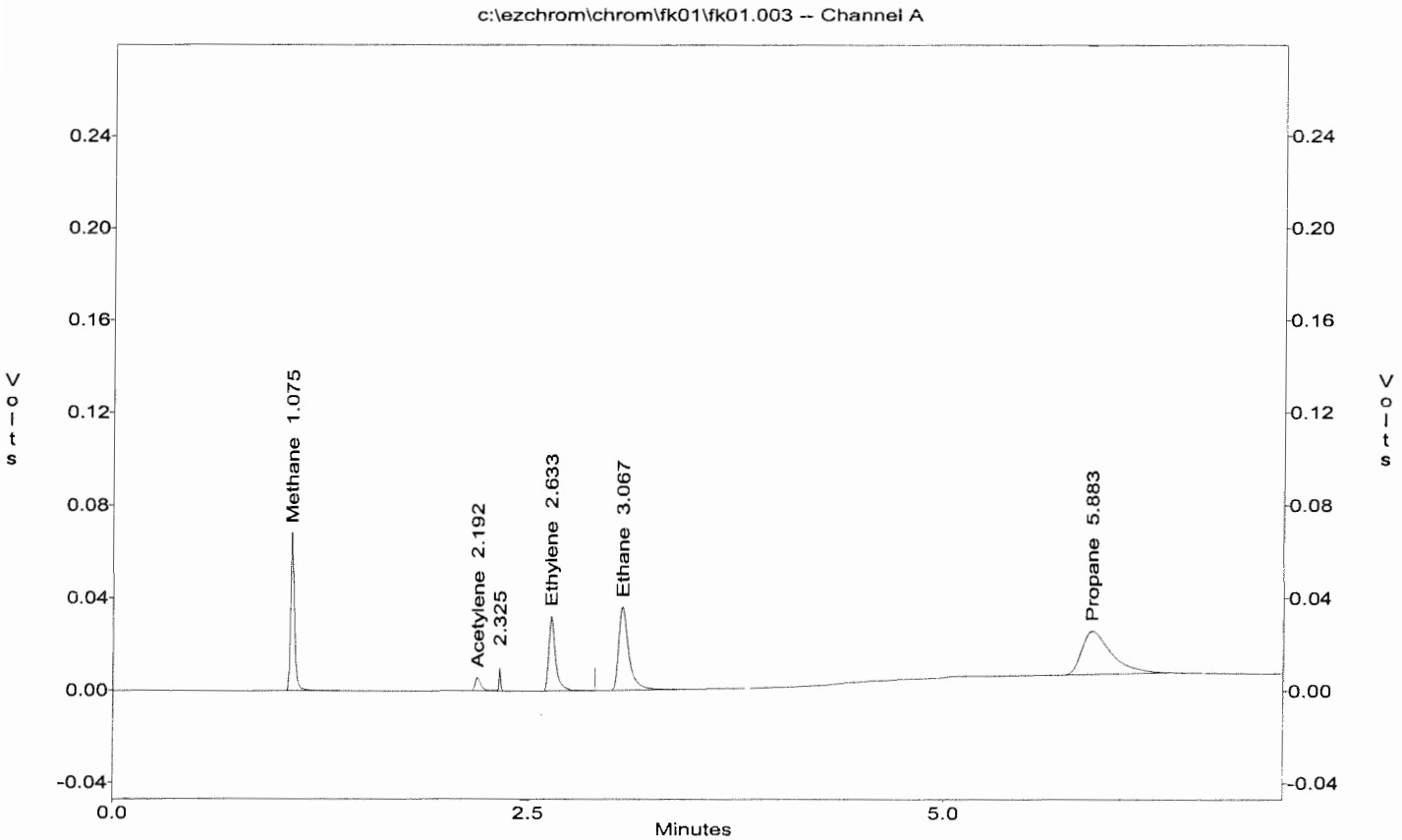
RS 11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.003
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-02
Acquired : Nov 01, 2011 11:41:49
Printed : Nov 01, 2011 16:46:57
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	113600.0	30507.1	3.39
2	Acetylene	2.192	14297.0	2647.6	5.51
4	Ethylene	2.633	95326.0	16311.8	5.93
5	Ethane	3.067	153436.0	24914.4	6.36
6	Propane	5.883	231819.0	27171.2	9.32



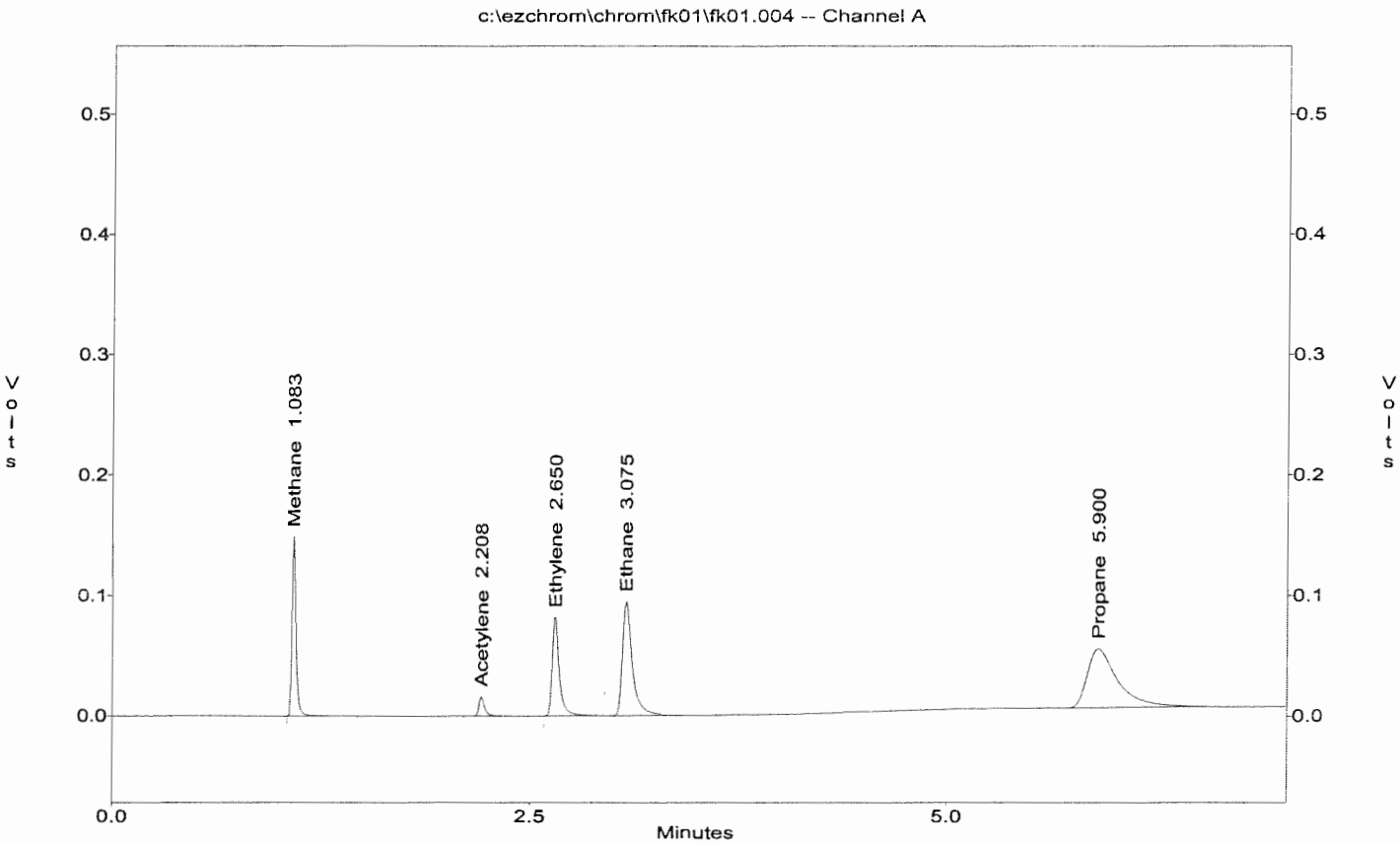
RS
11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.004
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-03
Acquired : Nov 01, 2011 11:55:36
Printed : Nov 01, 2011 16:47:09
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	253836.0	30507.1	8.47
2	Acetylene	2.208	37503.0	2647.6	13.77
3	Ethylene	2.650	246435.0	16311.8	14.83
4	Ethane	3.075	401839.0	24914.4	15.89
5	Propane	5.900	617912.0	27171.2	23.30



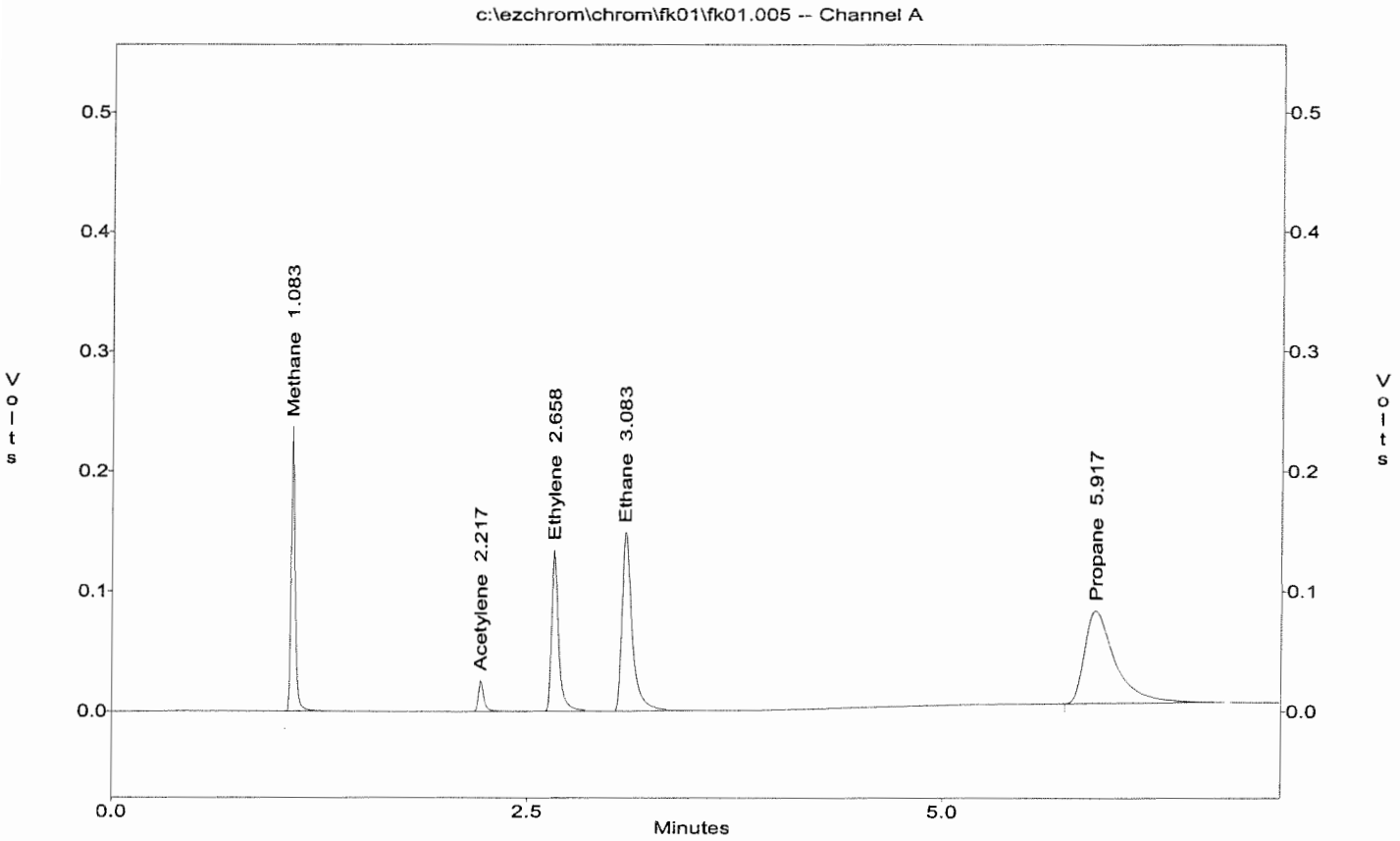
11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.005
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-04
Acquired : Nov 01, 2011 12:09:18
Printed : Nov 01, 2011 16:47:15
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	397403.0	30507.1	13.56
2	Acetylene	2.217	60362.0	2647.6	22.00
3	Ethylene	2.658	393970.0	16311.8	23.73
4	Ethane	3.083	637350.0	24914.4	25.42
5	Propane	5.917	977274.0	27171.2	37.28



RS
11/03/11

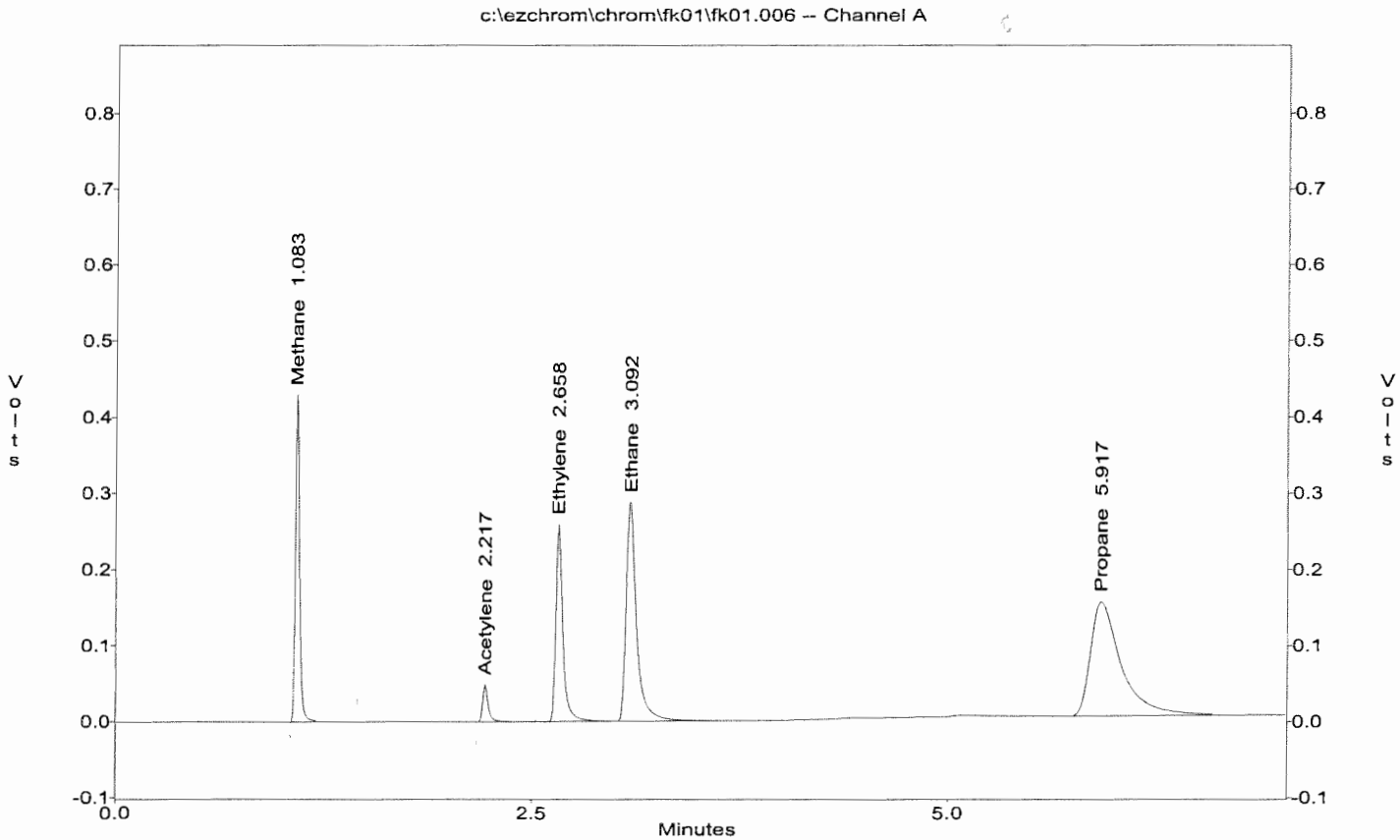
4030

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.006
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-05
Acquired : Nov 01, 2011 12:38:25
Printed : Nov 01, 2011 16:47:32
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	745775.0	30507.1	25.42
2	Acetylene	2.217	112175.0	2647.6	41.30
3	Ethylene	2.658	761815.0	16311.8	44.49
4	Ethane	3.092	1248240.0	24914.4	47.67
5	Propane	5.917	1938976.0	27171.2	69.91



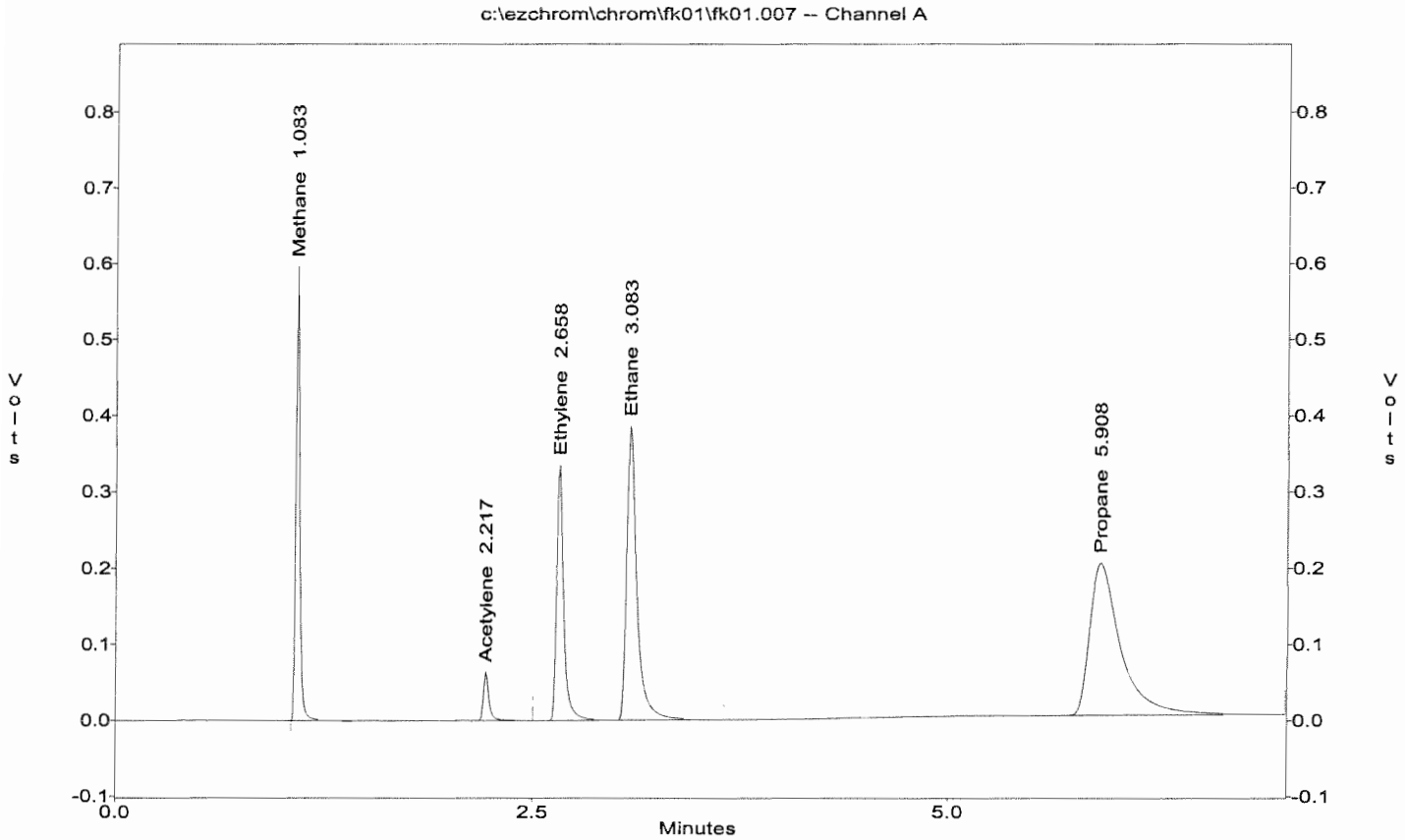
11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.007
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-06
Acquired : Nov 01, 2011 12:53:24
Printed : Nov 01, 2011 16:47:38
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	993496.0	30507.1	33.90
2	Acetylene	2.217	145648.0	2647.6	55.10
3	Ethylene	2.658	996770.0	16311.8	59.32
4	Ethane	3.083	1655327.0	24914.4	63.55
5	Propane	5.908	2591233.0	27171.2	93.21



AS 11/3/11

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK01008A 11/01/2011 13:45
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	416247	13.64	1		15
Acetylene	2.175	2.149	2.201	22.0	2647.6	66913	25.27	15		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	437326	26.81	13		15
Ethane	3.075	3.025	3.125	25.4	24914.4	691218	27.74	9		15
Propane	5.900	5.824	5.976	37.3	27171.2	1111008	40.89	10		15

DG10K01.MET

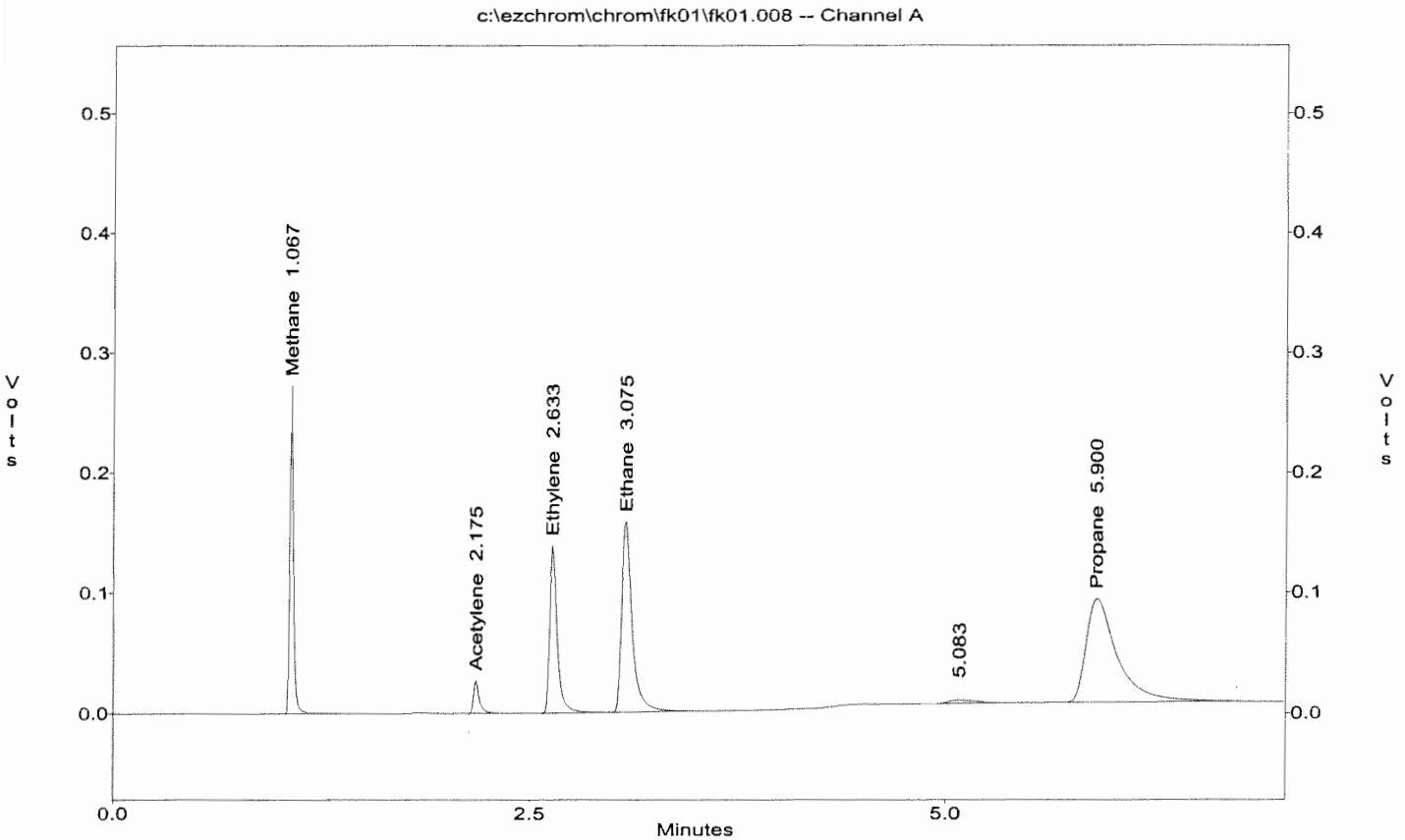
AJ
11/3/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.008
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : IDG10K0101
Acquired : Nov 01, 2011 13:45:55
Printed : Nov 01, 2011 16:47:55
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.067	416247.0	30507.1	13.64
2	Acetylene	2.175	66913.0	2647.6	25.27
3	Ethylene	2.633	437326.0	16311.8	26.81
4	Ethane	3.075	691218.0	24914.4	27.74
6	Propane	5.900	1111008.0	27171.2	40.89



11/3/11

DAILY CALIBRATIONS

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK29002A 11/29/2011 07:26
CONC UNIT : ppb

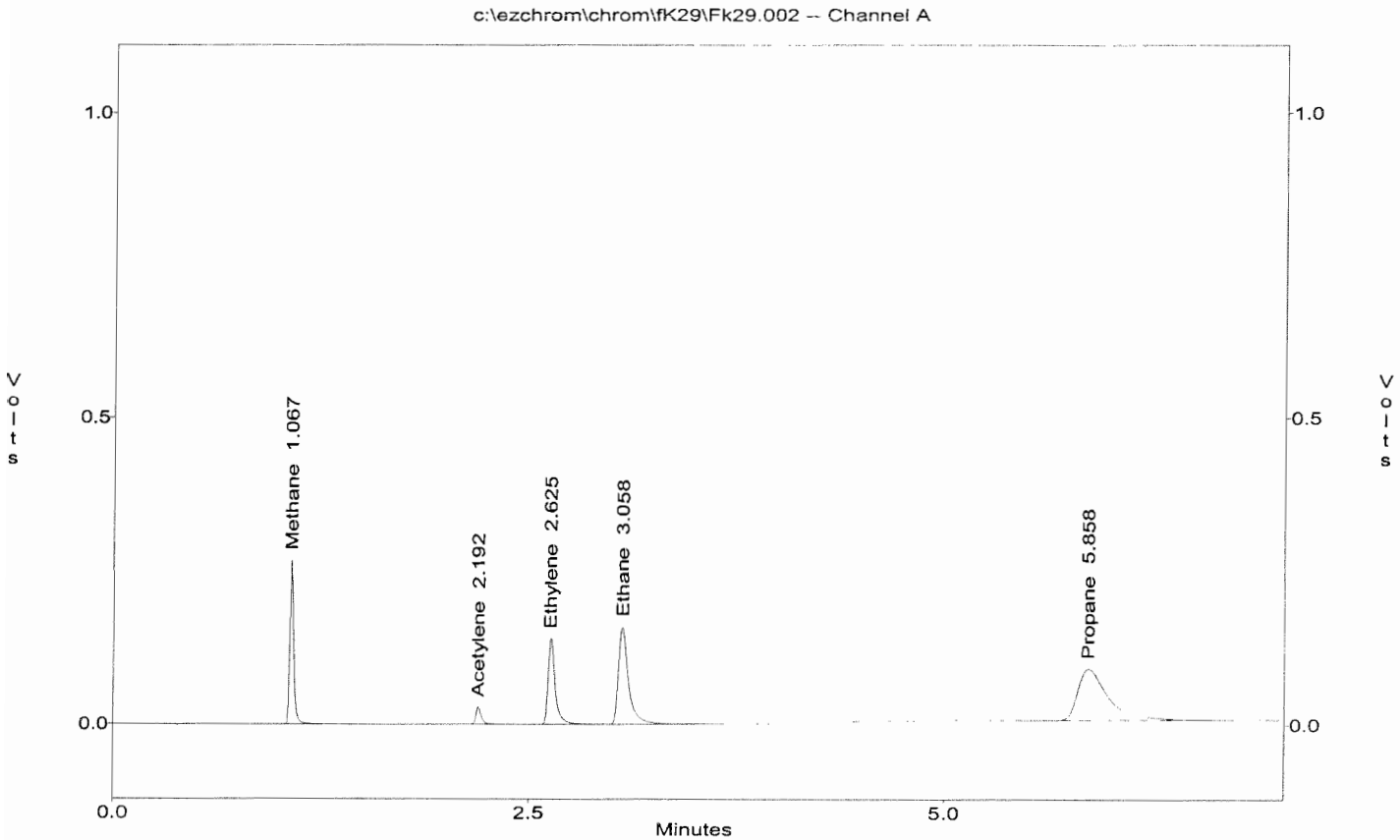
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	424993	13.93	3		15
Acetylene	2.192	2.166	2.218	22.0	2647.6	66107	24.97	13		15
Ethylene	2.625	2.574	2.676	23.7	16311.8	423341	25.95	9		15
Ethane	3.058	3.008	3.108	25.4	24914.4	687344	27.59	9		15
Propane	5.858	5.782	5.934	37.3	27171.2	1062496	39.10	5		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK29\Fk29.002
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01468
Acquired : Nov 29, 2011 07:26:02
Printed : Nov 29, 2011 07:33:04
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.067	424993.0	30507.1	13.93
2	Acetylene	2.192	66107.0	2647.6	24.97
3	Ethylene	2.625	423341.0	16311.8	25.95
4	Ethane	3.058	687344.0	24914.4	27.59
5	Propane	5.858	1062496.0	27171.2	39.10



CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK29013A 11/29/2011 09:52
CONC UNIT : ppb

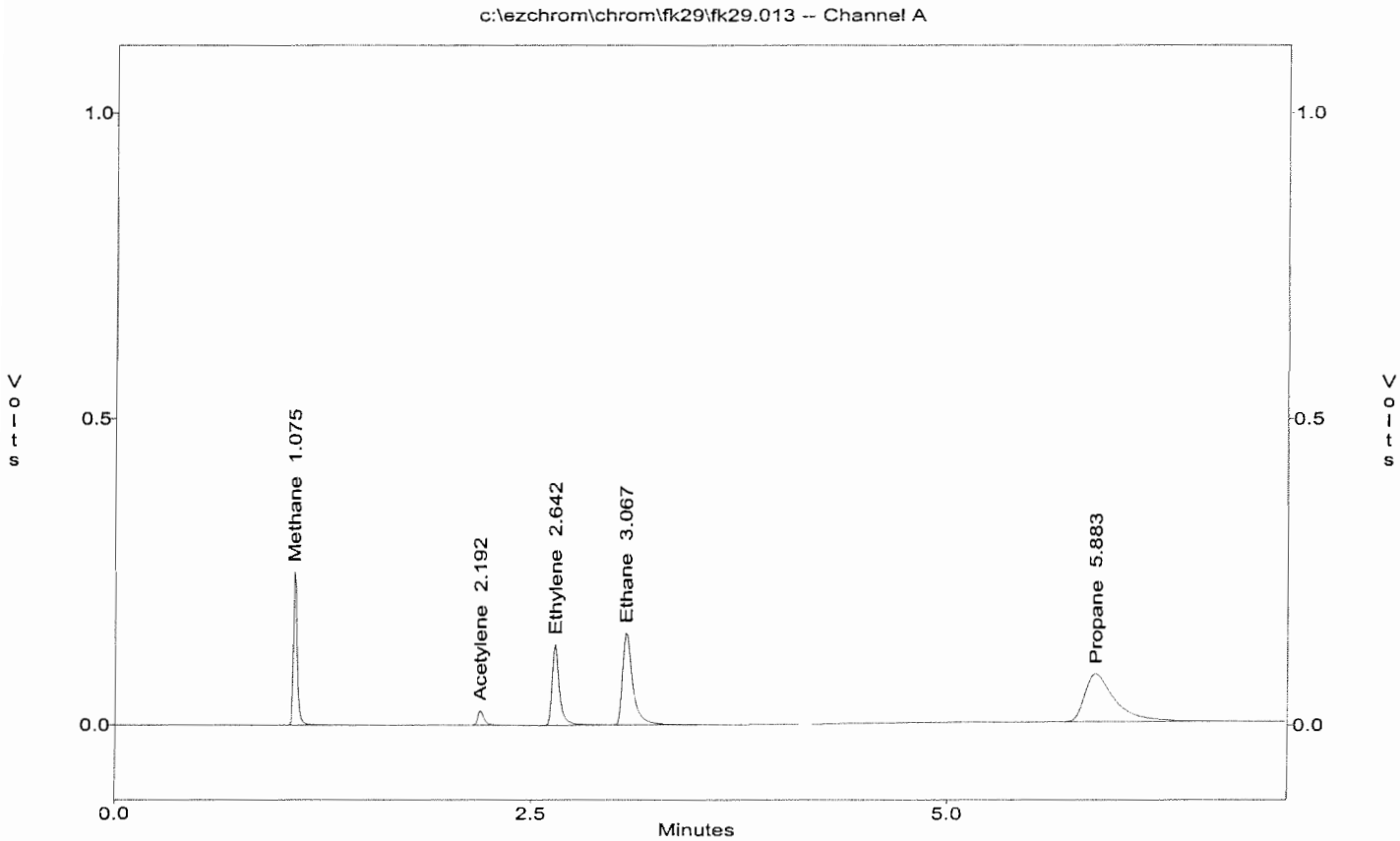
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	408120	13.38	-1		15
Acetylene	2.192	2.166	2.218	22.0	2647.6	61561	23.25	6		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	406281	24.91	5		15
Ethane	3.067	3.017	3.117	25.4	24914.4	651880	26.17	3		15
Propane	5.883	5.807	5.959	37.3	27171.2	1004302	36.96	-1		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk29\fk29.013
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : CDG10K01469
Acquired : Nov 29, 2011 09:52:35
Printed : Nov 29, 2011 10:13:35
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	408120.0	30507.1	13.38
2	Acetylene	2.192	61561.0	2647.6	23.25
3	Ethylene	2.642	406281.0	16311.8	24.91
4	Ethane	3.067	651880.0	24914.4	26.16
5	Propane	5.883	1004302.0	27171.2	36.96



CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK29024A 11/29/2011 12:26
CONC UNIT : ppb

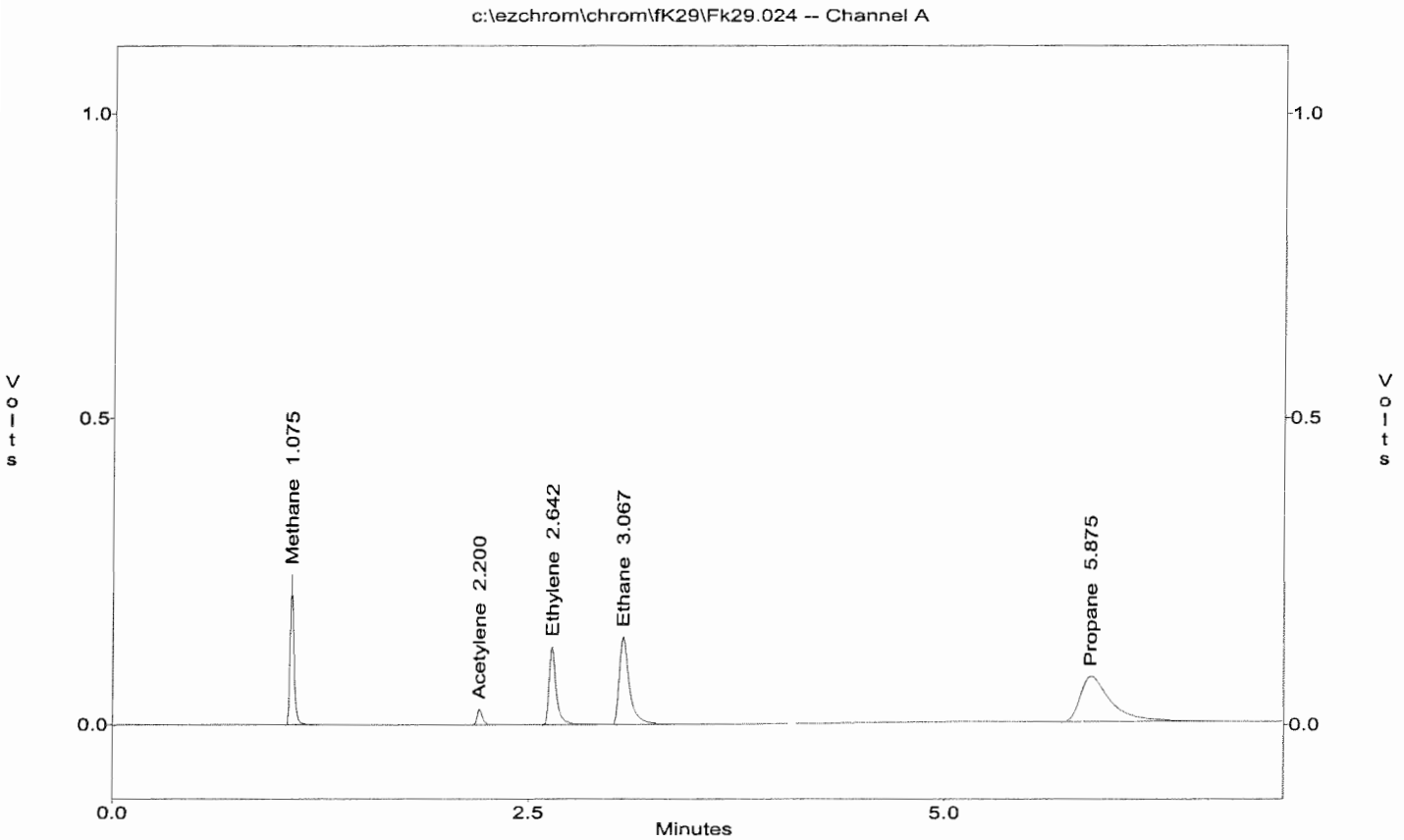
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	384083	12.59	-7		15
Acetylene	2.200	2.174	2.226	22.0	2647.6	58972	22.27	1		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	381435	23.38	-1		15
Ethane	3.067	3.017	3.117	25.4	24914.4	614292	24.66	-3		15
Propane	5.875	5.799	5.951	37.3	27171.2	941122	34.64	-7		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK29\Fk29.024
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01470
Acquired : Nov 29, 2011 12:26:30
Printed : Nov 29, 2011 12:33:32
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	384083.0	30507.1	12.59
2	Acetylene	2.200	58972.0	2647.6	22.27
3	Ethylene	2.642	381435.0	16311.8	23.38
4	Ethane	3.067	614292.0	24914.4	24.66
5	Propane	5.875	941122.0	27171.2	34.64



ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGAS ICAL

Book #:	A10-025
Instrument No.:	10
Analytical Sequence:	FK01
Method File:	DG10K01
Analytical Batch:	N/A

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGAS ICAL SSSA-05-01-10	500 ppm
DGAS ICV SSSA-05-01-7	500 ppm
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: SC

Date: 11/01/11

Disposed By: SC

Date Disposed: 11/01/11

Method: Dg10k01.met Batch: Fk01.seq Data: Fk01.011 - [Batch: fk01.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Run Type	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
1	Unknown	IB10K407	dg10k01.met	FK01.001	100ml 1	1	
2	Unknown	DG10K01-01	dg10k01.met	FK01.002	1	1	
3	Unknown	DG10K01-02	dg10k01.met	FK01.003	1	1	
4	Unknown	DG10K01-03	dg10k01.met	FK01.004	1	1	DGAS 1ml
5	Unknown	DG10K01-04	dg10k01.met	FK01.005	1	1	
6	Unknown	DG10K01-05	dg10k01.met	FK01.006	1	1	
7	Unknown	DG10K01-06	dg10k01.met	FK01.007	1	1	
8	Unknown	IDG10K0101	dg10k01.met	FK01.008	1	1	DGAS 1ov
9	Unknown	IB	dg10k01.met	FK01.009	1	1	
10	Unknown	IB	dg10k01.met	FK01.010	1	1	
11	Unknown	IB	dg10k01.met	FK01.011	1	1	
12	Unknown	IB	dg10k01.met	FK01.012	1	1	
13	Unknown	IB	dg10k01.met	FK01.013	1	1	
14	Unknown	IB	dg10k01.met	FK01.014	1	1	
15	Unknown	IB	dg10k01.met	FK01.015	1	1	FINAL
16	Unknown	IB	dg10k01.met	FK01.016	1	1	
17	Unknown	IB	dg10k01.met	FK01.017	1	1	
18	Unknown	IB	dg10k01.met	FK01.018	1	1	
19	Unknown	IB	dg10k01.met	FK01.019	1	1	
20	Unknown	IB	dg10k01.met	FK01.020	1	1	
21	Unknown	IB	dg10k01.met	FK01.021	1	1	
22	Unknown	IB	dg10k01.met	FK01.022	1	1	
23	Unknown	IB	dg10k01.met	FK01.023	1	1	
24	Unknown	IB	dg10k01.met	FK01.024	1	1	
25	Unknown	IB	dg10k01.met	FK01.025	1	1	
26	Unknown	IB	dg10k01.met	FK01.026	1	1	
27	Unknown	IB	dg10k01.met	FK01.027	1	1	
28	Unknown	IB	dg10k01.met	FK01.028	1	1	
29	Unknown	IB	dg10k01.met	FK01.029	1	1	
30	Unknown	IB	dg10k01.met	FK01.030	1	1	
31	Unknown	IB	dg10k01.met	FK01.031	1	1	
32	Unknown	IB	dg10k01.met	FK01.032	1	1	
33	Unknown	IB	dg10k01.met	FK01.033	1	1	
34	Unknown	IB	dg10k01.met	FK01.034	1	1	

SC 11/01/11

Waiting For Trigger...

Start | EZChrom Chromatograp... | Method: Dg10k01.... | Calculator | Method: Dg10k01.met | untitled - Paint | Exploring | Tuesday, November 01, 2011

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGK020W: K146, K174, K150

Book #:	A10-026
Instrument No.:	10
Analytical Sequence:	FK29
Method File:	DG10K01
Analytical Batch:	CDG10K01468

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGas DCC SSSB-07-41-2	200
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: RH

Date: 11/20/11

Disposed By: RH

Date Disposed: 11/20/11

4046

Method: Dg10k01.met Batch: Fk29.seq Data: Fk29.035 - [Batch: fk29.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
1	IB10K468	dg10k01.met	FK29.001	100uL 1	1	
2	CDG10K01468	dg10k01.met	FK29.002	1	1	
3	DGK020WB	dg10k01.met	FK29.003	1	1	
4	DGK020WL	dg10k01.met	FK29.004	1	1	
5	DGK020WC	dg10k01.met	FK29.005	1	1	
6	11K146-01	dg10k01.met	FK29.006	1	1	
7	11K146-02	dg10k01.met	FK29.007	1	1	
8	11K146-02T DF=40	dg10k01.met	FK29.008	2.5uL 1	40	CONF ONLY
9	11K146-02I DF=200	dg10k01.met	FK29.009	5uL (10x) 1	200	
10	11K146-03	dg10k01.met	FK29.010	100uL 1	1	
11	11K146-04	dg10k01.met	FK29.011	↓ 1	1	
12	11K146-04T DF=1000	dg10k01.met	FK29.012	2uL (20x) 1	1000	
13	CDG10K01469	dg10k01.met	FK29.013	100uL 1	1	
14	11K146-05	dg10k01.met	FK29.014	↓ 1	1	
15	11K146-05T DF=10	dg10k01.met	FK29.015	10uL 1	10	
16	11K146-05I DF=400	dg10k01.met	FK29.016	5uL (20x) 1	400	
17	11K146-06	dg10k01.met	FK29.017	100uL 1	1	
18	11K146-06T DF=1000	dg10k01.met	FK29.018	2uL (20x) 1	1000	
19	11K174-01	dg10k01.met	FK29.019	100uL 1	1	
20	11K174-02	dg10k01.met	FK29.020	↓ 1	1	
21	11K174-02T DF=20	dg10k01.met	FK29.021	5uL 1	20	FINAL
22	11K174-03	dg10k01.met	FK29.022	100uL 1	1	
23	11K174-01T DF=2	dg10k01.met	FK29.023	50uL 1	2	
24	CDG10K01470	dg10k01.met	FK29.024	100uL 1	1	
25	11K174-04	dg10k01.met	FK29.025	↓ 1	1	
26	11K174-03T DF=1000	dg10k01.met	FK29.026	2uL (20x) 1	1000	
27	11K174-05	dg10k01.met	FK29.027	100uL 1	1	
28	11K174-04T DF=50	dg10k01.met	FK29.028	2uL 1	50	
29	11K174-06	dg10k01.met	FK29.029	100uL 1	1	
30	11K174-06T DF=20	dg10k01.met	FK29.030	5uL 1	20	
31	11K174-07	dg10k01.met	FK29.031	100uL 1	1	
32	11K174-07T DF=2	dg10k01.met	FK29.032	50uL 1	2	
33	11K174-05T DF=1000	dg10k01.met	FK29.033	2uL (20x) 1	1000	
34	CDG10K01471	dg10k01.met	FK29.034	100uL 1	1	

Waiting For Trigger...

Start | EZChrom Chromatograp... | Method: Dg10k01.... | Method: Dg10k01.met | Calculator | Exploring - Export | untitled - F

Tuesday, November 29, 2011

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/01/11 Time: 10:00 End Date: 11/01/11 Time: 10:40

PREPARATION BATCH # N/A

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DG10K01-01	39	4	N/A	
02	-02			N/A	
03	-03			N/A	DGAS ICAL
04	-04			N/A	
05	-05			N/A	
06	-06			N/A	
07	IDG10K01 01			N/A	DGAS ICV
08					
09					
10					
11					
12					
13					SC 11/01/11
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Standards	ID	Amount Added (µl)
LCS/MS / ICV	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic free
He	Air Gas
ICAL STD (500 ppm)	SSSA-05-01-10 (SPECIALTY AIR)
ICV STD 500 ppm	SSSA-05-01-7 (MATHESON)

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #: (ESS)	28100705

Comments:

1) 0.08 ml ICAL STD + 3.92 ml He
2) 0.4 ml 3.6 ml
3) 1.0 ml 3.0 ml
4) 1.6 ml 2.4 ml
5) 3.0 ml 1.0 ml
6) 4.0 ml 0 ml

Prepared By: SC

Standard Added By: SC

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/29/11 Time: 07:10 End Date: 11/29/11 Time: 07:35

PREPARATION BATCH # DGK020W

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DGK020WB	39	4	N/A	
02	L			N/A	
03	C			N/A	
04	11K146-01			✓	
05	02			✓	
06	03			✓	
07	04			✓	
08	05			✓	
09	06			✓	
10	11K174-01			✓	
11	02			✓	
12	03			✓	
13	04			✓	
14	05			✓	
15	06			✓	
16	07			✓	
17	11K150-01			~7	Vial labeled preserved
18	01M			~7	
19	01S			~7	
20	02			✓	
21	03			✓	
22	04			✓	
23	05			✓	
24				RH 11/29/11	
25					

Standards	ID	Amount Added (µl)
LCS/MS	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic Free
He	Air Gas

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #:	28/00705

Comments:

Prepared By: RH

Standard Added By: RH

1050

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

SDG#: 11K146

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K146

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

A total of five (5) water samples were received on 11/16/11 for Dissolved Metals by ICP analysis, Method 3010A/6010B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source. Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for IPK034WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG. Analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED METALS BY TRACE ICP

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K146
Instrument ID : T-ID8

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IPK034WB	1	NA	11/23/1113:29	11/22/1113:00	ID8K020063	ID8K020061	IPK034W	Method Blank
LCS1W	IPK034WL	1	NA	11/23/1113:32	11/22/1113:00	ID8K020064	ID8K020061	IPK034W	Lab Control Sample (LCS)
LCD1W	IPK034WC	1	NA	11/23/1113:34	11/22/1113:00	ID8K020065	ID8K020061	IPK034W	LCS Duplicate
MW-70-PMW09-124AS	K119-01A	1	NA	12/01/1116:33	11/22/1113:00	ID8L001066	ID8L001064	IPK034W	Analytical Spike Sample
MW-70-PMW09-124	K119-01W	1	NA	12/01/1116:37	11/22/1113:00	ID8L001067	ID8L001064	IPK034W	Field Sample
MW-70-PMW09-124DL	K119-01J	5	NA	12/01/1116:40	11/22/1113:00	ID8L001068	ID8L001064	IPK034W	Diluted Sample
MW-70-PMW11A-138	K146-02	1	NA	11/23/1114:24	11/22/1113:00	ID8K020081	ID8K020073	IPK034W	Field Sample
MW-70-PMW11B-139	K146-03	1	NA	11/23/1114:27	11/22/1113:00	ID8K020082	ID8K020073	IPK034W	Field Sample
MW-70-PMW12A-140	K146-04	1	NA	11/23/1114:30	11/22/1113:00	ID8K020083	ID8K020073	IPK034W	Field Sample
MW-70-PMW12B-142	K146-05	1	NA	11/23/1114:42	11/22/1113:00	ID8K020087	ID8K020085	IPK034W	Field Sample
IR-70-FD-141	K146-06	1	NA	11/23/1114:46	11/22/1113:00	ID8K020088	ID8K020085	IPK034W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/16/11 10:42
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/16/11
SDG NO.	: 11K146	Date Extracted:	11/22/11 13:00
Sample ID:	MW-70-PMW11A-138	Date Analyzed:	11/23/11 14:24
Lab Samp ID:	K146-02	Dilution Factor:	1
Lab File ID:	ID8K020081	Matrix :	WATER
Ext Btch ID:	IPK034W	% Moisture :	NA
Calib. Ref.:	ID8K020073	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	4.42	0.200	0.0400
Manganese	4.30	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/16/11 11:34
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/16/11
SDG NO.	: 11K146	Date Extracted:	11/22/11 13:00
Sample ID:	MW-70-PMW11B-139	Date Analyzed:	11/23/11 14:27
Lab Samp ID:	K146-03	Dilution Factor:	1
Lab File ID:	ID8K020082	Matrix :	WATER
Ext Btch ID:	IPK034W	% Moisture :	NA
Calib. Ref.:	ID8K020073	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	0.00597J	0.200	0.00500
Iron	1.83	0.200	0.0400
Manganese	0.533	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/16/11 14:10
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/16/11
SDG NO.	: 11K146	Date Extracted:	11/22/11 13:00
Sample ID:	MW-70-PMW12A-140	Date Analyzed:	11/23/11 14:30
Lab Samp ID:	K146-04	Dilution Factor:	1
Lab File ID:	ID8K020083	Matrix :	WATER
Ext Btch ID:	IPK034W	% Moisture :	NA
Calib. Ref.:	ID8K020073	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	3.61	0.200	0.0400
Manganese	0.716	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/16/11 15:40
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/16/11
SDG NO.	: 11K146	Date Extracted:	11/22/11 13:00
Sample ID:	MW-70-PMW12B-142	Date Analyzed:	11/23/11 14:42
Lab Samp ID:	K146-05	Dilution Factor:	1
Lab File ID:	ID8K020087	Matrix :	WATER
Ext Btch ID:	IPK034W	% Moisture :	NA
Calib. Ref.:	ID8K020085	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	0.0115J	0.200	0.00500
Iron	8.81	0.200	0.0400
Manganese	0.419	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/16/11 14:30
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/16/11
SDG NO.	: 11K146	Date Extracted:	11/22/11 13:00
Sample ID:	IR-70-FD-141	Date Analyzed:	11/23/11 14:46
Lab Samp ID:	K146-06	Dilution Factor:	1
Lab File ID:	ID8K020088	Matrix :	WATER
Ext Btch ID:	IPK034W	% Moisture :	NA
Calib. Ref.:	ID8K020085	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	3.65	0.200	0.0400
Manganese	0.722	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/22/11
SDG NO.	: 11K146	Date Extracted:	11/22/11 13:00
Sample ID:	MBLK1W	Date Analyzed:	11/23/11 13:29
Lab Samp ID:	IPK034WB	Dilution Factor:	1
Lab File ID:	ID8K020063	Matrix :	WATER
Ext Btch ID:	IPK034W	% Moisture :	NA
Calib. Ref.:	ID8K020061	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	ND	0.200	0.0400
Manganese	ND	0.200	0.00300

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K146
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	IPK034WB	IPK034WL	IPK034WC		
LAB FILE ID:	ID8K020063	ID8K020064	ID8K020065		
DATIME EXTRCTD:	11/22/1113:00	11/22/1113:00	11/22/1113:00	DATE COLLECTED:	NA
DATIME ANALYZD:	11/23/1113:29	11/23/1113:32	11/23/1113:34	DATE RECEIVED:	11/22/11
PREP. BATCH:	IPK034W	IPK034W	IPK034W		
CALIB. REF:	ID8K020061	ID8K020061	ID8K020061		

ACCESSION:

PARAMETER	BLNK RSLT mg/L	SPIKE AMT mg/L	BS RSLT mg/L	BS % REC	SPIKE AMT mg/L	BSD RSLT mg/L	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	ND	.5	.535	107	.5	.532	106	1	80-120	20
Iron	ND	5	5.2	104	5	5.11	102	2	80-120	20
Manganese	ND	.5	.502	100	.5	.502	100	0	80-120	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: METHOD 3010A/6010B (DISSOLVED)

==========

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	5		
SAMPLE ID:	MW-70-PMW09-124	MW-70-PMW09-124DL		
EMAX SAMP ID:	K119-01W	K119-01J		
LAB FILE ID:	ID8L001067	ID8L001068		
DATE EXTRACTED:	11/22/1113:00	11/22/1113:00	DATE COLLECTED:	11/14/11 10:49
DATE ANALYZED:	12/01/1116:37	12/01/1116:40	DATE RECEIVED:	11/14/11
PREP. BATCH:	IPK034W	IPK034W		
CALIB. REF:	ID8L001064	ID8L001064		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SERIAL DIL RSLT (mg/L)	DIF RSLT %	QC LIMIT (%)
Arsenic	ND	ND	0	10
Iron	0.436	0.452J	4	10
Manganese	0.0988J	0.110J	11*	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K146
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX: WATER % MOISTURE: NA
DILTN FACTR: 1 1
SAMPLE ID: MW-70-PMW09-124
CONTROL NO.: K119-01W K119-01A
LAB FILE ID: ID8L001067 ID8L001066
DATIME EXTRCTD: 11/22/1113:00 11/22/1113:00 DATE COLLECTED: 11/14/11 10:49
DATIME ANALYZD: 12/01/1116:37 12/01/1116:33 DATE RECEIVED: 11/14/11
PREP. BATCH: IPK034W IPK034W
CALIB. REF: ID8L001064 ID8L001064

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	AS RSLT (mg/L)	AS % REC	QC LIMIT (%)
Arsenic	ND	.5	.587	117	75-125
Iron	.436	5	6.15	114	75-125
Manganese	.0988J	.5	.595	99	75-125

ICP QC CHECK TABLE

QC	ICV	CCV	ICSAB	ICSA	MLCV
Limit%	90-110	90-110	80-120	80-120	80-120
Comp	mg/L	mg/L	mg/L	mg/L	mg\L
Al	100	100	400	400	200
Sb	1.5	1.5	1	0	5
As	1	1	1	0	1
Ba	2	2	0.5	0	5
Be	1.5	1.5	0.5	0	5
B	2.5	2.5	0.5	0	5
Cd	2	2	1	0	5
Ca	75	75	500	500	250
Cr	2.5	2.5	0.5	0	5
Co	1	1	0.5	0	1
Cu	2.5	2.5	0.5	0	5
Fe	25	25	200	200	200
Pb	2.5	2.5	1	0	5
Li	0.5	0.5	1	0	0.5
Mg	60	60	200	200	100
Mn	2.5	2.5	0.5	0	5
Mo	2.5	2.5	1	0	5
Ni	2.5	2.5	1	0	5
K	60	60	75	0	250
Se	1	1	1	0	1
Ag	0.5	0.5	1	0	0.5
Na	60	60	75	0	150
Sr	0.5	0.5	0.5	0	0.5
Tl	2.5	2.5	1	0	5
Sn	0.5	0.5	1	0	0.5
Ti	0.5	0.5	1	0	0.5
V	1.5	1.5	0.5	0	5
Zn	2.5	2.5	1	0	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 11/23/11 10:19

End Date: 11/23/11 17:15

SOP #	Rev. #
☑ EMAX-6010	7
☐ EMAX-6010C	1
☐ EMAX-200.7	2
☐ EMAX-	

Comments:

CCB3 Zn > 3x IDL. However associated sample K575-01 detected 10x > than blank conc. Thus not corrective ~~sample~~ 11/29/11 action

CCB4 Zn > 3x IDL. However associated sample K201-02 and K201-03 detected 10x > than blank conc. Thus no corrective action.

Book #: AD8-021

Instrument No.: D8

Analytical Batch: 108K020

Analytical Sequence: S-11K6010 (v 30)

Method File: 11K6010 (v30)

Database: EMAX 14

	STANDARDS ID		STANDARDS ID
S0	SM1014-7805	S30	SM1014-6802
S1	NA	S31	-6803
S2		ICV	-8201
S3		CCV	-8204
S4		ICSA	-8502
S5		ICSAB	-6702
S6		CRI/MRL 1	-8104
S7		MRL2	-7401
S8			
S9			
S10			
S11			
S12			
S16			
S17			
S18			
S20	SM1014-8401		
S21	-6503		
S22	-6504		
S23	-8402		
S24	-6702		
S25	-6703		
S26	-7801		
S27	-7802		
S28	-7803		
S29	-7804		

Analyzed By: PD

Date: 11/23/11

SEQUENCE FILE : ID8K020

4-18	19-33	34-43	44-53	54-63
LFID	LSID	TIME	DATE	DF
ID8K020001	Blank	10:19	11/23/11	1.000
ID8K020002	S20	10:22	11/23/11	1.000
ID8K020003	S21	10:25	11/23/11	1.000
ID8K020004	S22	10:28	11/23/11	1.000
ID8K020005	S23	10:31	11/23/11	1.000
ID8K020006	S24	10:34	11/23/11	1.000
ID8K020007	S25	10:37	11/23/11	1.000
ID8K020008	S26	10:40	11/23/11	1.000
ID8K020009	S27	10:43	11/23/11	1.000
ID8K020010	S28	10:47	11/23/11	1.000
ID8K020011	S29	10:50	11/23/11	1.000
ID8K020012	S30	10:53	11/23/11	1.000
ID8K020013	S31	10:56	11/23/11	1.000
ID8K020014	ICV	10:58	11/23/11	1.000
ID8K020015	ICB	11:01	11/23/11	1.000
ID8K020016	MRLK2301	11:05	11/23/11	1.000
ID8K020017	MRLK2302	11:08	11/23/11	1.000
ID8K020018	ICSA1	11:10	11/23/11	1.000
ID8K020019	ICSAB1	11:14	11/23/11	1.000
ID8K020020	CCV1	11:17	11/23/11	1.000
ID8K020021	CCB1	11:19	11/23/11	1.000
ID8K020021	IPK036SQ	11:23	11/23/11	1.000
ID8K020021	IPK036SX	11:26	11/23/11	1.000
ID8K020021	IPK036SY	11:28	11/23/11	1.000
ID8K020025	K575-01A	11:31	11/23/11	5.000
ID8K020026	K575-01T	11:34	11/23/11	25.00
ID8K020027	K575-01J	11:37	11/23/11	5.000
ID8K020028	K575-01M	11:40	11/23/11	5.000
ID8K020029	K575-01S	11:43	11/23/11	5.000
ID8K020030	Blank	11:46	11/23/11	1.000
ID8K020031	CCV2	11:49	11/23/11	1.000
ID8K020032	CCB2	11:54	11/23/11	1.000
ID8K020033	K575-01A	11:57	11/23/11	1.000
ID8K020034	K575-01W	12:00	11/23/11	1.000
ID8K020035	K575-01J	12:04	11/23/11	5.000
ID8K020036	K575-01M	12:06	11/23/11	1.000
ID8K020037	K575-01S	12:10	11/23/11	1.000
ID8K020038	Blank	12:13	11/23/11	1.000
ID8K020039	CCV3	12:16	11/23/11	1.000
ID8K020040	CCB3	12:19	11/23/11	1.000
ID8K020041	K201-02W	12:22	11/23/11	1.000
ID8K020042	K201-03W	12:27	11/23/11	1.000
ID8K020043	Blank	12:30	11/23/11	1.000
ID8K020044	CCV4	12:33	11/23/11	1.000
ID8K020045	CCB4	12:36	11/23/11	1.000
ID8K020046	IPK035SB	12:39	11/23/11	1.000
ID8K020047	IPK035SL	12:42	11/23/11	1.000
ID8K020048	IPK035SC	12:45	11/23/11	1.000
ID8K020049	K203-17A	12:47	11/23/11	1.000
ID8K020050	K203-17	12:50	11/23/11	1.000
ID8K020051	K203-17J	12:54	11/23/11	5.000
ID8K020052	K203-18	12:56	11/23/11	1.000

ID8K020053	K203-19	12:59	11/23/11	1.000
ID8K020054	K203-20	13:02	11/23/11	1.000
ID8K020055	Blank	13:05	11/23/11	1.000
ID8K020056	CCV5	13:08	11/23/11	1.000
ID8K020057	CCB5	13:11	11/23/11	1.000
ID8K020058	K203-21	13:14	11/23/11	1.000
ID8K020059	K203-22	13:17	11/23/11	1.000
ID8K020060	Blank	13:20	11/23/11	1.000
ID8K020061	CCV6	13:23	11/23/11	1.000
ID8K020062	CCB6	13:26	11/23/11	1.000
ID8K020063	IPK034WB	13:29	11/23/11	1.000
ID8K020064	IPK034WL	13:32	11/23/11	1.000
ID8K020065	IPK034WC	13:34	11/23/11	1.000
ID8K020066	K133-01A	13:37	11/23/11	1.000
ID8K020067	K133-01	13:40	11/23/11	1.000
ID8K020068	K133-01J	13:44	11/23/11	5.000
ID8K020069	K133-01M	13:47	11/23/11	1.000
ID8K020070	K133-01S	13:50	11/23/11	1.000
ID8K020071	K133-02	13:53	11/23/11	1.000
ID8K020072	Blank	13:56	11/23/11	1.000
ID8K020073	CCV7	13:59	11/23/11	1.000
ID8K020074	CCB7	14:02	11/23/11	1.000
ID8K020075	K133-03	14:05	11/23/11	1.000
ID8K020076	K133-04	14:08	11/23/11	1.000
ID8K020077	K133-05	14:12	11/23/11	1.000
ID8K020078	K119-01	14:15	11/23/11	1.000
ID8K020079	K119-02	14:18	11/23/11	1.000
ID8K020080	K119-03	14:21	11/23/11	1.000
ID8K020081	K146-02	14:24	11/23/11	1.000
ID8K020082	K146-03	14:27	11/23/11	1.000
ID8K020083	K146-04	14:30	11/23/11	1.000
ID8K020084	Blank	14:34	11/23/11	1.000
ID8K020085	CCV8	14:37	11/23/11	1.000
ID8K020086	CCB8	14:39	11/23/11	1.000
ID8K020087	K146-05	14:42	11/23/11	1.000
ID8K020088	K146-06	14:46	11/23/11	1.000
ID8K020089	Blank	14:49	11/23/11	1.000
ID8K020090	CCV9	14:52	11/23/11	1.000
ID8K020091	CCB9	14:55	11/23/11	1.000
ID8K020092	TXK007SB	14:58	11/23/11	1.000
ID8K020093	K521-01A	15:01	11/23/11	1.000
ID8K020094	K521-01	15:04	11/23/11	1.000
ID8K020095	K521-01J	15:07	11/23/11	5.000
ID8K020096	K521-01M	15:10	11/23/11	1.000
ID8K020097	K521-01S	15:13	11/23/11	1.000
ID8K020098	K520-03	15:16	11/23/11	1.000
ID8K020099	Blank	15:19	11/23/11	1.000
ID8K020100	CCV10	15:22	11/23/11	1.000
ID8K020101	CCB10	15:25	11/23/11	1.000
ID8K020102	Blank	16:34	11/23/11	1.000
ID8K020103	CCV11	16:37	11/23/11	1.000
ID8K020104	CCB11	16:39	11/23/11	1.000
ID8K020105	IPK037WB	16:42	11/23/11	1.000
ID8K020106	IPK037WL	16:45	11/23/11	1.000
ID8K020107	IPK037WC	16:48	11/23/11	1.000

ID8K020108	TXK008SB	16:51	11/23/11	1.000
ID8K020109	K543-01A	16:54	11/23/11	1.000
ID8K020110	K543-01	16:57	11/23/11	1.000
ID8K020111	K543-01J	17:00	11/23/11	5.000
ID8K020112	K543-01M	17:03	11/23/11	1.000
ID8K020113	K543-01S	17:06	11/23/11	1.000
ID8K020114	Blank	17:09	11/23/11	1.000
ID8K020115	CCV12	17:12	11/23/11	1.000
ID8K020116	CCB12	17:15	11/23/11	1.000

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	----	----	----	----	---	----	----	----	---	----	----	---	---	----	----	---	---	-	--		-	---	----	---	---	----		
S20	----	----	---	--	--	----	----	----	---	-	---	----	---	---	---	--	----	----	----	---	---	--		---		--	----	---
S21	-		--	---	---		-	-			--	----		----	---	--		-			--	--	-	---	-	-	-	-
S22	--	-	----	---	---	---		----		-		---	---	---	----	---	---	-	-	--	-	--	---			--	-	
S23	---	--				----	---	-							-		-	----	--	----	--	-	---		---			
S24	---	---			-		---		---	-	--			--	----	----	--	-	--	---		--	----	----	----	----	-	-
S25	--	-	---	----	----	-	--	----	----	----	----	---	----	----	----	---	---	----		----	---	-	--		--	---	---	----
S26	-	---	----	----	----	--	---	----	----	----	----	----	----	----	---		--	----	---	----	----	---	-	-	-	----	---	----
S27	---	----	----	----	----	--	--	----	----	----	---	----	----	---	-		----	----	----	---	----	-		--	---	---	---	--
S28	----	--	-	---	---	--		-	--	---	---	-	---	---	---	-	---	-	--		---		-	--	--	--	-	-
S29	----	-				-	--	--	-	---	-	--	-	-	---	-	---	---	---	--	---	---		-	--	-	-	-
S30		---		---	---	---	-	----				---	-			-	----	---	----	---		-	--	-	---	---	--		
S31		----	----	----	----	----	---	----	----	----	----	---	----	---	-	---	---	---	----	---	----	-		---	---	--	---	----
ICV	103	100	104	103	102	99	100	101	98	97	103	103	97	105	97	96	101	99	102	104	102	107	98	92	101	101	100	103
ICB	--	---	---	----	----	--	---	--	----	----	----	----	----	----	---		-	----	----	----	----	---		---	----	----	---	---
MRLK230.	----	----	---			----	--	---	-			---			----	----	----	-	-	-		----	----	-	---			- -
MRLK230.	---	---	-	-	-		-		---	---	---	---	----	--		--		-	-	---	----			-	-- -	--	---	-
ICSA1	98	---	---	---	---			96	---	---	--	95	----	-	97		---	----	----	--	-	--	-	-	-- -	--	-	
ICSAB1	98	102	106	103	102	98	95	94	94	95	139	96	95	120	97	95	102	97	107	104	109	112	97	83	93	101	99	102
CCV1	104	101	104	103	102	99	100	102	99	98	105	101	97	104	97	96	101	99	103	105	103	108	99	92	101	100	101	104
CCB1	----	---			-				----	-- -	----	---	--	----	----		-	----		----	----		-	- -	----	---	--	- -
IPK036S3	---	--	-	---	--	-	-	- -	----	----	----	----	----	----	--	-	--	----	----	-- -	--	---	----	----	----	--		
IPK036S	-	-	----	----	----	----	----	----	--	-		--	--		--	----	----		-- -		----	----	---	-	-	--	----	- - -
IPK036S	----	- - -	--	- -		--	- - -	-	-	-	-		-	----	---	-		- -	-	---	--				-	---	- --		-
K675-01A	--								- -	-- -	- -	- --	----		-			- -	--					---		- -	- -		--
K675-01B	-	-	---	--	----	- -		- -				-		-	---	--	----				-	---	----			--		-	--
K675-01C	----	----	--	-		---	-	-	--	---	-		- -	----	----						----	-	--					- -
K675-02A	----	----	- --	- -		- -	- --	- -					-	--	---	----	-		-		----	----	---			--		- - -
K675-02B	----	---	-		-				----	----	----	- - -	---	-- -	--		- -	---	----	----	----					--		- - -	---
BLANK	----	---	-	--	----		- -	-	----	---	----	- - -	----	----	---		--	----	----	----	----			- -	-	-	-	--
ICV2	103	101	106	103	102	100	102	102	99	98	106	101	98	106	97	97	101	100	104	106	104	109	99	92	101	101	101	104
ICB2	-	-	-- -	- -		---	--	- -		--	- -			-	- -	--	-			--	--	-	- --	-	--			
K675-03A	-	--										-		---	--					---	-		- -					-
K675-03B		- -	---	----	----	- --	---	----		-	--	- - -	----	---	-	----	- -	----	----	---	---				-	--	- -	-
K675-04A	---	---	---			--	-		--	--				---	----	-					-	----	- --	- -	- -	- - -	----	
K675-04B		-	-	----	----	- -	-	- -	-	---	---	---	----	----	-	-	-	----	-	----	----	-		-				- -
K675-05	----	--	- -				-				---	-		---	--	----					--	----	---						
BLANK		-	----	---		----		-	-	-						----	--					- -	-	----	-	--	-	
ICV3	104	102	106	104	103	101	101	102	97	97	102	99	98	108	97	98	102	100	106	107	104	110	100	92	101	102	100	103
ICB3		-	---	-	--		--		----		--	---	-	- -	-	--	-	- --	- -	---			----	-	- -	-	---	-
K201-02A	-	----	----	---	--	----	--	----				--	----		-	----	- --	----	---	----	-		----	----	----	----	-	
K201-03A	---	----	----	---	- -	---	-- -	-	-	--	---	-		-	-- -	---	--		-		- --	----	----	----	- --	-	
BLANK	---	----		-	--				- -	----	--	- -		----	--	----				----	----	- -	- --					-
ICV4	103	101	104	105	102	99	99	101	97	98	106	100	98	107	97	97	103	100	106	105	103	110	99	91	102	101	100	103
ICB4	----	--	-- -	---	-- -	--		----		-	-	--	-	----	-			- -		----	-		---	-	- -	- -		
IPK036S5	-		-- -	- -		---	-	- -	- -		-				-	- -	- --	--	----				- - -		-	-		
IPK036S.	- -	---			-	- -	---	-	---	-	-	-	--			- --	- - -	----	-	----	----	---	---	----	----	----	---	
IPK036S.	-		- -	-	-	- -	-		----	----	----				-	----	---- -	----		----	----	- --	- -	- - -	----	---	-	
K203-17A	---	---	-		-	----	---	---			-	- -	---	--	--	-- -	--	--	-	----	----	----	-- -	----	----	---	- -	-
K203-17	---	--	----	----	--	- --	----	---			-	---	----	-	-		----	---	- -	-- -	----	---	---		---	-	-	- -
K203-17	--	- -	----	----	----	---	---	-- -	-	----	- -	-- -	---	----	---	-		--		----	----	----	----	----	----	---	--	---
K203-18	----	----	---	--	- -	- -	-	- -	-		---	- -	-	----	- -	---				--	---	---	--	-- -	-			

K203 19																												
K203 20																												
BLANK																												
CCV5	104	100	104	106	103	99	99	100	97	99	105	99	98	103	97	98	103	100	106	104	103	110	100	91	101	102	100	103
CCB5																												
K203 21																												
K203 22																												
BLANK																												
CCV6	104	100	103	106	102	98	98	100	96	99	105	99	98	104	95	98	103	100	106	103	103	110	100	90	101	101	99	102
CCB6																												
IPK034wb																												
IPK034wc																												
IPK034wa																												
K133 01/																												
K133-01																												
K133-01D																												
K133-01M																												
K133 01S																												
K133 02																												
BLANK																												
CCV7	104	100	103	107	102	98	98	99	96	99	106	98	98	110	96	97	103	100	108	104	103	112*	101	90	101	102	99	102
CCB7																												
K133 03																												
K133-04																												
K133-05																												
K119 01																												
K119 02																												
K119 03																												
K146 02																												
K146 03																												
K146 04																												
BLANK																												
CCV8	104	99	103	107	101	97	97	97	95	98	104	97	97	110	94	96	102	99	108	103	102	111*	100	90	100	101	98	101
CCB8																												
K146 07																												
K146 08																												
BLANK																												
CCV9	104	99	103	107	102	97	97	97	95	98	104	97	97	110	94	96	102	99	108	103	102	111*	101	89*	99	100	98	101
CCB9																												
IPK027ba																												
K521 01A																												
K521 01C																												
K521 01D																												
K521 01M																												
K521 01S																												
K521 03																												
BLANK																												
CCV10	103	99	102	107	101	97	98	97	95	98	104	97	97	110	95	96	102	99	108	104	102	110	100	90	100	101	98	101
CCB10																												
BLANK																												
CCV11	104	98	101	107	103	96	95	95	94	98	104	96	97	112*	93	95	102	99	109	101	101	112*	100	88*	100	100	97	100
CCB11																												
IPK034wa																												
IPK027wa																												
IPK034wa																												

TXCCBSP	--	-	.	- -	---																							
X542-017	----	----	- -	--	--	--	- -																					
X543-081		--	---	- --	---																							
X543-017	---	- -	-	- -	- -	- -		-	--																			
X543-018	----	-		---	- -	---		-	----		--	---																
X543-031	-	-	--			----	- --	--		-- -	-- -	----	- -	---		- -	-	----	- -			--	- -	----	----	----	----	-	-
R.AVE	---	- -		---	-					-						---				-	--		-				- -		-	- --
CCV2	104	98	101	108	101	97	96	96	95	98	105	97	96	112*	94	96	101	99	110	102	102	117*	101	88*	99	101	98	101
CCB2	-	----	-- -	-		----	-	---	- --	---	----	-- -	-	----	--	- --	-		----	--	----	----	---	--	-	-	--	

% Limits of each parameter are listed in a table attached next to all the QC check items
* = Out of QC Limit

VERSION 11A UNIT ug/L SUMMARY of CALIBRATION BLANKS - TDSK020 (WATER) DATE - 11/23/11 INST MAX

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK																												
S20																												
S21																												
S22																												
S23																												
S24																												
S25																												
S26																												
S27																												
S28																												
S29																												
S30																												
S31																												
ICV																												
ICB	3.62	949	430	173	-.310	4.70	-.070	-8.96	303	-.090	.180	2.47	290	490	1.69	.110	289	.175	107	.193	.100	13.6	.080	-.230	125	640	123	780
MRLK230																												
MRLK230																												
ICSA1		-1.01	-.960	750	.030	59.7	4.14		.520	.760	1.53		4.81	18.4		1.12	1.31	1.05	80.6	860	.270	43.7	840	-3.68	1.72	5.51	.600	1.67
ICSAB1																												
CCV1																												
CCB1	19.8	.200	.990	440	.050	4.53	.030	153	.070	.030	.330	.320	.180	.160	3.04	.190	.380	.120	.157	.013	.155	24.8	.175	-.330	-.060	.180	.010	5.63
IPK036SQ																												
IPK036S																												
IPK036S																												
K575-01																												
K575-01																												
K575-01																												
K575-01																												
K575-01																												
BLANK																												
ICV2																												
ICB2	4.03	1.17	.112	243	.030	13.7	.070	146	.040	-.030	.200	1.24	.170	.120	-19.7	.010	.180	.040	97.6	.010	.110	9.77	.160	.050	.130	.350	.100	1.92
K575-01																												
K575-01																												
K575-01																												
K575-01																												
K575-01																												
BLANK																												
ICV3																												
ICB3	9.89	1.24	.230	422	.050	42.1	.000	168	.040	-.150	.240	.10	.320	.050	10.6	.140	.370	.170	.166	-.160	.080	27.8	.150	.010	.100	1.12	.140	6.78
K201-02																												
K201-03																												
BLANK																												
ICV4																												
ICB4	8.34	1.23	1.54	460	.090	15.4	.050	173	.100	.060	.270	2.81	.290	.030	9.60	.290	.390	.170	97.1	.020	.060	11.5	.190	.470	.200	.640	.180	6.60
IPK035S																												
IPK035S																												
IPK035S																												
K203-16																												
K203-17																												
K203-17																												
K203-18																												

K203-19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K203-20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BLANK	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CCV5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CCR5	9.01	.980	.920	.470	.060	7.49	.050	.158	-.050	.030	.210	1.98	.170	-.230	-4.66	.190	.360	.070	47.1	.080	.010	3.69	.120	.300	.140	.650	.190	6.28
K203-21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K203-22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BLANK	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CCV6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CCB6	12.6	1.29	1.38	.410	.090	6.87	.060	.157	.030	-.050	.270	.960	.100	.630	7.74	.160	.440	.060	52.3	-.050	.110	7.98	.210	.300	.120	.420	.060	6.45
IPKD34W4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
IPKD34W5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
IPKD34W6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K133-01A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K133-01	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K133-01C	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K133-02A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K133-02C	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K133-03	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K133-03C	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K133-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K133-05	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K139-01	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K139-02	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K139-03	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K146-02	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K146-03	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K146-04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BLANK	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CCV8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CCB8	-.54	.470	-1.37	.420	.040	8.62	.010	96.8	.190	.020	.350	.980	.110	.690	-2.63	.410	.430	.180	.210	.210	.180	.540	.230	.240	.200	.650	.340	3.67
K4[illegible]-01	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K146-07	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BLANK	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CCV9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CCB9	11.6	1.18	.510	.360	.050	5.32	.020	97.5	.120	.050	.440	-2.83	.380	1.32	.8	.260	.660	.020	.187	.670	.130	.429	.210	.130	.570	.340	.150	3.20
K521-01	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K521-01A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K521-01C	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K521-02A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K521-02C	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K520-03	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BLANK	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CCV10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CCB10	9.72	1.61	.470	.360	.070	4.90	.030	91.2	.230	-.050	.280	.530	.270	.530	7.37	.080	.480	.170	.184	.250	.020	.352	.040	.290	-.190	.490	.110	3.70
BLANK	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CCV11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CCB11	9.34	.930	-1.12	.340	.110	3.68	.010	88.5	.180	-.170	.190	1.13	.140	.370	12.2	.220	.690	.150	.126	.020	.063	.222	.160	.130	-.190	.370	.240	3.46
IPK037W8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
IPK037W9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
IPK037W10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

IXK0085	--	--	-	----	----	-	----	---	- -						-	-	-			---	- -	---	----	-			-			- -	-
KS43-P1	----	----	-	- --		---	- --	-		--				--	----	----	----		- -	---	----	----	----	- -	-	-					--
KS43-D1	----	---	----	----	---	----	----	----	----	----	----	----	- --	---		----	----	- --	--			-	----	----	----	----	----	-			-
KS43-D1	- --	--	-	-- -	----		-	----	----	----	----	--	---	----	----	- -	----	----	----	----	-	-	- -	----	----	----	-				
KS43-D1P	-	----	----	-- -	-	----	----	---	-- -	- -	-- -		-	--	----	-- -	-	-	- --	----	----	--	-			-	-		--	---
KS43-D1P	----	----	- --	--	-	-- -	- --	---					- -	----	----	-		- -	----	----	----	--	- -					-	-	- -
BLANK	-	--		----	--		--	-						- -	--	-	- -	-	----			----	---			-		--	--	-
TOV.2	---	-	-	-	---	--	-	-		- --	----	--	----	-			-	---		- -	--		----	- -	-	-			---	
CCB.2	11.2	1.40	.350	.420	.080	3.74	.010	88.5	.230	.070	.120	1.60	.230	.610	8.09	.280	.780	.250	.180	.400	.220	.212	.190	.230	.180	.430	.290	3.52

% limits of each parameter are listed in a table attached next to all the LCP check forms
* : Out of QC limit

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
1	0	0	0	0	Unk	S0		ID8K020001			1	☒	unk	---
2	0	0	0	0	Unk	S1		ID8K020002			1	☒	unk	---
3	0	0	0	0	Unk	S2		ID8K020003			1	☒	unk	---
4	0	0	0	0	Unk	S3		ID8K020004			1	☒	unk	---
5	0	0	0	0	Unk	S4		ID8K020005			1	☒	unk	---
6	0	0	0	0	Unk	S5		ID8K020006			1	☒	unk	---
7	0	0	0	0	Unk	S6		ID8K020007			1	☒	unk	---
8	0	0	0	0	Unk	S7		ID8K020008			1	☒	unk	---
9	0	0	0	0	Unk	S8		ID8K020009			1	☒	unk	---
10	0	0	0	0	Unk	S9		ID8K020010			1	☒	unk	---
11	0	0	0	0	Unk	S10		ID8K020011			1	☒	unk	---
12	0	0	0	0	Unk	S11		ID8K020012			1	☒	unk	---
13	0	0	0	0	Unk	S12		ID8K020013			1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8K020014			1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8K020015			1	☒	3XIDL	None
16	3	2	3	1	QC	MRLK2301		ID8K020016			1	☒	MRL-EMAX	None
17	4	2	4	1	QC	MRLK2302		ID8K020017			1	☒	MRL-AFCEE	None
18	5	2	5	1	QC	ICSA1		ID8K020018			1	☒	ICSA-DoD	None
19	6	2	6	1	QC	ICSAB1		ID8K020019			1	☒	ICSAB	None
20	7	2	7	1	QC	CCV1		ID8K020020			1	☒	CCV	None
21	8	2	8	1	QC	CCB1		ID8K020021			1	☒	3XIDL	None
22	9	2	9	1	Unk	IPK036SQ		ID8K020022			1	☒	unk	---
23	10	2	10	1	Unk	IPK036SX		ID8K020023			1	☒	unk	---
24	11	2	11	1	Unk	IPK036SY		ID8K020024			1	☒	unk	---
25	12	2	12	1	Unk	K575-01A	5X	ID8K020025			1	☒	unk	---
26	13	2	1	2	Unk	K575-01T	5X	ID8K020026			1	☒	unk	---
27	14	2	2	2	Unk	K575-01J	25X	ID8K020027			1	☒	unk	---
28	15	2	3	2	Unk	K575-01M	5X	ID8K020028			1	☒	unk	---
29	16	2	4	2	Unk	K575-01S	5X	ID8K020029			1	☒	unk	---
30	17	2	5	2	Blank	Blank		ID8K020030			1	☐		---
31	18	2	6	2	QC	CCV2		ID8K020031			1	☒	CCV	None
32	19	2	7	2	QC	CCB2		ID8K020032			1	☒	3XIDL	None
33	25	2	1	3	Unk	K575-01A		ID8K020033			1	☒	unk	---
34	26	2	2	3	Unk	K575-01W		ID8K020034			1	☒	unk	---
35	27	2	3	3	Unk	K575-01J		ID8K020035			1	☒	unk	---
36	28	2	4	3	Unk	K575-01M		ID8K020036			1	☒	unk	---
37	29	2	5	3	Unk	K575-01S		ID8K020037			1	☒	unk	---
38	22	2	10	2	Blank	Blank		ID8K020038			1	☐		---
39	23	2	11	2	QC	CCV3		ID8K020039			1	☒	CCV	None

T0023

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
40	24	2	12	2	QC	CCB3		ID8K020040			1	☒	3XIDL	None
41	20	2	8	2	Unk	K201-02W		ID8K020041			1	☒	unk	---
42	21	2	9	2	Unk	K201-03W		ID8K020042			1	☒	unk	---
43	30	2	6	3	Blank	Blank		ID8K020043			1	☐		---
44	31	2	7	3	QC	CCV4		ID8K020044			1	☒	CCV	None
45	32	2	8	3	QC	CCB4		ID8K020045			1	☒	3XIDL	None
46	33	2	9	3	QC	IPK035SB		ID8K020046			1	☒	1/2LOQ	None
47	34	2	10	3	QC	IPK035SL		ID8K020047			1	☒	LCS	None
48	35	2	11	3	QC	IPK035SC		ID8K020048			1	☒	LCS	None
49	36	2	12	3	Unk	K203-17A		ID8K020049			1	☒	unk	---
50	37	2	1	4	Unk	K203-17		ID8K020050			1	☒	unk	---
51	38	2	2	4	Unk	K203-17J		ID8K020051			1	☒	unk	---
52	39	2	3	4	Unk	K203-18		ID8K020052			1	☒	unk	---
53	40	2	4	4	Unk	K203-19		ID8K020053			1	☒	unk	---
54	41	2	5	4	Unk	K203-20		ID8K020054			1	☒	unk	---
55	42	2	6	4	Blank	Blank		ID8K020055			1	☐		---
56	43	2	7	4	QC	CCV5		ID8K020056			1	☒	CCV	None
57	44	2	8	4	QC	CCB5		ID8K020057			1	☒	3XIDL	None
58	45	2	9	4	Unk	K203-21		ID8K020058			1	☒	unk	---
59	46	2	10	4	Unk	K203-22		ID8K020059			1	☒	unk	---
60	47	2	11	4	Blank	Blank		ID8K020060			1	☐		---
61	48	2	12	4	QC	CCV6		ID8K020061			1	☒	CCV	None
62	49	2	1	5	QC	CCB6		ID8K020062			1	☒	3XIDL	None
63	50	2	2	5	QC	IPK034WB		ID8K020063			1	☒	1/2LOQ	None
64	51	2	3	5	QC	IPK034WL		ID8K020064			1	☒	LCS	None
65	52	2	4	5	QC	IPK034WC		ID8K020065			1	☒	LCS	None
66	53	2	5	5	Unk	K133-01A	DISSOLVED	ID8K020066			1	☒	unk	---
67	54	2	6	5	Unk	K133-01	DISSOLVED	ID8K020067			1	☒	unk	---
68	55	2	7	5	Unk	K133-01J	DISSOLVED	ID8K020068			1	☒	unk	---
69	56	2	8	5	Unk	K133-01M	DISSOLVED	ID8K020069			1	☒	unk	---
70	57	2	9	5	Unk	K133-01S	DISSOLVED	ID8K020070			1	☒	unk	---
71	58	2	10	5	Unk	K133-02	DISSOLVED	ID8K020071			1	☒	unk	---
72	59	2	11	5	Blank	Blank		ID8K020072			1	☐		---
73	60	2	12	5	QC	CCV7		ID8K020073			1	☒	CCV	None
74	61	3	1	1	QC	CCB7		ID8K020074			1	☒	3XIDL	None
75	62	3	2	1	Unk	K133-03	DISSOLVED	ID8K020075			1	☒	unk	---
76	63	3	3	1	Unk	K133-04	DISSOLVED	ID8K020076			1	☒	unk	---
77	64	3	4	1	Unk	K133-05	DISSOLVED	ID8K020077			1	☒	unk	---
78	65	3	5	1	Unk	K119-01	DISSOLVED	ID8K020078			1	☒	unk	---

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
79	66	3	6	1	Unk	K119-02	DISSOLVED	ID8K020079			1	☒	unk	---
80	67	3	7	1	Unk	K119-03	DISSOLVED	ID8K020080			1	☒	unk	---
81	68	3	8	1	Unk	K146-02	DISSOLVED	ID8K020081			1	☒	unk	---
82	69	3	9	1	Unk	K146-03	DISSOLVED	ID8K020082			1	☒	unk	---
83	70	3	10	1	Unk	K146-04	DISSOLVED	ID8K020083			1	☒	unk	---
84	71	3	11	1	Blank	Blank		ID8K020084			1	☐		---
85	72	3	12	1	QC	CCV8		ID8K020085			1	☒	CCV	None
86	73	3	1	2	QC	CCB8		ID8K020086			1	☒	3XIDL	None
87	74	3	2	2	Unk	K146-05	DISSOLVED	ID8K020087			1	☒	unk	---
88	75	3	3	2	Unk	K146-06	DISSOLVED	ID8K020088			1	☒	unk	---
89	76	3	4	2	Blank	Blank		ID8K020089			1	☐		---
90	77	3	5	2	QC	CCV9		ID8K020090			1	☒	CCV	None
91	78	3	6	2	QC	CCB9		ID8K020091			1	☒	3XIDL	None
92	79	3	7	2	QC	TXK007SB	TCLP	ID8K020092			1	☒	1/2LOQ	None
93	80	3	8	2	Unk	K521-01A	TCLP	ID8K020093			1	☒	unk	---
94	81	3	9	2	Unk	K521-01	TCLP	ID8K020094			1	☒	unk	---
95	82	3	10	2	Unk	K521-01J	TCLP	ID8K020095			1	☒	unk	---
96	83	3	11	2	Unk	K521-01M	TCLP	ID8K020096			1	☒	unk	---
97	84	3	12	2	Unk	K521-01S	TCLP	ID8K020097			1	☒	unk	---
98	85	3	1	3	Unk	K520-03	TCLP	ID8K020098			1	☒	unk	---
99	86	3	2	3	Blank	Blank		ID8K020099			1	☐		---
100	87	3	3	3	QC	CCV10		ID8K020100			1	☒	CCV	None
101	88	3	4	3	QC	CCB10		ID8K020101			1	☒	3XIDL	None
102	89	3	5	3	Blank	Blank		ID8K020102			1	☐		---
103	90	3	6	3	QC	CCV11		ID8K020103			1	☒	CCV	None
104	91	3	7	3	QC	CCB11		ID8K020104			1	☒	3XIDL	None
105	92	3	8	3	QC	IPK037WB		ID8K020105			1	☒	1/2LOQ	None
106	93	3	9	3	QC	IPK037WL		ID8K020106			1	☒	LCS	None
107	94	3	10	3	QC	IPK037WC		ID8K020107			1	☒	LCS	None
108	95	3	11	3	QC	TXK008SB	TCLP	ID8K020108			1	☒	1/2LOQ	None
109	96	3	12	3	Unk	K543-01A	TCLP	ID8K020109			1	☒	unk	---
110	97	3	1	4	Unk	K543-01	TCLP	ID8K020110			1	☒	unk	---
111	98	3	2	4	Unk	K543-01J	TCLP	ID8K020111			1	☒	unk	---
112	99	3	3	4	Unk	K543-01M	TCLP	ID8K020112			1	☒	unk	---
113	100	3	4	4	Unk	K543-01S	TCLP	ID8K020113			1	☒	unk	---
114	101	3	5	4	Blank	Blank		ID8K020114			1	☐		---
115	102	3	6	4	QC	CCV12		ID8K020115			1	☒	CCV	None
116	103	3	7	4	QC	CCB12		ID8K020116			1	☒	3XIDL	None

7025

ID8K020 Section 1 of 3

INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID
1	Blank	.00115	.00002	-.00001	.00023	.00007	.00044	-.00003	.00055	-.00004	-.00096	Blank
2	S20					.97416		.11980				S20
3	S21					9.5846		1.1513				S21
4	S22				.56884						.15986	S22
5	S23				5.5784						1.5980	S23
6	S24						.09734					S24
7	S25						1.0039					S25
8	S26	.21700							.85491	.13199		S26
9	S27	8.2903							8.1923	1.3230		S27
10	S28		.00517									S28
11	S29		.05004									S29
12	S30			.00121								S30
13	S31			.00483								S31
14	ICV	103.23	1.5006	1.0390	2.0612	1.5320	2.4359	2.0052	75.997	2.4512	.96720	ICV
15	ICB	.00363	.00094	-.00040	.00011	-.00001	.00470	-.00007	-.00896	.00000	-.00009	ICB
16	MRLK2301	.21505	.09834	.00993	.01055	.01049	.09719	.01064	1.0269	.01058	.00973	MRLK2301
17	MRLK2302	.20364	.04865	.01004	.00505	.00412	.09656	.00521	.50327	.01004	.00968	MRLK2302
18	ICSA1	391.69	-.00101	-.00096	.00075	.00003	-.05970	.00414	478.89	.00052	-.00076	ICSA1
19	ICSAB1	393.08	1.0181	1.0606	.51281	.51123	.43755	.94970	471.23	.46989	.47750	ICSAB1
20	CCV1	103.62	1.5084	1.0448	2.0546	1.5274	2.4675	2.0081	76.529	2.4653	.97550	CCV1
21	CCB1	.01082	.00020	-.00099	.00044	.00005	.00453	.00003	.15308*	.00007	-.00003	CCB1
22	IPK036SQ	.14392*	.00097	-.00157	-.00002	.00000	.00171	-.00018	-.00995	.00026	-.00017	IPK036SQ
23	IPK036SX	5.0387	2.4672	.51662	.51893	.52267	.47220	.51504	51.237	.50725	.50819	IPK036SX
24	IPK036SY	5.1148	2.4887	.52019	.52603	.53295	.47958	.52256	52.252	.51858	.51667	IPK036SY
25	K575-01A	54.817	7.5442	.58599	4.4494	.56409	5.6303	.53952	308.60	.69279	.73739	K575-01A
26	K575-01T	47.959	4.9167	.01741	3.8682	.00356	5.0115	.00863	258.68	.16432	.20517	K575-01T
27	K575-01J	8.6541	.91925	.00258	.71959	.00069	.93932	.00162	50.202	.03203	.03827	K575-01J
28	K575-01M	59.694	5.1932	.12962	2.5902	.11860	5.0629	.11330	305.43	.27556	.25845	K575-01M
29	K575-01S	52.326	5.4038	.11851	1.9453	.11503	4.1565	.11323	273.22	.24451	.33689	K575-01S
30	Blank	.00589	.00302	.00051	.00017	-.00003	.01643	-.00008	.04128	-.00008	-.00018	Blank
31	CCV2	103.39	1.5133	1.0556	2.0758	1.5350	2.4887	2.0312	76.373	2.4742	.97846	CCV2
32	CCB2	.00903	.00153	-.00051	.00034	.00003	.01100*	.00000	.14565*	.00004	-.00005	CCB2
33	K575-01A	222.44	25.854*	.66781	18.755	.55340	23.138*	.52595	1106.3*	1.2124	1.4679	K575-01A
34	K575-01W	221.75	23.665*	.08307	18.836	.01607	23.321*	.04004	1100.3*	.74344	.97688	K575-01W
35	K575-01J	47.270	4.8285	.01724	3.9313	.00343	5.0274	.00849	252.65	.16170	.20500	K575-01J
36	K575-01M	267.52	24.602*	.62318	12.038	.52606	22.887*	.47205	1251.3*	1.1934	1.1788	K575-01M
37	K575-01S	235.00	25.414*	.56771	9.1956	.51261	18.812*	.47460	1124.2*	1.0698	1.5418	K575-01S
38	Blank	.01646	.01123	-.00072	.00076	-.00001	.08119	-.00005	.12914	-.00001	-.00010	Blank
39	CCV3	104.34	1.5331	1.0574	2.1130	1.5382	2.5281	2.0114	75.400	2.4312	.98508	CCV3
40	CCB3	.00989	.00325	-.00023	.00042	.00005	.04197*	.00000	.16766*	.00004	-.00015	CCB3
41	K201-02W	103.13	.00782	.07241	1.0441	.01828	.00616	.05714	31.953	.14562	.10684	K201-02W
42	K201-03W	118.13	.00404	.08190	1.1882	.01711	-.01302	.06169	27.322	.15469	.09331	K201-03W
43	Blank	.00806	.00141	.00069	.00012	-.00004	.01911	-.00005	.02434	-.00004	-.00004	Blank
44	CCV4	103.12	1.5191	1.0443	2.0950	1.5294	2.4783	1.9762	75.545	2.4189	.98469	CCV4
45	CCB4	.00834	.00123	-.00154	.00046	.00009	.01837*	.00005	.17339*	.00010	-.00006	CCB4
46	IPK035SB	.00519	.00248	-.00150	-.00004	-.00003	.01521	-.00015	-.01467	.00036	-.00015	IPK035SB
47	IPK035SL	5.1594	2.5041	.52475	.53795	.53159	.49170	.51745	51.687	.51327	.52737	IPK035SL
48	IPK035SC	5.1150	2.5050	.52394	.53576	.53095	.48990	.51652	51.373	.51030	.52510	IPK035SC
49	K203-17A	174.37	2.4617	.66715	1.7782	.55432	.39600	.51537	73.721	.77538	.59198	K203-17A
50	K203-17	176.34	.00037	.13194	1.2961	.00980	-.05750*	.00512	25.454	.28138	.05548	K203-17
51	K203-17J	37.300	.00030	.02833	.26103	.00200	-.01275	.00027	5.3160	.05742	.01097	K203-17J
52	K203-18	111.91	.00063	.06452	1.5841	.00853	-.03360*	.03333	22.754	.22731	.10854	K203-18

53	K203-19	96.766	-.00024	.10124	1.5318	.00996	-.04575*	.00515	14.267	.24145	.21109	K203-19
54	K203-20	102.33	-.00007	.06097	1.4079	.00748	-.02636*	.01835	18.831	.19715	.08904	K203-20
55	Blank	.00890	.00046	-.00018	.00010	-.00001	.00340	-.00003	.02540	-.00006	-.00007	Blank
56	CCV5	104.16	1.5056	1.0358	2.1222	1.5382	2.4642	1.9728	75.146	2.4221	.98579	CCV5
57	CCB5	.00801	.00098	-.00093	.00047	.00005	.00749	.00005	.15782*	-.00005	.00003	CCB5
58	K203-21	73.820	.00014	.05900	.88193	.00583	-.03193*	.00595	7.9567	.18904	.07990	K203-21
59	K203-22	82.873	.00071	.08588	1.0887	.00873	-.03564*	.00660	19.817	.21859	.11354	K203-22
60	Blank	.00737	.00019	.00026	.00011	-.00003	.00299	-.00008	.02303	-.00013	-.00011	Blank
61	CCV6	103.93	1.4926	1.0303	2.1184	1.5298	2.4525	1.9542	74.789	2.4119	.98833	CCV6
62	CCB6	.01263	.00129	.00138	.00041	.00009	.00687	.00006	.16678*	-.00003	-.00005	CCB6
63	IPK034WB	.00560	.00044	.00114	.00014	-.00004	.00409	-.00006	-.01672	.00004	-.00008	IPK034WB
64	IPK034WL	5.4397	2.5335	.53489	.53877	.53023	.51226	.51533	49.575	.50218	.51311	IPK034WL
65	IPK034WC	5.4196	2.5786	.53161	.53747	.52764	.52267	.51430	50.118	.49811	.50917	IPK034WC
66	K133-01A	7.4399	3.1296	.70518	.73313	.52954	1.6791	.49424	1282.4*	.50511	.53681	K133-01A
67	K133-01	.04242	-.00102	.00016	.13439	-.00005	1.1203	-.00071	1266.8*	.00027	-.00217	K133-01
68	K133-01J	.02437	.00013	-.00162	.02742	.00002	.22113	-.00021	304.91	.00052	-.00060	K133-01J
69	K133-01M	7.0268	3.1123	.66174	.69464	.49340	1.7065	.46237	1307.1*	.47423	.50173	K133-01M
70	K133-01S	7.1086	3.1350	.66252	.70512	.49701	1.7323	.46319	1323.8*	.47577	.50462	K133-01S
71	K133-02	.04326	.00027	-.00141	.06348	.00001	.26267	-.00024	397.79	.00045	-.00094	K133-02
72	Blank	.00454	.00071	-.00026	.00002	-.00003	.00385	-.00004	.05951	-.00011	.00002	Blank
73	CCV7	103.70	1.4939	1.0292	2.1334	1.5269	2.4564	1.9514	74.349	2.4054	.99010	CCV7
74	CCB7	.00993	.00052	-.00047	.00054	.00009	.00681	.00003	.17250*	.00015	-.00003	CCB7
75	K133-03	.05409	-.00318	.01675	.47556	-.00012	1.2084	-.00098	1637.9*	.00000	-.00196	K133-03
76	K133-04	.03221	-.00144	-.00031	.10086	-.00006	.42869	-.00050	912.52*	.00018	-.00141	K133-04
77	K133-05	.02270	.00058	-.00111	.15765	.00000	.22191	-.00024	460.22	.00035	-.00088	K133-05
78	K119-01	.01928	-.00023	.00196	.05119	.00001	.08829	-.00012	76.171	.00051	-.00023	K119-01
79	K119-02	.02809	-.00097	.01762	.08773	-.00008	.12204	-.00022	437.79	.00042	-.00061	K119-02
80	K119-03	.03765	.00005	.00414	.16433	.00001	.12122	-.00016	233.05	.00047	-.00082	K119-03
81	K146-02	.03414	-.00263	-.00015	.18317	-.00004	1.9593	-.00049	1181.8*	.00010	-.00179	K146-02
82	K146-03	.03606	-.00103	.00597	.33025	-.00003	.16456	-.00032	620.75	.00050	-.00108	K146-03
83	K146-04	.03551	-.00121	.00252	.21422	.00002	.14050	-.00019	376.52	.00058	-.00083	K146-04
84	Blank	.00559	.00066	.00005	.00013	-.00001	.00209	-.00001	.11103	-.00004	-.00007	Blank
85	CCV8	102.89	1.4797	1.0265	2.1334	1.5082	2.4226	1.9434	72.620	2.3765	.98011	CCV8
86	CCB8	.00954	.00047	-.00132	.00042	.00004	.00563	.00001	.09684*	.00019	-.00002	CCB8
87	K146-05	.03465	-.00087	.01150	.37726	-.00005	.14774	-.00015	573.82	.00039	-.00103	K146-05
88	K146-06	.03821	-.00062	.00230	.21683	-.00002	.14239	-.00014	377.21	.00062	-.00076	K146-06
89	Blank	.00724	.00033	.00092	.00004	-.00002	.00179	-.00004	.06580	.00006	-.00012	Blank
90	CCV9	103.54	1.4658	1.0169	2.1329	1.5042	2.4298	1.9374	72.685	2.3886	.97871	CCV9
91	CCB9	.01155	.00118	.00051	.00036	.00005	.00532	.00002	.09754*	.00012	.00005	CCB9
92	TXK007SB	.03586	.00067	.00035	.05695*	.00001	.07310*	-.00013	.01292	.00017	-.00006	TXK007SB
93	K521-01A	5.9864	2.6192	.59532	.61312	.55704	.62026	.53459	183.30	.52367	.54951	K521-01A
94	K521-01	.02515	.00026	-.00018	.02598	.00002	.10132	.00019	143.19	.00053	.00147	K521-01
95	K521-01J	.01504	.00124	.00049	.00537	.00000	.02198	.00000	30.278	.00030	.00021	K521-01J
96	K521-01M	5.7284	2.6815	.57544	.58163	.52813	.63490	.51418	190.45	.49480	.52019	K521-01M
97	K521-01S	5.6589	2.6383	.56591	.57517	.52444	.62229	.50733	183.03	.48947	.51581	K521-01S
98	K520-03	.09754	.00837	.21086	.06107	.00004	.10898	.00038	20.597	.06416	.00688	K520-03
99	Blank	.00562	.00108	.00019	.00010	.00002	.00145	-.00002	.04546	.00003	-.00009	Blank
100	CCV10	103.24	1.4855	1.0288	2.1344	1.5100	2.4258	1.9571	72.678	2.3840	.97902	CCV10
101	CCB10	.00972	.00151	.00047	.00036	.00007	.00490	.00003	.09119*	.00023	-.00005	CCB10
102	Blank	.00196	.00035	-.00012	-.00004	-.00004	-.00018	-.00005	.05083	.00013	-.00011	Blank
103	CCV11	103.77	1.4714	1.0054	2.1463	1.5031	2.4088	1.8968	72.236	2.3483	.97619	CCV11
104	CCB11	.00934	.00093	-.00112	.00034	.00011	.00368	.00001	.08845*	.00018	-.00017	CCB11
105	IPK037WB	.00654	.00020	.00093	.00001	-.00001	.00130	-.00005	-.01525	.00008	-.00010	IPK037WB
106	IPK037WL	5.4606	2.5048	.52242	.55348	.52931	.50602	.50323	48.867	.49401	.51005	IPK037WL
107	IPK037WC	5.5119	2.5262	.52567	.56266	.53787	.51161	.50826	49.124	.49767	.51076	IPK037WC

108	TXK008SB	.05069	.00103	-.00011	.00083	-.00001	.04257	-.00009	-.00954	.00023	-.00011	TXK008SB
109	K543-01A	6.0227	2.5869	.59156	1.0243	.55609	.63972	.52712	207.70	.52318	.54584	K543-01A
110	K543-01	.02501	.00062	.00229	.44269	.00001	.12279	-.00008	167.42	.00254	-.00002	K543-01
111	K543-01J	.01221	.00071	.00049	.09141	-.00003	.02449	-.00002	35.276	.00073	.00003	K543-01J
112	K543-01M	5.7843	2.6407	.56449	1.0177	.53094	.65680	.50377	213.93	.49985	.52023	K543-01M
113	K543-01S	5 7242	2.6250	.56210	.97518	.52437	.64618	.50091	202.85	.49898	.51956	K543-01S
114	Blank	.00404	.00109	.00051	.00018	.00001	.00097	.00001	.05382	.00012	-.00007	Blank
115	CCV12	103.56	1.4631	1.0093	2.1587	1.5082	2.4266	1.9177	72.335	2.3825	.97674	CCV12
116	CCB12	.01116	.00140	.00035	.00042	.00008	.00374	.00001	.08846*	.00023	-.00007	CCB12
INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID

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INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID
1	Blank	.00108	.00001	.00009	-.00019	.00002	.00004	-.00006	-.00060	- 00030	.00001	Blank
2	S20			.20556			.09605					S20
3	S21			2.0570			.96075					S21
4	S22	.27945	.04811									S22
5	S23	2.6915	1.8656									S23
6	S24							.76817				S24
7	S25							7.6522				S25
8	S26								.75595	.41573		S26
9	S27								7.5181	4.2088		S27
10	S28					.02236						S28
11	S29					.22033						S29
12	S30				.03398						.00139	S30
13	S31				.16919						.00556	S31
14	ICV	2.5704	25.052	2.4211	.52317	58.311	2.4109	2.5181	2.4628	61.223	1.0431	ICV
15	ICB	.00018	.00247	.00020	.00049	.00180	.00011	.00028	.00017	.10656	-.00019	ICB
16	MRLK2301	.01083	.21774	.01038	.01033	.98703	.01058	.01042	.01043	.99840	.00931	MRLK2301
17	MRLK2302	.01061	.10469	.00293	.10222	.19121	.00502	.00977	.01011	.99127	.01009	MRLK2302
18	ICSA1	.00150	190.29	.00481	.01836	193.48	.00112	-.00131	.00105	.08058	.00086	ICSA1
19	ICSAB1	.54547	192.04	.95309	1.1979	193.20	.47385	1.0162	97195	80.564	1.0434	ICSAB1
20	CCV1	2.6250	25.307	2.4341	.51998	58.216	2.4018	2.5329	2.4848	62.084	1.0488	CCV1
21	CCB1	.00033	.00032	-.00010	.00016	.00304	.00010	.00038	.00012	.15687	-.00001	CCB1
22	IPK036SQ	.00020	.00407	.00005	.00016	-.00139	.00000	.00032	-.00020	.12761	.00080	IPK036SQ
23	IPK036SX	.52189	5.1470	.50014	.00178*	48.975	.49555	.54420	.52044	50.788	.50744	IPK036SX
24	IPK036SY	.53177	5.2557	.50627	.00188*	50.069	.50424	.55239	.53062	51.596	.51264	IPK036SY
25	K575-01A	.69842	25.815	1.1733	.05870	69.400	1.7943	.53480	.66338	57.895	.56650	K575-01A
26	K575-01T	.11054	20.364	.63994	.05453	19.865	1.2705	.00873	.18154	4.6066	.00084	K575-01T
27	K575-01J	.02056	4.0035	.12223	.00888	3.8091	.24387	.00152	03407	.87583	.00047	K575-01J
28	K575-01M	.25017	26.552	.63513	.06249	36.775	1.8473	.12394	.37498	17.661	.10374	K575-01M
29	K575-01S	.21524	22.476	.87169	.05588	32.378	1.5752	.11624	.28378	16.549	.09768	K575-01S
30	Blank	-.00001	-.00318	-.00038	.00033	.00121	-.00001	.00014	-.00004	.05244	-.00013	Blank
31	CCV2	2.6343	25.267	2.4414	.52799	58.390	2.4301	2.5313	2.4880	62 632	1.0585	CCV2
32	CCB2	00020	.00120	00018	-.00001	-.01072	.00001	00018	00004	09762	.00091	CCB2
33	K575 01A	1.1595	92.390	3.3465	.28067	137.28	6.0793	.59042	1 2935	78.336	.59854	K575-01A
34	K575 01W	.55325	91.023	2.9340	.28261	91.573	5 7189	05003	85467	23.509	.00876	K575-01W
35	K575-01J	.11019	19.975	.63602	.05494	19.432	1 2489	00868	18101	4.6569	.00121	K575-01J
36	K575-01M	1.2365	113.26	2.7836	.32194	166.93	8.1679	59770	1.6836	88.349	.50102	K575-01M
37	K575-01S	1 0561	96.886	3 8449	.28528	148.87	7.0477	.56658	1 2861	82.218	.47221	K575-01S
38	Blank	.00006	.00761	-.00022	.00002	.01328	.00047	00019	-.00010	.18553	-.00011	Blank
39	CCV3	2.6502	24 837	2.4490	.54093	58.132	2.4523	2.5593	2.5025	63 873	1.0652	CCV3
40	CCB3	.00024	.00071	-.00032	.00056	.01083	.00014	.00037	.00017	.18607	-.00016	CCB3
41	K201-02W	.09126	138.93	.54580	.04734	5.4654	3.4244	00396	35091	8.9659	.00626	K201-02W
42	K201-03W	.11030	163.78	.42098	.05666	6.5112	3.1482	.00399	.33599	9.7852	.00787	K201-03W
43	Blank	-.00002	.00561	-.00040	.00018	-.00075	.00030	.00011	00007	.02265	-.00024	Blank
44	CCV4	2.6331	24.899	2.4485	.53524	57.991	2.4310	2.5661	2.4997	63.494	1.0537	CCV4
45	CCB4	.00027	.00287	-.00028	-.00003	-.00960	.00029	00039	00017	.09706	.00072	CCB4
46	IPK035SB	.00021	.00103	-.00008	.00009	.01163	.00008	.00038	.00000	.07469	.00143	IPK035SB
47	IPK035SL	.53757	5.2068	.51546	.00162*	49.665	.50996	.56287	.53948	52.733	.51911	IPK035SL
48	IPK035SC	.53537	5.1911	.50953	.00142*	49.613	.50808	.56119	53659	52.654	.51653	IPK035SC
49	K203-17A	.65843	302 51	.68165	.09419	60.484	2.1584	55433	58245	63.129	.54325	K203-17A
50	K203-17	.08932	320.49	.17242	.09446	12.959	1.7612	.01348	10323	11.267	.01174	K203-17
51	K203-17J	.01800	68.397	03572	.01870	2.6762	.36210	00257	02069	2.2041	.00231	K203-17J
52	K203-18	.10672	165.16	.76134	.05708	8.6185	6.0649	.00541	.12282	9.4057	.00306	K203-18

53	K203-19	.08840	200.95	.34584	.04976	6.5277	9.0954	.00971	.13920	7.5680	.00551	K203-19
54	K203-20	.08898	140.73	.36352	.05065	7.3338	5.0731	.00586	.09922	9.0238	.00523	K203-20
55	Blank	-.00010	.00708	.00013	.00020	-.00453	.00042	.00006	-.00003	-.01353	.00058	Blank
56	CCV5	2.6323	24.792	2.4503	.54455	58.254	2.4537	2.5647	2.4983	63.808	1.0407	CCV5
57	CCB5	.00021	.00198	.00017	-.00023	-.00486	.00019	.00036	.00007	.04713	.00008	CCB5
58	K203-21	.06138	140.46	.24829	.03605	5.0067	4.2715	.00638	.07506	6.6341	.00375	K203-21
59	K203-22	.08865	159.60	.36607	.04115	6.2017	5.2640	.00785	.11383	7.9026	.00459	K203-22
60	Blank	-.00005	.00572	.00011	-.00057	-.00284	.00040	.00007	-.00009	-.00567	-.00004	Blank
61	CCV6	2.6391	24.638	2.4481	.54385	57.791	2.4387	2.5693	2.5061	63.689	1.0339	CCV6
62	CCB6	.00027	.00096	-.00010	.00063	.00724	.00016	.00044	.00006	.05234	-.00005	CCB6
63	IPK034WB	.00029	.00144	-.00048	.00039	-.02202	.00007	.00009	.00011	.01214	.00096	IPK034WB
64	IPK034WL	.54678	5.2049	.51243	.00171*	47.670	.50228	.53348	.52656	52.143	.53433	IPK034WL
65	IPK034WC	.54217	5.1139	.50773	.00216*	48.621	.50183	.54171	.52116	52.936	.52887	IPK034WC
66	K133-01A	.72000	5.2687	.52720	.13226	542.44	3.5109	.56104	.47776	105.88	.72681	K133-01A
67	K133-01	.00390	.25938	.00286	.13303	501.98	3.0653	-.00183	.00025	39.854	.00485	K133-01
68	K133-01J	.00171	.03939	-.00008	.02467	107.31	.67897	-.00035	-.00015	7.4524	-.00021	K133-01J
69	K133-01M	.67242	4.9888	.49105	.13532	549.27	3.5206	.56805	.50466	106.89	.56030	K133-01M
70	K133-01S	.68217	5.0239	.49457	.13985	554.58	3.5559	.57209	.50737	108.71	.56150	K133-01S
71	K133-02	.00320	.42054	.00198	.03767	101.85	.61788	.00191	.00022	12.054	.00109	K133-02
72	Blank	-.00004	-.00103	-.00001	.00086	.00569	.00008	.00004	-.00004	.27479	.00037	Blank
73	CCV7	2.6424	24.535	2.4510	.54807	57.413	2.4370	2.5796	2.5104	64.776	1.0392	CCV7
74	CCB7	.00026	.00127	-.00032	.00077	.00209	.00017	.00043	.00003	.22872*	-.00005	CCB7
75	K133-03	.00938	.22700	.00451	.18372	663.45	4.5875	-.00332	.00192	42.837	.00686	K133-03
76	K133-04	.00174	2.7705	.00260	.08212	263.93	1.8535	-.00052	.00053	23.565	.00228	K133-04
77	K133-05	.00222	3.4476	.00337	.04453	114.25	.93330	-.00029	.00067	12.566	.00053	K133-05
78	K119-01	.00091	.41056	.00146	.01018	13.573	.10717	.00747	.00058	3.7747	.00050	K119-01
79	K119-02	.00120	3.6366	.00339	.03277	54.533	1.0796	-.00054	.00181	7.3882	-.00042	K119-02
80	K119-03	.00305	.77418	.00271	.01718	40.507	.32390	.00353	.00028	6.6003	-.00058	K119-03
81	K146-02	.00235	4.4186	.00337	.14576	695.09	4.3012	-.00120	.00163	49.326	.00274	K146-02
82	K146-03	.00171	1.8306	.00237	.04854	124.68	.53265	.00113	.00083	19.011	.00156	K146-03
83	K146-04	.00183	3.6050	.00264	.03749	81.882	.71621	.00087	.00233	12.745	-.00143	K146-04
84	Blank	-.00003	-.00319	-.00016	.00030	.00648	.00023	.00016	-.00017	.24061	-.00050	Blank
85	CCV8	2.6121	24.224	2.4261	.54881	56.613	2.4062	2.5511	2.4794	64.509	1.0292	CCV8
86	CCB8	.00033	.00088	-.00011	.00060	-.00363	.00041	.00043	.00018	.20976	.00021	CCB8
87	K146-05	.00180	8.8088	.00267	.04815	112.93	.41949	-.00037	.00044	15.520	.00230	K146-05
88	K146-06	.00525	3.6464	.00231	.03759	82.677	.72211	.00096	.00029	12.742	.00039	K146-06
89	Blank	.00014	-.00147	-.00051	.00066	.01026	.00015	.00016	.00006	.16489	-.00020	Blank
90	CCV9	2.6359	24.266	2.4158	.54850	56.345	2.3993	2.5416	2.4812	64.966	1.0264	CCV9
91	CCB9	.00044	-.00283	.00038	.00103	.00778	.00025	.00045	.00002	.18733	.00067	CCB9
92	TXK007SB	.00111	.00250	.00000	-.00038	.00649	.00014	.00051	-.00006	.30867	.00216	TXK007SB
93	K521-01A	.61593	5.4887	.53793	.00804	63.137	.88892	.54539	.51784	59.235	.60942	K521-01A
94	K521-01	.02141	.25415	.00107	.00642	15.789	.36573	.00131	.02508	.82009	.00188	K521-01
95	K521-01J	.00487	.05384	.00012	.00114	3.3648	.07844	.00034	.00510	.26541	-.00031	K521-01J
96	K521-01M	.58130	5.0181	.50942	.00892	64.336	.87087	.55938	.55246	59.531	.58720	K521-01M
97	K521-01S	.57253	4.9707	.50631	.00841	62.906	.84671	.55410	.54657	58.318	.57705	K521-01S
98	K520-03	.08345	.13061	.00073	.00196	3.5989	.35765	-.00001	.00754	4.2192	.00100	K520-03
99	Blank	-.00008	-.00012	-.00002	.00102	-.00426	.00001	.00012	-.00003	.15957	.00023	Blank
100	CCV10	2.6088	24.259	2.4268	.55086*	56.777	2.4072	2.5449	2.4782	64.650	1.0354	CCV10
101	CCB10	.00008	.00053	-.00027	.00053	.00737	.00008	.00048	.00017	.18373	.00025	CCB10
102	Blank	-.00004	-.00210	-.00023	-.00076	.00373	-.00010	.00004	.00005	.02514	.00031	Blank
103	CCV11	2.5916	24.065	2.4171	.56243*	56.093	2.3658	2.5558	2.4735	65.534	1.0149	CCV11
104	CCB11	.00019	.00112	.00014	.00007	-.01224	.00022	.00069	.00015	.12650	.00002	CCB11
105	IPK037WB	.00022	-.00155	-.00003	.00135	.00018	-.00012	.00017	.00004	.07447	-.00013	IPK037WB
106	IPK037WL	.53725	5.0600	.50648	.00180*	47.803	.49771	.53802	.52093	54.706	.52026	IPK037WL
107	IPK037WC	.53810	5.0555	.50871	.00178*	48.730	.50708	.53931	.52274	55.178	.52342	IPK037WC

108	TXK008SB	.00086	.00157	-.00041	-.00006	.00844	-.00012	.00063	-.00005	.26656	.00182	TXK008SB
109	K543-01A	.59770	5.2214	.53679	.01022	50.167	.54207	.54476	.49454	63.064	.59930	K543-01A
110	K543-01	.00527	.00727	.00032	.00767	2.9332	.01844	.00100	.00129	3.5968	.00152	K543-01
111	K543-01J	.00135	.00086	.00007	.00105	.62298	.00414	.00021	.00018	.73195	.00023	K543-01J
112	K543-01M	.56796	5.0056	.51013	.00946	50.809	.51592	.55887	.53075	63.819	.57183	K543-01M
113	K543-01S	.56829	5.0322	.50840	.00922	49.795	.50618	.55735	.53091	63.083	.57195	K543-01S
114	Blank	-.00008	-.00097	-.00013	.00056	.00401	-.00005	.00030	-.00006	.18368	-.00019	Blank
115	CCV12	2.6285	24.203	2.4106	.56306*	56.390	2.3880	2.5347	2.4747	66.204*	1.0215	CCV12
116	CCB12	.00012	-.00160	.00023	.00061	.00869	.00028	.00078*	.00025	.17956	.00040	CCB12
INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID

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INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID
1	Blank	.00008	.00079	-.00011	-.00002	.00014	.00003	-.00016	.00117	Blank
2	S20									S20
3	S21									S21
4	S22							.12298		S22
5	S23							1.2265		S23
6	S24		1.3193							S24
7	S25		7.6101							S25
8	S26									S26
9	S27									S27
10	S28				.00568					S28
11	S29				.05587					S29
12	S30	.04188		.14662		.02596	.01647		.61813	S30
13	S31	.20598		.71346		.12272	.08792		5.9578	S31
14	ICV	.50937	64.106	.48985	2.2943	.50286	.50393	1.4964	2.5847	ICV
15	ICB	.00010	.01358	.00008	-.00023	-.00012	.00069	.00012	-.00078	ICB
16	MRLK2301	.01034	1.0343	.01036	.01095	-.00017	.01029	.01051	.02079	MRLK2301
17	MRLK2302	.01004	.51560	.00996	.01089	.00920	.01051	.01018	.00965	MRLK2302
18	ICSA1	.00027	.04367	.00084	-.00368	.00172	.00551	.00060	.00167	ICSA1
19	ICSAB1	1.0927	83.716	.48379	.83361	.92767	1.0111	.49360	1.0245	ICSAB1
20	CCV1	.51689	64.887	.49349	2.3000	.50565	.50083	1.5132	2.5935	CCV1
21	CCB1	.00015	.02481	.00017	-.00033	-.00006	.00018	.00001	.00563	CCB1
22	IPK036SQ	.00005	.01928	.00021	-.00146	.03407	.00054	.00007	.00005	IPK036SQ
23	IPK036SX	.50265	53.637	.49747	.46726	.52312	.52091	.52152	.54372	IPK036SX
24	IPK036SY	.50897	54.444	.50376	.47294	.52885	.52831	.53161	.55276	IPK036SY
25	K575-01A	.53700	61.718	1.0810	.48137	.49767	1.8372	.60112	28.211	K575-01A
26	K575-01T	.00069	5.7267	.58762	-.00227	.01971	1.3018	.05659	27.142	K575-01T
27	K575-01J	.00005	1.0166	.11082	-.00032	.00361	.24441	.01065	5.3718	K575-01J
28	K575-01M	.11556	21.727	.82183	.09631	.12118	1.6657	.17988	16.452	K575-01M
29	K575-01S	.11210	19.554	.62898	.09190	.12540	1.4288	.16702	28.350	K575-01S
30	Blank	-.00001	-.00366	.00007	-.00004	-.00040	.00022	.00012	.00164	Blank
31	CCV2	.52011	65.310	.49673	2.3125	.50347	.50438	1.5079	2.5990	CCV2
32	CCB2	.00011	.00977	.00016	-.00004	-.00013	.00035	.00010	.00583	CCB2
33	K575-01A	.55925	85.510	3.2193	.42197	.55539	6.4451	.77806	95.372*	K575-01A
34	K575-01W	.00393	28.820	2.8153	-.00724*	.09365	6.0633	.26372	97.772*	K575-01W
35	K575-01J	.00074	5.6866	.58301	-.00111	.01961	1.2843	.05577	26.529	K575-01J
36	K575-01M	.58379	105.71	3.8238	.37907	.54360	7.5711	.80517	63.980*	K575-01M
37	K575-01S	.56313	94.690	2.9243	.36687	.56553	6.5569	.74993	98.832*	K575-01S
38	Blank	.00012	.03130	.00033	.00017	-.00048	.00165	.00010	.00524	Blank
39	CCV3	.52018	66.131*	.50203	2.3035	.50352	.50854	1.4959	2.5775	CCV3
40	CCB3	.00008	.02780	.00015	-.00001	-.00010	.00112	.00014	.00678*	CCB3
41	K201-02W	-.00069	.16966	.25153	-.00392	.03738	1.0223	.20901	8.2481	K201-02W
42	K201-03W	-.00035	.22328	.28850	-.00362	.06368	1.1927	.22619	8.0604	K201-03W
43	Blank	.00005	-.00808	.00005	-.00020	-.00030	.00003	.00005	.00090	Blank
44	CCV4	.51580	65.789	.49611	2.2784	.50826	.50663	1.4979	2.5697	CCV4
45	CCB4	.00006	.01147	.00019	.00047	-.00020	.00064	.00018	.00680*	CCB4
46	IPK035SB	-.00007	.01285	.00004	-.00116	.03427	.00023	.00012	.00053	IPK035SB
47	IPK035SL	.51418	55.306	.50984	.47193	.53279	.53165	.53209	.55160	IPK035SL
48	IPK035SC	.51228	55.205	.50839	.46999	.52953	.53176	.52838	.54928	IPK035SC
49	K203-17A	.50476	55.380	.59631	.45069	.51846	1.8295	1.0753	1.9428	K203-17A
50	K203-17	-.00004	.75614	.11063	-.00578*	.04212	1.3870	.57617	1.4776	K203-17
51	K203-17J	-.00002	.14504	.02229	-.00028	.00795	.27851	.11741	.29436	K203-17J
52	K203-18	-.00074	.62180	.13181	-.00601*	.03819	1.7654	.33937	4.5269	K203-18

53	K203-19	-.00075	.16505	.11490	-.00571*	.03672	1 5467	.33527	.55242	K203-19
54	K203-20	-.00073	.20151	.09857	-.00538*	.03821	1.8365	.29714	2.6482	K203-20
55	Blank	.00006	-.01043	.00007	.00014	-.00021	.00049	.00002	00041	Blank
56	CCV5	.51552	66.084*	.50055	2.2707	.50522	.51106	1.4949	2.5714	CCV5
57	CCB5	-.00001	.00369	.00012	.00030	.00014	.00065	.00019	00628	CCB5
58	K203-21	-.00033	.13080	.05454	-.00398	.03549	1.5059	.26403	.69210	K203-21
59	K203-22	-.00032	.11309	.11241	-.00470	.03705	1.4477	.28220	.79511	K203-22
60	Blank	.00014	-.01859	.00016	-.00072	-.00040	.00075	.00004	.00042	Blank
61	CCV6	.51309	66.052*	.50068	2.2464*	.50319	.50718	1.4883	2.5566	CCV6
62	CCB6	.00011	.00798	.00021	.00030	.00012	.00042	.00006	.00645*	CCB6
63	IPK034WB	.00005	-.01045	.00010	.00010	-.00021	.00010	.00008	.00001	IPK034WB
64	IPK034WL	.52839	54.610	.50848	.48536	.48502	.52289	.52293	.53106	IPK034WL
65	IPK034WC	.52442	55.548	.51731	.48348	.49173	.53244	.51530	.52767	IPK034WC
66	K133-01A	.73399	2967.7*	13.128	.41765	.47155	.52077	.54885	.56854	K133-01A
67	K133-01	-.00069	3003.7*	12.790	-.00286	-.00142	.00029	-.00065	.00750	K133-01
68	K133-01J	-.00014	829.66*	2.7430	-.00106	-.00024	.00304	-.00033	.00169	K133-01J
69	K133-01M	.74123	2989.0*	13.328	.39549	.47544	.52059	.51760	.52804	K133-01M
70	K133-01S	.74576	2987.3*	13.559	.39291	.47941	.52642	.52127	.53420	K133-01S
71	K133-02	-.00026	698.57*	3.3542	-.00090	-.00011	.00293	-.00039	.01756	K133-02
72	Blank	-.00003	.97598	.00042	-.00026	-.00016	.00037	.00013	.00033	Blank
73	CCV7	.51363	67.008*	.50351	2.2556	.50471	.50857	1.4852	2.5557	CCV7
74	CCB7	.00013	.51408*	.00021	.00037	-.00021	.00019	.00014	.00630*	CCB7
75	K133-03	-.00066	*****	18.408	-.00205	-.00136	.00187	.00279	.00957	K133-03
76	K133-04	-.00054	1484.3*	8.5462	-.00173	-.00095	.00188	-.00047	.00619	K133-04
77	K133-05	-.00044	653.41	4.1492	-.00086	-.00023	.00316	-.00038	.00192	K133-05
78	K119-01	.00000	76.682	.68732	-.00011	-.00094	.00151	-.00007	.00430	K119-01
79	K119-02	-.00042	126.13	2.7702	-.00100	-.00043	.00590	.00289	.00368	K119-02
80	K119-03	-.00020	126.36	2.2121	-.00077	-.00031	.00317	-.00011	.00566	K119-03
81	K146-02	-.00070	*****	12.975	-.00382	-.00138	.00014	-.00115	.00460	K146-02
82	K146 03	-.00042	573.34	5.3725	-.00083	-.00134	.00273	-.00015	.00238	K146-03
83	K146-04	-.00036	391.48	3.6863	-.00126	-.00083	.00349	.00062	.01058	K146-04
84	Blank	-.00002	.89724	.00034	-.00020	-.00034	.00057	.00020	.00296	Blank
85	CCV8	.50813	66.339*	.50075	2.2459*	.50030	.50538	1.4651	2.5285	CCV8
86	CCB8	.00018	.54173*	.00023	-.00024	-.00020	.00065	.00024	.00367	CCB8
87	K146-05	-.00049	528 98	4.9240	-.00096	-.00019	.00278	-.00032	.00649	K146-05
88	K146-06	-.00037	398 35	3.7328	-.00120	-.00082	.00330	.00086	.00795	K146-06
89	Blank	-.00006	.58819	.00036	00013	-.00057	.00023	.00003	.00124	Blank
90	CCV9	.50983	66.560*	.50387	2.2249*	.49643	.50202	1.4674	2.5205	CCV9
91	CCB9	.00003	.42900*	.00021	00013	-.00057	.00034	.00019	.00374	CCB9
92	TXK007SB	.00002	337.58*	.00196	- 00166	.00021	00011	.00015	.03940*	TXK007SB
93	K521-01A	.54404	380.47	.91073	.47702	.48421	.52914	.54122	.64264	K521-01A
94	K521-01	.00000	330 17	.41619	-.00136	.00068	.00232	.00018	.07658	K521-01
95	K521-01J	-.00019	70.936	.08706	- 00028	-.00008	.00069	.00006	.01586	K521-01J
96	K521-01M	.55862	395.59	.94398	.45694	.49577	.53574	.51783	.61692	K521-01M
97	K521-01S	.55129	377.75	.91488	.45283	.48953	.53180	.51316	.61428	K521-01S
98	K520-03	-.00002	325.83	.12292	-.00142	.00054	.00272	.00072	1.0056	K520-03
99	Blank	.00007	.44939	.00007	-.00032	.00005	.00001	.00009	.00146	Blank
100	CCV10	.50879	66.265*	.50022	2.2573	.49875	.50495	1.4655	2.5371	CCV10
101	CCB10	.00002	.35178*	.00004	.00029	-.00019	.00049	.00011	.00370	CCB10
102	Blank	-.00003	.21390	.00022	.00049	-.00033	.00019	.00013	.00139	Blank
103	CCV11	.50253	66.969*	.49906	2.2029*	.50146	.50225	1.4610	2.5108	CCV11
104	CCB11	.00006	.22153*	.00016	-.00013	-.00019	.00037	.00024	.00346	CCB11
105	IPK037WB	.00008	.20309	.00007	.00004	-.00039	.00034	.00024	-.00063	IPK037WB
106	IPK037WL	.51705	56.475	51689	.47597	.48607	.52840	.51238	.52154	IPK037WL
107	IPK037WC	.52023	56.899	.52162	.48016	.48697	.53856	.51182	.52423	IPK037WC

108	TXK008SB	.00013	341.89*	.00158	-.00149	.00046	.00029	.00026	.00143	TXK008SB
109	K543-01A	.53920	411.84	1.1488	.46700	.48146	.53068	.54499	.66730	K543-01A
110	K543-01	-.00010	365.87	.65720	-.00152	.00010	.00317	.00391	.10218	K543-01
111	K543-01J	.00003	77.352	.13687	.00013	.00000	.00103	.00087	.02019	K543-01J
112	K543-01M	.55971	427.86	1.1938	.44503	.49324	.53821	.52323	.65862	K543-01M
113	K543-01S	.55673	403.78	1.1447	.44384	.49331	.53131	.52534	.66366	K543-01S
114	Blank	.00004	.29436	.00023	.00017	-.00007	.00028	.00019	.00131	Blank
115	CCV12	.50775	67.423*	.50597	2.2068*	.49426	.50258	1.4666	2.5138	CCV12
116	CCB12	.00022	.21210*	.00019	-.00023	.00018	.00043	.00029	.00352	CCB12
INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID

ID8K020 Section 3 of 3

7031

Sample Name: Blank Acquired: 11/23/2011 10:19:26 Type: Cal
Method: 11K6010(v30) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00115**	**.00002**	**-.00001**	**.00023**	**.00007**	**.00044**	**-.00003**
Stddev	.00002	.00000	.00000	.00003	.00003	.00000	.00001
%RSD	1.3047	22.886	8.5592	11.238	45.487	.87647	18.562
#1	.00115	.00002	-.00002	.00026	.00005	.00043	-.00004
#2	.00117	.00002	-.00001	.00021	.00011	.00044	-.00004
#3	.00114	.00002	-.00001	.00022	.00006	.00044	-.00003

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00055**	**-.00004**	**-.00096**	**.00108**	**.00001**	**.00009**	**-.00019**
Stddev	.00002	.00001	.00009	.00003	.00001	.00000	.00011
%RSD	3.7686	26.134	9.6170	3.0586	53.570	3.7726	59.291
#1	.00055	-.00005	-.00086	.00110	.00002	.00009	-.00006
#2	.00057	-.00003	-.00097	.00109	.00001	.00010	-.00028
#3	.00053	-.00005	-.00105	.00104	.00001	.00009	-.00023

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00002**	**.00004**	**-.00006**	**-.00060**	**-.00030**	**.00001**	**.00008**
Stddev	.00002	.00001	.00008	.00010	.00009	.00001	.00001
%RSD	84.171	34.955	132.68	16.962	28.067	61.963	18.564
#1	.00001	.00002	.00001	-.00069	-.00040	.00001	.00007
#2	.00004	.00005	-.00015	-.00062	-.00026	.00000	.00008
#3	.00001	.00005	-.00004	-.00049	-.00025	.00002	.00010

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00079**	**-.00011**	**-.00002**	**.00014**	**.00003**	**-.00016**	**.00117**
Stddev	.00012	.00009	.00000	.00003	.00001	.00002	.00005
%RSD	15.582	80.928	14.103	19.954	42.893	12.908	3.8734
#1	.00086	-.00015	-.00002	.00015	.00005	-.00018	.00121
#2	.00065	-.00001	-.00001	.00011	.00003	-.00014	.00119
#3	.00087	-.00018	-.00002	.00015	.00002	-.00017	.00112

Sample Name: Blank Acquired: 11/23/2011 10:19:26 Type: Cal
Method: 11K6010(v30) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8052.9**	**79261.**	**185000.**
Stddev	35.2	437.	788.
%RSD	.43746	.55123	.42597
#1	8013.3	79349.	185880.
#2	8064.5	79647.	184730.
#3	8080.9	78786.	184380.

Sample Name: S20 Acquired: 11/23/2011 10:22:25 Type: Cal
Method: 11K6010(v30) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Be	Cd	Pb	Mn
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.97416**	**.11980**	**.20556**	**.09605**
Stddev	.00248	.00128	.00056	.00028
%RSD	.25467	1.0656	.27173	.29253
#1	.97630	.11854	.20494	.09633
#2	.97473	.11978	.20574	.09604
#3	.97144	.12109	.20601	.09577

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8174.8**	**80226.**	**187400.**
Stddev	55.1	424.	485.
%RSD	.67401	.52820	.25900
#1	8121.8	79773.	187700.
#2	8170.8	80291.	187660.
#3	8231.8	80613.	186840.

Sample Name: S21 Acquired: 11/23/2011 10:25:21 Type: Cal
Method: 11K6010(v30) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Be	Cd	Pb	Mn
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**9.5846**	**1.1513**	**2.0570**	**.96075**
Stddev	.0773	.0118	.0045	.00690
%RSD	.80627	1.0211	.22059	.71801
#1	9.5282	1.1378	2.0536	.95633
#2	9.5530	1.1569	2.0553	.95722
#3	9.6727	1.1593	2.0622	.96870

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8246.4**	**82371.**	**192110.**
Stddev	53.3	924.	740.
%RSD	.64588	1.1213	.38502
#1	8190.1	83168.	192660.
#2	8253.1	82586.	191270.
#3	8296.0	81359.	192410.

Sample Name: S22 Acquired: 11/23/2011 10:28:26 Type: Cal
Method: 11K6010(v30) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Ba	Co	Cu	Fe	V
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.56884**	**.15986**	**.27945**	**.04811**	**.12298**
Stddev	.00127	.00064	.00126	.00026	.00026
%RSD	.22264	.39808	.45239	.53809	.21058
#1	.56783	.15914	.27807	.04823	.12298
#2	.56842	.16013	.28055	.04781	.12273
#3	.57026	.16032	.27973	.04829	.12324

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8118.1**	**77761.**	**183100.**
Stddev	85.8	525.	559.
%RSD	1.0571	.67485	.30517
#1	8030.7	77470.	182490.
#2	8121.2	77446.	183580.
#3	8202.3	78367.	183240.

Sample Name: S23 Acquired: 11/23/2011 10:31:25 Type: Cal
Method: 11K6010(v30) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Ba	Co	Cu	Fe	V
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5.5784**	**1.5980**	**2.6915**	**1.8656**	**1.2265**
Stddev	.0346	.0026	.0329	.0043	.0016
%RSD	.62062	.16046	1.2237	.23000	.12759
#1	5.5391	1.5969	2.7293	1.8702	1.2249
#2	5.5920	1.5962	2.6691	1.8649	1.2280
#3	5.6042	1.6010	2.6761	1.8617	1.2267

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7613.6**	**80069.**	**182020.**
Stddev	26.6	555.	785.
%RSD	.34967	.69339	.43119
#1	7584.3	80611.	181520.
#2	7636.3	80093.	181620.
#3	7620.1	79501.	182930.

Sample Name: S24 Acquired: 11/23/2011 10:34:43 Type: Cal
Method: 11K6010(v30) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	B	Mo	Na
Units	Cts/S	Cts/S	Cts/S
Avg	**.09734**	**.76817**	**1.3193**
Stddev	.00040	.00034	.0015
%RSD	.41488	.04467	.11567
#1	.09691	.76784	1.3185
#2	.09771	.76815	1.3183
#3	.09741	.76852	1.3210

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7935.7**	**80691.**	**182890.**
Stddev	42.0	382.	789.
%RSD	.52966	.47346	.43136
#1	7890.9	80893.	183120.
#2	7941.9	80928.	182010.
#3	7974.3	80250.	183530.

Sample Name: S25 Acquired: 11/23/2011 10:37:40 Type: Cal
Method: 11K6010(v30) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	B	Mo	Na
Units	Cts/S	Cts/S	Cts/S
Avg	**1.0039**	**7.6522**	**7.6101**
Stddev	.0048	.0210	.0250
%RSD	.47556	.27393	.32879
#1	.99851	7.6715	7.6379
#2	1.0076	7.6551	7.6030
#3	1.0057	7.6299	7.5894

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7330.7**	**78851.**	**169180.**
Stddev	75.4	729.	713.
%RSD	1.0286	.92426	.42174
#1	7249.2	79138.	169590.
#2	7344.9	79393.	168350.
#3	7398.0	78022.	169590.

Sample Name: S26 Acquired: 11/23/2011 10:40:47 Type: Cal
Method: 11K6010(v30) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Al	Ca	Cr	Ni	K
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.21700**	**.85491**	**.13199**	**.75595**	**.41573**
Stddev	.00002	.00241	.00015	.00106	.00088
%RSD	.00769	.28163	.11449	.13987	.21211
#1	.21702	.85232	.13211	.75706	.41479
#2	.21701	.85708	.13205	.75496	.41586
#3	.21698	.85534	.13182	.75585	.41654

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7752.8**	**80055.**	**180400.**
Stddev	53.4	536.	88.
%RSD	.68862	.67004	.04863
#1	7701.7	80653.	180310.
#2	7748.6	79898.	180400.
#3	7808.2	79615.	180490.

Sample Name: S27 Acquired: 11/23/2011 10:43:43 Type: Cal
Method: 11K6010(v30) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Al	Ca	Cr	Ni	K
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**8.2903**	**8.1923**	**1.3230**	**7.5181**	**4.2088**
Stddev	.0537	.0837	.0038	.0131	.0303
%RSD	.64794	1.0219	.28664	.17413	.71969
#1	8.3424	8.1556	1.3223	7.5031	4.2002
#2	8.2351	8.2881	1.3196	7.5275	4.2425
#3	8.2934	8.1332	1.3271	7.5237	4.1837

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6443.6**	**73998.**	**154100.**
Stddev	33.4	524.	705.
%RSD	.51891	.70772	.45723
#1	6406.3	74495.	153300.
#2	6453.8	73451.	154400.
#3	6470.8	74047.	154610.

Sample Name: S28 Acquired: 11/23/2011 10:47:06 Type: Cal
Method: 11K6010(v30) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Sb	Mg	Tl
Units	Cts/S	Cts/S	Cts/S
Avg	**.00517**	**.02236**	**.00568**
Stddev	.00004	.00020	.00004
%RSD	.69463	.90811	.72515
#1	.00513	.02226	.00564
#2	.00517	.02259	.00567
#3	.00520	.02222	.00572

Int. Std.	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S
Avg	**78293.**	**183170.**
Stddev	627.	231.
%RSD	.80079	.12585
#1	78202.	183070.
#2	77716.	183440.
#3	78960.	183010.

Sample Name: S29 Acquired: 11/23/2011 10:50:03 Type: Cal
Method: 11K6010(v30) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Sb	Mg	Tl
Units	Cts/S	Cts/S	Cts/S
Avg	**.05004**	**.22033**	**.05587**
Stddev	.00039	.00020	.00053
%RSD	.78501	.09099	.95393
#1	.04970	.22032	.05539
#2	.04995	.22014	.05577
#3	.05047	.22054	.05644

Int. Std.	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S
Avg	**77811.**	**177710.**
Stddev	383.	413.
%RSD	.49229	.23257
#1	77420.	177240.
#2	78185.	177970.
#3	77829.	177930.

Sample Name: S30 Acquired: 11/23/2011 10:53:01 Type: Cal
Method: 11K6010(v30) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	As	Li	Se	Ag	Sr	Sn	Ti	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00121**	**.03398**	**.00139**	**.04188**	**.14662**	**.02596**	**.01647**	**.61813**
Stddev	.00000	.00014	.00001	.00022	.00011	.00006	.00011	.00049
%RSD	.30018	.41584	.66459	.52187	.07789	.22695	.69073	.07876
#1	.00120	.03390	.00138	.04167	.14675	.02600	.01649	.61801
#2	.00121	.03414	.00139	.04188	.14657	.02597	.01658	.61771
#3	.00121	.03390	.00140	.04211	.14653	.02589	.01635	.61867

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8089.4**	**80184.**	**188230.**
Stddev	69.2	340.	362.
%RSD	.85493	.42376	.19206
#1	8014.4	80077.	187950.
#2	8103.1	80565.	188100.
#3	8150.7	79911.	188640.

Sample Name: S31 Acquired: 11/23/2011 10:56:00 Type: Cal
Method: 11K6010(v30) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	As	Li	Se	Ag	Sr	Sn	Ti	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00483**	**.16919**	**.00556**	**.20598**	**.71346**	**.12272**	**.08792**	**5.9578**
Stddev	.00002	.00031	.00003	.00069	.00039	.00019	.00027	.0077
%RSD	.44970	.18210	.62818	.33616	.05442	.15586	.31050	.12950
#1	.00481	.16889	.00552	.20521	.71302	.12294	.08814	5.9659
#2	.00484	.16950	.00558	.20616	.71376	.12266	.08801	5.9567
#3	.00486	.16918	.00558	.20656	.71359	.12257	.08761	5.9506

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8270.1**	**80857.**	**188840.**
Stddev	43.5	180.	403.
%RSD	.52562	.22312	.21322
#1	8231.3	80676.	188700.
#2	8262.0	80860.	188520.
#3	8317.1	81037.	189290.

Sample Name: ICV Acquired: 11/23/2011 10:58:59 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020014 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**103.23**	**1.5006**	**1.0390**	**2.0612**	**1.5320**	**2.4359**	**2.0052**	**75.997**
Stddev	.67	.0157	.0097	.0064	.0057	.0080	.0182	.369
%RSD	.64450	1.0469	.92935	.31054	.37409	.33060	.90733	.48582
#1	102.69	1.4853	1.0288	2.0676	1.5327	2.4285	1.9866	75.604
#2	103.97	1.4998	1.0404	2.0613	1.5374	2.4347	2.0060	76.337
#3	103.03	1.5167	1.0480	2.0548	1.5260	2.4445	2.0230	76.051
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4512**	**.96720**	**2.5704**	**25.052**	**2.4211**	**.52317**	**58.311**	**2.4109**
Stddev	.0038	.00114	.0016	.016	.0016	.00283	.291	.0105
%RSD	.15393	.11752	.06131	.06300	.06581	.54154	.49899	.43410
#1	2.4547	.96682	2.5705	25.036	2.4193	.52586	58.119	2.4148
#2	2.4472	.96630	2.5719	25.067	2.4222	.52345	58.646	2.4188
#3	2.4518	.96848	2.5688	25.052	2.4218	.52021	58.168	2.3990
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.5181**	**2.4628**	**61.223**	**1.0431**	**.50937**	**64.106**	**.48985**	**2.2943**
Stddev	.0036	.0032	.111	.0123	.00232	.097	.00270	.0193
%RSD	.14265	.12832	.18128	1.1746	.45559	.15147	.55045	.83892
#1	2.5185	2.4638	61.342	1.0306	.50701	64.216	.49296	2.2760
#2	2.5143	2.4592	61.123	1.0437	.50945	64.031	.48812	2.2925
#3	2.5214	2.4653	61.203	1.0551	.51165	64.071	.48848	2.3144
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: ICV Acquired: 11/23/2011 10:58:59 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020014 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.50286**	**.50393**	**1.4964**	**2.5847**
Stddev	.00038	.00200	.0008	.0052
%RSD	.07510	.39782	.05340	.20289
#1	.50256	.50370	1.4960	2.5869
#2	.50273	.50604	1.4960	2.5886
#3	.50328	.50205	1.4974	2.5788
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7210.9**	**79076.**	**172350.**
Stddev	51.7	578.	310.
%RSD	.71753	.73140	.17983
#1	7155.8	79634.	172640.
#2	7218.6	78479.	172380.
#3	7258.4	79116.	172020.

Sample Name: ICB Acquired: 11/23/2011 11:01:50 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020015 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00363**	**.00094**	**-.00040**	**.00011**	**-.00001**	**.00470**	**-.00007**	**-.00896**
Stddev	.00065	.00112	.00027	.00009	.00001	.00017	.00006	.00261
%RSD	17.947	118.68	67.680	83.791	228.76	3.5889	81.340	29.124
#1	.00322	.00041	-.00045	.00001	.00001	.00488	-.00005	-.00757
#2	.00328	.00018	-.00064	.00015	-.00002	.00466	-.00014	-.01197
#3	.00438	.00222	-.00011	.00018	-.00001	.00455	-.00003	-.00733
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00000**	**-.00009**	**.00018**	**.00247**	**.00020**	**.00049**	**.00180**	**.00011**
Stddev	.0000	.00016	.00022	.00117	.00028	.00072	.00279	.00044
%RSD	2287.9	170.42	117.97	47.427	143.12	145.91	154.74	385.38
#1	-.00003	-.00026	.00033	.00187	.00043	-.00030	-.00086	-.00027
#2	.00005	.00005	-.00007	.00172	-.00012	.00111	.00156	.00059
#3	-.00002	-.00007	.00029	.00382	.00029	.00067	.00471	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00028**	**.00017**	**.10656**	**-.00019**	**.00010**	**.01358**	**.00008**	**-.00023**
Stddev	.00010	.00004	.00607	.00098	.00018	.00283	.00013	.00049
%RSD	35.665	21.498	5.6939	520.53	179.55	20.841	168.85	209.68
#1	.00038	.00014	.11250	.00093	.00000	.01593	.00005	-.00068
#2	.00026	.00021	.10682	-.00084	.00032	.01438	.00022	.00029
#3	.00019	.00015	.10037	-.00066	-.00001	.01044	-.00004	-.00030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: ICB Acquired: 11/23/2011 11:01:50 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020015 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**-.00012**	**.00069**	**.00012**	**-.00078**
Stddev	.00047	.00023	.00014	.00021
%RSD	401.12	34.038	118.86	27.502
#1	.00037	.00060	.00025	-.00053
#2	-.00015	.00051	.00014	-.00087
#3	-.00057	.00095	-.00003	-.00092
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8169.9**	**78830.**	**186590.**
Stddev	55.5	197.	633.
%RSD	.67890	.25033	.33922
#1	8112.2	78642.	186190.
#2	8174.8	79036.	186270.
#3	8222.8	78814.	187320.

Sample Name: MRLK2301 Acquired: 11/23/2011 11:05:02 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020016 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.21505**	**.09834**	**.00993**	**.01055**	**.01049**	**.09719**	**.01064**	**1.0269**
Stddev	.00113	.00128	.00170	.00004	.00004	.00071	.00007	.0066
%RSD	.52335	1.2965	17.069	.38820	.39217	.72964	.66140	.64675
#1	.21621	.09724	.01142	.01059	.01054	.09637	.01056	1.0220
#2	.21499	.09806	.01029	.01051	.01047	.09764	.01066	1.0244
#3	.21396	.09974	.00809	.01054	.01048	.09756	.01070	1.0345
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01058**	**.00973**	**.01083**	**.21774**	**.01038**	**.01033**	**.98703**	**.01058**
Stddev	.00008	.00021	.00011	.00380	.00017	.00036	.02128	.00022
%RSD	.77798	2.1298	.97648	1.7474	1.6214	3.5042	2.1564	2.0569
#1	.01048	.00953	.01087	.21547	.01020	.01001	.99793	.01049
#2	.01063	.00995	.01071	.21561	.01039	.01025	.96250	.01041
#3	.01062	.00972	.01091	.22213	.01054	.01073	1.0007	.01082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01042**	**.01043**	**.99840**	**.00931**	**.01034**	**1.0343**	**.01036**	**.01095**
Stddev	.00008	.00010	.01838	.00134	.00008	.0089	.00016	.00016
%RSD	.74183	.99245	1.8412	14.354	.77263	.85831	1.5186	1.4237
#1	.01038	.01033	.98112	.00777	.01025	1.0293	.01053	.01102
#2	.01051	.01054	1.0177	.00994	.01040	1.0290	.01023	.01078
#3	.01037	.01043	.99635	.01021	.01037	1.0445	.01030	.01107
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: MRLK2301 Acquired: 11/23/2011 11:05:02 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020016 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	-.00017	.01029	.01051	.02079
Stddev	.00029	.00058	.00022	.00023
%RSD	168.09	5.6274	2.0840	1.0961
#1	-.00045	.00979	.01026	.02062
#2	.00012	.01015	.01066	.02069
#3	-.00018	.01093	.01061	.02105
Check ?	None	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8042.9	79214.	183910.
Stddev	77.7	360.	535.
%RSD	.96561	.45417	.29097
#1	7972.4	79366.	184330.
#2	8030.1	79474.	183310.
#3	8126.1	78804.	184100.

Sample Name: MRLK2302 Acquired: 11/23/2011 11:08:01 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020017 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.20364**	**.04865**	**.01004**	**.00505**	**.00412**	**.09656**	**.00521**	**.50327**
Stddev	.00085	.00071	.00107	.00014	.00002	.00054	.00010	.00643
%RSD	.41528	1.4532	10.672	2.7276	.58443	.56304	1.8499	1.2778
#1	.20352	.04873	.01083	.00499	.00409	.09594	.00514	.49683
#2	.20455	.04791	.00882	.00495	.00413	.09693	.00517	.50969
#3	.20287	.04931	.01048	.00521	.00413	.09682	.00532	.50329
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01004**	**.00968**	**.01061**	**.10469**	**.00293**	**.10222**	**.19121**	**.00502**
Stddev	.00008	.00004	.00015	.00308	.00055	.00113	.01310	.00017
%RSD	.84180	.38060	1.4534	2.9376	18.860	1.1034	6.8516	3.3154
#1	.01007	.00969	.01054	.10116	.00350	.10099	.17671	.00505
#2	.00994	.00971	.01078	.10615	.00288	.10244	.19471	.00517
#3	.01010	.00964	.01049	.10676	.00240	.10321	.20219	.00484
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00977**	**.01011**	**.99127**	**.01009**	**.01004**	**.51560**	**.00996**	**.01089**
Stddev	.00009	.00010	.02179	.00092	.00003	.00203	.00016	.00057
%RSD	.90418	.97074	2.1985	9.1361	.30306	.39399	1.6098	5.2455
#1	.00986	.01020	1.0124	.00936	.01003	.51413	.01008	.01023
#2	.00978	.01001	.96884	.01113	.01001	.51791	.00978	.01129
#3	.00968	.01013	.99259	.00978	.01007	.51475	.01003	.01114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: MRLK2302 Acquired: 11/23/2011 11:08:01 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020017 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00920**	**.01051**	**.01018**	**.00965**
Stddev	.00048	.00033	.00005	.00014
%RSD	5.2145	3.1187	.50426	1.4159
#1	.00896	.01063	.01020	.00949
#2	.00976	.01014	.01022	.00973
#3	.00889	.01076	.01013	.00973
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8059.5**	**78783.**	**183740.**
Stddev	88.1	851.	355.
%RSD	1.0929	1.0807	.19321
#1	7970.6	79762.	183940.
#2	8061.1	78373.	183330.
#3	8146.7	78214.	183950.

Sample Name: ICSA1 Acquired: 11/23/2011 11:10:59 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020018 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**391.69**	**-.00101**	**-.00096**	**.00075**	**.00003**	**-.05970**	**.00414**	**478.89**
Stddev	1.44	.00065	.00254	.00010	.00002	.00068	.00013	8.64
%RSD	.36722	64.445	265.30	12.666	61.646	1.1338	3.2497	1.8040
#1	391.76	-.00073	.00189	.00083	.00003	-.05971	.00408	479.18
#2	393.10	-.00054	-.00300	.00065	.00001	-.05902	.00429	470.11
#3	390.22	-.00175	-.00177	.00079	.00004	-.06038	.00405	487.38
Check ?	Chk Pass	None	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00052**	**-.00076**	**.00150**	**190.29**	**.00481**	**.01836**	**193.48**	**.00112**
Stddev	.00013	.00017	.00004	1.36	.00174	.00021	1.40	.00021
%RSD	25.526	22.419	2.4496	.71650	36.213	1.1436	.72181	18.840
#1	.00050	-.00071	.00151	189.46	.00657	.01837	193.90	.00136
#2	.00040	-.00095	.00146	191.86	.00308	.01815	191.92	.00101
#3	.00066	-.00062	.00153	189.54	.00479	.01857	194.62	.00099
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00131**	**.00105**	**.08058**	**.00086**	**.00027**	**.04367**	**.00084**	**-.00368**
Stddev	.00036	.00030	.00602	.00249	.00017	.00401	.00018	.00139
%RSD	27.767	28.766	7.4646	288.66	64.958	9.1829	21.751	37.766
#1	-.00089	.00072	.08654	-.00005	.00019	.04339	.00087	-.00459
#2	-.00153	.00131	.07451	-.00104	.00014	.03980	.00100	-.00208
#3	-.00150	.00111	.08070	.00368	.00046	.04781	.00064	-.00437
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Sample Name: ICSA1 Acquired: 11/23/2011 11:10:59 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020018 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00172**	**.00551**	**.00060**	**.00167**
Stddev	.00136	.00033	.00002	.00008
%RSD	79.067	5.9652	3.3451	4.7337
#1	.00112	.00537	.00063	.00176
#2	.00327	.00588	.00059	.00162
#3	.00076	.00527	.00059	.00164
Check ?	None	None	None	None
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6437.7**	**76122.**	**159560.**
Stddev	58.0	807.	522.
%RSD	.90115	1.0599	.32715
#1	6378.0	76005.	159580.
#2	6441.5	76981.	159030.
#3	6493.8	75380.	160070.

Sample Name: ICSAB1 Acquired: 11/23/2011 11:14:10 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020019 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**393.08**	**1.0181**	**1.0606**	**.51281**	**.51123**	**.43755**	**.94970**	**471.23**
Stddev	1.53	.0059	.0049	.00123	.00230	.00187	.00340	3.16
%RSD	.38995	.57616	.46461	.23949	.44964	.42677	.35790	.66974
#1	394.47	1.0118	1.0560	.51140	.50904	.43560	.94581	467.59
#2	391.44	1.0191	1.0658	.51366	.51362	.43773	.95122	472.88
#3	393.34	1.0234	1.0599	.51337	.51103	.43932	.95208	473.21
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.46989**	**.47750**	**.54547**	**192.04**	**.95309**	**1.1979**	**193.20**	**.47385**
Stddev	.00067	.00070	.00140	.51	.00155	.0049	1.15	.00165
%RSD	.14160	.14626	.25679	.26618	.16271	.40454	.59776	.34804
#1	.46918	.47670	.54544	191.55	.95412	1.1934	191.88	.47245
#2	.46998	.47783	.54408	192.57	.95131	1.2030	194.03	.47567
#3	.47050	.47798	.54688	191.98	.95386	1.1973	193.70	.47343
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**1.0162**	**.97195**	**80.564**	**1.0434**	**1.0927**	**83.716**	**.48379**	**.83361**
Stddev	.0008	.00141	.241	.0045	.0032	.158	.00146	.00328
%RSD	.07814	.14556	.29913	.42970	.29011	.18841	.30183	.39338
#1	1.0166	.97034	80.290	1.0388	1.0902	83.534	.48247	.82982
#2	1.0152	.97253	80.661	1.0477	1.0918	83.810	.48536	.83552
#3	1.0166	.97299	80.742	1.0437	1.0963	83.804	.48354	.83548
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: ICSAB1 Acquired: 11/23/2011 11:14:10 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020019 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.92767**	1.0111	**.49360**	1.0245
Stddev	.00252	.0034	.00020	.0007
%RSD	.27173	.33615	.04120	.06415
#1	.93048	1.0073	.49378	1.0238
#2	.92693	1.0120	.49338	1.0249
#3	.92561	1.0140	.49364	1.0249
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6334.1**	**76582.**	**159540.**
Stddev	29.9	645.	354.
%RSD	.47190	.84182	.22197
#1	6301.6	77326.	159350.
#2	6340.2	76185.	159310.
#3	6360.4	76234.	159940.

Sample Name: CCV1 Acquired: 11/23/2011 11:17:05 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020020 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**103.62**	**1.5084**	**1.0448**	**2.0546**	**1.5274**	**2.4675**	**2.0081**	**76.529**
Stddev	.59	.0093	.0050	.0001	.0044	.0125	.0109	.409
%RSD	.56557	.61562	.47554	.00738	.28612	.50556	.54480	.53422
#1	104.17	1.4982	1.0391	2.0545	1.5300	2.4568	1.9983	76.556
#2	103.68	1.5105	1.0481	2.0545	1.5299	2.4646	2.0061	76.923
#3	103.00	1.5165	1.0473	2.0548	1.5224	2.4812	2.0199	76.107
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4653**	**.97550**	**2.6250**	**25.307**	**2.4341**	**.51998**	**58.216**	**2.4018**
Stddev	.0101	.00123	.0114	.167	.0047	.00218	.421	.0155
%RSD	.40842	.12580	.43273	.66152	.19408	.41954	.72352	.64633
#1	2.4689	.97443	2.6197	25.389	2.4287	.52002	58.455	2.4106
#2	2.4539	.97522	2.6380	25.115	2.4366	.52214	58.464	2.4109
#3	2.4731	.97684	2.6172	25.418	2.4371	.51778	57.730	2.3839
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.5329**	**2.4848**	**62.084**	**1.0488**	**.51689**	**64.887**	**.49349**	**2.3000**
Stddev	.0019	.0013	.089	.0038	.00206	.044	.00088	.0136
%RSD	.07415	.05384	.14364	.35898	.39866	.06796	.17837	.58920
#1	2.5315	2.4835	62.059	1.0456	.51455	64.842	.49433	2.2899
#2	2.5351	2.4862	62.184	1.0478	.51769	64.888	.49358	2.2947
#3	2.5322	2.4848	62.011	1.0529	.51843	64.931	.49257	2.3154
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV1 Acquired: 11/23/2011 11:17:05 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020020 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.50565**	**.50083**	**1.5132**	**2.5935**
Stddev	.00079	.00203	.0054	.0026
%RSD	.15586	.40503	.35612	.10093
#1	.50590	.50183	1.5171	2.5905
#2	.50629	.50216	1.5071	2.5951
#3	.50477	.49849	1.5156	2.5950
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7188.2**	**79025.**	**172340.**
Stddev	36.0	940.	150.
%RSD	.50124	1.1895	.08694
#1	7151.1	78609.	172220.
#2	7190.4	78365.	172510.
#3	7223.1	80101.	172310.

Sample Name: CCB1 Acquired: 11/23/2011 11:19:52 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020021 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01082**	**.00020**	**-.00099**	**.00044**	**.00005**	**.00453**	**.00003**
Stddev	.00061	.00055	.00066	.00005	.00001	.00014	.00003
%RSD	5.6591	267.49	66.328	11.982	30.427	2.9974	92.121
#1	.01011	.00072	-.00076	.00040	.00003	.00468	.00000
#2	.01115	-.00037	-.00048	.00050	.00004	.00443	.00006
#3	.01118	.00026	-.00173	.00041	.00006	.00447	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.15308**	**.00007**	**-.00003**	**.00033**	**.00032**	**-.00010**	**.00016**
Stddev	.00117	.00013	.00007	.00023	.00063	.00031	.00113
%RSD	.76550	188.79	218.21	69.859	200.59	313.72	687.68
#1	.15221	-.00008	.00003	.00007	.00093	-.00005	-.00042
#2	.15261	.00011	-.00011	.00052	-.00034	.00018	-.00055
#3	.15441	.00018	-.00002	.00039	.00036	-.00042	.00147
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.03240						
Low Limit	-.03240						

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00304**	**.00010**	**.00038**	**.00012**	**.15687**	**-.00001**	**.00015**
Stddev	.00132	.00006	.00017	.00014	.01780	.00164	.00009
%RSD	43.306	53.573	44.386	122.18	11.349	31262.	58.617
#1	.00274	.00017	.00056	-.00001	.17685	-.00060	.00010
#2	.00190	.00008	.00023	.00027	.14268	-.00127	.00026
#3	.00448	.00006	.00035	.00009	.15109	.00185	.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB1 Acquired: 11/23/2011 11:19:52 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020021 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.02481**	**.00017**	**-.00033**	**-.00006**	**.00018**	**.00001**	**.00563**
Stddev	.00986	.00007	.00023	.00025	.00015	.00007	.00016
%RSD	39.742	42.320	68.592	428.06	80.675	518.44	2.7960
#1	.03597	.00026	-.00008	.00014	.00001	-.00006	.00580
#2	.02116	.00012	-.00052	.00003	.00028	.00008	.00559
#3	.01729	.00014	-.00039	-.00035	.00025	.00002	.00550
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8131.6**	**79297.**	**184580.**
Stddev	35.8	366.	511.
%RSD	.44085	.46201	.27686
#1	8092.3	78876.	185140.
#2	8140.0	79478.	184480.
#3	8162.5	79538.	184130.

Sample Name: CCV6 Acquired: 11/23/2011 13:23:15 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020061 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**103.93**	**1.4926**	**1.0303**	**2.1184**	**1.5298**	**2.4525**	**1.9542**
Stddev	1.01	.0094	.0095	.0095	.0033	.0062	.0133
%RSD	.96878	.62642	.92410	.44772	.21342	.25280	.68198
#1	104.88	1.5032	1.0413	2.1293	1.5329	2.4526	1.9696
#2	102.87	1.4853	1.0247	2.1119	1.5264	2.4463	1.9462
#3	104.05	1.4894	1.0249	2.1140	1.5302	2.4587	1.9469
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**74.789**	**2.4119**	**.98833**	**2.6391**	**24.638**	**2.4481**	**.54385**
Stddev	.257	.0131	.00041	.0033	.128	.0027	.00258
%RSD	.34408	.54132	.04197	.12334	.51841	.11021	.47521
#1	74.518	2.4126	.98822	2.6402	24.597	2.4498	.54681
#2	74.818	2.3985	.98879	2.6416	24.537	2.4496	.54203
#3	75.030	2.4246	.98798	2.6354	24.782	2.4450	.54272
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**57.791**	**2.4387**	**2.5693**	**2.5061**	**63.689**	**1.0339**	**.51309**
Stddev	.057	.0075	.0017	.0026	.138	.0063	.00147
%RSD	.09790	.30896	.06564	.10385	.21600	.60826	.28699
#1	57.727	2.4422	2.5673	2.5045	63.831	1.0406	.51344
#2	57.830	2.4300	2.5700	2.5091	63.556	1.0281	.51147
#3	57.817	2.4438	2.5705	2.5047	63.681	1.0331	.51435
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV6 Acquired: 11/23/2011 13:23:15 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020061 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **66.052**	**.50068**	F **2.2464**	**.50319**	**.50718**	**1.4883**	**2.5566**
Stddev	.109	.00216	.0114	.00155	.00246	.0032	.0046
%RSD	.16540	.43050	.50718	.30876	.48591	.21458	.17812
#1	66.178	.50310	2.2596	.50141	.50990	1.4872	2.5558
#2	65.994	.49899	2.2394	.50423	.50655	1.4858	2.5614
#3	65.983	.49993	2.2403	.50394	.50509	1.4919	2.5524
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	60.000		2.5000				
Range	10.000%		-10.000%				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7132.0**	**80123.**	**176400.**
Stddev	8.4	201.	1064.
%RSD	.11798	.25148	.60322
#1	7139.5	80232.	175170.
#2	7122.9	80247.	177040.
#3	7133.6	79891.	176980.

Sample Name: CCB6 Acquired: 11/23/2011 13:26:06 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020062 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01263**	**.00129**	**.00138**	**.00041**	**.00009**	**.00687**	**.00006**
Stddev	.00117	.00055	.00079	.00014	.00002	.00050	.00003
%RSD	9.2736	42.903	57.072	34.907	20.975	7.2581	62.281
#1	.01350	.00082	.00104	.00029	.00007	.00733	.00010
#2	.01130	.00115	.00082	.00056	.00011	.00694	.00004
#3	.01310	.00190	.00228	.00037	.00008	.00634	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.16678**	**-.00003**	**-.00005**	**.00027**	**.00096**	**-.00010**	**.00063**
Stddev	.00328	.00011	.00008	.00006	.00166	.00023	.00058
%RSD	1.9654	319.12	173.45	21.726	171.77	235.82	92.157
#1	.16967	-.00005	-.00009	.00025	.00231	-.00005	-.00002
#2	.16322	-.00013	.00005	.00033	-.00088	.00010	.00082
#3	.16745	.00008	-.00010	.00022	.00146	-.00035	.00110
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.03240						
Low Limit	-.03240						

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00724**	**.00016**	**.00044**	**.00006**	**.05234**	**-.00005**	**.00011**
Stddev	.00909	.00005	.00006	.00025	.01123	.00101	.00008
%RSD	125.56	28.241	13.568	414.74	21.466	1849.8	77.870
#1	.01743	.00012	.00047	.00005	.05955	.00009	.00020
#2	-.00002	.00016	.00037	.00032	.05807	.00088	.00004
#3	.00430	.00021	.00047	-.00019	.03939	-.00113	.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB6 Acquired: 11/23/2011 13:26:06 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020062 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00798**	**.00021**	**.00030**	**.00012**	**.00042**	**.00006**	F **.00645**
Stddev	.00462	.00009	.00070	.00032	.00048	.00014	.00007
%RSD	57.834	43.959	234.83	265.76	113.44	226.44	1.1245
#1	.01313	.00024	.00047	.00047	.00042	-.00009	.00640
#2	.00421	.00011	-.00047	.00004	-.00005	.00009	.00653
#3	.00661	.00029	.00090	-.00015	.00091	.00019	.00641
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.00630
Low Limit							-.00630

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7958.2**	**78218.**	**185150.**
Stddev	63.3	699.	699.
%RSD	.79567	.89346	.37753
#1	7889.0	77756.	184410.
#2	7972.6	79022.	185240.
#3	8013.1	77877.	185800.

Sample Name: IPK034WB Acquired: 11/23/2011 13:29:07 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020063 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00560**	**.00044**	**.00114**	**.00014**	**-.00004**	**.00409**	**-.00006**	**-.01672**
Stddev	.00028	.00064	.00045	.00014	.00003	.00016	.00001	.00097
%RSD	4.9203	145.03	39.498	98.228	86.025	3.8582	9.6878	5.8151
#1	.00586	-.00023	.00064	.00021	-.00002	.00414	-.00007	-.01782
#2	.00565	.00105	.00152	-.00002	-.00002	.00422	-.00007	-.01598
#3	.00531	.00050	.00125	.00024	-.00008	.00392	-.00006	-.01635
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00004**	**-.00008**	**.00029**	**.00144**	**-.00048**	**.00039**	**-.02202**	**.00007**
Stddev	.00005	.00019	.00005	.00180	.00032	.00077	.00818	.00022
%RSD	127.24	242.98	17.112	124.75	67.402	197.82	37.160	302.73
#1	.00001	-.00013	.00035	.00071	-.00014	.00070	-.02939	.00018
#2	.00001	-.00024	.00026	.00349	-.00079	.00096	-.02344	.00021
#3	.00009	.00013	.00026	.00012	-.00050	-.00049	-.01322	-.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00009**	**.00011**	**.01214**	**.00096**	**.00005**	**-.01045**	**.00010**	**.00010**
Stddev	.00005	.00014	.01913	.00073	.00008	.00169	.00007	.00075
%RSD	54.635	127.74	157.55	75.696	160.11	16.176	67.360	732.96
#1	.00003	.00010	-.00681	.00073	.00008	-.00860	.00017	-.00055
#2	.00010	.00025	.03144	.00038	-.00004	-.01191	.00004	-.00006
#3	.00012	-.00003	.01179	.00177	.00012	-.01085	.00009	.00092
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: IPK034WB Acquired: 11/23/2011 13:29:07 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020063 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**-.00021**	**.00010**	**.00008**	**.00001**
Stddev	.00006	.00068	.00007	.00011
%RSD	26.747	671.13	78.458	1159.5
#1	-.00015	.00011	.00014	-.00011
#2	-.00026	-.00059	.00001	.00003
#3	-.00022	.00078	.00010	.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8080.9**	**80545.**	**190190.**
Stddev	49.3	465.	845.
%RSD	.61002	.57679	.44418
#1	8029.0	80010.	189330.
#2	8086.4	80838.	190210.
#3	8127.2	80788.	191020.

Sample Name: IPK034WL Acquired: 11/23/2011 13:32:06 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020064 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**5.4397**	**2.5335**	**.53489**	**.53877**	**.53023**	**.51226**	**.51533**
Stddev	.0165	.0034	.00441	.00090	.00153	.00080	.00297
%RSD	.30357	.13437	.82401	.16645	.28764	.15706	.57580
#1	5.4372	2.5352	.53851	.53797	.52856	.51279	.51737
#2	5.4246	2.5357	.53617	.53860	.53059	.51133	.51669
#3	5.4573	2.5296	.52998	.53974	.53155	.51265	.51193
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**49.575**	**.50218**	**.51311**	**.54678**	**5.2049**	**.51243**	F **.00171**
Stddev	.233	.00066	.00119	.00071	.0225	.00115	.00108
%RSD	.47004	.13160	.23171	.12913	.43308	.22471	63.474
#1	49.310	.50290	.51247	.54727	5.2147	.51308	.00290
#2	49.663	.50203	.51238	.54597	5.2208	.51110	.00078
#3	49.750	.50160	.51449	.54710	5.1791	.51312	.00145
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							.50000
Range							-20.000%

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**47.670**	**.50228**	**.53348**	**.52656**	**52.143**	**.53433**	**.52839**
Stddev	.320	.00184	.00144	.00042	.122	.00107	.00041
%RSD	.67081	.36620	.26981	.07989	.23403	.20085	.07844
#1	47.312	.50015	.53270	.52614	52.045	.53468	.52887
#2	47.775	.50342	.53259	.52654	52.105	.53312	.52819
#3	47.925	.50325	.53514	.52698	52.280	.53518	.52811
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: IPK034WL Acquired: 11/23/2011 13:32:06 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020064 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**54.610**	**.50848**	**.48536**	**.48502**	**.52289**	**.52293**	**.53106**
Stddev	.034	.00075	.00262	.00088	.00217	.00081	.00178
%RSD	.06172	.14680	.54063	.18239	.41567	.15484	.33443
#1	54.597	.50836	.48834	.48551	.52100	.52294	.53171
#2	54.584	.50780	.48438	.48555	.52526	.52373	.53242
#3	54.648	.50928	.48338	.48400	.52240	.52211	.52905
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7231.2**	**81315.**	**177620.**
Stddev	19.1	309.	845.
%RSD	.26445	.38053	.47569
#1	7230.1	81538.	176780.
#2	7250.8	80962.	177610.
#3	7212.6	81446.	178470.

Sample Name: IPK034WC Acquired: 11/23/2011 13:34:50 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020065 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**5.4196**	**2.5786**	**.53161**	**.53747**	**.52764**	**.52267**	**.51430**
Stddev	.0252	.0025	.00211	.00236	.00244	.00180	.00126
%RSD	.46418	.09745	.39700	.43909	.46239	.34531	.24411
#1	5.4106	2.5762	.52995	.53587	.52547	.52346	.51555
#2	5.4003	2.5785	.53091	.54018	.53028	.52061	.51304
#3	5.4481	2.5812	.53399	.53635	.52717	.52395	.51430
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**50.118**	**.49811**	**.50917**	**.54217**	**5.1139**	**.50773**	F **.00216**
Stddev	.047	.00058	.00042	.00073	.0087	.00086	.00121
%RSD	.09315	.11672	.08326	.13452	.17001	.16964	55.837
#1	50.080	.49817	.50868	.54263	5.1231	.50860	.00114
#2	50.170	.49750	.50937	.54133	5.1129	.50688	.00185
#3	50.104	.49866	.50946	.54255	5.1058	.50771	.00349
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							.50000
Range							-20.000%

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**48.621**	**.50183**	**.54171**	**.52116**	**52.936**	**.52887**	**.52442**
Stddev	.309	.00430	.00051	.00031	.060	.00045	.00142
%RSD	.63597	.85674	.09403	.05937	.11396	.08519	.26999
#1	48.500	.49849	.54114	.52082	52.871	.52939	.52376
#2	48.972	.50668	.54213	.52124	52.947	.52861	.52344
#3	48.390	.50033	.54185	.52142	52.990	.52860	.52604
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: IPK034WC Acquired: 11/23/2011 13:34:50 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020065 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**55.548**	**.51731**	**.48348**	**.49173**	**.53244**	**.51530**	**.52767**
Stddev	.028	.00053	.00152	.00059	.00286	.00170	.00105
%RSD	.04961	.10154	.31394	.11898	.53783	.32963	.19847
#1	55.521	.51720	.48453	.49108	.53104	.51719	.52875
#2	55.576	.51684	.48174	.49190	.53574	.51484	.52666
#3	55.548	.51788	.48418	.49221	.53055	.51388	.52761
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7218.8**	**80284.**	**176120.**
Stddev	8.0	713.	433.
%RSD	.11149	.88831	.24567
#1	7210.4	80080.	175700.
#2	7219.5	79695.	176560.
#3	7226.4	81077.	176100.

Sample Name: CCV7 Acquired: 11/23/2011 13:59:43 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020073 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**103.70**	**1.4939**	**1.0292**	**2.1334**	**1.5269**	**2.4564**	**1.9514**
Stddev	.14	.0049	.0058	.0062	.0080	.0033	.0160
%RSD	.13607	.32563	.55952	.28907	.52700	.13517	.81991
#1	103.64	1.4983	1.0352	2.1346	1.5256	2.4584	1.9685
#2	103.86	1.4947	1.0286	2.1267	1.5196	2.4582	1.9486
#3	103.60	1.4887	1.0237	2.1388	1.5356	2.4526	1.9369
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**74.349**	**2.4054**	**.99010**	**2.6424**	**24.535**	**2.4510**	**.54807**
Stddev	.225	.0062	.00237	.0034	.072	.0033	.00164
%RSD	.30310	.25662	.23939	.12791	.29493	.13627	.29999
#1	74.142	2.4120	.98786	2.6397	24.618	2.4484	.54821
#2	74.315	2.4046	.98986	2.6462	24.492	2.4499	.54635
#3	74.589	2.3997	.99258	2.6414	24.493	2.4548	.54963
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**57.413**	**2.4370**	**2.5796**	**2.5104**	**64.776**	**1.0392**	**.51363**
Stddev	.459	.0168	.0085	.0071	.091	.0052	.00115
%RSD	.79872	.68974	.33029	.28308	.14062	.49922	.22310
#1	57.296	2.4329	2.5714	2.5038	64.671	1.0451	.51474
#2	57.025	2.4227	2.5790	2.5095	64.827	1.0353	.51371
#3	57.919	2.4555	2.5884	2.5179	64.831	1.0371	.51245
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV7 Acquired: 11/23/2011 13:59:43 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020073 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F 67.008	.50351	2.2556	.50471	.50857	1.4852	2.5557
Stddev	.082	.00112	.0167	.00083	.00332	.0008	.0094
%RSD	.12190	.22289	.74013	.16526	.65197	.05426	.36612
#1	66.966	.50222	2.2731	.50433	.50883	1.4859	2.5648
#2	66.956	.50420	2.2540	.50412	.50514	1.4843	2.5561
#3	67.102	.50412	2.2398	.50566	.51175	1.4853	2.5461
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	60.000						
Range	10.000%						

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7031.3	78538.	174510.
Stddev	22.9	317.	1004.
%RSD	.32598	.40368	.57541
#1	7056.8	78510.	173530.
#2	7024.6	78869.	174460.
#3	7012.5	78237.	175540.

Sample Name: CCB7 Acquired: 11/23/2011 14:02:32 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020074 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00993**	**.00052**	**-.00047**	**.00054**	**.00009**	**.00681**	**.00003**
Stddev	.00110	.00072	.00131	.00017	.00004	.00015	.00000
%RSD	11.119	140.30	276.87	30.521	41.832	2.2652	12.514
#1	.01120	.00019	-.00181	.00041	.00009	.00696	.00003
#2	.00931	.00002	-.00042	.00073	.00005	.00682	.00003
#3	.00927	.00135	.00081	.00049	.00012	.00666	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.17250**	**.00015**	**-.00003**	**.00026**	**.00127**	**-.00032**	**.00077**
Stddev	.00386	.00001	.00009	.00006	.00253	.00088	.00045
%RSD	2.2399	8.3593	327.21	23.862	199.55	276.27	58.403
#1	.16804	.00015	-.00006	.00034	-.00015	.00011	.00033
#2	.17464	.00013	-.00010	.00023	-.00024	.00026	.00123
#3	.17482	.00016	.00008	.00023	.00419	-.00134	.00075
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.03240						
Low Limit	-.03240						

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00209**	**.00017**	**.00043**	**.00003**	F **.22872**	**-.00005**	**.00013**
Stddev	.00193	.00017	.00009	.00014	.02230	.00104	.00015
%RSD	92.040	101.26	20.077	520.31	9.7492	1902.7	112.23
#1	-.00013	.00031	.00053	.00019	.21198	.00101	.00021
#2	.00321	.00021	.00037	-.00005	.25403	-.00011	.00023
#3	.00321	-.00002	.00040	-.00006	.22014	-.00107	-.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					.21070		
Low Limit					-.21070		

Sample Name: CCB7 Acquired: 11/23/2011 14:02:32 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020074 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.51408**	**.00021**	**.00037**	**-.00021**	**.00019**	**.00014**	F **.00630**
Stddev	.00231	.00010	.00049	.00027	.00026	.00016	.00019
%RSD	.45010	47.797	132.87	129.10	134.09	112.84	2.9359
#1	.51565	.00022	.00009	-.00015	.00034	-.00002	.00647
#2	.51142	.00031	.00093	-.00050	-.00011	.00014	.00633
#3	.51516	.00011	.00008	.00003	.00035	.00030	.00610
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit	.05090						.00630
Low Limit	-.05090						-.00630

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7967.5**	**77546.**	**186440.**
Stddev	37.1	91.	732.
%RSD	.46588	.11785	.39268
#1	7927.8	77441.	185720.
#2	7973.4	77588.	186420.
#3	8001.3	77608.	187190.

Sample Name: K146-02 Acquired: 11/23/2011 14:24:23 Type: Unk
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020081 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.03414**	**-.00263**	**-.00015**	**.18317**	**-.00004**	**1.9593**	**-.00049**
Stddev	.00095	.00214	.00211	.00088	.00005	.0026	.00006
%RSD	2.7696	81.359	1434.1	.48205	110.92	.13006	12.223
#1	.03333	-.00039	.00217	.18229	-.00004	1.9598	-.00043
#2	.03393	-.00283	-.00065	.18405	-.00009	1.9565	-.00049
#3	.03518	-.00465	-.00196	.18317	.00000	1.9615	-.00055

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **1181.8**	**.00010**	**-.00179**	**.00235**	**4.4186**	**.00337**	**.14576**
Stddev	10.2	.00014	.00019	.00025	.0148	.00130	.00081
%RSD	.86506	136.08	10.667	10.648	.33424	38.632	.55482
#1	1170.9	-.00001	-.00167	.00244	4.4204	.00449	.14667
#2	1191.2	.00005	-.00201	.00255	4.4030	.00369	.14511
#3	1183.4	.00026	-.00169	.00207	4.4324	.00194	.14549

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**695.09**	**4.3012**	**-.00120**	**.00163**	**49.326**	**.00274**	**-.00070**
Stddev	6.05	.0388	.00018	.00040	.181	.00055	.00029
%RSD	.87019	.90182	14.868	24.313	.36731	20.115	42.220
#1	688.33	4.2602	-.00119	.00117	49.119	.00224	-.00038
#2	699.98	4.3373	-.00138	.00187	49.403	.00333	-.00096
#3	696.96	4.3060	-.00102	.00186	49.456	.00264	-.00074

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	^ *****	**12.975**	**-.00382**	**-.00138**	**.00014**	**-.00115**	**.00460**
Stddev	-----	.076	.00028	.00064	.00116	.00021	.00011
%RSD	-----	.58243	7.2727	46.109	804.05	18.413	2.4179
#1	^ -----	12.892	-.00414	-.00068	.00082	-.00101	.00449
#2	^ -----	12.994	-.00365	-.00194	.00080	-.00104	.00459
#3	^ -----	13.040	-.00367	-.00153	-.00120	-.00139	.00472

Sample Name: K146-02 Acquired: 11/23/2011 14:24:23 Type: Unk
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020081 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	4120.1	65083.	110580.
Stddev	10.7	369.	147.
%RSD	.25986	.56700	.13312
#1	4125.9	65387.	110420.
#2	4107.8	64672.	110600.
#3	4126.7	65191.	110720.

Sample Name: K146-03 Acquired: 11/23/2011 14:27:40 Type: Unk
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020082 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.03606**	**-.00103**	**.00597**	**.33025**	**-.00003**	**.16456**	**-.00032**	**620.75**
Stddev	.00062	.00040	.00125	.00143	.00002	.00059	.00006	4.15
%RSD	1.7281	38.694	20.986	.43399	52.725	.35804	17.684	.66813
#1	.03561	-.00146	.00476	.33181	-.00004	.16514	-.00025	620.15
#2	.03581	-.00098	.00726	.32993	-.00001	.16396	-.00035	625.17
#3	.03677	-.00066	.00589	.32899	-.00004	.16460	-.00035	616.94

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00050**	**-.00108**	**.00171**	**1.8306**	**.00237**	**.04854**	**124.68**	**.53265**
Stddev	.00018	.00012	.00006	.0197	.00150	.00105	.46	.00144
%RSD	37.225	11.025	3.2378	1.0760	63.512	2.1578	.36546	.27033
#1	.00029	-.00113	.00174	1.8269	.00108	.04972	125.13	.53316
#2	.00065	-.00094	.00164	1.8130	.00402	.04773	124.69	.53377
#3	.00055	-.00115	.00174	1.8519	.00201	.04818	124.22	.53103

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00113**	**.00083**	**19.011**	**.00156**	**-.00042**	**573.34**	**5.3725**	**-.00083**
Stddev	.00019	.00024	.047	.00051	.00019	3.50	.0036	.00038
%RSD	16.480	28.359	.24886	32.481	44.997	.60974	.06673	45.976
#1	.00129	.00091	18.974	.00137	-.00035	573.47	5.3747	-.00122
#2	.00093	.00057	18.994	.00118	-.00064	569.78	5.3744	-.00046
#3	.00118	.00102	19.064	.00214	-.00028	576.77	5.3683	-.00080

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**-.00134**	**.00273**	**-.00015**	**.00238**
Stddev	.00046	.00033	.00020	.00020
%RSD	34.642	11.935	134.54	8.5927
#1	-.00157	.00308	-.00026	.00261
#2	-.00080	.00244	-.00026	.00227
#3	-.00164	.00267	.00008	.00225

Sample Name: K146-03 Acquired: 11/23/2011 14:27:40 Type: Unk
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020082 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	5719.1	71494.	146970.
Stddev	42.5	510.	893.
%RSD	.74259	.71312	.60780
#1	5670.8	71018.	145950.
#2	5750.6	71433.	147320.
#3	5735.9	72032.	147630.

Sample Name: K146-04 Acquired: 11/23/2011 14:30:55 Type: Unk
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020083 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.03551**	**-.00121**	**.00252**	**.21422**	**.00002**	**.14050**	**-.00019**	**376.52**
Stddev	.00246	.00116	.00085	.00004	.00006	.00030	.00006	1.42
%RSD	6.9193	96.364	33.722	.02060	310.24	.21249	33.296	.37583
#1	.03811	-.00141	.00188	.21417	.00008	.14040	-.00021	374.97
#2	.03519	-.00225	.00348	.21424	.00002	.14083	-.00024	376.83
#3	.03323	.00005	.00218	.21425	-.00004	.14026	-.00012	377.75

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00058**	**-.00083**	**.00183**	**3.6050**	**.00264**	**.03749**	**81.882**	**.71621**
Stddev	.00017	.00014	.00017	.0155	.00134	.00018	.385	.00126
%RSD	28.873	17.132	9.5149	.43032	50.738	.48342	.47044	.17551
#1	.00077	-.00080	.00203	3.5946	.00116	.03748	81.781	.71656
#2	.00047	-.00070	.00171	3.5976	.00377	.03732	82.307	.71725
#3	.00050	-.00098	.00174	3.6228	.00297	.03768	81.557	.71481

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00087**	**.00233**	**12.745**	**-.00143**	**-.00036**	**391.48**	**3.6863**	**-.00126**
Stddev	.00005	.00019	.012	.00011	.00007	2.00	.0044	.00055
%RSD	5.3857	8.3321	.09673	7.6774	19.115	.51073	.11959	43.750
#1	.00092	.00250	12.758	-.00155	-.00036	392.90	3.6907	-.00189
#2	.00085	.00236	12.743	-.00135	-.00029	392.35	3.6819	-.00091
#3	.00084	.00212	12.734	-.00138	-.00043	389.19	3.6862	-.00096

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**-.00083**	**.00349**	**.00062**	**.01058**
Stddev	.00032	.00006	.00010	.00011
%RSD	39.100	1.7383	16.465	1.0132
#1	-.00116	.00350	.00072	.01064
#2	-.00082	.00343	.00052	.01046
#3	-.00051	.00355	.00061	.01064

Sample Name: K146-04 Acquired: 11/23/2011 14:30:55 Type: Unk
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020083 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	6078.0	73600.	155740.
Stddev	34.8	794.	522.
%RSD	.57204	1.0790	.33544
#1	6038.0	73202.	155220.
#2	6095.9	73084.	155750.
#3	6100.2	74514.	156260.

Sample Name: CCV8 Acquired: 11/23/2011 14:37:07 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020085 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**102.89**	**1.4797**	**1.0265**	**2.1334**	**1.5082**	**2.4226**	**1.9434**
Stddev	.87	.0044	.0031	.0071	.0020	.0060	.0074
%RSD	.84906	.29571	.30173	.33156	.13355	.24653	.37879
#1	103.45	1.4766	1.0246	2.1410	1.5100	2.4168	1.9349
#2	103.34	1.4777	1.0250	2.1323	1.5060	2.4225	1.9467
#3	101.88	1.4847	1.0301	2.1270	1.5085	2.4287	1.9485
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**72.620**	**2.3765**	**.98011**	**2.6121**	**24.224**	**2.4261**	**.54881**
Stddev	.325	.0013	.00132	.0029	.014	.0025	.00225
%RSD	.44696	.05265	.13471	.11245	.05786	.10375	.41034
#1	72.381	2.3778	.98137	2.6154	24.235	2.4276	.55138
#2	72.490	2.3764	.98021	2.6098	24.229	2.4276	.54788
#3	72.990	2.3753	.97874	2.6111	24.208	2.4232	.54717
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**56.613**	**2.4062**	**2.5511**	**2.4794**	**64.509**	**1.0292**	**.50813**
Stddev	.119	.0028	.0013	.0013	.082	.0015	.00106
%RSD	.21094	.11726	.05087	.05119	.12765	.14422	.20922
#1	56.560	2.4076	2.5526	2.4786	64.605	1.0308	.50748
#2	56.529	2.4030	2.5502	2.4788	64.463	1.0278	.50755
#3	56.749	2.4081	2.5505	2.4809	64.461	1.0291	.50935
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV8 Acquired: 11/23/2011 14:37:07 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020085 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **66.339**	**.50075**	F **2.2459**	**.50030**	**.50538**	**1.4651**	**2.5285**
Stddev	.047	.00176	.0057	.00036	.00046	.0003	.0061
%RSD	.07132	.35230	.25497	.07256	.09124	.01816	.24019
#1	66.385	.50209	2.2393	.50009	.50588	1.4654	2.5219
#2	66.341	.50141	2.2486	.50009	.50497	1.4651	2.5299
#3	66.291	.49875	2.2498	.50072	.50530	1.4649	2.5338
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	60.000		2.5000				
Range	10.000%		-10.000%				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6959.5**	**76460.**	**172050.**
Stddev	52.4	259.	679.
%RSD	.75321	.33883	.39484
#1	6902.9	76177.	171390.
#2	6968.9	76684.	172030.
#3	7006.5	76520.	172740.

Sample Name: CCB8 Acquired: 11/23/2011 14:39:59 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020086 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00954**	**.00047**	**-.00132**	**.00042**	**.00004**	**.00563**	**.00001**
Stddev	.00075	.00054	.00093	.00001	.00002	.00038	.00002
%RSD	7.8569	113.20	70.602	2.6050	45.355	6.7724	264.38
#1	.01037	.00021	-.00207	.00042	.00003	.00603	.00000
#2	.00890	.00109	-.00028	.00041	.00004	.00559	-.00001
#3	.00937	.00012	-.00161	.00043	.00007	.00527	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.09684**	**.00019**	**-.00002**	**.00033**	**.00088**	**-.00011**	**.00060**
Stddev	.00242	.00003	.00008	.00008	.00179	.00031	.00031
%RSD	2.4970	16.128	374.64	23.502	201.94	272.77	51.469
#1	.09537	.00023	-.00004	.00036	.00234	.00021	.00047
#2	.09552	.00019	-.00009	.00024	-.00111	-.00015	.00096
#3	.09963	.00016	.00006	.00038	.00142	-.00041	.00038
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.03240						
Low Limit	-.03240						

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00363**	**.00041**	**.00043**	**.00018**	**.20976**	**.00021**	**.00018**
Stddev	.01500	.00016	.00005	.00010	.01855	.00111	.00002
%RSD	413.31	39.777	11.563	53.355	8.8449	527.02	11.319
#1	.00163	.00031	.00048	.00025	.22882	-.00067	.00016
#2	-.02055	.00060	.00042	.00024	.20872	.00146	.00020
#3	.00804	.00032	.00039	.00007	.19175	-.00015	.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB8 Acquired: 11/23/2011 14:39:59 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020086 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.54173**	**.00023**	**-.00024**	**-.00020**	**.00065**	**.00024**	**.00367**
Stddev	.00297	.00002	.00078	.00035	.00020	.00013	.00007
%RSD	.54827	9.8550	323.77	176.06	30.880	53.071	1.8619
#1	.54515	.00021	-.00061	-.00020	.00087	.00037	.00360
#2	.53976	.00023	-.00077	.00015	.00049	.00011	.00369
#3	.54028	.00026	.00065	-.00055	.00058	.00025	.00374
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.05090						
Low Limit	-.05090						

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7959.0**	**76820.**	**186770.**
Stddev	25.5	316.	977.
%RSD	.32056	.41134	.52329
#1	7929.5	77181.	185800.
#2	7973.1	76596.	186760.
#3	7974.2	76682.	187760.

Sample Name: K146-05 Acquired: 11/23/2011 14:42:59 Type: Unk
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020087 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.03465**	**-.00087**	**.01150**	**.37726**	**-.00005**	**.14774**	**-.00015**	**573.82**
Stddev	.00011	.00045	.00183	.00065	.00002	.00052	.00011	2.69
%RSD	.32279	52.374	15.903	.17307	41.462	.35274	78.246	.46826
#1	.03469	-.00107	.01165	.37713	-.00008	.14722	-.00021	576.84
#2	.03452	-.00035	.01326	.37669	-.00003	.14774	-.00001	572.89
#3	.03474	-.00119	.00961	.37797	-.00005	.14826	-.00022	571.71

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00039**	**-.00103**	**.00180**	**8.8088**	**.00267**	**.04815**	**112.93**	**.41949**
Stddev	.00021	.00022	.00020	.0257	.00035	.00099	.33	.00124
%RSD	52.244	21.622	10.948	.29192	12.935	2.0644	.29501	.29651
#1	.00061	-.00098	.00192	8.8184	.00240	.04893	112.67	.42028
#2	.00036	-.00128	.00190	8.7797	.00306	.04849	112.81	.41806
#3	.00021	-.00084	.00157	8.8284	.00255	.04703	113.30	.42014

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00037**	**.00044**	**15.520**	**.00230**	**-.00049**	**528.98**	**4.9240**	**-.00096**
Stddev	.00003	.00009	.023	.00098	.00010	1.34	.0052	.00073
%RSD	6.7878	20.705	.14758	42.803	19.509	.25248	.10454	75.557
#1	-.00039	.00054	15.493	.00341	-.00043	530.25	4.9252	-.00036
#2	-.00038	.00036	15.532	.00193	-.00045	529.10	4.9285	-.00077
#3	-.00035	.00042	15.534	.00155	-.00061	527.59	4.9184	-.00177

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**-.00019**	**.00278**	**-.00032**	**.00649**
Stddev	.00008	.00021	.00011	.00006
%RSD	42.519	7.4270	35.213	.88327
#1	-.00020	.00272	-.00039	.00654
#2	-.00027	.00260	-.00019	.00643
#3	-.00011	.00300	-.00038	.00651

Sample Name: K146-05 Acquired: 11/23/2011 14:42:59 Type: Unk
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020087 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	5820.8	71432.	148120.
Stddev	35.8	602.	453.
%RSD	.61481	.84210	.30592
#1	5782.1	70809.	147630.
#2	5827.7	71480.	148190.
#3	5852.7	72009.	148530.

Sample Name: K146-06 Acquired: 11/23/2011 14:46:11 Type: Unk
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020088 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.03821**	**-.00062**	**.00230**	**.21683**	**-.00002**	**.14239**	**-.00014**	**377.21**
Stddev	.00130	.00122	.00119	.00119	.00004	.00034	.00004	.68
%RSD	3.4028	195.26	51.597	.54720	278.66	.24043	26.564	.17954
#1	.03971	.00006	.00364	.21766	.00002	.14279	-.00010	377.93
#2	.03734	.00010	.00191	.21737	-.00006	.14219	-.00018	376.60
#3	.03759	-.00203	.00136	.21548	.00000	.14219	-.00015	377.09

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00062**	**-.00076**	**.00525**	**3.6464**	**.00231**	**.03759**	**82.677**	**.72211**
Stddev	.00006	.00010	.00019	.0104	.00003	.00109	.318	.00286
%RSD	9.5539	13.142	3.5992	.28512	1.2093	2.8918	.38505	.39667
#1	.00060	-.00086	.00542	3.6572	.00234	.03883	82.991	.72349
#2	.00058	-.00077	.00529	3.6365	.00228	.03714	82.686	.72401
#3	.00069	-.00066	.00505	3.6456	.00232	.03679	82.354	.71881

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00096**	**.00029**	**12.742**	**.00039**	**-.00037**	**398.35**	**3.7328**	**-.00120**
Stddev	.00007	.00012	.040	.00122	.00006	4.25	.0054	.00056
%RSD	7.1733	41.407	.31054	315.17	15.539	1.0675	.14478	46.497
#1	.00088	.00017	12.746	.00047	-.00043	402.70	3.7278	-.00071
#2	.00099	.00028	12.700	-.00087	-.00036	398.15	3.7321	-.00181
#3	.00102	.00041	12.779	.00157	-.00032	394.20	3.7385	-.00109

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**-.00082**	**.00330**	**.00086**	**.00795**
Stddev	.00037	.00091	.00018	.00016
%RSD	44.826	27.495	21.411	1.9964
#1	-.00059	.00263	.00084	.00808
#2	-.00063	.00434	.00105	.00777
#3	-.00124	.00295	.00068	.00799

Sample Name: K146-06 Acquired: 11/23/2011 14:46:11 Type: Unk
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020088 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	6122.3	72379.	154050.
Stddev	29.6	584.	493.
%RSD	.48426	.80625	.32015
#1	6088.3	71785.	153480.
#2	6135.5	72402.	154320.
#3	6143.0	72951.	154350.

Sample Name: CCV9 Acquired: 11/23/2011 14:52:22 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020090 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**103.54**	**1.4658**	**1.0169**	**2.1329**	**1.5042**	**2.4298**	**1.9374**
Stddev	.18	.0024	.0026	.0080	.0038	.0028	.0008
%RSD	.16945	.16611	.25809	.37364	.25267	.11354	.04368
#1	103.65	1.4668	1.0199	2.1382	1.5059	2.4311	1.9380
#2	103.63	1.4630	1.0148	2.1368	1.5069	2.4316	1.9365
#3	103.34	1.4676	1.0161	2.1237	1.4999	2.4266	1.9378
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**72.685**	**2.3886**	**.97871**	**2.6359**	**24.266**	**2.4158**	**.54850**
Stddev	.161	.0058	.00046	.0052	.083	.0019	.00347
%RSD	.22195	.24236	.04654	.19743	.34102	.07872	.63304
#1	72.547	2.3914	.97827	2.6419	24.316	2.4169	.55177
#2	72.646	2.3925	.97918	2.6335	24.311	2.4136	.54886
#3	72.863	2.3819	.97867	2.6324	24.170	2.4169	.54486
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**56.345**	**2.3993**	**2.5416**	**2.4812**	**64.966**	**1.0264**	**.50983**
Stddev	.160	.0073	.0029	.0011	.164	.0026	.00071
%RSD	.28448	.30490	.11433	.04502	.25170	.25540	.13860
#1	56.180	2.3971	2.5384	2.4824	65.151	1.0295	.51053
#2	56.500	2.4074	2.5426	2.4802	64.841	1.0247	.50985
#3	56.355	2.3933	2.5439	2.4810	64.906	1.0251	.50911
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV9 Acquired: 11/23/2011 14:52:22 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020090 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **66.560**	**.50387**	F **2.2249**	**.49643**	**.50202**	**1.4674**	**2.5205**
Stddev	.148	.00103	.0015	.00145	.00043	.0032	.0059
%RSD	.22268	.20399	.06783	.29130	.08637	.21874	.23339
#1	66.729	.50504	2.2266	.49531	.50246	1.4698	2.5161
#2	66.500	.50311	2.2241	.49593	.50202	1.4686	2.5181
#3	66.452	.50346	2.2239	.49807	.50159	1.4637	2.5272
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	60.000		2.5000				
Range	10.000%		-10.000%				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7053.5**	**77369.**	**174320.**
Stddev	22.7	208.	651.
%RSD	.32172	.26823	.37372
#1	7035.4	77238.	173770.
#2	7046.0	77261.	174150.
#3	7078.9	77608.	175040.

Sample Name: CCB9 Acquired: 11/23/2011 14:55:12 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020091 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01155**	**.00118**	**.00051**	**.00036**	**.00005**	**.00532**	**.00002**
Stddev	.00080	.00089	.00066	.00006	.00003	.00046	.00003
%RSD	6.9477	75.177	130.91	15.831	62.352	8.7367	173.77
#1	.01098	.00173	.00096	.00031	.00001	.00584	.00006
#2	.01247	.00016	.00082	.00034	.00006	.00516	.00000
#3	.01120	.00167	-.00026	.00042	.00007	.00495	.00000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.09754**	**.00012**	**.00005**	**.00044**	**-.00283**	**.00038**	**.00103**
Stddev	.00147	.00007	.00013	.00011	.00213	.00023	.00099
%RSD	1.5048	60.184	263.17	26.258	75.301	60.105	96.061
#1	.09797	.00020	.00011	.00031	-.00239	.00047	.00169
#2	.09874	.00009	.00013	.00052	-.00095	.00054	.00153
#3	.09590	.00007	-.00010	.00049	-.00514	.00012	-.00011
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.03240						
Low Limit	-.03240						

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00778**	**.00025**	**.00045**	**.00002**	**.18733**	**.00067**	**.00003**
Stddev	.00971	.00013	.00012	.00010	.01148	.00095	.00003
%RSD	124.89	51.954	27.652	526.02	6.1298	142.29	74.487
#1	.00251	.00016	.00059	-.00008	.18101	.00044	.00004
#2	.01899	.00041	.00039	.00012	.18039	-.00015	.00001
#3	.00184	.00020	.00036	.00002	.20058	.00171	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB9 Acquired: 11/23/2011 14:55:12 Type: QC
Method: 11K6010(v30) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K020091 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.42900**	**.00021**	**.00013**	**-.00057**	**.00034**	**.00019**	**.00374**
Stddev	.00520	.00004	.00021	.00020	.00052	.00022	.00011
%RSD	1.2132	18.267	161.72	35.360	150.92	112.16	2.9441
#1	.42835	.00022	-.00004	-.00034	.00094	.00000	.00387
#2	.42415	.00017	.00006	-.00067	.00002	.00016	.00368
#3	.43450	.00025	.00037	-.00070	.00007	.00043	.00367
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.05090						
Low Limit	-.05090						

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7903.2**	**76502.**	**184060.**
Stddev	77.9	278.	199.
%RSD	.98552	.36378	.10813
#1	7828.8	76200.	183830.
#2	7896.6	76558.	184160.
#3	7984.2	76748.	184190.

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 12/1/11 13:01

End Date: 12/1/11 16:55

SOP #	Rev. #
☑ EMAX-6010	7
☐ EMAX-6010C	1
☐ EMAX-200.7	2
☐ EMAX-	

Comments:

Book #: AD8-022

Instrument No.: D8

Analytical Batch: ~~12/8~~ 12/1/11 1D8L001

Analytical Sequence: S-11L6010 (v3)

Method File: 11L6010 (v3)

Database: EMAX

	STANDARDS ID		STANDARDS ID
S0	SM1014-7805	S30	SM1014-6802
S1	NA	S31	-6803
S2		ICV	-8201
S3		CCV	-8301
S4		ICSA	-8502
S5		ICSAB	-6704
S6		CRI/MRL1	-8101
S7		MRL2	-7401
S8			
S9			
S10			
S11			
S12			
S16			
S17			
S18			
S20	SM1014-8401		
S21	-6503		
S22	-6504		
S23	-8402		
S24	-6702		
S25	-6703		
S26	-7801		
S27	-7802		
S28	-7803		
S29	-7804		

Analyzed By: MP

Date: 12/1/11

7097

[illegible]	<233 [illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	CCB5	[illegible]	[illegible]	[illegible]
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[illegible]	<229 [illegible]	[illegible]	[illegible]	[illegible]
[illegible]	Blank	[illegible]	[illegible]	[illegible]
[illegible]	CCV6	[illegible]	[illegible]	[illegible]
[illegible]	CCB6	[illegible]	[illegible]	[illegible]
[illegible]	<119-01A	[illegible]	[illegible]	[illegible]
[illegible]	<119-01W	[illegible]	[illegible]	[illegible]
[illegible]	<119 01J	[illegible]	[illegible]	[illegible]
[illegible]	<119 03W	[illegible]	[illegible]	[illegible]
[illegible]	<119 03W	[illegible]	[illegible]	[illegible]
[illegible]	Blank	[illegible]	[illegible]	[illegible]
[illegible]	CCV7	[illegible]	[illegible]	[illegible]
[illegible]	CCB7	[illegible]	[illegible]	[illegible]

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANKS	-					--			----	-		--		--			---		-		----					--	-	
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1 A	103	104	106	10.	101	101	104	102	99	97	105	102	98	97	97	95	103	99	97	107	104	104	98	98	101	101	103	104
1 B				-	- --	- -				-			----	-	--	---		--			-			-				-
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LCS A1	97	-	-					94			- -	97	--	-	98		- --	-	-	--		-		----		-		
LCS 1	96	102	106	98	100	88	98	93	95	96	108	9-	96	109	96	93	102	96	101	105	109	107	95	87	91	101	100	102
CCV1	103	104	106	106	101	107	105	103	101	97	106	104	97	98	97	95	103	99	95	107	104	105	98	96	102	101	105	104
CCV1				---	- - -	--	-			---			----	-		- --		---		---				-			---	-	-
MB47 1mA	---	-			---	---	- --				-		----	--			-	-	-	-	---			--	-		--	-	---
MB42 1mA			- -		-	-	- -	--				--		-			----			-			- -		-		- -	-	-
MB47 1mA	--	-		-	- -	--	- -			---			----		--	---				--	--							----	
MB47 1mA	- -			--	----	-	- --			-			- -	-	- --	--	- -	-	-		--						--	- -	
BLANKS	--				-	-		-		-	-	----	-			-	-			-- -			- -				--		-
CCV	100	103	107	99	101	101	104	101	100	97	104	104	97	98	97	96	103	99	99	105	103	106	98	95	102	102	104	106
CCV			- -			-		-	----				--		--		-	--				----		--	-			
CCV1mAB			-	----	--	----				-			--	--			-				--	----			- -			--	
CCV1mAL		-	-	- -			-		-		-	--			-	---				-	--			--			-		
CCV1mAL	-		- -	--	-	--			--				--		--	--	-		- -								-		
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*232-C2																												
*233-C2M																												
*233-C2S																												
*233-C3																												
B.AVG																												
C195	103	104	106	92	98	103	105	102	102	97	106	105	97	98	95	92	101	99	96	105	106	105	97	96	102	98	107	104
C196																												
*200-D2																												
*222-D2																												
*225-D4																												
B.AVG																												
C2W6	101	101	106	96	99	103	105	103	102	97	107	104	97	104	94	92	100	99	97	104	105	103	97	95	94	98	107	103
C2P6																												
*219-D1A																												
*219-C1A																												
*219-D1C																												
*219-D2A																												
*219-C3A																												
B.AVG																												
C2V7	99	96	102	96	99	96	100	101	99	96	106	103	95	117	93	91	99	98	96	102	102	103	96	91	93	98	107	101
C2J7																												

%: Limit of each parameter are listed in a table attached next to all the IQA check forms
* Out of SC Limit

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANKS																												
S20																												
S21																												
S22																												
S23																												
S24																												
S25																												
S26																												
S27																												
S28																												
S29																												
S30																												
S31																												
ICV																												
ICB	9.27	.090	.210	.250	.170	4.15	.160	19.0	.120	.100	.180	1.[illegible]	4.40	.010	4.48	.630	.270	.150	8.1	1.0	.050	37.0	.050	.570	.110	.680	.330	1.40
MSA [illegible]																												
MRL STD																												
ICSA1		5.46	1.34	1.32	.120	72.3	.090		.560	.250	[illegible]		4.97	3.73		1.41	1.21	1.34	39.9	7.31	.120	56.7	.900	3.06	.780	3.08	4.95	2.4[illegible]
ICSAB1																												
ICV																												
ICB	17.9	.095	1.97	.250	.130	4.14	.060	63.0	.190	.050	.170	[illegible]	.470	.430	5.44	.730	.380	.160	.140	.260	.150	57.3	.050	.280	.090	.240	.130	1.90
MSA [illegible]																												
LFB [illegible]																												
LFB [illegible]																												
LFB [illegible]																												
BLANKS																												
CCV																												
CCB	1.70	.060	1.30	.100	.110	3.60	.[illegible]	43.0	.110	.060	.140	4.[illegible]	.670	.540	5.50	.400	.470	.170	.170	.640	.070	46.7	.040	.290	.030	.310	.170	1.30
PRCB [illegible]																												
LCS [illegible]																												
LCSB [illegible]																												
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[illegible]	5.94	.80	.74	.210	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.820	.240	[illegible]	.40	.440	5.46	.280	.350	.07	.150	.470	.110	43.7	.040	.110	.310	.170	.260	[illegible]
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[illegible]																												
BLANK																												
CCV																												
CCB	6.72	.240	.840	.260	.100	2.47	.140	9.[illegible]	.510	.130	.160	[illegible]	.120	.220	.900	.390	.450	[illegible]	.160	.070	.010	.103	.020	.010	.050	.300	.080	1.1[illegible]
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[illegible]	11.6	1.56	490	280	.31	7.36	130	39.8	170	360	380	-7.30	310	960	-2.34	240	430	240	190	200	140	78.4	.060	570	180	310	100	1.22
[illegible]																														
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[illegible]	8.06	840	1.24	330	120	2.19	690	35.7	290	820	870	-5.09	-.360	-.330	2.83	240	280	.130	114	150	840	63.9	600	320	.020	.220	160	1.85
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[illegible]	4.91	370	640	710	0.7	1.28	.360	37.6	270	280	.023	5.13	.340	.020	1.83	370	410	050	147	-1.22	.080	61.4	070	130	250	140	940

LC limit of each parameter are listed in a table attached next to all the ICP check forms
* Out of limit

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Facto	CorrFa	Check	Check Table	Fail Action
1	0	0	0	0	Unk	S0		ID8L001001			1	☒	unk	---
2	0	0	0	0	Unk	S1		ID8L001002			1	☒	unk	---
3	0	0	0	0	Unk	S2		ID8L001003			1	☒	unk	---
4	0	0	0	0	Unk	S3		ID8L001004			1	☒	unk	---
5	0	0	0	0	Unk	S4		ID8L001005			1	☒	unk	---
6	0	0	0	0	Unk	S5		ID8L001006			1	☒	unk	---
7	0	0	0	0	Unk	S6		ID8L001007			1	☒	unk	---
8	0	0	0	0	Unk	S7		ID8L001008			1	☒	unk	---
9	0	0	0	0	Unk	S8		ID8L001009			1	☒	unk	---
10	0	0	0	0	Unk	S9		ID8L001010			1	☒	unk	---
11	0	0	0	0	Unk	S10		ID8L001011			1	☒	unk	---
12	0	0	0	0	Unk	S11		ID8L001012			1	☒	unk	---
13	0	0	0	0	Unk	S12		ID8L001013			1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8L001014			1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8L001015			1	☒	3XIDL	None
16	3	2	3	1	QC	MRLL0101		ID8L001016			1	☒	MRL-EMAX	None
17	4	2	4	1	QC	MRLL0102		ID8L001017			1	☒	MRL-AFCEE	None
18	5	2	5	1	QC	ICSA1		ID8L001018			1	☒	ICSA-DoD	None
19	6	2	6	1	QC	ICSAB1		ID8L001019			1	☒	ICSAB	None
20	7	2	7	1	QC	CCV1		ID8L001020			1	☒	CCV	None
21	8	2	8	1	QC	CCB1		ID8L001021			1	☒	3XIDL	None
22	36	2	12	3	Unk	K542-06A	TCLP 18X	ID8L001022			1	☒	unk	---
23	37	2	1	4	Unk	K542-06A	TCLP 18X DLB SPI	ID8L001023			1	☒	unk	---
24	38	2	2	4	Unk	K542-06K	TCLP 18X	ID8L001024			1	☒	unk	---
25	39	2	3	4	Unk	K542-06J	TCLP 90X	ID8L001025			1	☒	unk	---
26	40	2	4	4	Blank	Blank		ID8L001026			1	☐		---
27	41	2	5	4	QC	CCV2		ID8L001027			1	☒	CCV	None
28	42	2	6	4	QC	CCB2		ID8L001028			1	☒	3XIDL	None
29	18	2	6	2	QC	IPK045WB		ID8L001029			1	☒	1/2LOQ	None
30	19	2	7	2	QC	IPK045WL		ID8L001030			1	☒	LCS	None
31	20	2	8	2	QC	IPK045WC		ID8L001031			1	☒	LCS	None
32	21	2	9	2	Unk	K227-01A		ID8L001032			1	☒	unk	---
33	22	2	10	2	Unk	K227-01		ID8L001033			1	☒	unk	---
34	23	2	11	2	Unk	K227-01J		ID8L001034			1	☒	unk	---
35	24	2	12	2	Unk	K227-01M		ID8L001035			1	☒	unk	---
36	25	2	1	3	Unk	K227-01S		ID8L001036			1	☒	unk	---
37	26	2	2	3	Unk	K217-01		ID8L001037			1	☒	unk	---
38	15	2	3	2	Blank	Blank		ID8L001038			1	☐		---
39	16	2	4	2	QC	CCV3		ID8L001039			1	☒	CCV	None

7103

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Facto	CorrFa	Check	Check Table	Fail Action
40	17	2	5	2	QC	CCB3		ID8L001040			1	☒	3XIDL	None
41	9	2	9	1	Unk	K133-01A	DLB SPIKE 10X	ID8L001041			1	☒	unk	---
42	30	2	6	3	Unk	K133-01A		ID8L001042			1	☒	unk	---
43	31	2	7	3	Unk	K133-01I	10X	ID8L001043			1	☒	unk	---
44	32	2	8	3	Unk	K133-01J	25X	ID8L001044			1	☒	unk	---
45	27	2	3	3	Blank	Blank		ID8L001045			1	☐		---
46	28	2	4	3	QC	CCV4		ID8L001046			1	☒	CCV	None
47	29	2	5	3	QC	CCB4		ID8L001047			1	☒	3XIDL	None
48	10	2	10	1	QC	IPL001WB		ID8L001048			1	☒	1/2LOQ	None
49	11	2	11	1	QC	IPL001WL		ID8L001049			1	☒	LCS	None
50	12	2	12	1	QC	IPL001WC		ID8L001050			1	☒	LCS	None
51	13	2	1	2	Unk	K233-03A		ID8L001051			1	☒	unk	---
52	14	2	2	2	Unk	K233-03		ID8L001052			1	☒	unk	---
53	33	2	9	3	Unk	K233-03J		ID8L001053			1	☒	unk	---
54	34	2	10	3	Unk	K233-03M		ID8L001054			1	☒	unk	---
55	35	2	11	3	Unk	K233-03S		ID8L001055			1	☒	unk	---
56	43	2	7	4	Unk	K233-01		ID8L001056			1	☒	unk	---
57	44	2	8	4	Blank	Blank		ID8L001057			1	☐		---
58	45	2	9	4	QC	CCV5		ID8L001058			1	☒	CCV	None
59	46	2	10	4	QC	CCB5		ID8L001059			1	☒	3XIDL	None
60	47	2	11	4	Unk	K233-04		ID8L001060			1	☒	unk	---
61	48	2	12	4	Unk	K229-02		ID8L001061			1	☒	unk	---
62	49	2	1	5	Unk	K229-04		ID8L001062			1	☒	unk	---
63	50	2	2	5	Blank	Blank		ID8L001063			1	☐		---
64	51	2	3	5	QC	CCV6		ID8L001064			1	☒	CCV	None
65	52	2	4	5	QC	CCB6		ID8L001065			1	☒	3XIDL	None
66	53	2	5	5	Unk	K119-01A	DISSOLVED	ID8L001066			1	☒	unk	---
67	54	2	6	5	Unk	K119-01W	DISSOLVED	ID8L001067			1	☒	unk	---
68	55	2	7	5	Unk	K119-01J	DISSOLVED	ID8L001068			1	☒	unk	---
69	56	2	8	5	Unk	K119-02W	DISSOLVED	ID8L001069			1	☒	unk	---
70	57	2	9	5	Unk	K119-03W	DISSOLVED	ID8L001070			1	☒	unk	---
71	58	2	10	5	Blank	Blank		ID8L001071			1	☐		---
72	59	2	11	5	QC	CCV7		ID8L001072			1	☒	CCV	None
73	60	2	12	5	QC	CCB7		ID8L001073			1	☒	3XIDL	None

7101

INDX	LABEL	A1	A2	A3	B1	B2	B3	C1	C2	C3	D1	LABEL
1	Blank	.07148	.05051	.06521	.08314	.00018	.05337	-.03832	.03055	-.10002	-.00397	Blank
2	S21					.95755		.17616				S21
3	S22					9.4712		1.2213				S22
4	S22				.5016						.15986	S22
5	S23				5.1387						1.5844	S23
6	S24						.09926					S24
7	S25						1.8883					S25
8	S26	.21675							.96663	.13851		S26
9	S27	8.2969							9.2842	1.0102		S27
10	S28		.01539									S28
11	S29		.05273									S29
12	S30			.01.4								S30
13	S31			.10456								S31
14	IPV	103.37	1.5540	.0485	2.0104	1.5068	2.5364	7.0847	76.597	2.4269	.07165	IPV
15	IPB	.04927	-.03886	.00521	.00875	.03017	.10456	.00305	.01922	.00312	.00310	IPB
16	MR..0101	.71854	.09680	.01526	.01586	.01654	.09892	.01399	1.0559	.01368	.03996	MR..0101
17	MR..0102	.20708	.04858	.01042	.00520	.00420	.09761	.00536	.52115	.01305	.03964	MR..0102
18	ICSA1	387.45	3.0548	.00179	.00132	.00017	-.07026	.00099	470.57	.00336	.00375	ICSA1
19	ICSAR1	383.64	1.0372	1.0617	.49145	.49984	.43838	.95351	467.43	4.371	.43357	ICSAR1
20	CCV1	102.03	1.5634	1.0624	1.9961	1.5088	2.5568	7.0955	76.893	2.5149	.97447	CCV1
21	CCR1	.01360	.00308	.00.97	.00325	.00013	.00414	.00006	.06296*	.00319	-.00005	CCR1
22	X542-06A	6.3125	4.5152	.54477	.52439	.51173	.51364	.57581	51.707	.54402	.13977	X542-06A
23	X542-06A	15.649	4.9079	1.1.5	1.0744	1.1176	1.0001	1.1296	51.771	1.0745	1.0680	X542-06A
24	X542-06X	.03842	.00784	.03336	.00376	.00312	.30911	.01258	.84778	.00322	.00368	X542-06X
25	X542-061	.00192	.00300	.00134	.00325	.00304	.30182	.00268	.18360	.00313	.00311	X542-061
26	Blank	.03435	.00148	.00347	.00324	.00308	.00351	.00002	.05053	.00302	.00305	Blank
27	CV2	100.43	1.5954	1.0484	1.9804	1.5137	2.5276	7.0751	76.959	2.4481	.97231	CV2
28	CR2	.10675	.00325	-.07175	.00114	.00311	.00382	.00006	.04889*	.00321	.00305	CR2
29	IPK04-06B	.31519	.08.27	.03856	.03549	.03314	.03178	.03056	.06847	.06315	.03954	IPK04-06B
30	IPK04-06A	5.1782	2.4964	5.1.1	.10641	.47728	.57106	.52337	53.551	.56652	.51.74	IPK04-06A
31	IPK04-06X	5.1581	2.1014	.2813	.47627	5.1.57	.57.47	.57700	53.513	.5147	.51.4	IPK04-06X
32	X542-06A	8.4213	1.4743	2.1.2	1.1121	.13371	1.1.28	.5.255	54.312	.5.6.1	1.1.4	X542-06A
33	X542-06A	.73839	.0544	.1.1	.1.1	.10011	.17.1	.1.3.1	1.2.02	1.1.1	.17.7	X542-06A
34	X542-06X	.31109	.05.6		.1.4	.1.1	.1.1	.1334	.1.1	.3114	.1.1	X542-06X
35	X542-061	.2761	.1.4	.1.1	.1.1	.1.1	.1.1	.5.1.6	5.1.2	.1.1	.1.1	X542-061
36	X542-06A	8.1.5	.1.1	.1	.1.1	.1.1	.5.1.3	.5.1.4	51.11	.51.7	.1.1	X542-06A
37	X542-06A	.10811	.1.1	.1.1	.1.1	.1.1	.1.1.9	.1.1.1	.1.1.1	.1.1.7	.1.1.1	X542-06A
38	Blank	.0562	.0511	.1.1	.10119	.1.1.7	.1.1.1	.1.1.1	.1.1.6	.1.1.5	.1.1.1	Blank
39	[illegible]	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.2	2.1.1.8	2.1.1.7	.1.1.1	2.1.1.1	.1.1.1	[illegible]
40	[illegible]	.1.1.6	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	[illegible]
41	X133-01A	11.414	5.1.1.4	.1.1.1	.1.1.1	1.1.1.0	1.1.1.4	1.1.1.1	.1.1.1	1.1.1.2	1.1.1.2	X133-01A
42	X133-01A	5.1.1.7	2.1.1.6	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	X133-01A
43	X133-01C	.01.64	.01.21	.01.1	.01.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	X133-01C
44	X133-01C	.10.02	.03.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	X133-01C
45	Blank	.0659	.03.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	Blank
46	CCV4	101.45	1.5.1	.1.1.1	1.8.1	.1.1.1	2.5.1	7.1.1	76.517	2.5.1	.9.1.1	CCV4
47	CCR4	.10933	.03.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.03692*	.1.1.1	.1.1.1	CCR4
48	IPK06-06B	.01608	.01159	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.1.1.1	.05492	.1.1.1	.1.1.1	IPK06-06B
49	IPK06-06A	5.2298	2.1.1.1	.1.1.1	.48793	.49296	.52.1	.54224	51.256	.5.1.1	.4.1.1	IPK06-06A
50	IPK06-06X	5.2602	2.1.1.1	.1.1.1	.46327	.44.1	.57608	.53826	.1.1.242	.51.1.1	.4.1.1	IPK06-06X
51	X233-03A	5.7012	2.6.1.1	.1.1.1	.1.1.1	.54081	.54330	.57518	53.513	.55383	.1.1.1	X233-03A
52	X233-03	.02423	.0296	.1.1.1	.1.1.1	.00023	.01145	.00.76	1.1.941	.1.1.1	.1.1.1	X233-03

53	K233-03J	.00799	00143	.00031	.01521	.00018	00161	.00019	2.8087	.00049	.00083	K233-03J
54	K233-03M	5.3482	2.5870	.53891	.56731	.51373	.53427	.53038	64.452	.51206	.49431	K233-03M
55	K233-03S	5.3781	2.6479	.55203	.56514	.51093	.54523	.53853	64.868	.52123	.50121	K233-03S
56	K233-01	.03179	.00209	.00008	.26812	.00017	.03063	.00021	25.646	.00111	.00071	K233-01
57	Blank	.00382	.00045	.00131	.00017	.00010	-.00095	-.00001	.04458	.00004	.00008	Blank
58	CCV5	103.17	1.5646	1.0499	1.9552	1.4712	2.5700	2.0904	77.405	2.5599	.97023	CCV5
59	CCB5	.01061	.00156	.00049	.00028	.00010	.00236	.00010	.03575*	.00012	-.00005	CCB5
60	K233-04	.01344	.00157	.00052	.00122	.00015	.00281	.00014	.46242	.00093	.00023	K233-04
61	K229-02	.02494	.00237	.00170	.02321	.00021	.00252	.01608	156.90	.00060	.00729	K229-02
62	K229-04	.11356	.00134	.00060	.04236	.00018	.00256	.00653	102.15	.00089	.00058	K229-04
63	Blank	.01629	-.00011	.00079	.00012	.00006	-.00118	-.00002	.04241	.00027	.00017	Blank
64	CCV6	100.89	1.5217	1.0585	1.9119	1.4856	2.5654	2.1019	76.974	2.5627	.96846	CCV6
65	CCB6	.00806	-.00004	.00124	.00033	.00012	.00219	.00009	.03572*	.00029	.00002	CCB6
66	K119-01A	5.4874	2.6163	.58685	.55829	.53479	.61586	.56346	126.67	.55156	.52372	K119-01A
67	K119-01W	.01443	.00206	.00360	.04520	.00018	.08684	.00011	79.291	.00062	-.00008	K119-01W
68	K119-01J	.00757	.00220	.00185	.00990	.00017	.01677	.00014	16.911	.00053	.00016	K119-01J
69	K119-02W	.02376	.00049	.01955	.08011	.00016	.12162	-.00015	455.66	.00062	-.00028	K119-02W
70	K119-03W	.02273	.00185	.00355	.13697	.00017	.10934	.00001	225.81	.00080	-.00034	K119-03W
71	Blank	-.00173	.00062	.00035	.00011	.00005	-.00157	.00005	.05918	00012	.00004	Blank
72	CCV7	98.592	1.4701	1.0206	1.9022	1.4797	2.4859	2.0000	75.515	2.4850	.96012	CCV7
73	CCB7	.00401	-.00032	.00054	.00021	.00007	.00128	.00008	.03756*	.00027	-.00008	CCB7
INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID

ID8L001 Section 1 of 3

Table 1. Section 2 of 2

IND	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Mg	[illegible]	[illegible]	[illegible]	K	[illegible]	[illegible]
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]			[illegible]			[illegible]					[illegible]
3	[illegible]			[illegible]			[illegible]					[illegible]
4	[illegible]	[illegible]	[illegible]									[illegible]
5	[illegible]	[illegible]	[illegible]									[illegible]
6	[illegible]							[illegible]				[illegible]
7	[illegible]							[illegible]				[illegible]
8	[illegible]								[illegible]	[illegible]		[illegible]
9	[illegible]								[illegible]	[illegible]		[illegible]
10	[illegible]					[illegible]						[illegible]
11	[illegible]					[illegible]						[illegible]
12	[illegible]				[illegible]						[illegible]	[illegible]
13	[illegible]				[illegible]						[illegible]	[illegible]
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
32	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
33	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
34	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
35	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
38	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
39	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
42	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
43	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
44	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
46	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
47	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
48	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

53	K233-03J	.00087	.00282	.00114	- 00006	2.3165	.03413	.00032	.00137	61968	.00018	K233-03J
54	K233-03M	.53831	5.3223	.49153	.00035	59.881	63558	.52210	.51021	52.227	.52200	K233-03M
55	K233 03S	.55216	5 4019	.49476	00143	59.193	.63318	.52747	.51683	52.524	.53243	K233-03S
56	K233 01	.00280	.89914	.00206	.01410	10.719	.21215	.00168	.00457	5.3186	-.00044	K233-01
57	Blank	-.00005	-.00673	-.00001	-.00042	-.00352	.00025	.00008	- 00008	.11340	-.00008	Blank
58	CCV5	2.6941	26.161	2.4209	.48997	56.768	2.3033	2.5289	2.4774	59.431	1.0475	CCV5
59	CCB5	-.00008	-.00338	.00001	-.00096	-.00234	.00029	.00043	.00024	.13855	-.00020	CCB5
60	K233-04	.00188	.00683	.00046	-.00025	.05667	.00074	.00058	.00121	.13939	- 00118	K233-04
61	K229-02	.00125	.00437	.00240	.00275	17.643	.58411	-.00001	.01224	1.1110	.00067	K229-02
62	K229-04	.00263	.01454	.00232	.00116	7.2423	.07498	.00060	.00171	1.7638	.00030	K229-04
63	Blank	-.00025	-.00480	.00031	.00005	-.00531	.00015	.00004	-.00004	.05598	-.00017	Blank
64	CCV6	2.6861	26.082	2.4134	.52242	56.277	2.2898	2.4934	2.4702	58.331	1.0367	CCV6
65	CCB6	-.00007	-.00309	-.00006	-.00033	-.00283	.00024	.00028	.00013	.11365	.00015	CCB6
66	K119-01A	.58475	6.1535	.52152	.00756	60.907	.59475	.52257	.47792	53.354	.56631	K119-01A
67	K119-01W	.00064	.43635	.00151	.00738	13.340	.09882	.00728	.00069	3.3561	-.00089	K119-01W
68	K119-01J	.00011	.09047	.00081	.00175	2.8985	.02193	.00173	.00013	.77120	-.00120	K119-01J
69	K119 02W	.00080	3.8211	.00322	.01645	55.156	1.0364	-.00038	.00194	6.6147	-.00083	K119-02W
70	K119-03W	.00121	.73855	.00189	.00833	37.591	.28474	.00322	.00066	5.4898	-.00078	K119-03W
71	Blank	-.00017	-.00185	.00062	-.00036	.00142	.00015	.00001	-.00002	.12652	-.00093	Blank
72	CCV7	2.6492	25.656	2.3828	.52340	55.688	2.2645	2.4868	2.4546	57.892	.99825	CCV7
73	CCB7	-.00002	-.00813	.00034	-.00002	.00183	.00037	.00041	.00005	.14654	-.00123	CCB7
INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID

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Table 38.301 Section 3.37.3

Case	[illegible]	Ag	Xg	Sr	Ti	Sn	Fr	V	Zi	[illegible]
1	Blank	00012	00040	00000	00007	00001	00005	00025	00006	Blank
2	S20									S20
3	S21									S21
4	S22							1.3916		S22
5	S23							1.3299		S23
6	S24		1.0962							S24
7	S25		6.3775							S25
8	S26									S26
9	S27									S27
10	S28				00573					S28
11	S29				35644					S29
12	S30	04292		14002		32508	01587		01637	S30
13	S31	.21603		98695		17012	06400		5.9621	S31
14	[illegible]	.01561	62.504	48986	2.4062	50693	53572	1.5483	2.5974	[illegible]
15	[illegible]	.00005	03696	.00008	.00057	.00011	00068	-.00003	00157	[illegible]
16	MR[illegible]1	01021	-.0467	01044	01107	00001	01069	.01015	02148	MR[illegible]1
17	MR[illegible]2	00990	02177	00986	01350	00925	01138	00906	01327	MR[illegible]2
18	ICSA1	00012	00917	.60592	00316	00528	00308	.00495	00942	ICSA1
19	ICSAB1	1.0958	80.336	4767	56904	91774	1.0115	.49888	1.0158	ICSAB1
20	ICV1	51991	62.979	48925	2.3960	.50789	53528	1.5697	2.6021	ICV1
21	ICB1	00015	05728*	00015	.00826	00009	00024	.0001.3	.03146	ICB1
22	[illegible]	48658	64.667	49316	51104	48019	52156	56061	1.5209	[illegible]
23	[illegible]	96887	64.46	96793	.02774	94036	1.1432	1.1154	2.0775	[illegible]
24	[illegible]	00307	13.251	01147	00357*	00198	00050	00019	[illegible]	[illegible]
25	[illegible]	00009	2.8290	.00739	.00081	00039	00027	00006	.9806	[illegible]
26	Blank	00004	00146	00001	00046	00004	-.00012	00002	00172	Blank
27	[illegible]	51861	62.569	46654	2.3641	50689	-.0458	1.5658	2.6113	[illegible]
28	[illegible]	00009	.0462	00009	00029	.00037	00031	00[illegible]	[illegible]	[illegible]
29	IPK01W3	00021	00940	00018	00017	.0056	.00032	00012	[illegible]	IPK01W3
30	IPK01W4	.1290	[illegible]	49342	48735	45[illegible]	57626	53013	.0174	IPK01W4
31	IPK01W5	[illegible]	[illegible]	49641	48804	46[illegible]	12765	54[illegible]	[illegible]	IPK01W5
32	[illegible]	.0889	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
33	[illegible]	[illegible]	[illegible]	[illegible]	00047	0014	[illegible]	[illegible]	[illegible]	[illegible]
34	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
35	[illegible]	.1280	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
38	[illegible]	00104	.2784	.0004	00005	0001	.0031	.0031	[illegible]	[illegible]
39	[illegible]	[illegible]	[illegible]	17502	2.3[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
40	[illegible]	00011	.0132	00003	00011	0001	.0017	.0036	[illegible]	[illegible]
41	[illegible]	1.1004	47.73	1.1727	99648	9651	[illegible]	1.18.9	1.2967	[illegible]
42	[illegible]	15497	41.67	1.7817	53297	4814	19595	59764	[illegible]	[illegible]
43	[illegible]	00010	384.43	1.2421	0001.7	0004	1.0131	001.	00159	[illegible]
44	[illegible]	00001	[illegible]	24031	0001	01039	01109	.0001	.0341	[illegible]
45	Blank	0001	.1474	00003	00037	0001	.0013	0001	01159	Blank
46	[illegible]	.3341	6.537	48135	2.3887	51313	47252	1.6397	2.6020	[illegible]
47	[illegible]	00001	.0264*	00007	00001	.0005	00039	00009	[illegible]	[illegible]
48	[illegible]	00067	08002	00054	00016	00021	00017	00030	[illegible]	[illegible]
49	[illegible]	[illegible]	[illegible]	4960	5011	48508	4891	5541	5673	[illegible]
50	[illegible]	5.004	[illegible]	49015	4911	48478	5021.4	5116	5301	[illegible]
51	[illegible]	5.684	[illegible]	5816	5294	48365	5.502	.5271	55.43	[illegible]
52	[illegible]	00006	[illegible]	.0351	00014	0035	00041	00009	.1221	[illegible]

53	K233-03J	.00007	10.684	.02234	00013	.00000	00051	.00009	.00559	K233-03J
54	K233-03M	.52689	103.35	.59397	.49041	.48181	52080	.53693	.54605	K233-03M
55	K233-03S	.53842	104.48	.60188	.49615	48866	51898	.55075	.55348	K233-03S
56	K233-01	.00015	29.166	24323	00003	.00040	.00112	.00018	.02274	K233-01
57	Blank	.00008	07715	.00009	-.00064	.00026	.00037	.00009	.00164	Blank
58	CCV5	.52888	62.978	.48634	2.3827	.50892	.48992	1.6046	2.6011	CCV5
59	CCB5	.00012	.07861*	-.00006	.00057	-.00018	.00031	.00010	.00122	CCB5
60	K233-04	.00017	.17098	.00343	.00051	.00043	.00099	.00010	.01800	K233-04
61	K229-02	-.00009	4.5430	.15229	-.00022	.00010	.00181	.00006	3.6301	K229-02
62	K229-04	-.00011	1.8625	.07180	.00017	-.00017	.00209	.00009	.63898	K229-04
63	Blank	.00003	.05048	.00004	-.00016	.00019	.00016	.00007	.00094	Blank
64	CCV6	.52513	61.836	.48343	2.3701	.47163	49235	1.6109	2.5753	CCV6
65	CCB6	.00004	.06389*	.00000	.00032	-.00002	.00022	.00016	.00105	CCB6
66	K119-01A	.51309	124.43	1.1202	.51206	.48024	.50218	.58398	.56872	K119-01A
67	K119-01W	.00014	72.252	.65199	.00071	-.00009	.00102	.00012	.00535	K119-01W
68	K119-01J	.00005	15.168	.13930	.00057	.00001	.00088	.00022	.00214	K119-01J
69	K119-02W	-.00039	119.85	2.6654	-.00019	-.00028	.00417	.00296	.00506	K119-02W
70	K119-03W	-.00016	109.92	1.9402	-.00001	.00023	.00213	.00004	.00656	K119-03W
71	Blank	-.00003	.09794	.00014	.00033	.00017	-.00006	.00005	.00259	Blank
72	CCV7	.51049	61.615	.48068	2.2705	.46665	.48819	1.5695	2.5260	CCV7
73	CCB7	-.00008	.08185*	.00007	.00002	-.00015	.00025	.00014	.00098	CCB7
INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID

ID8L001 Section 3 of 3

EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP METALS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

All samples pH <2

Book #: EIP-104
Batch: 1PK034W
Matrix: Water
Digestor ID: E

SOP #	Rev. #
☐ EMAX-3005	4
☑ EMAX-3010	5
☐ EMAX-3050	4
☐ EMAX-200.7	2
☐ EMAX-	

Start	Temp	End	Temp
	95 °C		95 °C

Standards	ID	Amount Added (ml)
LCS-1	SM1A-013-04-13	0.25
LCS-2	SM1A-013-03-13	0.25
LCS-3	SM1A-013-04-14	0.5
MS	Same spike vol used as LCS1, LCS2, LCS3	
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SW1A-04-407	1.5 + 1.5
HCl	SW1A-04-408	2.5 + 2.5
H_2O_2	N/A	
HNO3(1:1)	N/A	

Digestate Location	ICP
Extract Location	

- ☒ Reagent Water ID: SM5A-02-076
- ☒ Thermometer ID: 101993366
- ☒ Pipette ID: ICP-07
- ☒ Pipette ID: 142750035
- ☐ Pipette ID:
- ☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask
- ☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask

Prepared By: GG

Standard Added By: GG Witnessed By: PP

Extract Rcvd By: TH Checked By: TH

EMAX LABORATORIES, INC.

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
11IPK034W01	IPK034WB	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W02	IPK034WL	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W03	IPK034WC	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W04	TXK007SB	10	ml	11/22/11 12:55	50	50	50	5	TCLP
11IPK034W05	K520-03	10	ml	11/22/11 12:55	50	50	50	5	TCLP
11IPK034W06	K521-01	10	ml	11/22/11 12:55	50	50	50	5	TCLP
11IPK034W07	K521-01M	10	ml	11/22/11 12:55	50	50	50	5	TCLP
11IPK034W08	K521-01S	10	ml	11/22/11 12:55	50	50	50	5	TCLP
11IPK034W09	K119-01	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W10	K119-02	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W11	K119-03	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W12	K133-01	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W13	K133-01M	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W14	K133-01S	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W15	K133-02	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W16	K133-03	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W17	K133-04	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W18	K133-05	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W19	K146-02	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W20	K146-03	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W21	K146-04	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W22	K146-05	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W23	K146-06	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W24	K202-01	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W25	K202-02	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED
11IPK034W26	K202-03	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W27	K202-03M	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W28	K202-03S	50	ml	11/22/11 12:55	50	50	50	1	
11IPK034W29	K202-04	50	ml	11/22/11 12:55	50	50	50	1	DISSOLVED

11/22/11 GG

Vd=digestate volume PrepFctr=)ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 11/22/11 13:00 Prepared By GG

☑ Digestion Ended @ 11/22/11 17:14 Checked By TH

Comments: Date 11/22/11

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

WET CHEMICAL ANALYSES

SDG#: 11K146

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K146

METHOD 300.0
ANIONS BY IC

A total of five (5) water samples were received on 11/16/11 for Anions (Chloride, Nitrate, Nitrite and Sulfate) by IC analysis, Method 300.0 in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, three (3) method blanks were analyzed with the samples. Results were compliant to project requirement.

Lab Control Sample
Three (3) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for ICK061WL/C were all within QC limits.
Percent recoveries for ICK063WL/C were all within QC limits.
Percent recoveries for ICK069WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. Sample K146-02 for Nitrite was analyzed at 25x and samples K146-03, -04, -05 and -06 were analyzed at 5x dilutions due to interference from high Chloride concentration. Sample K146-02 for Nitrate was initially analyzed at 10x due to sample odor and sample K146-05 was initially analyzed at 2x due to sample turbidity.

SAMPLE RESULTS

METHOD 300.0
CHLORIDE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K146

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK069WB	ND	1	NA	0.200	0.100	11/18/1122:17	NA	AK27-36	AK27-34	ICK069W	NA	NA
LCS1W	ICK069WL	1.99	1	NA	0.200	0.100	11/18/1122:33	NA	AK27-37	AK27-34	ICK069W	NA	NA
LCD1W	ICK069WC	2.01	1	NA	0.200	0.100	11/18/1122:49	NA	AK27-38	AK27-34	ICK069W	NA	NA
MW-70-PMW11A-138	K146-02	13800	1000	NA	200	100	11/18/1123:06	NA	AK27-39	AK27-34	ICK069W	11/16/1110:42	11/16/11
MW-70-PMW11B-139	K146-03	1950	200	NA	40.0	20.0	11/18/1123:22	NA	AK27-40	AK27-34	ICK069W	11/16/1111:34	11/16/11
MW-70-PMW12A-140	K146-04	1310	100	NA	20.0	10.0	11/18/1123:38	NA	AK27-41	AK27-34	ICK069W	11/16/1114:10	11/16/11
MW-70-PMW12B-142	K146-05	1800	100	NA	20.0	10.0	11/18/1123:54	NA	AK27-42	AK27-34	ICK069W	11/16/1115:40	11/16/11
IR-70-FD-141	K146-06	1300	100	NA	20.0	10.0	11/19/1100:10	NA	AK27-43	AK27-34	ICK069W	11/16/1114:30	11/16/11

METHOD 300.0
NITRATE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K146

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK061WB	ND	1	NA	0.200	0.0500	11/17/1110:35	NA	AK25-03	AK25-01	ICK061W	NA	NA
LCS1W	ICK061WL	0.984	1	NA	0.200	0.0500	11/17/1110:52	NA	AK25-04	AK25-01	ICK061W	NA	NA
LCD1W	ICK061WC	0.987	1	NA	0.200	0.0500	11/17/1111:08	NA	AK25-05	AK25-01	ICK061W	NA	NA
MW-70-PMW11A-138	K146-02	ND	10	NA	2.00	0.500	11/17/1114:54	NA	AK25-19	AK25-13	ICK061W	11/16/1110:42	11/16/11
MW-70-PMW11B-139	K146-03	ND	1	NA	0.200	0.0500	11/17/1115:10	NA	AK25-20	AK25-13	ICK061W	11/16/1111:34	11/16/11
MW-70-PMW12A-140	K146-04	ND	1	NA	0.200	0.0500	11/17/1115:26	NA	AK25-21	AK25-13	ICK061W	11/16/1114:10	11/16/11
MW-70-PMW12B-142	K146-05	ND	2	NA	0.400	0.100	11/17/1115:43	NA	AK25-22	AK25-13	ICK061W	11/16/1115:40	11/16/11
IR-70-FD-141	K146-06	ND	1	NA	0.200	0.0500	11/17/1115:59	NA	AK25-23	AK25-13	ICK061W	11/16/1114:30	11/16/11

METHOD 300.0
NITRITE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K146

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK063WB	ND	1	NA	0.200	0.0500	11/17/1118:40	NA	AK25-33	AK25-31	ICK063W	NA	NA
LCS1W	ICK063WL	2.07	1	NA	0.200	0.0500	11/17/1118:57	NA	AK25-34	AK25-31	ICK063W	NA	NA
LCD1W	ICK063WC	2.07	1	NA	0.200	0.0500	11/17/1119:13	NA	AK25-35	AK25-31	ICK063W	NA	NA
MW-70-PMW11A-138	K146-02	ND	25	NA	5.00	1.25	11/17/1119:29	NA	AK25-36	AK25-31	ICK063W	11/16/1110:42	11/16/11
MW-70-PMW11B-139	K146-03	ND	5	NA	1.00	0.250	11/17/1120:01	NA	AK25-38	AK25-31	ICK063W	11/16/1111:34	11/16/11
MW-70-PMW12A-140	K146-04	ND	5	NA	1.00	0.250	11/17/1120:34	NA	AK25-40	AK25-31	ICK063W	11/16/1114:10	11/16/11
MW-70-PMW12B-142	K146-05	ND	5	NA	1.00	0.250	11/17/1120:50	NA	AK25-41	AK25-31	ICK063W	11/16/1115:40	11/16/11
IR-70-FD-141	K146-06	ND	5	NA	1.00	0.250	11/17/1121:06	NA	AK25-42	AK25-31	ICK063W	11/16/1114:30	11/16/11

METHOD 300.0
SULFATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K146

Matrix : WATER
Instrument ID : DO

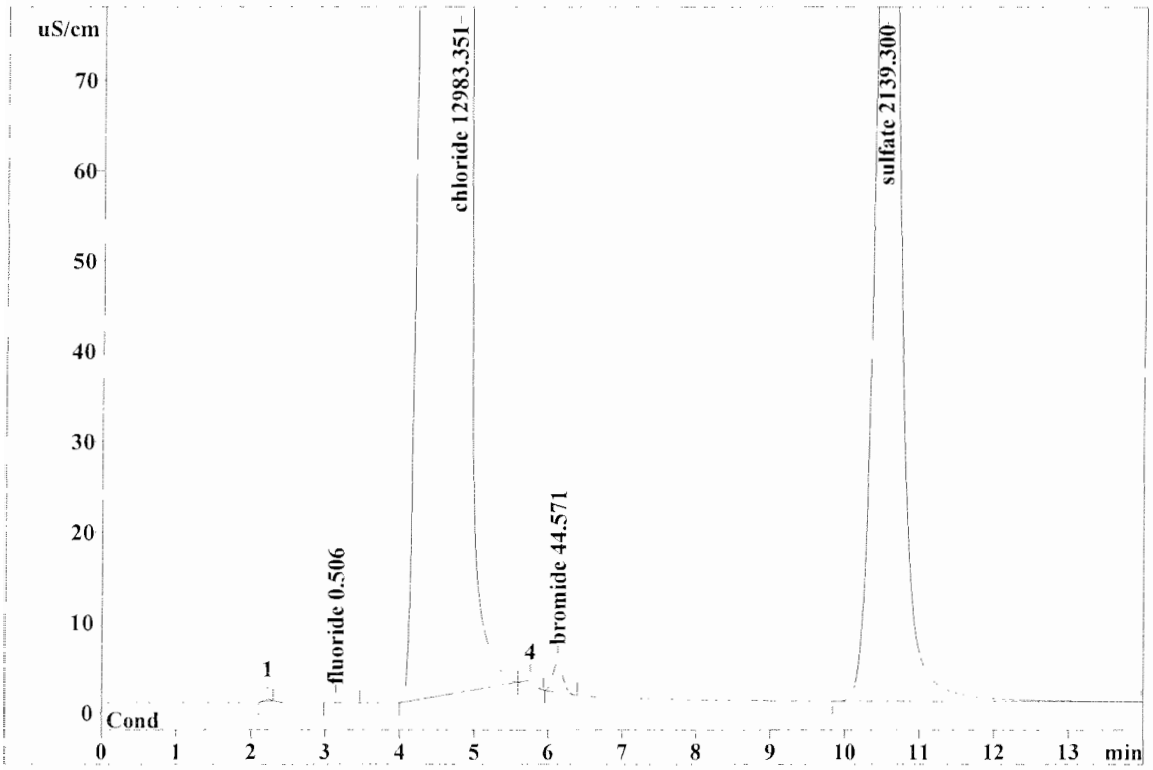
SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK069WB	ND	1	NA	0.500	0.250	11/18/1122:17	NA	AK27-36	AK27-34	ICK069W	NA	NA
LCS1W	ICK069WL	5.17	1	NA	0.500	0.250	11/18/1122:33	NA	AK27-37	AK27-34	ICK069W	NA	NA
LCD1W	ICK069WC	5.19	1	NA	0.500	0.250	11/18/1122:49	NA	AK27-38	AK27-34	ICK069W	NA	NA
MW-70-PMW11A-138	K146-02	2100	1000	NA	500	250	11/18/1123:06	NA	AK27-39	AK27-34	ICK069W	11/16/1110:42	11/16/11
MW-70-PMW11B-139	K146-03	550	200	NA	100	50.0	11/18/1123:22	NA	AK27-40	AK27-34	ICK069W	11/16/1111:34	11/16/11
MW-70-PMW12A-140	K146-04	219	100	NA	50.0	25.0	11/18/1123:38	NA	AK27-41	AK27-34	ICK069W	11/16/1114:10	11/16/11
MW-70-PMW12B-142	K146-05	512	100	NA	50.0	25.0	11/18/1123:54	NA	AK27-42	AK27-34	ICK069W	11/16/1115:40	11/16/11
IR-70-FD-141	K146-06	218	100	NA	50.0	25.0	11/19/1100:10	NA	AK27-43	AK27-34	ICK069W	11/16/1114:30	11/16/11

Report date: 11/17/2011 3:34:02 PM
Printed by: Jadelyn Chun

Ident: AK25-19 K146-02 DF=10
Analysis from: 11/17/2011 2:54:34 PM
File: vb171454.chw Last save: 11/17/2011 3:08:31 PM

Method: ICD0-I30.mtw Last save: 11/17/2011 10:08:29 AM
Run operator: Jadelyn Chun
Analysis number: 71725

SAMPLE:
:
Vial number: 19
Volume: 1.0 µL
Dilution: 10.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.22	0.22	1.347	0.000	
2	3.14	0.03	0.320	0.506	fluoride
3	4.75	838.17	23280.938	12983.351	chloride
4	5.76	0.50	5.841	0.000	
5	6.13	3.28	31.266	44.571	bromide
6	10.52	133.66	2820.543	2139.300	sulfate
6	14.00	975.86	26140.253	15167.728	

NO3N

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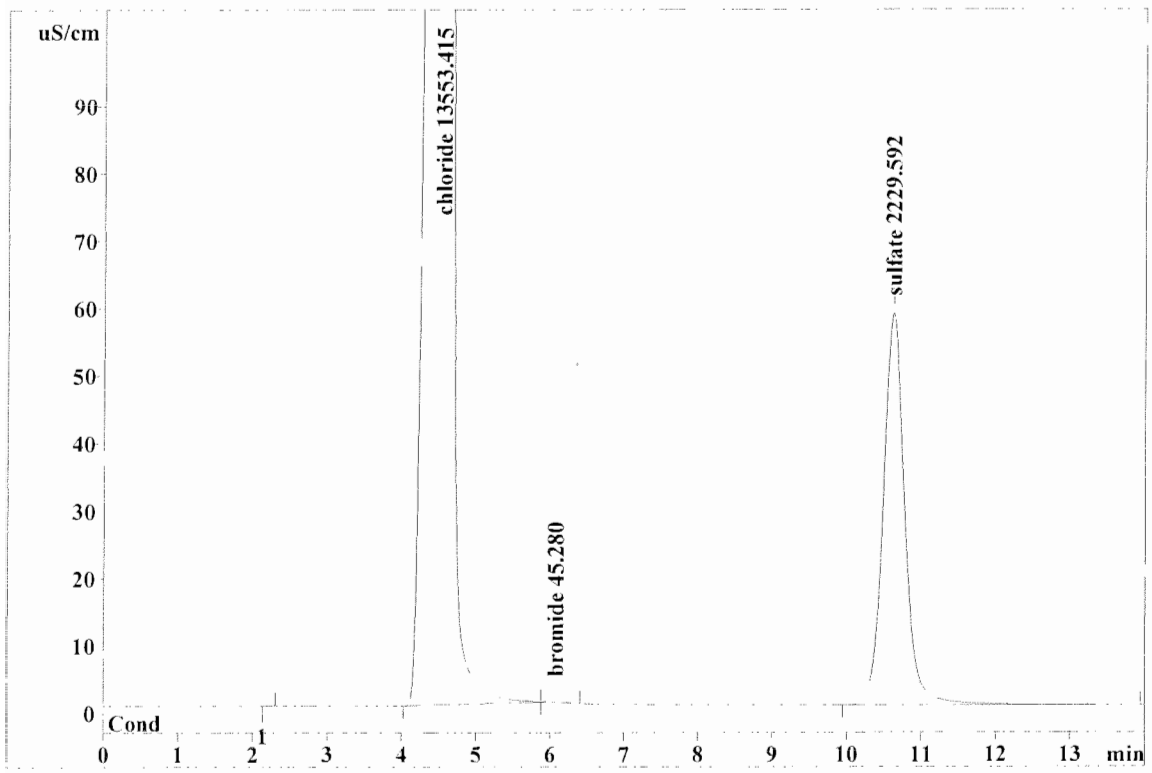
Report date: 11/18/2011 10:43:02 AM
Printed by: Jadelyn Chun

Ident: AK25-36 K146-02 DF=25
Analysis from: 11/17/2011 7:29:21 PM
File: vb171929.chw Last save: 11/17/2011 7:43:18 PM

Method: ICD0-I30.mtw Last save: 11/17/2011 10:08:29 AM
Run operator: Jadelyn Chun
Analysis number: 71742

SAMPLE:
:
Vial number: 36
Volume: 1.0 µL
Dilution: 25.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.13	-0.00	0.153	0.000	
2	4.55	562.09	9720.352	13553.415	chloride
3	6.08	1.22	12.478	45.280	bromide
4	10.62	58.07	1174.843	2229.592	sulfate
4	14.00	621.38	10907.826	15828.287	

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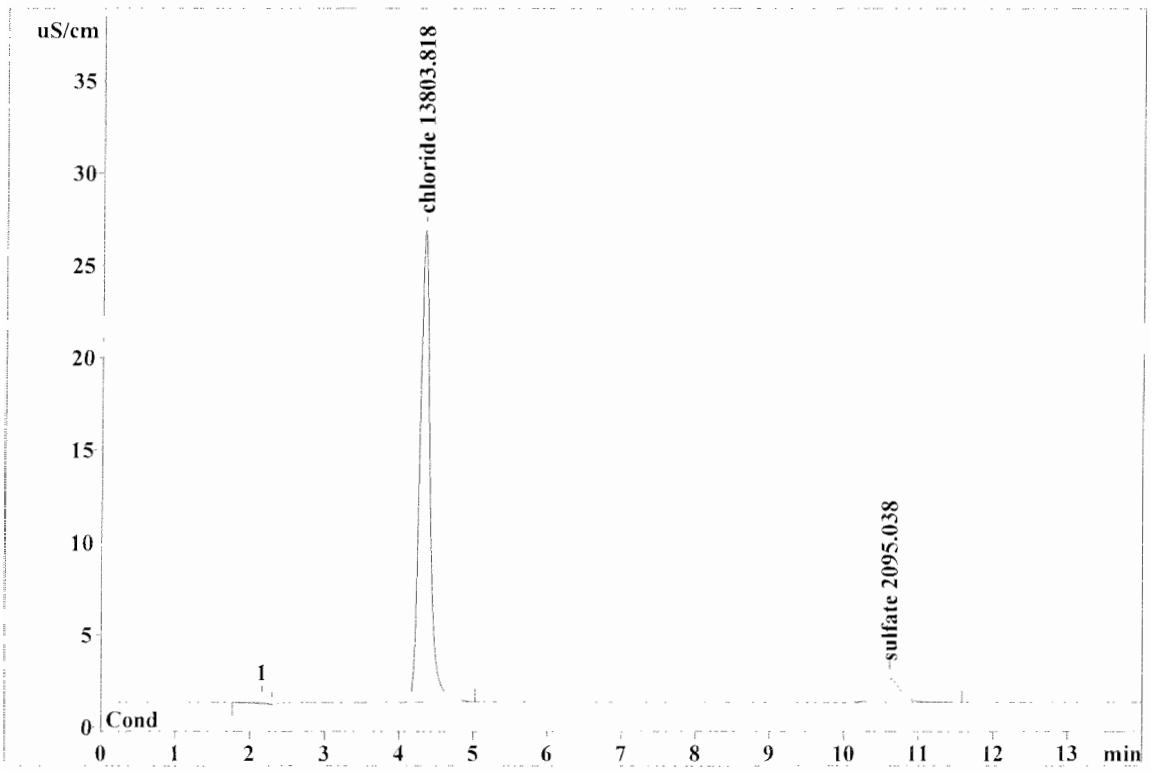
Report date: 11/21/2011 12:26:34 PM
Printed by: CHERRY DAM

Ident: AK27-39 K146-02 DF=1000
Analysis from: 11/18/2011 11:06:06 PM
File: vb182306.chw Last save: 11/18/2011 11:20:03 PM
Modified!
Method: ICD0-I30.mtw Last save: 11/18/2011 4:16:08 PM
Run operator: Jadelyn Chun
Analysis number: 71842

SAMPLE:
:
Vial number: 39
Volume: 1.0 µL
Dilution: 1000.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.08	1.381	0.000	
2	4.33	25.52	245.985	13803.818	chloride
3	10.62	1.29	25.938	2095.038	sulfate
3	14.00	26.89	273.304	15898.856	

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QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK069WB	ICK069WL	ICK069WC		
LAB FILE ID:	AK27-36	AK27-37	AK27-38		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1122:17	11/18/1122:33	11/18/1122:49	DATE RECEIVED:	NA
PREP. BATCH:	ICK069W	ICK069W	ICK069W		
CALIB. REF:	AK27-34	AK27-34	AK27-34		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	ND	2.00	1.99	100	2.00	2.01	101	1	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK061WB	ICK061WL	ICK061WC		
LAB FILE ID:	AK25-03	AK25-04	AK25-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/17/1110:35	11/17/1110:52	11/17/1111:08	DATE RECEIVED:	NA
PREP. BATCH:	ICK061W	ICK061W	ICK061W		
CALIB. REF:	AK25-01	AK25-01	AK25-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrate-N	ND	1.00	0.984	98	1.00	0.987	99	0	90-110	20

8012

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK063WB	ICK063WL	ICK063WC		
LAB FILE ID:	AK25-33	AK25-34	AK25-35		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/17/1118:40	11/17/1118:57	11/17/1119:13	DATE RECEIVED:	NA
PREP. BATCH:	ICK063W	ICK063W	ICK063W		
CALIB. REF:	AK25-31	AK25-31	AK25-31		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	2.00	2.07	103	2.00	2.07	103	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK069WB	ICK069WL	ICK069WC		
LAB FILE ID:	AK27-36	AK27-37	AK27-38		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1122:17	11/18/1122:33	11/18/1122:49	DATE RECEIVED:	NA
PREP. BATCH:	ICK069W	ICK069W	ICK069W		
CALIB. REF:	AK27-34	AK27-34	AK27-34		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	5.17	103	5.00	5.19	104	0	90-110	20

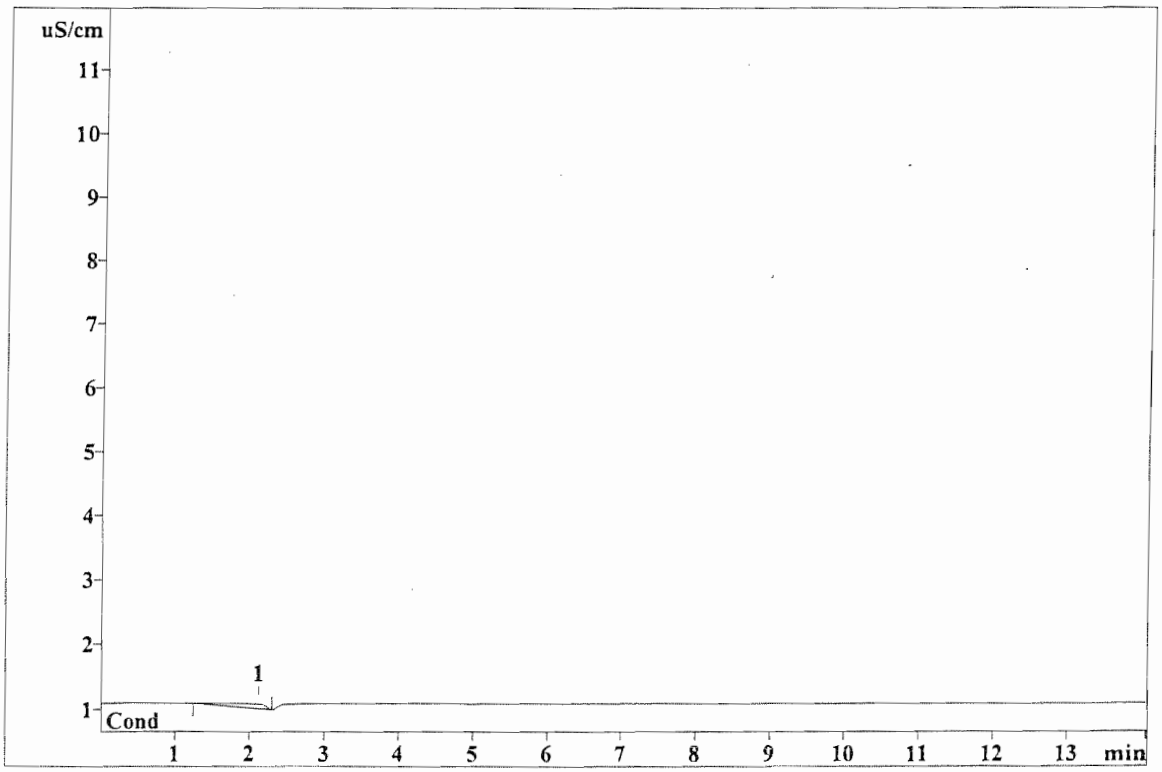
QC DATA

Report date: 11/18/2011 10:29:15 AM
Printed by: Jadelyn Chun

Ident: AK25-03 ICK061WB
Analysis from: 11/17/2011 10:35:58 AM
File: vb171035.chw Last save: 11/17/2011 10:49:55 AM

Method: ICD0-I30.mtw Last save: 11/17/2011 10:08:29 AM
Run operator: Jadelyn Chun
Analysis number: 71709

SAMPLE:
:
Vial number: 3
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.13	0.07	2.617	0.000	

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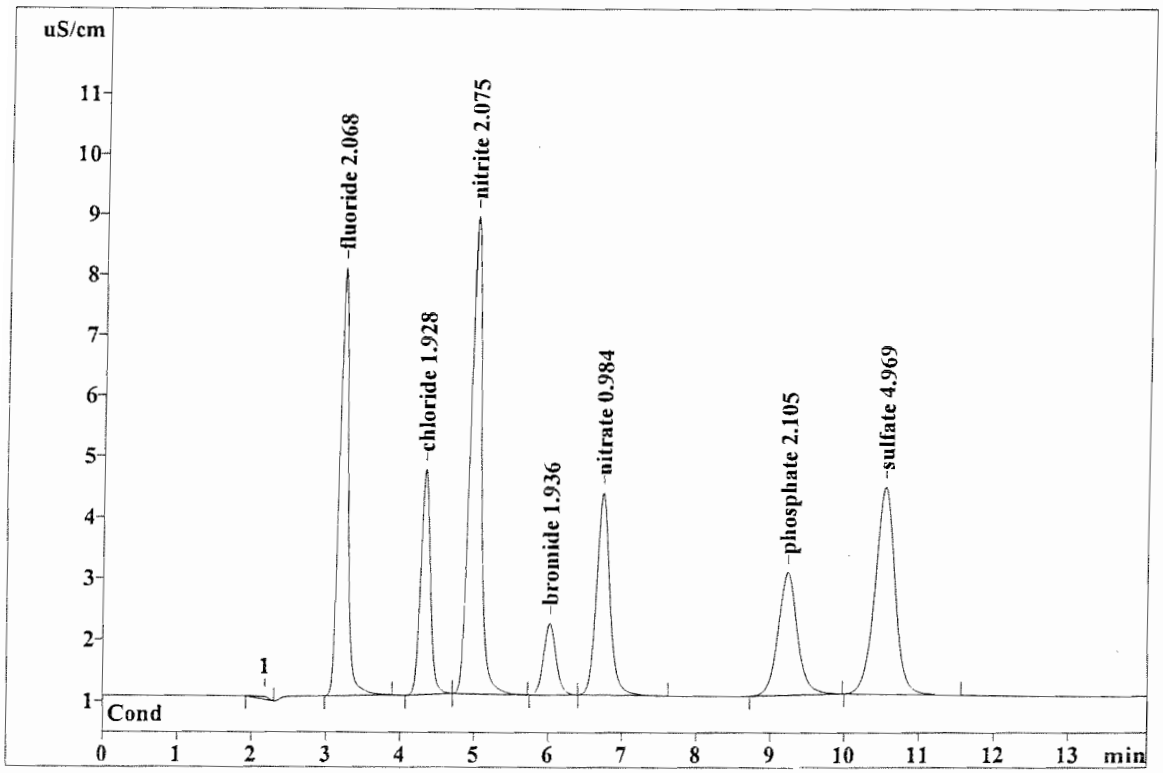
Report date: 11/17/2011 11:06:04 AM
Printed by: Jadelyn Chun

Ident: AK25-04 ICK061WL
Analysis from: 11/17/2011 10:52:07 AM
File: VB171052.CHW Last save: 11/17/2011 11:06:04 AM

Method: ICD0-I30.mtw Last save: 11/17/2011 10:08:29 AM
Run operator: Jadelyn Chun
Analysis number: 71710

SAMPLE:
:
Vial number: 4
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.05	0.577	0.000	
2	3.20	7.02	60.740	2.068	fluoride
3	4.32	3.68	33.017	1.928	chloride
4	4.98	7.85	84.135	2.075	nitrite
5	6.01	1.16	13.365	1.936	bromide
6	6.72	3.29	42.433	0.984	nitrate
7	9.22	2.00	36.636	2.105	phosphate
8	10.53	3.38	63.858	4.969	sulfate
8	14.00	28.43	334.759	16.065	

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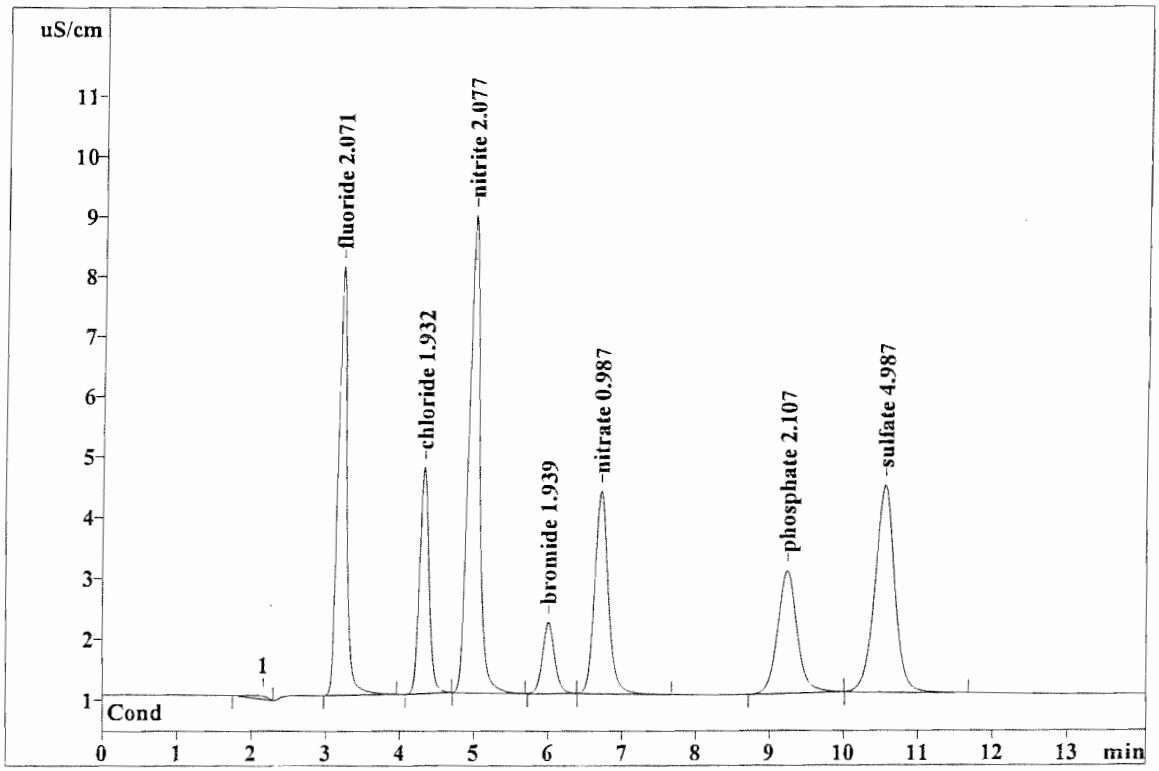
Report date: 11/17/2011 11:22:14 AM
Printed by: Jadelyn Chun

Ident: AK25-05 ICK061WC
Analysis from: 11/17/2011 11:08:17 AM
File: VB171108.CHW Last save: 11/17/2011 11:22:14 AM

Method: ICD0-I30.mtw Last save: 11/17/2011 10:08:29 AM
Run operator: Jadelyn Chun
Analysis number: 71711

SAMPLE:
:
Vial number: 5
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.16	0.06	1.028	0.000	
2	3.20	7.08	60.831	2.071	fluoride
3	4.32	3.72	33.094	1.932	chloride
4	4.97	7.90	84.189	2.077	nitrite
5	6.00	1.17	13.389	1.939	bromide
6	6.71	3.33	42.578	0.987	nitrate
7	9.23	2.01	36.680	2.107	phosphate
8	10.54	3.39	64.088	4.987	sulfate
8	14.00	28.66	335.878	16.101	

This report has been created by IC Net
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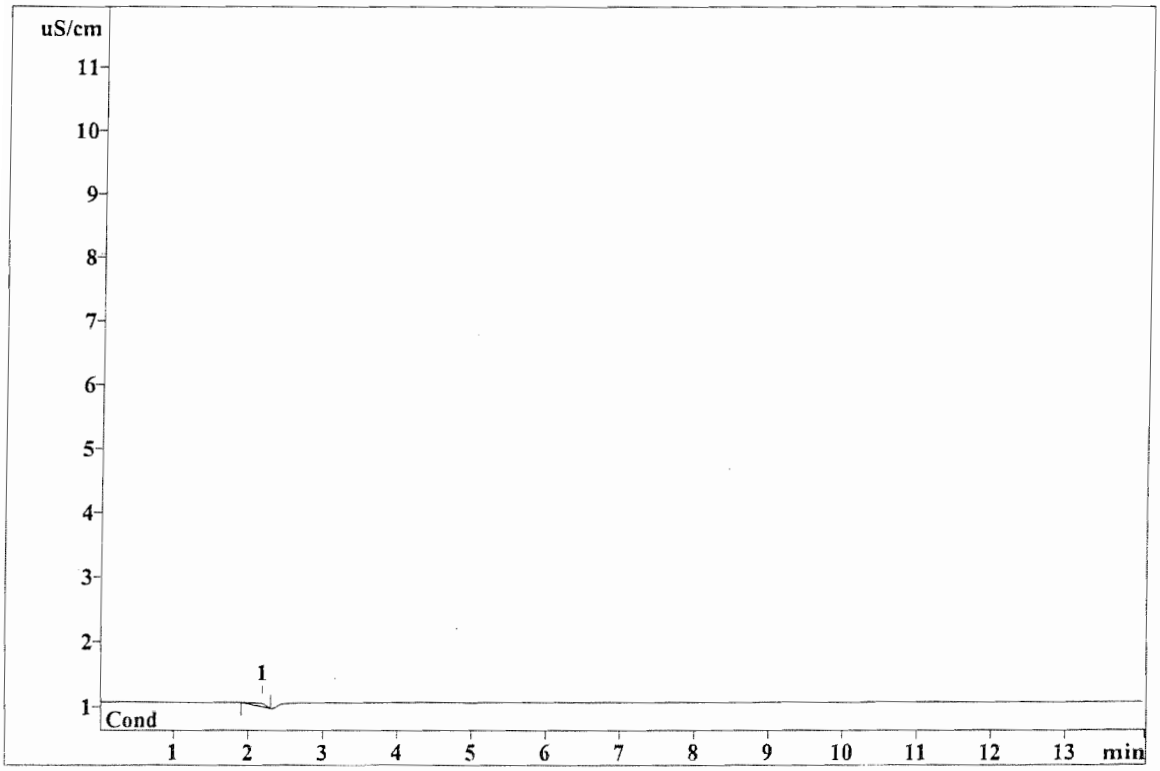
Report date: 11/18/2011 10:31:23 AM
Printed by: Jadelyn Chun

Ident: AK25-33 ICK063WB
Analysis from: 11/17/2011 6:40:51 PM
File: vb171840.chw Last save: 11/17/2011 6:54:48 PM

Method: ICD0-I30.mtw Last save: 11/17/2011 10:08:29 AM
Run operator: Jadelyn Chun
Analysis number: 71739

SAMPLE:
:
Vial number: 33
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.18	0.05	0.691	0.000	

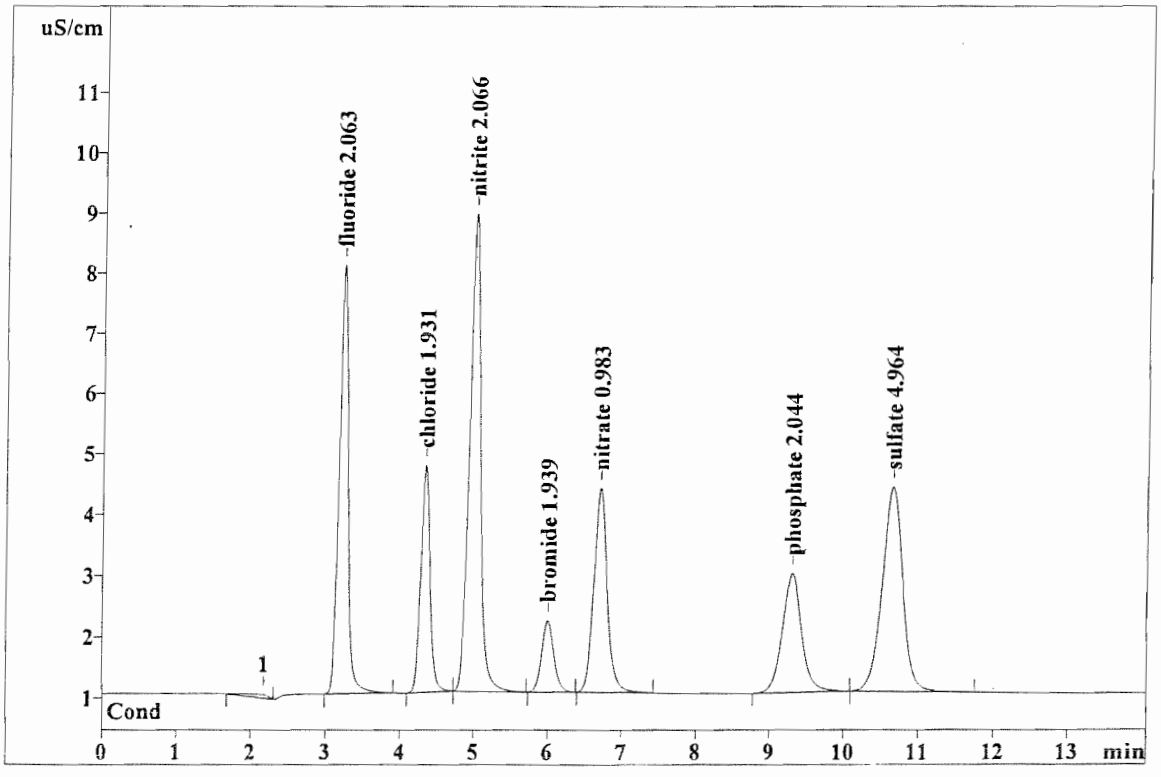
This report has been created by IC Net
METROHM LTD

Report date: 11/17/2011 7:10:58 PM
Printed by: Jadelyn Chun

Ident: AK25-34 ICK063WL
Analysis from: 11/17/2011 6:57:01 PM
File: VB171857.CHW Last save: 11/17/2011 7:10:58 PM

Method: ICD0-I30.mtw Last save: 11/17/2011 10:08:29 AM
Run operator: Jadelyn Chun
Analysis number: 71740

SAMPLE:
:
Vial number: 34
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.16	0.06	1.255	0.000	
2	3.21	7.07	60.593	2.063	fluoride
3	4.33	3.71	33.078	1.931	chloride
4	4.98	7.88	83.764	2.066	nitrite
5	6.00	1.17	13.383	1.939	bromide
6	6.70	3.34	42.388	0.983	nitrate
7	9.30	1.94	35.520	2.044	phosphate
8	10.65	3.34	63.788	4.964	sulfate
8	14.00	28.52	333.769	15.990	

This report has been created by IC Net
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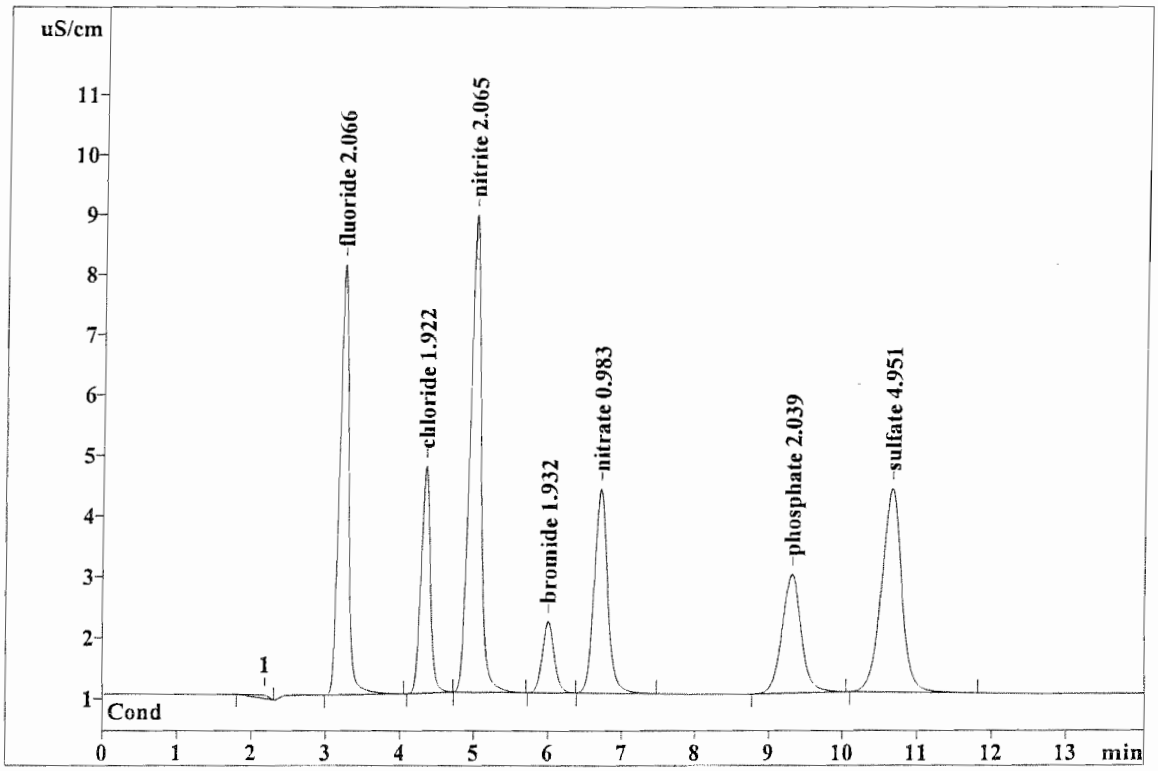
Report date: 11/17/2011 7:27:08 PM
Printed by: Jadelyn Chun

Ident: AK25-35 ICK063WC
Analysis from: 11/17/2011 7:13:11 PM
File: VB171913.CHW Last save: 11/17/2011 7:27:08 PM

Method: ICD0-I30.mtw Last save: 11/17/2011 10:08:29 AM
Run operator: Jadelyn Chun
Analysis number: 71741

SAMPLE:
:
Vial number: 35
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.06	0.914	0.000	
2	3.21	7.10	60.685	2.066	fluoride
3	4.33	3.72	32.905	1.922	chloride
4	4.98	7.89	83.729	2.065	nitrite
5	6.00	1.17	13.333	1.932	bromide
6	6.70	3.34	42.380	0.983	nitrate
7	9.30	1.95	35.423	2.039	phosphate
8	10.65	3.34	63.612	4.951	sulfate
8	14.00	28.58	332.982	15.957	

This report has been created by IC Net
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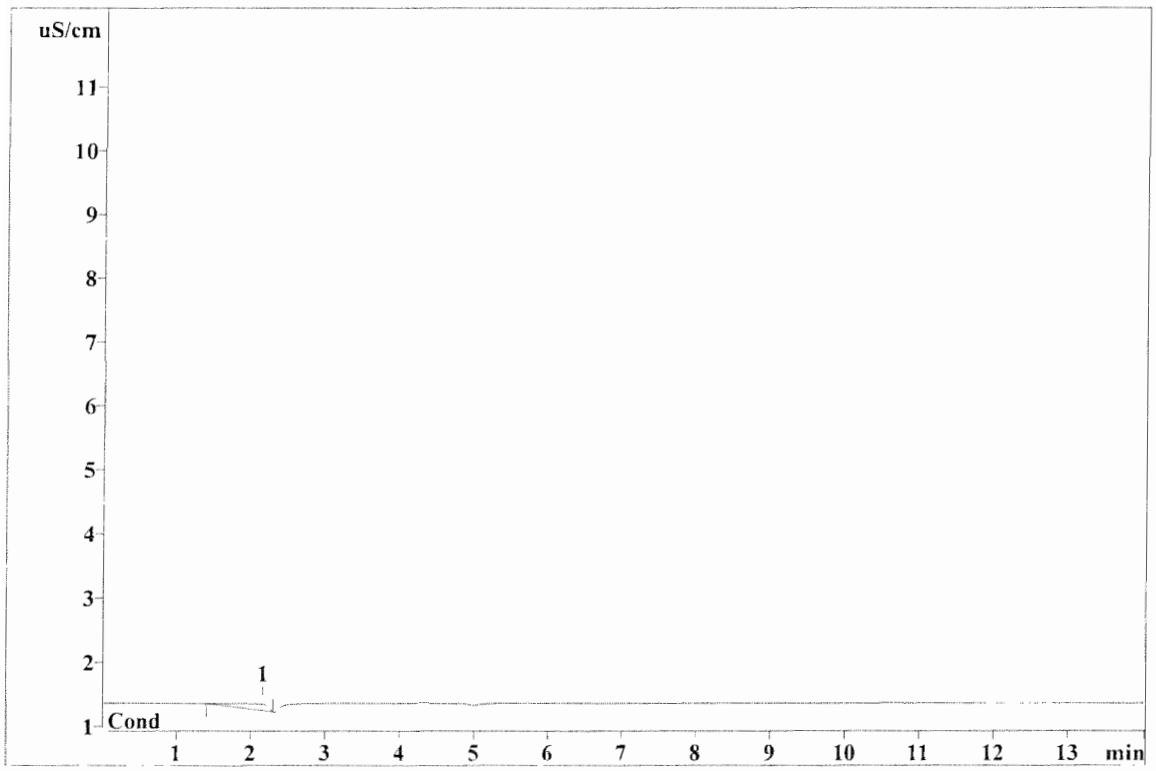
Report date: 11/21/2011 12:09:11 PM
Printed by: CHERRY DAM

Ident: AK27-36 ICK069WB
Analysis from: 11/18/2011 10:17:38 PM
File: vb182217.chw Last save: 11/18/2011 10:31:36 PM
Modified!
Method: ICD0-I30.mtw Last save: 11/18/2011 4:16:08 PM
Run operator: Jadelyn Chun
Analysis number: 71839

SAMPLE:
:
Vial number: 36
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.16	0.10	2.935	0.000	

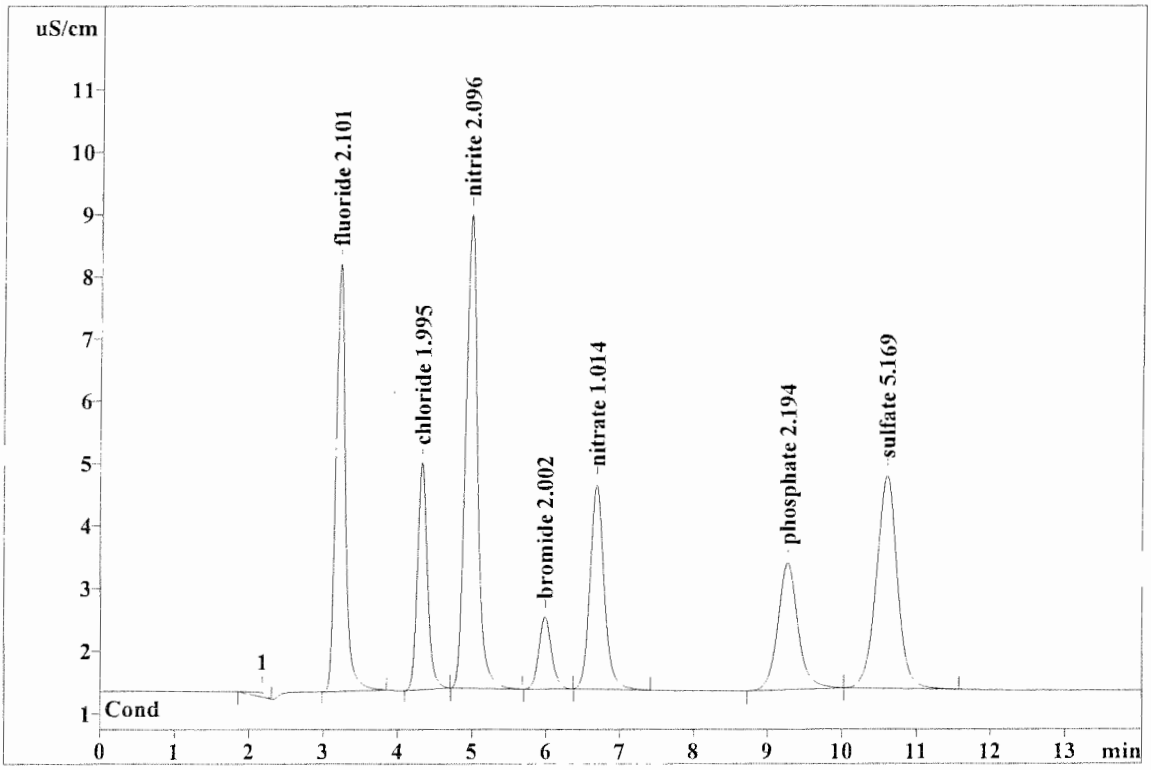
This report has been created by IC Net
METROHM LTD

Report date: 11/18/2011 10:47:45 PM
Printed by: Jadelyn Chun

Ident: AK27-37 ICK069WL
Analysis from: 11/18/2011 10:33:48 PM
File: VB182233.CHW Last save: 11/18/2011 10:47:45 PM

Method: ICD0-I30.mtw Last save: 11/18/2011 4:16:08 PM
Run operator: Jadelyn Chun
Analysis number: 71840

SAMPLE:
:
Vial number: 37
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.07	1.096	0.000	
2	3.21	6.85	61.715	2.101	fluoride
3	4.32	3.63	34.215	1.995	chloride
4	4.97	7.60	84.981	2.096	nitrite
5	5.98	1.15	13.833	2.002	bromide
6	6.68	3.27	43.782	1.014	nitrate
7	9.26	2.02	38.264	2.194	phosphate
8	10.59	3.40	66.495	5.169	sulfate
8	14.00	27.99	344.380	16.570	

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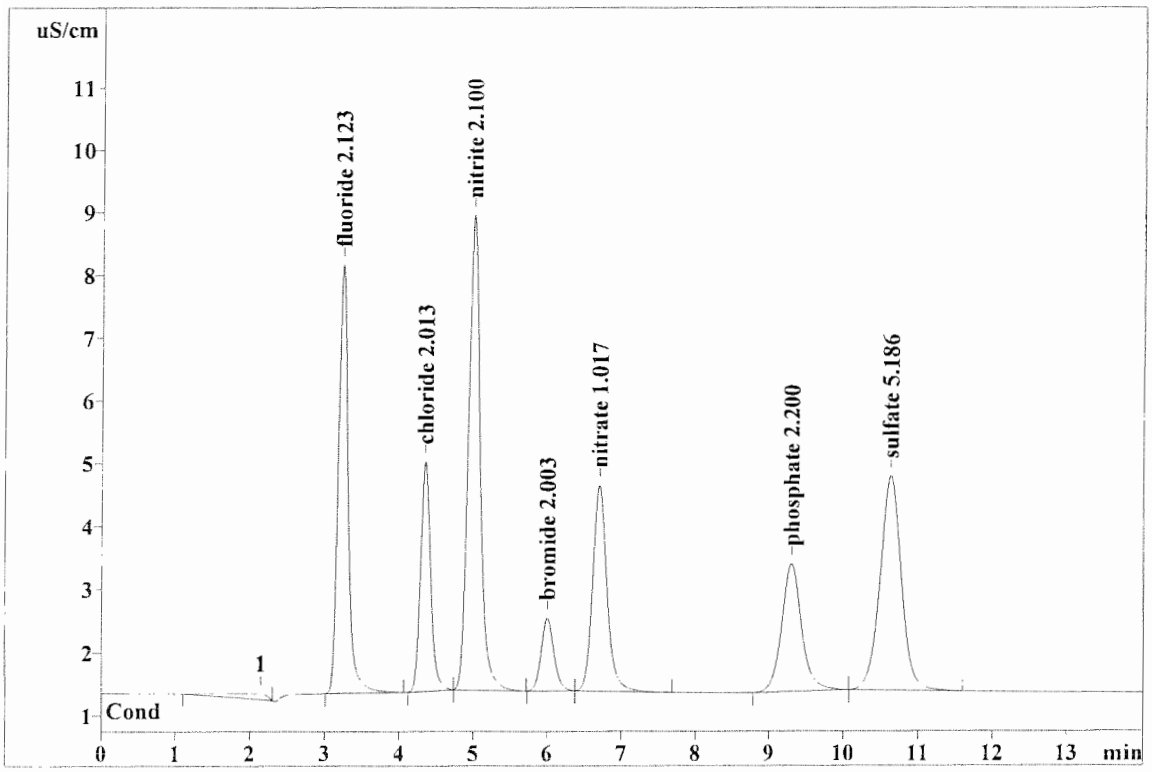
Report date: 11/18/2011 11:03:54 PM
Printed by: Jadelyn Chun

Ident: AK27-38 ICK069WC
Analysis from: 11/18/2011 10:49:57 PM
File: VB182249.CHW Last save: 11/18/2011 11:03:54 PM

Method: ICD0-I30.mtw Last save: 11/18/2011 4:16:08 PM
Run operator: Jadelyn Chun
Analysis number: 71841

SAMPLE:
:
Vial number: 38
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.09	3.496	0.000	
2	3.23	6.81	62.392	2.123	fluoride
3	4.35	3.64	34.552	2.013	chloride
4	4.99	7.55	85.121	2.100	nitrite
5	6.00	1.15	13.837	2.003	bromide
6	6.70	3.26	43.954	1.017	nitrate
7	9.30	2.02	38.374	2.200	phosphate
8	10.63	3.40	66.710	5.186	sulfate
8	14.00	27.92	348.438	16.642	

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INITIAL CALIBRATIONS

IC Result Check FormVersion : I30/AI39

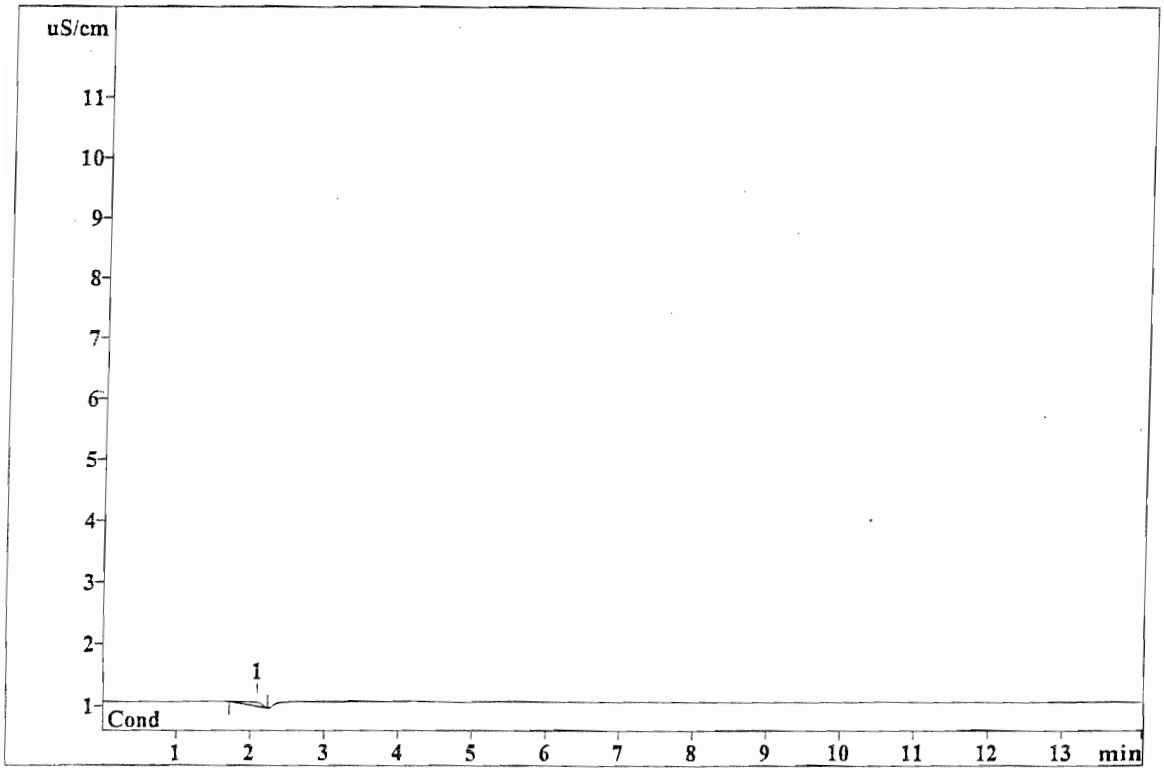
LFID	LSID	Selection	nitrite	fluoride	chloride	bromide	nitrate	phosphate	sulfate	RawNetID	DF
AI39-01	IB	IFCBNPS	0	0	0	0	0	0	0	v9301829	1
AI39-02	S0	IFCBNPS	0	0	0	0	0	0	0	v9301845	1
AI39-03	S1	IFCBNPS	0.0402732	0.0794447	0.137238	0.0962101	0.0900188	0.132659	0.181386	v9301901	1
AI39-04	S2	IFCBNPS	0.0827484	0.120657	0.172987	0.138434	0.127411	0.166211	0.219384	v9301917	1
AI39-05	S3	IFCBNPS	0.175829	0.207372	0.255839	0.223376	0.213499	0.241921	0.298411	v9301934	1
AI39-06	S4	IFCBNPS	0.468611	0.487287	0.510168	0.483675	0.481038	0.46682	0.535669	v9301950	1
AI39-07	S5	IFCBNPS	0.987232	0.975831	0.969747	0.947628	0.958434	0.904972	0.974277	v9302006	1
AI39-08	S6	IFCBNPS	2.03579	2.00618	1.92527	1.92275	1.95393	1.87863	1.87805	v9302022	1
AI39-09	S7	IFCBNPS	5.13141	5.00267	4.89791	5.03793	5.02567	5.05879	4.80122	v9302038	1
AI39-10	S8	IFCBNPS	9.9281	9.57748	9.9004	10.4648	10.1254	10.4079	9.8176	v9302054	1
AI39-11	S9	IFCBNPS	18.5849	17.9543	20.0804	21.615	20.3941	21.1232	20.144	v9302111	1
AI39-12	ICV	IFCBNPS	98.6%	100.1%	97.7%	94.1%	98.6%	92.5%	99.9%	v9302127	1
AI39-13	ICB	IFCBNPS	0	0	0	0	0	0	0	v9302143	1

Report date: 10/3/2011 10:48:38 AM
Printed by: Jadelyn Chun

Ident: AI39-02 S0
Analysis from: 9/30/2011 6:45:36 PM
File: v9301845.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69483

SAMPLE:
:
Vial number: 2
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.07	1.184	0.000	

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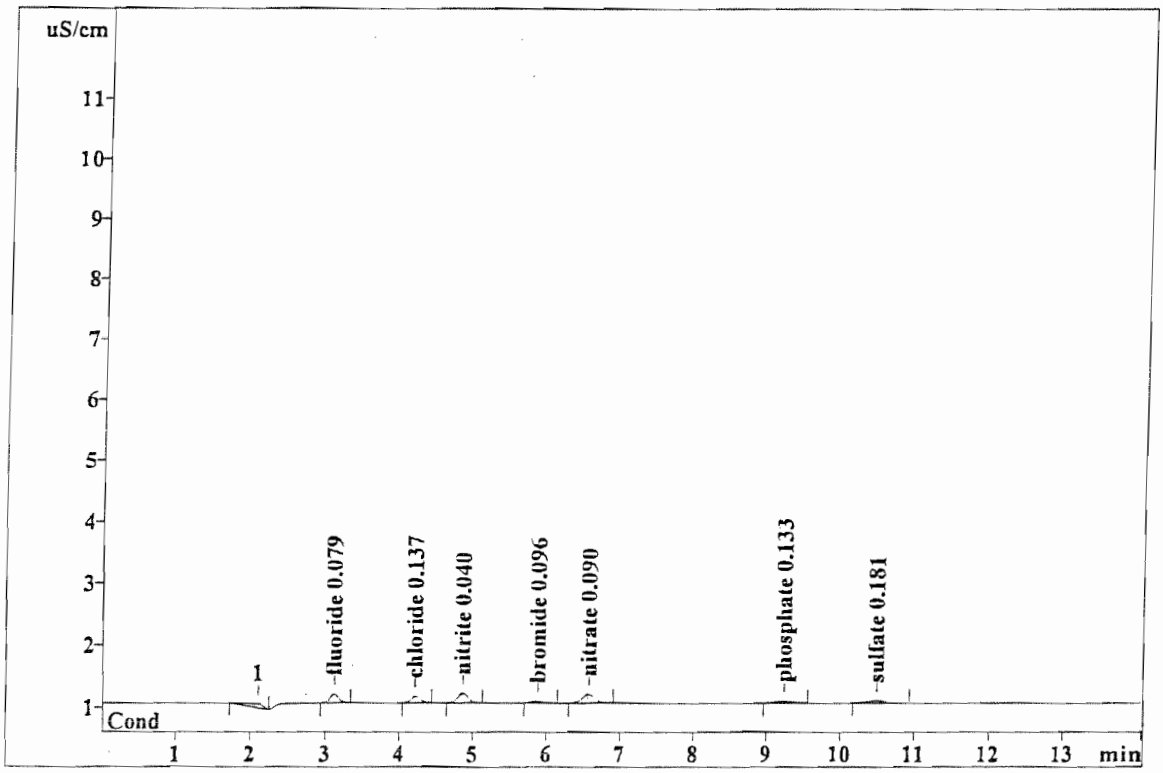
AS
10/03/11

Report date: 10/3/2011 10:48:46 AM
Printed by: Jadelyn Chun

Ident: AI39-03 S1
Analysis from: 9/30/2011 7:01:46 PM
File: v9301901.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69484

SAMPLE:
:
Vial number: 3
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.07	1.147	0.000	
2	3.12	0.14	1.182 ✓	0.079	fluoride
3	4.23	0.10	0.908 ✓	0.137	chloride
4	4.87	0.16	1.561 ✓	0.040	nitrite
5	5.87	0.03	0.301 ✓	0.096	bromide
6	6.57	0.14	1.722 ✓	0.090 ✓	nitrate
7	9.23	0.03	0.520 ✓	0.133 ✓	phosphate
8	10.50	0.04	0.692 ✓	0.181 ✓	sulfate
8	14.00	0.71	8.034	0.757	

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METROHM LTD

RS 10/03/11

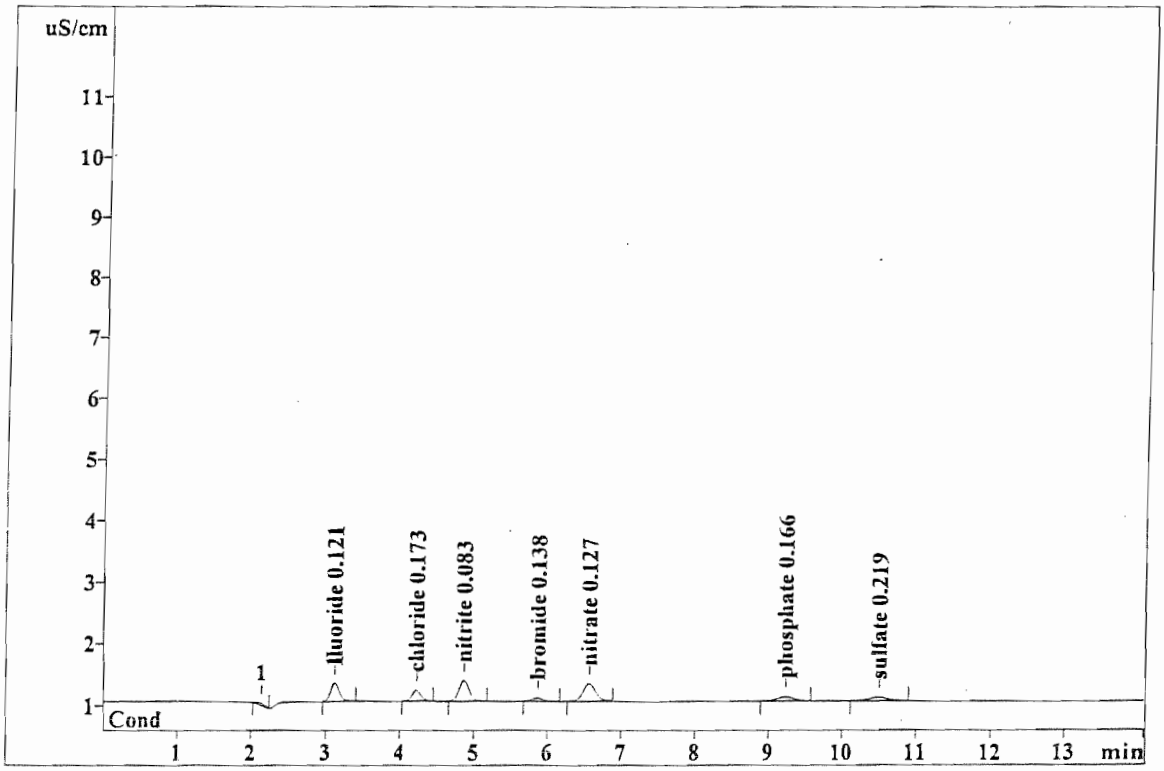
8028

Report date: 10/3/2011 10:49:06 AM
Printed by: Jadelyn Chun

Ident: AI39-04 S2
Analysis from: 9/30/2011 7:17:56 PM
File: v9301917.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69485

SAMPLE:
:
Vial number: 4
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.13	0.04	0.262	0.000	
2	3.12	0.30	2.417	0.121	fluoride
3	4.22	0.18	1.549	0.173	chloride
4	4.86	0.34	3.285	0.083	nitrite
5	5.87	0.05	0.601	0.138	bromide
6	6.56	0.29	3.425	0.127	nitrate
7	9.24	0.07	1.135	0.166	phosphate
8	10.51	0.07	1.193	0.219	sulfate
8	14.00	1.32	13.866	1.028	

This report has been created by IC Net
METROHM LTD

AS
10/03/11

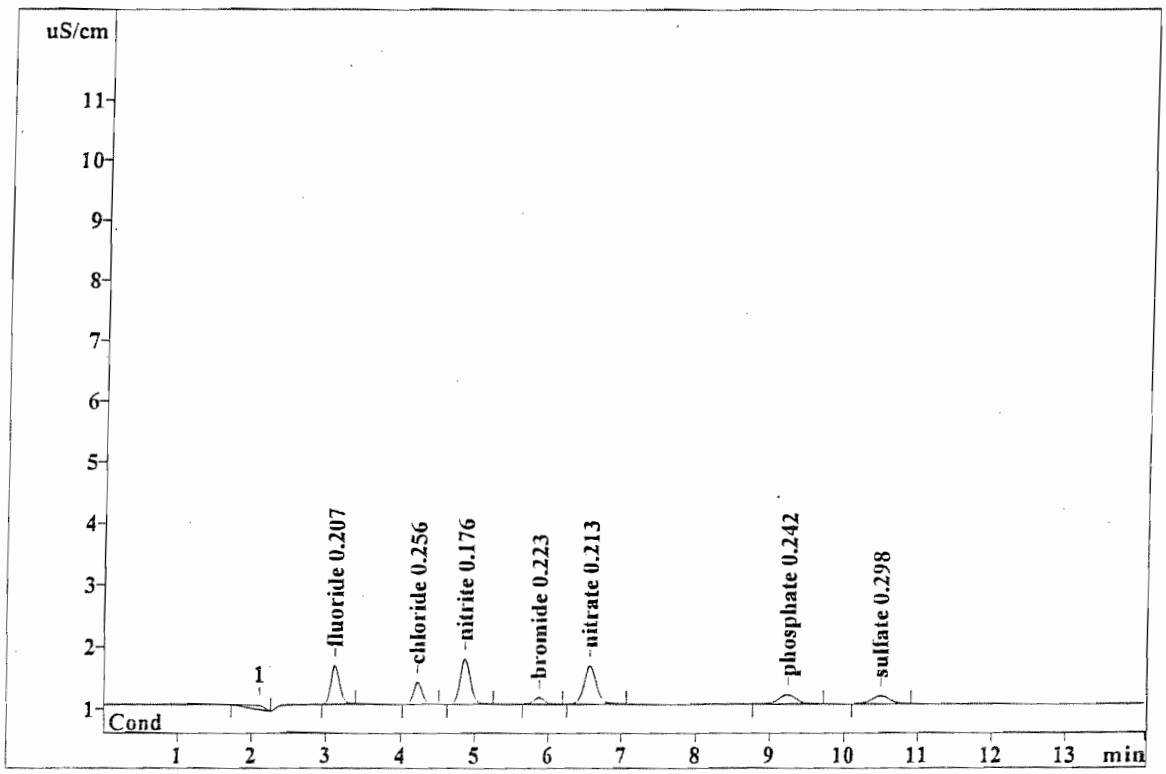
8029

Report date: 10/3/2011 10:49:15 AM
Printed by: Jadelyn Chun

Ident: AI39-05 S3
Analysis from: 9/30/2011 7:34:06 PM
File: v9301934.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69486

SAMPLE:
:
Vial number: 5
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.07	1.155	0.000	
2	3.12	0.62	5.014	0.207	fluoride
3	4.22	0.35	3.034	0.256	chloride ✓
4	4.87	0.73	7.062	0.176	nitrite
5	5.87	0.11	1.204	0.223	bromide
6	6.56	0.62	7.345	0.213	nitrate
7	9.24	0.15	2.521	0.242	phosphate
8	10.50	0.13	2.236 ✓	0.298	sulfate
8	14.00	2.78	29.572	1.616	

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AS
10/03/11

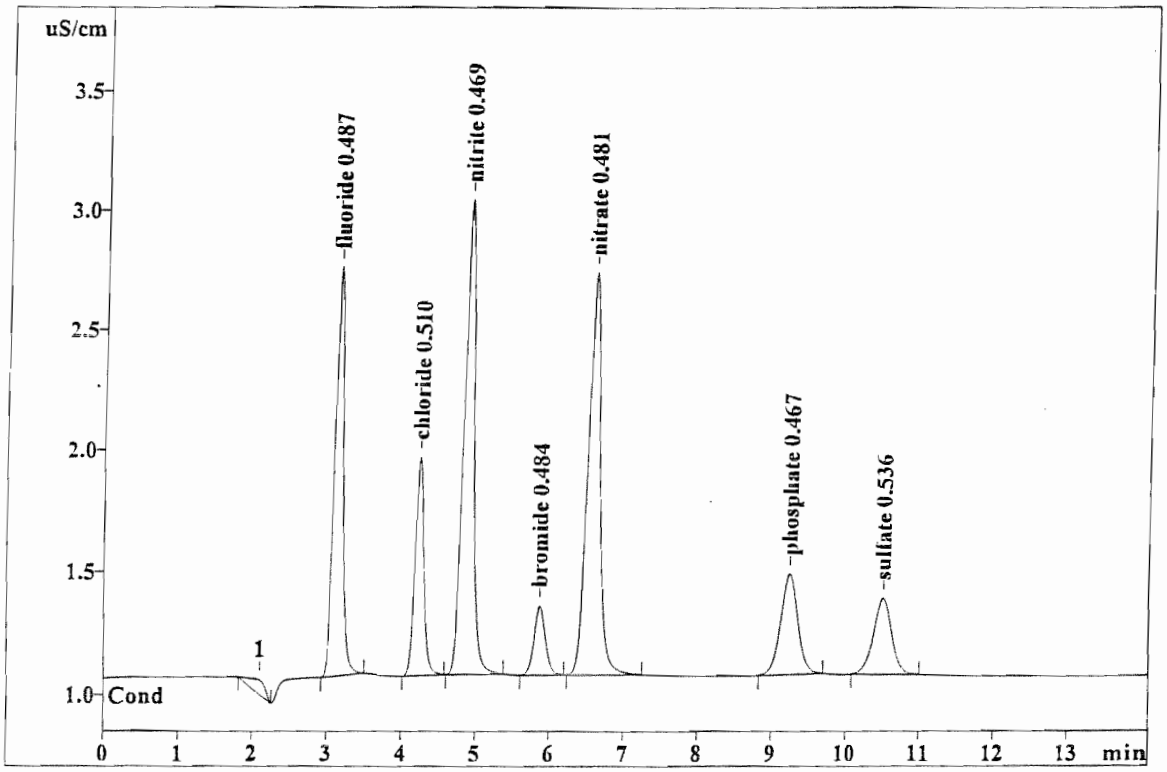
8030

Report date: 10/3/2011 10:49:34 AM
Printed by: Jadelyn Chun

Ident: AI39-06 S4
Analysis from: 9/30/2011 7:50:16 PM
File: v9301950.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69487

SAMPLE:
:
Vial number: 6
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.06	0.880	0.000	
2	3.12	1.69	13.397	0.487	fluoride
3	4.23	0.89	7.595	0.510	chloride ✓
4	4.87	1.96	18.943	0.469	nitrite
5	5.87	0.28	3.053	0.484	bromide ✓
6	6.55	1.66	19.530	0.481	nitrate
7	9.24	0.41	6.640	0.467	phosphate ✓
8	10.51	0.31	5.366 ✓	0.536	sulfate ✓
8	14.00	7.26	75.402	3.433	

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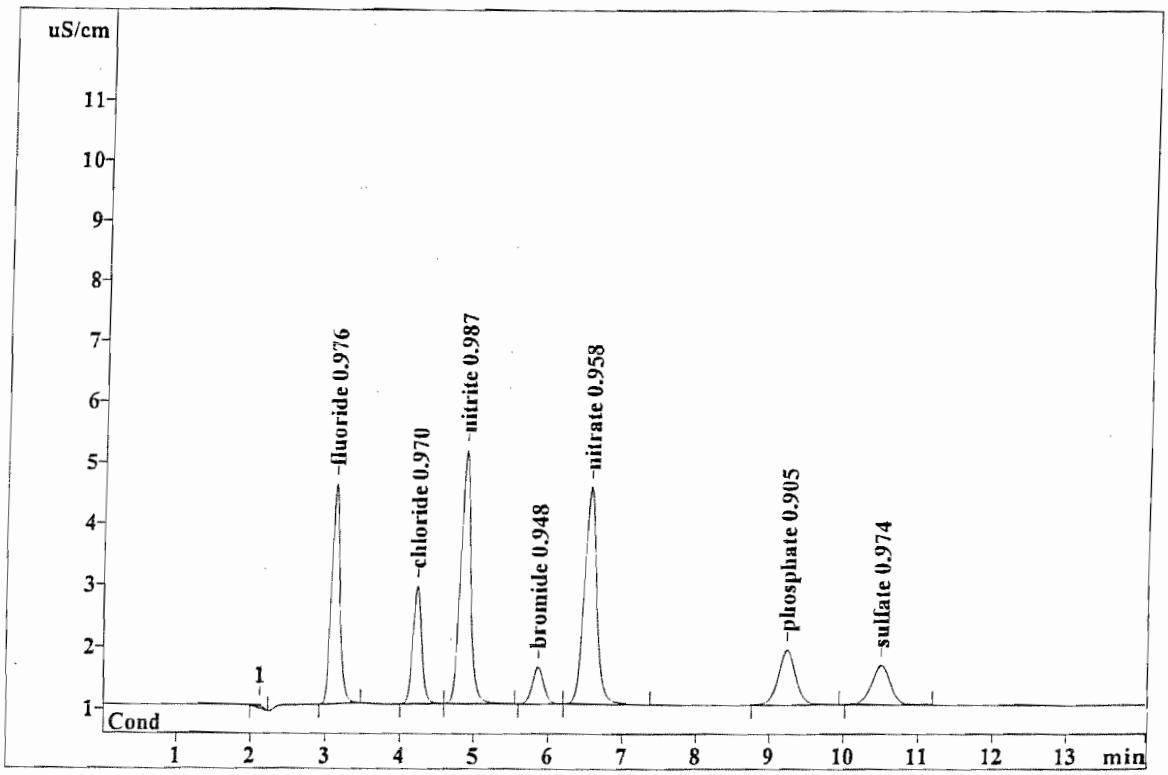
As
10/03/11

Report date: 10/3/2011 10:49:41 AM
Printed by: Jadelyn Chun

Ident: AI39-07 S5
Analysis from: 9/30/2011 8:06:26 PM
File: v9302006.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69488

SAMPLE:
:
Vial number: 7
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.13	0.04	0.341	0.000	
2	3.12	3.57	28.028	0.976	fluoride
3	4.22	1.90	15.837	0.970	chloride
4	4.86	4.12	39.987	0.987	nitrite
5	5.86	0.59	6.347	0.948	bromide
6	6.54	3.52	41.272	0.958	nitrate
7	9.24	0.88	14.663	0.905	phosphate
8	10.50	0.63	11.152	0.974	sulfate
8	14.00	15.25	157.627	6.718	

This report has been created by IC Net
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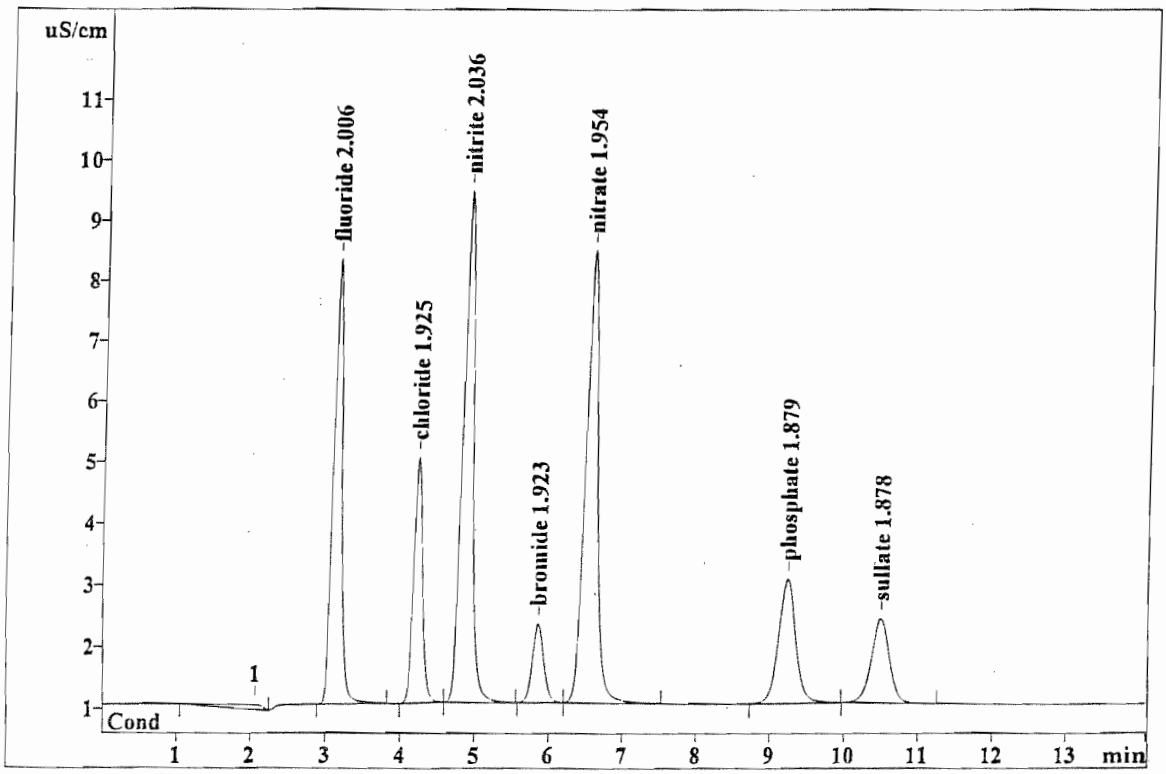
AS
10/03/11

Report date: 10/3/2011 10:49:51 AM
Printed by: Jadelyn Chun

Ident: AI39-08 S6
Analysis from: 9/30/2011 8:22:36 PM
File: v9302022.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69489

SAMPLE:
:
Vial number: 8
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.08	0.08	3.161	0.000	
2	3.12	7.28	58.886	2.006	fluoride
3	4.22	3.98	32.972	1.925	chloride
4	4.86	8.39	82.536	2.036	nitrite
5	5.86	1.27	13.271	1.923	bromide
6	6.53	7.42	86.609	1.954	nitrate
7	9.23	2.01	32.493	1.879	phosphate
8	10.50	1.36	23.075 ✓	1.878	sulfate
8	14.00	31.79	333.001	13.601	

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AS
10/03/11

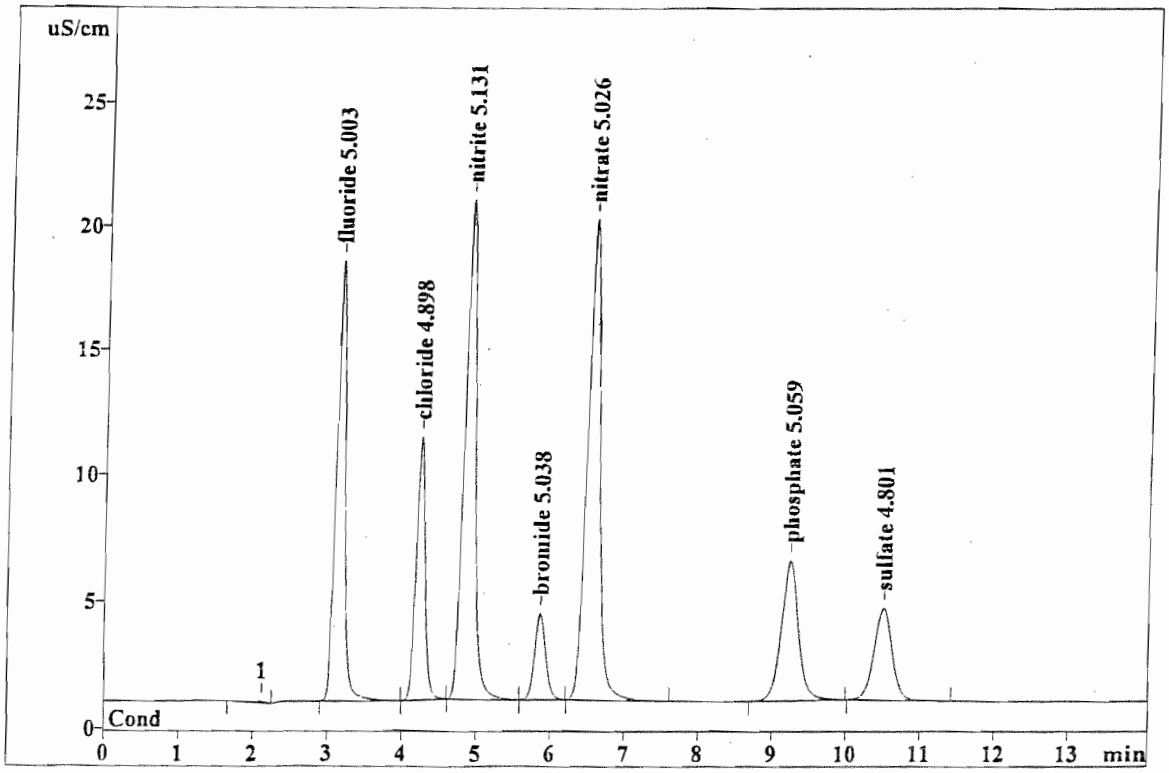
8033

Report date: 10/3/2011 10:49:56 AM
Printed by: Jadelyn Chun

Ident: AI39-09 S7
Analysis from: 9/30/2011 8:38:46 PM
File: v9302038.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69490

SAMPLE:
:
Vial number: 9
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.06	1.110	0.000	
2	3.13	17.51	148.626	5.003	fluoride
3	4.23	10.38	86.279	4.898	chloride
4	4.86	19.91	208.149	5.131	nitrite
5	5.86	3.40	35.390	5.038	bromide
6	6.53	19.15	226.504	5.026	nitrate
7	9.23	5.51	90.728	5.059	phosphate
8	10.50	3.62	61.639 ✓	4.801	sulfate
8	14.00	79.53	858.424	34.956	

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Ag
10/03/11

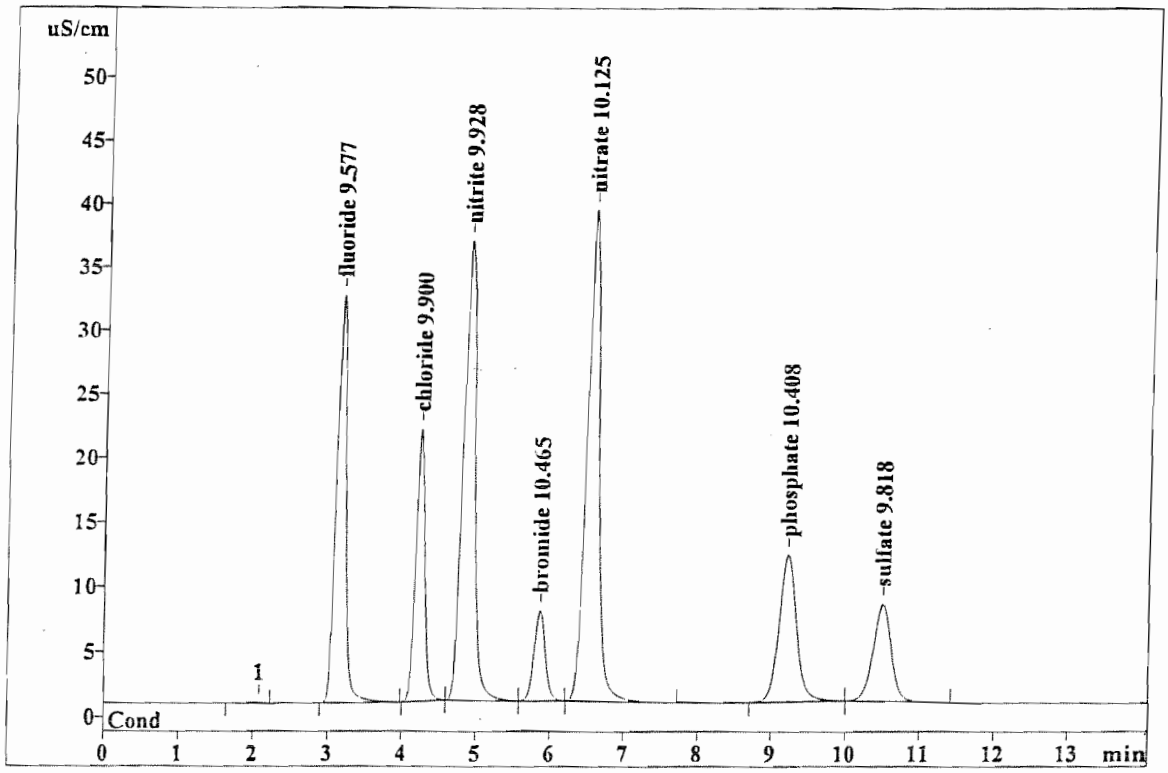
8034

Report date: 10/3/2011 10:50:01 AM
Printed by: Jadelyn Chun

Ident: AI39-10 S8
Analysis from: 9/30/2011 8:54:55 PM
File: v9302054.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69491

SAMPLE:
:
Vial number: 10
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.09	0.04	0.883	0.000	
2	3.14	31.68	285.635	9.577	fluoride
3	4.22	21.04	175.986	9.900	chloride
4	4.86	35.83	402.789	9.928	nitrite
5	5.85	6.92	73.923	10.465	bromide
6	6.52	38.33	458.760	10.125	nitrate
7	9.21	11.30	188.680	10.408	phosphate
8	10.49	7.47	127.816	9.818	sulfate
8	14.00	152.61	1714.471	70.222	

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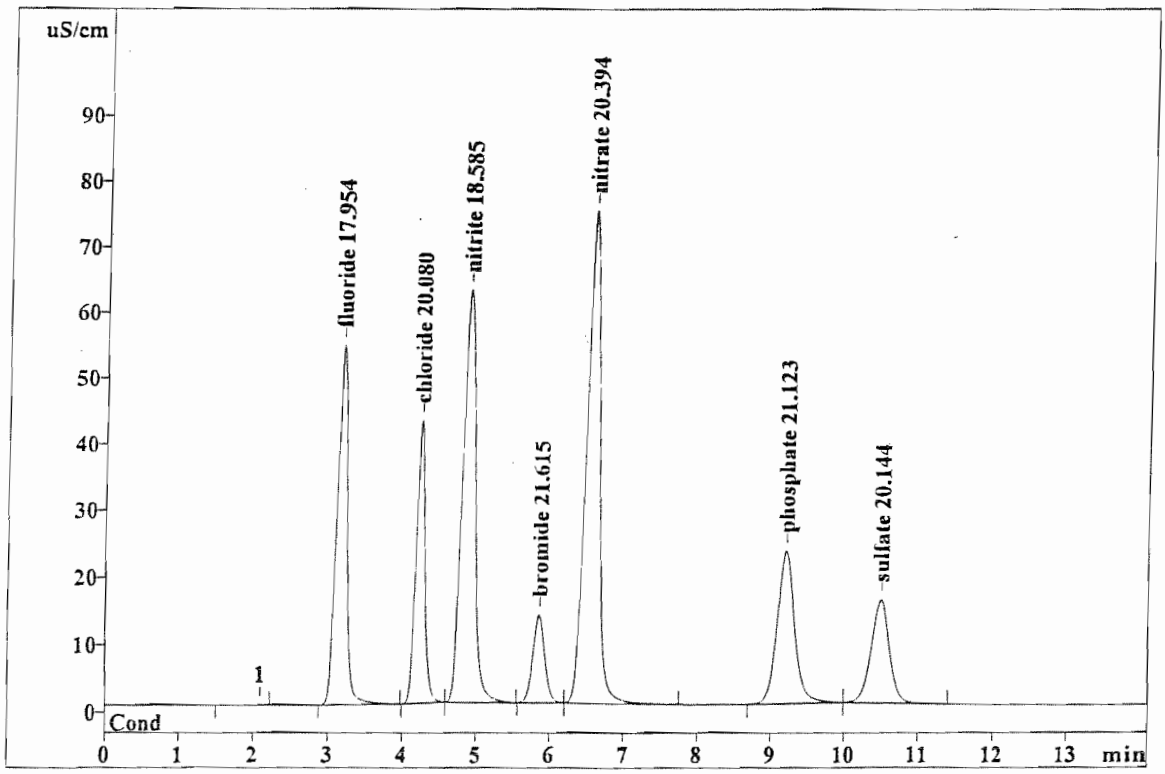
AS
10/03/11

Report date: 10/3/2011 10:50:10 AM
Printed by: Jadelyn Chun

Ident: AI39-11 S9
Analysis from: 9/30/2011 9:11:05 PM
File: v9302111.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69492

SAMPLE:
:
Vial number: 11
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.09	0.02	0.447	0.000	
2	3.16	53.88	536.509	17.954	fluoride
3	4.23	42.24	358.541	20.080	chloride
4	4.86	61.98	754.064	18.585	nitrite
5	5.85	13.02	153.094	21.615	bromide
6	6.54	74.20	926.425	20.394	nitrate
7	9.19	22.65	384.898	21.123	phosphate
8	10.49	15.33	264.046 ✓	20.144	sulfate
8	14.00	283.33	3378.024	139.896	

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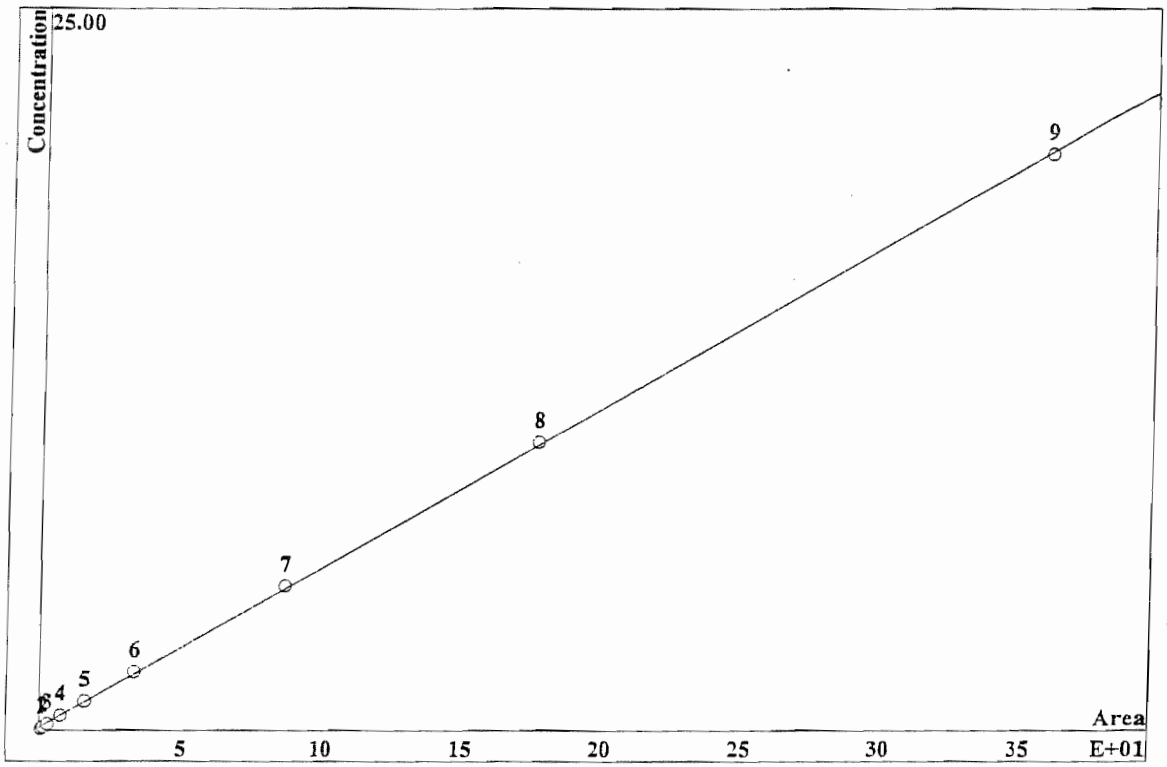
AJ
10/03/11

8036

CALIBRATION OF COMPONENT chloride

Method: ICD0-I30.mtw
Equation: Q = 0.0557644·A + 0.0866239
RSD: 1.948 %
Correlation coefficient: 0.999932



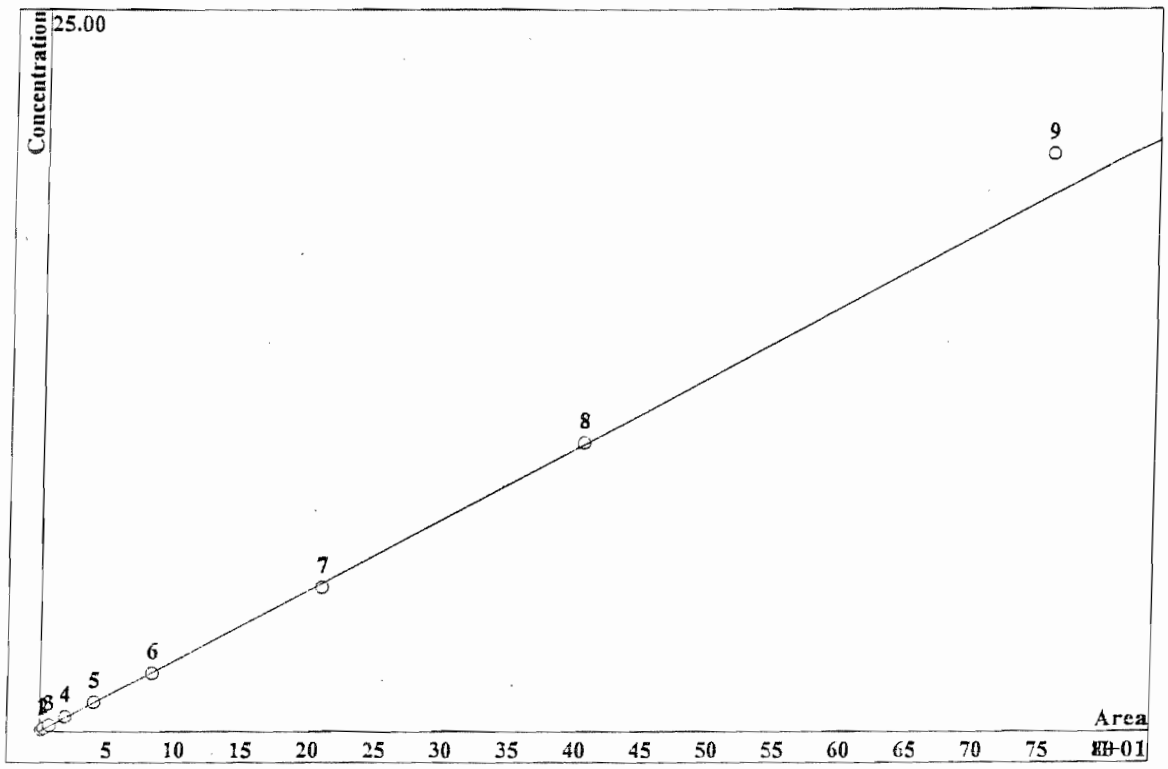
K3 = 0 K2 = 0 K1 = 0.0557644 K0 = 0.0866239
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1035	0.9076	0.05	1	4.26	Yes	v9301901.chw
2	0.1796	1.549	0.1	1	4.26	Yes	v9301917.chw
3	0.354	3.034	0.2	1	4.26	Yes	v9301934.chw
4	0.8921	7.595	0.5	1	4.26	Yes	v9301950.chw
5	1.896	15.84	1	1	4.26	Yes	v9302006.chw
6	3.983	32.97	2	1	4.26	Yes	v9302022.chw
7	10.38	86.28	5	1	4.26	Yes	v9302038.chw
8	21.04	176	10	1	4.26	Yes	v9302054.chw
9	42.24	358.5	20	1	4.26	Yes	v9302111.chw

AA
10/03/11

CALIBRATION OF COMPONENT nitrite

Method: ICD0-I30.mtw ✓ ✓
Equation: Q = 0.024644·A + 0.00179217
RSD: 2.785 %
Correlation coefficient: 0.999850



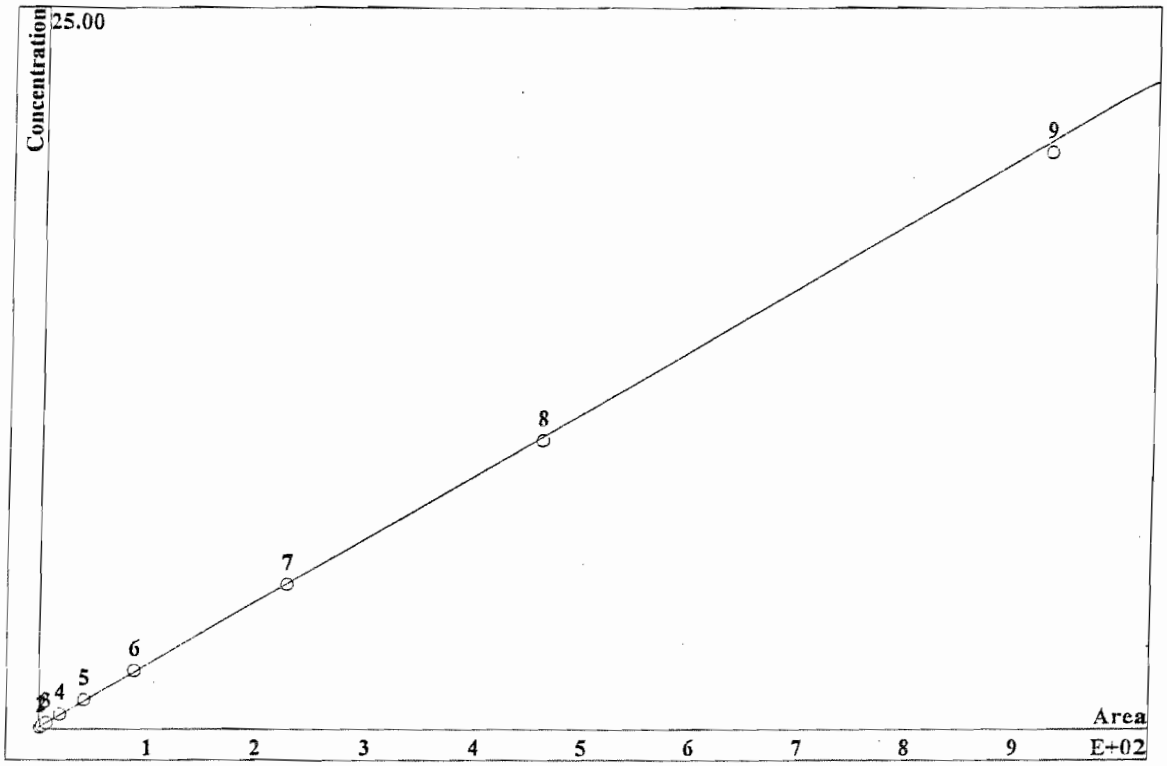
K3 = 0 K2 = 0 K1 = 0.024644 K0 = 0.00179217
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1597	1.561 ✓	0.05	1	4.932	Yes	v9301901.chw
2	0.3368	3.285 ✓	0.1	1	4.932	Yes	v9301917.chw
3	0.7305	7.062 ✓	0.2	1	4.932	Yes	v9301934.chw
4	1.964	18.94 ✓	0.5	1	4.932	Yes	v9301950.chw
5	4.115	39.99 ✓	1	1	4.932	Yes	v9302006.chw
6	8.392	82.54 ✓	2	1	4.932	Yes	v9302022.chw
7	19.91	208.1 ✓	5	1	4.932	Yes	v9302038.chw
8	35.83	402.8 ✓	10	1	4.932	Yes	v9302054.chw
9	61.98	754.1 ✓	20	1	4.932	No	v9302111.chw

RA
10/13/11

CALIBRATION OF COMPONENT nitrate

Method: ICD0-I30.mtw
Equation: Q = 0.0219574·A + 0.0522169
RSD: 3.044 %
Correlation coefficient: 0.999806



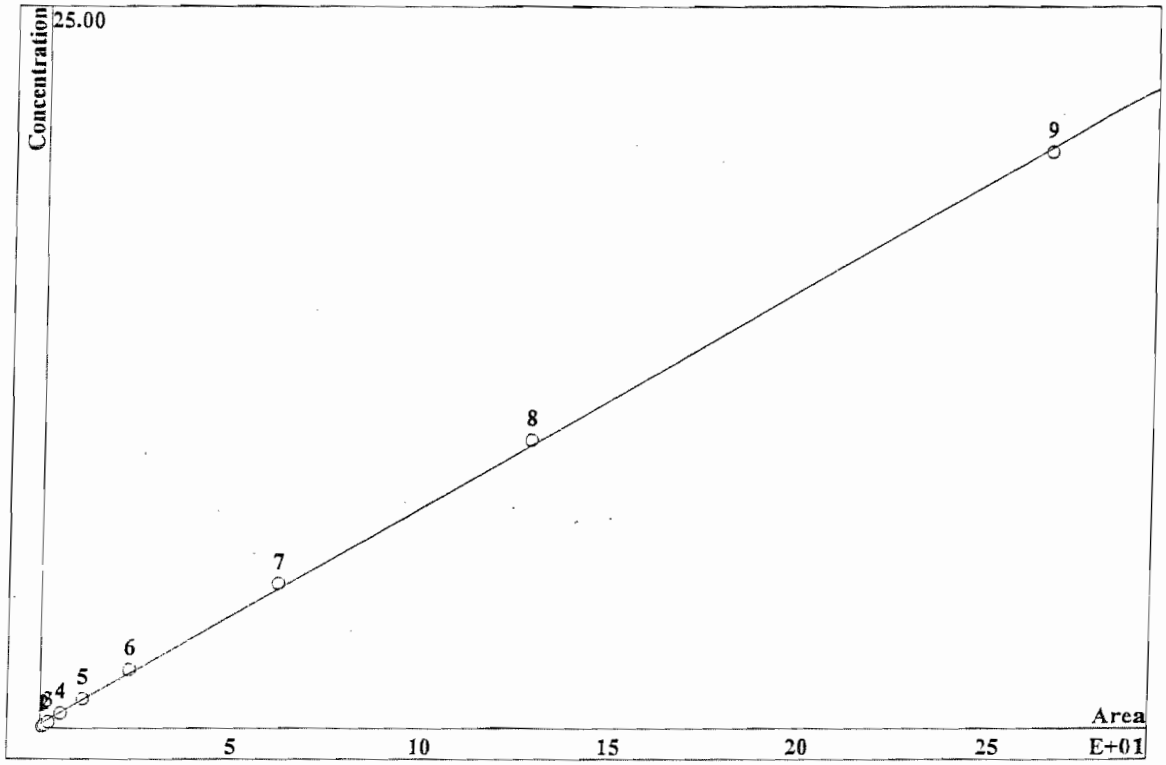
K3 = 0 K2 = 0 K1 = 0.0219574 K0 = 0.0522169
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1416	1.722	0.05	1	6.74	Yes	v9301901.chw
2	0.2866	3.425	0.1	1	6.74	Yes	v9301917.chw
3	0.6179	7.345	0.2	1	6.74	Yes	v9301934.chw
4	1.658	19.53	0.5	1	6.74	Yes	v9301950.chw
5	3.518	41.27	1	1	6.74	Yes	v9302006.chw
6	7.416	86.61	2	1	6.74	Yes	v9302022.chw
7	19.15	226.5	5	1	6.74	Yes	v9302038.chw
8	38.33	458.8	10	1	6.74	No	v9302054.chw
9	74.21	926.4	20	1	6.74	No	v9302111.chw

RS
10/03/11

CALIBRATION OF COMPONENT sulfate

Method: ICD0-I30.mtw ✓ ✓
Equation: Q = 0.0758014·A + 0.128926
RSD: 3.408 %
Correlation coefficient: 0.999791



K3 = 0 K2 = 0 K1 = 0.0758014 K0 = 0.128926
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.03861	0.6921 ✓	0.05	1	10.79	Yes	v9301901.chw
2	0.06635	1.193 ✓	0.1	1	10.79	Yes	v9301917.chw
3	0.1288	2.236 ✓	0.2	1	10.79	Yes	v9301934.chw
4	0.3105	5.366 ✓	0.5	1	10.79	Yes	v9301950.chw
5	0.6333	11.15 ✓	1	1	10.79	Yes	v9302006.chw
6	1.361	23.08 ✓	2	1	10.79	Yes	v9302022.chw
7	3.625	61.64 ✓	5	1	10.79	Yes	v9302038.chw
8	7.471	127.8 ✓	10	1	10.79	Yes	v9302054.chw
9	15.34	264 ✓	20	1	10.79	Yes	v9302111.chw

DA
10/03/11

SECOND SOURCE VERIFICATION

IC Result Check FormVersion : I30/AI39

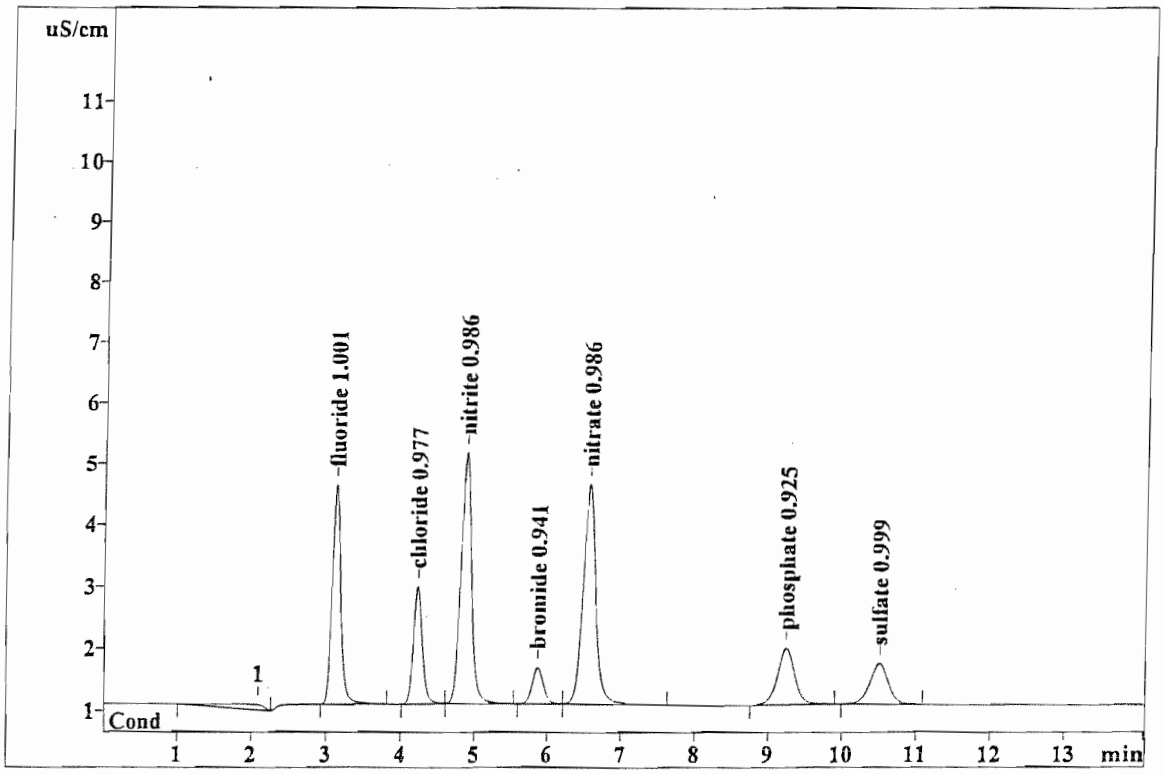
LFID	LSID	Selection	bromide	nitrite	sulfate	fluoride	chloride	nitrate	phosphate	RawNetID	DF
AI39-12	ICV	BISFCNP	94.1%	98.6%	99.9%	100.1%	97.7%	98.6%	92.5%	v9302127	1
AI39-13	ICB	BISFCNP	0	0	0	0	0	0	0	v9302143	1

Report date: 10/3/2011 10:50:13 AM
Printed by: Jadelyn Chun

Ident: AI39-12 ICV
Analysis from: 9/30/2011 9:27:15 PM
File: v9302127.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69493

SAMPLE:
:
Vial number: 12
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.08	0.09	3.575	0.000	
2	3.12	3.55	28.790 ✓	1.001 ✓	fluoride
3	4.23	1.89	15.958 ✓	0.977 ✓	chloride
4	4.87	4.07	39.941 ✓	0.986 ✓	nitrite
5	5.87	0.58	6.302 ✓	0.941 ✓	bromide
6	6.55	3.55	42.546 ✓	0.986 ✓	nitrate
7	9.24	0.91	15.033 ✓	0.925 ✓	phosphate
8	10.51	0.65	11.474 ✓	0.999 ✓	sulfate
8	14.00	15.29	163.619	6.815	

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10/03/11

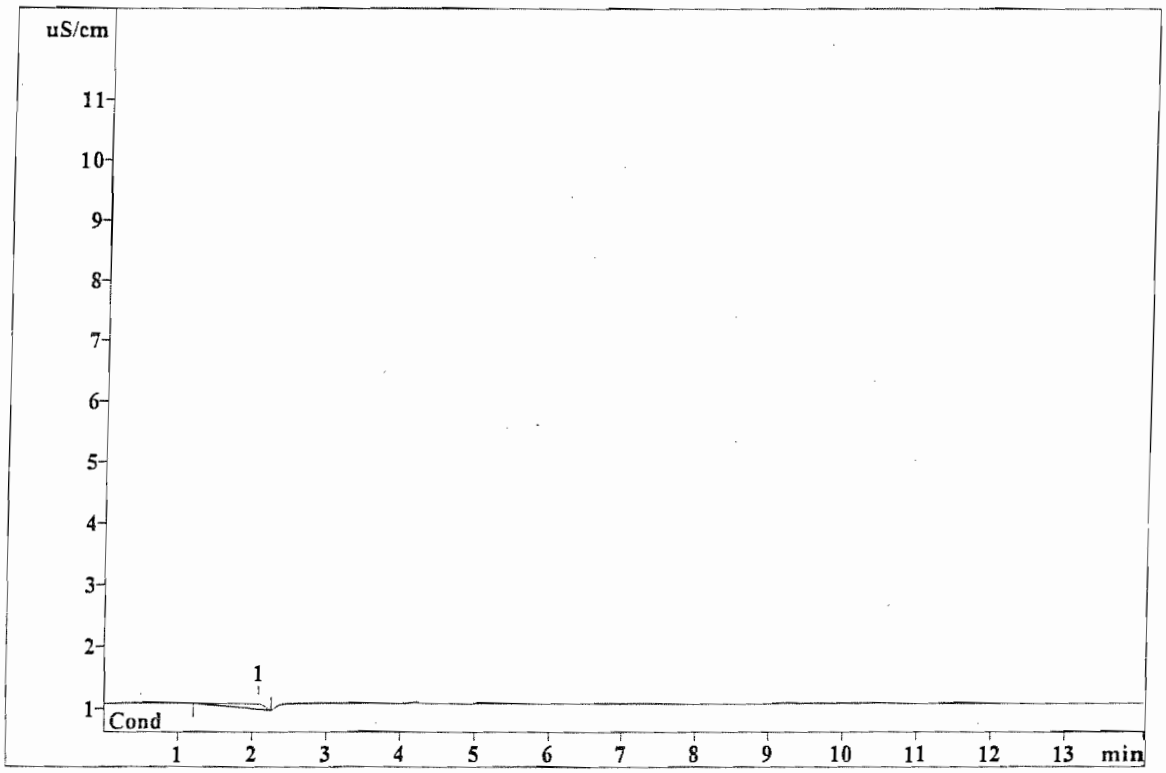
8043

Report date: 10/3/2011 10:50:20 AM
Printed by: Jadelyn Chun

Ident: AI39-13 ICB
Analysis from: 9/30/2011 9:43:24 PM
File: v9302143.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69494

SAMPLE:
:
Vial number: 13
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.08	0.08	2.935	0.000	

This report has been created by IC Net
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AS
10/03/11

8044

DAILY CALIBRATIONS

IC Result Check FormVersion : I30/AI39

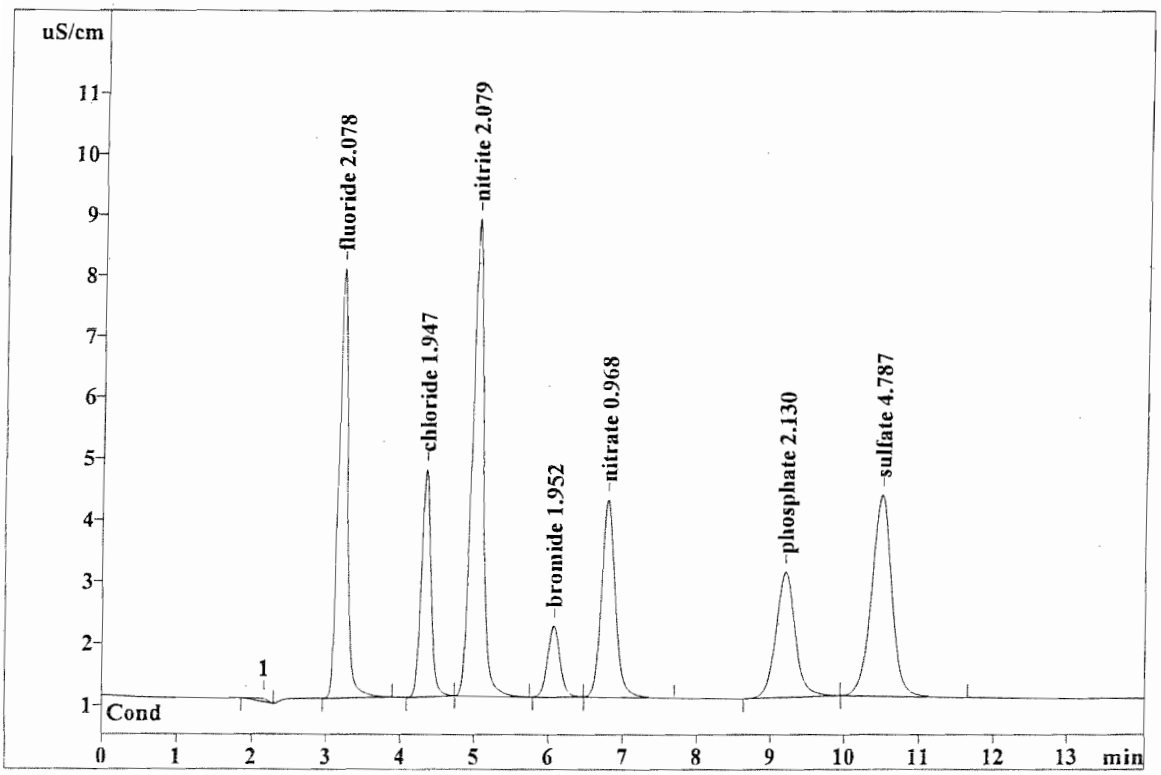
FID	LSID	Selection	phosphate	sulfate	fluoride	chloride	nitrite	bromide	nitrate	RawNetID	DF
.K25-01	CCV469	PSFCIBN	106.5%	95.7%	103.9%	97.4%	103.9%	97.6%	96.8%	vb171003	1
.K25-02	CCB469	PSFCIBN	0	0	0	0	0	0	0	vb171019	1
.K25-13	CCV471	PSFCIBN	106.2%	96%	103.8%	97.7%	103.9%	98%	97.2%	vb171317	1
.K25-14	CCB471	PSFCIBN	0	0	0	0	0	0	0	vb171333	1
.K25-25	CCV473	PSFCIBN	108.2%	96.3%	104.1%	98.1%	103.9%	98.1%	97.2%	vb171631	1
.K25-26	CCB473	PSFCIBN	0	0	0	0	0	0	0	vb171647	1
.K25-31	CCV475	PSFCIBN	104.4%	95.5%	103.4%	97.5%	103.6%	97.5%	97.2%	vb171808	1
.K25-32	CCB475	PSFCIBN	0	0	0	0	0	0	0	vb171824	1
.K25-43	CCV477	PSFCIBN	107.4%	96.3%	104.2%	97.9%	103.9%	98%	97.2%	vb172122	1
.K25-44	CCB477	PSFCIBN	0	0	0	0	0	0	0	vb172138	1
.K25-55	CCV479	PSFCIBN	109.6%	95.6%	103.6%	97.5%	103.8%	97.8%	97.4%	vb180036	1
.K25-56	CCB479	PSFCIBN	0	0	0	0	0	0	0	vb180052	1
.K25-65	CCV481	PSFCIBN	109.9%	95.5%	103.2%	97.4%	103.7%	97.5%	96.9%	vb180318	1
.K25-66	CCB481	PSFCIBN	0	0	0	0	0	0	0	vb180334	1
.K25-77	CCV483	PSFCIBN	109.9%	96%	103.7%	97.4%	104.1%	98.5%	97.7%	vb180632	1
.K25-78	CCB483	PSFCIBN	0	0	0	0	0	0	0	vb180648	1
.K25-89	CCV485	PSFCIBN	109.4%	101.5%	103.5%	101.5%	103.9%	98%	99.6%	vb180947	1
.K25-90	CCB485	PSFCIBN	0	0	0	0.121254	0	0	0	vb181003	1
.K25-95	CCV487	PSFCIBN	110.1%*	100.5%	104.5%	98.9%	104%	97.9%	99.4%	vb181124	1
.K25-96	CCB487	PSFCIBN	0	0	0	0	0	0	0	vb181140	1

Report date: 11/17/2011 10:17:36 AM
Printed by: Jadelyn Chun

Ident: AK25-01 CCV469
Analysis from: 11/17/2011 10:03:39 AM
File: VB171003.CHW Last save: 11/17/2011 10:17:36 AM

Method: ICD0-I30.mtw Last save: 11/17/2011 10:08:29 AM
Run operator: Jadelyn Chun
Analysis number: 71707

SAMPLE:
:
Vial number: 1
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.16	0.05	0.698	0.000	
2	3.20	7.01	61.035	2.078	fluoride
3	4.34	3.68	33.361	1.947	chloride
4	5.00	7.79	84.270	2.079	nitrite
5	6.06	1.15	13.478	1.952	bromide
6	6.78	3.20	41.689	0.968	nitrate
7	9.19	2.03	37.091	2.130	phosphate
8	10.49	3.26	61.458	4.787	sulfate
8	14.00	28.16	333.079	15.940	

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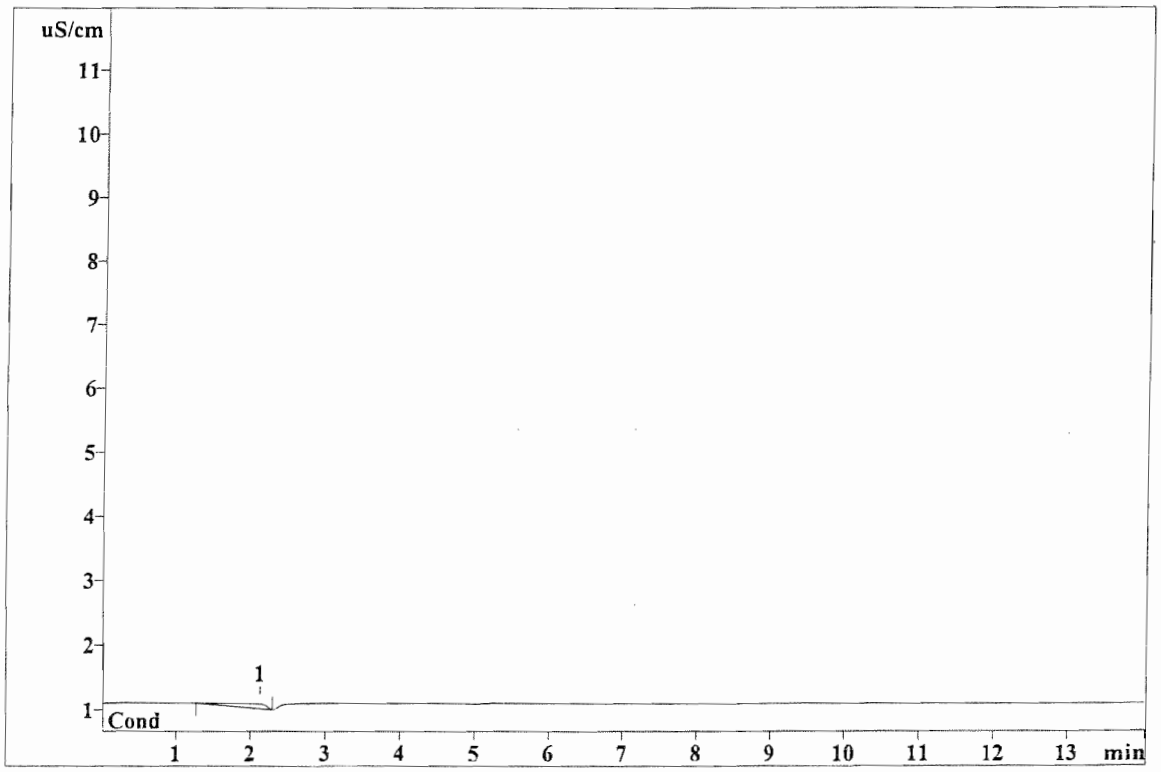
Report date: 11/18/2011 10:28:59 AM
Printed by: Jadelyn Chun

Ident: AK25-02 CCB469
Analysis from: 11/17/2011 10:19:48 AM
File: vb171019.chw Last save: 11/17/2011 10:33:45 AM

Method: ICD0-I30.mtw Last save: 11/17/2011 10:08:29 AM
Run operator: Jadelyn Chun
Analysis number: 71708

SAMPLE:
:
Vial number: 2
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.13	0.07	2.526	0.000	

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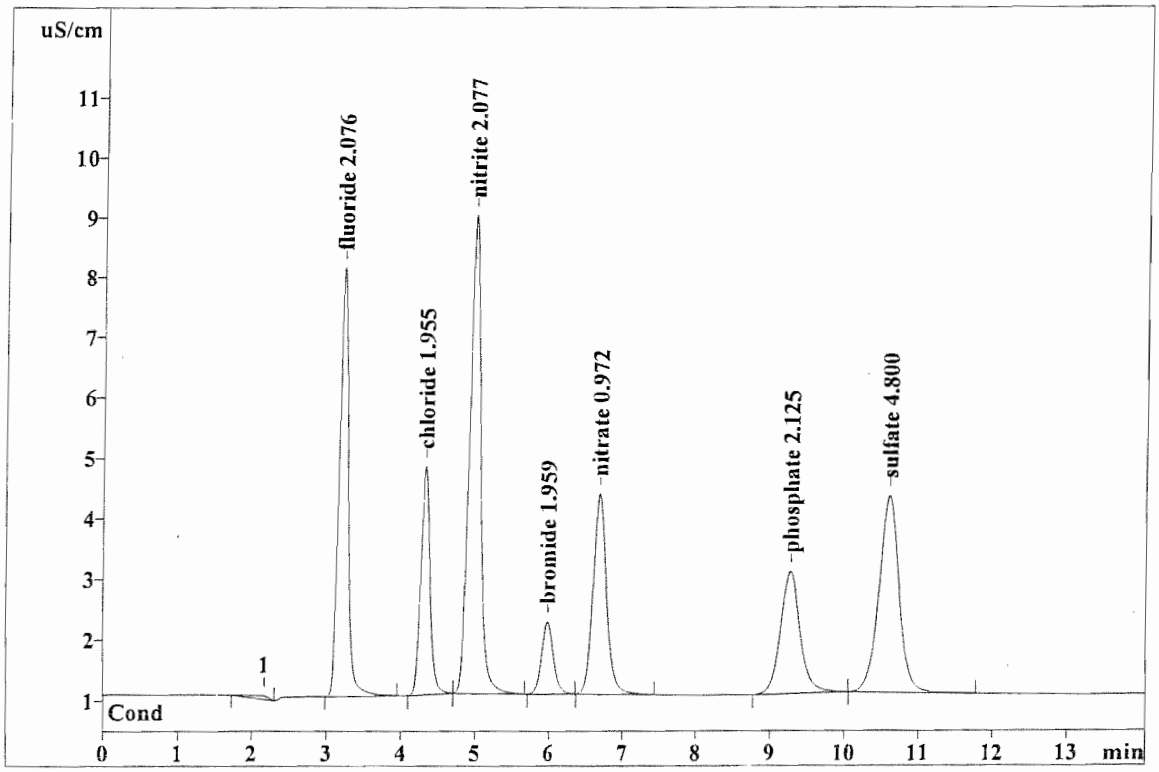
Report date: 11/17/2011 1:31:32 PM
Printed by: Jadelyn Chun

Ident: AK25-13 CCV471
Analysis from: 11/17/2011 1:17:35 PM
File: VB171317.CHW Last save: 11/17/2011 1:31:32 PM

Method: ICD0-I30.mtw Last save: 11/17/2011 10:08:29 AM
Run operator: Jadelyn Chun
Analysis number: 71719

SAMPLE:
:
Vial number: 13
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.16	0.06	1.169	0.000	
2	3.21	7.09	60.963	2.076	fluoride
3	4.32	3.76	33.502	1.955	chloride
4	4.97	7.92	84.213	2.077	nitrite
5	5.98	1.19	13.531	1.959	bromide
6	6.68	3.30	41.905	0.972	nitrate
7	9.27	2.01	37.001	2.125	phosphate
8	10.60	3.23	61.622	4.800	sulfate
8	14.00	28.56	333.905	15.964	

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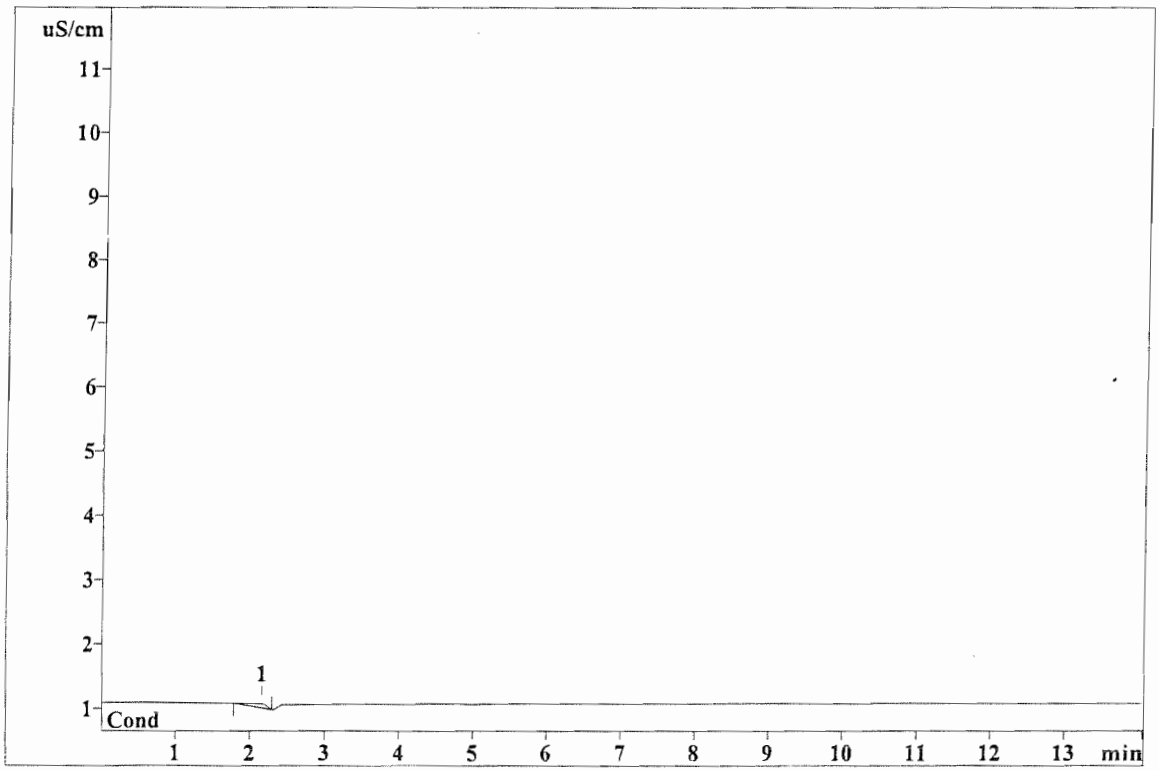
Report date: 11/18/2011 10:30:17 AM
Printed by: Jadelyn Chun

Ident: AK25-14 CCB471
Analysis from: 11/17/2011 1:33:44 PM
File: vb171333.chw Last save: 11/17/2011 1:47:41 PM

Method: ICD0-I30.mtw Last save: 11/17/2011 10:08:29 AM
Run operator: Jadelyn Chun
Analysis number: 71720

SAMPLE:
:
Vial number: 14
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.06	1.074	0.000	

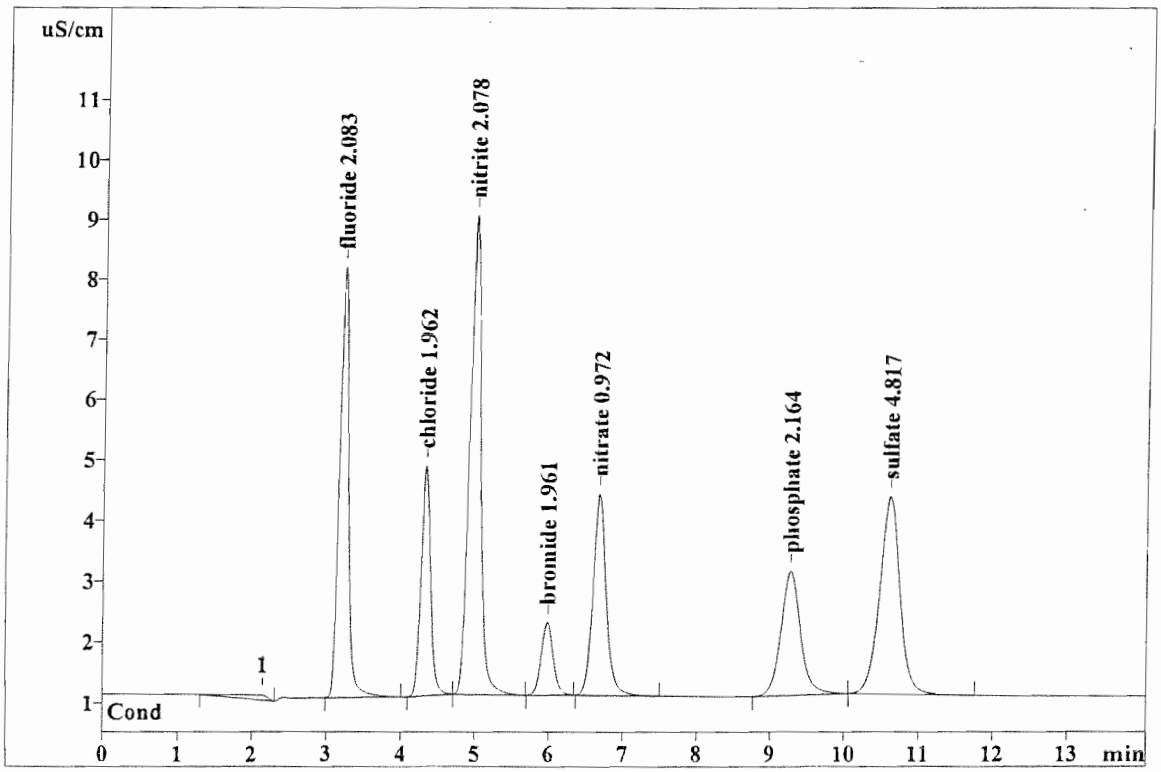
This report has been created by IC Net
METROHM LTD

Report date: 11/17/2011 4:45:30 PM
Printed by: Jadelyn Chun

Ident: AK25-25 CCV473
Analysis from: 11/17/2011 4:31:33 PM
File: VB171631.CHW Last save: 11/17/2011 4:45:30 PM

Method: ICD0-I30.mtw Last save: 11/17/2011 10:08:29 AM
Run operator: Jadelyn Chun
Analysis number: 71731

SAMPLE:
:
Vial number: 25
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.14	0.08	2.603	0.000	
2	3.21	7.12	61.182	2.083	fluoride
3	4.32	3.78	33.626	1.962	chloride
4	4.97	7.93	84.252	2.078	nitrite
5	5.98	1.19	13.543	1.961	bromide
6	6.68	3.31	41.890	0.972	nitrate
7	9.27	2.04	37.717	2.164	phosphate
8	10.61	3.24	61.843	4.817	sulfate
8	14.00	28.69	336.656	16.036	

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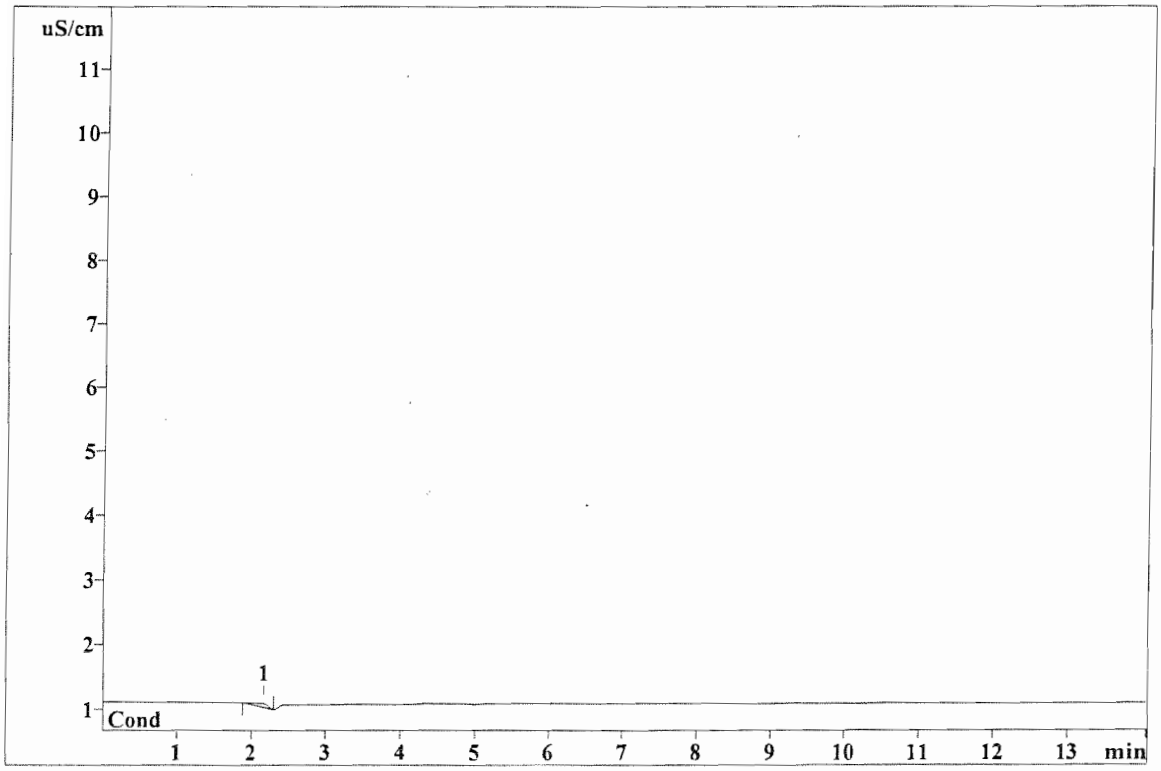
Report date: 11/18/2011 10:30:54 AM
Printed by: Jadelyn Chun

Ident: AK25-26 CCB473
Analysis from: 11/17/2011 4:47:42 PM
File: vb171647.chw Last save: 11/17/2011 5:01:39 PM

Method: ICD0-I30.mtw Last save: 11/17/2011 10:08:29 AM
Run operator: Jadelyn Chun
Analysis number: 71732

SAMPLE:
:
Vial number: 26
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.16	0.06	0.802	0.000	

This report has been created by IC Net
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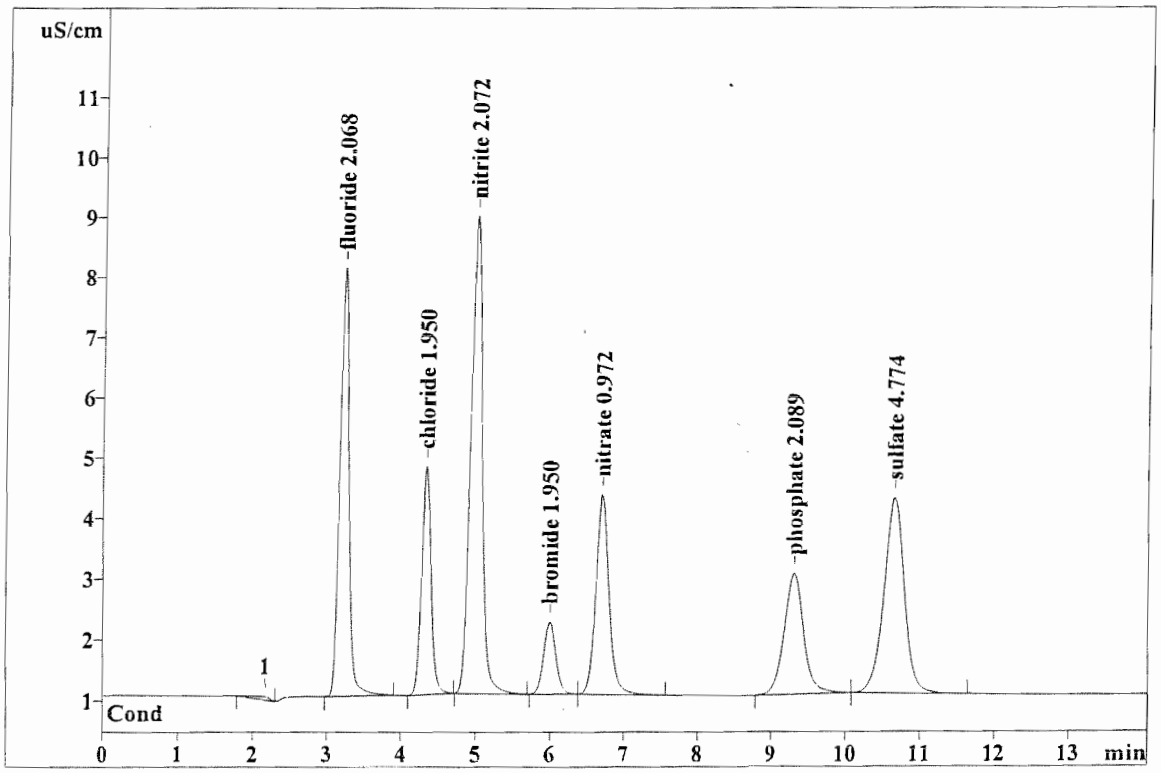
Report date: 11/17/2011 6:22:30 PM
Printed by: Jadelyn Chun

Ident: AK25-31 CCV475
Analysis from: 11/17/2011 6:08:33 PM
File: VB171808.CHW Last save: 11/17/2011 6:22:30 PM

Method: ICD0-I30.mtw Last save: 11/17/2011 10:08:29 AM
Run operator: Jadelyn Chun
Analysis number: 71737

SAMPLE:
:
Vial number: 31
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.16	0.06	0.973	0.000	
2	3.21	7.09	60.742	2.068	fluoride
3	4.33	3.76	33.420	1.950	chloride
4	4.98	7.91	84.018	2.072	nitrite
5	6.00	1.18	13.463	1.950	bromide
6	6.70	3.29	41.905	0.972	nitrate
7	9.30	1.99	36.345	2.089	phosphate
8	10.65	3.21	61.275	4.774	sulfate
8	14.00	28.48	332.139	15.875	

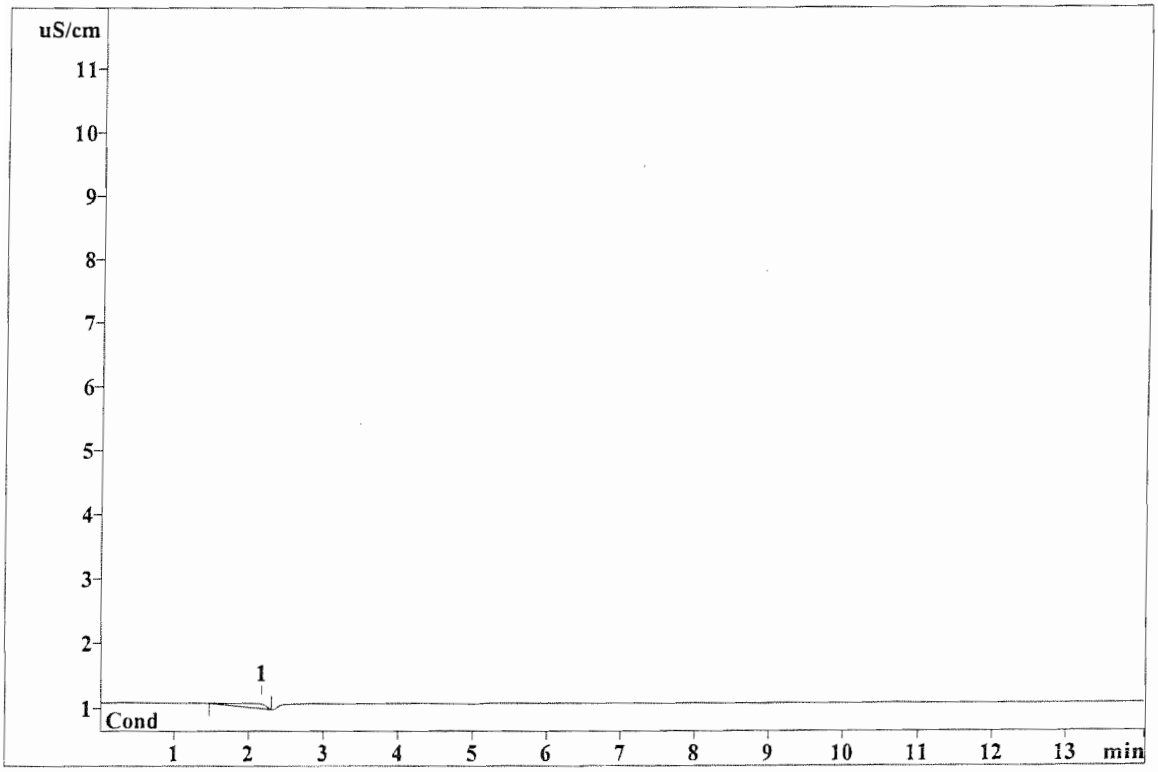
This report has been created by IC Net
METROHM LTD

Report date: 11/18/2011 10:31:08 AM
Printed by: Jadelyn Chun

Ident: AK25-32 CCB475
Analysis from: 11/17/2011 6:24:42 PM
File: vb171824.chw Last save: 11/17/2011 6:38:39 PM

Method: ICD0-I30.mtw Last save: 11/17/2011 10:08:29 AM
Run operator: Jadelyn Chun
Analysis number: 71738

SAMPLE:
:
Vial number: 32
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.16	0.07	2.006	0.000	

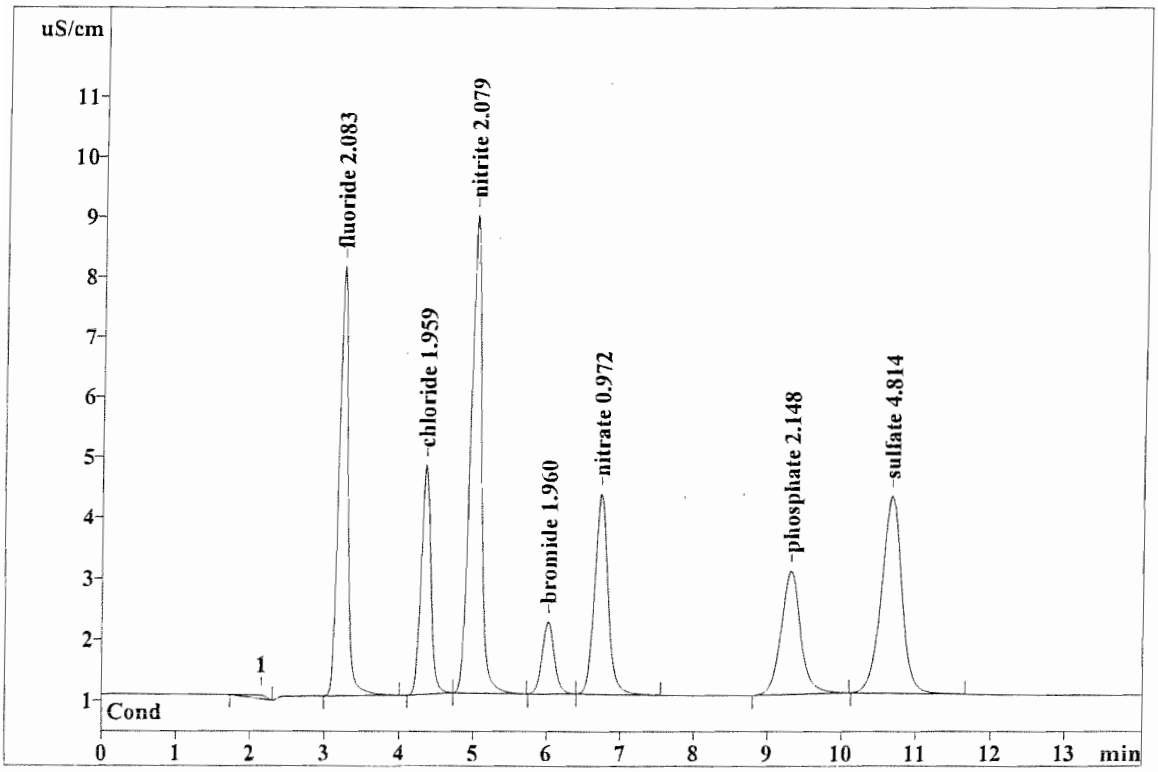
This report has been created by IC Net
METROHM LTD

Report date: 11/17/2011 9:36:27 PM
Printed by: Jadelyn Chun

Ident: AK25-43 CCV477
Analysis from: 11/17/2011 9:22:30 PM
File: VB172122.CHW Last save: 11/17/2011 9:36:27 PM

Method: ICD0-I30.mtw Last save: 11/17/2011 10:08:29 AM
Run operator: Jadelyn Chun
Analysis number: 71749

SAMPLE:
:
Vial number: 43
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.15	0.06	1.171	0.000	
2	3.22	7.10	61.199	2.083	fluoride
3	4.34	3.76	33.571	1.959	chloride
4	4.99	7.90	84.280	2.079	nitrite
5	6.02	1.18	13.537	1.960	bromide
6	6.72	3.28	41.890	0.972	nitrate
7	9.30	2.02	37.422	2.148	phosphate
8	10.66	3.23	61.808	4.814	sulfate
8	14.00	28.54	334.879	16.015	

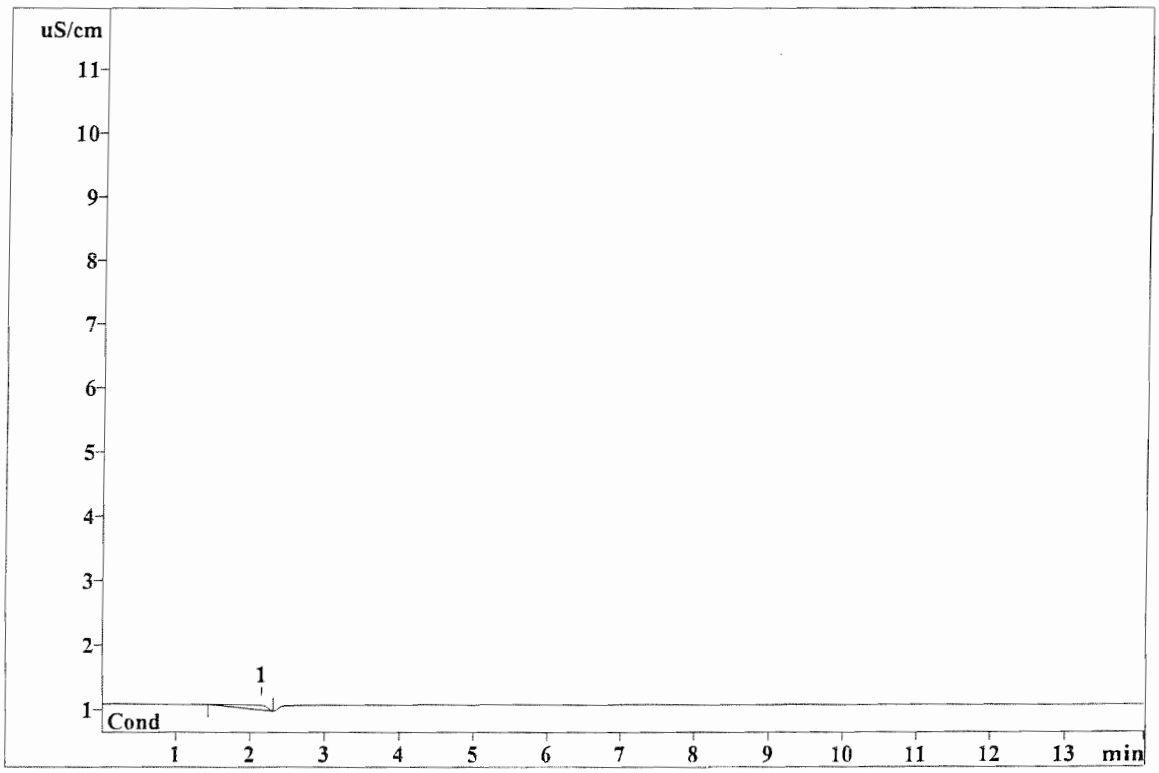
This report has been created by IC Net
METROHM LTD

Report date: 11/18/2011 10:31:57 AM
Printed by: Jadelyn Chun

Ident: AK25-44 CCB477
Analysis from: 11/17/2011 9:38:40 PM
File: vb172138.chw Last save: 11/17/2011 9:52:37 PM

Method: ICD0-I30.mtw Last save: 11/17/2011 10:08:29 AM
Run operator: Jadelyn Chun
Analysis number: 71750

SAMPLE:
:
Vial number: 44
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.14	0.08	2.220	0.000	

This report has been created by IC Net
METROHM LTD

IC Result Check FormVersion : I30\I39(2011)

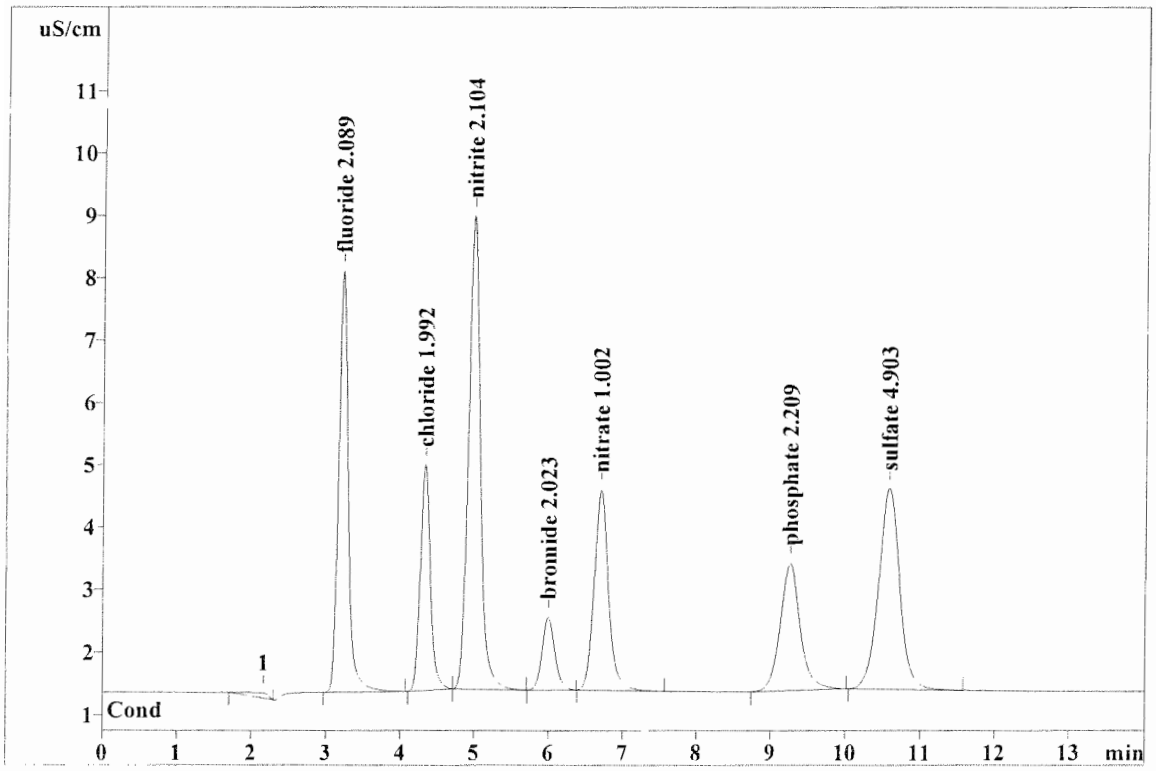
LFID	LSID	Selection	phosphate	sulfate	fluoride	chloride	nitrite	bromide	nitrate	RawNetID	DF
AK27-01	CCV489	PSFCIBN	110.3%*	97.9%	103.6%	102.8%	105.2%	102.3%	100.5%	vb181251	1
AK27-02	CCB489	PSFCIBN	0	0	0	0	0	0	0	vb181308	1
AK27-13	CCV491	PSFCIBN	108.5%	98.1%	103.9%	100.5%	104.9%	100.9%	100.3%	vb181605	1
AK27-14	CCB491	PSFCIBN	0	0	0	0	0	0	0	vb181622	1
AK27-25	CCV493	PSFCIBN	109.2%	98.1%	104.1%	100.6%	105%	101.1%	100.4%	vb181919	1
AK27-26	CCB493	PSFCIBN	0	0	0	0	0	0	0	vb181936	1
AK27-34	CCV495	PSFCIBN	110.4%*	98.1%	104.5%	99.6%	105.2%	101.2%	100.2%	vb182145	1
AK27-35	CCB495	PSFCIBN	0	0	0	0	0	0	0	vb182201	1
AK27-46	CCV497	PSFCIBN	111.6%*	98.3%	104.5%	99.5%	105.1%	101.1%	100.2%	vb190059	1
AK27-47	CCB497	PSFCIBN	0	0	0	0	0	0	0	vb190115	1
AK27-58	CCV499	PSFCIBN	110.8%*	98.7%	104.6%	100.1%	105.6%	101.4%	100.7%	vb190413	1
AK27-59	CCB499	PSFCIBN	0	0	0	0	0	0	0	vb190429	1
AK27-67	CCV501	PSFCIBN	110.6%*	98.9%	104.7%	100.5%	105.4%	101.2%	100.8%	vb190638	1
AK27-68	CCB501	PSFCIBN	0	0	0	0	0	0	0	vb190654	1
AK27-79	CCV503	PSFCIBN	116.7%*	99%	104.9%	101.2%	105.5%	101.9%	101.5%	vb190952	1
AK27-80	CCB503	PSFCIBN	0	0	0	0	0	0	0	vb191008	1
AK27-91	CCV505	PSFCIBN	116.1%*	98.7%	105.1%	100.9%	106%	102.3%	101.2%	vb191306	1
AK27-92	CCB505	PSFCIBN	0	0	0	0	0	0	0	vb191322	1
AK27-103	CCV507	PSFCIBN	111.9%*	98.8%	105.2%	101%	105.9%	102%	101.1%	vb191620	1
AK27-104	CCB507	PSFCIBN	0	0	0	0	0	0	0	vb191636	1

Report date: 11/18/2011 9:59:16 PM
Printed by: Jadelyn Chun

Ident: AK27-34 CCV495
Analysis from: 11/18/2011 9:45:18 PM
File: VB182145.CHW Last save: 11/18/2011 9:59:15 PM

Method: ICD0-I30.mtw Last save: 11/18/2011 4:16:08 PM
Run operator: Jadelyn Chun
Analysis number: 71837

SAMPLE:
:
Vial number: 34
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.16	0.08	1.653	0.000	
2	3.21	6.75	61.374	2.089	fluoride
3	4.33	3.62	34.176	1.992	chloride
4	4.98	7.59	85.304	2.104	nitrite
5	6.00	1.16	13.984	2.023	bromide
6	6.70	3.21	43.272	1.002	nitrate
7	9.26	2.03	38.539	2.209	phosphate
8	10.58	3.22	62.982	4.903	sulfate
8	14.00	27.66	341.284	16.323	

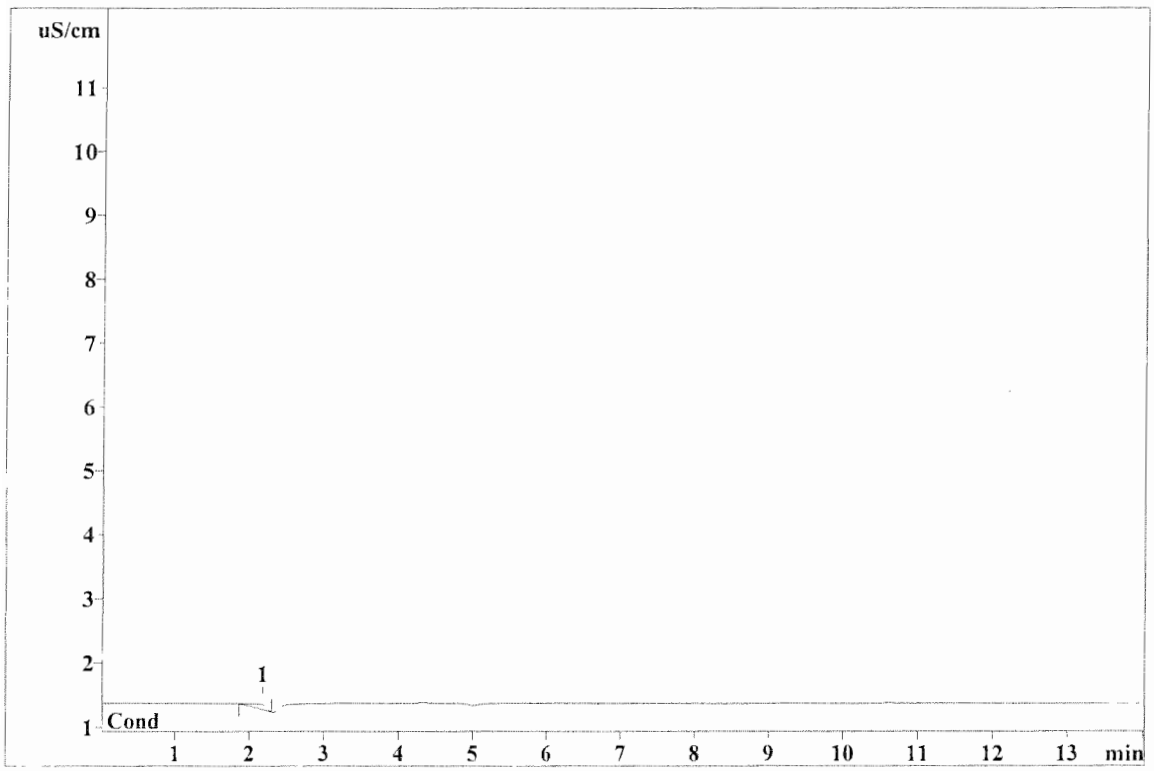
This report has been created by IC Net
METROHM LTD

Report date: 11/21/2011 12:08:51 PM
Printed by: CHERRY DAM

Ident: AK27-35 CCB495
Analysis from: 11/18/2011 10:01:29 PM
File: vb182201.chw Last save: 11/18/2011 10:15:26 PM

Method: ICD0-I30.mtw Last save: 11/18/2011 4:16:08 PM
Run operator: Jadelyn Chun
Analysis number: 71838

SAMPLE:
:
Vial number: 35
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.18	0.08	1.131	0.000	

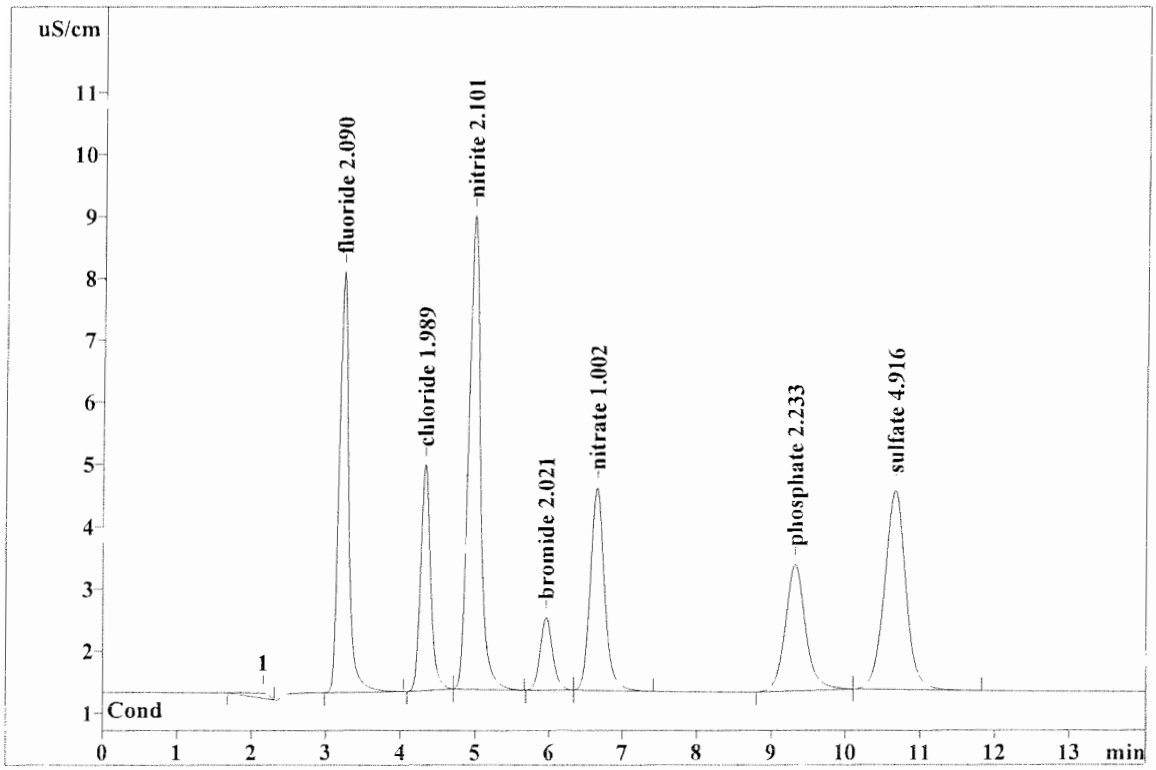
This report has been created by IC Net
METROHM LTD

Report date: 11/19/2011 1:13:11 AM
Printed by: Jadelyn Chun

Ident: AK27-46 CCV497
Analysis from: 11/19/2011 12:59:14 AM
File: VB190059.CHW Last save: 11/19/2011 1:13:11 AM

Method: ICD0-I30.mtw Last save: 11/18/2011 4:16:08 PM
Run operator: Jadelyn Chun
Analysis number: 71849

SAMPLE:
:
Vial number: 46
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.08	1.719	0.000	
2	3.22	6.77	61.402	2.090	fluoride
3	4.33	3.63	34.122	1.989	chloride
4	4.96	7.64	85.199	2.101	nitrite
5	5.96	1.17	13.972	2.021	bromide
6	6.64	3.25	43.245	1.002	nitrate
7	9.32	2.04	38.976	2.233	phosphate
8	10.66	3.20	63.155	4.916	sulfate
8	14.00	27.78	341.789	16.353	

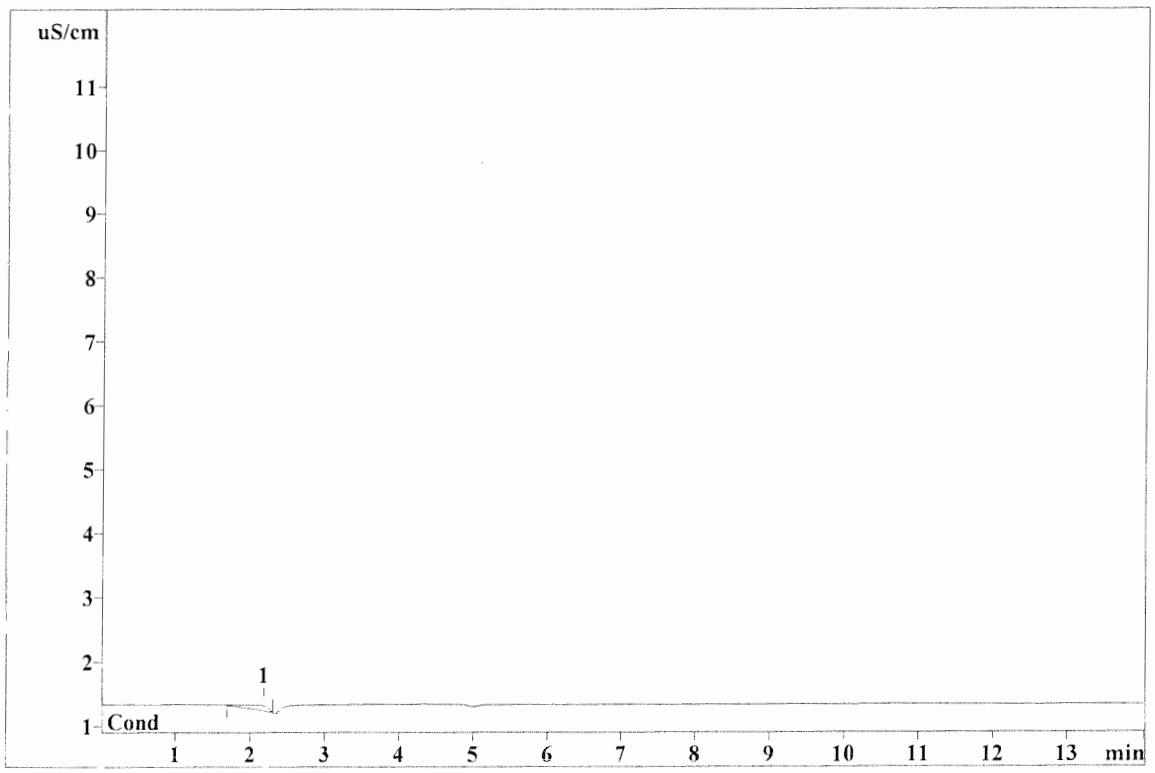
This report has been created by IC Net
METROHM LTD

Report date: 11/21/2011 12:09:22 PM
Printed by: CHERRY DAM

Ident: AK27-47 CCB497
Analysis from: 11/19/2011 1:15:24 AM
File: vb190115.chw Last save: 11/19/2011 1:29:21 AM

Method: ICD0-I30.mtw Last save: 11/18/2011 4:16:08 PM
Run operator: Jadelyn Chun
Analysis number: 71850

SAMPLE:
:
Vial number: 47
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.18	0.08	1.673	0.000	

This report has been created by IC Net
METROHM LTD

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Concentrations of:

S_1 — 0.05 ppm
S_2 — 0.1
S_3 — 0.2
S_4 — 0.5
S_5 — 1.0
S_6 — 2.0
S_7 — 5.0
S_8 — 10.0
S_9 — 20.0

Linearity (ppm)

F^- — 5
Cl^- — 20
NO_2N — 10
Br^- — 5
NO_3N — 5
PO_4P — 5
SO_4^{2-} — 20

Column: Metrosep A Supp 5-100

Flow Rate: 0.70 ml/min

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-220 (1000 mM H_2SO_4) 100 ml - 1 L

Book #:	AD0-031
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AI39
Method File:	ICD0-I30.mtw
Analytical Batch:	NA

SOP #	Rev. #
☑ EMAX-300.0	6
☐ EMAX-4110B	0
☑ EMAX-9056	3
☐ EMAX-	

STANDARDS ID	
ICAL	SI1B-17-57-02
ICV	SI1B-17-57-03
CCV	NA
LCS	
MS	

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 9/30/11

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
v9301829.chw	ICD0-130.mtw	AI39-01 IB	1	1.0	1.0	1.0	100.0	0		
v9301845.chw	ICD0-130.mtw	AI39-02 S0	2	1.0	1.0	1.0	100.0	0		
v9301901.chw	ICD0-130.mtw	AI39-03 S1	3	1.0	1.0	1.0	100.0	1		
v9301917.chw	ICD0-130.mtw	AI39-04 S2	4	1.0	1.0	1.0	100.0	2		
v9301934.chw	ICD0-130.mtw	AI39-05 S3	5	1.0	1.0	1.0	100.0	3		
v9301950.chw	ICD0-130.mtw	AI39-06 S4	6	1.0	1.0	1.0	100.0	4		
v9302006.chw	ICD0-130.mtw	AI39-07 S5	7	1.0	1.0	1.0	100.0	5		
v9302022.chw	ICD0-130.mtw	AI39-08 S6	8	1.0	1.0	1.0	100.0	6		
v9302038.chw	ICD0-130.mtw	AI39-09 S7	9	1.0	1.0	1.0	100.0	7		
v9302054.chw	ICD0-130.mtw	AI39-10 S8	10	1.0	1.0	1.0	100.0	8		
v9302111.chw	ICD0-130.mtw	AI39-11 S9	11	1.0	1.0	1.0	100.0	9	FINAL	
v9302127.chw	ICD0-130.mtw	AI39-12 ICV	12	1.0	1.0	1.0	100.0	0		
v9302143.chw	ICD0-130.mtw	AI39-13 ICB	13	1.0	1.0	1.0	100.0	0		

JC 10/3/11

10/3/11

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

AK25-39 K146-03A DF=5 PS NO2,N @ 1ppm

Book #:	AD0-032
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AK25
Method File:	IcD0 -I30.mtw
Analytical Batch:	IcK061W ; IcK063W IcK065W

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SI1B-17-91-02
LCS	SI1B-17-91-03
MS	SCP Refer to LCS Parent ID

Column: Metrosep A Supp 5-100 Filter 0.45µm : 21787469

Flow Rate: 0.70 ml/min 0.20µm : 21772726

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 11/17/11

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb171003.chw	ICD0-I30.mtw	AK25-01 CCV469	1	1.0	1.0	1.0	100.0	0		
vb171019.chw	ICD0-I30.mtw	AK25-02 CCB469	2	1.0	1.0	1.0	100.0	0		
vb171035.chw	ICD0-I30.mtw	AK25-03 ICK061WB	3	1.0	1.0	1.0	100.0	0		
vb171052.chw	ICD0-I30.mtw	AK25-04 ICK061WL	4	1.0	1.0	1.0	100.0	0		
vb171108.chw	ICD0-I30.mtw	AK25-05 ICK061WC	5	1.0	1.0	1.0	100.0	0		
vb171124.chw	ICD0-I30.mtw	AK25-06 K133-03 DF=40	6	1.0	40.0	1.0	100.0	0		
vb171140.chw	ICD0-I30.mtw	AK25-07 K150-01 DF=5	7	1.0	5.0	1.0	100.0	0		
vb171156.chw	ICD0-I30.mtw	AK25-08 K150-01D DF=5	8	1.0	5.0	1.0	100.0	0		
vb171212.chw	ICD0-I30.mtw	AK25-09 K150-01M DF=5	9	1.0	5.0	1.0	100.0	0		
vb171229.chw	ICD0-I30.mtw	AK25-10 K150-01S DF=5	10	1.0	5.0	1.0	100.0	0		
vb171245.chw	ICD0-I30.mtw	AK25-11 K153-01	11	1.0	1.0	1.0	100.0	0		
vb171301.chw	ICD0-I30.mtw	AK25-12 K153-02	12	1.0	1.0	1.0	100.0	0		
vb171317.chw	ICD0-I30.mtw	AK25-13 CCV471	13	1.0	1.0	1.0	100.0	0		
vb171333.chw	ICD0-I30.mtw	AK25-14 CCB471	14	1.0	1.0	1.0	100.0	0		
vb171349.chw	ICD0-I30.mtw	AK25-15 K153-03	15	1.0	1.0	1.0	100.0	0		
vb171406.chw	ICD0-I30.mtw	AK25-16 K153-04	16	1.0	1.0	1.0	100.0	0		
vb171422.chw	ICD0-I30.mtw	AK25-17 K153-05	17	1.0	1.0	1.0	100.0	0		
vb171438.chw	ICD0-I30.mtw	AK25-18 K153-06	18	1.0	1.0	1.0	100.0	0		
vb171454.chw	ICD0-I30.mtw	AK25-19 K146-02 DF=10	19	1.0	10.0	1.0	100.0	0		
vb171510.chw	ICD0-I30.mtw	AK25-20 K146-03	20	1.0	1.0	1.0	100.0	0		
vb171526.chw	ICD0-I30.mtw	AK25-21 K146-04	21	1.0	1.0	1.0	100.0	0		
vb171543.chw	ICD0-I30.mtw	AK25-22 K146-05 DF=2	22	1.0	2.0	1.0	100.0	0		
vb171559.chw	ICD0-I30.mtw	AK25-23 K146-06	23	1.0	1.0	1.0	100.0	0		
vb171615.chw	ICD0-I30.mtw	AK25-24 K153-07	24	1.0	1.0	1.0	100.0	0		
vb171631.chw	ICD0-I30.mtw	AK25-25 CCV473	25	1.0	1.0	1.0	100.0	0		
vb171647.chw	ICD0-I30.mtw	AK25-26 CCB473	26	1.0	1.0	1.0	100.0	0		
vb171703.chw	ICD0-I30.mtw	AK25-27 K548-01	27	1.0	1.0	1.0	100.0	0		
vb171720.chw	ICD0-I30.mtw	AK25-28 K546-02	28	1.0	1.0	1.0	100.0	0		
vb171736.chw	ICD0-I30.mtw	AK25-29 K548-01 DF=20	29	1.0	20.0	1.0	100.0	0		
vb171752.chw	ICD0-I30.mtw	AK25-30 K546-02 DF=10	30	1.0	10.0	1.0	100.0	0		
vb171808.chw	ICD0-I30.mtw	AK25-31 CCV475	31	1.0	1.0	1.0	100.0	0		
vb171824.chw	ICD0-I30.mtw	AK25-32 CCB475	32	1.0	1.0	1.0	100.0	0		
vb171840.chw	ICD0-I30.mtw	AK25-33 ICK063WB	33	1.0	1.0	1.0	100.0	0		
vb171857.chw	ICD0-I30.mtw	AK25-34 ICK063WL	34	1.0	1.0	1.0	100.0	0		
vb171913.chw	ICD0-I30.mtw	AK25-35 ICK063WC	35	1.0	1.0	1.0	100.0	0		
vb171929.chw	ICD0-I30.mtw	AK25-36 K146-02 DF=25	36	1.0	25.0	1.0	100.0	0		
vb171945.chw	ICD0-I30.mtw	AK25-37 K146-02 DF=40	37	1.0	40.0	1.0	100.0	0		
vb172001.chw	ICD0-I30.mtw	AK25-38 K146-03 DF=5	38	1.0	5.0	1.0	100.0	0		
vb172017.chw	ICD0-I30.mtw	AK25-39 K146-03A DF=5	39	1.0	5.0	1.0	100.0	0		
vb172034.chw	ICD0-I30.mtw	AK25-40 K146-04 DF=5	40	1.0	5.0	1.0	100.0	0		
vb172050.chw	ICD0-I30.mtw	AK25-41 K146-05 DF=5	41	1.0	5.0	1.0	100.0	0		
vb172106.chw	ICD0-I30.mtw	AK25-42 K146-06 DF=5	42	1.0	5.0	1.0	100.0	0		
vb172122.chw	ICD0-I30.mtw	AK25-43 CCV477	43	1.0	1.0	1.0	100.0	0		
vb172138.chw	ICD0-I30.mtw	AK25-44 CCB477	44	1.0	1.0	1.0	100.0	0		
vb172154.chw	ICD0-I30.mtw	AK25-45 K166-06	45	1.0	1.0	1.0	100.0	0		
vb172210.chw	ICD0-I30.mtw	AK25-46 K166-01	46	1.0	1.0	1.0	100.0	0		
vb172227.chw	ICD0-I30.mtw	AK25-47 K166-02 DF=5	47	1.0	5.0	1.0	100.0	0		
vb172243.chw	ICD0-I30.mtw	AK25-48 K166-03	48	1.0	1.0	1.0	100.0	0		
vb172259.chw	ICD0-I30.mtw	AK25-49 K166-04	49	1.0	1.0	1.0	100.0	0		
vb172315.chw	ICD0-I30.mtw	AK25-50 K166-05	50	1.0	1.0	1.0	100.0	0		
vb172331.chw	ICD0-I30.mtw	AK25-51 K150-01 DF=40	51	1.0	40.0	1.0	100.0	0		
vb172347.chw	ICD0-I30.mtw	AK25-52 K150-01D DF=40	52	1.0	40.0	1.0	100.0	0	FINAL	
vb180004.chw	ICD0-I30.mtw	AK25-53 K150-01M DF=40	53	1.0	40.0	1.0	100.0	0		
vb180020.chw	ICD0-I30.mtw	AK25-54 K150-01S DF=40	54	1.0	40.0	1.0	100.0	0		
vb180036.chw	ICD0-I30.mtw	AK25-55 CCV479	55	1.0	1.0	1.0	100.0	0		
vb180052.chw	ICD0-I30.mtw	AK25-56 CCB479	56	1.0	1.0	1.0	100.0	0		
vb180108.chw	ICD0-I30.mtw	AK25-57 K090-01 DF=10	57	1.0	10.0	1.0	100.0	0		

ac 11/18/11

8066

F2

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb180125.chw	ICD0-I30.mtw	AK25-58 K090-02 DF=10	58	1.0	10.0	1.0	100.0	0		
vb180141.chw	ICD0-I30.mtw	AK25-59 K090-03 DF=10	59	1.0	10.0	1.0	100.0	0		
vb180157.chw	ICD0-I30.mtw	AK25-60 K150-01 DF=500	60	1.0	500.0	1.0	100.0	0		
vb180213.chw	ICD0-I30.mtw	AK25-61 K150-01D DF=500	61	1.0	500.0	1.0	100.0	0		
vb180229.chw	ICD0-I30.mtw	AK25-62 K150-01M DF=500	62	1.0	500.0	1.0	100.0	0		
vb180245.chw	ICD0-I30.mtw	AK25-63 K150-01S DF=500	63	1.0	500.0	1.0	100.0	0		
vb180302.chw	ICD0-I30.mtw	AK25-64 RINSE	64	1.0	1.0	1.0	100.0	0		
vb180318.chw	ICD0-I30.mtw	AK25-65 CCV481	65	1.0	1.0	1.0	100.0	0		
vb180334.chw	ICD0-I30.mtw	AK25-66 CCB481	66	1.0	1.0	1.0	100.0	0		
vb180350.chw	ICD0-I30.mtw	AK25-67 ICK065WB	67	1.0	1.0	1.0	100.0	0		
vb180406.chw	ICD0-I30.mtw	AK25-68 ICK065WL	68	1.0	1.0	1.0	100.0	0		
vb180422.chw	ICD0-I30.mtw	AK25-69 ICK065WC	69	1.0	1.0	1.0	100.0	0		
vb180439.chw	ICD0-I30.mtw	AK25-70 K116-02 DF=50	70	1.0	50.0	1.0	100.0	0		
vb180455.chw	ICD0-I30.mtw	AK25-71 K116-04 DF=10	71	1.0	10.0	1.0	100.0	0		
vb180511.chw	ICD0-I30.mtw	AK25-72 K116-04D DF=10	72	1.0	10.0	1.0	100.0	0		
vb180527.chw	ICD0-I30.mtw	AK25-73 K116-04M DF=10	73	1.0	10.0	1.0	100.0	0		
vb180543.chw	ICD0-I30.mtw	AK25-74 K116-04S DF=10	74	1.0	10.0	1.0	100.0	0		
vb180559.chw	ICD0-I30.mtw	AK25-75 K116-06 DF=1000	75	1.0	1000.0	1.0	100.0	0		
vb180616.chw	ICD0-I30.mtw	AK25-76 K116-07 DF=1000	76	1.0	1000.0	1.0	100.0	0		
vb180632.chw	ICD0-I30.mtw	AK25-77 CCV483	77	1.0	1.0	1.0	100.0	0		
vb180648.chw	ICD0-I30.mtw	AK25-78 CCB483	78	1.0	1.0	1.0	100.0	0		
vb180704.chw	ICD0-I30.mtw	AK25-79 K131-02 DF=2000	79	1.0	2000.0	1.0	100.0	0		
vb180720.chw	ICD0-I30.mtw	AK25-80 K131-03 DF=5	80	1.0	5.0	1.0	100.0	0		
vb180736.chw	ICD0-I30.mtw	AK25-81 K131-04 DF=200	81	1.0	200.0	1.0	100.0	0		
vb180753.chw	ICD0-I30.mtw	AK25-82 K131-05 DF=2000	82	1.0	2000.0	1.0	100.0	0		
vb180809.chw	ICD0-I30.mtw	AK25-83 K131-06 DF=2000	83	1.0	2000.0	1.0	100.0	0		
vb180825.chw	ICD0-I30.mtw	AK25-84 K174-01	84	1.0	1.0	1.0	100.0	0		
vb180841.chw	ICD0-I30.mtw	AK25-85 K174-07	85	1.0	1.0	1.0	100.0	0		
vb180858.chw	ICD0-I30.mtw	AK25-86 K174-01 DF=5	86	1.0	5.0	1.0	100.0	0		
vb180915.chw	ICD0-I30.mtw	AK25-87 K174-07 DF=5	87	1.0	5.0	1.0	100.0	0		
vb180931.chw	ICD0-I30.mtw	AK25-88 K166-02	88	1.0	1.0	1.0	100.0	0		
vb180947.chw	ICD0-I30.mtw	AK25-89 CCV485	89	1.0	1.0	1.0	100.0	0		
vb181003.chw	ICD0-I30.mtw	AK25-90 CCB485	90	1.0	1.0	1.0	100.0	0		
vb181019.chw	ICD0-I30.mtw	AK25-91 K174-01 DF=10	91	1.0	10.0	1.0	100.0	0	FINAL	
vb181036.chw	ICD0-I30.mtw	AK25-92 K174-07 DF=10	92	1.0	10.0	1.0	100.0	0		
vb181052.chw	ICD0-I30.mtw	AK25-93 K179-01	93	1.0	1.0	1.0	100.0	0		
vb181108.chw	ICD0-I30.mtw	AK25-94 K179-03	94	1.0	1.0	1.0	100.0	0		
vb181124.chw	ICD0-I30.mtw	AK25-95 CCV487	95	1.0	1.0	1.0	100.0	0		
vb181140.chw	ICD0-I30.mtw	AK25-96 CCB487	96	1.0	1.0	1.0	100.0	0		

JC 11/18/11

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EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #:	AD0-032
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AK27
Method File:	IKDO-I30.mtw
Analytical Batch:	IKK067W; IKK069W IKK071W

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	→
ICV	—
CCV	SI18-17-92-01
LCS	SI18-17-92-02
MS	SEP Refer to LCS Parent ID

Column: Metrosep A Supp 5-100 Filter 0.45 µm: 21787469

Flow Rate: 0.70 ml/min 0.2 µm: 21772726

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 11/18/11

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb181251.chw	ICD0-I30.mtw	AK27-01 CCV489	1	1.0	1.0	1.0	100.0	0		
vb181308.chw	ICD0-I30.mtw	AK27-02 CCB489	2	1.0	1.0	1.0	100.0	0		
vb181324.chw	ICD0-I30.mtw	AK27-03 ICK067WB	3	1.0	1.0	1.0	100.0	0		
vb181340.chw	ICD0-I30.mtw	AK27-04 ICK067WL	4	1.0	1.0	1.0	100.0	0		
vb181356.chw	ICD0-I30.mtw	AK27-05 ICK067WC	5	1.0	1.0	1.0	100.0	0		
vb181412.chw	ICD0-I30.mtw	AK27-06 K131-08 DF=200	6	1.0	200.0	1.0	100.0	0		
vb181428.chw	ICD0-I30.mtw	AK27-07 K131-09 DF=2000	7	1.0	2000.0	1.0	100.0	0		
vb181445.chw	ICD0-I30.mtw	AK27-08 K131-10 DF=2000	8	1.0	2000.0	1.0	100.0	0		
vb181501.chw	ICD0-I30.mtw	AK27-09 K131-11 DF=2000	9	1.0	2000.0	1.0	100.0	0		
vb181517.chw	ICD0-I30.mtw	AK27-10 K131-13 DF=2000	10	1.0	2000.0	1.0	100.0	0		
vb181533.chw	ICD0-I30.mtw	AK27-11 K131-14 DF=2000	11	1.0	2000.0	1.0	100.0	0		
vb181549.chw	ICD0-I30.mtw	AK27-12 K131-15 DF=2000	12	1.0	2000.0	1.0	100.0	0		
vb181605.chw	ICD0-I30.mtw	AK27-13 CCV491	13	1.0	1.0	1.0	100.0	0		
vb181622.chw	ICD0-I30.mtw	AK27-14 CCB491	14	1.0	1.0	1.0	100.0	0		
vb181638.chw	ICD0-I30.mtw	AK27-15 K131-16 DF=2000	15	1.0	2000.0	1.0	100.0	0		
vb181654.chw	ICD0-I30.mtw	AK27-16 K131-17 DF=10	16	1.0	10.0	1.0	100.0	0		
vb181710.chw	ICD0-I30.mtw	AK27-17 K131-18 DF=2000	17	1.0	2000.0	1.0	100.0	0		
vb181726.chw	ICD0-I30.mtw	AK27-18 K131-19 DF=2000	18	1.0	2000.0	1.0	100.0	0		
vb181742.chw	ICD0-I30.mtw	AK27-19 K116-02 DF=5	19	1.0	5.0	1.0	100.0	0		
vb181759.chw	ICD0-I30.mtw	AK27-20 K116-02 DF=100	20	1.0	100.0	1.0	100.0	0		
vb181815.chw	ICD0-I30.mtw	AK27-21 K116-04 DF=20	21	1.0	20.0	1.0	100.0	0		
vb181831.chw	ICD0-I30.mtw	AK27-22 K116-04D DF=20	22	1.0	20.0	1.0	100.0	0		
vb181847.chw	ICD0-I30.mtw	AK27-23 K116-04M DF=20	23	1.0	20.0	1.0	100.0	0		
vb181903.chw	ICD0-I30.mtw	AK27-24 K116-04S DF=20	24	1.0	20.0	1.0	100.0	0		
vb181919.chw	ICD0-I30.mtw	AK27-25 CCV493	25	1.0	1.0	1.0	100.0	0		
vb181936.chw	ICD0-I30.mtw	AK27-26 CCB493	26	1.0	1.0	1.0	100.0	0		
vb181952.chw	ICD0-I30.mtw	AK27-27 K116-06 DF=100	27	1.0	100.0	1.0	100.0	0		
vb182008.chw	ICD0-I30.mtw	AK27-28 K116-07 DF=100	28	1.0	100.0	1.0	100.0	0		
vb182024.chw	ICD0-I30.mtw	AK27-29 K166-01 DF=10	29	1.0	10.0	1.0	100.0	0		
vb182040.chw	ICD0-I30.mtw	AK27-30 K166-02 DF=10	30	1.0	10.0	1.0	100.0	0		
vb182056.chw	ICD0-I30.mtw	AK27-31 K166-03 DF=5	31	1.0	5.0	1.0	100.0	0		
vb182112.chw	ICD0-I30.mtw	AK27-32 K166-04 DF=5	32	1.0	5.0	1.0	100.0	0		
vb182129.chw	ICD0-I30.mtw	AK27-33 RINSE	33	1.0	1.0	1.0	100.0	0		
vb182145.chw	ICD0-I30.mtw	AK27-34 CCV495	34	1.0	1.0	1.0	100.0	0		
vb182201.chw	ICD0-I30.mtw	AK27-35 CCB495	35	1.0	1.0	1.0	100.0	0		
vb182217.chw	ICD0-I30.mtw	AK27-36 ICK069WB	36	1.0	1.0	1.0	100.0	0		
vb182233.chw	ICD0-I30.mtw	AK27-37 ICK069WL	37	1.0	1.0	1.0	100.0	0		
vb182249.chw	ICD0-I30.mtw	AK27-38 ICK069WC	38	1.0	1.0	1.0	100.0	0		
vb182306.chw	ICD0-I30.mtw	AK27-39 K146-02 DF=1000	39	1.0	1000.0	1.0	100.0	0		
vb182322.chw	ICD0-I30.mtw	AK27-40 K146-03 DF=200	40	1.0	200.0	1.0	100.0	0		
vb182338.chw	ICD0-I30.mtw	AK27-41 K146-04 DF=100	41	1.0	100.0	1.0	100.0	0		
vb182354.chw	ICD0-I30.mtw	AK27-42 K146-05 DF=100	42	1.0	100.0	1.0	100.0	0		
vb190010.chw	ICD0-I30.mtw	AK27-43 K146-06 DF=100	43	1.0	100.0	1.0	100.0	0		
vb190026.chw	ICD0-I30.mtw	AK27-44 K174-01 DF=400	44	1.0	400.0	1.0	100.0	0		
vb190043.chw	ICD0-I30.mtw	AK27-45 K174-07 DF=400	45	1.0	400.0	1.0	100.0	0		
vb190059.chw	ICD0-I30.mtw	AK27-46 CCV497	46	1.0	1.0	1.0	100.0	0		FINAL
vb190115.chw	ICD0-I30.mtw	AK27-47 CCB497	47	1.0	1.0	1.0	100.0	0		
vb190131.chw	ICD0-I30.mtw	AK27-48 K153-01 DF=5	48	1.0	5.0	1.0	100.0	0		
vb190147.chw	ICD0-I30.mtw	AK27-49 K153-01 DF=20	49	1.0	20.0	1.0	100.0	0		
vb190203.chw	ICD0-I30.mtw	AK27-50 K153-02 DF=5	50	1.0	5.0	1.0	100.0	0		
vb190220.chw	ICD0-I30.mtw	AK27-51 K153-03 DF=5	51	1.0	5.0	1.0	100.0	0		
vb190236.chw	ICD0-I30.mtw	AK27-52 K153-04 DF=10	52	1.0	10.0	1.0	100.0	0		
vb190252.chw	ICD0-I30.mtw	AK27-53 K153-05 DF=5	53	1.0	5.0	1.0	100.0	0		
vb190308.chw	ICD0-I30.mtw	AK27-54 K153-06 DF=10	54	1.0	10.0	1.0	100.0	0		
vb190324.chw	ICD0-I30.mtw	AK27-55 K153-07 DF=10	55	1.0	10.0	1.0	100.0	0		
vb190340.chw	ICD0-I30.mtw	AK27-56 K179-01 DF=5	56	1.0	5.0	1.0	100.0	0		
vb190357.chw	ICD0-I30.mtw	AK27-57 K179-03 DF=10	57	1.0	10.0	1.0	100.0	0		

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File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb190413.chw	ICD0-130.mtw	AK27-58 CCV499	58	1.0	1.0	1.0	100.0	0		
vb190429.chw	ICD0-130.mtw	AK27-59 CCB499	59	1.0	1.0	1.0	100.0	0		
vb190445.chw	ICD0-130.mtw	AK27-60 K144-01 DF=40	60	1.0	40.0	1.0	100.0	0		
vb190501.chw	ICD0-130.mtw	AK27-61 K144-01D DF=40	61	1.0	40.0	1.0	100.0	0		
vb190517.chw	ICD0-130.mtw	AK27-62 K144-01M DF=40	62	1.0	40.0	1.0	100.0	0		
vb190534.chw	ICD0-130.mtw	AK27-63 K144-01S DF=40	63	1.0	40.0	1.0	100.0	0		
vb190550.chw	ICD0-130.mtw	AK27-64 K144-02 DF=10	64	1.0	10.0	1.0	100.0	0		
vb190606.chw	ICD0-130.mtw	AK27-65 K144-03 DF=10	65	1.0	10.0	1.0	100.0	0		
vb190622.chw	ICD0-130.mtw	AK27-66 RINSE	66	1.0	1.0	1.0	100.0	0		
vb190638.chw	ICD0-130.mtw	AK27-67 CCV501	67	1.0	1.0	1.0	100.0	0		
vb190654.chw	ICD0-130.mtw	AK27-68 CCB501	68	1.0	1.0	1.0	100.0	0		
vb190711.chw	ICD0-130.mtw	AK27-69 ICK071WB	69	1.0	1.0	1.0	100.0	0		
vb190727.chw	ICD0-130.mtw	AK27-70 ICK071WL	70	1.0	1.0	1.0	100.0	0		
vb190743.chw	ICD0-130.mtw	AK27-71 ICK071WC	71	1.0	1.0	1.0	100.0	0		
vb190759.chw	ICD0-130.mtw	AK27-72 K184-01	72	1.0	1.0	1.0	100.0	0		
vb190815.chw	ICD0-130.mtw	AK27-73 K184-02	73	1.0	1.0	1.0	100.0	0		
vb190831.chw	ICD0-130.mtw	AK27-74 K184-03	74	1.0	1.0	1.0	100.0	0		
vb190848.chw	ICD0-130.mtw	AK27-75 K184-04	75	1.0	1.0	1.0	100.0	0		
vb190904.chw	ICD0-130.mtw	AK27-76 K184-05 DF=10	76	1.0	10.0	1.0	100.0	0		
vb190920.chw	ICD0-130.mtw	AK27-77 K184-05 DF=20	77	1.0	20.0	1.0	100.0	0		
vb190936.chw	ICD0-130.mtw	AK27-78 RINSE	78	1.0	1.0	1.0	100.0	0		
vb190952.chw	ICD0-130.mtw	AK27-79 CCV503	79	1.0	1.0	1.0	100.0	0		
vb191008.chw	ICD0-130.mtw	AK27-80 CCB503	80	1.0	1.0	1.0	100.0	0		
vb191025.chw	ICD0-130.mtw	AK27-81 K184-01 DF=5	81	1.0	5.0	1.0	100.0	0		
vb191041.chw	ICD0-130.mtw	AK27-82 K184-02 DF=10	82	1.0	10.0	1.0	100.0	0		
vb191057.chw	ICD0-130.mtw	AK27-83 K184-03 DF=5	83	1.0	5.0	1.0	100.0	0		
vb191113.chw	ICD0-130.mtw	AK27-84 K184-04 DF=10	84	1.0	10.0	1.0	100.0	0		
vb191129.chw	ICD0-130.mtw	AK27-85 K133-01 DF=1000	85	1.0	1000.0	1.0	100.0	0		
vb191145.chw	ICD0-130.mtw	AK27-86 K133-01D DF=1000	86	1.0	1000.0	1.0	100.0	0		
vb191201.chw	ICD0-130.mtw	AK27-87 K133-01M DF=1000	87	1.0	1000.0	1.0	100.0	0		
vb191218.chw	ICD0-130.mtw	AK27-88 K133-01S DF=1000	88	1.0	1000.0	1.0	100.0	0		
vb191234.chw	ICD0-130.mtw	AK27-89 K133-02 DF=100	89	1.0	100.0	1.0	100.0	0		
vb191250.chw	ICD0-130.mtw	AK27-90 K133-03 DF=1000	90	1.0	1000.0	1.0	100.0	0		
vb191306.chw	ICD0-130.mtw	AK27-91 CCV505	91	1.0	1.0	1.0	100.0	0		
vb191322.chw	ICD0-130.mtw	AK27-92 CCB505	92	1.0	1.0	1.0	100.0	0		
vb191338.chw	ICD0-130.mtw	AK27-93 K184-01 DF=10	93	1.0	10.0	1.0	100.0	0		
vb191355.chw	ICD0-130.mtw	AK27-94 K184-02 DF=20	94	1.0	20.0	1.0	100.0	0		
vb191411.chw	ICD0-130.mtw	AK27-95 K184-03 DF=10	95	1.0	10.0	1.0	100.0	0		
vb191427.chw	ICD0-130.mtw	AK27-96 K184-04 DF=20	96	1.0	20.0	1.0	100.0	0		
vb191443.chw	ICD0-130.mtw	AK27-97 K184-05 DF=40	97	1.0	40.0	1.0	100.0	0		
vb191459.chw	ICD0-130.mtw	AK27-98 K133-04 DF=500	98	1.0	500.0	1.0	100.0	0		
vb191515.chw	ICD0-130.mtw	AK27-99 K133-05 DF=100	99	1.0	100.0	1.0	100.0	0		FINAL
vb191532.chw	ICD0-130.mtw	AK27-100 ICK071WX	100	1.0	1.0	1.0	100.0	0		
vb191548.chw	ICD0-130.mtw	AK27-101 ICK071WY	101	1.0	1.0	1.0	100.0	0		
vb191604.chw	ICD0-130.mtw	AK27-102 ICK071WQ	102	1.0	1.0	1.0	100.0	0		
vb191620.chw	ICD0-130.mtw	AK27-103 CCV507	103	1.0	1.0	1.0	100.0	0		
vb191636.chw	ICD0-130.mtw	AK27-104 CCB507	104	1.0	1.0	1.0	100.0	0		

Am 11/21/19

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RETENTION TIME WINDOW

RETENTION TIME WINDOW
METHOD 300.0

Lab name:	**EMAX**	**Method:**	**EMAX-300.0**
Instrument ID:	IC100 (761 IC)	IC column:	METROSEP A SUPP 5
		Column size:	100X4.0mm

Compound	Retention time Window
FLUORIDE	0.234
CHLORIDE	0.407
NTIRITE	0.52
BROMIDE	0.688
NTIRATE	0.836
PHOSPHATE	0.678
SULFATE	0.915
IODIDE	1.078

10-17-01

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K146

METHOD 300.0(M)
ORGANIC ACIDS BY IC

A total of six (6) water samples were received on 11/16/11 for Organic Acids (Acetate, Butyrate, Lactate and Propionate) by IC analysis, Method 300.0(M) in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary forms for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for OAK014WL/C were all within QC limits.
Percent recoveries for OAK016WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. Sample K146-02 was reported from DF5 due to matrix-interference.

SAMPLE RESULTS

METHOD 300.0(M)
ACETATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K146

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK014WB	ND	1	NA	1.00	0.0500	11/18/1110:20	NA	HK18003	HK18001	OAK014W	NA	NA
LCS1W	OAK014WL	19.1	1	NA	1.00	0.0500	11/18/1110:41	NA	HK18004	HK18001	OAK014W	NA	NA
LCD1W	OAK014WC	18.9	1	NA	1.00	0.0500	11/18/1111:02	NA	HK18005	HK18001	OAK014W	NA	NA
MW-70-43B-137	K146-01	ND	1	NA	1.00	0.0500	11/18/1117:50	NA	HK18014	HK18012	OAK014W	11/16/1109:36	11/16/11
MW-70-PMW12A-140	K146-04	ND	1	NA	1.00	0.0500	11/18/1119:53	NA	HK18017	HK18012	OAK014W	11/16/1114:10	11/16/11
MW-70-PMW12B-142	K146-05	ND	1	NA	1.00	0.0500	11/18/1120:34	NA	HK18018	HK18012	OAK014W	11/16/1115:40	11/16/11
IR-70-FD-141	K146-06	ND	1	NA	1.00	0.0500	11/18/1121:14	NA	HK18019	HK18012	OAK014W	11/16/1114:30	11/16/11
MBLK2W	OAK016WB	ND	1	NA	1.00	0.0500	11/22/1112:34	NA	HK22003	HK22001	OAK016W	NA	NA
LCS2W	OAK016WL	18.1	1	NA	1.00	0.0500	11/22/1112:55	NA	HK22004	HK22001	OAK016W	NA	NA
LCD2W	OAK016WC	18.0	1	NA	1.00	0.0500	11/22/1113:16	NA	HK22005	HK22001	OAK016W	NA	NA
MW-70-PMW11A-138	K146-02	ND	5	NA	5.00	0.250	11/22/1114:19	NA	HK22006	HK22001	OAK016W	11/16/1110:42	11/16/11
MW-70-PMW11B-139	K146-03R	ND	1	NA	1.00	0.0500	11/22/1116:21	NA	HK22008	HK22001	OAK016W	11/16/1111:34	11/16/11

METHOD 300.0(M)
BUTYRATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K146

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK014WB	ND	1	NA	1.00	0.0500	11/18/1110:20	NA	HK18003	HK18001	OAK014W	NA	NA
LCS1W	OAK014WL	18.8	1	NA	1.00	0.0500	11/18/1110:41	NA	HK18004	HK18001	OAK014W	NA	NA
LCD1W	OAK014WC	21.0	1	NA	1.00	0.0500	11/18/1111:02	NA	HK18005	HK18001	OAK014W	NA	NA
MW-70-43B-137	K146-01	ND	1	NA	1.00	0.0500	11/18/1117:50	NA	HK18014	HK18012	OAK014W	11/16/1109:36	11/16/11
MW-70-PMW12A-140	K146-04	ND	1	NA	1.00	0.0500	11/18/1119:53	NA	HK18017	HK18012	OAK014W	11/16/1114:10	11/16/11
MW-70-PMW12B-142	K146-05	ND	1	NA	1.00	0.0500	11/18/1120:34	NA	HK18018	HK18012	OAK014W	11/16/1115:40	11/16/11
IR-70-FD-141	K146-06	ND	1	NA	1.00	0.0500	11/18/1121:14	NA	HK18019	HK18012	OAK014W	11/16/1114:30	11/16/11
MBLK2W	OAK016WB	ND	1	NA	1.00	0.0500	11/22/1112:34	NA	HK22003	HK22001	OAK016W	NA	NA
LCS2W	OAK016WL	18.4	1	NA	1.00	0.0500	11/22/1112:55	NA	HK22004	HK22001	OAK016W	NA	NA
LCD2W	OAK016WC	18.0	1	NA	1.00	0.0500	11/22/1113:16	NA	HK22005	HK22001	OAK016W	NA	NA
MW-70-PMW11A-138	K146-02	ND	5	NA	5.00	0.250	11/22/1114:19	NA	HK22006	HK22001	OAK016W	11/16/1110:42	11/16/11
MW-70-PMW11B-139	K146-03R	ND	1	NA	1.00	0.0500	11/22/1116:21	NA	HK22008	HK22001	OAK016W	11/16/1111:34	11/16/11

METHOD 300.0(M)
LACTATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K146

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK014WB	ND	1	NA	1.00	0.0500	11/18/1110:20	NA	HK18003	HK18001	OAK014W	NA	NA
LCS1W	OAK014WL	19.3	1	NA	1.00	0.0500	11/18/1110:41	NA	HK18004	HK18001	OAK014W	NA	NA
LCD1W	OAK014WC	19.2	1	NA	1.00	0.0500	11/18/1111:02	NA	HK18005	HK18001	OAK014W	NA	NA
MW-70-43B-137	K146-01	ND	1	NA	1.00	0.0500	11/18/1117:50	NA	HK18014	HK18012	OAK014W	11/16/1109:36	11/16/11
MW-70-PMW12A-140	K146-04	ND	1	NA	1.00	0.0500	11/18/1119:53	NA	HK18017	HK18012	OAK014W	11/16/1114:10	11/16/11
MW-70-PMW12B-142	K146-05	ND	1	NA	1.00	0.0500	11/18/1120:34	NA	HK18018	HK18012	OAK014W	11/16/1115:40	11/16/11
IR-70-FD-141	K146-06	ND	1	NA	1.00	0.0500	11/18/1121:14	NA	HK18019	HK18012	OAK014W	11/16/1114:30	11/16/11
MBLK2W	OAK016WB	ND	1	NA	1.00	0.0500	11/22/1112:34	NA	HK22003	HK22001	OAK016W	NA	NA
LCS2W	OAK016WL	18.2	1	NA	1.00	0.0500	11/22/1112:55	NA	HK22004	HK22001	OAK016W	NA	NA
LCD2W	OAK016WC	18.1	1	NA	1.00	0.0500	11/22/1113:16	NA	HK22005	HK22001	OAK016W	NA	NA
MW-70-PMW11A-138	K146-02	ND	5	NA	5.00	0.250	11/22/1114:19	NA	HK22006	HK22001	OAK016W	11/16/1110:42	11/16/11
MW-70-PMW11B-139	K146-03R	ND	1	NA	1.00	0.0500	11/22/1116:21	NA	HK22008	HK22001	OAK016W	11/16/1111:34	11/16/11

METHOD 300.0(M)
PROPIONATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K146

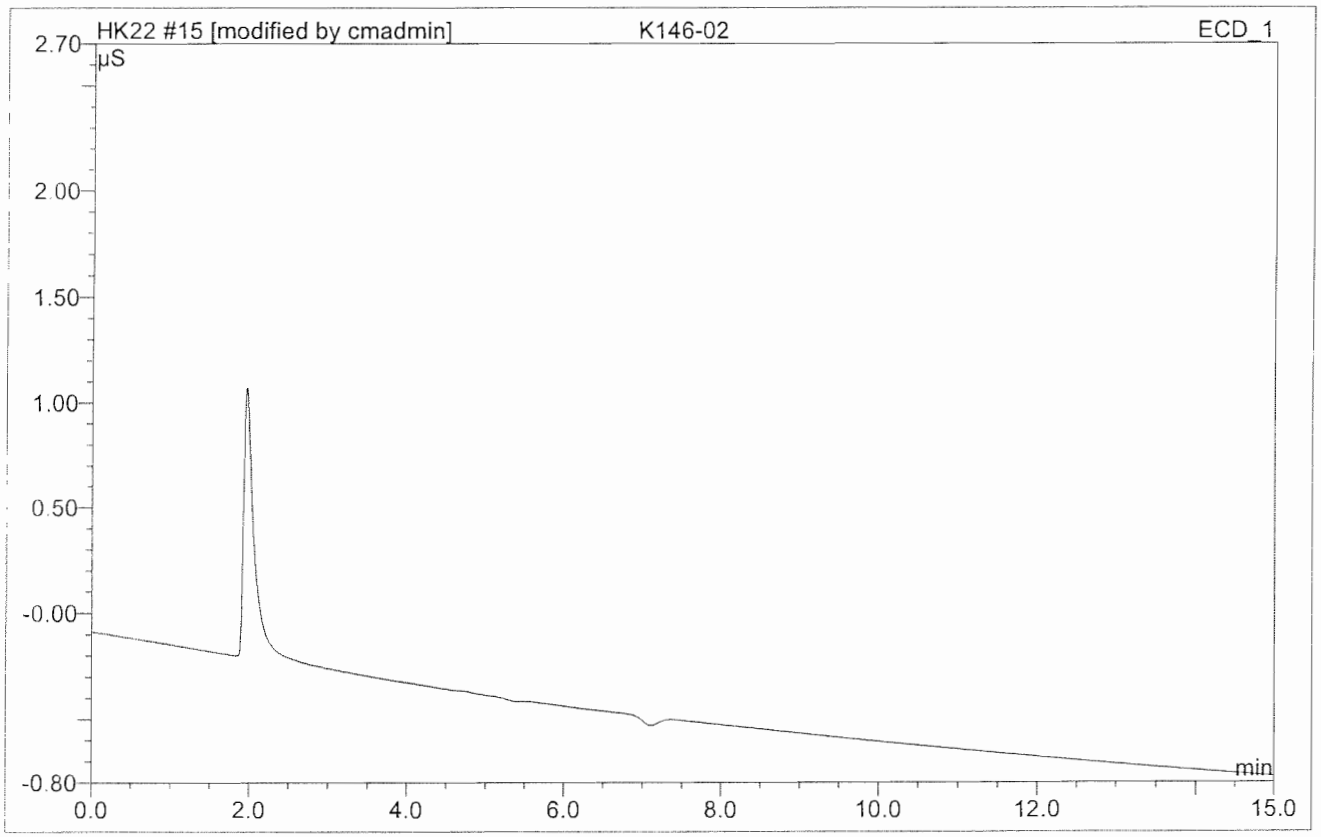
Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK014WB	ND	1	NA	1.00	0.0500	11/18/1110:20	NA	HK18003	HK18001	OAK014W	NA	NA
LCS1W	OAK014WL	19.0	1	NA	1.00	0.0500	11/18/1110:41	NA	HK18004	HK18001	OAK014W	NA	NA
LCD1W	OAK014WC	19.0	1	NA	1.00	0.0500	11/18/1111:02	NA	HK18005	HK18001	OAK014W	NA	NA
MW-70-43B-137	K146-01	ND	1	NA	1.00	0.0500	11/18/1117:50	NA	HK18014	HK18012	OAK014W	11/16/1109:36	11/16/11
MW-70-PMW12A-140	K146-04	ND	1	NA	1.00	0.0500	11/18/1119:53	NA	HK18017	HK18012	OAK014W	11/16/1114:10	11/16/11
MW-70-PMW12B-142	K146-05	ND	1	NA	1.00	0.0500	11/18/1120:34	NA	HK18018	HK18012	OAK014W	11/16/1115:40	11/16/11
IR-70-FD-141	K146-06	ND	1	NA	1.00	0.0500	11/18/1121:14	NA	HK18019	HK18012	OAK014W	11/16/1114:30	11/16/11
MBLK2W	OAK016WB	ND	1	NA	1.00	0.0500	11/22/1112:34	NA	HK22003	HK22001	OAK016W	NA	NA
LCS2W	OAK016WL	19.3	1	NA	1.00	0.0500	11/22/1112:55	NA	HK22004	HK22001	OAK016W	NA	NA
LCD2W	OAK016WC	18.9	1	NA	1.00	0.0500	11/22/1113:16	NA	HK22005	HK22001	OAK016W	NA	NA
MW-70-PMW11A-138	K146-02	ND	5	NA	5.00	0.250	11/22/1114:19	NA	HK22006	HK22001	OAK016W	11/16/1110:42	11/16/11
MW-70-PMW11B-139	K146-03R	ND	1	NA	1.00	0.0500	11/22/1116:21	NA	HK22008	HK22001	OAK016W	11/16/1111:34	11/16/11

HK22 006 K146-02

SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5

Sample Name:	**K146-02**	*Injection Volume:*	**25.0**
Vial Number:	**1**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**5**
Recording Time:	**11/22/2011 14:19**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: METHOD 300.0(M)

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MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: OAK014WB OAK014WL OAK014WC
LAB FILE ID: HK18003 HK18004 HK18005
DATE EXTRACTED: NA NA NA DATE COLLECTED: NA
DATE ANALYZED: 11/18/1110:20 11/18/1110:41 11/18/1111:02 DATE RECEIVED: NA
PREP. BATCH: OAK014W OAK014W OAK014W
CALIB. REF: HK18001 HK18001 HK18001

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	19.1	96	20.0	18.9	94	1	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	OAK016WB	OAK016WL	OAK016WC		
LAB FILE ID:	HK22003	HK22004	HK22005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1112:34	11/22/1112:55	11/22/1113:16	DATE RECEIVED:	NA
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22001	HK22001	HK22001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	18.1	90	20.0	18.0	90	1	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK014WB	OAK014WL	OAK014WC		
LAB FILE ID:	HK18003	HK18004	HK18005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1110:20	11/18/1110:41	11/18/1111:02	DATE RECEIVED:	NA
PREP. BATCH:	OAK014W	OAK014W	OAK014W		
CALIB. REF:	HK18001	HK18001	HK18001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	20.0	18.8	94	20.0	21.0	105	11	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	OAK016WB	OAK016WL	OAK016WC		
LAB FILE ID:	HK22003	HK22004	HK22005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1112:34	11/22/1112:55	11/22/1113:16	DATE RECEIVED:	NA
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22001	HK22001	HK22001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	20.0	18.4	92	20.0	18.0	90	2	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK014WB	OAK014WL	OAK014WC		
LAB FILE ID:	HK18003	HK18004	HK18005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1110:20	11/18/1110:41	11/18/1111:02	DATE RECEIVED:	NA
PREP. BATCH:	OAK014W	OAK014W	OAK014W		
CALIB. REF:	HK18001	HK18001	HK18001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	20.0	19.3	96	20.0	19.2	96	1	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	OAK016WB	OAK016WL	OAK016WC		
LAB FILE ID:	HK22003	HK22004	HK22005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1112:34	11/22/1112:55	11/22/1113:16	DATE RECEIVED:	NA
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22001	HK22001	HK22001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	20.0	18.2	91	20.0	18.1	90	1	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: METHOD 300.0(M)

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MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK014WB	OAK014WL	OAK014WC		
LAB FILE ID:	HK18003	HK18004	HK18005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1110:20	11/18/1110:41	11/18/1111:02	DATE RECEIVED:	NA
PREP. BATCH:	OAK014W	OAK014W	OAK014W		
CALIB. REF:	HK18001	HK18001	HK18001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	20.0	19.0	95	20.0	19.0	95	0	90-110	20

8087

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	OAK016WB	OAK016WL	OAK016WC		
LAB FILE ID:	HK22003	HK22004	HK22005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1112:34	11/22/1112:55	11/22/1113:16	DATE RECEIVED:	NA
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22001	HK22001	HK22001		

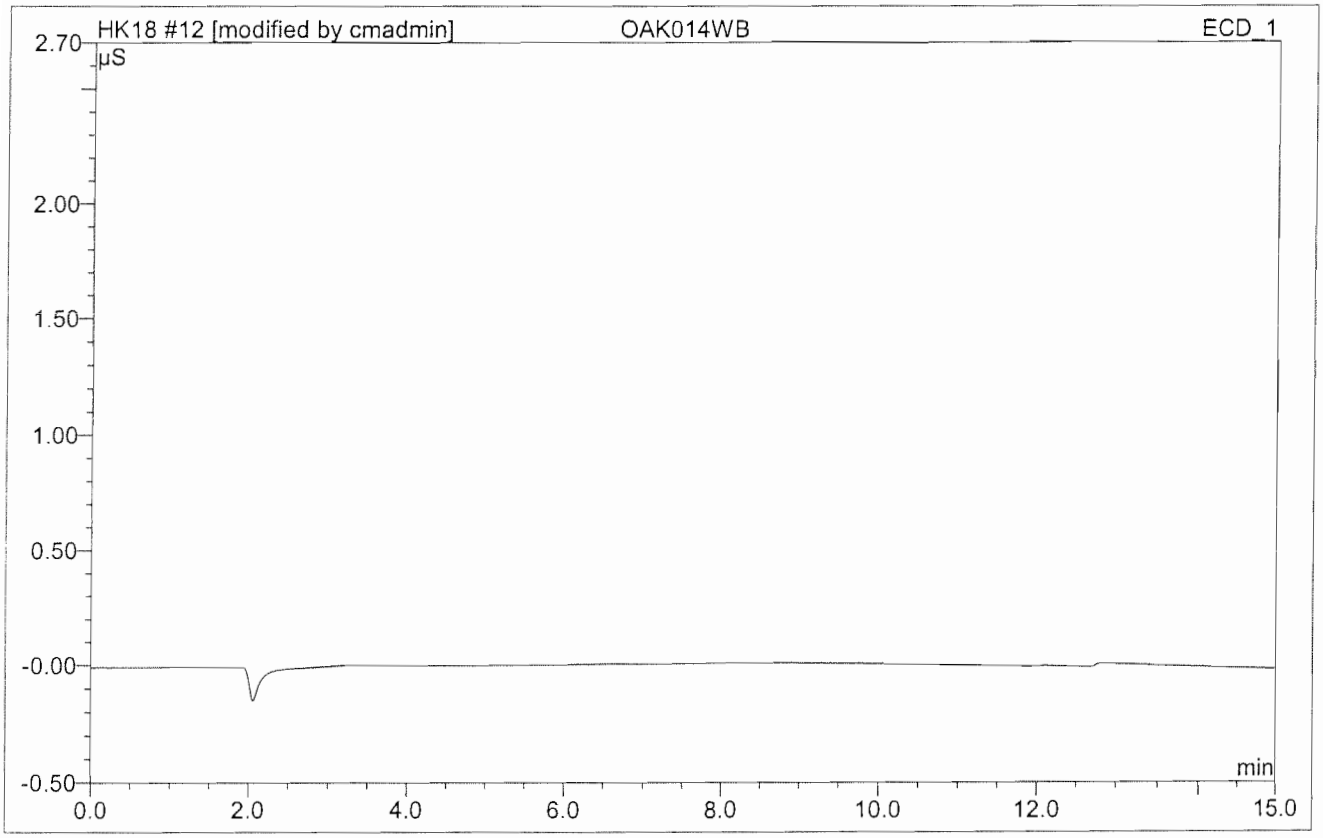
ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	20.0	19.3	96	20.0	18.9	94	2	90-110	20

QC DATA

HK18 003 OAK014WB

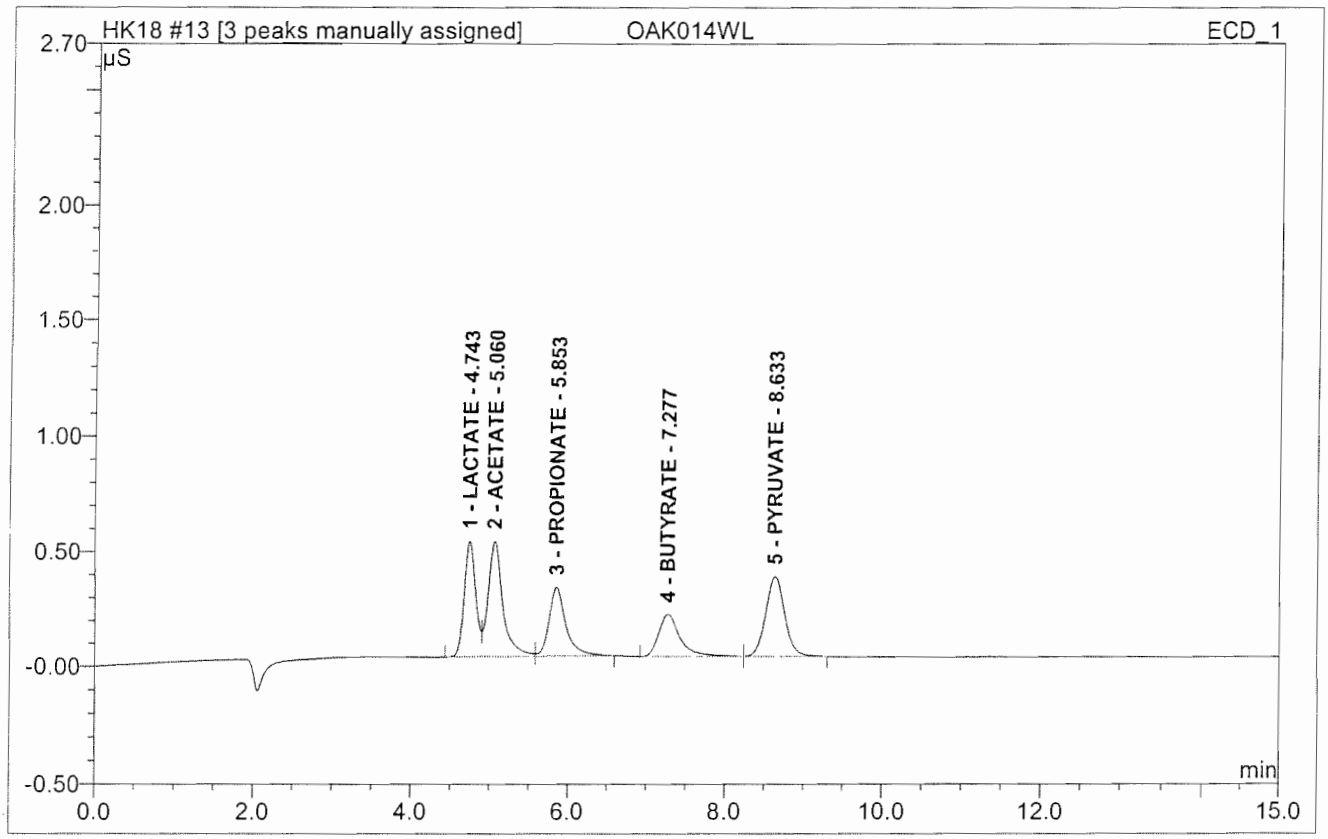
Sample Name:	**OAK014WB**	*Injection Volume:*	**25.0**
Vial Number:	**98**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/18/2011 10:20**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

HK18 004 OAK014WL

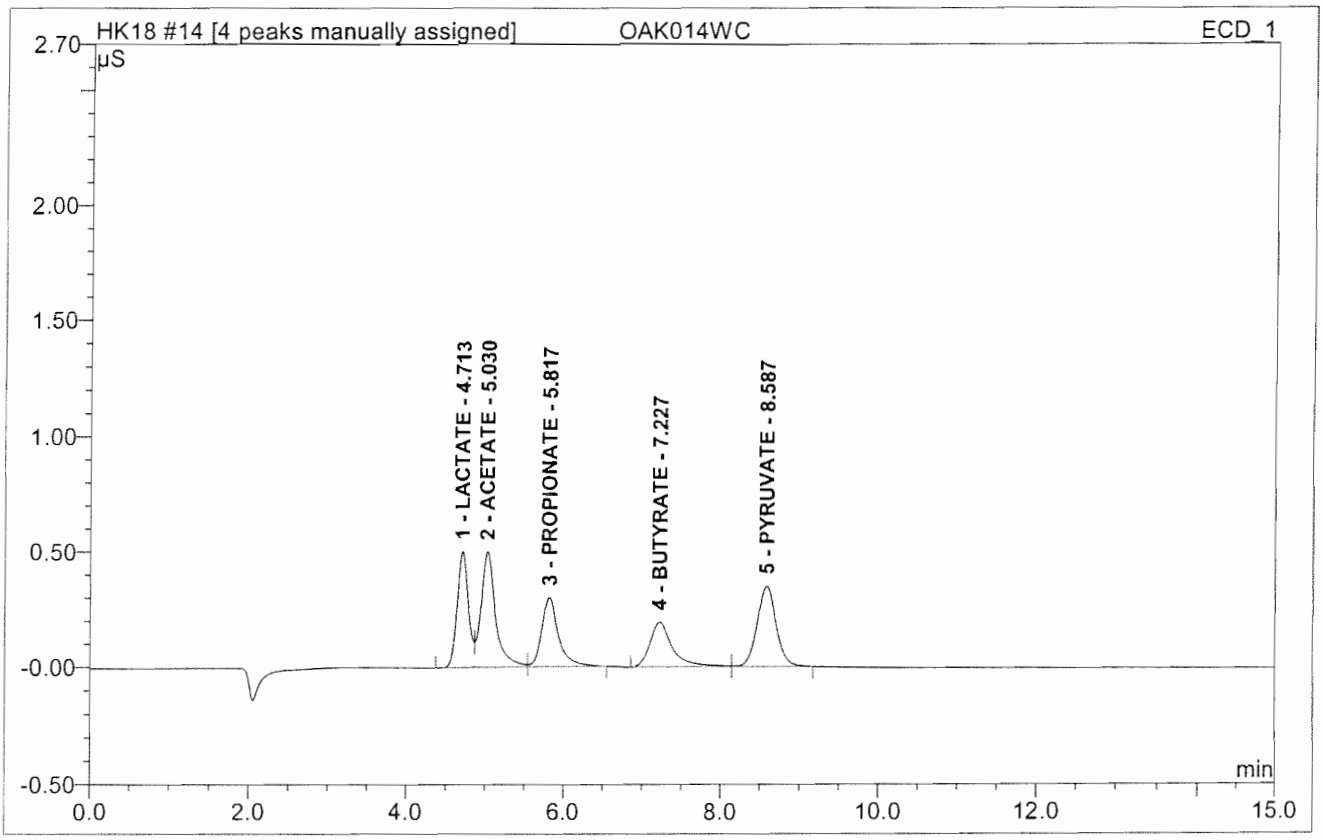
Sample Name:	**OAK014WL**	*Injection Volume:*	**25.0**
Vial Number:	**97**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/18/2011 10:41**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.74	LACTATE	0.503142	0.085225	20.05	1.927	BM
2	5.06	ACETATE	0.500244	0.108790	25.59	1.909	M
3	5.85	PROPIONATE	0.299406	0.074779	17.59	1.904	MB^
4	7.28	BUTYRATE	0.185366	0.058300	13.71	1.880	BM ^
5	8.63	PYRUVATE	0.347016	0.097995	23.05	1.905	MB^
Total:			1.835	0.425	100.00	9.525	

HK18 005 OAK014WC

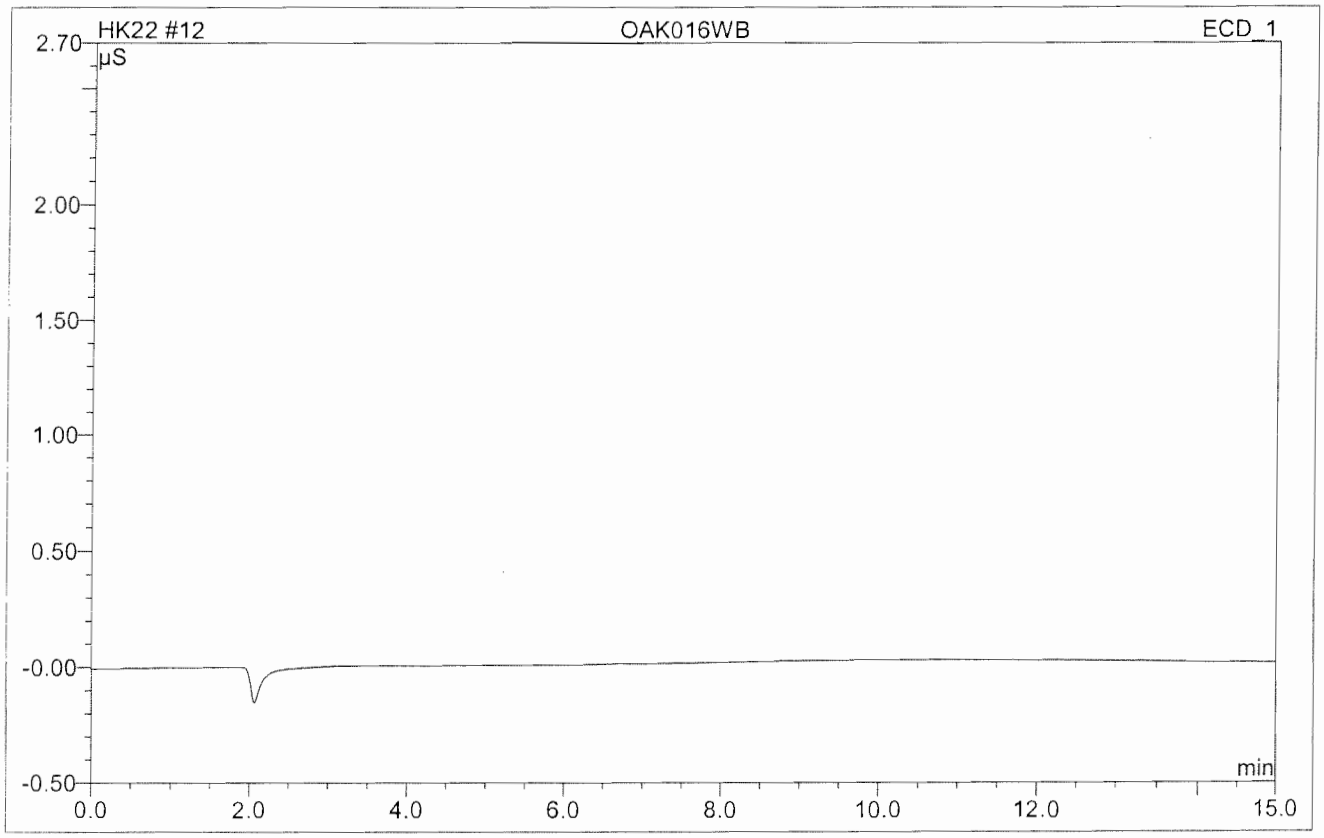
Sample Name:	**OAK014WC**	*Injection Volume:*	**25.0**
Vial Number:	**96**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/18/2011 11:02**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.71	LACTATE	0.502610	0.084842	19.70	1.918	BM
2	5.03	ACETATE	0.500232	0.107988	25.08	1.895	M ^
3	5.82	PROPIONATE	0.299250	0.074456	17.29	1.896	MB^
4	7.23	BUTYRATE	0.195108	0.065244	15.15	2.102	BM ^
5	8.59	PYRUVATE	0.347558	0.098112	22.78	1.907	MB^
Total:			1.845	0.431	100.00	9.718	

HK22 003 OAK016WB

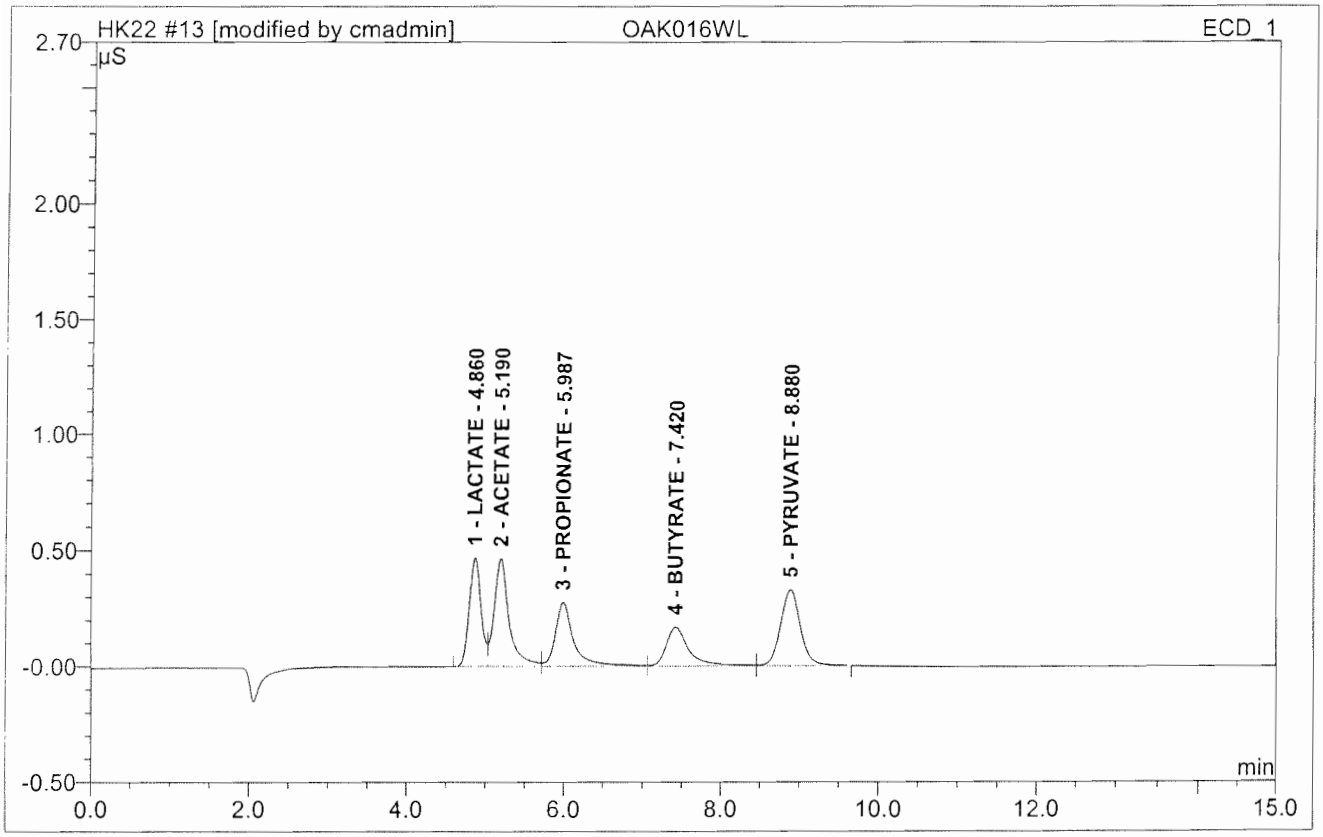
Sample Name:	**OAK016WB**	*Injection Volume:*	**25.0**
Vial Number:	**98**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 12:34**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

HK22 004 OAK016WL

Sample Name:	**OAK016WL**	*Injection Volume:*	**25.0**
Vial Number:	**97**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 12:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.86	LACTATE	0.467410	0.080631	19.54	1.823	BM *
2	5.19	ACETATE	0.463982	0.103105	24.99	1.809	M *
3	5.99	PROPIONATE	0.276534	0.075961	18.41	1.934	M *
4	7.42	BUTYRATE	0.168434	0.056932	13.80	1.836	M *
5	8.88	PYRUVATE	0.327210	0.095922	23.25	1.865	MB*
Total:			1.704	0.413	100.00	9.268	

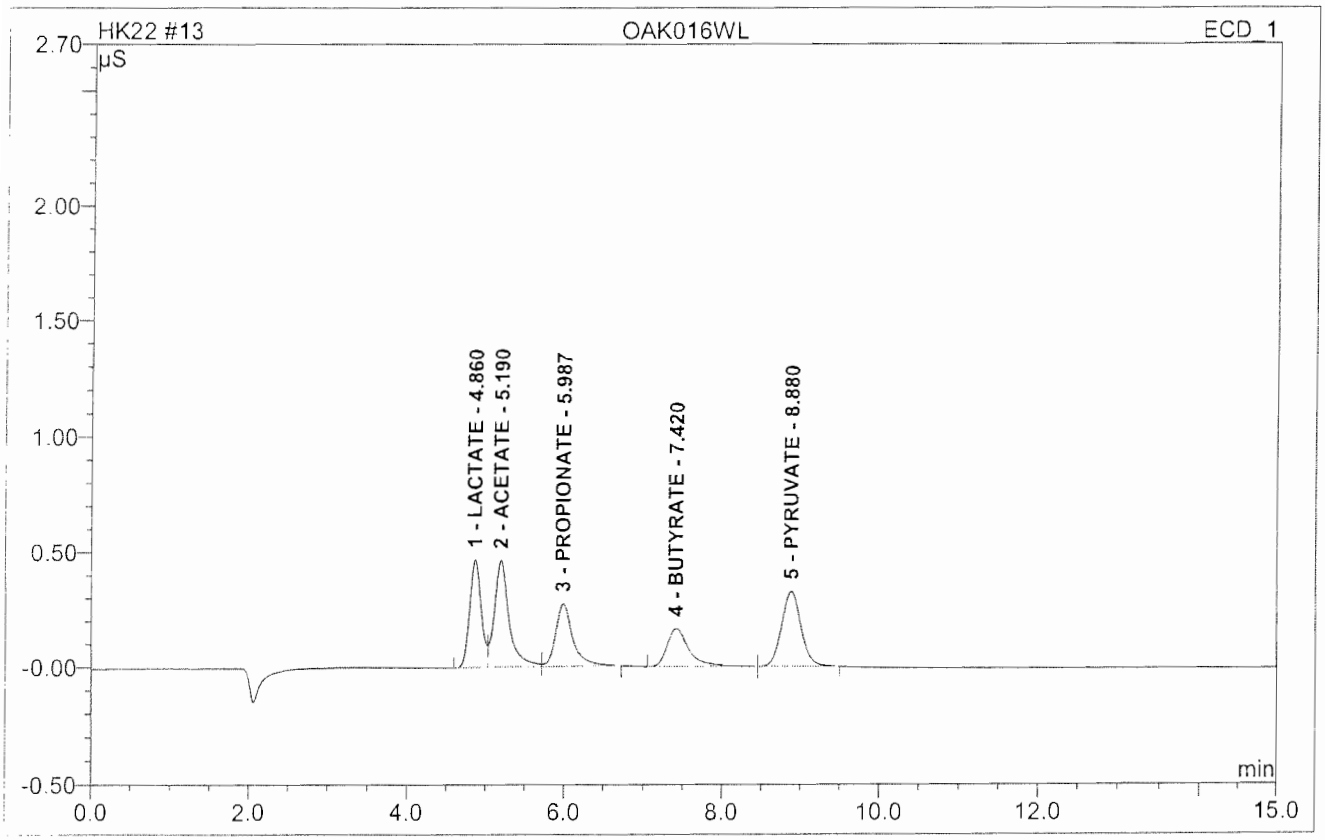
- ☐ Incorrect Retention Time
- ☑ Incorrect Baseline
- ☐ Incorrect Integration
- ☐ Other _____

Initials: a.l.
Date: 11/23/11

original

HK22 004 OAK016WL

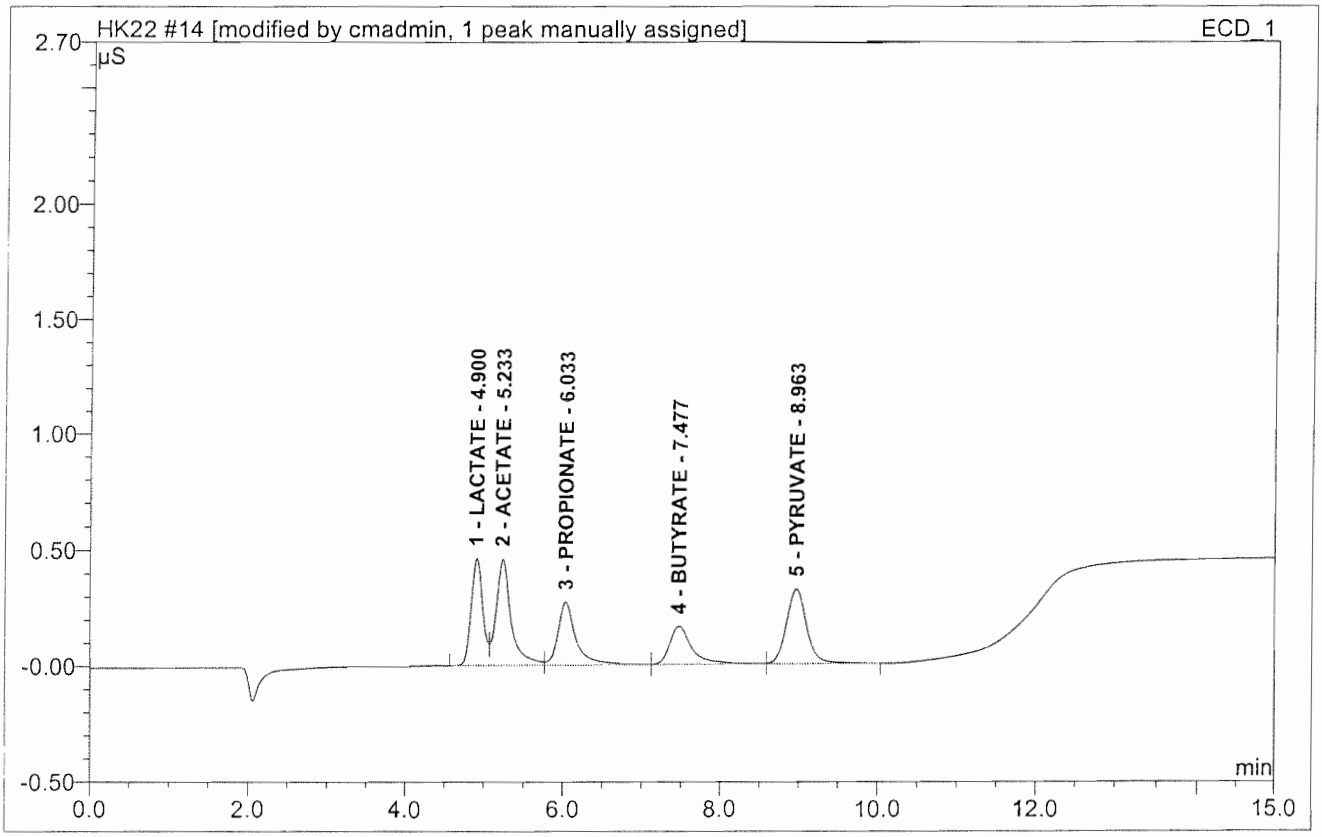
Sample Name:	**OAK016WL**	*Injection Volume:*	**25.0**
Vial Number:	**97**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 12:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.86	LACTATE	0.466506	0.080311	20.21	1.816	BM
2	5.19	ACETATE	0.461984	0.101313	25.49	1.778	M
3	5.99	PROPIONATE	0.271900	0.068782	17.31	1.752	MB
4	7.42	BUTYRATE	0.165872	0.053496	13.46	1.727	BM
5	8.88	PYRUVATE	0.325042	0.093532	23.53	1.819	MB
Total:			1.691	0.397	100.00	8.891	

HK22 005 OAK016WC

Sample Name:	**OAK016WC**	*Injection Volume:*	**25.0**
Vial Number:	**96**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 13:16**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.90	LACTATE	0.461014	0.080208	19.58	1.814	BM *
2	5.23	ACETATE	0.457276	0.102676	25.06	1.802	M *
3	6.03	PROPIONATE	0.273410	0.074329	18.14	1.893	M *
4	7.48	BUTYRATE	0.165748	0.055888	13.64	1.803	M *
5	8.96	PYRUVATE	0.322194	0.096556	23.57	1.877	MB*^
Total:			1.680	0.410	100.00	9.189	

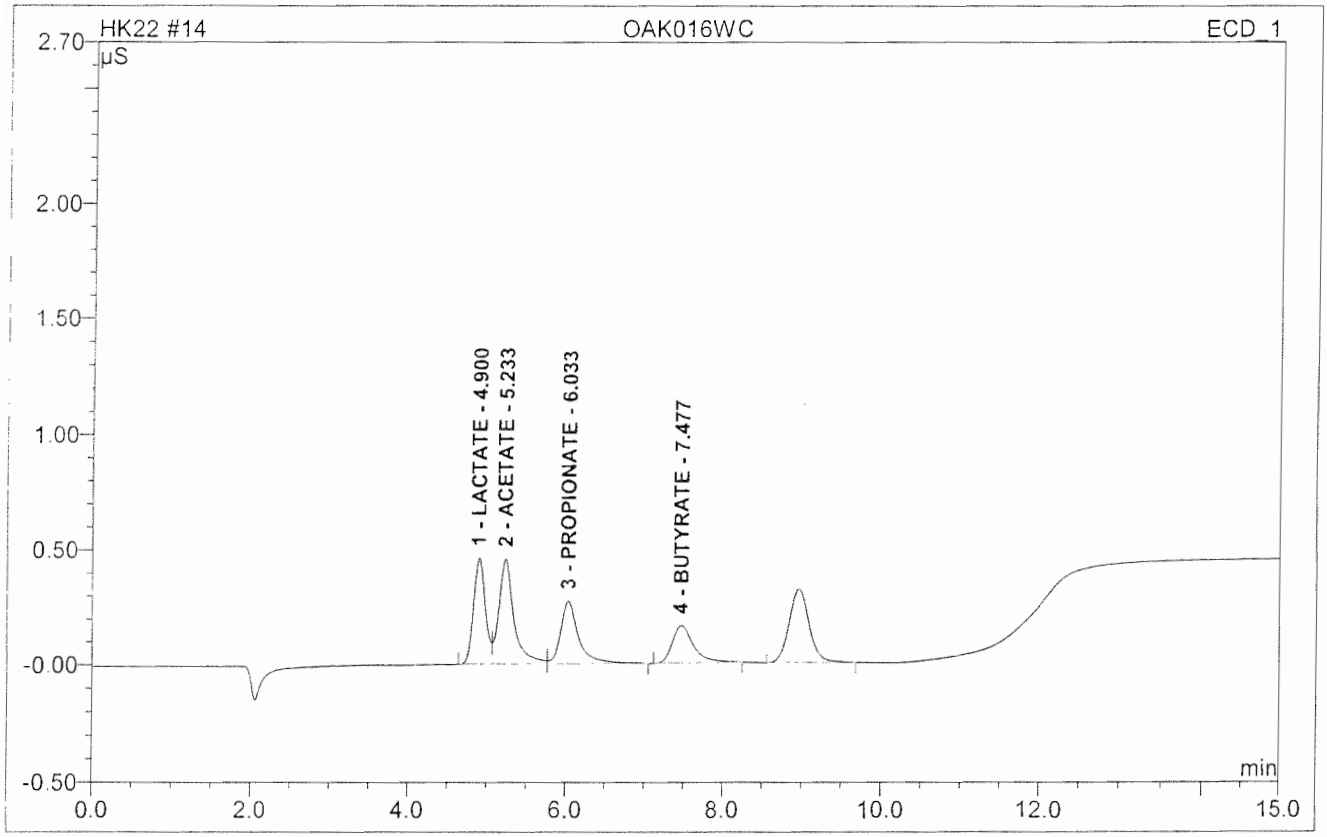
- ☐ Incorrect Retention Time
- ☒ Incorrect Baseline
- ☐ Incorrect Integration
- ☐ Other _____

Initials CS
Date 11/23/11

HK22 005 OAK016WC

original

Sample Name:	**OAK016WC**	*Injection Volume:*	**25.0**
Vial Number:	**96**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 13:16**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.90	LACTATE	0.460040	0.079751	20.01	1.804	BM
2	5.23	ACETATE	0.456254	0.101942	25.58	1.789	M
3	6.03	PROPIONATE	0.272272	0.072705	18.25	1.852	MB
4	7.48	BUTYRATE	0.163208	0.050838	12.76	1.642	BMB
5	8.96	n.a.	0.319536	0.093254	23.40	n.a.	BMB
Total:			1.671	0.398	100.00	7.086	

INITIAL CALIBRATIONS

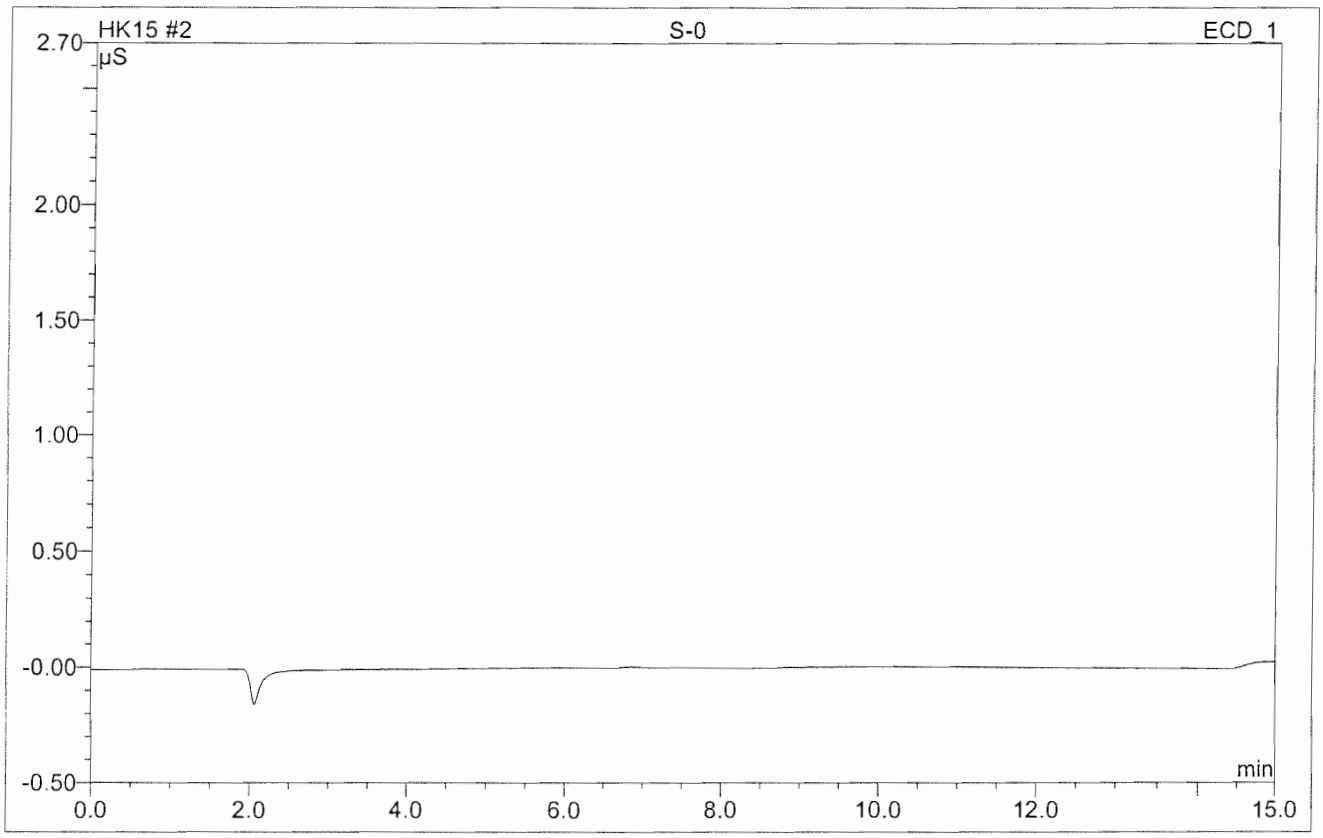
IC SEQ FORM/HK15(2011)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
HK15001	IB	ABLPY	OAD6K15	11/15/1117:34	1
HK15002	S-0	ABLPY	OAD6K15	11/15/1117:55	1
HK15003	S-1	ABLPY	OAD6K15	11/15/1118:16	1
HK15004	S-2	ABLPY	OAD6K15	11/15/1118:37	1
HK15005	S-3	ABLPY	OAD6K15	11/15/1118:58	1
HK15006	S-4	ABLPY	OAD6K15	11/15/1119:19	1
HK15007	S-5	ABLPY	OAD6K15	11/15/1119:40	1
HK15008	ICV	ABLPY	OAD6K15	11/15/1120:01	1
HK15009	ICB	ABLPY	OAD6K15	11/15/1120:22	1
HK15010	CCV2	ABLPY	OAD6K15	11/15/1123:52	1
HK15011	CCB2	ABLPY	OAD6K15	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	OAD6K15	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	OAD6K15	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	OAD6K15	11/16/1101:15	1
HK15015	K101-01	ABLPY	OAD6K15	11/16/1101:36	1
HK15016	K101-02	ABLPY	OAD6K15	11/16/1102:17	1
HK15017	K101-03	ABLPY	OAD6K15	11/16/1102:58	1
HK15018	K101-04	ABLPY	OAD6K15	11/16/1103:39	1
HK15019	K101-05	ABLPY	OAD6K15	11/16/1104:20	1
HK15020	K101-05M	ABLPY	OAD6K15	11/16/1105:01	1
HK15021	K101-05S	ABLPY	OAD6K15	11/16/1105:42	1
HK15022	CCV4	ABLPY	OAD6K15	11/16/1106:23	1
HK15023	CCB4	ABLPY	OAD6K15	11/16/1106:44	1
HK15024	K084-01	ABLPY	OAD6K15	11/16/1107:05	1
HK15025	K084-02	ABLPY	OAD6K15	11/16/1107:46	1
HK15026	K084-03	ABLPY	OAD6K15	11/16/1108:26	1
HK15027	K084-04	ABLPY	OAD6K15	11/16/1109:10	1
HK15028	CCV6	ABLPY	OAD6K15	11/16/1111:30	1
HK15029	CCB6	ABLPY	OAD6K15	11/16/1112:32	1
HK15030	K084-05	ABLPY	OAD6K15	11/16/1112:53	1
HK15031	K084-06	ABLPY	OAD6K15	11/16/1113:34	1
HK15032	K035-01	*BLPY	OAD6K15	11/16/1114:15	5
HK15033	K035-01A	*BLPY	OAD6K15	11/16/1114:55	5
HK15034	CCV8	ABLPY	OAD6K15	11/16/1115:36	1
HK15035	CCB8	ABLPY	OAD6K15	11/16/1115:57	1

AJ
11/29/11

HK15 002 S-0

Sample Name:	**S-0**	*Injection Volume:*	**25.0**
Vial Number:	**32**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 17:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

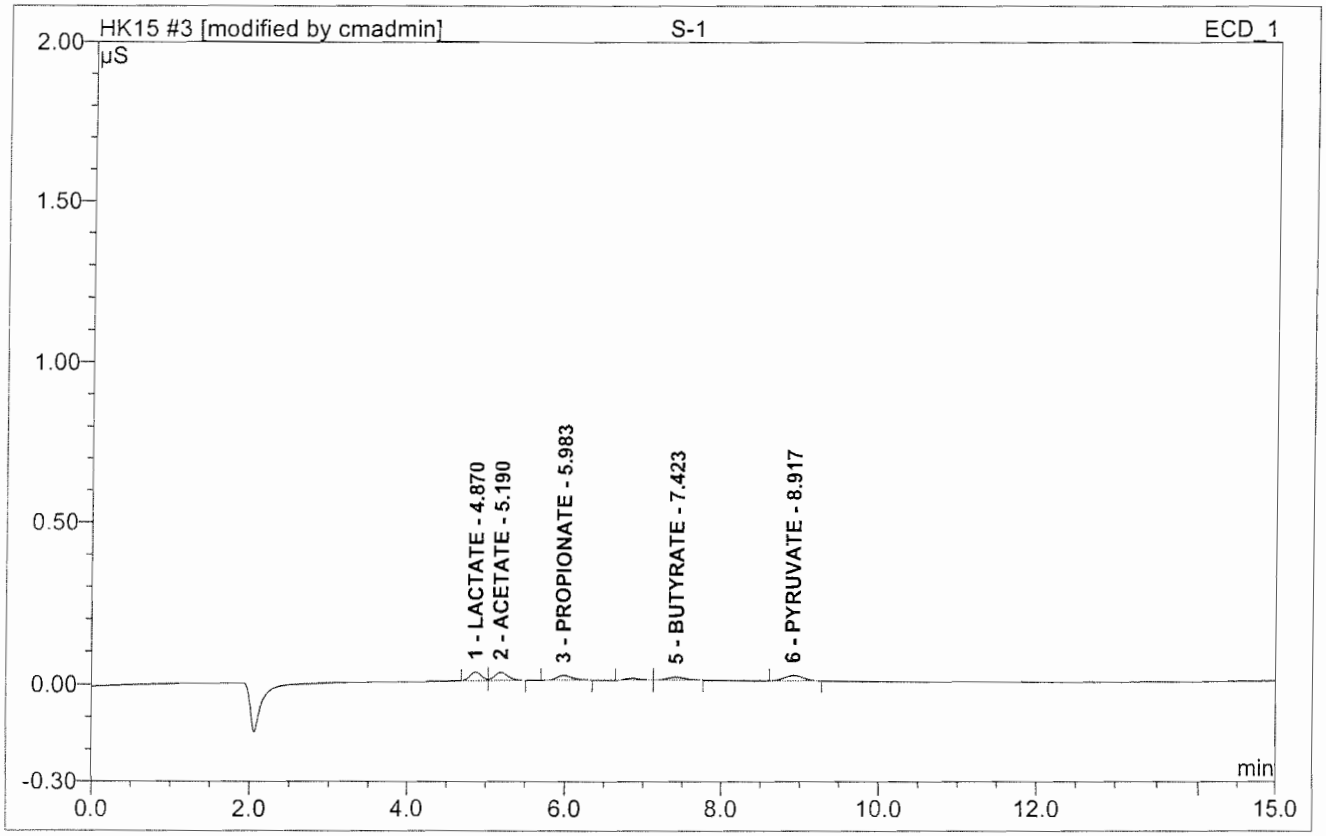


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

RS
11/29/11

HK15 003 S-1

Sample Name:	**S-1**	*Injection Volume:*	**25.0**
Vial Number:	**33**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 18:16**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

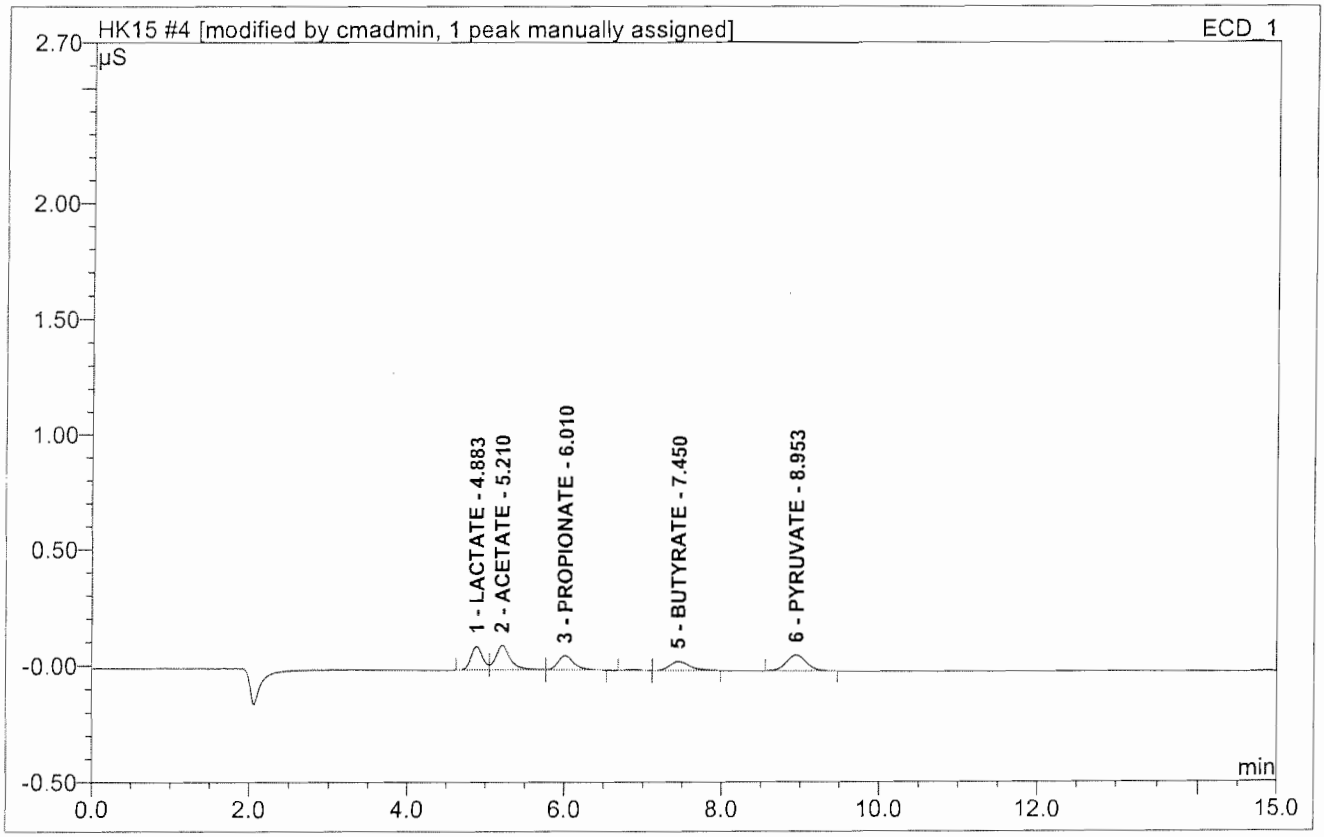


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.87	LACTATE	0.026174	0.004401	20.69	0.104	BM
2	5.19	ACETATE	0.024918	0.004820	22.66	0.083	MB
3	5.98	PROPIONATE	0.015232	0.003572	16.79	0.096	BMB
4	6.87	n.a.	0.006552	0.001302	6.12	n.a.	BMb*
5	7.42	BUTYRATE	0.009554	0.002586	12.16	0.101	bMB*
6	8.92	PYRUVATE	0.016650	0.004592	21.58	0.103	BMB
Total:			0.099	0.021	100.00	0.488	

RA 11/29/11

HK15 004 S-2

Sample Name:	**S-2**	*Injection Volume:*	**25.0**
Vial Number:	**34**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 18:37**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

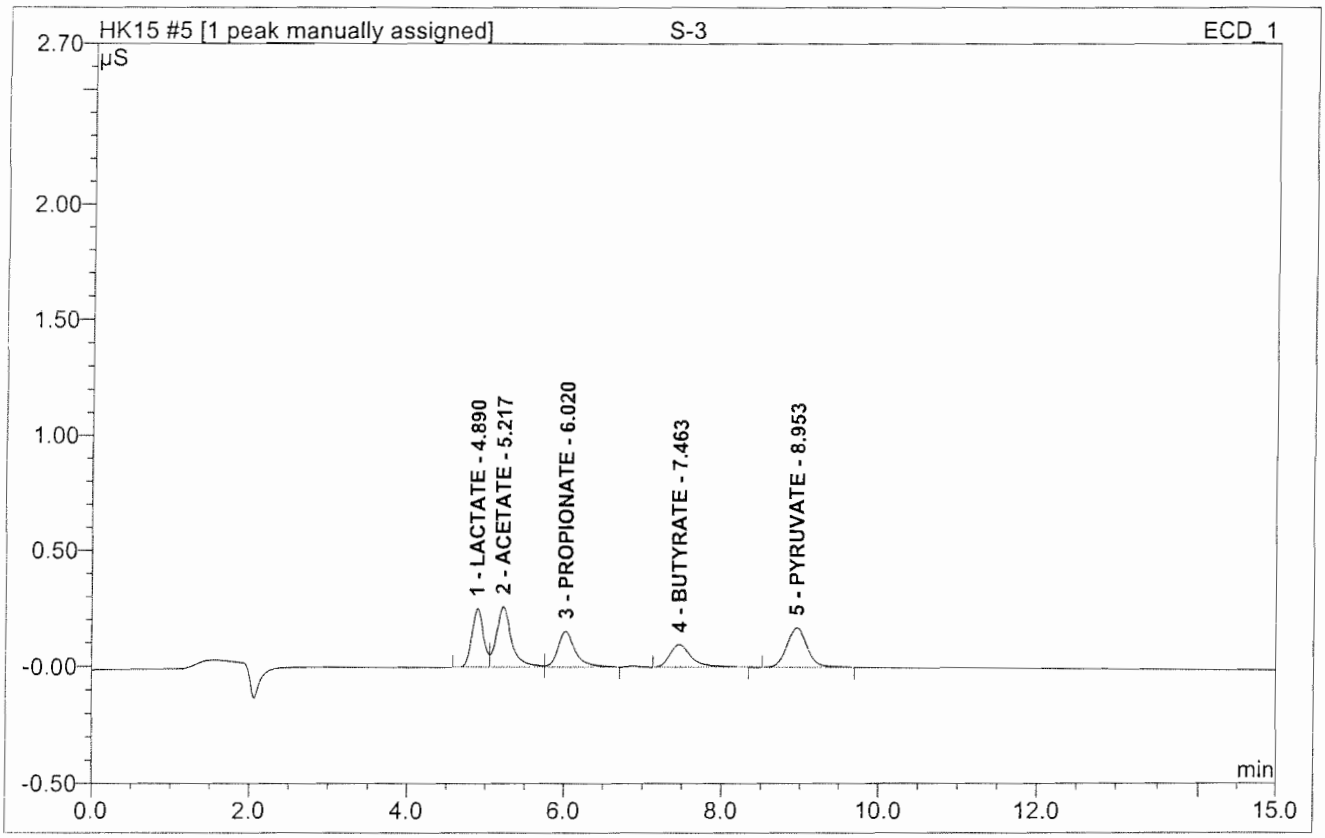


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.88	LACTATE	0.100086	0.017358	19.88	0.396	BM
2	5.21	ACETATE	0.105524	0.022908	26.23	0.401	M
3	6.01	PROPIONATE	0.061798	0.014840	16.99	0.382	MB
4	6.87	n.a.	0.005038	0.001008	1.15	n.a.	BMB
5	7.45	BUTYRATE	0.038386	0.011480	13.14	0.385	BMB*
6	8.95	PYRUVATE	0.067030	0.019737	22.60	0.395	BMB^
Total:			0.378	0.087	100.00	1.960	

RS 11/29/11

HK15 005 S-3

Sample Name:	**S-3**	*Injection Volume:*	**25.0**
Vial Number:	**35**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 18:58**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

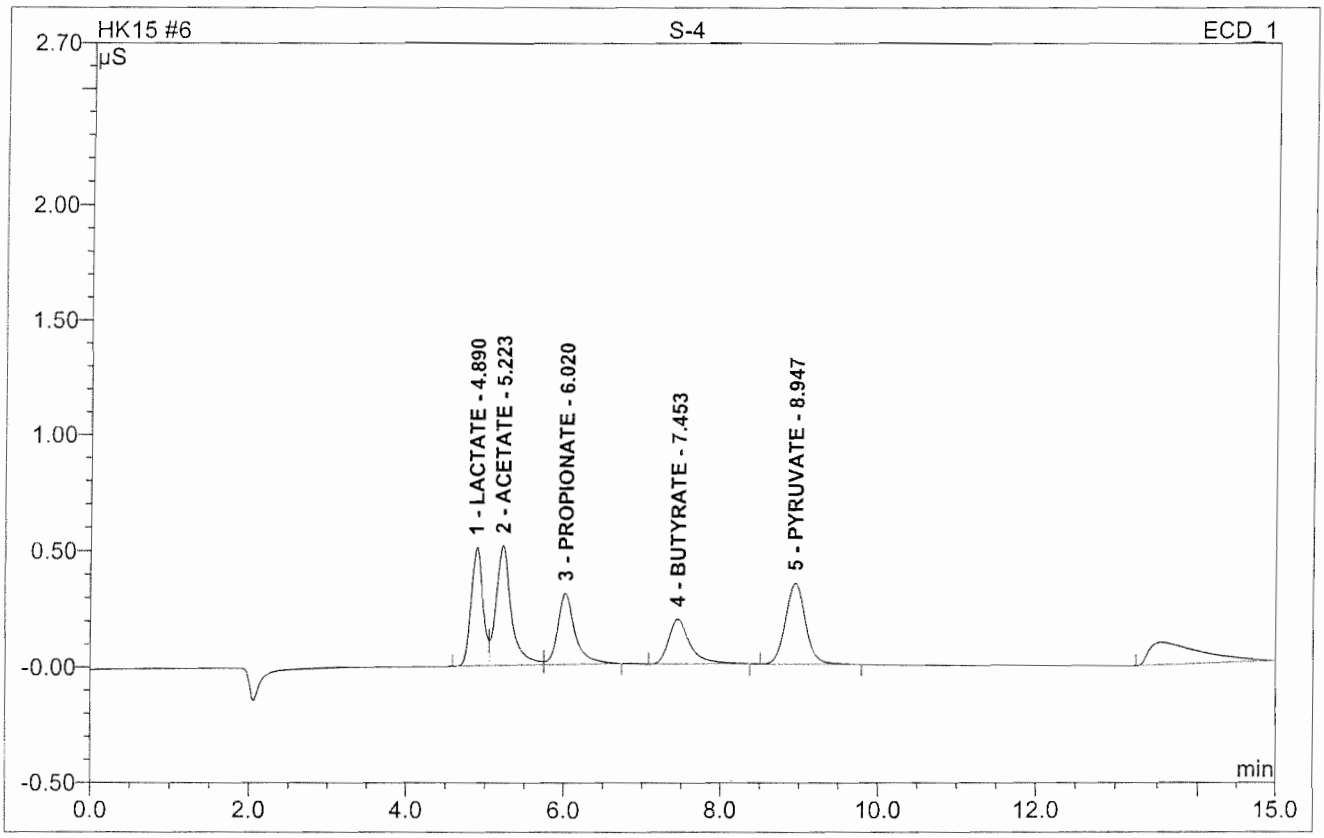


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.89	LACTATE	0.251224 ✓	0.043840 ✓	19.76	0.993 ✓	BM
2	5.22	ACETATE	0.260248 ✓	0.057600 ✓	25.96	1.010 ✓	M
3	6.02	PROPIONATE	0.154006 ✓	0.039548 ✓	17.83	1.010 ✓	MB
4	7.46	BUTYRATE	0.096982 ✓	0.030610 ✓	13.80	0.996 ✓	BMB
5	8.95	PYRUVATE	0.169390 ✓	0.050249 ✓	22.65	0.984 ✓	BMB^
Total:			0.932	0.222	100.00	4.993	

AS 11/29/11

HK15 006 S-4

Sample Name:	**S-4**	*Injection Volume:*	**25.0**
Vial Number:	**36**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 19:19**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

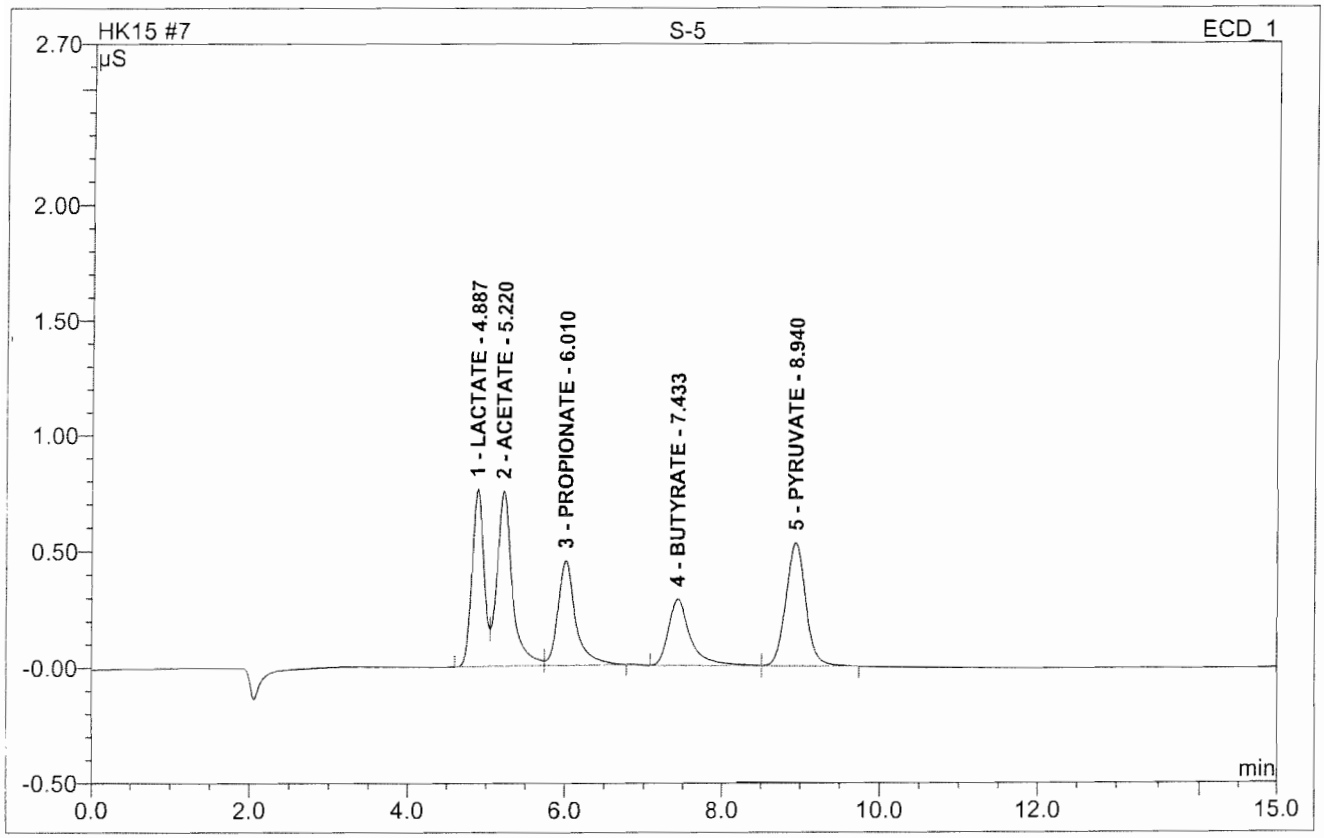


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.89	LACTATE	0.507630 ✓	0.088426 ✓	16.99	1.999 ✓	BM
2	5.22	ACETATE	0.513976 ✓	0.115562 ✓	22.21	2.028 ✓	M
3	6.02	PROPIONATE	0.306558 ✓	0.079442 ✓	15.27	2.023 ✓	MB
4	7.45	BUTYRATE	0.194514 ✓	0.061661 ✓	11.85	1.987 ✓	BMB
5	8.95	PYRUVATE	0.348296 ✓	0.102505 ✓	19.70	1.992 ✓	BMB
6	13.54	n.a.	0.097046	0.072730	13.98	n.a.	BMB
Total:			1.968	0.520	100.00	10.029	

RS 11/29/11.

HK15 007 S-5

Sample Name:	**S-5**	*Injection Volume:*	**25.0**
Vial Number:	**37**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 19:40**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.89	LACTATE	0.759794	0.132927	19.87	3.003	BM
2	5.22	ACETATE	0.750282	0.169666	25.36	2.978	M
3	6.01	PROPIONATE	0.448824	0.117298	17.53	2.984	MB
4	7.43	BUTYRATE	0.286108	0.093750	14.01	3.012	BM
5	8.94	PYRUVATE	0.527514	0.155355	23.22	3.011	MB
Total:			2.773	0.669	100.00	14.989	

AS
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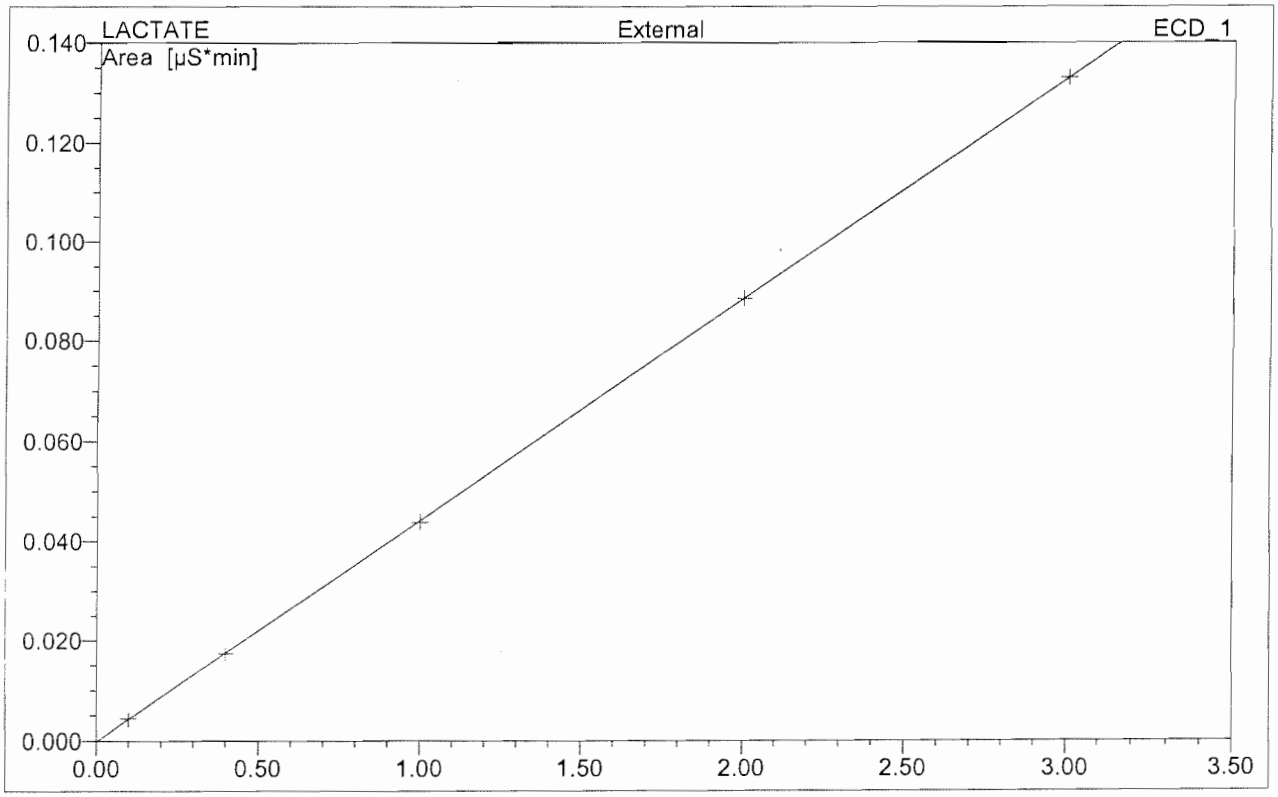
HK15 008 ICV

Sample Name:	**ICV**	*Injection Volume:*	**25.0**
Vial Number:	**38**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/15/2011 20:01**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Cal.Type	Points	Coeff.Det. %	Offset	Slope	Curve
1	4.88	LACTATE	0LOff	5	99.9986	-0.0002	0.0443	0.0000
2	5.21	ACETATE	0LOff	5	99.9712	0.0001	0.0569	0.0000
3	6.00	PROPIONATE	0LOff	5	99.9791	-0.0002	0.0394	0.0000
4	7.42	BUTYRATE	0LOff	5	99.9907	-0.0006	0.0313	0.0000
5	8.93	PYRUVATE	0LOff	5	99.9915	-0.0008	0.0518	0.0000
Average:					99.9862	-0.0003	0.0448	0.0000

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No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square	Offset	Slope	Curve
1	4.88	LACTATE	0LOff	5	1.0000	-0.000198	0.0443	0.0000
2	5.21	ACETATE	0LOff	5	0.9997	0.000068	0.0569	0.0000
3	6.00	PROPIONA⁻	0LOff	5	0.9998	-0.000209	0.0394	0.0000
4	7.42	BUTYRATE	0LOff	5	0.9999	-0.000584	0.0313	0.0000
5	8.93	PYRUVATE	0LOff	5	0.9999	-0.000755	0.0518	0.0000
Average:					n.a.	n.a.	n.a.	0.0000

$$\text{conc} = \frac{\text{area} - \text{offset}}{\text{slope}}$$

AS
11/29/11

SECOND SOURCE VERIFICATION

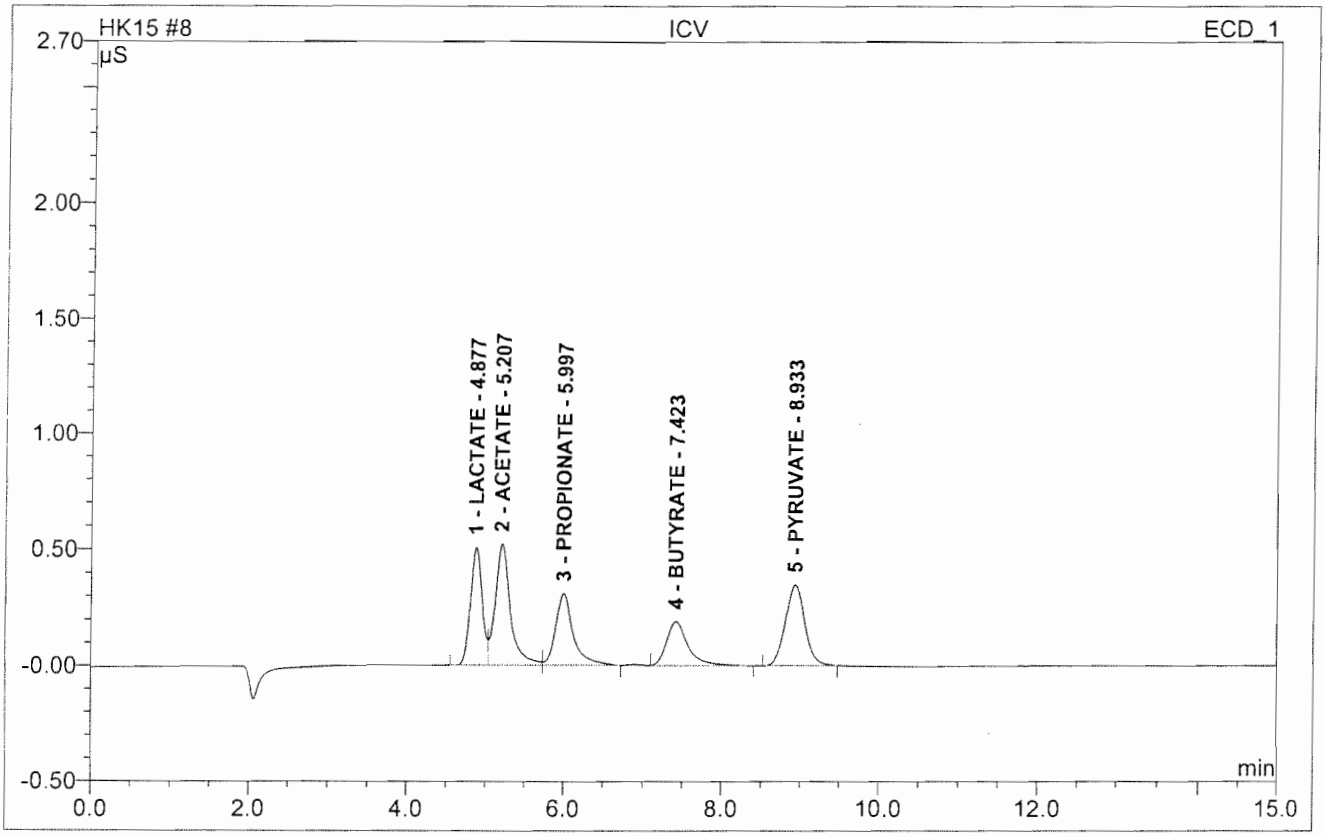
IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK15001	IB	ABLPY	ND	ND	ND	ND	ND	11/15/1117:34	1
HK15002	S-0	ABLPY	ND	ND	ND	ND	ND	11/15/1117:55	1
HK15003	S-1	ABLPY	.083	.101	.104	.096	.103	11/15/1118:16	1
HK15004	S-2	ABLPY	.401	.385	.396	.382	.395	11/15/1118:37	1
HK15005	S-3	ABLPY	1.01	.996	.993	1.01	.984	11/15/1118:58	1
HK15006	S-4	ABLPY	2.028	1.987	1.999	2.023	1.992	11/15/1119:19	1
HK15007	S-5	ABLPY	2.978	3.012	3.003	2.984	3.011	11/15/1119:40	1
HK15008	ICV	ABLPY	103%	96.8%	99.5%	104%	97.7%	11/15/1120:01	1
HK15009	ICB	ABLPY	ND	ND	ND	ND	ND	11/15/1120:22	1
HK15010	CCV2	ABLPY	103%	103%	101%	104%	93.9%	11/15/1123:52	1
HK15011	CCB2	ABLPY	ND	ND	ND	ND	ND	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	ND	ND	ND	ND	ND	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	2.07	2.1	2.02	2	1.96	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	2.07	2.02	2.04	2.1	1.95	11/16/1101:15	1
HK15015	K101-01	ABLPY	ND	ND	ND	ND	ND	11/16/1101:36	1
HK15016	K101-02	ABLPY	ND	ND	ND	ND	ND	11/16/1102:17	1
HK15017	K101-03	ABLPY	ND	ND	ND	ND	ND	11/16/1102:58	1
HK15018	K101-04	ABLPY	ND	ND	ND	ND	ND	11/16/1103:39	1
HK15019	K101-05	ABLPY	ND	ND	ND	ND	ND	11/16/1104:20	1
HK15020	K101-05M	ABLPY	.83	.826	.959	.922	.904	11/16/1105:01	1
HK15021	K101-05S	ABLPY	.878	.826	.985	1.01	.882	11/16/1105:42	1
HK15022	CCV4	ABLPY	101%	103%	99.3%	99.1%	92.6%	11/16/1106:23	1
HK15023	CCB4	ABLPY	ND	ND	ND	ND	ND	11/16/1106:44	1
HK15024	K084-01	ABLPY	ND	ND	ND	ND	ND	11/16/1107:05	1
HK15025	K084-02	ABLPY	ND	ND	ND	ND	ND	11/16/1107:46	1
HK15026	K084-03	ABLPY	ND	ND	ND	ND	ND	11/16/1108:26	1
HK15027	K084-04	ABLPY	ND	ND	ND	ND	ND	11/16/1109:10	1
HK15028	CCV6	ABLPY	101%	90.7%	99.7%	103%	92.5%	11/16/1111:30	1
HK15029	CCB6	ABLPY	ND	ND	ND	ND	ND	11/16/1112:32	1
HK15030	K084-05	ABLPY	ND	ND	ND	ND	ND	11/16/1112:53	1
HK15031	K084-06	ABLPY	ND	ND	ND	ND	ND	11/16/1113:34	1
HK15032	K035-01	*BLPY	28.1E	ND	ND	1.13	ND	11/16/1114:15	5
HK15033	K035-01A	*BLPY	32.4E	5.38	4.35	6.28	4.73	11/16/1114:55	5
HK15034	CCV8	ABLPY	102%	97%	99.6%	109%	93.8%	11/16/1115:36	1
HK15035	CCB8	ABLPY	ND	ND	ND	ND	ND	11/16/1115:57	1

AS
11/29/11

HK15 008 ICV

Sample Name:	**ICV**	*Injection Volume:*	**25.0**
Vial Number:	**38**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 20:01**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

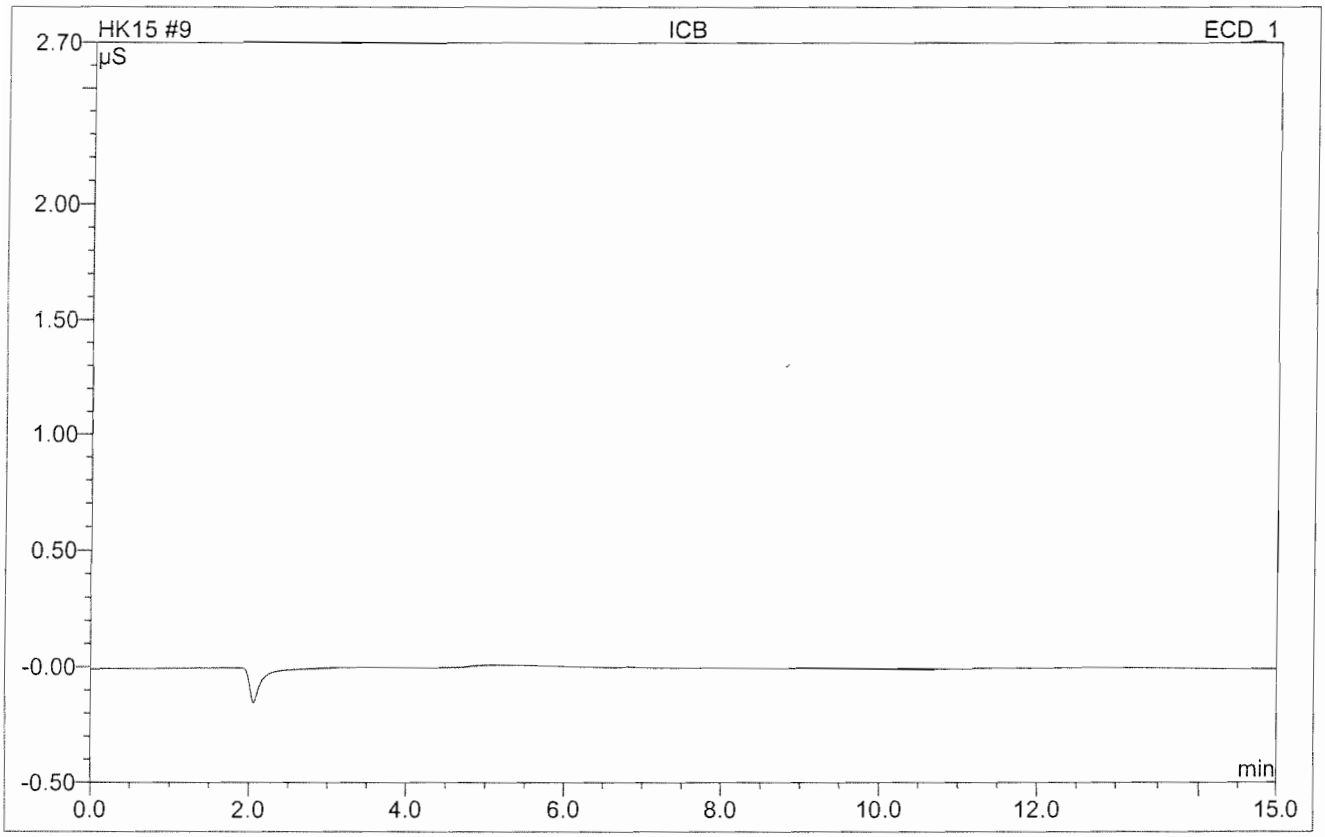


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.88	LACTATE	0.504694	0.088011	19.68	1.990	BM
2	5.21	ACETATE	0.520464	0.117058	26.18	2.054	M
3	6.00	PROPIONATE	0.309202	0.081457	18.22	2.074	MB
4	7.42	BUTYRATE	0.190046	0.060090	13.44	1.937	BMB
5	8.93	PYRUVATE	0.347528	0.100546	22.49	1.954	BMB
Total:			1.872	0.447	100.00	10.009	

RS
11/29/11

HK15 009 ICB

Sample Name:	**ICB**	*Injection Volume:*	**25.0**
Vial Number:	**39**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 20:22**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

AS 11/29/11

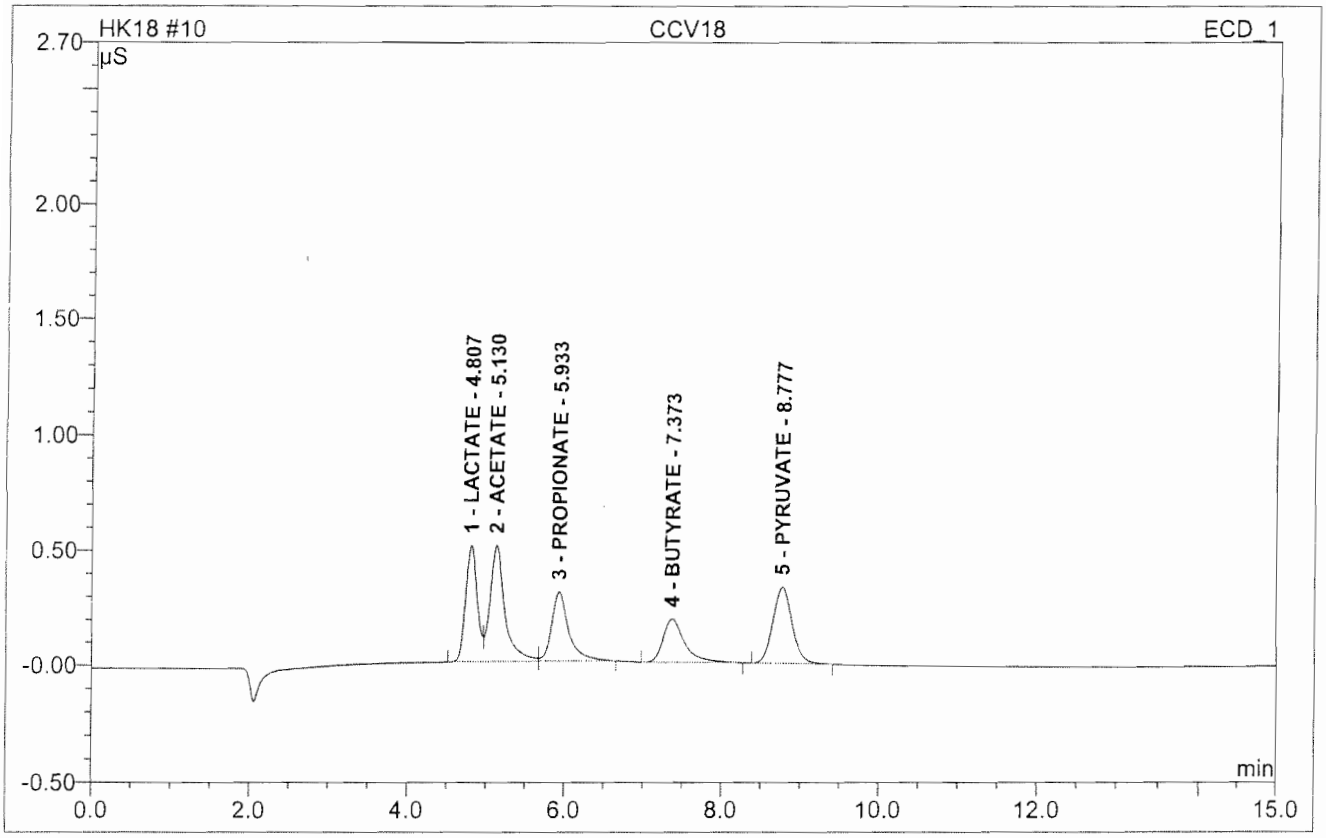
DAILY CALIBRATIONS

IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK18001	CCV18	ABLPY	98.8%	97.5%	97.8%	97.8%	91.2%	11/18/1109:17	1
HK18002	CCB18	ABLPY	ND	ND	ND	ND	ND	11/18/1109:59	1
HK18003	OAK014WB	ABLPY	ND	ND	ND	ND	ND	11/18/1110:20	1
HK18004	OAK014WL	ABLPY	1.91	1.88	1.93	1.9	1.9	11/18/1110:41	1
HK18005	OAK014WC	ABLPY	1.89	2.1	1.92	1.9	1.91	11/18/1111:02	1
HK18006	K133-03	ABLPY	ND	ND	ND	ND	ND	11/18/1111:23	5
HK18007	K133-03A	ABLPY	4.43	4.41	4.82	4.68	4.69	11/18/1112:24	5
HK18008	K133-01	*****	ND	ND	ND	ND	ND	11/18/1113:05	5
HK18009	K133-01M	ABLPY	4.62	4.52	4.94	4.91	4.65	11/18/1114:06	5
HK18010	K133-01S	ABLPY	4.49	5.06	4.51	5.23	4.91	11/18/1115:06	5
HK18011	K133-01R	ABLPY	ND	ND	ND	ND	ND	11/18/1116:07	5
HK18012	CCV20	ABLPY	90.3%	104%	90.7%	94.9%	90%*	11/18/1117:08	1
HK18013	CCB20	ABLPY	ND	ND	ND	ND	ND	11/18/1117:29	1
HK18014	K146-01	ABLPY	ND	ND	ND	ND	ND	11/18/1117:50	1
HK18015	K146-02	*****	.124	ND	ND	ND	ND	11/18/1118:31	1
HK18016	K146-03	*****	ND	ND	ND	ND	ND	11/18/1119:12	1
HK18017	K146-04	ABLPY	ND	ND	ND	ND	ND	11/18/1119:53	1
HK18018	K146-05	ABLPY	ND	ND	ND	ND	ND	11/18/1120:34	1
HK18019	K146-06	ABLPY	ND	ND	ND	ND	ND	11/18/1121:14	1
HK18020	CCV22	ABLPY	91%	96.7%	89.7%*	94.8%	89.7%*	11/18/1121:55	1
HK18021	CCB22	ABLPY	ND	ND	ND	ND	ND	11/18/1122:16	1

HK18 001 CCV18

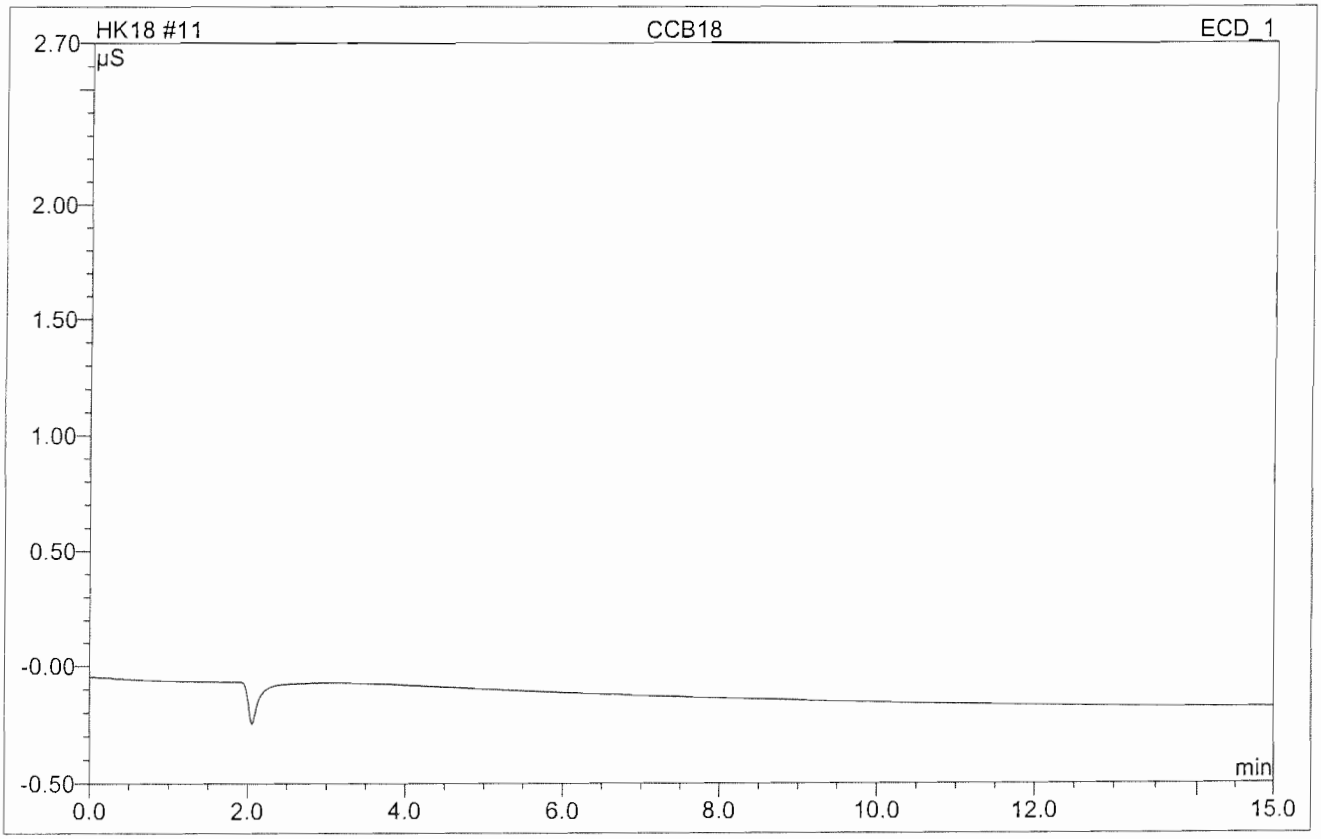
Sample Name:	**CCV18**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/18/2011 9:17**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.81	LACTATE	0.505664	0.086559	20.11	1.957	BM
2	5.13	ACETATE	0.505164	0.112671	26.17	1.977	M
3	5.93	PROPIONATE	0.301442	0.076844	17.85	1.957	MB
4	7.37	BUTYRATE	0.189876	0.060537	14.06	1.951	BMB
5	8.78	PYRUVATE	0.331480	0.093871	21.81	1.825	BMB
Total:			1.834	0.430	100.00	9.668	

HK18 002 CCB18

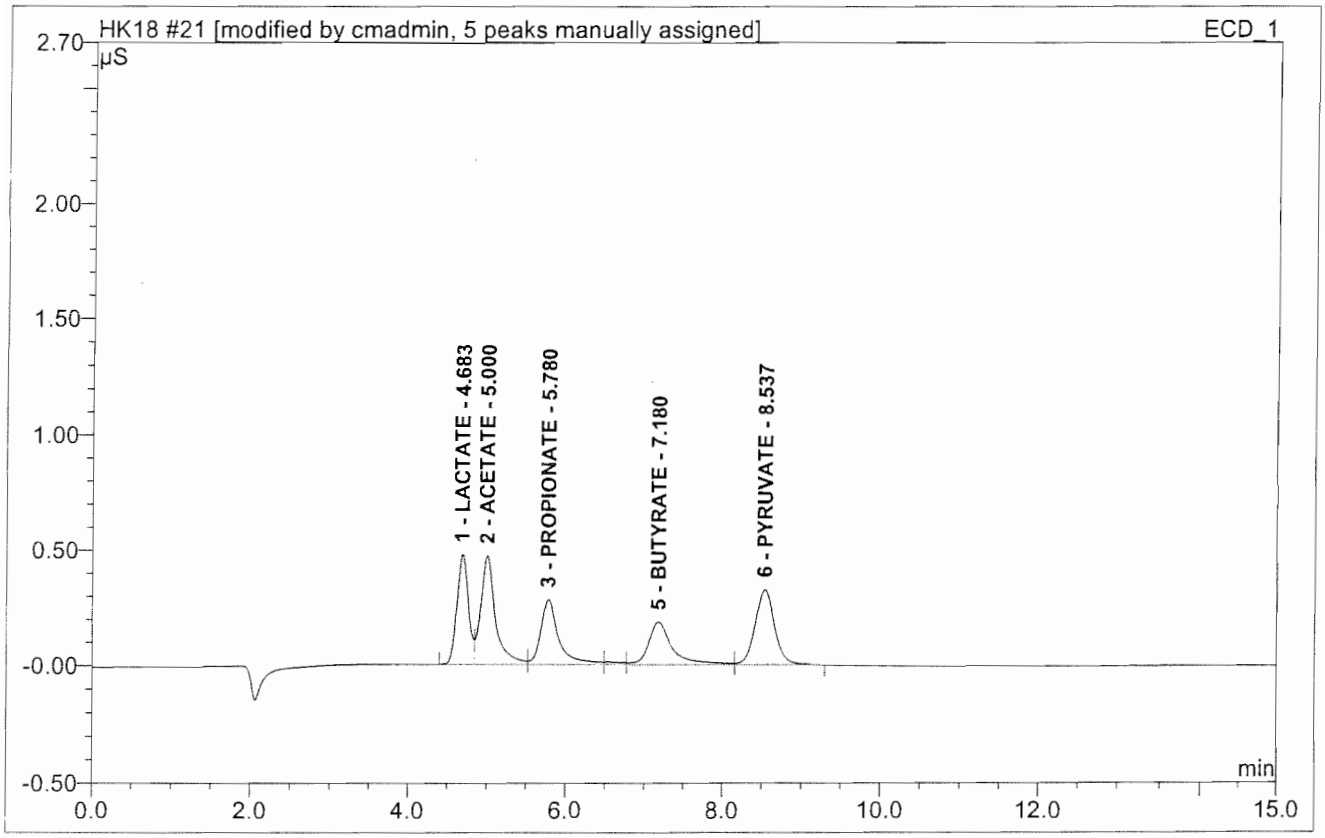
Sample Name:	**CCB18**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/18/2011 9:59**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

HK18 012 CCV20

Sample Name:	**CCV20**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/18/2011 17:08**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



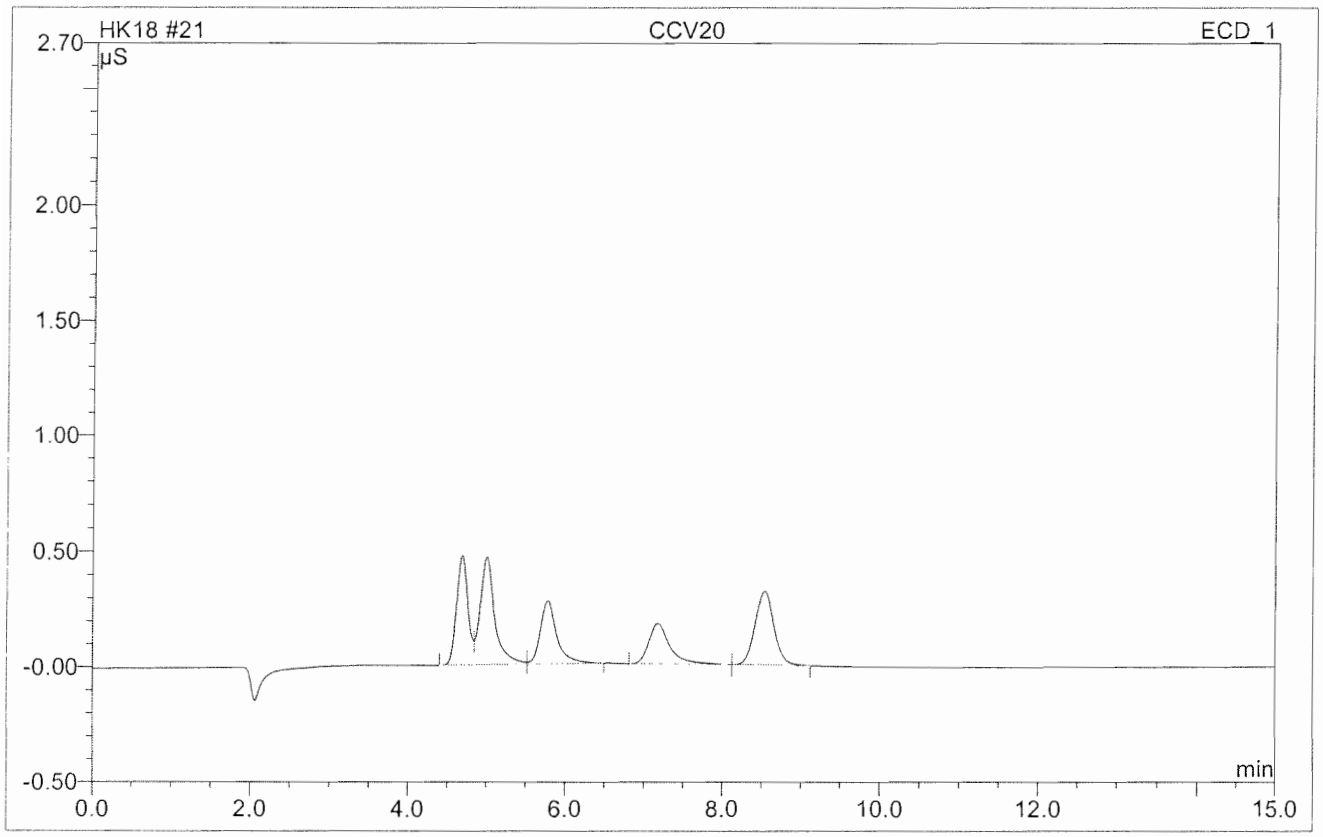
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.68	LACTATE	0.474586	0.080207	19.19	1.814	BM *^
2	5.00	ACETATE	0.468876	0.102921	24.63	1.806	M *^
3	5.78	PROPIONATE	0.280302	0.074527	17.83	1.898	M *^
4	6.55	n.a.	0.011722	0.002972	0.71	n.a.	M *
5	7.18	BUTYRATE	0.184084	0.064738	15.49	2.086	M *^
6	8.54	PYRUVATE	0.323674	0.092525	22.14	1.799	MB*^
Total:			1.743	0.418	100.00	9.403	

☐ Incorrect Retention Time
☑ Incorrect Baseline
☐ Incorrect Integration
☐ Other _____
Initials CJL
Date 11/21/11

HK18 012 CCV20

original

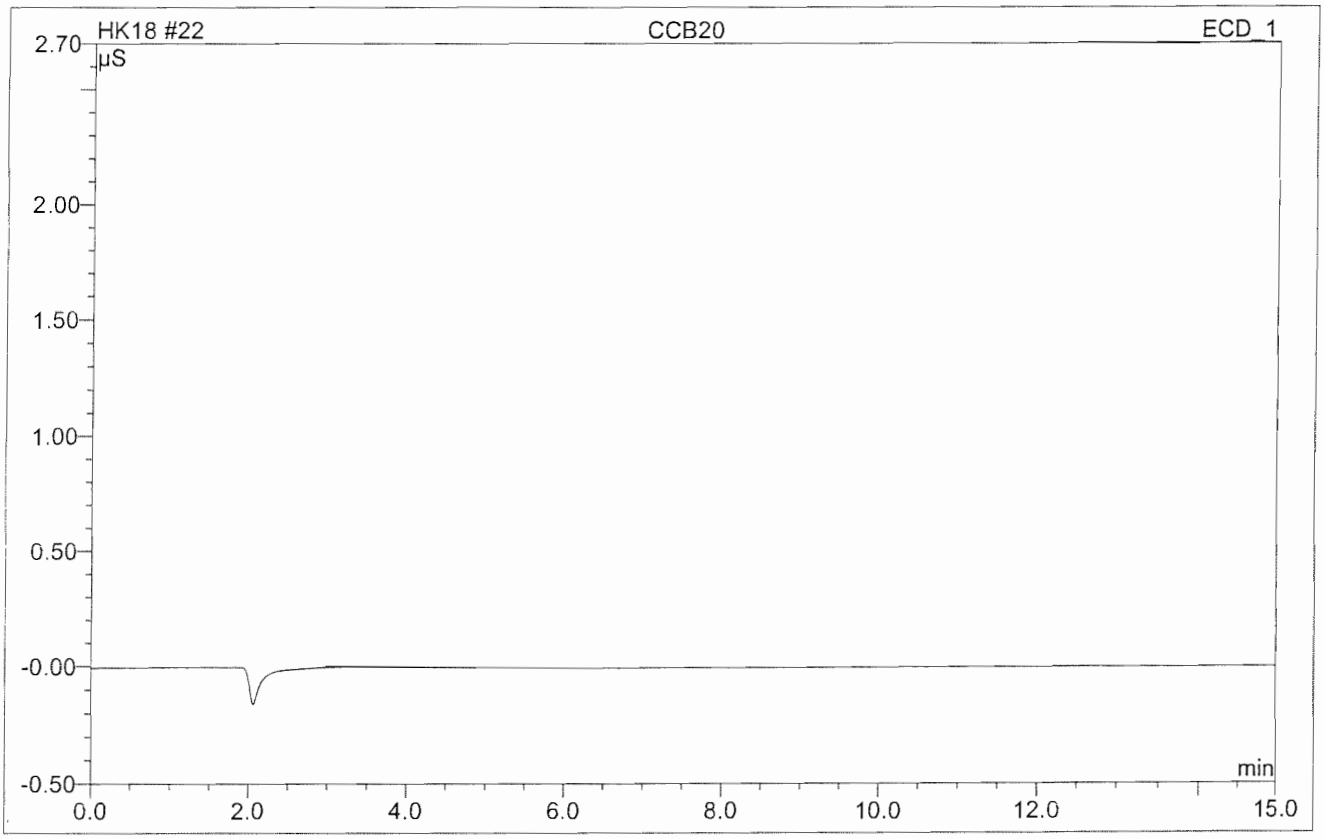
Sample Name:	**CCV20**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/18/2011 17:08**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.68	n.a.	0.473108	0.079694	20.44	n.a.	BM
2	5.00	n.a.	0.465748	0.100163	25.69	n.a.	M
3	5.78	n.a.	0.273102	0.066404	17.03	n.a.	MB
4	7.18	n.a.	0.176386	0.054882	14.08	n.a.	BMB
5	8.54	n.a.	0.319490	0.088754	22.76	n.a.	BMB
Total:			1.708	0.390	100.00	0.000	

HK18 013 CCB20

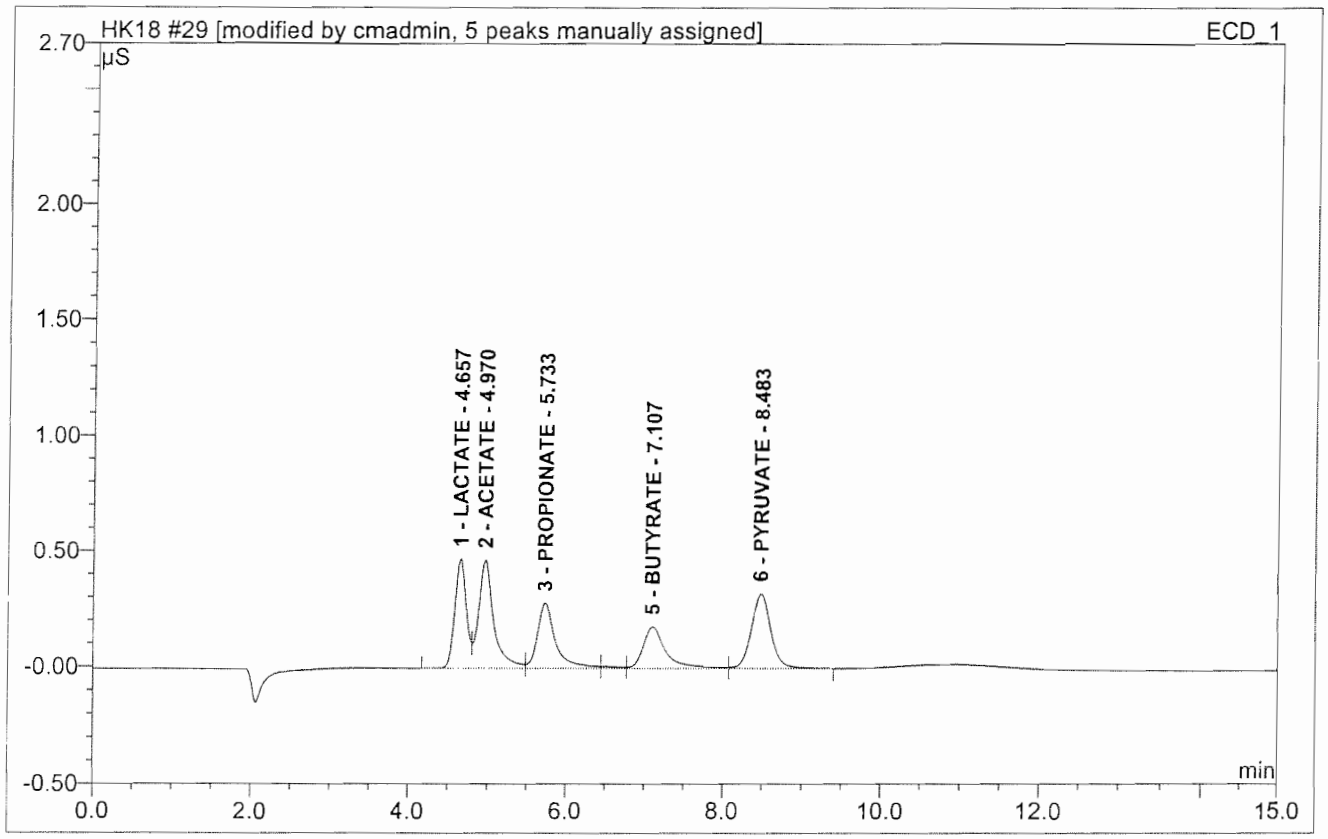
Sample Name:	**CCB20**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/18/2011 17:29**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

HK18 020 CCV22

Sample Name:	**CCV22**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/18/2011 21:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.66	LACTATE	0.471458	0.079312	19.25	1.794	BM *^
2	4.97	ACETATE	0.466492	0.103784	25.19	1.821	M *^
3	5.73	PROPIONATE	0.280860	0.074488	18.08	1.897	M *^
4	6.51	n.a.	0.008778	0.002121	0.51	n.a.	M *
5	7.11	BUTYRATE	0.178358	0.059979	14.56	1.934	M *^
6	8.48	PYRUVATE	0.321390	0.092296	22.40	1.795	MB*^
Total:			1.727	0.412	100.00	9.240	

- ☐ Incorrect Retention Time
- ☑ Incorrect Baseline
- ☐ Incorrect Integration
- ☐ Other _____

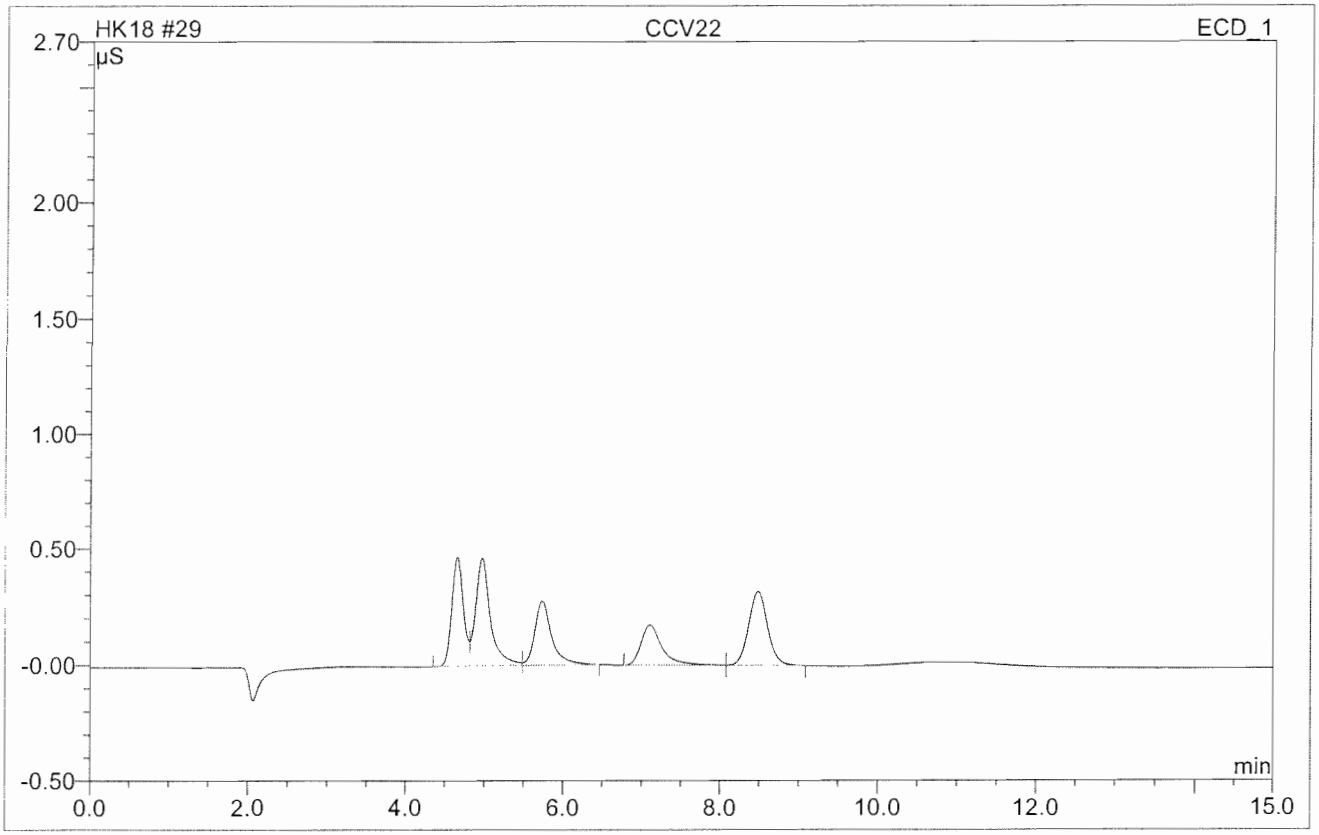
Initials _____ aR
Date _____ 11/21/11

default/Integration

HK18 020 CCV22

original

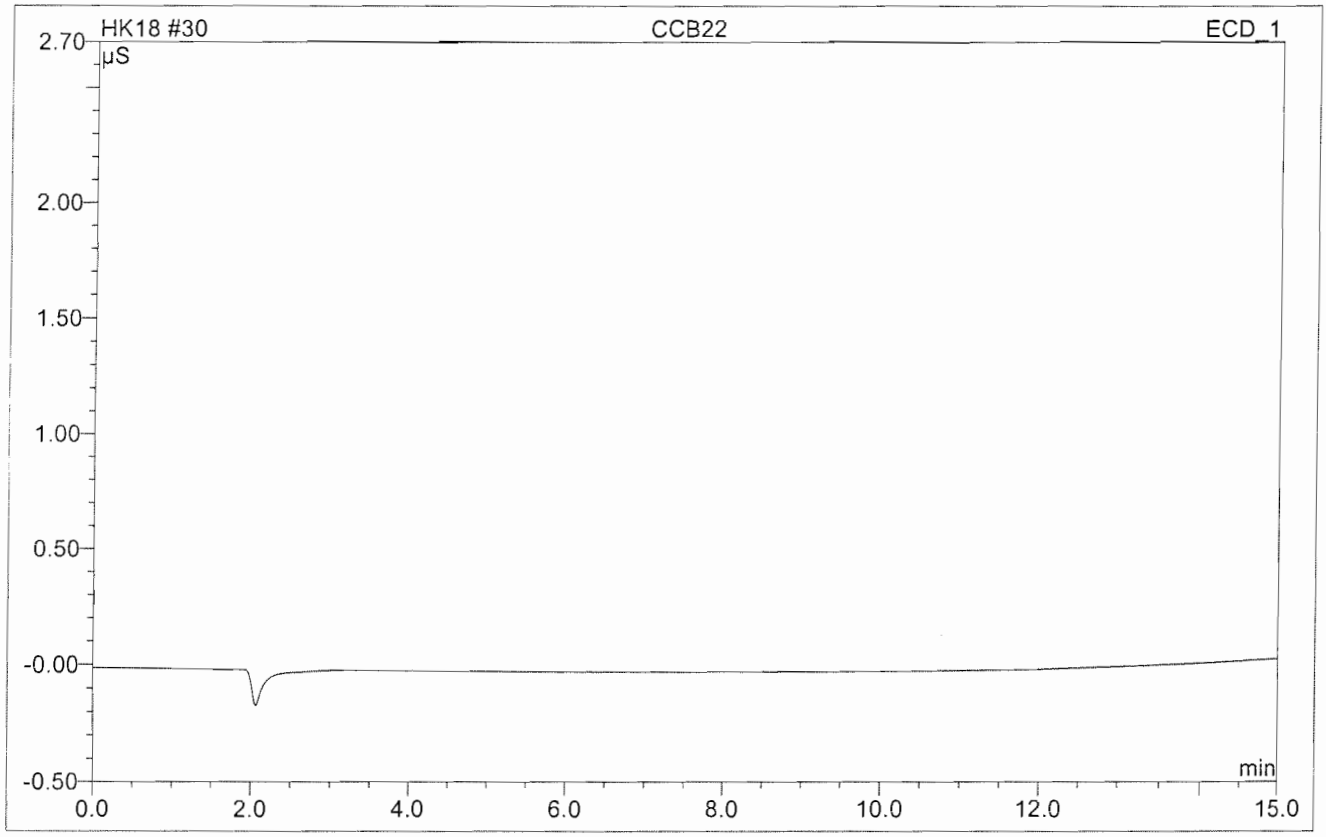
Sample Name:	**CCV22**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/18/2011 21:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.66	n.a.	0.470040	0.079425	20.23	n.a.	BM
2	4.97	n.a.	0.463988	0.100979	25.72	n.a.	M
3	5.73	n.a.	0.275708	0.068702	17.50	n.a.	MB
4	7.11	n.a.	0.173832	0.054509	13.88	n.a.	BM
5	8.48	n.a.	0.318382	0.089018	22.67	n.a.	MB
Total:			1.702	0.393	100.00	0.000	

HK18 021 CCB22

Sample Name:	**CCB22**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/18/2011 22:16**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



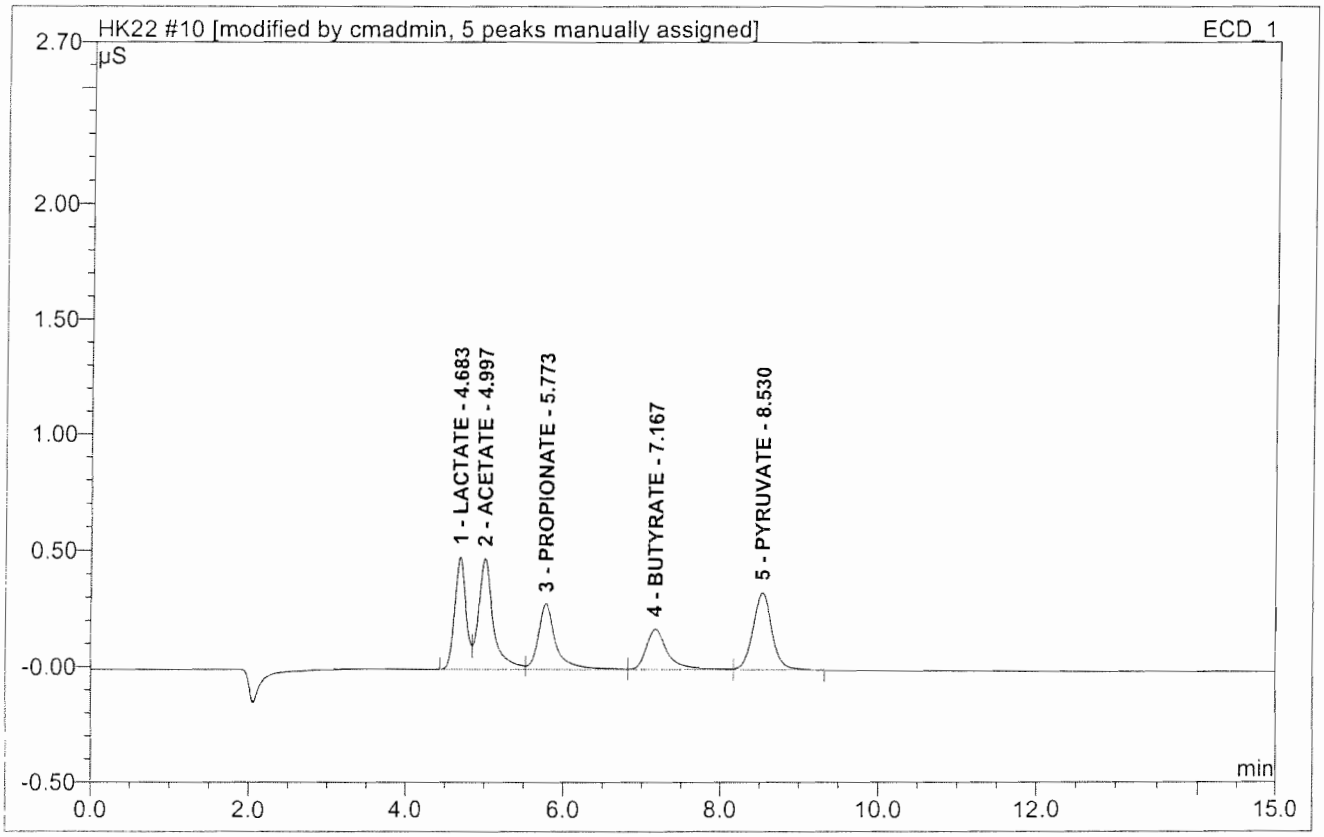
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK22001	CCV24	ABLPY	91.4%	92.9%	91%	95.4%	91.8%	11/22/1111:31	1
HK22002	CCB24	ABLPY	ND	ND	ND	ND	ND	11/22/1112:13	1
HK22003	OAK016WB	ABLPY	ND	ND	ND	ND	ND	11/22/1112:34	1
HK22004	OAK016WL	ABLPY	1.81	1.84	1.82	1.93	1.87	11/22/1112:55	1
HK22005	OAK016WC	ABLPY	1.8	1.8	1.81	1.89	1.88	11/22/1113:16	1
HK22006	K146-02	ABLPY	ND	ND	ND	ND	ND	11/22/1114:19	5
HK22007	K146-02A	ABLPY	4.88	5.26	5.3	4.92	4.73	11/22/1115:20	5
HK22008	K146-03R	ABLPY	ND	ND	ND	ND	ND	11/22/1116:21	1
HK22009	K174-01	ABLPY	ND	ND	ND	ND	ND	11/22/1117:02	1
HK22010	K174-02	ABLPY	ND	ND	ND	ND	ND	11/22/1117:42	1
HK22011	K174-03	ABLPY	ND	ND	ND	ND	ND	11/22/1118:23	1
HK22012	K174-04	ABLPY	ND	ND	ND	ND	ND	11/22/1119:04	1
HK22013	CCV26	ABLPY	105%	100%	106%	102%	99.8%	11/22/1119:45	1
HK22014	CCB26	ABLPY	ND	ND	ND	ND	ND	11/22/1120:06	1
HK22015	K174-05	ABLPY	ND	ND	ND	ND	ND	11/22/1120:27	1
HK22016	K174-06	ABLPY	ND	ND	ND	ND	ND	11/22/1121:08	1
HK22017	K174-07	ABLPY	ND	ND	ND	ND	ND	11/22/1121:49	1
HK22018	K184-01	ABLPY	ND	ND	ND	ND	ND	11/22/1122:30	1
HK22019	K184-01M	ABLPY	1.05	1.07	1.03	1.1	.98	11/22/1123:11	1
HK22020	K184-01S	ABLPY	1.01	1.04	1.04	.805	1.07	11/22/1123:52	1
HK22021	K184-02	ABLPY	ND	ND	ND	ND	ND	11/23/1100:33	1
HK22022	K184-03	ABLPY	ND	ND	ND	ND	ND	11/23/1101:13	1
HK22023	K184-04	ABLPY	ND	ND	ND	ND	ND	11/23/1101:54	1
HK22024	K184-05	ABLPY	ND	ND	ND	ND	ND	11/23/1102:35	1
HK22025	CCV28	ABLPY	109%	108%	110%	109%	103%	11/23/1103:41	1
HK22026	CCB28	ABLPY	ND	ND	ND	ND	ND	11/23/1104:23	1
HK22027	K101-04	ABLPY	ND	ND	ND	ND	ND	11/23/1104:44	5
HK22028	K101-04A	ABLPY	5.05	5.12	5.01	5.1	4.87	11/23/1105:45	5
HK22029	CCV30	ABLPY	109%	107%	108%	110%	101%	11/23/1107:07	1
HK22030	CCB30	ABLPY	ND	ND	ND	ND	ND	11/23/1107:28	1

HK22 001 CCV24

Sample Name:	**CCV24**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 11:31**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



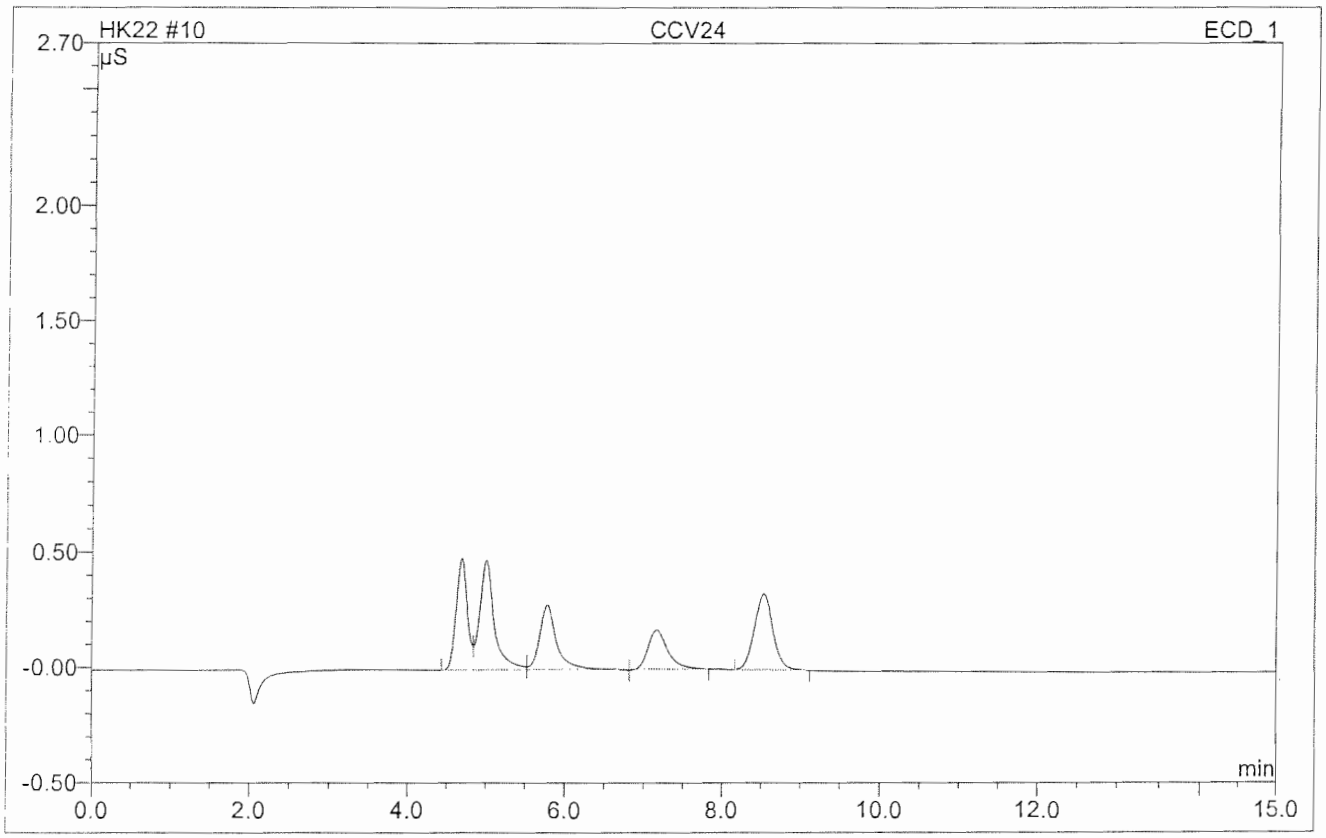
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.68	LACTATE	0.482652	0.080429	19.54	1.819	BM *^
2	5.00	ACETATE	0.476322	0.104211	25.32	1.829	M *^
3	5.77	PROPIONATE	0.283832	0.074919	18.20	1.908	M *^
4	7.17	BUTYRATE	0.176478	0.057652	14.01	1.859	M *^
5	8.53	PYRUVATE	0.332508	0.094416	22.94	1.836	MB*^
Total:			1.752	0.412	100.00	9.251	

☐ Incorrect Retention Time
☑ Incorrect Baseline
☐ Incorrect Integration
☐ Other _____
Initials aa
Date 11/23/11

HK22 001 CCV24

original

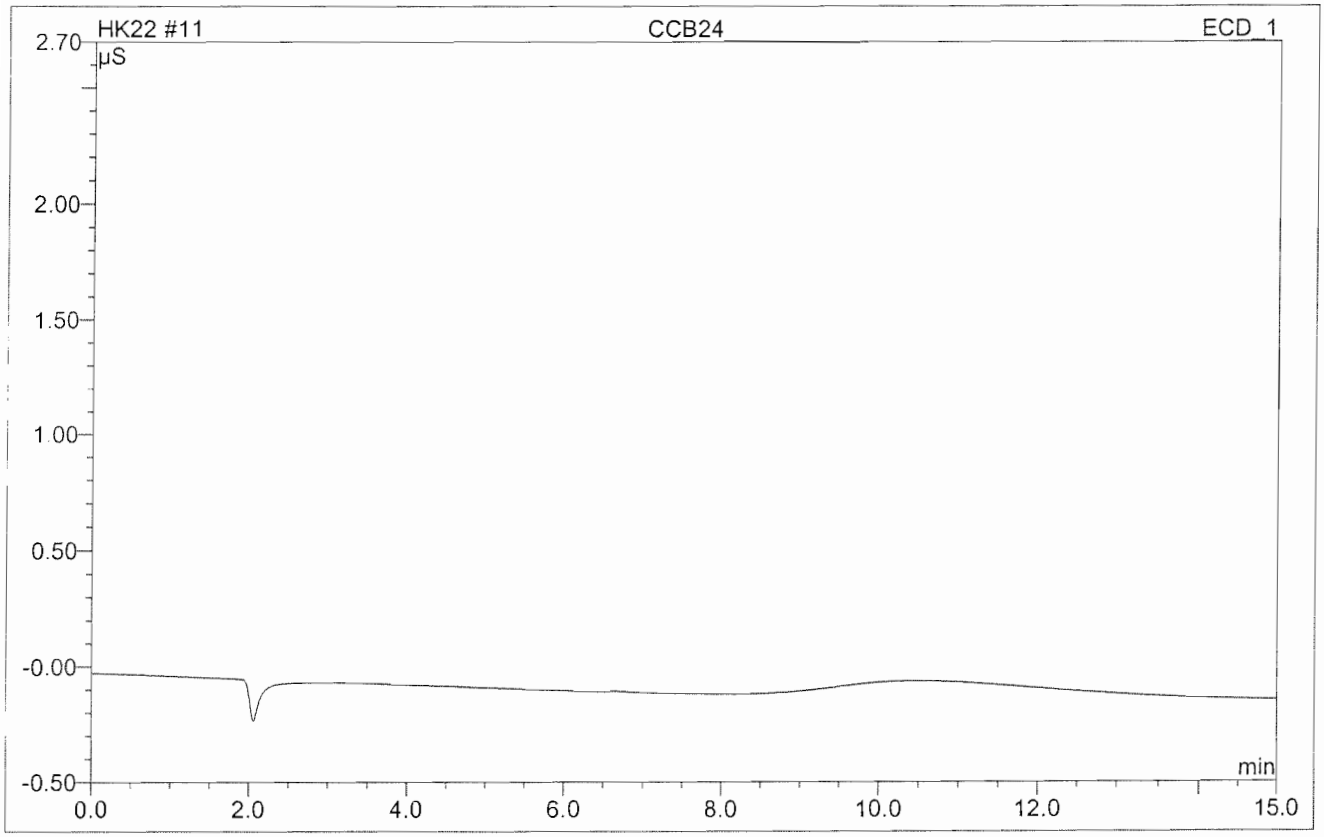
Sample Name:	**CCV24**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 11:31**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.68	n.a.	0.482104	0.080247	20.41	n.a.	BM
2	5.00	n.a.	0.475094	0.103097	26.22	n.a.	M
3	5.77	n.a.	0.280920	0.070021	17.81	n.a.	M
4	7.17	n.a.	0.170542	0.049173	12.51	n.a.	MB
5	8.53	n.a.	0.328592	0.090594	23.04	n.a.	BMB
Total:			1.737	0.393	100.00	0.000	

HK22 002 CCB24

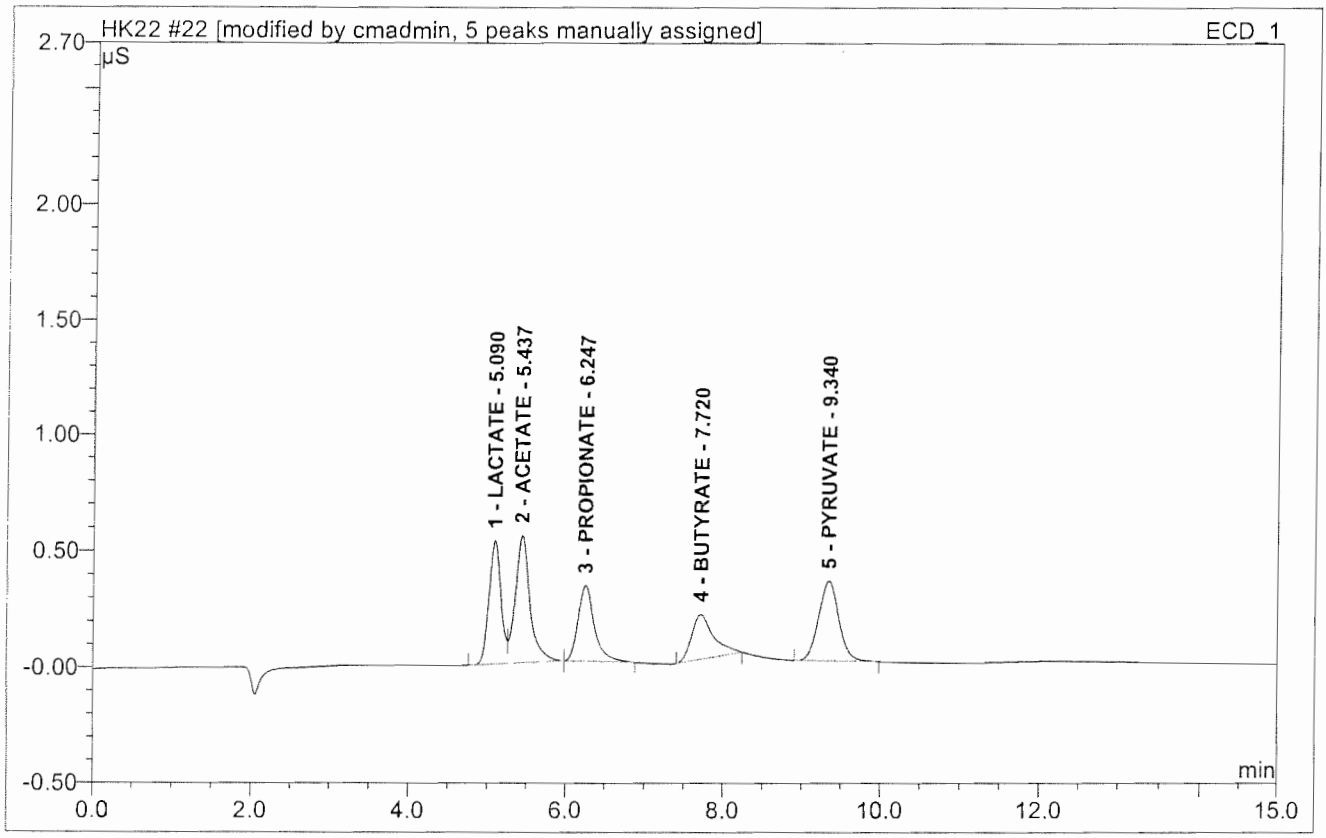
Sample Name:	**CCB24**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 12:13**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

HK22 013 CCV26

Sample Name:	**CCV26**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 19:45**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.09	LACTATE	0.528958	0.093883	20.46	2.122	BM *^
2	5.44	ACETATE	0.544038	0.119586	26.07	2.099	Mb*^
3	6.25	PROPIONATE	0.326022	0.080360	17.52	2.046	bMB*^
4	7.72	BUTYRATE	0.193358	0.062201	13.56	2.005	BMB*^
5	9.34	PYRUVATE	0.343212	0.102760	22.40	1.997	BMB*^
Total:			1.936	0.459	100.00	10.268	

☐ Incorrect Retention Time
☑ Incorrect Baseline
☐ Incorrect Integration
☐ Other _____
Initials aR
Date 11/23/11

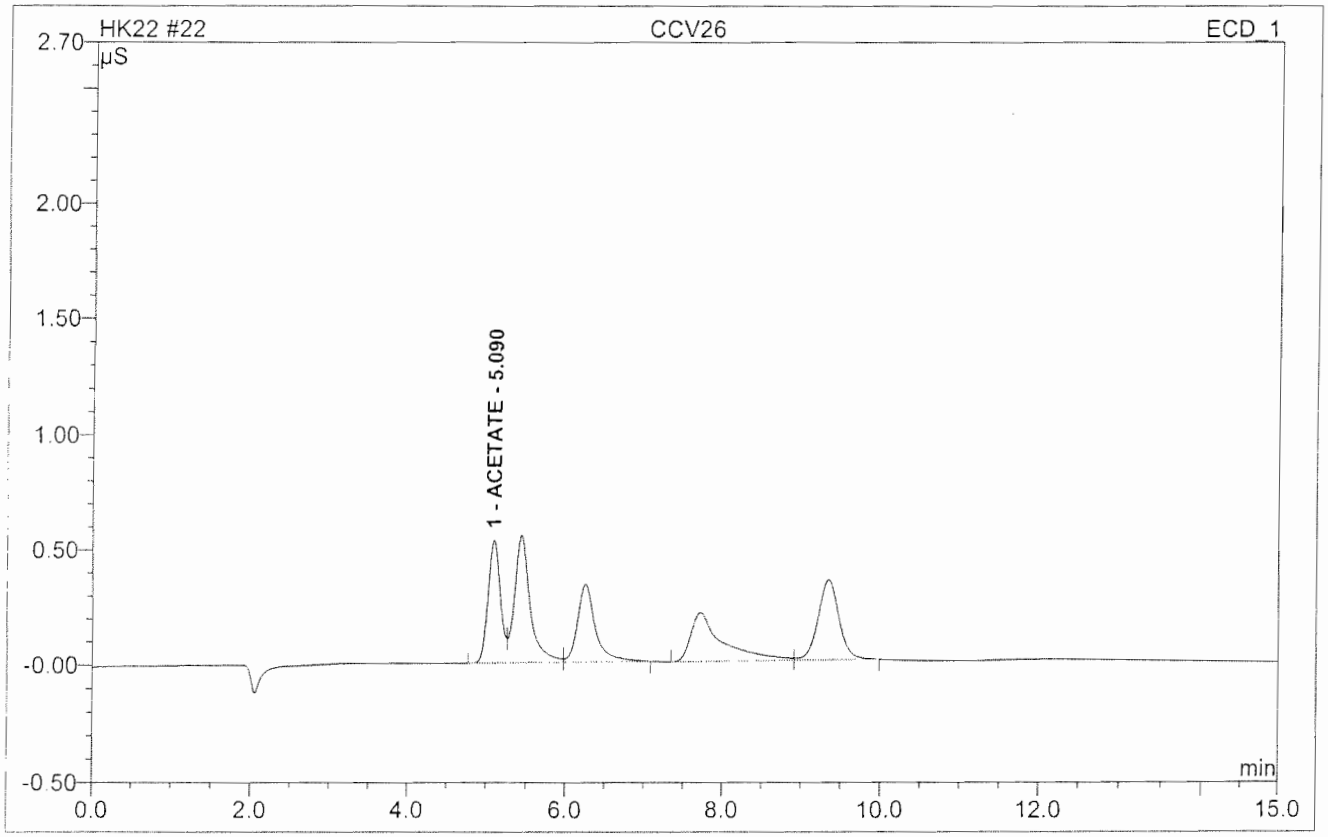
default/Integration

8126

HK22 013 CCV26

original

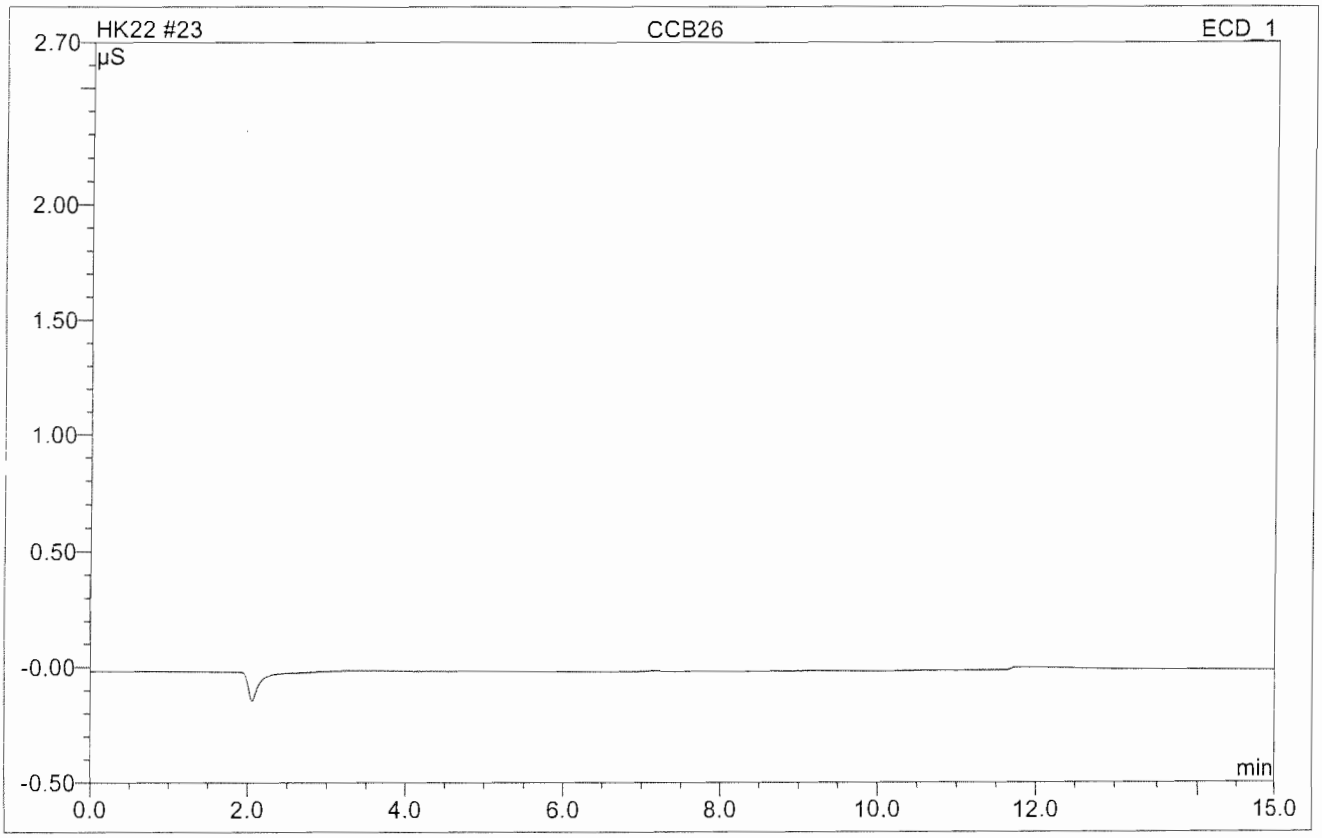
Sample Name:	**CCV26**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 19:45**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.09	ACETATE	0.532890	0.095367	18.35	1.673	BM
2	5.44	n.a.	0.552140	0.126960	24.43	n.a.	M
3	6.25	n.a.	0.337908	0.089988	17.32	n.a.	MB
4	7.72	n.a.	0.212934	0.099610	19.17	n.a.	BM
5	9.34	n.a.	0.348806	0.107761	20.74	n.a.	MB
Total:			1.985	0.520	100.00	1.673	

HK22 014 CCB26

Sample Name:	**CCB26**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 20:06**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-221

0AD6K15.met : 300M ICAL → Passed

-Linear Range :

S-0 → 0.0 ppm S-3 → 1.0 ppm

S-1 → 0.1 S-4 → 2.0

S-2 → 0.4 S-5 → 3.0

- ICV : 2ppm
- Sample Loop : 25uL
- Flow Rate : 1.50 mL/min
- Suppressor : ASRS 4mm
- SRS Current : 100 mA
- Column: Ion Pac AS11 HC, 4x250 mm
- Guard Column : Ion Pac AG16; 4x250mm

0AK010W: K101 , K084 & K035 (conf. only)

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK15
Method File:	0AD6K15.met
Analytical Batch:	0AK010W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID		
ICAL	SW12A-02-330	
ICV		332
CCV		331
LCS		332
MS	↓	327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: ce / AM

Date: 11/15/11

8130

Sequence: HK15
Operator: cmadmin

Printed: 11/17/2011 3:52:16 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK15	001	IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK15	002	S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK15	003	S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK15	004	S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK15	005	S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK15	006	S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK15	007	S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK15	008	ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK15	009	ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK15	010	CCV2	Unknown	100	25.0	ORG	OAD6K15	Finished	11/15/2011 11:52:01 PM	1.0000
11	HK15	011	CCB2	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 12:13:00 AM	1.0000
12	HK15	012	OAK010WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/16/2011 12:33:58 AM	1.0000
13	HK15	013	OAK010WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/16/2011 12:54:57 AM	1.0000
14	HK15	014	OAK010WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/16/2011 1:15:56 AM	1.0000
15	HK15	015	K101-01	Unknown	1	25.0	ORG	OAD6K15	Finished	11/16/2011 1:36:54 AM	1.0000
16	HK15	016	K101-02	Unknown	2	25.0	ORG	OAD6K15	Finished	11/16/2011 2:17:49 AM	1.0000
17	HK15	017	K101-03	Unknown	3	25.0	ORG	OAD6K15	Finished	11/16/2011 2:58:42 AM	1.0000
18	HK15	018	K101-04	Unknown	4	25.0	ORG	OAD6K15	Finished	11/16/2011 3:39:37 AM	1.0000
19	HK15	019	K101-05	Unknown	5	25.0	ORG	OAD6K15	Finished	11/16/2011 4:20:31 AM	1.0000
20	HK15	020	K101-05M	Unknown	6	25.0	ORG	OAD6K15	Finished	11/16/2011 5:01:24 AM	1.0000
21	HK15	021	K101-05S	Unknown	7	25.0	ORG	OAD6K15	Finished	11/16/2011 5:42:18 AM	1.0000
22	HK15	022	CCV4	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 6:23:12 AM	1.0000
23	HK15	023	CCB4	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 6:44:11 AM	1.0000
24	HK15	024	K084-01	Unknown	8	25.0	ORG	OAD6K15	Finished	11/16/2011 7:05:09 AM	1.0000
25	HK15	025	K084-02	Unknown	9	25.0	ORG	OAD6K15	Finished	11/16/2011 7:46:03 AM	1.0000
26	HK15	026	K084-03	Unknown	10	25.0	ORG	OAD6K15	Finished	11/16/2011 8:26:57 AM	1.0000
27	HK15	027	K084-04	Unknown	11	25.0	ORG	OAD6K15	Finished	11/16/2011 9:10:16 AM	1.0000

FINAL

Sequence: HK15
Operator: cmadmin

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Comment
1	HK15	
2	HK15	
3	HK15	
4	HK15	
5	HK15	
6	HK15	
7	HK15	
8	HK15	
9	HK15	
10	HK15	
11	HK15	
12	HK15	
13	HK15	
14	HK15	
15	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
17	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK15	
23	HK15	
24	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
25	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
26	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
27	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

FINAL

81132

Sequence: HK15
Operator: cmadmin

Printed: 11/17/2011 3:35:11 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK15	028	CCV6	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 11:30:24 AM	1.0000
29	HK15	029	CCB6	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 12:32:17 PM	1.0000
30	HK15	030	K084-05	Unknown	12	25.0	ORG	OAD6K15	Finished	11/16/2011 12:53:15 PM	1.0000
31	HK15	031	K084-06	Unknown	13	25.0	ORG	OAD6K15	Finished	11/16/2011 1:34:09 PM	1.0000
32	HK15	032	K035-01	Unknown	14	25.0	ORG	OAD6K15	Finished	11/16/2011 2:15:03 PM	5.0000
33	HK15	033	K035-01A	Unknown	15	25.0	ORG	OAD6K15	Finished	11/16/2011 2:55:56 PM	5.0000
34	HK15	034	CCV8	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 3:36:50 PM	1.0000
35	HK15	035	CCB8	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 3:57:49 PM	1.0000

FINAL

Sequence: HK15
Operator: cmadmin

Printed: 11/17/2011 3:35:11 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Comment
28	HK15	
29	HK15	
30	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
31	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
32	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
33	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
34	HK15	
35	HK15	

FINAL

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4 - 01 - 221

OAK014W ; 11K133 , 11K146

- HK18.008 & -.016 : Bad injection due to carry-over.
- HK18.015 : Record only, RR @ DF=5X due to matrix-interference.

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK18
Method File:	OADG K15.met
Analytical Batch:	OAK 014W.

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SW12A - 02 - 331
LCS	332
MS	327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: el

Date: 11/18/11

8135

Sequence: HK18
Operator: cmadmin

Printed: 11/21/2011 5:11:43 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 30

Created: 11/18/2011 8:44:19 AM by cmadmin
Last Update: 11/21/2011 5:09:22 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK18		IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK18		S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK18		S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK18		S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK18		S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK18		S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK18		S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK18		ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK18		ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK18	001	CCV18	Unknown	100	25.0	ORG	OAD6K15	Finished	11/18/2011 9:17:40 AM	1.0000
11	HK18	002	CCB18	Unknown	99	25.0	ORG	OAD6K15	Finished	11/18/2011 9:59:38 AM	1.0000
12	HK18	003	OAK014WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/18/2011 10:20:37 AM	1.0000
13	HK18	004	OAK014WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/18/2011 10:41:35 AM	1.0000
14	HK18	005	OAK014WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/18/2011 11:02:34 AM	1.0000
15	HK18	006	K133-03	Unknown	1	25.0	ORG	OAD6K15	Finished	11/18/2011 11:23:33 AM	5.0000
16	HK18	007	K133-03A	Unknown	2	25.0	ORG	OAD6K15	Finished	11/18/2011 12:24:21 PM	5.0000
17	HK18	008 [*]	K133-01	Unknown	3	25.0	ORG	OAD6K15	Finished	11/18/2011 1:05:15 PM	5.0000
18	HK18	009	K133-01M	Unknown	4	25.0	ORG	OAD6K15	Finished	11/18/2011 2:06:04 PM	5.0000
19	HK18	010	K133-01S	Unknown	5	25.0	ORG	OAD6K15	Finished	11/18/2011 3:06:52 PM	5.0000
20	HK18	011	K133-01R	Unknown	3	25.0	ORG	OAD6K15	Finished	11/18/2011 4:07:41 PM	5.0000
21	HK18	012	CCV20	Unknown	100	25.0	ORG	OAD6K15	Finished	11/18/2011 5:08:30 PM	1.0000
22	HK18	013	CCB20	Unknown	99	25.0	ORG	OAD6K15	Finished	11/18/2011 5:29:29 PM	1.0000
23	HK18	014	K146-01	Unknown	6	25.0	ORG	OAD6K15	Finished	11/18/2011 5:50:27 PM	1.0000
24	HK18	015 (*)	K146-02	Unknown	7	25.0	ORG	OAD6K15	Finished	11/18/2011 6:31:21 PM	1.0000
25	HK18	016 [*]	K146-03	Unknown	8	25.0	ORG	OAD6K15	Finished	11/18/2011 7:12:15 PM	1.0000
26	HK18	017	K146-04	Unknown	9	25.0	ORG	OAD6K15	Finished	11/18/2011 7:53:09 PM	1.0000
27	HK18	018	K146-05	Unknown	10	25.0	ORG	OAD6K15	Finished	11/18/2011 8:34:03 PM	1.0000

NOTE: [*]: Bad injection due to carry-over.
(*): Record only; RR @ DF=5X due to matrix-interference

81136

Chromeleon © Dionex Corporation, Version 6.70 Build 1820

FINAL

Sequence: HK18
Operator: cmadmin

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 30

Created: 11/18/2011 8:44:19 AM by cmadmin
Last Update: 11/21/2011 5:09:22 PM by cmadmin

No.	Sequence	Comment
1	HK18	
2	HK18	
3	HK18	
4	HK18	
5	HK18	
6	HK18	
7	HK18	
8	HK18	
9	HK18	
10	HK18	
11	HK18	
12	HK18	
13	HK18	
14	HK18	
15	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
16	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
17	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
18	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
19	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
20	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
21	HK18	
22	HK18	
23	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
24	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
25	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
26	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
27	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5

FINAL

Sequence: HK18
Operator: cmadmin

Printed: 11/21/2011 5:11:43 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 30

Created: 11/18/2011 8:44:19 AM by cmadmin
Last Update: 11/21/2011 5:09:22 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK18	019	K146-06	Unknown	11	25.0	ORG	OAD6K15	Finished	11/18/2011 9:14:57 PM	1.0000
29	HK18	020	CCV22	Unknown	100	25.0	ORG	OAD6K15	Finished	11/18/2011 9:55:50 PM	1.0000
30	HK18	021	CCB22	Unknown	99	25.0	ORG	OAD6K15	Finished	11/18/2011 10:16:49 PM	1.0000

FINAL

81138

Sequence: HK18
Operator: cmadmin

Printed: 11/21/2011 5:11:43 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 30

Created: 11/18/2011 8:44:19 AM by cmadmin
Last Update: 11/21/2011 5:09:22 PM by cmadmin

No.	Sequence	Comment
28	HK18	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
29	HK18	
30	HK18	

81139

FINAL

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EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4- 01 - 221

0AD6K15.met : 11K146, 11K174 & 11K184 & 11K101

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	4K22
Method File:	0AD6K15.met
Analytical Batch:	0AK016W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SW12A - 02 - 331
LCS	332
MS	337

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: [illegible]

Date: 11/22/11

8140

Sequence: HK22
Operator: cmadmin

Printed: 11/23/2011 9:38:34 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 39

Created: 11/22/2011 10:18:35 AM by cmadmin
Last Update: 11/23/2011 9:36:55 AM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK22		IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK22		S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK22		S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK22		S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK22		S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK22		S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK22		S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK22		ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK22		ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK22	001	CCV24	Unknown	100	25.0	ORG	OAD6K15	Finished	11/22/2011 11:31:44 AM	1.0000
11	HK22	002	CCB24	Unknown	99	25.0	ORG	OAD6K15	Finished	11/22/2011 12:13:41 PM	1.0000
12	HK22	003	OAK016WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/22/2011 12:34:40 PM	1.0000
13	HK22	004	OAK016WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/22/2011 12:55:39 PM	1.0000
14	HK22	005	OAK016WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/22/2011 1:16:38 PM	1.0000
15	HK22	006	K146-02	Unknown	1	25.0	ORG	OAD6K15	Finished	11/22/2011 2:19:34 PM	5.0000
16	HK22	007	K146-02A	Unknown	2	25.0	ORG	OAD6K15	Finished	11/22/2011 3:20:22 PM	5.0000
17	HK22	008	K146-03R	Unknown	3	25.0	ORG	OAD6K15	Finished	11/22/2011 4:21:11 PM	1.0000
18	HK22	009	K174-01	Unknown	4	25.0	ORG	OAD6K15	Finished	11/22/2011 5:02:05 PM	1.0000
19	HK22	010	K174-02	Unknown	5	25.0	ORG	OAD6K15	Finished	11/22/2011 5:42:59 PM	1.0000
20	HK22	011	K174-03	Unknown	6	25.0	ORG	OAD6K15	Finished	11/22/2011 6:23:52 PM	1.0000
21	HK22	012	K174-04	Unknown	7	25.0	ORG	OAD6K15	Finished	11/22/2011 7:04:46 PM	1.0000
22	HK22	013	CCV26	Unknown	100	25.0	ORG	OAD6K15	Finished	11/22/2011 7:45:40 PM	1.0000
23	HK22	014	CCB26	Unknown	99	25.0	ORG	OAD6K15	Finished	11/22/2011 8:06:39 PM	1.0000
24	HK22	015	K174-05	Unknown	8	25.0	ORG	OAD6K15	Finished	11/22/2011 8:27:38 PM	1.0000
25	HK22	016	K174-06	Unknown	9	25.0	ORG	OAD6K15	Finished	11/22/2011 9:08:32 PM	1.0000
26	HK22	017	K174-07	Unknown	10	25.0	ORG	OAD6K15	Finished	11/22/2011 9:49:25 PM	1.0000
27	HK22	018	K184-01	Unknown	11	25.0	ORG	OAD6K15	Finished	11/22/2011 10:30:19 PM	1.0000

FINAL

Sequence: HK22
Operator: cmadmin

Printed: 11/23/2011 9:38:34 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 39

Created: 11/22/2011 10:18:35 AM by cmadmin
Last Update: 11/23/2011 9:36:55 AM by cmadmin

No.	Sequence	Comment
1	HK22	
2	HK22	
3	HK22	
4	HK22	
5	HK22	
6	HK22	
7	HK22	
8	HK22	
9	HK22	
10	HK22	
11	HK22	
12	HK22	
13	HK22	
14	HK22	
15	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
16	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
17	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK22	
23	HK22	
24	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
25	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
26	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
27	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

FINAL

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Sequence: HK22
Operator: cmadmin

Printed: 11/23/2011 10:12:36 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 39

Created: 11/22/2011 10:18:35 AM by cmadmin
Last Update: 11/23/2011 10:06:22 AM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK22	019	K184-01M	Unknown	12	25.0	ORG	OAD6K15	Finished	11/22/2011 11:11:12 PM	1.0000
29	HK22	020	K184-01S	Unknown	13	25.0	ORG	OAD6K15	Finished	11/22/2011 11:52:06 PM	1.0000
30	HK22	021	K184-02	Unknown	14	25.0	ORG	OAD6K15	Finished	11/23/2011 12:33:00 AM	1.0000
31	HK22	022	K184-03	Unknown	15	25.0	ORG	OAD6K15	Finished	11/23/2011 1:13:54 AM	1.0000
32	HK22	023	K184-04	Unknown	16	25.0	ORG	OAD6K15	Finished	11/23/2011 1:54:48 AM	1.0000
33	HK22	024	K184-05	Unknown	17	25.0	ORG-SAMPLE	OAD6K15	Finished	11/23/2011 2:35:41 AM	1.0000
34	HK22	025	CCV28	Unknown	100	25.0	ORG	OAD6K15	Finished	11/23/2011 3:41:35 AM	1.0000
35	HK22	026	CCB28	Unknown	99	25.0	ORG	OAD6K15	Finished	11/23/2011 4:23:33 AM	1.0000
36	HK22	027	K101-04	Unknown	18	25.0	ORG	OAD6K15	Finished	11/23/2011 4:44:31 AM	5.0000
37	HK22	028	K101-04A	Unknown	19	25.0	ORG	OAD6K15	Finished	11/23/2011 5:45:20 AM	5.0000
38	HK22	029	CCV30	Unknown	100	25.0	ORG	OAD6K15	Finished	11/23/2011 7:07:08 AM	1.0000
39	HK22	030	CCB30	Unknown	99	25.0	ORG	OAD6K15	Finished	11/23/2011 7:28:07 AM	1.0000

FINAL

Sequence: HK22
Operator: cmadmin

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 39

Created: 11/22/2011 10:18:35 AM by cmadmin
Last Update: 11/23/2011 9:36:55 AM by cmadmin

No.	Sequence	Comment
28	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
29	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
30	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
31	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
32	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
33	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
34	HK22	
35	HK22	
36	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
37	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
38	HK22	
39	HK22	

FINAL

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K146

METHOD 2320B
TOTAL ALKALINITY

A total of five (5) water samples were received on 11/16/11 for Alkalinity analysis, Method 2320B in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for ALK011WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2320B
TOTAL ALKALINITY

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K146

Matrix : WATER
Instrument ID : E5

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ALK011WB	ND	1	NA	5.00	5.00	11/23/1114:53	NA	11E5K05003	NA	ALK011W	NA	NA
LCS1W	ALK011WL	207	1	NA	5.00	5.00	11/23/1115:00	NA	11E5K05004	NA	ALK011W	NA	NA
LCD1W	ALK011WC	206	1	NA	5.00	5.00	11/23/1115:07	NA	11E5K05005	NA	ALK011W	NA	NA
MW-70-PMW11A-138	K146-02	215	1	NA	5.00	5.00	11/23/1116:57	NA	11E5K05017	NA	ALK011W	11/16/1110:42	11/16/11
MW-70-PMW11B-139	K146-03	217	1	NA	5.00	5.00	11/23/1117:05	NA	11E5K05018	NA	ALK011W	11/16/1111:34	11/16/11
MW-70-PMW12A-140	K146-04	248	1	NA	5.00	5.00	11/23/1117:12	NA	11E5K05019	NA	ALK011W	11/16/1114:10	11/16/11
MW-70-PMW12B-142	K146-05	223	1	NA	5.00	5.00	11/23/1117:19	NA	11E5K05020	NA	ALK011W	11/16/1115:40	11/16/11
IR-70-FD-141	K146-06	250	1	NA	5.00	5.00	11/23/1117:28	NA	11E5K05021	NA	ALK011W	11/16/1114:30	11/16/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: METHOD 2320B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ALK011WB	ALK011WL	ALK011WC		
LAB FILE ID:	11E5K05003	11E5K05004	11E5K05005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1114:53	11/23/1115:00	11/23/1115:07	DATE RECEIVED:	NA
PREP. BATCH:	ALK011W	ALK011W	ALK011W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Total Alkalinity	ND	230	207	90	230	206	90	0	80-120	20

8117

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ALKALINITY

Note: For samples and relevent QCs/Standards analyzed, refer to attached analytical sequence.

☒ Titration end point: pH 4.5 ± 0.04

☒ Low alkalinity: pH 4.2 ± 0.04

MS/MSD amount of spike:

Comments: Method 310.1 for SDG 11K116

Book#: AAL-031

Instrument No.: ☐ 53 ☐ 97 ☒ E5

Analytical Batch: ALK011

Analytical Sequence: 11E5K05

SOP #	Rev. #
☒ EMAX-310.1	5
☒ EMAX-2320B	3
☐ EMAX-	

STANDARDS ID	CONC. (mg/L)
0.02N HCL SWR1-01-338	0.02
LCS SW1-01-402	230
MS/MSD NA	NA
ICV NA	NA

pH Buffer	ID
pH 4	SW1-01-341
pH 7	SW1-01-279
pH 10	SW1-01-396
pH 8.0 (Check)	SW1-01-347

Analyzed By: RC

Date: 11/23/11

Report Date: 11/23/2011 : 5:52 PM

PC-TitratION PLUS

pH and Alkalinity In-Run Report

Run Number 546 **Analytical Batch#** 11E5K05

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
1	ICV PH8	11E5K05	11/23/2011	2:44 PM	7.98	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	
2	RINSE	11E5K05	11/23/2011	2:49 PM	5.53	.00	.03	.04	.00	1.12	1.12	.00	.00	
3	ALK011WB	11E5K05	11/23/2011	2:53 PM	4.46	.00	.00	.01	.00	-.31	-.31	.00	.00	
4	ALK011WL	11E5K05	11/23/2011	3:00 PM	8.62	1.69	5.16	-1.00	67.66	206.59	71.28	135.32	.00	
5	ALK011WC	11E5K05	11/23/2011	3:07 PM	8.64	1.75	5.16	-1.00	69.83	206.49	66.83	139.66	.00	
6	K532-01	11E5K05	11/23/2011	3:15 PM	7.89	.00	2.85	-1.00	.00	114.05	114.05	.00	.00	
7	K532-02	11E5K05	11/23/2011	3:21 PM	7.98	.00	2.87	-1.00	.00	114.66	114.66	.00	.00	
8	K532-03	11E5K05	11/23/2011	3:28 PM	8.01	.00	2.87	-1.00	.00	114.70	114.70	.00	.00	
9	K116-02	11E5K05	11/23/2011	3:41 PM	6.61	.00	17.16	-1.00	.00	686.58	686.58	.00	.00	
10	K116-04	11E5K05	11/23/2011	3:49 PM	8.05	.00	7.64	-1.00	.00	305.61	305.61	.00	.00	
11	K116-04D	11E5K05	11/23/2011	3:59 PM	8.11	.00	7.72	-1.00	.00	308.86	308.86	.00	.00	
12	K116-06	11E5K05	11/23/2011	4:08 PM	7.60	.00	15.15	-1.00	.00	606.19	606.19	.00	.00	
13	K116-07	11E5K05	11/23/2011	4:19 PM	7.62	.00	15.21	-1.00	.00	608.20	608.20	.00	.00	
14	K119-01	11E5K05	11/23/2011	4:27 PM	7.83	.00	4.08	-1.00	.00	163.05	163.05	.00	.00	
15	K119-02	11E5K05	11/23/2011	4:41 PM	7.09	.00	29.27	-1.00	.00	1,170.88	1,170.88	.00	.00	
16	K119-03	11E5K05	11/23/2011	4:49 PM	7.80	.00	4.70	-1.00	.00	187.94	187.94	.00	.00	
17	K146-02	11E5K05	11/23/2011	4:57 PM	7.40	.00	5.37	-1.00	.00	214.93	214.93	.00	.00	
18	K146-03	11E5K05	11/23/2011	5:05 PM	7.63	.00	5.42	-1.00	.00	216.92	216.92	.00	.00	

Analyzed by: Rc Reviewed by: Rc Date: 11/23/11

PC-TitratION PLUS by Man-Tech Associates, Inc.

pH AND ALKALINITY IN-RUN REPORT.SRW

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Run Number 546 **Analytical Batch#** **11E5K05**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
19	K146-04	11E5K05	11/23/2011	5:12 PM	7.51	.00	6.20	-1.00	.00	248.07	248.07	.00	.00	
20	K146-05	11E5K05	11/23/2011	5:19 PM	7.48	.00	5.59	-1.00	.00	223.44	223.44	.00	.00	
21	K146-06	11E5K05	11/23/2011	5:28 PM	7.59	.00	6.24	-1.00	.00	249.62	249.62	.00	.00	
22	K174-01	11E5K05	11/23/2011	5:36 PM	7.61	.00	5.43	-1.00	.00	217.13	217.13	.00	.00	
23	K174-07	11E5K05	11/23/2011	5:43 PM	7.61	.00	5.44	-1.00	.00	217.44	217.44	.00	.00	
24	RINSE	11E5K05	11/23/2011	5:49 PM	6.17	.00	.08	.17	.00	-.22	-.22	.00	.00	

8159

Analyzed by: RC Reviewed by: RC Date: 11/28/11

pH AND ALKALINITY IN-RUN REPORT.SRW

PC-TitratION PLUS by Man-Tech Associates, Inc.

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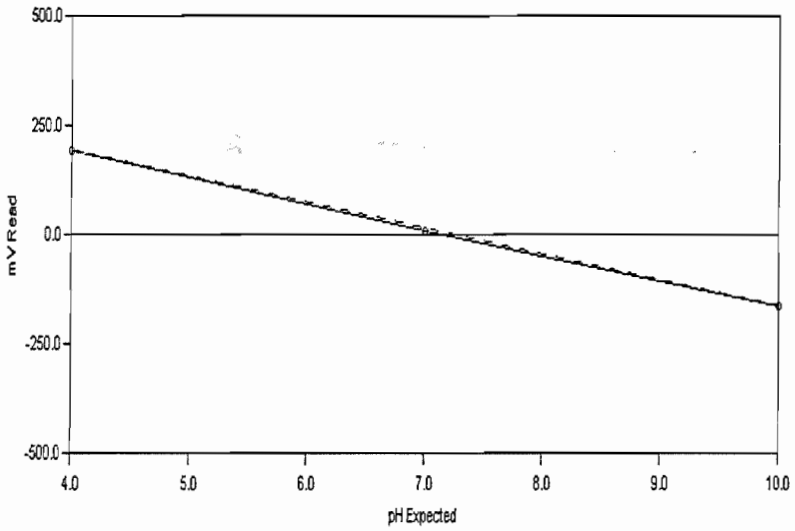
PC-TitratION PLUS
Calibration Report

Calibration Record # 284



Calibration Settings

Calibration ID	PH CAL 4-7-10	Date	11/23/2011	
Channel	1	Time	2:41 PM	
Probe Type	pH	Temperature	296.66 K	23.51 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit	

Calibration Results

Slope	-59.385	CorrCoeff	0.9998
Intercept	13.343	Equation: Y = (-59.385) X + (13.343)	

Calibration Validity **True** Operator

	Result	Minimum	Maximum
Slope	-59.385	-65.00	-53.00
Intercept	13.343	-40.00	40.00
Correlation Coefficient	0.9998	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	**Standard**	**Reading**
	4.00	193.35
	7.00	9.64
	10.00	-162.96

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PC-Titrate For Windows

Running List Report

Order Number - 111E5K05

	Schedule	Sample Id	Vial	Weight	Volume
1	PH CAL	CAL	1	.00	25.00
2	PH ONLY	ICV PH8	4	.00	25.00
3	PH-ALK	RINSE	5	.00	25.00
4	PH-ALK	ALK011WB	6	.00	25.00
5	PH-ALK	ALK011WL	7	.00	25.00
6	PH-ALK	ALK011WC	8	.00	25.00
7	PH-ALK	K532-01	9	.00	25.00
8	PH-ALK	K532-02	10	.00	25.00
9	PH-ALK	K532-03	11	.00	25.00
10	PH-ALK	K116-02	12	.00	25.00
11	PH-ALK	K116-04	13	.00	25.00
12	PH-ALK	K116-04D	14	.00	25.00
13	PH-ALK	K116-06	15	.00	25.00
14	PH-ALK	K116-07	16	.00	25.00
15	PH-ALK	K119-01	17	.00	25.00
16	PH-ALK	K119-02	18	.00	25.00
17	PH-ALK	K119-03	19	.00	25.00
18	PH-ALK	K146-02	20	.00	25.00
19	PH-ALK	K146-03	21	.00	25.00
20	PH-ALK	K146-04	22	.00	25.00
21	PH-ALK	K146-05	23	.00	25.00
22	PH-ALK	K146-06	24	.00	25.00
23	PH-ALK	K174-01	25	.00	25.00
24	PH-ALK	K174-07	26	.00	25.00
25	PH-ALK	RINSE	27	.00	25.00

PC-TitratION PLUS by Man-Tech Associates, Inc.

runninglist.SRW
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CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K146

METHOD 2540C
TOTAL DISSOLVED SOLIDS

A total of five (5) water samples were received on 11/16/11 for Total Dissolved Solids analysis, Method 2540C in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Balance calibration was checked as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TDK013WL/C were all within QC limits.

Matrix QC Sample
Sample duplicate was analyzed with the samples in this SDG. RPD was within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2540C
TOTAL DISSOLVED SOLIDS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K146

Matrix : WATER
Instrument ID : 40706360

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TDK013WB	ND	1	NA	20.0	20.0	11/22/1116:51	NA	TDK01301	NA	TDK013W	NA	NA
LCS1W	TDK013WL	1020	1	NA	20.0	20.0	11/22/1116:51	NA	TDK01302	NA	TDK013W	NA	NA
LCD1W	TDK013WC	1020	1	NA	20.0	20.0	11/22/1116:51	NA	TDK01303	NA	TDK013W	NA	NA
MW-70-PMW11A-138	K146-02	25200	1	NA	20.0	20.0	11/22/1116:51	NA	TDK01310	NA	TDK013W	11/16/1110:42	11/16/11
MW-70-PMW11B-139	K146-03	4200	1	NA	20.0	20.0	11/22/1116:51	NA	TDK01311	NA	TDK013W	11/16/1111:34	11/16/11
MW-70-PMW12A-140	K146-04	2590	1	NA	20.0	20.0	11/22/1116:51	NA	TDK01312	NA	TDK013W	11/16/1114:10	11/16/11
MW-70-PMW12B-142	K146-05	3890	1	NA	20.0	20.0	11/22/1116:51	NA	TDK01313	NA	TDK013W	11/16/1115:40	11/16/11
IR-70-FD-141	K146-06	2640	1	NA	20.0	20.0	11/22/1116:51	NA	TDK01314	NA	TDK013W	11/16/1114:30	11/16/11
IR-70-FD-141DUP	K146-06D	2630	1	NA	20.0	20.0	11/22/1116:51	NA	TDK01315	NA	TDK013W	11/16/1114:30	11/16/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: METHOD 2540C

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TDK013WB	TDK013WL	TDK013WC		
LAB FILE ID:	TDK01301	TDK01302	TDK01303		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1116:51	11/22/1116:51	11/22/1116:51	DATE RECEIVED:	NA
PREP. BATCH:	TDK013W	TDK013W	TDK013W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TDS	ND	1000	1020	102	1000	1020	102	0	80-120	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: METHOD 2540C

==========

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	IR-70-FD-141			
EMAX SAMP ID:	K146-06	K146-06D		
LAB FILE ID:	TDK01314	TDK01315		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/16/11 14:30
DATE ANALYZED:	11/22/1116:51	11/22/1116:51	DATE RECEIVED:	11/16/11
PREP. BATCH:	TDK013W	TDK013W		
CALIB. REF:	NA	NA		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
TDS	2640	2630	0	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
GRAVIMETRIC

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AGV-047

Balance ID: 40706360

Analytical Batch: TDk 013

SOP #	Rev. #
☐ EMAX-160.1	6
☐ EMAX-160.2	4
☐ EMAX-160.3	2
☐ EMAX-2540B	1
☑ EMAX-2540C	5
☐ EMAX-2540D	1

STANDARDS ID	CONC. (mg/L)
LCS SW2-02-0714	1000

Micropipette ID: 438481331

Analyzed By: NM

Date: 11/23/11

GRAVIMETRIC ANALYSES
RAW DATA

11TDK013.xls

EMAX LABORATORIES, INC.

Analytical Batch: TDK013 Instrument ID: 40706360 Oven Temp IN (°C): 180 Oven Temp OUT (°C): 180 SOP: EMAX-2540C Rev.1

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish #	Dish (g)	Date	Time	1st Dry Weight + Dish (g)	Date	Time	2nd Dry Weight + Dish (g)	Date	Time	3rd Dry Weight + Dish (g)	Date	Time	Difference 1st & 2nd Dry Wt. Rdg.	Difference 2nd & 3rd Dry Wt. Rdg. (<0.5mg)	NOTES
TDK01301	TDK013WB	100	B	71.3216	11/22/11	16:51	71.3217	11/23/11	9:39	71.3215	11/23/11	11:33	71.3215	11/23/11	11:33	-0.0002	0.0	
TDK01302	TDK013WL	20	L	21.4185	11/22/11	16:51	21.4392	11/23/11	9:40	21.439	11/23/11	11:33	21.439	11/23/11	11:33	-0.0002	0.0	
TDK01303	TDK013WC	20	C	21.4439	11/22/11	16:51	21.4644	11/23/11	9:40	21.4642	11/23/11	11:34	21.4642	11/23/11	11:34	-0.0002	0.0	
TDK01304	K186-06	20	1	21.5793	11/22/11	16:51	21.5983	11/23/11	9:40	21.5983	11/23/11	11:34	21.5983	11/23/11	11:34	0	0.0	
TDK01305	K186-08	20	2	21.4480	11/22/11	16:51	21.4644	11/23/11	9:41	21.4642	11/23/11	11:34	21.4642	11/23/11	11:34	-0.0002	0.0	
TDK01306	K186-08D	20	3	21.4824	11/22/11	16:52	21.4993	11/23/11	9:41	21.4992	11/23/11	11:35	21.4992	11/23/11	11:35	-0.0001	0.0	
TDK01307	K186-09	20	4	21.3272	11/22/11	16:52	21.3443	11/23/11	9:41	21.3444	11/23/11	11:35	21.3444	11/23/11	11:35	1E-04	0.0	
TDK01308	K186-10	20	5	21.4282	11/22/11	16:52	21.4729	11/23/11	9:41	21.4731	11/23/11	11:35	21.4731	11/23/11	11:35	0.0002	0.0	
TDK01309	K186-12	50	6	68.8540	11/22/11	16:52	68.8829	11/23/11	9:42	68.8829	11/23/11	11:36	68.8829	11/23/11	11:36	0	0.0	
TDK01310	K146-02	5	7	21.3556	11/22/11	16:52	21.4814	11/23/11	9:42	21.4818	11/23/11	11:36	21.4818	11/23/11	11:36	0.0004	0.0	
TDK01311	K146-03	20	8	21.4298	11/22/11	16:53	21.5136	11/23/11	9:42	21.5139	11/23/11	11:37	21.5139	11/23/11	11:37	0.0003	0.0	
TDK01312	K146-04	20	9	21.4949	11/22/11	16:53	21.5462	11/23/11	9:43	21.5466	11/23/11	11:37	21.5466	11/23/11	11:37	0.0004	0.0	
TDK01313	K146-05	20	10	21.6015	11/22/11	16:53	21.6794	11/23/11	9:43	21.6792	11/23/11	11:37	21.6792	11/23/11	11:37	-0.0002	0.0	
TDK01314	K146-06	20	11	21.5493	11/22/11	16:53	21.6017	11/23/11	9:43	21.6021	11/23/11	11:38	21.6021	11/23/11	11:38	0.0004	0.0	
TDK01315	K146-06D	20	12	21.4276	11/22/11	16:53	21.4798	11/23/11	9.44	21.4802	11/23/11	11:38	21.4802	11/23/11	11:38	0.0004	0.0	
TDK01316	K580-01	100	13	68.7494	11/22/11	16:53	68.7909	11/23/11	9.44	68.7909	11/23/11	11:39	68.7909	11/23/11	11:39	0	0.0	

11/23/11 NM

Beginning Balance Check

Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/22/11 16:43	PASSED
5	5.0000	11/22/11 16:43	PASSED
100	99.9976	11/22/11 16:51	PASSED

Ending Balance Check

Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/22/11 16:54	PASSED
5	5.0000	11/22/11 16:54	PASSED
100	99.9976	11/22/11 16:54	PASSED

Beginning Balance Check

Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1001	11/23/11 9:38	PASSED
5	5.0000	11/23/11 9:39	PASSED
100	99.9987	11/23/11 9:39	PASSED

Ending Balance Check

Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/23/11 11:39	PASSED
5	5.0000	11/23/11 11:39	PASSED
100	99.9992	11/23/11 11:40	PASSED

Acceptance Criteria: ± 0.1% OR 0.5 mg whichever is greater

LCS Conc 1000 mg/L MDL 10 mg/L RL 10 mg/L Initial Rdg by: NM Final Rdg by: NM Reviewed by: NM

Remarks: Date 11/23/11

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EMAX LABORATORIES INC.

GRAVIMETRIC CALCULATION

Analytical Batch: TDK013 Start Date/Time: 11/22/11 16:51 Temp IN(°C): 180

Balance ID: 40706360 End Date/Time: 11/23/11 11:39 Temp Out(°C): 180

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish (g)	Dry Weight + Dish (g)	SOLIDS (mg)	RESULT (mg/L)	NOTES
TDK01301	TDK013WB	100	71.3216	71.3215	-0.1000	ND	
TDK01302	TDK013WL	20	21.4185	21.439	20.5000	1020	102
TDK01303	TDK013WC	20	21.4439	21.4642	20.3000	1020	102
TDK01304	K186-06	20	21.5793	21.5983	19.0000	950	
TDK01305	K186-08	20	21.448	21.4642	16.2000	810	
TDK01306	K186-08D	20	21.4824	21.4992	16.8000	840	
TDK01307	K186-09	20	21.3272	21.3444	17.2000	860	
TDK01308	K186-10	20	21.4282	21.4731	44.9000	2240	
TDK01309	K186-12	50	68.854	68.8829	28.9000	578	
TDK01310	K146-02	5	21.3556	21.4818	126.2000	25200	
TDK01311	K146-03	20	21.4298	21.5139	84.1000	4200	
TDK01312	K146-04	20	21.4949	21.5466	51.7000	2590	
TDK01313	K146-05	20	21.6015	21.6792	77.7000	3890	
TDK01314	K146-06	20	21.5493	21.6021	52.8000	2640	
TDK01315	K146-06D	20	21.4276	21.4802	52.6000	2630	
TDK01316	K580-01	100	68.7494	68.7909	41.5000	415	

NM 11/23/11

LCS Concentration: 1000 mg/L MDL(mg/L): 10 Initial Reading by: NM

SOP: EMAX-2540C Rev.1 RL (mg/L): 10 Final Reading by: NM

Remarks:

Reviewed by: NM

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K146

METHOD 4500F
DISSOLVED HYDROGEN SULFIDE

A total of five (5) water samples were received on 11/16/11 for Dissolved Hydrogen Sulfide analysis, Method 4500F in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 4500F
Dissolved Hydrogen Sulfide

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K146

Matrix : WATER
Instrument ID : NA

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	HSK004WB	ND	1	NA	1.00	1.00	11/22/1112:59	NA	HSK00401	NA	HSK004W	NA	NA
MW-70-PMW11A-138	K146-02	ND	1	NA	1.00	1.00	11/22/1113:05	NA	HSK00404	NA	HSK004W	11/16/1110:42	11/16/11
MW-70-PMW11B-139	K146-03	ND	1	NA	1.00	1.00	11/22/1114:22	NA	HSK00405	NA	HSK004W	11/16/1111:34	11/16/11
MW-70-PMW12A-140	K146-04	ND	1	NA	1.00	1.00	11/22/1114:28	NA	HSK00406	NA	HSK004W	11/16/1114:10	11/16/11
MW-70-PMW12B-142	K146-05	ND	1	NA	1.00	1.00	11/22/1114:36	NA	HSK00407	NA	HSK004W	11/16/1115:40	11/16/11
MW-70-PMW12B-142DUP	K146-05D	ND	1	NA	1.00	1.00	11/22/1114:39	NA	HSK00407	NA	HSK004W	11/16/1115:40	11/16/11
IR-70-FD-141	K146-06	ND	1	NA	1.00	1.00	11/22/1114:42	NA	HSK00409	NA	HSK004W	11/16/1114:30	11/16/11

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
SULFIDE

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Book #: ASD-018

Analytical Batch: HSK004

Comments:

SOP #	Rev. #
☐ EMAX-376.1	3
☐ EMAX-9034	0
☐ EMAX-4500-S2F	1
☑ EMAX-4500-S2H	0
☐ EMAX-	

STANDARDS ID	conc.
LCS SWI-01-422	8.48
Spike NA	NA
$Na_2S_2O_3$ Standard SWRI-01-384	0.0248
Iodine SWRI-01-465	0.0250
HCl SWPI-007-60-03	6N
Indicator SWRI-01-340	–

Analyzed By: NM

Date: 11/22/11

SM4500-S^{2} H

EMAX LABORATORIES, INC.

ANALYSIS FOR UN-IONIZED HYDROGEN SULFIDE

Method SM4500-S2-H

Analytical Batch: HSK004

Data File Name	Lab Sample ID	Sulfide	Unit	Date Time	Temp. °C	pH	Conductivity µS/cm	H2S	Unit	COMMENTS
HSK0041	HSK004WB	ND	mg/L	11/22/11 12:59				ND	mg/L	
HSK0042	HSK004WL	7.06	mg/L	11/22/11 13:00				#VALUE!	mg/L	
HSK0043	HSK004WC	7.02	mg/L	11/22/11 13:03				#VALUE!	mg/L	
HSK0044	K146-02	ND	mg/L	11/22/11 13:05	24.6	6.93	34800	ND	mg/L	
HSK0045	K146-03	ND	mg/L	11/22/11 14:22	24.6	7.14	6560	ND	mg/L	
HSK0046	K146-04	ND	mg/L	11/22/11 14:28	24.6	7.03	4440	ND	mg/L	
HSK0047	K146-05	ND	mg/L	11/22/11 14:36	24.6	6.97	6070	ND	mg/L	
HSK0048	K146-05D	ND	mg/L	11/22/11 14:39	24.6	6.97	6070	ND	mg/L	
HSK0049	K146-06	ND	mg/L	11/22/11 14:42	24.7	6.99	4430	ND	mg/L	
HSK00410	K174-01	ND	mg/L	11/22/11 14:48	25.1	7.15	9980	ND	mg/L	
HSK00411	K174-07	ND	mg/L	11/22/11 14:53	25.2	7.3	9960	ND	mg/L	

NM 11/22/11

$$pK_1 = 32.5 + 1519.44/T - 15.672\log_{10}T + 0.02722T$$

$$A = 0.7083 - 2.277x10^{-3}T + 5.399x10^{-6}T^2$$

$$I = 1.6x10^{-5}\,Conductivity$$

$$pf_m = A\left(\frac{\sqrt{I}}{1+\sqrt{I}} - 0.3\right)$$

$$K'_1 = 10^{-pK_1+2pf_m}$$

$$H^+ = 10^{-pH+pf_m}$$

$$H_2S = \left(\frac{S_T}{1+\frac{K'_1}{H^+}}\right)$$

Analyzed by: NM

Reviewed by: NM

Date: 11/22/2011

Where: T(°K)= T°C+272.15 pK1=dissociation constant for zero ionic strength A= Debye-Huckel Parameter I= Ionic Strength pfm=negative logarithm of the monovalent ion activity coefficient K'_1=conditional ionization constanct H^+=Hydrogen ion concentration S_T=Total Sulfide Concentration

EMAX LABORATORIES, INC.

ANALYSIS FOR SULFIDE

Method: SM4500-S2-H Analytical Batch: HSK004 Book #: ASD-018 Page: 15

Data File Name	Lab Sample ID	V_e (ml)	V_T (ml)	Volume of Titant V_t (ml)	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Sulfide	Sample Result	Flag J	Unit
HSK0041	HSK004WB	100	2.5	2.49	11/22/11	12:59:27	0.11968	ND		mg/L
HSK0042	HSK004WL	100	2.5	0.74	11/22/11	13:00:24	7.06368	7.06		mg/L
HSK0043	HSK004WC	100	2.5	0.75	11/22/11	13:03:35	7.024	7.02		mg/L
HSK0044	K146-02	100	2.5	2.54	11/22/11	13:05:59	-0.07872	ND		mg/L
HSK0045	K146-03	100	2.5	2.45	11/22/11	14:22:36	0.2784	ND		mg/L
HSK0046	K146-04	100	2.5	2.53	11/22/11	14:28:17	-0.03904	ND		mg/L
HSK0047	K146-05	100	2.5	2.55	11/22/11	14:36:19	-0.1184	ND		mg/L
HSK0048	K146-05D	100	2.5	2.56	11/22/11	14:39:07	-0.15808	ND		mg/L
HSK0049	K146-06	100	2.5	2.53	11/22/11	14:42:53	-0.03904	ND		mg/L
HSK00410	K174-01	100	2.5	2.53	11/22/11	14:48:23	-0.03904	ND		mg/L
HSK00411	K174-07	100	2.5	2.53	11/22/11	14:53:32	-0.03904	ND		mg/L

NM 11/22/11

STANDARDIZATION

V_I (ml)	V_{Na2SO3} (ml)	DATE	TIME	Titrant Na_2SO_3 (N)
Average Normality of Iodine (NI)=				**0.025**

☑ Standard Purchased as Certified Solution

$$N_I = \frac{(N * V)_{Na_2SO_3}}{V_I}$$

MISCELLANEOUS INFORMATION

Standard	Concentration		Unit
Iodine	0.025		N
$Na_2S_2O_3$	0.0248		N
LCS [WATER | SOIL]	8.48	84.8	mg/L | mg/Kg
MDL [WATER | SOIL]	1	10	mg/L | mg/Kg
RL	1	10	mg/L | mg/Kg

$$S(mg/L) = \frac{[(V_I * N_I) - (V_t * N_t)](16{,}000)}{V_S}$$

MS/MSD	TV=	8.48	mg/L
ID	Result (mg/L)	%Rec.	RPD

Comments:

Analyzed By: NM

8161

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K146

METHOD SM5310B
TOC

A total of five (5) water samples were received on 11/16/11 for Total Organic Carbon analysis, Method SM5310B in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TCK015WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD SM5310B
TOC

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K146

Matrix : WATER
Instrument ID : I62

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
LCS1W	TCK015WL	24.4	1	NA	1.00	0.500	11/18/1121:31	NA	TCK010-33	TCK010-26	TCK015W	NA	NA
LCD1W	TCK015WC	25.4	1	NA	1.00	0.500	11/18/1121:48	NA	TCK010-34	TCK010-26	TCK015W	NA	NA
MW-70-PMW11A-138	K146-02	2.40	1	NA	1.00	0.500	11/19/1102:25	NA	TCK010-55	TCK010-50	TCK015W	11/16/1110:42	11/16/11
MW-70-PMW11B-139	K146-03	2.12	1	NA	1.00	0.500	11/19/1102:36	NA	TCK010-56	TCK010-50	TCK015W	11/16/1111:34	11/16/11
MW-70-PMW12A-140	K146-04	4.66	1	NA	1.00	0.500	11/19/1102:49	NA	TCK010-57	TCK010-50	TCK015W	11/16/1114:10	11/16/11
MW-70-PMW12B-142	K146-05	1.78	1	NA	1.00	0.500	11/19/1103:00	NA	TCK010-58	TCK010-50	TCK015W	11/16/1115:40	11/16/11
IR-70-FD-141	K146-06	4.58	1	NA	1.00	0.500	11/19/1103:12	NA	TCK010-59	TCK010-50	TCK015W	11/16/1114:30	11/16/11
MBLK1W	TCK015WQ	ND	1	NA	1.00	0.500	11/19/1103:23	NA	TCK010-60	TCK010-50	TCK015W	NA	NA

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K146
METHOD: METHOD SM5310B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TCK015WQ	TCK015WL	TCK015WC		
LAB FILE ID:	TCK010-60	TCK010-33	TCK010-34		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/19/1103:23	11/18/1121:31	11/18/1121:48	DATE RECEIVED:	NA
PREP. BATCH:	TCK015W	TCK015W	TCK015W		
CALIB. REF:	TCK010-50	TCK010-26	TCK010-26		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	ND	25.0	24.4	98	25.0	25.4	101	4	85-115	20

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EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TOC

	Date	Time
Start	11/18/11	1320
End	11/19/11	0344

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

TCK014W/15W
K123 9060
K131 415.1
K104 ↓ DOC
K051
K133 5310B
K146 ↓

Sample K133-03 was diluted prior to analysis due to its smell

TCK010-35 not evaluated due to bad injection

2 M HCl SW4-01-223

Book #:	A62-020
Instrument No.:	62
Pipette ID:	039380025
	SW3-01-33
	SI1A-01-4
Balance ID:	40706360
Analytical Sequence:	TCK010
Method File:	TCK010
Analytical Batch:	TCK014W/15W

SOP #	Rev. #
☑ EMAX-415.1	2
☑ EMAX-5310B	1
☑ EMAX-9060	2
☐ EMAX-	

STANDARDS ID		CONC. (mg/L)
S0	nanopure	0
S1	SW10B-04-174	1
S2	↓	5
S3		10
S4		40
S5		80
S6	—	—
ICV/LCS	SW10B-04-178	25
CCV	↓ -179	25

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ TOC	
☐	

Analyzed By: AM

Date: 11/18/11

	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
1	Standard	NPOC	ICAL	TCK010-01	0A-123456-	C:\Program	1.000		
2	Control	NPOC	ICV	TCK010-02	0A-123456-	C:\Program	1.000	NPOC:24.67 mg/L	
3	Unknown	NPOC	ICB	TCK010-03	0A-123456-	C:\Program	1.000	NPOC:0.09412 mg	
4	Unknown	NPOC	HCO3\CO3	TCK010-04	0A-123456-	C:\Program	1.000	NPOC:0.1231 mg/	
5	Unknown	NPOC	TCK014WB	TCK010-05	0A-123456-	C:\Program	1.000	NPOC:0.02313 mg	
6	Unknown	NPOC	TCK014WL	TCK010-06	0A-123456-	C:\Program	1.000	NPOC:24.50 mg/L	
7	Unknown	NPOC	TCK014WC	TCK010-07	0A-123456-	C:\Program	1.000	NPOC:24.57 mg/L	
8	Unknown	NPOC	K123-01	TCK010-08	0A-123456-	C:\Program	1.000	NPOC:2.071 mg/L	PH<2
9	Unknown	NPOC	K123-03	TCK010-09	0A-123456-	C:\Program	1.000	NPOC:3.507 mg/L	PH<2
10	Unknown	NPOC	K123-04	TCK010-10	0A-123456-	C:\Program	1.000	NPOC:3.567 mg/L	PH<2
11	Unknown	NPOC	K123-05	TCK010-11	0A-123456-	C:\Program	1.000	NPOC:1.925 mg/L	PH<2
12	Unknown	NPOC	K131-04T	TCK010-12	0A-123456-	C:\Program	20.00	NPOC:534.5 mg/L	DF=20
13	Unknown	NPOC	K131-05R	TCK010-13	0A-123456-	C:\Program	1.000	NPOC:17.44 mg/L	
14	Control	NPOC	CCV1	TCK010-14	0A-123456-	C:\Program	1.000	NPOC:24.53 mg/L	
15	Unknown	NPOC	CCB1	TCK010-15	0A-123456-	C:\Program	1.000	NPOC:0.1076 mg/	
16	Unknown	NPOC	K104-14R	TCK010-16	0A-123456-	C:\Program	1.000	NPOC:31.40 mg/L	
17	Unknown	NPOC	K104-14M	TCK010-17	0A-123456-	C:\Program	1.000	NPOC:56.46 mg/L	
18	Unknown	NPOC	K104-14S	TCK010-18	0A-123456-	C:\Program	1.000	NPOC:56.32 mg/L	
19	Unknown	NPOC	K096-02R	TCK010-19	0A-123456-	C:\Program	1.000	NPOC:1.918 mg/L	
20	Unknown	NPOC	K096-03R	TCK010-20	0A-123456-	C:\Program	1.000	NPOC:1.858 mg/L	
21	Unknown	NPOC	K096-04R	TCK010-21	0A-123456-	C:\Program	1.000	NPOC:12.86 mg/L	
22	Unknown	NPOC	K096-05R	TCK010-22	0A-123456-	C:\Program	1.000	NPOC:5.377 mg/L	
23	Unknown	NPOC	K096-06R	TCK010-23	0A-123456-	C:\Program	1.000	NPOC:1.812 mg/L	
24	Unknown	NPOC	K096-07R	TCK010-24	0A-123456-	C:\Program	1.000	NPOC:2.740 mg/L	
25	Unknown	NPOC	K096-09R	TCK010-25	0A-123456-	C:\Program	1.000	NPOC:2.385 mg/L	
26	Control	NPOC	CCV2	TCK010-26	0A-123456-	C:\Program	1.000	NPOC:23.99 mg/L	
27	Unknown	NPOC	CCB2	TCK010-27	0A-123456-	C:\Program	1.000	NPOC:0.3854 mg/	
28	Unknown	NPOC	K096-10R	TCK010-28	0A-123456-	C:\Program	1.000	NPOC:2.886 mg/L	
29	Unknown	NPOC	K096-11R	TCK010-29	0A-123456-	C:\Program	1.000	NPOC:2.976 mg/L	
30	Unknown	NPOC	K096-12R	TCK010-30	0A-123456-	C:\Program	1.000	NPOC:2.248 mg/L	
31	Unknown	NPOC	K096-13R	TCK010-31	0A-123456-	C:\Program	1.000	NPOC:2.044 mg/L	
32	Unknown	NPOC	K096-14R	TCK010-32	0A-123456-	C:\Program	1.000	NPOC:~~2.129~~ mg/L	2.248 mg/L
33	Unknown	NPOC	TCK015WL	TCK010-33	0A-123456-	C:\Program	1.000	NPOC:24.41 mg/L	
34	Unknown	NPOC	TCK015WC	TCK010-34	0A-123456-	C:\Program	1.000	NPOC:25.35 mg/L	
35	Unknown	NPOC	TCK015WB	TCK010-35	0A-123456-	C:\Program	1.000	NPOC:0.6814 mg/	Bad inj - not evaluated
36	Unknown	NPOC	K096-15R	TCK010-36	0A-123456-	C:\Program	1.000	NPOC:29.23 mg/L	
37	Unknown	NPOC	K096-16R	TCK010-37	0A-123456-	C:\Program	1.000	NPOC:15.46 mg/L	
38	Control	NPOC	CCV3	TCK010-38	0A-123456-	C:\Program	1.000	NPOC:24.88 mg/L	
39	Unknown	NPOC	CCB3	TCK010-39	0A-123456-	C:\Program	1.000	NPOC:0.2095 mg/	
40	Unknown	NPOC	K096-18R	TCK010-40	0A-123456-	C:\Program	1.000	NPOC:7.769 mg/L	
41	Unknown	NPOC	K096-19R	TCK010-41	0A-123456-	C:\Program	1.000	NPOC:8.538 mg/L	
42	Unknown	NPOC	K096-20R	TCK010-42	0A-123456-	C:\Program	1.000	NPOC:2.465 mg/L	
43	Unknown	NPOC	K096-21R	TCK010-43	0A-123456-	C:\Program	1.000	NPOC:2.556 mg/L	
44	Unknown	NPOC	K096-22R	TCK010-44	0A-123456-	C:\Program	1.000	NPOC:1.478 mg/L	
45	Unknown	NPOC	K096-23R	TCK010-45	0A-123456-	C:\Program	1.000	NPOC:2.093 mg/L	
46	Unknown	NPOC	K133-01	TCK010-46	0A-123456-	C:\Program	1.000	NPOC:~~2.241~~ mg/L	2.360 mg/L PH<2
47	Unknown	NPOC	K133-01M	TCK010-47	0A-123456-	C:\Program	1.000	NPOC:26.52 mg/L	
48	Unknown	NPOC	K133-01S	TCK010-48	0A-123456-	C:\Program	1.000	NPOC:27.11 mg/L	
49	Unknown	NPOC	K133-02	TCK010-49	0A-123456-	C:\Program	1.000	NPOC:2.011 mg/L	PH<2
50	Control	NPOC	CCV4	TCK010-50	0A-123456-	C:\Program	1.000	NPOC:24.53 mg/L	
51	Unknown	NPOC	CCB4	TCK010-51	0A-123456-	C:\Program	1.000	NPOC:0.2844 mg/	
52	Unknown	NPOC	K133-03	TCK010-52	0A-123456-	C:\Program	5.000	NPOC:70.51 mg/L	PH<2; DF=5
53	Unknown	NPOC	K133-04	TCK010-53	0A-123456-	C:\Program	1.000	NPOC:1.699 mg/L	PH<2
54	Unknown	NPOC	K133-05	TCK010-54	0A-123456-	C:\Program	1.000	NPOC:1.603 mg/L	PH<2
55	Unknown	NPOC	K146-02	TCK010-55	0A-123456-	C:\Program	1.000	NPOC:2.403 mg/L	PH<2
56	Unknown	NPOC	K146-03	TCK010-56	0A-123456-	C:\Program	1.000	NPOC:2.119 mg/L	PH<2
57	Unknown	NPOC	K146-04	TCK010-57	0A-123456-	C:\Program	1.000	NPOC:4.659 mg/L	PH<2
58	Unknown	NPOC	K146-05	TCK010-58	0A-123456-	C:\Program	1.000	NPOC:1.778 mg/L	PH<2
59	Unknown	NPOC	K146-06	TCK010-59	0A-123456-	C:\Program	1.000	NPOC:4.581 mg/L	PH<2
60	Unknown	NPOC	TCK015WQ	TCK010-60	0A-123456-	C:\Program	1.000	NPOC:0.08472 mg	
61	Control	NPOC	CCV5	TCK010-61	0A-123456-	C:\Program	1.000	NPOC:24.16 mg/L	
62	Unknown	NPOC	CCB5	TCK010-62	0A-123456-	C:\Program	1.000	NPOC:0.07555 mg	
63									
64									
65									
66						FINAL			
67									

Am 11/21/11

Am 11/21/11

Instr.Information

System	toc
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Cal. Curve

Sample Name:	ICAL
Sample ID:	TCK010-01
Cal. Curve:	TCK010.2011_11_18_13_12_32.cal

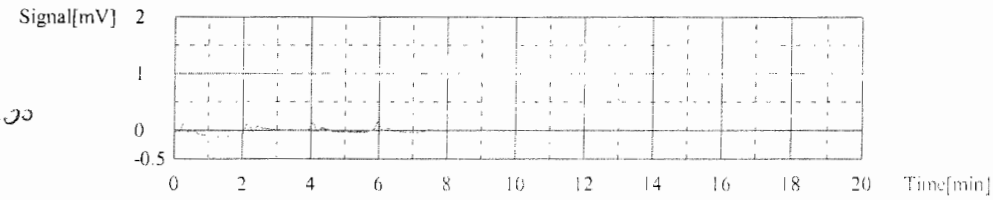
Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.000	50uL	1	*******		11/18/11 01:20:41 PM
2	0.000	50uL	1	*******		11/18/11 01:22:45 PM
3	0.000	50uL	1	*******		11/18/11 01:24:49 PM
4	0.000	50uL	1	*******		11/18/11 01:26:52 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 0.000

$\frac{\text{mean area}}{\text{slope}} = \frac{0.000}{2.218} = 0.0000$

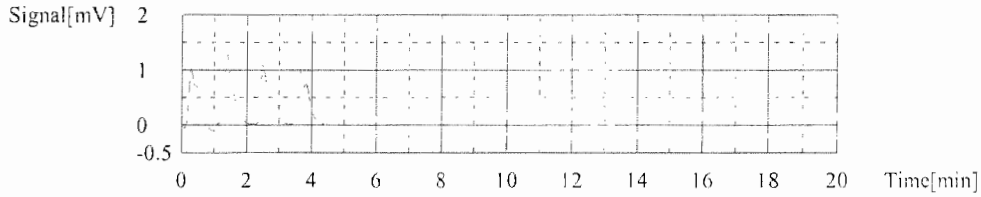


Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	2.178	50uL	10	*******		11/18/11 01:35:07 PM
2	2.293	50uL	10	*******		11/18/11 01:36:24 PM
3	2.171	50uL	10	*******		11/18/11 01:37:42 PM
4	2.226	50uL	10	*******		11/18/11 01:39:01 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 2.217

$\frac{\bar{A}}{m} = \frac{2.217}{2.218} = 0.9995$



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	10.74	50uL	2	*******		11/18/11 01:45:26 PM
2	10.76	50uL	2	*******		11/18/11 01:46:46 PM
3	10.94	50uL	2	*******		11/18/11 01:48:03 PM
4	10.88	50uL	2	*******		11/18/11 01:49:21 PM

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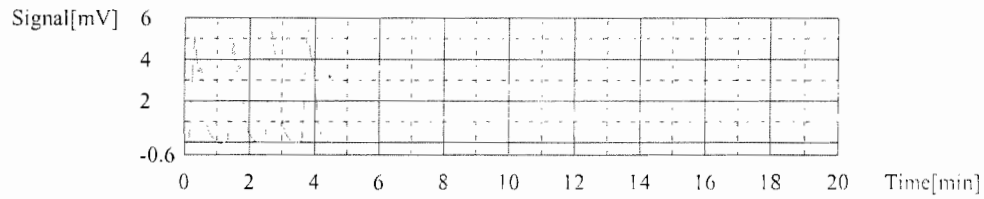
Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 10.83

$\frac{\bar{A}}{m} = \frac{10.83}{2.218} = 4.883$

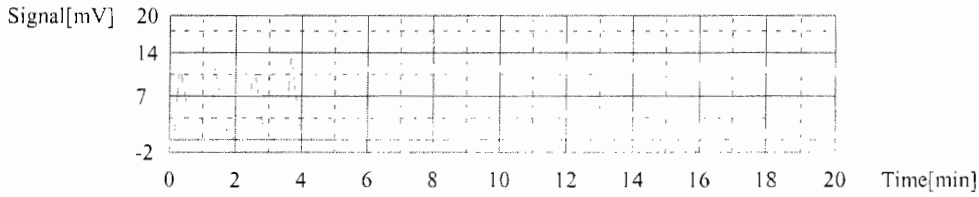


Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	21.49	50uL	1	*******		11/18/11 01:54:57 PM
2	21.63	50uL	1	*******		11/18/11 01:56:16 PM
3	21.52	50uL	1	*******		11/18/11 01:57:34 PM
4	21.66	50uL	1	*******		11/18/11 01:58:49 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 21.57

$\frac{\bar{A}}{m} = \frac{21.57}{2.218} = 9.725$

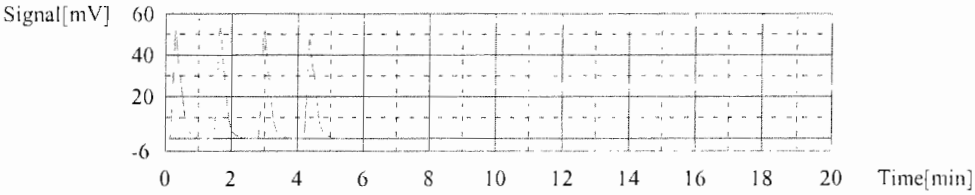


Conc: 40.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	86.67	50uL	2	*******		11/18/11 02:07:19 PM
2	86.34	50uL	2	*******		11/18/11 02:08:49 PM
3	87.24	50uL	2	*******		11/18/11 02:10:22 PM
4	86.54	50uL	2	*******		11/18/11 02:11:54 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 86.70

$\frac{\bar{A}}{m} = \frac{86.70}{2.218} = 39.09$

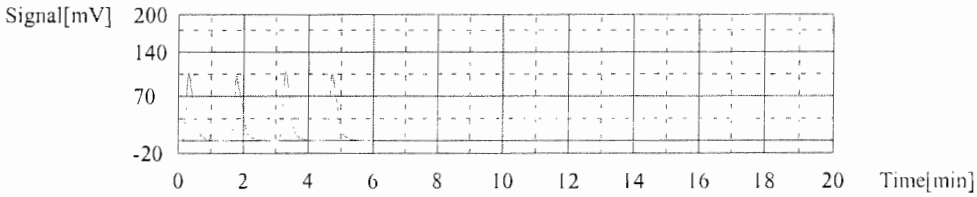


Conc: 80.00mg/L

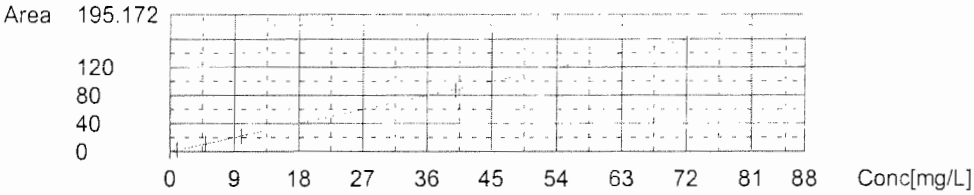
No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	177.7	50uL	1	*******		11/18/11 02:17:55 PM
2	178.5	50uL	1	*******		11/18/11 02:19:34 PM
3	177.2	50uL	1	*******		11/18/11 02:21:11 PM
4	177.9	50uL	1	*******		11/18/11 02:22:53 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 177.8

$\frac{\bar{A}}{m} = \frac{177.8}{2.218} = 80.16$



Slope: 2.218
Intercept 0.000
r^2 0.999854



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Control Sample

Sample Name: ICV
Sample ID: TCK010-02
Method: TCK010.tpl
Chk. Result Control value: 24.67 / Control exceeds range!

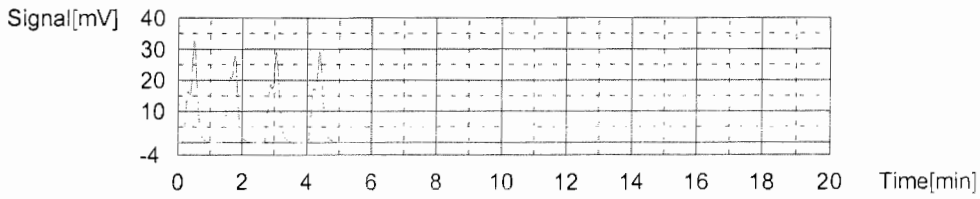
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:24.67 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.33	24.95mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 02:30:51 PM
2	54.60	24.62mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 02:32:18 PM
3	55.12	24.85mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 02:33:49 PM
4	53.85	24.28mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 02:35:15 PM

Mean Area 54.73
Mean Conc. 24.67mg/L



Sample

Sample Name: ICB
Sample ID: TCK010-03
Origin: TCK010.cal
Chk. Result

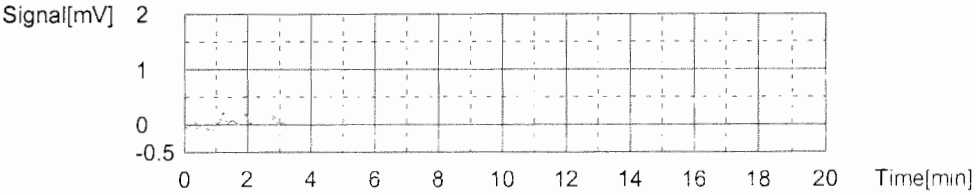
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.09412 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2227	0.1004mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 02:42:43 PM
2	0.1957	0.08824mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 02:43:36 PM
3	0.2984	0.1345mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 02:44:40 PM
4	0.1182	0.05329mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 02:45:28 PM

Mean Area 0.2087
Mean Conc. 0.09412mg/L



Sample

Sample Name: HCO3\CO3
Sample ID: TCK010-04
Origin: TCK010.cal
Chk. Result

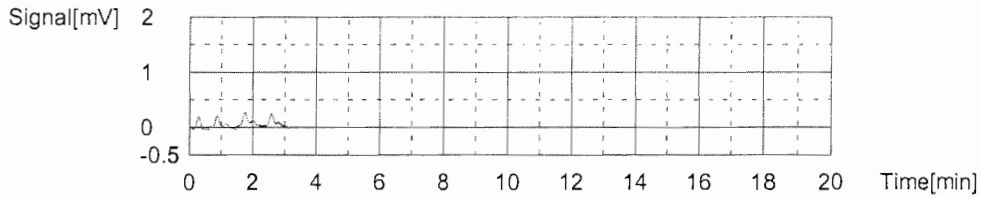
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1231 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1941	0.08752mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 03:39:41 PM
2	0.2919	0.1316mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 03:40:45 PM
3	0.3408	0.1537mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 03:41:47 PM
4	0.2651	0.1195mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 03:42:50 PM

Mean Area 0.2730
Mean Conc. 0.1231mg/L



Sample

Sample Name: TCK014WB
Sample ID: TCK010-05
Origin: TCK010.cal
Chk. Result

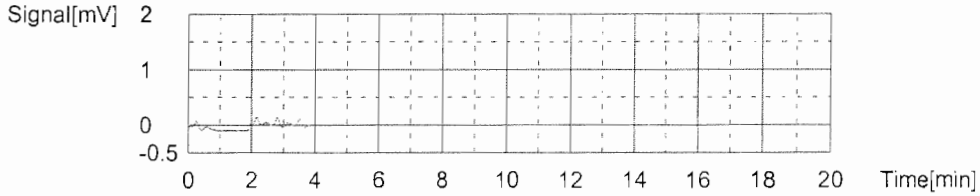
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.02313 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.000	0.000mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 03:51:13 PM
2	0.09640	0.04347mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 03:52:04 PM
3	0.07850	0.03539mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 03:52:58 PM
4	0.03030	0.01366mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 03:53:46 PM

Mean Area 0.05130
Mean Conc. 0.02313mg/L



Sample

Sample Name: TCK014WL
Sample ID: TCK010-06
Origin: TCK010.cal
Chk. Result

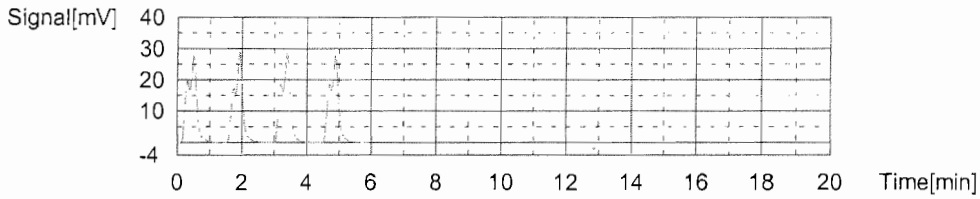
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:24.50 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.40	24.53mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:01:40 PM
2	53.88	24.29mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:03:20 PM
3	54.78	24.70mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:05:02 PM
4	54.25	24.46mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:06:46 PM

Mean Area 54.33
Mean Conc. 24.50mg/L



Sample

Sample Name: TCK014WC
Sample ID: TCK010-07
Origin: TCK010.cal
Chk. Result

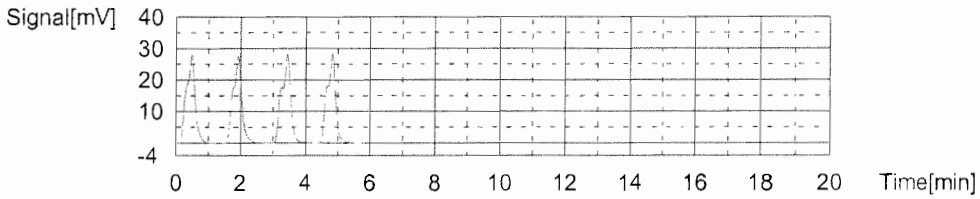
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:24.57 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.37	24.51mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:14:40 PM
2	54.53	24.59mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:16:22 PM
3	55.18	24.88mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:17:59 PM
4	53.91	24.31mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:19:39 PM

Mean Area 54.50
Mean Conc. 24.57mg/L



Sample

Sample Name: K123-01
Sample ID: TCK010-08
Origin: TCK010.cal
Chk. Result

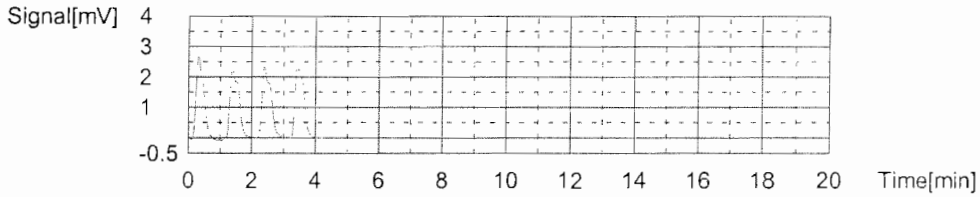
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.071 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.675	2.108mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:27:12 PM
2	4.582	2.066mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:28:25 PM
3	4.520	2.038mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:29:39 PM
4	4.594	2.071mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:30:57 PM

Mean Area 4.593
Mean Conc. 2.071mg/L



Sample

Sample Name: K123-03
Sample ID: TCK010-09
Origin: TCK010.cal
Chk. Result

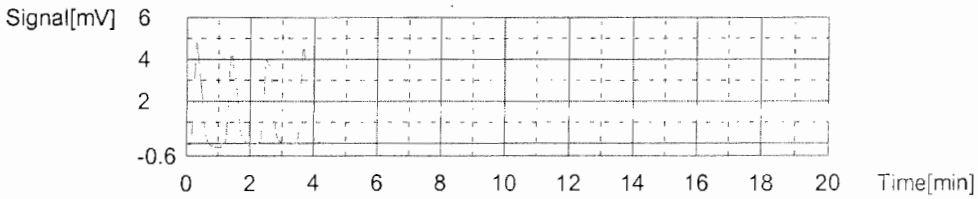
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:3.507 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.604	3.429mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:38:31 PM
2	7.839	3.534mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:39:49 PM
3	7.790	3.512mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:41:11 PM
4	7.880	3.553mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:42:27 PM

Mean Area 7.778
Mean Conc. 3.507mg/L



Sample

Sample Name: K123-04
Sample ID: TCK010-10
Origin: TCK010.cal
Chk. Result

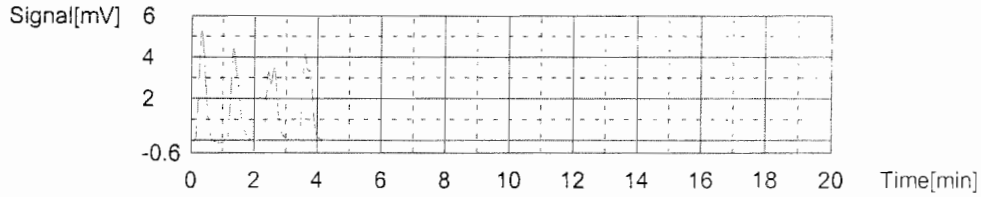
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:3.567 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.991	3.603mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:49:57 PM
2	7.829	3.530mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:51:17 PM
3	7.862	3.545mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:52:37 PM
4	7.964	3.591mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 04:53:54 PM

Mean Area 7.912
Mean Conc. 3.567mg/L



Sample

Sample Name: K123-05
Sample ID: TCK010-11
Origin: TCK010.cal
Chk. Result

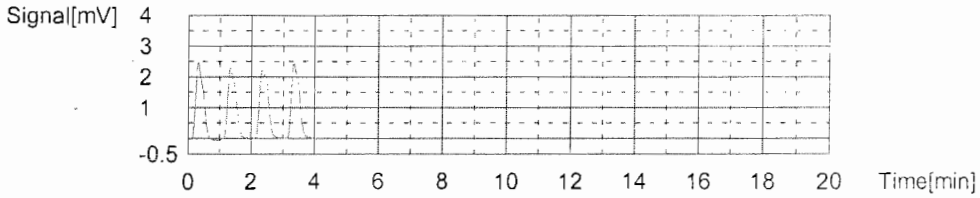
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.925 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.200	1.894mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:01:24 PM
2	4.189	1.889mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:02:36 PM
3	4.326	1.951mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:03:48 PM
4	4.364	1.968mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:05:04 PM

Mean Area 4.270
Mean Conc. 1.925mg/L



Sample

Sample Name: K131-04T
Sample ID: TCK010-12
Origin: TCK010.cal
Chk. Result

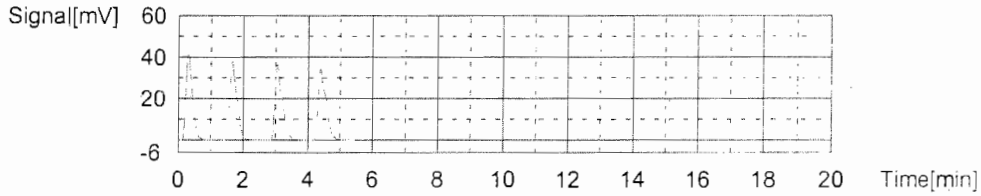
Type	Anal.	Dil.	Result
Unknown	NPOC	20.00	NPOC:534.5 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	58.46	527.2mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:12:54 PM
2	59.32	534.9mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:14:30 PM
3	59.85	539.7mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:16:02 PM
4	59.45	536.1mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:17:36 PM

Mean Area 59.27
Mean Conc. 534.5mg/L



Sample

Sample Name: K131-05R
Sample ID: TCK010-13
Origin: TCK010.cal
Chk. Result

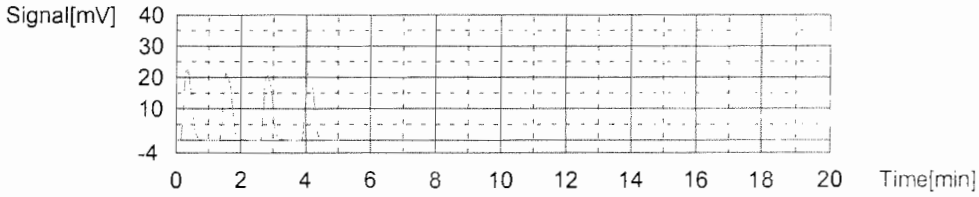
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:17.44 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	37.97	17.12mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:25:18 PM
2	38.47	17.35mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:26:44 PM
3	39.03	17.60mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:28:12 PM
4	39.29	17.72mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:29:40 PM

Mean Area 38.69
Mean Conc. 17.44mg/L



Control Sample

Sample Name: CCV1
Sample ID: TCK010-14
Method: TCK010.tpl
Chk. Result Control value: 24.53 / Control exceeds range!

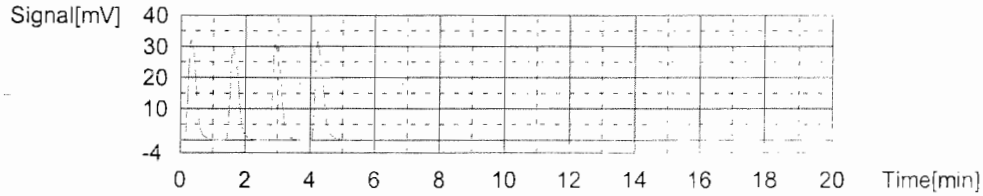
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:24.53 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.55	24.60mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:37:26 PM
2	54.12	24.40mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:38:56 PM
3	54.61	24.62mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:40:26 PM
4	54.38	24.52mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:41:59 PM

Mean Area 54.42
Mean Conc. 24.53mg/L



Sample

Sample Name: CCB1
Sample ID: TCK010-15
Origin: TCK010.cal
Chk. Result

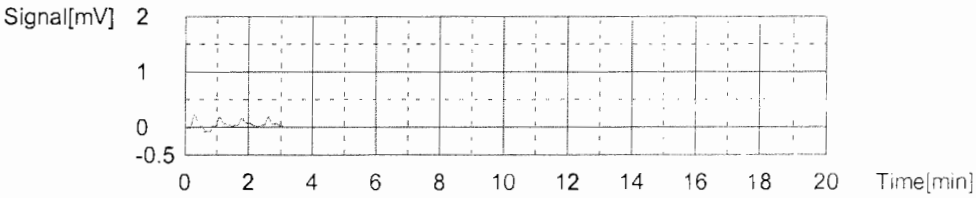
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1076 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3523	0.1588mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:49:17 PM
2	0.2088	0.09414mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:50:11 PM
3	0.1975	0.08905mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:51:13 PM
4	0.1963	0.08851mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 05:52:14 PM

Mean Area 0.2387
Mean Conc. 0.1076mg/L



Sample

Sample Name: K104-14R
Sample ID: TCK010-16
Origin: TCK010.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:31.40 mg/L

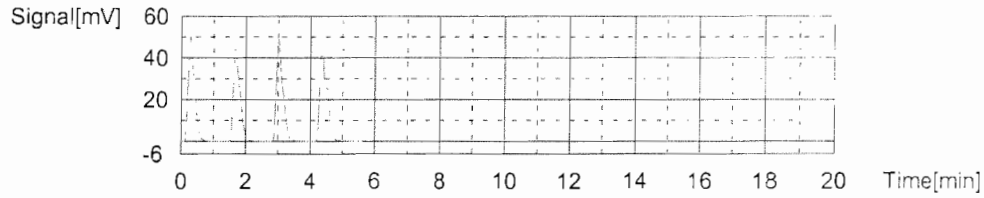
1. Det

Anal.: NPOC

8178

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	69.36	31.27mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:00:07 PM
2	68.82	31.03mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:01:39 PM
3	69.86	31.50mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:03:12 PM
4	70.49	31.78mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:04:56 PM

Mean Area 69.63
Mean Conc. 31.40mg/L



Sample

Sample Name: K104-14M
Sample ID: TCK010-17
Origin: TCK010.cal
Chk. Result

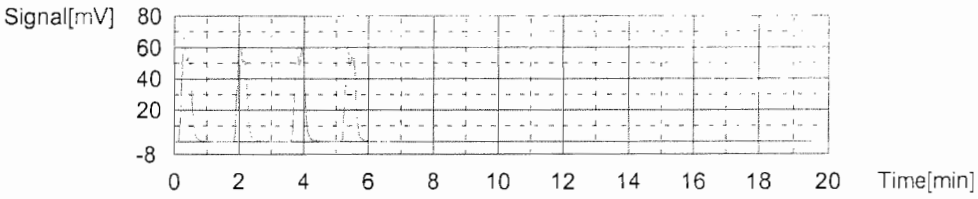
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:56.46 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	123.4	55.64mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:13:08 PM
2	125.4	56.54mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:15:06 PM
3	126.6	57.08mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:16:52 PM
4	125.5	56.59mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:18:39 PM

Mean Area 125.2
Mean Conc. 56.46mg/L



Sample

Sample Name: K104-14S
Sample ID: TCK010-18
Origin: TCK010.cal
Chk. Result

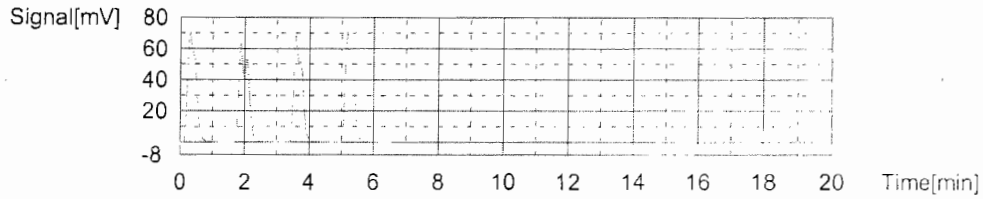
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:56.32 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	125.4	56.54mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:26:44 PM
2	124.5	56.14mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:28:38 PM
3	124.1	55.95mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:30:26 PM
4	125.6	56.63mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:32:17 PM

Mean Area 124.9
Mean Conc. 56.32mg/L



Sample

Sample Name: K096-02R
Sample ID: TCK010-19
Origin: TCK010.cal
Chk. Result

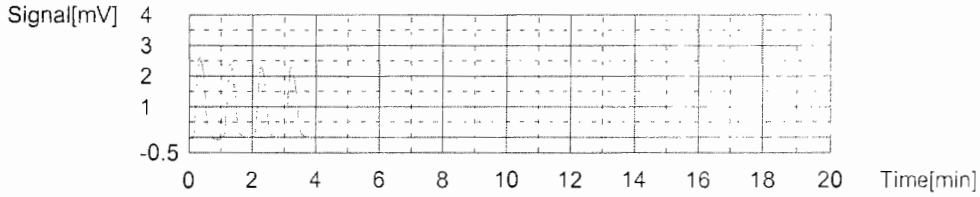
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.918 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.756	2.144mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:39:44 PM
2	4.088	1.843mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:40:54 PM
3	4.002	1.804mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:42:03 PM
4	4.170	1.880mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:43:15 PM

Mean Area 4.254
Mean Conc. 1.918mg/L



Sample

Sample Name: K096-03R
Sample ID: TCK010-20
Origin: TCK010.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.858 mg/L

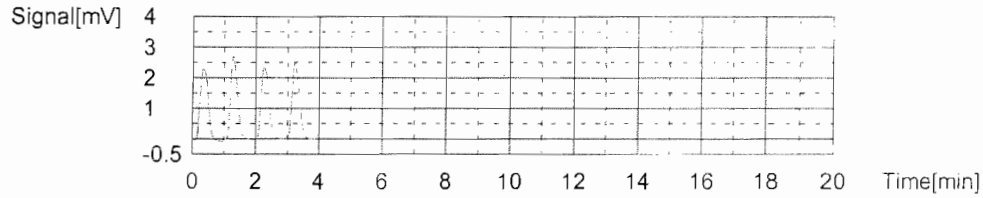
1. Det

Anal.: NPOC

8180

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.145	1.869mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:50:41 PM
2	4.102	1.850mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:51:51 PM
3	4.068	1.834mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:53:00 PM
4	4.169	1.880mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 06:54:10 PM

Mean Area 4.121
Mean Conc. 1.858mg/L



Sample

Sample Name: K096-04R
Sample ID: TCK010-21
Origin: TCK010.cal
Chk. Result

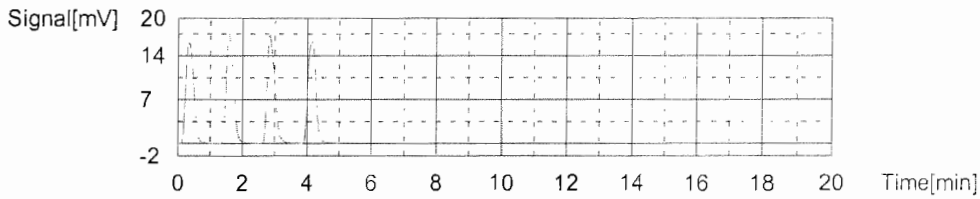
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:12.86 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	27.54	12.42mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:01:55 PM
2	28.78	12.98mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:03:23 PM
3	28.89	13.03mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:04:49 PM
4	28.91	13.04mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:06:13 PM

Mean Area 28.53
Mean Conc. 12.86mg/L



Sample

Sample Name: K096-05R
Sample ID: TCK010-22
Origin: TCK010.cal
Chk. Result

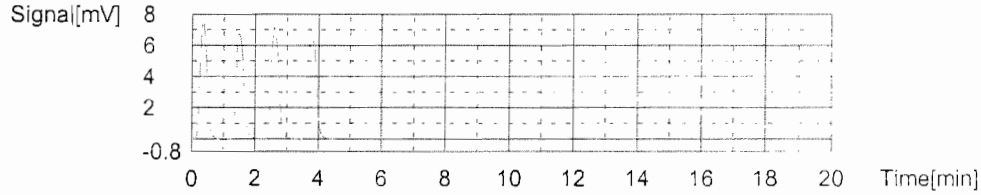
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:5.377 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.96	5.393mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:13:51 PM
2	11.86	5.347mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:15:10 PM
3	11.94	5.384mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:16:31 PM
4	11.94	5.384mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:17:49 PM

Mean Area 11.93
Mean Conc. 5.377mg/L



Sample

Sample Name: K096-06R
Sample ID: TCK010-23
Origin: TCK010.cal
Chk. Result

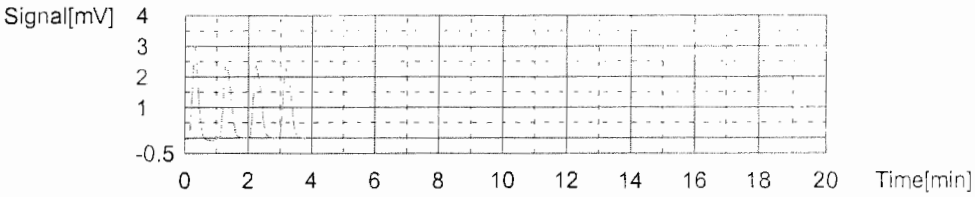
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.812 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.980	1.795mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:25:18 PM
2	4.001	1.804mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:26:26 PM
3	4.016	1.811mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:27:33 PM
4	4.074	1.837mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:28:45 PM

Mean Area 4.018
Mean Conc. 1.812mg/L



Sample

Sample Name: K096-07R
Sample ID: TCK010-24
Origin: TCK010.cal
Chk. Result

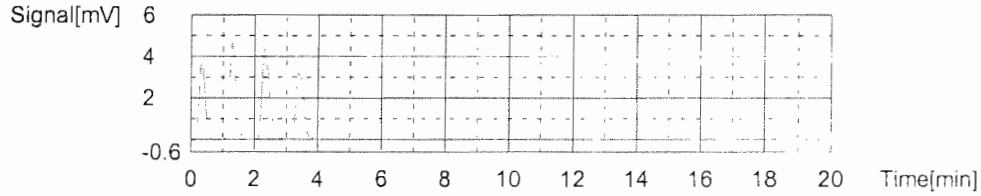
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.740 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.030	2.268mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:36:12 PM
2	6.511	2.936mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:37:25 PM
3	7.097	3.200mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:38:41 PM
4	5.672	2.557mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:39:55 PM

Mean Area 6.078
Mean Conc. 2.740mg/L



Sample

Sample Name: K096-09R
Sample ID: TCK010-25
Origin: TCK010.cal
Chk. Result

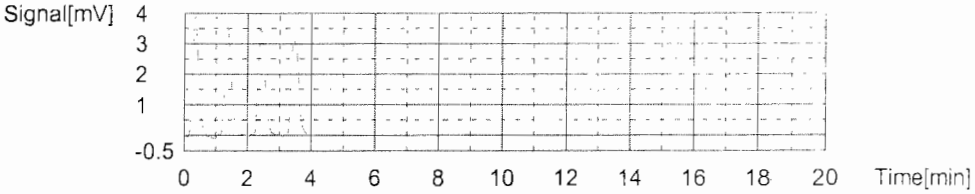
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.385 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.302	2.391mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:47:26 PM
2	5.280	2.381mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:48:40 PM
3	5.371	2.422mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:49:54 PM
4	5.205	2.347mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:51:06 PM

Mean Area 5.290
Mean Conc. 2.385mg/L



Control Sample

Sample Name: CCV2
Sample ID: TCK010-26
Method: TCK010.tpl
Chk. Result Control value: 23.99 / Control exceeds range!

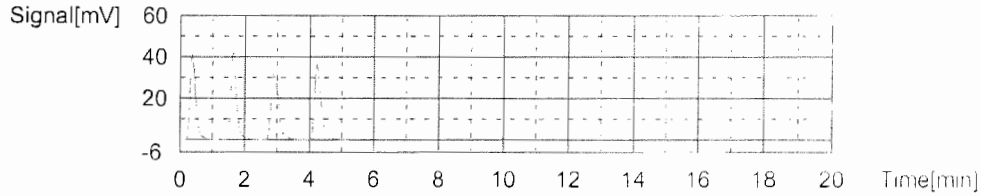
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:23.99 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	52.57	23.70mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 07:58:53 PM
2	53.53	24.14mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 08:00:19 PM
3	54.29	24.48mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 08:01:52 PM
4	52.41	23.63mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 08:03:23 PM

Mean Area 53.20
Mean Conc. 23.99mg/L



Sample

Sample Name: CCB2
Sample ID: TCK010-27
Origin: TCK010.cal
Chk. Result

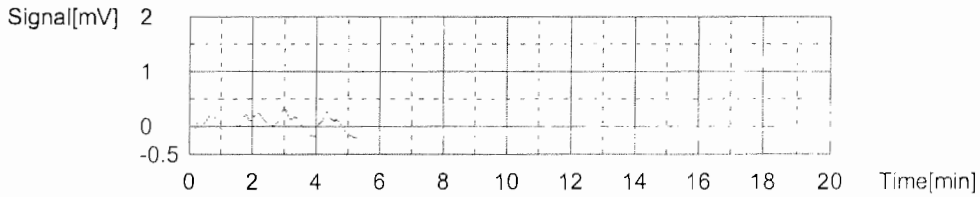
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.3854 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.012	0.4563mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 08:11:21 PM
2	0.6767	0.3051mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 08:12:45 PM
3	0.9403	0.4240mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 08:14:17 PM
4	0.7898	0.3561mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 08:15:48 PM

Mean Area 0.8547
Mean Conc. 0.3854mg/L



Sample

Sample Name: K096-10R
Sample ID: TCK010-28
Origin: TCK010.cal
Chk. Result

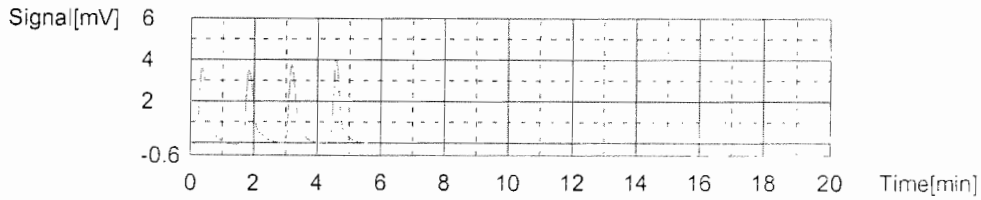
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.886 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.561	2.958mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 08:23:47 PM
2	6.343	2.860mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 08:25:20 PM
3	6.391	2.882mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 08:26:55 PM
4	6.311	2.846mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 08:28:31 PM

Mean Area 6.402
Mean Conc. 2.886mg/L



Sample

Sample Name: K096-11R
Sample ID: TCK010-29
Origin: TCK010.cal
Chk. Result

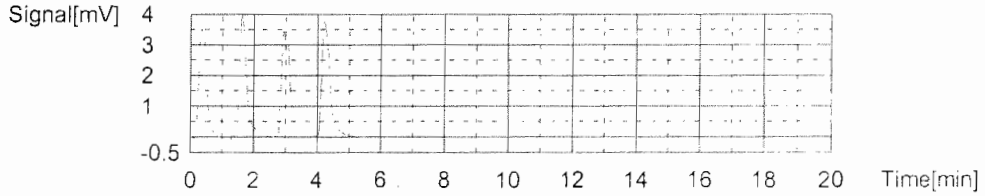
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.976 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.518	2.939mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 08:36:17 PM
2	6.528	2.943mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 08:37:49 PM
3	6.680	3.012mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 08:39:17 PM
4	6.677	3.011mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 08:40:45 PM

Mean Area 6.601
Mean Conc. 2.976mg/L



Sample

Sample Name: K096-12R
Sample ID: TCK010-30
Origin: TCK010.cal
Chk. Result

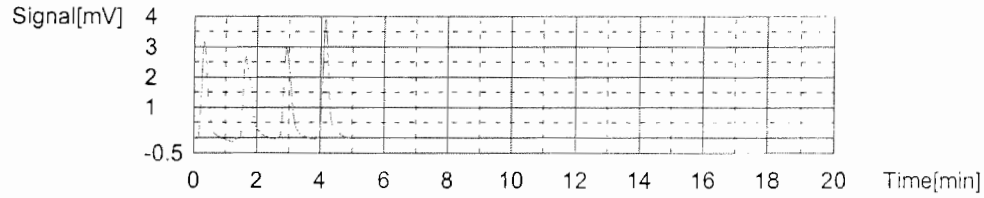
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.248 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.845	2.185mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 08:48:34 PM
2	5.094	2.297mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 08:50:02 PM
3	5.137	2.316mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 08:51:28 PM
4	4.871	2.196mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 08:52:55 PM

Mean Area 4.987
Mean Conc. 2.248mg/L



Sample

Sample Name: K096-13R
Sample ID: TCK010-31
Origin: TCK010.cal
Chk. Result

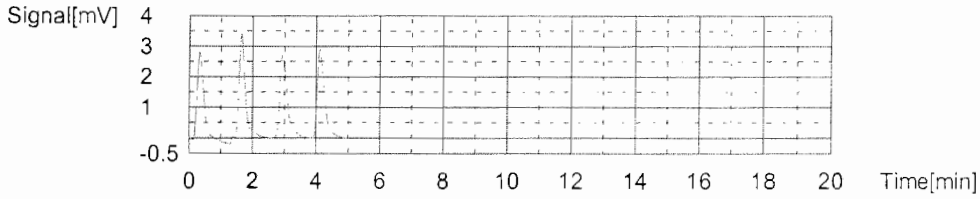
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.044 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.421	1.993mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 09:00:44 PM
2	4.683	2.111mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 09:02:12 PM
3	4.467	2.014mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 09:03:34 PM
4	4.565	2.058mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 09:05:00 PM

Mean Area 4.534
Mean Conc. 2.044mg/L



Sample

Sample Name: K096-14R
Sample ID: TCK010-32
Origin: TCK010.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:~~2.129~~ mg/L

2.248mg/L

1. Det

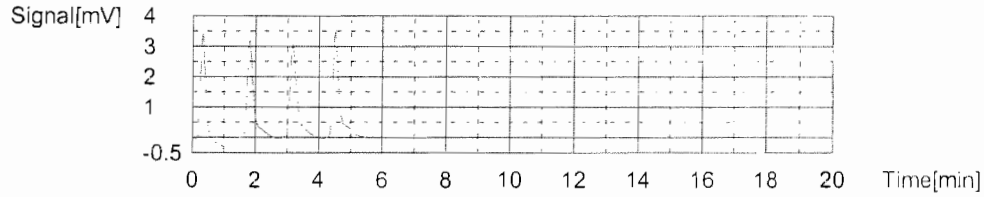
Anal.: NPOC

dc 11/21/11

8186

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.929	~~1.772~~mg/L OL	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 09:12:58 PM
2	4.768	2.150mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 09:14:31 PM
3	5.067	2.285mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 09:16:03 PM
4	5.121	2.309mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 09:17:33 PM

Mean Area 4.721
Mean Conc. ~~2.129~~mg/L
2.248 mg/L
Amulzifu



Sample

Sample Name: TCK015WL
Sample ID: TCK010-33
Origin: TCK010.cal
Chk. Result

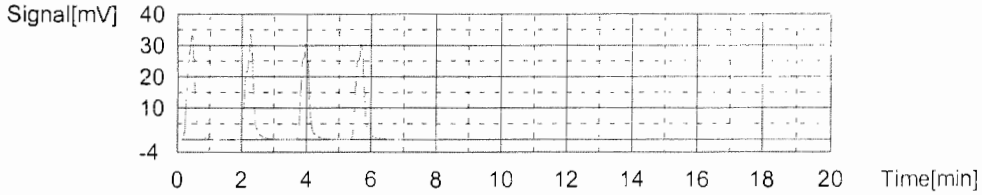
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:24.41 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.57	24.15mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 09:25:50 PM
2	54.31	24.49mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 09:27:46 PM
3	54.30	24.48mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 09:29:39 PM
4	54.40	24.53mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 09:31:31 PM

Mean Area 54.15
Mean Conc. 24.41mg/L



Sample

Sample Name: TCK015WC
Sample ID: TCK010-34
Origin: TCK010.cal
Chk. Result

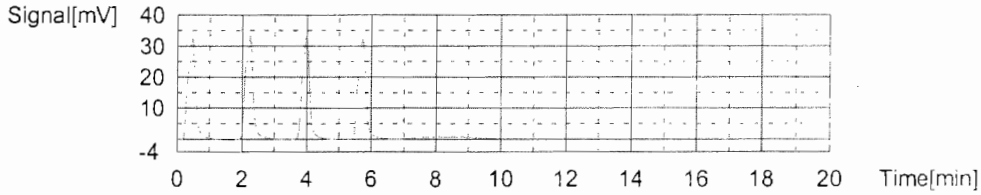
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:25.35 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.19	24.43mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 09:39:47 PM
2	54.61	24.62mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 09:41:44 PM
3	54.41	24.53mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 09:43:39 PM
4	61.66	27.80mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 09:48:27 PM

Mean Area 56.22
Mean Conc. 25.35mg/L



Sample

Sample Name: TCK015WB
Sample ID: TCK010-35
Origin: TCK010.cal
Chk. Result

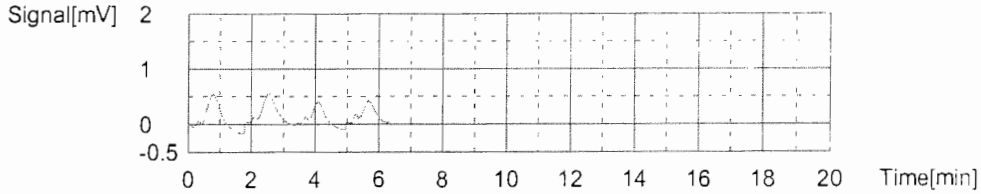
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.6814 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.975	0.8905mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 09:56:42 PM
2	1.723	0.7769mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 09:58:30 PM
3	1.252	0.5645mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 10:00:16 PM
4	1.095	0.4937mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 10:01:51 PM

Mean Area 1.511
Mean Conc. 0.6814mg/L



Sample

Sample Name: K096-15R
Sample ID: TCK010-36
Origin: TCK010.cal
Chk. Result

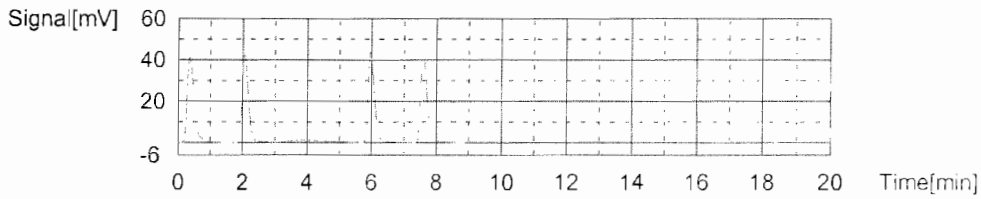
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:29.23 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	62.73	28.28mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 10:10:00 PM
2	69.14	31.17mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 10:14:06 PM
3	63.33	28.55mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 10:15:57 PM
4	64.07	28.89mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 10:17:44 PM

Mean Area 64.82
Mean Conc. 29.23mg/L



Sample

Sample Name: K096-16R
Sample ID: TCK010-37
Origin: TCK010.cal
Chk. Result

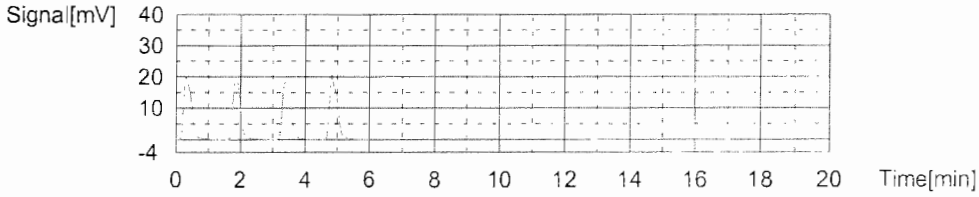
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:15.46 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	33.68	15.19mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 10:25:44 PM
2	34.15	15.40mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 10:27:28 PM
3	34.50	15.56mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 10:29:08 PM
4	34.84	15.71mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 10:30:47 PM

Mean Area 34.29
Mean Conc. 15.46mg/L



Control Sample

Sample Name: CCV3
Sample ID: TCK010-38
Method: TCK010.tpl
Chk. Result Control value: 24.88 / Control exceeds range!

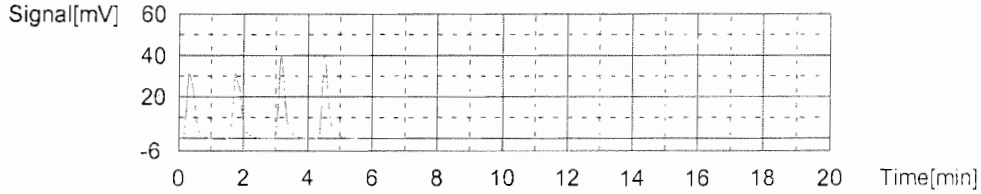
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:24.88 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.02	24.36mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 10:38:40 PM
2	55.19	24.88mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 10:40:16 PM
3	56.12	25.30mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 10:41:49 PM
4	55.41	24.98mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 10:43:22 PM

Mean Area 55.19
Mean Conc. 24.88mg/L



Sample

Sample Name: CCB3
Sample ID: TCK010-39
Origin: TCK010.cal
Chk. Result

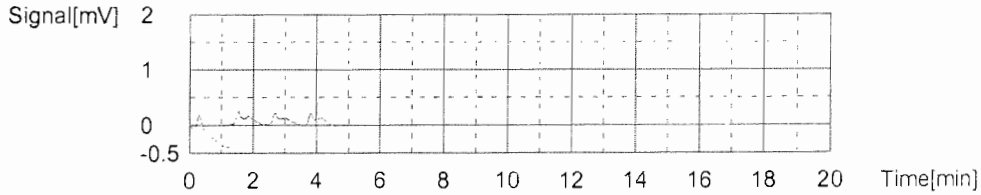
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.2095 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2570	0.1159mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 10:51:05 PM
2	0.5678	0.2560mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 10:52:26 PM
3	0.4686	0.2113mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 10:53:45 PM
4	0.5653	0.2549mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 10:55:03 PM

Mean Area 0.4647
Mean Conc. 0.2095mg/L



Sample

Sample Name: K096-18R
Sample ID: TCK010-40
Origin: TCK010.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:7.769 mg/L

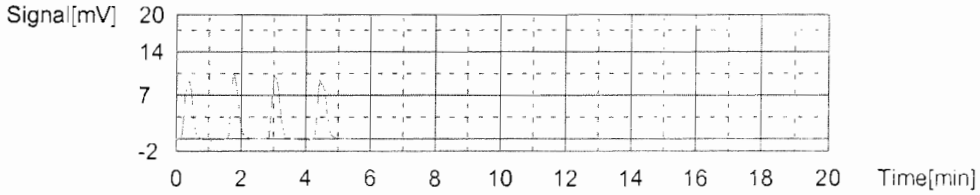
1. Det

Anal.: NPOC

8190

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	16.25	7.327mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:02:59 PM
2	17.10	7.710mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:04:26 PM
3	17.85	8.048mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:06:03 PM
4	17.72	7.990mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:07:33 PM

Mean Area 17.23
Mean Conc. 7.769mg/L



Sample

Sample Name: K096-19R
Sample ID: TCK010-41
Origin: TCK010.cal
Chk. Result

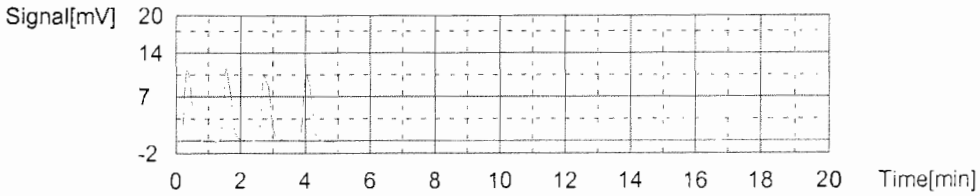
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:8.538 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	18.34	8.269mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:15:16 PM
2	18.88	8.513mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:16:38 PM
3	19.37	8.734mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:18:07 PM
4	19.15	8.634mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:19:32 PM

Mean Area 18.94
Mean Conc. 8.538mg/L



Sample

Sample Name: K096-20R
Sample ID: TCK010-42
Origin: TCK010.cal
Chk. Result

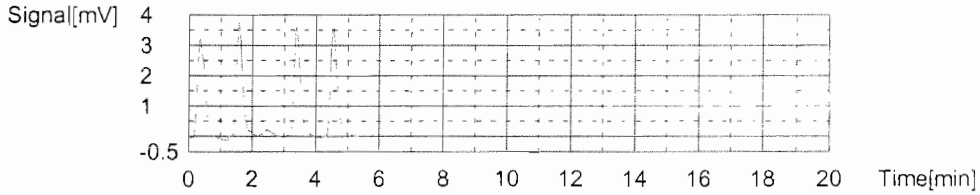
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.465 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.316	2.397mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:27:16 PM
2	5.868	2.646mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:29:16 PM
3	5.337	2.406mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:30:38 PM
4	5.346	2.410mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:31:56 PM

Mean Area 5.467
Mean Conc. 2.465mg/L



Sample

Sample Name: K096-21R
Sample ID: TCK010-43
Origin: TCK010.cal
Chk. Result

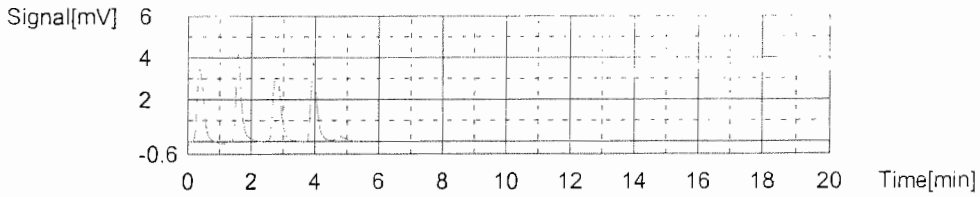
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.556 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.420	2.444mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:39:40 PM
2	5.542	2.499mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:41:02 PM
3	5.777	2.605mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:42:26 PM
4	5.932	2.675mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:44:27 PM

Mean Area 5.668
Mean Conc. 2.556mg/L



Sample

Sample Name: K096-22R
Sample ID: TCK010-44
Origin: TCK010.cal
Chk. Result

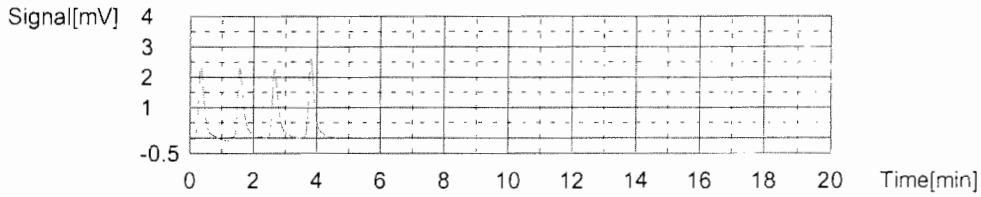
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.478 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.391	1.529mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:52:11 PM
2	3.096	1.396mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:53:28 PM
3	3.296	1.486mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:54:49 PM
4	3.328	1.501mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/18/11 11:56:07 PM

Mean Area 3.278
Mean Conc. 1.478mg/L



Sample

Sample Name: K096-23R
Sample ID: TCK010-45
Origin: TCK010.cal
Chk. Result

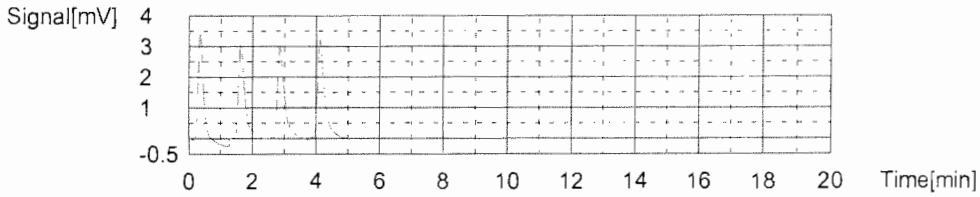
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.093 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.276	1.928mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 12:03:53 AM
2	4.553	2.053mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 12:05:19 AM
3	4.706	2.122mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 12:06:48 AM
4	5.036	2.271mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 12:08:13 AM

Mean Area 4.643
Mean Conc. 2.093mg/L



Sample

Sample Name: K133-01
Sample ID: TCK010-46
Origin: TCK010.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:~~2.241~~ mg/L

2.362 mg/L

1. Det

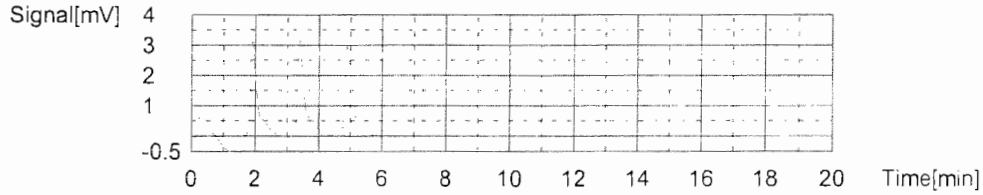
Anal.: NPOC

Am 11/21/11

8193

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.112	~~1.854~~mg/L OL	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 12:16:17 AM
2	5.026	2.266mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 12:17:57 AM
3	5.459	2.461mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 12:19:40 AM
4	5.280	2.381mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 12:21:12 AM

Mean Area 4.969
Mean Conc. ~~2.241~~mg/L
2.369 mg/L
[illegible] 11/21/11



Sample

Sample Name: K133-01M
Sample ID: TCK010-47
Origin: TCK010.cal
Chk. Result

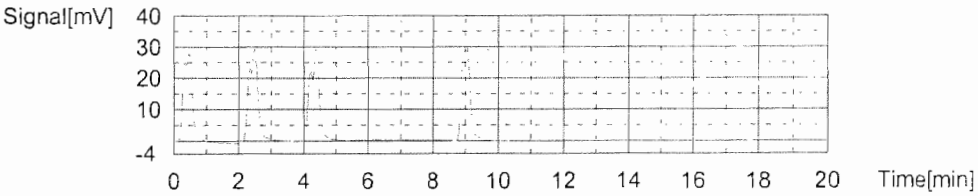
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:26.52 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.02	24.81mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 12:29:42 AM
2	58.80	26.51mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 12:31:46 AM
3	63.43	28.60mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 12:36:41 AM
4	58.02	26.16mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 12:38:36 AM

Mean Area 58.82
Mean Conc. 26.52mg/L



Sample

Sample Name: K133-01S
Sample ID: TCK010-48
Origin: TCK010.cal
Chk. Result

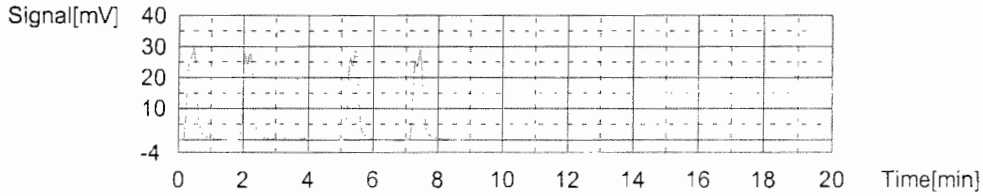
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:27.11 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	58.60	26.42mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 12:46:50 AM
2	62.60	28.23mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 12:50:15 AM
3	59.88	27.00mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 12:52:27 AM
4	59.45	26.81mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 12:54:29 AM

Mean Area 60.13
Mean Conc. 27.11mg/L



Sample

Sample Name: K133-02
Sample ID: TCK010-49
Origin: TCK010.cal
Chk. Result

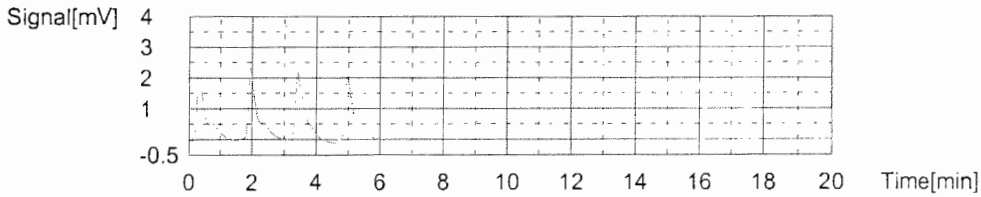
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.011 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.720	2.128mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 01:02:37 AM
2	4.428	1.997mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 01:04:16 AM
3	4.440	2.002mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 01:06:01 AM
4	4.249	1.916mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 01:07:41 AM

Mean Area 4.459
Mean Conc. 2.011mg/L



Control Sample

Sample Name: CCV4
Sample ID: TCK010-50
Method: TCK010.tpi
Chk. Result Control value: 24.53 / Control exceeds range!

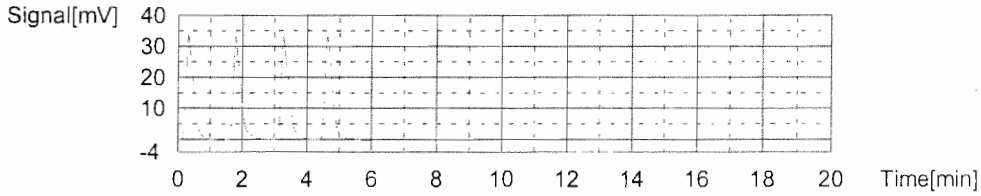
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:24.53 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	52.94	23.87mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 01:15:39 AM
2	54.91	24.76mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 01:17:19 AM
3	54.93	24.77mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 01:18:52 AM
4	54.82	24.72mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 01:20:48 AM

Mean Area 54.40
Mean Conc. 24.53mg/L



Sample

Sample Name: CCB4
Sample ID: TCK010-51
Origin: TCK010.cal
Chk. Result

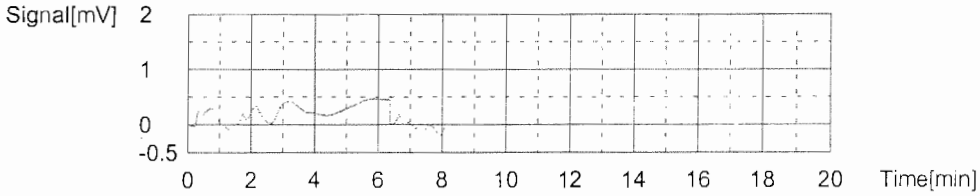
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.2844 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.249	0.5632mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 01:28:45 AM
2	1.188	0.5357mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 01:33:50 AM
3	0.08570	0.03864mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 01:34:40 AM
4	0.000	0.000mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 01:35:56 AM

Mean Area 0.6307
Mean Conc. 0.2844mg/L



Sample

Sample Name: K133-03
Sample ID: TCK010-52
Origin: TCK010.cal
Chk. Result

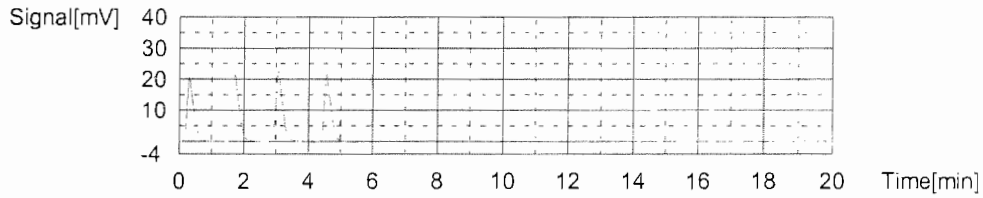
Type	Anal.	Dil.	Result
Unknown	NPOC	5.000	NPOC:70.51 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	30.72	69.26mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 01:43:50 AM
2	30.93	69.73mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 01:45:22 AM
3	32.15	72.48mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 01:47:03 AM
4	31.31	70.59mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 01:48:35 AM

Mean Area 31.28
Mean Conc. 70.51mg/L



Sample

Sample Name: K133-04
Sample ID: TCK010-53
Origin: TCK010.cal
Chk. Result

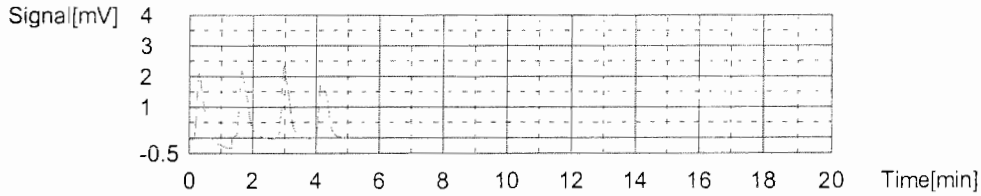
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.699 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.543	1.597mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 01:56:25 AM
2	3.941	1.777mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 01:57:56 AM
3	3.969	1.790mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 01:59:18 AM
4	3.623	1.634mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:00:39 AM

Mean Area 3.769
Mean Conc. 1.699mg/L



Sample

Sample Name: K133-05
Sample ID: TCK010-54
Origin: TCK010.cal
Chk. Result

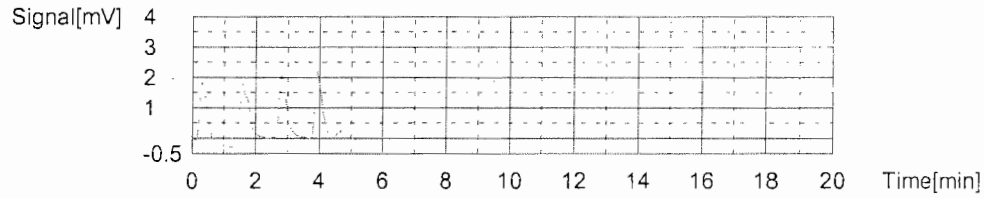
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.603 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.076	1.387mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:08:25 AM
2	3.404	1.535mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:09:49 AM
3	3.463	1.561mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:11:08 AM
4	4.276	1.928mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:12:59 AM

Mean Area 3.555
Mean Conc. 1.603mg/L



Sample

Sample Name: K146-02
Sample ID: TCK010-55
Origin: TCK010.cal
Chk. Result

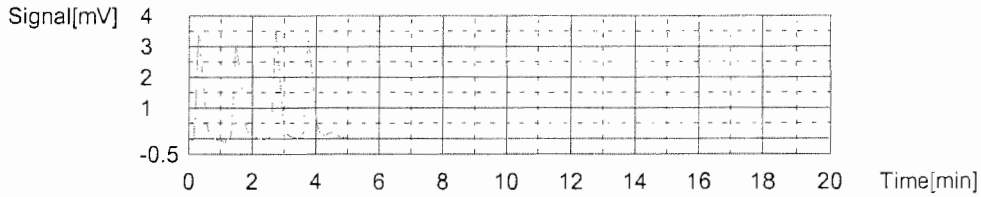
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.403 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.168	2.330mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:20:39 AM
2	5.380	2.426mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:22:05 AM
3	5.203	2.346mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:23:17 AM
4	5.563	2.508mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:25:02 AM

Mean Area 5.329
Mean Conc. 2.403mg/L



Sample

Sample Name: K146-03
Sample ID: TCK010-56
Origin: TCK010.cal
Chk. Result

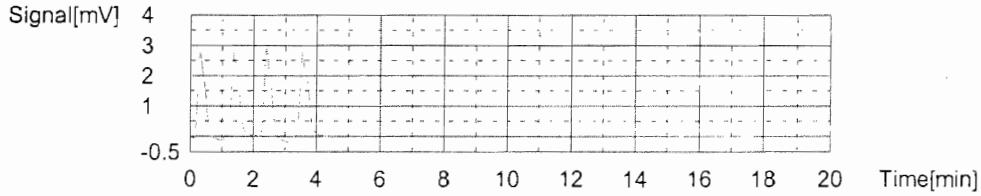
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.119 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.620	2.083mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:32:36 AM
2	4.778	2.154mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:33:50 AM
3	4.482	2.021mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:35:09 AM
4	4.921	2.219mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:36:30 AM

Mean Area 4.700
Mean Conc. 2.119mg/L



Sample

Sample Name: K146-04
Sample ID: TCK010-57
Origin: TCK010.cal
Chk. Result

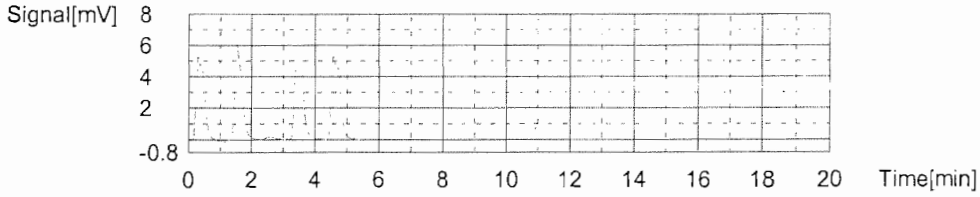
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:4.659 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.03	4.522mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:44:14 AM
2	10.55	4.757mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:46:18 AM
3	10.47	4.721mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:47:39 AM
4	10.28	4.635mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:49:00 AM

Mean Area 10.33
Mean Conc. 4.659mg/L



Sample

Sample Name: K146-05
Sample ID: TCK010-58
Origin: TCK010.cal
Chk. Result

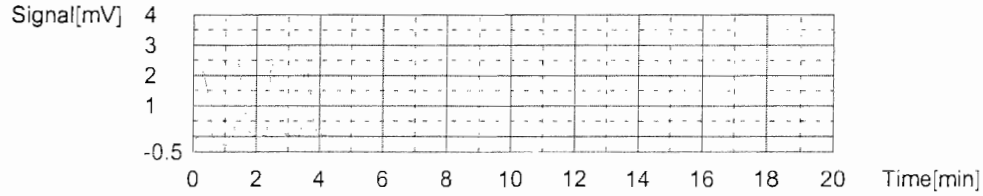
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.778 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.726	1.680mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:56:38 AM
2	3.923	1.769mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:57:52 AM
3	4.158	1.875mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 02:59:08 AM
4	3.963	1.787mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 03:00:21 AM

Mean Area 3.942
Mean Conc. 1.778mg/L



Sample

Sample Name: K146-06
Sample ID: TCK010-59
Origin: TCK010.cal
Chk. Result

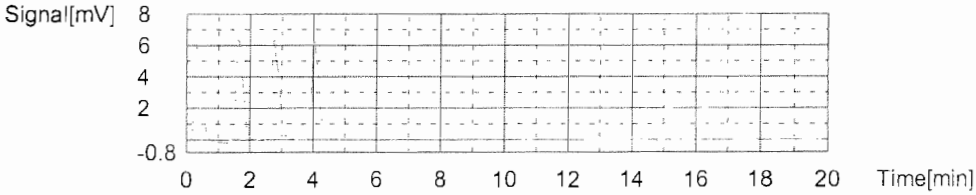
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:4.581 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.750	4.396mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 03:08:10 AM
2	9.939	4.481mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 03:09:28 AM
3	10.63	4.793mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 03:10:55 AM
4	10.32	4.653mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 03:12:15 AM

Mean Area 10.16
Mean Conc. 4.581mg/L



Sample

Sample Name: TCK015WQ
Sample ID: TCK010-60
Origin: TCK010.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.08472 mg/L

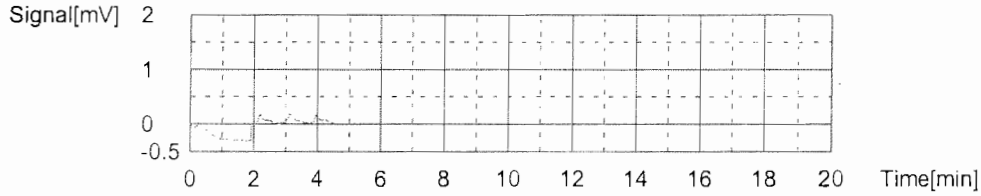
1. Det

Anal.: NPOC

8200

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.000	0.000mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 03:20:40 AM
2	0.2867	0.1293mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 03:21:47 AM
3	0.2197	0.09906mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 03:22:49 AM
4	0.2452	0.1106mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 03:23:53 AM

Mean Area 0.1879
Mean Conc. 0.08472mg/L



Control Sample

Sample Name: CCV5
Sample ID: TCK010 61
Method: TCK010.tpl
Chk. Result Control value. 24.16 / Control exceeds range!

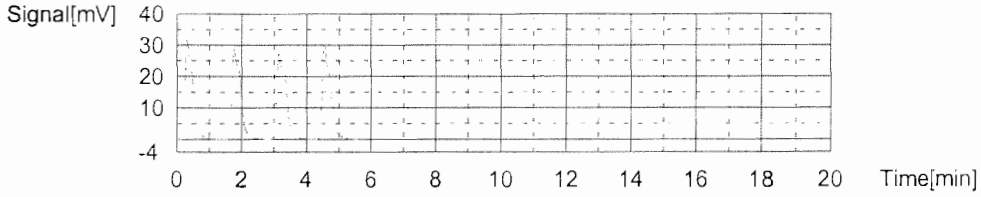
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:24.16 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.32	24.04mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 03:31:51 AM
2	53.66	24.19mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 03:33:25 AM
3	54.20	24.44mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 03:35:00 AM
4	53.17	23.97mg/L	50uL	1		TCK010.2011_11_18_13_12_32 cal	11/19/11 03:36:33 AM

Mean Area 53.59
Mean Conc. 24.16mg/L



Sample

Sample Name: CCB5
Sample ID: TCK010-62
Origin: TCK010.cal
Chk. Result

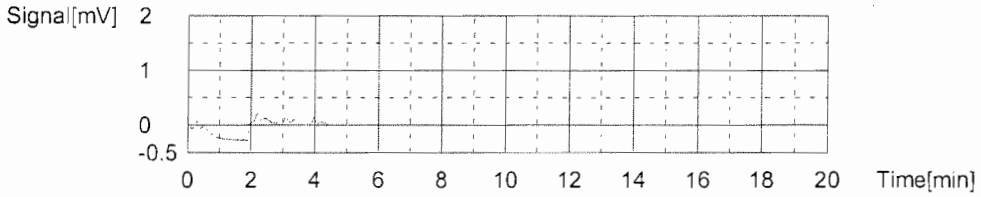
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.07555 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.000	0.000mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 03:44:58 AM
2	0.2710	0.1222mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 03:46:04 AM
3	0.2384	0.1075mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 03:47:07 AM
4	0.1608	0.07250mg/L	50uL	1		TCK010.2011_11_18_13_12_32.cal	11/19/11 03:48:02 AM

Mean Area 0.1676
Mean Conc. 0.07555mg/L



8202

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PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11K173**

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GC/MS-VOA	METHOD 5030B/8260B	2000 – 2038
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GC-VOA	**	4000 –
GC-SVOA	**	5000 –
HPLC	**	6000 –
METALS	**	7000 –
WET	**	8000 –
OTHERS	**	9000 –

** - Not Requested

LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 12-06-2011
EMAX Batch No.: 11K173

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 11/17/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW-70-MNA15-148	K173-01	11/17/11	WATER	VOLATILE ORGANICS BY GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.

1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 4-77101*

SAMPLE STORAGE

EMAX CONTROL NO. * 11K173

PROJECT CODE:

CLIENT: INSIGHT GEO, INC.
PROJECT: IN SITE 70 - NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 714 686700 FAX: 714 686711 EMAIL: NWEINBERGER@IGEOI.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT GEO, INC.
ADDRESS: 3010 E. MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: Ge Mejia

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: VOA: EPA 8260B

TAT:
- ☐ Rush ____hrs.
- ☐ Rush ____days
- ☐ 7 days
- ☒ 14 days
- ☐ 21 days
- ☐ 30 days
- ☐ ____days
- ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	PRESERVATIVE CODE HC								COMMENTS
1	MW-70-MNA15-148	INSITE 70	11-17-11	1304	3	40 ml	VOA	GW	III	X								
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
0																		

Instructions: *PLEASE BILL THIS TO INSIGHT & SEND THE INVOICE TO INSIGHT GEO, INC. 3010 E. MIRALOMA AVE, ANAHEIM, CA 92806.

Cooler #	Temp. (°C)	Sample #s
1	2.8	

SAMPLER: CHASE BRODDON

COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-17-11	1705	[signature]
[signature]	11/17/11	1753	

NOTICE: Turn-around-time (TAT) for samples shall not begin untill all discrepancies have been resolved. For samples received and discrepancies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

1001

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11K173
☑ EMAX Courier	SEE COC	Recepient J-LUNA
☐ Client Delivery		Date 11-17-11
☐ Third Party		Time 1753

COC Inspection

☑ Client Name ☑ Client PM/FC ☑ Sampler Name ☑ Sampling Date/Time/Location ☑ Sample ID ☑ Matrix
☑ Address ☑ Tel # / Fax # ☑ Courier Signature ☑ Analysis Required ☑ Preservative (if any) ☑ TAT
Safety Issues ☑ None ☐ High concentrations expected ☐ Superfund Site samples ☐ Rad screening required
Comments:

Packaging Inspection

Container ☑ Cooler ☐ Box ☐ Other
Condition ☐ Custody Seal ☑ Intact ☐ Damaged
Packaging ☑ Bubble Pack ☐ Styrofoam ☐ Popcorn ☑ Sufficient ☐ _____
Temperatures (Cool, ≤6 °C but not frozen) A ☑ Cooler 2.8 °C ☐ Cooler 2_____ °C ☐ Cooler 3_____ °C ☐ Cooler 4_____ °C ☐ Cooler 5_____ °C
☐ Cooler 6_____ °C ☐ Cooler 7_____ °C ☐ Cooler 8_____ °C ☐ Cooler 9_____ °C ☐ Cooler 10_____ °C

Thermometer: *A - S/N 101541371* *B - S/N 101541382*

Comments: ☐ **PM was informed on non-compliant coolers immediately.**

Note: **pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code

REVIEWS

Sample Labeling _____ Date 11/17/11

SRF _____ Date 11/18/11

PM LP for Yo Date 11/18/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s), wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4	_____	E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	_____
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	_____
B3	Sample ID is inconsistent in COC vis-à-vis label	F2	Bubble is> 6mm		
B4	_____	G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	_____		
C4	_____	H2	_____		

Linh Pham

From: Ye Myint
Sent: Friday, November 18, 2011 11:27 AM
To: 'Sree Akkenapally'
Cc: Tony Ford; Nick Weinberger; Mitra Fattahipour; Linh Pham
Subject: RE: Groundwater Sample ID MW-70-MNA15-148, IR Site 70-NWS Seal Beach

Hi Sree,

Thanks for the heads-up. We will send the invoice for this sample to Insight.

Ye
310-618-8889 x121

NOTE: EMAX will be closed on the following days for Thanksgiving.

Thursday (11/24/11)
Friday (11/25/11)
Saturday (11/26/11)

From: Sree Akkenapally [mailto:SAkkenapally@ieeci.com]
Sent: Friday, November 18, 2011 11:09 AM
To: Ye Myint
Cc: Tony Ford; Nick Weinberger; Mitra Fattahipour
Subject: Groundwater Sample ID MW-70-MNA15-148, IR Site 70-NWS Seal Beach

Hello Ye,

We have collected a groundwater sample from monitoring well MNA15 yesterday at IR Site 70-NWS Seal Beach. We have prepared a separate chain-of-custody for this sample and the sample ID is MW-70-MNA15-148. As indicated on the chain-of-custody, **please send the invoice for this sample analysis to Insight <u>not to OTIE</u>**. I know this may cause a little confusion, but this how the project is set up. Please call me if you have any questions.

Thank you,

Sree

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11K173

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K173

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

One (1) water sample was received on 11/17/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
The sample was analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary form for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for VO03K21L/C were all within QC limits.
Percent recoveries for VO03K25L/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K173
Instrument ID : T-003

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V003K21B	1	NA	11/21/1109:53	11/21/1109:53	RKB312	RHB444	V003K21	Method Blank
LCS1W	V003K21L	1	NA	11/21/1108:47	11/21/1108:47	RKB310	RHB444	V003K21	Lab Control Sample (LCS)
LCD1W	V003K21C	1	NA	11/21/1109:20	11/21/1109:20	RKB311	RHB444	V003K21	LCS Duplicate
MW-70-MNA15-148	K173-01	1	NA	11/21/1116:47	11/21/1116:47	RKB324	RHB444	V003K21	Field Sample
MBLK2W	V003K25B	1	NA	11/23/1112:22	11/23/1112:22	RKB396	RHB444	V003K25	Method Blank
LCS2W	V003K25L	1	NA	11/23/1111:06	11/23/1111:06	RKB394	RHB444	V003K25	Lab Control Sample (LCS)
LCD2W	V003K25C	1	NA	11/23/1111:44	11/23/1111:44	RKB395	RHB444	V003K25	LCS Duplicate
MW-70-MNA15-148DL	K173-01T	50	NA	11/23/1118:44	11/23/1118:44	RKB406	RHB444	V003K25	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K173	Date Extracted:	11/21/11 16:47
Sample ID:	MW-70-MNA15-148	Date Analyzed:	11/21/11 16:47
Lab Samp ID:	K173-01	Dilution Factor:	1
Lab File ID:	RKB324	Matrix	: WATER
Ext Btch ID:	VO03K21	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.54J	1.0	0.20
1,1-DICHLOROETHENE	4.4	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	240E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	55	1.0	0.20
TRICHLOROETHENE	12	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	3.7	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.91	10.00	89.1	70-140
4-BROMOFLUOROBENZENE	9.74	10.00	97.4	70-130
TOLUENE-D8	9.30	10.00	93.0	70-140

METHOD 5D30B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K173	Date Extracted:	11/23/11 18:44
Sample ID:	MW-70-MNA15-148DL	Date Analyzed:	11/23/11 18:44
Lab Samp ID:	K173-01T	Dilution Factor:	50
Lab File ID:	RKB406	Matrix :	WATER
Ext Btch ID:	V003K25	% Moisture :	NA
Calib. Ref.:	RHB444	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	50	10
1,1,1,2-TETRACHLOROETHANE	ND	50	10
1,1,2,2-TETRACHLOROETHANE	ND	50	10
1,1,2-TRICHLOROETHANE	ND	50	10
FREON113	ND	50	15
1,1-DICHLOROETHANE	ND	50	10
1,1-DICHLOROETHENE	ND	25	10
1,1-DICHLOROPROPENE	ND	50	10
1,2-DIBROMO-3-CHLOROPROPANE	ND	100	25
1,2-DIBROMOETHANE	ND	50	10
1,2-DICHLOROBENZENE	ND	50	10
1,2-DICHLOROETHANE	ND	25	10
1,2-DICHLOROPROPANE	ND	50	10
1,2,3-TRICHLOROBENZENE	ND	50	15
1,2,3-TRICHLOROPROPANE	ND	50	25
1,2,4-TRICHLOROBENZENE	ND	50	15
1,2,4-TRIMETHYLBENZENE	ND	50	10
1,3-DICHLOROBENZENE	ND	50	10
1,3,5-TRIMETHYLBENZENE	ND	50	10
1,4-DICHLOROBENZENE	ND	50	10
2-BUTANONE	ND	500	200
2-CHLOROTOLUENE	ND	50	10
2-HEXANONE	ND	500	200
2,2-DICHLOROPROPANE	ND	50	10
4-CHLOROTOLUENE	ND	50	10
4-METHYL-2-PENTANONE	ND	500	200
N-BUTYLBENZENE	ND	50	10
N-PROPYLBENZENE	ND	50	10
P-ISOPROPYLTOLUENE	ND	50	10
SEC-BUTYLBENZENE	ND	50	10
TERT-BUTYLBENZENE	ND	50	10
ACETONE	ND	500	250
BENZENE	ND	50	10
BROMOBENZENE	ND	50	10
BROMODICHLOROMETHANE	ND	50	10
CIS-1,3-DICHLOROPROPENE	ND	50	10
TRANS-1,3-DICHLOROPROPENE	ND	50	10
BROMOMETHANE	ND	100	15
BROMOFORM	ND	50	15
CARBON DISULFIDE	ND	50	10
CARBON TETRACHLORIDE	ND	25	10
CHLOROBENZENE	ND	50	10
CHLOROETHANE	ND	100	15
CHLOROFORM	ND	50	10
CHLOROMETHANE	ND	100	15
CIS-1,2-DICHLOROETHENE	1000	50	10
DICHLORODIFLUOROMETHANE	ND	100	15
DIBROMOCHLOROMETHANE	ND	50	10
DIBROMOMETHANE	ND	50	10
ETHYLBENZENE	ND	50	10
HEXACHLOROBUTADIENE	ND	50	15
ISOPROPYL BENZENE	ND	50	10
METHYLENE CHLORIDE	ND	50	25
MTBE	ND	50	10
STYRENE	ND	50	10
TETRACHLOROETHYLENE	ND	50	10
TOLUENE	ND	50	10
TRANS-1,2-DICHLOROETHENE	63	50	10
TRICHLOROETHENE	14J	250	10
TRICHLOROFLUOROMETHANE	ND	100	15
VINYL CHLORIDE	ND	25	10
XYLENES (TOTAL)	ND	100	30
M/P-XYLENES	ND	50	20
O-XYLENE	ND	50	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	453	500.0	90.6	70-140
4-BROMOFLUOROBENZENE	481	500.0	96.2	70-130
TOLUENE-D8	468	500.0	93.5	70-140

QC SUMMARIES

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/21/11
Batch No. : 11K173	Date Extracted: 11/21/11 09:53
Sample ID: MBLK1W	Date Analyzed: 11/21/11 09:53
Lab Samp ID: V003K21B	Dilution Factor: 1
Lab File ID: RKB312	Matrix : WATER
Ext Btch ID: V003K21	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.36	10.00	83.6	70-140
4-BROMOFLUOROBENZENE	9.52	10.00	95.2	70-130
TOLUENE-D8	9.59	10.00	95.9	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K173
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	V003K21B	V003K21L	V003K21C		
LAB FILE ID:	RKB312	RKB310	RKB311		
DATE EXTRACTED:	11/21/1109:53	11/21/1108:47	11/21/1109:20	DATE COLLECTED:	NA
DATE ANALYZED:	11/21/1109:53	11/21/1108:47	11/21/1109:20	DATE RECEIVED:	11/21/11
PREP. BATCH:	V003K21	V003K21	V003K21		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.50	95	10.0	9.16	92	4	60-130	30
Benzene	ND	10.0	9.95	99	10.0	9.57	96	4	70-130	30
Chlorobenzene	ND	10.0	9.97	100	10.0	9.71	97	3	70-120	30
Toluene	ND	10.0	9.58	96	10.0	9.13	91	5	70-130	30
Trichloroethene	ND	10.0	10.0	100	10.0	9.59	96	4	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.44	84	10.0	8.41	84	70-140
4-Bromofluorobenzene	10.0	9.62	96	10.0	9.34	93	70-130
Toluene-d8	10.0	9.54	95	10.0	9.26	93	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/23/11
Batch No.	: 11K173	Date Extracted:	11/23/11 12:22
Sample ID:	MBLK2W	Date Analyzed:	11/23/11 12:22
Lab Samp ID:	V003K25B	Dilution Factor:	1
Lab File ID:	RKB396	Matrix :	WATER
Ext Btch ID:	V003K25	% Moisture :	NA
Calib. Ref.:	RHB444	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.76	10.00	87.6	70-140
4-BROMOFLUOROBENZENE	9.20	10.00	92.0	70-130
TOLUENE-D8	9.31	10.00	93.1	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, TR SITE 70.
BATCH NO.: 11K173
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	V003K25B	V003K25L	V003K25C		
LAB FILE ID:	RKB396	RKB394	RKB395		
DATE EXTRACTED:	11/23/1112:22	11/23/1111:06	11/23/1111:44	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1112:22	11/23/1111:06	11/23/1111:44	DATE RECEIVED:	11/23/11
PREP. BATCH:	V003K25	V003K25	V003K25		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.11	91	10.0	8.98	90	1	60-130	30
Benzene	ND	10.0	9.61	96	10.0	9.43	94	2	70-130	30
Chlorobenzene	ND	10.0	10.1	101	10.0	9.86	99	2	70-120	30
Toluene	ND	10.0	9.37	94	10.0	9.28	93	1	70-130	30
Trichloroethene	ND	10.0	9.84	98	10.0	9.63	96	2	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.88	89	10.0	8.69	87	70-140
4-Bromofluorobenzene	10.0	9.18	92	10.0	9.26	93	70-130
Toluene-d8	10.0	9.27	93	10.0	9.40	94	70-130

INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RHB438
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K173
BFB Injection Date : 08/16/11
BFB Injection Time : 11:15
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	26.25
75	30.0 - 60.0% of mass 95	54.23
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.88
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	60.88
175	5.0 - 9.0% of mass 174	4.93(8.1)1
176	95.0 - 101.0% of mass 174	58.41(96.0)1
177	5.0 - 9.0% of mass 176	4.58(7.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	V003H161	RHB439	08/16/11	11:49
2	VSTD0.5	V003H162	RHB440	08/16/11	12:24
3	VSTD01	V003H163	RHB441	08/16/11	12:57
4	VSTD02	V003H164	RHB442	08/16/11	13:32
5	VSTD05	V003H165	RHB443	08/16/11	14:06
6	VSTD010	V003H166	RHB444	08/16/11	14:40
7	VSTD020	V003H167	RHB445	08/16/11	15:14
8	VSTD030	V003H168	RHB446	08/16/11	15:48
9	VSTD040	V003H169	RHB447	08/16/11	16:21
10	VSTD050	V003H1610	RHB448	08/16/11	16:56
11	VSTD100	V003H1611	RHB449	08/16/11	17:30
12	VSTD010	IV003H161	RHB452	08/16/11	19:13

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :03
Beginning DateTime :08/16/11 11:49
Spike Units :PPB
IC File :RHB444

Column Spec :ZB-624 ID :0.25MM
Ending DateTime :08/16/11 17:30
HPChem Method :V003H16

M	IDX	Parameters	.3 11:49 RHB439	.5 12:24 RHB440	1 12:57 RHB441	2 13:32 RHB442	5 14:06 RHB443	10 14:40 RHB444	20 15:14 RHB445	30 15:48 RHB446	40 16:21 RHB447	50 16:56 RHB448	100 17:30 RHB449	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	1	0	13.2029
	2	Chlorotrifluoroethylene	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	3	Dichlorodifluoromethane	0.333	0.326	0.343	0.357	0.358	0.429	0.335	0.363	0.324	0.341	0.375	0.353	8.52	4.1126
	4	Dichlorotetrafluoroethane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	5	Chloromethane	0.323	0.300	0.336	0.346	0.362	0.430	0.350	0.384	0.342	0.356	0.394	0.357	10.00	4.6120
	6	2-Chloro-1,1,1-trifluoroethane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	7	Vinyl chloride	0.290	0.283	0.319	0.335	0.351	0.415	0.336	0.355	0.320	0.334	0.372	0.337	10.93	4.9340
	8	Bromomethane	0.218	0.200	0.221	0.218	0.234	0.281	0.230	0.245	0.221	0.224	0.202	0.227	9.78	5.8582
	9	Chloroethane	0.155	0.158	0.171	0.167	0.178	0.217	0.174	0.189	0.173	0.178	0.189	0.177	9.63	6.1356
	10	Dichlorofluoromethane	0.720	0.721	0.765	0.755	0.776	0.817	0.754	0.797	0.735	0.750	0.809	0.764	4.35	6.6727
	11	Trichlorofluoromethane	0.483	0.478	0.529	0.539	0.564	0.666	0.530	0.573	0.516	0.533	0.585	0.545	9.58	6.7323
5	12	Acrolein	------	------	0.008	0.007	0.008	0.009	0.009	0.010	0.010	------	------	0.009	13.95	7.8523
	13	1,1,2-Trichloro-1,2,2-trifluoroethane	0.214	0.200	0.199	0.192	0.199	0.213	0.198	0.208	0.194	0.200	0.216	0.203	4.08	7.9826
5	14	Acetone	------	------	0.045	0.038	0.038	0.040	0.036	0.036	0.035	0.037	0.042	0.039	8.41	8.1846
	15	1,1-Dichloroethene	0.666	0.641	0.683	0.681	0.707	0.726	0.649	0.690	0.620	0.646	0.690	0.673	4.65	8.0029
	16	Methyl acetate	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	17	Iodomethane	0.595	0.558	0.625	0.620	0.644	0.683	0.622	0.668	0.610	0.629	0.689	0.631	6.13	8.3899
	18	Carbon disulfide	1.096	1.194	1.329	1.365	1.443	1.326	1.392	1.540	1.350	1.429	1.420	1.353	8.97	8.5144
	19	Methylene chloride	0.499	0.472	0.484	0.467	0.481	0.496	0.455	0.480	0.438	0.456	0.503	0.475	4.30	9.0800
5	20	tert-Butyl alcohol	------	0.011	0.011	0.011	0.012	0.013	0.012	0.012	0.011	0.012	0.014	0.012	6.87	9.2881
	21	tert-Butyl methyl ether (MTBE)	0.490	0.469	0.498	0.473	0.489	0.517	0.482	0.491	0.455	0.480	0.531	0.489	4.37	9.5102
	22	trans-1,2-Dichloroethene	0.675	0.662	0.683	0.699	0.701	0.732	0.668	0.711	0.642	0.662	0.708	0.686	3.87	9.5711
5	23	Acrylonitrile	0.033	0.031	0.034	0.033	0.035	0.038	0.036	0.038	0.035	0.037	0.041	0.036	7.73	9.6022
	24	Isopropyl ether (DIPE)	1.151	1.115	1.209	1.191	1.227	1.299	1.169	1.239	1.128	1.181	1.246	1.196	4.59	10.3302
	25	Vinyl acetate	------	0.309	0.374	0.410	0.409	0.470	0.412	0.419	0.353	0.382	0.476	0.401	12.58	10.3881
	26	1,1-Dichloroethane	0.733	0.691	0.747	0.754	0.775	0.806	0.727	0.770	0.691	0.721	0.755	0.743	4.72	10.3695
5	27	2-Butanol	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	28	tert-Butyl ethyl ether (ETBE)	0.820	0.794	0.868	0.845	0.869	0.915	0.834	0.888	0.805	0.851	0.926	0.856	4.96	10.9486
	29	2,2-Dichloropropane	0.645	0.638	0.680	0.663	0.654	0.651	0.579	0.585	0.526	0.522	0.512	0.605	10.34	11.3261
5	30	2-Butanone	0.080	0.076	0.068	0.060	0.063	0.068	0.062	0.063	0.060	0.062	0.067	0.066	10.11	11.3546
	31	cis-1,2-Dichloroethene	0.374	0.367	0.389	0.395	0.396	0.418	0.383	0.409	0.369	0.382	0.398	0.389	4.16	11.3600
	32	Bromochloromethane	0.290	0.292	0.316	0.301	0.313	0.334	0.301	0.316	0.291	0.302	0.324	0.307	4.66	11.7699
	33	Tetrahydrofuran	------	0.040	0.045	0.038	0.038	0.036	0.036	0.036	0.033	0.035	0.041	0.038	8.93	11.8229
	34	Chloroform	0.779	0.771	0.815	0.825	0.841	0.878	0.785	0.834	0.750	0.776	0.822	0.807	4.69	11.8606
5	35	tert-Amyl alcohol	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	36	Dibromofluoromethane	------	------	------	------	0.389	0.390	0.366	0.381	0.347	0.360	0.368	0.372	4.23	12.1220
	37	1,1,1-Trichloroethane	0.737	0.711	0.742	0.756	0.766	0.787	0.702	0.733	0.656	0.674	0.689	0.723	5.57	12.1312
	38	Cyclohexane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	39	tert-Amyl methyl ether (TAME)	0.119	0.125	0.141	0.132	0.137	0.146	0.130	0.135	0.124	0.128	0.137	0.132	5.96	12.7415
	40	1,2-Dichloroethane-d4	------	------	------	------	0.405	0.399	0.376	0.375	0.347	0.364	0.381	0.378	5.20	12.6515
	41	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	1	0	17.1946
	42	1,1-Dichloropropene	0.194	0.191	0.194	0.202	0.199	0.214	0.195	0.210	0.187	0.194	0.202	0.198	4.08	12.3667
	43	Carbon tetrachloride	0.651	0.632	0.695	0.701	0.694	0.726	0.654	0.705	0.628	0.664	0.700	0.677	4.82	12.3748
	44	Benzene	1.610	1.539	1.609	1.645	1.618	1.728	1.560	1.733	1.533	1.641	------	1.622	4.28	12.7061
	45	1,2-Dichloroethane	0.477	0.486	0.520	0.521	0.517	0.534	0.479	0.506	0.456	0.484	0.524	0.500	5.00	12.7645
	46	Trichloroethene	0.439	0.414	0.425	0.434	0.440	0.469	0.434	0.477	0.426	0.452	0.484	0.445	5.11	13.6183
	47	Methylcyclohexane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	48	1,2-Dichloropropane	0.392	0.391	0.404	0.409	0.418	0.443	0.407	0.444	0.391	0.421	0.444	0.415	5.04	13.9674
20	49	1,4-Dioxane	------	------	------	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	13.98	14.1284
	50	Dibromomethane	0.173	0.185	0.186	0.192	0.196	0.207	0.195	0.208	0.188	0.203	0.223	0.196	7.00	14.1839
	51	Bromodichloromethane	0.568	0.548	0.588	0.615	0.635	0.668	0.614	0.663	0.593	0.639	0.688	0.620	7.03	14.3490
	52	2-Chloroethyl vinyl ether	0.127	0.109	0.107	0.108	0.119	0.128	0.126	0.136	0.125	0.135	0.157	0.125	11.72	14.6453
	53	cis-1,3-Dichloropropene	0.559	0.576	0.607	0.629	0.639	0.692	0.640	0.694	0.622	0.667	0.716	0.640	7.70	14.9159
5	54	4-Methyl-2-pentanone	0.216	0.203	0.202	0.183	0.194	0.211	0.195	0.203	0.189	0.204	0.221	0.202	5.64	15.0350
	55	Toluene-d8	------	------	------	------	1.414	1.463	1.383	1.491	1.335	1.437	------	1.420	3.97	15.2566
	56	Toluene	1.743	1.699	1.754	1.765	1.767	1.866	1.709	1.870	1.659	1.763	------	1.759	3.81	15.3480
	57	Ethyl methacrylate	0.317	0.290	0.311	0.307	0.328	0.349	0.328	0.342	0.314	0.337	0.367	0.326	6.64	15.5912
	58	trans-1,3-Dichloropropene	0.444	0.436	0.476	0.491	0.506	0.549	0.503	0.533	0.486	0.523	0.562	0.501	8.00	15.6345

Sm 8/18/11

59	1,1,2-Trichloroethane	0.200	0.210	0.215	0.211	0.215	0.232	0.213	0.227	0.205	0.220	0.240	0.217	5.48	15.9132
60	Tetrachloroethene	0.394	0.381	0.379	0.375	0.383	0.402	0.368	0.401	0.355	0.377	0.390	0.382	3.71	16.0891
5 61	2-Hexanone	0.124	0.136	0.139	0.124	0.131	0.145	0.133	0.136	0.126	0.134	0.139	0.133	4.95	16.1081
62	1,3-Dichloropropane	0.394	0.407	0.439	0.435	0.440	0.467	0.430	0.451	0.411	0.435	0.468	0.434	5.43	16.1405
63	Dibromochloromethane	0.269	0.276	0.295	0.307	0.323	0.349	0.331	0.351	0.320	0.343	0.374	0.322	10.17	16.4869
64	1,2-Dibromoethane	0.219	0.212	0.227	0.229	0.237	0.254	0.241	0.251	0.231	0.246	0.270	0.238	7.10	16.6723
65	1-Chlorohexane	0.806	0.829	0.818	0.818	0.821	0.858	0.797	0.855	0.760	0.800	0.812	0.816	3.31	17.0363
66	Chlorobenzene	1.013	0.966	0.986	1.007	1.015	1.077	0.995	1.068	0.945	0.996	1.033	1.009	3.91	17.2366
67	Ethylbenzene	2.214	2.216	2.257	2.290	2.286	2.401	2.175	2.333	------	------	------	2.272	3.20	17.2809
68	1,1,1,2-Tetrachloroethane	0.351	0.348	0.375	0.382	0.379	0.408	0.371	0.398	0.352	0.374	0.383	0.375	5.09	17.3137
2 69	m-Xylene & p-Xylene	1.793	1.710	1.756	1.784	1.773	1.830	1.658	1.696	------	------	------	1.750	3.27	17.4093
70	o-Xylene	1.787	1.675	1.748	1.756	1.739	1.810	1.626	1.732	1.506	1.591	------	1.697	5.67	17.9438
71	Styrene	1.054	1.000	1.088	1.118	1.153	1.209	1.104	1.164	1.021	1.074	1.058	1.095	5.77	17.9672
72	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	1	0	20.7222
73	Isopropylbenzene	5.858	5.671	5.633	5.810	5.728	5.928	5.332	5.949	5.238	5.551	------	5.670	4.24	18.3621
74	Bromoform	0.324	0.344	0.368	0.382	0.408	0.454	0.425	0.465	0.423	0.454	0.497	0.413	13.02	18.3529
75	4-Bromofluorobenzene	------	------	------	------	1.571	1.602	1.509	1.625	1.474	------	------	1.556	4.08	18.6495
76	1,1,2,2-Tetrachloroethane	0.772	0.704	0.722	0.721	0.745	0.787	0.727	0.787	0.711	0.765	0.847	0.753	5.72	18.7926
77	trans-1,4-Dichloro-2-butene	0.242	0.213	0.220	0.226	0.232	0.251	0.250	0.269	0.242	0.260	0.284	0.244	8.79	18.8292
78	n-Propylbenzene	8.224	8.356	7.993	8.230	8.165	8.440	7.620	8.477	7.035	------	------	8.060	5.75	18.8738
79	1,2,3-Trichloropropane	0.148	0.180	0.183	0.183	0.182	0.189	0.172	0.183	0.160	0.171	0.176	0.175	6.81	18.8927
80	Bromobenzene	1.099	1.123	1.157	1.144	1.155	1.202	1.089	1.207	1.063	1.135	1.187	1.142	4.08	18.9131
81	1,3,5-Trimethylbenzene	5.021	4.935	4.880	5.015	4.948	5.155	4.658	5.132	4.444	4.689	------	4.888	4.63	19.0498
82	2-Chlorotoluene	5.177	5.066	5.093	5.142	5.099	5.296	4.742	5.233	4.586	4.857	------	5.029	4.52	19.0899
83	4-Chlorotoluene	4.375	4.251	4.270	4.354	4.458	4.591	4.187	4.627	4.062	4.288	------	4.346	4.03	19.2165
84	tert-Butylbenzene	1.029	0.977	0.964	0.977	0.993	1.020	0.928	1.019	0.887	0.930	0.935	0.969	4.68	19.5152
85	1,2,4-Trimethylbenzene	4.786	4.599	4.661	4.724	4.753	4.900	4.450	4.909	4.270	4.452	------	4.650	4.48	19.5692
86	sec-Butylbenzene	6.721	6.468	6.448	6.425	6.464	6.693	6.076	6.628	5.748	6.015	------	6.369	5.02	19.7895
87	p-Isopropyltoluene	4.919	4.972	4.842	4.954	5.082	5.267	4.766	5.175	4.496	4.694	------	4.917	4.68	19.9309
88	1,3-Dichlorobenzene	2.180	2.099	2.105	2.143	2.217	2.322	2.149	2.351	2.047	2.200	2.279	2.190	4.38	20.0957
89	1,4-Dichlorobenzene	1.974	1.957	1.960	1.989	2.042	2.192	2.013	2.184	1.927	2.020	2.150	2.037	4.65	20.2012
90	n-Butylbenzene	5.497	5.378	5.308	5.435	5.582	5.847	5.333	5.742	4.986	5.191	------	5.430	4.68	20.4876
91	1,2-Dichlorobenzene	1.635	1.630	1.645	1.640	1.673	1.784	1.636	1.768	1.569	1.668	1.777	1.675	4.20	20.7520
92	1,2-Dibromo-3-chloropropane	------	0.071	0.077	0.076	0.085	0.093	0.090	0.095	0.088	0.094	------	0.085	10.04	21.8756
93	1,2,4-Trichlorobenzene	0.793	0.757	0.731	0.751	0.832	0.913	0.883	0.926	0.849	0.893	1.017	0.850	10.33	23.1186
94	Hexachlorobutadiene	0.813	0.765	0.736	0.736	0.774	0.844	0.780	0.806	0.730	0.749	0.825	0.778	5.07	23.2512
95	Naphthalene	0.985	0.890	0.921	0.924	1.070	1.223	1.223	1.249	1.184	1.282	------	1.095	14.07	23.6207
96	1,2,3-Trichlorobenzene	0.569	0.526	0.548	0.555	0.608	0.669	0.660	0.675	0.632	0.667	0.753	0.624	11.07	24.0414

Spike Amount = Nominal Amount * M

Ave_%RSD : 6.5 Max_%RSD : 14.1

54 8/18/11

2011

SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :03
IC_Beginning DateTime :08/16/11 11:49
Spike Amount :10 PPB
CC/CV File :RHB452
IC File :RHB444

Column Spec :ZB-624 ID :0.25MM
IC_Ending DateTime :08/16/11 17:30
HPChem Method :V003H16
Date_Time :08/16/11 19:13

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	1964342	1	1	13.207	13.203	0				
	2	Chlorotrifluoroethylene												
	3	Dichlorodifluoromethane	10.093	0.9	699900	0.356	0.353	4.112	4.113	8.52				
	4	Dichlorotetrafluoroethane												
	5	Chloromethane	10.630	6.3	744562	0.379	0.357	4.618	4.612	10.00				
	6	2-Chloro-1,1,1-trifluoroethane												
	7	Vinyl chloride	10.627	6.3	704186	0.358	0.337	4.931	4.934	10.93				
	8	Bromomethane	11.072	10.7	493194	0.251	0.227	5.869	5.858	9.78				
	9	Chloroethane	10.559	5.6	367718	0.187	0.177	6.151	6.136	9.63				
	10	Dichlorofluoromethane	9.808	-1.9	1471244	0.749	0.764	6.672	6.673	4.35				
	11	Trichlorofluoromethane	10.147	1.5	1086354	0.553	0.545	6.747	6.732	9.58				
5	12	Acrolein	48.279	-3.4	84307	0.009	0.009	7.848	7.852	13.95				
	13	1,1,2-Trichloro-1,2,2-trifluoroethane	9.633	-3.7	384110	0.196	0.203	7.982	7.983	4.08				
5	14	Acetone	45.661	-8.7	346459	0.035	0.039	8.191	8.185	8.41				
	15	1,1-Dichloroethene	9.833	-1.7	1299399	0.661	0.673	8.012	8.003	4.65				
	16	Methyl acetate												
	17	Iodomethane	9.877	-1.2	1224692	0.623	0.631	8.399	8.390	6.13				
	18	Carbon disulfide	9.749	-2.5	2591704	1.319	1.353	8.518	8.514	8.97				
	19	Methylene chloride	9.496	-5.0	886710	0.451	0.475	9.084	9.080	4.30				
5	20	tert-Butyl alcohol	48.030	-3.9	113617	0.012	0.012	9.277	9.288	6.87				
	21	tert-Butyl methyl ether (MTBE)	9.404	-6.0	902635	0.460	0.489	9.500	9.510	4.37				
	22	trans-1,2-Dichloroethene	9.789	-2.1	1318564	0.671	0.686	9.575	9.571	3.87				
5	23	Acrylonitrile	47.722	-4.6	332995	0.034	0.036	9.604	9.602	7.73				
	24	Isopropyl ether (DIPE)	9.920	-0.8	2330749	1.187	1.196	10.334	10.330	4.59				
	25	Vinyl acetate	9.528	-4.7	751324	0.382	0.401	10.378	10.388	12.58				
	26	1,1-Dichloroethane	9.930	-0.7	1448484	0.737	0.743	10.378	10.370	4.72				
5	27	2-Butanol												
	28	tert-Butyl ethyl ether (ETBE)	9.593	-4.1	1613230	0.821	0.856	10.944	10.949	4.96				
	29	2,2-Dichloropropane	9.497	-5.0	1128621	0.575	0.605	11.331	11.326	10.34				
5	30	2-Butanone	45.732	-8.5	593514	0.060	0.066	11.346	11.355	10.11				
	31	cis-1,2-Dichloroethene	9.895	-1.0	756535	0.385	0.389	11.361	11.360	4.16				
	32	Bromochloromethane	9.603	-4.0	579777	0.295	0.307	11.778	11.770	4.66				
	33	Tetrahydrofuran	8.976	-10.2	66683	0.034	0.038	11.822	11.823	8.93				
	34	Chloroform	9.825	-1.8	1557374	0.793	0.807	11.867	11.861	4.69				
5	35	tert-Amyl alcohol												
	36	Dibromofluoromethane	9.783	-2.2	713957	0.363	0.372	12.120	12.122	4.23				
	37	1,1,1-Trichloroethane	10.014	0.1	1422256	0.724	0.723	12.135	12.131	5.57				
	38	Cyclohexane												
	39	tert-Amyl methyl ether (TAME)	9.629	-3.7	250003	0.127	0.132	12.745	12.741	5.96				
	40	1,2-Dichloroethane-d4	9.565	-4.4	710649	0.362	0.378	12.656	12.651	5.20				
	41	CHLOROBENZENE-D5	10.000	0	1798817	1	1	17.196	17.195	0				
	42	1,1-Dichloropropene	10.046	0.5	358644	0.199	0.198	12.373	12.367	4.08				
	43	Carbon tetrachloride	9.973	-0.3	1214995	0.675	0.677	12.373	12.375	4.82				
	44	Benzene	9.859	-1.4	2875933	1.599	1.622	12.700	12.706	4.28				
	45	1,2-Dichloroethane	9.612	-3.9	865253	0.481	0.500	12.760	12.764	5.00				
	46	Trichloroethene	9.753	-2.5	780754	0.434	0.445	13.623	13.618	5.11				
	47	Methylcyclohexane												
	48	1,2-Dichloropropane	9.773	-2.3	729684	0.406	0.415	13.966	13.967	5.04				
20	49	1,4-Dioxane	183.576	-8.2	42494	0.001	0.001	14.129	14.128	13.98				
	50	Dibromomethane	9.611	-3.9	338874	0.188	0.196	14.189	14.184	7.00				
	51	Bromodichloromethane	9.825	-1.8	1095495	0.609	0.620	14.353	14.349	7.03				
	52	2-Chloroethyl vinyl ether	9.067	-9.3	204114	0.113	0.125	14.650	14.645	11.72				
	53	cis-1,3-Dichloropropene	9.692	-3.1	1116066	0.620	0.640	14.918	14.916	7.70				
5	54	4-Methyl-2-pentanone	47.294	-5.4	1718865	0.191	0.202	15.037	15.035	5.64				
	55	Toluene-d8	9.655	-3.5	2466873	1.371	1.420	15.261	15.257	3.97				
	56	Toluene	9.993	-0.1	3162952	1.758	1.759	15.350	15.348	3.81				
	57	Ethyl methacrylate	9.621	-3.8	564739	0.314	0.326	15.588	15.591	6.64				
	58	trans-1,3-Dichloropropene	9.804	-2.0	883251	0.491	0.501	15.633	15.634	8.00				
	59	1,1,2-Trichloroethane	9.563	-4.4	373487	0.208	0.217	15.915	15.913	5.48				

SW
8/18/11

2015

	60	Tetrachloroethene	9.848	-1.5	677306	0.377	0.382	16.094	16.089	3.71				
5	61	2-Hexanone	48.468	-3.1	1163929	0.129	0.133	16.109	16.108	4.95				
	62	1,3-Dichloropropane	9.655	-3.5	754490	0.419	0.434	16.139	16.140	5.43				
	63	Dibromochloromethane	9.885	-1.1	571900	0.318	0.322	16.481	16.487	10.17				
	64	1,2-Dibromoethane	9.766	-2.3	417971	0.232	0.238	16.675	16.672	7.10				
	65	1-Chlorohexane	9.962	-0.4	1461845	0.813	0.816	17.032	17.036	3.31				
	66	Chlorobenzene	9.849	-1.5	1787931	0.994	1.009	17.240	17.237	3.91				
	67	Ethylbenzene	9.937	-0.6	4060376	2.257	2.272	17.285	17.281	3.20				
	68	1,1,1,2-Tetrachloroethane	10.061	0.6	678042	0.377	0.375	17.315	17.314	5.09				
2	69	m-Xylene & p-Xylene	19.693	-1.5	6198937	1.723	1.750	17.404	17.409	3.27				
	70	o-Xylene	9.947	-0.5	3036203	1.688	1.697	17.940	17.944	5.67				
	71	Styrene	10.236	2.4	2015906	1.121	1.095	17.969	17.967	5.77				
	72	1,2-DICHLOROBENZENE-D4	10.000	0	640128	1	1	20.723	20.722	0				
	73	Isopropylbenzene	9.728	-2.7	3530678	5.516	5.670	18.357	18.362	4.24				
	74	Bromoform	9.443	-5.6	249695	0.390	0.413	18.357	18.353	13.02				
	75	4-Bromofluorobenzene	9.646	-3.5	960964	1.501	1.556	18.654	18.649	4.08				
	76	1,1,2,2-Tetrachloroethane	9.148	-8.5	441198	0.689	0.753	18.788	18.793	5.72				
	77	trans-1,4-Dichloro-2-butene	9.162	-8.4	143359	0.224	0.244	18.833	18.829	8.79				
	78	n-Propylbenzene	9.830	-1.7	5072007	7.923	8.060	18.878	18.874	5.75				
	79	1,2,3-Trichloropropane	9.596	-4.0	107620	0.168	0.175	18.892	18.893	6.81				
	80	Bromobenzene	9.649	-3.5	705287	1.102	1.142	18.907	18.913	4.08				
	81	1,3,5-Trimethylbenzene	9.894	-1.1	3095769	4.836	4.888	19.041	19.050	4.63				
	82	2-Chlorotoluene	9.764	-2.4	3143279	4.910	5.029	19.086	19.090	4.52				
	83	4-Chlorotoluene	9.838	-1.6	2736995	4.276	4.346	19.220	19.216	4.03				
	84	tert-Butylbenzene	9.890	-1.1	613463	0.958	0.969	19.517	19.515	4.68				
	85	1,2,4-Trimethylbenzene	9.958	-0.4	2964568	4.631	4.650	19.562	19.569	4.48				
	86	sec-Butylbenzene	9.913	-0.9	4041314	6.313	6.369	19.785	19.789	5.02				
	87	p-Isopropyltoluene	10.093	0.9	3176708	4.963	4.917	19.934	19.931	4.68				
	88	1,3-Dichlorobenzene	9.880	-1.2	1385302	2.164	2.190	20.098	20.096	4.38				
	89	1,4-Dichlorobenzene	9.945	-0.6	1296892	2.026	2.037	20.202	20.201	4.65				
	90	n-Butylbenzene	10.239	2.4	3559056	5.560	5.430	20.485	20.488	4.68				
	91	1,2-Dichlorobenzene	9.828	-1.7	1053936	1.646	1.675	20.753	20.752	4.20				
	92	1,2-Dibromo-3-chloropropane	9.687	-3.1	53004	0.083	0.085	21.884	21.876	10.04				
	93	1,2,4-Trichlorobenzene	10.206	2.1	555050	0.867	0.850	23.119	23.119	10.33				
	94	Hexachlorobutadiene	10.504	5.0	523217	0.817	0.778	23.253	23.251	5.07				
	95	Naphthalene	10.499	5.0	736086	1.150	1.095	23.626	23.621	14.07				
	96	1,2,3-Trichlorobenzene	10.239	2.4	408911	0.639	0.624	24.042	24.041	11.07				

Spike Amount = Nominal Amount * M

Sw
8/18/11

2017

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB307
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K173
BFB Injection Date : 11/21/11
BFB Injection Time : 06:54
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.04
75	30.0 - 60.0% of mass 95	55.14
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.39
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	64.21
175	5.0 - 9.0% of mass 174	4.84(7.5)1
176	95.0 - 101.0% of mass 174	62.11(96.7)1
177	5.0 - 9.0% of mass 176	4.24(6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV003H1654	RKB309	11/21/11	08:07
2	MBLK1W	V003K218	RKB312	11/21/11	09:53
3	LCS1W	V003K21L	RKB310	11/21/11	08:47
4	LCD1W	V003K21C	RKB311	11/21/11	09:20
5	MW-70-MNA15-148	K173-01	RKB324	11/21/11	16:47

FORM V VOA OLM02.0

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RHB444
Instrument ID: 03
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K173
Date Analyzed: 08/16/11
Time Analyzed: 14:40
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1861981	13.20	1722743	17.19	603523	20.72
	UPPER LIMIT	3723962	13.70	3445486	17.69	1207046	21.22
	LOWER LIMIT	930991	12.70	861372	16.69	301762	20.22
	SAMPLE ID						
1	VSTD010	2132236	13.16	2019485	17.15	672808	20.67
2	MBLK1W	2463110	13.16	2242238	17.15	704811	20.66
3	LCS1W	2152842	13.16	1958957	17.15	630750	20.66
4	LCD1W	2405985	13.15	2254896	17.14	733489	20.67
5	MW-70-MNA15-148	2271476	13.15	2188467	17.14	704548	20.67

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKB309.D Vial: 3
Acq On : 21 Nov 2011 8:07 am Operator: CGM
Sample : CV003H1654 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\V003H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	115	0.00
2	T,M	Chlorotrifluoroethylene	-1.000	0.000	0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	11.260	-12.6	106	0.01
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	106	0.01
5	P,T,M	Chloromethane	10.000	11.203	-12.0	106	0.01
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000	0.0	0	-5.22#
7	C,T,M	Vinyl chloride	10.000	10.673	-6.7	99	0.01
8	T,M	Bromomethane	10.000	11.681	-16.8	108	0.00
9	T,M	Chloroethane	10.000	11.411	-14.1	107	0.00
10	T,M	Dichlorofluoromethane	10.000	10.252	-2.5	110	-0.02
11	T,M	Trichlorofluoromethane	10.000	9.213	7.9	86	0.00
12	T,M	Acrolein	50.000	36.465	27.1#	82	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.207	7.9	101	0.00
14	T,M	Acetone	50.000	49.361	1.3	109	0.00
15	C,T,M	1,1-Dichloroethene	10.000	9.709	2.9	103	0.01
16	T,M	Methyl acetate	-1.000	0.000	0.0	108	0.00
17	T,M	Iodomethane	10.000	9.331	6.7	99	0.01
18	T,M	Carbon disulfide	10.000	10.944	-9.4	128	0.00
19	T,M	Methylene chloride	10.000	9.816	1.8	108	0.00
20	T,M	tert-Butyl alcohol	50.000	39.544	20.9#	82	0.00
21	T,M	tert-Butyl methyl ether (MT	10.000	9.357	6.4	101	0.00
22	T,M	trans-1,2-Dichloroethene	10.000	9.955	0.4	107	0.00
23	T,M	Acrylonitrile	50.000	55.162	-10.3	118	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	9.883	1.2	104	0.00
25	T,M	Vinyl acetate	10.000	8.821	11.8	86	0.01
26	P,T,M	1,1-Dichloroethane	10.000	9.734	2.7	103	0.01
27	T,M	2-Butanol	-1.000	0.000	0.0	90	0.01
28	T,M	tert-Butyl ethyl ether (ETB	10.000	9.509	4.9	102	0.00
29	T,M	2,2-Dichloropropane	10.000	9.977	0.2	106	0.00
30	T,M	2-Butanone	50.000	48.314	3.4	108	0.00
31	T,M	cis-1,2-Dichloroethene	10.000	10.115	-1.2	108	0.00
32	T,M	Bromochloromethane	10.000	10.036	-0.4	106	0.01
33	T,M	Tetrahydrofuran	10.000	9.733	2.7	117	0.00
34	C,T,M	Chloroform	10.000	9.226	7.7	97	0.00
35	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	63	0.00
36	S	Dibromofluoromethane	10.000	9.646	3.5	105	0.00
37	T,M	1,1,1-Trichloroethane	10.000	9.025	9.7	95	0.00
38	T,M	Cyclohexane	-1.000	0.000	0.0	109	0.01
39	T,M	tert-Amyl methyl ether (TAM	10.000	9.252	7.5	96	0.00
40	S	1,2-Dichloroethane-d4	10.000	9.202	8.0	100	0.00
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	117	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKB309.D Vial: 3
Acq On : 21 Nov 2011 8:07 am Operator: CGM
Sample : CV003H1654 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	9.523	4.8	103	0.01
43	T,M	Carbon tetrachloride	10.000	8.452	15.5	92	0.00
44	T,M	Benzene	10.000	9.745	2.6	107	0.01
45	T,M	1,2-Dichloroethane	10.000	8.506	14.9	93	0.00
46	T,M	Trichloroethene	10.000	9.191	8.1	102	0.00
47	T,M	Methylcyclohexane	-1.000	0.000	0.0	94	0.01
48	C,T,M	1,2-Dichloropropane	10.000	9.949	0.5	109	0.00
49	T,M	1,4-Dioxane	200.000	244.291	-22.1#	144	0.00
50	T,M	Dibromomethane	10.000	8.935	10.6	99	0.00
51	T,M	Bromodichloromethane	10.000	8.905	11.0	97	0.00
52	T,M	2-Chloroethyl vinyl ether	10.000	1.286	87.1#	15	0.00
53	T,M	cis-1,3-Dichloropropene	10.000	9.466	5.3	103	0.00
54	T,M	4-Methyl-2-pentanone	50.000	48.045	3.9	108	0.00
55	S	Toluene-d8	10.000	9.244	7.6	105	0.00
56	C,T,M	Toluene	10.000	9.381	6.2	104	0.00
57	T,M	Ethyl methacrylate	10.000	9.425	5.7	103	0.01
58	T,M	trans-1,3-Dichloropropene	10.000	8.857	11.4	95	0.00
59	T,M	1,1,2-Trichloroethane	10.000	9.218	7.8	101	0.00
60	T,M	Tetrachloroethene	10.000	8.790	12.1	98	0.00
61	T,M	2-Hexanone	50.000	48.699	2.6	105	0.00
62	T,M	1,3-Dichloropropane	10.000	9.784	2.2	107	0.00
63	T,M	Dibromochloromethane	10.000	9.001	10.0	97	0.01
64	T,M	1,2-Dibromoethane	10.000	9.441	5.6	104	0.00
65	T,M	1-Chlorohexane	10.000	9.842	1.6	110	0.01
66	P,M	Chlorobenzene	10.000	9.617	3.8	106	0.00
67	C,T,M	Ethylbenzene	10.000	9.221	7.8	102	0.00
68	T,M	1,1,1,2-Tetrachloroethane	10.000	8.947	10.5	96	0.00
69	T,M	m-Xylene & p-Xylene	20.000	18.166	9.2	102	0.01
70	T,M	o-Xylene	10.000	9.148	8.5	101	0.01
71	T,M	Styrene	10.000	9.712	2.9	103	0.00
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	111	0.00
73	T,M	Isopropylbenzene	10.000	9.562	4.4	102	0.01
74	P,T,M	Bromoform	10.000	9.081	9.2	92	0.00
75	S	4-Bromofluorobenzene	10.000	9.408	5.9	102	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.215	-2.1	109	0.01
77	T,M	trans-1,4-Dichloro-2-butene	10.000	6.365	36.4#	69	0.00
78	T,M	n-Propylbenzene	10.000	9.819	1.8	105	0.00
79	T,M	1,2,3-Trichloropropane	10.000	9.573	4.3	99	0.00
80	T,M	Bromobenzene	10.000	9.323	6.8	99	0.01
81	T,M	1,3,5-Trimethylbenzene	10.000	9.349	6.5	99	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKB309.D Vial: 3
Acq On : 21 Nov 2011 8:07 am Operator: CGM
Sample : CVO03H1654 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	9.432	5.7	100	0.00
83	T,M	4-Chlorotoluene	10.000	9.473	5.3	100	0.00
84	T,M	tert-Butylbenzene	10.000	9.773	2.3	103	0.00
85	T,M	1,2,4-Trimethylbenzene	10.000	9.331	6.7	99	0.01
86	T,M	sec-Butylbenzene	10.000	9.792	2.1	104	0.00
87	T,M	p-Isopropyltoluene	10.000	9.654	3.5	100	0.00
88	T,M	1,3-Dichlorobenzene	10.000	9.372	6.3	99	0.01
89	T,M	1,4-Dichlorobenzene	10.000	9.440	5.6	98	0.00
90	T,M	n-Butylbenzene	10.000	9.913	0.9	103	0.00
91	T,M	1,2-Dichlorobenzene	10.000	9.368	6.3	98	0.00
92	T,M	1,2-Dibromo-3-chloropropane	10.000	9.054	9.5	93	0.00
93	T,M	1,2,4-Trichlorobenzene	10.000	9.135	8.7	95	0.00
94	T,M	Hexachlorobutadiene	10.000	8.291	17.1	85	0.00
95	T,M	Naphthalene	10.000	9.757	2.4	97	0.00
96	T,M	1,2,3-Trichlorobenzene	10.000	9.039	9.6	94	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKB309.D Vial: 3
Acq On : 21 Nov 2011 8:07 am Operator: CGM
Sample : CV003H1654 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\V003H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	115	0.00
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.397	-12.5	106	0.01
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	106	0.01
5	P,T,M	Chloromethane	0.357	0.399	-11.8	106	0.01
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.22#
7	C,T,M	Vinyl chloride	0.337	0.360	-6.8	99	0.01
8	T,M	Bromomethane	0.227	0.265	-16.7	108	0.00
9	T,M	Chloroethane	0.177	0.202	-14.1	107	0.00
10	T,M	Dichlorofluoromethane	0.764	0.783	-2.5	110	-0.02
11	T,M	Trichlorofluoromethane	0.545	0.502	7.9	86	0.00
12	T,M	Acrolein	0.009	0.006	33.3#	82	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.187	7.9	101	0.00
14	T,M	Acetone	0.039	0.038	2.6	109	0.00
15	C,T,M	1,1-Dichloroethene	0.673	0.653	3.0	103	0.01
16	T,M	Methyl acetate	0.000	0.000	0.0	108	0.00
17	T,M	Iodomethane	0.631	0.589	6.7	99	0.01
18	T,M	Carbon disulfide	1.353	1.481	-9.5	128	0.00
19	T,M	Methylene chloride	0.475	0.467	1.7	108	0.00
20	T,M	tert-Butyl alcohol	0.012	0.010	16.7	82	0.00
21	T,M	tert-Butyl methyl ether (MT	0.489	0.457	6.5	101	0.00
22	T,M	trans-1,2-Dichloroethene	0.686	0.683	0.4	107	0.00
23	T,M	Acrylonitrile	0.036	0.039	-8.3	118	0.00
24	T,M	Isopropyl ether (DIPE)	1.196	1.182	1.2	104	0.00
25	T,M	Vinyl acetate	0.401	0.354	11.7	86	0.01
26	P,T,M	1,1-Dichloroethane	0.743	0.723	2.7	103	0.01
27	T,M	2-Butanol	0.000	0.000	0.0	90	0.01
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.814	4.9	102	0.00
29	T,M	2,2-Dichloropropane	0.605	0.604	0.2	106	0.00
30	T,M	2-Butanone	0.066	0.064	3.0	108	0.00
31	T,M	cis-1,2-Dichloroethene	0.389	0.394	-1.3	108	0.00
32	T,M	Bromochloromethane	0.307	0.308	-0.3	106	0.01
33	T,M	Tetrahydrofuran	0.038	0.037	2.6	117	0.00
34	C,T,M	Chloroform	0.807	0.744	7.8	97	0.00
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	63	0.00
36	S	Dibromofluoromethane	0.372	0.358	3.8	105	0.00
37	T,M	1,1,1-Trichloroethane	0.723	0.653	9.7	95	0.00
38	T,M	Cyclohexane	0.000	0.000	0.0	109	0.01
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.122	7.6	96	0.00
40	S	1,2-Dichloroethane-d4	0.378	0.348	7.9	100	0.00
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	117	0.00

(#) = Out of Range

2024

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKB309.D Vial: 3
Acq On : 21 Nov 2011 8:07 am Operator: CGM
Sample : CVO03H1654 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.198	0.189	4.5	103	0.01
43	T,M	Carbon tetrachloride	0.677	0.572	15.5	92	0.00
44	T,M	Benzene	1.622	1.580	2.6	107	0.01
45	T,M	1,2-Dichloroethane	0.500	0.426	14.8	93	0.00
46	T,M	Trichloroethene	0.445	0.409	8.1	102	0.00
47	T,M	Methylcyclohexane	0.000	0.000	0.0	94	0.01
48	C,T,M	1,2-Dichloropropane	0.415	0.413	0.5	109	0.00
49	T,M	1,4-Dioxane	0.001	0.002	-100.0#	144	0.00
50	T,M	Dibromomethane	0.196	0.175	10.7	99	0.00
51	T,M	Bromodichloromethane	0.620	0.552	11.0	97	0.00
52	T,M	2-Chloroethyl vinyl ether	0.125	0.016	87.2#	15#	0.00
53	T,M	cis-1,3-Dichloropropene	0.640	0.606	5.3	103	0.00
54	T,M	4-Methyl-2-pentanone	0.202	0.194	4.0	108	0.00
55	S	Toluene-d8	1.420	1.313	7.5	105	0.00
56	C,T,M	Toluene	1.759	1.651	6.1	104	0.00
57	T,M	Ethyl methacrylate	0.326	0.308	5.5	103	0.01
58	T,M	trans-1,3-Dichloropropene	0.501	0.444	11.4	95	0.00
59	T,M	1,1,2-Trichloroethane	0.217	0.200	7.8	101	0.00
60	T,M	Tetrachloroethene	0.382	0.336	12.0	98	0.00
61	T,M	2-Hexanone	0.133	0.130	2.3	105	0.00
62	T,M	1,3-Dichloropropane	0.434	0.425	2.1	107	0.00
63	T,M	Dibromochloromethane	0.322	0.289	10.2	97	0.01
64	T,M	1,2-Dibromoethane	0.238	0.225	5.5	104	0.00
65	T,M	1-Chlorohexane	0.816	0.803	1.6	110	0.01
66	P,M	Chlorobenzene	1.009	0.970	3.9	106	0.00
67	C,T,M	Ethylbenzene	2.272	2.095	7.8	102	0.00
68	T,M	1,1,1,2-Tetrachloroethane	0.375	0.335	10.7	96	0.00
69	T,M	m-Xylene & p-Xylene	1.750	1.589	9.2	102	0.01
70	T,M	o-Xylene	1.697	1.552	8.5	101	0.01
71	T,M	Styrene	1.095	1.063	2.9	103	0.00
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	111	0.00
73	T,M	Isopropylbenzene	5.670	5.421	4.4	102	0.01
74	P,T,M	Bromoform	0.413	0.375	9.2	92	0.00
75	S	4-Bromofluorobenzene	1.556	1.464	5.9	102	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	0.753	0.770	-2.3	109	0.01
77	T,M	trans-1,4-Dichloro-2-butene	0.244	0.156	36.1#	69	0.00
78	T,M	n-Propylbenzene	8.060	7.914	1.8	105	0.00
79	T,M	1,2,3-Trichloropropane	0.175	0.168	4.0	99	0.00
80	T,M	Bromobenzene	1.142	1.065	6.7	99	0.01
81	T,M	1,3,5-Trimethylbenzene	4.888	4.569	6.5	99	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K21\RKB309.D Vial: 3
Acq On : 21 Nov 2011 8:07 am Operator: CGM
Sample : CVO03H1654 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	4.743	5.7	100	0.00
83	T,M	4-Chlorotoluene	4.346	4.117	5.3	100	0.00
84	T,M	tert-Butylbenzene	0.969	0.947	2.3	103	0.00
85	T,M	1,2,4-Trimethylbenzene	4.650	4.339	6.7	99	0.01
86	T,M	sec-Butylbenzene	6.369	6.236	2.1	104	0.00
87	T,M	p-Isopropyltoluene	4.917	4.747	3.5	100	0.00
88	T,M	1,3-Dichlorobenzene	2.190	2.053	6.3	99	0.01
89	T,M	1,4-Dichlorobenzene	2.037	1.923	5.6	98	0.00
90	T,M	n-Butylbenzene	5.430	5.382	0.9	103	0.00
91	T,M	1,2-Dichlorobenzene	1.675	1.569	6.3	98	0.00
92	T,M	1,2-Dibromo-3-chloropropane	0.085	0.077	9.4	93	0.00
93	T,M	1,2,4-Trichlorobenzene	0.850	0.776	8.7	95	0.00
94	T,M	Hexachlorobutadiene	0.778	0.645	17.1	85	0.00
95	T,M	Naphthalene	1.095	1.069	2.4	97	0.00
96	T,M	1,2,3-Trichlorobenzene	0.624	0.564	9.6	94	0.00

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB392
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K173
BFB Injection Date : 11/23/11
BFB Injection Time : 09:49
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.79
75	30.0 - 60.0% of mass 95	53.69
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.54
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	57.53
175	5.0 - 9.0% of mass 174	4.49(7.8)1
176	95.0 - 101.0% of mass 174	56.39(98.0)1
177	5.0 - 9.0% of mass 176	3.90(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV003H1658	RKB393	11/23/11	10:27
2	MBLK2W	V003K25B	RKB396	11/23/11	12:22
3	LCS2W	V003K25L	RKB394	11/23/11	11:06
4	LCD2W	V003K25C	RKB395	11/23/11	11:44
5	MW-70-MNA15-148DL	K173-01T	RKB406	11/23/11	18:44

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RHB444
Instrument ID: 03
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K173
Date Analyzed: 08/16/11
Time Analyzed: 14:40
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1861981	13.20	1722743	17.19	603523	20.72
	UPPER LIMIT	3723962	13.70	3445486	17.69	1207046	21.22
	LOWER LIMIT	930991	12.70	861372	16.69	301762	20.22
	SAMPLE ID						
1	VSTD010	2014551	13.15	1877251	17.15	671023	20.66
2	MBLK2W	2422223	13.16	2257384	17.15	775851	20.68
3	LCS2W	2110265	13.16	1993606	17.15	705878	20.66
4	LCD2W	2219405	13.16	2097168	17.15	734744	20.66
5	MW-70-MNA15-148DL	2122922	13.16	1994434	17.16	663755	20.67

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB393.D Vial: 2
Acq On : 23 Nov 2011 10:27 am Operator: CGM
Sample : CVO03H1658 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	108	-0.02
2	T,M	Chlorotrifluoroethylene	-1.000	0.000	0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	11.252	-12.5	100	0.01
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	100	0.01
5	P,T,M	Chloromethane	10.000	11.447	-14.5	103	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000	0.0	0	-5.22#
7	C,T,M	Vinyl chloride	10.000	10.383	-3.8	91	0.00
8	T,M	Bromomethane	10.000	10.636	-6.4	93	-0.02
9	T,M	Chloroethane	10.000	10.689	-6.9	94	0.00
10	T,M	Dichlorofluoromethane	10.000	10.383	-3.8	105	0.00
11	T,M	Trichlorofluoromethane	10.000	9.023	9.8	80	0.00
12	T,M	Acrolein	50.000	76.861	-53.7#	162	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.889	1.1	102	-0.02
14	T,M	Acetone	50.000	51.817	-3.6	108	0.00
15	C,T,M	1,1-Dichloroethene	10.000	9.767	2.3	98	0.00
16	T,M	Methyl acetate	-1.000	0.000	0.0	107	0.00
17	T,M	Iodomethane	10.000	9.830	1.7	98	0.00
18	T,M	Carbon disulfide	10.000	10.457	-4.6	115	0.00
19	T,M	Methylene chloride	10.000	10.211	-2.1	106	-0.02
20	T,M	tert-Butyl alcohol	50.000	49.269	1.5	97	0.00
21	T,M	tert-Butyl methyl ether (MT	10.000	10.043	-0.4	103	-0.02
22	T,M	trans-1,2-Dichloroethene	10.000	10.039	-0.4	102	-0.02
23	T,M	Acrylonitrile	50.000	55.493	-11.0	112	-0.02
24	T,M	Isopropyl ether (DIPE)	10.000	10.801	-8.0	108	-0.02
25	T,M	Vinyl acetate	10.000	10.628	-6.3	98	0.00
26	P,T,M	1,1-Dichloroethane	10.000	10.376	-3.8	103	0.00
27	T,M	2-Butanol	-1.000	0.000	0.0	96	0.00
28	T,M	tert-Butyl ethyl ether (ETB	10.000	10.967	-9.7	111	-0.02
29	T,M	2,2-Dichloropropane	10.000	9.678	3.2	97	-0.02
30	T,M	2-Butanone	50.000	52.462	-4.9	110	-0.02
31	T,M	cis-1,2-Dichloroethene	10.000	10.589	-5.9	107	0.00
32	T,M	Bromochloromethane	10.000	10.554	-5.5	105	0.00
33	T,M	Tetrahydrofuran	10.000	10.851	-8.5	123	-0.02
34	C,T,M	Chloroform	10.000	9.997	0.0	99	-0.02
35	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	27	0.00
36	S	Dibromofluoromethane	10.000	9.584	4.2	99	0.00
37	T,M	1,1,1-Trichloroethane	10.000	9.392	6.1	93	-0.02
38	T,M	Cyclohexane	-1.000	0.000	0.0	119	0.00
39	T,M	tert-Amyl methyl ether (TAM	10.000	11.092	-10.9	109	0.00
40	S	1,2-Dichloroethane-d4	10.000	8.861	11.4	91	-0.02
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	109	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB393.D Vial: 2
Acq On : 23 Nov 2011 10:27 am Operator: CGM
Sample : CVO03H1658 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	10.281	-2.8	104	0.00
43	T,M	Carbon tetrachloride	10.000	9.380	6.2	95	0.00
44	T,M	Benzene	10.000	10.360	-3.6	106	0.00
45	T,M	1,2-Dichloroethane	10.000	9.241	7.6	94	0.00
46	T,M	Trichloroethene	10.000	10.125	-1.3	105	-0.02
47	T,M	Methylcyclohexane	-1.000	0.000	0.0	100	0.00
48	C,T,M	1,2-Dichloropropane	10.000	10.885	-8.8	111	0.00
49	T,M	1,4-Dioxane	200.000	251.942	-26.0#	138	0.00
50	T,M	Dibromomethane	10.000	10.015	-0.2	104	-0.02
51	T,M	Bromodichloromethane	10.000	9.983	0.2	101	-0.02
52	T,M	2-Chloroethyl vinyl ether	10.000	9.689	3.1	103	-0.02
53	T,M	cis-1,3-Dichloropropene	10.000	10.567	-5.7	107	0.00
54	T,M	4-Methyl-2-pentanone	50.000	53.667	-7.3	112	0.00
55	S	Toluene-d8	10.000	9.363	6.4	99	-0.02
56	C,T,M	Toluene	10.000	10.342	-3.4	106	0.00
57	T,M	Ethyl methacrylate	10.000	10.867	-8.7	111	0.00
58	T,M	trans-1,3-Dichloropropene	10.000	10.500	-5.0	104	0.00
59	T,M	1,1,2-Trichloroethane	10.000	10.288	-2.9	105	0.00
60	T,M	Tetrachloroethene	10.000	9.758	2.4	101	-0.02
61	T,M	2-Hexanone	50.000	57.229	-14.5	115	0.00
62	T,M	1,3-Dichloropropane	10.000	10.535	-5.4	107	0.00
63	T,M	Dibromochloromethane	10.000	10.156	-1.6	102	0.00
64	T,M	1,2-Dibromoethane	10.000	10.439	-4.4	106	0.00
65	T,M	1-Chlorohexane	10.000	10.535	-5.4	109	0.00
66	P,M	Chlorobenzene	10.000	10.622	-6.2	108	-0.02
67	C,T,M	Ethylbenzene	10.000	10.244	-2.4	106	-0.02
68	T,M	1,1,1,2-Tetrachloroethane	10.000	10.290	-2.9	103	0.00
69	T,M	m-Xylene & p-Xylene	20.000	20.226	-1.1	105	0.00
70	T,M	o-Xylene	10.000	10.366	-3.7	106	0.00
71	T,M	Styrene	10.000	11.064	-10.6	109	-0.02
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	111	-0.02
73	T,M	Isopropylbenzene	10.000	10.172	-1.7	108	0.00
74	P,T,M	Bromoform	10.000	9.987	0.1	101	-0.02
75	S	4-Bromofluorobenzene	10.000	9.221	7.8	100	-0.02
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.699	-7.0	114	0.00
77	T,M	trans-1,4-Dichloro-2-butene	10.000	11.144	-11.4	121	0.00
78	T,M	n-Propylbenzene	10.000	10.528	-5.3	112	-0.02
79	T,M	1,2,3-Trichloropropane	10.000	10.286	-2.9	106	0.00
80	T,M	Bromobenzene	10.000	9.942	0.6	105	0.00
81	T,M	1,3,5-Trimethylbenzene	10.000	10.137	-1.4	107	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB393.D Vial: 2
Acq On : 23 Nov 2011 10:27 am Operator: CGM
Sample : CVO03H1658 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	10.007	-0.1	106	0.00
83	T,M	4-Chlorotoluene	10.000	10.425	-4.3	110	-0.02
84	T,M	tert-Butylbenzene	10.000	10.410	-4.1	110	-0.02
85	T,M	1,2,4-Trimethylbenzene	10.000	10.383	-3.8	110	0.00
86	T,M	sec-Butylbenzene	10.000	10.510	-5.1	111	0.00
87	T,M	p-Isopropyltoluene	10.000	10.709	-7.1	111	-0.02
88	T,M	1,3-Dichlorobenzene	10.000	10.571	-5.7	111	0.00
89	T,M	1,4-Dichlorobenzene	10.000	10.549	-5.5	109	-0.02
90	T,M	n-Butylbenzene	10.000	11.109	-11.1	115	0.00
91	T,M	1,2-Dichlorobenzene	10.000	10.315	-3.1	108	-0.02
92	T,M	1,2-Dibromo-3-chloropropane	10.000	10.103	-1.0	103	0.00
93	T,M	1,2,4-Trichlorobenzene	10.000	10.931	-9.3	113	0.00
94	T,M	Hexachlorobutadiene	10.000	9.467	5.3	97	-0.02
95	T,M	Naphthalene	10.000	11.479	-14.8	114	-0.02
96	T,M	1,2,3-Trichlorobenzene	10.000	10.681	-6.8	111	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB393.D Vial: 2
Acq On : 23 Nov 2011 10:27 am Operator: CGM
Sample : CV003H1658 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\V003H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	108	-0.02
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.397	-12.5	100	0.01
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	100	0.01
5	P,T,M	Chloromethane	0.357	0.408	-14.3	103	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.22#
7	C,T,M	Vinyl chloride	0.337	0.350	-3.9	91	0.00
8	T,M	Bromomethane	0.227	0.241	-6.2	93	-0.02
9	T,M	Chloroethane	0.177	0.189	-6.8	94	0.00
10	T,M	Dichlorofluoromethane	0.764	0.793	-3.8	105	0.00
11	T,M	Trichlorofluoromethane	0.545	0.492	9.7	80	0.00
12	T,M	Acrolein	0.009	0.014	-55.6#	162	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.201	1.0	102	-0.02
14	T,M	Acetone	0.039	0.040	-2.6	108	0.00
15	C,T,M	1,1-Dichloroethene	0.673	0.657	2.4	98	0.00
16	T,M	Methyl acetate	0.000	0.000	0.0	107	0.00
17	T,M	Iodomethane	0.631	0.620	1.7	98	0.00
18	T,M	Carbon disulfide	1.353	1.415	-4.6	115	0.00
19	T,M	Methylene chloride	0.475	0.485	-2.1	106	-0.02
20	T,M	tert-Butyl alcohol	0.012	0.012	0.0	97	0.00
21	T,M	tert-Butyl methyl ether (MT	0.489	0.491	-0.4	103	-0.02
22	T,M	trans-1,2-Dichloroethene	0.686	0.688	-0.3	102	-0.02
23	T,M	Acrylonitrile	0.036	0.039	-8.3	112	-0.02
24	T,M	Isopropyl ether (DIPE)	1.196	1.292	-8.0	108	-0.02
25	T,M	Vinyl acetate	0.401	0.427	-6.5	98	0.00
26	P,T,M	1,1-Dichloroethane	0.743	0.770	-3.6	103	0.00
27	T,M	2-Butanol	0.000	0.000	0.0	96	0.00
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.939	-9.7	111	-0.02
29	T,M	2,2-Dichloropropane	0.605	0.586	3.1	97	-0.02
30	T,M	2-Butanone	0.066	0.069	-4.5	110	-0.02
31	T,M	cis-1,2-Dichloroethene	0.389	0.412	-5.9	107	0.00
32	T,M	Bromochloromethane	0.307	0.324	-5.5	105	0.00
33	T,M	Tetrahydrofuran	0.038	0.041	-7.9	123	-0.02
34	C,T,M	Chloroform	0.807	0.807	0.0	99	-0.02
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	27#	0.00
36	S	Dibromofluoromethane	0.372	0.356	4.3	99	0.00
37	T,M	1,1,1-Trichloroethane	0.723	0.679	6.1	93	-0.02
38	T,M	Cyclohexane	0.000	0.000	0.0	119	0.00
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.147	-11.4	109	0.00
40	S	1,2-Dichloroethane-d4	0.378	0.335	11.4	91	-0.02
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	109	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB393.D Vial: 2
Acq On : 23 Nov 2011 10:27 am Operator: CGM
Sample : CVO03H1658 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.198	0.204	-3.0	104	0.00
43	T,M	Carbon tetrachloride	0.677	0.635	6.2	95	0.00
44	T,M	Benzene	1.622	1.680	-3.6	106	0.00
45	T,M	1,2-Dichloroethane	0.500	0.462	7.6	94	0.00
46	T,M	Trichloroethene	0.445	0.451	-1.3	105	-0.02
47	T,M	Methylcyclohexane	0.000	0.000	0.0	100	0.00
48	C,T,M	1,2-Dichloropropane	0.415	0.452	-8.9	111	0.00
49	T,M	1,4-Dioxane	0.001	0.002	-100.0#	138	0.00
50	T,M	Dibromomethane	0.196	0.196	0.0	104	-0.02
51	T,M	Bromodichloromethane	0.620	0.619	0.2	101	-0.02
52	T,M	2-Chloroethyl vinyl ether	0.125	0.121	3.2	103	-0.02
53	T,M	cis-1,3-Dichloropropene	0.640	0.676	-5.6	107	0.00
54	T,M	4-Methyl-2-pentanone	0.202	0.217	-7.4	112	0.00
55	S	Toluene-d8	1.420	1.330	6.3	99	-0.02
56	C,T,M	Toluene	1.759	1.820	-3.5	106	0.00
57	T,M	Ethyl methacrylate	0.326	0.355	-8.9	111	0.00
58	T,M	trans-1,3-Dichloropropene	0.501	0.526	-5.0	104	0.00
59	T,M	1,1,2-Trichloroethane	0.217	0.223	-2.8	105	0.00
60	T,M	Tetrachloroethene	0.382	0.373	2.4	101	-0.02
61	T,M	2-Hexanone	0.133	0.153	-15.0	115	0.00
62	T,M	1,3-Dichloropropane	0.434	0.458	-5.5	107	0.00
63	T,M	Dibromochloromethane	0.322	0.327	-1.6	102	0.00
64	T,M	1,2-Dibromoethane	0.238	0.248	-4.2	106	0.00
65	T,M	1-Chlorohexane	0.816	0.859	-5.3	109	0.00
66	P,M	Chlorobenzene	1.009	1.072	-6.2	108	-0.02
67	C,T,M	Ethylbenzene	2.272	2.327	-2.4	106	-0.02
68	T,M	1,1,1,2-Tetrachloroethane	0.375	0.385	-2.7	103	0.00
69	T,M	m-Xylene & p-Xylene	1.750	1.770	-1.1	105	0.00
70	T,M	o-Xylene	1.697	1.759	-3.7	106	0.00
71	T,M	Styrene	1.095	1.211	-10.6	109	-0.02
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	111	-0.02
73	T,M	Isopropylbenzene	5.670	5.767	-1.7	108	0.00
74	P,T,M	Bromoform	0.413	0.413	0.0	101	-0.02
75	S	4-Bromofluorobenzene	1.556	1.435	7.8	100	-0.02
76	P,T,M	1,1,2,2-Tetrachloroethane	0.753	0.806	-7.0	114	0.00
77	T,M	trans-1,4-Dichloro-2-butene	0.244	0.272	-11.5	121	0.00
78	T,M	n-Propylbenzene	8.060	8.485	-5.3	112	-0.02
79	T,M	1,2,3-Trichloropropane	0.175	0.180	-2.9	106	0.00
80	T,M	Bromobenzene	1.142	1.135	0.6	105	0.00
81	T,M	1,3,5-Trimethylbenzene	4.888	4.955	-1.4	107	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB393.D Vial: 2
Acq On : 23 Nov 2011 10:27 am Operator: CGM
Sample : CVO03H1658 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	5.033	-0.1	106	0.00
83	T,M	4-Chlorotoluene	4.346	4.531	-4.3	110	-0.02
84	T,M	tert-Butylbenzene	0.969	1.009	-4.1	110	-0.02
85	T,M	1,2,4-Trimethylbenzene	4.650	4.828	-3.8	110	0.00
86	T,M	sec-Butylbenzene	6.369	6.693	-5.1	111	0.00
87	T,M	p-Isopropyltoluene	4.917	5.265	-7.1	111	-0.02
88	T,M	1,3-Dichlorobenzene	2.190	2.315	-5.7	111	0.00
89	T,M	1,4-Dichlorobenzene	2.037	2.149	-5.5	109	-0.02
90	T,M	n-Butylbenzene	5.430	6.032	-11.1	115	0.00
91	T,M	1,2-Dichlorobenzene	1.675	1.728	-3.2	108	-0.02
92	T,M	1,2-Dibromo-3-chloropropane	0.085	0.086	-1.2	103	0.00
93	T,M	1,2,4-Trichlorobenzene	0.850	0.929	-9.3	113	0.00
94	T,M	Hexachlorobutadiene	0.778	0.737	5.3	97	-0.02
95	T,M	Naphthalene	1.095	1.257	-14.8	114	-0.02
96	T,M	1,2,3-Trichlorobenzene	0.624	0.666	-6.7	111	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 6 ☐ EMAX-524.2 Rev.No. 5 ☐ EMAX-624 Rev.No. 2 ☐ EMAX-8260SIM Rev.No.0 ☐ EMAX-TCPSIM Rev.No.1 ☐ EMAX-M8260SIM Rev.No.0 ☐

Start Date: 8/16/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -047

Sample Prep. ID	Data File Name	Lab Sample ID	* Sample Amount (ml/g/ml)	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RHB438	RB03H23	1 L	N/A	N/A	N/A	N/A	11:15am
02	439	V003H161	.04/.5/.5 L					0.5/1.5/1.5 ppb 8260
03	440	2	.08/.5/.5 L					0.5/2.5/2.5 ppb
04	441	3	.1/.5/.5 L					1.0/5.0/5.0 ppb
05	442	4	.2/1/1 L					2.0/10/10 ppb
06	443	5	.2/1.25/1.25 L					5.0/25/25 ppb
07	444	6	1/5/5 L					10/50/50 ppb
08	445	7	2/10/10 L					20/100/100 ppb
09	446	8	3/15/15 L					30/150/150 ppb
10	447	9	4/20/20 L					40/200/200 ppb
11	448	10	5/25/25 L					50/250/250 ppb
12	449	11	10/50/50 L					100/500/500 ppb
13	450	IS/IS	25 mL					
14	451	V003H238	↓					
15	452	V003H161	1/5/5 mL					10/50/50 ppb
16	453	RINSE	25 mL					7:49pm
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30			NW	8/17/11				

BATCH V003H166

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003H16

STANDARDS

NAME	ID	Amount (ul)	Conc. (mg/L)
DCC Fast CS	SV1-17-76-1	*	
DCC CL	-71-1		
DCC 8260	-72-1		
DCC KETONE	-69-3		
BFB	-45-3	1	50/250
IS/SURR.	-73-3	1	
ICV/LCS Fast CS	-69-1	1	
ICV/LCS CL	-71-2	1	
ICV/LCS 8260	-60-2	5	
ICV/LCS KETONE	-70-2	5	
	-51-3	1	
	-51-1	1	
DATA FILE FOLDER	11H16		

Electronic Data Archival

Location	Date
HPCHEM_VOA/T003	

Comments: *please refer to sample amount

Analyzed By: NW

Date Disposed: 8/17/11

Disposed By: NW

2035

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/21/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -048

BATCH VC03H1654

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKB307	BFB03K21						06:54
02	08	STD CHECK						
03	09	CV003H1654						
04	10	V003K21L		1.0				
05	11	C						
06	12	B	25mL					
07	13	11K133-02T	0.5mL	10				
08	14	-05T						
09	15	11K146-01T	5.0mL	5.0				
10	16	-03T	2.5mL	10				
11	17	-04T						
12	18	-05T	5.0mL	5.0				
13	19	-06T	2.5mL	10				
14	20	11K114-03T	0.25mL	100				
15	21	11K151-09T	5.0mL	5.0				
16	22	11K114-08T	2.5mL	10				
17	23	Rinse						
18	24	11K173-01	25mL	1.0				
19	25	11K133-02						
20	26	-05						17:52
21	27	Rinse						
22								
23								
24								
25								
26								
27								
28								
29								

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	VC03H16

STANDARDS

NAME	ID	Amount (uL)	Conc. (mg/L)
DCC	SM-19-6-2	1	
DCC	6.3	1	
DCC	7.2	5	
DCC	8.1	5	
BFB	3.2	1	50
IS/SURR.	6.1	1	250
ICV/LCS	SM-17-90.3	1	
ICV/LCS	97.2	1	
ICV/LCS	89.2	5	
ICV/LCS	99.3	5	

DATA FILE FOLDER 11K21

Electronic Data Archival

Location	Date
HPCHEM_VOA/T003	

Comments:

Analyzed By: CGM

Date Disposed: 11/22/11

Disposed By: CGM

2037

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/23/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -048

BATCH V003HK58

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKB392	BFB03K25						09:49
02	93	V003HK58						
03	94	V003K25L		10				
04	95	C						
05	96	B	25mL					
06	97	11K146-01R						
07	98	11K205-01M						
08	99	015						
09	RKB400	01						
10	01	02						
11	02	06						
12	03	03						
13	04	04						
14	05	05						
15	06	11K173-01T	0.5mL	50				
16	07	11K174-01T						
17	08	02T						
18	09	03T						
19	10	04T	5.0mL	5.0				21:17
20	11	05T	0.5mL	50				RR out of 12-hr
21	12	06T						
22								
23								
24								
25								
26								
27								
28								
29								
30								CGM 11/28/11

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003HK

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-19-6-2	1	
DCC	6-3	1	
DCC	7-2	5	
DCC	8-1	5	
BFB	3-2	1	50/250
IS/SURR.	6-1	1	
ICV/LCS	SV1-17-90-3	1	
ICV/LCS	97-2	1	
ICV/LCS	SV1-19-9-2	5	
ICV/LCS	SV1-17-99-3	5	

DATA FILE FOLDER 11K23

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO03	11/28/11

Comments:

Analyzed By: CGM

Date Disposed: 11/28/11

Disposed By: CGM

2038

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CLIENT: **INSIGHT EEC, INC.**

PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11K174**

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	METHOD SM5310B	8082 – 8090
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 12-05-2011
EMAX Batch No.: 11K174

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 11/17/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
IW-70-SHB217-144	K174-01	11/17/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-MNA12-146	K174-02	11/17/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
MW-70-MNA16-149	K174-03	11/17/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
MW-70-MNA14-151	K174-04	11/17/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
IR-70-FD-150	K174-05	11/17/11	WATER	DISSOLVED GAS

Sample ID	Control #	Col Date	Matrix	Analysis
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
IR-70-FD-147	K174-06	11/17/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
IR-70-FD-145	K174-07	11/17/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IR-70-TB-143	K174-08	11/17/11	WATER	VOLATILE ORGANICS BY GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011068-8042
SAMPLE STORAGE
EMAX CONTROL NO. * 11K174
PROJECT CODE: 4-77101

CLIENT: INSIGHT ECC, INC.
PROJECT: IR SITE 70 NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 7146786700 FAX: 7146786711 EMAIL: NWEINBERGER@IECCI.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT ECC, INC.
ADDRESS: 3010 E. MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: Yu Myina

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: VOCs: EPA 8260B; DISS HYD. GASSES: RSK-175; WET CHEM; TOC-SM5310B; SULFIDE-SM4500; DISS METALS: EPA 6010B; VOCs: EPA 8260B; DISS HYD. GASSES: RSK-175

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	HC	HC	HN	HC	ZA	HN	NO	NP	COMMENTS
1	IW-70-SH8217-144	IR SITE 70	11-17-11	0958	10	MANY	MANY	GW	III	X	X	X	X	X	X			
2	MW-70-MNA12-146	IR SITE 70	11-17-11	1138	7	MANY	MANY	GW	III	X	X	X						RUN VFAs ONLY FOR WET CHEM.
3	MW-70-MNA16-149	IR SITE 70	11-17-11	1438	7	MANY	MANY	GW	III	X	X	X						RUN VFAs ONLY FOR WET CHEM
4	MW-70-MNA14-151	IR SITE 70	11-17-11	1539	7	MANY	MANY	GW	III			X						RUN VFAs ONLY FOR WET CHEM.
5																		
6																		
5	IR-70-FD-150	IR SITE 70	11-17-11	1500	7	MANY	MANY	GW	III	X	X	X						DUPLICATE - FOR WET CHEM RUN VFAs ONLY
6	IR-70-FD-147	IR SITE 70	11-17-11	1155	7	MANY	MANY	GW	III	X	X	X						DUPLICATE - FOR WET CHEM RUN VFAs ONLY
7	IR-70-FD-145	IR SITE 70	11-17-11	1020	10	MANY	MANY	GW	III	X	X	X	X	X	X			DUPLICATE
8	IR-70-TB-143	IR SITE 70	11-17-11	0800	2	40mL	VOA	GW	III	X								TRIP BLANKS

Instructions: FOR WET CHEM ANALYSIS AS FOLLOWS: ANIONS - EPA 300.0, VFAs - EPA 300.0M, TDS - SM2540C, ALKALINITY - SM2320B, DHS - SM4500. UNLESS NOTED OTHERWISE IN COMMENTS.

Cooler #	Temp. (°C)
1	2.8

Sample #s

SAMPLER: CHASE BRADDON
COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
	11-17-11	1705	
	11/17/11	1753	

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11K174
☑ EMAX Courier	See COC	Recepient J-LUNA
☐ Client Delivery		Date 11-17-11
☐ Third Party		Time 1753

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☑ Preservative (if any)	☑ TAT
Safety Issues	☑ None	☐ High concentrations expected	☐ Superfund Site samples	☐ Rad screening required	

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen).	A ☑ Cooler 1 2.8 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C

Thermometer: *A - S/N 101541371* *B - S/N 101541382*

Comments: ☐ **PM was informed on non-compliant coolers immediately.**

Note: **pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code
-04			H1	R5

REVIEWS

Sample Labeling _____ Date 11/17/11

SRF _____ Date 11/17/11

PM _____ Date 11/17/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4		E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	Login for 8260B ARSK17
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	
B3	Sample ID is inconsistent in COC vis-à-vis label	F2	Bubble is> 6mm		
B4		G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	RECVD 6 VIALS FOR VOCS AND RSK 175.		
C4		H2	NOT MARKED IN COC		

1003

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11K174

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K174

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of eight (8) water samples were received on 11/17/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, four (4) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary form for details.

Lab Control Sample
Four (4) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for VO03K23L/C were all within QC limits.
Percent recoveries for VO03K25L/C were all within QC limits.
Percent recoveries for VO03K26L/C were all within QC limits.
Percent recoveries for VO03K28L/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Manual integration was applied to Carbon disulfide in sample K174-04 because of improper integration. Corrected chromatogram was initialed and dated. Both original and corrected chromatograms were submitted for review. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K174
Instrument ID : T-003

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V003K23B	1	NA	11/22/1109:29	11/22/1109:29	RKB354	RHB444	V003K23	Method Blank
LCS1W	V003K23L	1	NA	11/22/1108:21	11/22/1108:21	RKB352	RHB444	V003K23	Lab Control Sample (LCS)
LCD1W	V003K23C	1	NA	11/22/1108:55	11/22/1108:55	RKB353	RHB444	V003K23	LCS Duplicate
IR-70-TB-143	K174-08	1	NA	11/22/1111:49	11/22/1111:49	RKB358	RHB444	V003K23	Field Sample
IW-70-SHB217-144	K174-01	1	NA	11/22/1115:29	11/22/1115:29	RKB364	RHB444	V003K23	Field Sample
MW-70-MNA12-146	K174-02	1	NA	11/22/1116:06	11/22/1116:06	RKB365	RHB444	V003K23	Field Sample
MW-70-MNA16-149	K174-03	1	NA	11/22/1116:43	11/22/1116:43	RKB366	RHB444	V003K23	Field Sample
MW-70-MNA14-151	K174-04	1	NA	11/22/1117:19	11/22/1117:19	RKB367	RHB444	V003K23	Field Sample
IR-70-FD-150	K174-05	1	NA	11/22/1117:54	11/22/1117:54	RKB368	RHB444	V003K23	Field Sample
IR-70-FD-147	K174-06	1	NA	11/22/1118:30	11/22/1118:30	RKB369	RHB444	V003K23	Field Sample
IR-70-FD-145	K174-07	1	NA	11/22/1119:06	11/22/1119:06	RKB370	RHB444	V003K23	Field Sample
MBLK2W	V003K25B	1	NA	11/23/1112:22	11/23/1112:22	RKB396	RHB444	V003K25	Method Blank
LCS2W	V003K25L	1	NA	11/23/1111:06	11/23/1111:06	RKB394	RHB444	V003K25	Lab Control Sample (LCS)
LCD2W	V003K25C	1	NA	11/23/1111:44	11/23/1111:44	RKB395	RHB444	V003K25	LCS Duplicate
IW-70-SHB217-144DL	K174-01T	50	NA	11/23/1119:24	11/23/1119:24	RKB407	RHB444	V003K25	Diluted Sample
MW-70-MNA12-146DL	K174-02T	50	NA	11/23/1120:02	11/23/1120:02	RKB408	RHB444	V003K25	Diluted Sample
MW-70-MNA16-149DL	K174-03T	50	NA	11/23/1120:39	11/23/1120:39	RKB409	RHB444	V003K25	Diluted Sample
MW-70-MNA14-151DL	K174-04T	5	NA	11/23/1121:17	11/23/1121:17	RKB410	RHB444	V003K25	Diluted Sample
MBLK3W	V003K26B	1	NA	11/24/1102:17	11/24/1102:17	RKB418	RHB444	V003K26	Method Blank
LCS3W	V003K26L	1	NA	11/24/1100:25	11/24/1100:25	RKB415	RHB444	V003K26	Lab Control Sample (LCS)
LCD3W	V003K26C	1	NA	11/24/1101:03	11/24/1101:03	RKB416	RHB444	V003K26	LCS Duplicate
IR-70-FD-145DL	K174-07T	50	NA	11/24/1102:55	11/24/1102:55	RKB419	RHB444	V003K26	Diluted Sample
MBLK4W	V003K28B	1	NA	11/29/1110:55	11/29/1110:55	RKB461	RHB444	V003K28	Method Blank
LCS4W	V003K28L	1	NA	11/29/1109:08	11/29/1109:08	RKB458	RHB444	V003K28	Lab Control Sample (LCS)
LCD4W	V003K28C	1	NA	11/29/1109:43	11/29/1109:43	RKB459	RHB444	V003K28	LCS Duplicate
IR-70-FD-150DL	K174-05T	25	NA	11/29/1113:21	11/29/1113:21	RKB463	RHB444	V003K28	Diluted Sample
IR-70-FD-147DL	K174-06T	25	NA	11/29/1113:58	11/29/1113:58	RKB464	RHB444	V003K28	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/22/11 15:29
Sample ID:	IW-70-SHB217-144	Date Analyzed:	11/22/11 15:29
Lab Samp ID:	K174-01	Dilution Factor:	1
Lab File ID:	RKB364	Matrix	: WATER
Ext Btch ID:	VO03K23	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.44J	1.0	0.20
1,1-DICHLOROETHENE	3.2	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	170E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	36	1.0	0.20
TRICHLOROETHENE	6.6	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	1.3	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.25	10.00	92.5	70-140
4-BROMOFLUOROBENZENE	9.70	10.00	97.0	70-130
TOLUENE-D8	9.41	10.00	94.1	70-140

METHOD 5030B/826DB
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/23/11 19:24
Sample ID:	IW-70-SHB217-144DL	Date Analyzed:	11/23/11 19:24
Lab Samp ID:	K174-01T	Dilution Factor:	50
Lab File ID:	RKB407	Matrix :	WATER
Ext Btch ID:	V003K25	% Moisture :	NA
Calib. Ref.:	RHB444	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	50	10
1,1,1,2-TETRACHLOROETHANE	ND	50	10
1,1,2,2-TETRACHLOROETHANE	ND	50	10
1,1,2-TRICHLOROETHANE	ND	50	10
FREON113	ND	50	15
1,1-DICHLOROETHANE	ND	50	10
1,1-DICHLOROETHENE	ND	25	10
1,1-DICHLOROPROPENE	ND	50	10
1,2-DIBROMO-3-CHLOROPROPANE	ND	100	25
1,2-DIBROMOETHANE	ND	50	10
1,2-DICHLOROBENZENE	ND	50	10
1,2-DICHLOROETHANE	ND	25	10
1,2-DICHLOROPROPANE	ND	50	10
1,2,3-TRICHLOROBENZENE	ND	50	15
1,2,3-TRICHLOROPROPANE	ND	50	25
1,2,4-TRICHLOROBENZENE	ND	50	15
1,2,4-TRIMETHYLBENZENE	ND	50	10
1,3-DICHLOROBENZENE	ND	50	10
1,3,5-TRIMETHYLBENZENE	ND	50	10
1,4-DICHLOROBENZENE	ND	50	10
2-BUTANONE	ND	500	200
2-CHLOROTOLUENE	ND	50	10
2-HEXANONE	ND	500	200
2,2-DICHLOROPROPANE	ND	50	10
4-CHLOROTOLUENE	ND	50	10
4-METHYL-2-PENTANONE	ND	500	200
N-BUTYLBENZENE	ND	50	10
N-PROPYLBENZENE	ND	50	10
P-ISOPROPYLTOLUENE	ND	50	10
SEC-BUTYLBENZENE	ND	50	10
TERT-BUTYLBENZENE	ND	50	10
ACETONE	ND	500	250
BENZENE	ND	50	10
BROMOBENZENE	ND	50	10
BROMODICHLOROMETHANE	ND	50	10
CIS-1,3-DICHLOROPROPENE	ND	50	10
TRANS-1,3-DICHLOROPROPENE	ND	50	10
BROMOMETHANE	ND	100	15
BROMOFORM	ND	50	15
CARBON DISULFIDE	ND	50	10
CARBON TETRACHLORIDE	ND	25	10
CHLOROBENZENE	ND	50	10
CHLOROETHANE	ND	100	15
CHLOROFORM	ND	50	10
CHLOROMETHANE	ND	100	15
CIS-1,2-DICHLOROETHENE	890	50	10
DICHLORODIFLUOROMETHANE	ND	100	15
DIBROMOCHLOROMETHANE	ND	50	10
DIBROMOMETHANE	ND	50	10
ETHYLBENZENE	ND	50	10
HEXACHLOROBUTADIENE	ND	50	15
ISOPROPYL BENZENE	ND	50	10
METHYLENE CHLORIDE	ND	50	25
MTBE	ND	50	10
STYRENE	ND	50	10
TETRACHLOROETHYLENE	ND	50	10
TOLUENE	ND	50	10
TRANS-1,2-DICHLOROETHENE	39J	50	10
TRICHLOROETHENE	ND	250	10
TRICHLOROFLUOROMETHANE	ND	100	15
VINYL CHLORIDE	ND	25	10
XYLENES (TOTAL)	ND	100	30
M/P-XYLENES	ND	50	20
O-XYLENE	ND	50	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	485	500.0	97.0	70-140
4-BROMOFLUOROBENZENE	473	500.0	94.7	70-130
TOLUENE-D8	468	500.0	93.6	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/22/11 16:06
Sample ID:	MW-70-MNA12-146	Date Analyzed:	11/22/11 16:06
Lab Samp ID:	K174-02	Dilution Factor:	1
Lab File ID:	RKB365	Matrix	: WATER
Ext Btch ID:	V003K23	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.43J	1.0	0.20
1,1-DICHLOROETHENE	3.3	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	240E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	NO	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	22	1.0	0.20
TRICHLOROETHENE	11	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	1.4	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.20	10.00	92.0	70-140
4-BROMOFLUOROBENZENE	9.71	10.00	97.1	70-130
TOLUENE-D8	9.35	10.00	93.5	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/17/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/17/11
Batch No. : 11K174	Date Extracted: 11/23/11 20:02
Sample ID: MW-70-MNA12-146DL	Date Analyzed: 11/23/11 20:02
Lab Samp ID: K174-02T	Dilution Factor: 50
Lab File ID: RKB408	Matrix : WATER
Ext Btch ID: V003K25	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	50	10
1,1,1,2-TETRACHLOROETHANE	ND	50	10
1,1,2,2-TETRACHLOROETHANE	ND	50	10
1,1,2-TRICHLOROETHANE	ND	50	10
FREON113	ND	50	15
1,1-DICHLOROETHANE	ND	50	10
1,1-DICHLOROETHENE	ND	25	10
1,1-DICHLOROPROPENE	ND	50	10
1,2-DIBROMO-3-CHLOROPROPANE	ND	100	25
1,2-DIBROMOETHANE	ND	50	10
1,2-DICHLOROBENZENE	ND	50	10
1,2-DICHLOROETHANE	ND	25	10
1,2-DICHLOROPROPANE	ND	50	10
1,2,3-TRICHLOROBENZENE	ND	50	15
1,2,3-TRICHLOROPROPANE	ND	50	25
1,2,4-TRICHLOROBENZENE	ND	50	15
1,2,4-TRIMETHYLBENZENE	ND	50	10
1,3-DICHLOROBENZENE	ND	50	10
1,3,5-TRIMETHYLBENZENE	ND	50	10
1,4-DICHLOROBENZENE	ND	50	10
2-BUTANONE	ND	500	200
2-CHLOROTOLUENE	ND	50	10
2-HEXANONE	ND	500	200
2,2-DICHLOROPROPANE	ND	50	10
4-CHLOROTOLUENE	ND	50	10
4-METHYL-2-PENTANONE	ND	500	200
N-BUTYLBENZENE	ND	50	10
N-PROPYLBENZENE	ND	50	10
P-ISOPROPYLTOLUENE	ND	50	10
SEC-BUTYLBENZENE	ND	50	10
TERT-BUTYLBENZENE	ND	50	10
ACETONE	ND	500	250
BENZENE	ND	50	10
BROMOBENZENE	ND	50	10
BROMODICHLOROMETHANE	ND	50	10
CIS-1,3-DICHLOROPROPENE	ND	50	10
TRANS-1,3-DICHLOROPROPENE	ND	50	10
BROMOMETHANE	ND	100	15
BROMOFORM	ND	50	15
CARBON DISULFIDE	ND	50	10
CARBON TETRACHLORIDE	ND	25	10
CHLOROBENZENE	ND	50	10
CHLOROETHANE	ND	100	15
CHLOROFORM	ND	50	10
CHLOROMETHANE	ND	100	15
CIS-1,2-DICHLOROETHENE	950	50	10
DICHLORODIFLUOROMETHANE	ND	100	15
DIBROMOCHLOROMETHANE	ND	50	10
DIBROMOMETHANE	ND	50	10
ETHYLBENZENE	ND	50	10
HEXACHLOROBUTADIENE	ND	50	15
ISOPROPYL BENZENE	ND	50	10
METHYLENE CHLORIDE	ND	50	25
MTBE	ND	50	10
STYRENE	ND	50	10
TETRACHLOROETHYLENE	ND	50	10
TOLUENE	ND	50	10
TRANS-1,2-DICHLOROETHENE	25J	50	10
TRICHLOROETHENE	12J	250	10
TRICHLOROFLUOROMETHANE	ND	100	15
VINYL CHLORIDE	ND	25	10
XYLENES (TOTAL)	ND	100	30
M/P-XYLENES	ND	50	20
O-XYLENE	ND	50	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	472	500.0	94.4	70-140
4-BROMOFLUOROBENZENE	476	500.0	95.2	70-130
TOLUENE-D8	468	500.0	93.5	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/22/11 16:43
Sample ID:	MW-70-MNA16-149	Date Analyzed:	11/22/11 16:43
Lab Samp ID:	K174-03	Dilution Factor:	1
Lab File ID:	RKB366	Matrix	: WATER
Ext Btch ID:	V003K23	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.38J	1.0	0.20
1,1-DICHLOROETHENE	3.9	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	260E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	46	1.0	0.20
TRICHLOROETHENE	12	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	25	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.40	10.00	94.0	70-140
4-BROMOFLUOROBENZENE	9.63	10.00	96.3	70-130
TOLUENE-D8	9.17	10.00	91.7	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/23/11 20:39
Sample ID:	MW-70-MNA16-149DL	Date Analyzed:	11/23/11 20:39
Lab Samp ID:	K174-03T	Dilution Factor:	50
Lab File ID:	RKB409	Matrix	: WATER
Ext Btch ID:	V003K25	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	50	10
1,1,1,2-TETRACHLOROETHANE	ND	50	10
1,1,2,2-TETRACHLOROETHANE	ND	50	10
1,1,2-TRICHLOROETHANE	ND	50	10
FREON113	ND	50	15
1,1-DICHLOROETHANE	ND	50	10
1,1-DICHLOROETHENE	ND	25	10
1,1-DICHLOROPROPENE	ND	50	10
1,2-DIBROMO-3-CHLOROPROPANE	ND	100	25
1,2-DIBROMOETHANE	ND	50	10
1,2-DICHLOROBENZENE	ND	50	10
1,2-DICHLOROETHANE	ND	25	10
1,2-DICHLOROPROPANE	ND	50	10
1,2,3-TRICHLOROBENZENE	ND	50	15
1,2,3-TRICHLOROPROPANE	ND	50	25
1,2,4-TRICHLOROBENZENE	ND	50	15
1,2,4-TRIMETHYLBENZENE	ND	50	10
1,3-DICHLOROBENZENE	ND	50	10
1,3,5-TRIMETHYLBENZENE	ND	50	10
1,4-DICHLOROBENZENE	ND	50	10
2-BUTANONE	ND	500	200
2-CHLOROTOLUENE	ND	50	10
2-HEXANONE	ND	500	200
2,2-DICHLOROPROPANE	ND	50	10
4-CHLOROTOLUENE	ND	50	10
4-METHYL-2-PENTANONE	ND	500	200
N-BUTYLBENZENE	ND	50	10
N-PROPYLBENZENE	ND	50	10
P-ISOPROPYLTOLUENE	ND	50	10
SEC-BUTYLBENZENE	ND	50	10
TERT-BUTYLBENZENE	ND	50	10
ACETONE	ND	500	250
BENZENE	ND	50	10
BROMOBENZENE	ND	50	10
BROMODICHLOROMETHANE	ND	50	10
CIS-1,3-DICHLOROPROPENE	ND	50	10
TRANS-1,3-DICHLOROPROPENE	ND	50	10
BROMOMETHANE	ND	100	15
BROMOFORM	ND	50	15
CARBON DISULFIDE	ND	50	10
CARBON TETRACHLORIDE	ND	25	10
CHLOROBENZENE	ND	50	10
CHLOROETHANE	ND	100	15
CHLOROFORM	ND	50	10
CHLOROMETHANE	ND	100	15
CIS-1,2-DICHLOROETHENE	1000	50	10
DICHLORODIFLUOROMETHANE	ND	100	15
DIBROMOCHLOROMETHANE	ND	50	10
DIBROMOMETHANE	ND	50	10
ETHYLBENZENE	ND	50	10
HEXACHLOROBUTADIENE	ND	50	15
ISOPROPYL BENZENE	ND	50	10
METHYLENE CHLORIDE	ND	50	25
MTBE	ND	50	10
STYRENE	ND	50	10
TETRACHLOROETHYLENE	ND	50	10
TOLUENE	ND	50	10
TRANS-1,2-DICHLOROETHENE	55	50	10
TRICHLOROETHENE	14J	250	10
TRICHLORODFLUOROMETHANE	ND	100	15
VINYL CHLORIDE	31	25	10
XYLENES (TOTAL)	ND	100	30
M/P-XYLENES	ND	50	20
O-XYLENE	ND	50	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	485	500.0	97.0	70-140
4-BROMOFLUOROBENZENE	467	500.0	93.4	70-130
TOLUENE-D8	454	500.0	90.9	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/22/11 17:19
Sample ID:	MW-70-MNA14-151	Date Analyzed:	11/22/11 17:19
Lab Samp ID:	K174-04	Dilution Factor:	1
Lab File ID:	RKB367	Matrix	: WATER
Ext Btch ID:	V003K23	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	0.60	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.20J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	110E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	0.83J	1.0	0.20
TRICHLOROETHENE	5.0	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	0.58	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.29	10.00	92.9	70-140
4-BROMOFLUOROBENZENE	9.70	10.00	97.0	70-130
TOLUENE-D8	9.44	10.00	94.4	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/23/11 21:17
Sample ID:	MW-70-MNA14-151DL	Date Analyzed:	11/23/11 21:17
Lab Samp ID:	K174-04T	Dilution Factor:	5
Lab File ID:	RKB410	Matrix :	WATER
Ext Btch ID:	VQ03K25	% Moisture :	NA
Calib. Ref.:	RHB444	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5.0	1.0
1,1,1,2-TETRACHLOROETHANE	ND	5.0	1.0
1,1,2,2-TETRACHLOROETHANE	ND	5.0	1.0
1,1,2-TRICHLOROETHANE	ND	5.0	1.0
FREON113	ND	5.0	1.5
1,1-DICHLOROETHANE	ND	5.0	1.0
1,1-DICHLOROETHENE	ND	2.5	1.0
1,1-DICHLOROPROPENE	ND	5.0	1.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	10	2.5
1,2-DIBROMOETHANE	ND	5.0	1.0
1,2-DICHLOROBENZENE	ND	5.0	1.0
1,2-DICHLOROETHANE	ND	2.5	1.0
1,2-DICHLOROPROPANE	ND	5.0	1.0
1,2,3-TRICHLOROBENZENE	ND	5.0	1.5
1,2,3-TRICHLOROPROPANE	ND	5.0	2.5
1,2,4-TRICHLOROBENZENE	ND	5.0	1.5
1,2,4-TRIMETHYLBENZENE	ND	5.0	1.0
1,3-DICHLOROBENZENE	ND	5.0	1.0
1,3,5-TRIMETHYLBENZENE	ND	5.0	1.0
1,4-DICHLOROBENZENE	ND	5.0	1.0
2-BUTANONE	ND	50	20
2-CHLOROTOLUENE	ND	5.0	1.0
2-HEXANONE	ND	50	20
2,2-DICHLOROPROPANE	ND	5.0	1.0
4-CHLOROTOLUENE	ND	5.0	1.0
4-METHYL-2-PENTANONE	ND	50	20
N-BUTYLBENZENE	ND	5.0	1.0
N-PROPYLBENZENE	ND	5.0	1.0
P-ISOPROPYLTOLUENE	ND	5.0	1.0
SEC-BUTYLBENZENE	ND	5.0	1.0
TERT-BUTYLBENZENE	ND	5.0	1.0
ACETONE	ND	50	25
BENZENE	ND	5.0	1.0
BROMOBENZENE	ND	5.0	1.0
BROMODICHLOROMETHANE	ND	5.0	1.0
CIS-1,3-DICHLOROPROPENE	ND	5.0	1.0
TRANS-1,3-DICHLOROPROPENE	ND	5.0	1.0
BROMOMETHANE	ND	10	1.5
BROMOFORM	ND	5.0	1.5
CARBON DISULFIDE	ND	5.0	1.0
CARBON TETRACHLORIDE	ND	2.5	1.0
CHLOROBENZENE	ND	5.0	1.0
CHLOROETHANE	ND	10	1.5
CHLOROFORM	ND	5.0	1.0
CHLOROMETHANE	ND	10	1.5
CIS-1,2-DICHLOROETHENE	130	5.0	1.0
DICHLORODIFLUOROMETHANE	ND	10	1.5
DIBROMOCHLOROMETHANE	ND	5.0	1.0
DIBROMOMETHANE	ND	5.0	1.0
ETHYLBENZENE	ND	5.0	1.0
HEXACHLOROBUTADIENE	ND	5.0	1.5
ISOPROPYL BENZENE	ND	5.0	1.0
METHYLENE CHLORIDE	ND	5.0	2.5
MTBE	ND	5.0	1.0
STYRENE	ND	5.0	1.0
TETRACHLOROETHYLENE	ND	5.0	1.0
TOLUENE	ND	5.0	1.0
TRANS-1,2-DICHLOROETHENE	ND	5.0	1.0
TRICHLOROETHENE	4.4J	25	1.0
TRICHLOROFLUOROMETHANE	ND	10	1.5
VINYL CHLORIDE	ND	2.5	1.0
XYLENES (TOTAL)	ND	10	3.0
M/P-XYLENES	ND	5.0	2.0
O-XYLENE	ND	5.0	1.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	48.6	50.00	97.2	70-140
4-BROMOFLUOROBENZENE	48.1	50.00	96.2	70-130
TOLUENE-D8	47.0	50.00	94.0	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/22/11 17:54
Sample ID:	IR-70-FD-150	Date Analyzed:	11/22/11 17:54
Lab Samp ID:	K174-05	Dilution Factor:	1
Lab File ID:	RKB368	Matrix	: WATER
Ext Btch ID:	VO03K23	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.37J	1.0	0.20
1,1-DICHLOROETHENE	3.8	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	210E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	45	1.0	0.20
TRICHLOROETHENE	12	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	24	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.24	10.00	92.4	70-140
4-BROMOFLUOROBENZENE	9.75	10.00	97.5	70-130
TOLUENE-D8	9.35	10.00	93.5	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/17/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/17/11
Batch No. : 11K174	Date Extracted: 11/29/11 13:21
Sample ID: IR-70-FD-150DL	Date Analyzed: 11/29/11 13:21
Lab Samp ID: K174-05T	Dilution Factor: 25
Lab File ID: RKB463	Matrix : WATER
Ext Btch ID: V003K28	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	25	5.0
1,1,1,2-TETRACHLOROETHANE	ND	25	5.0
1,1,2,2-TETRACHLOROETHANE	ND	25	5.0
1,1,2-TRICHLOROETHANE	ND	25	5.0
FREON113	ND	25	7.5
1,1-DICHLOROETHANE	ND	25	5.0
1,1-DICHLOROETHENE	ND	12	5.0
1,1-DICHLOROPROPENE	ND	25	5.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	50	12
1,2-DIBROMOETHANE	ND	25	5.0
1,2-DICHLOROBENZENE	ND	25	5.0
1,2-DICHLOROETHANE	ND	12	5.0
1,2-DICHLOROPROPANE	ND	25	5.0
1,2,3-TRICHLOROBENZENE	ND	25	7.5
1,2,3-TRICHLOROPROPANE	ND	25	12
1,2,4-TRICHLOROBENZENE	ND	25	7.5
1,2,4-TRIMETHYLBENZENE	ND	25	5.0
1,3-DICHLOROBENZENE	ND	25	5.0
1,3,5-TRIMETHYLBENZENE	ND	25	5.0
1,4-DICHLOROBENZENE	ND	25	5.0
2-BUTANONE	ND	250	100
2-CHLOROTOLUENE	ND	25	5.0
2-HEXANONE	ND	250	100
2,2-DICHLOROPROPANE	ND	25	5.0
4-CHLOROTOLUENE	ND	25	5.0
4-METHYL-2-PENTANONE	ND	250	100
N-BUTYLBENZENE	ND	25	5.0
N-PROPYLBENZENE	ND	25	5.0
P-ISOPROPYLTOLUENE	ND	25	5.0
SEC-BUTYLBENZENE	ND	25	5.0
TERT-BUTYLBENZENE	ND	25	5.0
ACETONE	ND	250	120
BENZENE	ND	25	5.0
BROMOBENZENE	ND	25	5.0
BROMODICHLOROMETHANE	ND	25	5.0
CIS-1,3-DICHLOROPROPENE	ND	25	5.0
TRANS-1,3-DICHLOROPROPENE	ND	25	5.0
BROMOMETHANE	ND	50	7.5
BROMOFORM	ND	25	7.5
CARBON DISULFIDE	ND	25	5.0
CARBON TETRACHLORIDE	ND	12	5.0
CHLOROBENZENE	ND	25	5.0
CHLOROETHANE	ND	50	7.5
CHLOROFORM	ND	25	5.0
CHLOROMETHANE	ND	50	7.5
CIS-1,2-DICHLOROETHENE	920	25	5.0
DICHLORODIFLUOROMETHANE	ND	50	7.5
DIBROMOCHLOROMETHANE	ND	25	5.0
DIBROMOMETHANE	ND	25	5.0
ETHYLBENZENE	ND	25	5.0
HEXACHLOROBUTADIENE	ND	25	7.5
ISOPROPYL BENZENE	ND	25	5.0
METHYLENE CHLORIDE	ND	25	12
MTBE	ND	25	5.0
STYRENE	ND	25	5.0
TETRACHLOROETHYLENE	ND	25	5.0
TOLUENE	ND	25	5.0
TRANS-1,2-DICHLOROETHENE	50	25	5.0
TRICHLOROETHENE	13J	120	5.0
TRICHLOROFLUOROMETHANE	ND	50	7.5
VINYL CHLORIDE	24	12	5.0
XYLENES (TOTAL)	ND	50	15
M/P-XYLENES	ND	25	10
O-XYLENE	ND	25	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	228	250.0	91.0	70-140
4-BROMOFLUOROBENZENE	245	250.0	98.0	70-130
TOLUENE-D8	236	250.0	94.2	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/22/11 18:30
Sample ID:	IR-70-F0-147	Date Analyzed:	11/22/11 18:30
Lab Samp ID:	K174-06	Dilution Factor:	1
Lab File ID:	RKB369	Matrix :	WATER
Ext Btch ID:	V003K23	% Moisture :	NA
Calib. Ref.:	RHB444	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.44J	1.0	0.20
1,1-DICHLOROETHENE	3.2	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	230E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	22	1.0	0.20
TRICHLOROETHENE	11	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	1.5	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.21	10.00	92.1	70-140
4-BROMOFLUOROBENZENE	9.84	10.00	98.4	70-130
TOLUENE-D8	9.32	10.00	93.2	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/29/11 13:58
Sample ID:	IR-70-FD-147DL	Date Analyzed:	11/29/11 13:58
Lab Samp ID:	K174-06T	Dilution Factor:	25
Lab File ID:	RKB464	Matrix :	WATER
Ext Btch ID:	V003K28	% Moisture :	NA
Calib. Ref.:	RHB444	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	25	5.0
1,1,1,2-TETRACHLOROETHANE	ND	25	5.0
1,1,2,2-TETRACHLOROETHANE	ND	25	5.0
1,1,2-TRICHLOROETHANE	ND	25	5.0
FREON113	ND	25	7.5
1,1-DICHLOROETHANE	ND	25	5.0
1,1-DICHLOROETHENE	ND	12	5.0
1,1-DICHLOROPROPENE	ND	25	5.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	50	12
1,2-DIBROMOETHANE	ND	25	5.0
1,2-DICHLOROBENZENE	ND	25	5.0
1,2-DICHLOROETHANE	ND	12	5.0
1,2-DICHLOROPROPANE	ND	25	5.0
1,2,3-TRICHLOROBENZENE	ND	25	7.5
1,2,3-TRICHLOROPROPANE	ND	25	12
1,2,4-TRICHLOROBENZENE	ND	25	7.5
1,2,4-TRIMETHYLBENZENE	ND	25	5.0
1,3-DICHLOROBENZENE	ND	25	5.0
1,3,5-TRIMETHYLBENZENE	ND	25	5.0
1,4-DICHLOROBENZENE	ND	25	5.0
2-BUTANONE	ND	250	100
2-CHLOROTOLUENE	ND	25	5.0
2-HEXANONE	ND	250	100
2,2-DICHLOROPROPANE	ND	25	5.0
4-CHLOROTOLUENE	ND	25	5.0
4-METHYL-2-PENTANONE	ND	250	100
N-BUTYLBENZENE	ND	25	5.0
N-PROPYLBENZENE	ND	25	5.0
P-ISOPROPYLTOLUENE	ND	25	5.0
SEC-BUTYLBENZENE	ND	25	5.0
TERT-BUTYLBENZENE	ND	25	5.0
ACETONE	ND	250	120
BENZENE	ND	25	5.0
BROMOBENZENE	ND	25	5.0
BROMODICHLOROMETHANE	ND	25	5.0
CIS-1,3-DICHLOROPROPENE	ND	25	5.0
TRANS-1,3-DICHLOROPROPENE	ND	25	5.0
BROMOMETHANE	ND	50	7.5
BROMOFORM	ND	25	7.5
CARBON DISULFIDE	ND	25	5.0
CARBON TETRACHLORIDE	ND	12	5.0
CHLOROBENZENE	ND	25	5.0
CHLOROETHANE	ND	50	7.5
CHLOROFORM	ND	25	5.0
CHLOROMETHANE	ND	50	7.5
CIS-1,2-DICHLOROETHENE	870	25	5.0
DICHLORODIFLUOROMETHANE	ND	50	7.5
DIBROMOCHLOROMETHANE	ND	25	5.0
DIBROMOMETHANE	ND	25	5.0
ETHYLBENZENE	ND	25	5.0
HEXACHLOROBUTADIENE	ND	25	7.5
ISOPROPYL BENZENE	ND	25	5.0
METHYLENE CHLORIDE	ND	25	12
MTBE	ND	25	5.0
STYRENE	ND	25	5.0
TETRACHLOROETHYLENE	ND	25	5.0
TOLUENE	ND	25	5.0
TRANS-1,2-DICHLOROETHENE	23J	25	5.0
TRICHLOROETHENE	12J	120	5.0
TRICHLOROFLUOROMETHANE	ND	50	7.5
VINYL CHLORIDE	ND	12	5.0
XYLENES (TOTAL)	ND	50	15
M/P-XYLENES	ND	25	10
O-XYLENE	ND	25	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	221	250.0	88.3	70-140
4-BROMOFLUOROBENZENE	246	250.0	98.4	70-130
TOLUENE-D8	239	250.0	95.7	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/22/11 19:06
Sample ID:	IR-70-FD-145	Date Analyzed:	11/22/11 19:06
Lab Samp ID:	K174-07	Dilution Factor:	1
Lab File ID:	RKB370	Matrix	: WATER
Ext Btch ID:	V003K23	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.43J	1.0	0.20
1,1-DICHLOROETHENE	3.1	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	230E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	36	1.0	0.20
TRICHLOROETHENE	6.4	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	1.4	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.02	10.00	90.2	70-140
4-BROMOFLUOROBENZENE	9.73	10.00	97.3	70-130
TOLUENE-D8	9.31	10.00	93.1	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/24/11 02:55
Sample ID:	IR-70-FD-1450L	Date Analyzed:	11/24/11 02:55
Lab Samp ID:	K174-07T	Dilution Factor:	50
Lab File ID:	RKB419	Matrix :	WATER
Ext Btch ID:	V003K26	% Moisture :	NA
Calib. Ref.:	RHB444	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	50	10
1,1,1,2-TETRACHLOROETHANE	ND	50	10
1,1,2,2-TETRACHLOROETHANE	ND	50	10
1,1,2-TRICHLOROETHANE	ND	50	10
FREON113	ND	50	15
1,1-DICHLOROETHANE	ND	50	10
1,1-DICHLOROETHENE	ND	25	10
1,1-DICHLOROPROPENE	ND	50	10
1,2-DIBROMO-3-CHLOROPROPANE	ND	100	25
1,2-DIBROMOETHANE	ND	50	10
1,2-DICHLOROBENZENE	ND	50	10
1,2-DICHLOROETHANE	ND	25	10
1,2-DICHLOROPROPANE	ND	50	10
1,2,3-TRICHLOROBENZENE	ND	50	15
1,2,3-TRICHLOROPROPANE	ND	50	25
1,2,4-TRICHLOROBENZENE	ND	50	15
1,2,4-TRIMETHYLBENZENE	ND	50	10
1,3-DICHLOROBENZENE	ND	50	10
1,3,5-TRIMETHYLBENZENE	ND	50	10
1,4-DICHLOROBENZENE	ND	50	10
2-BUTANONE	ND	500	200
2-CHLOROTOLUENE	ND	50	10
2-HEXANONE	ND	500	200
2,2-DICHLOROPROPANE	ND	50	10
4-CHLOROTOLUENE	ND	50	10
4-METHYL-2-PENTANONE	ND	500	200
N-BUTYLBENZENE	ND	50	10
N-PROPYLBENZENE	ND	50	10
P-ISOPROPYLTOLUENE	ND	50	10
SEC-BUTYLBENZENE	ND	50	10
TERT-BUTYLBENZENE	ND	50	10
ACETONE	ND	500	250
BENZENE	ND	50	10
BROMOBENZENE	ND	50	10
BROMODICHLOROMETHANE	ND	50	10
CIS-1,3-DICHLOROPROPENE	ND	50	10
TRANS-1,3-DICHLOROPROPENE	ND	50	10
BROMOMETHANE	ND	100	15
BROMOFORM	ND	50	15
CARBON DISULFIDE	ND	50	10
CARBON TETRACHLORIDE	ND	25	10
CHLOROBENZENE	ND	50	10
CHLOROETHANE	ND	100	15
CHLOROFORM	ND	50	10
CHLOROMETHANE	ND	100	15
CIS-1,2-DICHLOROETHENE	910	50	10
DICHLORODIFLUOROMETHANE	ND	100	15
DIBROMOCHLOROMETHANE	ND	50	10
DIBROMOMETHANE	ND	50	10
ETHYLBENZENE	ND	50	10
HEXACHLOROBUTADIENE	ND	50	15
ISOPROPYL BENZENE	ND	50	10
METHYLENE CHLORIDE	ND	50	25
MTBE	ND	50	10
STYRENE	ND	50	10
TETRACHLOROETHYLENE	ND	50	10
TOLUENE	ND	50	10
TRANS-1,2-DICHLOROETHENE	40J	50	10
TRICHLOROETHENE	ND	250	10
TRICHLOROFLUOROMETHANE	ND	100	15
VINYL CHLORIDE	ND	25	10
XYLENES (TOTAL)	ND	100	30
M/P-XYLENES	ND	50	20
O-XYLENE	ND	50	10

SURROGATE PARAMETERS	RESULTS	SPK AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	454	500.0	90.9	70-140
4-BROMOFLUOROBENZENE	472	500.0	94.5	70-130
TOLUENE-D8	465	500.0	93.1	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/22/11 11:49
Sample ID:	IR-70-TB-143	Date Analyzed:	11/22/11 11:49
Lab Samp ID:	K174-08	Dilution Factor:	1
Lab File ID:	RKB358	Matrix	: WATER
Ext Btch ID:	V003K23	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.17	10.00	91.7	70-140
4-BROMOFLUOROBENZENE	9.97	10.00	99.7	70-130
TOLUENE-D8	9.53	10.00	95.3	70-140

QC SUMMARIES

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/22/11
Batch No.	: 11K174	Date Extracted:	11/22/11 09:29
Sample ID:	MBLK1W	Date Analyzed:	11/22/11 09:29
Lab Samp ID:	V003K23B	Dilution Factor:	1
Lab File ID:	RKB354	Matrix	: WATER
Ext Btch ID:	V003K23	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.19	10.00	81.9	70-140
4-BROMOFLUOROBENZENE	9.52	10.00	95.2	70-130
TOLUENE-D8	9.67	10.00	96.7	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K174
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	V003K23B	V003K23L	V003K23C		
LAB FILE ID:	RKB354	RKB352	RKB353		
DATE EXTRACTED:	11/22/1109:29	11/22/1108:21	11/22/1108:55	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1109:29	11/22/1108:21	11/22/1108:55	DATE RECEIVED:	11/22/11
PREP. BATCH:	V003K23	V003K23	V003K23		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.21	92	10.0	9.30	93	1	60-130	30
Benzene	ND	10.0	9.41	94	10.0	9.66	97	3	70-130	30
Chlorobenzene	ND	10.0	9.92	99	10.0	9.98	100	1	70-120	30
Toluene	ND	10.0	9.19	92	10.0	9.40	94	2	70-130	30
Trichloroethene	ND	10.0	9.38	94	10.0	9.68	97	3	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.76	88	10.0	8.48	85	70-140
4-Bromofluorobenzene	10.0	9.28	93	10.0	9.30	93	70-130
Toluene-d8	10.0	9.20	92	10.0	9.34	93	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/23/11
Batch No.	: 11K174	Date Extracted:	11/23/11 12:22
Sample ID:	MBLK2W	Date Analyzed:	11/23/11 12:22
Lab Samp ID:	V003K25B	Dilution Factor:	1
Lab File ID:	RKB396	Matrix	: WATER
Ext Btch ID:	V003K25	% Moisture	: NA
Calib. Ref.:	RH8444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.76	10.00	87.6	70-140
4-BROMOFLUOROBENZENE	9.20	10.00	92.0	70-130
TOLUENE-D8	9.31	10.00	93.1	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K174
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	V003K25B	V003K25L	V003K25C		
LAB FILE ID:	RKB396	RKB394	RKB395		
DATE EXTRACTED:	11/23/1112:22	11/23/1111:06	11/23/1111:44	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1112:22	11/23/1111:06	11/23/1111:44	DATE RECEIVED:	11/23/11
PREP. BATCH:	V003K25	V003K25	V003K25		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.11	91	10.0	8.98	90	1	60-130	30
Benzene	ND	10.0	9.61	96	10.0	9.43	94	2	70-130	30
Chlorobenzene	ND	10.0	10.1	101	10.0	9.86	99	2	70-120	30
Toluene	ND	10.0	9.37	94	10.0	9.28	93	1	70-130	30
Trichloroethene	ND	10.0	9.84	98	10.0	9.63	96	2	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.88	89	10.0	8.69	87	70-140
4-Bromofluorobenzene	10.0	9.18	92	10.0	9.26	93	70-130
Toluene-d8	10.0	9.27	93	10.0	9.40	94	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/24/11
Batch No.	: 11K174	Date Extracted:	11/24/11 02:17
Sample ID:	MBLK3W	Date Analyzed:	11/24/11 02:17
Lab Samp ID:	V003K26B	Dilution Factor:	1
Lab File ID:	RKB418	Matrix :	WATER
Ext Btch ID:	V003K26	% Moisture :	NA
Calib. Ref.:	RHB444	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.19	10.00	91.9	70-140
4-BROMOFLUOROBENZENE	9.18	10.00	91.8	70-130
TOLUENE-D8	9.34	10.00	93.4	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K174
METHOD: SW 5030B/8260B

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK3W				
LAB SAMP ID:	VO03K26B	VO03K26L	VO03K26C		
LAB FILE ID:	RKB418	RKB415	RKB416		
DATE EXTRACTED:	11/24/1102:17	11/24/1100:25	11/24/1101:03	DATE COLLECTED:	NA
DATE ANALYZED:	11/24/1102:17	11/24/1100:25	11/24/1101:03	DATE RECEIVED:	11/24/11
PREP. BATCH:	VO03K26	VO03K26	VO03K26		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	10.1	101	10.0	9.78	98	3	60-130	30
Benzene	ND	10.0	10.3	103	10.0	10.4	104	0	70-130	30
Chlorobenzene	ND	10.0	10.6	106	10.0	10.7	107	1	70-120	30
Toluene	ND	10.0	9.97	100	10.0	10.1	101	1	70-130	30
Trichloroethene	ND	10.0	10.5	105	10.0	10.6	106	1	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	9.43	94	10.0	8.89	89	70-140
4-Bromofluorobenzene	10.0	9.15	92	10.0	9.26	93	70-130
Toluene-d8	10.0	9.21	92	10.0	9.33	93	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/29/11
Batch No. : 11K174	Date Extracted: 11/29/11 10:55
Sample ID: M8LK4W	Date Analyzed: 11/29/11 10:55
Lab Samp ID: V003K28B	Dilution Factor: 1
Lab File ID: RKB461	Matrix : WATER
Ext Btch ID: V003K28	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.77	10.00	87.7	70-140
4-BROMOFLUOROBENZENE	9.55	10.00	95.5	70-130
TOLUENE-D8	9.38	10.00	93.8	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K174
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK4W				
LAB SAMP ID:	V003K28B	V003K28L	V003K28C		
LAB FILE ID:	RKB461	RKB458	RKB459		
DATE EXTRACTED:	11/29/1110:55	11/29/1109:08	11/29/1109:43	DATE COLLECTED:	NA
DATE ANALYZED:	11/29/1110:55	11/29/1109:08	11/29/1109:43	DATE RECEIVED:	11/29/11
PREP. BATCH:	V003K28	V003K28	V003K28		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.18	92	10.0	9.07	91	1	60-130	30
Benzene	ND	10.0	9.78	98	10.0	9.89	99	1	70-130	30
Chlorobenzene	ND	10.0	10.2	102	10.0	10.2	102	1	70-120	30
Toluene	ND	10.0	9.53	95	10.0	9.67	97	2	70-130	30
Trichloroethene	ND	10.0	9.77	98	10.0	9.81	98	0	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.98	90	10.0	8.70	87	70-140
4-Bromofluorobenzene	10.0	9.45	95	10.0	9.44	94	70-130
Toluene-d8	10.0	9.28	93	10.0	9.46	95	70-130

INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RHB438
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K174
BFB Injection Date : 08/16/11
BFB Injection Time : 11:15
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	26.25
75	30.0 - 60.0% of mass 95	54.23
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.88
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	60.88
175	5.0 - 9.0% of mass 174	4.93(8.1)1
176	95.0 - 101.0% of mass 174	58.41(96.0)1
177	5.0 - 9.0% of mass 176	4.58(7.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	V003H161	RHB439	08/16/11	11:49
2	VSTD0.5	V003H162	RHB440	08/16/11	12:24
3	VSTD01	V003H163	RHB441	08/16/11	12:57
4	VSTD02	V003H164	RHB442	08/16/11	13:32
5	VSTD05	V003H165	RHB443	08/16/11	14:06
6	VSTD010	V003H166	RHB444	08/16/11	14:40
7	VSTD020	V003H167	RHB445	08/16/11	15:14
8	VSTD030	V003H168	RHB446	08/16/11	15:48
9	VSTD040	V003H169	RHB447	08/16/11	16:21
10	VSTD050	V003H1610	RHB448	08/16/11	16:56
11	VSTD100	V003H1611	RHB449	08/16/11	17:30
12	VSTD010	IV003H161	RHB452	08/16/11	19:13

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :03
Beginning DateTime :08/16/11 11:49
Spike Units :PPB
IC File :RHB444

Column Spec :ZB-624 ID :0.25MM
Ending DateTime :08/16/11 17:30
HPChem Method :V003H16

M	IDX	Parameters	.3 11:49 RHB439	.5 12:24 RHB440	1 12:57 RHB441	2 13:32 RHB442	5 14:06 RHB443	10 14:40 RHB444	20 15:14 RHB445	30 15:48 RHB446	40 16:21 RHB447	50 16:56 RHB448	100 17:30 RHB449	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	1	0	13.2029
	2	Chlorotrifluoroethylene	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	3	Dichlorodifluoromethane	0.333	0.326	0.343	0.357	0.358	0.429	0.335	0.363	0.324	0.341	0.375	0.353	8.52	4.1126
	4	Dichlorotetrafluoroethane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	5	Chloromethane	0.323	0.300	0.336	0.346	0.362	0.430	0.350	0.384	0.342	0.356	0.394	0.357	10.00	4.6120
	6	2-Chloro-1,1,1-trifluoroethane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	7	Vinyl chloride	0.290	0.283	0.319	0.335	0.351	0.415	0.336	0.355	0.320	0.334	0.372	0.337	10.93	4.9340
	8	Bromomethane	0.218	0.200	0.221	0.218	0.234	0.281	0.230	0.245	0.221	0.224	0.202	0.227	9.78	5.8582
	9	Chloroethane	0.155	0.158	0.171	0.167	0.178	0.217	0.174	0.189	0.173	0.178	0.189	0.177	9.63	6.1356
	10	Dichlorofluoromethane	0.720	0.721	0.765	0.755	0.776	0.817	0.754	0.797	0.735	0.750	0.809	0.764	4.35	6.6727
	11	Trichlorofluoromethane	0.483	0.478	0.529	0.539	0.564	0.666	0.530	0.573	0.516	0.533	0.585	0.545	9.58	6.7323
5	12	Acrolein	------	------	0.008	0.007	0.008	0.009	0.009	0.010	0.010	------	------	0.009	13.95	7.8523
	13	1,1,2-Trichloro-1,2,2-trifluoroethane	0.214	0.200	0.199	0.192	0.199	0.213	0.198	0.208	0.194	0.200	0.216	0.203	4.08	7.9826
5	14	Acetone	------	------	0.045	0.038	0.038	0.040	0.036	0.036	0.035	0.037	0.042	0.039	8.41	8.1846
	15	1,1-Dichloroethene	0.666	0.641	0.683	0.681	0.707	0.726	0.649	0.690	0.620	0.646	0.690	0.673	4.65	8.0029
	16	Methyl acetate	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	17	Iodomethane	0.595	0.558	0.625	0.620	0.644	0.683	0.622	0.668	0.610	0.629	0.689	0.631	6.13	8.3899
	18	Carbon disulfide	1.096	1.194	1.329	1.365	1.443	1.326	1.392	1.540	1.350	1.429	1.420	1.353	8.97	8.5144
	19	Methylene chloride	0.499	0.472	0.484	0.467	0.481	0.496	0.455	0.480	0.438	0.456	0.503	0.475	4.30	9.0800
5	20	tert-Butyl alcohol	------	0.011	0.011	0.011	0.012	0.013	0.012	0.012	0.011	0.012	0.014	0.012	6.87	9.2881
	21	tert-Butyl methyl ether (MTBE)	0.490	0.469	0.498	0.473	0.489	0.517	0.482	0.491	0.455	0.480	0.531	0.489	4.37	9.5102
	22	trans-1,2-Dichloroethene	0.675	0.662	0.683	0.699	0.701	0.732	0.668	0.711	0.642	0.662	0.708	0.686	3.87	9.5711
5	23	Acrylonitrile	0.033	0.031	0.034	0.033	0.035	0.038	0.036	0.038	0.035	0.037	0.041	0.036	7.73	9.6022
	24	Isopropyl ether (DIPE)	1.151	1.115	1.209	1.191	1.227	1.299	1.169	1.239	1.128	1.181	1.246	1.196	4.59	10.3302
	25	Vinyl acetate	------	0.309	0.374	0.410	0.409	0.470	0.412	0.419	0.353	0.382	0.476	0.401	12.58	10.3881
	26	1,1-Dichloroethane	0.733	0.691	0.747	0.754	0.775	0.806	0.727	0.770	0.691	0.721	0.755	0.743	4.72	10.3695
5	27	2-Butanol	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	28	tert-Butyl ethyl ether (ETBE)	0.820	0.794	0.868	0.845	0.869	0.915	0.834	0.888	0.805	0.851	0.926	0.856	4.96	10.9486
	29	2,2-Dichloropropane	0.645	0.638	0.680	0.663	0.654	0.651	0.579	0.585	0.526	0.522	0.512	0.605	10.34	11.3261
5	30	2-Butanone	0.080	0.076	0.068	0.060	0.063	0.068	0.062	0.063	0.060	0.062	0.067	0.066	10.11	11.3546
	31	cis-1,2-Dichloroethene	0.374	0.367	0.389	0.395	0.396	0.418	0.383	0.409	0.369	0.382	0.398	0.389	4.16	11.3600
	32	Bromochloromethane	0.290	0.292	0.316	0.301	0.313	0.334	0.301	0.316	0.291	0.302	0.324	0.307	4.66	11.7699
	33	Tetrahydrofuran	------	0.040	0.045	0.038	0.038	0.036	0.036	0.036	0.033	0.035	0.041	0.038	8.93	11.8229
	34	Chloroform	0.779	0.771	0.815	0.825	0.841	0.878	0.785	0.834	0.750	0.776	0.822	0.807	4.69	11.8606
5	35	tert-Amyl alcohol	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	36	Dibromofluoromethane	------	------	------	------	0.389	0.390	0.366	0.381	0.347	0.360	0.368	0.372	4.23	12.1220
	37	1,1,1-Trichloroethane	0.737	0.711	0.742	0.756	0.766	0.787	0.702	0.733	0.656	0.674	0.689	0.723	5.57	12.1312
	38	Cyclohexane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	39	tert-Amyl methyl ether (TAME)	0.119	0.125	0.141	0.132	0.137	0.146	0.130	0.135	0.124	0.128	0.137	0.132	5.96	12.7415
	40	1,2-Dichloroethane-d4	------	------	------	------	0.405	0.399	0.376	0.375	0.347	0.364	0.381	0.378	5.20	12.6515
	41	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	1	0	17.1946
	42	1,1-Dichloropropene	0.194	0.191	0.194	0.202	0.199	0.214	0.195	0.210	0.187	0.194	0.202	0.198	4.08	12.3667
	43	Carbon tetrachloride	0.651	0.632	0.695	0.701	0.694	0.726	0.654	0.705	0.628	0.664	0.700	0.677	4.82	12.3748
	44	Benzene	1.610	1.539	1.609	1.645	1.618	1.728	1.560	1.733	1.533	1.641	------	1.622	4.28	12.7061
	45	1,2-Dichloroethane	0.477	0.486	0.520	0.521	0.517	0.534	0.479	0.506	0.456	0.484	0.524	0.500	5.00	12.7645
	46	Trichloroethene	0.439	0.414	0.425	0.434	0.440	0.469	0.434	0.477	0.426	0.452	0.484	0.445	5.11	13.6183
	47	Methylcyclohexane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	48	1,2-Dichloropropane	0.392	0.391	0.404	0.409	0.418	0.443	0.407	0.444	0.391	0.421	0.444	0.415	5.04	13.9674
20	49	1,4-Dioxane	------	------	------	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	13.98	14.1284
	50	Dibromomethane	0.173	0.185	0.186	0.192	0.196	0.207	0.195	0.208	0.188	0.203	0.223	0.196	7.00	14.1839
	51	Bromodichloromethane	0.568	0.548	0.588	0.615	0.635	0.668	0.614	0.663	0.593	0.639	0.688	0.620	7.03	14.3490
	52	2-Chloroethyl vinyl ether	0.127	0.109	0.107	0.108	0.119	0.128	0.126	0.136	0.125	0.135	0.157	0.125	11.72	14.6453
	53	cis-1,3-Dichloropropene	0.559	0.576	0.607	0.629	0.639	0.692	0.640	0.694	0.622	0.667	0.716	0.640	7.70	14.9159
5	54	4-Methyl-2-pentanone	0.216	0.203	0.202	0.183	0.194	0.211	0.195	0.203	0.189	0.204	0.221	0.202	5.64	15.0350
	55	Toluene-d8	------	------	------	------	1.414	1.463	1.383	1.491	1.335	1.437	------	1.420	3.97	15.2566
	56	Toluene	1.743	1.699	1.754	1.765	1.767	1.866	1.709	1.870	1.659	1.763	------	1.759	3.81	15.3480
	57	Ethyl methacrylate	0.317	0.290	0.311	0.307	0.328	0.349	0.328	0.342	0.314	0.337	0.367	0.326	6.64	15.5912
	58	trans-1,3-Dichloropropene	0.444	0.436	0.476	0.491	0.506	0.549	0.503	0.533	0.486	0.523	0.562	0.501	8.00	15.6345

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59	1,1,2-Trichloroethane	0.200	0.210	0.215	0.211	0.215	0.232	0.213	0.227	0.205	0.220	0.240	0.217	5.48	15.9132
60	Tetrachloroethene	0.394	0.381	0.379	0.375	0.383	0.402	0.368	0.401	0.355	0.377	0.390	0.382	3.71	16.0891
5 61	2-Hexanone	0.124	0.136	0.139	0.124	0.131	0.145	0.133	0.136	0.126	0.134	0.139	0.133	4.95	16.1081
62	1,3-Dichloropropane	0.394	0.407	0.439	0.435	0.440	0.467	0.430	0.451	0.411	0.435	0.468	0.434	5.43	16.1405
63	Dibromochloromethane	0.269	0.276	0.295	0.307	0.323	0.349	0.331	0.351	0.320	0.343	0.374	0.322	10.17	16.4869
64	1,2-Dibromoethane	0.219	0.212	0.227	0.229	0.237	0.254	0.241	0.251	0.231	0.246	0.270	0.238	7.10	16.6723
65	1-Chlorohexane	0.806	0.829	0.818	0.818	0.821	0.858	0.797	0.855	0.760	0.800	0.812	0.816	3.31	17.0363
66	Chlorobenzene	1.013	0.966	0.986	1.007	1.015	1.077	0.995	1.068	0.945	0.996	1.033	1.009	3.91	17.2366
67	Ethylbenzene	2.214	2.216	2.257	2.290	2.286	2.401	2.175	2.333	------	------	------	2.272	3.20	17.2809
68	1,1,1,2-Tetrachloroethane	0.351	0.348	0.375	0.382	0.379	0.408	0.371	0.398	0.352	0.374	0.383	0.375	5.09	17.3137
2 69	m-Xylene & p-Xylene	1.793	1.710	1.756	1.784	1.773	1.830	1.658	1.696	------	------	------	1.750	3.27	17.4093
70	o-Xylene	1.787	1.675	1.748	1.756	1.739	1.810	1.626	1.732	1.506	1.591	------	1.697	5.67	17.9438
71	Styrene	1.054	1.000	1.088	1.118	1.153	1.209	1.104	1.164	1.021	1.074	1.058	1.095	5.77	17.9672
72	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	1	0	20.7222
73	Isopropylbenzene	5.858	5.671	5.633	5.810	5.728	5.928	5.332	5.949	5.238	5.551	------	5.670	4.24	18.3621
74	Bromoform	0.324	0.344	0.368	0.382	0.408	0.454	0.425	0.465	0.423	0.454	0.497	0.413	13.02	18.3529
75	4-Bromofluorobenzene	------	------	------	------	1.571	1.602	1.509	1.625	1.474	------	------	1.556	4.08	18.6495
76	1,1,2,2-Tetrachloroethane	0.772	0.704	0.722	0.721	0.745	0.787	0.727	0.787	0.711	0.765	0.847	0.753	5.72	18.7926
77	trans-1,4-Dichloro-2-butene	0.242	0.213	0.220	0.226	0.232	0.251	0.250	0.269	0.242	0.260	0.284	0.244	8.79	18.8292
78	n-Propylbenzene	8.224	8.356	7.993	8.230	8.165	8.440	7.620	8.477	7.035	------	------	8.060	5.75	18.8738
79	1,2,3-Trichloropropane	0.148	0.180	0.183	0.183	0.182	0.189	0.172	0.183	0.160	0.171	0.176	0.175	6.81	18.8927
80	Bromobenzene	1.099	1.123	1.157	1.144	1.155	1.202	1.089	1.207	1.063	1.135	1.187	1.142	4.08	18.9131
81	1,3,5-Trimethylbenzene	5.021	4.935	4.880	5.015	4.948	5.155	4.658	5.132	4.444	4.689	------	4.888	4.63	19.0498
82	2-Chlorotoluene	5.177	5.066	5.093	5.142	5.099	5.296	4.742	5.233	4.586	4.857	------	5.029	4.52	19.0899
83	4-Chlorotoluene	4.375	4.251	4.270	4.354	4.458	4.591	4.187	4.627	4.062	4.288	------	4.346	4.03	19.2165
84	tert-Butylbenzene	1.029	0.977	0.964	0.977	0.993	1.020	0.928	1.019	0.887	0.930	0.935	0.969	4.68	19.5152
85	1,2,4-Trimethylbenzene	4.786	4.599	4.661	4.724	4.753	4.900	4.450	4.909	4.270	4.452	------	4.650	4.48	19.5692
86	sec-Butylbenzene	6.721	6.468	6.448	6.425	6.464	6.693	6.076	6.628	5.748	6.015	------	6.369	5.02	19.7895
87	p-Isopropyltoluene	4.919	4.972	4.842	4.954	5.082	5.267	4.766	5.175	4.496	4.694	------	4.917	4.68	19.9309
88	1,3-Dichlorobenzene	2.180	2.099	2.105	2.143	2.217	2.322	2.149	2.351	2.047	2.200	2.279	2.190	4.38	20.0957
89	1,4-Dichlorobenzene	1.974	1.957	1.960	1.989	2.042	2.192	2.013	2.184	1.927	2.020	2.150	2.037	4.65	20.2012
90	n-Butylbenzene	5.497	5.378	5.308	5.435	5.582	5.847	5.333	5.742	4.986	5.191	------	5.430	4.68	20.4876
91	1,2-Dichlorobenzene	1.635	1.630	1.645	1.640	1.673	1.784	1.636	1.768	1.569	1.668	1.777	1.675	4.20	20.7520
92	1,2-Dibromo-3-chloropropane	------	0.071	0.077	0.076	0.085	0.093	0.090	0.095	0.088	0.094	------	0.085	10.04	21.8756
93	1,2,4-Trichlorobenzene	0.793	0.757	0.731	0.751	0.832	0.913	0.883	0.926	0.849	0.893	1.017	0.850	10.33	23.1186
94	Hexachlorobutadiene	0.813	0.765	0.736	0.736	0.774	0.844	0.780	0.806	0.730	0.749	0.825	0.778	5.07	23.2512
95	Naphthalene	0.985	0.890	0.921	0.924	1.070	1.223	1.223	1.249	1.184	1.282	------	1.095	14.07	23.6207
96	1,2,3-Trichlorobenzene	0.569	0.526	0.548	0.555	0.608	0.669	0.660	0.675	0.632	0.667	0.753	0.624	11.07	24.0414

Spike Amount = Nominal Amount * M

Ave_%RSD : 6.5 Max_%RSD : 14.1

8/18/11

2031

SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :03
IC_Beginning DateTime :08/16/11 11:49
Spike Amount :10 PPB
CC/CV File :RHB452
IC File :RHB444

Column Spec :ZB-624 ID :0.25MM
IC_Ending DateTime :08/16/11 17:30
HPChem Method :V003H16
Date_Time :08/16/11 19:13

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	1964342	1	1	13.207	13.203	0				
	2	Chlorotrifluoroethylene												
	3	Dichlorodifluoromethane	10.093	0.9	699900	0.356	0.353	4.112	4.113	8.52				
	4	Dichlorotetrafluoroethane												
	5	Chloromethane	10.630	6.3	744562	0.379	0.357	4.618	4.612	10.00				
	6	2-Chloro-1,1,1-trifluoroethane												
	7	Vinyl chloride	10.627	6.3	704186	0.358	0.337	4.931	4.934	10.93				
	8	Bromomethane	11.072	10.7	493194	0.251	0.227	5.869	5.858	9.78				
	9	Chloroethane	10.559	5.6	367718	0.187	0.177	6.151	6.136	9.63				
	10	Dichlorofluoromethane	9.808	-1.9	1471244	0.749	0.764	6.672	6.673	4.35				
	11	Trichlorofluoromethane	10.147	1.5	1086354	0.553	0.545	6.747	6.732	9.58				
5	12	Acrolein	48.279	-3.4	84307	0.009	0.009	7.848	7.852	13.95				
	13	1,1,2-Trichloro-1,2,2-trifluoroethane	9.633	-3.7	384110	0.196	0.203	7.982	7.983	4.08				
5	14	Acetone	45.661	-8.7	346459	0.035	0.039	8.191	8.185	8.41				
	15	1,1-Dichloroethene	9.833	-1.7	1299399	0.661	0.673	8.012	8.003	4.65				
	16	Methyl acetate												
	17	Iodomethane	9.877	-1.2	1224692	0.623	0.631	8.399	8.390	6.13				
	18	Carbon disulfide	9.749	-2.5	2591704	1.319	1.353	8.518	8.514	8.97				
	19	Methylene chloride	9.496	-5.0	886710	0.451	0.475	9.084	9.080	4.30				
5	20	tert-Butyl alcohol	48.030	-3.9	113617	0.012	0.012	9.277	9.288	6.87				
	21	tert-Butyl methyl ether (MTBE)	9.404	-6.0	902635	0.460	0.489	9.500	9.510	4.37				
	22	trans-1,2-Dichloroethene	9.789	-2.1	1318564	0.671	0.686	9.575	9.571	3.87				
5	23	Acrylonitrile	47.722	-4.6	332995	0.034	0.036	9.604	9.602	7.73				
	24	Isopropyl ether (DIPE)	9.920	-0.8	2330749	1.187	1.196	10.334	10.330	4.59				
	25	Vinyl acetate	9.528	-4.7	751324	0.382	0.401	10.378	10.388	12.58				
	26	1,1-Dichloroethane	9.930	-0.7	1448484	0.737	0.743	10.378	10.370	4.72				
5	27	2-Butanol												
	28	tert-Butyl ethyl ether (ETBE)	9.593	-4.1	1613230	0.821	0.856	10.944	10.949	4.96				
	29	2,2-Dichloropropane	9.497	-5.0	1128621	0.575	0.605	11.331	11.326	10.34				
5	30	2-Butanone	45.732	-8.5	593514	0.060	0.066	11.346	11.355	10.11				
	31	cis-1,2-Dichloroethene	9.895	-1.0	756535	0.385	0.389	11.361	11.360	4.16				
	32	Bromochloromethane	9.603	-4.0	579777	0.295	0.307	11.778	11.770	4.66				
	33	Tetrahydrofuran	8.976	-10.2	66683	0.034	0.038	11.822	11.823	8.93				
	34	Chloroform	9.825	-1.8	1557374	0.793	0.807	11.867	11.861	4.69				
5	35	tert-Amyl alcohol												
	36	Dibromofluoromethane	9.783	-2.2	713957	0.363	0.372	12.120	12.122	4.23				
	37	1,1,1-Trichloroethane	10.014	0.1	1422256	0.724	0.723	12.135	12.131	5.57				
	38	Cyclohexane												
	39	tert-Amyl methyl ether (TAME)	9.629	-3.7	250003	0.127	0.132	12.745	12.741	5.96				
	40	1,2-Dichloroethane-d4	9.565	-4.4	710649	0.362	0.378	12.656	12.651	5.20				
	41	CHLOROBENZENE-D5	10.000	0	1798817	1	1	17.196	17.195	0				
	42	1,1-Dichloropropene	10.046	0.5	358644	0.199	0.198	12.373	12.367	4.08				
	43	Carbon tetrachloride	9.973	-0.3	1214995	0.675	0.677	12.373	12.375	4.82				
	44	Benzene	9.859	-1.4	2875933	1.599	1.622	12.700	12.706	4.28				
	45	1,2-Dichloroethane	9.612	-3.9	865253	0.481	0.500	12.760	12.764	5.00				
	46	Trichloroethene	9.753	-2.5	780754	0.434	0.445	13.623	13.618	5.11				
	47	Methylcyclohexane												
	48	1,2-Dichloropropane	9.773	-2.3	729684	0.406	0.415	13.966	13.967	5.04				
20	49	1,4-Dioxane	183.576	-8.2	42494	0.001	0.001	14.129	14.128	13.98				
	50	Dibromomethane	9.611	-3.9	338874	0.188	0.196	14.189	14.184	7.00				
	51	Bromodichloromethane	9.825	-1.8	1095495	0.609	0.620	14.353	14.349	7.03				
	52	2-Chloroethyl vinyl ether	9.067	-9.3	204114	0.113	0.125	14.650	14.645	11.72				
	53	cis-1,3-Dichloropropene	9.692	-3.1	1116066	0.620	0.640	14.918	14.916	7.70				
5	54	4-Methyl-2-pentanone	47.294	-5.4	1718865	0.191	0.202	15.037	15.035	5.64				
	55	Toluene-d8	9.655	-3.5	2466873	1.371	1.420	15.261	15.257	3.97				
	56	Toluene	9.993	-0.1	3162952	1.758	1.759	15.350	15.348	3.81				
	57	Ethyl methacrylate	9.621	-3.8	564739	0.314	0.326	15.588	15.591	6.64				
	58	trans-1,3-Dichloropropene	9.804	-2.0	883251	0.491	0.501	15.633	15.634	8.00				
	59	1,1,2-Trichloroethane	9.563	-4.4	373487	0.208	0.217	15.915	15.913	5.48				

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	60	Tetrachloroethene	9.848	-1.5	677306	0.377	0.382	16.094	16.089	3.71				
5	61	2-Hexanone	48.468	-3.1	1163929	0.129	0.133	16.109	16.108	4.95				
	62	1,3-Dichloropropane	9.655	-3.5	754490	0.419	0.434	16.139	16.140	5.43				
	63	Dibromochloromethane	9.885	-1.1	571900	0.318	0.322	16.481	16.487	10.17				
	64	1,2-Dibromoethane	9.766	-2.3	417971	0.232	0.238	16.675	16.672	7.10				
	65	1-Chlorohexane	9.962	-0.4	1461845	0.813	0.816	17.032	17.036	3.31				
	66	Chlorobenzene	9.849	-1.5	1787931	0.994	1.009	17.240	17.237	3.91				
	67	Ethylbenzene	9.937	-0.6	4060376	2.257	2.272	17.285	17.281	3.20				
	68	1,1,1,2-Tetrachloroethane	10.061	0.6	678042	0.377	0.375	17.315	17.314	5.09				
2	69	m-Xylene & p-Xylene	19.693	-1.5	6198937	1.723	1.750	17.404	17.409	3.27				
	70	o-Xylene	9.947	-0.5	3036203	1.688	1.697	17.940	17.944	5.67				
	71	Styrene	10.236	2.4	2015906	1.121	1.095	17.969	17.967	5.77				
	72	1,2-DICHLOROBENZENE-D4	10.000	0	640128	1	1	20.723	20.722	0				
	73	Isopropylbenzene	9.728	-2.7	3530678	5.516	5.670	18.357	18.362	4.24				
	74	Bromoform	9.443	-5.6	249695	0.390	0.413	18.357	18.353	13.02				
	75	4-Bromofluorobenzene	9.646	-3.5	960964	1.501	1.556	18.654	18.649	4.08				
	76	1,1,2,2-Tetrachloroethane	9.148	-8.5	441198	0.689	0.753	18.788	18.793	5.72				
	77	trans-1,4-Dichloro-2-butene	9.162	-8.4	143359	0.224	0.244	18.833	18.829	8.79				
	78	n-Propylbenzene	9.830	-1.7	5072007	7.923	8.060	18.878	18.874	5.75				
	79	1,2,3-Trichloropropane	9.596	-4.0	107620	0.168	0.175	18.892	18.893	6.81				
	80	Bromobenzene	9.649	-3.5	705287	1.102	1.142	18.907	18.913	4.08				
	81	1,3,5-Trimethylbenzene	9.894	-1.1	3095769	4.836	4.888	19.041	19.050	4.63				
	82	2-Chlorotoluene	9.764	-2.4	3143279	4.910	5.029	19.086	19.090	4.52				
	83	4-Chlorotoluene	9.838	-1.6	2736995	4.276	4.346	19.220	19.216	4.03				
	84	tert-Butylbenzene	9.890	-1.1	613463	0.958	0.969	19.517	19.515	4.68				
	85	1,2,4-Trimethylbenzene	9.958	-0.4	2964568	4.631	4.650	19.562	19.569	4.48				
	86	sec-Butylbenzene	9.913	-0.9	4041314	6.313	6.369	19.785	19.789	5.02				
	87	p-Isopropyltoluene	10.093	0.9	3176708	4.963	4.917	19.934	19.931	4.68				
	88	1,3-Dichlorobenzene	9.880	-1.2	1385302	2.164	2.190	20.098	20.096	4.38				
	89	1,4-Dichlorobenzene	9.945	-0.6	1296892	2.026	2.037	20.202	20.201	4.65				
	90	n-Butylbenzene	10.239	2.4	3559056	5.560	5.430	20.485	20.488	4.68				
	91	1,2-Dichlorobenzene	9.828	-1.7	1053936	1.646	1.675	20.753	20.752	4.20				
	92	1,2-Dibromo-3-chloropropane	9.687	-3.1	53004	0.083	0.085	21.884	21.876	10.04				
	93	1,2,4-Trichlorobenzene	10.206	2.1	555050	0.867	0.850	23.119	23.119	10.33				
	94	Hexachlorobutadiene	10.504	5.0	523217	0.817	0.778	23.253	23.251	5.07				
	95	Naphthalene	10.499	5.0	736086	1.150	1.095	23.626	23.621	14.07				
	96	1,2,3-Trichlorobenzene	10.239	2.4	408911	0.639	0.624	24.042	24.041	11.07				

Spike Amount = Nominal Amount * M

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DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB350
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K174
BFB Injection Date : 11/22/11
BFB Injection Time : 07:12
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.58
75	30.0 - 60.0% of mass 95	52.95
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.49
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	62.14
175	5.0 - 9.0% of mass 174	4.74(7.6)1
176	95.0 - 101.0% of mass 174	60.08(96.7)1
177	5.0 - 9.0% of mass 176	4.18(7.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV003H1656	RKB351	11/22/11	07:48
2	MBLK1W	V003K23B	RKB354	11/22/11	09:29
3	LCS1W	V003K23L	RKB352	11/22/11	08:21
4	LCD1W	V003K23C	RKB353	11/22/11	08:55
5	IR-70-TB-143	K174-08	RKB358	11/22/11	11:49
6	IW-70-SHB217-144	K174-01	RKB364	11/22/11	15:29
7	MW-70-MNA12-146	K174-02	RKB365	11/22/11	16:06
8	MW-70-MNA16-149	K174-03	RKB366	11/22/11	16:43
9	MW-70-MNA14-151	K174-04	RKB367	11/22/11	17:19
10	IR-70-FD-150	K174-05	RKB368	11/22/11	17:54
11	IR-70-FD-147	K174-06	RKB369	11/22/11	18:30
12	IR-70-FD-145	K174-07	RKB370	11/22/11	19:06

FORM V VOA OLM02.0

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RHB444
Instrument ID: 03
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K174
Date Analyzed: 08/16/11
Time Analyzed: 14:40
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1861981	13.20	1722743	17.19	603523	20.72
	UPPER LIMIT	3723962	13.70	3445486	17.69	1207046	21.22
	LOWER LIMIT	930991	12.70	861372	16.69	301762	20.22
	SAMPLE ID						
1	VSTD010	1947743	13.15	1901134	17.14	672511	20.65
2	MBLK1W	2476181	13.14	2249284	17.13	698202	20.64
3	LCS1W	2357416	13.15	2253741	17.14	785298	20.65
4	LCD1W	2475446	13.15	2320335	17.13	784763	20.65
5	IR-70-TB-143	2205569	13.15	2061810	17.13	645468	20.65
6	IW-70-SHB217-144	2290130	13.15	2169193	17.14	699179	20.66
7	MW-70-MNA12-146	2280309	13.15	2162197	17.14	704594	20.65
8	MW-70-MNA16-149	2244917	13.15	2167523	17.14	711387	20.66
9	MW-70-MNA14-151	2265688	13.16	2108465	17.15	683703	20.66
10	IR-70-FD-150	2257892	13.15	2138187	17.14	682251	20.67
11	IR-70-FD-147	2279993	13.15	2153693	17.14	687004	20.67
12	IR-70-FD-145	2304790	13.15	2200460	17.14	702134	20.67

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB351.D Vial: 2
Acq On : 22 Nov 2011 7:48 am Operator: CGM
Sample : CVO03H1656 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	105	-0.01
2	T,M	Chlorotrifluoroethylene	-1.000	0.000	0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	11.791	-17.9	101	0.00
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	101	0.00
5	P,T,M	Chloromethane	10.000	10.390	-3.9	90	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000	0.0	0	-5.22#
7	C,T,M	Vinyl chloride	10.000	10.068	-0.7	86	0.00
8	T,M	Bromomethane	10.000	11.115	-11.2	94	-0.01
9	T,M	Chloroethane	10.000	11.019	-10.2	94	0.00
10	T,M	Dichlorofluoromethane	10.000	10.183	-1.8	100	-0.01
11	T,M	Trichlorofluoromethane	10.000	9.388	6.1	80	-0.01
12	T,M	Acrolein	50.000	33.846	32.3#	69	-0.01
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.198	8.0	92	-0.01
14	T,M	Acetone	50.000	51.769	-3.5	105	-0.01
15	C,T,M	1,1-Dichloroethene	10.000	9.941	0.6	96	-0.01
16	T,M	Methyl acetate	-1.000	0.000	0.0	104	-0.01
17	T,M	Iodomethane	10.000	9.139	8.6	88	-0.01
18	T,M	Carbon disulfide	10.000	10.925	-9.3	117	-0.01
19	T,M	Methylene chloride	10.000	9.955	0.4	100	-0.01
20	T,M	tert-Butyl alcohol	50.000	42.870	14.3	82	-0.01
21	T,M	tert-Butyl methyl ether (MT	10.000	9.775	2.2	97	-0.03
22	T,M	trans-1,2-Dichloroethene	10.000	9.951	0.5	98	-0.01
23	T,M	Acrylonitrile	50.000	55.188	-10.4	108	-0.03
24	T,M	Isopropyl ether (DIPE)	10.000	10.153	-1.5	98	-0.01
25	T,M	Vinyl acetate	10.000	8.274	17.3	74	-0.01
26	P,T,M	1,1-Dichloroethane	10.000	9.967	0.3	96	-0.01
27	T,M	2-Butanol	-1.000	0.000	0.0	94	-0.01
28	T,M	tert-Butyl ethyl ether (ETB	10.000	10.427	-4.3	102	-0.03
29	T,M	2,2-Dichloropropane	10.000	9.940	0.6	97	-0.01
30	T,M	2-Butanone	50.000	50.923	-1.8	104	-0.03
31	T,M	cis-1,2-Dichloroethene	10.000	10.071	-0.7	98	-0.01
32	T,M	Bromochloromethane	10.000	10.599	-6.0	102	-0.01
33	T,M	Tetrahydrofuran	10.000	10.043	-0.4	110	-0.03
34	C,T,M	Chloroform	10.000	9.769	2.3	94	-0.03
35	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	52	-0.01
36	S	Dibromofluoromethane	10.000	9.560	4.4	95	-0.01
37	T,M	1,1,1-Trichloroethane	10.000	9.358	6.4	90	-0.03
38	T,M	Cyclohexane	-1.000	0.000	0.0	94	-0.01
39	T,M	tert-Amyl methyl ether (TAM	10.000	10.038	-0.4	95	-0.01
40	S	1,2-Dichloroethane-d4	10.000	9.539	4.6	95	-0.03
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	110	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB351.D Vial: 2
Acq On : 22 Nov 2011 7:48 am Operator: CGM
Sample : CV003H1656 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\V003H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.		%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	9.354		6.5	96	-0.01
43	T,M	Carbon tetrachloride	10.000	8.665		13.4	89	-0.01
44	T,M	Benzene	10.000	9.661		3.4	100	-0.01
45	T,M	1,2-Dichloroethane	10.000	9.035		9.6	93	-0.01
46	T,M	Trichloroethene	10.000	9.002		10.0	94	-0.03
47	T,M	Methylcyclohexane	-1.000	0.000		0.0	88	-0.01
48	C,T,M	1,2-Dichloropropane	10.000	10.144		-1.4	105	-0.01
49	T,M	1,4-Dioxane	200.000	213.375		-6.7	118	-0.01
50	T,M	Dibromomethane	10.000	9.430		5.7	99	-0.03
51	T,M	Bromodichloromethane	10.000	9.317		6.8	95	-0.03
~~52~~	~~T,M~~	~~2-Chloroethyl vinyl ether~~	~~10.000~~	2.367	M	76.3#	26	-0.03
53	T,M	cis-1,3-Dichloropropene	10.000	9.660		3.4	99	-0.01
54	T,M	4-Methyl-2-pentanone	50.000	50.220		-0.4	106	-0.01
55	S	Toluene-d8	10.000	9.111		8.9	98	-0.03
56	C,T,M	Toluene	10.000	9.570		4.3	100	-0.01
57	T,M	Ethyl methacrylate	10.000	9.881		1.2	102	-0.01
58	T,M	trans-1,3-Dichloropropene	10.000	9.390		6.1	94	-0.01
59	T,M	1,1,2-Trichloroethane	10.000	9.799		2.0	101	-0.01
60	T,M	Tetrachloroethene	10.000	9.074		9.3	95	-0.03
61	T,M	2-Hexanone	50.000	52.898		-5.8	108	-0.01
62	T,M	1,3-Dichloropropane	10.000	10.212		-2.1	105	-0.01
63	T,M	Dibromochloromethane	10.000	9.512		4.9	97	-0.01
64	T,M	1,2-Dibromoethane	10.000	9.826		1.7	101	-0.01
65	T,M	1-Chlorohexane	10.000	10.019		-0.2	105	-0.01
66	P,M	Chlorobenzene	10.000	9.994		0.1	103	-0.03
67	C,T,M	Ethylbenzene	10.000	9.503		5.0	99	-0.03
68	T,M	1,1,1,2-Tetrachloroethane	10.000	9.442		5.6	96	-0.01
69	T,M	m-Xylene & p-Xylene	20.000	19.060		4.7	101	-0.01
70	T,M	o-Xylene	10.000	9.727		2.7	101	-0.01
71	T,M	Styrene	10.000	10.184		-1.8	102	-0.03
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000		0.0	111	-0.03
73	T,M	Isopropylbenzene	10.000	9.597		4.0	102	-0.01
74	P,T,M	Bromoform	10.000	9.082		9.2	92	-0.03
75	S	4-Bromofluorobenzene	10.000	9.242		7.6	100	-0.03
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.486		-4.9	112	-0.01
77	T,M	trans-1,4-Dichloro-2-butene	10.000	7.337	M	26.6#	80	-0.03
78	T,M	n-Propylbenzene	10.000	9.912		0.9	105	-0.03
79	T,M	1,2,3-Trichloropropane	10.000	9.990		0.1	103	-0.03
80	T,M	Bromobenzene	10.000	9.330		6.7	99	-0.01
81	T,M	1,3,5-Trimethylbenzene	10.000	9.552		4.5	101	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB351.D Vial: 2
Acq On : 22 Nov 2011 7:48 am Operator: CGM
Sample : CVO03H1656 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	9.673	3.3	102	-0.01
83	T,M	4-Chlorotoluene	10.000	9.840	1.6	104	-0.03
84	T,M	tert-Butylbenzene	10.000	9.840	1.6	104	-0.03
85	T,M	1,2,4-Trimethylbenzene	10.000	9.784	2.2	103	-0.01
86	T,M	sec-Butylbenzene	10.000	9.950	0.5	105	-0.01
87	T,M	p-Isopropyltoluene	10.000	10.066	-0.7	105	-0.03
88	T,M	1,3-Dichlorobenzene	10.000	9.963	0.4	105	-0.01
89	T,M	1,4-Dichlorobenzene	10.000	9.823	1.8	102	-0.03
90	T,M	n-Butylbenzene	10.000	10.470	-4.7	108	-0.01
91	T,M	1,2-Dichlorobenzene	10.000	9.911	0.9	104	-0.03
~~92~~	~~T,M~~	~~1,2-Dibromo-3-chloropropane~~	~~10.000~~	~~9.631~~	~~3.7~~	~~99~~	~~-0.03~~
93	T,M	1,2,4-Trichlorobenzene	10.000	10.119	-1.2	105	-0.03
94	T,M	Hexachlorobutadiene	10.000	9.269	7.3	95	-0.03
95	T,M	Naphthalene	10.000	10.952	-9.5	109	-0.03
96	T,M	1,2,3-Trichlorobenzene	10.000	10.150	-1.5	105	-0.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB351.D Vial: 2
Acq On : 22 Nov 2011 7:48 am Operator: CGM
Sample : CVO03H1656 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	105	-0.01
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.416	-17.8	101	0.00
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	101	0.00
5	P,T,M	Chloromethane	0.357	0.370	-3.6	90	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.22#
7	C,T,M	Vinyl chloride	0.337	0.340	-0.9	86	0.00
8	T,M	Bromomethane	0.227	0.252	-11.0	94	-0.01
9	T,M	Chloroethane	0.177	0.195	-10.2	94	0.00
10	T,M	Dichlorofluoromethane	0.764	0.778	-1.8	100	-0.01
~~11~~	~~T,M~~	~~Trichlorofluoromethane~~	~~0.545~~	~~0.512~~	~~6.1~~	~~80~~	~~-0.01~~
12	T,M	Acrolein	0.009	0.006	33.3#	69	-0.01
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.187	7.9	92	-0.01
14	T,M	Acetone	0.039	0.040	-2.6	105	-0.01
15	C,T,M	1,1-Dichloroethene	0.673	0.669	0.6	96	-0.01
16	T,M	Methyl acetate	0.000	0.000	0.0	104	-0.01
17	T,M	Iodomethane	0.631	0.577	8.6	88	-0.01
18	T,M	Carbon disulfide	1.353	1.479	-9.3	117	-0.01
19	T,M	Methylene chloride	0.475	0.473	0.4	100	-0.01
20	T,M	tert-Butyl alcohol	0.012	0.010	16.7	82	-0.01
21	T,M	tert-Butyl methyl ether (MT	0.489	0.478	2.2	97	-0.03
22	T,M	trans-1,2-Dichloroethene	0.686	0.682	0.6	98	-0.01
23	T,M	Acrylonitrile	0.036	0.039	-8.3	108	-0.03
24	T,M	Isopropyl ether (DIPE)	1.196	1.214	-1.5	98	-0.01
25	T,M	Vinyl acetate	0.401	0.332	17.2	74	-0.01
26	P,T,M	1,1-Dichloroethane	0.743	0.740	0.4	96	-0.01
27	T,M	2-Butanol	0.000	0.000	0.0	94	-0.01
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.893	-4.3	102	-0.03
29	T,M	2,2-Dichloropropane	0.605	0.601	0.7	97	-0.01
30	T,M	2-Butanone	0.066	0.067	-1.5	104	-0.03
31	T,M	cis-1,2-Dichloroethene	0.389	0.392	-0.8	98	-0.01
32	T,M	Bromochloromethane	0.307	0.326	-6.2	102	-0.01
33	T,M	Tetrahydrofuran	0.038	0.038	0.0	110	-0.03
34	C,T,M	Chloroform	0.807	0.788	2.4	94	-0.03
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	52	-0.01
36	S	Dibromofluoromethane	0.372	0.355	4.6	95	-0.01
37	T,M	1,1,1-Trichloroethane	0.723	0.677	6.4	90	-0.03
38	T,M	Cyclohexane	0.000	0.000	0.0	94	-0.01
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.133	-0.8	95	-0.01
40	S	1,2-Dichloroethane-d4	0.378	0.361	4.5	95	-0.03
~~41~~	~~I~~	~~CHLOROBENZENE-D5~~	~~1.000~~	~~1.000~~	~~0.0~~	~~110~~	~~0.01~~

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB351.D Vial: 2
Acq On : 22 Nov 2011 7:48 am Operator: CGM
Sample : CV003H1656 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\V003H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.198	0.186	6.1	96	-0.01
43	T,M	Carbon tetrachloride	0.677	0.587	13.3	89	-0.01
44	T,M	Benzene	1.622	1.567	3.4	100	-0.01
45	T,M	1,2-Dichloroethane	0.500	0.452	9.6	93	-0.01
46	T,M	Trichloroethene	0.445	0.401	9.9	94	-0.03
47	T,M	Methylcyclohexane	0.000	0.000	0.0	88	-0.01
48	C,T,M	1,2-Dichloropropane	0.415	0.421	-1.4	105	-0.01
49	T,M	1,4-Dioxane	0.001	0.001	0.0	118	-0.01
50	T,M	Dibromomethane	0.196	0.185	5.6	99	-0.03
51	T,M	Bromodichloromethane	0.620	0.578	6.8	95	-0.03
~~52~~	~~T,M~~	~~2-Chloroethyl vinyl ether~~	~~0.125~~	~~0.030~~	~~76.0#~~	~~26#~~	~~-0.03~~
53	T,M	cis-1,3-Dichloropropene	0.640	0.618	3.4	99	-0.01
54	T,M	4-Methyl-2-pentanone	0.202	0.203	-0.5	106	-0.01
55	S	Toluene-d8	1.420	1.294	8.9	98	-0.03
56	C,T,M	Toluene	1.759	1.684	4.3	100	-0.01
57	T,M	Ethyl methacrylate	0.326	0.322	1.2	102	-0.01
58	T,M	trans-1,3-Dichloropropene	0.501	0.470	6.2	94	-0.01
59	T,M	1,1,2-Trichloroethane	0.217	0.213	1.8	101	-0.01
60	T,M	Tetrachloroethene	0.382	0.347	9.2	95	-0.03
61	T,M	2-Hexanone	0.133	0.141	-6.0	108	-0.01
62	T,M	1,3-Dichloropropane	0.434	0.444	-2.3	105	-0.01
63	T,M	Dibromochloromethane	0.322	0.306	5.0	97	-0.01
64	T,M	1,2-Dibromoethane	0.238	0.234	1.7	101	-0.01
65	T,M	1-Chlorohexane	0.816	0.817	-0.1	105	-0.01
66	P,M	Chlorobenzene	1.009	1.009	0.0	103	-0.03
67	C,T,M	Ethylbenzene	2.272	2.159	5.0	99	-0.03
68	T,M	1,1,1,2-Tetrachloroethane	0.375	0.354	5.6	96	-0.01
69	T,M	m-Xylene & p-Xylene	1.750	1.668	4.7	101	-0.01
70	T,M	o-Xylene	1.697	1.650	2.8	101	-0.01
71	T,M	Styrene	1.095	1.115	-1.8	102	-0.03
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	111	-0.03
73	T,M	Isopropylbenzene	5.670	5.441	4.0	102	-0.01
74	P,T,M	Bromoform	0.413	0.375	9.2	92	-0.03
75	S	4-Bromofluorobenzene	1.556	1.438	7.6	100	-0.03
76	P,T,M	1,1,2,2-Tetrachloroethane	0.753	0.790	-4.9	112	-0.01
77	T,M	trans-1,4-Dichloro-2-butene	0.244	0.179	26.6#	80	-0.03
78	T,M	n-Propylbenzene	8.060	7.989	0.9	105	-0.03
79	T,M	1,2,3-Trichloropropane	0.175	0.175	0.0	103	-0.03
80	T,M	Bromobenzene	1.142	1.065	6.7	99	-0.01
81	T,M	1,3,5-Trimethylbenzene	4.888	4.669	4.5	101	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB351.D Vial: 2
Acq On : 22 Nov 2011 7:48 am Operator: CGM
Sample : CV003H1656 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\V003H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	4.865	3.3	102	-0.01
83	T,M	4-Chlorotoluene	4.346	4.277	1.6	104	-0.03
84	T,M	tert-Butylbenzene	0.969	0.953	1.7	104	-0.03
85	T,M	1,2,4-Trimethylbenzene	4.650	4.550	2.2	103	-0.01
86	T,M	sec-Butylbenzene	6.369	6.337	0.5	105	-0.01
87	T,M	p-Isopropyltoluene	4.917	4.949	-0.7	105	-0.03
88	T,M	1,3-Dichlorobenzene	2.190	2.182	0.4	105	-0.01
89	T,M	1,4-Dichlorobenzene	2.037	2.001	1.8	102	-0.03
90	T,M	n-Butylbenzene	5.430	5.685	-4.7	108	-0.01
91	T,M	1,2-Dichlorobenzene	1.675	1.660	0.9	104	-0.03
~~92~~	~~T,M~~	~~1,2-Dibromo-3-chloropropane~~	~~0.085~~	~~0.082~~	~~3.5~~	~~99~~	~~-0.03~~
93	T,M	1,2,4-Trichlorobenzene	0.850	0.860	-1.2	105	-0.03
94	T,M	Hexachlorobutadiene	0.778	0.721	7.3	95	-0.03
95	T,M	Naphthalene	1.095	1.199	-9.5	109	-0.03
96	T,M	1,2,3-Trichlorobenzene	0.624	0.633	-1.4	105	-0.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB392
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K174
BFB Injection Date : 11/23/11
BFB Injection Time : 09:49
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.79
75	30.0 - 60.0% of mass 95	53.69
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.54
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	57.53
175	5.0 - 9.0% of mass 174	4.49(7.8)1
176	95.0 - 101.0% of mass 174	56.39(98.0)1
177	5.0 - 9.0% of mass 176	3.90(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV003H1658	RKB393	11/23/11	10:27
2	MBLK2W	V003K25B	RKB396	11/23/11	12:22
3	LCS2W	V003K25L	RKB394	11/23/11	11:06
4	LCD2W	V003K25C	RKB395	11/23/11	11:44
5	IW-70-SHB217-144DL	K174-01T	RKB407	11/23/11	19:24
6	MW-70-MNA12-146DL	K174-02T	RKB408	11/23/11	20:02
7	MW-70-MNA16-149DL	K174-03T	RKB409	11/23/11	20:39
8	MW-70-MNA14-151DL	K174-04T	RKB410	11/23/11	21:17

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RHB444
Instrument ID: 03
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K174
Date Analyzed: 08/16/11
Time Analyzed: 14:40
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1861981	13.20	1722743	17.19	603523	20.72
	UPPER LIMIT	3723962	13.70	3445486	17.69	1207046	21.22
	LOWER LIMIT	930991	12.70	861372	16.69	301762	20.22
	SAMPLE ID						
1	VSTD010	2014551	13.15	1877251	17.15	671023	20.66
2	MBLK2W	2422223	13.16	2257384	17.15	775851	20.68
3	LCS2W	2110265	13.16	1993606	17.15	705878	20.66
4	LCD2W	2219405	13.16	2097168	17.15	734744	20.66
5	IW-70-SHB217-144DL	1990924	13.17	1862648	17.16	635477	20.67
6	MW-70-MNA12-146DL	1992805	13.17	1872134	17.16	628840	20.67
7	MW-70-MNA16-149DL	2024093	13.16	1963328	17.15	680254	20.67
8	MW-70-MNA14-151DL	2033723	13.16	1910178	17.15	638591	20.68

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB393.D Vial: 2
Acq On : 23 Nov 2011 10:27 am Operator: CGM
Sample : CV003H1658 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\V003H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	108	-0.02
2	T,M	Chlorotrifluoroethylene	-1.000	0.000	0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	11.252	-12.5	100	0.01
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	100	0.01
5	P,T,M	Chloromethane	10.000	11.447	-14.5	103	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000	0.0	0	-5.22#
7	C,T,M	Vinyl chloride	10.000	10.383	-3.8	91	0.00
8	T,M	Bromomethane	10.000	10.636	-6.4	93	-0.02
9	T,M	Chloroethane	10.000	10.689	-6.9	94	0.00
10	T,M	Dichlorofluoromethane	10.000	10.383	-3.8	105	0.00
11	T,M	Trichlorofluoromethane	10.000	9.023	9.8	80	0.00
12	T,M	Acrolein	50.000	76.861	-53.7#	162	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.889	1.1	102	-0.02
14	T,M	Acetone	50.000	51.817	-3.6	108	0.00
15	C,T,M	1,1-Dichloroethene	10.000	9.767	2.3	98	0.00
16	T,M	Methyl acetate	-1.000	0.000	0.0	107	0.00
17	T,M	Iodomethane	10.000	9.830	1.7	98	0.00
18	T,M	Carbon disulfide	10.000	10.457	-4.6	115	0.00
19	T,M	Methylene chloride	10.000	10.211	-2.1	106	-0.02
20	T,M	tert-Butyl alcohol	50.000	49.269	1.5	97	0.00
21	T,M	tert-Butyl methyl ether (MT	10.000	10.043	-0.4	103	-0.02
22	T,M	trans-1,2-Dichloroethene	10.000	10.039	-0.4	102	-0.02
23	T,M	Acrylonitrile	50.000	55.493	-11.0	112	-0.02
24	T,M	Isopropyl ether (DIPE)	10.000	10.801	-8.0	108	-0.02
25	T,M	Vinyl acetate	10.000	10.628	-6.3	98	0.00
26	P,T,M	1,1-Dichloroethane	10.000	10.376	-3.8	103	0.00
27	T,M	2-Butanol	-1.000	0.000	0.0	96	0.00
28	T,M	tert-Butyl ethyl ether (ETB	10.000	10.967	-9.7	111	-0.02
29	T,M	2,2-Dichloropropane	10.000	9.678	3.2	97	-0.02
30	T,M	2-Butanone	50.000	52.462	-4.9	110	-0.02
31	T,M	cis-1,2-Dichloroethene	10.000	10.589	-5.9	107	0.00
32	T,M	Bromochloromethane	10.000	10.554	-5.5	105	0.00
33	T,M	Tetrahydrofuran	10.000	10.851	-8.5	123	-0.02
34	C,T,M	Chloroform	10.000	9.997	0.0	99	-0.02
35	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	27	0.00
36	S	Dibromofluoromethane	10.000	9.584	4.2	99	0.00
37	T,M	1,1,1-Trichloroethane	10.000	9.392	6.1	93	-0.02
38	T,M	Cyclohexane	-1.000	0.000	0.0	119	0.00
39	T,M	tert-Amyl methyl ether (TAM	10.000	11.092	-10.9	109	0.00
40	S	1,2-Dichloroethane-d4	10.000	8.861	11.4	91	-0.02
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	109	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB393.D Vial: 2
Acq On : 23 Nov 2011 10:27 am Operator: CGM
Sample : CV003H1658 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\V003H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.		%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	10.281		-2.8	104	0.00
43	T,M	Carbon tetrachloride	10.000	9.380		6.2	95	0.00
44	T,M	Benzene	10.000	10.360		-3.6	106	0.00
45	T,M	1,2-Dichloroethane	10.000	9.241		7.6	94	0.00
46	T,M	Trichloroethene	10.000	10.125		-1.3	105	-0.02
47	T,M	Methylcyclohexane	-1.000	0.000		0.0	100	0.00
48	C,T,M	1,2-Dichloropropane	10.000	10.885		-8.8	111	0.00
49	T,M	1,4-Dioxane	200.000	251.942	PT	-26.0#	138	0.00
50	T,M	Dibromomethane	10.000	10.015		-0.2	104	-0.02
51	T,M	Bromodichloromethane	10.000	9.983		0.2	101	-0.02
52	T,M	2-Chloroethyl vinyl ether	10.000	9.689		3.1	103	-0.02
53	T,M	cis-1,3-Dichloropropene	10.000	10.567		-5.7	107	0.00
54	T,M	4-Methyl-2-pentanone	50.000	53.667		-7.3	112	0.00
55	S	Toluene-d8	10.000	9.363		6.4	99	-0.02
56	C,T,M	Toluene	10.000	10.342		-3.4	106	0.00
57	T,M	Ethyl methacrylate	10.000	10.867		-8.7	111	0.00
58	T,M	trans-1,3-Dichloropropene	10.000	10.500		-5.0	104	0.00
59	T,M	1,1,2-Trichloroethane	10.000	10.288		-2.9	105	0.00
60	T,M	Tetrachloroethene	10.000	9.758		2.4	101	-0.02
61	T,M	2-Hexanone	50.000	57.229		-14.5	115	0.00
62	T,M	1,3-Dichloropropane	10.000	10.535		-5.4	107	0.00
63	T,M	Dibromochloromethane	10.000	10.156		-1.6	102	0.00
64	T,M	1,2-Dibromoethane	10.000	10.439		-4.4	106	0.00
65	T,M	1-Chlorohexane	10.000	10.535		-5.4	109	0.00
66	P,M	Chlorobenzene	10.000	10.622		-6.2	108	-0.02
67	C,T,M	Ethylbenzene	10.000	10.244		-2.4	106	-0.02
68	T,M	1,1,1,2-Tetrachloroethane	10.000	10.290		-2.9	103	0.00
69	T,M	m-Xylene & p-Xylene	20.000	20.226		-1.1	105	0.00
70	T,M	o-Xylene	10.000	10.366		-3.7	106	0.00
71	T,M	Styrene	10.000	11.064		-10.6	109	-0.02
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000		0.0	111	-0.02
73	T,M	Isopropylbenzene	10.000	10.172		-1.7	108	0.00
74	P,T,M	Bromoform	10.000	9.987		0.1	101	-0.02
75	S	4-Bromofluorobenzene	10.000	9.221		7.8	100	-0.02
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.699		-7.0	114	0.00
77	T,M	trans-1,4-Dichloro-2-butene	10.000	11.144		-11.4	121	0.00
78	T,M	n-Propylbenzene	10.000	10.528		-5.3	112	-0.02
79	T,M	1,2,3-Trichloropropane	10.000	10.286		-2.9	106	0.00
80	T,M	Bromobenzene	10.000	9.942		0.6	105	0.00
81	T,M	1,3,5-Trimethylbenzene	10.000	10.137		-1.4	107	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB393.D Vial: 2
Acq On : 23 Nov 2011 10:27 am Operator: CGM
Sample : CVO03H1658 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	10.007	-0.1	106	0.00
83	T,M	4-Chlorotoluene	10.000	10.425	-4.3	110	-0.02
84	T,M	tert-Butylbenzene	10.000	10.410	-4.1	110	-0.02
85	T,M	1,2,4-Trimethylbenzene	10.000	10.383	-3.8	110	0.00
86	T,M	sec-Butylbenzene	10.000	10.510	-5.1	111	0.00
87	T,M	p-Isopropyltoluene	10.000	10.709	-7.1	111	-0.02
88	T,M	1,3-Dichlorobenzene	10.000	10.571	-5.7	111	0.00
89	T,M	1,4-Dichlorobenzene	10.000	10.549	-5.5	109	-0.02
90	T,M	n-Butylbenzene	10.000	11.109	-11.1	115	0.00
91	T,M	1,2-Dichlorobenzene	10.000	10.315	-3.1	108	-0.02
92	T,M	1,2-Dibromo-3-chloropropane	10.000	10.103	-1.0	103	0.00
93	T,M	1,2,4-Trichlorobenzene	10.000	10.931	-9.3	113	0.00
94	T,M	Hexachlorobutadiene	10.000	9.467	5.3	97	-0.02
95	T,M	Naphthalene	10.000	11.479	-14.8	114	-0.02
96	T,M	1,2,3-Trichlorobenzene	10.000	10.681	-6.8	111	-0.02

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB393.D Vial: 2
Acq On : 23 Nov 2011 10:27 am Operator: CGM
Sample : CV003H1658 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\V003H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	108	-0.02
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.397	-12.5	100	0.01
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	100	0.01
5	P,T,M	Chloromethane	0.357	0.408	-14.3	103	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.22#
7	C,T,M	Vinyl chloride	0.337	0.350	-3.9	91	0.00
8	T,M	Bromomethane	0.227	0.241	-6.2	93	-0.02
9	T,M	Chloroethane	0.177	0.189	-6.8	94	0.00
10	T,M	Dichlorofluoromethane	0.764	0.793	-3.8	105	0.00
11	T,M	Trichlorofluoromethane	0.545	0.492	9.7	80	0.00
12	T,M	Acrolein	0.009	0.014	-55.6#	162	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.201	1.0	102	-0.02
14	T,M	Acetone	0.039	0.040	-2.6	108	0.00
15	C,T,M	1,1-Dichloroethene	0.673	0.657	2.4	98	0.00
16	T,M	Methyl acetate	0.000	0.000	0.0	107	0.00
17	T,M	Iodomethane	0.631	0.620	1.7	98	0.00
18	T,M	Carbon disulfide	1.353	1.415	-4.6	115	0.00
19	T,M	Methylene chloride	0.475	0.485	-2.1	106	-0.02
20	T,M	tert-Butyl alcohol	0.012	0.012	0.0	97	0.00
21	T,M	tert-Butyl methyl ether (MT	0.489	0.491	-0.4	103	-0.02
22	T,M	trans-1,2-Dichloroethene	0.686	0.688	-0.3	102	-0.02
23	T,M	Acrylonitrile	0.036	0.039	-8.3	112	-0.02
24	T,M	Isopropyl ether (DIPE)	1.196	1.292	-8.0	108	-0.02
25	T,M	Vinyl acetate	0.401	0.427	-6.5	98	0.00
26	P,T,M	1,1-Dichloroethane	0.743	0.770	-3.6	103	0.00
27	T,M	2-Butanol	0.000	0.000	0.0	96	0.00
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.939	-9.7	111	-0.02
29	T,M	2,2-Dichloropropane	0.605	0.586	3.1	97	-0.02
30	T,M	2-Butanone	0.066	0.069	-4.5	110	-0.02
31	T,M	cis-1,2-Dichloroethene	0.389	0.412	-5.9	107	0.00
32	T,M	Bromochloromethane	0.307	0.324	-5.5	105	0.00
33	T,M	Tetrahydrofuran	0.038	0.041	-7.9	123	-0.02
34	C,T,M	Chloroform	0.807	0.807	0.0	99	-0.02
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	27#	0.00
36	S	Dibromofluoromethane	0.372	0.356	4.3	99	0.00
37	T,M	1,1,1-Trichloroethane	0.723	0.679	6.1	93	-0.02
38	T,M	Cyclohexane	0.000	0.000	0.0	119	0.00
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.147	-11.4	109	0.00
40	S	1,2-Dichloroethane-d4	0.378	0.335	11.4	91	-0.02
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	109	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB393.D Vial: 2
Acq On : 23 Nov 2011 10:27 am Operator: CGM
Sample : CVO03H1658 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.198	0.204	-3.0	104	0.00
43	T,M	Carbon tetrachloride	0.677	0.635	6.2	95	0.00
44	T,M	Benzene	1.622	1.680	-3.6	106	0.00
45	T,M	1,2-Dichloroethane	0.500	0.462	7.6	94	0.00
46	T,M	Trichloroethene	0.445	0.451	-1.3	105	-0.02
47	T,M	Methylcyclohexane	0.000	0.000	0.0	100	0.00
48	C,T,M	1,2-Dichloropropane	0.415	0.452	-8.9	111	0.00
49	T,M	1,4-Dioxane	0.001	0.002	-100.0#	138	0.00
50	T,M	Dibromomethane	0.196	0.196	0.0	104	-0.02
51	T,M	Bromodichloromethane	0.620	0.619	0.2	101	-0.02
52	T,M	2-Chloroethyl vinyl ether	0.125	0.121	3.2	103	-0.02
53	T,M	cis-1,3-Dichloropropene	0.640	0.676	-5.6	107	0.00
54	T,M	4-Methyl-2-pentanone	0.202	0.217	-7.4	112	0.00
55	S	Toluene-d8	1.420	1.330	6.3	99	-0.02
56	C,T,M	Toluene	1.759	1.820	-3.5	106	0.00
57	T,M	Ethyl methacrylate	0.326	0.355	-8.9	111	0.00
58	T,M	trans-1,3-Dichloropropene	0.501	0.526	-5.0	104	0.00
59	T,M	1,1,2-Trichloroethane	0.217	0.223	-2.8	105	0.00
60	T,M	Tetrachloroethene	0.382	0.373	2.4	101	-0.02
61	T,M	2-Hexanone	0.133	0.153	-15.0	115	0.00
62	T,M	1,3-Dichloropropane	0.434	0.458	-5.5	107	0.00
63	T,M	Dibromochloromethane	0.322	0.327	-1.6	102	0.00
64	T,M	1,2-Dibromoethane	0.238	0.248	-4.2	106	0.00
65	T,M	1-Chlorohexane	0.816	0.859	-5.3	109	0.00
66	P,M	Chlorobenzene	1.009	1.072	-6.2	108	-0.02
67	C,T,M	Ethylbenzene	2.272	2.327	-2.4	106	-0.02
68	T,M	1,1,1,2-Tetrachloroethane	0.375	0.385	-2.7	103	0.00
69	T,M	m-Xylene & p-Xylene	1.750	1.770	-1.1	105	0.00
70	T,M	o-Xylene	1.697	1.759	-3.7	106	0.00
71	T,M	Styrene	1.095	1.211	-10.6	109	-0.02
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	111	-0.02
73	T,M	Isopropylbenzene	5.670	5.767	-1.7	108	0.00
74	P,T,M	Bromoform	0.413	0.413	0.0	101	-0.02
75	S	4-Bromofluorobenzene	1.556	1.435	7.8	100	-0.02
76	P,T,M	1,1,2,2-Tetrachloroethane	0.753	0.806	-7.0	114	0.00
77	T,M	trans-1,4-Dichloro-2-butene	0.244	0.272	-11.5	121	0.00
78	T,M	n-Propylbenzene	8.060	8.485	-5.3	112	-0.02
79	T,M	1,2,3-Trichloropropane	0.175	0.180	-2.9	106	0.00
80	T,M	Bromobenzene	1.142	1.135	0.6	105	0.00
81	T,M	1,3,5-Trimethylbenzene	4.888	4.955	-1.4	107	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB393.D Vial: 2
Acq On : 23 Nov 2011 10:27 am Operator: CGM
Sample : CVO03H1658 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	5.033	-0.1	106	0.00
83	T,M	4-Chlorotoluene	4.346	4.531	-4.3	110	-0.02
84	T,M	tert-Butylbenzene	0.969	1.009	-4.1	110	-0.02
85	T,M	1,2,4-Trimethylbenzene	4.650	4.828	-3.8	110	0.00
86	T,M	sec-Butylbenzene	6.369	6.693	-5.1	111	0.00
87	T,M	p-Isopropyltoluene	4.917	5.265	-7.1	111	-0.02
88	T,M	1,3-Dichlorobenzene	2.190	2.315	-5.7	111	0.00
89	T,M	1,4-Dichlorobenzene	2.037	2.149	-5.5	109	-0.02
90	T,M	n-Butylbenzene	5.430	6.032	-11.1	115	0.00
91	T,M	1,2-Dichlorobenzene	1.675	1.728	-3.2	108	-0.02
92	T,M	1,2-Dibromo-3-chloropropane	0.085	0.086	-1.2	103	0.00
93	T,M	1,2,4-Trichlorobenzene	0.850	0.929	-9.3	113	0.00
94	T,M	Hexachlorobutadiene	0.778	0.737	5.3	97	-0.02
95	T,M	Naphthalene	1.095	1.257	-14.8	114	-0.02
96	T,M	1,2,3-Trichlorobenzene	0.624	0.666	-6.7	111	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB413
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K174
BFB Injection Date : 11/23/11
BFB Injection Time : 23:10
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.47
75	30.0 - 60.0% of mass 95	53.39
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.81
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	57.25
175	5.0 - 9.0% of mass 174	4.36(7.6)1
176	95.0 - 101.0% of mass 174	55.78(97.4)1
177	5.0 - 9.0% of mass 176	3.94(7.1)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV003H1659	RKB414	11/23/11	23:47
2	MBLK3W	V003K26B	RKB418	11/24/11	02:17
3	LCS3W	V003K26L	RKB415	11/24/11	00:25
4	LCD3W	V003K26C	RKB416	11/24/11	01:03
5	IR-70-FD-145DL	K174-07T	RKB419	11/24/11	02:55

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RHB444
Instrument ID: 03
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K174
Date Analyzed: 08/16/11
Time Analyzed: 14:40
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1861981	13.20	1722743	17.19	603523	20.72
	UPPER LIMIT	3723962	13.70	3445486	17.69	1207046	21.22
	LOWER LIMIT	930991	12.70	861372	16.69	301762	20.22
	SAMPLE ID						
1	VSTD010	1983747	13.16	1916314	17.15	678515	20.68
2	MBLK3W	2326489	13.17	2196286	17.16	753956	20.67
3	LCS3W	2046486	13.16	1945747	17.16	687997	20.67
4	LCD3W	2171518	13.17	2042246	17.16	710841	20.67
5	IR-70-FD-145DL	2143699	13.16	1991240	17.16	671685	20.67

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.
page 1 of 1

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB414.D Vial: 2
Acq On : 23 Nov 2011 11:47 pm Operator: CGM
Sample : CV003H1659 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\V003H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	107	0.00
2	T,M	Chlorotrifluoroethylene	-1.000	0.000	0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	10.786	-7.9	94	0.02
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	93	0.02
5	P,T,M	Chloromethane	10.000	10.358	-3.6	92	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000	0.0	0	-5.22#
7	C,T,M	Vinyl chloride	10.000	9.250	7.5	80	0.02
8	T,M	Bromomethane	10.000	10.138	-1.4	87	0.00
9	T,M	Chloroethane	10.000	10.312	-3.1	90	0.02
10	T,M	Dichlorofluoromethane	10.000	9.935	0.6	99	0.00
11	T,M	Trichlorofluoromethane	10.000	8.520	14.8	74	0.00
12	T,M	Acrolein	50.000	45.454	9.1	95	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	8.924	10.8	91	0.00
14	T,M	Acetone	50.000	55.497	-11.0	114	0.00
15	C,T,M	1,1-Dichloroethene	10.000	9.678	3.2	96	0.00
16	T,M	Methyl acetate	-1.000	0.000	0.0	114	0.00
17	T,M	Iodomethane	10.000	9.224	7.8	91	0.00
18	T,M	Carbon disulfide	10.000	9.609	3.9	104	0.00
19	T,M	Methylene chloride	10.000	10.225	-2.2	104	0.00
20	T,M	tert-Butyl alcohol	50.000	53.351	-6.7	103	0.00
21	T,M	tert-Butyl methyl ether (MT	10.000	10.819	-8.2	109	0.00
22	T,M	trans-1,2-Dichloroethene	10.000	9.963	0.4	99	0.00
23	T,M	Acrylonitrile	50.000	59.594	-19.2	118	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	10.845	-8.5	106	0.00
25	T,M	Vinyl acetate	10.000	7.436 NT	25.6#	68	0.00
26	P,T,M	1,1-Dichloroethane	10.000	10.115	-1.2	99	0.00
27	T,M	2-Butanol	-1.000	0.000	0.0	102	0.00
28	T,M	tert-Butyl ethyl ether (ETB	10.000	11.234	-12.3	112	-0.01
29	T,M	2,2-Dichloropropane	10.000	8.330	16.7	82	0.00
30	T,M	2-Butanone	50.000	56.421	-12.8	117	-0.01
31	T,M	cis-1,2-Dichloroethene	10.000	10.220	-2.2	101	0.00
32	T,M	Bromochloromethane	10.000	11.032	-10.3	108	0.00
33	T,M	Tetrahydrofuran	10.000	11.598	-16.0	130	0.00
34	C,T,M	Chloroform	10.000	10.060	-0.6	99	0.00
35	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	29	0.02
36	S	Dibromofluoromethane	10.000	9.791	2.1	99	0.00
37	T,M	1,1,1-Trichloroethane	10.000	9.444	5.6	92	0.00
38	T,M	Cyclohexane	-1.000	0.000	0.0	118	0.00
39	T,M	tert-Amyl methyl ether (TAM	10.000	11.072	-10.7	107	0.00
40	S	1,2-Dichloroethane-d4	10.000	9.755	2.4	99	0.00
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	111	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB414.D Vial: 2
Acq On : 23 Nov 2011 11:47 pm Operator: CGM
Sample : CVO03H1659 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.		%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	9.211		7.9	95	0.02
43	T,M	Carbon tetrachloride	10.000	8.921		10.8	93	0.00
44	T,M	Benzene	10.000	9.903		1.0	103	0.00
45	T,M	1,2-Dichloroethane	10.000	9.563		4.4	100	0.00
46	T,M	Trichloroethene	10.000	9.719		2.8	102	0.00
47	T,M	Methylcyclohexane	-1.000	0.000		0.0	93	0.00
48	C,T,M	1,2-Dichloropropane	10.000	10.644		-6.4	111	0.00
49	T,M	1,4-Dioxane	200.000	234.507		-17.3	131	0.00
50	T,M	Dibromomethane	10.000	9.945		0.5	105	0.00
51	T,M	Bromodichloromethane	10.000	9.862		1.4	102	0.00
52	T,M	2-Chloroethyl vinyl ether	10.000	9.746		2.5	106	0.00
53	T,M	cis-1,3-Dichloropropene	10.000	10.071		-0.7	104	0.00
54	T,M	4-Methyl-2-pentanone	50.000	56.941		-13.9	121	0.00
55	S	Toluene-d8	10.000	9.228		7.7	100	0.00
56	C,T,M	Toluene	10.000	9.817		1.8	103	0.00
57	T,M	Ethyl methacrylate	10.000	11.067		-10.7	115	0.00
58	T,M	trans-1,3-Dichloropropene	10.000	10.265		-2.7	104	0.00
59	T,M	1,1,2-Trichloroethane	10.000	10.362		-3.6	108	0.00
60	T,M	Tetrachloroethene	10.000	8.982		10.2	95	0.00
61	T,M	2-Hexanone	50.000	60.780	NT	-21.6#	125	0.00
62	T,M	1,3-Dichloropropane	10.000	10.632		-6.3	110	0.00
63	T,M	Dibromochloromethane	10.000	10.272		-2.7	105	0.00
64	T,M	1,2-Dibromoethane	10.000	10.571		-5.7	110	0.00
65	T,M	1-Chlorohexane	10.000	9.777		2.2	103	0.00
66	P,M	Chlorobenzene	10.000	10.125		-1.3	106	0.00
67	C,T,M	Ethylbenzene	10.000	9.777		2.2	103	0.00
68	T,M	1,1,1,2-Tetrachloroethane	10.000	10.016		-0.2	102	0.00
69	T,M	m-Xylene & p-Xylene	20.000	19.354		3.2	103	0.00
70	T,M	o-Xylene	10.000	9.977		0.2	104	0.02
71	T,M	Styrene	10.000	10.637		-6.4	107	0.00
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000		0.0	112	0.00
73	T,M	Isopropylbenzene	10.000	9.761		2.4	105	0.02
74	P,T,M	Bromoform	10.000	10.137		-1.4	104	0.00
75	S	4-Bromofluorobenzene	10.000	9.521		4.8	104	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.962		-9.6	118	0.00
77	T,M	trans-1,4-Dichloro-2-butene	10.000	10.565		-5.6	116	0.00
78	T,M	n-Propylbenzene	10.000	9.972		0.3	107	0.00
79	T,M	1,2,3-Trichloropropane	10.000	10.769		-7.7	112	0.00
80	T,M	Bromobenzene	10.000	9.742		2.6	104	0.00
81	T,M	1,3,5-Trimethylbenzene	10.000	9.676		3.2	103	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB414.D Vial: 2
Acq On : 23 Nov 2011 11:47 pm Operator: CGM
Sample : CVO03H1659 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	9.758	2.4	104	0.00
83	T,M	4-Chlorotoluene	10.000	9.959	0.4	106	0.00
84	T,M	tert-Butylbenzene	10.000	9.842	1.6	105	0.00
85	T,M	1,2,4-Trimethylbenzene	10.000	9.944	0.6	106	0.00
86	T,M	sec-Butylbenzene	10.000	9.859	1.4	105	0.00
87	T,M	p-Isopropyltoluene	10.000	9.937	0.6	104	0.00
88	T,M	1,3-Dichlorobenzene	10.000	9.936	0.6	105	0.00
89	T,M	1,4-Dichlorobenzene	10.000	10.070	-0.7	105	0.00
90	T,M	n-Butylbenzene	10.000	10.014	-0.1	105	0.00
91	T,M	1,2-Dichlorobenzene	10.000	9.881	1.2	104	0.00
92	T,M	1,2-Dibromo-3-chloropropane	10.000	10.196	-2.0	105	0.00
93	T,M	1,2,4-Trichlorobenzene	10.000	9.407	5.9	98	0.00
94	T,M	Hexachlorobutadiene	10.000	7.960	20.4#	82	0.00
95	T,M	Naphthalene	10.000	10.623	-6.2	107	0.00
96	T,M	1,2,3-Trichlorobenzene	10.000	9.310	6.9	98	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB414.D Vial: 2
Acq On : 23 Nov 2011 11:47 pm Operator: CGM
Sample : CVO03H1659 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	107	0.00
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.381	-7.9	94	0.02
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	93	0.02
5	P,T,M	Chloromethane	0.357	0.369	-3.4	92	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.22#
7	C,T,M	Vinyl chloride	0.337	0.312	7.4	80	0.02
8	T,M	Bromomethane	0.227	0.230	-1.3	87	0.00
9	T,M	Chloroethane	0.177	0.183	-3.4	90	0.02
10	T,M	Dichlorofluoromethane	0.764	0.759	0.7	99	0.00
11	T,M	Trichlorofluoromethane	0.545	0.464	14.9	74	0.00
12	T,M	Acrolein	0.009	0.008	11.1	95	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.181	10.8	91	0.00
14	T,M	Acetone	0.039	0.043	-10.3	114	0.00
15	C,T,M	1,1-Dichloroethene	0.673	0.651	3.3	96	0.00
16	T,M	Methyl acetate	0.000	0.000	0.0	114	0.00
17	T,M	Iodomethane	0.631	0.582	7.8	91	0.00
18	T,M	Carbon disulfide	1.353	1.300	3.9	104	0.00
19	T,M	Methylene chloride	0.475	0.486	-2.3	104	0.00
20	T,M	tert-Butyl alcohol	0.012	0.013	-8.3	103	0.00
21	T,M	tert-Butyl methyl ether (MT	0.489	0.529	-8.2	109	0.00
22	T,M	trans-1,2-Dichloroethene	0.686	0.683	0.4	99	0.00
23	T,M	Acrylonitrile	0.036	0.042	-16.7	118	0.00
24	T,M	Isopropyl ether (DIPE)	1.196	1.297	-8.4	106	0.00
25	T,M	Vinyl acetate	0.401	0.298	25.7#	68	0.00
26	P,T,M	1,1-Dichloroethane	0.743	0.751	-1.1	99	0.00
27	T,M	2-Butanol	0.000	0.000	0.0	102	0.00
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.962	-12.4	112	-0.01
29	T,M	2,2-Dichloropropane	0.605	0.504	16.7	82	0.00
30	T,M	2-Butanone	0.066	0.075	-13.6	117	-0.01
31	T,M	cis-1,2-Dichloroethene	0.389	0.398	-2.3	101	0.00
32	T,M	Bromochloromethane	0.307	0.339	-10.4	108	0.00
33	T,M	Tetrahydrofuran	0.038	0.044	-15.8	130	0.00
34	C,T,M	Chloroform	0.807	0.812	-0.6	99	0.00
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	29#	0.02
36	S	Dibromofluoromethane	0.372	0.364	2.2	99	0.00
37	T,M	1,1,1-Trichloroethane	0.723	0.683	5.5	92	0.00
38	T,M	Cyclohexane	0.000	0.000	0.0	118	0.00
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.146	-10.6	107	0.00
40	S	1,2-Dichloroethane-d4	0.378	0.369	2.4	99	0.00
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	111	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB414.D Vial: 2
Acq On : 23 Nov 2011 11:47 pm Operator: CGM
Sample : CVO03H1659 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.198	0.183	7.6	95	0.02
43	T,M	Carbon tetrachloride	0.677	0.604	10.8	93	0.00
44	T,M	Benzene	1.622	1.606	1.0	103	0.00
45	T,M	1,2-Dichloroethane	0.500	0.479	4.2	100	0.00
46	T,M	Trichloroethene	0.445	0.432	2.9	102	0.00
47	T,M	Methylcyclohexane	0.000	0.000	0.0	93	0.00
48	C,T,M	1,2-Dichloropropane	0.415	0.442	-6.5	111	0.00
49	T,M	1,4-Dioxane	0.001	0.002	-100.0#	131	0.00
50	T,M	Dibromomethane	0.196	0.195	0.5	105	0.00
51	T,M	Bromodichloromethane	0.620	0.611	1.5	102	0.00
52	T,M	2-Chloroethyl vinyl ether	0.125	0.122	2.4	106	0.00
53	T,M	cis-1,3-Dichloropropene	0.640	0.645	-0.8	104	0.00
54	T,M	4-Methyl-2-pentanone	0.202	0.230	-13.9	121	0.00
55	S	Toluene-d8	1.420	1.311	7.7	100	0.00
56	C,T,M	Toluene	1.759	1.727	1.8	103	0.00
57	T,M	Ethyl methacrylate	0.326	0.361	-10.7	115	0.00
58	T,M	trans-1,3-Dichloropropene	0.501	0.514	-2.6	104	0.00
59	T,M	1,1,2-Trichloroethane	0.217	0.225	-3.7	108	0.00
60	T,M	Tetrachloroethene	0.382	0.343	10.2	95	0.00
61	T,M	2-Hexanone	0.133	0.162	-21.8#	125	0.00
62	T,M	1,3-Dichloropropane	0.434	0.462	-6.5	110	0.00
63	T,M	Dibromochloromethane	0.322	0.330	-2.5	105	0.00
64	T,M	1,2-Dibromoethane	0.238	0.251	-5.5	110	0.00
65	T,M	1-Chlorohexane	0.816	0.798	2.2	103	0.00
66	P,M	Chlorobenzene	1.009	1.022	-1.3	106	0.00
67	C,T,M	Ethylbenzene	2.272	2.221	2.2	103	0.00
68	T,M	1,1,1,2-Tetrachloroethane	0.375	0.375	0.0	102	0.00
69	T,M	m-Xylene & p-Xylene	1.750	1.693	3.3	103	0.00
70	T,M	o-Xylene	1.697	1.693	0.2	104	0.02
71	T,M	Styrene	1.095	1.165	-6.4	107	0.00
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	112	0.00
73	T,M	Isopropylbenzene	5.670	5.534	2.4	105	0.02
74	P,T,M	Bromoform	0.413	0.419	-1.5	104	0.00
75	S	4-Bromofluorobenzene	1.556	1.482	4.8	104	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	0.753	0.826	-9.7	118	0.00
77	T,M	trans-1,4-Dichloro-2-butene	0.244	0.258	-5.7	116	0.00
78	T,M	n-Propylbenzene	8.060	8.037	0.3	107	0.00
79	T,M	1,2,3-Trichloropropane	0.175	0.189	-8.0	112	0.00
80	T,M	Bromobenzene	1.142	1.112	2.6	104	0.00
81	T,M	1,3,5-Trimethylbenzene	4.888	4.729	3.3	103	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB414.D Vial: 2
Acq On : 23 Nov 2011 11:47 pm Operator: CGM
Sample : CVO03H1659 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	4.907	2.4	104	0.00
83	T,M	4-Chlorotoluene	4.346	4.328	0.4	106	0.00
84	T,M	tert-Butylbenzene	0.969	0.954	1.5	105	0.00
85	T,M	1,2,4-Trimethylbenzene	4.650	4.624	0.6	106	0.00
86	T,M	sec-Butylbenzene	6.369	6.279	1.4	105	0.00
87	T,M	p-Isopropyltoluene	4.917	4.886	0.6	104	0.00
88	T,M	1,3-Dichlorobenzene	2.190	2.176	0.6	105	0.00
89	T,M	1,4-Dichlorobenzene	2.037	2.051	-0.7	105	0.00
90	T,M	n-Butylbenzene	5.430	5.437	-0.1	105	0.00
91	T,M	1,2-Dichlorobenzene	1.675	1.655	1.2	104	0.00
92	T,M	1,2-Dibromo-3-chloropropane	0.085	0.087	-2.4	105	0.00
93	T,M	1,2,4-Trichlorobenzene	0.850	0.799	6.0	98	0.00
94	T,M	Hexachlorobutadiene	0.778	0.619	20.4#	82	0.00
95	T,M	Naphthalene	1.095	1.163	-6.2	107	0.00
96	T,M	1,2,3-Trichlorobenzene	0.624	0.581	6.9	98	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB455
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K174
BFB Injection Date : 11/29/11
BFB Injection Time : 06:55
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.96
75	30.0 - 60.0% of mass 95	53.74
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.93
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	60.60
175	5.0 - 9.0% of mass 174	4.43(7.3)1
176	95.0 - 101.0% of mass 174	58.40(96.4)1
177	5.0 - 9.0% of mass 176	3.82(6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV003H1661	RKB457	11/29/11	08:29
2	MBLK4W	V003K28B	RKB461	11/29/11	10:55
3	LCS4W	V003K28L	RKB458	11/29/11	09:08
4	LCD4W	V003K28C	RKB459	11/29/11	09:43
5	IR-70-FD-150DL	K174-05T	RKB463	11/29/11	13:21
6	IR-70-FD-147DL	K174-06T	RKB464	11/29/11	13:58

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RHB444
Instrument ID: 03
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K174
Date Analyzed: 08/16/11
Time Analyzed: 14:40
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1861981	13.20	1722743	17.19	603523	20.72
	UPPER LIMIT	3723962	13.70	3445486	17.69	1207046	21.22
	LOWER LIMIT	930991	12.70	861372	16.69	301762	20.22
	SAMPLE ID						
1	VSTD010	1958539	13.16	1837768	17.16	599273	20.67
2	MBLK4W	2399597	13.16	2229005	17.15	722287	20.67
3	LCS4W	2193135	13.16	2100870	17.15	718139	20.68
4	LCD4W	2215617	13.16	2065294	17.15	688163	20.66
5	IR-70-FD-150DL	2136207	13.20	1991743	17.20	639343	20.73
6	IR-70-FD-147DL	2160826	13.20	1965772	17.19	606875	20.72

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K29\RKB457.D Vial: 3
Acq On : 29 Nov 2011 8:29 am Operator: CGM
Sample : CVO03H1661 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.		%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000		0.0	105	0.00
2	T,M	Chlorotrifluoroethylene	-1.000	0.000		0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	11.619		-16.2	100	0.01
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000		0.0	100	0.01
5	P,T,M	Chloromethane	10.000	10.996		-10.0	96	0.03
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000		0.0	0	-5.22#
7	C,T,M	Vinyl chloride	10.000	10.291		-2.9	88	0.03
8	T,M	Bromomethane	10.000	11.676		-16.8	99	0.01
9	T,M	Chloroethane	10.000	11.995		-19.9	103	0.01
10	T,M	Dichlorofluoromethane	10.000	10.648		-6.5	105	0.01
11	T,M	Trichlorofluoromethane	10.000	9.496		5.0	82	0.01
12	T,M	Acrolein	50.000	32.104	NT	35.8#	66	0.01
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.893		1.1	99	0.00
14	T,M	Acetone	50.000	49.731		0.5	101	0.01
15	C,T,M	1,1-Dichloroethene	10.000	10.247		-2.5	100	0.01
16	T,M	Methyl acetate	-1.000	0.000		0.0	101	0.01
17	T,M	Iodomethane	10.000	10.012		-0.1	97	0.01
18	T,M	Carbon disulfide	10.000	11.032		-10.3	118	0.01
19	T,M	Methylene chloride	10.000	10.764		-7.6	109	0.00
20	T,M	tert-Butyl alcohol	50.000	51.062		-2.1	98	0.01
21	T,M	tert-Butyl methyl ether (MT	10.000	10.375		-3.8	103	0.00
22	T,M	trans-1,2-Dichloroethene	10.000	10.519		-5.2	104	0.00
23	T,M	Acrylonitrile	50.000	55.404		-10.8	109	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	11.141		-11.4	108	0.00
25	T,M	Vinyl acetate	10.000	9.558		4.4	86	0.01
26	P,T,M	1,1-Dichloroethane	10.000	10.742		-7.4	104	0.01
27	T,M	2-Butanol	-1.000	0.000		0.0	95	0.01
28	T,M	tert-Butyl ethyl ether (ETB	10.000	10.467		-4.7	103	0.00
29	T,M	2,2-Dichloropropane	10.000	10.061		-0.6	98	0.00
30	T,M	2-Butanone	50.000	50.784		-1.6	104	0.00
31	T,M	cis-1,2-Dichloroethene	10.000	10.793		-7.9	106	0.00
32	T,M	Bromochloromethane	10.000	11.238		-12.4	109	0.01
33	T,M	Tetrahydrofuran	10.000	11.524		-15.2	127	0.00
34	C,T,M	Chloroform	10.000	10.278		-2.8	99	0.00
35	T,M	tert-Amyl alcohol	-1.000	0.000		0.0	92	0.00
36	S	Dibromofluoromethane	10.000	9.500		5.0	95	0.01
37	T,M	1,1,1-Trichloroethane	10.000	9.732		2.7	94	0.00
38	T,M	Cyclohexane	-1.000	0.000		0.0	116	0.01
39	T,M	tert-Amyl methyl ether (TAM	10.000	9.842		1.6	94	0.00
40	S	1,2-Dichloroethane-d4	10.000	8.901		11.0	89	0.00
41	I	CHLOROBENZENE-D5	10.000	10.000		0.0	107	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K29\RKB457.D Vial: 3
Acq On : 29 Nov 2011 8:29 am Operator: CGM
Sample : CVO03H1661 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.		%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	10.638		-6.4	105	0.01
43	T,M	Carbon tetrachloride	10.000	9.197		8.0	91	0.01
44	T,M	Benzene	10.000	10.796		-8.0	108	0.01
45	T,M	1,2-Dichloroethane	10.000	9.636		3.6	96	0.01
46	T,M	Trichloroethene	10.000	10.276		-2.8	104	0.00
47	T,M	Methylcyclohexane	-1.000	0.000		0.0	93	0.01
48	C,T,M	1,2-Dichloropropane	10.000	11.489		-14.9	115	0.01
49	T,M	1,4-Dioxane	200.000	263.224	NT	-31.6#	141	0.01
50	T,M	Dibromomethane	10.000	10.400		-4.0	105	0.00
51	T,M	Bromodichloromethane	10.000	10.008		-0.1	99	0.00
52	T,M	2-Chloroethyl vinyl ether	10.000	1.066	NT	89.3#	11	0.00
53	T,M	cis-1,3-Dichloropropene	10.000	10.704		-7.0	106	0.00
54	T,M	4-Methyl-2-pentanone	50.000	50.199		-0.4	102	0.00
55	S	Toluene-d8	10.000	9.395		6.1	97	0.00
56	C,T,M	Toluene	10.000	10.637		-6.4	107	0.01
57	T,M	Ethyl methacrylate	10.000	10.752		-7.5	107	0.01
58	T,M	trans-1,3-Dichloropropene	10.000	9.581		4.2	93	0.01
59	T,M	1,1,2-Trichloroethane	10.000	10.968		-9.7	110	0.01
60	T,M	Tetrachloroethene	10.000	9.765		2.3	99	0.00
61	T,M	2-Hexanone	50.000	51.240		-2.5	101	0.01
62	T,M	1,3-Dichloropropane	10.000	11.126		-11.3	110	0.01
63	T,M	Dibromochloromethane	10.000	10.196		-2.0	100	0.01
64	T,M	1,2-Dibromoethane	10.000	10.622		-6.2	106	0.00
65	T,M	1-Chlorohexane	10.000	11.033		-10.3	112	0.01
66	P,M	Chlorobenzene	10.000	10.825		-8.2	108	0.00
67	C,T,M	Ethylbenzene	10.000	10.433		-4.3	105	0.00
68	T,M	1,1,1,2-Tetrachloroethane	10.000	10.084		-0.8	99	0.01
69	T,M	m-Xylene & p-Xylene	20.000	20.283		-1.4	103	0.01
70	T,M	o-Xylene	10.000	10.211		-2.1	102	0.01
71	T,M	Styrene	10.000	10.477		-4.8	101	0.00
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000		0.0	99	0.00
73	T,M	Isopropylbenzene	10.000	11.064		-10.6	105	0.01
74	P,T,M	Bromoform	10.000	10.425		-4.3	94	0.00
75	S	4-Bromofluorobenzene	10.000	9.685		3.1	93	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	11.900		-19.0	113	0.01
77	T,M	trans-1,4-Dichloro-2-butene	10.000	7.500	NT	25.0#	72	0.00
78	T,M	n-Propylbenzene	10.000	11.335		-13.4	107	0.00
79	T,M	1,2,3-Trichloropropane	10.000	11.024		-10.2	102	0.00
80	T,M	Bromobenzene	10.000	10.715		-7.1	101	0.01
81	T,M	1,3,5-Trimethylbenzene	10.000	10.745		-7.4	101	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K29\RKB457.D Vial: 3
Acq On : 29 Nov 2011 8:29 am Operator: CGM
Sample : CVO03H1661 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	10.871	-8.7	103	0.01
83	T,M	4-Chlorotoluene	10.000	10.980	-9.8	103	0.00
84	T,M	tert-Butylbenzene	10.000	11.116	-11.2	105	0.00
85	T,M	1,2,4-Trimethylbenzene	10.000	10.838	-8.4	102	0.01
86	T,M	sec-Butylbenzene	10.000	11.236	-12.4	106	0.01
87	T,M	p-Isopropyltoluene	10.000	11.122	-11.2	103	0.00
88	T,M	1,3-Dichlorobenzene	10.000	11.041	-10.4	103	0.01
89	T,M	1,4-Dichlorobenzene	10.000	10.889	-8.9	100	0.00
90	T,M	n-Butylbenzene	10.000	11.483	-14.8	106	0.01
91	T,M	1,2-Dichlorobenzene	10.000	10.786	-7.9	101	0.00
92	T,M	1,2-Dibromo-3-chloropropane	10.000	9.886	1.1	90	0.00
93	T,M	1,2,4-Trichlorobenzene	10.000	10.324	-3.2	95	0.01
94	T,M	Hexachlorobutadiene	10.000	9.479	5.2	87	0.01
95	T,M	Naphthalene	10.000	11.358	-13.6	101	0.00
96	T,M	1,2,3-Trichlorobenzene	10.000	10.165	-1.6	94	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K29\RKB457.D Vial: 3
Acq On : 29 Nov 2011 8:29 am Operator: CGM
Sample : CV003H1661 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\V003H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	105	0.00
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.410	-16.1	100	0.01
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	100	0.01
5	P,T,M	Chloromethane	0.357	0.392	-9.8	96	0.03
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.22#
7	C,T,M	Vinyl chloride	0.337	0.347	-3.0	88	0.03
8	T,M	Bromomethane	0.227	0.265	-16.7	99	0.01
9	T,M	Chloroethane	0.177	0.213	-20.3#	103	0.01
10	T,M	Dichlorofluoromethane	0.764	0.813	-6.4	105	0.01
11	T,M	Trichlorofluoromethane	0.545	0.518	5.0	82	0.01
12	T,M	Acrolein	0.009	0.006	33.3#	66	0.01
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.201	1.0	99	0.00
14	T,M	Acetone	0.039	0.038	2.6	101	0.01
15	C,T,M	1,1-Dichloroethene	0.673	0.689	-2.4	100	0.01
16	T,M	Methyl acetate	0.000	0.000	0.0	101	0.01
17	T,M	Iodomethane	0.631	0.632	-0.2	97	0.01
18	T,M	Carbon disulfide	1.353	1.493	-10.3	118	0.01
19	T,M	Methylene chloride	0.475	0.512	-7.8	109	0.00
20	T,M	tert-Butyl alcohol	0.012	0.012	0.0	98	0.01
21	T,M	tert-Butyl methyl ether (MT	0.489	0.507	-3.7	103	0.00
22	T,M	trans-1,2-Dichloroethene	0.686	0.721	-5.1	104	0.00
23	T,M	Acrylonitrile	0.036	0.039	-8.3	109	0.00
24	T,M	Isopropyl ether (DIPE)	1.196	1.332	-11.4	108	0.00
25	T,M	Vinyl acetate	0.401	0.384	4.2	86	0.01
26	P,T,M	1,1-Dichloroethane	0.743	0.798	-7.4	104	0.01
27	T,M	2-Butanol	0.000	0.000	0.0	95	0.01
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.896	-4.7	103	0.00
29	T,M	2,2-Dichloropropane	0.605	0.609	-0.7	98	0.00
30	T,M	2-Butanone	0.066	0.067	-1.5	104	0.00
31	T,M	cis-1,2-Dichloroethene	0.389	0.420	-8.0	106	0.00
32	T,M	Bromochloromethane	0.307	0.345	-12.4	109	0.01
33	T,M	Tetrahydrofuran	0.038	0.044	-15.8	127	0.00
34	C,T,M	Chloroform	0.807	0.829	-2.7	99	0.00
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	92	0.00
36	S	Dibromofluoromethane	0.372	0.353	5.1	95	0.01
37	T,M	1,1,1-Trichloroethane	0.723	0.704	2.6	94	0.00
38	T,M	Cyclohexane	0.000	0.000	0.0	116	0.01
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.130	1.5	94	0.00
40	S	1,2-Dichloroethane-d4	0.378	0.337	10.8	89	0.00
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	107	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K29\RKB457.D Vial: 3
Acq On : 29 Nov 2011 8:29 am Operator: CGM
Sample : CVO03H1661 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.198	0.211	-6.6	105	0.01
43	T,M	Carbon tetrachloride	0.677	0.623	8.0	91	0.01
44	T,M	Benzene	1.622	1.751	-8.0	108	0.01
45	T,M	1,2-Dichloroethane	0.500	0.482	3.6	96	0.01
46	T,M	Trichloroethene	0.445	0.457	-2.7	104	0.00
47	T,M	Methylcyclohexane	0.000	0.000	0.0	93	0.01
48	C,T,M	1,2-Dichloropropane	0.415	0.477	-14.9	115	0.01
49	T,M	1,4-Dioxane	0.001	0.002	-100.0#	141	0.01
50	T,M	Dibromomethane	0.196	0.204	-4.1	105	0.00
51	T,M	Bromodichloromethane	0.620	0.620	0.0	99	0.00
52	T,M	2-Chloroethyl vinyl ether	0.125	0.013	89.6#	11#	0.00
53	T,M	cis-1,3-Dichloropropene	0.640	0.685	-7.0	106	0.00
54	T,M	4-Methyl-2-pentanone	0.202	0.203	-0.5	102	0.00
55	S	Toluene-d8	1.420	1.335	6.0	97	0.00
56	C,T,M	Toluene	1.759	1.871	-6.4	107	0.01
57	T,M	Ethyl methacrylate	0.326	0.351	-7.7	107	0.01
58	T,M	trans-1,3-Dichloropropene	0.501	0.480	4.2	93	0.01
59	T,M	1,1,2-Trichloroethane	0.217	0.238	-9.7	110	0.01
60	T,M	Tetrachloroethene	0.382	0.373	2.4	99	0.00
61	T,M	2-Hexanone	0.133	0.137	-3.0	101	0.01
62	T,M	1,3-Dichloropropane	0.434	0.483	-11.3	110	0.01
63	T,M	Dibromochloromethane	0.322	0.328	-1.9	100	0.01
64	T,M	1,2-Dibromoethane	0.238	0.253	-6.3	106	0.00
65	T,M	1-Chlorohexane	0.816	0.900	-10.3	112	0.01
66	P,M	Chlorobenzene	1.009	1.092	-8.2	108	0.00
67	C,T,M	Ethylbenzene	2.272	2.370	-4.3	105	0.00
68	T,M	1,1,1,2-Tetrachloroethane	0.375	0.378	-0.8	99	0.01
69	T,M	m-Xylene & p-Xylene	1.750	1.775	-1.4	103	0.01
70	T,M	o-Xylene	1.697	1.733	-2.1	102	0.01
71	T,M	Styrene	1.095	1.147	-4.7	101	0.00
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	99	0.00
73	T,M	Isopropylbenzene	5.670	6.273	-10.6	105	0.01
74	P,T,M	Bromoform	0.413	0.431	-4.4	94	0.00
75	S	4-Bromofluorobenzene	1.556	1.507	3.1	93	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	0.753	0.897	-19.1	113	0.01
77	T,M	trans-1,4-Dichloro-2-butene	0.244	0.183	25.0#	72	0.00
78	T,M	n-Propylbenzene	8.060	9.136	-13.3	107	0.00
79	T,M	1,2,3-Trichloropropane	0.175	0.193	-10.3	102	0.00
80	T,M	Bromobenzene	1.142	1.223	-7.1	101	0.01
81	T,M	1,3,5-Trimethylbenzene	4.888	5.252	-7.4	101	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K29\RKB457.D Vial: 3
Acq On : 29 Nov 2011 8:29 am Operator: CGM
Sample : CVO03H1661 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	5.467	-8.7	103	0.01
83	T,M	4-Chlorotoluene	4.346	4.772	-9.8	103	0.00
84	T,M	tert-Butylbenzene	0.969	1.077	-11.1	105	0.00
85	T,M	1,2,4-Trimethylbenzene	4.650	5.040	-8.4	102	0.01
86	T,M	sec-Butylbenzene	6.369	7.156	-12.4	106	0.01
87	T,M	p-Isopropyltoluene	4.917	5.468	-11.2	103	0.00
88	T,M	1,3-Dichlorobenzene	2.190	2.418	-10.4	103	0.01
89	T,M	1,4-Dichlorobenzene	2.037	2.218	-8.9	100	0.00
90	T,M	n-Butylbenzene	5.430	6.235	-14.8	106	0.01
91	T,M	1,2-Dichlorobenzene	1.675	1.807	-7.9	101	0.00
92	T,M	1,2-Dibromo-3-chloropropane	0.085	0.085	0.0	90	0.00
93	T,M	1,2,4-Trichlorobenzene	0.850	0.877	-3.2	95	0.01
94	T,M	Hexachlorobutadiene	0.778	0.738	5.1	87	0.01
95	T,M	Naphthalene	1.095	1.244	-13.6	101	0.00
96	T,M	1,2,3-Trichlorobenzene	0.624	0.634	-1.6	94	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 6 ☐ EMAX-524.2 Rev.No. 5 ☐ EMAX-624 Rev.No. 2 ☐ EMAX-8260SIM Rev.No.0 ☐ EMAX-TCPSIM Rev.No.1 ☐ EMAX-M8260SIM Rev.No.0 ☐

Start Date: 8/16/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -047

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount (ml/g/L)	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RHB438	HB03H23	1~L	N/A	N/A	N/A	N/A	11:15am
02	439	V003H161	.04/1/1.5~L					0.3/1.5/1.5 ppb 8260
03	440	2	.05/1/1.25~L					0.5/2.5/2.5 ppb
04	441	3	.1/1/1.5~L					1.0/5.0/5.0 ppb
05	442	4	.2/1/1~L					2.0/10/10 ppb
06	443	5	.5/1.5/1.5~L					5.0/25/25 ppb
07	444	6	1/5/5~L					10/50/50 ppb
08	445	7	2/10/10~L					20/100/100 ppb
09	446	8	3/15/15~L					30/150/150 ppb
10	447	9	4/20/20~L					40/200/200 ppb
11	448	10	5/25/25~L					50/250/250 ppb
12	449	11	10/50/50~L					100/500/500 ppb
13	450	15/15	25mL					
14	451	V003H238	↓					
15	452	V003H161	1/5/5mL					10/50/50 ppb
16	453	RINSE	25mL					7:49pm
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30			NW	8/17/11				

BATCH V003H166

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003H16

STANDARDS

NAME	ID	Amount (ul)	Conc. (mg/L)
DCC Freons	SV1-17-76-1	*	
DCC CL	-71-1	↓	
DCC 8260	-72-1		
DCC TCPIPA	-69-3	↓	
BFB	-45-3	1	50/250
IS/SURR.	-73-3	1	
ICV/LCS Freons	-69-1	1	
ICV/LCS CL	-71-2	1	
ICV/LCS 8260	-60-2	5	
ICV/LCS TCPIPA	-70-2	5	
IS	-51-3	1	
SS	-52-1	↓	

DATA FILE FOLDER	11H16

Electronic Data Archival

Location	Date
HPCHEM_VOA/T003	

Comments: *check vial to sample amount

Analyzed By: NW

Date Disposed: 8/17/11

Disposed By: NW

2659

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/22/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -048

BATCH V003H16SC

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKB 350	BFB03K23						07:12
02	51	V003H16SC						
03	52	V003K23L		1.0				
04	53	C						
05	54	B	25 mL					
06	55	11K146-01T	5.0 mL	5.0				
07	56	11K151-10R	25 mL	1.0				
08	57	11K173-01T	0.05 mL	500				RR 50X
09	58	~~11K174-04~~	25 mL	1.0				
10	59	11K~~174~~-17						
11	60	11K151-1817						
12	61	-1818						
13	62	-2019						
14	63	11K-20						
15	64	11K174-01						50X
16	65	02						
17	66	03						
18	67	04						50
19	68	05						50X
20	69	06						
21	70	07						19:06
22	71	Rinse						
23								
24								
25								
26								
27								
28								
29								

CGM 11/22/11

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003H16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-19-6.2	1	
DCC	6.3	1	
DCC	7.2	5	
DCC	8.1	5	
BFB	3.2	1	50
IS/SURR.	6.1	1	250
ICV/LCS	SV1-17-90.3	1	
ICV/LCS	97.2	1	
ICV/LCS	89.2	5	
ICV/LCS	99.3	5	

DATA FILE FOLDER	11K22
Electronic Data Archival	
Location	Date
HPCHEM_VOA/T003	

Comments:

Analyzed By: CGM

Date Disposed: 11/23/11

Disposed By: CGM 11/

2070

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/23/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -048

BATCH V003H1658

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RKB392	BFB03K25						09:49
02		93	V003H1658						
03		94	V003K25L		10				
04		95	C						
05		96	B	25mL					
06		97	11K146-01R						
07		98	11K205-01M			7			
08		99	01S						
09		RKB400	01						
10		01	02						
11		02	06						
12		03	03			7			
13		04	04						
14		05	05						
15		06	11K173-01T	0.5mL	50				
16		07	11K174-01T						
17		08	02T						
18		09	03T						
19		10	04T	5.0mL	5.0				21:17
20		11	05T	0.5mL	50				RR out of 2-hr
21		12	06T						
22									
23									
24									
25									
26									
27									
28									
29									
30									CGM 11/28/11

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003H16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-19-6-2	1	
DCC	6-3	1	
DCC	7-2	5	
DCC	8-1	5	
BFB	3-2	1	50/250
IS/SURR.	6-1	1	
ICV/LCS	SV1-17-90-3	1	
ICV/LCS	97-2	1	
ICV/LCS	SV1-19-9-2	5	
ICV/LCS	SV1-17-99-3	5	

DATA FILE FOLDER	11K25

Electronic Data Archival

Location	Date
HPCHEM_VOA/T003	11/28/11

Comments:

Analyzed By: CGM

Date Disposed: 11/28/11

Disposed By: CGM

2071

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/23/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge Book # A03 -048

BATCH CV003H1659-9

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKB413	BFB03K26						23:10
02	414	CV003H1659						
03	415	V003K26L		10				
04	416	↓ C		↓				
05	417	Rinse						
06	418	V003K26B	25 mL	10				
07	419	11K174-01T	0.5mL	50	✓	✓		
08	420	11K184-01T	2.5mL	10	✓	✓		
09	421	02T	0.5mL	50	✓	✓		
10	422	03T	2.5mL	10	✓	✓		
11	423	04T	2.5mL	↓	✓	✓		
12	424	11K206-01	25 mL	1.0	✓	✓		
13	425	02			✓	✓		
14	426	03			✓	✓		
15	427	04			✓	✓		
16	428	05			✓	✓		
17	429	06			✓	✓		
18	430	07			✓	✓		
19	431	08			✓	✓		
20	432	09			✓	✓		11:03
21	433	10			✓	✓		concentrator froze, RR 1X
22								
23								
24								
25								
26								
27								
28								
29								

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003H16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SM-19-6-2	1	
DCC	6-3	1	
DCC	7-2	5	
DCC	8-1	5	
BFB	3-2	1	50
IS/SURR.	6-1	1	250
ICV/LCS	SM-17-90-3	1	
ICV/LCS	9-2	1	
ICV/LCS	SM-19-9-2	5	
ICV/LCS	SM-17-99-3	5	

DATA FILE FOLDER 11K23

Electronic Data Archival

Location	Date
HPCHEM_VOA/T003	11/28/11

Comments:

Analyzed By: CGM

Date Disposed: 11/28/11

Disposed By: CGM

2872

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/29/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -048

BATCH CV003H166.1

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKB455	BFB03K28	1µL					6:55am
02	456	STD CHECK						
03	457	CV003H166.1	11.15/5mL					
04	458	V003K28L	↓					
05	459	↓ C	↓					
06	460	RINSE						
07	461	V003K28B	25m					
08	462	11K217-03T	0.5mL	20ml	✓	✓		
09	463	11K174-05T	1.0mL	25ml	✓	✓		
10	464	↓ -06T	↓	↓	✓	✓		1:58pm
11	465	RINSE						
12	466-469	TEST 1						
13	467	↓ 2						
14	468-470	RINSE						
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003H16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-19-6-2	1	250
DCC	↓ -6-3	1	250
DCC	-7-2	5	250
DCC	-8-1	5	50/250
BFB	-3-2	1	50
IS/SURR.	↓ -6-1	1	250
ICV/LCS	SV1-17-90-3	1	250
ICV/LCS	↓ -97-2	1	250
ICV/LCS	SV1-19-9-2	5	250
ICV/LCS	SV1-17-99-3	5	50/250

DATA FILE FOLDER 11K29

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO03	

Comments:

Analyzed By: CGM

Date Disposed: 11/30/11

Disposed By: CGM

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD RSK-175
DISSOLVED GASES

SDG#: 11K174

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K174

METHOD RSK-175
DISSOLVED GASES

A total of seven (7) water samples were received on 11/17/11 for Dissolved Gas analysis, Method RSK-175 in accordance with USEPA at R.S. Kerr Environmental Research Laboratory, Ada, OK 74820 March 15, 1989.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for DGK020WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED GASES

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K174
Instrument ID : GCT010

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DGK020WB	1	NA	11/29/1107:38	11/29/1107:10	FK29003A	FK29002A	DGK020W	Method Blank
LCS1W	DGK020WL	1	NA	11/29/1107:51	11/29/1107:10	FK29004A	FK29002A	DGK020W	Lab Control Sample (LCS)
LCD1W	DGK020WC	1	NA	11/29/1108:04	11/29/1107:10	FK29005A	FK29002A	DGK020W	LCS Duplicate
IW-70-SHB217-144	K174-01	1	NA	11/29/1111:14	11/29/1107:10	FK29019A	FK29013A	DGK020W	Field Sample
IW-70-SHB217-144DL	K174-01T	2	NA	11/29/1112:13	11/29/1107:10	FK29023A	FK29013A	DGK020W	Diluted Sample
MW-70-MNA12-146	K174-02	1	NA	11/29/1111:28	11/29/1107:10	FK29020A	FK29013A	DGK020W	Field Sample
MW-70-MNA12-146DL	K174-02T	20	NA	11/29/1111:47	11/29/1107:10	FK29021A	FK29013A	DGK020W	Diluted Sample
MW-70-MNA16-149	K174-03	1	NA	11/29/1112:00	11/29/1107:10	FK29022A	FK29013A	DGK020W	Field Sample
MW-70-MNA16-149DL	K174-03T	1000	NA	11/29/1112:57	11/29/1107:10	FK29026A	FK29024A	DGK020W	Diluted Sample
MW-70-MNA14-151	K174-04	1	NA	11/29/1112:39	11/29/1107:10	FK29025A	FK29024A	DGK020W	Field Sample
MW-70-MNA14-151DL	K174-04T	50	NA	11/29/1113:28	11/29/1107:10	FK29028A	FK29024A	DGK020W	Diluted Sample
IR-70-FD-150	K174-05	1	NA	11/29/1113:14	11/29/1107:10	FK29027A	FK29024A	DGK020W	Field Sample
IR-70-FD-150DL	K174-05T	1000	NA	11/29/1114:36	11/29/1107:10	FK29033A	FK29024A	DGK020W	Diluted Sample
IR-70-FD-147	K174-06	1	NA	11/29/1113:44	11/29/1107:10	FK29029A	FK29024A	DGK020W	Field Sample
IR-70-FD-147DL	K174-06T	20	NA	11/29/1113:59	11/29/1107:10	FK29030A	FK29024A	DGK020W	Diluted Sample
IR-70-FD-145	K174-07	1	NA	11/29/1114:11	11/29/1107:10	FK29031A	FK29024A	DGK020W	Field Sample
IR-70-FD-145DL	K174-07T	2	NA	11/29/1114:24	11/29/1107:10	FK29032A	FK29024A	DGK020W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/29/11 07:10
Sample ID:	IW-70-SHB217-144	Date Analyzed:	11/29/11 11:14
Lab Samp ID:	K174-01	Dilution Factor:	1
Lab File ID:	FK29019A	Matrix :	WATER
Ext Btch ID:	DGK020W	% Moisture :	NA
Calib. Ref.:	FK29013A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	1.3J	2.0	0.60
METHANE	37E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/29/11 07:10
Sample ID:	IW-70-SHB217-144DL	Date Analyzed:	11/29/11 12:13
Lab Samp ID:	K174-01T	Dilution Factor:	2
Lab File ID:	FK29023A	Matrix :	WATER
Ext Btch ID:	DGK020W	% Moisture :	NA
Calib. Ref.:	FK29013A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	4.0	1.3
ETHENE	ND	4.0	1.2
METHANE	35	4.0	0.68

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/17/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/17/11
Batch No. : 11K174	Date Extracted: 11/29/11 07:10
Sample ID: MW-70-MNA12-146	Date Analyzed: 11/29/11 11:28
Lab Samp ID: K174-02	Dilution Factor: 1
Lab File ID: FK29020A	Matrix : WATER
Ext Btch ID: DGK020W	% Moisture : NA
Calib. Ref.: FK29013A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	1.4J	2.0	0.60
METHANE	100E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/17/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/17/11
Batch No. : 11K174	Date Extracted: 11/29/11 07:10
Sample ID: MW-70-MNA12-146DL	Date Analyzed: 11/29/11 11:47
Lab Samp ID: K174-02T	Dilution Factor: 20
Lab File ID: FK29021A	Matrix : WATER
Ext Btch ID: DGK020W	% Moisture : NA
Calib. Ref.: FK29013A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	40	13
ETHENE	ND	40	12
METHANE	190	40	6.8

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 7D.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/29/11 07:10
Sample ID:	MW-70-MNA16-149	Date Analyzed:	11/29/11 12:00
Lab Samp ID:	K174-03	Dilution Factor:	1
Lab File ID:	FK29022A	Matrix :	WATER
Ext Btch ID:	DGK020W	% Moisture :	NA
Calib. Ref.:	FK29013A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	19	2.0	0.60
METHANE	120E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/17/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/17/11
Batch No. : 11K174	Date Extracted: 11/29/11 07:10
Sample ID: MW-70-MNA16-149DL	Date Analyzed: 11/29/11 12:57
Lab Samp ID: K174-03T	Dilution Factor: 1000
Lab File ID: FK29026A	Matrix : WATER
Ext Btch ID: DGK020W	% Moisture : NA
Calib. Ref.: FK29024A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	14000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/17/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/17/11
Batch No. : 11K174	Date Extracted: 11/29/11 07:10
Sample ID: MW-70-MNA14-151	Date Analyzed: 11/29/11 12:39
Lab Samp ID: K174-04	Dilution Factor: 1
Lab File ID: FK29025A	Matrix : WATER
Ext Btch ID: DGK020W	% Moisture : NA
Calib. Ref.: FK29024A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	3.2	2.0	0.60
METHANE	170E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/29/11 07:10
Sample ID:	MW-70-MNA14-1510L	Date Analyzed:	11/29/11 13:28
Lab Samp ID:	K174-04T	Dilution Factor:	50
Lab File ID:	FK29028A	Matrix :	WATER
Ext Btch ID:	DGK020W	% Moisture :	NA
Calib. Ref.:	FK29024A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	100	32
ETHENE	ND	100	30
METHANE	1300	100	17

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/29/11 07:10
Sample ID:	IR-70-FD-15D	Date Analyzed:	11/29/11 13:14
Lab Samp ID:	K174-D5	Dilution Factor:	1
Lab File ID:	FK29027A	Matrix :	WATER
Ext Btch ID:	DGK020W	% Moisture :	NA
Calib. Ref.:	FK29024A	Instrument ID :	GCT01D

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	18	2.0	0.60
METHANE	120E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/29/11 07:10
Sample ID:	IR-70-FD-150DL	Date Analyzed:	11/29/11 14:36
Lab Samp ID:	K174-05T	Dilution Factor:	1000
Lab File ID:	FK29033A	Matrix :	WATER
Ext Btch ID:	DGK020W	% Moisture :	NA
Calib. Ref.:	FK29024A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	18000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/29/11 07:10
Sample ID:	IR-70-FD-147	Date Analyzed:	11/29/11 13:44
Lab Samp ID:	K174-06	Dilution Factor:	1
Lab File ID:	FK29029A	Matrix :	WATER
Ext Btch ID:	DGK020W	% Moisture :	NA
Calib. Ref.:	FK29024A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	1.6J	2.0	0.60
METHANE	100E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/29/11 07:10
Sample ID:	IR-70-FD-147DL	Date Analyzed:	11/29/11 13:59
Lab Samp ID:	K174-06T	Dilution Factor:	20
Lab File ID:	FK29030A	Matrix :	WATER
Ext Btch ID:	DGK020W	% Moisture :	NA
Calib. Ref.:	FK29024A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	40	13
ETHENE	ND	40	12
METHANE	200	40	6.8

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
Batch No.	: 11K174	Date Extracted:	11/29/11 07:10
Sample ID:	IR-70-FD-145	Date Analyzed:	11/29/11 14:11
Lab Samp ID:	K174-07	Dilution Factor:	1
Lab File ID:	FK29031A	Matrix :	WATER
Ext Btch ID:	DGK020W	% Moisture :	NA
Calib. Ref.:	FK29024A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	1.3J	2.0	0.60
METHANE	38E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/17/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/17/11
Batch No. : 11K174	Date Extracted: 11/29/11 07:10
Sample ID: IR-70-FD-145DL	Date Analyzed: 11/29/11 14:24
Lab Samp ID: K174-07T	Dilution Factor: 2
Lab File ID: FK29032A	Matrix : WATER
Ext Btch ID: DGK020W	% Moisture : NA
Calib. Ref.: FK29024A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	4.0	1.3
ETHENE	1.2J	4.0	1.2
METHANE	35	4.0	0.68

QC SUMMARIES

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/29/11
Batch No. : 11K174	Date Extracted: 11/29/11 07:10
Sample ID: MBLK1W	Date Analyzed: 11/29/11 07:38
Lab Samp ID: DGK020WB	Dilution Factor: 1
Lab File ID: FK29003A	Matrix : WATER
Ext Btch ID: DGK020W	% Moisture : NA
Calib. Ref.: FK29002A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K174
METHOD: METHOD RSK-175

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	DGK020WB	DGK020WL	DGK020WC		
LAB FILE ID:	FK29003A	FK29004A	FK29005A		
DATE EXTRACTED:	11/29/1107:10	11/29/1107:10	11/29/1107:10	DATE COLLECTED:	NA
DATE ANALYZED:	11/29/1107:38	11/29/1107:51	11/29/1108:04	DATE RECEIVED:	11/29/11
PREP. BATCH:	DGK020W	DGK020W	DGK020W		
CALTB. REF:	FK29002A	FK29002A	FK29002A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	ND	25.4	26.6	105	25.4	25.9	102	3	70-140	30
Ethene	ND	23.7	25.5	108	23.7	25.0	105	2	70-140	30
Methane	ND	13.6	12.8	94	13.6	12.4	91	3	70-130	30

INITIAL CALIBRATIONS

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	25.00X	40.00X	75.00X	100.00X	MEAN	%RSD
Methane	0.34	31626	33510	29954	29307	29338	29307	30507.1	5.6
Acetylene	0.55	2465	2595	2723	2744	2716	2643	2647.7	4.0
Ethylene	0.59	14655	16070	16617	16602	17123	16803	16311.8	5.4
Ethane	0.64	22748	24144	25289	25073	26185	26048	24914.4	5.2
Propane	0.93	29887	24871	26520	26214	27735	27800	27171.2	6.3

DG10K01.MET

FORM VI DGAS -2 1/96 Rev 2/2006

11/03/11

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK01008A 11/01/2011 13:45
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	416247	13.64	1		15
Acetylene	2.175	2.149	2.201	22.0	2647.6	66913	25.27	15		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	437326	26.81	13		15
Ethane	3.075	3.025	3.125	25.4	24914.4	691218	27.74	9		15
Propane	5.900	5.824	5.976	37.3	27171.2	1111008	40.89	10		15

DG10K01.MET

AJ
11/3/11

DAILY CALIBRATIONS

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK29002A 11/29/2011 07:26
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	424993	13.93	3		15
Acetylene	2.192	2.166	2.218	22.0	2647.6	66107	24.97	13		15
Ethylene	2.625	2.574	2.676	23.7	16311.8	423341	25.95	9		15
Ethane	3.058	3.008	3.108	25.4	24914.4	687344	27.59	9		15
Propane	5.858	5.782	5.934	37.3	27171.2	1062496	39.10	5		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK29013A 11/29/2011 09:52
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	408120	13.38	-1		15
Acetylene	2.192	2.166	2.218	22.0	2647.6	61561	23.25	6		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	406281	24.91	5		15
Ethane	3.067	3.017	3.117	25.4	24914.4	651880	26.17	3		15
Propane	5.883	5.807	5.959	37.3	27171.2	1004302	36.96	-1		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK29024A 11/29/2011 12:26
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	384083	12.59	-7		15
Acetylene	2.200	2.174	2.226	22.0	2647.6	58972	22.27	1		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	381435	23.38	-1		15
Ethane	3.067	3.017	3.117	25.4	24914.4	614292	24.66	-3		15
Propane	5.875	5.799	5.951	37.3	27171.2	941122	34.64	-7		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK29034A 11/29/2011 14:49
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	364049	11.93	-12		15
Acetylene	2.192	2.166	2.218	22.0	2647.6	58248	22.00	0		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	365428	22.40	-6		15
Ethane	3.058	3.008	3.108	25.4	24914.4	584201	23.45	-8		15
Propane	5.867	5.791	5.943	37.3	27171.2	885343	32.58	-13		15

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGAS ICAL

Book #:	A10-025
Instrument No.:	10
Analytical Sequence:	FK01
Method File:	DG10K01
Analytical Batch:	N/A

SOP #	Rev. #
☐ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGAS ICAL SSSA-05-01-10	500 ppm
DGAS ICV SSSA-05-01-7	500 ppm
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: SC

Date: 11/01/11

Disposed By: SC

Date Disposed: 11/01/11

Method: Dg10k01.met Batch: Fk01.seq Data: Fk01.011 - [Batch: fk01.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Run Type	Sample ID	Method	Filename	Sample Amt	Mult	Description
1	Unknown	IB10K407	dg10k01.met	FK01.001	100ml 1	1	
2	Unknown	DG10K01-01	dg10k01.met	FK01.002	1	1	
3	Unknown	DG10K01-02	dg10k01.met	FK01.003	1	1	
4	Unknown	DG10K01-03	dg10k01.met	FK01.004	1	1	DGAS 1CML
5	Unknown	DG10K01-04	dg10k01.met	FK01.005	1	1	
6	Unknown	DG10K01-05	dg10k01.met	FK01.006	1	1	
7	Unknown	DG10K01-06	dg10k01.met	FK01.007	1	1	
8	Unknown	IDG10K0101	dg10k01.met	FK01.008	1	1	DGAS 1CV
9	Unknown	~~IB~~	dg10k01.met	FK01.009	1	1	
10	Unknown	IB	dg10k01.met	FK01.010	1	1	
11	Unknown	IB	dg10k01.met	FK01.011	1	1	
12	Unknown	IB	dg10k01.met	FK01.012	1	1	
13	Unknown	IB	dg10k01.met	FK01.013	1	1	
14	Unknown	IB	dg10k01.met	FK01.014	1	1	
15	Unknown	IB	dg10k01.met	FK01.015	1	1	FINAL
16	Unknown	IB	dg10k01.met	FK01.016	1	1	
17	Unknown	IB	dg10k01.met	FK01.017	1	1	
18	Unknown	IB	dg10k01.met	FK01.018	1	1	
19	Unknown	IB	dg10k01.met	FK01.019	1	1	
20	Unknown	IB	dg10k01.met	FK01.020	1	1	
21	Unknown	IB	dg10k01.met	FK01.021	1	1	
22	Unknown	IB	dg10k01.met	FK01.022	1	1	
23	Unknown	IB	dg10k01.met	FK01.023	1	1	
24	Unknown	IB	dg10k01.met	FK01.024	1	1	
25	Unknown	IB	dg10k01.met	FK01.025	1	1	
26	Unknown	IB	dg10k01.met	FK01.026	1	1	
27	Unknown	IB	dg10k01.met	FK01.027	1	1	
28	Unknown	IB	dg10k01.met	FK01.028	1	1	
29	Unknown	IB	dg10k01.met	FK01.029	1	1	
30	Unknown	IB	dg10k01.met	FK01.030	1	1	
31	Unknown	IB	dg10k01.met	FK01.031	1	1	
32	Unknown	IB	dg10k01.met	FK01.032	1	1	
33	Unknown	IB	dg10k01.met	FK01.033	1	1	
34	Unknown	~~IB~~	dg10k01.met	FK01.034	1	1	

SC 11/01/11

Waiting For Trigger...

Start | Chromeleon | Method: Dg10k01 | Scheduler | Method: Dg10k01.met | Untitled - Paint | Explorer | Tuesday, November 01, 2011

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGK020W: K146, K174, K180

Book #:	A10-026
Instrument No.:	10
Analytical Sequence:	FK29
Method File:	DG10K01
Analytical Batch:	CDG10K01468

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGas DCC SSSB-07-41-2	200
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: RH

Date: 11/29/11

Disposed By: RH

Date Disposed: 11/29/11

Method: Dg10k01.met Batch: Fk29.seq Data: Fk29.035 - [Batch: fk29.SEQ]

File Edit Method Batch Option Analysis Control Window Help

Run	Sample ID	Method	Filename	Sample Amt		Mult	Description
1	IB10K468	dg10k01.met	FK29.001	100mL	1	1	
2	CDG10K01468	dg10k01.met	FK29.002		1	1	
3	DGK020WB	dg10k01.met	FK29.003		1	1	
4	DGK020WL	dg10k01.met	FK29.004		1	1	
5	DGK020WC	dg10k01.met	FK29.005		1	1	
6	11K146-01	dg10k01.met	FK29.006		1	1	
7	11K146-02	dg10k01.met	FK29.007		1	1	
8	11K146-02T DF=40	dg10k01.met	FK29.008	2.5mL	1	40	CONF ONLY
9	11K146-02I DF=200	dg10k01.met	FK29.009	5mL (10x)	1	200	
10	11K146-03	dg10k01.met	FK29.010	100mL	1	1	
11	11K146-04	dg10k01.met	FK29.011		1	1	
12	11K146-04T DF=1000	dg10k01.met	FK29.012	2mL (20x)	1	1000	
13	CDG10K01469	dg10k01.met	FK29.013	100mL	1	1	
14	11K146-05	dg10k01.met	FK29.014		1	1	
15	11K146-05T DF=10	dg10k01.met	FK29.015	10mL	1	10	
16	11K146-05I DF=400	dg10k01.met	FK29.016	5mL (20x)	1	400	
17	11K146-06	dg10k01.met	FK29.017	100mL	1	1	
18	11K146-06T DF=1000	dg10k01.met	FK29.018	2mL (20x)	1	1000	
19	11K174-01	dg10k01.met	FK29.019	100mL	1	1	
20	11K174-02	dg10k01.met	FK29.020		1	1	
21	11K174-02T DF=20	dg10k01.met	FK29.021	5mL	1	20	FINAL
22	11K174-03	dg10k01.met	FK29.022	100mL	1	1	
23	11K174-01T DF=2	dg10k01.met	FK29.023	50mL	1	2	
24	CDG10K01470	dg10k01.met	FK29.024	100mL	1	1	
25	11K174-04	dg10k01.met	FK29.025		1	1	
26	11K174-03T DF=1000	dg10k01.met	FK29.026	2mL (20x)	1	1000	
27	11K174-05	dg10k01.met	FK29.027	100mL	1	1	
28	11K174-04T DF=50	dg10k01.met	FK29.028	2mL	1	50	
29	11K174-06	dg10k01.met	FK29.029	100mL	1	1	
30	11K174-06T DF=20	dg10k01.met	FK29.030	5mL	1	20	
31	11K174-07	dg10k01.met	FK29.031	100mL	1	1	
32	11K174-07T DF=2	dg10k01.met	FK29.032	50mL	1	2	
33	11K174-05T DF=1000	dg10k01.met	FK29.033	2mL (20x)	1	1000	
34	CDG10K01471	dg10k01.met	FK29.034	100mL	1	1	

Waiting For Trigger

Start | Method: Dg10k01 | Calculator | Tuesday, November 29, 2011

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/01/11 Time: 10:00 End Date: 11/01/11 Time: 10:40

PREPARATION BATCH # N/A

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DG10K01-01	39	4	N/A	
02	-02			N/A	
03	-03			N/A	DGAS ICAL
04	-04			N/A	
05	-05			N/A	
06	-06			N/A	
07	IDG10K01 01			N/A	DGAS ICV
08					
09					
10					
11					
12					
13					SC 11/01/11
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Standards	ID	Amount Added (µl)
LCS/MS / ICV	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic free
He	Air Gas
ICAL STD (500 ppm)	SSSA-05-01-10 (SPECIALTY AIR)
ICV STD 500 ppm	SSSA-05-01-7 (MATHESON)

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #: (ESS)	28100705

Comments:

1)	0.08 ml ICAL STD	+ 3.92 ml He
2)	0.4 ml	3.6 ml
3)	1.0 ml	3.0 ml
4)	1.6 ml	2.4 ml
5)	3.0 ml	1.0 ml
6)	4.0 ml	0 ml

Prepared By: SC

Standard Added By: SC

1635

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/29/11 Time: 07:10 End Date: 11/29/11 Time: 07:35

PREPARATION BATCH # DGK020W

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DGK020WB	39	4	NA	
02	L			NA	
03	C			NA	
04	11K146-01			✓	
05	02			✓	
06	03			✓	
07	04			✓	
08	05			✓	
09	06			✓	
10	11K174-01			✓	
11	02			✓	
12	03			✓	
13	04			✓	
14	05			✓	
15	06			✓	
16	07			✓	
17	11K180-01			~7	Vial labeled preserved
18	01M			~7	
19	01S			~7	
20	02			✓	
21	03			✓	
22	04			✓	
23	05			✓	
24				RN 11/29/11	
25					

Standards	ID	Amount Added (µl)
LCS/MS	555A-05-01-7	1600

Reagent	Source
H_2O	Organic Free
He	Air Gas

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #:	2810705

Comments:

Prepared By: RH

Standard Added By: RH

1637

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

SDG#: 11K174

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K174

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

A total of two (2) water samples were received on 11/17/11 for Dissolved Metals by ICP analysis, Method 3010A/6010B in accordance with Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source. Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for IPK041WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG. Analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED METALS BY TRACE ICP

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K174
Instrument ID : T-ID8

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IPK041WB	1	NA	11/30/1111:40	11/28/1111:54	ID8K024031	ID8K024029	IPK041W	Method Blank
LCS1W	IPK041WL	1	NA	11/30/1111:43	11/28/1111:54	ID8K024032	ID8K024029	IPK041W	Lab Control Sample (LCS)
LCD1W	IPK041WC	1	NA	11/30/1111:45	11/28/1111:54	ID8K024033	ID8K024029	IPK041W	LCS Duplicate
IW-70-SHB217-144	K174-01	1	NA	11/30/1112:55	11/28/1111:54	ID8K024055	ID8K024053	IPK041W	Field Sample
IR-70-FD-145	K174-07	1	NA	11/30/1112:58	11/28/1111:54	ID8K024056	ID8K024053	IPK041W	Field Sample
44-E-13-N-112111AS	K198-05A	1	NA	11/30/1114:00	11/28/1111:54	ID8K024077	ID8K024075	IPK041W	Analytical Spike Sample
44-E-13-N-112111	K198-05	1	NA	11/30/1114:03	11/28/1111:54	ID8K024078	ID8K024075	IPK041W	Field Sample
44-E-13-N-1121110L	K198-05J	5	NA	11/30/1114:06	11/28/1111:54	ID8K024079	ID8K024075	IPK041W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11 09:58
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
SDG NO.	: 11K174	Date Extracted:	11/28/11 11:54
Sample ID:	IW-70-SHB217-144	Date Analyzed:	11/30/11 12:55
Lab Samp ID:	K174-01	Dilution Factor:	1
Lab File ID:	ID8K024055	Matrix :	WATER
Ext Btch ID:	IPK041W	% Moisture :	NA
Calib. Ref.:	ID8K024053	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	3.95	0.200	0.0400
Manganese	0.963	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/17/11 10:20
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/17/11
SDG NO.	: 11K174	Date Extracted:	11/28/11 11:54
Sample ID:	IR-70-FD-145	Date Analyzed:	11/30/11 12:58
Lab Samp ID:	K174-07	Dilution Factor:	1
Lab File ID:	ID8K024056	Matrix :	WATER
Ext Btch ID:	IPK041W	% Moisture :	NA
Calib. Ref.:	ID8K024053	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	3.9D	0.200	0.0400
Manganese	0.953	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/28/11
SDG NO.	: 11K174	Date Extracted:	11/28/11 11:54
Sample ID:	MBLK1W	Date Analyzed:	11/30/11 11:40
Lab Samp ID:	IPK041WB	Dilution Factor:	1
Lab File ID:	ID8K024031	Matrix :	WATER
Ext Btch ID:	IPK041W	% Moisture :	NA
Calib. Ref.:	ID8K024029	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	ND	0.200	0.0400
Manganese	ND	0.200	0.00300

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K174
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	IPK041WB	IPK041WL	IPK041WC		
LAB FILE ID:	ID8K024031	ID8K024032	ID8K024033		
DATIME EXTRCTD:	11/28/1111:54	11/28/1111:54	11/28/1111:54	DATE COLLECTED:	NA
DATIME ANALYZD:	11/30/1111:40	11/30/1111:43	11/30/1111:45	DATE RECEIVED:	11/28/11
PREP. BATCH:	IPK041W	IPK041W	IPK041W		
CALIB. REF:	ID8K024029	ID8K024029	ID8K024029		

ACCESSION:

PARAMETER	BLNK RSLT mg/L	SPIKE AMT mg/L	BS RSLT mg/L	BS % REC	SPIKE AMT mg/L	BSD RSLT mg/L	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	ND	.5	.537	107	.5	.539	108	0	80-120	20
Iron	ND	5	5.21	104	5	5.23	105	0	80-120	20
Manganese	ND	.5	.467	93	.5	.472	94	1	80-120	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K174
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	44-E-13-N-112111	44-E-13-N-112111DL		
EMAX SAMP ID:	K198-05	K198-05J		
LAB FILE ID:	ID8K024078	ID8K024079		
DATE EXTRACTED:	11/28/1111:54	11/28/1111:54	DATE COLLECTED:	11/21/11 11:00
DATE ANALYZED:	11/30/1114:03	11/30/1114:06	DATE RECEIVED:	11/22/11
PREP. BATCH:	IPK041W	IPK041W		
CALIB. REF:	ID8K024075	ID8K024075		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SERIAL DIL RSLT (mg/L)	DIF RSLT %	QC LIMIT (%)
Arsenic	ND	ND	0	10
Iron	ND	ND	0	10
Manganese	ND	ND	D	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K174
METHOD: METHOD 3010A/6010B (DISSOLVED)

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MATRIX: WATER % MOISTURE: NA
DILTN FACTR: 1 1
SAMPLE ID: 44-E-13-N-112111
CONTROL NO.: K198-05 K198-05A
LAB FILE ID: ID8K024078 ID8K024077
DATIME EXTRCTD: 11/28/1111:54 11/28/1111:54 DATE COLLECTED: 11/21/11 11:00
DATIME ANALYZD: 11/30/1114:03 11/30/1114:00 DATE RECEIVED: 11/22/11
PREP. BATCH: IPK041W IPK041W
CALIB. REF: ID8K024075 ID8K024075

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	AS RSLT (mg/L)	AS % REC	QC LIMIT (%)
Arsenic	ND	.5	.617	123	75-125
Iron	ND	5	5.56	111	75-125
Manganese	ND	.5	.524	105	75-125

ICP QC CHECK TABLE

QC	ICV	CCV	ICSAB	ICSA	MLCV
Limit%	90-110	90-110	80-120	80-120	80-120
Comp	mg/L	mg/L	mg/L	mg/L	mg\L
Al	100	100	400	400	200
Sb	1.5	1.5	1	0	5
As	1	1	1	0	1
Ba	2	2	0.5	0	5
Be	1.5	1.5	0.5	0	5
B	2.5	2.5	0.5	0	5
Cd	2	2	1	0	5
Ca	75	75	500	500	250
Cr	2.5	2.5	0.5	0	5
Co	1	1	0.5	0	1
Cu	2.5	2.5	0.5	0	5
Fe	25	25	200	200	200
Pb	2.5	2.5	1	0	5
Li	0.5	0.5	1	0	0.5
Mg	60	60	200	200	100
Mn	2.5	2.5	0.5	0	5
Mo	2.5	2.5	1	0	5
Ni	2.5	2.5	1	0	5
K	60	60	75	0	250
Se	1	1	1	0	1
Ag	0.5	0.5	1	0	0.5
Na	60	60	75	0	150
Sr	0.5	0.5	0.5	0	0.5
Tl	2.5	2.5	1	0	5
Sn	0.5	0.5	1	0	0.5
Ti	0.5	0.5	1	0	0.5
V	1.5	1.5	0.5	0	5
Zn	2.5	2.5	1	0	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 11/30/11 10:02

End Date: 11/30/11 17:36

SOP #	Rev. #
☑ EMAX-6010	7
☐ EMAX-6010C	1
☐ EMAX-200.7	2
☐ EMAX-	

Comments:

Book #: AD8-022

Instrument No.: D8

Analytical Batch: 108K024

Analytical Sequence: S-11K6010 (v33)

Method File: 11K6010 (v33)

Database: EMAX14

	STANDARDS ID		STANDARDS ID
S0	SA1B14-7805	S30	SA1B14-6802
S1	N/A	S31	-6803
S2		ICV	-8201
S3		CCV	-8301
S4		ICSA	-8502
S5		ICSAB	-6704
S6		CRI/MRL 1	-8101
S7		MRL2	-7401
S8			
S9			
S10			
S11			
S12			
S16			
S17			
S18			
S20	SA1B14-8401		
S21	-6503		
S22	-6504		
S23	-8402		
S24	-6702		
S25	-6703		
S26	-7801		
S27	-7802		
S28	-7803		
S29	-7804		

Analyzed By: [illegible]

Date: 11/30/11

7010

SEQUENCE FILE : ID8K024

4-18 LFID	19-33 LSID	34-43 TIME	44-53 DATE	54-63 DF
ID8K024001	Blank	10:02	11/30/11	1.000
ID8K024002	S20	10:05	11/30/11	1.000
ID8K024003	S21	10:07	11/30/11	1.000
ID8K024004	S22	10:11	11/30/11	1.000
ID8K024005	S23	10:14	11/30/11	1.000
ID8K024006	S24	10:17	11/30/11	1.000
ID8K024007	S25	10:20	11/30/11	1.000
ID8K024008	S26	10:23	11/30/11	1.000
ID8K024009	S27	10:26	11/30/11	1.000
ID8K024010	S28	10:29	11/30/11	1.000
ID8K024011	S29	10:32	11/30/11	1.000
ID8K024012	S30	10:35	11/30/11	1.000
ID8K024013	S31	10:38	11/30/11	1.000
ID8K024014	ICV	10:41	11/30/11	1.000
ID8K024015	ICB	10:44	11/30/11	1.000
ID8K024016	MRLK3001	10:47	11/30/11	1.000
ID8K024017	MRLK3002	10:50	11/30/11	1.000
ID8K024018	ICSA1	10:53	11/30/11	1.000
ID8K024019	ICAB1	10:56	11/30/11	1.000
ID8K024020	CCV1	10:59	11/30/11	1.000
ID8K024021	CCB1	11:02	11/30/11	1.000
ID8K024022	K542-08	11:05	11/30/11	1.000
ID8K024023	Blank	11:08	11/30/11	1.000
ID8K024024	CCV2	11:11	11/30/11	1.000
ID8K024025	CCB2	11:14	11/30/11	1.000
ID8K024026	K542-08W	11:24	11/30/11	1.000
ID8K024027	K550-08	11:27	11/30/11	1.000
ID8K024028	Blank	11:30	11/30/11	1.000
ID8K024029	CCV3	11:34	11/30/11	1.000
ID8K024030	CCB3	11:37	11/30/11	1.000
ID8K024031	IPK041WB	11:40	11/30/11	1.000
ID8K024032	IPK041WL	11:43	11/30/11	1.000
ID8K024033	IPK041WC	11:45	11/30/11	1.000
ID8K024034	K205-01A	11:48	11/30/11	1.000
ID8K024035	K205-01	11.51	11/30/11	1.000
ID8K024036	K205-01J	11:54	11/30/11	5.000
ID8K024037	K205-01M	11:57	11/30/11	1.000
ID8K024038	K205-01S	12:00	11/30/11	1.000
ID8K024039	K203-15	12.06	11/30/11	1.000
ID8K024040	Blank	12:09	11/30/11	1.000
ID8K024041	CCV4	12:12	11/30/11	1.000
ID8K024042	CCB4	12:15	11/30/11	1.000
ID8K024043	K205-02	12:18	11/30/11	1.000
ID8K024044	K205-03	12:21	11/30/11	1.000
ID8K024045	K205-04	12:24	11/30/11	1.000
ID8K024046	K205-05	12:27	11/30/11	1.000
ID8K024047	K184-01	12:30	11/30/11	1.000
ID8K024048	K184-02	12:33	11/30/11	1.000
ID8K024049	K184-03	12:37	11/30/11	1.000
ID8K024050	K184-04	12:40	11/30/11	1.000
ID8K024051	K184-05	12:43	11/30/11	1.000
ID8K024052	Blank	12:46	11/30/11	1.000

ID8K024053	CCV5	12:49	11/30/11	1.000
ID8K024054	CCB5	12:52	11/30/11	1.000
ID8K024055	KI74-01	12:55	11/30/11	1.000
ID8K024056	KI74-07	12:58	11/30/11	1.000
ID8K024057	K188-03	13:02	11/30/11	1.000
ID8K024058	Blank	13:05	11/30/11	1.000
ID8K024059	CCV6	13:08	11/30/11	1.000
ID8K024060	CCB6	13:11	11/30/11	1.000
ID8K024061	K542-06A	13:14	11/30/11	5.000
ID8K024062	K542-06T	13:16	11/30/11	5.000
ID8K024063	K542-06J	13:19	11/30/11	25.00
ID8K024064	K542-06M	13:22	11/30/11	5.000
ID8K024065	K542-06S	13:25	11/30/11	5.000
ID8K024066	Blank	13:28	11/30/11	1.000
ID8K024067	CCV7	13:31	11/30/11	1.000
ID8K024068	CCB7	13:34	11/30/11	1.000
ID8K024069	K205-01A	13:37	11/30/11	5.000
ID8K024070	K205-01T	13:39	11/30/11	5.000
ID8K02407I	K205-01J	13:43	11/30/11	25.00
ID8K024072	K205-01M	13:46	11/30/11	5.000
ID8K024073	K205-01S	13:48	11/30/11	5.000
ID8K024074	Blank	13.51	11/30/11	1.000
IDBK024075	CCV8	13:54	11/30/11	1.000
ID8K024076	CCB8	13:57	11/30/11	1.000
ID8K024077	KI98-05A	14:00	11/30/11	1.000
ID8K024078	KI98-05	14:03	11/30/11	1.000
ID8K024079	KI98-05J	14.06	11/30/11	5.000
ID8K024080	K198-05M	14.09	11/30/11	1.000
ID8K024081	K198-05S	14:11	11/30/11	1.000
ID8K024082	K198-03	14:14	11/30/11	1.000
ID8K024083	K198-04	14:17	11/30/11	1.000
ID8K024084	Blank	14:20	11/30/11	1.000
ID8K024085	CCV9	14:23	11/30/11	1 000
ID8K024086	CCB9	14:26	11/30/11	1 000
ID8K024087	K207-01	14:29	11/30/11	1 000
ID8K024088	K207-02	14:32	11/30/11	1.000
ID8K024089	Blank	14:35	11/30/11	1.000
ID8K024090	CCV10	14:38	11/30/11	1.000
ID8K024091	CCB10	14:41	11/30/11	1.000
ID8K024092	K119-01A	14:44	11/30/11	1 000
ID8K024093	K119-01W	14:46	11/30/11	1.000
ID8K024094	K119-01J	14:49	11/30/11	5.000
ID8K024095	K133-01A	14:52	11/30/11	5.000
IDBK024096	K133-01T	14:55	11/30/11	5 000
ID8K024097	K133-01J	14:58	11/30/11	25.00
ID8K024098	Blank	15:01	11/30/11	1.000
ID8K024099	CCV11	15:04	11/30/11	1.000
ID8K024100	CCB11	15:07	11/30/11	1.000
ID8K024101	IPK045WB	15:10	11/30/11	1.000
ID8K024102	IPK045WL	15:13	11/30/11	1.000
ID8K024103	IPK045WC	15:16	11/30/11	1.000
ID8K024104	TXK010SB	15:19	11/30/11	1.000
ID8K024105	K216-01A	15:22	11/30/11	1.000
ID8K024106	K216-01	15:25	11/30/11	1.000
ID8K024107	K216-01J	15:28	11/30/11	5.000

ID8K02410B	K216-01M	15:31	11/30/11	1.000
ID8K024109	K216-01S	15:34	11/30/11	1.000
ID8K024110	Blank	15:37	11/30/11	1.000
ID8K024111	CCV12	15:40	11/30/11	1.000
ID8K024112	CCB12	15:42	11/30/11	1.000
ID8K024113	K216-02	15:46	11/30/11	1.000
ID8K024114	Blank	15:49	11/30/11	1.000
ID8K024115	CCV13	15:52	11/30/11	1.000
ID8K024116	CCB13	15:54	11/30/11	1.000
ID8K024117	K542-06A	15:57	11/30/11	10.00
ID8K02411B	K542-06A	16:00	11/30/11	10.00
ID8K024119	K542-061	16:03	11/30/11	10.00
ID8K024120	K542-06J	16:06	11/30/11	50.00
ID8K024121	K542-06M	16:09	11/30/11	10.00
ID8K024122	K542-06S	16:12	11/30/11	10.00
ID8K024123	Blank	16:14	11/30/11	1.000
ID8K024124	CCV14	16:17	11/30/11	1.000
ID8K024125	CCB14	16:20	11/30/11	1.000
ID8K024126	K133-01A	16:23	11/30/11	10.00
ID8K024127	K133-011	16:26	11/30/11	10.00
ID8K024128	K133-01J	16:29	11/30/11	50.00
ID8K024129	Blank	16:32	11/30/11	1.000
ID8K024130	CCV15	16:35	11/30/11	1.000
ID8K024131	CCB15	16:38	11/30/11	1.000
ID8K024132	IPK046WB	16:41	11/30/11	1.000
ID8K024133	IPK046WL	16:44	11/30/11	1.000
ID8K024134	IPK046WC	16:47	11/30/11	1.000
ID8K024135	K229-01A	16:50	11/30/11	1.000
ID8K024136	K229-01	16:52	11/30/11	1.000
ID8K024137	K229-01J	16:55	11/30/11	5.000
ID8K024138	K229-01M	16:58	11/30/11	1.000
ID8K024139	K229-01S	17:01	11/30/11	1.000
ID8K024140	K229-03	17:04	11/30/11	1.000
ID8K024141	Blank	17:06	11/30/11	1.000
ID8K024142	CCV16	17:09	11/30/11	1.000
ID8K024143	CCV16	17:12	11/30/11	1.000
ID8K024144	K133-01A	17:15	11/30/11	10.00
ID8K024145	K542-06A	17:18	11/30/11	15.00
ID8K024146	K542-06A	17:21	11/30/11	15.00
ID8K024147	K542 06G	17:23	11/30/11	15.00
ID8K024148	K542-06J	17:26	11/30/11	75.00
ID8K024149	Blank	17:29	11/30/11	1.000
ID8K024150	CCV17	17.32	11/30/11	1.000
ID8K024151	CCB17	17:36	11/30/11	1.000

VERSON : 11A UNIT : % SUMMARY of ICV and CCV : 1D8K024 DATE : 11/30/11 INST : EMAXT

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S26	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	101	97	103	98	98	98	98	99	97	96	105	100	96	108	94	92	99	98	97	103	101	105	97	91	93	99	102	102
ICB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK3001	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK3002	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA1	97	----	----	----	----	----	----	94	----	----	----	95	----	----	95	----	----	----	----	----	----	----	----	----	----	----	----	----
ICAB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	-485*	-479*	-489*	97	95	0*	-470*	99	0*	95	0*	0*	94	100	93	91	99	97	99	-495*	0*	106	96	-439*	98	97	0*	102
CCB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	101	100	104	98	95	98	99	98	97	96	105	99	95	101	93	91	99	97	99	103	102	106	97	93	98	97	101	102
CCB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-08W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K550-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	103	100	106	99	99	100	102	101	100	97	108	102	97	109	95	94	100	99	100	105	104	107	98	95	93	100	103	104
CCB3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK041WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK041WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK041WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K203-15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	101	101	106	97	95	99	101	99	99	96	107	100	94	99	93	92	97	97	99	105	104	107	97	94	96	97	101	102
CCB4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

CCV5	101	98	105	97	95	100	100	97	101	96	110	100	94	100	92	92	97	97	100	104	105	108	98	92	94	95	101	101
CCB5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K174-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K174-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K1B8-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	102	98	103	98	96	99	99	98	99	96	107	99	94	101	95	94	98	97	99	102	104	107	97	92	96	98	100	101
CCB6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	104	97	107	99	100	101	104	99	103	97	111*	100	95	111*	96	97	98	99	100	105	107	108	100	95	88*	100	102	102
CCB7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	103	97	108	97	98	101	106	98	103	96	110	100	95	108	95	95	96	98	98	106	107	106	99	97	87*	99	101	102
CCB8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K19B-05A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	103	99	107	98	97	101	105	98	103	96	111*	100	94	102	95	94	96	97	100	107	108	108	99	96	92	97	101	102
CCB9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K207-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K207-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV10	102	99	107	98	96	100	105	98	102	96	110	100	94	102	95	94	96	97	100	106	106	108	99	96	93	97	100	102
CCB10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K119-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K119-01W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K119-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV11	103	100	108	97	96	101	107	97	103	96	110	100	95	100	94	94	96	97	100	109	108	108	99	98	93	96	101	103
CCB11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK045WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK045WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK045WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TXK010SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K216-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV12	103	99	108	98	97	102	108	98	105	96	111*	100	94	102	96	95	96	97	100	108	108	109	99	98	92	97	101	102
CCB12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV13	102	100	109	97	95	102	107	98	104	96	112*	101	94	100	93	94	96	98	101	109	109	109	99	97	92	95	101	103
CCB13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV14	102	99	108	97	95	102	107	98	105	96	112*	101	94	100	93	93	96	97	100	109	108	109	99	97	92	95	101	103
CCB14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV15	103	99	107	99	97	101	105	97	102	96	110	100	94	102	94	95	97	97	100	107	106	108	98	96	93	97	100	102
CCB15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK046W8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK046WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK046WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV16	102	99	107	96	94	101	104	97	103	96	111*	101	93	99	92	91	96	97	100	106	107	109	98	95	93	95	101	102
CCV16	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06G	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV17	102	99	106	99	96	100	103	97	101	96	109	99	94	103	94	95	97	97	100	106	106	109	99	95	94	97	100	102
CCB17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

QC limit of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC Limit

VERSON : 11A UNIT : UG/L SUMMARY of CALIBRATION BLANKS : ID8K024 (WATER) DATE : 11/30/11 INST : EMAXT

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S26	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICB	10.3	1.37	-1.66	.100	.060	3.65	-.040	-8.32	.280	-.120	.210	-.770	-.270	.210	-.800	.200	.300	.000	155	-2.10	.110	-182	.080	1.32	-.330	-.070	.020	-.410
MRLK3001	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK3002	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA1	----	-.240	.610	.760	.120	-57.6	4.17	----	.800	-.720	1.37	----	5.83	16.4	----	.910	-1.04	.900	229	1.12	-.110	-30.9	1.01	-2.32	1.45	3.74	.690	2.61
ICAB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB1	12.9	1.58	.710	.300	.090	3.82	.020	18.3	.230	.060	.270	.650	.100	-.660	.590	-.060	.380	-.090	105	-1.10	.040	-199	.090	.780	.120	.000	.290	.770
K542-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB2	12.7	1.53	-.550	.250	.100	4.30	-.010	13.8	.300	-.150	.300	-1.11	-.010	.160	-3.38	190	.340	.010	32.6	-1.85	060	-219	.110	1.17	-.500	.010	.210	.660
K542-08W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K550-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB3	15.6	.670	-.120	230	.120	3.84	.030	159	.230	100	480	1.30	-.260	.510	6.67	.370	.330	.000	-31.6	-1.03	-.020	-233	.250	1.44	-.520	.590	.200	5.89
1PK041WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK041WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK041WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K203-15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB4	13.8	1.56	-.200	.210	.110	1.08	-.040	23.1	.150	-.170	.270	.060	.310	120	-4.90	.020	.320	-.070	30.7	-1.83	-.040	-144	.140	1.02	-.150	.140	.200	470
K205-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

CCV5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB5	14.5	.950	-.780	.280	.090	-.450	.010	19.8	.110	.020	.160	-1.09	.250	-.080	.030	.050	.260	-.150	102	-1.05	.000	62.0	.100	1.29	-.540	-.150	.150	.550
K174-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K174-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K188-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB6	15.4	1.40	-.300	.310	.120	-.120	.010	16.7	.270	.000	-.030	-1.11	-.050	-.510	-3.01	.120	.320	-.070	84.5	-1.25	.070	67.9	.060	.990	-.570	.090	.280	.460
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB7	21.8	1.75	-.560	.300	.150	-1.43	.110	188	.190	.060	.170	1.75	.450	-.620	9.09	.120	.300	-.130	13.2	-.930	.030	-106	.050	1.14	-.630	.440	.120	6.42
K205-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB8	50.1	1.97	-1.21	.650	.210	-.780	.120	72.0	.380	.050	1.04	10.6	.600	-.870	6.75	.280	.390	-.220	39.5	-1.97	.070	-80.6	.110	.610	-.290	.370	.030	3.95
K198-05A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB9	23.8	2.08	-1.10	.330	.110	-1.47	-.010	16.4	.200	.010	.220	-2.26	-.210	-.110	4.91	.190	.440	-.150	29.1	-.400	-.030	-140	.090	1.27	-.480	.050	-.100	.390
K207-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K207-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB10	22.8	1.19	-1.18	.310	.130	-1.05	-.030	46.5	.190	.070	180	-.580	-.010	-.880	-3.00	.290	.260	-.160	18.1	-1.29	-.040	-168	.050	1.29	-.260	-.070	-.020	1.47
K119-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K119-01W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K119-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB11	30.8	2.49	-1.91	.520	.230	-1.32	130	383	.290	.190	.240	.090	.470	-1.49	13.3	.510	.490	.090	30.8	.600	-.030	-111	.240	.590	-.550	.460	.190	13.4
IPK045WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK045WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK045WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TXK010SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K216-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB12	31.4	2.34	-.450	.340	.170	-2.03	.020	40.6	.140	.140	.230	-2.45	-.320	-1.02	2.48	.270	.430	-.110	50.5	-.630	.040	-127	.120	.650	-.530	.470	.010	1.02
K216-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB13	26.6	2.46	-.920	.340	.220	-1.83	.000	26.0	.220	.150	.210	-.370	.210	-.860	5.44	.250	.370	-.100	46.0	-1.18	.010	-138	.110	.990	-.120	-.190	.210	.510
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB14	25.8	1.64	.080	.430	.160	-2.45	-.020	30.1	.170	.050	.170	-.220	-.290	-.790	3.35	.100	.350	-.140	9.74	-.580	000	-184	.100	.470	-.620	.050	.070	.750
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB15	19.6	2.17	.370	.290	.170	-2.29	.020	24.3	.240	.000	.030	.620	-.340	-.300	-1.64	.030	.340	-.190	34.4	-.500	.030	-156	.080	.230	-.450	-.120	.120	.680
IPK046WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK046WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK046WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06G	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB17	20.3	1.56	.590	.230	.150	-2.24	-.010	24.3	.280	.050	.060	-.670	.180	-.670	1.75	.130	.250	-.180	47.7	-1.15	-.020	-209	.150	1.12	-.470	-.330	.040	.970

QC limit of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC Limit

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
1	0	0	0	0	Unk	S0		ID8K024001			1	☒	unk	---
2	0	0	0	0	Unk	S20		ID8K024002			1	☒	unk	---
3	0	0	0	0	Unk	S21		ID8K024003			1	☒	unk	---
4	0	0	0	0	Unk	S22		ID8K024004			1	☒	unk	---
5	0	0	0	0	Unk	S23		ID8K024005			1	☒	unk	---
6	0	0	0	0	Unk	S24		ID8K024006			1	☒	unk	---
7	0	0	0	0	Unk	S25		ID8K024007			1	☒	unk	---
8	0	0	0	0	Unk	S26		ID8K024008			1	☒	unk	---
9	0	0	0	0	Unk	S27		ID8K024009			1	☒	unk	---
10	0	0	0	0	Unk	S28		ID8K024010			1	☒	unk	---
11	0	0	0	0	Unk	S29		ID8K024011			1	☒	unk	---
12	0	0	0	0	Unk	S30		ID8K024012			1	☒	unk	---
13	0	0	0	0	Unk	S31		ID8K024013			1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8K024014			1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8K024015			1	☒	3XIDL	None
16	3	2	3	1	QC	MRLK3001		ID8K024016			1	☒	MRL-EMAX	None
17	4	2	4	1	QC	MRLK3002		ID8K024017			1	☒	MRL-AFCEE	None
18	5	2	5	1	QC	ICSA1		ID8K024018			1	☒	ICSA-DoD	None
19	6	2	6	1	QC	ICAB1		ID8K024019			1	☒	ICSAB	None
20	7	2	7	1	QC	CCV1		ID8K024020			1	☒	CCV	None
21	8	2	8	1	QC	CCB1		ID8K024021			1	☒	3XIDL	None
22	9	2	9	1	Unk	K550-08	TCLP	ID8K024022			1	☒	unk	---
23	10	2	10	1	Blank	Blank		ID8K024023			1	☐		---
24	11	2	11	1	QC	CCV2		ID8K024024			1	☒	CCV	None
25	12	2	12	1	QC	CCB2		ID8K024025			1	☒	3XIDL	None
26	57	2	9	5	Unk	K542-08	TCLP	ID8K024026			1	☒	unk	---
27	58	2	10	5	Unk	K550-08	TCLP CONFIRM	ID8K024027			1	☒	unk	---
28	59	2	11	5	Blank	Blank		ID8K024028			1	☐		---
29	60	2	12	5	QC	CCV3		ID8K024029			1	☒	CCV	None
30	61	3	1	1	QC	CCB3		ID8K024030			1	☒	3XIDL	None
31	13	2	1	2	QC	IPK041WB		ID8K024031			1	☒	1/2LOQ	None
32	14	2	2	2	QC	IPK041WL		ID8K024032			1	☒	LCS	None
33	15	2	3	2	QC	IPK041WC		ID8K024033			1	☒	LCS	None
34	16	2	4	2	Unk	K205-01A	DISSOLVED	ID8K024034			1	☒	unk	---
35	17	2	5	2	Unk	K205-01	DISSOLVED	ID8K024035			1	☒	unk	---
36	18	2	6	2	Unk	K205-01J	DISSOLVED	ID8K024036			1	☒	unk	---
37	19	2	7	2	Unk	K205-01M	DISSOLVED	ID8K024037			1	☒	unk	---
38	20	2	8	2	Unk	K205-01S	DISSOLVED	ID8K024038			1	☒	unk	---
39	62	3	2	1	Unk	K203-15		ID8K024039			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
40	22	2	10	2	Blank	Blank		ID8K024040			1	☐		---
41	23	2	11	2	QC	CCV4		ID8K024041			1	☒	CCV	None
42	24	2	12	2	QC	CCB4		ID8K024042			1	☒	3XIDL	None
43	21	2	9	2	Unk	K205-02	DISSOLVED	ID8K024043			1	☒	unk	---
44	25	2	1	3	Unk	K205-03	DISSOLVED	ID8K024044			1	☒	unk	---
45	26	2	2	3	Unk	K205-04	DISSOLVED	ID8K024045			1	☒	unk	---
46	27	2	3	3	Unk	K205-05	DISSOLVED	ID8K024046			1	☒	unk	---
47	28	2	4	3	Unk	K184-01	DISSOLVED	ID8K024047			1	☒	unk	—
48	29	2	5	3	Unk	K184-02	DISSOLVED	ID8K024048			1	☒	unk	---
49	30	2	6	3	Unk	K184-03	DISSOLVED	ID8K024049			1	☒	unk	---
50	31	2	7	3	Unk	K184-04	DISSOLVED	ID8K024050			1	☒	unk	—
51	32	2	8	3	Unk	K184-05	DISSOLVED	ID8K024051			1	☒	unk	—
52	34	2	10	3	Blank	Blank		ID8K024052			1	☐		---
53	35	2	11	3	QC	CCV5		ID8K024053			1	☒	CCV	None
54	36	2	12	3	QC	CCB5		ID8K024054			1	☒	3XIDL	None
55	33	2	9	3	Unk	K174-01	DISSOLVED	ID8K024055			1	☒	unk	—
56	37	2	1	4	Unk	K174-07	DISSOLVED	ID8K024056			1	☒	unk	—
57	38	2	2	4	Unk	K188-03	DISSOLVED	ID8K024057			1	☒	unk	—
58	39	2	3	4	Blank	Blank		ID8K024058			1	☐		—
59	40	2	4	4	QC	CCV6		ID8K024059			1	☒	CCV	None
60	41	2	5	4	QC	CCB6		ID8K024060			1	☒	3XIDL	None
61	63	3	3	1	Unk	K542-06A	TCLP 5X As, Se	ID8K024061			1	☒	unk	---
62	64	3	4	1	Unk	K542-06T	TCLP 5X As, Se	ID8K024062			1	☒	unk	---
63	65	3	5	1	Unk	K542-06J	TCLP 25X As, Se	ID8K024063			1	☒	unk	---
64	66	3	6	1	Unk	K542-06M	TCLP 5X As, Se	ID8K024064			1	☒	unk	---
65	67	3	7	1	Unk	K542-06S	TCLP 5X As, Se	ID8K024065			1	☒	unk	---
66	68	3	8	1	Blank	Blank		ID8K024066			1	☐		---
67	69	3	9	1	QC	CCV7		ID8K024067			1	☒	CCV	None
68	70	3	10	1	QC	CCB7		ID8K024068			1	☒	3XIDL	None
69	71	3	11	1	Unk	K205-01A	DISSOLVED 5X	ID8K024069			1	☒	unk	---
70	72	3	12	1	Unk	K205-01T	DISSOLVED 5X	ID8K024070			1	☒	unk	---
71	73	3	1	2	Unk	K205-01J	DISSOLVED 25X	ID8K024071			1	☒	unk	---
72	74	3	2	2	Unk	K205-01M	DISSOLVED 5X	ID8K024072			1	☒	unk	---
73	75	3	3	2	Unk	K205-01S	DISSOLVED 5X	ID8K024073			1	☒	unk	—
74	76	3	4	2	Blank	Blank		ID8K024074			1	☐		—
75	77	3	5	2	QC	CCV8		ID8K024075			1	☒	CCV	None
76	78	3	6	2	QC	CCB8		ID8K024076			1	☒	3XIDL	None
77	42	2	6	4	Unk	K198-05A		ID8K024077			1	☒	unk	---
78	43	2	7	4	Unk	K198-05		ID8K024078			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
79	44	2	8	4	Unk	K198-05J		ID8K024079			1	☒	unk	—
80	45	2	9	4	Unk	K198-05M		ID8K024080			1	☒	unk	—
81	46	2	10	4	Unk	K198-05S		ID8K024081			1	☒	unk	---
82	47	2	11	4	Unk	K198-03		ID8K024082			1	☒	unk	---
83	51	2	3	5	Unk	K198-04		ID8K024083			1	☒	unk	---
84	48	2	12	4	Blank	Blank		ID8K024084			1	☐		—
85	49	2	1	5	QC	CCV9		ID8K024085			1	☒	CCV	None
86	50	2	2	5	QC	CCB9		ID8K024086			1	☒	3XIDL	None
87	52	2	4	5	Unk	K207-01		ID8K024087			1	☒	unk	---
88	53	2	5	5	Unk	K207-02		ID8K024088			1	☒	unk	---
89	54	2	6	5	Blank	Blank		ID8K024089			1	☐		---
90	55	2	7	5	QC	CCV10		ID8K024090			1	☒	CCV	None
91	56	2	8	5	QC	CCB10		ID8K024091			1	☒	3XIDL	None
92	79	3	7	2	Unk	K119-01A		ID8K024092			1	☒	unk	---
93	80	3	8	2	Unk	K119-01W		ID8K024093			1	☒	unk	—
94	81	3	9	2	Unk	K119-01J		ID8K024094			1	☒	unk	—
95	82	3	10	2	Unk	K133-01A	5X	ID8K024095			1	☒	unk	---
96	83	3	11	2	Unk	K133-01T	5X	ID8K024096			1	☒	unk	---
97	84	3	12	2	Unk	K133-01J	25X	ID8K024097			1	☒	unk	---
98	85	3	1	3	Blank	Blank		ID8K024098			1	☐		---
99	86	3	2	3	QC	CCV11		ID8K024099			1	☒	CCV	None
100	87	3	3	3	QC	CCB11		ID8K024100			1	☒	3XIDL	None
101	97	3	1	4	QC	IPK045WB		ID8K024101			1	☒	1/2LOQ	None
102	98	3	2	4	QC	IPK045WL		ID8K024102			1	☒	LCS	None
103	99	3	3	4	QC	IPK045WC		ID8K024103			1	☒	LCS	None
104	100	3	4	4	QC	TXK010SB	TCLP	ID8K024104			1	☒	1/2LOQ	None
105	101	3	5	4	Unk	K216-01A	TCLP	ID8K024105			1	☒	unk	---
106	102	3	6	4	Unk	K216-01	TCLP	ID8K024106			1	☒	unk	—
107	103	3	7	4	Unk	K216-01J	TCLP	ID8K024107			1	☒	unk	—
108	104	3	8	4	Unk	K216-01M	TCLP	ID8K024108			1	☒	unk	—
109	105	3	9	4	Unk	K216-01S	TCLP	ID8K024109			1	☒	unk	—
110	106	3	10	4	Blank	Blank		ID8K024110			1	☐		---
111	107	3	11	4	QC	CCV12		ID8K024111			1	☒	CCV	None
112	108	3	12	4	QC	CCB12		ID8K024112			1	☒	ICSAB10%	None
113	109	3	1	5	Unk	K216-02	TCLP	ID8K024113			1	☒	unk	---
114	110	3	2	5	Blank	Blank		ID8K024114			1	☐		---
115	111	3	3	5	QC	CCV13		ID8K024115			1	☒	CCV	None
116	112	3	4	5	QC	CCB13		ID8K024116			1	☒	3XIDL	None
117	88	3	4	3	Unk	K542-06A	TCLP 10X	ID8K024117			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	ConFact	Check	Check Table	Fail Action
118	89	3	5	3	Unk	K542-06A	TCLP 10X DLB SPIKE	ID8K024118			1	☒	unk	---
119	90	3	6	3	Unk	K542-06I	TCLP 10X	ID8K024119			1	☒	unk	---
120	91	3	7	3	Unk	K542-06J	TCLP 50X	ID8K024120			1	☒	unk	---
121	92	3	8	3	Unk	K542-06M	TCLP 10X	ID8K024121			1	☒	unk	---
122	93	3	9	3	Unk	K542-06S	TCLP 10X	ID8K024122			1	☒	unk	---
123	94	3	10	3	Blank	Blank		ID8K024123			1	☐		---
124	95	3	11	3	QC	CCV14		ID8K024124			1	☒	CCV	None
125	96	3	12	3	QC	CCB14		ID8K024125			1	☒	3XIDL	None
126	113	3	5	5	Unk	K133-01A	10X	ID8K024126			1	☒	unk	---
127	114	3	6	5	Unk	K133-01I	10X	ID8K024127			1	☒	unk	---
128	115	3	7	5	Unk	K133-01J	50X	ID8K024128			1	☒	unk	---
129	116	3	8	5	Blank	Blank		ID8K024129			1	☐		---
130	117	3	9	5	QC	CCV15		ID8K024130			1	☒	CCV	None
131	118	3	10	5	QC	CCB15		ID8K024131			1	☒	3XIDL	None
132	119	3	11	5	QC	IPK046WB		ID8K024132			1	☒	1/2LOQ	None
133	120	3	12	5	QC	IPK046WL		ID8K024133			1	☒	LCS	None
134	121	4	1	1	QC	IPK046WC		ID8K024134			1	☒	LCS	None
135	122	4	2	1	Unk	K229-01A		ID8K024135			1	☒	unk	---
136	123	4	3	1	Unk	K229-01		ID8K024136			1	☒	unk	---
137	124	4	4	1	Unk	K229-01J		ID8K024137			1	☒	unk	---
138	125	4	5	1	Unk	K229-01M		ID8K024138			1	☒	unk	---
139	126	4	6	1	Unk	K229-01S		ID8K024139			1	☒	unk	---
140	127	4	7	1	Unk	K229-03		ID8K024140			1	☒	unk	---
141	128	4	8	1	Blank	Blank		ID8K024141			1	☐		---
142	129	4	9	1	QC	CCV16		ID8K024142			1	☒	CCV	None
143	130	4	10	1	QC	CCV16		ID8K024143			1	☒	3XIDL	None
144	131	4	11	1	Unk	K133-01A	DLB SPIKE 10X	ID8K024144			1	☒	unk	---
145	132	4	12	1	Unk	K542-06A	DLB SPIKE 15X	ID8K024145			1	☒	unk	---
146	133	4	1	2	Unk	K542-06A	DLB SPIKE 15X	ID8K024146			1	☒	unk	---
147	134	4	2	2	Unk	K542-06G	DLB SPIKE 15X	ID8K024147			1	☒	unk	---
148	135	4	3	2	Unk	K542-06J	DLB SPIKE 75X	ID8K024148			1	☒	unk	---
149	136	4	4	2	Blank	Blank		ID8K024149			1	☐		---
150	137	4	5	2	QC	CCV17		ID8K024150			1	☒	CCV	None
151	138	4	6	2	QC	CCB17		ID8K024151			1	☒	3XIDL	None

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ID8K024 Section 1 of 3

INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID
1	Blank	.00105	.00002	-.00001	.00024	.00006	.00115	-.00003	.00047	- 00005	-.00096	Blank
2	S20					1.0166		.11539				S20
3	S21					10.153		1.1227				S21
4	S22				.64337						.15950	S22
5	S23				6 2663						1.5919	S23
6	S24						.09586					S24
7	S25						.97435					S25
8	S26	.21923							.84092	.12859		S26
9	S27	8.3400							8.1196	1.2915		S27
10	S28		.00506									S28
11	S29		.04825									S29
12	S30			.00117								S30
13	S31			.00465								S31
14	ICV	101.11	1.4606	1.0350	1.9554	1.4730	2.4463	1.9564	74.558	2.4364	.96260	ICV
15	ICB	.01030	.00137	-.00166	.00010	.00006	.00365	-.00004	-.00832	.00028	-.00012	ICB
16	MRLK3001	.22242	.09755	.00967	.01051	.01012	.09679	.01048	1.0627	.01061	.00980	MRLK3001
17	MRLK3002	.20880	.04897	.00892	.00510	.00399	.09602	.00505	.51752	.01023	.00982	MRLK3002
18	ICSA1	386.44	-.00024	.00061	.00076	.00012	-.05761	.00417	468.03	.00080	-.00072	ICSA1
19	ICAB1	385.60	1.0121	1.0477	.49481	.48550	.43975	.92718	464.59	.46518	.47288	ICAB1
20	CCV1	-485.36*	-7.1775*	-4.8883*	1.9480	1.4255	******	-9.3906*	73.987	******	.95431	CCV1
21	CCB1	.01286	.00158	00071	.00030	.00009	.00382	.00002	.01828	.00023	.00006	CCB1
22	K542-08	1116.4*	01513	-.00114	5.2964	.00357	.17031	2.3497	6.7751	1.9376	.04593	K542-08
23	Blank	.06889	.00080	-.00023	.00055	.00002	.00081	.00001	.02300	.00015	-.00011	Blank
24	CCV2	100.85	1.5019	1.0387	1.9582	1.4294	2.4526	1.9708	73.783	2.4204	95706	CCV2
25	CCB2	.01270	.00153	-.00055	.00025	.00010	.00430	-.00001	.01383	.00030	-.00015	CCB2
26	K542-08W	1103.4*	.01474	.00195	5.2273	.00349	.15766	2.3244	6.6688	1.8877	.04580	K542-08W
27	K550-08	.12606	.00123	00130	.13140	.00002	.57233	.00627	14.571	.00234	00149	K550-08
28	Blank	.01616	.00082	-.00157	.00027	.00002	.00134	-.00005	.04553	.00011	00000	Blank
29	CCV3	103.04	1.4927	1 0640	1.9707	1.4900	2.5109	2.0349	75.617	2.5010	.97399	CCV3
30	CCB3	.01560	.00067	- 00012	00023	00012	.00384	-.00003	.15910*	.00023	.00010	CCB3
31	IPK041WB	.01555	.00108	- 00067	00014	.00004	-.00030	-.00005	.00790	.00016	- 00005	IPK041WB
32	IPK041WL	5.2776	2 5418	53727	.49366	49255	51914	51760	49.578	.51290	.49521	IPK041WL
33	IPK041WC	5.3174	2.5536	53872	.49938	.49741	52234	52149	49.804	.51633	49774	IPK041WC
34	K205-01A	6.3572	2 8141	63541	62214	51260	83556	52540	778.91	.53036	53402	K205-01A
35	K205-01	.03677	.00052	.00086	.07951	.00001	28440	-.00039	757.45	.00070	00091	K205-01
36	K205-01J	.02432	.00004	-.00023	.01647	.00006	05616	.00012	172.54	00043	.00025	K205-01J
37	K205-01M	6.0830	2.8253	60080	.59821	.48938	.84196	.49605	800.25	.49784	.50241	K205-01M
38	K205-01S	5.9648	2.7602	.59208	.58649	.47972	.82762	.48815	788.37	.48931	.49426	K205-01S
39	K203-15	101.46	.00008	.06428	1 3401	.00739	-.03370*	.04256	18.627	.25465	11325	K203-15
40	Blank	.01360	.00118	-.00091	.00034	.00004	-.00126	- 00010	.04352	.00019	-.00008	Blank
41	CCV4	101.07	1.5097	1.0578	1.9310	1 4263	2 4778	2 0240	74.014	2.4649	95569	CCV4
42	CCB4	.01381	.00156	-.00020	.00021	.00011	.00108	-.00004	.02310	.00015	-.00017	CCB4
43	K205-02	.04279	.00085	.00099	.06142	.00011	.04746	.00021	247.79	.00123	.00021	K205-02
44	K205-03	.04370	.00040	.18982	00510	.00001	.60879	-.00034	508.29	.00102	00051	K205-03
45	K205-04	.01545	00078	00088	.00028	.00001	.02799	- 00013	.17729	.00017	-.00006	K205-04
46	K205-05	.01952	.00096	.00056	.00043	.00007	.02755	00009	.17870	.00024	.00002	K205-05
47	K184-01	.03188	-.00051	- 00139	15421	.00001	.20747	- 00032	553.67	.00049	- 00098	K184-01
48	K184-02	.03642	- 00077	00494	13771	.00003	.61373	- 00033	582.70	.00055	-.00088	K184-02
49	K184-03	.03070	-.00016	.00043	.44459	.00003	.18199	.00007	529.19	.00043	-.00085	K184-03
50	K184-04	.03793	-.00018	.00660	37312	.00002	.47127	.00026	593.50	.00052	-.00099	K184-04
51	K184-05	.04945	-.00075	.02468	.02779	.00006	.51374	-.00026	850.90	.00050	.00052	K184-05
52	Blank	.01093	.00107	-.00084	.00032	.00004	-.00349	-.00010	.08347	.00000	00005	Blank

53	CCV5	101.29	1.4736	1.0483	1.9386	1.4187	2 4991	2.0099	73.045	2.5150	.96208	CCV5
54	CCB5	.01453	.00095	-.00078	.00028	.00009	-.00045	.00001	.01978	.00011	.00002	CCB5
55	K174-01	.03716	-.00005	.00453	.23367	.00003	42269	-.00035	633.52	.00057	-.00114	K174-01
56	K174-07	.03797	-.00088	.00326	.23212	.00003	.41631	-.00030	628.19	.00058	-.00105	K174-07
57	K188-03	.07485	-.00050	-.00116	.25625	.00009	39302	00100	451.69	00131	.00038	K188-03
58	Blank	.00909	.00058	-.00007	.00022	.00005	-.00329	-.00009	.05915	.00013	.00005	Blank
59	CCV6	101.87	1.4748	1.0347	1.9602	1.4452	2.4699	1 9877	73.611	2 4831	95755	CCV6
60	CCB6	.01544	.00140	-.00030	.00031	.00012	-.00012	.00001	01667	00027	.00000	CCB6
61	K542-06A	5.1195	2.4240	.65606	.52819	.53403	.51627	.58872	52.419	.56105	56480	K542-06A
62	K542-06T	.08132	.00461	.00584	.00249	.00022	.02463	.04551	3.1258	.00053	.00263	K542-06T
63	K542-06J	.03482	.00337	.00041	.00068	.00006	- 00019	00884	.61825	.00021	.00054	K542-06J
64	K542-06M	1.1328	.51145	.13882	.11095	.10897	.13166	16132	13.849	.11623	.11775	K542-06M
65	K542-06S	1.2473	.57110	.15674	.12514	.12252	.14977	.18216	15.512	.12982	.13253	K542-06S
66	Blank	.01448	.00402	-.00002	.00014	.00007	-.00588	-.00007	.17860	.00011	-.00005	Blank
67	CCV7	104.35	1.4551	1.0659	1.9864	1.5018	2.5313	2.0745	74.252	2.5752	.97286	CCV7
68	CCB7	.02177	.00175	-.00056	.00030	.00015	-.00143	.00011	18805*	.00019	.00006	CCB7
69	K205-01A	5.8875	2.5121	.60473	.54788	.52721	.57722	.56547	214.89	.55915	.52973	K205-01A
70	K205-01T	.04674	.00041	.00091	.01617	.00010	.05144	-.00007	167.65	.00054	-.00029	K205-01T
71	K205-01J	.04198	.00162	.00032	.00350	.00010	.00487	.00003	32.818	.00050	.00002	K205-01J
72	K205-01M	1.1911	.54114	.11909	.12143	.10385	.16465	.11345	179.40	.11131	.10396	K205-01M
73	K205-01S	1.1887	.53309	.11798	.12165	.10405	.16385	.11330	180.14	.11063	10307	K205-01S
74	Blank	.04258	.00216	-.00163	.00054	.00008	-.00516	.00002	.08201	.00013	-.00008	Blank
75	CCV8	102.77	1.4537	1.0783	1.9484	1.4773	2 5231	2.1222	73.424	2.5758	96247	CCV8
76	CCB8	.05007*	.00197	-.00121	.00065	.00021*	-.00078	.00012	.07199*	.00038	.00005	CCB8
77	K198-05A	5.7949	2.6171	.61702	.61712	.53697	.60536	.59379	112.20	.61129	.52978	K198-05A
78	K198-05	.04103	.00191	.00332	.08218	.00008	.06490	-.00004	62.844	.04082	- 00047	K198-05
79	K198-05J	.02923	.00178	.00149	.01747	.00008	.00921	-.00005	13.407	.00893	-.00008	K198-05J
80	K198-05M	5.3766	2.5512	.56585	.57650	.49302	.59550	.53913	109.92	.56680	.49192	K198-05M
81	K198-05S	5.4509	2.5810	.56911	.58069	.49786	.59999	.54506	110.12	.56908	.49616	K198-05S
82	K198-03	.03481	.00183	00314	07397	.00016	.05267	.00011	57.971	.01771	-.00018	K198-03
83	K198-04	.04652	.00143	.00540	.10634	.00008	.05216	-.00004	58.567	.00951	.00032	K198-04
84	Blank	.01885	.00153	.00004	.00026	.00007	-.00515	.00011	.03481	.00004	-.00010	Blank
85	CCV9	102.51	1.4788	1 0726	1.9608	1.4479	2.5291	2.1070	73.507	2.5811	.96155	CCV9
86	CCB9	.02385	.00208	- 00110	00033	.00011	- 00147	-.00001	.01636	.00020	.00001	CCB9
87	K207-01	03339	00152	.00404	08925	.00003	05370	-.00007	61 873	01233	- 00038	K207-01
88	K207-02	03490	00144	.00426	08209	.00009	.05056	- 00007	57.684	00954	-.00031	K207-02
89	Blank	02080	00065	- 00092	00047	00007	- 00527	- 00014	.04159	.00020	00009	Blank
90	CCV10	102.43	1.4854	1 0696	1 9667	1.4453	2 5107	2 1000	73.340	2 5597	96048	CCV10
91	CCB10	02275	00119	-.00118	.00031	.00013	- 00105	- 00003	04653*	00019	.00007	CCB10
92	K119-01A	5.6573	2 5460	59200	.54478	.53666	.54217	58923	65.309	.56998	.52388	K119-01A
93	K119-01W	.02481	.00188	.00021	.00979	.00011	.01361	-.00005	15.942	.00031	-.00010	K119-01W
94	K119-01J	.01811	00115	-.00111	.00206	.00005	-.00228	-.00003	3.1267	.00013	00012	K119-01J
95	K133-01A	6.0832	2.7701	.65646	.55442	.51490	.78057	.58754	342.92	.57123	53455	K133-01A
96	K133-01T	.03995	.00228	-.00300	.02475	.00012	.21633	- 00029	299.76	.00049	- 00055	K133-01T
97	K133-01J	.02696	.00128	00066	.00473	.00008	.03456	- 00010	59.073	00043	.00003	K133-01J
98	Blank	.02461	.00201	-.00059	.00034	.00013	-.00557	-.00005	.07097	.00002	-.00003	Blank
99	CCV11	102.65	1.5045	1.0793	1.9494	1.4342	2.5310	2.1376	73.094	2.5743	.95641	CCV11
100	CCB11	.03080	.00249	-.00191	00052	.00023*	- 00132	00013	38319*	00029	.00019	CCB11
101	IPK045WB	.03198	.00209	-.00075	00018	.00013	-.00394	-.00010	.00174	.00019	-.00004	IPK045WB
102	IPK045WL	5.3460	2.4996	.55066	.50620	.51082	.51156	.55699	49.835	.54339	50436	IPK045WL
103	IPK045WC	5.2895	2.5345	55864	.49710	.50073	.51957	56251	49.773	.54748	.50614	IPK045WC
104	TXK010SB	.07021	.00273	-.00321	.00170	.00014	.07183*	-.00011	.03517	.00041	.00010	TXK010SB
105	K216-01A	5.6791	2 5844	.64432	1.0918	.52329	.70766	.59476	54.352	.57618	.53816	K216-01A
106	K216-01	.08423	.00360	02499	.58683	.00014	18034	.00009	5.1278	.00008	.00216	K216-01
107	K216-01J	.03425	.00160	.00521	.12195	.00013	.03189	-.00002	1.0837	.00022	.00039	K216-01J

108	K216-01M	5.5714	2.6140	.61790	1.2652	.51300	.80121	.56847	54.891	54772	51581	K216-01M
109	K216-01S	5.6230	2.6344	.61973	1.2509	.52011	.79692	.57542	55.042	.55075	.51739	K216-01S
110	Blank	.02020	.00266	-.00087	.00049	.00011	-.00425	-.00009	.01426	.00014	-.00003	Blank
111	CCV12	103.41	1.4923	1.0841	1.9609	1.4557	2 5452	2 1583	73.703	2.6165	.95519	CCV12
112	CCB12	.03140	.00234	-.00045	.00034	.00017	- 00203	.00002	.04061*	.00014	.00014	CCB12
113	K216-02	.17734	.01120	.01232	.31831	.00195	.15165	.00216	4.5559	.00245	.00175	K216-02
114	Blank	.02037	.00138	-.00032	.00038	.00013	-.00576	-.00006	.01325	.00012	.00003	Blank
115	CCV13	101.85	1.4951	1.0854	1.9447	1.4293	2.5560	2.1458	73.297	2.6076	.95894	CCV13
116	CCB13	.02656	00246	-.00092	.00034	.00022*	-.00183	.00000	.02600	.00022	.00015	CCB13
117	K542-06A	5.3369	2.4780	.63303	.53279	53384	.51101	.60107	50.191	.56765	.54563	K542-06A
118	K542-06A	10.628	4.8497	1.2526	1.0596	1.0617	.99086	1.1547	49.498	1.1189	1.0847	K542-06A
119	K542-06I	.06167	.00710	.00316	.00111	00014	.00985	.02352	1.4651	.00039	00118	K542-06I
120	K542-06J	.02432	.00411	.00195	.00048	.00016	-.00263	.00457	.30811	.00013	.00029	K542-06J
121	K542-06M	.52670	.24281	.06175	.05239	.05168	.05832	.07975	6.4892	.05510	.05294	K542-06M
122	K542-06S	.52972	.24673	.06223	.05212	.05154	.06005	.08184	6.6218	.05605	.05390	K542-06S
123	Blank	.02049	.00279	.00126	.00036	.00007	-.00697	-.00003	.02403	.00003	.00007	Blank
124	CCV14	101.70	1.4873	1.0822	1.9388	1.4273	2.5407	2.1326	73.128	2.6164	.95771	CCV14
125	CCB14	.02584	.00164	.00008	.00043	.00016	-.00245	-.00002	.03013	.00017	.00005	CCB14
126	K133-01A	5.8627	2.6865	.63462	.54314	.52239	.65501	.59158	195.96	.57060	.53080	K133-01A
127	K133-01I	.04072	.00148	-.00101	.01222	.00017	.09970	-.00014	150.28	.00059	-.00028	K133-01I
128	K133-01J	.03044	.00132	-.00022	.00270	.00018	.01392	-.00002	30.054	.00047	-.00005	K133-01J
129	Blank	.01664	.00186	-.00154	.00012	00010	-.00657	-.00008	.01959	.00007	.00005	Blank
130	CCV15	102.86	1.4915	1.0662	1.9796	1.4476	2.5165	2.0918	73.009	2.5491	.95832	CCV15
131	CCB15	.01959	.00217	.00037	.00029	.00017	-.00229	.00002	.02431	.00024	.00000	CCB15
132	IPK046WB	.02210	.00167	.00083	.00042	.00020	-.00490	.00001	.01695	.00015	.00006	IPK046WB
133	IPK046WL	5.4484	2.5855	.55690	.51148	.50956	.52800	.55287	49.842	.53042	.50150	IPK046WL
134	IPK046WC	5 4200	2.5621	.55240	.51040	.50884	.52474	.54913	49 388	.52853	.49833	IPK046WC
135	K229-01A	6.0586	2.6222	.60844	.57608	.53572	.53922	.59125	199.27	.56037	.54383	K229-01A
136	K229-01	.14909	.00247	-.00021	.02496	00026	-.00232	01697	153.56	.00080	.00728	K229-01
137	K229-01J	.05718	.00138	-.00097	.00555	00015	-.00529	.00369	32.804	.00041	.00149	K229-01J
138	K229-01M	5.8152	2.6369	.57484	.55082	51109	.53621	.55960	203 69	52551	.51292	K229-01M
139	K229-01S	5.8096	2.6319	.57380	.54432	50795	.53940	.55907	204 28	.52685	.51244	K229-01S
140	K229-03	1.1422	.00207	-.00003	.05114	.00026	- 00268	.00975	99.933	.00244	00047	K229-03
141	Blank	.01423	.00119	.00041	.00024	.00012	-.00705	-.00004	.02224	.00009	-.00006	Blank
142	CCV16	101.61	1.4877	1.0704	1.9171	1.4089	2 5269	2.0808	72.925	2.5643	.95528	CCV16
143	CCV16	.01985	00149	.00000	00023	C0016	-.00325	.00004	.02757	.00030	.00003	CCV16
144	K133-01A	11.697	5 3091	1.2554	1.0590	-.0263	1 1969	1.1520	193 73	1.1212	1.0589	K133-01A
145	K542-06A	10.805	4 8861	1.2226	1 0536	1 0493	1 0122	1.1494	49 423	1.1248	1.0865	K542 06A
146	K542-06A	5.4604	2.4909	.62217	.53595	53290	.51403	.59306	49 664	56970	.54961	K542-06A
147	K542-06G	.02823	.00656	.00263	.00086	00021	.00297	.01509	94990	00031	.00098	K542-06G
148	K542-06J	.02132	.00321	.00064	.00032	.00017	-.00506	.00323	.20830	00025	.00033	K542-06J
149	Blank	01853	.00199	-.00025	00028	00010	-.00702	-.00002	.01730	.00024	00000	Blank
150	CCV17	102.15	1.4845	1.0574	1.9896	1.4452	2.5060	2.0597	72.555	2.5250	95838	CCV17
151	CCB17	.02034	.00156	.00059	.00023	.00015	-.00224	-.00001	.02429	.00028	.00005	CCB17
INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID

ID8K024 Section 1 of 3

ID8K024 Section 2 of 3

INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID
1	Blank	.00101	.00002	.00010	-.00009	.00003	00004	.00002	-.00044	.00067	.00001	Blank
2	S20			.20630			.09887					S20
3	S21			2.0700			.98360					S21
4	S22	.26664	.04667									S22
5	S23	2.5787	1.8285									S23
6	S24							.77607				S24
7	S25							7.7096				S25
8	S26								.75597	.48454		S26
9	S27								7.5111	5.0274		S27
10	S28					.02254						S28
11	S29					.22282						S29
12	S30				04032						.00135	S30
13	S31				.19805						.00539	S31
14	ICV	2.6363	25.061	2.3935	.53855	56.439	2.3062	2.4751	2.4534	58.494	1.0258	ICV
15	ICB	.00021	-.00077	- 00027	.00021	-.00080	.00020	.00030	.00000	.15491	-.00210	ICB
16	MRLK3001	.01113	.21605	.00989	.00995	.96260	.01013	.01039	.01020	1.0219	.00811	MRLK3001
17	MRLK3002	.01059	.10312	.00270	.10117	.18269	.00492	.00967	.01030	.99458	.00991	MRLK3002
18	ICSA1	.00137	189.08	.00583	.01641	190.78	.00091	-.00104	.00090	.22864	.00112	ICSA1
19	ICAB1	.55266	189.51	.93432	1.1643	188.99	.45558	.99970	.95743	77.785	1.0243	ICAB1
20	CCV1	******	******	2.3525	49912	56.003	2.2722	2.4648	2.4238	59.120	-4.9509*	CCV1
21	CCB1	.00027	.00065	.00010	-.00066	.00059	-.00006	.00038	-.00009	.10517	-.00110	CCB1
22	K542-08	68.681*	393.06	.14822	.00678	11.735	13.317	01103	.84332	1.8713	.00783	K542-08
23	Blank	.00360	.01684	.00009	-.00038	-.00396	.00070	00008	-.00004	-.07629	-.00113	Blank
24	CCV2	2.6365	24.846	2.3653	50262	55.816	2.2804	2.4645	2.4254	59.324	1.0328	CCV2
25	CCB2	.00030	-.00111	- 00001	.00016	-.00338	.00019	.00034	.00001	.03259	-.00185	CCB2
26	K542-08W	67.998*	390.81	.14632	00674	11.505	13.097	.01105	.83574	1.8086	.00767	K542-08W
27	K550-08	.01540	3.6483	.01080	.07935	7.7398	.15119	.04936	11502	7.8106	-.00055	K550-08
28	Blank	.00062	.00250	- 00006	.00041	-.01077	.00015	.00010	.00013	-.11439	.00066	Blank
29	CCV3	2.7006	25.443	2.4201	.54613	57.159	2.3424	2.4914	2.4808	59.719	1.0495	CCV3
30	CCB3	.00048	.00130	- 00026	- 00051	.00667	.00037	00033	.00000	-.03163	-.00103	CCB3
31	IPK041WB	.00034	-.00045	.00008	.00064	-.01157	00021	00002	00002	-.07904	-.00114	IPK041WB
32	IPK041WL	.55251	5.2144	.48893	.00131*	46.696	46722	51157	50617	49.207	.52331	IPK041WL
33	IPK041WC	.55514	5.2296	.49177	.00155*	47.050	.47195	51524	50948	49.680	52761	IPK041WC
34	K205-01A	.65047	7.4842	.52595	.05519	203.29	.86425	53516	48162	78.371	.62038	K205-01A
35	K205-01	.00225	2.2922	.00348	.05376	158.12	.38590	00100	.00215	21.354	00176	K205-01
36	K205-01J	.00093	.49640	00088	01073	33.259	.08351	-.00021	.00032	4.0598	-.00286	K205-01J
37	K205-01M	.60478	7.1969	49253	05477	210.01	.85836	.54403	.50977	78.707	.49420	K205-01M
38	K205-01S	.59445	7.1236	48603	05532	207.68	.84317	.53350	.50216	77.771	48579	K205-01S
39	K203-15	09833	163.34	1 0837	05257	7.4962	6.4687	.00549	.11749	9.5015	00087	K203 15
40	Blank	00012	.00765	00026	-.00116	-.00353	.00046	.00001	-.00003	-.05344	-.00133	Blank
41	CCV4	2.6647	25.011	2 3563	.49679	56.034	2.2894	2 4372	2.4232	59.436	1.0469	CCV4
42	CCB4	.00027	.00006	.00031	00012	-.00490	-.00002	00032	-.00007	.03068	-.00183	CCB4
43	K205-02	.00184	31.476	.00200	.02991	18.545	.72514	-.00006	.00355	9.9782	- 00172	K205-02
44	K205-03	.00197	.21687	.00471	.04446	140.12	3.3029	-.00097	.00520	5.6793	- 00040	K205-03
45	K205-04	.00072	.00108	-.00045	.00010	.05700	.00006	00004	-.00013	.11391	-.00276	K205-04
46	K205-05	.00064	.00357	.00000	-.00046	.04680	.00019	.00004	-.00014	.07381	-.00176	K205-05
47	K184-01	.00197	1.8839	.00242	.04773	127 41	43581	.00044	.00026	16.533	-.00172	K184-01
48	K184-02	.00216	2.6246	.00233	.06093	228.48	.55413	.00143	.00070	22.846	-.00057	K184-02
49	K184-03	.00183	24.945	.00326	05910	123.20	1.3849	-.00073	00192	20.171	- 00043	K184-03
50	K184-04	.00158	24.022	00205	06845	214.89	1.6159	- 00076	00157	23.428	.00221	K184-04
51	K184-05	.00199	9.8493	.00261	.07892	267.54	.98652	-.00153	.00204	27.411	-.00036	K184 05
52	Blank	-.00007	-.00269	-.00010	-.00056	.00169	.00006	.00004	-.00026	.19560	.00018	Blank

53	CCV5	2.7551*	24.974	2.3438	49876	55.132	2.2902	2.4271	2.4336	59.839	1.0361	CCV5
54	CCB5	.00016	-.00109	.00025	-.00008	.00003	.00005	.00026	-.00015	.10156	-.00105	CCB5
55	K174-01	00142	3.9476	.00236	06204	199.10	.96310	.00114	-.00006	19.394	-.00165	K174-01
56	K174-07	.00151	3.8980	.00291	.06152	197.72	.95323	.00125	-.00002	19.392	.00068	K174-07
57	K188-03	.00226	62.554	00444	.06439	195.43	2.3049	-.00112	.00195	28.831	.00527	K188-03
58	Blank	-.00014	-.00024	.00012	-.00048	.01508	.00002	.00007	-.00019	.13398	-.00288	Blank
59	CCV6	2.6770	24.852	2.3492	.50745	56.882	2.3453	2.4377	2.4241	59.642	1.0221	CCV6
60	CCB6	-.00003	.00111	-.00005	-.00051	-.00301	.00012	.00032	-.00007	.08447	-.00125	CCB6
61	K542-06A	.62185	6.1279	.51214	.01897	52.494	.55145	.55271	.80292	51.273	.79292	K542-06A
62	K542-06T	.03569	.78437	-.00250	.01638	5.6927	.04881	-.00073	.30644	2 0795	.04198	K542-06T
63	K542-06J	.00741	15219	-.00023	.00267	1.1184	.00944	.00002	.05543	.41807	.00657	K542-06J
64	K542-06M	.15682	1.9354	.10583	.01779	15.633	.15363	.11958	.44279	12.452	.18504	K542-06M
65	K542-06S	.17688	2.1823	.11790	.02154	17.780	.17613	.13465	.51503	14.010	.21683	K542-06S
66	Blank	-.00008	-.00233	-.00002	-.00075	.00608	.00011	.00011	-.00019	-.00798	- 00001	Blank
67	CCV7	2.7751*	25.098	2.3871	.55571*	57.699	2.4143	2.4408	2.4670	59.973	1.0481	CCV7
68	CCB7	.00017	.00175	.00045	-.00062	.00909	.00012	.00030	-.00013	.01316	-.00093	CCB7
69	K205-01A	.62118	5.8987	.51793	.01139	81.262	.59174	.49209	.47913	57.316	.58869	K205-01A
70	K205-01T	.00144	.49298	.00129	.00951	32.384	.08241	-.00013	.00025	3.8637	-.00028	K205-01T
71	K205-01J	.00116	.10136	.00018	.00143	6.3361	.01677	.00007	-.00008	.69200	-.00004	K205-01J
72	K205-01M	.12294	1.5732	.10238	.01079	42.704	.18376	.10687	.10672	15.083	09664	K205-01M
73	K205-01S	.12011	1.5640	.10245	.01032	43.441	.18697	.10543	.10562	14.994	.09647	K205-01S
74	Blank	.00134	.00899	.00059	-.00028	.01823	.00049	.00013	-.00016	.01078	-.00186	Blank
75	CCV8	2.7565*	25.021	2.3756	.54142	56.986	2.3786	2.4017	2.4394	58.814	1.0642	CCV8
76	CCB8	.00104	.01059	.00060	-.00087	.00675	.00028	.00039	-.00022	.03948	-.00197	CCB8
77	K198-05A	.62025	5.5572	.52564	.03177	60 916	.52429	.64956	.47838	52.920	.59945	K198-05A
78	K198-05	.00152	.01217	.00295	.02943	12.277	.00203	.14507	-.00018	1.9625	.00083	K198-05
79	K198-05J	.00049	.00237	.00041	.00556	2.6232	.00042	.02996	-.00019	.39283	-.00126	K198-05J
80	K198-05M	.57263	5.1807	.48577	.03207	58.665	.47637	.64813	.50235	52.144	.55150	K198-05M
81	K198-05S	57452	5.2256	.49222	.03135	59.182	.48193	.65360	.50631	52.481	.55594	K198-05S
82	K198-03	.00165	.01782	.00751	.03559	11.295	.00165	.00477	.00265	2.4370	-.00009	K198-03
83	K198-04	.00256	.23809	.00558	.04511	10.473	.00229	.00203	.00009	2.4535	- 00053	K198-04
84	Blank	-.00010	- 00319	.00017	-.00054	-.01219	.00005	.00007	-.00027	- 02034	-.00201	Blank
85	CCV9	2.7692*	25.046	2.3465	.50795	56.814	2.3596	2.4017	2.4280	59 964	1.0653	CCV9
86	CCB9	.00022	- 00226	-.00021	-.00011	.00491	.00019	.00044	-.00015	02913	- 00040	CCB9
87	K207-01	.00085	.00289	.00263	03402	11.785	-.00002	.01454	-.00030	2.1869	- 00040	K207-01
88	K207-02	.00102	.13712	.00160	.03059	11.039	.00509	01370	-.00018	2.0757	00047	K207-02
89	Blank	00027	.00237	.00021	-.00134	- 00549	-.00010	.00008	-.00027	-.05227	00060	Blank
90	CCV10	2.7380	24 896	2.3578	50776	56 840	2 3620	2 4064	2 4277	59.785	1 0600	CCV10
91	CCB10	00018	.00058	-.00001	-.00088	.00300	.00029	.00026	-.00016	.01809	- 00129	CCB10
92	K119-01A	.59910	5.6207	52037	00241	51.458	54816	.49682	.47435	50 575	57533	K119-01A
93	K119-01W	.00036	.08478	00012	.00075	2.8199	02168	.00157	-.00027	67437	.00130	K119-01W
94	K119-01J	.00004	.01361	.00037	-.00041	54064	.00429	.00034	-.00016	07935	-.00271	K119-01J
95	K133-01A	.64885	5.4978	.51681	.02378	150 08	1 1349	.51403	.48074	63.294	.64706	K133-01A
96	K133-01T	.00160	03802	.00044	.02264	102.45	.63433	-.00039	-.00017	6.5318	-.00087	K133-01T
97	K133-01J	.00055	00565	.00007	00311	19 342	.12297	-.00006	- 00030	1.1179	-.00064	K133-01J
98	Blank	.00026	-.00328	- 00009	-.00110	-.00034	.00007	.00016	-.00014	.02757	- 00108	Blank
99	CCV11	2.7510*	25.080	2 3659	.49983	56 224	2.3397	2.4083	2.4337	59 815	1.0901	CCV11
100	CCB11	.00024	.00009	.00047	-.00149	01329	.00051	.00049	.00009	.03082	.00060	CCB11
101	IPK045WB	.00060	-.00157	.00009	-.00041	.01220	.00022	.00017	-.00015	-.03017	.00142	IPK045WB
102	IPK045WL	.56765	5.2272	.49157	.00021*	48.759	.49853	.51120	.51245	49.857	53240	IPK045WL
103	IPK045WC	.57664	5.2873	.49238	.00087*	47 705	.48513	.51449	51538	49.796	54453	IPK045WC
104	TXK010SB	.00153	01369	.00007	-.00096	.01345	.00039	.00062	-.00014	.19055	00162	TXK010SB
105	K216-01A	.62432	5.5055	.51676	.00226	49.334	2.1461	.51028	.48819	54.393	61928	K216-01A
106	K216-01	.00397	.01454	.00020	.00065	2.3359	1.7115	.00004	.00397	.95969	.00228	K216-01
107	K216-01J	.00109	00306	.00005	- 00021	.49395	.35715	.00012	.00091	.18170	.00015	K216-01J

INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID
108	K216-01M	.58663	5 2713	.49657	.00271	50.658	2.2290	.52614	.52695	54.775	.59224	K216-01M
109	K216-01S	.58464	5.3002	.49781	.00171	51.552	2.2109	.52955	.52736	54.669	.59306	K216-01S
110	Blank	.00012	-.00007	-.00017	-.00061	.00709	.00039	.00014	-.00011	.0967B	-.00018	Blank
111	CCV12	2.7654*	25.115	2.3478	.50773	57.522	2.3842	2.3942	2.4228	60.089	1.0844	CCV12
112	CCB12	.00023	-.00245	-.00032	-.00102	.00248	.00027	.00043	-.00011	.05047	-.00063	CCB12
113	K216-02	.00912	.07678	.00286	.00002	2 4723	.01539	.00210	00372	.81717	.00317	K216-02
114	Blank	-.00001	-.00364	.00041	-.00167	.00291	.00019	00008	-.00024	.00082	-.00162	Blank
115	CCV13	2.8003*	25.207	2.3524	.49888	56.075	2.3385	2.3935	2.4394	60.362	1.0904	CCV13
116	CCB13	.00021	-.00037	.00021	-.00086	.00544	.00025	.00037	-.00010	.04599	-.00118	CCB13
117	K542-06A	.60836	5.7049	.51428	.00959	50.200	.54116	.52210	.62657	50.562	.71963	K542-06A
118	K542-06A	1.1952	10.970	1.0221	.00961	49.516	1.0534	1.0295	1.1069	49.654	1.4040	K542-06A
119	K542-06I	.01687	.37642	.00084	.00809	2.9219	.02634	-.00026	.14495	1.0181	.01912	K542-06I
120	K542-06J	.00332	.07118	.00049	.00114	.59568	.00485	-.00003	.02696	.16755	.00384	K542-06J
121	K542-06M	.07136	.89157	.04997	.00785	7.7876	.07555	.05173	.19789	5.7206	.07724	K542-06M
122	K542-06S	.07428	.92294	.05025	.00844	7.8884	.07568	.05272	20894	5.7816	.07965	K542-06S
123	Blank	-.00018	.00090	-.00020	-.00111	.00230	-.00004	.00000	-.00025	-.06439	.00018	Blank
124	CCV14	2.8072*	25.290	2.3420	.49884	56.005	2.3304	2.3912	2.4365	60.042	1.0860	CCV14
125	CCB14	.00017	-.00022	-.00029	-.00079	.00335	.00010	.00035	-.00014	.00974	-.00058	CCB14
126	K133-01A	.62687	5.4851	.51728	.01228	97.939	.82547	.50798	47927	57.537	.62249	K133-01A
127	K133-01I	00120	.01917	.00022	.01005	50.443	.31720	-.00007	00014	3.0198	-.00158	K133-01I
128	K133-01J	.00045	.00627	-.00017	.00114	10.006	.06437	.00007	00012	.56837	-.00003	K133-01J
129	Blank	-.00008	-.00313	.00011	-.00091	-.01758	-.00008	.00008	- 00022	.00854	-.00156	Blank
130	CCV15	2.7404	24.907	2.3557	.51006	56.667	2.3664	2.4137	2.4365	60.080	1 0734	CCV15
131	CCB15	.00003	.00062	-.00034	-.00030	-.00164	.00003	.00034	-.00019	.03436	-.00050	CCB15
132	IPK046WB	.00046	.00375	.00036	-.00084	-.00019	.00028	.00019	-.00011	-.00094	-.00054	IPK046WB
133	IPK046WL	.56510	5.2169	49480	00078*	48.637	.49398	.51149	.51151	50.750	.55055	IPK046WL
134	IPK046WC	.56188	5.1931	.49272	00124*	48.321	.49390	.50818	.50816	50.382	.54376	IPK046WC
135	K229-01A	.61371	5.5524	.54845	.00797	66.276	1.1256	.51348	.49732	52.907	.59826	K229-01A
136	K229-01	.00159	.09244	.01764	.00702	17.649	.60897	-.00021	.01224	1.1378	-.00052	K229-01
137	K229-01J	.00066	.02190	.00389	.00063	3.7712	.13085	.00010	.00271	.22607	-.00099	K229-01J
138	K229-01M	.57378	5.2373	.51809	00815	67.435	1.1225	.52238	52777	53.118	56321	K229-01M
139	K229-01S	.57629	5 2935	.51600	.00808	67.115	1.1048	52110	52730	53.225	.56079	K229-01S
140	K229-03	.00560	.83351	.07705	.00412	7.6377	.09293	.00027	.00251	1.9681	-.00064	K229-03
141	Blank	-.00004	-.00087	-.00029	.00040	-.01847	.00006	.00016	-.00023	-.04040	-.00060	Blank
142	CCV16	2.7806*	25.164	2.3362	.49335	55.027	2 2849	2.3996	2.4292	60.019	1 0650	CCV16
143	CCV16	00011	-.00068	00000	-.00086	.00137	00017	00035	- 00020	.04058	- 00102	CCV16
144	K133-01A	1.2555	10 854	1.0344	.01157	95 794	1 3077	1 0108	95436	57.401	1.2263	K133-01A
145	K542-06A	1.2271	11.045	1.0330	00601	48 143	1.0316	1.0177	1 0596	50 176	1 3255	K542-06A
146	K542-06A	.61878	5.7028	52321	00705	48.717	.53219	.51534	58207	50.423	.68162	K542-06A
147	K542-06G	01119	24194	.00051	00484	1 8786	.01605	- 00014	09294	69742	.01145	K542-06G
148	K542-06J	00238	05356	.00001	00018	.40646	.00355	.00005	01915	.11689	.00092	K542-06J
149	Blank	- 00010	-.00163	.00012	00010	-.00455	.00013	.00013	00021	.02269	-.00056	Blank
150	CCV17	2 7368	24.758	2.3561	.51386	56.510	2.3696	2.4210	2.4333	60.279	1.0606	CCV17
151	CCB17	.00006	.00067	.00018	- 00067	.00175	.00013	.00025	-.00018	.04771	-.00115	CCB17

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INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID
1	Blank	.00010	.01064	- 00007	-.00002	.00015	.00006	-.00016	.00091	Blank
2	S20									S20
3	S21									S21
4	S22							.12054		S22
5	S23							1.1852		S23
6	S24		1.4536							S24
7	S25		8.3236							S25
8	S26									S26
9	S27									S27
10	S28				.00549					S28
11	S29				.05337					S29
12	S30	.04063		.15175		.02596	.01711		.61063	S30
13	S31	.20104		.73796		.12373	.09051		5.8958	S31
14	ICV	.50541	62.915	.48488	2.2809	.46493	.49633	1.5253	2.5609	ICV
15	ICB	.00011	-.18152*	.00008	.00132	-.00033	-.00007	.00002	-.00041	ICB
16	MRLK3001	.01048	.85537	.01054	01163	-.00009	.00993	.01066	.02282	MRLK3001
17	MRLK3002	.00992	.32290*	.01009	01150	.00926	.01034	.01029	.01092	MRLK3002
18	ICSA1	-.00011	-.03086	.00101	-.00232	.00145	.00374	.00069	.00261	ICSA1
19	ICAB1	1.0869	82.991	.47825	83329	.90834	.98893	.49528	1.0138	ICA81
20	CCV1	******	63.494	.48211	-10.967*	49228	.48540	******	2.5429	CCV1
21	CCB1	.00004	-.19933*	.00009	.00078	.00012	.00000	.00029	.00077	CCB1
22	K542-08	.00558	20.822	.11901	-.00714*	.04452	.19312	.05513	85.419*	K542-08
23	Blank	.00002	-.20122	.00016	00058	-.00028	-.00007	.00013	.00400	Blank
24	CCV2	.51144	63.667	.48352	2.3129	.49186	.48721	1.5109	2.5516	CCV2
25	CCB2	.00006	-.21891*	.00011	.00117	-.00050	.00001	.00021	.00066	CCB2
26	K542-08W	.00568	20.484	.11758	-.00536*	.04507	.18945	.05402	83.743*	K542-08W
27	K550-08	-.00022	63.785	.10887	00032	-.00028	.00207	.00218	20254	K550-08
28	Blank	-.00005	-.22790	00007	00100	-.00043	.00058	.00002	.00249	Blank
29	CCV3	.52241	64.234	.49233	2.3697	46405	50069	1.5484	2.5894	CCV3
30	CCB3	-.00002	-.23289*	.00025	.00144	.00052	.00059	00020	00589	CCB3
31	IPK041WB	-.00002	-.26028	00006	.00070	-.00029	.00010	00007	.00152	IPK041WB
32	IPK041WL	.52976	53.543	49921	49355	.46929	.50713	52796	52468	IPK041WL
33	IPK041WC	.53192	54.064	.50404	49716	.47103	.50640	.52969	.52806	IPK041WC
34	K205-01A	.62668	949.85*	6 1484	45969	47287	.51048	.56736	.58254	K205-01A
35	K205-01	-.00043	918.51*	5 7720	- 00013	.00067	00558	.00410	.01295	K205-01
36	K205-01J	-.00010	198.13	1 2009	- 00007	-.00095	.00248	.00089	.00348	K205-01J
37	K205-01M	.62420	963.93*	6 2497	43580	47689	.51805	.53264	.54237	K205-01M
38	K205-01S	61496	948.81*	6 1491	42856	.46805	.50654	.52566	53342	K205-01S
39	K203 15	.00077	.23550	.10462	00382	.03480	1.9060	33787	5 1133	K203-15
40	Blank	-.00008	-.13533	.00014	.00095	00037	.00059	.00001	.00132	Blank
41	CCV4	.52124	64.130	.48254	2.3571	.48233	.48311	1.5173	2 5553	CCV4
42	CCB4	-.00004	-.14368*	.00014	.00102	-.00015	.00014	.00020	.00047	CCB4
43	K205-02	-.00024	74.080	1.1629	- 00025	-.00001	.00399	.00467	.02577	K205-02
44	K205-03	-.00048	1086.9*	4.8212	.00032	-.00036	.01066	.01012	.01436	K205-03
45	K205-04	-.00005	1.4246	.00116	.00055	-.00047	.00008	.00013	.00481	K205-04
46	K205-05	- 00011	1.1846	.00102	.00053	-.00048	-.00018	.00007	.00298	K205-05
47	K184-01	- 00043	717.00*	4.9632	-.00004	-.00117	00239	-.00048	.00715	K184-01
48	K184-02	-.00052	1600.0*	5.6644	-.00057	-.00024	.00223	-.00065	.00885	K184-02
49	K184-03	- 00041	622.24	5 0573	-.00011	- 00042	00320	00028	00559	K184-03
50	K184-04	-.00031	1370.4*	5.3942	- 00113	-.00077	.00198	-.00027	.01032	K184-04
51	K184-05	-.00046	1672.8*	7.9830	- 00163	-.00107	00483	.00248	.00589	K184-05
52	Blank	-.00007	.62232	.00054	00036	- 00019	-.00013	.00004	.00098	Blank

53	CCV5	.52697	64 595	.49222	2.3096	.47237	.47726	1.5147	2.5355	CCV5
54	CCB5	.00000	06196*	.00010	.00129	-.00054	-.00015	.00015	.00055	CCB5
55	K174-01	-.00064	1278.8*	5.9043	-.00057	-.00030	.00210	-.00030	.00195	K174-01
56	K174-07	-.00040	1258.2*	5.8142	-.00012	-.00177	.00243	-.00006	.00450	K174-07
57	K188-03	-.00024	1377.2*	5.8636	-.00440	.00124	.00247	.00016	.01201	K188-03
58	Blank	-.00007	.52903	.00042	.00074	-.00034	.00037	.00008	.00108	Blank
59	CCV6	.51910	64.495	.48543	2.3081	.47823	.49019	1.5070	2.5371	CCV6
60	CCB6	.00007	.06786*	.00006	.00099	-.00057	.00009	.00028	.00046	CCB6
61	K542-06A	.49445	103.15	.53161	.45904	47388	.50140	.56782	4.4496	K542-06A
62	K542-06T	-.00002	49.452	.04243	.02697*	.01479	.00009	.00028	3.8638	K542-06T
63	K542-06J	.00005	9.5785	.00824	-.00360	.00182	.00001	.00012	.67547	K542-06J
64	K542-06M	.10758	64.178	.15485	.07186	.11401	.10731	.11609	4.2520	K542-06M
65	K542-06S	.11999	74.494	.17615	.07504	.12897	.12122	.12983	5.0480	K542-06S
66	Blank	-.00001	-.06548	.00019	.00043	-.00056	.00049	.00005	.00617	Blank
67	CCV7	.53276	64.780	.49967	2.3751	.43998*	.50034	1.5246	2.5557	CCV7
68	CCB7	.00003	-.10589*	.00005	.00114	-.00063	00044	.00012	.00642*	CCB7
69	K205-01A	.55845	251.26	1.6706	.50659	.43657	.48871	.56000	.56990	K205-01A
70	K205-01T	-.00014	198.56	1.1910	.00083	-.00052	.00234	.00089	.00491	K205-01T
71	K205-01J	-.00006	38.230	.23290	.00043	-.00033	.00094	.00022	.00393	K205-01J
72	K205-01M	.11825	212.16	1.3173	.10220	.09415	.10862	.11185	.11464	K205-01M
73	K205-01S	.11728	213.38	1.3219	.10240	.09260	.10688	.11025	.11375	K205-01S
74	Blank	.00005	-.01418	.00021	.00054	-.00064	.00017	.00005	.00287	Blank
75	CCVB	.53251	63.726	49396	2.4179	.43391*	.49283	1.5130	2.5480	CCV8
76	CCBB	.00007	-.08061*	00011	.00061	- 00029	.00037	.00003	.00395	CCB8
77	K198-05A	.55468	103.63	1.2740	54619	.45017	.50936	.56B53	.60628	K198-05A
78	K198-05	-.00005	48.125	.78125	.00068	-.00051	.00072	.00681	.04211	K198-05
79	K198-05J	-.00006	9.9403	.16633	.00086	-.00045	00004	.00147	.00942	K198-05J
80	K198-05M	.55003	102.21	1.2743	.49415	44804	49814	.53097	.56152	K198-05M
B1	K198-05S	.55394	102.06	1.2746	.50057	.45532	.50198	.53354	.57538	K198-05S
82	K198-03	.00000	45 690	.86846	.00059	-.00046	.00174	.00611	.27413	K198-03
83	K198-04	-.00010	48.008	.99870	- 00044	- 00087	00092	.00757	36317	K198 04
84	Blank	-.00003	-.12821	00014	00031	- 00044	00044	-.00005	.00129	Blank
85	CCV9	.53836	65 036	49591	2.4063	.45999	.48563	1.5136	2.5484	CCV9
86	CCB9	-.00003	-.14020*	.00009	.00127	-.00048	.00005	-.00010	.00039	CCB9
87	K207-01	-.00020	45 493	86042	-.00034	-.00041	.00161	00625	01848	K207-01
88	K207-02	.00007	42.911	81100	.00060	-.00048	.00101	00500	.04335	K207-02
89	Blank	-.00002	- 13338	00013	.00094	-.00037	-.00011	-.00002	.00136	Blank
90	CCV10	53237	64.750	49584	2.4079	.46373	48548	1 5041	2.5590	CCV10
91	CCB10	-.00004	- 16791*	.00005	.00129	-.00026	-.00007	- 00002	.00147	CCB10
92	K119-01A	.54209	69 989	.63199	54815	.45103	50943	.55730	56356	K119 01A
93	K119-01W	.00004	14.997	.14013	00059	- 00059	00033	.00005	.00075	K119-01W
94	K119-01J	.00005	2.7860	.02767	00068	- 00079	00008	00013	.00028	K119-01J
95	K133-01A	.61418	860.29*	3 1618	.50130	.44925	.49853	.56716	.58460	K133-01A
96	K133-01T	-.00012	822 87*	2.6833	.00027	.00020	.00214	-.00046	.00162	K133-01T
97	K133-01J	-.00003	162 07	50507	.00059	-.00051	.00064	-.00016	.00030	K133-01J
98	Blank	.00004	02486	.00016	00093	-.00008	.00046	00005	.00216	Blank
99	CCV11	.53768	64.792	49313	2.4450	46629	.47987	1.5088	2.5743	CCV11
100	CCB11	-.00003	- 11092*	00024	.00059	-.00055	00046	.00019	.01342*	CCB11
101	IPK045WB	-.00007	-.12858	.00009	00051	-.00015	00063	.00013	.00071	IPK045WB
102	IPK045WL	.54727	54.816	.50950	51368	.44822	.51243	.53200	.53503	IPK045WL
103	IPK045WC	.55301	54 601	.51177	.51625	.45410	.50443	53692	.53791	IPK045WC
104	TXK010SB	.00005	339 92*	.00157	-.00168	.00014	.00094	.00021	.01215*	TXK010SB
105	K216-01A	.55742	392.93	54832	51692	.44553	.49780	.56521	78612	K216-01A
106	K216-01	-.00007	342.41	.05378	.00095	.00057	.00062	.00009	.21325	K216-01
107	K216-01J	.00014	73.502	.01119	00037	-.00059	00026	.00014	.04303	K216-01J

108	K216-01M	.57687	400.17	56750	.49487	.45693	.51852	.53994	.91541	K216-01M
109	K216-01S	.57868	392.18	.56769	.50158	.45815	.52433	.54113	.90903	K216-01S
110	Blank	-.00005	-.01769	.00002	.00030	-.00057	.00039	.00004	.00056	Blank
111	CCV12	.54164	65.331	.49510	2.4527	.45972	.48622	1 5099	2 5600	CCV12
112	CCB12	.00004	-.12724*	.00012	.00065	-.00053	.00047	.00001	.00102	CCB12
113	K216-02	.00208	294 08	.02748	-.00004	.00170	.00273	.00211	.16559	K216-02
114	Blank	-.00002	-.05654	.00014	.00066	-.00048	-.00012	-.00007	.00043	Blank
115	CCV13	.54392	65.353	.49744	2.4285	.45926	.47609	1.5146	2.5681	CCV13
116	CCB13	.00001	-.13796*	.00011	.00099	-.00012	-.00019	.00021	.00051	CCB13
117	K542-06A	.51367	78.339	.51771	.50955	.45068	.50497	.55288	2.3660	K542-06A
118	K542-06A	1.0121	77.507	.99938	1.0120	.88515	.99681	1.0974	2.9473	K542-06A
119	K542-061	.00006	24.484	.02118	-.01145*	.00569	-.00011	.00017	1.8155	K542-06I
120	K542-06J	.00004	4.6165	.00403	-.00160	.00074	.00041	.00019	.33125	K542-06J
121	K542-06M	.05143	30.059	.07175	.03930	.05049	.05133	.05307	1 8847	K542-06M
122	K542-06S	.05225	31.683	.07373	.03832	.05183	.05131	.05409	2.0091	K542-06S
123	Blank	.00007	-.19068	.00003	-.00025	.00019	.00037	.00006	.00112	Blank
124	CCV14	.54143	65.200	.49667	2.4163	.46002	.47478	1.5183	2.5640	CCV14
125	CCB14	.00000	-.18362*	.00010	.00047	-.00062	.00005	.00007	.00075	CCB14
126	K133-01A	.57872	463.12	1.7947	.51493	.44627	.50283	.56116	.57951	K133-01A
127	K133-01I	-.00011	411.25	1.2953	.00020	-.00061	.00160	-.00021	.00194	K133-01I
128	K133-01J	.00008	83.091	.25868	.00046	-.00052	.00045	.00017	.00143	K133-01J
129	Blank	.00011	-.10087	.00010	.00035	-.00045	.00038	.00006	.00054	Blank
130	CCV15	.53142	64.961	.49221	2.3895	.46663	.48595	1.5027	2.5596	CCV15
131	CCB15	.00003	-.15586*	00008	00023	-.00045	-.00012	.00012	.00068	CCB15
132	IPK046WB	.00000	-.16383	.00019	.00060	-.00027	.00029	.00022	.00081	IPK046WB
133	IPK046WL	.54829	55.267	.51117	.51862	.45864	.51836	52759	.53439	IPK046WL
134	IPK046WC	.54509	54.777	.50923	.51682	.45563	.51584	.52457	53186	IPK046WC
135	K229-01A	.54776	60.820	.65379	.53517	.46228	.52057	.55992	4.3023	K229 01A
136	K229-01	-.00017	4.5300	.15771	.00078	- 00031	.00612	.00028	3.7634	K229-01
137	K229-01J	-.00003	.76714	.03363	.00070	- 00018	.00177	00015	79775	K229-01J
138	K229-01M	.56063	61.390	.67469	.50421	.46727	.52827	.52985	4.3832	K229-01M
139	K229-01S	.56289	61.483	.67046	.50340	.46748	.52490	.53393	4.3546	K229-01S
140	K229-03	-.00012	1.6998	.07513	.00012	-.00049	.04957	.00222	1.4623	K229-03
141	Blank	-.00005	-.22476	.00010	00134	-.00035	-.00030	-.00005	00042	Blank
142	CCV16	53564	65 107	49211	2.3762	.46744	.47262	1.5185	2 5519	CCV16
143	CCV16	00002	-.20756*	00007	00133	- 00034	.00033	.00006	00039	CCV16
144	K133-01A	1 1393	455.88	2.2621	1.0121	.89638	.98626	1 1208	1.1476	K133-01A
145	K542-06A	1 0332	69.467	.99525	1.0314	.89399	.98755	1 1130	2 2596	K542 06A
146	K542-06A	52289	70.134	50753	.51961	.45389	.49966	.56136	1 7291	K542 06A
147	K542-06G	00003	15.781	01369	.00747*	.00330	.00034	.00031	1 1444	K542 06G
148	K542-06J	.00015	3 1391	.00298	.00025	00033	.00033	.00021	.23017	K542 06J
149	Blank	.00004	.22839	.00007	.00058	-.00035	.00009	.00009	.00065	Blank
150	CCV17	.52902	65.186	.49336	2.3668	.46894	48687	1.4972	2.5505	CCV17
151	CCB17	-.00002	-.20931*	.00015	.00112	-.00047	-.00033	.00004	00097	CCB17
INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID

ID8K024 Section 3 of 3

EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP METALS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

All samples pH <2

Book #: EIP-104
Batch: iPK041W
Matrix: Water
Digestor ID: E

SOP #	Rev. #
☐ EMAX-3005	4
☑ EMAX-3010	5
☐ EMAX-3050	4
☐ EMAX-200.7	2
☐ EMAX-	

Start	Temp	End	Temp
	95 °C		95 °C

Standards	ID	Amount Added (ml)
LCS-1	SMIA-013-04-13	0.25
LCS-2	SMIA-013-03-13	0.25
LCS-3	SMIA-013-04-14	0.5
MS	Same spike vol and sol as LCS1, LCS2, LCS3	
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SWIA-04-407	1.5+1.5
HCl	SWIA-04-408	2.5+2.5
H_2O_2	N/A	
HNO3(1:1)	N/A	

Digestate Location	ICP
Extract Location	

☑ Reagent Water ID: SMSA-02-076
☑ Thermometer ID: 101993366
☑ Pipette ID: ICP-07
☑ Pipette ID: 142780035
☐ Pipette ID:
☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask
☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask

Prepared By: GG
Standard Added By: GG Witnessed By: NT
Extract Rcvd By: TH Checked By: TH

FileID: IPK041W

EMAX LABORATORIES, INC.

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
11IPK041W01	IPK041WB	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W02	IPK041WL	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W03	IPK041WC	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W04	K184-01	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W05	K184-02	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W06	K184-03	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W07	K184-04	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W08	K184-05	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W09	K174-01	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W10	K174-07	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W11	K188-03	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W12	K205-01	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W13	K205-01M	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W14	K205-01S	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W15	K205-02	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W16	K205-03	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W17	K205-04	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W18	K205-05	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W19	K187-01	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W20	K207-01	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W21	K207-02	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W22	K198-03	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W23	K198-04	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W24	K198-05	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W25	K198-05M	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W26	K198-05S	50	ml	11/28/11 11:54	50	50	50	1	

11/28/11 GG

Vd=digestate volume PrepFctr=)ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 11/28/11 11:54 Prepared By: GG

☑ Digestion Ended @ 11/28/11 16:15 Checked By: TH

Comments: Date 11/28/11

7034

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

WET CHEMICAL ANALYSES

SDG#: 11K174

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K174

METHOD 300.0
ANIONS BY IC

A total of two (2) water samples were received on 11/17/11 for Anions (Chloride, Nitrate, Nitrite and Sulfate) by IC analysis, Method 300.0 in accordance with Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. Results were compliant to project requirement.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for ICK065WL/C were all within QC limits.
Percent recoveries for ICK069WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. Samples K174-01 and -07 for Nitrite were reported from 5x dilution due to interference from high chloride concentrations.

SAMPLE RESULTS

METHOD 300.0
CHLORIDE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K174

Matrix : WATER
Instrument ID : D0

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK069WB	ND	1	NA	0.200	0.100	11/18/1122:17	NA	AK27-36	AK27-34	ICK069W	NA	NA
LCS1W	ICK069WL	1.99	1	NA	0.200	0.100	11/18/1122:33	NA	AK27-37	AK27-34	ICK069W	NA	NA
LCD1W	ICK069WC	2.01	1	NA	0.200	0.100	11/18/1122:49	NA	AK27-38	AK27-34	ICK069W	NA	NA
1W-70-SHB217-144	K174-01	3300	400	NA	80.0	40.0	11/19/1100:26	NA	AK27-44	AK27-34	ICK069W	11/17/1109:58	11/17/11
1R-70-FD-145	K174-07	3270	400	NA	80.0	40.0	11/19/1100:43	NA	AK27-45	AK27-34	ICK069W	11/17/1110:20	11/17/11

METHOD 300.0
NITRATE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K174

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK065WB	ND	1	NA	0.200	0.0500	11/18/1103:50	NA	AK25-67	AK25-65	ICK065W	NA	NA
LCS1W	ICK065WL	0.988	1	NA	0.200	0.0500	11/18/1104:06	NA	AK25-68	AK25-65	ICK065W	NA	NA
LCD1W	ICK065WC	0.987	1	NA	0.200	0.0500	11/18/1104:22	NA	AK25-69	AK25-65	ICK065W	NA	NA
IW-70-SHB217-144	K174-01	ND	1	NA	0.200	0.0500	11/18/1108:25	NA	AK25-84	AK25-77	ICK065W	11/17/1109:58	11/17/11
IR-70-FD-145	K174-07	ND	1	NA	0.200	0.0500	11/18/1108:41	NA	AK25-85	AK25-77	ICK065W	11/17/1110:20	11/17/11

METHOD 300.0
NITRITE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K174

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK065WB	ND	1	NA	0.200	0.0500	11/18/1103:50	NA	AK25-67	AK25-65	ICK065W	NA	NA
LCS1W	ICK065WL	2.07	1	NA	0.200	0.0500	11/18/1104:06	NA	AK25-68	AK25-65	ICK065W	NA	NA
LCD1W	ICK065WC	2.07	1	NA	0.200	0.0500	11/18/1104:22	NA	AK25-69	AK25-65	ICK065W	NA	NA
IW-70-SHB217-144	K174-01	ND	5	NA	1.00	0.250	11/18/1108:58	NA	AK25-86	AK25-77	ICK065W	11/17/1109:58	11/17/11
IR-70-FD-145	K174-07	ND	5	NA	1.00	0.250	11/18/1109:15	NA	AK25-87	AK25-77	ICK065W	11/17/1110:20	11/17/11

METHOD 300.0
SULFATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K174

Matrix : WATER
Instrument ID : D0

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	1CK069WB	ND	1	NA	0.500	0.250	11/18/1122:17	NA	AK27-36	AK27-34	1CK069W	NA	NA
LCS1W	1CK069WL	5.17	1	NA	0.500	0.250	11/18/1122:33	NA	AK27-37	AK27-34	1CK069W	NA	NA
LCD1W	1CK069WC	5.19	1	NA	0.500	0.250	11/18/1122:49	NA	AK27-38	AK27-34	1CK069W	NA	NA
IW-70-SHB217-144	K174-01	733	400	NA	200	100	11/19/1100:26	NA	AK27-44	AK27-34	1CK069W	11/17/1109:58	11/17/11
IR-70-FD-145	K174-07	726	400	NA	200	100	11/19/1100:43	NA	AK27-45	AK27-34	1CK069W	11/17/1110:20	11/17/11

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: TNSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K174
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK069WB	ICK069WL	ICK069WC		
LAB FILE ID:	AK27-36	AK27-37	AK27-38		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1122:17	11/18/1122:33	11/18/1122:49	DATE RECEIVED:	NA
PREP. BATCH:	ICK069W	ICK069W	ICK069W		
CALIB. REF:	AK27-34	AK27-34	AK27-34		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	ND	2.00	1.99	100	2.00	2.01	101	1	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K174
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK065WB	ICK065WL	ICK065WC		
LAB FILE ID:	AK25-67	AK25-68	AK25-69		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1103:50	11/18/1104:06	11/18/1104:22	DATE RECEIVED:	NA
PREP. BATCH:	ICK065W	ICK065W	ICK065W		
CALIB. REF:	AK25-65	AK25-65	AK25-65		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrate-N	ND	1.00	0.988	99	1.00	0.987	99	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K174
METHOD: METHOD 300.0

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK065WB	ICK065WL	ICK065WC		
LAB FILE ID:	AK25-67	AK25-68	AK25-69		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1103:50	11/18/1104:06	11/18/1104:22	DATE RECEIVED:	NA
PREP. BATCH:	ICK065W	ICK065W	ICK065W		
CALIB. REF:	AK25-65	AK25-65	AK25-65		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	2.00	2.07	104	2.00	2.07	103	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K174
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK069WB	ICK069WL	ICK069WC		
LAB FILE ID:	AK27-36	AK27-37	AK27-38		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1122:17	11/18/1122:33	11/18/1122:49	DATE RECEIVED:	NA
PREP. BATCH:	ICK069W	ICK069W	ICK069W		
CALIB. REF:	AK27-34	AK27-34	AK27-34		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	5.17	103	5.00	5.19	104	0	90-110	20

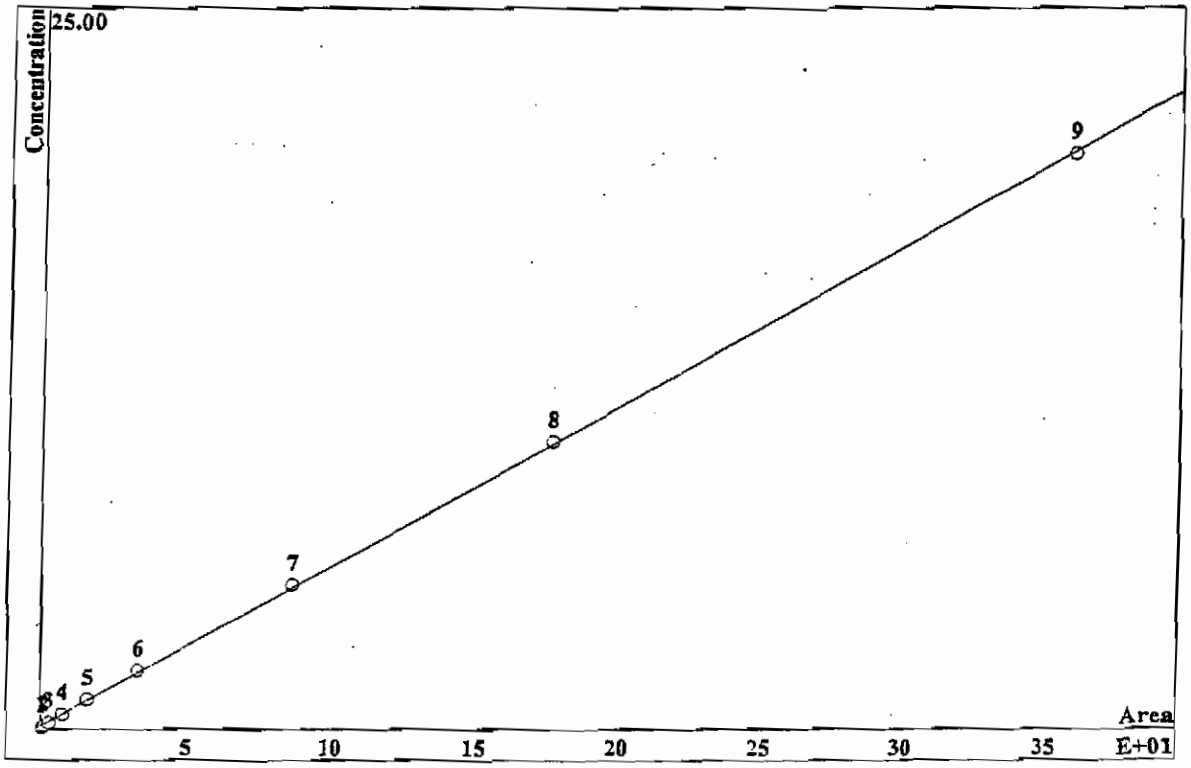
INITIAL CALIBRATIONS

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	nitrite	fluoride	chloride	bromide	nitrate	phosphate	sulfate	RawNetID	DF
AI39-01	IB	IFCBNPS	0	0	0	0	0	0	0	v9301829	1
AI39-02	S0	IFCBNPS	0	0	0	0	0	0	0	v9301845	1
AI39-03	S1	IFCBNPS	0.0402732	0.0794447	0.137238	0.0962101	0.0900188	0.132659	0.181386	v9301901	1
AI39-04	S2	IFCBNPS	0.0827484	0.120657	0.172987	0.138434	0.127411	0.166211	0.219384	v9301917	1
AI39-05	S3	IFCBNPS	0.175829	0.207372	0.255839	0.223376	0.213499	0.241921	0.298411	v9301934	1
AI39-06	S4	IFCBNPS	0.468611	0.487287	0.510168	0.483675	0.481038	0.46682	0.535669	v9301950	1
AI39-07	S5	IFCBNPS	0.987232	0.975831	0.969747	0.947628	0.958434	0.904972	0.974277	v9302006	1
AI39-08	S6	IFCBNPS	2.03579	2.00618	1.92527	1.92275	1.95393	1.87863	1.87805	v9302022	1
AI39-09	S7	IFCBNPS	5.13141	5.00267	4.89791	5.03793	5.02567	5.05879	4.80122	v9302038	1
AI39-10	S8	IFCBNPS	9.9281	9.57748	9.9004	10.4648	10.1254	10.4079	9.8176	v9302054	1
AI39-11	S9	IFCBNPS	18.5849	17.9543	20.0804	21.615	20.3941	21.1232	20.144	v9302111	1
AI39-12	ICV	IFCBNPS	98.6%	100.1%	97.7%	94.1%	98.6%	92.5%	99.9%	v9302127	1
AI39-13	ICB	IFCBNPS	0	0	0	0	0	0	0	v9302143	1

CALIBRATION OF COMPONENT chloride

Method: ICD0-I30.mtw
Equation: Q = 0.0557644·A + 0.0866239
RSD: 1.948 %
Correlation coefficient: 0.999932



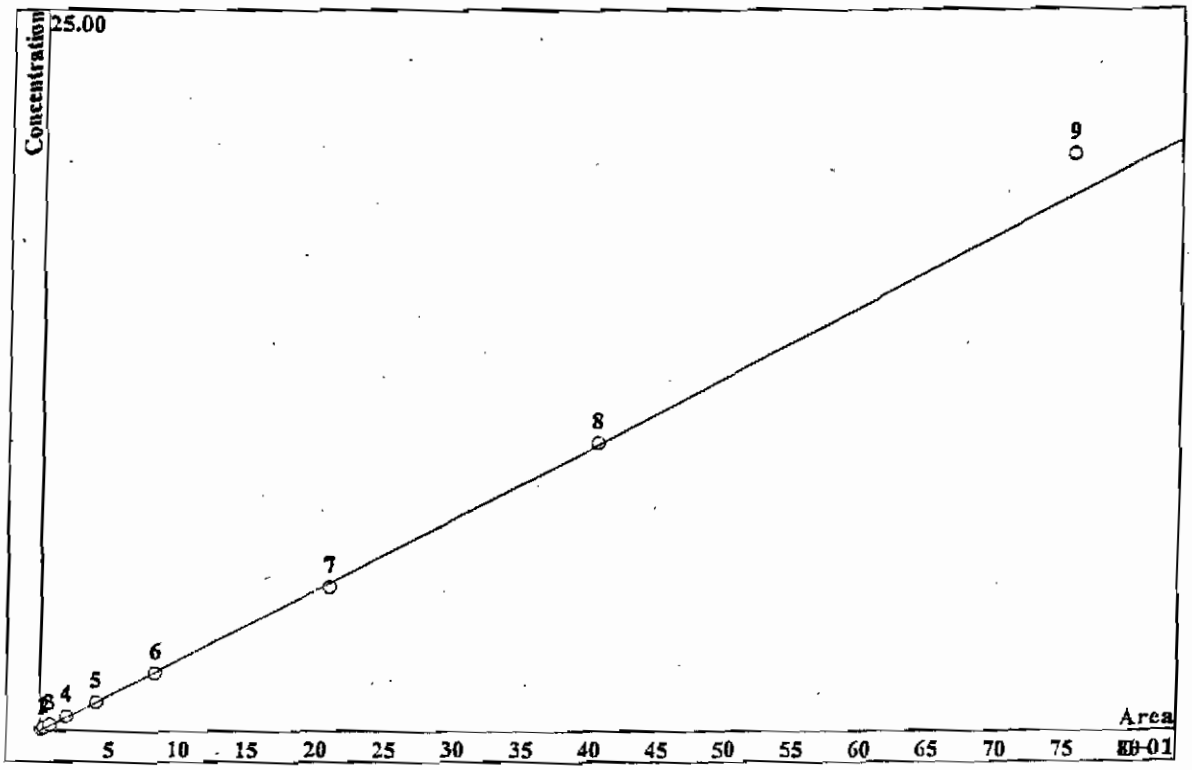
K3 = 0 K2 = 0 K1 = 0.0557644 K0 = 0.0866239
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1035	0.9076	0.05	1	4.26	Yes	v9301901.chw
2	0.1796	1.549	0.1	1	4.26	Yes	v9301917.chw
3	0.354	3.034	0.2	1	4.26	Yes	v9301934.chw
4	0.8921	7.595	0.5	1	4.26	Yes	v9301950.chw
5	1.896	15.84	1	1	4.26	Yes	v9302006.chw
6	3.983	32.97	2	1	4.26	Yes	v9302022.chw
7	10.38	86.28	5	1	4.26	Yes	v9302038.chw
8	21.04	176	10	1	4.26	Yes	v9302054.chw
9	42.24	358.5	20	1	4.26	Yes	v9302111.chw

AA
10/03/11

CALIBRATION OF COMPONENT nitrite

Method: ICD0-I30.mtw
Equation: Q = 0.024644·A + 0.00179217
RSD: 2.785 %
Correlation coefficient: 0.999850



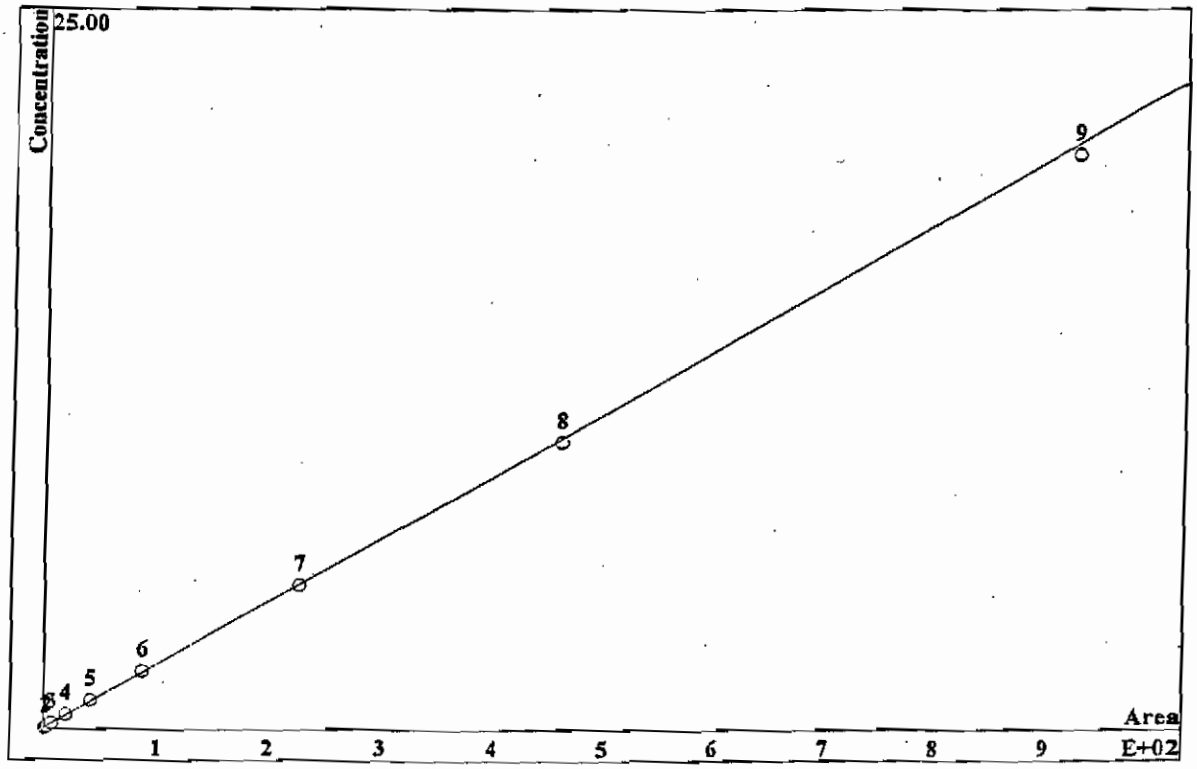
K3 = 0 K2 = 0 K1 = 0.024644 K0 = 0.00179217
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1597	1.561	0.05	1	4.932	Yes	v9301901.chw
2	0.3368	3.285	0.1	1	4.932	Yes	v9301917.chw
3	0.7305	7.062	0.2	1	4.932	Yes	v9301934.chw
4	1.964	18.94	0.5	1	4.932	Yes	v9301950.chw
5	4.115	39.99	1	1	4.932	Yes	v9302006.chw
6	8.392	82.54	2	1	4.932	Yes	v9302022.chw
7	19.91	208.1	5	1	4.932	Yes	v9302038.chw
8	35.83	402.8	10	1	4.932	Yes	v9302054.chw
9	61.98	754.1	20	1	4.932	No	v9302111.chw

RA
10/03/11

CALIBRATION OF COMPONENT nitrate

Method: ICD0-I30.mtw
Equation: Q = 0.0219574·A + 0.0522169
RSD: 3.044 %
Correlation coefficient: 0.999806



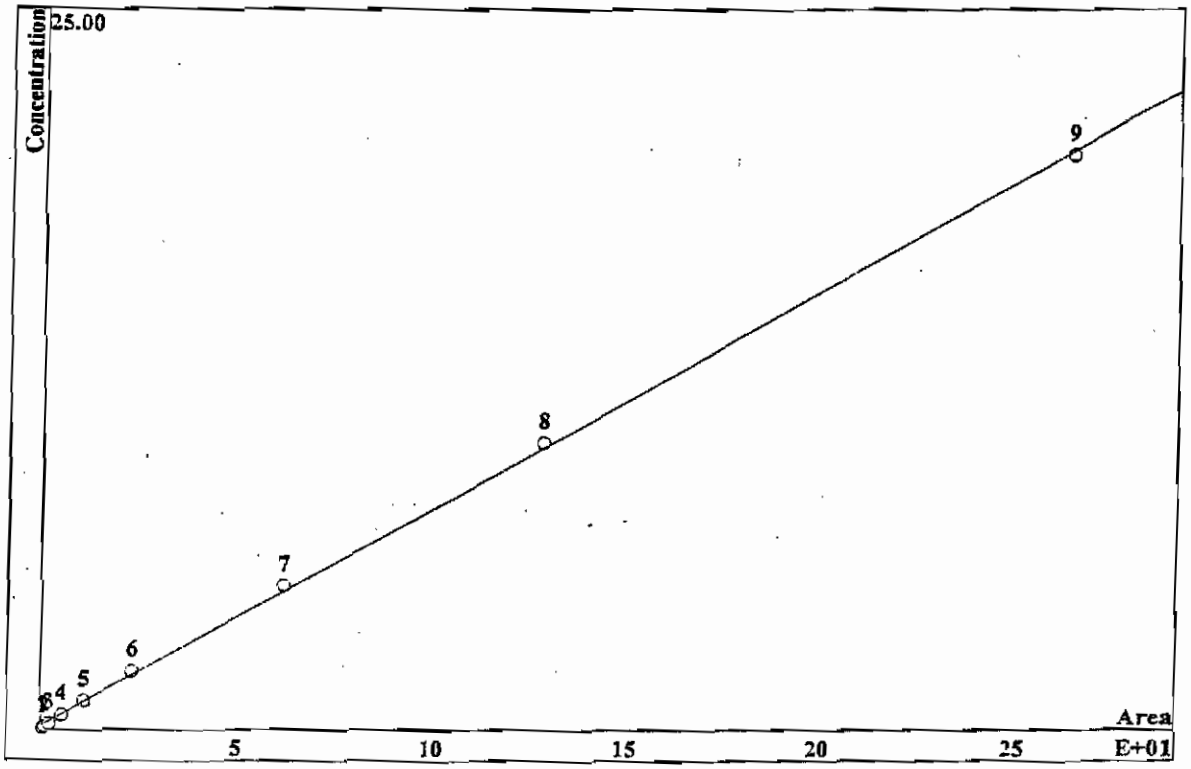
K3 = 0 K2 = 0 K1 = 0.0219574 K0 = 0.0522169
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1416	1.722	0.05	1	6.74	Yes	v9301901.chw
2	0.2866	3.425	0.1	1	6.74	Yes	v9301917.chw
3	0.6179	7.345	0.2	1	6.74	Yes	v9301934.chw
4	1.658	19.53	0.5	1	6.74	Yes	v9301950.chw
5	3.518	41.27	1	1	6.74	Yes	v9302006.chw
6	7.416	86.61	2	1	6.74	Yes	v9302022.chw
7	19.15	226.5	5	1	6.74	Yes	v9302038.chw
8	38.33	458.8	10	1	6.74	No	v9302054.chw
9	74.21	926.4	20	1	6.74	No	v9302111.chw

AS
10/03/11

CALIBRATION OF COMPONENT sulfate

Method: ICDQ-I30.mtw ✓ ✓
Equation: Q = 0.0758014·A + 0.128926
RSD: 3.408 %
Correlation coefficient: 0.999791



K3 = 0 K2 = 0 K1 = 0.0758014 K0 = 0.128926
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.03861	0.6921 ✓	0.05	1	10.79	Yes	v9301901.chw
2	0.06635	1.193 ✓	0.1	1	10.79	Yes	v9301917.chw
3	0.1288	2.236 ✓	0.2	1	10.79	Yes	v9301934.chw
4	0.3105	5.366 ✓	0.5	1	10.79	Yes	v9301950.chw
5	0.6333	11.15 ✓	1	1	10.79	Yes	v9302006.chw
6	1.361	23.08 ✓	2	1	10.79	Yes	v9302022.chw
7	3.625	61.64 ✓	5	1	10.79	Yes	v9302038.chw
8	7.471	127.8 ✓	10	1	10.79	Yes	v9302054.chw
9	15.34	264 ✓	20	1	10.79	Yes	v9302111.chw

AS
10/03/11

SECOND SOURCE VERIFICATION

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	bromide	nitrite	sulfate	fluoride	chloride	nitrate	phosphate	RawNetID	DF
AI39-12	ICV	BISFCNP	94.1%	98.6%	99.9%	100.1%	97.7%	98.6%	92.5%	v9302127	1
AI39-13	ICB	BISFCNP	0	0	0	0	0	0	0	v9302143	1

DAILY CALIBRATIONS

IC Result Check FormVersion : I30/AI39

.FID	LSID	Selection	phosphate	sulfate	fluoride	chloride	nitrite	bromide	nitrate	RawNetID	DF
AK25-01	CCV469	PSFCIBN	106.5%	95.7%	103.9%	97.4%	103.9%	97.6%	96.8%	vb171003	1
AK25-02	CCB469	PSFCIBN	0	0	0	0	0	0	0	vb171019	1
AK25-13	CCV471	PSFCIBN	106.2%	96%	103.8%	97.7%	103.9%	98%	97.2%	vb171317	1
AK25-14	CCB471	PSFCIBN	0	0	0	0	0	0	0	vb171333	1
AK25-25	CCV473	PSFCIBN	108.2%	96.3%	104.1%	98.1%	103.9%	98.1%	97.2%	vb171631	1
AK25-26	CCB473	PSFCIBN	0	0	0	0	0	0	0	vb171647	1
AK25-31	CCV475	PSFCIBN	104.4%	95.5%	103.4%	97.5%	103.6%	97.5%	97.2%	vb171808	1
AK25-32	CCB475	PSFCIBN	0	0	0	0	0	0	0	vb171824	1
AK25-43	CCV477	PSFCIBN	107.4%	96.3%	104.2%	97.9%	103.9%	98%	97.2%	vb172122	1
AK25-44	CCB477	PSFCIBN	0	0	0	0	0	0	0	vb172138	1
AK25-55	CCV479	PSFCIBN	109.6%	95.6%	103.6%	97.5%	103.8%	97.8%	97.4%	vb180036	1
AK25-56	CCB479	PSFCIBN	0	0	0	0	0	0	0	vb180052	1
AK25-65	CCV481	PSFCIBN	109.9%	95.5%	103.2%	97.4%	103.7%	97.5%	96.9%	vb180318	1
AK25-66	CCB481	PSFCIBN	0	0	0	0	0	0	0	vb180334	1
AK25-77	CCV483	PSFCIBN	109.9%	96%	103.7%	97.4%	104.1%	98.5%	97.7%	vb180632	1
AK25-78	CCB483	PSFCIBN	0	0	0	0	0	0	0	vb180648	1
AK25-89	CCV485	PSFCIBN	109.4%	101.5%	103.5%	101.5%	103.9%	98%	99.6%	vb180947	1
AK25-90	CCB485	PSFCIBN	0	0	0	0.121254	0	0	0	vb181003	1
AK25-95	CCV487	PSFCIBN	110.1%*	100.5%	104.5%	98.9%	104%	97.9%	99.4%	vb181124	1
AK25-96	CCB487	PSFCIBN	0	0	0	0	0	0	0	vb181140	1

IC Result Check FormVersion : I30\I39(2011)

LFID	LSID	Selection	phosphate	sulfate	fluoride	chloride	nitrite	bromide	nitrate	RawNetID	DF
AK27-01	CCV489	PSFCIBN	110.3%*	97.9%	103.6%	102.8%	105.2%	102.3%	100.5%	vb181251	1
AK27-02	CCB489	PSFCIBN	0	0	0	0	0	0	0	vb181308	1
AK27-13	CCV491	PSFCIBN	108.5%	98.1%	103.9%	100.5%	104.9%	100.9%	100.3%	vb181605	1
AK27-14	CCB491	PSFCIBN	0	0	0	0	0	0	0	vb181622	1
AK27-25	CCV493	PSFCIBN	109.2%	98.1%	104.1%	100.6%	105%	101.1%	100.4%	vb181919	1
AK27-26	CCB493	PSFCIBN	0	0	0	0	0	0	0	vb181936	1
AK27-34	CCV495	PSFCIBN	110.4%*	98.1%	104.5%	99.6%	105.2%	101.2%	100.2%	vb182145	1
AK27-35	CCB495	PSFCIBN	0	0	0	0	0	0	0	vb182201	1
AK27-46	CCV497	PSFCIBN	111.6%*	98.3%	104.5%	99.5%	105.1%	101.1%	100.2%	vb190059	1
AK27-47	CCB497	PSFCIBN	0	0	0	0	0	0	0	vb190115	1
AK27-58	CCV499	PSFCIBN	110.8%*	98.7%	104.6%	100.1%	105.6%	101.4%	100.7%	vb190413	1
AK27-59	CCB499	PSFCIBN	0	0	0	0	0	0	0	vb190429	1
AK27-67	CCV501	PSFCIBN	110.6%*	98.9%	104.7%	100.5%	105.4%	101.2%	100.8%	vb190638	1
AK27-68	CCB501	PSFCIBN	0	0	0	0	0	0	0	vb190654	1
AK27-79	CCV503	PSFCIBN	116.7%*	99%	104.9%	101.2%	105.5%	101.9%	101.5%	vb190952	1
AK27-80	CCB503	PSFCIBN	0	0	0	0	0	0	0	vb191008	1
AK27-91	CCV505	PSFCIBN	116.1%*	98.7%	105.1%	100.9%	106%	102.3%	101.2%	vb191306	1
AK27-92	CCB505	PSFCIBN	0	0	0	0	0	0	0	vb191322	1
AK27-103	CCV507	PSFCIBN	111.9%*	98.8%	105.2%	101%	105.9%	102%	101.1%	vb191620	1
AK27-104	CCB507	PSFCIBN	0	0	0	0	0	0	0	vb191636	1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Concentrations of:

S_1 — 0.05 ppm
S_2 — 0.1
S_3 — 0.2
S_4 — 0.5
S_5 — 1.0
S_6 — 2.0
S_7 — 5.0
S_8 — 10.0
S_9 — 20.0

Linearity (ppm)

F^- — 5
Cl^- — 20
NO_2N — 10
Br^- — 5
NO_3N — 5
PO_4P — 5
SO_4^{2-} — 20

Column: Metrosep A Supp 5-100

Flow Rate: 0.70 ml/min

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-220 (1000 mM H_2SO_4) 100 ml - 1 L

Book #:	AD0-031
Instrument No.:	D0
Pipette ID's:	039380124
	SWBA-02-12
	SWBA-02-13
Balance ID#:	40706360
Analytical Sequence:	AT39
Method File:	ICD0-T30.mtw
Analytical Batch:	NA

SOP #	Rev. #
☑ EMAX-300.0	6
☐ EMAX-4110B	0
☑ EMAX-9056	3
☐ EMAX-	

STANDARDS ID	
ICAL	SIIB-17-57-02
ICV	SIIB-17-57-03
CCV	NA
LCS	↓
MS	↓

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 9/30/11

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
v9301829.chw	ICD0-130.mtw	AI39-01 IB	1	1.0	1.0	1.0	100.0	0		
v9301845.chw	ICD0-130.mtw	AI39-02 S0	2	1.0	1.0	1.0	100.0	0		
v9301901.chw	ICD0-130.mtw	AI39-03 S1	3	1.0	1.0	1.0	100.0	1		
v9301917.chw	ICD0-130.mtw	AI39-04 S2	4	1.0	1.0	1.0	100.0	2		
v9301934.chw	ICD0-130.mtw	AI39-05 S3	5	1.0	1.0	1.0	100.0	3		
v9301950.chw	ICD0-130.mtw	AI39-06 S4	6	1.0	1.0	1.0	100.0	4		
v9302006.chw	ICD0-130.mtw	AI39-07 S5	7	1.0	1.0	1.0	100.0	5		
v9302022.chw	ICD0-130.mtw	AI39-08 S6	8	1.0	1.0	1.0	100.0	6		
v9302038.chw	ICD0-130.mtw	AI39-09 S7	9	1.0	1.0	1.0	100.0	7		
v9302054.chw	ICD0-130.mtw	AI39-10 S8	10	1.0	1.0	1.0	100.0	8		
v9302111.chw	ICD0-130.mtw	AI39-11 S9	11	1.0	1.0	1.0	100.0	9	FINAL	
v9302127.chw	ICD0-130.mtw	AI39-12 ICV	12	1.0	1.0	1.0	100.0	0		
v9302143.chw	ICD0-130.mtw	AI39-13 ICB	13	1.0	1.0	1.0	100.0	0		

Je 10/3/11

8025

10/3/11

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

AK25-39 K146-03A DF=5 PS NO_3 @ 1ppm

Book #:	AD0-032
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AK25
Method File:	IcD0 -I30.mtw
Analytical Batch:	IcK061W ; IcK063W IcK065W

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SI 18 - 17-91-02
LCS	SI 18 - 17-91-03
MS	SCP Refer to LCS Parent ID

Column: Metrosep A Supp 5-100 Filt 0.45µm : 21787469

Flow Rate: 0.70 ml/min 0.20µm : 121772726

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: Jc

Date: 11/17/11

8026

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb171003.chw	ICD0-I30.mtw	AK25-01 CCV469	1	1.0	1.0	1.0	100.0	0		
vb171019.chw	ICD0-I30.mtw	AK25-02 CCB469	2	1.0	1.0	1.0	100.0	0		
vb171035.chw	ICD0-I30.mtw	AK25-03 ICK061WB	3	1.0	1.0	1.0	100.0	0		
vb171052.chw	ICD0-I30.mtw	AK25-04 ICK061WL	4	1.0	1.0	1.0	100.0	0		
vb171108.chw	ICD0-I30.mtw	AK25-05 ICK061WC	5	1.0	1.0	1.0	100.0	0		
vb171124.chw	ICD0-I30.mtw	AK25-06 K133-03 DF=40	6	1.0	40.0	1.0	100.0	0		
vb171140.chw	ICD0-I30.mtw	AK25-07 K150-01 DF=5	7	1.0	5.0	1.0	100.0	0		
vb171156.chw	ICD0-I30.mtw	AK25-08 K150-01D DF=5	8	1.0	5.0	1.0	100.0	0		
vb171212.chw	ICD0-I30.mtw	AK25-09 K150-01M DF=5	9	1.0	5.0	1.0	100.0	0		
vb171229.chw	ICD0-I30.mtw	AK25-10 K150-01S DF=5	10	1.0	5.0	1.0	100.0	0		
vb171245.chw	ICD0-I30.mtw	AK25-11 K153-01	11	1.0	1.0	1.0	100.0	0		
vb171301.chw	ICD0-I30.mtw	AK25-12 K153-02	12	1.0	1.0	1.0	100.0	0		
vb171317.chw	ICD0-I30.mtw	AK25-13 CCV471	13	1.0	1.0	1.0	100.0	0		
vb171333.chw	ICD0-I30.mtw	AK25-14 CCB471	14	1.0	1.0	1.0	100.0	0		
vb171349.chw	ICD0-I30.mtw	AK25-15 K153-03	15	1.0	1.0	1.0	100.0	0		
vb171406.chw	ICD0-I30.mtw	AK25-16 K153-04	16	1.0	1.0	1.0	100.0	0		
vb171422.chw	ICD0-I30.mtw	AK25-17 K153-05	17	1.0	1.0	1.0	100.0	0		
vb171438.chw	ICD0-I30.mtw	AK25-18 K153-06	18	1.0	1.0	1.0	100.0	0		
vb171454.chw	ICD0-I30.mtw	AK25-19 K146-02 DF=10	19	1.0	10.0	1.0	100.0	0		
vb171510.chw	ICD0-I30.mtw	AK25-20 K146-03	20	1.0	1.0	1.0	100.0	0		
vb171526.chw	ICD0-I30.mtw	AK25-21 K146-04	21	1.0	1.0	1.0	100.0	0		
vb171543.chw	ICD0-I30.mtw	AK25-22 K146-05 DF=2	22	1.0	2.0	1.0	100.0	0		
vb171559.chw	ICD0-I30.mtw	AK25-23 K146-06	23	1.0	1.0	1.0	100.0	0		
vb171615.chw	ICD0-I30.mtw	AK25-24 K153-07	24	1.0	1.0	1.0	100.0	0		
vb171631.chw	ICD0-I30.mtw	AK25-25 CCV473	25	1.0	1.0	1.0	100.0	0		
vb171647.chw	ICD0-I30.mtw	AK25-26 CCB473	26	1.0	1.0	1.0	100.0	0		
vb171703.chw	ICD0-I30.mtw	AK25-27 K548-01	27	1.0	1.0	1.0	100.0	0		
vb171720.chw	ICD0-I30.mtw	AK25-28 K546-02	28	1.0	1.0	1.0	100.0	0		
vb171736.chw	ICD0-I30.mtw	AK25-29 K548-01 DF=20	29	1.0	20.0	1.0	100.0	0		
vb171752.chw	ICD0-I30.mtw	AK25-30 K546-02 DF=10	30	1.0	10.0	1.0	100.0	0		
vb171808.chw	ICD0-I30.mtw	AK25-31 CCV475	31	1.0	1.0	1.0	100.0	0		
vb171824.chw	ICD0-I30.mtw	AK25-32 CCB475	32	1.0	1.0	1.0	100.0	0		
vb171840.chw	ICD0-I30.mtw	AK25-33 ICK063WB	33	1.0	1.0	1.0	100.0	0		
vb171857.chw	ICD0-I30.mtw	AK25-34 ICK063WL	34	1.0	1.0	1.0	100.0	0		
vb171913.chw	ICD0-I30.mtw	AK25-35 ICK063WC	35	1.0	1.0	1.0	100.0	0		
vb171929.chw	ICD0-I30.mtw	AK25-36 K146-02 DF=25	36	1.0	25.0	1.0	100.0	0		
vb171945.chw	ICD0-I30.mtw	AK25-37 K146-02 DF=40	37	1.0	40.0	1.0	100.0	0		
vb172001.chw	ICD0-I30.mtw	AK25-38 K146-03 DF=5	38	1.0	5.0	1.0	100.0	0		
vb172017.chw	ICD0-I30.mtw	AK25-39 K146-03A DF=5	39	1.0	5.0	1.0	100.0	0		
vb172034.chw	ICD0-I30.mtw	AK25-40 K146-04 DF=5	40	1.0	5.0	1.0	100.0	0		
vb172050.chw	ICD0-I30.mtw	AK25-41 K146-05 DF=5	41	1.0	5.0	1.0	100.0	0		
vb172106.chw	ICD0-I30.mtw	AK25-42 K146-06 DF=5	42	1.0	5.0	1.0	100.0	0		
vb172122.chw	ICD0-I30.mtw	AK25-43 CCV477	43	1.0	1.0	1.0	100.0	0		
vb172138.chw	ICD0-I30.mtw	AK25-44 CCB477	44	1.0	1.0	1.0	100.0	0		
vb172154.chw	ICD0-I30.mtw	AK25-45 K166-06	45	1.0	1.0	1.0	100.0	0		
vb172210.chw	ICD0-I30.mtw	AK25-46 K166-01	46	1.0	1.0	1.0	100.0	0		
vb172227.chw	ICD0-I30.mtw	AK25-47 K166-02 DF=5	47	1.0	5.0	1.0	100.0	0		
vb172243.chw	ICD0-I30.mtw	AK25-48 K166-03	48	1.0	1.0	1.0	100.0	0		
vb172259.chw	ICD0-I30.mtw	AK25-49 K166-04	49	1.0	1.0	1.0	100.0	0		
vb172315.chw	ICD0-I30.mtw	AK25-50 K166-05	50	1.0	1.0	1.0	100.0	0		
vb172331.chw	ICD0-I30.mtw	AK25-51 K150-01 DF=40	51	1.0	40.0	1.0	100.0	0		
vb172347.chw	ICD0-I30.mtw	AK25-52 K150-01D DF=40	52	1.0	40.0	1.0	100.0	0	FINAL	
vb180004.chw	ICD0-I30.mtw	AK25-53 K150-01M DF=40	53	1.0	40.0	1.0	100.0	0		
vb180020.chw	ICD0-I30.mtw	AK25-54 K150-01S DF=40	54	1.0	40.0	1.0	100.0	0		
vb180036.chw	ICD0-I30.mtw	AK25-55 CCV479	55	1.0	1.0	1.0	100.0	0		
vb180052.chw	ICD0-I30.mtw	AK25-56 CCB479	56	1.0	1.0	1.0	100.0	0		
vb180108.chw	ICD0-I30.mtw	AK25-57 K090-01 DF=10	57	1.0	10.0	1.0	100.0	0		

SC 11/18/21

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File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb180125.chw	ICD0-I30.mtw	AK25-58 K090-02 DF=10	58	1.0	10.0	1.0	100.0	0		
vb180141.chw	ICD0-I30.mtw	AK25-59 K090-03 DF=10	59	1.0	10.0	1.0	100.0	0		
vb180157.chw	ICD0-I30.mtw	AK25-60 K150-01 DF=500	60	1.0	500.0	1.0	100.0	0		
vb180213.chw	ICD0-I30.mtw	AK25-61 K150-01D DF=500	61	1.0	500.0	1.0	100.0	0		
vb180229.chw	ICD0-I30.mtw	AK25-62 K150-01M DF=500	62	1.0	500.0	1.0	100.0	0		
vb180245.chw	ICD0-I30.mtw	AK25-63 K150-01S DF=500	63	1.0	500.0	1.0	100.0	0		
vb180302.chw	ICD0-I30.mtw	AK25-64 RINSE	64	1.0	1.0	1.0	100.0	0		
vb180318.chw	ICD0-I30.mtw	AK25-65 CCV481	65	1.0	1.0	1.0	100.0	0		
vb180334.chw	ICD0-I30.mtw	AK25-66 CCB481	66	1.0	1.0	1.0	100.0	0		
vb180350.chw	ICD0-I30.mtw	AK25-67 ICK065WB	67	1.0	1.0	1.0	100.0	0		
vb180406.chw	ICD0-I30.mtw	AK25-68 ICK065WL	68	1.0	1.0	1.0	100.0	0		
vb180422.chw	ICD0-I30.mtw	AK25-69 ICK065WC	69	1.0	1.0	1.0	100.0	0		
vb180439.chw	ICD0-I30.mtw	AK25-70 K116-02 DF=50	70	1.0	50.0	1.0	100.0	0		
vb180455.chw	ICD0-I30.mtw	AK25-71 K116-04 DF=10	71	1.0	10.0	1.0	100.0	0		
vb180511.chw	ICD0-I30.mtw	AK25-72 K116-04D DF=10	72	1.0	10.0	1.0	100.0	0		
vb180527.chw	ICD0-I30.mtw	AK25-73 K116-04M DF=10	73	1.0	10.0	1.0	100.0	0		
vb180543.chw	ICD0-I30.mtw	AK25-74 K116-04S DF=10	74	1.0	10.0	1.0	100.0	0		
vb180559.chw	ICD0-I30.mtw	AK25-75 K116-06 DF=1000	75	1.0	1000.0	1.0	100.0	0		
vb180616.chw	ICD0-I30.mtw	AK25-76 K116-07 DF=1000	76	1.0	1000.0	1.0	100.0	0		
vb180632.chw	ICD0-I30.mtw	AK25-77 CCV483	77	1.0	1.0	1.0	100.0	0		
vb180648.chw	ICD0-I30.mtw	AK25-78 CCB483	78	1.0	1.0	1.0	100.0	0		
vb180704.chw	ICD0-I30.mtw	AK25-79 K131-02 DF=2000	79	1.0	2000.0	1.0	100.0	0		
vb180720.chw	ICD0-I30.mtw	AK25-80 K131-03 DF=5	80	1.0	5.0	1.0	100.0	0		
vb180736.chw	ICD0-I30.mtw	AK25-81 K131-04 DF=200	81	1.0	200.0	1.0	100.0	0		
vb180753.chw	ICD0-I30.mtw	AK25-82 K131-05 DF=2000	82	1.0	2000.0	1.0	100.0	0		
vb180809.chw	ICD0-I30.mtw	AK25-83 K131-06 DF=2000	83	1.0	2000.0	1.0	100.0	0		
vb180825.chw	ICD0-I30.mtw	AK25-84 K174-01	84	1.0	1.0	1.0	100.0	0		
vb180841.chw	ICD0-I30.mtw	AK25-85 K174-07	85	1.0	1.0	1.0	100.0	0		
vb180858.chw	ICD0-I30.mtw	AK25-86 K174-01 DF=5	86	1.0	5.0	1.0	100.0	0		
vb180915.chw	ICD0-I30.mtw	AK25-87 K174-07 DF=5	87	1.0	5.0	1.0	100.0	0		
vb180931.chw	ICD0-I30.mtw	AK25-88 K166-02	88	1.0	1.0	1.0	100.0	0		
vb180947.chw	ICD0-I30.mtw	AK25-89 CCV485	89	1.0	1.0	1.0	100.0	0		
vb181003.chw	ICD0-I30.mtw	AK25-90 CCB485	90	1.0	1.0	1.0	100.0	0		
vb181019.chw	ICD0-I30.mtw	AK25-91 K174-01 DF=10	91	1.0	10.0	1.0	100.0	0	FINAL	
vb181036.chw	ICD0-I30.mtw	AK25-92 K174-07 DF=10	92	1.0	10.0	1.0	100.0	0		
vb181052.chw	ICD0-I30.mtw	AK25-93 K179-01	93	1.0	1.0	1.0	100.0	0		
vb181108.chw	ICD0-I30.mtw	AK25-94 K179-03	94	1.0	1.0	1.0	100.0	0		
vb181124.chw	ICD0-I30.mtw	AK25-95 CCV487	95	1.0	1.0	1.0	100.0	0		
vb181140.chw	ICD0-I30.mtw	AK25-96 CCB487	96	1.0	1.0	1.0	100.0	0		

JC 11/18/11

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AD0-032

Instrument No.: D0

Pipette ID's: 039380124

SW8A-02-12

SW8A-02-13

Balance ID#: 40706360

Analytical Sequence: AK27

Method File: IC00-I30.mtw

Analytical Batch: IC K067W ; IC K069W
IC K071W

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SI18-17-92-01
LCS	SI18-17-92-02
MS	SCP Refer to LCS Parent ID

Column: Metrosep A Supp 5-100 Filter 0.45 µm: 21787469

Flow Rate: 0.70 ml/min 0.2 µm: 21772726

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 11/18/11

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb190413.chw	ICD0-I30.mtw	AK27-58 CCV499	58	1.0	1.0	1.0	100.0	0		
vb190429.chw	ICD0-I30.mtw	AK27-59 CCB499	59	1.0	1.0	1.0	100.0	0		
vb190445.chw	ICD0-I30.mtw	AK27-60 K144-01 DF=40	60	1.0	40.0	1.0	100.0	0		
vb190501.chw	ICD0-I30.mtw	AK27-61 K144-01D DF=40	61	1.0	40.0	1.0	100.0	0		
vb190517.chw	ICD0-I30.mtw	AK27-62 K144-01M DF=40	62	1.0	40.0	1.0	100.0	0		
vb190534.chw	ICD0-I30.mtw	AK27-63 K144-01S DF=40	63	1.0	40.0	1.0	100.0	0		
vb190550.chw	ICD0-I30.mtw	AK27-64 K144-02 DF=10	64	1.0	10.0	1.0	100.0	0		
vb190606.chw	ICD0-I30.mtw	AK27-65 K144-03 DF=10	65	1.0	10.0	1.0	100.0	0		
vb190622.chw	ICD0-I30.mtw	AK27-66 RINSE	66	1.0	1.0	1.0	100.0	0		
vb190638.chw	ICD0-I30.mtw	AK27-67 CCV501	67	1.0	1.0	1.0	100.0	0		
vb190654.chw	ICD0-I30.mtw	AK27-68 CCB501	68	1.0	1.0	1.0	100.0	0		
vb190711.chw	ICD0-I30.mtw	AK27-69 ICK071WB	69	1.0	1.0	1.0	100.0	0		
vb190727.chw	ICD0-I30.mtw	AK27-70 ICK071WL	70	1.0	1.0	1.0	100.0	0		
vb190743.chw	ICD0-I30.mtw	AK27-71 ICK071WC	71	1.0	1.0	1.0	100.0	0		
vb190759.chw	ICD0-I30.mtw	AK27-72 K184-01	72	1.0	1.0	1.0	100.0	0		
vb190815.chw	ICD0-I30.mtw	AK27-73 K184-02	73	1.0	1.0	1.0	100.0	0		
vb190831.chw	ICD0-I30.mtw	AK27-74 K184-03	74	1.0	1.0	1.0	100.0	0		
vb190848.chw	ICD0-I30.mtw	AK27-75 K184-04	75	1.0	1.0	1.0	100.0	0		
vb190904.chw	ICD0-I30.mtw	AK27-76 K184-05 DF=10	76	1.0	10.0	1.0	100.0	0		
vb190920.chw	ICD0-I30.mtw	AK27-77 K184-05 DF=20	77	1.0	20.0	1.0	100.0	0		
vb190936.chw	ICD0-I30.mtw	AK27-78 RINSE	78	1.0	1.0	1.0	100.0	0		
vb190952.chw	ICD0-I30.mtw	AK27-79 CCV503	79	1.0	1.0	1.0	100.0	0		
vb191008.chw	ICD0-I30.mtw	AK27-80 CCB503	80	1.0	1.0	1.0	100.0	0		
vb191025.chw	ICD0-I30.mtw	AK27-81 K184-01 DF=5	81	1.0	5.0	1.0	100.0	0		
vb191041.chw	ICD0-I30.mtw	AK27-82 K184-02 DF=10	82	1.0	10.0	1.0	100.0	0		
vb191057.chw	ICD0-I30.mtw	AK27-83 K184-03 DF=5	83	1.0	5.0	1.0	100.0	0		
vb191113.chw	ICD0-I30.mtw	AK27-84 K184-04 DF=10	84	1.0	10.0	1.0	100.0	0		
vb191129.chw	ICD0-I30.mtw	AK27-85 K133-01 DF=1000	85	1.0	1000.0	1.0	100.0	0		
vb191145.chw	ICD0-I30.mtw	AK27-86 K133-01D DF=1000	86	1.0	1000.0	1.0	100.0	0		
vb191201.chw	ICD0-I30.mtw	AK27-87 K133-01M DF=1000	87	1.0	1000.0	1.0	100.0	0		
vb191218.chw	ICD0-I30.mtw	AK27-88 K133-01S DF=1000	88	1.0	1000.0	1.0	100.0	0		
vb191234.chw	ICD0-I30.mtw	AK27-89 K133-02 DF=100	89	1.0	100.0	1.0	100.0	0		
vb191250.chw	ICD0-I30.mtw	AK27-90 K133-03 DF=1000	90	1.0	1000.0	1.0	100.0	0		
vb191306.chw	ICD0-I30.mtw	AK27-91 CCV505	91	1.0	1.0	1.0	100.0	0		
vb191322.chw	ICD0-I30.mtw	AK27-92 CCB505	92	1.0	1.0	1.0	100.0	0		
vb191338.chw	ICD0-I30.mtw	AK27-93 K184-01 DF=10	93	1.0	10.0	1.0	100.0	0		
vb191355.chw	ICD0-I30.mtw	AK27-94 K184-02 DF=20	94	1.0	20.0	1.0	100.0	0		
vb191411.chw	ICD0-I30.mtw	AK27-95 K184-03 DF=10	95	1.0	10.0	1.0	100.0	0		
vb191427.chw	ICD0-I30.mtw	AK27-96 K184-04 DF=20	96	1.0	20.0	1.0	100.0	0		
vb191443.chw	ICD0-I30.mtw	AK27-97 K184-05 DF=40	97	1.0	40.0	1.0	100.0	0		
vb191459.chw	ICD0-I30.mtw	AK27-98 K133-04 DF=500	98	1.0	500.0	1.0	100.0	0		
vb191515.chw	ICD0-I30.mtw	AK27-99 K133-05 DF=100	99	1.0	100.0	1.0	100.0	0		FINAL
vb191532.chw	ICD0-I30.mtw	AK27-100 ICK071WX	100	1.0	1.0	1.0	100.0	0		
vb191548.chw	ICD0-I30.mtw	AK27-101 ICK071WY	101	1.0	1.0	1.0	100.0	0		
vb191604.chw	ICD0-I30.mtw	AK27-102 ICK071WQ	102	1.0	1.0	1.0	100.0	0		
vb191620.chw	ICD0-I30.mtw	AK27-103 CCV507	103	1.0	1.0	1.0	100.0	0		
vb191636.chw	ICD0-I30.mtw	AK27-104 CCB507	104	1.0	1.0	1.0	100.0	0		

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File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb181251.chw	ICD0-I30.mtw	AK27-01 CCV489	1	1.0	1.0	1.0	100.0	0		
vb181308.chw	ICD0-I30.mtw	AK27-02 CCB489	2	1.0	1.0	1.0	100.0	0		
vb181324.chw	ICD0-I30.mtw	AK27-03 ICK067WB	3	1.0	1.0	1.0	100.0	0		
vb181340.chw	ICD0-I30.mtw	AK27-04 ICK067WL	4	1.0	1.0	1.0	100.0	0		
vb181356.chw	ICD0-I30.mtw	AK27-05 ICK067WC	5	1.0	1.0	1.0	100.0	0		
vb181412.chw	ICD0-I30.mtw	AK27-06 K131-08 DF=200	6	1.0	200.0	1.0	100.0	0		
vb181428.chw	ICD0-I30.mtw	AK27-07 K131-09 DF=2000	7	1.0	2000.0	1.0	100.0	0		
vb181445.chw	ICD0-I30.mtw	AK27-08 K131-10 DF=2000	8	1.0	2000.0	1.0	100.0	0		
vb181501.chw	ICD0-I30.mtw	AK27-09 K131-11 DF=2000	9	1.0	2000.0	1.0	100.0	0		
vb181517.chw	ICD0-I30.mtw	AK27-10 K131-13 DF=2000	10	1.0	2000.0	1.0	100.0	0		
vb181533.chw	ICD0-I30.mtw	AK27-11 K131-14 DF=2000	11	1.0	2000.0	1.0	100.0	0		
vb181549.chw	ICD0-I30.mtw	AK27-12 K131-15 DF=2000	12	1.0	2000.0	1.0	100.0	0		
vb181605.chw	ICD0-I30.mtw	AK27-13 CCV491	13	1.0	1.0	1.0	100.0	0		
vb181622.chw	ICD0-I30.mtw	AK27-14 CCB491	14	1.0	1.0	1.0	100.0	0		
vb181638.chw	ICD0-I30.mtw	AK27-15 K131-16 DF=2000	15	1.0	2000.0	1.0	100.0	0		
vb181654.chw	ICD0-I30.mtw	AK27-16 K131-17 DF=10	16	1.0	10.0	1.0	100.0	0		
vb181710.chw	ICD0-I30.mtw	AK27-17 K131-18 DF=2000	17	1.0	2000.0	1.0	100.0	0		
vb181726.chw	ICD0-I30.mtw	AK27-18 K131-19 DF=2000	18	1.0	2000.0	1.0	100.0	0		
vb181742.chw	ICD0-I30.mtw	AK27-19 K116-02 DF=5	19	1.0	5.0	1.0	100.0	0		
vb181759.chw	ICD0-I30.mtw	AK27-20 K116-02 DF=100	20	1.0	100.0	1.0	100.0	0		
vb181815.chw	ICD0-I30.mtw	AK27-21 K116-04 DF=20	21	1.0	20.0	1.0	100.0	0		
vb181831.chw	ICD0-I30.mtw	AK27-22 K116-04D DF=20	22	1.0	20.0	1.0	100.0	0		
vb181847.chw	ICD0-I30.mtw	AK27-23 K116-04M DF=20	23	1.0	20.0	1.0	100.0	0		
vb181903.chw	ICD0-I30.mtw	AK27-24 K116-04S DF=20	24	1.0	20.0	1.0	100.0	0		
vb181919.chw	ICD0-I30.mtw	AK27-25 CCV493	25	1.0	1.0	1.0	100.0	0		
vb181936.chw	ICD0-I30.mtw	AK27-26 CCB493	26	1.0	1.0	1.0	100.0	0		
vb181952.chw	ICD0-I30.mtw	AK27-27 K116-06 DF=100	27	1.0	100.0	1.0	100.0	0		
vb182008.chw	ICD0-I30.mtw	AK27-28 K116-07 DF=100	28	1.0	100.0	1.0	100.0	0		
vb182024.chw	ICD0-I30.mtw	AK27-29 K166-01 DF=10	29	1.0	10.0	1.0	100.0	0		
vb182040.chw	ICD0-I30.mtw	AK27-30 K166-02 DF=10	30	1.0	10.0	1.0	100.0	0		
vb182056.chw	ICD0-I30.mtw	AK27-31 K166-03 DF=5	31	1.0	5.0	1.0	100.0	0		
vb182112.chw	ICD0-I30.mtw	AK27-32 K166-04 DF=5	32	1.0	5.0	1.0	100.0	0		
vb182129.chw	ICD0-I30.mtw	AK27-33 RINSE	33	1.0	1.0	1.0	100.0	0		
vb182145.chw	ICD0-I30.mtw	AK27-34 CCV495	34	1.0	1.0	1.0	100.0	0		
vb182201.chw	ICD0-I30.mtw	AK27-35 CCB495	35	1.0	1.0	1.0	100.0	0		
vb182217.chw	ICD0-I30.mtw	AK27-36 ICK069WB	36	1.0	1.0	1.0	100.0	0		
vb182233.chw	ICD0-I30.mtw	AK27-37 ICK069WL	37	1.0	1.0	1.0	100.0	0		
vb182249.chw	ICD0-I30.mtw	AK27-38 ICK069WC	38	1.0	1.0	1.0	100.0	0		
vb182306.chw	ICD0-I30.mtw	AK27-39 K146-02 DF=1000	39	1.0	1000.0	1.0	100.0	0		
vb182322.chw	ICD0-I30.mtw	AK27-40 K146-03 DF=200	40	1.0	200.0	1.0	100.0	0		
vb182338.chw	ICD0-I30.mtw	AK27-41 K146-04 DF=100	41	1.0	100.0	1.0	100.0	0		
vb182354.chw	ICD0-I30.mtw	AK27-42 K146-05 DF=100	42	1.0	100.0	1.0	100.0	0		
vb190010.chw	ICD0-I30.mtw	AK27-43 K146-06 DF=100	43	1.0	100.0	1.0	100.0	0		
vb190026.chw	ICD0-I30.mtw	AK27-44 K174-01 DF=400	44	1.0	400.0	1.0	100.0	0		
vb190043.chw	ICD0-I30.mtw	AK27-45 K174-07 DF=400	45	1.0	400.0	1.0	100.0	0		
vb190059.chw	ICD0-I30.mtw	AK27-46 CCV497	46	1.0	1.0	1.0	100.0	0		
vb190115.chw	ICD0-I30.mtw	AK27-47 CCB497	47	1.0	1.0	1.0	100.0	0		
vb190131.chw	ICD0-I30.mtw	AK27-48 K153-01 DF=5	48	1.0	5.0	1.0	100.0	0		
vb190147.chw	ICD0-I30.mtw	AK27-49 K153-01 DF=20	49	1.0	20.0	1.0	100.0	0		
vb190203.chw	ICD0-I30.mtw	AK27-50 K153-02 DF=5	50	1.0	5.0	1.0	100.0	0		
vb190220.chw	ICD0-I30.mtw	AK27-51 K153-03 DF=5	51	1.0	5.0	1.0	100.0	0		
vb190236.chw	ICD0-I30.mtw	AK27-52 K153-04 DF=10	52	1.0	10.0	1.0	100.0	0		
vb190252.chw	ICD0-I30.mtw	AK27-53 K153-05 DF=5	53	1.0	5.0	1.0	100.0	0		
vb190308.chw	ICD0-I30.mtw	AK27-54 K153-06 DF=10	54	1.0	10.0	1.0	100.0	0		
vb190324.chw	ICD0-I30.mtw	AK27-55 K153-07 DF=10	55	1.0	10.0	1.0	100.0	0		
vb190340.chw	ICD0-I30.mtw	AK27-56 K179-01 DF=5	56	1.0	5.0	1.0	100.0	0		
vb190357.chw	ICD0-I30.mtw	AK27-57 K179-03 DF=10	57	1.0	10.0	1.0	100.0	0		

FINAL

Am 11/21

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RETENTION TIME WINDOW

RETENTION TIME WINDOW
METHOD 300.0

Lab name:	**EMAX**	**Method:**	**EMAX-300.0**
Instrument ID:	IC100 (761 IC)	IC column:	METROSEP A SUPP 5
		Column size:	100X4.0mm

Compound	Retention time Window
FLUORIDE	**0.234**
CHLORIDE	**0.407**
NTIRITE	**0.52**
BROMIDE	**0.688**
NTIRATE	**0.836**
PHOSPHATE	**0.678**
SULFATE	**0.915**
IODIDE	**1.078**

AL 10-17-01

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K174

METHOD 300.0(M)
ORGANIC ACIDS BY IC

A total of seven (7) water samples were received on 11/17/11 for Organic Acids (Acetate, Butyrate, Lactate and Propionate) by IC analysis, Method 300.0(M) in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for OAK016WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

SAMPLE RESULTS

METHOD 300.0(M)
ACETATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K174

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK016WB	ND	1	NA	1.00	0.0500	11/22/1112:34	NA	HK22003	HK22001	OAK016W	NA	NA
LCS1W	OAK016WL	18.1	1	NA	1.00	0.0500	11/22/1112:55	NA	HK22004	HK22001	OAK016W	NA	NA
LCD1W	OAK016WC	18.0	1	NA	1.00	0.0500	11/22/1113:16	NA	HK22005	HK22001	OAK016W	NA	NA
IW-70-SHB217-144	K174-01	ND	1	NA	1.00	0.0500	11/22/1117:02	NA	HK22009	HK22001	OAK016W	11/17/1109:58	11/17/11
MW-70-MNA12-146	K174-02	ND	1	NA	1.00	0.0500	11/22/1117:42	NA	HK22010	HK22001	OAK016W	11/17/1111:38	11/17/11
MW-70-MNA16-149	K174-03	ND	1	NA	1.00	0.0500	11/22/1118:23	NA	HK22011	HK22001	OAK016W	11/17/1114:38	11/17/11
MW-70-MNA14-151	K174-04	ND	1	NA	1.00	0.0500	11/22/1119:04	NA	HK22012	HK22001	OAK016W	11/17/1115:39	11/17/11
IR-70-FD-150	K174-05	ND	1	NA	1.00	0.0500	11/22/1120:27	NA	HK22015	HK22013	OAK016W	11/17/1115:00	11/17/11
IR-70-FD-147	K174-06	ND	1	NA	1.00	0.0500	11/22/1121:08	NA	HK22016	HK22013	OAK016W	11/17/1111:55	11/17/11
IR-70-FD-145	K174-07	ND	1	NA	1.00	0.0500	11/22/1121:49	NA	HK22017	HK22013	OAK016W	11/17/1110:20	11/17/11

METHOD 300.0(M)
BUTYRATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K174

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK016WB	ND	1	NA	1.00	0.0500	11/22/1112:34	NA	HK22003	HK22001	OAK016W	NA	NA
LCS1W	OAK016WL	18.4	1	NA	1.00	0.0500	11/22/1112:55	NA	HK22004	HK22001	OAK016W	NA	NA
LCD1W	OAK016WC	18.0	1	NA	1.00	0.0500	11/22/1113:16	NA	HK22005	HK22001	OAK016W	NA	NA
IW-70-SHB217-144	K174-01	ND	1	NA	1.00	0.0500	11/22/1117:02	NA	HK22009	HK22001	OAK016W	11/17/1109:58	11/17/11
MW-70-MNA12-146	K174-02	ND	1	NA	1.00	0.0500	11/22/1117:42	NA	HK22010	HK22001	OAK016W	11/17/1111:38	11/17/11
MW-70-MNA16-149	K174-03	ND	1	NA	1.00	0.0500	11/22/1118:23	NA	HK22011	HK22001	OAK016W	11/17/1114:38	11/17/11
MW-70-MNA14-151	K174-04	ND	1	NA	1.00	0.0500	11/22/1119:04	NA	HK22012	HK22001	OAK016W	11/17/1115:39	11/17/11
IR-70-FD-150	K174-05	ND	1	NA	1.00	0.0500	11/22/1120:27	NA	HK22015	HK22013	OAK016W	11/17/1115:00	11/17/11
IR-70-FD-147	K174-06	ND	1	NA	1.00	0.0500	11/22/1121:08	NA	HK22016	HK22013	OAK016W	11/17/1111:55	11/17/11
IR-70-FD-145	K174-07	ND	1	NA	1.00	0.0500	11/22/1121:49	NA	HK22017	HK22013	OAK016W	11/17/1110:20	11/17/11

METHOD 300.0(M)
LACTATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K174

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK016WB	ND	1	NA	1.00	0.0500	11/22/1112:34	NA	HK22003	HK22001	OAK016W	NA	NA
LCS1W	OAK016WL	18.2	1	NA	1.00	0.0500	11/22/1112:55	NA	HK22004	HK22001	OAK016W	NA	NA
LCD1W	OAK016WC	18.1	1	NA	1.00	0.0500	11/22/1113:16	NA	HK22005	HK22001	OAK016W	NA	NA
IW-70-SHB217-144	K174-01	ND	1	NA	1.00	0.0500	11/22/1117:02	NA	HK22009	HK22001	OAK016W	11/17/1109:58	11/17/11
MW-70-MNA12-146	K174-02	ND	1	NA	1.00	0.0500	11/22/1117:42	NA	HK22010	HK22001	OAK016W	11/17/1111:38	11/17/11
MW-70-MNA16-149	K174-03	ND	1	NA	1.00	0.0500	11/22/1118:23	NA	HK22011	HK22001	OAK016W	11/17/1114:38	11/17/11
MW-70-MNA14-151	K174-04	ND	1	NA	1.00	0.0500	11/22/1119:04	NA	HK22012	HK22001	OAK016W	11/17/1115:39	11/17/11
IR-70-FD-150	K174-05	ND	1	NA	1.00	0.0500	11/22/1120:27	NA	HK22015	HK22013	OAK016W	11/17/1115:00	11/17/11
IR-70-FD-147	K174-06	ND	1	NA	1.00	0.0500	11/22/1121:08	NA	HK22016	HK22013	OAK016W	11/17/1111:55	11/17/11
IR-70-FD-145	K174-07	ND	1	NA	1.00	0.0500	11/22/1121:49	NA	HK22017	HK22013	OAK016W	11/17/1110:20	11/17/11

METHOD 300.0(M)
PROPIONATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K174

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK016WB	ND	1	NA	1.00	0.0500	11/22/1112:34	NA	HK22003	HK22001	OAK016W	NA	NA
LCS1W	OAK016WL	19.3	1	NA	1.00	0.0500	11/22/1112:55	NA	HK22004	HK22001	OAK016W	NA	NA
LCD1W	OAK016WC	18.9	1	NA	1.00	0.0500	11/22/1113:16	NA	HK22005	HK22001	OAK016W	NA	NA
IW-70-SHB217-144	K174-01	ND	1	NA	1.00	0.0500	11/22/1117:02	NA	HK22009	HK22001	OAK016W	11/17/1109:58	11/17/11
MW-70-MNA12-146	K174-02	ND	1	NA	1.00	0.0500	11/22/1117:42	NA	HK22010	HK22001	OAK016W	11/17/1111:38	11/17/11
MW-70-MNA16-149	K174-03	ND	1	NA	1.00	0.0500	11/22/1118:23	NA	HK22011	HK22001	OAK016W	11/17/1114:38	11/17/11
MW-70-MNA14-151	K174-04	ND	1	NA	1.00	0.0500	11/22/1119:04	NA	HK22012	HK22001	OAK016W	11/17/1115:39	11/17/11
IR-70-FD-150	K174-05	ND	1	NA	1.00	0.0500	11/22/1120:27	NA	HK22015	HK22013	OAK016W	11/17/1115:00	11/17/11
IR-70-FD-147	K174-06	ND	1	NA	1.00	0.0500	11/22/1121:08	NA	HK22016	HK22013	OAK016W	11/17/1111:55	11/17/11
IR-70-FD-145	K174-07	ND	1	NA	1.00	0.0500	11/22/1121:49	NA	HK22017	HK22013	OAK016W	11/17/1110:20	11/17/11

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K174
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK016WB	OAK016WL	OAK016WC		
LAB FILE ID:	HK22003	HK22004	HK22005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1112:34	11/22/1112:55	11/22/1113:16	DATE RECEIVED:	NA
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22001	HK22001	HK22001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	18.1	90	20.0	18.0	90	1	90-110	20

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EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K174
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK016WB	OAK016WL	OAK016WC		
LAB FILE ID:	HK22003	HK22004	HK22005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1112:34	11/22/1112:55	11/22/1113:16	DATE RECEIVED:	NA
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22001	HK22001	HK22001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	20.0	18.4	92	20.0	18.0	90	2	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K174
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK016WB	OAK016WL	OAK016WC		
LAB FILE ID:	HK22003	HK22004	HK22005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1112:34	11/22/1112:55	11/22/1113:16	DATE RECEIVED:	NA
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22001	HK22001	HK22001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	20.0	18.2	91	20.0	18.1	90	1	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K174
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK016WB	OAK016WL	OAK016WC		
LAB FILE ID:	HK22003	HK22004	HK22005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1112:34	11/22/1112:55	11/22/1113:16	DATE RECEIVED:	NA
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22001	HK22001	HK22001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	20.0	19.3	96	20.0	18.9	94	2	90-110	20

INITIAL CALIBRATIONS

IC SEQ FORM/HK15(2011)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
HK15001	IB	ABLPY	OAD6K15	11/15/1117:34	1
HK15002	S-0	ABLPY	OAD6K15	11/15/1117:55	1
HK15003	S-1	ABLPY	OAD6K15	11/15/1118:16	1
HK15004	S-2	ABLPY	OAD6K15	11/15/1118:37	1
HK15005	S-3	ABLPY	OAD6K15	11/15/1118:58	1
HK15006	S-4	ABLPY	OAD6K15	11/15/1119:19	1
HK15007	S-5	ABLPY	OAD6K15	11/15/1119:40	1
HK15008	ICV	ABLPY	OAD6K15	11/15/1120:01	1
HK15009	ICB	ABLPY	OAD6K15	11/15/1120:22	1
HK15010	CCV2	ABLPY	OAD6K15	11/15/1123:52	1
HK15011	CCB2	ABLPY	OAD6K15	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	OAD6K15	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	OAD6K15	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	OAD6K15	11/16/1101:15	1
HK15015	K101-01	ABLPY	OAD6K15	11/16/1101:36	1
HK15016	K101-02	ABLPY	OAD6K15	11/16/1102:17	1
HK15017	K101-03	ABLPY	OAD6K15	11/16/1102:58	1
HK15018	K101-04	ABLPY	OAD6K15	11/16/1103:39	1
HK15019	K101-05	ABLPY	OAD6K15	11/16/1104:20	1
HK15020	K101-05M	ABLPY	OAD6K15	11/16/1105:01	1
HK15021	K101-05S	ABLPY	OAD6K15	11/16/1105:42	1
HK15022	CCV4	ABLPY	OAD6K15	11/16/1106:23	1
HK15023	CCB4	ABLPY	OAD6K15	11/16/1106:44	1
HK15024	K084-01	ABLPY	OAD6K15	11/16/1107:05	1
HK15025	K084-02	ABLPY	OAD6K15	11/16/1107:46	1
HK15026	K084-03	ABLPY	OAD6K15	11/16/1108:26	1
HK15027	K084-04	ABLPY	OAD6K15	11/16/1109:10	1
HK15028	CCV6	ABLPY	OAD6K15	11/16/1111:30	1
HK15029	CCB6	ABLPY	OAD6K15	11/16/1112:32	1
HK15030	K084-05	ABLPY	OAD6K15	11/16/1112:53	1
HK15031	K084-06	ABLPY	OAD6K15	11/16/1113:34	1
HK15032	K035-01	*BLPY	OAD6K15	11/16/1114:15	5
HK15033	K035-01A	*BLPY	OAD6K15	11/16/1114:55	5
HK15034	CCV8	ABLPY	OAD6K15	11/16/1115:36	1
HK15035	CCB8	ABLPY	OAD6K15	11/16/1115:57	1

AS
11/29/11

No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square	Offset	Slope	Curve
1	4.88	LACTATE	0LOff	5	1.0000	-0.000198	0.0443	0.0000
2	5.21	ACETATE	0LOff	5	0.9997	0.000068	0.0569	0.0000
3	6.00	PROPIONA⁻	0LOff	5	0.9998	-0.000209	0.0394	0.0000
4	7.42	BUTYRATE	0LOff	5	0.9999	-0.000584	0.0313	0.0000
5	8.93	PYRUVATE	0LOff	5	0.9999	-0.000755	0.0518	0.0000
Average:					n.a.	n.a.	n.a.	0.0000

$$\text{conc} = \frac{\text{area} - \text{offset}}{\text{slope}}$$

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11/29/11

SECOND SOURCE VERIFICATION

IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK15001	IB	ABLPY	ND	ND	ND	ND	ND	11/15/1117:34	1
HK15002	S-0	ABLPY	ND	ND	ND	ND	ND	11/15/1117:55	1
HK15003	S-1	ABLPY	.083	.101	.104	.096	.103	11/15/1118:16	1
HK15004	S-2	ABLPY	.401	.385	.396	.382	.395	11/15/1118:37	1
HK15005	S-3	ABLPY	1.01	.996	.993	1.01	.984	11/15/1118:58	1
HK15006	S-4	ABLPY	2.028	1.987	1.999	2.023	1.992	11/15/1119:19	1
HK15007	S-5	ABLPY	2.978	3.012	3.003	2.984	3.011	11/15/1119:40	1
HK15008	ICV	ABLPY	103%	96.8%	99.5%	104%	97.7%	11/15/1120:01	1
HK15009	ICB	ABLPY	ND	ND	ND	ND	ND	11/15/1120:22	1
HK15010	CCV2	ABLPY	103%	103%	101%	104%	93.9%	11/15/1123:52	1
HK15011	CCB2	ABLPY	ND	ND	ND	ND	ND	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	ND	ND	ND	ND	ND	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	2.07	2.1	2.02	2	1.96	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	2.07	2.02	2.04	2.1	1.95	11/16/1101:15	1
HK15015	K101-01	ABLPY	ND	ND	ND	ND	ND	11/16/1101:36	1
HK15016	K101-02	ABLPY	ND	ND	ND	ND	ND	11/16/1102:17	1
HK15017	K101-03	ABLPY	ND	ND	ND	ND	ND	11/16/1102:58	1
HK15018	K101-04	ABLPY	ND	ND	ND	ND	ND	11/16/1103:39	1
HK15019	K101-05	ABLPY	ND	ND	ND	ND	ND	11/16/1104:20	1
HK15020	K101-05M	ABLPY	.83	.826	.959	.922	.904	11/16/1105:01	1
HK15021	K101-05S	ABLPY	.878	.826	.985	1.01	.882	11/16/1105:42	1
HK15022	CCV4	ABLPY	101%	103%	99.3%	99.1%	92.6%	11/16/1106:23	1
HK15023	CCB4	ABLPY	ND	ND	ND	ND	ND	11/16/1106:44	1
HK15024	K084-01	ABLPY	ND	ND	ND	ND	ND	11/16/1107:05	1
HK15025	K084-02	ABLPY	ND	ND	ND	ND	ND	11/16/1107:46	1
HK15026	K084-03	ABLPY	ND	ND	ND	ND	ND	11/16/1108:26	1
HK15027	K084-04	ABLPY	ND	ND	ND	ND	ND	11/16/1109:10	1
HK15028	CCV6	ABLPY	101%	90.7%	99.7%	103%	92.5%	11/16/1111:30	1
HK15029	CCB6	ABLPY	ND	ND	ND	ND	ND	11/16/1112:32	1
HK15030	K084-05	ABLPY	ND	ND	ND	ND	ND	11/16/1112:53	1
HK15031	K084-06	ABLPY	ND	ND	ND	ND	ND	11/16/1113:34	1
HK15032	K035-01	*BLPY	28.1E	ND	ND	1.13	ND	11/16/1114:15	5
HK15033	K035-01A	*BLPY	32.4E	5.38	4.35	6.28	4.73	11/16/1114:55	5
HK15034	CCV8	ABLPY	102%	97%	99.6%	109%	93.8%	11/16/1115:36	1
HK15035	CCB8	ABLPY	ND	ND	ND	ND	ND	11/16/1115:57	1

AS
11/29/11

DAILY CALIBRATIONS

IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK22001	CCV24	ABLPY	91.4%	92.9%	91%	95.4%	91.8%	11/22/1111:31	1
HK22002	CCB24	ABLPY	ND	ND	ND	ND	ND	11/22/1112:13	1
HK22003	OAK016WB	ABLPY	ND	ND	ND	ND	ND	11/22/1112:34	1
HK22004	OAK016WL	ABLPY	1.81	1.84	1.82	1.93	1.87	11/22/1112:55	1
HK22005	OAK016WC	ABLPY	1.8	1.8	1.81	1.89	1.88	11/22/1113:16	1
HK22006	K146-02	ABLPY	ND	ND	ND	ND	ND	11/22/1114:19	5
HK22007	K146-02A	ABLPY	4.88	5.26	5.3	4.92	4.73	11/22/1115:20	5
HK22008	K146-03R	ABLPY	ND	ND	ND	ND	ND	11/22/1116:21	1
HK22009	K174-01	ABLPY	ND	ND	ND	ND	ND	11/22/1117:02	1
HK22010	K174-02	ABLPY	ND	ND	ND	ND	ND	11/22/1117:42	1
HK22011	K174-03	ABLPY	ND	ND	ND	ND	ND	11/22/1118:23	1
HK22012	K174-04	ABLPY	ND	ND	ND	ND	ND	11/22/1119:04	1
HK22013	CCV26	ABLPY	105%	100%	106%	102%	99.8%	11/22/1119:45	1
HK22014	CCB26	ABLPY	ND	ND	ND	ND	ND	11/22/1120:06	1
HK22015	K174-05	ABLPY	ND	ND	ND	ND	ND	11/22/1120:27	1
HK22016	K174-06	ABLPY	ND	ND	ND	ND	ND	11/22/1121:08	1
HK22017	K174-07	ABLPY	ND	ND	ND	ND	ND	11/22/1121:49	1
HK22018	K184-01	ABLPY	ND	ND	ND	ND	ND	11/22/1122:30	1
HK22019	K184-01M	ABLPY	1.05	1.07	1.03	1.1	.98	11/22/1123:11	1
HK22020	K184-01S	ABLPY	1.01	1.04	1.04	.805	1.07	11/22/1123:52	1
HK22021	K184-02	ABLPY	ND	ND	ND	ND	ND	11/23/1100:33	1
HK22022	K184-03	ABLPY	ND	ND	ND	ND	ND	11/23/1101:13	1
HK22023	K184-04	ABLPY	ND	ND	ND	ND	ND	11/23/1101:54	1
HK22024	K184-05	ABLPY	ND	ND	ND	ND	ND	11/23/1102:35	1
HK22025	CCV28	ABLPY	109%	108%	110%	109%	103%	11/23/1103:41	1
HK22026	CCB28	ABLPY	ND	ND	ND	ND	ND	11/23/1104:23	1
HK22027	K101-04	ABLPY	ND	ND	ND	ND	ND	11/23/1104:44	5
HK22028	K101-04A	ABLPY	5.05	5.12	5.01	5.1	4.87	11/23/1105:45	5
HK22029	CCV30	ABLPY	109%	107%	108%	110%	101%	11/23/1107:07	1
HK22030	CCB30	ABLPY	ND	ND	ND	ND	ND	11/23/1107:28	1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-22

0AD6K15.met : 300M ICAL → Passed

-Linear Range :

S-0 → 0.0 ppm S-3 → 1.0 ppm

S-1 → 0.1 S-4 → 2.0

S-2 → 0.4 S-5 → 3.0

- ICV : 2ppm
- Sample Loop : 25uL
- Flow Rate : 1.50 mL/min
- Suppressor : ASRS 4mm
- SRS Current : 100 mA
- Column: Ion Pac AS11 HC, 4x250 mm
- Guard Column : Ion Pac AG16 ; 4x250mm

0AK010W: K101 , K084 & K035 (conf. only)

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK15
Method File:	0AD6K15.met
Analytical Batch:	0AK010W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	SW12A-02-33D
ICV	332
CCV	331
LCS	332
MS	327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: ce / AM

Date: 11/15/11

8653

Sequence: HK15
Operator: cmadmin

Printed: 11/17/2011 3:52:16 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK15	001	IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK15	002	S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK15	003	S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK15	004	S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK15	005	S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK15	006	S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK15	007	S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK15	008	ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK15	009	ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK15	010	CCV2	Unknown	100	25.0	ORG	OAD6K15	Finished	11/15/2011 11:52:01 PM	1.0000
11	HK15	011	CCB2	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 12:13:00 AM	1.0000
12	HK15	012	OAK010WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/16/2011 12:33:58 AM	1.0000
13	HK15	013	OAK010WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/16/2011 12:54:57 AM	1.0000
14	HK15	014	OAK010WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/16/2011 1:15:56 AM	1.0000
15	HK15	015	K101-01	Unknown	1	25.0	ORG	OAD6K15	Finished	11/16/2011 1:36:54 AM	1.0000
16	HK15	016	K101-02	Unknown	2	25.0	ORG	OAD6K15	Finished	11/16/2011 2:17:49 AM	1.0000
17	HK15	017	K101-03	Unknown	3	25.0	ORG	OAD6K15	Finished	11/16/2011 2:58:42 AM	1.0000
18	HK15	018	K101-04	Unknown	4	25.0	ORG	OAD6K15	Finished	11/16/2011 3:39:37 AM	1.0000
19	HK15	019	K101-05	Unknown	5	25.0	ORG	OAD6K15	Finished	11/16/2011 4:20:31 AM	1.0000
20	HK15	020	K101-05M	Unknown	6	25.0	ORG	OAD6K15	Finished	11/16/2011 5:01:24 AM	1.0000
21	HK15	021	K101-05S	Unknown	7	25.0	ORG	OAD6K15	Finished	11/16/2011 5:42:18 AM	1.0000
22	HK15	022	CCV4	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 6:23:12 AM	1.0000
23	HK15	023	CCB4	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 6:44:11 AM	1.0000
24	HK15	024	K084-01	Unknown	8	25.0	ORG	OAD6K15	Finished	11/16/2011 7:05:09 AM	1.0000
25	HK15	025	K084-02	Unknown	9	25.0	ORG	OAD6K15	Finished	11/16/2011 7:46:03 AM	1.0000
26	HK15	026	K084-03	Unknown	10	25.0	ORG	OAD6K15	Finished	11/16/2011 8:26:57 AM	1.0000
27	HK15	027	K084-04	Unknown	11	25.0	ORG	OAD6K15	Finished	11/16/2011 9:10:16 AM	1.0000

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FINAL

Sequence: HK15
Operator: cmadmin
Printed: 11/17/2011 3:35:11 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Comment
1	HK15	
2	HK15	
3	HK15	
4	HK15	
5	HK15	
6	HK15	
7	HK15	
8	HK15	
9	HK15	
10	HK15	
11	HK15	
12	HK15	
13	HK15	
14	HK15	
15	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
17	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK15	
23	HK15	
24	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
25	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
26	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
27	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

8055

FINAL

Sequence: HK15
Operator: cmadmin
Printed: 11/17/2011 3:35:11 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK15	028	CCV6	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 11:30:24 AM	1.0000
29	HK15	029	CCB6	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 12:32:17 PM	1.0000
30	HK15	030	K084-05	Unknown	12	25.0	ORG	OAD6K15	Finished	11/16/2011 12:53:15 PM	1.0000
31	HK15	031	K084-06	Unknown	13	25.0	ORG	OAD6K15	Finished	11/16/2011 1:34:09 PM	1.0000
32	HK15	032	K035-01	Unknown	14	25.0	ORG	OAD6K15	Finished	11/16/2011 2:15:03 PM	5.0000
33	HK15	033	K035-01A	Unknown	15	25.0	ORG	OAD6K15	Finished	11/16/2011 2:55:56 PM	5.0000
34	HK15	034	CCV8	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 3:36:50 PM	1.0000
35	HK15	035	CCB8	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 3:57:49 PM	1.0000

FINAL

Sequence: HK15
Operator: cmadmin
Printed: 11/17/2011 3:35:11 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Comment
28	HK15	
29	HK15	
30	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
31	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
32	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
33	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
34	HK15	
35	HK15	

FINAL

8057

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EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4- 01 - 221

0AD6K15.met : 11K146 , 11K174 & 11K184 & 11K101

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	4K22
Method File:	0AD6K15.met
Analytical Batch:	0AK016W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SW12A - 02 - 331
LCS	332
MS	327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: ee

Date: 11/22/11

8058

Sequence: HK22
Operator: cmadmin

Printed: 11/23/2011 9:38:34 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 39

Created: 11/22/2011 10:18:35 AM by cmadmin
Last Update: 11/23/2011 9:36:55 AM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK22		IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK22		S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK22		S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK22		S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK22		S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK22		S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK22		S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK22		ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK22		ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK22	001	CCV24	Unknown	100	25.0	ORG	OAD6K15	Finished	11/22/2011 11:31:44 AM	1.0000
11	HK22	002	CCB24	Unknown	99	25.0	ORG	OAD6K15	Finished	11/22/2011 12:13:41 PM	1.0000
12	HK22	003	OAK016WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/22/2011 12:34:40 PM	1.0000
13	HK22	004	OAK016WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/22/2011 12:55:39 PM	1.0000
14	HK22	005	OAK016WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/22/2011 1:16:38 PM	1.0000
15	HK22	006	K146-02	Unknown	1	25.0	ORG	OAD6K15	Finished	11/22/2011 2:19:34 PM	5.0000
16	HK22	007	K146-02A	Unknown	2	25.0	ORG	OAD6K15	Finished	11/22/2011 3:20:22 PM	5.0000
17	HK22	008	K146-03R	Unknown	3	25.0	ORG	OAD6K15	Finished	11/22/2011 4:21:11 PM	1.0000
18	HK22	009	K174-01	Unknown	4	25.0	ORG	OAD6K15	Finished	11/22/2011 5:02:05 PM	1.0000
19	HK22	010	K174-02	Unknown	5	25.0	ORG	OAD6K15	Finished	11/22/2011 5:42:59 PM	1.0000
20	HK22	011	K174-03	Unknown	6	25.0	ORG	OAD6K15	Finished	11/22/2011 6:23:52 PM	1.0000
21	HK22	012	K174-04	Unknown	7	25.0	ORG	OAD6K15	Finished	11/22/2011 7:04:46 PM	1.0000
22	HK22	013	CCV26	Unknown	100	25.0	ORG	OAD6K15	Finished	11/22/2011 7:45:40 PM	1.0000
23	HK22	014	CCB26	Unknown	99	25.0	ORG	OAD6K15	Finished	11/22/2011 8:06:39 PM	1.0000
24	HK22	015	K174-05	Unknown	8	25.0	ORG	OAD6K15	Finished	11/22/2011 8:27:38 PM	1.0000
25	HK22	016	K174-06	Unknown	9	25.0	ORG	OAD6K15	Finished	11/22/2011 9:08:32 PM	1.0000
26	HK22	017	K174-07	Unknown	10	25.0	ORG	OAD6K15	Finished	11/22/2011 9:49:25 PM	1.0000
27	HK22	018	K184-01	Unknown	11	25.0	ORG	OAD6K15	Finished	11/22/2011 10:30:19 PM	1.0000

FINAL

Sequence: HK22
Operator: cmadmin

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 39

Created: 11/22/2011 10:18:35 AM by cmadmin
Last Update: 11/23/2011 9:36:55 AM by cmadmin

No.	Sequence	Comment
1	HK22	
2	HK22	
3	HK22	
4	HK22	
5	HK22	
6	HK22	
7	HK22	
8	HK22	
9	HK22	
10	HK22	
11	HK22	
12	HK22	
13	HK22	
14	HK22	
15	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
16	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
17	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK22	
23	HK22	
24	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
25	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
26	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
27	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

FINAL

Sequence: HK22
Operator: cmadmin

Printed: 11/23/2011 10:12:36 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 39

Created: 11/22/2011 10:18:35 AM by cmadmin
Last Update: 11/23/2011 10:06:22 AM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK22	019	K184-01M	Unknown	12	25.0	ORG	OAD6K15	Finished	11/22/2011 11:11:12 PM	1.0000
29	HK22	020	K184-01S	Unknown	13	25.0	ORG	OAD6K15	Finished	11/22/2011 11:52:06 PM	1.0000
30	HK22	021	K184-02	Unknown	14	25.0	ORG	OAD6K15	Finished	11/23/2011 12:33:00 AM	1.0000
31	HK22	022	K184-03	Unknown	15	25.0	ORG	OAD6K15	Finished	11/23/2011 1:13:54 AM	1.0000
32	HK22	023	K184-04	Unknown	16	25.0	ORG	OAD6K15	Finished	11/23/2011 1:54:48 AM	1.0000
33	HK22	024	K184-05	Unknown	17	25.0	ORG-SAMPLE	OAD6K15	Finished	11/23/2011 2:35:41 AM	1.0000
34	HK22	025	CCV28	Unknown	100	25.0	ORG	OAD6K15	Finished	11/23/2011 3:41:35 AM	1.0000
35	HK22	026	CCB28	Unknown	99	25.0	ORG	OAD6K15	Finished	11/23/2011 4:23:33 AM	1.0000
36	HK22	027	K101-04	Unknown	18	25.0	ORG	OAD6K15	Finished	11/23/2011 4:44:31 AM	5.0000
37	HK22	028	K101-04A	Unknown	19	25.0	ORG	OAD6K15	Finished	11/23/2011 5:45:20 AM	5.0000
38	HK22	029	CCV30	Unknown	100	25.0	ORG	OAD6K15	Finished	11/23/2011 7:07:08 AM	1.0000
39	HK22	030	CCB30	Unknown	99	25.0	ORG	OAD6K15	Finished	11/23/2011 7:28:07 AM	1.0000

FINAL

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Sequence: HK22
Operator: cmadmin
Printed: 11/23/2011 9:38:34 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 39

Created: 11/22/2011 10:18:35 AM by cmadmin
Last Update: 11/23/2011 9:36:55 AM by cmadmin

No.	Sequence	Comment
28	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
29	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
30	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
31	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
32	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
33	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
34	HK22	
35	HK22	
36	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
37	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
38	HK22	
39	HK22	

FINAL

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CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K174

METHOD 2320B
TOTAL ALKALINITY

A total of two (2) water samples were received on 11/17/11 for Alkalinity analysis, Method 2320B in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for ALK011WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2320B
TOTAL ALKALINITY

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K174

Matrix : WATER
Instrument ID : E5

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ALK011WB	ND	1	NA	5.00	5.00	11/23/1114:53	NA	11E5K05003	NA	ALK011W	NA	NA
LCS1W	ALK011WL	207	1	NA	5.00	5.00	11/23/1115:00	NA	11E5K05004	NA	ALK011W	NA	NA
LCD1W	ALK011WC	206	1	NA	5.00	5.00	11/23/1115:07	NA	11E5K05005	NA	ALK011W	NA	NA
IW-70-SHB217-144	K174-01	217	1	NA	5.00	5.00	11/23/1117:36	NA	11E5K05022	NA	ALK011W	11/17/1109:58	11/17/11
IR-70-FD-145	K174-07	217	1	NA	5.00	5.00	11/23/1117:43	NA	11E5K05023	NA	ALK011W	11/17/1110:20	11/17/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K174
METHOD: METHOD 2320B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ALK011WB	ALK011WL	ALK011WC		
LAB FILE ID:	11E5K05003	11E5K05004	11E5K05005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1114:53	11/23/1115:00	11/23/1115:07	DATE RECEIVED:	NA
PREP. BATCH:	ALK011W	ALK011W	ALK011W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Total Alkalinity	ND	230	207	90	230	206	90	0	80-120	20

0965

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ALKALINITY

Note: For samples and relevent QCs/Standards analyzed, refer to attached analytical sequence.

☒ Titration end point: pH 4.5 ± 0.04

☒ Low alkalinity: pH 4.2 ± 0.04

MS/MSD amount of spike:

Comments: Method 310.1 for SDG 11K116

Book#: AAL-031

Instrument No.: ☐ 53 ☐ 97 ☒ E5

Analytical Batch: ALK011

Analytical Sequence: 11E5K05

SOP #	Rev. #
☒ EMAX-310.1	5
☒ EMAX-2320B	3
☐ EMAX-	

STANDARDS ID	CONC. (mg/L)
0.02N HCL SNR1-01-338	0.02
LCS SW1-01-402	230
MS/MSD NA	NA
ICV NA	NA

pH Buffer	ID
pH 4	SW1-01-341
pH 7	SW1-01-279
pH 10	SW1-01-396
pH 8.0 (Check)	SW1-01-347

Analyzed By: RC

Date: 11/23/11

PC-TitratION PLUS

pH and Alkalinity In-Run Report

Run Number 546 **Analytical Batch#** **11E5K05**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
1	ICV PH8	11E5K05	11/23/2011	2:44 PM	7.98	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	
2	RINSE	11E5K05	11/23/2011	2:49 PM	5.53	.00	.03	.04	.00	1.12	1.12	.00	.00	
3	ALK011WB	11E5K05	11/23/2011	2:53 PM	4.46	.00	.00	.01	.00	-.31	-.31	.00	.00	
4	ALK011WL	11E5K05	11/23/2011	3:00 PM	8.62	1.69	5.16	-1.00	67.66	206.59	71.28	135.32	.00	
5	ALK011WC	11E5K05	11/23/2011	3:07 PM	8.64	1.75	5.16	-1.00	69.63	206.49	66.83	139.66	.00	
6	K532-01	11E5K05	11/23/2011	3:15 PM	7.89	.00	2.85	-1.00	.00	114.05	114.05	.00	.00	
7	K532-02	11E5K05	11/23/2011	3:21 PM	7.98	.00	2.87	-1.00	.00	114.66	114.66	.00	.00	
8	K532-03	11E5K05	11/23/2011	3:28 PM	8.01	.00	2.87	-1.00	.00	114.70	114.70	.00	.00	
9	K116-02	11E5K05	11/23/2011	3:41 PM	6.61	.00	17.16	-1.00	.00	686.58	686.58	.00	.00	
10	K116-04	11E5K05	11/23/2011	3:49 PM	8.05	.00	7.64	-1.00	.00	305.61	305.61	.00	.00	
11	K116-04D	11E5K05	11/23/2011	3:59 PM	8.11	.00	7.72	-1.00	.00	308.86	308.86	.00	.00	
12	K116-06	11E5K05	11/23/2011	4:08 PM	7.60	.00	15.15	-1.00	.00	606.19	606.19	.00	.00	
13	K116-07	11E5K05	11/23/2011	4:19 PM	7.62	.00	15.21	-1.00	.00	608.20	608.20	.00	.00	
14	K119-01	11E5K05	11/23/2011	4:27 PM	7.83	.00	4.08	-1.00	.00	163.05	163.05	.00	.00	
15	K119-02	11E5K05	11/23/2011	4:41 PM	7.09	.00	29.27	-1.00	.00	1,170.88	1,170.88	.00	.00	
16	K119-03	11E5K05	11/23/2011	4:49 PM	7.80	.00	4.70	-1.00	.00	187.94	187.94	.00	.00	
17	K146-02	11E5K05	11/23/2011	4:57 PM	7.40	.00	5.37	-1.00	.00	214.93	214.93	.00	.00	
18	K146-03	11E5K05	11/23/2011	5:05 PM	7.63	.00	5.42	-1.00	.00	216.92	216.92	.00	.00	

Analyzed by: Rc Reviewed by: Rc Date: 11/23/11

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Run Number 546 **Analytical Batch#** **11E5K05**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
19	K146-04	11E5K05	11/23/2011	5:12 PM	7.51	.00	6.20	-1.00	.00	248.07	248.07	.00	.00	
20	K146-05	11E5K05	11/23/2011	5:19 PM	7.48	.00	5.59	-1.00	.00	223.44	223.44	.00	.00	
21	K146-06	11E5K05	11/23/2011	5:28 PM	7.59	.00	6.24	-1.00	.00	249.62	249.62	.00	.00	
22	K174-01	11E5K05	11/23/2011	5:36 PM	7.61	.00	5.43	-1.00	.00	217.13	217.13	.00	.00	
23	K174-07	11E5K05	11/23/2011	5:43 PM	7.61	.00	5.44	-1.00	.00	217.44	217.44	.00	.00	
24	RINSE	11E5K05	11/23/2011	5:49 PM	6.17	.00	.08	.17	.00	-.22	-.22	.00	.00	

Analyzed by: RC Reviewed by: RC Date: 11/28/11

PC-TitratION PLUS by Man-Tech Associates, Inc.

pH AND ALKALINITY IN-RUN REPORT.SRW

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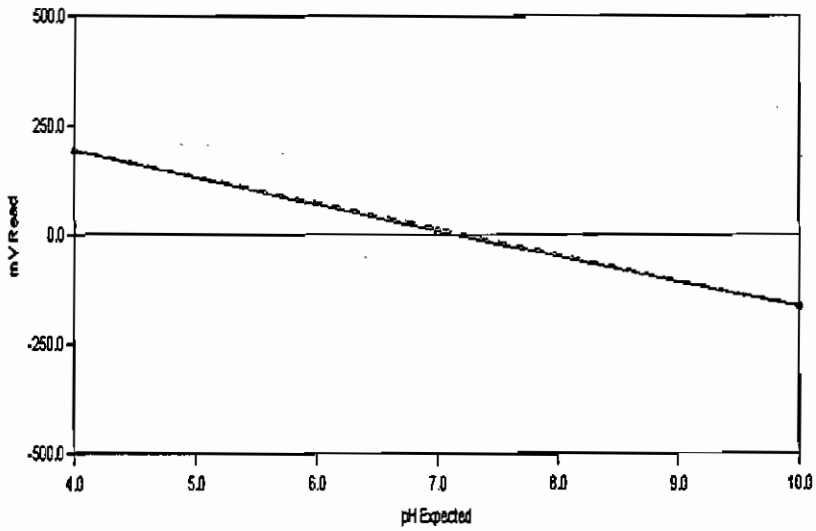
PC-TitratION PLUS
Calibration Report

Calibration Record # 284



Calibration Settings

Calibration ID	PH CAL 4-7-10	Date	11/23/2011	
Channel	1	Time	2:41 PM	
Probe Type	pH	Temperature	296.66 K	23.51 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit	

Calibration Results

Slope	-59.385	CorrCoeff	0.9998
Intercept	13.343	Equation: Y = (-59.385) X + (13.343)	

Calibration Validity **True** Operator

	Result	Minimum	Maximum
Slope	-59.385	-65.00	-53.00
Intercept	13.343	-40.00	40.00
Correlation Coefficient	0.9998	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	**Standard**	**Reading**
	4.00	193.35
	7.00	9.64
	10.00	-162.96

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PC-Titrate For Windows

Running List Report

Order Number - 111E5K05

	Schedule	Sample Id	Vial	Weight	Volume
1	PH CAL	CAL	1	.00	25.00
2	PH ONLY	ICV PH8	4	.00	25.00
3	PH-ALK	RINSE	5	.00	25.00
4	PH-ALK	ALK011WB	6	.00	25.00
5	PH-ALK	ALK011WL	7	.00	25.00
6	PH-ALK	ALK011WC	8	.00	25.00
7	PH-ALK	K532-01	9	.00	25.00
8	PH-ALK	K532-02	10	.00	25.00
9	PH-ALK	K532-03	11	.00	25.00
10	PH-ALK	K116-02	12	.00	25.00
11	PH-ALK	K116-04	13	.00	25.00
12	PH-ALK	K116-04D	14	.00	25.00
13	PH-ALK	K116-06	15	.00	25.00
14	PH-ALK	K116-07	16	.00	25.00
15	PH-ALK	K119-01	17	.00	25.00
16	PH-ALK	K119-02	18	.00	25.00
17	PH-ALK	K119-03	19	.00	25.00
18	PH-ALK	K146-02	20	.00	25.00
19	PH-ALK	K146-03	21	.00	25.00
20	PH-ALK	K146-04	22	.00	25.00
21	PH-ALK	K146-05	23	.00	25.00
22	PH-ALK	K146-06	24	.00	25.00
23	PH-ALK	K174-01	25	.00	25.00
24	PH-ALK	K174-07	26	.00	25.00
25	PH-ALK	RINSE	27	.00	25.00

PC-TitratION PLUS by Man-Tech Associates, Inc.

runninglist.SRW

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CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K174

METHOD 2540C
TOTAL DISSOLVED SOLIDS

A total of two (2) water samples were received on 11/17/11 for Total Dissolved Solids analysis, Method 2540C in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Balance calibration was checked as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TDK011WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2540C
TOTAL DISSOLVED SOLIDS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K174

Matrix : WATER
Instrument ID : 40706360

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TDK011WB	ND	1	NA	20.0	20.0	11/18/1117:20	NA	TDK01101	NA	TDK011W	NA	NA
LCS1W	TDK011WL	980	1	NA	20.0	20.0	11/18/1117:20	NA	TDK01102	NA	TDK011W	NA	NA
LCD1W	TDK011WC	985	1	NA	20.0	20.0	11/18/1117:20	NA	TDK01103	NA	TDK011W	NA	NA
IW-70-SHB217-144	K174-01	6900	1	NA	20.0	20.0	11/18/1117:20	NA	TDK01124	NA	TDK011W	11/17/1109:58	11/17/11
IR-70-FD-145	K174-07	6150	1	NA	20.0	20.0	11/18/1117:20	NA	TDK01125	NA	TDK011W	11/17/1110:20	11/17/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K174
METHOD: METHOD 2540C

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TDK011WB	TDK011WL	TDK011WC		
LAB FILE ID:	TDK01101	TDK01102	TDK01103		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1117:20	11/18/1117:20	11/18/1117:20	DATE RECEIVED:	NA
PREP. BATCH:	TDK011W	TDK011W	TDK011W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TDS	ND	1000	980	98	1000	985	98	1	80-120	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
GRAVIMETRIC

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AGV-047

Balance ID: 40706360

Analytical Batch: TDE011

SOP #	Rev. #
☐ EMAX-160.1	6
☐ EMAX-160.2	4
☐ EMAX-160.3	2
☐ EMAX-2540B	1
☐ EMAX-2540C	5
☐ EMAX-2540D	1

STANDARDS ID	CONC. (mg/L)
LCS SW2-02-014	1060

Micropipette ID: 438481531

Analyzed By: EM

Date: 11/21/11

GRAVIMETRIC ANALYSES
RAW DATA

11TDK011.xls

EMAX LABORATORIES INC.

Analytical Batch: TDK011 Instrument ID: 40706360 Oven Temp IN (°C): 180 Oven Temp OUT (°C): SOP: EMAX160.1 Rev. 3

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish #	Dish (g)	Date	Time	1st Dry Weight + Dish (g)	Date	Time	2nd Dry Weight + Dish (g)	Date	Time	3rd Dry Weight + Dish (g)	Date	Time	Difference 1st & 2nd Dry Wt. Rdg.	Difference 2nd & 3rd Dry Wt. Rdg. (<0.5mg)	NOTES
TDK01101	TDK011WB	100	B	71.3244	11/18/11	17:20	71.3238	11/21/11	10:44	71.3235	11/21/11	12:40	71.3235	11/21/11	12:40	-0.0003	0.0	
TDK01102	TDK011WL	20	L	21.4905	11/18/11	17:21	21.51	11/21/11	10:44	21.5101	11/21/11	12.41	21.5101	11/21/11	12:41	1E-04	0.0	
TDK01103	TDK011WC	20	C	21.5668	11/18/11	17:21	21.5864	11/21/11	10:44	21.5865	11/21/11	12:41	21.5865	11/21/11	12:41	1E-04	0.0	
TDK01104	K131-02	5	1	21.4069	11/18/11	17:21	21.5412	11/21/11	10.45	21.5415	11/21/11	12:41	21.5415	11/21/11	12:41	0.0003	0.0	
TDK01105	K131-02D	5	2	21.5094	11/18/11	17:21	21.6423	11/21/11	10:45	21.6427	11/21/11	12:41	21.6427	11/21/11	12:41	0.0004	0.0	
TDK01106	K131-03	100	3	21.5582	11/18/11	17:22	21.5842	11/21/11	10:45	21.5842	11/21/11	12:42	21.5842	11/21/11	12:42	0	0.0	
TDK01107	K131-04	5	4	21.5915	11/18/11	17.22	21.6242	11/21/11	10.46	21.6238	11/21/11	12:42	21.6238	11/21/11	12:42	-0.0004	0.0	
TDK01108	K131-05	5	5	21.5080	11/18/11	17:22	21.5865	11/21/11	10:46	21.5864	11/21/11	12:42	21.5864	11/21/11	12:42	-1E-04	0.0	
TDK01109	K131-06	5	6	21.4789	11/18/11	17:23	21.6513	11/21/11	10:46	21.6514	11/21/11	12.42	21.6514	11/21/11	12:42	1E-04	0.0	
TDK01110	K131-08	5	7	21.4849	11/18/11	17:23	21.5217	11/21/11	10:47	21.5215	11/21/11	12:43	21.5215	11/21/11	12:43	-0.0002	0.0	
TDK01111	K131-08D	5	8	21.5684	11/18/11	17.23	21.6035	11/21/11	10.47	21.6037	11/21/11	12:43	21.6037	11/21/11	12:43	0.0002	0.0	
TDK01112	K131-09	5	9	21.3483	11/18/11	17.23	21.5029	11/21/11	10:47	21.5029	11/21/11	12:44	21.5029	11/21/11	12:44	0	0.0	
TDK01113	K131-10	5	10	21.5534	11/18/11	17.24	21.7054	11/21/11	10:47	21.705	11/21/11	12.44	21.705	11/21/11	12:44	-0.0004	0.0	
TDK01114	K131-11	5	11	21.5701	11/18/11	17:24	21.7337	11/21/11	10:48	21.7335	11/21/11	12:44	21.7335	11/21/11	12:44	-0.0002	0.0	
TDK01115	K131-13	5	12	21.5367	11/18/11	17:25	21.6578	11/21/11	10:48	21.6575	11/21/11	12:45	21.6575	11/21/11	12:45	-0.0003	0.0	
TDK01116	K131-14	5	13	21.6048	11/18/11	17:25	21.7397	11/21/11	10:48	21.7395	11/21/11	12:45	21.7395	11/21/11	12:45	-0.0002	0.0	
TDK01117	K131-15	5	14	21.5686	11/18/11	17:26	21.7039	11/21/11	10:49	21.7036	11/21/11	12:45	21.7036	11/21/11	12:45	-0.0003	0.0	
TDK01118	K131-16	5	15	21.3606	11/18/11	17:26	21.5012	11/21/11	10:49	21.5015	11/21/11	12:45	21.5015	11/21/11	12:45	0.0003	0.0	
TDK01119	K131-17	20	16	21.5935	11/18/11	17:26	21.6333	11/21/11	10:49	21.6329	11/21/11	12:46	21.6329	11/21/11	12:46	-0.0004	0.0	
TDK01120	K131-18	2	17	21.5758	11/18/11	17:26	21.6593	11/21/11	10:50	21.6593	11/21/11	12.46	21.6593	11/21/11	12:46	0	0.0	
TDK01121	K131-19	2	18	21.6734	11/18/11	17:26	21.7611	11/21/11	10:50	21.7611	11/21/11	12:46	21.7611	11/21/11	12:46	0	0.0	
TDK01122	K546-02	20	19	21.4934	11/18/11	17:27	21.5097	11/21/11	10:50	21.5093	11/21/11	12:46	21.5093	11/21/11	12:46	-0.0004	0.0	
TDK01123	K548-01	20	20	21.3157	11/18/11	17:27	21.3304	11/21/11	10:50	21.33	11/21/11	12.47	21.33	11/21/11	12:47	-0.0004	0.0	
TDK01124	K174-01	10	21	21.6915	11/18/11	17.27	21.7609	11/21/11	10:51	21.7605	11/21/11	12:47	21.7605	11/21/11	12:47	-0.0004	0.0	
TDK01125	K174-07	10	22	21.6295	11/18/11	17.27	21.6911	11/21/11	10:51	21.691	11/21/11	12:48	21.691	11/21/11	12:48	-1E-04	0.0	

Beginning Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/18/11 17:19	PASSED
5	4.9999	11/18/11 17.20	PASSED
100	99.9978	11/18/11 17:20	PASSED

Ending Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1001	11/18/11 17:28	PASSED
5	5.0000	11/18/11 17:28	PASSED
100	99.9980	11/18/11 17:28	PASSED

Beginning Balance Check

Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1001	11/21/11 10:43	PASSED
5	5.0000	11/21/11 10:43	PASSED
100	99.9994	11/21/11 10:43	PASSED

Ending Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/21/11 12:48	PASSED
5	4.9996	11/21/11 12:48	PASSED
100	99.9988	11/21/11 12:49	PASSED

Acceptance Criteria: ± 0.1% OR 0.05 mg whichever is greater

LCS Conc. 1000 mg/L MDL: 10 mg/L RL: 10 mg/L Initial Rdg by: PP Final Rdg by: NM Reviewed by: NM

Remarks:

Date 11/21/11

EMAX LABORATORIES INC

GRAVIMETRIC CALCULATION

Analytical Batch: TDK011 Start Date/Time: 11/18/11 17:20 Temp IN(°C): 180

Balance ID: 40706360 End Date/Time: 11/21/11 12:46 Temp Out(°C):

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish (g)	Dry Weight + Dish (g)	SOLIDS (mg)	RESULT (mg/L)	NOTES
TDK01101	TDK011WB	100	71.3244	71.3235	-0.9000	ND	
TDK01102	TDK011WL	20	21.4905	21.5101	19.6000	980	98
TDK01103	TDK011WC	20	21.5668	21.5865	19.7000	985	99
TDK01104	K131-02	5	21.4069	21.5415	134.6000	26900	
TDK01105	K131-02D	5	21.5094	21.6427	133.3000	26700	
TDK01106	K131-03	100	21.5582	21.5842	26.0000	260	
TDK01107	K131-04	5	21.5915	21.6238	32.3000	6460	
TDK01108	K131-05	5	21.508	21.5864	78.4000	15700	
TDK01109	K131-06	5	21.4789	21.6514	172.5000	34500	
TDK01110	K131-08	5	21.4849	21.5215	36.6000	7320	
TDK01111	K131-08D	5	21.5684	21.6037	35.3000	7060	
TDK01112	K131-09	5	21.3483	21.5029	154.6000	30900	
TDK01113	K131-10	5	21.5534	21.705	151.6000	30300	
TDK01114	K131-11	5	21.5701	21.7335	163.4000	32700	
TDK01115	K131-13	5	21.5367	21.6575	120.8000	24200	
TDK01116	K131-14	5	21.6048	21.7395	134.7000	26900	
TDK01117	K131-15	5	21.5686	21.7036	135.0000	27000	
TDK01118	K131-16	5	21.3606	21.5015	140.9000	28200	
TDK01119	K131-17	20	21.5935	21.6329	39.4000	1970	
TDK01120	K131-18	2	21.5758	21.6593	83.5000	41800	
TDK01121	K131-19	2	21.6734	21.7611	87.7000	43800	
TDK01122	K546-02	20	21.4934	21.5093	15.9000	795	
TDK01123	K548-01	20	21.3157	21.33	14.3000	715	
TDK01124	K174-01	10	21.6915	21.7605	69.0000	6900	
TDK01125	K174-07	10	21.6295	21.691	61.5000	6150	

LCS Concentration: 1000 mg/L MDL(mg/L): 10 Initial Reading by: PP

SOP: EMAX160.1 Rev. 3 RL (mg/L): 10 Final Reading by: NM

Remarks:

Reviewed by: NM

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K174

METHOD 4500F
DISSOLVED HYDROGEN SULFIDE

A total of two (2) water samples were received on 11/17/11 for Dissolved Hydrogen Sulfide analysis, Method 4500F in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 4500F
Dissolved Hydrogen Sulfide

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K174

Matrix : WATER
Instrument ID : NA

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	HSK004WB	ND	1	NA	1.00	1.00	11/22/1112:59	NA	HSK00401	NA	HSK004W	NA	NA
IW-70-SHB217-144	K174-01	ND	1	NA	1.00	1.00	11/22/1114:48	NA	HSK00410	NA	HSK004W	11/17/1109:58	11/17/11
IR-70-FD-145	K174-07	ND	1	NA	1.00	1.00	11/22/1114:53	NA	HSK00411	NA	HSK004W	11/17/1110:20	11/17/11

8678

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
SULFIDE

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Book #: ASD-018

Analytical Batch: 11K004

Comments:

SOP #	Rev. #
☐ EMAX-376.1	3
☐ EMAX-9034	0
☐ EMAX-4500-S2F	1
☑ EMAX-4500-S2H	0
☐ EMAX-	

STANDARDS ID	conc.
LCS SWI-01-422	8.48
Spike NA	NA
$Na_2S_2O_3$ Standard SWRI-01-384	0.0248
Iodine SWRI-01-465	0.0252
HCl SWPI-007-60-03	6N
Indicator SWRI-01-340	–

Analyzed By: NM

Date: 11/22/11

SM4500-S^{2-} H

EMAX LABORATORIES, INC.

ANALYSIS FOR UN-IONIZED HYDROGEN SULFIDE

Method SM4500-S2-H

Analytical Batch: HSK004

Data File Name	Lab Sample ID	Sulfide	Unit	Date Time	Temp. °C	pH	Conductivity µS/cm	H2S	Unit	COMMENTS
HSK0041	HSK004WB	ND	mg/L	11/22/11 12:59				ND	mg/L	
HSK0042	HSK004WL	7.06	mg/L	11/22/11 13:00				#VALUE!	mg/L	
HSK0043	HSK004WC	7.02	mg/L	11/22/11 13:03				#VALUE!	mg/L	
HSK0044	K146-02	ND	mg/L	11/22/11 13:05	24.6	6.93	34800	ND	mg/L	
HSK0045	K146-03	ND	mg/L	11/22/11 14:22	24.6	7.14	6560	ND	mg/L	
HSK0046	K146-04	ND	mg/L	11/22/11 14:28	24.6	7.03	4440	ND	mg/L	
HSK0047	K146-05	ND	mg/L	11/22/11 14:36	24.6	6.97	6070	ND	mg/L	
HSK0048	K146-05D	ND	mg/L	11/22/11 14:39	24.6	6.97	6070	ND	mg/L	
HSK0049	K146-06	ND	mg/L	11/22/11 14:42	24.7	6.99	4430	ND	mg/L	
HSK00410	K174-01	ND	mg/L	11/22/11 14:48	25.1	7.15	9980	ND	mg/L	
HSK00411	K174-07	ND	mg/L	11/22/11 14:53	25.2	7.3	9960	ND	mg/L	

NM 11/22/11

$$pK_1 = 32.5 + 1519.44/T - 15.672\log_{10}T + 0.02722T$$

$$A = 0.7083 - 2.277x10^{-3}T + 5.399x10^{-6}T^2$$

$$I = 1.6x10^{-5}\,Conductivity$$

$$pf_m = A\left(\frac{\sqrt{I}}{1+\sqrt{I}} - 0.3\right)$$

$$K'_1 = 10^{-pK_1+2pf_m}$$

$$H^+ = 10^{-pH+pf_m}$$

$$H_2S = \left(\frac{S_T}{1+\frac{K'_1}{H^+}}\right)$$

Analyzed by: NM

Reviewed by: NM

Date: 11/22/2011

Where: T(°K)= T°C+272.15 pK1=dissociation constant for zero ionic strength A= Debye-Huckel Parameter I= Ionic Strength pfm=negative logarithm of the monovalent ion activity coefficient K'_1=conditional ionization constant H^+=Hydrogen ion concentration S_T=Total Sulfide Concentration

8080

EMAX LABORATORIES, INC.

ANALYSIS FOR SULFIDE

Method: SM4500-S2-H Analytical Batch: HSK004 Book #: ASD-018 Page: 15

Data File Name	Lab Sample ID	V_e (ml)	V_T (ml)	Volume of Titant V_t (ml)	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Sulfide	Sample Result	Flag J	Unit
HSK0041	HSK004WB	100	2.5	2.49	11/22/11	12:59:27	0.11968	ND		mg/L
HSK0042	HSK004WL	100	2.5	0.74	11/22/11	13:00:24	7.06368	7.06		mg/L
HSK0043	HSK004WC	100	2.5	0.75	11/22/11	13:03:35	7.024	7.02		mg/L
HSK0044	K146-02	100	2.5	2.54	11/22/11	13:05:59	-0.07872	ND		mg/L
HSK0045	K146-03	100	2.5	2.45	11/22/11	14:22:36	0.2784	ND		mg/L
HSK0046	K146-04	100	2.5	2.53	11/22/11	14:28:17	-0.03904	ND		mg/L
HSK0047	K146-05	100	2.5	2.55	11/22/11	14:36:19	-0.1184	ND		mg/L
HSK0048	K146-05D	100	2.5	2.56	11/22/11	14:39:07	-0.15808	ND		mg/L
HSK0049	K146-06	100	2.5	2.53	11/22/11	14:42:53	-0.03904	ND		mg/L
HSK00410	K174-01	100	2.5	2.53	11/22/11	14:48:23	-0.03904	ND		mg/L
HSK00411	K174-07	100	2.5	2.53	11/22/11	14:53:32	-0.03904	ND		mg/L

NM 11/22/11

STANDARDIZATION				
V_I (ml)	$V_{Na_2SO_3}$ (ml)	DATE	TIME	Titrant Na_2SO_3 (N)
Average Normality of Iodine (NI)=				0.025

☑ Standard Purchased as Certified Solution

$$N_I = \frac{(N * V)_{Na_2SO_3}}{V_I}$$

MISCELLANEOUS INFORMATION			
Standard	Concentration		Unit
Iodine	0.025		N
$Na_2S_2O_3$	0.0248		N
LCS [WATER | SOIL]	8.48	84.8	mg/L | mg/Kg
MDL [WATER | SOIL]	1	10	mg/L | mg/Kg
RL	1	10	mg/L | mg/Kg

$$S(mg/L) = \frac{[(V_I * N_I) - (V_T * N_T)](16{,}000)}{V_S}$$

MS/MSD	TV=	8.48	mg/L
ID	Result (mg/L)	%Rec.	RPD

Comments:

Analyzed By: NM

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K174

METHOD SM5310B
TOC

A total of two (2) water samples were received on 11/17/11 for Total Organic Carbon analysis, Method SM5310B in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TCK016WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD SM5310B
TOC

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K174

Matrix : WATER
Instrument ID : I62

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TCK016WB	ND	1	NA	1.00	0.500	11/22/1114:37	NA	TCK011-05	TCK011-02	TCK016W	NA	NA
LCS1W	TCK016WL	24.7	1	NA	1.00	0.500	11/22/1114:50	NA	TCK011-06	TCK011-02	TCK016W	NA	NA
LCD1W	TCK016WC	24.7	1	NA	1.00	0.500	11/22/1115:03	NA	TCK011-07	TCK011-02	TCK016W	NA	NA
IW-70-SHB217-144	K174-01	2.21	1	NA	1.00	0.500	11/22/1116:06	NA	TCK011-12	TCK011-02	TCK016W	11/17/1109:58	11/17/11
IR-70-FD-145	K174-07	2.05	1	NA	1.00	0.500	11/22/1116:17	NA	TCK011-13	TCK011-02	TCK016W	11/17/1110:20	11/17/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K174
METHOD: METHOD SM5310B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TCK016WB	TCK016WL	TCK016WC		
LAB FILE ID:	TCK011-05	TCK011-06	TCK011-07		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1114:37	11/22/1114:50	11/22/1115:03	DATE RECEIVED:	NA
PREP. BATCH:	TCK016W	TCK016W	TCK016W		
CALIB. REF:	TCK011-02	TCK011-02	TCK011-02		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	ND	25.0	24.7	99	25.0	24.7	99	0	85-115	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TOC

	Date	Time
Start	11/22/11	1207
End	11/23/11	0348

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

TCK016W/17W
K150 5310B
K546
K174
K184
K186
K153 9060
K142
K179
K159 415.1
K148 DX

Sample K546-01 was filtered prior to analysis due to its turbidity

Filter ID 0.45um 2177653
2 M HCl SW4-01-323

Book #:	A62-020
Instrument No.:	62
Pipette ID:	039380025
	SW3-01-33
	SI1A-01-4
Balance ID:	40706360
Analytical Sequence:	TCK011
Method File:	TCK011
Analytical Batch:	TCK016W / TCK017W

SOP #	Rev. #
☑ EMAX-415.1	2
☑ EMAX-5310B	1
☑ EMAX-9060	2
☐ EMAX-	

STANDARDS ID	CONC. (mg/L)
S0 nanopure	0
S1 SW10B-04-174	1
S2	5
S3	10
S4	40
S5	80
S6 —	—
ICV/LCS SW10B-04-178	25
CCV -179	25

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ TOC	
☐	

Analyzed By: AM

Date: 11/22/11

	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
1	Standard	NPOC	ICAL	TCK011-01	0A-123456-	C:\Program	1.000		
2	Control	NPOC	ICV	TCK011-02	0A-123456-	C:\Program	1.000	NPOC:24.87 mg/L	
3	Unknown	NPOC	ICB	TCK011-03	0A-123456-	C:\Program	1.000	NPOC:0.1761 mg/	
4	Unknown	NPOC	HCO3\CO3	TCK011-04	0A-123456-	C:\Program	1.000	NPOC:0.1306 mg/	
5	Unknown	NPOC	TCK016WB	TCK011-05	0A-123456-	C:\Program	1.000	NPOC:0.02901 mg	
6	Unknown	NPOC	TCK016WL	TCK011-06	0A-123456-	C:\Program	1.000	NPOC:24.68 mg/L	
7	Unknown	NPOC	TCK016WC	TCK011-07	0A-123456-	C:\Program	1.000	NPOC:24.66 mg/L	
8	Unknown	NPOC	K150-01	TCK011-08	0A-123456-	C:\Program	1.000	NPOC:10.13 mg/L	PH<2
9	Unknown	NPOC	K150-01M	TCK011-09	0A-123456-	C:\Program	1.000	NPOC:36.06 mg/L	
10	Unknown	NPOC	K150-01S	TCK011-10	0A-123456-	C:\Program	1.000	NPOC:36.05 mg/L	
11	Unknown	NPOC	K546-01	TCK011-11	0A-123456-	C:\Program	1.000	NPOC:24.19 mg/L	PH<2
12	Unknown	NPOC	K174-01	TCK011-12	0A-123456-	C:\Program	1.000	NPOC:2.213 mg/L	PH<2
13	Unknown	NPOC	K174-07	TCK011-13	0A-123456-	C:\Program	1.000	NPOC:2.049 mg/L	PH<2
14	Control	NPOC	CCV1	TCK011-14	0A-123456-	C:\Program	1.000	NPOC:24.40 mg/L	
15	Unknown	NPOC	CCB1	TCK011-15	0A-123456-	C:\Program	1.000	NPOC:0.09559 mg	
16	Unknown	NPOC	K184-01	TCK011-16	0A-123456-	C:\Program	1.000	NPOC:1.733 mg/L	PH<2
17	Unknown	NPOC	K184-02	TCK011-17	0A-123456-	C:\Program	1.000	NPOC:1.576 mg/L	PH<2
18	Unknown	NPOC	K184-03	TCK011-18	0A-123456-	C:\Program	1.000	NPOC:0.04844 mg	PH<2
19	Unknown	NPOC	K184-04	TCK011-19	0A-123456-	C:\Program	1.000	NPOC:1.949 mg/L	PH<2
20	Unknown	NPOC	K184-05	TCK011-20	0A-123456-	C:\Program	1.000	NPOC:104.1 mg/L	PH<2 over
21	Unknown	NPOC	K186-07	TCK011-21	0A-123456-	C:\Program	1.000	NPOC:65.98 mg/L	PH<2
22	Unknown	NPOC	K186-08	TCK011-22	0A-123456-	C:\Program	1.000	NPOC:3.646 mg/L	PH<2
23	Unknown	NPOC	K186-08M	TCK011-23	0A-123456-	C:\Program	1.000	NPOC:28.04 mg/L	
24	Unknown	NPOC	K186-08S	TCK011-24	0A-123456-	C:\Program	1.000	NPOC:27.98 mg/L	
25	Unknown	NPOC	K186-09	TCK011-25	0A-123456-	C:\Program	1.000	NPOC:3.235 mg/L	PH<2
26	Control	NPOC	CCV2	TCK011-26	0A-123456-	C:\Program	1.000	NPOC:23.81 mg/L	
27	Unknown	NPOC	CCB2	TCK011-27	0A-123456-	C:\Program	1.000	NPOC:0.1002 mg/	
28	Unknown	NPOC	K186-10	TCK011-28	0A-123456-	C:\Program	1.000	NPOC:18.63 mg/L	PH<2
29	Unknown	NPOC	K186-12	TCK011-29	0A-123456-	C:\Program	1.000	NPOC:6.763 mg/L	PH<2
30	Unknown	NPOC	K153-01	TCK011-30	0A-123456-	C:\Program	1.000	NPOC:1.721 mg/L	PH<2
31	Unknown	NPOC	K153-02	TCK011-31	0A-123456-	C:\Program	1.000	NPOC:0.7100 mg/	PH<2
32	Unknown	NPOC	K153-03	TCK011-32	0A-123456-	C:\Program	1.000	NPOC:0.3568 mg/	PH<2
33	Unknown	NPOC	K153-04	TCK011-33	0A-123456-	C:\Program	1.000	NPOC:0.6843 mg/	PH<2
34	Unknown	NPOC	K153-05	TCK011-34	0A-123456-	C:\Program	1.000	NPOC:0.6638 mg/	PH<2
35	Unknown	NPOC	TCK017WL	TCK011-35	0A-123456-	C:\Program	1.000	NPOC:23.75 mg/L	
36	Unknown	NPOC	TCK017WC	TCK011-36	0A-123456-	C:\Program	1.000	NPOC:23.77 mg/L	
37	Unknown	NPOC	TCK017WB	TCK011-37	0A-123456-	C:\Program	1.000	NPOC:0.09541 mg	
38	Control	NPOC	CCV3	TCK011-38	0A-123456-	C:\Program	1.000	NPOC:23.52 mg/L	
39	Unknown	NPOC	CCB3	TCK011-39	0A-123456-	C:\Program	1.000	NPOC:0.1109 mg/	
40	Unknown	NPOC	K153-06	TCK011-40	0A-123456-	C:\Program	1.000	NPOC:0.5494 mg/	PH<2
41	Unknown	NPOC	K153-07	TCK011-41	0A-123456-	C:\Program	1.000	NPOC:1.996 mg/L	PH<2
42	Unknown	NPOC	K142-01	TCK011-42	0A-123456-	C:\Program	1.000	NPOC:1.261 mg/L	PH<2
43	Unknown	NPOC	K142-03	TCK011-43	0A-123456-	C:\Program	1.000	NPOC:0.5499 mg/	PH<2
44	Unknown	NPOC	K142-03M	TCK011-44	0A-123456-	C:\Program	1.000	NPOC:25.28 mg/L	
45	Unknown	NPOC	K142-03S	TCK011-45	0A-123456-	C:\Program	1.000	NPOC:25.29 mg/L	
46	Unknown	NPOC	K142-04	TCK011-46	0A-123456-	C:\Program	1.000	NPOC:5.272 mg/L	PH<2
47	Unknown	NPOC	K179-01	TCK011-47	0A-123456-	C:\Program	1.000	NPOC:2.472 mg/L	PH<2
48	Unknown	NPOC	K179-03	TCK011-48	0A-123456-	C:\Program	1.000	NPOC:2.521 mg/L	PH<2
49	Unknown	NPOC	K759-01	TCK011-49	0A-123456-	C:\Program	1.000	NPOC:4.298 mg/L	PH<2
50	Control	NPOC	CCV4	TCK011-50	0A-123456-	C:\Program	1.000	NPOC:23.70 mg/L	
51	Unknown	NPOC	CCB4	TCK011-51	0A-123456-	C:\Program	1.000	NPOC:0.1132 mg/	
52	Unknown	NPOC	K145-02	TCK011-52	0A-123456-	C:\Program	1.000	NPOC:9.757 mg/L	PH<2
53	Unknown	NPOC	K145-03	TCK011-53	0A-123456-	C:\Program	1.000	NPOC:9.776 mg/L	PH<2
54	Unknown	NPOC	K145-04	TCK011-54	0A-123456-	C:\Program	1.000	NPOC:19.44 mg/L	PH<2
55	Unknown	NPOC	K145-05	TCK011-55	0A-123456-	C:\Program	1.000	NPOC:1.902 mg/L	PH<2
56	Unknown	NPOC	K145-07	TCK011-56	0A-123456-	C:\Program	1.000	NPOC:2.473 mg/L	PH<2
57	Unknown	NPOC	K145-08	TCK011-57	0A-123456-	C:\Program	1.000	NPOC:263.3 mg/L	PH<2
58	Unknown	NPOC	K145-08M	TCK011-58	0A-123456-	C:\Program	1.000	NPOC:287.8 mg/L	
59	Unknown	NPOC	K145-08S	TCK011-59	0A-123456-	C:\Program	1.000	NPOC:290.1 mg/L	
60	Unknown	NPOC	K145-09	TCK011-60	0A-123456-	C:\Program	1.000	NPOC:653.3 mg/L	PH<2
61	Control	NPOC	CCV5	TCK011-61	0A-123456-	C:\Program	1.000	NPOC:25.38 mg/L	
62	Unknown	NPOC	CCB5	TCK011-62	0A-123456-	C:\Program	1.000	NPOC:0.6893 mg/	
63	Unknown	NPOC	K145-11	TCK011-63	0A-123456-	C:\Program	1.000	NPOC:11.75 mg/L	PH<2
64	Unknown	NPOC	K145-11M	TCK011-64	0A-123456-	C:\Program	1.000	NPOC:36.60 mg/L	
65	Unknown	NPOC	K145-11S	TCK011-65	0A-123456-	C:\Program	1.000	NPOC:36.45 mg/L	
66	Unknown	NPOC	K145-12	TCK011-66	0A-123456-	C:\Program	1.000	NPOC:2.109 mg/L	PH<2
67	Unknown	NPOC	TCK012WQ	TCK011-67	0A-123456-	C:\Program	1.000	NPOC:0.1725 mg/	

	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
68	Control	NPOC	CCV6	TCK011-68	OA-123456-	C:\Program	1.000	NPOC:23.77 mg/L	
69	Unknown	NPOC	CCB6	TCK011-69	OA-123456-	C:\Program	1.000	NPOC:0.1337 mg/	
70									
71									
72									
73									
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132									
133									
134								Am 11/23/11	

Instr.Information

System	toc
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Cal. Curve

Sample Name:	ICAL
Sample ID:	TCK011-01
Cal. Curve:	TCK011.2011_11_22_11_59_31.cal

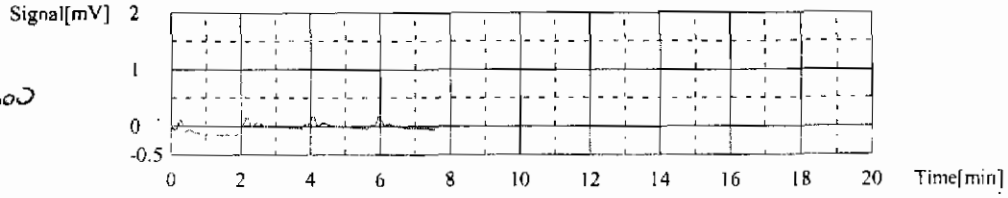
Type	Anal.
Standard	NPOC

Conc. 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.000	50uL	1	*******		11/22/11 12:07:40 PM
2	0.000	50uL	1	*******		11/22/11 12:09:44 PM
3	0.000	50uL	1	*******		11/22/11 12:11:48 PM
4	0.000	50uL	1	*******		11/22/11 12:13:52 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 0.000

$\frac{\text{mean area}}{\text{slope}} = \frac{0.000}{2.218} = 0.000$

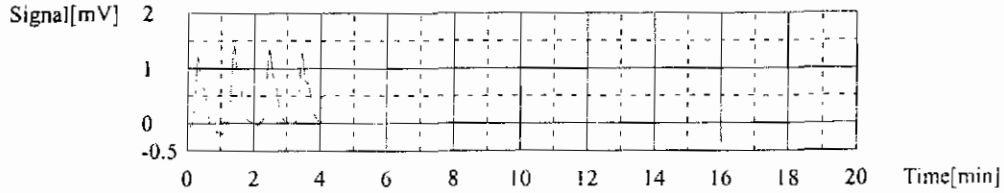


Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	2.172	50uL	10	*******		11/22/11 12:22:06 PM
2	2.314	50uL	10	*******		11/22/11 12:23:20 PM
3	2.283	50uL	10	*******		11/22/11 12:24:29 PM
4	2.295	50uL	10	*******		11/22/11 12:25:44 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 2.266

$\frac{\bar{A}}{m} = \frac{2.266}{2.218} = 1.022$



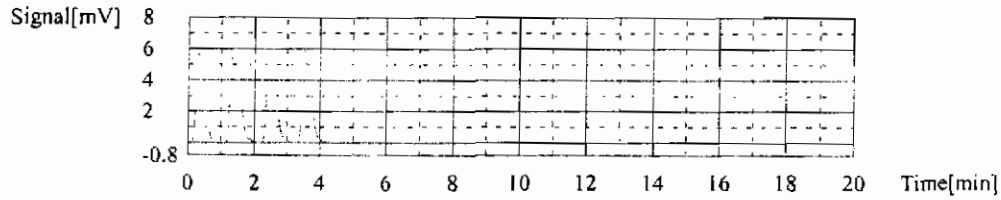
Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	10.74	50uL	2	*******		11/22/11 12:32:00 PM
2	10.82	50uL	2	*******		11/22/11 12:33:16 PM
3	11.03	50uL	2	*******		11/22/11 12:34:31 PM
4	10.77	50uL	2	*******		11/22/11 12:35:46 PM

8088

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 10.84

$\frac{\bar{A}}{m} = \frac{10.84}{2.218} = 4.887$

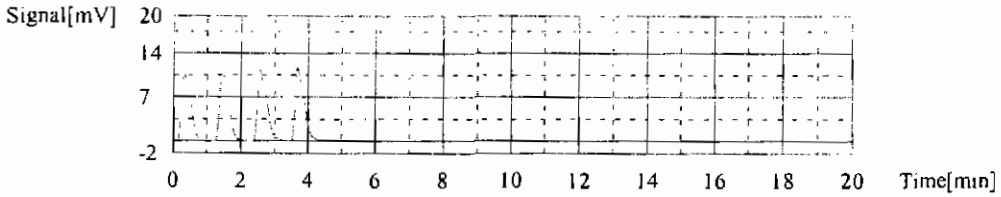


Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	21.14	50uL	1	*******		11/22/11 12:41:26 PM
2	21.50	50uL	1	*******		11/22/11 12:42:43 PM
3	21.72	50uL	1	*******		11/22/11 12:44:01 PM
4	21.57	50uL	1	*******		11/22/11 12:45:21 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 21.48

$\frac{\bar{A}}{m} = \frac{21.48}{2.218} = 9.684$

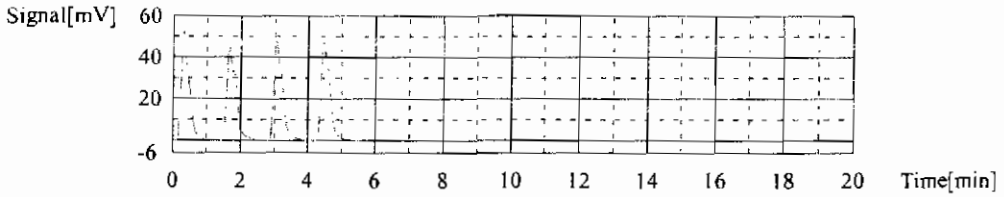


Conc: 40.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	85.71	50uL	2	*******		11/22/11 12:53:52 PM
2	85.66	50uL	2	*******		11/22/11 12:55:25 PM
3	87.37	50uL	2	*******		11/22/11 12:57:00 PM
4	86.22	50uL	2	*******		11/22/11 12:58 33 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 86.24

$\frac{\bar{A}}{m} = \frac{86.24}{2.218} = 38.88$

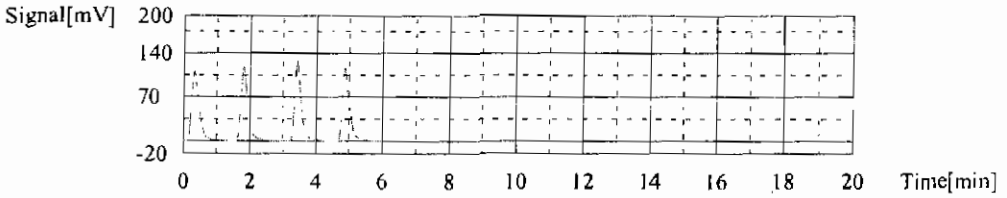


Conc: 80.00mg/L

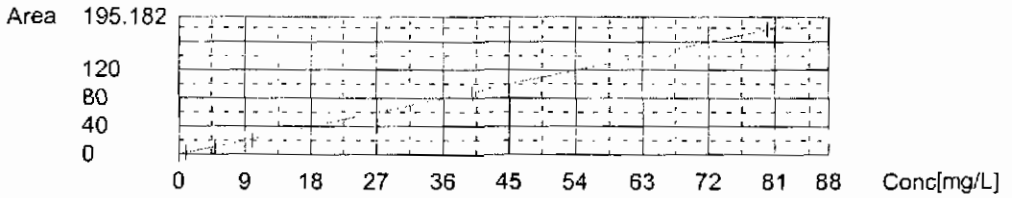
No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	178.2	50uL	1	*******		11/22/11 01:04:33 PM
2	178.0	50uL	1	*******		11/22/11 01:06:21 PM
3	178.3	50uL	1	*******		11/22/11 01:07:58 PM
4	177.4	50uL	1	*******		11/22/11 01:09:36 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 178.0

$\frac{\bar{A}}{m} = \frac{178.0}{2.218} = 80.25$



Slope: 2.218
Intercept 0.000
r^2 0.999773



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Control Sample

Sample Name: ICV
Sample ID: TCK011-02
Method: TCK011.tpl
Chk. Result Control value: 24.87 / Control exceeds range!

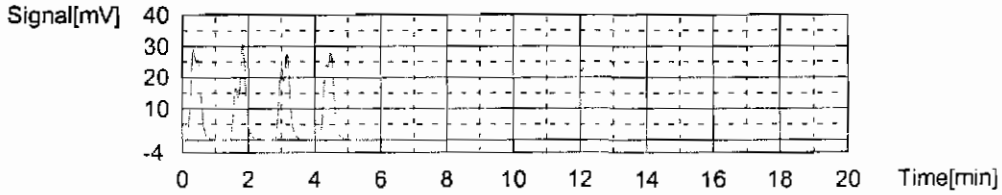
Type	Anal:	Dil.	Result
Control	NPOC	1.000	NPOC:24.87 mg/L

1. Det.

Anal : NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.83	25.17mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 01:17:36 PM
2	54.80	24.71mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 01:19:08 PM
3	55.31	24.94mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 01:20:39 PM
4	54.74	24.68mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 01:22:07 PM

Mean Area 55.17
Mean Conc. 24.87mg/L



Sample

Sample Name: ICB
Sample ID: TCK011-03
Origin: TCK011.cal
Chk. Result

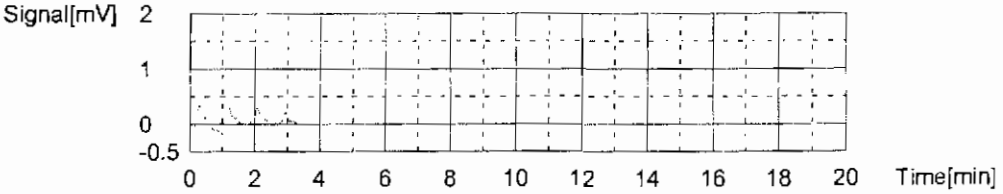
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1761 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6110	0.2755mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 01:29:32 PM
2	0.4348	0.1960mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 01:30:36 PM
3	0.3121	0.1407mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 01:31:37 PM
4	0.2041	0.09202mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 01:32:25 PM

Mean Area 0.3905
Mean Conc. 0.1761mg/L



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PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11K184**

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METALS	METHOD 3010A/6010B	7000 – 7110
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** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 12-06-2011
EMAX Batch No.: 11K184

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 11/18/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW-70-PMW13A-153	K184-01	11/18/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-PMW13B-154	K184-02	11/18/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-PMW14A-155	K184-03	11/18/11	WATER	ANIONS BY IC

Sample ID	Control #	Col Date	Matrix	Analysis
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-PMW14B-156	K184-04	11/18/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IW-70-SSB109-157	K184-05	11/18/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IR-70-TB-152	K184-06	11/18/11	WATER	VOLATILE ORGANICS BY GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

for

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

INS.0801-

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 7011068-8042
SAMPLE STORAGE
EMAX CONTROL NO. * 11K184
PROJECT CODE: 4-77101

CLIENT: INSIGHT GEO, INC.
PROJECT: IR SITE 70 - NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 714 678 6700 FAX: 714 678 6711 EMAIL: NWEINBERGER@IGEOI.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT GEO, INC.
ADDRESS: 3010 E. MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: Yu Hunt

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: VOC - 8260B; DISS. HYD. GASSES - RSK-175; WET CHEM; TCL - SM5310B; SULFIDE - SM4500S F; DISS. METALS - 6010B; VOC - 8260B; DISS. HYD. GASSES - RSK-175

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

	LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	VOC - 8260B (HC)	DISS. HYD. GASSES - RSK-175 (HC)	WET CHEM (NP)	TCL - SM5310B (HC)	SULFIDE - SM4500S F (ZA)	DISS. METALS - 6010B (HN)	VOC - 8260B (NP)	DISS. HYD. GASSES - RSK-175 (NP)	COMMENTS
1	1	MW-70-PMW13A-153	IR SITE 70	11-18-11	0945	10	VARY	VARY	GW	IV	X	X	X	X	X	X			
2	2	MW-70-PMW13B-154	IR SITE 70	11-18-11	1055	10	VARY	VARY	GW	III	X	X	X	X	X	X			
3	3	MW-70-PMW14A-155	IR SITE 70	11-18-11	1209	10	VARY	VARY	GW	III	X	X	X	X	X	X			
4	4	MW-70-PMW14B-156	IR SITE 70	11-18-11	1452	10	VARY	VARY	GW	III	X	X	X	X	X	X			
5	5	IW-70-SSB109-157	IR SITE 70	11-18-11	1613	10	VARY	VARY	GW	III			X	X	X	X	X	X	EFFLUENT WELL
	6																		
	7																		
	8																		
	9																		
6	0	IR-70-TB-152	IR SITE 70	11-18-11	0800	2	40 ml	VOA	GW	III	X								TRIP BLANKS.

Instructions: THE WET CHEM ANALYSIS AS FOLLOWS: ANIONS - 300.0, VFA's - 300.0M, TDS - SM2540C, ALKALINITY - SM2320B, DHS - SM4500. UNLESS NOTED OTHERWISE IN COMMENTS

Cooler #	Temp. (°C)	Sample #s
1	2.8	

SAMPLER: CHASE BROGDON
COURIER/AIRBILL:

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-18-11	1750	[signature]

1750

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associated with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

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EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill		
ECN	11K184		
☐ EMAX Courier		Recepient	Cp-amulus
☑ Client Delivery	See cur	Date	11·18·11
☐ Third Party		Time	1750

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☑ Preservative (if any)	☑ TAT

Safety Issues ☐ None ☐ High concentrations expected ☐ Superfund Site samples ☐ Rad screening required

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☑ plastic Bag
Temperatures (Cool, ≤6 °C but not frozen)	A ☐ Cooler 1 2.8 °C	☐ Cooler 2 ____ °C	☐ Cooler 3 ____ °C	☐ Cooler 4 ____ °C	☐ Cooler 5 ____ °C
	☐ Cooler 6 ____ °C	☐ Cooler 7 ____ °C	☐ Cooler 8 ____ °C	☐ Cooler 9 ____ °C	☐ Cooler 10 ____ °C

Thermometer: *A - S/N 101541371* *B - S/N 101541382*

Comments: ☐ **PM was informed on non-compliant coolers immediately.**

Note: **pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time .**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code
05		No Time on label	D2	R2
05	044, 045		vials had small bubbles	R5

REVIEWS

Sample Labeling Cp-amulus / D Date 11.18.11

SRF [signature] Date 11-18-11

PM LP to r'6 Date 11/21/11

LEGEND

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4		E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	Use other vials provid
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	
B3	Sample ID is inconsistent in COC vis-à-vis label	F2	Bubble is> 6mm		
B4		G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1			
C4		H2			

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the *results unless the* project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11K184

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K184

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of six (6) water samples were received on 11/18/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied except for 2-Hexanone in CV003H1659 was not within 20% of expected value (biased high). However, analyte was not one of analytes required dilution in associated diluted samples. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, four (4) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary form for details.

Lab Control Sample
Four (4) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for VO03K23L/C were all within QC limits.
Percent recoveries for VO03K24L/C were all within QC limits.
Percent recoveries for VO03K26L/C were all within QC limits.
Percent recoveries for VO03K27L/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Manual integration was applied to Carbon disulfide in sample K184-04 because of improper integration. Hence, the original chromatogram was retained with the initialed and dated corrected chromatogram. Manual integration was concurred by a secondary reviewer. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. Vials received for sample K184-05 has bubbles >6mm. Analysis was performed using vial with the smallest bubbles.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K184
Instrument ID : T-003

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V003K23B	1	NA	11/22/1109:29	11/22/1109:29	RKB354	RHB444	V003K23	Method Blank
LCS1W	V003K23L	1	NA	11/22/1108:21	11/22/1108:21	RKB352	RHB444	V003K23	Lab Control Sample (LCS)
LCD1W	V003K23C	1	NA	11/22/1108:55	11/22/1108:55	RKB353	RHB444	V003K23	LCS Duplicate
IW-70-SSB109-157	K184-05	1	NA	11/22/1112:25	11/22/1112:25	RKB359	RHB444	V003K23	Field Sample
MBLK2W	V003K24B	1	NA	11/22/1122:40	11/22/1122:40	RKB376	RHB444	V003K24	Method Blank
LCS2W	V003K24L	1	NA	11/22/1121:29	11/22/1121:29	RKB374	RHB444	V003K24	Lab Control Sample (LCS)
LCD2W	V003K24C	1	NA	11/22/1122:04	11/22/1122:04	RKB375	RHB444	V003K24	LCS Duplicate
IR-70-TB-152	K184-06	1	NA	11/22/1123:15	11/22/1123:15	RKB377	RHB444	V003K24	Field Sample
MW-70-PMW13A-153	K184-01	1	NA	11/23/1105:39	11/23/1105:39	RKB388	RHB444	V003K24	Field Sample
MW-70-PMW13B-154	K184-02	1	NA	11/23/1106:14	11/23/1106:14	RKB389	RHB444	V003K24	Field Sample
MW-70-PMW14A-155	K184-03	1	NA	11/23/1106:49	11/23/1106:49	RKB390	RHB444	V003K24	Field Sample
MW-70-PMW14B-156	K184-04	1	NA	11/23/1107:25	11/23/1107:25	RKB391	RHB444	V003K24	Field Sample
MBLK3W	V003K26B	1	NA	11/24/1102:17	11/24/1102:17	RKB418	RHB444	V003K26	Method Blank
LCS3W	V003K26L	1	NA	11/24/1100:25	11/24/1100:25	RKB415	RHB444	V003K26	Lab Control Sample (LCS)
LCD3W	V003K26C	1	NA	11/24/1101:03	11/24/1101:03	RKB416	RHB444	V003K26	LCS Duplicate
MW-70-PMW13A-153DL	K184-01T	10	NA	11/24/1103:33	11/24/1103:33	RKB420	RHB444	V003K26	Diluted Sample
MW-70-PMW14A-155DL	K184-03T	10	NA	11/24/1104:47	11/24/1104:47	RKB422	RHB444	V003K26	Diluted Sample
MW-70-PMW14B-156DL	K184-04T	10	NA	11/24/1105:25	11/24/1105:25	RKB423	RHB444	V003K26	Diluted Sample
MBLK4W	V003K27B	1	NA	11/28/1118:15	11/28/1118:15	RKB440	RHB444	V003K27	Method Blank
LCS4W	V003K27L	1	NA	11/28/1116:31	11/28/1116:31	RKB437	RHB444	V003K27	Lab Control Sample (LCS)
LCD4W	V003K27C	1	NA	11/28/1117:04	11/28/1117:04	RKB438	RHB444	V003K27	LCS Duplicate
MW-70-PMW13B-154DL	K184-02T	50	NA	11/28/1121:47	11/28/1121:47	RKB446	RHB444	V003K27	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/18/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/18/11
Batch No. : 11K184	Date Extracted: 11/23/11 05:39
Sample ID: MW-70-PMW13A-153	Date Analyzed: 11/23/11 05:39
Lab Samp ID: K184-01	Dilution Factor: 1
Lab File ID: RKB388	Matrix : WATER
Ext Btch ID: V003K24	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.27J	1.0	0.20
1,1-DICHLOROETHENE	2.6	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	120E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	99	1.0	0.20
TRICHLOROETHENE	200E	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	250E	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.05	10.00	80.5	70-140
4-BROMOFLUOROBENZENE	9.43	10.00	94.3	70-130
TOLUENE-D8	9.43	10.00	94.3	70-140

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K22\RKB388.D Vial: 17
Acq On : 23 Nov 2011 5:39 am Operator: CGM
Sample : 11K184-01 25mL Inst : 03
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Dec 2 14:26 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

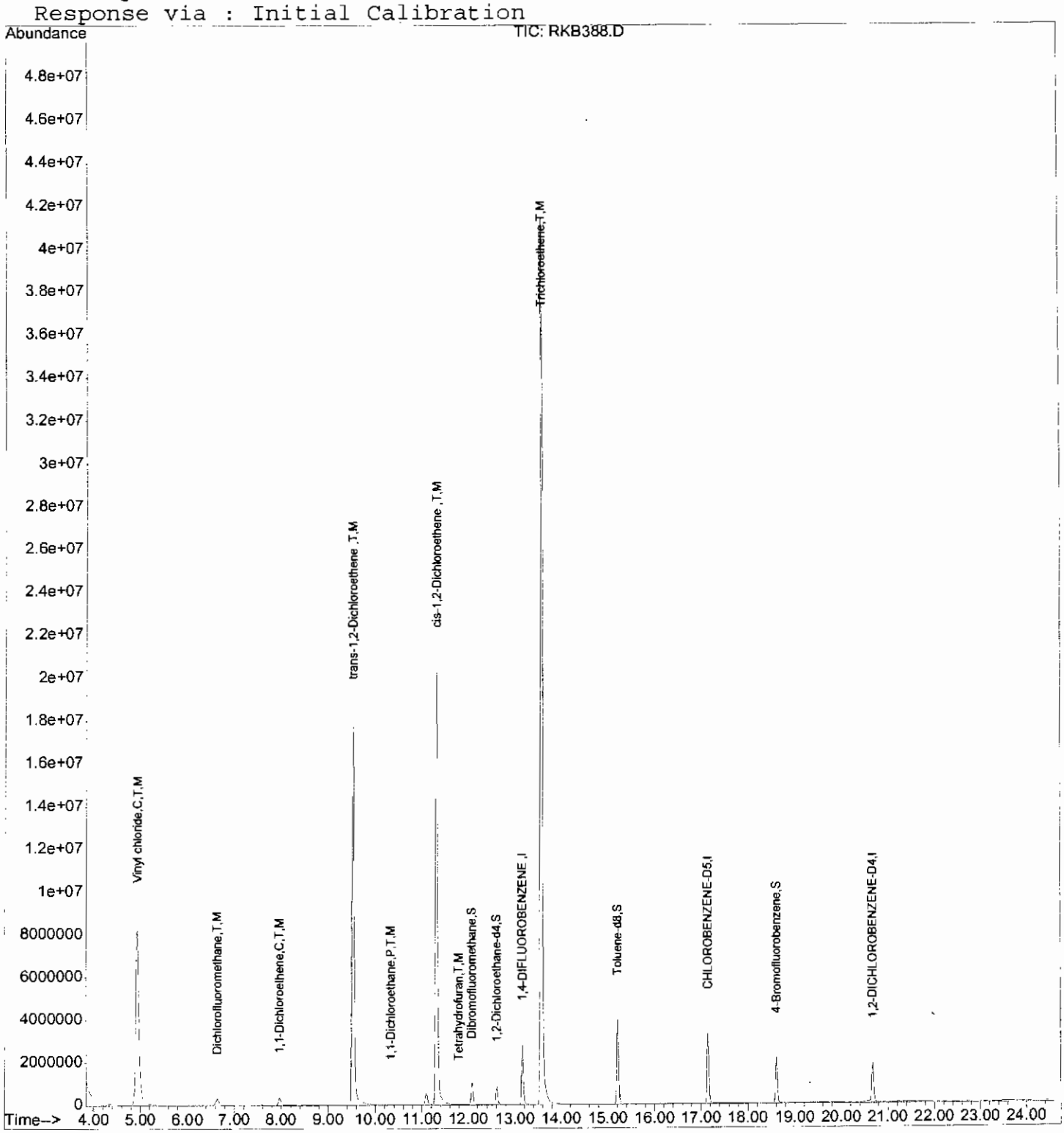
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.16	114	2788268	10.00	ug/l	0.00
41) CHLOROBENZENE-D5	17.15	117	2601680	10.00	ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.68	152	830325	10.00	ug/l	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	12.07	111	958507	9.25	ug/l	0.00
Spiked Amount 10.000			Recovery	=	92.50%	
40) 1,2-Dichloroethane-d4	12.61	65	848517	8.05	ug/l	0.00
Spiked Amount 10.000			Recovery	=	80.50%	
55) Toluene-d8	15.22	98	3486138	9.43	ug/l	0.00
Spiked Amount 10.000			Recovery	=	94.30%	
75) 4-Bromofluorobenzene	18.61	95	1219173	9.43	ug/l	0.00
Spiked Amount 10.000			Recovery	=	94.30%	
Target Compounds						Qvalue
7) Vinyl chloride	4.93	62	23186185	246.52	ug/l E	99
10) Dichlorofluoromethane	6.64	67	810725	3.81	ug/l	100
15) 1,1-Dichloroethene	7.97	61	485455	2.59	ug/l	97
22) trans-1,2-Dichloroethene	9.53	61	18927363	98.99	ug/l	97
26) 1,1-Dichloroethane	10.33	63	55734	0.27	ug/l	97
31) cis-1,2-Dichloroethene	11.32	96	13059119	120.34	ug/l # E	83
33) Tetrahydrofuran	11.79	42	3655	0.35	ug/l #	30
46) Trichloroethene	13.58	130	22780799	196.77	ug/l E	95

(#) = qualifier out of range (m) = manual integration

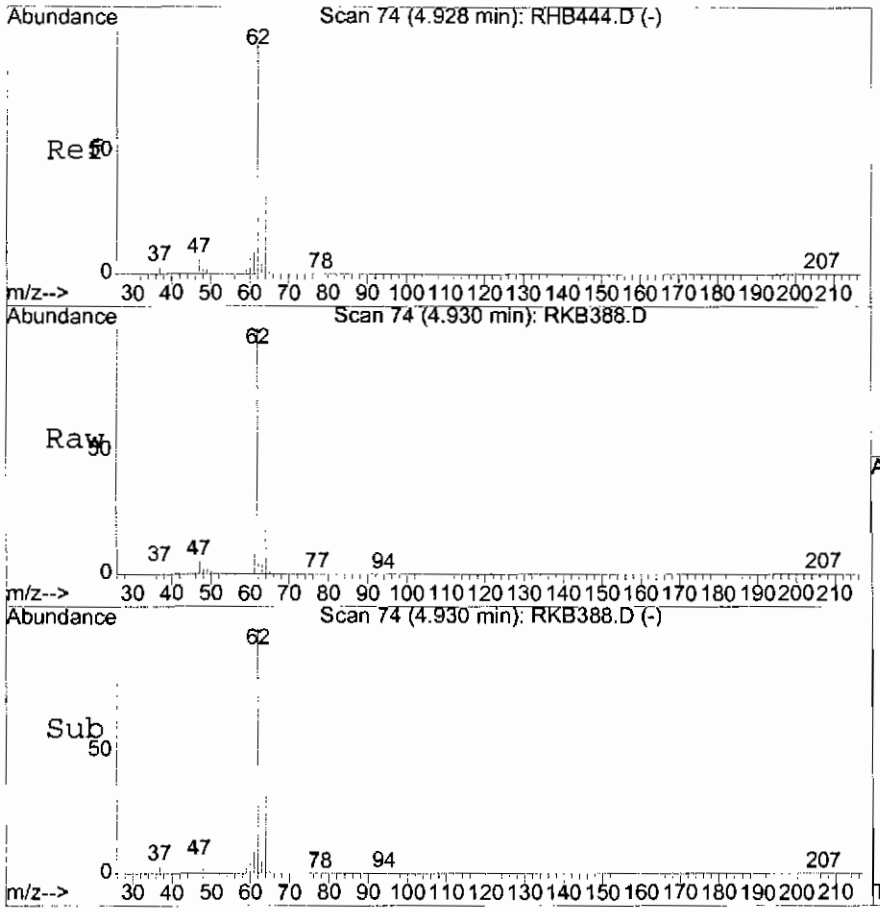
Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB388.D Vial: 17
Acq On : 23 Nov 2011 5:39 am Operator: CGM
Sample : 11K184-01 25mL Inst : 03
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Dec 2 14:26 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration



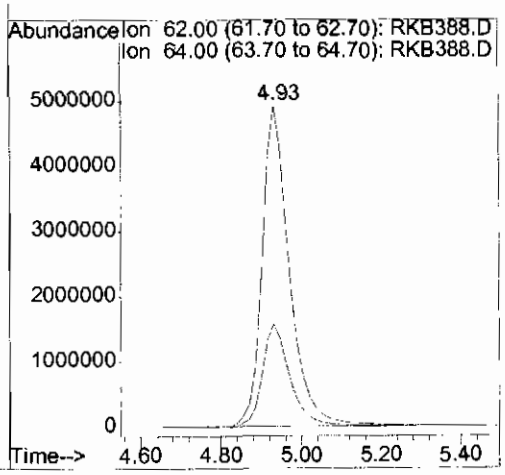
2005

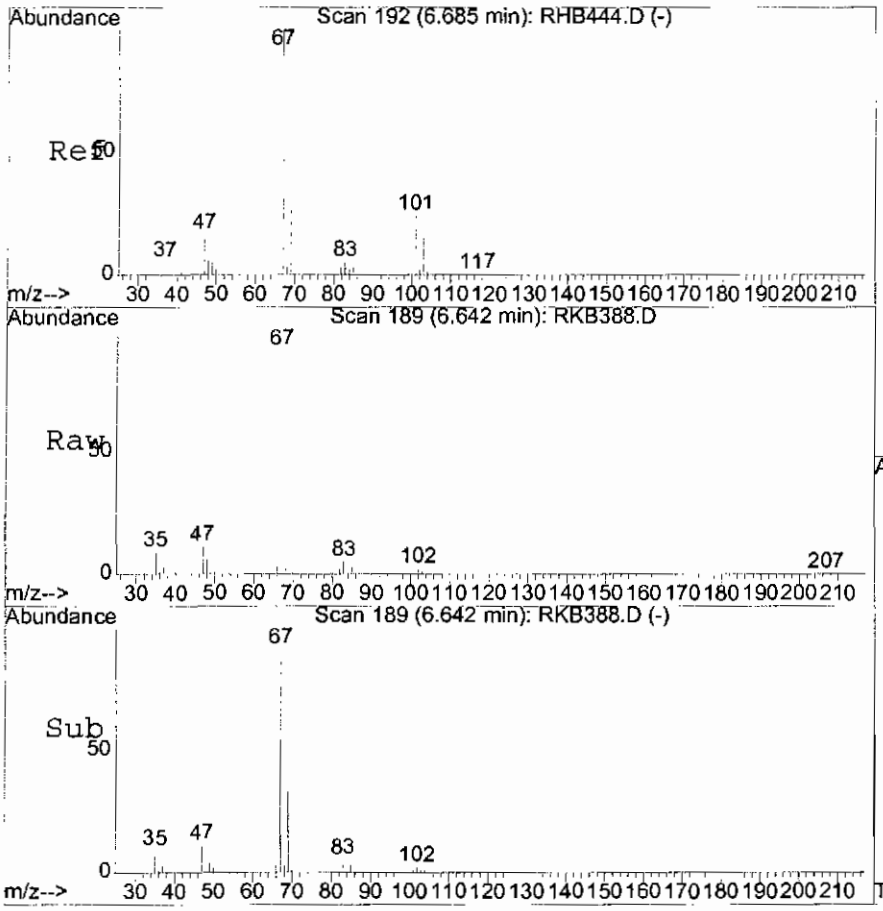


#7
Vinyl chloride
Concen: 246.52 ug/l
RT: 4.93 min Scan# 74
Delta R.T. 0.03 min
Lab File: RKB388.D
Acq: 23 Nov 2011 5:39 am

Tgt Ion: 62 Resp:23186185

Ion	Ratio	Lower	Upper
62	100		
64	32.1	2.9	62.9

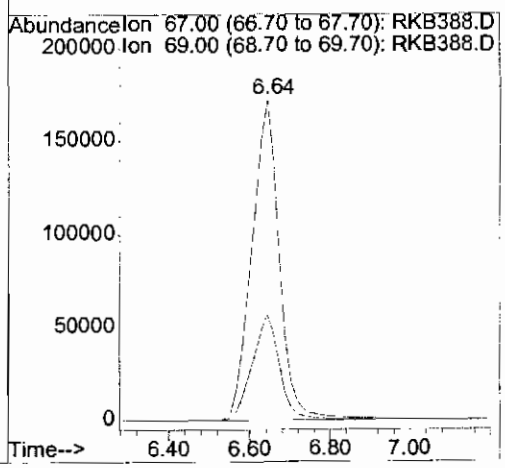


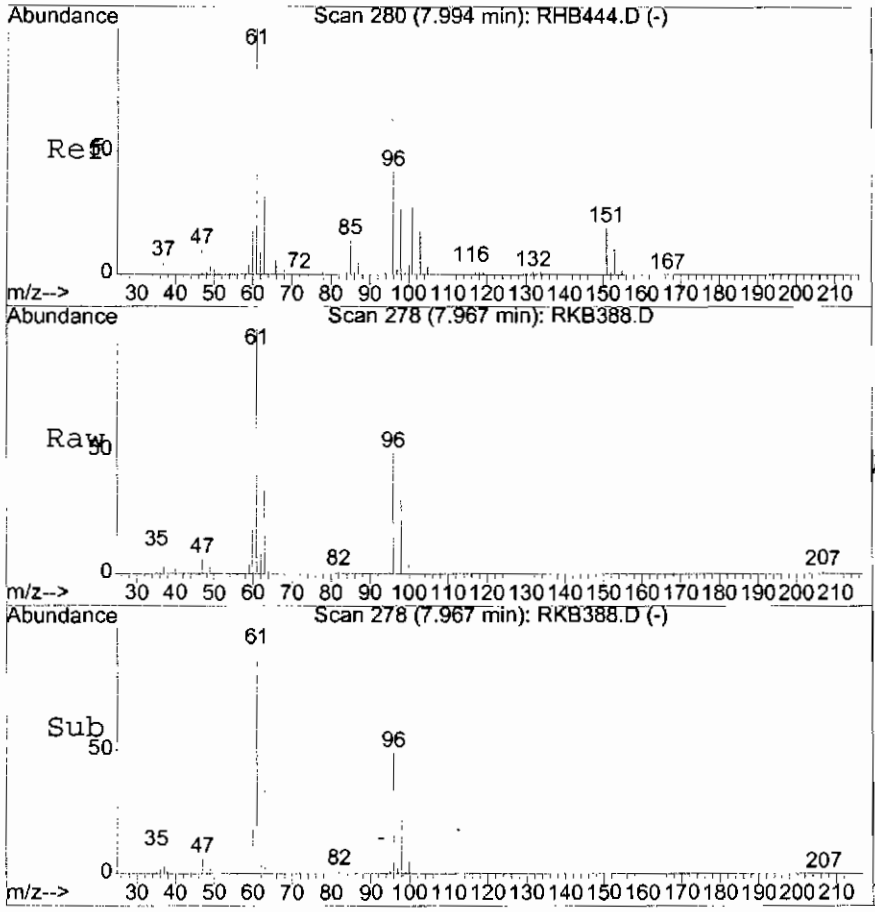


#10
Dichlorofluoromethane
Concen: 3.81 ug/l
RT: 6.64 min Scan# 189
Delta R.T. 0.02 min
Lab File: RKB388.D
Acq: 23 Nov 2011 5:39 am

Tgt Ion: 67 Resp: 810725

Ion	Ratio	Lower	Upper
67	100		
69	32.7	2.6	62.6

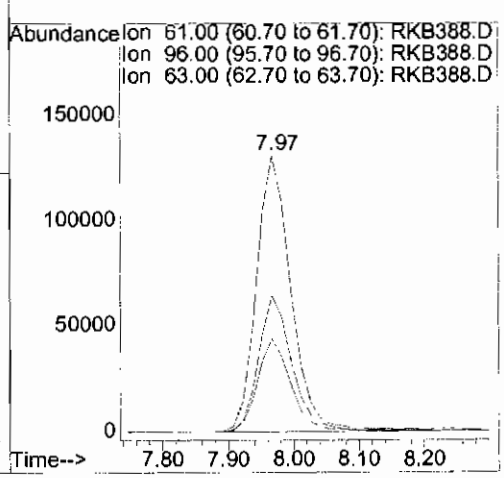


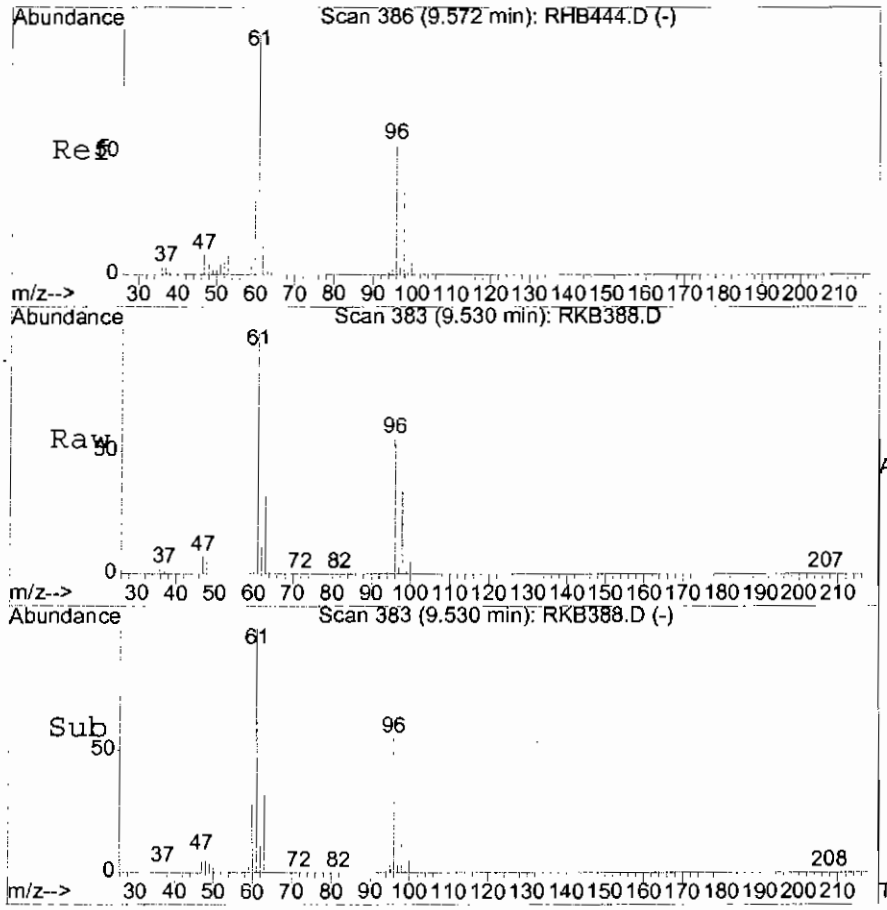


#15
1,1-Dichloroethene
Concen: 2.59 ug/l
RT: 7.97 min Scan# 278
Delta R.T. 0.02 min
Lab File: RKB388.D
Acq: 23 Nov 2011 5:39 am

Tgt Ion: 61 Resp: 485455

Ion	Ratio	Lower	Upper
61	100		
96	47.6	14.0	74.0
63	32.5	2.3	62.3

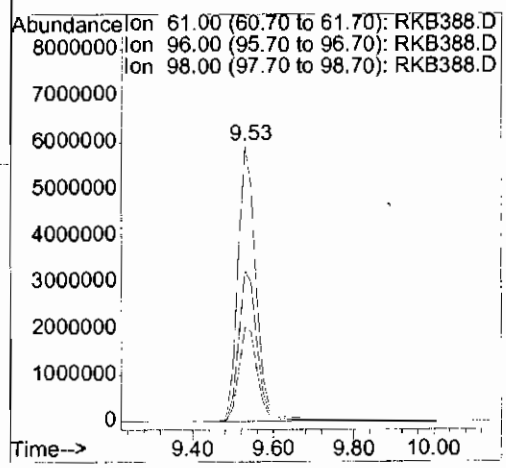


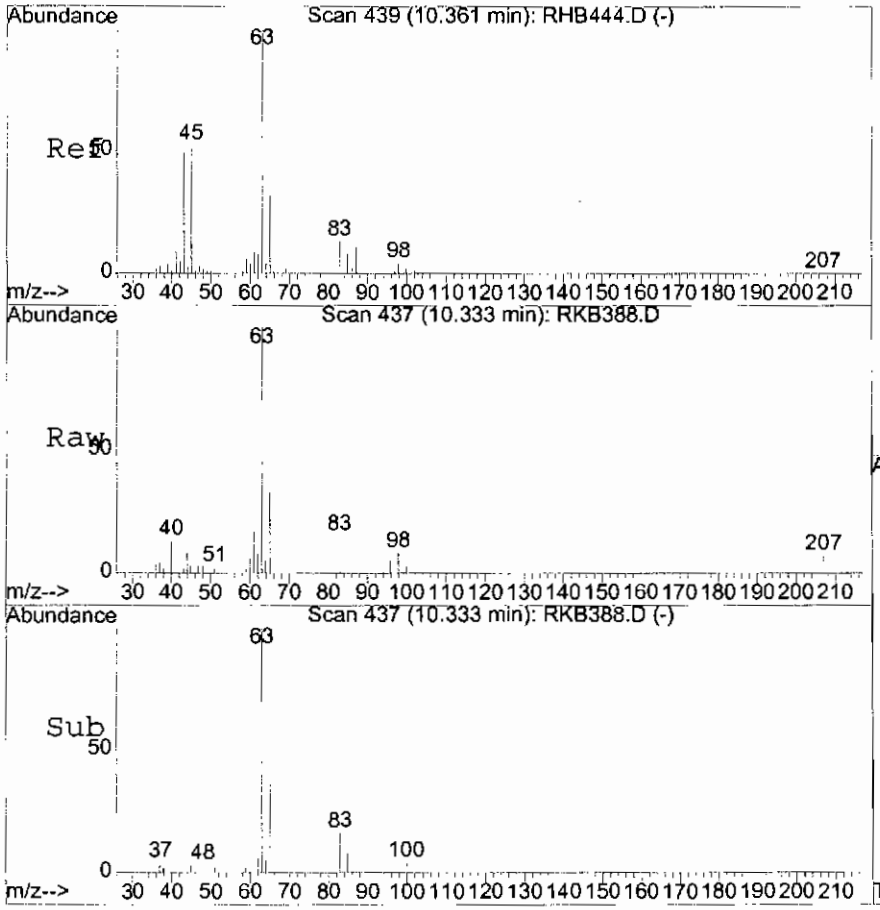


#22
trans-1,2-Dichloroethene
Concen: 98.99 ug/l
RT: 9.53 min Scan# 383
Delta R.T. 0.00 min
Lab File: RKB388.D
Acq: 23 Nov 2011 5:39 am

Tgt Ion: 61 Resp:18927363

Ion	Ratio	Lower	Upper
61	100		
96	56.1	23.5	83.5
98	35.6	4.2	64.2

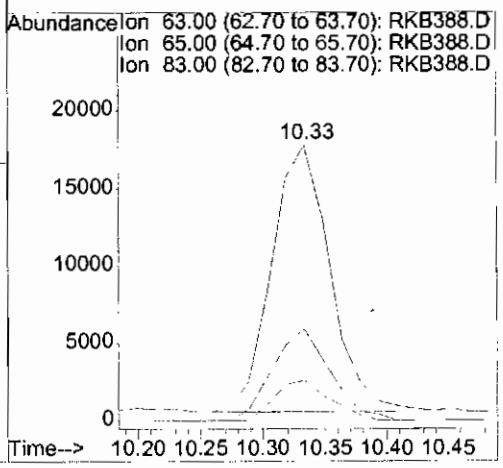


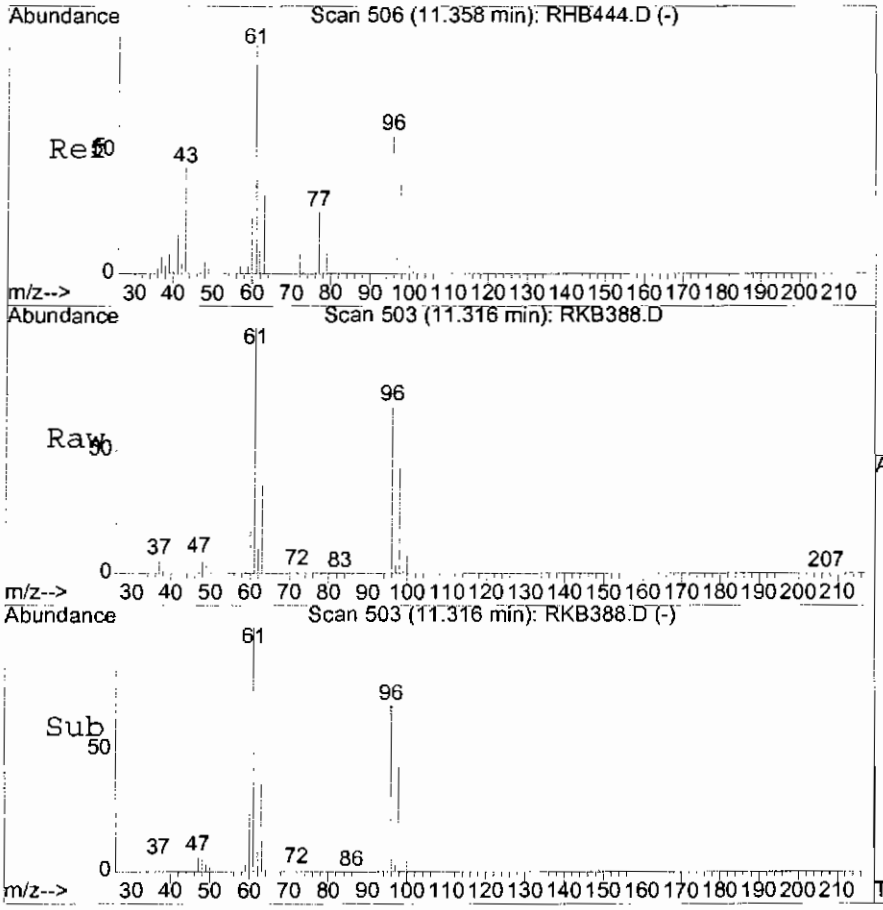


#26
1,1-Dichloroethane
Concen: 0.27 ug/l
RT: 10.33 min Scan# 437
Delta R.T. 0.02 min
Lab File: RKB388.D
Acq: 23 Nov 2011 5:39 am

Tgt Ion: 63 Resp: 55734

Ion	Ratio	Lower	Upper
63	100		
65	33.9	1.7	61.7
83	14.3	0.0	43.5

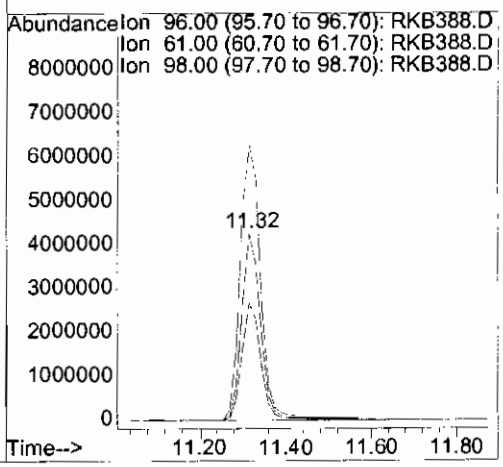


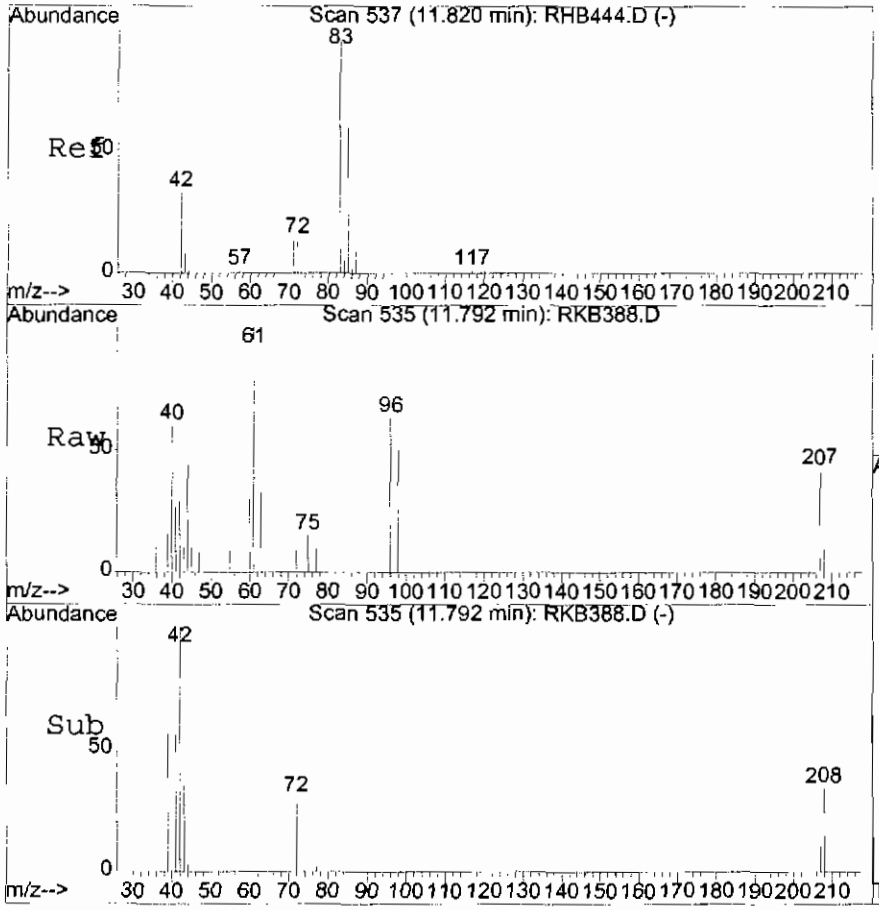


#31
cis-1,2-Dichloroethene
Concen: 120.34 ug/l
RT: 11.32 min Scan# 503
Delta R.T. 0.00 min
Lab File: RKB388.D
Acq: 23 Nov 2011 5:39 am

Tgt Ion: 96 Resp:13059119

Ion	Ratio	Lower	Upper
96	100		
61	158.2	162.4	222.4#
98	63.7	33.5	93.5

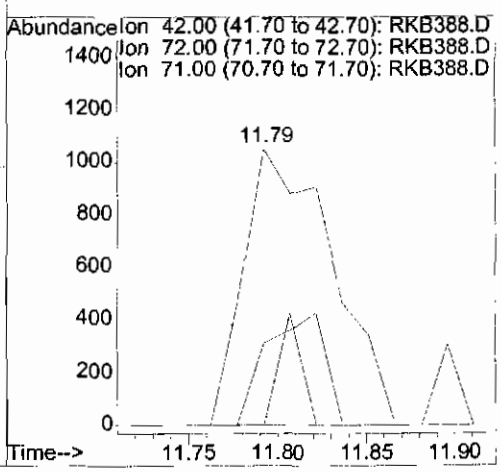


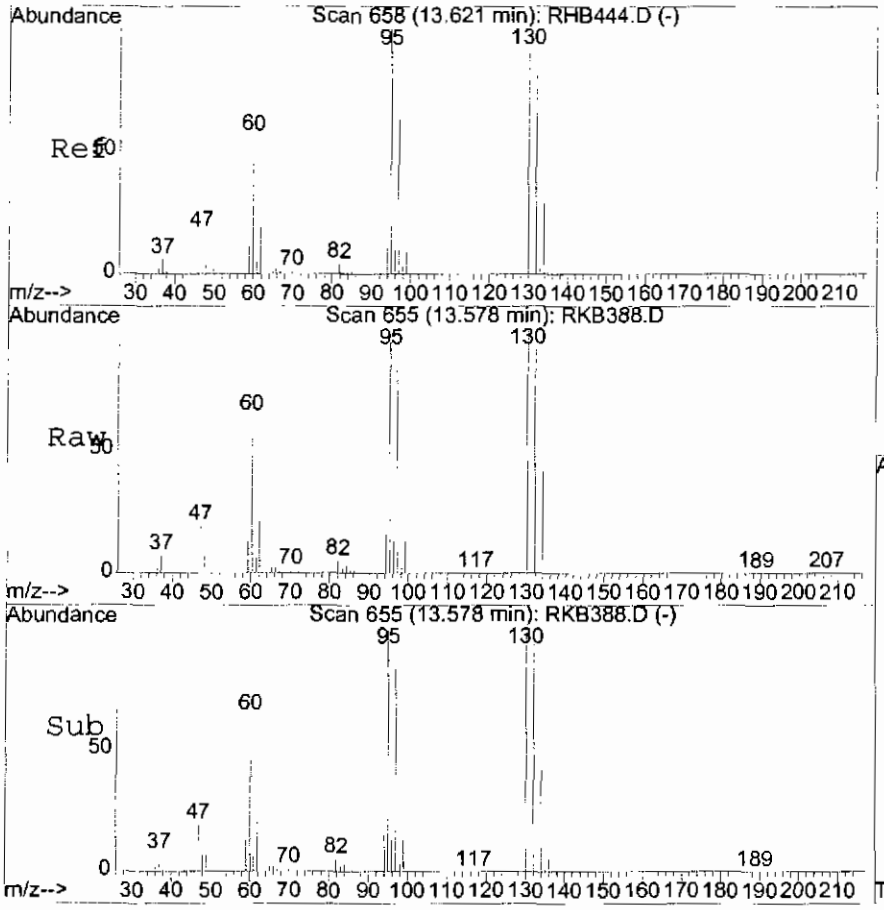


#33
Tetrahydrofuran
Concen: 0.35 ug/l
RT: 11.79 min Scan# 535
Delta R.T. 0.02 min
Lab File: RKB388.D
Acq: 23 Nov 2011 5:39 am

Tgt Ion: 42 Resp: 3655

Ion	Ratio	Lower	Upper
42	100		
72	0.0	23.2	83.2#
71	0.0	7.8	67.8#

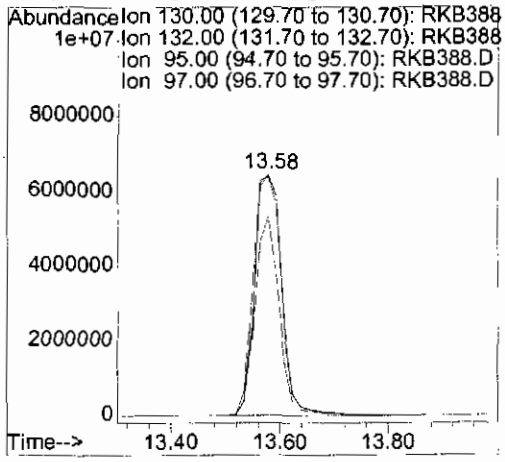




#46
Trichloroethene
Concen: 196.77 ug/l
RT: 13.58 min Scan# 655
Delta R.T. 0.00 min
Lab File: RKB388.D
Acq: 23 Nov 2011 5:39 am

Tgt Ion:130 Resp:22780799

Ion	Ratio	Lower	Upper
130	100		
132	98.8	67.6	127.6
95	102.3	83.6	143.6
97	73.1	43.1	103.1



METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/18/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
Batch No.	: 11K184	Date Extracted:	11/24/11 03:33
Sample ID:	MW-70-PMW13A-153DL	Date Analyzed:	11/24/11 03:33
Lab Samp ID:	K184-01T	Dilution Factor:	10
Lab File ID:	RKB420	Matrix	: WATER
Ext Btch ID:	V003K26	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	10	2.0
1,1,1,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2-TRICHLOROETHANE	ND	10	2.0
FREON113	ND	10	3.0
1,1-DICHLOROETHANE	ND	10	2.0
1,1-DICHLOROETHENE	2.9J	5.0	2.0
1,1-DICHLOROPROPENE	ND	10	2.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	20	5.0
1,2-DIBROMOETHANE	ND	10	2.0
1,2-DICHLOROBENZENE	ND	10	2.0
1,2-DICHLOROETHANE	ND	5.0	2.0
1,2-DICHLOROPROPANE	ND	10	2.0
1,2,3-TRICHLOROBENZENE	ND	10	3.0
1,2,3-TRICHLOROPROPANE	ND	10	5.0
1,2,4-TRICHLOROBENZENE	ND	10	3.0
1,2,4-TRIMETHYLBENZENE	ND	10	2.0
1,3-DICHLOROBENZENE	ND	10	2.0
1,3,5-TRIMETHYLBENZENE	ND	10	2.0
1,4-DICHLOROBENZENE	ND	10	2.0
2-BUTANONE	ND	100	40
2-CHLOROTOLUENE	ND	10	2.0
2-HEXANONE	ND	100	40
2,2-DICHLOROPROPANE	ND	10	2.0
4-CHLOROTOLUENE	ND	10	2.0
4-METHYL-2-PENTANONE	ND	100	40
N-BUTYLBENZENE	ND	10	2.0
N-PROPYLBENZENE	ND	10	2.0
P-ISOPROPYLTOLUENE	ND	10	2.0
SEC-BUTYLBENZENE	ND	10	2.0
TERT-BUTYLBENZENE	ND	10	2.0
ACETONE	ND	100	50
BENZENE	ND	10	2.0
BROMOBENZENE	ND	10	2.0
BROMODICHLOROMETHANE	ND	10	2.0
CIS-1,3-DICHLOROPROPENE	ND	10	2.0
TRANS-1,3-DICHLOROPROPENE	ND	10	2.0
BROMOMETHANE	ND	20	3.0
BROMOFORM	ND	10	3.0
CARBON DISULFIDE	ND	10	2.0
CARBON TETRACHLORIDE	ND	5.0	2.0
CHLOROBENZENE	ND	10	2.0
CHLOROETHANE	ND	20	3.0
CHLOROFORM	ND	10	2.0
CHLOROMETHANE	ND	20	3.0
CIS-1,2-DICHLOROETHENE	150	10	2.0
DICHLORODIFLUOROMETHANE	ND	20	3.0
DIBROMOCHLOROMETHANE	ND	10	2.0
DIBROMOMETHANE	ND	10	2.0
ETHYLBENZENE	ND	10	2.0
HEXACHLOROBUTADIENE	ND	10	3.0
ISOPROPYL BENZENE	ND	10	2.0
METHYLENE CHLORIDE	ND	10	5.0
MTBE	ND	10	2.0
STYRENE	ND	10	2.0
TETRACHLOROETHYLENE	ND	10	2.0
TOLUENE	ND	10	2.0
TRANS-1,2-DICHLOROETHENE	120	10	2.0
TRICHLOROETHENE	300	50	2.0
TRICHLOROFLUOROMETHANE	ND	20	3.0
VINYL CHLORIDE	300	5.0	2.0
XYLENES (TOTAL)	ND	20	6.0
M/P-XYLENES	ND	10	4.0
O-XYLENE	ND	10	2.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	92.6	100.0	92.6	70-140
4-BROMOFLUOROBENZENE	93.6	100.0	93.6	70-130
TOLUENE-D8	93.3	100.0	93.3	70-140

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K23\RKB420.D Vial: 8
Acq On : 24 Nov 2011 3:33 am Operator: CGM
Sample : 11K184-01T 2.5mL Inst : 03
Misc : DF=10 Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 28 12:14 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.16	114	2129771	10.00	ug/l	0.00
41) CHLOROBENZENE-D5	17.15	117	2007734	10.00	ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.68	152	682467	10.00	ug/l	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	12.08	111	767341	9.70	ug/l	0.00
Spiked Amount 10.000			Recovery	=	97.00%	
40) 1,2-Dichloroethane-d4	12.61	65	745991	9.26	ug/l	0.00
Spiked Amount 10.000			Recovery	=	92.60%	
55) Toluene-d8	15.22	98	2661148	9.33	ug/l	0.00
Spiked Amount 10.000			Recovery	=	93.30%	
75) 4-Bromofluorobenzene	18.61	95	993667	9.36	ug/l	0.00
Spiked Amount 10.000			Recovery	=	93.60%	
Target Compounds						Qvalue
7) Vinyl chloride	4.92	62	2120166	29.51	ug/l	99
10) Dichlorofluoromethane	6.64	67	71959	0.44	ug/l	98
15) 1,1-Dichloroethene	7.97	61	41963	0.29	ug/l	98
22) trans-1,2-Dichloroethene	9.53	61	1820521	12.47	ug/l	99
31) cis-1,2-Dichloroethene	11.32	96	1248986	15.07	ug/l	88
46) Trichloroethene	13.58	130	2665789	29.84	ug/l	99

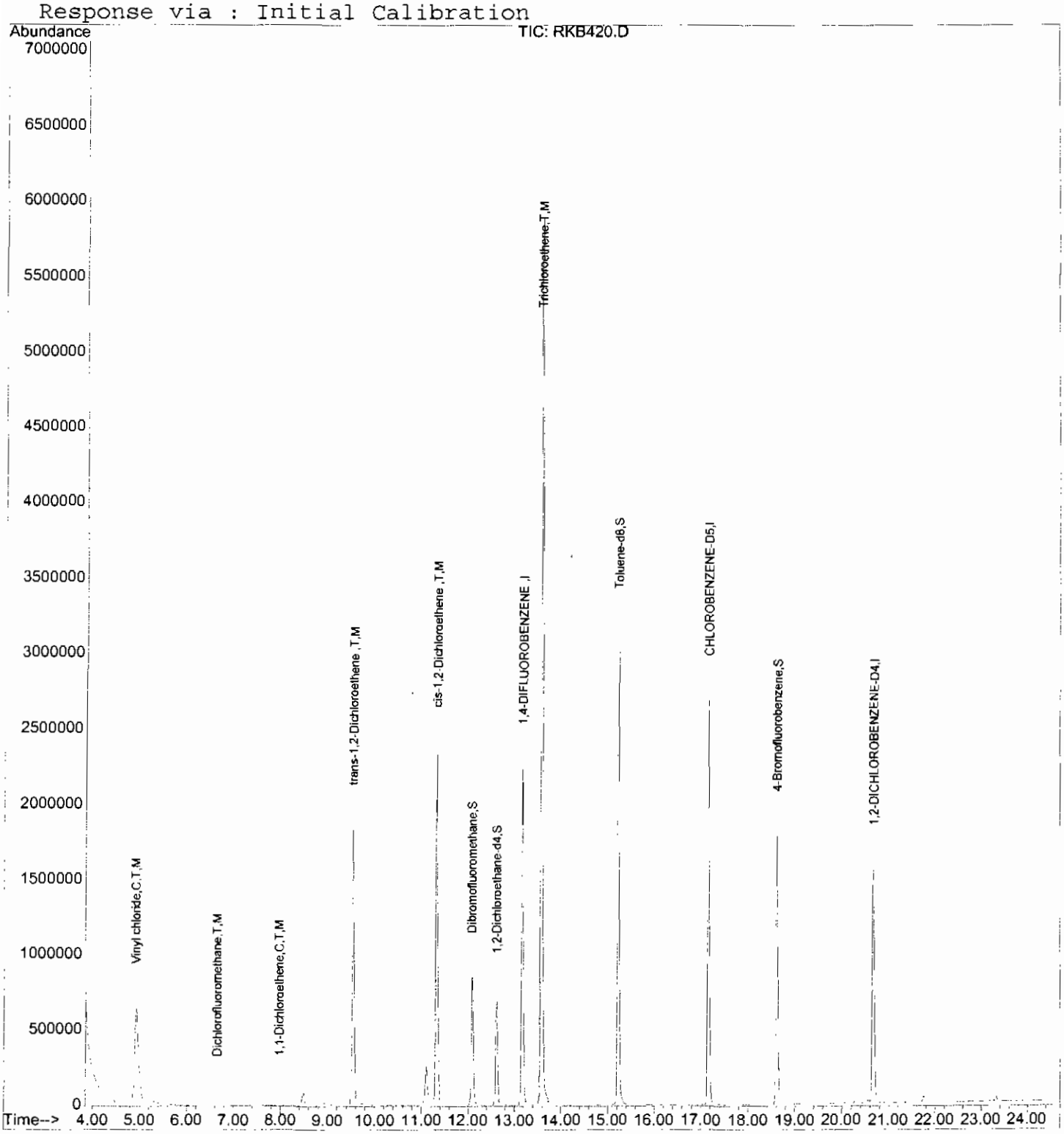
(#) = qualifier out of range (m) = manual integration

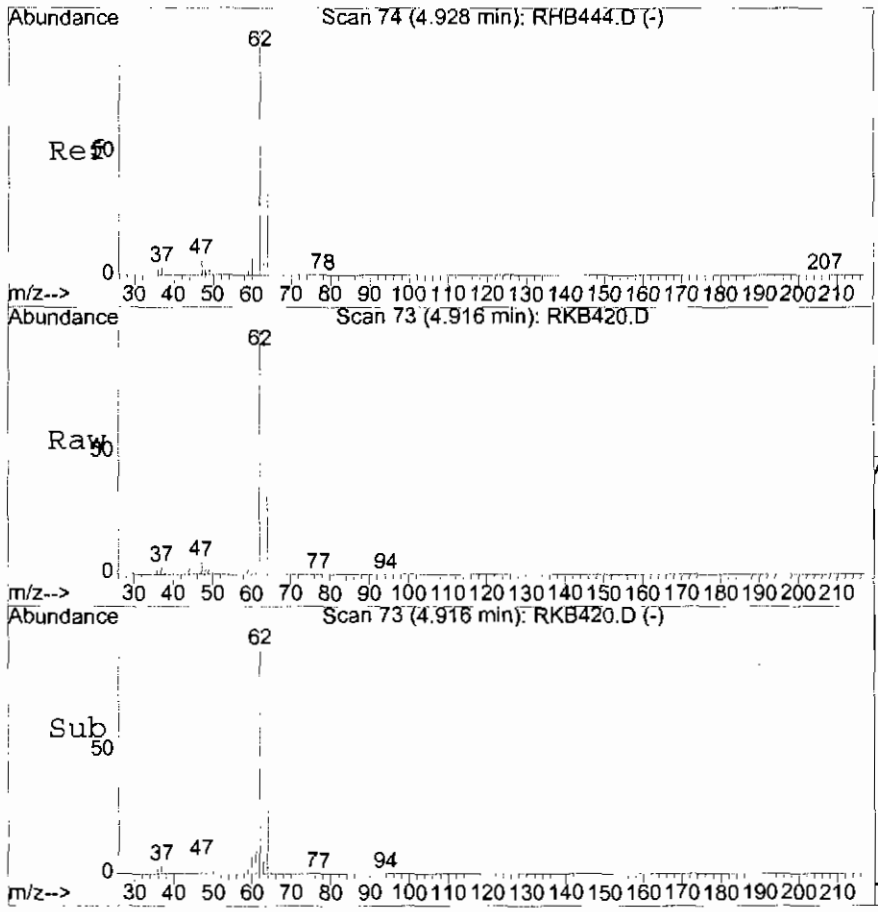
2012

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB420.D Vial: 8
Acq On : 24 Nov 2011 3:33 am Operator: CGM
Sample : 11K184-01T 2.5mL Inst : 03
Misc : DF=10 Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 28 12:14 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration

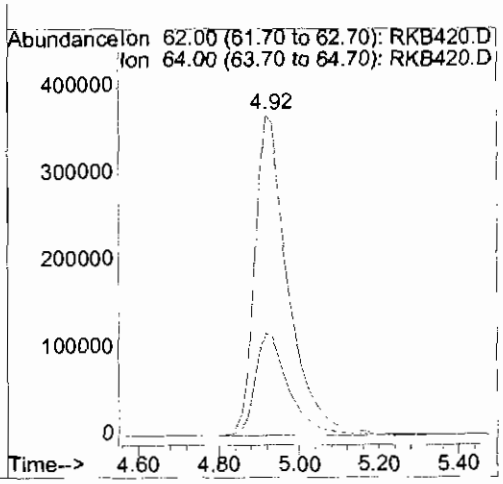


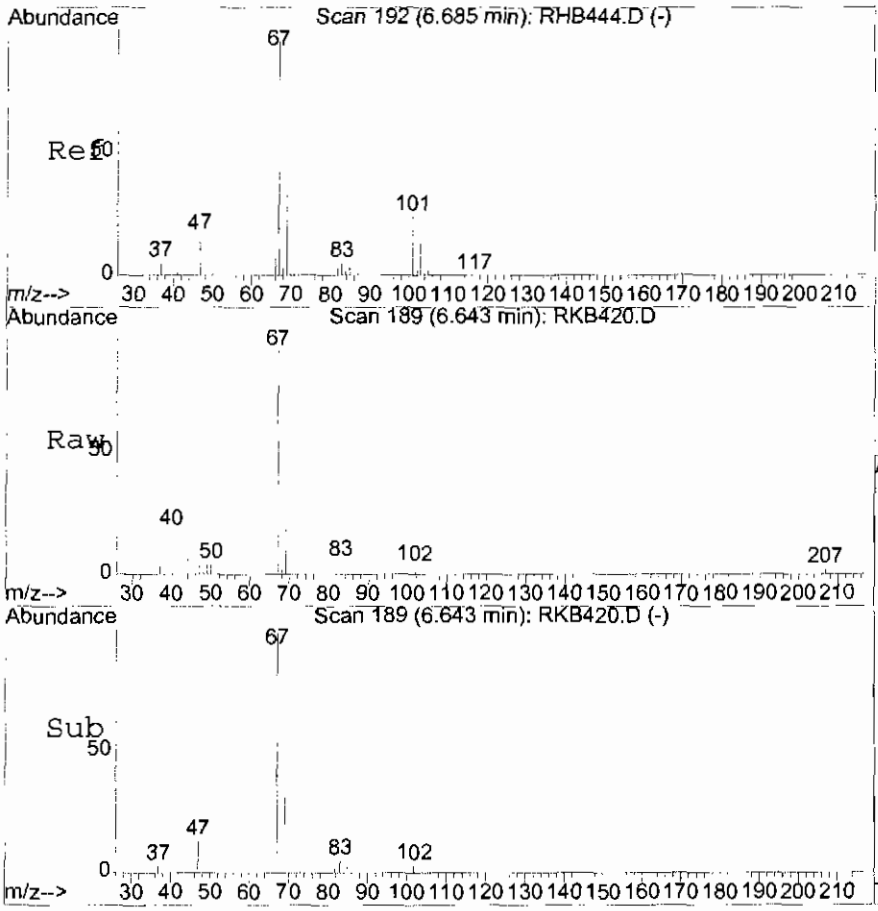


#7
Vinyl chloride
Concen: 29.51 ug/l
RT: 4.92 min Scan# 73
Delta R.T. 0.02 min
Lab File: RKB420.D
Acq: 24 Nov 2011 3:33 am

Tgt Ion: 62 Resp: 2120166

Ion	Ratio	Lower	Upper
62	100		
64	32.2	2.9	62.9

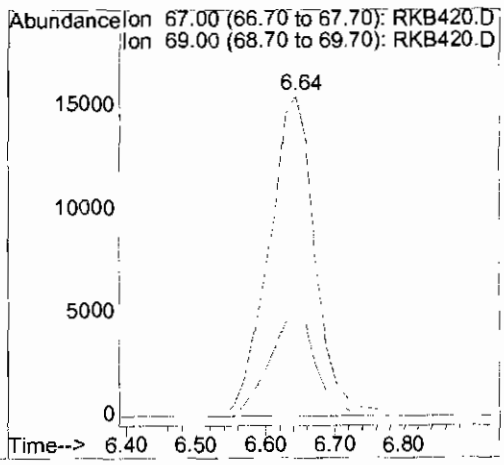


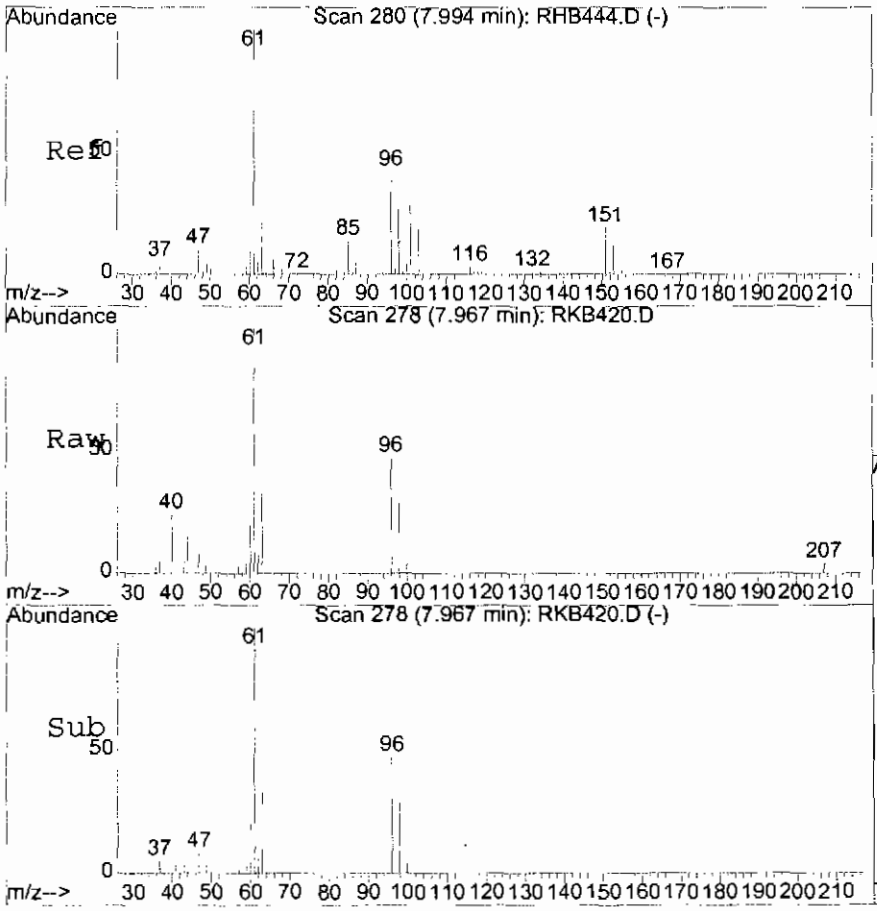


#10
Dichlorofluoromethane
Concen: 0.44 ug/l
RT: 6.64 min Scan# 189
Delta R.T. 0.02 min
Lab File: RKB420.D
Acq: 24 Nov 2011 3:33 am

Tgt Ion: 67 Resp: 71959

Ion	Ratio	Lower	Upper
67	100		
69	31.7	2.6	62.6

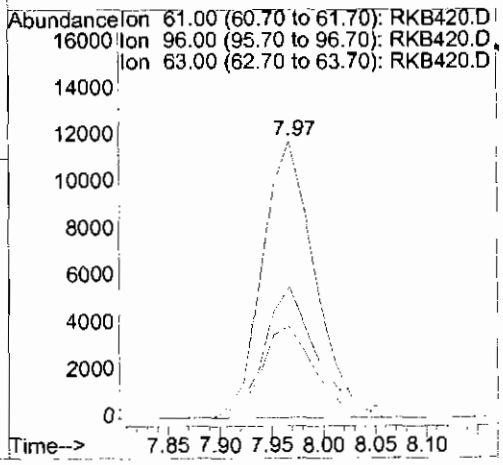


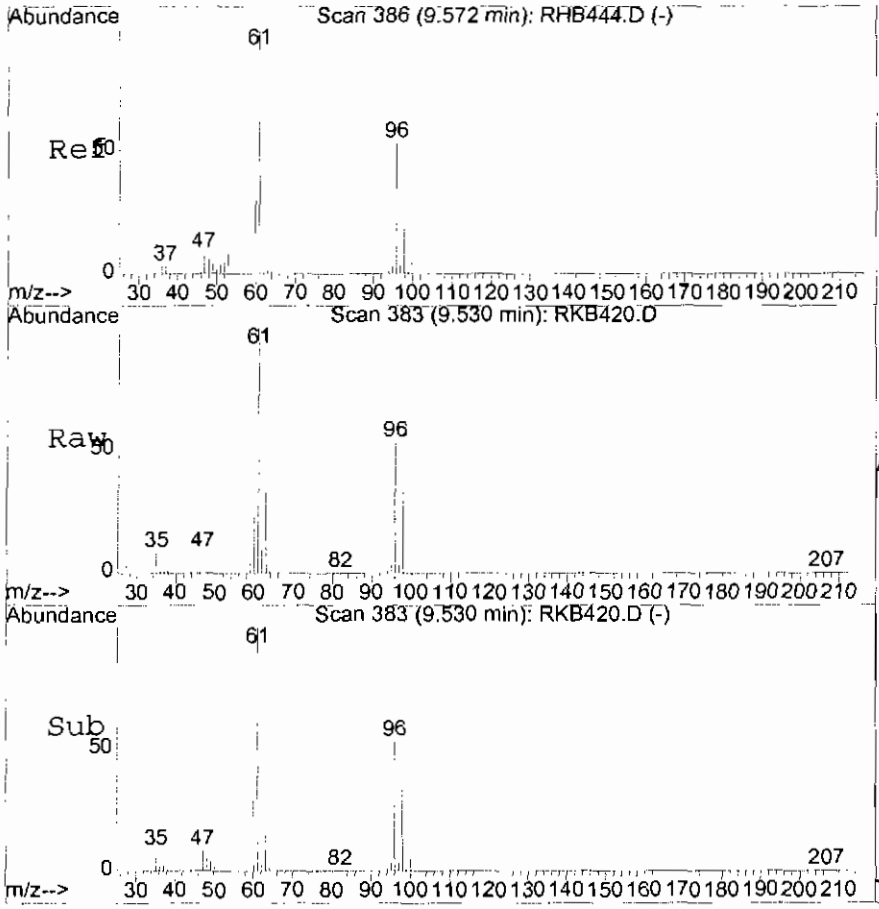


#15
1,1-Dichloroethene
Concen: 0.29 ug/l
RT: 7.97 min Scan# 278
Delta R.T. 0.02 min
Lab File: RKB420.D
Acq: 24 Nov 2011 3:33 am

Tgt Ion: 61 Resp: 41963

Ion	Ratio	Lower	Upper
61	100		
96	46.6	14.0	74.0
63	32.2	2.3	62.3

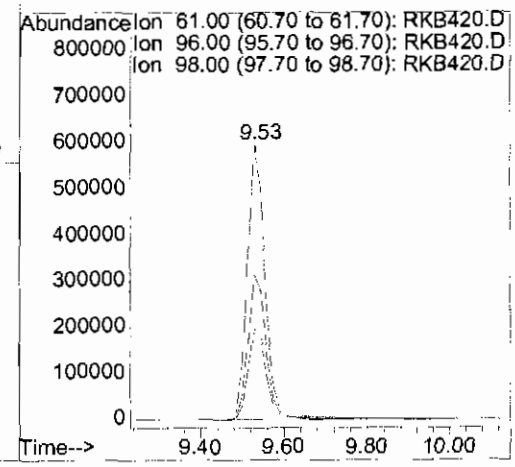


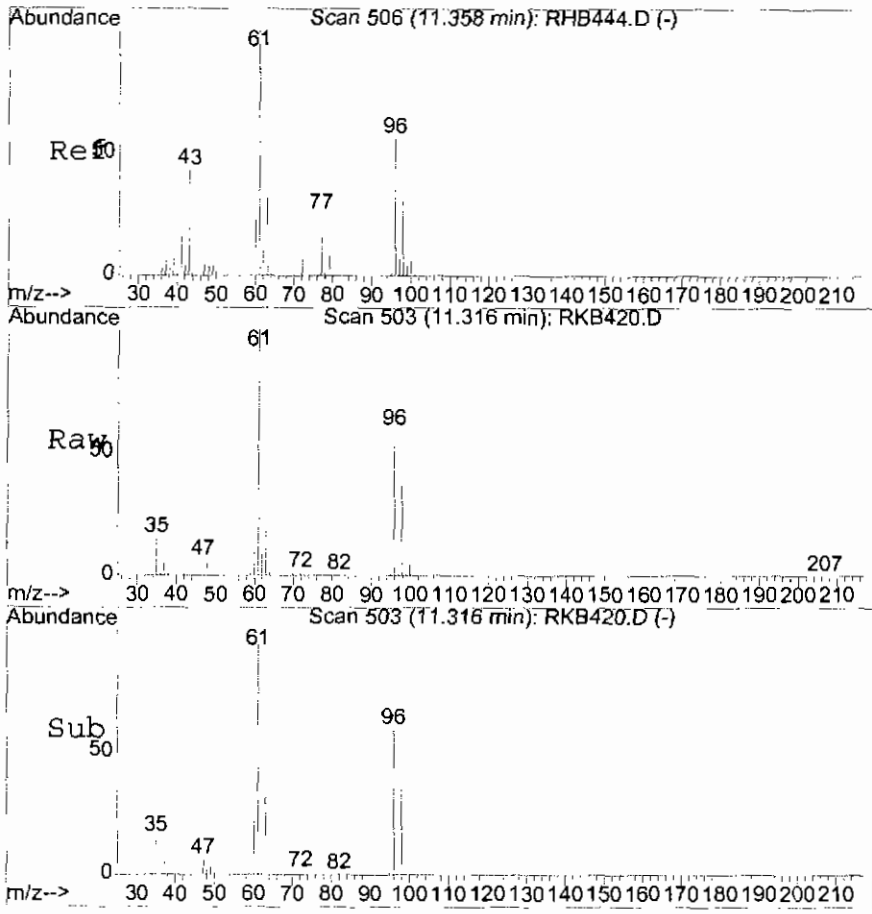


#22
trans-1,2-Dichloroethene
Concen: 12.47 ug/l
RT: 9.53 min Scan# 383
Delta R.T. 0.00 min
Lab File: RKB420.D
Acq: 24 Nov 2011 3:33 am

Tgt Ion: 61 Resp: 1820521

Ion	Ratio	Lower	Upper
61	100		
96	52.6	23.5	83.5
98	34.0	4.2	64.2

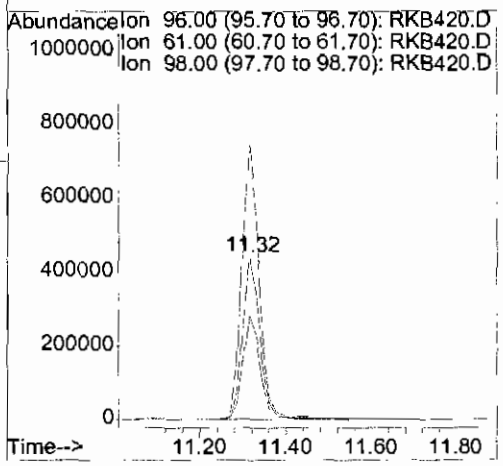


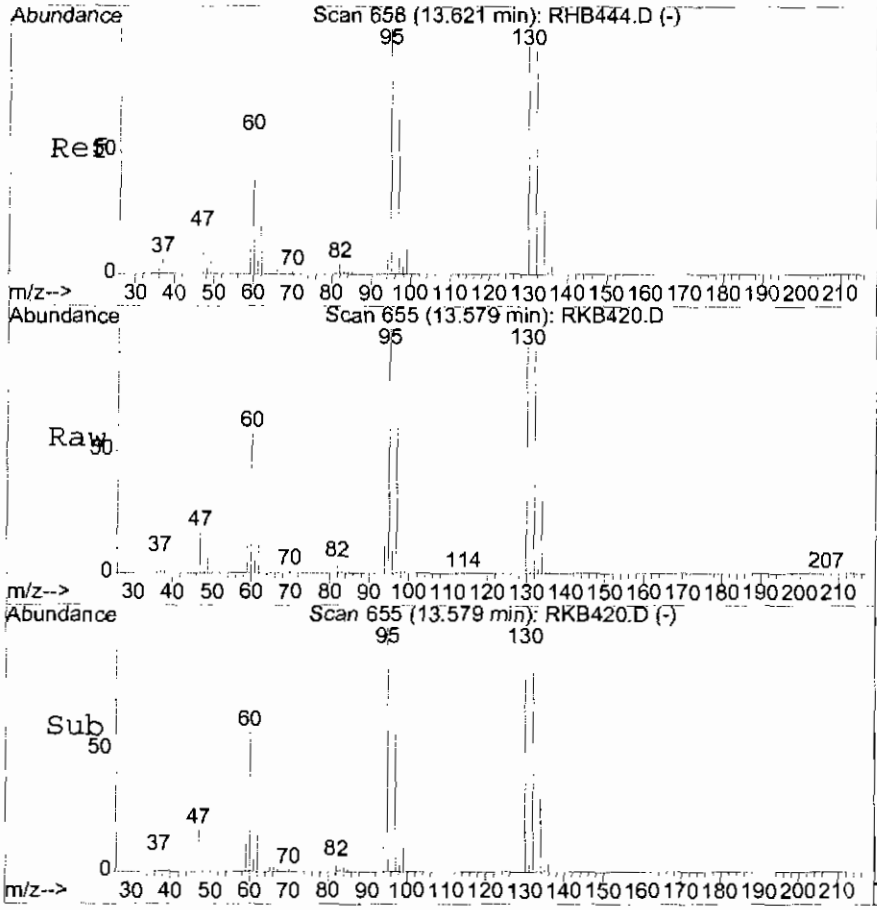


#31
cis-1,2-Dichloroethene
Concen: 15.07 ug/l
RT: 11.32 min Scan# 503
Delta R.T. 0.00 min
Lab File: RKB420.D
Acq: 24 Nov 2011 3:33 am

Tgt Ion: 96 Resp: 1248986

Ion	Ratio	Lower	Upper
96	100		
61	169.5	162.4	222.4
98	64.1	33.5	93.5

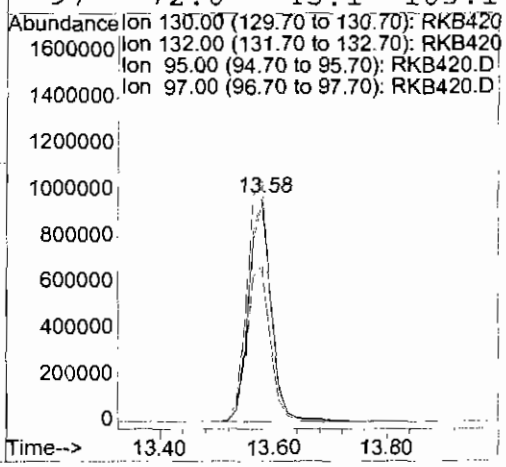




#46
Trichloroethene
Concen: 29.84 ug/l
RT: 13.58 min Scan# 655
Delta R.T. 0.00 min
Lab File: RKB420.D
Acq: 24 Nov 2011 3:33 am

Tgt Ion:130 Resp: 2665789

Ion	Ratio	Lower	Upper
130	100		
132	97.4	67.6	127.6
95	111.6	83.6	143.6
97	72.0	43.1	103.1



METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/18/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/18/11
Batch No. : 11K184	Date Extracted: 11/23/11 06:14
Sample ID: MW-70-PMW13B-154	Date Analyzed: 11/23/11 06:14
Lab Samp ID: K184-02	Dilution Factor: 1
Lab File ID: RKB389	Matrix : WATER
Ext Btch ID: V003K24	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.47J	1.0	0.20
1,1-DICHLOROETHENE	4.4	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	180E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	47	1.0	0.20
TRICHLOROETHENE	13	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	16	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.14	10.00	81.4	70-140
4-BROMOFLUOROBENZENE	9.38	10.00	93.8	70-130
TOLUENE-D8	9.46	10.00	94.6	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/18/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
Batch No.	: 11K184	Date Extracted:	11/28/11 21:47
Sample ID:	MW-70-PMW13B-154DL	Date Analyzed:	11/28/11 21:47
Lab Samp ID:	K184-02T	Dilution Factor:	50
Lab File ID:	RKB446	Matrix	: WATER
Ext Btch ID:	V003X27	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	50	10
1,1,1,2-TETRACHLOROETHANE	ND	50	10
1,1,2,2-TETRACHLOROETHANE	ND	50	10
1,1,2-TRICHLOROETHANE	ND	50	10
FREON113	ND	50	15
1,1-DICHLOROETHANE	ND	50	10
1,1-DICHLOROETHENE	ND	25	10
1,1-DICHLOROPROPENE	ND	50	10
1,2-DIBROMO-3-CHLOROPROPANE	ND	100	25
1,2-DIBROMOETHANE	ND	50	10
1,2-DICHLOROBENZENE	ND	50	10
1,2-DICHLOROETHANE	ND	25	10
1,2-DICHLOROPROPANE	ND	50	10
1,2,3-TRICHLOROBENZENE	ND	50	15
1,2,3-TRICHLOROPROPANE	ND	50	25
1,2,4-TRICHLOROBENZENE	ND	50	15
1,2,4-TRIMETHYLBENZENE	ND	50	10
1,3-DICHLOROBENZENE	ND	50	10
1,3,5-TRIMETHYLBENZENE	ND	50	10
1,4-DICHLOROBENZENE	ND	50	10
2-BUTANONE	ND	500	200
2-CHLOROTOLUENE	ND	50	10
2-HEXANONE	ND	500	200
2,2-DICHLOROPROPANE	ND	50	10
4-CHLOROTOLUENE	ND	50	10
4-METHYL-2-PENTANONE	ND	500	200
N-BUTYLBENZENE	ND	50	10
N-PROPYLBENZENE	ND	50	10
P-ISOPROPYLTOLUENE	ND	50	10
SEC-BUTYLBENZENE	ND	50	10
TERT-BUTYLBENZENE	ND	50	10
ACETONE	ND	500	250
BENZENE	ND	50	10
BROMOBENZENE	ND	50	10
BROMODICHLOROMETHANE	ND	50	10
CIS-1,3-DICHLOROPROPENE	ND	50	10
TRANS-1,3-DICHLOROPROPENE	ND	50	10
BROMOMETHANE	ND	100	15
BROMOFORM	ND	50	15
CARBON DISULFIDE	ND	50	10
CARBON TETRACHLORIDE	ND	25	10
CHLOROBENZENE	ND	50	10
CHLOROETHANE	ND	100	15
CHLOROFORM	ND	50	10
CHLOROMETHANE	ND	100	15
CIS-1,2-DICHLOROETHENE	1100	50	10
DICHLORODIFLUOROMETHANE	ND	100	15
DIBROMOCHLOROMETHANE	ND	50	10
DIBROMOMETHANE	ND	50	10
ETHYLBENZENE	ND	50	10
HEXACHLOROBUTADIENE	ND	50	15
ISOPROPYL BENZENE	ND	50	10
METHYLENE CHLORIDE	ND	50	25
MTBE	ND	50	10
STYRENE	ND	50	10
TETRACHLOROETHYLENE	ND	50	10
TOLUENE	ND	50	10
TRANS-1,2-DICHLOROETHENE	58	50	10
TRICHLOROETHENE	14J	250	10
TRICHLOROFLUOROMETHANE	ND	100	15
VINYL CHLORIDE	18J	25	10
XYLENES (TOTAL)	ND	100	30
M/P-XYLENES	ND	50	20
O-XYLENE	ND	50	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	460	500.0	91.9	70-140
4-BROMOFLUOROBENZENE	502	500.0	100	70-130
TOLUENE-D8	476	500.0	95.2	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/18/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/18/11
Batch No. : 11K184	Date Extracted: 11/23/11 06:49
Sample ID: MW-70-PMW14A-155	Date Analyzed: 11/23/11 06:49
Lab Samp ID: K184-03	Dilution Factor: 1
Lab File ID: RKB390	Matrix : WATER
Ext Btch ID: VQ03K24	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	9.1	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	30	1.0	0.20
TRICHLOROETHENE	5.4	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	190E	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.49	10.00	84.9	70-140
4-BROMOFLUOROBENZENE	9.40	10.00	94.0	70-130
TOLUENE-D8	9.48	10.00	94.8	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/18/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
Batch No.	: 11K184	Date Extracted:	11/24/11 04:47
Sample ID:	MW-70-PMW14A-155DL	Date Analyzed:	11/24/11 04:47
Lab Samp ID:	K184-03T	Dilution Factor:	10
Lab File ID:	RKB422	Matrix	: WATER
Ext Btch ID:	VO03K26	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	10	2.0
1,1,1,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2-TRICHLOROETHANE	ND	10	2.0
FREON113	ND	10	3.0
1,1-DICHLOROETHANE	ND	10	2.0
1,1-DICHLOROETHENE	ND	5.0	2.0
1,1-DICHLOROPROPENE	ND	10	2.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	20	5.0
1,2-DIBROMOETHANE	ND	10	2.0
1,2-DICHLOROBENZENE	ND	10	2.0
1,2-DICHLOROETHANE	ND	5.0	2.0
1,2-DICHLOROPROPANE	ND	10	2.0
1,2,3-TRICHLOROBENZENE	ND	10	3.0
1,2,3-TRICHLOROPROPANE	ND	10	5.0
1,2,4-TRICHLOROBENZENE	ND	10	3.0
1,2,4-TRIMETHYLBENZENE	ND	10	2.0
1,3-DICHLOROBENZENE	ND	10	2.0
1,3,5-TRIMETHYLBENZENE	ND	10	2.0
1,4-DICHLOROBENZENE	ND	10	2.0
2-BUTANONE	ND	100	40
2-CHLOROTOLUENE	ND	10	2.0
2-HEXANONE	ND	100	40
2,2-DICHLOROPROPANE	ND	10	2.0
4-CHLOROTOLUENE	ND	10	2.0
4-METHYL-2-PENTANONE	ND	100	40
N-BUTYLBENZENE	ND	10	2.0
N-PROPYLBENZENE	ND	10	2.0
P-ISOPROPYLTOLUENE	ND	10	2.0
SEC-BUTYLBENZENE	ND	10	2.0
TERT-BUTYLBENZENE	ND	10	2.0
ACETONE	ND	100	50
BENZENE	ND	10	2.0
BROMOBENZENE	ND	10	2.0
BROMODICHLOROMETHANE	ND	10	2.0
CIS-1,3-DICHLOROPROPENE	ND	10	2.0
TRANS-1,3-DICHLOROPROPENE	ND	10	2.0
BROMOMETHANE	ND	20	3.0
BROMOFORM	ND	10	3.0
CARBON DISULFIDE	ND	10	2.0
CARBON TETRACHLORIDE	ND	5.0	2.0
CHLOROBENZENE	ND	10	2.0
CHLOROETHANE	ND	20	3.0
CHLOROFORM	ND	10	2.0
CHLOROMETHANE	ND	20	3.0
CIS-1,2-DICHLOROETHENE	11	10	2.0
DICHLORODIFLUOROMETHANE	ND	20	3.0
DIBROMOCHLOROMETHANE	ND	10	2.0
DIBROMOMETHANE	ND	10	2.0
ETHYLBENZENE	ND	10	2.0
HEXACHLOROBUTADIENE	ND	10	3.0
ISOPROPYL BENZENE	ND	10	2.0
METHYLENE CHLORIDE	ND	10	5.0
MTBE	ND	10	2.0
STYRENE	ND	10	2.0
TETRACHLOROETHYLENE	ND	10	2.0
TOLUENE	ND	10	2.0
TRANS-1,2-DICHLOROETHENE	38	10	2.0
TRICHLOROETHENE	5.9J	50	2.0
TRICHLOROFLUOROMETHANE	ND	20	3.0
VINYL CHLORIDE	250	5.0	2.0
XYLENES (TOTAL)	ND	20	6.0
M/P-XYLENES	ND	10	4.0
O-XYLENE	ND	10	2.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	99.5	100.0	99.5	70-140
4-BROMOFLUOROBENZENE	94.7	100.0	94.7	70-130
TOLUENE-D8	91.3	100.0	91.3	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/18/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
Batch No.	: 11K184	Date Extracted:	11/23/11 07:25
Sample ID:	MW-70-PMW14B-156	Date Analyzed:	11/23/11 07:25
Lab Samp ID:	K184-04	Dilution Factor:	1
Lab File ID:	RKB391	Matrix	: WATER
Ext Btch ID:	VD03K24	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.47J	1.0	0.20
1,1-DICHLOROETHENE	1.9	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.26J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	260E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	36	1.0	0.20
TRICHLOROETHENE	11	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	230E	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.67	10.00	86.7	70-140
4-BROMOFLUOROBENZENE	9.51	10.00	95.1	70-130
TOLUENE-D8	9.44	10.00	94.4	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/18/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/18/11
Batch No. : 11K184	Date Extracted: 11/24/11 05:25
Sample ID: MW-70-PMW14B-156DL	Date Analyzed: 11/24/11 05:25
Lab Samp ID: K184-04T	Dilution Factor: 10
Lab File ID: RKB423	Matrix : WATER
Ext Btch ID: V003K26	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	10	2.0
1,1,1,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2-TRICHLOROETHANE	ND	10	2.0
FREON113	ND	10	3.0
1,1-DICHLOROETHANE	ND	10	2.0
1,1-DICHLOROETHENE	2.1J	5.0	2.0
1,1-DICHLOROPROPENE	ND	10	2.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	20	5.0
1,2-DIBROMOETHANE	ND	10	2.0
1,2-DICHLOROBENZENE	ND	10	2.0
1,2-DICHLOROETHANE	ND	5.0	2.0
1,2-DICHLOROPROPANE	ND	10	2.0
1,2,3-TRICHLOROBENZENE	ND	10	3.0
1,2,3-TRICHLOROPROPANE	ND	10	5.0
1,2,4-TRICHLOROBENZENE	ND	10	3.0
1,2,4-TRIMETHYLBENZENE	ND	10	2.0
1,3-DICHLOROBENZENE	ND	10	2.0
1,3,5-TRIMETHYLBENZENE	ND	10	2.0
1,4-DICHLOROBENZENE	ND	10	2.0
2-BUTANONE	ND	100	40
2-CHLOROTOLUENE	ND	10	2.0
2-HEXANONE	ND	100	40
2,2-DICHLOROPROPANE	ND	10	2.0
4-CHLOROTOLUENE	ND	10	2.0
4-METHYL-2-PENTANONE	ND	100	40
N-BUTYLBENZENE	ND	10	2.0
N-PROPYLBENZENE	ND	10	2.0
P-ISOPROPYLTOLUENE	ND	10	2.0
SEC-BUTYLBENZENE	ND	10	2.0
TERT-BUTYLBENZENE	ND	10	2.0
ACETONE	ND	100	50
BENZENE	ND	10	2.0
BROMOBENZENE	ND	10	2.0
BROMODICHLOROMETHANE	ND	10	2.0
CIS-1,3-DICHLOROPROPENE	ND	10	2.0
TRANS-1,3-DICHLOROPROPENE	ND	10	2.0
BROMOMETHANE	ND	20	3.0
BROMOFORM	ND	10	3.0
CARBON DISULFIDE	ND	10	2.0
CARBON TETRACHLORIDE	ND	5.0	2.0
CHLOROBENZENE	ND	10	2.0
CHLOROETHANE	ND	20	3.0
CHLOROFORM	ND	10	2.0
CHLOROMETHANE	ND	20	3.0
CIS-1,2-DICHLOROETHENE	420	10	2.0
DICHLORODIFLUOROMETHANE	ND	20	3.0
DIBROMOCHLOROMETHANE	ND	10	2.0
DIBROMOMETHANE	ND	10	2.0
ETHYLBENZENE	ND	10	2.0
HEXACHLOROBUTADIENE	ND	10	3.0
ISOPROPYL BENZENE	ND	10	2.0
METHYLENE CHLORIDE	ND	10	5.0
MTBE	ND	10	2.0
STYRENE	ND	10	2.0
TETRACHLOROETHYLENE	ND	10	2.0
TOLUENE	ND	10	2.0
TRANS-1,2-DICHLOROETHENE	42	10	2.0
TRICHLOROETHENE	11J	50	2.0
TRICHLOROFLUOROMETHANE	ND	20	3.0
VINYL CHLORIDE	300	5.0	2.0
XYLENES (TOTAL)	ND	20	6.0
M/P-XYLENES	ND	10	4.0
O-XYLENE	ND	10	2.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	95.0	100.0	95.0	70-140
4-BROMOFLUOROBENZENE	95.7	100.0	95.7	70-130
TOLUENE-D8	93.6	100.0	93.6	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/18/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
Batch No.	: 11K184	Date Extracted:	11/22/11 12:25
Sample ID:	IW-70-SSB109-157	Date Analyzed:	11/22/11 12:25
Lab Samp ID:	K184-05	Dilution Factor:	1
Lab File ID:	RKB359	Matrix	: WATER
Ext Btch ID:	V003K23	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	7.3J	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.42J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	0.32J	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	0.30J	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	0.43J	1.0	0.20
TRICHLOROETHENE	0.30J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	1.3	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.51	10.00	95.1	70-140
4-BROMOFLUOROBENZENE	9.43	10.00	94.3	70-130
TOLUENE-D8	9.28	10.00	92.8	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/18/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/18/11
Batch No. : 11K184	Date Extracted: 11/22/11 23:15
Sample ID: IR-70-TB-152	Date Analyzed: 11/22/11 23:15
Lab Samp ID: K184-06	Dilution Factor: 1
Lab File ID: RKB377	Matrix : WATER
Ext Btch ID: V003K24	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.75	10.00	87.5	70-140
4-BROMOFLUOROBENZENE	9.53	10.00	95.3	70-130
TOLUENE-D8	9.34	10.00	93.4	70-140

QC SUMMARIES

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/22/11
Batch No. : 11K184	Date Extracted: 11/22/11 09:29
Sample ID: MBLK1W	Date Analyzed: 11/22/11 09:29
Lab Samp ID: V003K23B	Dilution Factor: 1
Lab File ID: RKB354	Matrix : WATER
Ext Btch ID: V003K23	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.19	10.00	81.9	70-140
4-BROMOFLUOROBENZENE	9.52	10.00	95.2	70-130
TOLUENE-D8	9.67	10.00	96.7	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	V003K23B	V003K23L	V003K23C		
LAB FILE ID:	RKB354	RKB352	RKB353		
DATE EXTRACTED:	11/22/1109:29	11/22/1108:21	11/22/1108:55	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1109:29	11/22/1108:21	11/22/1108:55	DATE RECEIVED:	11/22/11
PREP. BATCH:	V003K23	V003K23	V003K23		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.21	92	10.0	9.30	93	1	60-130	30
Benzene	ND	10.0	9.41	94	10.0	9.66	97	3	70-130	30
Chlorobenzene	ND	10.0	9.92	99	10.0	9.98	100	1	70-120	30
Toluene	ND	10.0	9.19	92	10.0	9.40	94	2	70-130	30
Trichloroethene	ND	10.0	9.38	94	10.0	9.68	97	3	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.76	88	10.0	8.48	85	70-140
4-Bromofluorobenzene	10.0	9.28	93	10.0	9.30	93	70-130
Toluene-d8	10.0	9.20	92	10.0	9.34	93	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/22/11
Batch No.	: 11K184	Date Extracted:	11/22/11 22:40
Sample ID:	MBLK2W	Date Analyzed:	11/22/11 22:40
Lab Samp ID:	V003K24B	Dilution Factor:	1
Lab File ID:	RKB376	Matrix :	WATER
Ext Btch ID:	V003K24	% Moisture :	NA
Calib. Ref.:	RHB444	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.74	10.00	87.4	70-140
4-BROMOFLUOROBENZENE	9.43	10.00	94.3	70-130
TOLUENE-D8	9.48	10.00	94.8	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	V003K24B	V003K24L	V003K24C		
LAB FILE ID:	RKB376	RKB374	RKB375		
DATE EXTRACTED:	11/22/1122:40	11/22/1121:29	11/22/1122:04	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1122:40	11/22/1121:29	11/22/1122:04	DATE RECEIVED:	11/22/11
PREP. BATCH:	V003K24	V003K24	V003K24		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.83	98	10.0	9.32	93	5	60-130	30
Benzene	ND	10.0	10.1	101	10.0	10.0	100	1	70-130	30
Chlorobenzene	ND	10.0	10.5	105	10.0	10.3	103	2	70-120	30
Toluene	ND	10.0	9.90	99	10.0	9.71	97	2	70-130	30
Trichloroethene	ND	10.0	10.2	102	10.0	10.0	100	1	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	9.02	90	10.0	8.64	86	70-140
4-Bromofluorobenzene	10.0	9.34	93	10.0	9.22	92	70-130
Toluene-d8	10.0	9.29	93	10.0	9.35	94	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/24/11
Batch No.	: 11K184	Date Extracted:	11/24/11 02:17
Sample ID:	MBLK3W	Date Analyzed:	11/24/11 02:17
Lab Samp ID:	V003K26B	Dilution Factor:	1
Lab File ID:	RKB418	Matrix	: WATER
Ext Btch ID:	V003K26	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.19	10.00	91.9	70-140
4-BROMOFLUOROBENZENE	9.18	10.00	91.8	70-130
TOLUENE-D8	9.34	10.00	93.4	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK3W				
LAB SAMP ID:	V003K26B	V003K26L	V003K26C		
LAB FILE ID:	RKB418	RKB415	RKB416		
DATE EXTRACTED:	11/24/1102:17	11/24/1100:25	11/24/1101:03	DATE COLLECTED:	NA
DATE ANALYZED:	11/24/1102:17	11/24/1100:25	11/24/1101:03	DATE RECEIVED:	11/24/11
PREP. BATCH:	V003K26	V003K26	V003K26		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	10.1	101	10.0	9.78	98	3	60-130	30
Benzene	ND	10.0	10.3	103	10.0	10.4	104	0	70-130	30
Chlorobenzene	ND	10.0	10.6	106	10.0	10.7	107	1	70-120	30
Toluene	ND	10.0	9.97	100	10.0	10.1	101	1	70-130	30
Trichloroethene	ND	10.0	10.5	105	10.0	10.6	106	1	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	9.43	94	10.0	8.89	89	70-140
4-Bromofluorobenzene	10.0	9.15	92	10.0	9.26	93	70-130
Toluene-d8	10.0	9.21	92	10.0	9.33	93	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/28/11
Batch No.	: 11K184	Date Extracted:	11/28/11 18:15
Sample ID:	MBLK4W	Date Analyzed:	11/28/11 18:15
Lab Samp ID:	V003K27B	Dilution Factor:	1
Lab File ID:	RKB440	Matrix :	WATER
Ext Btch ID:	V003K27	% Moisture :	NA
Calib. Ref.:	RHB444	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.94	10.00	89.4	70-140
4-BROMOFLUOROBENZENE	9.38	10.00	93.8	70-130
TOLUENE-D8	9.36	10.00	93.6	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK4W				
LAB SAMP ID:	V003K27B	V003K27L	V003K27C		
LAB FILE ID:	RKB440	RKB437	RKB438		
DATE EXTRACTED:	11/28/1118:15	11/28/1116:31	11/28/1117:04	DATE COLLECTED:	NA
DATE ANALYZED:	11/28/1118:15	11/28/1116:31	11/28/1117:04	DATE RECEIVED:	11/28/11
PREP. BATCH:	V003K27	V003K27	V003K27		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.98	100	10.0	9.83	98	2	60-130	30
Benzene	ND	10.0	10.7	107	10.0	10.6	106	1	70-130	30
Chlorobenzene	ND	10.0	10.7	107	10.0	10.4	104	3	70-120	30
Toluene	ND	10.0	10.4	104	10.0	10.2	102	2	70-130	30
Trichloroethene	ND	10.0	10.0	100	10.0	10.0	100	0	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.83	88	10.0	8.46	85	70-140
4-Bromofluorobenzene	10.0	9.80	98	10.0	9.98	100	70-130
Toluene-d8	10.0	9.42	94	10.0	9.44	94	70-130

QC DATA

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K22\RKB376.D Vial: 5
Acq On : 22 Nov 2011 10:40 pm Operator: CGM
Sample : VO03K24B 25mL Inst : 03
Misc : DF=1.0 MB Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 23 7:03 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.16	114	2457602	10.00	ug/l	0.00
41) CHLOROBENZENE-D5	17.15	117	2277046	10.00	ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.66	152	727069	10.00	ug/l	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	12.07	111	850179	9.31	ug/l	0.00
Spiked Amount 10.000			Recovery	=	93.10%	
40) 1,2-Dichloroethane-d4	12.59	65	812680	8.74	ug/l	-0.02
Spiked Amount 10.000			Recovery	=	87.40%	
55) Toluene-d8	15.21	98	3065132	9.48	ug/l	0.00
Spiked Amount 10.000			Recovery	=	94.80%	
75) 4-Bromofluorobenzene	18.61	95	1067323	9.43	ug/l	0.00
Spiked Amount 10.000			Recovery	=	94.30%	

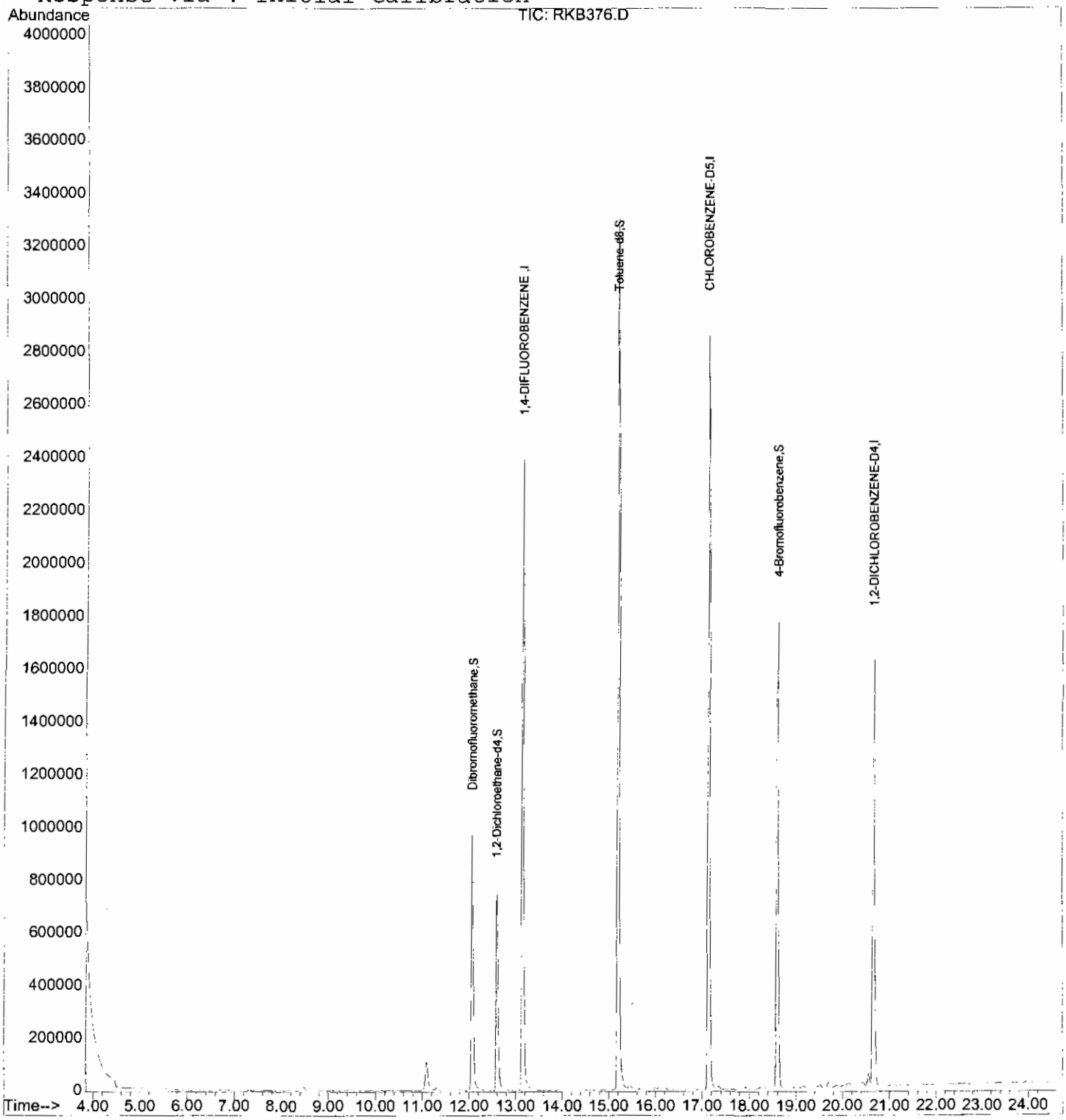
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB376.D Vial: 5
Acq On : 22 Nov 2011 10:40 pm Operator: CGM
Sample : VO03K24B 25mL Inst : 03
Misc : DF=1.0 MB Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 23 7:03 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K22\RKB374.D Vial: 3
Acq On : 22 Nov 2011 9:29 pm Operator: CGM
Sample : VO03K24L Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 22 21:54 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.16	114	2115906	10.00	ug/l	0.00
41) CHLOROBENZENE-D5	17.15	117	2000724	10.00	ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.66	152	681441	10.00	ug/l	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	12.07	111	751184	9.56	ug/l	0.00
Spiked Amount 10.000			Recovery	=	95.60%	
40) 1,2-Dichloroethane-d4	12.60	65	721755	9.02	ug/l	-0.01
Spiked Amount 10.000			Recovery	=	90.20%	
55) Toluene-d8	15.20	98	2639383	9.29	ug/l	-0.01
Spiked Amount 10.000			Recovery	=	92.90%	
75) 4-Bromofluorobenzene	18.59	95	990768	9.34	ug/l	-0.01
Spiked Amount 10.000			Recovery	=	93.40%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.07	85	643038	8.61	ug/l	100
5) Chloromethane	4.59	50	730584	9.68	ug/l	99
7) Vinyl chloride	4.92	62	632060	8.86	ug/l	100
8) Bromomethane	5.82	94	476425	9.93	ug/l	99
9) Chloroethane	6.11	64	392087	10.45	ug/l	98
10) Dichlorofluoromethane	6.64	67	1574870	9.75	ug/l	100
11) Trichlorofluoromethane	6.69	101	1067280	9.26	ug/l	100
12) Acrolein	7.80	56	53474	28.43	ug/l	95
13) 1,1,2-Trichloro-1,2,2-trif	7.94	151	408689	9.52	ug/l	99
14) Acetone	8.13	43	448010	54.82	ug/l	95
15) 1,1-Dichloroethene	7.95	61	1399110	9.83	ug/l	99
17) Iodomethane	8.34	142	1356772	10.16	ug/l	97
18) Carbon disulfide	8.47	76	3218403	11.24	ug/l	100
19) Methylene chloride	9.02	49	1078262	10.72	ug/l	98
20) tert-Butyl alcohol	9.23	59	127008	49.85	ug/l	94
21) tert-Butyl methyl ether (M	9.45	73	1067818	10.33	ug/l	97
22) trans-1,2-Dichloroethene	9.53	61	1393446	9.60	ug/l	100
23) Acrylonitrile	9.54	53	458402	60.99	ug/l	97
24) Isopropyl ether (DIPE)	10.27	45	2702476	10.68	ug/l	97
25) Vinyl acetate	10.33	43	838466	9.87	ug/l	95
26) 1,1-Dichloroethane	10.32	63	1649794	10.50	ug/l	100
28) tert-Butyl ethyl ether (ET	10.90	59	1943576	10.73	ug/l	99
29) 2,2-Dichloropropane	11.27	77	1101829	8.61	ug/l	98
30) 2-Butanone	11.30	43	822507	58.84	ug/l	99
31) cis-1,2-Dichloroethene	11.32	96	815903	9.91	ug/l	98
32) Bromochloromethane	11.72	49	686785	10.56	ug/l	99
33) Tetrahydrofuran	11.76	42	94145	11.76	ug/l	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K22\RKB374.D Vial: 3
Acq On : 22 Nov 2011 9:29 pm Operator: CGM
Sample : VO03K24L Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 22 21:54 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
34)	Chloroform	11.81	83	1737768	10.18 ug/l		100
37)	1,1,1-Trichloroethane	12.07	97	1413581	9.24 ug/l		98
39)	tert-Amyl methyl ether (TA	12.68	87	288110	10.30 ug/l		90
42)	1,1-Dichloropropene	12.31	110	397880	10.02 ug/l		99
43)	Carbon tetrachloride	12.33	119	1179862	8.71 ug/l		100
44)	Benzene	12.66	78	3290411	10.14 ug/l		99
45)	1,2-Dichloroethane	12.71	62	962114	9.61 ug/l		99
46)	Trichloroethene	13.56	130	907051	10.19 ug/l		99
48)	1,2-Dichloropropane	13.92	63	920707	11.09 ug/l		90
49)	1,4-Dioxane	14.08	88	60560	235.22 ug/l		97
50)	Dibromomethane	14.13	93	390504	9.96 ug/l		98
51)	Bromodichloromethane	14.29	83	1220295	9.84 ug/l		99
52)	2-Chloroethyl vinyl ether	14.59	63	70956	2.83 ug/l		97
53)	cis-1,3-Dichloropropene	14.87	75	1326017	10.35 ug/l		97
54)	4-Methyl-2-pentanone	14.99	43	2282601	56.47 ug/l		99
56)	Toluene	15.30	91	3484687	9.90 ug/l		99
57)	Ethyl methacrylate	15.54	69	620133	9.50 ug/l		99
58)	trans-1,3-Dichloropropene	15.59	75	1002782	10.01 ug/l		96
59)	1,1,2-Trichloroethane	15.87	97	462864	10.66 ug/l		99
60)	Tetrachloroethene	16.03	164	712912	9.32 ug/l		99
61)	2-Hexanone	16.06	43	1554820	58.21 ug/l		98
62)	1,3-Dichloropropane	16.09	76	934953	10.76 ug/l		99
63)	Dibromochloromethane	16.44	129	641316	9.97 ug/l		99
64)	1,2-Dibromoethane	16.63	107	459198	9.65 ug/l		99
65)	1-Chlorohexane	16.99	91	1631477	10.00 ug/l		99
66)	Chlorobenzene	17.18	112	2126352	10.53 ug/l		96
67)	Ethylbenzene	17.22	91	4401021	9.68 ug/l		99
68)	1,1,1,2-Tetrachloroethane	17.27	131	737296	9.84 ug/l		96
69)	m-Xylene & p-Xylene	17.36	91	6651094	19.00 ug/l		98
70)	o-Xylene	17.89	91	3302112	9.73 ug/l		98
71)	Styrene	17.91	104	2138190	9.76 ug/l		98
73)	Isopropylbenzene	18.31	105	4023859	10.41 ug/l		99
74)	Bromoform	18.30	173	282969	10.05 ug/l		99
76)	1,1,2,2-Tetrachloroethane	18.74	83	571565	11.13 ug/l		99
77)	trans-1,4-Dichloro-2-buten	18.79	53	124235	7.46 ug/l		91
78)	n-Propylbenzene	18.82	91	5477008	9.97 ug/l		100
79)	1,2,3-Trichloropropane	18.85	110	123981	10.39 ug/l	#	90
80)	Bromobenzene	18.86	156	724339	9.31 ug/l		95
81)	1,3,5-Trimethylbenzene	19.00	105	3086535	9.27 ug/l		98
82)	2-Chlorotoluene	19.04	91	3289188	9.60 ug/l		98
83)	4-Chlorotoluene	19.16	91	2971013	10.03 ug/l		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K22\RKB374.D Vial: 3
Acq On : 22 Nov 2011 9:29 pm Operator: CGM
Sample : VO03K24L Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 22 21:54 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

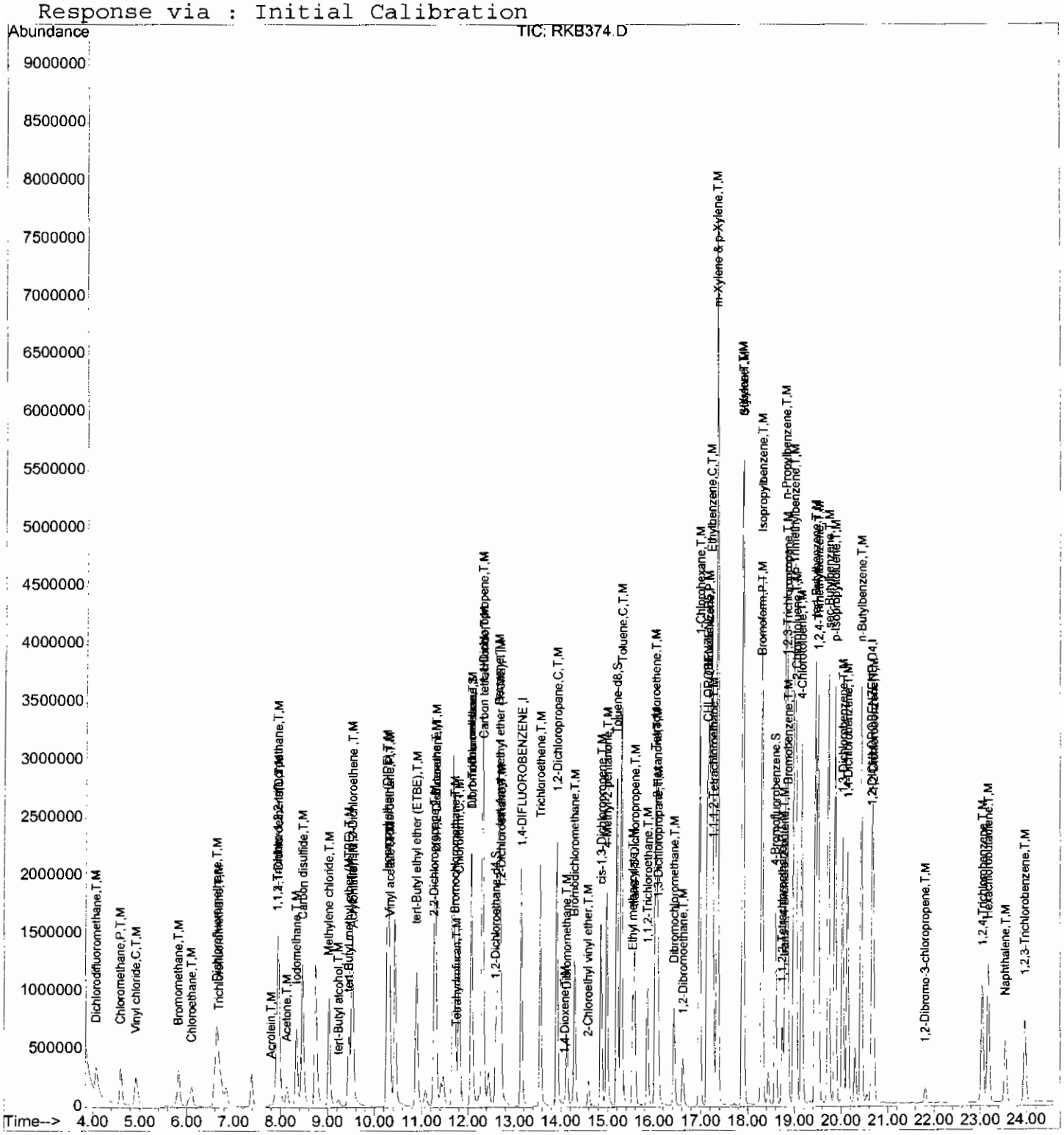
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84)	tert-Butylbenzene	19.46	134	659698	9.99 ug/l	93
85)	1,2,4-Trimethylbenzene	19.52	105	3068371	9.68 ug/l	98
86)	sec-Butylbenzene	19.74	105	4372016	10.07 ug/l	99
87)	p-Isopropyltoluene	19.87	119	3249484	9.70 ug/l	98
88)	1,3-Dichlorobenzene	20.04	146	1513751	10.14 ug/l	99
89)	1,4-Dichlorobenzene	20.14	146	1407732	10.14 ug/l	99
90)	n-Butylbenzene	20.44	91	3624629	9.80 ug/l	99
91)	1,2-Dichlorobenzene	20.69	146	1182532	10.36 ug/l	100
92)	1,2-Dibromo-3-chloropropan	21.81	157	57945	9.95 ug/l	97
93)	1,2,4-Trichlorobenzene	23.06	180	588124	10.16 ug/l	99
94)	Hexachlorobutadiene	23.18	225	459019	8.66 ug/l	99
95)	Naphthalene	23.55	128	837501	11.22 ug/l	100
96)	1,2,3-Trichlorobenzene	23.97	180	427570	10.06 ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB374.D Vial: 3
Acq On : 22 Nov 2011 9:29 pm Operator: CGM
Sample : VO03K24L Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 22 21:54 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K22\RKB375.D Vial: 4
Acq On : 22 Nov 2011 10:04 pm Operator: CGM
Sample : VO03K24C Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 22 22:29 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.16	114	2290156	10.00	ug/l	0.00
41) CHLOROBENZENE-D5	17.15	117	2143016	10.00	ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.66	152	743165	10.00	ug/l	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	12.07	111	796714	9.36	ug/l	0.00
Spiked Amount 10.000			Recovery	=	93.60%	
40) 1,2-Dichloroethane-d4	12.61	65	748202	8.64	ug/l	0.00
Spiked Amount 10.000			Recovery	=	86.40%	
55) Toluene-d8	15.21	98	2846398	9.35	ug/l	0.00
Spiked Amount 10.000			Recovery	=	93.50%	
75) 4-Bromofluorobenzene	18.61	95	1066479	9.22	ug/l	0.00
Spiked Amount 10.000			Recovery	=	92.20%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.08	85	701697	8.68	ug/l	98
5) Chloromethane	4.60	50	810478	9.93	ug/l	100
7) Vinyl chloride	4.91	62	699376	9.05	ug/l	100
8) Bromomethane	5.84	94	525369	10.12	ug/l	98
9) Chloroethane	6.10	64	442891	10.91	ug/l	97
10) Dichlorofluoromethane	6.64	67	1635900	9.35	ug/l	99
11) Trichlorofluoromethane	6.68	101	1171312	9.38	ug/l	100
12) Acrolein	7.80	56	60922	29.92	ug/l	97
13) 1,1,2-Trichloro-1,2,2-trif	7.93	151	429051	9.23	ug/l	99
14) Acetone	8.13	43	469378	53.06	ug/l	95
15) 1,1-Dichloroethene	7.96	61	1435939	9.32	ug/l	98
17) Iodomethane	8.34	142	1419280	9.82	ug/l	95
18) Carbon disulfide	8.47	76	3239558	10.45	ug/l	99
19) Methylene chloride	9.04	49	1117295	10.26	ug/l	99
20) tert-Butyl alcohol	9.23	59	129994	47.14	ug/l	97
21) tert-Butyl methyl ether (M	9.45	73	1125720	10.06	ug/l	96
22) trans-1,2-Dichloroethene	9.53	61	1451453	9.24	ug/l	98
23) Acrylonitrile	9.56	53	487156	59.88	ug/l	99
24) Isopropyl ether (DIPE)	10.29	45	2843008	10.38	ug/l	97
25) Vinyl acetate	10.33	43	782273	8.51	ug/l	98
26) 1,1-Dichloroethane	10.32	63	1711233	10.06	ug/l	99
28) tert-Butyl ethyl ether (ET	10.90	59	2089040	10.66	ug/l	98
29) 2,2-Dichloropropane	11.28	77	1118142	8.07	ug/l	98
30) 2-Butanone	11.30	43	819278	54.15	ug/l	99
31) cis-1,2-Dichloroethene	11.31	96	852250	9.56	ug/l	96
32) Bromochloromethane	11.71	49	724830	10.30	ug/l	99
33) Tetrahydrofuran	11.76	42	95481	11.02	ug/l	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K22\RKB375.D Vial: 4
Acq On : 22 Nov 2011 10:04 pm Operator: CGM
Sample : VO03K24C Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 22 22:29 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
34)	Chloroform	11.80	83	1790818	9.69	ug/l		100
37)	1,1,1-Trichloroethane	12.09	97	1453262	8.78	ug/l		99
39)	tert-Amyl methyl ether (TA	12.70	87	302883	10.01	ug/l		90
42)	1,1-Dichloropropene	12.31	110	416995	9.80	ug/l		100
43)	Carbon tetrachloride	12.32	119	1206743	8.31	ug/l		100
44)	Benzene	12.65	78	3477293	10.01	ug/l		99
45)	1,2-Dichloroethane	12.71	62	983361	9.17	ug/l		99
46)	Trichloroethene	13.56	130	958378	10.05	ug/l		98
48)	1,2-Dichloropropane	13.92	63	968958	10.89	ug/l		88
49)	1,4-Dioxane	14.08	88	62675	227.27	ug/l		93
50)	Dibromomethane	14.13	93	408360	9.72	ug/l		98
51)	Bromodichloromethane	14.30	83	1253577	9.44	ug/l		100
52)	2-Chloroethyl vinyl ether	14.60	63	76416	2.85	ug/l		98
53)	cis-1,3-Dichloropropene	14.87	75	1382169	10.08	ug/l		96
54)	4-Methyl-2-pentanone	14.99	43	2428048	56.08	ug/l		99
56)	Toluene	15.30	91	3661217	9.71	ug/l		99
57)	Ethyl methacrylate	15.54	69	661512	9.46	ug/l		99
58)	trans-1,3-Dichloropropene	15.58	75	1035221	9.65	ug/l		95
59)	1,1,2-Trichloroethane	15.87	97	490063	10.53	ug/l		98
60)	Tetrachloroethene	16.03	164	743756	9.08	ug/l		99
61)	2-Hexanone	16.06	43	1649336	57.65	ug/l		97
62)	1,3-Dichloropropane	16.09	76	984428	10.58	ug/l		100
63)	Dibromochloromethane	16.43	129	668184	9.69	ug/l		99
64)	1,2-Dibromoethane	16.63	107	477668	9.37	ug/l		99
65)	1-Chlorohexane	16.98	91	1721988	9.85	ug/l		99
66)	Chlorobenzene	17.19	112	2237590	10.35	ug/l		96
67)	Ethylbenzene	17.24	91	4603369	9.46	ug/l		99
68)	1,1,1,2-Tetrachloroethane	17.27	131	763014	9.50	ug/l		96
69)	m-Xylene & p-Xylene	17.36	91	6953516	18.54	ug/l		97
70)	o-Xylene	17.89	91	3459544	9.51	ug/l		97
71)	Styrene	17.91	104	2246651	9.58	ug/l		97
73)	Isopropylbenzene	18.31	105	4204414	9.98	ug/l		99
74)	Bromoform	18.31	173	299605	9.76	ug/l		100
76)	1,1,2,2-Tetrachloroethane	18.74	83	599941	10.71	ug/l		99
77)	trans-1,4-Dichloro-2-buten	18.78	53	127728	7.03	ug/l		92
78)	n-Propylbenzene	18.81	91	5755028	9.61	ug/l		99
79)	1,2,3-Trichloropropane	18.84	110	131433	10.10	ug/l	#	87
80)	Bromobenzene	18.86	156	770985	9.09	ug/l		97
81)	1,3,5-Trimethylbenzene	18.99	105	3238810	8.92	ug/l		98
82)	2-Chlorotoluene	19.04	91	3426687	9.17	ug/l		98
83)	4-Chlorotoluene	19.16	91	3124922	9.68	ug/l		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K22\RKB375.D
Acq On : 22 Nov 2011 10:04 pm
Sample : VO03K24C
Misc : 10ppb 8260/50ppb TBA-KET-AA
MS Integration Params: 524TAIL.P
Quant Time: Nov 22 22:29 2011

Vial: 4
Operator: CGM
Inst : 03
Multiplr: 1.00

Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

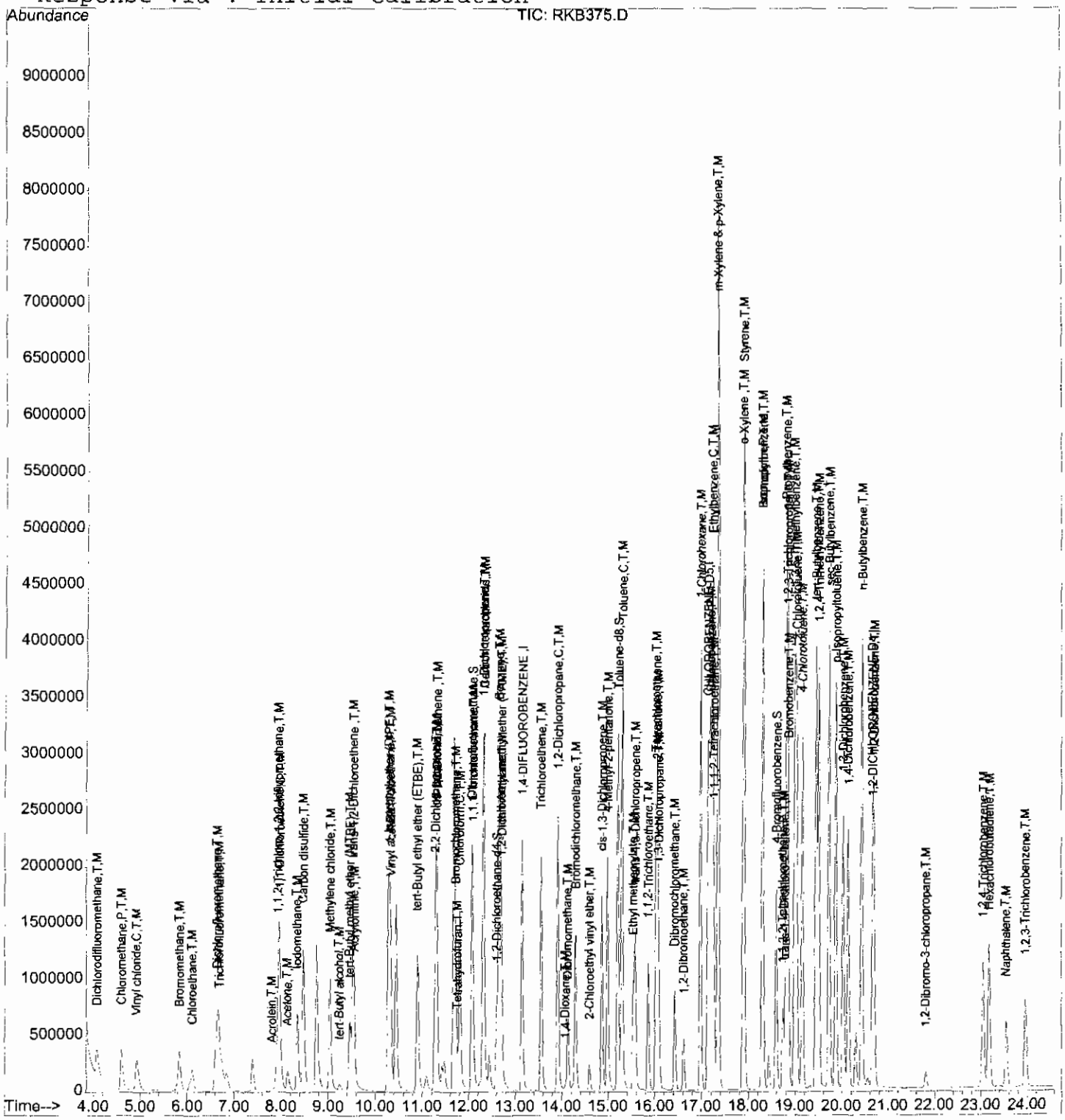
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84)	tert-Butylbenzene	19.45	134	694678	9.65 ug/l	91
85)	1,2,4-Trimethylbenzene	19.51	105	3220778	9.32 ug/l	98
86)	sec-Butylbenzene	19.74	105	4623231	9.77 ug/l	99
87)	p-Isopropyltoluene	19.89	119	3425971	9.38 ug/l	98
88)	1,3-Dichlorobenzene	20.03	146	1590800	9.77 ug/l	99
89)	1,4-Dichlorobenzene	20.14	146	1499919	9.91 ug/l	99
90)	n-Butylbenzene	20.44	91	3864262	9.58 ug/l	100
91)	1,2-Dichlorobenzene	20.69	146	1243990	9.99 ug/l	99
92)	1,2-Dibromo-3-chloropropan	21.81	157	61998	9.76 ug/l	97
93)	1,2,4-Trichlorobenzene	23.06	180	651332	10.32 ug/l	99
94)	Hexachlorobutadiene	23.19	225	506981	8.77 ug/l	100
95)	Naphthalene	23.55	128	927406	11.39 ug/l	99
96)	1,2,3-Trichlorobenzene	23.96	180	477602	10.30 ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB375.D Vial: 4
Acq On : 22 Nov 2011 10:04 pm Operator: CGM
Sample : VO03K24C Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 22 22:29 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K23\RKB418.D Vial: 6
Acq On : 24 Nov 2011 2:17 am Operator: CGM
Sample : VO03K26B 25mL Inst : 03
Misc : DF=1.0 MB Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 28 12:33 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.17	114	2326489	10.00	ug/l	0.00
41) CHLOROBENZENE-D5	17.16	117	2196286	10.00	ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.67	152	753956	10.00	ug/l	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	12.08	111	818307	9.47	ug/l	0.00
Spiked Amount 10.000			Recovery	=	94.70%	
40) 1,2-Dichloroethane-d4	12.60	65	808581	9.19	ug/l	0.00
Spiked Amount 10.000			Recovery	=	91.90%	
55) Toluene-d8	15.22	98	2912647	9.34	ug/l	0.00
Spiked Amount 10.000			Recovery	=	93.40%	
75) 4-Bromofluorobenzene	18.60	95	1077419	9.18	ug/l	0.00
Spiked Amount 10.000			Recovery	=	91.80%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
RKB418.D VO03H16.M Mon Nov 28 12:34:57 2011 Page 1

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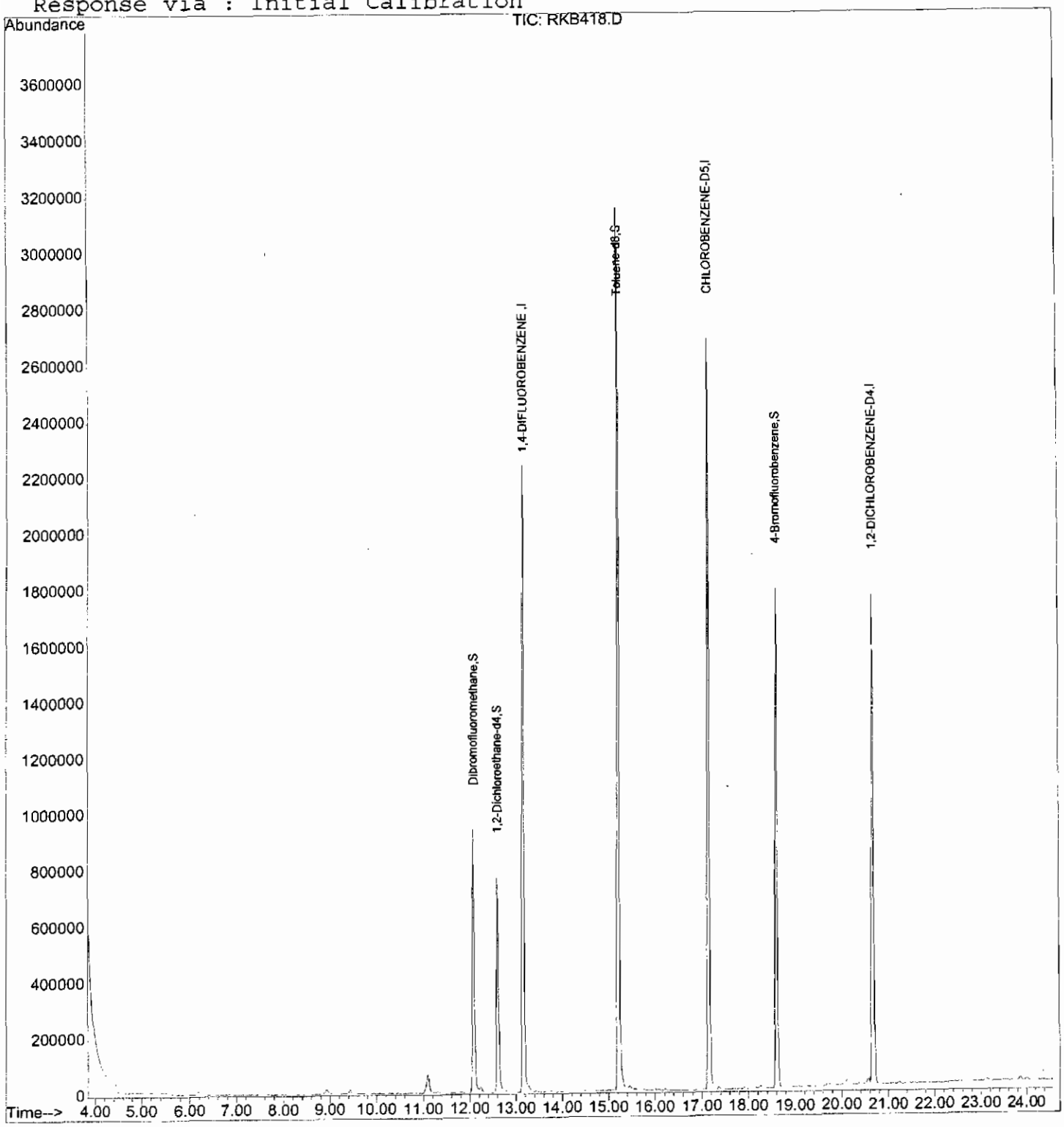
Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB418.D
Acq On : 24 Nov 2011 2:17 am
Sample : VO03K26B 25mL
Misc : DF=1.0 MB
MS Integration Params: 524TAIL.P
Quant Time: Nov 28 12:33 2011

Vial: 6
Operator: CGM
Inst : 03
Multiplr: 1.00

Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K23\RKB415.D Vial: 3
Acq On : 24 Nov 2011 12:25 am Operator: CGM
Sample : VO03K26L Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 24 0:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.16	114	2046486	10.00 ug/l	0.00
41) CHLOROBENZENE-D5	17.16	117	1945747	10.00 ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.67	152	687997	10.00 ug/l	0.00
System Monitoring Compounds					
36) Dibromofluoromethane	12.08	111	731980	9.63 ug/l	0.00
Spiked Amount 10.000			Recovery	= 96.30%	
40) 1,2-Dichloroethane-d4	12.60	65	729674	9.43 ug/l	0.00
Spiked Amount 10.000			Recovery	= 94.30%	
55) Toluene-d8	15.21	98	2544796	9.21 ug/l	0.00
Spiked Amount 10.000			Recovery	= 92.10%	
75) 4-Bromofluorobenzene	18.60	95	980095	9.15 ug/l	0.00
Spiked Amount 10.000			Recovery	= 91.50%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.09	85	652485	9.03 ug/l	98
5) Chloromethane	4.58	50	839894	11.51 ug/l	99
7) Vinyl chloride	4.91	62	666446	9.65 ug/l	99
8) Bromomethane	5.82	94	476602	10.27 ug/l	98
9) Chloroethane	6.10	64	406739	11.21 ug/l	98
10) Dichlorofluoromethane	6.64	67	1578826	10.10 ug/l	100
11) Trichlorofluoromethane	6.70	101	1075856	9.65 ug/l	100
12) Acrolein	7.81	56	108901	59.86 ug/l	98
13) 1,1,2-Trichloro-1,2,2-trif	7.93	151	416465	10.03 ug/l	99
14) Acetone	8.14	43	441597	55.86 ug/l	96
15) 1,1-Dichloroethene	7.96	61	1389760	10.10 ug/l	99
17) Iodomethane	8.35	142	1348532	10.44 ug/l	96
18) Carbon disulfide	8.48	76	2931722	10.59 ug/l	100
19) Methylene chloride	9.03	49	1085638	11.16 ug/l	98
20) tert-Butyl alcohol	9.24	59	140513	57.02 ug/l	96
21) tert-Butyl methyl ether (M	9.46	73	1133848	11.34 ug/l	96
22) trans-1,2-Dichloroethene	9.52	61	1382900	9.85 ug/l	100
23) Acrylonitrile	9.55	53	450821	62.02 ug/l	98
24) Isopropyl ether (DIPE)	10.28	45	2723361	11.13 ug/l	98
25) Vinyl acetate	10.34	43	513229	6.25 ug/l	98
26) 1,1-Dichloroethane	10.33	63	1644780	10.82 ug/l	99
28) tert-Butyl ethyl ether (ET	10.91	59	2084935	11.90 ug/l	99
29) 2,2-Dichloropropane	11.28	77	994900	8.04 ug/l	99
30) 2-Butanone	11.31	43	786463	58.17 ug/l	100
31) cis-1,2-Dichloroethene	11.32	96	809115	10.16 ug/l	95
32) Bromochloromethane	11.73	49	715829	11.38 ug/l	98
33) Tetrahydrofuran	11.77	42	101349	13.09 ug/l	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K23\RKB415.D Vial: 3
Acq On : 24 Nov 2011 12:25 am Operator: CGM
Sample : VO03K26L Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 24 0:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
34)	Chloroform	11.82	83	1725852	10.45 ug/l		99
37)	1,1,1-Trichloroethane	12.08	97	1391415	9.40 ug/l		99
39)	tert-Amyl methyl ether (TA	12.69	87	316688	11.71 ug/l		93
42)	1,1-Dichloropropene	12.32	110	396406	10.27 ug/l		98
43)	Carbon tetrachloride	12.34	119	1214566	9.22 ug/l		99
44)	Benzene	12.66	78	3261164	10.34 ug/l		99
45)	1,2-Dichloroethane	12.72	62	982127	10.09 ug/l		98
46)	Trichloroethene	13.57	130	907130	10.48 ug/l		98
48)	1,2-Dichloropropane	13.93	63	917385	11.36 ug/l		91
49)	1,4-Dioxane	14.09	88	67720	270.46 ug/l		90
50)	Dibromomethane	14.14	93	409591	10.74 ug/l		98
51)	Bromodichloromethane	14.30	83	1222164	10.13 ug/l		99
52)	2-Chloroethyl vinyl ether	14.60	63	258485	10.62 ug/l		99
53)	cis-1,3-Dichloropropene	14.87	75	1334929	10.72 ug/l		97
54)	4-Methyl-2-pentanone	14.99	43	2313458	58.85 ug/l		99
56)	Toluene	15.31	91	3412329	9.97 ug/l		99
57)	Ethyl methacrylate	15.55	69	670455	10.56 ug/l		100
58)	trans-1,3-Dichloropropene	15.60	75	1053578	10.81 ug/l		96
59)	1,1,2-Trichloroethane	15.88	97	474692	11.24 ug/l		98
60)	Tetrachloroethene	16.04	164	711509	9.56 ug/l		100
61)	2-Hexanone	16.07	43	1616849	62.25 ug/l		98
62)	1,3-Dichloropropane	16.10	76	956775	11.32 ug/l		100
63)	Dibromochloromethane	16.44	129	663657	10.61 ug/l		99
64)	1,2-Dibromoethane	16.62	107	483649	10.45 ug/l		99
65)	1-Chlorohexane	17.00	91	1628564	10.26 ug/l		99
66)	Chlorobenzene	17.19	112	2090351	10.65 ug/l		97
67)	Ethylbenzene	17.23	91	4325679	9.79 ug/l		99
68)	1,1,1,2-Tetrachloroethane	17.28	131	742584	10.19 ug/l		96
69)	m-Xylene & p-Xylene	17.37	91	6505222	19.11 ug/l		98
70)	o-Xylene	17.90	91	3266964	9.89 ug/l		98
71)	Styrene	17.92	104	2189024	10.28 ug/l		98
73)	Isopropylbenzene	18.32	105	4005860	10.27 ug/l		99
74)	Bromoform	18.31	173	301544	10.61 ug/l		98
76)	1,1,2,2-Tetrachloroethane	18.75	83	589774	11.38 ug/l		98
77)	trans-1,4-Dichloro-2-buten	18.78	53	175482	10.44 ug/l		96
78)	n-Propylbenzene	18.83	91	5533089	9.98 ug/l		99
79)	1,2,3-Trichloropropane	18.84	110	134752	11.18 ug/l	#	78
80)	Bromobenzene	18.87	156	745097	9.48 ug/l		95
81)	1,3,5-Trimethylbenzene	19.00	105	3094466	9.20 ug/l		98
82)	2-Chlorotoluene	19.05	91	3284174	9.49 ug/l		98
83)	4-Chlorotoluene	19.17	91	3017284	10.09 ug/l		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K23\RKB415.D Vial: 3
Acq On : 24 Nov 2011 12:25 am Operator: CGM
Sample : VO03K26L Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 24 0:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

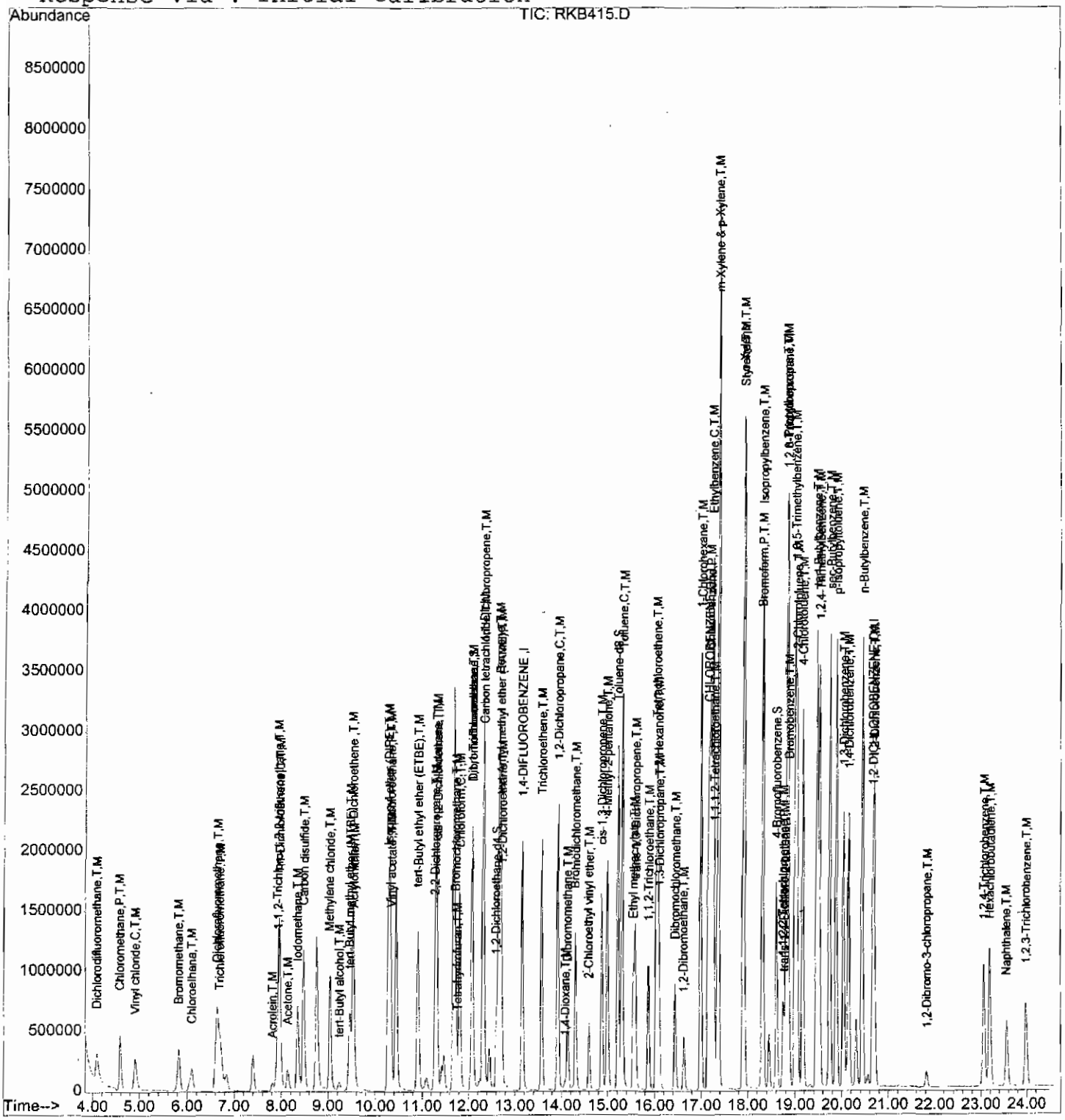
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84)	tert-Butylbenzene	19.47	134	665927	9.99 ug/l	92
85)	1,2,4-Trimethylbenzene	19.53	105	3078541	9.62 ug/l	97
86)	sec-Butylbenzene	19.75	105	4464042	10.19 ug/l	100
87)	p-Isopropyltoluene	19.88	119	3323151	9.82 ug/l	98
88)	1,3-Dichlorobenzene	20.05	146	1549939	10.29 ug/l	99
89)	1,4-Dichlorobenzene	20.15	146	1454029	10.37 ug/l	99
90)	n-Butylbenzene	20.45	91	3709430	9.93 ug/l	99
91)	1,2-Dichlorobenzene	20.70	146	1210883	10.51 ug/l	100
92)	1,2-Dibromo-3-chloropropan	21.83	157	58246	9.90 ug/l	97
93)	1,2,4-Trichlorobenzene	23.07	180	595459	10.19 ug/l	99
94)	Hexachlorobutadiene	23.20	225	439943	8.22 ug/l	99
95)	Naphthalene	23.56	128	862596	11.45 ug/l	99
96)	1,2,3-Trichlorobenzene	23.99	180	424316	9.89 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB415.D Vial: 3
Acq On : 24 Nov 2011 12:25 am Operator: CGM
Sample : VO03K26L Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 24 0:50 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K23\RKB416.D Vial: 4
Acq On : 24 Nov 2011 1:03 am Operator: CGM
Sample : VO03K26C Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 24 1:27 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.17	114	2171518	10.00 ug/l	0.00
41) CHLOROBENZENE-D5	17.16	117	2042246	10.00 ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.67	152	710841	10.00 ug/l	0.00
System Monitoring Compounds					
36) Dibromofluoromethane	12.08	111	759874	9.42 ug/l	0.00
Spiked Amount 10.000			Recovery	= 94.20%	
40) 1,2-Dichloroethane-d4	12.60	65	730143	8.89 ug/l	0.00
Spiked Amount 10.000			Recovery	= 88.90%	
55) Toluene-d8	15.22	98	2706379	9.33 ug/l	0.00
Spiked Amount 10.000			Recovery	= 93.30%	
75) 4-Bromofluorobenzene	18.60	95	1023876	9.26 ug/l	0.00
Spiked Amount 10.000			Recovery	= 92.60%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.09	85	614382	8.02 ug/l	95
5) Chloromethane	4.58	50	868122	11.21 ug/l	100
7) Vinyl chloride	4.92	62	690948	9.43 ug/l	99
8) Bromomethane	5.83	94	504772	10.25 ug/l	99
9) Chloroethane	6.10	64	427592	11.11 ug/l	98
10) Dichlorofluoromethane	6.64	67	1628554	9.82 ug/l	100
11) Trichlorofluoromethane	6.70	101	1106352	9.35 ug/l	100
12) Acrolein	7.81	56	111965	58.00 ug/l	99
13) 1,1,2-Trichloro-1,2,2-trif	7.95	151	436475	9.90 ug/l	99
14) Acetone	8.14	43	459759	54.81 ug/l	95
15) 1,1-Dichloroethene	7.96	61	1429292	9.78 ug/l	99
17) Iodomethane	8.35	142	1407927	10.27 ug/l	94
18) Carbon disulfide	8.48	76	2897916	9.86 ug/l	100
19) Methylene chloride	9.05	49	1135348	11.00 ug/l	98
20) tert-Butyl alcohol	9.24	59	145975	55.82 ug/l	96
21) tert-Butyl methyl ether (M	9.46	73	1160606	10.94 ug/l	96
22) trans-1,2-Dichloroethene	9.54	61	1431891	9.62 ug/l	99
23) Acrylonitrile	9.55	53	480580	62.30 ug/l	95
24) Isopropyl ether (DIPE)	10.30	45	2838488	10.93 ug/l	98
25) Vinyl acetate	10.30	43	1816329	20.84 ug/l	87
26) 1,1-Dichloroethane	10.33	63	1697483	10.53 ug/l	99
28) tert-Butyl ethyl ether (ET	10.91	59	2141096	11.52 ug/l	98
29) 2,2-Dichloropropane	11.30	77	994545	7.57 ug/l	98
30) 2-Butanone	11.31	43	845771	58.95 ug/l	100
31) cis-1,2-Dichloroethene	11.32	96	844012	9.99 ug/l	95
32) Bromochloromethane	11.73	49	748345	11.21 ug/l	97
33) Tetrahydrofuran	11.77	42	107671	13.11 ug/l	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K23\RKB416.D Vial: 4
Acq On : 24 Nov 2011 1:03 am Operator: CGM
Sample : VO03K26C Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 24 1:27 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
34)	Chloroform	11.82	83	1767562	10.09 ug/l		99
37)	1,1,1-Trichloroethane	12.08	97	1432760	9.13 ug/l		99
39)	tert-Amyl methyl ether (TA	12.71	87	324783	11.32 ug/l		92
42)	1,1-Dichloropropene	12.32	110	420778	10.38 ug/l		99
43)	Carbon tetrachloride	12.34	119	1238347	8.95 ug/l		99
44)	Benzene	12.66	78	3427759	10.35 ug/l		99
45)	1,2-Dichloroethane	12.72	62	986225	9.65 ug/l		98
46)	Trichloroethene	13.57	130	965289	10.62 ug/l		98
48)	1,2-Dichloropropane	13.93	63	965082	11.39 ug/l		88
49)	1,4-Dioxane	14.09	88	69437	264.22 ug/l		93
50)	Dibromomethane	14.14	93	418273	10.45 ug/l		98
51)	Bromodichloromethane	14.32	83	1246516	9.85 ug/l		99
52)	2-Chloroethyl vinyl ether	14.60	63	268740	10.52 ug/l		98
53)	cis-1,3-Dichloropropene	14.88	75	1388393	10.62 ug/l		95
54)	4-Methyl-2-pentanone	15.00	43	2456521	59.53 ug/l		99
56)	Toluene	15.31	91	3631770	10.11 ug/l		99
57)	Ethyl methacrylate	15.55	69	693275	10.40 ug/l		99
58)	trans-1,3-Dichloropropene	15.60	75	1085305	10.61 ug/l		95
59)	1,1,2-Trichloroethane	15.88	97	497980	11.23 ug/l		99
60)	Tetrachloroethene	16.04	164	742412	9.51 ug/l		100
61)	2-Hexanone	16.07	43	1722500	63.18 ug/l		97
62)	1,3-Dichloropropane	16.10	76	994725	11.21 ug/l		100
63)	Dibromochloromethane	16.44	129	684299	10.42 ug/l		100
64)	1,2-Dibromoethane	16.64	107	496133	10.21 ug/l		100
65)	1-Chlorohexane	17.00	91	1700322	10.21 ug/l		98
66)	Chlorobenzene	17.19	112	2207639	10.71 ug/l		95
67)	Ethylbenzene	17.23	91	4533583	9.77 ug/l		99
68)	1,1,1,2-Tetrachloroethane	17.28	131	768418	10.04 ug/l		96
69)	m-Xylene & p-Xylene	17.37	91	6821857	19.09 ug/l		97
70)	o-Xylene	17.90	91	3408934	9.84 ug/l		97
71)	Styrene	17.92	104	2303592	10.30 ug/l		96
73)	Isopropylbenzene	18.32	105	4203018	10.43 ug/l		99
74)	Bromoform	18.31	173	315143	10.73 ug/l		99
76)	1,1,2,2-Tetrachloroethane	18.75	83	601809	11.24 ug/l		100
77)	trans-1,4-Dichloro-2-buten	18.80	53	179458	10.33 ug/l		92
78)	n-Propylbenzene	18.83	91	5785390	10.10 ug/l		99
79)	1,2,3-Trichloropropane	18.86	110	136669	10.97 ug/l	#	83
80)	Bromobenzene	18.87	156	774381	9.54 ug/l		95
81)	1,3,5-Trimethylbenzene	19.01	105	3199307	9.21 ug/l		97
82)	2-Chlorotoluene	19.05	91	3388463	9.48 ug/l		98
83)	4-Chlorotoluene	19.17	91	3099346	10.03 ug/l		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K23\RKB416.D Vial: 4
Acq On : 24 Nov 2011 1:03 am Operator: CGM
Sample : VO03K26C Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 24 1:27 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

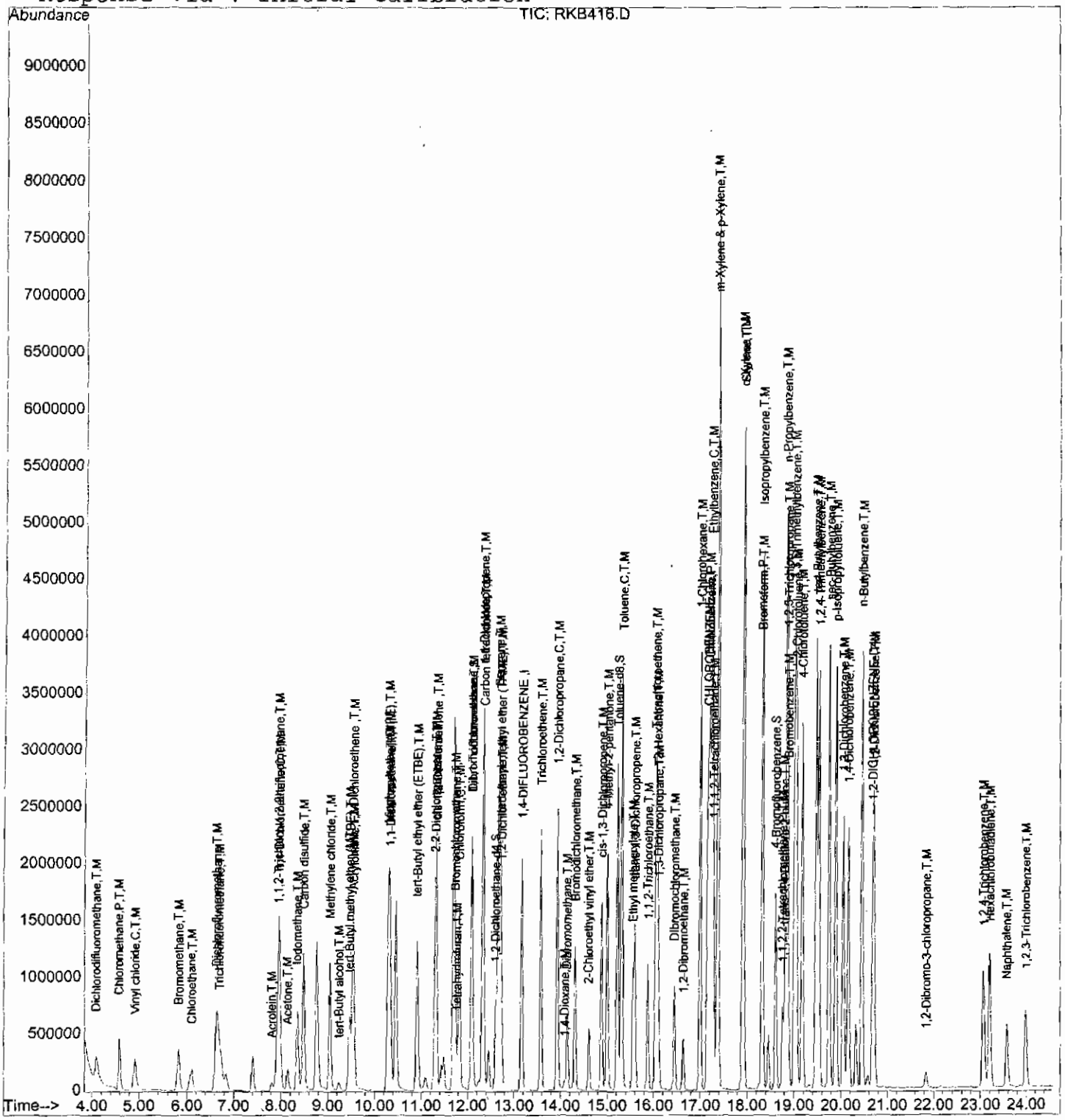
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84)	tert-Butylbenzene	19.47	134	693220	10.06 ug/l	91
85)	1,2,4-Trimethylbenzene	19.53	105	3212558	9.72 ug/l	98
86)	sec-Butylbenzene	19.75	105	4615148	10.19 ug/l	100
87)	p-Isopropyltoluene	19.88	119	3436863	9.83 ug/l	98
88)	1,3-Dichlorobenzene	20.05	146	1585408	10.18 ug/l	100
89)	1,4-Dichlorobenzene	20.15	146	1489548	10.29 ug/l	99
90)	n-Butylbenzene	20.45	91	3771425	9.77 ug/l	100
91)	1,2-Dichlorobenzene	20.70	146	1235914	10.38 ug/l	100
92)	1,2-Dibromo-3-chloropropan	21.83	157	60331	9.93 ug/l	97
93)	1,2,4-Trichlorobenzene	23.07	180	600711	9.95 ug/l	100
94)	Hexachlorobutadiene	23.20	225	446902	8.08 ug/l	100
95)	Naphthalene	23.56	128	862914	11.08 ug/l	99
96)	1,2,3-Trichlorobenzene	23.99	180	432677	9.76 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB416.D Vial: 4
Acq On : 24 Nov 2011 1:03 am Operator: CGM
Sample : VO03K26C Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 24 1:27 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration



INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RHB438
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K184
BFB Injection Date : 08/16/11
BFB Injection Time : 11:15
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	26.25
75	30.0 - 60.0% of mass 95	54.23
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.88
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	60.88
175	5.0 - 9.0% of mass 174	4.93(8.1)1
176	95.0 - 101.0% of mass 174	58.41(96.0)1
177	5.0 - 9.0% of mass 176	4.58(7.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	V003H161	RHB439	08/16/11	11:49
2	VSTD0.5	V003H162	RHB440	08/16/11	12:24
3	VSTD01	V003H163	RHB441	08/16/11	12:57
4	VSTD02	V003H164	RHB442	08/16/11	13:32
5	VSTD05	V003H165	RHB443	08/16/11	14:06
6	VSTD010	V003H166	RHB444	08/16/11	14:40
7	VSTD020	V003H167	RHB445	08/16/11	15:14
8	VSTD030	V003H168	RHB446	08/16/11	15:48
9	VSTD040	V003H169	RHB447	08/16/11	16:21
10	VSTD050	V003H1610	RHB448	08/16/11	16:56
11	VSTD100	V003H1611	RHB449	08/16/11	17:30
12	VSTD010	IV003H161	RHB452	08/16/11	19:13

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :03
Beginning DateTime :08/16/11 11:49
Spike Units :PPB
IC File :RHB444

Column Spec :ZB-624 ID :0.25MM
Ending DateTime :08/16/11 17:30
HPChem Method :V003H16

M	IDX	Parameters	.3 11:49 RHB439	.5 12:24 RHB440	1 12:57 RHB441	2 13:32 RHB442	5 14:06 RHB443	10 14:40 RHB444	20 15:14 RHB445	30 15:48 RHB446	40 16:21 RHB447	50 16:56 RHB448	100 17:30 RHB449	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	1	0	13.2029
	2	Chlorotrifluoroethylene	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	3	Dichlorodifluoromethane	0.333	0.326	0.343	0.357	0.358	0.429	0.335	0.363	0.324	0.341	0.375	0.353	8.52	4.1126
	4	Dichlorotetrafluoroethane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	5	Chloromethane	0.323	0.300	0.336	0.346	0.362	0.430	0.350	0.384	0.342	0.356	0.394	0.357	10.00	4.6120
	6	2-Chloro-1,1,1-trifluoroethane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	7	Vinyl chloride	0.290	0.283	0.319	0.335	0.351	0.415	0.336	0.355	0.320	0.334	0.372	0.337	10.93	4.9340
	8	Bromomethane	0.218	0.200	0.221	0.218	0.234	0.281	0.230	0.245	0.221	0.224	0.202	0.227	9.78	5.8582
	9	Chloroethane	0.155	0.158	0.171	0.167	0.178	0.217	0.174	0.189	0.173	0.178	0.189	0.177	9.63	6.1356
	10	Dichlorofluoromethane	0.720	0.721	0.765	0.755	0.776	0.817	0.754	0.797	0.735	0.750	0.809	0.764	4.35	6.6727
	11	Trichlorofluoromethane	0.483	0.478	0.529	0.539	0.564	0.666	0.530	0.573	0.516	0.533	0.585	0.545	9.58	6.7323
5	12	Acrolein	------	------	0.008	0.007	0.008	0.009	0.009	0.010	0.010	------	------	0.009	13.95	7.8523
	13	1,1,2-Trichloro-1,2,2-trifluoroethane	0.214	0.200	0.199	0.192	0.199	0.213	0.198	0.208	0.194	0.200	0.216	0.203	4.08	7.9826
5	14	Acetone	------	------	0.045	0.038	0.038	0.040	0.036	0.036	0.035	0.037	0.042	0.039	8.41	8.1846
	15	1,1-Dichloroethene	0.666	0.641	0.683	0.681	0.707	0.726	0.649	0.690	0.620	0.646	0.690	0.673	4.65	8.0029
	16	Methyl acetate	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	17	Iodomethane	0.595	0.558	0.625	0.620	0.644	0.683	0.622	0.668	0.610	0.629	0.689	0.631	6.13	8.3899
	18	Carbon disulfide	1.096	1.194	1.329	1.365	1.443	1.326	1.392	1.540	1.350	1.429	1.420	1.353	8.97	8.5144
	19	Methylene chloride	0.499	0.472	0.484	0.467	0.481	0.496	0.455	0.480	0.438	0.456	0.503	0.475	4.30	9.0800
5	20	tert-Butyl alcohol	------	0.011	0.011	0.011	0.012	0.013	0.012	0.012	0.011	0.012	0.014	0.012	6.87	9.2881
	21	tert-Butyl methyl ether (MTBE)	0.490	0.469	0.498	0.473	0.489	0.517	0.482	0.491	0.455	0.480	0.531	0.489	4.37	9.5102
	22	trans-1,2-Dichloroethene	0.675	0.662	0.683	0.699	0.701	0.732	0.668	0.711	0.642	0.662	0.708	0.686	3.87	9.5711
5	23	Acrylonitrile	0.033	0.031	0.034	0.033	0.035	0.038	0.036	0.038	0.035	0.037	0.041	0.036	7.73	9.6022
	24	Isopropyl ether (DIPE)	1.151	1.115	1.209	1.191	1.227	1.299	1.169	1.239	1.128	1.181	1.246	1.196	4.59	10.3302
	25	Vinyl acetate	------	0.309	0.374	0.410	0.409	0.470	0.412	0.419	0.353	0.382	0.476	0.401	12.58	10.3881
	26	1,1-Dichloroethane	0.733	0.691	0.747	0.754	0.775	0.806	0.727	0.770	0.691	0.721	0.755	0.743	4.72	10.3695
5	27	2-Butanol	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	28	tert-Butyl ethyl ether (ETBE)	0.820	0.794	0.868	0.845	0.869	0.915	0.834	0.888	0.805	0.851	0.926	0.856	4.96	10.9486
	29	2,2-Dichloropropane	0.645	0.638	0.680	0.663	0.654	0.651	0.579	0.585	0.526	0.522	0.512	0.605	10.34	11.3261
5	30	2-Butanone	0.080	0.076	0.068	0.060	0.063	0.068	0.062	0.063	0.060	0.062	0.067	0.066	10.11	11.3546
	31	cis-1,2-Dichloroethene	0.374	0.367	0.389	0.395	0.396	0.418	0.383	0.409	0.369	0.382	0.398	0.389	4.16	11.3600
	32	Bromochloromethane	0.290	0.292	0.316	0.301	0.313	0.334	0.301	0.316	0.291	0.302	0.324	0.307	4.66	11.7699
	33	Tetrahydrofuran	------	0.040	0.045	0.038	0.038	0.036	0.036	0.036	0.033	0.035	0.041	0.038	8.93	11.8229
	34	Chloroform	0.779	0.771	0.815	0.825	0.841	0.878	0.785	0.834	0.750	0.776	0.822	0.807	4.69	11.8606
5	35	tert-Amyl alcohol	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	36	Dibromofluoromethane	------	------	------	------	0.389	0.390	0.366	0.381	0.347	0.360	0.368	0.372	4.23	12.1220
	37	1,1,1-Trichloroethane	0.737	0.711	0.742	0.756	0.766	0.787	0.702	0.733	0.656	0.674	0.689	0.723	5.57	12.1312
	38	Cyclohexane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	39	tert-Amyl methyl ether (TAME)	0.119	0.125	0.141	0.132	0.137	0.146	0.130	0.135	0.124	0.128	0.137	0.132	5.96	12.7415
	40	1,2-Dichloroethane-d4	------	------	------	------	0.405	0.399	0.376	0.375	0.347	0.364	0.381	0.378	5.20	12.6515
	41	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	1	0	17.1946
	42	1,1-Dichloropropene	0.194	0.191	0.194	0.202	0.199	0.214	0.195	0.210	0.187	0.194	0.202	0.198	4.08	12.3667
	43	Carbon tetrachloride	0.651	0.632	0.695	0.701	0.694	0.726	0.654	0.705	0.628	0.664	0.700	0.677	4.82	12.3748
	44	Benzene	1.610	1.539	1.609	1.645	1.618	1.728	1.560	1.733	1.533	1.641	------	1.622	4.28	12.7061
	45	1,2-Dichloroethane	0.477	0.486	0.520	0.521	0.517	0.534	0.479	0.506	0.456	0.484	0.524	0.500	5.00	12.7645
	46	Trichloroethene	0.439	0.414	0.425	0.434	0.440	0.469	0.434	0.477	0.426	0.452	0.484	0.445	5.11	13.6183
	47	Methylcyclohexane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	48	1,2-Dichloropropane	0.392	0.391	0.404	0.409	0.418	0.443	0.407	0.444	0.391	0.421	0.444	0.415	5.04	13.9674
20	49	1,4-Dioxane	------	------	------	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	13.98	14.1284
	50	Dibromomethane	0.173	0.185	0.186	0.192	0.196	0.207	0.195	0.208	0.188	0.203	0.223	0.196	7.00	14.1839
	51	Bromodichloromethane	0.568	0.548	0.588	0.615	0.635	0.668	0.614	0.663	0.593	0.639	0.688	0.620	7.03	14.3490
	52	2-Chloroethyl vinyl ether	0.127	0.109	0.107	0.108	0.119	0.128	0.126	0.136	0.125	0.135	0.157	0.125	11.72	14.6453
	53	cis-1,3-Dichloropropene	0.559	0.576	0.607	0.629	0.639	0.692	0.640	0.694	0.622	0.667	0.716	0.640	7.70	14.9159
5	54	4-Methyl-2-pentanone	0.216	0.203	0.202	0.183	0.194	0.211	0.195	0.203	0.189	0.204	0.221	0.202	5.64	15.0350
	55	Toluene-d8	------	------	------	------	1.414	1.463	1.383	1.491	1.335	1.437	------	1.420	3.97	15.2566
	56	Toluene	1.743	1.699	1.754	1.765	1.767	1.866	1.709	1.870	1.659	1.763	------	1.759	3.81	15.3480
	57	Ethyl methacrylate	0.317	0.290	0.311	0.307	0.328	0.349	0.328	0.342	0.314	0.337	0.367	0.326	6.64	15.5912
	58	trans-1,3-Dichloropropene	0.444	0.436	0.476	0.491	0.506	0.549	0.503	0.533	0.486	0.523	0.562	0.501	8.00	15.6345

SM 8/18/11

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59	1,1,2-Trichloroethane	0.200	0.210	0.215	0.211	0.215	0.232	0.213	0.227	0.205	0.220	0.240	0.217	5.48	15.9132
60	Tetrachloroethene	0.394	0.381	0.379	0.375	0.383	0.402	0.368	0.401	0.355	0.377	0.390	0.382	3.71	16.0891
5 61	2-Hexanone	0.124	0.136	0.139	0.124	0.131	0.145	0.133	0.136	0.126	0.134	0.139	0.133	4.95	16.1081
62	1,3-Dichloropropane	0.394	0.407	0.439	0.435	0.440	0.467	0.430	0.451	0.411	0.435	0.468	0.434	5.43	16.1405
63	Dibromochloromethane	0.269	0.276	0.295	0.307	0.323	0.349	0.331	0.351	0.320	0.343	0.374	0.322	10.17	16.4869
64	1,2-Dibromoethane	0.219	0.212	0.227	0.229	0.237	0.254	0.241	0.251	0.231	0.246	0.270	0.238	7.10	16.6723
65	1-Chlorohexane	0.806	0.829	0.818	0.818	0.821	0.858	0.797	0.855	0.760	0.800	0.812	0.816	3.31	17.0363
66	Chlorobenzene	1.013	0.966	0.986	1.007	1.015	1.077	0.995	1.068	0.945	0.996	1.033	1.009	3.91	17.2366
67	Ethylbenzene	2.214	2.216	2.257	2.290	2.286	2.401	2.175	2.333	------	------	------	2.272	3.20	17.2809
68	1,1,1,2-Tetrachloroethane	0.351	0.348	0.375	0.382	0.379	0.408	0.371	0.398	0.352	0.374	0.383	0.375	5.09	17.3137
2 69	m-Xylene & p-Xylene	1.793	1.710	1.756	1.784	1.773	1.830	1.658	1.696	------	------	------	1.750	3.27	17.4093
70	o-Xylene	1.787	1.675	1.748	1.756	1.739	1.810	1.626	1.732	1.506	1.591	------	1.697	5.67	17.9438
71	Styrene	1.054	1.000	1.088	1.118	1.153	1.209	1.104	1.164	1.021	1.074	1.058	1.095	5.77	17.9672
72	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	1	0	20.7222
73	Isopropylbenzene	5.858	5.671	5.633	5.810	5.728	5.928	5.332	5.949	5.238	5.551	------	5.670	4.24	18.3621
74	Bromoform	0.324	0.344	0.368	0.382	0.408	0.454	0.425	0.465	0.423	0.454	0.497	0.413	13.02	18.3529
75	4-Bromofluorobenzene	------	------	------	------	1.571	1.602	1.509	1.625	1.474	------	------	1.556	4.08	18.6495
76	1,1,2,2-Tetrachloroethane	0.772	0.704	0.722	0.721	0.745	0.787	0.727	0.787	0.711	0.765	0.847	0.753	5.72	18.7926
77	trans-1,4-Dichloro-2-butene	0.242	0.213	0.220	0.226	0.232	0.251	0.250	0.269	0.242	0.260	0.284	0.244	8.79	18.8292
78	n-Propylbenzene	8.224	8.356	7.993	8.230	8.165	8.440	7.620	8.477	7.035	------	------	8.060	5.75	18.8738
79	1,2,3-Trichloropropane	0.148	0.180	0.183	0.183	0.182	0.189	0.172	0.183	0.160	0.171	0.176	0.175	6.81	18.8927
80	Bromobenzene	1.099	1.123	1.157	1.144	1.155	1.202	1.089	1.207	1.063	1.135	1.187	1.142	4.08	18.9131
81	1,3,5-Trimethylbenzene	5.021	4.935	4.880	5.015	4.948	5.155	4.658	5.132	4.444	4.689	------	4.888	4.63	19.0498
82	2-Chlorotoluene	5.177	5.066	5.093	5.142	5.099	5.296	4.742	5.233	4.586	4.857	------	5.029	4.52	19.0899
83	4-Chlorotoluene	4.375	4.251	4.270	4.354	4.458	4.591	4.187	4.627	4.062	4.288	------	4.346	4.03	19.2165
84	tert-Butylbenzene	1.029	0.977	0.964	0.977	0.993	1.020	0.928	1.019	0.887	0.930	0.935	0.969	4.68	19.5152
85	1,2,4-Trimethylbenzene	4.786	4.599	4.661	4.724	4.753	4.900	4.450	4.909	4.270	4.452	------	4.650	4.48	19.5692
86	sec-Butylbenzene	6.721	6.468	6.448	6.425	6.464	6.693	6.076	6.628	5.748	6.015	------	6.369	5.02	19.7895
87	p-Isopropyltoluene	4.919	4.972	4.842	4.954	5.082	5.267	4.766	5.175	4.496	4.694	------	4.917	4.68	19.9309
88	1,3-Dichlorobenzene	2.180	2.099	2.105	2.143	2.217	2.322	2.149	2.351	2.047	2.200	2.279	2.190	4.38	20.0957
89	1,4-Dichlorobenzene	1.974	1.957	1.960	1.989	2.042	2.192	2.013	2.184	1.927	2.020	2.150	2.037	4.65	20.2012
90	n-Butylbenzene	5.497	5.378	5.308	5.435	5.582	5.847	5.333	5.742	4.986	5.191	------	5.430	4.68	20.4876
91	1,2-Dichlorobenzene	1.635	1.630	1.645	1.640	1.673	1.784	1.636	1.768	1.569	1.668	1.777	1.675	4.20	20.7520
92	1,2-Dibromo-3-chloropropane	------	0.071	0.077	0.076	0.085	0.093	0.090	0.095	0.088	0.094	------	0.085	10.04	21.8756
93	1,2,4-Trichlorobenzene	0.793	0.757	0.731	0.751	0.832	0.913	0.883	0.926	0.849	0.893	1.017	0.850	10.33	23.1186
94	Hexachlorobutadiene	0.813	0.765	0.736	0.736	0.774	0.844	0.780	0.806	0.730	0.749	0.825	0.778	5.07	23.2512
95	Naphthalene	0.985	0.890	0.921	0.924	1.070	1.223	1.223	1.249	1.184	1.282	------	1.095	14.07	23.6207
96	1,2,3-Trichlorobenzene	0.569	0.526	0.548	0.555	0.608	0.669	0.660	0.675	0.632	0.667	0.753	0.624	11.07	24.0414

Spike Amount = Nominal Amount * M

Ave_%RSD : 6.5 Max_%RSD : 14.1

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2958

Compound List Report 03

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
Total Cpnds : 96

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-DIFLUOROBENZENE	114	13.20	1.000	A	1	A	B
2	T	Chlorotrifluoroethylene	116	3.99	0.302	A	2	A	B
3	T	Dichlorodifluoromethane	85	4.11	0.311	A	1	A	B
4	T	Dichlorotetrafluoroethane	85	4.11	0.311	A	2	A	B
5	T	Chloromethane	50	4.62	0.350	A	1	A	B
6	T	2-Chloro-1,1,1-trifluoroethane	118	5.23	0.396	A	2	A	B
7	T	Vinyl chloride	62	4.93	0.373	A	1	A	B
8	T	Bromomethane	94	5.87	0.444	A	1	A	B
9	T	Chloroethane	64	6.15	0.466	A	2	A	B
10	T	Dichlorofluoromethane	67	6.68	0.506	A	1	A	B
11	T	Trichlorofluoromethane	101	6.73	0.510	A	1	A	B
12	T	Acrolein	56	7.84	0.594	A	1	A	B
13	T	1,1,2-Trichloro-1,2,2-trifluor	151	7.99	0.605	A	1	A	B
14	T	Acetone	43	8.19	0.620	A	2	A	B
15	T	1,1-Dichloroethene	61	7.99	0.605	A	2	A	B
16	T	Methyl acetate	43	8.19	0.620	A	1	A	B
17	T	Iodomethane	142	8.38	0.635	A	1	A	B
18	T	Carbon disulfide	76	8.52	0.645	A	1	A	B
19	T	Methylene chloride	49	9.08	0.688	A	2	A	B
20	T	tert-Butyl alcohol	59	9.27	0.702	A	1	A	B
21	T	tert-Butyl methyl ether (MTBE)	73	9.50	0.719	A	1	A	B
22	T	trans-1,2-Dichloroethene	61	9.57	0.725	A	2	A	B
23	T	Acrylonitrile	53	9.60	0.727	A	2	A	B
24	T	Isopropyl ether (DIPE)	45	10.33	0.782	A	1	A	B
25	T	Vinyl acetate	43	10.39	0.787	A	1	A	B
26	T	1,1-Dichloroethane	63	10.36	0.785	A	2	A	B
27	T	2-Butanol	45	10.94	0.829	A	1	A	B
28	T	tert-Butyl ethyl ether (ETBE)	59	10.94	0.829	A	1	A	B
29	T	2,2-Dichloropropane	77	11.33	0.858	A	2	A	B
30	T	2-Butanone	43	11.36	0.860	A	1	A	B
31	T	cis-1,2-Dichloroethene	96	11.36	0.860	A	2	A	B
32	T	Bromochloromethane	49	11.78	0.892	A	2	A	B
33	T	Tetrahydrofuran	42	11.82	0.895	A	2	A	B
34	T	Chloroform	83	11.86	0.899	A	2	A	B
35	T	tert-Amyl alcohol	59	12.64	0.957	A	2	A	B
36	S	Dibromofluoromethane	111	12.12	0.918	A	2	A	B
37	T	1,1,1-Trichloroethane	97	12.13	0.919	A	2	A	B
38	T	Cyclohexane	56	12.25	0.928	A	2	A	B
39	T	tert-Amyl methyl ether (TAME)	87	12.74	0.965	A	2	A	B
40	S	1,2-Dichloroethane-d4	65	12.65	0.958	A	1	A	B
41	I	CHLOROBENZENE-D5	117	17.19	1.000	A	2	A	B
42	T	1,1-Dichloropropene	110	12.37	0.720	A	1	A	B
43	T	Carbon tetrachloride	119	12.37	0.720	A	1	A	B
44	T	Benzene	78	12.71	0.739	A	2	A	B
45	T	1,2-Dichloroethane	62	12.76	0.742	A	1	A	B
46	T	Trichloroethene	130	13.62	0.792	A	3	A	B
47	T	Methylcyclohexane	83	13.62	0.792	A	2	A	B
48	T	1,2-Dichloropropane	63	13.96	0.812	A	2	A	B
49	T	1,4-Dioxane	88	14.13	0.822	A	1	A	B
50	T	Dibromomethane	93	14.19	0.825	A	2	A	B
51	T	Bromodichloromethane	83	14.35	0.835	A	1	A	B
52	T	2-Chloroethyl vinyl ether	63	14.65	0.852	A	2	A	B

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53	T	cis-1,3-Dichloropropene	75	14.92	0.868	A	3	A	B
54	T	4-Methyl-2-pentanone	43	15.03	0.874	A	3	A	B
55	S	Toluene-d8	98	15.26	0.887	A	1	A	B
56	T	Toluene	91	15.35	0.893	A	1	A	B
57	T	Ethyl methacrylate	69	15.59	0.907	A	2	A	B
58	T	trans-1,3-Dichloropropene	75	15.63	0.909	A	2	A	B
59	T	1,1,2-Trichloroethane	97	15.91	0.926	A	3	A	B
60	T	Tetrachloroethene	164	16.09	0.936	A	3	A	B
61	T	2-Hexanone	43	16.11	0.937	A	2	A	B
62	T	1,3-Dichloropropane	76	16.14	0.939	A	1	A	B
63	T	Dibromochloromethane	129	16.49	0.959	A	1	A	B
64	T	1,2-Dibromoethane	107	16.67	0.970	A	1	A	B
65	T	1-Chlorohexane	91	17.03	0.990	A	3	A	B
66	P,M	Chlorobenzene	112	17.24	1.003	A	3	A	B
67	T	Ethylbenzene	91	17.28	1.005	A	1	A	B
68	T	1,1,1,2-Tetrachloroethane	131	17.31	1.007	A	3	A	B
69	T	m-Xylene & p-Xylene	91	17.42	1.013	A	1	A	B
70	T	o-Xylene	91	17.94	1.043	A	1	A	B
71	T	Styrene	104	17.97	1.045	A	2	A	B
72	I	1,2-DICHLOROBENZENE-D4	152	20.72	1.000	A	1	A	B
73	T	Isopropylbenzene	105	18.37	0.886	A	3	A	B
74	T	Bromoform	173	18.35	0.886	A	2	A	B
75	S	4-Bromofluorobenzene	95	18.65	0.900	A	2	A	B
76	T	1,1,2,2-Tetrachloroethane	83	18.79	0.907	A	1	A	B
77	T	trans-1,4-Dichloro-2-butene	53	18.83	0.909	A	1	A	B
78	T	n-Propylbenzene	91	18.87	0.911	A	2	A	B
79	T	1,2,3-Trichloropropane	110	18.89	0.912	A	2	A	B
80	T	Bromobenzene	156	18.92	0.913	A	2	A	B
81	T	1,3,5-Trimethylbenzene	105	19.05	0.920	A	2	A	B
82	T	2-Chlorotoluene	91	19.08	0.921	A	1	A	B
83	T	4-Chlorotoluene	91	19.22	0.927	A	1	A	B
84	T	tert-Butylbenzene	134	19.51	0.942	A	2	A	B
85	T	1,2,4-Trimethylbenzene	105	19.57	0.945	A	1	A	B
86	T	sec-Butylbenzene	105	19.78	0.955	A	1	A	B
87	T	p-Isopropyltoluene	119	19.93	0.962	A	2	A	B
88	T	1,3-Dichlorobenzene	146	20.10	0.970	A	2	A	B
89	T	1,4-Dichlorobenzene	146	20.20	0.975	A	2	A	B
90	T	n-Butylbenzene	91	20.48	0.988	A	2	A	B
91	T	1,2-Dichlorobenzene	146	20.75	1.001	A	2	A	B
92	T	1,2-Dibromo-3-chloropropane	157	21.88	1.056	A	2	A	B
93	T	1,2,4-Trichlorobenzene	180	23.12	1.116	A	2	A	B
94	T	Hexachlorobutadiene	225	23.25	1.122	A	2	A	B
95	T	Naphthalene	128	23.62	1.140	A	1	A	B
96	T	1,2,3-Trichlorobenzene	180	24.04	1.160	A	2	A	B

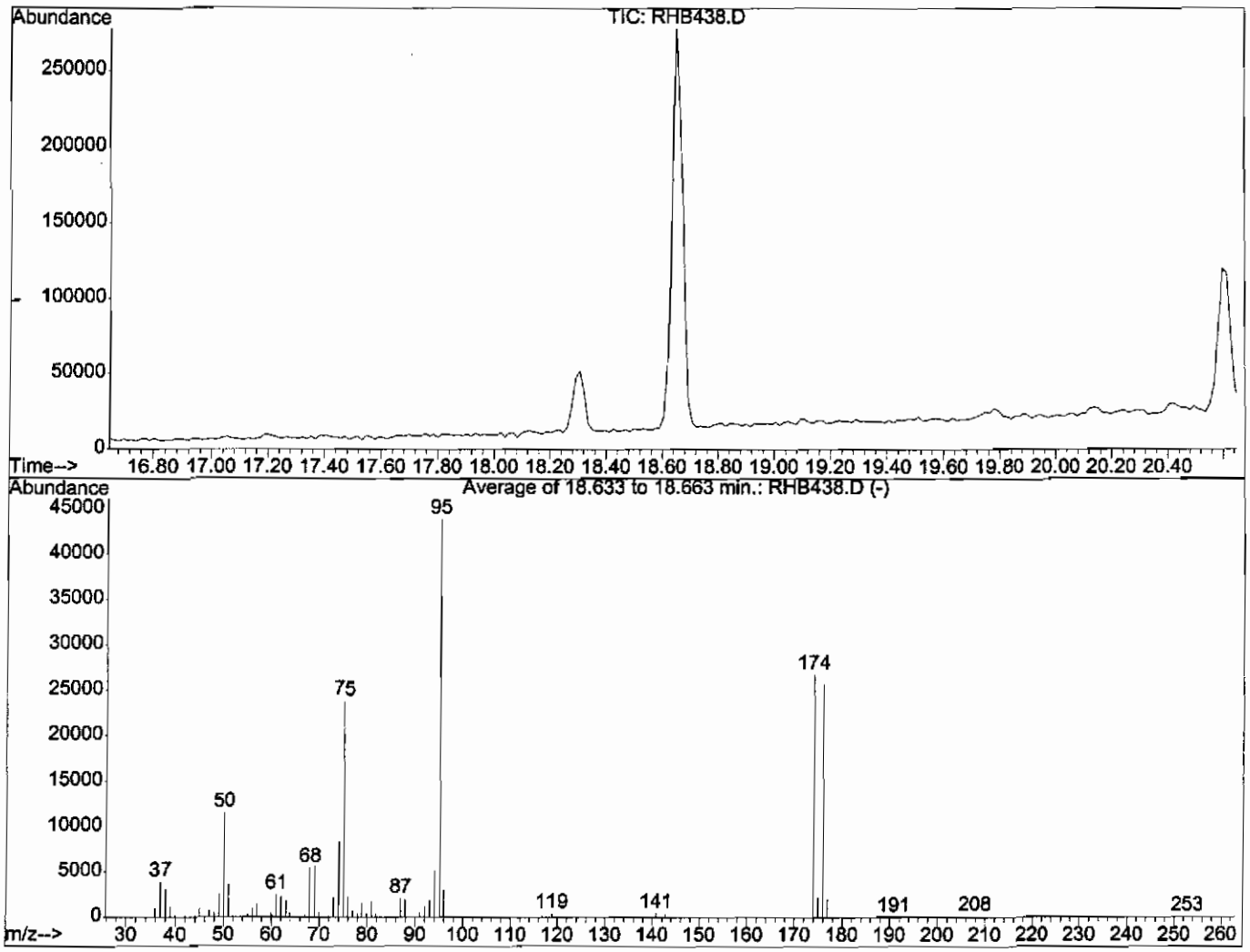
Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

VO03H16.M Thu Aug 18 10:10:38 2011

SC 8/18/11

BFB

Data File : D:\HPCHEM\1\DATA\11H16\RHB438.D Vial: 1
Acq On : 16 Aug 2011 11:15 am Operator: MW
Sample : BFB03H23 Inst : 03
Misc : T/CHECK Multiplr: 1.00
MS Integration Params: 524TAIL.P
Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL



AutoFind: Scans 995, 996, 997; Background Corrected with Scan 990

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	26.2	11522	PASS
75	95	30	60	54.2	23803	PASS
95	95	100	100	100.0	43896	PASS
96	95	5	9	6.9	3022	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	60.9	26723	PASS
175	174	5	9	8.1	2165	PASS
176	174	95	101	96.0	25641	PASS
177	176	5	9	7.8	2009	PASS

SU 8/18

RHB438.D VO03H16.M Thu Aug 18 10:10:03 2011

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB439.D Vial: 2
Acq On : 16 Aug 2011 11:49 am Operator: MW
Sample : VO03H161 0.3ppb Inst : 03
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.21	114	1673465	10.00	ug/l	0.00
41) CHLOROBENZENE-D5	17.19	117	1544261	10.00	ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	517939	10.00	ug/l	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	12.12	111	19060	0.31	ug/l	0.00
Spiked Amount 10.000			Recovery	=	3.10%	
40) 1,2-Dichloroethane-d4	12.65	65	19846	0.31	ug/l	0.00
Spiked Amount 10.000			Recovery	=	3.10%	
55) Toluene-d8	15.26	98	71929	0.33	ug/l	0.00
Spiked Amount 10.000			Recovery	=	3.30%	
75) 4-Bromofluorobenzene	18.65	95	30176	0.37	ug/l	0.00
Spiked Amount 10.000			Recovery	=	3.70%	

Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.11	85	16694	0.28	ug/l	93
5) Chloromethane	4.60	50	16217	0.27	ug/l	93
7) Vinyl chloride	4.91	62	14539	0.26	ug/l	75
8) Bromomethane	5.85	94	10921	0.29	ug/l	86
9) Chloroethane	6.12	64	7783	0.26	ug/l	95
10) Dichlorofluoromethane	6.66	67	36137	0.28	ug/l	94
11) Trichlorofluoromethane	6.72	101	24261	0.27	ug/l	100
12) Acrolein	7.85	56	1611	1.08	ug/l #	37
13) 1,1,2-Trichloro-1,2,2-trif	7.98	151	10761	0.32	ug/l	95
14) Acetone	8.20	43	16016	2.48	ug/l #	84
15) 1,1-Dichloroethene	8.00	61	33441	0.30	ug/l	97
17) Iodomethane	8.38	142	29887	0.28	ug/l	98
18) Carbon disulfide	8.52	76	55046	0.24	ug/l	97
19) Methylene chloride	9.08	49	25051	0.31	ug/l	98
20) tert-Butyl alcohol	9.29	59	2910	1.44	ug/l #	14
21) tert-Butyl methyl ether (M	9.51	73	24606	0.30	ug/l	66
22) trans-1,2-Dichloroethene	9.57	61	33865	0.30	ug/l	97
23) Acrylonitrile	9.60	53	8381	1.41	ug/l	95
24) Isopropyl ether (DIPE)	10.33	45	57798	0.29	ug/l	99
25) Vinyl acetate	10.39	43	15731	0.23	ug/l #	81
26) 1,1-Dichloroethane	10.36	63	36786	0.30	ug/l	97
28) tert-Butyl ethyl ether (ET	10.94	59	41189	0.29	ug/l	99
29) 2,2-Dichloropropane	11.31	77	32395	0.32	ug/l	98
30) 2-Butanone	11.36	43	20149	1.82	ug/l	88
31) cis-1,2-Dichloroethene	11.36	96	18769	0.29	ug/l	99
32) Bromochloromethane	11.76	49	14561	0.28	ug/l	98
33) Tetrahydrofuran	11.84	42	2269	0.36	ug/l #	30

(#) = qualifier out of range (m) = manual integration

SW 8/18/11

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Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB439.D
Acq On : 16 Aug 2011 11:49 am
Sample : VO03H161 0.3ppb
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011

Vial: 2
Operator: MW
Inst : 03
Multiplr: 1.00
Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
34)	Chloroform	11.85	83	39124	0.29 ug/l		97
37)	1,1,1-Trichloroethane	12.13	97	37011	0.31 ug/l		96
39)	tert-Amyl methyl ether (TA	12.74	87	5997	0.27 ug/l	#	86
42)	1,1-Dichloropropene	12.36	110	9001	0.29 ug/l		90
43)	Carbon tetrachloride	12.37	119	30172	0.29 ug/l		99
44)	Benzene	12.70	78	74580	0.30 ug/l		98
45)	1,2-Dichloroethane	12.76	62	22104	0.29 ug/l		92
46)	Trichloroethene	13.61	130	20355	0.30 ug/l		96
48)	1,2-Dichloropropane	13.96	63	18164	0.28 ug/l		92
49)	1,4-Dioxane	14.14	88	5497	27.66 ug/l		91
50)	Dibromomethane	14.17	93	8013	0.26 ug/l		97
51)	Bromodichloromethane	14.35	83	26326	0.28 ug/l		98
52)	2-Chloroethyl vinyl ether	14.65	63	5862	0.30 ug/l	#	75
53)	cis-1,3-Dichloropropene	14.92	75	25875	0.26 ug/l		82
54)	4-Methyl-2-pentanone	15.04	43	50099	1.61 ug/l		93
56)	Toluene	15.35	91	80753	0.30 ug/l		98
57)	Ethyl methacrylate	15.59	69	14669	0.29 ug/l		98
58)	trans-1,3-Dichloropropene	15.63	75	20551	0.27 ug/l		89
59)	1,1,2-Trichloroethane	15.91	97	9272	0.28 ug/l		99
60)	Tetrachloroethene	16.09	164	18241	0.31 ug/l		99
61)	2-Hexanone	16.11	43	28802	1.40 ug/l		95
62)	1,3-Dichloropropane	16.14	76	18261	0.27 ug/l		82
63)	Dibromochloromethane	16.48	129	12446	0.25 ug/l		100
64)	1,2-Dibromoethane	16.67	107	10128	0.28 ug/l		90
65)	1-Chlorohexane	17.03	91	37339	0.30 ug/l		95
66)	Chlorobenzene	17.24	112	46947	0.30 ug/l	#	62
67)	Ethylbenzene	17.28	91	102571	0.29 ug/l		100
68)	1,1,1,2-Tetrachloroethane	17.31	131	16251	0.28 ug/l		93
69)	m-Xylene & p-Xylene	17.40	91	166133	0.61 ug/l		97
70)	o-Xylene	17.94	91	82774	0.32 ug/l		95
71)	Styrene	17.97	104	48821	0.29 ug/l		92
73)	Isopropylbenzene	18.35	105	91024	0.31 ug/l		98
74)	Bromoform	18.35	173	5038	0.24 ug/l		94
76)	1,1,2,2-Tetrachloroethane	18.79	83	11995	0.31 ug/l		98
77)	trans-1,4-Dichloro-2-buten	18.83	53	3756	0.30 ug/l	#	34
78)	n-Propylbenzene	18.88	91	127785	0.31 ug/l		99
79)	1,2,3-Trichloropropane	18.89	110	2299	0.25 ug/l	#	12
80)	Bromobenzene	18.91	156	17077	0.29 ug/l	#	83
81)	1,3,5-Trimethylbenzene	19.05	105	78021	0.31 ug/l		98
82)	2-Chlorotoluene	19.08	91	80439	0.31 ug/l		99
83)	4-Chlorotoluene	19.22	91	67978	0.30 ug/l		99

(#) = qualifier out of range (m) = manual integration

SW 8/18/11

2063

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB439.D Vial: 2
Acq On : 16 Aug 2011 11:49 am Operator: MW
Sample : VO03H161 0.3ppb Inst : 03
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
84)	tert-Butylbenzene	19.52	134	15989	0.32 ug/l		99
85)	1,2,4-Trimethylbenzene	19.56	105	74365	0.31 ug/l		99
86)	sec-Butylbenzene	19.78	105	104426	0.32 ug/l		99
87)	p-Isopropyltoluene	19.93	119	76431	0.30 ug/l		95
88)	1,3-Dichlorobenzene	20.10	146	33868	0.30 ug/l		97
89)	1,4-Dichlorobenzene	20.20	146	30671	0.29 ug/l		92
90)	n-Butylbenzene	20.48	91	85414	0.30 ug/l		99
91)	1,2-Dichlorobenzene	20.75	146	25409	0.29 ug/l	#	70
93)	1,2,4-Trichlorobenzene	23.12	180	12315	0.28 ug/l		94
94)	Hexachlorobutadiene	23.25	225	12627	0.31 ug/l		92
95)	Naphthalene	23.62	128	15312	0.27 ug/l		76
96)	1,2,3-Trichlorobenzene	24.04	180	8840	0.27 ug/l		97

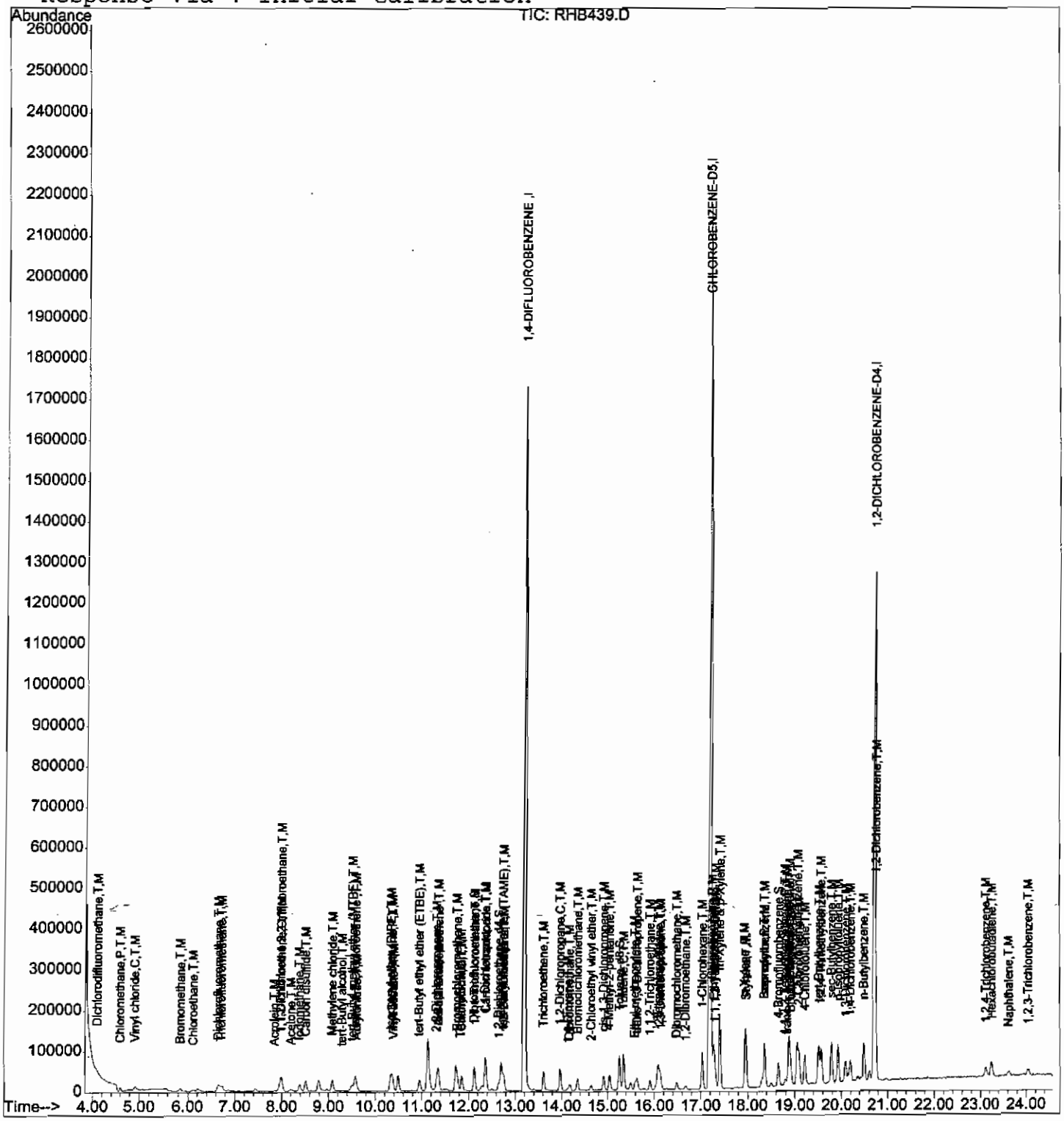
SV 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB439.D Vial: 2
Acq On : 16 Aug 2011 11:49 am Operator: MW
Sample : VO03H161 0.3ppb Inst : 03
Misc : 0.3ppb 8260/1.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



SW 8/18/11

2065

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB440.D Vial: 3
Acq On : 16 Aug 2011 12:24 pm Operator: MW
Sample : VO03H162 0.5ppb Inst : 03
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.21	114	1841246	10.00 ug/l	0.00
41) CHLOROBENZENE-D5	17.20	117	1695780	10.00 ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	571417	10.00 ug/l	0.00
System Monitoring Compounds					
36) Dibromofluoromethane	12.12	111	34821	0.51 ug/l	0.00
Spiked Amount 10.000			Recovery	= 5.10%	
40) 1,2-Dichloroethane-d4	12.66	65	37847	0.54 ug/l	0.00
Spiked Amount 10.000			Recovery	= 5.40%	
55) Toluene-d8	15.26	98	138197	0.57 ug/l	0.00
Spiked Amount 10.000			Recovery	= 5.70%	
75) 4-Bromofluorobenzene	18.65	95	57795	0.65 ug/l	0.00
Spiked Amount 10.000			Recovery	= 6.50%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.11	85	30002	0.46 ug/l	99
5) Chloromethane	4.60	50	27601	0.42 ug/l	97
7) Vinyl chloride	4.93	62	26067	0.42 ug/l	95
8) Bromomethane	5.87	94	18441	0.44 ug/l	92
9) Chloroethane	6.12	64	14554	0.45 ug/l	96
10) Dichlorofluoromethane	6.67	67	66399	0.47 ug/l	98
11) Trichlorofluoromethane	6.73	101	43971	0.44 ug/l	98
12) Acrolein	7.85	56	3459	2.11 ug/l	74
13) 1,1,2-Trichloro-1,2,2-trif	8.00	151	18454	0.49 ug/l	97
14) Acetone	8.19	43	22293	3.13 ug/l	91
15) 1,1-Dichloroethene	8.00	61	59012	0.48 ug/l	98
17) Iodomethane	8.38	142	51347	0.44 ug/l	95
18) Carbon disulfide	8.52	76	109949	0.44 ug/l	99
19) Methylene chloride	9.08	49	43417	0.50 ug/l	99
20) tert-Butyl alcohol	9.29	59	5110	2.30 ug/l	42
21) tert-Butyl methyl ether (M	9.51	73	43151	0.48 ug/l	84
22) trans-1,2-Dichloroethene	9.57	61	60990	0.48 ug/l	98
23) Acrylonitrile	9.60	53	14245	2.18 ug/l	98
24) Isopropyl ether (DIPE)	10.33	45	102669	0.47 ug/l	99
25) Vinyl acetate	10.39	43	28438	0.38 ug/l	96
26) 1,1-Dichloroethane	10.36	63	63573	0.46 ug/l	99
28) tert-Butyl ethyl ether (ET	10.96	59	73119	0.46 ug/l	99
29) 2,2-Dichloropropane	11.33	77	58731	0.53 ug/l	97
30) 2-Butanone	11.36	43	34859	2.87 ug/l	91
31) cis-1,2-Dichloroethene	11.36	96	33795	0.47 ug/l	97
32) Bromochloromethane	11.76	49	26876	0.47 ug/l	98
33) Tetrahydrofuran	11.87	42	3680	0.53 ug/l #	54

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB440.D Vial: 3
Acq On : 16 Aug 2011 12:24 pm Operator: MW
Sample : VO03H162 0.5ppb Inst : 03
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
34)	Chloroform	11.85	83	70938	0.48 ug/l		99
37)	1,1,1-Trichloroethane	12.13	97	65414	0.49 ug/l		99
39)	tert-Amyl methyl ether (TA	12.74	87	11511	0.47 ug/l		91
42)	1,1-Dichloropropene	12.37	110	16194	0.48 ug/l		99
43)	Carbon tetrachloride	12.37	119	53614	0.47 ug/l		99
44)	Benzene	12.70	78	130482	0.47 ug/l		99
45)	1,2-Dichloroethane	12.76	62	41249	0.49 ug/l		97
46)	Trichloroethene	13.62	130	35133	0.47 ug/l		99
48)	1,2-Dichloropropane	13.97	63	33187	0.47 ug/l		88
49)	1,4-Dioxane	14.14	88	6101	27.96 ug/l		93
50)	Dibromomethane	14.19	93	15665	0.47 ug/l		97
51)	Bromodichloromethane	14.35	83	46492	0.44 ug/l		97
52)	2-Chloroethyl vinyl ether	14.65	63	9209	0.43 ug/l		93
53)	cis-1,3-Dichloropropene	14.92	75	48863	0.45 ug/l		91
54)	4-Methyl-2-pentanone	15.04	43	86262	2.52 ug/l		96
56)	Toluene	15.35	91	144020	0.48 ug/l		99
57)	Ethyl methacrylate	15.59	69	24628	0.45 ug/l		81
58)	trans-1,3-Dichloropropene	15.63	75	36978	0.44 ug/l		83
59)	1,1,2-Trichloroethane	15.92	97	17800	0.48 ug/l		98
60)	Tetrachloroethene	16.08	164	32328	0.50 ug/l		99
61)	2-Hexanone	16.11	43	57678	2.55 ug/l		92
62)	1,3-Dichloropropane	16.14	76	34480	0.47 ug/l		94
63)	Dibromochloromethane	16.48	129	23385	0.43 ug/l		97
64)	1,2-Dibromoethane	16.67	107	18009	0.45 ug/l		98
65)	1-Chlorohexane	17.03	91	70282	0.51 ug/l		98
66)	Chlorobenzene	17.24	112	81900	0.48 ug/l		77
67)	Ethylbenzene	17.28	91	187900	0.49 ug/l		98
68)	1,1,1,2-Tetrachloroethane	17.31	131	29545	0.47 ug/l		97
69)	m-Xylene & p-Xylene	17.40	91	290014	0.98 ug/l		100
70)	o-Xylene	17.94	91	141982	0.49 ug/l		97
71)	Styrene	17.97	104	84811	0.46 ug/l		93
73)	Isopropylbenzene	18.36	105	162013	0.50 ug/l		98
74)	Bromoform	18.36	173	9820	0.42 ug/l		92
76)	1,1,2,2-Tetrachloroethane	18.79	83	20104	0.47 ug/l		98
77)	trans-1,4-Dichloro-2-buten	18.82	53	6086	0.44 ug/l		80
78)	n-Propylbenzene	18.88	91	238739	0.52 ug/l		98
79)	1,2,3-Trichloropropane	18.89	110	5154	0.51 ug/l	#	95
80)	Bromobenzene	18.91	156	32082	0.49 ug/l		93
81)	1,3,5-Trimethylbenzene	19.04	105	141010	0.50 ug/l		99
82)	2-Chlorotoluene	19.09	91	144743	0.50 ug/l		100
83)	4-Chlorotoluene	19.22	91	121452	0.49 ug/l		100

(#) = qualifier out of range (m) = manual integration

SC 8/18/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB440.D Vial: 3
Acq On : 16 Aug 2011 12:24 pm Operator: MW
Sample : VO03H162 0.5ppb Inst : 03
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
84)	tert-Butylbenzene	19.52	134	27900	0.50 ug/l		100
85)	1,2,4-Trimethylbenzene	19.56	105	131408	0.49 ug/l		98
86)	sec-Butylbenzene	19.79	105	184794	0.51 ug/l		99
87)	p-Isopropyltoluene	19.93	119	142044	0.51 ug/l		99
88)	1,3-Dichlorobenzene	20.10	146	59960	0.48 ug/l		97
89)	1,4-Dichlorobenzene	20.20	146	55924	0.48 ug/l		97
90)	n-Butylbenzene	20.48	91	153667	0.50 ug/l		98
91)	1,2-Dichlorobenzene	20.75	146	46574	0.49 ug/l		85
92)	1,2-Dibromo-3-chloropropan	21.87	157	2042	0.42 ug/l	#	11
93)	1,2,4-Trichlorobenzene	23.12	180	21614	0.45 ug/l		94
94)	Hexachlorobutadiene	23.25	225	21848	0.49 ug/l		93
95)	Naphthalene	23.61	128	25414	0.41 ug/l		88
96)	1,2,3-Trichlorobenzene	24.04	180	15042	0.42 ug/l		99

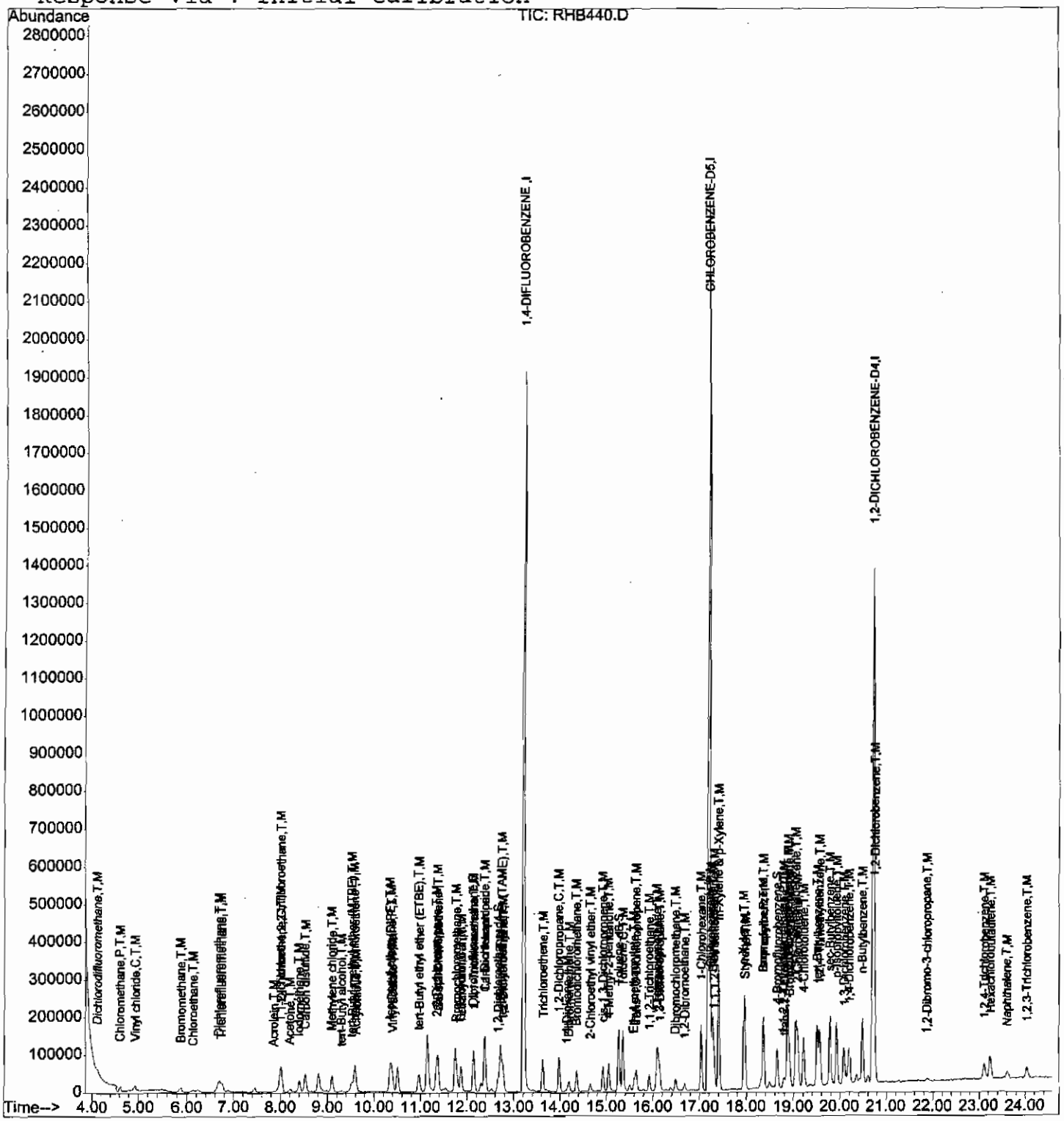
SW 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB440.D Vial: 3
Acq On : 16 Aug 2011 12:24 pm Operator: MW
Sample : VO03H162 0.5ppb Inst : 03
Misc : 0.5ppb 8260/2.5ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



SW 8/18/11

2069

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB441.D Vial: 4
Acq On : 16 Aug 2011 12:57 pm Operator: MW
Sample : VO03H163 1.0ppb Inst : 03
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.21	114	1792008	10.00 ug/l	0.00
41) CHLOROBENZENE-D5	17.20	117	1648393	10.00 ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	568390	10.00 ug/l	0.00
System Monitoring Compounds					
36) Dibromofluoromethane	12.12	111	70253	1.06 ug/l	0.00
Spiked Amount 10.000			Recovery	= 10.60%	
40) 1,2-Dichloroethane-d4	12.66	65	75482	1.11 ug/l	0.00
Spiked Amount 10.000			Recovery	= 11.10%	
55) Toluene-d8	15.26	98	237911	1.02 ug/l	0.00
Spiked Amount 10.000			Recovery	= 10.20%	
75) 4-Bromofluorobenzene	18.65	95	93442	1.06 ug/l	0.00
Spiked Amount 10.000			Recovery	= 10.60%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.11	85	61461	0.97 ug/l	100
5) Chloromethane	4.62	50	60129	0.94 ug/l	99
7) Vinyl chloride	4.93	62	57187	0.95 ug/l	98
8) Bromomethane	5.87	94	39668	0.98 ug/l	98
9) Chloroethane	6.15	64	30671	0.97 ug/l	96
10) Dichlorofluoromethane	6.67	67	137014	1.00 ug/l	99
11) Trichlorofluoromethane	6.73	101	94812	0.97 ug/l	100
12) Acrolein	7.86	56	6961	4.37 ug/l	89
13) 1,1,2-Trichloro-1,2,2-trif	7.98	151	35643	0.98 ug/l	98
14) Acetone	8.19	43	40617	5.87 ug/l	92
15) 1,1-Dichloroethene	8.00	61	122371	1.02 ug/l	100
17) Iodomethane	8.38	142	111978	0.99 ug/l	98
18) Carbon disulfide	8.52	76	238217	0.98 ug/l	99
19) Methylene chloride	9.08	49	86708	1.02 ug/l	98
20) tert-Butyl alcohol	9.29	59	10144	4.70 ug/l #	28
21) tert-Butyl methyl ether (M	9.51	73	89157	1.02 ug/l	93
22) trans-1,2-Dichloroethene	9.57	61	122454	1.00 ug/l	97
23) Acrylonitrile	9.60	53	30682	4.82 ug/l	96
24) Isopropyl ether (DIPE)	10.33	45	216743	1.01 ug/l	98
25) Vinyl acetate	10.39	43	67071	0.93 ug/l	98
26) 1,1-Dichloroethane	10.36	63	133820	1.01 ug/l	100
28) tert-Butyl ethyl ether (ET	10.94	59	155633	1.01 ug/l	99
29) 2,2-Dichloropropane	11.33	77	121824	1.12 ug/l	98
30) 2-Butanone	11.36	43	60898	5.14 ug/l	97
31) cis-1,2-Dichloroethene	11.36	96	69770	1.00 ug/l	99
32) Bromochloromethane	11.76	49	56707	1.03 ug/l	98
33) Tetrahydrofuran	11.84	42	8025	1.18 ug/l	77

(#) = qualifier out of range (m) = manual integration

8/18/11

2070

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB441.D Vial: 4
Acq On : 16 Aug 2011 12:57 pm Operator: MW
Sample : VO03H163 1.0ppb Inst : 03
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	Chloroform	11.87	83	145961	1.01 ug/l	98
37)	1,1,1-Trichloroethane	12.13	97	132897	1.03 ug/l	98
39)	tert-Amyl methyl ether (TA	12.74	87	25256	1.07 ug/l	100
42)	1,1-Dichloropropene	12.36	110	32004	0.98 ug/l	99
43)	Carbon tetrachloride	12.37	119	114502	1.03 ug/l	97
44)	Benzene	12.70	78	265268	0.99 ug/l	99
45)	1,2-Dichloroethane	12.76	62	85700	1.04 ug/l	98
46)	Trichloroethene	13.62	130	69975	0.95 ug/l	99
48)	1,2-Dichloropropane	13.97	63	66659	0.97 ug/l	91
49)	1,4-Dioxane	14.14	88	8069	38.04 ug/l	96
50)	Dibromomethane	14.19	93	30717	0.95 ug/l	98
51)	Bromodichloromethane	14.35	83	96844	0.95 ug/l	98
52)	2-Chloroethyl vinyl ether	14.64	63	17658	0.86 ug/l	98
53)	cis-1,3-Dichloropropene	14.92	75	99995	0.95 ug/l	94
54)	4-Methyl-2-pentanone	15.04	43	166673	5.00 ug/l	98
56)	Toluene	15.35	91	289134	1.00 ug/l	100
57)	Ethyl methacrylate	15.59	69	51336	0.95 ug/l	96
58)	trans-1,3-Dichloropropene	15.63	75	78435	0.95 ug/l	88
59)	1,1,2-Trichloroethane	15.92	97	35453	0.99 ug/l	98
60)	Tetrachloroethene	16.09	164	62521	0.99 ug/l	99
61)	2-Hexanone	16.11	43	114894	5.22 ug/l	95
62)	1,3-Dichloropropane	16.14	76	72428	1.01 ug/l	99
63)	Dibromochloromethane	16.48	129	48644	0.92 ug/l	99
64)	1,2-Dibromoethane	16.67	107	37361	0.95 ug/l	100
65)	1-Chlorohexane	17.03	91	134826	1.00 ug/l	97
66)	Chlorobenzene	17.24	112	162511	0.98 ug/l	87
67)	Ethylbenzene	17.28	91	372068	0.99 ug/l	99
68)	1,1,1,2-Tetrachloroethane	17.31	131	61859	1.00 ug/l	99
69)	m-Xylene & p-Xylene	17.40	91	578889	2.01 ug/l	99
70)	o-Xylene	17.94	91	288160	1.03 ug/l	99
71)	Styrene	17.97	104	179278	0.99 ug/l	97
73)	Isopropylbenzene	18.36	105	320199	0.99 ug/l	99
74)	Bromoform	18.36	173	20940	0.89 ug/l	98
76)	1,1,2,2-Tetrachloroethane	18.79	83	41033	0.96 ug/l	98
77)	trans-1,4-Dichloro-2-buten	18.83	53	12504	0.90 ug/l	95
78)	n-Propylbenzene	18.88	91	454308	0.99 ug/l	98
79)	1,2,3-Trichloropropane	18.89	110	10412	1.05 ug/l	96
80)	Bromobenzene	18.91	156	65763	1.01 ug/l	99
81)	1,3,5-Trimethylbenzene	19.04	105	277351	1.00 ug/l	100
82)	2-Chlorotoluene	19.09	91	289472	1.01 ug/l	99
83)	4-Chlorotoluene	19.22	91	242681	0.98 ug/l	100

(#) = qualifier out of range (m) = manual integration

SC 8/18/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB441.D Vial: 4
Acq On : 16 Aug 2011 12:57 pm Operator: MW
Sample : VO03H163 1.0ppb Inst : 03
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
84)	tert-Butylbenzene	19.52	134	54784	0.99 ug/l		96
85)	1,2,4-Trimethylbenzene	19.56	105	264910	1.00 ug/l		98
86)	sec-Butylbenzene	19.79	105	366508	1.01 ug/l		100
87)	p-Isopropyltoluene	19.93	119	275196	0.98 ug/l		99
88)	1,3-Dichlorobenzene	20.10	146	119666	0.96 ug/l		100
89)	1,4-Dichlorobenzene	20.20	146	111408	0.96 ug/l		98
90)	n-Butylbenzene	20.48	91	301690	0.98 ug/l		99
91)	1,2-Dichlorobenzene	20.75	146	93486	0.98 ug/l		94
92)	1,2-Dibromo-3-chloropropan	21.87	157	4390	0.90 ug/l	#	77
93)	1,2,4-Trichlorobenzene	23.12	180	41569	0.86 ug/l		99
94)	Hexachlorobutadiene	23.25	225	41861	0.95 ug/l		98
95)	Naphthalene	23.63	128	52344	0.84 ug/l		93
96)	1,2,3-Trichlorobenzene	24.04	180	31162	0.88 ug/l		96

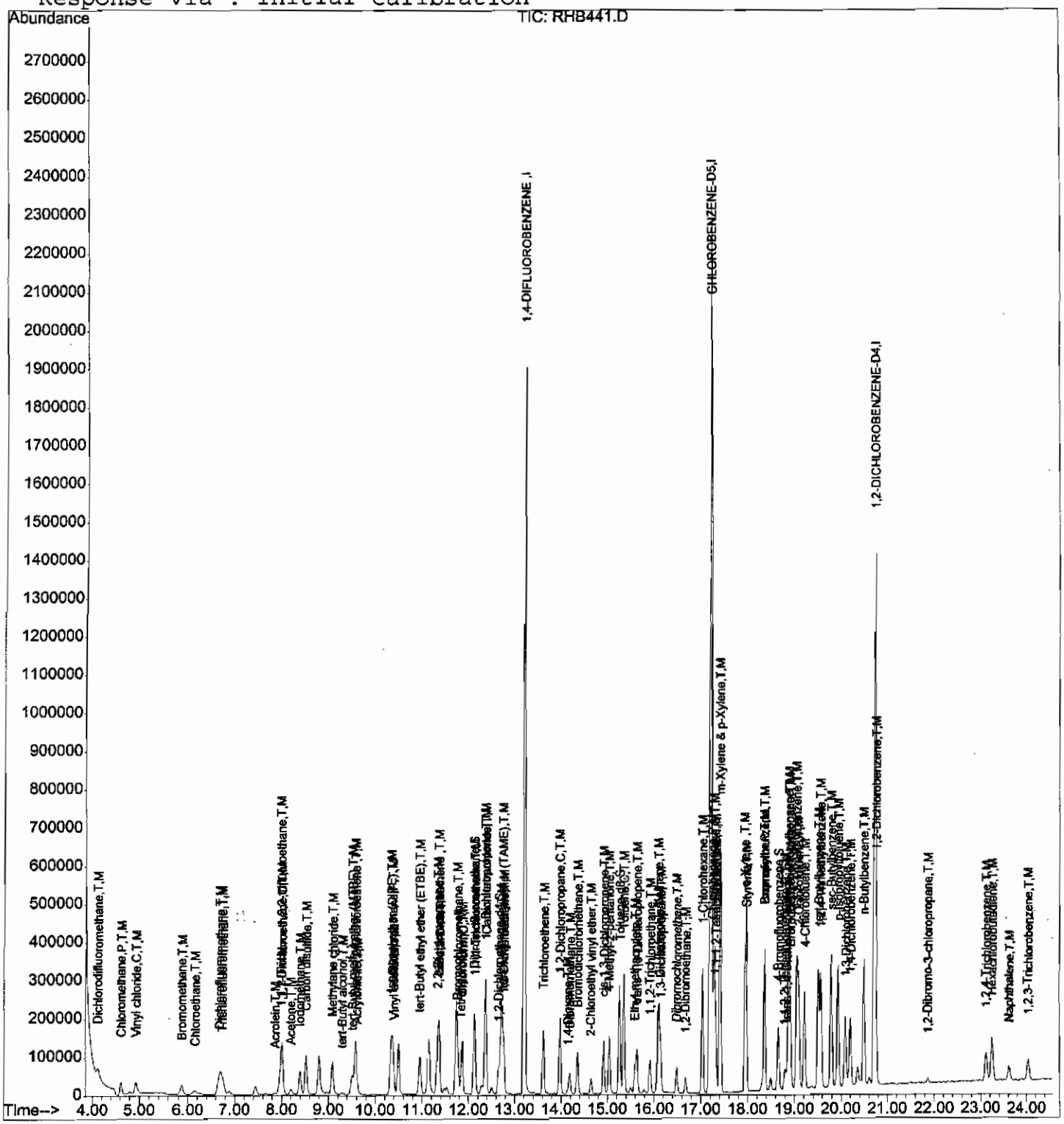
SW 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB441.D Vial: 4
Acq On : 16 Aug 2011 12:57 pm Operator: MW
Sample : VO03H163 1.0ppb Inst : 03
Misc : 1.0ppb 8260/5.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:48 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



SW 8/18/11

2673

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB442.D Vial: 5
Acq On : 16 Aug 2011 1:32 pm Operator: MW
Sample : VO03H164 2.0ppb Inst : 03
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.20	114	1830259	10.00 ug/l	0.00
41) CHLOROBENZENE-D5	17.19	117	1659145	10.00 ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	572895	10.00 ug/l	0.00
System Monitoring Compounds					
36) Dibromofluoromethane	12.13	111	141758	2.08 ug/l	0.01
Spiked Amount 10.000			Recovery	= 20.80%	
40) 1,2-Dichloroethane-d4	12.65	65	146051	2.11 ug/l	0.00
Spiked Amount 10.000			Recovery	= 21.10%	
55) Toluene-d8	15.25	98	481543	2.04 ug/l	0.00
Spiked Amount 10.000			Recovery	= 20.40%	
75) 4-Bromofluorobenzene	18.65	95	184129	2.07 ug/l	0.00
Spiked Amount 10.000			Recovery	= 20.70%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.12	85	130526	2.02 ug/l	99
5) Chloromethane	4.61	50	126598	1.94 ug/l	100
7) Vinyl chloride	4.94	62	122805	1.99 ug/l	100
8) Bromomethane	5.88	94	79778	1.92 ug/l	97
9) Chloroethane	6.16	64	61311	1.89 ug/l	97
10) Dichlorofluoromethane	6.68	67	276393	1.98 ug/l	100
11) Trichlorofluoromethane	6.74	101	197141	1.98 ug/l	100
12) Acrolein	7.86	56	13015	8.00 ug/l	88
13) 1,1,2-Trichloro-1,2,2-trif	7.99	151	70457	1.90 ug/l	99
14) Acetone	8.20	43	70134	9.92 ug/l	98
15) 1,1-Dichloroethene	8.00	61	249442	2.03 ug/l	99
17) Iodomethane	8.39	142	226841	1.96 ug/l	96
18) Carbon disulfide	8.51	76	499801	2.02 ug/l	99
19) Methylene chloride	9.08	49	170951	1.96 ug/l	99
20) tert-Butyl alcohol	9.28	59	20989	9.52 ug/l	85
21) tert-Butyl methyl ether (M	9.51	73	173260	1.94 ug/l	96
22) trans-1,2-Dichloroethene	9.57	61	255847	2.04 ug/l	98
23) Acrylonitrile	9.61	53	60375	9.29 ug/l	98
24) Isopropyl ether (DIPE)	10.33	45	435966	1.99 ug/l	99
25) Vinyl acetate	10.39	43	149999	2.04 ug/l	98
26) 1,1-Dichloroethane	10.37	63	275858	2.03 ug/l	100
28) tert-Butyl ethyl ether (ET	10.95	59	309494	1.98 ug/l	99
29) 2,2-Dichloropropane	11.32	77	242603	2.19 ug/l	98
30) 2-Butanone	11.35	43	108990	9.01 ug/l	99
31) cis-1,2-Dichloroethene	11.37	96	144604	2.03 ug/l	98
32) Bromochloromethane	11.77	49	110330	1.96 ug/l	99
33) Tetrahydrofuran	11.83	42	14017	2.02 ug/l	89

(#) = qualifier out of range (m) = manual integration
RHB442.D VO03H16.M Thu Aug 18 09:49:08 2011

8/18/11

2074

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB442.D Vial: 5
Acq On : 16 Aug 2011 1:32 pm Operator: MW
Sample : VO03H164 2.0ppb Inst : 03
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	Chloroform	11.86	83	302151	2.05 ug/l	99
37)	1,1,1-Trichloroethane	12.13	97	276732	2.09 ug/l	99
39)	tert-Amyl methyl ether (TA	12.74	87	48289	2.00 ug/l	95
42)	1,1-Dichloropropene	12.37	110	67078	2.04 ug/l	97
43)	Carbon tetrachloride	12.38	119	232693	2.07 ug/l	100
44)	Benzene	12.71	78	545908	2.03 ug/l	99
45)	1,2-Dichloroethane	12.77	62	173011	2.08 ug/l	99
46)	Trichloroethene	13.62	130	144006	1.95 ug/l	98
48)	1,2-Dichloropropane	13.97	63	135695	1.97 ug/l	95
49)	1,4-Dioxane	14.14	88	11096	51.97 ug/l	94
50)	Dibromomethane	14.18	93	63754	1.96 ug/l	98
51)	Bromodichloromethane	14.35	83	204021	1.98 ug/l	99
52)	2-Chloroethyl vinyl ether	14.64	63	35881	1.73 ug/l	97
53)	cis-1,3-Dichloropropene	14.91	75	208813	1.97 ug/l	96
54)	4-Methyl-2-pentanone	15.03	43	304036	9.07 ug/l	99
56)	Toluene	15.34	91	585835	2.01 ug/l	100
57)	Ethyl methacrylate	15.60	69	101765	1.88 ug/l	97
58)	trans-1,3-Dichloropropene	15.64	75	162938	1.96 ug/l	97
59)	1,1,2-Trichloroethane	15.91	97	70035	1.94 ug/l	99
60)	Tetrachloroethene	16.09	164	124590	1.96 ug/l	97
61)	2-Hexanone	16.12	43	205889	9.30 ug/l	99
62)	1,3-Dichloropropane	16.15	76	144249	2.00 ug/l	98
63)	Dibromochloromethane	16.49	129	101864	1.91 ug/l	99
64)	1,2-Dibromoethane	16.67	107	75862	1.92 ug/l	99
65)	1-Chlorohexane	17.04	91	271397	2.01 ug/l	99
66)	Chlorobenzene	17.23	112	334235	2.00 ug/l	94
67)	Ethylbenzene	17.28	91	759848	2.02 ug/l	100
68)	1,1,1,2-Tetrachloroethane	17.31	131	126835	2.04 ug/l	99
69)	m-Xylene & p-Xylene	17.41	91	1183767	4.08 ug/l	100
70)	o-Xylene	17.95	91	582600	2.07 ug/l	100
71)	Styrene	17.96	104	371035	2.04 ug/l	98
73)	Isopropylbenzene	18.36	105	665712	2.05 ug/l	99
74)	Bromoform	18.35	173	43808	1.85 ug/l	100
76)	1,1,2,2-Tetrachloroethane	18.80	83	82576	1.91 ug/l	99
77)	trans-1,4-Dichloro-2-buten	18.83	53	25868	1.85 ug/l	97
78)	n-Propylbenzene	18.87	91	942936	2.04 ug/l	99
79)	1,2,3-Trichloropropane	18.90	110	20936	2.09 ug/l	96
80)	Bromobenzene	18.91	156	131072	2.00 ug/l	100
81)	1,3,5-Trimethylbenzene	19.05	105	574657	2.05 ug/l	98
82)	2-Chlorotoluene	19.09	91	589199	2.05 ug/l	100
83)	4-Chlorotoluene	19.21	91	498826	2.00 ug/l	100

(#) = qualifier out of range (m) = manual integration

SW 8/18/11

2075

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB442.D Vial: 5
Acq On : 16 Aug 2011 1:32 pm Operator: MW
Sample : VO03H164 2.0ppb Inst : 03
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84) tert-Butylbenzene	19.51	134	111940	2.02 ug/l	98
85) 1,2,4-Trimethylbenzene	19.57	105	541231	2.03 ug/l	100
86) sec-Butylbenzene	19.79	105	736187	2.02 ug/l	100
87) p-Isopropyltoluene	19.93	119	567594	2.02 ug/l	99
88) 1,3-Dichlorobenzene	20.09	146	245488	1.96 ug/l	99
89) 1,4-Dichlorobenzene	20.19	146	227885	1.95 ug/l	99
90) n-Butylbenzene	20.49	91	622696	2.00 ug/l	99
91) 1,2-Dichlorobenzene	20.75	146	187877	1.96 ug/l	97
92) 1,2-Dibromo-3-chloropropan	21.88	157	8763	1.79 ug/l	84
93) 1,2,4-Trichlorobenzene	23.11	180	85992	1.77 ug/l	98
94) Hexachlorobutadiene	23.25	225	84273	1.89 ug/l	99
95) Naphthalene	23.62	128	105922	1.69 ug/l	96
96) 1,2,3-Trichlorobenzene	24.04	180	63599	1.78 ug/l	97

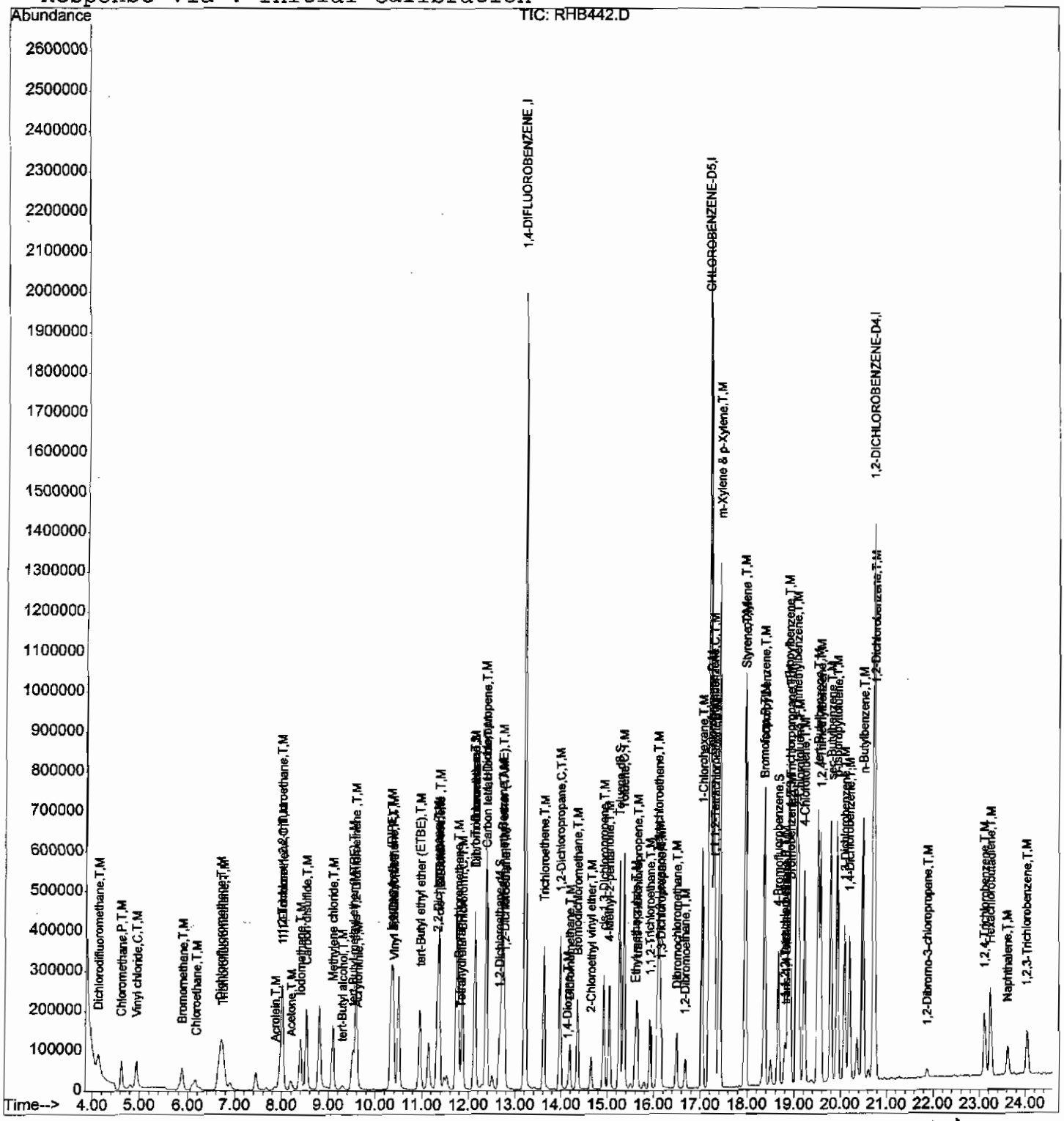
SW 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB442.D Vial: 5
Acq On : 16 Aug 2011 1:32 pm Operator: MW
Sample : VO03H164 2.0ppb Inst : 03
Misc : 2.0ppb 8260/10.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



SW 8/18/11

2077

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB443.D Vial: 6
Acq On : 16 Aug 2011 2:06 pm Operator: MW
Sample : VO03H165 5.0ppb Inst : 03
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.20	114	1833943	10.00	ug/l	0.00
41) CHLOROBENZENE-D5	17.19	117	1719319	10.00	ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	598826	10.00	ug/l	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	12.11	111	356632	5.23	ug/l	0.00
Spiked Amount 10.000			Recovery	=	52.30%	
40) 1,2-Dichloroethane-d4	12.65	65	371660	5.36	ug/l	0.00
Spiked Amount 10.000			Recovery	=	53.60%	
55) Toluene-d8	15.25	98	1215609	4.98	ug/l	0.00
Spiked Amount 10.000			Recovery	=	49.80%	
75) 4-Bromofluorobenzene	18.65	95	470508	5.05	ug/l	0.00
Spiked Amount 10.000			Recovery	=	50.50%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.12	85	328234	5.07	ug/l	99
5) Chloromethane	4.61	50	332191	5.08	ug/l	99
7) Vinyl chloride	4.93	62	321951	5.20	ug/l	99
8) Bromomethane	5.88	94	214699	5.16	ug/l	100
9) Chloroethane	6.15	64	163218	5.02	ug/l	98
10) Dichlorofluoromethane	6.68	67	711368	5.08	ug/l	99
11) Trichlorofluoromethane	6.74	101	516949	5.17	ug/l	99
12) Acrolein	7.86	56	37647	23.09	ug/l	98
13) 1,1,2-Trichloro-1,2,2-trif	7.98	151	182466	4.90	ug/l	98
14) Acetone	8.18	43	173954	24.56	ug/l	98
15) 1,1-Dichloroethene	8.01	61	647975	5.25	ug/l	99
17) Iodomethane	8.39	142	590339	5.10	ug/l	97
18) Carbon disulfide	8.51	76	1323634	5.33	ug/l	100
19) Methylene chloride	9.08	49	441234	5.06	ug/l	98
20) tert-Butyl alcohol	9.29	59	56922	25.77	ug/l	95
21) tert-Butyl methyl ether (M	9.51	73	448348	5.00	ug/l	99
22) trans-1,2-Dichloroethene	9.57	61	642599	5.11	ug/l	100
23) Acrylonitrile	9.60	53	160769	24.68	ug/l	99
24) Isopropyl ether (DIPE)	10.33	45	1125221	5.13	ug/l	100
25) Vinyl acetate	10.39	43	374592	5.09	ug/l	99
26) 1,1-Dichloroethane	10.37	63	710475	5.22	ug/l	100
28) tert-Butyl ethyl ether (ET	10.95	59	796845	5.08	ug/l	100
29) 2,2-Dichloropropane	11.33	77	599642	5.40	ug/l	99
30) 2-Butanone	11.36	43	286955	23.68	ug/l	100
31) cis-1,2-Dichloroethene	11.36	96	363571	5.09	ug/l	98
32) Bromochloromethane	11.77	49	287395	5.10	ug/l	98
33) Tetrahydrofuran	11.82	42	34689	5.00	ug/l	93

(#) = qualifier out of range (m) = manual integration
RHB443.D VO03H16.M Thu Aug 18 09:49:18 2011 SW 8/18/11 Page 1

2978

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB443.D
Acq On : 16 Aug 2011 2:06 pm
Sample : VO03H165 5.0ppb
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011

Vial: 6
Operator: MW
Inst : 03
Multiplr: 1.00
Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	Chloroform	11.86	83	771591	5.21 ug/l	100
37)	1,1,1-Trichloroethane	12.13	97	702611	5.30 ug/l	100
39)	tert-Amyl methyl ether (TA	12.74	87	125971	5.20 ug/l	99
42)	1,1-Dichloropropene	12.37	110	171310	5.02 ug/l	99
43)	Carbon tetrachloride	12.37	119	596662	5.12 ug/l	100
44)	Benzene	12.71	78	1391289	4.99 ug/l	100
45)	1,2-Dichloroethane	12.77	62	444449	5.17 ug/l	100
46)	Trichloroethene	13.62	130	378497	4.95 ug/l	99
48)	1,2-Dichloropropane	13.96	63	359698	5.04 ug/l	98
49)	1,4-Dioxane	14.14	88	22782	102.97 ug/l	96
50)	Dibromomethane	14.18	93	168213	4.99 ug/l	98
51)	Bromodichloromethane	14.35	83	545645	5.12 ug/l	99
52)	2-Chloroethyl vinyl ether	14.64	63	102041	4.74 ug/l	98
53)	cis-1,3-Dichloropropene	14.91	75	549682	4.99 ug/l	97
54)	4-Methyl-2-pentanone	15.03	43	833358	23.99 ug/l	100
56)	Toluene	15.34	91	1518932	5.02 ug/l	100
57)	Ethyl methacrylate	15.60	69	281565	5.02 ug/l	99
58)	trans-1,3-Dichloropropene	15.63	75	434819	5.05 ug/l	97
59)	1,1,2-Trichloroethane	15.91	97	184443	4.94 ug/l	98
60)	Tetrachloroethene	16.09	164	329192	5.01 ug/l	100
61)	2-Hexanone	16.10	43	564959	24.61 ug/l	100
62)	1,3-Dichloropropane	16.13	76	378578	5.07 ug/l	100
63)	Dibromochloromethane	16.49	129	277860	5.03 ug/l	99
64)	1,2-Dibromoethane	16.67	107	203759	4.98 ug/l	100
65)	1-Chlorohexane	17.04	91	706116	5.03 ug/l	100
66)	Chlorobenzene	17.23	112	872822	5.03 ug/l	98
67)	Ethylbenzene	17.28	91	1964989	5.03 ug/l	100
68)	1,1,1,2-Tetrachloroethane	17.31	131	325505	5.05 ug/l	99
69)	m-Xylene & p-Xylene	17.41	91	3047579	10.13 ug/l	100
70)	o-Xylene	17.95	91	1495060	5.12 ug/l	100
71)	Styrene	17.96	104	991391	5.27 ug/l	99
73)	Isopropylbenzene	18.37	105	1714922	5.05 ug/l	100
74)	Bromoform	18.35	173	122093	4.94 ug/l	99
76)	1,1,2,2-Tetrachloroethane	18.80	83	222938	4.94 ug/l	99
77)	trans-1,4-Dichloro-2-buten	18.83	53	69362	4.74 ug/l	99
78)	n-Propylbenzene	18.87	91	2444813	5.07 ug/l	99
79)	1,2,3-Trichloropropane	18.89	110	54474	5.19 ug/l	98
80)	Bromobenzene	18.92	156	345734	5.06 ug/l	99
81)	1,3,5-Trimethylbenzene	19.05	105	1481394	5.06 ug/l	99
82)	2-Chlorotoluene	19.10	91	1526615	5.07 ug/l	99
83)	4-Chlorotoluene	19.21	91	1334808	5.13 ug/l	99

(#) = qualifier out of range (m) = manual integration

SW 8/18/11

2079

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB443.D Vial: 6
Acq On : 16 Aug 2011 2:06 pm Operator: MW
Sample : VO03H165 5.0ppb Inst : 03
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84)	tert-Butylbenzene	19.51	134	297274	5.12 ug/l	99
85)	1,2,4-Trimethylbenzene	19.57	/105	1423178	5.11 ug/l	99
86)	sec-Butylbenzene	19.79	105	1935544	5.08 ug/l	100
87)	p-Isopropyltoluene	19.93	119	1521705	5.17 ug/l	100
88)	1,3-Dichlorobenzene	20.09	/146	663940	5.06 ug/l	99
89)	1,4-Dichlorobenzene	20.20	/146	611365	5.01 ug/l	98
90)	n-Butylbenzene	20.49	91	1671387	5.14 ug/l	100
91)	1,2-Dichlorobenzene	20.75	/146	501022	4.99 ug/l	99
92)	1,2-Dibromo-3-chloropropan	21.88	157	25304	4.94 ug/l	95
93)	1,2,4-Trichlorobenzene	23.11	/180	249247	4.90 ug/l	99
94)	Hexachlorobutadiene	23.25	225	231705	4.97 ug/l	100
95)	Naphthalene	23.62	128	320389	4.89 ug/l	99
96)	1,2,3-Trichlorobenzene	24.04	/180	182117	4.87 ug/l	100

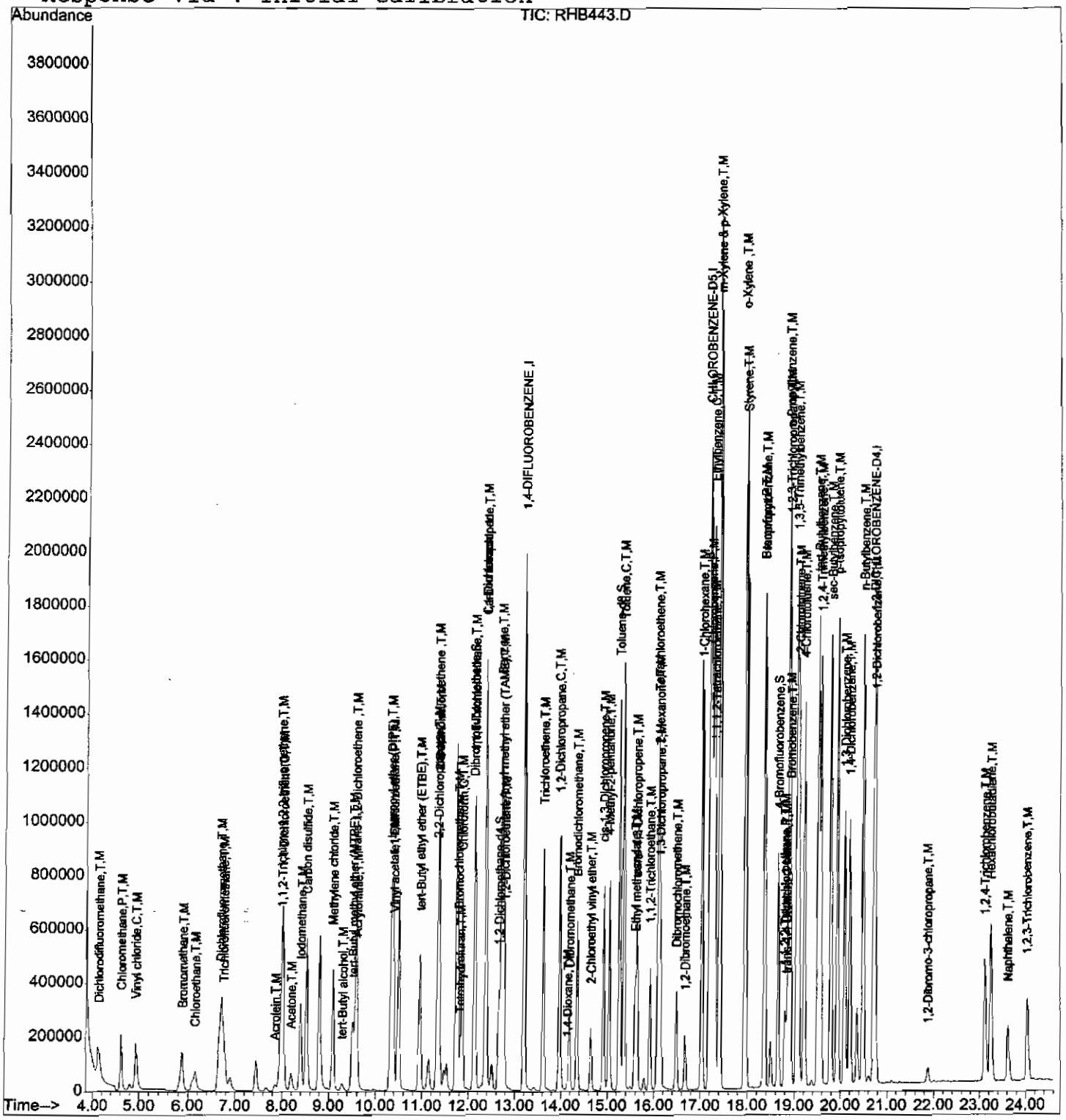
SW 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB443.D Vial: 6
Acq On : 16 Aug 2011 2:06 pm Operator: MW
Sample : VO03H165 5.0ppb Inst : 03
Misc : 5.0ppb 8260/25.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



SW 8/18/11

2081

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB444.D Vial: 7
Acq On : 16 Aug 2011 2:40 pm Operator: MW
Sample : VO03H166 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.20	114	1861981	10.00	ug/l	0.00
41) CHLOROBENZENE-D5	17.19	117	1722743	10.00	ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	603523	10.00	ug/l	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	12.12	111	725602	10.49	ug/l	0.00
Spiked Amount 10.000			Recovery	=	104.90%	
40) 1,2-Dichloroethane-d4	12.65	65	742017	10.54	ug/l	0.00
Spiked Amount 10.000			Recovery	=	105.40%	
55) Toluene-d8	15.26	98	2521150	10.30	ug/l	0.00
Spiked Amount 10.000			Recovery	=	103.00%	
75) 4-Bromofluorobenzene	18.65	95	966822	10.29	ug/l	0.00
Spiked Amount 10.000			Recovery	=	102.90%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.11	85	799715	12.17	ug/l	100
5) Chloromethane	4.62	50	800664	12.06	ug/l	100
7) Vinyl chloride	4.93	62	772476	12.30	ug/l	100
8) Bromomethane	5.87	94	524049	12.41	ug/l	100
9) Chloroethane	6.15	64	404536	12.26	ug/l	100
10) Dichlorofluoromethane	6.68	67	1520679	10.70	ug/l	100
11) Trichlorofluoromethane	6.73	101	1240385	12.22	ug/l	100
12) Acrolein	7.85	56	84715	51.18	ug/l	100
13) 1,1,2-Trichloro-1,2,2-trif	7.99	151	396018	10.48	ug/l	100
14) Acetone	8.19	43	371650	51.67	ug/l	100
15) 1,1-Dichloroethene	7.99	61	1351158	10.79	ug/l	100
17) Iodomethane	8.38	142	1271057	10.82	ug/l	100
18) Carbon disulfide	8.52	76	2468999	9.80	ug/l	100
19) Methylene chloride	9.08	49	923088	10.43	ug/l	100
20) tert-Butyl alcohol	9.27	59	123162	54.93	ug/l	100
21) tert-Butyl methyl ether (M	9.50	73	962352	10.58	ug/l	100
22) trans-1,2-Dichloroethene	9.57	61	1362225	10.67	ug/l	100
23) Acrylonitrile	9.60	53	354701	53.63	ug/l	100
24) Isopropyl ether (DIPE)	10.33	45	2417849	10.86	ug/l	100
25) Vinyl acetate	10.39	43	875928	11.72	ug/l	100
26) 1,1-Dichloroethane	10.36	63	1500293	10.85	ug/l	100
28) tert-Butyl ethyl ether (ET	10.94	59	1703438	10.69	ug/l	100
29) 2,2-Dichloropropane	11.33	77	1212683	10.77	ug/l	100
30) 2-Butanone	11.36	43	632700	51.43	ug/l	100
31) cis-1,2-Dichloroethene	11.36	96	778768	10.75	ug/l	100
32) Bromochloromethane	11.78	49	621549	10.86	ug/l	100
33) Tetrahydrofuran	11.82	42	67100	9.53	ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB444.D Vial: 7
Acq On : 16 Aug 2011 2:40 pm Operator: MW
Sample : VO03H166 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	Chloroform	11.86	83	1634214	10.88 ug/l	100
37)	1,1,1-Trichloroethane	12.13	97	1465347	10.88 ug/l	100
39)	tert-Amyl methyl ether (TA	12.74	87	270926	11.01 ug/l	100
42)	1,1-Dichloropropene	12.37	110	368860	10.79 ug/l	100
43)	Carbon tetrachloride	12.37	119	1251054	10.72 ug/l	100
44)	Benzene	12.71	78	2977258	10.66 ug/l	100
45)	1,2-Dichloroethane	12.76	62	920211	10.67 ug/l	100
46)	Trichloroethene	13.62	130	808735	10.55 ug/l	100
48)	1,2-Dichloropropane	13.96	63	763856	10.68 ug/l	100
49)	1,4-Dioxane	14.13	88	44238	199.55 ug/l	100
50)	Dibromomethane	14.19	93	355886	10.54 ug/l	100
51)	Bromodichloromethane	14.35	83	1150353	10.77 ug/l	100
52)	2-Chloroethyl vinyl ether	14.65	63	220677	10.24 ug/l	100
53)	cis-1,3-Dichloropropene	14.92	75	1191656	10.81 ug/l	100
54)	4-Methyl-2-pentanone	15.03	43	1820104	52.29 ug/l	100
56)	Toluene	15.35	91	3214817	10.61 ug/l	100
57)	Ethyl methacrylate	15.59	69	600987	10.69 ug/l	100
58)	trans-1,3-Dichloropropene	15.63	75	946627	10.97 ug/l	100
59)	1,1,2-Trichloroethane	15.91	97	399582	10.68 ug/l	100
60)	Tetrachloroethene	16.09	164	692521	10.51 ug/l	100
61)	2-Hexanone	16.11	43	1247334	54.24 ug/l	100
62)	1,3-Dichloropropane	16.14	76	805146	10.76 ug/l	100
63)	Dibromochloromethane	16.49	129	601240	10.85 ug/l	100
64)	1,2-Dibromoethane	16.67	107	437998	10.69 ug/l	100
65)	1-Chlorohexane	17.03	91	1477818	10.52 ug/l	100
66)	Chlorobenzene	17.24	112	1855116	10.67 ug/l	100
67)	Ethylbenzene	17.28	91	4136370	10.57 ug/l	100
68)	1,1,1,2-Tetrachloroethane	17.31	131	703396	10.90 ug/l	100
69)	m-Xylene & p-Xylene	17.42	91	6304944	20.91 ug/l	100
70)	o-Xylene	17.94	91	3117484	10.66 ug/l	100
71)	Styrene	17.97	104	2083302	11.05 ug/l	100
73)	Isopropylbenzene	18.37	105	3577979	10.46 ug/l	100
74)	Bromoform	18.35	173	273788	10.98 ug/l	100
76)	1,1,2,2-Tetrachloroethane	18.79	83	475240	10.45 ug/l	100
77)	trans-1,4-Dichloro-2-buten	18.83	53	151626	10.28 ug/l	100
78)	n-Propylbenzene	18.87	91	5093485	10.47 ug/l	100
79)	1,2,3-Trichloropropane	18.89	110	113856	10.77 ug/l	100
80)	Bromobenzene	18.92	156	725537	10.53 ug/l	100
81)	1,3,5-Trimethylbenzene	19.05	105	3111139	10.55 ug/l	100
82)	2-Chlorotoluene	19.08	91	3195982	10.53 ug/l	100
83)	4-Chlorotoluene	19.22	91	2770585	10.56 ug/l	100

(#) = qualifier out of range (m) = manual integration

SW 8/18/11

2083

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB444.D Vial: 7
Acq On : 16 Aug 2011 2:40 pm Operator: MW
Sample : VO03H166 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84)	tert-Butylbenzene	19.51	134	615549	10.53 ug/l	100
85)	1,2,4-Trimethylbenzene	19.57	105	2957308	10.54 ug/l	100
86)	sec-Butylbenzene	19.78	105	4039485	10.51 ug/l	100
87)	p-Isopropyltoluene	19.93	119	3178669	10.71 ug/l	100
88)	1,3-Dichlorobenzene	20.10	146	1401499	10.60 ug/l	100
89)	1,4-Dichlorobenzene	20.20	146	1322708	10.76 ug/l	100
90)	n-Butylbenzene	20.48	91	3528539	10.77 ug/l	100
91)	1,2-Dichlorobenzene	20.75	146	1076911	10.65 ug/l	100
92)	1,2-Dibromo-3-chloropropan	21.88	157	56199	10.89 ug/l	100
93)	1,2,4-Trichlorobenzene	23.12	180	551013	10.75 ug/l	100
94)	Hexachlorobutadiene	23.25	225	509673	10.85 ug/l	100
95)	Naphthalene	23.62	128	738192	11.17 ug/l	100
96)	1,2,3-Trichlorobenzene	24.04	180	403785	10.72 ug/l	100

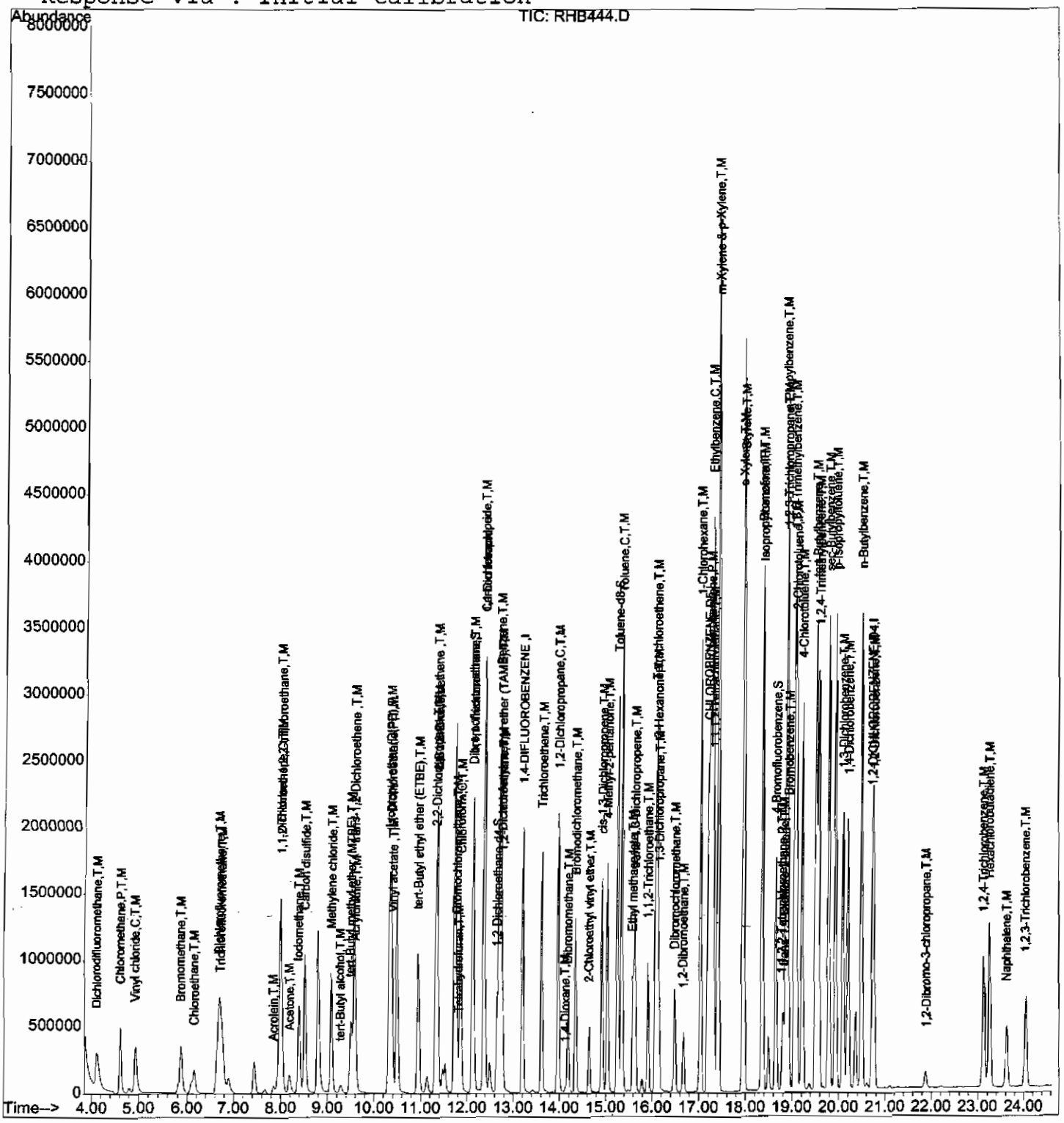
SV 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB444.D Vial: 7
Acq On : 16 Aug 2011 2:40 pm Operator: MW
Sample : VO03H166 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



8/18/11

2085

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB445.D Vial: 8
Acq On : 16 Aug 2011 3:14 pm Operator: MW
Sample : VO03H167 20.0ppb Inst : 03
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.20	114	2028565	10.00 ug/l	0.00
41) CHLOROBENZENE-D5	17.19	117	1868201	10.00 ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	668366	10.00 ug/l	0.00
System Monitoring Compounds					
36) Dibromofluoromethane	12.13	111	1486703	19.73 ug/l	0.01
Spiked Amount 10.000			Recovery	= 197.30%	
40) 1,2-Dichloroethane-d4	12.65	65	1523826	19.86 ug/l	0.00
Spiked Amount 10.000			Recovery	= 198.60%	
55) Toluene-d8	15.25	98	5166204	19.47 ug/l	0.00
Spiked Amount 10.000			Recovery	= 194.70%	
75) 4-Bromofluorobenzene	18.65	95	2017344	19.39 ug/l	0.00
Spiked Amount 10.000			Recovery	= 193.90%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.12	85	1360540	19.00 ug/l	99
5) Chloromethane	4.61	50	1418699	19.61 ug/l	100
7) Vinyl chloride	4.94	62	1364153	19.94 ug/l	99
8) Bromomethane	5.86	94	933542	20.30 ug/l	99
9) Chloroethane	6.13	64	705923	19.63 ug/l	99
10) Dichlorofluoromethane	6.68	67	3060153	19.75 ug/l	100
11) Trichlorofluoromethane	6.74	101	2151820	19.46 ug/l	99
12) Acrolein	7.86	56	191530	106.21 ug/l	100
13) 1,1,2-Trichloro-1,2,2-trif	7.98	151	802810	19.50 ug/l	99
14) Acetone	8.18	43	728628	92.99 ug/l	99
15) 1,1-Dichloroethene	8.01	61	2633806	19.30 ug/l	99
17) Iodomethane	8.39	142	2522357	19.70 ug/l	100
18) Carbon disulfide	8.51	76	5649052	20.58 ug/l	100
19) Methylene chloride	9.08	49	1844392	19.13 ug/l	100
20) tert-Butyl alcohol	9.29	59	246378	100.86 ug/l	98
21) tert-Butyl methyl ether (M	9.51	73	1954173	19.72 ug/l	99
22) trans-1,2-Dichloroethene	9.57	61	2709710	19.48 ug/l	99
23) Acrylonitrile	9.60	53	723551	100.41 ug/l	100
24) Isopropyl ether (DIPE)	10.33	45	4743102	19.55 ug/l	100
25) Vinyl acetate	10.39	43	1670702	20.52 ug/l	98
26) 1,1-Dichloroethane	10.37	63	2949781	19.58 ug/l	100
28) tert-Butyl ethyl ether (ET	10.95	59	3384401	19.49 ug/l	99
29) 2,2-Dichloropropane	11.32	77	2349657	19.15 ug/l	100
30) 2-Butanone	11.35	43	1249122	93.20 ug/l	99
31) cis-1,2-Dichloroethene	11.35	96	1555875	19.71 ug/l	98
32) Bromochloromethane	11.77	49	1221189	19.59 ug/l	98
33) Tetrahydrofuran	11.82	42	147147	19.18 ug/l	94

(#) = qualifier out of range (m) = manual integration SW 8/18/11
RHB445.D VO03H16.M Thu Aug 18 09:49:37 2011 Page 1

2086

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB445.D Vial: 8
Acq On : 16 Aug 2011 3:14 pm Operator: MW
Sample : VO03H167 20.0ppb Inst : 03
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	Chloroform	11.86	83	3186045	19.46 ug/l	100
37)	1,1,1-Trichloroethane	12.13	97	2847717	19.42 ug/l	99
39)	tert-Amyl methyl ether (TA	12.74	87	528563	19.72 ug/l	99
42)	1,1-Dichloropropene	12.37	110	729821	19.68 ug/l	100
43)	Carbon tetrachloride	12.38	119	2443140	19.31 ug/l	100
44)	Benzene	12.71	78	5829728	19.24 ug/l	100
45)	1,2-Dichloroethane	12.77	62	1790962	19.16 ug/l	99
46)	Trichloroethene	13.62	130	1621808	19.51 ug/l	99
48)	1,2-Dichloropropane	13.97	63	1521825	19.63 ug/l	100
49)	1,4-Dioxane	14.12	88	84018	349.48 ug/l	93
50)	Dibromomethane	14.18	93	727609	19.87 ug/l	100
51)	Bromodichloromethane	14.35	83	2294527	19.82 ug/l	100
52)	2-Chloroethyl vinyl ether	14.64	63	471027	20.15 ug/l	99
53)	cis-1,3-Dichloropropene	14.91	75	2392092	20.00 ug/l	99
54)	4-Methyl-2-pentanone	15.03	43	3638893	96.40 ug/l	100
56)	Toluene	15.34	91	6385102	19.42 ug/l	100
57)	Ethyl methacrylate	15.60	69	1226896	20.13 ug/l	100
58)	trans-1,3-Dichloropropene	15.64	75	1880955	20.10 ug/l	99
59)	1,1,2-Trichloroethane	15.91	97	796125	19.63 ug/l	99
60)	Tetrachloroethene	16.09	164	1374504	19.24 ug/l	99
61)	2-Hexanone	16.10	43	2478930	99.39 ug/l	99
62)	1,3-Dichloropropane	16.15	76	1605697	19.79 ug/l	100
63)	Dibromochloromethane	16.49	129	1236324	20.58 ug/l	100
64)	1,2-Dibromoethane	16.67	107	899773	20.24 ug/l	98
65)	1-Chlorohexane	17.04	91	2978376	19.54 ug/l	99
66)	Chlorobenzene	17.23	112	3716051	19.71 ug/l	98
67)	Ethylbenzene	17.28	91	8127057	19.15 ug/l	100
68)	1,1,1,2-Tetrachloroethane	17.31	131	1385377	19.79 ug/l	100
69)	m-Xylene & p-Xylene	17.41	91	12390725	37.90 ug/l	100
70)	o-Xylene	17.95	91	6074585	19.16 ug/l	100
71)	Styrene	17.96	104	4123843	20.16 ug/l	99
73)	Isopropylbenzene	18.36	105	7127038	18.81 ug/l	100
74)	Bromoform	18.35	173	567800	20.57 ug/l	99
76)	1,1,2,2-Tetrachloroethane	18.80	83	972326	19.31 ug/l	99
77)	trans-1,4-Dichloro-2-buten	18.83	53	334378	20.47 ug/l	99
78)	n-Propylbenzene	18.87	91	10185382	18.91 ug/l	100
79)	1,2,3-Trichloropropane	18.89	110	229426	19.59 ug/l	98
80)	Bromobenzene	18.92	156	1455386	19.07 ug/l	100
81)	1,3,5-Trimethylbenzene	19.05	105	6226213	19.06 ug/l	99
82)	2-Chlorotoluene	19.09	91	6338983	18.86 ug/l	100
83)	4-Chlorotoluene	19.21	91	5596363	19.27 ug/l	100

(#) = qualifier out of range (m) = manual integration
RHB445.D VO03H16.M Thu Aug 18 09:49:38 2011

Su 8/18/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB445.D Vial: 8
Acq On : 16 Aug 2011 3:14 pm Operator: MW
Sample : VO03H167 20.0ppb Inst : 03
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84) tert-Butylbenzene	19.51	134	1240641	19.16 ug/l	97
85) 1,2,4-Trimethylbenzene	19.57	105	5948561	19.14 ug/l	100
86) sec-Butylbenzene	19.79	105	8122175	19.08 ug/l	100
87) p-Isopropyltoluene	19.93	119	6371083	19.39 ug/l	100
88) 1,3-Dichlorobenzene	20.09	146	2872522	19.62 ug/l	99
89) 1,4-Dichlorobenzene	20.20	146	2691065	19.77 ug/l	99
90) n-Butylbenzene	20.49	91	7128365	19.64 ug/l	100
91) 1,2-Dichlorobenzene	20.75	146	2187409	19.54 ug/l	100
92) 1,2-Dibromo-3-chloropropan	21.88	157	119679	20.95 ug/l	98
93) 1,2,4-Trichlorobenzene	23.11	180	1180331	20.79 ug/l	99
94) Hexachlorobutadiene	23.25	225	1042573	20.05 ug/l	100
95) Naphthalene	23.62	128	1635162	22.34 ug/l	100
96) 1,2,3-Trichlorobenzene	24.04	180	881630	21.14 ug/l	99

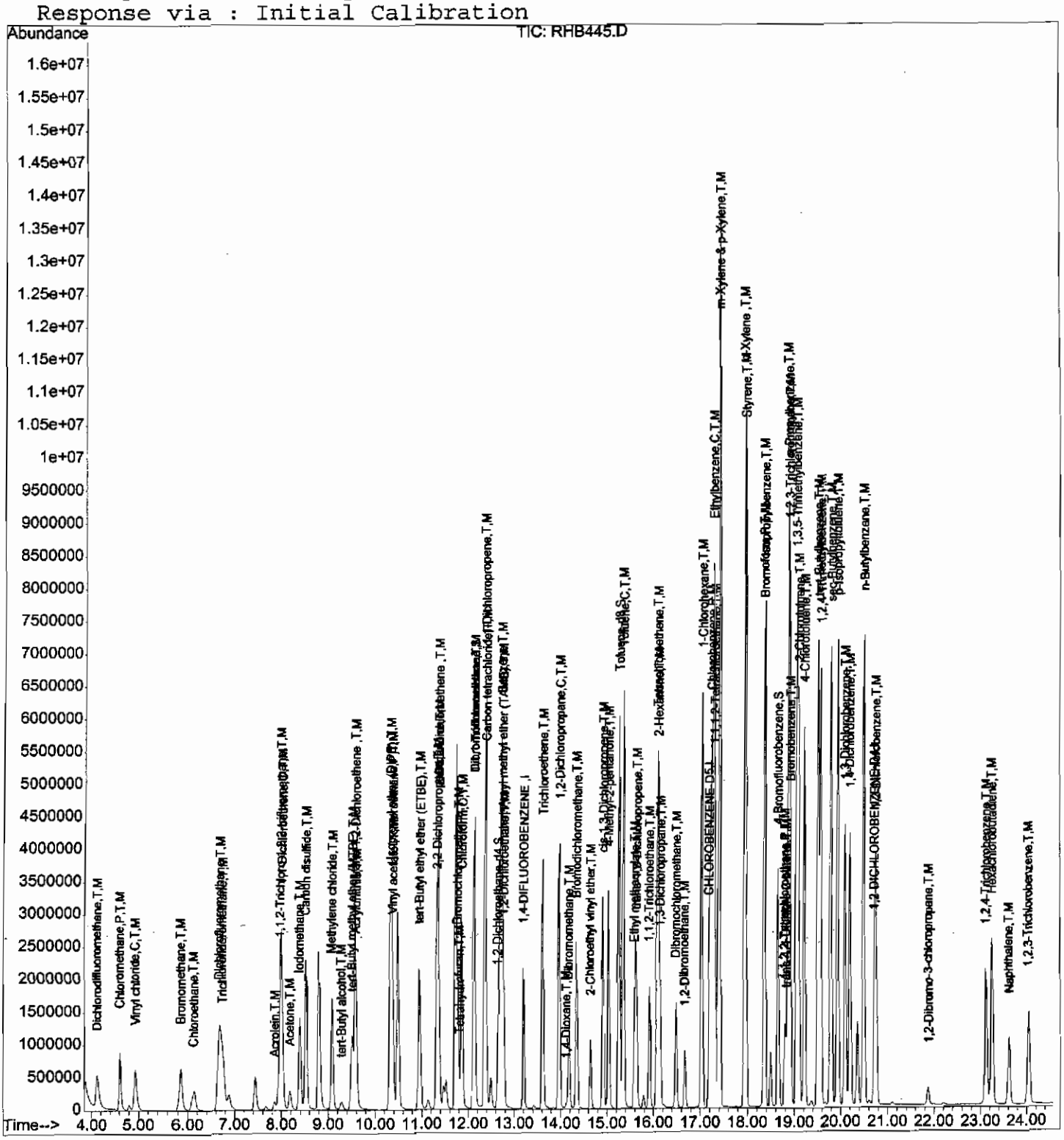
SW 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB445.D Vial: 8
Acq On : 16 Aug 2011 3:14 pm Operator: MW
Sample : VO03H167 20.0ppb Inst : 03
Misc : 20.0ppb 8260/100.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



SW 8/18/11

2089

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB446.D Vial: 9
Acq On : 16 Aug 2011 3:48 pm Operator: MW
Sample : VO03H168 30.0ppb Inst : 03
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.20	114	1928230	10.00 ug/l	0.00
41) CHLOROBENZENE-D5	17.20	117	1724646	10.00 ug/l	0.01
72) 1,2-DICHLOROBENZENE-D4	20.73	152	583154	10.00 ug/l	0.01
System Monitoring Compounds					
36) Dibromofluoromethane	12.13	111	2201741	30.74 ug/l	0.01
Spiked Amount 10.000			Recovery =	307.40%	
40) 1,2-Dichloroethane-d4	12.65	65	2171278	29.77 ug/l	0.00
Spiked Amount 10.000			Recovery =	297.70%	
55) Toluene-d8	15.25	98	7712108	31.48 ug/l	0.00
Spiked Amount 10.000			Recovery =	314.80%	
75) 4-Bromofluorobenzene	18.65	95	2843272	31.33 ug/l	0.00
Spiked Amount 10.000			Recovery =	313.30%	

Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.11	85	2098210	30.83 ug/l	99
5) Chloromethane	4.61	50	2221432	32.31 ug/l	100
7) Vinyl chloride	4.94	62	2055006	31.59 ug/l	99
8) Bromomethane	5.85	94	1414372	32.35 ug/l	98
9) Chloroethane	6.13	64	1093076	31.98 ug/l	99
10) Dichlorofluoromethane	6.67	67	4611758	31.32 ug/l	100
11) Trichlorofluoromethane	6.74	101	3312175	31.52 ug/l	100
12) Acrolein	7.84	56	301167	175.70 ug/l	97
13) 1,1,2-Trichloro-1,2,2-trif	7.97	151	1204059	30.76 ug/l	98
14) Acetone	8.18	43	1052874	141.36 ug/l	98
15) 1,1-Dichloroethene	8.00	61	3989691	30.76 ug/l	99
17) Iodomethane	8.39	142	3866904	31.77 ug/l	99
18) Carbon disulfide	8.51	76	8906996	34.13 ug/l	100
19) Methylene chloride	9.08	49	2775209	30.28 ug/l	100
20) tert-Butyl alcohol	9.28	59	341209	146.94 ug/l	98
21) tert-Butyl methyl ether (M	9.51	73	2841185	30.16 ug/l	99
22) trans-1,2-Dichloroethene	9.57	61	4112064	31.10 ug/l	99
23) Acrylonitrile	9.60	53	1092581	159.51 ug/l	97
24) Isopropyl ether (DIPE)	10.33	45	7169314	31.09 ug/l	100
25) Vinyl acetate	10.39	43	2424911	31.33 ug/l	99
26) 1,1-Dichloroethane	10.37	63	4453938	31.11 ug/l	99
28) tert-Butyl ethyl ether (ET	10.95	59	5136602	31.12 ug/l	99
29) 2,2-Dichloropropane	11.32	77	3385644	29.02 ug/l	99
30) 2-Butanone	11.35	43	1809803	142.07 ug/l	99
31) cis-1,2-Dichloroethene	11.35	96	2366627	31.53 ug/l	97
32) Bromochloromethane	11.77	49	1826455	30.82 ug/l	98
33) Tetrahydrofuran	11.82	42	209180	28.68 ug/l	95

(#) = qualifier out of range (m) = manual integration
RHB446.D VO03H16.M Thu Aug 18 09:49:47 2011

Sw 8/18/11

2098

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB446.D Vial: 9
Acq On : 16 Aug 2011 3:48 pm Operator: MW
Sample : VO03H168 30.0ppb Inst : 03
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
34)	Chloroform	11.86	83	4826823	31.02 ug/l		100
37)	1,1,1-Trichloroethane	12.13	97	4237980	30.40 ug/l		99
39)	tert-Amyl methyl ether (TA	12.74	87	778664	30.56 ug/l		99
42)	1,1-Dichloropropene	12.37	110	1086595	31.75 ug/l		99
43)	Carbon tetrachloride	12.38	119	3645620	31.21 ug/l		100
44)	Benzene	12.71	78	8964411	32.05 ug/l		100
45)	1,2-Dichloroethane	12.77	62	2616558	30.32 ug/l		99
46)	Trichloroethene	13.62	130	2465508	32.13 ug/l		99
48)	1,2-Dichloropropane	13.97	63	2296842	32.09 ug/l		98
49)	1,4-Dioxane	14.12	88	123953	558.51 ug/l		98
50)	Dibromomethane	14.18	93	1074105	31.77 ug/l		100
51)	Bromodichloromethane	14.35	83	3429170	32.08 ug/l		100
52)	2-Chloroethyl vinyl ether	14.64	63	702075	32.53 ug/l		99
53)	cis-1,3-Dichloropropene	14.91	75	3588325	32.50 ug/l		99
54)	4-Methyl-2-pentanone	15.03	43	5248774	150.63 ug/l		99
56)	Toluene	15.36	91	9674780	31.88 ug/l		100
57)	Ethyl methacrylate	15.60	69	1768796	31.43 ug/l		100
58)	trans-1,3-Dichloropropene	15.64	75	2758054	31.93 ug/l		99
59)	1,1,2-Trichloroethane	15.91	97	1175376	31.39 ug/l		99
60)	Tetrachloroethene	16.09	164	2076371	31.49 ug/l		99
61)	2-Hexanone	16.10	43	3508422	152.38 ug/l		99
62)	1,3-Dichloropropane	16.15	76	2335400	31.17 ug/l		100
63)	Dibromochloromethane	16.49	129	1817886	32.78 ug/l		99
64)	1,2-Dibromoethane	16.67	107	1300854	31.70 ug/l		99
65)	1-Chlorohexane	17.04	91	4422402	31.43 ug/l		99
66)	Chlorobenzene	17.23	112	5523928	31.74 ug/l		97
67)	Ethylbenzene	17.28	91	12070741	30.81 ug/l		100
68)	1,1,1,2-Tetrachloroethane	17.32	131	2061689	31.91 ug/l		100
69)	m-Xylene & p-Xylene	17.41	91	17547926	58.14 ug/l		98
70)	o-Xylene	17.95	91	8962917	30.63 ug/l		100
71)	Styrene	17.96	104	6023656	31.90 ug/l		99
73)	Isopropylbenzene	18.36	105	10407291	31.48 ug/l		100
74)	Bromoform	18.35	173	812657	33.74 ug/l		99
76)	1,1,2,2-Tetrachloroethane	18.80	83	1377399	31.35 ug/l		100
77)	trans-1,4-Dichloro-2-buten	18.83	53	470381	33.00 ug/l		98
78)	n-Propylbenzene	18.87	91	14830581	31.55 ug/l		100
79)	1,2,3-Trichloropropane	18.90	110	319903	31.31 ug/l	#	95
80)	Bromobenzene	18.91	156	2111766	31.72 ug/l		98
81)	1,3,5-Trimethylbenzene	19.05	105	8977888	31.50 ug/l		100
82)	2-Chlorotoluene	19.09	91	9154343	31.21 ug/l		100
83)	4-Chlorotoluene	19.21	91	8094145	31.94 ug/l		100

(#) = qualifier out of range (m) = manual integration

SW 8/18/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB446.D Vial: 9
Acq On : 16 Aug 2011 3:48 pm Operator: MW
Sample : VO03H168 30.0ppb Inst : 03
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84)	tert-Butylbenzene	19.51	134	1783414	31.56 ug/l	98
85)	1,2,4-Trimethylbenzene	19.57	105	8587859	31.67 ug/l	100
86)	sec-Butylbenzene	19.79	105	11596264	31.22 ug/l	100
87)	p-Isopropyltoluene	19.93	119	9053036	31.57 ug/l	99
88)	1,3-Dichlorobenzene	20.09	146	4112915	32.20 ug/l	100
89)	1,4-Dichlorobenzene	20.21	146	3820199	32.16 ug/l	99
90)	n-Butylbenzene	20.49	91	10046105	31.73 ug/l	100
91)	1,2-Dichlorobenzene	20.76	146	3093008	31.66 ug/l	99
92)	1,2-Dibromo-3-chloropropan	21.88	157	165955	33.29 ug/l	97
93)	1,2,4-Trichlorobenzene	23.13	180	1620789	32.71 ug/l	100
94)	Hexachlorobutadiene	23.25	225	1410786	31.09 ug/l	100
95)	Naphthalene	23.62	128	2184589	34.21 ug/l	99
96)	1,2,3-Trichlorobenzene	24.05	180	1180890	32.46 ug/l	99

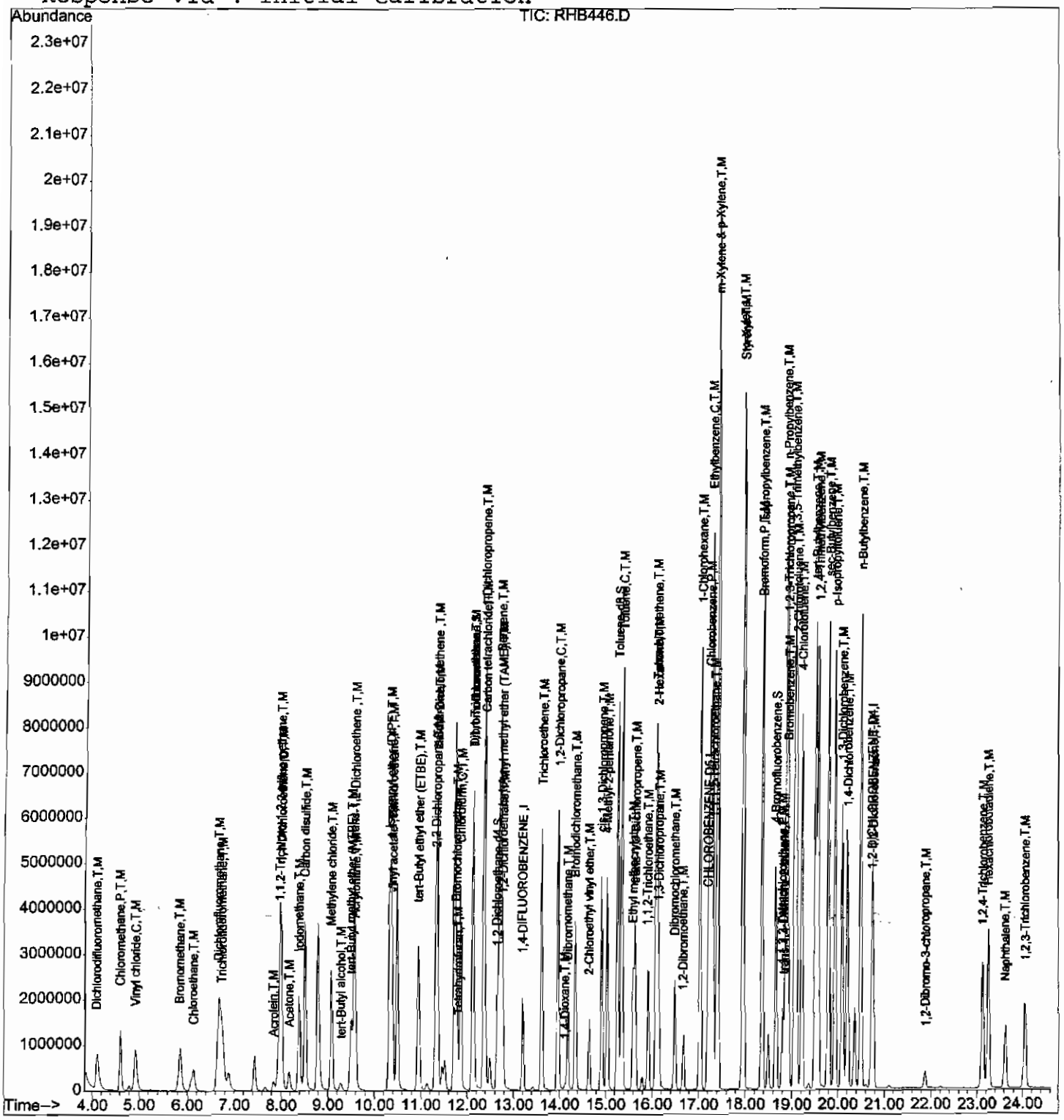
SW 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB446.D Vial: 9
Acq On : 16 Aug 2011 3:48 pm Operator: MW
Sample : VO03H168 30.0ppb Inst : 03
Misc : 30.0ppb 8260/150.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



SW 8/18/11

2093

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB447.D Vial: 10
Acq On : 16 Aug 2011 4:21 pm Operator: MW
Sample : VO03H169 40.0ppb Inst : 03
Misc : 40.0ppb 8260/200.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.20	114	2093238	10.00	ug/l	0.00
41) CHLOROBENZENE-D5	17.19	117	1898344	10.00	ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	642231	10.00	ug/l	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	12.12	111	2907252	37.38	ug/l	0.00
Spiked Amount 10.000			Recovery	=	373.80%	
40) 1,2-Dichloroethane-d4	12.65	65	2908770	36.74	ug/l	0.00
Spiked Amount 10.000			Recovery	=	367.40%	
55) Toluene-d8	15.26	98	10133955	37.58	ug/l	0.00
Spiked Amount 10.000			Recovery	=	375.80%	
75) 4-Bromofluorobenzene	18.65	95	3785492	37.87	ug/l	0.00
Spiked Amount 10.000			Recovery	=	378.70%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.11	85	2709983	36.68	ug/l	99
5) Chloromethane	4.62	50	2865369	38.39	ug/l	100
7) Vinyl chloride	4.94	62	2678446	37.93	ug/l	99
8) Bromomethane	5.85	94	1853168	39.04	ug/l	99
9) Chloroethane	6.13	64	1445926	38.97	ug/l	100
10) Dichlorofluoromethane	6.67	67	6157354	38.52	ug/l	100
11) Trichlorofluoromethane	6.73	101	4316403	37.84	ug/l	100
12) Acrolein	7.85	56	426317	229.10	ug/l	97
13) 1,1,2-Trichloro-1,2,2-trif	7.98	151	1621388	38.16	ug/l	99
14) Acetone	8.17	43	1480810	183.15	ug/l	98
15) 1,1-Dichloroethene	8.01	61	5191944	36.87	ug/l	98
17) Iodomethane	8.40	142	5106574	38.65	ug/l	98
18) Carbon disulfide	8.52	76	11307633	39.92	ug/l	100
19) Methylene chloride	9.08	49	3665478	36.84	ug/l	99
20) tert-Butyl alcohol	9.29	59	477304	189.35	ug/l	96
21) tert-Butyl methyl ether (M	9.51	73	3808977	37.24	ug/l	99
22) trans-1,2-Dichloroethene	9.57	61	5378121	37.47	ug/l	98
23) Acrylonitrile	9.60	53	1463643	196.84	ug/l	99
24) Isopropyl ether (DIPE)	10.33	45	9448310	37.74	ug/l	100
25) Vinyl acetate	10.38	43	2955602	35.18	ug/l	100
26) 1,1-Dichloroethane	10.38	63	5783631	37.21	ug/l	99
28) tert-Butyl ethyl ether (ET	10.94	59	6739646	37.61	ug/l	99
29) 2,2-Dichloropropane	11.33	77	4400311	34.75	ug/l	99
30) 2-Butanone	11.34	43	2493297	180.29	ug/l	99
31) cis-1,2-Dichloroethene	11.36	96	3089075	37.92	ug/l	96
32) Bromochloromethane	11.78	49	2439389	37.92	ug/l	99
33) Tetrahydrofuran	11.81	42	276937	34.98	ug/l	97

(#) = qualifier out of range (m) = manual integration
RHB447.D VO03H16.M Thu Aug 18 09:49:56 2011

SW 8/18/11

2094

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB447.D Vial: 10
Acq On : 16 Aug 2011 4:21 pm Operator: MW
Sample : VO03H169 40.0ppb Inst : 03
Misc : 40.0ppb 8260/200.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
34)	Chloroform	11.87	83	6283141	37.20 ug/l		100
37)	1,1,1-Trichloroethane	12.13	97	5495491	36.31 ug/l		100
39)	tert-Amyl methyl ether (TA	12.74	87	1034928	37.41 ug/l		100
42)	1,1-Dichloropropene	12.37	110	1418212	37.64 ug/l		99
43)	Carbon tetrachloride	12.37	119	4765938	37.07 ug/l		99
44)	Benzene	12.70	78	11636914	37.80 ug/l		99
45)	1,2-Dichloroethane	12.76	62	3459631	36.42 ug/l		100
46)	Trichloroethene	13.62	130	3236126	38.31 ug/l		98
48)	1,2-Dichloropropane	13.96	63	2969222	37.69 ug/l		98
49)	1,4-Dioxane	14.13	88	170539	698.11 ug/l		100
50)	Dibromomethane	14.19	93	1430974	38.46 ug/l		99
51)	Bromodichloromethane	14.35	83	4503516	38.27 ug/l		100
52)	2-Chloroethyl vinyl ether	14.65	63	952799	40.11 ug/l		99
53)	cis-1,3-Dichloropropene	14.92	75	4726107	38.89 ug/l		99
54)	4-Methyl-2-pentanone	15.04	43	7187440	187.39 ug/l		100
56)	Toluene	15.35	91	12593997	37.71 ug/l		100
57)	Ethyl methacrylate	15.59	69	2381864	38.45 ug/l		100
58)	trans-1,3-Dichloropropene	15.63	75	3687701	38.79 ug/l		99
59)	1,1,2-Trichloroethane	15.91	97	1556716	37.77 ug/l		99
60)	Tetrachloroethene	16.09	164	2691941	37.09 ug/l		99
61)	2-Hexanone	16.11	43	4797069	189.29 ug/l		99
62)	1,3-Dichloropropane	16.14	76	3119342	37.83 ug/l		100
63)	Dibromochloromethane	16.48	129	2433042	39.85 ug/l		99
64)	1,2-Dibromoethane	16.67	107	1755398	38.87 ug/l		99
65)	1-Chlorohexane	17.03	91	5772301	37.27 ug/l		98
66)	Chlorobenzene	17.24	112	7174138	37.45 ug/l		97
67)	Ethylbenzene	17.28	91	15417582	35.75 ug/l		100
68)	1,1,1,2-Tetrachloroethane	17.31	131	2671301	37.56 ug/l		100
69)	m-Xylene & p-Xylene	17.42	91	20237624	60.92 ug/l		90
70)	o-Xylene	17.94	91	11432432	35.49 ug/l		100
71)	Styrene	17.97	104	7755591	37.32 ug/l		99
73)	Isopropylbenzene	18.35	105	13455983	36.95 ug/l		99
74)	Bromoform	18.35	173	1086274	40.95 ug/l		99
76)	1,1,2,2-Tetrachloroethane	18.79	83	1826459	37.75 ug/l		100
77)	trans-1,4-Dichloro-2-buten	18.83	53	622127	39.63 ug/l		99
78)	n-Propylbenzene	18.88	91	18072916	34.91 ug/l		99
79)	1,2,3-Trichloropropane	18.89	110	412238	36.64 ug/l	#	95
80)	Bromobenzene	18.91	156	2729482	37.22 ug/l		98
81)	1,3,5-Trimethylbenzene	19.05	105	11415616	36.37 ug/l		99
82)	2-Chlorotoluene	19.08	91	11781396	36.48 ug/l		99
83)	4-Chlorotoluene	19.22	91	10434755	37.38 ug/l		99

(#) = qualifier out of range (m) = manual integration

SW 8/18/11

2095

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB447.D Vial: 10
Acq On : 16 Aug 2011 4:21 pm Operator: MW
Sample : VO03H169 40.0ppb Inst : 03
Misc : 40.0ppb 8260/200.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84)	tert-Butylbenzene	19.52	134	2278795	36.62 ug/l	98
85)	1,2,4-Trimethylbenzene	19.58	105	10970377	36.73 ug/l	100
86)	sec-Butylbenzene	19.78	105	14766716	36.10 ug/l	100
87)	p-Isopropyltoluene	19.93	119	11550268	36.58 ug/l	99
88)	1,3-Dichlorobenzene	20.10	146	5258989	37.39 ug/l	100
89)	1,4-Dichlorobenzene	20.20	146	4950844	37.84 ug/l	99
90)	n-Butylbenzene	20.48	91	12808308	36.73 ug/l	100
91)	1,2-Dichlorobenzene	20.75	146	4031441	37.47 ug/l	99
92)	1,2-Dibromo-3-chloropropan	21.87	157	226044	41.18 ug/l	99
93)	1,2,4-Trichlorobenzene	23.12	180	2181209	39.98 ug/l	100
94)	Hexachlorobutadiene	23.25	225	1875034	37.52 ug/l	100
95)	Naphthalene	23.62	128	3041436	43.24 ug/l	99
96)	1,2,3-Trichlorobenzene	24.04	180	1623955	40.53 ug/l	100

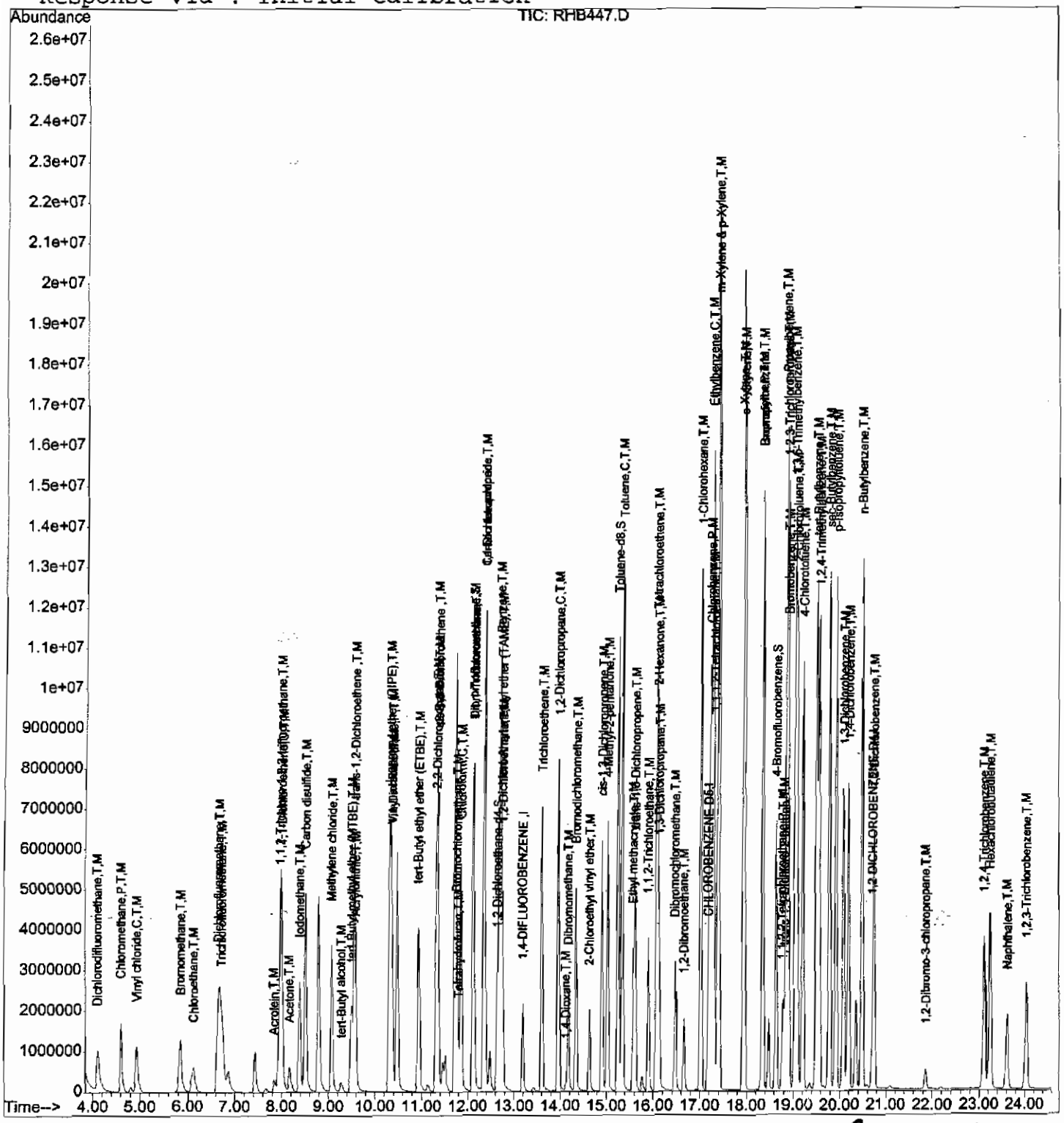
SL 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB447.D Vial: 10
Acq On : 16 Aug 2011 4:21 pm Operator: MW
Sample : VO03H169 40.0ppb Inst : 03
Misc : 40.0ppb 8260/200.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:49 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



Su 8/18/11

2097

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB448.D Vial: 11
Acq On : 16 Aug 2011 4:56 pm Operator: MW
Sample : VO03H1610 50.0ppb Inst : 03
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.21	114	1981352	10.00	ug/l	0.00
41) CHLOROBENZENE-D5	17.20	117	1745991	10.00	ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	579998	10.00	ug/l	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	12.12	111	3564050	48.42	ug/l	0.00
Spiked Amount 10.000			Recovery	=	484.20%	
40) 1,2-Dichloroethane-d4	12.66	65	3605750	48.12	ug/l	0.00
Spiked Amount 10.000			Recovery	=	481.20%	
55) Toluene-d8	15.26	98	12545143	50.59	ug/l	0.00
Spiked Amount 10.000			Recovery	=	505.90%	
75) 4-Bromofluorobenzene	18.65	95	4552902	50.44	ug/l	0.00
Spiked Amount 10.000			Recovery	=	504.40%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.11	85	3376983	48.28	ug/l	100
5) Chloromethane	4.62	50	3529278	49.96	ug/l	100
7) Vinyl chloride	4.95	62	3307672	49.49	ug/l	99
8) Bromomethane	5.84	94	2215277	49.31	ug/l	99
9) Chloroethane	6.14	64	1762270	50.17	ug/l	99
10) Dichlorofluoromethane	6.67	67	7433212	49.13	ug/l	100
11) Trichlorofluoromethane	6.73	101	5282511	48.92	ug/l	100
12) Acrolein	7.85	56	546302	310.16	ug/l	98
13) 1,1,2-Trichloro-1,2,2-trif	7.98	151	1976741	49.15	ug/l	99
14) Acetone	8.18	43	1812916	236.88	ug/l	98
15) 1,1-Dichloroethene	8.01	61	6403713	48.05	ug/l	98
17) Iodomethane	8.40	142	6234650	49.85	ug/l	98
18) Carbon disulfide	8.52	76	14157162	52.80	ug/l	100
19) Methylene chloride	9.08	49	4512826	47.91	ug/l	99
20) tert-Butyl alcohol	9.29	59	592419	248.29	ug/l	99
21) tert-Butyl methyl ether (M	9.51	73	4759236	49.16	ug/l	99
22) trans-1,2-Dichloroethene	9.57	61	6562731	48.30	ug/l	98
23) Acrylonitrile	9.60	53	1822979	259.02	ug/l	99
24) Isopropyl ether (DIPE)	10.33	45	11700488	49.37	ug/l	100
25) Vinyl acetate	10.39	43	3780726	47.54	ug/l	99
26) 1,1-Dichloroethane	10.38	63	7141766	48.54	ug/l	100
28) tert-Butyl ethyl ether (ET	10.94	59	8429629	49.70	ug/l	99
29) 2,2-Dichloropropane	11.33	77	5173148	43.16	ug/l	99
30) 2-Butanone	11.35	43	3087894	235.89	ug/l	99
31) cis-1,2-Dichloroethene	11.36	96	3783385	49.06	ug/l	96
32) Bromochloromethane	11.78	49	2992505	49.14	ug/l	98
33) Tetrahydrofuran	11.81	42	345326	46.08	ug/l	96

(#) = qualifier out of range (m) = manual integration
RHB448.D VO03H16.M Thu Aug 18 09:50:06 2011 SW 8/18/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB448.D Vial: 11
Acq On : 16 Aug 2011 4:56 pm Operator: MW
Sample : VO03H1610 50.0ppb Inst : 03
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34) Chloroform	11.87	83	7682972	48.05 ug/l	100
37) 1,1,1-Trichloroethane	12.13	97	6682083	46.65 ug/l	99
39) tert-Amyl methyl ether (TA	12.74	87	1267100	48.39 ug/l	99
42) 1,1-Dichloropropene	12.37	110	1697391	48.99 ug/l	99
43) Carbon tetrachloride	12.37	119	5800547	49.05 ug/l	99
44) Benzene	12.72	78	14323237	50.59 ug/l	99
45) 1,2-Dichloroethane	12.77	62	4226140	48.37 ug/l	99
46) Trichloroethene	13.62	130	3949008	50.83 ug/l	98
48) 1,2-Dichloropropane	13.97	63	3675605	50.72 ug/l	98
49) 1,4-Dioxane	14.13	88	208885	929.70 ug/l	98
50) Dibromomethane	14.19	93	1775527	51.88 ug/l	100
51) Bromodichloromethane	14.35	83	5574912	51.51 ug/l	100
52) 2-Chloroethyl vinyl ether	14.65	63	1182775	54.13 ug/l	99
53) cis-1,3-Dichloropropene	14.92	75	5824651	52.12 ug/l	99
54) 4-Methyl-2-pentanone	15.04	43	8897005	252.20 ug/l	100
56) Toluene	15.35	91	15394013	50.11 ug/l	100
57) Ethyl methacrylate	15.59	69	2939104	51.59 ug/l	100
58) trans-1,3-Dichloropropene	15.63	75	4564651	52.21 ug/l	99
59) 1,1,2-Trichloroethane	15.92	97	1919829	50.65 ug/l	99
60) Tetrachloroethene	16.09	164	3290720	49.30 ug/l	99
61) 2-Hexanone	16.11	43	5867642	251.74 ug/l	99
62) 1,3-Dichloropropane	16.14	76	3799318	50.09 ug/l	100
63) Dibromochloromethane	16.50	129	2991703	53.28 ug/l	99
64) 1,2-Dibromoethane	16.67	107	2145210	51.64 ug/l	98
65) 1-Chlorohexane	17.05	91	6980479	49.01 ug/l	98
66) Chlorobenzene	17.24	112	8694862	49.35 ug/l	97
67) Ethylbenzene	17.28	91	17823602	44.94 ug/l	97
68) 1,1,1,2-Tetrachloroethane	17.31	131	3261275	49.86 ug/l	100
69) m-Xylene & p-Xylene	17.42	91	22278786	72.92 ug/l	84
70) o-Xylene	17.95	91	13891949	46.89 ug/l	99
71) Styrene	17.97	104	9376252	49.05 ug/l	99
73) Isopropylbenzene	18.37	105	16097275	48.95 ug/l	100
74) Bromoform	18.36	173	1317030	54.98 ug/l	99
76) 1,1,2,2-Tetrachloroethane	18.80	83	2218392	50.77 ug/l	100
77) trans-1,4-Dichloro-2-buten	18.83	53	753439	53.15 ug/l	97
78) n-Propylbenzene	18.88	91	20194202	43.20 ug/l	96
79) 1,2,3-Trichloropropane	18.89	110	495653	48.78 ug/l	95
80) Bromobenzene	18.92	156	3291733	49.71 ug/l	97
81) 1,3,5-Trimethylbenzene	19.06	105	13596651	47.96 ug/l	100
82) 2-Chlorotoluene	19.10	91	14085193	48.29 ug/l	99
83) 4-Chlorotoluene	19.22	91	12435589	49.33 ug/l	99

(#) = qualifier out of range (m) = manual integration
RHB448.D VO03H16.M Thu Aug 18 09:50:07 2011 Sw 8/18/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB448.D Vial: 11
Acq On : 16 Aug 2011 4:56 pm Operator: MW
Sample : VO03H1610 50.0ppb Inst : 03
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84)	tert-Butylbenzene	19.52	134	2695820	47.97 ug/l	99
85)	1,2,4-Trimethylbenzene	19.58	105	12910417	47.87 ug/l	100
86)	sec-Butylbenzene	19.80	105	17442737	47.22 ug/l	100
87)	p-Isopropyltoluene	19.93	119	13613368	47.74 ug/l	100
88)	1,3-Dichlorobenzene	20.10	146	6380260	50.23 ug/l	98
89)	1,4-Dichlorobenzene	20.20	146	5858297	49.58 ug/l	99
90)	n-Butylbenzene	20.48	91	15053551	47.80 ug/l	100
91)	1,2-Dichlorobenzene	20.75	146	4838187	49.80 ug/l	99
92)	1,2-Dibromo-3-chloropropan	21.88	157	272889	55.04 ug/l	97
93)	1,2,4-Trichlorobenzene	23.12	180	2590139	52.56 ug/l	100
94)	Hexachlorobutadiene	23.25	225	2173447	48.16 ug/l	100
95)	Naphthalene	23.63	128	3718366	58.54 ug/l	100
96)	1,2,3-Trichlorobenzene	24.04	180	1934896	53.47 ug/l	100

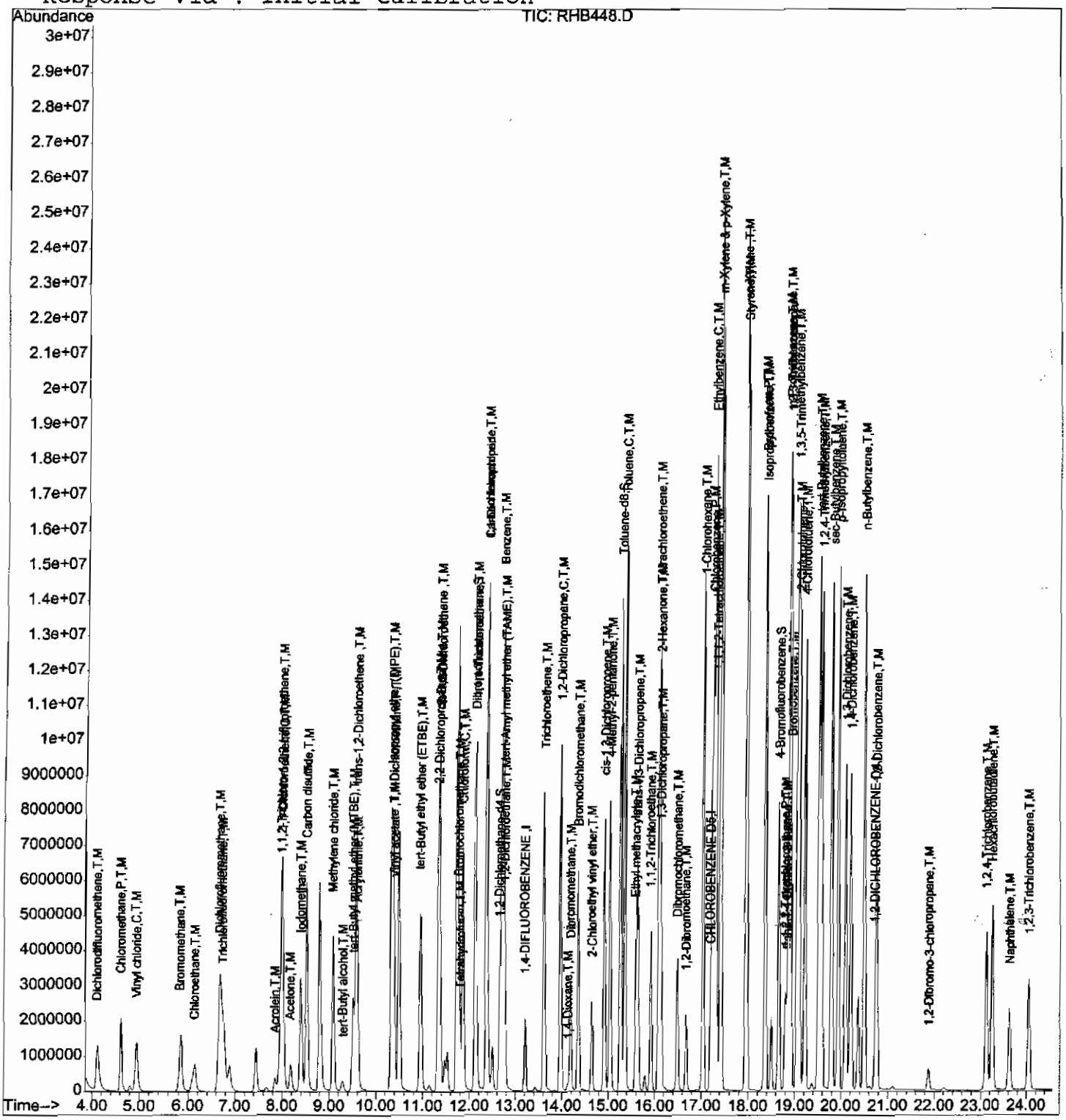
Su 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB448.D Vial: 11
Acq On : 16 Aug 2011 4:56 pm Operator: MW
Sample : VO03H1610 50.0ppb Inst : 03
Misc : 50.0ppb 8260/250.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



Su 8/18/11

2101

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB449.D Vial: 12
Acq On : 16 Aug 2011 5:30 pm Operator: MW
Sample : VO03H1611 100.0ppb Inst : 03
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.20	114	1775262	10.00 ug/l	0.00
41) CHLOROBENZENE-D5	17.20	117	1546679	10.00 ug/l	0.01
72) 1,2-DICHLOROBENZENE-D4	20.73	152	493802	10.00 ug/l	0.01
System Monitoring Compounds					
36) Dibromofluoromethane	12.13	111	6531228	99.03 ug/l	0.01
Spiked Amount 10.000			Recovery	= 990.30%	
40) 1,2-Dichloroethane-d4	12.65	65	6770368	100.83 ug/l	0.00
Spiked Amount 10.000			Recovery	= 1008.30%	
55) Toluene-d8	15.27	98	20262804	92.23 ug/l	0.01
Spiked Amount 10.000			Recovery	= 922.30%	
75) 4-Bromofluorobenzene	18.66	95	8049676	104.75 ug/l	0.01
Spiked Amount 10.000			Recovery	= 1047.50%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.11	85	6655411	106.21 ug/l	99
5) Chloromethane	4.61	50	6987443	110.39 ug/l	100
7) Vinyl chloride	4.94	62	6603040	110.27 ug/l	99
8) Bromomethane	5.83	94	3585086	89.06 ug/l	98
9) Chloroethane	6.12	64	3363757	106.88 ug/l	100
10) Dichlorofluoromethane	6.67	67	14370703	106.01 ug/l	100
11) Trichlorofluoromethane	6.73	101	10383931	107.32 ug/l	100
12) Acrolein	7.86	56	1132541	717.64 ug/l	98
13) 1,1,2-Trichloro-1,2,2-trif	7.98	151	3829565	106.28 ug/l	99
14) Acetone	8.18	43	3713308	541.52 ug/l	98
15) 1,1-Dichloroethene	8.01	61	12257901	102.65 ug/l	98
17) Iodomethane	8.39	142	12238516	109.22 ug/l	98
18) Carbon disulfide	8.51	76	25211220	104.94 ug/l	98
19) Methylene chloride	9.08	49	8926927	105.78 ug/l	100
20) tert-Butyl alcohol	9.30	59	1205893	564.07 ug/l	99
21) tert-Butyl methyl ether (M	9.51	73	9425972	108.67 ug/l	99
22) trans-1,2-Dichloroethene	9.57	61	12562789	103.20 ug/l	98
23) Acrylonitrile	9.60	53	3621867	574.35 ug/l	99
24) Isopropyl ether (DIPE)	10.33	45	22113058	104.15 ug/l	99
25) Vinyl acetate	10.39	43	8457876	118.69 ug/l	98
26) 1,1-Dichloroethane	10.37	63	13402956	101.68 ug/l	100
28) tert-Butyl ethyl ether (ET	10.95	59	16444662	108.21 ug/l	100
29) 2,2-Dichloropropane	11.32	77	9084079	84.58 ug/l	99
30) 2-Butanone	11.35	43	5914561	504.28 ug/l	99
31) cis-1,2-Dichloroethene	11.37	96	7062143	102.21 ug/l	95
32) Bromochloromethane	11.77	49	5745730	105.31 ug/l	99
33) Tetrahydrofuran	11.82	42	726432	108.20 ug/l	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB449.D Vial: 12
Acq On : 16 Aug 2011 5:30 pm Operator: MW
Sample : VO03H1611 100.0ppb Inst : 03
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	Chloroform	11.86	83	14586309	101.82 ug/l	100
37)	1,1,1-Trichloroethane	12.13	97	12234915	95.32 ug/l	99
39)	tert-Amyl methyl ether (TA	12.74	87	2435098	103.79 ug/l	99
42)	1,1-Dichloropropene	12.37	110	3117094	101.55 ug/l	100
43)	Carbon tetrachloride	12.38	119	10819776	103.29 ug/l	99
44)	Benzene	12.71	78	22596681	90.10 ug/l	94
45)	1,2-Dichloroethane	12.77	62	8103528	104.70 ug/l	100
46)	Trichloroethene	13.62	130	7485273	108.75 ug/l	98
48)	1,2-Dichloropropane	13.97	63	6861627	106.89 ug/l	100
49)	1,4-Dioxane	14.12	88	424484	2132.74 ug/l	99
50)	Dibromomethane	14.18	93	3456794	114.02 ug/l	100
51)	Bromodichloromethane	14.35	83	10644212	111.03 ug/l	100
52)	2-Chloroethyl vinyl ether	14.64	63	2422795	125.17 ug/l	99
53)	cis-1,3-Dichloropropene	14.93	75	11072581	111.84 ug/l	98
54)	4-Methyl-2-pentanone	15.05	43	17112419	547.60 ug/l	100
56)	Toluene	15.36	91	22464929	82.55 ug/l	81
57)	Ethyl methacrylate	15.60	69	5680993	112.56 ug/l	99
58)	trans-1,3-Dichloropropene	15.64	75	8689062	112.18 ug/l	100
59)	1,1,2-Trichloroethane	15.92	97	3715837	110.66 ug/l	100
60)	Tetrachloroethene	16.09	164	6033799	102.04 ug/l	98
61)	2-Hexanone	16.12	43	10770543	521.63 ug/l	99
62)	1,3-Dichloropropane	16.15	76	7245237	107.84 ug/l	100
63)	Dibromochloromethane	16.49	129	5777736	116.15 ug/l	99
64)	1,2-Dibromoethane	16.68	107	4181515	113.64 ug/l	99
65)	1-Chlorohexane	17.04	91	12556836	99.52 ug/l	98
66)	Chlorobenzene	17.23	112	15974181	102.35 ug/l	95
67)	Ethylbenzene	17.28	91	23221299	66.10 ug/l	79
68)	1,1,1,2-Tetrachloroethane	17.32	131	5919848	102.16 ug/l	99
69)	m-Xylene & p-Xylene	17.41	91	27166956	100.38 ug/l	55
70)	o-Xylene	17.95	91	21122348	80.48 ug/l	92
71)	Styrene	17.98	104	16358748	96.60 ug/l	98
73)	Isopropylbenzene	18.36	105	22387370	79.96 ug/l	90
74)	Bromoform	18.35	173	2454521	120.34 ug/l	99
76)	1,1,2,2-Tetrachloroethane	18.80	83	4181295	112.39 ug/l	99
77)	trans-1,4-Dichloro-2-buten	18.84	53	1404015	116.32 ug/l	98
78)	n-Propylbenzene	18.87	91	25610999	64.35 ug/l	82
79)	1,2,3-Trichloropropane	18.90	110	870964	100.68 ug/l	96
80)	Bromobenzene	18.92	156	5859619	103.93 ug/l	96
81)	1,3,5-Trimethylbenzene	19.05	105	20202110	83.70 ug/l	91
82)	2-Chlorotoluene	19.09	91	22735266	91.55 ug/l	97
83)	4-Chlorotoluene	19.23	91	20139977	93.84 ug/l	96

(#) = qualifier out of range (m) = manual integration

SW 8/18/11

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB449.D Vial: 12
Acq On : 16 Aug 2011 5:30 pm Operator: MW
Sample : VO03H1611 100.0ppb Inst : 03
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84)	tert-Butylbenzene	19.53	134	4617398	96.50 ug/l	98
85)	1,2,4-Trimethylbenzene	19.57	105	20294415	88.38 ug/l	93
86)	sec-Butylbenzene	19.79	105	23902465	76.00 ug/l	89
87)	p-Isopropyltoluene	19.94	119	21028911	86.62 ug/l	94
88)	1,3-Dichlorobenzene	20.11	146	11255719	104.07 ug/l	99
89)	1,4-Dichlorobenzene	20.21	146	10614458	105.52 ug/l	99
90)	n-Butylbenzene	20.49	91	22618063	84.36 ug/l	88
91)	1,2-Dichlorobenzene	20.76	146	8773484	106.07 ug/l	99
92)	1,2-Dibromo-3-chloropropan	21.88	157	555489	131.60 ug/l	97
93)	1,2,4-Trichlorobenzene	23.13	180	5023456	119.74 ug/l	100
94)	Hexachlorobutadiene	23.26	225	4076267	106.09 ug/l	99
95)	Naphthalene	23.62	128	7309598	135.16 ug/l	100
96)	1,2,3-Trichlorobenzene	24.05	180	3716622	120.64 ug/l	99

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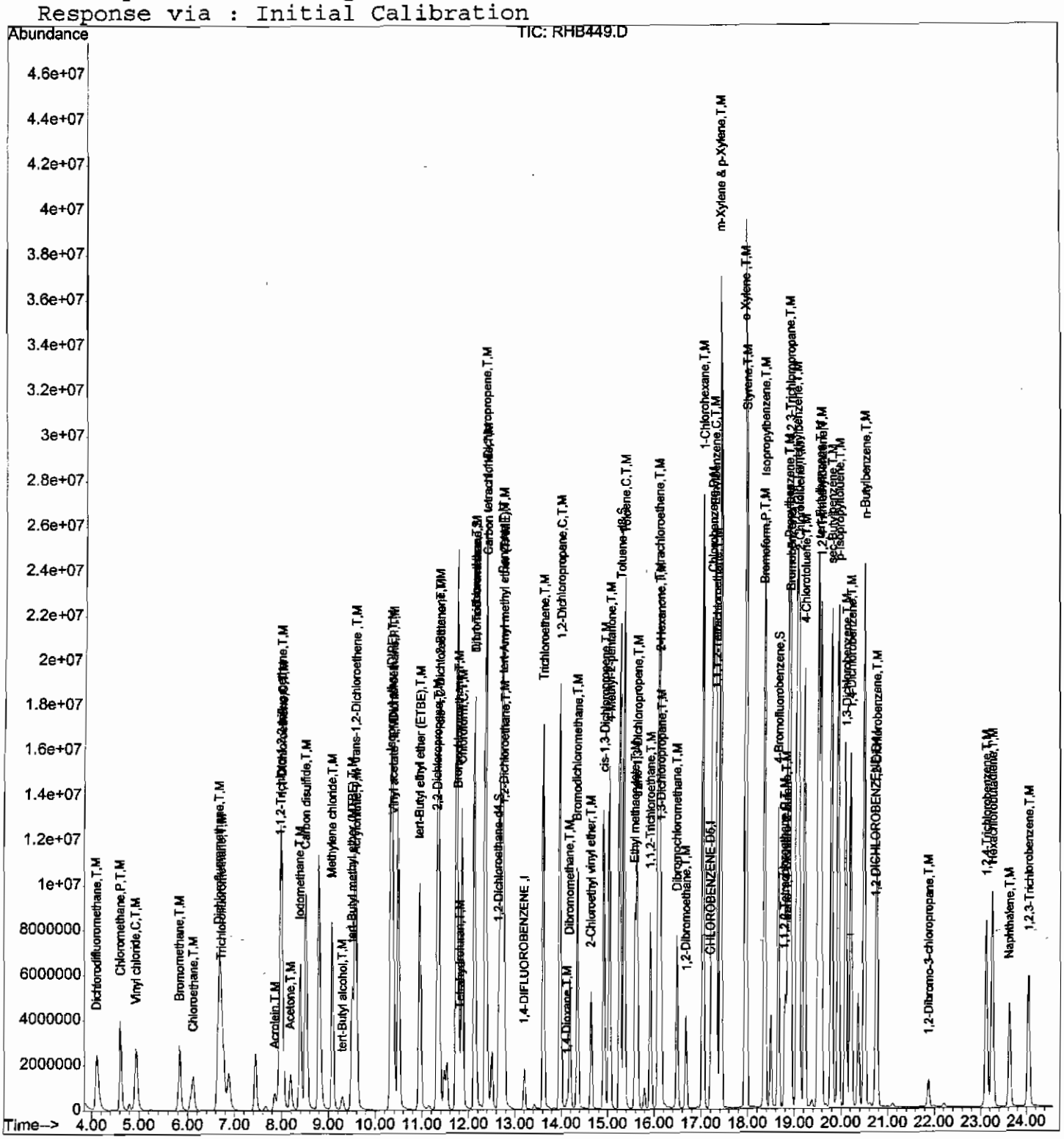
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB449.D Vial: 12
Acq On : 16 Aug 2011 5:30 pm Operator: MW
Sample : VO03H1611 100.0ppb Inst : 03
Misc : 100.0ppb 8260/500.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



Sa 8/18/11

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SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :03
IC_Beginning DateTime :08/16/11 11:49
Spike Amount :10 PPB
CC/CV File :RHB452
IC File :RHB444

Column Spec :ZB-624 ID :0.25MM
IC_Ending DateTime :08/16/11 17:30
HPChem Method :V003H16
Date_Time :08/16/11 19:13

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	1964342	1	1	13.207	13.203	0				
	2	Chlorotrifluoroethylene												
	3	Dichlorodifluoromethane	10.093	0.9	699900	0.356	0.353	4.112	4.113	8.52				
	4	Dichlorotetrafluoroethane												
	5	Chloromethane	10.630	6.3	744562	0.379	0.357	4.618	4.612	10.00				
	6	2-Chloro-1,1,1-trifluoroethane												
	7	Vinyl chloride	10.627	6.3	704186	0.358	0.337	4.931	4.934	10.93				
	8	Bromomethane	11.072	10.7	493194	0.251	0.227	5.869	5.858	9.78				
	9	Chloroethane	10.559	5.6	367718	0.187	0.177	6.151	6.136	9.63				
	10	Dichlorofluoromethane	9.808	-1.9	1471244	0.749	0.764	6.672	6.673	4.35				
	11	Trichlorofluoromethane	10.147	1.5	1086354	0.553	0.545	6.747	6.732	9.58				
5	12	Acrolein	48.279	-3.4	84307	0.009	0.009	7.848	7.852	13.95				
	13	1,1,2-Trichloro-1,2,2-trifluoroethane	9.633	-3.7	384110	0.196	0.203	7.982	7.983	4.08				
5	14	Acetone	45.661	-8.7	346459	0.035	0.039	8.191	8.185	8.41				
	15	1,1-Dichloroethene	9.833	-1.7	1299399	0.661	0.673	8.012	8.003	4.65				
	16	Methyl acetate												
	17	Iodomethane	9.877	-1.2	1224692	0.623	0.631	8.399	8.390	6.13				
	18	Carbon disulfide	9.749	-2.5	2591704	1.319	1.353	8.518	8.514	8.97				
	19	Methylene chloride	9.496	-5.0	886710	0.451	0.475	9.084	9.080	4.30				
5	20	tert-Butyl alcohol	48.030	-3.9	113617	0.012	0.012	9.277	9.288	6.87				
	21	tert-Butyl methyl ether (MTBE)	9.404	-6.0	902635	0.460	0.489	9.500	9.510	4.37				
	22	trans-1,2-Dichloroethene	9.789	-2.1	1318564	0.671	0.686	9.575	9.571	3.87				
5	23	Acrylonitrile	47.722	-4.6	332995	0.034	0.036	9.604	9.602	7.73				
	24	Isopropyl ether (DIPE)	9.920	-0.8	2330749	1.187	1.196	10.334	10.330	4.59				
	25	Vinyl acetate	9.528	-4.7	751324	0.382	0.401	10.378	10.388	12.58				
	26	1,1-Dichloroethane	9.930	-0.7	1448484	0.737	0.743	10.378	10.370	4.72				
5	27	2-Butanol												
	28	tert-Butyl ethyl ether (ETBE)	9.593	-4.1	1613230	0.821	0.856	10.944	10.949	4.96				
	29	2,2-Dichloropropane	9.497	-5.0	1128621	0.575	0.605	11.331	11.326	10.34				
5	30	2-Butanone	45.732	-8.5	593514	0.060	0.066	11.346	11.355	10.11				
	31	cis-1,2-Dichloroethene	9.895	-1.0	756535	0.385	0.389	11.361	11.360	4.16				
	32	Bromochloromethane	9.603	-4.0	579777	0.295	0.307	11.778	11.770	4.66				
	33	Tetrahydrofuran	8.976	-10.2	66683	0.034	0.038	11.822	11.823	8.93				
	34	Chloroform	9.825	-1.8	1557374	0.793	0.807	11.867	11.861	4.69				
5	35	tert-Amyl alcohol												
	36	Dibromofluoromethane	9.783	-2.2	713957	0.363	0.372	12.120	12.122	4.23				
	37	1,1,1-Trichloroethane	10.014	0.1	1422256	0.724	0.723	12.135	12.131	5.57				
	38	Cyclohexane												
	39	tert-Amyl methyl ether (TAME)	9.629	-3.7	250003	0.127	0.132	12.745	12.741	5.96				
	40	1,2-Dichloroethane-d4	9.565	-4.4	710649	0.362	0.378	12.656	12.651	5.20				
	41	CHLOROBENZENE-D5	10.000	0	1798817	1	1	17.196	17.195	0				
	42	1,1-Dichloropropene	10.046	0.5	358644	0.199	0.198	12.373	12.367	4.08				
	43	Carbon tetrachloride	9.973	-0.3	1214995	0.675	0.677	12.373	12.375	4.82				
	44	Benzene	9.859	-1.4	2875933	1.599	1.622	12.700	12.706	4.28				
	45	1,2-Dichloroethane	9.612	-3.9	865253	0.481	0.500	12.760	12.764	5.00				
	46	Trichloroethene	9.753	-2.5	780754	0.434	0.445	13.623	13.618	5.11				
	47	Methylcyclohexane												
	48	1,2-Dichloropropane	9.773	-2.3	729684	0.406	0.415	13.966	13.967	5.04				
20	49	1,4-Dioxane	183.576	-8.2	42494	0.001	0.001	14.129	14.128	13.98				
	50	Dibromomethane	9.611	-3.9	338874	0.188	0.196	14.189	14.184	7.00				
	51	Bromodichloromethane	9.825	-1.8	1095495	0.609	0.620	14.353	14.349	7.03				
	52	2-Chloroethyl vinyl ether	9.067	-9.3	204114	0.113	0.125	14.650	14.645	11.72				
	53	cis-1,3-Dichloropropene	9.692	-3.1	1116066	0.620	0.640	14.918	14.916	7.70				
5	54	4-Methyl-2-pentanone	47.294	-5.4	1718865	0.191	0.202	15.037	15.035	5.64				
	55	Toluene-d8	9.655	-3.5	2466873	1.371	1.420	15.261	15.257	3.97				
	56	Toluene	9.993	-0.1	3162952	1.758	1.759	15.350	15.348	3.81				
	57	Ethyl methacrylate	9.621	-3.8	564739	0.314	0.326	15.588	15.591	6.64				
	58	trans-1,3-Dichloropropene	9.804	-2.0	883251	0.491	0.501	15.633	15.634	8.00				
	59	1,1,2-Trichloroethane	9.563	-4.4	373487	0.208	0.217	15.915	15.913	5.48				

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	60	Tetrachloroethene	9.848	-1.5	677306	0.377	0.382	16.094	16.089	3.71				
5	61	2-Hexanone	48.468	-3.1	1163929	0.129	0.133	16.109	16.108	4.95				
	62	1,3-Dichloropropane	9.655	-3.5	754490	0.419	0.434	16.139	16.140	5.43				
	63	Dibromochloromethane	9.885	-1.1	571900	0.318	0.322	16.481	16.487	10.17				
	64	1,2-Dibromoethane	9.766	-2.3	417971	0.232	0.238	16.675	16.672	7.10				
	65	1-Chlorohexane	9.962	-0.4	1461845	0.813	0.816	17.032	17.036	3.31				
	66	Chlorobenzene	9.849	-1.5	1787931	0.994	1.009	17.240	17.237	3.91				
	67	Ethylbenzene	9.937	-0.6	4060376	2.257	2.272	17.285	17.281	3.20				
	68	1,1,1,2-Tetrachloroethane	10.061	0.6	678042	0.377	0.375	17.315	17.314	5.09				
2	69	m-Xylene & p-Xylene	19.693	-1.5	6198937	1.723	1.750	17.404	17.409	3.27				
	70	o-Xylene	9.947	-0.5	3036203	1.688	1.697	17.940	17.944	5.67				
	71	Styrene	10.236	2.4	2015906	1.121	1.095	17.969	17.967	5.77				
	72	1,2-DICHLOROBENZENE-D4	10.000	0	640128	1	1	20.723	20.722	0				
	73	Isopropylbenzene	9.728	-2.7	3530678	5.516	5.670	18.357	18.362	4.24				
	74	Bromoform	9.443	-5.6	249695	0.390	0.413	18.357	18.353	13.02				
	75	4-Bromofluorobenzene	9.646	-3.5	960964	1.501	1.556	18.654	18.649	4.08				
	76	1,1,2,2-Tetrachloroethane	9.148	-8.5	441198	0.689	0.753	18.788	18.793	5.72				
	77	trans-1,4-Dichloro-2-butene	9.162	-8.4	143359	0.224	0.244	18.833	18.829	8.79				
	78	n-Propylbenzene	9.830	-1.7	5072007	7.923	8.060	18.878	18.874	5.75				
	79	1,2,3-Trichloropropane	9.596	-4.0	107620	0.168	0.175	18.892	18.893	6.81				
	80	Bromobenzene	9.649	-3.5	705287	1.102	1.142	18.907	18.913	4.08				
	81	1,3,5-Trimethylbenzene	9.894	-1.1	3095769	4.836	4.888	19.041	19.050	4.63				
	82	2-Chlorotoluene	9.764	-2.4	3143279	4.910	5.029	19.086	19.090	4.52				
	83	4-Chlorotoluene	9.838	-1.6	2736995	4.276	4.346	19.220	19.216	4.03				
	84	tert-Butylbenzene	9.890	-1.1	613463	0.958	0.969	19.517	19.515	4.68				
	85	1,2,4-Trimethylbenzene	9.958	-0.4	2964568	4.631	4.650	19.562	19.569	4.48				
	86	sec-Butylbenzene	9.913	-0.9	4041314	6.313	6.369	19.785	19.789	5.02				
	87	p-Isopropyltoluene	10.093	0.9	3176708	4.963	4.917	19.934	19.931	4.68				
	88	1,3-Dichlorobenzene	9.880	-1.2	1385302	2.164	2.190	20.098	20.096	4.38				
	89	1,4-Dichlorobenzene	9.945	-0.6	1296892	2.026	2.037	20.202	20.201	4.65				
	90	n-Butylbenzene	10.239	2.4	3559056	5.560	5.430	20.485	20.488	4.68				
	91	1,2-Dichlorobenzene	9.828	-1.7	1053936	1.646	1.675	20.753	20.752	4.20				
	92	1,2-Dibromo-3-chloropropane	9.687	-3.1	53004	0.083	0.085	21.884	21.876	10.04				
	93	1,2,4-Trichlorobenzene	10.206	2.1	555050	0.867	0.850	23.119	23.119	10.33				
	94	Hexachlorobutadiene	10.504	5.0	523217	0.817	0.778	23.253	23.251	5.07				
	95	Naphthalene	10.499	5.0	736086	1.150	1.095	23.626	23.621	14.07				
	96	1,2,3-Trichlorobenzene	10.239	2.4	408911	0.639	0.624	24.042	24.041	11.07				

Spike Amount = Nominal Amount * M

Sw
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Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IVO03H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	105	0.00
2	T,M	Chlorotrifluoroethylene	-1.000	0.000	0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	10.094	-0.9	88	0.00
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	88	0.00
5	P,T,M	Chloromethane	10.000	10.630	-6.3	93	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000	0.0	0	-5.23#
7	C,T,M	Vinyl chloride	10.000	10.627	-6.3	91	0.00
8	T,M	Bromomethane	10.000	11.073	-10.7	94	0.00
9	T,M	Chloroethane	10.000	10.560	-5.6	91	0.00
10	T,M	Dichlorofluoromethane	10.000	9.808	1.9	97	-0.01
11	T,M	Trichlorofluoromethane	10.000	10.147	-1.5	88	0.02
12	T,M	Acrolein	50.000	48.279	3.4	100	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.634	3.7	97	-0.01
14	T,M	Acetone	50.000	45.662	8.7	93	0.00
15	C,T,M	1,1-Dichloroethene	10.000	9.834	1.7	96	0.02
16	T,M	Methyl acetate	-1.000	0.000	0.0	93	0.00
17	T,M	Iodomethane	10.000	9.878	1.2	96	0.02
18	T,M	Carbon disulfide	10.000	9.749	2.5	105	0.00
19	T,M	Methylene chloride	10.000	9.496	5.0	96	0.00
20	T,M	tert-Butyl alcohol	50.000	48.030	3.9	92	0.00
21	T,M	tert-Butyl methyl ether (MT	10.000	9.405	6.0	94	0.00
22	T,M	trans-1,2-Dichloroethene	10.000	9.789	2.1	97	0.00
23	T,M	Acrylonitrile	50.000	47.723	4.6	94	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	9.921	0.8	96	0.00
25	T,M	Vinyl acetate	10.000	9.529	4.7	86	-0.01
26	P,T,M	1,1-Dichloroethane	10.000	9.931	0.7	97	0.02
27	T,M	2-Butanol	-1.000	0.000	0.0	92	0.00
28	T,M	tert-Butyl ethyl ether (ETB	10.000	9.593	4.1	95	0.00
29	T,M	2,2-Dichloropropane	10.000	9.497	5.0	93	0.00
30	T,M	2-Butanone	50.000	45.733	8.5	94	-0.01
31	T,M	cis-1,2-Dichloroethene	10.000	9.895	1.1	97	0.00
32	T,M	Bromochloromethane	10.000	9.603	4.0	93	0.00
33	T,M	Tetrahydrofuran	10.000	8.976	10.2	99	0.00
34	C,T,M	Chloroform	10.000	9.825	1.8	95	0.00
35	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	101	0.00
36	S	Dibromofluoromethane	10.000	9.783	2.2	98	0.00
37	T,M	1,1,1-Trichloroethane	10.000	10.014	-0.1	97	0.00
38	T,M	Cyclohexane	-1.000	0.000	0.0	89	0.00
39	T,M	tert-Amyl methyl ether (TAM	10.000	9.630	3.7	92	0.00
40	S	1,2-Dichloroethane-d4	10.000	9.565	4.4	96	0.00
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	104	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IVO03H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	10.046	-0.5	97	0.00
43	T,M	Carbon tetrachloride	10.000	9.973	0.3	97	0.00
44	T,M	Benzene	10.000	9.859	1.4	97	-0.01
45	T,M	1,2-Dichloroethane	10.000	9.612	3.9	94	0.00
46	T,M	Trichloroethene	10.000	9.754	2.5	97	0.00
47	T,M	Methylcyclohexane	-1.000	0.000	0.0	92	-0.01
48	C,T,M	1,2-Dichloropropane	10.000	9.773	2.3	96	0.00
49	T,M	1,4-Dioxane	200.000	183.577	8.2	96	0.00
50	T,M	Dibromomethane	10.000	9.611	3.9	95	0.00
51	T,M	Bromodichloromethane	10.000	9.825	1.8	95	0.00
52	T,M	2-Chloroethyl vinyl ether	10.000	9.067	9.3	92	0.00
53	T,M	cis-1,3-Dichloropropene	10.000	9.693	3.1	94	0.00
54	T,M	4-Methyl-2-pentanone	50.000	47.294	5.4	94	0.00
55	S	Toluene-d8	10.000	9.655	3.5	98	0.00
56	C,T,M	Toluene	10.000	9.994	0.1	98	0.00
57	T,M	Ethyl methacrylate	10.000	9.621	3.8	94	0.00
58	T,M	trans-1,3-Dichloropropene	10.000	9.805	2.0	93	0.00
59	T,M	1,1,2-Trichloroethane	10.000	9.564	4.4	93	0.00
60	T,M	Tetrachloroethene	10.000	9.849	1.5	98	0.00
61	T,M	2-Hexanone	50.000	48.469	3.1	93	0.00
62	T,M	1,3-Dichloropropane	10.000	9.656	3.4	94	0.00
63	T,M	Dibromochloromethane	10.000	9.886	1.1	95	-0.01
64	T,M	1,2-Dibromoethane	10.000	9.767	2.3	95	0.00
65	T,M	1-Chlorohexane	10.000	9.962	0.4	99	0.00
66	P,M	Chlorobenzene	10.000	9.850	1.5	96	0.00
67	C,T,M	Ethylbenzene	10.000	9.937	0.6	98	0.00
68	T,M	1,1,1,2-Tetrachloroethane	10.000	10.061	-0.6	96	0.00
69	T,M	m-Xylene & p-Xylene	20.000	19.693	1.5	98	-0.01
70	T,M	o-Xylene	10.000	9.947	0.5	97	0.00
71	T,M	Styrene	10.000	10.236	-2.4	97	0.00
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	106	0.00
73	T,M	Isopropylbenzene	10.000	9.728	2.7	99	-0.01
74	P,T,M	Bromoform	10.000	9.444	5.6	91	0.00
75	S	4-Bromofluorobenzene	10.000	9.646	3.5	99	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	9.148	8.5	93	0.00
77	T,M	trans-1,4-Dichloro-2-butene	10.000	9.162	8.4	95	0.00
78	T,M	n-Propylbenzene	10.000	9.831	1.7	100	0.00
79	T,M	1,2,3-Trichloropropane	10.000	9.597	4.0	95	0.00
80	T,M	Bromobenzene	10.000	9.650	3.5	97	-0.01
81	T,M	1,3,5-Trimethylbenzene	10.000	9.895	1.1	100	-0.01

(#) = Out of Range

Sw 8/18/11

2110

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IVO03H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	9.764	2.4	98	0.00
83	T,M	4-Chlorotoluene	10.000	9.838	1.6	99	0.00
84	T,M	tert-Butylbenzene	10.000	9.891	1.1	100	0.00
85	T,M	1,2,4-Trimethylbenzene	10.000	9.959	0.4	100	-0.01
86	T,M	sec-Butylbenzene	10.000	9.913	0.9	100	0.00
87	T,M	p-Isopropyltoluene	10.000	10.093	-0.9	100	0.00
88	T,M	1,3-Dichlorobenzene	10.000	9.881	1.2	99	0.00
89	T,M	1,4-Dichlorobenzene	10.000	9.946	0.5	98	0.00
90	T,M	n-Butylbenzene	10.000	10.240	-2.4	101	0.00
91	T,M	1,2-Dichlorobenzene	10.000	9.829	1.7	98	0.00
92	T,M	1,2-Dibromo-3-chloropropane	10.000	9.687	3.1	94	0.00
93	T,M	1,2,4-Trichlorobenzene	10.000	10.206	-2.1	101	0.00
94	T,M	Hexachlorobutadiene	10.000	10.505	-5.1	103	0.00
95	T,M	Naphthalene	10.000	10.500	-5.0	100	0.00
96	T,M	1,2,3-Trichlorobenzene	10.000	10.239	-2.4	101	0.00

SW 8/18/11

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IVO03H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	105	0.00
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.356	-0.8	88	0.00
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	88	0.00
5	P,T,M	Chloromethane	0.357	0.379	-6.2	93	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.23#
7	C,T,M	Vinyl chloride	0.337	0.358	-6.2	91	0.00
8	T,M	Bromomethane	0.227	0.251	-10.6	94	0.00
9	T,M	Chloroethane	0.177	0.187	-5.6	91	0.00
10	T,M	Dichlorofluoromethane	0.764	0.749	2.0	97	-0.01
11	T,M	Trichlorofluoromethane	0.545	0.553	-1.5	88	0.02
12	T,M	Acrolein	0.009	0.009	0.0	100	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.196	3.4	97	-0.01
14	T,M	Acetone	0.039	0.035	10.3	93	0.00
15	C,T,M	1,1-Dichloroethene	0.673	0.661	1.8	96	0.02
16	T,M	Methyl acetate	0.000	0.000	0.0	93	0.00
17	T,M	Iodomethane	0.631	0.623	1.3	96	0.02
18	T,M	Carbon disulfide	1.353	1.319	2.5	105	0.00
19	T,M	Methylene chloride	0.475	0.451	5.1	96	0.00
20	T,M	tert-Butyl alcohol	0.012	0.012	0.0	92	0.00
21	T,M	tert-Butyl methyl ether (MT	0.489	0.460	5.9	94	0.00
22	T,M	trans-1,2-Dichloroethene	0.686	0.671	2.2	97	0.00
23	T,M	Acrylonitrile	0.036	0.034	5.6	94	0.00
24	T,M	Isopropyl ether (DIPE)	1.196	1.187	0.8	96	0.00
25	T,M	Vinyl acetate	0.401	0.382	4.7	86	-0.01
26	P,T,M	1,1-Dichloroethane	0.743	0.737	0.8	97	0.02
27	T,M	2-Butanol	0.000	0.000	0.0	92	0.00
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.821	4.1	95	0.00
29	T,M	2,2-Dichloropropane	0.605	0.575	5.0	93	0.00
30	T,M	2-Butanone	0.066	0.060	9.1	94	-0.01
31	T,M	cis-1,2-Dichloroethene	0.389	0.385	1.0	97	0.00
32	T,M	Bromochloromethane	0.307	0.295	3.9	93	0.00
33	T,M	Tetrahydrofuran	0.038	0.034	10.5	99	0.00
34	C,T,M	Chloroform	0.807	0.793	1.7	95	0.00
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	101	0.00
36	S	Dibromofluoromethane	0.372	0.363	2.4	98	0.00
37	T,M	1,1,1-Trichloroethane	0.723	0.724	-0.1	97	0.00
38	T,M	Cyclohexane	0.000	0.000	0.0	89	0.00
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.127	3.8	92	0.00
40	S	1,2-Dichloroethane-d4	0.378	0.362	4.2	96	0.00
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	104	0.00

(#) = Out of Range

SW 8/18/11

2112

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IVO03H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.198	0.199	-0.5	97	0.00
43	T,M	Carbon tetrachloride	0.677	0.675	0.3	97	0.00
44	T,M	Benzene	1.622	1.599	1.4	97	-0.01
45	T,M	1,2-Dichloroethane	0.500	0.481	3.8	94	0.00
46	T,M	Trichloroethene	0.445	0.434	2.5	97	0.00
47	T,M	Methylcyclohexane	0.000	0.000	0.0	92	-0.01
48	C,T,M	1,2-Dichloropropane	0.415	0.406	2.2	96	0.00
49	T,M	1,4-Dioxane	0.001	0.001	0.0	96	0.00
50	T,M	Dibromomethane	0.196	0.188	4.1	95	0.00
51	T,M	Bromodichloromethane	0.620	0.609	1.8	95	0.00
52	T,M	2-Chloroethyl vinyl ether	0.125	0.113	9.6	92	0.00
53	T,M	cis-1,3-Dichloropropene	0.640	0.620	3.1	94	0.00
54	T,M	4-Methyl-2-pentanone	0.202	0.191	5.4	94	0.00
55	S	Toluene-d8	1.420	1.371	3.5	98	0.00
56	C,T,M	Toluene	1.759	1.758	0.1	98	0.00
57	T,M	Ethyl methacrylate	0.326	0.314	3.7	94	0.00
58	T,M	trans-1,3-Dichloropropene	0.501	0.491	2.0	93	0.00
59	T,M	1,1,2-Trichloroethane	0.217	0.208	4.1	93	0.00
60	T,M	Tetrachloroethene	0.382	0.377	1.3	98	0.00
61	T,M	2-Hexanone	0.133	0.129	3.0	93	0.00
62	T,M	1,3-Dichloropropane	0.434	0.419	3.5	94	0.00
63	T,M	Dibromochloromethane	0.322	0.318	1.2	95	-0.01
64	T,M	1,2-Dibromoethane	0.238	0.232	2.5	95	0.00
65	T,M	1-Chlorohexane	0.816	0.813	0.4	99	0.00
66	P,M	Chlorobenzene	1.009 ✓	0.994	1.5	96	0.00
67	C,T,M	Ethylbenzene	2.272	2.257	0.7	98	0.00
68	T,M	1,1,1,2-Tetrachloroethane	0.375	0.377	-0.5	96	0.00
69	T,M	m-Xylene & p-Xylene	1.750	1.723	1.5	98	-0.01
70	T,M	o-Xylene	1.697	1.688	0.5	97	0.00
71	T,M	Styrene	1.095	1.121	-2.4	97	0.00
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	106	0.00
73	T,M	Isopropylbenzene	5.670	5.516	2.7	99	-0.01
74	P,T,M	Bromoform	0.413 ✓	0.390	5.6	91	0.00
75	S	4-Bromofluorobenzene	1.556	1.501	3.5	99	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	0.753 ✓	0.689	8.5	93	0.00
77	T,M	trans-1,4-Dichloro-2-butene	0.244	0.224	8.2	95	0.00
78	T,M	n-Propylbenzene	8.060	7.923	1.7	100	0.00
79	T,M	1,2,3-Trichloropropane	0.175	0.168	4.0	95	0.00
80	T,M	Bromobenzene	1.142	1.102	3.5	97	-0.01
81	T,M	1,3,5-Trimethylbenzene	4.888	4.836	1.1	100	-0.01

(#) = Out of Range

SC 8/18/11

2113

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IVO03H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	4.910	2.4	98	0.00
83	T,M	4-Chlorotoluene	4.346	4.276	1.6	99	0.00
84	T,M	tert-Butylbenzene	0.969	0.958	1.1	100	0.00
85	T,M	1,2,4-Trimethylbenzene	4.650	4.631	0.4	100	-0.01
86	T,M	sec-Butylbenzene	6.369	6.313	0.9	100	0.00
87	T,M	p-Isopropyltoluene	4.917	4.963	-0.9	100	0.00
88	T,M	1,3-Dichlorobenzene	2.190	2.164	1.2	99	0.00
89	T,M	1,4-Dichlorobenzene	2.037	2.026	0.5	98	0.00
90	T,M	n-Butylbenzene	5.430	5.560	-2.4	101	0.00
91	T,M	1,2-Dichlorobenzene	1.675	1.646	1.7	98	0.00
92	T,M	1,2-Dibromo-3-chloropropane	0.085	0.083	2.4	94	0.00
93	T,M	1,2,4-Trichlorobenzene	0.850	0.867	-2.0	101	0.00
94	T,M	Hexachlorobutadiene	0.778	0.817	-5.0	103	0.00
95	T,M	Naphthalene	1.095	1.150	-5.0	100	0.00
96	T,M	1,2,3-Trichlorobenzene	0.624	0.639	-2.4	101	0.00

SW 8/18/11

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IVO03H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.21	114	1964342	10.00 ug/l	0.00
41) CHLOROBENZENE-D5	17.20	117	1798817	10.00 ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.72	152	640128	10.00 ug/l	0.00
System Monitoring Compounds					
36) Dibromofluoromethane	12.12	111	713957	9.78 ug/l	0.00
Spiked Amount 10.000			Recovery	= 97.80%	
40) 1,2-Dichloroethane-d4	12.66	65	710649	9.57 ug/l	0.00
Spiked Amount 10.000			Recovery	= 95.70%	
55) Toluene-d8	15.26	98	2466873	9.65 ug/l	0.00
Spiked Amount 10.000			Recovery	= 96.50%	
75) 4-Bromofluorobenzene	18.65	95	960964	9.65 ug/l	0.00
Spiked Amount 10.000			Recovery	= 96.50%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.11	85	699900	10.09 ug/l	99
5) Chloromethane	4.62	50	744562	10.63 ug/l	99
7) Vinyl chloride	4.93	62	704186	10.63 ug/l	99
8) Bromomethane	5.87	94	493194	11.07 ug/l	99
9) Chloroethane	6.15	64	367718	10.56 ug/l	99
10) Dichlorofluoromethane	6.67	67	1471244	9.81 ug/l	100
11) Trichlorofluoromethane	6.75	101	1086354	10.15 ug/l	99
12) Acrolein	7.85	56	84307	48.28 ug/l	98
13) 1,1,2-Trichloro-1,2,2-trif	7.98	151	384110	9.63 ug/l	99
14) Acetone	8.19	43	346459	45.66 ug/l	100
15) 1,1-Dichloroethene	8.01	61	1299399	9.83 ug/l	100
17) Iodomethane	8.40	142	1224692	9.88 ug/l	100
18) Carbon disulfide	8.52	76	2591704	9.75 ug/l	100
19) Methylene chloride	9.08	49	886710	9.50 ug/l	100
20) tert-Butyl alcohol	9.28	59	113617	48.03 ug/l	98
21) tert-Butyl methyl ether (M	9.50	73	902635	9.40 ug/l	98
22) trans-1,2-Dichloroethene	9.57	61	1318564	9.79 ug/l	99
23) Acrylonitrile	9.60	53	332995	47.72 ug/l	98
24) Isopropyl ether (DIPE)	10.33	45	2330749	9.92 ug/l	100
25) Vinyl acetate	10.38	43	751324	9.53 ug/l	99
26) 1,1-Dichloroethane	10.38	63	1448484	9.93 ug/l	100
28) tert-Butyl ethyl ether (ET	10.94	59	1613230	9.59 ug/l	99
29) 2,2-Dichloropropane	11.33	77	1128621	9.50 ug/l	99
30) 2-Butanone	11.35	43	593514	45.73 ug/l	99
31) cis-1,2-Dichloroethene	11.36	96	756535	9.90 ug/l	98
32) Bromochloromethane	11.78	49	579777	9.60 ug/l	99
33) Tetrahydrofuran	11.82	42	66683	8.98 ug/l	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IV003H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
34)	Chloroform	11.87	83	1557374	9.83 ug/l		99
37)	1,1,1-Trichloroethane	12.13	97	1422256	10.01 ug/l		100
39)	tert-Amyl methyl ether (TA	12.75	87	250003	9.63 ug/l		99
42)	1,1-Dichloropropene	12.37	110	358644	10.05 ug/l		99
43)	Carbon tetrachloride	12.37	119	1214995	9.97 ug/l		99
44)	Benzene	12.70	78	2875933	9.86 ug/l		100
45)	1,2-Dichloroethane	12.76	62	865253	9.61 ug/l		100
46)	Trichloroethene	13.62	130	780754	9.75 ug/l		99
48)	1,2-Dichloropropane	13.97	63	729684	9.77 ug/l		99
49)	1,4-Dioxane	14.13	88	42494	183.58 ug/l		99
50)	Dibromomethane	14.19	93	338874	9.61 ug/l		99
51)	Bromodichloromethane	14.35	83	1095495	9.83 ug/l		99
52)	2-Chloroethyl vinyl ether	14.65	63	204114	9.07 ug/l		100
53)	cis-1,3-Dichloropropene	14.92	75	1116066	9.69 ug/l		99
54)	4-Methyl-2-pentanone	15.04	43	1718865	47.29 ug/l		99
56)	Toluene	15.35	91	3162952	9.99 ug/l		100
57)	Ethyl methacrylate	15.59	69	564739	9.62 ug/l		99
58)	trans-1,3-Dichloropropene	15.63	75	883251	9.80 ug/l		99
59)	1,1,2-Trichloroethane	15.92	97	373487	9.56 ug/l		100
60)	Tetrachloroethene	16.09	164	677306	9.85 ug/l		99
61)	2-Hexanone	16.11	43	1163929	48.47 ug/l		99
62)	1,3-Dichloropropane	16.14	76	754490	9.66 ug/l		100
63)	Dibromochloromethane	16.48	129	571900	9.89 ug/l		99
64)	1,2-Dibromoethane	16.67	107	417971	9.77 ug/l		98
65)	1-Chlorohexane	17.03	91	1461845	9.96 ug/l		99
66)	Chlorobenzene	17.24	112	1787931	9.85 ug/l		99
67)	Ethylbenzene	17.28	91	4060376	9.94 ug/l		100
68)	1,1,1,2-Tetrachloroethane	17.31	131	678042	10.06 ug/l		99
69)	m-Xylene & p-Xylene	17.40	91	6198937	19.69 ug/l		100
70)	o-Xylene	17.94	91	3036203	9.95 ug/l		99
71)	Styrene	17.97	104	2015906	10.24 ug/l		100
73)	Isopropylbenzene	18.36	105	3530678	9.73 ug/l		100
74)	Bromoform	18.36	173	249695	9.44 ug/l		99
76)	1,1,2,2-Tetrachloroethane	18.79	83	441198	9.15 ug/l		100
77)	trans-1,4-Dichloro-2-buten	18.83	53	143359	9.16 ug/l		99
78)	n-Propylbenzene	18.88	91	5072007	9.83 ug/l		100
79)	1,2,3-Trichloropropane	18.89	110	107620	9.60 ug/l	#	94
80)	Bromobenzene	18.91	156	705287	9.65 ug/l		99
81)	1,3,5-Trimethylbenzene	19.04	105	3095769	9.89 ug/l		100
82)	2-Chlorotoluene	19.09	91	3143279	9.76 ug/l		100
83)	4-Chlorotoluene	19.22	91	2736995	9.84 ug/l		99

(#) = qualifier out of range (m) = manual integration

SW 8/18/11

2116

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IVO03H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84)	tert-Butylbenzene	19.52	134	613463	9.89 ug/l	100
85)	1,2,4-Trimethylbenzene	19.56	105	2964568	9.96 ug/l	100
86)	sec-Butylbenzene	19.79	105	4041314	9.91 ug/l	100
87)	p-Isopropyltoluene	19.93	119	3176708	10.09 ug/l	100
88)	1,3-Dichlorobenzene	20.10	146	1385302	9.88 ug/l	99
89)	1,4-Dichlorobenzene	20.20	146	1296892	9.95 ug/l	99
90)	n-Butylbenzene	20.48	91	3559056	10.24 ug/l	100
91)	1,2-Dichlorobenzene	20.75	146	1053936	9.83 ug/l	100
92)	1,2-Dibromo-3-chloropropan	21.88	157	53004	9.69 ug/l	93
93)	1,2,4-Trichlorobenzene	23.12	180	555050	10.21 ug/l	100
94)	Hexachlorobutadiene	23.25	225	523217	10.50 ug/l	100
95)	Naphthalene	23.63	128	736086	10.50 ug/l	100
96)	1,2,3-Trichlorobenzene	24.04	180	408911	10.24 ug/l	99

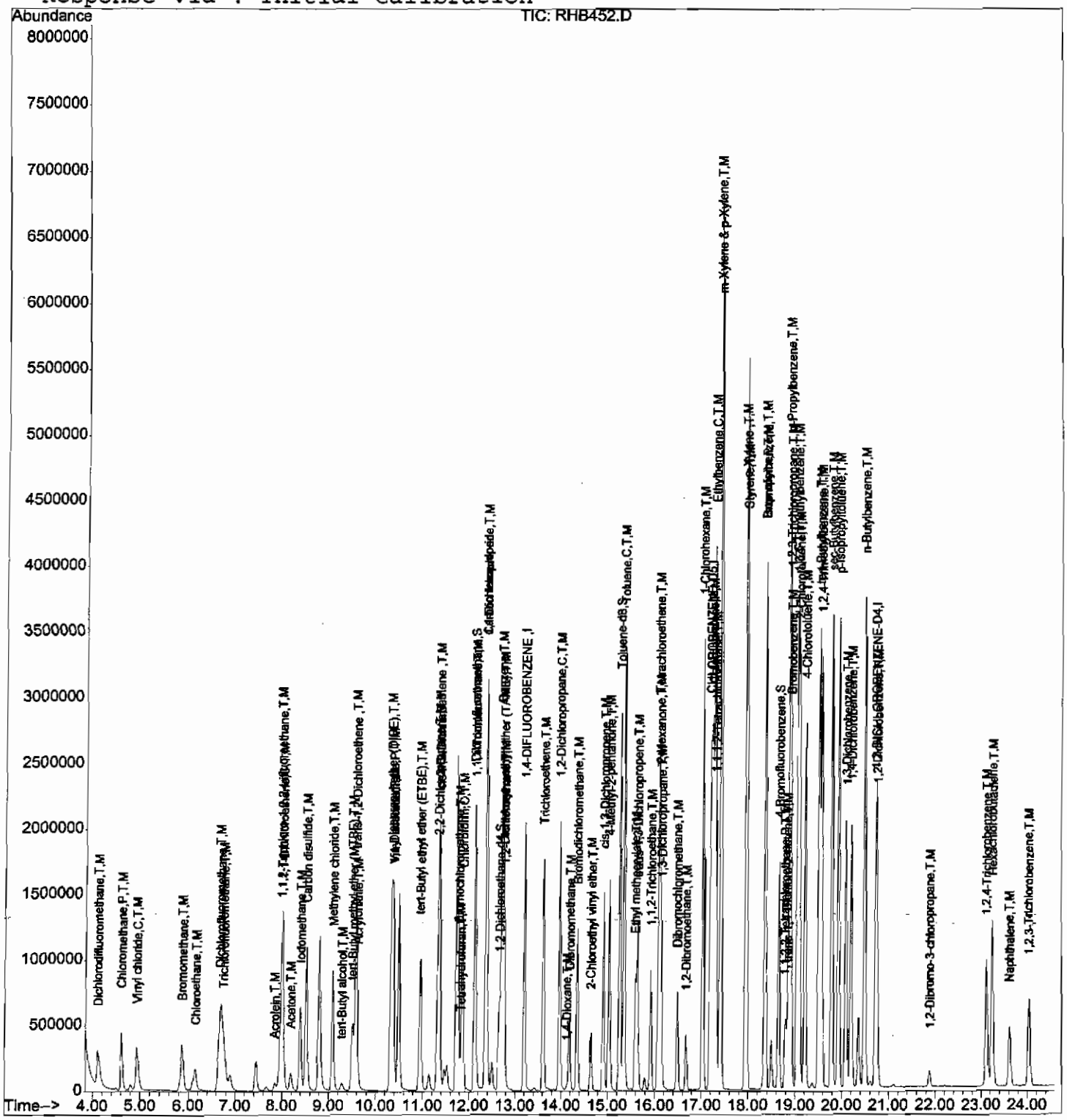
SW 8/18/11

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11H16\RHB452.D Vial: 15
Acq On : 16 Aug 2011 7:13 pm Operator: MW
Sample : IVO03H161 10.0ppb Inst : 03
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Aug 18 9:50 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Wed Aug 17 09:32:03 2011
Response via : Initial Calibration



SU 8/18/11

2118

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB350
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K184
BFB Injection Date : 11/22/11
BFB Injection Time : 07:12
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.58
75	30.0 - 60.0% of mass 95	52.95
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.49
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	62.14
175	5.0 - 9.0% of mass 174	4.74(7.6)1
176	95.0 - 101.0% of mass 174	60.08(96.7)1
177	5.0 - 9.0% of mass 176	4.18(7.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV003H1656	RKB351	11/22/11	07:48
2	MBLK1W	V003K23B	RKB354	11/22/11	09:29
3	LCS1W	V003K23L	RKB352	11/22/11	08:21
4	LCD1W	V003K23C	RKB353	11/22/11	08:55
5	IW-70-SSB109-157	K184-05	RKB359	11/22/11	12:25

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RHB444
Instrument ID: 03
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K184
Date Analyzed: 08/16/11
Time Analyzed: 14:40
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1861981	13.20	1722743	17.19	603523	20.72
	UPPER LIMIT	3723962	13.70	3445486	17.69	1207046	21.22
	LOWER LIMIT	930991	12.70	861372	16.69	301762	20.22
	SAMPLE ID						
1	VSTD010	1947743	13.15	1901134	17.14	672511	20.65
2	MBLK1W	2476181	13.14	2249284	17.13	698202	20.64
3	LCS1W	2357416	13.15	2253741	17.14	785298	20.65
4	LCD1W	2475446	13.15	2320335	17.13	784763	20.65
5	IW-70-SSB109-157	2076998	13.14	1947632	17.13	652744	20.66

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB351.D Vial: 2
Acq On : 22 Nov 2011 7:48 am Operator: CGM
Sample : CVO03H1656 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	105	-0.01
2	T,M	Chlorotrifluoroethylene	-1.000	0.000	0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	11.791	-17.9	101	0.00
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	101	0.00
5	P,T,M	Chloromethane	10.000	10.390	-3.9	90	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000	0.0	0	-5.22#
7	C,T,M	Vinyl chloride	10.000	10.068	-0.7	86	0.00
8	T,M	Bromomethane	10.000	11.115	-11.2	94	-0.01
9	T,M	Chloroethane	10.000	11.019	-10.2	94	0.00
10	T,M	Dichlorofluoromethane	10.000	10.183	-1.8	100	-0.01
11	T,M	Trichlorofluoromethane	10.000	9.388	6.1	80	-0.01
12	T,M	Acrolein	50.000	33.846	32.3#	69	-0.01
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.198	8.0	92	-0.01
14	T,M	Acetone	50.000	51.769	-3.5	105	-0.01
15	C,T,M	1,1-Dichloroethene	10.000	9.941	0.6	96	-0.01
16	T,M	Methyl acetate	-1.000	0.000	0.0	104	-0.01
17	T,M	Iodomethane	10.000	9.139	8.6	88	-0.01
18	T,M	Carbon disulfide	10.000	10.925	-9.3	117	-0.01
19	T,M	Methylene chloride	10.000	9.955	0.4	100	-0.01
20	T,M	tert-Butyl alcohol	50.000	42.870	14.3	82	-0.01
21	T,M	tert-Butyl methyl ether (MT	10.000	9.775	2.2	97	-0.03
22	T,M	trans-1,2-Dichloroethene	10.000	9.951	0.5	98	-0.01
23	T,M	Acrylonitrile	50.000	55.188	-10.4	108	-0.03
24	T,M	Isopropyl ether (DIPE)	10.000	10.153	-1.5	98	-0.01
25	T,M	Vinyl acetate	10.000	8.274	17.3	74	-0.01
26	P,T,M	1,1-Dichloroethane	10.000	9.967	0.3	96	-0.01
27	T,M	2-Butanol	-1.000	0.000	0.0	94	-0.01
28	T,M	tert-Butyl ethyl ether (ETB	10.000	10.427	-4.3	102	-0.03
29	T,M	2,2-Dichloropropane	10.000	9.940	0.6	97	-0.01
30	T,M	2-Butanone	50.000	50.923	-1.8	104	-0.03
31	T,M	cis-1,2-Dichloroethene	10.000	10.071	-0.7	98	-0.01
32	T,M	Bromochloromethane	10.000	10.599	-6.0	102	-0.01
33	T,M	Tetrahydrofuran	10.000	10.043	-0.4	110	-0.03
34	C,T,M	Chloroform	10.000	9.769	2.3	94	-0.03
35	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	52	-0.01
36	S	Dibromofluoromethane	10.000	9.560	4.4	95	-0.01
37	T,M	1,1,1-Trichloroethane	10.000	9.358	6.4	90	-0.03
38	T,M	Cyclohexane	-1.000	0.000	0.0	94	-0.01
39	T,M	tert-Amyl methyl ether (TAM	10.000	10.038	-0.4	95	-0.01
40	S	1,2-Dichloroethane-d4	10.000	9.539	4.6	95	-0.03
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	110	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB351.D Vial: 2
Acq On : 22 Nov 2011 7:48 am Operator: CGM
Sample : CV003H1656 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\V003H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	9.354	6.5	96	-0.01
43	T,M	Carbon tetrachloride	10.000	8.665	13.4	89	-0.01
44	T,M	Benzene	10.000	9.661	3.4	100	-0.01
45	T,M	1,2-Dichloroethane	10.000	9.035	9.6	93	-0.01
46	T,M	Trichloroethene	10.000	9.002	10.0	94	-0.03
47	T,M	Methylcyclohexane	-1.000	0.000	0.0	88	-0.01
48	C,T,M	1,2-Dichloropropane	10.000	10.144	-1.4	105	-0.01
49	T,M	1,4-Dioxane	200.000	213.375	-6.7	118	-0.01
50	T,M	Dibromomethane	10.000	9.430	5.7	99	-0.03
51	T,M	Bromodichloromethane	10.000	9.317	6.8	95	-0.03
~~52~~	~~T,M~~	~~2-Chloroethyl vinyl ether~~	~~10.000~~	~~2.367~~	~~76.3#~~	~~26~~	~~-0.03~~
53	T,M	cis-1,3-Dichloropropene	10.000	9.660	3.4	99	-0.01
54	T,M	4-Methyl-2-pentanone	50.000	50.220	-0.4	106	-0.01
55	S	Toluene-d8	10.000	9.111	8.9	98	-0.03
56	C,T,M	Toluene	10.000	9.570	4.3	100	-0.01
57	T,M	Ethyl methacrylate	10.000	9.881	1.2	102	-0.01
58	T,M	trans-1,3-Dichloropropene	10.000	9.390	6.1	94	-0.01
59	T,M	1,1,2-Trichloroethane	10.000	9.799	2.0	101	-0.01
60	T,M	Tetrachloroethene	10.000	9.074	9.3	95	-0.03
61	T,M	2-Hexanone	50.000	52.898	-5.8	108	-0.01
62	T,M	1,3-Dichloropropane	10.000	10.212	-2.1	105	-0.01
63	T,M	Dibromochloromethane	10.000	9.512	4.9	97	-0.01
64	T,M	1,2-Dibromoethane	10.000	9.826	1.7	101	-0.01
65	T,M	1-Chlorohexane	10.000	10.019	-0.2	105	-0.01
66	P,M	Chlorobenzene	10.000	9.994	0.1	103	-0.03
67	C,T,M	Ethylbenzene	10.000	9.503	5.0	99	-0.03
68	T,M	1,1,1,2-Tetrachloroethane	10.000	9.442	5.6	96	-0.01
69	T,M	m-Xylene & p-Xylene	20.000	19.060	4.7	101	-0.01
70	T,M	o-Xylene	10.000	9.727	2.7	101	-0.01
71	T,M	Styrene	10.000	10.184	-1.8	102	-0.03
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	111	-0.03
73	T,M	Isopropylbenzene	10.000	9.597	4.0	102	-0.01
74	P,T,M	Bromoform	10.000	9.082	9.2	92	-0.03
75	S	4-Bromofluorobenzene	10.000	9.242	7.6	100	-0.03
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.486	-4.9	112	-0.01
77	T,M	trans-1,4-Dichloro-2-butene	10.000	7.337	26.6#	80	-0.03
78	T,M	n-Propylbenzene	10.000	9.912	0.9	105	-0.03
79	T,M	1,2,3-Trichloropropane	10.000	9.990	0.1	103	-0.03
80	T,M	Bromobenzene	10.000	9.330	6.7	99	-0.01
81	T,M	1,3,5-Trimethylbenzene	10.000	9.552	4.5	101	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB351.D Vial: 2
Acq On : 22 Nov 2011 7:48 am Operator: CGM
Sample : CVO03H1656 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	9.673	3.3	102	-0.01
83	T,M	4-Chlorotoluene	10.000	9.840	1.6	104	-0.03
84	T,M	tert-Butylbenzene	10.000	9.840	1.6	104	-0.03
85	T,M	1,2,4-Trimethylbenzene	10.000	9.784	2.2	103	-0.01
86	T,M	sec-Butylbenzene	10.000	9.950	0.5	105	-0.01
87	T,M	p-Isopropyltoluene	10.000	10.066	-0.7	105	-0.03
88	T,M	1,3-Dichlorobenzene	10.000	9.963	0.4	105	-0.01
89	T,M	1,4-Dichlorobenzene	10.000	9.823	1.8	102	-0.03
90	T,M	n-Butylbenzene	10.000	10.470	-4.7	108	-0.01
91	T,M	1,2-Dichlorobenzene	10.000	9.911	0.9	104	-0.03
~~92~~	~~T,M~~	~~1,2-Dibromo-3-chloropropane~~	~~10.000~~	~~9.631~~	~~3.7~~	~~99~~	~~-0.03~~
93	T,M	1,2,4-Trichlorobenzene	10.000	10.119	-1.2	105	-0.03
94	T,M	Hexachlorobutadiene	10.000	9.269	7.3	95	-0.03
95	T,M	Naphthalene	10.000	10.952	-9.5	109	-0.03
96	T,M	1,2,3-Trichlorobenzene	10.000	10.150	-1.5	105	-0.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB351.D Vial: 2
Acq On : 22 Nov 2011 7:48 am Operator: CGM
Sample : CVO03H1656 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	105	-0.01
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.416	-17.8	101	0.00
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	101	0.00
5	P,T,M	Chloromethane	0.357	0.370	-3.6	90	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.22#
7	C,T,M	Vinyl chloride	0.337	0.340	-0.9	86	0.00
8	T,M	Bromomethane	0.227	0.252	-11.0	94	-0.01
9	T,M	Chloroethane	0.177	0.195	-10.2	94	0.00
10	T,M	Dichlorofluoromethane	0.764	0.778	-1.8	100	-0.01
~~11~~	~~T,M~~	~~Trichlorofluoromethane~~	~~0.545~~	~~0.512~~	~~6.1~~	~~80~~	~~-0.01~~
12	T,M	Acrolein	0.009	0.006	33.3#	69	-0.01
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.187	7.9	92	-0.01
14	T,M	Acetone	0.039	0.040	-2.6	105	-0.01
15	C,T,M	1,1-Dichloroethene	0.673	0.669	0.6	96	-0.01
16	T,M	Methyl acetate	0.000	0.000	0.0	104	-0.01
17	T,M	Iodomethane	0.631	0.577	8.6	88	-0.01
18	T,M	Carbon disulfide	1.353	1.479	-9.3	117	-0.01
19	T,M	Methylene chloride	0.475	0.473	0.4	100	-0.01
20	T,M	tert-Butyl alcohol	0.012	0.010	16.7	82	-0.01
21	T,M	tert-Butyl methyl ether (MT	0.489	0.478	2.2	97	-0.03
22	T,M	trans-1,2-Dichloroethene	0.686	0.682	0.6	98	-0.01
23	T,M	Acrylonitrile	0.036	0.039	-8.3	108	-0.03
24	T,M	Isopropyl ether (DIPE)	1.196	1.214	-1.5	98	-0.01
25	T,M	Vinyl acetate	0.401	0.332	17.2	74	-0.01
26	P,T,M	1,1-Dichloroethane	0.743	0.740	0.4	96	-0.01
27	T,M	2-Butanol	0.000	0.000	0.0	94	-0.01
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.893	-4.3	102	-0.03
29	T,M	2,2-Dichloropropane	0.605	0.601	0.7	97	-0.01
30	T,M	2-Butanone	0.066	0.067	-1.5	104	-0.03
31	T,M	cis-1,2-Dichloroethene	0.389	0.392	-0.8	98	-0.01
32	T,M	Bromochloromethane	0.307	0.326	-6.2	102	-0.01
33	T,M	Tetrahydrofuran	0.038	0.038	0.0	110	-0.03
34	C,T,M	Chloroform	0.807	0.788	2.4	94	-0.03
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	52	-0.01
36	S	Dibromofluoromethane	0.372	0.355	4.6	95	-0.01
37	T,M	1,1,1-Trichloroethane	0.723	0.677	6.4	90	-0.03
38	T,M	Cyclohexane	0.000	0.000	0.0	94	-0.01
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.133	-0.8	95	-0.01
40	S	1,2-Dichloroethane-d4	0.378	0.361	4.5	95	-0.03
~~41~~	~~I~~	~~CHLOROBENZENE-D5~~	~~1.000~~	~~1.000~~	~~0.0~~	~~110~~	~~0.01~~

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB351.D Vial: 2
Acq On : 22 Nov 2011 7:48 am Operator: CGM
Sample : CVO03H1656 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.198	0.186	6.1	96	-0.01
43	T,M	Carbon tetrachloride	0.677	0.587	13.3	89	-0.01
44	T,M	Benzene	1.622	1.567	3.4	100	-0.01
45	T,M	1,2-Dichloroethane	0.500	0.452	9.6	93	-0.01
46	T,M	Trichloroethene	0.445	0.401	9.9	94	-0.03
47	T,M	Methylcyclohexane	0.000	0.000	0.0	88	-0.01
48	C,T,M	1,2-Dichloropropane	0.415	0.421	-1.4	105	-0.01
49	T,M	1,4-Dioxane	0.001	0.001	0.0	118	-0.01
50	T,M	Dibromomethane	0.196	0.185	5.6	99	-0.03
51	T,M	Bromodichloromethane	0.620	0.578	6.8	95	-0.03
~~52~~	~~T,M~~	~~2-Chloroethyl vinyl ether~~	~~0.125~~	~~0.030~~	~~76.0#~~	~~26#~~	~~-0.03~~
53	T,M	cis-1,3-Dichloropropene	0.640	0.618	3.4	99	-0.01
54	T,M	4-Methyl-2-pentanone	0.202	0.203	-0.5	106	-0.01
55	S	Toluene-d8	1.420	1.294	8.9	98	-0.03
56	C,T,M	Toluene	1.759	1.684	4.3	100	-0.01
57	T,M	Ethyl methacrylate	0.326	0.322	1.2	102	-0.01
58	T,M	trans-1,3-Dichloropropene	0.501	0.470	6.2	94	-0.01
59	T,M	1,1,2-Trichloroethane	0.217	0.213	1.8	101	-0.01
60	T,M	Tetrachloroethene	0.382	0.347	9.2	95	-0.03
61	T,M	2-Hexanone	0.133	0.141	-6.0	108	-0.01
62	T,M	1,3-Dichloropropane	0.434	0.444	-2.3	105	-0.01
63	T,M	Dibromochloromethane	0.322	0.306	5.0	97	-0.01
64	T,M	1,2-Dibromoethane	0.238	0.234	1.7	101	-0.01
65	T,M	1-Chlorohexane	0.816	0.817	-0.1	105	-0.01
66	P,M	Chlorobenzene	1.009	1.009	0.0	103	-0.03
67	C,T,M	Ethylbenzene	2.272	2.159	5.0	99	-0.03
68	T,M	1,1,1,2-Tetrachloroethane	0.375	0.354	5.6	96	-0.01
69	T,M	m-Xylene & p-Xylene	1.750	1.668	4.7	101	-0.01
70	T,M	o-Xylene	1.697	1.650	2.8	101	-0.01
71	T,M	Styrene	1.095	1.115	-1.8	102	-0.03
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	111	-0.03
73	T,M	Isopropylbenzene	5.670	5.441	4.0	102	-0.01
74	P,T,M	Bromoform	0.413	0.375	9.2	92	-0.03
75	S	4-Bromofluorobenzene	1.556	1.438	7.6	100	-0.03
76	P,T,M	1,1,2,2-Tetrachloroethane	0.753	0.790	-4.9	112	-0.01
77	T,M	trans-1,4-Dichloro-2-butene	0.244	0.179	26.6#	80	-0.03
78	T,M	n-Propylbenzene	8.060	7.989	0.9	105	-0.03
79	T,M	1,2,3-Trichloropropane	0.175	0.175	0.0	103	-0.03
80	T,M	Bromobenzene	1.142	1.065	6.7	99	-0.01
81	T,M	1,3,5-Trimethylbenzene	4.888	4.669	4.5	101	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB351.D Vial: 2
Acq On : 22 Nov 2011 7:48 am Operator: CGM
Sample : CVO03H1656 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	4.865	3.3	102	-0.01
83	T,M	4-Chlorotoluene	4.346	4.277	1.6	104	-0.03
84	T,M	tert-Butylbenzene	0.969	0.953	1.7	104	-0.03
85	T,M	1,2,4-Trimethylbenzene	4.650	4.550	2.2	103	-0.01
86	T,M	sec-Butylbenzene	6.369	6.337	0.5	105	-0.01
87	T,M	p-Isopropyltoluene	4.917	4.949	-0.7	105	-0.03
88	T,M	1,3-Dichlorobenzene	2.190	2.182	0.4	105	-0.01
89	T,M	1,4-Dichlorobenzene	2.037	2.001	1.8	102	-0.03
90	T,M	n-Butylbenzene	5.430	5.685	-4.7	108	-0.01
91	T,M	1,2-Dichlorobenzene	1.675	1.660	0.9	104	-0.03
~~92~~	~~T,M~~	~~1,2-Dibromo-3-chloropropane~~	~~0.085~~	~~0.082~~	~~3.5~~	~~99~~	~~-0.03~~
93	T,M	1,2,4-Trichlorobenzene	0.850	0.860	-1.2	105	-0.03
94	T,M	Hexachlorobutadiene	0.778	0.721	7.3	95	-0.03
95	T,M	Naphthalene	1.095	1.199	-9.5	109	-0.03
96	T,M	1,2,3-Trichlorobenzene	0.624	0.633	-1.4	105	-0.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB372
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K184
BFB Injection Date : 11/22/11
BFB Injection Time : 20:17
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	27.32
75	30.0 - 60.0% of mass 95	53.19
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.65
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	55.91
175	5.0 - 9.0% of mass 174	3.93(7.0)1
176	95.0 - 101.0% of mass 174	53.93(96.5)1
177	5.0 - 9.0% of mass 176	3.82(7.1)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV003H1657	RKB373	11/22/11	20:53
2	MBLK2W	V003K24B	RKB376	11/22/11	22:40
3	LCS2W	V003K24L	RKB374	11/22/11	21:29
4	LCD2W	V003K24C	RKB375	11/22/11	22:04
5	IR-70-TB-152	K184-06	RKB377	11/22/11	23:15
6	MW-70-PMW13A-153	K184-01	RKB388	11/23/11	05:39
7	MW-70-PMW13B-154	K184-02	RKB389	11/23/11	06:14
8	MW-70-PMW14A-155	K184-03	RKB390	11/23/11	06:49
9	MW-70-PMW14B-156	K184-04	RKB391	11/23/11	07:25

FORM V VOA OLM02.0

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RHB444
Instrument ID: 03
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K184
Date Analyzed: 08/16/11
Time Analyzed: 14:40
Heated Purge: (Y/N) N

		IS1(DFB)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1861981	13.20	1722743	17.19	603523	20.72
	UPPER LIMIT	3723962	13.70	3445486	17.69	1207046	21.22
	LOWER LIMIT	930991	12.70	861372	16.69	301762	20.22
	SAMPLE ID						
1	VSTD010	2019134	13.16	1963698	17.15	710006	20.66
2	MBLK2W	2457602	13.16	2277046	17.15	727069	20.66
3	LCS2W	2115906	13.16	2000724	17.15	681441	20.66
4	LCD2W	2290156	13.16	2143016	17.15	743165	20.66
5	IR-70-TB-152	2442904	13.16	2258805	17.15	728010	20.67
6	MW-70-PMW13A-153	2788268	13.16	2601680	17.15	830325	20.68
7	MW-70-PMW13B-154	2714125	13.17	2525123	17.15	813779	20.67
8	MW-70-PMW14A-155	2531937	13.16	2371383	17.15	769300	20.67
9	MW-70-PMW14B-156	2495709	13.16	2348126	17.15	768290	20.67

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

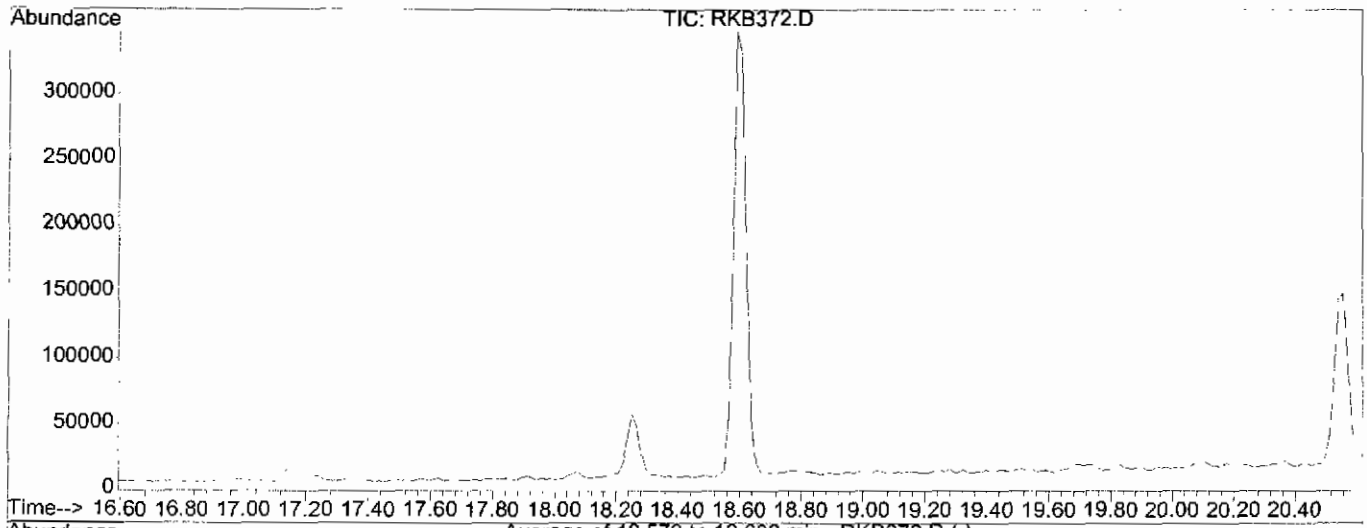
Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

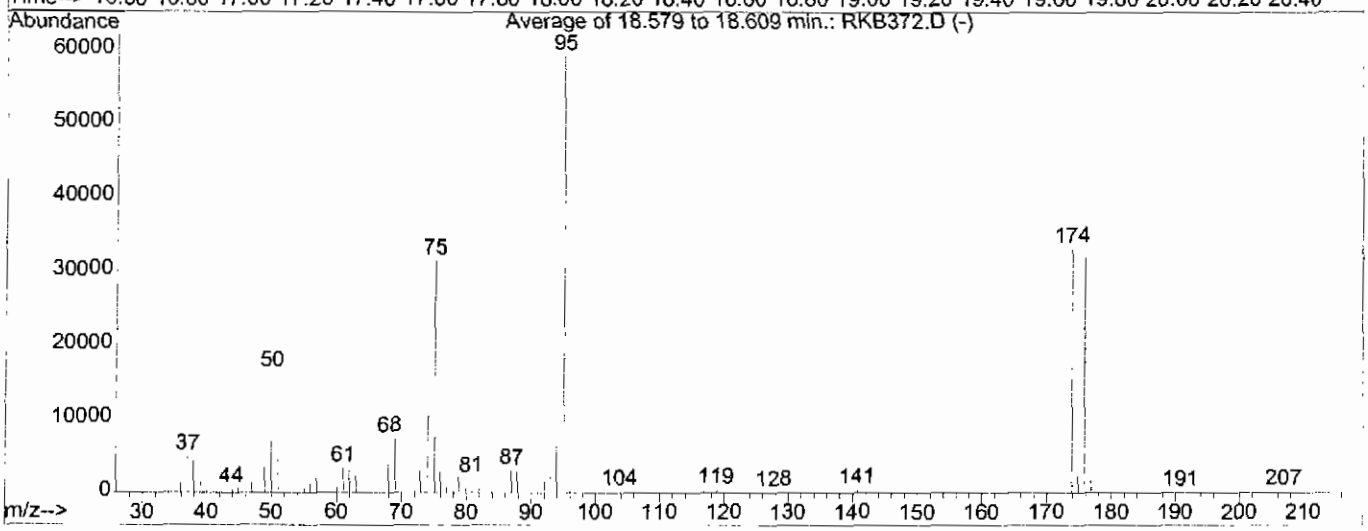
FORM VIII VOA-8260 1/2000

BFB

Data File : D:\HPCHEM\1\DATA\11K22\RKB372.D
Acq On : 22 Nov 2011 8:17 pm
Sample : BFB03K24
Misc : T/CHECK
MS Integration Params: 524TAIL.P
Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL

Vial: 1
Operator: CGM
Inst : 03
Multiplr: 1.00





AutoFind: Scans 991, 992, 993; Background Corrected with Scan 986

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	27.3	16172	PASS
75	95	30	60	53.2	31485	PASS
95	95	100	100	100.0	59192	PASS
96	95	5	9	6.6	3935	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	55.9	33096	PASS
175	174	5	9	7.0	2327	PASS
176	174	95	101	96.5	31923	PASS
177	176	5	9	7.1	2263	PASS

RKB372.D VO03H16.M Wed Nov 23 07:08:50 2011

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB373.D Vial: 2
Acq On : 22 Nov 2011 8:53 pm Operator: CGM
Sample : CV003H1657 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\V003H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	108	0.00
2	T,M	Chlorotrifluoroethylene	-1.000	0.000	0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	11.143	-11.4	99	0.01
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	99	0.01
5	P,T,M	Chloromethane	10.000	9.988	0.1	90	0.03
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000	0.0	0	-5.22#
7	C,T,M	Vinyl chloride	10.000	9.692	3.1	85	0.01
8	T,M	Bromomethane	10.000	10.963	-9.6	96	0.00
9	T,M	Chloroethane	10.000	10.531	-5.3	93	0.00
10	T,M	Dichlorofluoromethane	10.000	9.990	0.1	101	0.00
11	T,M	Trichlorofluoromethane	10.000	8.841	11.6	78	0.00
12	T,M	Acrolein	50.000	43.456	13.1	92	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	8.958	10.4	93	0.00
14	T,M	Acetone	50.000	54.162	-8.3	114	0.00
15	C,T,M	1,1-Dichloroethene	10.000	9.567	4.3	96	0.01
16	T,M	Methyl acetate	-1.000	0.000	0.0	112	0.00
17	T,M	Iodomethane	10.000	9.014	9.9	90	0.00
18	T,M	Carbon disulfide	10.000	10.374	-3.7	115	0.00
19	T,M	Methylene chloride	10.000	9.954	0.5	104	0.00
20	T,M	tert-Butyl alcohol	50.000	48.982	2.0	97	0.00
21	T,M	tert-Butyl methyl ether (MT	10.000	10.324	-3.2	106	-0.01
22	T,M	trans-1,2-Dichloroethene	10.000	9.843	1.6	100	0.00
23	T,M	Acrylonitrile	50.000	58.107	-16.2	117	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	10.445	-4.5	104	0.00
25	T,M	Vinyl acetate	10.000	8.200	18.0	76	0.00
26	P,T,M	1,1-Dichloroethane	10.000	9.961	0.4	100	0.00
27	T,M	2-Butanol	-1.000	0.000	0.0	98	0.00
28	T,M	tert-Butyl ethyl ether (ETB	10.000	10.901	-9.0	111	-0.01
29	T,M	2,2-Dichloropropane	10.000	9.115	8.8	92	0.00
30	T,M	2-Butanone	50.000	54.909	-9.8	116	-0.01
31	T,M	cis-1,2-Dichloroethene	10.000	10.088	-0.9	102	0.00
32	T,M	Bromochloromethane	10.000	10.610	-6.1	106	0.00
33	T,M	Tetrahydrofuran	10.000	10.625	-6.3	121	-0.01
34	C,T,M	Chloroform	10.000	9.769	2.3	97	-0.01
35	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	63	-0.01
36	S	Dibromofluoromethane	10.000	9.637	3.6	100	0.00
37	T,M	1,1,1-Trichloroethane	10.000	9.282	7.2	92	-0.01
38	T,M	Cyclohexane	-1.000	0.000	0.0	110	0.00
39	T,M	tert-Amyl methyl ether (TAM	10.000	10.459	-4.6	103	0.00
40	S	1,2-Dichloroethane-d4	10.000	9.571	4.3	99	-0.01
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	114	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB373.D Vial: 2
Acq On : 22 Nov 2011 8:53 pm Operator: CGM
Sample : CVO03H1657 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	9.176	8.2	97	0.00
43	T,M	Carbon tetrachloride	10.000	8.454	15.5	90	0.00
44	T,M	Benzene	10.000	9.587	4.1	103	0.00
45	T,M	1,2-Dichloroethane	10.000	9.017	9.8	96	0.00
46	T,M	Trichloroethene	10.000	9.094	9.1	98	-0.01
47	T,M	Methylcyclohexane	-1.000	0.000	0.0	88	0.00
48	C,T,M	1,2-Dichloropropane	10.000	10.181	-1.8	109	0.00
49	T,M	1,4-Dioxane	200.000	211.773	-5.9	121	0.00
50	T,M	Dibromomethane	10.000	9.506	4.9	103	-0.01
51	T,M	Bromodichloromethane	10.000	9.431	5.7	100	0.00
52	T,M	2-Chloroethyl vinyl ether	10.000	2.719	72.8#	30	-0.01
53	T,M	cis-1,3-Dichloropropene	10.000	9.762	2.4	103	0.00
54	T,M	4-Methyl-2-pentanone	50.000	54.622	-9.2	119	0.00
55	S	Toluene-d8	10.000	9.166	8.3	101	0.00
56	C,T,M	Toluene	10.000	9.538	4.6	103	0.00
57	T,M	Ethyl methacrylate	10.000	10.391	-3.9	111	0.00
58	T,M	trans-1,3-Dichloropropene	10.000	9.772	2.3	102	0.00
59	T,M	1,1,2-Trichloroethane	10.000	10.269	-2.7	110	0.00
60	T,M	Tetrachloroethene	10.000	8.766	12.3	95	-0.01
61	T,M	2-Hexanone	50.000	57.547	-15.1	121	0.00
62	T,M	1,3-Dichloropropane	10.000	10.552	-5.5	112	0.00
63	T,M	Dibromochloromethane	10.000	9.815	1.9	103	0.00
64	T,M	1,2-Dibromoethane	10.000	10.043	-0.4	107	0.00
65	T,M	1-Chlorohexane	10.000	9.743	2.6	106	0.00
66	P,M	Chlorobenzene	10.000	10.004	-0.0	107	-0.01
67	C,T,M	Ethylbenzene	10.000	9.653	3.5	104	-0.01
68	T,M	1,1,1,2-Tetrachloroethane	10.000	9.730	2.7	102	0.00
69	T,M	m-Xylene & p-Xylene	20.000	19.100	4.5	104	0.00
70	T,M	o-Xylene	10.000	9.775	2.2	104	0.00
71	T,M	Styrene	10.000	10.251	-2.5	106	-0.01
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	118	-0.01
73	T,M	Isopropylbenzene	10.000	9.467	5.3	107	0.00
74	P,T,M	Bromoform	10.000	9.618	3.8	103	-0.01
75	S	4-Bromofluorobenzene	10.000	9.222	7.8	105	-0.01
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.838	-8.4	122	0.00
77	T,M	trans-1,4-Dichloro-2-butene	10.000	8.244	17.6	94	-0.01
78	T,M	n-Propylbenzene	10.000	9.693	3.1	109	-0.01
79	T,M	1,2,3-Trichloropropane	10.000	10.170	-1.7	111	0.00
80	T,M	Bromobenzene	10.000	9.302	7.0	104	0.00
81	T,M	1,3,5-Trimethylbenzene	10.000	9.464	5.4	106	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB373.D Vial: 2
Acq On : 22 Nov 2011 8:53 pm Operator: CGM
Sample : CVO03H1657 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	9.532	4.7	106	0.00
83	T,M	4-Chlorotoluene	10.000	9.636	3.6	107	-0.01
84	T,M	tert-Butylbenzene	10.000	9.724	2.8	109	-0.01
85	T,M	1,2,4-Trimethylbenzene	10.000	9.630	3.7	108	0.00
86	T,M	sec-Butylbenzene	10.000	9.874	1.3	111	0.00
87	T,M	p-Isopropyltoluene	10.000	9.892	1.1	109	-0.01
88	T,M	1,3-Dichlorobenzene	10.000	9.757	2.4	108	0.00
89	T,M	1,4-Dichlorobenzene	10.000	9.830	1.7	107	-0.01
90	T,M	n-Butylbenzene	10.000	10.016	-0.2	109	0.00
91	T,M	1,2-Dichlorobenzene	10.000	9.895	1.1	109	-0.01
92	T,M	1,2-Dibromo-3-chloropropane	10.000	10.577	-5.8	114	-0.01
93	T,M	1,2,4-Trichlorobenzene	10.000	10.078	-0.8	110	0.00
94	T,M	Hexachlorobutadiene	10.000	8.881	11.2	96	-0.01
95	T,M	Naphthalene	10.000	11.187	-11.9	118	-0.01
96	T,M	1,2,3-Trichlorobenzene	10.000	10.124	-1.2	111	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB373.D Vial: 2
Acq On : 22 Nov 2011 8:53 pm Operator: CGM
Sample : CVO03H1657 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	108	0.00
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.393	-11.3	99	0.01
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	99	0.01
5	P,T,M	Chloromethane	0.357	0.356	0.3	90	0.03
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.22#
7	C,T,M	Vinyl chloride	0.337	0.327	3.0	85	0.01
8	T,M	Bromomethane	0.227	0.249	-9.7	96	0.00
9	T,M	Chloroethane	0.177	0.187	-5.6	93	0.00
10	T,M	Dichlorofluoromethane	0.764	0.763	0.1	101	0.00
11	T,M	Trichlorofluoromethane	0.545	0.482	11.6	78	0.00
12	T,M	Acrolein	0.009	0.008	11.1	92	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.182	10.3	93	0.00
14	T,M	Acetone	0.039	0.042	-7.7	114	0.00
15	C,T,M	1,1-Dichloroethene	0.673	0.644	4.3	96	0.01
16	T,M	Methyl acetate	0.000	0.000	0.0	112	0.00
17	T,M	Iodomethane	0.631	0.569	9.8	90	0.00
18	T,M	Carbon disulfide	1.353	1.404	-3.8	115	0.00
19	T,M	Methylene chloride	0.475	0.473	0.4	104	0.00
20	T,M	tert-Butyl alcohol	0.012	0.012	0.0	97	0.00
21	T,M	tert-Butyl methyl ether (MT	0.489	0.504	-3.1	106	-0.01
22	T,M	trans-1,2-Dichloroethene	0.686	0.675	1.6	100	0.00
23	T,M	Acrylonitrile	0.036	0.041	-13.9	117	0.00
24	T,M	Isopropyl ether (DIPE)	1.196	1.249	-4.4	104	0.00
25	T,M	Vinyl acetate	0.401	0.329	18.0	76	0.00
26	P,T,M	1,1-Dichloroethane	0.743	0.740	0.4	100	0.00
27	T,M	2-Butanol	0.000	0.000	0.0	98	0.00
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.933	-9.0	111	-0.01
29	T,M	2,2-Dichloropropane	0.605	0.551	8.9	92	0.00
30	T,M	2-Butanone	0.066	0.073	-10.6	116	-0.01
31	T,M	cis-1,2-Dichloroethene	0.389	0.393	-1.0	102	0.00
32	T,M	Bromochloromethane	0.307	0.326	-6.2	106	0.00
33	T,M	Tetrahydrofuran	0.038	0.040	-5.3	121	-0.01
34	C,T,M	Chloroform	0.807	0.788	2.4	97	-0.01
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	63	-0.01
36	S	Dibromofluoromethane	0.372	0.358	3.8	100	0.00
37	T,M	1,1,1-Trichloroethane	0.723	0.671	7.2	92	-0.01
38	T,M	Cyclohexane	0.000	0.000	0.0	110	0.00
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.138	-4.5	103	0.00
40	S	1,2-Dichloroethane-d4	0.378	0.362	4.2	99	-0.01
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	114	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB373.D Vial: 2
Acq On : 22 Nov 2011 8:53 pm Operator: CGM
Sample : CVO03H1657 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.198	0.182	8.1	97	0.00
43	T,M	Carbon tetrachloride	0.677	0.573	15.4	90	0.00
44	T,M	Benzene	1.622	1.555	4.1	103	0.00
45	T,M	1,2-Dichloroethane	0.500	0.451	9.8	96	0.00
46	T,M	Trichloroethene	0.445	0.405	9.0	98	-0.01
47	T,M	Methylcyclohexane	0.000	0.000	0.0	88	0.00
48	C,T,M	1,2-Dichloropropane	0.415	0.423	-1.9	109	0.00
49	T,M	1,4-Dioxane	0.001	0.001	0.0	121	0.00
50	T,M	Dibromomethane	0.196	0.186	5.1	103	-0.01
51	T,M	Bromodichloromethane	0.620	0.585	5.6	100	0.00
52	T,M	2-Chloroethyl vinyl ether	0.125	0.034	72.8#	30#	-0.01
53	T,M	cis-1,3-Dichloropropene	0.640	0.625	2.3	103	0.00
54	T,M	4-Methyl-2-pentanone	0.202	0.221	-9.4	119	0.00
55	S	Toluene-d8	1.420	1.302	8.3	101	0.00
56	C,T,M	Toluene	1.759	1.678	4.6	103	0.00
57	T,M	Ethyl methacrylate	0.326	0.339	-4.0	111	0.00
58	T,M	trans-1,3-Dichloropropene	0.501	0.489	2.4	102	0.00
59	T,M	1,1,2-Trichloroethane	0.217	0.223	-2.8	110	0.00
60	T,M	Tetrachloroethene	0.382	0.335	12.3	95	-0.01
61	T,M	2-Hexanone	0.133	0.154	-15.8	121	0.00
62	T,M	1,3-Dichloropropane	0.434	0.458	-5.5	112	0.00
63	T,M	Dibromochloromethane	0.322	0.316	1.9	103	0.00
64	T,M	1,2-Dibromoethane	0.238	0.239	-0.4	107	0.00
65	T,M	1-Chlorohexane	0.816	0.795	2.6	106	0.00
66	P,M	Chlorobenzene	1.009	1.010	-0.1	107	-0.01
67	C,T,M	Ethylbenzene	2.272	2.193	3.5	104	-0.01
68	T,M	1,1,1,2-Tetrachloroethane	0.375	0.365	2.7	102	0.00
69	T,M	m-Xylene & p-Xylene	1.750	1.671	4.5	104	0.00
70	T,M	o-Xylene	1.697	1.659	2.2	104	0.00
71	T,M	Styrene	1.095	1.122	-2.5	106	-0.01
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	118	-0.01
73	T,M	Isopropylbenzene	5.670	5.367	5.3	107	0.00
74	P,T,M	Bromoform	0.413	0.397	3.9	103	-0.01
75	S	4-Bromofluorobenzene	1.556	1.435	7.8	105	-0.01
76	P,T,M	1,1,2,2-Tetrachloroethane	0.753	0.817	-8.5	122	0.00
77	T,M	trans-1,4-Dichloro-2-butene	0.244	0.201	17.6	94	-0.01
78	T,M	n-Propylbenzene	8.060	7.813	3.1	109	-0.01
79	T,M	1,2,3-Trichloropropane	0.175	0.178	-1.7	111	0.00
80	T,M	Bromobenzene	1.142	1.062	7.0	104	0.00
81	T,M	1,3,5-Trimethylbenzene	4.888	4.626	5.4	106	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB373.D Vial: 2
Acq On : 22 Nov 2011 8:53 pm Operator: CGM
Sample : CVO03H1657 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	4.794	4.7	106	0.00
83	T,M	4-Chlorotoluene	4.346	4.188	3.6	107	-0.01
84	T,M	tert-Butylbenzene	0.969	0.942	2.8	109	-0.01
85	T,M	1,2,4-Trimethylbenzene	4.650	4.479	3.7	108	0.00
86	T,M	sec-Butylbenzene	6.369	6.288	1.3	111	0.00
87	T,M	p-Isopropyltoluene	4.917	4.864	1.1	109	-0.01
88	T,M	1,3-Dichlorobenzene	2.190	2.137	2.4	108	0.00
89	T,M	1,4-Dichlorobenzene	2.037	2.002	1.7	107	-0.01
90	T,M	n-Butylbenzene	5.430	5.438	-0.1	109	0.00
91	T,M	1,2-Dichlorobenzene	1.675	1.657	1.1	109	-0.01
92	T,M	1,2-Dibromo-3-chloropropane	0.085	0.090	-5.9	114	-0.01
93	T,M	1,2,4-Trichlorobenzene	0.850	0.856	-0.7	110	0.00
94	T,M	Hexachlorobutadiene	0.778	0.691	11.2	96	-0.01
95	T,M	Naphthalene	1.095	1.225	-11.9	118	-0.01
96	T,M	1,2,3-Trichlorobenzene	0.624	0.632	-1.3	111	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K22\RKB373.D Vial: 2
Acq On : 22 Nov 2011 8:53 pm Operator: CGM
Sample : CVO03H1657 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 22 21:18 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.16	114	2019134	10.00	ug/l	0.00
41) CHLOROBENZENE-D5	17.15	117	1963698	10.00	ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.66	152	710006	10.00	ug/l	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	12.07	111	722881	9.64	ug/l	0.00
Spiked Amount 10.000			Recovery	=	96.40%	
40) 1,2-Dichloroethane-d4	12.60	65	730910	9.57	ug/l	-0.01
Spiked Amount 10.000			Recovery	=	95.70%	
55) Toluene-d8	15.21	98	2556657	9.17	ug/l	0.00
Spiked Amount 10.000			Recovery	=	91.70%	
75) 4-Bromofluorobenzene	18.59	95	1018947	9.22	ug/l	-0.01
Spiked Amount 10.000			Recovery	=	92.20%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.08	85	794193	11.14	ug/l	100
5) Chloromethane	4.60	50	719128	9.99	ug/l	100
7) Vinyl chloride	4.91	62	660144	9.69	ug/l	100
8) Bromomethane	5.82	94	501904	10.96	ug/l	99
9) Chloroethane	6.09	64	376933	10.53	ug/l	98
10) Dichlorofluoromethane	6.63	67	1540253	9.99	ug/l	100
11) Trichlorofluoromethane	6.69	101	972875	8.84	ug/l	100
12) Acrolein	7.80	56	78002	43.46	ug/l	98
13) 1,1,2-Trichloro-1,2,2-trif	7.94	151	367151	8.96	ug/l	98
14) Acetone	8.13	43	422419	54.16	ug/l	97
15) 1,1-Dichloroethene	7.97	61	1299405	9.57	ug/l	98
17) Iodomethane	8.34	142	1148789	9.01	ug/l	100
18) Carbon disulfide	8.47	76	2834682	10.37	ug/l	100
19) Methylene chloride	9.04	49	955439	9.95	ug/l	98
20) tert-Butyl alcohol	9.23	59	119101	48.98	ug/l	91
21) tert-Butyl methyl ether (M	9.45	73	1018458	10.32	ug/l	98
22) trans-1,2-Dichloroethene	9.53	61	1362867	9.84	ug/l	98
23) Acrylonitrile	9.56	53	416760	58.11	ug/l	99
24) Isopropyl ether (DIPE)	10.29	45	2522493	10.45	ug/l	97
25) Vinyl acetate	10.33	43	664619	8.20	ug/l	99
26) 1,1-Dichloroethane	10.32	63	1493481	9.96	ug/l	99
28) tert-Butyl ethyl ether (ET	10.90	59	1884207	10.90	ug/l	97
29) 2,2-Dichloropropane	11.29	77	1113441	9.11	ug/l	100
30) 2-Butanone	11.30	43	732470	54.91	ug/l	100
31) cis-1,2-Dichloroethene	11.32	96	792801	10.09	ug/l	99
32) Bromochloromethane	11.72	49	658417	10.61	ug/l	96
33) Tetrahydrofuran	11.76	42	81134	10.62	ug/l	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K22\RKB373.D Vial: 2
Acq On : 22 Nov 2011 8:53 pm Operator: CGM
Sample : CVO03H1657 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 22 21:18 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	Chloroform	11.81	83	1591601	9.77 ug/l	100
37)	1,1,1-Trichloroethane	12.07	97	1355053	9.28 ug/l	98
39)	tert-Amyl methyl ether (TA	12.70	87	279113	10.46 ug/l	92
42)	1,1-Dichloropropene	12.31	110	357596	9.18 ug/l	100
43)	Carbon tetrachloride	12.33	119	1124387	8.45 ug/l	100
44)	Benzene	12.65	78	3052887	9.59 ug/l	99
45)	1,2-Dichloroethane	12.71	62	886106	9.02 ug/l	99
46)	Trichloroethene	13.56	130	794720	9.09 ug/l	100
48)	1,2-Dichloropropane	13.92	63	829822	10.18 ug/l	96
49)	1,4-Dioxane	14.08	88	53514	211.77 ug/l	91
50)	Dibromomethane	14.13	93	365881	9.51 ug/l	98
51)	Bromodichloromethane	14.31	83	1147919	9.43 ug/l	100
52)	2-Chloroethyl vinyl ether	14.59	63	66823	2.72 ug/l	99
53)	cis-1,3-Dichloropropene	14.87	75	1227079	9.76 ug/l	98
54)	4-Methyl-2-pentanone	14.99	43	2167163	54.62 ug/l	99
56)	Toluene	15.30	91	3295315	9.54 ug/l	100
57)	Ethyl methacrylate	15.54	69	665870	10.39 ug/l	99
58)	trans-1,3-Dichloropropene	15.59	75	960939	9.77 ug/l	99
59)	1,1,2-Trichloroethane	15.87	97	437789	10.27 ug/l	99
60)	Tetrachloroethene	16.03	164	658132	8.77 ug/l	98
61)	2-Hexanone	16.06	43	1508599	57.55 ug/l	98
62)	1,3-Dichloropropane	16.09	76	900116	10.55 ug/l	99
63)	Dibromochloromethane	16.44	129	619884	9.82 ug/l	99
64)	1,2-Dibromoethane	16.63	107	469202	10.04 ug/l	100
65)	1-Chlorohexane	16.99	91	1560751	9.74 ug/l	99
66)	Chlorobenzene	17.18	112	1982476	10.00 ug/l	99
67)	Ethylbenzene	17.22	91	4305697	9.65 ug/l	99
68)	1,1,1,2-Tetrachloroethane	17.27	131	715798	9.73 ug/l	98
69)	m-Xylene & p-Xylene	17.36	91	6563429	19.10 ug/l	99
70)	o-Xylene	17.89	91	3257168	9.77 ug/l	98
71)	Styrene	17.91	104	2203885	10.25 ug/l	98
73)	Isopropylbenzene	18.31	105	3810933	9.47 ug/l	99
74)	Bromoform	18.30	173	282065	9.62 ug/l	99
76)	1,1,2,2-Tetrachloroethane	18.74	83	579745	10.84 ug/l	99
77)	trans-1,4-Dichloro-2-buten	18.77	53	143065	8.24 ug/l	93
78)	n-Propylbenzene	18.82	91	5547131	9.69 ug/l	100
79)	1,2,3-Trichloropropane	18.85	110	126499	10.17 ug/l	98
80)	Bromobenzene	18.86	156	754105	9.30 ug/l	94
81)	1,3,5-Trimethylbenzene	19.00	105	3284388	9.46 ug/l	99
82)	2-Chlorotoluene	19.04	91	3403510	9.53 ug/l	99
83)	4-Chlorotoluene	19.16	91	2973592	9.64 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K22\RKB373.D Vial: 2
Acq On : 22 Nov 2011 8:53 pm Operator: CGM
Sample : CVO03H1657 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 22 21:18 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

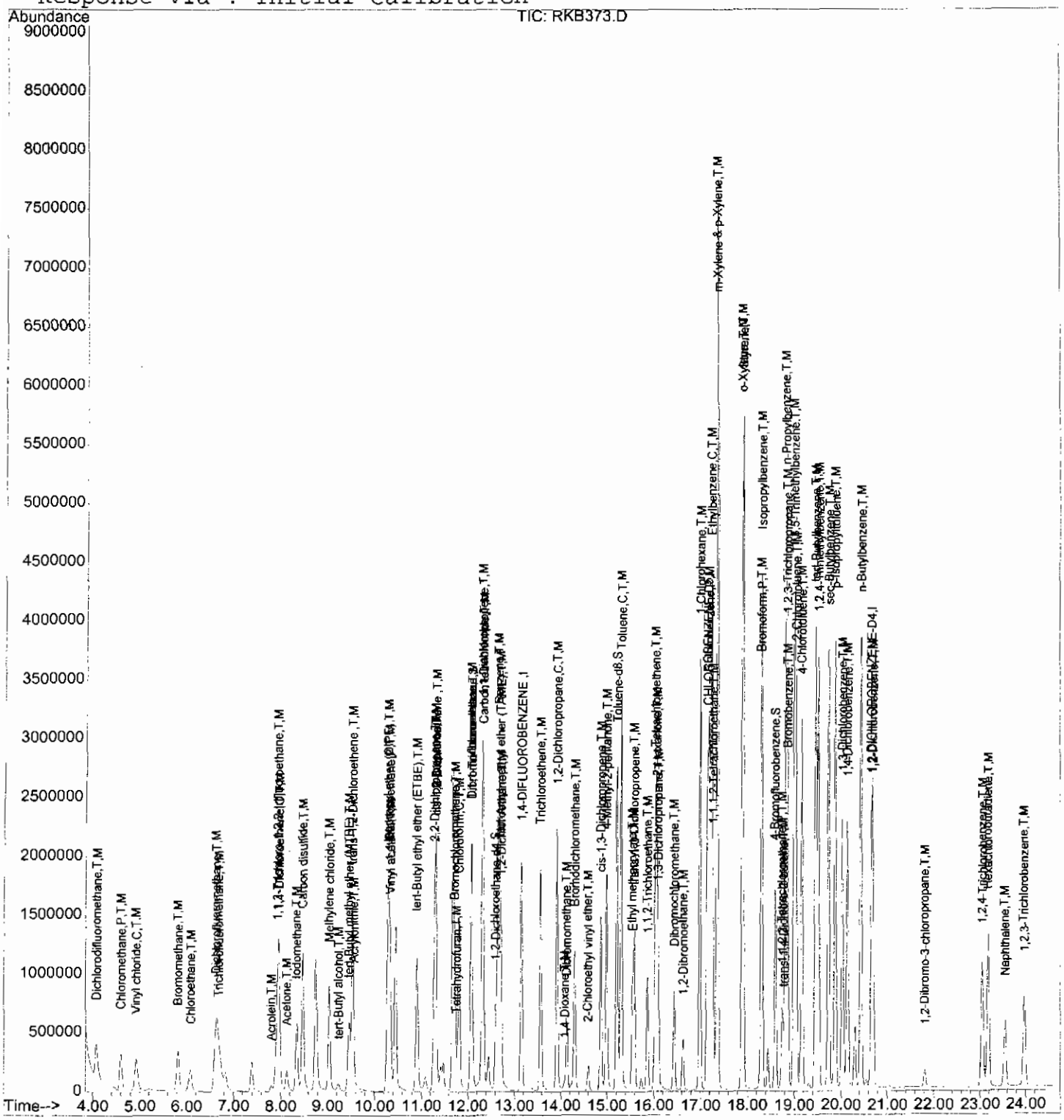
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84)	tert-Butylbenzene	19.46	134	668939	9.72 ug/l	95
85)	1,2,4-Trimethylbenzene	19.52	105	3179770	9.63 ug/l	98
86)	sec-Butylbenzene	19.74	105	4464849	9.87 ug/l	99
87)	p-Isopropyltoluene	19.87	119	3453273	9.89 ug/l	98
88)	1,3-Dichlorobenzene	20.04	146	1517255	9.76 ug/l	99
89)	1,4-Dichlorobenzene	20.14	146	1421730	9.83 ug/l	99
90)	n-Butylbenzene	20.44	91	3861284	10.02 ug/l	99
91)	1,2-Dichlorobenzene	20.69	146	1176821	9.89 ug/l	99
92)	1,2-Dibromo-3-chloropropan	21.81	157	64193	10.58 ug/l	97
93)	1,2,4-Trichlorobenzene	23.06	180	607902	10.08 ug/l	100
94)	Hexachlorobutadiene	23.18	225	490626	8.88 ug/l	100
95)	Naphthalene	23.55	128	869866	11.19 ug/l	100
96)	1,2,3-Trichlorobenzene	23.97	180	448441	10.12 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K22\RKB373.D Vial: 2
Acq On : 22 Nov 2011 8:53 pm Operator: CGM
Sample : CVO03H1657 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 22 21:18 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration



5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB413
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K184
BFB Injection Date : 11/23/11
BFB Injection Time : 23:10
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.47
75	30.0 - 60.0% of mass 95	53.39
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.81
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	57.25
175	5.0 - 9.0% of mass 174	4.36(7.6)1
176	95.0 - 101.0% of mass 174	55.78(97.4)1
177	5.0 - 9.0% of mass 176	3.94(7.1)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV003H1659	RKB414	11/23/11	23:47
2	MBLK3W	V003K26B	RKB418	11/24/11	02:17
3	LCS3W	V003K26L	RKB415	11/24/11	00:25
4	LCD3W	V003K26C	RKB416	11/24/11	01:03
5	MW-70-PMW13A-153DL	K184-01T	RKB420	11/24/11	03:33
6	MW-70-PMW14A-155DL	K184-03T	RKB422	11/24/11	04:47
7	MW-70-PMW14B-156DL	K184-04T	RKB423	11/24/11	05:25

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RHB444
Instrument ID: 03
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K184
Date Analyzed: 08/16/11
Time Analyzed: 14:40
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1861981	13.20	1722743	17.19	603523	20.72
	UPPER LIMIT	3723962	13.70	3445486	17.69	1207046	21.22
	LOWER LIMIT	930991	12.70	861372	16.69	301762	20.22
	SAMPLE ID						
1	VSTD010	1983747	13.16	1916314	17.15	678515	20.68
2	MBLK3W	2326489	13.17	2196286	17.16	753956	20.67
3	LCS3W	2046486	13.16	1945747	17.16	687997	20.67
4	LCD3W	2171518	13.17	2042246	17.16	710841	20.67
5	MW-70-PMW13A-153DL	2129771	13.16	2007734	17.15	682467	20.68
6	MW-70-PMW14A-155DL	1935217	13.16	1864043	17.15	631460	20.68
7	MW-70-PMW14B-156DL	2089026	13.17	1965080	17.16	660600	20.67

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

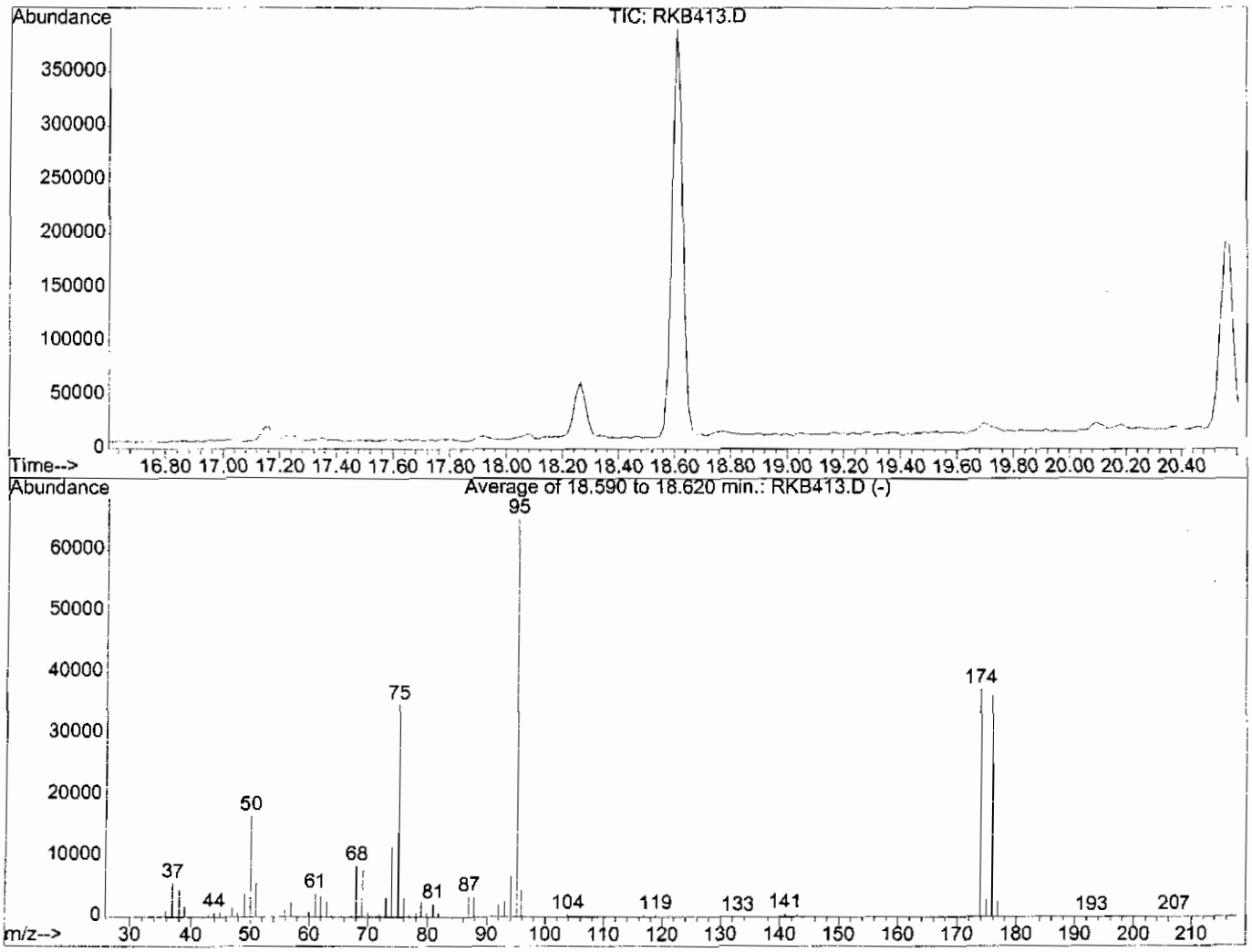
AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

BFB

Data File : D:\HPCHEM\1\DATA\11K23\RKB413.D Vial: 1
Acq On : 23 Nov 2011 11:10 pm Operator: CGM
Sample : BFB03K26 Inst : 03
Misc : T/CHECK Multiplr: 1.00
MS Integration Params: 524TAIL.P
Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL



AutoFind: Scans 992, 993, 994; Background Corrected with Scan 987

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.5	16579	PASS
75	95	30	60	53.4	34760	PASS
95	95	100	100	100.0	65104	PASS
96	95	5	9	6.8	4432	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	57.2	37272	PASS
175	174	5	9	7.6	2840	PASS
176	174	95	101	97.4	36315	PASS
177	176	5	9	7.1	2568	PASS

RKB413.D VO03H16.M Mon Nov 28 12:33:36 2011

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB414.D Vial: 2
Acq On : 23 Nov 2011 11:47 pm Operator: CGM
Sample : CVO03H1659 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	107	0.00
2	T,M	Chlorotrifluoroethylene	-1.000	0.000	0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	10.786	-7.9	94	0.02
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	93	0.02
5	P,T,M	Chloromethane	10.000	10.358	-3.6	92	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000	0.0	0	-5.22#
7	C,T,M	Vinyl chloride	10.000	9.250	7.5	80	0.02
8	T,M	Bromomethane	10.000	10.138	-1.4	87	0.00
9	T,M	Chloroethane	10.000	10.312	-3.1	90	0.02
10	T,M	Dichlorofluoromethane	10.000	9.935	0.6	99	0.00
11	T,M	Trichlorofluoromethane	10.000	8.520	14.8	74	0.00
12	T,M	Acrolein	50.000	45.454	9.1	95	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	8.924	10.8	91	0.00
14	T,M	Acetone	50.000	55.497	-11.0	114	0.00
15	C,T,M	1,1-Dichloroethene	10.000	9.678	3.2	96	0.00
16	T,M	Methyl acetate	-1.000	0.000	0.0	114	0.00
17	T,M	Iodomethane	10.000	9.224	7.8	91	0.00
18	T,M	Carbon disulfide	10.000	9.609	3.9	104	0.00
19	T,M	Methylene chloride	10.000	10.225	-2.2	104	0.00
20	T,M	tert-Butyl alcohol	50.000	53.351	-6.7	103	0.00
21	T,M	tert-Butyl methyl ether (MT	10.000	10.819	-8.2	109	0.00
22	T,M	trans-1,2-Dichloroethene	10.000	9.963	0.4	99	0.00
23	T,M	Acrylonitrile	50.000	59.594	-19.2	118	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	10.845	-8.5	106	0.00
25	T,M	Vinyl acetate	10.000	7.436	25.6#	68	0.00
26	P,T,M	1,1-Dichloroethane	10.000	10.115	-1.2	99	0.00
27	T,M	2-Butanol	-1.000	0.000	0.0	102	0.00
28	T,M	tert-Butyl ethyl ether (ETB	10.000	11.234	-12.3	112	-0.01
29	T,M	2,2-Dichloropropane	10.000	8.330	16.7	82	0.00
30	T,M	2-Butanone	50.000	56.421	-12.8	117	-0.01
31	T,M	cis-1,2-Dichloroethene	10.000	10.220	-2.2	101	0.00
32	T,M	Bromochloromethane	10.000	11.032	-10.3	108	0.00
33	T,M	Tetrahydrofuran	10.000	11.598	-16.0	130	0.00
34	C,T,M	Chloroform	10.000	10.060	-0.6	99	0.00
35	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	29	0.02
36	S	Dibromofluoromethane	10.000	9.791	2.1	99	0.00
37	T,M	1,1,1-Trichloroethane	10.000	9.444	5.6	92	0.00
38	T,M	Cyclohexane	-1.000	0.000	0.0	118	0.00
39	T,M	tert-Amyl methyl ether (TAM	10.000	11.072	-10.7	107	0.00
40	S	1,2-Dichloroethane-d4	10.000	9.755	2.4	99	0.00
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	111	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB414.D Vial: 2
Acq On : 23 Nov 2011 11:47 pm Operator: CGM
Sample : CVO03H1659 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	9.211	7.9	95	0.02
43	T,M	Carbon tetrachloride	10.000	8.921	10.8	93	0.00
44	T,M	Benzene	10.000	9.903	1.0	103	0.00
45	T,M	1,2-Dichloroethane	10.000	9.563	4.4	100	0.00
46	T,M	Trichloroethene	10.000	9.719	2.8	102	0.00
47	T,M	Methylcyclohexane	-1.000	0.000	0.0	93	0.00
48	C,T,M	1,2-Dichloropropane	10.000	10.644	-6.4	111	0.00
49	T,M	1,4-Dioxane	200.000	234.507	-17.3	131	0.00
50	T,M	Dibromomethane	10.000	9.945	0.5	105	0.00
51	T,M	Bromodichloromethane	10.000	9.862	1.4	102	0.00
52	T,M	2-Chloroethyl vinyl ether	10.000	9.746	2.5	106	0.00
53	T,M	cis-1,3-Dichloropropene	10.000	10.071	-0.7	104	0.00
54	T,M	4-Methyl-2-pentanone	50.000	56.941	-13.9	121	0.00
55	S	Toluene-d8	10.000	9.228	7.7	100	0.00
56	C,T,M	Toluene	10.000	9.817	1.8	103	0.00
57	T,M	Ethyl methacrylate	10.000	11.067	-10.7	115	0.00
58	T,M	trans-1,3-Dichloropropene	10.000	10.265	-2.7	104	0.00
59	T,M	1,1,2-Trichloroethane	10.000	10.362	-3.6	108	0.00
60	T,M	Tetrachloroethene	10.000	8.982	10.2	95	0.00
61	T,M	2-Hexanone	50.000	60.780	-21.6#	125	0.00
62	T,M	1,3-Dichloropropane	10.000	10.632	-6.3	110	0.00
63	T,M	Dibromochloromethane	10.000	10.272	-2.7	105	0.00
64	T,M	1,2-Dibromoethane	10.000	10.571	-5.7	110	0.00
65	T,M	1-Chlorohexane	10.000	9.777	2.2	103	0.00
66	P,M	Chlorobenzene	10.000	10.125	-1.3	106	0.00
67	C,T,M	Ethylbenzene	10.000	9.777	2.2	103	0.00
68	T,M	1,1,1,2-Tetrachloroethane	10.000	10.016	-0.2	102	0.00
69	T,M	m-Xylene & p-Xylene	20.000	19.354	3.2	103	0.00
70	T,M	o-Xylene	10.000	9.977	0.2	104	0.02
71	T,M	Styrene	10.000	10.637	-6.4	107	0.00
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	112	0.00
73	T,M	Isopropylbenzene	10.000	9.761	2.4	105	0.02
74	P,T,M	Bromoform	10.000	10.137	-1.4	104	0.00
75	S	4-Bromofluorobenzene	10.000	9.521	4.8	104	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.962	-9.6	118	0.00
77	T,M	trans-1,4-Dichloro-2-butene	10.000	10.565	-5.6	116	0.00
78	T,M	n-Propylbenzene	10.000	9.972	0.3	107	0.00
79	T,M	1,2,3-Trichloropropane	10.000	10.769	-7.7	112	0.00
80	T,M	Bromobenzene	10.000	9.742	2.6	104	0.00
81	T,M	1,3,5-Trimethylbenzene	10.000	9.676	3.2	103	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB414.D Vial: 2
Acq On : 23 Nov 2011 11:47 pm Operator: CGM
Sample : CVO03H1659 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	9.758	2.4	104	0.00
83	T,M	4-Chlorotoluene	10.000	9.959	0.4	106	0.00
84	T,M	tert-Butylbenzene	10.000	9.842	1.6	105	0.00
85	T,M	1,2,4-Trimethylbenzene	10.000	9.944	0.6	106	0.00
86	T,M	sec-Butylbenzene	10.000	9.859	1.4	105	0.00
87	T,M	p-Isopropyltoluene	10.000	9.937	0.6	104	0.00
88	T,M	1,3-Dichlorobenzene	10.000	9.936	0.6	105	0.00
89	T,M	1,4-Dichlorobenzene	10.000	10.070	-0.7	105	0.00
90	T,M	n-Butylbenzene	10.000	10.014	-0.1	105	0.00
91	T,M	1,2-Dichlorobenzene	10.000	9.881	1.2	104	0.00
92	T,M	1,2-Dibromo-3-chloropropane	10.000	10.196	-2.0	105	0.00
93	T,M	1,2,4-Trichlorobenzene	10.000	9.407	5.9	98	0.00
94	T,M	Hexachlorobutadiene	10.000	7.960	20.4#	82	0.00
95	T,M	Naphthalene	10.000	10.623	-6.2	107	0.00
96	T,M	1,2,3-Trichlorobenzene	10.000	9.310	6.9	98	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB414.D Vial: 2
Acq On : 23 Nov 2011 11:47 pm Operator: CGM
Sample : CVO03H1659 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	107	0.00
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.381	-7.9	94	0.02
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	93	0.02
5	P,T,M	Chloromethane	0.357	0.369	-3.4	92	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.22#
7	C,T,M	Vinyl chloride	0.337	0.312	7.4	80	0.02
8	T,M	Bromomethane	0.227	0.230	-1.3	87	0.00
9	T,M	Chloroethane	0.177	0.183	-3.4	90	0.02
10	T,M	Dichlorofluoromethane	0.764	0.759	0.7	99	0.00
11	T,M	Trichlorofluoromethane	0.545	0.464	14.9	74	0.00
12	T,M	Acrolein	0.009	0.008	11.1	95	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.181	10.8	91	0.00
14	T,M	Acetone	0.039	0.043	-10.3	114	0.00
15	C,T,M	1,1-Dichloroethene	0.673	0.651	3.3	96	0.00
16	T,M	Methyl acetate	0.000	0.000	0.0	114	0.00
17	T,M	Iodomethane	0.631	0.582	7.8	91	0.00
18	T,M	Carbon disulfide	1.353	1.300	3.9	104	0.00
19	T,M	Methylene chloride	0.475	0.486	-2.3	104	0.00
20	T,M	tert-Butyl alcohol	0.012	0.013	-8.3	103	0.00
21	T,M	tert-Butyl methyl ether (MT	0.489	0.529	-8.2	109	0.00
22	T,M	trans-1,2-Dichloroethene	0.686	0.683	0.4	99	0.00
23	T,M	Acrylonitrile	0.036	0.042	-16.7	118	0.00
24	T,M	Isopropyl ether (DIPE)	1.196	1.297	-8.4	106	0.00
25	T,M	Vinyl acetate	0.401	0.298	25.7#	68	0.00
26	P,T,M	1,1-Dichloroethane	0.743	0.751	-1.1	99	0.00
27	T,M	2-Butanol	0.000	0.000	0.0	102	0.00
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.962	-12.4	112	-0.01
29	T,M	2,2-Dichloropropane	0.605	0.504	16.7	82	0.00
30	T,M	2-Butanone	0.066	0.075	-13.6	117	-0.01
31	T,M	cis-1,2-Dichloroethene	0.389	0.398	-2.3	101	0.00
32	T,M	Bromochloromethane	0.307	0.339	-10.4	108	0.00
33	T,M	Tetrahydrofuran	0.038	0.044	-15.8	130	0.00
34	C,T,M	Chloroform	0.807	0.812	-0.6	99	0.00
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	29#	0.02
36	S	Dibromofluoromethane	0.372	0.364	2.2	99	0.00
37	T,M	1,1,1-Trichloroethane	0.723	0.683	5.5	92	0.00
38	T,M	Cyclohexane	0.000	0.000	0.0	118	0.00
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.146	-10.6	107	0.00
40	S	1,2-Dichloroethane-d4	0.378	0.369	2.4	99	0.00
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	111	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB414.D Vial: 2
Acq On : 23 Nov 2011 11:47 pm Operator: CGM
Sample : CVO03H1659 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.198	0.183	7.6	95	0.02
43	T,M	Carbon tetrachloride	0.677	0.604	10.8	93	0.00
44	T,M	Benzene	1.622	1.606	1.0	103	0.00
45	T,M	1,2-Dichloroethane	0.500	0.479	4.2	100	0.00
46	T,M	Trichloroethene	0.445	0.432	2.9	102	0.00
47	T,M	Methylcyclohexane	0.000	0.000	0.0	93	0.00
48	C,T,M	1,2-Dichloropropane	0.415	0.442	-6.5	111	0.00
49	T,M	1,4-Dioxane	0.001	0.002	-100.0#	131	0.00
50	T,M	Dibromomethane	0.196	0.195	0.5	105	0.00
51	T,M	Bromodichloromethane	0.620	0.611	1.5	102	0.00
52	T,M	2-Chloroethyl vinyl ether	0.125	0.122	2.4	106	0.00
53	T,M	cis-1,3-Dichloropropene	0.640	0.645	-0.8	104	0.00
54	T,M	4-Methyl-2-pentanone	0.202	0.230	-13.9	121	0.00
55	S	Toluene-d8	1.420	1.311	7.7	100	0.00
56	C,T,M	Toluene	1.759	1.727	1.8	103	0.00
57	T,M	Ethyl methacrylate	0.326	0.361	-10.7	115	0.00
58	T,M	trans-1,3-Dichloropropene	0.501	0.514	-2.6	104	0.00
59	T,M	1,1,2-Trichloroethane	0.217	0.225	-3.7	108	0.00
60	T,M	Tetrachloroethene	0.382	0.343	10.2	95	0.00
61	T,M	2-Hexanone	0.133	0.162	-21.8#	125	0.00
62	T,M	1,3-Dichloropropane	0.434	0.462	-6.5	110	0.00
63	T,M	Dibromochloromethane	0.322	0.330	-2.5	105	0.00
64	T,M	1,2-Dibromoethane	0.238	0.251	-5.5	110	0.00
65	T,M	1-Chlorohexane	0.816	0.798	2.2	103	0.00
66	P,M	Chlorobenzene	1.009	1.022	-1.3	106	0.00
67	C,T,M	Ethylbenzene	2.272	2.221	2.2	103	0.00
68	T,M	1,1,1,2-Tetrachloroethane	0.375	0.375	0.0	102	0.00
69	T,M	m-Xylene & p-Xylene	1.750	1.693	3.3	103	0.00
70	T,M	o-Xylene	1.697	1.693	0.2	104	0.02
71	T,M	Styrene	1.095	1.165	-6.4	107	0.00
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	112	0.00
73	T,M	Isopropylbenzene	5.670	5.534	2.4	105	0.02
74	P,T,M	Bromoform	0.413	0.419	-1.5	104	0.00
75	S	4-Bromofluorobenzene	1.556	1.482	4.8	104	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	0.753	0.826	-9.7	118	0.00
77	T,M	trans-1,4-Dichloro-2-butene	0.244	0.258	-5.7	116	0.00
78	T,M	n-Propylbenzene	8.060	8.037	0.3	107	0.00
79	T,M	1,2,3-Trichloropropane	0.175	0.189	-8.0	112	0.00
80	T,M	Bromobenzene	1.142	1.112	2.6	104	0.00
81	T,M	1,3,5-Trimethylbenzene	4.888	4.729	3.3	103	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB414.D Vial: 2
Acq On : 23 Nov 2011 11:47 pm Operator: CGM
Sample : CVO03H1659 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	4.907	2.4	104	0.00
83	T,M	4-Chlorotoluene	4.346	4.328	0.4	106	0.00
84	T,M	tert-Butylbenzene	0.969	0.954	1.5	105	0.00
85	T,M	1,2,4-Trimethylbenzene	4.650	4.624	0.6	106	0.00
86	T,M	sec-Butylbenzene	6.369	6.279	1.4	105	0.00
87	T,M	p-Isopropyltoluene	4.917	4.886	0.6	104	0.00
88	T,M	1,3-Dichlorobenzene	2.190	2.176	0.6	105	0.00
89	T,M	1,4-Dichlorobenzene	2.037	2.051	-0.7	105	0.00
90	T,M	n-Butylbenzene	5.430	5.437	-0.1	105	0.00
91	T,M	1,2-Dichlorobenzene	1.675	1.655	1.2	104	0.00
92	T,M	1,2-Dibromo-3-chloropropane	0.085	0.087	-2.4	105	0.00
93	T,M	1,2,4-Trichlorobenzene	0.850	0.799	6.0	98	0.00
94	T,M	Hexachlorobutadiene	0.778	0.619	20.4#	82	0.00
95	T,M	Naphthalene	1.095	1.163	-6.2	107	0.00
96	T,M	1,2,3-Trichlorobenzene	0.624	0.581	6.9	98	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K23\RKB414.D Vial: 2
Acq On : 23 Nov 2011 11:47 pm Operator: CGM
Sample : CVO03H1659 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 24 0:11 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.16	114	1983747	10.00	ug/l	0.00
41) CHLOROBENZENE-D5	17.15	117	1916314	10.00	ug/l	0.00
72) 1,2-DICHLOROBENZENE-D4	20.68	152	678515	10.00	ug/l	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	12.07	111	721560	9.79	ug/l	0.00
Spiked Amount 10.000			Recovery	=	97.90%	
40) 1,2-Dichloroethane-d4	12.61	65	731914	9.76	ug/l	0.00
Spiked Amount 10.000			Recovery	=	97.60%	
55) Toluene-d8	15.22	98	2511899	9.23	ug/l	0.00
Spiked Amount 10.000			Recovery	=	92.30%	
75) 4-Bromofluorobenzene	18.61	95	1005388	9.52	ug/l	0.00
Spiked Amount 10.000			Recovery	=	95.20%	

Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.08	85	755287	10.79	ug/l	99
5) Chloromethane	4.59	50	732656	10.36	ug/l	99
7) Vinyl chloride	4.92	62	618977	9.25	ug/l	99
8) Bromomethane	5.82	94	456001	10.14	ug/l	98
9) Chloroethane	6.11	64	362637	10.31	ug/l	99
10) Dichlorofluoromethane	6.63	67	1504988	9.93	ug/l	100
11) Trichlorofluoromethane	6.69	101	921193	8.52	ug/l	100
12) Acrolein	7.80	56	80157	45.45	ug/l	99
13) 1,1,2-Trichloro-1,2,2-trif	7.94	151	359316	8.92	ug/l	99
14) Acetone	8.13	43	425246	55.50	ug/l	98
15) 1,1-Dichloroethene	7.95	61	1291427	9.68	ug/l	98
17) Iodomethane	8.34	142	1154923	9.22	ug/l	99
18) Carbon disulfide	8.47	76	2579716	9.61	ug/l	100
19) Methylene chloride	9.04	49	964221	10.23	ug/l	98
20) tert-Butyl alcohol	9.23	59	127450	53.35	ug/l	96
21) tert-Butyl methyl ether (M	9.47	73	1048666	10.82	ug/l	98
22) trans-1,2-Dichloroethene	9.53	61	1355273	9.96	ug/l	98
23) Acrylonitrile	9.56	53	419938	59.59	ug/l	97
24) Isopropyl ether (DIPE)	10.29	45	2573006	10.84	ug/l	97
25) Vinyl acetate	10.33	43	592127	7.44	ug/l	98
26) 1,1-Dichloroethane	10.32	63	1489916	10.11	ug/l	100
28) tert-Butyl ethyl ether (ET	10.90	59	1907708	11.23	ug/l	99
29) 2,2-Dichloropropane	11.29	77	999674	8.33	ug/l	99
30) 2-Butanone	11.30	43	739460	56.42	ug/l	100
31) cis-1,2-Dichloroethene	11.32	96	789048	10.22	ug/l	99
32) Bromochloromethane	11.72	49	672611	11.03	ug/l	96
33) Tetrahydrofuran	11.78	42	87012	11.60	ug/l	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K23\RKB414.D Vial: 2
Acq On : 23 Nov 2011 11:47 pm Operator: CGM
Sample : CVO03H1659 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 24 0:11 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
34)	Chloroform	11.82	83	1610335	10.06 ug/l		100
37)	1,1,1-Trichloroethane	12.09	97	1354565	9.44 ug/l		98
39)	tert-Amyl methyl ether (TA	12.70	87	290285	11.07 ug/l	#	88
42)	1,1-Dichloropropene	12.33	110	350304	9.21 ug/l		99
43)	Carbon tetrachloride	12.33	119	1157790	8.92 ug/l		100
44)	Benzene	12.65	78	3077234	9.90 ug/l		99
45)	1,2-Dichloroethane	12.71	62	917082	9.56 ug/l		100
46)	Trichloroethene	13.58	130	828771	9.72 ug/l		98
48)	1,2-Dichloropropane	13.92	63	846556	10.64 ug/l		96
49)	1,4-Dioxane	14.08	88	57829	234.51 ug/l		95
50)	Dibromomethane	14.14	93	373562	9.95 ug/l		96
51)	Bromodichloromethane	14.31	83	1171435	9.86 ug/l		100
52)	2-Chloroethyl vinyl ether	14.60	63	233717	9.75 ug/l		99
53)	cis-1,3-Dichloropropene	14.87	75	1235282	10.07 ug/l		98
54)	4-Methyl-2-pentanone	14.99	43	2204667	56.94 ug/l		98
56)	Toluene	15.30	91	3310027	9.82 ug/l		100
57)	Ethyl methacrylate	15.54	69	692014	11.07 ug/l		99
58)	trans-1,3-Dichloropropene	15.59	75	985122	10.27 ug/l		99
59)	1,1,2-Trichloroethane	15.87	97	431114	10.36 ug/l		98
60)	Tetrachloroethene	16.05	164	658029	8.98 ug/l		99
61)	2-Hexanone	16.06	43	1554899	60.78 ug/l		99
62)	1,3-Dichloropropane	16.09	76	885029	10.63 ug/l		100
63)	Dibromochloromethane	16.44	129	633091	10.27 ug/l		99
64)	1,2-Dibromoethane	16.63	107	481945	10.57 ug/l		100
65)	1-Chlorohexane	16.99	91	1528341	9.78 ug/l		99
66)	Chlorobenzene	17.19	112	1958057	10.13 ug/l		99
67)	Ethylbenzene	17.24	91	4256055	9.78 ug/l		100
68)	1,1,1,2-Tetrachloroethane	17.27	131	719054	10.02 ug/l		98
69)	m-Xylene & p-Xylene	17.36	91	6490019	19.35 ug/l		98
70)	o-Xylene	17.91	91	3244284	9.98 ug/l		98
71)	Styrene	17.92	104	2231764	10.64 ug/l		98
73)	Isopropylbenzene	18.33	105	3754969	9.76 ug/l		99
74)	Bromoform	18.31	173	284083	10.14 ug/l		99
76)	1,1,2,2-Tetrachloroethane	18.74	83	560396	10.96 ug/l		100
77)	trans-1,4-Dichloro-2-buten	18.79	53	175221	10.57 ug/l		97
78)	n-Propylbenzene	18.83	91	5453368	9.97 ug/l		100
79)	1,2,3-Trichloropropane	18.85	110	128008	10.77 ug/l	#	94
80)	Bromobenzene	18.86	156	754774	9.74 ug/l		94
81)	1,3,5-Trimethylbenzene	19.01	105	3208951	9.68 ug/l		99
82)	2-Chlorotoluene	19.04	91	3329714	9.76 ug/l		99
83)	4-Chlorotoluene	19.17	91	2936668	9.96 ug/l		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\11K23\RKB414.D Vial: 2
Acq On : 23 Nov 2011 11:47 pm Operator: CGM
Sample : CV003H1659 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 24 0:11 2011 Quant Results File: VO03H16.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration
DataAcq Meth : VO03H16

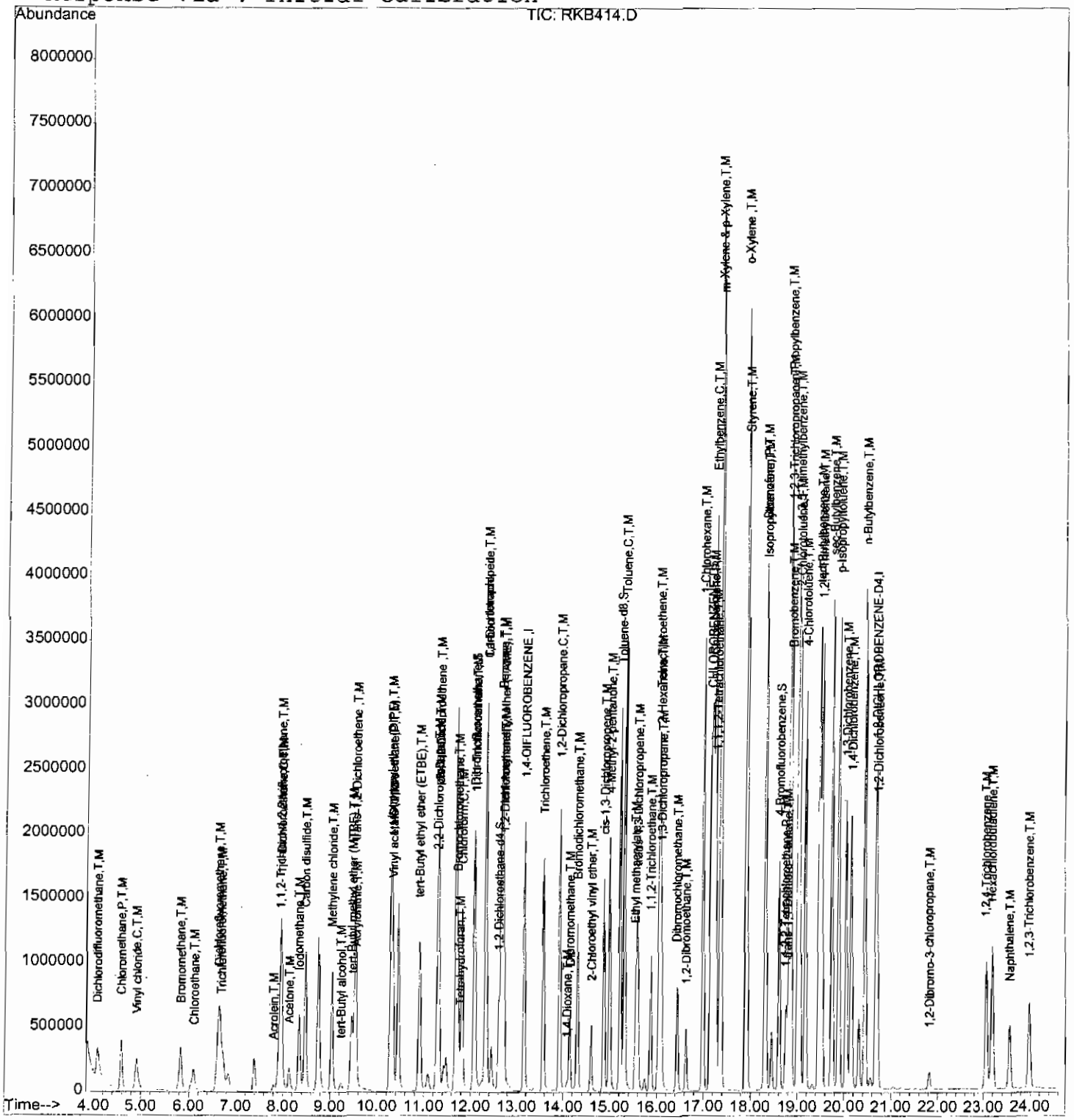
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
84)	tert-Butylbenzene	19.47	134	647045	9.84 ug/l	96
85)	1,2,4-Trimethylbenzene	19.52	105	3137737	9.94 ug/l	99
86)	sec-Butylbenzene	19.74	105	4260310	9.86 ug/l	100
87)	p-Isopropyltoluene	19.89	119	3314917	9.94 ug/l	98
88)	1,3-Dichlorobenzene	20.04	146	1476534	9.94 ug/l	99
89)	1,4-Dichlorobenzene	20.16	146	1391855	10.07 ug/l	99
90)	n-Butylbenzene	20.44	91	3689325	10.01 ug/l	99
91)	1,2-Dichlorobenzene	20.71	146	1123075	9.88 ug/l	100
92)	1,2-Dibromo-3-chloropropan	21.82	157	59136	10.20 ug/l	95
93)	1,2,4-Trichlorobenzene	23.06	180	542248	9.41 ug/l	98
94)	Hexachlorobutadiene	23.19	225	420265	7.96 ug/l	99
95)	Naphthalene	23.57	128	789428	10.62 ug/l	100
96)	1,2,3-Trichlorobenzene	23.98	180	394095	9.31 ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB414.D Vial: 2
Acq On : 23 Nov 2011 11:47 pm Operator: CGM
Sample : CVO03H1659 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Nov 24 0:11 2011 Quant Results File: VO03H16.RES

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Initial Calibration



5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB435
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K184
BFB Injection Date : 11/28/11
BFB Injection Time : 15:24
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.72
75	30.0 - 60.0% of mass 95	51.77
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.49
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	59.44
175	5.0 - 9.0% of mass 174	4.29(7.2)1
176	95.0 - 101.0% of mass 174	57.09(96.1)1
177	5.0 - 9.0% of mass 176	3.93(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV003H1660	RKB436	11/28/11	15:58
2	MBLK4W	V003K27B	RKB440	11/28/11	18:15
3	LCS4W	V003K27L	RKB437	11/28/11	16:31
4	LCD4W	V003K27C	RKB438	11/28/11	17:04
5	MW-70-PMW13B-154DL	K184-02T	RKB446	11/28/11	21:47

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RHB444
Instrument ID: 03
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K184
Date Analyzed: 08/16/11
Time Analyzed: 14:40
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1861981	13.20	1722743	17.19	603523	20.72
	UPPER LIMIT	3723962	13.70	3445486	17.69	1207046	21.22
	LOWER LIMIT	930991	12.70	861372	16.69	301762	20.22
	SAMPLE ID						
1	VSTD010	2207040	13.17	2099134	17.16	674772	20.67
2	MBLK4W	2344900	13.16	2191234	17.15	726395	20.67
3	LCS4W	2212777	13.16	2062832	17.15	662265	20.68
4	LCD4W	2254918	13.16	2079546	17.15	648008	20.68
5	MW-70-PMW13B-154DL	2165873	13.16	1980547	17.15	618242	20.68

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.
page 1 of 1

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K28\RKB436.D Vial: 2
Acq On : 28 Nov 2011 3:58 pm Operator: CGM
Sample : CVO03H1660 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	119	0.00
2	T,M	Chlorotrifluoroethylene	-1.000	0.000	0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	11.186	-11.9	109	0.00
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	108	0.00
5	P,T,M	Chloromethane	10.000	10.939	-9.4	108	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000	0.0	0	-5.22#
7	C,T,M	Vinyl chloride	10.000	10.104	-1.0	97	0.02
8	T,M	Bromomethane	10.000	11.500	-15.0	110	0.00
9	T,M	Chloroethane	10.000	11.239	-12.4	109	0.00
10	T,M	Dichlorofluoromethane	10.000	10.570	-5.7	117	0.00
11	T,M	Trichlorofluoromethane	10.000	9.076	9.2	88	0.00
12	T,M	Acrolein	50.000	42.657	14.7	99	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.494	5.1	107	0.00
14	T,M	Acetone	50.000	53.170	-6.3	122	0.00
15	C,T,M	1,1-Dichloroethene	10.000	9.628	3.7	106	0.00
16	T,M	Methyl acetate	-1.000	0.000	0.0	121	0.00
17	T,M	Iodomethane	10.000	9.474	5.3	104	0.00
18	T,M	Carbon disulfide	10.000	11.093	-10.9	134	0.00
19	T,M	Methylene chloride	10.000	10.239	-2.4	116	0.00
20	T,M	tert-Butyl alcohol	50.000	48.718	2.6	105	0.00
21	T,M	tert-Butyl methyl ether (MT	10.000	10.524	-5.2	118	0.00
22	T,M	trans-1,2-Dichloroethene	10.000	9.856	1.4	110	0.00
23	T,M	Acrylonitrile	50.000	58.565	-17.1	129	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	10.692	-6.9	117	0.00
25	T,M	Vinyl acetate	10.000	8.382	16.2	85	0.00
26	P,T,M	1,1-Dichloroethane	10.000	10.053	-0.5	110	0.00
27	T,M	2-Butanol	-1.000	0.000	0.0	115	0.00
28	T,M	tert-Butyl ethyl ether (ETB	10.000	10.910	-9.1	121	0.00
29	T,M	2,2-Dichloropropane	10.000	10.030	-0.3	110	0.00
30	T,M	2-Butanone	50.000	52.988	-6.0	122	0.00
31	T,M	cis-1,2-Dichloroethene	10.000	10.230	-2.3	113	0.00
32	T,M	Bromochloromethane	10.000	11.017	-10.2	120	0.00
33	T,M	Tetrahydrofuran	10.000	11.674	-16.7	145	0.00
34	C,T,M	Chloroform	10.000	9.626	3.7	105	0.00
35	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	82	0.00
36	S	Dibromofluoromethane	10.000	9.612	3.9	109	0.00
37	T,M	1,1,1-Trichloroethane	10.000	9.114	8.9	99	0.00
38	T,M	Cyclohexane	-1.000	0.000	0.0	113	0.00
39	T,M	tert-Amyl methyl ether (TAM	10.000	10.677	-6.8	115	0.00
40	S	1,2-Dichloroethane-d4	10.000	9.262	7.4	104	0.00
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	122	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K28\RKB436.D Vial: 2
Acq On : 28 Nov 2011 3:58 pm Operator: CGM
Sample : CVO03H1660 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	9.565	4.4	108	0.00
43	T,M	Carbon tetrachloride	10.000	8.437	15.6	96	0.00
44	T,M	Benzene	10.000	10.072	-0.7	115	0.00
45	T,M	1,2-Dichloroethane	10.000	9.110	8.9	104	0.00
46	T,M	Trichloroethene	10.000	9.356	6.4	108	0.00
47	T,M	Methylcyclohexane	-1.000	0.000	0.0	101	0.00
48	C,T,M	1,2-Dichloropropane	10.000	10.775	-7.8	123	0.00
49	T,M	1,4-Dioxane	200.000	230.768	-15.4	141	0.00
50	T,M	Dibromomethane	10.000	10.004	-0.0	116	0.00
51	T,M	Bromodichloromethane	10.000	9.497	5.0	107	0.00
52	T,M	2-Chloroethyl vinyl ether	10.000	2.134	78.7#	25	0.00
53	T,M	cis-1,3-Dichloropropene	10.000	10.181	-1.8	115	0.00
54	T,M	4-Methyl-2-pentanone	50.000	53.628	-7.3	125	0.00
55	S	Toluene-d8	10.000	9.166	8.3	108	0.00
56	C,T,M	Toluene	10.000	9.874	1.3	113	0.00
57	T,M	Ethyl methacrylate	10.000	10.535	-5.4	120	0.00
58	T,M	trans-1,3-Dichloropropene	10.000	9.886	1.1	110	0.00
59	T,M	1,1,2-Trichloroethane	10.000	10.432	-4.3	119	0.00
60	T,M	Tetrachloroethene	10.000	9.004	10.0	104	0.00
61	T,M	2-Hexanone	50.000	55.102	-10.2	124	0.00
62	T,M	1,3-Dichloropropane	10.000	10.671	-6.7	121	0.00
63	T,M	Dibromochloromethane	10.000	9.715	2.9	109	0.00
64	T,M	1,2-Dibromoethane	10.000	10.302	-3.0	117	0.00
65	T,M	1-Chlorohexane	10.000	9.988	0.1	116	0.00
66	P,M	Chlorobenzene	10.000	9.962	0.4	114	0.00
67	C,T,M	Ethylbenzene	10.000	9.634	3.7	111	0.00
68	T,M	1,1,1,2-Tetrachloroethane	10.000	9.415	5.9	105	0.00
69	T,M	m-Xylene & p-Xylene	20.000	18.834	5.8	110	0.00
70	T,M	o-Xylene	10.000	9.427	5.7	108	0.00
71	T,M	Styrene	10.000	9.832	1.7	108	0.00
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	112	0.00
73	T,M	Isopropylbenzene	10.000	10.260	-2.6	110	0.00
74	P,T,M	Bromoform	10.000	10.286	-2.9	105	0.00
75	S	4-Bromofluorobenzene	10.000	9.795	2.1	106	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	11.638	-16.4	124	0.00
77	T,M	trans-1,4-Dichloro-2-butene	10.000	9.010	9.9	98	0.00
78	T,M	n-Propylbenzene	10.000	10.413	-4.1	111	0.00
79	T,M	1,2,3-Trichloropropane	10.000	10.893	-8.9	113	0.00
80	T,M	Bromobenzene	10.000	10.041	-0.4	107	0.00
81	T,M	1,3,5-Trimethylbenzene	10.000	10.038	-0.4	106	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K28\RKB436.D Vial: 2
Acq On : 28 Nov 2011 3:58 pm Operator: CGM
Sample : CVO03H1660 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	10.077	-0.8	107	0.00
83	T,M	4-Chlorotoluene	10.000	10.302	-3.0	109	0.00
84	T,M	tert-Butylbenzene	10.000	10.233	-2.3	109	0.00
85	T,M	1,2,4-Trimethylbenzene	10.000	10.057	-0.6	107	0.00
86	T,M	sec-Butylbenzene	10.000	10.236	-2.4	109	0.00
87	T,M	p-Isopropyltoluene	10.000	10.161	-1.6	106	0.00
88	T,M	1,3-Dichlorobenzene	10.000	10.211	-2.1	108	0.00
89	T,M	1,4-Dichlorobenzene	10.000	10.071	-0.7	105	0.00
90	T,M	n-Butylbenzene	10.000	10.406	-4.1	108	0.00
91	T,M	1,2-Dichlorobenzene	10.000	9.872	1.3	104	0.00
92	T,M	1,2-Dibromo-3-chloropropane	10.000	9.642	3.6	99	0.00
93	T,M	1,2,4-Trichlorobenzene	10.000	9.212	7.9	96	0.00
94	T,M	Hexachlorobutadiene	10.000	8.235	17.7	85	0.00
95	T,M	Naphthalene	10.000	10.176	-1.8	102	0.00
96	T,M	1,2,3-Trichlorobenzene	10.000	8.983	10.2	94	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K28\RKB436.D Vial: 2
Acq On : 28 Nov 2011 3:58 pm Operator: CGM
Sample : CVO03H1660 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	119	0.00
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.395	-11.9	109	0.00
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	108	0.00
5	P,T,M	Chloromethane	0.357	0.390	-9.2	108	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.22#
7	C,T,M	Vinyl chloride	0.337	0.341	-1.2	97	0.02
8	T,M	Bromomethane	0.227	0.261	-15.0	110	0.00
9	T,M	Chloroethane	0.177	0.199	-12.4	109	0.00
10	T,M	Dichlorofluoromethane	0.764	0.807	-5.6	117	0.00
11	T,M	Trichlorofluoromethane	0.545	0.495	9.2	88	0.00
12	T,M	Acrolein	0.009	0.008	11.1	99	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.193	4.9	107	0.00
14	T,M	Acetone	0.039	0.041	-5.1	122	0.00
15	C,T,M	1,1-Dichloroethene	0.673	0.648	3.7	106	0.00
16	T,M	Methyl acetate	0.000	0.000	0.0	121	0.00
17	T,M	Iodomethane	0.631	0.598	5.2	104	0.00
18	T,M	Carbon disulfide	1.353	1.501	-10.9	134	0.00
19	T,M	Methylene chloride	0.475	0.487	-2.5	116	0.00
20	T,M	tert-Butyl alcohol	0.012	0.012	0.0	105	0.00
21	T,M	tert-Butyl methyl ether (MT	0.489	0.514	-5.1	118	0.00
22	T,M	trans-1,2-Dichloroethene	0.686	0.676	1.5	110	0.00
23	T,M	Acrylonitrile	0.036	0.042	-16.7	129	0.00
24	T,M	Isopropyl ether (DIPE)	1.196	1.279	-6.9	117	0.00
25	T,M	Vinyl acetate	0.401	0.336	16.2	85	0.00
26	P,T,M	1,1-Dichloroethane	0.743	0.747	-0.5	110	0.00
27	T,M	2-Butanol	0.000	0.000	0.0	115	0.00
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.934	-9.1	121	0.00
29	T,M	2,2-Dichloropropane	0.605	0.607	-0.3	110	0.00
30	T,M	2-Butanone	0.066	0.070	-6.1	122	0.00
31	T,M	cis-1,2-Dichloroethene	0.389	0.398	-2.3	113	0.00
32	T,M	Bromochloromethane	0.307	0.339	-10.4	120	0.00
33	T,M	Tetrahydrofuran	0.038	0.044	-15.8	145	0.00
34	C,T,M	Chloroform	0.807	0.777	3.7	105	0.00
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	82	0.00
36	S	Dibromofluoromethane	0.372	0.357	4.0	109	0.00
37	T,M	1,1,1-Trichloroethane	0.723	0.659	8.9	99	0.00
38	T,M	Cyclohexane	0.000	0.000	0.0	113	0.00
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.141	-6.8	115	0.00
40	S	1,2-Dichloroethane-d4	0.378	0.350	7.4	104	0.00
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	122	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K28\RKB436.D Vial: 2
Acq On : 28 Nov 2011 3:58 pm Operator: CGM
Sample : CVO03H1660 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.198	0.190	4.0	108	0.00
43	T,M	Carbon tetrachloride	0.677	0.571	15.7	96	0.00
44	T,M	Benzene	1.622	1.633	-0.7	115	0.00
45	T,M	1,2-Dichloroethane	0.500	0.456	8.8	104	0.00
46	T,M	Trichloroethene	0.445	0.416	6.5	108	0.00
47	T,M	Methylcyclohexane	0.000	0.000	0.0	101	0.00
48	C,T,M	1,2-Dichloropropane	0.415	0.447	-7.7	123	0.00
49	T,M	1,4-Dioxane	0.001	0.001	0.0	141	0.00
50	T,M	Dibromomethane	0.196	0.196	0.0	116	0.00
51	T,M	Bromodichloromethane	0.620	0.589	5.0	107	0.00
52	T,M	2-Chloroethyl vinyl ether	0.125	0.027	78.4#	25#	0.00
53	T,M	cis-1,3-Dichloropropene	0.640	0.652	-1.9	115	0.00
54	T,M	4-Methyl-2-pentanone	0.202	0.217	-7.4	125	0.00
55	S	Toluene-d8	1.420	1.302	8.3	108	0.00
56	C,T,M	Toluene	1.759	1.737	1.3	113	0.00
57	T,M	Ethyl methacrylate	0.326	0.344	-5.5	120	0.00
58	T,M	trans-1,3-Dichloropropene	0.501	0.495	1.2	110	0.00
59	T,M	1,1,2-Trichloroethane	0.217	0.226	-4.1	119	0.00
60	T,M	Tetrachloroethene	0.382	0.344	9.9	104	0.00
61	T,M	2-Hexanone	0.133	0.147	-10.5	124	0.00
62	T,M	1,3-Dichloropropane	0.434	0.464	-6.9	121	0.00
63	T,M	Dibromochloromethane	0.322	0.312	3.1	109	0.00
64	T,M	1,2-Dibromoethane	0.238	0.245	-2.9	117	0.00
65	T,M	1-Chlorohexane	0.816	0.815	0.1	116	0.00
66	P,M	Chlorobenzene	1.009	1.005	0.4	114	0.00
67	C,T,M	Ethylbenzene	2.272	2.188	3.7	111	0.00
68	T,M	1,1,1,2-Tetrachloroethane	0.375	0.353	5.9	105	0.00
69	T,M	m-Xylene & p-Xylene	1.750	1.648	5.8	110	0.00
70	T,M	o-Xylene	1.697	1.600	5.7	108	0.00
71	T,M	Styrene	1.095	1.076	1.7	108	0.00
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	112	0.00
73	T,M	Isopropylbenzene	5.670	5.817	-2.6	110	0.00
74	P,T,M	Bromoform	0.413	0.425	-2.9	105	0.00
75	S	4-Bromofluorobenzene	1.556	1.524	2.1	106	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	0.753	0.877	-16.5	124	0.00
77	T,M	trans-1,4-Dichloro-2-butene	0.244	0.220	9.8	98	0.00
78	T,M	n-Propylbenzene	8.060	8.393	-4.1	111	0.00
79	T,M	1,2,3-Trichloropropane	0.175	0.191	-9.1	113	0.00
80	T,M	Bromobenzene	1.142	1.147	-0.4	107	0.00
81	T,M	1,3,5-Trimethylbenzene	4.888	4.906	-0.4	106	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K28\RKB436.D Vial: 2
Acq On : 28 Nov 2011 3:58 pm Operator: CGM
Sample : CVO03H1660 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	5.068	-0.8	107	0.00
83	T,M	4-Chlorotoluene	4.346	4.477	-3.0	109	0.00
84	T,M	tert-Butylbenzene	0.969	0.992	-2.4	109	0.00
85	T,M	1,2,4-Trimethylbenzene	4.650	4.677	-0.6	107	0.00
86	T,M	sec-Butylbenzene	6.369	6.519	-2.4	109	0.00
87	T,M	p-Isopropyltoluene	4.917	4.996	-1.6	106	0.00
88	T,M	1,3-Dichlorobenzene	2.190	2.237	-2.1	108	0.00
89	T,M	1,4-Dichlorobenzene	2.037	2.052	-0.7	105	0.00
90	T,M	n-Butylbenzene	5.430	5.650	-4.1	108	0.00
91	T,M	1,2-Dichlorobenzene	1.675	1.654	1.3	104	0.00
92	T,M	1,2-Dibromo-3-chloropropane	0.085	0.082	3.5	99	0.00
93	T,M	1,2,4-Trichlorobenzene	0.850	0.783	7.9	96	0.00
94	T,M	Hexachlorobutadiene	0.778	0.641	17.6	85	0.00
95	T,M	Naphthalene	1.095	1.114	-1.7	102	0.00
96	T,M	1,2,3-Trichlorobenzene	0.624	0.560	10.3	94	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 6 ☐ EMAX-524.2 Rev.No. 5 ☐ EMAX-624 Rev.No. 2 ☐ EMAX-8260SIM Rev.No.0 ☐ EMAX-TCPSIM Rev.No.1 ☐ EMAX-M8260SIM Rev.No.0 ☐

Start Date: 8/16/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -047

Sample Prep. ID	Data File Name	Lab Sample ID	* Sample Amount (g/mL/cm²)	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RHB438	BFB03H23	1mL	N/A	N/A	N/A	N/A	11:15am
02	439	V003H161	.04/1/1.5mL					0.3/1.5/1.5ppb d2100
03	440	2	.05/1/2.5mL					0.5/2.5/2.5ppb
04	441	3	.1/1/5mL					1.0/5.0/5.0ppb
05	442	4	.2/1/10mL					2.0/10/10ppb
06	443	5	.5/1/25mL					5.0/25/25ppb
07	444	6	1/1/50mL					10/50/50ppb
08	445	7	2/1/100mL					20/100/100ppb
09	446	8	3/1/150mL					30/150/150ppb
10	447	9	4/1/200mL					40/200/200ppb
11	448	10	5/1/250mL					50/250/250ppb
12	449	11	10/1/500mL					100/500/500ppb
13	450	IS/SS	25mL					
14	451	V003H23B	↓					
15	452	V003H161	1/1/5mL					10/50/50ppb
16	453	RINSE	25mL					7:49pm
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29			NW	8/19/11				

BATCH V003H/16

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003H16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC Fmics	SV1-17-76-1	*	
DCC CL	-71-1		
DCC Mbo	-72-1		
DCC TTMB	-69-3		
BFB	-45-3	1	50/250
IS/SURR.	-73-3	1	
ICV/LCS Fmics	-69-1	1	
ICV/LCS CL	-71-2	1	
ICV/LCS Mbo	-60-2	5	
ICV/LCS TTMB	-70-2	5	
SS	-51-3	1	
	-52-1	*	
DATA FILE FOLDER	11H16		

Electronic Data Archival

Location	Date
HPCHEM_VOA/T003	

Comments: *Check KFL YO Sample amount

Analyzed By: NW

Date Disposed: 8/17/11

Disposed By: NW

2158

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/22/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -048

BATCH V003H165G

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKB 350	BFB03K23						07:12
02	51	V003H165G						
03	52	V003K23L		1.0				
04	53	C						
05	54	B	25 mL					
06	55	11K146-01T	5.0 mL	5.0				
07	56	11K151-10R	25 mL	1.0				
08	57	11K173-01T	0.05 mL	500				RR 50X
09	58	11K174-05	25 mL	1.0				
10	59	11K151-17						
11	60	11K151-1817						
12	61	-1918						
13	62	-2019						
14	63	11K174-20						
15	64	11K174-01						50X
16	65	02						
17	66	03						
18	67	04						5X
19	68	05						50X
20	69	06						
21	70	07						19:06
22	71	Rinse						
23								
24								
25								
26								
27								
28								
29								

CGM 11/22/11

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003H16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-19-6.2	1	
DCC	6.3	1	
DCC	7.2	5	
DCC	8.1	5	
BFB	3.2	1	50
IS/SURR.	6.1	1	250
ICV/LCS	SV1-17-90.3	1	
ICV/LCS	97.2	1	
ICV/LCS	89.2	5	
ICV/LCS	99.3	5	

DATA FILE FOLDER 11K22

Electronic Data Archival

Location	Date
HPCHEM_VOA/T003	

Comments:

Analyzed By: CGM

Date Disposed: 11/23/11

Disposed By: CGM 11/

2161

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/22/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -048

BATCH V003H1657

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKB372	BFB03K24						20:17
02	73	CV003H1657						
03	74	V003K24L		1.0				
04	75	C						
05	76	B	25mL					
06	77	11K184-06						
07	78	11K166-07						
08	79	-06						
09	80	-01						
10	81	-02						
11	82	-03						
12	83	-04						
13	84	Rinse						
14	85	11K166-05						
15	86	Rinse						
16	87							
17	88	11K184-01						10X
18	89	-02						50X
19	90	-03						10X
20	91	-04						10X 07:25
21								
22								
23								
24								
25								
26								
27								
28								
29								

CGM 11/22/11

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003H16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-19-6.2	1	
DCC	6.3	1	
DCC	7.2	5	
DCC	8.1	5	
BFB	3.2	1	50
IS/SURR.	6.1	1	250
ICV/LCS	SV1-17-90.3	1	
ICV/LCS	97.2	1	
ICV/LCS	89.2	5	
ICV/LCS	99.3	5	

DATA FILE FOLDER	11K22
Electronic Data Archival	
Location	Date
HPCHEM_VOA/T003	

Comments:

Analyzed By: CGM

Date Disposed: 11/23/11

Disposed By: CGM

2165

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/23/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -048

BATCH CV003H1659

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKB413	BFB03K26						23:10
02	414	CV003H1659 (CGM 11/23/11)						
03	415	V003K26L		10				
04	416	↓ C		↓				
05	417	Rinse						
06	418	V003K26B	25 mL	10				
07	419	11K174-01T	0.5 mL	50	✓	✓		
08	420	11K184-01T	2.5 mL	10	✓	✓		
09	421	02T	0.5 mL	50	✓	✓		
10	422	03T	2.5 mL	10	✓	✓		
11	423	04T	2.5 mL	↓	✓	✓		
12	424	11K246-01	25 mL	10	✓	✓		
13	425	02			✓	✓		
14	426	03			✓	✓		
15	427	04			✓	✓		
16	428	05			✓	✓		
17	429	06			✓	✓		
18	430	07			✓	✓		
19	431	08			✓	✓		
20	432	09			✓	✓		11:03
21	433	10			✓	✓		concentrator froze, RR ✗
22								
23								
24								
25								
26								
27								
28								
29								

CGM 11/23/11

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003H16

STANDARDS

NAME	ID	Amount (ul)	Conc. (mg/L)
DCC	SM-19-6-2	1	
DCC	6-3	1	
DCC	7-2	5	
DCC	8-1	5	
BFB	5-2	1	50/250
IS/SURR.	6-1	1	
ICV/LCS	SM-17-90-3	1	
ICV/LCS	9-2	1	
ICV/LCS	SM-19-9-2	5	
ICV/LCS	SM-17-99-3	5	

DATA FILE FOLDER 11K23

Electronic Data Archival

Location	Date
HPCHEM_VOA/T003	11/28/11

Comments:

Analyzed By: CGM

Date Disposed: 11/28/11

Disposed By: CGM

2166

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-S24.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/28/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge Book # A03 -048

BATCH CV003H1660

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKB435	BFB03K27						15:24
02	36	CV003H1660						
03	37	V003K27L		1.0				
04	38	↓ C		↓				
05	39	Rinse						
06	40	V003K27B	25mL	1.0				
07	41	11K206-10R	↓	↓				
08	42	11K174-05T	0.5mL	50				
09	43	↓ -06T	↓	↓				
10	44	11K217-04	25mL	1.0				
11	45	↓ -05	↓	↓				
12	46	11K184-02T	0.5mL	50				
13	47	↓ -02R	25mL	1.0				
14	48	Rinse						
15	49	11K217-01	25mL	1.0				
16	50	↓ 02	↓	↓				
17	51	↓ 03	↓	↓				10X (gas) 16:59
18	52	Rinse						
19	53	↓						
20	54	↓						
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								CGM 11/28/11

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003 H16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SM-19-6-2	1	
DCC	6-3	1	
DCC	7-2	5	
DCC	8-1	5	
BFB	3-2	1	50
IS/SURR.	6-1	1	250
ICV/LCS	SM-17-90-3	1	
ICV/LCS	97-2	1	
ICV/LCS	SM-19-9-2	5	
ICV/LCS	SM-17-99-3	5	

DATA FILE FOLDER 11K28

Electronic Data Archival

Location	Date
HPCHEM_VOA/T003	

Comments:

Analyzed By: CGM

Date Disposed: 11/29/11

Disposed By: CGM

2157

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD RSK-175
DISSOLVED GASES

SDG#: 11K184

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K184

METHOD RSK-175
DISSOLVED GASES

A total of five (5) water samples were received on 11/18/11 for Dissolved Gas analysis, Method RSK-175 in accordance with USEPA at R.S. Kerr Environmental Research Laboratory, Ada, OK 74820 March 15, 1989.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary form for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for DGK015WL were all within QC limits.
Percent recoveries for DGK021WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED GASES

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K184
Instrument ID : GCT010

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DGK015WB	1	NA	11/22/1116:29	11/22/1115:45	FK22040A	FK22038A	DGK015W	Method Blank
LCS1W	DGK015WL	1	NA	11/22/1116:43	11/22/1115:45	FK22041A	FK22038A	DGK015W	Lab Control Sample (LCS)
MBLK2W	DGK021WB	1	NA	11/30/1107:54	11/30/1107:20	FK30003A	FK30002A	DGK021W	Method Blank
LCS2W	DGK021WL	1	NA	11/30/1108:07	11/30/1107:20	FK30004A	FK30002A	DGK021W	Lab Control Sample (LCS)
LCD2W	DGK021WC	1	NA	11/30/1108:21	11/30/1107:20	FK30005A	FK30002A	DGK021W	LCS Duplicate
MW-70-PMW13A-153	K184-01	1	NA	11/30/1108:41	11/30/1107:20	FK30006A	FK30002A	DGK021W	Field Sample
MW-70-PMW13A-153DL	K184-01T	10	NA	11/30/1108:54	11/30/1107:20	FK30007A	FK30002A	DGK021W	Diluted Sample
MW-70-PMW13B-154	K184-02	1	NA	11/30/1109:27	11/30/1107:20	FK30008A	FK30002A	DGK021W	Field Sample
MW-70-PMW14A-155	K184-03	1	NA	11/30/1110:17	11/30/1107:20	FK30010A	FK30002A	DGK021W	Field Sample
MW-70-PMW14A-155DL	K184-03T	2	NA	11/30/1111:36	11/30/1107:20	FK30012A	FK30002A	DGK021W	Diluted Sample
MW-70-PMW14A-155DL	K184-03I	1000	NA	11/30/1112:03	11/30/1107:20	FK30013A	FK30002A	DGK021W	Diluted Sample
MW-70-PMW14B-156	K184-04	1	NA	11/30/1112:15	11/30/1107:20	FK30014A	FK30002A	DGK021W	Field Sample
MW-70-PMW14B-156DL	K184-04T	1000	NA	11/30/1112:28	11/30/1107:20	FK30015A	FK30002A	DGK021W	Diluted Sample
IW-70-SSB109-157	K184-05	1	NA	11/22/1118:18	11/22/1115:45	FK22048A	FK22038A	DGK015W	Field Sample
IW-70-SSB109-157DL	K184-05T	1000	NA	11/22/1118:34	11/22/1115:45	FK22049A	FK22038A	DGK015W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/18/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
Batch No.	: 11K184	Date Extracted:	11/30/11 07:20
Sample ID:	MW-70-PMW13A-153	Date Analyzed:	11/30/11 08:41
Lab Samp ID:	K184-01	Dilution Factor:	1
Lab File ID:	FK30006A	Matrix :	WATER
Ext Btch ID:	DGK021W	% Moisture :	NA
Calib. Ref.:	FK30002A	Instrument ID :	GCT010

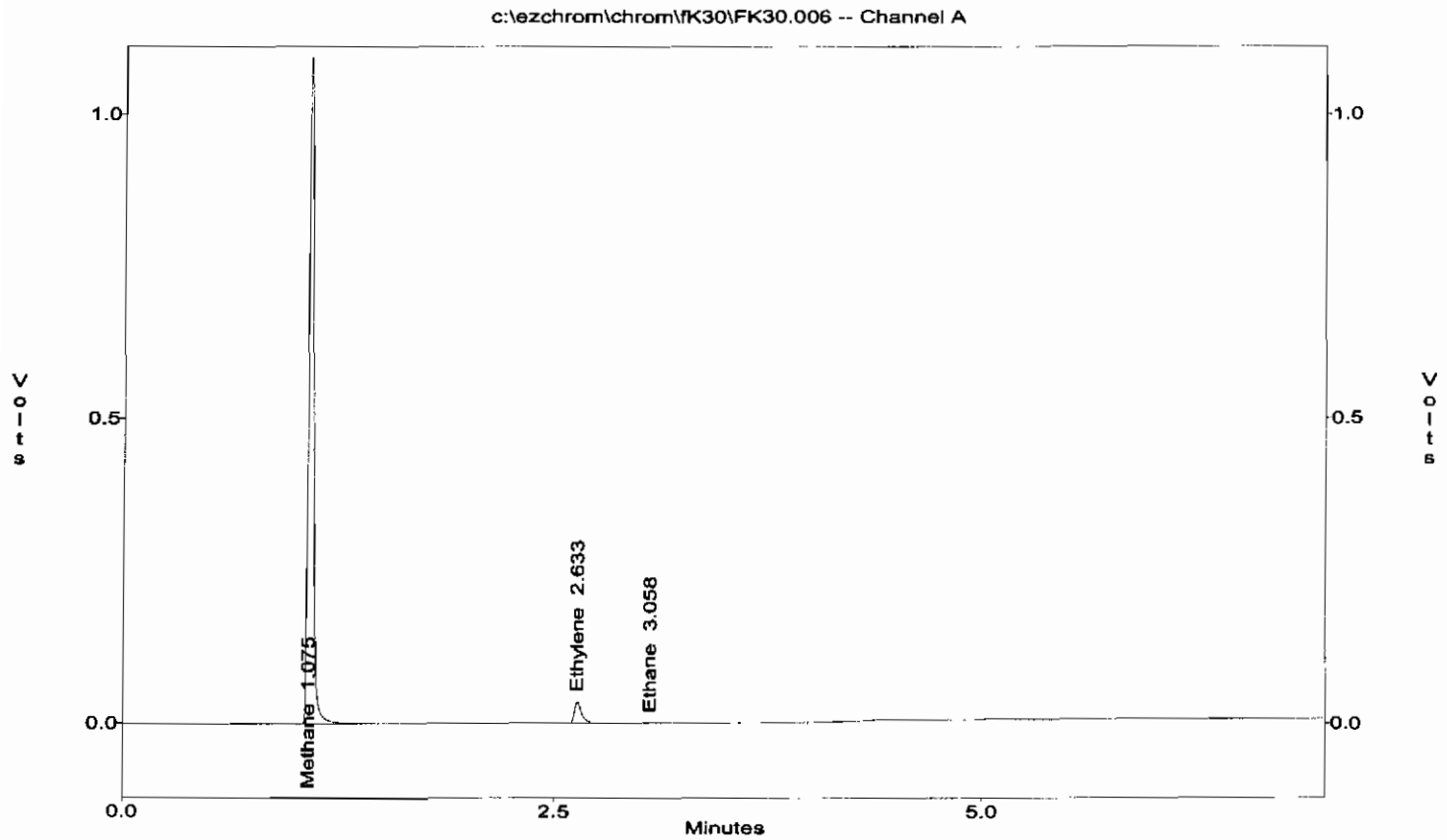
PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	6.4	2.0	0.60
METHANE	73E	2.0	0.34

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK30\FK30.006
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : 11K184-01
Acquired : Nov 30, 2011 08:41:33
Printed : Nov 30, 2011 08:52:51
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	2239931.0	30507.1	73.42 E
--	Acetylene	2.233	0.0	0.0	0.00
2	Ethylene	2.633	104301.0	16311.8	6.39
3	Ethane	3.058	3415.0	24914.4	0.14
--	Propane	5.942	0.0	0.0	0.00



METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/18/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/18/11
Batch No. : 11K184	Date Extracted: 11/30/11 07:20
Sample ID: MW-70-PMW13A-153DL	Date Analyzed: 11/30/11 08:54
Lab Samp ID: K184-01T	Dilution Factor: 10
Lab File ID: FK30007A	Matrix : WATER
Ext Btch ID: DGK021W	% Moisture : NA
Calib. Ref.: FK30002A	Instrument ID : GCT010

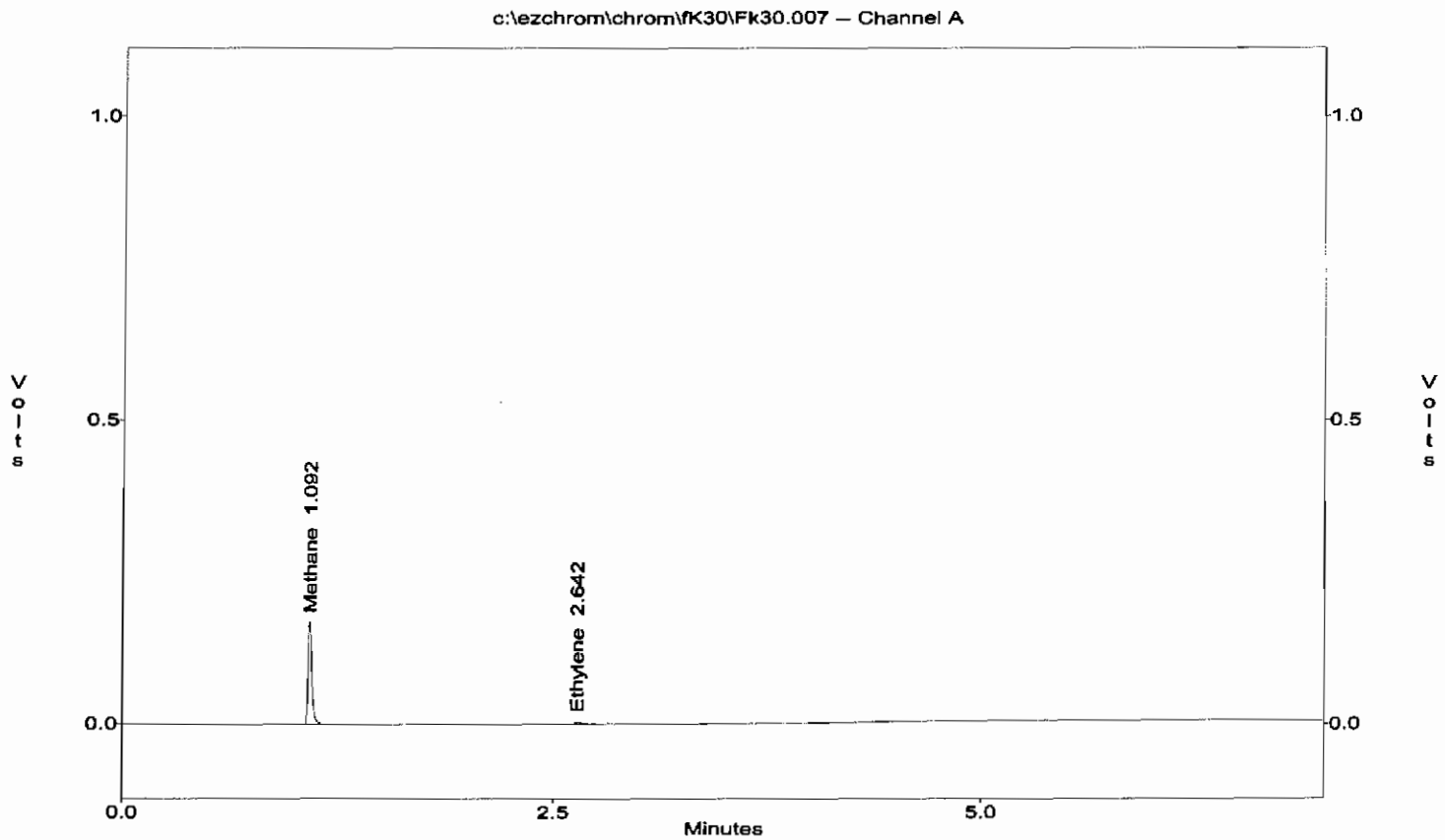
PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	20	6.4
ETHENE	ND	20	6.0
METHANE	87	20	3.4

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK30\Fk30.007
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : 11K184-01T DF=10
Acquired : Nov 30, 2011 08:54:11
Printed : Nov 30, 2011 09:01:15
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.092	264860.0	30507.1	86.82
--	Acetylene	2.233	0.0	0.0	0.00
2	Ethylene	2.642	9421.0	16311.8	5.78
--	Ethane	3.100	0.0	0.0	0.00
--	Propane	5.942	0.0	0.0	0.00



METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/18/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
Batch No.	: 11K184	Date Extracted:	11/30/11 07:20
Sample ID:	MW-70-PMW13B-154	Date Analyzed:	11/30/11 09:27
Lab Samp ID:	K184-02	Dilution Factor:	1
Lab File ID:	FK30008A	Matrix :	WATER
Ext Btch ID:	DGK021W	% Moisture :	NA
Calib. Ref.:	FK30002A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	1.6J	2.0	0.60
METHANE	11	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/18/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
Batch No.	: 11K184	Date Extracted:	11/30/11 07:20
Sample ID:	MW-70-PMW14A-155	Date Analyzed:	11/30/11 10:17
Lab Samp ID:	K184-03	Dilution Factor:	1
Lab File ID:	FK30010A	Matrix :	WATER
Ext Btch ID:	DGK021W	% Moisture :	NA
Calib. Ref.:	FK30002A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	2.6	2.0	0.64
ETHENE	69E	2.0	0.60
METHANE	130E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/18/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
Batch No.	: 11K184	Date Extracted:	11/30/11 07:20
Sample ID:	MW-70-PMW14A-155DL	Date Analyzed:	11/30/11 11:36
Lab Samp ID:	K184-03T	Dilution Factor:	2
Lab File ID:	FK30012A	Matrix :	WATER
Ext Btch ID:	DGK021W	% Moisture :	NA
Calib. Ref.:	FK30002A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	4.0	1.3
ETHENE	68	4.0	1.2
METHANE	230E	4.0	0.68

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/18/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
Batch No.	: 11K184	Date Extracted:	11/30/11 07:20
Sample ID:	MW-70-PMW14A-155DL	Date Analyzed:	11/30/11 12:03
Lab Samp ID:	K184-03I	Dilution Factor:	1000
Lab File ID:	FK30013A	Matrix :	WATER
Ext Btch ID:	DGK021W	% Moisture :	NA
Calib. Ref.:	FK30002A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	26000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/18/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
Batch No.	: 11K184	Date Extracted:	11/30/11 07:20
Sample ID:	MW-70-PMW14B-156	Date Analyzed:	11/30/11 12:15
Lab Samp ID:	K184-04	Dilution Factor:	1
Lab File ID:	FK30014A	Matrix :	WATER
Ext Btch ID:	DGK021W	% Moisture :	NA
Calib. Ref.:	FK30002A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	4.8	2.0	0.64
ETHENE	52	2.0	0.60
METHANE	110E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/18/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
Batch No.	: 11K184	Date Extracted:	11/30/11 07:20
Sample ID:	MW-70-PMW14B-156DL	Date Analyzed:	11/30/11 12:28
Lab Samp ID:	K184-04T	Dilution Factor:	1000
Lab File ID:	FK30015A	Matrix :	WATER
Ext Btch ID:	DGK021W	% Moisture :	NA
Calib. Ref.:	FK30002A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	16000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/18/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
Batch No.	: 11K184	Date Extracted:	11/22/11 15:45
Sample ID:	IW-70-SSB109-157	Date Analyzed:	11/22/11 18:18
Lab Samp ID:	K184-05	Dilution Factor:	1
Lab File ID:	FK22048A	Matrix :	WATER
Ext Btch ID:	DGK015W	% Moisture :	NA
Calib. Ref.:	FK22038A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	2.3	2.0	0.64
ETHENE	0.72J	2.0	0.60
METHANE	140E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/18/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/18/11
Batch No. : 11K184	Date Extracted: 11/22/11 15:45
Sample ID: 1W-70-SSB109-157DL	Date Analyzed: 11/22/11 18:34
Lab Samp ID: K184-05T	Dilution Factor: 1000
Lab File ID: FK22049A	Matrix : WATER
Ext Btch ID: DGK015W	% Moisture : NA
Calib. Ref.: FK22038A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	17000	2000	340

QC SUMMARIES

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/22/11
Batch No. : 11K184	Date Extracted: 11/22/11 15:45
Sample ID: MBLK1W	Date Analyzed: 11/22/11 16:29
Lab Samp ID: DGK015WB	Dilution Factor: 1
Lab File ID: FK22040A	Matrix : WATER
Ext Btch ID: DGK015W	% Moisture : NA
Calib. Ref.: FK22038A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD RSK-175

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: DGK015WB DGK015WL
LAB FILE ID: FK22040A FK22041A
DATE EXTRACTED: 11/22/1115:45 11/22/1115:45 DATE COLLECTED: NA
DATE ANALYZED: 11/22/1116:29 11/22/1116:43 DATE RECEIVED: 11/22/11
PREP. BATCH: DGK015W DGK015W
CALIB. REF: FK22038A FK22038A

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	QC LIMIT (%)
Ethane	ND	25.4	26.6	105	70-140
Ethene	ND	23.7	25.9	109	70-140
Methane	ND	13.6	13.0	96	70-130

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/30/11
Batch No. : 11K184	Date Extracted: 11/30/11 07:20
Sample ID: MBLK2W	Date Analyzed: 11/30/11 07:54
Lab Samp ID: DGKD21WB	Dilution Factor: 1
Lab File ID: FK30003A	Matrix : WATER
Ext Btch ID: DGKD21W	% Moisture : NA
Calib. Ref.: FK30002A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD RSK-175

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	DGK021WB	DGK021WL	DGK021WC		
LAB FILE ID:	FK30003A	FK30004A	FK30005A		
DATE EXTRACTED:	11/30/11D7:20	11/30/1107:20	11/30/1107:20	DATE COLLECTED:	NA
DATE ANALYZED:	11/30/1107:54	11/30/1108:07	11/30/1108:21	DATE RECEIVED:	11/30/11
PREP. BATCH:	DGK021W	DGK021W	DGK021W		
CALIB. REF:	FK30002A	FK30002A	FK30002A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	ND	25.4	25.1	99	25.4	25.1	99	0	70-140	30
Ethene	ND	23.7	24.3	102	23.7	24.4	103	1	70-140	30
Methane	ND	13.6	11.9	87	13.6	11.9	87	0	70-130	30

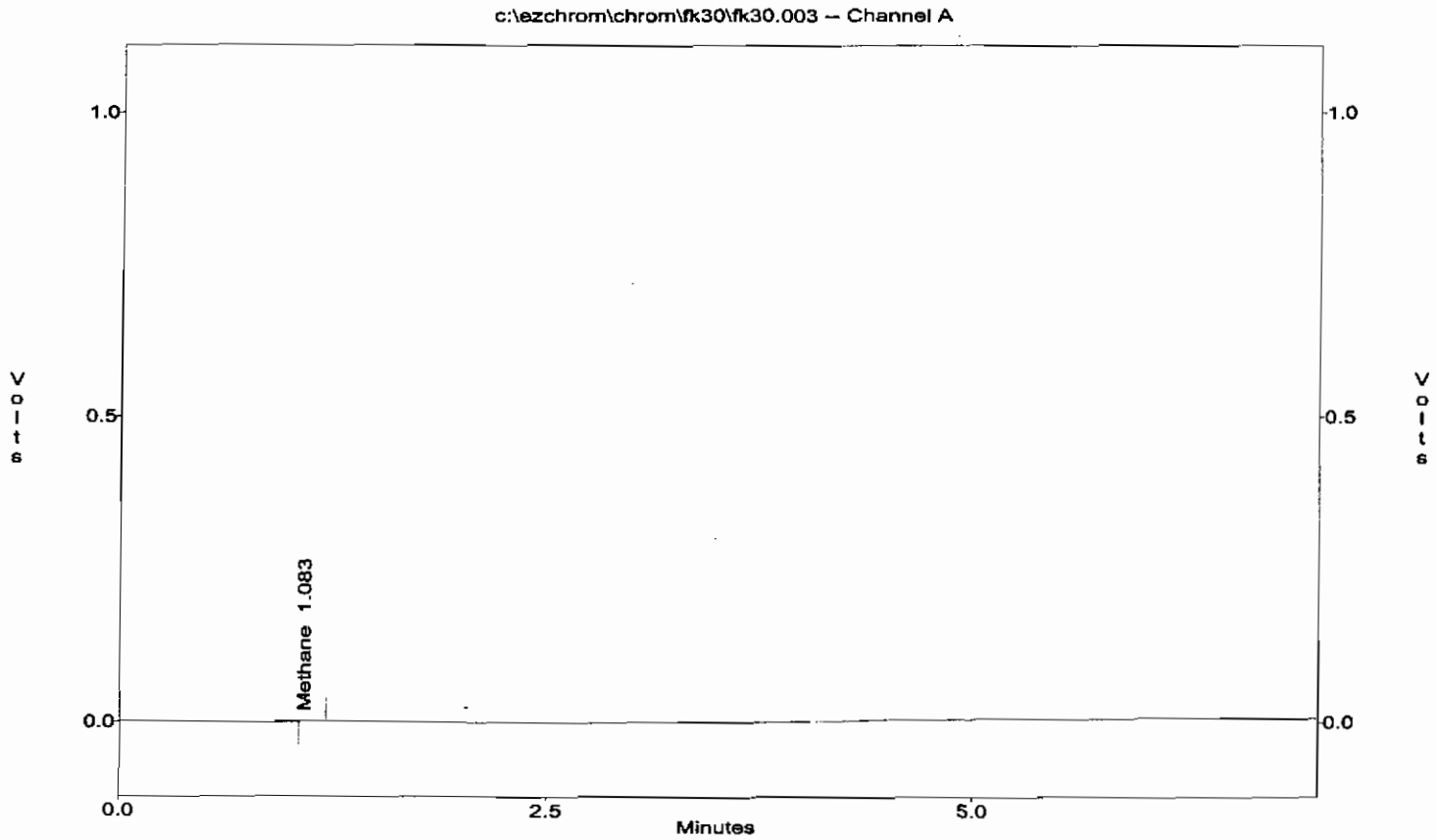
QC DATA

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk30\fk30.003
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DGK021WB
Acquired : Nov 30, 2011 07:54:42
Printed : Nov 30, 2011 08:17:17
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	4114.0	30507.1	0.13
--	Acetylene	2.233	0.0	0.0	0.00
--	Ethylene	2.667	0.0	0.0	0.00
--	Ethane	3.100	0.0	0.0	0.00
--	Propane	5.942	0.0	0.0	0.00

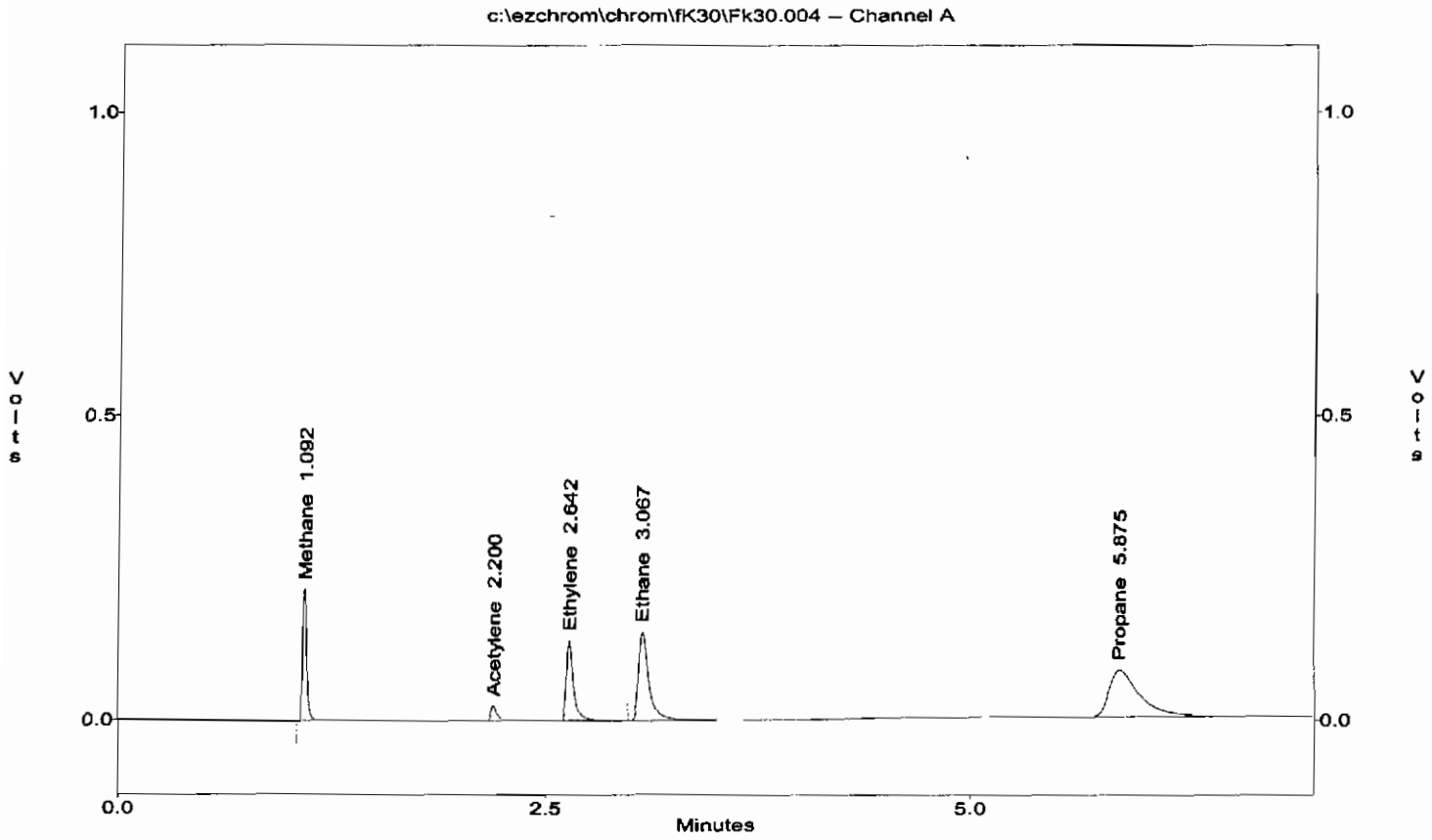


EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK30\Fk30.004
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK021WL
Acquired : Nov 30, 2011 08:07:50
Printed : Nov 30, 2011 08:15:08
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.092	361937.0	30507.1	11.86
2	Acetylene	2.200	61047.0	2647.6	23.06
3	Ethylene	2.642	395585.0	16311.8	24.25
4	Ethane	3.067	625251.0	24914.4	25.10
5	Propane	5.875	985311.0	27171.2	36.26

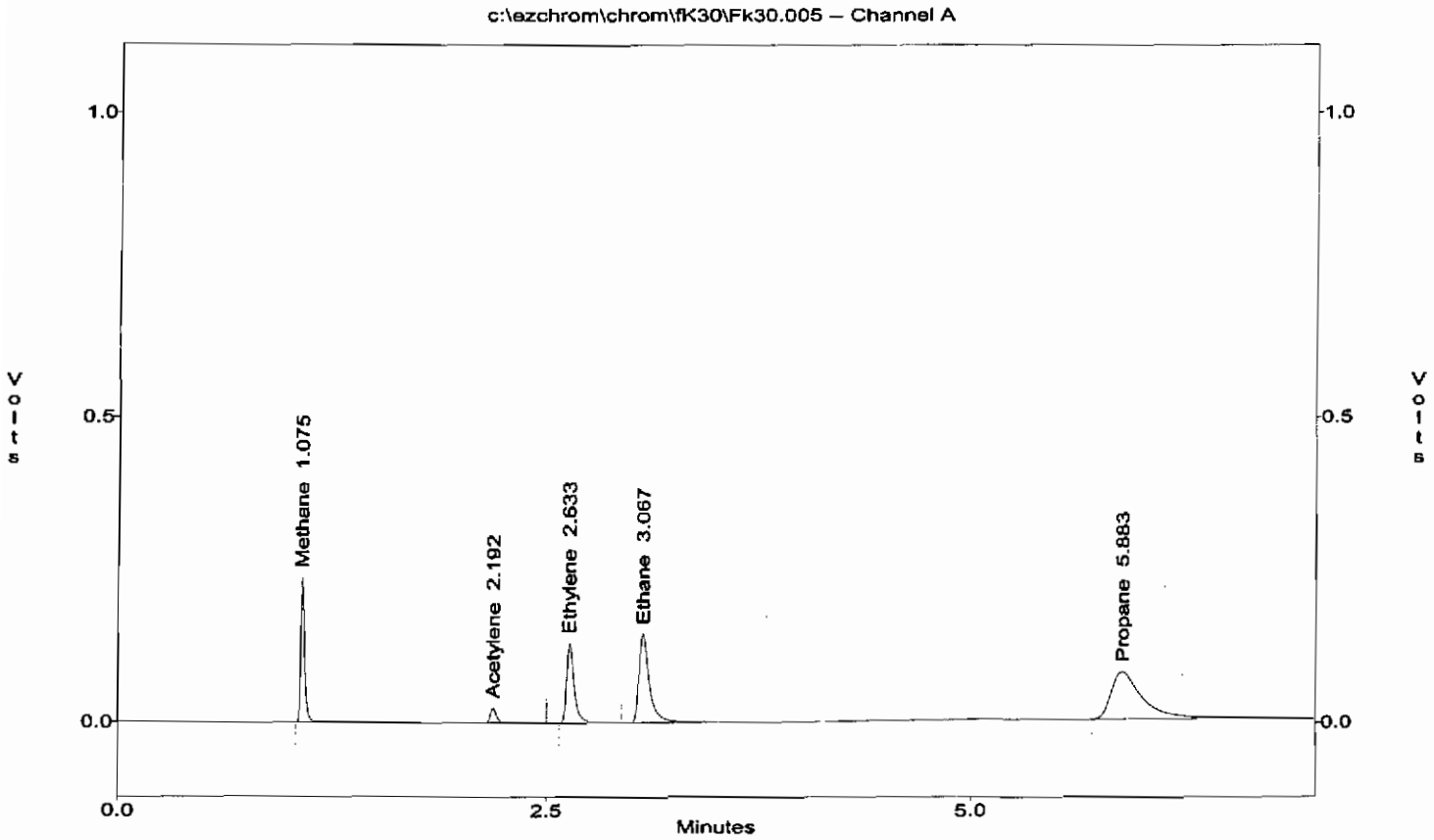


EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK30\Fk30.005
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : DGK021WC
Acquired : Nov 30, 2011 08:21:01
Printed : Nov 30, 2011 08:28:07
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	362610.0	30507.1	11.89
2	Acetylene	2.192	64277.0	2647.6	24.28
3	Ethylene	2.633	398688.0	16311.8	24.44
4	Ethane	3.067	624767.0	24914.4	25.08
5	Propane	5.883	1011833.0	27171.2	37.24



INITIAL CALIBRATIONS

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01D04A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	25.00X	40.00X	75.00X	100.00X	MEAN	%RSD
Methane	0.34	31626	33510	29954	29307	29338	29307	30507.1	5.6
Acetylene	0.55	2465	2595	2723	2744	2716	2643	2647.7	4.0
Ethylene	0.59	14655	16070	16617	16602	17123	16803	16311.8	5.4
Ethane	0.64	22748	24144	25289	25073	26185	26048	24914.4	5.2
Propane	0.93	29887	24871	26520	26214	27735	27800	27171.2	6.3

DG10K01.MET

FORM VI DGAS -2 1/96 Rev 2/2006

11/03/11

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53

COMPOUND	RT OF STANDARDS (MIN) 2.0X	10.0X	25.0X	40.0X	75.0X	100.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
Methane	1.083	1.075	1.083	1.083	1.083	1.083	1.082	1.056	1.108	0.026
Acetylene	2.208	2.192	2.208	2.217	2.217	2.217	2.210	2.184	2.236	0.026
Ethylene	2.642	2.633	2.650	2.658	2.658	2.658	2.650	2.599	2.701	0.051
Ethane	3.067	3.067	3.075	3.083	3.092	3.083	3.078	3.028	3.128	0.050
Propane	5.942	5.883	5.900	5.917	5.917	5.908	5.911	5.835	5.987	0.076

DG10K01.MET

AS 11/03/11

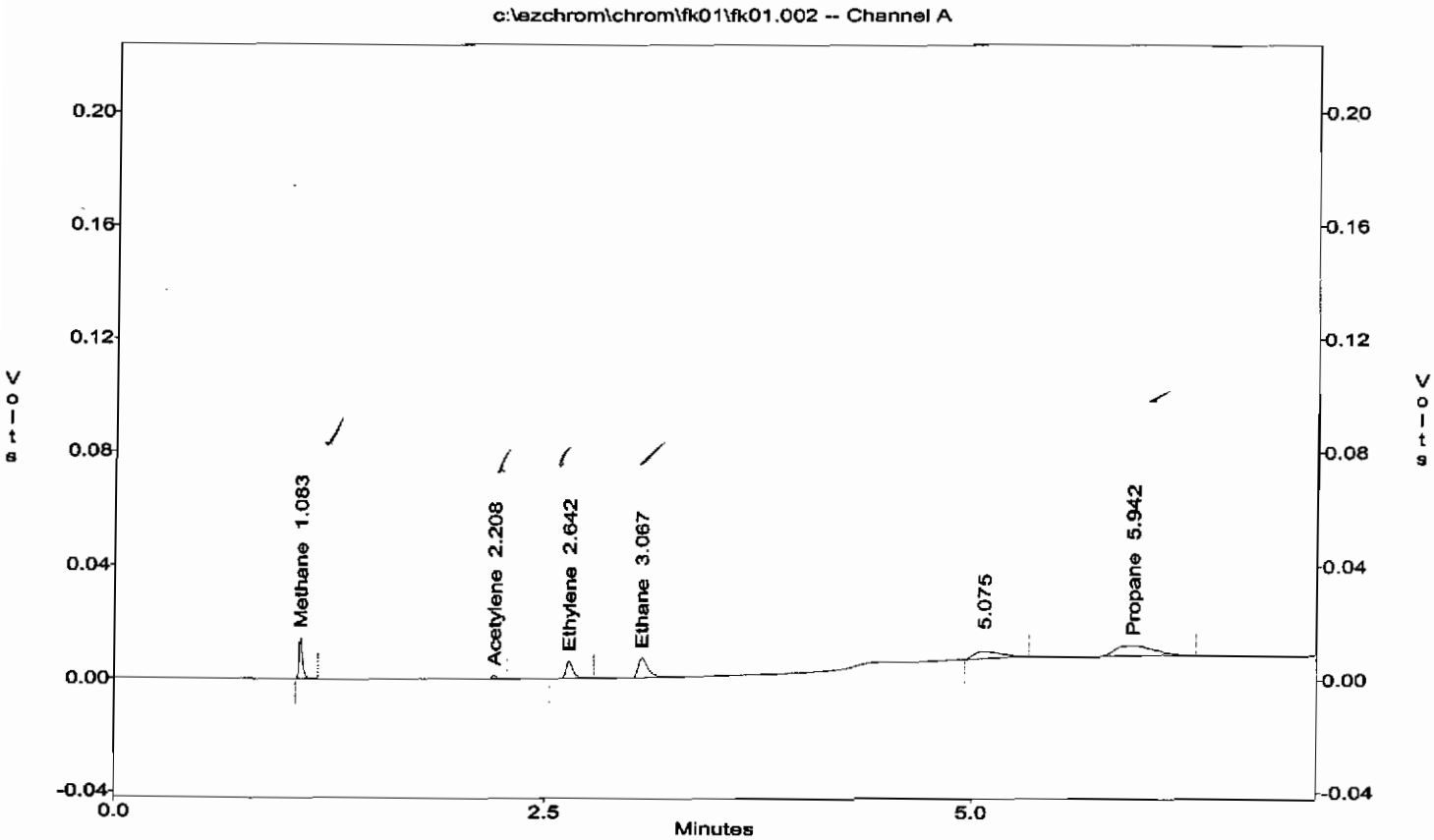
FORM VI DGAS -1 1/96 Rev 2/2006

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.002
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-01
Acquired : Nov 01, 2011 11:28:48
Printed : Nov 01, 2011 16:46:40
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	21439.0	30507.1	0.68
2	Acetylene	2.208	2712.0	2647.6	1.10
3	Ethylene	2.642	17381.0	16311.8	1.19
4	Ethane	3.067	28913.0	24914.4	1.27
6	Propane	5.942	55710.0	27171.2	1.86



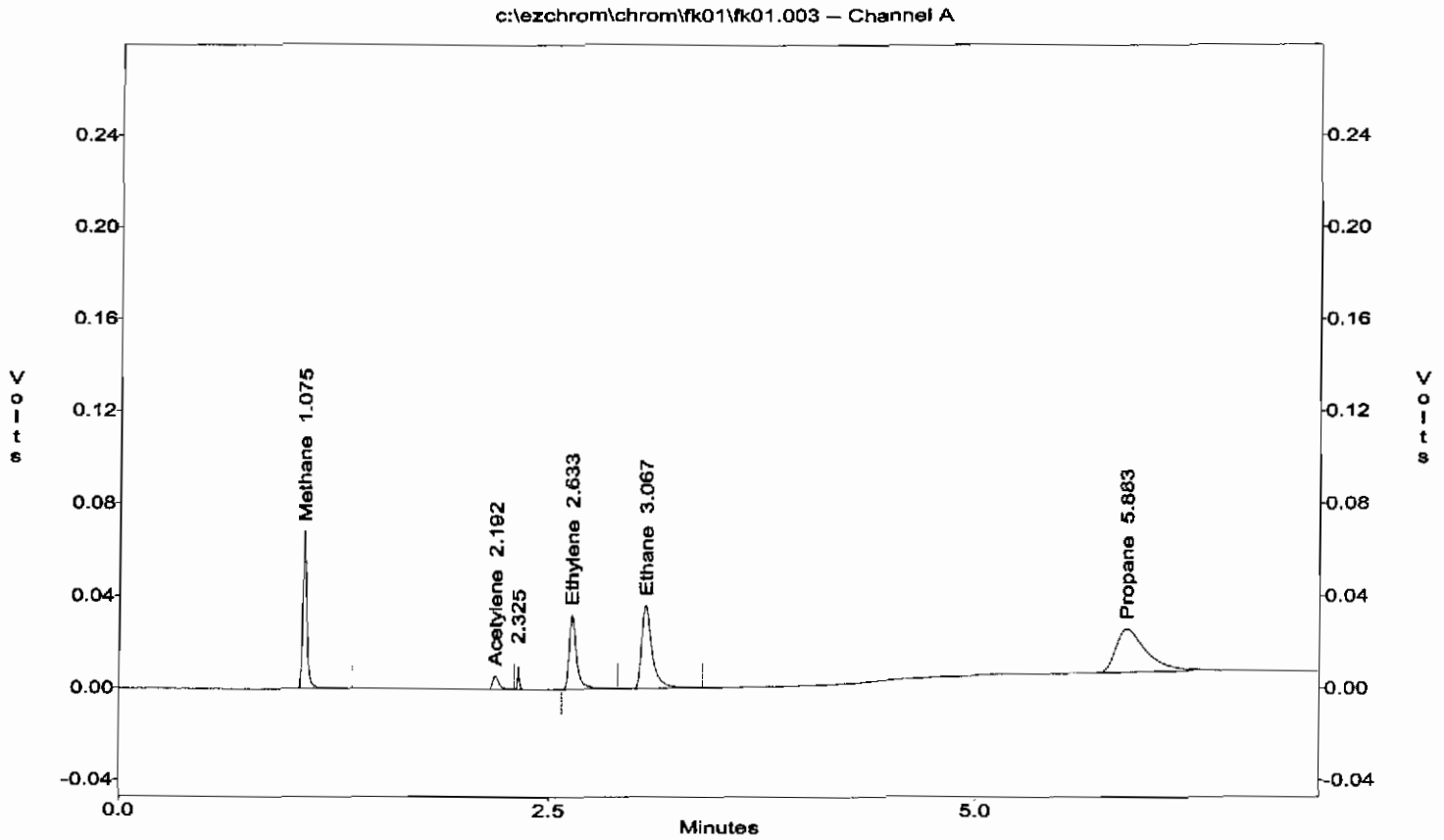
RS
11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.003
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-02
Acquired : Nov 01, 2011 11:41:49
Printed : Nov 01, 2011 16:46:57
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	113600.0	30507.1	3.39
2	Acetylene	2.192	14297.0	2647.6	5.51
4	Ethylene	2.633	95326.0	16311.8	5.93
5	Ethane	3.067	153436.0	24914.4	6.36
6	Propane	5.883	231819.0	27171.2	9.32



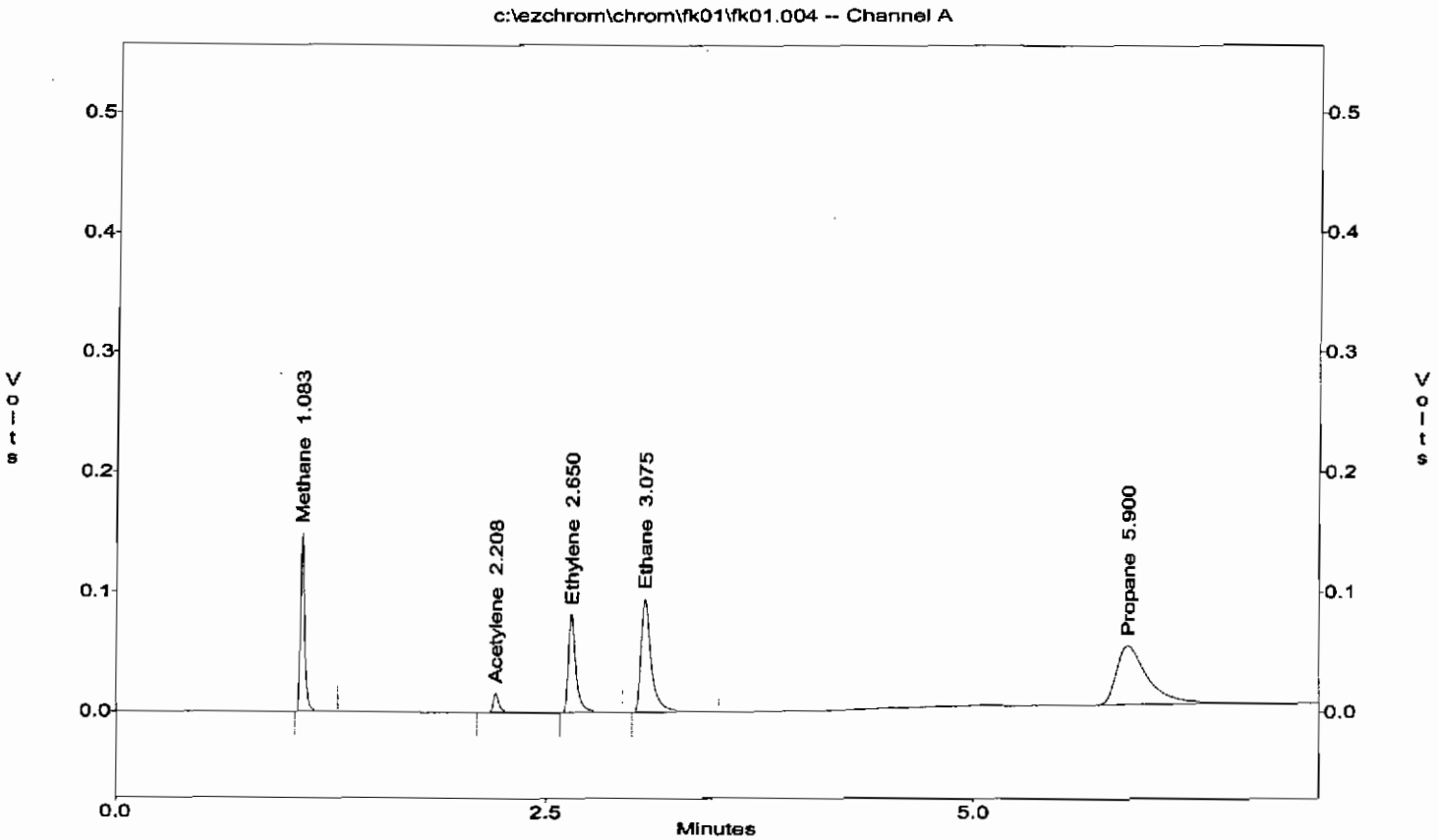
AS
11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.004
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-03
Acquired : Nov 01, 2011 11:55:36
Printed : Nov 01, 2011 16:47:09
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	253836.0	30507.1	8.47
2	Acetylene	2.208	37503.0	2647.6	13.77
3	Ethylene	2.650	246435.0	16311.8	14.83
4	Ethane	3.075	401839.0	24914.4	15.89
5	Propane	5.900	617912.0	27171.2	23.30



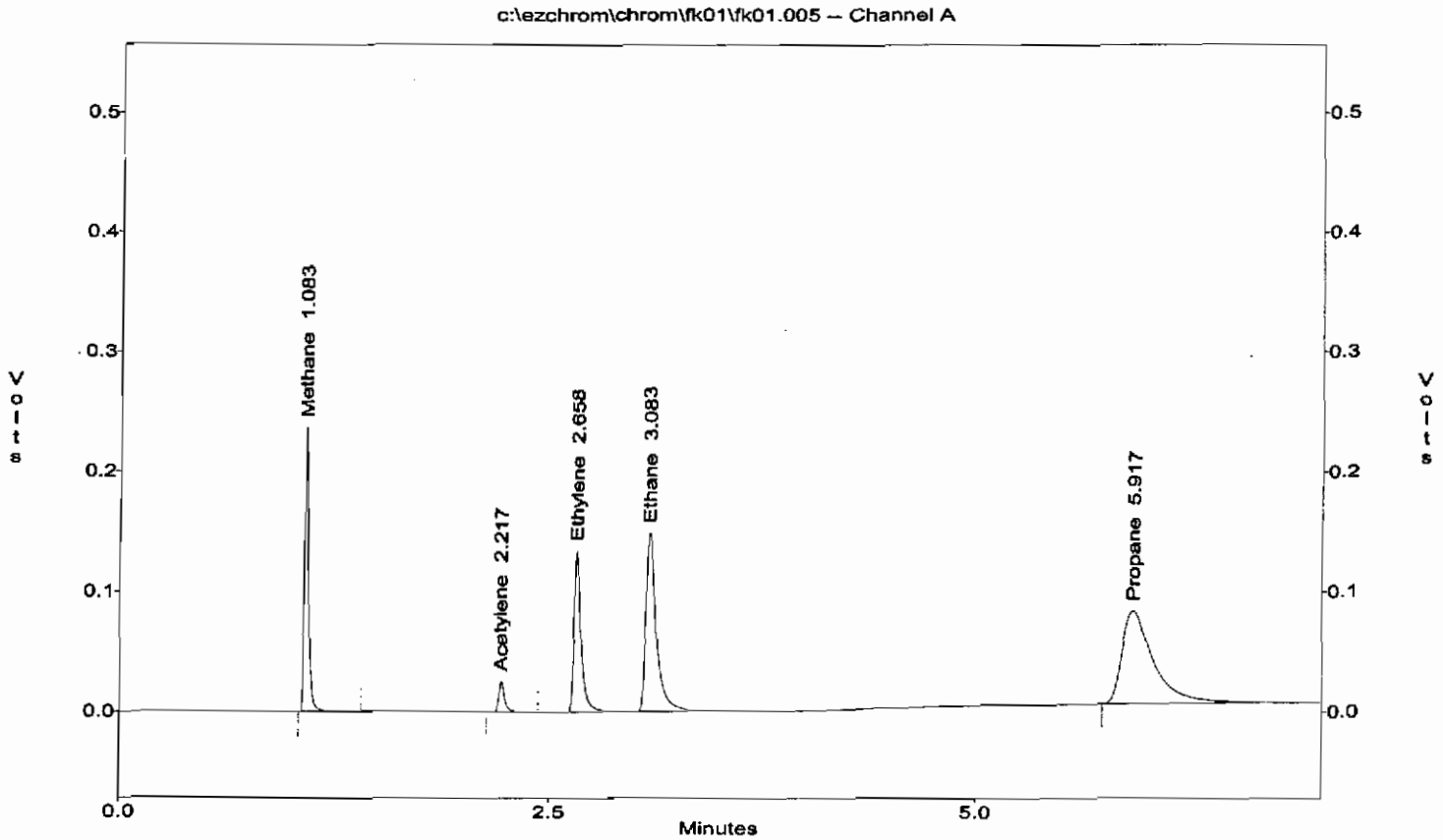
11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.005
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-04
Acquired : Nov 01, 2011 12:09:18
Printed : Nov 01, 2011 16:47:15
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	397403.0	30507.1	13.56
2	Acetylene	2.217	60362.0	2647.6	22.00
3	Ethylene	2.658	393970.0	16311.8	23.73
4	Ethane	3.083	637350.0	24914.4	25.42
5	Propane	5.917	977274.0	27171.2	37.28



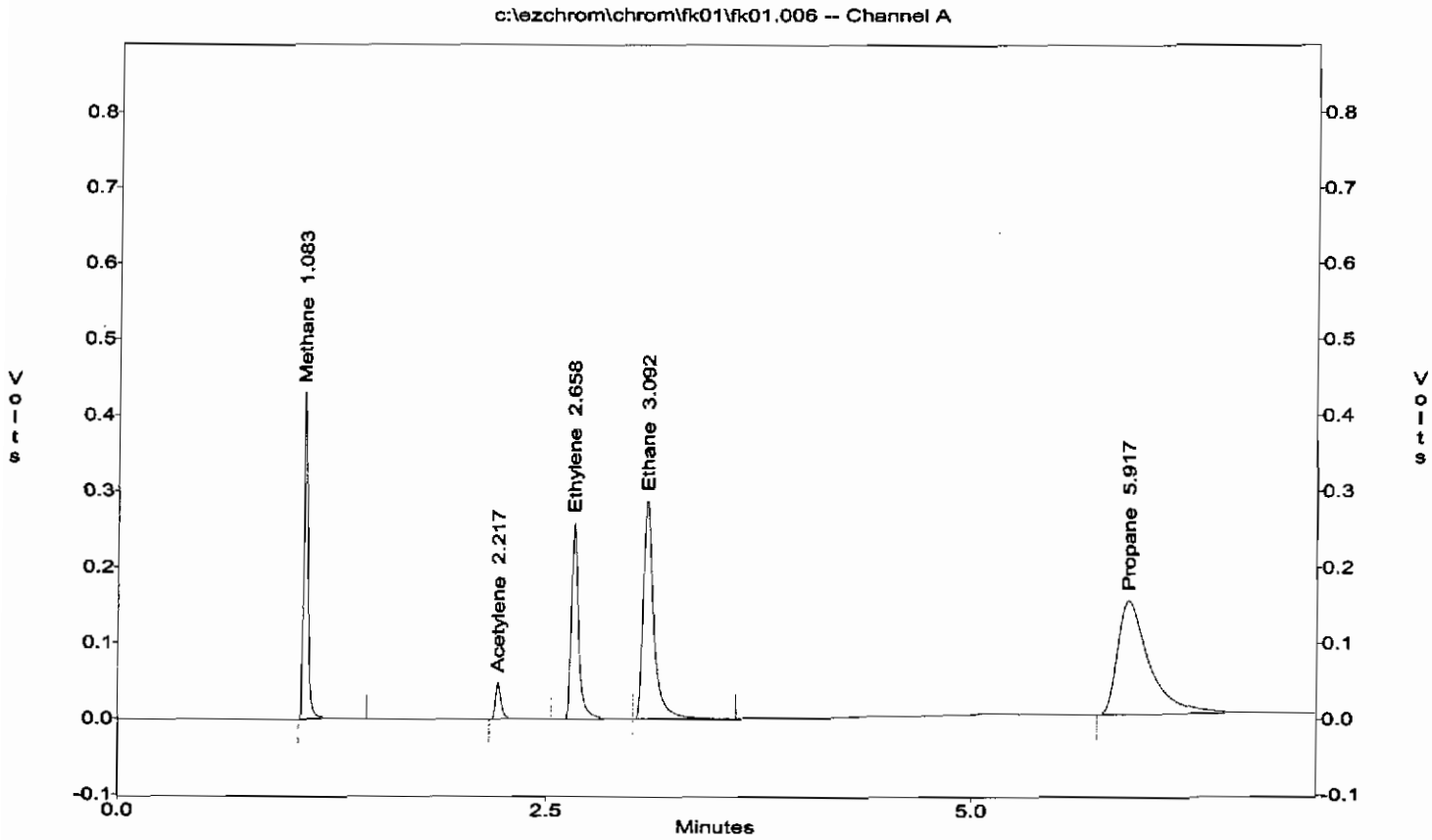
AS
11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.006
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-05
Acquired : Nov 01, 2011 12:38:25
Printed : Nov 01, 2011 16:47:32
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	745775.0	30507.1	25.42
2	Acetylene	2.217	112175.0	2647.6	41.30
3	Ethylene	2.658	761815.0	16311.8	44.49
4	Ethane	3.092	1248240.0	24914.4	47.67
5	Propane	5.917	1938976.0	27171.2	69.91



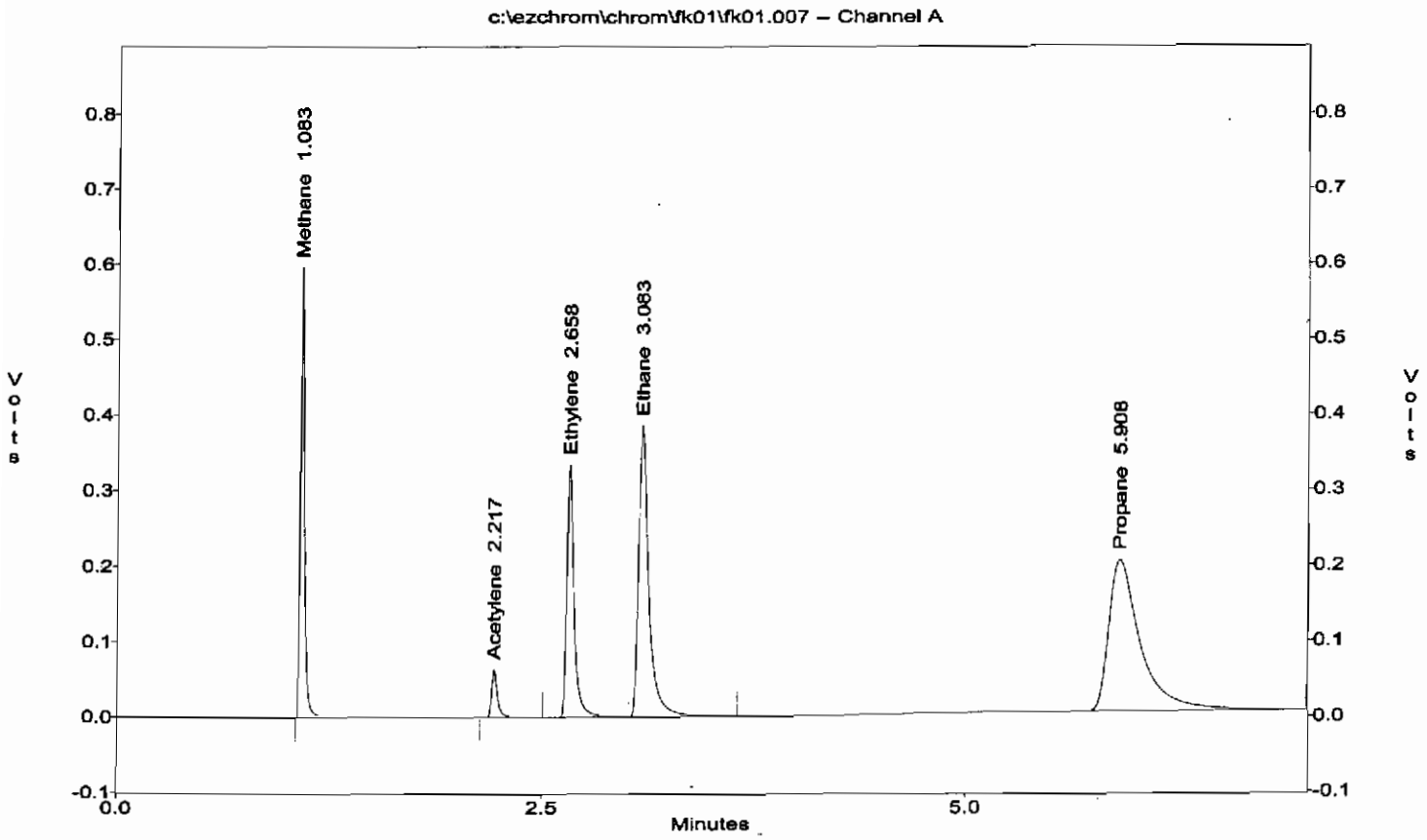
11/03/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.007
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : DG10K01-06
Acquired : Nov 01, 2011 12:53:24
Printed : Nov 01, 2011 16:47:38
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.083	993496.0	30507.1	33.90
2	Acetylene	2.217	145648.0	2647.6	55.10
3	Ethylene	2.658	996770.0	16311.8	59.32
4	Ethane	3.083	1655327.0	24914.4	63.55
5	Propane	5.908	2591233.0	27171.2	93.21



AS 11/3/11

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK01008A 11/01/2011 13:45
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	416247	13.64	1		15
Acetylene	2.175	2.149	2.201	22.0	2647.6	66913	25.27	15		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	437326	26.81	13		15
Ethane	3.075	3.025	3.125	25.4	24914.4	691218	27.74	9		15
Propane	5.900	5.824	5.976	37.3	27171.2	1111008	40.89	10		15

DG10K01.MET

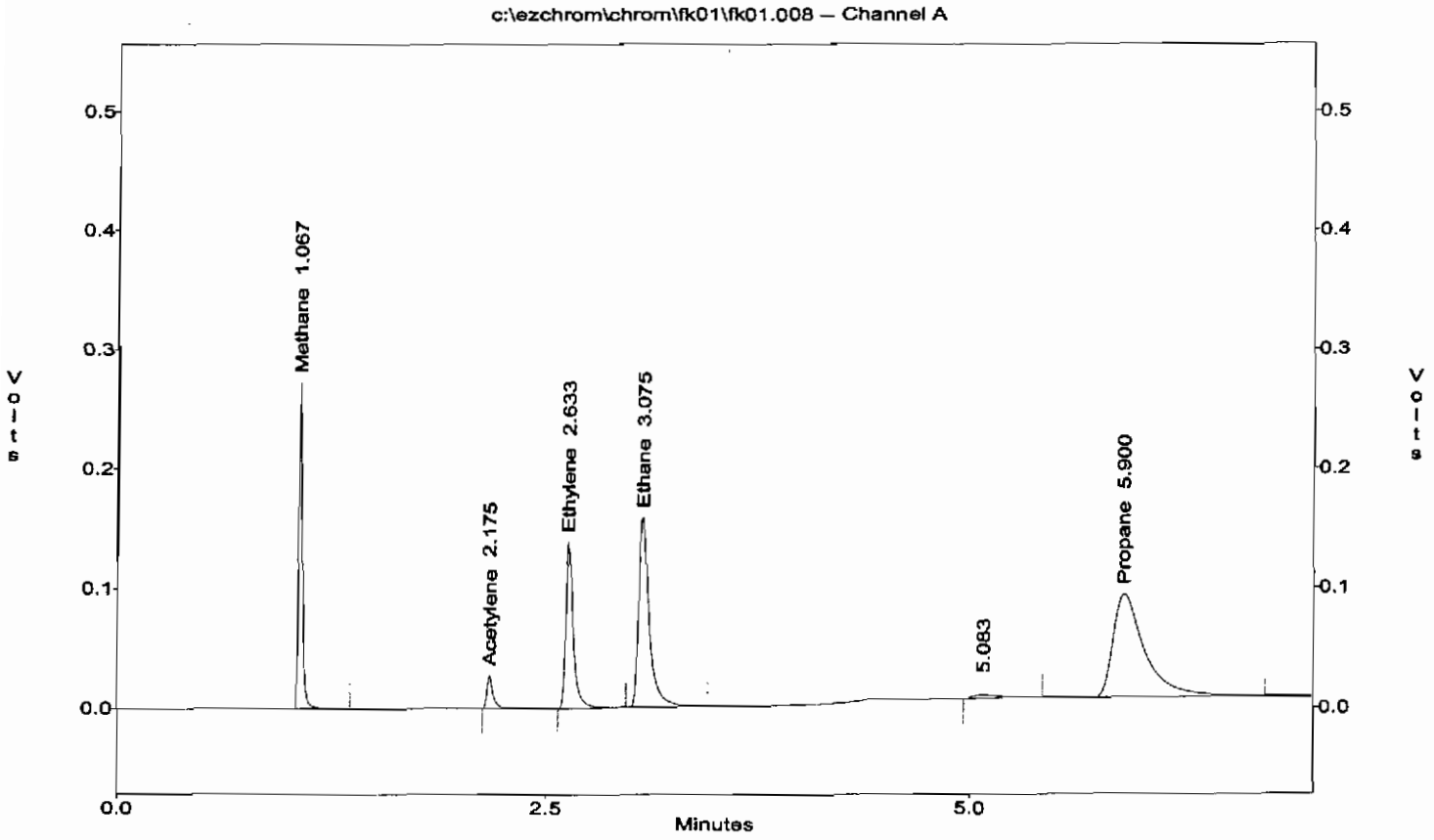
AJ
11/3/11

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk01\fk01.008
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : IDG10K0101
Acquired : Nov 01, 2011 13:45:55
Printed : Nov 01, 2011 16:47:55
User : SERGIO

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.067	416247.0	30507.1	13.64
2	Acetylene	2.175	66913.0	2647.6	25.27
3	Ethylene	2.633	437326.0	16311.8	26.81
4	Ethane	3.075	691218.0	24914.4	27.74
6	Propane	5.900	1111008.0	27171.2	40.89



11/3/11

DAILY CALIBRATIONS

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK22D38A 11/22/2011 16:01
CONC UNIT : ppb

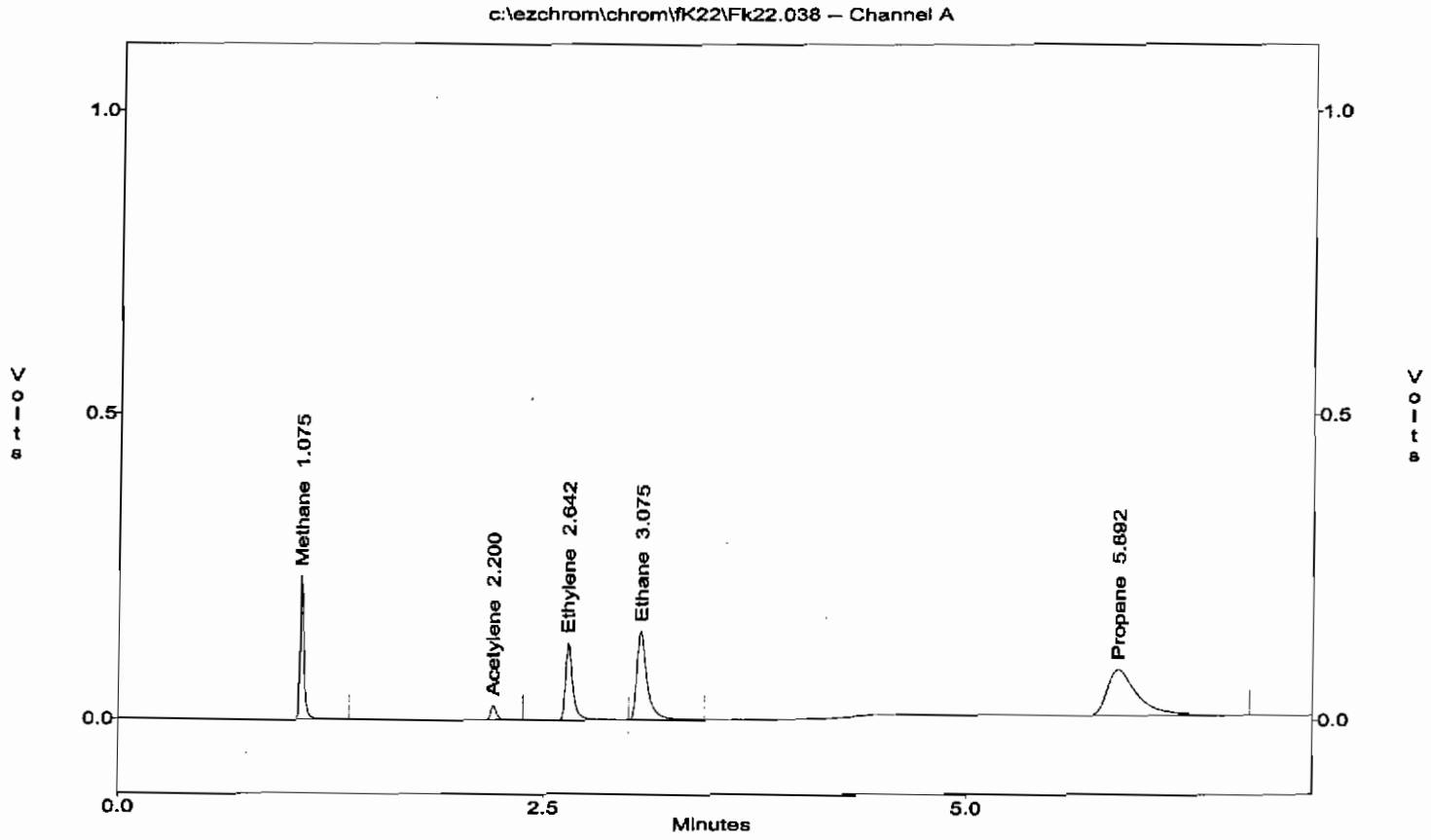
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	384476	12.60	-7		15
Acetylene	2.200	2.174	2.226	22.0	2647.6	55070	20.80	-5		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	382273	23.43	-1		15
Ethane	3.075	3.025	3.125	25.4	24914.4	617302	24.78	-3		15
Propane	5.892	5.816	5.968	37.3	27171.2	953147	35.08	-6		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK22\Fk22.038
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01455
Acquired : Nov 22, 2011 16:01:55
Printed : Nov 22, 2011 16:08:57
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	384476.0	30507.1	12.60
2	Acetylene	2.200	55070.0	2647.6	20.80
3	Ethylene	2.642	382273.0	16311.8	23.44
4	Ethane	3.075	617302.0	24914.4	24.78
5	Propane	5.892	953147.0	27171.2	35.08



CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK22050A 11/22/2011 18:48
CONC UNIT : ppb

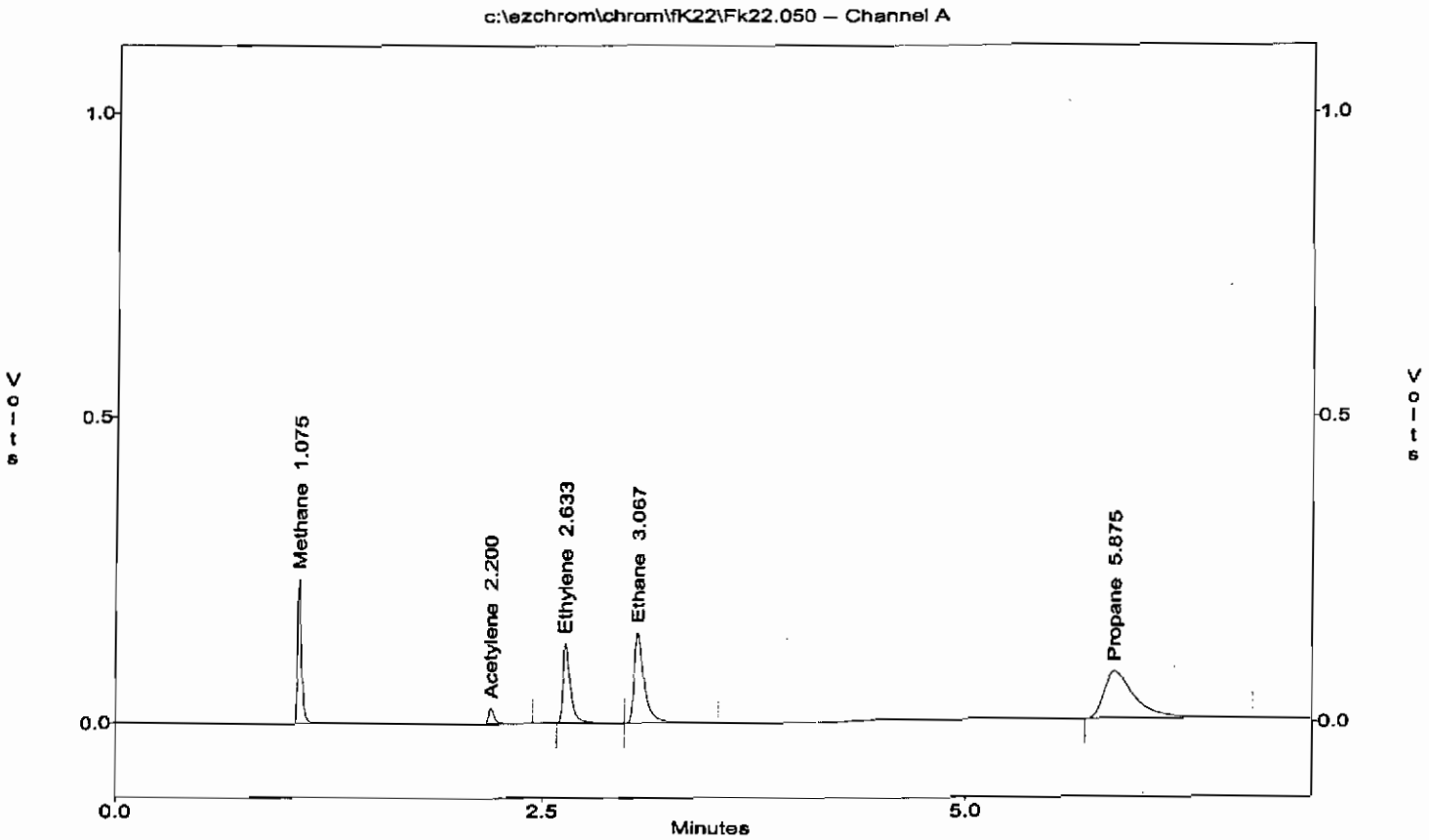
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	398656	13.07	-4		15
Acetylene	2.200	2.174	2.226	22.0	2647.6	58851	22.23	1		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	390912	23.97	1		15
Ethane	3.067	3.017	3.117	25.4	24914.4	638520	25.63	1		15
Propane	5.875	5.799	5.951	37.3	27171.2	981224	36.11	-3		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK22\Fk22.050
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01456
Acquired : Nov 22, 2011 18:48:45
Printed : Nov 22, 2011 18:55:47
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	398656.0	30507.1	13.07
2	Acetylene	2.200	58851.0	2647.6	22.23
3	Ethylene	2.633	390912.0	16311.8	23.96
4	Ethane	3.067	638520.0	24914.4	25.63
5	Propane	5.875	981224.0	27171.2	36.11



CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK30002A 11/30/2011 07:41
CONC UNIT : ppb

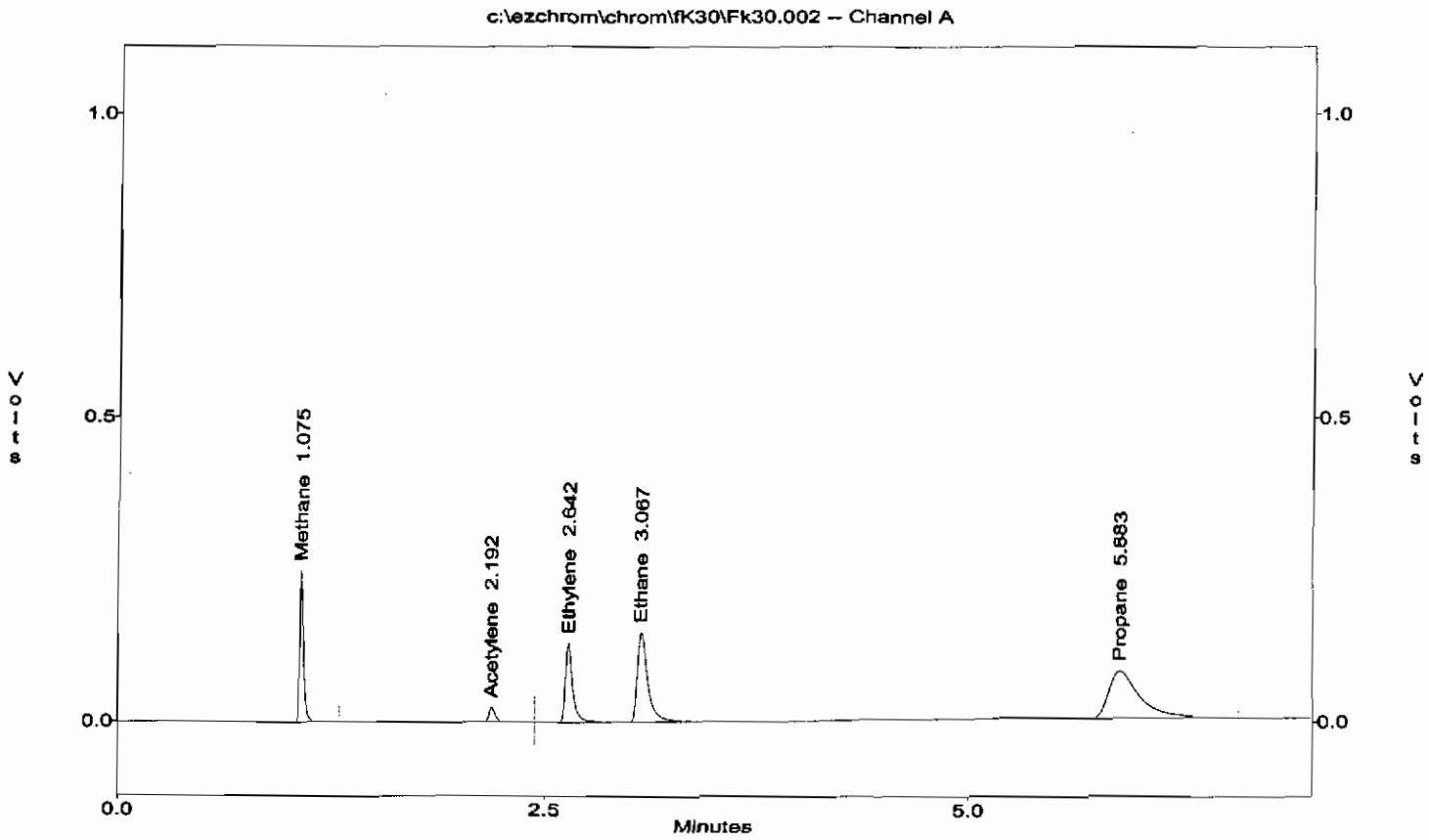
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	388281	12.73	-6		15
Acetylene	2.192	2.166	2.218	22.0	2647.6	59619	22.52	2		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	395573	24.25	2		15
Ethane	3.067	3.017	3.117	25.4	24914.4	639021	25.65	1		15
Propane	5.883	5.807	5.959	37.3	27171.2	981324	36.12	-3		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fK30\Fk30.002
Method : c:\ezchrom\methods\Dg10k01.met
Sample ID : CDG10K01473
Acquired : Nov 30, 2011 07:41:42
Printed : Nov 30, 2011 07:48:54
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.075	388281.0	30507.1	12.73
2	Acetylene	2.192	59619.0	2647.6	22.52
3	Ethylene	2.642	395573.0	16311.8	24.25
4	Ethane	3.067	639021.0	24914.4	25.65
5	Propane	5.883	981324.0	27171.2	36.12



CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK30016A 11/30/2011 13:16
CONC UNIT : ppb

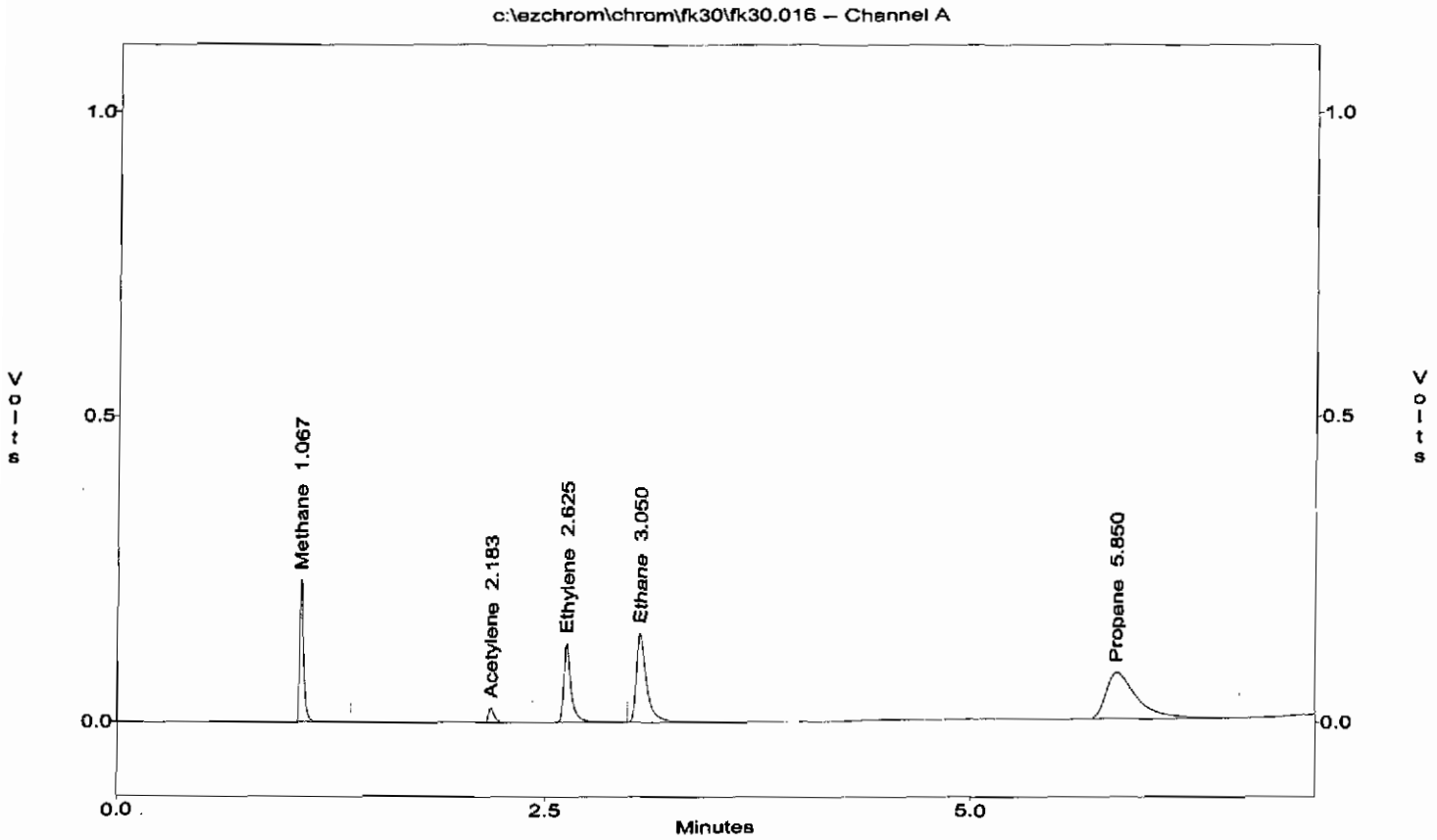
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	390617	12.80	-6		15
Acetylene	2.183	2.157	2.209	22.0	2647.6	60006	22.66	3		15
Ethylene	2.625	2.574	2.676	23.7	16311.8	386507	23.69	-0		15
Ethane	3.050	3.000	3.100	25.4	24914.4	627525	25.19	-1		15
Propane	5.850	5.774	5.926	37.3	27171.2	953738	35.10	-6		15

EPA DGAS by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\fk30\fk30.016
Method : c:\ezchrom\methods\dg10k01.met
Sample ID : CDG10K01474
Acquired : Nov 30, 2011 13:16:15
Printed : Nov 30, 2011 13:35:27
User : RAYMOND

Channel A Results

#	Peak Name	Ret. Time(Min)	Area	Ave. CF	ESTD Conc.(ppb)
1	Methane	1.067	390617.0	30507.1	12.80
2	Acetylene	2.183	60006.0	2647.6	22.66
3	Ethylene	2.625	386507.0	16311.8	23.69
4	Ethane	3.050	627525.0	24914.4	25.19
5	Propane	5.850	953738.0	27171.2	35.10



ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGAS ICAL

Book #:	A10-025
Instrument No.:	10
Analytical Sequence:	FK01
Method File:	DG10K01
Analytical Batch:	N/A

SOP #	Rev. #
☒ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGAS ICAL SSSA-05-01-10	500 ppm
DGAS ICV SSSA-05-01-7	500 ppm
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: SC

Date: 11/01/11

Disposed By: SC

Date Disposed: 11/01/11

Method: Dg10k01.met Batch: Fk01.seq Data: Fk01.011 - [Batch: fk01.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Run Type	Sample ID	Method	Filename	Sample Amt	Mult	Description
1	Unknown	IB10K407	dg10k01.met	FK01.001	100ml 1	1	
2	Unknown	DG10K01-01	dg10k01.met	FK01.002	1	1	
3	Unknown	DG10K01-02	dg10k01.met	FK01.003	1	1	
4	Unknown	DG10K01-03	dg10k01.met	FK01.004	1	1	DGAS ICAL
5	Unknown	DG10K01-04	dg10k01.met	FK01.005	1	1	
6	Unknown	DG10K01-05	dg10k01.met	FK01.006	1	1	
7	Unknown	DG10K01-06	dg10k01.met	FK01.007	1	1	
8	Unknown	IDG10K0101	dg10k01.met	FK01.008	1	1	DGAS ICV
9	Unknown	IB	dg10k01.met	FK01.009	1	1	
10	Unknown	IB	dg10k01.met	FK01.010	1	1	
11	Unknown	IB	dg10k01.met	FK01.011	1	1	
12	Unknown	IB	dg10k01.met	FK01.012	1	1	
13	Unknown	IB	dg10k01.met	FK01.013	1	1	
14	Unknown	IB	dg10k01.met	FK01.014	1	1	
15	Unknown	IB	dg10k01.met	FK01.015	1	1	FINAL
16	Unknown	IB	dg10k01.met	FK01.016	1	1	
17	Unknown	IB	dg10k01.met	FK01.017	1	1	
18	Unknown	IB	dg10k01.met	FK01.018	1	1	
19	Unknown	IB	dg10k01.met	FK01.019	1	1	
20	Unknown	IB	dg10k01.met	FK01.020	1	1	
21	Unknown	IB	dg10k01.met	FK01.021	1	1	
22	Unknown	IB	dg10k01.met	FK01.022	1	1	
23	Unknown	IB	dg10k01.met	FK01.023	1	1	
24	Unknown	IB	dg10k01.met	FK01.024	1	1	
25	Unknown	IB	dg10k01.met	FK01.025	1	1	
26	Unknown	IB	dg10k01.met	FK01.026	1	1	
27	Unknown	IB	dg10k01.met	FK01.027	1	1	
28	Unknown	IB	dg10k01.met	FK01.028	1	1	
29	Unknown	IB	dg10k01.met	FK01.029	1	1	
30	Unknown	IB	dg10k01.met	FK01.030	1	1	
31	Unknown	IB	dg10k01.met	FK01.031	1	1	
32	Unknown	IB	dg10k01.met	FK01.032	1	1	
33	Unknown	IB	dg10k01.met	FK01.033	1	1	
34	Unknown	IB	dg10k01.met	FK01.034	1	1	

EC 11/01/11

Waiting For Trigger...

Start | Method: Dg10K01... | Calculator | Tuesday, November 01, 2011

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGK014W: K096, K104, K131

DGK015W: K144, K184

Book #:	A10-026
Instrument No.:	10
Analytical Sequence:	FK22
Method File:	DG10K01
Analytical Batch:	CDG10K01452

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGas DCC 555B-07-39-2	200
DGas DCC 555B-07-39-3	200
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: RH

Date: 11/22/11

Disposed By: RH

Date Disposed: 11/22/11

Method: Dg10k01.met Batch: Fk22.seq Data: Fk22.050 - [Batch: fk22.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
1	IB10K452	dg10k01.met	FK22.001	100 µL 1	1	
2	CDG10K01452	dg10k01.met	FK22.002	1	1	
3	DGK014WB	dg10k01.met	FK22.003	1	1	
4	DGK014WL	dg10k01.met	FK22.004	1	1	
5	DGK014WC	dg10k01.met	FK22.005	1	1	
6	11K131-02	dg10k01.met	FK22.006	1	1	
7	11K131-02T DF=5	dg10k01.met	FK22.007	20 µL 1	5	
8	11K131-03	dg10k01.met	FK22.008	100 µL 1	1	
9	11K131-03T DF=5	dg10k01.met	FK22.009	20 µL 1	5	
10	11K131-03I DF=200	dg10k01.met	FK22.010	5 µL (10x) 1	200	
11	11K131-04	dg10k01.met	FK22.011	100 µL 1	1	
12	11K131-04T DF=1000	dg10k01.met	FK22.012	2 µL (20x) 1	1000	
13	CDG10K10453	dg10k01.met	FK22.013	100 µL 1	1	FINAL
14	11K131-05	dg10k01.met	FK22.014	1	1	
15	11K131-05T DF=50	dg10k01.met	FK22.015	2 µL 1	50	
16	11K131-06	dg10k01.met	FK22.016	100 µL 1	1	
17	11K096-20R	dg10k01.met	FK22.017	1	1	
18	11K096-21R	dg10k01.met	FK22.018	1	1	
19	11K104-06R	dg10k01.met	FK22.019	1	1	
20	11K104-07R	dg10k01.met	FK22.020	1	1	
21	11K131-08	dg10k01.met	FK22.021	1	1	
22	11K131-08T DF=5	dg10k01.met	FK22.022	20 µL 1	5	
23	11K131-09	dg10k01.met	FK22.023	100 µL 1	1	
24	CDG10K10454	dg10k01.met	FK22.024	1	1	
25	11K131-10	dg10k01.met	FK22.025	1	1	
26	11K131-11	dg10k01.met	FK22.026	1	1	
27	11K131-13	dg10k01.met	FK22.027	1	1	
28	11K131-13T DF=20	dg10k01.met	FK22.028	5 µL 1	20	
29	11K131-14	dg10k01.met	FK22.029	100 µL 1	1	
30	11K131-15	dg10k01.met	FK22.030	1	1	
31	11K131-16	dg10k01.met	FK22.031	1	1	
32	11K131-16T DF=5	dg10k01.met	FK22.032	20 µL 1	5	
33	11K131-17	dg10k01.met	FK22.033	100 µL 1	1	
34	11K131-17T DF=2	dg10k01.met	FK22.034	50 µL 1	2	

Waiting For Trigger...

Start | Method: Dg10k | Tuesday, November 22, 2011

Method: Dg10k01.met Batch: Fk22.seq Data: Fk22.050 - [Batch: fk22.SEQ]

File Edit Method Batch Option Analysis Control Window Help

Run	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
35	RINSE CHANGEDSEPTUM	dg10k01.met	FK22.035	1	1	
36	11K131-17I DF=200	dg10k01.met	FK22.036	5mL (200) 1	200	
37	11K131-18	dg10k01.met	FK22.037	100mL 1	1	
38	CDG10K01455	dg10k01.met	FK22.038	1	1	
39	11K131-19	dg10k01.met	FK22.039	1	1	
40	DGK015WB	dg10k01.met	FK22.040	1	1	
41	DGK015WL	dg10k01.met	FK22.041	1	1	
42	11K144-04	dg10k01.met	FK22.042	1	1	
43	11K144-01	dg10k01.met	FK22.043	1	1	
44	11K144-01M	dg10k01.met	FK22.044	1	1	
45	11K144-01S	dg10k01.met	FK22.045	1	1	
46	11K144-02	dg10k01.met	FK22.046	1	1	
47	11K144-03	dg10k01.met	FK22.047	1	1	
48	11K184-05	dg10k01.met	FK22.048	1	1	
49	11K184-05T DF=1000	dg10k01.met	FK22.049	2mL (200) 1	1000	
50	CDG10K01456	dg10k01.met	FK22.050	100mL 1	1	
51	IB	dg10k01.met	FK22.051	1	1	
52	IB	dg10k01.met	FK22.052	1	1	
53	IB	dg10k01.met	FK22.053	1	1	FINAL
54	IB	dg10k01.met	FK22.054	1	1	
55	IB	dg10k01.met	FK22.055	1	1	
56	IB	dg10k01.met	FK22.056	1	1	
57	IB	dg10k01.met	FK22.057	1	1	
58	IB	dg10k01.met	FK22.058	1	1	
59	IB	dg10k01.met	FK22.059	1	1	
60	IB	dg10k01.met	FK22.060	1	1	
61						
62						
63						
64						
65						
66						
67						
68						

EH 11/22/11

Instrument 2 TQ10

Start | Method Dg10 | Tuesday, November 22, 2011

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGK021W: K179, K184, K217

Book #:	A10-026
Instrument No.:	10
Analytical Sequence:	FK30
Method File:	DG10K01
Analytical Batch:	CDG10K01473

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DCC SSSR-07-41-3	200
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: RH

Date: 11/30/11

Disposed By: RH

Date Disposed: 11/30/11

Method: Dg10k01.met Batch: Fk30.seq Data: Fk30.023 - [Batch: fk30.seq]

File Edit Method Batch Options Analysis Control Window Help

Run	Sample ID	Method	Filename	Sample Amt	Mult	Description
1	IB10K473	dg10k01.met	FK30.001	100mL 1	1	
2	CDG10K01473	dg10k01.met	FK30.002	1	1	
3	DGK021WB	dg10k01.met	FK30.003	1	1	
4	DGK021WL	dg10k01.met	FK30.004	1	1	
5	DGK021WC	dg10k01.met	FK30.005	1	1	
6	11K184-01	dg10k01.met	FK30.006	1	1	
7	11K184-01T DF=10	dg10k01.met	FK30.007	10mL 1	10	
8	11K184-02	dg10k01.met	FK30.008	100mL 1	1	
9	NO DATA	dg10k01.met	FK30.009	1	1	
10	11K184-03	dg10k01.met	FK30.010	1	1	
11	NO DATA	dg10k01.met	FK30.011	1	1	
12	11K184-03T DF=2	dg10k01.met	FK30.012	50mL 1	2	
13	11K184-03I DF=1000	dg10k01.met	FK30.013	2mL (20x) 1	1000	
14	11K184-04	dg10k01.met	FK30.014	100mL 1	1	
15	11K184-04T DF=1000	dg10k01.met	FK30.015	2mL (20x) 1	1000	
16	CDG10K01474	dg10k01.met	FK30.016	100mL 1	1	
17	11K179-01	dg10k01.met	FK30.017	1	1	
18	11K179-01T DF=5	dg10k01.met	FK30.018	20mL 1	5	
19	11K179-03	dg10k01.met	FK30.019	100mL 1	1	
20	11K179-03T DF=10	dg10k01.met	FK30.020	10mL 1	10	
21	11K217-02	dg10k01.met	FK30.021	100mL 1	1	FINAL
22	11K217-03	dg10k01.met	FK30.022	1	1	
23	CDG10K01475	dg10k01.met	FK30.023	1	1	
24	IB	dg10k01.met	FK30.024	1	1	
25	IB	dg10k01.met	FK30.025	1	1	
26	IB	dg10k01.met	FK30.026	1	1	
27	IB	dg10k01.met	FK30.027	1	1	
28	IB	dg10k01.met	FK30.028	1	1	
29	IB	dg10k01.met	FK30.029	1	1	
30	IB	dg10k01.met	FK30.030	1	1	
31	IB	dg10k01.met	FK30.031	1	1	
32	IB	dg10k01.met	FK30.032	1	1	
33	IB	dg10k01.met	FK30.033	1	1	
34	IB	dg10k01.met	FK30.034	1	1	

RA infoh

Instrument 2: TOTI

Start | EZ Chem Chromatography | Method: Dg10k01.me... | Method: Dg10k01.met - B | Exploring - Hexane

Wednesday, November 30, 201

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EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/01/11 Time: 10:00 End Date: 11/01/11 Time: 10:40

PREPARATION BATCH # N/A

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DG10K01-01	39	4	N/A	
02	-02			N/A	
03	-03			N/A	DGAS ICAL
04	-04			N/A	
05	-05			N/A	
06	-06			N/A	
07	IDG10K01 01			N/A	DGAS ICV
08					
09					
10					
11					
12					
13					SC 11/01/11
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Standards	ID	Amount Added (µl)
LCS/MS / ICV	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic free
He	Air Gas
ICAL STD (500 ppm)	SSSA-05-01-10 (SPECIALTY AIR)
ICV STD 500 ppm	SSSA-05-01-7 (MATHESON)

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #: (ESS)	28100705

Comments:

1) 0.08 ml ICAL STD + 3.92 ml He
2) 0.4 ml 3.6 ml
3) 1.0 ml 3.0 ml
4) 1.6 ml 2.4 ml
5) 3.0 ml 1.0 ml
6) 4.0 ml 0 ml

Prepared By: SC

Standard Added By: SC

1055

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/22/11 Time: 15:45 End Date: 11/22/11 Time: 16:20

PREPARATION BATCH # DGK015W

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DGK015WB	39	4	N/A	
02	L			N/A	
03	C			N/A	
04	11K144-01			✓	
05	01M			✓	
06	01S			✓	
07	02			✓	
08	03			✓	
09	04			✓	
10	11K184-05			pH 7	
11					
12					
13					
14					
15					
16					SC 11/22/11
17					
18					
19					
20					
21					
22					
23					
24					
25					

Standards	ID	Amount Added (µl)
LCS/MS	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic Free
He	AirGas

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #:	28100705

Comments:

Prepared By: RH

Standard Added By: RH

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/30/11 Time: 07:20 End Date: 11/30/11 Time: 07:45

PREPARATION BATCH # DG1021W

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (< 2)	Notes
01	DG1021WB	39	4	N/A	
02	↓ L	↓	↓	N/A	
03	↓ C	↓	↓	N/A	
04	11K179-01	↓	↓	✓	
05	↓ 03	↓	↓	✓	
06	11K184-01	↓	↓	✓	
07	↓ 02	↓	↓	✓	
08	↓ 03	↓	↓	✓	
09	↓ 04	↓	↓	✓	
10	11K217-02	↓	↓	✓	
11	↓ 03	↓	↓	✓	
12					
13					
14					
15					
16					
17					
18					
19				11/30/11	
20			RN		
21					
22					
23					
24					
25					

Standards	ID	Amount Added (µl)
LCS/MS	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic Free
He	Air Gas

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #:	28100705

Comments:

Prepared By: RN

Standard Added By: RN

LC0h

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

SDG#: 11K184

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K184

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

A total of five (5) water samples were received on 11/18/11 for Dissolved Metals by ICP analysis, Method 3010A/6010B in accordance with Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source. Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for IPK041WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG. Analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED METALS BY TRACE ICP

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K184
Instrument ID : T-ID8

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IPK041WB	1	NA	11/30/1111:40	11/28/1111:54	ID8K024031	ID8K024029	IPK041W	Method Blank
LCS1W	IPK041WL	1	NA	11/30/1111:43	11/28/1111:54	ID8K024032	ID8K024029	IPK041W	Lab Control Sample (LCS)
LCD1W	IPK041WC	1	NA	11/30/1111:45	11/28/1111:54	ID8K024033	ID8K024029	IPK041W	LCS Duplicate
MW-70-PMW13A-153	K184-01	1	NA	11/30/1112:30	11/28/1111:54	ID8K024047	ID8K024041	IPK041W	Field Sample
MW-70-PMW13B-154	K184-02	1	NA	11/30/1112:33	11/28/1111:54	ID8K024048	ID8K024041	IPK041W	Field Sample
MW-70-PMW14A-155	K184-03	1	NA	11/30/1112:37	11/28/1111:54	ID8K024049	ID8K024041	IPK041W	Field Sample
MW-70-PMW14B-156	K184-04	1	NA	11/30/1112:40	11/28/1111:54	ID8K024050	ID8K024041	IPK041W	Field Sample
IW-70-SSB109-157	K184-05	1	NA	11/30/1112:43	11/28/1111:54	ID8K024051	ID8K024041	IPK041W	Field Sample
44-E-13-N-112111AS	K198-05A	1	NA	11/30/1114:00	11/28/1111:54	ID8K024077	ID8K024075	IPK041W	Analytical Spike Sample
44-E-13-N-112111	K198-05	1	NA	11/30/1114:03	11/28/1111:54	ID8K024078	ID8K024075	IPK041W	Field Sample
44-E-13-N-112111DL	K198-05J	5	NA	11/30/1114:06	11/28/1111:54	ID8K024079	ID8K024075	IPK041W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD 3010A/60108
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/18/11 09:45
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
SDG NO.	: 11K184	Date Extracted:	11/28/1111:54
Sample ID:	MW-70-PMW13A-153	Date Analyzed:	11/30/11 12:30
Lab Samp ID:	K184-01	Dilution Factor:	1
Lab File ID:	ID8K024047	Matrix :	WATER
Ext Btch ID:	IPK041W	% Moisture :	NA
Calib. Ref.:	ID8K024D41	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	1.88	0.200	0.0400
Manganese	0.436	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/18/11 10:55
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
SDG NO.	: 11K184	Date Extracted:	11/28/1111:54
Sample ID:	MW-70-PMW13B-154	Date Analyzed:	11/30/11 12:33
Lab Samp ID:	K184-02	Dilution Factor:	1
Lab File ID:	ID8K024048	Matrix :	WATER
Ext Btch ID:	IPK041W	% Moisture :	NA
Calib. Ref.:	ID8K024041	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	2.62	0.200	0.0400
Manganese	0.554	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/18/11 12:09
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
SDG NO.	: 11K184	Date Extracted:	11/28/1111:54
Sample ID:	MW-70-PMW14A-155	Date Analyzed:	11/30/11 12:37
Lab Samp ID:	K184-03	Dilution Factor:	1
Lab File ID:	ID8K024049	Matrix :	WATER
Ext Btch ID:	IPK041W	% Moisture :	NA
Calib. Ref.:	ID8K024041	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	24.9	0.200	0.0400
Manganese	1.38	0.200	0.0030D

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/18/11 14:52
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
SDG NO.	: 11K184	Date Extracted:	11/28/1111:54
Sample ID:	MW-70-PMW14B-156	Date Analyzed:	11/30/11 12:40
Lab Samp ID:	K184-04	Dilution Factor:	1
Lab File ID:	ID8K024050	Matrix :	WATER
Ext Btch ID:	IPK041W	% Moisture :	NA
Calib. Ref.:	ID8K024041	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	0.00660J	0.200	0.00500
Iron	24.0	0.200	0.0400
Manganese	1.62	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/18/11 16:13
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/18/11
SDG NO.	: 11K184	Date Extracted:	11/28/1111:54
Sample ID:	IW-70-SSB109-157	Date Analyzed:	11/30/11 12:43
Lab Samp ID:	K184-05	Dilution Factor:	1
Lab File ID:	ID8K024051	Matrix :	WATER
Ext Btch ID:	IPK041W	% Moisture :	NA
Calib. Ref.:	ID8K024041	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	0.0247J	0.200	0.00500
Iron	9.85	0.200	0.0400
Manganese	0.987	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/28/11
SDG NO.	: 11K184	Date Extracted:	11/28/1111:54
Sample ID:	MBLK1W	Date Analyzed:	11/30/11 11:40
Lab Samp ID:	IPK041WB	Dilution Factor:	1
Lab File ID:	ID8K024031	Matrix :	WATER
Ext Btch ID:	IPK041W	% Moisture :	NA
Calib. Ref.:	ID8K024029	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	ND	0.200	0.0400
Manganese	ND	0.200	0.00300

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K184
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	IPK041WB	IPK041WL	IPK041WC		
LAB FILE ID:	ID8K024031	ID8K024032	ID8K024033		
DATIME EXTRCTD:	11/28/1111:54	11/28/1111:54	11/28/1111:54	DATE COLLECTED:	NA
DATIME ANALYZD:	11/30/1111:40	11/30/1111:43	11/30/1111:45	DATE RECEIVED:	11/28/11
PREP. BATCH:	IPK041W	IPK041W	IPK041W		
CALIB. REF:	ID8K024029	ID8K024029	ID8K024029		

ACCESSION:

PARAMETER	BLNK RSLT mg/L	SPIKE AMT mg/L	BS RSLT mg/L	BS % REC	SPIKE AMT mg/L	BSD RSLT mg/L	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	ND	.5	.537	107	.5	.539	108	0	80-120	20
Iron	ND	5	5.21	104	5	5.23	105	0	80-120	20
Manganese	ND	.5	.467	93	.5	.472	94	1	80-120	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: *INSIGHT EEC, INC.*
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	44-E-13-N-112111	44-E-13-N-112111DL		
EMAX SAMP ID:	K198-05	K198-05J		
LAB FILE ID:	ID8K024078	ID8K024079		
DATE EXTRACTED:	11/28/1111:54	11/28/1111:54	DATE COLLECTED:	11/21/11 11:00
DATE ANALYZED:	11/30/1114:03	11/30/1114:06	DATE RECEIVED:	11/22/11
PREP. BATCH:	IPK041W	IPK041W		
CALIB. REF:	ID8K024075	ID8K024075		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SERIAL DIL RSLT (mg/L)	DIF RSLT %	QC LIMIT (%)
Arsenic	ND	ND	0	10
Iron	ND	ND	0	10
Manganese	ND	ND	0	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K184
METHOD: METHOD 3010A/6010B (DISSOLVED)

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MATRIX: WATER % MOISTURE: NA
DILTN FACTR: 1 1
SAMPLE ID: 44-E-13-N-112111
CONTROL NO.: K198-05 K198-05A
LAB FILE ID: ID8K024078 ID8K024077
DATIME EXTRCTD: 11/28/1111:54 11/28/1111:54 DATE COLLECTED: 11/21/11 11:00
DATIME ANALYZD: 11/30/1114:03 11/30/1114:00 DATE RECEIVED: 11/22/11
PREP. BATCH: IPK041W IPK041W
CALIB. REF: ID8K024075 ID8K024075

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	AS RSLT (mg/L)	AS % REC	QC LIMIT (%)
Arsenic	ND	.5	.617	123	75-125
Iron	ND	5	5.56	111	75-125
Manganese	ND	.5	.524	105	75-125

ICP QC CHECK TABLE

QC	ICV	CCV	ICSAB	ICSA	MLCV
Limit%	90-110	90-110	80-120	80-120	80-120
Comp	mg/L	mg/L	mg/L	mg/L	mg\L
Al	100	100	400	400	200
Sb	1.5	1.5	1	0	5
As	1	1	1	0	1
Ba	2	2	0.5	0	5
Be	1.5	1.5	0.5	0	5
B	2.5	2.5	0.5	0	5
Cd	2	2	1	0	5
Ca	75	75	500	500	250
Cr	2.5	2.5	0.5	0	5
Co	1	1	0.5	0	1
Cu	2.5	2.5	0.5	0	5
Fe	25	25	200	200	200
Pb	2.5	2.5	1	0	5
Li	0.5	0.5	1	0	0.5
Mg	60	60	200	200	100
Mn	2.5	2.5	0.5	0	5
Mo	2.5	2.5	1	0	5
Ni	2.5	2.5	1	0	5
K	60	60	75	0	250
Se	1	1	1	0	1
Ag	0.5	0.5	1	0	0.5
Na	60	60	75	0	150
Sr	0.5	0.5	0.5	0	0.5
Tl	2.5	2.5	1	0	5
Sn	0.5	0.5	1	0	0.5
Ti	0.5	0.5	1	0	0.5
V	1.5	1.5	0.5	0	5
Zn	2.5	2.5	1	0	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 11/30/11 10:02

End Date: 11/30/11 17:36

SOP #	Rev. #
☑ EMAX-6010	7
☐ EMAX-6010C	1
☐ EMAX-200.7	2
☐ EMAX-	

Comments:

Book #: AD8-022

Instrument No.: D8

Analytical Batch: 108K024

Analytical Sequence: S-11K6010 (v33)

Method File: 11K6010 (v33)

Database: EMAx14

	STANDARDS ID		STANDARDS ID
S0	SM1B14-7805	S30	SM1B14-6802
S1	N/A	S31	-6803
S2		ICV	-8201
S3		CCV	-8301
S4		ICSA	-8502
S5		ICSAB	-6704
S6		CRI/MRL 1	-8101
S7		MRL2	-7401
S8			
S9			
S10			
S11			
S12			
S16			
S17			
S18			
S20	SM1B14-8401		
S21	-6503		
S22	-6504		
S23	-8402		
S24	-6702		
S25	-6763		
S26	-7801		
S27	-7802		
S28	-7803		
S29	-7804		

Analyzed By: AP

Date: 11/30/11

SEQUENCE FILE : ID8K024

4-18	19-33	34-43	44-53	54-63
LFID	LSID	TIME	DATE	DF
ID8K024001	Blank	10:02	11/30/11	1.000
ID8K024002	S20	10:05	11/30/11	1.000
ID8K024003	S21	10:07	11/30/11	1.000
ID8K024004	S22	10:11	11/30/11	1.000
ID8K024005	S23	10:14	11/30/11	1.000
ID8K024006	S24	10:17	11/30/11	1.000
ID8K024007	S25	10:20	11/30/11	1.000
ID8K024008	S26	10:23	11/30/11	1.000
ID8K024009	S27	10:26	11/30/11	1.000
ID8K024010	S28	10:29	11/30/11	1.000
ID8K024011	S29	10:32	11/30/11	1.000
ID8K024012	S30	10:35	11/30/11	1.000
ID8K024013	S31	10:38	11/30/11	1.000
ID8K024014	ICV	10:41	11/30/11	1.000
ID8K024015	ICB	10:44	11/30/11	1.000
ID8K024016	MRLK3001	10:47	11/30/11	1.000
ID8K024017	MRLK3002	10:50	11/30/11	1.000
ID8K024018	ICSA1	10:53	11/30/11	1.000
ID8K024019	ICAB1	10:56	11/30/11	1.000
ID8K024020	CCV1	10:59	11/30/11	1.000
ID8K024021	CCB1	11:02	11/30/11	1.000
ID8K024022	K542-08	11:05	11/30/11	1.000
ID8K024023	Blank	11:08	11/30/11	1.000
ID8K024024	CCV2	11:11	11/30/11	1.000
ID8K024025	CCB2	11:14	11/30/11	1.000
ID8K024026	K542-08W	11:24	11/30/11	1.000
ID8K024027	K550-08	11:27	11/30/11	1.000
ID8K024028	Blank	11:30	11/30/11	1.000
ID8K024029	CCV3	11:34	11/30/11	1.000
ID8K024030	CCB3	11:37	11/30/11	1.000
ID8K024031	IPK041WB	11:40	11/30/11	1.000
ID8K024032	IPK041WL	11:43	11/30/11	1.000
ID8K024033	IPK041WC	11:45	11/30/11	1.000
ID8K024034	K205-01A	11:48	11/30/11	1.000
ID8K024035	K205-01	11:51	11/30/11	1.000
ID8K024036	K205-01J	11:54	11/30/11	5.000
ID8K024037	K205-01M	11:57	11/30/11	1.000
ID8K024038	K205-01S	12:00	11/30/11	1.000
ID8K024039	K203-15	12:06	11/30/11	1.000
ID8K024040	Blank	12:09	11/30/11	1.000
ID8K024041	CCV4	12:12	11/30/11	1.000
ID8K024042	CCB4	12:15	11/30/11	1.000
ID8K024043	K205-02	12:18	11/30/11	1.000
ID8K024044	K205-03	12:21	11/30/11	1.000
ID8K024045	K205-04	12:24	11/30/11	1.000
ID8K024046	K205-05	12:27	11/30/11	1.000
ID8K024047	K184-01	12:30	11/30/11	1.000
ID8K024048	K184-02	12:33	11/30/11	1.000
ID8K024049	K184-03	12:37	11/30/11	1.000
ID8K024050	K184-04	12:40	11/30/11	1.000
ID8K024051	K184-05	12:43	11/30/11	1.000
ID8K024052	Blank	12:46	11/30/11	1.000

ID8K024053	CCV5	12:49	11/30/11	1.000
ID8K024054	CCB5	12:52	11/30/11	1.000
ID8K024055	K174-01	12:55	11/30/11	1.000
ID8K024056	K174-07	12:58	11/30/11	1.000
ID8K024057	K188-03	13:02	11/30/11	1.000
ID8K024058	Blank	13:05	11/30/11	1.000
ID8K024059	CCV6	13:08	11/30/11	1.000
ID8K024060	CCB6	13:11	11/30/11	1.000
ID8K024061	K542-06A	13:14	11/30/11	5.000
ID8K024062	K542-06T	13:16	11/30/11	5.000
ID8K024063	K542-06J	13:19	11/30/11	25.00
ID8K024064	K542-06M	13:22	11/30/11	5.000
ID8K024065	K542-06S	13:25	11/30/11	5.000
ID8K024066	Blank	13:28	11/30/11	1.000
ID8K024067	CCV7	13:31	11/30/11	1.000
ID8K024068	CCB7	13:34	11/30/11	1.000
ID8K024069	K205-01A	13:37	11/30/11	5.000
ID8K024070	K205-01T	13:39	11/30/11	5.000
ID8K024071	K205-01J	13:43	11/30/11	25.00
ID8K024072	K205-01M	13:46	11/30/11	5.000
ID8K024073	K205-01S	13:48	11/30/11	5.000
ID8K024074	Blank	13:51	11/30/11	1.000
ID8K024075	CCV8	13:54	11/30/11	1.000
ID8K024076	CCB8	13:57	11/30/11	1.000
ID8K024077	K198-05A	14:00	11/30/11	1.000
ID8K024078	K198-05	14:03	11/30/11	1.000
ID8K024079	K198-05J	14:06	11/30/11	5.000
ID8K024080	K198-05M	14:09	11/30/11	1.000
ID8K024081	K198-05S	14:11	11/30/11	1.000
ID8K024082	K198-03	14:14	11/30/11	1.000
ID8K024083	K198-04	14:17	11/30/11	1.000
ID8K024084	Blank	14:20	11/30/11	1.000
ID8K024085	CCV9	14:23	11/30/11	1.000
ID8K024086	CCB9	14:26	11/30/11	1.000
ID8K024087	K207-01	14:29	11/30/11	1.000
ID8K024088	K207-02	14:32	11/30/11	1.000
ID8K024089	Blank	14:35	11/30/11	1.000
ID8K024090	CCV10	14:38	11/30/11	1.000
ID8K024091	CCB10	14:41	11/30/11	1.000
ID8K024092	K119-01A	14:44	11/30/11	1.000
ID8K024093	K119-01W	14:46	11/30/11	1.000
ID8K024094	K119-01J	14:49	11/30/11	5.000
ID8K024095	K133-01A	14:52	11/30/11	5.000
ID8K024096	K133-01T	14:55	11/30/11	5.000
ID8K024097	K133-01J	14:58	11/30/11	25.00
ID8K024098	Blank	15:01	11/30/11	1.000
ID8K024099	CCV11	15:04	11/30/11	1.000
ID8K024100	CCB11	15:07	11/30/11	1.000
ID8K024101	IPK045WB	15:10	11/30/11	1.000
ID8K024102	IPK045WL	15:13	11/30/11	1.000
ID8K024103	IPK045WC	15:16	11/30/11	1.000
ID8K024104	TXK010SB	15:19	11/30/11	1.000
ID8K024105	K216-01A	15:22	11/30/11	1.000
ID8K024106	K216-01	15:25	11/30/11	1.000
ID8K024107	K216-01J	15:28	11/30/11	5.000

1D8K024108	K216-01M	15:31	11/30/11	1.000
1D8K024109	K216-01S	15:34	11/30/11	1.000
1D8K024110	Blank	15:37	11/30/11	1.000
1D8K024111	CCV12	15:40	11/30/11	1.000
1D8K024112	CCB12	15:42	11/30/11	1.000
1D8K024113	K216-02	15:46	11/30/11	1.000
1D8K024114	Blank	15:49	11/30/11	1.000
1D8K024115	CCV13	15:52	11/30/11	1.000
1D8K024116	CCB13	15:54	11/30/11	1.000
1D8K024117	K542-06A	15:57	11/30/11	10.00
1D8K024118	K542-06A	16:00	11/30/11	10.00
1D8K024119	K542-06I	16:03	11/30/11	10.00
1D8K024120	K542-06J	16:06	11/30/11	50.00
1D8K024121	K542-06M	16:09	11/30/11	10.00
1D8K024122	K542-06S	16:12	11/30/11	10.00
1D8K024123	Blank	16:14	11/30/11	1.000
1D8K024124	CCV14	16:17	11/30/11	1.000
1D8K024125	CCB14	16:20	11/30/11	1.000
1D8K024126	K133-01A	16:23	11/30/11	10.00
1D8K024127	K133-01I	16:26	11/30/11	10.00
1D8K024128	K133-01J	16:29	11/30/11	50.00
1D8K024129	Blank	16:32	11/30/11	1.000
1D8K024130	CCV15	16:35	11/30/11	1.000
1D8K024131	CCB15	16:38	11/30/11	1.000
1D8K024132	IPK046WB	16:41	11/30/11	1.000
1D8K024133	IPK046WL	16:44	11/30/11	1.000
1D8K024134	IPK046WC	16:47	11/30/11	1.000
1D8K024135	K229-01A	16:50	11/30/11	1.000
1D8K024136	K229-01	16:52	11/30/11	1.000
1D8K024137	K229-01J	16:55	11/30/11	5.000
1D8K024138	K229-01M	16:58	11/30/11	1.000
1D8K024139	K229-01S	17:01	11/30/11	1.000
1D8K024140	K229-03	17:04	11/30/11	1.000
1D8K024141	Blank	17:06	11/30/11	1.000
1D8K024142	CCV16	17:09	11/30/11	1.000
1D8K024143	CCV16	17:12	11/30/11	1.000
1D8K024144	K133-01A	17.15	11/30/11	10.00
1D8K024145	K542-06A	17:18	11/30/11	15.00
1D8K024146	K542-06A	17:21	11/30/11	15.00
1D8K024147	K542-06G	17:23	11/30/11	15.00
1D8K024148	K542-06J	17:26	11/30/11	75.00
1D8K024149	Blank	17:29	11/30/11	1.000
1D8K024150	CCV17	17:32	11/30/11	1.000
1D8K024151	CCB17	17:36	11/30/11	1.000

VERSON : 11A UNIT : % SUMMARY of ICV and CCV : ID8K024 DATE : 11/30/11 INST : EMAX1

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S26	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	101	97	103	98	98	98	98	99	97	96	105	100	96	108	94	92	99	98	97	103	101	105	97	91	93	99	102	102
ICB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK3001	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK3002	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA1	97	----	----	----	----	----	----	94	----	----	----	95	----	----	95	----	----	----	----	----	----	----	----	----	----	----	----	----
ICAB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	-485*	-479*	-489*	97	95	0*	-470*	99	0*	95	0*	0*	94	100	93	91	99	97	99	-495*	0*	106	96	-439*	98	97	0*	102
CCB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	101	100	104	98	95	98	99	98	97	96	105	99	95	101	93	91	99	97	99	103	102	106	97	93	98	97	101	102
CCB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-08W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K550-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	103	100	106	99	99	100	102	101	100	97	108	102	97	109	95	94	100	99	100	105	104	107	98	95	93	100	103	104
CCB3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK041WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK041WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK041WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K203-15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	101	101	106	97	95	99	101	99	99	96	107	100	94	99	93	92	97	97	99	105	104	107	97	94	96	97	101	102
CCB4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

CCV5	101	98	105	97	95	100	100	97	101	96	110	100	94	100	92	92	97	97	100	104	105	108	98	92	94	95	101	101
CCB5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K174-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K174-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K188-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	102	98	103	98	96	99	99	98	99	96	107	99	94	101	95	94	98	97	99	102	104	107	97	92	96	98	100	101
CCB6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	104	97	107	99	100	101	104	99	103	97	111*	100	95	111*	96	97	98	99	100	105	107	108	100	95	88*	100	102	102
CCB7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	103	97	108	97	98	101	106	98	103	96	110	100	95	108	95	95	96	98	98	106	107	106	99	97	87*	99	101	102
CCB8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	103	99	107	98	97	101	105	98	103	96	111*	100	94	102	95	94	96	97	100	107	108	108	99	96	92	97	101	102
CCB9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K207-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K207-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV10	102	99	107	98	96	100	105	98	102	96	110	100	94	102	95	94	96	97	100	106	106	108	99	96	93	97	100	102
CCB10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K119-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K119-01W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K119-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV11	103	100	108	97	96	101	107	97	103	96	110	100	95	100	94	94	96	97	100	109	108	108	99	98	93	96	101	103
CCB11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK045WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK045WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK045WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TXK010SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K216-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV12	103	99	108	98	97	102	108	98	105	96	111*	100	94	102	96	95	96	97	100	108	108	109	99	98	92	97	101	102
CCB12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV13	102	100	109	97	95	102	107	98	104	96	112*	101	94	100	93	94	96	98	101	109	109	109	99	97	92	95	101	103
CCB13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-061	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV14	102	99	108	97	95	102	107	98	105	96	112*	101	94	100	93	93	96	97	100	109	108	109	99	97	92	95	101	103
CCB14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV15	103	99	107	99	97	101	105	97	102	96	110	100	94	102	94	95	97	97	100	107	106	108	98	96	93	97	100	102
CCB15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK046WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK046WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK046WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV16	102	99	107	96	94	101	104	97	103	96	111*	101	93	99	92	91	96	97	100	106	107	109	98	95	93	95	101	102
CCV16	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06G	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV17	102	99	106	99	96	100	103	97	101	96	109	99	94	103	94	95	97	97	100	106	106	109	99	95	94	97	100	102
CCB17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

QC limit of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC Limit

VERSON : 11A UNIT : UG/L SUMMARY of CALIBRATION BLANKS : ID8K024 (WATER) DATE : 11/30/11 INST : EMAX7

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S26	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICB	10.3	1.37	-1.66	.100	.060	3.65	-.040	-8.32	.280	-.120	.210	-.770	-.270	.210	-.800	.200	.300	.000	155	-2.10	.110	-182	.080	1.32	-.330	-.070	.020	-.410
MRLK3001	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK3002	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA1	----	-.240	.610	.760	.120	-57.6	4.17	----	.800	-.720	1.37	----	5.83	16.4	----	.910	-1.04	.900	229	1.12	-.110	-30.9	1.01	-2.32	1.45	3.74	.690	2.61
ICAB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB1	12.9	1.58	.710	.300	.090	3.82	.020	18.3	.230	.060	.270	.650	.100	-.660	.590	-.060	.380	-.090	105	-1.10	.040	-199	.090	.780	.120	.000	.290	.770
K542-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB2	12.7	1.53	-.550	.250	.100	4.30	-.010	13.8	.300	-.150	.300	-1.11	-.010	.160	-3.38	.190	.340	.010	32.6	-1.85	.060	-219	.110	1.17	-.500	.010	.210	.660
K542-08W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K550-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB3	15.6	.670	-.120	230	.120	3.84	-.030	159	.230	100	480	1.30	-.260	-.510	6 67	.370	.330	.000	-31.6	-1.03	-.020	-233	.250	1.44	-.520	.590	200	5.89
IPK041WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK041WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK041WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K203-15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB4	13.8	1.56	-.200	.210	.110	1.08	-.040	23.1	.150	-.170	.270	.060	.310	.120	-4.90	- 020	.320	-.070	30.7	-1.83	-.040	-144	.140	1.02	-.150	.140	.200	.470
K205-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

CCV5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB5	14.5	.950	-.780	.280	.090	-.450	.010	19.8	.110	.020	.160	-1.09	.250	-.080	.030	.050	.260	-.150	102	-1.05	.000	62.0	.100	1.29	-.540	-.150	.150	.550
K174-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K174-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K188-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB6	15.4	1.40	-.300	.310	.120	-.120	.010	16.7	.270	.000	-.030	-1.11	.050	-.510	-3.01	.120	.320	-.070	84.5	-1.25	.070	67.9	.060	.990	-.570	.090	.280	.460
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB7	21.8	1.75	-.560	.300	.150	-1.43	.110	188	.190	.060	.170	1.75	.450	-.620	9.09	.120	.300	-.130	13.2	-.930	.030	-106	.050	1.14	-.630	.440	.120	6.42
K205-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB8	50.1	1.97	-1.21	.650	.210	-.780	.120	72.0	.380	.050	1.04	10.6	.600	-.870	6.75	.280	.390	-.220	39.5	-1.97	.070	-80.6	.110	.610	-.290	.370	.030	3.95
K198-05A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB9	23.8	2.08	-1.10	.330	.110	-1.47	-.010	16.4	.200	.010	.220	-2.26	-.210	-.110	4.91	.190	.440	-.150	29.1	-.400	-.030	-140	.090	1.27	-.480	.050	-.100	.390
K207-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K207-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB10	22.8	1.19	-1.18	.310	.130	-1.05	-.030	46.5	.190	.070	.180	-.580	-.010	.880	-3.00	.290	.260	-.160	18.1	-1.29	-.040	-168	.050	1.29	-.260	-.070	-.020	1.47
K119-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K119-01W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K119-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB11	30.8	2.49	-1.91	.520	.230	-1.32	.130	383	.290	.190	.240	.090	.470	-1.49	13.3	.510	.490	.090	30.8	.600	-.030	-111	.240	.590	-.550	.460	.190	13.4
IPK045WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK045WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK045WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TXK010SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K216-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB12	31.4	2.34	-.450	.340	.170	-2.03	.020	40.6	.140	.140	.230	-2.45	-.320	-1.02	2.48	.270	.430	-.110	50.5	-.630	.040	-127	.120	.650	-.530	.470	.010	1.02
K216-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB13	26.6	2.46	-.920	.340	.220	-1.83	.000	26.0	.220	.150	.210	-.370	.210	-.860	5.44	.250	.370	-.100	46.0	-1.18	.010	-138	.110	.990	-.120	-.190	.210	.510
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB14	25.8	1.64	.080	.430	.160	-2.45	-.020	30.1	.170	.050	.170	-.220	-.290	-.790	3.35	.100	.350	-.140	9.74	-.580	.000	-184	.100	.470	-.620	.050	.070	.750
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB15	19.6	2.17	.370	.290	.170	-2.29	.020	24.3	.240	.000	.030	.620	-.340	-.300	-1.64	.030	.340	-.190	34.4	-.500	.030	-156	.080	.230	-.450	-.120	.120	.680
IPK046WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK046WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK046WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06G	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB17	20.3	1.56	.590	.230	.150	-2.24	-.010	24.3	.280	.050	060	-.670	.180	-.670	1.75	.130	.250	-.180	47.7	-1.15	-.020	-209	.150	1.12	-.470	-.330	.040	.970

QC limit of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC Limit

VERSON : 11A UNIT : UG/L SUMMARY of CALIBRATION BLANKS : 1D8K024 (SOIL) DATE : 11/30/11 INST : EMAXI

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S26	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICB	10.3	1.37	-1.66	.100	.060	3.65	-.040	-8.32	.280	-.120	.210	-.770	-.270	.210	-.800	.200	.300	.000	155	-2.10	.110	-182	.080	1.32	-.330	-.070	.020	-.410
MRLK3001	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK3002	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1CSA1	----	-.240	.610	.760	.120	-57.6	4.17	----	.800	-.720	1.37	----	5.83	16.4	----	.910	-1.04	.900	229	1.12	-.110	-30.9	1.01	-2.32	1.45	3.74	.690	2.61
1CAB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB1	12.9	1.58	.710	.300	.090	3.82	.020	18.3	.230	.060	.270	.650	.100	-.660	.590	-.060	.380	-.090	105	-1.10	.040	-199	.090	.780	.120	.000	.290	.770
K542-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB2	12.7	1.53	-.550	.250	.100	4.30	-.010	13.8	.300	-.150	.300	-1.11	-.010	.160	-3.38	.190	.340	.010	32.6	-1.85	.060	-219	.110	1.17	-.500	.010	.210	.660
K542-08W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K550-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB3	15.6	.670	-.120	.230	120	3.84	-.030	159	.230	.100	.480	1.30	-.260	-.510	6.67	.370	.330	.000	-31.6	-1.03	-.020	-233	.250	1.44	-.520	.590	.200	5.89
1PK041WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK041WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK041WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K203-15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB4	13.8	1.56	-.200	.210	.110	1.08	-.040	23.1	.150	-.170	.270	.060	.310	120	-4.90	-.020	.320	-.070	30.7	-1.83	-.040	-144	.140	1.02	-.150	.140	.200	.470
K205-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

CCV5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB5	14.5	.950	-.780	.280	.090	-.450	.010	19.8	.110	.020	.160	-1.09	.250	-.080	.030	.050	.260	-.150	102	-1.05	.000	62.0	.100	1.29	-.540	-.150	.150	.550
K174-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K174-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K188-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB6	15.4	1.40	-.300	.310	.120	-.120	.010	16.7	.270	.000	-.030	-1.11	-.050	-.510	-3.01	.120	.320	-.070	84.5	-1.25	.070	67.9	.060	.990	-.570	.090	.280	.460
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB7	21.8	1.75	-.560	.300	.150	-1.43	.110	188	.190	.060	.170	1.75	.450	-.620	9.09	.120	.300	-.130	13.2	-.930	.030	-106	.050	1.14	-.630	.440	.120	6.42
K205-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB8	50.1	1.97	-1.21	.650	.210	-.780	.120	72.0	.380	.050	1.04	10.6	.600	-.870	6.75	.280	.390	-.220	39.5	-1.97	.070	-80.6	.110	.610	-.290	.370	.030	3.95
K198-05A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB9	23.8	2.08	-1.10	.330	.110	-1.47	-.010	16 4	.200	.010	.220	-2.26	-.210	-.110	4 91	.190	.440	-.150	29.1	-.400	-.030	-140	.090	1.27	-.480	.050	-.100	.390
K207-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K207-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB10	22.8	1.19	-1.18	310	.130	-1.05	-.030	46.5	.190	070	.180	-.580	-.010	-.880	-3.00	290	.260	-.160	18.1	-1.29	-.040	-168	.050	1.29	-.260	-.070	-.020	1.47
K119-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K119-01W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K119-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB11	30.8	2.49	-1.91	.520	230	-1 32	.130	383	.290	.190	.240	.090	.470	-1.49	13.3	.510	.490	.090	30.8	.600	-.030	-111	.240	.590	-.550	.460	.190	13.4
1PK045WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK045WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK045WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TXK010SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K216-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB12	31.4	2.34	-.450	.340	.170	-2.03	.020	40.6	.140	.140	.230	-2.45	-.320	-1.02	2.48	.270	.430	-.110	50.5	-.630	.040	-127	.120	.650	-.530	.470	.010	1.02
K216-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB13	26.6	2.46	-.920	.340	.220	-1.83	.000	26.0	.220	.150	.210	-.370	.210	-.860	5.44	.250	.370	-.100	46.0	-1.18	.010	-138	.110	.990	-.120	-.190	.210	.510
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-061	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB14	25.8	1.64	.080	.430	.160	-2.45	-.020	30.1	.170	.050	.170	-.220	-.290	-.790	3.35	.100	.350	-.140	9.74	-.580	.000	-184	.100	.470	-.620	.050	.070	.750
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB15	19.6	2.17	.370	.290	.170	-2.29	.020	24.3	.240	.000	.030	.620	-.340	-.300	-1.64	.030	.340	-.190	34.4	-.500	.030	-156	.080	.230	-.450	-.120	.120	.680
IPK046WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK046WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK046WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06G	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB17	20.3	1.56	.590	.230	.150	-2.24	-.010	24.3	.280	.050	.060	-.670	.180	.670	1.75	.130	.250	-.180	47.7	-1.15	-.020	-209	.150	1.12	-.470	-.330	.040	.970

QC limit of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC Limit

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
1	0	0	0	0	Unk	S0		ID8K024001			1	☒	unk	---
2	0	0	0	0	Unk	S20		ID8K024002			1	☒	unk	---
3	0	0	0	0	Unk	S21		ID8K024003			1	☒	unk	---
4	0	0	0	0	Unk	S22		ID8K024004			1	☒	unk	---
5	0	0	0	0	Unk	S23		ID8K024005			1	☒	unk	---
6	0	0	0	0	Unk	S24		ID8K024006			1	☒	unk	---
7	0	0	0	0	Unk	S25		ID8K024007			1	☒	unk	---
8	0	0	0	0	Unk	S26		ID8K024008			1	☒	unk	---
9	0	0	0	0	Unk	S27		ID8K024009			1	☒	unk	---
10	0	0	0	0	Unk	S28		ID8K024010			1	☒	unk	---
11	0	0	0	0	Unk	S29		ID8K024011			1	☒	unk	---
12	0	0	0	0	Unk	S30		ID8K024012			1	☒	unk	---
13	0	0	0	0	Unk	S31		ID8K024013			1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8K024014			1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8K024015			1	☒	3XIDL	None
16	3	2	3	1	QC	MRLK3001		ID8K024016			1	☒	MRL-EMAX	None
17	4	2	4	1	QC	MRLK3002		ID8K024017			1	☒	MRL-AFCEE	None
18	5	2	5	1	QC	ICSA1		ID8K024018			1	☒	ICSA-DoD	None
19	6	2	6	1	QC	ICAB1		ID8K024019			1	☒	ICSAB	None
20	7	2	7	1	QC	CCV1		ID8K024020			1	☒	CCV	None
21	8	2	8	1	QC	CCB1		ID8K024021			1	☒	3XIDL	None
22	9	2	9	1	Unk	K550-08	TCLP	ID8K024022			1	☒	unk	---
23	10	2	10	1	Blank	Blank		ID8K024023			1	☐		---
24	11	2	11	1	QC	CCV2		ID8K024024			1	☒	CCV	None
25	12	2	12	1	QC	CCB2		ID8K024025			1	☒	3XIDL	None
26	57	2	9	5	Unk	K542-08	TCLP	ID8K024026			1	☒	unk	---
27	58	2	10	5	Unk	K550-08	TCLP CONFIRM	ID8K024027			1	☒	unk	---
28	59	2	11	5	Blank	Blank		ID8K024028			1	☐		---
29	60	2	12	5	QC	CCV3		ID8K024029			1	☒	CCV	None
30	61	3	1	1	QC	CCB3		ID8K024030			1	☒	3XIDL	None
31	13	2	1	2	QC	IPK041WB		ID8K024031			1	☒	1/2LOQ	None
32	14	2	2	2	QC	IPK041WL		ID8K024032			1	☒	LCS	None
33	15	2	3	2	QC	IPK041WC		ID8K024033			1	☒	LCS	None
34	16	2	4	2	Unk	K205-01A	DISSOLVED	ID8K024034			1	☒	unk	---
35	17	2	5	2	Unk	K205-01	DISSOLVED	ID8K024035			1	☒	unk	---
36	18	2	6	2	Unk	K205-01J	DISSOLVED	ID8K024036			1	☒	unk	---
37	19	2	7	2	Unk	K205-01M	DISSOLVED	ID8K024037			1	☒	unk	---
38	20	2	8	2	Unk	K205-01S	DISSOLVED	ID8K024038			1	☒	unk	---
39	62	3	2	1	Unk	K203-15		ID8K024039			1	☒	unk	---

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
40	22	2	10	2	Blank	Blank		ID8K024040			1	☐		---
41	23	2	11	2	QC	CCV4		ID8K024041			1	☒	CCV	None
42	24	2	12	2	QC	CCB4		ID8K024042			1	☒	3XIDL	None
43	21	2	9	2	Unk	K205-02	DISSOLVED	ID8K024043			1	☒	unk	---
44	25	2	1	3	Unk	K205-03	DISSOLVED	ID8K024044			1	☒	unk	---
45	26	2	2	3	Unk	K205-04	DISSOLVED	ID8K024045			1	☒	unk	---
46	27	2	3	3	Unk	K205-05	DISSOLVED	ID8K024046			1	☒	unk	---
47	28	2	4	3	Unk	K184-01	DISSOLVED	ID8K024047			1	☒	unk	---
48	29	2	5	3	Unk	K184-02	DISSOLVED	ID8K024048			1	☒	unk	---
49	30	2	6	3	Unk	K184-03	DISSOLVED	ID8K024049			1	☒	unk	---
50	31	2	7	3	Unk	K184-04	DISSOLVED	ID8K024050			1	☒	unk	---
51	32	2	8	3	Unk	K184-05	DISSOLVED	ID8K024051			1	☒	unk	---
52	34	2	10	3	Blank	Blank		ID8K024052			1	☐		---
53	35	2	11	3	QC	CCV5		ID8K024053			1	☒	CCV	None
54	36	2	12	3	QC	CCB5		ID8K024054			1	☒	3XIDL	None
55	33	2	9	3	Unk	K174-01	DISSOLVED	ID8K024055			1	☒	unk	---
56	37	2	1	4	Unk	K174-07	DISSOLVED	ID8K024056			1	☒	unk	---
57	38	2	2	4	Unk	K188-03	DISSOLVED	ID8K024057			1	☒	unk	---
58	39	2	3	4	Blank	Blank		ID8K024058			1	☐		---
59	40	2	4	4	QC	CCV6		ID8K024059			1	☒	CCV	None
60	41	2	5	4	QC	CCB6		ID8K024060			1	☒	3XIDL	None
61	63	3	3	1	Unk	K542-06A	TCLP 5X As, Se	ID8K024061			1	☒	unk	---
62	64	3	4	1	Unk	K542-06T	TCLP 5X As, Se	ID8K024062			1	☒	unk	---
63	65	3	5	1	Unk	K542-06J	TCLP 25X As, Se	ID8K024063			1	☒	unk	---
64	66	3	6	1	Unk	K542-06M	TCLP 5X As, Se	ID8K024064			1	☒	unk	---
65	67	3	7	1	Unk	K542-06S	TCLP 5X As, Se	ID8K024065			1	☒	unk	---
66	68	3	8	1	Blank	Blank		ID8K024066			1	☐		---
67	69	3	9	1	QC	CCV7		ID8K024067			1	☒	CCV	None
68	70	3	10	1	QC	CCB7		ID8K024068			1	☒	3XIDL	None
69	71	3	11	1	Unk	K205-01A	DISSOLVED 5X	ID8K024069			1	☒	unk	---
70	72	3	12	1	Unk	K205-01T	DISSOLVED 5X	ID8K024070			1	☒	unk	---
71	73	3	1	2	Unk	K205-01J	DISSOLVED 25X	ID8K024071			1	☒	unk	---
72	74	3	2	2	Unk	K205-01M	DISSOLVED 5X	ID8K024072			1	☒	unk	---
73	75	3	3	2	Unk	K205-01S	DISSOLVED 5X	ID8K024073			1	☒	unk	---
74	76	3	4	2	Blank	Blank		ID8K024074			1	☐		---
75	77	3	5	2	QC	CCV8		ID8K024075			1	☒	CCV	None
76	78	3	6	2	QC	CCB8		ID8K024076			1	☒	3XIDL	None
77	42	2	6	4	Unk	K198-05A		ID8K024077			1	☒	unk	---
78	43	2	7	4	Unk	K198-05		ID8K024078			1	☒	unk	---

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
79	44	2	8	4	Unk	K198-05J		ID8K024079			1	☒	unk	---
80	45	2	9	4	Unk	K198-05M		ID8K024080			1	☒	unk	---
81	46	2	10	4	Unk	K198-05S		ID8K024081			1	☒	unk	---
82	47	2	11	4	Unk	K198-03		ID8K024082			1	☒	unk	---
83	51	2	3	5	Unk	K198-04		ID8K024083			1	☒	unk	---
84	48	2	12	4	Blank	Blank		ID8K024084			1	☐		---
85	49	2	1	5	QC	CCV9		ID8K024085			1	☒	CCV	None
86	50	2	2	5	QC	CCB9		ID8K024086			1	☒	3XIDL	None
87	52	2	4	5	Unk	K207-01		ID8K024087			1	☒	unk	---
88	53	2	5	5	Unk	K207-02		ID8K024088			1	☒	unk	---
89	54	2	6	5	Blank	Blank		ID8K024089			1	☐		---
90	55	2	7	5	QC	CCV10		ID8K024090			1	☒	CCV	None
91	56	2	8	5	QC	CCB10		ID8K024091			1	☒	3XIDL	None
92	79	3	7	2	Unk	K119-01A		ID8K024092			1	☒	unk	---
93	80	3	8	2	Unk	K119-01W		ID8K024093			1	☒	unk	---
94	81	3	9	2	Unk	K119-01J		ID8K024094			1	☒	unk	---
95	82	3	10	2	Unk	K133-01A	5X	ID8K024095			1	☒	unk	---
96	83	3	11	2	Unk	K133-01T	5X	ID8K024096			1	☒	unk	---
97	84	3	12	2	Unk	K133-01J	25X	ID8K024097			1	☒	unk	---
98	85	3	1	3	Blank	Blank		ID8K024098			1	☐		---
99	86	3	2	3	QC	CCV11		ID8K024099			1	☒	CCV	None
100	87	3	3	3	QC	CCB11		ID8K024100			1	☒	3XIDL	None
101	97	3	1	4	QC	IPK045WB		ID8K024101			1	☒	1/2LOQ	None
102	98	3	2	4	QC	IPK045WL		ID8K024102			1	☒	LCS	None
103	99	3	3	4	QC	IPK045WC		ID8K024103			1	☒	LCS	None
104	100	3	4	4	QC	TXK010SB	TCLP	ID8K024104			1	☒	1/2LOQ	None
105	101	3	5	4	Unk	K216-01A	TCLP	ID8K024105			1	☒	unk	---
106	102	3	6	4	Unk	K216-01	TCLP	ID8K024106			1	☒	unk	---
107	103	3	7	4	Unk	K216-01J	TCLP	ID8K024107			1	☒	unk	---
108	104	3	8	4	Unk	K216-01M	TCLP	ID8K024108			1	☒	unk	---
109	105	3	9	4	Unk	K216-01S	TCLP	ID8K024109			1	☒	unk	---
110	106	3	10	4	Blank	Blank		ID8K024110			1	☐		---
111	107	3	11	4	QC	CCV12		ID8K024111			1	☒	CCV	None
112	108	3	12	4	QC	CCB12		ID8K024112			1	☒	ICSAB10%	None
113	109	3	1	5	Unk	K216-02	TCLP	ID8K024113			1	☒	unk	---
114	110	3	2	5	Blank	Blank		ID8K024114			1	☐		---
115	111	3	3	5	QC	CCV13		ID8K024115			1	☒	CCV	None
116	112	3	4	5	QC	CCB13		ID8K024116			1	☒	3XIDL	None
117	88	3	4	3	Unk	K542-06A	TCLP 10X	ID8K024117			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
118	89	3	5	3	Unk	K542-06A	TCLP 10X DLB SPIKE	ID8K024118			1	☒	unk	---
119	90	3	6	3	Unk	K542-06I	TCLP 10X	ID8K024119			1	☒	unk	---
120	91	3	7	3	Unk	K542-06J	TCLP 50X	ID8K024120			1	☒	unk	---
121	92	3	8	3	Unk	K542-06M	TCLP 10X	ID8K024121			1	☒	unk	---
122	93	3	9	3	Unk	K542-06S	TCLP 10X	ID8K024122			1	☒	unk	---
123	94	3	10	3	Blank	Blank		ID8K024123			1	☐		---
124	95	3	11	3	QC	CCV14		ID8K024124			1	☒	CCV	None
125	96	3	12	3	QC	CCB14		ID8K024125			1	☒	3XIDL	None
126	113	3	5	5	Unk	K133-01A	10X	ID8K024126			1	☒	unk	---
127	114	3	6	5	Unk	K133-01I	10X	ID8K024127			1	☒	unk	---
128	115	3	7	5	Unk	K133-01J	50X	ID8K024128			1	☒	unk	---
129	116	3	8	5	Blank	Blank		ID8K024129			1	☐		---
130	117	3	9	5	QC	CCV15		ID8K024130			1	☒	CCV	None
131	118	3	10	5	QC	CCB15		ID8K024131			1	☒	3XIDL	None
132	119	3	11	5	QC	IPK046WB		ID8K024132			1	☒	1/2LOQ	None
133	120	3	12	5	QC	IPK046WL		ID8K024133			1	☒	LCS	None
134	121	4	1	1	QC	IPK046WC		ID8K024134			1	☒	LCS	None
135	122	4	2	1	Unk	K229-01A		ID8K024135			1	☒	unk	---
136	123	4	3	1	Unk	K229-01		ID8K024136			1	☒	unk	---
137	124	4	4	1	Unk	K229-01J		ID8K024137			1	☒	unk	---
138	125	4	5	1	Unk	K229-01M		ID8K024138			1	☒	unk	---
139	126	4	6	1	Unk	K229-01S		ID8K024139			1	☒	unk	---
140	127	4	7	1	Unk	K229-03		ID8K024140			1	☒	unk	---
141	128	4	8	1	Blank	Blank		ID8K024141			1	☐		---
142	129	4	9	1	QC	CCV16		ID8K024142			1	☒	CCV	None
143	130	4	10	1	QC	CCV16		ID8K024143			1	☒	3XIDL	None
144	131	4	11	1	Unk	K133-01A	DLB SPIKE 10X	ID8K024144			1	☒	unk	---
145	132	4	12	1	Unk	K542-06A	DLB SPIKE 15X	ID8K024145			1	☒	unk	---
146	133	4	1	2	Unk	K542-06A	DLB SPIKE 15X	ID8K024146			1	☒	unk	---
147	134	4	2	2	Unk	K542-06G	DLB SPIKE 15X	ID8K024147			1	☒	unk	---
148	135	4	3	2	Unk	K542-06J	DLB SPIKE 75X	ID8K024148			1	☒	unk	---
149	136	4	4	2	Blank	Blank		ID8K024149			1	☐		---
150	137	4	5	2	QC	CCV17		ID8K024150			1	☒	CCV	None
151	138	4	6	2	QC	CCB17		ID8K024151			1	☒	3XIDL	None

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ID8K024 Section 1 of 3

INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID
1	Blank	.00105	.00002	-.00001	.00024	.00006	.00115	-.00003	.00047	-.00005	- 00096	Blank
2	S20					1.0166		.11539				S20
3	S21					10.153		1.1227				S21
4	S22				.64337						.15950	S22
5	S23				6.2663						1.5919	S23
6	S24						.09586					S24
7	S25						.97435					S25
8	S26	.21923							.84092	.12859		S26
9	S27	8.3400							8.1196	1.2915		S27
10	S28		.00506									S28
11	S29		.04825									S29
12	S30			.00117								S30
13	S31			.00465								S31
14	ICV	101.11	1.4606	1.0350	1.9554	1.4730	2.4463	1.9564	74.558	2.4364	.96260	ICV
15	ICB	.01030	.00137	-.00166	.00010	.00006	.00365	-.00004	-.00832	.00028	-.00012	ICB
16	MRLK3001	.22242	.09755	.00967	.01051	.01012	.09679	.01048	1.0627	.01061	.00980	MRLK3001
17	MRLK3002	.20880	.04897	.00892	.00510	.00399	.09602	.00505	.51752	.01023	.00982	MRLK3002
18	ICSA1	386.44	-.00024	.00061	.00076	.00012	-.05761	.00417	468.03	.00080	-.00072	ICSA1
19	ICAB1	385.60	1.0121	1.0477	.49481	.48550	.43975	.92718	464.59	.46518	.47288	ICAB1
20	CCV1	-485.36*	-7.1775*	-4.8883*	1.9480	1.4255	******	-9.3906*	73.987	******	.95431	CCV1
21	CCB1	.01286	.00158	.00071	.00030	.00009	.00382	.00002	.01828	.00023	.00006	CCB1
22	K542-08	1116.4*	.01513	-.00114	5.2964	.00357	.17031	2.3497	6.7751	1.9376	.04593	K542-08
23	Blank	.06889	.00080	-.00023	.00055	.00002	.00081	.00001	.02300	.00015	-.00011	Blank
24	CCV2	100.85	1.5019	1.0387	1.9582	1.4294	2.4526	1.9708	73.783	2.4204	.95706	CCV2
25	CCB2	.01270	.00153	-.00055	.00025	.00010	00430	-.00001	.01383	.00030	-.00015	CCB2
26	K542-0BW	1103.4*	.01474	.00195	5.2273	.00349	.15766	2.3244	6.6688	1.8877	.04580	K542-08W
27	K550-08	.12606	.00123	.00130	.13140	.00002	.57233	.00627	14.571	.00234	.00149	K550-08
28	Blank	.01616	.00082	-.00157	.00027	.00002	.00134	-.00005	.04553	.00011	00000	Blank
29	CCV3	103.04	1.4927	1.0640	1.9707	1.4900	2 5109	2.0349	75.617	2.5010	.97399	CCV3
30	CCB3	.01560	.00067	-.00012	.00023	.00012	.00384	-.00003	.15910*	.00023	.00010	CCB3
31	IPK041WB	.01555	.00108	- 00067	.00014	.00004	-.00030	-.00005	.00790	.00016	.00005	IPK041WB
32	IPK041WL	5.2776	2.5418	53727	.49366	.49255	.51914	51760	49.578	.51290	.49521	IPK041WL
33	IPK041WC	5.3174	2.5536	53872	.49938	.49741	.52234	.52149	49.804	.51633	49774	IPK041WC
34	K205-01A	6.3572	2.8141	63541	.62214	.51260	83556	.52540	778.91	.53036	.53402	K205-01A
35	K205-01	.03677	-.00052	00086	.07951	.00001	.28440	- 00039	757.45	.00070	- 00091	K205-01
36	K205-01J	.02432	.00004	-.00023	01647	.00006	.05616	- 00012	172.54	.00043	- 00025	K205-01J
37	K205-01M	6.0830	2 8253	.60080	59821	.48938	.84196	.49605	800.25	.49784	.50241	K205-01M
38	K205-01S	5.9648	2.7602	.59208	.58649	.47972	.82762	.48815	788.37	.48931	.49426	K205-01S
39	K203-15	101.46	.00008	.06428	1.3401	.00739	-.03370*	.04256	18.627	.25465	.11325	K203-15
40	Blank	.01360	.00118	.00091	.00034	00004	-.00126	-.00010	.04352	.00019	-.00008	Blank
41	CCV4	101.07	1.5097	1.0578	1.9310	1.4263	2.4778	2.0240	74.014	2.4649	.95569	CCV4
42	CCB4	.01381	.00156	-.00020	.00021	.00011	.00108	-.00004	.02310	.00015	-.00017	CCB4
43	K205-02	.04279	.00085	00099	06142	.00011	.04746	.00021	247.79	.00123	.00021	K205-02
44	K205-03	.04370	.00040	.18982	.00510	.00001	.60879	- 00034	508.29	.00102	.00051	K205-03
45	K205-04	.01545	.00078	.00088	.00028	.00001	.02799	-.00013	.17729	.00017	- 00006	K205-04
46	K205-05	.01952	.00096	.00056	.00043	.00007	.02755	-.00009	.17870	.00024	.00002	K205-05
47	K184-01	.03188	-.00051	-.00139	15421	.00001	.20747	-.00032	553.67	.00049	-.00098	K184-01
48	K184-02	.03642	-.00077	.00494	.13771	.00003	.61373	-.00033	582.70	.00055	-.00088	K184-02
49	K184-03	.03070	-.00016	-.00043	.44459	.00003	.18199	.00007	529.19	.00043	-.00085	K184-03
50	K184-04	.03793	-.00018	.00660	.37312	.00002	.47127	.00026	593.50	.00052	-.00099	K184-04
51	K184-05	.04945	-.00075	.02468	.02779	.00006	.51374	-.00026	850.90	.00050	.00052	K184-05
52	Blank	.01093	.00107	-.00084	00032	.00004	-.00349	-.00010	.08347	.00000	.00005	Blank

53	CCV5	101.29	1.4736	1.0483	1.9386	1.4187	2.4991	2 0099	73.045	2.5150	.96208	CCV5
54	CCB5	.01453	.00095	-.00078	.00028	.00009	- 00045	.00001	.01978	.00011	.00002	CCB5
55	K174-01	.03716	-.00005	.00453	.23367	.00003	.42269	-.00035	633.52	.00057	-.00114	K174-01
56	K174-07	.03797	-.00088	.00326	.23212	.00003	.41631	-.00030	628.19	.00058	-.00105	K174-07
57	K188-03	.07485	-.00050	-.00116	.25625	.00009	.39302	.00100	451.69	.00131	.00038	K188-03
58	Blank	.00909	.00058	-.00007	.00022	.00005	-.00329	-.00009	.05915	.00013	.00005	Blank
59	CCV6	101.87	1.4748	1.0347	1.9602	1.4452	2.4699	1.9877	73.611	2.4831	.95755	CCV6
60	CCB6	.01544	.00140	-.00030	.00031	.00012	-.00012	.00001	.01667	.00027	.00000	CCB6
61	K542-06A	5.1195	2.4240	.65606	.52819	.53403	.51627	.58872	52.419	.56105	56480	K542-06A
62	K542-06T	.08132	.00461	.00584	.00249	.00022	.02463	.04551	3.1258	.00053	.00263	K542-06T
63	K542-06J	.03482	.00337	.00041	.00068	.00006	-.00019	.00884	.61825	.00021	.00054	K542-06J
64	K542-06M	1.1328	.51145	.13882	.11095	.10897	.13166	.16132	13.849	.11623	.11775	K542-06M
65	K542-06S	1.2473	.57110	.15674	.12514	.12252	.14977	.18216	15.512	.12982	.13253	K542-06S
66	Blank	.01448	.00402	-.00002	.00014	.00007	-.00588	-.00007	.17860	.00011	-.00005	Blank
67	CCV7	104.35	1.4551	1.0659	1.9864	1.5018	2.5313	2.0745	74.252	2.5752	.97286	CCV7
68	CCB7	.02177	.00175	-.00056	.00030	.00015	-.00143	.00011	.18805*	.00019	.00006	CCB7
69	K205-01A	5.8875	2.5121	.60473	.54788	.52721	.57722	.56547	214.89	.55915	.52973	K205-01A
70	K205-01T	.04674	.00041	.00091	.01617	.00010	.05144	-.00007	167.65	.00054	-.00029	K205-01T
71	K205-01J	.04198	.00162	.00032	.00350	.00010	.00487	.00003	32.818	.00050	.00002	K205-01J
72	K205-01M	1.1911	.54114	.11909	.12143	.10385	.16465	.11345	179.40	.11131	.10396	K205-01M
73	K205-01S	1.1887	.53309	.11798	.12165	.10405	.16385	.11330	180.14	.11063	.10307	K205-01S
74	Blank	.04258	.00216	-.00163	.00054	.00008	-.00516	.00002	.08201	.00013	-.00008	Blank
75	CCV8	102.77	1.4537	1.0783	1.9484	1.4773	2.5231	2.1222	73.424	2.5758	.96247	CCV8
76	CCB8	.05007*	.00197	-.00121	.00065	.00021*	- 00078	00012	.07199*	.00038	.00005	CCB8
77	K198-05A	5.7949	2.6171	.61702	.61712	.53697	.60536	.59379	112.20	.61129	.52978	K198-05A
78	K198-05	.04103	.00191	.00332	.08218	.00008	.06490	-.00004	62.844	.04082	-.00047	K198-05
79	K198-05J	.02923	.00178	.00149	.01747	.00008	.00921	-.00005	13.407	.00893	-.00008	K198-05J
80	K198-05M	5.3766	2.5512	.56585	.57650	.49302	.59550	.53913	109.92	.56680	.49192	K198-05M
81	K198-05S	5.4509	2.5810	.56911	.58069	.49786	.59999	.54506	110.12	.56908	.49616	K198-05S
82	K198-03	.03481	.00183	.00314	.07397	.00016	.05267	.00011	57.971	.01771	-.00018	K198-03
83	K198-04	.04652	.00143	.00540	.10634	.00008	05216	-.00004	58.567	.00951	-.00032	K198-04
84	Blank	.01885	.00153	.00004	.00026	.00007	-.00515	-.00011	.03481	.00004	-.00010	Blank
85	CCV9	102.51	1.4788	1.0726	1.9608	1.4479	2.5291	2.1070	73.507	2 5811	.96155	CCV9
86	CCB9	.02385	.00208	-.00110	.00033	.00011	- 00147	-.00001	.01636	.00020	.00001	CCB9
87	K207-01	.03339	.00152	.00404	.08925	.00003	05370	- 00007	61.873	.01233	-.00038	K207-01
88	K207-02	.03490	00144	00426	.08209	00009	.05056	-.00007	57.684	.00954	- 00031	K207-02
89	Blank	.02080	.00065	-.00092	.00047	.00007	-.00527	.00014	.04159	.00020	00009	Blank
90	CCV10	102.43	1 4854	1.0696	1.9667	1.4453	2.5107	2 1000	73.340	2.5597	96048	CCV10
91	CCB10	.02275	.00119	-.00118	.00031	.00013	-.00105	- 00003	.04653*	00019	.00007	CCB10
92	K119-01A	5.6573	2.5460	.59200	.54478	.53666	.54217	.58923	65.309	.56998	.52388	K119-01A
93	K119-01W	02481	.00188	.00021	.00979	.00011	.01361	-.00005	15 942	.00031	-.00010	K119-01W
94	K119-01J	.01811	.00115	- 00111	.00206	.00005	-.00228	-.00003	3.1267	.00013	.00012	K119-01J
95	K133-01A	6.0832	2.7701	.65646	.55442	.51490	.78057	.58754	342.92	.57123	.53455	K133-01A
96	K133-01T	.03995	.00228	-.00300	.02475	.00012	.21633	-.00029	299.76	.00049	-.00055	K133-01T
97	K133-01J	.02696	.00128	.00066	.00473	.00008	.03456	-.00010	59.073	.00043	.00003	K133-01J
98	Blank	.02461	.00201	-.00059	.00034	.00013	-.00557	-.00005	.07097	.00002	-.00003	Blank
99	CCV11	102.65	1.5045	1 0793	1.9494	1.4342	2.5310	2.1376	73.094	2.5743	.95641	CCV11
100	CCB11	.03080	.00249	-.00191	00052	.00023*	-.00132	.00013	.38319*	.00029	.00019	CCB11
101	IPK045WB	.03198	.00209	-.00075	.00018	.00013	-.00394	-.00010	.00174	.00019	-.00004	IPK045WB
102	IPK045WL	5.3460	2.4996	.55066	.50620	.51082	51156	.55699	49.835	.54339	.50436	IPK045WL
103	IPK045WC	5.2895	2.5345	.55864	.49710	.50073	.51957	.56251	49.773	.54748	.50614	IPK045WC
104	TXK010SB	.07021	00273	-.00321	.00170	.00014	.07183*	-.00011	.03517	.00041	.00010	TXK010SB
105	K216-01A	5.6791	2.5844	.64432	1.0918	.52329	.70766	.59476	54.352	.57618	.53816	K216-01A
106	K216-01	.08423	.00360	.02499	.58683	.00014	.18034	.00009	5.1278	.00008	.00216	K216-01
107	K216-01J	.03425	.00160	.00521	.12195	.00013	.03189	-.00002	1.0837	.00022	.00039	K216-01J

108	K216-01M	5.5714	2.6140	.61790	1.2652	.51300	.80121	.56847	54.891	.54772	.51581	K216-01M
109	K216-01S	5.6230	2.6344	.61973	1.2509	.52011	.79692	.57542	55.042	.55075	.51739	K216-01S
110	Blank	.02020	.00266	-.00087	.00049	.00011	-.00425	-.00009	.01426	.00014	-.00003	Blank
111	CCV12	103.41	1.4923	1.0841	1.9609	1.4557	2.5452	2.1583	73.703	2.6165	.95519	CCV12
112	CCB12	.03140	.00234	-.00045	.00034	.00017	-.00203	.00002	.04061*	.00014	.00014	CCB12
113	K216-02	.17734	.01120	.01232	.31831	.00195	.15165	.00216	4.5559	00245	.00175	K216-02
114	Blank	.02037	.00138	-.00032	.00038	.00013	-.00576	-.00006	.01325	00012	.00003	Blank
115	CCV13	101.85	1.4951	1.0854	1.9447	1.4293	2.5560	2.1458	73.297	2.6076	.95894	CCV13
116	CCB13	.02656	.00246	-.00092	.00034	.00022*	-.00183	.00000	.02600	.00022	.00015	CCB13
117	K542-06A	5.3369	2.4780	.63303	.53279	.53384	.51101	.60107	50.191	.56765	.54563	K542-06A
118	K542-06A	10.628	4.8497	1.2526	1.0596	1.0617	.99086	1.1547	49.498	1.1189	1.0847	K542-06A
119	K542-06I	.06167	.00710	.00316	.00111	.00014	.00985	.02352	1.4651	.00039	.00118	K542-06I
120	K542-06J	.02432	.00411	.00195	.00048	.00016	-.00263	.00457	.30811	.00013	.00029	K542-06J
121	K542-06M	.52670	.24281	.06175	.05239	.05168	.05832	.07975	6.4892	.05510	.05294	K542-06M
122	K542-06S	.52972	.24673	.06223	.05212	.05154	.06005	.08184	6.6218	.05605	.05390	K542-06S
123	Blank	.02049	.00279	.00126	.00036	.00007	-.00697	-.00003	.02403	.00003	.00007	Blank
124	CCV14	101.70	1.4873	1.0822	1.9388	1.4273	2.5407	2.1326	73.128	2.6164	.95771	CCV14
125	CCB14	.02584	.00164	.00008	.00043	.00016	-.00245	-.00002	.03013	.00017	.00005	CCB14
126	K133-01A	5.8627	2.6865	.63462	.54314	.52239	.65501	.59158	195.96	.57060	.53080	K133-01A
127	K133-01I	.04072	.00148	-.00101	.01222	.00017	.09970	-.00014	150.28	.00059	-.00028	K133-01I
128	K133-01J	.03044	.00132	-.00022	.00270	.00018	.01392	-.00002	30.054	.00047	-.00005	K133-01J
129	Blank	.01664	.00186	-.00154	.00012	.00010	-.00657	-.00008	.01959	.00007	.00005	Blank
130	CCV15	102.86	1.4915	1.0662	1.9796	1.4476	2.5165	2.0918	73.009	2.5491	.95832	CCV15
131	CCB15	.01959	.00217	.00037	.00029	.00017	-.00229	.00002	.02431	.00024	.00000	CCB15
132	IPK046WB	.02210	.00167	.00083	.00042	.00020	-.00490	.00001	.01695	.00015	.00006	IPK046WB
133	IPK046WL	5.4484	2.5855	.55690	.51148	.50956	.52800	.55287	49.842	.53042	.50150	IPK046WL
134	IPK046WC	5.4200	2.5621	.55240	.51040	.50884	.52474	.54913	49.388	.52853	.49833	IPK046WC
135	K229-01A	6.0586	2.6222	.60844	.57608	.53572	.53922	.59125	199.27	.56037	.54383	K229-01A
136	K229-01	.14909	.00247	-.00021	.02496	.00026	-.00232	.01697	153.56	.00080	.00728	K229-01
137	K229-01J	.05718	.00138	-.00097	.00555	.00015	-.00529	.00369	32.804	.00041	.00149	K229-01J
138	K229-01M	5.8152	2.6369	.57484	.55082	.51109	.53621	.55960	203.69	.52551	.51292	K229-01M
139	K229-01S	5.8096	2.6319	.57380	.54432	.50795	.53940	.55907	204.28	.52685	.51244	K229-01S
140	K229-03	1.1422	.00207	-.00003	.05114	.00026	-.00268	.00975	99.933	.00244	.00047	K229-03
141	Blank	.01423	.00119	.00041	.00024	.00012	-.00705	-.00004	.02224	.00009	-.00006	Blank
142	CCV16	101.61	1 4877	1.0704	1.9171	1.4089	2.5269	2.0808	72.925	2.5643	.95528	CCV16
143	CCV16	01985	.00149	.00000	.00023	00016	-.00325	.00004	02757	00030	-.00003	CCV16
144	K133-01A	11.697	5.3091	1.2554	1.0590	1.0263	1 1969	1.1520	193.73	1.1212	1.0589	K133-01A
145	K542-06A	10.805	4.8861	1.2226	1.0536	1 0493	1.0122	1.1494	49.423	1.1248	1.0865	K542-06A
146	K542-06A	5 4604	2.4909	.62217	53595	53290	.51403	.59306	49.664	.56970	.54961	K542-06A
147	K542-06G	.02823	.00656	.00263	.00086	00021	.00297	.01509	.94990	.00031	.00098	K542-06G
148	K542-06J	.02132	.00321	.00064	.00032	.00017	-.00506	.00323	.20830	.00025	.00033	K542-06J
149	Blank	.01853	.00199	-.00025	.00028	.00010	-.00702	-.00002	01730	.00024	.00000	Blank
150	CCV17	102.15	1.4845	1.0574	1.9896	1.4452	2.5060	2.0597	72.555	2.5250	.95838	CCV17
151	CCB17	.02034	.00156	.00059	.00023	.00015	-.00224	-.00001	.02429	.00028	.00005	CCB17
INDX	LSID	Al	Sb	As	Ba	Be	8	Cd	Ca	Cr	Co	LSID

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ID8K024 Section 2 of 3

INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID
1	Blank	.00101	.00002	.00010	-.00009	.00003	.00004	.00002	-.00044	.00067	.00001	Blank
2	S20			.20630			.09887					S20
3	S21			2.0700			.98360					S21
4	S22	.26664	.04667									S22
5	S23	2.5787	1.8285									S23
6	S24							.77607				S24
7	S25							7.7096				S25
8	S26								.75597	.4B454		S26
9	S27								7.5111	5.0274		S27
10	S28					.02254						S28
11	S29					.22282						S29
12	S30				.04032						.00135	S30
13	S31				.19805						.00539	S31
14	ICV	2.6363	25.061	2.3935	.53855	56.439	2.3062	2.4751	2.4534	58.494	1.0258	ICV
15	ICB	.00021	-.00077	-.00027	.00021	-.00080	.00020	.00030	.00000	.15491	-.00210	ICB
16	MRLK3001	.01113	.21605	.00989	.00995	.96260	.01013	.01039	.01020	1.0219	.00811	MRLK3001
17	MRLK3002	.01059	.10312	.00270	.10117	.18269	.00492	.00967	.01030	.99458	.00991	MRLK3002
18	ICSA1	.00137	189.08	.00583	.01641	190.78	.00091	-.00104	.00090	.22864	.00112	ICSA1
19	ICAB1	.55266	189.51	.93432	1.1643	188.99	.45558	.99970	.95743	77.785	1.0243	ICAB1
20	CCV1	******	******	2.3525	.49912	56.003	2.2722	2.4648	2.4238	59.120	-4.9509*	CCV1
21	CCB1	.00027	.00065	.00010	-.00066	.00059	-.00006	.00038	-.00009	.10517	-.00110	CCB1
22	K542-08	68.681*	393.06	.14822	.00678	11.735	13.317	.01103	.84332	1.8713	.00783	K542-08
23	Blank	.00360	.01684	.00009	-.00038	-.00396	.00070	.00008	-.00004	-.07629	-.00113	Blank
24	CCV2	2.6365	24.846	2.3653	.50262	55.816	2.2804	2.4645	2.4254	59.324	1.0328	CCV2
25	CCB2	.00030	-.00111	-.00001	00016	-.00338	.00019	.00034	.00001	.03259	-.00185	CCB2
26	K542-08W	67.99B*	390.81	.14632	00674	11.505	13.097	.01105	.83574	1.8086	.00767	K542-08W
27	K550-08	.01540	3.6483	.01080	.07935	7.7398	.15119	.04936	.11502	7.8106	-.00055	K550-0B
28	Blank	.00062	.00250	-.00006	00041	-.01077	.00015	.00010	.00013	-.11439	-.00066	Blank
29	CCV3	2.7006	25.443	2.4201	.54613	57.159	2.3424	2 4914	2.4808	59.719	1.0495	CCV3
30	CCB3	.00048	.00130	-.00026	- 00051	.00667	.00037	.00033	.00000	-.03163	-.00103	CCB3
31	IPK041WB	.00034	-.00045	.00008	-.00064	-.01157	.00021	.00002	.00002	-.07904	-.00114	IPK041WB
32	IPK041WL	.55251	5.2144	.48893	00131*	46.696	.46722	.51157	.50617	49.207	52331	IPK041WL
33	IPK041WC	.55514	5.2296	.49177	.00155*	47.050	.47195	.51524	.50948	49.680	.52761	IPK041WC
34	K205-01A	.65047	7.4842	52595	05519	203.29	.86425	53516	.48162	78.371	.62038	K205-01A
35	K205-01	.00225	2.2922	00348	.05376	158.12	.38590	-.00100	.00215	21.354	.00176	K205-01
36	K205-01J	.00093	.49640	.00088	.01073	33.259	.08351	-.00021	.00032	4.0598	- 00286	K205-01J
37	K205-01M	.60478	7.1969	.49253	05477	210.01	.85836	.54403	.50977	78.707	49420	K205-01M
38	K205-01S	.59445	7.1236	.48603	.05532	207.68	.84317	.53350	.50216	77.771	.48579	K205-01S
39	K203-15	.09833	163.34	1 0837	.05257	7.4962	6.4687	.00549	.11749	9.5015	.00087	K203-15
40	Blank	.00012	.00765	.00026	-.00116	-.00353	.00046	.00001	-.00003	-.05344	-.00133	Blank
41	CCV4	2.6647	25.011	2.3563	.49679	56.034	2.2894	2.4372	2.4232	59.436	1.0469	CCV4
42	CCB4	.00027	.00006	.00031	.00012	-.00490	-.00002	00032	-.00007	.0306B	-.00183	CCB4
43	K205-02	.00184	31.476	.00200	.02991	18.545	.72514	-.00006	.00355	9.9782	-.00172	K205-02
44	K205-03	.00197	.21687	.00471	04446	140.12	3.3029	-.00097	.00520	5.6793	-.00040	K205-03
45	K205-04	.00072	.00108	-.00045	.00010	.05700	.00006	.00004	-.00013	.11391	-.00276	K205-04
46	K205-05	.00064	.00357	.00000	-.00046	.04680	.00019	.00004	-.00014	.07381	-.00176	K205-05
47	K184-01	.00197	1.8839	.00242	.04773	127.41	.43581	.00044	.00026	16.533	-.00172	K184-01
48	K184-02	.00216	2.6246	.00233	.06093	228.48	.55413	00143	.00070	22.846	-.00057	K184-02
49	K184-03	.00183	24.945	.00326	.05910	123.20	1.3B49	-.00073	.00192	20.171	-.00043	K1B4-03
50	K184-04	.00158	24.022	.00205	.06845	214.89	1.6159	-.00076	.00157	23.428	-.00221	K184-04
51	K184-05	.00199	9.B493	.00261	.07B92	267.54	.98652	-.00153	.00204	27.411	-.00036	K1B4-05
52	Blank	-.00007	-.00269	-.00010	-.00056	.00169	.00006	.00004	-.00026	.19560	.00018	Blank

53	CCV5	2.7551*	24.974	2.3438	.49876	55.132	2.2902	2.4271	2.4336	59.839	1.0361	CCV5
54	CCB5	.00016	-.00109	.00025	-.00008	.00003	.00005	.00026	-.00015	.10156	-.00105	CCB5
55	K174-01	.00142	3.9476	.00236	.06204	199.10	.96310	.00114	-.00006	19.394	-.00165	K174-01
56	K174-07	.00151	3 8980	.00291	.06152	197.72	.95323	.00125	-.00002	19.392	-.00068	K174-07
57	K188-03	.00226	62.554	.00444	.06439	195.43	2.3049	-.00112	.00195	28.831	.00527	K188-03
58	Blank	-.00014	-.00024	.00012	-.00048	.01508	.00002	.00007	-.00019	.13398	-.00288	Blank
59	CCV6	2.6770	24.852	2.3492	.50745	56.882	2.3453	2.4377	2.4241	59.642	1.0221	CCV6
60	CCB6	-.00003	-.00111	-.00005	-.00051	-.00301	.00012	.00032	-.00007	.08447	-.00125	CCB6
61	K542-06A	.62185	6.1279	.51214	.01897	52.494	.55145	.55271	.80292	51.273	.79292	K542-06A
62	K542-06T	.03569	.78437	.00250	.01638	5.6927	.04881	-.00073	.30644	2.0795	.04198	K542-06T
63	K542-06J	.00741	.15219	-.00023	.00267	1.1184	.00944	.00002	.05543	.41807	.00657	K542-06J
64	K542-06M	.15682	1.9354	.10583	.01779	15.633	.15363	.11958	.44279	12.452	.18504	K542-06M
65	K542-06S	.17688	2.1823	.11790	.02154	17.780	.17613	.13465	.51503	14.010	.21683	K542-06S
66	Blank	-.00008	-.00233	-.00002	-.00075	.00608	.00011	.00011	-.00019	-.00798	-.00001	Blank
67	CCV7	2.7751*	25.098	2.3871	.55571*	57.699	2.4143	2.4408	2.4670	59.973	1.0481	CCV7
68	CCB7	.00017	.00175	.00045	-.00062	.00909	.00012	.00030	-.00013	.01316	-.00093	CCB7
69	K205-01A	.62118	5.8987	.51793	.01139	81.262	.59174	.49209	.47913	57.316	.58869	K205-01A
70	K205-01T	.00144	.49298	.00129	.00951	32.384	.08241	-.00013	.00025	3.8637	-.00028	K205-01T
71	K205-01J	.00116	.10136	.00018	.00143	6.3361	.01677	.00007	-.00008	.69200	-.00004	K205-01J
72	K205-01M	.12294	1.5732	.10238	.01079	42.704	.18376	.10687	.10672	15.083	.09664	K205-01M
73	K205-01S	.12011	1.5640	.10245	.01032	43.441	.18697	.10543	.10562	14.994	.09647	K205-01S
74	Blank	.00134	.00899	.00059	-.00028	.01823	.00049	.00013	-.00016	.01078	-.00186	Blank
75	CCV8	2.7565*	25.021	2.3756	.54142	56 986	2.3786	2.4017	2.4394	58.814	1.0642	CCV8
76	CCB8	.00104	.01059	.00060	-.00087	.00675	.00028	.00039	-.00022	.03948	-.00197	CCB8
77	K198-05A	.62025	5.5572	.52564	.03177	60.916	.52429	.64956	.47838	52.920	.59945	K198-05A
78	K198-05	.00152	.01217	.00295	.02943	12.277	.00203	.14507	-.00018	1.9625	.00083	K198-05
79	K198-05J	.00049	00237	.00041	.00556	2.6232	.00042	.02996	-.00019	.39283	-.00126	K198-05J
80	K198-05M	.57263	5.1807	.48577	.03207	58.665	.47637	.64813	.50235	52.144	.55150	K198-05M
81	K198-05S	.57452	5.2256	.49222	.03135	59.182	.48193	.65360	.50631	52.481	.55594	K198-05S
82	K198-03	.00165	.01782	.00751	.03559	11.295	.00165	.00477	.00265	2.4370	-.00009	K198-03
83	K198-04	.00256	23809	.00558	.04511	10.473	.00229	.00203	.00009	2.4535	- 00053	K198-04
84	Blank	-.00010	-.00319	.00017	-.00054	-.01219	.00005	.00007	-.00027	-.02034	-.00201	Blank
85	CCV9	2.7692*	25.046	2.3465	.50795	56.814	2.3596	2.4017	2.4280	59.964	1 0653	CCV9
86	CCB9	.00022	-.00226	-.00021	-.00011	.00491	00019	.00044	-.00015	.02913	- 00040	CCB9
87	K207-01	.00085	.00289	.00263	.03402	11 785	-.00002	.01454	-.00030	2.1869	-.00040	K207-01
88	K207-02	.00102	13712	.00160	.03059	11.039	.00509	.01370	-.00018	2 0757	.00047	K207-02
89	Blank	.00027	-.00237	00021	-.00134	-.00549	-.00010	.00008	-.00027	- 05227	.00060	Blank
90	CCV10	2.7380	24.896	2.3578	.50776	56.840	2.3620	2.4064	2.4277	59.785	1.0600	CCV10
91	CCB10	.00018	-.00058	-.00001	-.00088	-.00300	.00029	.00026	-.00016	.01809	-.00129	CCB10
92	K119-01A	.59910	5 6207	.52037	.00241	51.458	.54816	.49682	.47435	50.575	.57533	K119-01A
93	K119-01W	.00036	.08478	.00012	.00075	2 8199	.02168	.00157	-.00027	.67437	- 00130	K119-01W
94	K119-01J	-.00004	.01361	.00037	- 00041	54064	00429	.00034	-.00016	07935	- 00271	K119-01J
95	K133-01A	.64885	5.4978	.51681	.02378	150.08	1.1349	.51403	.48074	63.294	.64706	K133-01A
96	K133-01T	.00160	.03802	.00044	.02264	102.45	.63433	-.00039	-.00017	6.5318	-.00087	K133-01T
97	K133-01J	.00055	.00565	.00007	.00311	19.342	.12297	-.00006	-.00030	1.1179	-.00064	K133-01J
98	Blank	.00026	- 00328	-.00009	-.00110	-.00034	.00007	.00016	-.00014	.02757	-.00108	Blank
99	CCV11	2.7510*	25.080	2.3659	.49983	56.224	2.3397	2.4083	2.4337	59 815	1.0901	CCV11
100	CCB11	.00024	.00009	.00047	-.00149	.01329	.00051	.00049	.00009	.03082	.00060	CCB11
101	1PK045W8	.00060	- 00157	.00009	-.00041	.01220	.00022	.00017	-.00015	-.03017	-.00142	1PK045WB
102	IPK045WL	.56765	5.2272	.49157	00021*	48 759	.49853	.51120	.51245	49.857	.53240	1PK045WL
103	1PK045WC	.57664	5.2873	.49238	.00087*	47.705	.48513	.51449	.51538	49.796	.54453	TPK045WC
104	TXK010SB	.00153	01369	.00007	-.00096	.01345	.00039	.00062	-.00014	19055	.00162	TXK010SB
105	K216-01A	.62432	5.5055	.51676	.00226	49.334	2.1461	.51028	.48819	54.393	.61928	K216-01A
106	K216-01	.00397	.01454	.00020	.00065	2.3359	1.7115	.00004	.00397	.95969	.00228	K216-01
107	K216-01J	.00109	.00306	.00005	-.00021	.49395	.35715	.00012	.00091	.18170	.00015	K216-01J

INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID
108	K216-01M	.58663	5.2713	.49657	00271	50.658	2.2290	.52614	.52695	54.775	.59224	K216-01M
109	K216-01S	.58464	5.3002	.49781	.00171	51.552	2.2109	.52955	.52736	54.669	.59306	K216-01S
110	Blank	.00012	-.00007	-.00017	-.00061	.00709	.00039	.00014	-.00011	.09678	-.00018	Blank
111	CCV12	2.7654*	25.115	2.3478	.50773	57.522	2.3842	2.3942	2.4228	60.089	1.0844	CCV12
112	CCB12	.00023	-.00245	-.00032	-.00102	.00248	.00027	.00043	-.00011	.05047	-.00063	CCB12
113	K216-02	.00912	.07678	.00286	.00002	2.4723	.01539	.00210	.00372	.81717	.00317	K216-02
114	Blank	- 00001	-.00364	.00041	-.00167	.00291	.00019	.00008	-.00024	.00082	-.00162	Blank
115	CCV13	2.8003*	25.207	2.3524	.49888	56.075	2.3385	2.3935	2.4394	60.362	1.0904	CCV13
116	CCB13	.00021	-.00037	.00021	-.00086	.00544	.00025	.00037	-.00010	.04599	-.00118	CCB13
117	K542-06A	.60836	5.7049	.51428	.00959	50.200	.54116	.52210	.62657	50.562	.71963	K542-06A
118	K542-06A	1.1952	10.970	1.0221	.00961	49.516	1.0534	1.0295	1.1069	49.654	1.4040	K542-06A
119	K542-06I	.01687	.37642	.00084	.00809	2.9219	.02634	-.00026	.14495	1.0181	.01912	K542-06I
120	K542-06J	.00332	.07118	.00049	.00114	.59568	.00485	-.00003	.02696	.16755	.00384	K542-06J
121	K542-06M	.07136	.89157	.04997	.00785	7.7876	.07555	.05173	.19789	5.7206	.07724	K542-06M
122	K542-06S	.07428	.92294	.05025	.00844	7.8884	.07568	.05272	.20894	5.7816	.07965	K542-06S
123	Blank	-.00018	.00090	-.00020	-.00111	.00230	-.00004	.00000	-.00025	-.06439	.00018	Blank
124	CCV14	2.8072*	25.290	2.3420	.49884	56.005	2.3304	2.3912	2.4365	60.042	1.0860	CCV14
125	CCB14	.00017	-.00022	-.00029	-.00079	.00335	.00010	.00035	-.00014	.00974	-.00058	CCB14
126	K133-01A	.62687	5.4851	.51728	.01228	97.939	.82547	.50798	.47927	57.537	.62249	K133-01A
127	K133-01I	.00120	.01917	.00022	.01005	50.443	.31720	-.00007	.00014	3.0198	-.00158	K133-01I
128	K133-01J	.00045	.00627	-.00017	.00114	10.006	.06437	.00007	.00012	.56837	-.00003	K133-01J
129	Blank	-.00008	-.00313	.00011	-.00091	-.01758	-.00008	.00008	-.00022	.00854	-.00156	Blank
130	CCV15	2.7404	24.907	2.3557	.51006	56.667	2.3664	2.4137	2.4365	60.080	1.0734	CCV15
131	CCB15	.00003	.00062	-.00034	-.00030	-.00164	.00003	.00034	-.00019	.03436	-.00050	CCB15
132	IPK046WB	.00046	.00375	.00036	-.00084	-.00019	.00028	.00019	-.00011	-.00094	-.00054	IPK046WB
133	IPK046WL	.56510	5.2169	.49480	.00078*	48.637	.49398	.51149	.51151	50.750	.55055	IPK046WL
134	IPK046WC	.56188	5.1931	.49272	.00124*	48.321	.49390	.50818	.50816	50.382	.54376	IPK046WC
135	K229-01A	.61371	5.5524	.54845	.00797	66.276	1.1256	.51348	.49732	52.907	.59826	K229-01A
136	K229-01	.00159	.09244	.01764	.00702	17.649	.60897	-.00021	.01224	1.1378	-.00052	K229-01
137	K229-01J	.00066	.02190	.00389	.00063	3.7712	.13085	.00010	.00271	.22607	-.00099	K229-01J
138	K229-01M	57378	5 2373	.51809	.00815	67.435	1.1225	.52238	.52777	53.118	.56321	K229-01M
139	K229-01S	.57629	5.2935	.51600	.00808	67.115	1.1048	.52110	.52730	53.225	.56079	K229-01S
140	K229-03	.00560	.83351	.07705	.00412	7.6377	.09293	.00027	00251	1.9681	-.00064	K229-03
141	Blank	-.00004	-.00087	-.00029	.00040	-.01847	.00006	.00016	-.00023	-.04040	-.00060	Blank
142	CCV16	2 7806*	25.164	2.3362	.49335	55.027	2.2849	2.3996	2.4292	60.019	1.0650	CCV16
143	CCV16	00011	-.00068	.00000	-.00086	.00137	.00017	.00035	-.00020	.04058	-.00102	CCV16
144	K133-01A	1.2555	10 854	1.0344	.01157	95.794	1.3077	1.0108	.95436	57.401	1.2263	K133-01A
145	K542-06A	1.2271	11 045	1.0330	.00601	48.143	1.0316	1.0177	1.0596	50.176	1 3255	K542-06A
146	K542-06A	61878	5.7028	.52321	.00705	48.717	.53219	.51534	58207	50.423	.68162	K542-06A
147	K542-06G	01119	.24194	.00051	.00484	1.8786	.01605	-.00014	.09294	.69742	.01145	K542-06G
148	K542-06J	.00238	.05356	.00001	.00018	.40646	.00355	.00005	.01915	.11689	.00092	K542-06J
149	Blank	-.00010	-.00163	.00012	- 00010	-.00455	.00013	.00013	- 00021	-.02269	-.00056	Blank
150	CCV17	2.7368	24.758	2.3561	.51386	56.510	2.3696	2.4210	2.4333	60.279	1.0606	CCV17
151	CCB17	.00006	-.00067	.00018	- 00067	.00175	.00013	.00025	-.00018	.04771	-.00115	CCB17

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INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID
1	Blank	.00010	.01064	-.00007	-.00002	.00015	.00006	-.00016	.00091	Blank
2	S20									S20
3	S21									S21
4	S22							.12054		S22
5	S23							1.1852		S23
6	S24		1.4536							S24
7	S25		8.3236							S25
8	S26									S26
9	S27									S27
10	S28				.00549					S28
11	S29				.05337					S29
12	S30	.04063		.15175		.02596	.01711		.61063	S30
13	S31	.20104		.73796		.12373	.09051		5.8958	S31
14	ICV	.50541	62.915	.48488	2.2809	.46493	.49633	1.5253	2.5609	ICV
15	ICB	.00011	-.18152*	.00008	.00132	-.00033	-.00007	.00002	-.00041	ICB
16	MRLK3001	.01048	.85537	.01054	.01163	-.00009	.00993	.01066	.02282	MRLK3001
17	MRLK3002	.00992	.32290*	.01009	.01150	.00926	.01034	.01029	.01092	MRLK3002
18	ICSAI	-.00011	-.03086	.00101	-.00232	.00145	.00374	.00069	.00261	ICSAI
19	ICAB1	1.0869	82.991	.47825	.83329	.90834	.98893	.49528	1.0138	ICAB1
20	CCV1	******	63.494	.48211	-10.967*	.49228	.48540	******	2.5429	CCV1
21	CCB1	.00004	-.19933*	.00009	.00078	00012	.00000	.00029	.00077	CCB1
22	K542-08	.00558	20.822	.11901	-.00714*	.04452	.19312	.05513	85.419*	K542-08
23	Blank	.00002	-.20122	.00016	.00058	-.00028	-.00007	.00013	.00400	Blank
24	CCV2	.51144	63.667	.48352	2.3129	.49186	.48721	1.5109	2.5516	CCV2
25	CCB2	.00006	-.21891*	.00011	.00117	-.00050	.00001	.00021	.00066	CCB2
26	K542-08W	.00568	20.484	.11758	- 00536*	.04507	.18945	.05402	83.743*	K542-08W
27	K550-08	-.00022	63.785	.10887	.00032	-.00028	.00207	.00218	.20254	K550-08
28	Blank	-.00005	-.22790	.00007	.00100	-.00043	.00058	.00002	.00249	Blank
29	CCV3	.52241	64.234	.49233	2.3697	.46405	.50069	1.5484	2.5894	CCV3
30	CCB3	-.00002	-.23289*	.00025	.00144	-.00052	.00059	.00020	.00589	CCB3
31	IPK041WB	-.00002	-.26028	.00006	.00070	-.00029	.00010	.00007	.00152	IPK04IWB
32	IPK041WL	.52976	53.543	.49921	49355	.46929	.50213	.52796	.52468	IPK041WL
33	IPK041WC	.53192	54.064	.50404	49716	.47103	.50640	.52969	.52806	IPK041WC
34	K205-01A	.62668	949.85*	6.1484	45969	47287	.51048	.56736	.58254	K205-01A
35	K205-01	-.00043	918.51*	5.7720	-.00013	-.00067	.00558	.00410	01295	K205-01
36	K205-01J	-.00010	198.13	1.2009	-.00007	-.00095	.00248	.00089	.00348	K205-01J
37	K205-01M	.62420	963.93*	6.2497	43580	.47689	.51805	.53264	.54237	K205-01M
38	K205-01S	.61496	948.81*	6.1491	42856	.46805	.50654	.52566	.53342	K205-01S
39	K203-15	-.00077	.23550	.10462	-.00382	.03480	1.9060	.33787	5.1133	K203-15
40	Blank	-.00008	-.13533	.00014	00095	- 00037	.00059	.00001	.00132	Blank
41	CCV4	.52124	64.130	.48254	2.3571	.48233	.4B311	1.5173	2.5553	CCV4
42	CCB4	-.00004	-.14368*	.00014	.00102	-.00015	.00014	.00020	.00047	CCB4
43	K205-02	-.00024	74.080	1.1629	-.00025	-.00001	.00399	.00467	.02577	K205-02
44	K205-03	-.00048	1086.9*	4.8212	-.00032	-.00036	.01066	.01012	01436	K205-03
45	K205-04	-.00005	1.4246	.00116	.00055	-.00047	.00008	.00013	.00481	K205-04
46	K205-05	-.00011	1.1846	.00102	.00053	-.0004B	-.00018	.00007	.00298	K205-05
47	K184-01	-.00043	717.00*	4.9632	- 00004	-.00117	.00239	- 00048	.00715	K184-01
48	K184-02	-.00052	1600.0*	5.6644	-.00057	-.00024	.00223	-.00065	.00885	K184-02
49	K184-03	-.00041	622.24	5.0573	-.00011	-.00042	.00320	.00028	.00559	K184-03
50	K184-04	-.00031	1370.4*	5.3942	-.00113	-.00077	.00198	-.00027	.01032	K184-04
51	K184-05	-.00046	1672.B*	7.9830	- 00163	-.00107	.00483	.00248	.00589	K184-05
52	Blank	-.00007	.62232	.00054	.00036	-.00019	-.00013	.00004	.00098	Blank

53	CCV5	.52697	64 595	.49222	2.3096	.47237	.47726	1.5147	2.5355	CCV5
54	CCB5	.00000	.06196*	.00010	.00129	-.00054	-.00015	.00015	.00055	CCB5
55	K174-01	-.00064	1278.8*	5.9043	-.00057	-.00030	.00210	-.00030	.00195	K174-01
56	K174-07	-.00040	1258.2*	5.8142	-.00012	-.00177	.00243	-.00006	.00450	K174-07
57	K188-03	-.00024	1377.2*	5.8636	-.00440	.00124	.00247	.00016	.01201	K188-03
58	Blank	-.00007	.52903	.00042	.00074	-.00034	.00037	.00008	.00108	Blank
59	CCV6	.51910	64.495	.48543	2.3081	.47823	.49019	1.5070	2.5371	CCV6
60	CCB6	.00007	.06786*	.00006	.00099	-.00057	.00009	.00028	.00046	CCB6
61	K542-06A	.49445	103.15	.53161	.45904	.47388	.50140	.56782	4.4496	K542-06A
62	K542-06T	-.00002	49.452	.04243	-.02697*	.01479	-.00009	.00028	3.8638	K542-06T
63	K542-06J	.00005	9.5785	.00824	-.00360	.00182	.00001	.00012	.67547	K542-06J
64	K542-06M	.10758	64.178	.15485	.07186	.11401	.10731	.11609	4.2520	K542-06M
65	K542-06S	.11999	74.494	.17615	.07504	.12897	.12122	.12983	5.0480	K542-06S
66	Blank	-.00001	-.06548	.00019	.00043	-.00056	.00049	.00005	.00617	Blank
67	CCV7	.53276	64.780	.49967	2.3751	.43998*	.50034	1.5246	2.5557	CCV7
68	CCB7	.00003	- 10589*	.00005	.00114	-.00063	.00044	.00012	.00642*	CCB7
69	K205-01A	.55845	251.26	1.6706	.50659	.43657	.48871	.56000	.56990	K205-01A
70	K205-01T	-.00014	198.56	1.1910	.00083	-.00052	.00234	.00089	.00491	K205-01T
71	K205-01J	-.00006	38.230	.23290	.00043	-.00033	.00094	.00022	.00393	K205-01J
72	K205-01M	.11825	212.16	1.3173	.10220	.09415	.10862	.11185	.11464	K205-01M
73	K205-01S	.11728	213.38	1.3219	.10240	.09260	.10688	.11025	.11375	K205-01S
74	Blank	.00005	-.01418	.00021	.00054	-.00064	.00017	.00005	.00287	Blank
75	CCV8	.53251	63.726	.49396	2.4179	.43391*	.49283	1.5130	2.5480	CCV8
76	CCB8	.00007	-.08061*	.00011	.00061	-.00029	.00037	.00003	.00395	CCB8
77	K198-05A	.55468	103.63	1 2740	.54619	.45017	.50936	.56853	.60628	K198-05A
78	K198-05	-.00005	48.125	.78125	.00068	-.00051	.00072	.00681	.04211	K198-05
79	K198-05J	-.00006	9.9403	.16633	.00086	-.00045	.00004	.00147	.00942	K198-05J
80	K198-05M	.55003	102.21	1.2743	.49415	.44804	.49814	.53097	.56152	K198-05M
81	K198-05S	.55394	102 06	1.2746	.50057	.45532	.50198	.53354	.57538	K198-05S
82	K198-03	.00000	45.690	86846	.00059	-.00046	.00174	.00611	.27413	K198-03
83	K198-04	-.00010	48.008	.99870	-.00044	-.00087	.00092	.00757	.36317	K198-04
84	Blank	-.00003	- 12821	.00014	.00031	-.00044	.00044	-.00005	.00129	Blank
85	CCV9	.53836	65.036	.49591	2.4063	.45999	.48563	1.5136	2.5484	CCV9
86	CCB9	-.00003	.14020*	.00009	.00127	-.00048	.00005	-.00010	.00039	CCB9
87	K207-01	-.00020	45.493	.86042	-.00034	-.00041	00161	.00625	.01848	K207-01
88	K207-02	.00007	42 911	81100	.00060	-.00048	.00101	.00500	.04335	K207-02
89	Blank	-.00002	-.13338	00013	00094	-.00037	-.00011	-.00002	.00136	Blank
90	CCV10	.53237	64.750	.49584	2 4079	46373	.48548	1.5041	2.5590	CCV10
91	CCB10	-.00004	-.16791*	00005	00129	.00026	- 00007	-.00002	.00147	CCB10
92	K119-01A	.54209	69 989	.63199	.54815	.45103	.50943	.55730	.56356	K119-01A
93	K119-01W	.00004	14.997	.14013	.00059	-.00059	00033	.00005	.00075	K119-01W
94	K119-01J	.00005	2 7860	.02767	.00068	-.00079	00008	.00013	.00028	K119-01J
95	K133-01A	.61418	860.29*	3.1618	50130	44925	.49853	.56716	.58460	K133-01A
96	K133-01T	-.00012	822.87*	2.6833	.00027	00020	.00214	-.00046	.00162	K133-01T
97	K133-01J	-.00003	162.07	.50507	00059	-.00051	.00064	-.00016	.00030	K133-01J
98	Blank	.00004	.02486	.00016	00093	-.00008	.00046	.00005	.00216	Blank
99	CCV11	.53768	64 792	.49313	2.4450	.46629	.47987	1.5088	2.5743	CCV11
100	CCB11	-.00003	- 11092*	.00024	.00059	-.00055	.00046	.00019	.01342*	CCB11
101	IPK045WB	-.00007	-.12858	.00009	.00051	-.00015	.00063	.00013	.00071	IPK045WB
102	IPK045WL	.54727	54.816	.50950	.51368	.44822	.51243	.53200	.53503	IPK045WL
103	IPK045WC	.55301	54.601	.51177	.51625	45410	.50443	.53692	.53791	IPK045WC
104	TXK010SB	.00005	339.92*	00157	-.00168	.00014	.00094	.00021	.01215*	TXK010SB
105	K216-01A	.55742	392.93	.54832	.51692	.44553	.49780	.56521	.78612	K216-01A
106	K216-01	-.00007	342.41	.05378	-.00095	.00057	.00062	.00009	.21325	K216-01
107	K216-01J	.00014	73.502	.01119	00037	-.00059	.00026	.00014	.04303	K216-01J

INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID
108	K216-01M	.57687	400.17	.56750	.49487	.45693	.51852	.53994	.91541	K216-01M
109	K216-01S	.57868	392.18	.56769	.50158	.45815	.52433	.54113	.90903	K216-01S
110	Blank	-.00005	-.01769	.00002	.00030	-.00057	.00039	.00004	.00056	Blank
111	CCV12	.54164	65.331	.49510	2.4527	.45972	.48622	1.5099	2.5600	CCV12
112	CCB12	.00004	-.12724*	.00012	.00065	-.00053	.00047	.00001	.00102	CCB12
113	K216-02	.00208	294.08	.02748	-.00004	.00170	.00273	.00211	.16559	K216-02
114	Blank	-.00002	-.05654	.00014	.00066	-.00048	-.00012	-.00007	.00043	Blank
115	CCV13	.54392	65.353	.49744	2.4285	.45926	.47609	1.5146	2.5681	CCV13
116	CCB13	.00001	-.13796*	.00011	.00099	-.00012	-.00019	.00021	.00051	CCB13
117	K542-06A	.51367	78.339	.51771	.50955	.45068	.50497	.55288	2.3660	K542-06A
118	K542-06A	1.0121	77.507	.99938	1.0120	.88515	.99681	1.0974	2.9473	K542-06A
119	K542-06I	.00006	24.484	.02118	-.01145*	.00569	-.00011	.00017	1.8155	K542-06I
120	K542-06J	.00004	4.6165	.00403	-.00160	.00074	.00041	.00019	.33125	K542-06J
121	K542-06M	.05143	30.059	.07175	.03930	.05049	.05133	.05307	1.8847	K542-06M
122	K542-06S	.05225	31.683	.07373	.03832	.05183	.05131	.05409	2.0091	K542-06S
123	Blank	.00007	-.19068	.00003	-.00025	.00019	.00037	.00006	.00112	Blank
124	CCV14	.54143	65.200	.49667	2.4163	.46002	.47478	1.5183	2.5640	CCV14
125	CCB14	.00000	-.18362*	.00010	.00047	-.00062	.00005	.00007	.00075	CCB14
126	K133-01A	.57872	463.12	1.7947	.51493	.44627	.50283	.56116	.57951	K133-01A
127	K133-01I	-.00011	411.25	1.2953	.00020	-.00061	.00160	-.00021	.00194	K133-01I
128	K133-01J	.00008	83.091	.25868	.00046	-.00052	.00045	.00017	.00143	K133-01J
129	Blank	.00011	-.10087	.00010	.00035	-.00045	.00038	.00006	.00054	Blank
130	CCV15	.53142	64.961	.49221	2.3895	.46663	.48595	1.5027	2.5596	CCV15
131	CCB15	.00003	-.15586*	.00008	.00023	-.00045	-.00012	.00012	.00068	CCB15
132	IPK046WB	.00000	-.16383	.00019	.00060	-.00027	.00029	.00022	.00081	IPK046WB
133	IPK046WL	.54829	55.267	.51117	.51862	.45864	.51836	.52759	.53439	IPK046WL
134	IPK046WC	.54509	54.777	.50923	.51682	.45563	.51584	.52457	.53186	IPK046WC
135	K229-01A	54776	60.820	.65379	.53517	.46228	.52057	.55992	4.3023	K229-01A
136	K229-01	-.00017	4.5300	.15771	.00078	-.00031	.00612	.00028	3 7634	K229-01
137	K229-01J	-.00003	.76714	.03363	.00070	-.00018	.00177	.00015	.79775	K229-01J
138	K229-01M	.56063	61.390	.67469	.50421	.46727	.52827	.52985	4.3832	K229-01M
139	K229-01S	.56289	61.483	.67046	.50340	.46748	.52490	.53393	4.3546	K229-01S
140	K229-03	-.00012	1 6998	.07513	.00012	-.00049	.04957	.00222	1.4623	K229-03
141	Blank	- 00005	-.22476	.00010	00134	-.00035	-.00030	-.00005	00042	Blank
142	CCV16	.53564	65.107	.49211	2.3762	.46744	.47262	1.5185	2.5519	CCV16
143	CCV16	.00002	-.20756*	.00007	.00133	-.00034	.00033	.00006	.00089	CCV16
144	K133 01A	1.1393	455.88	2.2621	1.0121	.89638	.98626	1.1208	1.1476	K133-01A
145	K542-06A	1.0332	69 467	.99525	1.0314	89399	.98755	1.1130	2 2596	K542-06A
146	K542-06A	.52289	70.134	50753	51961	45389	49966	.56136	1 7291	K542-06A
147	K542-06G	00003	15.781	.01369	- 00747*	.00330	00034	.00031	1.1444	K542-06G
148	K542-06J	.00015	3.1391	.00298	- 00025	.00033	.00033	.00021	.23017	K542-06J
149	Blank	00004	-.22839	.00007	.00058	- 00035	.00009	.00009	.00065	Blank
150	CCV17	.52902	65.186	.49336	2.3668	.46894	.48687	1.4972	2.5505	CCV17
151	CCB17	- 00002	-.20931*	.00015	.00112	-.00047	- 00033	.00004	.00097	CCB17

ID8K024 Section 3 of 3

Sample Name: Blank Acquired: 11/30/2011 10:02:02 Type: Cal
Method: 11K6010(v33) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00105	.00002	-.00001	.00024	.00006	.00115	-.00003
Stddev	.00003	.00000	.00000	.00008	.00002	.00000	.00001
%RSD	3.0928	15.359	27.650	32.586	29.216	.29934	21.844
#1	.00107	.00001	-.00002	.00020	.00008	.00115	-.00003
#2	.00102	.00002	-.00001	.00034	.00006	.00116	-.00002
#3	.00107	.00002	-.00001	.00020	.00004	.00115	-.00003

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00047	-.00005	-.00096	.00101	.00002	.00010	-.00009
Stddev	.00006	.00001	.00002	.00001	.00001	.00008	.00003
%RSD	13.365	15.189	2.4240	.59149	36.507	74.170	34.789
#1	.00049	-.00006	-.00097	.00101	.00002	.00009	-.00009
#2	.00040	-.00005	-.00098	.00101	.00001	.00003	-.00013
#3	.00052	-.00005	-.00093	.00100	.00003	.00018	-.00006

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00003	.00004	.00002	-.00044	.00067	.00001	.00010
Stddev	.00001	.00003	.00006	.00007	.00005	.00000	.00002
%RSD	46.276	57.388	375.99	16.474	7.5744	32.157	17.565
#1	.00004	.00007	-.00005	-.00052	.00070	.00002	.00012
#2	.00001	.00003	.00002	-.00041	.00070	.00001	.00008
#3	.00003	.00003	.00007	-.00039	.00061	.00001	.00011

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.01064	-.00007	-.00002	.00015	.00006	-.00016	.00091
Stddev	.00006	.00001	.00000	.00001	.00005	.00002	.00005
%RSD	.57616	19.844	12.243	9.7547	96.929	10.592	5.4863
#1	.01057	-.00005	-.00002	.00015	.00003	-.00017	.00093
#2	.01066	-.00008	-.00002	.00013	.00012	-.00018	.00085
#3	.01069	-.00008	-.00002	.00016	.00002	-.00014	.00094

Sample Name: Blank Acquired: 11/30/2011 10:02:02 Type: Cal
Method: 11K6010(v33) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8477.3**	**67388.**	**202950.**
Stddev	23.5	576.	279.
%RSD	.27777	.85508	.13744
#1	8450.2	68026.	203270.
#2	8489.1	67231.	202750.
#3	8492.5	66906.	202830.

Sample Name: S20 Acquired: 11/30/2011 10:05:00 Type: Cal
Method: 11K6010(v33) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Be	Cd	Pb	Mn
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.0166**	**.11539**	**.20630**	**.09887**
Stddev	.0013	.00005	.00013	.00019
%RSD	.13064	.04256	.06181	.19488
#1	1.0158	.11541	.20627	.09886
#2	1.0181	.11533	.20645	.09907
#3	1.0157	.11542	.20620	.09869

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8477.1**	**67298.**	**202270.**
Stddev	9.2	210.	220.
%RSD	.10910	.31212	.10871
#1	8467.3	67060.	202240.
#2	8478.1	67457.	202070.
#3	8485.7	67378.	202500.

Sample Name: S21 Acquired: 11/30/2011 10:07:57 Type: Cal
Method: 11K6010(v33) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Be	Cd	Pb	Mn
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**10.153**	**1.1227**	**2.0700**	**.98360**
Stddev	.096	.0002	.0019	.00091
%RSD	.94368	.01998	.09232	.09204
#1	10.045	1.1229	2.0679	.98408
#2	10.227	1.1225	2.0706	.98416
#3	10.187	1.1227	2.0716	.98256

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8433.9**	**68008.**	**202210.**
Stddev	15.9	273.	235.
%RSD	.18811	.40158	.11600
#1	8451.7	68309.	202440.
#2	8421.3	67775.	201970.
#3	8428.7	67941.	202230.

Sample Name: S22 Acquired: 11/30/2011 10:11:02 Type: Cal
Method: 11K6010(v33) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Ba	Co	Cu	Fe	V
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.64337	.15950	.26664	.04667	.12054
Stddev	.00560	.00018	.00044	.00004	.00010
%RSD	.87099	.11396	.16449	.08991	.07914
#1	.64978	.15935	.26703	.04662	.12046
#2	.63942	.15946	.26616	.04670	.12052
#3	.64090	.15970	.26674	.04669	.12065

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8482.9	67022.	202510.
Stddev	7.8	489.	412.
%RSD	.09204	.72919	.20339
#1	8477.3	66599.	202870.
#2	8479.6	67557.	202060.
#3	8491.8	66909.	202610.

Sample Name: S23 Acquired: 11/30/2011 10:14:00 Type: Cal
Method: 11K6010(v33) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Ba	Co	Cu	Fe	V
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6.2663**	**1.5919**	**2.5787**	**1.8285**	**1.1852**
Stddev	.0451	.0015	.0147	.0073	.0022
%RSD	.72028	.09536	.57137	.39993	.18509
#1	6.3066	1.5931	2.5956	1.8316	1.1865
#2	6.2748	1.5902	2.5686	1.8201	1.1865
#3	6.2176	1.5924	2.5719	1.8337	1.1827

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7871.4**	**67732.**	**196270.**
Stddev	12.9	283.	468.
%RSD	.16381	.41710	.23862
#1	7856.6	67629.	195890.
#2	7876.7	68052.	196120.
#3	7880.7	67516.	196790.

Sample Name: S24 Acquired: 11/30/2011 10:17:27 Type: Cal
Method: 11K6010(v33) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	B	Mo	Na
Units	Cts/S	Cts/S	Cts/S
Avg	**.09586**	**.77607**	**1.4536**
Stddev	.00010	.00041	.0008
%RSD	.10014	.05293	.05204
#1	.09589	.77625	1.4535
#2	.09576	.77636	1.4544
#3	.09594	.77560	1.4529

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8168.5**	**67249.**	**194920.**
Stddev	15.5	126.	631.
%RSD	.19011	.18779	.32358
#1	8161.6	67152.	194420.
#2	8157.6	67392.	195630.
#3	8186.3	67204.	194710.

Sample Name: S25 Acquired: 11/30/2011 10:20:25 Type: Cal
Method: 11K6010(v33) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	B	Mo	Na
Units	Cts/S	Cts/S	Cts/S
Avg	**.97435**	**7.7096**	**8.3236**
Stddev	.00149	.0046	.0601
%RSD	.15296	.05909	.72225
#1	.97263	7.7140	8.3667
#2	.97509	7.7100	8.2549
#3	.97532	7.7049	8.3491

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7587.1**	**67688.**	**183320.**
Stddev	12.1	254.	420.
%RSD	.15883	.37537	.22893
#1	7574.0	67617.	183780.
#2	7589.5	67970.	182970.
#3	7597.7	67477.	183200.

Sample Name: S26 Acquired: 11/30/2011 10:23:29 Type: Cal
Method: 11K6010(v33) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Al	Ca	Cr	Ni	K
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.21923**	**.84092**	**.12859**	**.75597**	**.48454**
Stddev	.00014	.00150	.00023	.00065	.00069
%RSD	.06180	.17834	.17592	.08622	.14206
#1	.21922	.84015	.12848	.75615	.48462
#2	.21937	.83996	.12885	.75524	.48381
#3	.21911	.84264	.12844	.75651	.48518

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7915.4**	**67594.**	**191630.**
Stddev	9.2	116.	525.
%RSD	.11654	.17140	.27376
#1	7907.4	67554.	191760.
#2	7925.5	67725.	191050.
#3	7913.3	67504.	192080.

Sample Name: S27 Acquired: 11/30/2011 10:26:26 Type: Cal
Method: 11K6010(v33) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Al	Ca	Cr	Ni	K
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**8.3400**	**8.1196**	**1.2915**	**7.5111**	**5.0274**
Stddev	.0570	.0154	.0029	.0108	.0658
%RSD	.68321	.18908	.22442	.14324	1.3095
#1	8.3785	8.1338	1.2935	7.5179	5.0061
#2	8.2746	8.1217	1.2882	7.4987	5.1012
#3	8.3670	8.1033	1.2929	7.5168	4.9748

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6600.1**	**63039.**	**165260.**
Stddev	11.3	509.	418.
%RSD	.17145	.80790	.25285
#1	6596.0	63412.	164950.
#2	6591.5	62459.	165730.
#3	6612.9	63247.	165080.

Sample Name: S28 Acquired: 11/30/2011 10:29:48 Type: Cal
Method: 11K6010(v33) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Sb	Mg	Tl
Units	Cts/S	Cts/S	Cts/S
Avg	**.00506**	**.02254**	**.00549**
Stddev	.00002	.00019	.00001
%RSD	.43989	.84421	.10351
#1	.00508	.02237	.00549
#2	.00504	.02251	.00549
#3	.00505	.02274	.00550

Int. Std.	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S
Avg	**65990.**	**193700.**
Stddev	494.	158.
%RSD	.74880	.08146
#1	66472.	193620.
#2	66013.	193590.
#3	65485.	193880.

Sample Name: S29 Acquired: 11/30/2011 10:32:45 Type: Cal
Method: 11K6010(v33) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	Sb	Mg	Tl
Units	Cts/S	Cts/S	Cts/S
Avg	**.04825**	**.22282**	**.05337**
Stddev	.00005	.00142	.00015
%RSD	.10195	.63606	.27855
#1	.04831	.22176	.05353
#2	.04821	.22228	.05333
#3	.04825	.22443	.05324

Int. Std.	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S
Avg	**68004.**	**192720.**
Stddev	301.	661.
%RSD	.44329	.34293
#1	68183.	191990.
#2	68173.	192880.
#3	67656.	193290.

Sample Name: S30 Acquired: 11/30/2011 10:35:43 Type: Cal
Method: 11K6010(v33) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	As	Li	Se	Ag	Sr	Sn	Ti	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00117	.04032	.00135	.04063	.15175	.02596	.01711	.61063
Stddev	.00000	.00012	.00000	.00003	.00068	.00012	.00009	.00012
%RSD	.14905	.29149	.27710	.08226	.44830	.46530	.55197	.02041
#1	.00117	.04045	.00136	.04066	.15234	.02606	.01707	.61053
#2	.00116	.04022	.00135	.04064	.15100	.02583	.01703	.61077
#3	.00117	.04029	.00136	.04060	.15190	.02599	.01721	.61059

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8189.4	66603.	198150.
Stddev	8.8	306.	154.
%RSD	.10799	.45938	.07748
#1	8182.0	66697.	198320.
#2	8199.2	66852.	198100.
#3	8187.1	66262.	198030.

Sample Name: S31 Acquired: 11/30/2011 10:38:41 Type: Cal
Method: 11K6010(v33) Mode: IR Corr. Factor: 1.000000
User: admin Data File: Type: Diln Factor:
Comment:

Elem	As	Li	Se	Ag	Sr	Sn	Ti	Zn
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00465**	**.19805**	**.00539**	**.20104**	**.73796**	.12373	**.09051**	**5.8958**
Stddev	.00001	.00085	.00001	.00020	.00224	.00011	.00045	.0006
%RSD	.19284	.42805	.20730	.09848	.30390	.09079	.50266	.00986
#1	.00464	.19859	.00539	.20084	.73965	.12383	.09095	5.8952
#2	.00465	.19708	.00538	.20106	.73542	.12375	.09004	5.8963
#3	.00466	.19850	.00541	.20123	.73883	.12361	.09054	5.8960

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8367.2**	68373.	199730.
Stddev	17.6	302.	283.
%RSD	.21032	.44242	.14168
#1	8372.7	68430.	200030.
#2	8347.5	68643.	199690.
#3	8381.4	68046.	199460.

Sample Name: ICV Acquired: 11/30/2011 10:41:34 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024014 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**101.11**	**1.4606**	1.0350	**1.9554**	**1.4730**	**2.4463**	**1.9564**	**74.558**
Stddev	.65	.0061	.0043	.0058	.0045	.0046	.0066	.077
%RSD	.64407	.41488	.41847	.29579	.30775	.18869	.33831	.10307
#1	101.44	1.4640	1.0342	1.9510	1.4681	2.4413	1.9532	74.540
#2	101.53	1.4642	1.0396	1.9620	1.4771	2.4503	1.9640	74.492
#3	100.36	1.4536	1.0310	1.9533	1.4737	2.4473	1.9520	74.642
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4364**	**.96260**	**2.6363**	**25.061**	**2.3935**	**.53855**	**56.439**	**2.3062**
Stddev	.0046	.00148	.0052	.046	.0060	.00192	.243	.0083
%RSD	.18694	.15336	.19747	.18256	.25273	.35630	.43033	.36140
#1	2.4337	.96141	2.6311	25.013	2.3869	.53698	56.159	2.2983
#2	2.4417	.96425	2.6363	25.104	2.3951	.54069	56.556	2.3149
#3	2.4339	.96213	2.6415	25.066	2.3986	.53797	56.601	2.3056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4751**	**2.4534**	**58.494**	**1.0258**	**.50541**	**62.915**	**.48488**	**2.2809**
Stddev	.0047	.0045	.132	.0027	.00065	.060	.00160	.0072
%RSD	.18927	.18357	.22578	.26572	.12771	.09582	.32961	.31563
#1	2.4708	2.4483	58.395	1.0237	.50472	62.875	.48325	2.2757
#2	2.4744	2.4568	58.644	1.0289	.50551	62.984	.48644	2.2891
#3	2.4801	2.4551	58.443	1.0247	.50600	62.886	.48495	2.2779
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: ICV Acquired: 11/30/2011 10:41:34 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024014 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.46493**	**.49633**	**1.5253**	**2.5609**
Stddev	.00014	.00262	.0014	.0015
%RSD	.03111	.52763	.09007	.05777
#1	.46486	.49542	1.5242	2.5594
#2	.46510	.49929	1.5268	2.5624
#3	.46483	.49430	1.5249	2.5609
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7322.2**	**67085.**	**182340.**
Stddev	15.3	171.	356.
%RSD	.20848	.25508	.19547
#1	7320.0	67208.	182110.
#2	7338.4	66890.	182150.
#3	7308.1	67157.	182750.

Sample Name: ICB Acquired: 11/30/2011 10:44:25 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024015 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01030**	**.00137**	**-.00166**	**.00010**	**.00006**	**.00365**	**-.00004**
Stddev	.00102	.00077	.00141	.00006	.00001	.00053	.00001
%RSD	9.9042	56.266	85.263	63.425	25.213	14.539	14.409
#1	.00996	.00208	-.00295	.00004	.00006	.00410	-.00005
#2	.01144	.00055	-.00186	.00016	.00004	.00379	-.00004
#3	.00949	.00150	-.00015	.00009	.00007	.00306	-.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00832**	**.00028**	**-.00012**	**.00021**	**-.00077**	**-.00027**	**.00021**
Stddev	.00162	.00005	.00008	.00009	.00281	.00030	.00028
%RSD	19.411	17.608	63.504	43.584	362.97	112.27	134.52
#1	-.01016	.00031	-.00007	.00031	-.00350	-.00020	.00015
#2	-.00714	.00030	-.00009	.00016	.00211	.00000	.00052
#3	-.00766	.00022	-.00021	.00015	-.00093	-.00059	-.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00080**	**.00020**	**.00030**	**.00000**	**.15491**	**-.00210**	**.00011**
Stddev	.01456	.00018	.00006	.0001	.00931	.00091	.00003
%RSD	1817.1	87.841	20.294	5890.4	6.0074	43.217	25.718
#1	-.00080	.00037	.00035	.00000	.14957	-.00144	.00010
#2	.01375	.00022	.00031	.00007	.16565	-.00313	.00009
#3	-.01536	.00002	.00023	-.00008	.14951	-.00172	.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ICB Acquired: 11/30/2011 10:44:25 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024015 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F -.18152	.00008	.00132	-.00033	-.00007	.00002	-.00041
Stddev	.00136	.00012	.00066	.00011	.00054	.00003	.00007
%RSD	.74680	157.59	50.480	33.024	797.45	188.55	16.906
#1	-.18046	.00004	.00208	-.00027	.00053	.00005	-.00034
#2	-.18305	.00021	.00089	-.00045	-.00022	-.00001	-.00043
#3	-.18107	-.00002	.00098	-.00026	-.00051	.00001	-.00047
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.05090						
Low Limit	-.05090						

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8349.8	68357.	198610.
Stddev	16.8	58.	709.
%RSD	.20079	.08496	.35710
#1	8332.3	68423.	199330.
#2	8365.7	68314.	197910.
#3	8351.2	68333.	198600.

Sample Name: MRLK3001 Acquired: 11/30/2011 10:47:24 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024016 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.22242**	**.09755**	**.00967**	**.01051**	**.01012**	**.09679**	**.01048**	**1.0627**
Stddev	.00103	.00090	.00107	.00011	.00005	.00010	.00005	.0064
%RSD	.46432	.91787	11.102	1.0674	.48057	.10735	.46991	.59983
#1	.22130	.09775	.00891	.01050	.01008	.09676	.01043	1.0619
#2	.22263	.09658	.01090	.01063	.01010	.09690	.01047	1.0568
#3	.22333	.09833	.00921	.01041	.01017	.09670	.01053	1.0695
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01061**	**.00980**	**.01113**	**.21605**	**.00989**	**.00995**	**.96260**	**.01013**
Stddev	.00011	.00001	.00002	.00149	.00035	.00055	.02176	.00038
%RSD	1.0354	.11276	.17571	.69022	3.5198	5.4790	2.2606	3.7358
#1	.01056	.00981	.01112	.21776	.01027	.01027	.95183	.01053
#2	.01074	.00980	.01115	.21506	.00980	.00932	.94832	.00979
#3	.01054	.00978	.01111	.21531	.00959	.01026	.98764	.01006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01039**	**.01020**	**1.0219**	**.00811**	**.01048**	**.85537**	**.01054**	**.01163**
Stddev	.00008	.00016	.0030	.00087	.00010	.00690	.00014	.00057
%RSD	.78990	1.5752	.29692	10.733	.92167	.80638	1.3533	4.9027
#1	.01045	.01038	1.0254	.00762	.01056	.85983	.01061	.01098
#2	.01030	.01007	1.0202	.00760	.01037	.85886	.01063	.01205
#3	.01041	.01016	1.0201	.00912	.01050	.84743	.01037	.01185
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: MRLK3001 Acquired: 11/30/2011 10:47:24 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024016 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	-.00009	.00993	.01066	.02282
Stddev	.00038	.00031	.00006	.00008
%RSD	409.81	3.1523	.56505	.33075
#1	-.00053	.00972	.01068	.02291
#2	.00007	.01029	.01072	.02278
#3	.00018	.00979	.01060	.02278
Check ?	None	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8195.3	66824.	194510.
Stddev	10.7	305.	65.
%RSD	.13082	.45658	.03321
#1	8185.2	67143.	194440.
#2	8206.6	66794.	194510.
#3	8194.2	66535.	194570.

Sample Name: MRLK3002 Acquired: 11/30/2011 10:50:23 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024017 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.20880**	**.04897**	**.00892**	**.00510**	**.00399**	**.09602**	**.00505**
Stddev	.00186	.00033	.00093	.00007	.00005	.00033	.00003
%RSD	.88969	.67387	10.392	1.3129	1.1869	.34750	.50032
#1	.20959	.04904	.00999	.00508	.00398	.09640	.00506
#2	.20668	.04925	.00837	.00518	.00395	.09588	.00506
#3	.21014	.04861	.00841	.00505	.00405	.09577	.00502
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.51752**	**.01023**	**.00982**	**.01059**	**.10312**	**.00270**	**.10117**
Stddev	.00721	.00018	.00013	.00016	.00395	.00018	.00073
%RSD	1.3938	1.7281	1.2899	1.4676	3.8346	6.6994	.71872
#1	.51559	.01014	.00980	.01068	.10059	.00269	.10123
#2	.52551	.01043	.00995	.01041	.10110	.00252	.10041
#3	.51147	.01011	.00970	.01069	.10768	.00288	.10186
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.18269**	**.00492**	**.00967**	**.01030**	**.99458**	**.00991**	**.00992**
Stddev	.01180	.00025	.00007	.00009	.01400	.00101	.00014
%RSD	6.4588	5.0061	.75475	.84011	1.4077	10.161	1.3656
#1	.17575	.00464	.00968	.01028	.99276	.01097	.00998
#2	.17600	.00500	.00960	.01022	.98158	.00896	.01002
#3	.19631	.00511	.00974	.01039	1.0094	.00981	.00976
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: MRLK3002 Acquired: 11/30/2011 10:50:23 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024017 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F .32290	.01009	.01150	.00926	.01034	.01029	.01092
Stddev	.00206	.00006	.00059	.00060	.00102	.00011	.00009
%RSD	.63649	.57191	5.1427	6.4953	9.9057	1.0971	.81491
#1	.32055	.01014	.01216	.00874	.00935	.01016	.01088
#2	.32433	.01009	.01132	.00913	.01139	.01035	.01085
#3	.32383	.01003	.01102	.00992	.01027	.01036	.01102
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.50000						
Range	-20.000%						

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8220.9	66520.	194660.
Stddev	14.2	667.	480.
%RSD	.17218	1.0022	.24654
#1	8211.4	66211.	194140.
#2	8214.1	67285.	194740.
#3	8237.2	66064.	195090.

Sample Name: ICSA1 Acquired: 11/30/2011 10:53:23 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024018 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**386.44**	**-.00024**	**.00061**	**.00076**	**.00012**	**-.05761**	**.00417**	**468.03**
Stddev	1.18	.00070	.00148	.00012	.00003	.00013	.00009	3.15
%RSD	.30579	290.92	241.60	15.658	26.657	.22399	2.0785	.67353
#1	385.35	-.00021	.00077	.00075	.00009	-.05766	.00424	470.14
#2	386.29	.00044	.00200	.00064	.00015	-.05770	.00420	469.54
#3	387.70	-.00095	-.00094	.00088	.00011	-.05746	.00407	464.41
Check ?	Chk Pass	None	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00080**	**-.00072**	**.00137**	**189.08**	**.00583**	**.01641**	**190.78**	**.00091**
Stddev	.00007	.00043	.00013	.28	.00074	.00033	1.24	.00038
%RSD	9.0226	59.673	9.7864	.14992	12.734	2.0403	.65053	41.497
#1	.00086	-.00072	.00151	189.15	.00661	.01645	191.08	.00058
#2	.00072	-.00115	.00137	188.77	.00513	.01672	191.85	.00133
#3	.00082	-.00029	.00124	189.32	.00577	.01606	189.42	.00084
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00104**	**.00090**	**.22864**	**.00112**	**-.00011**	**-.03086**	**.00101**	**-.00232**
Stddev	.00007	.00033	.02601	.00283	.00023	.00359	.00014	.00155
%RSD	6.8196	36.652	11.377	251.95	211.93	11.648	13.951	66.899
#1	-.00106	.00125	.19866	.00082	-.00020	-.03487	.00117	-.00296
#2	-.00096	.00085	.24200	.00409	.00015	-.02793	.00096	-.00055
#3	-.00109	.00059	.24526	-.00154	-.00027	-.02977	.00091	-.00344
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Sample Name: ICSA1 Acquired: 11/30/2011 10:53:23 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024018 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.00145**	**.00374**	**.00069**	**.00261**
Stddev	.00021	.00052	.00026	.00020
%RSD	14.634	13.969	38.354	7.5439
#1	.00166	.00325	.00086	.00239
#2	.00145	.00369	.00038	.00266
#3	.00124	.00429	.00082	.00277
Check ?	None	None	None	None
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6427.0**	**63575.**	**166340.**
Stddev	2.4	383.	220.
%RSD	.03808	.60182	.13225
#1	6424.6	63580.	166450.
#2	6429.5	63190.	166490.
#3	6426.9	63955.	166090.

Sample Name: ICAB1 Acquired: 11/30/2011 10:56:33 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024019 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**385.60**	**1.0121**	**1.0477**	**.49481**	**.48550**	**.43975**	**.92718**	**464.59**
Stddev	2.02	.0023	.0029	.00096	.00048	.00014	.00173	1.60
%RSD	.52389	.22772	.27817	.19466	.09844	.03133	.18682	.34334
#1	387.36	1.0135	1.0458	.49470	.48511	.43970	.92521	465.87
#2	386.04	1.0095	1.0510	.49390	.48604	.43964	.92845	462.81
#3	383.39	1.0134	1.0462	.49582	.48537	.43990	.92789	465.09
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.46518**	**.47288**	**.55266**	**189.51**	**.93432**	**1.1643**	**188.99**	**.45558**
Stddev	.00157	.00012	.00135	.79	.00199	.0002	.56	.00083
%RSD	.33715	.02640	.24341	.41557	.21350	.01512	.29463	.18116
#1	.46420	.47301	.55330	188.73	.93213	1.1645	188.36	.45471
#2	.46435	.47287	.55111	189.51	.93604	1.1644	189.21	.45568
#3	.46699	.47277	.55356	190.31	.93478	1.1641	189.41	.45636
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.99970**	**.95743**	**77.785**	**1.0243**	**1.0869**	**82.991**	**.47825**	**.83329**
Stddev	.00042	.00101	.132	.0025	.0020	.071	.00068	.00035
%RSD	.04209	.10524	.16979	.24311	.18228	.08574	.14258	.04231
#1	.99996	.95765	77.674	1.0269	1.0871	83.054	.47817	.83370
#2	.99992	.95832	77.750	1.0243	1.0848	82.914	.47762	.83306
#3	.99921	.95634	77.931	1.0219	1.0887	83.005	.47898	.83312
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: ICAB1 Acquired: 11/30/2011 10:56:33 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024019 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.90834**	**.98893**	**.49528**	**1.0138**
Stddev	.00057	.00061	.00207	.0024
%RSD	.06315	.06197	.41815	.23283
#1	.90850	.98940	.49332	1.0113
#2	.90770	.98915	.49508	1.0142
#3	.90881	.98823	.49745	1.0160
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6384.1**	**63851.**	**166220.**
Stddev	23.5	176.	313.
%RSD	.36871	.27585	.18821
#1	6358.0	64040.	165860.
#2	6390.6	63691.	166320.
#3	6403.6	63821.	166460.

Sample Name: CCV1 Acquired: 11/30/2011 10:59:26 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024020 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	sF **-485.36**	sF **-7.1775**	sF **-4.8883**	k **1.9480**	**1.4255**	^F *****
Stddev	1016.8	15.082	10.292	.0021	.0015	-----
%RSD	209.49	210.13	210.55	.10634	.10339	-----
#1	103.24	1.5279	1.0526	1.9483	1.4263	2.4100
#2	100.09	1.5322	1.0553	1.9499	1.4263	2.4073
#3	s -1659.4	s -24.593	s -16.773	k 1.9458	1.4238	^ -----
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value	100.00	1.5000	1.0000			2.5000
Range	-10.000%	-10.000%	-10.000%			-10.000%

Elem	Cd	Ca	Cr	Co	Cu	Fe
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	sF **-9.3906**	**73.987**	^F *****	k **.95431**	^F *****	^F *****
Stddev	19.715	.037	-----	.00288	-----	-----
%RSD	209.94	.05046	-----	.30159	-----	-----
#1	1.9910	74.027	2.3574	.95645	2.6630	24.141
#2	1.9928	73.953	2.3553	.95546	2.6509	24.128
#3	s -32.156	73.980	^ -----	k .95104	^ -----	^ -----
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail
Value	2.0000		2.5000		2.5000	25.000
Range	-10.000%		-10.000%		-10.000%	-10.000%

Elem	Pb	Li	Mg	Mn	Mo	Ni
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	k **2.3525**	**.49912**	**56.003**	**2.2722**	k **2.4648**	k **2.4238**
Stddev	.0127	.00123	.228	.0040	.0038	.0016
%RSD	.53991	.24674	.40698	.17445	.15540	.06780
#1	2.3606	.49973	55.952	2.2729	2.4668	2.4257
#2	2.3591	.49993	56.252	2.2757	2.4673	2.4231
#3	k 2.3379	.49770	55.805	2.2679	k 2.4604	k 2.4226
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV1 Acquired: 11/30/2011 10:59:26 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024020 Type: Diln Factor:
Comment:

Elem	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	k **59.120**	sF -4.**9509**	^F *****	k **63.494**	.**48211**	sF **-10.967**
Stddev	.131	10.389	-----	.032	.00109	23.045
%RSD	.22178	209.84	-----	.05101	.22660	210.13
#1	59.254	1.0471	.50630	63.531	.48320	2.3356
#2	59.112	1.0473	.50514	63.472	.48211	2.3404
#3	k 58.992	s -16.947	^ -----	k 63.479	.48102	s -37.577
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value		1.0000	.50000			2.5000
Range		-10.000%	-10.000%			-10.000%

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.49228**	**.48540**	^F *****	k **2.5429**
Stddev	.00271	.00013	-----	.0072
%RSD	.55053	.02673	-----	.28303
#1	.49523	.48540	1.4897	2.5511
#2	.49171	.48526	1.4898	2.5397
#3	.48990	.48552	^ -----	k 2.5378
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value			1.5000	
Range			-10.000%	

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7342.3**	**67011.**	^ *****
Stddev	14.0	236.	-----
%RSD	.19065	.35253	-----
	7333.5	66786.	177300.
	7335.0	66990.	176940.
	7358.5	67257.	^ -----

Sample Name: CCV3 Acquired: 11/30/2011 11:34:09 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024029 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**103.04**	**1.4927**	**1.0640**	**1.9707**	**1.4900**	**2.5109**	**2.0349**	**75.617**
Stddev	.62	.0035	.0009	.0059	.0032	.0076	.0051	.237
%RSD	.60573	.23181	.08241	.29665	.21359	.30403	.25251	.31324
#1	102.41	1.4952	1.0640	1.9720	1.4890	2.5033	2.0352	75.415
#2	103.66	1.4943	1.0648	1.9758	1.4936	2.5185	2.0398	75.558
#3	103.05	1.4888	1.0631	1.9643	1.4875	2.5108	2.0296	75.877
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.5010**	**.97399**	**2.7006**	25.443	**2.4201**	.54613	**57.159**	2.3424
Stddev	.0071	.00175	.0078	.091	.0054	.00192	.169	.0071
%RSD	.28370	.17981	.28813	.35888	.22265	.35228	.29479	.30416
#1	2.4935	.97593	2.6925	25.362	2.4263	.54686	56.965	2.3393
#2	2.5075	.97352	2.7080	25.542	2.4179	.54758	57.252	2.3506
#3	2.5021	.97252	2.7013	25.425	2.4162	.54395	57.261	2.3374
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4914**	**2.4808**	**59.719**	**1.0495**	**.52241**	**64.234**	**.49233**	**2.3697**
Stddev	.0046	.0049	.165	.0047	.00091	.105	.00096	.0102
%RSD	.18530	.19747	.27640	.44627	.17380	.16336	.19471	.43004
#1	2.4966	2.4857	59.535	1.0487	.52150	64.157	.49149	2.3738
#2	2.4878	2.4760	59.767	1.0545	.52332	64.192	.49337	2.3771
#3	2.4899	2.4807	59.854	1.0452	.52241	64.354	.49211	2.3580
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV3 Acquired: 11/30/2011 11:34:09 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024029 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.46405**	**.50069**	**1.5484**	**2.5894**
Stddev	.00138	.00085	.0057	.0013
%RSD	.29717	.17063	.37055	.04809
#1	.46304	.50157	1.5429	2.5885
#2	.46562	.50065	1.5544	2.5889
#3	.46349	.49986	1.5481	2.5909
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7235.9**	**62871.**	**175100.**
Stddev	29.1	236.	911.
%RSD	.40203	.37489	.52038
#1	7204.1	63109.	174600.
#2	7242.2	62638.	174540.
#3	7261.3	62865.	176150.

Sample Name: CCB3 Acquired: 11/30/2011 11:37:04 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024030 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01560**	**.00067**	**-.00012**	**.00023**	**.00012**	**.00384**	**-.00003**
Stddev	.00075	.00047	.00076	.00001	.00005	.00085	.00001
%RSD	4.8160	70.568	643.50	4.7121	41.761	22.103	33.901
#1	.01633	.00114	-.00035	.00022	.00008	.00477	-.00003
#2	.01564	.00065	-.00073	.00024	.00011	.00365	-.00004
#3	.01483	.00020	.00073	.00023	.00018	.00311	-.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.15910**	**.00023**	**.00010**	**.00048**	**.00130**	**-.00026**	**-.00051**
Stddev	.00242	.00006	.00021	.00021	.00075	.00040	.00062
%RSD	1.5218	26.402	220.45	43.745	57.796	153.78	121.61
#1	.15642	.00030	.00032	.00024	.00217	-.00011	.00020
#2	.15975	.00017	.00007	.00055	.00090	.00004	-.00092
#3	.16113	.00023	-.00010	.00064	.00084	-.00072	-.00080
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.03240						
Low Limit	-.03240						

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00667**	**.00037**	**.00033**	**.00000**	**-.03163**	**-.00103**	**-.00002**
Stddev	.01003	.00010	.00015	.0001	.00877	.00069	.00005
%RSD	150.34	26.770	46.702	3032.7	27.735	67.150	246.36
#1	-.00044	.00040	.00043	-.00006	-.03116	-.00123	-.00001
#2	.01814	.00026	.00040	.00006	-.02310	-.00026	.00003
#3	.00231	.00046	.00015	-.00001	-.04063	-.00160	-.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB3 Acquired: 11/30/2011 11:37:04 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024030 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **-.23289**	.00025	.00144	**-.00052**	**.00059**	**.00020**	**.00589**
Stddev	.00609	.00010	.00057	.00026	.00021	.00007	.00009
%RSD	2.6165	38.400	39.148	50.985	35.475	33.644	1.5611
#1	-.23107	.00032	.00093	-.00021	.00037	.00027	.00598
#2	-.22791	.00029	.00205	-.00066	.00078	.00017	.00580
#3	-.23969	.00014	.00135	-.00067	.00063	.00015	.00588
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.05090						
Low Limit	-.05090						

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8367.2**	**65721.**	**194910.**
Stddev	11.0	363.	524.
%RSD	.13135	.55215	.26892
#1	8359.1	65442.	195300.
#2	8362.8	65588.	194320.
#3	8379.7	66131.	195120.

Sample Name: IPK041WB Acquired: 11/30/2011 11:40:05 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024031 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.01555	.00108	-.00067	.00014	.00004	-.00030	-.00005	.00790
Stddev	.00113	.00081	.00171	.00008	.00001	.00009	.00003	.00141
%RSD	7.2836	75.653	255.79	56.102	29.099	29.295	64.457	17.888
#1	.01556	.00016	.00131	.00012	.00004	-.00024	-.00006	.00725
#2	.01441	.00172	-.00168	.00008	.00002	-.00026	-.00001	.00693
#3	.01668	.00135	-.00165	.00023	.00004	-.00040	-.00008	.00952
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00016	-.00005	.00034	-.00045	.00008	-.00064	-.01157	.00021
Stddev	.00010	.00024	.00007	.00266	.00000	.00015	.00834	.00009
%RSD	64.113	514.33	20.375	590.62	2.6229	22.837	72.093	41.459
#1	.00027	-.00031	.00032	.00001	.00008	-.00055	-.00644	.00030
#2	.00016	.00015	.00042	.00195	.00009	-.00081	-.02119	.00013
#3	.00006	.00002	.00029	-.00331	.00008	-.00057	-.00708	.00020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00002	.00002	-.07904	-.00114	-.00002	-.26028	.00006	.00070
Stddev	.00009	.00008	.00411	.00042	.00007	.00601	.00003	.00015
%RSD	492.23	370.06	5.2047	36.673	391.76	2.3093	43.984	21.715
#1	.00007	.00004	-.07635	-.00100	-.00003	-.25584	.00003	.00085
#2	-.00009	.00009	-.08378	-.00080	.00006	-.25788	.00007	.00055
#3	.00007	-.00006	-.07700	-.00160	-.00008	-.26712	.00008	.00070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: IPK041WB Acquired: 11/30/2011 11:40:05 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024031 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**-.00029**	**.00010**	**.00007**	**.00152**
Stddev	.00037	.00021	.00012	.00013
%RSD	128.07	219.59	165.35	8.2783
#1	.00001	-.00009	.00020	.00138
#2	-.00017	.00032	.00005	.00161
#3	-.00070	.00005	-.00003	.00159
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8496.2**	**67376.**	**196790.**
Stddev	15.9	206.	258.
%RSD	.18768	.30503	.13136
#1	8501.9	67337.	196630.
#2	8508.4	67599.	196640.
#3	8478.1	67193.	197090.

Sample Name: IPK041WL Acquired: 11/30/2011 11:43:04 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024032 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**5.2776**	**2.5418**	**.53727**	**.49366**	**.49255**	**.51914**	**.51760**
Stddev	.0151	.0123	.00570	.00067	.00198	.00154	.00325
%RSD	.28683	.48373	1.0608	.13648	.40165	.29669	.62695
#1	5.2627	2.5363	.53079	.49355	.49087	.51785	.51441
#2	5.2772	2.5332	.53949	.49438	.49473	.51873	.51749
#3	5.2930	2.5559	.54152	.49304	.49204	.52085	.52090
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**49.578**	**.51290**	**.49521**	**.55251**	**5.2144**	**.48893**	F **.00131**
Stddev	.059	.00307	.00081	.00188	.0097	.00044	.00085
%RSD	.11936	.59817	.16377	.34084	.18674	.08947	64.431
#1	49.510	.51023	.49434	.55105	5.2055	.48848	.00229
#2	49.620	.51220	.49595	.55184	5.2248	.48895	.00085
#3	49.603	.51625	.49534	.55463	5.2130	.48935	.00080
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							.50000
Range							-20.000%

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**46.696**	**.46722**	**.51157**	**.50617**	**49.207**	**.52331**	**.52976**
Stddev	.083	.00151	.00074	.00011	.187	.00339	.00259
%RSD	.17865	.32299	.14426	.02207	.38063	.64768	.48891
#1	46.624	.46592	.51225	.50630	49.219	.51941	.52752
#2	46.788	.46887	.51167	.50609	49.388	.52493	.52917
#3	46.677	.46686	.51078	.50611	49.014	.52558	.53260
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: IPK041WL Acquired: 11/30/2011 11:43:04 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024032 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**53.543**	**.49921**	**.49355**	**.46929**	**.50213**	**.52796**	**.52468**
Stddev	.144	.00215	.00333	.00051	.00137	.00031	.00059
%RSD	.26861	.43034	.67412	.10942	.27303	.05930	.11171
#1	53.593	.49997	.49021	.46933	.50287	.52760	.52510
#2	53.655	.50088	.49358	.46876	.50298	.52813	.52401
#3	53.381	.49679	.49687	.46978	.50055	.52814	.52492
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7482.4**	**66536.**	**180230.**
Stddev	13.2	220.	738.
%RSD	.17612	.33114	.40966
#1	7469.4	66556.	180860.
#2	7482.1	66306.	180400.
#3	7495.8	66745.	179420.

Sample Name: IPK041WC Acquired: 11/30/2011 11:45:50 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024033 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.3174	2.5536	.53872	.49938	.49741	.52234	.52149
Stddev	.0034	.0094	.00447	.00254	.00194	.00039	.00066
%RSD	.06324	.36821	.82987	.50955	.38978	.07547	.12696
#1	5.3149	2.5428	.53790	.49733	.49584	.52189	.52155
#2	5.3212	2.5595	.53471	.50223	.49958	.52260	.52080
#3	5.3162	2.5586	.54354	.49859	.49681	.52253	.52211
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	49.804	.51633	.49774	.55514	5.2296	.49177	F .00155
Stddev	.052	.00117	.00015	.00187	.0175	.00038	.00065
%RSD	.10425	.22564	.02950	.33767	.33367	.07698	41.591
#1	49.763	.51628	.49764	.55671	5.2235	.49220	.00230
#2	49.862	.51519	.49768	.55564	5.2160	.49161	.00122
#3	49.786	.51752	.49791	.55306	5.2493	.49150	.00114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							.50000
Range							-20.000%

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	47.050	.47195	.51524	.50948	49.680	.52761	.53192
Stddev	.208	.00400	.00033	.00033	.005	.00091	.00057
%RSD	.44146	.84821	.06496	.06538	.01014	.17278	.10659
#1	46.901	.46895	.51487	.50979	49.679	.52661	.53198
#2	47.288	.47649	.51536	.50913	49.686	.52840	.53133
#3	46.963	.47040	.51550	.50952	49.676	.52782	.53246
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: IPK041WC Acquired: 11/30/2011 11:45:50 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024033 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**54.064**	**.50404**	**.49716**	**.47103**	**.50640**	**.52969**	**.52806**
Stddev	.027	.00020	.00083	.00228	.00043	.00029	.00039
%RSD	.04924	.04062	.16780	.48508	.08448	.05401	.07304
#1	54.041	.50416	.49626	.46927	.50602	.52944	.52842
#2	54.093	.50380	.49791	.47362	.50686	.53000	.52765
#3	54.058	.50415	.49732	.47022	.50633	.52962	.52810
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7460.0	**65962.**	179740.
Stddev	10.0	387.	210.
%RSD	.13384	.58732	.11672
#1	7448.6	66337.	179630.
#2	7463.9	65563.	179980.
#3	7467.4	65987.	179620.

Sample Name: CCV4 Acquired: 11/30/2011 12:12:39 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024041 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**101.07**	**1.5097**	**1.0578**	**1.9310**	**1.4263**	**2.4778**	**2.0240**	**74.014**
Stddev	.87	.0018	.0017	.0118	.0059	.0064	.0053	.308
%RSD	.85661	.12088	.16465	.61178	.41494	.25835	.26242	.41593
#1	102.07	1.5115	1.0558	1.9389	1.4284	2.4708	2.0278	73.690
#2	100.54	1.5096	1.0592	1.9366	1.4309	2.4791	2.0263	74.051
#3	100.61	1.5079	1.0583	1.9174	1.4196	2.4834	2.0180	74.302
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4649**	**.95569**	**2.6647**	**25.011**	**2.3563**	**.49679**	**56.034**	**2.2894**
Stddev	.0025	.00071	.0046	.071	.0057	.00232	.192	.0122
%RSD	.10130	.07388	.17057	.28579	.24354	.46755	.34277	.53479
#1	2.4631	.95506	2.6606	24.968	2.3629	.49809	56.006	2.2962
#2	2.4639	.95557	2.6639	24.972	2.3537	.49818	56.238	2.2968
#3	2.4677	.95645	2.6696	25.094	2.3524	.49411	55.857	2.2753
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**2.4372**	**2.4232**	**59.436**	**1.0469**	**.52124**	**64.130**	**.48254**	**2.3571**
Stddev	.0018	.0040	.110	.0024	.00091	.060	.00111	.0089
%RSD	.07493	.16609	.18560	.22954	.17436	.09321	.23040	.37683
#1	2.4372	2.4196	59.310	1.0468	.52024	64.061	.48279	2.3645
#2	2.4354	2.4225	59.517	1.0446	.52148	64.162	.48352	2.3596
#3	2.4390	2.4275	59.481	1.0494	.52201	64.167	.48133	2.3472
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV4 Acquired: 11/30/2011 12:12:39 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024041 Type: Diln Factor:
Comment:

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**.48233**	**.48311**	**1.5173**	**2.5553**
Stddev	.00103	.00199	.0033	.0095
%RSD	.21329	.41201	.21473	.37063
#1	.48339	.48443	1.5150	2.5642
#2	.48225	.48407	1.5158	2.5564
#3	.48134	.48082	1.5210	2.5453
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7315.9**	**61468.**	**173560.**
Stddev	39.9	73.	1151.
%RSD	.54525	.11953	.66328
#1	7272.0	61474.	172410.
#2	7325.8	61391.	173540.
#3	7349.9	61538.	174720.

Sample Name: CCB4 Acquired: 11/30/2011 12:15:29 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024042 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01381**	**.00156**	**-.00020**	**.00021**	**.00011**	**.00108**	**-.00004**
Stddev	.00020	.00082	.00114	.00012	.00005	.00052	.00005
%RSD	1.4550	52.663	582.77	56.276	49.806	48.428	129.06
#1	.01394	.00061	-.00072	.00033	.00015	.00152	-.00002
#2	.01391	.00210	-.00098	.00009	.00013	.00122	.00000
#3	.01358	.00196	.00111	.00021	.00005	.00050	-.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.02310**	**.00015**	**-.00017**	**.00027**	**.00006**	**.00031**	**.00012**
Stddev	.00218	.00005	.00012	.00008	.00225	.00027	.00016
%RSD	9.4469	34.017	69.982	28.606	3965.2	85.216	136.58
#1	.02266	.00010	-.00008	.00034	.00261	.00006	-.00004
#2	.02116	.00013	-.00013	.00029	-.00166	.00059	.00028
#3	.02546	.00020	-.00031	.00019	-.00077	.00029	.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00490**	**-.00002**	**.00032**	**-.00007**	**.03068**	**-.00183**	**-.00004**
Stddev	.01702	.00007	.00026	.00003	.00637	.00053	.00014
%RSD	347.41	299.05	79.868	43.128	20.770	28.802	360.15
#1	.00867	.00001	.00059	-.00010	.03756	-.00182	-.00011
#2	-.02400	-.00010	.00029	-.00006	.02950	-.00237	-.00013
#3	.00064	.00002	.00008	-.00004	.02498	-.00131	.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB4 Acquired: 11/30/2011 12:15:29 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024042 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F -.14368	.00014	.00102	-.00015	.00014	.00020	.00047
Stddev	.00326	.00008	.00045	.00039	.00047	.00027	.00011
%RSD	2.2675	56.598	43.774	255.53	346.24	134.08	23.567
#1	-.13992	.00005	.00150	.00009	-.00041	.00050	.00042
#2	-.14570	.00021	.00094	-.00060	.00042	-.00003	.00040
#3	-.14541	.00017	.00062	.00005	.00040	.00014	.00060
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.05090						
Low Limit	-.05090						

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8389.6	62646.	189310.
Stddev	45.0	138.	1236.
%RSD	.53594	.21962	.65277
#1	8338.0	62520.	188330.
#2	8410.8	62792.	188900.
#3	8420.1	62625.	190700.

Sample Name: K184-01 Acquired: 11/30/2011 12:30:42 Type: Unk
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024047 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.03188	-.00051	-.00139	.15421	.00001	.20747	-.00032
Stddev	.00060	.00152	.00134	.00072	.00002	.00057	.00015
%RSD	1.8908	295.93	96.436	.46948	214.61	.27350	45.139
#1	.03239	.00121	.00005	.15344	-.00001	.20766	-.00016
#2	.03122	-.00166	-.00161	.15431	.00003	.20792	-.00035
#3	.03202	-.00109	-.00261	.15488	.00001	.20684	-.00045

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	553.67	.00049	-.00098	.00197	1.8839	.00242	.04773
Stddev	6.19	.00007	.00013	.00023	.0060	.00108	.00068
%RSD	1.1177	13.537	13.653	11.462	.31613	44.668	1.4262
#1	550.62	.00042	-.00083	.00222	1.8782	.00152	.04775
#2	560.80	.00055	-.00105	.00178	1.8835	.00212	.04840
#3	549.61	.00050	-.00107	.00191	1.8901	.00361	.04704

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	127.41	.43581	.00044	.00026	16.533	-.00172	-.00043
Stddev	.75	.00179	.00009	.00018	.024	.00232	.00006
%RSD	.58604	.40960	19.402	68.516	.14470	134.98	13.726
#1	126.76	.43383	.00036	.00017	16.508	.00088	-.00037
#2	128.23	.43729	.00043	.00046	16.555	-.00247	-.00049
#3	127.24	.43631	.00053	.00015	16.537	-.00357	-.00043

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F 717.00	4.9632	-.00004	-.00117	.00239	-.00048	.00715
Stddev	4.12	.0020	.00059	.00116	.00013	.00010	.00017
%RSD	.57442	.04014	1498.4	99.253	5.5036	19.880	2.3346
#1	717.73	4.9654	-.00054	-.00233	.00253	-.00043	.00696
#2	720.71	4.9614	-.00019	-.00118	.00227	-.00042	.00724
#3	712.57	4.9629	.00061	.00000	.00238	-.00059	.00726

Sample Name: K184-01 Acquired: 11/30/2011 12:30:42 Type: Unk
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024047 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	6009.1	60417.	151370.
Stddev	10.7	424.	293.
%RSD	.17742	.70239	.19379
#1	6020.8	60499.	151300.
#2	6000.0	59958.	151120.
#3	6006.4	60795.	151690.

Sample Name: K184-02 Acquired: 11/30/2011 12:33:54 Type: Unk
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024048 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.03642**	**-.00077**	**.00494**	**.13771**	**.00003**	**.61373**	**-.00033**
Stddev	.00106	.00052	.00050	.00105	.00002	.00110	.00008
%RSD	2.9034	67.197	10.086	.75904	70.741	.17990	23.136
#1	.03730	-.00021	.00482	.13662	.00001	.61498	-.00041
#2	.03672	-.00087	.00452	.13779	.00003	.61331	-.00031
#3	.03525	-.00124	.00549	.13871	.00006	.61289	-.00026

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**582.70**	**.00055**	**-.00088**	**.00216**	**2.6246**	**.00233**	**.06093**
Stddev	1.30	.00023	.00024	.00011	.0055	.00092	.00058
%RSD	.22309	41.273	27.857	4.9503	.20789	39.470	.95213
#1	581.24	.00058	-.00063	.00222	2.6306	.00331	.06149
#2	583.11	.00076	-.00111	.00203	2.6200	.00149	.06098
#3	583.74	.00031	-.00089	.00221	2.6233	.00218	.06033

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**228.48**	**.55413**	**.00143**	**.00070**	**22.846**	**-.00057**	**-.00052**
Stddev	1.69	.00332	.00010	.00017	.020	.00162	.00021
%RSD	.74001	.59891	6.8328	24.411	.08651	282.44	41.063
#1	226.60	.55067	.00151	.00064	22.825	-.00056	-.00070
#2	228.97	.55444	.00147	.00089	22.849	-.00220	-.00029
#3	229.87	.55728	.00132	.00057	22.865	.00104	-.00056

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **1600.0**	**5.6644**	**-.00057**	**-.00024**	**.00223**	**-.00065**	**.00885**
Stddev	10.1	.0089	.00034	.00032	.00085	.00013	.00014
%RSD	.63257	.15672	59.814	133.48	38.170	19.256	1.5697
#1	1611.7	5.6678	-.00039	-.00061	.00180	-.00054	.00899
#2	1594.3	5.6544	-.00036	-.00013	.00168	-.00062	.00872
#3	1594.1	5.6711	-.00096	.00001	.00321	-.00079	.00883

Sample Name: K184-02 Acquired: 11/30/2011 12:33:54 Type: Unk
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024048 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	5603.8	58751.	141630.
Stddev	14.5	160.	282.
%RSD	.25810	.27224	.19921
#1	5587.6	58933.	141390.
#2	5608.4	58634.	141550.
#3	5615.4	58685.	141940.

Sample Name: K184-03 Acquired: 11/30/2011 12:37:05 Type: Unk
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024049 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.03070**	**-.00016**	**-.00043**	**.44459**	**.00003**	**.18199**	.00007	**529.19**
Stddev	.00157	.00028	.00494	.00233	.00002	.00044	.00004	.15
%RSD	5.1268	176.90	1137.2	.52471	72.242	.23954	54.285	.02767
#1	.03042	-.00029	.00477	.44727	.00005	.18154	.00011	529.21
#2	.03240	-.00034	-.00101	.44308	.00002	.18202	.00009	529.03
#3	.02929	.00016	-.00507	.44340	.00001	.18241	.00003	529.32

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00043**	**-.00085**	**.00183**	**24.945**	**.00326**	**.05910**	**123.20**	**1.3849**
Stddev	.00010	.00018	.00011	.023	.00027	.00053	.16	.0054
%RSD	22.632	20.952	6.1684	.09178	8.3095	.89894	.13012	.38807
#1	.00037	-.00083	.00179	24.939	.00357	.05942	123.34	1.3906
#2	.00055	-.00068	.00174	24.926	.00309	.05939	123.02	1.3841
#3	.00038	-.00103	.00196	24.971	.00311	.05849	123.22	1.3800

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.00073**	**.00192**	**20.171**	**-.00043**	**-.00041**	**622.24**	**5.0573**	-.00011
Stddev	.00015	.00019	.097	.00128	.00019	9.06	.0211	.00081
%RSD	20.941	9.9890	.47968	296.59	44.651	1.4560	.41701	747.05
#1	-.00071	.00214	20.283	-.00185	-.00053	631.48	5.0807	-.00067
#2	-.00059	.00182	20.120	-.00011	-.00020	621.86	5.0516	.00082
#3	-.00089	.00180	20.111	.00066	-.00051	613.38	5.0397	-.00048

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	**-.00042**	**.00320**	**.00028**	**.00559**
Stddev	.00023	.00038	.00026	.00023
%RSD	54.191	11.788	95.117	4.0660
#1	-.00033	.00345	.00014	.00582
#2	-.00025	.00277	.00058	.00557
#3	-.00068	.00339	.00011	.00537

Sample Name: K184-03 Acquired: 11/30/2011 12:37:05 Type: Unk
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024049 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6163.9**	**59953.**	**154500.**
Stddev	12.0	225.	223.
%RSD	.19536	.37577	.14411
#1	6150.0	59787.	154720.
#2	6171.0	59863.	154270.
#3	6170.7	60210.	154500.

Sample Name: K184-04 Acquired: 11/30/2011 12:40:16 Type: Unk
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024050 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.03793	-.00018	.00660	.37312	.00002	.47127	.00026
Stddev	.00228	.00032	.00174	.00093	.00007	.00168	.00013
%RSD	6.0184	177.35	26.396	.25058	308.05	.35567	48.750
#1	.03866	-.00041	.00747	.37346	-.00002	.46991	.00026
#2	.03977	-.00032	.00459	.37207	.00010	.47314	.00040
#3	.03538	.00019	.00773	.37384	-.00001	.47077	.00014

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	593.50	.00052	-.00099	.00158	24.022	.00205	.06845
Stddev	3.26	.00015	.00020	.00008	.050	.00079	.00086
%RSD	.54912	29.692	20.140	5.3153	.20971	38.395	1.2563
#1	594.72	.00035	-.00081	.00156	23.978	.00221	.06783
#2	589.80	.00054	-.00121	.00151	24.010	.00273	.06943
#3	595.97	.00066	-.00097	.00167	24.077	.00119	.06809

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	214.89	1.6159	-.00076	.00157	23.428	-.00221	-.00031
Stddev	.32	.0059	.00009	.00016	.068	.00065	.00008
%RSD	.14756	.36475	12.056	10.413	.29010	29.157	24.825
#1	214.52	1.6111	-.00074	.00141	23.451	-.00286	-.00036
#2	215.10	1.6141	-.00067	.00174	23.352	-.00223	-.00034
#3	215.04	1.6225	-.00085	.00157	23.482	-.00156	-.00022

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F 1370.4	5.3942	-.00113	-.00077	.00198	-.00027	.01032
Stddev	13.3	.0177	.00047	.00009	.00067	.00015	.00014
%RSD	.97331	.32906	41.799	12.077	33.856	57.005	1.3266
#1	1385.8	5.3996	-.00118	-.00067	.00244	-.00013	.01023
#2	1363.9	5.3744	-.00064	-.00080	.00121	-.00043	.01025
#3	1361.6	5.4086	-.00158	-.00085	.00230	-.00025	.01048

Sample Name: K184-04 Acquired: 11/30/2011 12:40:16 Type: Unk
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024050 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**5751.3**	**58371.**	**143710.**
Stddev	4.5	117.	436.
%RSD	.07809	.20013	.30315
#1	5746.5	58252.	144150.
#2	5752.2	58485.	143280.
#3	5755.3	58376.	143720.

Sample Name: K184-05 Acquired: 11/30/2011 12:43:27 Type: Unk
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024051 Type: Diln Factor:
Comment: DISSOLVED

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.04945**	**-.00075**	**.02468**	**.02779**	**.00006**	.51374	**-.00026**
Stddev	.00217	.00092	.00101	.00007	.00006	.00087	.00003
%RSD	4.3920	123.03	4.0969	.25580	114.73	.16960	12.191
#1	.04846	-.00180	.02456	.02780	.00012	.51380	-.00022
#2	.04794	-.00026	.02575	.02771	-.00001	.51285	-.00027
#3	.05194	-.00017	.02374	.02785	.00006	.51459	-.00028

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**850.90**	**.00050**	**.00052**	**.00199**	**9.8493**	**.00261**	**.07892**
Stddev	4.11	.00008	.00011	.00006	.0066	.00129	.00166
%RSD	.48248	16.293	20.788	2.8634	.06743	49.509	2.1071
#1	846.68	.00055	.00062	.00202	9.8456	.00363	.08069
#2	851.14	.00054	.00053	.00202	9.8453	.00116	.07739
#3	854.88	.00040	.00040	.00192	9.8569	.00305	.07870

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**267.54**	**.98652**	**-.00153**	**.00204**	**27.411**	**-.00036**	**-.00046**
Stddev	.60	.00309	.00024	.00015	.059	.00247	.00008
%RSD	.22459	.31344	15.596	7.4094	.21520	682.91	17.298
#1	266.92	.98410	-.00132	.00221	27.353	-.00058	-.00040
#2	267.58	.98546	-.00179	.00197	27.471	.00221	-.00043
#3	268.12	.99000	-.00149	.00194	27.410	-.00272	-.00055

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **1672.8**	**7.9830**	**-.00163**	**-.00107**	**.00483**	**.00248**	**.00589**
Stddev	10.9	.0157	.00045	.00108	.00067	.00015	.00020
%RSD	.65399	.19622	27.675	101.00	13.776	5.8521	3.3492
#1	1665.9	7.9815	-.00117	-.00194	.00529	.00244	.00600
#2	1685.5	7.9681	-.00164	.00014	.00514	.00236	.00566
#3	1667.2	7.9993	-.00207	-.00140	.00407	.00264	.00601

Sample Name: K184-05 Acquired: 11/30/2011 12:43:27 Type: Unk
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024051 Type: Diln Factor:
Comment: DISSOLVED

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	5412.2	57620.	136390.
Stddev	5.1	257.	282.
%RSD	.09490	.44533	.20657
#1	5418.1	57912.	136190.
#2	5408.5	57516.	136710.
#3	5410.1	57431.	136270.

Sample Name: CCV5 Acquired: 11/30/2011 12:49:48 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024053 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**101.29**	**1.4736**	**1.0483**	**1.9386**	**1.4187**	**2.4991**	**2.0099**
Stddev	.65	.0027	.0013	.0056	.0030	.0023	.0037
%RSD	.64012	.18625	.12035	.28809	.21154	.09313	.18277
#1	100.59	1.4705	1.0488	1.9441	1.4204	2.4964	2.0062
#2	101.44	1.4746	1.0468	1.9387	1.4203	2.5004	2.0100
#3	101.86	1.4757	1.0492	1.9329	1.4152	2.5005	2.0136
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**73.045**	**2.5150**	**.96208**	**F 2.7551**	**24.974**	**2.3438**	**.49876**
Stddev	.169	.0028	.00026	.0059	.035	.0040	.00192
%RSD	.23106	.10971	.02714	.21407	.14059	.17184	.38412
#1	73.019	2.5140	.96199	2.7512	24.936	2.3398	.50084
#2	72.890	2.5181	.96238	2.7619	25.005	2.3436	.49836
#3	73.225	2.5128	.96188	2.7522	24.981	2.3479	.49707
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value				2.5000			
Range				10.000%			

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**55.132**	**2.2902**	**2.4271**	**2.4336**	**59.839**	**1.0361**	**.52697**
Stddev	.130	.0057	.0002	.0029	.177	.0020	.00108
%RSD	.23655	.24994	.00709	.11722	.29653	.19060	.20562
#1	55.265	2.2954	2.4273	2.4350	59.919	1.0354	.52592
#2	55.005	2.2912	2.4270	2.4304	59.635	1.0383	.52808
#3	55.124	2.2840	2.4270	2.4356	59.962	1.0345	.52692
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV5 Acquired: 11/30/2011 12:49:48 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024053 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**64.595**	**.49222**	**2.3096**	**.47237**	**.47726**	**1.5147**	**2.5355**
Stddev	.145	.00171	.0049	.00159	.00117	.0015	.0008
%RSD	.22440	.34733	.21060	.33692	.24619	.10237	.02968
#1	64.758	.49409	2.3040	.47252	.47817	1.5132	2.5348
#2	64.480	.49073	2.3122	.47389	.47768	1.5163	2.5355
#3	64.548	.49183	2.3126	.47071	.47593	1.5147	2.5363
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7430.1	64468.	177310.
Stddev	12.9	130.	99.
%RSD	.17330	.20173	.05556
#1	7415.8	64343.	177200.
#2	7433.5	64602.	177340.
#3	7440.9	64458.	177390.

Sample Name: CCB5 Acquired: 11/30/2011 12:52:37 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024054 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.01453	.00095	-.00078	.00028	.00009	-.00045	.00001
Stddev	.00199	.00086	.00095	.00002	.00002	.00050	.00003
%RSD	13.667	90.997	121.51	8.5181	22.562	111.76	283.03
#1	.01361	.00111	-.00142	.00025	.00008	.00006	.00003
#2	.01680	.00171	.00031	.00029	.00011	-.00046	.00002
#3	.01316	.00002	-.00122	.00028	.00008	-.00094	-.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.01978	.00011	.00002	.00016	-.00109	.00025	-.00008
Stddev	.00061	.00007	.00007	.00003	.00350	.00039	.00010
%RSD	3.1002	62.566	425.05	21.859	320.46	156.37	118.23
#1	.01934	.00017	.00005	.00016	-.00414	-.00017	-.00004
#2	.02048	.00013	-.00007	.00019	-.00187	.00031	-.00020
#3	.01953	.00004	.00006	.00012	.00273	.00061	-.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00003	.00005	.00026	-.00015	.10156	-.00105	.00000
Stddev	.01361	.00032	.00000	.00011	.01959	.00100	.00004
%RSD	44138.	608.08	.61361	73.077	19.284	95.504	3821.1
#1	.01277	.00040	.00026	-.00020	.12408	-.00215	.00000
#2	-.01431	-.00022	.00026	-.00002	.08852	-.00083	.00004
#3	.00164	-.00002	.00026	-.00021	.09209	-.00017	-.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB5 Acquired: 11/30/2011 12:52:37 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024054 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **.06196**	**.00010**	**.00129**	**-.00054**	**-.00015**	**.00015**	**.00055**
Stddev	.00116	.00003	.00072	.00016	.00029	.00013	.00006
%RSD	1.8761	33.043	56.247	29.898	193.30	91.746	10.393
#1	.06309	.00008	.00209	-.00045	-.00035	.00010	.00061
#2	.06203	.00014	.00068	-.00045	-.00027	.00004	.00051
#3	.06077	.00008	.00109	-.00073	.00018	.00030	.00052
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.05090						
Low Limit	-.05090						

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8458.9**	**64801.**	**192020.**
Stddev	1.8	338.	286.
%RSD	.02082	.52153	.14889
#1	8457.2	65191.	191740.
#2	8460.7	64630.	192010.
#3	8458.9	64584.	192310.

Sample Name: CCV8 Acquired: 11/30/2011 13:54:52 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024075 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**102.77**	**1.4537**	**1.0783**	**1.9484**	**1.4773**	**2.5231**	**2.1222**
Stddev	.39	.0095	.0068	.0039	.0019	.0174	.0148
%RSD	.38265	.65667	.63339	.19809	.12679	.68816	.69786
#1	103.05	1.4429	1.0706	1.9460	1.4770	2.5036	2.1052
#2	102.32	1.4610	1.0809	1.9464	1.4756	2.5289	2.1289
#3	102.93	1.4573	1.0835	1.9529	1.4793	2.5369	2.1325
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**73.424**	**2.5758**	**.96247**	**F 2.7565**	**25.021**	**2.3756**	**.54142**
Stddev	.082	.0045	.00069	.0093	.078	.0010	.00056
%RSD	.11100	.17464	.07133	.33581	.31005	.04163	.10289
#1	73.353	2.5706	.96315	2.7486	24.934	2.3745	.54176
#2	73.513	2.5784	.96248	2.7667	25.047	2.3764	.54172
#3	73.407	2.5784	.96177	2.7541	25.083	2.3760	.54078
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value				2.5000			
Range				10.000%			

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**56.986**	**2.3786**	**2.4017**	**2.4394**	**58.814**	**1.0642**	**.53251**
Stddev	.097	.0118	.0011	.0016	.267	.0052	.00386
%RSD	.17035	.49694	.04658	.06664	.45404	.48869	.72484
#1	56.880	2.3732	2.4024	2.4412	58.589	1.0585	.52807
#2	57.070	2.3704	2.4024	2.4391	58.744	1.0687	.53441
#3	57.008	2.3921	2.4005	2.4379	59.109	1.0655	.53505
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV8 Acquired: 11/30/2011 13:54:52 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024075 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**63.726**	**.49396**	**2.4179**	F **.43391**	**.49283**	**1.5130**	**2.5480**
Stddev	.269	.00067	.0162	.00149	.00086	.0025	.0035
%RSD	.42238	.13553	.67170	.34335	.17530	.16428	.13859
#1	63.465	.49382	2.3991	.43543	.49211	1.5104	2.5439
#2	63.711	.49338	2.4266	.43245	.49379	1.5134	2.5497
#3	64.003	.49469	2.4279	.43384	.49259	1.5153	2.5504
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value				.50000			
Range				-10.000%			

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7240.2**	**57815.**	**165620.**
Stddev	58.8	366.	390.
%RSD	.81173	.63300	.23519
#1	7177.2	58189.	165520.
#2	7249.9	57798.	165290.
#3	7293.5	57457.	166050.

Sample Name: CCB8 Acquired: 11/30/2011 13:57:42 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024076 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F .05007	.00197	-.00121	.00065	F .00021	-.00078	.00012
Stddev	.00044	.00101	.00141	.00007	.00002	.00053	.00004
%RSD	.88080	51.393	116.62	10.176	9.8185	68.642	34.517
#1	.05001	.00300	-.00272	.00058	.00022	-.00023	.00017
#2	.04967	.00098	.00006	.00065	.00022	-.00080	.00009
#3	.05054	.00191	-.00096	.00071	.00019	-.00129	.00010
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit	.04840				.00020		
Low Limit	-.04840				-.00020		

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F .07199	.00038	.00005	.00104	.01059	.00060	-.00087
Stddev	.00456	.00011	.00018	.00013	.00344	.00050	.00102
%RSD	6.3334	28.762	330.88	12.067	32.501	82.882	117.09
#1	.06805	.00049	-.00015	.00107	.01083	.00031	.00005
#2	.07699	.00027	.00015	.00090	.01391	.00117	-.00070
#3	.07095	.00037	.00017	.00114	.00704	.00031	-.00196
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.03240						
Low Limit	-.03240						

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00675	.00028	.00039	-.00022	.03948	-.00197	.00007
Stddev	.01018	.00021	.00004	.00006	.01141	.00101	.00007
%RSD	150.80	76.013	11.221	27.642	28.897	51.222	105.99
#1	.01801	.00024	.00037	-.00015	.04334	-.00224	.00003
#2	-.00184	.00051	.00044	-.00024	.04845	-.00086	.00015
#3	.00409	.00009	.00036	-.00027	.02664	-.00283	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB8 Acquired: 11/30/2011 13:57:42 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024076 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F **-.08061**	**.00011**	**.00061**	**-.00029**	**.00037**	**.00003**	**.00395**
Stddev	.00828	.00011	.00020	.00031	.00014	.00026	.00005
%RSD	10.266	100.73	33.214	106.06	37.570	839.56	1.2277
#1	-.08922	.00003	.00058	-.00038	.00039	.00023	.00400
#2	-.07989	.00006	.00082	-.00055	.00051	-.00026	.00390
#3	-.07272	.00023	.00042	.00005	.00023	.00012	.00396
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.05090						
Low Limit	-.05090						

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**8272.7**	57784.	176890.
Stddev	98.0	295.	505.
%RSD	1.1842	.51066	.28530
#1	8166.8	57756.	176590.
#2	8291.3	58092.	177470.
#3	8360.0	57504.	176600.

Sample Name: K198-05A Acquired: 11/30/2011 14:00:43 Type: Unk
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024077 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.7949	2.6171	.61702	.61712	.53697	.60536	.59379	112.20
Stddev	.0180	.0277	.00852	.00140	.00058	.00277	.00644	.14
%RSD	.30992	1.0582	1.3809	.22675	.10730	.45692	1.0842	.12837
#1	5.7996	2.5950	.61265	.61583	.53633	.60362	.58811	112.09
#2	5.7750	2.6082	.61158	.61691	.53714	.60392	.59248	112.37
#3	5.8100	2.6482	.62684	.61861	.53745	.60855	.60078	112.16

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.61129	.52978	.62025	5.5572	.52564	.03177	60.916	.52429
Stddev	.00153	.00110	.00134	.0070	.00031	.00081	.184	.00272
%RSD	.25091	.20745	.21595	.12637	.05876	2.5531	.30248	.51913
#1	.61250	.52889	.62088	5.5626	.52587	.03086	60.721	.52205
#2	.60956	.52944	.61871	5.5598	.52576	.03205	60.939	.52351
#3	.61180	.53101	.62115	5.5492	.52529	.03241	61.087	.52732

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.64956	.47838	52.920	.59945	.55468	103.63	1.2740	.54619
Stddev	.00100	.00018	.178	.00616	.00301	.23	.0021	.00613
%RSD	.15402	.03669	.33700	1.0276	.54192	.21844	.16236	1.1216
#1	.64984	.47821	52.761	.59453	.55291	103.41	1.2759	.54084
#2	.64844	.47836	52.887	.59747	.55298	103.62	1.2744	.54485
#3	.65039	.47856	53.113	.60636	.55815	103.86	1.2718	.55287

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	.45017	.50936	.56853	.60628
Stddev	.00103	.00117	.00038	.00142
%RSD	.22895	.22971	.06769	.23407
#1	.44911	.51035	.56859	.60478
#2	.45116	.50807	.56888	.60760
#3	.45024	.50966	.56812	.60645

Sample Name: K198-05A Acquired: 11/30/2011 14:00:43 Type: Unk
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024077 Type: Diln Factor:
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**6968.8**	**55736.**	**157950.**
Stddev	81.3	171.	522.
%RSD	1.1668	.30593	.33020
#1	6888.9	55897.	157350.
#2	6966.2	55557.	158290.
#3	7051.4	55755.	158220.

Sample Name: K198-05 Acquired: 11/30/2011 14:03:25 Type: Unk
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024078 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.04103	.00191	.00332	.08218	.00008	.06490	-.00004	62.844
Stddev	.00073	.00097	.00189	.00010	.00006	.00019	.00003	.153
%RSD	1.7750	50.903	56.982	.11581	72.524	.29384	72.982	.24384
#1	.04178	.00277	.00165	.08222	.00011	.06503	-.00006	62.774
#2	.04033	.00211	.00293	.08224	.00011	.06468	-.00005	63.020
#3	.04098	.00086	.00538	.08207	.00001	.06498	-.00001	62.739

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.04082	-.00047	.00152	.01217	.00295	.02943	12.277	.00203
Stddev	.00025	.00011	.00011	.00380	.00062	.00055	.044	.00022
%RSD	.61980	23.797	7.0003	31.246	20.888	1.8834	.35897	10.841
#1	.04053	-.00059	.00149	.01542	.00366	.03006	12.251	.00222
#2	.04099	-.00037	.00144	.00799	.00260	.02904	12.328	.00208
#3	.04093	-.00046	.00164	.01310	.00259	.02918	12.253	.00179

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.14507	-.00018	1.9625	.00083	-.00005	48.125	.78125	.00068
Stddev	.00063	.00010	.0350	.00204	.00005	.040	.00165	.00015
%RSD	.43208	54.859	1.7862	245.33	105.53	.08225	.21180	21.678
#1	.14532	-.00027	1.9962	.00243	-.00006	48.169	.78285	.00051
#2	.14553	-.00007	1.9651	.00153	.00001	48.116	.78136	.00077
#3	.14435	-.00020	1.9262	-.00147	-.00010	48.091	.77954	.00077

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	-.00051	.00072	.00681	.04211
Stddev	.00047	.00088	.00021	.00024
%RSD	91.785	123.64	3.0191	.56192
#1	.00000	.00169	.00677	.04189
#2	-.00094	.00048	.00703	.04208
#3	-.00060	-.00003	.00662	.04236

Sample Name: K198-05 Acquired: 11/30/2011 14:03:25 Type: Unk
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024078 Type: Diln Factor:
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	7733.1	61074.	174260.
Stddev	49.2	348.	295.
%RSD	.63606	.56900	.16919
#1	7690.3	60805.	173990.
#2	7722.3	60949.	174580.
#3	7786.8	61466.	174220.

Sample Name: K198-05J Acquired: 11/30/2011 14:06:18 Type: Unk
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024079 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.02923	.00178	.00149	.01747	.00008	.00921	-.00005	13.407
Stddev	.00094	.00165	.00066	.00008	.00003	.00013	.00002	.039
%RSD	3.2144	92.517	44.522	.43504	42.438	1.3821	53.328	.28990
#1	.02820	.00139	.00207	.01738	.00007	.00908	-.00006	13.369
#2	.02945	.00359	.00077	.01753	.00005	.00920	-.00002	13.446
#3	.03004	.00036	.00162	.01749	.00012	.00934	-.00006	13.405

Elem	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.00893	-.00008	.00049	.00237	.00041	.00556	2.6232	.00042
Stddev	.00015	.00012	.00031	.00262	.00074	.00048	.0230	.00028
%RSD	1.6623	150.70	63.276	110.27	180.87	8.7133	.87502	68.046
#1	.00877	.00000	.00083	-.00063	.00108	.00611	2.6001	.00012
#2	.00906	-.00002	.00022	.00417	-.00039	.00518	2.6234	.00069
#3	.00896	-.00021	.00041	.00358	.00054	.00540	2.6460	.00044

Elem	Mo	Ni	K	Se	Ag	Na	Sr	Tl
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.02996	-.00019	.39283	-.00126	-.00006	9.9403	.16633	.00086
Stddev	.00025	.00013	.01893	.00047	.00001	.0257	.00042	.00042
%RSD	.82835	69.910	4.8178	37.177	17.921	.25871	.25243	49.195
#1	.02984	-.00032	.38165	-.00077	-.00005	9.9119	.16599	.00086
#2	.02979	-.00006	.38216	-.00170	-.00006	9.9469	.16680	.00043
#3	.03024	-.00018	.41468	-.00131	-.00007	9.9621	.16619	.00128

Elem	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L
Avg	-.00045	.00004	.00147	.00942
Stddev	.00007	.00112	.00008	.00010
%RSD	16.686	3084.3	5.1928	1.0915
#1	-.00049	.00131	.00139	.00947
#2	-.00036	-.00042	.00152	.00930
#3	-.00049	-.00078	.00151	.00949

Sample Name: K198-05J Acquired: 11/30/2011 14:06:18 Type: Unk
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024079 Type: Diln Factor:
Comment:

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8144.1	60962.	178770.
Stddev	51.3	311.	152.
%RSD	.62942	.51043	.08488
#1	8086.1	61099.	178650.
#2	8162.9	60606.	178730.
#3	8183.4	61182.	178940.

Sample Name: CCV9 Acquired: 11/30/2011 14:23:32 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024085 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**102.51**	**1.4788**	**1.0726**	**1.9608**	**1.4479**	**2.5291**	**2.1070**
Stddev	.83	.0116	.0057	.0129	.0053	.0191	.0239
%RSD	.81153	.78115	.53071	.65663	.36359	.75525	1.1348
#1	102.49	1.4673	1.0668	1.9748	1.4529	2.5110	2.0806
#2	103.35	1.4787	1.0729	1.9581	1.4484	2.5272	2.1130
#3	101.69	1.4904	1.0782	1.9495	1.4424	2.5490	2.1273
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**73.507**	**2.5811**	**.96155**	F **2.7692**	**25.046**	**2.3465**	**.50795**
Stddev	.305	.0103	.00104	.0181	.069	.0013	.00395
%RSD	.41480	.39882	.10799	.65396	.27374	.05378	.77701
#1	73.155	2.5708	.96129	2.7492	24.985	2.3472	.51247
#2	73.677	2.5811	.96067	2.7739	25.032	2.3450	.50621
#3	73.689	2.5914	.96270	2.7845	25.120	2.3472	.50517
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value				2.5000			
Range				10.000%			

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**56.814**	**2.3596**	**2.4017**	**2.4280**	**59.964**	**1.0653**	**.53836**
Stddev	.184	.0121	.0019	.0062	.067	.0085	.00550
%RSD	.32450	.51259	.07945	.25634	.11248	.79653	1.0212
#1	56.667	2.3683	2.4032	2.4209	60.012	1.0564	.53262
#2	57.020	2.3647	2.3995	2.4307	59.887	1.0662	.53888
#3	56.754	2.3458	2.4023	2.4324	59.993	1.0733	.54358
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV9 Acquired: 11/30/2011 14:23:32 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024085 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**65.036**	**.49591**	**2.4063**	**.45999**	**.48563**	**1.5136**	**2.5484**
Stddev	.073	.00121	.0246	.00148	.00211	.0037	.0045
%RSD	.11157	.24315	1.0230	.32163	.43363	.24312	.17545
#1	65.114	.49718	2.3800	.46169	.48804	1.5094	2.5440
#2	64.970	.49577	2.4102	.45927	.48470	1.5150	2.5481
#3	65.025	.49478	2.4287	.45901	.48415	1.5163	2.5529
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	**7319.8**	**58787.**	**167410.**
Stddev	53.5	103.	450.
%RSD	.73119	.17470	.26893
#1	7260.3	58870.	167890.
#2	7335.1	58818.	167340.
#3	7364.1	58672.	167000.

Sample Name: CCB9 Acquired: 11/30/2011 14:26:21 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024086 Type: Diln Factor:
Comment:

Elem	Al	Sb	As	Ba	Be	B	Cd
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.02385**	**.00208**	**-.00110**	**.00033**	**.00011**	**-.00147**	**-.00001**
Stddev	.00075	.00082	.00156	.00021	.00002	.00037	.00003
%RSD	3.1350	39.481	141.96	63.982	22.063	25.271	196.90
#1	.02337	.00198	.00066	.00018	.00012	-.00109	-.00002
#2	.02471	.00294	-.00231	.00057	.00012	-.00149	.00002
#3	.02346	.00131	-.00165	.00023	.00008	-.00183	-.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.01636**	**.00020**	**.00001**	**.00022**	**-.00226**	**-.00021**	**-.00011**
Stddev	.00080	.00002	.00010	.00021	.00476	.00050	.00136
%RSD	4.8880	10.990	1828.2	92.585	210.07	238.14	1255.2
#1	.01592	.00017	.00003	.00003	-.00276	-.00073	.00123
#2	.01588	.00020	-.00011	.00044	-.00675	-.00017	-.00148
#3	.01728	.00022	.00009	.00020	.00272	.00027	-.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg	Mn	Mo	Ni	K	Se	Ag
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	**.00491**	**.00019**	**.00044**	**-.00015**	**.02913**	**-.00040**	**-.00003**
Stddev	.00350	.00052	.00005	.00012	.01785	.00220	.00003
%RSD	71.248	273.72	12.404	79.748	61.284	549.66	114.85
#1	.00179	-.00041	.00044	-.00013	.00866	.00030	-.00005
#2	.00869	.00056	.00049	-.00004	.04149	.00137	.00001
#3	.00425	.00042	.00038	-.00027	.03723	-.00287	-.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB9 Acquired: 11/30/2011 14:26:21 Type: QC
Method: 11K6010(v33) Mode: CONC Corr. Factor: 1.000000
User: admin Data File: ID8K024086 Type: Diln Factor:
Comment:

Elem	Na	Sr	Tl	Sn	Ti	V	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F -.14020	.00009	.00127	-.00048	.00005	-.00010	.00039
Stddev	.00191	.00004	.00015	.00060	.00094	.00014	.00009
%RSD	1.3636	40.250	11.959	125.44	1923.3	143.03	24.306
#1	-.14218	.00010	.00122	-.00057	.00051	.00003	.00049
#2	-.13836	.00012	.00115	.00016	-.00103	-.00008	.00030
#3	-.14007	.00005	.00144	-.00102	.00067	-.00025	.00037
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.05090						
Low Limit	-.05090						

Int. Std.	Sc2273_A	Sc3613_R	Sc3645_A
Units	Cts/S	Cts/S	Cts/S
Avg	8280.8	58716.	177890.
Stddev	82.6	455.	489.
%RSD	.99702	.77469	.27498
#1	8195.8	58229.	177420.
#2	8285.8	58790.	178390.
#3	8360.7	59130.	177850.

EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP METALS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

All samples pH <2

Book #: EIP-104
Batch: iPK041W
Matrix: Water
Digestor ID: E

SOP #	Rev. #
☐ EMAX-3005	4
☑ EMAX-3010	5
☐ EMAX-3050	4
☐ EMAX-200.7	2
☐ EMAX-	

Start	Temp	End	Temp
	95 °C		95 °C

Standards	ID	Amount Added (ml)
LCS-1	SMIA-013-04-13	0.25
LCS-2	SMIA-013-03-13	0.25
LCS-3	SMIA-013-04-14	0.5
MS	Same spike vol and sol as LCS1, LCS2, LCS3	
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SWIA-04-407	1.5+1.5
HCl	SWIA-04-408	2.5+2.5
H_2O_2	N/A	
HNO3(1:1)	N/A	

Digestate Location	ICP
Extract Location	

☑ Reagent Water ID: SMSA-02-076
☑ Thermometer ID: 161993366
☑ Pipette ID: ICP-07
☑ Pipette ID: 142780035
☐ Pipette ID:
☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask
☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask

Prepared By: GG
Standard Added By: GG Witnessed By: NT
Extract Rcvd By: TH Checked By: TH

FileID: IPK041W

EMAX LABORATORIES, INC.

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
11IPK041W01	IPK041WB	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W02	IPK041WL	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W03	IPK041WC	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W04	K184-01	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W05	K184-02	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W06	K184-03	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W07	K184-04	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W08	K184-05	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W09	K174-01	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W10	K174-07	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W11	K188-03	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W12	K205-01	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W13	K205-01M	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W14	K205-01S	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W15	K205-02	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W16	K205-03	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W17	K205-04	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W18	K205-05	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W19	K187-01	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W20	K207-01	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W21	K207-02	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W22	K198-03	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W23	K198-04	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W24	K198-05	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W25	K198-05M	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W26	K198-05S	50	ml	11/28/11 11:54	50	50	50	1	

11/28/11 GG

Vd=digestate volume PrepFctr=)ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 11/28/11 11:54 Prepared By: GG

☑ Digestion Ended @ 11/28/11 16:15 Checked By: TH

Comments: Date 11/28/11

7110

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

WET CHEMICAL ANALYSES

SDG#: 11K184

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K184

METHOD 300.0
ANIONS BY IC

A total of five (5) water samples were received on 11/18/11 for Anions (Chloride, Nitrate, Nitrite and Sulfate) by IC analysis, Method 300.0 in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. Results were compliant to project requirement.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for ICK071WL/C were all within QC limits.
Percent recoveries for ICK077WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. Samples K184-01, -02, -03, -04 and -05 for Nitrite were analyzed with dilutions due to interference from high chloride concentrations. Sample K185-05 for Nitrate was analyzed at 10x due to sample matrix.

SAMPLE RESULTS

METHOD 300.0
CHLORIDE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K184

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK077WB	ND	1	NA	0.200	0.100	11/21/1120:20	NA	AK31-36	AK31-34	ICK077W	NA	NA
LCS1W	ICK077WL	1.94	1	NA	0.200	0.100	11/21/1120:36	NA	AK31-37	AK31-34	ICK077W	NA	NA
LCD1W	ICK077WC	1.95	1	NA	0.200	0.100	11/21/1120:52	NA	AK31-38	AK31-34	ICK077W	NA	NA
MW-70-PMW13A-153	K184-01	2230	200	NA	40.0	20.0	11/21/1123:34	NA	AK31-48	AK31-46	ICK077W	11/18/1109:45	11/18/11
MW-70-PMW13B-154	K184-02	4390	400	NA	80.0	40.0	11/21/1123:50	NA	AK31-49	AK31-46	ICK077W	11/18/1110:55	11/18/11
MW-70-PMW14A-155	K184-03	1900	200	NA	40.0	20.0	11/22/1100:22	NA	AK31-51	AK31-46	ICK077W	11/18/1112:09	11/18/11
MW-70-PMW14B-156	K184-04	3670	400	NA	80.0	40.0	11/22/1100:54	NA	AK31-53	AK31-46	ICK077W	11/18/1114:52	11/18/11
IW-70-SSB109-157	K184-05	4740	500	NA	100	50.0	11/22/1101:11	NA	AK31-54	AK31-46	ICK077W	11/18/1116:13	11/18/11

METHOD 300.0
NITRATE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K184

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK071WB	ND	1	NA	0.200	0.0500	11/19/1107:11	NA	AK27-69	AK27-67	ICK071W	NA	NA
LCS1W	ICK071WL	1.02	1	NA	0.200	0.0500	11/19/1107:27	NA	AK27-70	AK27-67	ICK071W	NA	NA
LCD1W	ICK071WC	1.02	1	NA	0.200	0.0500	11/19/1107:43	NA	AK27-71	AK27-67	ICK071W	NA	NA
MW-70-PMW13A-153	K184-01	ND	1	NA	0.200	0.0500	11/19/1107:59	NA	AK27-72	AK27-67	ICK071W	11/18/1109:45	11/18/11
MW-70-PMW13B-154	K184-02	ND	1	NA	0.200	0.0500	11/19/1108:15	NA	AK27-73	AK27-67	ICK071W	11/18/1110:55	11/18/11
MW-70-PMW14A-155	K184-03	ND	1	NA	0.200	0.0500	11/19/1108:31	NA	AK27-74	AK27-67	ICK071W	11/18/1112:09	11/18/11
MW-70-PMW14B-156	K184-04	ND	1	NA	0.200	0.0500	11/19/1108:48	NA	AK27-75	AK27-67	ICK071W	11/18/1114:52	11/18/11
IW-70-SS8109-157	K184-05	ND	10	NA	2.00	0.500	11/19/1109:04	NA	AK27-76	AK27-67	ICK071W	11/18/1116:13	11/18/11

METHOD 300.0
NITRITE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K184

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK071WB	ND	1	NA	0.200	0.0500	11/19/1107:11	NA	AK27-69	AK27-67	ICK071W	NA	NA
LCS1W	ICK071WL	2.11	1	NA	0.200	0.0500	11/19/1107:27	NA	AK27-70	AK27-67	ICK071W	NA	NA
LCD1W	ICK071WC	2.10	1	NA	0.200	0.0500	11/19/1107:43	NA	AK27-71	AK27-67	ICK071W	NA	NA
IW-70-SSB109-157	K184-05	ND	10	NA	2.00	0.500	11/19/1109:04	NA	AK27-76	AK27-67	ICK071W	11/18/1116:13	11/18/11
MW-70-PMW13A-153	K184-01	ND	5	NA	1.00	0.250	11/19/1110:25	NA	AK27-81	AK27-79	ICK071W	11/18/1109:45	11/18/11
MW-70-PMW13B-154	K184-02	ND	10	NA	2.00	0.500	11/19/1110:41	NA	AK27-82	AK27-79	ICK071W	11/18/1110:55	11/18/11
MW-70-PMW14A-155	K184-03	ND	5	NA	1.00	0.250	11/19/1110:57	NA	AK27-83	AK27-79	ICK071W	11/18/1112:09	11/18/11
MW-70-PMW14B-156	K184-04	ND	10	NA	2.00	0.500	11/19/1111:13	NA	AK27-84	AK27-79	ICK071W	11/18/1114:52	11/18/11

METHOD 300.0
SULFATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K184

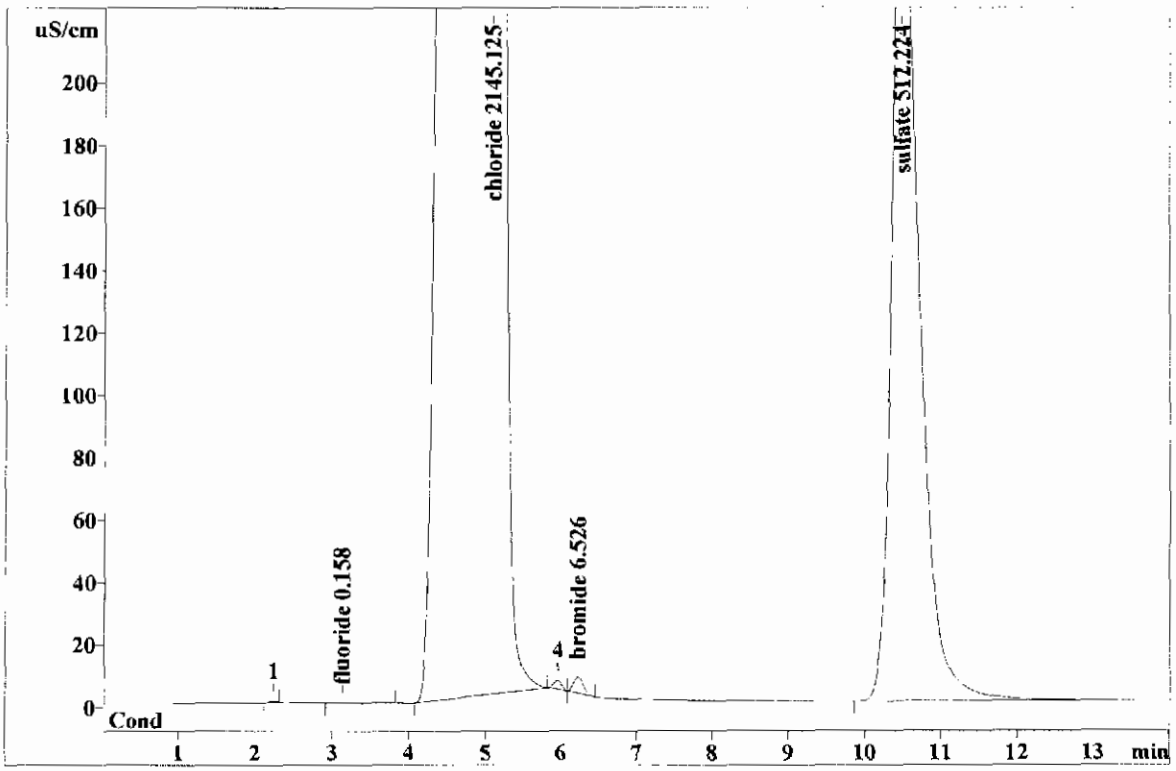
Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK071WB	ND	1	NA	0.500	0.250	11/19/1107:11	NA	AK27-69	AK27-67	ICK071W	NA	NA
LCS1W	ICK071WL	5.20	1	NA	0.500	0.250	11/19/1107:27	NA	AK27-70	AK27-67	ICK071W	NA	NA
LCD1W	ICK071WC	5.20	1	NA	0.500	0.250	11/19/1107:43	NA	AK27-71	AK27-67	ICK071W	NA	NA
1W-70-SSB109-157	K184-05	6.09	10	NA	5.00	2.50	11/19/1109:04	NA	AK27-76	AK27-67	ICK071W	11/18/1116:13	11/18/11
MBLK2W	ICK077WB	ND	1	NA	0.500	0.250	11/21/1120:20	NA	AK31-36	AK31-34	ICK077W	NA	NA
LCS2W	ICK077WL	4.93	1	NA	0.500	0.250	11/21/1120:36	NA	AK31-37	AK31-34	ICK077W	NA	NA
LCD2W	ICK077WC	4.94	1	NA	0.500	0.250	11/21/1120:52	NA	AK31-38	AK31-34	ICK077W	NA	NA
MW-70-PMW13A-153	K184-01	484	200	NA	100	50.0	11/21/1123:34	NA	AK31-48	AK31-46	ICK077W	11/18/1109:45	11/18/11
MW-70-PMW13B-154	K184-02	781	400	NA	200	100	11/21/1123:50	NA	AK31-49	AK31-46	ICK077W	11/18/1110:55	11/18/11
MW-70-PMW14A-155	K184-03	338	20	NA	10.0	5.00	11/22/1100:06	NA	AK31-50	AK31-46	ICK077W	11/18/1112:09	11/18/11
MW-70-PMW14B-156	K184-04	677	50	NA	25.0	12.5	11/22/1100:38	NA	AK31-52	AK31-46	ICK077W	11/18/1114:52	11/18/11

Report date: 11/21/2011 2:34:56 PM
Printed by: CHERRY DAM

Ident: AK27-72 K184-01
Analysis from: 11/19/2011 7:59:32 AM
File: vb190759.chw Last save: 11/19/2011 8:13:29 AM
Modified!
Method: ICD0-I30.mtw Last save: 11/18/2011 4:16:08 PM
Run operator: Jadelyn Chun
Analysis number: 71875

SAMPLE:
:
Vial number: 72
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

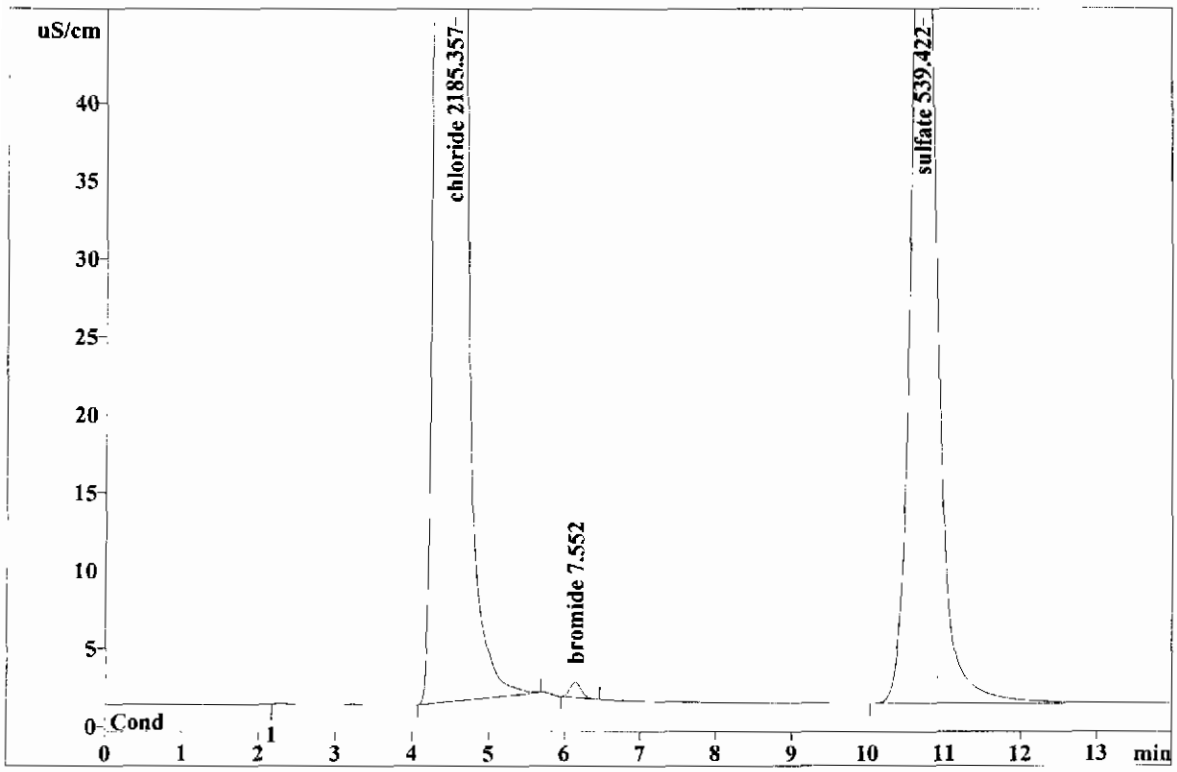
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.22	0.43	2.667	0.000	
2	3.12	0.20	3.544	0.158	fluoride
3	5.09	888.83	38466.052	2145.125	chloride
4	5.96	2.77	20.150	0.000	
5	6.22	5.14	45.955	6.526	bromide
6	10.48	270.69	6755.743	512.224	sulfate
6	14.00	1168.05	45294.110	2664.032	Na_2 ✓

This report has been created by IC Net
METROHM LTD

Report date: 11/21/2011 2:45:09 PM
Printed by: CHERRY DAM

Ident: AK27-81 K184-01 DF=5
Analysis from: 11/19/2011 10:25:00 AM
File: vb191025.chw Last save: 11/21/2011 2:30:59 PM
Modified!
Method: ICD0-I30.mtw Last save: 11/18/2011 4:16:08 PM
Run operator: Jadelyn Chun
Analysis number: 71884

SAMPLE:
:
Vial number: 81
Volume: 1.0 µL
Dilution: 5.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	-0.00	0.074	0.000	
2	4.54	495.83	7836.261	2185.357	chloride
3	6.14	1.00	10.342	7.552	bromide
4	10.71	67.37	1421.549	539.422	sulfate
4	14.00	564.20	9268.226	2732.330	

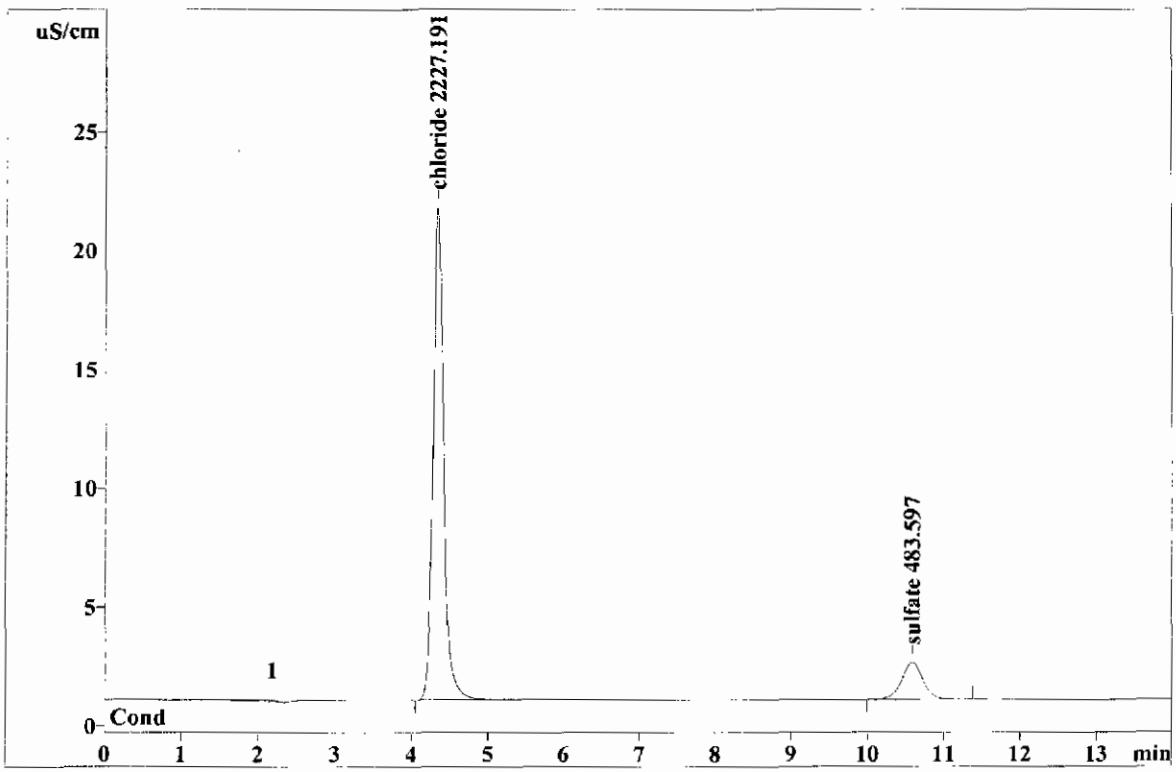
This report has been created by IC Net
METROHM LTD

Report date: 11/21/2011 11:48:00 PM
Printed by: CHERRY DAM

Ident: AK31-48 K184-01 DF=200
Analysis from: 11/21/2011 11:34:03 PM
File: VB212334.CHW Last save: 11/21/2011 11:48:00 PM

Method: ICD0-I30.mtw Last save: 11/21/2011 11:32:33 AM
Run operator: CHERRY DAM
Analysis number: 71984

SAMPLE:
:
Vial number: 48
Volume: 1.0 µL
Dilution: 200.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.06	1.450	0.000	
2	4.34	20.70	198.143	2227.191	chloride
3	10.58	1.55	30.198	483.597	sulfate
3	14.00	22.32	229.791	2710.788	

This report has been created by IC Net
METROHM LTD

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK077WB	ICK077WL	ICK077WC		
LAB FILE ID:	AK31-36	AK31-37	AK31-38		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/21/1120:20	11/21/1120:36	11/21/1120:52	DATE RECEIVED:	NA
PREP. BATCH:	ICK077W	ICK077W	ICK077W		
CALIB. REF:	AK31-34	AK31-34	AK31-34		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	ND	2.00	1.94	97	2.00	1.95	98	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK071WB	ICK071WL	ICK071WC		
LAB FILE ID:	AK27-69	AK27-70	AK27-71		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/19/1107:11	11/19/1107:27	11/19/1107:43	DATE RECEIVED:	NA
PREP. BATCH:	ICK071W	ICK071W	ICK071W		
CALIB. REF:	AK27-67	AK27-67	AK27-67		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrate-N	ND	1.00	1.02	102	1.00	1.02	102	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK071WB	ICK071WL	ICK071WC		
LAB FILE ID:	AK27-69	AK27-70	AK27-71		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/19/1107:11	11/19/1107:27	11/19/1107:43	DATE RECEIVED:	NA
PREP. BATCH:	ICK071W	ICK071W	ICK071W		
CALIB. REF:	AK27-67	AK27-67	AK27-67		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	2.00	2.11	105	2.00	2.10	105	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLTENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK071WB	ICK071WL	ICK071WC		
LAB FILE ID:	AK27-69	AK27-70	AK27-71		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/19/1107:11	11/19/1107:27	11/19/1107:43	DATE RECEIVED:	NA
PREP. BATCH:	ICK071W	ICK071W	ICK071W		
CALIB. REF:	AK27-67	AK27-67	AK27-67		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	5.20	104	5.00	5.20	104	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	ICK077WB	ICK077WL	ICK077WC		
LAB FILE ID:	AK31-36	AK31-37	AK31-38		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/21/1120:20	11/21/1120:36	11/21/1120:52	DATE RECEIVED:	NA
PREP. BATCH:	ICK077W	ICK077W	ICK077W		
CALIB. REF:	AK31-34	AK31-34	AK31-34		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	4.93	99	5.00	4.94	99	0	90-110	20

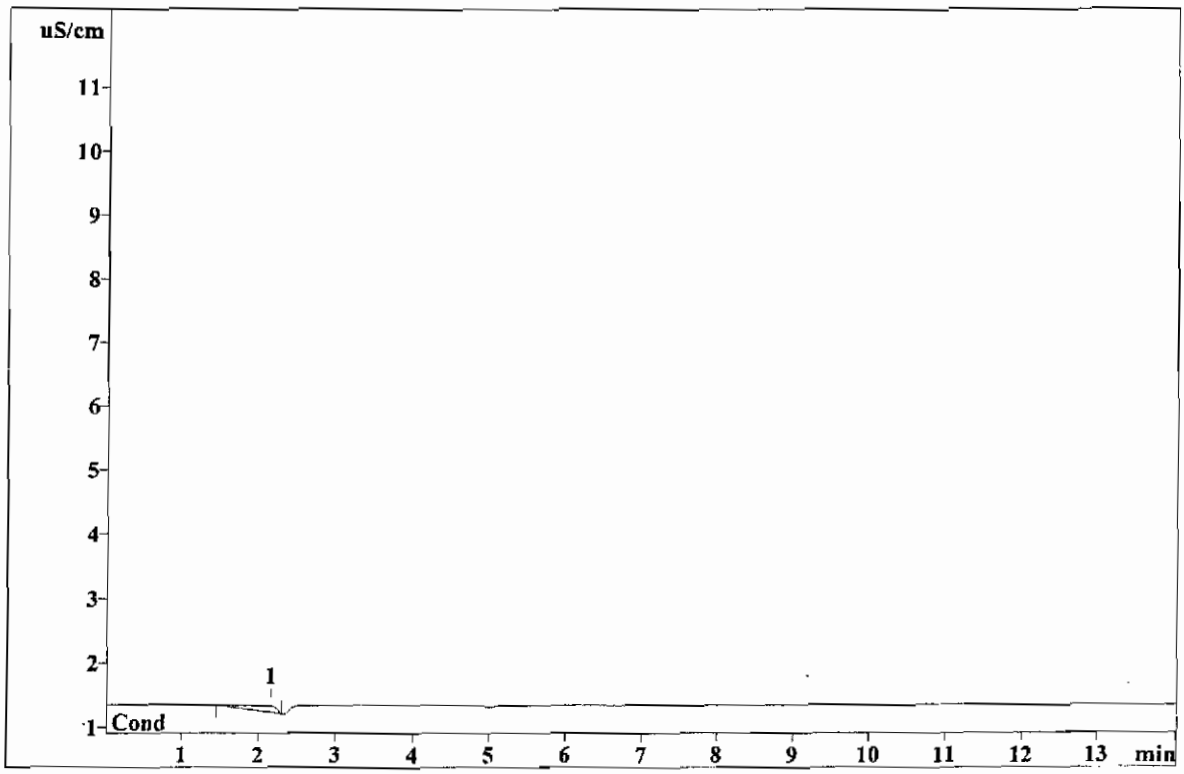
QC DATA

Report date: 11/21/2011 12:09:47 PM
Printed by: CHERRY DAM

Ident: AK27-69 ICK071WB
Analysis from: 11/19/2011 7:11:04 AM
File: vb190711.chw Last save: 11/19/2011 7:25:01 AM

Method: ICD0-I30.mtw Last save: 11/18/2011 4:16:08 PM
Run operator: Jadelyn Chun
Analysis number: 71872

SAMPLE:
:
Vial number: 69
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.16	0.10	2.722	0.000	

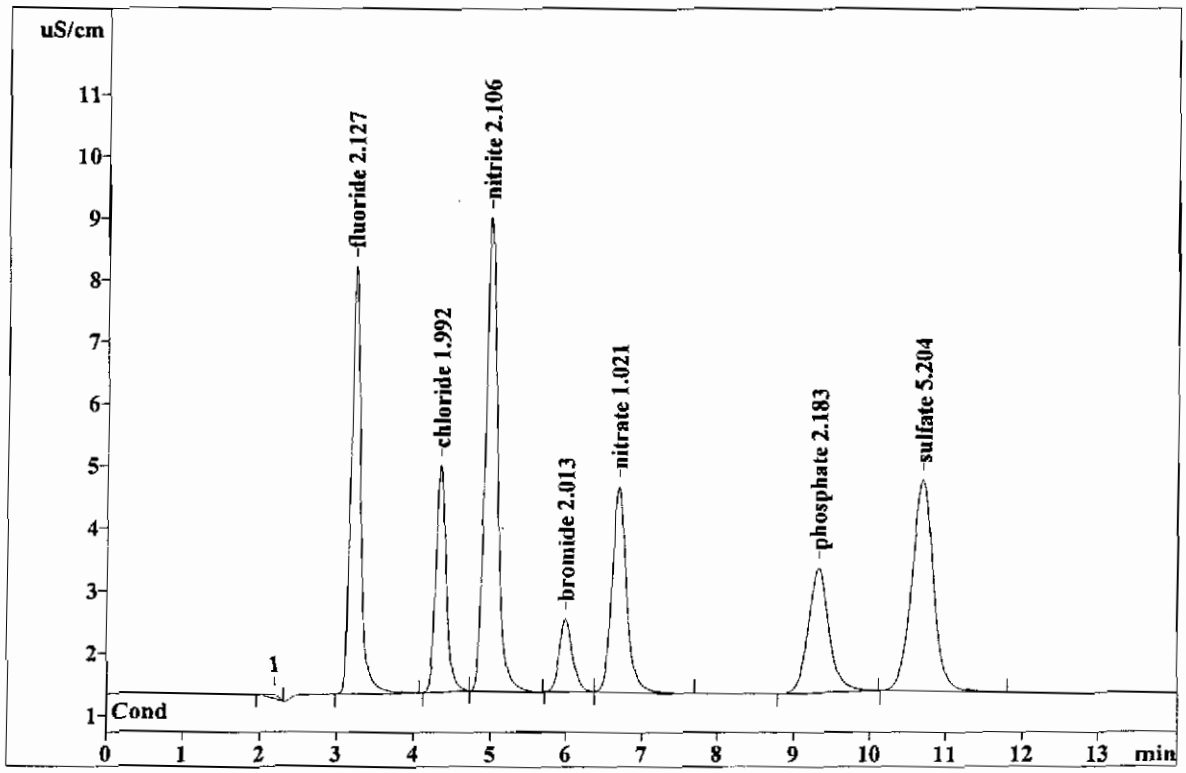
This report has been created by IC Net
METROHM LTD

Report date: 11/19/2011 7:41:10 AM
Printed by: Jadelyn Chun

Ident: AK27-70 ICK071WL
Analysis from: 11/19/2011 7:27:13 AM
File: VB190727.CHW Last save: 11/19/2011 7:41:10 AM

Method: ICD0-I30.mtw Last save: 11/18/2011 4:16:08 PM
Run operator: Jadelyn Chun
Analysis number: 71873

SAMPLE:
:
Vial number: 70
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.18	0.06	0.769	0.000	
2	3.22	6.89	62.509	2.127	fluoride
3	4.34	3.63	34.167	1.992	chloride
4	4.98	7.63	85.368	2.106	nitrite
5	5.99	1.16	13.908	2.013	bromide
6	6.69	3.29	44.100	1.021	nitrate
7	9.32	2.00	38.075	2.183	phosphate
8	10.69	3.38	66.958	5.204	sulfate
8	14.00	28.04	345.854	16.646	

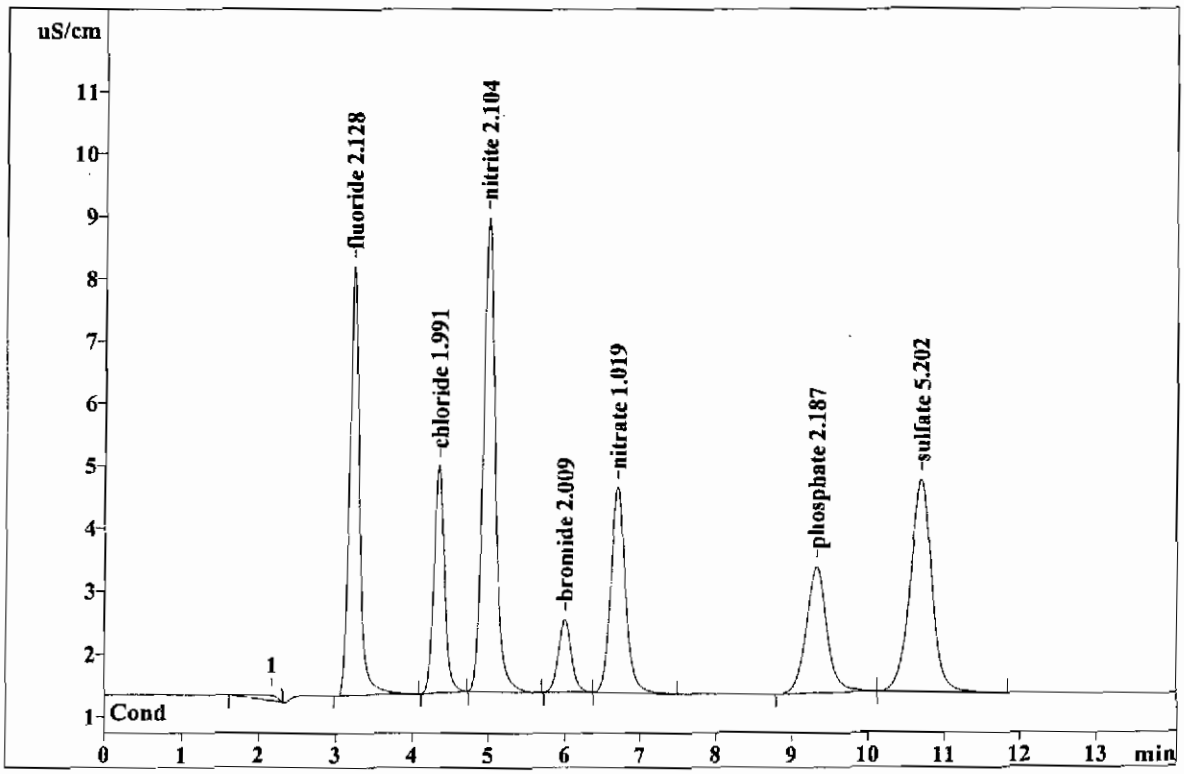
This report has been created by IC Net
METROHM LTD

Report date: 11/19/2011 7:57:20 AM
Printed by: Jadelyn Chun

Ident: AK27-71 ICK071WC
Analysis from: 11/19/2011 7:43:23 AM
File: VB190743.CHW Last save: 11/19/2011 7:57:20 AM

Method: ICD0-I30.mtw Last save: 11/18/2011 4:16:08 PM
Run operator: Jadelyn Chun
Analysis number: 71874

SAMPLE:
:
Vial number: 71
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.08	1.907	0.000	
2	3.23	6.85	62.535	2.128	fluoride
3	4.34	3.61	34.143	1.991	chloride
4	4.99	7.58	85.299	2.104	nitrite
5	6.00	1.15	13.886	2.009	bromide
6	6.69	3.27	44.015	1.019	nitrate
7	9.32	2.00	38.144	2.187	phosphate
8	10.69	3.38	66.926	5.202	sulfate
8	14.00	27.94	346.855	16.640	

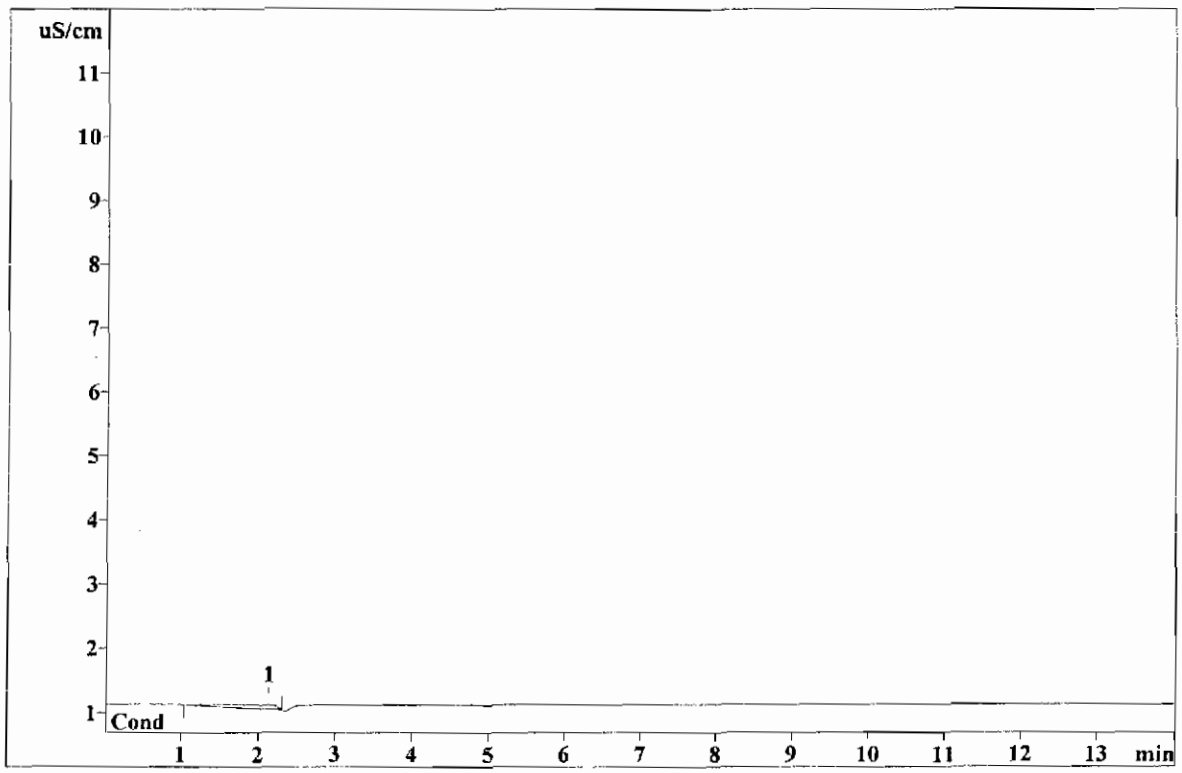
This report has been created by IC Net
METROHM LTD

Report date: 11/22/2011 9:43:40 AM
Printed by: Jadelyn Chun

Ident: AK31-36 ICK077WB
Analysis from: 11/21/2011 8:20:06 PM
File: vb212020.chw Last save: 11/21/2011 8:34:03 PM

Method: ICD0-I30.mtw Last save: 11/21/2011 11:32:33 AM
Run operator: CHERRY DAM
Analysis number: 71972

SAMPLE:
:
Vial number: 36
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.15	0.06	2.837	0.000	

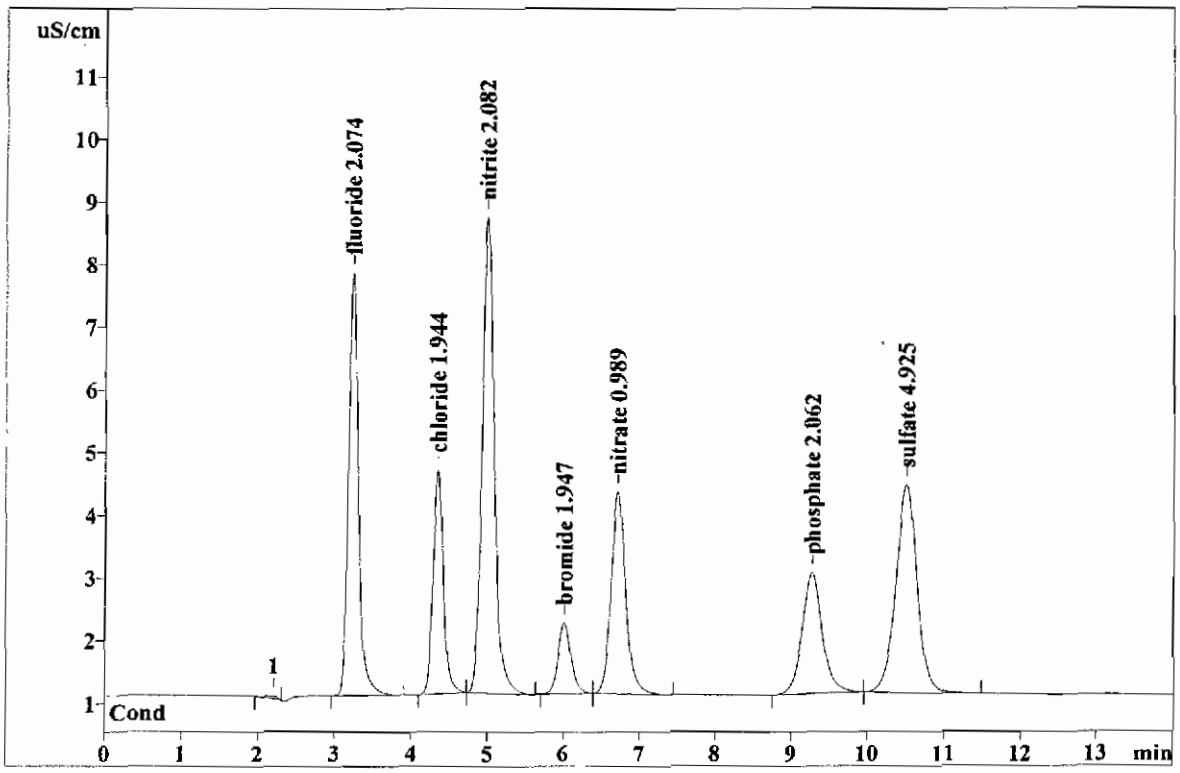
This report has been created by IC Net
METROHM LTD

Report date: 11/21/2011 8:50:12 PM
Printed by: CHERRY DAM

Ident: AK31-37 ICK077WL
Analysis from: 11/21/2011 8:36:15 PM
File: VB212036.CHW Last save: 11/21/2011 8:50:12 PM

Method: ICD0-I30.mtw Last save: 11/21/2011 11:32:33 AM
Run operator: CHERRY DAM
Analysis number: 71973

SAMPLE:
:
Vial number: 37
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.20	0.04	0.490	0.000	
2	3.23	6.75	60.909	2.074	fluoride
3	4.34	3.56	33.316	1.944	chloride
4	4.99	7.59	84.393	2.082	nitrite
5	6.01	1.12	13.443	1.947	bromide
6	6.71	3.22	42.658	0.989	nitrate
7	9.27	1.92	35.852	2.062	phosphate
8	10.51	3.31	63.272	4.925	sulfate
8	14.00	27.50	334.333	16.023	

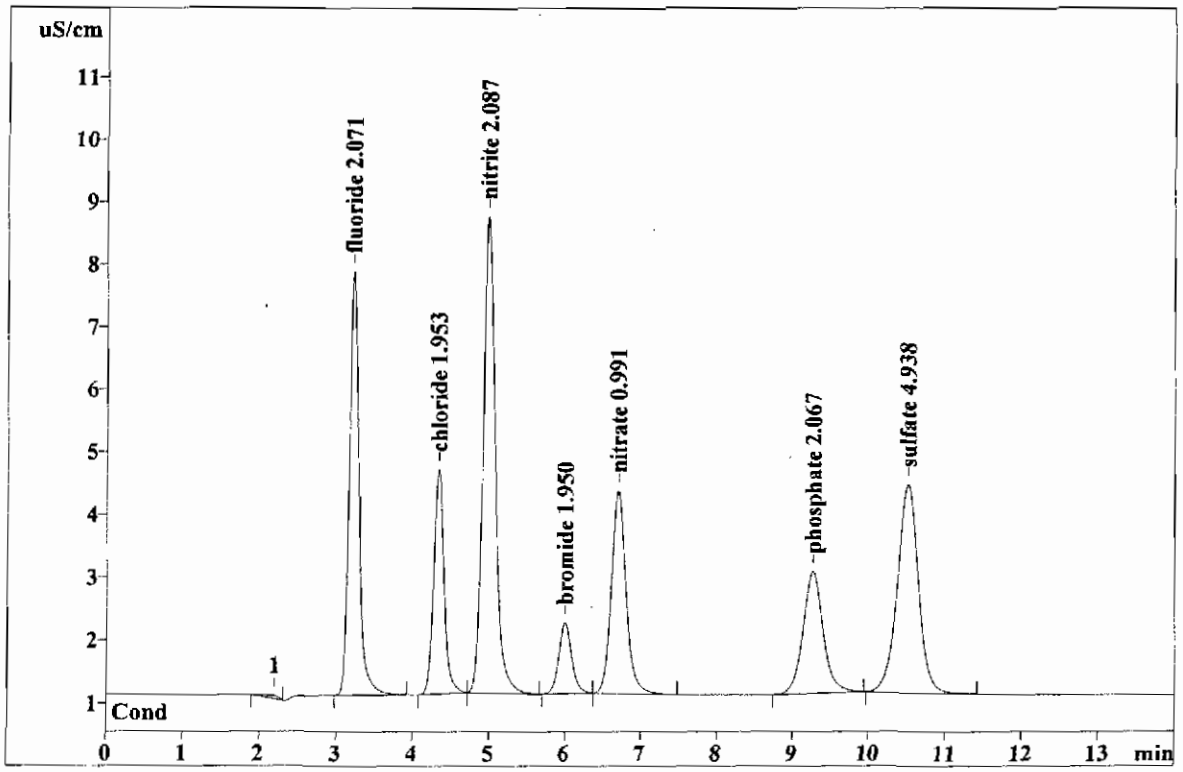
This report has been created by IC Net
METROHM LTD

Report date: 11/21/2011 9:06:23 PM
Printed by: CHERRY DAM

Ident: AK31-38 ICK077WC
Analysis from: 11/21/2011 8:52:25 PM
File: VB212052.CHW Last save: 11/21/2011 9:06:23 PM

Method: ICD0-I30.mtw Last save: 11/21/2011 11:32:33 AM
Run operator: CHERRY DAM
Analysis number: 71974

SAMPLE:
:
Vial number: 38
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.19	0.05	0.687	0.000	
2	3.21	6.77	60.816	2.071	fluoride
3	4.33	3.57	33.462	1.953	chloride
4	4.98	7.60	84.627	2.087	nitrite
5	6.00	1.13	13.464	1.950	bromide
6	6.70	3.23	42.747	0.991	nitrate
7	9.27	1.93	35.950	2.067	phosphate
8	10.51	3.32	63.448	4.938	sulfate
8	14.00	27.59	335.200	16.057	

This report has been created by IC Net
METROHM LTD

INITIAL CALIBRATIONS

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	nitrite	fluoride	chloride	bromide	nitrate	phosphate	sulfate	RawNetID	DF
AI39-01	IB	IFCBNPS	0	0	0	0	0	0	0	v9301829	1
AI39-02	S0	IFCBNPS	0	0	0	0	0	0	0	v9301845	1
AI39-03	S1	IFCBNPS	0.0402732	0.0794447	0.137238	0.0962101	0.0900188	0.132659	0.181386	v9301901	1
AI39-04	S2	IFCBNPS	0.0827484	0.120657	0.172987	0.138434	0.127411	0.166211	0.219384	v9301917	1
AI39-05	S3	IFCBNPS	0.175829	0.207372	0.255839	0.223376	0.213499	0.241921	0.298411	v9301934	1
AI39-06	S4	IFCBNPS	0.468611	0.487287	0.510168	0.483675	0.481038	0.46682	0.535669	v9301950	1
AI39-07	S5	IFCBNPS	0.987232	0.975831	0.969747	0.947628	0.958434	0.904972	0.974277	v9302006	1
AI39-08	S6	IFCBNPS	2.03579	2.00618	1.92527	1.92275	1.95393	1.87863	1.87805	v9302022	1
AI39-09	S7	IFCBNPS	5.13141	5.00267	4.89791	5.03793	5.02567	5.05879	4.80122	v9302038	1
AI39-10	S8	IFCBNPS	9.9281	9.57748	9.9004	10.4648	10.1254	10.4079	9.8176	v9302054	1
AI39-11	S9	IFCBNPS	18.5849	17.9543	20.0804	21.615	20.3941	21.1232	20.144	v9302111	1
AI39-12	ICV	IFCBNPS	98.6%	100.1%	97.7%	94.1%	98.6%	92.5%	99.9%	v9302127	1
AI39-13	ICB	IFCBNPS	0	0	0	0	0	0	0	v9302143	1

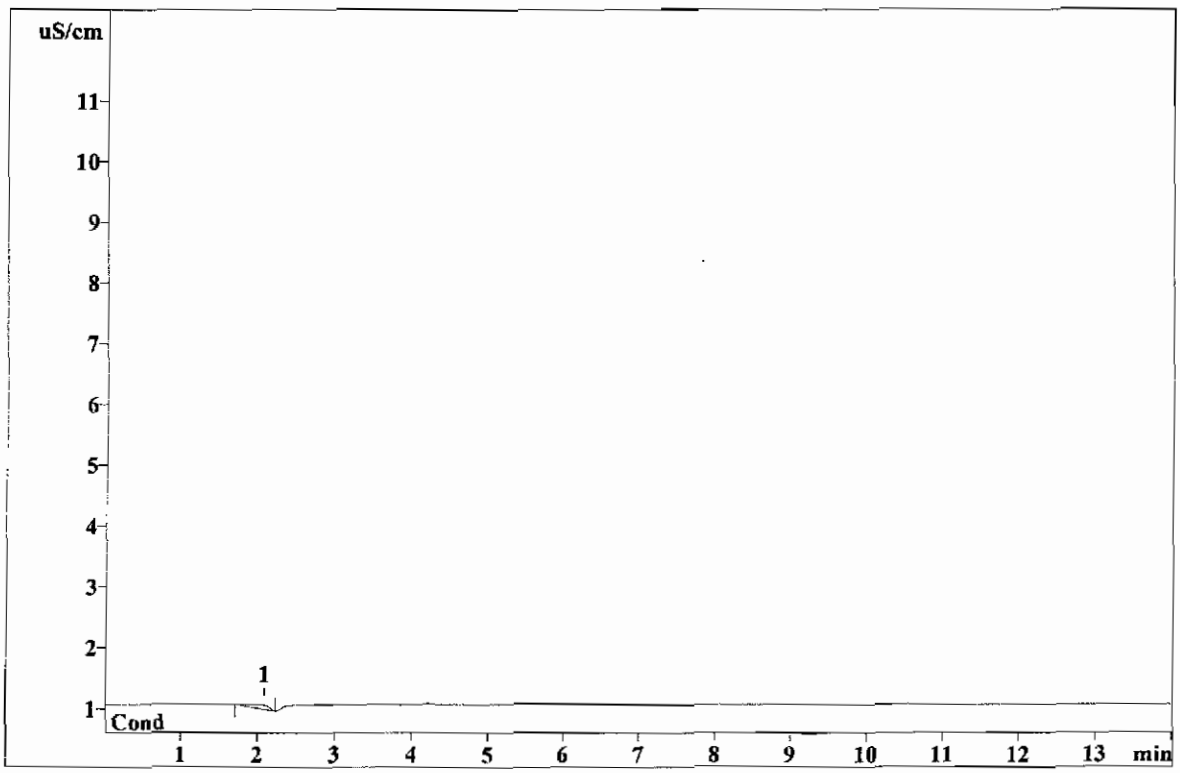
AJ
03/11

Report date: 10/3/2011 10:48:38 AM
Printed by: Jadelyn Chun

Ident: AI39-02 S0
Analysis from: 9/30/2011 6:45:36 PM
File: v9301845.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69483

SAMPLE:
:
Vial number: 2
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.07	1.184	0.000	

This report has been created by IC Net
METROHM LTD

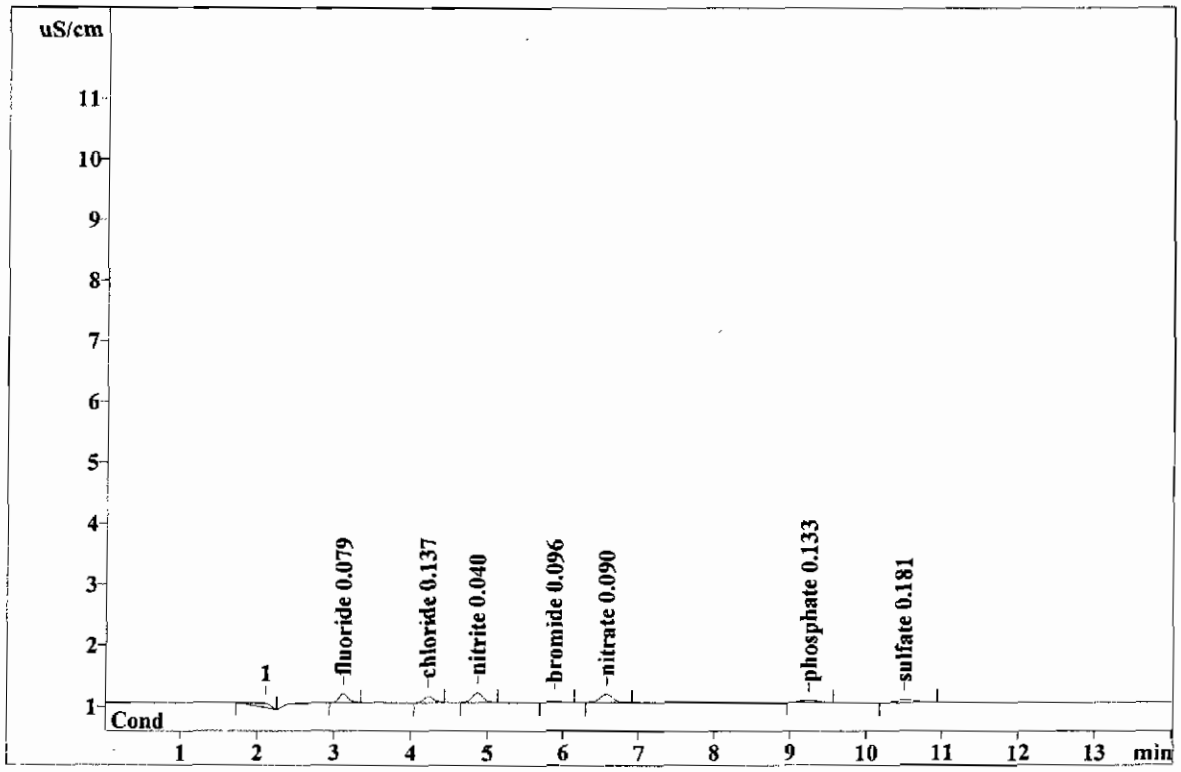
AA
10/03/11

Report date: 10/3/2011 10:48:46 AM
Printed by: Jadelyn Chun

Ident: AI39-03 S1
Analysis from: 9/30/2011 7:01:46 PM
File: v9301901.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69484

SAMPLE:
:
Vial number: 3
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.07	1.147	0.000	
2	3.12	0.14	1.182 ✓	0.079	fluoride
3	4.23	0.10	0.908 ✓	0.137	chloride
4	4.87	0.16	1.561 ✓	0.040	nitrite
5	5.87	0.03	0.301 ✓	0.096	bromide
6	6.57	0.14	1.722 ✓	0.090 ✓	nitrate
7	9.23	0.03	0.520 ✓	0.133 ✓	phosphate
8	10.50	0.04	0.692 ✓	0.181 ✓	sulfate
8	14.00	0.71	8.034	0.757	

This report has been created by IC Net
METROHM LTD

AS 10/03/11

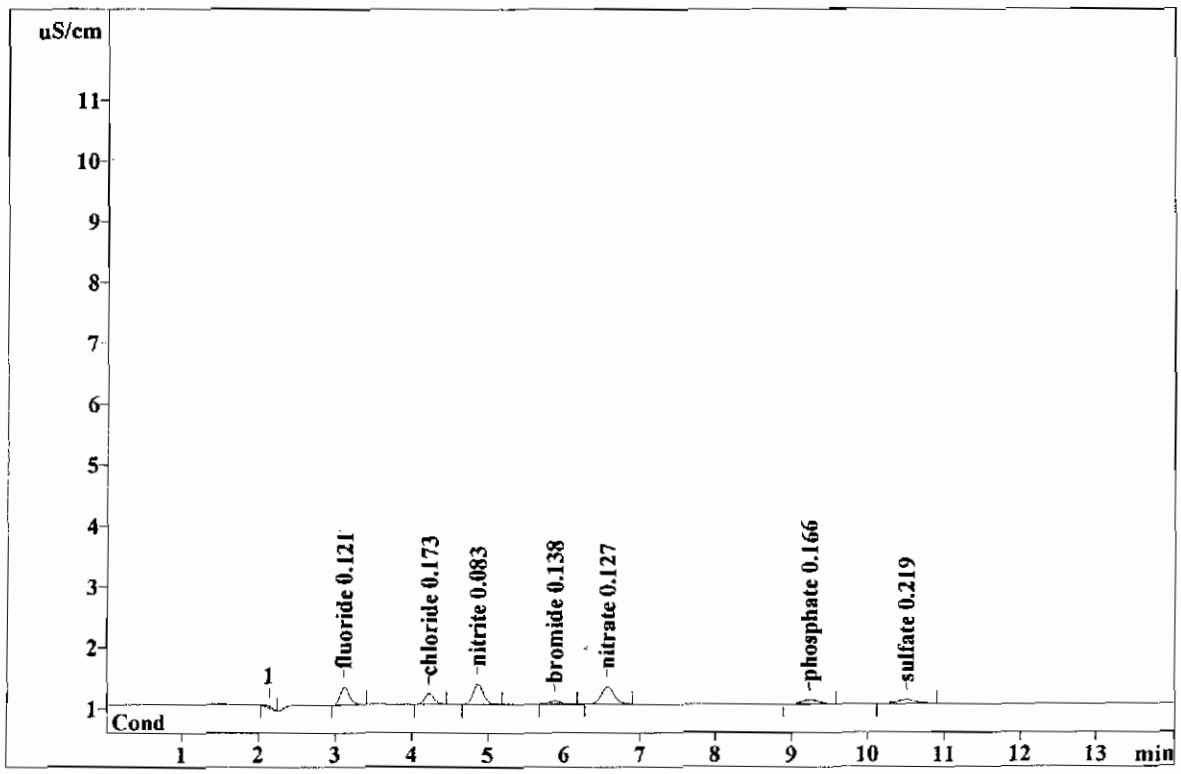
8026

Report date: 10/3/2011 10:49:06 AM
Printed by: Jadelyn Chun

Ident: AI39-04 S2
Analysis from: 9/30/2011 7:17:56 PM
File: v9301917.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69485

SAMPLE:
:
Vial number: 4
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.13	0.04	0.262	0.000	
2	3.12	0.30	2.417	0.121	fluoride
3	4.22	0.18	1.549	0.173	chloride
4	4.86	0.34	3.285	0.083	nitrite
5	5.87	0.05	0.601	0.138	bromide
6	6.56	0.29	3.425	0.127	nitrate
7	9.24	0.07	1.135	0.166	phosphate
8	10.51	0.07	1.193	0.219	sulfate
8	14.00	1.32	13.866	1.028	

This report has been created by IC Net
METROHM LTD

AS
10/03/11

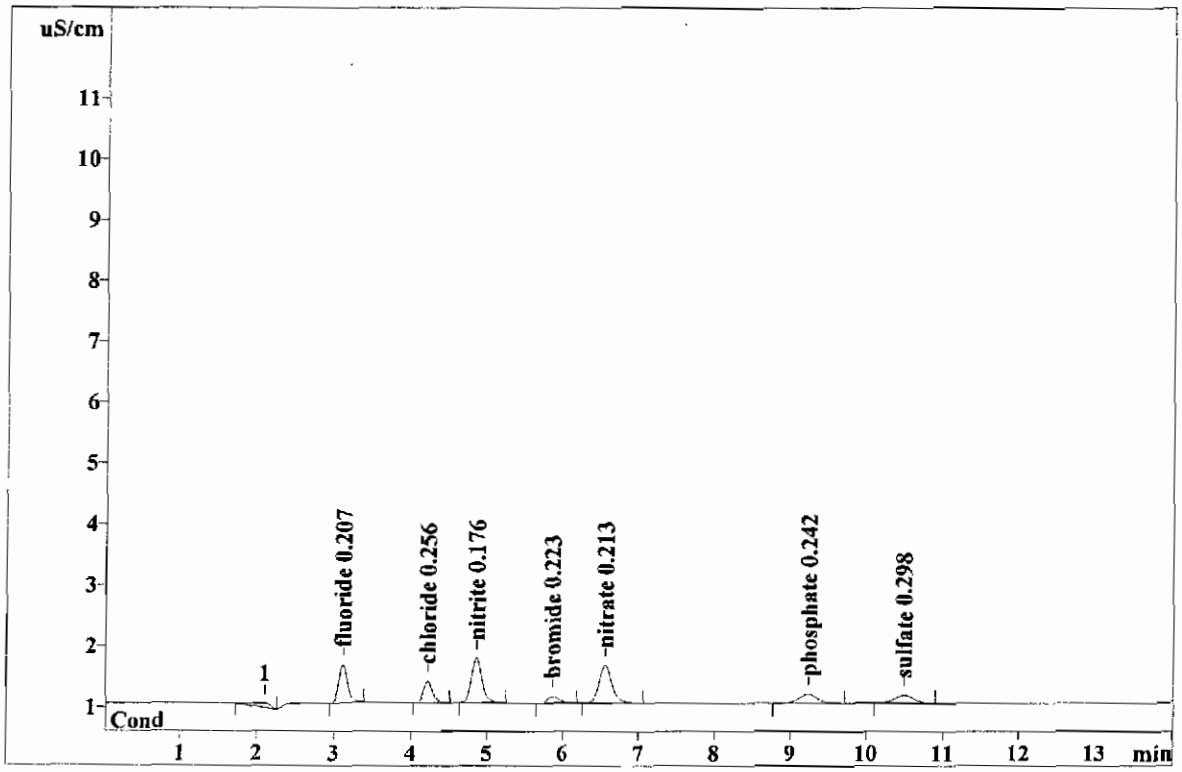
8027

Report date: 10/3/2011 10:49:15 AM
Printed by: Jadelyn Chun

Ident: AI39-05 S3
Analysis from: 9/30/2011 7:34:06 PM
File: v9301934.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69486

SAMPLE:
:
Vial number: 5
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.07	1.155	0.000	
2	3.12	0.62	5.014	0.207	fluoride
3	4.22	0.35	3.034	0.256	chloride ✓
4	4.87	0.73	7.062	0.176	nitrite
5	5.87	0.11	1.204	0.223	bromide
6	6.56	0.62	7.345	0.213	nitrate
7	9.24	0.15	2.521	0.242	phosphate
8	10.50	0.13	2.236 ✓	0.298	sulfate
8	14.00	2.78	29.572	1.616	

This report has been created by IC Net
METROHM LTD

AA
10/03/11

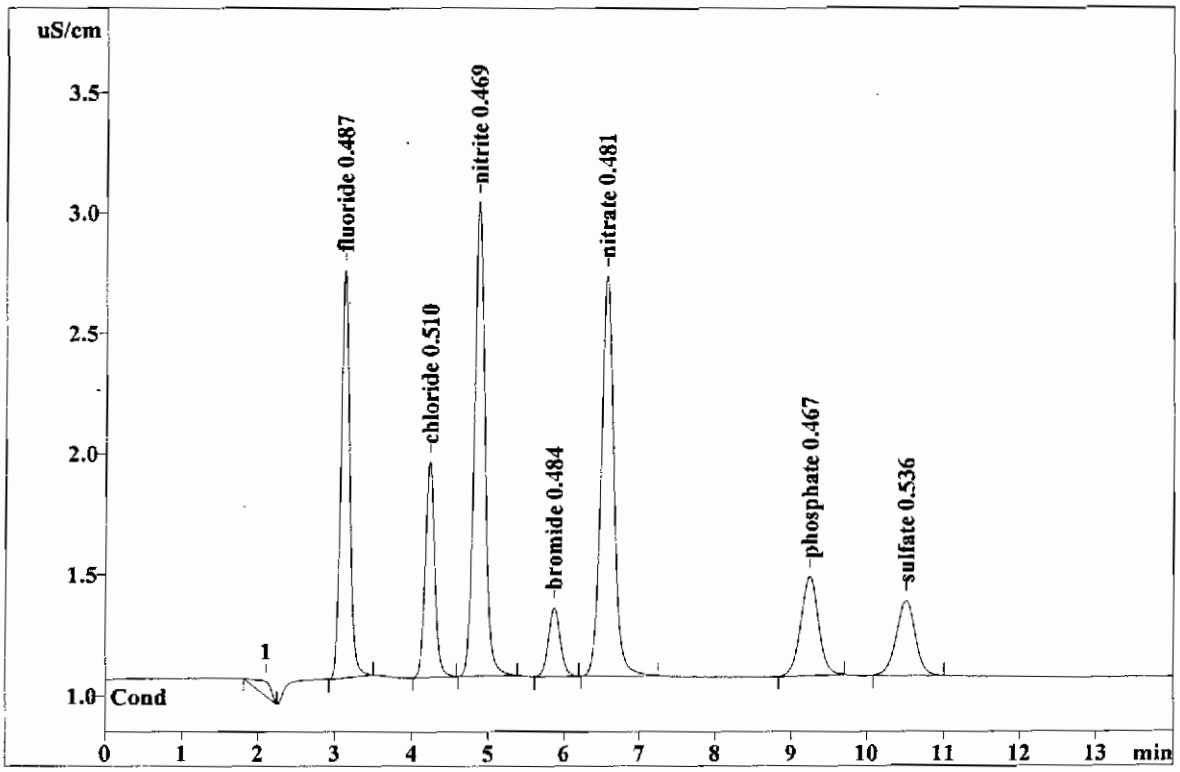
8028

Report date: 10/3/2011 10:49:34 AM
Printed by: Jadelyn Chun

Ident: AI39-06 S4
Analysis from: 9/30/2011 7:50:16 PM
File: v9301950.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69487

SAMPLE:
:
Vial number: 6
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.06	0.880	0.000	
2	3.12	1.69	13.397	0.487	fluoride
3	4.23	0.89	7.595	0.510	chloride ✓
4	4.87	1.96	18.943	0.469	nitrite
5	5.87	0.28	3.053	0.484	bromide ✓
6	6.55	1.66	19.530	0.481	nitrate
7	9.24	0.41	6.640	0.467	phosphate ✓
8	10.51	0.31	5.366 ✓	0.536	sulfate ✓
8	14.00	7.26	75.402	3.433	

This report has been created by IC Net
METROHM LTD

10/03/11

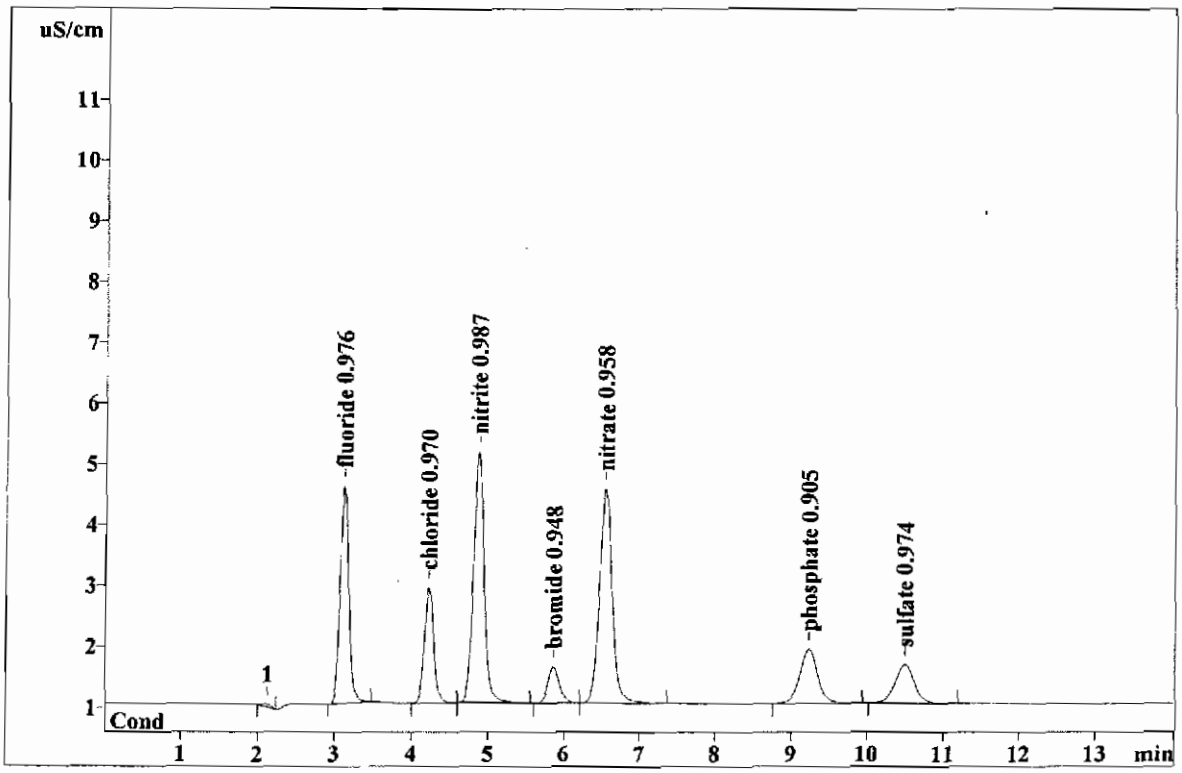
8029

Report date: 10/3/2011 10:49:41 AM
Printed by: Jadelyn Chun

Ident: AI39-07 S5
Analysis from: 9/30/2011 8:06:26 PM
File: v9302006.chw Last save: 10/3/2011 9:34:34 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69488

SAMPLE:
:
Vial number: 7
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.13	0.04	0.341	0.000	
2	3.12	3.57	28.028	0.976	fluoride
3	4.22	1.90	15.837	0.970	chloride
4	4.86	4.12	39.987	0.987	nitrite
5	5.86	0.59	6.347	0.948	bromide
6	6.54	3.52	41.272	0.958	nitrate
7	9.24	0.88	14.663	0.905	phosphate
8	10.50	0.63	11.152 ✓	0.974	sulfate
8	14.00	15.25	157.627	6.718	

This report has been created by IC Net
METROHM LTD

AS
10/03/11

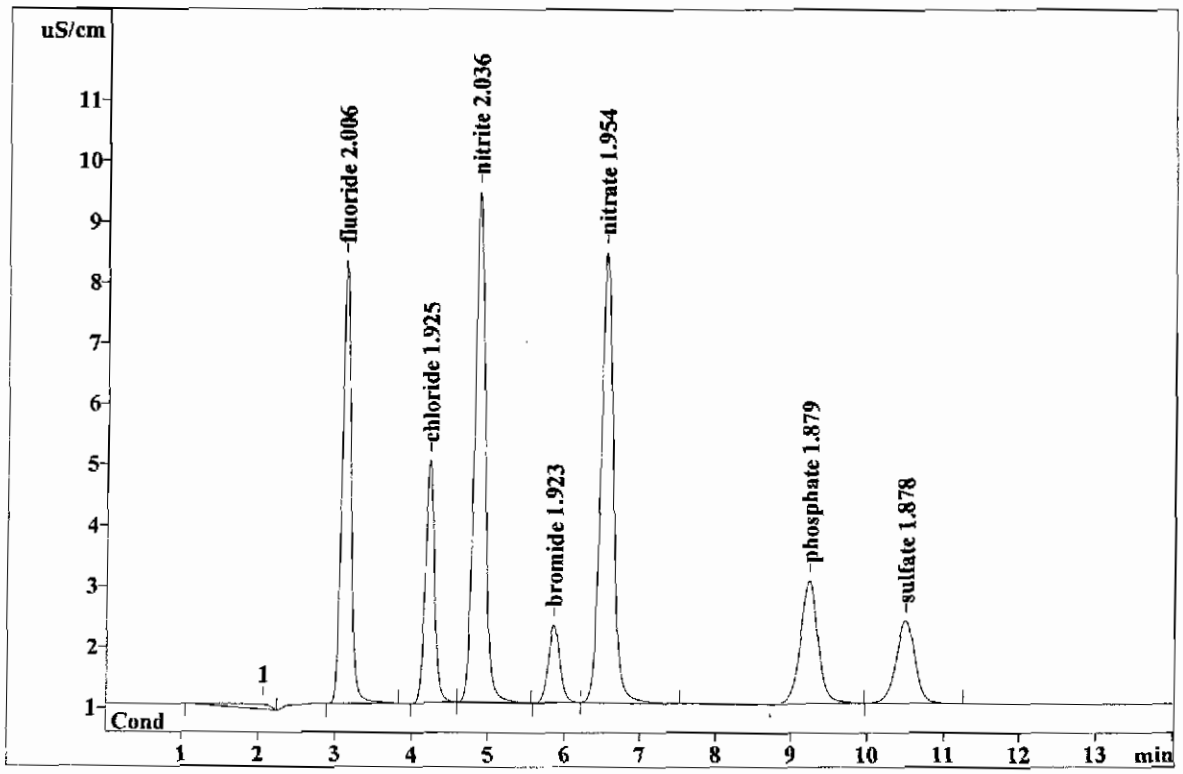
8030

Report date: 10/3/2011 10:49:51 AM
Printed by: Jadelyn Chun

Ident: AI39-08 S6
Analysis from: 9/30/2011 8:22:36 PM
File: v9302022.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69489

SAMPLE:
:
Vial number: 8
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.08	0.08	3.161	0.000	
2	3.12	7.28	58.886	2.006	fluoride
3	4.22	3.98	32.972	1.925	chloride
4	4.86	8.39	82.536	2.036	nitrite
5	5.86	1.27	13.271	1.923	bromide
6	6.53	7.42	86.609	1.954	nitrate
7	9.23	2.01	32.493	1.879	phosphate
8	10.50	1.36	23.075 ✓	1.878	sulfate
8	14.00	31.79	333.001	13.601	

This report has been created by IC Net
METROHM LTD

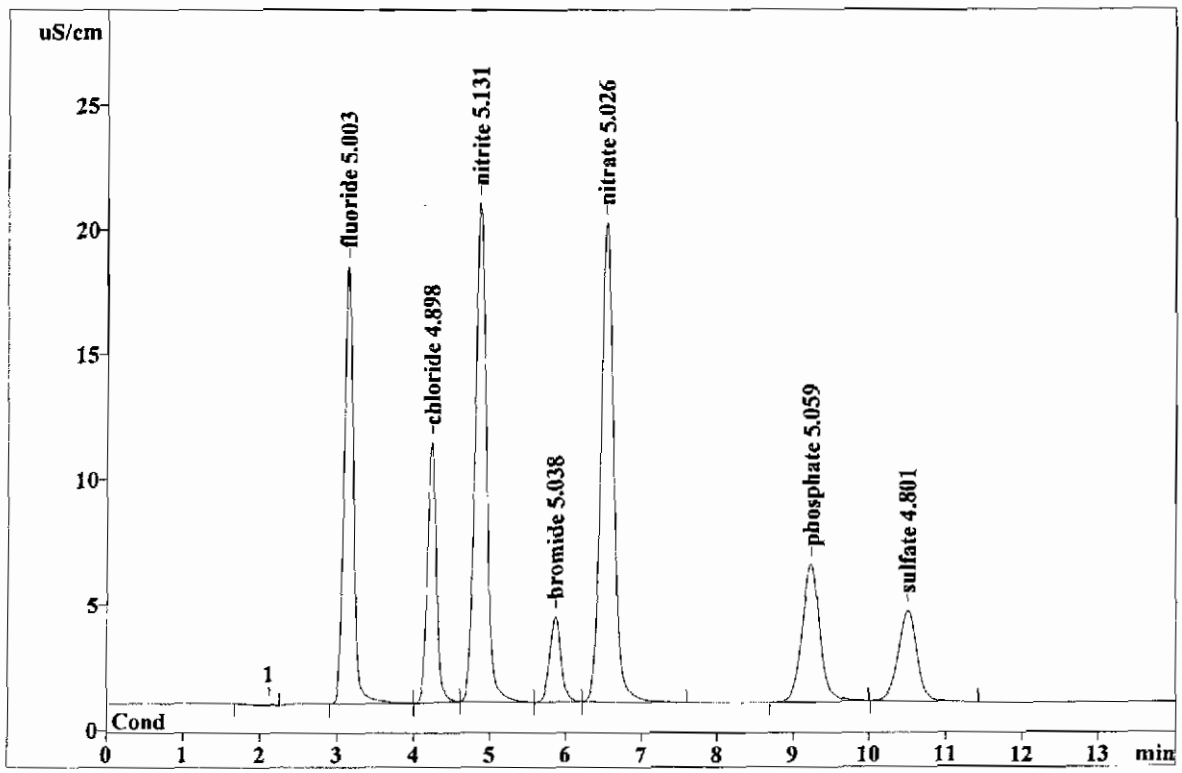
AJ
10/03/11

Report date: 10/3/2011 10:49:56 AM
Printed by: Jadelyn Chun

Ident: AI39-09 S7
Analysis from: 9/30/2011 8:38:46 PM
File: v9302038.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69490

SAMPLE:
:
Vial number: 9
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.10	0.06	1.110	0.000	
2	3.13	17.51	148.626	5.003	fluoride
3	4.23	10.38	86.279	4.898	chloride
4	4.86	19.91	208.149	5.131	nitrite
5	5.86	3.40	35.390	5.038	bromide
6	6.53	19.15	226.504	5.026	nitrate
7	9.23	5.51	90.728	5.059	phosphate
8	10.50	3.62	61.639 ✓	4.801	sulfate
8	14.00	79.53	858.424	34.956	

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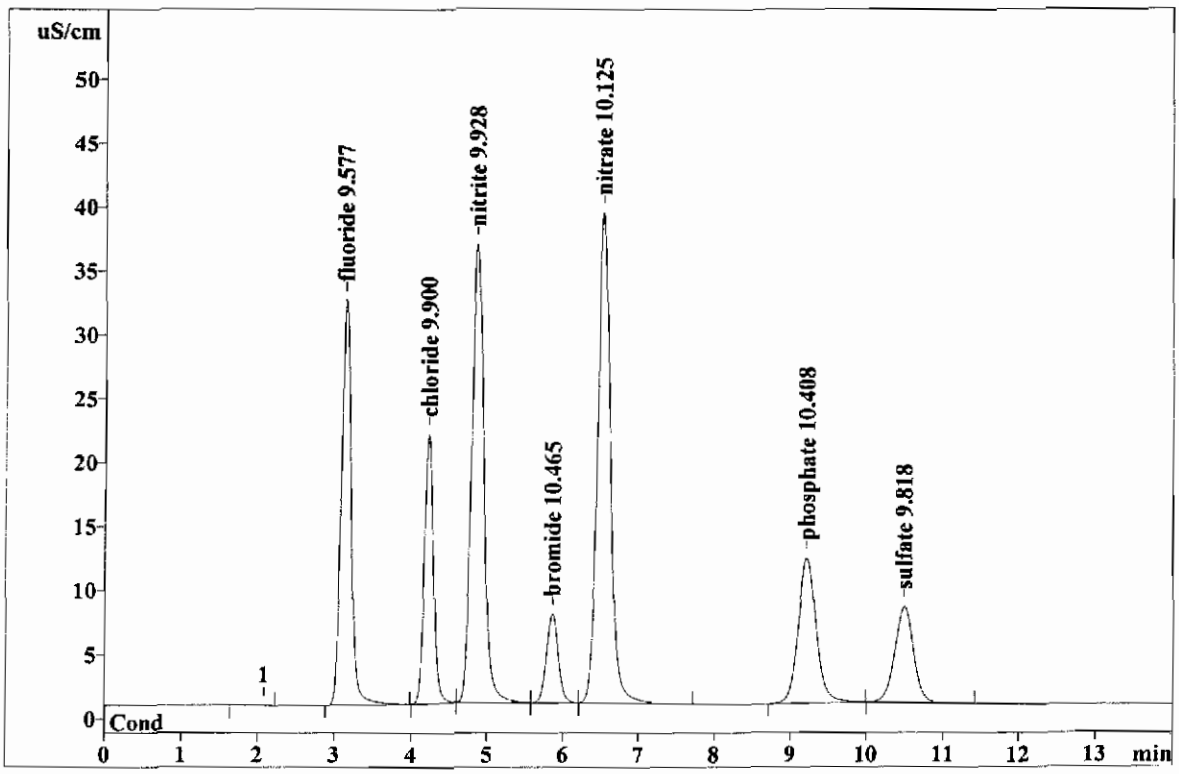
Ag
10/03/11

Report date: 10/3/2011 10:50:01 AM
Printed by: Jadelyn Chun

Ident: AI39-10 S8
Analysis from: 9/30/2011 8:54:55 PM
File: v9302054.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69491

SAMPLE:
:
Vial number: 10
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.09	0.04	0.883	0.000	
2	3.14	31.68	285.635	9.577	fluoride
3	4.22	21.04	175.986	9.900	chloride
4	4.86	35.83	402.789	9.928	nitrite
5	5.85	6.92	73.923	10.465	bromide
6	6.52	38.33	458.760	10.125	nitrate
7	9.21	11.30	188.680	10.408	phosphate
8	10.49	7.47	127.816	9.818	sulfate
8	14.00	152.61	1714.471	70.222	

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AJ
10/03/11

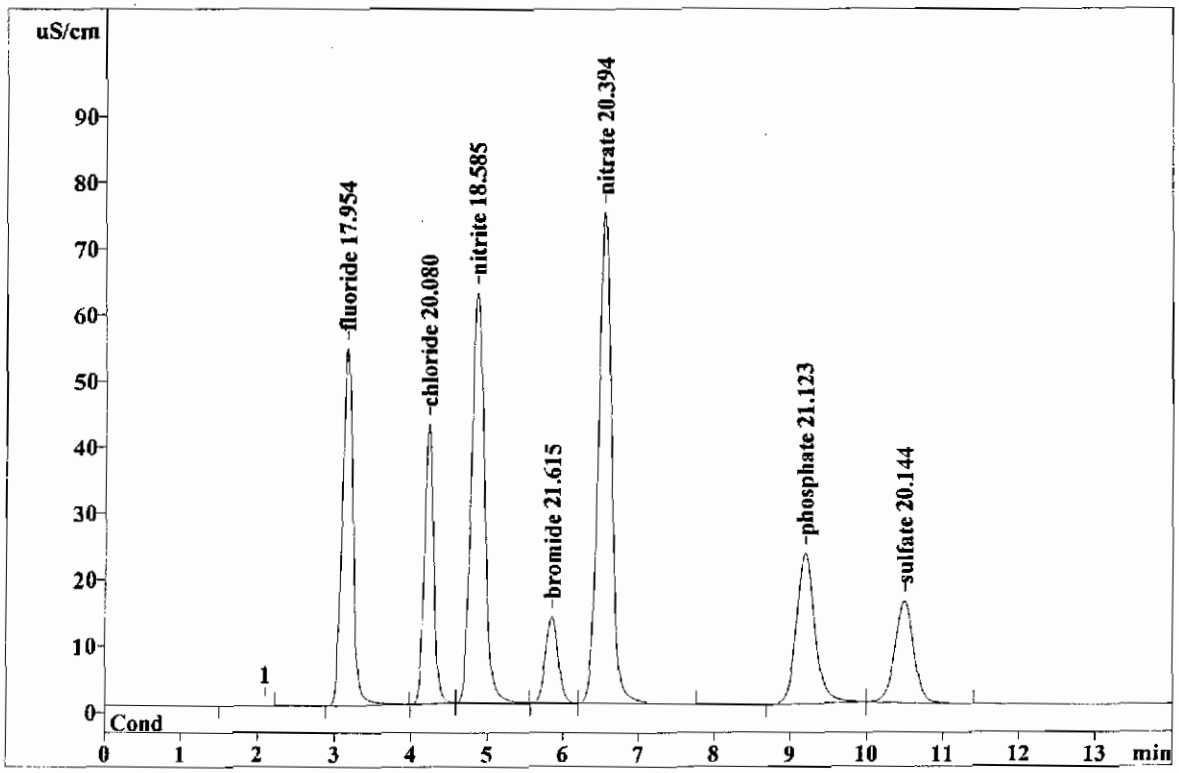
8033

Report date: 10/3/2011 10:50:10 AM
Printed by: Jadelyn Chun

Ident: AI39-11 S9
Analysis from: 9/30/2011 9:11:05 PM
File: v9302111.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69492

SAMPLE:
:
Vial number: 11
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.09	0.02	0.447	0.000	
2	3.16	53.88	536.509	17.954	fluoride
3	4.23	42.24	358.541	20.080	chloride
4	4.86	61.98	754.064	18.585	nitrite
5	5.85	13.02	153.094	21.615	bromide
6	6.54	74.20	926.425	20.394	nitrate
7	9.19	22.65	384.898	21.123	phosphate
8	10.49	15.33	264.046 ✓	20.144	sulfate
8	14.00	283.33	3378.024	139.896	

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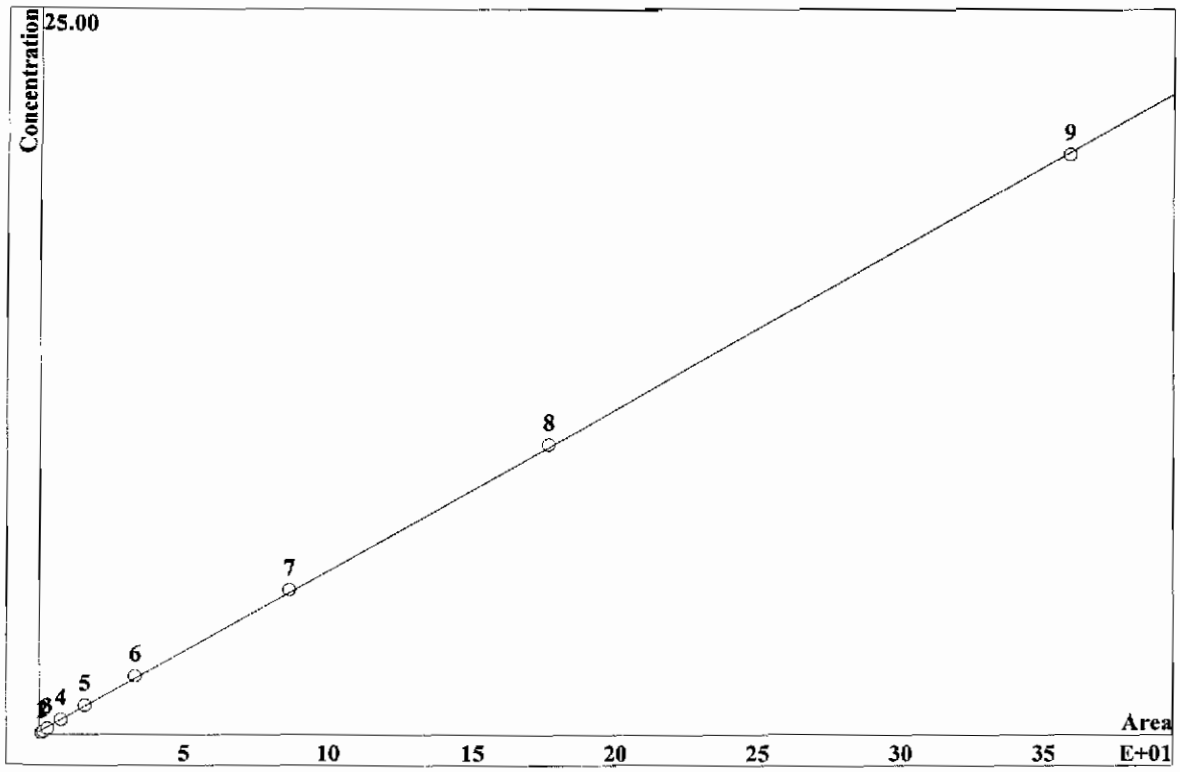
10/03/11

8034

CALIBRATION OF COMPONENT chloride

Method: ICD0-I30.mtw
Equation: Q = 0.0557644·A + 0.0866239
RSD: 1.948 %
Correlation coefficient: 0.999932



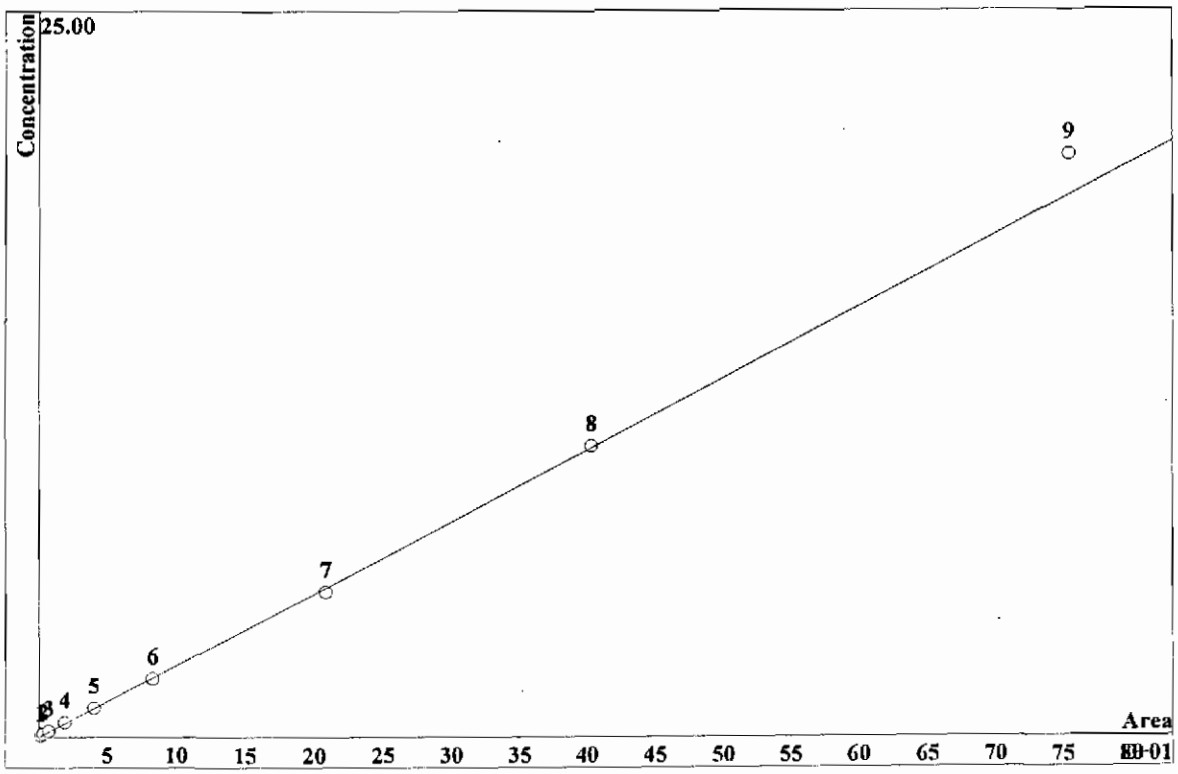
K3 = 0 K2 = 0 K1 = 0.0557644 K0 = 0.0866239
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1035	0.9076	0.05	1	4.26	Yes	v9301901.chw
2	0.1796	1.549	0.1	1	4.26	Yes	v9301917.chw
3	0.354	3.034	0.2	1	4.26	Yes	v9301934.chw
4	0.8921	7.595	0.5	1	4.26	Yes	v9301950.chw
5	1.896	15.84	1	1	4.26	Yes	v9302006.chw
6	3.983	32.97	2	1	4.26	Yes	v9302022.chw
7	10.38	86.28	5	1	4.26	Yes	v9302038.chw
8	21.04	176	10	1	4.26	Yes	v9302054.chw
9	42.24	358.5	20	1	4.26	Yes	v9302111.chw

AA
10/03/11

CALIBRATION OF COMPONENT nitrite

Method: ICD0-I30.mtw
Equation: Q = 0.024644·A + 0.00179217
RSD: 2.785 %
Correlation coefficient: 0.999850



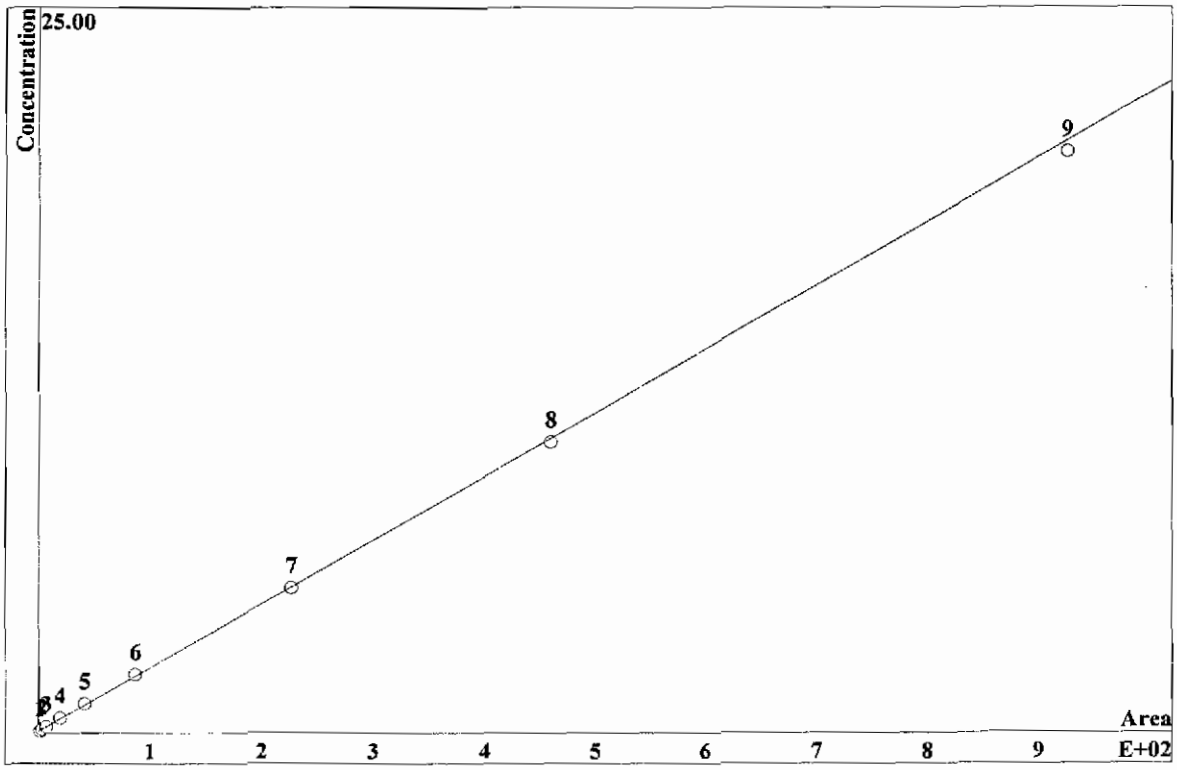
K3 = 0 K2 = 0 K1 = 0.024644 K0 = 0.00179217
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1597	1.561	0.05	1	4.932	Yes	v9301901.chw
2	0.3368	3.285	0.1	1	4.932	Yes	v9301917.chw
3	0.7305	7.062	0.2	1	4.932	Yes	v9301934.chw
4	1.964	18.94	0.5	1	4.932	Yes	v9301950.chw
5	4.115	39.99	1	1	4.932	Yes	v9302006.chw
6	8.392	82.54	2	1	4.932	Yes	v9302022.chw
7	19.91	208.1	5	1	4.932	Yes	v9302038.chw
8	35.83	402.8	10	1	4.932	Yes	v9302054.chw
9	61.98	754.1	20	1	4.932	No	v9302111.chw

DS
10/13/11

CALIBRATION OF COMPONENT nitrate

Method: ICD0-I30.mtw
Equation: Q = 0.0219574·A + 0.0522169
RSD: 3.044 %
Correlation coefficient: 0.999806



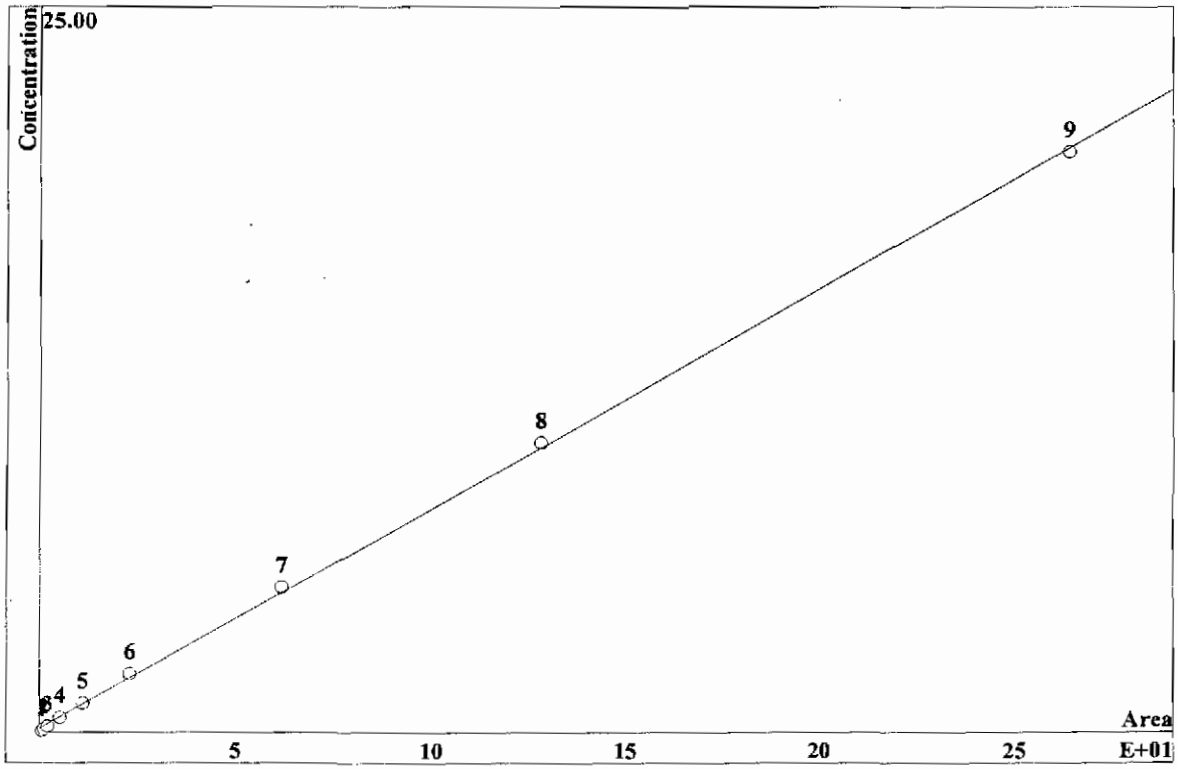
K3 = 0 K2 = 0 K1 = 0.0219574 K0 = 0.0522169
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1416	1.722	0.05	1	6.74	Yes	v9301901.chw
2	0.2866	3.425	0.1	1	6.74	Yes	v9301917.chw
3	0.6179	7.345	0.2	1	6.74	Yes	v9301934.chw
4	1.658	19.53	0.5	1	6.74	Yes	v9301950.chw
5	3.518	41.27	1	1	6.74	Yes	v9302006.chw
6	7.416	86.61	2	1	6.74	Yes	v9302022.chw
7	19.15	226.5	5	1	6.74	Yes	v9302038.chw
8	38.33	458.8	10	1	6.74	No	v9302054.chw
9	74.21	926.4	20	1	6.74	No	v9302111.chw

AS
10/03/11

CALIBRATION OF COMPONENT sulfate

Method: ICD0-I30.mtw ✓ ✓
Equation: Q = 0.0758014·A + 0.128926
RSD: 3.408 %
Correlation coefficient: 0.999791



K3 = 0 K2 = 0 K1 = 0.0758014 K0 = 0.128926
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.03861	0.6921 ✓	0.05	1	10.79	Yes	v9301901.chw
2	0.06635	1.193 ✓	0.1	1	10.79	Yes	v9301917.chw
3	0.1288	2.236 ✓	0.2	1	10.79	Yes	v9301934.chw
4	0.3105	5.366 ✓	0.5	1	10.79	Yes	v9301950.chw
5	0.6333	11.15 ✓	1	1	10.79	Yes	v9302006.chw
6	1.361	23.08 ✓	2	1	10.79	Yes	v9302022.chw
7	3.625	61.64 ✓	5	1	10.79	Yes	v9302038.chw
8	7.471	127.8 ✓	10	1	10.79	Yes	v9302054.chw
9	15.34	264 ✓	20	1	10.79	Yes	v9302111.chw

AA
10/03/11

SECOND SOURCE VERIFICATION

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	bromide	nitrite	sulfate	fluoride	chloride	nitrate	phosphate	RawNetID	DF
AI39-12	ICV	BISFCNP	94.1%	98.6%	99.9%	100.1%	97.7%	98.6%	92.5%	v9302127	1
AI39-13	ICB	BISFCNP	0	0	0	0	0	0	0	v9302143	1

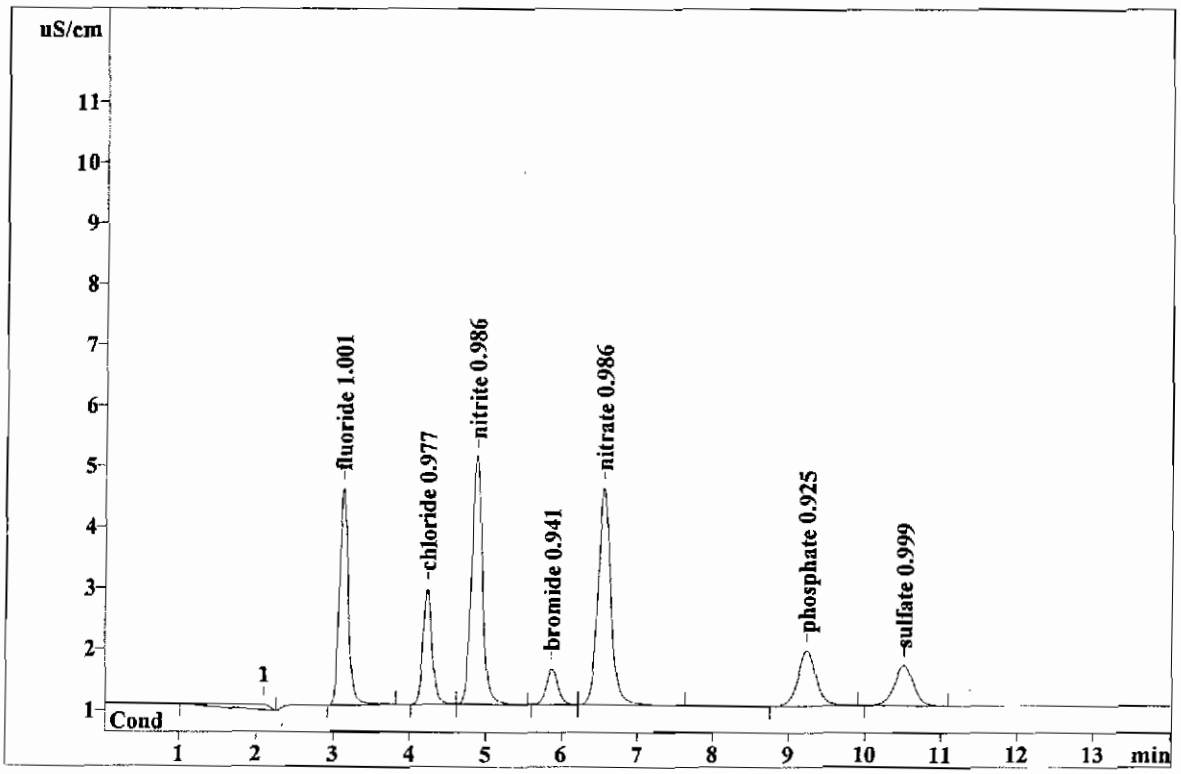
AS 10/03/11

Report date: 10/3/2011 10:50:13 AM
Printed by: Jadelyn Chun

Ident: AI39-12 ICV
Analysis from: 9/30/2011 9:27:15 PM
File: v9302127.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69493

SAMPLE:
:
Vial number: 12
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.08	0.09	3.575	0.000	
2	3.12	3.55	28.790 ✓	1.001 ✓	fluoride
3	4.23	1.89	15.958 ✓	0.977 ✓	chloride
4	4.87	4.07	39.941 ✓	0.986 ✓	nitrite
5	5.87	0.58	6.302 ✓	0.941 ✓	bromide
6	6.55	3.55	42.546 ✓	0.986 ✓	nitrate
7	9.24	0.91	15.033 ✓	0.925 ✓	phosphate
8	10.51	0.65	11.474 ✓	0.999 ✓	sulfate
8	14.00	15.29	163.619	6.815	

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10/03/11

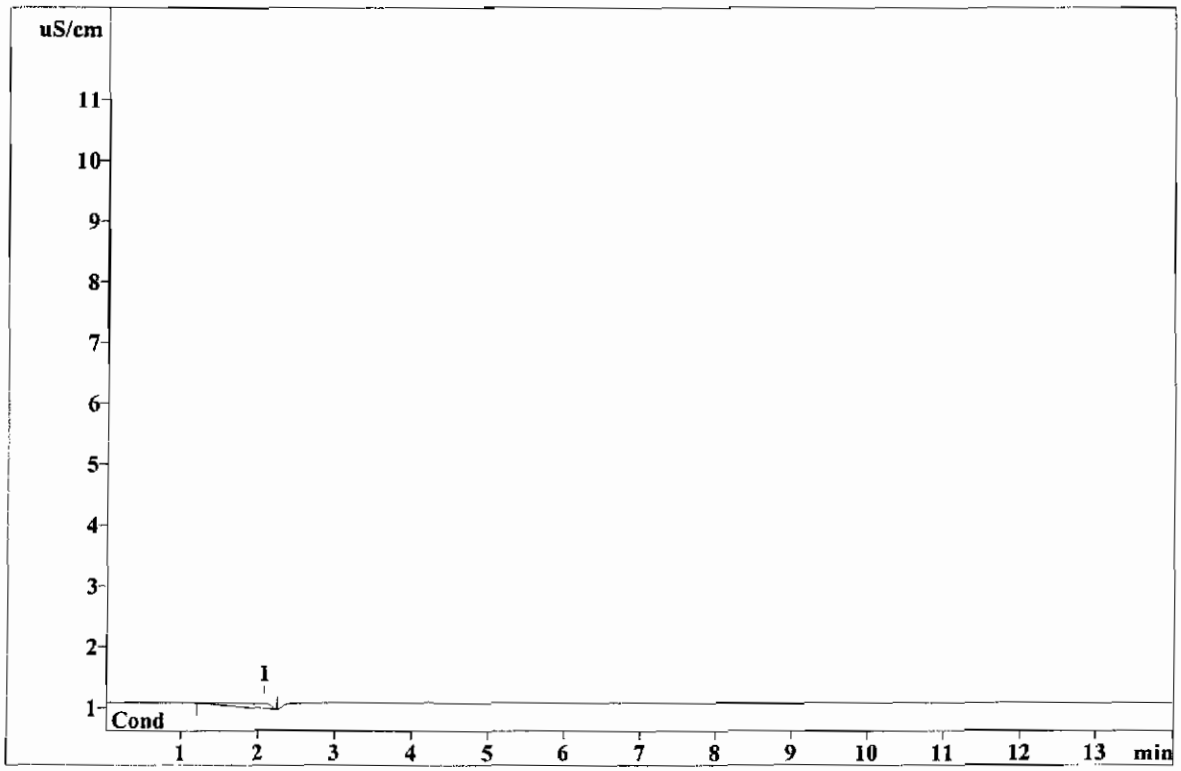
8041

Report date: 10/3/2011 10:50:20 AM
Printed by: Jadelyn Chun

Ident: AI39-13 ICB
Analysis from: 9/30/2011 9:43:24 PM
File: v9302143.chw Last save: 10/3/2011 9:34:35 AM

Method: ICD0-I30.mtw Last save: 9/30/2011 7:48:03 PM
Run operator: Jadelyn Chun
Analysis number: 69494

SAMPLE:
:
Vial number: 13
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.08	0.08	2.935	0.000	

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AJ
10/03/11

8042

DAILY CALIBRATIONS

IC Result Check FormVersion : I30\I39(2011)

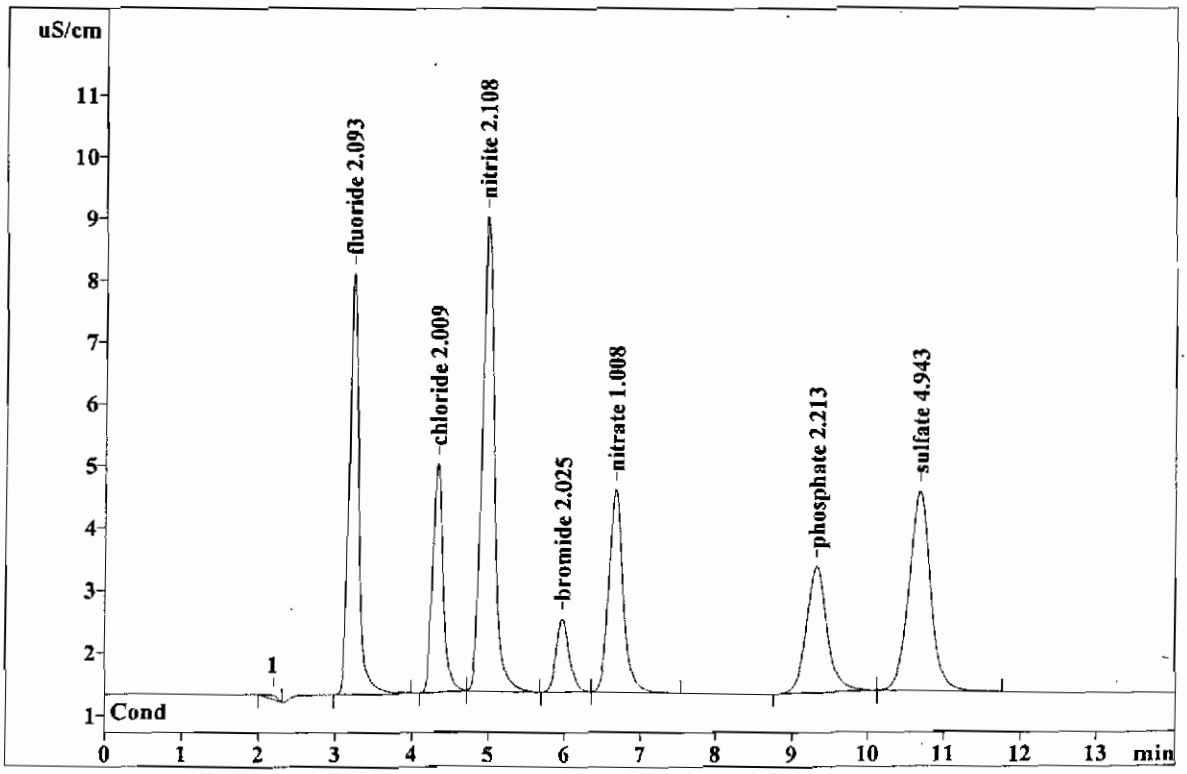
LFID	LSID	Selection	phosphate	sulfate	fluoride	chloride	nitrite	bromide	nitrate	RawNetID	DF
AK27-01	CCV489	PSFCIBN	110.3%*	97.9%	103.6%	102.8%	105.2%	102.3%	100.5%	vb181251	1
AK27-02	CCB489	PSFCIBN	0	0	0	0	0	0	0	vb181308	1
AK27-13	CCV491	PSFCIBN	108.5%	98.1%	103.9%	100.5%	104.9%	100.9%	100.3%	vb181605	1
AK27-14	CCB491	PSFCIBN	0	0	0	0	0	0	0	vb181622	1
AK27-25	CCV493	PSFCIBN	109.2%	98.1%	104.1%	100.6%	105%	101.1%	100.4%	vb181919	1
AK27-26	CCB493	PSFCIBN	0	0	0	0	0	0	0	vb181936	1
AK27-34	CCV495	PSFCIBN	110.4%*	98.1%	104.5%	99.6%	105.2%	101.2%	100.2%	vb182145	1
AK27-35	CCB495	PSFCIBN	0	0	0	0	0	0	0	vb182201	1
AK27-46	CCV497	PSFCIBN	111.6%*	98.3%	104.5%	99.5%	105.1%	101.1%	100.2%	vb190059	1
AK27-47	CCB497	PSFCIBN	0	0	0	0	0	0	0	vb190115	1
AK27-58	CCV499	PSFCIBN	110.8%*	98.7%	104.6%	100.1%	105.6%	101.4%	100.7%	vb190413	1
AK27-59	CCB499	PSFCIBN	0	0	0	0	0	0	0	vb190429	1
AK27-67	CCV501	PSFCIBN	110.6%*	98.9%	104.7%	100.5%	105.4%	101.2%	100.8%	vb190638	1
AK27-68	CCB501	PSFCIBN	0	0	0	0	0	0	0	vb190654	1
AK27-79	CCV503	PSFCIBN	116.7%*	99%	104.9%	101.2%	105.5%	101.9%	101.5%	vb190952	1
AK27-80	CCB503	PSFCIBN	0	0	0	0	0	0	0	vb191008	1
AK27-91	CCV505	PSFCIBN	116.1%*	98.7%	105.1%	100.9%	106%	102.3%	101.2%	vb191306	1
AK27-92	CCB505	PSFCIBN	0	0	0	0	0	0	0	vb191322	1
AK27-103	CCV507	PSFCIBN	111.9%*	98.8%	105.2%	101%	105.9%	102%	101.1%	vb191620	1
AK27-104	CCB507	PSFCIBN	0	0	0	0	0	0	0	vb191636	1

Report date: 11/19/2011 6:52:41 AM
Printed by: Jadelyn Chun

Ident: AK27-67 CCV501
Analysis from: 11/19/2011 6:38:44 AM
File: VB190638.CHW Last save: 11/19/2011 6:52:41 AM

Method: ICD0-I30.mtw Last save: 11/18/2011 4:16:08 PM
Run operator: Jadelyn Chun
Analysis number: 71870

SAMPLE:
:
Vial number: 67
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.19	0.06	0.639	0.000	
2	3.22	6.79	61.488	2.093	fluoride
3	4.33	3.67	34.478	2.009	chloride
4	4.97	7.65	85.446	2.108	nitrite
5	5.98	1.17	13.994	2.025	bromide
6	6.67	3.25	43.507	1.008	nitrate
7	9.32	2.02	38.608	2.213	phosphate
8	10.69	3.20	63.505	4.943	sulfate
8	14.00	27.81	341.665	16.397	

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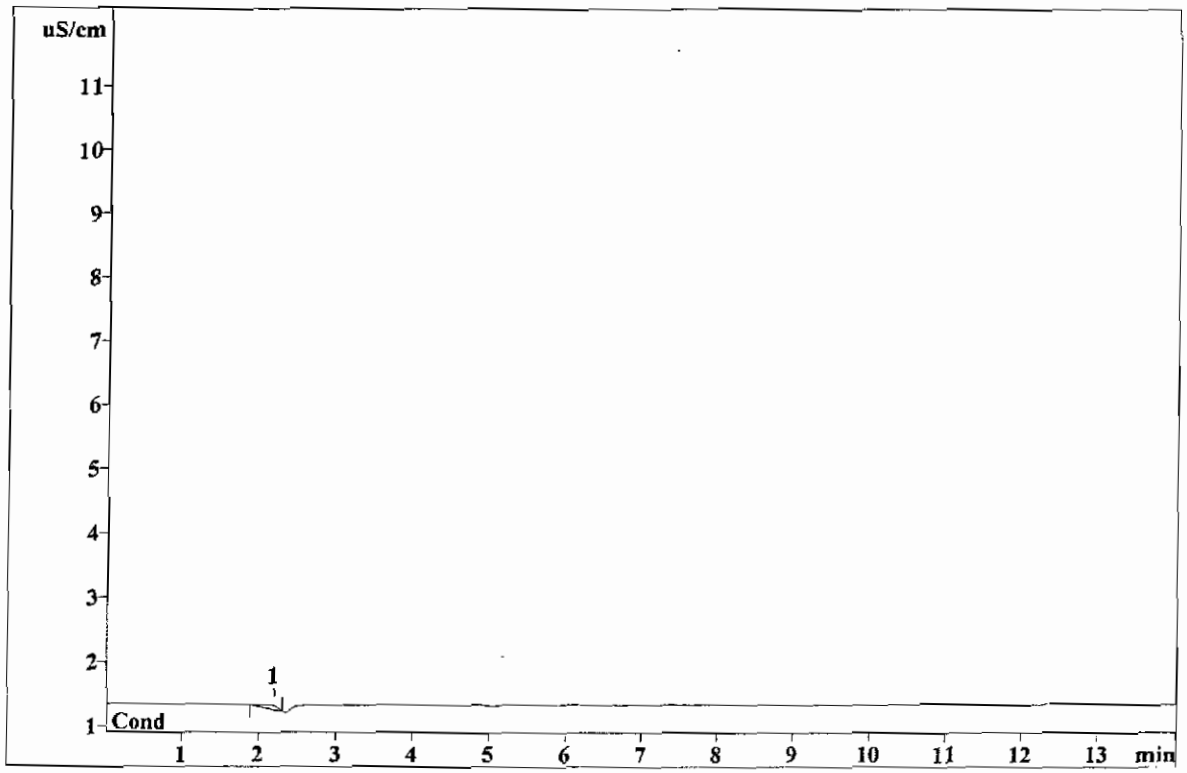
Report date: 11/21/2011 12:09:43 PM
Printed by: CHERRY DAM

Ident: AK27-68 CCB501
Analysis from: 11/19/2011 6:54:54 AM
File: vb190654.chw Last save: 11/19/2011 7:08:51 AM

Method: ICD0-I30.mtw Last save: 11/18/2011 4:16:08 PM
Run operator: Jadelyn Chun
Analysis number: 71871

SAMPLE:
:
Vial number: 68
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.20	0.07	0.925	0.000	

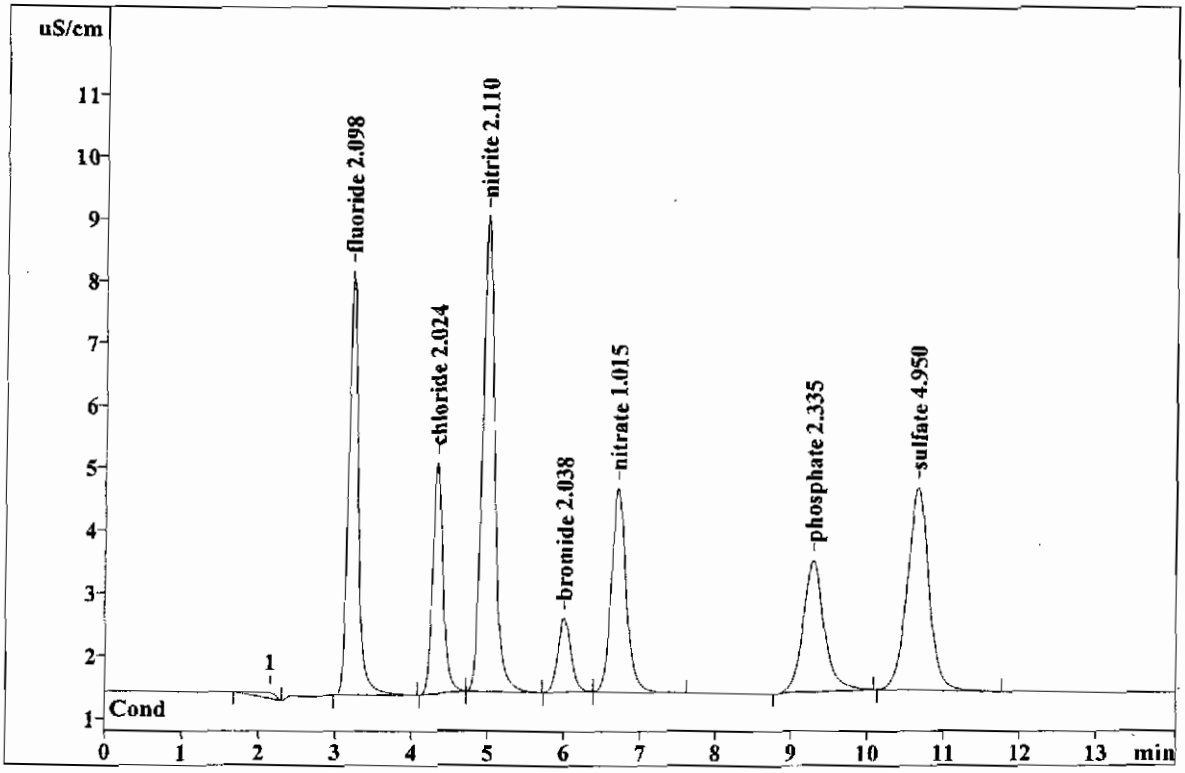
This report has been created by IC Net
METROHM LTD

Report date: 11/19/2011 10:06:37 AM
Printed by: Jadelyn Chun

Ident: AK27-79 CCV503
Analysis from: 11/19/2011 9:52:40 AM
File: VB190952.CHW Last save: 11/19/2011 10:06:37 AM

Method: ICD0-I30.mtw Last save: 11/18/2011 4:16:08 PM
Run operator: Jadelyn Chun
Analysis number: 71882

SAMPLE:
:
Vial number: 79
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.15	0.09	1.927	0.000	
2	3.21	6.79	61.628	2.098	fluoride
3	4.33	3.68	34.743	2.024	chloride
4	4.98	7.62	85.550	2.110	nitrite
5	6.00	1.17	14.087	2.038	bromide
6	6.71	3.25	43.865	1.015	nitrate
7	9.29	2.10	40.849	2.335	phosphate
8	10.66	3.22	63.603	4.950	sulfate
8	14.00	27.93	346.252	16.570	

This report has been created by IC Net
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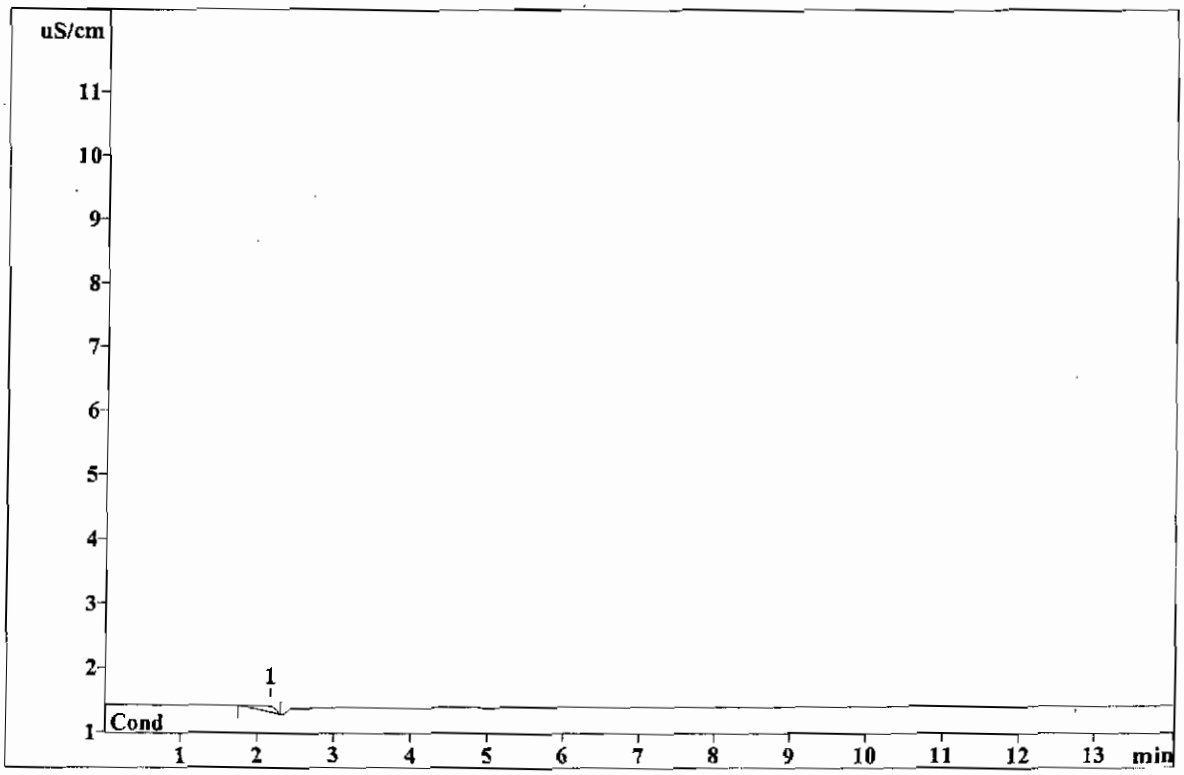
Report date: 11/21/2011 12:09:49 PM
Printed by: CHERRY DAM

Ident: AK27-80 CCB503
Analysis from: 11/19/2011 10:08:50 AM
File: vb191008.chw Last save: 11/19/2011 10:22:48 AM

Method: ICD0-I30.mtw Last save: 11/18/2011 4:16:08 PM
Run operator: Jadelyn Chun
Analysis number: 71883

SAMPLE:
:
Vial number: 80
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.09	1.674	0.000	

This report has been created by IC Net
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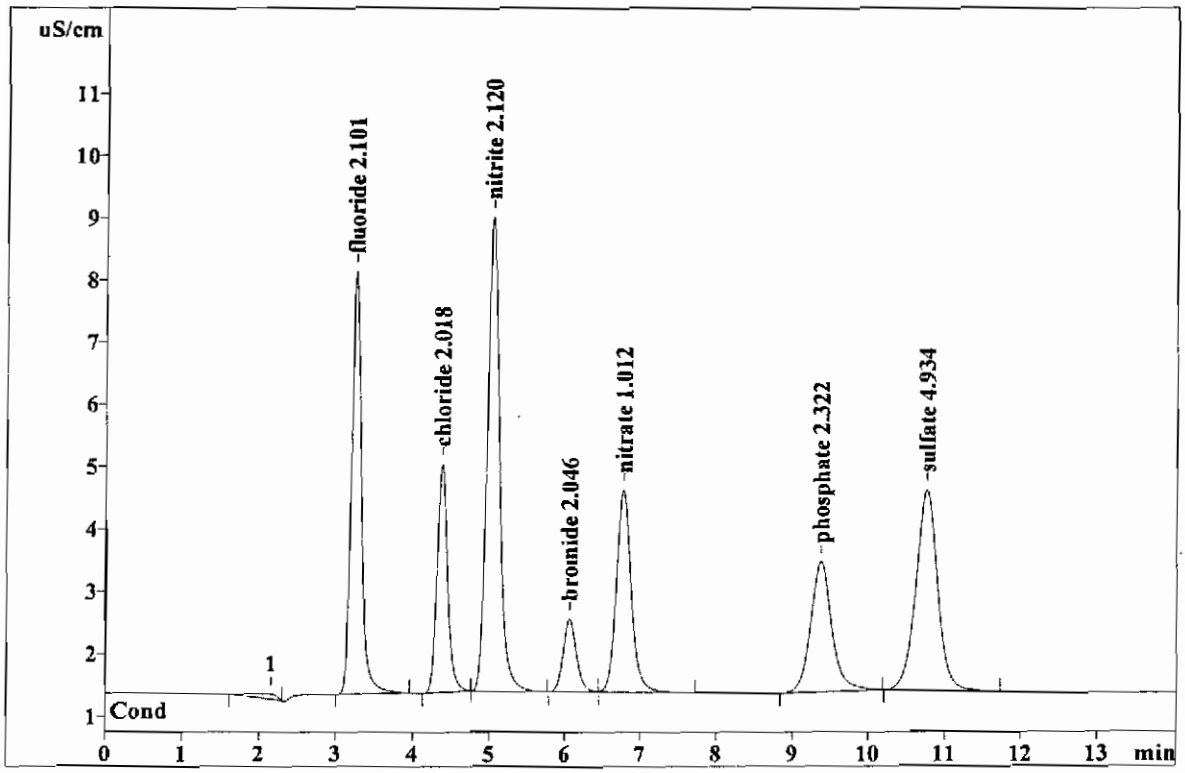
Report date: 11/19/2011 1:20:34 PM
Printed by: Jadelyn Chun

Ident: AK27-91 CCV505
Analysis from: 11/19/2011 1:06:36 PM
File: VB191306.CHW Last save: 11/19/2011 1:20:34 PM

Method: ICD0-I30.mtw Last save: 11/18/2011 4:16:08 PM
Run operator: Jadelyn Chun
Analysis number: 71894

SAMPLE:
:
Vial number: 91
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.18	0.08	1.809	0.000	
2	3.25	6.78	61.740	2.101	fluoride
3	4.38	3.65	34.628	2.018	chloride
4	5.03	7.62	85.967	2.120	nitrite
5	6.06	1.17	14.143	2.046	bromide
6	6.77	3.23	43.711	1.012	nitrate
7	9.37	2.08	40.606	2.322	phosphate
8	10.76	3.20	63.390	4.934	sulfate
8	14.00	27.80	345.992	16.553	

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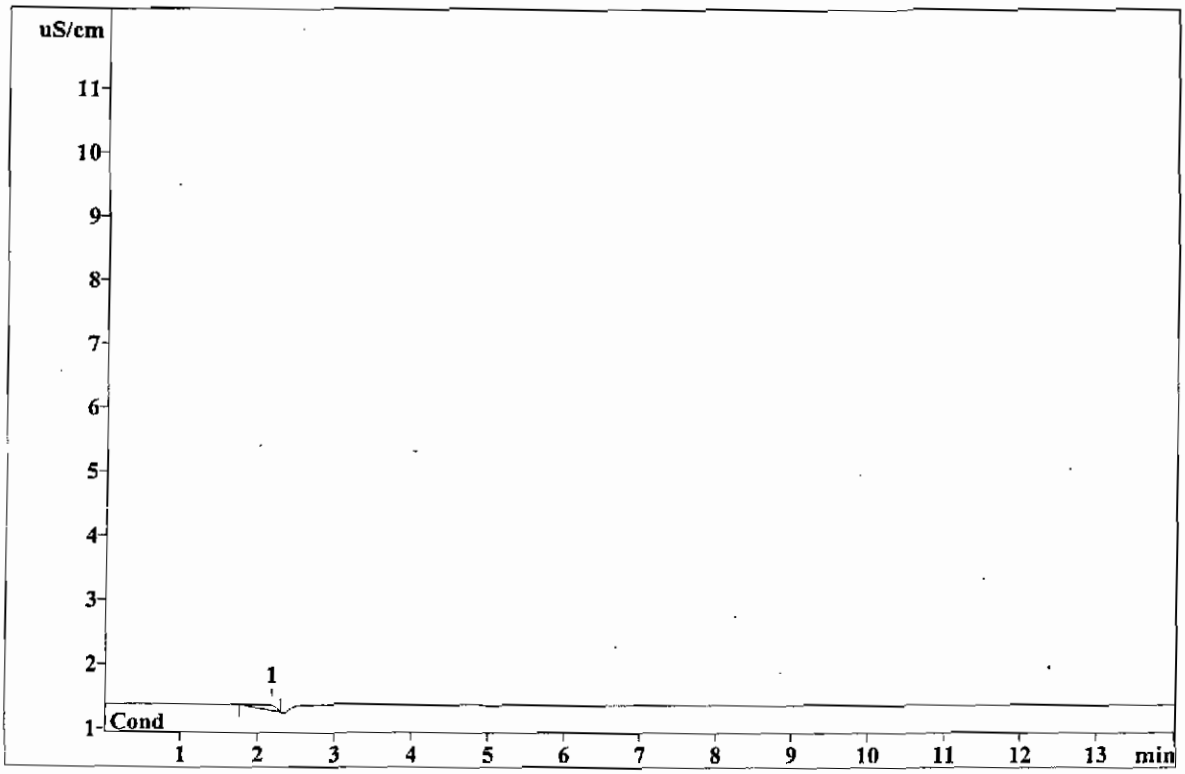
METROHM LTD

Report date: 11/21/2011 12:09:52 PM
Printed by: CHERRY DAM

Ident: AK27-92 CCB505
Analysis from: 11/19/2011 1:22:46 PM
File: vb191322.chw Last save: 11/19/2011 1:36:43 PM

Method: ICD0-I30.mtw Last save: 11/18/2011 4:16:08 PM
Run operator: Jadelyn Chun
Analysis number: 71895

SAMPLE:
:
Vial number: 92
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.18	0.08	1.405	0.000	

This report has been created by IC Net
METROHM LTD

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	sulfate	chloride	phosphate	nitrate	fluoride	nitrite	bromide	RawNetID	DF
AK31-01	CCV515	SCPNFIB	98.8%	98.6%	102.2%	97.7%	103.8%	104.8%	99.5%	vb211054	1
AK31-02	CCB515	SCPNFIB	0	0	0	0	0	0	0	vb211110	1
AK31-13	CCV517	SCPNFIB	98.9%	98.3%	101.5%	97.7%	103.8%	105%	99%	vb211408	1
AK31-14	CCB517	SCPNFIB	0	0	0	0	0	0	0	vb211424	1
AK31-25	CCV519	SCPNFIB	98.7%	98.6%	104%	97.9%	104%	105.1%	99.5%	vb211722	1
AK31-26	CCB519	SCPNFIB	0	0	0	0	0	0	0	vb211738	1
AK31-34	CCV521	SCPNFIB	99.4%	98.8%	104.4%	98%	104.6%	105.3%	99.7%	vb211947	1
AK31-35	CCB521	SCPNFIB	0	0	0	0	0	0	0	vb212003	1
AK31-46	CCV523	SCPNFIB	99%	98.7%	104.1%	98%	104.2%	105.2%	99.5%	vb212301	1
AK31-47	CCB523	SCPNFIB	0	0	0	0	0	0	0	vb212317	1
AK31-58	CCV525	SCPNFIB	98.9%	98.6%	103.3%	98%	104.6%	105.2%	99.4%	vb220215	1
AK31-59	CCB525	SCPNFIB	0	0	0	0	0	0	0	vb220231	1
AK31-70	CCV527	SCPNFIB	99.5%	99.2%	107.2%	98.5%	104.7%	105.9%	100.1%	vb220529	1
AK31-71	CCB527	SCPNFIB	0	0	0	0	0	0	0	vb220545	1

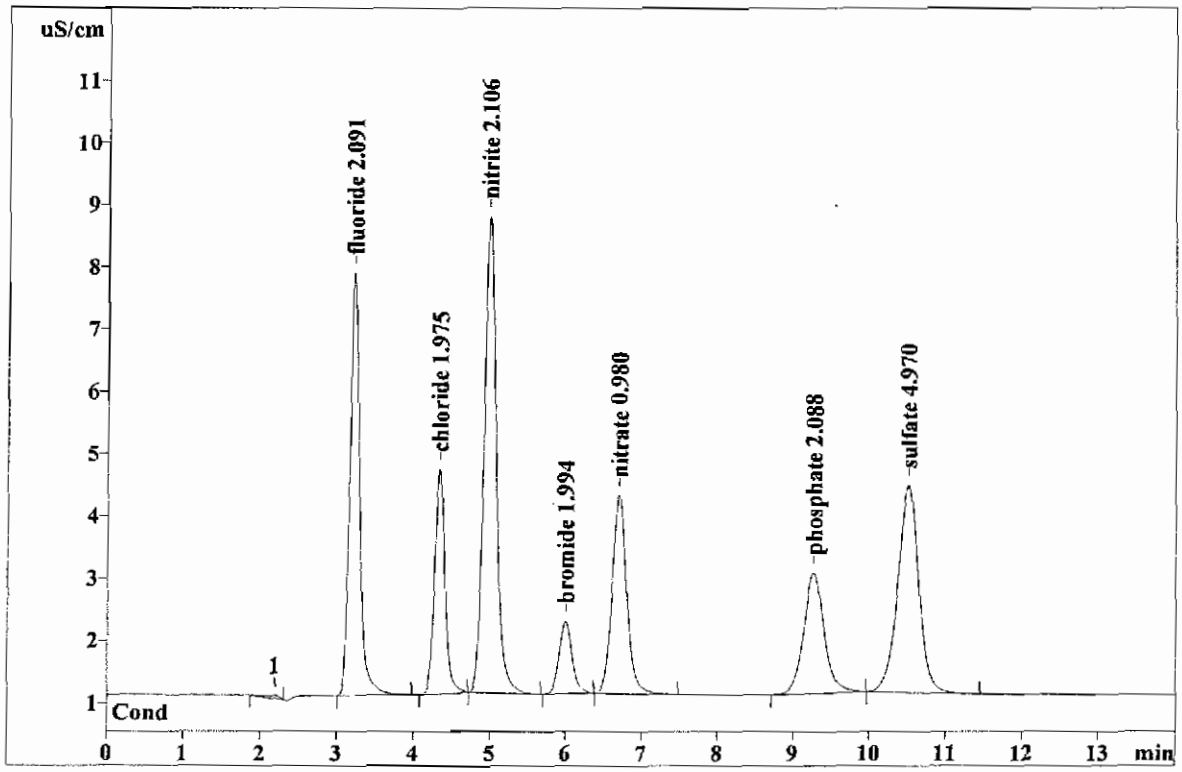
Report date: 11/21/2011 8:01:43 PM
Printed by: CHERRY DAM

Ident: AK31-34 CCV521
Analysis from: 11/21/2011 7:47:46 PM
File: VB211947.CHW Last save: 11/21/2011 8:01:43 PM

Method: ICD0-I30.mtw Last save: 11/21/2011 11:32:33 AM
Run operator: CHERRY DAM
Analysis number: 71970

SAMPLE:

Vial number: 34
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.19	0.05	0.717	0.000	
2	3.22	6.79	61.433	2.091	fluoride
3	4.33	3.60	33.866	1.975	chloride
4	4.98	7.65	85.377	2.106	nitrite
5	6.00	1.15	13.778	1.994	bromide
6	6.70	3.18	42.259	0.980	nitrate
7	9.27	1.94	36.321	2.088	phosphate
8	10.51	3.32	63.866	4.970	sulfate
8	14.00	27.68	337.615	16.204	

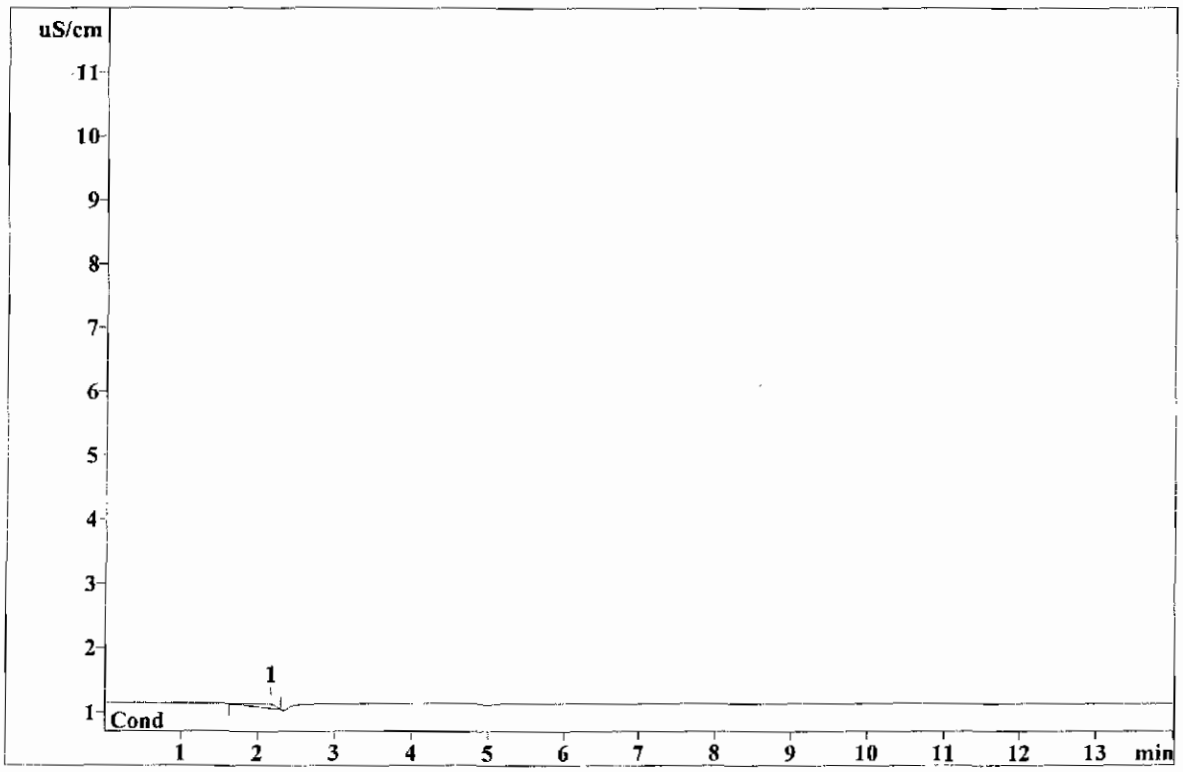
This report has been created by IC Net
METROHM LTD

Report date: 11/22/2011 9:43:26 AM
Printed by: Jadelyn Chun

Ident: AK31-35 CCB521
Analysis from: 11/21/2011 8:03:55 PM
File: vb212003.chw Last save: 11/21/2011 8:17:53 PM

Method: ICD0-I30.mtw Last save: 11/21/2011 11:32:33 AM
Run operator: CHERRY DAM
Analysis number: 71971

SAMPLE:
:
Vial number: 35
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.06	1.441	0.000	

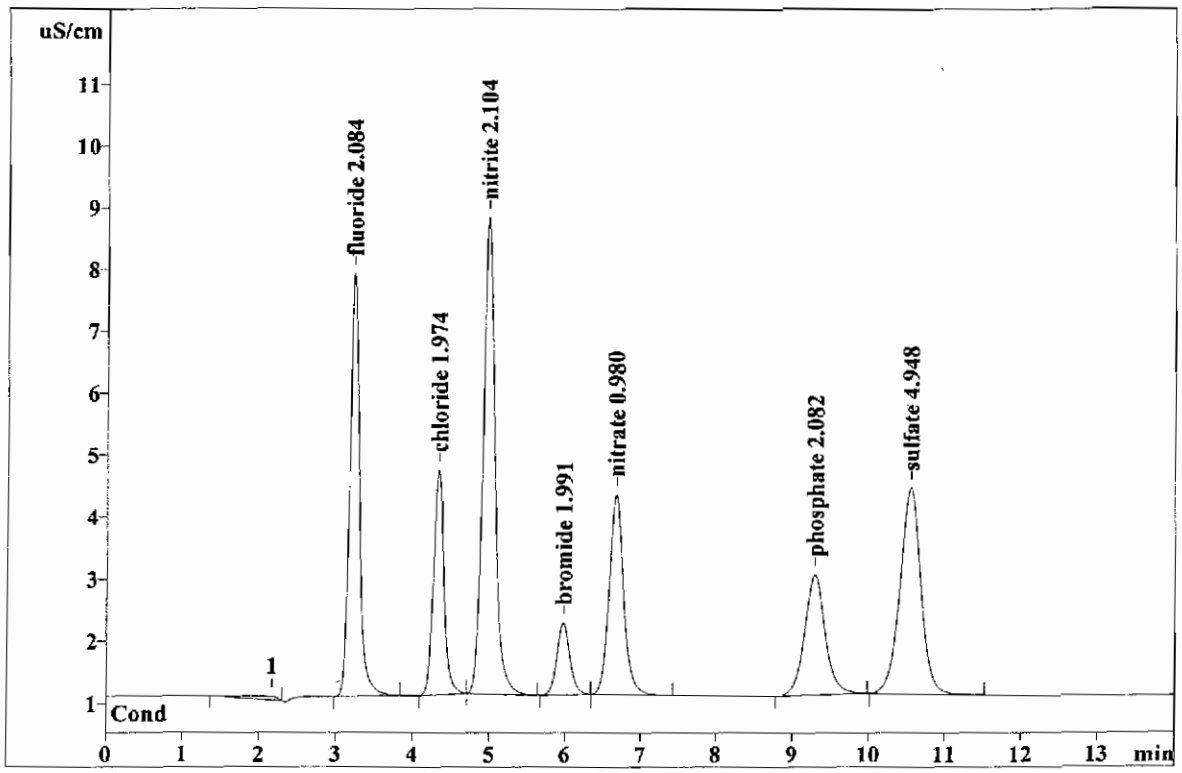
This report has been created by IC Net
METROHM LTD

Report date: 11/21/2011 11:15:40 PM
Printed by: CHERRY DAM

Ident: AK31-46 CCV523
Analysis from: 11/21/2011 11:01:43 PM
File: VB212301.CHW Last save: 11/21/2011 11:15:40 PM

Method: ICD0-I30.mtw Last save: 11/21/2011 11:32:33 AM
Run operator: CHERRY DAM
Analysis number: 71982

SAMPLE:
:
Vial number: 46
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.17	0.06	1.958	0.000	
2	3.22	6.81	61.214	2.084	fluoride
3	4.33	3.62	33.842	1.974	chloride
4	4.97	7.69	85.302	2.104	nitrite
5	5.98	1.16	13.755	1.991	bromide
6	6.66	3.22	42.258	0.980	nitrate
7	9.29	1.93	36.216	2.082	phosphate
8	10.55	3.31	63.581	4.948	sulfate
8	14.00	27.80	338.126	16.163	

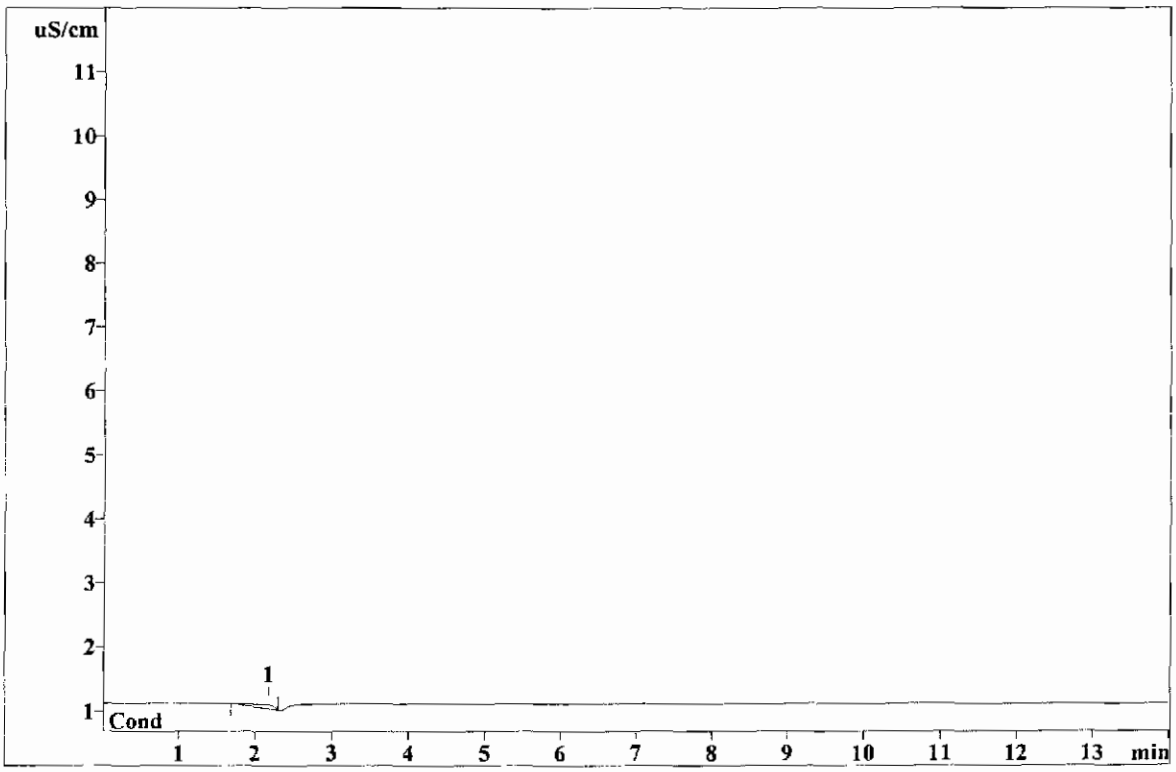
This report has been created by IC Net
METROHM LTD

Report date: 11/22/2011 9:43:59 AM
Printed by: Jadelyn Chun

Ident: AK31-47 CCB523
Analysis from: 11/21/2011 11:17:53 PM
File: vb212317.chw Last save: 11/21/2011 11:31:50 PM

Method: ICD0-I30.mtw Last save: 11/21/2011 11:32:33 AM
Run operator: CHERRY DAM
Analysis number: 71983

SAMPLE:
:
Vial number: 47
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.18	0.06	1.291	0.000	

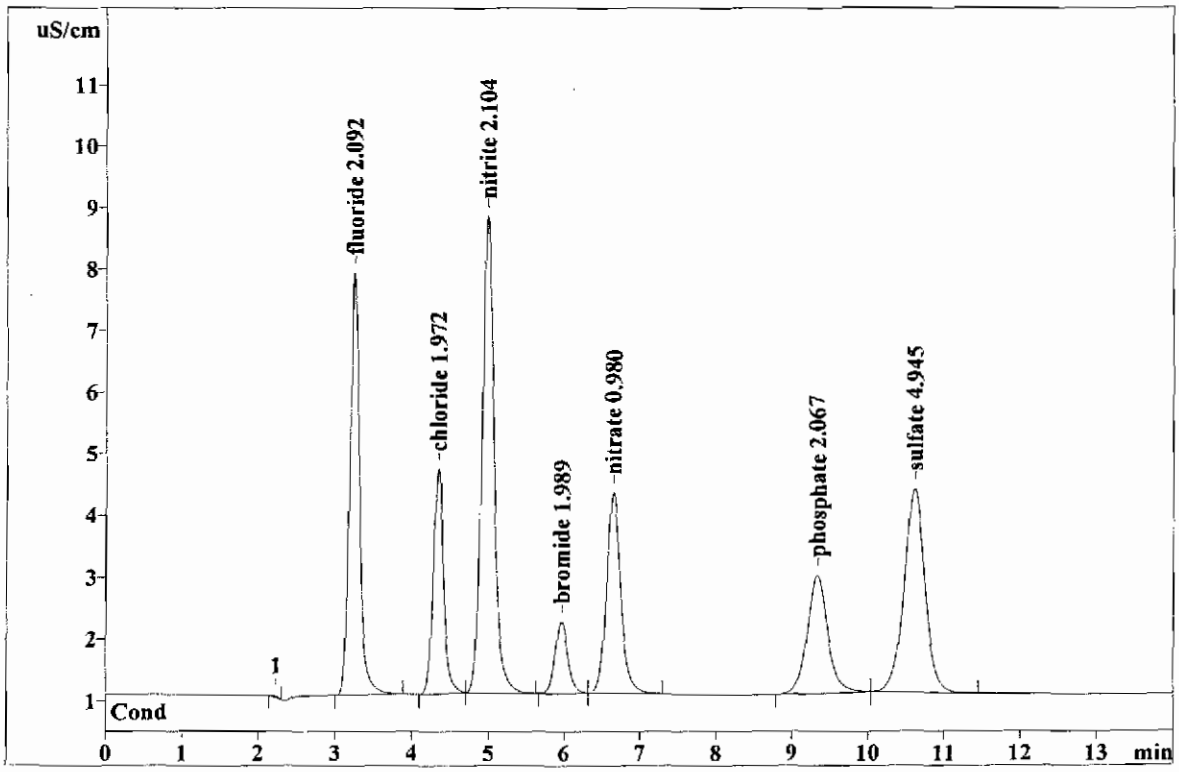
This report has been created by IC Net
METROHM LTD

Report date: 11/22/2011 2:29:38 AM
Printed by: CHERRY DAM

Ident: AK31-58 CCV525
Analysis from: 11/22/2011 2:15:41 AM
File: VB220215.CHW Last save: 11/22/2011 2:29:38 AM

Method: ICD0-I30.mtw Last save: 11/21/2011 11:32:33 AM
Run operator: CHERRY DAM
Analysis number: 71994

SAMPLE:
:
Vial number: 58
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.23	0.02	0.144	0.000	
2	3.23	6.85	61.457	2.092	fluoride
3	4.34	3.63	33.804	1.972	chloride
4	4.97	7.73	85.307	2.104	nitrite
5	5.96	1.16	13.740	1.989	bromide
6	6.64	3.24	42.250	0.980	nitrate
7	9.33	1.91	35.936	2.067	phosphate
8	10.61	3.29	63.538	4.945	sulfate
8	14.00	27.84	336.176	16.148	

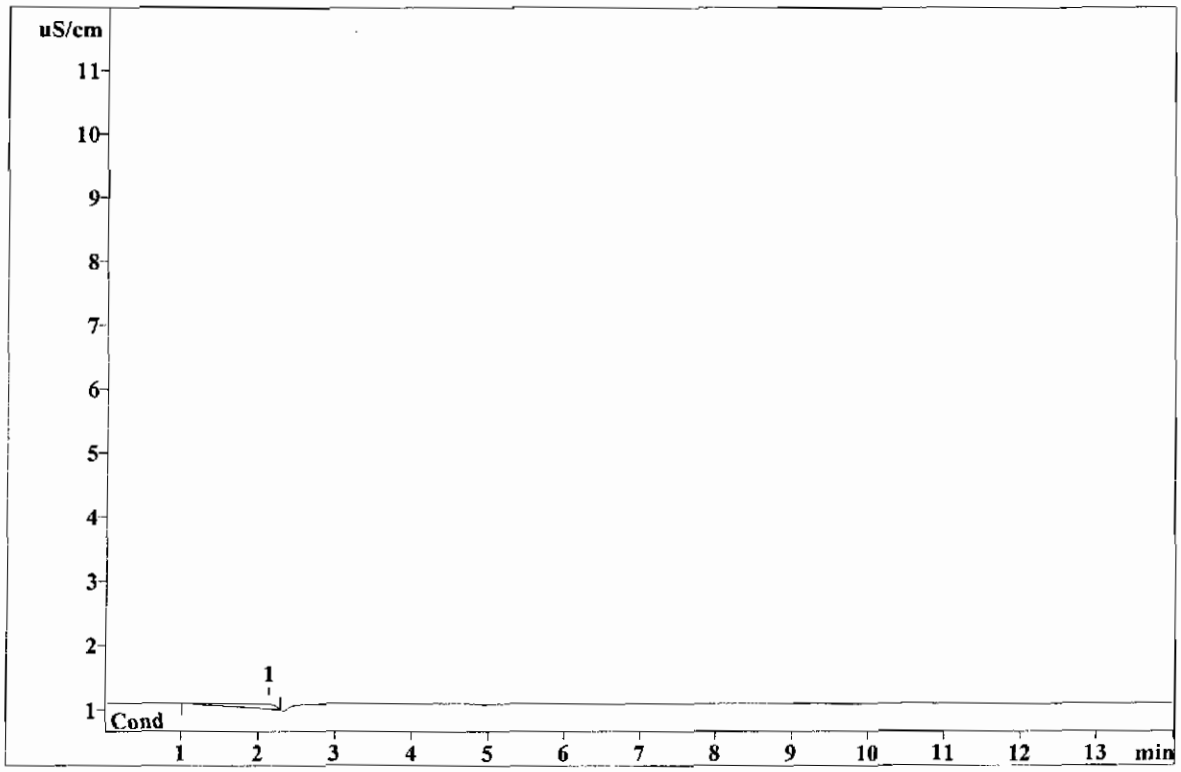
This report has been created by IC Net
METROHM LTD

Report date: 11/22/2011 9:44:15 AM
Printed by: Jadelyn Chun

Ident: AK31-59 CCB525
Analysis from: 11/22/2011 2:31:51 AM
File: vb220231.chw Last save: 11/22/2011 2:45:48 AM

Method: ICD0-I30.mtw Last save: 11/21/2011 11:32:33 AM
Run operator: CHERRY DAM
Analysis number: 71995

SAMPLE:
:
Vial number: 59
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	2.16	0.07	3.084	0.000	

This report has been created by IC Net
METROHM LTD

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Concentrations of:

S_1 — 0.05 ppm
S_2 — 0.1
S_3 — 0.2
S_4 — 0.5
S_5 — 1.0
S_6 — 2.0
S_7 — 5.0
S_8 — 10.0
S_9 — 20.0

Linearity (ppm)

F^- — 5
Cl^- — 20
NO_2N — 10
Br^- — 5
NO_3N — 5
PO_4P — 5
SO_4^{2-} — 20

Column: Metrosep A Supp 5-100

Flow Rate: 0.70 ml/min

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-220 (1000 mM H_2SO_4) 100 ml - 1 L

Book #:	AD0-031
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AI39
Method File:	ICD0-I30.mtw
Analytical Batch:	NA

SOP #	Rev. #
☑ EMAX-300.0	6
☐ EMAX-4110B	0
☑ EMAX-9056	3
☐ EMAX-	

STANDARDS ID	
ICAL	SI1B-17-57-02
ICV	SI1B-17-57-03
CCV	NA
LCS	
MS	

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 9/30/11

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
v9301829.chw	ICD0-130.mtw	AI39-01 IB	1	1.0	1.0	1.0	100.0	0		
v9301845.chw	ICD0-130.mtw	AI39-02 S0	2	1.0	1.0	1.0	100.0	0		
v9301901.chw	ICD0-130.mtw	AI39-03 S1	3	1.0	1.0	1.0	100.0	1		
v9301917.chw	ICD0-130.mtw	AI39-04 S2	4	1.0	1.0	1.0	100.0	2		
v9301934.chw	ICD0-130.mtw	AI39-05 S3	5	1.0	1.0	1.0	100.0	3		
v9301950.chw	ICD0-130.mtw	AI39-06 S4	6	1.0	1.0	1.0	100.0	4		
v9302006.chw	ICD0-130.mtw	AI39-07 S5	7	1.0	1.0	1.0	100.0	5		
v9302022.chw	ICD0-130.mtw	AI39-08 S6	8	1.0	1.0	1.0	100.0	6		
v9302038.chw	ICD0-130.mtw	AI39-09 S7	9	1.0	1.0	1.0	100.0	7		
v9302054.chw	ICD0-130.mtw	AI39-10 S8	10	1.0	1.0	1.0	100.0	8		
v9302111.chw	ICD0-130.mtw	AI39-11 S9	11	1.0	1.0	1.0	100.0	9	FINAL	
v9302127.chw	ICD0-130.mtw	AI39-12 ICV	12	1.0	1.0	1.0	100.0	0		
v9302143.chw	ICD0-130.mtw	AI39-13 ICB	13	1.0	1.0	1.0	100.0	0		

JC 10/3/11

AA 10/03/11

8960

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AD0-032

Instrument No.: D0

Pipette ID's: 039380124

SW8A-02-12

SW8A-02-13

Balance ID#: 40706360

Analytical Sequence: AK27

Method File: IcD0-I30.mtw

Analytical Batch: IcK067W ; IcK069W
IcK071W

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SI18-17-92-01
LCS	SI18-17-92-02
MS	SCP Refer to LCS Parent ID

Column: Metrosep A Supp 5-100 Filter 0.45 µm: 21787469

Flow Rate: 0.70 ml/min 0.2 µm: 21772726

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 11/18/11

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb181251.chw	ICD0-130.mtw	AK27-01 CCV489	1	1.0	1.0	1.0	100.0	0		
vb181308.chw	ICD0-130.mtw	AK27-02 CCB489	2	1.0	1.0	1.0	100.0	0		
vb181324.chw	ICD0-130.mtw	AK27-03 ICK067WB	3	1.0	1.0	1.0	100.0	0		
vb181340.chw	ICD0-130.mtw	AK27-04 ICK067WL	4	1.0	1.0	1.0	100.0	0		
vb181356.chw	ICD0-130.mtw	AK27-05 ICK067WC	5	1.0	1.0	1.0	100.0	0		
vb181412.chw	ICD0-130.mtw	AK27-06 K131-08 DF=200	6	1.0	200.0	1.0	100.0	0		
vb181428.chw	ICD0-130.mtw	AK27-07 K131-09 DF=2000	7	1.0	2000.0	1.0	100.0	0		
vb181445.chw	ICD0-130.mtw	AK27-08 K131-10 DF=2000	8	1.0	2000.0	1.0	100.0	0		
vb181501.chw	ICD0-130.mtw	AK27-09 K131-11 DF=2000	9	1.0	2000.0	1.0	100.0	0		
vb181517.chw	ICD0-130.mtw	AK27-10 K131-13 DF=2000	10	1.0	2000.0	1.0	100.0	0		
vb181533.chw	ICD0-130.mtw	AK27-11 K131-14 DF=2000	11	1.0	2000.0	1.0	100.0	0		
vb181549.chw	ICD0-130.mtw	AK27-12 K131-15 DF=2000	12	1.0	2000.0	1.0	100.0	0		
vb181605.chw	ICD0-130.mtw	AK27-13 CCV491	13	1.0	1.0	1.0	100.0	0		
vb181622.chw	ICD0-130.mtw	AK27-14 CCB491	14	1.0	1.0	1.0	100.0	0		
vb181638.chw	ICD0-130.mtw	AK27-15 K131-16 DF=2000	15	1.0	2000.0	1.0	100.0	0		
vb181654.chw	ICD0-130.mtw	AK27-16 K131-17 DF=10	16	1.0	10.0	1.0	100.0	0		
vb181710.chw	ICD0-130.mtw	AK27-17 K131-18 DF=2000	17	1.0	2000.0	1.0	100.0	0		
vb181726.chw	ICD0-130.mtw	AK27-18 K131-19 DF=2000	18	1.0	2000.0	1.0	100.0	0		
vb181742.chw	ICD0-130.mtw	AK27-19 K116-02 DF=5	19	1.0	5.0	1.0	100.0	0		
vb181759.chw	ICD0-130.mtw	AK27-20 K116-02 DF=100	20	1.0	100.0	1.0	100.0	0		
vb181815.chw	ICD0-130.mtw	AK27-21 K116-04 DF=20	21	1.0	20.0	1.0	100.0	0		
vb181831.chw	ICD0-130.mtw	AK27-22 K116-04D DF=20	22	1.0	20.0	1.0	100.0	0		
vb181847.chw	ICD0-130.mtw	AK27-23 K116-04M DF=20	23	1.0	20.0	1.0	100.0	0		
vb181903.chw	ICD0-130.mtw	AK27-24 K116-04S DF=20	24	1.0	20.0	1.0	100.0	0		
vb181919.chw	ICD0-130.mtw	AK27-25 CCV493	25	1.0	1.0	1.0	100.0	0		
vb181936.chw	ICD0-130.mtw	AK27-26 CCB493	26	1.0	1.0	1.0	100.0	0		
vb181952.chw	ICD0-130.mtw	AK27-27 K116-06 DF=100	27	1.0	100.0	1.0	100.0	0		
vb182008.chw	ICD0-130.mtw	AK27-28 K116-07 DF=100	28	1.0	100.0	1.0	100.0	0		
vb182024.chw	ICD0-130.mtw	AK27-29 K166-01 DF=10	29	1.0	10.0	1.0	100.0	0		
vb182040.chw	ICD0-130.mtw	AK27-30 K166-02 DF=10	30	1.0	10.0	1.0	100.0	0		
vb182056.chw	ICD0-130.mtw	AK27-31 K166-03 DF=5	31	1.0	5.0	1.0	100.0	0		
vb182112.chw	ICD0-130.mtw	AK27-32 K166-04 DF=5	32	1.0	5.0	1.0	100.0	0		
vb182129.chw	ICD0-130.mtw	AK27-33 RINSE	33	1.0	1.0	1.0	100.0	0		
vb182145.chw	ICD0-130.mtw	AK27-34 CCV495	34	1.0	1.0	1.0	100.0	0		
vb182201.chw	ICD0-130.mtw	AK27-35 CCB495	35	1.0	1.0	1.0	100.0	0		
vb182217.chw	ICD0-130.mtw	AK27-36 ICK069WB	36	1.0	1.0	1.0	100.0	0		
vb182233.chw	ICD0-130.mtw	AK27-37 ICK069WL	37	1.0	1.0	1.0	100.0	0		
vb182249.chw	ICD0-130.mtw	AK27-38 ICK069WC	38	1.0	1.0	1.0	100.0	0		
vb182306.chw	ICD0-130.mtw	AK27-39 K146-02 DF=1000	39	1.0	1000.0	1.0	100.0	0		
vb182322.chw	ICD0-130.mtw	AK27-40 K146-03 DF=200	40	1.0	200.0	1.0	100.0	0		
vb182338.chw	ICD0-130.mtw	AK27-41 K146-04 DF=100	41	1.0	100.0	1.0	100.0	0		
vb182354.chw	ICD0-130.mtw	AK27-42 K146-05 DF=100	42	1.0	100.0	1.0	100.0	0		
vb190010.chw	ICD0-130.mtw	AK27-43 K146-06 DF=100	43	1.0	100.0	1.0	100.0	0		
vb190026.chw	ICD0-130.mtw	AK27-44 K174-01 DF=400	44	1.0	400.0	1.0	100.0	0		
vb190043.chw	ICD0-130.mtw	AK27-45 K174-07 DF=400	45	1.0	400.0	1.0	100.0	0		
vb190059.chw	ICD0-130.mtw	AK27-46 CCV497	46	1.0	1.0	1.0	100.0	0		
vb190115.chw	ICD0-130.mtw	AK27-47 CCB497	47	1.0	1.0	1.0	100.0	0		
vb190131.chw	ICD0-130.mtw	AK27-48 K153-01 DF=5	48	1.0	5.0	1.0	100.0	0		
vb190147.chw	ICD0-130.mtw	AK27-49 K153-01 DF=20	49	1.0	20.0	1.0	100.0	0		
vb190203.chw	ICD0-130.mtw	AK27-50 K153-03 DF=5	50	1.0	5.0	1.0	100.0	0		
vb190220.chw	ICD0-130.mtw	AK27-51 K153-03 DF=5	51	1.0	5.0	1.0	100.0	0		
vb190236.chw	ICD0-130.mtw	AK27-52 K153-04 DF=10	52	1.0	10.0	1.0	100.0	0		
vb190252.chw	ICD0-130.mtw	AK27-53 K153-05 DF=5	53	1.0	5.0	1.0	100.0	0		
vb190308.chw	ICD0-130.mtw	AK27-54 K153-06 DF=10	54	1.0	10.0	1.0	100.0	0		
vb190324.chw	ICD0-130.mtw	AK27-55 K153-07 DF=10	55	1.0	10.0	1.0	100.0	0		
vb190340.chw	ICD0-130.mtw	AK27-56 K179-01 DF=5	56	1.0	5.0	1.0	100.0	0		
vb190357.chw	ICD0-130.mtw	AK27-57 K179-03 DF=10	57	1.0	10.0	1.0	100.0	0		

FINAL

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File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb190413.chw	ICD0-I30.mtw	AK27-58 CCV499	58	1.0	1.0	1.0	100.0	0		
vb190429.chw	ICD0-I30.mtw	AK27-59 CCB499	59	1.0	1.0	1.0	100.0	0		
vb190445.chw	ICD0-I30.mtw	AK27-60 K144-01 DF=40	60	1.0	40.0	1.0	100.0	0		
vb190501.chw	ICD0-I30.mtw	AK27-61 K144-01D DF=40	61	1.0	40.0	1.0	100.0	0		
vb190517.chw	ICD0-I30.mtw	AK27-62 K144-01M DF=40	62	1.0	40.0	1.0	100.0	0		
vb190534.chw	ICD0-I30.mtw	AK27-63 K144-01S DF=40	63	1.0	40.0	1.0	100.0	0		
vb190550.chw	ICD0-I30.mtw	AK27-64 K144-02 DF=10	64	1.0	10.0	1.0	100.0	0		
vb190606.chw	ICD0-I30.mtw	AK27-65 K144-03 DF=10	65	1.0	10.0	1.0	100.0	0		
vb190622.chw	ICD0-I30.mtw	AK27-66 RINSE	66	1.0	1.0	1.0	100.0	0		
vb190638.chw	ICD0-I30.mtw	AK27-67 CCV501	67	1.0	1.0	1.0	100.0	0		
vb190654.chw	ICD0-I30.mtw	AK27-68 CCB501	68	1.0	1.0	1.0	100.0	0		
vb190711.chw	ICD0-I30.mtw	AK27-69 ICK071WB	69	1.0	1.0	1.0	100.0	0		
vb190727.chw	ICD0-I30.mtw	AK27-70 ICK071WL	70	1.0	1.0	1.0	100.0	0		
vb190743.chw	ICD0-I30.mtw	AK27-71 ICK071WC	71	1.0	1.0	1.0	100.0	0		
vb190759.chw	ICD0-I30.mtw	AK27-72 K184-01	72	1.0	1.0	1.0	100.0	0		
vb190815.chw	ICD0-I30.mtw	AK27-73 K184-02	73	1.0	1.0	1.0	100.0	0		
vb190831.chw	ICD0-I30.mtw	AK27-74 K184-03	74	1.0	1.0	1.0	100.0	0		
vb190848.chw	ICD0-I30.mtw	AK27-75 K184-04	75	1.0	1.0	1.0	100.0	0		
vb190904.chw	ICD0-I30.mtw	AK27-76 K184-05 DF=10	76	1.0	10.0	1.0	100.0	0		
vb190920.chw	ICD0-I30.mtw	AK27-77 K184-05 DF=20	77	1.0	20.0	1.0	100.0	0		
vb190936.chw	ICD0-I30.mtw	AK27-78 RINSE	78	1.0	1.0	1.0	100.0	0		
vb190952.chw	ICD0-I30.mtw	AK27-79 CCV503	79	1.0	1.0	1.0	100.0	0		
vb191008.chw	ICD0-I30.mtw	AK27-80 CCB503	80	1.0	1.0	1.0	100.0	0		
vb191025.chw	ICD0-I30.mtw	AK27-81 K184-01 DF=5	81	1.0	5.0	1.0	100.0	0		
vb191041.chw	ICD0-I30.mtw	AK27-82 K184-02 DF=10	82	1.0	10.0	1.0	100.0	0		
vb191057.chw	ICD0-I30.mtw	AK27-83 K184-03 DF=5	83	1.0	5.0	1.0	100.0	0		
vb191113.chw	ICD0-I30.mtw	AK27-84 K184-04 DF=10	84	1.0	10.0	1.0	100.0	0		
vb191129.chw	ICD0-I30.mtw	AK27-85 K133-01 DF=1000	85	1.0	1000.0	1.0	100.0	0		
vb191145.chw	ICD0-I30.mtw	AK27-86 K133-01D DF=1000	86	1.0	1000.0	1.0	100.0	0		
vb191201.chw	ICD0-I30.mtw	AK27-87 K133-01M DF=1000	87	1.0	1000.0	1.0	100.0	0		
vb191218.chw	ICD0-I30.mtw	AK27-88 K133-01S DF=1000	88	1.0	1000.0	1.0	100.0	0		
vb191234.chw	ICD0-I30.mtw	AK27-89 K133-02 DF=100	89	1.0	100.0	1.0	100.0	0		
vb191250.chw	ICD0-I30.mtw	AK27-90 K133-03 DF=1000	90	1.0	1000.0	1.0	100.0	0		
vb191306.chw	ICD0-I30.mtw	AK27-91 CCV505	91	1.0	1.0	1.0	100.0	0		
vb191322.chw	ICD0-I30.mtw	AK27-92 CCB505	92	1.0	1.0	1.0	100.0	0		
vb191338.chw	ICD0-I30.mtw	AK27-93 K184-01 DF=10	93	1.0	10.0	1.0	100.0	0		
vb191355.chw	ICD0-I30.mtw	AK27-94 K184-02 DF=20	94	1.0	20.0	1.0	100.0	0		
vb191411.chw	ICD0-I30.mtw	AK27-95 K184-03 DF=10	95	1.0	10.0	1.0	100.0	0		
vb191427.chw	ICD0-I30.mtw	AK27-96 K184-04 DF=20	96	1.0	20.0	1.0	100.0	0		
vb191443.chw	ICD0-I30.mtw	AK27-97 K184-05 DF=40	97	1.0	40.0	1.0	100.0	0		
vb191459.chw	ICD0-I30.mtw	AK27-98 K133-04 DF=500	98	1.0	500.0	1.0	100.0	0		
vb191515.chw	ICD0-I30.mtw	AK27-99 K133-05 DF=100	99	1.0	100.0	1.0	100.0	0		FINAL
vb191532.chw	ICD0-I30.mtw	AK27-100 ICK071WX	100	1.0	1.0	1.0	100.0	0		
vb191548.chw	ICD0-I30.mtw	AK27-101 ICK071WY	101	1.0	1.0	1.0	100.0	0		
vb191604.chw	ICD0-I30.mtw	AK27-102 ICK071WQ	102	1.0	1.0	1.0	100.0	0		
vb191620.chw	ICD0-I30.mtw	AK27-103 CCV507	103	1.0	1.0	1.0	100.0	0		
vb191636.chw	ICD0-I30.mtw	AK27-104 CCB507	104	1.0	1.0	1.0	100.0	0		

Am 11/21/9

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EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AD0-032

Instrument No.: D0

Pipette ID's: 039380124

SW8A-02-12

SW8A-02-13

Balance ID#: 40706360

Analytical Sequence: AK31

Method File: ICD0-I30.mth

Analytical Batch: ICK0751; ICK0770

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SI18-17-93-02
LCS	SI18-17-93-03
MS	SCP Refer to LCS Parent ID

Column: Metrosep A Supp 5-100 Filter 0.45µm: 21787469

Flow Rate: 0.70 ml/min 0.20µm: 21772726

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 11/21/11

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb211054.chw	ICD0-I30.mtw	AK31-01 CCV515	1	1.0	1.0	1.0	100.0	0		
vb211110.chw	ICD0-I30.mtw	AK31-02 CCB515	2	1.0	1.0	1.0	100.0	0		
vb211126.chw	ICD0-I30.mtw	AK31-03 ICK075WB	3	1.0	1.0	1.0	100.0	0		
vb211142.chw	ICD0-I30.mtw	AK31-04 ICK075WL	4	1.0	1.0	1.0	100.0	0		
vb211158.chw	ICD0-I30.mtw	AK31-05 ICK075WC	5	1.0	1.0	1.0	100.0	0		
vb211215.chw	ICD0-I30.mtw	AK31-06 K145-02 DF=1000	6	1.0	1000.0	1.0	100.0	0		
vb211231.chw	ICD0-I30.mtw	AK31-07 K145-03 DF=1000	7	1.0	1000.0	1.0	100.0	0		
vb211247.chw	ICD0-I30.mtw	AK31-08 K145-04 DF=1000	8	1.0	1000.0	1.0	100.0	0		
vb211303.chw	ICD0-I30.mtw	AK31-09 K145-05 DF=1000	9	1.0	1000.0	1.0	100.0	0		
vb211319.chw	ICD0-I30.mtw	AK31-10 K145-07 DF=1000	10	1.0	1000.0	1.0	100.0	0		
vb211335.chw	ICD0-I30.mtw	AK31-11 K145-09 DF=50	11	1.0	50.0	1.0	100.0	0		
vb211352.chw	ICD0-I30.mtw	AK31-12 K145-12 DF=1000	12	1.0	1000.0	1.0	100.0	0		
vb211408.chw	ICD0-I30.mtw	AK31-13 CCV517	13	1.0	1.0	1.0	100.0	0		
vb211424.chw	ICD0-I30.mtw	AK31-14 CCB517	14	1.0	1.0	1.0	100.0	0		
vb211440.chw	ICD0-I30.mtw	AK31-15 K145-08 DF=50	15	1.0	50.0	1.0	100.0	0		
vb211456.chw	ICD0-I30.mtw	AK31-16 K145-08D DF=50	16	1.0	50.0	1.0	100.0	0		
vb211513.chw	ICD0-I30.mtw	AK31-17 K145-08M DF=50	17	1.0	50.0	1.0	100.0	0		
vb211529.chw	ICD0-I30.mtw	AK31-18 K145-11 DF=50	18	1.0	50.0	1.0	100.0	0		
vb211545.chw	ICD0-I30.mtw	AK31-19 K145-11D DF=50	19	1.0	50.0	1.0	100.0	0		
vb211601.chw	ICD0-I30.mtw	AK31-20 K145-11M DF=50	20	1.0	50.0	1.0	100.0	0		
vb211617.chw	ICD0-I30.mtw	AK31-21 K131-02 DF=200	21	1.0	200.0	1.0	100.0	0		
vb211633.chw	ICD0-I30.mtw	AK31-22 K188-03 DF=10	22	1.0	10.0	1.0	100.0	0		
vb211649.chw	ICD0-I30.mtw	AK31-23 K131-05 DF=100	23	1.0	100.0	1.0	100.0	0		
vb211706.chw	ICD0-I30.mtw	AK31-24 K131-08 DF=400	24	1.0	400.0	1.0	100.0	0		
vb211722.chw	ICD0-I30.mtw	AK31-25 CCV519	25	1.0	1.0	1.0	100.0	0		
vb211738.chw	ICD0-I30.mtw	AK31-26 CCB519	26	1.0	1.0	1.0	100.0	0		
vb211754.chw	ICD0-I30.mtw	AK31-27 K131-03	27	1.0	1.0	1.0	100.0	0		
vb211810.chw	ICD0-I30.mtw	AK31-28 K131-04 DF=10	28	1.0	10.0	1.0	100.0	0		
vb211826.chw	ICD0-I30.mtw	AK31-29 K131-13 DF=200	29	1.0	200.0	1.0	100.0	0		
vb211843.chw	ICD0-I30.mtw	AK31-30 K131-14 DF=200	30	1.0	200.0	1.0	100.0	0		
vb211859.chw	ICD0-I30.mtw	AK31-31 K131-15 DF=200	31	1.0	200.0	1.0	100.0	0		
vb211915.chw	ICD0-I30.mtw	AK31-32 K131-16 DF=200	32	1.0	200.0	1.0	100.0	0		
vb211931.chw	ICD0-I30.mtw	AK31-33 K131-17 DF=40	33	1.0	40.0	1.0	100.0	0		
vb211947.chw	ICD0-I30.mtw	AK31-34 CCV521	34	1.0	1.0	1.0	100.0	0		
vb212003.chw	ICD0-I30.mtw	AK31-35 CCB521	35	1.0	1.0	1.0	100.0	0		
vb212020.chw	ICD0-I30.mtw	AK31-36 ICK077WB	36	1.0	1.0	1.0	100.0	0		
vb212036.chw	ICD0-I30.mtw	AK31-37 ICK077WL	37	1.0	1.0	1.0	100.0	0		
vb212052.chw	ICD0-I30.mtw	AK31-38 ICK077WC	38	1.0	1.0	1.0	100.0	0		
vb212108.chw	ICD0-I30.mtw	AK31-39 K145-04 DF=2000	39	1.0	2000.0	1.0	100.0	0		
vb212124.chw	ICD0-I30.mtw	AK31-40 K145-07 DF=2000	40	1.0	2000.0	1.0	100.0	0		
vb212140.chw	ICD0-I30.mtw	AK31-41 K145-08 DF=5	41	1.0	5.0	1.0	100.0	0		
vb212157.chw	ICD0-I30.mtw	AK31-42 K145-08D DF=5	42	1.0	5.0	1.0	100.0	0		
vb212213.chw	ICD0-I30.mtw	AK31-43 K145-08M DF=5	43	1.0	5.0	1.0	100.0	0		
vb212229.chw	ICD0-I30.mtw	AK31-44 K145-09 DF=200	44	1.0	200.0	1.0	100.0	0		
vb212245.chw	ICD0-I30.mtw	AK31-45 K145-12 DF=2000	45	1.0	2000.0	1.0	100.0	0		
vb212301.chw	ICD0-I30.mtw	AK31-46 CCV523	46	1.0	1.0	1.0	100.0	0		
vb212317.chw	ICD0-I30.mtw	AK31-47 CCB523	47	1.0	1.0	1.0	100.0	0		
vb212334.chw	ICD0-I30.mtw	AK31-48 K184-01 DF=200	48	1.0	200.0	1.0	100.0	0		
vb212350.chw	ICD0-I30.mtw	AK31-49 K184-02 DF=400	49	1.0	400.0	1.0	100.0	0		
vb220006.chw	ICD0-I30.mtw	AK31-50 K184-03 DF=20	50	1.0	20.0	1.0	100.0	0		
vb220022.chw	ICD0-I30.mtw	AK31-51 K184-03 DF=200	51	1.0	200.0	1.0	100.0	0		
vb220038.chw	ICD0-I30.mtw	AK31-52 K184-04 DF=50	52	1.0	50.0	1.0	100.0	0		
vb220054.chw	ICD0-I30.mtw	AK31-53 K184-04 DF=400	53	1.0	400.0	1.0	100.0	0		
vb220111.chw	ICD0-I30.mtw	AK31-54 K184-05 DF=500	54	1.0	500.0	1.0	100.0	0		
vb220127.chw	ICD0-I30.mtw	AK31-55 K186-06 DF=10	55	1.0	10.0	1.0	100.0	0		
vb220143.chw	ICD0-I30.mtw	AK31-56 K186-09 DF=10	56	1.0	10.0	1.0	100.0	0		
vb220159.chw	ICD0-I30.mtw	AK31-57 K186-12 DF=10	57	1.0	10.0	1.0	100.0	0		

FINAL

JC 11/22/11

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File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb220215.chw	ICD0-130.mtw	AK31-58 CCV525	58	1.0	1.0	1.0	100.0	0		
vb220231.chw	ICD0-130.mtw	AK31-59 CCB525	59	1.0	1.0	1.0	100.0	0		
vb220248.chw	ICD0-130.mtw	AK31-60 K148-01	60	1.0	1.0	1.0	100.0	0		
vb220304.chw	ICD0-130.mtw	AK31-61 K186-08 DF=2	61	1.0	2.0	1.0	100.0	0		
vb220320.chw	ICD0-130.mtw	AK31-62 K186-08D DF=2	62	1.0	2.0	1.0	100.0	0		
vb220336.chw	ICD0-130.mtw	AK31-63 K186-08M DF=2	63	1.0	2.0	1.0	100.0	0		
vb220352.chw	ICD0-130.mtw	AK31-64 K186-08S DF=2	64	1.0	2.0	1.0	100.0	0		
vb220408.chw	ICD0-130.mtw	AK31-65 K186-08 DF=10	65	1.0	10.0	1.0	100.0	0		
vb220424.chw	ICD0-130.mtw	AK31-66 K186-08D DF=10	66	1.0	10.0	1.0	100.0	0		
vb220441.chw	ICD0-130.mtw	AK31-67 K186-08M DF=10	67	1.0	10.0	1.0	100.0	0		
vb220457.chw	ICD0-130.mtw	AK31-68 K186-08S DF=10	68	1.0	10.0	1.0	100.0	0		
vb220513.chw	ICD0-130.mtw	AK31-69 K188-03 DF=200	69	1.0	200.0	1.0	100.0	0		
vb220529.chw	ICD0-130.mtw	AK31-70 CCV527	70	1.0	1.0	1.0	100.0	0		
vb220545.chw	ICD0-130.mtw	AK31-71 CCB527	71	1.0	1.0	1.0	100.0	0		

FINAL

JL 11/22/11

RETENTION TIME WINDOW

RETENTION TIME WINDOW
METHOD 300.0

Lab name:	**EMAX**	**Method:**	**EMAX-300.0**
Instrument ID:	IC100 (761 IC)	IC column:	METROSEP A SUPP 5
		Column size:	100X4.0mm

Compound	Retention time Window
FLUORIDE	**0.234**
CHLORIDE	**0.407**
NTIRITE	**0.52**
BROMIDE	**0.688**
NTIRATE	**0.836**
PHOSPHATE	**0.678**
SULFATE	**0.915**
IODIDE	**1.078**

10-17-07

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K184

METHOD 300.0(M)
ORGANIC ACIDS BY IC

A total of five (5) water samples were received on 11/18/11 for Organic Acids (Acetate, Butyrate, Lactate and Propionate) by IC analysis, Method 300.0(M) in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for OAK016WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample was analyzed at the frequency prescribed by the project. Percent recoveries were within project QC limits except for one result qualified with [*] in K184-01 M/S Propionate summary form, most likely due to matrix interference. Check QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

SAMPLE RESULTS

METHOD 300.0(M)
ACETATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K184

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK016WB	ND	1	NA	1.00	0.0500	11/22/1112:34	NA	HK22003	HK22001	OAK016W	NA	NA
LCS1W	OAK016WL	18.1	1	NA	1.00	0.0500	11/22/1112:55	NA	HK22004	HK22001	OAK016W	NA	NA
LCD1W	OAK016WC	18.0	1	NA	1.00	0.0500	11/22/1113:16	NA	HK22005	HK22001	OAK016W	NA	NA
MW-70-PMW13A-153	K184-01	ND	1	NA	1.00	0.0500	11/22/1122:30	NA	HK22018	HK22013	OAK016W	11/18/1109:45	11/18/11
MW-70-PMW13A-153MS	K184-01M	10.5	1	NA	1.00	0.0500	11/22/1123:11	NA	HK22019	HK22013	OAK016W	11/18/1109:45	11/18/11
MW-70-PMW13A-153MSD	K184-01S	10.1	1	NA	1.00	0.0500	11/22/1123:52	NA	HK22020	HK22013	OAK016W	11/18/1109:45	11/18/11
MW-70-PMW13B-154	K184-02	ND	1	NA	1.00	0.0500	11/23/1100:33	NA	HK22021	HK22013	OAK016W	11/18/1110:55	11/18/11
MW-70-PMW14A-155	K184-03	ND	1	NA	1.00	0.0500	11/23/1101:13	NA	HK22022	HK22013	OAK016W	11/18/1112:09	11/18/11
MW-70-PMW14B-156	K184-04	ND	1	NA	1.00	0.0500	11/23/1101:54	NA	HK22023	HK22013	OAK016W	11/18/1114:52	11/18/11
IW-70-SSB109-157	K184-05	ND	1	NA	1.00	0.0500	11/23/1102:35	NA	HK22024	HK22013	OAK016W	11/18/1116:13	11/18/11

METHOD 300.0(M)
BUTYRATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K184

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK016WB	ND	1	NA	1.00	0.0500	11/22/1112:34	NA	HK22003	HK22001	OAK016W	NA	NA
LCS1W	OAK016WL	18.4	1	NA	1.00	0.0500	11/22/1112:55	NA	HK22004	HK22001	OAK016W	NA	NA
LCD1W	OAK016WC	18.0	1	NA	1.00	0.0500	11/22/1113:16	NA	HK22005	HK22001	OAK016W	NA	NA
MW-70-PMW13A-153	K184-01	ND	1	NA	1.00	0.0500	11/22/1122:30	NA	HK22018	HK22013	OAK016W	11/18/1109:45	11/18/11
MW-70-PMW13A-153MS	K184-01M	10.7	1	NA	1.00	0.0500	11/22/1123:11	NA	HK22019	HK22013	OAK016W	11/18/1109:45	11/18/11
MW-70-PMW13A-153MSD	K184-01S	10.4	1	NA	1.00	0.0500	11/22/1123:52	NA	HK22020	HK22013	OAK016W	11/18/1109:45	11/18/11
MW-70-PMW13B-154	K184-02	ND	1	NA	1.00	0.0500	11/23/1100:33	NA	HK22021	HK22013	OAK016W	11/18/1110:55	11/18/11
MW-70-PMW14A-155	K184-03	ND	1	NA	1.00	0.0500	11/23/1101:13	NA	HK22022	HK22013	OAK016W	11/18/1112:09	11/18/11
MW-70-PMW14B-156	K184-04	ND	1	NA	1.00	0.0500	11/23/1101:54	NA	HK22023	HK22013	OAK016W	11/18/1114:52	11/18/11
IW-70-SSB109-157	K184-05	ND	1	NA	1.00	0.0500	11/23/1102:35	NA	HK22024	HK22013	OAK016W	11/18/1116:13	11/18/11

METHOD 300.0(M)
LACTATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K184

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK016WB	ND	1	NA	1.00	0.0500	11/22/1112:34	NA	HK22003	HK22001	OAK016W	NA	NA
LCS1W	OAK016WL	18.2	1	NA	1.00	0.0500	11/22/1112:55	NA	HK22004	HK22001	OAK016W	NA	NA
LCD1W	OAK016WC	18.1	1	NA	1.00	0.0500	11/22/1113:16	NA	HK22005	HK22001	OAK016W	NA	NA
MW-70-PMW13A-153	K184-01	ND	1	NA	1.00	0.0500	11/22/1122:30	NA	HK22018	HK22013	OAK016W	11/18/1109:45	11/18/11
MW-70-PMW13A-153MS	K184-01M	10.3	1	NA	1.00	0.0500	11/22/1123:11	NA	HK22019	HK22013	OAK016W	11/18/1109:45	11/18/11
MW-70-PMW13A-153MSD	K184-01S	10.4	1	NA	1.00	0.0500	11/22/1123:52	NA	HK22020	HK22013	OAK016W	11/18/1109:45	11/18/11
MW-70-PMW13B-154	K184-02	ND	1	NA	1.00	0.0500	11/23/1100:33	NA	HK22021	HK22013	OAK016W	11/18/1110:55	11/18/11
MW-70-PMW14A-155	K184-03	ND	1	NA	1.00	0.0500	11/23/1101:13	NA	HK22022	HK22013	OAK016W	11/18/1112:09	11/18/11
MW-70-PMW14B-156	K184-04	ND	1	NA	1.00	0.0500	11/23/1101:54	NA	HK22023	HK22013	OAK016W	11/18/1114:52	11/18/11
IW-70-SSB109-157	K184-05	ND	1	NA	1.00	0.0500	11/23/1102:35	NA	HK22024	HK22013	OAK016W	11/18/1116:13	11/18/11

METHOD 300.0(M)
PROPIONATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K184

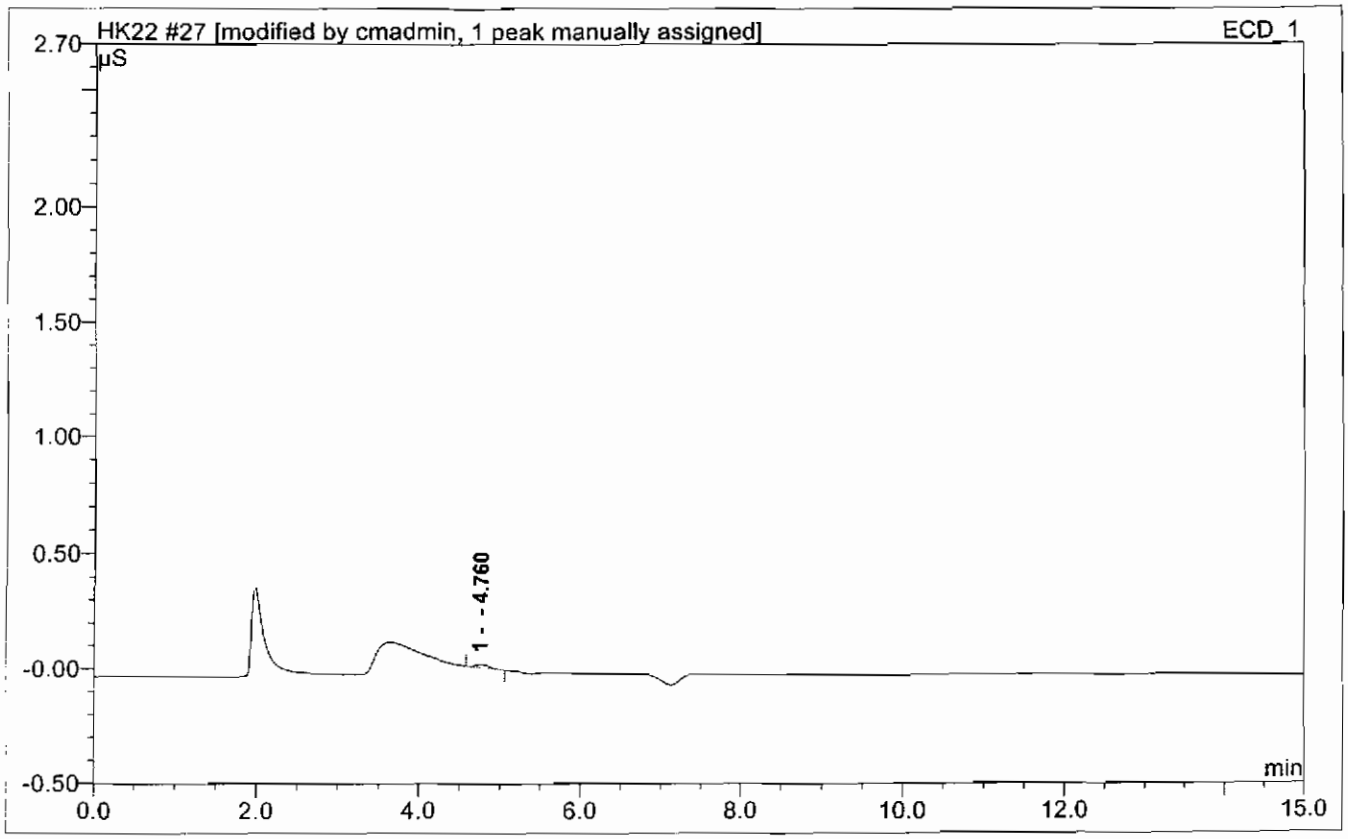
Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK016WB	ND	1	NA	1.00	0.0500	11/22/1112:34	NA	HK22003	HK22001	OAK016W	NA	NA
LCS1W	OAK016WL	19.3	1	NA	1.00	0.0500	11/22/1112:55	NA	HK22004	HK22001	OAK016W	NA	NA
LCD1W	OAK016WC	18.9	1	NA	1.00	0.0500	11/22/1113:16	NA	HK22005	HK22001	OAK016W	NA	NA
MW-70-PMW13A-153	K184-01	ND	1	NA	1.00	0.0500	11/22/1122:30	NA	HK22018	HK22013	OAK016W	11/18/1109:45	11/18/11
MW-70-PMW13A-153MS	K184-01M	11.0	1	NA	1.00	0.0500	11/22/1123:11	NA	HK22019	HK22013	OAK016W	11/18/1109:45	11/18/11
MW-70-PMW13A-153MSD	K184-01S	8.05	1	NA	1.00	0.0500	11/22/1123:52	NA	HK22020	HK22013	OAK016W	11/18/1109:45	11/18/11
MW-70-PMW13B-154	K184-02	ND	1	NA	1.00	0.0500	11/23/1100:33	NA	HK22021	HK22013	OAK016W	11/18/1110:55	11/18/11
MW-70-PMW14A-155	K184-03	ND	1	NA	1.00	0.0500	11/23/1101:13	NA	HK22022	HK22013	OAK016W	11/18/1112:09	11/18/11
MW-70-PMW14B-156	K184-04	ND	1	NA	1.00	0.0500	11/23/1101:54	NA	HK22023	HK22013	OAK016W	11/18/1114:52	11/18/11
IW-70-SSB109-157	K184-05	ND	1	NA	1.00	0.0500	11/23/1102:35	NA	HK22024	HK22013	OAK016W	11/18/1116:13	11/18/11

HK22 018 K184-01

SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

Sample Name:	**K184-01**	*Injection Volume:*	**25.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 22:30**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.76		0.014822	0.002739	100.00	n.a.	BMB^
Total:			0.015	0.003	100.00	0.000	

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK016WB	OAK016WL	OAK016WC		
LAB FILE ID:	HK22003	HK22004	HK22005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1112:34	11/22/1112:55	11/22/1113:16	DATE RECEIVED:	NA
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22001	HK22001	HK22001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	18.1	90	20.0	18.0	90	1	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MW-70-PMW13A-153				
LAB SAMP ID:	K184-01	K184-01M	K184-01S		
LAB FILE ID:	HK22018	HK22019	HK22020		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/18/11 09:45
DATE ANALYZED:	11/22/1122:30	11/22/1123:11	11/22/1123:52	DATE RECEIVED:	11/18/11
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22013	HK22013	HK22013		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPTKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	10.0	10.5	105	10.0	10.1	101	4	75-125	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK016WB	OAK016WL	OAK016WC		
LAB FILE ID:	HK22003	HK22004	HK22005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1112:34	11/22/1112:55	11/22/1113:16	DATE RECEIVED:	NA
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22001	HK22001	HK22001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	20.0	18.4	92	20.0	18.0	90	2	90-110	20

8976

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MW-70-PMW13A-153				
LAB SAMP ID:	K184-01	K184-01M	K184-01S		
LAB FILE ID:	HK22018	HK22019	HK22020		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/18/11 09:45
DATE ANALYZED:	11/22/1122:30	11/22/1123:11	11/22/1123:52	DATE RECEIVED:	11/18/11
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22013	HK22013	HK22013		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	10.0	10.7	107	10.0	10.4	104	3	75-125	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK016WB	OAK016WL	OAK016WC		
LAB FILE ID:	HK22003	HK22004	HK22005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1112:34	11/22/1112:55	11/22/1113:16	DATE RECEIVED:	NA
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22001	HK22001	HK22001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	20.0	18.2	91	20.0	18.1	90	1	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MW-70-PMW13A-153				
LAB SAMP ID:	K184-01	K184-01M	K184-01S		
LAB FILE ID:	HK22018	HK22019	HK22020		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/18/11 09:45
DATE ANALYZED:	11/22/1122:30	11/22/1123:11	11/22/1123:52	DATE RECEIVED:	11/18/11
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22013	HK22013	HK22013		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	10.0	10.3	103	10.0	10.4	104	1	75-125	20

8982

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP TD:	OAK016WB	OAK016WL	OAK016WC		
LAB FTLE ID:	HK22003	HK22004	HK22005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1112:34	11/22/1112:55	11/22/1113:16	DATE RECEIVED:	NA
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22001	HK22001	HK22001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	20.0	19.3	96	20.0	18.9	94	2	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MW-70-PMW13A-153				
LAB SAMP ID:	K184-01	K184-01M	K184-01S		
LAB FILE ID:	HK22018	HK22019	HK22020		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/18/11 09:45
DATE ANALYZED:	11/22/1122:30	11/22/1123:11	11/22/1123:52	DATE RECEIVED:	11/18/11
PREP. BATCH:	OAK016W	OAK016W	OAK016W		
CALIB. REF:	HK22013	HK22013	HK22013		

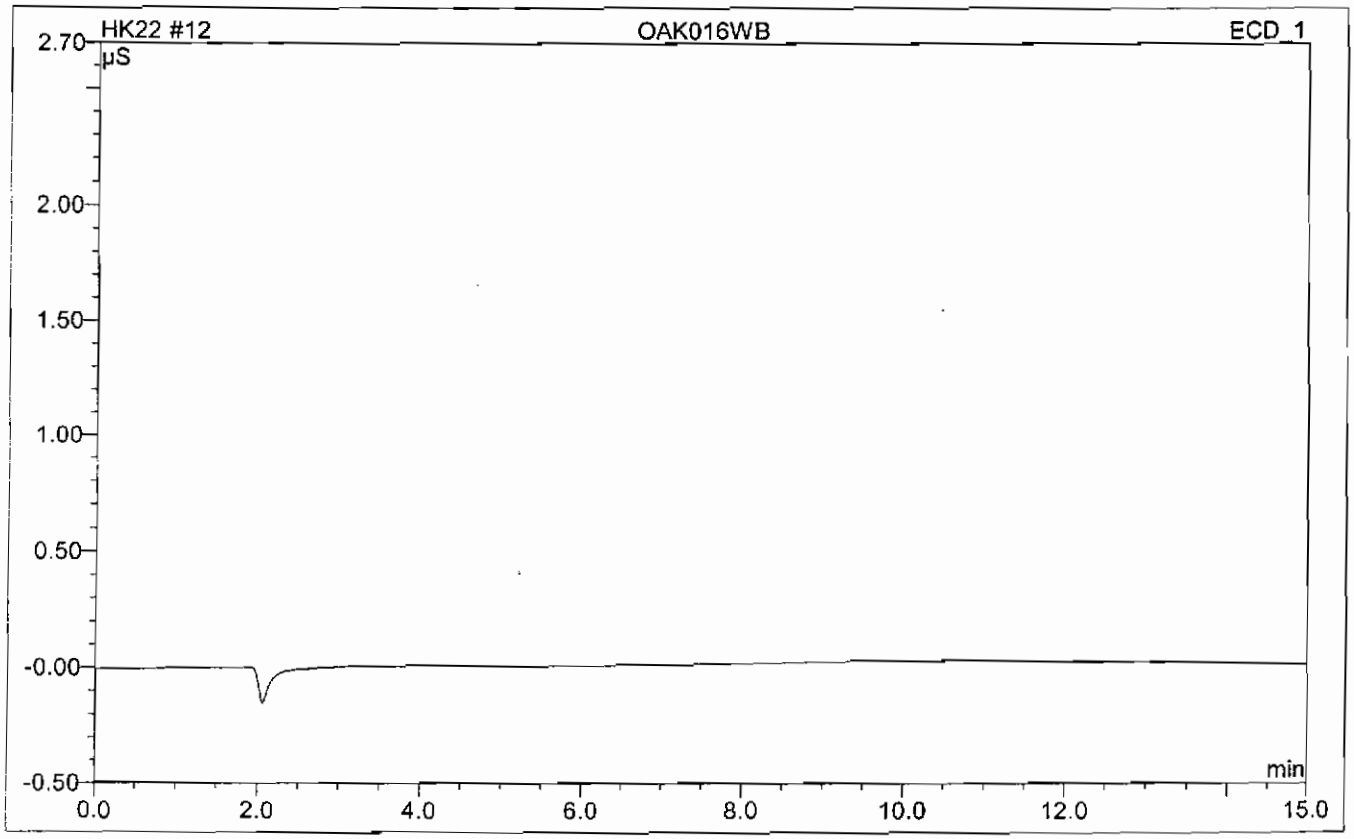
ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	10.0	11.0	110	10.0	8.05	80	31*	75-125	20

QC DATA

HK22 003 OAK016WB

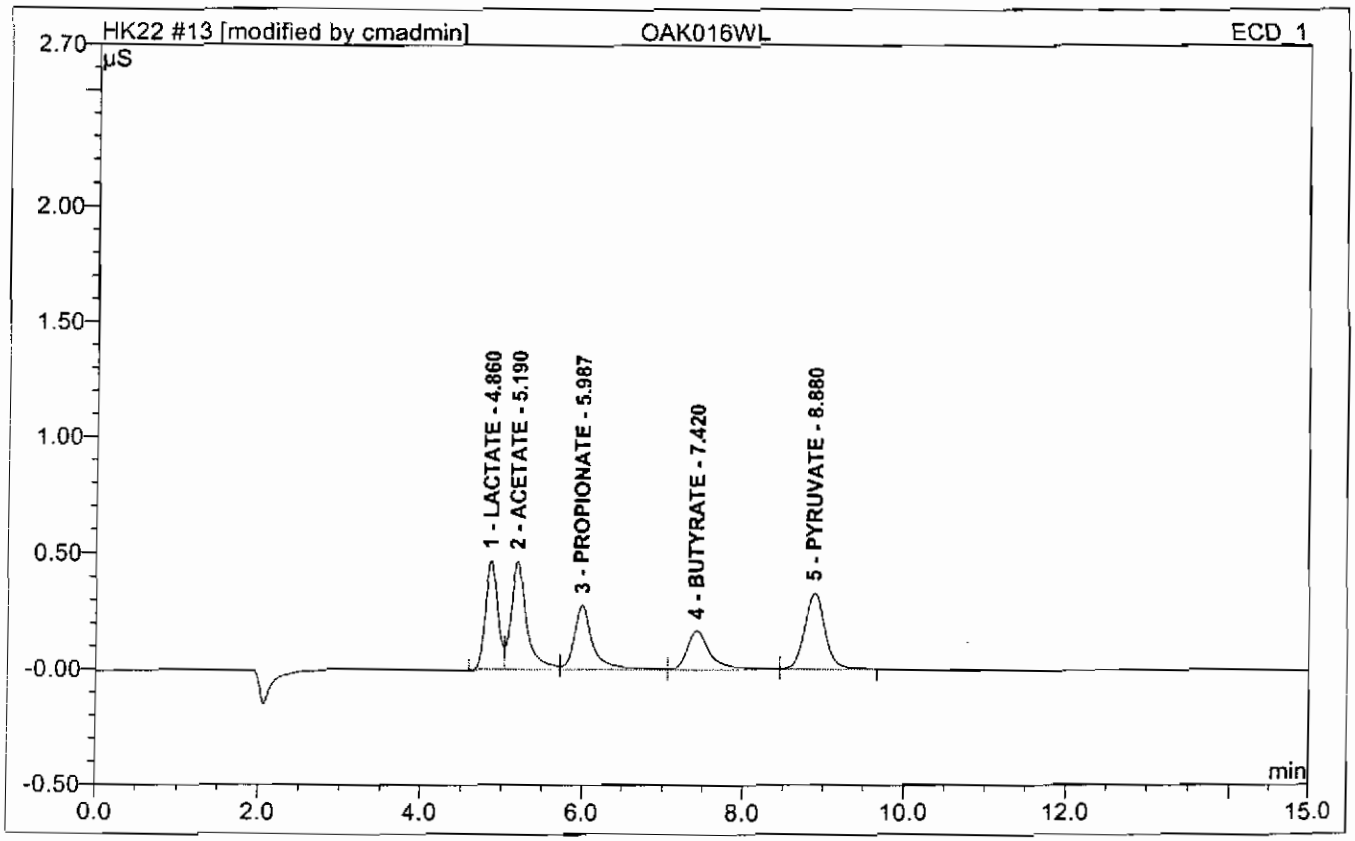
Sample Name:	**OAK016WB**	*Injection Volume:*	**25.0**
Vial Number:	**98**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 12:34**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

HK22 004 OAK016WL

Sample Name:	**OAK016WL**	*Injection Volume:*	**25.0**
Vial Number:	**97**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 12:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.86	LACTATE	0.467410	0.080631	19.54	1.823	BM *
2	5.19	ACETATE	0.463982	0.103105	24.99	1.809	M *
3	5.99	PROPIONATE	0.276534	0.075961	18.41	1.934	M *
4	7.42	BUTYRATE	0.168434	0.056932	13.80	1.836	M *
5	8.88	PYRUVATE	0.327210	0.095922	23.25	1.865	MB*
Total:			1.704	0.413	100.00	9.268	

- ☐ Incorrect Retention Time
- ☑ Incorrect Baseline
- ☐ Incorrect Integration
- ☐ Other _____

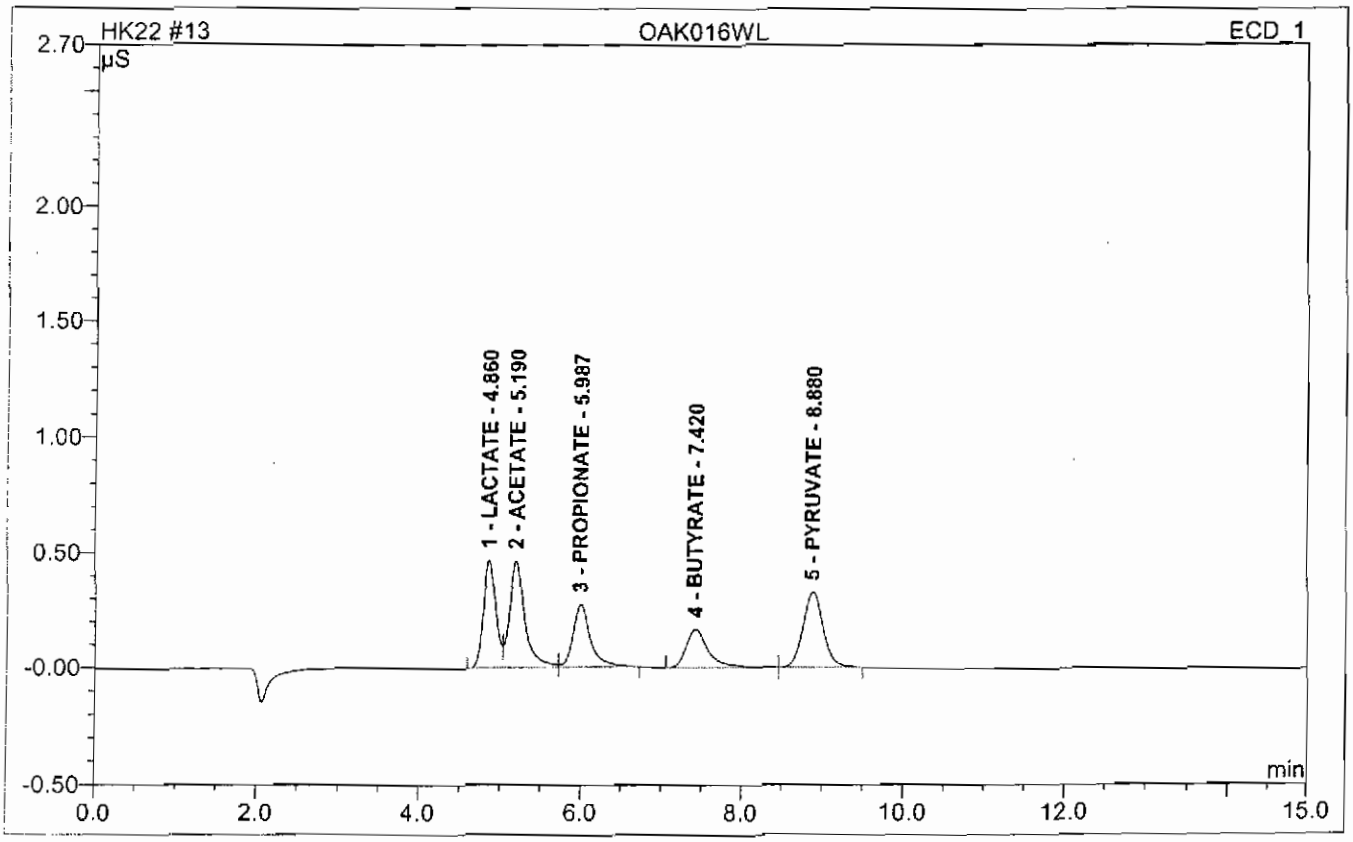
Initials: ae
Date: 11/23/11

default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.70 Build 1820

HK22 004 OAK016WL

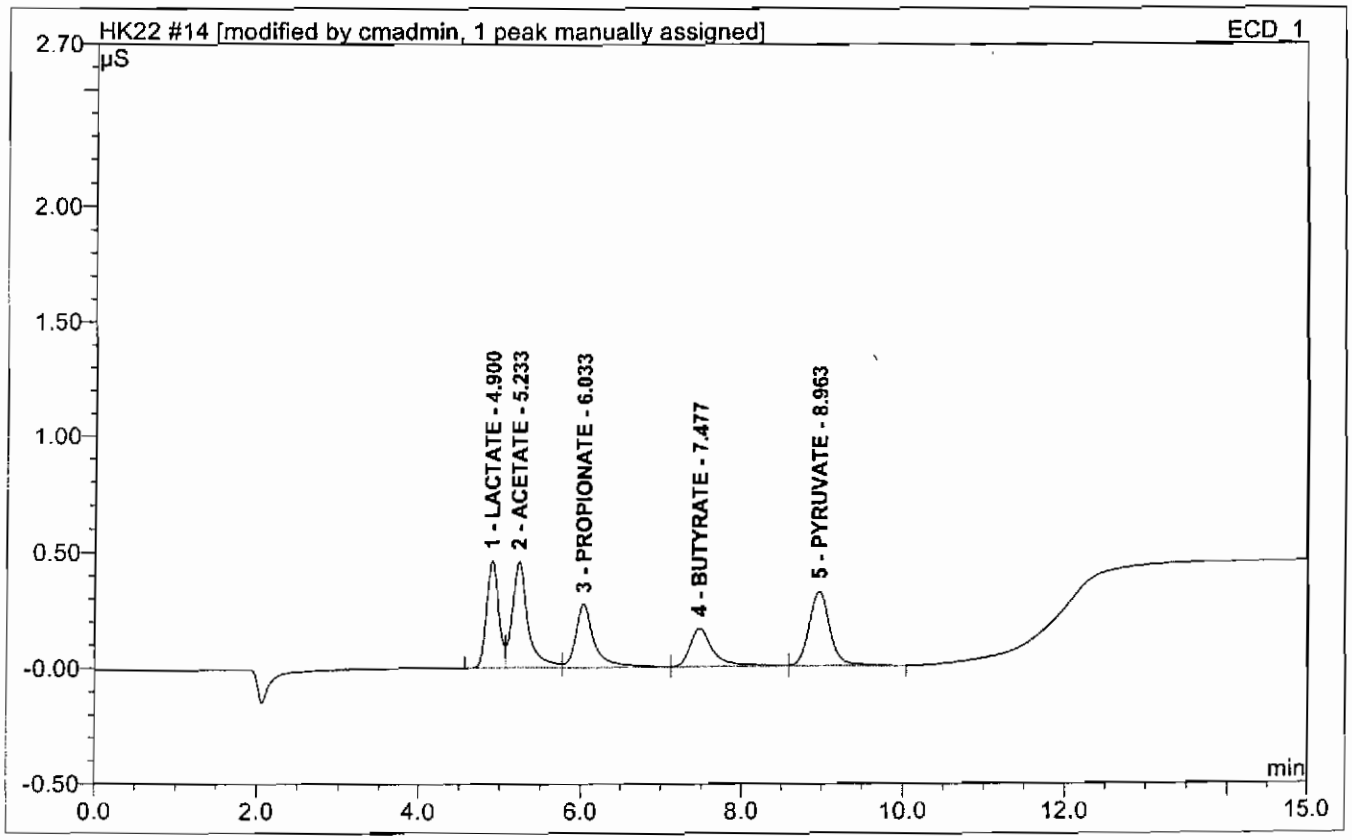
Sample Name:	**OAK016WL**	*Injection Volume:*	**25.0**
Vial Number:	**97**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 12:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.86	LACTATE	0.466506	0.080311	20.21	1.816	BM
2	5.19	ACETATE	0.461984	0.101313	25.49	1.778	M
3	5.99	PROPIONATE	0.271900	0.068782	17.31	1.752	MB
4	7.42	BUTYRATE	0.165872	0.053496	13.46	1.727	BM
5	8.88	PYRUVATE	0.325042	0.093532	23.53	1.819	MB
Total:			1.691	0.397	100.00	8.891	

HK22 005 OAK016WC

Sample Name:	**OAK016WC**	*Injection Volume:*	**25.0**
Vial Number:	**96**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 13:16**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



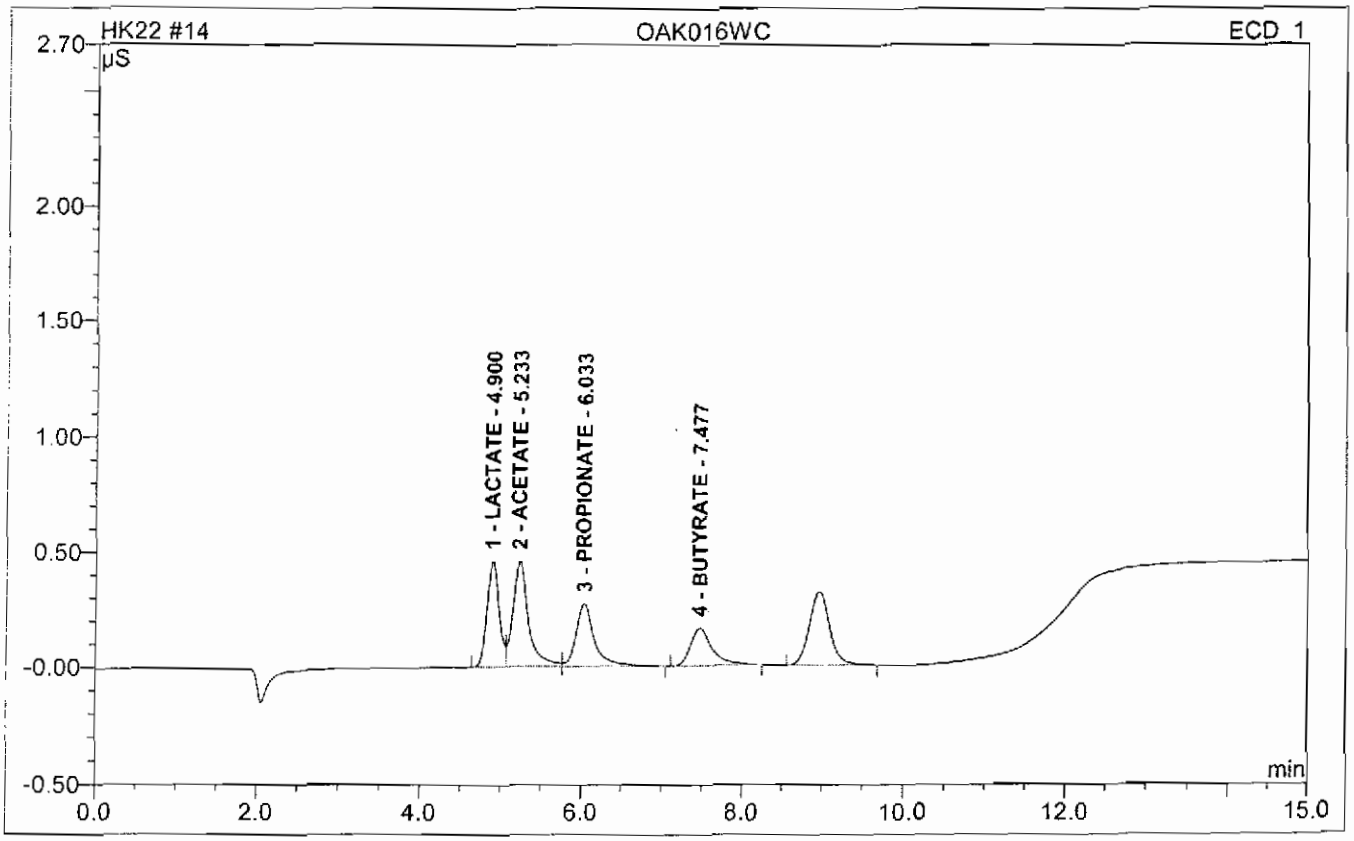
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.90	LACTATE	0.461014	0.080208	19.58	1.814	BM *
2	5.23	ACETATE	0.457276	0.102676	25.06	1.802	M *
3	6.03	PROPIONATE	0.273410	0.074329	18.14	1.893	M *
4	7.48	BUTYRATE	0.165748	0.055888	13.64	1.803	M *
5	8.96	PYRUVATE	0.322194	0.096556	23.57	1.877	MB*^
Total:			1.680	0.410	100.00	9.189	

- ☐ Incorrect Retention Time
- ☑ Incorrect Baseline
- ☐ Incorrect Integration
- ☐ Other _____

Initials: ES
Date: 11/23/11

HK22 005 OAK016WC

Sample Name:	**OAK016WC**	*Injection Volume:*	**25.0**
Vial Number:	**96**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 13:16**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

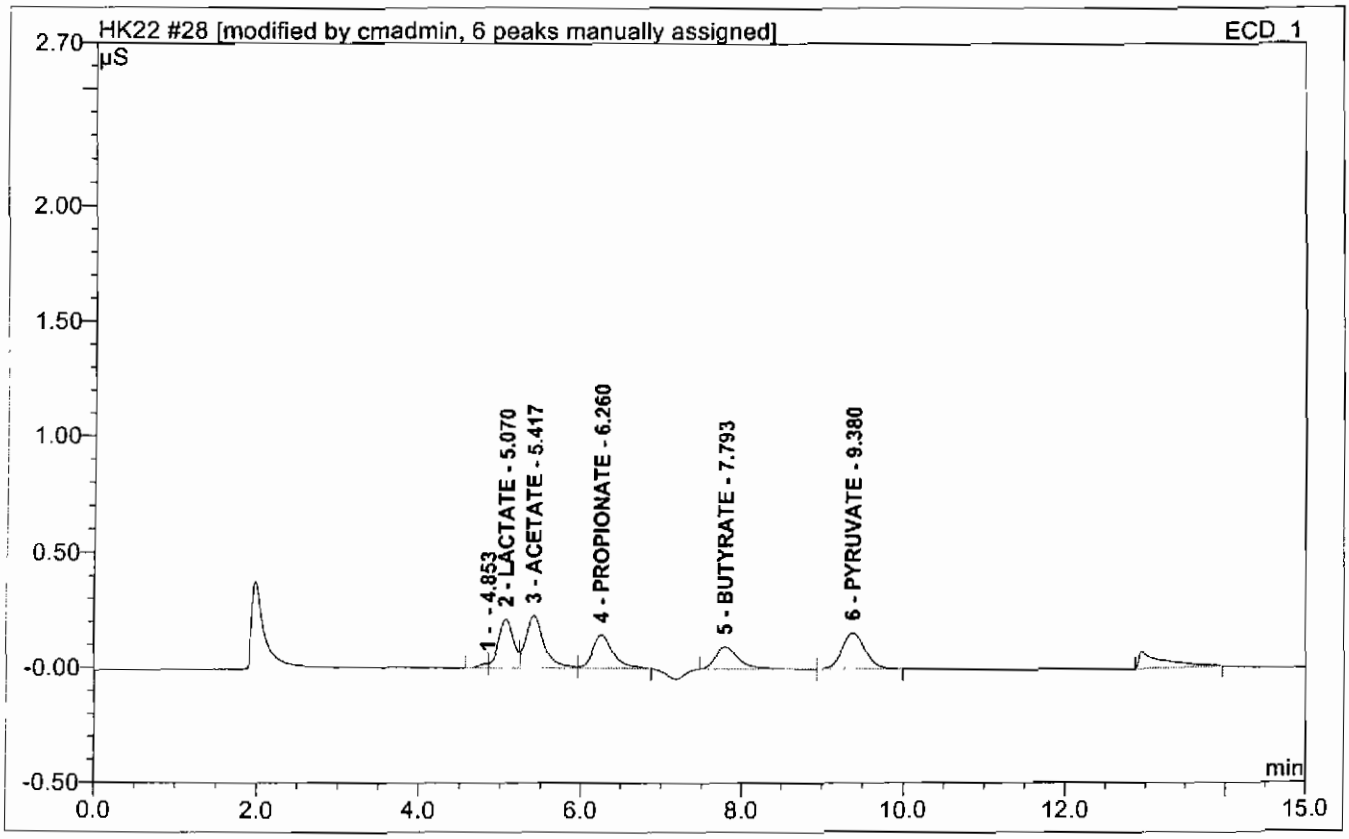


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.90	LACTATE	0.460040	0.079751	20.01	1.804	BM
2	5.23	ACETATE	0.456254	0.101942	25.58	1.789	M
3	6.03	PROPIONATE	0.272272	0.072705	18.25	1.852	MB
4	7.48	BUTYRATE	0.163208	0.050838	12.76	1.642	BMB
5	8.96	n.a.	0.319536	0.093254	23.40	n.a.	BMB
Total:			1.671	0.398	100.00	7.086	

HK22 019 K184-01M

SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

Sample Name:	**K184-01M**	*Injection Volume:*	**25.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 23:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.85		0.019800	0.002409	0.93	n.a.	BM *^
2	5.07	LACTATE	0.211920	0.045556	17.53	1.032	M *^
3	5.42	ACETATE	0.228092	0.059783	23.00	1.049	M *^
4	6.26	PROPIONATE	0.146254	0.043109	16.59	1.100	MB*^
5	7.79	BUTYRATE	0.096408	0.032988	12.69	1.072	BMb*^
6	9.38	PYRUVATE	0.155424	0.050045	19.26	0.980	bMB^
7	12.95	n.a.	0.074060	0.026014	10.01	n.a.	BMB
Total:			0.932	0.260	100.00	5.233	

☐ Incorrect Retention Time
☑ Incorrect Baseline
☐ Incorrect Integration
☑ Other Split Peak
Initials ae
Date 11/28/11

default/Integration

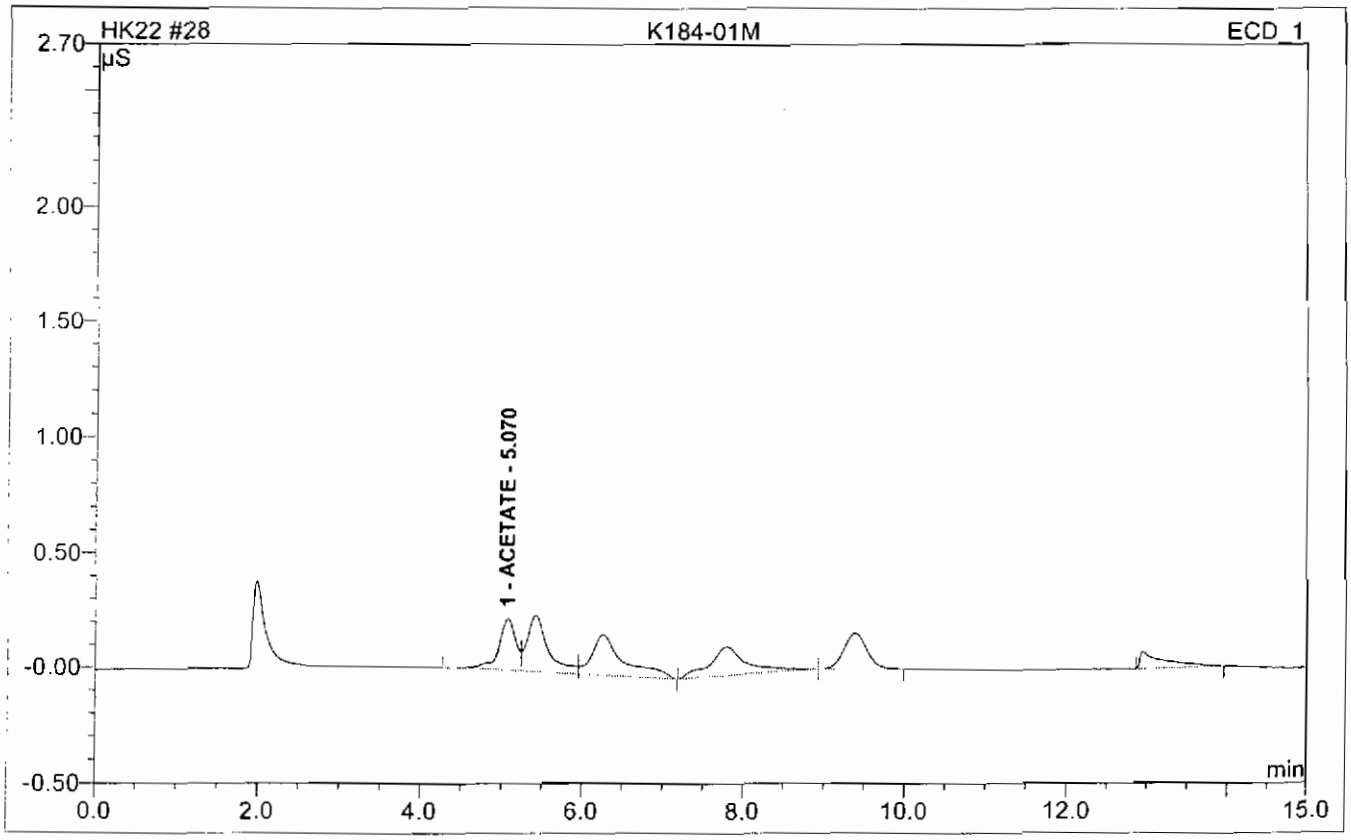
Chromeleon (c) Dionex 1996-2001
Version 6.70 Build 1820

8091

HK22 019 K184-01M

SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

Sample Name:	**K184-01M**	*Injection Volume:*	**25.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 23:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

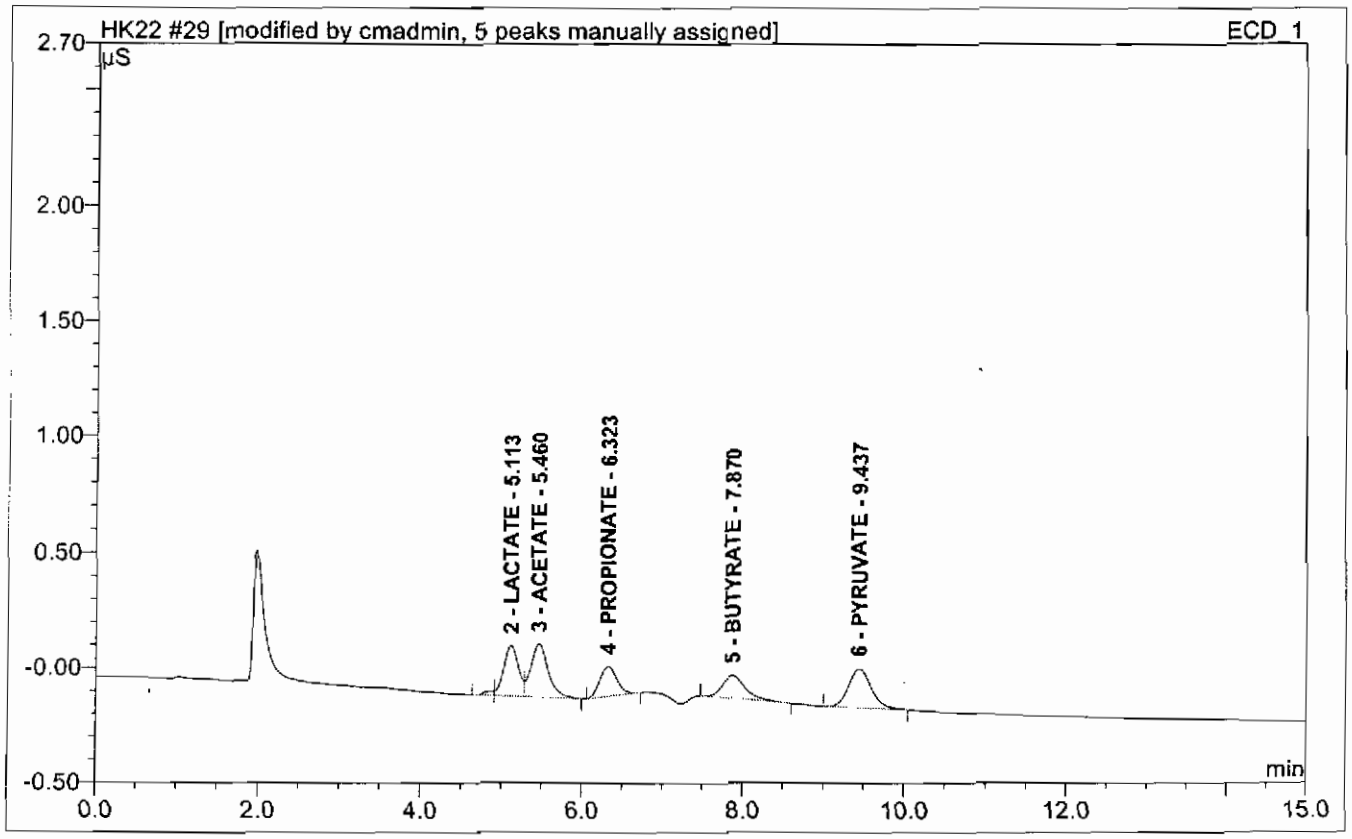


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.07	ACETATE	0.223712	0.054677	15.54	0.959	BM
2	5.42	n.a.	0.245422	0.074282	21.11	n.a.	M
3	6.26	n.a.	0.177056	0.080443	22.86	n.a.	MB
4	7.79	n.a.	0.125226	0.066372	18.86	n.a.	BMB
5	9.38	n.a.	0.155424	0.050045	14.22	n.a.	bMB
6	12.95	n.a.	0.074060	0.026014	7.39	n.a.	BMB
Total:			1.001	0.352	100.00	0.959	

HK22 020 K184-01S

SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

Sample Name:	**K184-01S**	*Injection Volume:*	**25.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 23:52**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.67	n.a.	0.000200	0.002477	1.10	n.a.	BM *
2	5.11	LACTATE	0.218412	0.046116	20.53	1.045	M *^
3	5.46	ACETATE	0.230568	0.057641	25.66	1.011	MB*^
4	6.32	PROPIONATE	0.129212	0.031483	14.01	0.805	BMB^
5	7.87	BUTYRATE	0.098008	0.032119	14.30	1.044	BMB*^
6	9.44	PYRUVATE	0.167830	0.054815	24.40	1.072	BMB*^
Total:			0.844	0.225	100.00	4.977	

- ☐ Incorrect Retention Time
- ☑ Incorrect Baseline
- ☐ Incorrect Integration
- ☑ Other Split Peak
- Initials ae
- Date 11/23/11

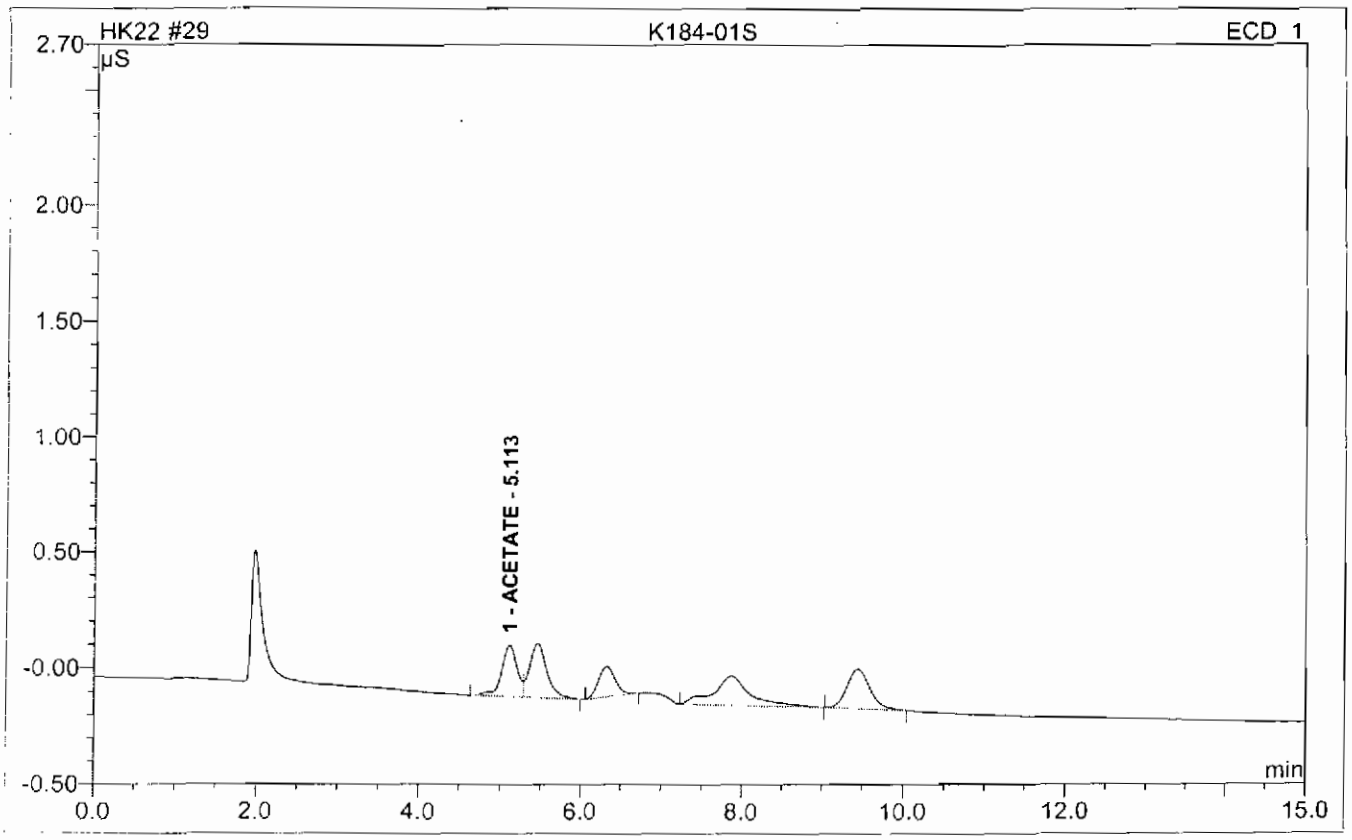
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.70 Build 1820

HK22 020 K184-01S

SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

Sample Name:	**K184-01S**	*Injection Volume:*	**25.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 23:52**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.11	ACETATE	0.218412	0.048593	18.81	0.852	BM
2	5.46	n.a.	0.230570	0.057641	22.31	n.a.	MB
3	6.32	n.a.	0.129212	0.031483	12.19	n.a.	BMB
4	7.87	n.a.	0.125818	0.065735	25.45	n.a.	BMB
5	9.44	n.a.	0.167908	0.054885	21.25	n.a.	BMB
Total:			0.872	0.258	100.00	0.852	

INITIAL CALIBRATIONS

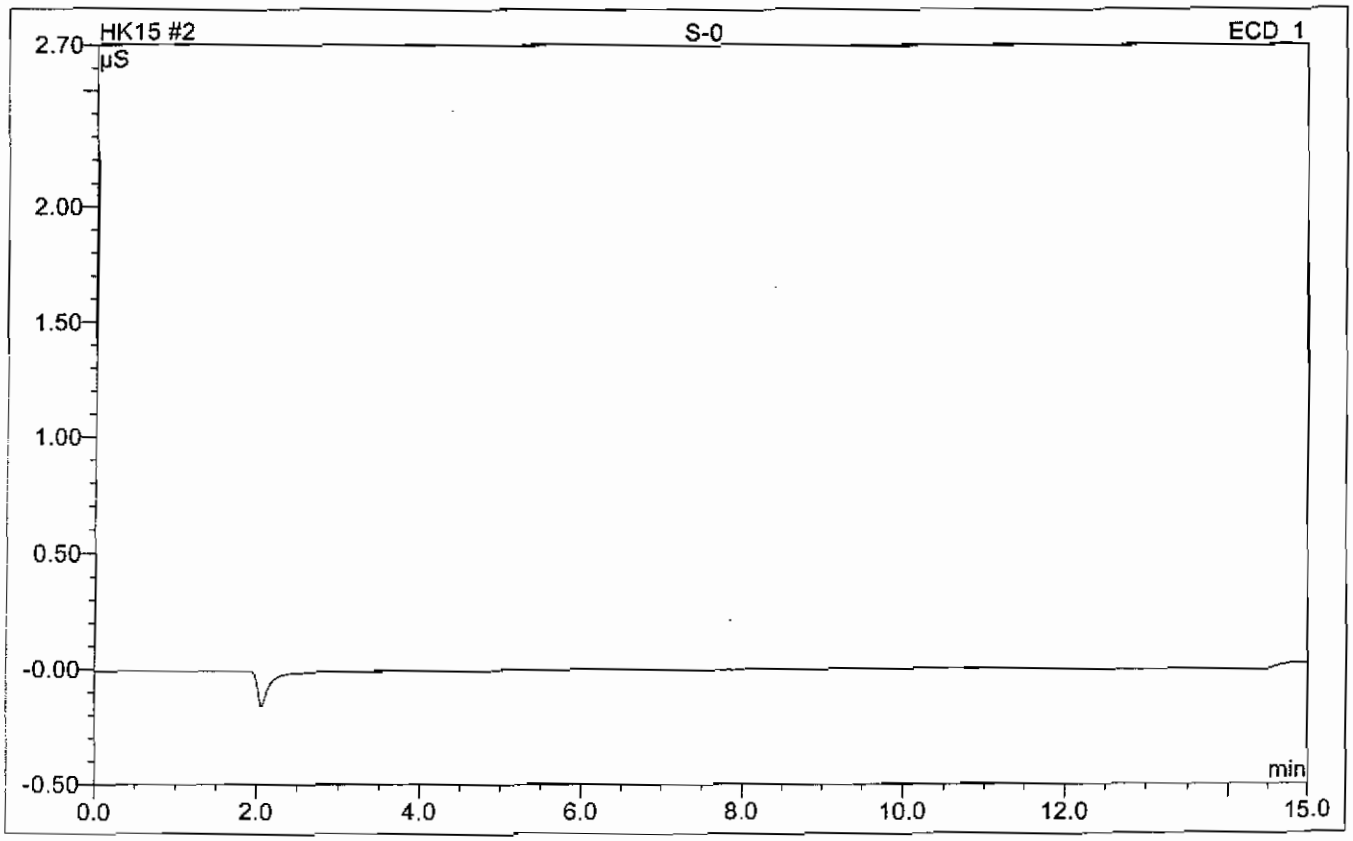
IC SEQ FORM/HK15(2011)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
HK15001	IB	ABLPY	OAD6K15	11/15/1117:34	1
HK15002	S-0	ABLPY	OAD6K15	11/15/1117:55	1
HK15003	S-1	ABLPY	OAD6K15	11/15/1118:16	1
HK15004	S-2	ABLPY	OAD6K15	11/15/1118:37	1
HK15005	S-3	ABLPY	OAD6K15	11/15/1118:58	1
HK15006	S-4	ABLPY	OAD6K15	11/15/1119:19	1
HK15007	S-5	ABLPY	OAD6K15	11/15/1119:40	1
HK15008	ICV	ABLPY	OAD6K15	11/15/1120:01	1
HK15009	ICB	ABLPY	OAD6K15	11/15/1120:22	1
HK15010	CCV2	ABLPY	OAD6K15	11/15/1123:52	1
HK15011	CCB2	ABLPY	OAD6K15	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	OAD6K15	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	OAD6K15	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	OAD6K15	11/16/1101:15	1
HK15015	K101-01	ABLPY	OAD6K15	11/16/1101:36	1
HK15016	K101-02	ABLPY	OAD6K15	11/16/1102:17	1
HK15017	K101-03	ABLPY	OAD6K15	11/16/1102:58	1
HK15018	K101-04	ABLPY	OAD6K15	11/16/1103:39	1
HK15019	K101-05	ABLPY	OAD6K15	11/16/1104:20	1
HK15020	K101-05M	ABLPY	OAD6K15	11/16/1105:01	1
HK15021	K101-05S	ABLPY	OAD6K15	11/16/1105:42	1
HK15022	CCV4	ABLPY	OAD6K15	11/16/1106:23	1
HK15023	CCB4	ABLPY	OAD6K15	11/16/1106:44	1
HK15024	K084-01	ABLPY	OAD6K15	11/16/1107:05	1
HK15025	K084-02	ABLPY	OAD6K15	11/16/1107:46	1
HK15026	K084-03	ABLPY	OAD6K15	11/16/1108:26	1
HK15027	K084-04	ABLPY	OAD6K15	11/16/1109:10	1
HK15028	CCV6	ABLPY	OAD6K15	11/16/1111:30	1
HK15029	CCB6	ABLPY	OAD6K15	11/16/1112:32	1
HK15030	K084-05	ABLPY	OAD6K15	11/16/1112:53	1
HK15031	K084-06	ABLPY	OAD6K15	11/16/1113:34	1
HK15032	K035-01	*BLPY	OAD6K15	11/16/1114:15	5
HK15033	K035-01A	*BLPY	OAD6K15	11/16/1114:55	5
HK15034	CCV8	ABLPY	OAD6K15	11/16/1115:36	1
HK15035	CCB8	ABLPY	OAD6K15	11/16/1115:57	1

AS
11/29/11

HK15 002 S-0

Sample Name:	**S-0**	*Injection Volume:*	**25.0**
Vial Number:	**32**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 17:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

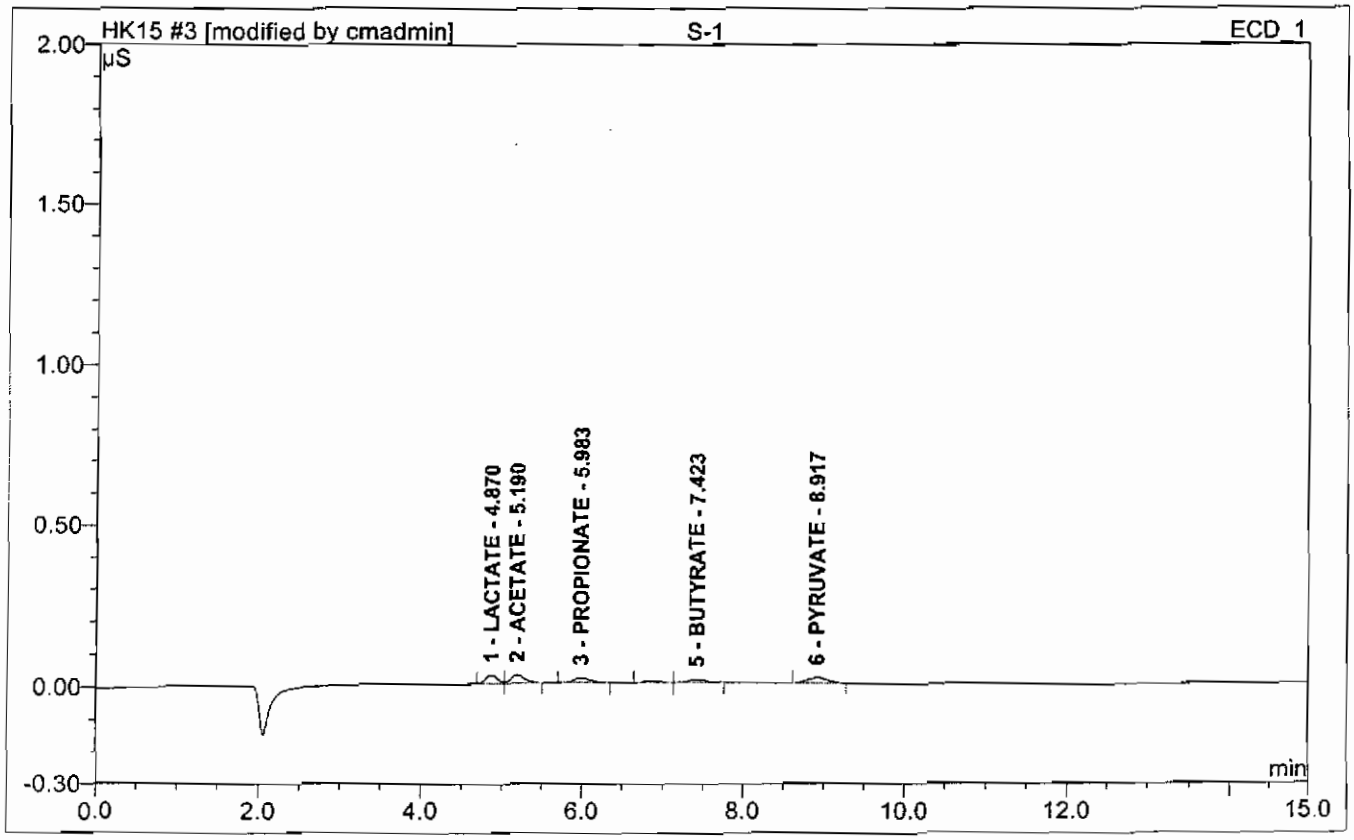


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

RS
11/29/11

HK15 003 S-1

Sample Name:	**S-1**	*Injection Volume:*	**25.0**
Vial Number:	**33**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 18:16**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

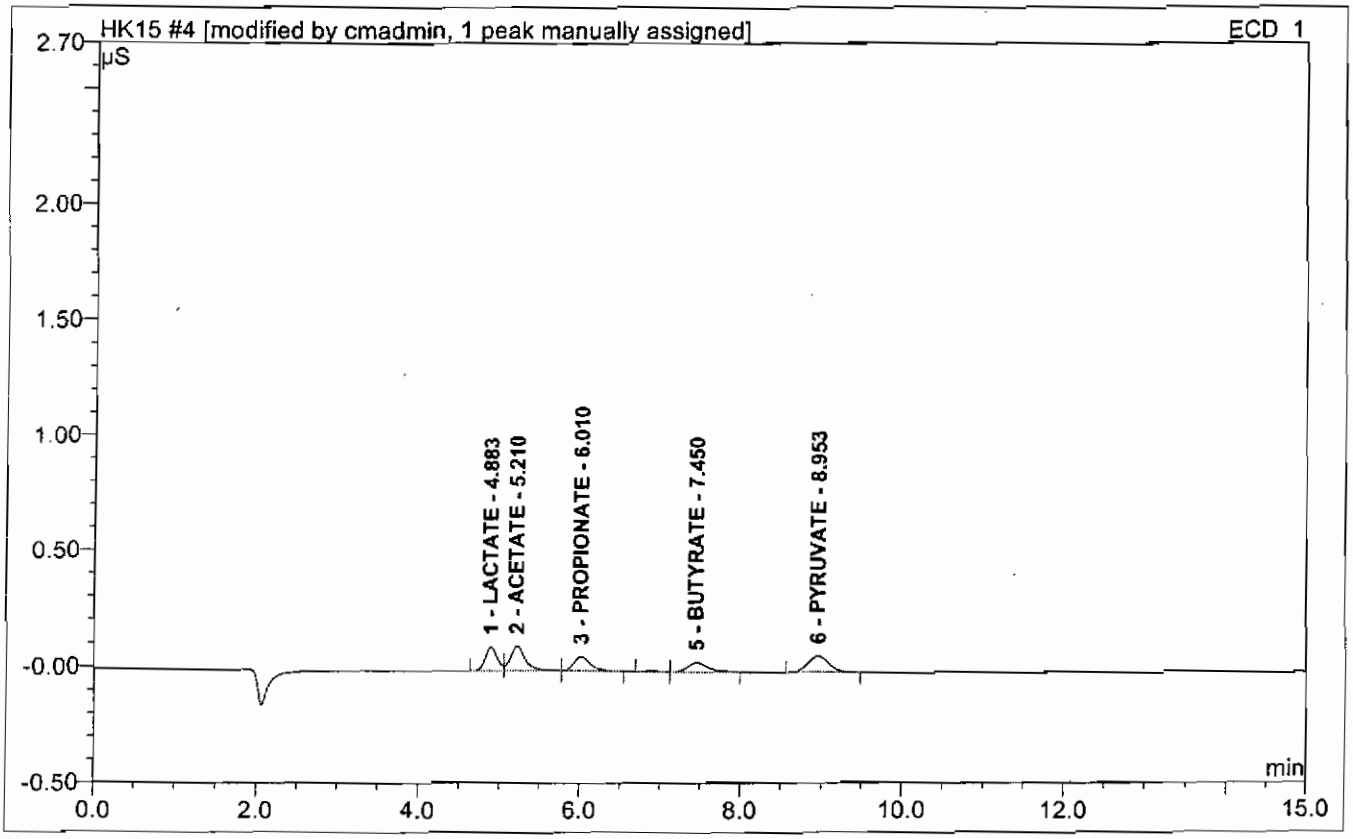


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.87	LACTATE	0.026174	0.004401	20.69	0.104	BM
2	5.19	ACETATE	0.024918	0.004820	22.66	0.083	MB
3	5.98	PROPIONATE	0.015232	0.003572	16.79	0.096	BMB
4	6.87	n.a.	0.006552	0.001302	6.12	n.a.	BMb*
5	7.42	BUTYRATE	0.009554	0.002586	12.16	0.101	bMB*
6	8.92	PYRUVATE	0.016650	0.004592	21.58	0.103	BMB
Total:			0.099	0.021	100.00	0.488	

AK 11/29/11

HK15 004 S-2

Sample Name:	**S-2**	*Injection Volume:*	**25.0**
Vial Number:	**34**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 18:37**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

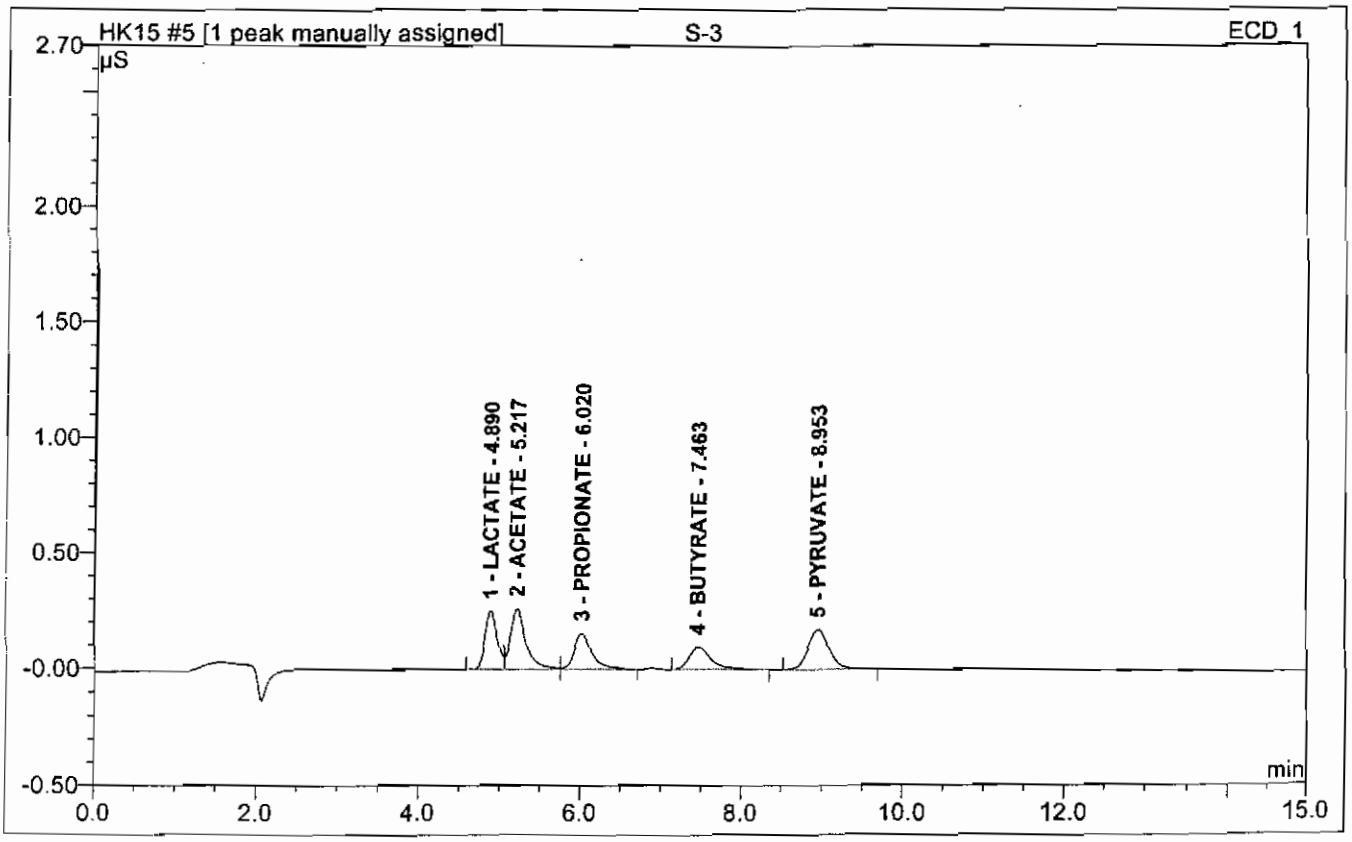


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.88	LACTATE	0.100086	0.017358	19.88	0.396	BM
2	5.21	ACETATE	0.105524	0.022908	26.23	0.401	M
3	6.01	PROPIONATE	0.061798	0.014840	16.99	0.382	MB
4	6.87	n.a.	0.005038	0.001008	1.15	n.a.	BMB
5	7.45	BUTYRATE	0.038386	0.011480	13.14	0.385	BMB*
6	8.95	PYRUVATE	0.067030	0.019737	22.60	0.395	BMB^
Total:			0.378	0.087	100.00	1.960	

RA 11/29/11

HK15 005 S-3

Sample Name:	**S-3**	*Injection Volume:*	**25.0**
Vial Number:	**35**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 18:58**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

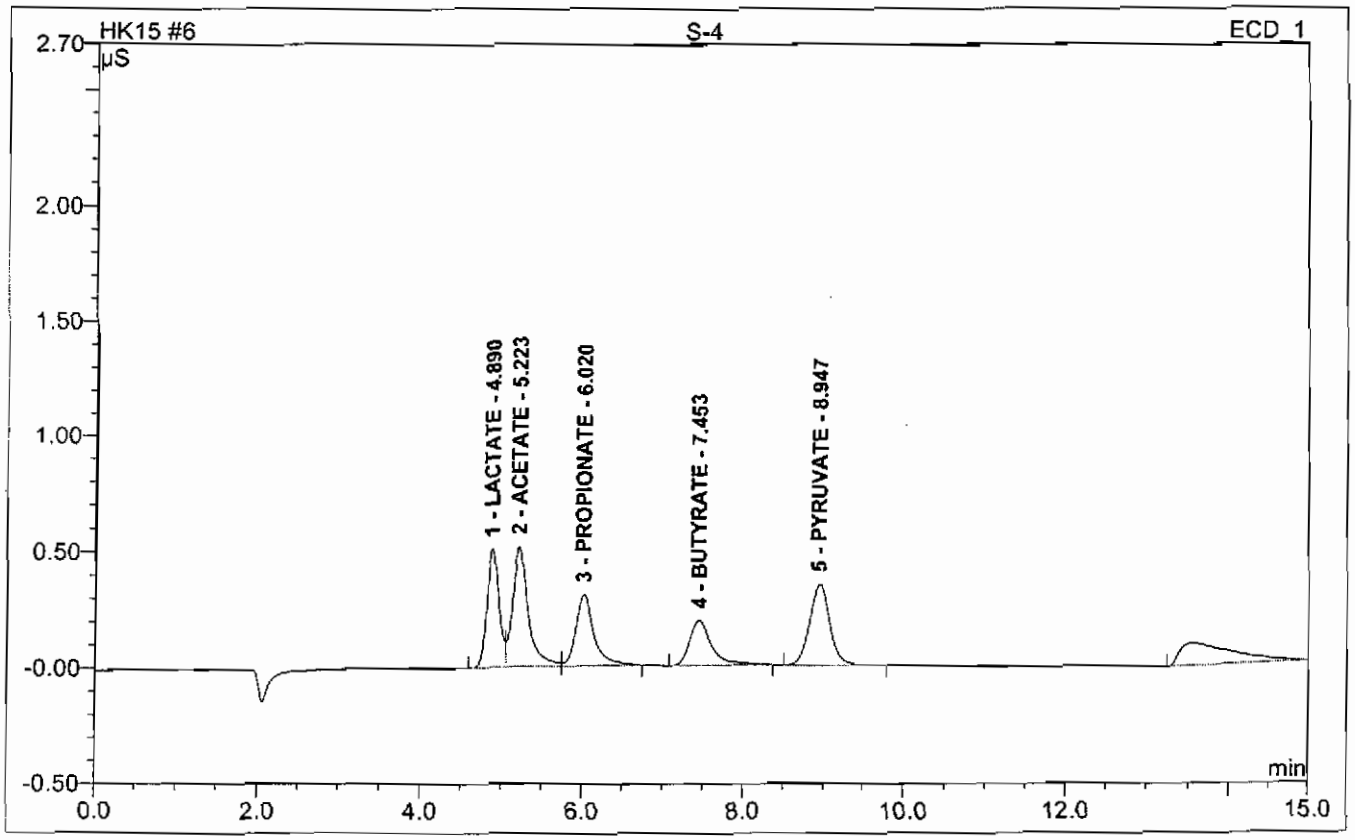


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.89	LACTATE	0.251224 ✓	0.043840 ✓	19.76	0.993 ✓	BM
2	5.22	ACETATE	0.260248 ✓	0.057600 ✓	25.96	1.010 ✓	M
3	6.02	PROPIONATE	0.154006 ✓	0.039548 ✓	17.83	1.010 ✓	MB
4	7.46	BUTYRATE	0.096982 ✓	0.030610 ✓	13.80	0.996 ✓	BMB
5	8.95	PYRUVATE	0.169390 ✓	0.050249 ✓	22.65	0.984 ✓	BMB^
Total:			0.932	0.222	100.00	4.993	

AS 11/29/11

HK15 006 S-4

Sample Name:	**S-4**	*Injection Volume:*	**25.0**
Vial Number:	**36**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 19:19**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

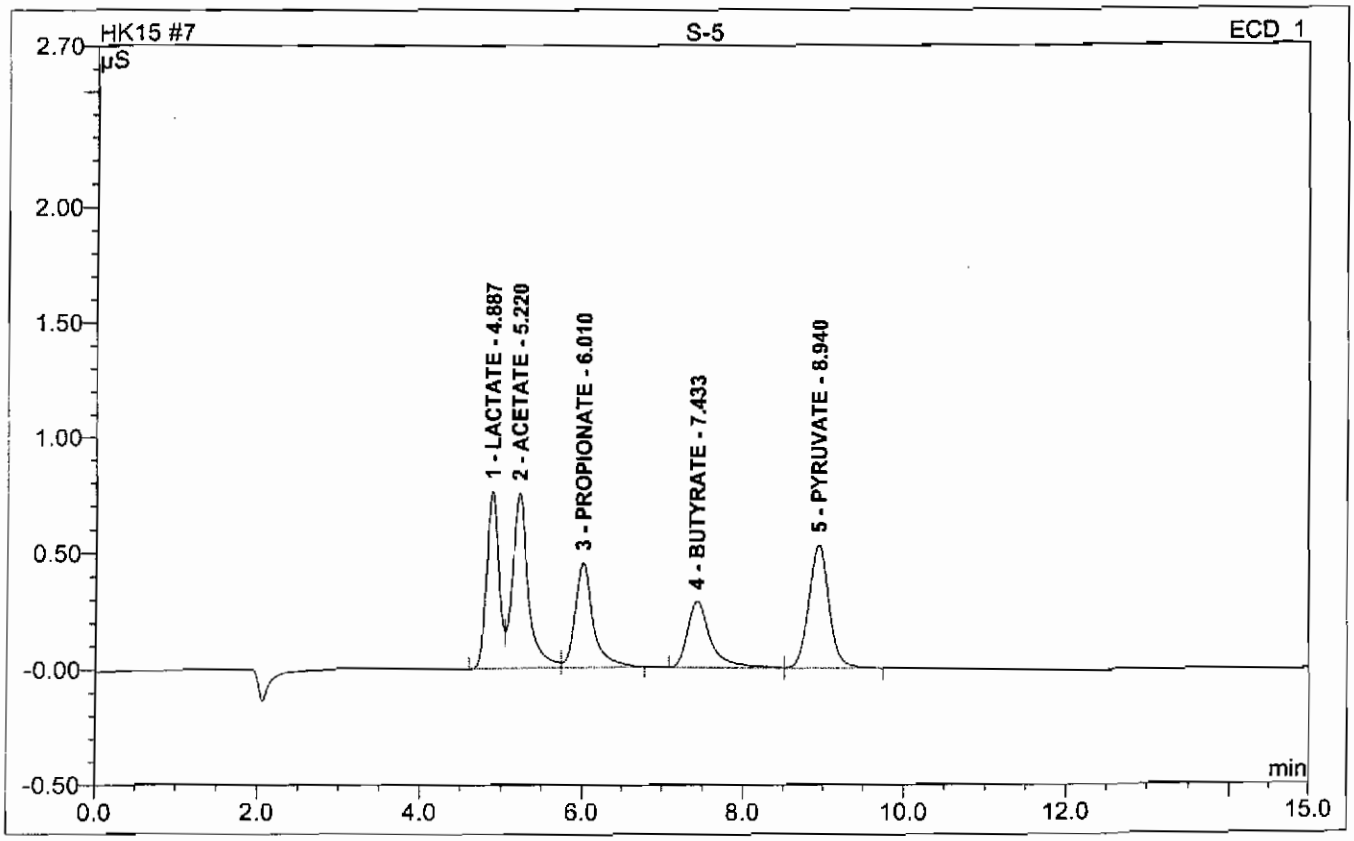


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.89	LACTATE	0.507630 ✓	0.088426 ✓	16.99	1.999 ✓	BM
2	5.22	ACETATE	0.513976 ✓	0.115562 ✓	22.21	2.028 ✓	M
3	6.02	PROPIONATE	0.306558 ✓	0.079442 ✓	15.27	2.023 ✓	MB
4	7.45	BUTYRATE	0.194514 ✓	0.061661 ✓	11.85	1.987 ✓	BMB
5	8.95	PYRUVATE	0.348296 ✓	0.102505 ✓	19.70	1.992 ✓	BMB
6	13.54	n.a.	0.097046	0.072730	13.98	n.a.	BMB
Total:			1.968	0.520	100.00	10.029	

QS 11/29/11.

HK15 007 S-5

Sample Name:	**S-5**	*Injection Volume:*	**25.0**
Vial Number:	**37**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 19:40**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.89	LACTATE	0.759794	0.132927	19.87	3.003	BM
2	5.22	ACETATE	0.750282	0.169666	25.36	2.978	M
3	6.01	PROPIONATE	0.448824	0.117298	17.53	2.984	MB
4	7.43	BUTYRATE	0.286108	0.093750	14.01	3.012	BM
5	8.94	PYRUVATE	0.527514	0.155355	23.22	3.011	MB
Total:			2.773	0.669	100.00	14.989	

AS 11/29/11

No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square	Offset	Slope	Curve
1	4.88	LACTATE	0LOff	5	1.0000	-0.000198	0.0443	0.0000
2	5.21	ACETATE	0LOff	5	0.9997	0.000068	0.0569	0.0000
3	6.00	PROPIONA	0LOff	5	0.9998	-0.000209	0.0394	0.0000
4	7.42	BUTYRATE	0LOff	5	0.9999	-0.000584	0.0313	0.0000
5	8.93	PYRUVATE	0LOff	5	0.9999	-0.000755	0.0518	0.0000
Average:					n.a.	n.a.	n.a.	0.0000

$$\text{conc} = \frac{\text{area} - \text{offset}}{\text{slope}}$$

AS
11/29/11

SECOND SOURCE VERIFICATION

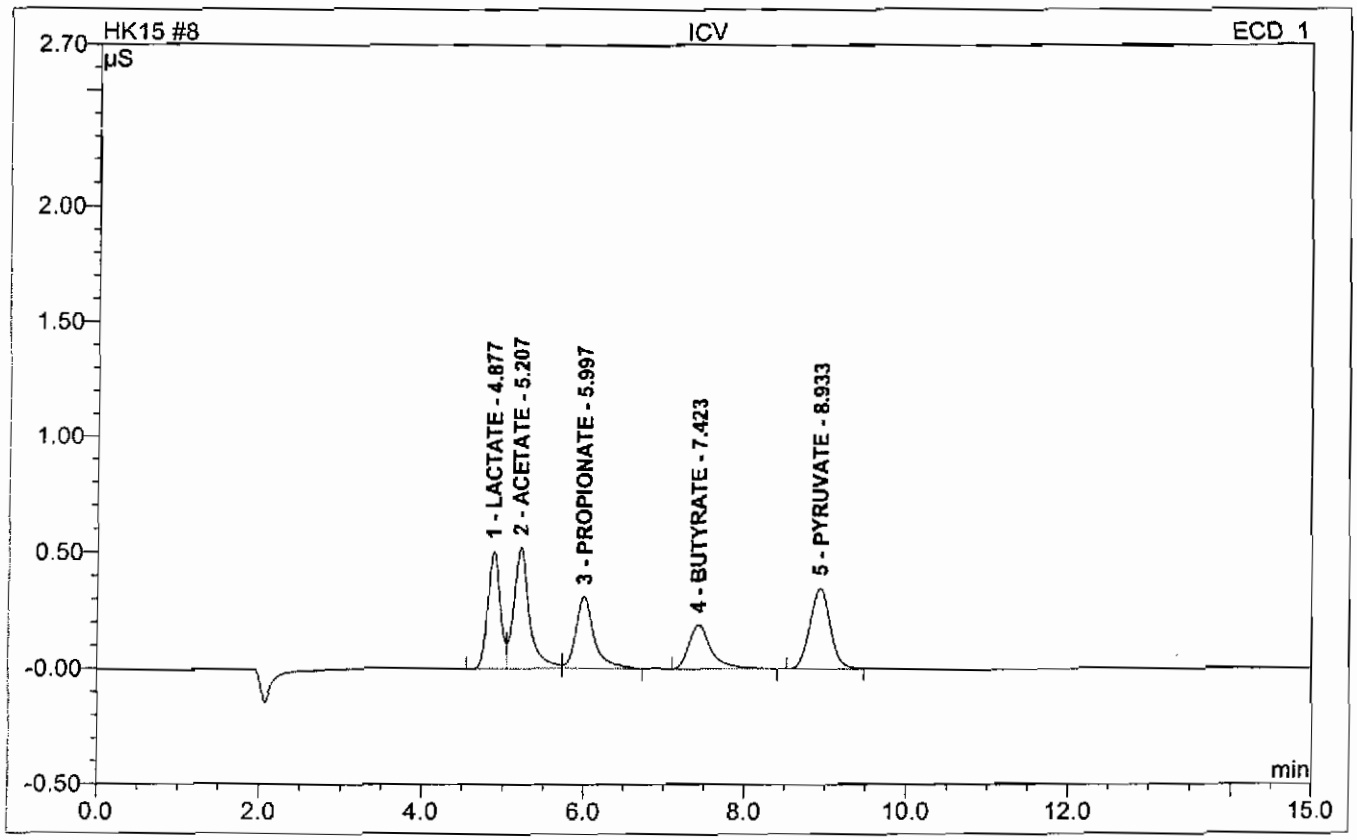
IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK15001	IB	ABLPY	ND	ND	ND	ND	ND	11/15/1117:34	1
HK15002	S-0	ABLPY	ND	ND	ND	ND	ND	11/15/1117:55	1
HK15003	S-1	ABLPY	.083	.101	.104	.096	.103	11/15/1118:16	1
HK15004	S-2	ABLPY	.401	.385	.396	.382	.395	11/15/1118:37	1
HK15005	S-3	ABLPY	1.01	.996	.993	1.01	.984	11/15/1118:58	1
HK15006	S-4	ABLPY	2.028	1.987	1.999	2.023	1.992	11/15/1119:19	1
HK15007	S-5	ABLPY	2.978	3.012	3.003	2.984	3.011	11/15/1119:40	1
HK15008	ICV	ABLPY	103%	96.8%	99.5%	104%	97.7%	11/15/1120:01	1
HK15009	ICB	ABLPY	ND	ND	ND	ND	ND	11/15/1120:22	1
HK15010	CCV2	ABLPY	103%	103%	101%	104%	93.9%	11/15/1123:52	1
HK15011	CCB2	ABLPY	ND	ND	ND	ND	ND	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	ND	ND	ND	ND	ND	11/16/1100:33	1
HK15013	OAK01DWL	ABLPY	2.07	2.1	2.02	2	1.96	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	2.07	2.02	2.04	2.1	1.95	11/16/1101:15	1
HK15015	K101-01	ABLPY	ND	ND	ND	ND	ND	11/16/1101:36	1
HK15016	K101-02	ABLPY	ND	ND	ND	ND	ND	11/16/1102:17	1
HK15017	K101-03	ABLPY	ND	ND	ND	ND	ND	11/16/1102:58	1
HK15018	K101-04	ABLPY	ND	ND	ND	ND	ND	11/16/1103:39	1
HK15019	K101-05	ABLPY	ND	ND	ND	ND	ND	11/16/1104:20	1
HK15020	K101-05M	ABLPY	.83	.826	.959	.922	.904	11/16/1105:01	1
HK15021	K101-05S	ABLPY	.878	.826	.985	1.01	.882	11/16/1105:42	1
HK15022	CCV4	ABLPY	101%	103%	99.3%	99.1%	92.6%	11/16/1106:23	1
HK15023	CCB4	ABLPY	ND	ND	ND	ND	ND	11/16/1106:44	1
HK15024	K084-01	ABLPY	ND	ND	ND	ND	ND	11/16/1107:05	1
HK15025	K084-02	ABLPY	ND	ND	ND	ND	ND	11/16/1107:46	1
HK15026	K084-03	ABLPY	ND	ND	ND	ND	ND	11/16/1108:26	1
HK15027	K084-04	ABLPY	ND	ND	ND	ND	ND	11/16/1109:10	1
HK15028	CCV6	ABLPY	101%	90.7%	99.7%	103%	92.5%	11/16/1111:30	1
HK15029	CCB6	ABLPY	ND	ND	ND	ND	ND	11/16/1112:32	1
HK15030	K084-05	ABLPY	ND	ND	ND	ND	ND	11/16/1112:53	1
HK15031	K084-06	ABLPY	ND	ND	ND	ND	ND	11/16/1113:34	1
HK15032	K035-01	*BLPY	28.1E	ND	ND	1.13	ND	11/16/1114:15	5
HK15033	K035-D1A	*BLPY	32.4E	5.38	4.35	6.28	4.73	11/16/1114:55	5
HK15034	CCV8	ABLPY	102%	97%	99.6%	109%	93.8%	11/16/1115:36	1
HK15035	CCB8	ABLPY	ND	ND	ND	ND	ND	11/16/1115:57	1

AS
11/29/11

HK15 008 ICV

Sample Name:	**ICV**	*Injection Volume:*	**25.0**
Vial Number:	**38**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 20:01**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

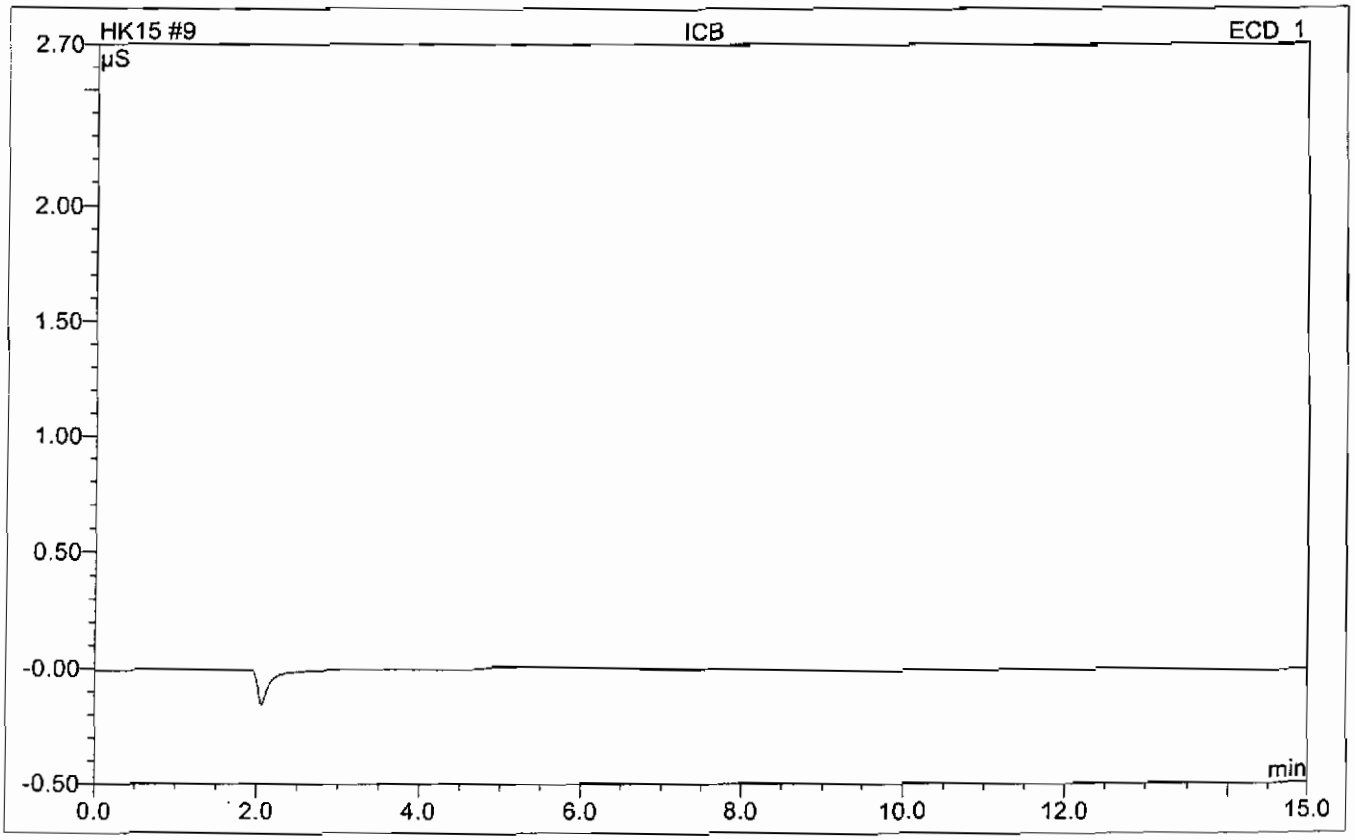


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.88	LACTATE	0.504694	0.088011	19.68	1.990	BM
2	5.21	ACETATE	0.520464	0.117058	26.18	2.054	M
3	6.00	PROPIONATE	0.309202	0.081457	18.22	2.074	MB
4	7.42	BUTYRATE	0.190046	0.060090	13.44	1.937	BMB
5	8.93	PYRUVATE	0.347528	0.100546	22.49	1.954	BMB
Total:			1.872	0.447	100.00	10.009	

RS
11/29/11

HK15 009 ICB

Sample Name:	**ICB**	*Injection Volume:*	**25.0**
Vial Number:	**39**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/15/2011 20:22**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

AS 11/29/11

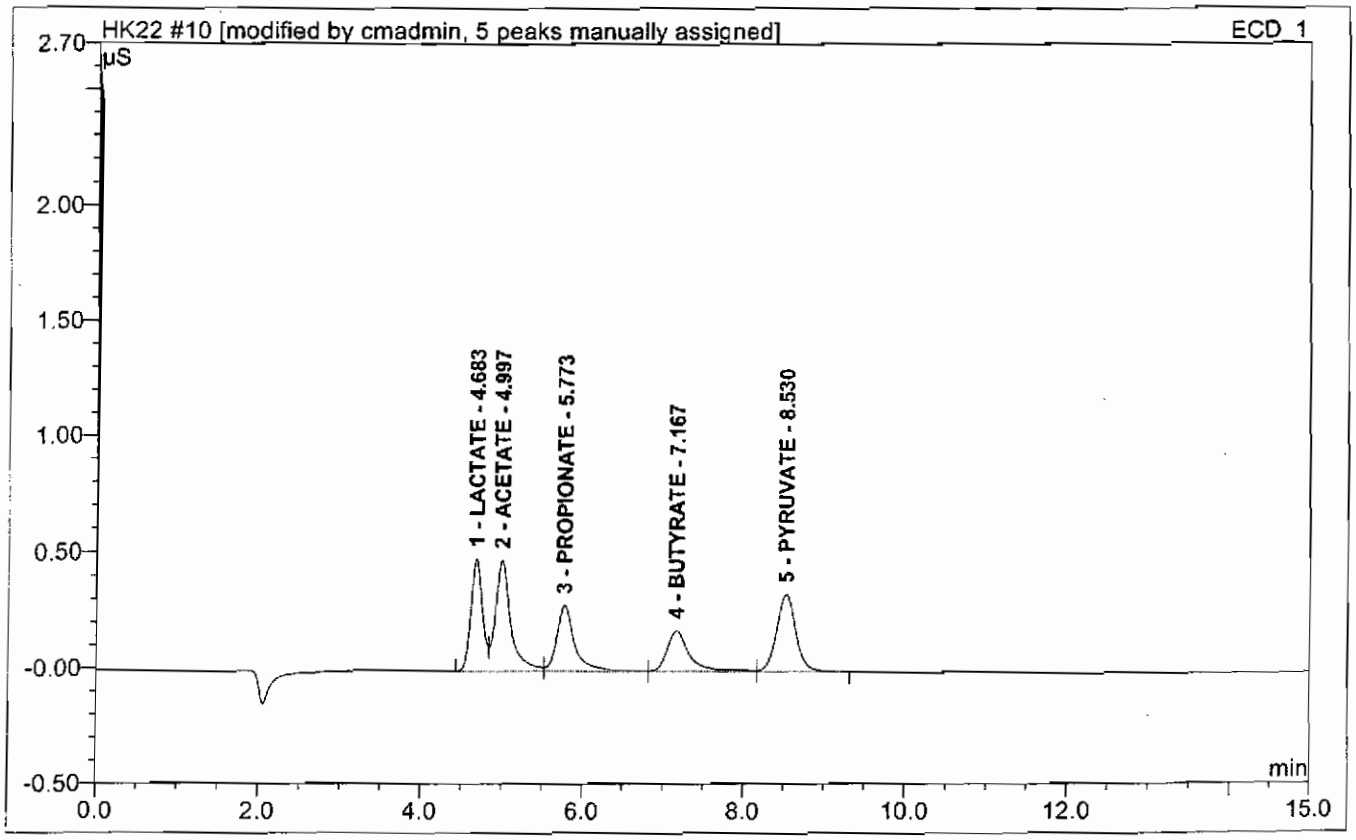
DAILY CALIBRATIONS

IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK22001	CCV24	ABLPY	91.4%	92.9%	91%	95.4%	91.8%	11/22/1111:31	1
HK22002	CCB24	ABLPY	ND	ND	ND	ND	ND	11/22/1112:13	1
HK22003	OAK016WB	ABLPY	ND	ND	ND	ND	ND	11/22/1112:34	1
HK22004	OAK016WL	ABLPY	1.81	1.84	1.82	1.93	1.87	11/22/1112:55	1
HK22005	OAK016WC	ABLPY	1.8	1.8	1.81	1.89	1.88	11/22/1113:16	1
HK22006	K146-02	ABLPY	ND	ND	ND	ND	ND	11/22/1114:19	5
HK22007	K146-02A	ABLPY	4.88	5.26	5.3	4.92	4.73	11/22/1115:20	5
HK22008	K146-03R	ABLPY	ND	ND	ND	ND	ND	11/22/1116:21	1
HK22009	K174-01	ABLPY	ND	ND	ND	ND	ND	11/22/1117:02	1
HK22010	K174-02	ABLPY	ND	ND	ND	ND	ND	11/22/1117:42	1
HK22011	K174-03	ABLPY	ND	ND	ND	ND	ND	11/22/1118:23	1
HK22012	K174-04	ABLPY	ND	ND	ND	ND	ND	11/22/1119:04	1
HK22013	CCV26	ABLPY	105%	100%	106%	102%	99.8%	11/22/1119:45	1
HK22014	CCB26	ABLPY	ND	ND	ND	ND	ND	11/22/1120:06	1
HK22015	K174-05	ABLPY	ND	ND	ND	ND	ND	11/22/1120:27	1
HK22016	K174-06	ABLPY	ND	ND	ND	ND	ND	11/22/1121:08	1
HK22017	K174-07	ABLPY	ND	ND	ND	ND	ND	11/22/1121:49	1
HK22018	K184-01	ABLPY	ND	ND	ND	ND	ND	11/22/1122:30	1
HK22019	K184-01M	ABLPY	1.05	1.07	1.03	1.1	.98	11/22/1123:11	1
HK22020	K184-01S	ABLPY	1.01	1.04	1.04	.805	1.07	11/22/1123:52	1
HK22021	K184-02	ABLPY	ND	ND	ND	ND	ND	11/23/1100:33	1
HK22022	K184-03	ABLPY	ND	ND	ND	ND	ND	11/23/1101:13	1
HK22023	K184-04	ABLPY	ND	ND	ND	ND	ND	11/23/1101:54	1
HK22024	K184-05	ABLPY	ND	ND	ND	ND	ND	11/23/1102:35	1
HK22025	CCV28	ABLPY	109%	108%	110%	109%	103%	11/23/1103:41	1
HK22026	CCB28	ABLPY	ND	ND	ND	ND	ND	11/23/1104:23	1
HK22027	K101-04	ABLPY	ND	ND	ND	ND	ND	11/23/1104:44	5
HK22028	K101-04A	ABLPY	5.05	5.12	5.01	5.1	4.87	11/23/1105:45	5
HK22029	CCV30	ABLPY	109%	107%	108%	110%	101%	11/23/1107:07	1
HK22030	CCB30	ABLPY	ND	ND	ND	ND	ND	11/23/1107:28	1

HK22 001 CCV24

Sample Name:	**CCV24**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 11:31**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



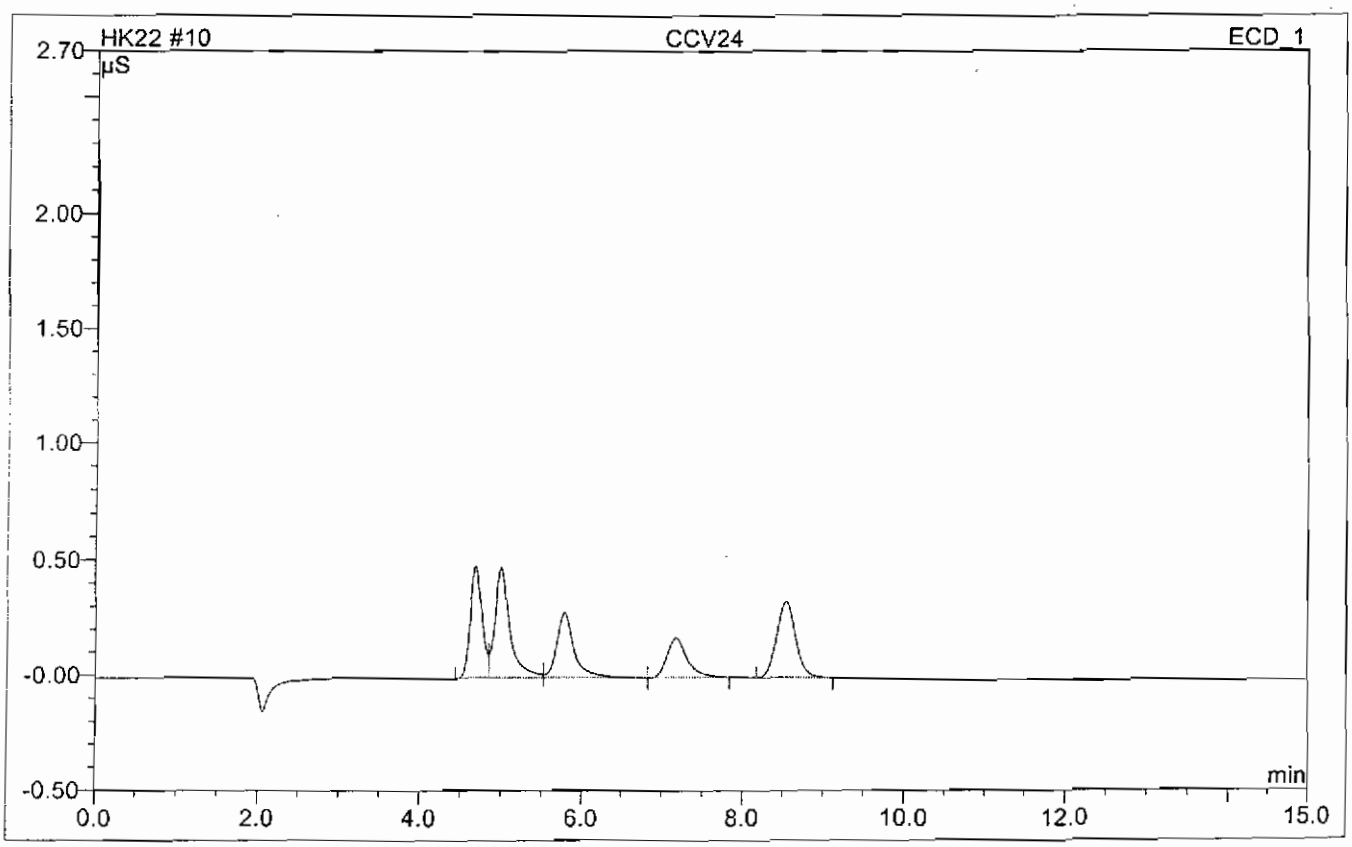
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.68	LACTATE	0.482652	0.080429	19.54	1.819	BM *^
2	5.00	ACETATE	0.476322	0.104211	25.32	1.829	M *^
3	5.77	PROPIONATE	0.283832	0.074919	18.20	1.908	M *^
4	7.17	BUTYRATE	0.176478	0.057652	14.01	1.859	M *^
5	8.53	PYRUVATE	0.332508	0.094416	22.94	1.836	MB*^
Total:			1.752	0.412	100.00	9.251	

☐ Incorrect Retention Time
☒ Incorrect Baseline
☐ Incorrect Integration
☐ Other _____
Initials ad
Date 11/23/11

default/Integration

HK22 001 CCV24

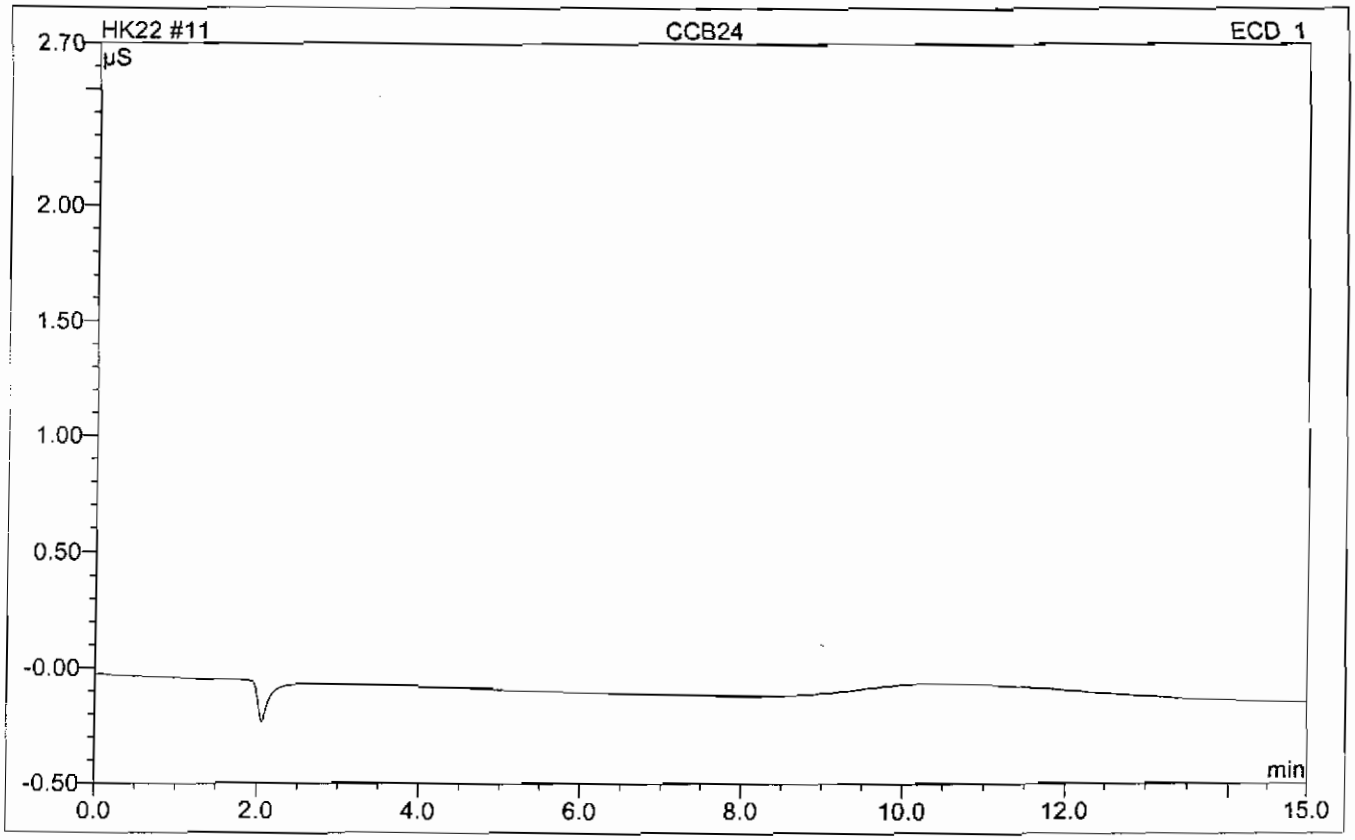
Sample Name:	**CCV24**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 11:31**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.68	n.a.	0.482104	0.080247	20.41	n.a.	BM
2	5.00	n.a.	0.475094	0.103097	26.22	n.a.	M
3	5.77	n.a.	0.280920	0.070021	17.81	n.a.	M
4	7.17	n.a.	0.170542	0.049173	12.51	n.a.	MB
5	8.53	n.a.	0.328592	0.090594	23.04	n.a.	BMB
Total:			1.737	0.393	100.00	0.000	

HK22 002 CCB24

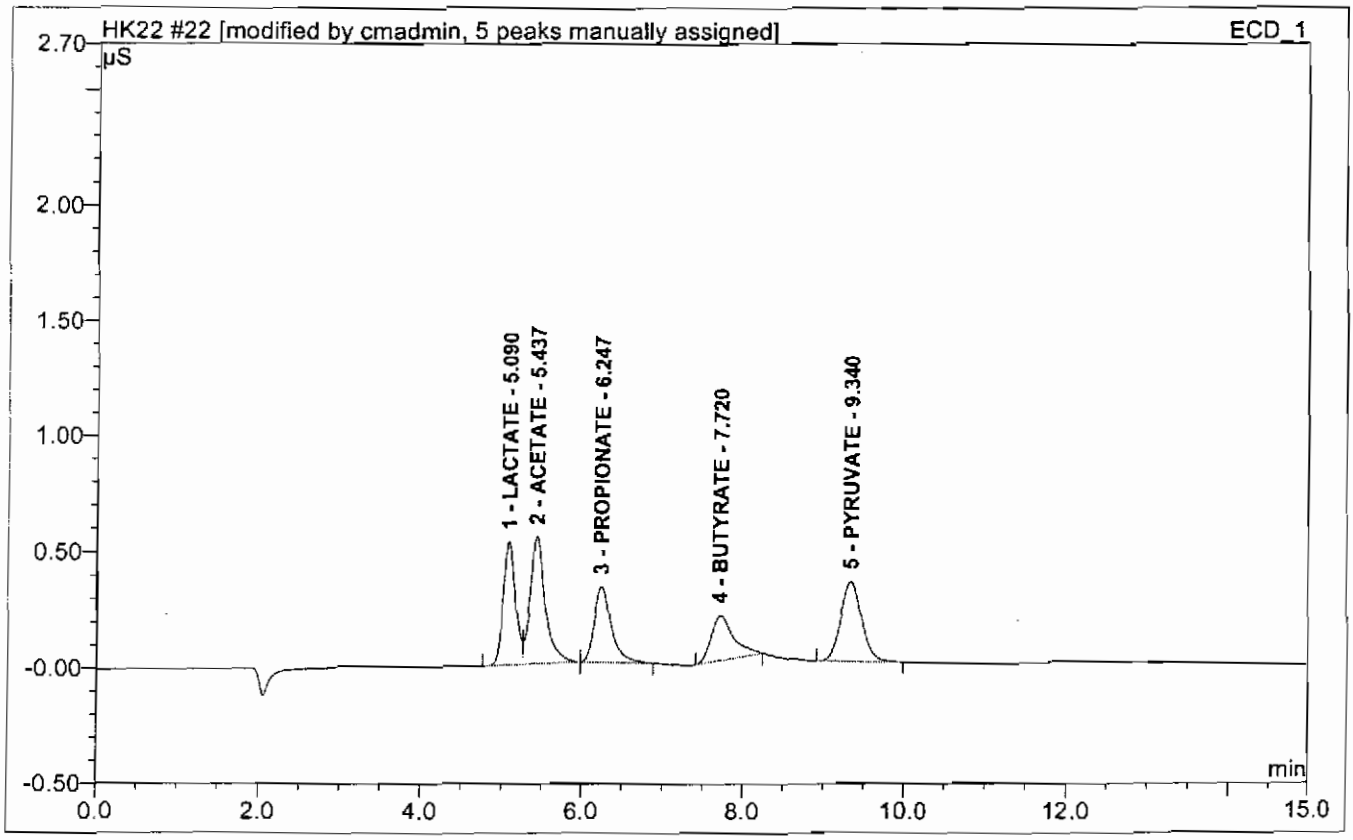
Sample Name:	**CCB24**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 12:13**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

HK22 013 CCV26

Sample Name:	**CCV26**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 19:45**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.09	LACTATE	0.528958	0.093883	20.46	2.122	BM *^
2	5.44	ACETATE	0.544038	0.119586	26.07	2.099	Mb*^
3	6.25	PROPIONATE	0.326022	0.080360	17.52	2.046	bMB*^
4	7.72	BUTYRATE	0.193358	0.062201	13.56	2.005	BMB*^
5	9.34	PYRUVATE	0.343212	0.102760	22.40	1.997	BMB*^
Total:			1.936	0.459	100.00	10.268	

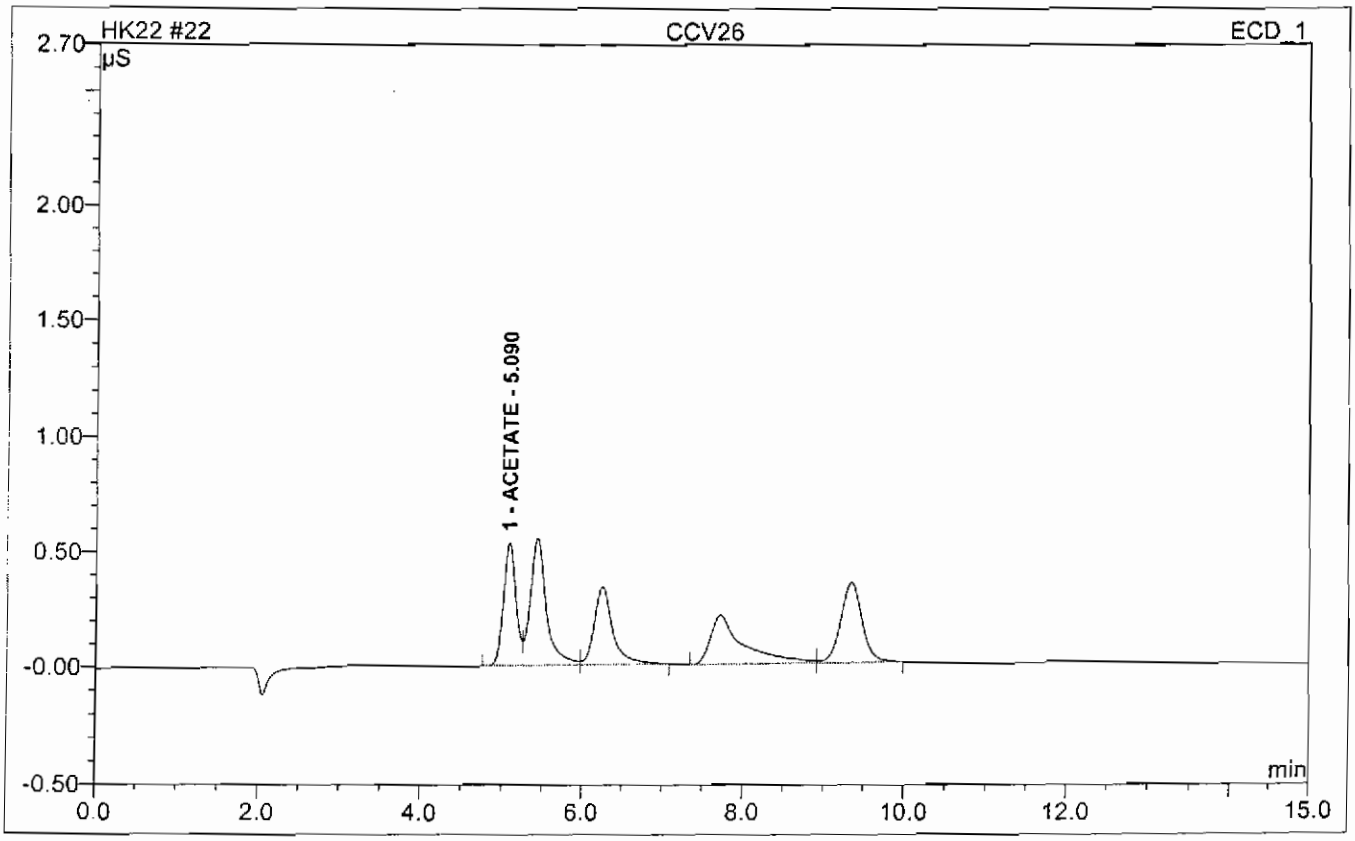
- ☐ Incorrect Retention Time
- ☑ Incorrect Baseline
- ☐ Incorrect Integration
- ☐ Other _____

Initials: ad
Date: 11/23/11

default/Integration

HK22 013 CCV26

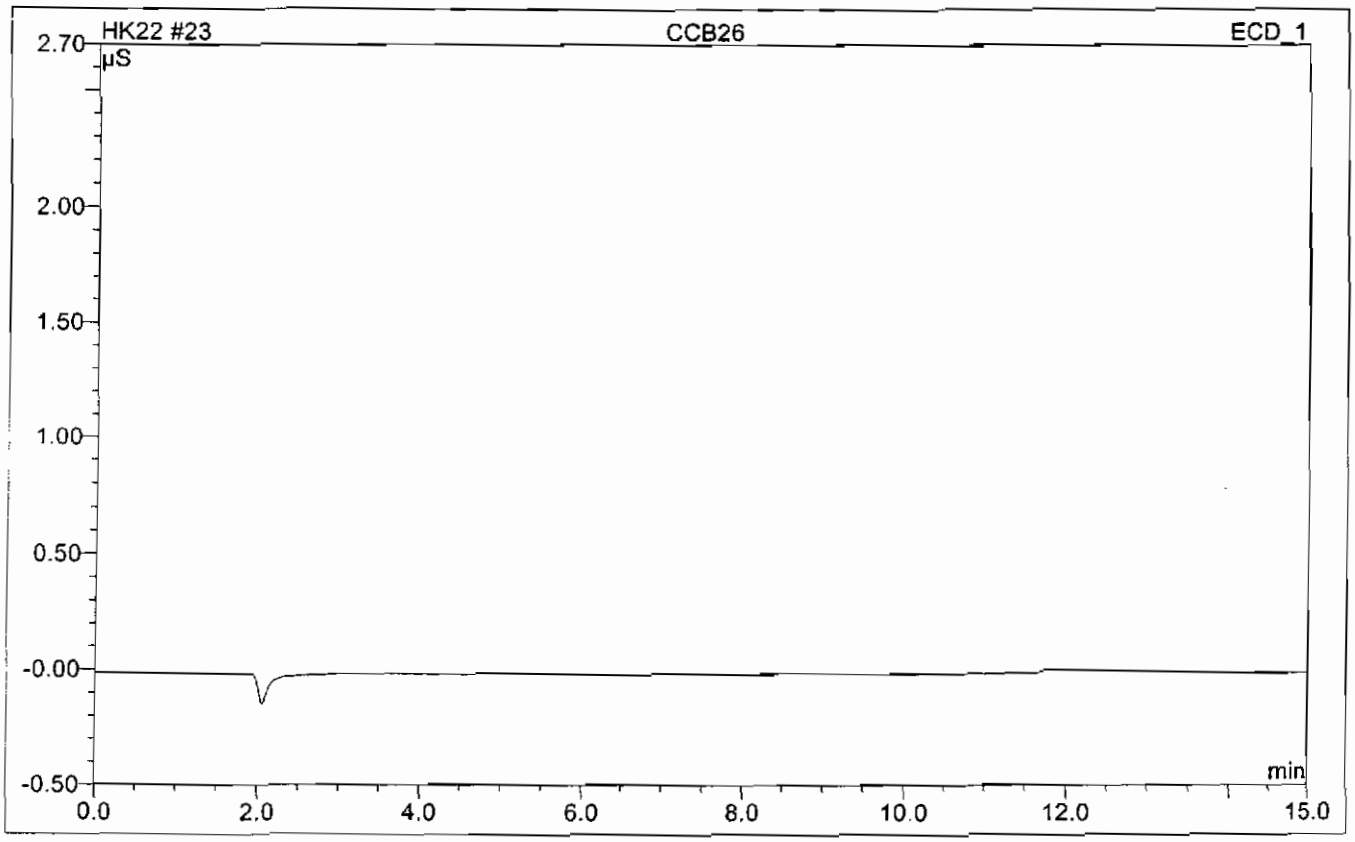
Sample Name:	**CCV26**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 19:45**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.09	ACETATE	0.532890	0.095367	18.35	1.673	BM
2	5.44	n.a.	0.552140	0.126960	24.43	n.a.	M
3	6.25	n.a.	0.337908	0.089988	17.32	n.a.	MB
4	7.72	n.a.	0.212934	0.099610	19.17	n.a.	BM
5	9.34	n.a.	0.348806	0.107761	20.74	n.a.	MB
Total:			1.985	0.520	100.00	1.673	

HK22 014 CCB26

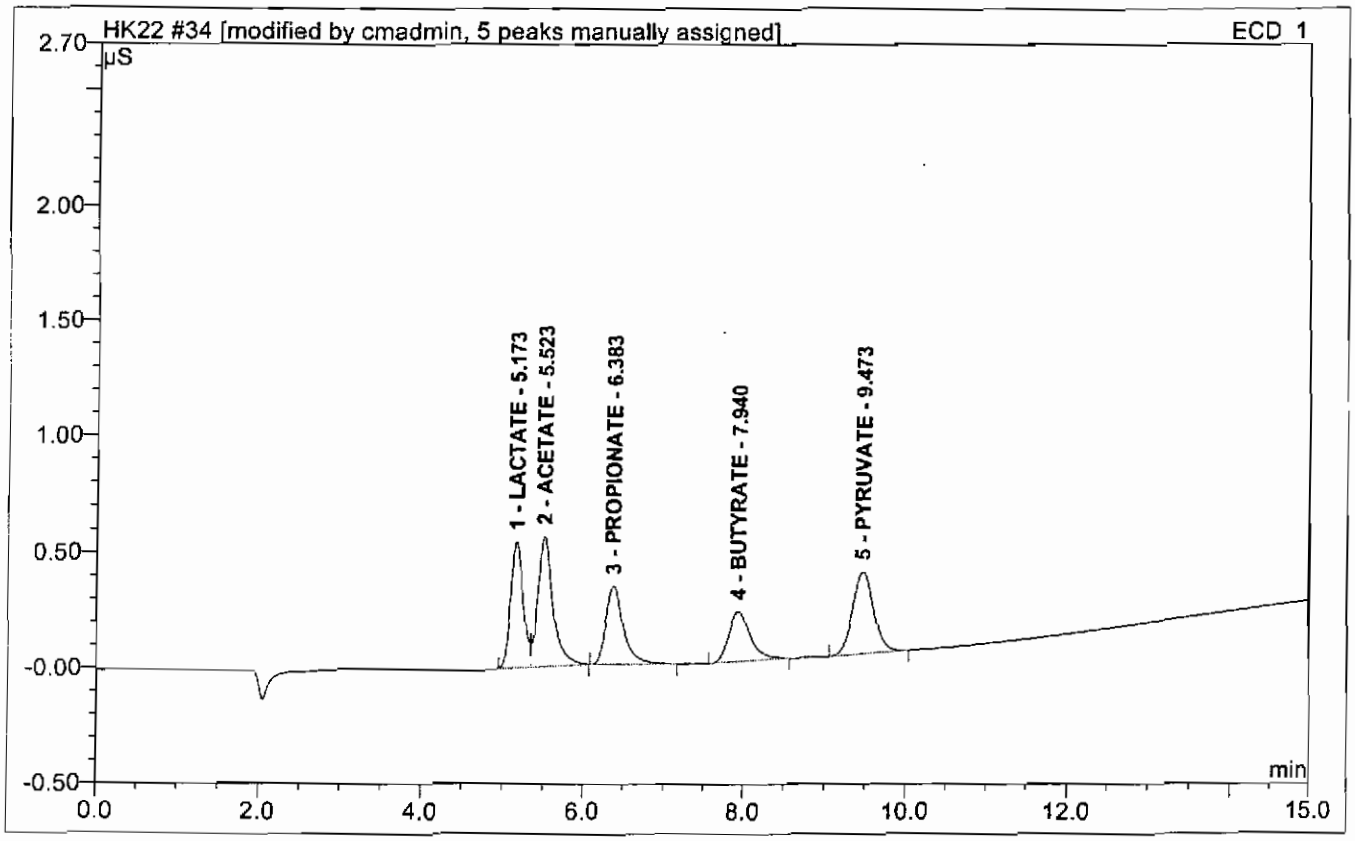
Sample Name:	**CCB26**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/22/2011 20:06**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

HK22 025 CCV28

Sample Name:	**CCV28**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/23/2011 3:41**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.17	LACTATE	0.543262	0.097038	20.21	2.193	BM *^
2	5.52	ACETATE	0.560888	0.123737	25.78	2.172	MB*^
3	6.38	PROPIONATE	0.339342	0.085956	17.91	2.188	BMB*^
4	7.94	BUTYRATE	0.216336	0.067279	14.01	2.167	BMB*^
5	9.47	PYRUVATE	0.353438	0.106050	22.09	2.060	BMB^
Total:			2.013	0.480	100.00	10.780	

- ☐ Incorrect Retention Time
- ☑ Incorrect Baseline
- ☐ Incorrect Integration
- ☐ Other _____

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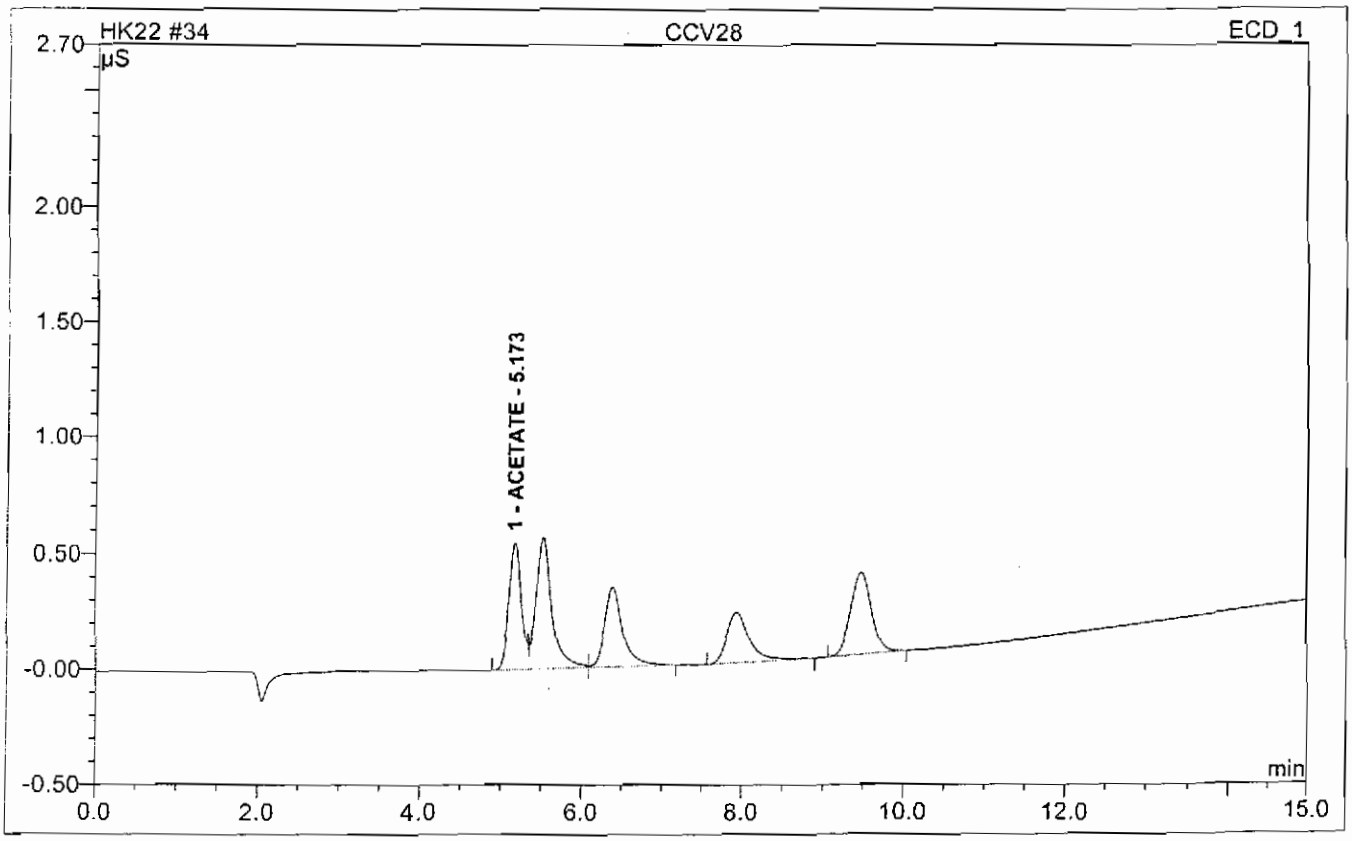
Date 11/23/11

HK22 025 CCV28

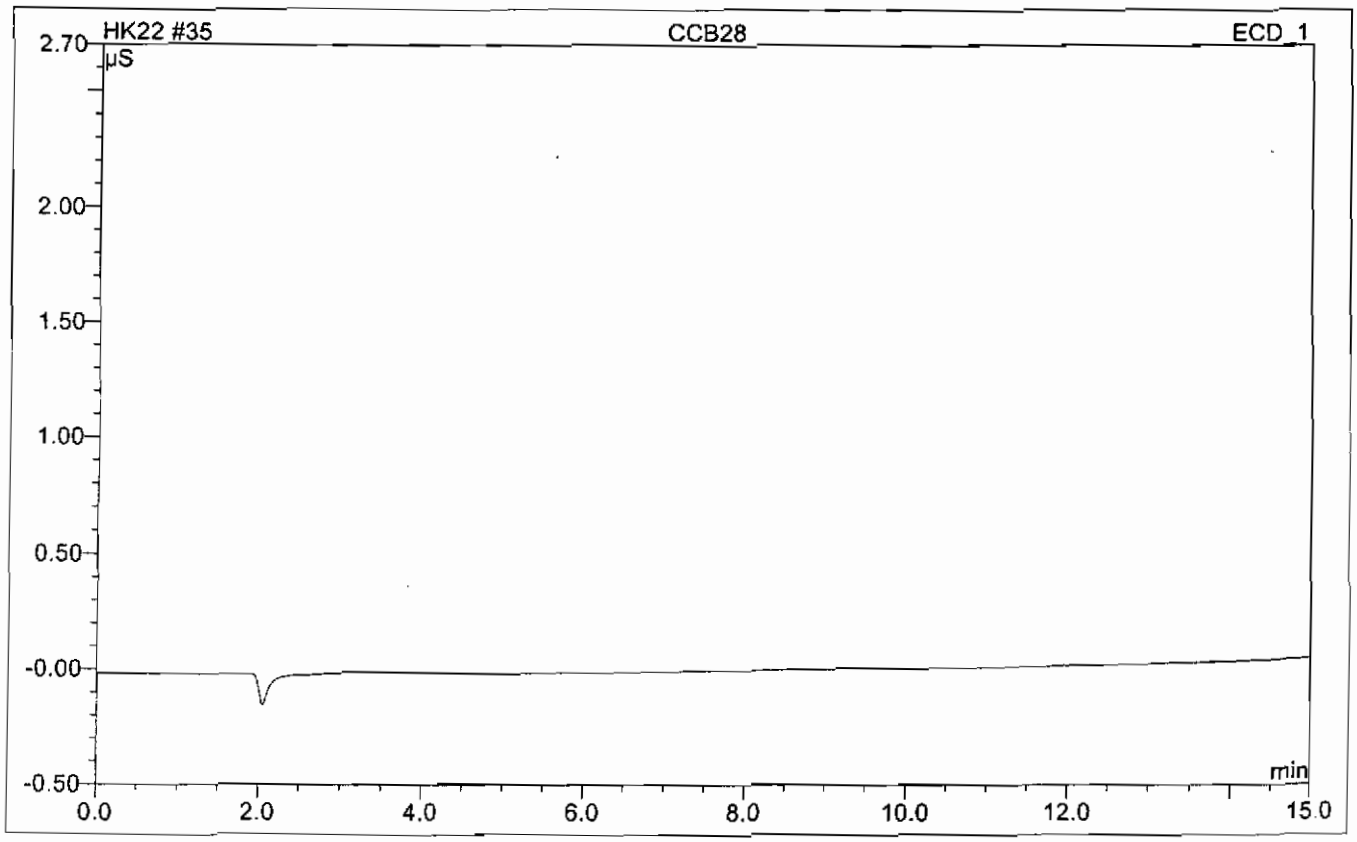
Sample Name:	**CCV28**	*Injection Volume:*	**25.0**
Vial Number:	**100**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/23/2011 3:41**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	5.17	ACETATE	0.546448	0.098284	19.90	1.725	BM
2	5.52	n.a.	0.566092	0.128380	25.99	n.a.	M
3	6.38	n.a.	0.345056	0.090244	18.27	n.a.	MB
4	7.94	n.a.	0.218556	0.071034	14.38	n.a.	BMB
5	9.47	n.a.	0.353438	0.106050	21.47	n.a.	BMB
Total:			2.030	0.494	100.00	1.725	

HK22 026 CCB28

Sample Name:	**CCB28**	*Injection Volume:*	**25.0**
Vial Number:	**99**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ORG**	*Bandwidth:*	**n.a.**
Quantif. Method:	**OAD6K15**	*Dilution Factor:*	**1**
Recording Time:	**11/23/2011 4:23**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-221

0AD6K15.met : 300M ICAL → Passed

-Linear Range :

S-0 → 0.0 ppm S-3 → 1.0 ppm

S-1 → 0.1 S-4 → 2.0

S-2 → 0.4 S-5 → 3.0

- ICV : 2ppm
- Sample Loop : 25uL
- Flow Rate : 1.50 mL/min
- Suppressor : ASRS 4mm
- SRS Current : 100 mA
- Column: Ion Pac AS11 HC, 4x250 mm
- Guard Column : Ion Pac AG16; 4x250mm

0AK010W: K101, K084 & K035 (conf. only)

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK15
Method File:	0AD6K15.met
Analytical Batch:	0AK010W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID		
ICAL	SW12A-02-330	
ICV		332
CCV		331
LCS		332
MS		327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: ce / AM

Date: 11/15/11

8120

Sequence: HK15
Operator: cmadmin

Printed: 11/17/2011 3:52:16 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK15	001	IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK15	002	S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK15	003	S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK15	004	S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK15	005	S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK15	006	S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK15	007	S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK15	008	ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK15	009	ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK15	010	CCV2	Unknown	100	25.0	ORG	OAD6K15	Finished	11/15/2011 11:52:01 PM	1.0000
11	HK15	011	CCB2	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 12:13:00 AM	1.0000
12	HK15	012	OAK010WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/16/2011 12:33:58 AM	1.0000
13	HK15	013	OAK010WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/16/2011 12:54:57 AM	1.0000
14	HK15	014	OAK010WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/16/2011 1:15:56 AM	1.0000
15	HK15	015	K101-01	Unknown	1	25.0	ORG	OAD6K15	Finished	11/16/2011 1:36:54 AM	1.0000
16	HK15	016	K101-02	Unknown	2	25.0	ORG	OAD6K15	Finished	11/16/2011 2:17:49 AM	1.0000
17	HK15	017	K101-03	Unknown	3	25.0	ORG	OAD6K15	Finished	11/16/2011 2:58:42 AM	1.0000
18	HK15	018	K101-04	Unknown	4	25.0	ORG	OAD6K15	Finished	11/16/2011 3:39:37 AM	1.0000
19	HK15	019	K101-05	Unknown	5	25.0	ORG	OAD6K15	Finished	11/16/2011 4:20:31 AM	1.0000
20	HK15	020	K101-05M	Unknown	6	25.0	ORG	OAD6K15	Finished	11/16/2011 5:01:24 AM	1.0000
21	HK15	021	K101-05S	Unknown	7	25.0	ORG	OAD6K15	Finished	11/16/2011 5:42:18 AM	1.0000
22	HK15	022	CCV4	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 6:23:12 AM	1.0000
23	HK15	023	CCB4	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 6:44:11 AM	1.0000
24	HK15	024	K084-01	Unknown	8	25.0	ORG	OAD6K15	Finished	11/16/2011 7:05:09 AM	1.0000
25	HK15	025	K084-02	Unknown	9	25.0	ORG	OAD6K15	Finished	11/16/2011 7:46:03 AM	1.0000
26	HK15	026	K084-03	Unknown	10	25.0	ORG	OAD6K15	Finished	11/16/2011 8:26:57 AM	1.0000
27	HK15	027	K084-04	Unknown	11	25.0	ORG	OAD6K15	Finished	11/16/2011 9:10:16 AM	1.0000

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FINAL

Sequence: HK15
Operator: cmadmin
Printed: 11/17/2011 3:35:11 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Comment
1	HK15	
2	HK15	
3	HK15	
4	HK15	
5	HK15	
6	HK15	
7	HK15	
8	HK15	
9	HK15	
10	HK15	
11	HK15	
12	HK15	
13	HK15	
14	HK15	
15	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
17	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK15	
23	HK15	
24	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
25	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
26	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
27	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

FINAL

Sequence: HK15
Operator: cmadmin

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK15	028	CCV6	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 11:30:24 AM	1.0000
29	HK15	029	CCB6	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 12:32:17 PM	1.0000
30	HK15	030	K084-05	Unknown	12	25.0	ORG	OAD6K15	Finished	11/16/2011 12:53:15 PM	1.0000
31	HK15	031	K084-06	Unknown	13	25.0	ORG	OAD6K15	Finished	11/16/2011 1:34:09 PM	1.0000
32	HK15	032	K035-01	Unknown	14	25.0	ORG	OAD6K15	Finished	11/16/2011 2:15:03 PM	5.0000
33	HK15	033	K035-01A	Unknown	15	25.0	ORG	OAD6K15	Finished	11/16/2011 2:55:56 PM	5.0000
34	HK15	034	CCV8	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 3:36:50 PM	1.0000
35	HK15	035	CCB8	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 3:57:49 PM	1.0000

FINAL

8123

Sequence: HK15
Operator: cmadmin
Printed: 11/17/2011 3:35:11 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Comment
28	HK15	
29	HK15	
30	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
31	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
32	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
33	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
34	HK15	
35	HK15	

FINAL

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4- 01 - 221

DAD6K15.met : 11K146 , 11K174 & 11K184 & 11K101

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	4K22
Method File:	DAD6K15.met
Analytical Batch:	DAK016W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SW12A - 02 - 331
LCS	332
MS	327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: [illegible]

Date: 11/22/11

8125

Sequence: HK22
Operator: cmadmin
Printed: 11/23/2011 9:38:34 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 39

Created: 11/22/2011 10:18:35 AM by cmadmin
Last Update: 11/23/2011 9:36:55 AM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK22		IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK22		S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK22		S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK22		S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK22		S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK22		S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK22		S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK22		ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK22		ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK22	001	CCV24	Unknown	100	25.0	ORG	OAD6K15	Finished	11/22/2011 11:31:44 AM	1.0000
11	HK22	002	CCB24	Unknown	99	25.0	ORG	OAD6K15	Finished	11/22/2011 12:13:41 PM	1.0000
12	HK22	003	OAK016WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/22/2011 12:34:40 PM	1.0000
13	HK22	004	OAK016WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/22/2011 12:55:39 PM	1.0000
14	HK22	005	OAK016WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/22/2011 1:16:38 PM	1.0000
15	HK22	006	K146-02	Unknown	1	25.0	ORG	OAD6K15	Finished	11/22/2011 2:19:34 PM	5.0000
16	HK22	007	K146-02A	Unknown	2	25.0	ORG	OAD6K15	Finished	11/22/2011 3:20:22 PM	5.0000
17	HK22	008	K146-03R	Unknown	3	25.0	ORG	OAD6K15	Finished	11/22/2011 4:21:11 PM	1.0000
18	HK22	009	K174-01	Unknown	4	25.0	ORG	OAD6K15	Finished	11/22/2011 5:02:05 PM	1.0000
19	HK22	010	K174-02	Unknown	5	25.0	ORG	OAD6K15	Finished	11/22/2011 5:42:59 PM	1.0000
20	HK22	011	K174-03	Unknown	6	25.0	ORG	OAD6K15	Finished	11/22/2011 6:23:52 PM	1.0000
21	HK22	012	K174-04	Unknown	7	25.0	ORG	OAD6K15	Finished	11/22/2011 7:04:46 PM	1.0000
22	HK22	013	CCV26	Unknown	100	25.0	ORG	OAD6K15	Finished	11/22/2011 7:45:40 PM	1.0000
23	HK22	014	CCB26	Unknown	99	25.0	ORG	OAD6K15	Finished	11/22/2011 8:06:39 PM	1.0000
24	HK22	015	K174-05	Unknown	8	25.0	ORG	OAD6K15	Finished	11/22/2011 8:27:38 PM	1.0000
25	HK22	016	K174-06	Unknown	9	25.0	ORG	OAD6K15	Finished	11/22/2011 9:08:32 PM	1.0000
26	HK22	017	K174-07	Unknown	10	25.0	ORG	OAD6K15	Finished	11/22/2011 9:49:25 PM	1.0000
27	HK22	018	K184-01	Unknown	11	25.0	ORG	OAD6K15	Finished	11/22/2011 10:30:19 PM	1.0000

8125

FINAL

Sequence: HK22
Operator: cmadmin

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 39

Created: 11/22/2011 10:18:35 AM by cmadmin
Last Update: 11/23/2011 9:36:55 AM by cmadmin

No.	Sequence	Comment
1	HK22	
2	HK22	
3	HK22	
4	HK22	
5	HK22	
6	HK22	
7	HK22	
8	HK22	
9	HK22	
10	HK22	
11	HK22	
12	HK22	
13	HK22	
14	HK22	
15	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
16	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
17	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK22	
23	HK22	
24	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
25	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
26	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
27	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

FINAL

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Sequence: HK22
Operator: cmadmin

Printed: 11/23/2011 10:12:36 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 39

Created: 11/22/2011 10:18:35 AM by cmadmin
Last Update: 11/23/2011 10:06:22 AM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK22	019	K184-01M	Unknown	12	25.0	ORG	OAD6K15	Finished	11/22/2011 11:11:12 PM	1.0000
29	HK22	020	K184-01S	Unknown	13	25.0	ORG	OAD6K15	Finished	11/22/2011 11:52:06 PM	1.0000
30	HK22	021	K184-02	Unknown	14	25.0	ORG	OAD6K15	Finished	11/23/2011 12:33:00 AM	1.0000
31	HK22	022	K184-03	Unknown	15	25.0	ORG	OAD6K15	Finished	11/23/2011 1:13:54 AM	1.0000
32	HK22	023	K184-04	Unknown	16	25.0	ORG	OAD6K15	Finished	11/23/2011 1:54:48 AM	1.0000
33	HK22	024	K184-05	Unknown	17	25.0	ORG-SAMPLE	OAD6K15	Finished	11/23/2011 2:35:41 AM	1.0000
34	HK22	025	CCV28	Unknown	100	25.0	ORG	OAD6K15	Finished	11/23/2011 3:41:35 AM	1.0000
35	HK22	026	CCB28	Unknown	99	25.0	ORG	OAD6K15	Finished	11/23/2011 4:23:33 AM	1.0000
36	HK22	027	K101-04	Unknown	18	25.0	ORG	OAD6K15	Finished	11/23/2011 4:44:31 AM	5.0000
37	HK22	028	K101-04A	Unknown	19	25.0	ORG	OAD6K15	Finished	11/23/2011 5:45:20 AM	5.0000
38	HK22	029	CCV30	Unknown	100	25.0	ORG	OAD6K15	Finished	11/23/2011 7:07:08 AM	1.0000
39	HK22	030	CCB30	Unknown	99	25.0	ORG	OAD6K15	Finished	11/23/2011 7:28:07 AM	1.0000

FINAL

8128

Sequence: HK22
Operator: cmadmin

Printed: 11/23/2011 9:38:34 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 39

Created: 11/22/2011 10:18:35 AM by cmadmin
Last Update: 11/23/2011 9:36:55 AM by cmadmin

No.	Sequence	Comment
28	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
29	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
30	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
31	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
32	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
33	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
34	HK22	
35	HK22	
36	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
37	HK22	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
38	HK22	
39	HK22	

FINAL

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CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K184

METHOD 2320B
TOTAL ALKALINITY

A total of five (5) water samples were received on 11/18/11 for Alkalinity analysis, Method 2320B in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG. Percent recoveries for ALK014WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2320B
TOTAL ALKALINITY

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, TR SITE 70.
Batch No. : 11K184

Matrix : WATER
Instrument ID : E5

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ALK014WB	ND	1	NA	5.00	5.00	11/30/1111:44	NA	11E5K06003	NA	ALK014W	NA	NA
LCS1W	ALK014WL	211	1	NA	5.00	5.00	11/30/1111:51	NA	11E5K06004	NA	ALK014W	NA	NA
LCD1W	ALK014WC	210	1	NA	5.00	5.00	11/30/1111:59	NA	11E5K06005	NA	ALK014W	NA	NA
MW-70-PMW13A-153	K184-01	196	1	NA	5.00	5.00	11/30/1113:32	NA	11E5K06012	NA	ALK014W	11/18/1109:45	11/18/11
MW-70-PMW13B-154	K184-02	205	1	NA	5.00	5.00	11/30/1113:39	NA	11E5K06013	NA	ALK014W	11/18/1110:55	11/18/11
MW-70-PMW14A-155	K184-03	473	1	NA	5.00	5.00	11/30/1113:49	NA	11E5K06014	NA	ALK014W	11/18/1112:09	11/18/11
MW-70-PMW14B-156	K184-04	372	1	NA	5.00	5.00	11/30/1113:57	NA	11E5K06015	NA	ALK014W	11/18/1114:52	11/18/11
IW-70-SSB109-157	K184-05	1210	1	NA	5.00	5.00	11/30/1114:12	NA	11E5K06016	NA	ALK014W	11/18/1116:13	11/18/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, TR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD 23208

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ALK014WB	ALK014WL	ALK014WC		
LAB FILE ID:	11E5K06003	11E5K06004	11E5K06005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/30/1111:44	11/30/1111:51	11/30/1111:59	DATE RECEIVED:	NA
PREP. BATCH:	ALK014W	ALK014W	ALK014W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Total Alkalinity	ND	230	211	92	230	210	91	0	80-120	20

8132

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ALKALINITY

Note: For samples and relevent QCs/Standards analyzed, refer to attached analytical sequence.

☒ Titration end point: pH 4.5 ± 0.04

☒ Low alkalinity: pH 4.2 ± 0.04

MS/MSD amount of spike: NA

Comments:

Book#: AAL-031

Instrument No.: ☐ 53 ☐ 97 ☒ ES

Analytical Batch: ALK014

Analytical Sequence: ~~ALK014~~ 11E5K06
RC 11/30/11

SOP #	Rev. #
☐ EMAX-310.1	5
☒ EMAX-2320B	3
☐ EMAX-	

STANDARDS ID		CONC. (mg/L)
0.02N HCL	SWR1-01-483	0.02
LCS	SW1-01-407	230
MS/MSD	NA	NA
ICV	NA	NA

pH Buffer	ID
pH 4	SW1-01-341
pH 7	-342
pH 10	-396
pH 8.0 (Check)	-347

Analyzed By: RC

Date: 11/30/11

Report Date: 11/30/2011 : 2:44 PM

PC-TitratION PLUS

pH and Alkalinity In-Run Report

Run Number 547 **Analytical Batch#** **11E5K06**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
1	ICV PH8	11E5K06	11/30/2011	11:35 AM	7.97	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	
2	RINSE	11E5K06	11/30/2011	11:40 AM	5.42	.00	.04	.04	.00	1.20	1.20	.00	.00	
3	ALK014WB	11E5K06	11/30/2011	11:44 AM	4.38	.00	.00	.00	.00	-.18	-.18	.00	.00	
4	ALK014WL	11E5K06	11/30/2011	11:51 AM	8.58	1.47	5.27	-1.00	58.95	210.98	93.09	117.89	.00	
5	ALK014WC	11E5K06	11/30/2011	11:59 AM	8.59	1.57	5.26	-1.00	62.79	210.42	84.84	125.58	.00	
6	K180-01	11E5K06	11/30/2011	12:26 PM	5.21	.00	60.13	-1.00	.00	2,405.00	2,405.00	.00	.00	
7	K180-01D	11E5K06	11/30/2011	12:54 PM	5.25	.00	64.76	-1.00	.00	2,590.21	2,590.21	.00	.00	
8	K180-02	11E5K06	11/30/2011	1:03 PM	6.48	.00	9.62	-1.00	.00	384.93	384.93	.00	.00	
9	K180-03	11E5K06	11/30/2011	1:13 PM	6.54	.00	9.73	-1.00	.00	389.14	389.14	.00	.00	
10	K180-04	11E5K06	11/30/2011	1:19 PM	6.43	.00	.62	-1.00	.00	24.82	24.82	.00	.00	
11	K180-05	11E5K06	11/30/2011	1:25 PM	6.39	.00	2.61	-1.00	.00	104.21	104.21	.00	.00	
12	K184-01	11E5K06	11/30/2011	1:32 PM	7.59	.00	4.90	-1.00	.00	196.03	196.03	.00	.00	
13	K184-02	11E5K06	11/30/2011	1:39 PM	7.62	.00	5.12	-1.00	.00	204.79	204.79	.00	.00	
14	K184-03	11E5K06	11/30/2011	1:49 PM	7.12	.00	11.82	-1.00	.00	472.87	472.87	.00	.00	
15	K184-04	11E5K06	11/30/2011	1:57 PM	7.26	.00	9.29	-1.00	.00	371.74	371.74	.00	.00	
16	K184-05	11E5K06	11/30/2011	2:12 PM	6.87	.00	30.14	-1.00	.00	1,205.55	1,205.55	.00	.00	
17	K845-01	11E5K06	11/30/2011	2:21 PM	7.38	.00	1.16	-1.00	.00	46.29	46.29	.00	.00	
18	K845-02	11E5K06	11/30/2011	2:28 PM	7.51	.00	1.13	-1.00	.00	45.35	45.35	.00	.00	

Analyzed by: Rc Reviewed by: Rc Date: 12/1/11

PC-TitratION PLUS by Man-Tech Associates, Inc.

pH AND ALKALINITY IN-RUN REPORT.SRW

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Run Number 547 **Analytical Batch#** **11E5K06**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
19	K845-02D	11E5K06	11/30/2011	2:36 PM	7.50	.00	1.14	-1.00	.00	45.41	45.41	.00	.00	
20	RINSE	11E5K06	11/30/2011	2:42 PM	5.70	.00	.06	.13	.00	-.72	-.72	.00	.00	

Analyzed by: RC Reviewed by: RC Date: 12/1/11

PC-TitratION PLUS by Man-Tech Associates, Inc.

pH AND ALKALINITY IN-RUN REPORT.SRW
Copyright Hinterland Software Ltd.

PC-Titrate For Windows

Running List Report

Order Number - 11E5K06

	Schedule	Sample Id	Vial	Weight	Volume
1	PH CAL	CAL	1	.00	25.00
2	PH ONLY	ICV PH8	4	.00	25.00
3	PH-ALK	RINSE	5	.00	25.00
4	PH-ALK	ALK014WB	6	.00	25.00
5	PH-ALK	ALK014WL	7	.00	25.00
6	PH-ALK	ALK014WC	8	.00	25.00
7	PH-ALK	K180-01	9	.00	25.00
8	PH-ALK	K180-01D	10	.00	25.00
9	PH-ALK	K180-02	11	.00	25.00
10	PH-ALK	K180-03	12	.00	25.00
11	PH-ALK	K180-04	13	.00	25.00
12	PH-ALK	K180-05	14	.00	25.00
13	PH-ALK	K184-01	15	.00	25.00
14	PH-ALK	K184-02	16	.00	25.00
15	PH-ALK	K184-03	17	.00	25.00
16	PH-ALK	K184-04	18	.00	25.00
17	PH-ALK	K184-05	19	.00	25.00
18	PH-ALK	K845-01	20	.00	25.00
19	PH-ALK	K845-02	21	.00	25.00
20	PH-ALK	K845-02D	22	.00	25.00
21	PH-ALK	RINSE	23	.00	25.00

PC-TitratION PLUS by Man-Tech Associates, Inc.
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PC-Titrate For Windows

Running List Report

Order Number - 11E5K06

	Schedule	Sample Id	Vial	Weight	Volume
1	PH CAL	CAL	1	.00	25.00
2	PH ONLY	ICV PH8	4	.00	25.00
3	PH-ALK	RINSE	5	.00	25.00
4	PH-ALK	ALK014WB	6	.00	25.00
5	PH-ALK	ALK014WL	7	.00	25.00
6	PH-ALK	ALK014WC	8	.00	25.00
7	PH-ALK	K180-01	9	.00	25.00
8	PH-ALK	K180-01D	10	.00	25.00
9	PH-ALK	K180-02	11	.00	25.00
10	PH-ALK	K180-03	12	.00	25.00
11	PH-ALK	K180-04	13	.00	25.00
12	PH-ALK	K180-05	14	.00	25.00
13	PH-ALK	K184-01	15	.00	25.00
14	PH-ALK	K184-02	16	.00	25.00
15	PH-ALK	K184-03	17	.00	25.00
16	PH-ALK	K184-04	18	.00	25.00
17	PH-ALK	K184-05	19	.00	25.00
18	PH-ALK	K845-01	20	.00	25.00
19	PH-ALK	K845-02	21	.00	25.00
20	PH-ALK	RINSE	22	.00	25.00

PC-TitratION PLUS by Man-Tech Associates, Inc.
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CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K184

METHOD 2540C
TOTAL DISSOLVED SOLIDS

A total of five (5) water samples were received on 11/18/11 for Total Dissolved Solids analysis, Method 2540C in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Balance calibration was checked as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TDK014WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2540C
TOTAL DISSOLVED SOLIDS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K184

Matrix : WATER
Instrument ID : 40706360

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TDK014WB	ND	1	NA	20.0	20.0	11/23/1115:20	NA	TDK01401	NA	TDK014W	NA	NA
LCS1W	TDK014WL	1000	1	NA	20.0	20.0	11/23/1115:20	NA	TDK01402	NA	TDK014W	NA	NA
LCD1W	TDK014WC	965	1	NA	20.0	20.0	11/23/1115:20	NA	TDK01403	NA	TDK014W	NA	NA
MW-70-PMW13A-153	K184-01	4460	1	NA	20.0	20.0	11/23/1115:20	NA	TDK01404	NA	TDK014W	11/18/1109:45	11/18/11
MW-70-PMW13B-154	K184-02	8320	1	NA	20.0	20.0	11/23/1115:20	NA	TDK01405	NA	TDK014W	11/18/1110:55	11/18/11
MW-70-PMW14A-155	K184-03	3720	1	NA	20.0	20.0	11/23/1115:20	NA	TDK01406	NA	TDK014W	11/18/1112:09	11/18/11
MW-70-PMW14B-156	K184-04	7400	1	NA	20.0	20.0	11/23/1115:20	NA	TDK01407	NA	TDK014W	11/18/1114:52	11/18/11
IW-70-SSB109-157	K184-05	9520	1	NA	20.0	20.0	11/23/1115:20	NA	TDK01408	NA	TDK014W	11/18/1116:13	11/18/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD 2540C

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TDK014WB	TDK014WL	TDK014WC		
LAB FILE ID:	TDK01401	TDK01402	TDK01403		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1115:20	11/23/1115:20	11/23/1115:20	DATE RECEIVED:	NA
PREP. BATCH:	TDK014W	TDK014W	TDK014W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TDS	ND	1000	1000	100	1000	965	96	4	80-120	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
GRAVIMETRIC

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AGV-047

Balance ID: 40706360

Analytical Batch: TDK014

SOP #	Rev. #
☐ EMAX-160.1	6
☐ EMAX-160.2	4
☐ EMAX-160.3	2
☐ EMAX-2540B	1
☑ EMAX-2540C	5
☐ EMAX-2540D	1

STANDARDS ID	CONC. (mg/L)
LCS CW2-02-914	1000

Micropipette ID: 438481531

Analyzed By: NM

Date: 11/28/11

EMAX LABORATORIES, INC.

GRAVIMETRIC ANALYSES
RAW DATA

11TDK014.xls

Analytical Batch: TDK014 Instrument ID: 40706360 Oven Temp IN (°C): 180 Oven Temp OUT (°C): 180 SOP: EMAX160.1 Rev. 3

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish #	Dish (g)	Date	Time	1st Dry Weight + Dish (g)	Date	Time	2nd Dry Weight + Dish (g)	Date	Time	3rd Dry Weight + Dish (g)	Date	Time	Difference 1st & 2nd Dry Wt. Rdg.	Difference 2nd & 3rd Dry Wt. Rdg. (<0.5mg)	NOTES
TDK01401	TDK014WB	100	B	72.7781	11/23/11	15:20	72.7781	11/28/11	13:21	72.7781	11/28/11	15:29	72.7781	11/28/11	15:29	0	0.0	
TDK01402	TDK014WL	20	L	21.4203	11/23/11	15:21	21.4400	11/28/11	13:22	21.4404	11/28/11	15:30	21.4404	11/28/11	15:30	0.0004	0.0	
TDK01403	TDK014WC	20	C	21.5157	11/23/11	15:21	21.5349	11/28/11	13:23	21.535	11/28/11	15:30	21.535	11/28/11	15:30	1E-04	0.0	
TDK01404	K184-01	20	1	21.4145	11/23/11	15:21	21.5040	11/28/11	13:23	21.5038	11/28/11	15:31	21.5038	11/28/11	15:31	-0.0002	0.0	
TDK01405	K184-02	5	2	21.4083	11/23/11	15:22	21.4503	11/28/11	13:24	21.4499	11/28/11	15:31	21.4499	11/28/11	15:31	-0.0004	0.0	
TDK01406	K184-03	20	3	21.5911	11/23/11	15:22	21.6656	11/28/11	13:24	21.6654	11/28/11	15:31	21.6654	11/28/11	15:31	-0.0002	0.0	
TDK01407	K184-04	5	4	21.3760	11/23/11	15:22	21.4130	11/28/11	13:24	21.413	11/28/11	15:32	21.413	11/28/11	15:32	0	0.0	
TDK01408	K184-05	5	5	21.4534	11/23/11	15:23	21.5014	11/28/11	13:25	21.501	11/28/11	15:32	21.501	11/28/11	15:32	-0.0004	0.0	
TDK01409	K205-01	20	6	21.5833	11/23/11	15:23	21.6821	11/28/11	13:25	21.6817	11/28/11	15:32	21.6817	11/28/11	15:32	-0.0004	0.0	
TDK01410	K205-01D	20	7	21.4741	11/23/11	15:23	21.5680	11/28/11	13:25	21.5680	11/28/11	15:34	21.5680	11/28/11	15:34	0	0.0	
TDK01411	K205-02	20	8	21.4149	11/23/11	15:24	21.4334	11/28/11	13:26	21.4338	11/28/11	15:34	21.4338	11/28/11	15:34	0.0004	0.0	
TDK01412	K205-05	100	9	70.4804	11/23/11	15.24	70.4796	11/28/11	13:27	70.4798	11/28/11	15:34	70.4798	11/28/11	15:34	0.0002	0.0	
TDK01413	K205-04	100	10	70.7087	11/23/11	15.24	70.7082	11/28/11	13:27	70.7084	11/28/11	15:35	70.7084	11/28/11	15:35	0.0002	0.0	
TDK01414	K205-03	20	11	21.4096	11/23/11	15.25	21.506	11/28/11	13:28	21.5062	11/28/11	15:35	21.5062	11/28/11	15:35	0.0002	0.0	
TDK01415	K845-01	20	12	21.5352	11/23/11	15:25	21.5631	11/28/11	13:28	21.5631	11/28/11	15:35	21.5631	11/28/11	15:35	0	0.0	
TDK01416	K845-01D	20	13	21.5179	11/23/11	15:25	21.5459	11/28/11	13:29	21.546	11/28/11	15:36	21.546	11/28/11	15:36	1E-04	0.0	
TDK01417	K845-02	20	14	21.4574	11/23/11	15:25	21.4852	11/28/11	13:29	21.4848	11/28/11	15.36	21.4848	11/28/11	15:36	-0.0004	0.0	

NM 11/28/11

Beginning Balance Check			
Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/23/11 15:19	PASSED
5	5.0000	11/23/11 15:19	PASSED
100	99.9987	11/23/11 15:19	PASSED

Ending Balance Check			
Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/23/11 15.26	PASSED
5	4.9999	11/23/11 15.27	PASSED
100	99.9988	11/23/11 15.27	PASSED

Beginning Balance Check			
Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/28/11 13:20	PASSED
5	4.9998	11/28/11 13:20	PASSED
100	99.9981	11/28/11 13:21	PASSED

Ending Balance Check			
Std. Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/28/11 15:36	PASSED
5	4.9999	11/28/11 15:36	PASSED
100	99.9949	11/28/11 15:36	PASSED

Acceptance Criteria: ± 0.1% OR 0.5 mg whichever is greater

LCS Conc: 1000 mg/L MDL 10 mg/L RL: 10 mg/L Initial Rdg by: NM Final Rdg by: NM Reviewed by: NM

Remarks. Date: 11/28/11

EMAX LABORATORIES INC.

GRAVIMETRIC CALCULATION

Analytical Batch: TDK014 Start Date/Time: 11/23/11 15:20 Temp IN(°C): 180

Balance ID: 40706360 End Date/Time: 11/28/11 15:36 Temp Out(°C): 180

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish (g)	Dry Weight + Dish (g)	SOLIDS (mg)	RESULT (mg/L)	NOTES
TDK01401	TDK014WB	100	72.7781	72.7781		ND	
TDK01402	TDK014WL	20	21.4203	21.4404	20.1000	1000	100
TDK01403	TDK014WC	20	21.5157	21.535	19.3000	965	97
TDK01404	K184-01	20	21.4145	21.5038	89.3000	4460	
TDK01405	K184-02	5	21.4083	21.4499	41.6000	8320	
TDK01406	K184-03	20	21.5911	21.6654	74.3000	3720	
TDK01407	K184-04	5	21.376	21.413	37.0000	7400	
TDK01408	K184-05	5	21.4534	21.501	47.6000	9520	
TDK01409	K205-01	20	21.5833	21.6817	98.4000	4920	
TDK01410	K205-01D	20	21.4741	21.568	93.9000	4700	
TDK01411	K205-02	20	21.4149	21.4338	18.9000	945	
TDK01412	K205-05	100	70.4804	70.4798	-0.6000	ND	
TDK01413	K205-04	100	70.7087	70.7084	-0.3000	ND	
TDK01414	K205-03	20	21.4096	21.5062	96.6000	4830	
TDK01415	K845-01	20	21.5352	21.5631	27.9000	1390	
TDK01416	K845-01D	20	21.5179	21.546	28.1000	1400	
TDK01417	K845-02	20	21.4574	21.4848	27.4000	1370	

NM 11/28/11

LCS Concentration: 1000 mg/L MDL(mg/L): 10 Initial Reading by: NM

SOP: EMAX160.1 Rev. 3 RL (mg/L): 10 Final Reading by: NM

Remarks:

Reviewed by: NM

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K184

METHOD 4500F
DISSOLVED HYDROGEN SULFIDE

A total of five (5) water samples were received on 11/18/11 for Dissolved Hydrogen Sulfide analysis, Method 4500F in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 4500F
Dissolved Hydrogen Sulfide

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K184

Matrix : WATER
Instrument ID : NA

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	HSK005WB	ND	1	NA	1.00	1.00	11/23/1114:35	NA	HSK00501	NA	HSK005W	NA	NA
MW-70-PMW13A-153	K184-01	ND	1	NA	1.00	1.00	11/23/1114:43	NA	HSK00504	NA	HSK005W	11/18/1109:45	11/18/11
MW-70-PMW13B-154	K184-02	ND	1	NA	1.00	1.00	11/23/1114:49	NA	HSK00505	NA	HSK005W	11/18/1110:55	11/18/11
MW-70-PMW14A-155	K184-03	ND	1	NA	1.00	1.00	11/23/1114:52	NA	HSK00506	NA	HSK005W	11/18/1112:09	11/18/11
MW-70-PMW14B-156	K184-04	ND	1	NA	1.00	1.00	11/23/1114:55	NA	HSK00507	NA	HSK005W	11/18/1114:52	11/18/11
IW-70-SSB109-157	K184-05	ND	1	NA	1.00	1.00	11/23/1115:02	NA	HSK00508	NA	HSK005W	11/18/1116:13	11/18/11

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
SULFIDE

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Book #: ASD-018

Analytical Batch: HSK005

Comments:

Presence of analyte was confirmed using colorimetric method.

Abs @ 664

Blank (0ppm) = 0

1ppm = 0.665

188-03 @ 1X = 1.999

205-03 @ 1X = 1.999

188-03 @ 20X = 0.396

205-03 @ 20X = 0.392

SOP #	Rev. #
☐ EMAX-376.1	3
☐ EMAX-9034	0
☐ EMAX-4500-S2F	1
☑ EMAX-4500-S2H	0
☐ EMAX-	

STANDARDS ID	conc.
LCS SWI-01-422	8.48
Spike NA	NA
$Na_2S_2O_3$ Standard SWRI-01-384	0.0248
Iodine SWRI-01-465	0.0250
HCl SWPI-007-60-03	6N
Indicator SWRI-01-340	–

Analyzed By: NM

Date: 11/23/11

8145

EMAX LABORATORIES, INC.

ANALYSIS FOR SULFIDE

Method: SM4500-S2-H Analytical Batch: **HSK005** Book #: ASD-018 Page: 15

Data File Name	Lab Sample ID	V_c (ml)	V_s (ml)	Volume of Titant V_t (ml)	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Sulfide	Sample Result	Flag J	Unit
HSK0051	HSK005WB	100	2.5	2.53	11/23/11	14:35:06	-0.03904	ND		mg/L
HSK0052	HSK005WL	100	2.5	0.73	11/23/11	14:37:35	7.10336	7.1		mg/L
HSK0053	HSK005WC	100	2.5	0.74	11/23/11	14:40:59	7.06368	7.06		mg/L
HSK0054	K184-01	100	2.5	2.56	11/23/11	14:43:56	-0.15808	ND		mg/L
HSK0055	K184-02	100	2.5	2.61	11/23/11	14:49:19	-0.35648	ND		mg/L
HSK0056	K184-03	100	2.5	2.61	11/23/11	14:52:02	-0.35648	ND		mg/L
HSK0057	K184-04	100	2.5	2.7	11/23/11	14:55:15	-0.7136	ND		mg/L
HSK0058	K184-05	100	2.5	2.44	11/23/11	15:02:32	0.31808	ND		mg/L
HSK0059	K187-01	100	2.5	2.62	11/23/11	15:07:11	-0.39616	ND		mg/L
HSK00510	K188-03	100	5	2.69	11/23/11	15:15:41	9.32608	9.33		mg/L
HSK00511	K205-01	100	2.5	2.59	11/23/11	15:33:29	-0.27712	ND		mg/L
HSK00512	K205-01D	100	2.5	2.6	11/23/11	15:46:00	-0.3168	ND		mg/L
HSK00513	K205-02	100	2.5	2.7	11/23/11	16:04:37	-0.7136	ND		mg/L
HSK00514	K205-03	100	5	2.58	11/23/11	16:07:35	9.76256	9.76		mg/L
HSK00515	K205-04	100	2.5	2.55	11/23/11	16:10:02	-0.1184	ND		mg/L
HSK00516	K205-05	100	2.5	2.51	11/23/11	16:13:02	0.04032	ND		mg/L

NM 11/23/11

STANDARDIZATION

V_I (ml)	V_{Na2SO3} (ml)	DATE	TIME	Titrant Na_2SO_3 (N)
Average Normality of Iodine (NI)=				0.025

☑ Standard Purchased as Certified Solution

$$N_I = \frac{(N * V)_{Na_2SO_3}}{V_I}$$

MISCELLANEOUS INFORMATION

Standard	Concentration		Unit
Iodine	0.025		N
$Na_2S_2O_3$	0.0248		N
LCS [WATER | SOIL]	8.48	84.8	mg/L | mg/Kg
MDL [WATER | SOIL]	1	10	mg/L | mg/Kg
RL	1	10	mg/L | mg/Kg

$$S(mg/L) = \frac{[(V_I * N_I) - (V_t * N_t)](16{,}000)}{V_S}$$

MS/MSD	TV=	8.48	mg/L
ID	Result (mg/L)	%Rec.	RPD

Comments:

Analyzed By: NM

SM4500-S^2 H

EMAX LABORATORIES, INC.

ANALYSIS FOR UN-IONIZED HYDROGEN SULFIDE

Method SM4500-S2-H

Analytical Batch: HSK005

Data File Name	Lab Sample ID	Sulfide	Unit	Date Time	Temp. °C	pH	Conductivity µS/cm	H2S	Unit	COMMENTS
HSK0051	HSK005WB	ND	mg/L	11/23/11 14:35				ND	mg/L	
HSK0052	HSK005WL	7.1	mg/L	11/23/11 14:37				#VALUE!	mg/L	
HSK0053	HSK005WC	7.06	mg/L	11/23/11 14:40				#VALUE!	mg/L	
HSK0054	K184-01	ND	mg/L	11/23/11 14:43	24.9	7.25	7200	ND	mg/L	
HSK0055	K184-02	ND	mg/L	11/23/11 14:49	25.2	7.27	12920	ND	mg/L	
HSK0056	K184-03	ND	mg/L	11/23/11 14:52	24.8	6.63	6440	ND	mg/L	
HSK0057	K184-04	ND	mg/L	11/23/11 14:55	24.9	6.8	11310	ND	mg/L	
HSK0058	K184-05	ND	mg/L	11/23/11 15:02	25	6.42	14650	ND	mg/L	
HSK0059	K187-01	ND	mg/L	11/23/11 15:07	24.9	7.67	7770	ND	mg/L	
HSK00510	K188-03	9.33	mg/L	11/23/11 15:15	25	5.18	9651	9.14	mg/L	
HSK00511	K205-01	ND	mg/L	11/23/11 15:33	25.1	6.53	8600	ND	mg/L	
HSK00512	K205-01D	ND	mg/L	11/23/11 15:46	25	6.56	8510	ND	mg/L	
HSK00513	K205-02	ND	mg/L	11/23/11 16:04	25.1	6.54	1608	ND	mg/L	
HSK00514	K205-03	9.76	mg/L	11/23/11 16:07	25.1	6.93	7530	4.53	mg/L	
HSK00515	K205-04	ND	mg/L	11/23/11 16:10	25	6.57	7.47	ND	mg/L	
HSK00516	K205-05	ND	mg/L	11/23/11 16:13	24.8	6.55	6.57	ND	mg/L	

11/23/11
NM

$$pK_1 = 32.5 + 1519.44/T - 15.672\log_{10}T + 0.02722T$$

$$A = 0.7083 - 2.277x10^{-3}T + 5.399x10^{-6}T^2$$

$$I = 1.6x10^{-5}\,Conductivity$$

$$pf_m = A\left(\frac{\sqrt{I}}{1+\sqrt{I}} - 0.3\right)$$

$$K'_1 = 10^{-pK_1+2pf_m}$$

$$H^+ = 10^{-pH+pf_m}$$

$$H_2S = \left(\frac{S_T}{1+\frac{K'_1}{H^+}}\right)$$

Analyzed by: NM

Reviewed by: NM

Date: 11/23/2011

Where: T(°K)= T°C+272.15 pK1=dissociation constant for zero ionic strength A= Debye-Huckel Parameter I= Ionic Strength pfm=negative logarithm of the mooovalent ion activity coefficient K'_1=conditional ionization constanct H^+=Hydrogen ion concentration S_T=Total Sulfide Concentration

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K184

METHOD SM5310B
TOC

A total of five (5) water samples were received on 11/18/11 for Total Organic Carbon analysis, Method SM5310B in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary forms for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for TCK016WL/C were all within QC limits.
Percent recoveries for TCK018WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD SM5310B
TOC

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K184

Matrix : WATER
Instrument ID : I62

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TCK016WB	ND	1	NA	1.00	0.500	11/22/1114:37	NA	TCK011-05	TCK011-02	TCK016W	NA	NA
LCS1W	TCK016WL	24.7	1	NA	1.00	0.500	11/22/1114:50	NA	TCK011-06	TCK011-02	TCK016W	NA	NA
LCD1W	TCK016WC	24.7	1	NA	1.00	0.500	11/22/1115:03	NA	TCK011-07	TCK011-02	TCK016W	NA	NA
MW-70-PMW13A-153	K184-01	1.73	1	NA	1.00	0.500	11/22/1116:51	NA	TCK011-16	TCK011-14	TCK016W	11/18/1109:45	11/18/11
MW-70-PMW13B-154	K184-02	1.58	1	NA	1.00	0.500	11/22/1117:02	NA	TCK011-17	TCK011-14	TCK016W	11/18/1110:55	11/18/11
MW-70-PMW14A-155	K184-03	ND	1	NA	1.00	0.500	11/22/1117:13	NA	TCK011-18	TCK011-14	TCK016W	11/18/1112:09	11/18/11
MW-70-PMW14B-156	K184-04	1.95	1	NA	1.00	0.500	11/22/1117:24	NA	TCK011-19	TCK011-14	TCK016W	11/18/1114:52	11/18/11
MBLK2W	TCK018WB	ND	1	NA	1.00	0.500	11/28/1115:56	NA	TCK012-05	TCK012-02	TCK018W	NA	NA
LCS2W	TCK018WL	25.1	1	NA	1.00	0.500	11/28/1116:09	NA	TCK012-06	TCK012-02	TCK018W	NA	NA
LCD2W	TCK018WC	25.2	1	NA	1.00	0.500	11/28/1116:22	NA	TCK012-07	TCK012-02	TCK018W	NA	NA
IW-70-SSB109-157	K184-05T	96.3	5	NA	5.00	2.50	11/28/1118:40	NA	TCK012-18	TCK012-14	TCK018W	11/18/1116:13	11/18/11

0558

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD SM5310B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TCK016WB	TCK016WL	TCK016WC		
LAB FILE ID:	TCK011-05	TCK011-06	TCK011-07		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1114:37	11/22/1114:50	11/22/1115:03	DATE RECEIVED:	NA
PREP. BATCH:	TCK016W	TCK016W	TCK016W		
CALIB. REF:	TCK011-02	TCK011-02	TCK011-02		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	ND	25.0	24.7	99	25.0	24.7	99	0	85-115	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K184
METHOD: METHOD SM5310B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	TCK018WB	TCK018WL	TCK018WC		
LAB FILE ID:	TCK012-05	TCK012-06	TCK012-07		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/28/1115:56	11/28/1116:09	11/28/1116:22	DATE RECEIVED:	NA
PREP. BATCH:	TCK018W	TCK018W	TCK018W		
CALIB. REF:	TCK012-02	TCK012-02	TCK012-02		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	ND	25.0	25.1	100	25.0	25.2	101	0	85-115	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TOC

	Date	Time
Start	11/22/11	1207
End	11/23/11	0348

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

TCK016W/17W
K150 5310B
K546
K174
K184
K186
K153 9060
K142
K179
K159 415.1
K148 DOC

Sample K546-01 was filtered prior to analysis due to its turbidity

Filter ID 0.45um 2176453
2 M HCl SW4-01-323

Book #:	A62-020
Instrument No.:	62
Pipette ID:	039380025
	SW3-01-33
	SI1A-01-4
Balance ID:	40706360
Analytical Sequence:	TCK011
Method File:	TCK011
Analytical Batch:	TCK016W / TCK017W

SOP #	Rev. #
☑ EMAX-415.1	2
☑ EMAX-5310B	1
☑ EMAX-9060	2
☐ EMAX-	

STANDARDS ID	CONC. (mg/L)
S0 nanopure	0
S1 SW10B-04-174	1
S2	5
S3	10
S4	40
S5	80
S6 —	—
ICV/LCS SW10B-04-178	25
CCV -179	25

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ TOC	
☐	

Analyzed By: AM

Date: 11/22/11

	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
1	Standard	NPOC	ICAL	TCK011-01	0A-123456	C:\Program	1.000		
2	Control	NPOC	ICV	TCK011-02	0A-123456	C:\Program	1.000	NPOC:24.87 mg/L	
3	Unknown	NPOC	ICB	TCK011-03	0A-123456	C:\Program	1.000	NPOC:0.1761 mg/	
4	Unknown	NPOC	HCO3\CO3	TCK011-04	0A-123456	C:\Program	1.000	NPOC:0.1306 mg/	
5	Unknown	NPOC	TCK016WB	TCK011-05	0A-123456	C:\Program	1.000	NPOC:0.02901 mg	
6	Unknown	NPOC	TCK016WL	TCK011-06	0A-123456	C:\Program	1.000	NPOC:24.68 mg/L	
7	Unknown	NPOC	TCK016WC	TCK011-07	0A-123456	C:\Program	1.000	NPOC:24.66 mg/L	
8	Unknown	NPOC	K150-01	TCK011-08	0A-123456	C:\Program	1.000	NPOC:10.13 mg/L	PH<2
9	Unknown	NPOC	K150-01M	TCK011-09	0A-123456	C:\Program	1.000	NPOC:36.06 mg/L	
10	Unknown	NPOC	K150-01S	TCK011-10	0A-123456	C:\Program	1.000	NPOC:36.05 mg/L	
11	Unknown	NPOC	K546-01	TCK011-11	0A-123456	C:\Program	1.000	NPOC:24.19 mg/L	PH<2
12	Unknown	NPOC	K174-01	TCK011-12	0A-123456	C:\Program	1.000	NPOC:2.213 mg/L	PH<2
13	Unknown	NPOC	K174-07	TCK011-13	0A-123456	C:\Program	1.000	NPOC:2.049 mg/L	PH<2
14	Control	NPOC	CCV1	TCK011-14	0A-123456	C:\Program	1.000	NPOC:24.40 mg/L	
15	Unknown	NPOC	CCB1	TCK011-15	0A-123456	C:\Program	1.000	NPOC:0.09559 mg	
16	Unknown	NPOC	K184-01	TCK011-16	0A-123456	C:\Program	1.000	NPOC:1.733 mg/L	PH<2
17	Unknown	NPOC	K184-02	TCK011-17	0A-123456	C:\Program	1.000	NPOC:1.576 mg/L	PH<2
18	Unknown	NPOC	K184-03	TCK011-18	0A-123456	C:\Program	1.000	NPOC:0.04844 mg	PH<2
19	Unknown	NPOC	K184-04	TCK011-19	0A-123456	C:\Program	1.000	NPOC:1.949 mg/L	PH<2
20	Unknown	NPOC	K184-05	TCK011-20	0A-123456	C:\Program	1.000	NPOC:104.1 mg/L	PH<2 over
21	Unknown	NPOC	K186-07	TCK011-21	0A-123456	C:\Program	1.000	NPOC:65.98 mg/L	PH<2
22	Unknown	NPOC	K186-08	TCK011-22	0A-123456	C:\Program	1.000	NPOC:3.646 mg/L	PH<2
23	Unknown	NPOC	K186-08M	TCK011-23	0A-123456	C:\Program	1.000	NPOC:28.04 mg/L	
24	Unknown	NPOC	K186-08S	TCK011-24	0A-123456	C:\Program	1.000	NPOC:27.98 mg/L	
25	Unknown	NPOC	K186-09	TCK011-25	0A-123456	C:\Program	1.000	NPOC:3.235 mg/L	PH<2
26	Control	NPOC	CCV2	TCK011-26	0A-123456	C:\Program	1.000	NPOC:23.81 mg/L	
27	Unknown	NPOC	CCB2	TCK011-27	0A-123456	C:\Program	1.000	NPOC:0.1002 mg/	
28	Unknown	NPOC	K186-10	TCK011-28	0A-123456	C:\Program	1.000	NPOC:18.63 mg/L	PH<2
29	Unknown	NPOC	K186-12	TCK011-29	0A-123456	C:\Program	1.000	NPOC:6.763 mg/L	PH<2
30	Unknown	NPOC	K153-01	TCK011-30	0A-123456	C:\Program	1.000	NPOC:1.721 mg/L	PH<2
31	Unknown	NPOC	K153-02	TCK011-31	0A-123456	C:\Program	1.000	NPOC:0.7100 mg/	PH<2
32	Unknown	NPOC	K153-03	TCK011-32	0A-123456	C:\Program	1.000	NPOC:0.3568 mg/	PH<2
33	Unknown	NPOC	K153-04	TCK011-33	0A-123456	C:\Program	1.000	NPOC:0.6843 mg/	PH<2
34	Unknown	NPOC	K153-05	TCK011-34	0A-123456	C:\Program	1.000	NPOC:0.6638 mg/	PH<2
35	Unknown	NPOC	TCK017WL	TCK011-35	0A-123456	C:\Program	1.000	NPOC:23.75 mg/L	
36	Unknown	NPOC	TCK017WC	TCK011-36	0A-123456	C:\Program	1.000	NPOC:23.77 mg/L	
37	Unknown	NPOC	TCK017WB	TCK011-37	0A-123456	C:\Program	1.000	NPOC:0.09541 mg	
38	Control	NPOC	CCV3	TCK011-38	0A-123456	C:\Program	1.000	NPOC:23.52 mg/L	
39	Unknown	NPOC	CCB3	TCK011-39	0A-123456	C:\Program	1.000	NPOC:0.1109 mg/	
40	Unknown	NPOC	K153-06	TCK011-40	0A-123456	C:\Program	1.000	NPOC:0.5494 mg/	PH<2
41	Unknown	NPOC	K153-07	TCK011-41	0A-123456	C:\Program	1.000	NPOC:1.996 mg/L	PH<2
42	Unknown	NPOC	K142-01	TCK011-42	0A-123456	C:\Program	1.000	NPOC:1.261 mg/L	PH<2
43	Unknown	NPOC	K142-03	TCK011-43	0A-123456	C:\Program	1.000	NPOC:0.5499 mg/	PH<2
44	Unknown	NPOC	K142-03M	TCK011-44	0A-123456	C:\Program	1.000	NPOC:25.28 mg/L	
45	Unknown	NPOC	K142-03S	TCK011-45	0A-123456	C:\Program	1.000	NPOC:25.29 mg/L	
46	Unknown	NPOC	K142-04	TCK011-46	0A-123456	C:\Program	1.000	NPOC:5.272 mg/L	PH<2
47	Unknown	NPOC	K179-01	TCK011-47	0A-123456	C:\Program	1.000	NPOC:2.472 mg/L	PH<2
48	Unknown	NPOC	K179-03	TCK011-48	0A-123456	C:\Program	1.000	NPOC:2.521 mg/L	PH<2
49	Unknown	NPOC	K759-01	TCK011-49	0A-123456	C:\Program	1.000	NPOC:4.298 mg/L	PH<2
50	Control	NPOC	CCV4	TCK011-50	0A-123456	C:\Program	1.000	NPOC:23.70 mg/L	✓
51	Unknown	NPOC	CCB4	TCK011-51	0A-123456	C:\Program	1.000	NPOC:0.1132 mg/	
52	Unknown	NPOC	K145-02	TCK011-52	0A-123456	C:\Program	1.000	NPOC:9.757 mg/L	✓ PH<2
53	Unknown	NPOC	K145-03	TCK011-53	0A-123456	C:\Program	1.000	NPOC:9.776 mg/L	✓ PH<2
54	Unknown	NPOC	K145-04	TCK011-54	0A-123456	C:\Program	1.000	NPOC:19.44 mg/L	✓ PH<2
55	Unknown	NPOC	K145-05	TCK011-55	0A-123456	C:\Program	1.000	NPOC:1.902 mg/L	PH<2
56	Unknown	NPOC	K145-07	TCK011-56	0A-123456	C:\Program	1.000	NPOC:2.473 mg/L	PH<2
57	Unknown	NPOC	K145-08	TCK011-57	0A-123456	C:\Program	1.000	NPOC:263.3 mg/L	PH<2 over
58	Unknown	NPOC	K145-08M	TCK011-58	0A-123456	C:\Program	1.000	NPOC:287.8 mg/L	over
59	Unknown	NPOC	K145-08S	TCK011-59	0A-123456	C:\Program	1.000	NPOC:290.1 mg/L	over
60	Unknown	NPOC	K145-09	TCK011-60	0A-123456	C:\Program	1.000	NPOC:653.3 mg/L	PH<2 over
61	Control	NPOC	CCV5	TCK011-61	0A-123456	C:\Program	1.000	NPOC:25.38 mg/L	
62	Unknown	NPOC	CCB5	TCK011-62	0A-123456	C:\Program	1.000	NPOC:0.6393 mg/	✓
63	Unknown	NPOC	K145-11	TCK011-63	0A-123456	C:\Program	1.000	NPOC:11.75 mg/L	PH<2
64	Unknown	NPOC	K145-11M	TCK011-64	0A-123456	C:\Program	1.000	NPOC:36.60 mg/L	
65	Unknown	NPOC	K145-11S	TCK011-65	0A-123456	C:\Program	1.000	NPOC:36.45 mg/L	
66	Unknown	NPOC	K145-12	TCK011-66	0A-123456	C:\Program	1.000	NPOC:2.109 mg/L	PH<2
67	Unknown	NPOC	TCK012WQ	TCK011-67	0A-123456	C:\Program	1.000	NPOC:0.1725 mg/	

	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
68	Control	NPOC	CCV6	TCK011-68	0A-123456-	C:\Program	1.000	NPOC:23.77 mg/L	
69	Unknown	NPOC	CCB6	TCK011-69	0A-123456-	C:\Program	1.000	NPOC:0.1337 mg/	
70									
71									
72									
73									
74									
75									
76									
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129									
130									FINAL
131									
132									
133									
134								Am 11/23/11	

Instr.Information

System	toc
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Cal. Curve

Sample Name:	ICAL
Sample ID:	TCK011-01
Cal. Curve:	TCK011.2011_11_22_11_59_31.cal

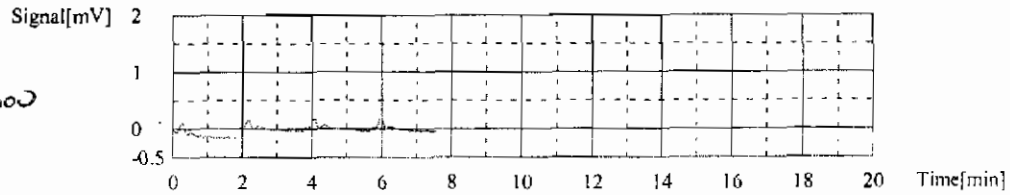
Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.000	50uL	1	*******		11/22/11 12:07:40 PM
2	0.000	50uL	1	*******		11/22/11 12:09:44 PM
3	0.000	50uL	1	*******		11/22/11 12:11:48 PM
4	0.000	50uL	1	*******		11/22/11 12:13:52 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 0.000

$\frac{\text{mean area}}{\text{slope}} = \frac{0.000}{2.218} = 0.000$

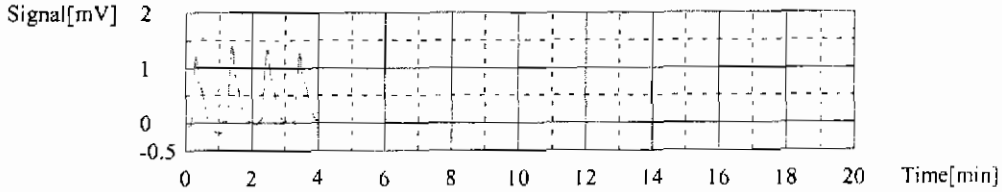


Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem	Ex.	Date / Time
1	2.172	50uL	10	*******		11/22/11 12:22:06 PM
2	2.314	50uL	10	*******		11/22/11 12:23:20 PM
3	2.283	50uL	10	*******		11/22/11 12:24:29 PM
4	2.295	50uL	10	*******		11/22/11 12:25:44 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 2.266

$\frac{\bar{x}}{m} = \frac{2.266}{2.218} = 1.022$

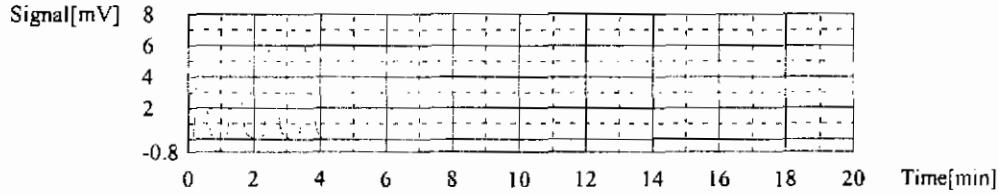


Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	10.74	50uL	2	*******		11/22/11 12:32:00 PM
2	10.82	50uL	2	*******		11/22/11 12:33:16 PM
3	11.03	50uL	2	*******		11/22/11 12:34:31 PM
4	10.77	50uL	2	*******		11/22/11 12:35:46 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 10.84

$\frac{\bar{A}}{m} = \frac{10.84}{2.218} = 4.887$

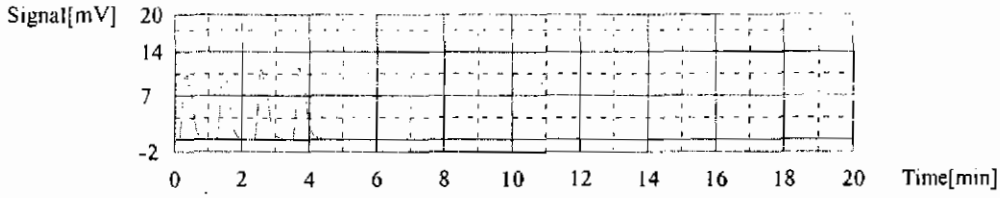


Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	21.14	50uL	1	*******		11/22/11 12:41:26 PM
2	21.50	50uL	1	*******		11/22/11 12:42:43 PM
3	21.72	50uL	1	*******		11/22/11 12:44:01 PM
4	21.57	50uL	1	*******		11/22/11 12:45:21 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 21.48

$\frac{\bar{A}}{m} = \frac{21.48}{2.218} = 9.684$

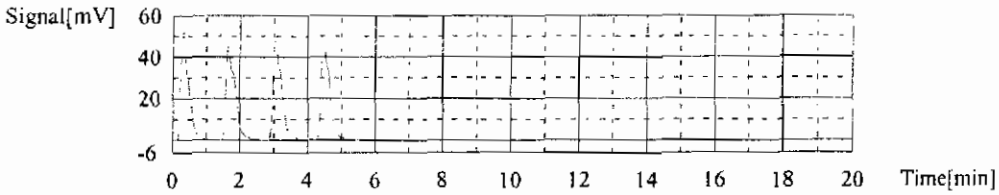


Conc: 40.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	85.71	50uL	2	*******		11/22/11 12:53:52 PM
2	85.66	50uL	2	*******		11/22/11 12:55:25 PM
3	87.37	50uL	2	*******		11/22/11 12:57:00 PM
4	86.22	50uL	2	*******		11/22/11 12:58.33 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 86.24

$\frac{\bar{A}}{m} = \frac{86.24}{2.218} = 38.88$

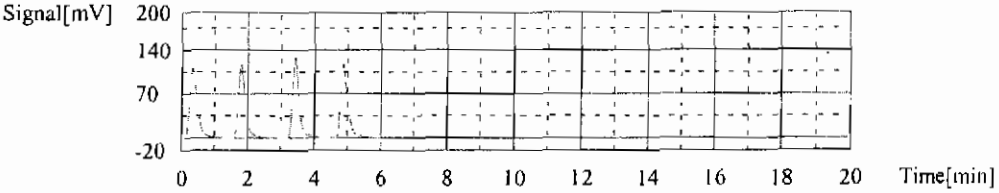


Conc: 80.00mg/L

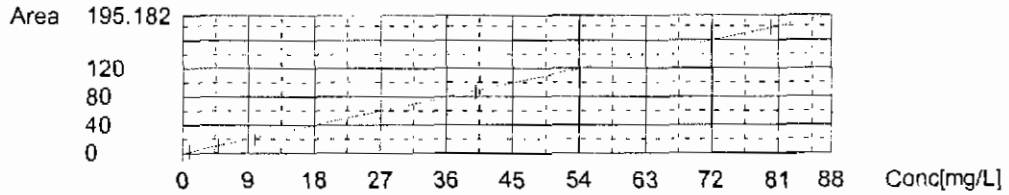
No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	178.2	50uL	1	*******		11/22/11 01:04:33 PM
2	178.0	50uL	1	*******		11/22/11 01:06:21 PM
3	178.3	50uL	1	*******		11/22/11 01:07:58 PM
4	177.4	50uL	1	*******		11/22/11 01:09.36 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 178.0

$\frac{\bar{A}}{m} = \frac{178.0}{2.218} = 80.25$



Slope: 2.218
Intercept 0.000
r^2 0.999773



8157

Control Sample

Sample Name: ICV
Sample ID: TCK011-02
Method: TCK011.tpl
Chk. Result Control value: 24.87 / Control exceeds range!

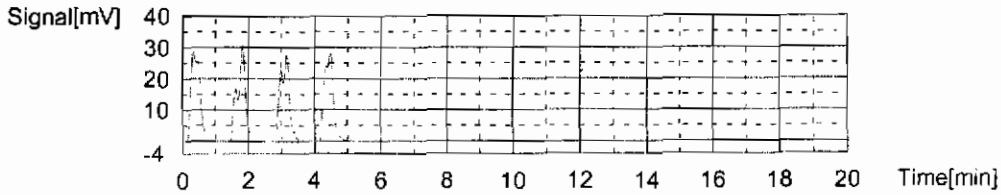
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:24.87 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.83	25.17mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 01:17:36 PM
2	54.80	24.71mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 01:19:08 PM
3	55.31	24.94mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 01:20:39 PM
4	54.74	24.68mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 01:22:07 PM

Mean Area 55.17
Mean Conc. 24.87mg/L



Sample

Sample Name: ICB
Sample ID: TCK011-03
Origin: TCK011.cal
Chk. Result

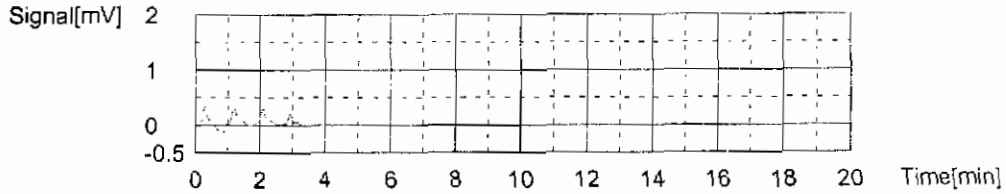
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1761 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6110	0.2755mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 01:29:32 PM
2	0.4348	0.1960mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 01:30:36 PM
3	0.3121	0.1407mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 01:31:37 PM
4	0.2041	0.09202mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 01:32:25 PM

Mean Area 0.3905
Mean Conc. 0.1761mg/L



8158

Sample

Sample Name: HCO3\CO3
Sample ID: TCK011-04
Origin: TCK011.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1306 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2988	0.1347mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 02:23:31 PM
2	0.3404	0.1535mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 02:24:35 PM
3	0.2759	0.1244mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 02:25:40 PM
4	0.2438	0.1099mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 02:26:34 PM

Mean Area 0.2897
Mean Conc. 0.1306mg/L

Sample

Sample Name: TCK016WB
Sample ID: TCK011-05
Origin: TCK011.cal
Chk. Result

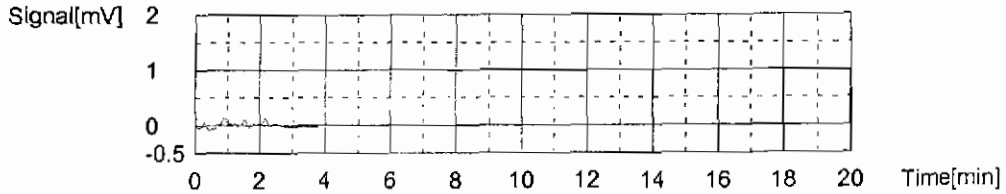
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.02901 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.06610	0.02980mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 02:33:40 PM
2	0.1118	0.05041mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 02:34:30 PM
3	0.07950	0.03584mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 02:35:21 PM
4	0.000	0.000mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 02:37:27 PM

Mean Area 0.06435
Mean Conc. 0.02901mg/L



Sample

8159

Sample Name: TCK016WL
Sample ID: TCK011-06
Origin: TCK011.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:24.68 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.83	24.72mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 02:45:32 PM
2	54.65	24.64mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 02:47:16 PM
3	55.16	24.87mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 02:48:53 PM
4	54.32	24.49mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 02:50:37 PM

Mean Area 54.74
Mean Conc. 24.68mg/L

Sample

Sample Name: TCK016WC
Sample ID: TCK011-07
Origin: TCK011.cal
Chk. Result

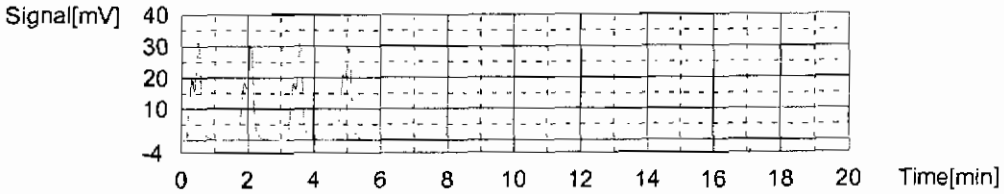
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:24.66 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.91	24.76mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 02:58:41 PM
2	54.89	24.75mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 03:00:23 PM
3	54.41	24.53mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 03:02:05 PM
4	54.59	24.61mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 03:03:39 PM

Mean Area 54.70
Mean Conc. 24.66mg/L



Sample

Sample Name: K150-01
Sample ID: TCK011-08
Origin: TCK011.cal
Chk. Result

8160

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:10.13 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	22.18	10.00mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 03:11:25 PM
2	21.95	9.896mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 03:12:53 PM
3	22.92	10.33mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 03:14:28 PM
4	22.86	10.31mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 03:15:56 PM

Mean Area 22.48
Mean Conc. 10.13mg/L

Sample

Sample Name: K150-01M
Sample ID: TCK011-09
Origin: TCK011.cal
Chk. Result

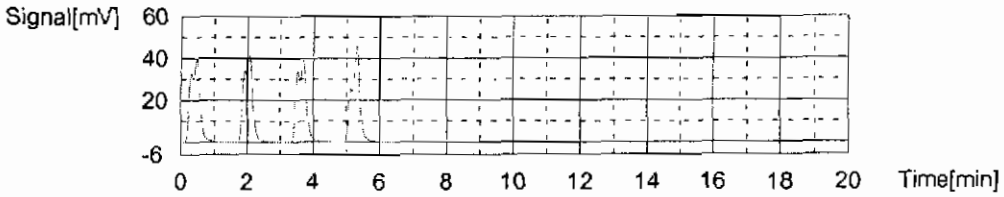
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:36.06 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	79.55	35.87mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 03:24:02 PM
2	80.23	36.17mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 03:25:51 PM
3	80.14	36.13mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 03:27:40 PM
4	79.97	36.06mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 03:29:32 PM

Mean Area 79.97
Mean Conc. 36.06mg/L



Sample

Sample Name: K150-01S
Sample ID: TCK011-10
Origin: TCK011.cal
Chk. Result

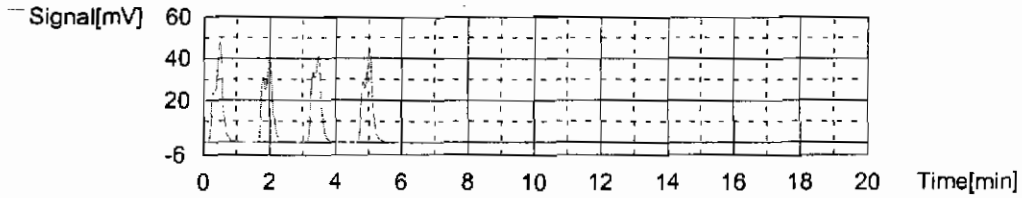
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:36.05 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	79.12	35.67mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 03:37:32 PM
2	79.56	35.87mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 03:39:14 PM
3	80.20	36.16mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 03:40:59 PM
4	80.93	36.49mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 03:42:36 PM

Mean Area 79.95
Mean Conc. 36.05mg/L



Sample

Sample Name: K546-01
Sample ID: TCK011-11
Origin: TCK011.cal
Chk. Result

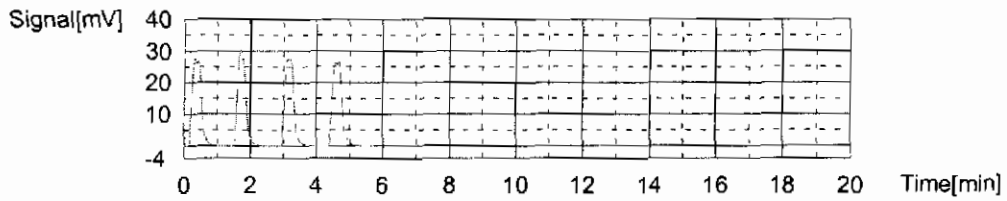
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:24.19 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.21	24.44mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 03:50:28 PM
2	53.03	23.91mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 03:52:06 PM
3	53.76	24.24mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 03:53:45 PM
4	53.59	24.16mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 03:55:25 PM

Mean Area 53.65
Mean Conc. 24.19mg/L



Sample

Sample Name: K174-01
Sample ID: TCK011-12
Origin: TCK011.cal
Chk. Result

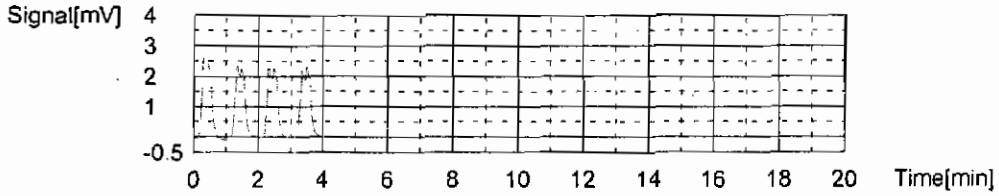
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.213 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.303	2.391mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:02:57 PM
2	4.765	2.148mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:04:09 PM
3	4.804	2.166mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:05:22 PM
4	4.764	2.148mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:06:35 PM

Mean Area 4.909
Mean Conc. 2.213mg/L



Sample

Sample Name: K174-07
Sample ID: TCK011-13
Origin: TCK011.cal
Chk. Result

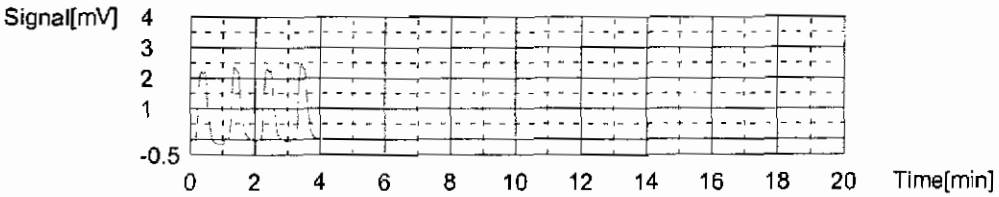
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.049 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.499	2.028mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:14:07 PM
2	4.554	2.053mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:15:19 PM
3	4.558	2.055mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:16:35 PM
4	4.569	2.060mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:17:46 PM

Mean Area 4.545
Mean Conc. 2.049mg/L



Control Sample

Sample Name: CCV1
Sample ID: TCK011-14
Method: TCK011.tpl
Chk. Result Control value: 24.40 / Control exceeds range!

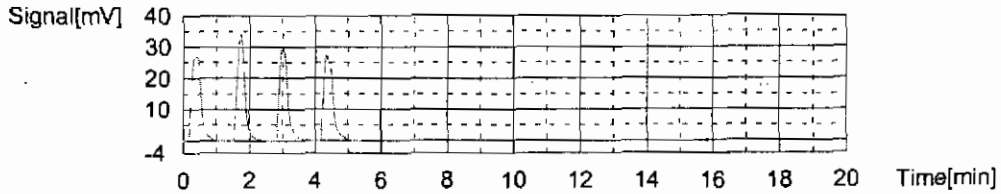
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:24.40 mg/L

1. Det.

Anal.. NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.46	24.10mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:25:38 PM
2	53.97	24.33mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:27:07 PM
3	54.97	24.78mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:28:42 PM
4	54.05	24.37mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:30:16 PM

Mean Area 54.11
Mean Conc. 24.40mg/L



Sample

Sample Name: CCB1
Sample ID: TCK011-15
Origin: TCK011.cal
Chk. Result

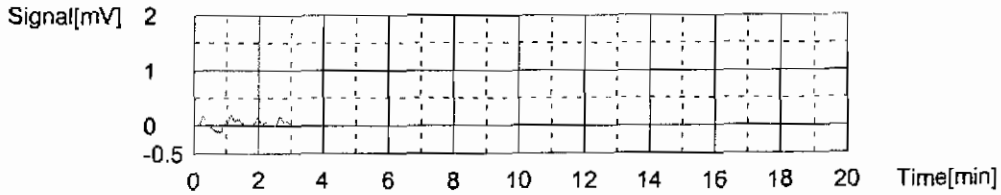
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.09559 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2883	0.1300mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:37:37 PM
2	0.2502	0.1128mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:38:39 PM
3	0.1436	0.06474mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:39:31 PM
4	0.1660	0.07484mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:40:22 PM

Mean Area 0.2120
Mean Conc. 0.09559mg/L



Sample

Sample Name: K184-01
Sample ID: TCK011-16
Origin: TCK011.cal
Chk. Result

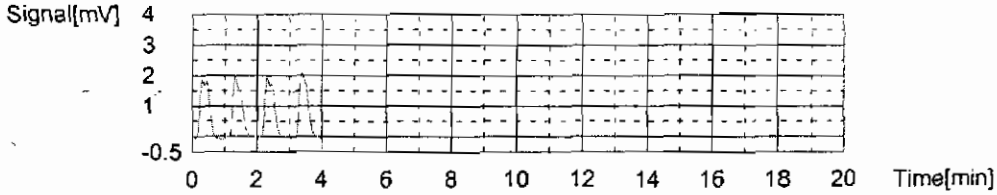
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.733 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.825	1.725mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:47:53 PM
2	3.830	1.727mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:49:04 PM
3	3.846	1.734mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:50:20 PM
4	3.873	1.746mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:51:36 PM

Mean Area 3.844
Mean Conc. 1.733mg/L



Sample

Sample Name: K184-02
Sample ID: TCK011-17
Origin: TCK011.cal
Chk. Result

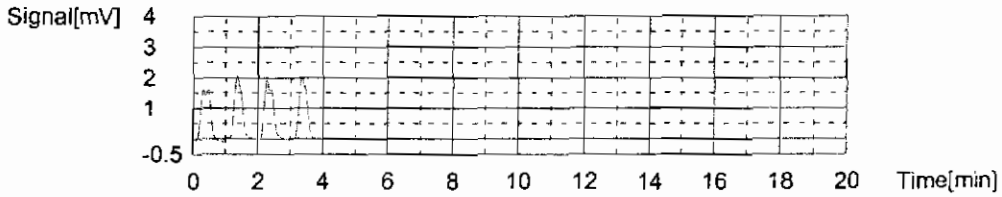
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.576 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.417	1.541mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 04:59:06 PM
2	3.436	1.549mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 05:00:14 PM
3	3.612	1.629mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 05:01:30 PM
4	3.514	1.584mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 05:02:44 PM

Mean Area 3.495
Mean Conc. 1.576mg/L



Sample

Sample Name: K184-03
Sample ID: TCK011-18
Origin: TCK011.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.04844 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.000	0.000mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 05:11:08 PM
2	0.09000	0.04058mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 05:12:02 PM
3	0.1193	0.05379mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 05:12:56 PM
4	0.2205	0.09941mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 05:13:52 PM

Mean Area 0.1075
Mean Conc. 0.04844mg/L

Sample

Sample Name: K184-04
Sample ID: TCK011-19
Origin: TCK011.cal
Chk. Result

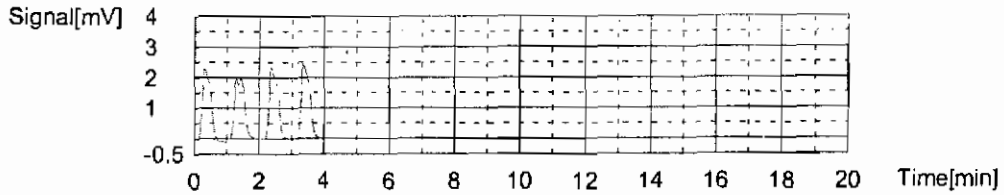
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.949 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.270	1.925mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 05:21:21 PM
2	4.165	1.878mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 05:22:37 PM
3	4.357	1.964mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 05:23:49 PM
4	4.496	2.027mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 05:24:59 PM

Mean Area 4.322
Mean Conc. 1.949mg/L



Sample

Sample Name: K184-05
Sample ID: TCK011-20
Origin: TCK011.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:104.1 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	229.7	103.6mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 05:33:33 PM
2	228.6	103.1mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 05:35:43 PM
3	233.1	105.1mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 05:37:53 PM
4	232.1	104.6mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 05:40:05 PM

Mean Area 230.9
Mean Conc. 104.1mg/L

Sample

Sample Name: K186-07
Sample ID: TCK011-21
Origin: TCK011.cal
Chk. Result

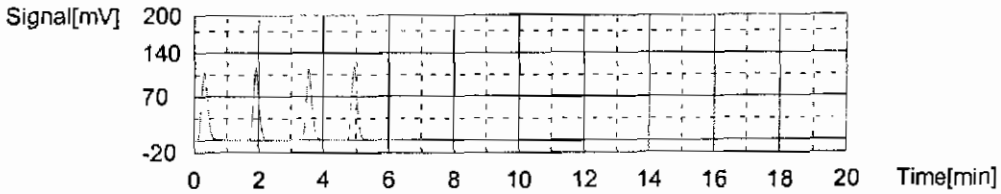
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:65.98 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	145.7	65.69mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 05:48:12 PM
2	146.2	65.92mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 05:50:02 PM
3	145.9	65.78mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 05:51:37 PM
4	147.6	66.55mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 05:53:24 PM

Mean Area 146.4
Mean Conc. 65.98mg/L



Sample

Sample Name: K186-08
Sample ID: TCK011-22
Origin: TCK011.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:3.646 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.964	3.591mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:00:59 PM
2	8.086	3.646mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:02:16 PM
3	8.053	3.631mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:03:28 PM
4	8.244	3.717mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:04:48 PM

Mean Area 8.087
Mean Conc. 3.646mg/L

Sample

Sample Name: K186-08M
Sample ID: TCK011-23
Origin: TCK011.cal
Chk. Result

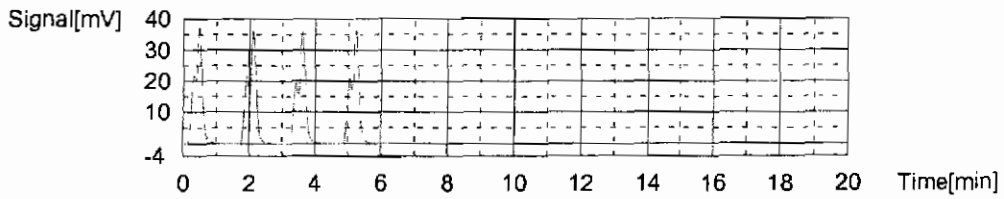
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:28.04 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	61.56	27.75mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:12:55 PM
2	62.34	28.11mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:14:36 PM
3	62.65	28.25mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:16:26 PM
4	62.21	28.05mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:18:09 PM

Mean Area 62.19
Mean Conc. 28.04mg/L



Sample

Sample Name: K186-08S
Sample ID: TCK011-24
Origin: TCK011.cal
Chk. Result

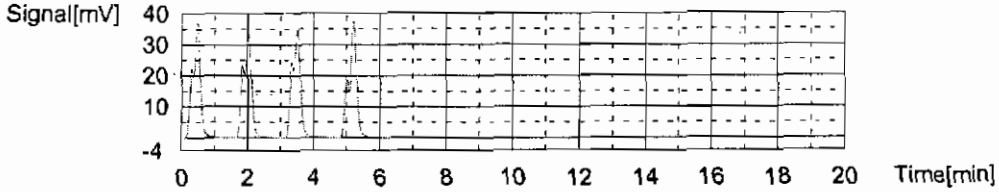
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:27.98 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	61.44	27.70mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:26:11 PM
2	61.64	27.79mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:27:53 PM
3	62.38	28.12mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:29:45 PM
4	62.77	28.30mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:31:34 PM

Mean Area 62.06
Mean Conc. 27.98mg/L



Sample

Sample Name: K186-09
Sample ID: TCK011-25
Origin: TCK011.cal
Chk. Result

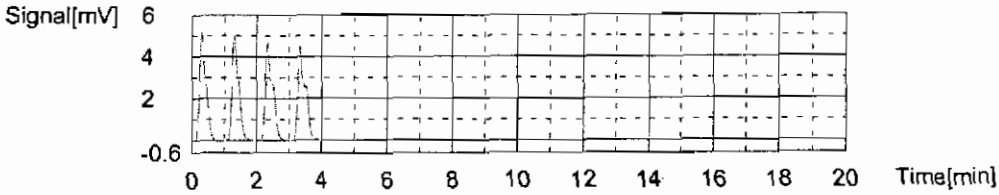
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:3.235 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.040	3.174mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:39:05 PM
2	7.194	3.243mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:40:19 PM
3	7.244	3.266mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:41:31 PM
4	7.224	3.257mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:42:45 PM

Mean Area 7.176
Mean Conc. 3.235mg/L



Control Sample

Sample Name: CCV2
Sample ID: TCK011-26
Method: TCK011.tpl
Chk. Result Control value: 23.81 / Control exceeds range!

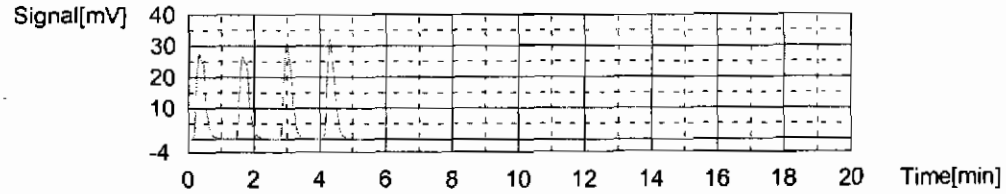
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:23.81 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	52.28	23.57mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:50:34 PM
2	52.83	23.82mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:52:06 PM
3	53.22	23.99mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:53:37 PM
4	52.87	23.84mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 06:55:08 PM

Mean Area 52.80
Mean Conc. 23.81mg/L



Sample

Sample Name: CCB2
Sample ID: TCK011-27
Origin: TCK011.cal
Chk. Result

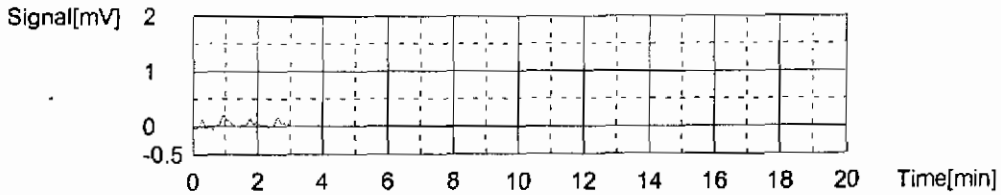
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1002 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1596	0.07196mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:02:18 PM
2	0.2986	0.1346mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:03:20 PM
3	0.2104	0.09486mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:04:22 PM
4	0.2205	0.09941mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:05:24 PM

Mean Area 0.2223
Mean Conc. 0.1002mg/L



Sample

Sample Name: K186-10
Sample ID: TCK011-28
Origin: TCK011.cal
Chk. Result

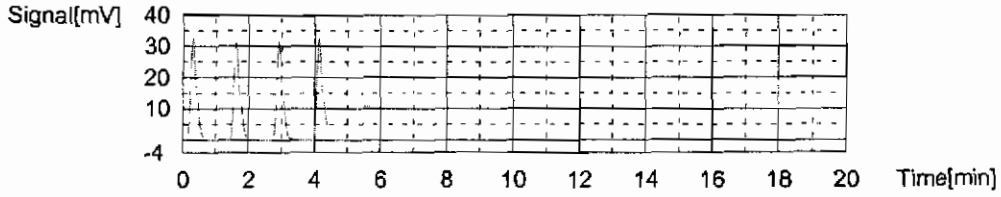
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:18.63 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	40.97	18.47mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:13:14 PM
2	41.41	18.67mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:14:43 PM
3	41.03	18.50mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:16:08 PM
4	41.86	18.87mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:17:28 PM

Mean Area 41.32
Mean Conc. 18.63mg/L



Sample

Sample Name: K186-12
Sample ID: TCK011-29
Origin: TCK011.cal
Chk. Result

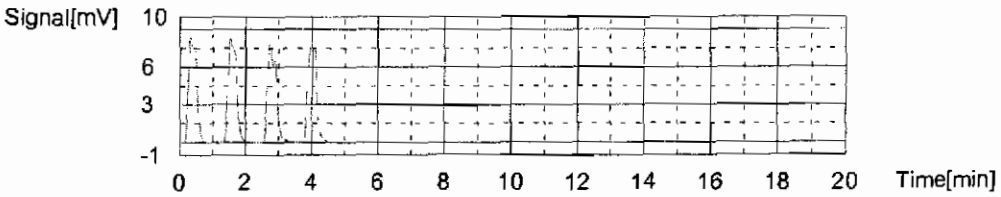
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:6.763 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	15.12	6.817mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:25:11 PM
2	14.87	6.704mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:26:35 PM
3	15.00	6.763mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:27:58 PM
4	15.01	6.767mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:29:18 PM

Mean Area 15.00
Mean Conc. 6.763mg/L



Sample

Sample Name: K153-01
Sample ID: TCK011-30
Origin: TCK011.cal
Chk. Result

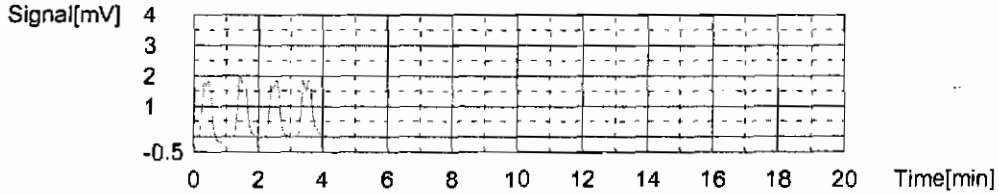
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.721 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.645	1.643mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:36:56 PM
2	3.842	1.732mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:38:07 PM
3	3.789	1.708mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:39:19 PM
4	3.990	1.799mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:40:34 PM

Mean Area 3.817
Mean Conc. 1.721mg/L



Sample

Sample Name: K153-02
Sample ID: TCK011-31
Origin: TCK011.cal
Chk. Result

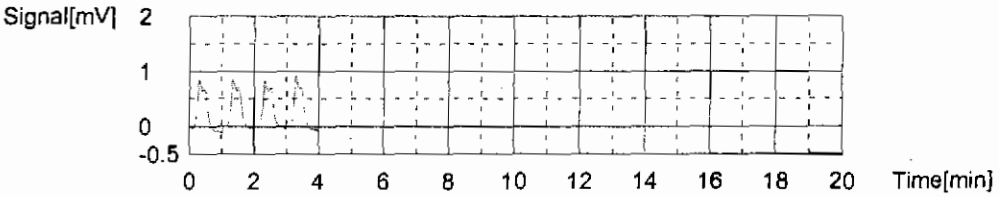
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.7100 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.588	0.7160mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:48:07 PM
2	1.606	0.7241mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:49:17 PM
3	1.546	0.6970mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:50:28 PM
4	1.559	0.7029mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:51:38 PM

Mean Area 1.575
Mean Conc. 0.7100mg/L



Sample

Sample Name: K153-03
Sample ID: TCK011-32
Origin: TCK011.cal
Chk. Result

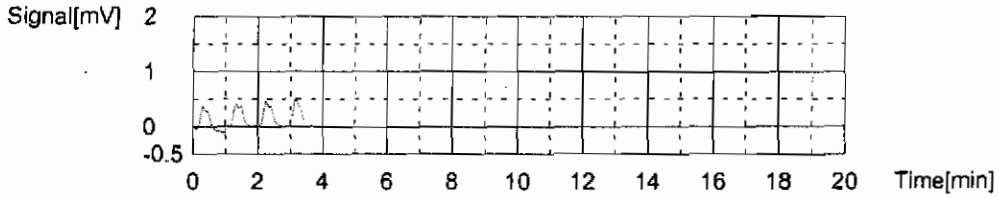
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.3568 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.7386	0.3330mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 07:59:09 PM
2	0.7800	0.3517mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:00:17 PM
3	0.8146	0.3673mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:01:24 PM
4	0.8320	0.3751mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:02:28 PM

Mean Area 0.7913
Mean Conc. 0.3568mg/L



Sample

Sample Name: K153-04
Sample ID: TCK011-33
Origin: TCK011.cal
Chk. Result

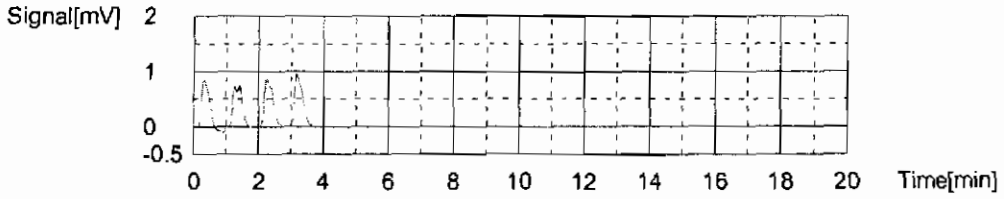
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.6843 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.495	0.6740mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:09:56 PM
2	1.440	0.6492mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:11:05 PM
3	1.499	0.6758mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:12:13 PM
4	1.637	0.7381mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:13:18 PM

Mean Area 1.518
Mean Conc. 0.6843mg/L



Sample

Sample Name: K153-05
Sample ID: TCK011-34
Origin: TCK011.cal
Chk. Result

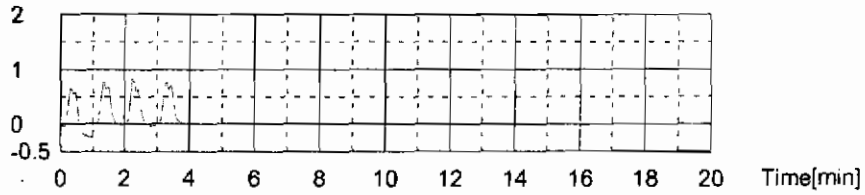
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.6638 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.416	0.6384mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:20:49 PM
2	1.463	0.6596mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:21:56 PM
3	1.475	0.6650mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:23:09 PM
4	1.535	0.6921mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:24:18 PM

Mean Area 1.472
Mean Conc. 0.6638mg/L



Sample

Sample Name: TCK017WL
Sample ID: TCK011-35
Origin: TCK011.cal
Chk. Result

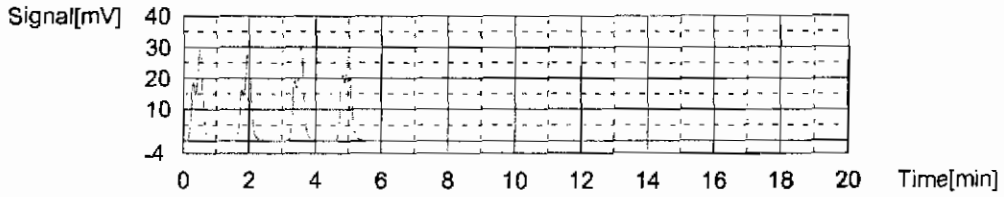
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:23.75 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	52.62	23.72mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:32:16 PM
2	52.64	23.73mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:34:04 PM
3	52.97	23.88mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:35:42 PM
4	52.45	23.65mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:37:20 PM

Mean Area 52.67
Mean Conc. 23.75mg/L



Sample

Sample Name: TCK017WC
Sample ID: TCK011-36
Origin: TCK011.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:23.77 mg/L

1. Det

Anal.. NPOC

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No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	52.83	23.82mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:45:26 PM
2	52.79	23.80mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:47:06 PM
3	52.95	23.87mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:48:46 PM
4	52.31	23.58mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:50:24 PM

Mean Area 52.72
Mean Conc. 23.77mg/L

Sample

Sample Name: TCK017WB
Sample ID: TCK011-37
Origin: TCK011.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.09541 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2556	0.1152mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:57:47 PM
2	0.2142	0.09657mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:58:49 PM
3	0.1992	0.08981mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 08:59:49 PM
4	0.1775	0.08003mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:00:41 PM

Mean Area 0.2116
Mean Conc. 0.09541mg/L

Control Sample

Sample Name: CCV3
Sample ID: TCK011-38
Method: TCK011.tpl
Chk. Result Control value: 23.52 / Control exceeds range!

Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:23.52 mg/L

1. Det.

Anal.. NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	52.00	23.44mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:08:31 PM
2	51.93	23.41mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:10:06 PM
3	52.25	23.56mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:11:39 PM
4	52.47	23.66mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:13:15 PM

Mean Area 52.16
Mean Conc. 23.52mg/L

Sample

Sample Name: CCB3
Sample ID: TCK011-39
Origin: TCK011.cal
Chk. Result

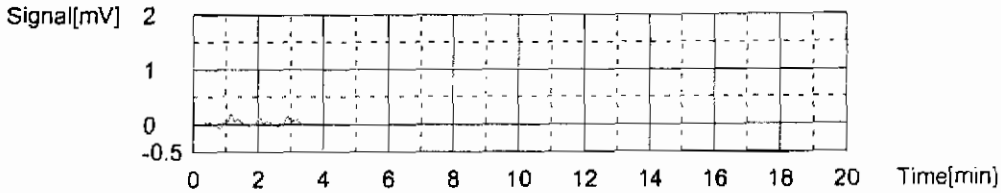
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1109 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2555	0.1152mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:20:37 PM
2	0.2733	0.1232mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:21:42 PM
3	0.2266	0.1022mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:22:45 PM
4	0.2284	0.1030mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:23:49 PM

Mean Area 0.2460
Mean Conc. 0.1109mg/L



Sample

Sample Name: K153-06
Sample ID: TCK011-40
Origin: TCK011.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.5494 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.124	0.5068mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:31:20 PM
2	1.270	0.5726mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:32:29 PM
3	1.235	0.5568mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:33:37 PM
4	1.245	0.5613mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:34:47 PM

Mean Area 1.219
Mean Conc. 0.5494mg/L

Sample

Sample Name: K153-07
Sample ID: TCK011-41
Origin: TCK011.cal
Chk. Result

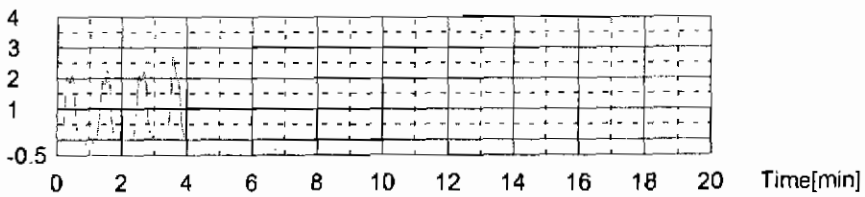
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.996 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.228	1.906mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:42:22 PM
2	4.383	1.976mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:43:42 PM
3	4.464	2.013mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:44:56 PM
4	4.636	2.090mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:46:12 PM

Mean Area 4.428
Mean Conc. 1.996mg/L



Sample

Sample Name: K142-01
Sample ID: TCK011-42
Origin: TCK011.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.261 mg/L

1. Det

Anal.: NPOC

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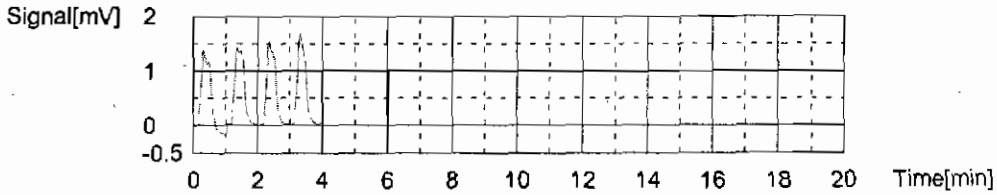
No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.720	1.226mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:53:44 PM
2	2.820	1.271mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:54:56 PM
3	2.832	1.277mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:56:04 PM
4	2.818	1.271mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 09:57:17 PM

Mean Area 2.798
Mean Conc. 1.261mg/L



Sample

Sample Name: K142-03
Sample ID: TCK011-43
Origin: TCK011.cal
Chk. Result

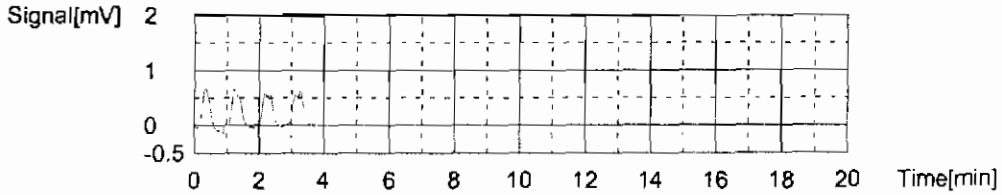
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.5499 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.215	0.5478mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:04:42 PM
2	1.187	0.5352mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:05:51 PM
3	1.186	0.5347mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:06:58 PM
4	1.291	0.5821mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:08:09 PM

Mean Area 1.220
Mean Conc. 0.5499mg/L



Sample

Sample Name: K142-03M
Sample ID: TCK011-44
Origin: TCK011.cal
Chk. Result

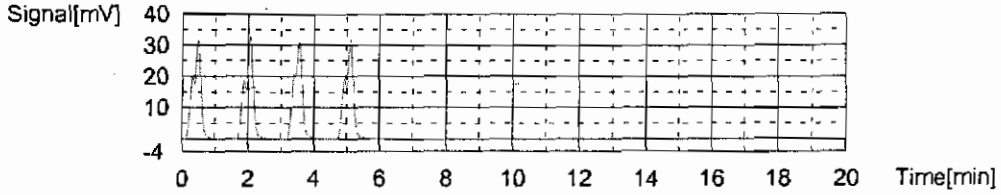
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:25.28 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.64	25.09mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:16:13 PM
2	56.32	25.39mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:17:55 PM
3	56.13	25.31mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:19:39 PM
4	56.18	25.33mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:21:23 PM

Mean Area 56.07
Mean Conc. 25.28mg/L



Sample

Sample Name: K142-03S
Sample ID: TCK011-45
Origin: TCK011.cal
Chk. Result

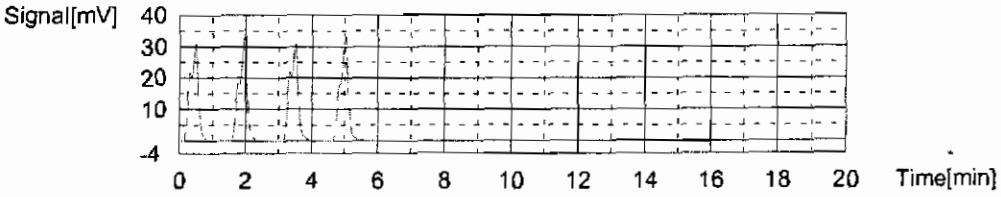
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:25.29 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.88	25.19mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:29:21 PM
2	56.04	25.27mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:31:06 PM
3	55.78	25.15mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:32:47 PM
4	56.66	25.55mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:34:26 PM

Mean Area 56.09
Mean Conc. 25.29mg/L



Sample

Sample Name: K142-04
Sample ID: TCK011-46
Origin: TCK011.cal
Chk. Result

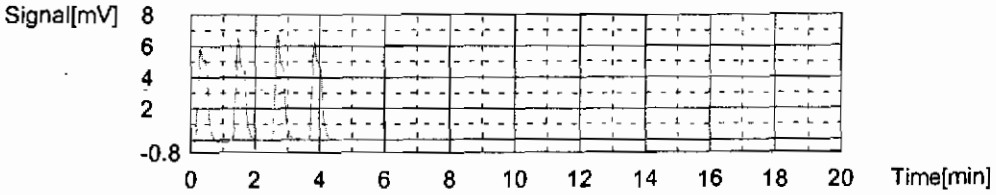
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:5.272 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.38	5.131mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:42:06 PM
2	11.65	5.253mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:43:30 PM
3	11.78	5.311mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:44:51 PM
4	11.96	5.392mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:46:16 PM

Mean Area 11.69
Mean Conc. 5.272mg/L



Sample

Sample Name: K179-01
Sample ID: TCK011-47
Origin: TCK011.cal
Chk. Result

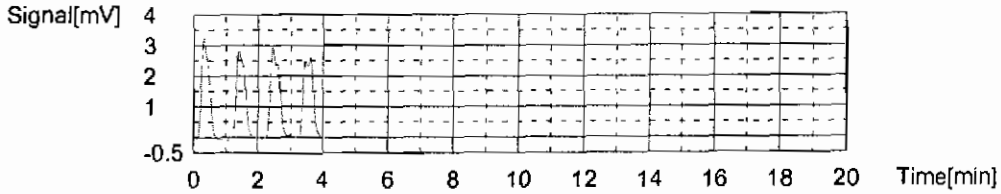
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.472 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.466	2.464mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:53:51 PM
2	5.394	2.432mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:55:06 PM
3	5.544	2.500mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:56:18 PM
4	5.523	2.490mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 10:57:32 PM

Mean Area 5.482
Mean Conc. 2.472mg/L



Sample

Sample Name: K179-03
Sample ID: TCK011-48
Origin: TCK011.cal
Chk. Result

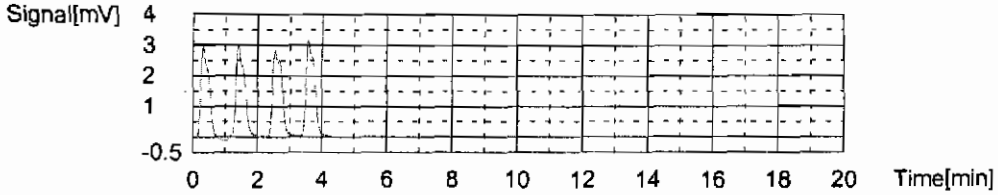
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.521 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.421	2.444mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:05:07 PM
2	5.660	2.552mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:06:27 PM
3	5.566	2.509mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:07:40 PM
4	5.718	2.578mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:08:52 PM

Mean Area 5.591
Mean Conc. 2.521mg/L



Sample

Sample Name: K759-01
Sample ID: TCK011-49
Origin: TCK011.cal
Chk. Result

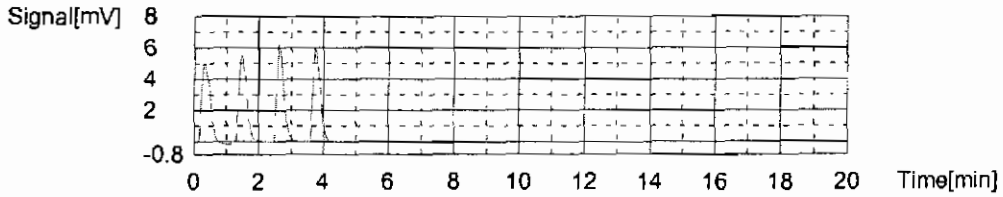
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:4.298 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.373	4.226mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:16:30 PM
2	9.491	4.279mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:17:52 PM
3	9.477	4.273mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:19:11 PM
4	9.794	4.416mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:20:35 PM

Mean Area 9.534
Mean Conc. 4.298mg/L



Control Sample

Sample Name: CCV4
Sample ID: TCK011-50
Method: TCK011.tpl
Chk. Result Control value: 23.70 / Control exceeds range!

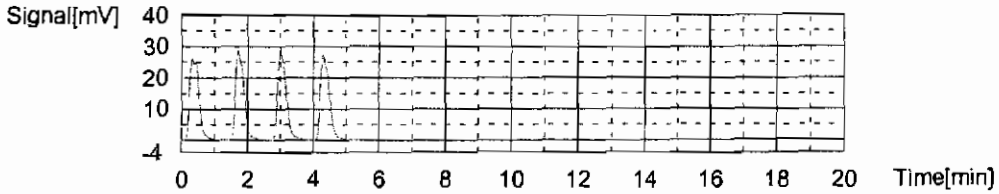
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:23.70 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	52.39	23.62mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:28:27 PM
2	52.18	23.53mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:29:57 PM
3	52.88	23.84mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:31:26 PM
4	52.78	23.80mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:33:02 PM

Mean Area 52.56
Mean Conc. 23.70mg/L



Sample

Sample Name: CCB4
Sample ID: TCK011-51
Origin: TCK011.cal
Chk. Result

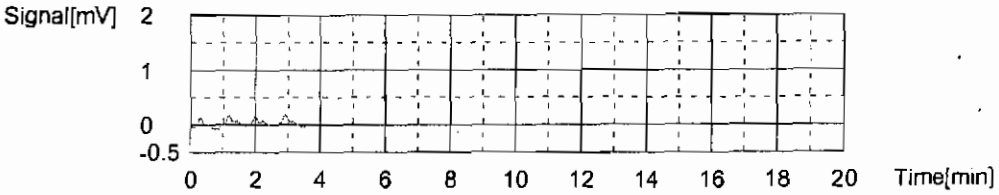
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1132 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2738	0.1234mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:40:25 PM
2	0.2733	0.1232mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:41:26 PM
3	0.2119	0.09554mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:42:32 PM
4	0.2453	0.1106mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:43:38 PM

Mean Area 0.2511
Mean Conc. 0.1132mg/L



Sample

Sample Name: K145-02
Sample ID: TCK011-52
Origin: TCK011.cal
Chk. Result

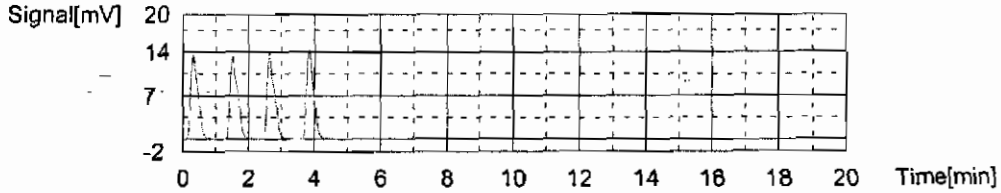
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:9.757 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	21.31	9.608mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:51:20 PM
2	21.57	9.725mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:52:40 PM
3	21.90	9.874mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:54:03 PM
4	21.78	9.820mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/22/11 11:55:26 PM

Mean Area 21.64
Mean Conc. 9.757mg/L



Sample

Sample Name: K145-03
Sample ID: TCK011-53
Origin: TCK011.cal
Chk. Result

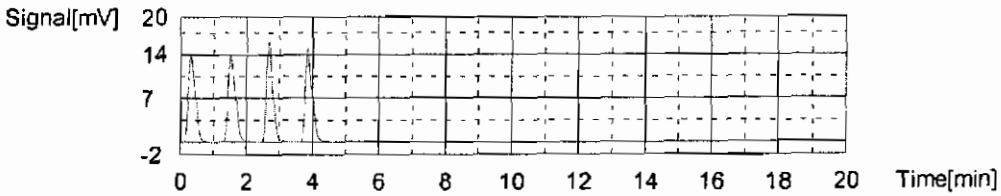
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:9.776 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	21.16	9.540mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:03:08 AM
2	21.73	9.797mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:04:30 AM
3	21.85	9.851mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:05:52 AM
4	21.99	9.914mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:07:12 AM

Mean Area 21.68
Mean Conc. 9.776mg/L



Sample

Sample Name: K145-04
Sample ID: TCK011-54
Origin: TCK011.cal
Chk. Result

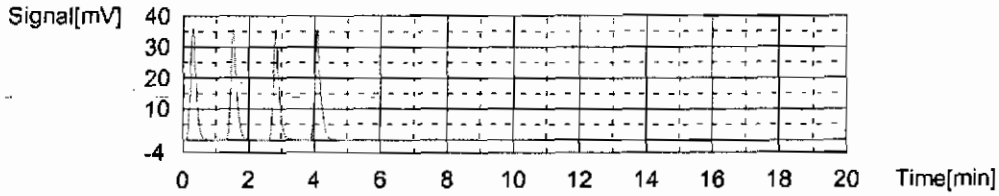
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:19.44 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	42.45	19.14mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:14:56 AM
2	42.94	19.36mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:16:25 AM
3	42.97	19.37mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:17:52 AM
4	44.12	19.89mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:19:27 AM

Mean Area 43.12
Mean Conc. 19.44mg/L



Sample

Sample Name: K145-05
Sample ID: TCK011-55
Origin: TCK011.cal
Chk. Result

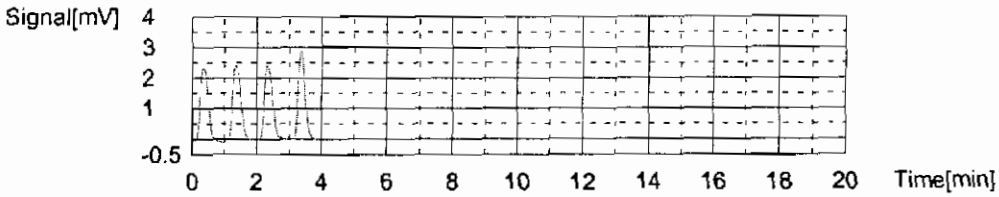
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:1.902 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.202	1.895mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:26:59 AM
2	4.086	1.842mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:28:09 AM
3	4.198	1.893mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:29:22 AM
4	4.388	1.978mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:30:31 AM

Mean Area 4.219
Mean Conc. 1.902mg/L



Sample

Sample Name: K145-07
Sample ID: TCK011-56
Origin: TCK011.cal
Chk. Result

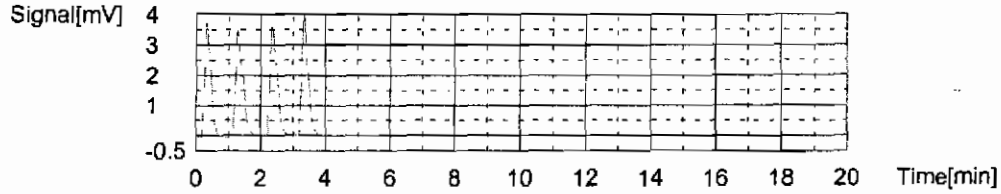
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.473 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.202	2.345mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:38:01 AM
2	5.465	2.464mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:39:17 AM
3	5.591	2.521mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:40:27 AM
4	5.684	2.563mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:41:41 AM

Mean Area 5.486
Mean Conc. 2.473mg/L



Sample

Sample Name: K145-08
Sample ID: TCK011-57
Origin: TCK011.cal
Chk. Result

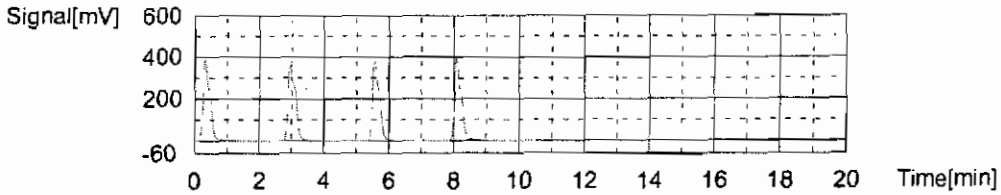
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:263.3 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	576.2	259.8mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:50:50 AM
2	581.5	262.2mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:53:38 AM
3	582.5	262.6mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:56:21 AM
4	595.6	268.5mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 12:59:16 AM

Mean Area 584.0
Mean Conc. 263.3mg/L



Sample

Sample Name: K145-08M
Sample ID: TCK011-58
Origin: TCK011.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:287.8 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	627.1	282.7mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 01:08:14 AM
2	637.0	287.2mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 01:11:08 AM
3	644.0	290.4mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 01:13:50 AM
4	644.8	290.7mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 01:16:40 AM

Mean Area 638.2
Mean Conc. 287.8mg/L

Sample

Sample Name: K145-08S
Sample ID: TCK011-59
Origin: TCK011.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:290.1 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	637.6	287.5mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 01:25:53 AM
2	636.3	286.9mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 01:28:46 AM
3	647.8	292.1mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 01:31:22 AM
4	651.8	293.9mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 01:34:09 AM

Mean Area 643.4
Mean Conc. 290.1mg/L

Sample

Sample Name: K145-09
Sample ID: TCK011-60
Origin: TCK011.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:653.3 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1436	647.4mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 01:43:25 AM
2	1462	659.2mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 01:46:16 AM
3	1450	653.7mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 01:49:19 AM
4	1448	652.8mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 01:52:39 AM

Mean Area 1449
Mean Conc. 653.3mg/L

Control Sample

Sample Name: CCV5
Sample ID: TCK011-61
Method: TCK011.tpl
Chk. Result Control value: 25.38 / Control exceeds range!

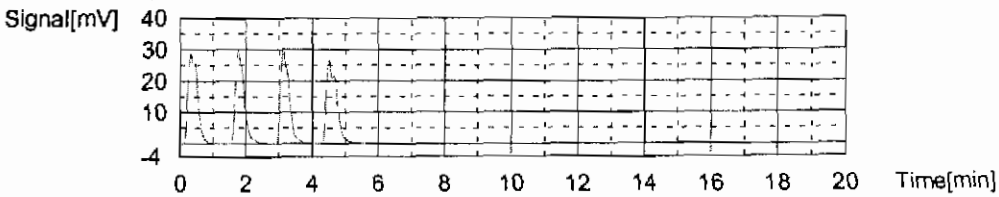
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:25.38 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	57.76	26.04mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 02:00:36 AM
2	56.03	25.26mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 02:02:09 AM
3	55.29	24.93mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 02:03:44 AM
4	56.12	25.30mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 02:05:22 AM

Mean Area 56.30
Mean Conc. 25.38mg/L



Sample

Sample Name: CCB5
Sample ID: TCK011-62
Origin: TCK011.cal
Chk. Result

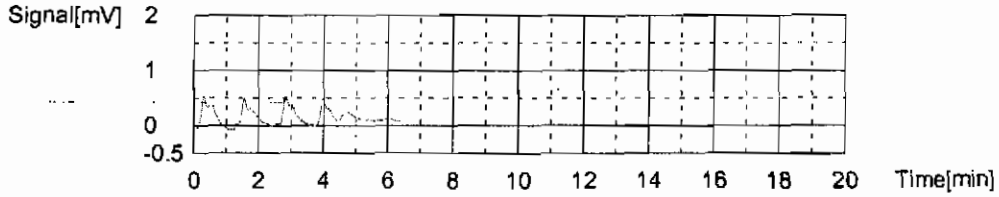
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.6393 mg/L

1. Det

Anal.. NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.523	0.6867mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 02:13:08 AM
2	1.093	0.4928mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 02:14:35 AM
3	1.153	0.5198mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 02:15:56 AM
4	1.903	0.8580mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 02:18:54 AM

Mean Area 1.418
Mean Conc. 0.6393mg/L



Sample

Sample Name: K145-11
Sample ID: TCK011-63
Origin: TCK011.cal
Chk. Result

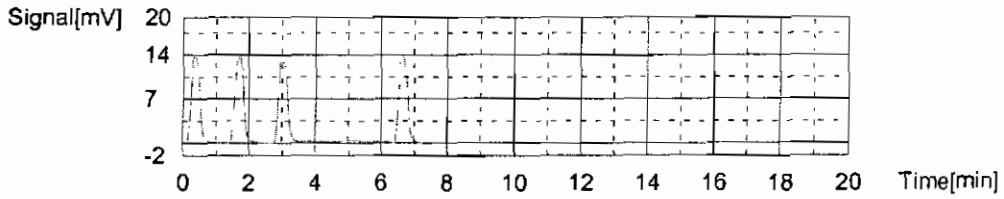
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:11.75 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	24.73	11.15mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 02:26:44 AM
2	25.64	11.56mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 02:28:14 AM
3	28.22	12.72mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 02:32:05 AM
4	25.69	11.58mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 02:33:36 AM

Mean Area 26.07
Mean Conc. 11.75mg/L



Sample

Sample Name: K145-11M
Sample ID: TCK011-64
Origin: TCK011.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:36.60 mg/L

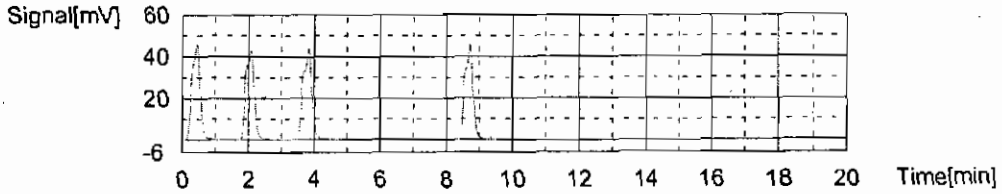
1. Det

Anal.: NPOC

8188

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	78.58	35.43mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 02:41:45 AM
2	80.52	36.30mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 02:43:40 AM
3	84.96	38.31mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 02:48:46 AM
4	80.62	36.35mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 02:50:35 AM

Mean Area 81.17
Mean Conc. 36.60mg/L



Sample

Sample Name: K145-11S
Sample ID: TCK011-65
Origin: TCK011.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:36.45 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	79.44	35.82mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 02:58:49 AM
2	79.54	35.86mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 03:00:39 AM
3	81.75	36.86mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 03:02:25 AM
4	82.65	37.26mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 03:06:47 AM

Mean Area 80.84
Mean Conc. 36.45mg/L

Sample

Sample Name: K145-12
Sample ID: TCK011-66
Origin: TCK011.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:2.109 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.727	2.131mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 03:14:19 AM
2	4.626	2.086mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 03:15:33 AM
3	4.655	2.099mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 03:16:51 AM
4	4.701	2.119mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 03:18:05 AM

Mean Area 4.677
Mean Conc. 2.109mg/L

Sample

Sample Name: TCK012WQ
Sample ID: TCK011-67
Origin: TCK011.cal
Chk. Result

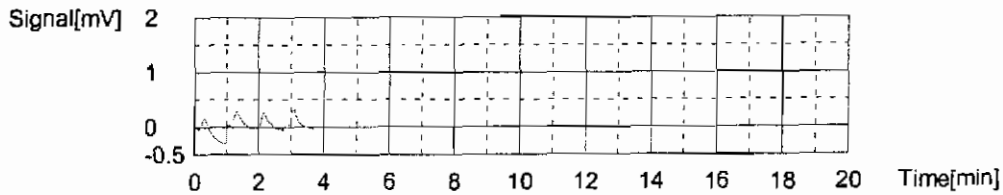
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1725 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2733	0.1232mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 03:25:35 AM
2	0.4156	0.1874mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 03:26:38 AM
3	0.3682	0.1660mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 03:27:44 AM
4	0.4731	0.2133mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 03:28:51 AM

Mean Area 0.3826
Mean Conc. 0.1725mg/L



Control Sample

Sample Name: CCV6
Sample ID: TCK011-68
Method: TCK011.tpl
Chk. Result Control value: 23.77 / Control exceeds range!

Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:23.77 mg/L

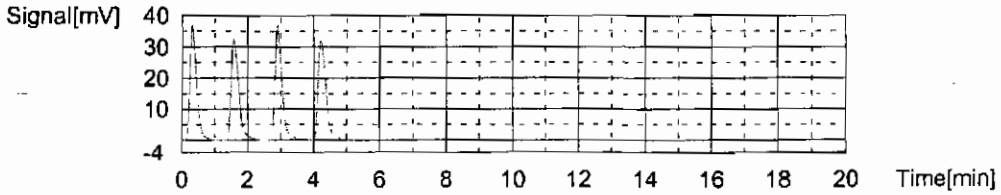
1. Det.

Anal.: NPOC

8190

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	51.65	23.29mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 03:36:37 AM
2	52.81	23.81mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 03:38:08 AM
3	53.22	23.99mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 03:39:38 AM
4	53.18	23.98mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 03:41:11 AM

Mean Area 52.72
Mean Conc. 23.77mg/L



Sample

Sample Name: CCB6
Sample ID: TCK011-69
Origin: TCK011.cal
Chk. Result

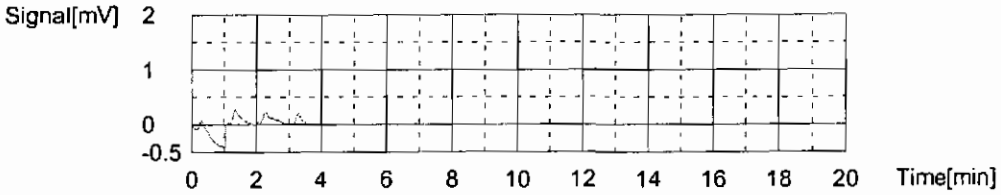
Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1337 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1729	0.07795mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 03:48:44 AM
2	0.3724	0.1679mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 03:49:52 AM
3	0.3683	0.1661mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 03:51:04 AM
4	0.2722	0.1227mg/L	50uL	1		TCK011.2011_11_22_11_59_31.cal	11/23/11 03:52:04 AM

Mean Area 0.2964
Mean Conc. 0.1337mg/L



8191

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TOC

	Date	Time
Start	11/28/11	1408
End	11/28/11	1704

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

TCK018W
K145 415.1 DOC
K541 5310B
K184
K188
K205

Samples K188-03 & K205-03 were diluted prior to analysis due to their smell.

Sample K205-02 was diluted prior to analysis due to its brown coloration.

2 M HCl SW4-01-223

Book #:	A62-020
Instrument No.:	62
Pipette ID:	03938002S
	SW3-01-33
	SI1A-01-4
Balance ID:	40706360
Analytical Sequence:	TCK017
Method File:	TCK012
Analytical Batch:	TCK018W

SOP #	Rev. #
☑ EMAX-415.1	2
☑ EMAX-5310B	1
☐ EMAX-9060	2
☐ EMAX-	

STANDARDS ID	CONC. (mg/L)
S0 nanopure	0
S1 SW1015-04-174	1
S2	5
S3	10
S4	40
S5	80
S6 —	—
ICV/LCS SW10B-04-178	25
CCV -179	25

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ TOC	
☐	

Analyzed By: Am

Date: 11/28/11

	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
1	Standard	NPOC	ICAL	TCK012-01	0A-123456-	C:\Program	1.000		
2	Control	NPOC	ICV	TCK012-02	0A-123456-	C:\Program	1.000	NPOC:25.11 mg/L	
3	Unknown	NPOC	ICB	TCK012-03	0A-123456-	C:\Program	1.000	NPOC:0.2108 mg/	
4	Unknown	NPOC	HCO3\CO3	TCK012-04	0A-123456-	C:\Program	1.000	NPOC:0.2116 mg/	
5	Unknown	NPOC	TCK018WB	TCK012-05	0A-123456-	C:\Program	1.000	NPOC:0.09922 mg	
6	Unknown	NPOC	TCK018WL	TCK012-06	0A-123456-	C:\Program	1.000	NPOC:25.06 mg/L	
7	Unknown	NPOC	TCK018WC	TCK012-07	0A-123456-	C:\Program	1.000	NPOC:25.18 mg/L	
8	Unknown	NPOC	K145-05R	TCK012-08	0A-123456-	C:\Program	1.000	NPOC:~~2.087~~ mg/L	1.592mg/L
9	Unknown	NPOC	K145-07R	TCK012-09	0A-123456-	C:\Program	1.000	NPOC:2.476 mg/L	
10	Unknown	NPOC	K145-08T	TCK012-10	0A-123456-	C:\Program	10.00	NPOC:241.1 mg/L	DF=10
11	Unknown	NPOC	K145-08M	TCK012-11	0A-123456-	C:\Program	10.00	NPOC:486.2 mg/L	DF=10
12	Unknown	NPOC	K145-08S	TCK012-12	0A-123456-	C:\Program	10.00	NPOC:488.4 mg/L	DF=10
13	Unknown	NPOC	K145-09T	TCK012-13	0A-123456-	C:\Program	20.00	NPOC:530.1 mg/L	DF=20
14	Control	NPOC	CCV1	TCK012-14	0A-123456-	C:\Program	1.000	NPOC:24.06 mg/L	
15	Unknown	NPOC	CCB1	TCK012-15	0A-123456-	C:\Program	1.000	NPOC:0.1194 mg/	
16	Unknown	NPOC	K145-12R	TCK012-16	0A-123456-	C:\Program	1.000	NPOC:1.950 mg/L	
17	Unknown	NPOC	K541-01	TCK012-17	0A-123456-	C:\Program	1.000	NPOC:154.7 mg/L	PH<2 over
18	Unknown	NPOC	K184-05T	TCK012-18	0A-123456-	C:\Program	5.000	NPOC:96.29 mg/L	DF=5
19	Unknown	NPOC	K188-03	TCK012-19	0A-123456-	C:\Program	10.00	NPOC:1687 mg/L	PH<2;DF=10 over
20	Control	NPOC	CCV2	TCK012-20	0A-123456-	C:\Program	1.000	NPOC:24.25 mg/L	
21	Unknown	NPOC	CCB2	TCK012-21	0A-123456-	C:\Program	1.000	NPOC:0.1693 mg/	
22	Unknown	NPOC	K205-01	TCK012-22	0A-123456-	C:\Program	1.000	NPOC:14.86 mg/L	PH<2
23	Unknown	NPOC	K205-01M	TCK012-23	0A-123456-	C:\Program	1.000	NPOC:40.49 mg/L	
24	Unknown	NPOC	K205-01S	TCK012-24	0A-123456-	C:\Program	1.000	NPOC:39.95 mg/L	
25	Unknown	NPOC	K205-02	TCK012-25	0A-123456-	C:\Program	5.000	NPOC:29.19 mg/L	PH<2; DF=5
26	Unknown	NPOC	K205-03	TCK012-26	0A-123456-	C:\Program	5.000	NPOC:86.16 mg/L	PH<2; DF=5
27	Unknown	NPOC	K205-04	TCK012-27	0A-123456-	C:\Program	1.000	NPOC:0.4658 mg/	PH<2
28	Unknown	NPOC	K205-05	TCK012-28	0A-123456-	C:\Program	1.000	NPOC:0.4770 mg/	PH<2
29	Control	NPOC	CCV3	TCK012-29	0A-123456-	C:\Program	1.000	NPOC:24.26 mg/L	
30	Unknown	NPOC	CCB3	TCK012-30	0A-123456-	C:\Program	1.000	NPOC:0.08843 mg	
31									
32									
33									
34									
35									
36									
37									
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60									
61									
62								FINAL	
63									
64									
65									
66									
67									

Am ug/L

An ug/L

11/29/11

Instr.Information

System	toc
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Cal.-Curve

Sample Name:	ICAL
Sample ID:	TCK012-01
Cal. Curve:	TCK012.2011_11_28_13_59_51.cal

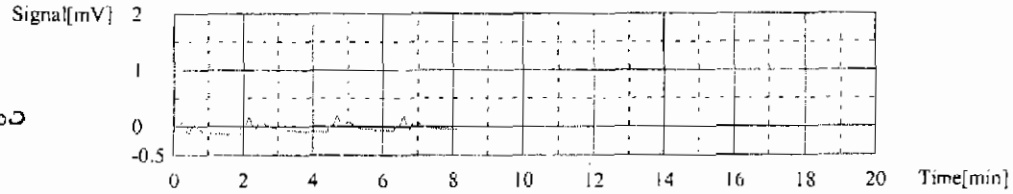
Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.000	50uL	1	*******		11/28/11 02:08:02 PM
2	0.000	50uL	1	*******		11/28/11 02:10:07 PM
3	0.000	50uL	1	*******		11/28/11 02:12:12 PM
4	0.000	50uL	1	*******		11/28/11 02:14:18 PM

Acid Add.	2.500%
Sp. Time	90.00sec
Mean Area	0.000

$$\frac{\text{mean area}}{\text{slope}} = \frac{0.000}{2.148} = 0.000$$

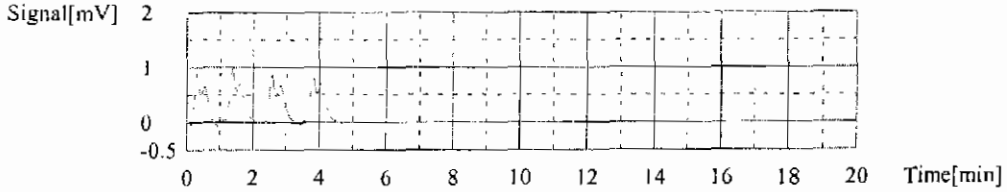


Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	1.917	50uL	10	*******		11/28/11 02:22:31 PM
2	2.116	50uL	10	*******		11/28/11 02:23:55 PM
3	2.166	50uL	10	*******		11/28/11 02:25:20 PM
4	2.235	50uL	10	*******		11/28/11 02:26:43 PM

Acid Add.	2.500%
Sp. Time	90.00sec
Mean Area	2.109

$$\frac{\bar{x}}{m} = \frac{2.109}{2.198} = 0.9595$$

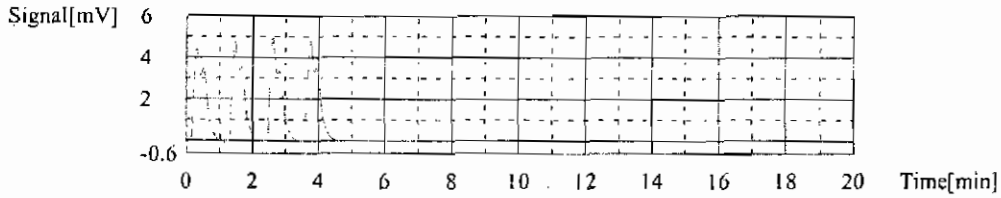


Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	10.28	50uL	2	*******		11/28/11 02:33:07 PM
2	10.76	50uL	2	*******		11/28/11 02:34:27 PM
3	10.85	50uL	2	*******		11/28/11 02:35:48 PM
4	10.73	50uL	2	*******		11/28/11 02:37:09 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 10.66

$\frac{\bar{A}}{m} = \frac{10.66}{2.198} = 4.850$

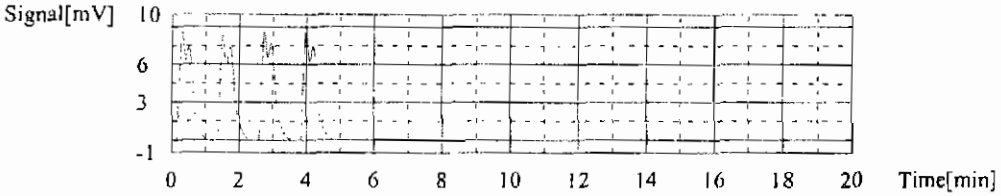


Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	21.25	50uL	1	*******		11/28/11 02:42:54 PM
2	21.68	50uL	1	*******		11/28/11 02:44:20 PM
3	21.88	50uL	1	*******		11/28/11 02:45:46 PM
4	21.82	50uL	1	*******		11/28/11 02:47:13 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 21.66

$\frac{\bar{A}}{m} = \frac{21.66}{2.198} = 9.854$

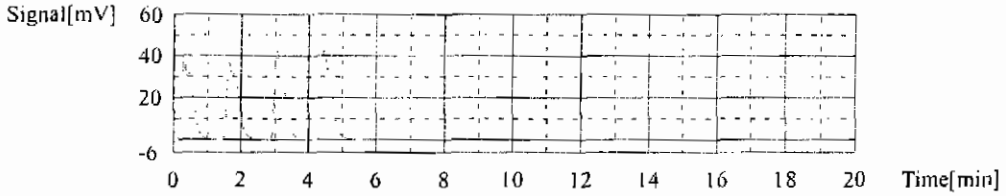


Conc: 40.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	84.53	50uL	2	*******		11/28/11 02:55:44 PM
2	85.26	50uL	2	*******		11/28/11 02:57:20 PM
3	87.30	50uL	2	*******		11/28/11 02:58:56 PM
4	86.03	50uL	2	*******		11/28/11 03:00:30 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 85.78

$\frac{\bar{A}}{m} = \frac{85.78}{2.198} = 39.03$

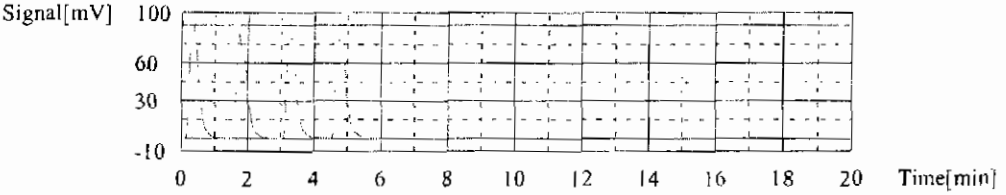


Conc. 80.00mg/L

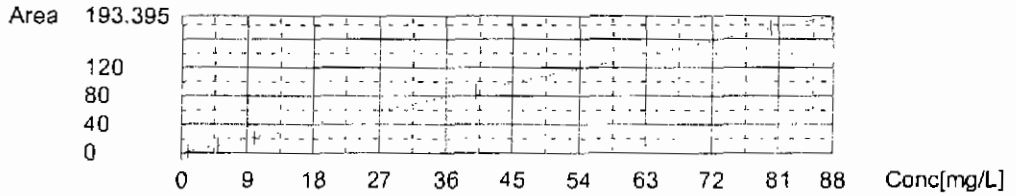
No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	175.8	50uL	1	*******		11/28/11 03:06:28 PM
2	176.8	50uL	1	*******		11/28/11 03:08:10 PM
3	175.9	50uL	1	*******		11/28/11 03:09:50 PM
4	176.5	50uL	1	*******		11/28/11 03:11:33 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 176.3

$\frac{\bar{A}}{m} = \frac{176.3}{2.198} = 80.21$



Slope: 2.198
intercept 0.000
r^2 0.999838



8195

Control Sample

Sample Name: ICV
Sample ID: TCK012-02
Method: TCK012.tpl
Chk. Result Control value: 25.11 / Control exceeds range!

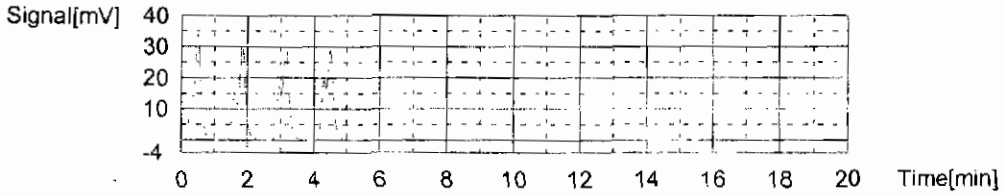
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:25.11 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.33	25.18mg/L	50uL	1		TCK012.2011_11_28_13_59_51.cal	11/28/11 03:19:35 PM
2	55.13	25.09mg/L	50uL	1		TCK012.2011_11_28_13_59_51.cal	11/28/11 03:21:06 PM
3	55.57	25.29mg/L	50uL	1		TCK012.2011_11_28_13_59_51.cal	11/28/11 03:22:38 PM
4	54.74	24.91mg/L	50uL	1		TCK012.2011_11_28_13_59_51.cal	11/28/11 03:24:10 PM

Mean Area 55.19
Mean Conc. 25.11mg/L



Sample

Sample Name: ICB
Sample ID: TCK012-03
Origin: TCK012.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.2108 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6400	0.2912mg/L	50uL	1		TCK012.2011_11_28_13_59_51.cal	11/28/11 03:31:39 PM
2	0.5420	0.2466mg/L	50uL	1		TCK012.2011_11_28_13_59_51.cal	11/28/11 03:32:47 PM
3	0.3176	0.1445mg/L	50uL	1		TCK012.2011_11_28_13_59_51.cal	11/28/11 03:33:52 PM
4	0.3535	0.1609mg/L	50uL	1		TCK012.2011_11_28_13_59_51.cal	11/28/11 03:34:58 PM

Mean Area 0.4633
Mean Conc. 0.2108mg/L

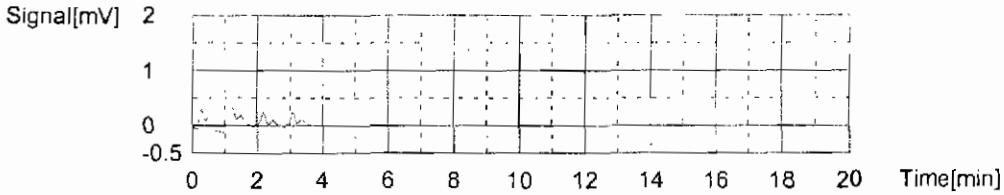


TABLE OF CONTENTS

CLIENT: **INSIGHT EEC, INC.**

PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11K188**

SECTION		PAGE
Cover Letter, COC/Sample Receipt Form		1000 – 1003
GC/MS-VOA	METHOD 5030B/8260B	2000 – 2030
GC/MS-SVOA	**	3000 –
GC-VOA	METHOD RSK-175	4000 – 4026
GC-SVOA	**	5000 –
HPLC	**	6000 –
METALS	METHOD 3010A/6010B	7000 – 7033
WET	METHOD 300.0	8000 – 8027
	METHOD 300.0 (M)	8028 – 8061
	METHOD 2320B	8062 – 8067
	METHOD 2540C	8068 – 8073
	METHOD 4500F	8074 – 8078
	METHOD SM5310B	8079 – 8086
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 12-08-2011
EMAX Batch No.: 11K188

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 11/21/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW-70-15-159	K188-01	11/21/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
MW-70-MNA17-160	K188-02	11/21/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
IW-70-SHB310-161	K188-03	11/21/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IR-70-TB-158	K188-04	11/21/11	WATER	VOLATILE ORGANICS BY GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

INS.0801

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011063-8042
SAMPLE STORAGE
EMAX CONTROL NO. * 11K188
PROJECT CODE: 4-77101

CLIENT: INSIGHT EEC, INC.
PROJECT: IN SITU 70 - NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 7146786700 FAX: 7146786711 EMAIL: NWEINBERGER@IEEC.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT EEC, INC.
ADDRESS: 3010 E. MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: [illegible]

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	VOCs-8260B (HC)	DISS HYD. GASES-RSK-175 (HC)	WET CHEM (NP)	TCC-SM5310B (HC)	SULFIDE-SM4500S (SH)	DISS METAL-6010B (HN)	VOCs-8260B (NP)	DISS HYD GASES-RSK-175 (NP)	COMMENTS
1	MW-70-15-159	IN SITE 70	11-21-11	1044	7	VARY	VARY	GW	III	X	X	X						FOR WET CHEM RUN ONLY VFA'S
2	MW-70-MNA17-160	IN SITE 70	11-21-11	1154	7	VARY	VARY	GW	III	X	X	X						FOR WET CHEM RUN ONLY VFA'S
3	IW-70-SHB310-161	IN SITE 70	11-21-11	1334	10	VARY	VARY	GW	III			X	X	X	X	X	X	EFFLUENT WELL
4																		
5																		
6																		
7																		
8																		
9																		
10	TR-70-TB-158	IN SITE 70	11-21-11	0830	2	40ml	VOA	GW	III	X								TRIP BLANKS.

Instructions: WET CHEM ANALYSIS AS FOLLOWS: ANIONS - 300.0, VFA's - 300.0M, TDS-SM2540C, ALKALINITY-SM2320B, DHS-SM4500. UNLESS NOTED OTHERWISE IN COMMENTS.

Cooler #	Temp. (°C)
1	2.4

Sample #s

SAMPLER: CHASE BROWDON

COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-21-11	1550	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11K188
☐ EMAX Courier		Recepient Gpramulus
☑ Client Delivery	SEE COC	Date 11-21-11
☐ Third Party		Time 1550

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☑ Preservative (if any)	☑ TAT
Safety Issues	☐ None	☐ High concentrations expected	☐ Superfund Site samples	☐ Rad screening required	

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☑ Plastic Bag
Temperatures (Cool, ≤6 °C but not frozen) A	☑ Cooler 1 2.4 °C	☐ Cooler 2 ____ °C	☐ Cooler 3 ____ °C	☐ Cooler 4 ____ °C	☐ Cooler 5 ____ °C
	☐ Cooler 6 ____ °C	☐ Cooler 7 ____ °C	☐ Cooler 8 ____ °C	☐ Cooler 9 ____ °C	☐ Cooler 10 ____ °C

Thermometer: *A - S/N 101541371* *B - S/N 101541382*

Comments: ☐ **PM was informed on non-compliant coolers immediately.**

Note: **pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code
3			H1	R5
4	24		F2	R6

REVIEWS

Sample Labeling Gpramulus Date 11-21-11

SRP [signature] Date 11/21/11

PM LP for Ye Date 11/22/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4		E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	proceed with analysis
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	use the vial with smaller bubble first
B3	Sample ID is inconsistent in COC vis-à-vis label	F2	Bubble is> 6mm		
B4		G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	Note: Vials HCl on label (unpreserved on COC)		
C4		H2			

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11K188

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K188

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of four (4) water samples were received on 11/21/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for VO01K25L/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Manual integration was applied to 2-Butanone in samples K188-03 and -03T because of improper integration. Hence, the original chromatograms were retained with the initialed and dated corrected chromatograms. Manual integrations were concurred by a secondary reviewer. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K188
Instrument ID : T-001

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V001K25B	1	NA	11/23/1111:00	11/23/1111:00	RKV579	RJV602	V001K25	Method Blank
LCS1W	V001K25L	1	NA	11/23/1108:54	11/23/1108:54	RKV575	RJV602	V001K25	Lab Control Sample (LCS)
LCD1W	V001K25Y	1	NA	11/23/1109:57	11/23/1109:57	RKV577	RJV602	V001K25	LCS Duplicate
MW-70-15-159	K188-01	1	NA	11/23/1113:48	11/23/1113:48	RKV585	RJV602	V001K25	Field Sample
MW-70-MNA17-160	K188-02	1	NA	11/23/1114:16	11/23/1114:16	RKV586	RJV602	V001K25	Field Sample
IR-70-TB-158	K188-04	1	NA	11/23/1114:44	11/23/1114:44	RKV587	RJV602	V001K25	Field Sample
IW-70-SHB310-161DL	K188-03T	10	NA	11/23/1117:32	11/23/1117:32	RKV593	RJV602	V001K25	Diluted Sample
IW-70-SHB310-161	K188-03	1	NA	11/23/1117:59	11/23/1117:59	RKV594	RJV602	V001K25	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/21/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/21/11
Batch No. : 11K188	Date Extracted: 11/23/11 13:48
Sample ID: MW-70-15-159	Date Analyzed: 11/23/11 13:48
Lab Samp ID: K188-01	Dilution Factor: 1
Lab File ID: RKV585	Matrix : WATER
Ext Btch ID: V001K25	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	3.4	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	16	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.1	10.00	111	70-140
4-BROMOFLUOROBENZENE	10.8	10.00	108	70-130
TOLUENE-D8	9.97	10.00	99.7	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/21/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/21/11
Batch No.	: 11K188	Date Extracted:	11/23/11 14:16
Sample ID:	MW-70-MNA17-160	Date Analyzed:	11/23/11 14:16
Lab Samp ID:	K188-02	Dilution Factor:	1
Lab File ID:	RKV586	Matrix	: WATER
Ext Btch ID:	V001K25	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	9.9	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	6.1	1.0	0.20
TRICHLOROETHENE	65	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.2	10.00	112	70-140
4-BROMOFLUOROBENZENE	10.9	10.00	109	70-130
TOLUENE-D8	9.77	10.00	97.7	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/21/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/21/11
Batch No.	: 11K188	Date Extracted:	11/23/11 17:59
Sample ID:	IW-70-SHB310-161	Date Analyzed:	11/23/11 17:59
Lab Samp ID:	K188-03	Dilution Factor:	1
Lab File ID:	RKV594	Matrix	: WATER
Ext Btch ID:	V001K25	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	330	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	100	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	33	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	400	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	1.5	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	160E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	0.50J	1.0	0.20
TRANS-1,2-DICHLOROETHENE	11	1.0	0.20
TRICHLOROETHENE	19	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	6.1	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	11.6	10.00	116	70-140
4-BROMOFLUOROBENZENE	9.56	10.00	95.6	70-130
TOLUENE-D8	9.66	10.00	96.6	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/21/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/21/11
Batch No. : 11K188	Date Extracted: 11/23/11 17:32
Sample ID: IW-70-SHB310-1610L	Date Analyzed: 11/23/11 17:32
Lab Samp ID: K188-03T	Dilution Factor: 10
Lab File ID: RKV593	Matrix : WATER
Ext Btch ID: VO01K25	% Moisture : NA
Calib. Ref.: RJV602	Instrument ID : T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	10	2.0
1,1,1,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2-TRICHLOROETHANE	ND	10	2.0
FREON113	ND	10	3.0
1,1-DICHLOROETHANE	ND	10	2.0
1,1-DICHLOROETHENE	ND	5.0	2.0
1,1-DICHLOROPROPENE	ND	10	2.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	20	5.0
1,2-DIBROMOETHANE	ND	10	2.0
1,2-DICHLOROBENZENE	ND	10	2.0
1,2-DICHLOROETHANE	ND	5.0	2.0
1,2-DICHLOROPROPANE	ND	10	2.0
1,2,3-TRICHLOROBENZENE	ND	10	3.0
1,2,3-TRICHLOROPROPANE	ND	10	5.0
1,2,4-TRICHLOROBENZENE	ND	10	3.0
1,2,4-TRIMETHYLBENZENE	ND	10	2.0
1,3-DICHLOROBENZENE	ND	10	2.0
1,3,5-TRIMETHYLBENZENE	ND	10	2.0
1,4-DICHLOROBENZENE	ND	10	2.0
2-BUTANONE	320	100	40
2-CHLOROTOLUENE	ND	10	2.0
2-HEXANONE	71J	100	40
2,2-DICHLOROPROPANE	ND	10	2.0
4-CHLOROTOLUENE	ND	10	2.0
4-METHYL-2-PENTANONE	ND	100	40
N-BUTYLBENZENE	ND	10	2.0
N-PROPYLBENZENE	ND	10	2.0
P-ISOPROPYLTOLUENE	ND	10	2.0
SEC-BUTYLBENZENE	ND	10	2.0
TERT-BUTYLBENZENE	ND	10	2.0
ACETONE	470	100	50
BENZENE	ND	10	2.0
BROMOBENZENE	ND	10	2.0
BROMODICHLOROMETHANE	ND	10	2.0
CIS-1,3-DICHLOROPROPENE	ND	10	2.0
TRANS-1,3-DICHLOROPROPENE	ND	10	2.0
BROMOMETHANE	ND	20	3.0
BROMOFORM	ND	10	3.0
CARBON DISULFIDE	ND	10	2.0
CARBON TETRACHLORIDE	ND	5.0	2.0
CHLOROBENZENE	ND	10	2.0
CHLOROETHANE	ND	20	3.0
CHLOROFORM	ND	10	2.0
CHLOROMETHANE	ND	20	3.0
CIS-1,2-DICHLOROETHENE	160	10	2.0
DICHLORODIFLUOROMETHANE	ND	20	3.0
DIBROMOCHLOROMETHANE	ND	10	2.0
DIBROMOMETHANE	ND	10	2.0
ETHYLBENZENE	ND	10	2.0
HEXACHLOROBUTADIENE	ND	10	3.0
ISOPROPYL BENZENE	ND	10	2.0
METHYLENE CHLORIDE	ND	10	5.0
MTBE	ND	10	2.0
STYRENE	ND	10	2.0
TETRACHLOROETHYLENE	ND	10	2.0
TOLUENE	ND	10	2.0
TRANS-1,2-DICHLOROETHENE	11	10	2.0
TRICHLOROETHENE	19J	50	2.0
TRICHLOROFLUOROMETHANE	ND	20	3.0
VINYL CHLORIDE	5.5	5.0	2.0
XYLENES (TOTAL)	ND	20	6.0
M/P-XYLENES	ND	10	4.0
O-XYLENE	ND	10	2.0

SURROGATE PARAMETERS	RESULTS	SPK AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	116	100.0	116	70-140
4-BROMOFLUOROBENZENE	104	100.0	104	70-130
TOLUENE-D8	99.5	100.0	99.5	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/21/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/21/11
Batch No.	: 11K188	Date Extracted:	11/23/11 14:44
Sample ID:	IR-70-TB-158	Date Analyzed:	11/23/11 14:44
Lab Samp ID:	K188-04	Dilution Factor:	1
Lab File ID:	RKV587	Matrix	: WATER
Ext Btch ID:	V001K25	% Moisture	: NA
Calib. Ref.:	RJV602	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.4	10.00	104	70-140
4-BROMOFLUOROBENZENE	11.0	10.00	110	70-130
TOLUENE-D8	10.2	10.00	102	70-140

QC SUMMARIES

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/23/11
Batch No.	: 11K188	Date Extracted:	11/23/11 11:00
Sample ID:	MBLK1W	Date Analyzed:	11/23/11 11:00
Lab Samp ID:	V001K25B	Dilution Factor:	1
Lab File ID:	RKV579	Matrix :	WATER
Ext Btch ID:	V001K25	% Moisture :	NA
Calib. Ref.:	RJV602	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.25	10.00	92.5	70-140
4-BROMOFLUOROBENZENE	11.1	10.00	111	70-130
TOLUENE-D8	10.4	10.00	104	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K188
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	V001K25B	V001K25L	V001K25Y		
LAB FILE ID:	RKV579	RKV575	RKV577		
DATE EXTRACTED:	11/23/1111:00	11/23/1108:54	11/23/1109:57	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1111:00	11/23/1108:54	11/23/1109:57	DATE RECEIVED:	11/23/11
PREP. BATCH:	V001K25	V001K25	V001K25		
CALIB. REF:	RJV602	RJV602	RJV602		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	10.2	102	10.0	9.78	98	4	60-130	30
Benzene	ND	10.0	10.9	109	10.0	10.7	107	2	70-130	30
Chlorobenzene	ND	10.0	11.3	113	10.0	10.6	106	6	70-120	30
Toluene	ND	10.0	10.7	107	10.0	10.7	107	0	70-130	30
Trichloroethene	ND	10.0	10.9	109	10.0	10.6	106	2	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	9.99	100	10.0	9.40	94	70-140
4-Bromofluorobenzene	10.0	9.65	97	10.0	9.71	97	70-130
Toluene-d8	10.0	9.90	99	10.0	9.93	99	70-130

INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RJV596
Instrument ID: T001
GC Column:RTX502.2ID:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K188
BFB Injection Date : 10/31/11
BFB Injection Time : 09:18
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.79
75	30.0 - 60.0% of mass 95	51.84
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.73
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	73.40
175	5.0 - 9.0% of mass 174	5.20(7.1)1
176	95.0 - 101.0% of mass 174	72.01(98.1)1
177	5.0 - 9.0% of mass 176	4.99(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	V001J311	RJV597	10/31/11	09:59
2	VSTD0.5	V001J312	RJV598	10/31/11	10:30
3	VSTD01	V001J313	RJV599	10/31/11	11:01
4	VSTD02	V001J314	RJV600	10/31/11	11:32
5	VSTD05	V001J315	RJV601	10/31/11	12:03
6	VSTD010	V001J316	RJV602	10/31/11	12:33
7	VSTD020	V001J317	RJV603	10/31/11	13:04
8	VSTD030	V001J318	RJV604	10/31/11	13:35
9	VSTD050	V001J319	RJV605	10/31/11	14:05
10	VSTD100	V001J3110	RJV606	10/31/11	14:36
11	VSTD010	IV001J311	RJV609	10/31/11	16:07

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :T001
Beginning DateTime :10/31/11 09:59
Spike Units :PPB
IC File :RJV602

Column Spec :RTX502.2 ID :0.32MM
Ending DateTime :10/31/11 14:36
HPChem Method :V001J31

M	IDX	Parameters	.3 09:59 RJV597	.5 10:30 RJV598	1 11:01 RJV599	2 11:32 RJV600	5 12:03 RJV601	10 12:33 RJV602	20 13:04 RJV603	30 13:35 RJV604	50 14:05 RJV605	100 14:36 RJV606	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	0	7.7772
	2	Chlorotrifluoroethylene	------	0.109	0.142	0.158	0.161	0.161	0.174	0.164	0.169	0.164	0.156	12.57	2.1081
	3	Dichlorodifluoromethane	0.309	0.336	0.351	0.390	0.390	0.404	0.374	0.355	0.365	0.359	0.363	7.72	2.1576
	4	Chloromethane	0.424	0.438	0.439	0.437	0.442	0.478	0.432	0.422	0.420	0.418	0.435	4.03	2.3766
	5	Vinyl chloride	0.390	0.428	0.455	0.475	0.480	0.515	0.481	0.460	0.478	0.455	0.461	7.36	2.5408
	6	2-Chloro-1,1,1-trifluoroethane	0.267	0.292	0.352	0.405	0.357	0.346	0.367	0.343	0.340	0.315	0.338	11.52	2.6548
	7	Bromomethane	0.218	0.243	0.243	0.252	0.251	0.264	0.237	0.222	0.213	0.143	0.229	14.94	2.9004
	8	Chloroethane	0.371	0.316	0.291	0.288	0.275	0.285	0.269	0.252	0.251	0.223	0.282	14.40	3.0217
	9	Dichlorofluoromethane	0.808	0.730	0.755	0.724	0.730	0.705	0.722	0.671	0.654	0.622	0.712	7.42	3.3088
	10	Trichlorofluoromethane	------	0.394	0.410	0.439	0.446	0.459	0.428	------	------	------	0.429	5.60	3.3129
5	11	Acrolein	------	------	0.015	0.012	0.011	0.011	0.011	0.011	0.011	0.010	0.011	12.29	3.8010
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	0.227	0.210	0.222	0.216	0.226	0.217	0.224	0.216	0.216	0.214	0.219	2.60	3.9761
5	13	Acetone	------	------	0.054	0.046	0.045	0.046	0.044	0.040	0.039	0.036	0.044	12.62	3.9619
	14	1,1-Dichloroethene	0.682	0.667	0.685	0.687	0.691	0.670	0.668	0.631	0.616	0.584	0.658	5.45	3.9272
	15	Iodomethane	0.473	0.447	0.475	0.470	0.485	0.478	0.497	0.482	0.491	0.488	0.479	2.89	4.1122
	16	Carbon disulfide	1.104	0.866	0.961	0.999	1.070	0.991	1.192	1.135	1.223	1.201	1.074	10.99	4.2084
	17	Methylene chloride	0.589	0.509	0.526	0.494	0.501	0.484	0.501	0.484	0.485	0.473	0.505	6.57	4.5117
5	18	tert-Butyl alcohol	------	------	0.011	0.010	0.011	0.012	0.014	0.013	0.012	0.012	0.012	10.38	4.6333
5	19	Acrylonitrile	0.057	0.049	0.054	0.049	0.054	0.054	0.056	0.055	0.055	0.054	0.054	4.68	4.7766
	20	tert-Butyl methyl ether (MTBE)	0.581	0.545	0.619	0.597	0.611	0.595	0.636	0.580	0.573	0.550	0.589	4.92	4.8372
	21	trans-1,2-Dichloroethene	0.705	0.636	0.678	0.676	0.683	0.672	0.685	0.661	0.654	0.626	0.668	3.56	4.8505
	22	Vinyl acetate	------	0.362	0.399	0.481	0.527	0.523	0.516	0.523	0.507	0.446	0.476	12.74	5.3567
	23	1,1-Dichloroethane	0.823	0.707	0.773	0.758	0.764	0.745	0.768	0.750	0.748	0.727	0.756	4.05	5.3714
	24	Isopropyl ether (DIPE)	1.407	1.255	1.338	1.339	1.359	1.324	1.393	1.341	1.334	------	1.343	3.23	5.4144
5	25	2-Butanol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	26	tert-Butyl ethyl ether (ETBE)	1.023	0.928	1.019	0.963	0.989	0.968	1.012	0.923	0.924	0.912	0.966	4.44	5.8596
5	27	2-Butanone	0.072	0.064	0.071	0.064	0.072	0.073	0.077	0.073	0.072	0.069	0.071	5.82	6.0416
	28	cis-1,2-Dichloroethene	0.393	0.357	0.386	0.385	0.379	0.374	0.391	0.380	0.379	0.368	0.379	2.86	6.0801
	29	2,2-Dichloropropane	0.598	0.568	0.573	0.560	0.561	0.534	0.532	0.496	0.488	0.469	0.538	7.77	6.0993
	30	Bromochloromethane	0.309	0.297	0.317	0.305	0.307	0.309	0.319	0.301	0.297	0.289	0.305	3.06	6.3775
	31	Chloroform	0.660	0.608	0.644	0.641	0.661	0.654	0.655	0.620	0.616	0.606	0.636	3.47	6.5047
	32	Dibromofluoromethane	0.282	0.250	0.254	0.287	0.283	0.277	0.288	0.274	0.275	0.266	0.274	4.90	6.7089
	33	1,1,1-Trichloroethane	0.511	0.499	0.523	0.513	0.526	0.516	0.513	0.485	0.488	0.482	0.506	3.15	6.7459
	34	tert-Amyl methyl ether (TAME)	0.134	0.128	0.146	0.142	0.146	0.148	0.155	0.144	0.141	0.136	0.142	5.46	7.3807
	35	1,2-Dichloroethane-d4	0.295	0.293	0.281	0.319	0.317	0.298	0.304	0.276	0.273	0.266	0.292	6.16	7.1646
	36	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	0	12.3211
	37	1,1-Dichloropropene	0.235	0.213	0.208	0.199	0.205	0.203	0.202	0.208	0.204	0.202	0.208	4.86	6.9486
	38	Carbon tetrachloride	0.524	0.459	0.480	0.500	0.518	0.514	0.503	0.498	0.487	0.498	0.498	3.89	6.9546
	39	Benzene	1.929	1.746	1.769	1.711	1.749	1.714	1.733	1.752	1.800	------	1.767	3.77	7.2081
	40	1,2-Dichloroethane	0.464	0.438	0.454	0.442	0.456	0.445	0.441	0.417	0.415	0.410	0.438	4.24	7.2697
	41	Trichloroethene	0.487	0.420	0.428	0.433	0.441	0.435	0.444	0.437	0.449	0.451	0.442	4.13	8.1205
	42	1,2-Dichloropropane	0.496	0.463	0.451	0.450	0.461	0.447	0.455	0.452	0.461	0.455	0.459	3.08	8.4889
20	43	1,4-Dioxane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	44	Dibromomethane	0.151	0.142	0.151	0.143	0.152	0.151	0.153	0.147	0.150	0.151	0.149	2.57	8.6117
	45	Bromodichloromethane	0.536	0.466	0.498	0.506	0.523	0.517	0.528	0.510	0.518	0.519	0.512	3.82	8.8633
	46	2-Chloroethyl vinyl ether	0.106	0.092	0.109	0.108	0.117	0.121	0.135	0.127	0.132	0.135	0.118	12.09	9.2716
	47	cis-1,3-Dichloropropene	0.638	0.563	0.591	0.602	0.617	0.610	0.632	0.618	0.632	0.634	0.614	3.83	9.5247
5	48	4-Methyl-2-pentanone	0.209	0.181	0.188	0.176	0.198	0.205	0.219	0.209	0.215	0.212	0.201	7.38	9.7348
	49	Toluene-d8	1.537	1.362	1.194	1.412	1.388	1.334	1.400	1.406	1.417	------	1.383	6.52	9.9520
	50	Toluene	1.907	1.740	1.719	1.699	1.743	1.702	1.724	1.760	1.786	------	1.753	3.65	10.0604
	51	Ethyl methacrylate	0.317	0.261	0.296	0.297	0.326	0.344	0.371	0.359	0.362	0.362	0.330	11.06	10.5042
	52	trans-1,3-Dichloropropene	0.446	0.396	0.447	0.443	0.471	0.468	0.480	0.460	0.466	0.467	0.454	5.28	10.4169
	53	1,1,2-Trichloroethane	0.243	0.203	0.217	0.208	0.215	0.211	0.222	0.214	0.215	0.212	0.216	4.93	10.7439
	54	Tetrachloroethene	0.381	0.340	0.352	0.348	0.357	0.356	0.357	0.352	0.358	0.361	0.356	2.94	10.9066
	55	1,3-Dichloropropane	0.467	0.414	0.447	0.441	0.452	0.455	0.468	0.449	0.457	0.442	0.449	3.40	11.0161
5	56	2-Hexanone	0.139	0.115	0.119	0.111	0.126	0.135	0.144	0.141	0.143	0.141	0.131	9.50	11.0857
	57	Dibromochloromethane	0.232	0.231	0.244	0.250	0.264	0.269	0.280	0.265	0.266	0.268	0.257	6.52	11.3816
	58	1,2-Dibromoethane	0.199	0.179	0.201	0.204	0.210	0.209	0.221	0.209	0.210	0.209	0.205	5.44	11.5946

SG
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2011

	59	1-Chlorohexane	0.816	0.718	0.707	0.695	0.728	0.717	0.725	0.721	0.722	0.703	0.725	4.61	12.3360
	60	Chlorobenzene	1.034	0.946	0.995	0.993	1.039	1.037	1.038	1.023	1.017	0.974	1.010	3.12	12.3641
	61	1,1,1,2-Tetrachloroethane	0.350	0.301	0.326	0.332	0.346	0.344	0.351	0.335	0.334	0.322	0.334	4.52	12.4898
	62	Ethylbenzene	2.164	1.945	1.977	1.991	2.089	2.054	2.104	2.054	1.984	------	2.040	3.49	12.5018
2	63	m-Xylene & p-Xylene	1.610	1.482	1.470	1.505	1.572	1.573	1.567	1.538	------	------	1.540	3.23	12.6812
	64	o-Xylene	1.589	1.453	1.476	1.474	1.569	1.547	1.546	1.502	1.481	------	1.515	3.19	13.1841
	65	Styrene	1.016	0.911	1.000	1.022	1.143	1.156	1.192	1.187	1.174	1.038	1.084	9.03	13.2134
	66	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	0	15.4150
	67	Bromoform	0.300	0.296	0.320	0.305	0.327	0.327	0.344	0.343	0.359	0.377	0.330	7.98	13.4427
	68	Isopropylbenzene	5.486	4.993	4.975	4.842	4.950	4.869	4.800	4.988	4.786	------	4.966	4.25	13.6379
	69	4-Bromofluorobenzene	1.481	1.312	1.095	1.243	1.225	1.133	1.166	1.195	1.226	1.246	1.232	8.67	13.8452
	70	1,1,2,2-Tetrachloroethane	0.708	0.641	0.683	0.668	0.684	0.663	0.694	0.682	0.687	0.686	0.680	2.70	13.9828
	71	Bromobenzene	1.217	0.984	1.027	0.976	0.999	0.987	0.997	1.005	------	------	1.024	7.74	14.0073
	72	trans-1,4-Dichloro-2-butene	0.150	0.153	0.174	0.160	0.173	0.179	0.189	0.184	0.186	0.192	0.174	8.64	14.0272
	73	1,2,3-Trichloropropane	0.208	0.163	0.191	0.169	0.172	0.165	0.171	0.165	0.166	0.171	0.174	8.18	14.0538
	74	n-Propylbenzene	6.681	6.426	6.296	6.295	6.395	6.353	6.300	6.476	------	------	6.403	2.04	14.1128
	75	1,3,5-Trimethylbenzene	4.223	4.025	4.069	4.018	4.178	4.115	4.097	4.107	4.142	------	4.108	1.64	14.3070
	76	2-Chlorotoluene	3.930	3.660	3.570	3.417	3.531	3.421	3.367	3.429	3.495	------	3.536	4.91	14.2149
	77	4-Chlorotoluene	4.164	3.976	3.937	3.805	3.928	3.864	3.769	3.804	3.846	------	3.899	3.11	14.3481
	78	tert-Butylbenzene	0.968	0.910	0.914	0.906	0.922	0.915	0.906	0.923	0.918	0.917	0.920	1.93	14.6442
	79	1,2,4-Trimethylbenzene	4.266	3.870	3.910	3.868	3.983	4.040	3.945	3.951	3.974	3.171	3.898	7.18	14.7033
	80	sec-Butylbenzene	5.313	4.991	5.022	5.120	5.427	5.421	5.317	5.421	4.953	------	5.221	3.80	14.8692
	81	p-Isopropyltoluene	4.020	3.777	3.939	4.070	4.305	4.382	4.330	4.345	4.239	3.076	4.048	9.79	15.0185
	82	1,3-Dichlorobenzene	2.001	1.931	1.924	1.887	1.975	1.984	1.970	1.966	1.997	1.986	1.962	1.87	14.9948
	83	1,4-Dichlorobenzene	1.937	1.762	1.795	1.801	1.875	1.890	1.897	1.889	1.897	1.885	1.863	3.02	15.0954
	84	n-Butylbenzene	3.778	3.544	3.535	3.722	3.974	4.177	4.224	4.173	4.098	------	3.914	7.03	15.4019
	85	1,2-Dichlorobenzene	1.623	1.514	1.544	1.533	1.578	1.581	1.583	1.550	1.545	1.563	1.561	2.00	15.4328
	86	1,2-Dibromo-3-chloropropane	------	0.054	0.073	0.074	0.076	0.081	0.086	0.084	0.086	0.090	0.078	14.04	16.1711
	87	1,2,4-Trichlorobenzene	0.599	0.558	0.592	0.622	0.706	0.786	0.817	0.793	0.802	------	0.697	15.05	16.9571
	88	Hexachlorobutadiene	0.532	0.483	0.519	0.518	0.581	0.602	0.586	0.560	0.550	0.625	0.556	7.87	17.0855
	89	Naphthalene	------	0.848	0.785	0.727	0.815	0.969	1.054	------	------	------	0.866	14.11	17.2361
	90	1,2,3-Trichlorobenzene	0.465	0.412	0.437	0.448	0.513	0.579	0.599	0.581	0.590	------	0.514	14.54	17.4553

Spike Amount = Nominal Amount * M
Ave_%RSD : 6.3 Max_%RSD : 15

Use Least Square Linear Regression with weighting factor of inverse concentration for comps with %_RSD > 15
Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
87	1,2,4-Trichlorobenzene	-0.01281	0.80017	0.9994

SG
11/4/11

2015

SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :T001
IC_Beginning DateTime :10/31/11 09:59
Spike Amount :10 PPB
CC/CV File :RJV609
IC File :RJV602

Column Spec :RTX502.2 ID :0.32MM
IC_Ending DateTime :10/31/11 14:36
HPChem Method :V001J31
Date_Time :10/31/11 16:07

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	2078216	1	1	7.785	7.777	0				
	2	Chlorotrifluoroethylene	10.337	3.4	334837	0.161	0.156	2.118	2.108	12.57				
	3	Dichlorodifluoromethane	8.998	-10.0	679552	0.327	0.363	2.163	2.158	7.72				
	4	Chloromethane	9.368	-6.3	847031	0.408	0.435	2.385	2.377	4.03				
	5	Vinyl chloride	9.570	-4.3	917897	0.442	0.461	2.547	2.541	7.36				
	6	2-Chloro-1,1,1-trifluoroethane	10.198	2.0	717414	0.345	0.338	2.666	2.655	11.52				
	7	Bromomethane	10.172	1.7	483272	0.233	0.229	2.917	2.900	14.94				
	8	Chloroethane	9.111	-8.9	534262	0.257	0.282	3.036	3.022	14.40				
	9	Dichlorofluoromethane	9.679	-3.2	1432022	0.689	0.712	3.317	3.309	7.42				
	10	Trichlorofluoromethane	8.656	-13.4	772218	0.372	0.429	3.317	3.313	5.60				
5	11	Acrolein	50.524	1.0	118784	0.011	0.011	3.805	3.801	12.29				
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	9.899	-1.0	450197	0.217	0.219	3.983	3.976	2.60				
5	13	Acetone	48.877	-2.2	445516	0.043	0.044	3.968	3.962	12.62				
	14	1,1-Dichloroethene	9.655	-3.5	1320508	0.635	0.658	3.938	3.927	5.45				
	15	Iodomethane	10.262	2.6	1020558	0.491	0.479	4.116	4.112	2.89				
	16	Carbon disulfide	10.377	3.8	2316232	1.115	1.074	4.219	4.208	10.99				
	17	Methylene chloride	9.852	-1.5	1033145	0.497	0.505	4.515	4.512	6.57				
5	18	tert-Butyl alcohol	49.112	-1.8	120463	0.012	0.012	4.634	4.633	10.38				
5	19	Acrylonitrile	52.562	5.1	587908	0.057	0.054	4.781	4.777	4.68				
	20	tert-Butyl methyl ether (MTBE)	10.014	0.1	1225298	0.590	0.589	4.841	4.837	4.92				
	21	trans-1,2-Dichloroethene	9.877	-1.2	1370568	0.659	0.668	4.856	4.851	3.56				
	22	Vinyl acetate	10.093	0.9	998377	0.480	0.476	5.359	5.357	12.74				
	23	1,1-Dichloroethane	10.049	0.5	1579616	0.760	0.756	5.373	5.371	4.05				
	24	Isopropyl ether (DIPE)	10.337	3.4	2886019	1.389	1.343	5.418	5.414	3.23				
5	25	2-Butanol												
	26	tert-Butyl ethyl ether (ETBE)	9.749	-2.5	1957252	0.942	0.966	5.862	5.860	4.44				
5	27	2-Butanone	52.537	5.1	771595	0.074	0.071	6.039	6.042	5.82				
	28	cis-1,2-Dichloroethene	10.308	3.1	812742	0.391	0.379	6.084	6.080	2.86				
	29	2,2-Dichloropropane	9.670	-3.3	1080913	0.520	0.538	6.098	6.099	7.77				
	30	Bromochloromethane	9.920	-0.8	629180	0.303	0.305	6.379	6.378	3.06				
	31	Chloroform	9.731	-2.7	1287132	0.619	0.636	6.513	6.505	3.47				
	32	Dibromofluoromethane	9.632	-3.7	547922	0.264	0.274	6.720	6.709	4.90				
	33	1,1,1-Trichloroethane	9.429	-5.7	990643	0.477	0.506	6.749	6.746	3.15				
	34	tert-Amyl methyl ether (TAME)	10.176	1.8	300183	0.144	0.142	7.386	7.381	5.46				
	35	1,2-Dichloroethane-d4	8.932	-10.7	542346	0.261	0.292	7.179	7.165	6.16				
	36	CHLOROBENZENE-D5	10.000	0	1765489	1	1	12.328	12.321	0				
	37	1,1-Dichloropropene	9.645	-3.5	354243	0.201	0.208	6.957	6.949	4.86				
	38	Carbon tetrachloride	9.552	-4.5	840066	0.476	0.498	6.957	6.955	3.89				
	39	Benzene	10.189	1.9	3178606	1.800	1.767	7.223	7.208	3.77				
	40	1,2-Dichloroethane	9.335	-6.6	722336	0.409	0.438	7.282	7.270	4.24				
	41	Trichloroethene	10.044	0.4	784620	0.444	0.442	8.125	8.120	4.13				
	42	1,2-Dichloropropane	10.004	0.0	810670	0.459	0.459	8.495	8.489	3.08				
20	43	1,4-Dioxane												
	44	Dibromomethane	10.144	1.4	266983	0.151	0.149	8.614	8.612	2.57				
	45	Bromodichloromethane	9.799	-2.0	885837	0.502	0.512	8.865	8.863	3.82				
	46	2-Chloroethyl vinyl ether	10.396	4.0	217043	0.123	0.118	9.280	9.272	12.09				
	47	cis-1,3-Dichloropropene	10.050	0.5	1089123	0.617	0.614	9.531	9.525	3.83				
5	48	4-Methyl-2-pentanone	51.482	3.0	1827746	0.207	0.201	9.738	9.735	7.38				
	49	Toluene-d8	9.543	-4.6	2330918	1.320	1.383	9.960	9.952	6.52				
	50	Toluene	10.051	0.5	3111412	1.762	1.753	10.064	10.060	3.65				
	51	Ethyl methacrylate	10.418	4.2	606348	0.343	0.330	10.508	10.504	11.06				
	52	trans-1,3-Dichloropropene	10.018	0.2	803608	0.455	0.454	10.419	10.417	5.28				
	53	1,1,2-Trichloroethane	9.987	-0.1	380807	0.216	0.216	10.744	10.744	4.93				
	54	Tetrachloroethene	9.960	-0.4	626428	0.355	0.356	10.922	10.907	2.94				
	55	1,3-Dichloropropane	10.067	0.7	798400	0.452	0.449	11.026	11.016	3.40				
5	56	2-Hexanone	50.570	1.1	1173148	0.133	0.131	11.085	11.086	9.50				
	57	Dibromochloromethane	10.095	1.0	457958	0.259	0.257	11.395	11.382	6.52				
	58	1,2-Dibromoethane	10.098	1.0	365541	0.207	0.205	11.603	11.595	5.44				
	59	1-Chlorohexane	9.938	-0.6	1272480	0.721	0.725	12.342	12.336	4.61				

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SG
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60	Chlorobenzene	10.114	1.1	1802805	1.021	1.010	12.372	12.364	3.12				
61	1,1,1,2-Tetrachloroethane	10.026	0.3	591491	0.335	0.334	12.490	12.490	4.52				
62	Ethylbenzene	10.043	0.4	3617689	2.049	2.040	12.505	12.502	3.49				
2 63	m-Xylene & p-Xylene	19.918	-0.4	5414517	1.533	1.540	12.683	12.681	3.23				
64	o-Xylene	9.951	-0.5	2662138	1.508	1.515	13.186	13.184	3.19				
65	Styrene	10.684	6.8	2044347	1.158	1.084	13.215	13.213	9.03				
66	1,2-DICHLOROBENZENE-D4	10.000	0	676620	1	1	15.420	15.415	0				
67	Bromoform	9.880	-1.2	220603	0.326	0.330	13.452	13.443	7.98				
68	Isopropylbenzene	9.790	-2.1	3289549	4.862	4.966	13.644	13.638	4.25				
69	4-Bromofluorobenzene	8.942	-10.6	745615	1.102	1.232	13.852	13.845	8.67				
70	1,1,2,2-Tetrachloroethane	9.932	-0.7	456807	0.675	0.680	13.985	13.983	2.70				
71	Bromobenzene	9.698	-3.0	672008	0.993	1.024	14.014	14.007	7.74				
72	trans-1,4-Dichloro-2-butene	10.164	1.6	119681	0.177	0.174	14.029	14.027	8.64				
73	1,2,3-Trichloropropane	9.577	-4.2	112697	0.167	0.174	14.059	14.054	8.18				
74	n-Propylbenzene	9.990	-0.1	4328062	6.397	6.403	14.118	14.113	2.04				
75	1,3,5-Trimethylbenzene	9.868	-1.3	2743150	4.054	4.108	14.310	14.307	1.64				
76	2-Chlorotoluene	9.609	-3.9	2298732	3.397	3.536	14.222	14.215	4.91				
77	4-Chlorotoluene	9.834	-1.7	2594676	3.835	3.899	14.355	14.348	3.11				
78	tert-Butylbenzene	9.925	-0.7	617877	0.913	0.920	14.651	14.644	1.93				
79	1,2,4-Trimethylbenzene	10.070	0.7	2655963	3.925	3.898	14.710	14.703	7.18				
80	sec-Butylbenzene	10.152	1.5	3586389	5.300	5.221	14.873	14.869	3.80				
81	p-Isopropyltoluene	10.463	4.6	2866222	4.236	4.048	15.021	15.019	9.79				
82	1,3-Dichlorobenzene	9.960	-0.4	1322269	1.954	1.962	15.006	14.995	1.87				
83	1,4-Dichlorobenzene	9.877	-1.2	1244915	1.840	1.863	15.094	15.095	3.02				
84	n-Butylbenzene	10.295	3.0	2726374	4.029	3.914	15.405	15.402	7.03				
85	1,2-Dichlorobenzene	9.923	-0.8	1048344	1.549	1.561	15.435	15.433	2.00				
86	1,2-Dibromo-3-chloropropane	9.989	-0.1	52967	0.078	0.078	16.175	16.171	14.04				
87	1,2,4-Trichlorobenzene	9.584	-4.2	510233	0.754	0.697	16.959	16.957	15.05	-0.0128	0.8002		0.9994
88	Hexachlorobutadiene	10.265	2.7	385907	0.570	0.556	17.092	17.086	7.87				
89	Naphthalene	10.703	7.0	627450	0.927	0.866	17.240	17.236	14.11				
90	1,2,3-Trichlorobenzene	10.574	5.7	367640	0.543	0.514	17.462	17.455	14.54				

Spike Amount = Nominal Amount * M

5a
M14411

2018

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKV572
Instrument ID: TQ01
GC Column:RTX502.21D:0.32mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K188
BFB Injection Date : 11/23/11
BFB Injection Time : 07:21
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.04
75	30.0 - 60.0% of mass 95	53.50
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	5.93
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	73.21
175	5.0 - 9.0% of mass 174	5.25(7.2)1
176	95.0 - 101.0% of mass 174	70.23(95.9)1
177	5.0 - 9.0% of mass 176	4.87(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV001J3126	RKV574	11/23/11	08:22
2	MBLK1W	VO01K25B	RKV579	11/23/11	11:00
3	LCS1W	VO01K25L	RKV575	11/23/11	08:54
4	LCD1W	VO01K25Y	RKV577	11/23/11	09:57
5	MW-70-15-159	K188-01	RKV585	11/23/11	13:48
6	MW-70-MNA17-160	K188-02	RKV586	11/23/11	14:16
7	IR-70-TB-158	K188-04	RKV587	11/23/11	14:44
8	IW-70-SHB310-161DL	K188-03T	RKV593	11/23/11	17:32
9	IW-70-SHB310-161	K188-03	RKV594	11/23/11	17:59

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RJV602
Instrument ID: T001
GC Column: RTX502.2 ID: 0.32mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K188
Date Analyzed: 10/31/11
Time Analyzed: 12:33
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1719891	7.78	1480141	12.32	584394	15.41
	UPPER LIMIT	3439782	8.28	2960282	12.82	1168788	15.91
	LOWER LIMIT	859946	7.28	740071	11.82	292197	14.91
	SAMPLE ID						
1	VSTD010	1900841	7.77	1590266	12.31	595502	15.41
2	MBLK1W	2137999	7.77	1646815	12.32	469243	15.41
3	LCS1W	1933463	7.77	1599378	12.31	612620	15.41
4	LCD1W	2085097	7.77	1748466	12.31	647272	15.40
5	MW-70-15-159	1681935	7.78	1370559	12.32	407840	15.42
6	MW-70-MNA17-160	1679525	7.77	1382970	12.31	415378	15.42
7	IR-70-TB-158	1495372	7.78	1196555	12.33	343291	15.42
8	IW-70-SHB310-161DL	1561983	7.79	1283386	12.33	407487	15.42
9	TW-70-SHB310-161	1276350	7.78	1087925	12.32	411326	15.42

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKV574.D Vial: 3
Acq On : 23 Nov 2011 8:22 am Operator: MW
Sample : CVO01J3126 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.		%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000		0.0	111	0.00
2	T,M	Chlorotrifluoroethylene	10.000	0.000	MT	100.0#	0	-2.11#
3	T,M	Dichlorodifluoromethane	10.000	8.740		12.6	87	0.00
4	P,T,M	Chloromethane	10.000	9.210		7.9	93	0.00
5	C,T,M	Vinyl chloride	10.000	9.365		6.3	93	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	10.000	0.000	MT	100.0#	0	-2.66#
7	T,M	Bromomethane	10.000	9.623		3.8	92	0.00
8	T,M	Chloroethane	10.000	8.679		13.2	95	0.00
9	T,M	Dichlorofluoromethane	10.000	9.670		3.3	108	0.00
10	T,M	Trichlorofluoromethane	10.000	9.069		9.3	94	0.07
11	T,M	Acrolein	50.000	62.267	MT	-24.5#	147	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.919		0.8	111	0.00
13	T,M	Acetone	50.000	47.618		4.8	100	0.00
14	C,T,M	1,1-Dichloroethene	10.000	10.104		-1.0	110	0.00
15	T,M	Iodomethane	10.000	10.046		-0.5	111	0.00
16	T,M	Carbon disulfide	10.000	8.914		10.9	107	0.00
17	T,M	Methylene chloride	10.000	9.580		4.2	110	0.00
18	T,M	tert-Butyl alcohol	50.000	44.032		11.9	94	0.00
19	T,M	Acrylonitrile	50.000	48.236		3.5	107	0.00
20	T,M	tert-Butyl methyl ether (MT	10.000	9.914		0.9	108	0.00
21	T,M	trans-1,2-Dichloroethene	10.000	9.882		1.2	108	0.00
22	T,M	Vinyl acetate	10.000	8.693		13.1	87	0.00
23	P,T,M	1,1-Dichloroethane	10.000	9.949		0.5	112	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	9.932		0.7	111	0.00
25	T,M	2-Butanol	-1.000	0.000		0.0	111	0.00
26	T,M	tert-Butyl ethyl ether (ETB	10.000	9.681		3.2	107	0.00
27	T,M	2-Butanone	50.000	48.354		3.3	103	0.00
28	T,M	cis-1,2-Dichloroethene	10.000	10.372		-3.7	116	0.00
29	T,M	2,2-Dichloropropane	10.000	10.073		-0.7	112	0.00
30	T,M	Bromochloromethane	10.000	10.162		-1.6	111	0.00
31	C,T,M	Chloroform	10.000	10.170		-1.7	109	0.00
32	S	Dibromofluoromethane	10.000	10.412		-4.1	114	0.00
33	T,M	1,1,1-Trichloroethane	10.000	9.809		1.9	106	0.00
34	T,M	tert-Amyl methyl ether (TAM	10.000	9.843		1.6	104	0.00
35	S	1,2-Dichloroethane-d4	10.000	10.215		-2.1	111	0.00
36	I	CHLOROBENZENE-D5	10.000	10.000		0.0	107	0.00
37	T,M	1,1-Dichloropropene	10.000	10.087		-0.9	111	0.00
38	T,M	Carbon tetrachloride	10.000	10.065		-0.6	105	0.00
39	T,M	Benzene	10.000	9.927		0.7	110	0.00
40	T,M	1,2-Dichloroethane	10.000	10.504		-5.0	111	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKV574.D Vial: 3
Acq On : 23 Nov 2011 8:22 am Operator: MW
Sample : CVO01J3126 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	10.000	10.286	-2.9	112	0.00
42	C,T,M	1,2-Dichloropropane	10.000	9.987	0.1	110	0.00
43	T,M	1,4-Dioxane	-1.000	0.000	0.0	80	0.00
44	T,M	Dibromomethane	10.000	10.394	-3.9	110	0.00
45	T,M	Bromodichloromethane	10.000	10.413	-4.1	111	0.00
46	T,M	2-Chloroethyl vinyl ether	10.000	2.636	73.6#	28	0.00
47	T,M	cis-1,3-Dichloropropene	10.000	10.079	-0.8	109	0.00
48	T,M	4-Methyl-2-pentanone	50.000	47.652	4.7	101	0.00
49	S	Toluene-d8	10.000	9.683	3.2	108	0.00
50	C,T,M	Toluene	10.000	10.125	-1.3	112	0.00
51	T,M	Ethyl methacrylate	10.000	10.193	-1.9	105	0.00
52	T,M	trans-1,3-Dichloropropene	10.000	10.236	-2.4	107	0.00
53	T,M	1,1,2-Trichloroethane	10.000	10.329	-3.3	113	0.00
54	T,M	Tetrachloroethene	10.000	10.133	-1.3	109	0.00
55	T,M	1,3-Dichloropropane	10.000	10.339	-3.4	110	0.00
56	T,M	2-Hexanone	50.000	46.021	8.0	96	0.00
57	T,M	Dibromochloromethane	10.000	11.014	-10.1	113	0.00
58	T,M	1,2-Dibromoethane	10.000	10.761	-7.6	114	0.00
59	T,M	1-Chlorohexane	10.000	9.654	3.5	105	0.00
60	P,M	Chlorobenzene	10.000	10.394	-3.9	109	0.00
61	T,M	1,1,1,2-Tetrachloroethane	10.000	10.533	-5.3	110	0.00
62	C,T,M	Ethylbenzene	10.000	9.789	2.1	104	0.00
63	T,M	m-Xylene & p-Xylene	20.000	20.031	-0.2	105	0.00
64	T,M	o-Xylene	10.000	10.286	-2.9	108	0.00
65	T,M	Styrene	10.000	10.579	-5.8	107	0.00
66	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	102	0.00
67	P,T,M	Bromoform	10.000	10.691	-6.9	110	0.00
68	T,M	Isopropylbenzene	10.000	10.094	-0.9	105	0.00
69	S	4-Bromofluorobenzene	10.000	9.625	3.8	107	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.574	-5.7	111	0.00
71	T,M	Bromobenzene	10.000	9.992	0.1	106	0.00
72	T,M	trans-1,4-Dichloro-2-butene	10.000	7.286 M	27.1#	72	0.00
73	T,M	1,2,3-Trichloropropane	10.000	10.290	-2.9	111	0.00
74	T,M	n-Propylbenzene	10.000	10.008	-0.1	103	0.00
75	T,M	1,3,5-Trimethylbenzene	10.000	10.153	-1.5	103	0.00
76	T,M	2-Chlorotoluene	10.000	10.002	-0.0	105	0.00
77	T,M	4-Chlorotoluene	10.000	10.192	-1.9	105	0.00
78	T,M	tert-Butylbenzene	10.000	10.203	-2.0	104	0.00
79	T,M	1,2,4-Trimethylbenzene	10.000	10.175	-1.8	100	0.00
80	T,M	sec-Butylbenzene	10.000	10.131	-1.3	99	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKV574.D Vial: 3
Acq On : 23 Nov 2011 8:22 am Operator: MW
Sample : CVO01J3126 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	10.000	10.294	-2.9	97	0.00
82	T,M	1,3-Dichlorobenzene	10.000	10.242	-2.4	103	0.00
83	T,M	1,4-Dichlorobenzene	10.000	10.184	-1.8	102	0.00
84	T,M	n-Butylbenzene	10.000	9.378	6.2	90	0.00
85	T,M	1,2-Dichlorobenzene	10.000	10.202	-2.0	103	0.00
86	T,M	1,2-Dibromo-3-chloropropane	10.000	10.564	-5.6	104	0.00
87	T,M	1,2,4-Trichlorobenzene	10.000	8.193	18.1	83	0.00
88	T,M	Hexachlorobutadiene	10.000	9.342	6.6	88	0.00
89	T,M	Naphthalene	10.000	8.489	15.1	77	0.00
90	T,M	1,2,3-Trichlorobenzene	10.000	8.717	12.8	79	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKV574.D Vial: 3
Acq On : 23 Nov 2011 8:22 am Operator: MW
Sample : CVO01J3126 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	111	0.00
2	T,M	Chlorotrifluoroethylene	0.156	0.000	100.0#	0#	-2.11#
3	T,M	Dichlorodifluoromethane	0.363	0.318	12.4	87	0.00
4	P,T,M	Chloromethane	0.435	0.401	7.8	93	0.00
5	C,T,M	Vinyl chloride	0.461	0.432	6.3	93	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.338	0.000	100.0#	0#	-2.66#
7	T,M	Bromomethane	0.229	0.220	3.9	92	0.00
8	T,M	Chloroethane	0.282	0.245	13.1	95	0.00
9	T,M	Dichlorofluoromethane	0.712	0.688	3.4	108	0.00
10	T,M	Trichlorofluoromethane	0.429	0.389	9.3	94	0.07
11	T,M	Acrolein	0.011	0.014	-27.3#	147	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.219	0.217	0.9	111	0.00
13	T,M	Acetone	0.044	0.042	4.5	100	0.00
14	C,T,M	1,1-Dichloroethene	0.658	0.665	-1.1	110	0.00
15	T,M	Iodomethane	0.479	0.481	-0.4	111	0.00
16	T,M	Carbon disulfide	1.074	0.957	10.9	107	0.00
17	T,M	Methylene chloride	0.505	0.483	4.4	110	0.00
18	T,M	tert-Butyl alcohol	0.012	0.010	16.7	94	0.00
19	T,M	Acrylonitrile	0.054	0.052	3.7	107	0.00
20	T,M	tert-Butyl methyl ether (MT	0.589	0.584	0.8	108	0.00
21	T,M	trans-1,2-Dichloroethene	0.668	0.660	1.2	108	0.00
22	T,M	Vinyl acetate	0.476	0.414	13.0	87	0.00
23	P,T,M	1,1-Dichloroethane	0.756	0.752	0.5	112	0.00
24	T,M	Isopropyl ether (DIPE)	1.343	1.334	0.7	111	0.00
25	T,M	2-Butanol	0.000	0.000	0.0	111	0.00
26	T,M	tert-Butyl ethyl ether (ETB	0.966	0.935	3.2	107	0.00
27	T,M	2-Butanone	0.071	0.068	4.2	103	0.00
28	T,M	cis-1,2-Dichloroethene	0.379	0.393	-3.7	116	0.00
29	T,M	2,2-Dichloropropane	0.538	0.542	-0.7	112	0.00
30	T,M	Bromochloromethane	0.305	0.310	-1.6	111	0.00
31	C,T,M	Chloroform	0.636	0.647	-1.7	109	0.00
32	S	Dibromofluoromethane	0.274	0.285	-4.0	114	0.00
33	T,M	1,1,1-Trichloroethane	0.506	0.496	2.0	106	0.00
34	T,M	tert-Amyl methyl ether (TAM	0.142	0.140	1.4	104	0.00
35	S	1,2-Dichloroethane-d4	0.292	0.298	-2.1	111	0.00
36	I	CHLOROBENZENE-D5	1.000	1.000	0.0	107	0.00
37	T,M	1,1-Dichloropropene	0.208	0.210	-1.0	111	0.00
38	T,M	Carbon tetrachloride	0.498	0.501	-0.6	105	0.00
39	T,M	Benzene	1.767	1.754	0.7	110	0.00
40	T,M	1,2-Dichloroethane	0.438	0.460	-5.0	111	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKV574.D Vial: 3
Acq On : 23 Nov 2011 8:22 am Operator: MW
Sample : CVO01J3126 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T,M	Trichloroethene	0.442	0.455	-2.9	112	0.00
42	C,T,M	1,2-Dichloropropane	0.459	0.458	0.2	110	0.00
43	T,M	1,4-Dioxane	0.000	0.000	0.0	80	0.00
44	T,M	Dibromomethane	0.149	0.155	-4.0	110	0.00
45	T,M	Bromodichloromethane	0.512	0.533	-4.1	111	0.00
46	T,M	2-Chloroethyl vinyl ether	0.118	0.031	73.7#	28#	0.00
47	T,M	cis-1,3-Dichloropropene	0.614	0.619	-0.8	109	0.00
48	T,M	4-Methyl-2-pentanone	0.201	0.192	4.5	101	0.00
49	S	Toluene-d8	1.383	1.340	3.1	108	0.00
50	C,T,M	Toluene	1.753	1.775	-1.3	112	0.00
51	T,M	Ethyl methacrylate	0.330	0.336	-1.8	105	0.00
52	T,M	trans-1,3-Dichloropropene	0.454	0.465	-2.4	107	0.00
53	T,M	1,1,2-Trichloroethane	0.216	0.223	-3.2	113	0.00
54	T,M	Tetrachloroethene	0.356	0.361	-1.4	109	0.00
55	T,M	1,3-Dichloropropane	0.449	0.464	-3.3	110	0.00
56	T,M	2-Hexanone	0.131	0.121	7.6	96	0.00
57	T,M	Dibromochloromethane	0.257	0.283	-10.1	113	0.00
58	T,M	1,2-Dibromoethane	0.205	0.221	-7.8	114	0.00
59	T,M	1-Chlorohexane	0.725	0.700	3.4	105	0.00
60	P,M	Chlorobenzene	1.010	1.049	-3.9	109	0.00
61	T,M	1,1,1,2-Tetrachloroethane	0.334	0.352	-5.4	110	0.00
62	C,T,M	Ethylbenzene	2.040	1.997	2.1	104	0.00
63	T,M	m-Xylene & p-Xylene	1.540	1.542	-0.1	105	0.00
64	T,M	o-Xylene	1.515	1.558	-2.8	108	0.00
65	T,M	Styrene	1.084	1.146	-5.7	107	0.00
66	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	102	0.00
67	P,T,M	Bromoform	0.330	0.353	-7.0	110	0.00
68	T,M	Isopropylbenzene	4.966	5.012	-0.9	105	0.00
69	S	4-Bromofluorobenzene	1.232	1.186	3.7	107	0.00
70	P,T,M	1,1,2,2-Tetrachloroethane	0.680	0.719	-5.7	111	0.00
71	T,M	Bromobenzene	1.024	1.023	0.1	106	0.00
72	T,M	trans-1,4-Dichloro-2-butene	0.174	0.127	27.0#	72	0.00
73	T,M	1,2,3-Trichloropropane	0.174	0.179	-2.9	111	0.00
74	T,M	n-Propylbenzene	6.403	6.408	-0.1	103	0.00
75	T,M	1,3,5-Trimethylbenzene	4.108	4.171	-1.5	103	0.00
76	T,M	2-Chlorotoluene	3.536	3.536	0.0	105	0.00
77	T,M	4-Chlorotoluene	3.899	3.974	-1.9	105	0.00
78	T,M	tert-Butylbenzene	0.920	0.939	-2.1	104	0.00
79	T,M	1,2,4-Trimethylbenzene	3.898	3.966	-1.7	100	0.00
80	T,M	sec-Butylbenzene	5.221	5.289	-1.3	99	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKV574.D Vial: 3
Acq On : 23 Nov 2011 8:22 am Operator: MW
Sample : CVO01J3126 Inst : TO01
Misc : 10.0ppb 8260/50.0ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524C.P

Method : D:\HPCHEM\1\METHODS\VO01J31.M (RTE Integrator)
Title : METHOD 8260 25mls
Last Update : Wed Nov 02 11:07:23 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	p-Isopropyltoluene	4.048	4.167	-2.9	97	0.00
82	T,M	1,3-Dichlorobenzene	1.962	2.010	-2.4	103	0.00
83	T,M	1,4-Dichlorobenzene	1.863	1.897	-1.8	102	0.00
84	T,M	n-Butylbenzene	3.914	3.670	6.2	90	0.00
85	T,M	1,2-Dichlorobenzene	1.561	1.593	-2.0	103	0.00
86	T,M	1,2-Dibromo-3-chloropropane	0.078	0.083	-6.4	104	0.00
87	T,M	1,2,4-Trichlorobenzene	0.697	0.643	7.7	83	0.00
88	T,M	Hexachlorobutadiene	0.556	0.519	6.7	88	0.00
89	T,M	Naphthalene	0.866	0.735	15.1	77	0.00
90	T,M	1,2,3-Trichlorobenzene	0.514	0.448	12.8	79	0.00

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 10/31/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A01 -038

BATCH V001J316

	Sample Prep. ID	Data File Name	Lab Sample ID	* Sample Amount A/B/C	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RJU596	BFB01J29	1 ml	NA	NA	NA	NA	9:18am
02		597	V001J311	.01/.1/1.5 ml					0.3/1.5/1.5 ppb
03		598	2	.01/.1/.5 ml					0.5/2.5/2.5 ppb
04		599	3	.1/.5/1.5 ml					1.0/5.0/5.0 ppb
05		600	4	.2/1/1 ml					2.0/10/10 ppb
06		601	5	.5/2.5/2.5 ml					5.0/25/25 ppb
07		602	6	1/5/5 ml					10/50/50 ppb
08		603	7	2/10/10 ml					20/100/100 ppb
09		604	8	3/15/15 ml					30/150/150 ppb
10		605	9	5/25/25 ml					50/250/250 ppb
11		606	10	10/50/50 ml					100/500/500 ppb
12		607	IS/SS	25 ml					
13		608	V001J29B	↓					
14		609	V001J311	1/5/5 ml					10/50/50 ppb
15		610	RINSE	25 ml					4:51pm
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30				NW	11/1/11				

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J31

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC Gases	SV1-17-96-3	*	
DCC Cl_2	-92-3		
DCC BL60	-86-2		
DCC Freons	-95-1 -100-3		
BFB	-45-3	1	1/49/1000
IS/SURR.	-99-1	1	
ICV/LCS Gases	-97-1	1	
ICV/LCS Cl_2	-97-2	1	
ICV/LCS BL60	-99-2	5	
ICV/LCS Freons	-89-2	5	
ICV/LCS CLFC	J31-2-26-2	0.5	
	-26-1	0.5	
IS	S1-17-91-1	1	50ppm
SS	-91-2	1	
DATA FILE FOLDER	J31		

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO01	

Comments: *please refer to sample amount
A: SS, gases, Cl_2, Freons
B: BL60
C: CLFC
IS/SS NW 11/1/11

Analyzed By: NW
Date Disposed: 11/1/11
Disposed By: NW

2020

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/23/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge Book # A01 -038

BATCH V001J31/26

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RKV572	BFB01K25 ✓	1µL					7:21am
02		573	std test						
03		574	CV001J31/26 ✓	1/1/5/5mL					
04		575	V001K25L ✓						
05		576	↓ C						
06		577	~~RINSE~~ V001K25Y/Z	↓					
07		578 4/28/11	~~V001K25B~~ RINSE						
08		579	V001K25B ✓	25mL					
09		580	11K180-01T	0.50mL	50	4	✓		
10		581	11K179-04R	25mL	1.0	✓	✓		
11		582	11K101-04R			✓	✓		
12		583	11K179-02R			✓	✓		
13		584	↓ -03R			✓	✓		
14		585	11K188-01			✓	✓		
15		586	-02			✓	✓		
16		587	↓ -04			✓	✓		
17		588	11K150-04R			✓	✓		
18		589	-06R			✓	✓		
19		590	-07R	↓	↓	✓	✓		
20		591	-02T	0.25mL	100	✓	✓		
21		592	↓ -05T	50mL	500	✓	✓		
22		593	11K188-03T	2.5mL	10	✓	✓		
23		594	↓ -03	25mL	1.0	✓	✓		
24		595	11K150-05R	↓	↓	✓	✓		6:27PM
25		596-598	RINSE						
26									
27									
28									
29									
30									6d 11/28/11

Instrument No.	01
INITIAL CALIBRATION REFERENCE	
DATE	10/31/11
ICAL ID	V001J01

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-12-96-3	1	250
DCC	-92-3	1	250
DCC	-86-2	5	50/250
DCC	-98-1	5	250
BFB	-95-3	1	50
IS/SURR.	-99-1	1	250
ICV/LCS	-97-1	1	250
ICV/LCS	-97-2	1	250
ICV/LCS	-99-2	5	50/250
ICV/LCS	-89-2	5	250

DATA FILE FOLDER 11K23

Electronic Data Archival

Location	Date
HPCHEM_VOA/T001	11/29/11

Comments:

Analyzed By: MW

Date Disposed: 11/28/11

Disposed By: CGM

2030

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD RSK-175
DISSOLVED GASES

SDG#: 11K188

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K188

METHOD RSK-175
DISSOLVED GASES

A total of three (3) water samples were received on 11/21/11 for Dissolved Gas analysis, Method RSK-175 in accordance with USEPA at R.S. Kerr Environmental Research Laboratory, Ada, OK 74820 March 15, 1989.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for DGK016WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED GASES

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K188
Instrument ID : GCT010

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DGK016WB	1	NA	11/23/1107:44	11/23/1107:15	FK23003A	FK23002A	DGK016W	Method Blank
LCS1W	DGK016WL	1	NA	11/23/1107:58	11/23/1107:15	FK23004A	FK23002A	DGK016W	Lab Control Sample (LCS)
LCD1W	DGK016WC	1	NA	11/23/1108:10	11/23/1107:15	FK23005A	FK23002A	DGK016W	LCS Duplicate
MW-70-15-159	K188-01	1	NA	11/23/1111:40	11/23/1107:15	FK23020A	FK23013A	DGK016W	Field Sample
MW-70-MWA17-160	K188-02	1	NA	11/23/1111:53	11/23/1107:15	FK23021A	FK23013A	DGK016W	Field Sample
IW-70-SHB310-161	K188-03	1	NA	11/23/1112:06	11/23/1107:15	FK23022A	FK23013A	DGK016W	Field Sample
IW-70-SHB310-161DL	K188-03T	400	NA	11/23/1112:19	11/23/1107:15	FK23023A	FK23013A	DGK016W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/21/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/21/11
Batch No.	: 11K188	Date Extracted:	11/23/11 07:15
Sample ID:	MW-70-15-159	Date Analyzed:	11/23/11 11:40
Lab Samp ID:	K188-01	Dilution Factor:	1
Lab File ID:	FK23020A	Matrix :	WATER
Ext Btch ID:	DGK016W	% Moisture :	NA
Calib. Ref.:	FK23013A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	12	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/21/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/21/11
Batch No. : 11K188	Date Extracted: 11/23/11 07:15
Sample ID: MW-70-MNA17-160	Date Analyzed: 11/23/11 11:53
Lab Samp ID: K188-02	Dilution Factor: 1
Lab File ID: FK23021A	Matrix : WATER
Ext Btch ID: DGK016W	% Moisture : NA
Calib. Ref.: FK23013A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	23	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/21/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/21/11
Batch No.	: 11K188	Date Extracted:	11/23/11 07:15
Sample ID:	IW-70-SHB310-161	Date Analyzed:	11/23/11 12:06
Lab Samp ID:	K188-03	Dilution Factor:	1
Lab File ID:	FKZ3022A	Matrix :	WATER
Ext Btch ID:	DGK016W	% Moisture :	NA
Calib. Ref.:	FKZ3013A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	0.93J	2.0	0.64
ETHENE	0.93J	2.0	0.60
METHANE	290E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/21/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/21/11
Batch No. : 11K188	Date Extracted: 11/23/11 07:15
Sample ID: IW-70-SHB310-161DL	Date Analyzed: 11/23/11 12:19
Lab Samp ID: K188-03T	Dilution Factor: 400
Lab File ID: FK23023A	Matrix : WATER
Ext Btch ID: DGK016W	% Moisture : NA
Calib. Ref.: FK23013A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	800	260
ETHENE	ND	800	240
METHANE	5200	800	140

QC SUMMARIES

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/23/11
Batch No.	: 11K188	Date Extracted:	11/23/11 07:15
Sample ID:	MBLK1W	Date Analyzed:	11/23/11 07:44
Lab Samp ID:	DGK016WB	Dilution Factor:	1
Lab File ID:	FK23003A	Matrix :	WATER
Ext Btch ID:	DGK016W	% Moisture :	NA
Calib. Ref.:	FK23002A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K188
METHOD: METHOD RSK-175

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	DGK016WB	DGK016WL	DGK016WC		
LAB FILE ID:	FK23003A	FK23004A	FK23005A		
DATE EXTRACTED:	11/23/1107:15	11/23/1107:15	11/23/1107:15	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1107:44	11/23/1107:58	11/23/1108:10	DATE RECEIVED:	11/23/11
PREP. BATCH:	DGK016W	DGK016W	DGK016W		
CALIB. REF:	FK23002A	FK23002A	FK23002A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	ND	25.4	25.2	99	25.4	24.7	97	2	70-140	30
Ethene	ND	23.7	23.9	101	23.7	23.9	101	0	70-140	30
Methane	ND	13.6	12.2	90	13.6	12.0	89	1	70-130	30

INITIAL CALIBRATIONS

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK010D2A 11/01/11 11:28
LFID & Datetime: FK01D03A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	25.00X	40.00X	75.00X	100.00X	MEAN	%RSD
Methane	0.34	31626	33510	29954	29307	29338	29307	30507.1	5.6
Acetylene	0.55	2465	2595	2723	2744	2716	2643	2647.7	4.0
Ethylene	0.59	14655	16070	16617	16602	17123	16803	16311.8	5.4
Ethane	0.64	22748	24144	25289	25073	26185	26048	24914.4	5.2
Propane	0.93	29887	24871	26520	26214	27735	27800	27171.2	6.3

DG10K01.MET

FORM VI DGAS -2 1/96 Rev 2/2006

11/03/11

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK01008A 11/01/2011 13:45
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	416247	13.64	1		15
Acetylene	2.175	2.149	2.201	22.0	2647.6	66913	25.27	15		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	437326	26.81	13		15
Ethane	3.075	3.025	3.125	25.4	24914.4	691218	27.74	9		15
Propane	5.900	5.824	5.976	37.3	27171.2	1111008	40.89	10		15

DG10K01.MET

AJ
11/3/11

DAILY CALIBRATIONS

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK23002A 11/23/2011 07:31
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	399944	13.11	-3		15
Acetylene	2.200	2.174	2.226	22.0	2647.6	63420	23.95	9		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	398706	24.44	3		15
Ethane	3.067	3.017	3.117	25.4	24914.4	645969	25.93	2		15
Propane	5.875	5.799	5.951	37.3	27171.2	1122809	41.32	11		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK23013A 11/23/2011 10:02
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	385057	12.62	-7		15
Acetylene	2.208	2.182	2.234	22.0	2647.6	60185	22.73	3		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	385053	23.61	-1		15
Ethane	3.075	3.025	3.125	25.4	24914.4	612024	24.57	-3		15
Propane	5.883	5.807	5.959	37.3	27171.2	1033601	38.04	2		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK23026A 11/23/2011 13:02
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	373415	12.24	-10		15
Acetylene	2.208	2.182	2.234	22.0	2647.6	59363	22.42	2		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	375210	23.00	-3		15
Ethane	3.075	3.025	3.125	25.4	24914.4	602464	24.18	-5		15
Propane	5.883	5.807	5.959	37.3	27171.2	913699	33.63	-10		15

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGAS ICAL

Book #:	A10-025
Instrument No.:	10
Analytical Sequence:	FK01
Method File:	DG10K01
Analytical Batch:	N/A

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGAS ICAL SSSA-05-01-10	500 ppm
DGAS ICV SSSA-05-01-7	500ppm
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: SC

Date: 11/01/11

Disposed By: SC

Date Disposed: 11/01/11

Method: Dg10k01.met Batch: Fk01.seq Data: Fk01.011 - [Batch: fk01.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Run Type	Sample ID	Method	Filename	Sample Amt	Mult	Description
1	Unknown	IB10K407	dg10k01.met	FK01.001	100ml 1	1	
2	Unknown	DG10K01-01	dg10k01.met	FK01.002	1	1	
3	Unknown	DG10K01-02	dg10k01.met	FK01.003	1	1	
4	Unknown	DG10K01-03	dg10k01.met	FK01.004	1	1	DGAS ICML
5	Unknown	DG10K01-04	dg10k01.met	FK01.005	1	1	
6	Unknown	DG10K01-05	dg10k01.met	FK01.006	1	1	
7	Unknown	DG10K01-06	dg10k01.met	FK01.007	1	1	
8	Unknown	IDG10K0101	dg10k01.met	FK01.008	1	1	DGAS ICV
9	Unknown	IB	dg10k01.met	FK01.009	1	1	
10	Unknown	IB	dg10k01.met	FK01.010	1	1	
11	Unknown	IB	dg10k01.met	FK01.011	1	1	
12	Unknown	IB	dg10k01.met	FK01.012	1	1	
13	Unknown	IB	dg10k01.met	FK01.013	1	1	
14	Unknown	IB	dg10k01.met	FK01.014	1	1	
15	Unknown	IB	dg10k01.met	FK01.015	1	1	FINAL
16	Unknown	IB	dg10k01.met	FK01.016	1	1	
17	Unknown	IB	dg10k01.met	FK01.017	1	1	
18	Unknown	IB	dg10k01.met	FK01.018	1	1	
19	Unknown	IB	dg10k01.met	FK01.019	1	1	
20	Unknown	IB	dg10k01.met	FK01.020	1	1	
21	Unknown	IB	dg10k01.met	FK01.021	1	1	
22	Unknown	IB	dg10k01.met	FK01.022	1	1	
23	Unknown	IB	dg10k01.met	FK01.023	1	1	
24	Unknown	IB	dg10k01.met	FK01.024	1	1	
25	Unknown	IB	dg10k01.met	FK01.025	1	1	
26	Unknown	IB	dg10k01.met	FK01.026	1	1	
27	Unknown	IB	dg10k01.met	FK01.027	1	1	
28	Unknown	IB	dg10k01.met	FK01.028	1	1	
29	Unknown	IB	dg10k01.met	FK01.029	1	1	
30	Unknown	IB	dg10k01.met	FK01.030	1	1	
31	Unknown	IB	dg10k01.met	FK01.031	1	1	
32	Unknown	IB	dg10k01.met	FK01.032	1	1	
33	Unknown	IB	dg10k01.met	FK01.033	1	1	
34	Unknown	IB	dg10k01.met	FK01.034	1	1	

EC 11/01/11

Waiting For Trigger...

Start | Method: Dg10k01... | Tuesday, November 01, 2011

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGK016W: K116, K138 K123
K142

DGK017W: K205

Book #:	A10-026
Instrument No.:	10
Analytical Sequence:	FK23
Method File:	DG10K01
Analytical Batch:	CDG10K01457

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGas DEC SSSB-07-40-1	200
DGas DEC SSSB-07-40-2	200
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: RA

Date: 11/23/11

Disposed By: RA

Date Disposed: 11/23/11

Method: Dg10k01.met Batch: Fk23.seq Data: Fk23.042 - [Batch: fk23.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Sample ID	Method	Filename	Sample Amt.		Mult.	Description
1	IB10K457	dg10k01.met	FK23.001	100ul	1	1	
2	CDG10K01457	dg10k01.met	FK23.002		1	1	
3	DGK016WB	dg10k01.met	FK23.003		1	1	
4	DGK016WL	dg10k01.met	FK23.004		1	1	
5	DGK016WC	dg10k01.met	FK23.005		1	1	
6	11K116-02	dg10k01.met	FK23.006		1	1	CONF ONLY
7	TEST	dg10k01.met	FK23.007	—	1	1	
8	11K116-02T DF=5	dg10k01.met	FK23.008	20ul	1	5	
9	11K116-02I DF=200	dg10k01.met	FK23.009	50ul (10x)	1	200	
10	11K116-04	dg10k01.met	FK23.010	100ul	1	1	
11	11K116-04M	dg10k01.met	FK23.011		1	1	
12	11K116-04S	dg10k01.met	FK23.012		1	1	
13	CDG10K01458	dg10k01.met	FK23.013		1	1	
14	11K116-04W Conf. only	dg10k01.met	FK23.014		1	1	CONF ONLY
15	11K116-06	dg10k01.met	FK23.015		1	1	
16	11K116-06T DF=20	dg10k01.met	FK23.016	50ul	1	20	FINAL
17	11K116-07	dg10k01.met	FK23.017	100ul	1	1	
18	11K116-07T DF=5	dg10k01.met	FK23.018	20ul	1	5	CONF ONLY
19	11K116-07I DF=20	dg10k01.met	FK23.019	50ul	1	20	
20	11K188-01	dg10k01.met	FK23.020	100ul	1	1	
21	11K188-02	dg10k01.met	FK23.021		1	1	
22	11K188-03	dg10k01.met	FK23.022		1	1	
23	11K188-03T DF=400	dg10k01.met	FK23.023	50ul (20x)	1	400	
24	11K123-01	dg10k01.met	FK23.024	100ul	1	1	
25	11K123-01T DF=2	dg10k01.met	FK23.025	50ul	1	2	
26	CDG10K01459	dg10k01.met	FK23.026	100ul	1	1	
27	11K123-03	dg10k01.met	FK23.027		1	1	
28	11K123-04	dg10k01.met	FK23.028		1	1	
29	11K123-05	dg10k01.met	FK23.029		1	1	
30	11K142-01	dg10k01.met	FK23.030		1	1	
31	11K142-01T DF=10	dg10k01.met	FK23.031	10ul	1	10	
32	11K142-03	dg10k01.met	FK23.032	100ul	1	1	
33	11K142-03M	dg10k01.met	FK23.033		1	1	
34	11K142-03S	dg10k01.met	FK23.034		1	1	

Instrument 2 TO10

Start | EZ Chrom Chromatography | Exploring - Export | Method: Dg10k01.me... | Method: Dg10k01.met - B... | Calculator | Wednesday, November 23, 2011

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/23/11 Time: 07:15 End Date: 11/23/11 Time: 07:40

PREPARATION BATCH # DGK016W

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DGK016WB	39	4	NA	
02	L			NA	
03	C			NA	
04	11K116-02			✓	
05	04			✓	
06	04M			✓	
07	04S			✓	
08	06			✓	
09	07			✓	
10	11K188-01			✓	
11	02			✓	
12	03			✓	
13	11K123-01			✓	
14	03			✓	
15	04			✓	
16	05			✓	
17	11K142-01			✓	
18	03			✓	
19	03M			✓	
20	03S			✓	
21	04			✓	
22					
23					
24			RH 11/23/11		
25					

Standards	ID	Amount Added (µl)
LCS/MS	555A-05-01-7	1600

Reagent	Source
H_2O	Organic Free
He	Air Gas

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #:	25100705

Comments:

Prepared By: RH

Standard Added By: RH

1025

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☐ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/01/11 Time: 10:00 End Date: 11/01/11 Time: 10:40

PREPARATION BATCH # N/A

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DG10K01-01	39	4	N/A	
02	-02			N/A	
03	-03			N/A	DGAS ICAL
04	-04			N/A	
05	-05			N/A	
06	-06			N/A	
07	IDG10K01 01			N/A	DGAS ICV
08					
09					
10					
11					
12					
13					SC 11/01/11
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Standards	ID	Amount Added (µl)
LCS/MS / ICV	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic free
He	Air Gas
ICAL STD (500 ppm)	SSSA-05-01-10 (SPECIALTY AIR)
ICV STD 500 ppm	SSSA-05-01-7 (MATHESON)

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #: (ESS)	28100705

Comments:

1) 0.08 ml ICAL STD + 3.92 ml He
2) 0.4 ml 3.6 ml
3) 1.0 ml 3.0 ml
4) 1.6 ml 2.4 ml
5) 3.0 ml 1.0 ml
6) 4.0 ml 0 ml

Prepared By: SC

Standard Added By: SC

4026

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

SDG#: 11K188

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K188

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

One (1) water sample was received on 11/21/11 for Dissolved Metals by ICP analysis, Method 3010A/6010B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source. Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for IPK041WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG. Analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED METALS BY TRACE ICP

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K188
Instrument ID : T-ID8

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IPK041WB	1	NA	11/30/1111:40	11/28/1111:54	ID8K024031	ID8K024029	IPK041W	Method Blank
LCS1W	IPK041WL	1	NA	11/30/1111:43	11/28/1111:54	ID8K024032	ID8K024029	IPK041W	Lab Control Sample (LCS)
LCD1W	IPK041WC	1	NA	11/30/1111:45	11/28/1111:54	ID8K024033	ID8K024029	IPK041W	LCS Duplicate
44-E-13-N-112111AS	K198-05A	1	NA	11/30/1114:00	11/28/1111:54	ID8K024077	ID8K024075	IPK041W	Analytical Spike Sample
44-E-13-N-112111	K198-05	1	NA	11/30/1114:03	11/28/1111:54	ID8K024078	ID8K024075	IPK041W	Field Sample
44-E-13-N-112111DL	K198-05J	5	NA	11/30/1114:06	11/28/1111:54	ID8K024079	ID8K024075	IPK041W	Diluted Sample
IW-70-SHB310-161	K188-03	1	NA	11/30/1113:02	11/28/1111:54	ID8K024057	ID8K024053	IPK041W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/21/11 13:34
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/21/11
SDG NO.	: 11K188	Date Extracted:	11/28/11 11:54
Sample ID:	IW-70-SHB310-161	Date Analyzed:	11/30/11 13:02
Lab Samp ID:	K188-03	Dilution Factor:	1
Lab File ID:	ID8K024057	Matrix :	WATER
Ext Btch ID:	IPK041W	% Moisture :	NA
Calib. Ref.:	ID8K024053	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	62.6	0.200	0.0400
Manganese	2.30	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/28/11
SDG NO.	: 11K188	Date Extracted:	11/28/11 11:54
Sample ID:	MBLK1W	Date Analyzed:	11/30/11 11:40
Lab Samp ID:	1PK041WB	Dilution Factor:	1
Lab File ID:	ID8K024031	Matrix :	WATER
Ext Btch ID:	1PK041W	% Moisture :	NA
Calib. Ref.:	ID8K024029	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	ND	0.200	0.0400
Manganese	ND	0.200	0.00300

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K188
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	IPKD41WB	IPK041WL	IPK041WC		
LAB FILE ID:	ID8K024031	ID8K024032	ID8K024033		
DATIME EXTRCTD:	11/28/1111:54	11/28/1111:54	11/28/1111:54	DATE COLLECTED:	NA
DATIME ANALYZD:	11/30/1111:40	11/30/1111:43	11/30/1111:45	DATE RECEIVED:	11/28/11
PREP. BATCH:	IPK041W	IPKD41W	IPK041W		
CALIB. REF:	ID8K024029	ID8K024029	ID8K024029		

ACCESSION:

PARAMETER	BLNK RSLT mg/L	SPIKE AMT mg/L	BS RSLT mg/L	BS % REC	SPIKE AMT mg/L	BSD RSLT mg/L	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	ND	.5	.537	107	.5	.539	108	0	80-120	20
Iron	ND	5	5.21	104	5	5.23	105	0	80-120	20
Manganese	ND	.5	.467	93	.5	.472	94	1	80-120	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K188
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	44-E-13-N-112111	44-E-13-N-112111DL		
EMAX SAMP ID:	K198-05	K198-05J		
LAB FILE ID:	ID8K024078	ID8K024079		
DATE EXTRACTED:	11/28/1111:54	11/28/1111:54	DATE COLLECTED:	11/21/11 11:00
DATE ANALYZED:	11/30/1114:03	11/30/1114:06	DATE RECEIVED:	11/22/11
PREP. BATCH:	IPK041W	IPK041W		
CALIB. REF:	ID8K024075	ID8K024075		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SERIAL DIL RSLT (mg/L)	DIF RSLT %	QC LIMIT (%)
Arsenic	ND	ND	0	10
Iron	ND	ND	0	10
Manganese	ND	ND	0	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K188
METHOD: METHOD 3010A/60108 (DISSOLVED)

==========

MATRIX: WATER % MOISTURE: NA
DILTN FACTR: 1 1
SAMPLE ID: 44-E-13-N-112111
CONTROL NO.: K198-05 K198-05A
LAB FILE ID: ID8K024078 ID8K024077
DATIME EXTRCTD: 11/28/1111:54 11/28/1111:54 DATE COLLECTED: 11/21/11 11:00
DATIME ANALYZD: 11/30/1114:03 11/30/1114:00 DATE RECEIVED: 11/22/11
PREP. BATCH: IPK041W IPK041W
CALIB. REF: ID8K024075 ID8K024075

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	AS RSLT (mg/L)	AS % REC	QC LIMIT (%)
Arsenic	ND	.5	.617	123	75-125
Iron	ND	5	5.56	111	75-125
Manganese	ND	.5	.524	105	75-125

ICP QC CHECK TABLE

QC	ICV	CCV	ICSAB	ICSA	MLCV
Limit%	90-110	90-110	80-120	80-120	80-120
Comp	mg/L	mg/L	mg/L	mg/L	mg\L
Al	100	100	400	400	200
Sb	1.5	1.5	1	0	5
As	1	1	1	0	1
Ba	2	2	0.5	0	5
Be	1.5	1.5	0.5	0	5
B	2.5	2.5	0.5	0	5
Cd	2	2	1	0	5
Ca	75	75	500	500	250
Cr	2.5	2.5	0.5	0	5
Co	1	1	0.5	0	1
Cu	2.5	2.5	0.5	0	5
Fe	25	25	200	200	200
Pb	2.5	2.5	1	0	5
Li	0.5	0.5	1	0	0.5
Mg	60	60	200	200	100
Mn	2.5	2.5	0.5	0	5
Mo	2.5	2.5	1	0	5
Ni	2.5	2.5	1	0	5
K	60	60	75	0	250
Se	1	1	1	0	1
Ag	0.5	0.5	1	0	0.5
Na	60	60	75	0	150
Sr	0.5	0.5	0.5	0	0.5
Tl	2.5	2.5	1	0	5
Sn	0.5	0.5	1	0	0.5
Ti	0.5	0.5	1	0	0.5
V	1.5	1.5	0.5	0	5
Zn	2.5	2.5	1	0	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 11/30/11 10:02

End Date: 11/30/11 17:36

SOP #	Rev. #
☑ EMAX-6010	7
☐ EMAX-6010C	1
☐ EMAX-200.7	2
☐ EMAX-	

Comments:

Book #: AD8-022

Instrument No.: D8

Analytical Batch: 108K024

Analytical Sequence: S-11K6010 (v33)

Method File: 11K6010 (v33)

Database: EMAX14

	STANDARDS ID		STANDARDS ID
S0	SM1B14-7805	S30	SM1B14-6802
S1	N/A	S31	-6803
S2		ICV	-8201
S3		CCV	-8301
S4		ICSA	-8502
S5		ICSAB	-6704
S6		CRI/MRL 1	-8101
S7		MRL2	-7401
S8			
S9			
S10			
S11			
S12			
S16			
S17			
S18			
S20	SM1B14-8401		
S21	-6503		
S22	-6504		
S23	-8402		
S24	-6702		
S25	-6703		
S26	-7801		
S27	-7802		
S28	-7803		
S29	-7804		

Analyzed By: [illegible]

Date: 11/30/11

7009

SEQUENCE FILE : ID8K024

4-18	19-33	34-43	44-53	54-63
LFID	LSID	TIME	DATE	DF
ID8K024001	Blank	10:02	11/30/11	1.000
ID8K024002	S20	10:05	11/30/11	1.000
ID8K024003	S21	10:07	11/30/11	1.000
ID8K024004	S22	10:11	11/30/11	1.000
ID8K024005	S23	10:14	11/30/11	1.000
ID8K024006	S24	10:17	11/30/11	1.000
ID8K024007	S25	10:20	11/30/11	1.000
ID8K024008	S26	10:23	11/30/11	1.000
ID8K024009	S27	10:26	11/30/11	1.000
ID8K024010	S28	10:29	11/30/11	1.000
ID8K024011	S29	10:32	11/30/11	1.000
ID8K024012	S30	10:35	11/30/11	1.000
ID8K024013	S31	10:38	11/30/11	1.000
ID8K024014	ICV	10:41	11/30/11	1.000
ID8K024015	ICB	10:44	11/30/11	1.000
ID8K024016	MRLK3001	10:47	11/30/11	1.000
ID8K024017	MRLK3002	10:50	11/30/11	1.000
ID8K024018	ICSA1	10:53	11/30/11	1.000
ID8K024019	ICAB1	10:56	11/30/11	1.000
ID8K024020	CCV1	10:59	11/30/11	1.000
ID8K024021	CCB1	11:02	11/30/11	1.000
ID8K024022	K542-08	11:05	11/30/11	1.000
ID8K024023	Blank	11:08	11/30/11	1.000
ID8K024024	CCV2	11:11	11/30/11	1.000
ID8K024025	CCB2	11:14	11/30/11	1.000
ID8K024026	K542-08W	11:24	11/30/11	1.000
ID8K024027	K550-08	11:27	11/30/11	1.000
ID8K024028	Blank	11:30	11/30/11	1.000
ID8K024029	CCV3	11:34	11/30/11	1.000
ID8K024030	CCB3	11:37	11/30/11	1.000
ID8K024031	IPK041WB	11:40	11/30/11	1.000
ID8K024032	IPK041WL	11:43	11/30/11	1.000
ID8K024033	IPK041WC	11:45	11/30/11	1.000
ID8K024034	K205-01A	11:48	11/30/11	1 000
ID8K024035	K205-01	11:51	11/30/11	1.000
ID8K024036	K205-01J	11:54	11/30/11	5.000
ID8K024037	K205-01M	11:57	11/30/11	1.000
ID8K024038	K205-01S	12:00	11/30/11	1.000
ID8K024039	K203-15	12:06	11/30/11	1.000
ID8K024040	Blank	12:09	11/30/11	1.000
ID8K024041	CCV4	12:12	11/30/11	1.000
ID8K024042	CCB4	12:15	11/30/11	1.000
ID8K024043	K205-02	12:18	11/30/11	1.000
ID8K024044	K205-03	12:21	11/30/11	1.000
ID8K024045	K205-04	12:24	11/30/11	1.000
ID8K024046	K205-05	12:27	11/30/11	1.000
ID8K024047	K184-01	12:30	11/30/11	1.000
ID8K024048	K184-02	12:33	11/30/11	1.000
ID8K024049	K184-03	12:37	11/30/11	1.000
ID8K024050	K184-04	12:40	11/30/11	1.000
ID8K024051	K184-05	12:43	11/30/11	1.000
ID8K024052	Blank	12:46	11/30/11	1.000

ID8K024053	CCV5	12:49	11/30/11	1.000
ID8K024054	CCB5	12:52	11/30/11	1.000
ID8K024055	K174-01	12:55	11/30/11	1.000
ID8K024056	K174-07	12:58	11/30/11	1.000
ID8K024057	K188-03	13:02	11/30/11	1.000
ID8K024058	Blank	13:05	11/30/11	1.000
ID8K024059	CCV6	13:08	11/30/11	1.000
ID8K024060	CCB6	13:11	11/30/11	1.000
ID8K024061	K542-06A	13:14	11/30/11	5.000
ID8K024062	K542-06T	13:16	11/30/11	5.000
ID8K024063	K542-06J	13:19	11/30/11	25.00
ID8K024064	K542-06M	13:22	11/30/11	5.000
ID8K024065	K542-06S	13:25	11/30/11	5.000
ID8K024066	Blank	13:28	11/30/11	1.000
ID8K024067	CCV7	13:31	11/30/11	1.000
ID8K024068	CCB7	13:34	11/30/11	1.000
ID8K024069	K205-01A	13:37	11/30/11	5.000
ID8K024070	K205-01T	13:39	11/30/11	5.000
ID8K024071	K205-01J	13:43	11/30/11	25.00
ID8K024072	K205-01M	13:46	11/30/11	5.000
ID8K024073	K205-01S	13:48	11/30/11	5.000
ID8K024074	Blank	13:51	11/30/11	1.000
ID8K024075	CCV8	13:54	11/30/11	1.000
ID8K024076	CCB8	13:57	11/30/11	1.000
ID8K024077	K198-05A	14:00	11/30/11	1.000
ID8K024078	K198-05	14:03	11/30/11	1.000
ID8K024079	K198-05J	14:06	11/30/11	5.000
ID8K024080	K198-05M	14:09	11/30/11	1.000
ID8K024081	K198-05S	14:11	11/30/11	1.000
ID8K024082	K198-03	14:14	11/30/11	1.000
ID8K024083	K198-04	14:17	11/30/11	1.000
ID8K024084	Blank	14:20	11/30/11	1.000
ID8K024085	CCV9	14:23	11/30/11	1.000
ID8K024086	CCB9	14:26	11/30/11	1.000
ID8K024087	K207-01	14:29	11/30/11	1.000
ID8K024088	K207-02	14:32	11/30/11	1.000
ID8K024089	Blank	14.35	11/30/11	1.000
ID8K024090	CCV10	14:38	11/30/11	1 000
ID8K024091	CCB10	14:41	11/30/11	1.000
ID8K024092	K119-01A	14:44	11/30/11	1.000
ID8K024093	K119-01W	14:46	11/30/11	1.000
ID8K024094	K119-01J	14:49	11/30/11	5.000
ID8K024095	K133-01A	14:52	11/30/11	5.000
ID8K024096	K133-01T	14:55	11/30/11	5.000
ID8K024097	K133-01J	14:58	11/30/11	25.00
ID8K024098	Blank	15:01	11/30/11	1.000
ID8K024099	CCV11	15:04	11/30/11	1.000
ID8K024100	CCB11	15:07	11/30/11	1.000
ID8K024101	IPK045WB	15:10	11/30/11	1.000
ID8K024102	IPK045WL	15:13	11/30/11	1.000
ID8K024103	IPK045WC	15:16	11/30/11	1.000
ID8K024104	TXK010SB	15:19	11/30/11	1.000
ID8K024105	K216-01A	15:22	11/30/11	1.000
ID8K024106	K216-01	15:25	11/30/11	1.000
ID8K024107	K216-01J	15:28	11/30/11	5.000

ID8K024108	K216-01M	15:31	11/30/11	1.000
ID8K024109	K216-01S	15:34	11/30/11	1.000
ID8K024110	Blank	15:37	11/30/11	1.000
ID8K024111	CCV12	15:40	11/30/11	1.000
ID8K024112	CCB12	15:42	11/30/11	1.000
ID8K024113	K216-02	15:46	11/30/11	1.000
ID8K024114	Blank	15:49	11/30/11	1.000
ID8K024115	CCV13	15:52	11/30/11	1.000
ID8K024116	CCB13	15:54	11/30/11	1.000
ID8K024117	K542-06A	15:57	11/30/11	10.00
ID8K024118	K542-06A	16:00	11/30/11	10.00
ID8K024119	K542-06I	16:03	11/30/11	10.00
ID8K024120	K542-06J	16:06	11/30/11	50.00
ID8K024121	K542-06M	16:09	11/30/11	10.00
ID8K024122	K542-06S	16:12	11/30/11	10.00
ID8K024123	Blank	16:14	11/30/11	1.000
ID8K024124	CCV14	16:17	11/30/11	1.000
ID8K024125	CCB14	16:20	11/30/11	1.000
ID8K024126	K133-01A	16:23	11/30/11	10.00
ID8K024127	K133-01I	16:26	11/30/11	10.00
ID8K024128	K133-01J	16:29	11/30/11	50.00
ID8K024129	Blank	16:32	11/30/11	1.000
ID8K024130	CCV15	16:35	11/30/11	1.000
ID8K024131	CCB15	16:38	11/30/11	1.000
ID8K024132	1PK046W8	16:41	11/30/11	1.000
ID8K024133	1PK046WL	16:44	11/30/11	1.000
ID8K024134	1PK046WC	16:47	11/30/11	1.000
ID8K024135	K229-01A	16:50	11/30/11	1.000
ID8K024136	K229-01	16:52	11/30/11	1.000
ID8K024137	K229-01J	16:55	11/30/11	5.000
ID8K024138	K229-01M	16:58	11/30/11	1.000
ID8K024139	K229-01S	17:01	11/30/11	1.000
ID8K024140	K229-03	17:04	11/30/11	1.000
ID8K024141	Blank	17:06	11/30/11	1.000
ID8K024142	CCV16	17:09	11/30/11	1.000
ID8K024143	CCV16	17:12	11/30/11	1.000
ID8K024144	K133-01A	17:15	11/30/11	10.00
ID8K024145	K542-06A	17:18	11/30/11	15.00
ID8K024146	K542-06A	17:21	11/30/11	15.00
ID8K024147	K542-06G	17:23	11/30/11	15.00
ID8K024148	K542-06J	17:26	11/30/11	75.00
ID8K024149	Blank	17:29	11/30/11	1.000
ID8K024150	CCV17	17:32	11/30/11	1.000
ID8K024151	CCB17	17:36	11/30/11	1.000

VERSON : 11A UNIT : % SUMMARY of ICV and CCV : ID8K024 DATE : 11/30/11 INST : EMAXT

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S26	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	101	97	103	98	98	98	98	99	97	96	105	100	96	108	94	92	99	98	97	103	101	105	97	91	93	99	102	102
ICB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK3001	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK3002	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA1	97	----	----	----	----	----	----	94	----	----	----	95	----	----	95	----	----	----	----	----	----	----	----	----	----	----	----	----
ICAB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	-485*	-479*	-489*	97	95	0*	-470*	99	0*	95	0*	0*	94	100	93	91	99	97	99	-495*	0*	106	96	-439*	98	97	0*	102
CCB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	101	100	104	98	95	98	99	98	97	96	105	99	95	101	93	91	99	97	99	103	102	106	97	93	98	97	101	102
CCB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-08W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K550-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	103	100	106	99	99	100	102	101	100	97	108	102	97	109	95	94	100	99	100	105	104	107	98	95	93	100	103	104
CCB3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK041WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK041WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK041WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K203-15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	101	101	106	97	95	99	101	99	99	96	107	100	94	99	93	92	97	97	99	105	104	107	97	94	96	97	101	102
CCB4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

CCV5	101	98	105	97	95	100	100	97	101	96	110	100	94	100	92	92	97	97	100	104	105	108	98	92	94	95	101	101
CCB5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K174-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K174-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K188-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	102	98	103	98	96	99	99	98	99	96	107	99	94	101	95	94	98	97	99	102	104	107	97	92	96	98	100	101
CCB6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	104	97	107	99	100	101	104	99	103	97	111*	100	95	111*	96	97	98	99	100	105	107	108	100	95	88*	100	102	102
CCB7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	103	97	108	97	98	101	106	98	103	96	110	100	95	108	95	95	96	98	98	106	107	106	99	97	87*	99	101	102
CCB8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K19B-05A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	103	99	107	98	97	101	105	98	103	96	111*	100	94	102	95	94	96	97	100	107	108	108	99	96	92	97	101	102
CCB9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K207-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K207-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV10	102	99	107	98	96	100	105	98	102	96	110	100	94	102	95	94	96	97	100	106	106	108	99	96	93	97	100	102
CCB10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K119-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K119-01W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K119-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV11	103	100	108	97	96	101	107	97	103	96	110	100	95	100	94	94	96	97	100	109	108	108	99	98	93	96	101	103
CCB11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK045WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK045WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK045WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TXK010SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K216-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV12	103	99	108	98	97	102	108	98	105	96	111*	100	94	102	96	95	96	97	100	108	108	109	99	98	92	97	101	102
CCB12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV13	102	100	109	97	95	102	107	98	104	96	112*	101	94	100	93	94	96	98	101	109	109	109	99	97	92	95	101	103
CCB13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-061	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV14	102	99	108	97	95	102	107	98	105	96	112*	101	94	100	93	93	96	97	100	109	108	109	99	97	92	95	101	103
CCB14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV15	103	99	107	99	97	101	105	97	102	96	110	100	94	102	94	95	97	97	100	107	106	108	98	96	93	97	100	102
CCB15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK046WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK046WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK046WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV16	102	99	107	96	94	101	104	97	103	96	111*	101	93	99	92	91	96	97	100	106	107	109	98	95	93	95	101	102
CCV16	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06G	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV17	102	99	106	99	96	100	103	97	101	96	109	99	94	103	94	95	97	97	100	106	106	109	99	95	94	97	100	102
CCB17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

QC limit of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC Limit

VERSON : 11A UNIT : UG/L SUMMARY of CALIBRATION BLANKS : ID8K024 (WATER) DATE : 11/30/11 INST : EMAX1

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S26	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IC8	10.3	1.37	-1.66	.100	.060	3.65	-.040	-8.32	.280	-.120	.210	-.770	-.270	.210	-.800	.200	.300	.000	155	-2.10	.110	-182	.080	1.32	-.330	-.070	.020	-.410
MRLK3001	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK3002	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA1	----	-.240	.610	.760	.120	-57.6	4.17	----	.800	-.720	1.37	----	5.83	16.4	----	.910	-1.04	.900	229	1.12	-.110	-30.9	1.01	-2.32	1.45	3.74	.690	2.61
ICAB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB1	12.9	1.58	.710	.300	.090	3.82	.020	18.3	.230	.060	.270	.650	.100	-.660	.590	-.060	.380	-.090	105	-1.10	.040	-199	.090	.780	.120	.000	.290	.770
K542-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB2	12.7	1.53	-.550	.250	.100	4.30	-.010	13.8	.300	-.150	.300	-1.11	-.010	.160	-3.38	190	.340	.010	32.6	-1.85	.060	-219	.110	1.17	-.500	.010	210	.660
K542-08W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K550-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB3	15.6	.670	-.120	230	.120	3.84	-.030	159	.230	.100	.480	1.30	-.260	-.510	6.67	.370	.330	.000	-31.6	-1.03	-.020	-233	.250	1.44	-.520	.590	.200	5.89
1PK041WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK041WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1PK041WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K203-15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB4	13.8	1.56	-.200	.210	.110	1.08	-.040	23.1	.150	-.170	.270	.060	.310	.120	-4 90	-.020	.320	-.070	30.7	-1.83	-.040	-144	.140	1.02	-.150	.140	.200	.470
K205-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K184-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

CCV5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB5	14.5	.950	-.780	.280	.090	-.450	.010	19.8	.110	.020	.160	-1.09	.250	-.080	.030	.050	.260	-.150	102	-1.05	.000	62.0	.100	1.29	-.540	-.150	.150	.550
K174-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K174-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K188-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB6	15.4	1.40	-.300	.310	.120	-.120	.010	16.7	.270	.000	-.030	-1.11	-.050	-.510	-3.01	.120	.320	-.070	84.5	-1.25	.070	67.9	.060	.990	-.570	.090	.280	.460
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB7	21.8	1.75	-.560	.300	.150	-1.43	.110	188	.190	.060	.170	1.75	.450	-.620	9.09	.120	.300	-.130	13.2	-.930	.030	-106	.050	1.14	-.630	.440	.120	6.42
K205-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K205-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB8	50.1	1.97	-1.21	.650	.210	-.780	.120	72.0	.380	.050	1.04	10.6	.600	-.870	6.75	.280	.390	-.220	39.5	-1.97	.070	-80.6	.110	.610	-.290	.370	.030	3.95
K198-05A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-05S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K198-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB9	23.8	2.08	-1.10	.330	.110	-1.47	-.010	16.4	200	010	.220	-2.26	-.210	-.110	4.91	.190	.440	-.150	29.1	- 400	-.030	-140	.090	1.27	-.480	.050	-.100	.390
K207-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K207-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB10	22.8	1.19	-1.18	.310	.130	-1.05	-.030	46.5	.190	.070	.180	-.580	-.010	.880	-3.00	.290	.260	-.160	18.1	-1.29	-.040	-168	.050	1.29	-.260	-.070	-.020	1.47
K119-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K119-01W	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K119-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB11	30.8	2.49	-1.91	.520	.230	-1.32	.130	383	290	.190	.240	.090	.470	-1.49	13.3	.510	.490	.090	30.8	.600	-.030	-111	.240	.590	-.550	.460	.190	13.4
IPK045WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK045WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK045WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TXK010SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K216-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K216-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB12	31.4	2.34	-.450	.340	.170	-2.03	020	40.6	.140	.140	.230	-2.45	-.320	-1.02	2.48	.270	.430	-.110	50.5	-.630	.040	-127	.120	.650	-.530	.470	.010	1.02
K216-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB13	26.6	2.46	-.920	.340	.220	-1.83	.000	26.0	.220	.150	.210	-.370	.210	-.860	5.44	.250	.370	-.100	46.0	-1.18	.010	-138	.110	.990	-.120	-.190	.210	.510
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-061	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB14	25.8	1.64	.080	.430	.160	-2.45	-.020	30.1	.170	.050	.170	-.220	-.290	-.790	3.35	.100	.350	-.140	9.74	-.580	.000	-184	.100	.470	-.620	.050	.070	.750
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB15	19.6	2.17	.370	.290	.170	-2.29	.020	24.3	.240	.000	.030	.620	-.340	-.300	-1.64	.030	.340	-.190	34.4	-.500	.030	-156	.080	.230	-.450	-.120	.120	.680
IPK046WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK046WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPK046WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K229-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06G	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K542-06J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB17	20.3	1.56	.590	.230	.150	-2.24	-.010	24.3	.280	.050	.060	-.670	.180	-.670	1.75	.130	.250	-.180	47.7	-1.15	-.020	-209	.150	1.12	-.470	-.330	.040	.970

QC limit of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC Limit

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
1	0	0	0	0	Unk	S0		ID8K024001			1	☒	unk	---
2	0	0	0	0	Unk	S20		ID8K024002			1	☒	unk	---
3	0	0	0	0	Unk	S21		ID8K024003			1	☒	unk	---
4	0	0	0	0	Unk	S22		ID8K024004			1	☒	unk	---
5	0	0	0	0	Unk	S23		ID8K024005			1	☒	unk	---
6	0	0	0	0	Unk	S24		ID8K024006			1	☒	unk	---
7	0	0	0	0	Unk	S25		ID8K024007			1	☒	unk	---
8	0	0	0	0	Unk	S26		ID8K024008			1	☒	unk	---
9	0	0	0	0	Unk	S27		ID8K024009			1	☒	unk	---
10	0	0	0	0	Unk	S28		ID8K024010			1	☒	unk	---
11	0	0	0	0	Unk	S29		ID8K024011			1	☒	unk	---
12	0	0	0	0	Unk	S30		ID8K024012			1	☒	unk	---
13	0	0	0	0	Unk	S31		ID8K024013			1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8K024014			1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8K024015			1	☒	3XIDL	None
16	3	2	3	1	QC	MRLK3001		ID8K024016			1	☒	MRL-EMAX	None
17	4	2	4	1	QC	MRLK3002		ID8K024017			1	☒	MRL-AFCEE	None
18	5	2	5	1	QC	ICSA1		ID8K024018			1	☒	ICSA-DoD	None
19	6	2	6	1	QC	ICAB1		ID8K024019			1	☒	ICSAB	None
20	7	2	7	1	QC	CCV1		ID8K024020			1	☒	CCV	None
21	8	2	8	1	QC	CCB1		ID8K024021			1	☒	3XIDL	None
22	9	2	9	1	Unk	K550-08	TCLP	ID8K024022			1	☒	unk	---
23	10	2	10	1	Blank	Blank		ID8K024023			1	☐		---
24	11	2	11	1	QC	CCV2		ID8K024024			1	☒	CCV	None
25	12	2	12	1	QC	CCB2		ID8K024025			1	☒	3XIDL	None
26	57	2	9	5	Unk	K542-08	TCLP	ID8K024026			1	☒	unk	---
27	58	2	10	5	Unk	K550-08	TCLP CONFIRM	ID8K024027			1	☒	unk	---
28	59	2	11	5	Blank	Blank		ID8K024028			1	☐		---
29	60	2	12	5	QC	CCV3		ID8K024029			1	☒	CCV	None
30	61	3	1	1	QC	CCB3		ID8K024030			1	☒	3XIDL	None
31	13	2	1	2	QC	IPK041WB		ID8K024031			1	☒	1/2LOQ	None
32	14	2	2	2	QC	IPK041WL		ID8K024032			1	☒	LCS	None
33	15	2	3	2	QC	IPK041WC		ID8K024033			1	☒	LCS	None
34	16	2	4	2	Unk	K205-01A	DISSOLVED	ID8K024034			1	☒	unk	---
35	17	2	5	2	Unk	K205-01	DISSOLVED	ID8K024035			1	☒	unk	---
36	18	2	6	2	Unk	K205-01J	DISSOLVED	ID8K024036			1	☒	unk	---
37	19	2	7	2	Unk	K205-01M	DISSOLVED	ID8K024037			1	☒	unk	---
38	20	2	8	2	Unk	K205-01S	DISSOLVED	ID8K024038			1	☒	unk	---
39	62	3	2	1	Unk	K203-15		ID8K024039			1	☒	unk	---

7019

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
40	22	2	10	2	Blank	Blank		ID8K024040			1	☐		---
41	23	2	11	2	QC	CCV4		ID8K024041			1	☒	CCV	None
42	24	2	12	2	QC	CCB4		ID8K024042			1	☒	3XIDL	None
43	21	2	9	2	Unk	K205-02	DISSOLVED	ID8K024043			1	☒	unk	---
44	25	2	1	3	Unk	K205-03	DISSOLVED	ID8K024044			1	☒	unk	---
45	26	2	2	3	Unk	K205-04	DISSOLVED	ID8K024045			1	☒	unk	---
46	27	2	3	3	Unk	K205-05	DISSOLVED	ID8K024046			1	☒	unk	---
47	28	2	4	3	Unk	K184-01	DISSOLVED	ID8K024047			1	☒	unk	---
48	29	2	5	3	Unk	K184-02	DISSOLVED	ID8K024048			1	☒	unk	---
49	30	2	6	3	Unk	K184-03	DISSOLVED	ID8K024049			1	☒	unk	---
50	31	2	7	3	Unk	K184-04	DISSOLVED	ID8K024050			1	☒	unk	---
51	32	2	8	3	Unk	K184-05	DISSOLVED	ID8K024051			1	☒	unk	---
52	34	2	10	3	Blank	Blank		ID8K024052			1	☐		---
53	35	2	11	3	QC	CCV5		ID8K024053			1	☒	CCV	None
54	36	2	12	3	QC	CCB5		ID8K024054			1	☒	3XIDL	None
55	33	2	9	3	Unk	K174-01	DISSOLVED	ID8K024055			1	☒	unk	---
56	37	2	1	4	Unk	K174-07	DISSOLVED	ID8K024056			1	☒	unk	---
57	38	2	2	4	Unk	K188-03	DISSOLVED	ID8K024057			1	☒	unk	---
58	39	2	3	4	Blank	Blank		ID8K024058			1	☐		---
59	40	2	4	4	QC	CCV6		ID8K024059			1	☒	CCV	None
60	41	2	5	4	QC	CCB6		ID8K024060			1	☒	3XIDL	None
61	63	3	3	1	Unk	K542-06A	TCLP 5X As, Se	ID8K024061			1	☒	unk	---
62	64	3	4	1	Unk	K542-06T	TCLP 5X As, Se	ID8K024062			1	☒	unk	---
63	65	3	5	1	Unk	K542-06J	TCLP 25X As, Se	ID8K024063			1	☒	unk	---
64	66	3	6	1	Unk	K542-06M	TCLP 5X As, Se	ID8K024064			1	☒	unk	---
65	67	3	7	1	Unk	K542-06S	TCLP 5X As, Se	ID8K024065			1	☒	unk	---
66	68	3	8	1	Blank	Blank		ID8K024066			1	☐		---
67	69	3	9	1	QC	CCV7		ID8K024067			1	☒	CCV	None
68	70	3	10	1	QC	CCB7		ID8K024068			1	☒	3XIDL	None
69	71	3	11	1	Unk	K205-01A	DISSOLVED 5X	ID8K024069			1	☒	unk	---
70	72	3	12	1	Unk	K205-01T	DISSOLVED 5X	ID8K024070			1	☒	unk	---
71	73	3	1	2	Unk	K205-01J	DISSOLVED 25X	ID8K024071			1	☒	unk	---
72	74	3	2	2	Unk	K205-01M	DISSOLVED 5X	ID8K024072			1	☒	unk	---
73	75	3	3	2	Unk	K205-01S	DISSOLVED 5X	ID8K024073			1	☒	unk	---
74	76	3	4	2	Blank	Blank		ID8K024074			1	☐		---
75	77	3	5	2	QC	CCV8		ID8K024075			1	☒	CCV	None
76	78	3	6	2	QC	CCB8		ID8K024076			1	☒	3XIDL	None
77	42	2	6	4	Unk	K198-05A		ID8K024077			1	☒	unk	---
78	43	2	7	4	Unk	K198-05		ID8K024078			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
79	44	2	8	4	Unk	K198-05J		ID8K024079			1	☒	unk	---
80	45	2	9	4	Unk	K198-05M		ID8K024080			1	☒	unk	---
81	46	2	10	4	Unk	K198-05S		ID8K024081			1	☒	unk	---
82	47	2	11	4	Unk	K198-03		ID8K024082			1	☒	unk	---
83	51	2	3	5	Unk	K198-04		ID8K024083			1	☒	unk	---
84	48	2	12	4	Blank	Blank		ID8K024084			1	☐		---
85	49	2	1	5	QC	CCV9		ID8K024085			1	☒	CCV	None
86	50	2	2	5	QC	CCB9		ID8K024086			1	☒	3XIDL	None
87	52	2	4	5	Unk	K207-01		ID8K024087			1	☒	unk	---
88	53	2	5	5	Unk	K207-02		ID8K024088			1	☒	unk	---
89	54	2	6	5	Blank	Blank		ID8K024089			1	☐		---
90	55	2	7	5	QC	CCV10		ID8K024090			1	☒	CCV	None
91	56	2	8	5	QC	CCB10		ID8K024091			1	☒	3XIDL	None
92	79	3	7	2	Unk	K119-01A		ID8K024092			1	☒	unk	---
93	80	3	8	2	Unk	K119-01W		ID8K024093			1	☒	unk	---
94	81	3	9	2	Unk	K119-01J		ID8K024094			1	☒	unk	---
95	82	3	10	2	Unk	K133-01A	5X	ID8K024095			1	☒	unk	---
96	83	3	11	2	Unk	K133-01T	5X	ID8K024096			1	☒	unk	---
97	84	3	12	2	Unk	K133-01J	25X	ID8K024097			1	☒	unk	---
98	85	3	1	3	Blank	Blank		ID8K024098			1	☐		---
99	86	3	2	3	QC	CCV11		ID8K024099			1	☒	CCV	None
100	87	3	3	3	QC	CCB11		ID8K024100			1	☒	3XIDL	None
101	97	3	1	4	QC	IPK045WB		ID8K024101			1	☒	1/2LOQ	None
102	98	3	2	4	QC	IPK045WL		ID8K024102			1	☒	LCS	None
103	99	3	3	4	QC	IPK045WC		ID8K024103			1	☒	LCS	None
104	100	3	4	4	QC	TXK010SB	TCLP	ID8K024104			1	☒	1/2LOQ	None
105	101	3	5	4	Unk	K216-01A	TCLP	ID8K024105			1	☒	unk	---
106	102	3	6	4	Unk	K216-01	TCLP	ID8K024106			1	☒	unk	---
107	103	3	7	4	Unk	K216-01J	TCLP	ID8K024107			1	☒	unk	---
108	104	3	8	4	Unk	K216-01M	TCLP	ID8K024108			1	☒	unk	---
109	105	3	9	4	Unk	K216-01S	TCLP	ID8K024109			1	☒	unk	---
110	106	3	10	4	Blank	Blank		ID8K024110			1	☐		---
111	107	3	11	4	QC	CCV12		ID8K024111			1	☒	CCV	None
112	108	3	12	4	QC	CCB12		ID8K024112			1	☒	ICSAB10%	None
113	109	3	1	5	Unk	K216-02	TCLP	ID8K024113			1	☒	unk	---
114	110	3	2	5	Blank	Blank		ID8K024114			1	☐		---
115	111	3	3	5	QC	CCV13		ID8K024115			1	☒	CCV	None
116	112	3	4	5	QC	CCB13		ID8K024116			1	☒	3XIDL	None
117	88	3	4	3	Unk	K542-06A	TCLP 10X	ID8K024117			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
118	89	3	5	3	Unk	K542-06A	TCLP 10X DLB SPIKE	ID8K024118			1	☒	unk	---
119	90	3	6	3	Unk	K542-06I	TCLP 10X	ID8K024119			1	☒	unk	---
120	91	3	7	3	Unk	K542-06J	TCLP 50X	ID8K024120			1	☒	unk	---
121	92	3	8	3	Unk	K542-06M	TCLP 10X	ID8K024121			1	☒	unk	---
122	93	3	9	3	Unk	K542-06S	TCLP 10X	ID8K024122			1	☒	unk	---
123	94	3	10	3	Blank	Blank		ID8K024123			1	☐		---
124	95	3	11	3	QC	CCV14		ID8K024124			1	☒	CCV	None
125	96	3	12	3	QC	CCB14		ID8K024125			1	☒	3XIDL	None
126	113	3	5	5	Unk	K133-01A	10X	ID8K024126			1	☒	unk	---
127	114	3	6	5	Unk	K133-01I	10X	ID8K024127			1	☒	unk	---
128	115	3	7	5	Unk	K133-01J	50X	ID8K024128			1	☒	unk	---
129	116	3	8	5	Blank	Blank		ID8K024129			1	☐		---
130	117	3	9	5	QC	CCV15		ID8K024130			1	☒	CCV	None
131	118	3	10	5	QC	CCB15		ID8K024131			1	☒	3XIDL	None
132	119	3	11	5	QC	IPK046WB		ID8K024132			1	☒	1/2LOQ	None
133	120	3	12	5	QC	IPK046WL		ID8K024133			1	☒	LCS	None
134	121	4	1	1	QC	IPK046WC		ID8K024134			1	☒	LCS	None
135	122	4	2	1	Unk	K229-01A		ID8K024135			1	☒	unk	---
136	123	4	3	1	Unk	K229-01		ID8K024136			1	☒	unk	---
137	124	4	4	1	Unk	K229-01J		ID8K024137			1	☒	unk	---
138	125	4	5	1	Unk	K229-01M		ID8K024138			1	☒	unk	---
139	126	4	6	1	Unk	K229-01S		ID8K024139			1	☒	unk	---
140	127	4	7	1	Unk	K229-03		ID8K024140			1	☒	unk	---
141	128	4	8	1	Blank	Blank		ID8K024141			1	☐		---
142	129	4	9	1	QC	CCV16		ID8K024142			1	☒	CCV	None
143	130	4	10	1	QC	CCV16		ID8K024143			1	☒	3XIDL	None
144	131	4	11	1	Unk	K133-01A	DLB SPIKE 10X	ID8K024144			1	☒	unk	---
145	132	4	12	1	Unk	K542-06A	DLB SPIKE 15X	ID8K024145			1	☒	unk	---
146	133	4	1	2	Unk	K542-06A	DLB SPIKE 15X	ID8K024146			1	☒	unk	---
147	134	4	2	2	Unk	K542-06G	DLB SPIKE 15X	ID8K024147			1	☒	unk	---
148	135	4	3	2	Unk	K542-06J	DLB SPIKE 75X	ID8K024148			1	☒	unk	---
149	136	4	4	2	Blank	Blank		ID8K024149			1	☐		---
150	137	4	5	2	QC	CCV17		ID8K024150			1	☒	CCV	None
151	138	4	6	2	QC	CCB17		ID8K024151			1	☒	3XIDL	None

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ID8K024 Section 1 of 3

INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID
1	Blank	.00105	.00002	-.00001	.00024	.00006	.00115	-.00003	.00047	-.00005	-.00096	Blank
2	S20					1.0166		.11539				S20
3	S21					10.153		1.1227				S21
4	S22				.64337						.15950	S22
5	S23				6.2663						1.5919	S23
6	S24						.09586					S24
7	S25						97435					S25
8	S26	.21923							.84092	.12859		S26
9	S27	8.3400							8.1196	1.2915		S27
10	S28		.00506									S28
11	S29		.04825									S29
12	S30			.00117								S30
13	S31			.00465								S31
14	ICV	101.11	1.4606	1.0350	1.9554	1.4730	2.4463	1.9564	74.558	2.4364	.96260	ICV
15	ICB	.01030	.00137	-.00166	.00010	.00006	.00365	-.00004	-.00832	.00028	-.00012	ICB
16	MRLK3001	.22242	.09755	.00967	.01051	.01012	.09679	.01048	1.0627	.01061	.00980	MRLK3001
17	MRLK3002	.20880	.04897	.00892	.00510	.00399	.09602	.00505	.51752	.01023	.00982	MRLK3002
18	ICSA1	386.44	-.00024	.00061	.00076	.00012	-.05761	.00417	468.03	.00080	-.00072	ICSA1
19	ICAB1	385.60	1.0121	1.0477	.49481	.48550	.43975	.92718	464.59	.46518	.47288	ICAB1
20	CCV1	-485.36*	-7.1775*	-4.8883*	1.9480	1.4255	******	-9.3906*	73.987	******	.95431	CCV1
21	CCB1	.01286	.00158	.00071	.00030	.00009	.00382	.00002	.01828	.00023	.00006	CCB1
22	K542-08	1116.4*	.01513	-.00114	5.2964	.00357	.17031	2.3497	6.7751	1.9376	.04593	K542-08
23	Blank	.06889	.00080	-.00023	.00055	.00002	.00081	.00001	.02300	.00015	-.00011	Blank
24	CCV2	100.85	1.5019	1.0387	1.9582	1.4294	2.4526	1.9708	73.783	2.4204	.95706	CCV2
25	CCB2	.01270	.00153	-.00055	.00025	.00010	.00430	-.00001	.01383	.00030	-.00015	CCB2
26	K542-08W	1103.4*	.01474	.00195	5.2273	.00349	.15766	2.3244	6.6688	1.8877	.04580	K542-08W
27	K550-08	.12606	.00123	00130	.13140	.00002	.57233	.00627	14.571	.00234	.00149	K550-08
28	Blank	.01616	.00082	-.00157	.00027	.00002	.00134	-.00005	.04553	.00011	.00000	Blank
29	CCV3	103.04	1.4927	1.0640	1.9707	1.4900	2.5109	2.0349	75.617	2.5010	.97399	CCV3
30	CCB3	.01560	.00067	-.00012	.00023	.00012	.00384	-.00003	.15910*	.00023	.00010	CCB3
31	IPK041WB	.01555	.00108	-.00067	.00014	.00004	-.00030	-.00005	.00790	.00016	-.00005	IPK041WB
32	IPK041WL	5.2776	2.5418	.53727	.49366	49255	.51914	51760	49.578	.51290	49521	IPK041WL
33	IPK041WC	5.3174	2.5536	.53872	.49938	.49741	.52234	.52149	49.804	51633	.49774	IPK041WC
34	K205-01A	6.3572	2.8141	.63541	.62214	.51260	.83556	.52540	778.91	.53036	.53402	K205-01A
35	K205-01	.03677	-.00052	.00086	07951	.00001	.28440	-.00039	757.45	.00070	-.00091	K205-01
36	K205-01J	.02432	.00004	-.00023	01647	.00006	.05616	-.00012	172.54	.00043	-.00025	K205-01J
37	K205-01M	6.0830	2.8253	60080	.59821	.48938	.84196	.49605	800.25	.49784	50241	K205-01M
38	K205-01S	5.9648	2.7602	.59208	58649	.47972	.82762	.48815	788.37	.48931	.49426	K205-01S
39	K203-15	101.46	.00008	06428	1.3401	.00739	-.03370*	.04256	18.627	.25465	11325	K203-15
40	Blank	.01360	.00118	-.00091	00034	.00004	-.00126	-.00010	.04352	.00019	-.00008	Blank
41	CCV4	101.07	1.5097	1.0578	1.9310	1.4263	2.4778	2.0240	74.014	2.4649	.95569	CCV4
42	CCB4	.01381	.00156	-.00020	.00021	.00011	.00108	-.00004	.02310	.00015	-.00017	CCB4
43	K205-02	.04279	.00085	.00099	.06142	.00011	.04746	.00021	247.79	.00123	.00021	K205-02
44	K205-03	.04370	.00040	.18982	.00510	.00001	.60879	-.00034	508.29	.00102	.00051	K205-03
45	K205-04	.01545	.00078	.00088	.00028	.00001	.02799	-.00013	.17729	.00017	-.00006	K205-04
46	K205-05	.01952	.00096	00056	.00043	.00007	.02755	-.00009	.17870	.00024	.00002	K205-05
47	K184-01	.03188	-.00051	-.00139	.15421	.00001	.20747	-.00032	553.67	.00049	-.00098	K184-01
48	K184-02	.03642	-.00077	00494	13771	.00003	.61373	-.00033	582.70	.00055	-.00088	K184-02
49	K184-03	.03070	-.00016	-.00043	.44459	.00003	.18199	.00007	529.19	.00043	-.00085	K184-03
50	K184-04	.03793	-.00018	.00660	37312	.00002	.47127	.00026	593.50	.00052	-.00099	K184-04
51	K184-05	.04945	-.00075	.02468	.02779	.00006	.51374	-.00026	850.90	.00050	.00052	K1B4-05
52	Blank	.01093	.00107	-.00084	.00032	.00004	-.00349	-.00010	.08347	.00000	.00005	Blank

53	CCV5	101.29	1.4736	1.0483	1.9386	1.4187	2.4991	2.0099	73.045	2.5150	.96208	CCV5
54	CCB5	.01453	.00095	-.00078	.00028	.00009	-.00045	.00001	.01978	.00011	.00002	CCB5
55	K174-01	.03716	-.00005	.00453	.23367	.00003	.42269	-.00035	633.52	.00057	-.00114	K174-01
56	K174-07	.03797	-.00088	.00326	.23212	.00003	.41631	-.00030	628.19	.00058	-.00105	K174-07
57	K188-03	.07485	-.00050	-.00116	.25625	.00009	.39302	.00100	451.69	.00131	.00038	K188-03
58	Blank	.00909	.00058	-.00007	.00022	.00005	-.00329	-.00009	.05915	.00013	.00005	Blank
59	CCV6	101.87	1.4748	1.0347	1.9602	1.4452	2.4699	1.9877	73.611	2.4831	.95755	CCV6
60	CCB6	.01544	.00140	-.00030	.00031	.00012	-.00012	.00001	.01667	00027	.00000	CCB6
61	K542-06A	5.1195	2.4240	.65606	.52819	.53403	.51627	.58872	52.419	.56105	56480	K542-06A
62	K542-06T	.08132	.00461	.00584	.00249	.00022	.02463	.04551	3.1258	.00053	.00263	K542-06T
63	K542-06J	.03482	.00337	.00041	.00068	.00006	-.00019	.00884	.61825	.00021	.00054	K542-06J
64	K542-06M	1.1328	.51145	.13882	.11095	.10897	.13166	.16132	13.849	.11623	.11775	K542-06M
65	K542-06S	1.2473	.57110	.15674	.12514	.12252	.14977	.18216	15.512	.12982	.13253	K542-06S
66	Blank	.01448	.00402	-.00002	.00014	.00007	-.00588	-.00007	.17860	.00011	-.00005	Blank
67	CCV7	104.35	1.4551	1.0659	1.9864	1.5018	2.5313	2.0745	74.252	2.5752	.97286	CCV7
68	CCB7	.02177	.00175	-.00056	.00030	.00015	-.00143	.00011	.18805*	.00019	.00006	CCB7
69	K205-01A	5.8875	2.5121	.60473	.54788	.52721	.57722	.56547	214.89	.55915	.52973	K205-01A
70	K205-01T	.04674	.00041	.00091	.01617	.00010	.05144	-.00007	167.65	.00054	-.00029	K205-01T
71	K205-01J	.04198	.00162	.00032	.00350	.00010	.00487	.00003	32.818	.00050	.00002	K205-01J
72	K205-01M	1.1911	.54114	.11909	.12143	.10385	.16465	.11345	179.40	.11131	.10396	K205-01M
73	K205-01S	1.1887	.53309	.11798	.12165	.10405	.16385	.11330	180.14	.11063	.10307	K205-01S
74	Blank	.04258	00216	-.00163	.00054	.00008	-.00516	.00002	.08201	.00013	-.00008	Blank
75	CCV8	102.77	1.4537	1.0783	1.9484	1.4773	2.5231	2.1222	73.424	2.5758	.96247	CCV8
76	CCB8	.05007*	.00197	-.00121	.00065	.00021*	-.00078	.00012	.07199*	.00038	.00005	CCB8
77	K198-05A	5.7949	2.6171	.61702	.61712	.53697	.60536	.59379	112.20	.61129	.52978	K198-05A
78	K198-05	.04103	.00191	.00332	.08218	.00008	.06490	-.00004	62.844	.04082	-.00047	K198-05
79	K198-05J	.02923	.00178	.00149	.01747	.00008	.00921	-.00005	13.407	.00893	-.00008	K198-05J
80	K198-05M	5.3766	2.5512	.56585	.57650	.49302	.59550	.53913	109.92	.56680	.49192	K198-05M
81	K198-05S	5.4509	2.5810	.56911	.58069	.49786	.59999	54506	110.12	.56908	.49616	K198-05S
82	K198-03	.03481	.00183	.00314	.07397	.00016	.05267	.00011	57.971	.01771	-.00018	K198-03
83	K198-04	.04652	.00143	.00540	.10634	.00008	.05216	-.00004	58.567	.00951	- 00032	K198-04
84	Blank	.01885	.00153	.00004	.00026	.00007	-.00515	-.00011	.03481	.00004	-.00010	Blank
85	CCV9	102.51	1.4788	1.0726	1.9608	1.4479	2 5291	2 1070	73.507	2.5811	.96155	CCV9
86	CCB9	.02385	.00208	-.00110	.00033	.00011	-.00147	-.00001	.01636	.00020	00001	CCB9
87	K207-01	.03339	.00152	.00404	.08925	.00003	.05370	-.00007	61 873	.01233	- 00038	K207-01
88	K207-02	.03490	00144	.00426	.08209	.00009	.05056	-.00007	57.684	.00954	-.00031	K207-02
89	Blank	.02080	.00065	-.00092	.00047	.00007	-.00527	- 00014	.04159	.00020	.00009	Blank
90	CCV10	102.43	1 4854	1.0696	1.9667	1.4453	2 5107	2 1000	73.340	2.5597	.96048	CCV10
91	CCB10	.02275	.00119	-.00118	.00031	.00013	- 00105	- 00003	.04653*	.00019	.00007	CCB10
92	K119-01A	5 6573	2.5460	59200	.54478	.53666	.54217	.58923	65.309	.56998	.52388	K119-01A
93	K119-01W	.02481	.00188	.00021	.00979	.00011	.01361	- 00005	15.942	.00031	-.00010	K119-01W
94	K119-01J	.01811	.00115	-.00111	.00206	.00005	-.00228	-.00003	3.1267	00013	.00012	K119-01J
95	K133-01A	6.0832	2.7701	.65646	.55442	.51490	.78057	.58754	342.92	.57123	.53455	K133-01A
96	K133-01T	.03995	.00228	-.00300	.02475	.00012	.21633	-.00029	299.76	.00049	-.00055	K133-01T
97	K133-01J	.02696	.00128	.00066	.00473	.00008	.03456	-.00010	59.073	00043	.00003	K133-01J
98	Blank	02461	.00201	-.00059	.00034	.00013	-.00557	-.00005	.07097	.00002	-.00003	Blank
99	CCV11	102.65	1.5045	1.0793	1.9494	1.4342	2.5310	2.1376	73.094	2.5743	.95641	CCV11
100	CCB11	.03080	.00249	-.00191	.00052	.00023*	-.00132	.00013	.38319*	.00029	.00019	CCB11
101	IPK045WB	.03198	.00209	-.00075	.00018	.00013	-.00394	-.00010	.00174	.00019	-.00004	IPK045WB
102	IPK045WL	5.3460	2.4996	.55066	.50620	.51082	.51156	.55699	49.835	.54339	.50436	IPK045WL
103	IPK045WC	5.2895	2.5345	.55864	.49710	50073	.51957	.56251	49.773	.54748	.50614	IPK045WC
104	TXK010SB	.07021	.00273	-.00321	.00170	.00014	07183*	-.00011	.03517	.00041	.00010	TXK010SB
105	K216-01A	5.6791	2.5844	.64432	1.0918	.52329	.70766	.59476	54.352	.57618	.53816	K216-01A
106	K216-01	.08423	.00360	.02499	.58683	.00014	18034	.00009	5.1278	.00008	.00216	K216-01
107	K216-01J	.03425	.00160	.00521	.12195	.00013	.03189	-.00002	1.0837	.00022	.00039	K216-01J

108	K216-01M	5.5714	2.6140	.61790	1.2652	.51300	.80121	.56847	54.891	.54772	.51581	K216-01M
109	K216-01S	5.6230	2.6344	.61973	1.2509	.52011	.79692	.57542	55.042	.55075	.51739	K216-01S
110	Blank	.02020	.00266	-.00087	.00049	.00011	-.00425	-.00009	.01426	.00014	-.00003	Blank
111	CCV12	103.41	1.4923	1.0841	1.9609	1.4557	2.5452	2.1583	73.703	2.6165	.95519	CCV12
112	CCB12	.03140	.00234	-.00045	.00034	.00017	-.00203	.00002	.04061*	.00014	.00014	CCB12
113	K216-02	.17734	.01120	.01232	.31831	.00195	.15165	.00216	4.5559	.00245	.00175	K216-02
114	Blank	.02037	.00138	-.00032	.00038	.00013	-.00576	-.00006	.01325	.00012	.00003	Blank
115	CCV13	101.85	1.4951	1.0854	1.9447	1.4293	2.5560	2.1458	73.297	2.6076	.95894	CCV13
116	CCB13	.02656	.00246	-.00092	.00034	.00022*	-.00183	.00000	.02600	.00022	.00015	CCB13
117	K542-06A	5.3369	2.4780	.63303	.53279	.53384	.51101	.60107	50.191	.56765	.54563	K542-06A
118	K542-06A	10.628	4.8497	1.2526	1.0596	1.0617	.99086	1.1547	49.498	1.1189	1.0847	K542-06A
119	K542-06I	.06167	.00710	.00316	.00111	.00014	.00985	.02352	1.4651	.00039	.00118	K542-06I
120	K542-06J	.02432	.00411	.00195	.00048	.00016	-.00263	.00457	.30811	.00013	.00029	K542-06J
121	K542-06M	.52670	.24281	.06175	.05239	.05168	.05832	.07975	6.4892	.05510	.05294	K542-06M
122	K542-06S	.52972	.24673	.06223	.05212	.05154	.06005	.08184	6.6218	.05605	.05390	K542-06S
123	Blank	.02049	.00279	.00126	.00036	.00007	-.00697	-.00003	.02403	.00003	.00007	Blank
124	CCV14	101.70	1.4873	1.0822	1.9388	1.4273	2.5407	2.1326	73.128	2.6164	.95771	CCV14
125	CCB14	.02584	.00164	.00008	.00043	.00016	-.00245	-.00002	.03013	.00017	.00005	CCB14
126	K133-01A	5.8627	2.6865	.63462	.54314	.52239	.65501	.59158	195.96	.57060	.53080	K133-01A
127	K133-01I	.04072	.00148	-.00101	.01222	.00017	.09970	-.00014	150.28	.00059	-.00028	K133-01I
128	K133-01J	.03044	.00132	-.00022	.00270	.00018	.01392	-.00002	30.054	.00047	-.00005	K133-01J
129	Blank	.01664	.00186	-.00154	.00012	.00010	-.00657	-.00008	.01959	.00007	.00005	Blank
130	CCV15	102.86	1.4915	1.0662	1.9796	1.4476	2.5165	2.0918	73.009	2.5491	.95832	CCV15
131	CCB15	.01959	.00217	.00037	.00029	.00017	-.00229	.00002	.02431	.00024	.00000	CCB15
132	IPK046WB	.02210	.00167	.00083	.00042	.00020	-.00490	.00001	.01695	.00015	.00006	IPK046WB
133	IPK046WL	5.4484	2.5855	.55690	.51148	.50956	.52800	.55287	49.842	.53042	.50150	IPK046WL
134	IPK046WC	5.4200	2.5621	.55240	.51040	.50884	.52474	.54913	49.388	.52853	.49833	IPK046WC
135	K229-01A	6.0586	2.6222	.60844	.57608	.53572	.53922	.59125	199.27	.56037	.54383	K229-01A
136	K229-01	.14909	.00247	-.00021	.02496	.00026	-.00232	.01697	153.56	.00080	.00728	K229-01
137	K229-01J	.05718	.00138	-.00097	.00555	.00015	-.00529	.00369	32.804	.00041	.00149	K229-01J
138	K229-01M	5.8152	2.6369	.57484	.55082	.51109	.53621	.55960	203.69	.52551	.51292	K229-01M
139	K229-01S	5.8096	2.6319	.57380	.54432	.50795	.53940	.55907	204.28	.52685	.51244	K229-01S
140	K229-03	1.1422	.00207	-.00003	.05114	.00026	-.00268	.00975	99.933	.00244	.00047	K229-03
141	Blank	.01423	.00119	.00041	.00024	.00012	-.00705	-.00004	.02224	.00009	-.00006	Blank
142	CCV16	101.61	1.4877	1.0704	1.9171	1.4089	2.5269	2.0808	72.925	2.5643	.95528	CCV16
143	CCV16	.01985	.00149	.00000	.00023	.00016	-.00325	.00004	.02757	.00030	-.00003	CCV16
144	K133-01A	11.697	5.3091	1.2554	1.0590	1.0263	1.1969	1.1520	193.73	1.1212	1.0589	K133-01A
145	K542-06A	10.805	4.8861	1.2226	1.0536	1.0493	1.0122	1.1494	49.423	1.1248	1.0865	K542-06A
146	K542-06A	5.4604	2.4909	.62217	.53595	.53290	.51403	.59306	49.664	.56970	.54961	K542-06A
147	K542-06G	.02823	.00656	.00263	.00086	.00021	.00297	.01509	.94990	.00031	.00098	K542-06G
148	K542-06J	.02132	.00321	.00064	.00032	.00017	-.00506	.00323	.20830	.00025	.00033	K542-06J
149	Blank	.01853	.00199	-.00025	.00028	.00010	-.00702	-.00002	.01730	.00024	.00000	Blank
150	CCV17	102.15	1.4845	1.0574	1.9896	1.4452	2.5060	2.0597	72.555	2.5250	.95838	CCV17
151	CCB17	.02034	.00156	.00059	.00023	.00015	-.00224	-.00001	.02429	.00028	.00005	CCB17
INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID

ID8K024 Section 1 of 3

ID8K024 Section 2 of 3

INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID
1	Blank	.00101	.00002	.00010	-.00009	.00003	.00004	.00002	-.00044	.00067	.00001	Blank
2	S20			.20630			.09887					S20
3	S21			2.0700			.98360					S21
4	S22	.26664	.04667									S22
5	S23	2.5787	1.8285									S23
6	S24							.77607				S24
7	S25							7.7096				S25
8	S26								.75597	.48454		S26
9	S27								7.5111	5.0274		S27
10	S28					.02254						S28
11	S29					.22282						S29
12	S30				.04032						.00135	S30
13	S31				.19805						.00539	S31
14	1CV	2.6363	25.061	2.3935	.53855	56.439	2.3062	2.4751	2.4534	58.494	1.0258	ICV
15	1CB	.00021	-.00077	-.00027	.00021	-.00080	.00020	.00030	.00000	.15491	-.00210	ICB
16	MRLK3001	.01113	.21605	.00989	.00995	.96260	.01013	.01039	.01020	1.0219	.00811	MRLK3001
17	MRLK3002	.01059	.10312	.00270	.10117	.18269	.00492	.00967	.01030	.99458	.00991	MRLK3002
18	1CSA1	.00137	189.08	.00583	.01641	190.78	.00091	-.00104	.00090	.22864	.00112	ICSA1
19	1CA81	.55266	189.51	.93432	1.1643	188.99	45558	.99970	.95743	77.785	1.0243	ICAB1
20	CCV1	******	******	2.3525	.49912	56.003	2.2722	2.4648	2.4238	59.120	-4.9509*	CCV1
21	CCB1	.00027	.00065	.00010	-.00066	.00059	-.00006	.00038	-.00009	.10517	-.00110	CCB1
22	K542-08	68.681*	393.06	.14822	.00678	11.735	13.317	.01103	.84332	1.8713	.00783	K542-08
23	Blank	.00360	.01684	.00009	- 00038	-.00396	.00070	.00008	-.00004	-.07629	-.00113	Blank
24	CCV2	2.6365	24.846	2.3653	.50262	55.816	2.2804	2.4645	2.4254	59.324	1.0328	CCV2
25	CCB2	.00030	-.00111	-.00001	.00016	-.00338	00019	.00034	.00001	.03259	-.00185	CCB2
26	K542-08W	67.998*	390.81	.14632	.00674	11.505	13.097	.01105	.83574	1.8086	.00767	K542-08W
27	K550-08	.01540	3.6483	.01080	.07935	7.7398	.15119	.04936	.11502	7.8106	-.00055	K550-08
28	Blank	.00062	.00250	-.00006	.00041	-.01077	.00015	.00010	.00013	-.11439	-.00066	Blank
29	CCV3	2.7006	25.443	2.4201	.54613	57.159	2.3424	2.4914	2.4808	59 719	1.0495	CCV3
30	CCB3	.00048	.00130	-.00026	- 00051	.00667	.00037	.00033	.00000	-.03163	- 00103	CCB3
31	IPK041WB	.00034	-.00045	.00008	-.00064	-.01157	.00021	.00002	.00002	-.07904	- 00114	IPK041WB
32	1PK041WL	.55251	5.2144	.48B93	.00131*	46.696	.46722	.51157	.50617	49.207	.52331	1PK041WL
33	IPK041WC	.55514	5.2296	.49177	.00155*	47 050	.47195	.51524	.50948	49.680	.52761	IPK041WC
34	K205-01A	.65047	7.4842	.52595	.05519	203.29	.86425	.53516	.48162	78.371	.62038	K205-01A
35	K205-01	.00225	2.2922	.00348	.05376	158.12	.38590	-.00100	.00215	21.354	.00176	K205-01
36	K205-01J	.00093	.49640	.00088	.01073	33 259	.08351	-.00021	.00032	4.0598	- 00286	K205-01J
37	K205-01M	.60478	7.1969	.49253	.05477	210.01	.85836	.54403	.50977	78.707	.49420	K205-01M
38	K205-01S	.59445	7.1236	.48603	.05532	207.68	.84317	.53350	.50216	77.771	.48579	K205-01S
39	K203-15	.09833	163.34	1 0837	.05257	7.4962	6.4687	.00549	.11749	9.5015	.00087	K203-15
40	Blank	.00012	.00765	.00026	- 00116	-.00353	.00046	.00001	-.00003	-.05344	-.00133	Blank
41	CCV4	2.6647	25.011	2.3563	.49679	56.034	2.2894	2.4372	2.4232	59.436	1.0469	CCV4
42	CCB4	.00027	.00006	.00031	.00012	-.00490	-.00002	.00032	-.00007	.03068	-.00183	CCB4
43	K205-02	.00184	31.476	.00200	.02991	18.545	.72514	-.00006	.00355	9.9782	-.00172	K205-02
44	K205-03	.00197	.21687	.00471	.04446	140.12	3.3029	-.00097	.00520	5.6793	-.00040	K205-03
45	K205-04	.00072	.00108	-.00045	.00010	.05700	.00006	.00004	-.00013	.11391	-.00276	K205-04
46	K205-05	.00064	.00357	.00000	-.00046	.04680	.00019	.00004	-.00014	.07381	-.00176	K205-05
47	K184-01	.00197	1.8839	.00242	.04773	127.41	.43581	.00044	.00026	16.533	-.00172	K184-01
48	K184-02	.00216	2.6246	.00233	.06093	228.48	.55413	.00143	.00070	22.846	-.00057	K184-02
49	K184-03	.00183	24.945	.00326	.05910	123.20	1.3849	-.00073	.00192	20.171	-.00043	K184-03
50	K184-04	.00158	24.022	.00205	.06845	214.89	1.6159	-.00076	.00157	23.428	-.00221	K184-04
51	K184-05	.00199	9.8493	.00261	.07892	267.54	.98652	-.00153	.00204	27.411	-.00036	K184-05
52	Blank	-.00007	-.00269	-.00010	-.00056	.00169	.00006	.00004	-.00026	.19560	.00018	Blank

53	CCV5	2.7551*	24.974	2.3438	.49876	55.132	2.2902	2.4271	2.4336	59 839	1.0361	CCV5
54	CCB5	.00016	-.00109	.00025	-.00008	.00003	.00005	.00026	-.00015	.10156	-.00105	CCB5
55	K174-01	.00142	3.9476	.00236	.06204	199.10	.96310	.00114	-.00006	19.394	-.00165	K174-01
56	K174-07	.00151	3.8980	.00291	.06152	197.72	.95323	.00125	-.00002	19.392	-.00068	K174-07
57	K188-03	.00226	62.554	.00444	.06439	195.43	2.3049	-.00112	.00195	28.831	.00527	K188-03
58	Blank	-.00014	-.00024	.00012	-.00048	.01508	.00002	.00007	-.00019	.13398	-.00288	Blank
59	CCV6	2.6770	24.852	2.3492	.50745	56.882	2.3453	2.4377	2.4241	59.642	1.0221	CCV6
60	CCB6	-.00003	-.00111	-.00005	-.00051	-.00301	.00012	.00032	-.00007	.08447	-.00125	CCB6
61	K542-06A	.62185	6.1279	.51214	.01897	52.494	.55145	.55271	.80292	51.273	.79292	K542-06A
62	K542-06T	.03569	.78437	.00250	.01638	5.6927	.04881	-.00073	.30644	2.0795	.04198	K542-06T
63	K542-06J	.00741	.15219	-.00023	.00267	1.1184	.00944	.00002	.05543	.41807	.00657	K542-06J
64	K542-06M	.15682	1.9354	.10583	.01779	15.633	.15363	.11958	.44279	12.452	.18504	K542-06M
65	K542-06S	.17688	2.1823	.11790	.02154	17.780	.17613	.13465	.51503	14.010	.21683	K542-06S
66	Blank	-.00008	-.00233	-.00002	-.00075	.00608	.00011	.00011	-.00019	-.00798	-.00001	Blank
67	CCV7	2.7751*	25.098	2.3871	.55571*	57.699	2.4143	2.4408	2.4670	59.973	1.0481	CCV7
68	CCB7	.00017	.00175	.00045	-.00062	.00909	.00012	.00030	-.00013	.01316	-.00093	CCB7
69	K205-01A	.62118	5.8987	.51793	.01139	81.262	.59174	.49209	.47913	57.316	.58869	K205-01A
70	K205-01T	.00144	.49298	.00129	.00951	32.384	.08241	-.00013	.00025	3.8637	-.00028	K205-01T
71	K205-01J	.00116	.10136	.00018	.00143	6 3361	.01677	.00007	-.00008	.69200	-.00004	K205-01J
72	K205-01M	.12294	1.5732	.10238	.01079	42.704	.18376	.10687	.10672	15.083	.09664	K205-01M
73	K205-01S	.12011	1.5640	.10245	.01032	43.441	.18697	.10543	.10562	14 994	09647	K205-01S
74	Blank	.00134	.00899	.00059	-.00028	.01823	.00049	.00013	-.00016	.01078	-.00186	Blank
75	CCV8	2.7565*	25.021	2.3756	.54142	56.986	2.3786	2.4017	2.4394	58 814	1.0642	CCV8
76	CCB8	.00104	.01059	.00060	-.00087	.00675	.00028	.00039	-.00022	.03948	-.00197	CCB8
77	K198-05A	.62025	5.5572	.52564	.03177	60.916	.52429	.64956	.47838	52.920	.59945	K198-05A
78	K198-05	.00152	.01217	.00295	.02943	12.277	.00203	.14507	-.00018	1.9625	.00083	K198-05
79	K198-05J	.00049	.00237	.00041	.00556	2.6232	.00042	.02996	-.00019	.39283	-.00126	K198-05J
80	K198-05M	.57263	5.1807	.48577	.03207	58.665	.47637	.64813	.50235	52.144	.55150	K198-05M
81	K198-05S	.57452	5.2256	49222	.03135	59.182	.48193	.65360	.50631	52.481	.55594	K198-05S
82	K198-03	.00165	.01782	.00751	.03559	11.295	.00165	.00477	.00265	2.4370	-.00009	K198-03
83	K198-04	.00256	23809	.00558	.04511	10.473	.00229	.00203	.00009	2.4535	-.00053	K198-04
84	Blank	-.00010	-.00319	.00017	-.00054	-.01219	.00005	.00007	-.00027	-.02034	-.00201	Blank
85	CCV9	2.7692*	25.046	2.3465	.50795	56.814	2.3596	2.4017	2.4280	59 964	1.0653	CCV9
86	CCB9	.00022	-.00226	-.00021	-.00011	.00491	.00019	.00044	-.00015	.02913	-.00040	CCB9
87	K207-01	.00085	.00289	.00263	.03402	11 785	- 00002	.01454	-.00030	2.1869	-.00040	K207-01
88	K207-02	.00102	13712	00160	.03059	11.039	00509	.01370	-.00018	2.0757	.00047	K207-02
89	Blank	.00027	-.00237	.00021	-.00134	- 00549	-.00010	.00008	-.00027	-.05227	00060	Blank
90	CCV10	2.7380	24.896	2.3578	.50776	56.840	2.3620	2.4064	2.4277	59.785	1.0600	CCV10
91	CCB10	.00018	-.00058	-.00001	-.00088	-.00300	.00029	.00026	-.00016	.01809	-.00129	CCB10
92	K119-01A	.59910	5.6207	.52037	.00241	51.458	.54816	49682	.47435	50.575	.57533	K119-01A
93	K119-01W	.00036	.08478	.00012	.00075	2.8199	.02168	.00157	-.00027	.67437	- 00130	K119-01W
94	K119-01J	-.00004	.01361	.00037	-.00041	.54064	.00429	.00034	-.00016	.07935	-.00271	K119-01J
95	K133-01A	.64885	5.4978	.51681	.02378	150 08	1 1349	.51403	.48074	63.294	.64706	K133-01A
96	K133-01T	.00160	03802	.00044	.02264	102.45	.63433	-.00039	-.00017	6.5318	-.00087	K133-01T
97	K133-01J	.00055	.00565	.00007	.00311	19.342	.12297	-.00006	-.00030	1.1179	-.00064	K133-01J
98	Blank	.00026	-.00328	-.00009	-.00110	-.00034	.00007	.00016	-.00014	.02757	-.00108	Blank
99	CCV11	2.7510*	25.080	2.3659	.49983	56.224	2.3397	2.4083	2.4337	59.815	1.0901	CCV11
100	CCB11	.00024	.00009	.00047	-.00149	.01329	.00051	.00049	.00009	.03082	.00060	CCB11
101	1PK045WB	.00060	-.00157	.00009	-.00041	.01220	.00022	.00017	-.00015	-.03017	-.00142	1PK045WB
102	1PK045WL	.56765	5.2272	.49157	.00021*	48 759	.49853	.51120	.51245	49.857	.53240	1PK045WL
103	1PK045WC	.57664	5.2873	.49238	.00087*	47.705	.48513	.51449	.51538	49.796	.54453	1PK045WC
104	TXK010SB	.00153	.01369	.00007	-.00096	.01345	.00039	.00062	-.00014	.19055	.00162	TXK010SB
105	K216-01A	.62432	5.5055	.51676	.00226	49.334	2.1461	.51028	.48819	54.393	.61928	K216-01A
106	K216-01	.00397	.01454	.00020	.00065	2.3359	1.7115	.00004	.00397	.95969	.00228	K216-01
107	K216-01J	.00109	.00306	.00005	-.00021	.49395	.35715	.00012	.00091	.18170	.00015	K216-01J

108	K216-01M	.58663	5.2713	.49657	.00271	50.658	2 2290	.52614	.52695	54.775	.59224	K216-01M
109	K216-01S	.58464	5.3002	.49781	.00171	51.552	2.2109	.52955	.52736	54.669	.59306	K216-01S
110	Blank	.00012	-.00007	-.00017	-.00061	.00709	.00039	.00014	-.00011	.09678	-.00018	Blank
111	CCV12	2.7654*	25.115	2.3478	.50773	57.522	2.3842	2.3942	2.4228	60.089	1.0844	CCV12
112	CCB12	.00023	-.00245	-.00032	-.00102	.00248	.00027	.00043	-.00011	.05047	-.00063	CCB12
113	K216-02	.00912	.07678	.00286	.00002	2.4723	.01539	.00210	.00372	.81717	.00317	K216-02
114	Blank	-.00001	-.00364	.00041	-.00167	.00291	.00019	.00008	-.00024	.00082	-.00162	Blank
115	CCV13	2.8003*	25.207	2.3524	.49888	56.075	2.3385	2.3935	2.4394	60.362	1.0904	CCV13
116	CCB13	.00021	-.00037	.00021	-.00086	.00544	.00025	.00037	-.00010	.04599	-.00118	CCB13
117	K542-06A	.60836	5.7049	.51428	.00959	50.200	.54116	.52210	.62657	50.562	.71963	K542-06A
118	K542-06A	1 1952	10.970	1.0221	.00961	49.516	1.0534	1.0295	1.1069	49.654	1 4040	K542-06A
119	K542-061	.01687	.37642	.00084	.00809	2.9219	.02634	-.00026	.14495	1.0181	.01912	K542-06I
120	K542-06J	.00332	.07118	.00049	.00114	.59568	.00485	-.00003	.02696	.16755	.00384	K542-06J
121	K542-06M	.07136	.89157	.04997	.00785	7.7876	.07555	.05173	.19789	5.7206	.07724	K542-06M
122	K542-06S	.07428	.92294	.05025	.00844	7.8884	.07568	.05272	.20894	5.7816	.07965	K542-06S
123	Blank	-.00018	.00090	-.00020	-.00111	.00230	-.00004	.00000	-.00025	-.06439	.00018	Blank
124	CCV14	2.8072*	25.290	2.3420	.49884	56.005	2.3304	2.3912	2.4365	60.042	1.0860	CCV14
125	CCB14	.00017	-.00022	-.00029	-.00079	.00335	.00010	.00035	-.00014	.00974	-.00058	CCB14
126	K133-01A	.62687	5.4851	.51728	.01228	97.939	.82547	.50798	.47927	57.537	.62249	K133-01A
127	K133-011	.00120	.01917	.00022	.01005	50.443	.31720	-.00007	.00014	3.0198	-.00158	K133-01I
128	K133-01J	.00045	.00627	-.00017	.00114	10.006	.06437	.00007	.00012	.56837	-.00003	K133-01J
129	Blank	-.00008	-.00313	.00011	- 00091	-.01758	-.00008	.00008	-.00022	.00854	-.00156	Blank
130	CCV15	2.7404	24.907	2.3557	.51006	56.667	2.3664	2.4137	2.4365	60.080	1.0734	CCV15
131	CCB15	.00003	.00062	-.00034	-.00030	-.00164	.00003	.00034	-.00019	.03436	-.00050	CCB15
132	IPK046WB	.00046	.00375	.00036	-.00084	-.00019	.00028	.00019	-.00011	-.00094	-.00054	IPK046WB
133	IPK046WL	.56510	5.2169	.49480	00078*	48.637	.49398	.51149	.51151	50.750	.55055	IPK046WL
134	IPK046WC	.56188	5.1931	.49272	.00124*	48.321	.49390	.50818	.50816	50.382	.54376	IPK046WC
135	K229-01A	.61371	5.5524	.54845	.00797	66.276	1.1256	.51348	.49732	52.907	.59826	K229-01A
136	K229-01	.00159	.09244	.01764	.00702	17.649	.60897	-.00021	.01224	1.1378	-.00052	K229-01
137	K229-01J	.00066	.02190	.00389	.00063	3.7712	.13085	.00010	.00271	.22607	-.00099	K229-01J
138	K229-01M	.57378	5.2373	.51809	.00815	67.435	1.1225	.52238	.52777	53.118	.56321	K229-01M
139	K229-01S	.57629	5.2935	.51600	.00808	67.115	1.1048	.52110	52730	53.225	.56079	K229-01S
140	K229-03	.00560	.83351	.07705	.00412	7.6377	.09293	.00027	.00251	1.9681	-.00064	K229-03
141	Blank	- 00004	-.00087	-.00029	.00040	-.01847	.00006	.00016	-.00023	-.04040	-.00060	Blank
142	CCV16	2 7806*	25.164	2.3362	.49335	55.027	2.2849	2.3996	2.4292	60.019	1.0650	CCV16
143	CCV16	.00011	-.00068	.00000	-.00086	.00137	.00017	.00035	-.00020	.04058	-.00102	CCV16
144	K133-01A	1.2555	10.854	1 0344	.01157	95 794	1.3077	1.0108	.95436	57.401	1.2263	K133-01A
145	K542-06A	1.2271	11.045	1.0330	.00601	48 143	1.0316	1.0177	1 0596	50.176	1.3255	K542-06A
146	K542-06A	.61878	5.7028	.52321	.00705	48.717	.53219	.51534	.58207	50.423	.68162	K542-06A
147	K542-06G	.01119	.24194	.00051	.00484	1.8786	.01605	-.00014	.09294	.69742	.01145	K542-06G
148	K542-06J	.00238	.05356	.00001	.00018	.40646	.00355	.00005	.01915	.11689	.00092	K542-06J
149	Blank	-.00010	-.00163	.00012	- 00010	-.00455	.00013	.00013	- 00021	-.02269	-.00056	Blank
150	CCV17	2.7368	24.758	2.3561	.51386	56.510	2.3696	2.4210	2.4333	60.279	1.0606	CCV17
151	CCB17	.00006	-.00067	.00018	-.00067	.00175	.00013	.00025	-.00018	.04771	-.00115	CCB17
INDX	LS1D	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LS1D

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INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID
1	Blank	.00010	.01064	-.00007	-.00002	.00015	.00006	-.00016	.00091	Blank
2	S20									S20
3	S21									S21
4	S22							.12054		S22
5	S23							1.1852		S23
6	S24		1.4536							S24
7	S25		8.3236							S25
8	S26									S26
9	S27									S27
10	S28				.00549					S28
11	S29				.05337					S29
12	S30	.04063		.15175		.02596	.01711		.61063	S30
13	S31	.20104		.73796		.12373	.09051		5.8958	S31
14	ICV	.50541	62.915	.48488	2.2809	.46493	.49633	1.5253	2.5609	ICV
15	ICB	.00011	-.18152*	.00008	.00132	-.00033	-.00007	.00002	-.00041	ICB
16	MRLK3001	.01048	.85537	.01054	.01163	-.00009	.00993	.01066	.02282	MRLK3001
17	MRLK3002	.00992	.32290*	.01009	.01150	.00926	.01034	.01029	.01092	MRLK3002
18	ICSA1	-.00011	-.03086	.00101	-.00232	.00145	.00374	.00069	.00261	ICSA1
19	ICAB1	1.0869	82.991	.47825	.83329	.90834	.98893	.49528	1.0138	ICAB1
20	CCV1	******	63.494	.48211	-10.967*	.49228	.48540	******	2.5429	CCV1
21	CCB1	.00004	-.19933*	.00009	.00078	.00012	.00000	.00029	.00077	CCB1
22	K542-08	.00558	20.822	.11901	-.00714*	.04452	.19312	.05513	85.419*	K542-08
23	Blank	.00002	-.20122	.00016	.00058	-.00028	-.00007	.00013	.00400	Blank
24	CCV2	.51144	63.667	.48352	2.3129	.49186	.48721	1.5109	2.5516	CCV2
25	CCB2	.00006	-.21891*	.00011	.00117	-.00050	.00001	.00021	.00066	CCB2
26	K542-08W	.00568	20.484	.11758	-.00536*	.04507	.18945	.05402	83.743*	K542-08W
27	K550-08	-.00022	63.785	.10887	.00032	-.00028	.00207	.00218	.20254	K550-08
28	Blank	-.00005	-.22790	.00007	.00100	-.00043	.00058	.00002	.00249	Blank
29	CCV3	.52241	64.234	.49233	2.3697	.46405	.50069	1.5484	2.5894	CCV3
30	CCB3	-.00002	-.23289*	.00025	.00144	-.00052	.00059	.00020	.00589	CCB3
31	IPK041WB	-.00002	-.26028	.00006	.00070	-.00029	.00010	.00007	.00152	IPK041WB
32	IPK041WL	.52976	53.543	.49921	.49355	.46929	.50213	.52796	.52468	IPK041WL
33	IPK041WC	.53192	54.064	.50404	.49716	.47103	.50640	.52969	.52806	IPK041WC
34	K205-01A	.62668	949.85*	6.1484	.45969	.47287	.51048	.56736	.58254	K205-01A
35	K205-01	-.00043	918.51*	5.7720	-.00013	-.00067	.00558	.00410	.01295	K205-01
36	K205-01J	-.00010	198.13	1.2009	-.00007	-.00095	.00248	.00089	.00348	K205-01J
37	K205-01M	.62420	963.93*	6.2497	.43580	.47689	.51805	.53264	.54237	K205-01M
38	K205-01S	.61496	948.81*	6.1491	.42856	.46805	.50654	.52566	.53342	K205-01S
39	K203-15	-.00077	.23550	.10462	-.00382	.03480	1.9060	.33787	5.1133	K203-15
40	Blank	-.00008	-.13533	.00014	.00095	-.00037	.00059	.00001	.00132	Blank
41	CCV4	.52124	64.130	.48254	2.3571	.48233	.48311	1.5173	2.5553	CCV4
42	CCB4	-.00004	-.14368*	.00014	.00102	-.00015	.00014	.00020	.00047	CCB4
43	K205-02	-.00024	74.080	1.1629	-.00025	-.00001	.00399	.00467	.02577	K205-02
44	K205-03	-.00048	1086.9*	4.8212	-.00032	-.00036	.01066	.01012	.01436	K205-03
45	K205-04	-.00005	1.4246	.00116	.00055	-.00047	.00008	.00013	.00481	K205-04
46	K205-05	-.00011	1.1846	.00102	.00053	-.00048	-.00018	.00007	.00298	K205-05
47	K184-01	-.00043	717.00*	4.9632	-.00004	-.00117	.00239	-.00048	.00715	K184-01
48	K184-02	-.00052	1600.0*	5.6644	-.00057	-.00024	.00223	-.00065	.00885	K184-02
49	K184-03	-.00041	622.24	5.0573	-.00011	-.00042	.00320	.00028	.00559	K184-03
50	K184-04	-.00031	1370.4*	5.3942	-.00113	-.00077	.00198	-.00027	.01032	K184-04
51	K184-05	-.00046	1672.8*	7.9830	-.00163	-.00107	.00483	.00248	.00589	K184-05
52	Blank	-.00007	.62232	.00054	.00036	-.00019	-.00013	.00004	.00098	Blank

53	CCV5	.52697	64.595	.49222	2.3096	.47237	.47726	1.5147	2.5355	CCV5
54	CCB5	.00000	.06196*	.00010	.00129	-.00054	-.00015	.00015	.00055	CCB5
55	K174-01	-.00064	1278.8*	5.9043	-.00057	-.00030	00210	-.00030	.00195	K174-01
56	K174-07	-.00040	1258.2*	5.8142	-.00012	-.00177	.00243	-.00006	.00450	K174-07
57	K188-03	-.00024	1377.2*	5.8636	-.00440	.00124	.00247	.00016	.01201	K188-03
58	Blank	-.00007	.52903	.00042	.00074	-.00034	.00037	.00008	.00108	Blank
59	CCV6	.51910	64.495	.48543	2.3081	.47823	.49019	1.5070	2.5371	CCV6
60	CCB6	.00007	.06786*	.00006	.00099	-.00057	.00009	.00028	.00046	CCB6
61	K542-06A	.49445	103.15	.53161	.45904	.47388	.50140	.56782	4.4496	K542-06A
62	K542-06T	-.00002	49.452	.04243	-.02697*	.01479	-.00009	.00028	3.8638	K542-06T
63	K542-06J	.00005	9.5785	.00824	-.00360	.00182	.00001	.00012	.67547	K542-06J
64	K542-06M	.10758	64.178	.15485	.07186	.11401	.10731	.11609	4.2520	K542-06M
65	K542-06S	.11999	74.494	.17615	.07504	.12897	.12122	.12983	5.0480	K542-06S
66	Blank	-.00001	-.06548	.00019	.00043	-.00056	.00049	.00005	.00617	Blank
67	CCV7	.53276	64.780	.49967	2.3751	.43998*	.50034	1.5246	2.5557	CCV7
68	CCB7	.00003	-.10589*	.00005	.00114	-.00063	.00044	.00012	.00642*	CCB7
69	K205-01A	.55845	251.26	1.6706	.50659	.43657	.48871	.56000	.56990	K205-01A
70	K205-01T	-.00014	198.56	1.1910	.00083	-.00052	.00234	.00089	.00491	K205-01T
71	K205-01J	-.00006	38.230	.23290	.00043	-.00033	.00094	.00022	.00393	K205-01J
72	K205-01M	.11825	212.16	1.3173	.10220	.09415	.10862	.11185	.11464	K205-01M
73	K205-01S	.11728	213.38	1.3219	.10240	.09260	.10688	.11025	.11375	K205-01S
74	Blank	.00005	-.01418	.00021	.00054	-.00064	.00017	.00005	.00287	Blank
75	CCV8	.53251	63.726	.49396	2.4179	.43391*	.49283	1.5130	2.5480	CCV8
76	CCB8	.00007	-.08061*	.00011	.00061	-.00029	.00037	.00003	.00395	CCB8
77	K198-05A	.55468	103.63	1.2740	.54619	.45017	.50936	.56853	.60628	K198-05A
78	K198-05	-.00005	48 125	78125	.00068	-.00051	.00072	.00681	.04211	K198-05
79	K198-05J	-.00006	9.9403	.16633	.00086	-.00045	.00004	.00147	.00942	K198-05J
80	K198-05M	.55003	102.21	1.2743	.49415	44804	.49814	.53097	.56152	K198-05M
81	K198-05S	.55394	102.06	1.2746	.50057	.45532	.50198	.53354	.57538	K198-05S
82	K198-03	.00000	45.690	.86846	.00059	-.00046	.00174	.00611	.27413	K198-03
83	K198-04	-.00010	48.008	.99870	-.00044	-.00087	.00092	.00757	.36317	K198-04
84	Blank	-.00003	-.12821	.00014	.00031	-.00044	.00044	-.00005	.00129	Blank
85	CCV9	.53836	65.036	49591	2.4063	.45999	.48563	1.5136	2.5484	CCV9
86	CCB9	-.00003	-.14020*	.00009	.00127	-.00048	00005	-.00010	.00039	CCB9
87	K207-01	-.00020	45.493	.86042	- 00034	-.00041	00161	.00625	.01848	K207-01
88	K207-02	.00007	42 911	.81100	.00060	-.00048	.00101	.00500	.04335	K207-02
89	Blank	-.00002	- 13338	.00013	.00094	-.00037	-.00011	-.00002	00136	Blank
90	CCV10	.53237	64 750	.49584	2.4079	46373	48548	1.5041	2.5590	CCV10
91	CCB10	-.00004	-.16791*	.00005	.00129	-.00026	-.00007	-.00002	.00147	CCB10
92	K119-01A	.54209	69 989	.63199	.54815	.45103	50943	.55730	.56356	K119-01A
93	K119-01W	.00004	14.997	.14013	.00059	-.00059	00033	.00005	.00075	K119-01W
94	K119-01J	.00005	2.7860	.02767	.00068	-.00079	.00008	.00013	.00028	K119-01J
95	K133-01A	.61418	860.29*	3.1618	.50130	.44925	.49853	.56716	.58460	K133-01A
96	K133-01T	-.00012	822.87*	2.6833	.00027	.00020	.00214	-.00046	.00162	K133-01T
97	K133-01J	-.00003	162.07	.50507	.00059	-.00051	.00064	-.00016	.00030	K133-01J
98	Blank	.00004	.02486	.00016	.00093	-.00008	.00046	.00005	.00216	Blank
99	CCV11	.53768	64.792	.49313	2 4450	.46629	.47987	1.5088	2.5743	CCV11
100	CCB11	-.00003	-.11092*	.00024	.00059	-.00055	.00046	.00019	.01342*	CCB11
101	IPK045WB	-.00007	-.12858	.00009	.00051	-.00015	.00063	.00013	.00071	IPK045WB
102	IPK045WL	.54727	54.816	.50950	.51368	.44822	.51243	.53200	.53503	IPK045WL
103	IPK045WC	.55301	54 601	.51177	.51625	.45410	.50443	.53692	.53791	IPK045WC
104	TXK010SB	.00005	339.92*	.00157	-.00168	.00014	.00094	.00021	01215*	TXK010SB
105	K216-01A	.55742	392.93	.54832	.51692	.44553	.49780	.56521	.78612	K216-01A
106	K216-01	-.00007	342.41	.05378	-.00095	.00057	.00062	.00009	.21325	K216-01
107	K216-01J	.00014	73.502	.01119	.00037	-.00059	.00026	.00014	.04303	K216-01J

108	K216-01M	.57687	400.17	.56750	.49487	.45693	.51852	.53994	.91541	K216-01M
109	K216-01S	.57868	392.18	.56769	.50158	.45815	.52433	.54113	.90903	K216-01S
110	Blank	-.00005	-.01769	.00002	.00030	-.00057	.00039	.00004	.00056	Blank
111	CCV12	.54164	65.331	.49510	2.4527	.45972	.48622	1.5099	2 5600	CCV12
112	CCB12	.00004	-.12724*	.00012	00065	-.00053	.00047	.00001	.00102	CCB12
113	K216-02	.00208	294.08	.02748	-.00004	.00170	.00273	.00211	.16559	K216-02
114	Blank	-.00002	-.05654	.00014	.00066	-.00048	-.00012	-.00007	.00043	Blank
115	CCV13	.54392	65.353	.49744	2.4285	.45926	.47609	1.5146	2.5681	CCV13
116	CCB13	.00001	-.13796*	.00011	.00099	-.00012	-.00019	.00021	.00051	CCB13
117	K542-06A	.51367	78.339	.51771	.50955	.45068	.50497	.55288	2.3660	K542-06A
118	K542-06A	1.0121	77.507	.99938	1.0120	.88515	.99681	1.0974	2.9473	K542-06A
119	K542-06I	.00006	24.484	.02118	-.01145*	.00569	-.00011	.00017	1.8155	K542-06I
120	K542-06J	.00004	4.6165	.00403	-.00160	.00074	.00041	.00019	.33125	K542-06J
121	K542-06M	.05143	30.059	.07175	.03930	.05049	.05133	.05307	1.8847	K542-06M
122	K542-06S	.05225	31.683	.07373	.03832	.05183	.05131	.05409	2.0091	K542-06S
123	Blank	.00007	-.19068	.00003	-.00025	.00019	.00037	.00006	.00112	Blank
124	CCV14	.54143	65.200	.49667	2.4163	.46002	.47478	1.5183	2.5640	CCV14
125	CCB14	.00000	-.18362*	.00010	.00047	-.00062	.00005	.00007	.00075	CCB14
126	K133-01A	.57872	463.12	1.7947	.51493	.44627	.50283	.56116	.57951	K133-01A
127	K133-01I	-.00011	411.25	1.2953	.00020	-.00061	.00160	-.00021	.00194	K133-01I
128	K133-01J	.00008	83.091	.25868	.00046	-.00052	.00045	.00017	.00143	K133-01J
129	Blank	.00011	-.10087	.00010	.00035	-.00045	.00038	.00006	.00054	Blank
130	CCV15	.53142	64.961	.49221	2.3895	.46663	.48595	1.5027	2.5596	CCV15
131	CCB15	.00003	-.15586*	.00008	.00023	-.00045	-.00012	.00012	.00068	CCB15
132	IPK046WB	.00000	-.16383	.00019	.00060	-.00027	.00029	.00022	.00081	IPK046WB
133	IPK046WL	.54829	55.267	.51117	.51862	.45864	.51836	.52759	.53439	IPK046WL
134	IPK046WC	.54509	54.777	.50923	.51682	.45563	.51584	.52457	.53186	IPK046WC
135	K229-01A	.54776	60.820	.65379	.53517	.46228	.52057	.55992	4.3023	K229-01A
136	K229-01	-.00017	4.5300	.15771	.00078	-.00031	.00612	.00028	3.7634	K229-01
137	K229-01J	-.00003	.76714	.03363	.00070	-.00018	.00177	.00015	.79775	K229-01J
138	K229-01M	.56063	61.390	.67469	.50421	.46727	.52827	.52985	4.3832	K229-01M
139	K229-01S	.56289	61.483	.67046	.50340	.46748	.52490	.53393	4.3546	K229-01S
140	K229-03	-.00012	1.6998	.07513	.00012	-.00049	.04957	.00222	1 4623	K229-03
141	Blank	-.00005	-.22476	.00010	00134	-.00035	-.00030	-.00005	.00042	Blank
142	CCV16	.53564	65.107	.49211	2 3762	.46744	.47262	1.5185	2 5519	CCV16
143	CCV16	.00002	-.20756*	.00007	.00133	-.00034	.00033	.00006	.00089	CCV16
144	K133-01A	1.1393	455.88	2.2621	1 0121	.89638	.98626	1.1208	1.1476	K133-01A
145	K542-06A	1.0332	69.467	.99525	1.0314	.89399	.98755	1.1130	2.2596	K542-06A
146	K542-06A	.52289	70.134	.50753	.51961	.45389	.49966	.56136	1.7291	K542-06A
147	K542-06G	.00003	15.781	.01369	-.00747*	.00330	.00034	.00031	1.1444	K542 06G
148	K542-06J	.00015	3.1391	.00298	-.00025	.00033	.00033	.00021	.23017	K542-06J
149	Blank	.00004	-.22839	.00007	.00058	- 00035	.00009	.00009	.00065	Blank
150	CCV17	.52902	65.186	.49336	2.3668	.46894	.48687	1.4972	2.5505	CCV17
151	CCB17	- 00002	- 20931*	.00015	.00112	-.00047	-.00033	.00004	00097	CCB17
INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID

1D8K024 Section 3 of 3

EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP METALS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

All samples pH <2

Book #: EIP-104
Batch: iPK041W
Matrix: Water
Digestor ID: E

SOP #	Rev. #
☐ EMAX-3005	4
☑ EMAX-3010	5
☐ EMAX-3050	4
☐ EMAX-200.7	2
☐ EMAX-	

Start	Temp	End	Temp
	95 °C		95 °C

Standards	ID	Amount Added (ml)
LCS-1	SMIA-013-04-13	0.25
LCS-2	SMIA-013-03-13	0.25
LCS-3	SMIA-013-04-14	0.5
MS	Same spike vol and sol as LCS1, LCS2, LCS3	
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SWIA-04-407	1.5+1.5
HCl	SWIA-04-408	2.5+2.5
H_2O_2	N/A	
HNO3(1:1)	N/A	

Digestate Location	ICP
Extract Location	

☑ Reagent Water ID: SMSA-02-076
☑ Thermometer ID: 101993366
☑ Pipette ID: ICP-07
☑ Pipette ID: 142780035
☐ Pipette ID:
☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask
☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask

Prepared By: GG
Standard Added By: GG Witnessed By: NT
Extract Rcvd By: TH Checked By: TH

EMAX LABORATORIES, INC.

FileID: IPK041W

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
11IPK041W01	IPK041WB	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W02	IPK041WL	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W03	IPK041WC	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W04	K184-01	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W05	K184-02	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W06	K184-03	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W07	K184-04	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W08	K184-05	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W09	K174-01	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W10	K174-07	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W11	K186-03	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W12	K205-01	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W13	K205-01M	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W14	K205-01S	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W15	K205-02	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W16	K205-03	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W17	K205-04	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W18	K205-05	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W19	K187-01	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W20	K207-01	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W21	K207-02	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W22	K198-03	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W23	K198-04	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W24	K198-05	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W25	K198-05M	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W26	K198-05S	50	ml	11/28/11 11:54	50	50	50	1	

11/28/11 GG

Vd=digestate volume PrepFctr=)ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 11/28/11 11:54 Prepared By: GG

☑ Digestion Ended @ 11/28/11 16:15 Checked By: TH

Comments: Date 11/28/11

7033

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

WET CHEMICAL ANALYSES

SDG#: 11K188

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K188

METHOD 300.0
ANIONS BY IC

One (1) water sample was received on 11/21/11 for Anions (Chloride, Nitrate, Nitrite and Sulfate) by IC analysis, Method 300.0 in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. Results were compliant to project requirement.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for ICK075WL/C were all within QC limits.
Percent recoveries for ICK077WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. Sample K188-03 was initially analyzed at 10x either due to strong odor, turbidity and/or high chloride concentration.

SAMPLE RESULTS

METHOD 300.0
CHLORIDE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K188

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK077WB	ND	1	NA	0.200	0.100	11/21/1120:20	NA	AK31-36	AK31-34	ICK077W	NA	NA
LCS1W	ICK077WL	1.94	1	NA	0.200	0.100	11/21/1120:36	NA	AK31-37	AK31-34	ICK077W	NA	NA
LCD1W	ICK077WC	1.95	1	NA	0.200	0.100	11/21/1120:52	NA	AK31-38	AK31-34	ICK077W	NA	NA
IW-70-SHB310-161	K188-03	3120	200	NA	40.0	20.0	11/22/1105:13	NA	AK31-69	AK31-58	ICK077W	11/21/1113:34	11/21/11

METHOD 300.0
NITRATE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K188

Matrix : WATER
Instrument ID : D0

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK075WB	ND	1	NA	0.200	0.0500	11/21/1111:26	NA	AK31-03	AK31-01	TCK075W	NA	NA
LCS1W	ICK075WL	0.986	1	NA	0.200	0.0500	11/21/1111:42	NA	AK31-04	AK31-01	ICK075W	NA	NA
LCD1W	ICK075WC	0.990	1	NA	0.200	0.0500	11/21/1111:58	NA	AK31-05	AK31-01	ICK075W	NA	NA
IW-70-SHB310-161	K188-03	ND	10	NA	2.00	0.500	11/21/1116:33	NA	AK31-22	AK31-13	ICK075W	11/21/1113:34	11/21/11

METHOD 300.0
NITRITE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K188

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK075WB	ND	1	NA	0.200	0.0500	11/21/1111:26	NA	AK31-03	AK31-01	ICK075W	NA	NA
LCS1W	ICK075WL	2.08	1	NA	0.200	0.0500	11/21/1111:42	NA	AK31-04	AK31-01	ICK075W	NA	NA
LCD1W	ICK075WC	2.08	1	NA	0.200	0.0500	11/21/1111:58	NA	AK31-05	AK31-01	ICK075W	NA	NA
IW-70-SHB310-161	K188-03	ND	10	NA	2.00	0.500	11/21/1116:33	NA	AK31-22	AK31-13	ICK075W	11/21/1113:34	11/21/11

METHOD 300.0
SULFATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K188

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK075WB	ND	1	NA	0.500	0.250	11/21/1111:26	NA	AK31-03	AK31-01	ICK075W	NA	NA
LCS1W	ICK075WL	4.92	1	NA	0.500	0.250	11/21/1111:42	NA	AK31-04	AK31-01	ICK075W	NA	NA
LCD1W	ICK075WC	4.92	1	NA	0.500	0.250	11/21/1111:58	NA	AK31-05	AK31-01	ICK075W	NA	NA
IW-70-SHB310-161	K188-03	4.16J	10	NA	5.00	2.50	11/21/1116:33	NA	AK31-22	AK31-13	ICK075W	11/21/1113:34	11/21/11

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K188
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK077WB	ICK077WL	ICK077WC		
LAB FILE ID:	AK31-36	AK31-37	AK31-38		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/21/1120:20	11/21/112D:36	11/21/1120:52	DATE RECEIVED:	NA
PREP. BATCH:	ICK077W	ICK077W	ICK077W		
CALIB. REF:	AK31-34	AK31-34	AK31-34		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	ND	2.00	1.94	97	2.00	1.95	98	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K188
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK075WB	ICK075WL	ICK075WC		
LAB FILE ID:	AK31-03	AK31-04	AK31-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/21/1111:26	11/21/1111:42	11/21/1111:58	DATE RECEIVED:	NA
PREP. BATCH:	ICK075W	ICK075W	ICK075W		
CALIB. REF:	AK31-01	AK31-01	AK31-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrate-N	ND	1.00	0.986	99	1.00	0.990	99	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K188
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK075WB	ICK075WL	ICK075WC		
LAB FILE ID:	AK31-03	AK31-04	AK31-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/21/1111:26	11/21/1111:42	11/21/1111:58	DATE RECEIVED:	NA
PREP. BATCH:	ICK075W	ICK075W	ICK075W		
CALIB. REF:	AK31-01	AK31-01	AK31-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	2.00	2.08	104	2.00	2.08	104	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K188
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK075WB	ICK075WL	ICK075WC		
LAB FILE ID:	AK31-03	AK31-04	AK31-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/21/1111:26	11/21/1111:42	11/21/1111:58	DATE RECEIVED:	NA
PREP. BATCH:	ICK075W	ICK075W	ICK075W		
CALIB. REF:	AK31-01	AK31-01	AK31-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	4.92	98	5.00	4.92	98	0	90-110	20

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INITIAL CALIBRATIONS

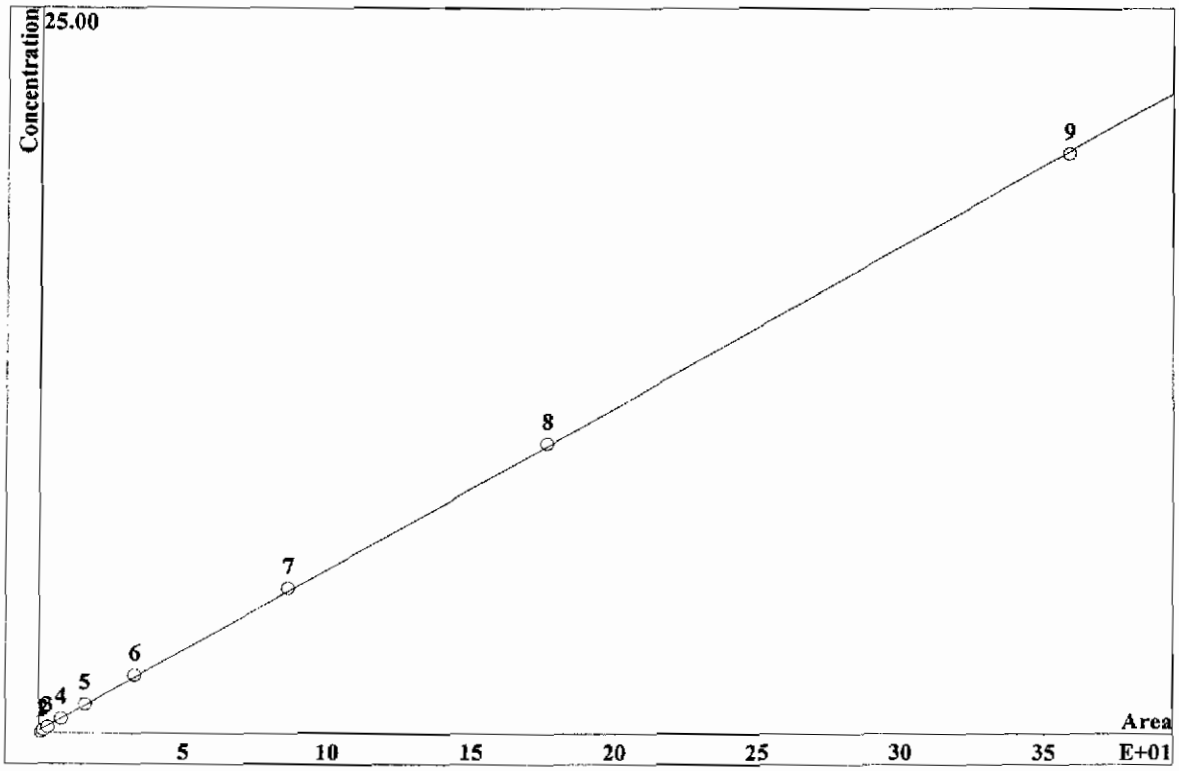
IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	nitrite	fluoride	chloride	bromide	nitrate	phosphate	sulfate	RawNetID	DF
AI39-01	IB	IFCBNPS	0	0	0	0	0	0	0	v9301829	1
AI39-02	S0	IFCBNPS	0	0	0	0	0	0	0	v9301845	1
AI39-03	S1	IFCBNPS	0.0402732	0.0794447	0.137238	0.0962101	0.0900188	0.132659	0.181386	v9301901	1
AI39-04	S2	IFCBNPS	0.0827484	0.120657	0.172987	0.138434	0.127411	0.166211	0.219384	v9301917	1
AI39-05	S3	IFCBNPS	0.175829	0.207372	0.255839	0.223376	0.213499	0.241921	0.298411	v9301934	1
AI39-06	S4	IFCBNPS	0.468611	0.487287	0.510168	0.483675	0.481038	0.46682	0.535669	v9301950	1
AI39-07	S5	IFCBNPS	0.987232	0.975831	0.969747	0.947628	0.958434	0.904972	0.974277	v9302006	1
AI39-08	S6	IFCBNPS	2.03579	2.00618	1.92527	1.92275	1.95393	1.87863	1.87805	v9302022	1
AI39-09	S7	IFCBNPS	5.13141	5.00267	4.89791	5.03793	5.02567	5.05879	4.80122	v9302038	1
AI39-10	S8	IFCBNPS	9.9281	9.57748	9.9004	10.4648	10.1254	10.4079	9.8176	v9302054	1
AI39-11	S9	IFCBNPS	18.5849	17.9543	20.0804	21.615	20.3941	21.1232	20.144	v9302111	1
AI39-12	ICV	IFCBNPS	98.6%	100.1%	97.7%	94.1%	98.6%	92.5%	99.9%	v9302127	1
AI39-13	ICB	IFCBNPS	0	0	0	0	0	0	0	v9302143	1

AJ
10/03/11

CALIBRATION OF COMPONENT chloride

Method: ICD0-I30.mtw
Equation: Q = 0.0557644·A + 0.0866239
RSD: 1.948 %
Correlation coefficient: 0.999932



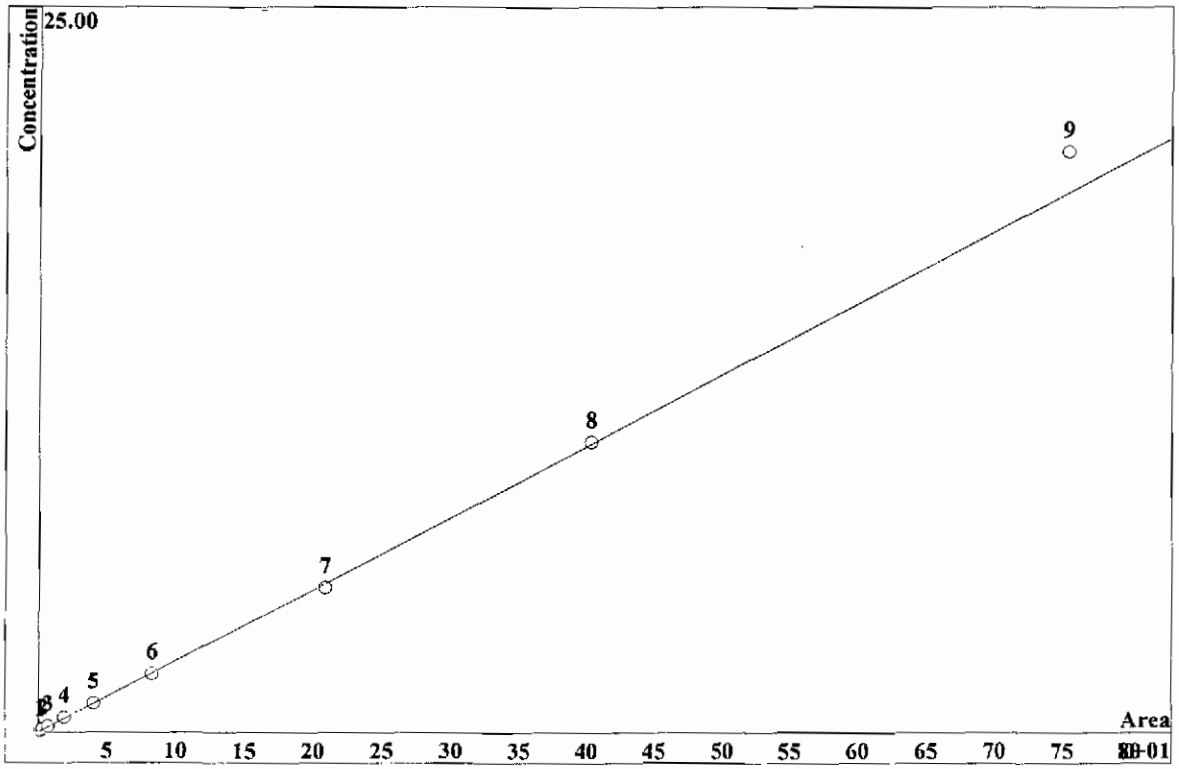
K3 = 0 K2 = 0 K1 = 0.0557644 K0 = 0.0866239
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1035	0.9076	0.05	1	4.26	Yes	v9301901.chw
2	0.1796	1.549	0.1	1	4.26	Yes	v9301917.chw
3	0.354	3.034	0.2	1	4.26	Yes	v9301934.chw
4	0.8921	7.595	0.5	1	4.26	Yes	v9301950.chw
5	1.896	15.84	1	1	4.26	Yes	v9302006.chw
6	3.983	32.97	2	1	4.26	Yes	v9302022.chw
7	10.38	86.28	5	1	4.26	Yes	v9302038.chw
8	21.04	176	10	1	4.26	Yes	v9302054.chw
9	42.24	358.5	20	1	4.26	Yes	v9302111.chw

AA
10/03/11

CALIBRATION OF COMPONENT nitrite

Method: ICD0-I30.mtw ✓ ✓
Equation: Q = 0.024644·A + 0.00179217
RSD: 2.785 %
Correlation coefficient: 0.999850



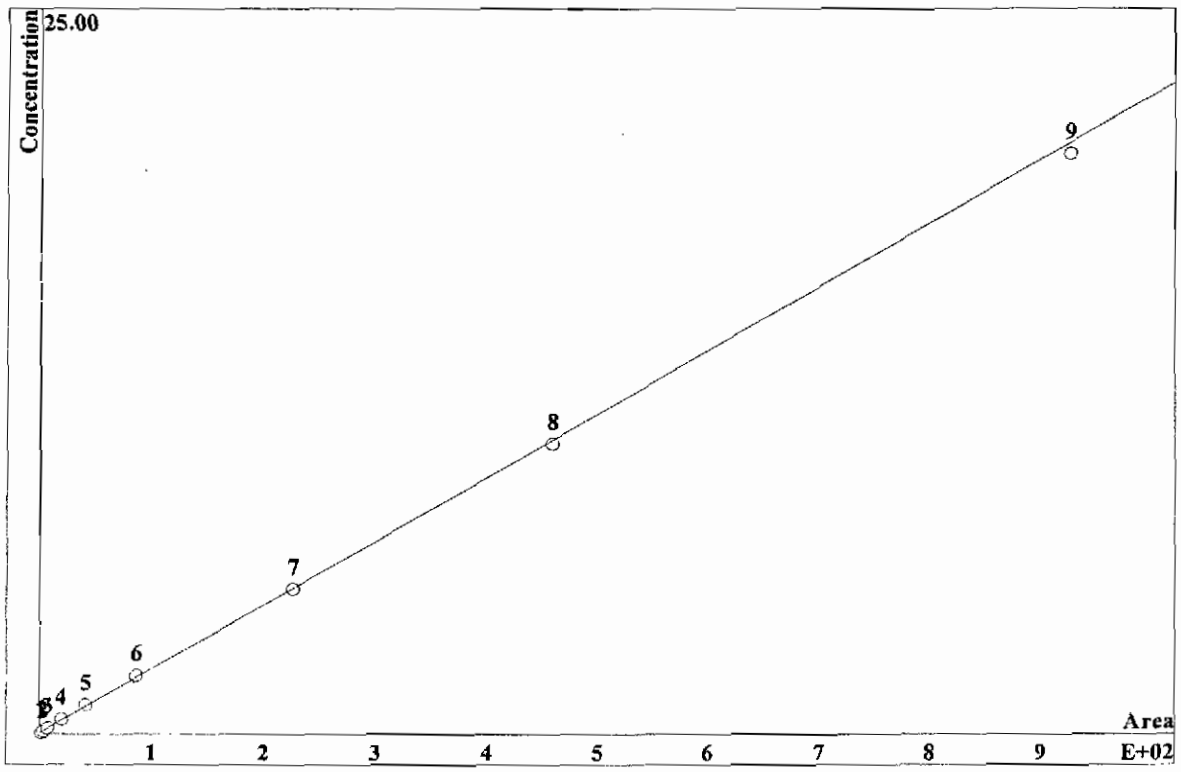
K3 = 0 K2 = 0 K1 = 0.024644 K0 = 0.00179217
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1597	1.561 ✓	0.05	1	4.932	Yes	v9301901.chw
2	0.3368	3.285 ✓	0.1	1	4.932	Yes	v9301917.chw
3	0.7305	7.062 ✓	0.2	1	4.932	Yes	v9301934.chw
4	1.964	18.94 ✓	0.5	1	4.932	Yes	v9301950.chw
5	4.115	39.99 ✓	1	1	4.932	Yes	v9302006.chw
6	8.392	82.54 ✓	2	1	4.932	Yes	v9302022.chw
7	19.91	208.1 ✓	5	1	4.932	Yes	v9302038.chw
8	35.83	402.8 ✓	10	1	4.932	Yes	v9302054.chw
9	61.98	754.1 ✓	20	1	4.932	No	v9302111.chw

RA
10/03/11

CALIBRATION OF COMPONENT nitrate

Method: ICD0-I30.mtw
Equation: Q = 0.0219574·A + 0.0522169
RSD: 3.044 %
Correlation coefficient: 0.999806



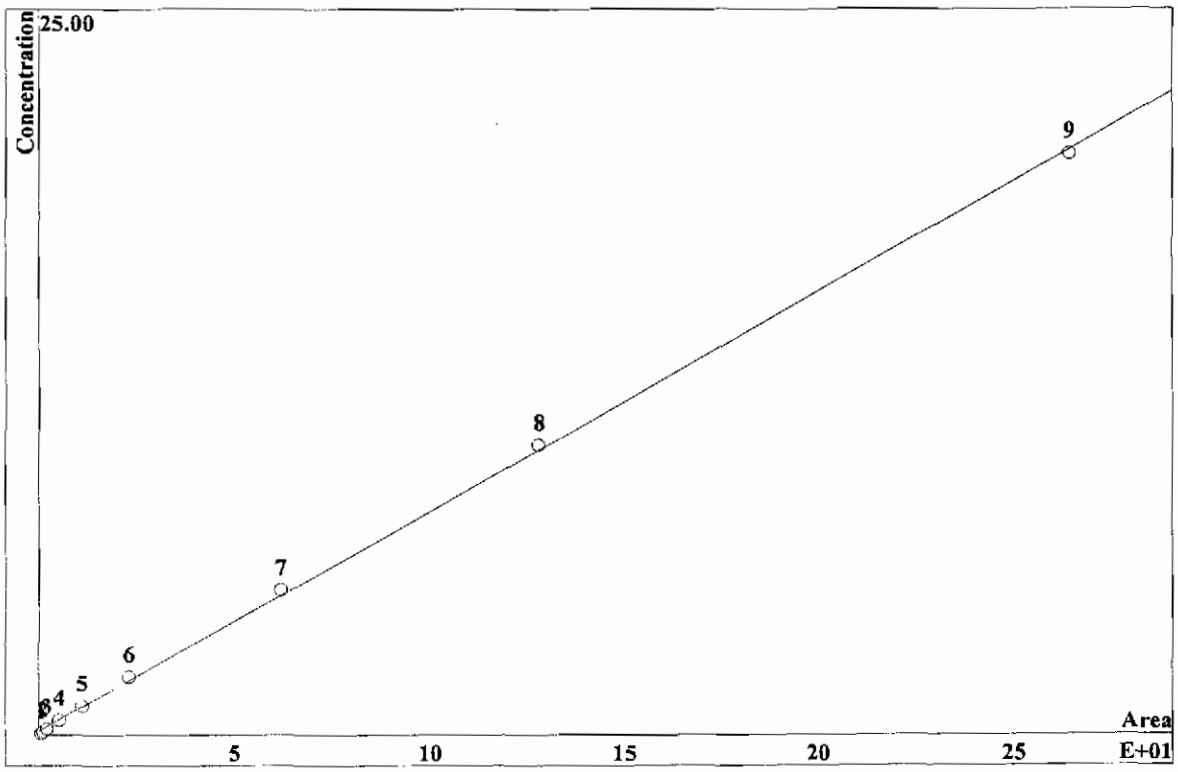
K3 = 0 K2 = 0 K1 = 0.0219574 K0 = 0.0522169
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1416	1.722	0.05	1	6.74	Yes	v9301901.chw
2	0.2866	3.425	0.1	1	6.74	Yes	v9301917.chw
3	0.6179	7.345	0.2	1	6.74	Yes	v9301934.chw
4	1.658	19.53	0.5	1	6.74	Yes	v9301950.chw
5	3.518	41.27	1	1	6.74	Yes	v9302006.chw
6	7.416	86.61	2	1	6.74	Yes	v9302022.chw
7	19.15	226.5	5	1	6.74	Yes	v9302038.chw
8	38.33	458.8	10	1	6.74	No	v9302054.chw
9	74.21	926.4	20	1	6.74	No	v9302111.chw

AS
10/03/11

CALIBRATION OF COMPONENT sulfate

Method: ICD0-I30.mtw ✓ ✓
Equation: Q = 0.0758014·A + 0.128926
RSD: 3.408 %
Correlation coefficient: 0.999791



K3 = 0 K2 = 0 K1 = 0.0758014 K0 = 0.128926
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.03861	0.6921 ✓	0.05	1	10.79	Yes	v9301901.chw
2	0.06635	1.193 ✓	0.1	1	10.79	Yes	v9301917.chw
3	0.1288	2.236 ✓	0.2	1	10.79	Yes	v9301934.chw
4	0.3105	5.366 ✓	0.5	1	10.79	Yes	v9301950.chw
5	0.6333	11.15 ✓	1	1	10.79	Yes	v9302006.chw
6	1.361	23.08 ✓	2	1	10.79	Yes	v9302022.chw
7	3.625	61.64 ✓	5	1	10.79	Yes	v9302038.chw
8	7.471	127.8 ✓	10	1	10.79	Yes	v9302054.chw
9	15.34	264 ✓	20	1	10.79	Yes	v9302111.chw

AA
10/03/11

SECOND SOURCE VERIFICATION

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	bromide	nitrite	sulfate	fluoride	chloride	nitrate	phosphate	RawNetID	DF
AI39-12	ICV	BISFCNP	94.1%	98.6%	99.9%	100.1%	97.7%	98.6%	92.5%	v9302127	1
AI39-13	ICB	BISFCNP	0	0	0	0	0	0	0	v9302143	1

AS 10/03/11

DAILY CALIBRATIONS

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	sulfate	chloride	phosphate	nitrate	fluoride	nitrite	bromide	RawNetID	DF
AK31-01	CCV515	SCPNFIB	98.8%	98.6%	102.2%	97.7%	103.8%	104.8%	99.5%	vb211054	1
AK31-02	CCB515	SCPNFIB	0	0	0	0	0	0	0	vb211110	1
AK31-13	CCV517	SCPNFIB	98.9%	98.3%	101.5%	97.7%	103.8%	105%	99%	vb211408	1
AK31-14	CCB517	SCPNFIB	0	0	0	0	0	0	0	vb211424	1
AK31-25	CCV519	SCPNFIB	98.7%	98.6%	104%	97.9%	104%	105.1%	99.5%	vb211722	1
AK31-26	CCB519	SCPNFIB	0	0	0	0	0	0	0	vb211738	1
AK31-34	CCV521	SCPNFIB	99.4%	98.8%	104.4%	98%	104.6%	105.3%	99.7%	vb211947	1
AK31-35	CCB521	SCPNFIB	0	0	0	0	0	0	0	vb212003	1
AK31-46	CCV523	SCPNFIB	99%	98.7%	104.1%	98%	104.2%	105.2%	99.5%	vb212301	1
AK31-47	CCB523	SCPNFIB	0	0	0	0	0	0	0	vb212317	1
AK31-58	CCV525	SCPNFIB	98.9%	98.6%	103.3%	98%	104.6%	105.2%	99.4%	vb220215	1
AK31-59	CCB525	SCPNFIB	0	0	0	0	0	0	0	vb220231	1
AK31-70	CCV527	SCPNFIB	99.5%	99.2%	107.2%	98.5%	104.7%	105.9%	100.1%	vb220529	1
AK31-71	CCB527	SCPNFIB	0	0	0	0	0	0	0	vb220545	1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Concentrations of:

S_1 — 0.05 ppm
S_2 — 0.1
S_3 — 0.2
S_4 — 0.5
S_5 — 1.0
S_6 — 2.0
S_7 — 5.0
S_8 — 10.0
S_9 — 20.0

Linearity (ppm)

F^- — 5
Cl^- — 20
NO_2N — 10
Br^- — 5
NO_3N — 5
PO_4P — 5
SO_4^{2-} — 20

Column: Metrosep A Supp 5-100

Flow Rate: 0.70 ml/min

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-220 (1000 mM H_2SO_4) 100 ml - 1 L

Book #:	AD0-031
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AI39
Method File:	ICD0-I30.mtw
Analytical Batch:	NA

SOP #	Rev. #
☑ EMAX-300.0	6
☐ EMAX-4110B	0
☑ EMAX-9056	3
☐ EMAX-	

STANDARDS ID	
ICAL	SI1B-17-57-02
ICV	SI1B-17-57-03
CCV	NA
LCS	
MS	

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 9/30/11

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
v9301829.chw	ICD0-130.mtw	AI39-01 IB	1	1.0	1.0	1.0	100.0	0		
v9301845.chw	ICD0-130.mtw	AI39-02 S0	2	1.0	1.0	1.0	100.0	0		
v9301901.chw	ICD0-130.mtw	AI39-03 S1	3	1.0	1.0	1.0	100.0	1		
v9301917.chw	ICD0-130.mtw	AI39-04 S2	4	1.0	1.0	1.0	100.0	2		
v9301934.chw	ICD0-130.mtw	AI39-05 S3	5	1.0	1.0	1.0	100.0	3		
v9301950.chw	ICD0-130.mtw	AI39-06 S4	6	1.0	1.0	1.0	100.0	4		
v9302006.chw	ICD0-130.mtw	AI39-07 S5	7	1.0	1.0	1.0	100.0	5		
v9302022.chw	ICD0-130.mtw	AI39-08 S6	8	1.0	1.0	1.0	100.0	6		
v9302038.chw	ICD0-130.mtw	AI39-09 S7	9	1.0	1.0	1.0	100.0	7		
v9302054.chw	ICD0-130.mtw	AI39-10 S8	10	1.0	1.0	1.0	100.0	8		
v9302111.chw	ICD0-130.mtw	AI39-11 S9	11	1.0	1.0	1.0	100.0	9	FINAL	
v9302127.chw	ICD0-130.mtw	AI39-12 ICV	12	1.0	1.0	1.0	100.0	0		
v9302143.chw	ICD0-130.mtw	AI39-13 ICB	13	1.0	1.0	1.0	100.0	0		

JC 10/3/11

8024 10/3/11

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #:	AD0-032
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AR31
Method File:	ICD0-I30.mtw
Analytical Batch:	ICK0750; ICK0770

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SI18-17-93-02
LCS	SI18-17-93-03
MS	SCP Refer to LCS Parent ID

Column: Metrosep A Supp 5-100 Filter 0.45µm : 21787469

Flow Rate: 0.70 ml/min 0.20µm : 21772726

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: Jc

Date: 11/21/11

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb211054.chw	ICD0-I30.mtw	AK31-01 CCV515	1	1.0	1.0	1.0	100.0	0		
vb211110.chw	ICD0-I30.mtw	AK31-02 CCB515	2	1.0	1.0	1.0	100.0	0		
vb211126.chw	ICD0-I30.mtw	AK31-03 ICK075WB	3	1.0	1.0	1.0	100.0	0		
vb211142.chw	ICD0-I30.mtw	AK31-04 ICK075WL	4	1.0	1.0	1.0	100.0	0		
vb211158.chw	ICD0-I30.mtw	AK31-05 ICK075WC	5	1.0	1.0	1.0	100.0	0		
vb211215.chw	ICD0-I30.mtw	AK31-06 K145-02 DF=1000	6	1.0	1000.0	1.0	100.0	0		
vb211231.chw	ICD0-I30.mtw	AK31-07 K145-03 DF=1000	7	1.0	1000.0	1.0	100.0	0		
vb211247.chw	ICD0-I30.mtw	AK31-08 K145-04 DF=1000	8	1.0	1000.0	1.0	100.0	0		
vb211303.chw	ICD0-I30.mtw	AK31-09 K145-05 DF=1000	9	1.0	1000.0	1.0	100.0	0		
vb211319.chw	ICD0-I30.mtw	AK31-10 K145-07 DF=1000	10	1.0	1000.0	1.0	100.0	0		
vb211335.chw	ICD0-I30.mtw	AK31-11 K145-09 DF=50	11	1.0	50.0	1.0	100.0	0		
vb211352.chw	ICD0-I30.mtw	AK31-12 K145-12 DF=1000	12	1.0	1000.0	1.0	100.0	0		
vb211408.chw	ICD0-I30.mtw	AK31-13 CCV517	13	1.0	1.0	1.0	100.0	0		
vb211424.chw	ICD0-I30.mtw	AK31-14 CCB517	14	1.0	1.0	1.0	100.0	0		
vb211440.chw	ICD0-I30.mtw	AK31-15 K145-08 DF=50	15	1.0	50.0	1.0	100.0	0		
vb211456.chw	ICD0-I30.mtw	AK31-16 K145-08D DF=50	16	1.0	50.0	1.0	100.0	0		
vb211513.chw	ICD0-I30.mtw	AK31-17 K145-08M DF=50	17	1.0	50.0	1.0	100.0	0		
vb211529.chw	ICD0-I30.mtw	AK31-18 K145-11 DF=50	18	1.0	50.0	1.0	100.0	0		
vb211545.chw	ICD0-I30.mtw	AK31-19 K145-11D DF=50	19	1.0	50.0	1.0	100.0	0		
vb211601.chw	ICD0-I30.mtw	AK31-20 K145-11M DF=50	20	1.0	50.0	1.0	100.0	0		
vb211617.chw	ICD0-I30.mtw	AK31-21 K131-02 DF=200	21	1.0	200.0	1.0	100.0	0		
vb211633.chw	ICD0-I30.mtw	AK31-22 K188-03 DF=10	22	1.0	10.0	1.0	100.0	0		
vb211649.chw	ICD0-I30.mtw	AK31-23 K131-05 DF=100	23	1.0	100.0	1.0	100.0	0		
vb211706.chw	ICD0-I30.mtw	AK31-24 K131-08 DF=400	24	1.0	400.0	1.0	100.0	0		
vb211722.chw	ICD0-I30.mtw	AK31-25 CCV519	25	1.0	1.0	1.0	100.0	0		
vb211738.chw	ICD0-I30.mtw	AK31-26 CCB519	26	1.0	1.0	1.0	100.0	0		
vb211754.chw	ICD0-I30.mtw	AK31-27 K131-03	27	1.0	1.0	1.0	100.0	0		
vb211810.chw	ICD0-I30.mtw	AK31-28 K131-04 DF=10	28	1.0	10.0	1.0	100.0	0		
vb211826.chw	ICD0-I30.mtw	AK31-29 K131-13 DF=200	29	1.0	200.0	1.0	100.0	0		
vb211843.chw	ICD0-I30.mtw	AK31-30 K131-14 DF=200	30	1.0	200.0	1.0	100.0	0		
vb211859.chw	ICD0-I30.mtw	AK31-31 K131-15 DF=200	31	1.0	200.0	1.0	100.0	0		
vb211915.chw	ICD0-I30.mtw	AK31-32 K131-16 DF=200	32	1.0	200.0	1.0	100.0	0		
vb211931.chw	ICD0-I30.mtw	AK31-33 K131-17 DF=40	33	1.0	40.0	1.0	100.0	0		
vb211947.chw	ICD0-I30.mtw	AK31-34 CCV521	34	1.0	1.0	1.0	100.0	0		
vb212003.chw	ICD0-I30.mtw	AK31-35 CCB521	35	1.0	1.0	1.0	100.0	0		
vb212020.chw	ICD0-I30.mtw	AK31-36 ICK077WB	36	1.0	1.0	1.0	100.0	0		
vb212036.chw	ICD0-I30.mtw	AK31-37 ICK077WL	37	1.0	1.0	1.0	100.0	0		
vb212052.chw	ICD0-I30.mtw	AK31-38 ICK077WC	38	1.0	1.0	1.0	100.0	0		
vb212108.chw	ICD0-I30.mtw	AK31-39 K145-04 DF=2000	39	1.0	2000.0	1.0	100.0	0		
vb212124.chw	ICD0-I30.mtw	AK31-40 K145-07 DF=2000	40	1.0	2000.0	1.0	100.0	0		
vb212140.chw	ICD0-I30.mtw	AK31-41 K145-08 DF=5	41	1.0	5.0	1.0	100.0	0		
vb212157.chw	ICD0-I30.mtw	AK31-42 K145-08D DF=5	42	1.0	5.0	1.0	100.0	0		
vb212213.chw	ICD0-I30.mtw	AK31-43 K145-08M DF=5	43	1.0	5.0	1.0	100.0	0		
vb212229.chw	ICD0-I30.mtw	AK31-44 K145-09 DF=200	44	1.0	200.0	1.0	100.0	0		
vb212245.chw	ICD0-I30.mtw	AK31-45 K145-12 DF=2000	45	1.0	2000.0	1.0	100.0	0		
vb212301.chw	ICD0-I30.mtw	AK31-46 CCV523	46	1.0	1.0	1.0	100.0	0		
vb212317.chw	ICD0-I30.mtw	AK31-47 CCB523	47	1.0	1.0	1.0	100.0	0		
vb212334.chw	ICD0-I30.mtw	AK31-48 K184-01 DF=200	48	1.0	200.0	1.0	100.0	0		
vb212350.chw	ICD0-I30.mtw	AK31-49 K184-02 DF=400	49	1.0	400.0	1.0	100.0	0		
vb220006.chw	ICD0-I30.mtw	AK31-50 K184-03 DF=20	50	1.0	20.0	1.0	100.0	0		
vb220022.chw	ICD0-I30.mtw	AK31-51 K184-03 DF=200	51	1.0	200.0	1.0	100.0	0		
vb220038.chw	ICD0-I30.mtw	AK31-52 K184-04 DF=50	52	1.0	50.0	1.0	100.0	0	FINAL	
vb220054.chw	ICD0-I30.mtw	AK31-53 K184-04 DF=400	53	1.0	400.0	1.0	100.0	0		
vb220111.chw	ICD0-I30.mtw	AK31-54 K184-05 DF=500	54	1.0	500.0	1.0	100.0	0		
vb220127.chw	ICD0-I30.mtw	AK31-55 K186-06 DF=10	55	1.0	10.0	1.0	100.0	0		
vb220143.chw	ICD0-I30.mtw	AK31-56 K186-09 DF=10	56	1.0	10.0	1.0	100.0	0		
vb220159.chw	ICD0-I30.mtw	AK31-57 K186-12 DF=10	57	1.0	10.0	1.0	100.0	0		

JC 11/22/11

8026

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb220215.chw	ICD0-130.mtw	AK31-58 CCV525	58	1.0	1.0	1.0	100.0	0		
vb220231.chw	ICD0-130.mtw	AK31-59 CCB525	59	1.0	1.0	1.0	100.0	0		
vb220248.chw	ICD0-130.mtw	AK31-60 K148-01	60	1.0	1.0	1.0	100.0	0		
vb220304.chw	ICD0-130.mtw	AK31-61 K186-08 DF=2	61	1.0	2.0	1.0	100.0	0		
vb220320.chw	ICD0-130.mtw	AK31-62 K186-08D DF=2	62	1.0	2.0	1.0	100.0	0		
vb220336.chw	ICD0-130.mtw	AK31-63 K186-08M DF=2	63	1.0	2.0	1.0	100.0	0		
vb220352.chw	ICD0-130.mtw	AK31-64 K186-08S DF=2	64	1.0	2.0	1.0	100.0	0		
vb220408.chw	ICD0-130.mtw	AK31-65 K186-08 DF=10	65	1.0	10.0	1.0	100.0	0		
vb220424.chw	ICD0-130.mtw	AK31-66 K186-08D DF=10	66	1.0	10.0	1.0	100.0	0		
vb220441.chw	ICD0-130.mtw	AK31-67 K186-08M DF=10	67	1.0	10.0	1.0	100.0	0		
vb220457.chw	ICD0-130.mtw	AK31-68 K186-08S DF=10	68	1.0	10.0	1.0	100.0	0		
vb220513.chw	ICD0-130.mtw	AK31-69 K188-03 DF=200	69	1.0	200.0	1.0	100.0	0		
vb220529.chw	ICD0-130.mtw	AK31-70 CCV527	70	1.0	1.0	1.0	100.0	0		
vb220545.chw	ICD0-130.mtw	AK31-71 CCB527	71	1.0	1.0	1.0	100.0	0		

FINAL

JL 11/22/17

8027

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K188

METHOD 300.0(M)
ORGANIC ACIDS BY IC

A total of three (3) water samples were received on 11/21/11 for Organic Acids (Acetate, Butyrate, Lactate and Propionate) by IC analysis, Method 300.0(M) in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary forms for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for OAK018WL/C were all within QC limits.
Percent recoveries for OAK020WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. Samples K188-01 and -02 were reported at 2x dilutions due to matrix interference.

SAMPLE RESULTS

METHOD 300.0(M)
ACETATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K188

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK018WB	ND	1	NA	1.00	0.0500	11/23/1111:39	NA	HK23003	HK23001	OAK018W	NA	NA
LCS1W	OAK018WL	21.0	1	NA	1.00	0.0500	11/23/1112:00	NA	HK23004	HK23001	OAK018W	NA	NA
LCD1W	OAK018WC	21.0	1	NA	1.00	0.0500	11/23/1112:21	NA	HK23005	HK23001	OAK018W	NA	NA
IW-70-SHB310-161	K188-03	29.0	1	NA	1.00	0.0500	11/23/1116:47	NA	HK23012	HK23001	OAK018W	11/21/1113:34	11/21/11
MBLK2W	OAK020WB	ND	1	NA	1.00	0.0500	11/29/1114:22	NA	HK29003	HK29001	OAK020W	NA	NA
LCS2W	OAK020WL	20.5	1	NA	1.00	0.0500	11/29/1114:43	NA	HK29004	HK29001	OAK020W	NA	NA
LCD2W	OAK020WC	18.1	1	NA	1.00	0.0500	11/29/1115:04	NA	HK29005	HK29001	OAK020W	NA	NA
MW-70-MNA17-160	K188-02	ND	2	NA	2.00	0.100	11/29/1117:27	NA	HK29009	HK29001	OAK020W	11/21/1111:54	11/21/11
MW-70-15-159	K188-01	ND	2	NA	2.00	0.100	11/29/1118:08	NA	HK29010	HK29001	OAK020W	11/21/1110:44	11/21/11

METHOD 300.0(M)
BUTYRATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K188

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK020WB	ND	1	NA	1.00	0.0500	11/29/1114:22	NA	HK29003	HK29001	OAK020W	NA	NA
LCS1W	OAK020WL	19.8	1	NA	1.00	0.0500	11/29/1114:43	NA	HK29004	HK29001	OAK020W	NA	NA
LCD1W	OAK020WC	19.2	1	NA	1.00	0.0500	11/29/1115:04	NA	HK29005	HK29001	OAK020W	NA	NA
MW-70-MNA17-160	K188-02	ND	2	NA	2.00	0.100	11/29/1117:27	NA	HK29009	HK29001	OAK020W	11/21/1111:54	11/21/11
MW-70-15-159	K188-01	ND	2	NA	2.00	0.100	11/29/1118:08	NA	HK29010	HK29001	OAK020W	11/21/1110:44	11/21/11
IW-70-SHB310-161	K188-03	557	40	NA	40.0	2.00	11/29/1118:49	NA	HK29011	HK29001	OAK020W	11/21/1113:34	11/21/11

METHOD 300.0(M)
LACTATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K188

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK018WB	ND	1	NA	1.00	0.0500	11/23/1111:39	NA	HK23003	HK23001	OAK018W	NA	NA
LCS1W	OAK018WL	20.9	1	NA	1.00	0.0500	11/23/1112:00	NA	HK23004	HK23001	OAK018W	NA	NA
LCD1W	OAK018WC	21.7	1	NA	1.00	0.0500	11/23/1112:21	NA	HK23005	HK23001	OAK018W	NA	NA
IW-70-SHB310-161	K188-03	ND	1	NA	1.00	0.0500	11/23/1116:47	NA	HK23012	HK23001	OAK018W	11/21/1113:34	11/21/11
MBLK2W	OAK020WB	ND	1	NA	1.00	0.0500	11/29/1114:22	NA	HK29003	HK29001	OAK020W	NA	NA
LCS2W	OAK020WL	20.9	1	NA	1.00	0.0500	11/29/1114:43	NA	HK29004	HK29001	OAK020W	NA	NA
LCD2W	OAK020WC	19.8	1	NA	1.00	0.0500	11/29/1115:04	NA	HK29005	HK29001	OAK020W	NA	NA
MW-70-MNA17-160	K188-02	ND	2	NA	2.00	0.100	11/29/1117:27	NA	HK29009	HK29001	OAK020W	11/21/1111:54	11/21/11
MW-70-15-159	K188-01	ND	2	NA	2.00	0.100	11/29/1118:08	NA	HK29010	HK29001	OAK020W	11/21/1110:44	11/21/11

METHOD 300.0(M)
PROPIONATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K188

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK020WB	ND	1	NA	1.00	0.0500	11/29/1114:22	NA	HK29003	HK29001	OAK020W	NA	NA
LCS1W	OAK020WL	21.6	1	NA	1.00	0.0500	11/29/1114:43	NA	HK29004	HK29001	OAK020W	NA	NA
LCD1W	OAK020WC	18.1	1	NA	1.00	0.0500	11/29/1115:04	NA	HK29005	HK29001	OAK020W	NA	NA
MW-70-MNA17-160	K188-02	ND	2	NA	2.00	0.100	11/29/1117:27	NA	HK29009	HK29001	OAK020W	11/21/1111:54	11/21/11
MW-70-15-159	K188-01	ND	2	NA	2.00	0.100	11/29/1118:08	NA	HK29010	HK29001	OAK020W	11/21/1110:44	11/21/11
IW-70-SHB310-161	K188-03	575	40	NA	40.0	2.00	11/29/1118:49	NA	HK29011	HK29001	OAK020W	11/21/1113:34	11/21/11

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K188
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK018W8	OAK018WL	OAK018WC		
LAB FILE ID:	HK23003	HK23004	HK23005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1111:39	11/23/1112:00	11/23/1112:21	DATE RECEIVED:	NA
PREP. BATCH:	OAK018W	OAK018W	OAK018W		
CALIB. REF:	HK23001	HK23001	HK23001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	21.0	105	20.0	21.0	105	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K188
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	OAK020WB	OAK020WL	OAK020WC		
LAB FILE ID:	HK29003	HK29004	HK29005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/29/1114:22	11/29/1114:43	11/29/1115:04	DATE RECEIVED:	NA
PREP. BATCH:	OAK020W	OAK020W	OAK020W		
CALIB. REF:	HK29001	HK29001	HK29001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	20.5	102	20.0	18.1	90	12	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K188
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK020WB	OAK020WL	OAK020WC		
LAB FILE ID:	HK29003	HK29004	HK29005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/29/1114:22	11/29/1114:43	11/29/1115:04	DATE RECEIVED:	NA
PREP. BATCH:	OAK020W	OAK020W	OAK020W		
CALIB. REF:	HK29001	HK29001	HK29001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	20.0	19.8	99	20.0	19.2	96	3	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K188
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK018WB	OAK018WL	OAK018WC		
LAB FILE ID:	HK23003	HK23004	HK23005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1111:39	11/23/1112:00	11/23/1112:21	DATE RECEIVED:	NA
PREP. BATCH:	OAK018W	OAK018W	OAK018W		
CALIB. REF:	HK23001	HK23001	HK23001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	20.0	20.9	104	20.0	21.7	108	4	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K188
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	OAK020WB	OAK020WL	OAK020WC		
LAB FILE ID:	HK29003	HK29004	HK29005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/29/1114:22	11/29/1114:43	11/29/1115:04	DATE RECEIVED:	NA
PREP. BATCH:	OAK020W	OAK020W	OAK020W		
CALIB. REF:	HK29001	HK29001	HK29001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	20.0	20.9	104	20.0	19.8	99	5	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K188
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK020WB	OAK020WL	OAK020WC		
LAB FILE ID:	HK29003	HK29004	HK29005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/29/1114:22	11/29/1114:43	11/29/1115:04	DATE RECEIVED:	NA
PREP. BATCH:	OAK020W	OAK020W	OAK020W		
CALIB. REF:	HK29001	HK29001	HK29001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	20.0	21.6	108	20.0	18.1	90	18	90-110	20

INITIAL CALIBRATIONS

IC SEQ FORM/HK15(2011)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
HK15001	IB	ABLPY	OAD6K15	11/15/1117:34	1
HK15002	S-0	ABLPY	OAD6K15	11/15/1117:55	1
HK15003	S-1	ABLPY	OAD6K15	11/15/1118:16	1
HK15004	S-2	ABLPY	OAD6K15	11/15/1118:37	1
HK15005	S-3	ABLPY	OAD6K15	11/15/1118:58	1
HK15006	S-4	ABLPY	OAD6K15	11/15/1119:19	1
HK15007	S-5	ABLPY	OAD6K15	11/15/1119:40	1
HK15008	ICV	ABLPY	OAD6K15	11/15/1120:01	1
HK15009	ICB	ABLPY	OAD6K15	11/15/1120:22	1
HK15010	CCV2	ABLPY	OAD6K15	11/15/1123:52	1
HK15011	CCB2	ABLPY	OAD6K15	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	OAD6K15	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	OAD6K15	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	OAD6K15	11/16/1101:15	1
HK15015	K101-01	ABLPY	OAD6K15	11/16/1101:36	1
HK15016	K101-02	ABLPY	OAD6K15	11/16/1102:17	1
HK15017	K101-03	ABLPY	OAD6K15	11/16/1102:58	1
HK15018	K101-04	ABLPY	OAD6K15	11/16/1103:39	1
HK15019	K101-05	ABLPY	OAD6K15	11/16/1104:20	1
HK15020	K101-05M	ABLPY	OAD6K15	11/16/1105:01	1
HK15021	K101-05S	ABLPY	OAD6K15	11/16/1105:42	1
HK15022	CCV4	ABLPY	OAD6K15	11/16/1106:23	1
HK15023	CCB4	ABLPY	OAD6K15	11/16/1106:44	1
HK15024	K084-01	ABLPY	OAD6K15	11/16/1107:05	1
HK15025	K084-02	ABLPY	OAD6K15	11/16/1107:46	1
HK15026	K084-03	ABLPY	OAD6K15	11/16/1108:26	1
HK15027	K084-04	ABLPY	OAD6K15	11/16/1109:10	1
HK15028	CCV6	ABLPY	OAD6K15	11/16/1111:30	1
HK15029	CCB6	ABLPY	OAD6K15	11/16/1112:32	1
HK15030	K084-05	ABLPY	OAD6K15	11/16/1112:53	1
HK15031	K084-06	ABLPY	OAD6K15	11/16/1113:34	1
HK15032	K035-01	*BLPY	OAD6K15	11/16/1114:15	5
HK15033	K035-01A	*BLPY	OAD6K15	11/16/1114:55	5
HK15034	CCV8	ABLPY	OAD6K15	11/16/1115:36	1
HK15035	CCB8	ABLPY	OAD6K15	11/16/1115:57	1

AS
11/29/11

No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square	Offset	Slope	Curve
1	4.88	LACTATE	0LOff	5	1.0000	-0.000198	0.0443	0.0000
2	5.21	ACETATE	0LOff	5	0.9997	0.000068	0.0569	0.0000
3	6.00	PROPIONA	0LOff	5	0.9998	-0.000209	0.0394	0.0000
4	7.42	BUTYRATE	0LOff	5	0.9999	-0.000584	0.0313	0.0000
5	8.93	PYRUVATE	0LOff	5	0.9999	-0.000755	0.0518	0.0000
Average:					n.a.	n.a.	n.a.	0.0000

$$\text{conc} = \frac{\text{area} - \text{offset}}{\text{slope}}$$

AS
11/29/11

SECOND SOURCE VERIFICATION

IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK15001	IB	ABLPY	ND	ND	ND	ND	ND	11/15/1117:34	1
HK15002	S-0	ABLPY	ND	ND	ND	ND	ND	11/15/1117:55	1
HK15003	S-1	ABLPY	.083	.101	.104	.096	.103	11/15/1118:16	1
HK15004	S-2	ABLPY	.401	.385	.396	.382	.395	11/15/1118:37	1
HK15005	S-3	ABLPY	1.01	.996	.993	1.01	.984	11/15/1118:58	1
HK15006	S-4	ABLPY	2.028	1.987	1.999	2.023	1.992	11/15/1119:19	1
HK15007	S-5	ABLPY	2.978	3.012	3.003	2.984	3.011	11/15/1119:40	1
HK15008	ICV	ABLPY	103%	96.8%	99.5%	104%	97.7%	11/15/1120:01	1
HK15009	ICB	ABLPY	ND	ND	ND	ND	ND	11/15/1120:22	1
HK15010	CCV2	ABLPY	103%	103%	101%	104%	93.9%	11/15/1123:52	1
HK15011	CCB2	ABLPY	ND	ND	ND	ND	ND	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	ND	ND	ND	ND	ND	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	2.07	2.1	2.02	2	1.96	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	2.07	2.02	2.04	2.1	1.95	11/16/1101:15	1
HK15015	K101-01	ABLPY	ND	ND	ND	ND	ND	11/16/1101:36	1
HK15016	K101-02	ABLPY	ND	ND	ND	ND	ND	11/16/1102:17	1
HK15017	K101-03	ABLPY	ND	ND	ND	ND	ND	11/16/1102:58	1
HK15018	K101-04	ABLPY	ND	ND	ND	ND	ND	11/16/1103:39	1
HK15019	K101-05	ABLPY	ND	ND	ND	ND	ND	11/16/1104:20	1
HK15020	K101-05M	ABLPY	.83	.826	.959	.922	.904	11/16/1105:01	1
HK15021	K101-05S	ABLPY	.878	.826	.985	1.01	.882	11/16/1105:42	1
HK15022	CCV4	ABLPY	101%	103%	99.3%	99.1%	92.6%	11/16/1106:23	1
HK15023	CCB4	ABLPY	ND	ND	ND	ND	ND	11/16/1106:44	1
HK15024	K084-01	ABLPY	ND	ND	ND	ND	ND	11/16/1107:05	1
HK15025	K084-02	ABLPY	ND	ND	ND	ND	ND	11/16/1107:46	1
HK15026	K084-03	ABLPY	ND	ND	ND	ND	ND	11/16/1108:26	1
HK15027	K084-04	ABLPY	ND	ND	ND	ND	ND	11/16/1109:10	1
HK15028	CCV6	ABLPY	101%	90.7%	99.7%	103%	92.5%	11/16/1111:30	1
HK15029	CCB6	ABLPY	ND	ND	ND	ND	ND	11/16/1112:32	1
HK15030	K084-05	ABLPY	ND	ND	ND	ND	ND	11/16/1112:53	1
HK15031	K084-06	ABLPY	ND	ND	ND	ND	ND	11/16/1113:34	1
HK15032	K035-01	*BLPY	28.1E	ND	ND	1.13	ND	11/16/1114:15	5
HK15033	K035-01A	*BLPY	32.4E	5.38	4.35	6.28	4.73	11/16/1114:55	5
HK15034	CCV8	ABLPY	102%	97%	99.6%	109%	93.8%	11/16/1115:36	1
HK15035	CCB8	ABLPY	ND	ND	ND	ND	ND	11/16/1115:57	1

AS
11/29/11

DAILY CALIBRATIONS

IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK23001	CCV32	ABLPY	106%	107%	109%	104%	102%	11/23/1110:57	1
HK23002	CCB32	ABLPY	ND	ND	ND	ND	ND	11/23/1111:18	1
HK23003	OAK018WB	ABLPY	ND	ND	ND	ND	ND	11/23/1111:39	1
HK23004	OAK018WL	ABLPY	2.1	2	2.09	2.12	1.98	11/23/1112:00	1
HK23005	OAK018WC	ABLPY	2.1	2.09	2.17	2.1	2.07	11/23/1112:21	1
HK23006	K174-06R	ABLPY	ND	ND	ND	ND	ND	11/23/1112:42	1
HK23007	K174-06A	ABLPY	.084	.091	.113	.095	.092	11/23/1113:23	1
HK23008	K184-03R	ABLPY	ND	ND	ND	ND	ND	11/23/1114:03	1
HK23009	K184-03A	ABLPY	.075	.093	.109	.09	.099	11/23/1114:44	1
HK23010	K188-01	*****	ND	ND	ND	ND	ND	11/23/1115:25	1
HK23011	K188-02	*****	ND	ND	ND	ND	ND	11/23/1116:06	1
HK23012	K188-03	A*L*Y	2.9	51.4E	ND	44.3E	2.95	11/23/1116:47	1
HK23013	CCV34	ABLPY	103%	103%	101%	105%	95.3%	11/23/1118:13	1
HK23014	CCB34	ABLPY	ND	ND	ND	ND	ND	11/23/1118:55	1
HK23015	K205-04	ABLPY	ND	ND	ND	ND	ND	11/23/1119:37	1
HK23016	K205-05	ABLPY	ND	ND	ND	ND	ND	11/23/1120:18	1
HK23017	K205-01	ABLPY	ND	ND	ND	ND	ND	11/23/1120:59	1
HK23018	K205-01M	ABLPY	1.07	1.01	1.11	.99	1.05	11/23/1121:39	1
HK23019	K205-01S	ABLPY	1.05	1.01	1.12	.976	1.05	11/23/1122:20	1
HK23020	K217-04	ABLPY	ND	ND	ND	ND	ND	11/23/1123:01	1
HK23021	K217-02	ABLPY	ND	ND	ND	ND	ND	11/23/1123:42	1
HK23022	K217-03	ABLPY	ND	ND	ND	ND	ND	11/24/1100:23	1
HK23023	K205-02	ABLPY	ND	ND	ND	ND	ND	11/24/1101:04	1
HK23024	K205-03	*BLPY	9.69E	ND	ND	1.51	ND	11/24/1102:30	1
HK23025	CCV36	ABLPY	107%	108%	105%	108%	98.4%	11/24/1104:17	1
HK23026	CCB36	ABLPY	ND	ND	ND	ND	ND	11/24/1104:37	1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-221

0AD6K15.met : 300M ICAL → Passed

-Linear Range :

S-0 → 0.0 ppm S-3 → 1.0 ppm

S-1 → 0.1 S-4 → 2.0

S-2 → 0.4 S-5 → 3.0

- ICV : 2ppm
- Sample Loop : 25uL
- Flow Rate : 1.50 mL/min
- Suppressor : ASRS 4mm
- SRS Current : 100 mA
- Column: Ion Pac AS11 HC, 4x250 mm
- Guard Column : Ion Pac AG16 ; 4x250mm

0AK010W: K101 , K084 & K035 (conf. only)

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK15
Method File:	0AD6K15.met
Analytical Batch:	0AK010W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID		
ICAL	SW12A-02-33D	
ICV		332
CCV		331
LCS		332
MS	↓	327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: ce / AM

Date: 11/15/11

8049

Sequence: HK15
Operator: cmadmin

Printed: 11/17/2011 3:52:16 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK15	001	IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK15	002	S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK15	003	S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK15	004	S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK15	005	S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK15	006	S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK15	007	S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK15	008	ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK15	009	ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK15	010	CCV2	Unknown	100	25.0	ORG	OAD6K15	Finished	11/15/2011 11:52:01 PM	1.0000
11	HK15	011	CCB2	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 12:13:00 AM	1.0000
12	HK15	012	OAK010WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/16/2011 12:33:58 AM	1.0000
13	HK15	013	OAK010WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/16/2011 12:54:57 AM	1.0000
14	HK15	014	OAK010WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/16/2011 1:15:56 AM	1.0000
15	HK15	015	K101-01	Unknown	1	25.0	ORG	OAD6K15	Finished	11/16/2011 1:36:54 AM	1.0000
16	HK15	016	K101-02	Unknown	2	25.0	ORG	OAD6K15	Finished	11/16/2011 2:17:49 AM	1.0000
17	HK15	017	K101-03	Unknown	3	25.0	ORG	OAD6K15	Finished	11/16/2011 2:58:42 AM	1.0000
18	HK15	018	K101-04	Unknown	4	25.0	ORG	OAD6K15	Finished	11/16/2011 3:39:37 AM	1.0000
19	HK15	019	K101-05	Unknown	5	25.0	ORG	OAD6K15	Finished	11/16/2011 4:20:31 AM	1.0000
20	HK15	020	K101-05M	Unknown	6	25.0	ORG	OAD6K15	Finished	11/16/2011 5:01:24 AM	1.0000
21	HK15	021	K101-05S	Unknown	7	25.0	ORG	OAD6K15	Finished	11/16/2011 5:42:18 AM	1.0000
22	HK15	022	CCV4	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 6:23:12 AM	1.0000
23	HK15	023	CCB4	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 6:44:11 AM	1.0000
24	HK15	024	K084-01	Unknown	8	25.0	ORG	OAD6K15	Finished	11/16/2011 7:05:09 AM	1.0000
25	HK15	025	K084-02	Unknown	9	25.0	ORG	OAD6K15	Finished	11/16/2011 7:46:03 AM	1.0000
26	HK15	026	K084-03	Unknown	10	25.0	ORG	OAD6K15	Finished	11/16/2011 8:26:57 AM	1.0000
27	HK15	027	K084-04	Unknown	11	25.0	ORG	OAD6K15	Finished	11/16/2011 9:10:16 AM	1.0000

8659

FINAL

Sequence: HK15
Operator: cmadmin

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Comment
1	HK15	
2	HK15	
3	HK15	
4	HK15	
5	HK15	
6	HK15	
7	HK15	
8	HK15	
9	HK15	
10	HK15	
11	HK15	
12	HK15	
13	HK15	
14	HK15	
15	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
17	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK15	
23	HK15	
24	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
25	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
26	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
27	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

FINAL

Sequence: HK15
Operator: cmadmin
Printed: 11/17/2011 3:35:11 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK15	028	CCV6	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 11:30:24 AM	1.0000
29	HK15	029	CCB6	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 12:32:17 PM	1.0000
30	HK15	030	K084-05	Unknown	12	25.0	ORG	OAD6K15	Finished	11/16/2011 12:53:15 PM	1.0000
31	HK15	031	K084-06	Unknown	13	25.0	ORG	OAD6K15	Finished	11/16/2011 1:34:09 PM	1.0000
32	HK15	032	K035-01	Unknown	14	25.0	ORG	OAD6K15	Finished	11/16/2011 2:15:03 PM	5.0000
33	HK15	033	K035-01A	Unknown	15	25.0	ORG	OAD6K15	Finished	11/16/2011 2:55:56 PM	5.0000
34	HK15	034	CCV8	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 3:36:50 PM	1.0000
35	HK15	035	CCB8	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 3:57:49 PM	1.0000

FINAL

8652

Chromeleon © Dionex Corporation, Version 6.70 Build 1820

Sequence: HK15
Operator: cmadmin
Printed: 11/17/2011 3:35:11 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Comment
28	HK15	
29	HK15	
30	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
31	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
32	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
33	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
34	HK15	
35	HK15	

FINAL

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4- 01- 221

OAK018W : 11K174 (conf.), 11K184 (conf.), 11K188, 11K205 & 11K217

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK23
Method File:	OAKD6K15.met (ok 11/23/11)
Analytical Batch:	OAK018W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SW12A- 02-331
LCS	332
MS	327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: ek

Date: 11/23/11

Sequence: HK23
Operator: cmadmin
Printed: 11/28/2011 5:19:08 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/28/2011 3:25:36 PM by cmadmin
Last Update: 11/28/2011 3:25:36 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK23		IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK23		S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK23		S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK23		S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK23		S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK23		S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK23		S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK23		ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK23		ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK23	001	CCV32	Unknown	100	25.0	ORG	OAD6K15	Finished	11/23/2011 10:57:14 AM	1.0000
11	HK23	002	CCB32	Unknown	99	25.0	ORG	OAD6K15	Finished	11/23/2011 11:18:13 AM	1.0000
12	HK23	003	OAK018WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/23/2011 11:39:12 AM	1.0000
13	HK23	004	OAK018WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/23/2011 12:00:11 PM	1.0000
14	HK23	005	OAK018WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/23/2011 12:21:10 PM	1.0000
15	HK23	006	K174-06R	Unknown	1	25.0	ORG	OAD6K15	Finished	11/23/2011 12:42:09 PM	1.0000
16	HK23	007	K174-06A	Unknown	2	25.0	ORG	OAD6K15	Finished	11/23/2011 1:23:03 PM	1.0000
17	HK23	008	K184-03R	Unknown	3	25.0	ORG	OAD6K15	Finished	11/23/2011 2:03:56 PM	1.0000
18	HK23	009	K184-03A	Unknown	4	25.0	ORG	OAD6K15	Finished	11/23/2011 2:44:51 PM	1.0000
19	HK23	010	K188-01	Unknown	5	25.0	ORG	OAD6K15	Finished	11/23/2011 3:25:44 PM	1.0000
20	HK23	011	K188-02	Unknown	6	25.0	ORG	OAD6K15	Finished	11/23/2011 4:06:38 PM	1.0000
21	HK23	012	K188-03	Unknown	7	25.0	ORG-SAMPLE	OAD6K15	Finished	11/23/2011 4:47:32 PM	1.0000
22	HK23	013	CCV34	Unknown	100	25.0	ORG	OAD6K15	Finished	11/23/2011 6:13:20 PM	1.0000
23	HK23	014	CCB34	Unknown	99	25.0	ORG	OAD6K15	Finished	11/23/2011 6:55:17 PM	1.0000
24	HK23	015	K205-04	Unknown	8	25.0	ORG	OAD6K15	Finished	11/23/2011 7:37:15 PM	1.0000
25	HK23	016	K205-05	Unknown	9	25.0	ORG	OAD6K15	Finished	11/23/2011 8:18:09 PM	1.0000
26	HK23	017	K205-01	Unknown	10	25.0	ORG	OAD6K15	Finished	11/23/2011 8:59:02 PM	1.0000
27	HK23	018	K205-01M	Unknown	11	25.0	ORG	OAD6K15	Finished	11/23/2011 9:39:56 PM	1.0000

8955

FINAL

Sequence: HK23
Operator: cmadmin
Printed: 11/28/2011 5:19:08 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/28/2011 3:25:36 PM by cmadmin
Last Update: 11/28/2011 3:25:36 PM by cmadmin

No.	Sequence	Comment
1	HK23	
2	HK23	
3	HK23	
4	HK23	
5	HK23	
6	HK23	
7	HK23	
8	HK23	
9	HK23	
10	HK23	
11	HK23	
12	HK23	
13	HK23	
14	HK23	
15	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
17	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK23	
23	HK23	
24	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
25	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
26	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
27	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

8856

FINAL

Sequence: HK23
Operator: cmadmin
Printed: 11/28/2011 5:19:08 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/28/2011 3:25:36 PM by cmadmin
Last Update: 11/28/2011 3:25:36 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK23	019	K205-01S	Unknown	12	25.0	ORG	OAD6K15	Finished	11/23/2011 10:20:50 PM	1.0000
29	HK23	020	K217-04	Unknown	15	25.0	ORG	OAD6K15	Finished	11/23/2011 11:01:43 PM	1.0000
30	HK23	021	K217-02	Unknown	16	25.0	ORG	OAD6K15	Finished	11/23/2011 11:42:37 PM	1.0000
31	HK23	022	K217-03	Unknown	17	25.0	ORG	OAD6K15	Finished	11/24/2011 12:23:31 AM	1.0000
32	HK23	023	K205-02	Unknown	13	25.0	ORG-SAMPLE	OAD6K15	Finished	11/24/2011 1:04:24 AM	1.0000
33	HK23	024	K205-03	Unknown	14	25.0	ORG-SAMPLE	OAD6K15	Finished	11/24/2011 2:30:13 AM	1.0000
34	HK23	025	CCV36	Unknown	100	25.0	ORG	OAD6K15	Finished	11/24/2011 4:17:00 AM	1.0000
35	HK23	026	CCB36	Unknown	99	25.0	ORG	OAD6K15	Finished	11/24/2011 4:37:59 AM	1.0000

FINAL

Sequence: HK23
Operator: cmadmin

Printed: 11/28/2011 5:19:08 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/28/2011 3:25:36 PM by cmadmin
Last Update: 11/28/2011 3:25:36 PM by cmadmin

No.	Sequence	Comment
28	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
29	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
30	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
31	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
32	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
33	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
34	HK23	
35	HK23	

FINAL

8958

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EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-221

0AK020W: 11K188 & 11K205

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK29
Method File:	al 11/29/11 → 0AK020W
Analytical Batch:	→ 0AD6K15.met

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SW12A - 02 - 333
LCS	334
MS	327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: al

Date: 11/29/11

8059

Sequence: HK29
Operator: cmadmin
Printed: 11/30/2011 12:44:39 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 23

Created: 11/30/2011 10:50:00 AM by cmadmin
Last Update: 11/30/2011 12:44:32 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK29		IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK29		S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK29		S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK29		S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK29		S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK29		S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK29		S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK29		ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK29		ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK29	001	CCV38	Unknown	100	25.0	ORG	OAD6K15	Finished	11/29/2011 1:40:08 PM	1.0000
11	HK29	002	CCB38	Unknown	99	25.0	ORG	OAD6K15	Finished	11/29/2011 2:01:06 PM	1.0000
12	HK29	003	OAK020WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/29/2011 2:22:05 PM	1.0000
13	HK29	004	OAK020WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/29/2011 2:43:04 PM	1.0000
14	HK29	005	OAK020WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/29/2011 3:04:03 PM	1.0000
15	HK29	006	K188-01R	Unknown	1	25.0	ORG	OAD6K15	Finished	11/29/2011 3:25:01 PM	1.0000
16	HK29	007	K188-01A	Unknown	2	25.0	ORG	OAD6K15	Finished	11/29/2011 4:05:55 PM	1.0000
17	HK29	008	K188-02A	Unknown	5	25.0	ORG	OAD6K15	Finished	11/29/2011 4:46:49 PM	2.0000
18	HK29	009	K188-02	Unknown	4	25.0	ORG	OAD6K15	Finished	11/29/2011 5:27:42 PM	2.0000
19	HK29	010	K188-01	Unknown	3	25.0	ORG	OAD6K15	Finished	11/29/2011 6:08:36 PM	2.0000
20	HK29	011	K188-03	Unknown	6	25.0	ORG	OAD6K15	Finished	11/29/2011 6:49:30 PM	40.0000
21	HK29	012	K205-03	Unknown	7	25.0	ORG	OAD6K15	Finished	11/29/2011 7:30:23 PM	10.0000
22	HK29	013	CCV40	Unknown	100	25.0	ORG	OAD6K15	Finished	11/29/2011 8:11:17 PM	1.0000
23	HK29	014	CCB40	Unknown	99	25.0	ORG	OAD6K15	Finished	11/29/2011 8:32:16 PM	1.0000

FINAL

8969

Sequence: HK29
Operator: cmadmin
Printed: 11/30/2011 12:44:39 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 23

Created: 11/30/2011 10:50:00 AM by cmadmin
Last Update: 11/30/2011 12:44:32 PM by cmadmin

No.	Sequence	Comment
1	HK29	
2	HK29	
3	HK29	
4	HK29	
5	HK29	
6	HK29	
7	HK29	
8	HK29	
9	HK29	
10	HK29	
11	HK29	
12	HK29	
13	HK29	
14	HK29	
15	HK29	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK29	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
17	HK29	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=2
18	HK29	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=2
19	HK29	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=2
20	HK29	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=40
21	HK29	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=10
22	HK29	
23	HK29	

FINAL

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CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K188

METHOD 2320B
TOTAL ALKALINITY

One (1) water sample was received on 11/21/11 for Alkalinity analysis, Method 2320B in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for ALK013WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2320B
TOTAL ALKALINITY

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K188

Matrix : WATER
Instrument ID : 53

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ALK013WB	ND	1	NA	5.00	5.00	11/29/1112:42	NA	ALK013-01	NA	ALK013W	NA	NA
LCS1W	ALK013WL	219	1	NA	5.00	5.00	11/29/1112:46	NA	ALK013-02	NA	ALK013W	NA	NA
LCD1W	ALK013WC	215	1	NA	5.00	5.00	11/29/1112:49	NA	ALK013-03	NA	ALK013W	NA	NA
IW-70-SHB310-161	K188-03	670	1	NA	5.00	5.00	11/29/1116:04	NA	ALK013-25	NA	ALK013W	11/21/1113:34	11/21/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K188
METHOD: METHOD 2320B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ALK013WB	ALK013WL	ALK013WC		
LAB FILE ID:	ALK013-01	ALK013-02	ALK013-03		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/29/1112:42	11/29/1112:46	11/29/1112:49	DATE RECEIVED:	NA
PREP. BATCH:	ALK013W	ALK013W	ALK013W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Total Alkalinity	ND	230	219	95	230	215	93	2	80-120	20

1596

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ALKALINITY

Note: For samples and relevent QCs/Standards analyzed, refer to attached analytical sequence.

☒ Titration end point: pH 4.5 ± 0.04

☒ Low alkalinity: pH 4.2 ± 0.04

MS/MSD amount of spike: NA

Book#: AAL-031

Instrument No.: ☒ 53 ☐ 97 ☐ E5

Analytical Batch: ALK013

Analytical Sequence: ALK013

SOP #	Rev. #
☒ EMAX-310.1	5
☒ EMAX-2320B	3
☐ EMAX-	

Comments: Method 2320B for SDG 11K145
Samples for batch were analyzed manually even though concentrations were not too high because of the same samples have a strong odor, color, or sand.

STANDARDS ID	CONC. (mg/L)
0.02N HCL SW1-01-338	0.02
LCS SW1-01-402	230
MS/MSD NA	NA
ICV NA	NA

pH Buffer	ID
pH 4	SW1-01-341
pH 7	-279
pH 10	-396
pH 8.0 (Check)	-347

Analyzed By: RC

Date: 11/29/11

EMAX LABORATORIES, INC.

ALKALINITY RAW DATA

MISCELLANEOUS INFORMATION		
Standard	Concentration	
Acid Titrant, HCl	0.02	N
Na_2CO_3 (Z or Z_N)*	2.63	g/L
LCS	230	mg/L
MS	100	mg/L
MDL	5	mg/L
RL	5	mg/L

pH Meter Calibration			
Instrument ID:		53	
Buffer 4	4.01	11/29/11	12:32:50
Buffer 7	7.01	11/29/11	12:34:01
Buffer 10	10.04	11/29/11	12:35:35
pH Check Buffer (8)	7.96	11/29/11	12:37:04

$$N = \frac{(Z)(V_{Na_2CO_3})}{(53)(V_{HCl})} \qquad N = \frac{(Z_N)(V_{Na_2CO_3})}{(V_{HCl})}$$

* Standardization of Acid Titrant(N)
Z=g/L Na_2CO_3. If the concentration of Na_2CO_3 is in N, then $Z=Z_N$.

STANDARDIZATION				
$V_{Na_2CO_3}$ / V_b (ml)	V_{HCl} (ml)	DATE	TIME	Acid Titrant HCl (N)
				NA
				#DIV/0!
				#DIV/0!
				#DIV/0!
			Average HCl (N)=	0.02000

☑ Acid Titrant is purchased as certified standard solution

Book #: AAL-031

Page: 4

SOP: EMAX-310.1 Rev. 3

Analytical Batch: **ALK013**

Analyzed By: RC

Data File Name	Lab Sample ID	Sample Amount (ml)	Sample pH	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Volume of Acid Titrant (A) ml pH=8.3	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Volume of Acid Titrant (B) ml pH=4.5	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Vol.of Acid Titrant (C) ml pH=4.2	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Final pH	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	NOTES
ALK013-01	ALK013WB	100	6.09	11/29/11	12:40:37	NA	11/29/11	12:41:29	0.15	11/29/11	12:41:42	0.29	11/29/11	12:42:11	4.23	11/29/11	12:42:15	
ALK013-02	ALK013WL	10	9.03	11/29/11	12:43:55	1.3	11/29/11	12:45:01	2.19	11/29/11	12:46:12	NA	11/29/11	12:46:14	4.47	11/29/11	12:46:17	
ALK013-03	ALK013WC	10	9.07	11/29/11	12:47:30	1.29	11/29/11	12:48:18	2.15	11/29/11	12:48:59	NA	11/29/11	12:49:01	4.52	11/29/11	12:49:07	
ALK013-04	K133-01	3	7.14	11/29/11	12:53:30	NA	11/29/11	12:53:35	1.14	11/29/11	12:56:44	NA	11/29/11	12:56:46	4.5	11/29/11	12:57:14	
ALK013-05	K133-01D	3	7.08	11/29/11	13:00:37	NA	11/29/11	13:00:39	1.14	11/29/11	13:02:38	NA	11/29/11	13:02:40	4.47	11/29/11	13:02:42	
ALK013-06	K133-02	5	7.57	11/29/11	13:06:44	NA	11/29/11	13:06:47	1.22	11/29/11	13:08:34	NA	11/29/11	13:08:36	4.46	11/29/11	13:08:39	
ALK013-07	K133-03	1	7.07	11/29/11	13:58:52	NA	11/29/11	13:58:56	2.01	11/29/11	14:02:33	NA	11/29/11	14:02:34	4.5	11/29/11	14:02:38	
ALK013-08	K133-04	5	7.17	11/29/11	14:10:04	NA	11/29/11	14:10:06	1.63	11/29/11	14:14:35	NA	11/29/11	14:14:37	4.47	11/29/11	14:14:40	
ALK013-09	K133-05	5	7.24	11/29/11	14:22:14	NA	11/29/11	14:22:16	1.47	11/29/11	14:24:15	NA	11/29/11	14:24:18	4.5	11/29/11	14:24:21	
ALK013-10	K145-02	3	7.31	11/29/11	14:28:10	NA	11/29/11	14:28:12	1.31	11/29/11	14:29:43	NA	11/29/11	14:29:45	4.47	11/29/11	14:29:47	
ALK013-11	K145-03	3	7.34	11/29/11	14:33:40	NA	11/29/11	14:33:42	1.33	11/29/11	14:35:01	NA	11/29/11	14:35:03	4.53	11/29/11	14:35:04	
ALK013-12	K145-04	3	7.06	11/29/11	14:38:06	NA	11/29/11	14:38:07	1.4	11/29/11	14:39:05	NA	11/29/11	14:39:07	4.46	11/29/11	14:39:09	
ALK013-13	K145-05	10	7.29	11/29/11	14:42:45	NA	11/29/11	14:42:48	2.68	11/29/11	14:44:55	NA	11/29/11	14:44:57	4.47	11/29/11	14:44:59	
ALK013-14	K145-07	3	6.84	11/29/11	14:48:08	NA	11/29/11	14:48:10	1.59	11/29/11	14:49:47	NA	11/29/11	14:49:50	4.48	11/29/11	14:49:53	
ALK013-15	K145-08	2	7.09	11/29/11	14:52:42	NA	11/29/11	14:52:43	1.55	11/29/11	14:55:45	NA	11/29/11	14:55:47	4.53	11/29/11	14:55:50	
ALK013-16	K145-08D	2	7.02	11/29/11	14:59:40	NA	11/29/11	14:59:42	1.56	11/29/11	15:00:54	NA	11/29/11	15:00:56	4.54	11/29/11	15:00:58	
ALK013-17	K145-09	1	7.46	11/29/11	15:04:05	NA	11/29/11	15:04:09	1.84	11/29/11	15:08:15	NA	11/29/11	15:08:18	4.46	11/29/11	15:08:19	
ALK013-18	K145-11	2	8.02	11/29/11	15:14:05	NA	11/29/11	15:14:07	1.8	11/29/11	15:15:54	NA	11/29/11	15:15:57	4.48	11/29/11	15:15:59	
ALK013-19	K145-11D	2	7.94	11/29/11	15:19:57	NA	11/29/11	15:19:59	1.82	11/29/11	15:21:30	NA	11/29/11	15:21:34	4.48	11/29/11	15:21:36	
ALK013-20	K145-12	5	7.31	11/29/11	15:24:32	NA	11/29/11	15:24:34	1.51	11/29/11	15:26:41	NA	11/29/11	15:26:43	4.47	11/29/11	15:26:49	
ALK013-21	K205-01	2	6.72	11/29/11	15:31:48	NA	11/29/11	15:31:52	2.36	11/29/11	15:34:28	NA	11/29/11	15:34:31	4.54	11/29/11	15:34:33	
ALK013-22	K205-01D	2	6.67	11/29/11	15:36:39	NA	11/29/11	15:36:41	2.4	11/29/11	15:38:22	NA	11/29/11	15:38:32	4.49	11/29/11	15:39:02	
ALK013-23	K205-02	2	6.67	11/29/11	15:42:46	NA	11/29/11	15:42:48	1.28	11/29/11	15:45:13	NA	11/29/11	15:45:15	4.46	11/29/11	15:45:28	
ALK013-24	K205-03	1	7.18	11/29/11	15:48:09	NA	11/29/11	15:48:15	2.64	11/29/11	15:51:39	NA	11/29/11	15:51:55	4.51	11/29/11	15:52:00	
ALK013-25	K188-03	3	5.39	11/29/11	16:00:20	NA	11/29/11	16:00:21	2.01	11/29/11	16:04:10	NA	11/29/11	16:04:13	4.53	11/29/11	16:04:15	

COMMENTS:

8066

ALKALINITY REPORT FORM

EMAX LABORATORIES, INC.

SOP: EMAX-310.1 Rev. 3 | Standardized Titrant HCl (N): 0.02 | Book #: AAL-031

Start Date/Time: 11/29/11 12:32 | End Date/Time: 11/29/11 16:04 | Page: 4

Data File Name	Lab Sample ID	Sample Amount (ml)	Volume of Acid Titant (A) ml pH=8.3	Volume of Acid Titant (B) ml pH=4.5	Vol of Acid Titant (C) ml pH=4.2	ALKALINITY (mg/L) TOTAL[P]	TOTAL[T]	[OH]	[CO_3]	[HCO_3]	NOTES
ALK013-01	ALK013WB	100	NA	0.15	0.29	ND	ND	ND	ND	ND	
ALK013-02	ALK013WL	10	1.3	2.19	NA	130	219	41	178	ND	
ALK013-03	ALK013WC	10	1.29	2.15	NA	129	215	43	172	ND	
ALK013-04	K133-01	3	NA	1.14	NA	ND	380	ND	ND	380	
ALK013-05	K133-01D	3	NA	1.14	NA	ND	380	ND	ND	380	
ALK013-06	K133-02	5	NA	1.22	NA	ND	244	ND	ND	244	
ALK013-07	K133-03	1	NA	2.01	NA	ND	2010	ND	ND	2010	
ALK013-08	K133-04	5	NA	1.63	NA	ND	326	ND	ND	326	
ALK013-09	K133-05	5	NA	1.47	NA	ND	294	ND	ND	294	
ALK013-10	K145-02	3	NA	1.31	NA	ND	437	ND	ND	437	
ALK013-11	K145-03	3	NA	1.33	NA	ND	443	ND	ND	443	
ALK013-12	K145-04	3	NA	1.4	NA	ND	467	ND	ND	467	
ALK013-13	K145-05	10	NA	2.68	NA	ND	268	ND	ND	268	
ALK013-14	K145-07	3	NA	1.59	NA	ND	530	ND	ND	530	
ALK013-15	K145-08	2	NA	1.55	NA	ND	775	ND	ND	775	
ALK013-16	K145-08D	2	NA	1.56	NA	ND	780	ND	ND	780	
ALK013-17	K145-09	1	NA	1.84	NA	ND	1840	ND	ND	1840	
ALK013-18	K145-11	2	NA	1.8	NA	ND	900	ND	ND	900	
ALK013-19	K145-11D	2	NA	1.82	NA	ND	910	ND	ND	910	
ALK013-20	K145-12	5	NA	1.51	NA	ND	302	ND	ND	302	
ALK013-21	K205-01	2	NA	2.36	NA	ND	1180	ND	ND	1180	
ALK013-22	K205-01D	2	NA	2.4	NA	ND	1200	ND	ND	1200	
ALK013-23	K205-02	2	NA	1.28	NA	ND	640	ND	ND	640	
ALK013-24	K205-03	1	NA	2.64	NA	ND	2640	ND	ND	2640	
ALK013-25	K188-03	3	NA	2.01	NA	ND	670	ND	ND	670	

Re 11/29/11

Analytical Batch: ALK013 Analyzed by: RC

MISCELLANEOUS INFORMATION

Standard	Concentration	
Acid Titrant, HCl	0.02	N
Na_2CO_3 (Zor Z_{ph})*	2.63	g/L
LCS	200	mg/L
MS	100	mg/L
MDL	5	mg/L
RL	5	mg/L

ALKALINITY (mg/L)

$$P = \frac{(A)(N)(50,000)}{S}$$

$$T = \frac{(2B-C)(N)(50,000)}{S} \quad for\ T < 20mg/L$$

$$T = \frac{(B)(N)(50,000)}{S} \quad for\ T > 20mg/L$$

Lab Control Sample — QC Limit: 80-120

Sample ID	Result	Rec.	RPD	Comments
ALK013WL	219	95%		%Rec. Passed
ALK013WC	215	93%	2%	%Rec. Passed

Matrix Spike — QC Limit: 75-125

Sample ID	Result	Rec.	RPD	Comments

Sample Duplicate — QC Limit: ≤ 20

Sample ID	Result	RPD	Comments
K133-01	380		
K133-01D	380	0%	Passed
K145-08	775		
K145-08D	780	1%	Passed

Matrix Spike — QC Limit: 75-125

Sample ID	Result	Rec.	RPD	Comments

Sample Duplicate — QC Limit: ≤ 20

Sample ID	Result	RPD	Comments
K145-11	900		Passed
K145-11D	910	1%	
K205-01	1180		Passed
K205-01D	1200	2%	

8657

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K188

METHOD 2540C
TOTAL DISSOLVED SOLIDS

One (1) water sample was received on 11/21/11 for Total Dissolved Solids analysis, Method 2540C in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Balance calibration was checked as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TDK012WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2540C
TOTAL DISSOLVED SOLIDS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K188

Matrix : WATER
Instrument ID : 40706360

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TDK012WB	ND	1	NA	20.0	20.0	11/21/1117:15	NA	TDK01201	NA	TDK012W	NA	NA
LCS1W	TDK012WL	1010	1	NA	20.0	20.0	11/21/1117:15	NA	TDK01202	NA	TDK012W	NA	NA
LCD1W	TDK012WC	985	1	NA	20.0	20.0	11/21/1117:15	NA	TDK01203	NA	TDK012W	NA	NA
IW-70-SHB310-161	K188-03	7900	1	NA	20.0	20.0	11/21/1117:15	NA	TDK01221	NA	TDK012W	11/21/1113:34	11/21/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K188
METHOD: METHOD 2540C

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TDK012WB	TDK012WL	TDK012WC		
LAB FILE ID:	TDK01201	TDK01202	TDK01203		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/21/1117:15	11/21/1117:15	11/21/1117:15	DATE RECEIVED:	NA
PREP. BATCH:	TDK012W	TDK012W	TDK012W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TDS	ND	1000	1010	101	1000	985	98	3	80-120	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
GRAVIMETRIC

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AGV-047

Balance ID: 40706360

Analytical Batch: 40K012

SOP #	Rev. #
☐ EMAX-160.1	6
☐ EMAX-160.2	4
☐ EMAX-160.3	2
☐ EMAX-2540B	1
☑ EMAX-2540C	5
☐ EMAX-2540D	1

STANDARDS ID	CONC. (mg/L)
LCS SW2-02-914	1000

Micropipette ID: 4384P1331

Analyzed By: NM

Date: 11/22/11

GRAVIMETRIC ANALYSES
RAW DATA

EMAX LABORATORIES

Analytical Batch: TDK012C Instrument ID: 40706360 Oven Temp IN (°C): 180 Oven Temp OUT (°C): 180 SOP: EMAX160.1 Rev. 3

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish #	Dish (g)	Date	Time	1st Dry Weight + Dish (g)	Date	Time	2nd Dry Weight + Dish (g)	Date	Time	3rd Dry Weight + Dish (g)	Date	Time	Difference 1st & 2nd Dry Wt. Rdg	Difference 2nd & 3rd Dry Wt. Rdg. (<0.5mg)	NOTES
TDK01201	TDK012WB	100	B	70.7043	11/21/11	17:15	70.7046	11/22/11	10:16	70.7042	11/22/11	13:07	70.7042	11/22/11	13:07	-0.0004	0.0	
TDK01202	TDK012WL	20	L	21.5853	11/21/11	17:15	21.6056	11/22/11	10.17	21.6055	11/22/11	13:08	21.6055	11/22/11	13:08	-1E-04	0.0	
TDK01203	TDK012WC	20	C	21 3964	11/21/11	17:16	21.4162	11/22/11	10:17	21.4161	11/22/11	13:08	21.4161	11/22/11	13:08	-1E-04	0.0	
TDK01204	K133-01	5	1	21.4421	11/21/11	17:16	21.5369	11/22/11	10 17	21.5366	11/22/11	13:08	21.5366	11/22/11	13:08	-0.0003	0.0	
TDK01205	K133-01D	5	2	21.5316	11/21/11	17:16	21.6276	11/22/11	10:17	21.6275	11/22/11	13.09	21.6275	11/22/11	13:09	-1E-04	0.0	
TDK01206	K133-02	5	3	21.5443	11/21/11	17:16	21.5645	11/22/11	10:18	21.5646	11/22/11	13.09	21.5646	11/22/11	13:09	1E-04	0.0	
TDK01207	K133-03	5	4	21.5660	11/21/11	17:17	21.675	11/22/11	10.18	21.6748	11/22/11	13:10	21.6748	11/22/11	13:10	-0.0002	0.0	
TDK01208	K133-04	5	5	21.3858	11/21/11	17:17	21.4352	11/22/11	10.18	21.4352	11/22/11	13:10	21 4352	11/22/11	13:10	0	0.0	
TDK01209	K133-05	10	6	21.4704	11/21/11	17:17	21.5095	11/22/11	10:18	21.5094	11/22/11	13:10	21.5094	11/22/11	13:10	-1E-04	0.0	
TDK01210	K145-02	5	7	21.5407	11/21/11	17.17	21.6761	11/22/11	10:19	21.676	11/22/11	13:11	21.676	11/22/11	13:11	-0 0001	0.0	
TDK01211	K145-03	5	8	21.4450	11/21/11	17:18	21.58	11/22/11	10:19	21.5797	11/22/11	13:11	21.5797	11/22/11	13:11	-0 0003	0.0	
TDK01212	K145-04	2	9	21.3521	11/21/11	17:18	21.4296	11/22/11	10 19	21.4297	11/22/11	13:11	21.4297	11/22/11	13:11	1E-04	0.0	
TDK01213	K145-05	2	10	21 4281	11/21/11	17:18	21.4888	11/22/11	10.20	21.4891	11/22/11	13:12	21.4891	11/22/11	13 12	0.0003	0.0	
TDK01214	K145-07	2	11	21.4600	11/21/11	17 18	21.5514	11/22/11	10.20	21.5513	11/22/11	13 12	21.5513	11/22/11	13.12	-1E-04	0 0	
TDK01215	K145-08	20	12	21.3646	11/21/11	17 19	21.4095	11/22/11	10 20	21.4098	11/22/11	13:12	21.4098	11/22/11	13.12	0.0003	0 0	
TDK01216	K145-08D	20	13	21 4968	11/21/11	17:19	21.5411	11/22/11	10:20	21.5411	11/22/11	13:12	21.5411	11/22/11	13.12	0	0.0	
TDK01217	K145-09	10	14	21 4796	11/21/11	17:19	21 5337	11/22/11	10:21	21.534	11/22/11	13:13	21.534	11/22/11	13:13	0 0003	0.0	
TDK01218	K145-11	20	15	21 4383	11/21/11	17:19	21.4835	11/22/11	10:21	21.4839	11/22/11	13:13	21.4839	11/22/11	13:13	0 0004	0.0	
TDK01219	K145-11D	20	16	21 3611	11/21/11	17:20	21.4067	11/22/11	10:21	21.4071	11/22/11	13:13	21.4071	11/22/11	13.13	0 0004	0.0	
TDK01220	K145-12	2	17	21 4178	11/21/11	17:20	21.4946	11/22/11	10:22	21 4947	11/22/11	13:14	21.4947	11/22/11	13:14	0 0001	0.0	
TDK01221	K186-03	10	18	21 4938	11/21/11	17:20	21.5724	11/22/11	10 22	21.5728	11/22/11	13:14	21.5728	11/22/11	13.14	0 0004	0.0	

NM 11/22/11

Beginning Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0 1	0.1000	11/21/11 17 14	PASSED
5	5.0000	11/21/11 17:14	PASSED
100	99 9978	11/21/11 17 14	PASSED

Ending Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/21/11 17:21	PASSED
5	5 0000	11/21/11 17 21	PASSED
100	99.9978	11/21/11 17 21	PASSED

Beginning Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0 1	0.1000	11/22/11 10:15	PASSED
5	5 0000	11/22/11 10.15	PASSED
100	99 9991	11/22/11 10:16	PASSED

Ending Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0 1000	11/22/11 13.14	PASSED
5	5.0000	11/22/11 13.14	PASSED
100	99.9988	11/22/11 13 15	PASSED

Acceptance Criteria: ± 0.1% OR 0.05 mg whichever is greater

LCS Conc. 1000 mg/L MDL: 10 mg/L RL: 10 mg/L Initial Rdg by NM Final Rdg by NM Reviewed by NM

Remarks. Date 11/22/11

LABORATORIES INC.

GRAVIMETRIC CALCULATION

Analytical Batch: TDK012 Start Date/Time: 11/21/11 17:15 Temp IN(°C): 180

Balance ID: 40706360 End Date/Time: 11/22/11 13:14 Temp Out(°C): 180

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish (g)	Dry Weight + Dish (g)	SOLIDS (mg)	RESULT (mg/L)	NOTES
TDK01201	TDK012WB	100	70.7043	70.7042	-0.1000	ND	
TDK01202	TDK012WL	20	21.5853	21.6055	20.2000	1010	101
TDK01203	TDK012WC	20	21.3964	21.4161	19.7000	985	99
TDK01204	K133-01	5	21.4421	21.5366	94.5000	18900	
TDK01205	K133-01D	5	21.5316	21.6275	95.9000	19200	
TDK01206	K133-02	5	21.5443	21.5646	20.3000	4060	
TDK01207	K133-03	5	21.566	21.6748	108.8000	21800	
TDK01208	K133-04	5	21.3858	21.4352	49.4000	9880	
TDK01209	K133-05	10	21.4704	21.5094	39.0000	3900	
TDK01210	K145-02	5	21.5407	21.676	135.3000	27100	
TDK01211	K145-03	5	21.445	21.5797	134.7000	26900	
TDK01212	K145-04	2	21.3521	21.4297	77.6000	38800	
TDK01213	K145-05	2	21.4281	21.4891	61.0000	30500	
TDK01214	K145-07	2	21.46	21.5513	91.3000	45700	
TDK01215	K145-08	20	21.3646	21.4098	45.2000	2260	
TDK01216	K145-08D	20	21.4968	21.5411	44.3000	2210	
TDK01217	K145-09	10	21.4796	21.534	54.4000	5440	
TDK01218	K145-11	20	21.4383	21.4839	45.6000	2280	
TDK01219	K145-11D	20	21.3611	21.4071	46.0000	2300	
TDK01220	K145-12	2	21.4178	21.4947	76.9000	38500	
TDK01221	K188-03	10	21.4938	21.5728	79.0000	7900	
						NM 11/22/11	

LCS Concentration: 1000 mg/L MDL(mg/L): 10 Initial Reading by: NM

SOP: EMAX160.1 Rev. 3 RL (mg/L): 10 Final Reading by: NM

Remarks:

Reviewed by: NM

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K188

METHOD 4500F
DISSOLVED HYDROGEN SULFIDE

One (1) water sample was received on 11/21/11 for Dissolved Hydrogen Sulfide analysis, Method 4500F in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
The sample was analyzed within the prescribed holding time.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 4500F
Dissolved Hydrogen Sulfide

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K188

Matrix : WATER
Instrument ID : NA

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	HSK005WB	ND	1	NA	1.00	1.00	11/23/1114:35	NA	HSK00511	NA	HSK005W	NA	NA
1W-70-SHB310-161	K188-03	9.14	1	NA	1.00	1.00	11/23/1115:15	NA	HSK00510	NA	HSK005W	11/21/1113:34	11/21/11

8075

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
SULFIDE

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Book #: ASD-018

Analytical Batch: HSK005

Comments:

Presence of analyte was confirmed using colorimetric method.

Abs @ 664

Blank (0ppm) = 0

1ppm = 0.665

188-03 @ 1X = 1.999

205-03 @ 1X = 1.999

188-03 @ 20X = 0.396

205-03 @ 20X = 0.392

SOP #	Rev. #
☐ EMAX-376.1	3
☐ EMAX-9034	0
☐ EMAX-4500-S2F	1
☑ EMAX-4500-S2H	0
☐ EMAX-	

STANDARDS ID	conc.
LCS SWI-01-422	8.48
Spike NA	NA
$Na_2S_2O_3$ Standard SWRI-01-384	0.0248
Iodine SWRI-01-465	0.0250
HCl SWPI-007-60-03	6N
Indicator SWRI-01-340	–

Analyzed By: NM

Date: 11/23/11

8076

SM4500-S^2 H

EMAX LABORATORIES, INC.

ANALYSIS FOR UN-IONIZED HYDROGEN SULFIDE

Method SM4500-S2-H **Analytical Batch:** HSK005

Data File Name	Lab Sample ID	Sulfide	Unit	Date Time	Temp. °C	pH	Conductivity µS/cm	H2S	Unit	COMMENTS
HSK0051	HSK005WB	ND	mg/L	11/23/11 14:35				ND	mg/L	
HSK0052	HSK005WL	7.1	mg/L	11/23/11 14:37				#VALUE!	mg/L	
HSK0053	HSK005WC	7.06	mg/L	11/23/11 14:40				#VALUE!	mg/L	
HSK0054	K184-01	ND	mg/L	11/23/11 14:43	24.9	7.25	7200	ND	mg/L	
HSK0055	K184-02	ND	mg/L	11/23/11 14:49	25.2	7.27	12920	ND	mg/L	
HSK0056	K184-03	ND	mg/L	11/23/11 14:52	24.8	6.63	6440	ND	mg/L	
HSK0057	K184-04	ND	mg/L	11/23/11 14:55	24.9	6.8	11310	ND	mg/L	
HSK0058	K184-05	ND	mg/L	11/23/11 15:02	25	6.42	14650	ND	mg/L	
HSK0059	K187-01	ND	mg/L	11/23/11 15:07	24.9	7.67	7770	ND	mg/L	
HSK00510	K188-03	9.33	mg/L	11/23/11 15:15	25	5.18	9651	9.14	mg/L	
HSK00511	K205-01	ND	mg/L	11/23/11 15:33	25.1	6.53	8600	ND	mg/L	
HSK00512	K205-01D	ND	mg/L	11/23/11 15:46	25	6.56	8510	ND	mg/L	
HSK00513	K205-02	ND	mg/L	11/23/11 16:04	25.1	6.54	1608	ND	mg/L	
HSK00514	K205-03	9.76	mg/L	11/23/11 16:07	25.1	6.93	7530	4.53	mg/L	
HSK00515	K205-04	ND	mg/L	11/23/11 16:10	25	6.57	7.47	ND	mg/L	
HSK00516	K205-05	ND	mg/L	11/23/11 16:13	24.8	6.55	6.57	ND	mg/L	

11/23/11
NM

$$pK_1 = 32.5 + 1519.44/T - 15.672\log_{10}T + 0.02722T$$

$$A = 0.7083 - 2.277x10^{-3}T + 5.399x10^{-6}T^2$$

$$I = 1.6x10^{-5}\,Conductivity$$

$$pf_m = A\left(\frac{\sqrt{I}}{1+\sqrt{I}} - 0.3\right)$$

$$K'_1 = 10^{-pK_1+2pf_m} \quad H_2S = \left(\frac{S_T}{1+\frac{K'_1}{H^+}}\right)$$

$$H^+ = 10^{-pH+pf_m}$$

Analyzed by: NM

Reviewed by: NM

Date: 11/23/2011

Where: T(°K)= T°C+272.15 pK1=dissociation constant for zero ionic strength A= Debye-Huckel Parameter I= Ionic Strength pfm=negative logarithm of the monovalent ion activity coefficient K'_1=conditional ionization constant H^+=Hydrogen ion concentration S_T=Total Sulfide Concentration

E-MAX LABORATORIES, INC.

ANALYSIS FOR SULFIDE

Method: SM4500-S2-H Analytical Batch: HSK005 Book #: ASD-018 Page: 15

Data File Name	Lab Sample ID	V_e (ml)	V_i (ml)	Volume of Titant V_t (ml)	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Sulfide	Sample Result	Flag J	Unit
HSK0051	HSK005WB	100	2.5	2.53	11/23/11	14:35:06	-0.03904	ND		mg/L
HSK0052	HSK005WL	100	2.5	0.73	11/23/11	14:37:35	7.10336	7.1		mg/L
HSK0053	HSK005WC	100	2.5	0.74	11/23/11	14:40:59	7.06368	7.06		mg/L
HSK0054	K184-01	100	2.5	2.56	11/23/11	14:43:56	-0.15808	ND		mg/L
HSK0055	K184-02	100	2.5	2.61	11/23/11	14:49:19	-0.35648	ND		mg/L
HSK0056	K184-03	100	2.5	2.61	11/23/11	14:52:02	-0.35648	ND		mg/L
HSK0057	K184-04	100	2.5	2.7	11/23/11	14:55:15	-0.7136	ND		mg/L
HSK0058	K184-05	100	2.5	2.44	11/23/11	15:02:32	0.31808	ND		mg/L
HSK0059	K187-01	100	2.5	2.62	11/23/11	15:07:11	-0.39616	ND		mg/L
HSK00510	K188-03	100	5	2.69	11/23/11	15:15:41	9.32608	9.33		mg/L
HSK00511	K205-01	100	2.5	2.59	11/23/11	15:33:29	-0.27712	ND		mg/L
HSK00512	K205-01D	100	2.5	2.6	11/23/11	15:46:00	-0.3168	ND		mg/L
HSK00513	K205-02	100	2.5	2.7	11/23/11	16:04:37	-0.7136	ND		mg/L
HSK00514	K205-03	100	5	2.58	11/23/11	16:07:35	9.76256	9.76		mg/L
HSK00515	K205-04	100	2.5	2.55	11/23/11	16:10:02	-0.1184	ND		mg/L
HSK00516	K205-05	100	2.5	2.51	11/23/11	16:13:02	0.04032	ND		mg/L

NM 11/23/11

STANDARDIZATION

V_I (ml)	V_{Na2SO3} (ml)	DATE	TIME	Titrant Na_2SO_3 (N)
Average Normality of Iodine (NI)=				0.025

☑ Standard Purchased as Certified Solution

$$N_I = \frac{(N * V)_{Na_2SO_3}}{V_I}$$

MISCELLANEOUS INFORMATION

Standard	Concentration		Unit
Iodine	0.025		N
$Na_2S_2O_3$	0.0248		N
LCS [WATER | SOIL]	8.48	84.8	mg/L | mg/Kg
MDL [WATER | SOIL]	1	10	mg/L | mg/Kg
RL	1	10	mg/L | mg/Kg

$$S(mg/L) = \frac{[(V_I * N_I) - (V_t * N_t)](16{,}000)}{V_S}$$

MS/MSD	TV=	8.48	mg/L
ID	Result (mg/L)	%Rec.	RPD

Comments:

Analyzed By: NM

8/28

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K188

METHOD SM5310B
TOC

One (1) water sample was received on 11/21/11 for Total Organic Carbon analysis, Method SM5310B in accordance with Standard Methods for the Examination of Water and Wastewater, 18th Edition.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TCK019WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD SM5310B
TOC

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K188

Matrix : WATER
Instrument ID : 162

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TCK019WB	ND	1	NA	1.00	0.500	11/29/1114:16	NA	TCK013-05	TCK013-02	TCK019W	NA	NA
LCS1W	TCK019WL	24.6	1	NA	1.00	0.500	11/29/1114:29	NA	TCK013-06	TCK013-02	TCK019W	NA	NA
LCD1W	TCK019WC	24.8	1	NA	1.00	0.500	11/29/1114:41	NA	TCK013-07	TCK013-02	TCK019W	NA	NA
IW-70-SHB310-161	K188-03T	1670	100	NA	100	50.0	11/29/1115:18	NA	TCK013-10	TCK013-02	TCK019W	11/21/1113:34	11/21/11

0889

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K188
METHOD: METHOD SM5310B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TCK019WB	TCK019WL	TCK019WC		
LAB FILE ID:	TCK013-05	TCK013-06	TCK013-07		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/29/1114:16	11/29/1114:29	11/29/1114:41	DATE RECEIVED:	NA
PREP. BATCH:	TCK019W	TCK019W	TCK019W		
CALIB. REF:	TCK013-02	TCK013-02	TCK013-02		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	ND	25.0	24.6	98	25.0	24.8	99	1	85-115	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TOC

	Date	Time
Start	11/29/11	1228
End	11/29/11	1538

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

TCK019W
K217 SSW03 Solder reflled by Ye
K541 ↓
K188 ↓

2 M HCl SW4-01 -223

Book #:	A62-020
Instrument No.:	62
Pipette ID:	039380025
	SW3-01-33
	SI1A-01-4
Balance ID:	40706360
Analytical Sequence:	TCK013
Method File:	TCK013
Analytical Batch:	TCK019W

SOP #	Rev. #
☐ EMAX-415.1	2
☑ EMAX-5310B	1
☐ EMAX-9060	2
☐ EMAX-	

STANDARDS ID	CONC. (mg/L)
S0 nanopure	0
S1 SW10B-04-174	1
S2 ↓	5
S3	10
S4	40
S5	80
S6 —	—
ICV/LCS SW10B-04-180	25
CCV ↓ 179	25

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ TOC	
☐	

Analyzed By: AA

Date: 11/29/11

8082

	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
1	Standard	NPOC	ICAL	TCK013-01	0A-123456-	C:\Program	1.000		
2	Control	NPOC	ICV	TCK013-02	0A-123456-	C:\Program	1.000	NPOC:25.03 mg/L	
3	Unknown	NPOC	ICB	TCK013-03	0A-123456-	C:\Program	1.000	NPOC:0.1809 mg/	
4	Unknown	NPOC	HCO3\CO3	TCK013-04	0A-123456-	C:\Program	1.000	NPOC:0.2705 mg/	
5	Unknown	NPOC	TCK019WB	TCK013-05	0A-123456-	C:\Program	1.000	NPOC:0.1312 mg/	
6	Unknown	NPOC	TCK019WL	TCK013-06	0A-123456-	C:\Program	1.000	NPOC:24.60 mg/L	
7	Unknown	NPOC	TCK019WC	TCK013-07	0A-123456-	C:\Program	1.000	NPOC:24.79 mg/L	
8	Unknown	NPOC	K217-04	TCK013-08	0A-123456-	C:\Program	1.000	NPOC:0.6672 mg/	PH<2
9	Unknown	NPOC	K541-01T	TCK013-09	0A-123456-	C:\Program	5.000	NPOC:149.3 mg/L	DF=5
10	Unknown	NPOC	K188-03T	TCK013-10	0A-123456-	C:\Program	100.0	NPOC:1668 mg/L	DF=100
11	Control	NPOC	CCV1	TCK013-11	0A-123456-	C:\Program	1.000	NPOC:24.50 mg/L	
12	Unknown	NPOC	CCB1	TCK013-12	0A-123456-	C:\Program	1.000	NPOC:0.1911 mg/	
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FINAL

Am 11/29/11

Instr.Information

System	toc
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Cal. Curve

Sample Name:	ICAL
Sample ID:	TCK013-01
Cal. Curve:	TCK013.2011_11_29_12_20_45.cal

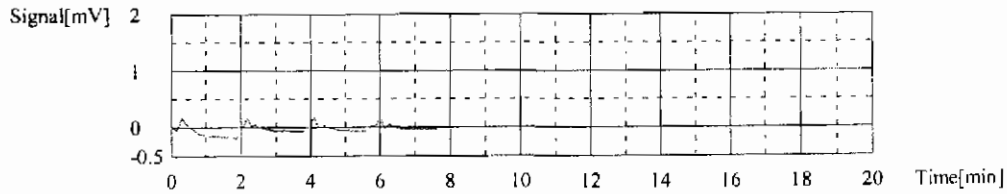
Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.000	50uL	1	*******		11/29/11 12:28:56 PM
2	0.000	50uL	1	*******		11/29/11 12:31:00 PM
3	0.000	50uL	1	*******		11/29/11 12:33:05 PM
4	0.000	50uL	1	*******		11/29/11 12:35:09 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 0.000

$\frac{\text{mean area}}{\text{slope}} = \frac{0.000}{2220} = 0.000$

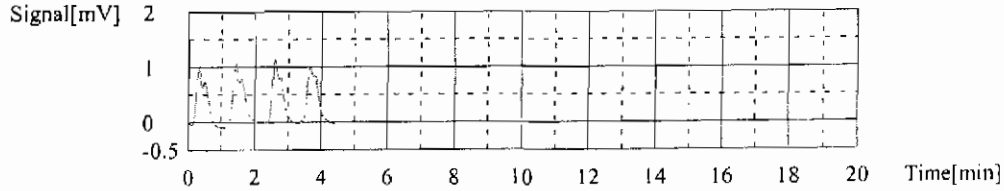


Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	2.093	50uL	10	*******		11/29/11 12:43:26 PM
2	2.145	50uL	10	*******		11/29/11 12:44:46 PM
3	2.281	50uL	10	*******		11/29/11 12:46:00 PM
4	2.248	50uL	10	*******		11/29/11 12:47:16 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 2.192

$\frac{A}{m} = \frac{2.192}{2220} = 0.0874$

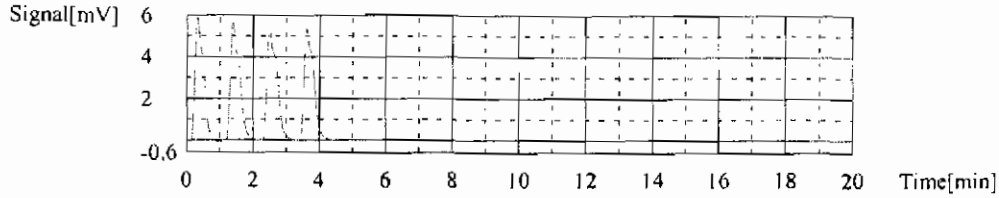


Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	10.83	50uL	2	*******		11/29/11 12:53:36 PM
2	10.85	50uL	2	*******		11/29/11 12:54:52 PM
3	10.93	50uL	2	*******		11/29/11 12:56:09 PM
4	10.85	50uL	2	*******		11/29/11 12:57:26 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 10.87

$\frac{\bar{A}}{m} = \frac{10.87}{2.220} = 4.896$

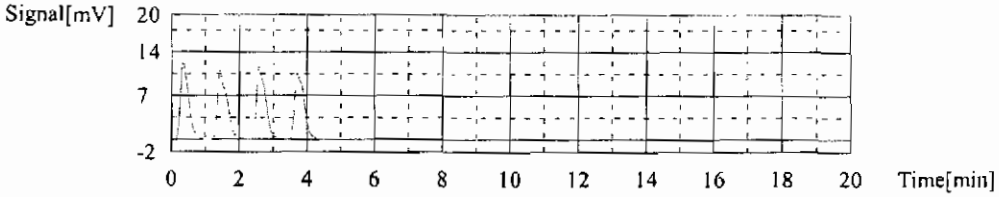


Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	21.52	50uL	1	*******		11/29/11 01:03:06 PM
2	21.78	50uL	1	*******		11/29/11 01:04:25 PM
3	21.89	50uL	1	*******		11/29/11 01:05:43 PM
4	21.43	50uL	1	*******		11/29/11 01:07:03 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 21.66

$\frac{\bar{A}}{m} = \frac{21.66}{2.220} = 9.757$

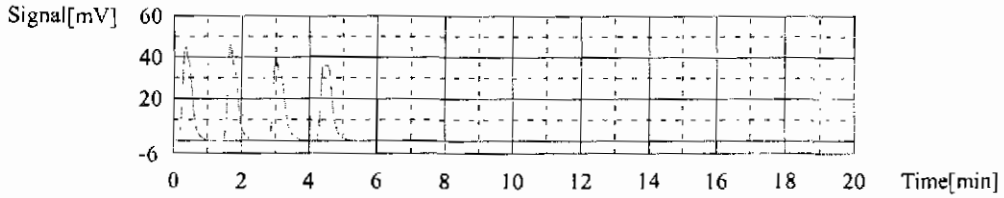


Conc: 40.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	85.57	50uL	2	*******		11/29/11 01:15:34 PM
2	85.94	50uL	2	*******		11/29/11 01:17:04 PM
3	86.06	50uL	2	*******		11/29/11 01:18:40 PM
4	87.80	50uL	2	*******		11/29/11 01:20:15 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 86.34

$\frac{\bar{A}}{m} = \frac{86.34}{2.220} = 38.89$

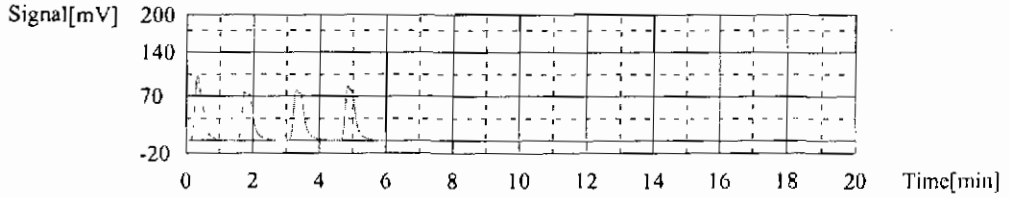


Conc: 80.00mg/L

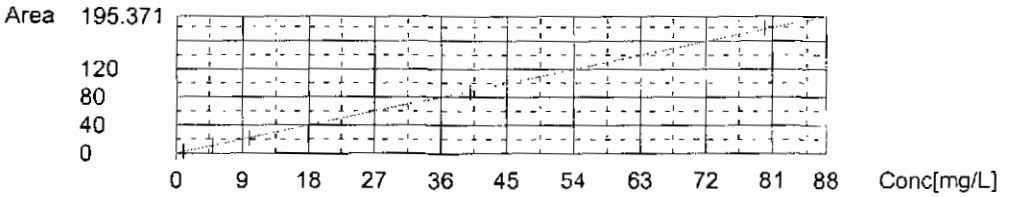
No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	177.9	50uL	1	*******		11/29/11 01:26:13 PM
2	177.2	50uL	1	*******		11/29/11 01:27:55 PM
3	178.8	50uL	1	*******		11/29/11 01:29:40 PM
4	178.7	50uL	1	*******		11/29/11 01:31:22 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 178.2

$\frac{\bar{A}}{m} = \frac{178.2}{2.220} = 80.27$



Slope: 2.220
Intercept 0.000
r^2 0.999780



8085

Control Sample

Sample Name: ICV
Sample ID: TCK013-02
Method: TCK013.tpl
Chk. Result: Control value: 25.03 / Control exceeds range!

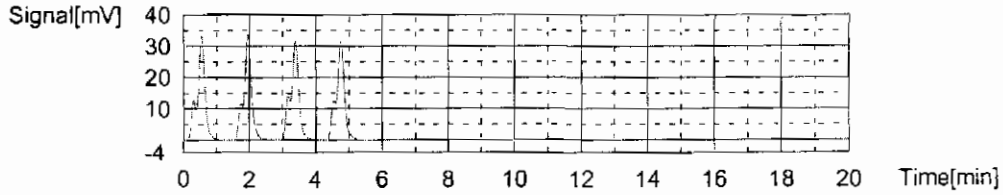
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:25.03 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.56	25.03mg/L	50uL	1		TCK013.2011_11_29_12_20_45.cal	11/29/11 01:39:30 PM
2	56.97	25.66mg/L	50uL	1		TCK013.2011_11_29_12_20_45.cal	11/29/11 01:41:06 PM
3	55.69	25.08mg/L	50uL	1		TCK013.2011_11_29_12_20_45.cal	11/29/11 01:42:39 PM
4	54.08	24.36mg/L	50uL	1		TCK013.2011_11_29_12_20_45.cal	11/29/11 01:44:11 PM

Mean Area 55.58
Mean Conc. 25.03mg/L



Sample

Sample Name: ICB
Sample ID: TCK013-03
Origin: TCK013.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1809 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.5458	0.2458mg/L	50uL	1		TCK013.2011_11_29_12_20_45.cal	11/29/11 01:51:45 PM
2	0.5121	0.2307mg/L	50uL	1		TCK013.2011_11_29_12_20_45.cal	11/29/11 01:52:54 PM
3	0.2761	0.1244mg/L	50uL	1		TCK013.2011_11_29_12_20_45.cal	11/29/11 01:54:00 PM
4	0.2722	0.1226mg/L	50uL	1		TCK013.2011_11_29_12_20_45.cal	11/29/11 01:55:07 PM

Mean Area 0.4016
Mean Conc. 0.1809mg/L

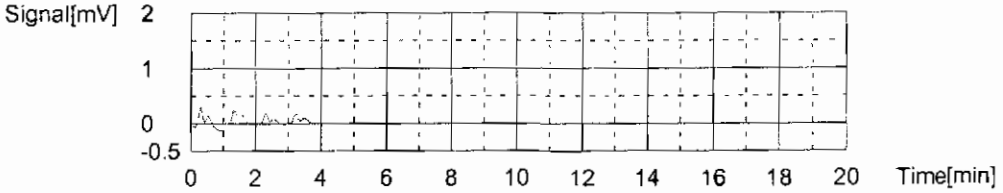


TABLE OF CONTENTS

CLIENT: **INSIGHT EEC, INC.**

PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11K205**

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Cover Letter, COC/Sample Receipt Form		1000 – 1004
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GC/MS-SVOA	**	3000 –
GC-VOA	METHOD RSK-175	4000 – 4033
GC-SVOA	**	5000 –
HPLC	**	6000 –
METALS	METHOD 3010A/6010B	7000 – 7038
WET	METHOD 300.0	8000 – 8038
	METHOD 300.0 (M)	8039 – 8079
	METHOD 2320B	8080 – 8086
	METHOD 2540C	8087 – 8093
	METHOD 4500F	8094 – 8099
	METHOD SM5310B	8100 – 8108
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 12-12-2011
EMAX Batch No.: 11K205

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 11/22/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
IW-70-SSB119-163	K205-01	11/22/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IW-70-SHB311-164	K205-02	11/22/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IW-70-SAT35-167	K205-03	11/22/11	WATER	ANIONS BY IC

Sample ID	Control #	Col Date	Matrix	Analysis
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IR-70-SB-165	K205-04	11/22/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IR-70-EB-166	K205-05	11/22/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IR-70-TB-162	K205-06	11/22/11	WATER	VOLATILE ORGANICS BY GC/MS
IW-70-SSB119-163MS	K205-01M	11/22/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
IW-70-SSB119-163MSD	K205-01S	11/22/11	WATER	DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				TOTAL ORGANIC CARBON
				ANIONS BY IC
				ORGANIC ACIDS BY IC
IW-70-SSB119-163DUP	K205-01D	11/22/11	WATER	ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

INS-0801

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011068-8042
SAMPLE STORAGE
EMAX CONTROL NO. * 11K205
PROJECT CODE: 4-77101

CLIENT: INSIGHT ECC, INC.
PROJECT: IN SITE 70 - NWS SEAL BEACH
COORDINATOR: NICK MEINBERGEN
TEL: 7146786700 FAX: 7146786701 EMAIL: NMEINBERGEN@
SEND REPORT TO: NICK MEINBERGEN ECCI.COM
COMPANY: INSIGHT ECC, INC.
ADDRESS: 3010 E MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: Ye Myint

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: Vol - 8260B; DISS MET CAMSB - PSK-175; WET CHEM; TOC - SM5310B; Sulfide - SM4500S; DISS METAL - 8260B; Vol - 8260B; DISS METAL CAMSB - PSK-175

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

	LAB	CLIENT (SAMPLE ID)	LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	Vol - 8260B (HC)	DISS METAL CAMSB - PSK-175 (HC)	WET CHEM (NP)	TOC - SM5310B (HC)	Sulfide - SM4500S (ZA)	DISS METAL - 8260B (HN)	Vol - 8260B (NP)	DISS METAL CAMSB - PSK-175 (NP)	COMMENTS
1	1	IW-70-SSB119-163	IN SITE 70	11-21-11	1145	20	Many	Many	GW	III			X	X	X	X	X	X	MS/MSD, EFFLUENT WELL
2	2	IW-70-SHB311-164	IN SITE 70	11-22-11	1347	10	Many	Many	GW	III			X	X	X	X	X	X	EFFLUENT WELL.
3	3	IW-70-SAT35-167	IN SITE 70	11-22-11	1623	10	Many	Many	GW	III			X	X	X	X			
	4																		
	5																		
	6																		
	7																		
4	8	IW-70-SB-165	IN SITE 70	11-22-11	1415	10	Many	Many	GW	III	X	X	X	X	X	X			SOURCE BLANK
5	9	IW-70-EB-166	IN SITE 70	11-22-11	1420	10	Many	Many	GW	III	X	X	X	X	X	X			EQUIPMENT BLANK
6	0	IW-70-TB-162	IN SITE 70	11-22-11	0830	2	40mL	VOA	GW	III	X								TRIP BLANKS.

Instructions: WET CHEM ANALYSIS AS FOLLOWS: ANIONS - 300.0, VFA's - 300.0M, TDS - SM2540C, ALKALINITY - SM2320B, DHS - SM4500, UNLESS NOTED OTHERWISE IN COMMENTS.

Cooler #	Temp. (°C)
1	2.7°C

Sample #s

SAMPLER: CHASE BROTSON

COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-22-11	1735	[signature]
[signature]	11/22/11	17:56	[signature]

NOTICE. Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associated with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

1502

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11 K205
☑ EMAX Courier	SEE COC	Recepient I PATEL
☐ Client Delivery		Date 11/22/11
☐ Third Party		Time

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☑ Preservative (if any)	☑ TAT
Safety Issues	☑ None	☐ High concentrations expected	☐ Superfund Site samples	☐ Rad screening required	

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	No ☑ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☑ Plastic Bag
Temperatures (Cool, ≤6 °C but not frozen)	A ☑ Cooler 1 2.7 °C	☐ Cooler 2 ____ °C	☐ Cooler 3 ____ °C	☐ Cooler 4 ____ °C	☐ Cooler 5 ____ °C
	☐ Cooler 6 ____ °C	☐ Cooler 7 ____ °C	☐ Cooler 8 ____ °C	☐ Cooler 9 ____ °C	☐ Cooler 10 ____ °C

Thermometer: *A - S/N 101541371* *B - S/N 101541382*

Comments: ☐ **PM was informed on non-compliant coolers immediately.**

Note: **pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time .**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code
01, 02			VOC & RSK vial's	R5, R6
			Label Reads Pres/HCl	
			COC Reads unpres.	
03			Rec'd (6) vials for	R5, R7, R6
			VOCs & RSK175, Label	
			Reads HCl. No info	
			on COC, Analysis	
			Not Requested on COC.	
02	024-026		All (3) vials for RSK175	R5, R8
			Rec'd w/ Big Bubble	
			~ ~~2mm size~~ (< 6 mm)	
01		Collection DATE	2MM Size	R5, R9
		11/22/11 on labels	COC Reads 11/21/11	

REVIEWS

Sample Labeling _____ Date 11/22/11

SRF _____ Date 11/22/11

PM _____ Date 11/22/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4		E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	Inform client
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	Analyse within 7 days from collection
B3	Sample ID is inconsistent in COC vis-a-vis label	F2	Bubble is> 6mm	R7	Analyse for VOCs and RSK175
B4		G1	Temperature is out of range	R8	Use vials without any bubbles first.
C1	Wrong container	G2	Out of Holding Time	R9	Login as 11/22/11
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1			
C4		H2			

Ye Myint

From: Nick Weinberger [NWeinberger@ieeci.com]
Sent: Tuesday, November 29, 2011 8:26 AM
To: Ye Myint
Subject: RE: Logins for Seal Beach

Ye,

For samples IR-70-SB-165 and IR-70-EB-166 We should only be running VOCs (82690B), Anions (EPA 300), and Dissolved Metals (EPA 6010B/6020). If we can still cancel other tests not started, that would be great.

This will be true for all other -EB- and -SB- samples as well, if we have any other logins.

Thanks,
Nick

Nicholas M. Weinberger, Project Chemist
[illegible] Mountain Avenue Anaheim, CA 92806
T 714.678.6700 F 714.678.6711 www.ieeci.com

From: Ye Myint [mailto:YMyint@emaxlabs.com]
Sent: Monday, November 28, 2011 7:12 PM
To: Nick Weinberger
Cc: 'Rebecca Lesher'
Subject: Logins for Seal Beach

Nick,

Attached are the logins and COCs information for SDG: 11K205. Please review and let me know if there are any corrections necessary. Thanks.

Ye Myint
Project Manager
EMAX Laboratories, Inc.
1835W 205th. St.
Torrance, CA 90501
Ph: 310-618-8889 x121
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E-mail: ymyint@emaxlabs.com

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[illegible]

[illegible]

[illegible]

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11K205

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K205

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of six (6) water samples were received on 11/22/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for VO03K25L/C were all within QC limits.

Matrix QC Sample
A set of MS/MSD was analyzed with the samples in this SDG.
Percent recoveries for K205-01M/S were within project QC limits.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Manual integration was applied to Chloroethane, Carbon disulfide in sample K205-03 and Carbon disulfide in sample K205-04 because of improper integration. Hence, the original chromatograms were retained with the initialed and dated corrected chromatograms. Manual integrations were concurred by a secondary reviewer. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K205
Instrument ID : T-003

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V003K25B	1	NA	11/23/1112:22	11/23/1112:22	RKB396	RHB444	V003K25	Method Blank
LCS1W	V003K25L	1	NA	11/23/1111:06	11/23/1111:06	RKB394	RHB444	V003K25	Lab Control Sample (LCS)
LCD1W	V003K25C	1	NA	11/23/1111:44	11/23/1111:44	RKB395	RHB444	V003K25	LCS Duplicate
IW-70-SSB119-163MS	K205-01M	1	NA	11/23/1113:38	11/23/1113:38	RKB398	RHB444	V003K25	Matrix Spike Sample (MS)
IW-70-SSB119-163MSD	K205-01S	1	NA	11/23/1114:17	11/23/1114:17	RKB399	RHB444	V003K25	MS Duplicate (MSD)
IW-70-SSB119-163	K205-01	1	NA	11/23/1114:55	11/23/1114:55	RKB400	RHB444	V003K25	Field Sample
IW-70-SHB311-164	K205-02	1	NA	11/23/1115:35	11/23/1115:35	RKB401	RHB444	V003K25	Field Sample
IR-70-TB-162	K205-06	1	NA	11/23/1116:13	11/23/1116:13	RKB402	RHB444	V003K25	Field Sample
IW-70-SAT35-167	K205-03	1	NA	11/23/1116:51	11/23/1116:51	RKB403	RHB444	V003K25	Field Sample
IR-70-SB-165	K205-04	1	NA	11/23/1117:28	11/23/1117:28	RKB404	RHB444	V003K25	Field Sample
IR-70-EB-166	K205-05	1	NA	11/23/1118:07	11/23/1118:07	RKB405	RHB444	V003K25	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/22/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/22/11
Batch No. : 11K205	Date Extracted: 11/23/11 14:55
Sample ID: IW-70-SSB119-163	Date Analyzed: 11/23/11 14:55
Lab Samp ID: K205-01	Dilution Factor: 1
Lab File ID: RKB400	Matrix : WATER
Ext Btch ID: V003K25	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.22J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	0.49J	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	0.74J	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	0.45J	1.0	0.20
TRANS-1,2-DICHLOROETHENE	0.43J	1.0	0.20
TRICHLOROETHENE	0.24J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	1.7	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.70	10.00	87.0	70-140
4-BROMOFLUOROBENZENE	9.07	10.00	90.7	70-130
TOLUENE-D8	9.15	10.00	91.5	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/22/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/22/11
Batch No. : 11K205	Date Extracted: 11/23/11 15:35
Sample ID: IW-70-SHB311-164	Date Analyzed: 11/23/11 15:35
Lab Samp ID: K205-02	Dilution Factor: 1
Lab File ID: RKB401	Matrix : WATER
Ext Btch ID: V003K25	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	6.7J	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	0.48J	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	1.7	1.0	0.20
TRANS-1,2-DICHLOROETHENE	1.1	1.0	0.20
TRICHLOROETHENE	0.30J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	2.1	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.60	10.00	86.0	70-140
4-BROMOFLUOROBENZENE	9.50	10.00	95.0	70-130
TOLUENE-D8	8.79	10.00	87.9	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/22/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/22/11
Batch No.	: 11K205	Date Extracted:	11/23/11 16:51
Sample ID:	IW-70-SAT35-167	Date Analyzed:	11/23/11 16:51
Lab Samp ID:	K205-03	Dilution Factor:	1
Lab File ID:	RKB403	Matrix	: WATER
Ext Btch ID:	V003K25	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	36	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	16	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	130	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.27J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	0.49J	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	0.50J	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	0.55J	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	0.29J	1.0	0.20
TRANS-1,2-DICHLOROETHENE	5.3	1.0	0.20
TRICHLOROETHENE	0.47J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	3.3	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.27	10.00	92.7	70-140
4-BROMOFLUOROBENZENE	9.11	10.00	91.1	70-130
TOLUENE-D8	9.27	10.00	92.7	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/22/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/22/11
Batch No.	: 11K205	Date Extracted:	11/23/11 17:28
Sample ID:	IR-70-SB-165	Date Analyzed:	11/23/11 17:28
Lab Samp ID:	K205-04	Dilution Factor:	1
Lab File ID:	RKB404	Matrix	: WATER
Ext Btch ID:	V003K25	% Moisture	: NA
Calib. Ref.:	RHB444	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	0.28J	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.26J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	0.29J	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	0.35J	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.06	10.00	90.6	70-140
4-BROMOFLUOROBENZENE	9.26	10.00	92.6	70-130
TOLUENE-D8	9.30	10.00	93.0	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/22/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/22/11
Batch No. : 11K205	Date Extracted: 11/23/11 18:07
Sample ID: IR-70-EB-166	Date Analyzed: 11/23/11 18:07
Lab Samp ID: K205-05	Dilution Factor: 1
Lab File ID: RKB405	Matrix : WATER
Ext Btch ID: V003K25	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	0.25J	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	0.28J	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	0.34J	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.26	10.00	92.6	70-140
4-BROMOFLUOROBENZENE	9.57	10.00	95.7	70-130
TOLUENE-D8	9.31	10.00	93.1	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/22/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/22/11
Batch No. : 11K205	Date Extracted: 11/23/11 16:13
Sample ID: IR-70-TB-162	Date Analyzed: 11/23/11 16:13
Lab Samp ID: K205-06	Dilution Factor: 1
Lab File ID: RKB402	Matrix : WATER
Ext Btch ID: V003K25	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.02	10.00	90.2	70-140
4-BROMOFLUOROBENZENE	9.35	10.00	93.5	70-130
TOLUENE-D8	9.30	10.00	93.0	70-140

QC SUMMARIES

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/23/11
Batch No. : 11K205	Date Extracted: 11/23/11 12:22
Sample ID: MBLK1W	Date Analyzed: 11/23/11 12:22
Lab Samp ID: V003K25B	Dilution Factor: 1
Lab File ID: RKB396	Matrix : WATER
Ext Btch ID: V003K25	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.76	10.00	87.6	70-140
4-BROMOFLUOROBENZENE	9.20	10.00	92.0	70-130
TOLUENE-D8	9.31	10.00	93.1	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	VO03K25B	VO03K25L	VO03K25C		
LAB FILE ID:	RKB396	RKB394	RKB395		
DATE EXTRACTED:	11/23/1112:22	11/23/1111:06	11/23/1111:44	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1112:22	11/23/1111:06	11/23/1111:44	DATE RECEIVED:	11/23/11
PREP. BATCH:	VO03K25	VO03K25	VO03K25		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.11	91	10.0	8.98	90	1	60-130	30
Benzene	ND	10.0	9.61	96	10.0	9.43	94	2	70-130	30
Chlorobenzene	ND	10.0	10.1	101	10.0	9.86	99	2	70-120	30
Toluene	ND	10.0	9.37	94	10.0	9.28	93	1	70-130	30
Trichloroethene	ND	10.0	9.84	98	10.0	9.63	96	2	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.88	89	10.0	8.69	87	70-140
4-Bromofluorobenzene	10.0	9.18	92	10.0	9.26	93	70-130
Toluene-d8	10.0	9.27	93	10.0	9.40	94	70-130

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	IW-70-SSB119-163				
LAB SAMP ID:	K205-01	K205-01M	K205-01S		
LAB FILE ID:	RKB400	RKB398	RKB399		
DATE EXTRACTED:	11/23/1114:55	11/23/1113:38	11/23/1114:17	DATE COLLECTED:	11/22/11
DATE ANALYZED:	11/23/1114:55	11/23/1113:38	11/23/1114:17	DATE RECEIVED:	11/22/11
PREP. BATCH:	V003K25	V003K25	V003K25		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	10.1	101	10.0	9.45	94	7	60-140	30
Benzene	ND	10.0	10.8	108	10.0	10.1	101	6	60-140	30
Chlorobenzene	ND	10.0	11.1	111	10.0	10.4	104	7	63-132	30
Toluene	0.451J	10.0	11.0	105	10.0	10.3	99	6	70-140	30
Trichloroethene	0.239J	10.0	11.2	110	10.0	10.6	104	6	60-140	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.84	88	10.0	8.58	86	70-140
4-Bromofluorobenzene	10.0	9.44	94	10.0	9.37	94	70-130
Toluene-d8	10.0	9.52	95	10.0	9.36	94	70-140

INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RHB438
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K205
BFB Injection Date : 08/16/11
BFB Injection Time : 11:15
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	26.25
75	30.0 - 60.0% of mass 95	54.23
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.88
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	60.88
175	5.0 - 9.0% of mass 174	4.93(8.1)1
176	95.0 - 101.0% of mass 174	58.41(96.0)1
177	5.0 - 9.0% of mass 176	4.58(7.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	VO03H161	RHB439	08/16/11	11:49
2	VSTD0.5	VO03H162	RHB440	08/16/11	12:24
3	VSTD01	VO03H163	RHB441	08/16/11	12:57
4	VSTD02	VO03H164	RHB442	08/16/11	13:32
5	VSTD05	VO03H165	RHB443	08/16/11	14:06
6	VSTD010	VO03H166	RHB444	08/16/11	14:40
7	VSTD020	VO03H167	RHB445	08/16/11	15:14
8	VSTD030	VO03H168	RHB446	08/16/11	15:48
9	VSTD040	VO03H169	RHB447	08/16/11	16:21
10	VSTD050	VO03H1610	RHB448	08/16/11	16:56
11	VSTD100	VO03H1611	RHB449	08/16/11	17:30
12	VSTD010	IVO03H161	RHB452	08/16/11	19:13

FORM V VOA OLM02.0

2015

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :03
Beginning DateTime :08/16/11 11:49
Spike Units :PPB
IC File :RHB444

Column Spec :ZB-624 ID :0.25MM
Ending DateTime :08/16/11 17:30
HPChem Method :V003H16

M	IDX	Parameters	.3 11:49 RHB439	.5 12:24 RHB440	1 12:57 RHB441	2 13:32 RHB442	5 14:06 RHB443	10 14:40 RHB444	20 15:14 RHB445	30 15:48 RHB446	40 16:21 RHB447	50 16:56 RHB448	100 17:30 RHB449	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	1	0	13.2029
	2	Chlorotrifluoroethylene	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	3	Dichlorodifluoromethane	0.333	0.326	0.343	0.357	0.358	0.429	0.335	0.363	0.324	0.341	0.375	0.353	8.52	4.1126
	4	Dichlorotetrafluoroethane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	5	Chloromethane	0.323	0.300	0.336	0.346	0.362	0.430	0.350	0.384	0.342	0.356	0.394	0.357	10.00	4.6120
	6	2-Chloro-1,1,1-trifluoroethane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	7	Vinyl chloride	0.290	0.283	0.319	0.335	0.351	0.415	0.336	0.355	0.320	0.334	0.372	0.337	10.93	4.9340
	8	Bromomethane	0.218	0.200	0.221	0.218	0.234	0.281	0.230	0.245	0.221	0.224	0.202	0.227	9.78	5.8582
	9	Chloroethane	0.155	0.158	0.171	0.167	0.178	0.217	0.174	0.189	0.173	0.178	0.189	0.177	9.63	6.1356
	10	Dichlorofluoromethane	0.720	0.721	0.765	0.755	0.776	0.817	0.754	0.797	0.735	0.750	0.809	0.764	4.35	6.6727
	11	Trichlorofluoromethane	0.483	0.478	0.529	0.539	0.564	0.666	0.530	0.573	0.516	0.533	0.585	0.545	9.58	6.7323
5	12	Acrolein	------	------	0.008	0.007	0.008	0.009	0.009	0.010	0.010	------	------	0.009	13.95	7.8523
	13	1,1,2-Trichloro-1,2,2-trifluoroethane	0.214	0.200	0.199	0.192	0.199	0.213	0.198	0.208	0.194	0.200	0.216	0.203	4.08	7.9826
5	14	Acetone	------	------	0.045	0.038	0.038	0.040	0.036	0.036	0.035	0.037	0.042	0.039	8.41	8.1846
	15	1,1-Dichloroethene	0.666	0.641	0.683	0.681	0.707	0.726	0.649	0.690	0.620	0.646	0.690	0.673	4.65	8.0029
	16	Methyl acetate	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	17	Iodomethane	0.595	0.558	0.625	0.620	0.644	0.683	0.622	0.668	0.610	0.629	0.689	0.631	6.13	8.3899
	18	Carbon disulfide	1.096	1.194	1.329	1.365	1.443	1.326	1.392	1.540	1.350	1.429	1.420	1.353	8.97	8.5144
	19	Methylene chloride	0.499	0.472	0.484	0.467	0.481	0.496	0.455	0.480	0.438	0.456	0.503	0.475	4.30	9.0800
5	20	tert-Butyl alcohol	------	0.011	0.011	0.011	0.012	0.013	0.012	0.012	0.011	0.012	0.014	0.012	6.87	9.2881
	21	tert-Butyl methyl ether (MTBE)	0.490	0.469	0.498	0.473	0.489	0.517	0.482	0.491	0.455	0.480	0.531	0.489	4.37	9.5102
	22	trans-1,2-Dichloroethene	0.675	0.662	0.683	0.699	0.701	0.732	0.668	0.711	0.642	0.662	0.708	0.686	3.87	9.5711
5	23	Acrylonitrile	0.033	0.031	0.034	0.033	0.035	0.038	0.036	0.038	0.035	0.037	0.041	0.036	7.73	9.6022
	24	Isopropyl ether (DIPE)	1.151	1.115	1.209	1.191	1.227	1.299	1.169	1.239	1.128	1.181	1.246	1.196	4.59	10.3302
	25	Vinyl acetate	------	0.309	0.374	0.410	0.409	0.470	0.412	0.419	0.353	0.382	0.476	0.401	12.58	10.3881
	26	1,1-Dichloroethane	0.733	0.691	0.747	0.754	0.775	0.806	0.727	0.770	0.691	0.721	0.755	0.743	4.72	10.3695
5	27	2-Butanol	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	28	tert-Butyl ethyl ether (ETBE)	0.820	0.794	0.868	0.845	0.869	0.915	0.834	0.888	0.805	0.851	0.926	0.856	4.96	10.9486
	29	2,2-Dichloropropane	0.645	0.638	0.680	0.663	0.654	0.651	0.579	0.585	0.526	0.522	0.512	0.605	10.34	11.3261
5	30	2-Butanone	0.080	0.076	0.068	0.060	0.063	0.068	0.062	0.063	0.060	0.062	0.067	0.066	10.11	11.3546
	31	cis-1,2-Dichloroethene	0.374	0.367	0.389	0.395	0.396	0.418	0.383	0.409	0.369	0.382	0.398	0.389	4.16	11.3600
	32	Bromochloromethane	0.290	0.292	0.316	0.301	0.313	0.334	0.301	0.316	0.291	0.302	0.324	0.307	4.66	11.7699
	33	Tetrahydrofuran	------	0.040	0.045	0.038	0.038	0.036	0.036	0.036	0.033	0.035	0.041	0.038	8.93	11.8229
	34	Chloroform	0.779	0.771	0.815	0.825	0.841	0.878	0.785	0.834	0.750	0.776	0.822	0.807	4.69	11.8606
5	35	tert-Amyl alcohol	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	36	Dibromofluoromethane	------	------	------	------	0.389	0.390	0.366	0.381	0.347	0.360	0.368	0.372	4.23	12.1220
	37	1,1,1-Trichloroethane	0.737	0.711	0.742	0.756	0.766	0.787	0.702	0.733	0.656	0.674	0.689	0.723	5.57	12.1312
	38	Cyclohexane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	39	tert-Amyl methyl ether (TAME)	0.119	0.125	0.141	0.132	0.137	0.146	0.130	0.135	0.124	0.128	0.137	0.132	5.96	12.7415
	40	1,2-Dichloroethane-d4	------	------	------	------	0.405	0.399	0.376	0.375	0.347	0.364	0.381	0.378	5.20	12.6515
	41	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	1	0	17.1946
	42	1,1-Dichloropropene	0.194	0.191	0.194	0.202	0.199	0.214	0.195	0.210	0.187	0.194	0.202	0.198	4.08	12.3667
	43	Carbon tetrachloride	0.651	0.632	0.695	0.701	0.694	0.726	0.654	0.705	0.628	0.664	0.700	0.677	4.82	12.3748
	44	Benzene	1.610	1.539	1.609	1.645	1.618	1.728	1.560	1.733	1.533	1.641	------	1.622	4.28	12.7061
	45	1,2-Dichloroethane	0.477	0.486	0.520	0.521	0.517	0.534	0.479	0.506	0.456	0.484	0.524	0.500	5.00	12.7645
	46	Trichloroethene	0.439	0.414	0.425	0.434	0.440	0.469	0.434	0.477	0.426	0.452	0.484	0.445	5.11	13.6183
	47	Methylcyclohexane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	48	1,2-Dichloropropane	0.392	0.391	0.404	0.409	0.418	0.443	0.407	0.444	0.391	0.421	0.444	0.415	5.04	13.9674
20	49	1,4-Dioxane	------	------	------	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	13.98	14.1284
	50	Dibromomethane	0.173	0.185	0.186	0.192	0.196	0.207	0.195	0.208	0.188	0.203	0.223	0.196	7.00	14.1839
	51	Bromodichloromethane	0.568	0.548	0.588	0.615	0.635	0.668	0.614	0.663	0.593	0.639	0.688	0.620	7.03	14.3490
	52	2-Chloroethyl vinyl ether	0.127	0.109	0.107	0.108	0.119	0.128	0.126	0.136	0.125	0.135	0.157	0.125	11.72	14.6453
	53	cis-1,3-Dichloropropene	0.559	0.576	0.607	0.629	0.639	0.692	0.640	0.694	0.622	0.667	0.716	0.640	7.70	14.9159
5	54	4-Methyl-2-pentanone	0.216	0.203	0.202	0.183	0.194	0.211	0.195	0.203	0.189	0.204	0.221	0.202	5.64	15.0350
	55	Toluene-d8	------	------	------	------	1.414	1.463	1.383	1.491	1.335	1.437	------	1.420	3.97	15.2566
	56	Toluene	1.743	1.699	1.754	1.765	1.767	1.866	1.709	1.870	1.659	1.763	------	1.759	3.81	15.3480
	57	Ethyl methacrylate	0.317	0.290	0.311	0.307	0.328	0.349	0.328	0.342	0.314	0.337	0.367	0.326	6.64	15.5912
	58	trans-1,3-Dichloropropene	0.444	0.436	0.476	0.491	0.506	0.549	0.503	0.533	0.486	0.523	0.562	0.501	8.00	15.6345

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	59	1,1,2-Trichloroethane	0.200	0.210	0.215	0.211	0.215	0.232	0.213	0.227	0.205	0.220	0.240	0.217	5.48	15.9132
	60	Tetrachloroethene	0.394	0.381	0.379	0.375	0.383	0.402	0.368	0.401	0.355	0.377	0.390	0.382	3.71	16.0891
5	61	2-Hexanone	0.124	0.136	0.139	0.124	0.131	0.145	0.133	0.136	0.126	0.134	0.139	0.133	4.95	16.1081
	62	1,3-Dichloropropane	0.394	0.407	0.439	0.435	0.440	0.467	0.430	0.451	0.411	0.435	0.468	0.434	5.43	16.1405
	63	Dibromochloromethane	0.269	0.276	0.295	0.307	0.323	0.349	0.331	0.351	0.320	0.343	0.374	0.322	10.17	16.4869
	64	1,2-Dibromoethane	0.219	0.212	0.227	0.229	0.237	0.254	0.241	0.251	0.231	0.246	0.270	0.238	7.10	16.6723
	65	1-Chlorohexane	0.806	0.829	0.818	0.818	0.821	0.858	0.797	0.855	0.760	0.800	0.812	0.816	3.31	17.0363
	66	Chlorobenzene	1.013	0.966	0.986	1.007	1.015	1.077	0.995	1.068	0.945	0.996	1.033	1.009	3.91	17.2366
	67	Ethylbenzene	2.214	2.216	2.257	2.290	2.286	2.401	2.175	2.333	------	------	------	2.272	3.20	17.2809
	68	1,1,1,2-Tetrachloroethane	0.351	0.348	0.375	0.382	0.379	0.408	0.371	0.398	0.352	0.374	0.383	0.375	5.09	17.3137
2	69	m-Xylene & p-Xylene	1.793	1.710	1.756	1.784	1.773	1.830	1.658	1.696	------	------	------	1.750	3.27	17.4093
	70	o-Xylene	1.787	1.675	1.748	1.756	1.739	1.810	1.626	1.732	1.506	1.591	------	1.697	5.67	17.9438
	71	Styrene	1.054	1.000	1.088	1.118	1.153	1.209	1.104	1.164	1.021	1.074	1.058	1.095	5.77	17.9672
	72	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	1	0	20.7222
	73	Isopropylbenzene	5.858	5.671	5.633	5.810	5.728	5.928	5.332	5.949	5.238	5.551	------	5.670	4.24	18.3621
	74	Bromoform	0.324	0.344	0.368	0.382	0.408	0.454	0.425	0.465	0.423	0.454	0.497	0.413	13.02	18.3529
	75	4-Bromofluorobenzene	------	------	------	------	1.571	1.602	1.509	1.625	1.474	------	------	1.556	4.08	18.6495
	76	1,1,2,2-Tetrachloroethane	0.772	0.704	0.722	0.721	0.745	0.787	0.727	0.787	0.711	0.765	0.847	0.753	5.72	18.7926
	77	trans-1,4-Dichloro-2-butene	0.242	0.213	0.220	0.226	0.232	0.251	0.250	0.269	0.242	0.260	0.284	0.244	8.79	18.8292
	78	n-Propylbenzene	8.224	8.356	7.993	8.230	8.165	8.440	7.620	8.477	7.035	------	------	8.060	5.75	18.8738
	79	1,2,3-Trichloropropane	0.148	0.180	0.183	0.183	0.182	0.189	0.172	0.183	0.160	0.171	0.176	0.175	6.81	18.8927
	80	Bromobenzene	1.099	1.123	1.157	1.144	1.155	1.202	1.089	1.207	1.063	1.135	1.187	1.142	4.08	18.9131
	81	1,3,5-Trimethylbenzene	5.021	4.935	4.880	5.015	4.948	5.155	4.658	5.132	4.444	4.689	------	4.888	4.63	19.0498
	82	2-Chlorotoluene	5.177	5.066	5.093	5.142	5.099	5.296	4.742	5.233	4.586	4.857	------	5.029	4.52	19.0899
	83	4-Chlorotoluene	4.375	4.251	4.270	4.354	4.458	4.591	4.187	4.627	4.062	4.288	------	4.346	4.03	19.2165
	84	tert-Butylbenzene	1.029	0.977	0.964	0.977	0.993	1.020	0.928	1.019	0.887	0.930	0.935	0.969	4.68	19.5152
	85	1,2,4-Trimethylbenzene	4.786	4.599	4.661	4.724	4.753	4.900	4.450	4.909	4.270	4.452	------	4.650	4.48	19.5692
	86	sec-Butylbenzene	6.721	6.468	6.448	6.425	6.464	6.693	6.076	6.628	5.748	6.015	------	6.369	5.02	19.7895
	87	p-Isopropyltoluene	4.919	4.972	4.842	4.954	5.082	5.267	4.766	5.175	4.496	4.694	------	4.917	4.68	19.9309
	88	1,3-Dichlorobenzene	2.180	2.099	2.105	2.143	2.217	2.322	2.149	2.351	2.047	2.200	2.279	2.190	4.38	20.0957
	89	1,4-Dichlorobenzene	1.974	1.957	1.960	1.989	2.042	2.192	2.013	2.184	1.927	2.020	2.150	2.037	4.65	20.2012
	90	n-Butylbenzene	5.497	5.378	5.308	5.435	5.582	5.847	5.333	5.742	4.986	5.191	------	5.430	4.68	20.4876
	91	1,2-Dichlorobenzene	1.635	1.630	1.645	1.640	1.673	1.784	1.636	1.768	1.569	1.668	1.777	1.675	4.20	20.7520
	92	1,2-Dibromo-3-chloropropane	------	0.071	0.077	0.076	0.085	0.093	0.090	0.095	0.088	0.094	------	0.085	10.04	21.8756
	93	1,2,4-Trichlorobenzene	0.793	0.757	0.731	0.751	0.832	0.913	0.883	0.926	0.849	0.893	1.017	0.850	10.33	23.1186
	94	Hexachlorobutadiene	0.813	0.765	0.736	0.736	0.774	0.844	0.780	0.806	0.730	0.749	0.825	0.778	5.07	23.2512
	95	Naphthalene	0.985	0.890	0.921	0.924	1.070	1.223	1.223	1.249	1.184	1.282	------	1.095	14.07	23.6207
	96	1,2,3-Trichlorobenzene	0.569	0.526	0.548	0.555	0.608	0.669	0.660	0.675	0.632	0.667	0.753	0.624	11.07	24.0414

Spike Amount = Nominal Amount * M
Ave_%RSD : 6.5 Max_%RSD : 14.1

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8/18/11

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SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :03
IC_Beginning DateTime :08/16/11 11:49
Spike Amount :10 PPB
CC/CV File :RHB452
IC File :RHB444

Column Spec :ZB-624 ID :0.25MM
IC_Ending DateTime :08/16/11 17:30
HPChem Method :V003H16
Date_Time :08/16/11 19:13

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	1964342	1	1	13.207	13.203	0				
	2	Chlorotrifluoroethylene												
	3	Dichlorodifluoromethane	10.093	0.9	699900	0.356	0.353	4.112	4.113	8.52				
	4	Dichlorotetrafluoroethane												
	5	Chloromethane	10.630	6.3	744562	0.379	0.357	4.618	4.612	10.00				
	6	2-Chloro-1,1,1-trifluoroethane												
	7	Vinyl chloride	10.627	6.3	704186	0.358	0.337	4.931	4.934	10.93				
	8	Bromomethane	11.072	10.7	493194	0.251	0.227	5.869	5.858	9.78				
	9	Chloroethane	10.559	5.6	367718	0.187	0.177	6.151	6.136	9.63				
	10	Dichlorofluoromethane	9.808	-1.9	1471244	0.749	0.764	6.672	6.673	4.35				
	11	Trichlorofluoromethane	10.147	1.5	1086354	0.553	0.545	6.747	6.732	9.58				
5	12	Acrolein	48.279	-3.4	84307	0.009	0.009	7.848	7.852	13.95				
	13	1,1,2-Trichloro-1,2,2-trifluoroethane	9.633	-3.7	384110	0.196	0.203	7.982	7.983	4.08				
5	14	Acetone	45.661	-8.7	346459	0.035	0.039	8.191	8.185	8.41				
	15	1,1-Dichloroethene	9.833	-1.7	1299399	0.661	0.673	8.012	8.003	4.65				
	16	Methyl acetate												
	17	Iodomethane	9.877	-1.2	1224692	0.623	0.631	8.399	8.390	6.13				
	18	Carbon disulfide	9.749	-2.5	2591704	1.319	1.353	8.518	8.514	8.97				
	19	Methylene chloride	9.496	-5.0	886710	0.451	0.475	9.084	9.080	4.30				
5	20	tert-Butyl alcohol	48.030	-3.9	113617	0.012	0.012	9.277	9.288	6.87				
	21	tert-Butyl methyl ether (MTBE)	9.404	-6.0	902635	0.460	0.489	9.500	9.510	4.37				
	22	trans-1,2-Dichloroethene	9.789	-2.1	1318564	0.671	0.686	9.575	9.571	3.87				
5	23	Acrylonitrile	47.722	-4.6	332995	0.034	0.036	9.604	9.602	7.73				
	24	Isopropyl ether (DIPE)	9.920	-0.8	2330749	1.187	1.196	10.334	10.330	4.59				
	25	Vinyl acetate	9.528	-4.7	751324	0.382	0.401	10.378	10.388	12.58				
	26	1,1-Dichloroethane	9.930	-0.7	1448484	0.737	0.743	10.378	10.370	4.72				
5	27	2-Butanol												
	28	tert-Butyl ethyl ether (ETBE)	9.593	-4.1	1613230	0.821	0.856	10.944	10.949	4.96				
	29	2,2-Dichloropropane	9.497	-5.0	1128621	0.575	0.605	11.331	11.326	10.34				
5	30	2-Butanone	45.732	-8.5	593514	0.060	0.066	11.346	11.355	10.11				
	31	cis-1,2-Dichloroethene	9.895	-1.0	756535	0.385	0.389	11.361	11.360	4.16				
	32	Bromochloromethane	9.603	-4.0	579777	0.295	0.307	11.778	11.770	4.66				
	33	Tetrahydrofuran	8.976	-10.2	66683	0.034	0.038	11.822	11.823	8.93				
	34	Chloroform	9.825	-1.8	1557374	0.793	0.807	11.867	11.861	4.69				
5	35	tert-Amyl alcohol												
	36	Dibromofluoromethane	9.783	-2.2	713957	0.363	0.372	12.120	12.122	4.23				
	37	1,1,1-Trichloroethane	10.014	0.1	1422256	0.724	0.723	12.135	12.131	5.57				
	38	Cyclohexane												
	39	tert-Amyl methyl ether (TAME)	9.629	-3.7	250003	0.127	0.132	12.745	12.741	5.96				
	40	1,2-Dichloroethane-d4	9.565	-4.4	710649	0.362	0.378	12.656	12.651	5.20				
	41	CHLOROBENZENE-D5	10.000	0	1798817	1	1	17.196	17.195	0				
	42	1,1-Dichloropropene	10.046	0.5	358644	0.199	0.198	12.373	12.367	4.08				
	43	Carbon tetrachloride	9.973	-0.3	1214995	0.675	0.677	12.373	12.375	4.82				
	44	Benzene	9.859	-1.4	2875933	1.599	1.622	12.700	12.706	4.28				
	45	1,2-Dichloroethane	9.612	-3.9	865253	0.481	0.500	12.760	12.764	5.00				
	46	Trichloroethene	9.753	-2.5	780754	0.434	0.445	13.623	13.618	5.11				
	47	Methylcyclohexane												
	48	1,2-Dichloropropane	9.773	-2.3	729684	0.406	0.415	13.966	13.967	5.04				
20	49	1,4-Dioxane	183.576	-8.2	42494	0.001	0.001	14.129	14.128	13.98				
	50	Dibromomethane	9.611	-3.9	338874	0.188	0.196	14.189	14.184	7.00				
	51	Bromodichloromethane	9.825	-1.8	1095495	0.609	0.620	14.353	14.349	7.03				
	52	2-Chloroethyl vinyl ether	9.067	-9.3	204114	0.113	0.125	14.650	14.645	11.72				
	53	cis-1,3-Dichloropropene	9.692	-3.1	1116066	0.620	0.640	14.918	14.916	7.70				
5	54	4-Methyl-2-pentanone	47.294	-5.4	1718865	0.191	0.202	15.037	15.035	5.64				
	55	Toluene-d8	9.655	-3.5	2466873	1.371	1.420	15.261	15.257	3.97				
	56	Toluene	9.993	-0.1	3162952	1.758	1.759	15.350	15.348	3.81				
	57	Ethyl methacrylate	9.621	-3.8	564739	0.314	0.326	15.588	15.591	6.64				
	58	trans-1,3-Dichloropropene	9.804	-2.0	883251	0.491	0.501	15.633	15.634	8.00				
	59	1,1,2-Trichloroethane	9.563	-4.4	373487	0.208	0.217	15.915	15.913	5.48				

SW
8/18/11

2013

	60	Tetrachloroethene	9.848	-1.5	677306	0.377	0.382	16.094	16.089	3.71				
5	61	2-Hexanone	48.468	-3.1	1163929	0.129	0.133	16.109	16.108	4.95				
	62	1,3-Dichloropropane	9.655	-3.5	754490	0.419	0.434	16.139	16.140	5.43				
	63	Dibromochloromethane	9.885	-1.1	571900	0.318	0.322	16.481	16.487	10.17				
	64	1,2-Dibromoethane	9.766	-2.3	417971	0.232	0.238	16.675	16.672	7.10				
	65	1-Chlorohexane	9.962	-0.4	1461845	0.813	0.816	17.032	17.036	3.31				
	66	Chlorobenzene	9.849	-1.5	1787931	0.994	1.009	17.240	17.237	3.91				
	67	Ethylbenzene	9.937	-0.6	4060376	2.257	2.272	17.285	17.281	3.20				
	68	1,1,1,2-Tetrachloroethane	10.061	0.6	678042	0.377	0.375	17.315	17.314	5.09				
2	69	m-Xylene & p-Xylene	19.693	-1.5	6198937	1.723	1.750	17.404	17.409	3.27				
	70	o-Xylene	9.947	-0.5	3036203	1.688	1.697	17.940	17.944	5.67				
	71	Styrene	10.236	2.4	2015906	1.121	1.095	17.969	17.967	5.77				
	72	1,2-DICHLOROBENZENE-D4	10.000	0	640128	1	1	20.723	20.722	0				
	73	Isopropylbenzene	9.728	-2.7	3530678	5.516	5.670	18.357	18.362	4.24				
	74	Bromoform	9.443	-5.6	249695	0.390	0.413	18.357	18.353	13.02				
	75	4-Bromofluorobenzene	9.646	-3.5	960964	1.501	1.556	18.654	18.649	4.08				
	76	1,1,2,2-Tetrachloroethane	9.148	-8.5	441198	0.689	0.753	18.788	18.793	5.72				
	77	trans-1,4-Dichloro-2-butene	9.162	-8.4	143359	0.224	0.244	18.833	18.829	8.79				
	78	n-Propylbenzene	9.830	-1.7	5072007	7.923	8.060	18.878	18.874	5.75				
	79	1,2,3-Trichloropropane	9.596	-4.0	107620	0.168	0.175	18.892	18.893	6.81				
	80	Bromobenzene	9.649	-3.5	705287	1.102	1.142	18.907	18.913	4.08				
	81	1,3,5-Trimethylbenzene	9.894	-1.1	3095769	4.836	4.888	19.041	19.050	4.63				
	82	2-Chlorotoluene	9.764	-2.4	3143279	4.910	5.029	19.086	19.090	4.52				
	83	4-Chlorotoluene	9.838	-1.6	2736995	4.276	4.346	19.220	19.216	4.03				
	84	tert-Butylbenzene	9.890	-1.1	613463	0.958	0.969	19.517	19.515	4.68				
	85	1,2,4-Trimethylbenzene	9.958	-0.4	2964568	4.631	4.650	19.562	19.569	4.48				
	86	sec-Butylbenzene	9.913	-0.9	4041314	6.313	6.369	19.785	19.789	5.02				
	87	p-Isopropyltoluene	10.093	0.9	3176708	4.963	4.917	19.934	19.931	4.68				
	88	1,3-Dichlorobenzene	9.880	-1.2	1385302	2.164	2.190	20.098	20.096	4.38				
	89	1,4-Dichlorobenzene	9.945	-0.6	1296892	2.026	2.037	20.202	20.201	4.65				
	90	n-Butylbenzene	10.239	2.4	3559056	5.560	5.430	20.485	20.488	4.68				
	91	1,2-Dichlorobenzene	9.828	-1.7	1053936	1.646	1.675	20.753	20.752	4.20				
	92	1,2-Dibromo-3-chloropropane	9.687	-3.1	53004	0.083	0.085	21.884	21.876	10.04				
	93	1,2,4-Trichlorobenzene	10.206	2.1	555050	0.867	0.850	23.119	23.119	10.33				
	94	Hexachlorobutadiene	10.504	5.0	523217	0.817	0.778	23.253	23.251	5.07				
	95	Naphthalene	10.499	5.0	736086	1.150	1.095	23.626	23.621	14.07				
	96	1,2,3-Trichlorobenzene	10.239	2.4	408911	0.639	0.624	24.042	24.041	11.07				

Spike Amount = Nominal Amount * M

Sw
8/18/11

2020

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB392
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K205
BFB Injection Date : 11/23/11
BFB Injection Time : 09:49
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.79
75	30.0 - 60.0% of mass 95	53.69
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.54
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	57.53
175	5.0 - 9.0% of mass 174	4.49(7.8)1
176	95.0 - 101.0% of mass 174	56.39(98.0)1
177	5.0 - 9.0% of mass 176	3.90(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV003H1658	RKB393	11/23/11	10:27
2	MBLK1W	V003K25B	RKB396	11/23/11	12:22
3	LCS1W	V003K25L	RKB394	11/23/11	11:06
4	LCD1W	V003K25C	RKB395	11/23/11	11:44
5	IW-70-SSB119-163MS	K205-01M	RKB398	11/23/11	13:38
6	IW-70-SSB119-163MSD	K205-01S	RKB399	11/23/11	14:17
7	IW-70-SSB119-163	K205-01	RKB400	11/23/11	14:55
8	IW-70-SHB311-164	K205-02	RKB401	11/23/11	15:35
9	IR-70-TB-162	K205-06	RKB402	11/23/11	16:13
10	IW-70-SAT35-167	K205-03	RKB403	11/23/11	16:51
11	IR-70-SB-165	K205-04	RKB404	11/23/11	17:28
12	IR-70-EB-166	K205-05	RKB405	11/23/11	18:07

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RHB444
Instrument ID: 03
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K205
Date Analyzed: 08/16/11
Time Analyzed: 14:40
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1861981	13.20	1722743	17.19	603523	20.72
	UPPER LIMIT	3723962	13.70	3445486	17.69	1207046	21.22
	LOWER LIMIT	930991	12.70	861372	16.69	301762	20.22
	SAMPLE ID						
1	VSTD010	2014551	13.15	1877251	17.15	671023	20.66
2	MBLK1W	2422223	13.16	2257384	17.15	775851	20.68
3	LCS1W	2110265	13.16	1993606	17.15	705878	20.66
4	LCD1W	2219405	13.16	2097168	17.15	734744	20.66
5	IW-70-SSB119-163MS	2041415	13.16	1888636	17.15	655326	20.68
6	IW-70-SSB119-163MSD	2212251	13.16	2074318	17.15	709225	20.68
7	IW-70-SSB119-163	2351696	13.16	2234638	17.15	786434	20.68
8	IW-70-SHB311-164	2286303	13.16	2036071	17.15	715568	20.68
9	IR-70-TB-162	2211966	13.17	2105391	17.16	721738	20.69
10	IW-70-SAT35-167	2134589	13.17	2027453	17.16	732539	20.67
11	IR-70-SB-165	2237351	13.17	2123049	17.16	747047	20.67
12	IR-70-EB-166	2096666	13.16	1991178	17.15	669030	20.68

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB393.D Vial: 2
Acq On : 23 Nov 2011 10:27 am Operator: CGM
Sample : CVO03H1658 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	108	-0.02
2	T,M	Chlorotrifluoroethylene	-1.000	0.000	0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	11.252	-12.5	100	0.01
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	100	0.01
5	P,T,M	Chloromethane	10.000	11.447	-14.5	103	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000	0.0	0	-5.22#
7	C,T,M	Vinyl chloride	10.000	10.383	-3.8	91	0.00
8	T,M	Bromomethane	10.000	10.636	-6.4	93	-0.02
9	T,M	Chloroethane	10.000	10.689	-6.9	94	0.00
10	T,M	Dichlorofluoromethane	10.000	10.383	-3.8	105	0.00
11	T,M	Trichlorofluoromethane	10.000	9.023	9.8	80	0.00
12	T,M	Acrolein	50.000	76.861	-53.7#	162	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.889	1.1	102	-0.02
14	T,M	Acetone	50.000	51.817	-3.6	108	0.00
15	C,T,M	1,1-Dichloroethene	10.000	9.767	2.3	98	0.00
16	T,M	Methyl acetate	-1.000	0.000	0.0	107	0.00
17	T,M	Iodomethane	10.000	9.830	1.7	98	0.00
18	T,M	Carbon disulfide	10.000	10.457	-4.6	115	0.00
19	T,M	Methylene chloride	10.000	10.211	-2.1	106	-0.02
20	T,M	tert-Butyl alcohol	50.000	49.269	1.5	97	0.00
21	T,M	tert-Butyl methyl ether (MT	10.000	10.043	-0.4	103	-0.02
22	T,M	trans-1,2-Dichloroethene	10.000	10.039	-0.4	102	-0.02
23	T,M	Acrylonitrile	50.000	55.493	-11.0	112	-0.02
24	T,M	Isopropyl ether (DIPE)	10.000	10.801	-8.0	108	-0.02
25	T,M	Vinyl acetate	10.000	10.628	-6.3	98	0.00
26	P,T,M	1,1-Dichloroethane	10.000	10.376	-3.8	103	0.00
27	T,M	2-Butanol	-1.000	0.000	0.0	96	0.00
28	T,M	tert-Butyl ethyl ether (ETB	10.000	10.967	-9.7	111	-0.02
29	T,M	2,2-Dichloropropane	10.000	9.678	3.2	97	-0.02
30	T,M	2-Butanone	50.000	52.462	-4.9	110	-0.02
31	T,M	cis-1,2-Dichloroethene	10.000	10.589	-5.9	107	0.00
32	T,M	Bromochloromethane	10.000	10.554	-5.5	105	0.00
33	T,M	Tetrahydrofuran	10.000	10.851	-8.5	123	-0.02
34	C,T,M	Chloroform	10.000	9.997	0.0	99	-0.02
35	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	27	0.00
36	S	Dibromofluoromethane	10.000	9.584	4.2	99	0.00
37	T,M	1,1,1-Trichloroethane	10.000	9.392	6.1	93	-0.02
38	T,M	Cyclohexane	-1.000	0.000	0.0	119	0.00
39	T,M	tert-Amyl methyl ether (TAM	10.000	11.092	-10.9	109	0.00
40	S	1,2-Dichloroethane-d4	10.000	8.861	11.4	91	-0.02
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	109	0.00

(#) = Out of Range

2024

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB393.D Vial: 2
Acq On : 23 Nov 2011 10:27 am Operator: CGM
Sample : CVO03H1658 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	10.281	-2.8	104	0.00
43	T,M	Carbon tetrachloride	10.000	9.380	6.2	95	0.00
44	T,M	Benzene	10.000	10.360	-3.6	106	0.00
45	T,M	1,2-Dichloroethane	10.000	9.241	7.6	94	0.00
46	T,M	Trichloroethene	10.000	10.125	-1.3	105	-0.02
47	T,M	Methylcyclohexane	-1.000	0.000	0.0	100	0.00
48	C,T,M	1,2-Dichloropropane	10.000	10.885	-8.8	111	0.00
49	T,M	1,4-Dioxane	200.000	251.942	-26.0#	138	0.00
50	T,M	Dibromomethane	10.000	10.015	-0.2	104	-0.02
51	T,M	Bromodichloromethane	10.000	9.983	0.2	101	-0.02
52	T,M	2-Chloroethyl vinyl ether	10.000	9.689	3.1	103	-0.02
53	T,M	cis-1,3-Dichloropropene	10.000	10.567	-5.7	107	0.00
54	T,M	4-Methyl-2-pentanone	50.000	53.667	-7.3	112	0.00
55	S	Toluene-d8	10.000	9.363	6.4	99	-0.02
56	C,T,M	Toluene	10.000	10.342	-3.4	106	0.00
57	T,M	Ethyl methacrylate	10.000	10.867	-8.7	111	0.00
58	T,M	trans-1,3-Dichloropropene	10.000	10.500	-5.0	104	0.00
59	T,M	1,1,2-Trichloroethane	10.000	10.288	-2.9	105	0.00
60	T,M	Tetrachloroethene	10.000	9.758	2.4	101	-0.02
61	T,M	2-Hexanone	50.000	57.229	-14.5	115	0.00
62	T,M	1,3-Dichloropropane	10.000	10.535	-5.4	107	0.00
63	T,M	Dibromochloromethane	10.000	10.156	-1.6	102	0.00
64	T,M	1,2-Dibromoethane	10.000	10.439	-4.4	106	0.00
65	T,M	1-Chlorohexane	10.000	10.535	-5.4	109	0.00
66	P,M	Chlorobenzene	10.000	10.622	-6.2	108	-0.02
67	C,T,M	Ethylbenzene	10.000	10.244	-2.4	106	-0.02
68	T,M	1,1,1,2-Tetrachloroethane	10.000	10.290	-2.9	103	0.00
69	T,M	m-Xylene & p-Xylene	20.000	20.226	-1.1	105	0.00
70	T,M	o-Xylene	10.000	10.366	-3.7	106	0.00
71	T,M	Styrene	10.000	11.064	-10.6	109	-0.02
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	111	-0.02
73	T,M	Isopropylbenzene	10.000	10.172	-1.7	108	0.00
74	P,T,M	Bromoform	10.000	9.987	0.1	101	-0.02
75	S	4-Bromofluorobenzene	10.000	9.221	7.8	100	-0.02
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	10.699	-7.0	114	0.00
77	T,M	trans-1,4-Dichloro-2-butene	10.000	11.144	-11.4	121	0.00
78	T,M	n-Propylbenzene	10.000	10.528	-5.3	112	-0.02
79	T,M	1,2,3-Trichloropropane	10.000	10.286	-2.9	106	0.00
80	T,M	Bromobenzene	10.000	9.942	0.6	105	0.00
81	T,M	1,3,5-Trimethylbenzene	10.000	10.137	-1.4	107	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB393.D Vial: 2
Acq On : 23 Nov 2011 10:27 am Operator: CGM
Sample : CVO03H1658 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	10.007	-0.1	106	0.00
83	T,M	4-Chlorotoluene	10.000	10.425	-4.3	110	-0.02
84	T,M	tert-Butylbenzene	10.000	10.410	-4.1	110	-0.02
85	T,M	1,2,4-Trimethylbenzene	10.000	10.383	-3.8	110	0.00
86	T,M	sec-Butylbenzene	10.000	10.510	-5.1	111	0.00
87	T,M	p-Isopropyltoluene	10.000	10.709	-7.1	111	-0.02
88	T,M	1,3-Dichlorobenzene	10.000	10.571	-5.7	111	0.00
89	T,M	1,4-Dichlorobenzene	10.000	10.549	-5.5	109	-0.02
90	T,M	n-Butylbenzene	10.000	11.109	-11.1	115	0.00
91	T,M	1,2-Dichlorobenzene	10.000	10.315	-3.1	108	-0.02
92	T,M	1,2-Dibromo-3-chloropropane	10.000	10.103	-1.0	103	0.00
93	T,M	1,2,4-Trichlorobenzene	10.000	10.931	-9.3	113	0.00
94	T,M	Hexachlorobutadiene	10.000	9.467	5.3	97	-0.02
95	T,M	Naphthalene	10.000	11.479	-14.8	114	-0.02
96	T,M	1,2,3-Trichlorobenzene	10.000	10.681	-6.8	111	-0.02

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB393.D Vial: 2
Acq On : 23 Nov 2011 10:27 am Operator: CGM
Sample : CVO03H1658 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	108	-0.02
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.397	-12.5	100	0.01
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	100	0.01
5	P,T,M	Chloromethane	0.357	0.408	-14.3	103	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.22#
7	C,T,M	Vinyl chloride	0.337	0.350	-3.9	91	0.00
8	T,M	Bromomethane	0.227	0.241	-6.2	93	-0.02
9	T,M	Chloroethane	0.177	0.189	-6.8	94	0.00
10	T,M	Dichlorofluoromethane	0.764	0.793	-3.8	105	0.00
11	T,M	Trichlorofluoromethane	0.545	0.492	9.7	80	0.00
12	T,M	Acrolein	0.009	0.014	-55.6#	162	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.201	1.0	102	-0.02
14	T,M	Acetone	0.039	0.040	-2.6	108	0.00
15	C,T,M	1,1-Dichloroethene	0.673	0.657	2.4	98	0.00
16	T,M	Methyl acetate	0.000	0.000	0.0	107	0.00
17	T,M	Iodomethane	0.631	0.620	1.7	98	0.00
18	T,M	Carbon disulfide	1.353	1.415	-4.6	115	0.00
19	T,M	Methylene chloride	0.475	0.485	-2.1	106	-0.02
20	T,M	tert-Butyl alcohol	0.012	0.012	0.0	97	0.00
21	T,M	tert-Butyl methyl ether (MT	0.489	0.491	-0.4	103	-0.02
22	T,M	trans-1,2-Dichloroethene	0.686	0.688	-0.3	102	-0.02
23	T,M	Acrylonitrile	0.036	0.039	-8.3	112	-0.02
24	T,M	Isopropyl ether (DIPE)	1.196	1.292	-8.0	108	-0.02
25	T,M	Vinyl acetate	0.401	0.427	-6.5	98	0.00
26	P,T,M	1,1-Dichloroethane	0.743	0.770	-3.6	103	0.00
27	T,M	2-Butanol	0.000	0.000	0.0	96	0.00
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.939	-9.7	111	-0.02
29	T,M	2,2-Dichloropropane	0.605	0.586	3.1	97	-0.02
30	T,M	2-Butanone	0.066	0.069	-4.5	110	-0.02
31	T,M	cis-1,2-Dichloroethene	0.389	0.412	-5.9	107	0.00
32	T,M	Bromochloromethane	0.307	0.324	-5.5	105	0.00
33	T,M	Tetrahydrofuran	0.038	0.041	-7.9	123	-0.02
34	C,T,M	Chloroform	0.807	0.807	0.0	99	-0.02
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	27#	0.00
36	S	Dibromofluoromethane	0.372	0.356	4.3	99	0.00
37	T,M	1,1,1-Trichloroethane	0.723	0.679	6.1	93	-0.02
38	T,M	Cyclohexane	0.000	0.000	0.0	119	0.00
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.147	-11.4	109	0.00
40	S	1,2-Dichloroethane-d4	0.378	0.335	11.4	91	-0.02
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	109	0.00

(#) = Out of Range

2027

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB393.D Vial: 2
Acq On : 23 Nov 2011 10:27 am Operator: CGM
Sample : CVO03H1658 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.198	0.204	-3.0	104	0.00
43	T,M	Carbon tetrachloride	0.677	0.635	6.2	95	0.00
44	T,M	Benzene	1.622	1.680	-3.6	106	0.00
45	T,M	1,2-Dichloroethane	0.500	0.462	7.6	94	0.00
46	T,M	Trichloroethene	0.445	0.451	-1.3	105	-0.02
47	T,M	Methylcyclohexane	0.000	0.000	0.0	100	0.00
48	C,T,M	1,2-Dichloropropane	0.415	0.452	-8.9	111	0.00
49	T,M	1,4-Dioxane	0.001	0.002	-100.0#	138	0.00
50	T,M	Dibromomethane	0.196	0.196	0.0	104	-0.02
51	T,M	Bromodichloromethane	0.620	0.619	0.2	101	-0.02
52	T,M	2-Chloroethyl vinyl ether	0.125	0.121	3.2	103	-0.02
53	T,M	cis-1,3-Dichloropropene	0.640	0.676	-5.6	107	0.00
54	T,M	4-Methyl-2-pentanone	0.202	0.217	-7.4	112	0.00
55	S	Toluene-d8	1.420	1.330	6.3	99	-0.02
56	C,T,M	Toluene	1.759	1.820	-3.5	106	0.00
57	T,M	Ethyl methacrylate	0.326	0.355	-8.9	111	0.00
58	T,M	trans-1,3-Dichloropropene	0.501	0.526	-5.0	104	0.00
59	T,M	1,1,2-Trichloroethane	0.217	0.223	-2.8	105	0.00
60	T,M	Tetrachloroethene	0.382	0.373	2.4	101	-0.02
61	T,M	2-Hexanone	0.133	0.153	-15.0	115	0.00
62	T,M	1,3-Dichloropropane	0.434	0.458	-5.5	107	0.00
63	T,M	Dibromochloromethane	0.322	0.327	-1.6	102	0.00
64	T,M	1,2-Dibromoethane	0.238	0.248	-4.2	106	0.00
65	T,M	1-Chlorohexane	0.816	0.859	-5.3	109	0.00
66	P,M	Chlorobenzene	1.009	1.072	-6.2	108	-0.02
67	C,T,M	Ethylbenzene	2.272	2.327	-2.4	106	-0.02
68	T,M	1,1,1,2-Tetrachloroethane	0.375	0.385	-2.7	103	0.00
69	T,M	m-Xylene & p-Xylene	1.750	1.770	-1.1	105	0.00
70	T,M	o-Xylene	1.697	1.759	-3.7	106	0.00
71	T,M	Styrene	1.095	1.211	-10.6	109	-0.02
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	111	-0.02
73	T,M	Isopropylbenzene	5.670	5.767	-1.7	108	0.00
74	P,T,M	Bromoform	0.413	0.413	0.0	101	-0.02
75	S	4-Bromofluorobenzene	1.556	1.435	7.8	100	-0.02
76	P,T,M	1,1,2,2-Tetrachloroethane	0.753	0.806	-7.0	114	0.00
77	T,M	trans-1,4-Dichloro-2-butene	0.244	0.272	-11.5	121	0.00
78	T,M	n-Propylbenzene	8.060	8.485	-5.3	112	-0.02
79	T,M	1,2,3-Trichloropropane	0.175	0.180	-2.9	106	0.00
80	T,M	Bromobenzene	1.142	1.135	0.6	105	0.00
81	T,M	1,3,5-Trimethylbenzene	4.888	4.955	-1.4	107	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K23\RKB393.D Vial: 2
Acq On : 23 Nov 2011 10:27 am Operator: CGM
Sample : CVO03H1658 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	5.033	-0.1	106	0.00
83	T,M	4-Chlorotoluene	4.346	4.531	-4.3	110	-0.02
84	T,M	tert-Butylbenzene	0.969	1.009	-4.1	110	-0.02
85	T,M	1,2,4-Trimethylbenzene	4.650	4.828	-3.8	110	0.00
86	T,M	sec-Butylbenzene	6.369	6.693	-5.1	111	0.00
87	T,M	p-Isopropyltoluene	4.917	5.265	-7.1	111	-0.02
88	T,M	1,3-Dichlorobenzene	2.190	2.315	-5.7	111	0.00
89	T,M	1,4-Dichlorobenzene	2.037	2.149	-5.5	109	-0.02
90	T,M	n-Butylbenzene	5.430	6.032	-11.1	115	0.00
91	T,M	1,2-Dichlorobenzene	1.675	1.728	-3.2	108	-0.02
92	T,M	1,2-Dibromo-3-chloropropane	0.085	0.086	-1.2	103	0.00
93	T,M	1,2,4-Trichlorobenzene	0.850	0.929	-9.3	113	0.00
94	T,M	Hexachlorobutadiene	0.778	0.737	5.3	97	-0.02
95	T,M	Naphthalene	1.095	1.257	-14.8	114	-0.02
96	T,M	1,2,3-Trichlorobenzene	0.624	0.666	-6.7	111	-0.02

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 6 ☐ EMAX-524.2 Rev.No. 5 ☐ EMAX-624 Rev.No. 2 ☐ EMAX-8260SIM Rev.No.0 ☐ EMAX-TCPSIM Rev.No.1 ☐ EMAX-M8260SIM Rev.No.0 ☐

Start Date: 8/16/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -047

BATCH V003H166

	Sample Prep. ID	Data File Name	Lab Sample ID	* Sample Amount (ml/g/kg)	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RHB438	BFB03H23	1mL	N/A	N/A	N/A	N/A	11:15am
02		439	V003H161	.04/1/1.5mL					0.3/1.5/1.5ppb 8260
03		440	2	.05/1/1.25mL					0.5/2.5/2.5ppb
04		441	3	.1/1/1.5mL					1.0/5.0/5.0ppb
05		442	4	.2/1/1mL					2.0/10/10ppb
06		443	5	.5/1/1.25mL					5.0/25/25ppb
07		444	6	1/5/5mL					10/50/50ppb
08		445	7	2/10/10mL					20/100/100ppb
09		446	8	3/15/15mL					30/150/150ppb
10		447	9	4/20/20mL					40/200/200ppb
11		448	10	5/25/25mL					50/250/250ppb
12		449	11	10/50/50mL					100/500/500ppb
13		450	15/15	25mL					
14		451	V003H23B	↓					
15		452	V003H161	1/5/5mL					10/50/50ppb
16		453	RINSE	25mL					7:49pm
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30				NW	8/17/11				

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003H16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC Fast CS	SV1-17-76-1	*	
DCC CL	-71-1	↓	
DCC 8260	-72-1		
DCC KETONE	-69-3		
BFB	-45-3	1	50/250
IS/SURR.	-73-3	1	
ICV/LCS Fast CS	-69-1	1	
ICV/LCS CL	-71-2	1	
ICV/LCS 8260	-60-2	5	
ICV/LCS KETONE	-70-2	5	
IS	-51-3	1	
SS	-52-1	*	

DATA FILE FOLDER	11H16
Electronic Data Archival	
Location	Date
HPCHEM_VOA/TO03	

Comments: *pick kfir TO sample amount

Analyzed By: NW

Date Disposed: 8/17/11

Disposed By: NW

2031

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/23/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -048

BATCH V003H1658

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKB392	BFB03K25						09:49
02	93	V003H1658						
03	94	V003K25L		10				
04	95	C						
05	96	B	25mL					
06	97	11K146-01R						
07	98	11K205-01M						
08	99	01S						
09	RKB400	01						
10	01	02						
11	02	06						
12	03	03						
13	04	04						
14	05	05						
15	06	11K173-01T	0.5mL	50				
16	07	11K174-01T						
17	08	02T						
18	09	03T						
19	10	04T	5.0mL	5.0				21:17
20	11	05T	0.5mL	50				RR out of 12-hr
21	12	06T						
22								
23								
24								
25								
26								
27								
28								
29								
30								CGM 11/23/11

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003H16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-19-6-2	1	
DCC	6-3	1	
DCC	7-2	5	
DCC	8-1	5	
BFB	3-2	1	(2)/250
IS/SURR.	6-1	1	
ICV/LCS	SV1-17-90-3	1	
ICV/LCS	97-2	1	
ICV/LCS	SV1-19-9-2	5	
ICV/LCS	SV1-17-99-3	5	

DATA FILE FOLDER	11/23
Electronic Data Archival	
Location	Date
HPCHEM_VOA/TO03	11/28/11

Comments:

Analyzed By: CGM

Date Disposed: 11/28/11

Disposed By: CAM

2032

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD RSK-175
DISSOLVED GASES

SDG#: 11K205

[illegible]

Client : INSIGHT REG, INC.

Project : [illegible] PLACER, [illegible] [illegible].

SDG : [illegible]

METHOD [illegible]
DISSOLVED [illegible]

A total of five (5) water samples were [illegible] on 1/21/[illegible] for Dissolved [illegible] analysis, Method [illegible] in accord [illegible] with EPA at R.S. Kerr Environmental Research Laboratory, Ada, OK [illegible] March [illegible], 1984.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the protocol. For this SDG, one method blank was analyzed with the samples. Result was consistent to project requirements.

Lab Control Sample
A lab control sample was analyzed with the samples in this SDG.
Percent recoveries for DGK [illegible] were all within QC limits.

Matrix QC Sample
A set of MS/MSD was analyzed with the samples in this SDG.
Percent recoveries for [illegible] were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise. Anomalies were discussed within the [illegible] QC parameters.

LAB CHRONICLE
DISSOLVED GASES

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K205
Instrument ID : GCT010

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DGK017WB	1	NA	11/23/1116:33	11/23/1115:00	FK23041A	FK23038A	DGK017W	Method Blank
LCS1W	DGK017WL	1	NA	11/23/1116:45	11/23/1115:00	FK23042A	FK23038A	DGK017W	Lab Control Sample (LCS)
IW-70-SSB119-163	K205-01	1	NA	11/23/1117:26	11/23/1115:00	FK23045A	FK23038A	DGK017W	Field Sample
IW-70-SSB119-163DL	K205-01T	1000	NA	11/23/1119:56	11/23/1115:00	FK23057A	FK23054A	DGK017W	Diluted Sample
IW-70-SHB311-164	K205-02	1	NA	11/23/1118:04	11/23/1115:00	FK23048A	FK23038A	DGK017W	Field Sample
IW-70-SHB311-164DL	K205-02T	1000	NA	11/23/1119:08	11/23/1115:00	FK23053A	FK23038A	DGK017W	Diluted Sample
IW-70-SAT35-167	K205-03	1	NA	11/23/1118:16	11/23/1115:00	FK23049A	FK23038A	DGK017W	Field Sample
IW-70-SAT35-167DL	K205-03T	10	NA	11/23/1119:31	11/23/1115:00	FK23055A	FK23054A	DGK017W	Diluted Sample
IW-70-SAT35-167DL	K205-03I	1000	NA	11/23/1119:44	11/23/1115:00	FK23056A	FK23054A	DGK017W	Diluted Sample
IR-70-SB-165	K205-04	1	NA	11/23/1116:58	11/23/1115:00	FK23043A	FK23038A	DGK017W	Field Sample
IR-70-EB-166	K205-05	1	NA	11/23/1117:11	11/23/1115:00	FK23044A	FK23038A	DGK017W	Field Sample
IW-70-SSB119-163MS	K205-01M	1	NA	11/23/1117:39	11/23/1115:00	FK23046A	FK23038A	DGK017W	Matrix Spike Sample (MS)
IW-70-SSB119-163MSD	K205-01S	1	NA	11/23/1117:51	11/23/1115:00	FK23047A	FK23038A	DGK017W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/22/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/22/11
Batch No.	: 11K205	Date Extracted:	11/23/11 15:00
Sample ID:	IW-70-SSB119-163	Date Analyzed:	11/23/11 17:26
Lab Samp ID:	K205-01	Dilution Factor:	1
Lab File ID:	FK23045A	Matrix :	WATER
Ext Btch ID:	DGK017W	% Moisture :	NA
Calib. Ref.:	FK23038A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	9.3	2.0	0.64
ETHENE	1.9J	2.0	0.60
METHANE	150E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/22/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/22/11
Batch No. : 11K205	Date Extracted: 11/23/11 15:00
Sample ID: IW-70-SSB119-163DL	Date Analyzed: 11/23/11 19:56
Lab Samp ID: K205-01T	Dilution Factor: 1000
Lab File ID: FK23057A	Matrix : WATER
Ext Btch ID: DGK017W	% Moisture : NA
Calib. Ref.: FK23054A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	23000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/22/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/22/11
Batch No. : 11K205	Date Extracted: 11/23/11 15:00
Sample ID: IW-70-SHB311-164	Date Analyzed: 11/23/11 18:04
Lab Samp ID: K205-02	Dilution Factor: 1
Lab File ID: FK23048A	Matrix : WATER
Ext Btch ID: DGK017W	% Moisture : NA
Calib. Ref.: FK23038A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	0.79J	2.0	0.64
ETHENE	0.62J	2.0	0.60
METHANE	150E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/22/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/22/11
Batch No.	: 11K205	Date Extracted:	11/23/11 15:00
Sample ID:	IW-70-SHB311-164DL	Date Analyzed:	11/23/11 19:08
Lab Samp ID:	K205-02T	Dilution Factor:	1000
Lab File ID:	FK23053A	Matrix :	WATER
Ext Btch ID:	DGK017W	% Moisture :	NA
Calib. Ref.:	FK23038A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	20000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/22/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/22/11
Batch No.	: 11K205	Date Extracted:	11/23/11 15:00
Sample ID:	IW-70-SAT35-167	Date Analyzed:	11/23/11 18:16
Lab Samp ID:	K205-03	Dilution Factor:	1
Lab File ID:	FK23049A	Matrix :	WATER
Ext Btch ID:	DGK017W	% Moisture :	NA
Calib. Ref.:	FK23038A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	0.94J	2.0	0.64
ETHENE	140E	2.0	0.60
METHANE	120E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/22/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/22/11
Batch No.	: 11K205	Date Extracted:	11/23/11 15:00
Sample ID:	IW-70-SAT35-167DL	Date Analyzed:	11/23/11 19:31
Lab Samp ID:	K205-03T	Dilution Factor:	10
Lab File ID:	FK23055A	Matrix :	WATER
Ext Btch ID:	DGK017W	% Moisture :	NA
Calib. Ref.:	FK23054A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	20	6.4
ETHENE	130	20	6.0
METHANE	2000E	20	3.4

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/22/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/22/11
Batch No. : 11K205	Date Extracted: 11/23/11 15:00
Sample ID: IW-70-SAT35-167DL	Date Analyzed: 11/23/11 19:44
Lab Samp ID: K205-03I	Dilution Factor: 1000
Lab File ID: FK23056A	Matrix : WATER
Ext Btch ID: DGK017W	% Moisture : NA
Calib. Ref.: FK23054A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	15000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/22/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/22/11
Batch No.	: 11K205	Date Extracted:	11/23/11 15:00
Sample ID:	IR-70-SB-165	Date Analyzed:	11/23/11 16:58
Lab Samp ID:	K205-04	Dilution Factor:	1
Lab File ID:	FK23043A	Matrix :	WATER
Ext Btch ID:	DGK017W	% Moisture :	NA
Calib. Ref.:	FK23038A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/22/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/22/11
Batch No. : 11K205	Date Extracted: 11/23/11 15:00
Sample ID: IR-70-EB-166	Date Analyzed: 11/23/11 17:11
Lab Samp ID: K205-05	Dilution Factor: 1
Lab File ID: FK23044A	Matrix : WATER
Ext Btch ID: DGK017W	% Moisture : NA
Calib. Ref.: FK23038A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

QC SUMMARIES

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/23/11
Batch No. : 11K205	Date Extracted: 11/23/11 15:00
Sample ID: MBLK1W	Date Analyzed: 11/23/11 16:33
Lab Samp ID: DGK017WB	Dilution Factor: 1
Lab File ID: FK23041A	Matrix : WATER
Ext Btch ID: DGK017W	% Moisture : NA
Calib. Ref.: FK23038A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD RSK-175

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: DGK017WB DGK017WL
LAB FILE ID: FK23041A FK23042A
DATE EXTRACTED: 11/23/1115:00 11/23/1115:00 DATE COLLECTED: NA
DATE ANALYZED: 11/23/1116:33 11/23/1116:45 DATE RECEIVED: 11/23/11
PREP. BATCH: DGK017W DGK017W
CALIB. REF: FK23038A FK23038A

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	QC LIMIT (%)
Ethane	ND	25.4	26.4	104	70-140
Ethene	ND	23.7	25.1	106	70-140
Methane	ND	13.6	12.8	94	70-130

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD RSK-175

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID:	IW-70-SSB119-163		
LAB SAMP ID:	K205-01	K205-01M	K205-01S
LAB FILE ID:	FK23045A	FK23046A	FK23047A
DATE EXTRACTED:	11/23/1115:00	11/23/1115:00	11/23/1115:00
DATE ANALYZED:	11/23/1117:26	11/23/1117:39	11/23/1117:51
PREP. BATCH:	DGK017W	DGK017W	DGK017W
CALIB. REF:	FK23038A	FK23038A	FK23038A

DATE COLLECTED: 11/22/11
DATE RECEIVED: 11/22/11

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	9.34	25.4	26.9	69	25.4	26.7	68	1	60-140	30
Ethene	1.89J	23.7	18.5	70	23.7	18.5	70	0	20-160	30
Methane	148E	13.6	156E	57	13.6	150E	19	3	10-160	30

INITIAL CALIBRATIONS

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	25.00X	40.00X	75.00X	100.00X	MEAN	%RSD
Methane	0.34	31626	33510	29954	29307	29338	29307	30507.1	5.6
Acetylene	0.55	2465	2595	2723	2744	2716	2643	2647.7	4.0
Ethylene	0.59	14655	16070	16617	16602	17123	16803	16311.8	5.4
Ethane	0.64	22748	24144	25289	25073	26185	26048	24914.4	5.2
Propane	0.93	29887	24871	26520	26214	27735	27800	27171.2	6.3

DG10K01.MET

FORM VI DGAS -2 1/96 Rev 2/2006

11/03/11

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK01008A 11/01/2011 13:45
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	416247	13.64	1		15
Acetylene	2.175	2.149	2.201	22.0	2647.6	66913	25.27	15		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	437326	26.81	13		15
Ethane	3.075	3.025	3.125	25.4	24914.4	691218	27.74	9		15
Propane	5.900	5.824	5.976	37.3	27171.2	1111008	40.89	10		15

DG10K01.MET

AJ
11/3/11

DAILY CALIBRATIONS

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK23038A 11/23/2011 15:56
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	367478	12.05	-11		15
Acetylene	2.192	2.166	2.218	22.0	2647.6	57735	21.81	-1		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	368785	22.61	-5		15
Ethane	3.058	3.008	3.108	25.4	24914.4	586008	23.52	-7		15
Propane	5.875	5.799	5.951	37.3	27171.2	893234	32.87	-12		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK23054A 11/23/2011 19:19
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	408163	13.38	-1		15
Acetylene	2.208	2.182	2.234	22.0	2647.6	56730	21.43	-3		15
Ethylene	2.650	2.599	2.701	23.7	16311.8	391534	24.00	1		15
Ethane	3.075	3.025	3.125	25.4	24914.4	645174	25.90	2		15
Propane	5.892	5.816	5.968	37.3	27171.2	973704	35.84	-4		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK23058A 11/23/2011 20:08
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	395113	12.95	-4		15
Acetylene	2.200	2.174	2.226	22.0	2647.6	58750	22.19	1		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	385820	23.65	-0		15
Ethane	3.067	3.017	3.117	25.4	24914.4	634835	25.48	0		15
Propane	5.875	5.799	5.951	37.3	27171.2	968943	35.66	-4		15

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGAS ICAL

Book #:	A10-025
Instrument No.:	10
Analytical Sequence:	FK01
Method File:	DG10K01
Analytical Batch:	N/A

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGAS ICAL SSSA-05-01-10	500 ppm
DGAS ICV SSSA-05-01-7	500 ppm
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: SC

Date: 11/01/11

Disposed By: SC

Date Disposed: 11/01/11

Method: Dg10k01.met Batch: Fk01.seq Data: Fk01.011 - [Batch: fk01.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Run Type	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
1	Unknown	IB10K407	dg10k01.met	FK01.001	100ml 1	1	
2	Unknown	DG10K01-01	dg10k01.met	FK01.002	1	1	
3	Unknown	DG10K01-02	dg10k01.met	FK01.003	1	1	
4	Unknown	DG10K01-03	dg10k01.met	FK01.004	1	1	DGAS 10ML
5	Unknown	DG10K01-04	dg10k01.met	FK01.005	1	1	
6	Unknown	DG10K01-05	dg10k01.met	FK01.006	1	1	
7	Unknown	DG10K01-06	dg10k01.met	FK01.007	1	1	
8	Unknown	IDG10K0101	dg10k01.met	FK01.008	1	1	DGAS 10V
9	Unknown	IB	dg10k01.met	FK01.009	1	1	
10	Unknown	IB	dg10k01.met	FK01.010	1	1	
11	Unknown	IB	dg10k01.met	FK01.011	1	1	
12	Unknown	IB	dg10k01.met	FK01.012	1	1	
13	Unknown	IB	dg10k01.met	FK01.013	1	1	
14	Unknown	IB	dg10k01.met	FK01.014	1	1	
15	Unknown	IB	dg10k01.met	FK01.015	1	1	FINAL
16	Unknown	IB	dg10k01.met	FK01.016	1	1	
17	Unknown	IB	dg10k01.met	FK01.017	1	1	
18	Unknown	IB	dg10k01.met	FK01.018	1	1	
19	Unknown	IB	dg10k01.met	FK01.019	1	1	
20	Unknown	IB	dg10k01.met	FK01.020	1	1	
21	Unknown	IB	dg10k01.met	FK01.021	1	1	
22	Unknown	IB	dg10k01.met	FK01.022	1	1	
23	Unknown	IB	dg10k01.met	FK01.023	1	1	
24	Unknown	IB	dg10k01.met	FK01.024	1	1	
25	Unknown	IB	dg10k01.met	FK01.025	1	1	
26	Unknown	IB	dg10k01.met	FK01.026	1	1	
27	Unknown	IB	dg10k01.met	FK01.027	1	1	
28	Unknown	IB	dg10k01.met	FK01.028	1	1	
29	Unknown	IB	dg10k01.met	FK01.029	1	1	
30	Unknown	IB	dg10k01.met	FK01.030	1	1	
31	Unknown	IB	dg10k01.met	FK01.031	1	1	
32	Unknown	IB	dg10k01.met	FK01.032	1	1	
33	Unknown	IB	dg10k01.met	FK01.033	1	1	
34	Unknown	IB	dg10k01.met	FK01.034	1	1	

EC 11/01/11

Waiting For Trigger...

Start | EZChrom Chromatograp... | Method: Dg10k01.... | Calculator | Method: Dg10k01.met | untitled - Paint | Exploring | Tuesday, November 01, 2011

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGK016W: K116, K138 K123 K142

DGK017W: K205

Book #:	A10-026
Instrument No.:	10
Analytical Sequence:	FK23
Method File:	DG10K01
Analytical Batch:	CDG10K01457

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGas DCC SSSB-07-40-1	200
DGas DCC SSSB-07-40-2	200
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: RH

Date: 11/23/11

Disposed By: RH

Date Disposed: 11/23/11

Method: Dg10k01.met Batch: Fk23.seq Data: Fk23.042 - [Batch: fk23.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
1	IB10K457	dg10k01.met	FK23.001	100ul 1	1	
2	CDG10K01457	dg10k01.met	FK23.002	1	1	
3	DGK016WB	dg10k01.met	FK23.003	1	1	
4	DGK016WL	dg10k01.met	FK23.004	1	1	
5	DGK016WC	dg10k01.met	FK23.005	1	1	
6	11K116-02	dg10k01.met	FK23.006	1	1	CONF ONLY
7	TEST	dg10k01.met	FK23.007	1	1	
8	11K116-02T DF=5	dg10k01.met	FK23.008	20ul 1	5	
9	11K116-02I DF=200	dg10k01.met	FK23.009	50ul (10x) 1	200	
10	11K116-04	dg10k01.met	FK23.010	100ul 1	1	
11	11K116-04M	dg10k01.met	FK23.011	1	1	
12	11K116-04S	dg10k01.met	FK23.012	1	1	
13	CDG10K01458	dg10k01.met	FK23.013	1	1	
14	11K116-04W Conf. only	dg10k01.met	FK23.014	1	1	CONF ONLY
15	11K116-06	dg10k01.met	FK23.015	1	1	
16	11K116-06T DF=20	dg10k01.met	FK23.016	50ul 1	20	
17	11K116-07	dg10k01.met	FK23.017	100ul 1	1	
18	11K116-07T DF=5	dg10k01.met	FK23.018	20ul 1	5	CONF ONLY
19	11K116-07I DF=20	dg10k01.met	FK23.019	50ul 1	20	
20	11K188-01	dg10k01.met	FK23.020	100ul 1	1	
21	11K188-02	dg10k01.met	FK23.021	1	1	
22	11K188-03	dg10k01.met	FK23.022	1	1	
23	11K188-03T DF=400	dg10k01.met	FK23.023	50ul (20x) 1	400	
24	11K123-01	dg10k01.met	FK23.024	100ul 1	1	
25	11K123-01T DF=2	dg10k01.met	FK23.025	50ul 1	2	
26	CDG10K01459	dg10k01.met	FK23.026	100ul 1	1	
27	11K123-03	dg10k01.met	FK23.027	1	1	
28	11K123-04	dg10k01.met	FK23.028	1	1	
29	11K123-05	dg10k01.met	FK23.029	1	1	
30	11K142-01	dg10k01.met	FK23.030	1	1	
31	11K142-01T DF=10	dg10k01.met	FK23.031	10ul 1	10	
32	11K142-03	dg10k01.met	FK23.032	100ul 1	1	
33	11K142-03M	dg10k01.met	FK23.033	1	1	
34	11K142-03S	dg10k01.met	FK23.034	1	1	

FINAL

Instrument 2: TO10

Start | EZChrom Chromatography... | Exploring - Export | Method: Dg10k01.me... | Method: Dg10k01.met B... | Calculator | Wednesday, November 23, 2011

4029

Method: Dg10k01.met Batch: Fk23.seq Data: Fk23.058 - [Batch: fk23.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
35	11K142-03T DF=10	dg10k01.met	FK23.035	10ul 1	10	
36	11K142-04	dg10k01.met	FK23.036	100ul 1	1	
37	11K142-04T DF=5	dg10k01.met	FK23.037	20ul 1	5	
38	CDG10K01460	dg10k01.met	FK23.038	100ul 1	1	
39	TEST	dg10k01.met	FK23.039	— 1	1	
40	TEST	dg10k01.met	FK23.040	— 1	1	
41	DGK017WB	dg10k01.met	FK23.041	100ul 1	1	
42	DGK017WL	dg10k01.met	FK23.042	1	1	
43	11K205-04	dg10k01.met	FK23.043	1	1	
44	11K205-05	dg10k01.met	FK23.044	1	1	
45	11K205-01	dg10k01.met	FK23.045	1	1	
46	11K205-01M	dg10k01.met	FK23.046	1	1	
47	11K205-01S	dg10k01.met	FK23.047	1	1	FINAL
48	11K205-02	dg10k01.met	FK23.048	1	1	
49	11K205-03	dg10k01.met	FK23.049	1	1	
50	RINSE CHNGD SEPTUM	dg10k01.met	FK23.050	— 1	1	
51	TEST	dg10k01.met	FK23.051	— 1	1	
52	11K205-01T DF=1000 Not evaluated	dg10k01.met	FK23.052	2ul (20x) 1	1000	
53	11K205-02T DF=1000	dg10k01.met	FK23.053	2ul (20x) 1	1000	
54	CDG10K01461	dg10k01.met	FK23.054	100ul 1	1	
55	11K205-03T DF=10	dg10k01.met	FK23.055	10ul 1	10	
56	11K205-03I DF=1000	dg10k01.met	FK23.056	2ul (20x) 1	1000	
57	11K205-01T DF=1000	dg10k01.met	FK23.057	2ul (20x) 1	1000	
58	CDG10K01462	dg10k01.met	FK23.058	100ul 1	1	
59	IB	dg10k01.met	FK23.059	1	1	
60	IB	dg10k01.met	FK23.060	1	1	
61	IB	dg10k01.met	FK23.061	1	1	
62	IB SC	dg10k01.met	FK23.062	1	1	
63	IB 11/23/11	dg10k01.met	FK23.063	1	1	
64	IB	dg10k01.met	FK23.064	1	1	
65	IB	dg10k01.met	FK23.065	1	1	
66	IB	dg10k01.met	FK23.066	1	1	
67	IB	dg10k01.met	FK23.067	1	1	
68	IB	dg10k01.met	FK23.068	1	1	

Instrument 2: TO10

Start | EZChrom Chromatography | Method: Dg10k01.me... | untitled - Paint | Method Dg10k01.met B... | Calculator | Wednesday, November 23, 2011 8:04 PM

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/01/11 Time: 10:00 End Date: 11/01/11 Time: 10:40

PREPARATION BATCH # N/A

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DG10K01-01	39	4	N/A	
02	-02			N/A	
03	-03			N/A	DGAS ICAL
04	-04			N/A	
05	-05			N/A	
06	-06			N/A	
07	IDG10K01 01			N/A	DGAS ICV
08					
09					
10					
11					
12					
13					SC 11/01/11
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Standards	ID	Amount Added (µl)
LCS/MS / ICV	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic free
He	Air Gas
ICAL STD (500 ppm)	SSSA-05-01-10 (SPECIALTY AIR)
ICV STD 500 ppm	SSSA-05-01-7 (MATHESON)

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #: (ESS)	28100705

Comments:

1) 0.08 ml ICAL STD + 3.92 ml He
2) 0.4 ml 3.6 ml
3) 1.0 ml 3.0 ml
4) 1.6 ml 2.4 ml
5) 3.0 ml 1.0 ml
6) 4.0 ml 0 ml

Prepared By: SC

Standard Added By: SC

4032

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☒ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/23/11 Time: 15:00 End Date: 11/23/11 Time: 15:40

PREPARATION BATCH # DGK017W

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (< 2)	Notes
01	DGK017 WB	39	4	N/A	
02	L			N/A	
03	11K205-01			~7	
04	01M			~7	
05	01S			~7	
06	02			~7	
07	03			~7	
08	04			✓	
09	05			✓	
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

RM 11/23/11

Standards		Amount Added (µl)
LCS/MS	SSSA-IB-01-7 ~~SSSA-05-07~~ RM 11/23/11	1600

Reagent	Source
H_2O	Organic Free
He	Air Gas

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #:	28100705

Comments:

Prepared By: RM

Standard Added By: RM

1033

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

SDG#: 11K205

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K205

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

A total of five (5) water samples were received on 11/22/11 for Dissolved Metals by ICP analysis, Method 3010A/6010B in accordance with Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source. Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for IPK041WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample was analyzed at the frequency prescribed by the project.
Percent recoveries for K205-01M/S were within project QC limits.
In addition, analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED METALS BY TRACE ICP

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K205
Instrument ID : T-ID8

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IPK041WB	1	NA	11/30/1111:40	11/28/1111:54	ID8K024031	ID8K024029	IPK041W	Method Blank
LCS1W	IPK041WL	1	NA	11/30/1111:43	11/28/1111:54	ID8K024032	ID8K024029	IPK041W	Lab Control Sample (LCS)
LCD1W	IPK041WC	1	NA	11/30/1111:45	11/28/1111:54	ID8K024033	ID8K024029	IPK041W	LCS Duplicate
IW-70-SSB119-163AS	K205-01A	1	NA	11/30/1111:48	11/28/1111:54	ID8K024034	ID8K024029	IPK041W	Analytical Spike Sample
IW-70-SSB119-163	K205-01	1	NA	11/30/1111:51	11/28/1111:54	ID8K024035	ID8K024029	IPK041W	Field Sample
IW-70-SSB119-163DL	K205-01J	5	NA	11/30/1111:54	11/28/1111:54	ID8K024036	ID8K024029	IPK041W	Diluted Sample
IW-70-SSB119-163MS	K205-01M	1	NA	11/30/1111:57	11/28/1111:54	ID8K024037	ID8K024029	IPK041W	Matrix Spike Sample (MS)
IW-70-SSB119-163MSD	K205-01S	1	NA	11/30/1112:00	11/28/1111:54	ID8K024038	ID8K024029	IPK041W	MS Duplicate (MSD)
IW-70-SHB311-164	K205-02	1	NA	11/30/1112:18	11/28/1111:54	ID8K024043	ID8K024041	IPK041W	Field Sample
IW-70-SAT35-167	K205-03	1	NA	11/30/1112:21	11/28/1111:54	ID8K024044	ID8K024041	IPK041W	Field Sample
IR-70-SB-165	K205-04	1	NA	11/30/1112:24	11/28/1111:54	ID8K024045	ID8K024041	IPK041W	Field Sample
IR-70-EB-166	K205-05	1	NA	11/30/1112:27	11/28/1111:54	ID8K024046	ID8K024041	IPK041W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/22/11 11:45
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/22/11
SDG NO.	: 11K205	Date Extracted:	11/28/11 11:54
Sample ID:	IW-70-SSB119-163	Date Analyzed:	11/30/11 11:51 # 11/30/11 13:39
Lab Samp ID:	K205-01 #K205-01T	Dilution Factor:	1 # 5
Lab File ID:	ID8K024035#ID8K024070	Matrix :	WATER
Ext Btch ID:	IPK041W	% Moisture :	NA
Calib. Ref.:	ID8K024029#ID8K024067	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
# Arsenic	ND	1.00	0.0250
Iron	2.29	0.200	0.0400
Manganese	0.386	0.200	0.00300

Members of the Associated File

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/22/11 13:47
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/22/11
SDG NO.	: 11K205	Date Extracted:	11/28/11 11:54
Sample ID:	IW-70-SHB311-164	Date Analyzed:	11/30/11 12:18
Lab Samp ID:	K205-02	Dilution Factor:	1
Lab File ID:	ID8K024043	Matrix :	WATER
Ext Btch ID:	IPK041W	% Moisture :	NA
Calib. Ref.:	ID8K024041	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	31.5	0.200	0.0400
Manganese	0.725	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/22/11 16:23
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/22/11
SDG NO.	: 11K205	Date Extracted:	11/28/11 11:54
Sample ID:	IW-70-SAT35-167	Date Analyzed:	11/30/11 12:21
Lab Samp ID:	K205-03	Dilution Factor:	1
Lab File ID:	ID8K024044	Matrix :	WATER
Ext Btch ID:	IPK041W	% Moisture :	NA
Calib. Ref.:	ID8K024041	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	0.190J	0.200	0.00500
Iron	0.217	0.200	0.0400
Manganese	3.30	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/22/11 14:15
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/22/11
SDG NO.	: 11K205	Date Extracted:	11/28/11 11:54
Sample ID:	IR-70-SB-165	Date Analyzed:	11/30/11 12:24
Lab Samp ID:	K205-04	Dilution Factor:	1
Lab File ID:	ID8K024045	Matrix :	WATER
Ext Btch ID:	IPK041W	% Moisture :	NA
Calib. Ref.:	ID8K024041	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	ND	0.200	0.0400
Manganese	ND	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/22/11 14:20
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/22/11
SDG NO.	: 11K205	Date Extracted:	11/28/11 11:54
Sample ID:	IR-70-EB-166	Date Analyzed:	11/30/11 12:27
Lab Samp ID:	K205-05	Dilution Factor:	1
Lab File ID:	ID8K024046	Matrix :	WATER
Ext Btch ID:	IPK041W	% Moisture :	NA
Calib. Ref.:	ID8K024041	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	ND	0.200	0.0400
Manganese	ND	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/28/11
SDG NO.	: 11K205	Date Extracted:	11/28/11 11:54
Sample ID:	MBLK1W	Date Analyzed:	11/30/11 11:40
Lab Samp ID:	IPK041WB	Dilution Factor:	1
Lab File ID:	ID8K024031	Matrix :	WATER
Ext Btch ID:	IPK041W	% Moisture :	NA
Calib. Ref.:	ID8K024029	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	ND	0.200	0.0400
Manganese	ND	0.200	0.00300

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K205
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	IPK041WB	IPK041WL	IPK041WC		
LAB FILE ID:	ID8K024031	ID8K024032	ID8K024033		
DATIME EXTRCTD:	11/28/1111:54	11/28/1111:54	11/28/1111:54	DATE COLLECTED:	NA
DATIME ANALYZD:	11/30/1111:40	11/30/1111:43	11/30/1111:45	DATE RECEIVED:	11/28/11
PREP. BATCH:	IPK041W	IPK041W	IPK041W		
CALIB. REF:	ID8K024029	ID8K024029	ID8K024029		

ACCESSION:

PARAMETER	BLNK RSLT mg/L	SPIKE AMT mg/L	BS RSLT mg/L	BS % REC	SPIKE AMT mg/L	BSD RSLT mg/L	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	ND	.5	.537	107	.5	.539	108	0	80-120	20
Iron	ND	5	5.21	104	5	5.23	105	0	80-120	20
Manganese	ND	.5	.467	93	.5	.472	94	1	80-120	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K205
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	IW-70-SSB119-163				
CONTROL NO.:	K205-01	K205-01M	K205-01S		
LAB FILE ID:	ID8K024035	ID8K024037	ID8K024038		
DATIME EXTRCTD:	11/28/1111:54	11/28/1111:54	11/28/1111:54	DATE COLLECTED:	11/22/11 11:45
DATIME ANALYZD:	11/30/1111:51	11/30/1111:57	11/30/1112:00	DATE RECEIVED:	11/22/11
PREP. BATCH:	IPK041W	IPK041W	IPK041W		
CALIB. REF:	ID8K024029	ID8K024029	ID8K024029		

ACCESSION:

PARAMETER	SMPL RSLT mg/L	SPIKE AMT mg/L	MS RSLT mg/L	MS % REC	SPIKE AMT mg/L	MSD RSLT mg/L	MSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic*	ND	.5	.601	120	.5	.592	118	1	75-125	20
Iron	2.29	5	7.2	98	5	7.12	97	1	75-125	20
Manganese	.386	.5	.858	94	.5	.843	91	2	75-125	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	IW-70-SSB119-163	IW-70-SSB119-163DL		
EMAX SAMP ID:	K205-01	K205-01J		
LAB FILE ID:	ID8K024035	ID8K024036		
DATE EXTRACTED:	11/28/1111:54	11/28/1111:54	DATE COLLECTED:	11/22/11 11:45
DATE ANALYZED:	11/30/1111:51	11/30/1111:54	DATE RECEIVED:	11/22/11
PREP. BATCH:	IPK041W	IPK041W		
CALIB. REF:	ID8K024029	ID8K024029		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SERIAL DIL RSLT (mg/L)	DIF RSLT %	QC LIMIT (%)
Arsenic^	ND	ND	0	10
Iron	2.29	2.48	8	10
Manganese	0.386	0.418J	NA	10

^ K205-0J : Analyzed at DF 25 on 11/30/11 13:43 | File ID ID8K024071

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K205
METHOD: METHOD 3010A/6010B (DISSOLVED)

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MATRIX:	WATER		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	IW-70-SSB119-163			
CONTROL NO.:	K205-01	K205-01A		
LAB FILE ID:	ID8K024035	ID8K024034		
DATIME EXTRCTD:	11/28/1111:54	11/28/1111:54	DATE COLLECTED:	11/22/11 11:45
DATIME ANALYZD:	11/30/1111:51	11/30/1111:48	DATE RECEIVED:	11/22/11
PREP. BATCH:	IPK041W	IPK041W		
CALIB. REF:	ID8K024029	ID8K024029		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	AS RSLT (mg/L)	AS % REC	QC LIMIT (%)
Arsenic^	ND	2.5	3.02	121	75-125
Iron	2.29	5	7.48	104	75-125
Manganese	.386	.5	.864	96	75-125

^ K205-01A : Analyzed at DF 5 on 11/30/11 13:37 | File ID ID8K024069

ICP QC CHECK TABLE

QC	ICV	CCV	ICSAB	ICSA	MLCV
Limit%	90-110	90-110	80-120	80-120	80-120
Comp	mg/L	mg/L	mg/L	mg/L	mg\L
Al	100	100	400	400	200
Sb	1.5	1.5	1	0	5
As	1	1	1	0	1
Ba	2	2	0.5	0	5
Be	1.5	1.5	0.5	0	5
B	2.5	2.5	0.5	0	5
Cd	2	2	1	0	5
Ca	75	75	500	500	250
Cr	2.5	2.5	0.5	0	5
Co	1	1	0.5	0	1
Cu	2.5	2.5	0.5	0	5
Fe	25	25	200	200	200
Pb	2.5	2.5	1	0	5
Li	0.5	0.5	1	0	0.5
Mg	60	60	200	200	100
Mn	2.5	2.5	0.5	0	5
Mo	2.5	2.5	1	0	5
Ni	2.5	2.5	1	0	5
K	60	60	75	0	250
Se	1	1	1	0	1
Ag	0.5	0.5	1	0	0.5
Na	60	60	75	0	150
Sr	0.5	0.5	0.5	0	0.5
Tl	2.5	2.5	1	0	5
Sn	0.5	0.5	1	0	0.5
Ti	0.5	0.5	1	0	0.5
V	1.5	1.5	0.5	0	5
Zn	2.5	2.5	1	0	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 11/30/11 10:02

End Date: 11/30/11 17:36

SOP #	Rev. #
☑ EMAX-6010	7
☐ EMAX-6010C	1
☐ EMAX-200.7	2
☐ EMAX-	

Comments:

Book #: AD8-022

Instrument No.: D8

Analytical Batch: 108K024

Analytical Sequence: S-11K6010 (v33)

Method File: 11K6010 (v33)

Database: EMAX14

	STANDARDS ID		STANDARDS ID
S0	SM1B14-7805	S30	SM1B14-6802
S1	N/A	S31	-6803
S2		ICV	-8201
S3		CCV	-8301
S4		ICSA	-8502
S5		ICSAB	-6704
S6		CRI/MRL 1	-8101
S7		MRL2	-7401
S8			
S9			
S10			
S11			
S12			
S16			
S17			
S18			
S20	SM1B14-8401		
S21	-6503		
S22	-6504		
S23	-8402		
S24	-6702		
S25	-6703		
S26	-7801		
S27	-7802		
S28	-7803		
S29	-7804		

Analyzed By: PP

Date: 11/30/11

7014

SEQUENCE FILE : ID8K024

4-18	19-33	34-43	44-53	54-63
LF1D	LS1D	TIME	DATE	DF
ID8K024001	Blank	10:02	11/30/11	1.000
ID8K024002	S20	10:05	11/30/11	1.000
ID8K024003	S21	10:07	11/30/11	1.000
ID8K024004	S22	10:11	11/30/11	1.000
ID8K024005	S23	10:14	11/30/11	1.000
ID8K024006	S24	10:17	11/30/11	1.000
ID8K024007	S25	10:20	11/30/11	1.000
ID8K024008	S26	10:23	11/30/11	1.000
ID8K024009	S27	10:26	11/30/11	1.000
ID8K024010	S28	10:29	11/30/11	1.000
ID8K024011	S29	10:32	11/30/11	1.000
ID8K024012	S30	10:35	11/30/11	1.000
ID8K024013	S31	10:38	11/30/11	1.000
ID8K024014	ICV	10:41	11/30/11	1.000
ID8K024015	ICB	10:44	11/30/11	1.000
ID8K024016	MRLK3001	10:47	11/30/11	1.000
ID8K024017	MRLK3002	10:50	11/30/11	1.000
ID8K024018	ICSA1	10:53	11/30/11	1.000
ID8K024019	ICAB1	10:56	11/30/11	1.000
ID8K024020	CCV1	10:59	11/30/11	1.000
ID8K024021	CCB1	11:02	11/30/11	1.000
ID8K024022	K542-08	11:05	11/30/11	1.000
ID8K024023	Blank	11:08	11/30/11	1.000
ID8K024024	CCV2	11:11	11/30/11	1.000
ID8K024025	CCB2	11:14	11/30/11	1.000
ID8K024026	K542-08W	11:24	11/30/11	1.000
ID8K024027	K550-08	11:27	11/30/11	1.000
ID8K024028	Blank	11:30	11/30/11	1.000
ID8K024029	CCV3	11:34	11/30/11	1.000
ID8K024030	CCB3	11:37	11/30/11	1.000
ID8K024031	IPK041WB	11:40	11/30/11	1.000
ID8K024032	IPK041WL	11:43	11/30/11	1.000
ID8K024033	IPK041WC	11:45	11/30/11	1.000
ID8K024034	K205-01A	11:48	11/30/11	1.000
ID8K024035	K205-01	11:51	11/30/11	1.000
ID8K024036	K205-01J	11:54	11/30/11	5.000
ID8K024037	K205-01M	11:57	11/30/11	1.000
ID8K024038	K205-01S	12:00	11/30/11	1.000
ID8K024039	K203-15	12:06	11/30/11	1.000
ID8K024040	Blank	12:09	11/30/11	1.000
ID8K024041	CCV4	12:12	11/30/11	1.000
ID8K024042	CCB4	12:15	11/30/11	1.000
ID8K024043	K205-02	12:18	11/30/11	1.000
ID8K024044	K205-03	12:21	11/30/11	1.000
ID8K024045	K205-04	12:24	11/30/11	1.000
ID8K024046	K205-05	12:27	11/30/11	1.000
ID8K024047	K184-01	12:30	11/30/11	1.000
ID8K024048	K184-02	12:33	11/30/11	1.000
ID8K024049	K184-03	12:37	11/30/11	1.000
ID8K024050	K184-04	12:40	11/30/11	1.000
ID8K024051	K184-05	12:43	11/30/11	1.000
ID8K024052	Blank	12:46	11/30/11	1.000

ID8K024053	CCV5	12:49	11/30/11	1.000
ID8K024054	CCB5	12:52	11/30/11	1.000
ID8K024055	K174-01	12:55	11/30/11	1.000
ID8K024056	K174-07	12:58	11/30/11	1.000
ID8K024057	K188-03	13:02	11/30/11	1.000
ID8K024058	Blank	13:05	11/30/11	1.000
ID8K024059	CCV6	13:08	11/30/11	1.000
ID8K024060	CCB6	13:11	11/30/11	1.000
ID8K024061	K542-06A	13:14	11/30/11	5.000
ID8K024062	K542-06T	13:16	11/30/11	5.000
ID8K024063	K542-06J	13:19	11/30/11	25.00
ID8K024064	K542-06M	13:22	11/30/11	5.000
ID8K024065	K542-06S	13:25	11/30/11	5.000
ID8K024066	Blank	13:28	11/30/11	1.000
ID8K024067	CCV7	13:31	11/30/11	1.000
ID8K024068	CCB7	13:34	11/30/11	1.000
ID8K024069	K205-01A As	13:37	11/30/11	5.000
ID8K024070	K205-01T	13:39	11/30/11	5.000
ID8K024071	K205-01J	13:43	11/30/11	25.00
ID8K024072	K205-01M	13:46	11/30/11	5.000
ID8K024073	K205-01S	13:48	11/30/11	5.000
ID8K024074	Blank	13:51	11/30/11	1.000
ID8K024075	CCV8	13:54	11/30/11	1.000
ID8K024076	CCB8	13:57	11/30/11	1.000
ID8K024077	K198-05A	14:00	11/30/11	1.000
ID8K024078	K198-05	14:03	11/30/11	1.000
ID8K024079	K198-05J	14:06	11/30/11	5.000
ID8K024080	K198-05M	14:09	11/30/11	1.000
ID8K024081	K198-05S	14:11	11/30/11	1.000
ID8K024082	K198-03	14:14	11/30/11	1.000
ID8K024083	K198-04	14:17	11/30/11	1.000
ID8K024084	Blank	14:20	11/30/11	1.000
ID8K024085	CCV9	14:23	11/30/11	1.000
ID8K024086	CCB9	14:26	11/30/11	1.000
ID8K024087	K207-01	14:29	11/30/11	1.000
ID8K024088	K207-02	14:32	11/30/11	1.000
ID8K024089	Blank	14:35	11/30/11	1.000
ID8K024090	CCV10	14:38	11/30/11	1.000
ID8K024091	CCB10	14:41	11/30/11	1.000
ID8K024092	K119-01A	14:44	11/30/11	1.000
ID8K024093	K119-01W	14:46	11/30/11	1.000
ID8K024094	K119-01J	14:49	11/30/11	5.000
ID8K024095	K133-01A	14:52	11/30/11	5.000
ID8K024096	K133-01T	14:55	11/30/11	5.000
ID8K024097	K133-01J	14:58	11/30/11	25.00
ID8K024098	Blank	15:01	11/30/11	1.000
ID8K024099	CCV11	15:04	11/30/11	1.000
ID8K024100	CCB11	15:07	11/30/11	1.000
ID8K024101	IPK045WB	15:10	11/30/11	1.000
ID8K024102	IPK045WL	15:13	11/30/11	1.000
ID8K024103	IPK045WC	15:16	11/30/11	1.000
ID8K024104	TXK010SB	15:19	11/30/11	1.000
ID8K024105	K216-01A	15:22	11/30/11	1.000
ID8K024106	K216-01	15:25	11/30/11	1.000
ID8K024107	K216-01J	15:28	11/30/11	5.000

ID8K024108	K216-01M	15:31	11/30/11	1.000
ID8K024109	K216-01S	15:34	11/30/11	1.000
ID8K024110	Blank	15:37	11/30/11	1.000
ID8K024111	CCV12	15:40	11/30/11	1.000
ID8K024112	CCB12	15:42	11/30/11	1.000
ID8K024113	K216-02	15:46	11/30/11	1.000
ID8K024114	Blank	15:49	11/30/11	1.000
ID8K024115	CCV13	15:52	11/30/11	1.000
ID8K024116	CCB13	15:54	11/30/11	1.000
ID8K024117	K542-06A	15:57	11/30/11	10.00
ID8K024118	K542-06A	16:00	11/30/11	10.00
ID8K024119	K542-06I	16:03	11/30/11	10.00
ID8K024120	K542-06J	16:06	11/30/11	50.00
ID8K024121	K542-06M	16:09	11/30/11	10.00
ID8K024122	K542-06S	16:12	11/30/11	10.00
ID8K024123	Blank	16:14	11/30/11	1.000
ID8K024124	CCV14	16:17	11/30/11	1.000
ID8K024125	CCB14	16:20	11/30/11	1.000
ID8K024126	K133-01A	16:23	11/30/11	10.00
ID8K024127	K133-01I	16:26	11/30/11	10.00
ID8K024128	K133-01J	16:29	11/30/11	50.00
ID8K024129	Blank	16:32	11/30/11	1.000
ID8K024130	CCV15	16:35	11/30/11	1.000
ID8K024131	CCB15	16:38	11/30/11	1.000
ID8K024132	IPK046WB	16:41	11/30/11	1.000
ID8K024133	IPK046WL	16:44	11/30/11	1.000
ID8K024134	IPK046WC	16:47	11/30/11	1.000
ID8K024135	K229-01A	16:50	11/30/11	1.000
ID8K024136	K229-01	16:52	11/30/11	1.000
ID8K024137	K229-01J	16:55	11/30/11	5.000
ID8K024138	K229-01M	16:58	11/30/11	1.000
ID8K024139	K229-01S	17:01	11/30/11	1.000
ID8K024140	K229-03	17:04	11/30/11	1.000
ID8K024141	Blank	17:06	11/30/11	1.000
ID8K024142	CCV16	17:09	11/30/11	1.000
ID8K024143	CCV16	17:12	11/30/11	1.000
ID8K024144	K133-01A	17:15	11/30/11	10.00
ID8K024145	K542-06A	17:18	11/30/11	15.00
ID8K024146	K542-06A	17:21	11/30/11	15.00
ID8K024147	K542-06G	17:23	11/30/11	15.00
ID8K024148	K542-06J	17:26	11/30/11	75.00
ID8K024149	Blank	17:29	11/30/11	1.000
ID8K024150	CCV17	17:32	11/30/11	1.000
ID8K024151	CCB17	17:36	11/30/11	1.000

VERSION [illegible] UNIT [illegible] SUMMARY of ICV and ICV . 128K024 DATE - 12/30/11 [illegible]

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	---	-	---	--	-	---	--		---					---	-					-		-	--	-				-
S20	----		---					-			--	-	---	-	-	--	-	----	----		-	--	---	----	--	-	-	-
S21	-	-	-								-	--	--	-		-	----	-		---		--	----	-	-		---	-
S22	---	--	-			---		-	---	--	-	--		-		---		--	---		-		-	---	--	-		
S23	--	--	-	----	--	----	--	--	---	--			-	----	-	--	--		--	--		---		--	-		-	
S24		-	-	-	--	-	----	---	-		-	-	--	-	--	-	-	----	----	-	--	---	--		--	---		-
S25		-			-			-	-	--	---	---	---	-	--	----		--	---	--	--		--	-		-	--	-
S26		-		-		-	---		----		-			---		--	-		-		----	-	-	----	---	--		-
S27		-	-	--	-	-	---	---	-	-	---	-	---	--	-	-	--	---	---	-		-	-	-	-	-		---
S28			--			---			---	-	-	-		--	-	---		--	--		---	---		--	---		-	---
S29		-	---		-		----		-		-	--	---	----			----	---	--	----			-	--	--		--	
S30	---	-	--	-		----			---	---			--	---	-	-	-	-	-	---	---	--	-	--	--	--		--
S31		--	-	--	----	----	----	----	----	--	--		-		--	----	-	----	---		-	-	--	-				---
ICV	101	97	103	98	98	98	98	99	97	96	105	100	96	108	94	97	99	98	97	103	101	105	97	91	93	99	102	102
ICB	-	--	-		--			--	-		---		--	-	--		--	---	---	-			--	-			-	
MRLK3001		--		---	--	---	-	----					--		--		--	----	----			-	--					-
MRLK3002		--	--	---	--	--				---	----	-	-	-			---		--	---		-					-	-
ICSA1	97	-				-	---	94	--			95		---	95		----			----			---	--				
ICAB1		---		-	-	-		----					-		--	--	--		--	--			---		--			--
CCV1	-485*	-479*	489*	97	95	0*	470*	99	0*	95	2*	0*	94	100	93	91	99	97	99	495*	0*	106	96	439*	98	97	0*	102
CCB1	---	---		-	--					---	---	--	--	-			----	-	-	----	-	-				---		-
K042 08	----	---	--	-	---	-		----	--	--	--	--	---	-	--	-	--	-	-	-		-			-	--	---	
BLANK	----	---	--					-		----	---	--	----	-	-		----	-	--	--		--		-		--	-	
CCV2	101	100	104	98	96	98	99	98	97	96	105	99	95	101	93	91	99	97	99	103	102	106	97	93	98	97	101	102
CCB2	--	-	---	---		----		-	--	--	--		--	-	--	--	-	-	---	-	-	--	---	-	--	--		-
K042 08A								-			-		--	-	--	--		--	-		-			--		--	----	
K042 08	--	-	--	----	---	----	-	--		-	-		--		--		-		-	--		--		--	-	-	-	--
BLANK		-	---	---	-	----	----	-	--	--		--		--	---	---		-	--	-			----	-	-	-		
CCV3	103	103	106	99	94	103	102	101	100	97	108	102	97	109	95	94	100	99	100	105	104	107	98	95	93	102	103	104
CCB3	-	---			--	---	-	-	-	-	---	--	---			--	--			-		---		-		--		-	
IPK-41AF					-							-		---	-				--		-				-	--			
IPK-41B		-	---			--	---		-			-		---	-				--			---					-		
IPK-41W		--			-			--	-		-	--		-			-	--	-				-			--			
[illegible]	-					-			-		-	-	--				---			----		--		---				--
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BLANK	-	-	----	---	--			--							-	---	-											-
CCV4	101	101	106	97	96	99	101	99	99	96	107	100	94	99	93	92	97	97	99	105	104	107	97	94	96	97	101	102
CCB4	-	-	----		--	----	---	---	---			--	-		----	-	----	-	--		----	-	--					
K042-02		--				----	---	-	---	---					---		---		--	-		-	---					
K042-03						--									---		---				--					---		
K042-04		-	-				---		--		---				---		-										----	-
K042-05		-				----			-			-		--	----			----	--	---	---					--		
K164-01	-		---	---	--			---			-		---					---		---		---			-			
K164-02		--	-		---		--		--			--		---	--		----	--	--	-		---	-					
K164-03		---				---	-		-					---	---		---	---	---	--		--		--				
K164-04			---	---	---		---	--			-		-	-	-				-	--		---		-				--
K164-05	---	-	-	-	--		-							----	---		---		-		---	--	--			-		
BLANK	-	----				---	----	---	-					---	-	---				-		---	----			-	-	

CV5	101	98	104	97	98	100	103	97	101	96	113	102	94	100	92	92	97	97	100	104	105	108	98	92	94	95	101	101
CCB5																												
K174-01																												
K174-03																												
K188-03																												
BLANK																												
CV6	102	98	113	98	96	99	99	96	96	96	107	99	94	101	95	94	98	97	99	102	104	107	97	92	96	98	100	101
CCB6																												
K542-06A																												
K542-06B																												
K542-06C																												
K542-06M																												
K542-06S																												
BLANK																												
CV7	104	97	103	96	100	101	104	99	103	97	1.1*	100	95	1.1*	96	97	98	99	100	105	107	108	100	95	88*	100	102	102
CCB7																												
K205-07A																												
K205-07B																												
K205-07C																												
K205-07M																												
K205-07S																												
BLANK																												
CV8	103	97	108	97	98	101	105	98	103	96	113	103	95	106	95	95	96	98	96	106	107	106	99	97	87*	99	101	102
CCB8																												
K198-08A																												
K198-08B																												
K198-08C																												
K198-08M																												
K198-08S																												
K198-09																												
K198-09A																												
BLANK																												
CV9	103	99	102	98	97	101	105	99	103	96	111*	107	94	112	95	94	96	97	102	107	108	108	99	96	92	97	101	102
CCB9																												
K219-09A																												
K219-09B																												
K219-09C																												
K219-09M																												
K219-09S																												
BLANK																												
CV10	102	97	107	96	96	100	106	97	102	96	110	107	94	102	95	94	96	97	102	109	108	108	99	98	93	98	101	103
CCB10																												
K230-10A																												
K230-10B																												
K230-10C																												
K230-10M																												
K230-10S																												
BLANK																												
CV11	104	100	108	97	96	101	107	97	103	95	110	106	95	100	94	94	96	97	102	109	108	108	99	98	93	98	101	103
CCB11																												
K251-11A																												
K251-11B																												
K251-11C																												
K251-11M																												
K251-11S																												
BLANK																												
CV12	104	100	108	97	96	101	107	97	103	95	110	106	95	100	94	94	96	97	102	109	108	108	99	98	93	98	101	103
CCB12																												
K272-12A																												
K272-12B																												
K272-12C																												
K272-12M																												
K272-12S																												
BLANK																												

K216 02F																												
K216 03S																												
B.MAX																												
CCV12	103	99	108	98	97	102	108	98	105	96	112*	100	94	102	96	95	96	97	100	108	106	102	99	98	97	97	101	102
CCB12																												
K216 03																												
B.MAX																												
CCV13	102	100	109	97	96	102	107	98	104	96	112*	101	94	100	93	94	96	98	101	109	109	102	99	97	92	95	101	103
CCB13																												
K542 06A																												
K542 06A																												
K542 06I																												
K542-06J																												
K542 06M																												
K542 06S																												
B.MAX																												
CCV14	107	99	108	97	95	102	107	98	105	96	112*	101	94	100	93	93	96	97	100	109	108	102	99	97	92	95	101	104
CCB14																												
K132 01A																												
K132 01I																												
K132 01J																												
B.MAX																												
CCV15	103	99	107	99	97	101	105	97	102	96	110	100	94	102	94	95	97	97	100	107	106	100	98	96	93	97	100	102
CCB15																												
IPK04bxE																												
IPK04bxI																												
IPK04bxM																												
K229 01A																												
K229-01																												
K229 01L																												
K229 01M																												
K229 01																												
K229 01																												
B.MAX																												
CCV16	101	99	107	98	94	101	105	97	101	96	111*	101	93	99	92	91	96	96	100	106	107	102	98	96	93	96	101	102
CCB16	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
K317 01																												
K317 01A																												
K542 [illegible]																												
K542 [illegible]																												
K542-[illegible]																												
B.MAX																												
CCV17	102	99	106	99	96	102	103	97	101	96	109	99	94	103	94	95	9	97	100	106	106	100	99	95	94	97	102	[illegible]
CCB17																												

DC limit of each parameter are listed on a card attached next to all the QC check forms

* Out of QC limit

VERSA 12A DATE [illegible] SUMMARY of CALIBRATION BLANKS ID8K024 (WATER) DATE 11/30/11 PAGE [illegible]

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	---	---	-		---	-	--	---	---	-		-	-	---	-	---	---		-	---	---	-	--	---	--		--	--
S20	---	--	-	-	---	---	---	---		---	---	---	---	-	-	---	--	---	---	---	---	---	---				---	
S21	---	-	--		--	---	--	-		--	---	--	-	--	-		-	---		-	---	--		---		-	-	
S22	---		-	-	---	--	---		-	-	-	---	--	-	---	-		--			-	--	---					
S23		--	--	---		--		-	--	--		-		-	---	---		---		--	-	-				-		--
S24	--	---	-	---	--	---	--	---	--	---	---	---	---	-	---	---	-	---	---	---		---	--		-	-	-	
S25	--		---	--	--	---	-		---	---	--	--		---	---	-	---	---	---	-	---	---		---	--	---		
S26	--	---	---	--	-			---	---	-			-	---	---	-	---	--	--	--	--	-	-	---	---	---	-	-
S27	---	---	---	-	--		--	---	---			---	---	---	-	---	---	--	--	---	---	-	---	---	---	---		-
S28	--	--	--	-		--	-	---		--	-	--		-	-		--		---		---	---	-				-	
S29	---	--	--	-		--	--		---		--	--	-	--	---		---		-	---	-	-			-	-	-	--
S30	--	---		--	---	-	-	---		--		--	--	--	-	---	-	--	---	---	---	-		---	--		-	
S31		-	---	--	---	---	---		--	---	---	--	-	--	---	-	---	---	---	---		---	---	-	-	---	---	--
LCV		--	--	-		---		--	---	--		--	--	---	--	---	---	---	---	--	---	-		---	---	---	-	-
ICS	10.3	1 37	1 66	100	060	3 65	- 040	-8.32	.280	-.120	210	-.270	-.270	710	.800	200	.300	.000	155	-2.10	110	182	.060	1 37	.330	070	020	410
MRLK3001	---	---	--	---	--	---		---	-	---	---	---	---	-	-	---	--	--	---	---		---	---	-	-	-	---	---
MRLK3002	---	---	---	--	--	-	--	---	--				--	-	-	--	-	---	-	---		--	--	--	--	--	-	-
ICSAI	--	- 240	.610	760	.120	5.6	4 17	--	.800	.720	1 37	-	5.83	16 4	-	910	1 04	.900	229	1 12	110	-30.9	1 01	-2 32	1 45	3 74	690	2 61
ICAS1	--	---		-				---			--	-	---	-	--	---	-	--	-	--	-	-	-			-	--	-
CCV1	-	-	---	--	---	---	-		---	---	---	--		---	---	-	---	---	---		--	--		-	---	---	--	
CRI	12.9	1 58	.710	300	090	3 82	020	18 3	230	060	.110	650	100	- 660	.690	060	380	-.090	105	1.10	340	-199	090	.780	120	000	290	770
MB42 08	---	---	-	-	---		---	---			---	---	---	---	-	---	---	--	---	---	---	--	---	---	--		--	---
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CCV2			---	-			---	--	--	-	--	-	--		--	-		---	--	-		--	-				-	
ICS2	12 7	1 53	550	750	180	4 30	010	13 8	380	.150	300	1 11	- 010	.160	-3.38	190	340	.010	32 6	1.65	060	-219	110	1 17	- 500	010	.210	660
MB42 08A	---	-	-				---		---				-	--	--	---	-	---	--		-	--		-	--		--	--	-
MB42 08B	---	---	-	---	---	---	--	---		-	---	--	---	---	-	---	---			--	--	--		-	---	--	-	
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CCV3			--	-	--	---			---	--	---	---			-	---			-	---	--		--		---	---	-	
ICB3	12 6	1 60	- 120	130	170	3 84	330	150	.250	100	480	1 30	200	510	6 60	370	330	.000	31 6	-1 03	320	233	250	1 44	520	590	230	3 84
IPC041WF			-	-	-	-			-	-				--	-	-	--	-		-			--	-			---		
IPC041WL				-	-	-	--		--			-	---	-	--	-		-							-	--	-		
IPC041WS	--	--	-				--		-						--		---	---	---	-		---	---	-			---	--
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<216 C16																																		
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B.A6A																																		
C:V12																																		
CC812	31.4	2.34	.450	.340	.130	2.33	.020	40.5	.140	.140	.230	2.45	.320	1.02	2.46	.270	.430	-.110	50.5	.630	.040	.177	.120	.650	.530	.470	.010	1.09
<216 C2																																		
P.A6A																																		
C:V13																																		
CC813	26.6	2.40	-.020	.340	.220	1.63	.000	26.0	.220	.150	.210	-.370	.210	-.860	5.44	.250	.370	-.100	46.0	1.18	.010	-.138	.110	.990	-.120	.190	.210	.610
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<542 C6F																																		
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B.A6A																																		
C:V14																																		
CC814	25.8	1.64	.080	.430	.160	-2.45	.020	30.1	.170	.050	.170	.270	.290	-.790	3.35	.100	.350	.140	9.74	-.580	.000	-.184	.100	.470	.620	.050	.070	.753
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<133 C1[illegible]																																		
B.A6A																																		
C:V15																																		
CC815	19.6	2.17	.370	.290	.170	2.79	.023	24.3	.240	.000	.330	.620	-.340	.300	1.64	.030	.340	.190	34.4	.500	.030	.156	.080	.230	-.450	.120	.127	.690
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B.A6A																																		
C:V1[illegible]																																		
CC81[illegible]																																		
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<1[illegible]																																		
B.A6A																																		
C:V1[illegible]																																		
CC81[illegible]	20.3	1.56	.580	.230	.150	2.26	.010	24.3	.280	.050	.300	-.670	.180	-.670	1.75	.130	.250	.180	47.7	1.15	-.020	.200	.150	1.12	.470	.330	.940	[illegible]

A [illegible] of each parameter are listed in a table attached next to all the IQC check forms

* [illegible] of IQC limit

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
1	0	0	0	0	Unk	S0		ID8K024001			1	☒	unk	---
2	0	0	0	0	Unk	S20		ID8K024002			1	☒	unk	---
3	0	0	0	0	Unk	S21		ID8K024003			1	☒	unk	---
4	0	0	0	0	Unk	S22		ID8K024004			1	☒	unk	---
5	0	0	0	0	Unk	S23		ID8K024005			1	☒	unk	---
6	0	0	0	0	Unk	S24		ID8K024006			1	☒	unk	---
7	0	0	0	0	Unk	S25		ID8K024007			1	☒	unk	---
8	0	0	0	0	Unk	S26		ID8K024008			1	☒	unk	---
9	0	0	0	0	Unk	S27		ID8K024009			1	☒	unk	---
10	0	0	0	0	Unk	S28		ID8K024010			1	☒	unk	---
11	0	0	0	0	Unk	S29		ID8K024011			1	☒	unk	---
12	0	0	0	0	Unk	S30		ID8K024012			1	☒	unk	---
13	0	0	0	0	Unk	S31		ID8K024013			1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8K024014			1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8K024015			1	☒	3XIDL	None
16	3	2	3	1	QC	MRLK3001		ID8K024016			1	☒	MRL-EMAX	None
17	4	2	4	1	QC	MRLK3002		ID8K024017			1	☒	MRL-AFCEE	None
18	5	2	5	1	QC	ICSA1		ID8K024018			1	☒	ICSA-DoD	None
19	6	2	6	1	QC	ICAB1		ID8K024019			1	☒	ICSAB	None
20	7	2	7	1	QC	CCV1		ID8K024020			1	☒	CCV	None
21	8	2	8	1	QC	CCB1		ID8K024021			1	☒	3XIDL	None
22	9	2	9	1	Unk	K550-08	TCLP	ID8K024022			1	☒	unk	---
23	10	2	10	1	Blank	Blank		ID8K024023			1	☐		---
24	11	2	11	1	QC	CCV2		ID8K024024			1	☒	CCV	None
25	12	2	12	1	QC	CCB2		ID8K024025			1	☒	3XIDL	None
26	57	2	9	5	Unk	K542-08	TCLP	ID8K024026			1	☒	unk	---
27	58	2	10	5	Unk	K550-08	TCLP CONFIRM	ID8K024027			1	☒	unk	---
28	59	2	11	5	Blank	Blank		ID8K024028			1	☐		---
29	60	2	12	5	QC	CCV3		ID8K024029			1	☒	CCV	None
30	61	3	1	1	QC	CCB3		ID8K024030			1	☒	3XIDL	None
31	13	2	1	2	QC	IPK041WB		ID8K024031			1	☒	1/2LOQ	None
32	14	2	2	2	QC	IPK041WL		ID8K024032			1	☒	LCS	None
33	15	2	3	2	QC	IPK041WC		ID8K024033			1	☒	LCS	None
34	16	2	4	2	Unk	K205-01A	DISSOLVED	ID8K024034			1	☒	unk	---
35	17	2	5	2	Unk	K205-01	DISSOLVED	ID8K024035			1	☒	unk	---
36	18	2	6	2	Unk	K205-01J	DISSOLVED	ID8K024036			1	☒	unk	---
37	19	2	7	2	Unk	K205-01M	DISSOLVED	ID8K024037			1	☒	unk	---
38	20	2	8	2	Unk	K205-01S	DISSOLVED	ID8K024038			1	☒	unk	---
39	62	3	2	1	Unk	K203-15		ID8K024039			1	☒	unk	---

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
40	22	2	10	2	Blank	Blank		ID8K024040			1	☐		---
41	23	2	11	2	QC	CCV4		ID8K024041			1	☒	CCV	None
42	24	2	12	2	QC	CCB4		ID8K024042			1	☒	3XIDL	None
43	21	2	9	2	Unk	K205-02	DISSOLVED	ID8K024043			1	☒	unk	---
44	25	2	1	3	Unk	K205-03	DISSOLVED	ID8K024044			1	☒	unk	---
45	26	2	2	3	Unk	K205-04	DISSOLVED	ID8K024045			1	☒	unk	---
46	27	2	3	3	Unk	K205-05	DISSOLVED	ID8K024046			1	☒	unk	---
47	28	2	4	3	Unk	K184-01	DISSOLVED	ID8K024047			1	☒	unk	---
48	29	2	5	3	Unk	K184-02	DISSOLVED	ID8K024048			1	☒	unk	---
49	30	2	6	3	Unk	K184-03	DISSOLVED	ID8K024049			1	☒	unk	---
50	31	2	7	3	Unk	K184-04	DISSOLVED	ID8K024050			1	☒	unk	---
51	32	2	8	3	Unk	K184-05	DISSOLVED	ID8K024051			1	☒	unk	---
52	34	2	10	3	Blank	Blank		ID8K024052			1	☐		---
53	35	2	11	3	QC	CCV5		ID8K024053			1	☒	CCV	None
54	36	2	12	3	QC	CCB5		ID8K024054			1	☒	3XIDL	None
55	33	2	9	3	Unk	K174-01	DISSOLVED	ID8K024055			1	☒	unk	---
56	37	2	1	4	Unk	K174-07	DISSOLVED	ID8K024056			1	☒	unk	---
57	38	2	2	4	Unk	K188-03	DISSOLVED	ID8K024057			1	☒	unk	---
58	39	2	3	4	Blank	Blank		ID8K024058			1	☐		---
59	40	2	4	4	QC	CCV6		ID8K024059			1	☒	CCV	None
60	41	2	5	4	QC	CCB6		ID8K024060			1	☒	3XIDL	None
61	63	3	3	1	Unk	K542-06A	TCLP 5X As, Se	ID8K024061			1	☒	unk	---
62	64	3	4	1	Unk	K542-06T	TCLP 5X As, Se	ID8K024062			1	☒	unk	---
63	65	3	5	1	Unk	K542-06J	TCLP 25X As, Se	ID8K024063			1	☒	unk	---
64	66	3	6	1	Unk	K542-06M	TCLP 5X As, Se	ID8K024064			1	☒	unk	---
65	67	3	7	1	Unk	K542-06S	TCLP 5X As, Se	ID8K024065			1	☒	unk	---
66	68	3	8	1	Blank	Blank		ID8K024066			1	☐		---
67	69	3	9	1	QC	CCV7		ID8K024067			1	☒	CCV	None
68	70	3	10	1	QC	CCB7		ID8K024068			1	☒	3XIDL	None
69	71	3	11	1	Unk	K205-01A	DISSOLVED 5X	ID8K024069			1	☒	unk	---
70	72	3	12	1	Unk	K205-01T	DISSOLVED 5X	ID8K024070			1	☒	unk	---
71	73	3	1	2	Unk	K205-01J	DISSOLVED 25X	ID8K024071			1	☒	unk	---
72	74	3	2	2	Unk	K205-01M	DISSOLVED 5X	ID8K024072			1	☒	unk	---
73	75	3	3	2	Unk	K205-01S	DISSOLVED 5X	ID8K024073			1	☒	unk	---
74	76	3	4	2	Blank	Blank		ID8K024074			1	☐		---
75	77	3	5	2	QC	CCV8		ID8K024075			1	☒	CCV	None
76	78	3	6	2	QC	CCB8		ID8K024076			1	☒	3XIDL	None
77	42	2	6	4	Unk	K198-05A		ID8K024077			1	☒	unk	---
78	43	2	7	4	Unk	K198-05		ID8K024078			1	☒	unk	---

7025

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
79	44	2	8	4	Unk	K198-05J		ID8K024079			1	☒	unk	---
80	45	2	9	4	Unk	K198-05M		ID8K024080			1	☒	unk	---
81	46	2	10	4	Unk	K198-05S		ID8K024081			1	☒	unk	---
82	47	2	11	4	Unk	K198-03		ID8K024082			1	☒	unk	---
83	51	2	3	5	Unk	K198-04		ID8K024083			1	☒	unk	---
84	48	2	12	4	Blank	Blank		ID8K024084			1	☐		---
85	49	2	1	5	QC	CCV9		ID8K024085			1	☒	CCV	None
86	50	2	2	5	QC	CCB9		ID8K024086			1	☒	3XIDL	None
87	52	2	4	5	Unk	K207-01		ID8K024087			1	☒	unk	---
88	53	2	5	5	Unk	K207-02		ID8K024088			1	☒	unk	---
89	54	2	6	5	Blank	Blank		ID8K024089			1	☐		---
90	55	2	7	5	QC	CCV10		ID8K024090			1	☒	CCV	None
91	56	2	8	5	QC	CCB10		ID8K024091			1	☒	3XIDL	None
92	79	3	7	2	Unk	K119-01A		ID8K024092			1	☒	unk	---
93	80	3	8	2	Unk	K119-01W		ID8K024093			1	☒	unk	---
94	81	3	9	2	Unk	K119-01J		ID8K024094			1	☒	unk	---
95	82	3	10	2	Unk	K133-01A	5X	ID8K024095			1	☒	unk	---
96	83	3	11	2	Unk	K133-01T	5X	ID8K024096			1	☒	unk	---
97	84	3	12	2	Unk	K133-01J	25X	ID8K024097			1	☒	unk	---
98	85	3	1	3	Blank	Blank		ID8K024098			1	☐		---
99	86	3	2	3	QC	CCV11		ID8K024099			1	☒	CCV	None
100	87	3	3	3	QC	CCB11		ID8K024100			1	☒	3XIDL	None
101	97	3	1	4	QC	IPK045WB		ID8K024101			1	☒	1/2LOQ	None
102	98	3	2	4	QC	IPK045WL		ID8K024102			1	☒	LCS	None
103	99	3	3	4	QC	IPK045WC		ID8K024103			1	☒	LCS	None
104	100	3	4	4	QC	TXK010SB	TCLP	ID8K024104			1	☒	1/2LOQ	None
105	101	3	5	4	Unk	K216-01A	TCLP	ID8K024105			1	☒	unk	---
106	102	3	6	4	Unk	K216-01	TCLP	ID8K024106			1	☒	unk	---
107	103	3	7	4	Unk	K216-01J	TCLP	ID8K024107			1	☒	unk	---
108	104	3	8	4	Unk	K216-01M	TCLP	ID8K024108			1	☒	unk	---
109	105	3	9	4	Unk	K216-01S	TCLP	ID8K024109			1	☒	unk	---
110	106	3	10	4	Blank	Blank		ID8K024110			1	☐		---
111	107	3	11	4	QC	CCV12		ID8K024111			1	☒	CCV	None
112	108	3	12	4	QC	CCB12		ID8K024112			1	☒	ICSAB10%	None
113	109	3	1	5	Unk	K216-02	TCLP	ID8K024113			1	☒	unk	---
114	110	3	2	5	Blank	Blank		ID8K024114			1	☐		---
115	111	3	3	5	QC	CCV13		ID8K024115			1	☒	CCV	None
116	112	3	4	5	QC	CCB13		ID8K024116			1	☒	3XIDL	None
117	88	3	4	3	Unk	K542-06A	TCLP 10X	ID8K024117			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
118	89	3	5	3	Unk	K542-06A	TCLP 10X DLB SPIKE	ID8K024118			1	☒	unk	---
119	90	3	6	3	Unk	K542-06I	TCLP 10X	ID8K024119			1	☒	unk	---
120	91	3	7	3	Unk	K542-06J	TCLP 50X	ID8K024120			1	☒	unk	---
121	92	3	8	3	Unk	K542-06M	TCLP 10X	ID8K024121			1	☒	unk	---
122	93	3	9	3	Unk	K542-06S	TCLP 10X	ID8K024122			1	☒	unk	---
123	94	3	10	3	Blank	Blank		ID8K024123			1	☐		---
124	95	3	11	3	QC	CCV14		ID8K024124			1	☒	CCV	None
125	96	3	12	3	QC	CCB14		ID8K024125			1	☒	3XIDL	None
126	113	3	5	5	Unk	K133-01A	10X	ID8K024126			1	☒	unk	---
127	114	3	6	5	Unk	K133-01I	10X	ID8K024127			1	☒	unk	---
128	115	3	7	5	Unk	K133-01J	50X	ID8K024128			1	☒	unk	---
129	116	3	8	5	Blank	Blank		ID8K024129			1	☐		---
130	117	3	9	5	QC	CCV15		ID8K024130			1	☒	CCV	None
131	118	3	10	5	QC	CCB15		ID8K024131			1	☒	3XIDL	None
132	119	3	11	5	QC	IPK046WB		ID8K024132			1	☒	1/2LOQ	None
133	120	3	12	5	QC	IPK046WL		ID8K024133			1	☒	LCS	None
134	121	4	1	1	QC	IPK046WC		ID8K024134			1	☒	LCS	None
135	122	4	2	1	Unk	K229-01A		ID8K024135			1	☒	unk	---
136	123	4	3	1	Unk	K229-01		ID8K024136			1	☒	unk	---
137	124	4	4	1	Unk	K229-01J		ID8K024137			1	☒	unk	---
138	125	4	5	1	Unk	K229-01M		ID8K024138			1	☒	unk	---
139	126	4	6	1	Unk	K229-01S		ID8K024139			1	☒	unk	---
140	127	4	7	1	Unk	K229-03		ID8K024140			1	☒	unk	---
141	128	4	8	1	Blank	Blank		ID8K024141			1	☐		---
142	129	4	9	1	QC	CCV16		ID8K024142			1	☒	CCV	None
143	130	4	10	1	QC	CCV16		ID8K024143			1	☒	3XIDL	None
144	131	4	11	1	Unk	K133-01A	DLB SPIKE 10X	ID8K024144			1	☒	unk	---
145	132	4	12	1	Unk	K542-06A	DLB SPIKE 15X	ID8K024145			1	☒	unk	---
146	133	4	1	2	Unk	K542-06A	DLB SPIKE 15X	ID8K024146			1	☒	unk	---
147	134	4	2	2	Unk	K542-06G	DLB SPIKE 15X	ID8K024147			1	☒	unk	---
148	135	4	3	2	Unk	K542-06J	DLB SPIKE 75X	ID8K024148			1	☒	unk	---
149	136	4	4	2	Blank	Blank		ID8K024149			1	☐		---
150	137	4	5	2	QC	CCV17		ID8K024150			1	☒	CCV	None
151	138	4	6	2	QC	CCB17		ID8K024151			1	☒	3XIDL	None

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ID8K024 Section 1 of 3

INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID
1	Blank	.00105	.00002	-.00001	.00024	.00006	.00115	-.00003	.00047	-.00005	-.00096	Blank
2	S20					1.0166		.11539				S20
3	S21					10.153		1.1227				S21
4	S22				.64337						.15950	S22
5	S23				6.2663						1 5919	S23
6	S24						.09586					S24
7	S25						.97435					S25
8	S26	.21923							.84092	.12859		S26
9	S27	8.3400							8.1196	1.2915		S27
10	S28		.00506									S28
11	S29		.04825									S29
12	S30			.00117								S30
13	S31			.00465								S31
14	ICV	101.11	1.4606	1.0350	1.9554	1.4730	2.4463	1.9564	74.558	2.4364	.96260	ICV
15	ICB	.01030	.00137	.00166	.00010	.00006	.00365	-.00004	-.00832	.00028	-.00012	ICB
16	MRLK3001	.22242	.09755	.00967	.01051	.01012	.09679	.01048	1.0627	.01061	.00980	MRLK3001
17	MRLK3002	.20880	.04897	.00892	.00510	.00399	.09602	.00505	.51752	.01023	.00982	MRLK3002
18	ICSA1	386.44	-.00024	.00061	.00076	.00012	-.05761	.00417	468.03	.00080	-.00072	ICSA1
19	ICAB1	385.60	1.0121	1.0477	.49481	.48550	.43975	.92718	464.59	.46518	.47288	ICAB1
20	CCV1	-485.36*	-7.1775*	-4.8883*	1.9480	1.4255	******	-9.3906*	73.987	******	.95431	CCV1
21	CCB1	.01286	.00158	.00071	.00030	.00009	.00382	.00002	.01828	.00023	.00006	CCB1
22	K542-08	1116.4*	.01513	-.00114	5.2964	.00357	.17031	2.3497	6.7751	1.9376	.04593	K542-08
23	Blank	.06889	.00080	-.00023	.00055	.00002	.00081	.00001	.02300	.00015	-.00011	Blank
24	CCV2	100.85	1.5019	1.0387	1.9582	1.4294	2.4526	1.9708	73.783	2.4204	.95706	CCV2
25	CCB2	.01270	.00153	-.00055	.00025	.00010	.00430	-.00001	.01383	.00030	-.00015	CCB2
26	K542-08W	1103.4*	.01474	.00195	5.2273	.00349	.15766	2.3244	6.6688	1.8877	.04580	K542-08W
27	K550-08	.12606	.00123	.00130	.13140	.00002	.57233	.00627	14.571	.00234	.00149	K550-08
28	Blank	.01616	.00082	- 00157	.00027	.00002	.00134	-.00005	.04553	.00011	00000	Blank
29	CCV3	103.04	1.4927	1 0640	1.9707	1.4900	2.5109	2.0349	75.617	2.5010	.97399	CCV3
30	CCB3	.01560	.00067	- 00012	.00023	.00012	.00384	-.00003	.15910*	.00023	.00010	CCB3
31	IPK041WB	.01555	.00108	-.00067	.00014	.00004	-.00030	-.00005	.00790	.00016	- 00005	IPK041WB
32	IPK041WL	5.2776	2.5418	53727	49366	.49255	.51914	.51760	49.578	.51290	49521	IPK041WL
33	IPK041WC	5.3174	2.5536	53872	.49938	.49741	.52234	.52149	49.804	.51633	49774	IPK041WC
34	K205-01A	6.3572	2.8141	63541	.62214	.51260	83556	.52540	778.91	.53036	53402	K205-01A
35	K205-01	.03677	-.00052	00086	07951	.00001	.28440	-.00039	757.45	.00070	-.00091	K205-01
36	K205-01J	.02432	.00004	- 00023	01647	.00006	.05616	- 00012	172.54	.00043	- 00025	K205-01J
37	K205-01M	6.0830	2.8253	60080	59821	.48938	.84196	.49605	800.25	.49784	.50241	K205-01M
38	K205-01S	5.9648	2.7602	.59208	.58649	.47972	.82762	.48815	788.37	.48931	.49426	K205-01S
39	K203-15	101.46	.00008	06428	1 3401	.00739	-.03370*	.04256	18.627	.25465	11325	K203-15
40	Blank	.01360	.00118	.00091	.00034	.00004	-.00126	-.00010	.04352	.00019	-.00008	Blank
41	CCV4	101.07	1.5097	1.0578	1.9310	1.4263	2.4778	2.0240	74.014	2.4649	.95569	CCV4
42	CCB4	.01381	.00156	- 00020	.00021	.00011	.00108	-.00004	.02310	.00015	-.00017	CCB4
43	K205-02	.04279	.00085	.00099	.06142	.00011	.04746	.00021	247.79	.00123	.00021	K205-02
44	K205-03	.04370	.00040	.18982	.00510	.00001	.60879	-.00034	508.29	.00102	.00051	K205-03
45	K205-04	.01545	.00078	.00088	.00028	.00001	.02799	-.00013	.17729	.00017	-.00006	K205-04
46	K205-05	.01952	.00096	00056	.00043	.00007	.02755	-.00009	.17870	.00024	00002	K205-05
47	K184-01	.03188	-.00051	- 00139	.15421	.00001	.20747	-.00032	553.67	.00049	-.00098	K184-01
48	K184-02	.03642	-.00077	00494	.13771	.00003	.61373	-.00033	582.70	.00055	-.00088	K184-02
49	K184-03	.03070	-.00016	-.00043	.44459	.00003	.18199	.00007	529.19	.00043	-.00085	K184-03
50	K184-04	.03793	-.00018	.00660	.37312	.00002	.47127	.00026	593.50	.00052	-.00099	K184-04
51	K184-05	.04945	-.00075	.02468	02779	.00006	.51374	-.00026	850.90	.00050	.00052	K184-05
52	Blank	.01093	.00107	-.00084	00032	.00004	-.00349	-.00010	.08347	.00000	.00005	Blank

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53	CCV5	101.29	1.4736	1.0483	1.9386	1.4187	2.4991	2.0099	73.045	2.5150	.96208	CCV5
54	CCB5	.01453	.00095	-.00078	.00028	.00009	-.00045	.00001	.01978	.00011	.00002	CCB5
55	K174-01	.03716	-.00005	.00453	.23367	.00003	.42269	-.00035	633.52	.00057	-.00114	K174-01
56	K174-07	.03797	-.00088	.00326	.23212	.00003	.41631	-.00030	628.19	.00058	-.00105	K174-07
57	K188-03	.07485	-.00050	-.00116	.25625	.00009	.39302	.00100	451.69	.00131	.00038	K188-03
58	Blank	.00909	.00058	-.00007	.00022	.00005	-.00329	-.00009	.05915	.00013	.00005	Blank
59	CCV6	101.87	1.4748	1.0347	1.9602	1.4452	2.4699	1.9877	73.611	2.4831	.95755	CCV6
60	CCB6	.01544	.00140	-.00030	.00031	.00012	-.00012	.00001	.01667	.00027	.00000	CCB6
61	K542-06A	5.1195	2.4240	.65606	.52819	.53403	.51627	.58872	52.419	.56105	.56480	K542-06A
62	K542-06T	.08132	.00461	.00584	.00249	.00022	.02463	.04551	3.1258	.00053	.00263	K542-06T
63	K542-06J	.03482	.00337	.00041	.00068	.00006	-.00019	.00884	.61825	.00021	.00054	K542-06J
64	K542-06M	1.1328	.51145	.13882	.11095	.10897	.13166	.16132	13.849	.11623	.11775	K542-06M
65	K542-06S	1.2473	.57110	.15674	.12514	.12252	.14977	.18216	15.512	.12982	.13253	K542-06S
66	Blank	.01448	.00402	-.00002	.00014	.00007	-.00588	-.00007	.17860	.00011	-.00005	Blank
67	CCV7	104.35	1.4551	1.0659	1.9864	1.5018	2.5313	2.0745	74.252	2.5752	.97286	CCV7
68	CCB7	.02177	.00175	-.00056	.00030	.00015	-.00143	.00011	.18805*	.00019	.00006	CCB7
69	K205-01A	5.8875	2.5121	.60473	.54788	.52721	.57722	.56547	214.89	.55915	.52973	K205-01A
70	K205-01T	.04674	.00041	.00091	.01617	.00010	.05144	-.00007	167.65	.00054	-.00029	K205-01T
71	K205-01J	.04198	.00162	.00032	.00350	.00010	.00487	.00003	32.818	.00050	.00002	K205-01J
72	K205-01M	1.1911	.54114	.11909	.12143	.10385	.16465	.11345	179.40	.11131	.10396	K205-01M
73	K205-01S	1.1887	.53309	.11798	.12165	.10405	.16385	.11330	180.14	.11063	.10307	K205-01S
74	Blank	.04258	.00216	-.00163	.00054	.00008	-.00516	.00002	.08201	.00013	-.00008	Blank
75	CCV8	102.77	1.4537	1.0783	1.9484	1.4773	2.5231	2.1222	73.424	2.5758	.96247	CCV8
76	CCB8	.05007*	.00197	-.00121	.00065	.00021*	-.00078	.00012	.07199*	.00038	.00005	CCB8
77	K198-05A	5.7949	2.6171	.61702	.61712	.53697	.60536	.59379	112.20	.61129	.52978	K198-05A
78	K198-05	.04103	.00191	.00332	.08218	.00008	.06490	-.00004	62.844	.04082	-.00047	K198-05
79	K198-05J	.02923	.00178	.00149	.01747	.00008	.00921	-.00005	13.407	.00893	-.00008	K198-05J
80	K198-05M	5.3766	2.5512	.56585	.57650	.49302	.59550	.53913	109.92	.56680	.49192	K198-05M
81	K198-05S	5.4509	2.5810	.56911	.58069	.49786	.59999	.54506	110.12	.56908	.49616	K198-05S
82	K198-03	.03481	.00183	.00314	.07397	.00016	.05267	.00011	57.971	.01771	-.00018	K198-03
83	K198-04	.04652	.00143	.00540	.10634	.00008	.05216	-.00004	58.567	.00951	-.00032	K198-04
84	Blank	.01885	.00153	.00004	.00026	.00007	-.00515	-.00011	.03481	.00004	-.00010	Blank
85	CCV9	102.51	1.4788	1.0726	1.9608	1.4479	2.5291	2.1070	73.507	2.5811	.96155	CCV9
86	CCB9	.02385	.00208	-.00110	.00033	.00011	.00147	-.00001	.01636	.00020	.00001	CCB9
87	K207-01	.03339	.00152	.00404	.08925	.00003	.05370	-.00007	61.873	.01233	-.00038	K207-01
88	K207-02	.03490	.00144	.00426	.08209	.00009	.05056	-.00007	57.684	.00954	-.00031	K207-02
89	Blank	.02080	.00065	-.00092	.00047	.00007	-.00527	-.00014	.04159	.00020	.00009	Blank
90	CCV10	102.43	1.4854	1.0696	1.9667	1.4453	2.5107	2.1000	73.340	2.5597	.96048	CCV10
91	CCB10	.02275	.00119	-.00118	.00031	.00013	-.00105	-.00003	.04653*	.00019	.00007	CCB10
92	K119-01A	5.6573	2.5460	.59200	.54478	.53666	.54217	.58923	65.309	.56998	.52388	K119-01A
93	K119-01W	.02481	.00188	.00021	.00979	.00011	.01361	-.00005	15.942	.00031	-.00010	K119-01W
94	K119-01J	.01811	.00115	.00111	.00206	.00005	-.00228	-.00003	3.1267	.00013	.00012	K119-01J
95	K133-01A	6.0832	2.7701	.65646	.55442	.51490	.78057	.58754	342.92	.57123	.53455	K133-01A
96	K133-01T	.03995	.00228	-.00300	.02475	.00012	.21633	-.00029	299.76	.00049	-.00055	K133-01T
97	K133-01J	.02696	.00128	.00066	.00473	.00008	.03456	-.00010	59.073	.00043	.00003	K133-01J
98	Blank	.02461	.00201	-.00059	.00034	.00013	-.00557	-.00005	.07097	.00002	-.00003	Blank
99	CCV11	102.65	1.5045	1.0793	1.9494	1.4342	2.5310	2.1376	73.094	2.5743	.95641	CCV11
100	CCB11	.03080	.00249	-.00191	.00052	.00023*	-.00132	.00013	.38319*	.00029	.00019	CCB11
101	IPK045WB	.03198	.00209	-.00075	.00018	.00013	-.00394	-.00010	.00174	.00019	-.00004	IPK045WB
102	IPK045WL	5.3460	2.4996	.55066	.50620	.51082	.51156	.55699	49.835	.54339	.50436	IPK045WL
103	IPK045WC	5.2895	2.5345	.55864	.49710	.50073	.51957	.56251	49.773	.54748	.50614	IPK045WC
104	TXK010SB	.07021	.00273	-.00321	.00170	.00014	.07183*	-.00011	.03517	.00041	.00010	TXK010SB
105	K216-01A	5.6791	2.5844	.64432	1.0918	.52329	.70766	.59476	54.352	.57618	.53816	K216-01A
106	K216-01	.08423	.00360	.02499	.58683	.00014	.18034	.00009	5.1278	.00008	.00216	K216-01
107	K216-01J	.03425	.00160	.00521	.12195	.00013	.03189	-.00002	1.0837	.00022	.00039	K216-01J

108	K216-01M	5.5714	2.6140	.61790	1.2652	.51300	.80121	.56847	54.891	.54772	.51581	K216-01M
109	K216-01S	5.6230	2.6344	.61973	1.2509	.52011	.79692	.57542	55.042	.55075	.51739	K216-01S
110	Blank	.02020	.00266	-.00087	.00049	.00011	-.00425	-.00009	.01426	.00014	-.00003	Blank
111	CCV12	103.41	1.4923	1.0841	1.9609	1.4557	2.5452	2.1583	73.703	2.6165	.95519	CCV12
112	CCB12	.03140	.00234	-.00045	.00034	.00017	-.00203	.00002	.04061*	.00014	.00014	CCB12
113	K216-02	.17734	.01120	.01232	.31831	.00195	.15165	.00216	4.5559	.00245	.00175	K216-02
114	Blank	.02037	.00138	-.00032	.00038	.00013	-.00576	-.00006	.01325	.00012	.00003	Blank
115	CCV13	101.85	1.4951	1.0854	1.9447	1.4293	2.5560	2.1458	73.297	2.6076	.95894	CCV13
116	CCB13	.02656	.00246	-.00092	.00034	.00022*	-.00183	.00000	.02600	.00022	.00015	CCB13
117	K542-06A	5.3369	2.4780	.63303	.53279	.53384	.51101	.60107	50.191	.56765	.54563	K542-06A
118	K542-06A	10.628	4.8497	1.2526	1.0596	1.0617	.99086	1.1547	49.498	1.1189	1.0847	K542-06A
119	K542-06I	.06167	.00710	.00316	.00111	.00014	.00985	.02352	1.4651	.00039	.00118	K542-06I
120	K542-06J	.02432	.00411	.00195	.00048	.00016	-.00263	.00457	.30811	.00013	.00029	K542-06J
121	K542-06M	.52670	.24281	.06175	.05239	.05168	.05832	.07975	6.4892	.05510	.05294	K542-06M
122	K542-06S	.52972	.24673	.06223	.05212	.05154	.06005	.08184	6.6218	.05605	.05390	K542-06S
123	Blank	.02049	.00279	.00126	.00036	.00007	-.00697	-.00003	.02403	.00003	.00007	Blank
124	CCV14	101.70	1.4873	1.0822	1.9388	1.4273	2.5407	2.1326	73.128	2.6164	.95771	CCV14
125	CCB14	.02584	.00164	.00008	.00043	.00016	-.00245	-.00002	.03013	.00017	.00005	CCB14
126	K133-01A	5.8627	2.6865	.63462	.54314	.52239	.65501	.59158	195.96	.57060	.53080	K133-01A
127	K133-01I	.04072	.00148	-.00101	.01222	.00017	.09970	-.00014	150.28	.00059	-.00028	K133-01I
128	K133-01J	.03044	.00132	-.00022	.00270	.00018	.01392	-.00002	30.054	.00047	-.00005	K133-01J
129	Blank	.01664	.00186	-.00154	.00012	.00010	-.00657	-.00008	.01959	.00007	.00005	Blank
130	CCV15	102.86	1.4915	1.0662	1.9796	1.4476	2.5165	2.0918	73.009	2.5491	.95832	CCV15
131	CCB15	.01959	.00217	.00037	.00029	.00017	-.00229	.00002	.02431	.00024	.00000	CCB15
132	IPK046WB	.02210	.00167	.00083	.00042	.00020	-.00490	.00001	.01695	.00015	.00006	IPK046WB
133	IPK046WL	5.4484	2.5855	.55690	.51148	.50956	.52800	.55287	49.842	.53042	.50150	IPK046WL
134	IPK046WC	5.4200	2.5621	.55240	.51040	.50884	.52474	.54913	49.388	.52853	.49833	IPK046WC
135	K229-01A	6.0586	2.6222	.60844	.57608	.53572	.53922	.59125	199.27	.56037	.54383	K229-01A
136	K229-01	.14909	.00247	-.00021	.02496	.00026	-.00232	.01697	153.56	.00080	.00728	K229-01
137	K229-01J	.05718	.00138	-.00097	.00555	.00015	-.00529	.00369	32.804	.00041	.00149	K229-01J
138	K229-01M	5.8152	2.6369	.57484	.55082	.51109	.53621	.55960	203.69	.52551	.51292	K229-01M
139	K229-01S	5.8096	2.6319	.57380	.54432	.50795	.53940	.55907	204.28	.52685	.51244	K229-01S
140	K229-03	1.1422	.00207	-.00003	.05114	.00026	-.00268	.00975	99.933	.00244	.00047	K229-03
141	Blank	.01423	.00119	.00041	.00024	.00012	-.00705	-.00004	.02224	.00009	-.00006	Blank
142	CCV16	101.61	1.4877	1.0704	1.9171	1.4089	2.5269	2.0808	72.925	2.5643	.95528	CCV16
143	CCV16	.01985	.00149	.00000	.00023	.00016	-.00325	.00004	.02757	.00030	-.00003	CCV16
144	K133-01A	11.697	5.3091	1.2554	1.0590	1.0263	1.1969	1.1520	193.73	1.1212	1.0589	K133-01A
145	K542-06A	10.805	4.8861	1.2226	1.0536	1.0493	1.0122	1.1494	49.423	1.1248	1.0865	K542-06A
146	K542-06A	5.4604	2.4909	.62217	.53595	.53290	.51403	.59306	49.664	.56970	.54961	K542-06A
147	K542-06G	.02823	.00656	.00263	.00086	.00021	.00297	.01509	.94990	.00031	.00098	K542-06G
148	K542-06J	.02132	.00321	.00064	.00032	.00017	-.00506	.00323	.20830	.00025	.00033	K542-06J
149	Blank	.01853	.00199	-.00025	.00028	.00010	-.00702	-.00002	.01730	.00024	.00000	Blank
150	CCV17	102.15	1.4845	1.0574	1.9896	1.4452	2.5060	2.0597	72.555	2.5250	.95838	CCV17
151	CCB17	.02034	.00156	.00059	.00023	.00015	.00224	-.00001	.02429	.00028	.00005	CCB17
INDX	LSID	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	LSID

ID8K024 Section 1 of 3

ID8K024 Section 2 of 3

INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID
1	Blank	.00101	.00002	.00010	-.00009	.00003	.00004	.00002	-.00044	.00067	.00001	Blank
2	S20			.20630			.09887					S20
3	S21			2.0700			.98360					S21
4	S22	.26664	.04667									S22
5	S23	2.5787	1.8285									S23
6	S24							.77607				S24
7	S25							7.7096				S25
8	S26								.75597	.48454		S26
9	S27								7.5111	5.0274		S27
10	S28					.02254						S28
11	S29					.22282						S29
12	S30				.04032						.00135	S30
13	S31				.19805						.00539	S31
14	ICV	2.6363	25.061	2.3935	.53855	56.439	2.3062	2.4751	2.4534	58.494	1.0258	ICV
15	ICB	.00021	-.00077	-.00027	.00021	-.00080	.00020	.00030	.00000	.15491	-.00210	ICB
16	MRLK3001	.01113	.21605	.00989	.00995	.96260	.01013	.01039	.01020	1.0219	.00811	MRLK3001
17	MRLK3002	.01059	.10312	.00270	.10117	.18269	.00492	.00967	.01030	.99458	.00991	MRLK3002
18	ICSA1	.00137	189.08	.00583	.01641	190.78	.00091	-.00104	.00090	.22864	.00112	ICSA1
19	ICAB1	.55266	189.51	.93432	1.1643	188.99	.45558	.99970	.95743	77.785	1.0243	ICAB1
20	CCV1	******	******	2.3525	.49912	56.003	2.2722	2.4648	2.4238	59.120	-4.9509*	CCV1
21	CCB1	.00027	.00065	.00010	-.00066	.00059	-.00006	.00038	-.00009	.10517	-.00110	CCB1
22	K542-08	68.681*	393.06	.14822	.00678	11.735	13.317	.01103	.84332	1.8713	.00783	K542-08
23	Blank	.00360	.01684	.00009	-.00038	-.00396	.00070	.00008	-.00004	-.07629	-.00113	Blank
24	CCV2	2.6365	24.846	2.3653	.50262	55.816	2.2804	2.4645	2.4254	59.324	1.0328	CCV2
25	CCB2	.00030	-.00111	-.00001	.00016	-.00338	.00019	.00034	.00001	.03259	-.00185	CCB2
26	K542-08W	67.998*	390.81	.14632	.00674	11.505	13.097	.01105	.83574	1.8086	.00767	K542-08W
27	K550-08	.01540	3.6483	.01080	.07935	7.7398	.15119	.04936	.11502	7.8106	-.00055	K550-08
28	Blank	.00062	.00250	-.00006	.00041	-.01077	.00015	.00010	.00013	-.11439	-.00066	Blank
29	CCV3	2.7006	25.443	2.4201	.54613	57.159	2.3424	2.4914	2.4808	59.719	1.0495	CCV3
30	CCB3	.00048	.00130	-.00026	-.00051	.00667	.00037	.00033	.00000	-.03163	-.00103	CCB3
31	IPK041WB	.00034	-.00045	.00008	-.00064	-.01157	.00021	.00002	.00002	-.07904	-.00114	IPK041WB
32	IPK041WL	.55251	5.2144	.48893	.00131*	46.696	.46722	.51157	.50617	49.207	.52331	IPK041WL
33	IPK041WC	.55514	5.2296	.49177	.00155*	47.050	.47195	.51524	.50948	49.680	.52761	IPK041WC
34	K205-01A	.65047	7.4842	.52595	.05519	203.29	.86425	.53516	.48162	78.371	.62038	K205-01A
35	K205-01	.00225	2.2922	.00348	.05376	158.12	.38590	-.00100	.00215	21.354	.00176	K205-01
36	K205-01J	.00093	.49640	.00088	.01073	33.259	.08351	-.00021	.00032	4.0598	-.00286	K205-01J
37	K205-01M	.60478	7.1969	.49253	.05477	210.01	.85836	.54403	.50977	78.707	.49420	K205-01M
38	K205-01S	.59445	7.1236	.48603	.05532	207.68	.84317	.53350	.50216	77.771	.48579	K205-01S
39	K203-15	.09833	163.34	1.0837	.05257	7.4962	6.4687	.00549	.11749	9.5015	.00087	K203-15
40	Blank	.00012	.00765	.00026	-.00116	-.00353	.00046	.00001	-.00003	-.05344	-.00133	Blank
41	CCV4	2.6647	25.011	2.3563	.49679	56.034	2.2894	2.4372	2.4232	59.436	1.0469	CCV4
42	CCB4	.00027	.00006	.00031	.00012	-.00490	-.00002	.00032	-.00007	.03068	-.00183	CCB4
43	K205-02	.00184	31.476	.00200	.02991	18.545	.72514	-.00006	.00355	9.9782	-.00172	K205-02
44	K205-03	.00197	.21687	.00471	.04446	140.12	3.3029	-.00097	.00520	5.6793	-.00040	K205-03
45	K205-04	.00072	.00108	-.00045	.00010	.05700	.00006	.00004	-.00013	.11391	-.00276	K205-04
46	K205-05	.00064	.00357	.00000	-.00046	.04680	.00019	.00004	-.00014	.07381	-.00176	K205-05
47	K184-01	.00197	1.8839	.00242	.04773	127.41	.43581	.00044	.00026	16.533	-.00172	K184-01
48	K184-02	.00216	2.6246	.00233	.06093	228.48	.55413	.00143	.00070	22.846	-.00057	K184-02
49	K184-03	.00183	24.945	.00326	.05910	123.20	1.3849	-.00073	.00192	20.171	-.00043	K184-03
50	K184-04	.00158	24.022	.00205	.06845	214.89	1.6159	-.00076	.00157	23.428	-.00221	K184-04
51	K184-05	.00199	9.8493	.00261	.07892	267.54	.98652	-.00153	.00204	27.411	-.00036	K184-05
52	Blank	-.00007	-.00269	-.00010	-.00056	.00169	.00006	.00004	-.00026	.19560	.00018	Blank

53	CCV5	2.7551*	24.974	2.3438	.49876	55.132	2.2902	2.4271	2.4336	59.839	1.0361	CCV5
54	CCB5	.00016	-.00109	.00025	-.00008	.00003	.00005	.00026	-.00015	.10156	-.00105	CCB5
55	K174-01	.00142	3.9476	.00236	.06204	199.10	.96310	.00114	-.00006	19.394	-.00165	K174-01
56	K174-07	.00151	3.8980	.00291	.06152	197.72	.95323	.00125	-.00002	19.392	-.00068	K174-07
57	K188-03	.00226	62.554	.00444	.06439	195.43	2.3049	-.00112	.00195	28.831	.00527	K188-03
58	Blank	-.00014	-.00024	.00012	-.00048	.01508	.00002	.00007	-.00019	.13398	-.00288	Blank
59	CCV6	2.6770	24.852	2.3492	.50745	56.882	2.3453	2.4377	2.4241	59.642	1.0221	CCV6
60	CCB6	-.00003	-.00111	-.00005	-.00051	-.00301	.00012	.00032	-.00007	.08447	-.00125	CCB6
61	K542-06A	.62185	6.1279	.51214	.01897	52.494	.55145	.55271	.80292	51.273	.79292	K542-06A
62	K542-06T	.03569	.78437	-.00250	.01638	5.6927	.04881	-.00073	.30644	2.0795	.04198	K542-06T
63	K542-06J	.00741	.15219	-.00023	.00267	1.1184	.00944	.00002	.05543	.41807	.00657	K542-06J
64	K542-06M	.15682	1.9354	.10583	.01779	15.633	.15363	.11958	.44279	12.452	.18504	K542-06M
65	K542-06S	.17688	2.1823	.11790	.02154	17.780	.17613	.13465	.51503	14.010	.21683	K542-06S
66	Blank	-.00008	-.00233	-.00002	-.00075	.00608	.00011	.00011	-.00019	-.00798	-.00001	Blank
67	CCV7	2.7751*	25.098	2.3871	.55571*	57.699	2.4143	2.4408	2.4670	59.973	1.0481	CCV7
68	CCB7	.00017	.00175	.00045	-.00062	.00909	.00012	.00030	-.00013	.01316	-.00093	CCB7
69	K205-01A	.62118	5.8987	.51793	.01139	81.262	.59174	.49209	.47913	57.316	.58869	K205-01A
70	K205-01T	.00144	.49298	.00129	.00951	32.384	.08241	-.00013	.00025	3.8637	-.00028	K205-01T
71	K205-01J	.00116	.10136	.00018	.00143	6.3361	.01677	.00007	-.00008	.69200	-.00004	K205-01J
72	K205-01M	.12294	1.5732	.10238	.01079	42.704	.18376	.10687	.10672	15.083	.09664	K205-01M
73	K205-01S	.12011	1.5640	.10245	.01032	43.441	.18697	.10543	.10562	14.994	.09647	K205-01S
74	Blank	.00134	.00899	.00059	-.00028	.01823	.00049	.00013	-.00016	.01078	-.00186	Blank
75	CCV8	2.7565*	25.021	2.3756	.54142	56.986	2.3786	2.4017	2.4394	58.814	1.0642	CCV8
76	CCB8	.00104	.01059	.00060	-.00087	.00675	.00028	.00039	-.00022	.03948	-.00197	CCB8
77	K198-05A	.62025	5.5572	.52564	.03177	60.916	.52429	.64956	.47838	52.920	.59945	K198-05A
78	K198-05	.00152	.01217	.00295	.02943	12.277	.00203	.14507	-.00018	1.9625	00083	K198-05
79	K198-05J	.00049	.00237	.00041	.00556	2.6232	.00042	.02996	-.00019	.39283	-.00126	K198-05J
80	K198-05M	.57263	5.1807	.48577	.03207	58.665	.47637	.64813	.50235	52.144	.55150	K198-05M
81	K198-05S	.57452	5.2256	.49222	.03135	59.182	48193	.65360	.50631	52.481	.55594	K198-05S
82	K198-03	.00165	.01782	.00751	.03559	11.295	.00165	.00477	.00265	2.4370	-.00009	K198-03
83	K198-04	.00256	.23809	.00558	.04511	10.473	.00229	.00203	.00009	2.4535	-.00053	K198-04
84	Blank	-.00010	-.00319	.00017	-.00054	-.01219	.00005	.00007	-.00027	-.02034	-.00201	Blank
85	CCV9	2.7692*	25.046	2.3465	.50795	56.814	2.3596	2.4017	2.4280	59.964	1.0653	CCV9
86	CCB9	.00022	-.00226	-.00021	-.00011	.00491	.00019	.00044	-.00015	02913	-.00040	CCB9
87	K207-01	.00085	00289	00263	03402	11.785	-.00002	.01454	-.00030	2.1869	-.00040	K207-01
88	K207-02	.00102	13712	00160	.03059	11.039	00509	.01370	-.00018	2.0757	00047	K207-02
89	Blank	.00027	-.00237	.00021	-.00134	-.00549	-.00010	.00008	-.00027	-.05227	00060	Blank
90	CCV10	2.7380	24.896	2.3578	.50776	56.840	2.3620	2.4064	2.4277	59.785	1.0600	CCV10
91	CCB10	.00018	-.00058	-.00001	-.00088	-.00300	.00029	.00026	-.00016	01809	-.00129	CCB10
92	K119-01A	.59910	5.6207	52037	.00241	51.458	.54816	.49682	.47435	50.575	.57533	K119-01A
93	K119-01W	.00036	.08478	.00012	.00075	2.8199	02168	.00157	-.00027	.67437	-.00130	K119-01W
94	K119-01J	-.00004	01361	.00037	-.00041	.54064	.00429	.00034	-.00016	.07935	-.00271	K119-01J
95	K133-01A	.64885	5.4978	.51681	02378	150.08	1.1349	.51403	.48074	63.294	.64706	K133-01A
96	K133-01T	.00160	.03802	.00044	.02264	102.45	.63433	-.00039	-.00017	6.5318	-.00087	K133-01T
97	K133-01J	.00055	.00565	.00007	.00311	19.342	.12297	-.00006	-.00030	1.1179	-.00064	K133-01J
98	Blank	.00026	-.00328	-.00009	-.00110	-.00034	.00007	.00016	-.00014	.02757	-.00108	Blank
99	CCV11	2.7510*	25.080	2.3659	.49983	56.224	2.3397	2.4083	2.4337	59.815	1.0901	CCV11
100	CCB11	.00024	.00009	.00047	-.00149	.01329	.00051	.00049	.00009	.03082	.00060	CCB11
101	IPK045WB	.00060	-.00157	.00009	-.00041	01220	.00022	.00017	-.00015	-.03017	-.00142	IPK045WB
102	IPK045WL	.56765	5.2272	.49157	.00021*	48.759	.49853	.51120	.51245	49.857	53240	IPK045WL
103	IPK045WC	.57664	5.2873	.49238	.00087*	47.705	.48513	.51449	.51538	49.796	.54453	IPK045WC
104	TXK010SB	.00153	01369	.00007	-.00096	.01345	.00039	.00062	-.00014	.19055	.00162	TXK010SB
105	K216-01A	.62432	5.5055	.51676	.00226	49.334	2.1461	.51028	.48819	54.393	.61928	K216-01A
106	K216-01	.00397	.01454	.00020	.00065	2.3359	1.7115	.00004	.00397	.95969	.00228	K216-01
107	K216-01J	.00109	00306	.00005	-.00021	.49395	.35715	.00012	.00091	.18170	.00015	K216-01J

INDX	LSID	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	LSID
108	K216-01M	.58663	5.2713	.49657	.00271	50.658	2.2290	.52614	.52695	54.775	.59224	K216-01M
109	K216-01S	.58464	5.3002	.49781	.00171	51.552	2.2109	.52955	.52736	54.669	.59306	K216-01S
110	Blank	.00012	-.00007	-.00017	-.00061	.00709	.00039	.00014	-.00011	.09678	-.00018	Blank
111	CCV12	2.7654*	25.115	2.3478	.50773	57.522	2.3842	2.3942	2.4228	60.089	1.0844	CCV12
112	CCB12	.00023	-.00245	-.00032	-.00102	.00248	.00027	.00043	-.00011	.05047	-.00063	CCB12
113	K216-02	.00912	.07678	.00286	.00002	2.4723	.01539	.00210	.00372	.81717	.00317	K216-02
114	Blank	-.00001	-.00364	.00041	-.00167	.00291	.00019	.00008	-.00024	.00082	-.00162	Blank
115	CCV13	2.8003*	25.207	2.3524	.49888	56.075	2.3385	2.3935	2.4394	60.362	1.0904	CCV13
116	CCB13	.00021	-.00037	.00021	-.00086	.00544	.00025	.00037	-.00010	.04599	-.00118	CCB13
117	K542-06A	.60836	5.7049	.51428	.00959	50.200	.54116	.52210	.62657	50.562	.71963	K542-06A
118	K542-06A	1.1952	10.970	1.0221	.00961	49.516	1.0534	1.0295	1.1069	49.654	1.4040	K542-06A
119	K542-06I	.01687	.37642	.00084	.00809	2.9219	.02634	-.00026	.14495	1.0181	.01912	K542-06I
120	K542-06J	.00332	.07118	.00049	.00114	.59568	.00485	-.00003	.02696	.16755	.00384	K542-06J
121	K542-06M	.07136	.89157	.04997	.00785	7.7876	.07555	.05173	.19789	5.7206	.07724	K542-06M
122	K542-06S	.07428	.92294	.05025	.00844	7.8884	.07568	.05272	.20894	5.7816	.07965	K542-06S
123	Blank	-.00018	.00090	-.00020	-.00111	.00230	-.00004	.00000	-.00025	-.06439	.00018	Blank
124	CCV14	2.8072*	25.290	2.3420	.49884	56.005	2.3304	2.3912	2.4365	60.042	1.0860	CCV14
125	CCB14	.00017	-.00022	-.00029	-.00079	.00335	.00010	.00035	-.00014	.00974	-.00058	CCB14
126	K133-01A	.62687	5.4851	.51728	.01228	97.939	.82547	.50798	.47927	57.537	.62249	K133-01A
127	K133-01I	.00120	.01917	.00022	.01005	50.443	.31720	-.00007	.00014	3.0198	-.00158	K133-01I
128	K133-01J	.00045	.00627	-.00017	.00114	10.006	.06437	.00007	.00012	.56837	-.00003	K133-01J
129	Blank	-.00008	-.00313	.00011	-.00091	-.01758	-.00008	.00008	-.00022	.00854	-.00156	Blank
130	CCV15	2.7404	24.907	2.3557	.51006	56.667	2.3664	2.4137	2.4365	60.080	1.0734	CCV15
131	CCB15	.00003	.00062	-.00034	-.00030	-.00164	.00003	.00034	-.00019	.03436	-.00050	CCB15
132	IPK046WB	.00046	.00375	.00036	-.00084	-.00019	.00028	.00019	-.00011	-.00094	-.00054	IPK046WB
133	IPK046WL	.56510	5.2169	.49480	.00078*	48.637	.49398	.51149	.51151	50.750	.55055	IPK046WL
134	IPK046WC	.56188	5.1931	.49272	.00124*	48.321	.49390	.50818	.50816	50.382	.54376	IPK046WC
135	K229-01A	.61371	5.5524	.54845	.00797	66.276	1.1256	.51348	.49732	52.907	.59826	K229-01A
136	K229-01	.00159	.09244	.01764	.00702	17.649	.60897	-.00021	.01224	1.1378	-.00052	K229-01
137	K229-01J	.00066	.02190	.00389	.00063	3.7712	.13085	.00010	.00271	.22607	-.00099	K229-01J
138	K229-01M	.57378	5.2373	.51809	.00815	67.435	1.1225	.52238	.52777	53.118	.56321	K229-01M
139	K229-01S	.57629	5.2935	.51600	.00808	67.115	1.1048	.52110	.52730	53.225	.56079	K229-01S
140	K229-03	.00560	.83351	.07705	.00412	7.6377	.09293	.00027	.00251	1.9681	-.00064	K229-03
141	Blank	-.00004	-.00087	-.00029	.00040	-.01847	.00006	.00016	-.00023	-.04040	-.00060	Blank
142	CCV16	2.7806*	25.164	2.3362	.49335	55.027	2.2849	2.3996	2.4292	60.019	1.0650	CCV16
143	CCV16	.00011	-.00068	.00000	-.00086	.00137	.00017	.00035	-.00020	.04058	-.00102	CCV16
144	K133-01A	1.2555	10.854	1.0344	.01157	95.794	1.3077	1.0108	.95436	57.401	1.2263	K133-01A
145	K542-06A	1.2271	11.045	1.0330	.00601	48.143	1.0316	1.0177	1.0596	50.176	1.3255	K542-06A
146	K542-06A	.61878	5.7028	.52321	.00705	48.717	.53219	.51534	.58207	50.423	.68162	K542-06A
147	K542-06G	.01119	.24194	.00051	.00484	1.8786	.01605	-.00014	.09294	.69742	.01145	K542-06G
148	K542-06J	.00238	.05356	.00001	.00018	.40646	.00355	.00005	.01915	.11689	.00092	K542-06J
149	Blank	-.00010	-.00163	.00012	-.00010	-.00455	.00013	.00013	-.00021	-.02269	-.00056	Blank
150	CCV17	2.7368	24.758	2.3561	.51386	56.510	2.3696	2.4210	2.4333	60.279	1.0606	CCV17
151	CCB17	.00006	-.00067	.00018	.00067	.00175	.00013	.00025	-.00018	.04771	-.00115	CCB17

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INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID
1	Blank	.00010	.01064	-.00007	-.00002	.00015	.00006	-.00016	.00091	Blank
2	S20									S20
3	S21									S21
4	S22							.12054		S22
5	S23							1.1852		S23
6	S24		1.4536							S24
7	S25		8.3236							S25
8	S26									S26
9	S27									S27
10	S28				.00549					S28
11	S29				.05337					S29
12	S30	.04063		.15175		.02596	.01711		.61063	S30
13	S31	.20104		.73796		.12373	.09051		5.8958	S31
14	ICV	.50541	62.915	.48488	2.2809	.46493	.49633	1.5253	2.5609	ICV
15	ICB	.00011	-.18152*	.00008	.00132	-.00033	-.00007	.00002	-.00041	ICB
16	MRLK3001	.01048	.85537	.01054	.01163	-.00009	.00993	.01066	.02282	MRLK3001
17	MRLK3002	.00992	.32290*	.01009	.01150	.00926	.01034	.01029	.01092	MRLK3002
18	ICSA1	-.00011	-.03086	.00101	-.00232	.00145	.00374	.00069	.00261	ICSA1
19	ICAB1	1.0869	82.991	.47825	.83329	.90834	.98893	.49528	1.0138	ICAB1
20	CCV1	******	63.494	.48211	-10.967*	.49228	.48540	******	2.5429	CCV1
21	CCB1	.00004	-.19933*	.00009	.00078	.00012	.00000	.00029	.00077	CCB1
22	K542-08	.00558	20.822	.11901	-.00714*	.04452	.19312	.05513	85.419*	K542-08
23	Blank	.00002	-.20122	.00016	.00058	-.00028	-.00007	.00013	.00400	Blank
24	CCV2	.51144	63.667	.48352	2.3129	.49186	.48721	1.5109	2.5516	CCV2
25	CCB2	.00006	-.21891*	.00011	.00117	-.00050	.00001	.00021	.00066	CCB2
26	K542-08W	.00568	20.484	.11758	-.00536*	.04507	.18945	.05402	83.743*	K542-08W
27	K550-08	-.00022	63.785	.10887	.00032	-.00028	.00207	.00218	.20254	K550-08
28	Blank	-.00005	-.22790	.00007	.00100	-.00043	.00058	.00002	.00249	Blank
29	CCV3	.52241	64.234	.49233	2.3697	.46405	.50069	1.5484	2.5894	CCV3
30	CCB3	-.00002	-.23289*	.00025	.00144	-.00052	.00059	.00020	.00589	CCB3
31	IPK041WB	-.00002	-.26028	.00006	.00070	-.00029	.00010	.00007	.00152	IPK041WB
32	IPK041WL	.52976	53.543	.49921	49355	.46929	50213	.52796	.52468	IPK041WL
33	IPK041WC	.53192	54.064	.50404	.49716	.47103	.50640	.52969	.52806	IPK041WC
34	K205-01A	.62668	949.85*	6.1484	.45969	.47287	.51048	.56736	.58254	K205-01A
35	K205-01	-.00043	918.51*	5 7720	-.00013	00067	.00558	.00410	.01295	K205-01
36	K205-01J	-.00010	198.13	1.2009	-.00007	-.00095	.00248	00089	.00348	K205-01J
37	K205-01M	.62420	963.93*	6.2497	43580	47689	.51805	.53264	.54237	K205-01M
38	K205-01S	.61496	948.81*	6 1491	.42856	.46805	.50654	.52566	.53342	K205-01S
39	K203-15	-.00077	.23550	.10462	-.00382	.03480	1.9060	.33787	5.1133	K203-15
40	Blank	-.00008	-.13533	.00014	00095	-.00037	.00059	.00001	.00132	Blank
41	CCV4	.52124	64.130	.48254	2.3571	.48233	.48311	1.5173	2.5553	CCV4
42	CCB4	-.00004	-.14368*	.00014	.00102	-.00015	.00014	.00020	.00047	CCB4
43	K205-02	-.00024	74.080	1.1629	-.00025	-.00001	.00399	.00467	.02577	K205-02
44	K205-03	-.00048	1086.9*	4.8212	-.00032	-.00036	.01066	.01012	.01436	K205-03
45	K205-04	-.00005	1.4246	.00116	.00055	-.00047	.00008	.00013	.00481	K205-04
46	K205-05	-.00011	1.1846	.00102	.00053	-.00048	-.00018	.00007	.00298	K205-05
47	K184-01	-.00043	717.00*	4.9632	-.00004	-.00117	.00239	-.00048	.00715	K184-01
48	K184-02	-.00052	1600.0*	5.6644	-.00057	-.00024	.00223	-.00065	.00885	K184-02
49	K184-03	-.00041	622.24	5.0573	-.00011	-.00042	.00320	.00028	.00559	K184-03
50	K184-04	-.00031	1370.4*	5.3942	-.00113	-.00077	.00198	-.00027	.01032	K184-04
51	K184-05	-.00046	1672.8*	7.9830	-.00163	-.00107	.00483	.00248	.00589	K184-05
52	Blank	-.00007	.62232	.00054	.00036	-.00019	-.00013	.00004	.00098	Blank

53	CCV5	.52697	64.595	.49222	2.3096	.47237	.47726	1.5147	2.5355	CCV5
54	CCB5	.00000	.06196*	.00010	.00129	-.00054	-.00015	.00015	.00055	CCB5
55	K174-01	-.00064	1278.8*	5.9043	-.00057	-.00030	.00210	-.00030	.00195	K174-01
56	K174-07	-.00040	1258.2*	5.8142	-.00012	-.00177	.00243	-.00006	.00450	K174-07
57	K188-03	-.00024	1377.2*	5.8636	-.00440	.00124	.00247	.00016	.01201	K188-03
58	Blank	-.00007	.52903	.00042	.00074	-.00034	.00037	.00008	.00108	Blank
59	CCV6	.51910	64.495	.48543	2.3081	.47823	.49019	1.5070	2.5371	CCV6
60	CCB6	.00007	.06786*	.00006	.00099	-.00057	.00009	.00028	.00046	CCB6
61	K542-06A	.49445	103.15	.53161	.45904	.47388	.50140	.56782	4.4496	K542-06A
62	K542-06T	-.00002	49.452	.04243	-.02697*	.01479	-.00009	.00028	3.8638	K542-06T
63	K542-06J	.00005	9.5785	.00824	-.00360	.00182	.00001	.00012	.67547	K542-06J
64	K542-06M	.10758	64.178	.15485	.07186	.11401	.10731	.11609	4.2520	K542-06M
65	K542-06S	.11999	74.494	.17615	.07504	.12897	.12122	.12983	5.0480	K542-06S
66	Blank	-.00001	-.06548	.00019	.00043	-.00056	.00049	.00005	.00617	Blank
67	CCV7	.53276	64.780	.49967	2.3751	.43998*	.50034	1.5246	2.5557	CCV7
68	CCB7	.00003	-.10589*	.00005	.00114	-.00063	.00044	.00012	.00642*	CCB7
69	K205-01A	.55845	251.26	1.6706	.50659	.43657	.48871	.56000	.56990	K205-01A
70	K205-01T	-.00014	198.56	1.1910	.00083	-.00052	.00234	.00089	.00491	K205-01T
71	K205-01J	-.00006	38.230	.23290	.00043	-.00033	.00094	.00022	.00393	K205-01J
72	K205-01M	.11825	212.16	1.3173	.10220	.09415	.10862	.11185	.11464	K205-01M
73	K205-01S	.11728	213.38	1.3219	.10240	.09260	.10688	.11025	.11375	K205-01S
74	Blank	.00005	-.01418	.00021	.00054	-.00064	.00017	.00005	.00287	Blank
75	CCV8	.53251	63.726	.49396	2.4179	.43391*	.49283	1.5130	2.5480	CCV8
76	CCB8	.00007	-.08061*	.00011	.00061	-.00029	.00037	.00003	.00395	CCB8
77	K198-05A	.55468	103.63	1.2740	.54619	.45017	.50936	.56853	.60628	K198-05A
78	K198-05	-.00005	48.125	.78125	.00068	-.00051	.00072	.00681	.04211	K198-05
79	K198-05J	-.00006	9.9403	.16633	.00086	-.00045	.00004	.00147	.00942	K198-05J
80	K198-05M	.55003	102.21	1.2743	.49415	.44804	.49814	.53097	.56152	K198-05M
81	K198-05S	.55394	102.06	1.2746	.50057	.45532	.50198	.53354	.57538	K198-05S
82	K198-03	.00000	45.690	.86846	.00059	-.00046	.00174	.00611	.27413	K198-03
83	K198-04	-.00010	48.008	.99870	-.00044	-.00087	.00092	.00757	.36317	K198-04
84	Blank	-.00003	-.12821	.00014	.00031	-.00044	.00044	-.00005	.00129	Blank
85	CCV9	.53836	65.036	.49591	2.4063	.45999	.48563	1.5136	2.5484	CCV9
86	CCB9	-.00003	-.14020*	.00009	.00127	-.00048	.00005	-.00010	.00039	CCB9
87	K207-01	-.00020	45.493	.86042	-.00034	-.00041	.00161	.00625	.01848	K207-01
88	K207-02	.00007	42.911	.81100	.00060	-.00048	.00101	.00500	.04335	K207-02
89	Blank	-.00002	-.13338	.00013	.00094	-.00037	-.00011	-.00002	.00136	Blank
90	CCV10	.53237	64.750	.49584	2.4079	.46373	.48548	1.5041	2.5590	CCV10
91	CCB10	-.00004	-.16791*	.00005	.00129	-.00026	-.00007	-.00002	.00147	CCB10
92	K119-01A	.54209	69.989	.63199	.54815	.45103	.50943	.55730	.56356	K119-01A
93	K119-01W	.00004	14.997	.14013	.00059	-.00059	.00033	.00005	.00075	K119-01W
94	K119-01J	.00005	2.7860	.02767	.00068	-.00079	.00008	.00013	.00028	K119-01J
95	K133-01A	.61418	860.29*	3.1618	.50130	.44925	.49853	.56716	.58460	K133-01A
96	K133-01T	-.00012	822.87*	2.6833	.00027	.00020	.00214	-.00046	.00162	K133-01T
97	K133-01J	-.00003	162.07	.50507	.00059	-.00051	.00064	-.00016	.00030	K133-01J
98	Blank	.00004	.02486	.00016	.00093	-.00008	.00046	.00005	.00216	Blank
99	CCV11	.53768	64.792	.49313	2.4450	.46629	.47987	1.5088	2.5743	CCV11
100	CCB11	-.00003	-.11092*	.00024	.00059	-.00055	.00046	.00019	.01342*	CCB11
101	IPK045WB	-.00007	-.12858	.00009	.00051	-.00015	.00063	.00013	.00071	IPK045WB
102	IPK045WL	.54727	54.816	.50950	.51368	.44822	.51243	.53200	.53503	IPK045WL
103	IPK045WC	.55301	54.601	.51177	.51625	.45410	.50443	.53692	.53791	IPK045WC
104	TXK010SB	.00005	339.92*	.00157	-.00168	.00014	.00094	.00021	.01215*	TXK010SB
105	K216-01A	.55742	392.93	.54832	.51692	.44553	.49780	.56521	.78612	K216-01A
106	K216-01	-.00007	342.41	.05378	-.00095	.00057	.00062	.00009	.21325	K216-01
107	K216-01J	.00014	73.502	.01119	.00037	-.00059	.00026	.00014	.04303	K216-01J

108	K216-01M	.57687	400.17	56750	.49487	.45693	.51852	.53994	.91541	K216-01M
109	K216-01S	.57868	392.18	.56769	.50158	.45815	.52433	.54113	.90903	K216-01S
110	Blank	-.00005	-.01769	.00002	.00030	-.00057	.00039	.00004	.00056	Blank
111	CCV12	.54164	65.331	.49510	2.4527	.45972	.48622	1.5099	2.5600	CCV12
112	CCB12	.00004	-.12724*	.00012	.00065	-.00053	.00047	.00001	.00102	CCB12
113	K216-02	.00208	294.08	.02748	-.00004	00170	.00273	.00211	.16559	K216-02
114	Blank	-.00002	-.05654	.00014	.00066	-.00048	-.00012	-.00007	.00043	Blank
115	CCV13	.54392	65.353	.49744	2.4285	.45926	.47609	1.5146	2.5681	CCV13
116	CCB13	.00001	-.13796*	.00011	.00099	-.00012	-.00019	.00021	.00051	CCB13
117	K542-06A	.51367	78.339	.51771	.50955	.45068	.50497	.55288	2.3660	K542-06A
118	K542-06A	1.0121	77.507	.99938	1.0120	.88515	.99681	1.0974	2.9473	K542-06A
119	K542-06I	.00006	24.484	.02118	-.01145*	.00569	-.00011	.00017	1.8155	K542-06I
120	K542-06J	.00004	4.6165	.00403	-.00160	.00074	.00041	.00019	.33125	K542-06J
121	K542-06M	.05143	30.059	.07175	.03930	.05049	.05133	.05307	1.8847	K542-06M
122	K542-06S	.05225	31.683	.07373	.03832	.05183	.05131	.05409	2.0091	K542-06S
123	Blank	.00007	-.19068	.00003	-.00025	.00019	.00037	.00006	.00112	Blank
124	CCV14	.54143	65.200	.49667	2.4163	.46002	.47478	1.5183	2.5640	CCV14
125	CCB14	.00000	-.18362*	.00010	.00047	-.00062	.00005	.00007	.00075	CCB14
126	K133-01A	.57872	463.12	1.7947	.51493	.44627	.50283	.56116	.57951	K133-01A
127	K133-01I	-.00011	411.25	1.2953	.00020	-.00061	.00160	-.00021	.00194	K133-01I
128	K133-01J	.00008	83.091	.25868	.00046	-.00052	.00045	.00017	.00143	K133-01J
129	Blank	.00011	-.10087	.00010	.00035	-.00045	.00038	.00006	.00054	Blank
130	CCV15	.53142	64.961	.49221	2.3895	.46663	.48595	1.5027	2.5596	CCV15
131	CCB15	.00003	-.15586*	.00008	.00023	-.00045	-.00012	.00012	.00068	CCB15
132	IPK046WB	.00000	-.16383	.00019	.00060	-.00027	.00029	.00022	.00081	IPK046WB
133	IPK046WL	.54829	55.267	.51117	.51862	.45864	.51836	.52759	.53439	IPK046WL
134	IPK046WC	.54509	54.777	.50923	.51682	.45563	.51584	.52457	.53186	IPK046WC
135	K229-01A	.54776	60.820	.65379	.53517	.46228	.52057	.55992	4.3023	K229-01A
136	K229-01	-.00017	4.5300	.15771	.00078	-.00031	.00612	.00028	3.7634	K229-01
137	K229-01J	-.00003	.76714	.03363	00070	-.00018	.00177	.00015	.79775	K229-01J
138	K229-01M	.56063	61.390	.67469	.50421	.46727	.52827	.52985	4.3832	K229-01M
139	K229-01S	.56289	61.483	.67046	.50340	.46748	.52490	.53393	4.3546	K229-01S
140	K229-03	-.00012	1.6998	.07513	.00012	-.00049	.04957	.00222	1.4623	K229-03
141	Blank	-.00005	-.22476	.00010	.00134	-.00035	-.00030	-.00005	00042	Blank
142	CCV16	53564	65.107	49211	2.3762	46744	.47262	1.5185	2.5519	CCV16
143	CCV16	00002	-.20756*	.00007	00133	-.00034	.00033	.00006	.00089	CCV16
144	K133-01A	1.1393	455.88	2.2621	1.0121	.89638	.98626	1.1208	1.1476	K133-01A
145	K542-06A	1.0332	69.467	.99525	1.0314	89399	.98755	1.1130	2.2596	K542-06A
146	K542-06A	.52289	70.134	.50753	.51961	.45389	.49966	.56136	1.7291	K542-06A
147	K542-06G	00003	15.781	.01369	-.00747*	.00330	00034	.00031	1.1444	K542-06G
148	K542-06J	.00015	3.1391	.00298	-.00025	.00033	.00033	.00021	.23017	K542-06J
149	Blank	00004	-.22839	.00007	.00058	-.00035	.00009	.00009	.00065	Blank
150	CCV17	.52902	65.186	.49336	2.3668	.46894	.48687	1.4972	2.5505	CCV17
151	CCB17	-.00002	-.20931*	.00015	.00112	-.00047	-.00033	.00004	.00097	CCB17
INDX	LSID	Ag	Na	Sr	Tl	Sn	Ti	V	Zn	LSID

ID8K024 Section 3 of 3

EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP METALS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

All samples pH <2

Book #: EIP-104
Batch: IPK041W
Matrix: Water
Digestor ID: E

SOP #	Rev. #
☐ EMAX-3005	4
☑ EMAX-3010	5
☐ EMAX-3050	4
☐ EMAX-200.7	2
☐ EMAX-	

Start	Temp	End	Temp
	95 °C		95 °C

Standards	ID	Amount Added (ml)
LCS-1	SMIA-013-04-13	0.25
LCS-2	SMIA-013-03-13	0.25
LCS-3	SMIA-013-04-14	0.5
MS	Same spike vol and sol as LCS1, LCS2, LCS3	
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SWIA-04-407	1.5+1.5
HCl	SWIA-04-408	2.5+2.5
H_2O_2	N/A	
HNO3(1:1)	N/A	

Digestate Location	ICP
Extract Location	
☑ Reagent Water ID: SMSA-02-076	
☑ Thermometer ID: 101993366	
☑ Pipette ID: ICP-07	
☑ Pipette ID: 142780035	
☐ Pipette ID:	
☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask	
☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask	

Prepared By: OG

Standard Added By: OG Witnessed By: NT

Extract Rcvd By: TH Checked By: TH

FileID: IPK041W

EMAX LABORATORIES, INC.

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
11IPK041W01	IPK041WB	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W02	IPK041WL	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W03	IPK041WC	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W04	K184-01	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W05	K184-02	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W06	K184-03	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W07	K184-04	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W08	K184-05	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W09	K174-01	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W10	K174-07	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W11	K188-03	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W12	K205-01	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W13	K205-01M	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W14	K205-01S	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W15	K205-02	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W16	K205-03	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W17	K205-04	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W18	K205-05	50	ml	11/28/11 11:54	50	50	50	1	DISSOLVED
11IPK041W19	K187-01	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W20	K207-01	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W21	K207-02	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W22	K198-03	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W23	K198-04	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W24	K198-05	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W25	K198-05M	50	ml	11/28/11 11:54	50	50	50	1	
11IPK041W26	K198-05S	50	ml	11/28/11 11:54	50	50	50	1	

11/28/11 GG

Vd=digestate volume PrepFctr=)ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 11/28/11 11:54 Prepared By GG

☑ Digestion Ended @ 11/28/11 16:15 Checked By: TH

Comments: Date 11/28/11

7038

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

WET CHEMICAL ANALYSES

SDG#: 11K205

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K205

METHOD 300.0
ANIONS BY IC

A total of five (5) water samples were received on 11/22/11 for Anions (Chloride, Nitrate, Nitrite and Sulfate) by IC analysis, Method 300.0 in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. Results were compliant to project requirement.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for ICK079WL/C were all within QC limits.
Percent recoveries for ICK081WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample were analyzed at the frequency prescribed by the project.
Percent recoveries for K205-01M/S were within project QC limits.
Sample duplicate were also analyzed with the samples. RPDs were within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. Nitrite samples K205-01 and -03 were analyzed with 5x or 10x dilutions due to interference from high chloride concentrations. Nitrate, Nitrite and Sulfate sample K205-02 was initially analyzed at 5x due to yellowish color and strong odor and Nitrate sample K205-03 was initially analyzed at 10x due to dark color and strong odor.

SAMPLE RESULTS

METHOD 300.0
CHLORIDE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K205

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK079WB	ND	1	NA	0.200	0.100	11/22/1111:03	NA	AK33-03	AK33-01	ICK079W	NA	NA
LCS1W	ICK079WL	1.93	1	NA	0.200	0.100	11/22/1111:19	NA	AK33-04	AK33-01	ICK079W	NA	NA
LCD1W	ICK079WC	1.93	1	NA	0.200	0.100	11/22/1111:35	NA	AK33-05	AK33-01	ICK079W	NA	NA
IR-70-EB-166	K205-05	0.167J	1	NA	0.200	0.100	11/22/1118:58	NA	AK33-21	AK33-19	ICK079W	11/22/1114:20	11/22/11
IR-70-SB-165	K205-04	0.165J	1	NA	0.200	0.100	11/22/1119:14	NA	AK33-22	AK33-19	ICK079W	11/22/1114:15	11/22/11
MBLK2W	ICK081WB	ND	1	NA	0.200	0.100	11/23/1112:53	NA	AK35-10	AK35-08	ICK081W	NA	NA
LCS2W	ICK081WL	1.98	1	NA	0.200	0.100	11/23/1113:09	NA	AK35-11	AK35-08	ICK081W	NA	NA
LCD2W	ICK081WC	1.98	1	NA	0.200	0.100	11/23/1113:25	NA	AK35-12	AK35-08	ICK081W	NA	NA
IW-70-SSB119-163	K205-01	2550	250	NA	50.0	25.0	11/23/1113:41	NA	AK35-13	AK35-08	ICK081W	11/22/1111:45	11/22/11
IW-70-SSB119-163DUP	K205-01D	2560	250	NA	50.0	25.0	11/23/1113:57	NA	AK35-14	AK35-08	ICK081W	11/22/1111:45	11/22/11
IW-70-SSB119-163MS	K205-01M	3000	250	NA	50.0	25.0	11/23/1114:13	NA	AK35-15	AK35-08	ICK081W	11/22/1111:45	11/22/11
IW-70-SSB119-163MSD	K205-01S	3000	250	NA	50.0	25.0	11/23/1114:30	NA	AK35-16	AK35-08	ICK081W	11/22/1111:45	11/22/11
IW-70-SHB311-164	K205-02	173	20	NA	4.00	2.00	11/23/1115:02	NA	AK35-18	AK35-08	ICK081W	11/22/1113:47	11/22/11
IW-70-SAT35-167	K205-03	1570	100	NA	20.0	10.0	11/23/1115:18	NA	AK35-19	AK35-08	ICK081W	11/22/1116:23	11/22/11

METHOD 300.0
NITRATE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K205

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK079WB	ND	1	NA	0.200	0.0500	11/22/1111:03	NA	AK33-03	AK33-01	ICK079W	NA	NA
LCS1W	ICK079WL	0.978	1	NA	0.200	0.0500	11/22/1111:19	NA	AK33-04	AK33-01	ICK079W	NA	NA
LCD1W	ICK079WC	0.979	1	NA	0.200	0.0500	11/22/1111:35	NA	AK33-05	AK33-01	ICK079W	NA	NA
IR-70-EB-166	K205-05	0.0830J	1	NA	0.200	0.0500	11/22/1118:58	NA	AK33-21	AK33-19	ICK079W	11/22/1114:20	11/22/11
IR-70-SB-165	K205-04	0.0840J	1	NA	0.200	0.0500	11/22/1119:14	NA	AK33-22	AK33-19	ICK079W	11/22/1114:15	11/22/11
IW-70-SSB119-163	K205-01	ND	1	NA	0.200	0.0500	11/22/1119:30	NA	AK33-23	AK33-19	ICK079W	11/22/1111:45	11/22/11
IW-70-SSB119-163DUP	K205-01D	ND	1	NA	0.200	0.0500	11/22/1119:46	NA	AK33-24	AK33-19	ICK079W	11/22/1111:45	11/22/11
IW-70-SSB119-163MS	K205-01M	1.08	1	NA	0.200	0.0500	11/22/1120:02	NA	AK33-25	AK33-19	ICK079W	11/22/1111:45	11/22/11
IW-70-SSB119-163MSD	K205-01S	1.08	1	NA	0.200	0.0500	11/22/1120:18	NA	AK33-26	AK33-19	ICK079W	11/22/1111:45	11/22/11
IW-70-SAT35-167	K205-03	ND	10	NA	2.00	0.500	11/22/1120:35	NA	AK33-27	AK33-19	ICK079W	11/22/1116:23	11/22/11
IW-70-SHB311-164	K205-02	ND	5	NA	1.00	0.250	11/22/1120:51	NA	AK33-28	AK33-19	ICK079W	11/22/1113:47	11/22/11

METHOD 300.0
NITRITE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K205

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK079WB	ND	1	NA	0.200	0.0500	11/22/1111:03	NA	AK33-03	AK33-01	ICK079W	NA	NA
LCS1W	ICK079WL	2.07	1	NA	0.200	0.0500	11/22/1111:19	NA	AK33-04	AK33-01	ICK079W	NA	NA
LCD1W	ICK079WC	2.07	1	NA	0.200	0.0500	11/22/1111:35	NA	AK33-05	AK33-01	ICK079W	NA	NA
IR-70-EB-166	K205-05	ND	1	NA	0.200	0.0500	11/22/1118:58	NA	AK33-21	AK33-19	ICK079W	11/22/1114:20	11/22/11
IR-70-SB-165	K205-04	ND	1	NA	0.200	0.0500	11/22/1119:14	NA	AK33-22	AK33-19	ICK079W	11/22/1114:15	11/22/11
IW-70-SAT35-167	K205-03	ND	10	NA	2.00	0.500	11/22/1120:35	NA	AK33-27	AK33-19	ICK079W	11/22/1116:23	11/22/11
IW-70-SHB311-164	K205-02	ND	5	NA	1.00	0.250	11/22/1120:51	NA	AK33-28	AK33-19	ICK079W	11/22/1113:47	11/22/11
IW-70-SSB119-163	K205-01	ND	5	NA	1.00	0.250	11/22/1121:07	NA	AK33-29	AK33-19	ICK079W	11/22/1111:45	11/22/11
IW-70-SSB119-163DUP	K205-01D	ND	5	NA	1.00	0.250	11/22/1121:23	NA	AK33-30	AK33-19	ICK079W	11/22/1111:45	11/22/11
IW-70-SSB119-163MS	K205-01M	10.3	5	NA	1.00	0.250	11/22/1122:12	NA	AK33-33	AK33-31	ICK079W	11/22/1111:45	11/22/11
IW-70-SSB119-163MSD	K205-01S	10.6	5	NA	1.00	0.250	11/22/1122:28	NA	AK33-34	AK33-31	ICK079W	11/22/1111:45	11/22/11

METHOD 300.0
SULFATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K205

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK079WB	ND	1	NA	0.500	0.250	11/22/1111:03	NA	AK33-03	AK33-01	ICK079W	NA	NA
LCS1W	ICK079WL	4.88	1	NA	0.500	0.250	11/22/1111:19	NA	AK33-04	AK33-01	ICK079W	NA	NA
LCD1W	ICK079WC	4.89	1	NA	0.500	0.250	11/22/1111:35	NA	AK33-05	AK33-01	ICK079W	NA	NA
IR-70-EB-166	K205-05	0.591	1	NA	0.500	0.250	11/22/1118:58	NA	AK33-21	AK33-19	ICK079W	11/22/1114:20	11/22/11
IR-70-SB-165	K205-04	0.290J	1	NA	0.500	0.250	11/22/1119:14	NA	AK33-22	AK33-19	ICK079W	11/22/1114:15	11/22/11
IW-70-SSB119-163	K205-01	4.89	1	NA	0.500	0.250	11/22/1119:30	NA	AK33-23	AK33-19	ICK079W	11/22/1111:45	11/22/11
IW-70-SSB119-163DUP	K205-01D	4.70	1	NA	0.500	0.250	11/22/1119:46	NA	AK33-24	AK33-19	ICK079W	11/22/1111:45	11/22/11
IW-70-SSB119-163MS	K205-01M	10.1	1	NA	0.500	0.250	11/22/1120:02	NA	AK33-25	AK33-19	ICK079W	11/22/1111:45	11/22/11
IW-70-SSB119-163MSD	K205-01S	10.1	1	NA	0.500	0.250	11/22/1120:18	NA	AK33-26	AK33-19	ICK079W	11/22/1111:45	11/22/11
IW-70-SAT35-167	K205-03	15.2	10	NA	5.00	2.50	11/22/1120:35	NA	AK33-27	AK33-19	ICK079W	11/22/1116:23	11/22/11
IW-70-SHB311-164	K205-02	1.93J	5	NA	2.50	1.25	11/22/1120:51	NA	AK33-28	AK33-19	ICK079W	11/22/1113:47	11/22/11

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK079WB	ICK079WL	ICK079WC		
LAB FILE ID:	AK33-03	AK33-04	AK33-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1111:03	11/22/1111:19	11/22/1111:35	DATE RECEIVED:	NA
PREP. BATCH:	ICK079W	ICK079W	ICK079W		
CALIB. REF:	AK33-01	AK33-01	AK33-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	ND	2.00	1.93	97	2.00	1.93	96	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	ICK081WB	ICK081WL	ICK081WC		
LAB FILE ID:	AK35-10	AK35-11	AK35-12		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1112:53	11/23/1113:09	11/23/1113:25	DATE RECEIVED:	NA
PREP. BATCH:	ICK081W	ICK081W	ICK081W		
CALIB. REF:	AK35-08	AK35-08	AK35-08		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	ND	2.00	1.98	99	2.00	1.98	99	0	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	250	250	250		
SAMPLE ID:	IW-70-SSB119-163				
LAB SAMP ID:	K205-01	K205-01M	K205-01S		
LAB FILE ID:	AK35-13	AK35-15	AK35-16		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/22/11 11:45
DATE ANALYZED:	11/23/1113:41	11/23/1114:13	11/23/1114:30	DATE RECEIVED:	11/22/11
PREP. BATCH:	ICK081W	ICK081W	ICK081W		
CALIB. REF:	AK35-08	AK35-08	AK35-08		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	2550	500	3000	89	500	3000	90	0	80-120	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0

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MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 250 250
SAMPLE ID: IW-70-SSB119-163
EMAX SAMP ID: K205-01 K205-01D
LAB FILE ID: AK35-13 AK35-14
DATE EXTRACTED: NA NA DATE COLLECTED: 11/22/11 11:45
DATE ANALYZED: 11/23/1113:41 11/23/1113:57 DATE RECEIVED: 11/22/11
PREP. BATCH: ICK081W ICK081W
CALIB. REF: AK35-08 AK35-08

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Chloride-Cl	2550	2560	0	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK079WB	ICK079WL	ICK079WC		
LAB FILE ID:	AK33-03	AK33-04	AK33-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1111:03	11/22/1111:19	11/22/1111:35	DATE RECEIVED:	NA
PREP. BATCH:	ICK079W	ICK079W	ICK079W		
CALIB. REF:	AK33-01	AK33-01	AK33-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrate-N	ND	1.00	0.978	98	1.00	0.979	98	0	90-110	20

8012

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0

MATRIX: WATER
% MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID:	IW-70-SSB119-163		
LAB SAMP ID:	K205-01	K205-01M	K205-01S
LAB FILE ID:	AK33-23	AK33-25	AK33-26
DATE EXTRACTED:	NA	NA	NA
DATE ANALYZED:	11/22/1119:30	11/22/1120:02	11/22/1120:18
PREP. BATCH:	ICK079W	ICK079W	ICK079W
CALIB. REF:	AK33-19	AK33-19	AK33-19

DATE COLLECTED: 11/22/11 11:45
DATE RECEIVED: 11/22/11

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrate-N	ND	1.00	1.08	108	1.00	1.08	108	0	80-120	20

8013

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0

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MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: IW-70-SSB119-163
EMAX SAMP ID: K205-01 K205-01D
LAB FILE ID: AK33-23 AK33-24
DATE EXTRACTED: NA NA DATE COLLECTED: 11/22/11 11:45
DATE ANALYZED: 11/22/1119:30 11/22/1119:46 DATE RECEIVED: 11/22/11
PREP. BATCH: ICK079W ICK079W
CALIB. REF: AK33-19 AK33-19

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Nitrate-N	ND	ND	0	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK079WB	ICK079WL	ICK079WC		
LAB FILE ID:	AK33-03	AK33-04	AK33-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1111:03	11/22/1111:19	11/22/1111:35	DATE RECEIVED:	NA
PREP. BATCH:	ICK079W	ICK079W	ICK079W		
CALIB. REF:	AK33-01	AK33-01	AK33-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	2.00	2.07	103	2.00	2.07	103	0	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	5	5	5
SAMPLE ID:	IW-70-SSB119-163		
LAB SAMP ID:	K205-01	K205-01M	K205-01S
LAB FILE ID:	AK33-29	AK33-33	AK33-34
DATE EXTRACTED:	NA	NA	NA
DATE ANALYZED:	11/22/1121:07	11/22/1122:12	11/22/1122:28
PREP. BATCH:	ICK079W	ICK079W	ICK079W
CALIB. REF:	AK33-19	AK33-31	AK33-31

DATE COLLECTED: 11/22/11 11:45
DATE RECEIVED: 11/22/11

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	10.0	10.3	103	10.0	10.6	106	3	80-120	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0

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MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 5 5
SAMPLE ID: IW-70-SSB119-163
EMAX SAMP ID: K205-01 K205-01D
LAB FILE ID: AK33-29 AK33-30
DATE EXTRACTED: NA NA DATE COLLECTED: 11/22/11 11:45
DATE ANALYZED: 11/22/1121:07 11/22/1121:23 DATE RECEIVED: 11/22/11
PREP. BATCH: ICK079W ICK079W
CALIB. REF: AK33-19 AK33-19

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Nitrite-N	ND	ND	0	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK079WB	ICK079WL	ICK079WC		
LAB FILE ID:	AK33-03	AK33-04	AK33-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/22/1111:03	11/22/1111:19	11/22/1111:35	DATE RECEIVED:	NA
PREP. BATCH:	ICK079W	ICK079W	ICK079W		
CALIB. REF:	AK33-01	AK33-01	AK33-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	4.88	98	5.00	4.89	98	0	90-110	20

8018

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID:	IW-70-SSB119-163		
LAB SAMP ID:	K205-01	K205-01M	K205-01S
LAB FILE ID:	AK33-23	AK33-25	AK33-26
DATE EXTRACTED:	NA	NA	NA
DATE ANALYZED:	11/22/1119:30	11/22/1120:02	11/22/1120:18
PREP. BATCH:	ICK079W	ICK079W	ICK079W
CALIB. REF:	AK33-19	AK33-19	AK33-19

DATE COLLECTED: 11/22/11 11:45
DATE RECEIVED: 11/22/11

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	4.89	5.00	10.1	105	5.00	10.1	105	0	80-120	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0

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MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: IW-70-SSB119-163
EMAX SAMP ID: K205-01 K205-01D
LAB FILE ID: AK33-23 AK33-24
DATE EXTRACTED: NA NA DATE COLLECTED: 11/22/11 11:45
DATE ANALYZED: 11/22/1119:30 11/22/1119:46 DATE RECEIVED: 11/22/11
PREP. BATCH: ICK079W ICK079W
CALIB. REF: AK33-19 AK33-19

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Sulfate	4.89	4.70	4	20

INITIAL CALIBRATIONS

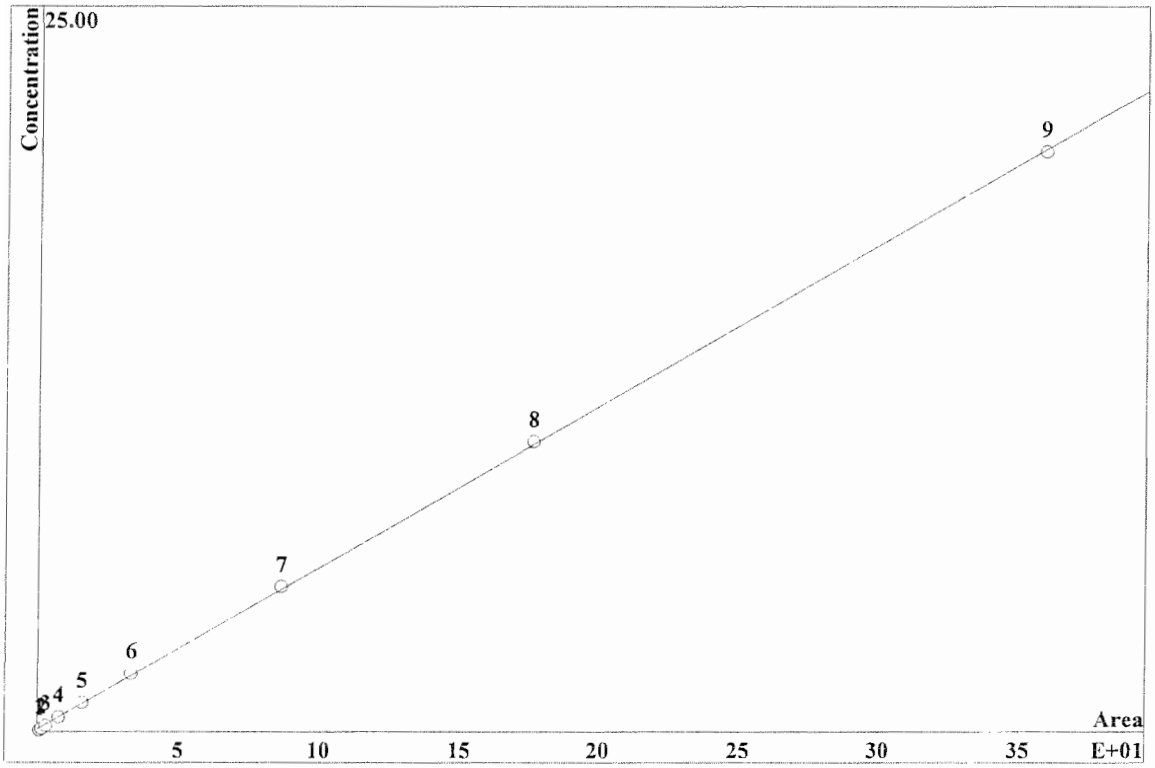
IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	nitrite	fluoride	chloride	bromide	nitrate	phosphate	sulfate	RawNetID	DF
AI39-01	IB	IFCBNPS	0	0	0	0	0	0	0	v9301829	1
AI39-02	S0	IFCBNPS	0	0	0	0	0	0	0	v9301845	1
AI39-03	S1	IFCBNPS	0.0402732	0.0794447	0.137238	0.0962101	0.0900188	0.132659	0.181386	v9301901	1
AI39-04	S2	IFCBNPS	0.0827484	0.120657	0.172987	0.138434	0.127411	0.166211	0.219384	v9301917	1
AI39-05	S3	IFCBNPS	0.175829	0.207372	0.255839	0.223376	0.213499	0.241921	0.298411	v9301934	1
AI39-06	S4	IFCBNPS	0.468611	0.487287	0.510168	0.483675	0.481038	0.46682	0.535669	v9301950	1
AI39-07	S5	IFCBNPS	0.987232	0.975831	0.969747	0.947628	0.958434	0.904972	0.974277	v9302006	1
AI39-08	S6	IFCBNPS	2.03579	2.00618	1.92527	1.92275	1.95393	1.87863	1.87805	v9302022	1
AI39-09	S7	IFCBNPS	5.13141	5.00267	4.89791	5.03793	5.02567	5.05879	4.80122	v9302038	1
AI39-10	S8	IFCBNPS	9.9281	9.57748	9.9004	10.4648	10.1254	10.4079	9.8176	v9302054	1
AI39-11	S9	IFCBNPS	18.5849	17.9543	20.0804	21.615	20.3941	21.1232	20.144	v9302111	1
AI39-12	ICV	IFCBNPS	98.6%	100.1%	97.7%	94.1%	98.6%	92.5%	99.9%	v9302127	1
AI39-13	ICB	IFCBNPS	0	0	0	0	0	0	0	v9302143	1

AJ
15/03/11

CALIBRATION OF COMPONENT chloride

Method: ICD0-I30.mtw
Equation: Q = 0.0557644·A + 0.0866239
RSD: 1.948 %
Correlation coefficient: 0.999932



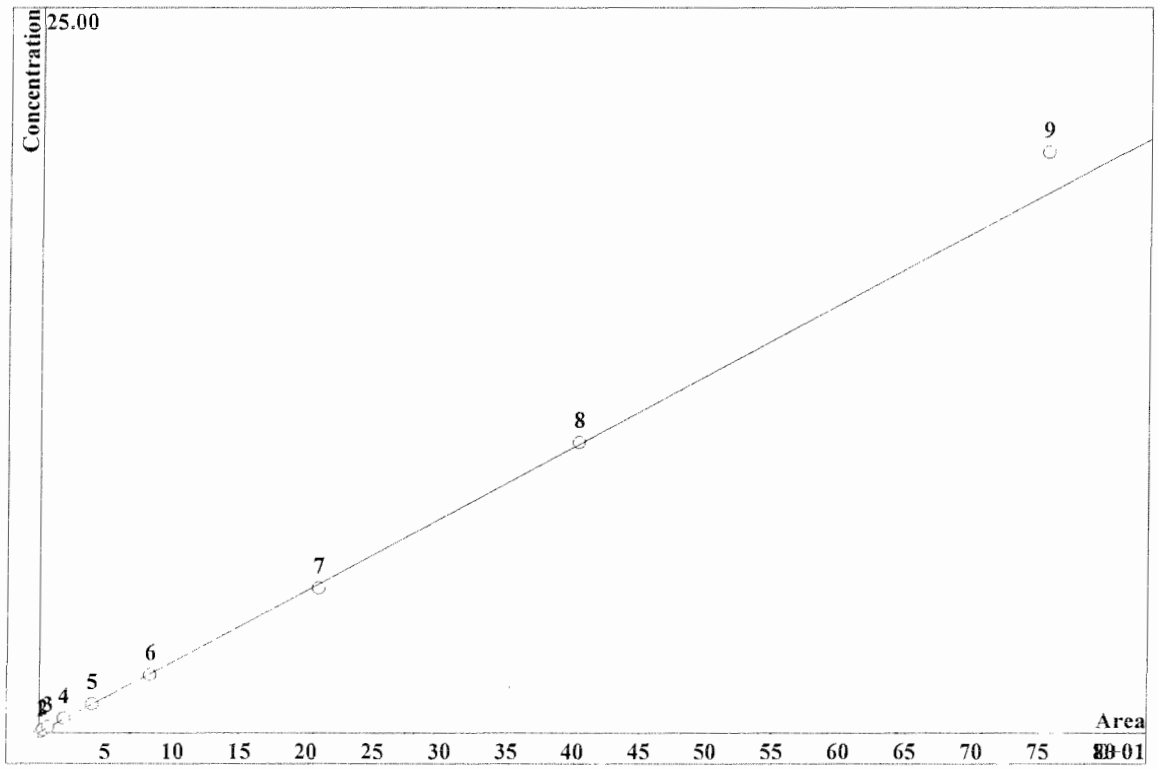
K3 = 0 K2 = 0 K1 = 0.0557644 K0 = 0.0866239
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1035	0.9076	0.05	1	4.26	Yes	v9301901.chw
2	0.1796	1.549	0.1	1	4.26	Yes	v9301917.chw
3	0.354	3.034	0.2	1	4.26	Yes	v9301934.chw
4	0.8921	7.595	0.5	1	4.26	Yes	v9301950.chw
5	1.896	15.84	1	1	4.26	Yes	v9302006.chw
6	3.983	32.97	2	1	4.26	Yes	v9302022.chw
7	10.38	86.28	5	1	4.26	Yes	v9302038.chw
8	21.04	176	10	1	4.26	Yes	v9302054.chw
9	42.24	358.5	20	1	4.26	Yes	v9302111.chw

AA
10/03/11

CALIBRATION OF COMPONENT nitrite

Method: ICD0-I30.mtw ✓ ✓
Equation: Q = 0.024644·A + 0.00179217
RSD: 2.785 %
Correlation coefficient: 0.999850



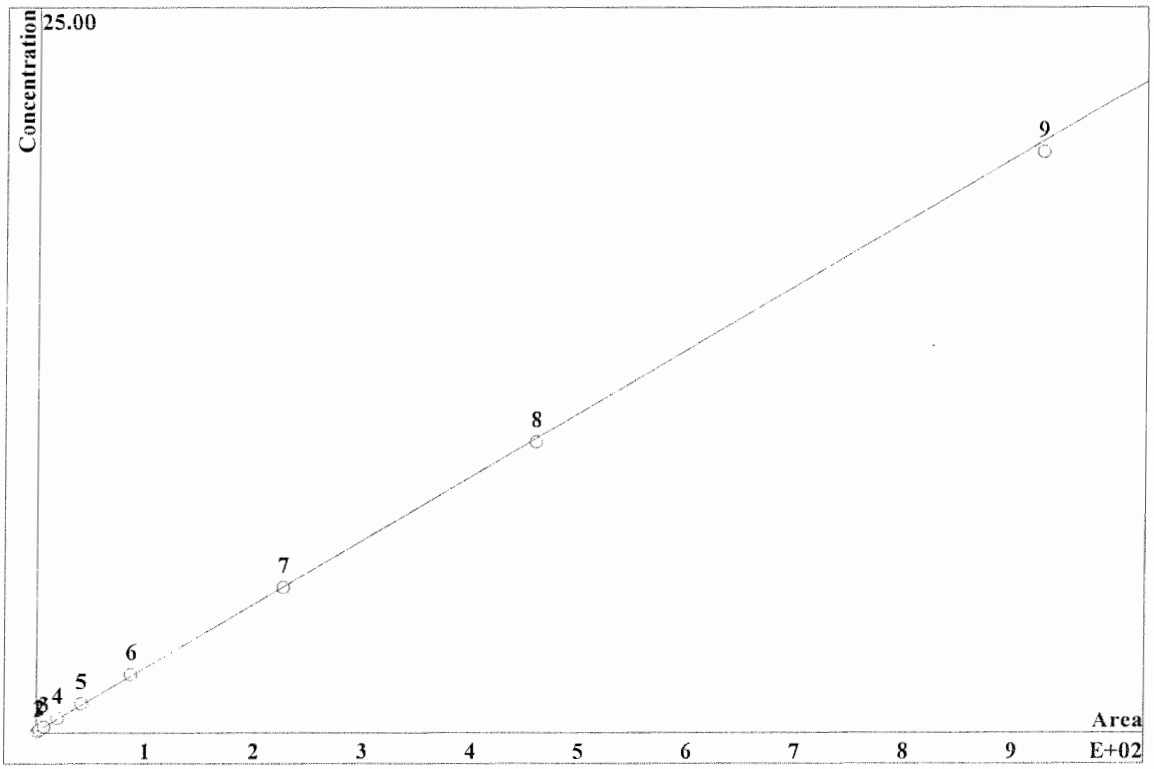
K3 = 0 K2 = 0 K1 = 0.024644 K0 = 0.00179217
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1597	1.561 ✓	0.05	1	4.932	Yes	v9301901.chw
2	0.3368	3.285 ✓	0.1	1	4.932	Yes	v9301917.chw
3	0.7305	7.062 ✓	0.2	1	4.932	Yes	v9301934.chw
4	1.964	18.94 ✓	0.5	1	4.932	Yes	v9301950.chw
5	4.115	39.99 ✓	1	1	4.932	Yes	v9302006.chw
6	8.392	82.54 ✓	2	1	4.932	Yes	v9302022.chw
7	19.91	208.1 ✓	5	1	4.932	Yes	v9302038.chw
8	35.83	402.8 ✓	10	1	4.932	Yes	v9302054.chw
9	61.98	754.1 ✓	20	1	4.932	No	v9302111.chw

RA
10/3/11

CALIBRATION OF COMPONENT nitrate

Method: ICD0-I30.mtw
Equation: Q = 0.0219574·A + 0.0522169
RSD: 3.044 %
Correlation coefficient: 0.999806



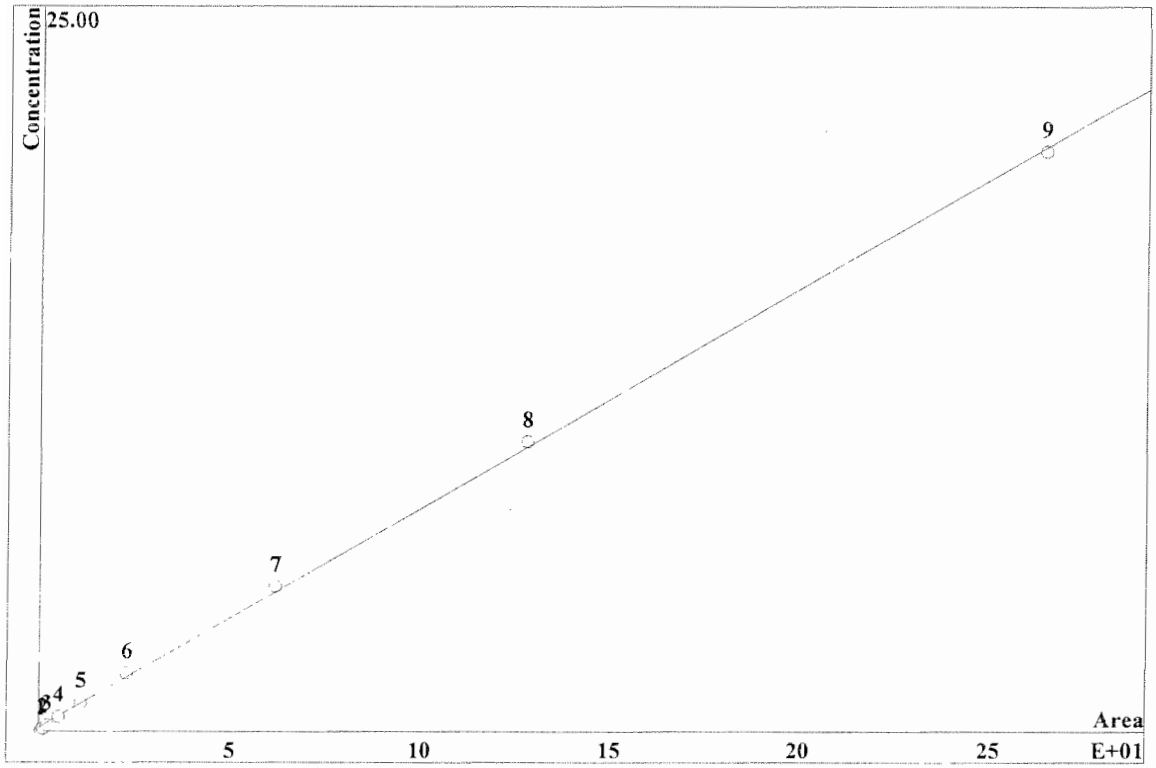
K3 = 0 K2 = 0 K1 = 0.0219574 K0 = 0.0522169
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1416	1.722	0.05	1	6.74	Yes	v9301901.chw
2	0.2866	3.425	0.1	1	6.74	Yes	v9301917.chw
3	0.6179	7.345	0.2	1	6.74	Yes	v9301934.chw
4	1.658	19.53	0.5	1	6.74	Yes	v9301950.chw
5	3.518	41.27	1	1	6.74	Yes	v9302006.chw
6	7.416	86.61	2	1	6.74	Yes	v9302022.chw
7	19.15	226.5	5	1	6.74	Yes	v9302038.chw
8	38.33	458.8	10	1	6.74	No	v9302054.chw
9	74.21	926.4	20	1	6.74	No	v9302111.chw

RS
10/03/11

CALIBRATION OF COMPONENT sulfate

Method: ICD0-I30.mtw ✓ ✓
Equation: Q = 0.0758014·A + 0.128926
RSD: 3.408 %
Correlation coefficient: 0.999791



K3 = 0 K2 = 0 K1 = 0.0758014 K0 = 0.128926
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.03861	0.6921 ✓	0.05	1	10.79	Yes	v9301901.chw
2	0.06635	1.193 ✓	0.1	1	10.79	Yes	v9301917.chw
3	0.1288	2.236 ✓	0.2	1	10.79	Yes	v9301934.chw
4	0.3105	5.366 ✓	0.5	1	10.79	Yes	v9301950.chw
5	0.6333	11.15 ✓	1	1	10.79	Yes	v9302006.chw
6	1.361	23.08 ✓	2	1	10.79	Yes	v9302022.chw
7	3.625	61.64 ✓	5	1	10.79	Yes	v9302038.chw
8	7.471	127.8 ✓	10	1	10.79	Yes	v9302054.chw
9	15.34	264 ✓	20	1	10.79	Yes	v9302111.chw

RA
10/03/11

SECOND SOURCE VERIFICATION

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	bromide	nitrite	sulfate	fluoride	chloride	nitrate	phosphate	RawNetID	DF
AI39-12	ICV	BISFCNP	94.1%	98.6%	99.9%	100.1%	97.7%	98.6%	92.5%	v9302127	1
AI39-13	ICB	BISFCNP	0	0	0	0	0	0	0	v9302143	1

AS 10/05/11

DAILY CALIBRATIONS

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	nitrite	sulfate	fluoride	chloride	bromide	nitrate	phosphate	RawNetID	DF
AK33-01	CCV529	ISFCBNP	104.3%	97.8%	103.3%	97.6%	98%	96.7%	102.2%	vb221031	1
AK33-02	CCB529	ISFCBNP	0	0	0	0	0	0	0	vb221047	1
AK33-13	CCV531	ISFCBNP	104.5%	97.6%	103.8%	97.9%	98.1%	97%	107%	vb221345	1
AK33-14	CCB531	ISFCBNP	0	0	0	0	0	0	0	vb221401	1
AK33-16	CCV533	ISFCBNP	104.3%	97.5%	103.3%	97.7%	97.8%	96.9%	106.6%	vb221433	1
AK33-17	CCB533	ISFCBNP	0	0	0	0	0	0	0	vb221449	1
AK33-19	CCV535	ISFCBNP	104.6%	98.1%	103.4%	98.4%	98.4%	97.1%	103.5%	vb221825	1
AK33-20	CCB535	ISFCBNP	0	0	0	0	0	0	0	vb221841	1
AK33-31	CCV537	ISFCBNP	104.6%	98.3%	103.5%	98.7%	98.8%	97.7%	108.9%	vb222139	1
AK33-32	CCB537	ISFCBNP	0	0	0	0	0	0	0	vb222155	1
AK33-35	CCV539	ISFCBNP	104.8%	99%	104.2%	98.9%	99%	98.2%	113.1%*	vb222244	1
AK33-36	CCB539	ISFCBNP	0	0	0	0	0	0	0	vb222300	1

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	bromide	chloride	fluoride	nitrite	nitrate	phosphate	sulfate	RawNetID	DF
AK35-01	CCV541	BCFINPS	98%	97.4%	102.5%	104.2%	98.1%	102.5%	99.2%	vb231024	1
AK35-02	CCB541	BCFINPS	0	0	0	0	0	0	0	vb231040	1
AK35-08	CCV543	BCFINPS	100.1%	99.7%	104.4%	105.8%	100.1%	104.8%	102.1%	vb231220	1
AK35-09	CCB543	BCFINPS	0	0	0	0	0	0	0	vb231236	1
AK35-20	CCV545	BCFINPS	99.3%	98.9%	103.7%	105.4%	100.2%	103.1%	100.9%	vb231534	1
AK35-21	CCB545	BCFINPS	0	0	0	0	0	0	0	vb231550	1
AK35-25	CCV547	BCFINPS	98.5%	98.5%	103.9%	105.4%	99.1%	101.6%	99.9%	vb231655	1
AK35-26	CCB547	BCFINPS	0	0	0	0	0	0	0	vb231711	1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Concentrations of:

S_1 — 0.05 ppm
S_2 — 0.1
S_3 — 0.2
S_4 — 0.5
S_5 — 1.0
S_6 — 2.0
S_7 — 5.0
S_8 — 10.0
S_9 — 20.0

Linearity (ppm)

F^- — 5
Cl^- — 20
NO_2N — 10
Br^- — 5
NO_3N — 5
PO_4P — 5
SO_4^{2-} — 20

Column: Metrosep A Supp 5-100

Flow Rate: 0.70 ml/min

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-220 (1000 mM H_2SO_4) 100 ml - 1 L

Book #:	AD0-031
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AI39
Method File:	ICD0-I30.mtw
Analytical Batch:	NA

SOP #	Rev. #
☑ EMAX-300.0	6
☐ EMAX-4110B	0
☑ EMAX-9056	3
☐ EMAX-	

STANDARDS ID	
ICAL	SI1B-17-57-02
ICV	SI1B-17-57-03
CCV	NA
LCS	
MS	

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 9/30/11

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
v930182v.chw	ICD0-130.mtw	AI39-01 IB	1	1.0	1.0	1.0	100.0	0		
v930184S.chw	ICD0-130.mtw	AI39-02 S0	2	1.0	1.0	1.0	100.0	0		
v930190.chw	ICD0-130.mtw	AI39-03 S1	3	1.0	1.0	1.0	100.0	1		
v930191.chw	ICD0-130.mtw	AI39-04 S2	4	1.0	1.0	1.0	100.0	2		
v930193.chw	ICD0-130.mtw	AI39-05 S3	5	1.0	1.0	1.0	100.0	3		
v930195C.chw	ICD0-130.mtw	AI39-06 S4	6	1.0	1.0	1.0	100.0	4		
v930200C.chw	ICD0-130.mtw	AI39-07 S5	7	1.0	1.0	1.0	100.0	5		
v930202.chw	ICD0-130.mtw	AI39-08 S6	8	1.0	1.0	1.0	100.0	6		
v930203S.chw	ICD0-130.mtw	AI39-09 S7	9	1.0	1.0	1.0	100.0	7		
v930205a.chw	ICD0-130.mtw	AI39-10 S8	10	1.0	1.0	1.0	100.0	8		
v930211.chw	ICD0-130.mtw	AI39-11 S9	11	1.0	1.0	1.0	100.0	9	FINAL	
v930212.chw	ICD0-130.mtw	AI39-12 ICV	12	1.0	1.0	1.0	100.0	0		
v930214.chw	ICD0-130.mtw	AI39-13 ICB	13	1.0	1.0	1.0	100.0	0		

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #:	AD0-032
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AK33
Method File:	ICDO - I30.mtw
Analytical Batch:	IAK079W

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	STIB-17-94-01
LCS	STIB-17-94-02
MS	SCP Refer to LCS Parent ID

Column: Metrosep A Supp 5-100 c.Hr 0.46 um : 21787469

Flow Rate: 0.70 ml/min 0.20 um : 21772726

IC Eluent:

Sw4-01-218 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

Jun-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 11/22/11

8035

File Name	Method	Ident		Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb221087.chw	ICD0-130.mtw	AK33-01	CCV529	1	1.0	1.0	1.0	100.0	0		
vb221094.chw	ICD0-130.mtw	AK33-02	CCB529	2	1.0	1.0	1.0	100.0	0		
vb221103.chw	ICD0-130.mtw	AK33-03	ICK079WB	3	1.0	1.0	1.0	100.0	0		
vb221113.chw	ICD0-130.mtw	AK33-04	ICK079WL	4	1.0	1.0	1.0	100.0	0		
vb221125.chw	ICD0-130.mtw	AK33-05	ICK079WC	5	1.0	1.0	1.0	100.0	0		
vb221152.chw	ICD0-130.mtw	AK33-06	K180-04	6	1.0	1.0	1.0	100.0	0		
vb221206.chw	ICD0-130.mtw	AK33-07	K180-01 DF=10	7	1.0	10.0	1.0	100.0	0		
vb221224.chw	ICD0-130.mtw	AK33-08	K180-01D DF=10	8	1.0	10.0	1.0	100.0	0		
vb221243.chw	ICD0-130.mtw	AK33-09	K180-01M DF=10	9	1.0	10.0	1.0	100.0	0		
vb221256.chw	ICD0-130.mtw	AK33-10	K180-02 DF=10	10	1.0	10.0	1.0	100.0	0		
vb221312.chw	ICD0-130.mtw	AK33-11	K180-03 DF=10	11	1.0	10.0	1.0	100.0	0		
vb221323.chw	ICD0-130.mtw	AK33-12	K180-05 DF=10	12	1.0	10.0	1.0	100.0	0		
vb221345.chw	ICD0-130.mtw	AK33-13	CCV531	13	1.0	1.0	1.0	100.0	0		
vb221403.chw	ICD0-130.mtw	AK33-14	CCB531	14	1.0	1.0	1.0	100.0	0		
vb221417.chw	ICD0-130.mtw	AK33-15	K150-05 DF=20	15	1.0	20.0	1.0	100.0	0		
vb221433.chw	ICD0-130.mtw	AK33-16	CCV533	16	1.0	1.0	1.0	100.0	0		
vb221443.chw	ICD0-130.mtw	AK33-17	CCB533	17	1.0	1.0	1.0	100.0	0		
vb221543.chw	ICD0-130.mtw	AK33-18	K739-01	18	1.0	1.0	1.0	100.0	0		
vb221823.chw	ICD0-130.mtw	AK33-19	CCV535	19	1.0	1.0	1.0	100.0	0		
vb221841.chw	ICD0-130.mtw	AK33-20	CCB535	20	1.0	1.0	1.0	100.0	0		
vb221855.chw	ICD0-130.mtw	AK33-21	K205-05	21	1.0	1.0	1.0	100.0	0		
vb221911.chw	ICD0-130.mtw	AK33-22	K205-04	22	1.0	1.0	1.0	100.0	0		
vb221933.chw	ICD0-130.mtw	AK33-23	K205-01	23	1.0	1.0	1.0	100.0	0		
vb221946.chw	ICD0-130.mtw	AK33-24	K205-01D	24	1.0	1.0	1.0	100.0	0		
vb222002.chw	ICD0-130.mtw	AK33-25	K205-01M	25	1.0	1.0	1.0	100.0	0		
vb222015.chw	ICD0-130.mtw	AK33-26	K205-01S	26	1.0	1.0	1.0	100.0	0		
vb222035.chw	ICD0-130.mtw	AK33-27	K205-03 DF=10	27	1.0	10.0	1.0	100.0	0		
vb222051.chw	ICD0-130.mtw	AK33-28	K205-02 DF=5	28	1.0	5.0	1.0	100.0	0		
vb222107.chw	ICD0-130.mtw	AK33-29	K205-01 DF=5	29	1.0	5.0	1.0	100.0	0		
vb222123.chw	ICD0-130.mtw	AK33-30	K205-01D DF=5	30	1.0	5.0	1.0	100.0	0		
vb222139.chw	ICD0-130.mtw	AK33-31	CCV537	31	1.0	1.0	1.0	100.0	0		
vb222155.chw	ICD0-130.mtw	AK33-32	CCB537	32	1.0	1.0	1.0	100.0	0		
vb222213.chw	ICD0-130.mtw	AK33-33	K205-01M DF=5	33	1.0	5.0	1.0	100.0	0		
vb222228.chw	ICD0-130.mtw	AK33-34	K205-01S DF=5	34	1.0	5.0	1.0	100.0	0		
vb222244.chw	ICD0-130.mtw	AK33-35	CCV539	35	1.0	1.0	1.0	100.0	0		
vb222300.chw	ICD0-130.mtw	AK33-36	CCB539	36	1.0	1.0	1.0	100.0	0		

FINAL

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

AK35 -07 K575-01A DF=2 PS F=2ppm

AK35 -17 K575-01A DF=2 PS F=4ppm

Book #:	AD0-032
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AK35
Method File:	ICD0 - I30.mtw
Analytical Batch:	ICK0035 ; ICK081W

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SIB-17-95-03
LCS	SIB-17-96-9
MS	SCP Refer to LCS (Parent)

Column: Metrosep A Supp 5-100 Filter 0.45µm: 21787469

Flow Rate: 0.70 ml/min 0.20µm: 21772726

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 11/23/17

F1

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb231024.chw	ICD0-I30.mtw	AK35-01 CCV541	1	1.0	1.0	1.0	100.0	0		
vb231040.chw	ICD0-I30.mtw	AK35-02 CCB541	2	1.0	1.0	1.0	100.0	0		
vb231056.chw	ICD0-I30.mtw	AK35-03 ICK003SB	3	1.0	1.0	1.0	100.0	0		
vb231112.chw	ICD0-I30.mtw	AK35-04 ICK003SL	4	1.0	1.0	1.0	100.0	0		
vb231128.chw	ICD0-I30.mtw	AK35-05 ICK003SC	5	1.0	1.0	1.0	100.0	0		
vb231145.chw	ICD0-I30.mtw	AK35-06 K575-01 DF=2	6	1.0	2.0	1.0	100.0	0		
vb231204.chw	ICD0-I30.mtw	AK35-07 K575-01A DF=2	7	1.0	2.0	1.0	100.0	0		
vb231220.chw	ICD0-I30.mtw	AK35-08 CCV543	8	1.0	1.0	1.0	100.0	0		
vb231236.chw	ICD0-I30.mtw	AK35-09 CCB543	9	1.0	1.0	1.0	100.0	0		
vb231253.chw	ICD0-I30.mtw	AK35-10 ICK081WB	10	1.0	1.0	1.0	100.0	0		
vb231309.chw	ICD0-I30.mtw	AK35-11 ICK081WL	11	1.0	1.0	1.0	100.0	0		
vb231325.chw	ICD0-I30.mtw	AK35-12 ICK081WC	12	1.0	1.0	1.0	100.0	0		
vb231341.chw	ICD0-I30.mtw	AK35-13 K205-01 DF=250	13	1.0	250.0	1.0	100.0	0		
vb231357.chw	ICD0-I30.mtw	AK35-14 K205-01D DF=250	14	1.0	250.0	1.0	100.0	0		
vb231413.chw	ICD0-I30.mtw	AK35-15 K205-01M DF=250	15	1.0	250.0	1.0	100.0	0		
vb231430.chw	ICD0-I30.mtw	AK35-16 K205-01S DF=250	16	1.0	250.0	1.0	100.0	0		
vb231446.chw	ICD0-I30.mtw	AK35-17 K575-01A DF=2	17	1.0	2.0	1.0	100.0	0		
vb231502.chw	ICD0-I30.mtw	AK35-18 K205-02 DF=20	18	1.0	20.0	1.0	100.0	0		
vb231518.chw	ICD0-I30.mtw	AK35-19 K205-03 DF=100	19	1.0	100.0	1.0	100.0	0		
vb231534.chw	ICD0-I30.mtw	AK35-20 CCV545	20	1.0	1.0	1.0	100.0	0		
vb231550.chw	ICD0-I30.mtw	AK35-21 CCB545	21	1.0	1.0	1.0	100.0	0		
vb231607.chw	ICD0-I30.mtw	AK35-22 K217-04	22	1.0	1.0	1.0	100.0	0		
vb231623.chw	ICD0-I30.mtw	AK35-23 K207-01	23	1.0	1.0	1.0	100.0	0		
vb231639.chw	ICD0-I30.mtw	AK35-24 RINSE	24	1.0	1.0	1.0	100.0	0		
vb231655.chw	ICD0-I30.mtw	AK35-25 CCV547	25	1.0	1.0	1.0	100.0	0		
vb231711.chw	ICD0-I30.mtw	AK35-26 CCB547	26	1.0	1.0	1.0	100.0	0		

FINAL

JC 11/23/11

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K205

METHOD 300.0(M)
ORGANIC ACIDS BY IC

A total of five (5) water samples were received on 11/22/11 for Organic Acids (Acetate, Butyrate, Lactate and Propionate) by IC analysis, Method 300.0(M) in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary forms for details.

Lab Control Sample
A set of LCS/LCD and one LCS were analyzed with the samples in this SDG.
Percent recovery for OAK018WL/C was within QC limits.
Percent recovery for OAK022WL was within QC limits.

Matrix QC Sample
Matrix QC sample was analyzed at the frequency prescribed by the project.
Percent recoveries for K205-01M/S were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

SAMPLE RESULTS

METHOD 300.0(M)
ACETATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K205

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK018WB	ND	1	NA	1.00	0.0500	11/23/1111:39	NA	HK23003	HK23001	OAK018W	NA	NA
LCS1W	OAK018WL	21.0	1	NA	1.00	0.0500	11/23/1112:00	NA	HK23004	HK23001	OAK018W	NA	NA
LCD1W	OAK018WC	21.0	1	NA	1.00	0.0500	11/23/1112:21	NA	HK23005	HK23001	OAK018W	NA	NA
IR-70-SB-165	K205-04	ND	1	NA	1.00	0.0500	11/23/1119:37	NA	HK23015	HK23013	OAK018W	11/22/1114:15	11/22/11
IR-70-EB-166	K205-05	ND	1	NA	1.00	0.0500	11/23/1120:18	NA	HK23016	HK23013	OAK018W	11/22/1114:20	11/22/11
IW-70-SSB119-163	K205-01	ND	1	NA	1.00	0.0500	11/23/1120:59	NA	HK23017	HK23013	OAK018W	11/22/1111:45	11/22/11
IW-70-SSB119-163MS	K205-01M	10.7	1	NA	1.00	0.0500	11/23/1121:39	NA	HK23018	HK23013	OAK018W	11/22/1111:45	11/22/11
IW-70-SSB119-163MSD	K205-01S	10.5	1	NA	1.00	0.0500	11/23/1122:20	NA	HK23019	HK23013	OAK018W	11/22/1111:45	11/22/11
IW-70-SHB311-164	K205-02	ND	1	NA	1.00	0.0500	11/24/1101:04	NA	HK23023	HK23013	OAK018W	11/22/1113:47	11/22/11
MBLK2W	OAK022WB	ND	1	NA	1.00	0.0500	11/30/1113:44	NA	HK30003	HK30001	OAK022W	NA	NA
LCS2W	OAK022WL	20.8	1	NA	1.00	0.0500	11/30/1114:05	NA	HK30004	HK30001	OAK022W	NA	NA
IW-70-SAT35-167	K205-03	58.9	5	NA	5.00	0.250	11/30/1114:26	NA	HK30005	HK30001	OAK022W	11/22/1116:23	11/22/11

METHOD 300.0(M)
BUTYRATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K205

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK018WB	ND	1	NA	1.00	0.0500	11/23/1111:39	NA	HK23003	HK23001	OAK018W	NA	NA
LCS1W	OAK018WL	20.0	1	NA	1.00	0.0500	11/23/1112:00	NA	HK23004	HK23001	OAK018W	NA	NA
LCD1W	OAK018WC	20.9	1	NA	1.00	0.0500	11/23/1112:21	NA	HK23005	HK23001	OAK018W	NA	NA
IR-70-SB-165	K205-04	ND	1	NA	1.00	0.0500	11/23/1119:37	NA	HK23015	HK23013	OAK018W	11/22/1114:15	11/22/11
IR-70-EB-166	K205-05	ND	1	NA	1.00	0.0500	11/23/1120:18	NA	HK23016	HK23013	OAK018W	11/22/1114:20	11/22/11
IW-70-SSB119-163	K205-01	ND	1	NA	1.00	0.0500	11/23/1120:59	NA	HK23017	HK23013	OAK018W	11/22/1111:45	11/22/11
IW-70-SSB119-163MS	K205-01M	10.1	1	NA	1.00	0.0500	11/23/1121:39	NA	HK23018	HK23013	OAK018W	11/22/1111:45	11/22/11
IW-70-SSB119-163MSD	K205-01S	10.1	1	NA	1.00	0.0500	11/23/1122:20	NA	HK23019	HK23013	OAK018W	11/22/1111:45	11/22/11
IW-70-SHB311-164	K205-02	ND	1	NA	1.00	0.0500	11/24/1101:04	NA	HK23023	HK23013	OAK018W	11/22/1113:47	11/22/11
MBLK2W	OAK022WB	ND	1	NA	1.00	0.0500	11/30/1113:44	NA	HK30003	HK30001	OAK022W	NA	NA
LCS2W	OAK022WL	21.5	1	NA	1.00	0.0500	11/30/1114:05	NA	HK30004	HK30001	OAK022W	NA	NA
IW-70-SAT35-167	K205-03R	ND	1	NA	1.00	0.0500	11/30/1115:32	NA	HK30006	HK30001	OAK022W	11/22/1116:23	11/22/11

METHOD 300.0(M)
LACTATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K205

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK018WB	ND	1	NA	1.00	0.0500	11/23/1111:39	NA	HK23003	HK23001	OAK018W	NA	NA
LCS1W	OAK018WL	20.9	1	NA	1.00	0.0500	11/23/1112:00	NA	HK23004	HK23001	OAK018W	NA	NA
LCD1W	OAK018WC	21.7	1	NA	1.00	0.0500	11/23/1112:21	NA	HK23005	HK23001	OAK018W	NA	NA
IR-70-SB-165	K205-04	ND	1	NA	1.00	0.0500	11/23/1119:37	NA	HK23015	HK23013	OAK018W	11/22/1114:15	11/22/11
IR-70-EB-166	K205-05	ND	1	NA	1.00	0.0500	11/23/1120:18	NA	HK23016	HK23013	OAK018W	11/22/1114:20	11/22/11
IW-70-SSB119-163	K205-01	ND	1	NA	1.00	0.0500	11/23/1120:59	NA	HK23017	HK23013	OAK018W	11/22/1111:45	11/22/11
IW-70-SSB119-163MS	K205-01M	11.1	1	NA	1.00	0.0500	11/23/1121:39	NA	HK23018	HK23013	OAK018W	11/22/1111:45	11/22/11
IW-70-SSB119-163MSD	K205-01S	11.2	1	NA	1.00	0.0500	11/23/1122:20	NA	HK23019	HK23013	OAK018W	11/22/1111:45	11/22/11
IW-70-SHB311-164	K205-02	ND	1	NA	1.00	0.0500	11/24/1101:04	NA	HK23023	HK23013	OAK018W	11/22/1113:47	11/22/11
MBLK2W	OAK022WB	ND	1	NA	1.00	0.0500	11/30/1113:44	NA	HK30003	HK30001	OAK022W	NA	NA
LCS2W	OAK022WL	21.2	1	NA	1.00	0.0500	11/30/1114:05	NA	HK30004	HK30001	OAK022W	NA	NA
IW-70-SAT35-167	K205-03R	ND	1	NA	1.00	0.0500	11/30/1115:32	NA	HK30006	HK30001	OAK022W	11/22/1116:23	11/22/11

METHOD 300.0(M)
PROPIONATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K205

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK018WB	ND	1	NA	1.00	0.0500	11/23/1111:39	NA	HK23003	HK23001	OAK018W	NA	NA
LCS1W	OAK018WL	21.2	1	NA	1.00	0.0500	11/23/1112:00	NA	HK23004	HK23001	OAK018W	NA	NA
LCD1W	OAK018WC	21.0	1	NA	1.00	0.0500	11/23/1112:21	NA	HK23005	HK23001	OAK018W	NA	NA
IR-70-SB-165	K205-04	ND	1	NA	1.00	0.0500	11/23/1119:37	NA	HK23015	HK23013	OAK018W	11/22/1114:15	11/22/11
IR-70-EB-166	K205-05	ND	1	NA	1.00	0.0500	11/23/1120:18	NA	HK23016	HK23013	OAK018W	11/22/1114:20	11/22/11
IW-70-SSB119-163	K205-01	ND	1	NA	1.00	0.0500	11/23/1120:59	NA	HK23017	HK23013	OAK018W	11/22/1111:45	11/22/11
IW-70-SSB119-163MS	K205-01M	9.90	1	NA	1.00	0.0500	11/23/1121:39	NA	HK23018	HK23013	OAK018W	11/22/1111:45	11/22/11
IW-70-SSB119-163MSD	K205-01S	9.76	1	NA	1.00	0.0500	11/23/1122:20	NA	HK23019	HK23013	OAK018W	11/22/1111:45	11/22/11
IW-70-SHB311-164	K205-02	ND	1	NA	1.00	0.0500	11/24/1101:04	NA	HK23023	HK23013	OAK018W	11/22/1113:47	11/22/11
MBLK2W	OAK022WB	ND	1	NA	1.00	0.0500	11/30/1113:44	NA	HK30003	HK30001	OAK022W	NA	NA
LCS2W	OAK022WL	21.4	1	NA	1.00	0.0500	11/30/1114:05	NA	HK30004	HK30001	OAK022W	NA	NA
IW-70-SAT35-167	K205-03R	3.13	1	NA	1.00	0.0500	11/30/1115:32	NA	HK30006	HK30001	OAK022W	11/22/1116:23	11/22/11

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK018WB	OAK018WL	OAK018WC		
LAB FILE ID:	HK23003	HK23004	HK23005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1111:39	11/23/1112:00	11/23/1112:21	DATE RECEIVED:	NA
PREP. BATCH:	OAK018W	OAK018W	OAK018W		
CALIB. REF:	HK23001	HK23001	HK23001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	21.0	105	20.0	21.0	105	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0(M)

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MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MBLK2W
LAB SAMP ID: OAK022WB OAK022WL
LAB FILE ID: HK30003 HK30004
DATE EXTRACTED: NA NA DATE COLLECTED: NA
DATE ANALYZED: 11/30/1113:44 11/30/1114:05 DATE RECEIVED: NA
PREP. BATCH: OAK022W OAK022W
CALIB. REF: HK30001 HK30001

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	QC LIMIT (%)
Acetate	ND	20.0	20.8	104	90-110

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0(M)

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MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	IW-70-SSB119-163				
LAB SAMP ID:	K205-01	K205-01M	K205-01S		
LAB FILE ID:	HK23017	HK23018	HK23019		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/22/11 11:45
DATE ANALYZED:	11/23/1120:59	11/23/1121:39	11/23/1122:20	DATE RECEIVED:	11/22/11
PREP. BATCH:	OAK018W	OAK018W	OAK018W		
CALIB. REF:	HK23013	HK23013	HK23013		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	10.0	10.7	107	10.0	10.5	105	2	75-125	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK018WB	OAK018WL	OAK018WC		
LAB FILE ID:	HK23003	HK23004	HK23005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1111:39	11/23/1112:00	11/23/1112:21	DATE RECEIVED:	NA
PREP. BATCH:	OAK018W	OAK018W	OAK018W		
CALIB. REF:	HK23001	HK23001	HK23001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	20.0	20.0	100	20.0	20.9	104	4	90-110	20

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0(M)

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MBLK2W
LAB SAMP ID: OAK022WB OAK022WL
LAB FILE ID: HK30003 HK30004
DATE EXTRACTED: NA NA DATE COLLECTED: NA
DATE ANALYZED: 11/30/1113:44 11/30/1114:05 DATE RECEIVED: NA
PREP. BATCH: OAK022W OAK022W
CALIB. REF: HK30001 HK30001

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	QC LIMIT (%)
Butyrate	ND	20.0	21.5	108	90-110

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	IW-70-SSB119-163				
LAB SAMP ID:	K205-01	K205-01M	K205-01S		
LAB FILE ID:	HK23017	HK23018	HK23019		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/22/11 11:45
DATE ANALYZED:	11/23/1120:59	11/23/1121:39	11/23/1122:20	DATE RECEIVED:	11/22/11
PREP. BATCH:	OAK018W	OAK018W	OAK018W		
CALIB. REF:	HK23013	HK23013	HK23013		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	10.0	10.1	101	10.0	10.1	101	0	75-125	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK018WB	OAK018WL	OAK018WC		
LAB FILE ID:	HK23003	HK23004	HK23005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1111:39	11/23/1112:00	11/23/1112:21	DATE RECEIVED:	NA
PREP. BATCH:	OAK018W	OAK018W	OAK018W		
CALIB. REF:	HK23001	HK23001	HK23001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	20.0	20.9	104	20.0	21.7	108	4	90-110	20

8052

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0(M)

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MBLK2W
LAB SAMP ID: OAK022WB OAK022WL
LAB FILE ID: HK30003 HK30004
DATE EXTRACTED: NA NA DATE COLLECTED: NA
DATE ANALYZED: 11/30/1113:44 11/30/1114:05 DATE RECEIVED: NA
PREP. BATCH: OAK022W OAK022W
CALIB. REF: HK30001 HK30001

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	QC LIMIT (%)
Lactate	ND	20.0	21.2	106	90-110

8053

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0(M)

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	IW-70-SSB119-163				
LAB SAMP ID:	K205-01	K205-01M	K205-01S		
LAB FILE ID:	HK23017	HK23018	HK23019		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/22/11 11:45
DATE ANALYZED:	11/23/1120:59	11/23/1121:39	11/23/1122:20	DATE RECEIVED:	11/22/11
PREP. BATCH:	OAK018W	OAK018W	OAK018W		
CALIB. REF:	HK23013	HK23013	HK23013		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	10.0	11.1	111	10.0	11.2	112	1	75-125	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK018WB	OAK018WL	OAK018WC		
LAB FILE ID:	HK23003	HK23004	HK23005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1111:39	11/23/1112:00	11/23/1112:21	DATE RECEIVED:	NA
PREP. BATCH:	OAK018W	OAK018W	OAK018W		
CALIB. REF:	HK23001	HK23001	HK23001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	20.0	21.2	106	20.0	21.0	105	1	90-110	20

8055

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0(M)

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MBLK2W
LAB SAMP ID: OAK022WB OAK022WL
LAB FILE ID: HK30003 HK30004
DATE EXTRACTED: NA NA DATE COLLECTED: NA
DATE ANALYZED: 11/30/1113:44 11/30/1114:05 DATE RECEIVED: NA
PREP. BATCH: OAK022W OAK022W
CALIB. REF: HK30001 HK30001

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	QC LIMIT (%)
Propionate	ND	20.0	21.4	107	90-110

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 300.0(M)

==========

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID:	IW-70-SSB119-163		
LAB SAMP ID:	K205-01	K205-01M	K205-01S
LAB FILE ID:	HK23017	HK23018	HK23019
DATE EXTRACTED:	NA	NA	NA
DATE ANALYZED:	11/23/1120:59	11/23/1121:39	11/23/1122:20
PREP. BATCH:	OAK018W	OAK018W	OAK018W
CALIB. REF:	HK23013	HK23013	HK23013

DATE COLLECTED: 11/22/11 11:45
DATE RECEIVED: 11/22/11

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	10.0	9.90	99	10.0	9.76	98	1	75-125	20

8057

INITIAL CALIBRATIONS

IC SEQ FORM/HK15(2011)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
HK15001	IB	ABLPY	OAD6K15	11/15/1117:34	1
HK15002	S-0	ABLPY	OAD6K15	11/15/1117:55	1
HK15003	S-1	ABLPY	OAD6K15	11/15/1118:16	1
HK15004	S-2	ABLPY	OAD6K15	11/15/1118:37	1
HK15005	S-3	ABLPY	OAD6K15	11/15/1118:58	1
HK15006	S-4	ABLPY	OAD6K15	11/15/1119:19	1
HK15007	S-5	ABLPY	OAD6K15	11/15/1119:40	1
HK15008	ICV	ABLPY	OAD6K15	11/15/1120:01	1
HK15009	ICB	ABLPY	OAD6K15	11/15/1120:22	1
HK15010	CCV2	ABLPY	OAD6K15	11/15/1123:52	1
HK15011	CCB2	ABLPY	OAD6K15	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	OAD6K15	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	OAD6K15	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	OAD6K15	11/16/1101:15	1
HK15015	K101-01	ABLPY	OAD6K15	11/16/1101:36	1
HK15016	K101-02	ABLPY	OAD6K15	11/16/1102:17	1
HK15017	K101-03	ABLPY	OAD6K15	11/16/1102:58	1
HK15018	K101-04	ABLPY	OAD6K15	11/16/1103:39	1
HK15019	K101-05	ABLPY	OAD6K15	11/16/1104:20	1
HK15020	K101-05M	ABLPY	OAD6K15	11/16/1105:01	1
HK15021	K101-05S	ABLPY	OAD6K15	11/16/1105:42	1
HK15022	CCV4	ABLPY	OAD6K15	11/16/1106:23	1
HK15023	CCB4	ABLPY	OAD6K15	11/16/1106:44	1
HK15024	K084-01	ABLPY	OAD6K15	11/16/1107:05	1
HK15025	K084-02	ABLPY	OAD6K15	11/16/1107:46	1
HK15026	K084-03	ABLPY	OAD6K15	11/16/1108:26	1
HK15027	K084-04	ABLPY	OAD6K15	11/16/1109:10	1
HK15028	CCV6	ABLPY	OAD6K15	11/16/1111:30	1
HK15029	CCB6	ABLPY	OAD6K15	11/16/1112:32	1
HK15030	K084-05	ABLPY	OAD6K15	11/16/1112:53	1
HK15031	K084-06	ABLPY	OAD6K15	11/16/1113:34	1
HK15032	K035-01	*BLPY	OAD6K15	11/16/1114:15	5
HK15033	K035-01A	*BLPY	OAD6K15	11/16/1114:55	5
HK15034	CCV8	ABLPY	OAD6K15	11/16/1115:36	1
HK15035	CCB8	ABLPY	OAD6K15	11/16/1115:57	1

AJ
11/29/11

No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square	Offset	Slope	Curve
1	4.88	LACTATE	0LOff	5	1.0000	-0.000198	0.0443	0.0000
2	5.21	ACETATE	0LOff	5	0.9997	0.000068	0.0569	0.0000
3	6.00	PROPIONA⁻	0LOff	5	0.9998	-0.000209	0.0394	0.0000
4	7.42	BUTYRATE	0LOff	5	0.9999	-0.000584	0.0313	0.0000
5	8.93	PYRUVATE	0LOff	5	0.9999	-0.000755	0.0518	0.0000
Average:					n.a.	n.a.	n.a.	0.0000

$$\text{conc} = \frac{\text{area} - \text{offset}}{\text{slope}}$$

AS
11/29/11

8060

SECOND SOURCE VERIFICATION

IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK15001	IB	ABLPY	ND	ND	ND	ND	ND	11/15/1117:34	1
HK15002	S-0	ABLPY	ND	ND	ND	ND	ND	11/15/1117:55	1
HK15003	S-1	ABLPY	.083	.101	.104	.096	.103	11/15/1118:16	1
HK15004	S-2	ABLPY	.401	.385	.396	.382	.395	11/15/1118:37	1
HK15005	S-3	ABLPY	1.01	.996	.993	1.01	.984	11/15/1118:58	1
HK15006	S-4	ABLPY	2.028	1.987	1.999	2.023	1.992	11/15/1119:19	1
HK15007	S-5	ABLPY	2.978	3.012	3.003	2.984	3.011	11/15/1119:40	1
HK15008	ICV	ABLPY	103%	96.8%	99.5%	104%	97.7%	11/15/1120:01	1
HK15009	ICB	ABLPY	ND	ND	ND	ND	ND	11/15/1120:22	1
HK15010	CCV2	ABLPY	103%	103%	101%	104%	93.9%	11/15/1123:52	1
HK15011	CCB2	ABLPY	ND	ND	ND	ND	ND	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	ND	ND	ND	ND	ND	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	2.07	2.1	2.02	2	1.96	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	2.07	2.02	2.04	2.1	1.95	11/16/1101:15	1
HK15015	K101-01	ABLPY	ND	ND	ND	ND	ND	11/16/1101:36	1
HK15016	K101-02	ABLPY	ND	ND	ND	ND	ND	11/16/1102:17	1
HK15017	K101-03	ABLPY	ND	ND	ND	ND	ND	11/16/1102:58	1
HK15018	K101-04	ABLPY	ND	ND	ND	ND	ND	11/16/1103:39	1
HK15019	K101-05	ABLPY	ND	ND	ND	ND	ND	11/16/1104:20	1
HK15020	K101-05M	ABLPY	.83	.826	.959	.922	.904	11/16/1105:01	1
HK15021	K101-05S	ABLPY	.878	.826	.985	1.01	.882	11/16/1105:42	1
HK15022	CCV4	ABLPY	101%	103%	99.3%	99.1%	92.6%	11/16/1106:23	1
HK15023	CCB4	ABLPY	ND	ND	ND	ND	ND	11/16/1106:44	1
HK15024	K084-01	ABLPY	ND	ND	ND	ND	ND	11/16/1107:05	1
HK15025	K084-02	ABLPY	ND	ND	ND	ND	ND	11/16/1107:46	1
HK15026	K084-03	ABLPY	ND	ND	ND	ND	ND	11/16/1108:26	1
HK15027	K084-04	ABLPY	ND	ND	ND	ND	ND	11/16/1109:10	1
HK15028	CCV6	ABLPY	101%	90.7%	99.7%	103%	92.5%	11/16/1111:30	1
HK15029	CCB6	ABLPY	ND	ND	ND	ND	ND	11/16/1112:32	1
HK15030	K084-05	ABLPY	ND	ND	ND	ND	ND	11/16/1112:53	1
HK15031	K084-06	ABLPY	ND	ND	ND	ND	ND	11/16/1113:34	1
HK15032	K035-01	*BLPY	28.1E	ND	ND	1.13	ND	11/16/1114:15	5
HK15033	K035-01A	*BLPY	32.4E	5.38	4.35	6.28	4.73	11/16/1114:55	5
HK15034	CCV8	ABLPY	102%	97%	99.6%	109%	93.8%	11/16/1115:36	1
HK15035	CCB8	ABLPY	ND	ND	ND	ND	ND	11/16/1115:57	1

AS
11/29/11

DAILY CALIBRATIONS

IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK23001	CCV32	ABLPY	106%	107%	109%	104%	102%	11/23/1110:57	1
HK23002	CCB32	ABLPY	ND	ND	ND	ND	ND	11/23/1111:18	1
HK23003	OAK018WB	ABLPY	ND	ND	ND	ND	ND	11/23/1111:39	1
HK23004	OAK018WL	ABLPY	2.1	2	2.09	2.12	1.98	11/23/1112:00	1
HK23005	OAK018WC	ABLPY	2.1	2.09	2.17	2.1	2.07	11/23/1112:21	1
HK23006	K174-06R	ABLPY	ND	ND	ND	ND	ND	11/23/1112:42	1
HK23007	K174-06A	ABLPY	.084	.091	.113	.095	.092	11/23/1113:23	1
HK23008	K184-03R	ABLPY	ND	ND	ND	ND	ND	11/23/1114:03	1
HK23009	K184-03A	ABLPY	.075	.093	.109	.09	.099	11/23/1114:44	1
HK23010	K188-01	*****	ND	ND	ND	ND	ND	11/23/1115:25	1
HK23011	K188-02	*****	ND	ND	ND	ND	ND	11/23/1116:06	1
HK23012	K188-03	A*L*Y	2.9	51.4E	ND	44.3E	2.95	11/23/1116:47	1
HK23013	CCV34	ABLPY	103%	103%	101%	105%	95.3%	11/23/1118:13	1
HK23014	CCB34	ABLPY	ND	ND	ND	ND	ND	11/23/1118:55	1
HK23015	K205-04	ABLPY	ND	ND	ND	ND	ND	11/23/1119:37	1
HK23016	K205-05	ABLPY	ND	ND	ND	ND	ND	11/23/1120:18	1
HK23017	K205-01	ABLPY	ND	ND	ND	ND	ND	11/23/1120:59	1
HK23018	K205-01M	ABLPY	1.07	1.01	1.11	.99	1.05	11/23/1121:39	1
HK23019	K205-01S	ABLPY	1.05	1.01	1.12	.976	1.05	11/23/1122:20	1
HK23020	K217-04	ABLPY	ND	ND	ND	ND	ND	11/23/1123:01	1
HK23021	K217-02	ABLPY	ND	ND	ND	ND	ND	11/23/1123:42	1
HK23022	K217-03	ABLPY	ND	ND	ND	ND	ND	11/24/1100:23	1
HK23023	K205-02	ABLPY	ND	ND	ND	ND	ND	11/24/1101:04	1
HK23024	K205-03	*****	9.69E	ND	ND	1.51	ND	11/24/1102:30	1
HK23025	CCV36	ABLPY	107%	108%	105%	108%	98.4%	11/24/1104:17	1
HK23026	CCB36	ABLPY	ND	ND	ND	ND	ND	11/24/1104:37	1

IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK30001	CCV42	ABLPY	108%	101%	107%	110%	99.2%	11/30/1113:02	1
HK30002	CCB42	ABLPY	ND	ND	ND	ND	ND	11/30/1113:23	1
HK30003	OAK022WB	ABLPY	ND	ND	ND	ND	ND	11/30/1113:44	1
HK30004	OAK022WL	ABLPY	2.08	2.15	2.12	2.14	2.1	11/30/1114:05	1
HK30005	K205-03	A****	5.89	ND	ND	ND	ND	11/30/1114:26	5
HK30006	K205-03R	*BLPY	5.96E	ND	ND	.313	ND	11/30/1115:32	1
HK30007	CCV44	ABLPY	109%	109%	110%	108%	106%	11/30/1117:17	1
HK30008	CCB44	ABLPY	ND	ND	ND	ND	ND	11/30/1117:38	1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-221

0AD6K15.met : 300M ICAL → Passed

-Linear Range :

S-0 → 0.0 ppm S-3 → 1.0 ppm

S-1 → 0.1 S-4 → 2.0

S-2 → 0.4 S-5 → 3.0

- ICV : 2ppm
- Sample Loop : 25µL
- Flow Rate : 1.50 mL/min
- Suppressor : ASRS 4mm
- SRS Current : 100 mA
- Column: Ion Pac AS11 HC, 4x250 mm
- Guard Column : Ion Pac AG16; 4x250mm

0AK010W: K101, K084 & K035 (conf. only)

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK15
Method File:	0AD6K15.met
Analytical Batch:	0AK010W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID		
ICAL	SW12A-02-330	
ICV		332
CCV		331
LCS		332
MS	↓	327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: ca / AM

Date: 11/15/11

Sequence: HK15
Operator: cmadmin

Printed: 11/17/2011 3:52:16 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK15	001	IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK15	002	S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK15	003	S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK15	004	S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK15	005	S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK15	006	S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK15	007	S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK15	008	ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK15	009	ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK15	010	CCV2	Unknown	100	25.0	ORG	OAD6K15	Finished	11/15/2011 11:52:01 PM	1.0000
11	HK15	011	CCB2	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 12:13:00 AM	1.0000
12	HK15	012	OAK010WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/16/2011 12:33:58 AM	1.0000
13	HK15	013	OAK010WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/16/2011 12:54:57 AM	1.0000
14	HK15	014	OAK010WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/16/2011 1:15:56 AM	1.0000
15	HK15	015	K101-01	Unknown	1	25.0	ORG	OAD6K15	Finished	11/16/2011 1:36:54 AM	1.0000
16	HK15	016	K101-02	Unknown	2	25.0	ORG	OAD6K15	Finished	11/16/2011 2:17:49 AM	1.0000
17	HK15	017	K101-03	Unknown	3	25.0	ORG	OAD6K15	Finished	11/16/2011 2:58:42 AM	1.0000
18	HK15	018	K101-04	Unknown	4	25.0	ORG	OAD6K15	Finished	11/16/2011 3:39:37 AM	1.0000
19	HK15	019	K101-05	Unknown	5	25.0	ORG	OAD6K15	Finished	11/16/2011 4:20:31 AM	1.0000
20	HK15	020	K101-05M	Unknown	6	25.0	ORG	OAD6K15	Finished	11/16/2011 5:01:24 AM	1.0000
21	HK15	021	K101-05S	Unknown	7	25.0	ORG	OAD6K15	Finished	11/16/2011 5:42:18 AM	1.0000
22	HK15	022	CCV4	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 6:23:12 AM	1.0000
23	HK15	023	CCB4	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 6:44:11 AM	1.0000
24	HK15	024	K084-01	Unknown	8	25.0	ORG	OAD6K15	Finished	11/16/2011 7:05:09 AM	1.0000
25	HK15	025	K084-02	Unknown	9	25.0	ORG	OAD6K15	Finished	11/16/2011 7:46:03 AM	1.0000
26	HK15	026	K084-03	Unknown	10	25.0	ORG	OAD6K15	Finished	11/16/2011 8:26:57 AM	1.0000
27	HK15	027	K084-04	Unknown	11	25.0	ORG	OAD6K15	Finished	11/16/2011 9:10:16 AM	1.0000

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FINAL

8968

Sequence: HK15
Operator: cmadmin

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Comment
1	HK15	
2	HK15	
3	HK15	
4	HK15	
5	HK15	
6	HK15	
7	HK15	
8	HK15	
9	HK15	
10	HK15	
11	HK15	
12	HK15	
13	HK15	
14	HK15	
15	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
17	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK15	
23	HK15	
24	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
25	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
26	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
27	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

FINAL

6069

Sequence: HK15
Operator: cmadmin

Printed: 11/17/2011 3:35:11 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK15	028	CCV6	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 11:30:24 AM	1.0000
29	HK15	029	CCB6	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 12:32:17 PM	1.0000
30	HK15	030	K084-05	Unknown	12	25.0	ORG	OAD6K15	Finished	11/16/2011 12:53:15 PM	1.0000
31	HK15	031	K084-06	Unknown	13	25.0	ORG	OAD6K15	Finished	11/16/2011 1:34:09 PM	1.0000
32	HK15	032	K035-01	Unknown	14	25.0	ORG	OAD6K15	Finished	11/16/2011 2:15:03 PM	5.0000
33	HK15	033	K035-01A	Unknown	15	25.0	ORG	OAD6K15	Finished	11/16/2011 2:55:56 PM	5.0000
34	HK15	034	CCV8	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 3:36:50 PM	1.0000
35	HK15	035	CCB8	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 3:57:49 PM	1.0000

FINAL

Sequence: HK15
Operator: cmadmin

Printed: 11/17/2011 3:35:11 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Comment
28	HK15	
29	HK15	
30	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
31	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
32	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
33	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
34	HK15	
35	HK15	

FINAL

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4- 01- 221

OAK018W: 11K174 (cont.), 11K184 (cont.), 11K188, 11K205 & 11K217

HK23.024: Bad Injection; Record Only.

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK23
Method File:	~~OAK~~ OAD6K15.met ad 11/23/11
Analytical Batch:	OAK018W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SW12A- 02-331
LCS	332
MS	327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: ad

Date: 11/23/11

8072

Sequence: HK23
Operator: cmadmin
Printed: 11/28/2011 5:19:08 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/28/2011 3:25:36 PM by cmadmin
Last Update: 11/28/2011 3:25:36 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK23		IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK23		S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK23		S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK23		S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK23		S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK23		S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK23		S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK23		ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK23		ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK23	001	CCV32	Unknown	100	25.0	ORG	OAD6K15	Finished	11/23/2011 10:57:14 AM	1.0000
11	HK23	002	CCB32	Unknown	99	25.0	ORG	OAD6K15	Finished	11/23/2011 11:18:13 AM	1.0000
12	HK23	003	OAK018WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/23/2011 11:39:12 AM	1.0000
13	HK23	004	OAK018WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/23/2011 12:00:11 PM	1.0000
14	HK23	005	OAK018WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/23/2011 12:21:10 PM	1.0000
15	HK23	006	K174-06R	Unknown	1	25.0	ORG	OAD6K15	Finished	11/23/2011 12:42:09 PM	1.0000
16	HK23	007	K174-06A	Unknown	2	25.0	ORG	OAD6K15	Finished	11/23/2011 1:23:03 PM	1.0000
17	HK23	008	K184-03R	Unknown	3	25.0	ORG	OAD6K15	Finished	11/23/2011 2:03:56 PM	1.0000
18	HK23	009	K184-03A	Unknown	4	25.0	ORG	OAD6K15	Finished	11/23/2011 2:44:51 PM	1.0000
19	HK23	010	K188-01	Unknown	5	25.0	ORG	OAD6K15	Finished	11/23/2011 3:25:44 PM	1.0000
20	HK23	011	K188-02	Unknown	6	25.0	ORG	OAD6K15	Finished	11/23/2011 4:06:38 PM	1.0000
21	HK23	012	K188-03	Unknown	7	25.0	ORG-SAMPLE	OAD6K15	Finished	11/23/2011 4:47:32 PM	1.0000
22	HK23	013	CCV34	Unknown	100	25.0	ORG	OAD6K15	Finished	11/23/2011 6:13:20 PM	1.0000
23	HK23	014	CCB34	Unknown	99	25.0	ORG	OAD6K15	Finished	11/23/2011 6:55:17 PM	1.0000
24	HK23	015	K205-04	Unknown	8	25.0	ORG	OAD6K15	Finished	11/23/2011 7:37:15 PM	1.0000
25	HK23	016	K205-05	Unknown	9	25.0	ORG	OAD6K15	Finished	11/23/2011 8:18:09 PM	1.0000
26	HK23	017	K205-01	Unknown	10	25.0	ORG	OAD6K15	Finished	11/23/2011 8:59:02 PM	1.0000
27	HK23	018	K205-01M	Unknown	11	25.0	ORG	OAD6K15	Finished	11/23/2011 9:39:56 PM	1.0000

FINAL

Sequence: HK23
Operator: cmadmin

Printed: 11/28/2011 5:19:08 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/28/2011 3:25:36 PM by cmadmin
Last Update: 11/28/2011 3:25:36 PM by cmadmin

No.	Sequence	Comment
1	HK23	
2	HK23	
3	HK23	
4	HK23	
5	HK23	
6	HK23	
7	HK23	
8	HK23	
9	HK23	
10	HK23	
11	HK23	
12	HK23	
13	HK23	
14	HK23	
15	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
17	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK23	
23	HK23	
24	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
25	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
26	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
27	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

FINAL

Sequence: HK23
Operator: cmadmin

Printed: 11/28/2011 5:19:08 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/28/2011 3:25:36 PM by cmadmin
Last Update: 11/28/2011 3:25:36 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK23	019	K205-01S	Unknown	12	25.0	ORG	OAD6K15	Finished	11/23/2011 10:20:50 PM	1.0000
29	HK23	020	K217-04	Unknown	15	25.0	ORG	OAD6K15	Finished	11/23/2011 11:01:43 PM	1.0000
30	HK23	021	K217-02	Unknown	16	25.0	ORG	OAD6K15	Finished	11/23/2011 11:42:37 PM	1.0000
31	HK23	022	K217-03	Unknown	17	25.0	ORG	OAD6K15	Finished	11/24/2011 12:23:31 AM	1.0000
32	HK23	023	K205-02	Unknown	13	25.0	ORG-SAMPLE	OAD6K15	Finished	11/24/2011 1:04:24 AM	1.0000
33	HK23	024 *Bad Inj Rec only	K205-03	Unknown	14	25.0	ORG-SAMPLE	OAD6K15	Finished	11/24/2011 2:30:13 AM	1.0000
34	HK23	025	CCV36	Unknown	100	25.0	ORG	OAD6K15	Finished	11/24/2011 4:17:00 AM	1.0000
35	HK23	026	CCB36	Unknown	99	25.0	ORG	OAD6K15	Finished	11/24/2011 4:37:59 AM	1.0000

8075

FINAL

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Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/28/2011 3:25:36 PM by cmadmin
Last Update: 11/28/2011 3:25:36 PM by cmadmin

No.	Sequence	Comment
28	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
29	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
30	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
31	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
32	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
33	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
34	HK23	
35	HK23	

FINAL

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EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-221

OAK 022W: HK205

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK30
Method File:	C AD6 K15.met
Analytical Batch:	OAK022W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SW12A - 02 - 333
LCS	↓ 334
MS	—

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: ce

Date: 11/30/11

8077

Sequence HK30
Operator: cmadmin

Printed: 12/1/2011 10:42:57 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 17

Created: 11/30/2011 12:23:35 PM by cmadmin
Last Update: 12/1/2011 10:42:40 AM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK30		IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK30		S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK30		S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK30		S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK30		S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK30		S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK30		S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK30		ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK30		ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK30	001	CCV42	Unknown	100	25.0	ORG	OAD6K15	Finished	11/30/2011 1:02:26 PM	1.0000
11	HK30	002	CCB42	Unknown	99	25.0	ORG	OAD6K15	Finished	11/30/2011 1:23:25 PM	1.0000
12	HK30	003	OAK022WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/30/2011 1:44:24 PM	1.0000
13	HK30	004	OAK022WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/30/2011 2:05:23 PM	1.0000
14	HK30	005	K205-03	Unknown	1	25.0	ORG	OAD6K15	Finished	11/30/2011 2:26:22 PM	5.0000
15	HK30	006	K205-03R	Unknown	2	25.0	ORG	OAD6K15	Finished	11/30/2011 3:32:17 PM	1.0000
16	HK30	007	CCV44	Unknown	100	25.0	ORG	OAD6K15	Finished	11/30/2011 5:17:42 PM	1.0000
17	HK30	008	CCB44	Unknown	99	25.0	ORG	OAD6K15	Finished	11/30/2011 5:38:41 PM	1.0000

FINAL

8078

Chromeleon © Dionex Corporation, Version 6.70 Build 1820

Sequence: HK30
Operator: cmadmin
Printed: 12/1/2011 10:42:57 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 17

Created: 11/30/2011 12:23:35 PM by cmadmin
Last Update: 12/1/2011 10:42:40 AM by cmadmin

No.	Sequence	Comment
1	HK30	
2	HK30	
3	HK30	
4	HK30	
5	HK30	
6	HK30	
7	HK30	
8	HK30	
9	HK30	
10	HK30	
11	HK30	
12	HK30	
13	HK30	
14	HK30	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
15	HK30	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK30	
17	HK30	

FINAL

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CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K205

METHOD 2320B
TOTAL ALKALINITY

A total of three (3) water samples were received on 11/22/11 for Alkalinity analysis, Method 2320B in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for ALK013WL/C were all within QC limits.

Matrix QC Sample
Sample duplicate was analyzed with the samples. RPD was within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2320B
TOTAL ALKALINITY

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K205

Matrix : WATER
Instrument ID : 53

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ALK013WB	ND	1	NA	5.00	5.00	11/29/1112:42	NA	ALK013-01	NA	ALK013W	NA	NA
LCS1W	ALK013WL	219	1	NA	5.00	5.00	11/29/1112:46	NA	ALK013-02	NA	ALK013W	NA	NA
LCD1W	ALK013WC	215	1	NA	5.00	5.00	11/29/1112:49	NA	ALK013-03	NA	ALK013W	NA	NA
IW-70-SSB119-163	K205-01	1180	1	NA	5.00	5.00	11/29/1115:34	NA	ALK013-21	NA	ALK013W	11/22/1111:45	11/22/11
IW-70-SSB119-163DUP	K205-01D	1200	1	NA	5.00	5.00	11/29/1115:39	NA	ALK013-22	NA	ALK013W	11/22/1111:45	11/22/11
IW-70-SHB311-164	K205-02	640	1	NA	5.00	5.00	11/29/1115:45	NA	ALK013-23	NA	ALK013W	11/22/1113:47	11/22/11
IW-70-SAT35-167	K205-03	2640	1	NA	5.00	5.00	11/29/1115:52	NA	ALK013-24	NA	ALK013W	11/22/1116:23	11/22/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 2320B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ALK013WB	ALK013WL	ALK013WC		
LAB FILE ID:	ALK013-01	ALK013-02	ALK013-03		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/29/1112:42	11/29/1112:46	11/29/1112:49	DATE RECEIVED:	NA
PREP. BATCH:	ALK013W	ALK013W	ALK013W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Total Alkalinity	ND	230	219	95	230	215	93	2	80-120	20

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EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 2320B

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: IW-70-SSB119-163
EMAX SAMP ID: K205-01 K205-01D
LAB FILE ID: ALK013-21 ALK013-22
DATE EXTRACTED: NA NA DATE COLLECTED: 11/22/11 11:45
DATE ANALYZED: 11/29/1115:34 11/29/1115:39 DATE RECEIVED: 11/22/11
PREP. BATCH: ALK013W ALK013W
CALIB. REF: NA NA

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Total Alkalinity	1180	1200	2	20

8083

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ALKALINITY

Note: For samples and relevent QCs/Standards analyzed, refer to attached analytical sequence.

☒ Titration end point: pH 4.5 ± 0.04

☒ Low alkalinity: pH 4.2 ± 0.04

MS/MSD amount of spike: NA

Comments: Method 2320B for SDG 11K145 Samples for batch were analyzed manually even though concentrations were not too high because some of the samples have a strong odor, color, or sand.

Book#: AAL-031

Instrument No.: ☒ 53 ☐ 97 ☐ E5

Analytical Batch: ALK013

Analytical Sequence: ALK013

SOP #	Rev. #
☒ EMAX-310.1	5
☒ EMAX-2320B	3
☐ EMAX-	

STANDARDS ID	CONC. (mg/L)
0.02N HCL SWR1-01-338	0.02
LCS SW1-01-402	230
MS/MSD NA	NA
ICV NA	NA

pH Buffer	ID
pH 4	SW1-01-341
pH 7	-279
pH 10	-396
pH 8.0 (Check)	↓ -347

Analyzed By: RC

Date: 11/29/11

8084

EMAX LABORATORIES, INC.

ALKALINITY RAW DATA

MISCELLANEOUS INFORMATION		
Standard	Concentration	
Acid Titrant, HCl	0.02	N
Na_2CO_3 (Z or Z_N)*	2.63	g/L
LCS	230	mg/L
MS	100	mg/L
MDL	5	mg/L
RL	5	mg/L

pH Meter Calibration			
Instrument ID:		53	
Buffer 4	4.01	11/29/11	12:32:50
Buffer 7	7.01	11/29/11	12:34:01
Buffer 10	10.04	11/29/11	12:35:35
pH Check Buffer (8)	7.96	11/29/11	12:37:04

$$N = \frac{(Z)(V_{Na_2CO_3})}{(53)(V_{HCl})} \qquad N = \frac{(Z_N)(V_{Na_2CO_3})}{(V_{HCl})}$$

* Standardization of Acid Titrant(N)
Z=g/L Na_2CO_3. If the concentration of Na_2CO_3 is in N, then $Z=Z_N$

STANDARDIZATION				
$V_{Na_2CO_3}$ / V_b (ml)	V_{HCl} (ml)	DATE	TIME	Acid Titrant HCl (N)
				NA
				#DIV/0!
				#DIV/0!
				#DIV/0!
			Average HCl (N)=	0.02000

☑ Acid Titrant is purchased as certified standard solution

Book #: AAL-031

Page: 4

SOP: EMAX-310.1 Rev. 3

Analytical Batch: **ALK013**

Analyzed By: RC

Data File Name	Lab Sample ID	Sample Amount (ml)	Sample pH	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Volume of Acid Titant (A) ml pH=8.3	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Volume of Acid Titant (B) ml pH=4.5	Analysis Date mm.dd.yy	Analysis Time hh:mm:ss	Vol of Acid Titant (C) ml pH=4.2	Analysis Date mm.dd.yy	Analysis Time hh:mm:ss	Final pH	Analysis Date mm.dd.yy	Analysis Time hh:mm:ss	NOTES
ALK013-01	**ALK013WB**	100	6.09	11/29/11	12:40:37	NA	11/29/11	12:41:29	0.15	11/29/11	12:41:42	0.29	11/29/11	12:42:11	4.23	11/29/11	12:42:15	
ALK013-02	**ALK013WL**	10	9.03	11/29/11	12:43:55	1.3	11/29/11	12:45:01	2.19	11/29/11	12:46:12	NA	11/29/11	12:46:14	4.47	11/29/11	12:46:17	
ALK013-03	**ALK013WC**	10	9.07	11/29/11	12:47:30	1.29	11/29/11	12:48:18	2.15	11/29/11	12:48:59	NA	11/29/11	12:49:01	4.52	11/29/11	12:49:07	
ALK013-04	**K133-01**	3	7.14	11/29/11	12:53:30	NA	11/29/11	12:53:35	1.14	11/29/11	12:56:44	NA	11/29/11	12:56:46	4.5	11/29/11	12:57:14	
ALK013-05	**K133-01D**	3	7.08	11/29/11	13:00:37	NA	11/29/11	13:00:39	1.14	11/29/11	13:02:38	NA	11/29/11	13:02:40	4.47	11/29/11	13:02:42	
ALK013-06	**K133-02**	5	7.57	11/29/11	13:06:44	NA	11/29/11	13:06:47	1.22	11/29/11	13:08:34	NA	11/29/11	13:08:36	4.46	11/29/11	13:08:39	
ALK013-07	**K133-03**	1	7.07	11/29/11	13:58:52	NA	11/29/11	13:58:56	2.01	11/29/11	14:02:33	NA	11/29/11	14:02:34	4.5	11/29/11	14:02:38	
ALK013-08	**K133-04**	5	7.17	11/29/11	14:10:04	NA	11/29/11	14:10:06	1.63	11/29/11	14:14:35	NA	11/29/11	14:14:37	4.47	11/29/11	14:14:40	
ALK013-09	**K133-05**	5	7.24	11/29/11	14:22:14	NA	11/29/11	14:22:16	1.47	11/29/11	14:24:15	NA	11/29/11	14:24:18	4.5	11/29/11	14:24:21	
ALK013-10	**K145-02**	3	7.31	11/29/11	14:28:10	NA	11/29/11	14:28:12	1.31	11/29/11	14:29:43	NA	11/29/11	14:29:45	4.47	11/29/11	14:29:47	
ALK013-11	**K145-03**	3	7.34	11/29/11	14:33:40	NA	11/29/11	14:33:42	1.33	11/29/11	14:35:01	NA	11/29/11	14:35:03	4.53	11/29/11	14:35:04	
ALK013-12	**K145-04**	3	7.06	11/29/11	14:38:06	NA	11/29/11	14:38:07	1.4	11/29/11	14:39:05	NA	11/29/11	14:39:07	4.46	11/29/11	14:39:09	
ALK013-13	**K145-05**	10	7.29	11/29/11	14:42:45	NA	11/29/11	14:42:48	2.68	11/29/11	14:44:55	NA	11/29/11	14:44:57	4.47	11/29/11	14:44:59	
ALK013-14	**K145-07**	3	6.84	11/29/11	14:48:08	NA	11/29/11	14:48:10	1.59	11/29/11	14:49:47	NA	11/29/11	14:49:50	4.48	11/29/11	14:49:53	
ALK013-15	**K145-08**	2	7.09	11/29/11	14:52:42	NA	11/29/11	14:52:43	1.55	11/29/11	14:55:45	NA	11/29/11	14:55:47	4.53	11/29/11	14:55:50	
ALK013-16	**K145-08D**	2	7.02	11/29/11	14:59:40	NA	11/29/11	14:59:42	1.56	11/29/11	15:00:54	NA	11/29/11	15:00:56	4.54	11/29/11	15:00:58	
ALK013-17	**K145-09**	1	7.46	11/29/11	15:04:05	NA	11/29/11	15:04:09	1.84	11/29/11	15:08:15	NA	11/29/11	15:08:18	4.46	11/29/11	15:08:19	
ALK013-18	**K145-11**	2	8.02	11/29/11	15:14:05	NA	11/29/11	15:14:07	1.8	11/29/11	15:15:54	NA	11/29/11	15:15:57	4.48	11/29/11	15:15:59	
ALK013-19	**K145-11D**	2	7.94	11/29/11	15:19:57	NA	11/29/11	15:19:59	1.82	11/29/11	15:21:30	NA	11/29/11	15:21:34	4.48	11/29/11	15:21:36	
ALK013-20	**K145-12**	5	7.31	11/29/11	15:24:32	NA	11/29/11	15:24:34	1.51	11/29/11	15:26:41	NA	11/29/11	15:26:43	4.47	11/29/11	15:26:49	
ALK013-21	**K205-01**	2	6.72	11/29/11	15:31:48	NA	11/29/11	15:31:52	2.36	11/29/11	15:34:28	NA	11/29/11	15:34:31	4.54	11/29/11	15:34:33	
ALK013-22	**K205-01D**	2	6.67	11/29/11	15:36:39	NA	11/29/11	15:36:41	2.4	11/29/11	15:38:22	NA	11/29/11	15:38:32	4.49	11/29/11	15:39:02	
ALK013-23	**K205-02**	2	6.67	11/29/11	15:42:46	NA	11/29/11	15:42:48	1.28	11/29/11	15:45:13	NA	11/29/11	15:45:15	4.46	11/29/11	15:45:28	
ALK013-24	**K205-03**	1	7.18	11/29/11	15:48:09	NA	11/29/11	15:48:15	2.64	11/29/11	15:51:39	NA	11/29/11	15:51:55	4.51	11/29/11	15:52:00	
ALK013-25	**K188-03**	3	5.39	11/29/11	16:00:20	NA	11/29/11	16:00:21	2.01	11/29/11	16:04:10	NA	11/29/11	16:04:13	4.53	11/29/11	16:04:15	

COMMENTS.

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ALKALINITY REPORT FORM

EMAX LABORATORIES, INC.

SOP: EMAX-310.1 Rev. 3 | Standardized Titrant HCl (N)= 0.02 | Book #: AAL-031

Start Date/Time: 11/29/11 12:32 | End Date/Time: 11/29/11 16:04 | Page: 4

Data File Name	Lab Sample ID	Sample Amount (ml)	Volume of Acid Titant (A) ml pH=8.3	Volume of Acid Titant (B) ml pH=4.5	Vol. of Acid Titant (C) ml pH=4.2	ALKALINITY (mg/L) TOTAL[P]	TOTAL[T]	[OH]	[CO_3]	[HCO_3]	NOTES
ALK013-01	ALK013WB	100	NA	0.15	0.29	ND	ND	ND	ND	ND	
ALK013-02	ALK013WL	10	1.3	2.19	NA	130	219	41	178	ND	
ALK013-03	ALK013WC	10	1.29	2.15	NA	129	215	43	172	ND	
ALK013-04	K133-01	3	NA	1.14	NA	ND	380	ND	ND	380	
ALK013-05	K133-01D	3	NA	1.14	NA	ND	380	ND	ND	380	
ALK013-06	K133-02	5	NA	1.22	NA	ND	244	ND	ND	244	
ALK013-07	K133-03	1	NA	2.01	NA	ND	2010	ND	ND	2010	
ALK013-08	K133-04	5	NA	1.63	NA	ND	326	ND	ND	326	
ALK013-09	K133-05	5	NA	1.47	NA	ND	294	ND	ND	294	
ALK013-10	K145-02	3	NA	1.31	NA	ND	437	ND	ND	437	
ALK013-11	K145-03	3	NA	1.33	NA	ND	443	ND	ND	443	
ALK013-12	K145-04	3	NA	1.4	NA	ND	467	ND	ND	467	
ALK013-13	K145-05	10	NA	2.68	NA	ND	268	ND	ND	268	
ALK013-14	K145-07	3	NA	1.59	NA	ND	530	ND	ND	530	
ALK013-15	K145-08	2	NA	1.55	NA	ND	775	ND	ND	775	
ALK013-16	K145-08D	2	NA	1.56	NA	ND	780	ND	ND	780	
ALK013-17	K145-09	1	NA	1.84	NA	ND	1840	ND	ND	1840	
ALK013-18	K145-11	2	NA	1.8	NA	ND	900	ND	ND	900	
ALK013-19	K145-11D	2	NA	1.82	NA	ND	910	ND	ND	910	
ALK013-20	K145-12	5	NA	1.51	NA	ND	302	ND	ND	302	
ALK013-21	K205-01	2	NA	2.36	NA	ND	1180	ND	ND	1180	
ALK013-22	K205-01D	2	NA	2.4	NA	ND	1200	ND	ND	1200	
ALK013-23	K205-02	2	NA	1.28	NA	ND	640	ND	ND	640	
ALK013-24	K205-03	1	NA	2.64	NA	ND	2640	ND	ND	2640	
ALK013-25	K188-03	3	NA	2.01	NA	ND	670	ND	ND	670	

Re 11/29/11

Analytical Batch: ALK013 Analyzed by: RC

MISCELLANEOUS INFORMATION

Standard	Concentration	
Acid Titrant, HCl	0.02	N
Na_2CO_3 (Zor Z_N)*	2.63	g/L
LCS	230	mg/L
MS	100	mg/L
MDL	5	mg/L
RL	5	mg/L

ALKALINITY (mg/L)

$$P = \frac{(A)(N)(50,000)}{S}$$

$$T = \frac{(2B-C)(N)(50,000)}{S} \quad for\ T < 20\ mg/L$$

$$T = \frac{(B)(N)(50,000)}{S} \quad for\ T > 20\ mg/L$$

Lab Control Sample — QC Limit: 80-120

Sample ID	Result	Rec.	RPD	Comments
ALK013WL	219	95%	2%	%Rec. Passed
ALK013WC	215	93%		%Rec. Passed

Matrix Spike — QC Limit: 75-125

Sample ID	Result	Rec.	RPD	Comments

Sample Duplicate — QC Limit: ≤ 20

Sample ID	Result	RPD	Comments
K133-01	380	0%	Passed
K133-01D	380		
K145-08	775	1%	Passed
K145-08D	780		

Matrix Spike — QC Limit: 75-125

Sample ID	Result	Rec.	RPD	Comments

Sample Duplicate — QC Limit: ≤ 20

Sample ID	Result	RPD	Comments
K145-11	900	1%	Passed
K145-11D	910		
K205-01	1180	2%	Passed
K205-01D	1200		

00086

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K205

METHOD 2540C
TOTAL DISSOLVED SOLIDS

A total of five (5) water samples were received on 11/22/11 for Total Dissolved Solids analysis, Method 2540C in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Balance calibration was checked as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TDK014WL/C were all within QC limits.

Matrix QC Sample
Sample duplicate was analyzed with the samples in this SDG. RPD was within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2540C
TOTAL DISSOLVED SOLIDS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K205

Matrix : WATER
Instrument ID : 40706360

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TDK014WB	ND	1	NA	20.0	20.0	11/23/1115:20	NA	TDK01401	NA	TDK014W	NA	NA
LCS1W	TDK014WL	1000	1	NA	20.0	20.0	11/23/1115:20	NA	TDK01402	NA	TDK014W	NA	NA
LCD1W	TDK014WC	965	1	NA	20.0	20.0	11/23/1115:20	NA	TDK01403	NA	TDK014W	NA	NA
IW-70-SSB119-163	K205-01	4920	1	NA	20.0	20.0	11/23/1115:20	NA	TDK01409	NA	TDK014W	11/22/1111:45	11/22/11
IW-70-SSB119-163DUP	K205-01D	4700	1	NA	20.0	20.0	11/23/1115:20	NA	TDK01410	NA	TDK014W	11/22/1111:45	11/22/11
IW-70-SHB311-164	K205-02	945	1	NA	20.0	20.0	11/23/1115:20	NA	TDK01411	NA	TDK014W	11/22/1113:47	11/22/11
IR-70-EB-166	K205-05	ND	1	NA	20.0	20.0	11/23/1115:20	NA	TDK01412	NA	TDK014W	11/22/1114:20	11/22/11
IR-70-SB-165	K205-04	ND	1	NA	20.0	20.0	11/23/1115:20	NA	TDK01413	NA	TDK014W	11/22/1114:15	11/22/11
IW-70-SAT35-167	K205-03	4830	1	NA	20.0	20.0	11/23/1115:20	NA	TDK01414	NA	TDK014W	11/22/1116:23	11/22/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 2540C

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TDK014WB	TDK014WL	TDK014WC		
LAB FILE ID:	TDK01401	TDK01402	TDK01403		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1115:20	11/23/1115:20	11/23/1115:20	DATE RECEIVED:	NA
PREP. BATCH:	TDK014W	TDK014W	TDK014W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TDS	ND	1000	1000	100	1000	965	96	4	80-120	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD 2540C

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: IW-70-SSB119-163
EMAX SAMP ID: K205-01 K205-01D
LAB FILE ID: TDK01409 TDK01410
DATE EXTRACTED: NA NA DATE COLLECTED: 11/22/11 11:45
DATE ANALYZED: 11/23/1115:20 11/23/1115:20 DATE RECEIVED: 11/22/11
PREP. BATCH: TDK014W TDK014W
CALIB. REF: NA NA

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
TDS	4920	4700	5	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
GRAVIMETRIC

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AGV-047

Balance ID: 40706360

Analytical Batch: TDK014

SOP #	Rev. #
☐ EMAX-160.1	6
☐ EMAX-160.2	4
☐ EMAX-160.3	2
☐ EMAX-2540B	1
☑ EMAX-2540C	5
☐ EMAX-2540D	1

STANDARDS ID	CONC. (mg/L)
LCS CW2-02-914	1000

Micropipette ID: 438481531

Analyzed By: NM

Date: 11/28/11

GRAVIMETRIC ANALYSES
RAW DATA

EMAX LABORATORIES

Analytical Batch: TDK014C Instrument ID: 40706360 Oven Temp IN (°C): 180 Oven Temp OUT (°C): 180 SOP: EMAX160.1 Rev. 3

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish #	Dish (g)	Date	Time	1st Dry Weight + Dish (g)	Date	Time	2nd Dry Weight + Dish (g)	Date	Time	3rd Dry Weight + Dish (g)	Date	Time	Difference 1st & 2nd Dry Wt. Rdg.	Difference 2nd & 3rd Dry Wt. Rdg. (<0.5mg)	NOTES
TDK01401	TDK014WB	100	B	72.7781	11/23/11	15:20	72.7781	11/28/11	13:21	72.7781	11/28/11	15:29	72.7781	11/28/11	15:29	0	0.0	
TDK01402	TDK014WL	20	L	21.4203	11/23/11	15:21	21.4400	11/28/11	13:22	21.4404	11/28/11	15:30	21.4404	11/28/11	15:30	0.0004	0.0	
TDK01403	TDK014WC	20	C	21.5157	11/23/11	15:21	21.5349	11/28/11	13:23	21.535	11/28/11	15:30	21.535	11/28/11	15:30	1E-04	0.0	
TDK01404	K184-01	20	1	21.4145	11/23/11	15:21	21.5040	11/28/11	13:23	21.5038	11/28/11	15:31	21.5038	11/28/11	15:31	-0.0002	0.0	
TDK01405	K184-02	5	2	21.4083	11/23/11	15:22	21.4503	11/28/11	13:24	21.4499	11/28/11	15:31	21.4499	11/28/11	15:31	-0.0004	0.0	
TDK01406	K184-03	20	3	21.5911	11/23/11	15:22	21.6656	11/28/11	13:24	21.6654	11/28/11	15:31	21.6654	11/28/11	15:31	-0.0002	0.0	
TDK01407	K184-04	5	4	21.3760	11/23/11	15:22	21.4130	11/28/11	13:24	21.413	11/28/11	15:32	21.413	11/28/11	15:32	0	0.0	
TDK01408	K184-05	5	5	21.4534	11/23/11	15:23	21.5014	11/28/11	13:25	21.501	11/28/11	15:32	21.501	11/28/11	15:32	-0.0004	0.0	
TDK01409	K205-01	20	6	21.5833	11/23/11	15:23	21.6821	11/28/11	13:25	21.6817	11/28/11	15:32	21.6817	11/28/11	15:32	-0.0004	0.0	
TDK01410	K205-01D	20	7	21.4741	11/23/11	15:23	21.5680	11/28/11	13:25	21.5680	11/28/11	15:34	21.5680	11/28/11	15:34	0	0.0	
TDK01411	K205-02	20	8	21.4149	11/23/11	15:24	21.4334	11/28/11	13:25	21.4338	11/28/11	15:34	21.4338	11/28/11	15:34	0.0004	0.0	
TDK01412	K205-05	100	9	70.4804	11/23/11	15:24	70.4796	11/28/11	13:27	70.4798	11/28/11	15:34	70.4798	11/28/11	15:34	0.0002	0.0	
TDK01413	K205-04	100	10	70.7087	11/23/11	15:24	70.7082	11/28/11	13:27	70.7084	11/28/11	15:35	70.7084	11/28/11	15:35	0.0002	0.0	
TDK01414	K205-03	20	11	21.4096	11/23/11	15:25	21.506	11/28/11	13:28	21.5062	11/28/11	15:35	21.5062	11/28/11	15:35	0.0002	0.0	
TDK01415	K845-01	20	12	21.5352	11/23/11	15:25	21.5631	11/28/11	13:28	21.5631	11/28/11	15:35	21.5631	11/28/11	15:35	0	0.0	
TDK01416	K845-01D	20	13	21.5179	11/23/11	15:25	21.5459	11/28/11	13:29	21.546	11/28/11	15:36	21.546	11/28/11	15:36	1E-04	0.0	
TDK01417	K845-02	20	14	21.4574	11/23/11	15:25	21.4852	11/28/11	13:29	21.4848	11/28/11	15:36	21.4848	11/28/11	15:36	-0.0004	0.0	

NM 11/28/11

Beginning Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/23/11 15:19	PASSED
5	5.0000	11/23/11 15:19	PASSED
100	99.9987	11/23/11 15:19	PASSED

Ending Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/23/11 15:26	PASSED
5	4.9999	11/23/11 15:27	PASSED
100	99.9988	11/23/11 15:27	PASSED

Beginning Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/28/11 13:20	PASSED
5	4.9998	11/28/11 13:20	PASSED
100	99.9961	11/28/11 13:21	PASSED

Ending Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	11/28/11 15:36	PASSED
5	4.9999	11/28/11 15:36	PASSED
100	99.9949	11/28/11 15:36	PASSED

Acceptance Criteria: ± 0.1% OR 0.5 mg whichever is greater

LCS Conc 1000 mg/L MDL 10 mg/L RL 10 mg/L Initial Rdg by: NM Final Rdg by: NM Reviewed by: NM

Remarks: Date: 11/28/11

EMAX LABORATORIES INC.

GRAVIMETRIC CALCULATION

Analytical Batch: TDK014 Start Date/Time: 11/23/11 15:20 Temp IN(°C): 180

Balance ID: 40706360 End Date/Time: 11/28/11 15:36 Temp Out(°C): 180

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish (g)	Dry Weight + Dish (g)	SOLIDS (mg)	RESULT (mg/L)	NOTES
TDK01401	TDK014WB	100	72.7781	72.7781		ND	
TDK01402	TDK014WL	20	21.4203	21.4404	20.1000	1000	100
TDK01403	TDK014WC	20	21.5157	21.535	19.3000	965	97
TDK01404	K184-01	20	21.4145	21.5038	89.3000	4460	
TDK01405	K184-02	5	21.4083	21.4499	41.6000	8320	
TDK01406	K184-03	20	21.5911	21.6654	74.3000	3720	
TDK01407	K184-04	5	21.376	21.413	37.0000	7400	
TDK01408	K184-05	5	21.4534	21.501	47.6000	9520	
TDK01409	K205-01	20	21.5833	21.6817	98.4000	4920	
TDK01410	K205-01D	20	21.4741	21.568	93.9000	4700	
TDK01411	K205-02	20	21.4149	21.4338	18.9000	945	
TDK01412	K205-05	100	70.4804	70.4798	-0.6000	ND	
TDK01413	K205-04	100	70.7087	70.7084	-0.3000	ND	
TDK01414	K205-03	20	21.4096	21.5062	96.6000	4830	
TDK01415	K845-01	20	21.5352	21.5631	27.9000	1390	
TDK01416	K845-01D	20	21.5179	21.546	28.1000	1400	
TDK01417	K845-02	20	21.4574	21.4848	27.4000	1370	
				NM 11/28/11			

LCS Concentration: 1000 mg/L MDL(mg/L): 10 Initial Reading by: NM

SOP: EMAX160.1 Rev. 3 RL (mg/L): 10 Final Reading by: NM

Remarks:

Reviewed by: NM

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K205

METHOD 4500F
DISSOLVED HYDROGEN SULFIDE

A total of five (5) water samples were received on 11/22/11 for Dissolved Hydrogen Sulfide analysis, Method 4500F in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Matrix QC Sample
Sample duplicate was analyzed with the samples. RPD was within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 4500F
Dissolved Hydrogen Sulfide

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K205

Matrix : WATER
Instrument ID : NA

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	HSK005WB	ND	1	NA	1.00	1.00	11/23/1114:35	NA	HSK00501	NA	HSK005W	NA	NA
IW-70-SSB119-163	K205-01	ND	1	NA	1.00	1.00	11/23/1115:33	NA	HSK00511	NA	HSK005W	11/22/1111:45	11/22/11
IW-70-SSB119-163DUP	K205-01D	ND	1	NA	1.00	1.00	11/23/1115:46	NA	HSK00512	NA	HSK005W	11/22/1111:45	11/22/11
IW-70-SHB311-164	K205-02	ND	1	NA	1.00	1.00	11/23/1116:04	NA	HSK00513	NA	HSK005W	11/22/1113:47	11/22/11
IW-70-SAT35-167	K205-03	4.53	1	NA	1.00	1.00	11/23/1116:07	NA	HSK00514	NA	HSK005W	11/22/1116:23	11/22/11
IR-70-SB-165	K205-04	ND	1	NA	1.00	1.00	11/23/1116:10	NA	HSK00515	NA	HSK005W	11/22/1114:15	11/22/11
IR-70-EB-166	K205-05	ND	1	NA	1.00	1.00	11/23/1116:13	NA	HSK00516	NA	HSK005W	11/22/1114:20	11/22/11

EMAX QUALITY CONTROL DATA
DUPLICATE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
METHOD: METHOD 4500F (DISSOLVED)
MATRIX: WATER
% MOISTURE: NA

==========

BATCH NO.: 11K205
SAMPLE ID: IW-70-SSB119-163DUP
CONTROL NO.: K205-01D

DATE RECEIVED: 11/22/11
DATE EXTRACTED: NA
DATE ANALYZED: 11/23/11 15:46

ACCESSION:

PARAMETER	SAMPLE (mg/L)	DUP. SAMPLE (mg/L)	RPD (%)	RPD LIMIT (%)
Hydrogen Sulfide	ND	ND	0	20

8696

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
SULFIDE

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Book #: ASD-018

Analytical Batch: HSK005

Comments:

Presence of analyte was confirmed using colorimetric method.

Abs @ 664

Blank (0ppm) = 0

1ppm = 0.665

188-03 @ 1X = 1.999

205-03 @ 1X = 1.999

188-03 @ 20X = 0.396

205-03 @ 20X = 0.392

SOP #	Rev. #
☐ EMAX-376.1	3
☐ EMAX-9034	0
☐ EMAX-4500-S2F	1
☑ EMAX-4500-S2H	0
☐ EMAX-	

STANDARDS ID	conc.
LCS SWI-01-422	8.48
Spike NA	NA
$Na_2S_2O_3$ Standard SWRI-01-384	0.0248
Iodine SWRI-01-465	0.0250
HCl SWPI-007-60-03	6N
Indicator SWRI-01-340	–

Analyzed By: NM

Date: 11/23/11

8097

SM4500-S^2 H

EMAX LABORATORIES, INC.

ANALYSIS FOR UN-IONIZED HYDROGEN SULFIDE

Method SM4500-S2-H

Analytical Batch: HSK005

Data File Name	Lab Sample ID	Sulfide	Unit	Date Time	Temp. °C	pH	Conductivity µS/cm	H2S	Unit	COMMENTS
HSK0051	HSK005WB	ND	mg/L	11/23/11 14:35				ND	mg/L	
HSK0052	HSK005WL	7.1	mg/L	11/23/11 14:37				#VALUE!	mg/L	
HSK0053	HSK005WC	7.06	mg/L	11/23/11 14:40				#VALUE!	mg/L	
HSK0054	K184-01	ND	mg/L	11/23/11 14:43	24.9	7.25	7200	ND	mg/L	
HSK0055	K184-02	ND	mg/L	11/23/11 14:49	25.2	7.27	12920	ND	mg/L	
HSK0056	K184-03	ND	mg/L	11/23/11 14:52	24.8	6.63	6440	ND	mg/L	
HSK0057	K184-04	ND	mg/L	11/23/11 14:55	24.9	6.8	11310	ND	mg/L	
HSK0058	K184-05	ND	mg/L	11/23/11 15:02	25	6.42	14650	ND	mg/L	
HSK0059	K187-01	ND	mg/L	11/23/11 15:07	24.9	7.67	7770	ND	mg/L	
HSK00510	K188-03	9.33	mg/L	11/23/11 15:15	25	5.18	9651	9.14	mg/L	
HSK00511	K205-01	ND	mg/L	11/23/11 15:33	25.1	6.53	8600	ND	mg/L	
HSK00512	K205-01D	ND	mg/L	11/23/11 15:46	25	6.56	8510	ND	mg/L	
HSK00513	K205-02	ND	mg/L	11/23/11 16:04	25.1	6.54	1608	ND	mg/L	
HSK00514	K205-03	9.76	mg/L	11/23/11 16:07	25.1	6.93	7530	4.53	mg/L	
HSK00515	K205-04	ND	mg/L	11/23/11 16:10	25	6.57	7.47	ND	mg/L	
HSK00516	K205-05	ND	mg/L	11/23/11 16:13	24.8	6.55	6.57	ND	mg/L	

11/23/11
NM

$$pK_1 = 32.5 + 1519.44/T - 15.672\log_{10}T + 0.02722T$$

$$A = 0.7083 - 2.277x10^{-3}T + 5.399x10^{-6}T^2$$

$$I = 1.6x10^{-5}\,Conductivity$$

$$pf_m = A\left(\frac{\sqrt{I}}{1+\sqrt{I}} - 0.3\right)$$

$$K'_1 = 10^{-pK_1+2pf_m} \quad H_2S = \left(\frac{S_T}{1+\frac{K'_1}{H^+}}\right)$$

$$H^+ = 10^{-pH+pf_m}$$

Analyzed by: NM

Reviewed by: NM

Date: 11/23/2011

Where: T(°K)= T°C+272.15 pK1=dissociation constant for zero ionic strength A= Debye-Huckel Parameter I= Ionic Strength pfm=negative logarithm of the monovalent ion activity coefficient K'_1=conditional ionization constanct H^+=Hydrogen ion concentration S_T=Total Sulfide Concentration

EMAX LABORATORIES, INC.

ANALYSIS FOR SULFIDE

Method: SM4500-S2-H Analytical Batch: **HSK005** Book #: ASD-018 Page: 15

Data File Name	Lab Sample ID	V_c (ml)	V_t (ml)	Volume of Titant V_t (ml)	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Sulfide	Sample Result	Flag J	Unit
HSK0051	**HSK005WB**	100	2.5	2.53	11/23/11	14:35:06	-0.03904	ND		mg/L
HSK0052	**HSK005WL**	100	2.5	0.73	11/23/11	14:37:35	7.10336	7.1		mg/L
HSK0053	**HSK005WC**	100	2.5	0.74	11/23/11	14:40:59	7.06368	7.06		mg/L
HSK0054	**K184-01**	100	2.5	2.56	11/23/11	14:43:56	-0.15808	ND		mg/L
HSK0055	**K184-02**	100	2.5	2.61	11/23/11	14:49:19	-0.35648	ND		mg/L
HSK0056	**K184-03**	100	2.5	2.61	11/23/11	14:52:02	-0.35648	ND		mg/L
HSK0057	**K184-04**	100	2.5	2.7	11/23/11	14:55:15	-0.7136	ND		mg/L
HSK0058	**K184-05**	100	2.5	2.44	11/23/11	15:02:32	0.31808	ND		mg/L
HSK0059	**K187-01**	100	2.5	2.62	11/23/11	15:07:11	-0.39616	ND		mg/L
HSK00510	**K188-03**	100	5	2.69	11/23/11	15:15:41	9.32608	9.33		mg/L
HSK00511	**K205-01**	100	2.5	2.59	11/23/11	15:33:29	-0.27712	ND		mg/L
HSK00512	**K205-01D**	100	2.5	2.6	11/23/11	15:46:00	-0.3168	ND		mg/L
HSK00513	**K205-02**	100	2.5	2.7	11/23/11	16:04:37	-0.7136	ND		mg/L
HSK00514	**K205-03**	100	5	2.58	11/23/11	16:07:35	9.76256	9.76		mg/L
HSK00515	**K205-04**	100	2.5	2.55	11/23/11	16:10:02	-0.1184	ND		mg/L
HSK00516	**K205-05**	100	2.5	2.51	11/23/11	16:13:02	0.04032	ND		mg/L

NM 11/23/11

STANDARDIZATION

V_I (ml)	V_{Na2SO3} (ml)	DATE	TIME	Titrant Na_2SO_3 (N)
Average Normality of Iodine (NI)=				**0.025**

☑ Standard Purchased as Certified Solution

$$N_I = \frac{(N * V)_{Na_2SO_3}}{V_I}$$

MISCELLANEOUS INFORMATION

Standard	Concentration		Unit
Iodine	0.025		*N*
$Na_2S_2O_3$	0.0248		*N*
LCS [WATER | SOIL]	8.48	84.8	*mg/L | mg/Kg*
MDL [WATER | SOIL]	1	10	*mg/L | mg/Kg*
RL	1	10	*mg/L | mg/Kg*

$$S(mg/L) = \frac{[(V_I * N_I) - (V_t * N_t)](16{,}000)}{V_S}$$

MS/MSD	TV=	8.48	mg/L
ID	Result (mg/L)	%Rec.	RPD

Comments:

Analyzed By: NM

8099

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K205

METHOD SM5310B
TOC

A total of five (5) water samples were received on 11/22/11 for Total Organic Carbon analysis, Method SM5310B in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TCK018WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample was analyzed at the frequency prescribed by the project.
Percent recoveries for K205-01M/S were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD SM5310B
TOC

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K205

Matrix : WATER
Instrument ID : I62

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TCK018WB	ND	1	NA	1.00	0.500	11/28/1115:56	NA	TCK012-05	TCK012-02	TCK018W	NA	NA
LCS1W	TCK018WL	25.1	1	NA	1.00	0.500	11/28/1116:09	NA	TCK012-06	TCK012-02	TCK018W	NA	NA
LCD1W	TCK018WC	25.2	1	NA	1.00	0.500	11/28/1116:22	NA	TCK012-07	TCK012-02	TCK018W	NA	NA
IW-70-SSB119-163	K205-01	14.9	1	NA	1.00	0.500	11/28/1119:32	NA	TCK012-22	TCK012-20	TCK018W	11/22/1111:45	11/22/11
IW-70-SSB119-163MS	K205-01M	40.5	1	NA	1.00	0.500	11/28/1119:45	NA	TCK012-23	TCK012-20	TCK018W	11/22/1111:45	11/22/11
IW-70-SSB119-163MSD	K205-01S	39.9	1	NA	1.00	0.500	11/28/1119:59	NA	TCK012-24	TCK012-20	TCK018W	11/22/1111:45	11/22/11
IW-70-SHB311-164	K205-02	29.2	5	NA	5.00	2.50	11/28/1120:11	NA	TCK012-25	TCK012-20	TCK018W	11/22/1113:47	11/22/11
IW-70-SAT35-167	K205-03	86.2	5	NA	5.00	2.50	11/28/1120:24	NA	TCK012-26	TCK012-20	TCK018W	11/22/1116:23	11/22/11
IR-70-SB-165	K205-04	ND	1	NA	1.00	0.500	11/28/1120:34	NA	TCK012-27	TCK012-20	TCK018W	11/22/1114:15	11/22/11
IR-70-EB-166	K205-05	ND	1	NA	1.00	0.500	11/28/1120:45	NA	TCK012-28	TCK012-20	TCK018W	11/22/1114:20	11/22/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD SM5310B

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TCK018WB	TCK018WL	TCK018WC		
LAB FILE ID:	TCK012-05	TCK012-06	TCK012-07		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/28/1115:56	11/28/1116:09	11/28/1116:22	DATE RECEIVED:	NA
PREP. BATCH:	TCK018W	TCK018W	TCK018W		
CALIB. REF:	TCK012-02	TCK012-02	TCK012-02		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	ND	25.0	25.1	100	25.0	25.2	101	0	85-115	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K205
METHOD: METHOD SM5310B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	IW-70-SSB119-163				
LAB SAMP ID:	K205-01	K205-01M	K205-01S		
LAB FILE ID:	TCK012-22	TCK012-23	TCK012-24		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/22/11 11:45
DATE ANALYZED:	11/28/1119:32	11/28/1119:45	11/28/1119:59	DATE RECEIVED:	11/22/11
PREP. BATCH:	TCK018W	TCK018W	TCK018W		
CALIB. REF:	TCK012-20	TCK012-20	TCK012-20		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	14.9	25.0	40.5	103	25.0	39.9	100	1	75-125	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TOC

	Date	Time
Start	4/28/11	1408
End	4/28/11	1704

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

TCK018W
K145 415.1 DOC
K541 5310B
K184
K188
K205

Samples K188-03 & K205-03 were diluted prior to analysis due to their smell.

Sample K205-02 was diluted prior to analysis due to its brown coloration.

2 M HCl SW4401-223

Book #:	A62-020
Instrument No.:	62
Pipette ID:	039380025
	SW3-01-33
	SI1A-01-4
Balance ID:	40706360
Analytical Sequence:	TCK012
Method File:	TCK012
Analytical Batch:	TCK018W

SOP #	Rev. #
☑ EMAX-415.1	2
☑ EMAX-5310B	1
☐ EMAX-9060	2
☐ EMAX-	

STANDARDS ID	CONC. (mg/L)
S0 nanopure	0
S1 SW1013-04-174	1
S2	5
S3	10
S4	40
S5	80
S6 —	—
ICV/LCS SW1013-04-178	25
CCV -179	25

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ TOC	
☐	

Analyzed By: Am

Date: 4/28/11

8104

	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
1	Standard	NPOC	ICAL	TCK012-01	0A-123456-	C:\Program	1.000		
2	Control	NPOC	ICV	TCK012-02	0A-123456-	C:\Program	1.000	NPOC:25.11 mg/L	
3	Unknown	NPOC	ICB	TCK012-03	0A-123456-	C:\Program	1.000	NPOC:0.2108 mg/	
4	Unknown	NPOC	HCO3\CO3	TCK012-04	0A-123456-	C:\Program	1.000	NPOC:0.2116 mg/	
5	Unknown	NPOC	TCK018WB	TCK012-05	0A-123456-	C:\Program	1.000	NPOC:0.09922 mg	
6	Unknown	NPOC	TCK018WL	TCK012-06	0A-123456-	C:\Program	1.000	NPOC:25.06 mg/L	
7	Unknown	NPOC	TCK018WC	TCK012-07	0A-123456-	C:\Program	1.000	NPOC:25.18 mg/L	
8	Unknown	NPOC	K145-05R	TCK012-08	0A-123456-	C:\Program	1.000	NPOC:~~2.087~~ mg/L	1.992mg/L
9	Unknown	NPOC	K145-07R	TCK012-09	0A-123456-	C:\Program	1.000	NPOC:2.476 mg/L	
10	Unknown	NPOC	K145-08T	TCK012-10	0A-123456-	C:\Program	10.00	NPOC:241.1 mg/L	DF=10
11	Unknown	NPOC	K145-08M	TCK012-11	0A-123456-	C:\Program	10.00	NPOC:486.2 mg/L	DF=10
12	Unknown	NPOC	K145-08S	TCK012-12	0A-123456-	C:\Program	10.00	NPOC:488.4 mg/L	DF=10
13	Unknown	NPOC	K145-09T	TCK012-13	0A-123456-	C:\Program	20.00	NPOC:530.1 mg/L	DF=20
14	Control	NPOC	CCV1	TCK012-14	0A-123456-	C:\Program	1.000	NPOC:24.06 mg/L	
15	Unknown	NPOC	CCB1	TCK012-15	0A-123456-	C:\Program	1.000	NPOC:0.1194 mg/	
16	Unknown	NPOC	K145-12R	TCK012-16	0A-123456-	C:\Program	1.000	NPOC:1.950 mg/L	
17	Unknown	NPOC	K541-01	TCK012-17	0A-123456-	C:\Program	1.000	NPOC:154.7 mg/L	PH<2 over
18	Unknown	NPOC	K184-05T	TCK012-18	0A-123456-	C:\Program	5.000	NPOC:96.29 mg/L	DF=5
19	Unknown	NPOC	K188-03	TCK012-19	0A-123456-	C:\Program	10.00	NPOC:1687 mg/L	PH<2;DF=10 over
20	Control	NPOC	CCV2	TCK012-20	0A-123456-	C:\Program	1.000	NPOC:24.25 mg/L	
21	Unknown	NPOC	CCB2	TCK012-21	0A-123456-	C:\Program	1.000	NPOC:0.1693 mg/	
22	Unknown	NPOC	K205-01	TCK012-22	0A-123456-	C:\Program	1.000	NPOC:14.86 mg/L	PH<2
23	Unknown	NPOC	K205-01M	TCK012-23	0A-123456-	C:\Program	1.000	NPOC:40.49 mg/L	
24	Unknown	NPOC	K205-01S	TCK012-24	0A-123456-	C:\Program	1.000	NPOC:39.95 mg/L	
25	Unknown	NPOC	K205-02	TCK012-25	0A-123456-	C:\Program	5.000	NPOC:29.19 mg/L	PH<2; DF=5
26	Unknown	NPOC	K205-03	TCK012-26	0A-123456-	C:\Program	5.000	NPOC:86.16 mg/L	PH<2; DF=5
27	Unknown	NPOC	K205-04	TCK012-27	0A-123456-	C:\Program	1.000	NPOC:0.4658 mg/	PH<2
28	Unknown	NPOC	K205-05	TCK012-28	0A-123456-	C:\Program	1.000	NPOC:0.4770 mg/	PH<2
29	Control	NPOC	CCV3	TCK012-29	0A-123456-	C:\Program	1.000	NPOC:24.26 mg/L	
30	Unknown	NPOC	CCB3	TCK012-30	0A-123456-	C:\Program	1.000	NPOC:0.08843 mg	

Am 11/29/11

Am 11/29/11

FINAL

Am 11/29/11

Instr.Information

System	toc
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Cal. Curve

Sample Name:	ICAL
Sample ID:	TCK012-01
Cal. Curve:	TCK012.2011_11_28_13_59_51.cal

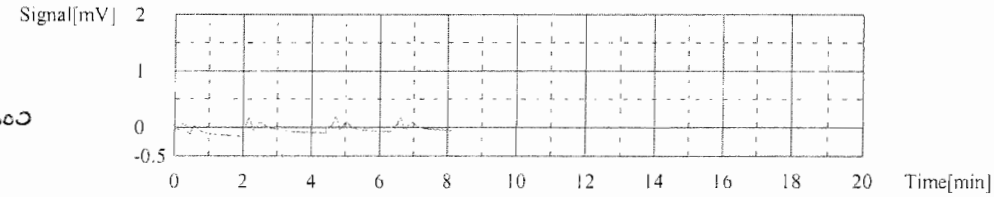
Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.000	50uL	1	*******		11/28/11 02:08:02 PM
2	0.000	50uL	1	*******		11/28/11 02:10:07 PM
3	0.000	50uL	1	*******		11/28/11 02:12:12 PM
4	0.000	50uL	1	*******		11/28/11 02:14:18 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 0.000

$$\frac{\text{mean area}}{\text{slope}} = \frac{0.000}{2.198} = 0.000$$

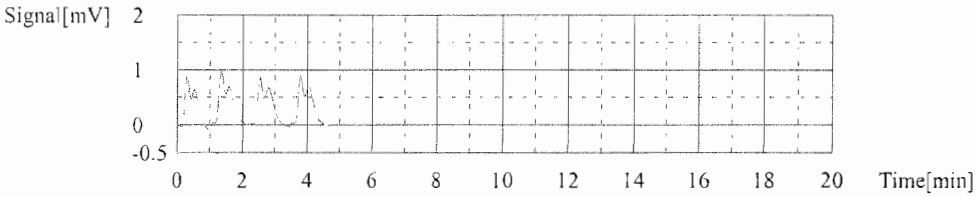


Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	1.917	50uL	10	*******		11/28/11 02:22:31 PM
2	2.116	50uL	10	*******		11/28/11 02:23:55 PM
3	2.166	50uL	10	*******		11/28/11 02:25:20 PM
4	2.235	50uL	10	*******		11/28/11 02:26:43 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 2.109

$$\frac{\bar{x}}{m} = \frac{2.109}{2.198} = 0.9595$$

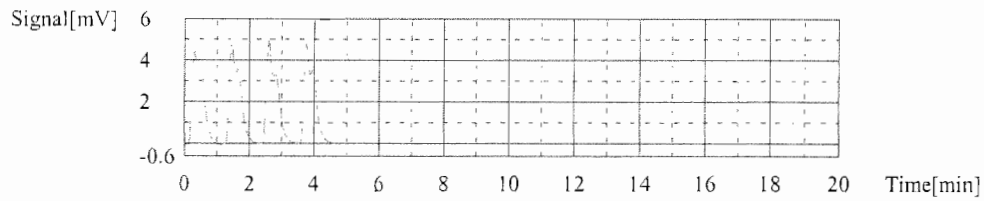


Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	10.28	50uL	2	*******		11/28/11 02:33:07 PM
2	10.76	50uL	2	*******		11/28/11 02:34:27 PM
3	10.85	50uL	2	*******		11/28/11 02:35:48 PM
4	10.73	50uL	2	*******		11/28/11 02:37:09 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 10.66

$$\frac{\bar{A}}{m} = \frac{10.66}{2.198} = 4.850$$

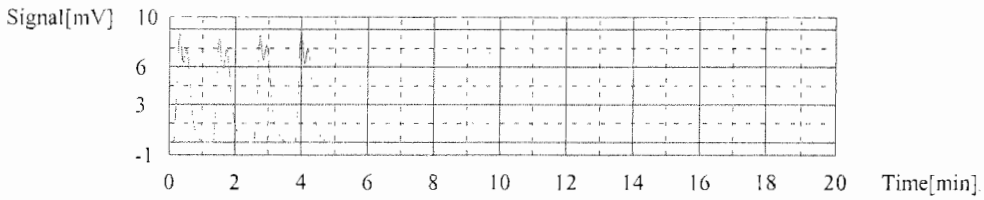


Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	21.25	50uL	1	*******		11/28/11 02:42:54 PM
2	21.68	50uL	1	*******		11/28/11 02:44:20 PM
3	21.88	50uL	1	*******		11/28/11 02:45:46 PM
4	21.82	50uL	1	*******		11/28/11 02:47:13 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 21.66

$$\frac{\bar{A}}{m} = \frac{21.66}{2.198} = 9.854$$

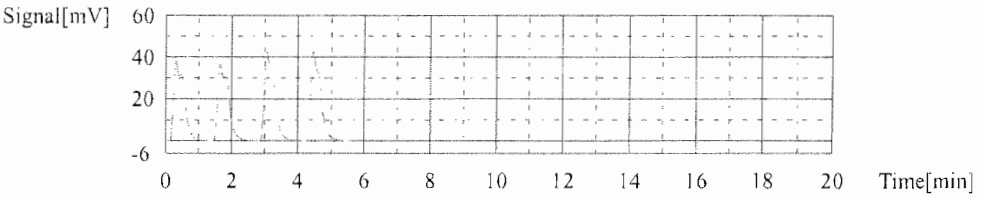


Conc: 40.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	84.53	50uL	2	*******		11/28/11 02:55:44 PM
2	85.26	50uL	2	*******		11/28/11 02:57:20 PM
3	87.30	50uL	2	*******		11/28/11 02:58:56 PM
4	86.03	50uL	2	*******		11/28/11 03:00:30 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 85.78

$$\frac{\bar{A}}{m} = \frac{85.78}{2.198} = 39.03$$

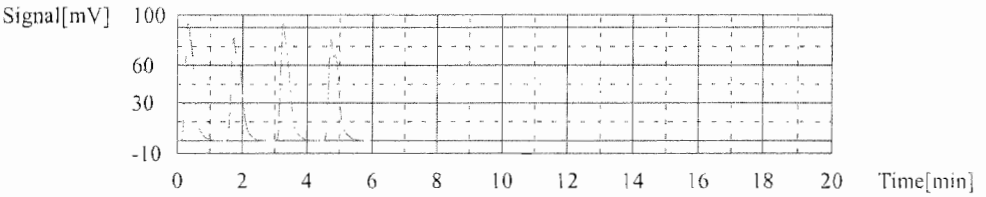


Conc: 80.00mg/L

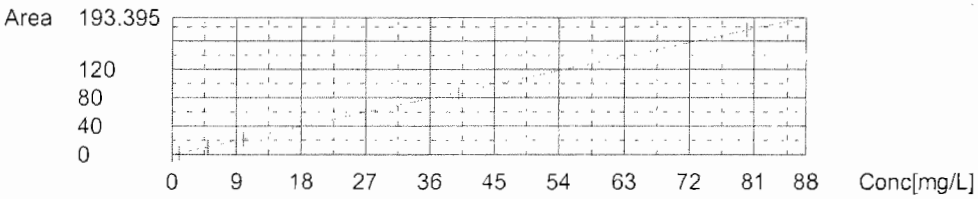
No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	175.8	50uL	1	*******		11/28/11 03:06:28 PM
2	176.8	50uL	1	*******		11/28/11 03:08:10 PM
3	175.9	50uL	1	*******		11/28/11 03:09:50 PM
4	176.5	50uL	1	*******		11/28/11 03:11:33 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 176.3

$$\frac{\bar{A}}{m} = \frac{176.3}{2.198} = 80.21$$



Slope: 2.198
Intercept 0.000
r^2 0.999838



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Control Sample

Sample Name: ICV
Sample ID: TCK012-02
Method: TCK012.tpl
Chk. Result Control value: 25.11 / Control exceeds range!

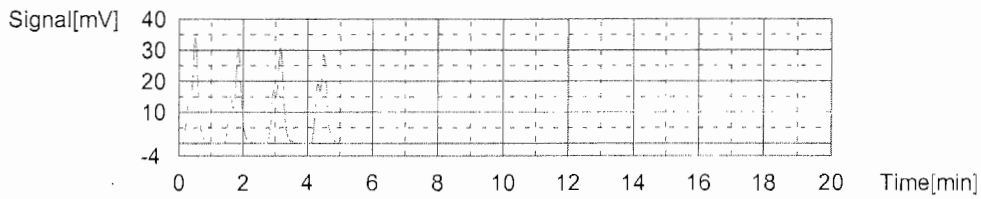
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:25.11 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.33	25.18mg/L	50uL	1		TCK012.2011_11_28_13_59_51.cal	11/28/11 03:19:35 PM
2	55.13	25.09mg/L	50uL	1		TCK012.2011_11_28_13_59_51.cal	11/28/11 03:21:06 PM
3	55.57	25.29mg/L	50uL	1		TCK012.2011_11_28_13_59_51.cal	11/28/11 03:22:38 PM
4	54.74	24.91mg/L	50uL	1		TCK012.2011_11_28_13_59_51.cal	11/28/11 03:24:10 PM

Mean Area 55.19
Mean Conc. 25.11mg/L



Sample

Sample Name: ICB
Sample ID: TCK012-03
Origin: TCK012.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.2108 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6400	0.2912mg/L	50uL	1		TCK012.2011_11_28_13_59_51.cal	11/28/11 03:31:39 PM
2	0.5420	0.2466mg/L	50uL	1		TCK012.2011_11_28_13_59_51.cal	11/28/11 03:32:47 PM
3	0.3176	0.1445mg/L	50uL	1		TCK012.2011_11_28_13_59_51.cal	11/28/11 03:33:52 PM
4	0.3535	0.1609mg/L	50uL	1		TCK012.2011_11_28_13_59_51.cal	11/28/11 03:34:58 PM

Mean Area 0.4633
Mean Conc. 0.2108mg/L

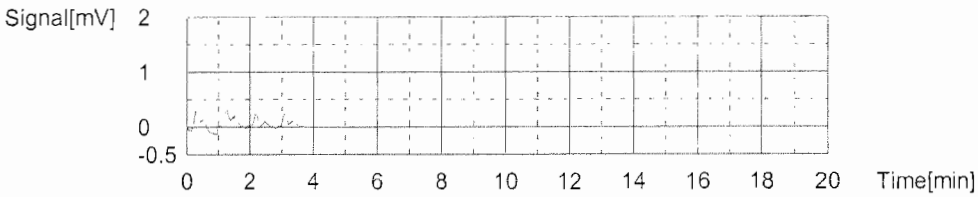


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TABLE OF CONTENTS

CLIENT: **INSIGHT EEC, INC.**

PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11K217**

SECTION		PAGE
Cover Letter, COC/Sample Receipt Form		1000 – 1004
GC/MS-VOA	METHOD 5030B/8260B	2000 – 2042
GC/MS-SVOA	**	3000 –
GC-VOA	METHOD RSK-175	4000 – 4024
GC-SVOA	**	5000 –
HPLC	**	6000 –
METALS	METHOD 3010A/6010B	7000 – 7033
WET	METHOD 300.0 METHOD 300.0 (M)	8000 – 8026 8027 – 8055
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 12-13-2011
EMAX Batch No.: 11K217

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 11/23/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW-70-03-169	K217-01	11/23/11	WATER	VOLATILE ORGANICS BY GC/MS
MW-70-43A-170	K217-02	11/23/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
MW-70-14-172	K217-03	11/23/11	WATER	DISSOLVED GAS
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
IR-70-EB-171	K217-04	11/23/11	WATER	ANIONS BY IC
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
IR-70-TB-168	K217-05	11/23/11	WATER	VOLATILE ORGANICS BY GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

INV 0801

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-6818
Email: info@emaxlabs.com

PO NUMBER: 2011068-8042
SAMPLE STORAGE
EMAX CONTROL NO. * 11K217
PROJECT CODE: 4-77101

CLIENT: INSIGHT EEC, INC.
PROJECT: IR SITE 70 - NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 7146786700 FAX: 7146786711 EMAIL: NWEINBERGER@EECI.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT EEC, INC.
ADDRESS: 3010 E. MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: Ye Myint

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ ~~14~~ days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	8260B - VOCs (HC)	RSK-175 - GASES (HC)	WET CHEM (NP)	TOC-SM5310B (HC)	SM4500F - SULFIDE (SH/ZA)	8010B - DISS. METALS (HN)	8260B - VOCs (NP)	RSK-175 - GASES (NP)	COMMENTS
1	MW-70-03-169	IR SITE 70	11-23-11	0917	3	40 ml	VOA	GW	III	X								
2	MW-70-43A-170	IR SITE 70	11-23-11	1128	7	varies	varies	GW	III	X	X	X						FOR WET CHEM RUN ONLY VFAs
3	MW-70-14-172	IR SITE 70	11-23-11	1306	7	varies	varies	GW	III			X						FOR WET CHEM RUN ONLY VFAs
4																		
5																		
6																		
7																		
8																		
4	IR-70-EB-171	IR SITE 70	11-23-11	1150	10	varies	varies	GW	III	X	X	X	X	X	X			EQUIPMENT BLANK.
5	IR-70-TB-168	IR SITE 70	11-23-11	0800	2	40 ml	VOA	GW	III	X								TRIP BLANK.

Instructions: FOR WET CHEM ANALYSIS AS FOLLOW: ANIONS: 300.0, VFAs: 300.0M, TDS: SM2540C, ALKALINITY: SM2370C, DHS = SM4500. UNLESS NOTED OTHERWISE IN COMMENTS.

Cooler #	Temp. (°C)	Sample #s
1	3.0	

SAMPLER: CHASE BRIDDON
COURIER/AIRBILL:

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-23-11	1405	Keith Stout
Keith Stout	11-23-11	1436	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associated with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

1001

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11K217
☑ EMAX Courier	Set Go	Recepient J. Luna
☐ Client Delivery		Date 11-23-11
☐ Third Party		Time 1436

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☑ Preservative (if any)	☑ TAT
Safety Issues	☑ None	☐ High concentrations expected	☐ Superfund Site samples	☐ Rad screening required	

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	A ☑ Cooler 1 3.0 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C

Thermometer: ***A - S/N 101541371*** ***B - S/N 101541382***

Comments: ☐ **PM was informed on non-compliant coolers immediately.**

Note: **pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time .**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code
-03		8260/RSK	H1	R5, R6

REVIEWS

Sample Labeling [signature] Date 11/23/11

SRF [signature] Date 11/23/11

PM [signature] Date 11/23/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-a-vis label	D3	Date and/or time is inconsistent in COC vis-a-vis label	R3	Refer to attached instruction
A4	_____	E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	Inform client
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	Login for VOCs & RSK175
B3	Sample ID is inconsistent in COC vis-a-vis label	F2	Bubble is> 6mm		
B4	_____	G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	RCVD 6 VIALS NOT MARKED IN COC		
C4	_____	H2	w/ HCL		

Ye Myint

From: Nick Weinberger [NWeinberger@ieeci.com]
Sent: Tuesday, November 29, 2011 8:26 AM
To: Ye Myint
Subject: RE: Logins for Seal Beach

Ye,

For samples IR-70-SB-165 and IR-70-EB-166 We should only be running VOCs (8260B), Anions (EPA 300), and Dissolved Metals (EPA 6010B/6020). If we can still cancel other tests not started, that would be great.

This will be true for all other -EB- and -SB- samples as well, if we have any other logins.

Thanks
Nick

[illegible] Weinberger, Project Chemist
[illegible] Melrose Avenue Anaheim, CA 92806
[illegible] 714.678.6711 [illegible]

From: Ye Myint [mailto:YMyint@emaxlabs.com]
Sent: Monday, November 28, 2011 7:12 PM
To: Nick Weinberger
Cc: 'Rebecca Lesher'
Subject: Logins for Seal Beach

Nick,

Attached are the logins and COCs information for SDG: 11K205. Please review and let me know if there are any corrections necessary. Thanks.

Ye Myint
Project Manager
EMAX Laboratories, Inc.
1835W 205th. St.
Torrance. CA 90501
Ph: 310-618-8889 x121
Fax: 310-618-0818
E-mail: ymyint@emaxlabs.com

[illegible]

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11K217

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K217

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of five (5) water samples were received on 11/23/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary form for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for VO03K27L/C were all within QC limits.
Percent recoveries for VO03K28L/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K217
Instrument ID : T-003

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V003K27B	1	NA	11/28/1118:15	11/28/1118:15	RKB440	RHB444	V003K27	Method Blank
LCS1W	V003K27L	1	NA	11/28/1116:31	11/28/1116:31	RKB437	RHB444	V003K27	Lab Control Sample (LCS)
LCD1W	V003K27C	1	NA	11/28/1117:04	11/28/1117:04	RKB438	RHB444	V003K27	LCS Duplicate
IR-70-EB-171	K217-04	1	NA	11/28/1120:37	11/28/1120:37	RKB444	RHB444	V003K27	Field Sample
IR-70-TB-168	K217-05	1	NA	11/28/1121:13	11/28/1121:13	RKB445	RHB444	V003K27	Field Sample
MW-70-03-169	K217-01	1	NA	11/28/1123:31	11/28/1123:31	RKB449	RHB444	V003K27	Field Sample
MW-70-43A-170	K217-02	1	NA	11/29/1100:05	11/29/1100:05	RKB450	RHB444	V003K27	Field Sample
MW-70-14-172	K217-03	1	NA	11/29/1100:39	11/29/1100:39	RKB451	RHB444	V003K27	Field Sample
MBLK2W	V003K28B	1	NA	11/29/1110:55	11/29/1110:55	RKB461	RHB444	V003K28	Method Blank
LCS2W	V003K28L	1	NA	11/29/1109:08	11/29/1109:08	RKB458	RHB444	V003K28	Lab Control Sample (LCS)
LCD2W	V003K28C	1	NA	11/29/1109:43	11/29/1109:43	RKB459	RHB444	V003K28	LCS Duplicate
MW-70-14-172DL	K217-03T	10	NA	11/29/1111:33	11/29/1111:33	RKB462	RHB444	V003K28	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/23/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/23/11
Batch No. : 11K217	Date Extracted: 11/28/11 23:31
Sample ID: MW-70-03-169	Date Analyzed: 11/28/11 23:31
Lab Samp ID: K217-01	Dilution Factor: 1
Lab File ID: RKB449	Matrix : WATER
Ext Btch ID: V003K27	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	0.42J	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	1.6	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	6.1J	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	7.6	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	0.25J	1.0	0.20
TRICHLOROETHENE	8.9	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	0.45J	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.0	10.00	100	70-140
4-BROMOFLUOROBENZENE	9.56	10.00	95.6	70-130
TOLUENE-D8	9.31	10.00	93.1	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/23/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/23/11
Batch No. : 11K217	Date Extracted: 11/29/11 00:05
Sample ID: MW-70-43A-170	Date Analyzed: 11/29/11 00:05
Lab Samp ID: K217-02	Dilution Factor: 1
Lab File ID: RKB450	Matrix : WATER
Ext Btch ID: V003K27	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	0.22J	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	0.26J	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	0.22J	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.71	10.00	97.1	70-140
4-BROMOFLUOROBENZENE	9.68	10.00	96.8	70-130
TOLUENE-D8	9.21	10.00	92.1	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/23/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/23/11
Batch No. : 11K217	Date Extracted: 11/29/11 00:39
Sample ID: MW-70-14-172	Date Analyzed: 11/29/11 00:39
Lab Samp ID: K217-03	Dilution Factor: 1
Lab File ID: RKB451	Matrix : WATER
Ext Btch ID: V003K27	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	2.1	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.25J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	280E	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	29	1.0	0.20
TRICHLOROETHENE	0.89J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	1.2	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.41	10.00	94.1	70-140
4-BROMOFLUOROBENZENE	9.92	10.00	99.2	70-130
TOLUENE-D8	9.25	10.00	92.5	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/23/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/23/11
Batch No. : 11K217	Date Extracted: 11/29/11 11:33
Sample ID: MW-70-14-172DL	Date Analyzed: 11/29/11 11:33
Lab Samp ID: K217-03T	Dilution Factor: 10
Lab File ID: RKB462	Matrix : WATER
Ext Btch ID: VO03K28	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	10	2.0
1,1,1,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2,2-TETRACHLOROETHANE	ND	10	2.0
1,1,2-TRICHLOROETHANE	ND	10	2.0
FREON113	ND	10	3.0
1,1-DICHLOROETHANE	ND	10	2.0
1,1-DICHLOROETHENE	2.3J	5.0	2.0
1,1-DICHLOROPROPENE	ND	10	2.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	20	5.0
1,2-DIBROMOETHANE	ND	10	2.0
1,2-DICHLOROBENZENE	ND	10	2.0
1,2-DICHLOROETHANE	ND	5.0	2.0
1,2-DICHLOROPROPANE	ND	10	2.0
1,2,3-TRICHLOROBENZENE	ND	10	3.0
1,2,3-TRICHLOROPROPANE	ND	10	5.0
1,2,4-TRICHLOROBENZENE	ND	10	3.0
1,2,4-TRIMETHYLBENZENE	ND	10	2.0
1,3-DICHLOROBENZENE	ND	10	2.0
1,3,5-TRIMETHYLBENZENE	ND	10	2.0
1,4-DICHLOROBENZENE	ND	10	2.0
2-BUTANONE	ND	100	40
2-CHLOROTOLUENE	ND	10	2.0
2-HEXANONE	ND	100	40
2,2-DICHLOROPROPANE	ND	10	2.0
4-CHLOROTOLUENE	ND	10	2.0
4-METHYL-2-PENTANONE	ND	100	40
N-BUTYLBENZENE	ND	10	2.0
N-PROPYLBENZENE	ND	10	2.0
P-ISOPROPYLTOLUENE	ND	10	2.0
SEC-BUTYLBENZENE	ND	10	2.0
TERT-BUTYLBENZENE	ND	10	2.0
ACETONE	ND	100	50
BENZENE	ND	10	2.0
BROMOBENZENE	ND	10	2.0
BROMODICHLOROMETHANE	ND	10	2.0
CIS-1,3-DICHLOROPROPENE	ND	10	2.0
TRANS-1,3-DICHLOROPROPENE	ND	10	2.0
BROMOMETHANE	ND	20	3.0
BROMOFORM	ND	10	3.0
CARBON DISULFIDE	ND	10	2.0
CARBON TETRACHLORIDE	ND	5.0	2.0
CHLOROBENZENE	ND	10	2.0
CHLOROETHANE	ND	20	3.0
CHLOROFORM	ND	10	2.0
CHLOROMETHANE	ND	20	3.0
CIS-1,2-DICHLOROETHENE	450	10	2.0
DICHLORODIFLUOROMETHANE	ND	20	3.0
DIBROMOCHLOROMETHANE	ND	10	2.0
DIBROMOMETHANE	ND	10	2.0
ETHYLBENZENE	ND	10	2.0
HEXACHLOROBUTADIENE	ND	10	3.0
ISOPROPYL BENZENE	ND	10	2.0
METHYLENE CHLORIDE	ND	10	5.0
MTBE	ND	10	2.0
STYRENE	ND	10	2.0
TETRACHLOROETHYLENE	ND	10	2.0
TOLUENE	ND	10	2.0
TRANS-1,2-DICHLOROETHENE	31	10	2.0
TRICHLOROETHENE	ND	50	2.0
TRICHLOROFLUOROMETHANE	ND	20	3.0
VINYL CHLORIDE	ND	5.0	2.0
XYLENES (TOTAL)	ND	20	6.0
M/P-XYLENES	ND	10	4.0
O-XYLENE	ND	10	2.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	87.9	100.0	87.9	70-140
4-BROMOFLUOROBENZENE	97.8	100.0	97.8	70-130
TOLUENE-D8	95.2	100.0	95.2	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/23/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/23/11
Batch No. : 11K217	Date Extracted: 11/28/11 20:37
Sample ID: IR-70-EB-171	Date Analyzed: 11/28/11 20:37
Lab Samp ID: K217-04	Dilution Factor: 1
Lab File ID: RKB444	Matrix : WATER
Ext Btch ID: V003K27	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	0.24J	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	0.25J	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	0.30J	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.15	10.00	91.5	70-140
4-BROMOFLUOROBENZENE	9.83	10.00	98.3	70-130
TOLUENE-D8	9.49	10.00	94.9	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/23/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/23/11
Batch No. : 11K217	Date Extracted: 11/28/11 21:13
Sample ID: IR-70-TB-168	Date Analyzed: 11/28/11 21:13
Lab Samp ID: K217-05	Dilution Factor: 1
Lab File ID: RKB445	Matrix : WATER
Ext Btch ID: V003K27	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.19	10.00	91.9	70-140
4-BROMOFLUOROBENZENE	9.90	10.00	99.0	70-130
TOLUENE-D8	9.38	10.00	93.8	70-140

QC SUMMARIES

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/28/11
Batch No.	: 11K217	Date Extracted:	11/28/11 18:15
Sample ID:	MBLK1W	Date Analyzed:	11/28/11 18:15
Lab Samp ID:	V003K27B	Dilution Factor:	1
Lab File ID:	RKB440	Matrix :	WATER
Ext Btch ID:	V003K27	% Moisture :	NA
Calib. Ref.:	RHB444	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.94	10.00	89.4	70-140
4-BROMOFLUOROBENZENE	9.38	10.00	93.8	70-130
TOLUENE-D8	9.36	10.00	93.6	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K217
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	V003K27B	V003K27L	V003K27C		
LAB FILE ID:	RKB440	RKB437	RKB438		
DATE EXTRACTED:	11/28/1118:15	11/28/1116:31	11/28/1117:04	DATE COLLECTED:	NA
DATE ANALYZED:	11/28/1118:15	11/28/1116:31	11/28/1117:04	DATE RECEIVED:	11/28/11
PREP. BATCH:	V003K27	V003K27	V003K27		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.98	100	10.0	9.83	98	2	60-130	30
Benzene	ND	10.0	10.7	107	10.0	10.6	106	1	70-130	30
Chlorobenzene	ND	10.0	10.7	107	10.0	10.4	104	3	70-120	30
Toluene	ND	10.0	10.4	104	10.0	10.2	102	2	70-130	30
Trichloroethene	ND	10.0	10.0	100	10.0	10.0	100	0	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.83	88	10.0	8.46	85	70-140
4-Bromofluorobenzene	10.0	9.80	98	10.0	9.98	100	70-130
Toluene-d8	10.0	9.42	94	10.0	9.44	94	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/29/11
Batch No. : 11K217	Date Extracted: 11/29/11 10:55
Sample ID: MBLK2W	Date Analyzed: 11/29/11 10:55
Lab Samp ID: V003K28B	Dilution Factor: 1
Lab File ID: RKB461	Matrix : WATER
Ext Btch ID: V003K28	% Moisture : NA
Calib. Ref.: RHB444	Instrument ID : T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8.77	10.00	87.7	70-140
4-BROMOFLUOROBENZENE	9.55	10.00	95.5	70-130
TOLUENE-D8	9.38	10.00	93.8	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K217
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	V003K28B	V003K28L	V003K28C		
LAB FILE ID:	RKB461	RKB458	RKB459		
DATE EXTRACTED:	11/29/1110:55	11/29/1109:08	11/29/1109:43	DATE COLLECTED:	NA
DATE ANALYZED:	11/29/1110:55	11/29/1109:08	11/29/1109:43	DATE RECEIVED:	11/29/11
PREP. BATCH:	V003K28	V003K28	V003K28		
CALIB. REF:	RHB444	RHB444	RHB444		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.18	92	10.0	9.07	91	1	60-130	30
Benzene	ND	10.0	9.78	98	10.0	9.89	99	1	70-130	30
Chlorobenzene	ND	10.0	10.2	102	10.0	10.2	102	1	70-120	30
Toluene	ND	10.0	9.53	95	10.0	9.67	97	2	70-130	30
Trichloroethene	ND	10.0	9.77	98	10.0	9.81	98	0	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	8.98	90	10.0	8.70	87	70-140
4-Bromofluorobenzene	10.0	9.45	95	10.0	9.44	94	70-130
Toluene-d8	10.0	9.28	93	10.0	9.46	95	70-130

INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RHB438
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K217
BFB Injection Date : 08/16/11
BFB Injection Time : 11:15
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	26.25
75	30.0 - 60.0% of mass 95	54.23
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.88
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	60.88
175	5.0 - 9.0% of mass 174	4.93(8.1)1
176	95.0 - 101.0% of mass 174	58.41(96.0)1
177	5.0 - 9.0% of mass 176	4.58(7.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	VO03H161	RHB439	08/16/11	11:49
2	VSTD0.5	VO03H162	RHB440	08/16/11	12:24
3	VSTD01	VO03H163	RHB441	08/16/11	12:57
4	VSTD02	VO03H164	RHB442	08/16/11	13:32
5	VSTD05	VO03H165	RHB443	08/16/11	14:06
6	VSTD010	VO03H166	RHB444	08/16/11	14:40
7	VSTD020	VO03H167	RHB445	08/16/11	15:14
8	VSTD030	VO03H168	RHB446	08/16/11	15:48
9	VSTD040	VO03H169	RHB447	08/16/11	16:21
10	VSTD050	VO03H1610	RHB448	08/16/11	16:56
11	VSTD100	VO03H1611	RHB449	08/16/11	17:30
12	VSTD010	IVO03H161	RHB452	08/16/11	19:13

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :03
Beginning DateTime :08/16/11 11:49
Spike Units :PPB
IC File :RHB444

Column Spec :ZB-624 ID :0.25MM
Ending DateTime :08/16/11 17:30
HPChem Method :V003H16

M	IDX	Parameters	.3 11:49 RHB439	.5 12:24 RHB440	1 12:57 RHB441	2 13:32 RHB442	5 14:06 RHB443	10 14:40 RHB444	20 15:14 RHB445	30 15:48 RHB446	40 16:21 RHB447	50 16:56 RHB448	100 17:30 RHB449	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	1	0	13.2029
	2	Chlorotrifluoroethylene	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	3	Dichlorodifluoromethane	0.333	0.326	0.343	0.357	0.358	0.429	0.335	0.363	0.324	0.341	0.375	0.353	8.52	4.1126
	4	Dichlorotetrafluoroethane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	5	Chloromethane	0.323	0.300	0.336	0.346	0.362	0.430	0.350	0.384	0.342	0.356	0.394	0.357	10.00	4.6120
	6	2-Chloro-1,1,1-trifluoroethane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	7	Vinyl chloride	0.290	0.283	0.319	0.335	0.351	0.415	0.336	0.355	0.320	0.334	0.372	0.337	10.93	4.9340
	8	Bromomethane	0.218	0.200	0.221	0.218	0.234	0.281	0.230	0.245	0.221	0.224	0.202	0.227	9.78	5.8582
	9	Chloroethane	0.155	0.158	0.171	0.167	0.178	0.217	0.174	0.189	0.173	0.178	0.189	0.177	9.63	6.1356
	10	Dichlorofluoromethane	0.720	0.721	0.765	0.755	0.776	0.817	0.754	0.797	0.735	0.750	0.809	0.764	4.35	6.6727
	11	Trichlorofluoromethane	0.483	0.478	0.529	0.539	0.564	0.666	0.530	0.573	0.516	0.533	0.585	0.545	9.58	6.7323
5	12	Acrolein	------	------	0.008	0.007	0.008	0.009	0.009	0.010	0.010	------	------	0.009	13.95	7.8523
	13	1,1,2-Trichloro-1,2,2-trifluoroethane	0.214	0.200	0.199	0.192	0.199	0.213	0.198	0.208	0.194	0.200	0.216	0.203	4.08	7.9826
5	14	Acetone	------	------	0.045	0.038	0.038	0.040	0.036	0.036	0.035	0.037	0.042	0.039	8.41	8.1846
	15	1,1-Dichloroethene	0.666	0.641	0.683	0.681	0.707	0.726	0.649	0.690	0.620	0.646	0.690	0.673	4.65	8.0029
	16	Methyl acetate	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	17	Iodomethane	0.595	0.558	0.625	0.620	0.644	0.683	0.622	0.668	0.610	0.629	0.689	0.631	6.13	8.3899
	18	Carbon disulfide	1.096	1.194	1.329	1.365	1.443	1.326	1.392	1.540	1.350	1.429	1.420	1.353	8.97	8.5144
	19	Methylene chloride	0.499	0.472	0.484	0.467	0.481	0.496	0.455	0.480	0.438	0.456	0.503	0.475	4.30	9.0800
5	20	tert-Butyl alcohol	------	0.011	0.011	0.011	0.012	0.013	0.012	0.012	0.011	0.012	0.014	0.012	6.87	9.2881
	21	tert-Butyl methyl ether (MTBE)	0.490	0.469	0.498	0.473	0.489	0.517	0.482	0.491	0.455	0.480	0.531	0.489	4.37	9.5102
	22	trans-1,2-Dichloroethene	0.675	0.662	0.683	0.699	0.701	0.732	0.668	0.711	0.642	0.662	0.708	0.686	3.87	9.5711
5	23	Acrylonitrile	0.033	0.031	0.034	0.033	0.035	0.038	0.036	0.038	0.035	0.037	0.041	0.036	7.73	9.6022
	24	Isopropyl ether (DIPE)	1.151	1.115	1.209	1.191	1.227	1.299	1.169	1.239	1.128	1.181	1.246	1.196	4.59	10.3302
	25	Vinyl acetate	------	0.309	0.374	0.410	0.409	0.470	0.412	0.419	0.353	0.382	0.476	0.401	12.58	10.3881
	26	1,1-Dichloroethane	0.733	0.691	0.747	0.754	0.775	0.806	0.727	0.770	0.691	0.721	0.755	0.743	4.72	10.3695
5	27	2-Butanol	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	28	tert-Butyl ethyl ether (ETBE)	0.820	0.794	0.868	0.845	0.869	0.915	0.834	0.888	0.805	0.851	0.926	0.856	4.96	10.9486
	29	2,2-Dichloropropane	0.645	0.638	0.680	0.663	0.654	0.651	0.579	0.585	0.526	0.522	0.512	0.605	10.34	11.3261
5	30	2-Butanone	0.080	0.076	0.068	0.060	0.063	0.068	0.062	0.063	0.060	0.062	0.067	0.066	10.11	11.3546
	31	cis-1,2-Dichloroethene	0.374	0.367	0.389	0.395	0.396	0.418	0.383	0.409	0.369	0.382	0.398	0.389	4.16	11.3600
	32	Bromochloromethane	0.290	0.292	0.316	0.301	0.313	0.334	0.301	0.316	0.291	0.302	0.324	0.307	4.66	11.7699
	33	Tetrahydrofuran	------	0.040	0.045	0.038	0.038	0.036	0.036	0.036	0.033	0.035	0.041	0.038	8.93	11.8229
	34	Chloroform	0.779	0.771	0.815	0.825	0.841	0.878	0.785	0.834	0.750	0.776	0.822	0.807	4.69	11.8606
5	35	tert-Amyl alcohol	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	36	Dibromofluoromethane	------	------	------	------	0.389	0.390	0.366	0.381	0.347	0.360	0.368	0.372	4.23	12.1220
	37	1,1,1-Trichloroethane	0.737	0.711	0.742	0.756	0.766	0.787	0.702	0.733	0.656	0.674	0.689	0.723	5.57	12.1312
	38	Cyclohexane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	39	tert-Amyl methyl ether (TAME)	0.119	0.125	0.141	0.132	0.137	0.146	0.130	0.135	0.124	0.128	0.137	0.132	5.96	12.7415
	40	1,2-Dichloroethane-d4	------	------	------	------	0.405	0.399	0.376	0.375	0.347	0.364	0.381	0.378	5.20	12.6515
	41	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	1	0	17.1946
	42	1,1-Dichloropropene	0.194	0.191	0.194	0.202	0.199	0.214	0.195	0.210	0.187	0.194	0.202	0.198	4.08	12.3667
	43	Carbon tetrachloride	0.651	0.632	0.695	0.701	0.694	0.726	0.654	0.705	0.628	0.664	0.700	0.677	4.82	12.3748
	44	Benzene	1.610	1.539	1.609	1.645	1.618	1.728	1.560	1.733	1.533	1.641	------	1.622	4.28	12.7061
	45	1,2-Dichloroethane	0.477	0.486	0.520	0.521	0.517	0.534	0.479	0.506	0.456	0.484	0.524	0.500	5.00	12.7645
	46	Trichloroethene	0.439	0.414	0.425	0.434	0.440	0.469	0.434	0.477	0.426	0.452	0.484	0.445	5.11	13.6183
	47	Methylcyclohexane	------	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	48	1,2-Dichloropropane	0.392	0.391	0.404	0.409	0.418	0.443	0.407	0.444	0.391	0.421	0.444	0.415	5.04	13.9674
20	49	1,4-Dioxane	------	------	------	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	13.98	14.1284
	50	Dibromomethane	0.173	0.185	0.186	0.192	0.196	0.207	0.195	0.208	0.188	0.203	0.223	0.196	7.00	14.1839
	51	Bromodichloromethane	0.568	0.548	0.588	0.615	0.635	0.668	0.614	0.663	0.593	0.639	0.688	0.620	7.03	14.3490
	52	2-Chloroethyl vinyl ether	0.127	0.109	0.107	0.108	0.119	0.128	0.126	0.136	0.125	0.135	0.157	0.125	11.72	14.6453
	53	cis-1,3-Dichloropropene	0.559	0.576	0.607	0.629	0.639	0.692	0.640	0.694	0.622	0.667	0.716	0.640	7.70	14.9159
5	54	4-Methyl-2-pentanone	0.216	0.203	0.202	0.183	0.194	0.211	0.195	0.203	0.189	0.204	0.221	0.202	5.64	15.0350
	55	Toluene-d8	------	------	------	------	1.414	1.463	1.383	1.491	1.335	1.437	------	1.420	3.97	15.2566
	56	Toluene	1.743	1.699	1.754	1.765	1.767	1.866	1.709	1.870	1.659	1.763	------	1.759	3.81	15.3480
	57	Ethyl methacrylate	0.317	0.290	0.311	0.307	0.328	0.349	0.328	0.342	0.314	0.337	0.367	0.326	6.64	15.5912
	58	trans-1,3-Dichloropropene	0.444	0.436	0.476	0.491	0.506	0.549	0.503	0.533	0.486	0.523	0.562	0.501	8.00	15.6345

SW 8/18/11

	59	1,1,2-Trichloroethane	0.200	0.210	0.215	0.211	0.215	0.232	0.213	0.227	0.205	0.220	0.240	0.217	5.48	15.9132
	60	Tetrachloroethene	0.394	0.381	0.379	0.375	0.383	0.402	0.368	0.401	0.355	0.377	0.390	0.382	3.71	16.0891
5	61	2-Hexanone	0.124	0.136	0.139	0.124	0.131	0.145	0.133	0.136	0.126	0.134	0.139	0.133	4.95	16.1081
	62	1,3-Dichloropropane	0.394	0.407	0.439	0.435	0.440	0.467	0.430	0.451	0.411	0.435	0.468	0.434	5.43	16.1405
	63	Dibromochloromethane	0.269	0.276	0.295	0.307	0.323	0.349	0.331	0.351	0.320	0.343	0.374	0.322	10.17	16.4869
	64	1,2-Dibromoethane	0.219	0.212	0.227	0.229	0.237	0.254	0.241	0.251	0.231	0.246	0.270	0.238	7.10	16.6723
	65	1-Chlorohexane	0.806	0.829	0.818	0.818	0.821	0.858	0.797	0.855	0.760	0.800	0.812	0.816	3.31	17.0363
	66	Chlorobenzene	1.013	0.966	0.986	1.007	1.015	1.077	0.995	1.068	0.945	0.996	1.033	1.009	3.91	17.2366
	67	Ethylbenzene	2.214	2.216	2.257	2.290	2.286	2.401	2.175	2.333	------	------	------	2.272	3.20	17.2809
	68	1,1,1,2-Tetrachloroethane	0.351	0.348	0.375	0.382	0.379	0.408	0.371	0.398	0.352	0.374	0.383	0.375	5.09	17.3137
2	69	m-Xylene & p-Xylene	1.793	1.710	1.756	1.784	1.773	1.830	1.658	1.696	------	------	------	1.750	3.27	17.4093
	70	o-Xylene	1.787	1.675	1.748	1.756	1.739	1.810	1.626	1.732	1.506	1.591	------	1.697	5.67	17.9438
	71	Styrene	1.054	1.000	1.088	1.118	1.153	1.209	1.104	1.164	1.021	1.074	1.058	1.095	5.77	17.9672
	72	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	1	0	20.7222
	73	Isopropylbenzene	5.858	5.671	5.633	5.810	5.728	5.928	5.332	5.949	5.238	5.551	------	5.670	4.24	18.3621
	74	Bromoform	0.324	0.344	0.368	0.382	0.408	0.454	0.425	0.465	0.423	0.454	0.497	0.413	13.02	18.3529
	75	4-Bromofluorobenzene	------	------	------	------	1.571	1.602	1.509	1.625	1.474	------	------	1.556	4.08	18.6495
	76	1,1,2,2-Tetrachloroethane	0.772	0.704	0.722	0.721	0.745	0.787	0.727	0.787	0.711	0.765	0.847	0.753	5.72	18.7926
	77	trans-1,4-Dichloro-2-butene	0.242	0.213	0.220	0.226	0.232	0.251	0.250	0.269	0.242	0.260	0.284	0.244	8.79	18.8292
	78	n-Propylbenzene	8.224	8.356	7.993	8.230	8.165	8.440	7.620	8.477	7.035	------	------	8.060	5.75	18.8738
	79	1,2,3-Trichloropropane	0.148	0.180	0.183	0.183	0.182	0.189	0.172	0.183	0.160	0.171	0.176	0.175	6.81	18.8927
	80	Bromobenzene	1.099	1.123	1.157	1.144	1.155	1.202	1.089	1.207	1.063	1.135	1.187	1.142	4.08	18.9131
	81	1,3,5-Trimethylbenzene	5.021	4.935	4.880	5.015	4.948	5.155	4.658	5.132	4.444	4.689	------	4.888	4.63	19.0498
	82	2-Chlorotoluene	5.177	5.066	5.093	5.142	5.099	5.296	4.742	5.233	4.586	4.857	------	5.029	4.52	19.0899
	83	4-Chlorotoluene	4.375	4.251	4.270	4.354	4.458	4.591	4.187	4.627	4.062	4.288	------	4.346	4.03	19.2165
	84	tert-Butylbenzene	1.029	0.977	0.964	0.977	0.993	1.020	0.928	1.019	0.887	0.930	0.935	0.969	4.68	19.5152
	85	1,2,4-Trimethylbenzene	4.786	4.599	4.661	4.724	4.753	4.900	4.450	4.909	4.270	4.452	------	4.650	4.48	19.5692
	86	sec-Butylbenzene	6.721	6.468	6.448	6.425	6.464	6.693	6.076	6.628	5.748	6.015	------	6.369	5.02	19.7895
	87	p-Isopropyltoluene	4.919	4.972	4.842	4.954	5.082	5.267	4.766	5.175	4.496	4.694	------	4.917	4.68	19.9309
	88	1,3-Dichlorobenzene	2.180	2.099	2.105	2.143	2.217	2.322	2.149	2.351	2.047	2.200	2.279	2.190	4.38	20.0957
	89	1,4-Dichlorobenzene	1.974	1.957	1.960	1.989	2.042	2.192	2.013	2.184	1.927	2.020	2.150	2.037	4.65	20.2012
	90	n-Butylbenzene	5.497	5.378	5.308	5.435	5.582	5.847	5.333	5.742	4.986	5.191	------	5.430	4.68	20.4876
	91	1,2-Dichlorobenzene	1.635	1.630	1.645	1.640	1.673	1.784	1.636	1.768	1.569	1.668	1.777	1.675	4.20	20.7520
	92	1,2-Dibromo-3-chloropropane	------	0.071	0.077	0.076	0.085	0.093	0.090	0.095	0.088	0.094	------	0.085	10.04	21.8756
	93	1,2,4-Trichlorobenzene	0.793	0.757	0.731	0.751	0.832	0.913	0.883	0.926	0.849	0.893	1.017	0.850	10.33	23.1186
	94	Hexachlorobutadiene	0.813	0.765	0.736	0.736	0.774	0.844	0.780	0.806	0.730	0.749	0.825	0.778	5.07	23.2512
	95	Naphthalene	0.985	0.890	0.921	0.924	1.070	1.223	1.223	1.249	1.184	1.282	------	1.095	14.07	23.6207
	96	1,2,3-Trichlorobenzene	0.569	0.526	0.548	0.555	0.608	0.669	0.660	0.675	0.632	0.667	0.753	0.624	11.07	24.0414

Spike Amount = Nominal Amount * M

Ave_%RSD : 6.5 Max_%RSD : 14.1

8/18/11

2018

SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :03
IC_Beginning DateTime :08/16/11 11:49
Spike Amount :10 PPB
CC/CV File :RHB452
IC File :RHB444

Column Spec :ZB-624 ID :0.25MM
IC_Ending DateTime :08/16/11 17:30
HPChem Method :V003H16
Date_Time :08/16/11 19:13

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	1964342	1	1	13.207	13.203	0				
	2	Chlorotrifluoroethylene												
	3	Dichlorodifluoromethane	10.093	0.9	699900	0.356	0.353	4.112	4.113	8.52				
	4	Dichlorotetrafluoroethane												
	5	Chloromethane	10.630	6.3	744562	0.379	0.357	4.618	4.612	10.00				
	6	2-Chloro-1,1,1-trifluoroethane												
	7	Vinyl chloride	10.627	6.3	704186	0.358	0.337	4.931	4.934	10.93				
	8	Bromomethane	11.072	10.7	493194	0.251	0.227	5.869	5.858	9.78				
	9	Chloroethane	10.559	5.6	367718	0.187	0.177	6.151	6.136	9.63				
	10	Dichlorofluoromethane	9.808	-1.9	1471244	0.749	0.764	6.672	6.673	4.35				
	11	Trichlorofluoromethane	10.147	1.5	1086354	0.553	0.545	6.747	6.732	9.58				
5	12	Acrolein	48.279	-3.4	84307	0.009	0.009	7.848	7.852	13.95				
	13	1,1,2-Trichloro-1,2,2-trifluoroethane	9.633	-3.7	384110	0.196	0.203	7.982	7.983	4.08				
5	14	Acetone	45.661	-8.7	346459	0.035	0.039	8.191	8.185	8.41				
	15	1,1-Dichloroethene	9.833	-1.7	1299399	0.661	0.673	8.012	8.003	4.65				
	16	Methyl acetate												
	17	Iodomethane	9.877	-1.2	1224692	0.623	0.631	8.399	8.390	6.13				
	18	Carbon disulfide	9.749	-2.5	2591704	1.319	1.353	8.518	8.514	8.97				
	19	Methylene chloride	9.496	-5.0	886710	0.451	0.475	9.084	9.080	4.30				
5	20	tert-Butyl alcohol	48.030	-3.9	113617	0.012	0.012	9.277	9.288	6.87				
	21	tert-Butyl methyl ether (MTBE)	9.404	-6.0	902635	0.460	0.489	9.500	9.510	4.37				
	22	trans-1,2-Dichloroethene	9.789	-2.1	1318564	0.671	0.686	9.575	9.571	3.87				
5	23	Acrylonitrile	47.722	-4.6	332995	0.034	0.036	9.604	9.602	7.73				
	24	Isopropyl ether (DIPE)	9.920	-0.8	2330749	1.187	1.196	10.334	10.330	4.59				
	25	Vinyl acetate	9.528	-4.7	751324	0.382	0.401	10.378	10.388	12.58				
	26	1,1-Dichloroethane	9.930	-0.7	1448484	0.737	0.743	10.378	10.370	4.72				
5	27	2-Butanol												
	28	tert-Butyl ethyl ether (ETBE)	9.593	-4.1	1613230	0.821	0.856	10.944	10.949	4.96				
	29	2,2-Dichloropropane	9.497	-5.0	1128621	0.575	0.605	11.331	11.326	10.34				
5	30	2-Butanone	45.732	-8.5	593514	0.060	0.066	11.346	11.355	10.11				
	31	cis-1,2-Dichloroethene	9.895	-1.0	756535	0.385	0.389	11.361	11.360	4.16				
	32	Bromochloromethane	9.603	-4.0	579777	0.295	0.307	11.778	11.770	4.66				
	33	Tetrahydrofuran	8.976	-10.2	66683	0.034	0.038	11.822	11.823	8.93				
	34	Chloroform	9.825	-1.8	1557374	0.793	0.807	11.867	11.861	4.69				
5	35	tert-Amyl alcohol												
	36	Dibromofluoromethane	9.783	-2.2	713957	0.363	0.372	12.120	12.122	4.23				
	37	1,1,1-Trichloroethane	10.014	0.1	1422256	0.724	0.723	12.135	12.131	5.57				
	38	Cyclohexane												
	39	tert-Amyl methyl ether (TAME)	9.629	-3.7	250003	0.127	0.132	12.745	12.741	5.96				
	40	1,2-Dichloroethane-d4	9.565	-4.4	710649	0.362	0.378	12.656	12.651	5.20				
	41	CHLOROBENZENE-D5	10.000	0	1798817	1	1	17.196	17.195	0				
	42	1,1-Dichloropropene	10.046	0.5	358644	0.199	0.198	12.373	12.367	4.08				
	43	Carbon tetrachloride	9.973	-0.3	1214995	0.675	0.677	12.373	12.375	4.82				
	44	Benzene	9.859	-1.4	2875933	1.599	1.622	12.700	12.706	4.28				
	45	1,2-Dichloroethane	9.612	-3.9	865253	0.481	0.500	12.760	12.764	5.00				
	46	Trichloroethene	9.753	-2.5	780754	0.434	0.445	13.623	13.618	5.11				
	47	Methylcyclohexane												
	48	1,2-Dichloropropane	9.773	-2.3	729684	0.406	0.415	13.966	13.967	5.04				
20	49	1,4-Dioxane	183.576	-8.2	42494	0.001	0.001	14.129	14.128	13.98				
	50	Dibromomethane	9.611	-3.9	338874	0.188	0.196	14.189	14.184	7.00				
	51	Bromodichloromethane	9.825	-1.8	1095495	0.609	0.620	14.353	14.349	7.03				
	52	2-Chloroethyl vinyl ether	9.067	-9.3	204114	0.113	0.125	14.650	14.645	11.72				
	53	cis-1,3-Dichloropropene	9.692	-3.1	1116066	0.620	0.640	14.918	14.916	7.70				
5	54	4-Methyl-2-pentanone	47.294	-5.4	1718865	0.191	0.202	15.037	15.035	5.64				
	55	Toluene-d8	9.655	-3.5	2466873	1.371	1.420	15.261	15.257	3.97				
	56	Toluene	9.993	-0.1	3162952	1.758	1.759	15.350	15.348	3.81				
	57	Ethyl methacrylate	9.621	-3.8	564739	0.314	0.326	15.588	15.591	6.64				
	58	trans-1,3-Dichloropropene	9.804	-2.0	883251	0.491	0.501	15.633	15.634	8.00				
	59	1,1,2-Trichloroethane	9.563	-4.4	373487	0.208	0.217	15.915	15.913	5.48				

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	60	Tetrachloroethene	9.848	-1.5	677306	0.377	0.382	16.094	16.089	3.71				
5	61	2-Hexanone	48.468	-3.1	1163929	0.129	0.133	16.109	16.108	4.95				
	62	1,3-Dichloropropane	9.655	-3.5	754490	0.419	0.434	16.139	16.140	5.43				
	63	Dibromochloromethane	9.885	-1.1	571900	0.318	0.322	16.481	16.487	10.17				
	64	1,2-Dibromoethane	9.766	-2.3	417971	0.232	0.238	16.675	16.672	7.10				
	65	1-Chlorohexane	9.962	-0.4	1461845	0.813	0.816	17.032	17.036	3.31				
	66	Chlorobenzene	9.849	-1.5	1787931	0.994	1.009	17.240	17.237	3.91				
	67	Ethylbenzene	9.937	-0.6	4060376	2.257	2.272	17.285	17.281	3.20				
	68	1,1,1,2-Tetrachloroethane	10.061	0.6	678042	0.377	0.375	17.315	17.314	5.09				
2	69	m-Xylene & p-Xylene	19.693	-1.5	6198937	1.723	1.750	17.404	17.409	3.27				
	70	o-Xylene	9.947	-0.5	3036203	1.688	1.697	17.940	17.944	5.67				
	71	Styrene	10.236	2.4	2015906	1.121	1.095	17.969	17.967	5.77				
	72	1,2-DICHLOROBENZENE-D4	10.000	0	640128	1	1	20.723	20.722	0				
	73	Isopropylbenzene	9.728	-2.7	3530678	5.516	5.670	18.357	18.362	4.24				
	74	Bromoform	9.443	-5.6	249695	0.390	0.413	18.357	18.353	13.02				
	75	4-Bromofluorobenzene	9.646	-3.5	960964	1.501	1.556	18.654	18.649	4.08				
	76	1,1,2,2-Tetrachloroethane	9.148	-8.5	441198	0.689	0.753	18.788	18.793	5.72				
	77	trans-1,4-Dichloro-2-butene	9.162	-8.4	143359	0.224	0.244	18.833	18.829	8.79				
	78	n-Propylbenzene	9.830	-1.7	5072007	7.923	8.060	18.878	18.874	5.75				
	79	1,2,3-Trichloropropane	9.596	-4.0	107620	0.168	0.175	18.892	18.893	6.81				
	80	Bromobenzene	9.649	-3.5	705287	1.102	1.142	18.907	18.913	4.08				
	81	1,3,5-Trimethylbenzene	9.894	-1.1	3095769	4.836	4.888	19.041	19.050	4.63				
	82	2-Chlorotoluene	9.764	-2.4	3143279	4.910	5.029	19.086	19.090	4.52				
	83	4-Chlorotoluene	9.838	-1.6	2736995	4.276	4.346	19.220	19.216	4.03				
	84	tert-Butylbenzene	9.890	-1.1	613463	0.958	0.969	19.517	19.515	4.68				
	85	1,2,4-Trimethylbenzene	9.958	-0.4	2964568	4.631	4.650	19.562	19.569	4.48				
	86	sec-Butylbenzene	9.913	-0.9	4041314	6.313	6.369	19.785	19.789	5.02				
	87	p-Isopropyltoluene	10.093	0.9	3176708	4.963	4.917	19.934	19.931	4.68				
	88	1,3-Dichlorobenzene	9.880	-1.2	1385302	2.164	2.190	20.098	20.096	4.38				
	89	1,4-Dichlorobenzene	9.945	-0.6	1296892	2.026	2.037	20.202	20.201	4.65				
	90	n-Butylbenzene	10.239	2.4	3559056	5.560	5.430	20.485	20.488	4.68				
	91	1,2-Dichlorobenzene	9.828	-1.7	1053936	1.646	1.675	20.753	20.752	4.20				
	92	1,2-Dibromo-3-chloropropane	9.687	-3.1	53004	0.083	0.085	21.884	21.876	10.04				
	93	1,2,4-Trichlorobenzene	10.206	2.1	555050	0.867	0.850	23.119	23.119	10.33				
	94	Hexachlorobutadiene	10.504	5.0	523217	0.817	0.778	23.253	23.251	5.07				
	95	Naphthalene	10.499	5.0	736086	1.150	1.095	23.626	23.621	14.07				
	96	1,2,3-Trichlorobenzene	10.239	2.4	408911	0.639	0.624	24.042	24.041	11.07				

Spike Amount = Nominal Amount * M

Sw
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2021

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB435
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K217
BFB Injection Date : 11/28/11
BFB Injection Time : 15:24
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.72
75	30.0 - 60.0% of mass 95	51.77
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.49
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	59.44
175	5.0 - 9.0% of mass 174	4.29(7.2)1
176	95.0 - 101.0% of mass 174	57.09(96.1)1
177	5.0 - 9.0% of mass 176	3.93(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV003H1660	RKB436	11/28/11	15:58
2	MBLK1W	V003K27B	RKB440	11/28/11	18:15
3	LCS1W	V003K27L	RKB437	11/28/11	16:31
4	LCD1W	V003K27C	RKB438	11/28/11	17:04
5	IR-70-EB-171	K217-04	RKB444	11/28/11	20:37
6	IR-70-TB-168	K217-05	RKB445	11/28/11	21:13
7	MW-70-03-169	K217-01	RKB449	11/28/11	23:31
8	MW-70-43A-170	K217-02	RKB450	11/29/11	00:05
9	MW-70-14-172	K217-03	RKB451	11/29/11	00:39

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RHB444
Instrument ID: 03
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K217
Date Analyzed: 08/16/11
Time Analyzed: 14:40
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1861981	13.20	1722743	17.19	603523	20.72
	UPPER LIMIT	3723962	13.70	3445486	17.69	1207046	21.22
	LOWER LIMIT	930991	12.70	861372	16.69	301762	20.22
	SAMPLE ID						
1	VSTD010	2207040	13.17	2099134	17.16	674772	20.67
2	MBLK1W	2344900	13.16	2191234	17.15	726395	20.67
3	LCS1W	2212777	13.16	2062832	17.15	662265	20.68
4	LCD1W	2254918	13.16	2079546	17.15	648008	20.68
5	IR-70-EB-171	2187115	13.16	2021368	17.15	644549	20.68
6	IR-70-TB-168	2178948	13.16	2054034	17.14	652181	20.67
7	MW-70-03-169	2007918	13.16	1911279	17.15	628812	20.68
8	MW-70-43A-170	2265736	13.16	2169573	17.15	708220	20.68
9	MW-70-14-172	2226247	13.16	2122559	17.16	670217	20.67

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K28\RKB436.D Vial: 2
Acq On : 28 Nov 2011 3:58 pm Operator: CGM
Sample : CVO03H1660 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	119	0.00
2	T,M	Chlorotrifluoroethylene	-1.000	0.000	0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	11.186	-11.9	109	0.00
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	108	0.00
5	P,T,M	Chloromethane	10.000	10.939	-9.4	108	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000	0.0	0	-5.22#
7	C,T,M	Vinyl chloride	10.000	10.104	-1.0	97	0.02
8	T,M	Bromomethane	10.000	11.500	-15.0	110	0.00
9	T,M	Chloroethane	10.000	11.239	-12.4	109	0.00
10	T,M	Dichlorofluoromethane	10.000	10.570	-5.7	117	0.00
11	T,M	Trichlorofluoromethane	10.000	9.076	9.2	88	0.00
12	T,M	Acrolein	50.000	42.657	14.7	99	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.494	5.1	107	0.00
14	T,M	Acetone	50.000	53.170	-6.3	122	0.00
15	C,T,M	1,1-Dichloroethene	10.000	9.628	3.7	106	0.00
16	T,M	Methyl acetate	-1.000	0.000	0.0	121	0.00
17	T,M	Iodomethane	10.000	9.474	5.3	104	0.00
18	T,M	Carbon disulfide	10.000	11.093	-10.9	134	0.00
19	T,M	Methylene chloride	10.000	10.239	-2.4	116	0.00
20	T,M	tert-Butyl alcohol	50.000	48.718	2.6	105	0.00
21	T,M	tert-Butyl methyl ether (MT	10.000	10.524	-5.2	118	0.00
22	T,M	trans-1,2-Dichloroethene	10.000	9.856	1.4	110	0.00
23	T,M	Acrylonitrile	50.000	58.565	-17.1	129	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	10.692	-6.9	117	0.00
25	T,M	Vinyl acetate	10.000	8.382	16.2	85	0.00
26	P,T,M	1,1-Dichloroethane	10.000	10.053	-0.5	110	0.00
27	T,M	2-Butanol	-1.000	0.000	0.0	115	0.00
28	T,M	tert-Butyl ethyl ether (ETB	10.000	10.910	-9.1	121	0.00
29	T,M	2,2-Dichloropropane	10.000	10.030	-0.3	110	0.00
30	T,M	2-Butanone	50.000	52.988	-6.0	122	0.00
31	T,M	cis-1,2-Dichloroethene	10.000	10.230	-2.3	113	0.00
32	T,M	Bromochloromethane	10.000	11.017	-10.2	120	0.00
33	T,M	Tetrahydrofuran	10.000	11.674	-16.7	145	0.00
34	C,T,M	Chloroform	10.000	9.626	3.7	105	0.00
35	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	82	0.00
36	S	Dibromofluoromethane	10.000	9.612	3.9	109	0.00
37	T,M	1,1,1-Trichloroethane	10.000	9.114	8.9	99	0.00
38	T,M	Cyclohexane	-1.000	0.000	0.0	113	0.00
39	T,M	tert-Amyl methyl ether (TAM	10.000	10.677	-6.8	115	0.00
40	S	1,2-Dichloroethane-d4	10.000	9.262	7.4	104	0.00
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	122	0.00

(#) = Out of Range

2025

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K28\RKB436.D Vial: 2
Acq On : 28 Nov 2011 3:58 pm Operator: CGM
Sample : CVO03H1660 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M 1,1-Dichloropropene	10.000	9.565	4.4	108	0.00
43	T,M Carbon tetrachloride	10.000	8.437	15.6	96	0.00
44	T,M Benzene	10.000	10.072	-0.7	115	0.00
45	T,M 1,2-Dichloroethane	10.000	9.110	8.9	104	0.00
46	T,M Trichloroethene	10.000	9.356	6.4	108	0.00
47	T,M Methylcyclohexane	-1.000	0.000	0.0	101	0.00
48	C,T,M 1,2-Dichloropropane	10.000	10.775	-7.8	123	0.00
49	T,M 1,4-Dioxane	200.000	230.768	-15.4	141	0.00
50	T,M Dibromomethane	10.000	10.004	-0.0	116	0.00
51	T,M Bromodichloromethane	10.000	9.497	5.0	107	0.00
52	T,M 2-Chloroethyl vinyl ether	10.000	2.134 NT	78.7#	25	0.00
53	T,M cis-1,3-Dichloropropene	10.000	10.181	-1.8	115	0.00
54	T,M 4-Methyl-2-pentanone	50.000	53.628	-7.3	125	0.00
55	S Toluene-d8	10.000	9.166	8.3	108	0.00
56	C,T,M Toluene	10.000	9.874	1.3	113	0.00
57	T,M Ethyl methacrylate	10.000	10.535	-5.4	120	0.00
58	T,M trans-1,3-Dichloropropene	10.000	9.886	1.1	110	0.00
59	T,M 1,1,2-Trichloroethane	10.000	10.432	-4.3	119	0.00
60	T,M Tetrachloroethene	10.000	9.004	10.0	104	0.00
61	T,M 2-Hexanone	50.000	55.102	-10.2	124	0.00
62	T,M 1,3-Dichloropropane	10.000	10.671	-6.7	121	0.00
63	T,M Dibromochloromethane	10.000	9.715	2.9	109	0.00
64	T,M 1,2-Dibromoethane	10.000	10.302	-3.0	117	0.00
65	T,M 1-Chlorohexane	10.000	9.988	0.1	116	0.00
66	P,M Chlorobenzene	10.000	9.962	0.4	114	0.00
67	C,T,M Ethylbenzene	10.000	9.634	3.7	111	0.00
68	T,M 1,1,1,2-Tetrachloroethane	10.000	9.415	5.9	105	0.00
69	T,M m-Xylene & p-Xylene	20.000	18.834	5.8	110	0.00
70	T,M o-Xylene	10.000	9.427	5.7	108	0.00
71	T,M Styrene	10.000	9.832	1.7	108	0.00
72	I 1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	112	0.00
73	T,M Isopropylbenzene	10.000	10.260	-2.6	110	0.00
74	P,T,M Bromoform	10.000	10.286	-2.9	105	0.00
75	S 4-Bromofluorobenzene	10.000	9.795	2.1	106	0.00
76	P,T,M 1,1,2,2-Tetrachloroethane	10.000	11.638	-16.4	124	0.00
77	T,M trans-1,4-Dichloro-2-butene	10.000	9.010	9.9	98	0.00
78	T,M n-Propylbenzene	10.000	10.413	-4.1	111	0.00
79	T,M 1,2,3-Trichloropropane	10.000	10.893	-8.9	113	0.00
80	T,M Bromobenzene	10.000	10.041	-0.4	107	0.00
81	T,M 1,3,5-Trimethylbenzene	10.000	10.038	-0.4	106	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K28\RKB436.D Vial: 2
Acq On : 28 Nov 2011 3:58 pm Operator: CGM
Sample : CVO03H1660 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	10.077	-0.8	107	0.00
83	T,M	4-Chlorotoluene	10.000	10.302	-3.0	109	0.00
84	T,M	tert-Butylbenzene	10.000	10.233	-2.3	109	0.00
85	T,M	1,2,4-Trimethylbenzene	10.000	10.057	-0.6	107	0.00
86	T,M	sec-Butylbenzene	10.000	10.236	-2.4	109	0.00
87	T,M	p-Isopropyltoluene	10.000	10.161	-1.6	106	0.00
88	T,M	1,3-Dichlorobenzene	10.000	10.211	-2.1	108	0.00
89	T,M	1,4-Dichlorobenzene	10.000	10.071	-0.7	105	0.00
90	T,M	n-Butylbenzene	10.000	10.406	-4.1	108	0.00
91	T,M	1,2-Dichlorobenzene	10.000	9.872	1.3	104	0.00
92	T,M	1,2-Dibromo-3-chloropropane	10.000	9.642	3.6	99	0.00
93	T,M	1,2,4-Trichlorobenzene	10.000	9.212	7.9	96	0.00
94	T,M	Hexachlorobutadiene	10.000	8.235	17.7	85	0.00
95	T,M	Naphthalene	10.000	10.176	-1.8	102	0.00
96	T,M	1,2,3-Trichlorobenzene	10.000	8.983	10.2	94	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K28\RKB436.D Vial: 2
Acq On : 28 Nov 2011 3:58 pm Operator: CGM
Sample : CVO03H1660 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	119	0.00
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.395	-11.9	109	0.00
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	108	0.00
5	P,T,M	Chloromethane	0.357	0.390	-9.2	108	0.02
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.22#
7	C,T,M	Vinyl chloride	0.337	0.341	-1.2	97	0.02
8	T,M	Bromomethane	0.227	0.261	-15.0	110	0.00
9	T,M	Chloroethane	0.177	0.199	-12.4	109	0.00
10	T,M	Dichlorofluoromethane	0.764	0.807	-5.6	117	0.00
11	T,M	Trichlorofluoromethane	0.545	0.495	9.2	88	0.00
12	T,M	Acrolein	0.009	0.008	11.1	99	0.00
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.193	4.9	107	0.00
14	T,M	Acetone	0.039	0.041	-5.1	122	0.00
15	C,T,M	1,1-Dichloroethene	0.673	0.648	3.7	106	0.00
16	T,M	Methyl acetate	0.000	0.000	0.0	121	0.00
17	T,M	Iodomethane	0.631	0.598	5.2	104	0.00
18	T,M	Carbon disulfide	1.353	1.501	-10.9	134	0.00
19	T,M	Methylene chloride	0.475	0.487	-2.5	116	0.00
20	T,M	tert-Butyl alcohol	0.012	0.012	0.0	105	0.00
21	T,M	tert-Butyl methyl ether (MT	0.489	0.514	-5.1	118	0.00
22	T,M	trans-1,2-Dichloroethene	0.686	0.676	1.5	110	0.00
23	T,M	Acrylonitrile	0.036	0.042	-16.7	129	0.00
24	T,M	Isopropyl ether (DIPE)	1.196	1.279	-6.9	117	0.00
25	T,M	Vinyl acetate	0.401	0.336	16.2	85	0.00
26	P,T,M	1,1-Dichloroethane	0.743	0.747	-0.5	110	0.00
27	T,M	2-Butanol	0.000	0.000	0.0	115	0.00
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.934	-9.1	121	0.00
29	T,M	2,2-Dichloropropane	0.605	0.607	-0.3	110	0.00
30	T,M	2-Butanone	0.066	0.070	-6.1	122	0.00
31	T,M	cis-1,2-Dichloroethene	0.389	0.398	-2.3	113	0.00
32	T,M	Bromochloromethane	0.307	0.339	-10.4	120	0.00
33	T,M	Tetrahydrofuran	0.038	0.044	-15.8	145	0.00
34	C,T,M	Chloroform	0.807	0.777	3.7	105	0.00
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	82	0.00
36	S	Dibromofluoromethane	0.372	0.357	4.0	109	0.00
37	T,M	1,1,1-Trichloroethane	0.723	0.659	8.9	99	0.00
38	T,M	Cyclohexane	0.000	0.000	0.0	113	0.00
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.141	-6.8	115	0.00
40	S	1,2-Dichloroethane-d4	0.378	0.350	7.4	104	0.00
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	122	0.00

(#) = Out of Range

2028

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K28\RKB436.D Vial: 2
Acq On : 28 Nov 2011 3:58 pm Operator: CGM
Sample : CVO03H1660 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M 1,1-Dichloropropene	0.198	0.190	4.0	108	0.00
43	T,M Carbon tetrachloride	0.677	0.571	15.7	96	0.00
44	T,M Benzene	1.622	1.633	-0.7	115	0.00
45	T,M 1,2-Dichloroethane	0.500	0.456	8.8	104	0.00
46	T,M Trichloroethene	0.445	0.416	6.5	108	0.00
47	T,M Methylcyclohexane	0.000	0.000	0.0	101	0.00
48	C,T,M 1,2-Dichloropropane	0.415	0.447	-7.7	123	0.00
49	T,M 1,4-Dioxane	0.001	0.001	0.0	141	0.00
50	T,M Dibromomethane	0.196	0.196	0.0	116	0.00
51	T,M Bromodichloromethane	0.620	0.589	5.0	107	0.00
52	T,M 2-Chloroethyl vinyl ether	0.125	0.027	78.4#	25#	0.00
53	T,M cis-1,3-Dichloropropene	0.640	0.652	-1.9	115	0.00
54	T,M 4-Methyl-2-pentanone	0.202	0.217	-7.4	125	0.00
55	S Toluene-d8	1.420	1.302	8.3	108	0.00
56	C,T,M Toluene	1.759	1.737	1.3	113	0.00
57	T,M Ethyl methacrylate	0.326	0.344	-5.5	120	0.00
58	T,M trans-1,3-Dichloropropene	0.501	0.495	1.2	110	0.00
59	T,M 1,1,2-Trichloroethane	0.217	0.226	-4.1	119	0.00
60	T,M Tetrachloroethene	0.382	0.344	9.9	104	0.00
61	T,M 2-Hexanone	0.133	0.147	-10.5	124	0.00
62	T,M 1,3-Dichloropropane	0.434	0.464	-6.9	121	0.00
63	T,M Dibromochloromethane	0.322	0.312	3.1	109	0.00
64	T,M 1,2-Dibromoethane	0.238	0.245	-2.9	117	0.00
65	T,M 1-Chlorohexane	0.816	0.815	0.1	116	0.00
66	P,M Chlorobenzene	1.009	1.005	0.4	114	0.00
67	C,T,M Ethylbenzene	2.272	2.188	3.7	111	0.00
68	T,M 1,1,1,2-Tetrachloroethane	0.375	0.353	5.9	105	0.00
69	T,M m-Xylene & p-Xylene	1.750	1.648	5.8	110	0.00
70	T,M o-Xylene	1.697	1.600	5.7	108	0.00
71	T,M Styrene	1.095	1.076	1.7	108	0.00
72	I 1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	112	0.00
73	T,M Isopropylbenzene	5.670	5.817	-2.6	110	0.00
74	P,T,M Bromoform	0.413	0.425	-2.9	105	0.00
75	S 4-Bromofluorobenzene	1.556	1.524	2.1	106	0.00
76	P,T,M 1,1,2,2-Tetrachloroethane	0.753	0.877	-16.5	124	0.00
77	T,M trans-1,4-Dichloro-2-butene	0.244	0.220	9.8	98	0.00
78	T,M n-Propylbenzene	8.060	8.393	-4.1	111	0.00
79	T,M 1,2,3-Trichloropropane	0.175	0.191	-9.1	113	0.00
80	T,M Bromobenzene	1.142	1.147	-0.4	107	0.00
81	T,M 1,3,5-Trimethylbenzene	4.888	4.906	-0.4	106	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K28\RKB436.D Vial: 2
Acq On : 28 Nov 2011 3:58 pm Operator: CGM
Sample : CVO03H1660 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	5.068	-0.8	107	0.00
83	T,M	4-Chlorotoluene	4.346	4.477	-3.0	109	0.00
84	T,M	tert-Butylbenzene	0.969	0.992	-2.4	109	0.00
85	T,M	1,2,4-Trimethylbenzene	4.650	4.677	-0.6	107	0.00
86	T,M	sec-Butylbenzene	6.369	6.519	-2.4	109	0.00
87	T,M	p-Isopropyltoluene	4.917	4.996	-1.6	106	0.00
88	T,M	1,3-Dichlorobenzene	2.190	2.237	-2.1	108	0.00
89	T,M	1,4-Dichlorobenzene	2.037	2.052	-0.7	105	0.00
90	T,M	n-Butylbenzene	5.430	5.650	-4.1	108	0.00
91	T,M	1,2-Dichlorobenzene	1.675	1.654	1.3	104	0.00
92	T,M	1,2-Dibromo-3-chloropropane	0.085	0.082	3.5	99	0.00
93	T,M	1,2,4-Trichlorobenzene	0.850	0.783	7.9	96	0.00
94	T,M	Hexachlorobutadiene	0.778	0.641	17.6	85	0.00
95	T,M	Naphthalene	1.095	1.114	-1.7	102	0.00
96	T,M	1,2,3-Trichlorobenzene	0.624	0.560	10.3	94	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB455
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K217
BFB Injection Date : 11/29/11
BFB Injection Time : 06:55
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.96
75	30.0 - 60.0% of mass 95	53.74
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.93
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	60.60
175	5.0 - 9.0% of mass 174	4.43(7.3)1
176	95.0 - 101.0% of mass 174	58.40(96.4)1
177	5.0 - 9.0% of mass 176	3.82(6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV003H1661	RKB457	11/29/11	08:29
2	MBLK2W	V003K28B	RKB461	11/29/11	10:55
3	LCS2W	V003K28L	RKB458	11/29/11	09:08
4	LCD2W	V003K28C	RKB459	11/29/11	09:43
5	MW-70-14-172DL	K217-03T	RKB462	11/29/11	11:33

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RHB444
Instrument ID: 03
GC Column: ZB-624 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K217
Date Analyzed: 08/16/11
Time Analyzed: 14:40
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1861981	13.20	1722743	17.19	603523	20.72
	UPPER LIMIT	3723962	13.70	3445486	17.69	1207046	21.22
	LOWER LIMIT	930991	12.70	861372	16.69	301762	20.22
	SAMPLE ID						
1	VSTD010	1958539	13.16	1837768	17.16	599273	20.67
2	MBLK2W	2399597	13.16	2229005	17.15	722287	20.67
3	LCS2W	2193135	13.16	2100870	17.15	718139	20.68
4	LCD2W	2215617	13.16	2065294	17.15	688163	20.66
5	MW-70-14-172DL	2293084	13.16	2112883	17.15	676592	20.67

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K29\RKB457.D Vial: 3
Acq On : 29 Nov 2011 8:29 am Operator: CGM
Sample : CVO03H1661 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	105	0.00
2	T,M	Chlorotrifluoroethylene	-1.000	0.000	0.0	0	-3.99#
3	T,M	Dichlorodifluoromethane	10.000	11.619	-16.2	100	0.01
4	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	100	0.01
5	P,T,M	Chloromethane	10.000	10.996	-10.0	96	0.03
6	T,M	2-Chloro-1,1,1-trifluoroeth	-1.000	0.000	0.0	0	-5.22#
7	C,T,M	Vinyl chloride	10.000	10.291	-2.9	88	0.03
8	T,M	Bromomethane	10.000	11.676	-16.8	99	0.01
9	T,M	Chloroethane	10.000	11.995	-19.9	103	0.01
10	T,M	Dichlorofluoromethane	10.000	10.648	-6.5	105	0.01
11	T,M	Trichlorofluoromethane	10.000	9.496	5.0	82	0.01
12	T,M	Acrolein	50.000	32.104	35.8#	66	0.01
13	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.893	1.1	99	0.00
14	T,M	Acetone	50.000	49.731	0.5	101	0.01
15	C,T,M	1,1-Dichloroethene	10.000	10.247	-2.5	100	0.01
16	T,M	Methyl acetate	-1.000	0.000	0.0	101	0.01
17	T,M	Iodomethane	10.000	10.012	-0.1	97	0.01
18	T,M	Carbon disulfide	10.000	11.032	-10.3	118	0.01
19	T,M	Methylene chloride	10.000	10.764	-7.6	109	0.00
20	T,M	tert-Butyl alcohol	50.000	51.062	-2.1	98	0.01
21	T,M	tert-Butyl methyl ether (MT	10.000	10.375	-3.8	103	0.00
22	T,M	trans-1,2-Dichloroethene	10.000	10.519	-5.2	104	0.00
23	T,M	Acrylonitrile	50.000	55.404	-10.8	109	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	11.141	-11.4	108	0.00
25	T,M	Vinyl acetate	10.000	9.558	4.4	86	0.01
26	P,T,M	1,1-Dichloroethane	10.000	10.742	-7.4	104	0.01
27	T,M	2-Butanol	-1.000	0.000	0.0	95	0.01
28	T,M	tert-Butyl ethyl ether (ETB	10.000	10.467	-4.7	103	0.00
29	T,M	2,2-Dichloropropane	10.000	10.061	-0.6	98	0.00
30	T,M	2-Butanone	50.000	50.784	-1.6	104	0.00
31	T,M	cis-1,2-Dichloroethene	10.000	10.793	-7.9	106	0.00
32	T,M	Bromochloromethane	10.000	11.238	-12.4	109	0.01
33	T,M	Tetrahydrofuran	10.000	11.524	-15.2	127	0.00
34	C,T,M	Chloroform	10.000	10.278	-2.8	99	0.00
35	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	92	0.00
36	S	Dibromofluoromethane	10.000	9.500	5.0	95	0.01
37	T,M	1,1,1-Trichloroethane	10.000	9.732	2.7	94	0.00
38	T,M	Cyclohexane	-1.000	0.000	0.0	116	0.01
39	T,M	tert-Amyl methyl ether (TAM	10.000	9.842	1.6	94	0.00
40	S	1,2-Dichloroethane-d4	10.000	8.901	11.0	89	0.00
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	107	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K29\RKB457.D Vial: 3
Acq On : 29 Nov 2011 8:29 am Operator: CGM
Sample : CVO03H1661 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.		%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	10.638		-6.4	105	0.01
43	T,M	Carbon tetrachloride	10.000	9.197		8.0	91	0.01
44	T,M	Benzene	10.000	10.796		-8.0	108	0.01
45	T,M	1,2-Dichloroethane	10.000	9.636		3.6	96	0.01
46	T,M	Trichloroethene	10.000	10.276		-2.8	104	0.00
47	T,M	Methylcyclohexane	-1.000	0.000		0.0	93	0.01
48	C,T,M	1,2-Dichloropropane	10.000	11.489		-14.9	115	0.01
49	T,M	1,4-Dioxane	200.000	263.224	NT	-31.6#	141	0.01
50	T,M	Dibromomethane	10.000	10.400		-4.0	105	0.00
51	T,M	Bromodichloromethane	10.000	10.008		-0.1	99	0.00
52	T,M	2-Chloroethyl vinyl ether	10.000	1.066	NT	89.3#	11	0.00
53	T,M	cis-1,3-Dichloropropene	10.000	10.704		-7.0	106	0.00
54	T,M	4-Methyl-2-pentanone	50.000	50.199		-0.4	102	0.00
55	S	Toluene-d8	10.000	9.395		6.1	97	0.00
56	C,T,M	Toluene	10.000	10.637		-6.4	107	0.01
57	T,M	Ethyl methacrylate	10.000	10.752		-7.5	107	0.01
58	T,M	trans-1,3-Dichloropropene	10.000	9.581		4.2	93	0.01
59	T,M	1,1,2-Trichloroethane	10.000	10.968		-9.7	110	0.01
60	T,M	Tetrachloroethene	10.000	9.765		2.3	99	0.00
61	T,M	2-Hexanone	50.000	51.240		-2.5	101	0.01
62	T,M	1,3-Dichloropropane	10.000	11.126		-11.3	110	0.01
63	T,M	Dibromochloromethane	10.000	10.196		-2.0	100	0.01
64	T,M	1,2-Dibromoethane	10.000	10.622		-6.2	106	0.00
65	T,M	1-Chlorohexane	10.000	11.033		-10.3	112	0.01
66	P,M	Chlorobenzene	10.000	10.825		-8.2	108	0.00
67	C,T,M	Ethylbenzene	10.000	10.433		-4.3	105	0.00
68	T,M	1,1,1,2-Tetrachloroethane	10.000	10.084		-0.8	99	0.01
69	T,M	m-Xylene & p-Xylene	20.000	20.283		-1.4	103	0.01
70	T,M	o-Xylene	10.000	10.211		-2.1	102	0.01
71	T,M	Styrene	10.000	10.477		-4.8	101	0.00
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000		0.0	99	0.00
73	T,M	Isopropylbenzene	10.000	11.064		-10.6	105	0.01
74	P,T,M	Bromoform	10.000	10.425		-4.3	94	0.00
75	S	4-Bromofluorobenzene	10.000	9.685		3.1	93	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	11.900		-19.0	113	0.01
77	T,M	trans-1,4-Dichloro-2-butene	10.000	7.500	NT	25.0#	72	0.00
78	T,M	n-Propylbenzene	10.000	11.335		-13.4	107	0.00
79	T,M	1,2,3-Trichloropropane	10.000	11.024		-10.2	102	0.00
80	T,M	Bromobenzene	10.000	10.715		-7.1	101	0.01
81	T,M	1,3,5-Trimethylbenzene	10.000	10.745		-7.4	101	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K29\RKB457.D Vial: 3
Acq On : 29 Nov 2011 8:29 am Operator: CGM
Sample : CVO03H1661 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	10.871	-8.7	103	0.01
83	T,M	4-Chlorotoluene	10.000	10.980	-9.8	103	0.00
84	T,M	tert-Butylbenzene	10.000	11.116	-11.2	105	0.00
85	T,M	1,2,4-Trimethylbenzene	10.000	10.838	-8.4	102	0.01
86	T,M	sec-Butylbenzene	10.000	11.236	-12.4	106	0.01
87	T,M	p-Isopropyltoluene	10.000	11.122	-11.2	103	0.00
88	T,M	1,3-Dichlorobenzene	10.000	11.041	-10.4	103	0.01
89	T,M	1,4-Dichlorobenzene	10.000	10.889	-8.9	100	0.00
90	T,M	n-Butylbenzene	10.000	11.483	-14.8	106	0.01
91	T,M	1,2-Dichlorobenzene	10.000	10.786	-7.9	101	0.00
92	T,M	1,2-Dibromo-3-chloropropane	10.000	9.886	1.1	90	0.00
93	T,M	1,2,4-Trichlorobenzene	10.000	10.324	-3.2	95	0.01
94	T,M	Hexachlorobutadiene	10.000	9.479	5.2	87	0.01
95	T,M	Naphthalene	10.000	11.358	-13.6	101	0.00
96	T,M	1,2,3-Trichlorobenzene	10.000	10.165	-1.6	94	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K29\RKB457.D Vial: 3
Acq On : 29 Nov 2011 8:29 am Operator: CGM
Sample : CVO03H1661 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	105	0.00
2	T,M	Chlorotrifluoroethylene	0.000	0.000	0.0	0#	-3.99#
3	T,M	Dichlorodifluoromethane	0.353	0.410	-16.1	100	0.01
4	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	100	0.01
5	P,T,M	Chloromethane	0.357	0.392	-9.8	96	0.03
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.000	0.000	0.0	0#	-5.22#
7	C,T,M	Vinyl chloride	0.337	0.347	-3.0	88	0.03
8	T,M	Bromomethane	0.227	0.265	-16.7	99	0.01
9	T,M	Chloroethane	0.177	0.213	-20.3#	103	0.01
10	T,M	Dichlorofluoromethane	0.764	0.813	-6.4	105	0.01
11	T,M	Trichlorofluoromethane	0.545	0.518	5.0	82	0.01
12	T,M	Acrolein	0.009	0.006	33.3#	66	0.01
13	T,M	1,1,2-Trichloro-1,2,2-trifl	0.203	0.201	1.0	99	0.00
14	T,M	Acetone	0.039	0.038	2.6	101	0.01
15	C,T,M	1,1-Dichloroethene	0.673	0.689	-2.4	100	0.01
16	T,M	Methyl acetate	0.000	0.000	0.0	101	0.01
17	T,M	Iodomethane	0.631	0.632	-0.2	97	0.01
18	T,M	Carbon disulfide	1.353	1.493	-10.3	118	0.01
19	T,M	Methylene chloride	0.475	0.512	-7.8	109	0.00
20	T,M	tert-Butyl alcohol	0.012	0.012	0.0	98	0.01
21	T,M	tert-Butyl methyl ether (MT	0.489	0.507	-3.7	103	0.00
22	T,M	trans-1,2-Dichloroethene	0.686	0.721	-5.1	104	0.00
23	T,M	Acrylonitrile	0.036	0.039	-8.3	109	0.00
24	T,M	Isopropyl ether (DIPE)	1.196	1.332	-11.4	108	0.00
25	T,M	Vinyl acetate	0.401	0.384	4.2	86	0.01
26	P,T,M	1,1-Dichloroethane	0.743	0.798	-7.4	104	0.01
27	T,M	2-Butanol	0.000	0.000	0.0	95	0.01
28	T,M	tert-Butyl ethyl ether (ETB	0.856	0.896	-4.7	103	0.00
29	T,M	2,2-Dichloropropane	0.605	0.609	-0.7	98	0.00
30	T,M	2-Butanone	0.066	0.067	-1.5	104	0.00
31	T,M	cis-1,2-Dichloroethene	0.389	0.420	-8.0	106	0.00
32	T,M	Bromochloromethane	0.307	0.345	-12.4	109	0.01
33	T,M	Tetrahydrofuran	0.038	0.044	-15.8	127	0.00
34	C,T,M	Chloroform	0.807	0.829	-2.7	99	0.00
35	T,M	tert-Amyl alcohol	0.000	0.000	0.0	92	0.00
36	S	Dibromofluoromethane	0.372	0.353	5.1	95	0.01
37	T,M	1,1,1-Trichloroethane	0.723	0.704	2.6	94	0.00
38	T,M	Cyclohexane	0.000	0.000	0.0	116	0.01
39	T,M	tert-Amyl methyl ether (TAM	0.132	0.130	1.5	94	0.00
40	S	1,2-Dichloroethane-d4	0.378	0.337	10.8	89	0.00
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	107	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K29\RKB457.D Vial: 3
Acq On : 29 Nov 2011 8:29 am Operator: CGM
Sample : CVO03H1661 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.198	0.211	-6.6	105	0.01
43	T,M	Carbon tetrachloride	0.677	0.623	8.0	91	0.01
44	T,M	Benzene	1.622	1.751	-8.0	108	0.01
45	T,M	1,2-Dichloroethane	0.500	0.482	3.6	96	0.01
46	T,M	Trichloroethene	0.445	0.457	-2.7	104	0.00
47	T,M	Methylcyclohexane	0.000	0.000	0.0	93	0.01
48	C,T,M	1,2-Dichloropropane	0.415	0.477	-14.9	115	0.01
49	T,M	1,4-Dioxane	0.001	0.002	-100.0#	141	0.01
50	T,M	Dibromomethane	0.196	0.204	-4.1	105	0.00
51	T,M	Bromodichloromethane	0.620	0.620	0.0	99	0.00
52	T,M	2-Chloroethyl vinyl ether	0.125	0.013	89.6#	11#	0.00
53	T,M	cis-1,3-Dichloropropene	0.640	0.685	-7.0	106	0.00
54	T,M	4-Methyl-2-pentanone	0.202	0.203	-0.5	102	0.00
55	S	Toluene-d8	1.420	1.335	6.0	97	0.00
56	C,T,M	Toluene	1.759	1.871	-6.4	107	0.01
57	T,M	Ethyl methacrylate	0.326	0.351	-7.7	107	0.01
58	T,M	trans-1,3-Dichloropropene	0.501	0.480	4.2	93	0.01
59	T,M	1,1,2-Trichloroethane	0.217	0.238	-9.7	110	0.01
60	T,M	Tetrachloroethene	0.382	0.373	2.4	99	0.00
61	T,M	2-Hexanone	0.133	0.137	-3.0	101	0.01
62	T,M	1,3-Dichloropropane	0.434	0.483	-11.3	110	0.01
63	T,M	Dibromochloromethane	0.322	0.328	-1.9	100	0.01
64	T,M	1,2-Dibromoethane	0.238	0.253	-6.3	106	0.00
65	T,M	1-Chlorohexane	0.816	0.900	-10.3	112	0.01
66	P,M	Chlorobenzene	1.009	1.092	-8.2	108	0.00
67	C,T,M	Ethylbenzene	2.272	2.370	-4.3	105	0.00
68	T,M	1,1,1,2-Tetrachloroethane	0.375	0.378	-0.8	99	0.01
69	T,M	m-Xylene & p-Xylene	1.750	1.775	-1.4	103	0.01
70	T,M	o-Xylene	1.697	1.733	-2.1	102	0.01
71	T,M	Styrene	1.095	1.147	-4.7	101	0.00
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	99	0.00
73	T,M	Isopropylbenzene	5.670	6.273	-10.6	105	0.01
74	P,T,M	Bromoform	0.413	0.431	-4.4	94	0.00
75	S	4-Bromofluorobenzene	1.556	1.507	3.1	93	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	0.753	0.897	-19.1	113	0.01
77	T,M	trans-1,4-Dichloro-2-butene	0.244	0.183	25.0#	72	0.00
78	T,M	n-Propylbenzene	8.060	9.136	-13.3	107	0.00
79	T,M	1,2,3-Trichloropropane	0.175	0.193	-10.3	102	0.00
80	T,M	Bromobenzene	1.142	1.223	-7.1	101	0.01
81	T,M	1,3,5-Trimethylbenzene	4.888	5.252	-7.4	101	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K29\RKB457.D Vial: 3
Acq On : 29 Nov 2011 8:29 am Operator: CGM
Sample : CVO03H1661 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-AA Multiplr: 1.00
MS Integration Params: 524TAIL.P

Method : D:\HPCHEM\1\METHODS\VO03H16.M (RTE Integrator)
Title : METHOD 8260 25.0mL
Last Update : Thu Nov 17 07:00:14 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	5.029	5.467	-8.7	103	0.01
83	T,M	4-Chlorotoluene	4.346	4.772	-9.8	103	0.00
84	T,M	tert-Butylbenzene	0.969	1.077	-11.1	105	0.00
85	T,M	1,2,4-Trimethylbenzene	4.650	5.040	-8.4	102	0.01
86	T,M	sec-Butylbenzene	6.369	7.156	-12.4	106	0.01
87	T,M	p-Isopropyltoluene	4.917	5.468	-11.2	103	0.00
88	T,M	1,3-Dichlorobenzene	2.190	2.418	-10.4	103	0.01
89	T,M	1,4-Dichlorobenzene	2.037	2.218	-8.9	100	0.00
90	T,M	n-Butylbenzene	5.430	6.235	-14.8	106	0.01
91	T,M	1,2-Dichlorobenzene	1.675	1.807	-7.9	101	0.00
92	T,M	1,2-Dibromo-3-chloropropane	0.085	0.085	0.0	90	0.00
93	T,M	1,2,4-Trichlorobenzene	0.850	0.877	-3.2	95	0.01
94	T,M	Hexachlorobutadiene	0.778	0.738	5.1	87	0.01
95	T,M	Naphthalene	1.095	1.244	-13.6	101	0.00
96	T,M	1,2,3-Trichlorobenzene	0.624	0.634	-1.6	94	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 6 ☐ EMAX-524.2 Rev.No. 5 ☐ EMAX-624 Rev.No. 2 ☐ EMAX-8260SIM Rev.No.0 ☐ EMAX-TCPSIM Rev.No.1 ☐ EMAX-M8260SIM Rev.No.0 ☐

Start Date: 8/16/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -047

BATCH V003H166

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RHB438	RB03H23	1mL	N/A	N/A	N/A	N/A	11:15am
02	439	V003H161	.01/1/.5mL					0.3/1.5/1.5ppb 8260
03	440	2	.01/1/.5mL					0.5/2.5/2.5ppb
04	441	3	.1/.5/.5mL					1.0/5.0/5.0ppb
05	442	4	.2/1/1mL					2.0/10/10ppb
06	443	5	.5/2.5/2.5mL					5.0/25/25ppb
07	444	6	1/5/5mL					10/50/50ppb
08	445	7	2/10/10mL					20/100/100ppb
09	446	8	3/15/15mL					30/150/150ppb
10	447	9	4/20/20mL					40/200/200ppb
11	448	10	5/25/25mL					50/250/250ppb
12	449	11	10/50/50mL					100/500/500ppb
13	450	15/15	25mL					
14	451	V003H238	↓					
15	452	V003H161	1/5/5mL					10/50/50ppb
16	453	RINSE	25mL					7:49pm
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30			NW	8/17/11				

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003H16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC Fast CS	SV1-17-76-1	*	
DCC CS2	-71-1		
DCC 8260	-72-1		
DCC RTPA	-69-3		
BFB	-45-3	1	50/250
IS/SURR.	-73-3	1	
ICV/LCS Fast CS	-69-1	1	
ICV/LCS CS2	-71-2	1	
ICV/LCS 8260	-60-2	5	
ICV/LCS RTPA	-70-2	5	
	-57-3	1	
	-54-1	*	
DATA FILE FOLDER	11H16		

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO03	

Comments: *please refer to sample amount

Analyzed By: NW

Date Disposed: 8/17/11

Disposed By: NW

2010

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/28/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge Book # A03 -048

BATCH CV003H1660

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01	RKB435	BFB03K27						15:24
02	36	CV003H1660						
03	37	V003K27L		1.0				
04	38	↓ C		↓				
05	39	Rinse						
06	40	V003K27B	25mL	1.0				
07	41	11K206-10R	↓	↓				
08	42	11K174-05T	0.5mL	50				
09	43	↓ -06T	↓	↓				
10	44	11K217-04	25mL	1.0				
11	45	↓ -05	↓	↓				
12	46	11K184-02T	0.5mL	50				
13	47	↓ -02R	25mL	1.0				
14	48	Rinse						
15	49	11K217-01	25mL	1.0				
16	50	↓ 02	↓	↓				
17	51	↓ 03	↓	↓				10X (4s) 00:59
18	52	Rinse						
19	53	↓						
20	54	↓						
21								
22								
23								
24								
25								
26								
27								
28								
29								
30							CGM	11/28/11

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003 A16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SM-19-6-2	1	
DCC	6-3	1	
DCC	7-2	5	
DCC	8-1	5	
BFB	3-2	1	50
IS/SURR.	6-1	1	250
ICV/LCS	SM-17-90-3	1	
ICV/LCS	97-2	1	
ICV/LCS	SM-19-9-2	5	
ICV/LCS	SM-17-99-3	5	

DATA FILE FOLDER 11K28

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO03	

Comments:

Analyzed By: CGM

Date Disposed: 11/29/11

Disposed By: CGM

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐

Start Date: 11/29/11 ☐ 5-mL Purge ☐ 10-mL Purge ☑ 25-mL Purge

Book # A03 -048

BATCH CV003H1661

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RKB455	B-B03K28	1mL					6:55am
02		456	STD CHECK						
03		457	CV003H1661	1/1.15/5mL					
04		458	V003K28L						
05		459	C						
06		460	RINSE						
07		461	V003K28B	25m					
08		462	11K217-03T	2.5mL	10	✓	✓		
09		463	11K174-05T	1.0mL	25	✓	✓		
10		464	-06T			✓	✓		1:58pm
11		465	RINSE						
12		466-467	TEST 1						
13		467	2						
14		468-470	RINSE						
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									sd 11/30/11

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	8/16/11
ICAL ID	V003H16

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC	SV1-19-6-2	1	250
DCC	-6-3	1	250
DCC	-7-2	5	250
DCC	-8-1	5	50/250
BFB	-3-2	1	50
IS/SURR.	-6-1	1	250
ICV/LCS	SV1-17-90-3	1	250
ICV/LCS	-97-2	1	250
ICV/LCS	SV1-19-9-2	5	250
ICV/LCS	SV1-17-99-3	5	50/250

DATA FILE FOLDER 11K29

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO03	

Comments:

Analyzed By: CGM

Date Disposed: 11/30/11

Disposed By: CGM

2012

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD RSK-175
DISSOLVED GASES

SDG#: 11K217

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K217

METHOD RSK-175
DISSOLVED GASES

A total of two (2) water samples were received on 11/23/11 for Dissolved Gas analysis, Method RSK-175 in accordance with USEPA at R.S. Kerr Environmental Research Laboratory, Ada, OK 74820 March 15, 1989.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for DGK021WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED GASES

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K217
Instrument ID : GCT010

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DGK021WB	1	NA	11/30/1107:54	11/30/1107:20	FK30003A	FK30002A	DGK021W	Method Blank
LCS1W	DGK021WL	1	NA	11/30/1108:07	11/30/1107:20	FK30004A	FK30002A	DGK021W	Lab Control Sample (LCS)
LCD1W	DGK021WC	1	NA	11/30/1108:21	11/30/1107:20	FK30005A	FK30002A	DGK021W	LCS Duplicate
MW-70-43A-170	K217-02	1	NA	11/30/1114:35	11/30/1107:20	FK30021A	FK30016A	DGK021W	Field Sample
MW-70-14-172	K217-03	1	NA	11/30/1115:09	11/30/1107:20	FK30022A	FK30016A	DGK021W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/23/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/23/11
Batch No. : 11K217	Date Extracted: 11/30/11 07:20
Sample ID: MW-70-43A-170	Date Analyzed: 11/30/11 14:35
Lab Samp ID: K217-02	Dilution Factor: 1
Lab File ID: FK30021A	Matrix : WATER
Ext Btch ID: DGK021W	% Moisture : NA
Calib. Ref.: FK30016A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	12	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/23/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/23/11
Batch No. : 11K217	Date Extracted: 11/30/11 07:20
Sample ID: MW-70-14-172	Date Analyzed: 11/30/11 15:09
Lab Samp ID: K217-03	Dilution Factor: 1
Lab File ID: FK30022A	Matrix : WATER
Ext Btch ID: DGK021W	% Moisture : NA
Calib. Ref.: FK30016A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	1.1J	2.0	0.60
METHANE	27	2.0	0.34

QC SUMMARIES

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/30/11
Batch No. : 11K217	Date Extracted: 11/30/11 07:20
Sample ID: MBLK1W	Date Analyzed: 11/30/11 07:54
Lab Samp ID: DGK021WB	Dilution Factor: 1
Lab File ID: FK30003A	Matrix : WATER
Ext Btch ID: DGK021W	% Moisture : NA
Calib. Ref.: FK30002A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K217
METHOD: METHOD RSK-175

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	DGK021WB	DGK021WL	DGK021WC		
LAB FILE ID:	FK30003A	FK30004A	FK30005A		
DATE EXTRACTED:	11/30/1107:20	11/30/1107:20	11/30/1107:20	DATE COLLECTED:	NA
DATE ANALYZED:	11/30/1107:54	11/30/1108:07	11/30/1108:21	DATE RECEIVED:	11/30/11
PREP. BATCH:	DGK021W	DGK021W	DGK021W		
CALIB. REF:	FK30002A	FK30002A	FK30002A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	ND	25.4	25.1	99	25.4	25.1	99	0	70-140	30
Ethene	ND	23.7	24.3	102	23.7	24.4	103	1	70-140	30
Methane	ND	13.6	11.9	87	13.6	11.9	87	0	70-130	30

INITIAL CALIBRATIONS

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	25.00X	40.00X	75.00X	100.00X	MEAN	%RSD
Methane	0.34	31626	33510	29954	29307	29338	29307	30507.1	5.6
Acetylene	0.55	2465	2595	2723	2744	2716	2643	2647.7	4.0
Ethylene	0.59	14655	16070	16617	16602	17123	16803	16311.8	5.4
Ethane	0.64	22748	24144	25289	25073	26185	26048	24914.4	5.2
Propane	0.93	29887	24871	26520	26214	27735	27800	27171.2	6.3

DG10K01.MET

FORM VI DGAS -2 1/96 Rev 2/2006

11/03/11

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK01008A 11/01/2011 13:45
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	416247	13.64	1		15
Acetylene	2.175	2.149	2.201	22.0	2647.6	66913	25.27	15		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	437326	26.81	13		15
Ethane	3.075	3.025	3.125	25.4	24914.4	691218	27.74	9		15
Propane	5.900	5.824	5.976	37.3	27171.2	1111008	40.89	10		15

DG10K01.MET

AJ
11/3/11

DAILY CALIBRATIONS

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK30002A 11/30/2011 07:41
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	388281	12.73	-6		15
Acetylene	2.192	2.166	2.218	22.0	2647.6	59619	22.52	2		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	395573	24.25	2		15
Ethane	3.067	3.017	3.117	25.4	24914.4	639021	25.65	1		15
Propane	5.883	5.807	5.959	37.3	27171.2	981324	36.12	-3		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK30016A 11/30/2011 13:16
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	390617	12.80	-6		15
Acetylene	2.183	2.157	2.209	22.0	2647.6	60006	22.66	3		15
Ethylene	2.625	2.574	2.676	23.7	16311.8	386507	23.69	-0		15
Ethane	3.050	3.000	3.100	25.4	24914.4	627525	25.19	-1		15
Propane	5.850	5.774	5.926	37.3	27171.2	953738	35.10	-6		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK30023A 11/30/2011 15:28
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.075	1.049	1.101	13.6	30507.1	379970	12.45	-8		15
Acetylene	2.200	2.174	2.226	22.0	2647.6	59410	22.44	2		15
Ethylene	2.642	2.591	2.693	23.7	16311.8	381884	23.41	-1		15
Ethane	3.067	3.017	3.117	25.4	24914.4	614298	24.66	-3		15
Propane	5.875	5.799	5.951	37.3	27171.2	923874	34.00	-9		15

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGAS ICAL

Book #:	A10-025
Instrument No.:	10
Analytical Sequence:	FK01
Method File:	DG10K01
Analytical Batch:	N/A

SOP #	Rev. #
☐ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGAS ICAL SSSA-05-01-10	500 ppm
DGAS ICV SSSA-05-01-7	500 ppm
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: SC

Date: 11/01/11

Disposed By: SC

Date Disposed: 11/01/11

Method: Dg10k01.met Batch: Fk01.seq Data: Fk01.011 - [Batch: fk01.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Run Type	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
1	Unknown	IB10K407	dg10k01.met	FK01.001	100ml 1	1	
2	Unknown	DG10K01-01	dg10k01.met	FK01.002	1	1	
3	Unknown	DG10K01-02	dg10k01.met	FK01.003	1	1	
4	Unknown	DG10K01-03	dg10k01.met	FK01.004	1	1	DGAS 10ML
5	Unknown	DG10K01-04	dg10k01.met	FK01.005	1	1	
6	Unknown	DG10K01-05	dg10k01.met	FK01.006	1	1	
7	Unknown	DG10K01-06	dg10k01.met	FK01.007	1	1	
8	Unknown	IDG10K0101	dg10k01.met	FK01.008	1	1	DGAS 10V
9	Unknown	IB	dg10k01.met	FK01.009	1	1	
10	Unknown	IB	dg10k01.met	FK01.010	1	1	
11	Unknown	IB	dg10k01.met	FK01.011	1	1	
12	Unknown	IB	dg10k01.met	FK01.012	1	1	
13	Unknown	IB	dg10k01.met	FK01.013	1	1	
14	Unknown	IB	dg10k01.met	FK01.014	1	1	
15	Unknown	IB	dg10k01.met	FK01.015	1	1	FINAL
16	Unknown	IB	dg10k01.met	FK01.016	1	1	
17	Unknown	IB	dg10k01.met	FK01.017	1	1	
18	Unknown	IB	dg10k01.met	FK01.018	1	1	
19	Unknown	IB	dg10k01.met	FK01.019	1	1	
20	Unknown	IB	dg10k01.met	FK01.020	1	1	
21	Unknown	IB	dg10k01.met	FK01.021	1	1	
22	Unknown	IB	dg10k01.met	FK01.022	1	1	
23	Unknown	IB	dg10k01.met	FK01.023	1	1	
24	Unknown	IB	dg10k01.met	FK01.024	1	1	
25	Unknown	IB	dg10k01.met	FK01.025	1	1	
26	Unknown	IB	dg10k01.met	FK01.026	1	1	
27	Unknown	IB	dg10k01.met	FK01.027	1	1	
28	Unknown	IB	dg10k01.met	FK01.028	1	1	
29	Unknown	IB	dg10k01.met	FK01.029	1	1	
30	Unknown	IB	dg10k01.met	FK01.030	1	1	
31	Unknown	IB	dg10k01.met	FK01.031	1	1	
32	Unknown	IB	dg10k01.met	FK01.032	1	1	
33	Unknown	IB	dg10k01.met	FK01.033	1	1	
34	Unknown	IB	dg10k01.met	FK01.034	1	1	

EC 11/01/11

Waiting For Trigger...

Start | EZChrom Chromatograp... | Method: Dg10k01.... | Calculator | Method: Dg10k01.met | untitled - Paint | Exploring | Tuesday, November 01, 2011

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGK021W: K179, K184, K217

Book #:	A10-026
Instrument No.:	10
Analytical Sequence:	FK30
Method File:	DG10K01
Analytical Batch:	CDG10K01473

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGas DCC SSSB-07-41-3	200
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: RH

Date: 11/30/11

Disposed By: RH

Date Disposed: 11/30/11

4020

Method: Dg10k01.met Batch: Fk30.seq Data: Fk30.023 - [Batch: fk30.seq]

File Edit Method Batch Options Analysis Control Window Help

Method Data Batch Setup Batch Preview Single Batch Recalib Analyze Reports

Run	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
1	IB10K473	dg10k01.met	FK30.001	100mL 1	1	
2	CDG10K01473	dg10k01.met	FK30.002	1	1	
3	DGK021WB	dg10k01.met	FK30.003	1	1	
4	DGK021WL	dg10k01.met	FK30.004	1	1	
5	DGK021WC	dg10k01.met	FK30.005	1	1	
6	11K184-01	dg10k01.met	FK30.006	1	1	
7	11K184-01T DF=10	dg10k01.met	FK30.007	10mL 1	10	
8	11K184-02	dg10k01.met	FK30.008	100mL 1	1	
9	NO DATA	dg10k01.met	FK30.009	1	1	
10	11K184-03	dg10k01.met	FK30.010	1	1	
11	NO DATA	dg10k01.met	FK30.011	1	1	
12	11K184-03T DF=2	dg10k01.met	FK30.012	50mL 1	2	
13	11K184-03I DF=1000	dg10k01.met	FK30.013	2mL (20x) 1	1000	
14	11K184-04	dg10k01.met	FK30.014	100mL 1	1	
15	11K184-04T DF=1000	dg10k01.met	FK30.015	2mL (20x) 1	1000	
16	CDG10K01474	dg10k01.met	FK30.016	100mL 1	1	
17	11K179-01	dg10k01.met	FK30.017	1	1	
18	11K179-01T DF=5	dg10k01.met	FK30.018	20mL 1	5	
19	11K179-03	dg10k01.met	FK30.019	100mL 1	1	
20	11K179-03T DF=10	dg10k01.met	FK30.020	10mL 1	10	
21	11K217-02	dg10k01.met	FK30.021	100mL 1	1	FINAL
22	11K217-03	dg10k01.met	FK30.022	1	1	
23	CDG10K01475	dg10k01.met	FK30.023	1	1	
24	IB	dg10k01.met	FK30.024	1	1	
25	IB	dg10k01.met	FK30.025	1	1	
26	IB	dg10k01.met	FK30.026	1	1	
27	IB	dg10k01.met	FK30.027	1	1	
28	IB	dg10k01.met	FK30.028	1	1	
29	IB	dg10k01.met	FK30.029	1	1	
30	IB	dg10k01.met	FK30.030	1	1	
31	IB	dg10k01.met	FK30.031	1	1	
32	IB	dg10k01.met	FK30.032	1	1	
33	IB	dg10k01.met	FK30.033	1	1	
34	IB	dg10k01.met	FK30.034	1	1	

RM 11/30/11

Instrument 2: TO10

Start | EZChrom Chromatography... | Method: Dg10k01.me... | Method: Dg10k01.met - B... | Exploring - 11export

Wednesday, November 30, 2011 3:35 PM

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/01/11 Time: 10:00 End Date: 11/01/11 Time: 10:40

PREPARATION BATCH # N/A

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DG10K01-01	39	4	N/A	
02	-02			N/A	
03	-03			N/A	DGAS ICAL
04	-04			N/A	
05	-05			N/A	
06	-06			N/A	
07	IDG10K01 01			N/A	DGAS ICV
08					
09					
10					
11					
12					
13					SC 11/01/11
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Standards	ID	Amount Added (µl)
LCS/MS / ICV	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic free
He	Air Gas
ICAL STD (500 ppm)	SSSA-05-01-10 (SPECIALTY AIR)
ICV STD 500 ppm	SSSA-05-01-7 (MATHESON)

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #: (ESS)	28100705

Comments:

1) 0.08 ml ICAL STD + 3.92 ml He
2) 0.4 ml 3.6 ml
3) 1.0 ml 3.0 ml
4) 1.6 ml 2.4 ml
5) 3.0 ml 1.0 ml
6) 4.0 ml 0 ml

Prepared By: SC

Standard Added By: SC

1023

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/30/11 Time: 07:20 End Date: 11/30/11 Time: 07:45

PREPARATION BATCH # DGK021W

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (< 2)	Notes
01	DGK021WB	39	4	N/A	
02	↓ L	↓	↓	N/A	
03	↓ C	↓	↓	N/A	
04	11K179-01	↓	↓	✓	
05	↓ 03	↓	↓	✓	
06	11K184-01	↓	↓	✓	
07	↓ 02	↓	↓	✓	
08	↓ 03	↓	↓	✓	
09	↓ 04	↓	↓	✓	
10	11K217-02	↓	↓	✓	
11	↓ 03	↓	↓	✓	
12					
13					
14					
15					
16					
17					
18					
19				11/30/11	
20			RM		
21					
22					
23					
24					
25					

Standards	ID	Amount Added (µl)
LCS/MS	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic Free
He	Air Gas

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #:	218100705

Comments:

Prepared By: RM

Standard Added By: RM

1024

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

SDG#: 11K217

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K217

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

One (1) water sample was received on 11/23/11 for Dissolved Metals by ICP analysis, Method 3010A/6010B in accordance with Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source. Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for IPK045WX/Y were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG. Analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED METALS BY TRACE ICP

Client : INSIGHT EEC, INC. SDG NO. : 11K217
Project : NWS SEAL BEACH, IR SITE 70. Instrument ID : T-ID8

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IPK045WQ	1	NA	12/05/1115:11	11/30/1109:30	ID8L003022	ID8L003020	IPK045W	Method Blank
LCS1W	IPK045WX	1	NA	12/05/1115:14	11/30/1109:30	ID8L003023	ID8L003020	IPK045W	Lab Control Sample (LCS)
LCD1W	IPK045WY	1	NA	12/05/1115:17	11/30/1109:30	ID8L003024	ID8L003020	IPK045W	LCS Duplicate
CONNECTION 799AS	K227-01A	1	NA	12/05/1115:20	11/30/1109:30	ID8L003025	ID8L003020	IPK045W	Analytical Spike Sample
CONNECTION 799	K227-01W	1	NA	12/05/1115:23	11/30/1109:30	ID8L003026	ID8L003020	IPK045W	Field Sample
CONNECTION 799DL	K227-01J	5	NA	12/05/1115:26	11/30/1109:30	ID8L003027	ID8L003020	IPK045W	Diluted Sample
IR-70-EB-171	K217-04W	1	NA	12/05/1115:28	11/30/1109:30	ID8L003028	ID8L003020	IPK045W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	11/23/11 11:50
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/23/11
SDG NO.	: 11K217	Date Extracted:	11/30/11 09:30
Sample ID:	IR-70-EB-171	Date Analyzed:	12/05/11 15:28
Lab Samp ID:	K217-04W	Dilution Factor:	1
Lab File ID:	ID8L003028	Matrix :	WATER
Ext Btch ID:	IPK045W	% Moisture :	NA
Calib. Ref.:	ID8L003020	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	ND	0.200	0.0400
Manganese	ND	0.200	0.00300

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/30/11
SDG NO.	: 11K217	Date Extracted:	11/30/11 09:30
Sample ID:	MBLK1W	Date Analyzed:	12/05/11 15:11
Lab Samp ID:	IPK045WQ	Dilution Factor:	1
Lab File ID:	ID8L003022	Matrix :	WATER
Ext Btch ID:	IPK045W	% Moisture :	NA
Calib. Ref.:	ID8L003020	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Arsenic	ND	0.200	0.00500
Iron	ND	0.200	0.0400
Manganese	ND	0.200	0.00300

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K217
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	IPK045WQ	IPK045WX	IPK045WY		
LAB FILE ID:	ID8L003022	ID8L003023	ID8L003024		
DATIME EXTRCTD:	11/30/1109:30	11/30/1109:30	11/30/1109:30	DATE COLLECTED:	NA
DATIME ANALYZD:	12/05/1115:11	12/05/1115:14	12/05/1115:17	DATE RECEIVED:	11/30/11
PREP. BATCH:	IPK045W	IPK045W	IPK045W		
CALIB. REF:	ID8L003020	ID8L003020	ID8L003020		

ACCESSION:

PARAMETER	BLNK RSLT mg/L	SPIKE AMT mg/L	BS RSLT mg/L	BS % REC	SPIKE AMT mg/L	BSD RSLT mg/L	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	ND	.5	.542	108	.5	.541	108	0	80-120	20
Iron	ND	5	5.4	108	5	5.42	108	0	80-120	20
Manganese	ND	.5	.508	102	.5	.505	101	1	80-120	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K217
METHOD: METHOD 3010A/6010B (DISSOLVED)

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	CONNECTION 799	CONNECTION 799DL		
EMAX SAMP ID:	K227-01W	K227-01J		
LAB FILE ID:	ID8L003026	ID8L003027		
DATE EXTRACTED:	11/30/1109:30	11/30/1109:30	DATE COLLECTED:	11/29/11 08:30
DATE ANALYZED:	12/05/1115:23	12/05/1115:26	DATE RECEIVED:	11/29/11
PREP. BATCH:	IPK045W	IPK045W		
CALIB. REF:	ID8L003020	ID8L003020		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SERIAL DIL RSLT (mg/L)	DIF RSLT %	QC LIMIT (%)
Arsenic	ND	ND	0	10
Iron	0.0854J	ND	NA	10
Manganese	0.0101J	ND	NA	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
SDG NO.: 11K217
METHOD: METHOD 3010A/6010B (DISSOLVED)

==========

MATRIX:	WATER		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	CONNECTION 799			
CONTROL NO.:	K227-01W	K227-01A		
LAB FILE ID:	ID8L003026	ID8L003025		
DATIME EXTRCTD:	11/30/1109:30	11/30/1109:30	DATE COLLECTED:	11/29/11 08:30
DATIME ANALYZD:	12/05/1115:23	12/05/1115:20	DATE RECEIVED:	11/29/11
PREP. BATCH:	IPK045W	IPK045W		
CALIB. REF:	ID8L003020	ID8L003020		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	AS RSLT (mg/L)	AS % REC	QC LIMIT (%)
Arsenic	ND	.5	.578	116	75-125
Iron	.0854J	5	5.85	115	75-125
Manganese	.0101J	.5	.546	107	75-125

ICP QC CHECK TABLE

QC	ICV	CCV	ICSAB	ICSA	MLCV
Limit%	90-110	90-110	80-120	80-120	80-120
Comp	mg/L	mg/L	mg/L	mg/L	mg\L
Al	100	100	400	400	200
Sb	1.5	1.5	1	0	5
As	1	1	1	0	1
Ba	2	2	0.5	0	5
Be	1.5	1.5	0.5	0	5
B	2.5	2.5	0.5	0	5
Cd	2	2	1	0	5
Ca	75	75	500	500	250
Cr	2.5	2.5	0.5	0	5
Co	1	1	0.5	0	1
Cu	2.5	2.5	0.5	0	5
Fe	25	25	200	200	200
Pb	2.5	2.5	1	0	5
Li	0.5	0.5	1	0	0.5
Mg	60	60	200	200	100
Mn	2.5	2.5	0.5	0	5
Mo	2.5	2.5	1	0	5
Ni	2.5	2.5	1	0	5
K	60	60	75	0	250
Se	1	1	1	0	1
Ag	0.5	0.5	1	0	0.5
Na	60	60	75	0	150
Sr	0.5	0.5	0.5	0	0.5
Tl	2.5	2.5	1	0	5
Sn	0.5	0.5	1	0	0.5
Ti	0.5	0.5	1	0	0.5
V	1.5	1.5	0.5	0	5
Zn	2.5	2.5	1	0	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 12/5/11 14:08

End Date: 12/5/11 21:08

SOP #	Rev. #
☑ EMAX-6010	7
☐ EMAX-6010C	1
☐ EMAX-200.7	2
☐ EMAX-	

Comments:

- CCV5 TSe, Cu, Na 7110%.
- CCV6 Na, Cu 7110%
- CCV7-CCV9 Na 7110%
- 11K224, 11K230, 11K237 for rerun
- K597-09T @ 5X Pb 7UDR
- K597-20T @ 5X Pb 7UDR

Book #: AD8-022

Instrument No.: D8

Analytical Batch: 1D8L003

Analytical Sequence: S_11L6010(V10)

Method File: 11L6010(V10)

Database: EMAX14

	STANDARDS ID			STANDARDS ID	
S0	SM1B14-8502		S30	SM1B14-6802	
S1	NA		S31		6803
S2			ICV		8201
S3			CCV		8301
S4			ICSA		8502
S5			ICSAB		6704
S6			CRI/MRL1		8101
S7			MRL2	✓	7401
S8					
S9					
S10					
S11					
S12					
S16					
S17					
S18	✓				
S20	SM1B14-8101				
S21		6503			
S22		6504			
S23		8102			
S24		6702			
S25		6703			
S26		7801			
S27		7802			
S28		7803			
S29	✓	7804			

Analyzed By: TH

Date: 12/5/11

7009

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

| | | |

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
1	0	0	0	0	Unk	S0		ID8L003001			1	☒	unk	---
2	0	0	0	0	Unk	S20		ID8L003002			1	☒	unk	---
3	0	0	0	0	Unk	S21		ID8L003003			1	☒	unk	---
4	0	0	0	0	Unk	S22		ID8L003004			1	☒	unk	---
5	0	0	0	0	Unk	S23		ID8L003005			1	☒	unk	---
6	0	0	0	0	Unk	S24		ID8L003006			1	☒	unk	---
7	0	0	0	0	Unk	S25		ID8L003007			1	☒	unk	---
8	0	0	0	0	Unk	S26		ID8L003008			1	☒	unk	---
9	0	0	0	0	Unk	S27		ID8L003009			1	☒	unk	---
10	0	0	0	0	Unk	S28		ID8L003010			1	☒	unk	---
11	0	0	0	0	Unk	S29		ID8L003011			1	☒	unk	---
12	0	0	0	0	Unk	S30		ID8L003012			1	☒	unk	---
13	0	0	0	0	Unk	S31		ID8L003013			1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8L003014			1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8L003015			1	☒	3XIDL	None
16	3	2	3	1	QC	MRLL0501		ID8L003016			1	☒	MRL-EMAX	None
17	4	2	4	1	QC	MRLL0502		ID8L003017			1	☒	MRL-AFCEE	None
18	5	2	5	1	QC	ICSA1		ID8L003018			1	☒	ICSA-DoD	None
19	6	2	6	1	QC	ICSAB1		ID8L003019			1	☒	ICSAB	None
20	7	2	7	1	QC	CCV1		ID8L003020			1	☒	CCV	None
21	8	2	8	1	QC	CCB1		ID8L003021			1	☒	3XIDL	None
22	9	2	9	1	QC	IPK045WQ		ID8L003022			1	☒	1/2LOQ	None
23	10	2	10	1	QC	IPK045WX		ID8L003023			1	☒	LCS	None
24	11	2	11	1	QC	IPK045WY		ID8L003024			1	☒	LCS	None
25	12	2	12	1	Unk	K227-01A		ID8L003025			1	☒	unk	---
26	13	2	1	2	Unk	K227-01W		ID8L003026			1	☒	unk	---
27	14	2	2	2	Unk	K227-01J		ID8L003027			1	☒	unk	---
28	15	2	3	2	Unk	K217-04W		ID8L003028			1	☒	unk	---
29	16	2	4	2	Blank	Blank		ID8L003029			1	☐		---
30	17	2	5	2	QC	CCV2		ID8L003030			1	☒	CCV	None
31	18	2	6	2	QC	CCB2		ID8L003031			1	☒	LOD	None
32	53	2	5	5	QC	IPL004SB		ID8L003032			1	☒	1/2LOQ	None
33	54	2	6	5	QC	IPL004SL		ID8L003033			1	☒	LCS	None
34	55	2	7	5	QC	IPL004SC		ID8L003034			1	☒	LCS	None
35	56	2	8	5	Unk	L008-01A		ID8L003035			1	☒	unk	---
36	57	2	9	5	Unk	L008-01		ID8L003036			1	☒	unk	---
37	58	2	10	5	Unk	L008-01J		ID8L003037			1	☒	unk	---
38	59	2	11	5	Unk	L008-01M		ID8L003038			1	☒	unk	---
39	60	2	12	5	Unk	L008-01S		ID8L003039			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
40	61	3	1	1	Unk	L008-02		ID8L003040			1	☒	unk	---
41	62	3	2	1	Blank	Blank		ID8L003041			1	☐		---
42	63	3	3	1	QC	CCV3		ID8L003042			1	☒	CCV	None
43	64	3	4	1	QC	CCB3		ID8L003043			1	☒	3XIDL	None
44	65	3	5	1	Unk	L008-03		ID8L003044			1	☒	unk	---
45	66	3	6	1	Unk	L008-04		ID8L003045			1	☒	unk	---
46	67	3	7	1	Unk	L008-05		ID8L003046			1	☒	unk	---
47	68	3	8	1	Unk	L008-06		ID8L003047			1	☒	unk	---
48	69	3	9	1	Unk	L008-07		ID8L003048			1	☒	unk	---
49	70	3	10	1	Unk	L008-08		ID8L003049			1	☒	unk	---
50	71	3	11	1	Unk	L008-09		ID8L003050			1	☒	unk	---
51	72	3	12	1	Unk	L008-10		ID8L003051			1	☒	unk	---
52	73	3	1	2	Blank	Blank		ID8L003052			1	☐		---
53	74	3	2	2	QC	CCV4		ID8L003053			1	☒	CCV	None
54	75	3	3	2	QC	CCB4		ID8L003054			1	☒	3XIDL	None
55	76	3	4	2	Unk	L012-01		ID8L003055			1	☒	unk	---
56	77	3	5	2	Unk	L012-02		ID8L003056			1	☒	unk	---
57	78	3	6	2	Unk	L012-03		ID8L003057			1	☒	unk	---
58	79	3	7	2	Unk	L012-04		ID8L003058			1	☒	unk	---
59	80	3	8	2	Blank	Blank		ID8L003059			1	☐		---
60	81	3	9	2	QC	CCV5	75Se Cu Na	ID8L003060			1	☒	CCV	None
61	82	3	10	2	QC	CCB5		ID8L003061			1	☒	LOD	None
62	19	2	7	2	QC	IPL003WB		ID8L003062			1	☒	1/2LOQ	None
63	20	2	8	2	QC	IPL003WL		ID8L003063			1	☒	LCS	None
64	21	2	9	2	QC	IPL003WC		ID8L003064			1	☒	LCS	None
65	22	2	10	2	Unk	K226-01A		ID8L003065			1	☒	unk	---
66	23	2	11	2	Unk	K226-01		ID8L003066			1	☒	unk	---
67	24	2	12	2	Unk	K226-01J		ID8L003067			1	☒	unk	---
68	25	2	1	3	Unk	K226-01M		ID8L003068			1	☒	unk	---
69	26	2	2	3	Unk	K226-01S		ID8L003069			1	☒	unk	---
70	27	2	3	3	Unk	K226-02		ID8L003070			1	☒	unk	---
71	28	2	4	3	Blank	Blank		ID8L003071			1	☐		---
72	29	2	5	3	QC	CCV6	75Cu Na	ID8L003072			1	☒	CCV	None
73	30	2	6	3	QC	CCB6		ID8L003073			1	☒	LOD	None
74	31	2	7	3	Unk	K226-03		ID8L003074			1	☒	unk	---
75	32	2	8	3	Unk	K226-04		ID8L003075			1	☒	unk	---
76	33	2	9	3	Unk	K224-09	rerun	ID8L003076			1	☒	unk	---
77	34	2	10	3	Unk	K230-11	rerun	ID8L003077			1	☒	unk	---
78	35	2	11	3	Unk	K237-01	rerun	ID8L003078			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
79	36	2	12	3	Unk	K231-01A		ID8L003079			1	☒	unk	---
80	37	2	1	4	Unk	K231-01		ID8L003080			1	☒	unk	---
81	38	2	2	4	Unk	K231-01J		ID8L003081			1	☒	unk	---
82	39	2	3	4	Unk	K231-01M		ID8L003082			1	☒	unk	---
83	40	2	4	4	Blank	Blank		ID8L003083			1	☐		---
84	41	2	5	4	QC	CCV7	↑Na	ID8L003084			1	☒	CCV	None
85	42	2	6	4	QC	CCB7		ID8L003085			1	☒	LOD	None
86	43	2	7	4	Unk	K231-01S		ID8L003086			1	☒	unk	---
87	44	2	8	4	Unk	K231-10		ID8L003087			1	☒	unk	---
88	45	2	9	4	Unk	K231-11		ID8L003088			1	☒	unk	---
89	46	2	10	4	Unk	K221-01	DISS	ID8L003089			1	☒	unk	---
90	47	2	11	4	Unk	K221-02	DISS	ID8L003090			1	☒	unk	---
91	48	2	12	4	Unk	K221-03	DISS	ID8L003091			1	☒	unk	---
92	49	2	1	5	Unk	K221-04	DISS	ID8L003092			1	☒	unk	---
93	83	3	11	2	Unk	K224-07		ID8L003093			1	☒	unk	---
94	50	2	2	5	Blank	Blank		ID8L003094			1	☐		---
95	51	2	3	5	QC	CCV8	↑Na	ID8L003095			1	☒	CCV	None
96	52	2	4	5	QC	CCB8		ID8L003096			1	☒	LOD	None
97	84	3	12	2	QC	IPL002SB		ID8L003097			1	☒	1/2LOQ	None
98	85	3	1	3	QC	IPL002SL		ID8L003098			1	☒	LCS	None
99	86	3	2	3	QC	IPL002SC		ID8L003099			1	☒	LCS	None
100	87	3	3	3	Unk	K224-02A		ID8L003100			1	☒	unk	---
101	88	3	4	3	Unk	K224-02		ID8L003101			1	☒	unk	---
102	89	3	5	3	Unk	K224-02J		ID8L003102			1	☒	unk	---
103	90	3	6	3	Unk	K224-03		ID8L003103			1	☒	unk	---
104	91	3	7	3	Unk	K224-04		ID8L003104			1	☒	unk	---
105	92	3	8	3	Unk	K224-06		ID8L003105			1	☒	unk	---
106	93	3	9	3	Blank	Blank		ID8L003106			1	☐		---
107	94	3	10	3	QC	CCV9	↑Na	ID8L003107			1	☒	CCV	None
108	95	3	11	3	QC	CCB9		ID8L003108			1	☒	3XIDL	None
109	96	3	12	3	QC	IPL006SB		ID8L003109			1	☒	1/2LOQ	None
110	97	3	1	4	QC	IPL006SL		ID8L003110			1	☒	LCS	None
111	98	3	2	4	QC	IPL006SC		ID8L003111			1	☒	LCS	None
112	99	3	3	4	Unk	K597-17A	5X	ID8L003112			1	☒	unk	---
113	100	3	4	4	Unk	K597-17T	5X	ID8L003113			1	☒	unk	---
114	101	3	5	4	Unk	K597-17J	25X	ID8L003114			1	☒	unk	---
115	102	3	6	4	Unk	K597-17M	5X	ID8L003115			1	☒	unk	---
116	103	3	7	4	Unk	K597-17S	5X	ID8L003116			1	☒	unk	---
117	104	3	8	4	Unk	K597-01T	5X	ID8L003117			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
118	105	3	9	4	Blank	Blank		ID8L003118			1	☐		---
119	106	3	10	4	QC	CCV10		ID8L003119			1	☒	CCV	None
120	107	3	11	4	QC	CCB10		ID8L003120			1	☒	3XIDL	None
121	108	3	12	4	Unk	K597-02T	5X	ID8L003121			1	☒	unk	---
122	109	3	1	5	Unk	K597-03T	5X	ID8L003122			1	☒	unk	---
123	110	3	2	5	Unk	K597-04T	5X	ID8L003123			1	☒	unk	---
124	111	3	3	5	Unk	K597-05T	5X	ID8L003124			1	☒	unk	---
125	112	3	4	5	Unk	K597-06T	5X	ID8L003125			1	☒	unk	---
126	113	3	5	5	Unk	K597-07T	5X	ID8L003126			1	☒	unk	---
127	114	3	6	5	Unk	K597-08T	5X	ID8L003127			1	☒	unk	---
128	115	3	7	5	Unk	K597-09T	5X Pb2UR	ID8L003128			1	☒	unk	---
129	116	3	8	5	Unk	K597-10T	5X	ID8L003129			1	☒	unk	---
130	117	3	9	5	Blank	Blank		ID8L003130			1	☐		---
131	118	3	10	5	QC	CCV11		ID8L003131			1	☒	CCV	None
132	119	3	11	5	QC	CCB11		ID8L003132			1	☒	3XIDL	None
133	120	3	12	5	Unk	K597-11T	5X	ID8L003133			1	☒	unk	---
134	121	4	1	1	Unk	K597-12T	5X	ID8L003134			1	☒	unk	---
135	122	4	2	1	Unk	K597-13T	5X	ID8L003135			1	☒	unk	---
136	123	4	3	1	Unk	K597-14T	5X	ID8L003136			1	☒	unk	---
137	124	4	4	1	Unk	K597-15T	5X	ID8L003137			1	☒	unk	---
138	125	4	5	1	Unk	K597-16T	5X	ID8L003138			1	☒	unk	---
139	126	4	6	1	Unk	K597-18T	5X	ID8L003139			1	☒	unk	---
140	127	4	7	1	Unk	K597-19T	5X	ID8L003140			1	☒	unk	---
141	128	4	8	1	Unk	K597-20T	5X Pb2UR	ID8L003141			1	☒	unk	---
142	129	4	9	1	Blank	Blank		ID8L003142			1	☐		---
143	130	4	10	1	QC	CCV12		ID8L003143			1	☒	CCV	None
144	131	4	11	1	QC	CCB12		ID8L003144			1	☒	3XIDL	None

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Table 2. Selection coefficients

Locus	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	Allele
1	2.041	0.0096	0.0003	0.0001	0.0015	0.0027	0.0103	0.0066	0.0209	0.0105	Blank
2	7				9.9962		1.0000				520
3	7				0.0000		1.1000				521
4	5.0			0.0005						0.0004	522
5	2.0			0.0007						1.0000	523
6	4.0					0.0005					524
7	5.0					0.9947					525
8	5.0	2.1161						0.0004	0.0004		526
9	1.7	1.7111						0.0012	1.7972		527
10	5.0		0.0001								528
11	5.0		0.0338								529
12	5.0			0.0112							530
13	5.0			0.0000							531
14	1.0	0.0043	1.0114	1.0843	2.1040	1.0878	2.0573	2.1011	2.0000	2.0127	1.0002	IGV
15	1.0	-0.0161	-0.0012	0.0016	0.0007	0.0007	0.0014	-0.0001	0.0044	0.0001	0.0002	IGG
16	MR_0501	2.1484	0.9837	0.0103	0.0001	0.0036	0.9942	0.0399	1.1078	0.0071	0.0030	MR_0501
17	MR_0502	2.0689	0.4865	0.0028	0.0014	0.0001	0.9963	0.0539	0.0143	0.0028	0.0004	MR_0502
18	IGSA1	4.1.86	-0.0014	0.0132	0.0000	0.0002	-0.0597	0.0037	4.0.4	0.0043	0.0007	IGSA1
19	IGSA3	4.0.0	1.0482	1.1126	0.0842	0.0471	0.0367	0.9475	4.4.0	0.4844	0.9567	IGSA3
20	IGV1	1.0.7	1.0036	1.0776	2.1134	1.0206	2.0590	2.0775	0.0.0	2.4986	0.9769	IGV1
21	IGG1	0.0007	0.0018	0.0038	0.0012	0.0004	0.0041	0.0007	1.0249*	-0.0006	0.0009	IGG1
22	IPK04bW	1.0.6	0.0046	0.0124	0.0011	-0.0002	0.0234	-0.0009	0.0.0	0.0001	-0.0001	IPK04bW
23	IPK04bX	-0.0.0	2.0400	1.4103	0.0374	0.4276	0.0087	0.0849	0.0.1	1.1958	0.0023	IPK04bX
24	IPK04bY	0.0.7	2.0223	0.0.9	1.0956	0.4053	0.4116	0.0727	0.0.3	1.1930	0.0121	IPK04bY
25	X227-01A	0.0.2	2.4200	0.0.7	0.0407	-0.1191	0.0073	0.0747	0.0.4	0.0398	0.0464	X227-01A
26	X227-01B	1.0.0	1.0391	0.0013	1.0.1	1.0002	0.1086	0.0043	4.0.0	0.0016	1.0072	X227-01B
27	X227-01C	0.0.7	0.0250	1.0004	0.0.4	0.0004	0.0239	0.0.5	0.0.7	0.0010	0.0017	X227-01C
28	X227-01D	0.0.6	0.0007	0.0250	0.0.0	1.0001	0.0017	-0.0004	0.0.1	0.0006	1.0004	X227-01D
29	Blank	0.0.5	0.0115	0.0062	0.0.4	0.0035	0.0032	0.0005	-0.0.1	-0.0003	0.0000	Blank
30	1.0.0	1.0.0	1.0043	1.0.4	2.0.1	0.0.0	2.0.1	2.0.7	0.0.0	0.0.4	0.0.2	520
31	0.0.0	0.0.7	0.0239	0.0.0	0.0006	0.0.1	0.0.0	0.0375	0.0.0	0.0.5	0.0.6	521
32	0.0.0	0.0.0	0.0.0	0.0.4	0.0.0	0.0.1	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	522
33	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	523
34	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	524
35	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	525
36	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	526
37	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	527
38	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	528
39	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	529
40	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	530
41	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	531
42	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	IGV
43	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	IGG
44	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	MR_0501
45	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	MR_0502
46	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	IGSA1
47	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	IGSA3
48	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	IGV1
49	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	IGG1
50	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	IPK04bW
51	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	IPK04bX
52	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	IPK04bY
53	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	X227-01A
54	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	X227-01B
55	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	X227-01C
56	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	X227-01D
57	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	Blank

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178	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
179	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
180	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
181	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
182	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
183	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
184	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
185	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
186	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
187	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
188	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
189	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
190	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
191	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
192	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
193	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
194	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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196	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
197	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
198	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
199	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
201	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
202	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
203	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
204	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
205	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
206	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
207	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
208	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
209	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
210	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
211	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
212	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
213	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
214	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
215	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
216	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
217	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
218	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
219	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
220	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
221	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
222	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
223	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
224	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
225	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	[illegible]								[illegible]
3	[illegible]								[illegible]
4	[illegible]						[illegible]		[illegible]
5	[illegible]						[illegible]		[illegible]
6	[illegible]		[illegible]						[illegible]
7	[illegible]		[illegible]						[illegible]
8	[illegible]								[illegible]
9	[illegible]								[illegible]
10	[illegible]				[illegible]				[illegible]
11	[illegible]				[illegible]				[illegible]
12	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
13	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
32	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
33	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
34	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
35	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
38	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
39	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
42	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
43	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
44	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
46	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
47	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
48	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

| | | |

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP METALS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:
All samples pH <2

Book #: EIP-104
Batch: 1PK045W
Matrix: Water
Digestor ID: E

SOP #	Rev. #
☐ EMAX-3005	4
☑ EMAX-3010	5
☐ EMAX-3050	4
☐ EMAX-200.7	2
☐ EMAX-	

Start	Temp	End	Temp
	95 °C		95 °C

Standards	ID	Amount Added (ml)
LCS-1	SM1A-013-04-13	0.25
LCS-2	SM1A-013-03-13	0.25
LCS-3	SM1A-013-04-14	0.5
MS	same spike vol and std as LCS1 LCS2, LCS3	
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SW1A-04-407	1.5 + 1.5
HCl	SW1A-04-408	2.5 + 2.5
H_2O_2	N/A	
HNO3(1:1)	N/A	

Digestate Location	ICP
Extract Location	
☑ Reagent Water ID: SM5A-02-075	
☑ Thermometer ID: 101993366	
☑ Pipette ID: ICP-07	
☑ Pipette ID: 142780035	
☐ Pipette ID:	
☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask	
☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask	

Prepared By: GG

Standard Added By: GG Witnessed By: [illegible]

Extract Rcvd By: TH Checked By: TH

EMAX LABORATORIES INC

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
11IPK045W01	IPK045WB	50	ml	11/30/11 9:25	50	50	50	1	
11IPK045W02	IPK045WL	50	ml	11/30/11 9:25	50	50	50	1	
11IPK045W03	IPK045WC	50	ml	11/30/11 9:25	50	50	50	1	
11IPK045W04	K217-04	50	ml	11/30/11 9:25	50	50	50	1	DISSOLVED
11IPK045W05	K227-01	50	ml	11/30/11 9:25	50	50	50	1	
11IPK045W06	K227-01M	50	ml	11/30/11 9:25	50	50	50	1	
11IPK045W07	K227-01S	50	ml	11/30/11 9:25	50	50	50	1	
11IPK045W08	TXK010SB	10	ml	11/30/11 9:25	50	50	50	5	TCLP
11IPK045W09	K216-01	10	ml	11/30/11 9:25	50	50	50	5	TCLP
11IPK045W10	K216-01M	10	ml	11/30/11 9:25	50	50	50	5	TCLP
11IPK045W11	K216-01S	10	ml	11/30/11 9:25	50	50	50	5	TCLP
11IPK045W12	K216-02	10	ml	11/30/11 9:25	50	50	50	5	TCLP

11/30/11 GG

Vd=digestate volume PrepFctr=)ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 11/30/11 9:30 Prepared By GG

☑ Digestion Ended @ 11/30/11 13:46 Checked By TH

Comments: Date 11/30/11

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

WET CHEMICAL ANALYSES

SDG#: 11K217

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K217

METHOD 300.0
ANIONS BY IC

One (1) water sample was received on 11/23/11 for Anions (Chloride, Nitrate, Nitrite and Sulfate) by IC analysis, Method 300.0 in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for ICK081WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

SAMPLE RESULTS

METHOD 300.0
CHLORIDE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K217

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK081WB	ND	1	NA	0.200	0.100	11/23/1112:53	NA	AK35-10	AK35-08	ICK081W	NA	NA
LCS1W	ICK081WL	1.98	1	NA	0.200	0.100	11/23/1113:09	NA	AK35-11	AK35-08	ICK081W	NA	NA
LCD1W	ICK081WC	1.98	1	NA	0.200	0.100	11/23/1113:25	NA	AK35-12	AK35-08	ICK081W	NA	NA
IR-70-EB-171	K217-04	0.174J	1	NA	0.200	0.100	11/23/1116:07	NA	AK35-22	AK35-20	ICK081W	11/23/1111:50	11/23/11

METHOD 300.0
NITRATE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K217

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK081WB	ND	1	NA	0.200	0.0500	11/23/1112:53	NA	AK35-10	AK35-08	ICK081W	NA	NA
LCS1W	ICK081WL	1.02	1	NA	0.200	0.0500	11/23/1113:09	NA	AK35-11	AK35-08	ICK081W	NA	NA
LCD1W	ICK081WC	1.02	1	NA	0.200	0.0500	11/23/1113:25	NA	AK35-12	AK35-08	ICK081W	NA	NA
IR-70-EB-171	K217-04	0.0837J	1	NA	0.200	0.0500	11/23/1116:07	NA	AK35-22	AK35-20	ICK081W	11/23/1111:50	11/23/11

METHOD 300.0
NITRITE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K217

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK081WB	ND	1	NA	0.200	0.0500	11/23/1112:53	NA	AK35-10	AK35-08	ICK081W	NA	NA
LCS1W	ICK081WL	2.12	1	NA	0.200	0.0500	11/23/1113:09	NA	AK35-11	AK35-08	ICK081W	NA	NA
LCD1W	ICK081WC	2.12	1	NA	0.200	0.0500	11/23/1113:25	NA	AK35-12	AK35-08	ICK081W	NA	NA
IR-70-EB-171	K217-04	ND	1	NA	0.200	0.0500	11/23/1116:07	NA	AK35-22	AK35-20	ICK081W	11/23/1111:50	11/23/11

METHOD 300.0
SULFATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K217

Matrix : WATER
Instrument ID : D0

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK081WB	ND	1	NA	0.500	0.250	11/23/1112:53	NA	AK35-10	AK35-08	ICK081W	NA	NA
LCS1W	ICK081WL	5.15	1	NA	0.500	0.250	11/23/1113:09	NA	AK35-11	AK35-08	ICK081W	NA	NA
LCD1W	ICK081WC	5.15	1	NA	0.500	0.250	11/23/1113:25	NA	AK35-12	AK35-08	ICK081W	NA	NA
IR-70-EB-171	K217-04	0.267J	1	NA	0.500	0.250	11/23/1116:07	NA	AK35-22	AK35-20	ICK081W	11/23/1111:50	11/23/11

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K217
METHOD: METHOD 300.0

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK081WB	ICK081WL	ICK081WC		
LAB FILE ID:	AK35-10	AK35-11	AK35-12		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1112:53	11/23/1113:09	11/23/1113:25	DATE RECEIVED:	NA
PREP. BATCH:	ICK081W	ICK081W	ICK081W		
CALIB. REF:	AK35-08	AK35-08	AK35-08		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	ND	2.00	1.98	99	2.00	1.98	99	0	90-110	20

8698

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K217
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK081WB	ICK081WL	ICK081WC		
LAB FILE ID:	AK35-10	AK35-11	AK35-12		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1112:53	11/23/1113:09	11/23/1113:25	DATE RECEIVED:	NA
PREP. BATCH:	ICK081W	ICK081W	ICK081W		
CALIB. REF:	AK35-08	AK35-08	AK35-08		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrate-N	ND	1.00	1.02	102	1.00	1.02	102	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K217
METHOD: METHOD 300.0

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID:	MBLK1W		
LAB SAMP ID:	ICK081WB	ICK081WL	ICK081WC
LAB FILE ID:	AK35-10	AK35-11	AK35-12
DATE EXTRACTED:	NA	NA	NA
DATE ANALYZED:	11/23/1112:53	11/23/1113:09	11/23/1113:25
PREP. BATCH:	ICK081W	ICK081W	ICK081W
CALIB. REF:	AK35-08	AK35-08	AK35-08

DATE COLLECTED: NA
DATE RECEIVED: NA

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	2.00	2.12	106	2.00	2.12	106	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K217
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK081WB	ICK081WL	ICK081WC		
LAB FILE ID:	AK35-10	AK35-11	AK35-12		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1112:53	11/23/1113:09	11/23/1113:25	DATE RECEIVED:	NA
PREP. BATCH:	ICK081W	ICK081W	ICK081W		
CALIB. REF:	AK35-08	AK35-08	AK35-08		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	5.15	103	5.00	5.15	103	0	90-110	20

INITIAL CALIBRATIONS

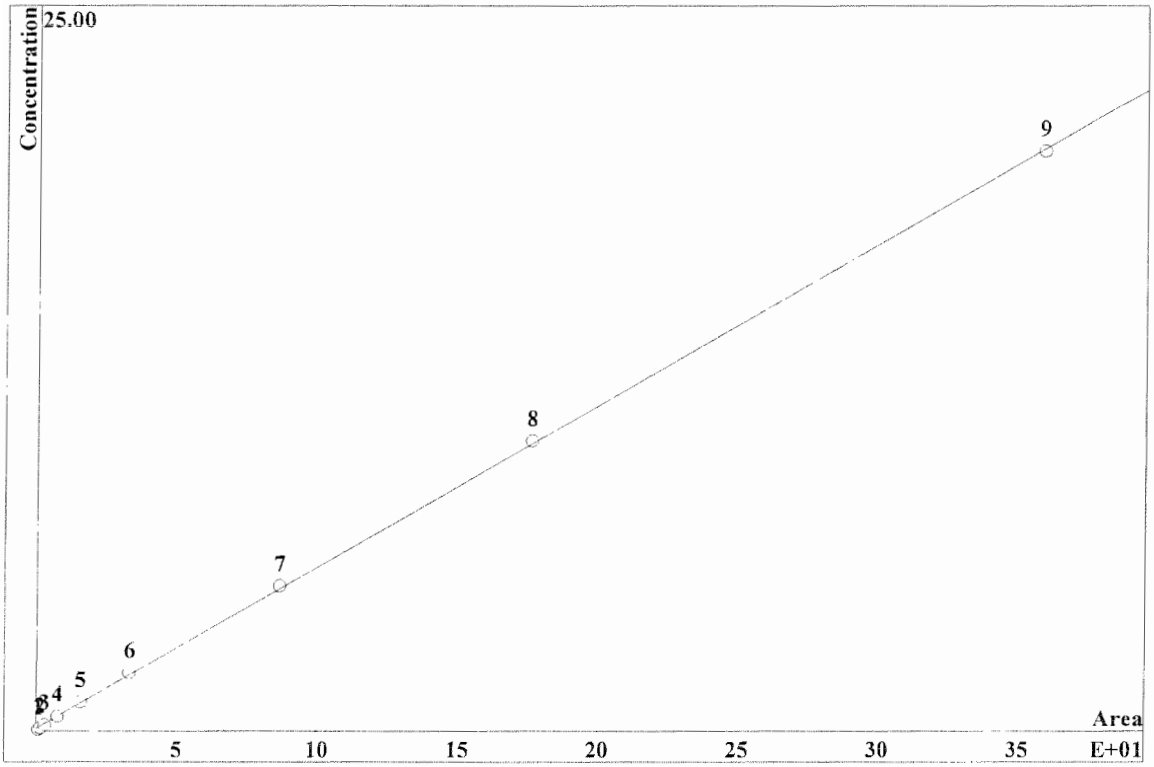
IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	nitrite	fluoride	chloride	bromide	nitrate	phosphate	sulfate	RawNetID	DF
AI39-01	IB	IFCBNPS	0	0	0	0	0	0	0	v9301829	1
AI39-02	S0	IFCBNPS	0	0	0	0	0	0	0	v9301845	1
AI39-03	S1	IFCBNPS	0.0402732	0.0794447	0.137238	0.0962101	0.0900188	0.132659	0.181386	v9301901	1
AI39-04	S2	IFCBNPS	0.0827484	0.120657	0.172987	0.138434	0.127411	0.166211	0.219384	v9301917	1
AI39-05	S3	IFCBNPS	0.175829	0.207372	0.255839	0.223376	0.213499	0.241921	0.298411	v9301934	1
AI39-06	S4	IFCBNPS	0.468611	0.487287	0.510168	0.483675	0.481038	0.46682	0.535669	v9301950	1
AI39-07	S5	IFCBNPS	0.987232	0.975831	0.969747	0.947628	0.958434	0.904972	0.974277	v9302006	1
AI39-08	S6	IFCBNPS	2.03579	2.00618	1.92527	1.92275	1.95393	1.87863	1.87805	v9302022	1
AI39-09	S7	IFCBNPS	5.13141	5.00267	4.89791	5.03793	5.02567	5.05879	4.80122	v9302038	1
AI39-10	S8	IFCBNPS	9.9281	9.57748	9.9004	10.4648	10.1254	10.4079	9.8176	v9302054	1
AI39-11	S9	IFCBNPS	18.5849	17.9543	20.0804	21.615	20.3941	21.1232	20.144	v9302111	1
AI39-12	ICV	IFCBNPS	98.6%	100.1%	97.7%	94.1%	98.6%	92.5%	99.9%	v9302127	1
AI39-13	ICB	IFCBNPS	0	0	0	0	0	0	0	v9302143	1

AJ
15/03/11

CALIBRATION OF COMPONENT chloride /

Method: ICD0-I30.mtw ✓
Equation: Q = 0.0557644·A + 0.0866239
RSD: 1.948 %
Correlation coefficient: 0.999932



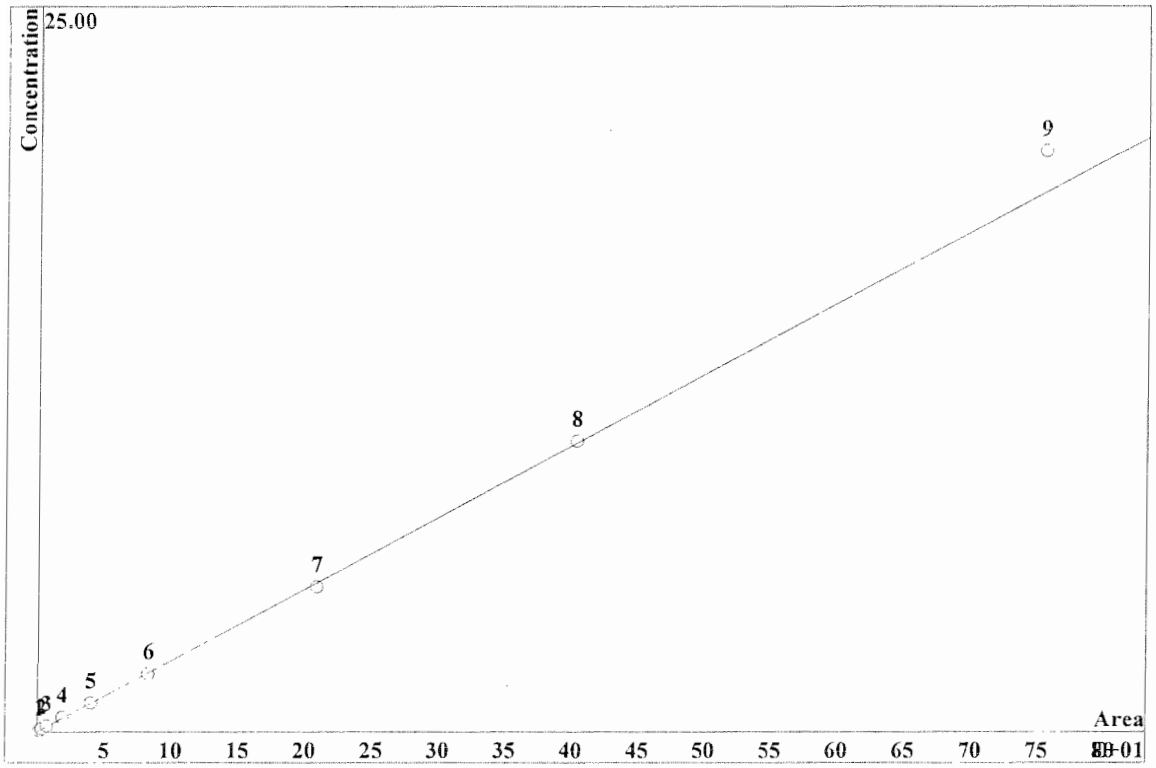
K3 = 0 K2 = 0 K1 = 0.0557644 K0 = 0.0866239
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1035	0.9076 ✓	0.05	1	4.26	Yes	v9301901.chw
2	0.1796	1.549 ✓	0.1	1	4.26	Yes	v9301917.chw
3	0.354	3.034 ✓	0.2	1	4.26	Yes	v9301934.chw
4	0.8921	7.595 ✓	0.5	1	4.26	Yes	v9301950.chw
5	1.896	15.84 ✓	1	1	4.26	Yes	v9302006.chw
6	3.983	32.97 ✓	2	1	4.26	Yes	v9302022.chw
7	10.38	86.28 ✓	5	1	4.26	Yes	v9302038.chw
8	21.04	176 ✓	10	1	4.26	Yes	v9302054.chw
9	42.24	358.5 ✓	20	1	4.26	Yes	v9302111.chw

AA
10/03/11

CALIBRATION OF COMPONENT nitrite

Method: ICD0-I30.mtw ✓ ✓
Equation: Q = 0.024644·A + 0.00179217
RSD: 2.785 %
Correlation coefficient: 0.999850



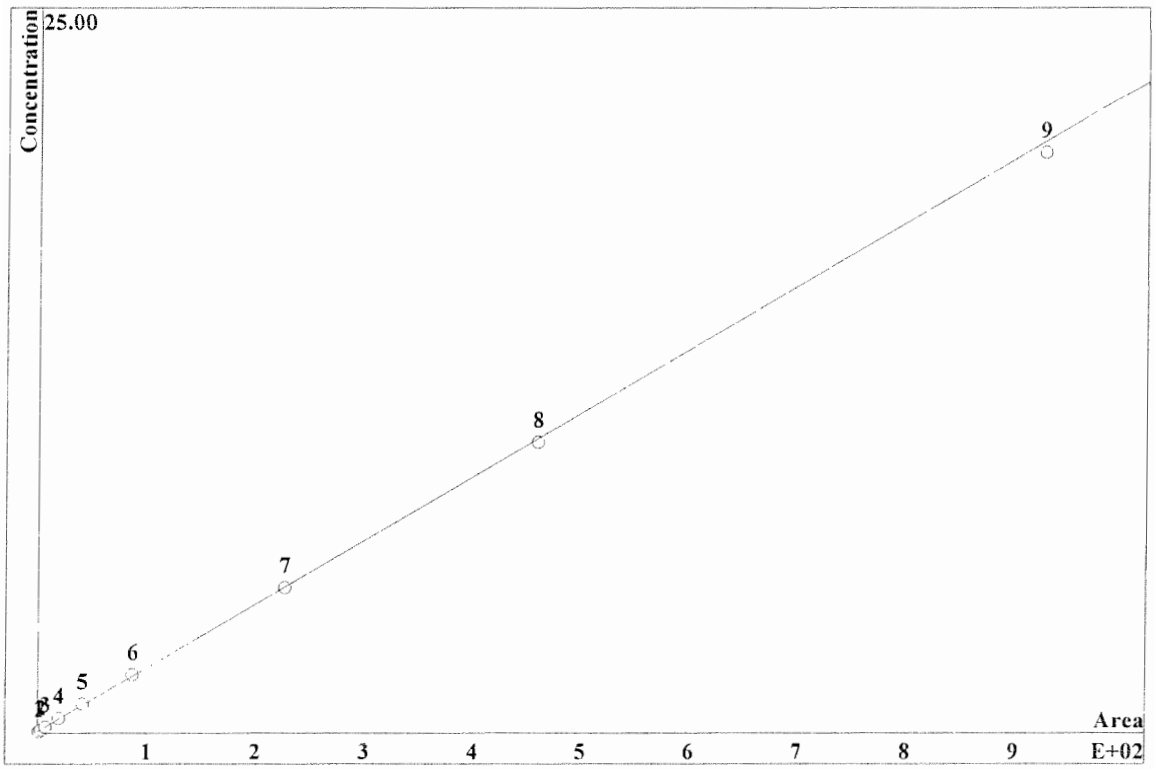
K3 = 0 K2 = 0 K1 = 0.024644 K0 = 0.00179217
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1597	1.561 ✓	0.05	1	4.932	Yes	v9301901.chw
2	0.3368	3.285 ✓	0.1	1	4.932	Yes	v9301917.chw
3	0.7305	7.062 ✓	0.2	1	4.932	Yes	v9301934.chw
4	1.964	18.94 ✓	0.5	1	4.932	Yes	v9301950.chw
5	4.115	39.99 ✓	1	1	4.932	Yes	v9302006.chw
6	8.392	82.54 ✓	2	1	4.932	Yes	v9302022.chw
7	19.91	208.1 ✓	5	1	4.932	Yes	v9302038.chw
8	35.83	402.8 ✓	10	1	4.932	Yes	v9302054.chw
9	61.98	754.1 ✓	20	1	4.932	No	v9302111.chw

RA
10/3/11

CALIBRATION OF COMPONENT nitrate

Method: ICD0-I30.mtw
Equation: Q = 0.0219574·A + 0.0522169
RSD: 3.044 %
Correlation coefficient: 0.999806



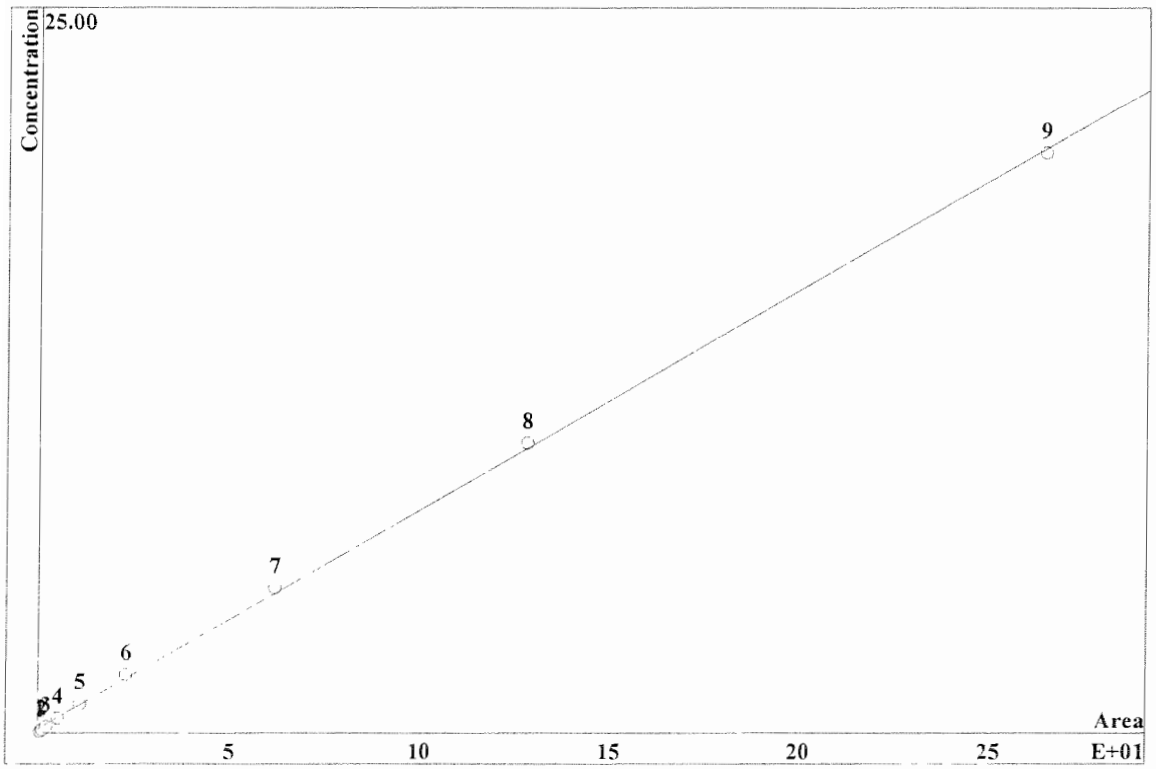
K3 = 0 K2 = 0 K1 = 0.0219574 K0 = 0.0522169
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1416	1.722	0.05	1	6.74	Yes	v9301901.chw
2	0.2866	3.425	0.1	1	6.74	Yes	v9301917.chw
3	0.6179	7.345	0.2	1	6.74	Yes	v9301934.chw
4	1.658	19.53	0.5	1	6.74	Yes	v9301950.chw
5	3.518	41.27	1	1	6.74	Yes	v9302006.chw
6	7.416	86.61	2	1	6.74	Yes	v9302022.chw
7	19.15	226.5	5	1	6.74	Yes	v9302038.chw
8	38.33	458.8	10	1	6.74	No	v9302054.chw
9	74.21	926.4	20	1	6.74	No	v9302111.chw

RS
10/03/11

CALIBRATION OF COMPONENT sulfate

Method: ICD0-I30.mtw ✓ ✓
Equation: Q = 0.0758014·A + 0.128926
RSD: 3.408 %
Correlation coefficient: 0.999791



K3 = 0 K2 = 0 K1 = 0.0758014 K0 = 0.128926
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.03861	0.6921 ✓	0.05	1	10.79	Yes	v9301901.chw
2	0.06635	1.193 ✓	0.1	1	10.79	Yes	v9301917.chw
3	0.1288	2.236 ✓	0.2	1	10.79	Yes	v9301934.chw
4	0.3105	5.366 ✓	0.5	1	10.79	Yes	v9301950.chw
5	0.6333	11.15 ✓	1	1	10.79	Yes	v9302006.chw
6	1.361	23.08 ✓	2	1	10.79	Yes	v9302022.chw
7	3.625	61.64 ✓	5	1	10.79	Yes	v9302038.chw
8	7.471	127.8 ✓	10	1	10.79	Yes	v9302054.chw
9	15.34	264 ✓	20	1	10.79	Yes	v9302111.chw

RA
10/03/11

SECOND SOURCE VERIFICATION

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	bromide	nitrite	sulfate	fluoride	chloride	nitrate	phosphate	RawNetID	DF
AI39-12	ICV	BISFCNP	94.1%	98.6%	99.9%	100.1%	97.7%	98.6%	92.5%	v9302127	1
AI39-13	ICB	BISFCNP	0	0	0	0	0	0	0	v9302143	1

AS 10/03/11

DAILY CALIBRATIONS

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	bromide	chloride	fluoride	nitrite	nitrate	phosphate	sulfate	RawNetID	DF
AK35-01	CCV541	BCFINPS	98%	97.4%	102.5%	104.2%	98.1%	102.5%	99.2%	vb231024	1
AK35-02	CCB541	BCFINPS	0	0	0	0	0	0	0	vb231040	1
AK35-08	CCV543	BCFINPS	100.1%	99.7%	104.4%	105.8%	100.1%	104.8%	102.1%	vb231220	1
AK35-09	CCB543	BCFINPS	0	0	0	0	0	0	0	vb231236	1
AK35-20	CCV545	BCFINPS	99.3%	98.9%	103.7%	105.4%	100.2%	103.1%	100.9%	vb231534	1
AK35-21	CCB545	BCFINPS	0	0	0	0	0	0	0	vb231550	1
AK35-25	CCV547	BCFINPS	98.5%	98.5%	103.9%	105.4%	99.1%	101.6%	99.9%	vb231655	1
AK35-26	CCB547	BCFINPS	0	0	0	0	0	0	0	vb231711	1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Concentrations of:

S_1 — 0.05 ppm
S_2 — 0.1
S_3 — 0.2
S_4 — 0.5
S_5 — 1.0
S_6 — 2.0
S_7 — 5.0
S_8 — 10.0
S_9 — 20.0

Linearity (ppm)

F^- — 5
Cl^- — 20
NO_2N — 10
Br^- — 5
NO_3N — 5
PO_4P — 5
SO_4^{2-} — 20

Column: Metrosep A Supp 5-100

Flow Rate: 0.70 ml/min

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-220 (1000 mM H_2SO_4) 100 ml - 1 L

Book #:	AD0-031
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AI39
Method File:	ICD0-I30.mtw
Analytical Batch:	NA

SOP #	Rev. #
☑ EMAX-300.0	6
☐ EMAX-4110B	0
☑ EMAX-9056	3
☐ EMAX-	

STANDARDS ID	
ICAL	SIIB-17-57-02
ICV	SIIB-17-57-03
CCV	NA
LCS	↓
MS	↓

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 9/30/11

8023

File Name	Method	Ident		Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
v930182?.chw	ICD0-130.mtw	AI39-01	IB	1	1.0	1.0	1.0	100.0	0		
v930184?.chw	ICD0-130.mtw	AI39-02	S0	2	1.0	1.0	1.0	100.0	0		
v930190?.chw	ICD0-130.mtw	AI39-03	S1	3	1.0	1.0	1.0	100.0	1		
v930191?.chw	ICD0-130.mtw	AI39-04	S2	4	1.0	1.0	1.0	100.0	2		
v930193?.chw	ICD0-130.mtw	AI39-05	S3	5	1.0	1.0	1.0	100.0	3		
v930195?.chw	ICD0-130.mtw	AI39-06	S4	6	1.0	1.0	1.0	100.0	4		
v930200?.chw	ICD0-130.mtw	AI39-07	S5	7	1.0	1.0	1.0	100.0	5		
v930202?.chw	ICD0-130.mtw	AI39-08	S6	8	1.0	1.0	1.0	100.0	6		
v930203?.chw	ICD0-130.mtw	AI39-09	S7	9	1.0	1.0	1.0	100.0	7		
v930205?.chw	ICD0-130.mtw	AI39-10	S8	10	1.0	1.0	1.0	100.0	8		
v930211?.chw	ICD0-130.mtw	AI39-11	S9	11	1.0	1.0	1.0	100.0	9	FINAL	
v930212?.chw	ICD0-130.mtw	AI39-12	ICV	12	1.0	1.0	1.0	100.0	0		
v930214?.chw	ICD0-130.mtw	AI39-13	ICB	13	1.0	1.0	1.0	100.0	0		

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

AK35 -07 K575-01A DF=2 PS F-0.2ppm

AK35 -17 K575-01A DF=2 PS F-0.4ppm

Book #:	AD0-032
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AK35
Method File:	ICD0 - I30.mtw
Analytical Batch:	ICK0035 ; ICK081W

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SIB-17-95-03
LCS	SIB-17-96-9
MS	SCP Refer to LCS (Parent 17)

Column: Metrosep A Supp 5-100 Filter 0.45µm: 21787469

Flow Rate: 0.70 ml/min 0.20µm: 21772726

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 11/23/17

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb231027.chw	ICD0-130.mtw	AK35-01 CCV541	1	1.0	1.0	1.0	100.0	0		
vb231039.chw	ICD0-130.mtw	AK35-02 CCB541	2	1.0	1.0	1.0	100.0	0		
vb231056.chw	ICD0-130.mtw	AK35-03 ICK003SB	3	1.0	1.0	1.0	100.0	0		
vb231112.chw	ICD0-130.mtw	AK35-04 ICK003SL	4	1.0	1.0	1.0	100.0	0		
vb231128.chw	ICD0-130.mtw	AK35-05 ICK003SC	5	1.0	1.0	1.0	100.0	0		
vb231145.chw	ICD0-130.mtw	AK35-06 K575-01 DF=2	6	1.0	2.0	1.0	100.0	0		
vb231214.chw	ICD0-130.mtw	AK35-07 K575-01A DF=2	7	1.0	2.0	1.0	100.0	0		
vb231229.chw	ICD0-130.mtw	AK35-08 CCV543	8	1.0	1.0	1.0	100.0	0		
vb231236.chw	ICD0-130.mtw	AK35-09 CCB543	9	1.0	1.0	1.0	100.0	0		
vb231253.chw	ICD0-130.mtw	AK35-10 ICK081WB	10	1.0	1.0	1.0	100.0	0		
vb231309.chw	ICD0-130.mtw	AK35-11 ICK081WL	11	1.0	1.0	1.0	100.0	0		
vb231325.chw	ICD0-130.mtw	AK35-12 ICK081WC	12	1.0	1.0	1.0	100.0	0		
vb231341.chw	ICD0-130.mtw	AK35-13 K205-01 DF=250	13	1.0	250.0	1.0	100.0	0		
vb231357.chw	ICD0-130.mtw	AK35-14 K205-01D DF=250	14	1.0	250.0	1.0	100.0	0		
vb231423.chw	ICD0-130.mtw	AK35-15 K205-01M DF=250	15	1.0	250.0	1.0	100.0	0		
vb231430.chw	ICD0-130.mtw	AK35-16 K205-01S DF=250	16	1.0	250.0	1.0	100.0	0		
vb231456.chw	ICD0-130.mtw	AK35-17 K575-01A DF=2	17	1.0	2.0	1.0	100.0	0		
vb231512.chw	ICD0-130.mtw	AK35-18 K205-02 DF=20	18	1.0	20.0	1.0	100.0	0		
vb231518.chw	ICD0-130.mtw	AK35-19 K205-03 DF=100	19	1.0	100.0	1.0	100.0	0		
vb231534.chw	ICD0-130.mtw	AK35-20 CCV545	20	1.0	1.0	1.0	100.0	0		
vb231540.chw	ICD0-130.mtw	AK35-21 CCB545	21	1.0	1.0	1.0	100.0	0		
vb231607.chw	ICD0-130.mtw	AK35-22 K217-04	22	1.0	1.0	1.0	100.0	0		
vb231623.chw	ICD0-130.mtw	AK35-23 K207-01	23	1.0	1.0	1.0	100.0	0	FINAL	
vb231639.chw	ICD0-130.mtw	AK35-24 RINSE	24	1.0	1.0	1.0	100.0	0		
vb231655.chw	ICD0-130.mtw	AK35-25 CCV547	25	1.0	1.0	1.0	100.0	0		
vb231711.chw	ICD0-130.mtw	AK35-26 CCB547	26	1.0	1.0	1.0	100.0	0		

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K217

METHOD 300.0(M)
ORGANIC ACIDS BY IC

A total of three (3) water samples were received on 11/23/11 for Organic Acids (Acetate, Butyrate, Lactate and Propionate) by IC analysis, Method 300.0(M) in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for OAK018WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

SAMPLE RESULTS

METHOD 300.0(M)
ACETATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K217

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK018WB	ND	1	NA	1.00	0.0500	11/23/1111:39	NA	HK23003	HK23001	OAK018W	NA	NA
LCS1W	OAK018WL	21.0	1	NA	1.00	0.0500	11/23/1112:00	NA	HK23004	HK23001	OAK018W	NA	NA
LCD1W	OAK018WC	21.0	1	NA	1.00	0.0500	11/23/1112:21	NA	HK23005	HK23001	OAK018W	NA	NA
IR-70-EB-171	K217-04	ND	1	NA	1.00	0.0500	11/23/1123:01	NA	HK23020	HK23013	OAK018W	11/23/1111:50	11/23/11
MW-70-43A-170	K217-02	ND	1	NA	1.00	0.0500	11/23/1123:42	NA	HK23021	HK23013	OAK018W	11/23/1111:28	11/23/11
MW-70-14-172	K217-03	ND	1	NA	1.00	0.0500	11/24/1100:23	NA	HK23022	HK23013	OAK018W	11/23/1113:06	11/23/11

METHOD 300.0(M)
BUTYRATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K217

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK018WB	ND	1	NA	1.00	0.0500	11/23/1111:39	NA	HK23003	HK23001	OAK018W	NA	NA
LCS1W	OAK018WL	20.0	1	NA	1.00	0.0500	11/23/1112:00	NA	HK23004	HK23001	OAK018W	NA	NA
LCD1W	OAK018WC	20.9	1	NA	1.00	0.0500	11/23/1112:21	NA	HK23005	HK23001	OAK018W	NA	NA
IR-70-EB-171	K217-04	ND	1	NA	1.00	0.0500	11/23/1123:01	NA	HK23020	HK23013	OAK018W	11/23/1111:50	11/23/11
MW-70-43A-170	K217-02	ND	1	NA	1.00	0.0500	11/23/1123:42	NA	HK23021	HK23013	OAK018W	11/23/1111:28	11/23/11
MW-70-14-172	K217-03	ND	1	NA	1.00	0.0500	11/24/1100:23	NA	HK23022	HK23013	OAK018W	11/23/1113:06	11/23/11

METHOD 300.0(M)
LACTATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K217

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK018WB	ND	1	NA	1.00	0.0500	11/23/1111:39	NA	HK23003	HK23001	OAK018W	NA	NA
LCS1W	OAK018WL	20.9	1	NA	1.00	0.0500	11/23/1112:00	NA	HK23004	HK23001	OAK018W	NA	NA
LCD1W	OAK018WC	21.7	1	NA	1.00	0.0500	11/23/1112:21	NA	HK23005	HK23001	OAK018W	NA	NA
IR-70-EB-171	K217-04	ND	1	NA	1.00	0.0500	11/23/1123:01	NA	HK23020	HK23013	OAK018W	11/23/1111:50	11/23/11
MW-70-43A-170	K217-02	ND	1	NA	1.00	0.0500	11/23/1123:42	NA	HK23021	HK23013	OAK018W	11/23/1111:28	11/23/11
MW-70-14-172	K217-03	ND	1	NA	1.00	0.0500	11/24/1100:23	NA	HK23022	HK23013	OAK018W	11/23/1113:06	11/23/11

METHOD 300.0(M)
PROPIONATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K217

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAK018WB	ND	1	NA	1.00	0.0500	11/23/1111:39	NA	HK23003	HK23001	OAK018W	NA	NA
LCS1W	OAK018WL	21.2	1	NA	1.00	0.0500	11/23/1112:00	NA	HK23004	HK23001	OAK018W	NA	NA
LCD1W	OAK018WC	21.0	1	NA	1.00	0.0500	11/23/1112:21	NA	HK23005	HK23001	OAK018W	NA	NA
IR-70-EB-171	K217-04	ND	1	NA	1.00	0.0500	11/23/1123:01	NA	HK23020	HK23013	OAK018W	11/23/1111:50	11/23/11
MW-70-43A-170	K217-02	ND	1	NA	1.00	0.0500	11/23/1123:42	NA	HK23021	HK23013	OAK018W	11/23/1111:28	11/23/11
MW-70-14-172	K217-03	ND	1	NA	1.00	0.0500	11/24/1100:23	NA	HK23022	HK23013	OAK018W	11/23/1113:06	11/23/11

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K217
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK018WB	OAK018WL	OAK018WC		
LAB FILE ID:	HK23003	HK23004	HK23005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1111:39	11/23/1112:00	11/23/1112:21	DATE RECEIVED:	NA
PREP. BATCH:	OAK018W	OAK018W	OAK018W		
CALIB. REF:	HK23001	HK23001	HK23001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	21.0	105	20.0	21.0	105	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K217
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK018WB	OAK018WL	OAK018WC		
LAB FILE ID:	HK23003	HK23004	HK23005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1111:39	11/23/1112:00	11/23/1112:21	DATE RECEIVED:	NA
PREP. BATCH:	OAK018W	OAK018W	OAK018W		
CALIB. REF:	HK23001	HK23001	HK23001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	20.0	20.0	100	20.0	20.9	104	4	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K217
METHOD: METHOD 300.0(M)

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK018WB	OAK018WL	OAK018WC		
LAB FILE ID:	HK23003	HK23004	HK23005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1111:39	11/23/1112:00	11/23/1112:21	DATE RECEIVED:	NA
PREP. BATCH:	OAK018W	OAK018W	OAK018W		
CALIB. REF:	HK23001	HK23001	HK23001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	20.0	20.9	104	20.0	21.7	108	4	90-110	20

8036

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K217
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAK018WB	OAK018WL	OAK018WC		
LAB FILE ID:	HK23003	HK23004	HK23005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/23/1111:39	11/23/1112:00	11/23/1112:21	DATE RECEIVED:	NA
PREP. BATCH:	OAK018W	OAK018W	OAK018W		
CALIB. REF:	HK23001	HK23001	HK23001		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	20.0	21.2	106	20.0	21.0	105	1	90-110	20

8037

INITIAL CALIBRATIONS

IC SEQ FORM/HK15(2011)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
HK15001	IB	ABLPY	OAD6K15	11/15/1117:34	1
HK15002	S-0	ABLPY	OAD6K15	11/15/1117:55	1
HK15003	S-1	ABLPY	OAD6K15	11/15/1118:16	1
HK15004	S-2	ABLPY	OAD6K15	11/15/1118:37	1
HK15005	S-3	ABLPY	OAD6K15	11/15/1118:58	1
HK15006	S-4	ABLPY	OAD6K15	11/15/1119:19	1
HK15007	S-5	ABLPY	OAD6K15	11/15/1119:40	1
HK15008	ICV	ABLPY	OAD6K15	11/15/1120:01	1
HK15009	ICB	ABLPY	OAD6K15	11/15/1120:22	1
HK15010	CCV2	ABLPY	OAD6K15	11/15/1123:52	1
HK15011	CCB2	ABLPY	OAD6K15	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	OAD6K15	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	OAD6K15	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	OAD6K15	11/16/1101:15	1
HK15015	K101-01	ABLPY	OAD6K15	11/16/1101:36	1
HK15016	K101-02	ABLPY	OAD6K15	11/16/1102:17	1
HK15017	K101-03	ABLPY	OAD6K15	11/16/1102:58	1
HK15018	K101-04	ABLPY	OAD6K15	11/16/1103:39	1
HK15019	K101-05	ABLPY	OAD6K15	11/16/1104:20	1
HK15020	K101-05M	ABLPY	OAD6K15	11/16/1105:01	1
HK15021	K101-05S	ABLPY	OAD6K15	11/16/1105:42	1
HK15022	CCV4	ABLPY	OAD6K15	11/16/1106:23	1
HK15023	CCB4	ABLPY	OAD6K15	11/16/1106:44	1
HK15024	K084-01	ABLPY	OAD6K15	11/16/1107:05	1
HK15025	K084-02	ABLPY	OAD6K15	11/16/1107:46	1
HK15026	K084-03	ABLPY	OAD6K15	11/16/1108:26	1
HK15027	K084-04	ABLPY	OAD6K15	11/16/1109:10	1
HK15028	CCV6	ABLPY	OAD6K15	11/16/1111:30	1
HK15029	CCB6	ABLPY	OAD6K15	11/16/1112:32	1
HK15030	K084-05	ABLPY	OAD6K15	11/16/1112:53	1
HK15031	K084-06	ABLPY	OAD6K15	11/16/1113:34	1
HK15032	K035-01	*BLPY	OAD6K15	11/16/1114:15	5
HK15033	K035-01A	*BLPY	OAD6K15	11/16/1114:55	5
HK15034	CCV8	ABLPY	OAD6K15	11/16/1115:36	1
HK15035	CCB8	ABLPY	OAD6K15	11/16/1115:57	1

AJ
11/29/11

No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square	Offset	Slope	Curve
1	4.88	LACTATE	0LOff	5	1.0000	-0.000198	0.0443	0.0000
2	5.21	ACETATE	0LOff	5	0.9997	0.000068	0.0569	0.0000
3	6.00	PROPIONA⁻	0LOff	5	0.9998	-0.000209	0.0394	0.0000
4	7.42	BUTYRATE	0LOff	5	0.9999	-0.000584	0.0313	0.0000
5	8.93	PYRUVATE	0LOff	5	0.9999	-0.000755	0.0518	0.0000
Average:					n.a.	n.a.	n.a.	0.0000

$$\text{conc} = \frac{\text{area} - \text{offset}}{\text{slope}}$$

AS
11/29/11

SECOND SOURCE VERIFICATION

IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK15001	IB	ABLPY	ND	ND	ND	ND	ND	11/15/1117:34	1
HK15002	S-0	ABLPY	ND	ND	ND	ND	ND	11/15/1117:55	1
HK15003	S-1	ABLPY	.083	.101	.104	.096	.103	11/15/1118:16	1
HK15004	S-2	ABLPY	.401	.385	.396	.382	.395	11/15/1118:37	1
HK15005	S-3	ABLPY	1.01	.996	.993	1.01	.984	11/15/1118:58	1
HK15006	S-4	ABLPY	2.028	1.987	1.999	2.023	1.992	11/15/1119:19	1
HK15007	S-5	ABLPY	2.978	3.012	3.003	2.984	3.011	11/15/1119:40	1
HK15008	ICV	ABLPY	103%	96.8%	99.5%	104%	97.7%	11/15/1120:01	1
HK15009	ICB	ABLPY	ND	ND	ND	ND	ND	11/15/1120:22	1
HK15010	CCV2	ABLPY	103%	103%	101%	104%	93.9%	11/15/1123:52	1
HK15011	CCB2	ABLPY	ND	ND	ND	ND	ND	11/16/1100:13	1
HK15012	OAK010WB	ABLPY	ND	ND	ND	ND	ND	11/16/1100:33	1
HK15013	OAK010WL	ABLPY	2.07	2.1	2.02	2	1.96	11/16/1100:54	1
HK15014	OAK010WC	ABLPY	2.07	2.02	2.04	2.1	1.95	11/16/1101:15	1
HK15015	K101-01	ABLPY	ND	ND	ND	ND	ND	11/16/1101:36	1
HK15016	K101-02	ABLPY	ND	ND	ND	ND	ND	11/16/1102:17	1
HK15017	K101-03	ABLPY	ND	ND	ND	ND	ND	11/16/1102:58	1
HK15018	K101-04	ABLPY	ND	ND	ND	ND	ND	11/16/1103:39	1
HK15019	K101-05	ABLPY	ND	ND	ND	ND	ND	11/16/1104:20	1
HK15020	K101-05M	ABLPY	.83	.826	.959	.922	.904	11/16/1105:01	1
HK15021	K101-05S	ABLPY	.878	.826	.985	1.01	.882	11/16/1105:42	1
HK15022	CCV4	ABLPY	101%	103%	99.3%	99.1%	92.6%	11/16/1106:23	1
HK15023	CCB4	ABLPY	ND	ND	ND	ND	ND	11/16/1106:44	1
HK15024	K084-01	ABLPY	ND	ND	ND	ND	ND	11/16/1107:05	1
HK15025	K084-02	ABLPY	ND	ND	ND	ND	ND	11/16/1107:46	1
HK15026	K084-03	ABLPY	ND	ND	ND	ND	ND	11/16/1108:26	1
HK15027	K084-04	ABLPY	ND	ND	ND	ND	ND	11/16/1109:10	1
HK15028	CCV6	ABLPY	101%	90.7%	99.7%	103%	92.5%	11/16/1111:30	1
HK15029	CCB6	ABLPY	ND	ND	ND	ND	ND	11/16/1112:32	1
HK15030	K084-05	ABLPY	ND	ND	ND	ND	ND	11/16/1112:53	1
HK15031	K084-06	ABLPY	ND	ND	ND	ND	ND	11/16/1113:34	1
HK15032	K035-01	*BLPY	28.1E	ND	ND	1.13	ND	11/16/1114:15	5
HK15033	K035-01A	*BLPY	32.4E	5.38	4.35	6.28	4.73	11/16/1114:55	5
HK15034	CCV8	ABLPY	102%	97%	99.6%	109%	93.8%	11/16/1115:36	1
HK15035	CCB8	ABLPY	ND	ND	ND	ND	ND	11/16/1115:57	1

AS
11/29/11

DAILY CALIBRATIONS

IC RESULT FORM CalVersion: 300M.K15/HK15(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HK23001	CCV32	ABLPY	106%	107%	109%	104%	102%	11/23/1110:57	1
HK23002	CCB32	ABLPY	ND	ND	ND	ND	ND	11/23/1111:18	1
HK23003	OAK018WB	ABLPY	ND	ND	ND	ND	ND	11/23/1111:39	1
HK23004	OAK018WL	ABLPY	2.1	2	2.09	2.12	1.98	11/23/1112:00	1
HK23005	OAK018WC	ABLPY	2.1	2.09	2.17	2.1	2.07	11/23/1112:21	1
HK23006	K174-06R	ABLPY	ND	ND	ND	ND	ND	11/23/1112:42	1
HK23007	K174-06A	ABLPY	.084	.091	.113	.095	.092	11/23/1113:23	1
HK23008	K184-03R	ABLPY	ND	ND	ND	ND	ND	11/23/1114:03	1
HK23009	K184-03A	ABLPY	.075	.093	.109	.09	.099	11/23/1114:44	1
HK23010	K188-01	*****	ND	ND	ND	ND	ND	11/23/1115:25	1
HK23011	K188-02	*****	ND	ND	ND	ND	ND	11/23/1116:06	1
HK23012	K188-03	A*L*Y	2.9	51.4E	ND	44.3E	2.95	11/23/1116:47	1
HK23013	CCV34	ABLPY	103%	103%	101%	105%	95.3%	11/23/1118:13	1
HK23014	CCB34	ABLPY	ND	ND	ND	ND	ND	11/23/1118:55	1
HK23015	K205-04	ABLPY	ND	ND	ND	ND	ND	11/23/1119:37	1
HK23016	K205-05	ABLPY	ND	ND	ND	ND	ND	11/23/1120:18	1
HK23017	K205-01	ABLPY	ND	ND	ND	ND	ND	11/23/1120:59	1
HK23018	K205-01M	ABLPY	1.07	1.01	1.11	.99	1.05	11/23/1121:39	1
HK23019	K205-01S	ABLPY	1.05	1.01	1.12	.976	1.05	11/23/1122:20	1
HK23020	K217-04	ABLPY	ND	ND	ND	ND	ND	11/23/1123:01	1
HK23021	K217-02	ABLPY	ND	ND	ND	ND	ND	11/23/1123:42	1
HK23022	K217-03	ABLPY	ND	ND	ND	ND	ND	11/24/1100:23	1
HK23023	K205-02	ABLPY	ND	ND	ND	ND	ND	11/24/1101:04	1
HK23024	K205-03	*****	9.69E	ND	ND	1.51	ND	11/24/1102:30	1
HK23025	CCV36	ABLPY	107%	108%	105%	108%	98.4%	11/24/1104:17	1
HK23026	CCB36	ABLPY	ND	ND	ND	ND	ND	11/24/1104:37	1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-221

0AD6K15.met : 300M ICAL → Passed

-Linear Range :

S-0 → 0.0 ppm S-3 → 1.0 ppm

S-1 → 0.1 S-4 → 2.0

S-2 → 0.4 S-5 → 3.0

- ICV : 2ppm
- Sample Loop : 25µL
- Flow Rate : 1.50 mL/min
- Suppressor : ASRS 4mm
- SRS Current : 100 mA
- Column: Ion Pac AS11 HC, 4x250 mm
- Guard Column : Ion Pac AG16 ; 4x250mm

0AK010W: K101 , K084 & K035 (conf. only)

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK15
Method File:	0AD6K15.met
Analytical Batch:	0AK010W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID		
ICAL	SW12A-02-330	
ICV		332
CCV		331
LCS		332
MS	↓	327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: ca / AM

Date: 11/15/11

8046

Sequence: HK15
Operator: cmadmin

Printed: 11/17/2011 3:52:16 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK15	001	IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK15	002	S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK15	003	S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK15	004	S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK15	005	S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK15	006	S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK15	007	S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK15	008	ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK15	009	ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK15	010	CCV2	Unknown	100	25.0	ORG	OAD6K15	Finished	11/15/2011 11:52:01 PM	1.0000
11	HK15	011	CCB2	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 12:13:00 AM	1.0000
12	HK15	012	OAK010WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/16/2011 12:33:58 AM	1.0000
13	HK15	013	OAK010WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/16/2011 12:54:57 AM	1.0000
14	HK15	014	OAK010WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/16/2011 1:15:56 AM	1.0000
15	HK15	015	K101-01	Unknown	1	25.0	ORG	OAD6K15	Finished	11/16/2011 1:36:54 AM	1.0000
16	HK15	016	K101-02	Unknown	2	25.0	ORG	OAD6K15	Finished	11/16/2011 2:17:49 AM	1.0000
17	HK15	017	K101-03	Unknown	3	25.0	ORG	OAD6K15	Finished	11/16/2011 2:58:42 AM	1.0000
18	HK15	018	K101-04	Unknown	4	25.0	ORG	OAD6K15	Finished	11/16/2011 3:39:37 AM	1.0000
19	HK15	019	K101-05	Unknown	5	25.0	ORG	OAD6K15	Finished	11/16/2011 4:20:31 AM	1.0000
20	HK15	020	K101-05M	Unknown	6	25.0	ORG	OAD6K15	Finished	11/16/2011 5:01:24 AM	1.0000
21	HK15	021	K101-05S	Unknown	7	25.0	ORG	OAD6K15	Finished	11/16/2011 5:42:18 AM	1.0000
22	HK15	022	CCV4	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 6:23:12 AM	1.0000
23	HK15	023	CCB4	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 6:44:11 AM	1.0000
24	HK15	024	K084-01	Unknown	8	25.0	ORG	OAD6K15	Finished	11/16/2011 7:05:09 AM	1.0000
25	HK15	025	K084-02	Unknown	9	25.0	ORG	OAD6K15	Finished	11/16/2011 7:46:03 AM	1.0000
26	HK15	026	K084-03	Unknown	10	25.0	ORG	OAD6K15	Finished	11/16/2011 8:26:57 AM	1.0000
27	HK15	027	K084-04	Unknown	11	25.0	ORG	OAD6K15	Finished	11/16/2011 9:10:16 AM	1.0000

FINAL

Sequence: HK15
Operator: cmadmin

Printed: 11/17/2011 3:35:11 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Comment
1	HK15	
2	HK15	
3	HK15	
4	HK15	
5	HK15	
6	HK15	
7	HK15	
8	HK15	
9	HK15	
10	HK15	
11	HK15	
12	HK15	
13	HK15	
14	HK15	
15	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
17	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK15	
23	HK15	
24	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
25	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
26	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
27	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

FINAL

Sequence: HK15
Operator: cmadmin

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK15	028	CCV6	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 11:30:24 AM	1.0000
29	HK15	029	CCB6	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 12:32:17 PM	1.0000
30	HK15	030	K084-05	Unknown	12	25.0	ORG	OAD6K15	Finished	11/16/2011 12:53:15 PM	1.0000
31	HK15	031	K084-06	Unknown	13	25.0	ORG	OAD6K15	Finished	11/16/2011 1:34:09 PM	1.0000
32	HK15	032	K035-01	Unknown	14	25.0	ORG	OAD6K15	Finished	11/16/2011 2:15:03 PM	5.0000
33	HK15	033	K035-01A	Unknown	15	25.0	ORG	OAD6K15	Finished	11/16/2011 2:55:56 PM	5.0000
34	HK15	034	CCV8	Unknown	100	25.0	ORG	OAD6K15	Finished	11/16/2011 3:36:50 PM	1.0000
35	HK15	035	CCB8	Unknown	99	25.0	ORG	OAD6K15	Finished	11/16/2011 3:57:49 PM	1.0000

FINAL

Sequence: HK15
Operator: cmadmin

Printed: 11/17/2011 3:35:11 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/15/2011 5:19:35 PM by cmadmin
Last Update: 11/17/2011 3:22:06 PM by cmadmin

No.	Sequence	Comment
28	HK15	
29	HK15	
30	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
31	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
32	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
33	HK15	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS; DF=5
34	HK15	
35	HK15	

FINAL

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4- 01- 221

OAK018W: 11K174 (cont.), 11K184 (cont.), 11K188, 11K205 & 11K217

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HK23
Method File:	OAK D6K15.met (ok 11/23/11)
Analytical Batch:	OAK018W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SW12A- 02-331
LCS	332
MS	327

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ CHROMELEON	
☐	

Analyzed By: ok

Date: 11/23/11

8051

Sequence: HK23
Operator: cmadmin

Printed: 11/28/2011 5:19:08 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/28/2011 3:25:36 PM by cmadmin
Last Update: 11/28/2011 3:25:36 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HK23		IB	Unknown	31	25.0	ORG	OAD6K15	Finished	11/15/2011 5:34:24 PM	1.0000
2	HK23		S-0	Standard	32	25.0	ORG	OAD6K15	Finished	11/15/2011 5:55:23 PM	1.0000
3	HK23		S-1	Standard	33	25.0	ORG	OAD6K15	Finished	11/15/2011 6:16:21 PM	1.0000
4	HK23		S-2	Standard	34	25.0	ORG	OAD6K15	Finished	11/15/2011 6:37:20 PM	1.0000
5	HK23		S-3	Standard	35	25.0	ORG	OAD6K15	Finished	11/15/2011 6:58:19 PM	1.0000
6	HK23		S-4	Standard	36	25.0	ORG	OAD6K15	Finished	11/15/2011 7:19:17 PM	1.0000
7	HK23		S-5	Standard	37	25.0	ORG	OAD6K15	Finished	11/15/2011 7:40:16 PM	1.0000
8	HK23		ICV	Unknown	38	25.0	ORG	OAD6K15	Finished	11/15/2011 8:01:15 PM	1.0000
9	HK23		ICB	Unknown	39	25.0	ORG	OAD6K15	Finished	11/15/2011 8:22:14 PM	1.0000
10	HK23	001	CCV32	Unknown	100	25.0	ORG	OAD6K15	Finished	11/23/2011 10:57:14 AM	1.0000
11	HK23	002	CCB32	Unknown	99	25.0	ORG	OAD6K15	Finished	11/23/2011 11:18:13 AM	1.0000
12	HK23	003	OAK018WB	Unknown	98	25.0	ORG	OAD6K15	Finished	11/23/2011 11:39:12 AM	1.0000
13	HK23	004	OAK018WL	Unknown	97	25.0	ORG	OAD6K15	Finished	11/23/2011 12:00:11 PM	1.0000
14	HK23	005	OAK018WC	Unknown	96	25.0	ORG	OAD6K15	Finished	11/23/2011 12:21:10 PM	1.0000
15	HK23	006	K174-06R	Unknown	1	25.0	ORG	OAD6K15	Finished	11/23/2011 12:42:09 PM	1.0000
16	HK23	007	K174-06A	Unknown	2	25.0	ORG	OAD6K15	Finished	11/23/2011 1:23:03 PM	1.0000
17	HK23	008	K184-03R	Unknown	3	25.0	ORG	OAD6K15	Finished	11/23/2011 2:03:56 PM	1.0000
18	HK23	009	K184-03A	Unknown	4	25.0	ORG	OAD6K15	Finished	11/23/2011 2:44:51 PM	1.0000
19	HK23	010	K188-01	Unknown	5	25.0	ORG	OAD6K15	Finished	11/23/2011 3:25:44 PM	1.0000
20	HK23	011	K188-02	Unknown	6	25.0	ORG	OAD6K15	Finished	11/23/2011 4:06:38 PM	1.0000
21	HK23	012	K188-03	Unknown	7	25.0	ORG-SAMPLE	OAD6K15	Finished	11/23/2011 4:47:32 PM	1.0000
22	HK23	013	CCV34	Unknown	100	25.0	ORG	OAD6K15	Finished	11/23/2011 6:13:20 PM	1.0000
23	HK23	014	CCB34	Unknown	99	25.0	ORG	OAD6K15	Finished	11/23/2011 6:55:17 PM	1.0000
24	HK23	015	K205-04	Unknown	8	25.0	ORG	OAD6K15	Finished	11/23/2011 7:37:15 PM	1.0000
25	HK23	016	K205-05	Unknown	9	25.0	ORG	OAD6K15	Finished	11/23/2011 8:18:09 PM	1.0000
26	HK23	017	K205-01	Unknown	10	25.0	ORG	OAD6K15	Finished	11/23/2011 8:59:02 PM	1.0000
27	HK23	018	K205-01M	Unknown	11	25.0	ORG	OAD6K15	Finished	11/23/2011 9:39:56 PM	1.0000

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FINAL

Sequence: HK23
Operator: cmadmin

Printed: 11/28/2011 5:19:08 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/28/2011 3:25:36 PM by cmadmin
Last Update: 11/28/2011 3:25:36 PM by cmadmin

No.	Sequence	Comment
1	HK23	
2	HK23	
3	HK23	
4	HK23	
5	HK23	
6	HK23	
7	HK23	
8	HK23	
9	HK23	
10	HK23	
11	HK23	
12	HK23	
13	HK23	
14	HK23	
15	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
17	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
19	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
20	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
21	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
22	HK23	
23	HK23	
24	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
25	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
26	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
27	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS

FINAL

Sequence: HK23
Operator: cmadmin

Printed: 11/28/2011 5:19:08 PM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/28/2011 3:25:36 PM by cmadmin
Last Update: 11/28/2011 3:25:36 PM by cmadmin

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
28	HK23	019	K205-01S	Unknown	12	25.0	ORG	OAD6K15	Finished	11/23/2011 10:20:50 PM	1.0000
29	HK23	020	K217-04	Unknown	15	25.0	ORG	OAD6K15	Finished	11/23/2011 11:01:43 PM	1.0000
30	HK23	021	K217-02	Unknown	16	25.0	ORG	OAD6K15	Finished	11/23/2011 11:42:37 PM	1.0000
31	HK23	022	K217-03	Unknown	17	25.0	ORG	OAD6K15	Finished	11/24/2011 12:23:31 AM	1.0000
32	HK23	023	K205-02	Unknown	13	25.0	ORG-SAMPLE	OAD6K15	Finished	11/24/2011 1:04:24 AM	1.0000
33	HK23	024	K205-03	Unknown	14	25.0	ORG-SAMPLE	OAD6K15	Finished	11/24/2011 2:30:13 AM	1.0000
34	HK23	025	CCV36	Unknown	100	25.0	ORG	OAD6K15	Finished	11/24/2011 4:17:00 AM	1.0000
35	HK23	026	CCB36	Unknown	99	25.0	ORG	OAD6K15	Finished	11/24/2011 4:37:59 AM	1.0000

FINAL

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 35

Created: 11/28/2011 3:25:36 PM by cmadmin
Last Update: 11/28/2011 3:25:36 PM by cmadmin

No.	Sequence	Comment
28	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
29	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
30	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
31	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
32	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
33	HK23	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
34	HK23	
35	HK23	

FINAL

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TABLE OF CONTENTS

CLIENT: **INSIGHT EEC, INC.**

PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11K221**

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Cover Letter, COC/Sample Receipt Form		1000 – 1005
GC/MS-VOA	METHOD 5030B/8260B	2000 – 2042
GC/MS-SVOA	**	3000 –
GC-VOA	METHOD RSK-175	4000 – 4028
GC-SVOA	**	5000 –
HPLC	**	6000 –
METALS	METHOD 3010A/6010B	7000 – 7035
WET	METHOD 300.0	8000 – 8034
	METHOD 300.0 (M)	8035 – 8056
	METHOD 2320B	8057 – 8067
	METHOD 2540C	8068 – 8074
	METHOD 4500F	8075 – 8080
	METHOD SM5310B	8081 – 8088
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 12-20-2011
EMAX Batch No.: 11K221

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 11/28/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW-70-RDO-4-174	K221-01	11/28/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IR-70-FSB229-175	K221-02	11/28/11	WATER	ANIONS BY IC
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
MW-70-49-176	K221-03	11/28/11	WATER	ANIONS BY IC

Sample ID	Control #	Col Date	Matrix	Analysis
				DISSOLVED GAS
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
				ORGANIC ACIDS BY IC
				TOTAL ORGANIC CARBON
				ALKALINITY
				TOTAL DISSOLVED SOLIDS
				DISSOLVED HYDROGEN SULFIDE
IR-70-EB-177	K221-04	11/28/11	WATER	ANIONS BY IC
				DISSOLVED METALS BY ICP
				VOLATILE ORGANICS BY GC/MS
IR-70-TB-173	K221-05	11/28/11	WATER	VOLATILE ORGANICS BY GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

for

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

INS0801-

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011068-8042
SAMPLE STORAGE
EMAX CONTROL NO. * 11K221
PROJECT CODE: 4-77101

CLIENT: INSIGHT EEC, INC.
PROJECT: INSITE 70 - NWS - SOAL BEACH
COORDINATOR: NICK WANBENGEN
TEL: 7146786700 FAX: 7146786711 EMAIL: NWANBENGEN@IEEC.COM
SEND REPORT TO: NICK WANBENGEN
COMPANY: INSIGHT EEC, INC.
ADDRESS: 3010 E. MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: Ye Myint

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

TAT: ☐ Rush ____hrs. ☐ Rush ____days ☐ 7 days ☒ 14 days ☐ 21 days ☐ 30 days ☐ ____days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	VOA - 8260B (HC)	DISS GAS. RSK-175 (HC)	WET CHEM SM5310B (NP)	TOC (HC)	SULFIDE - SM4500F (HC)	DISS METAL - 8010B (HN)	VOA - 8260B (NP)	DISS GAS - RSK-175 (NP)	COMMENTS
1	MW-70-RD0-4-174	INSITE 70	11-28-11	1054	10	many	many	GW	III	X	X	X	X	X	X			
2	IW-70-FSB229-175	INSITE 70	11-28-11	1242	10	many	many	GW	III			X	X	X	X	X	X	EFFLUENT WELL
3	MW-70-49-176	INSITE 70	11-28-11	1438	10	many	many	GW	III	X	X	X	X	X	X			
4	IW-70-EB-177	INSITE 70	11-28-11	1500	10	many	many	GW	III	X	X	X	X	X	X			EQUIPMENT BLANK.
5	IW-70-TB-173	INSITE 70	11-28-11	0830	2	40ml	VOA	GW	III	X								TRIP BLANK

Instructions: FOR WET CHEM, ANALYSIS AS FOLLOWS: ANIONS: 300.0 VFA: 300.0M, TDS: SM2540C, ALKALINITY: SM2370C, DHS: SM4500. UNLESS NOTED OTHERWISE IN COMMENTS.

Cooler #	Temp. (°C)
1	3.4

Sample #s

SAMPLER: CHASE BROWDON

COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-28-11	1655	[signature]
[signature]	11/28/11	1743	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associated with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11K221
☐ EMAX Courier	See COC	Recepient LUNA
☐ Client Delivery		Date 11-28-11
☐ Third Party		Time 1743

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☑ Preservative (if any)	☑ PAT
Safety Issues	☑ None	☐ High concentrations expected	☐ Superfund Site samples	☐ Rad screening required	

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	A ☑ Cooler 1 3.4 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C

Thermometer: ***A - S/N 101541371*** ***B - S/N 101541382***

Comments: ☐ **PM was informed on non-compliant coolers immediately.**

Note: **pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time .**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code
-02	014-016	RSK-175		R5

REVIEWS

Sample Labeling [signature] /ES Date 11/28/11

SRF [signature] Date 11/28/11

PM LP for Ye Date 11/29/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4		E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	Analyze within 7 days
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	from collected date.
B3	Sample ID is inconsistent in COC vis-à-vis label	F2	Bubble is> 6mm		
B4		G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	HCL IN CLIENT LABELS		(UNPRES. IN COC)
C4		H2			

Ye Myint

From: Nick Weinberger [NWeinberger@ieeci.com]
Sent: Tuesday, November 29, 2011 8:26 AM
To: Ye Myint
Subject: RE: Logins for Seal Beach

Ye,

For samples IR-70-SB-165 and IR-70-EB-166 We should only be running VOCs (82690B), Anions (EPA 300), and Dissolved Metals (EPA 6010B/6020). If we can still cancel other tests not started, that would be great.

This will be true for all other -EB- and -SB- samples as well, if we have any other logins.

Project Chemist
Anaheim, CA 92806
714.678.6711

From: Ye Myint [mailto:YMyint@emaxlabs.com]
Sent: Monday, November 28, 2011 7:12 PM
To: Nick Weinberger
Cc: 'Rebecca Lesher'
Subject: Logins for Seal Beach

Nick,

Attached are the logins and COCs information for SDG: 11K205. Please review and let me know if there are any corrections necessary. Thanks.

Ye Myint
Project Manager
EMAX Laboratories, Inc.
1835W 205th. St.
Torrance, CA 90501
Ph: 310-618-8889 x121
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REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11K221

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K221

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of five (5) water samples were received on 11/28/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary form for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for VO67K16L/C were all within QC limits.
Percent recoveries for VO67K17L/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K221
Instrument ID : T-067

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V067K16Q	1	NA	11/29/1117:29	11/29/1117:29	RKC347	RKC306	V067K16	Method Blank
LCS1W	V067K16L	1	NA	11/29/1115:20	11/29/1115:20	RKC343	RKC306	V067K16	Lab Control Sample (LCS)
LCD1W	V067K16C	1	NA	11/29/1115:50	11/29/1115:50	RKC344	RKC306	V067K16	LCS Duplicate
IR-70-TB-173	K221-05	1	NA	11/29/1119:02	11/29/1119:02	RKC350	RKC306	V067K16	Field Sample
IR-70-EB-177	K221-04	1	NA	11/29/1119:33	11/29/1119:33	RKC351	RKC306	V067K16	Field Sample
MW-70-RDO-4-174	K221-01	1	NA	11/29/1122:08	11/29/1122:08	RKC356	RKC306	V067K16	Field Sample
MBLK2W	V067K17B	1	NA	11/30/1112:29	11/30/1112:29	RKC371	RKC306	V067K17	Method Blank
LCS2W	V067K17L	1	NA	11/30/1110:56	11/30/1110:56	RKC368	RKC306	V067K17	Lab Control Sample (LCS)
LCD2W	V067K17C	1	NA	11/30/1111:27	11/30/1111:27	RKC369	RKC306	V067K17	LCS Duplicate
MW-70-RDO-4-174DL	K221-01T	25	NA	11/30/1113:00	11/30/1113:00	RKC372	RKC306	V067K17	Diluted Sample
IR-70-FSB229-175	K221-02	1	NA	11/30/1113:31	11/30/1113:31	RKC373	RKC306	V067K17	Field Sample
MW-70-49-176	K221-03	1	NA	11/30/1114:02	11/30/1114:02	RKC374	RKC306	V067K17	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/28/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/28/11
Batch No. : 11K221	Date Extracted: 11/29/11 22:08
Sample ID: MW-70-RDO-4-174	Date Analyzed: 11/29/11 22:08
Lab Samp ID: K221-01	Dilution Factor: 1
Lab File ID: RKC356	Matrix : WATER
Ext Btch ID: VO67K16	% Moisture : NA
Calib. Ref.: RKC306	Instrument ID : 67

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	0.47J	1.0	0.20
1,1-DICHLOROETHENE	1.5	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	0.39J	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	280E	1.0	0.20
DICHLORODIFLUOROMETHANE	0.47J	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	6.2	1.0	0.20
TRICHLOROETHENE	3.5J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	330E	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.75	10.00	97.5	70-140
4-BROMOFLUOROBENZENE	10.1	10.00	101	70-130
TOLUENE-D8	10.1	10.00	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/28/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/28/11
Batch No. : 11K221	Date Extracted: 11/30/11 13:00
Sample ID: MW-70-RDO-4-174DL	Date Analyzed: 11/30/11 13:00
Lab Samp ID: K221-01T	Dilution Factor: 25
Lab File ID: RKC372	Matrix : WATER
Ext Btch ID: V067K17	% Moisture : NA
Calib. Ref.: RKC306	Instrument ID : 67

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	25	5.0
1,1,1,2-TETRACHLOROETHANE	ND	25	5.0
1,1,2,2-TETRACHLOROETHANE	ND	25	5.0
1,1,2-TRICHLOROETHANE	ND	25	5.0
FREON113	ND	25	7.5
1,1-DICHLOROETHANE	ND	25	5.0
1,1-DICHLOROETHENE	ND	12	5.0
1,1-DICHLOROPROPENE	ND	25	5.0
1,2-DIBROMO-3-CHLOROPROPANE	ND	50	12
1,2-DIBROMOETHANE	ND	25	5.0
1,2-DICHLOROBENZENE	ND	25	5.0
1,2-DICHLOROETHANE	ND	12	5.0
1,2-DICHLOROPROPANE	ND	25	5.0
1,2,3-TRICHLOROBENZENE	ND	25	7.5
1,2,3-TRICHLOROPROPANE	ND	25	12
1,2,4-TRICHLOROBENZENE	ND	25	7.5
1,2,4-TRIMETHYLBENZENE	ND	25	5.0
1,3-DICHLOROBENZENE	ND	25	5.0
1,3,5-TRIMETHYLBENZENE	ND	25	5.0
1,4-DICHLOROBENZENE	ND	25	5.0
2-BUTANONE	ND	250	100
2-CHLOROTOLUENE	ND	25	5.0
2-HEXANONE	ND	250	100
2,2-DICHLOROPROPANE	ND	25	5.0
4-CHLOROTOLUENE	ND	25	5.0
4-METHYL-2-PENTANONE	ND	250	100
N-BUTYLBENZENE	ND	25	5.0
N-PROPYLBENZENE	ND	25	5.0
P-ISOPROPYLTOLUENE	ND	25	5.0
SEC-BUTYLBENZENE	ND	25	5.0
TERT-BUTYLBENZENE	ND	25	5.0
ACETONE	ND	250	120
BENZENE	ND	25	5.0
BROMOBENZENE	ND	25	5.0
BROMODICHLOROMETHANE	ND	25	5.0
CIS-1,3-DICHLOROPROPENE	ND	25	5.0
TRANS-1,3-DICHLOROPROPENE	ND	25	5.0
BROMOMETHANE	ND	50	7.5
BROMOFORM	ND	25	7.5
CARBON DISULFIDE	ND	25	5.0
CARBON TETRACHLORIDE	ND	12	5.0
CHLOROBENZENE	ND	25	5.0
CHLOROETHANE	ND	50	7.5
CHLOROFORM	ND	25	5.0
CHLOROMETHANE	ND	50	7.5
CIS-1,2-DICHLOROETHENE	310	25	5.0
DICHLORODIFLUOROMETHANE	ND	50	7.5
DIBROMOCHLOROMETHANE	ND	25	5.0
DIBROMOMETHANE	ND	25	5.0
ETHYLBENZENE	ND	25	5.0
HEXACHLOROBUTADIENE	ND	25	7.5
ISOPROPYL BENZENE	ND	25	5.0
METHYLENE CHLORIDE	ND	25	12
MTBE	ND	25	5.0
STYRENE	ND	25	5.0
TETRACHLOROETHYLENE	ND	25	5.0
TOLUENE	ND	25	5.0
TRANS-1,2-DICHLOROETHENE	6.0J	25	5.0
TRICHLOROETHENE	ND	120	5.0
TRICHLOROFLUOROMETHANE	ND	50	7.5
VINYL CHLORIDE	330	12	5.0
XYLENES (TOTAL)	ND	50	15
M/P-XYLENES	ND	25	10
O-XYLENE	ND	25	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	238	250.0	95.4	70-140
4-BROMOFLUOROBENZENE	252	250.0	101	70-130
TOLUENE-D8	254	250.0	102	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/28/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/28/11
Batch No. : 11K221	Date Extracted: 11/30/11 13:31
Sample ID: IR-70-FSB229-175	Date Analyzed: 11/30/11 13:31
Lab Samp ID: K221-02	Dilution Factor: 1
Lab File ID: RKC373	Matrix : WATER
Ext Btch ID: V067K17	% Moisture : NA
Calib. Ref.: RKC306	Instrument ID : 67

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	5.1	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	0.23J	1.0	0.20
TRICHLOROETHENE	0.44J	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	4.1	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.84	10.00	98.4	70-140
4-BROMOFLUOROBENZENE	9.94	10.00	99.4	70-130
TOLUENE-D8	10.1	10.00	101	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/28/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/28/11
Batch No. : 11K221	Date Extracted: 11/30/11 14:02
Sample ID: MW-70-49-176	Date Analyzed: 11/30/11 14:02
Lab Samp ID: K221-03	Dilution Factor: 1
Lab File ID: RKC374	Matrix : WATER
Ext Btch ID: V067K17	% Moisture : NA
Calib. Ref.: RKC306	Instrument ID : 67

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	9.5	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	1.7	1.0	0.20
TRICHLOROETHENE	17	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	0.33J	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	10.0	10.00	100	70-140
4-BROMOFLUOROBENZENE	9.87	10.00	98.7	70-130
TOLUENE-D8	10.0	10.00	100	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/28/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/28/11
Batch No. : 11K221	Date Extracted: 11/29/11 19:33
Sample ID: IR-70-EB-177	Date Analyzed: 11/29/11 19:33
Lab Samp ID: K221-04	Dilution Factor: 1
Lab File ID: RKC351	Matrix : WATER
Ext Btch ID: V067K16	% Moisture : NA
Calib. Ref.: RKC306	Instrument ID : 67

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	0.38J	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.70	10.00	97.0	70-140
4-BROMOFLUOROBENZENE	9.94	10.00	99.4	70-130
TOLUENE-D8	10.0	10.00	100	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/28/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/28/11
Batch No. : 11K221	Date Extracted: 11/29/11 19:02
Sample ID: IR-70-TB-173	Date Analyzed: 11/29/11 19:02
Lab Samp ID: K221-05	Dilution Factor: 1
Lab File ID: RKC350	Matrix : WATER
Ext Btch ID: V067K16	% Moisture : NA
Calib. Ref.: RKC306	Instrument ID : 67

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.86	10.00	98.6	70-140
4-BROMOFLUOROBENZENE	9.95	10.00	99.5	70-130
TOLUENE-D8	9.93	10.00	99.3	70-140

QC SUMMARIES

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/29/11
Batch No. : 11K221	Date Extracted: 11/29/11 17:29
Sample ID: MBLK1W	Date Analyzed: 11/29/11 17:29
Lab Samp ID: V067K16Q	Dilution Factor: 1
Lab File ID: RKC347	Matrix : WATER
Ext Btch ID: V067K16	% Moisture : NA
Calib. Ref.: RKC306	Instrument ID : 67

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.37	10.00	93.7	70-140
4-BROMOFLUOROBENZENE	10.1	10.00	101	70-130
TOLUENE-D8	10.1	10.00	101	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	V067K16Q	V067K16L	V067K16C		
LAB FILE ID:	RKC347	RKC343	RKC344		
DATE EXTRACTED:	11/29/1117:29	11/29/1115:20	11/29/1115:50	DATE COLLECTED:	NA
DATE ANALYZED:	11/29/1117:29	11/29/1115:20	11/29/1115:50	DATE RECEIVED:	11/29/11
PREP. BATCH:	V067K16	V067K16	V067K16		
CALIB. REF:	RKC306	RKC306	RKC306		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.91	99	10.0	9.85	99	1	60-130	30
Benzene	ND	10.0	9.61	96	10.0	9.85	99	2	70-130	30
Chlorobenzene	ND	10.0	9.87	99	10.0	10.1	101	2	70-120	30
Toluene	ND	10.0	9.66	97	10.0	9.88	99	2	70-130	30
Trichloroethene	ND	10.0	10.2	102	10.0	10.3	103	1	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	9.56	96	10.0	9.55	95	70-140
4-Bromofluorobenzene	10.0	9.75	98	10.0	9.75	98	70-130
Toluene-d8	10.0	10.1	101	10.0	10.1	101	70-130

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/30/11
Batch No.	: 11K221	Date Extracted:	11/30/11 12:29
Sample ID:	MBLK2W	Date Analyzed:	11/30/11 12:29
Lab Samp ID:	V067K17B	Dilution Factor:	1
Lab File ID:	RKC371	Matrix :	WATER
Ext Btch ID:	V067K17	% Moisture :	NA
Calib. Ref.:	RKC306	Instrument ID :	67

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.57	10.00	95.7	70-140
4-BROMOFLUOROBENZENE	10.0	10.00	100	70-130
TOLUENE-D8	10.1	10.00	101	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2W				
LAB SAMP ID:	V067K17B	V067K17L	V067K17C		
LAB FILE ID:	RKC371	RKC368	RKC369		
DATE EXTRACTED:	11/30/1112:29	11/30/1110:56	11/30/1111:27	DATE COLLECTED:	NA
DATE ANALYZED:	11/30/1112:29	11/30/1110:56	11/30/1111:27	DATE RECEIVED:	11/30/11
PREP. BATCH:	V067K17	V067K17	V067K17		
CALIB. REF:	RKC306	RKC306	RKC306		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.91	99	10.0	9.52	95	4	60-130	30
Benzene	ND	10.0	9.87	99	10.0	9.46	95	4	70-130	30
Chlorobenzene	ND	10.0	9.91	99	10.0	9.66	97	3	70-120	30
Toluene	ND	10.0	9.84	98	10.0	9.59	96	3	70-130	30
Trichloroethene	ND	10.0	10.1	101	10.0	9.83	98	3	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	9.37	94	10.0	9.65	97	70-140
4-Bromofluorobenzene	10.0	9.96	100	10.0	10.0	100	70-130
Toluene-d8	10.0	9.93	99	10.0	9.95	100	70-130

INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKC300
Instrument ID: 67
GC Column:RTX502.2ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K221
BFB Injection Date : 11/23/11
BFB Injection Time : 17:45
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.93
75	30.0 - 60.0% of mass 95	44.61
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.68
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	74.57
175	5.0 - 9.0% of mass 174	5.59(7.5)1
176	95.0 - 101.0% of mass 174	72.22(96.8)1
177	5.0 - 9.0% of mass 176	5.30(7.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	V067K2301	RKC301	11/23/11	18:16
2	VSTD0.5	V067K2302	RKC302	11/23/11	18:47
3	VSTD01	V067K2303	RKC303	11/23/11	19:18
4	VSTD02	V067K2304	RKC304	11/23/11	19:49
5	VSTD05	V067K2305	RKC305	11/23/11	20:20
6	VSTD010	V067K2306	RKC306	11/23/11	20:51
7	VSTD020	V067K2307	RKC307	11/23/11	21:22
8	VSTD030	V067K2308	RKC308	11/23/11	21:53
9	VSTD050	V067K2309	RKC309	11/23/11	22:24
10	VSTD100	V067K2310	RKC310	11/23/11	22:55
11	VSTD010	IV067K2301	RKC314	11/24/11	00:59

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :T067
Beginning DateTime :11/23/11 18:16
Spike Units :PPB
IC File :RKC306

Column Spec :RTX502.2 ID :0.25MM
Ending DateTime :11/23/11 22:55
HPChem Method :V067K23

M	IDX	Parameters	.3 18:16 RKC301	.5 18:47 RKC302	1 19:18 RKC303	2 19:49 RKC304	5 20:20 RKC305	10 20:51 RKC306	20 21:22 RKC307	30 21:53 RKC308	50 22:24 RKC309	100 22:55 RKC310	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	0	8.0926
	2	Dichlorodifluoromethane	0.260	0.293	0.249	0.290	0.296	0.304	0.294	0.303	0.286	0.303	0.288	6.51	1.9056
	3	Dichlorotetrafluoroethane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	4	Chloromethane	0.379	0.467	0.412	0.453	0.463	0.473	0.447	0.468	0.429	0.452	0.444	6.64	2.1494
	5	Vinyl chloride	0.402	0.460	0.419	0.464	0.467	0.468	0.445	0.461	0.415	------	0.445	5.75	2.2980
	6	Bromomethane	0.217	0.266	0.237	0.257	0.262	0.270	0.265	0.282	0.261	0.285	0.260	7.77	2.7699
	7	Chloroethane	0.285	0.280	0.250	0.266	0.262	0.272	0.260	0.273	0.252	0.274	0.267	4.37	2.8648
	8	Dichlorofluoromethane	0.597	0.651	0.615	0.595	0.594	0.650	0.616	0.640	0.588	0.624	0.617	3.84	2.9086
	9	Trichlorofluoromethane	0.311	0.353	0.314	0.373	0.374	0.385	0.374	0.393	0.364	0.386	0.363	7.91	3.1509
	10	sec-Propyl alcohol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
5	11	Acrolein	0.016	0.012	0.013	0.012	0.012	0.013	0.012	0.013	0.012	0.012	0.013	9.18	3.6371
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	0.226	0.231	0.215	0.214	0.216	0.237	0.224	0.228	0.221	0.231	0.224	3.41	3.6779
5	13	Acetone	------	------	0.035	0.031	0.024	0.025	0.022	0.022	0.019	0.021	0.025	21.57	3.7117
	14	1,1-Dichloroethene	0.549	0.613	0.573	0.556	0.568	0.613	0.569	0.581	0.548	0.562	0.573	4.06	3.8750
5	15	tert-Butyl alcohol	------	0.008	0.008	0.007	0.007	0.007	0.006	0.007	0.006	0.006	0.007	11.31	3.9718
	16	Methyl acetate	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	17	Iodomethane	0.488	0.539	0.540	0.517	0.539	0.575	0.537	0.574	0.534	0.578	0.542	5.17	4.2604
10	18	Acetonitrile	0.061	0.069	0.069	0.066	0.068	0.075	0.070	0.070	0.065	0.068	0.068	5.26	4.3232
	19	Methylene chloride	0.435	0.459	0.424	0.400	0.394	0.414	0.385	0.405	0.364	0.383	0.406	6.86	4.4692
	20	Carbon disulfide	1.033	1.440	1.268	1.386	1.351	1.328	1.330	1.400	1.269	1.346	1.315	8.57	4.4955
5	21	Acrylonitrile	0.039	0.040	0.037	0.038	0.035	0.039	0.036	0.039	0.035	0.038	0.038	4.45	4.6371
	22	tert-Butyl methyl ether (MTBE)	0.330	0.364	0.343	0.327	0.335	0.362	0.331	0.359	0.322	0.342	0.342	4.49	4.6721
	23	trans-1,2-Dichloroethene	0.545	0.606	0.592	0.563	0.578	0.615	0.583	0.595	0.560	0.582	0.582	3.70	4.8546
	24	Isopropyl ether (DIPE)	0.993	1.079	1.083	1.019	1.056	1.117	1.033	1.106	0.993	1.052	1.053	4.16	5.2707
	25	1,1-Dichloroethane	0.625	0.697	0.671	0.637	0.646	0.694	0.644	0.668	0.623	0.658	0.656	3.99	5.4181
	26	Vinyl acetate	0.292	0.273	0.267	0.271	0.279	0.279	0.260	0.299	0.268	0.281	0.277	4.22	5.4196
5	27	2-Butanol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	28	tert-Butyl ethyl ether (ETBE)	0.574	0.627	0.647	0.598	0.624	0.669	0.621	0.666	0.599	0.635	0.626	4.82	5.8239
5	29	2-Butanone	0.050	0.047	0.045	0.047	0.042	0.046	0.043	0.046	0.041	0.044	0.045	5.69	5.9962
	30	2,2-Dichloropropane	0.383	0.433	0.394	0.396	0.386	0.408	0.373	0.391	0.339	0.334	0.384	7.73	6.1889
	31	cis-1,2-Dichloroethene	0.363	0.390	0.377	0.349	0.369	0.381	0.365	0.385	0.357	0.389	0.372	3.79	6.2532
	32	Chloroform	0.486	0.535	0.518	0.493	0.513	0.544	0.503	0.528	0.485	0.515	0.512	3.96	6.4736
	33	Bromochloromethane	0.212	0.249	0.233	0.215	0.223	0.243	0.221	0.235	0.211	0.222	0.226	5.80	6.7072
5	34	tert-Amyl alcohol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	35	Dibromofluoromethane	0.299	0.300	0.257	0.256	0.277	0.266	0.270	0.288	0.265	0.287	0.277	5.87	6.7875
	36	Tetrahydrofuran	------	------	0.047	0.034	0.034	0.029	0.026	0.029	0.025	0.026	0.031	22.65	6.7593
	37	1,1,1-Trichloroethane	0.489	0.503	0.483	0.475	0.487	0.521	0.490	0.497	0.467	0.484	0.490	3.07	7.0459
	38	Cyclohexane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	39	tert-Amyl methyl ether (TAME)	0.087	0.094	0.099	0.086	0.092	0.096	0.090	0.097	0.088	0.092	0.092	4.82	7.4459
	40	1,2-Dichloroethane-d4	0.214	0.188	0.181	0.168	0.171	0.168	0.168	0.175	0.155	0.164	0.175	9.43	7.5101
	41	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	0	13.1964
	42	1,1-Dichloropropene	0.263	0.252	0.244	0.243	0.247	0.268	0.250	0.249	0.246	0.260	0.252	3.41	7.2751
	43	Carbon tetrachloride	0.543	0.558	0.554	0.548	0.544	0.589	0.549	0.551	0.537	0.561	0.553	2.58	7.4181
	44	1,2-Dichloroethane	0.273	0.294	0.292	0.270	0.287	0.298	0.275	0.284	0.252	0.268	0.279	5.08	7.6488
	45	Benzene	1.830	1.889	1.812	1.745	1.749	1.874	1.744	1.793	1.694	1.567	1.770	5.32	7.6692
	46	Trichloroethene	0.485	0.513	0.494	0.465	0.474	0.513	0.478	0.494	0.474	0.515	0.490	3.74	8.5992
	47	Methylcyclohexane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	48	1,2-Dichloropropane	0.417	0.434	0.424	0.401	0.405	0.433	0.405	0.422	0.391	0.421	0.415	3.41	8.8751

SG
11/29/11

2017

	49	Bromodichloromethane	0.392	0.431	0.425	0.397	0.408	0.437	0.408	0.430	0.395	0.428	0.415	4.06	9.2474
20	50	1,4-Dioxane	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5.16	9.2809
	51	Dibromomethane	0.130	0.138	0.152	0.139	0.130	0.151	0.142	0.150	0.138	0.148	0.142	5.71	9.3350
	52	2-Chloroethyl vinyl ether	0.105	0.100	0.096	0.089	0.091	0.102	0.093	0.099	0.093	0.101	0.097	5.48	9.7437
5	53	4-Methyl-2-pentanone	0.148	0.162	0.144	0.153	0.139	0.159	0.148	0.156	0.139	0.148	0.150	5.32	9.7905
	54	cis-1,3-Dichloropropene	0.503	0.497	0.515	0.489	0.501	0.531	0.492	0.524	0.481	0.522	0.505	3.29	10.1335
	55	Toluene-d8	1.798	1.650	1.443	1.441	1.493	1.477	1.498	1.544	1.467	1.449	1.526	7.50	10.5350
	56	Toluene	1.795	1.953	1.860	1.781	1.798	1.945	1.800	1.856	1.760	1.576	1.813	5.87	10.6693
	57	Ethyl methacrylate	0.206	0.228	0.221	0.203	0.213	0.230	0.213	0.230	0.208	0.222	0.217	4.67	10.9700
	58	trans-1,3-Dichloropropene	0.299	0.336	0.335	0.308	0.324	0.347	0.326	0.340	0.314	0.334	0.326	4.65	10.9832
	59	1,1,2-Trichloroethane	0.170	0.173	0.168	0.161	0.164	0.178	0.167	0.176	0.162	0.175	0.169	3.49	11.2503
5	60	2-Hexanone	0.106	0.100	0.085	0.088	0.082	0.093	0.087	0.091	0.081	0.085	0.090	9.06	11.2679
	61	1,3-Dichloropropane	0.322	0.336	0.329	0.312	0.314	0.337	0.313	0.332	0.303	0.327	0.322	3.59	11.6912
	62	Tetrachloroethene	0.384	0.384	0.382	0.364	0.371	0.401	0.370	0.373	0.362	0.380	0.377	3.07	11.7949
	63	Dibromochloromethane	0.209	0.225	0.226	0.208	0.214	0.233	0.216	0.230	0.212	0.229	0.220	4.27	12.1525
	64	1,2-Dibromoethane	0.155	0.176	0.178	0.169	0.174	0.187	0.176	0.188	0.172	0.184	0.176	5.53	12.5117
	65	1-Chlorohexane	0.834	0.846	0.809	0.785	0.794	0.865	0.812	0.808	0.783	0.809	0.815	3.26	12.8095
	66	Chlorobenzene	0.990	1.044	1.042	1.004	1.009	1.083	1.016	1.058	0.991	1.066	1.030	3.19	13.2635
	67	1,1,1,2-Tetrachloroethane	0.283	0.311	0.298	0.282	0.287	0.313	0.295	0.305	0.287	0.311	0.297	4.13	13.3497
	68	Ethylbenzene	2.063	2.185	2.070	1.992	2.037	2.198	2.046	2.063	1.953	------	2.067	3.87	13.3656
2	69	m-Xylene & p-Xylene	1.535	1.567	1.516	1.462	1.492	1.618	1.481	1.502	1.301	------	1.497	5.86	13.5099
	70	o-Xylene	1.444	1.467	1.455	1.394	1.392	1.514	1.407	1.440	1.337	1.349	1.420	3.84	14.3146
	71	Styrene	1.055	1.130	1.149	1.076	1.127	1.209	1.131	1.167	1.087	1.153	1.128	4.08	14.3862
	72	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	0	18.4169
	73	Isopropylbenzene	6.672	7.150	6.905	6.632	6.733	7.264	6.843	6.947	6.815	6.130	6.809	4.57	14.9993
	74	Bromoform	0.273	0.343	0.333	0.321	0.328	0.358	0.342	0.364	0.348	0.385	0.339	8.82	15.0154
	75	trans-1,4-Dichloro-2-butene	0.225	0.219	0.206	0.173	0.179	0.183	0.174	0.186	0.167	0.179	0.189	10.72	15.0957
	76	1,1,2,2-Tetrachloroethane	0.534	0.577	0.576	0.536	0.529	0.580	0.549	0.576	0.540	0.582	0.558	3.93	15.3307
	77	4-Bromofluorobenzene	------	1.669	1.374	1.284	1.335	1.284	1.312	1.346	1.293	1.405	1.367	8.82	15.4708
	78	1,2,3-Trichloropropane	0.131	0.141	0.152	0.144	0.144	0.154	0.145	0.154	0.143	0.154	0.146	5.01	15.6139
	79	n-Propylbenzene	8.550	8.846	8.591	8.268	8.449	9.163	8.629	8.665	8.392	------	8.617	3.07	15.7614
	80	Bromobenzene	1.068	1.150	1.118	1.055	1.075	1.155	1.086	1.130	1.090	1.187	1.111	3.92	15.8402
	81	1,3,5-Trimethylbenzene	5.397	5.806	5.536	5.204	5.365	5.777	5.443	5.488	5.328	5.337	5.468	3.54	16.0767
	82	2-Chlorotoluene	4.681	5.134	5.078	4.727	4.898	5.234	4.680	4.792	4.784	5.019	4.903	4.10	16.0957
	83	4-Chlorotoluene	4.165	4.429	4.066	3.701	3.752	3.992	3.992	3.997	3.646	3.906	3.965	5.88	16.1950
	84	tert-Butylbenzene	1.238	1.276	1.219	1.198	1.221	1.319	1.240	1.252	1.223	1.324	1.251	3.41	16.7643
	85	1,2,4-Trimethylbenzene	4.937	5.326	5.233	4.885	4.995	5.346	5.045	5.087	4.903	5.054	5.081	3.31	16.8388
	86	sec-Butylbenzene	7.621	8.075	7.697	7.562	7.574	8.245	7.744	7.672	7.537	6.406	7.613	6.36	17.1760
	87	p-Isopropyltoluene	5.782	6.275	6.066	5.888	6.030	6.517	6.075	6.094	5.944	5.611	6.028	4.17	17.4534
	88	1,3-Dichlorobenzene	2.217	2.314	2.186	2.058	2.147	2.301	2.139	2.219	2.120	2.266	2.197	3.76	17.6271
	89	1,4-Dichlorobenzene	2.047	2.207	2.071	1.942	1.987	2.125	1.992	2.058	1.954	2.106	2.049	4.06	17.8330
	90	n-Butylbenzene	5.788	6.130	5.776	5.669	5.836	6.376	5.915	5.863	5.768	5.053	5.817	5.82	18.2125
	91	1,2-Dichlorobenzene	1.578	1.735	1.625	1.524	1.584	1.680	1.577	1.641	1.560	1.668	1.617	3.98	18.4622
	92	1,2-Dibromo-3-chloropropane	------	0.070	0.075	0.065	0.070	0.077	0.074	0.079	0.075	0.081	0.074	7.02	19.5991
	93	1,2,4-Trichlorobenzene	1.068	1.069	1.061	1.001	1.047	1.133	1.067	1.128	1.109	1.182	1.086	4.76	20.6943
	94	Hexachlorobutadiene	1.041	1.065	0.996	1.004	1.013	1.126	1.045	1.042	1.064	1.091	1.049	3.82	20.8695
	95	Naphthalene	1.260	1.331	1.265	1.175	1.227	1.348	1.293	1.396	1.345	1.452	1.309	6.28	21.0272
	96	1,2,3-Trichlorobenzene	0.791	0.793	0.774	0.735	0.763	0.843	0.783	0.837	0.809	0.867	0.799	5.01	21.3454

Spike Amount = Nominal Amount * M

Ave_%RSD : 5.6 Max_%RSD : 22.7

SG
11/29/11

Use Least Square Linear Regression with weighting factor of inverse concentration for comps with %_RSD > 15

Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
13	Acetone	0.00937	0.02037	0.9983
36	Tetrahydrofuran	0.00219	0.02588	0.9987

SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :T067
IC_Beginning DateTime :11/23/11 18:16
Spike Amount :10 PPB
CC/CV File :RKC314
IC File :RKC306

Column Spec :RTX502.2 ID :0.25MM
IC_Ending DateTime :11/23/11 22:55
HPChem Method :V067K23
Date_Time :11/24/11 00:59

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	1788448	1	1	8.093	8.093	0				
	2	Dichlorodifluoromethane	9.720	-2.8	500264	0.280	0.288	1.903	1.906	6.51				
	3	Dichlorotetrafluoroethane												
	4	Chloromethane	9.300	-7.0	738969	0.413	0.444	2.136	2.149	6.64				
	5	Vinyl chloride	9.365	-6.4	744725	0.416	0.445	2.283	2.298	5.75				
	6	Bromomethane	9.871	-1.3	459678	0.257	0.260	2.764	2.770	7.77				
	7	Chloroethane	9.637	-3.6	460924	0.258	0.267	2.866	2.865	4.37				
	8	Dichlorofluoromethane	10.276	2.8	1133916	0.634	0.617	2.910	2.909	3.84				
	9	Trichlorofluoromethane	10.912	9.1	708264	0.396	0.363	3.144	3.151	7.91				
	10	sec-Propyl alcohol												
5	11	Acrolein	53.199	6.4	120381	0.013	0.013	3.640	3.637	9.18				
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	11.300	13.0	453648	0.254	0.224	3.669	3.678	3.41				
5	13	Acetone	55.726	11.5	219754	0.025	0.025	3.713	3.712	21.57	0.0094	0.0204		0.9983
	14	1,1-Dichloroethene	10.272	2.7	1052753	0.589	0.573	3.874	3.875	4.06				
5	15	tert-Butyl alcohol	53.455	6.9	67519	0.008	0.007	3.976	3.972	11.31				
	16	Methyl acetate												
	17	Iodomethane	11.376	13.8	1103172	0.617	0.542	4.253	4.260	5.17				
10	18	Acetonitrile	103.186	3.2	1258616	0.070	0.068	4.326	4.323	5.26				
	19	Methylene chloride	10.288	2.9	747714	0.418	0.406	4.472	4.469	6.86				
	20	Carbon disulfide	11.612	16.1	2731052	1.527	1.315	4.487	4.496	8.57				
5	21	Acrylonitrile	53.192	6.4	357469	0.040	0.038	4.633	4.637	4.45				
	22	tert-Butyl methyl ether (MTBE)	10.348	3.5	632096	0.353	0.342	4.677	4.672	4.49				
	23	trans-1,2-Dichloroethene	9.956	-0.4	1036356	0.579	0.582	4.852	4.855	3.70				
	24	Isopropyl ether (DIPE)	10.103	1.0	1902502	1.064	1.053	5.261	5.271	4.16				
	25	1,1-Dichloroethane	10.278	2.8	1206518	0.675	0.656	5.421	5.418	3.99				
	26	Vinyl acetate	8.867	-11.3	439369	0.246	0.277	5.421	5.420	4.22				
5	27	2-Butanol												
	28	tert-Butyl ethyl ether (ETBE)	10.436	4.4	1168278	0.653	0.626	5.830	5.824	4.82				
5	29	2-Butanone	51.689	3.4	416346	0.047	0.045	5.991	5.996	5.69				
	30	2,2-Dichloropropane	9.668	-3.3	663358	0.371	0.384	6.180	6.189	7.73				
	31	cis-1,2-Dichloroethene	9.712	-2.9	646925	0.362	0.372	6.253	6.253	3.79				
	32	Chloroform	10.512	5.1	962665	0.538	0.512	6.472	6.474	3.96				
	33	Bromochloromethane	10.330	3.3	418056	0.234	0.226	6.706	6.707	5.80				
5	34	tert-Amyl alcohol												
	35	Dibromofluoromethane	10.674	6.7	528024	0.295	0.277	6.779	6.787	5.87				
	36	Tetrahydrofuran	10.834	8.3	54063	0.030	0.031	6.750	6.759	22.65	0.0022	0.0259		0.9987
	37	1,1,1-Trichloroethane	10.189	1.9	892428	0.499	0.490	7.042	7.046	3.07				
	38	Cyclohexane												
	39	tert-Amyl methyl ether (TAME)	10.489	4.9	172856	0.097	0.092	7.436	7.446	4.82				
	40	1,2-Dichloroethane-d4	10.507	5.1	329393	0.184	0.175	7.509	7.510	9.43				
	41	CHLOROBENZENE-D5	10.000	0	1362441	1	1	13.202	13.196	0				
	42	1,1-Dichloropropene	10.495	4.9	360560	0.265	0.252	7.275	7.275	3.41				
	43	Carbon tetrachloride	10.272	2.7	774387	0.568	0.553	7.421	7.418	2.58				
	44	1,2-Dichloroethane	10.383	3.8	394996	0.290	0.279	7.655	7.649	5.08				

SG
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	45	Benzene	10.110	1.1	2437685	1.789	1.770	7.669	7.669	5.32				
	46	Trichloroethene	10.753	7.5	718572	0.527	0.490	8.604	8.599	3.74				
	47	Methylcyclohexane												
	48	1,2-Dichloropropane	10.243	2.4	579638	0.425	0.415	8.881	8.875	3.41				
	49	Bromodichloromethane	10.093	0.9	570669	0.419	0.415	9.246	9.247	4.06				
20	50	1,4-Dioxane	208.865	4.4	32672	0.001	0.001	9.275	9.281	5.16				
	51	Dibromomethane	9.629	-3.7	185895	0.136	0.142	9.334	9.335	5.71				
	52	2-Chloroethyl vinyl ether	10.499	5.0	138370	0.102	0.097	9.743	9.744	5.48				
5	53	4-Methyl-2-pentanone	51.514	3.0	1050271	0.154	0.150	9.786	9.790	5.32				
	54	cis-1,3-Dichloropropene	10.245	2.4	705531	0.518	0.505	10.137	10.134	3.29				
	55	Toluene-d8	10.683	6.8	2221159	1.630	1.526	10.531	10.535	7.50				
	56	Toluene	10.331	3.3	2551566	1.873	1.813	10.677	10.669	5.87				
	57	Ethyl methacrylate	9.900	-1.0	293083	0.215	0.217	10.969	10.970	4.67				
	58	trans-1,3-Dichloropropene	10.388	3.9	461812	0.339	0.326	10.983	10.983	4.65				
	59	1,1,2-Trichloroethane	10.757	7.6	248330	0.182	0.169	11.246	11.250	3.49				
5	60	2-Hexanone	50.456	0.9	616587	0.091	0.090	11.261	11.268	9.06				
	61	1,3-Dichloropropane	10.406	4.1	457007	0.335	0.322	11.684	11.691	3.59				
	62	Tetrachloroethene	10.355	3.5	531946	0.390	0.377	11.801	11.795	3.07				
	63	Dibromochloromethane	10.383	3.8	311376	0.229	0.220	12.151	12.153	4.27				
	64	1,2-Dibromoethane	10.053	0.5	240937	0.177	0.176	12.516	12.512	5.53				
	65	1-Chlorohexane	10.468	4.7	1161901	0.853	0.815	12.808	12.809	3.26				
	66	Chlorobenzene	10.538	5.4	1479247	1.086	1.030	13.261	13.264	3.19				
	67	1,1,1,2-Tetrachloroethane	10.416	4.2	421748	0.310	0.297	13.348	13.350	4.13				
	68	Ethylbenzene	10.070	0.7	2836333	2.082	2.067	13.363	13.366	3.87				
2	69	m-Xylene & p-Xylene	20.333	1.7	4147314	1.522	1.497	13.509	13.510	5.86				
	70	o-Xylene	10.134	1.3	1960683	1.439	1.420	14.312	14.315	3.84				
	71	Styrene	9.917	-0.8	1524546	1.119	1.128	14.385	14.386	4.08				
	72	1,2-DICHLOROBENZENE-D4	10.000	0	391560	1	1	18.414	18.417	0				
	73	Isopropylbenzene	10.858	8.6	2894946	7.393	6.809	14.998	14.999	4.57				
	74	Bromoform	10.719	7.2	142484	0.364	0.339	15.013	15.015	8.82				
	75	trans-1,4-Dichloro-2-butene	8.715	-12.8	64501	0.165	0.189	15.100	15.096	10.72				
	76	1,1,2,2-Tetrachloroethane	10.291	2.9	224778	0.574	0.558	15.334	15.331	3.93				
	77	4-Bromofluorobenzene	10.679	6.8	571686	1.460	1.367	15.465	15.471	8.82				
	78	1,2,3-Trichloropropane	10.742	7.4	61539	0.157	0.146	15.611	15.614	5.01				
	79	n-Propylbenzene	10.136	1.4	3420117	8.735	8.617	15.757	15.761	3.07				
	80	Bromobenzene	9.877	-1.2	429858	1.098	1.111	15.845	15.840	3.92				
	81	1,3,5-Trimethylbenzene	9.829	-1.7	2104616	5.375	5.468	16.078	16.077	3.54				
	82	2-Chlorotoluene	10.065	0.6	1932227	4.935	4.903	16.093	16.096	4.10				
	83	4-Chlorotoluene	9.821	-1.8	1524616	3.894	3.965	16.195	16.195	5.88				
	84	tert-Butylbenzene	10.150	1.5	497170	1.270	1.251	16.765	16.764	3.41				
	85	1,2,4-Trimethylbenzene	10.009	0.1	1991441	5.086	5.081	16.837	16.839	3.31				
	86	sec-Butylbenzene	10.486	4.9	3126276	7.984	7.613	17.173	17.176	6.36				
	87	p-Isopropyltoluene	10.200	2.0	2407852	6.149	6.028	17.451	17.453	4.17				
	88	1,3-Dichlorobenzene	10.347	3.5	890011	2.273	2.197	17.626	17.627	3.76				
	89	1,4-Dichlorobenzene	10.394	3.9	833898	2.130	2.049	17.830	17.833	4.06				
	90	n-Butylbenzene	10.031	0.3	2285098	5.836	5.817	18.210	18.212	5.82				
	91	1,2-Dichlorobenzene	10.361	3.6	656103	1.676	1.617	18.458	18.462	3.98				
	92	1,2-Dibromo-3-chloropropane	9.920	-0.8	28739	0.073	0.074	19.597	19.599	7.02				
	93	1,2,4-Trichlorobenzene	10.101	1.0	429723	1.097	1.086	20.692	20.694	4.76				
	94	Hexachlorobutadiene	10.094	0.9	414537	1.059	1.049	20.867	20.869	3.82				
	95	Naphthalene	9.699	-3.0	497211	1.270	1.309	21.027	21.027	6.28				
	96	1,2,3-Trichlorobenzene	9.848	-1.5	308259	0.787	0.799	21.349	21.345	5.01				

Spike Amount = Nominal Amount * M

Sa
11/29/11

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKC341
Instrument ID: 67
GC Column:RTX502.2ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K221
BFB Injection Date : 11/29/11
BFB Injection Time : 14:12
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.77
75	30.0 - 60.0% of mass 95	46.37
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.34
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	79.55
175	5.0 - 9.0% of mass 174	5.64(7.1)1
176	95.0 - 101.0% of mass 174	76.66(96.4)1
177	5.0 - 9.0% of mass 176	5.33(7.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV067K2302	RKC342	11/29/11	14:46
2	MBLK1W	V067K16Q	RKC347	11/29/11	17:29
3	LCS1W	V067K16L	RKC343	11/29/11	15:20
4	LCD1W	V067K16C	RKC344	11/29/11	15:50
5	IR-70-TB-173	K221-05	RKC350	11/29/11	19:02
6	IR-70-EB-177	K221-04	RKC351	11/29/11	19:33
7	MW-70-RDO-4-174	K221-01	RKC356	11/29/11	22:08

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RKC306
Instrument ID: 67
GC Column: RTX502.2 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K221
Date Analyzed: 11/23/11
Time Analyzed: 20:51
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2156765	8.09	1637638	13.20	477066	18.42
	UPPER LIMIT	4313530	8.59	3275276	13.70	954132	18.92
	LOWER LIMIT	1078383	7.59	818819	12.70	238533	17.92
	SAMPLE ID						
1	VSTD010	2477504	8.10	1838887	13.19	514795	18.42
2	MBLK1W	2463063	8.08	1805848	13.19	478045	18.42
3	LCS1W	2341160	8.10	1751226	13.19	498051	18.42
4	LCD1W	2257209	8.10	1679795	13.19	480202	18.42
5	IR-70-TB-173	2495965	8.09	1869530	13.19	512565	18.42
6	IR-70-EB-177	2598218	8.09	1925939	13.19	525843	18.42
7	MW-70-RDO-4-174	2431405	8.09	1816262	13.19	499830	18.42

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K29\RKC342.D Vial: 2
Acq On : 29 Nov 2011 2:46 pm Operator: AS
Sample : CVO67K2302 10ppb Inst : TO67
Misc : 10ppb 8260/50ppb KET-ACR-ACN-TBA Multiplr: 1.00
MS Integration Params: LSCINT1.P

Method : D:\HPCHEM\1\METHODS\VO67K23.M (RTE Integrator)
Title : METHOD 8260B 4.0
Last Update : Mon Nov 28 09:48:33 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	115	0.00
2	T,M	Dichlorodifluoromethane	10.000	9.706	2.9	106	0.00
3	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	0	0.00
4	P,T,M	Chloromethane	10.000	9.793	2.1	106	0.00
5	C,T,M	Vinyl chloride	10.000	9.939	0.6	108	0.00
6	T,M	Bromomethane	10.000	9.494	5.1	105	0.00
7	T,M	Chloroethane	10.000	9.306	6.9	105	0.00
8	T,M	Dichlorofluoromethane	10.000	9.074	9.3	99	0.00
9	T,M	Trichlorofluoromethane	10.000	9.958	0.4	108	0.00
10	T,M	sec-Propyl alcohol	-1.000	0.000	0.0	0	0.00
11	T,M	Acrolein	50.000	47.280	5.4	106	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.319	6.8	101	0.00
13	T,M	Acetone	50.000	45.474	9.1	95	0.00
14	C,T,M	1,1-Dichloroethene	10.000	9.446	5.5	102	0.00
15	T,M	tert-Butyl alcohol	50.000	38.199	23.6#	87	0.00 NT
16	T,M	Methyl acetate	-1.000	0.000	0.0	0	-4.30# NT
17	T,M	Iodomethane	10.000	9.098	9.0	98	0.00
18	T,M	Acetonitrile	100.000	95.777	4.2	100	0.00
19	T,M	Methylene chloride	10.000	9.096	9.0	103	0.00
20	T,M	Carbon disulfide	10.000	9.554	4.5	109	0.00
21	T,M	Acrylonitrile	50.000	43.642	12.7	97	0.00
22	T,M	tert-Butyl methyl ether (MT	10.000	8.647	13.5	94	0.00
23	T,M	trans-1,2-Dichloroethene	10.000	9.240	7.6	100	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	8.843	11.6	96	0.00
25	P,T,M	1,1-Dichloroethane	10.000	9.073	9.3	99	0.00
26	T,M	Vinyl acetate	10.000	9.068	9.3	103	0.00
27	T,M	2-Butanol	-1.000	0.000	0.0	0	-5.75# NT
28	T,M	tert-Butyl ethyl ether (ETB	10.000	8.792	12.1	95	0.00
29	T,M	2-Butanone	50.000	43.166	13.7	97	0.00
30	T,M	2,2-Dichloropropane	10.000	10.135	-1.3	110	0.00
31	T,M	cis-1,2-Dichloroethene	10.000	8.987	10.1	101	0.00
32	C,T,M	Chloroform	10.000	9.096	9.0	98	0.00
33	T,M	Bromochloromethane	10.000	9.087	9.1	97	0.00
34	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	0	-6.73# NT
35	S	Dibromofluoromethane	10.000	9.802	2.0	117	0.00
36	T,M	Tetrahydrofuran	10.000	8.024	19.8	92	0.00
37	T,M	1,1,1-Trichloroethane	10.000	9.320	6.8	101	0.00
38	T,M	Cyclohexane	-1.000	0.000	0.0	0	-7.09# NT
39	T,M	tert-Amyl methyl ether (TAM	10.000	8.607	13.9	95	0.00
40	S	1,2-Dichloroethane-d4	10.000	9.437	5.6	113	0.00
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	112	0.00

(#) = Out of Range

2025

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K29\RKC342.D Vial: 2
Acq On : 29 Nov 2011 2:46 pm Operator: AS
Sample : CVO67K2302 10ppb Inst : TO67
Misc : 10ppb 8260/50ppb KET-ACR-ACN-TBA Multiplr: 1.00
MS Integration Params: LSCINT1.P

Method : D:\HPCHEM\1\METHODS\VO67K23.M (RTE Integrator)
Title : METHOD 8260B 4.0
Last Update : Mon Nov 28 09:48:33 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	9.375	6.3	99	0.00
43	T,M	Carbon tetrachloride	10.000	9.473	5.3	100	0.00
44	T,M	1,2-Dichloroethane	10.000	9.114	8.9	96	0.00
45	T,M	Benzene	10.000	9.223	7.8	98	0.00
46	T,M	Trichloroethene	10.000	9.273	7.3	100	0.00
47	T,M	Methylcyclohexane	-1.000	0.000	0.0	0	-8.71#
48	C,T,M	1,2-Dichloropropane	10.000	8.999	10.0	97	0.00
49	T,M	Bromodichloromethane	10.000	9.141	8.6	98	0.00
50	T,M	1,4-Dioxane	200.000	182.685	8.7	101	0.00
51	T,M	Dibromomethane	10.000	9.286	7.1	98	0.00
52	T,M	2-Chloroethyl vinyl ether	10.000	8.374	16.3	89	0.00
53	T,M	4-Methyl-2-pentanone	50.000	44.626	10.7	94	0.00
54	T,M	cis-1,3-Dichloropropene	10.000	9.142	8.6	98	0.00
55	S	Toluene-d8	10.000	10.070	-0.7	117	0.00
56	C,T,M	Toluene	10.000	9.353	6.5	98	0.00
57	T,M	Ethyl methacrylate	10.000	8.774	12.3	93	0.00
58	T,M	trans-1,3-Dichloropropene	10.000	9.258	7.4	98	0.00
59	T,M	1,1,2-Trichloroethane	10.000	8.876	11.2	95	0.00
60	T,M	2-Hexanone	50.000	43.245	13.5	94	0.00
61	T,M	1,3-Dichloropropane	10.000	8.996	10.0	97	0.00
62	T,M	Tetrachloroethene	10.000	9.364	6.4	99	0.00
63	T,M	Dibromochloromethane	10.000	9.024	9.8	96	0.00
64	T,M	1,2-Dibromoethane	10.000	9.082	9.2	96	0.00
65	T,M	1-Chlorohexane	10.000	9.404	6.0	99	0.00
66	P,M	Chlorobenzene	10.000	9.188	8.1	98	0.00
67	T,M	1,1,1,2-Tetrachloroethane	10.000	9.079	9.2	97	0.00
68	C,T,M	Ethylbenzene	10.000	9.262	7.4	98	0.00
69	T,M	m-Xylene & p-Xylene	20.000	18.702	6.5	97	0.00
70	T,M	o-Xylene	10.000	9.209	7.9	97	0.00
71	T,M	Styrene	10.000	9.297	7.0	97	0.00
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	108	0.00
73	T,M	Isopropylbenzene	10.000	9.700	3.0	98	0.00
74	P,T,M	Bromoform	10.000	9.202	8.0	94	0.00
75	T,M	trans-1,4-Dichloro-2-butene	10.000	8.745	12.6	97	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	9.243	7.6	96	0.00
77	S	4-Bromofluorobenzene	10.000	9.990	0.1	115	0.00
78	T,M	1,2,3-Trichloropropane	10.000	9.207	7.9	95	0.00
79	T,M	n-Propylbenzene	10.000	9.642	3.6	98	0.00
80	T,M	Bromobenzene	10.000	9.277	7.2	96	0.00
81	T,M	1,3,5-Trimethylbenzene	10.000	9.501	5.0	97	0.00

(#) = Out of Range

2025

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K29\RKC342.D Vial: 2
Acq On : 29 Nov 2011 2:46 pm Operator: AS
Sample : CVO67K2302 10ppb Inst : TO67
Misc : 10ppb 8260/50ppb KET-ACR-ACN-TBA Multiplr: 1.00
MS Integration Params: LSCINT1.P

Method : D:\HPCHEM\1\METHODS\VO67K23.M (RTE Integrator)
Title : METHOD 8260B 4.0
Last Update : Mon Nov 28 09:48:33 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	9.173	8.3	93	0.00
83	T,M	4-Chlorotoluene	10.000	9.585	4.1	103	0.00
84	T,M	tert-Butylbenzene	10.000	9.503	5.0	97	0.00
85	T,M	1,2,4-Trimethylbenzene	10.000	9.473	5.3	97	0.00
86	T,M	sec-Butylbenzene	10.000	9.802	2.0	98	0.00
87	T,M	p-Isopropyltoluene	10.000	9.691	3.1	97	0.00
88	T,M	1,3-Dichlorobenzene	10.000	9.273	7.3	96	0.00
89	T,M	1,4-Dichlorobenzene	10.000	9.230	7.7	96	0.00
90	T,M	n-Butylbenzene	10.000	9.854	1.5	97	0.00
91	T,M	1,2-Dichlorobenzene	10.000	9.187	8.1	95	0.00
92	T,M	1,2-Dibromo-3-chloropropane	10.000	8.645	13.6	89	0.00
93	T,M	1,2,4-Trichlorobenzene	10.000	8.860	11.4	92	0.00
94	T,M	Hexachlorobutadiene	10.000	9.215	7.9	93	0.00
95	T,M	Naphthalene	10.000	8.342	16.6	87	0.00
96	T,M	1,2,3-Trichlorobenzene	10.000	8.657	13.4	89	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K29\RKC342.D Vial: 2
Acq On : 29 Nov 2011 2:46 pm Operator: AS
Sample : CVO67K2302 10ppb Inst : TO67
Misc : 10ppb 8260/50ppb KET-ACR-ACN-TBA Multiplr: 1.00
MS Integration Params: LSCINT1.P

Method : D:\HPCHEM\1\METHODS\VO67K23.M (RTE Integrator)
Title : METHOD 8260B 4.0
Last Update : Mon Nov 28 09:48:33 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	115	0.00
2	T,M	Dichlorodifluoromethane	0.288	0.279	3.1	106	0.00
3	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	0#	0.00
4	P,T,M	Chloromethane	0.444	0.435	2.0	106	0.00
5	C,T,M	Vinyl chloride	0.445	0.442	0.7	108	0.00
6	T,M	Bromomethane	0.260	0.247	5.0	105	0.00
7	T,M	Chloroethane	0.267	0.249	6.7	105	0.00
8	T,M	Dichlorofluoromethane	0.617	0.560	9.2	99	0.00
9	T,M	Trichlorofluoromethane	0.363	0.361	0.6	108	0.00
10	T,M	sec-Propyl alcohol	0.000	0.000	0.0	0#	0.00
11	T,M	Acrolein	0.013	0.012	7.7	106	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.224	0.209	6.7	101	0.00
13	T,M	Acetone	0.025	0.020	20.0#	95	0.00
14	C,T,M	1,1-Dichloroethene	0.573	0.541	5.6	102	0.00
15	T,M	tert-Butyl alcohol	0.007	0.005	28.6#	87	0.00
16	T,M	Methyl acetate	0.000	0.000	0.0	0#	-4.30#
17	T,M	Iodomethane	0.542	0.493	9.0	98	0.00
18	T,M	Acetonitrile	0.068	0.065	4.4	100	0.00
19	T,M	Methylene chloride	0.406	0.370	8.9	103	0.00
20	T,M	Carbon disulfide	1.315	1.256	4.5	109	0.00
21	T,M	Acrylonitrile	0.038	0.033	13.2	97	0.00
22	T,M	tert-Butyl methyl ether (MT	0.342	0.295	13.7	94	0.00
23	T,M	trans-1,2-Dichloroethene	0.582	0.538	7.6	100	0.00
24	T,M	Isopropyl ether (DIPE)	1.053	0.931	11.6	96	0.00
25	P,T,M	1,1-Dichloroethane	0.656	0.596	9.1	99	0.00
26	T,M	Vinyl acetate	0.277	0.251	9.4	103	0.00
27	T,M	2-Butanol	0.000	0.000	0.0	0#	-5.75#
28	T,M	tert-Butyl ethyl ether (ETB	0.626	0.550	12.1	95	0.00
29	T,M	2-Butanone	0.045	0.039	13.3	97	0.00
30	T,M	2,2-Dichloropropane	0.384	0.389	-1.3	110	0.00
31	T,M	cis-1,2-Dichloroethene	0.372	0.335	9.9	101	0.00
32	C,T,M	Chloroform	0.512	0.466	9.0	98	0.00
33	T,M	Bromochloromethane	0.226	0.206	8.8	97	0.00
34	T,M	tert-Amyl alcohol	0.000	0.000	0.0	0#	-6.73#
35	S	Dibromofluoromethane	0.277	0.271	2.2	117	0.00
36	T,M	Tetrahydrofuran	0.031	0.023	25.8#	92	0.00
37	T,M	1,1,1-Trichloroethane	0.490	0.456	6.9	101	0.00
38	T,M	Cyclohexane	0.000	0.000	0.0	0#	-7.09#
39	T,M	tert-Amyl methyl ether (TAM	0.092	0.079	14.1	95	0.00
40	S	1,2-Dichloroethane-d4	0.175	0.165	5.7	113	0.00
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	112	0.00

(#) = Out of Range

2028

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K29\RKC342.D Vial: 2
Acq On : 29 Nov 2011 2:46 pm Operator: AS
Sample : CVO67K2302 10ppb Inst : TO67
Misc : 10ppb 8260/50ppb KET-ACR-ACN-TBA Multiplr: 1.00
MS Integration Params: LSCINT1.P

Method : D:\HPCHEM\1\METHODS\VO67K23.M (RTE Integrator)
Title : METHOD 8260B 4.0
Last Update : Mon Nov 28 09:48:33 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.252	0.236	6.3	99	0.00
43	T,M	Carbon tetrachloride	0.553	0.524	5.2	100	0.00
44	T,M	1,2-Dichloroethane	0.279	0.254	9.0	96	0.00
45	T,M	Benzene	1.770	1.632	7.8	98	0.00
46	T,M	Trichloroethene	0.490	0.455	7.1	100	0.00
47	T,M	Methylcyclohexane	0.000	0.000	0.0	0#	-8.71#
48	C,T,M	1,2-Dichloropropane	0.415	0.374	9.9	97	0.00
49	T,M	Bromodichloromethane	0.415	0.379	8.7	98	0.00
50	T,M	1,4-Dioxane	0.001	0.001	0.0	101	0.00
51	T,M	Dibromomethane	0.142	0.132	7.0	98	0.00
52	T,M	2-Chloroethyl vinyl ether	0.097	0.081	16.5	89	0.00
53	T,M	4-Methyl-2-pentanone	0.150	0.134	10.7	94	0.00
54	T,M	cis-1,3-Dichloropropene	0.505	0.462	8.5	98	0.00
55	S	Toluene-d8	1.526	1.537	-0.7	117	0.00
56	C,T,M	Toluene	1.813	1.695	6.5	98	0.00
57	T,M	Ethyl methacrylate	0.217	0.191	12.0	93	0.00
58	T,M	trans-1,3-Dichloropropene	0.326	0.302	7.4	98	0.00
59	T,M	1,1,2-Trichloroethane	0.169	0.150	11.2	95	0.00
60	T,M	2-Hexanone	0.090	0.078	13.3	94	0.00
61	T,M	1,3-Dichloropropane	0.322	0.290	9.9	97	0.00
62	T,M	Tetrachloroethene	0.377	0.353	6.4	99	0.00
63	T,M	Dibromochloromethane	0.220	0.199	9.5	96	0.00
64	T,M	1,2-Dibromoethane	0.176	0.160	9.1	96	0.00
65	T,M	1-Chlorohexane	0.815	0.766	6.0	99	0.00
66	P,M	Chlorobenzene	1.030	0.947	8.1	98	0.00
67	T,M	1,1,1,2-Tetrachloroethane	0.297	0.270	9.1	97	0.00
68	C,T,M	Ethylbenzene	2.067	1.915	7.4	98	0.00
69	T,M	m-Xylene & p-Xylene	1.497	1.400	6.5	97	0.00
70	T,M	o-Xylene	1.420	1.308	7.9	97	0.00
71	T,M	Styrene	1.128	1.049	7.0	97	0.00
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	108	0.00
73	T,M	Isopropylbenzene	6.809	6.605	3.0	98	0.00
74	P,T,M	Bromoform	0.339	0.312	8.0	94	0.00
75	T,M	trans-1,4-Dichloro-2-butene	0.189	0.165	12.7	97	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	0.558	0.516	7.5	96	0.00
77	S	4-Bromofluorobenzene	1.367	1.366	0.1	115	0.00
78	T,M	1,2,3-Trichloropropane	0.146	0.135	7.5	95	0.00
79	T,M	n-Propylbenzene	8.617	8.309	3.6	98	0.00
80	T,M	Bromobenzene	1.111	1.031	7.2	96	0.00
81	T,M	1,3,5-Trimethylbenzene	5.468	5.195	5.0	97	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K29\RKC342.D Vial: 2
Acq On : 29 Nov 2011 2:46 pm Operator: AS
Sample : CVO67K2302 10ppb Inst : TO67
Misc : 10ppb 8260/50ppb KET-ACR-ACN-TBA Multiplr: 1.00
MS Integration Params: LSCINT1.P

Method : D:\HPCHEM\1\METHODS\VO67K23.M (RTE Integrator)
Title : METHOD 8260B 4.0
Last Update : Mon Nov 28 09:48:33 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	4.903	4.497	8.3	93	0.00
83	T,M	4-Chlorotoluene	3.965	3.800	4.2	103	0.00
84	T,M	tert-Butylbenzene	1.251	1.189	5.0	97	0.00
85	T,M	1,2,4-Trimethylbenzene	5.081	4.813	5.3	97	0.00
86	T,M	sec-Butylbenzene	7.613	7.463	2.0	98	0.00
87	T,M	p-Isopropyltoluene	6.028	5.842	3.1	97	0.00
88	T,M	1,3-Dichlorobenzene	2.197	2.037	7.3	96	0.00
89	T,M	1,4-Dichlorobenzene	2.049	1.891	7.7	96	0.00
90	T,M	n-Butylbenzene	5.817	5.732	1.5	97	0.00
91	T,M	1,2-Dichlorobenzene	1.617	1.486	8.1	95	0.00
92	T,M	1,2-Dibromo-3-chloropropane	0.074	0.064	13.5	89	0.00
93	T,M	1,2,4-Trichlorobenzene	1.086	0.963	11.3	92	0.00
94	T,M	Hexachlorobutadiene	1.049	0.966	7.9	93	0.00
95	T,M	Naphthalene	1.309	1.092	16.6	87	0.00
96	T,M	1,2,3-Trichlorobenzene	0.799	0.692	13.4	89	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKC366
Instrument ID: 67
GC Column:RTX502.2ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K221
BFB Injection Date : 11/30/11
BFB Injection Time : 09:50
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.88
75	30.0 - 60.0% of mass 95	46.91
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.81
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	82.50
175	5.0 - 9.0% of mass 174	5.80(7.0)1
176	95.0 - 101.0% of mass 174	78.52(95.2)1
177	5.0 - 9.0% of mass 176	5.21(6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV067K2303	RKC367	11/30/11	10:25
2	MBLK2W	V067K17B	RKC371	11/30/11	12:29
3	LCS2W	V067K17L	RKC368	11/30/11	10:56
4	LCD2W	V067K17C	RKC369	11/30/11	11:27
5	MW-70-RDO-4-174DL	K221-01T	RKC372	11/30/11	13:00
6	IR-70-FSB229-175	K221-02	RKC373	11/30/11	13:31
7	MW-70-49-176	K221-03	RKC374	11/30/11	14:02

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RKC306
Instrument ID: 67
GC Column: RTX502.2 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K221
Date Analyzed: 11/23/11
Time Analyzed: 20:51
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2156765	8.09	1637638	13.20	477066	18.42
	UPPER LIMIT	4313530	8.59	3275276	13.70	954132	18.92
	LOWER LIMIT	1078383	7.59	818819	12.70	238533	17.92
	SAMPLE ID						
1	VSTD010	2255506	8.10	1672539	13.21	483326	18.43
2	MBLK2W	2474453	8.10	1824349	13.21	500430	18.44
3	LCS2W	2323207	8.10	1742957	13.21	487373	18.43
4	LCD2W	2432560	8.11	1830893	13.22	506230	18.43
5	MW-70-RDO-4-174DL	2466514	8.11	1794599	13.21	479266	18.43
6	IR-70-FSB229-175	2163724	8.11	1582750	13.22	437900	18.44
7	MW-70-49-176	2505474	8.11	1869813	13.22	528054	18.43

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K30\RKC367.D Vial: 2
Acq On : 30 Nov 2011 10:25 am Operator: AS
Sample : CVO67K2303 10ppb Inst : TO67
Misc : 10ppb 8260/50ppb KET-ACR-ACN-TBA Multiplr: 1.00
MS Integration Params: LSCINT1.P

Method : D:\HPCHEM\1\METHODS\VO67K23.M (RTE Integrator)
Title : METHOD 8260B 4.0
Last Update : Mon Nov 28 09:48:33 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	105	0.00
2	T,M	Dichlorodifluoromethane	10.000	9.621	3.8	95	0.00
3	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	0	0.00
4	P,T,M	Chloromethane	10.000	9.614	3.9	94	-0.01
5	C,T,M	Vinyl chloride	10.000	9.585	4.1	95	0.00
6	T,M	Bromomethane	10.000	9.340	6.6	94	0.00
7	T,M	Chloroethane	10.000	9.271	7.3	95	0.00
8	T,M	Dichlorofluoromethane	10.000	9.408	5.9	93	0.00
9	T,M	Trichlorofluoromethane	10.000	9.976	0.2	98	-0.01
10	T,M	sec-Propyl alcohol	-1.000	0.000	0.0	0	0.00
11	T,M	Acrolein	50.000	46.081	7.8	94	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.337	6.6	92	0.00
13	T,M	Acetone	50.000	49.751	0.5	94	0.00
14	C,T,M	1,1-Dichloroethene	10.000	9.324	6.8	91	0.00
15	T,M	tert-Butyl alcohol	50.000	39.760	20.5#	82	0.00 NT
16	T,M	Methyl acetate	-1.000	0.000	0.0	0	-4.30#
17	T,M	Iodomethane	10.000	9.202	8.0	91	0.00
18	T,M	Acetonitrile	100.000	95.799	4.2	91	0.00
19	T,M	Methylene chloride	10.000	9.240	7.6	95	0.00
20	T,M	Carbon disulfide	10.000	10.112	-1.1	105	0.00
21	T,M	Acrylonitrile	50.000	44.641	10.7	90	0.00
22	T,M	tert-Butyl methyl ether (MT	10.000	8.723	12.8	86	0.00
23	T,M	trans-1,2-Dichloroethene	10.000	9.162	8.4	91	0.00
24	T,M	Isopropyl ether (DIPE)	10.000	8.987	10.1	89	-0.01
25	P,T,M	1,1-Dichloroethane	10.000	9.120	8.8	90	0.00
26	T,M	Vinyl acetate	10.000	8.808	11.9	91	0.00
27	T,M	2-Butanol	-1.000	0.000	0.0	0	-5.75# NT
28	T,M	tert-Butyl ethyl ether (ETB	10.000	9.020	9.8	88	0.00
29	T,M	2-Butanone	50.000	44.827	10.3	92	0.00
30	T,M	2,2-Dichloropropane	10.000	10.355	-3.6	102	0.00
31	T,M	cis-1,2-Dichloroethene	10.000	9.105	8.9	93	0.00
32	C,T,M	Chloroform	10.000	9.172	8.3	90	0.00
33	T,M	Bromochloromethane	10.000	9.143	8.6	89	0.00
34	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	0	-6.73# NT
35	S	Dibromofluoromethane	10.000	9.808	1.9	106	0.00
36	T,M	Tetrahydrofuran	10.000	8.609	13.9	89	0.00
37	T,M	1,1,1-Trichloroethane	10.000	9.377	6.2	92	0.00
38	T,M	Cyclohexane	-1.000	0.000	0.0	0	-7.09# NT
39	T,M	tert-Amyl methyl ether (TAM	10.000	8.732	12.7	87	0.00
40	S	1,2-Dichloroethane-d4	10.000	9.710	2.9	106	0.00
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	102	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K30\RKC367.D Vial: 2
Acq On : 30 Nov 2011 10:25 am Operator: AS
Sample : CV067K2303 10ppb Inst : TO67
Misc : 10ppb 8260/50ppb KET-ACR-ACN-TBA Multiplr: 1.00
MS Integration Params: LSCINT1.P

Method : D:\HPCHEM\1\METHODS\VO67K23.M (RTE Integrator)
Title : METHOD 8260B 4.0
Last Update : Mon Nov 28 09:48:33 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	9.369	6.3	90	0.00
43	T,M	Carbon tetrachloride	10.000	9.525	4.7	91	0.00
44	T,M	1,2-Dichloroethane	10.000	9.385	6.2	90	0.00
45	T,M	Benzene	10.000	9.320	6.8	90	0.00
46	T,M	Trichloroethene	10.000	9.173	8.3	90	0.00
47	T,M	Methylcyclohexane	-1.000	0.000	0.0	0	-8.71#
48	C,T,M	1,2-Dichloropropane	10.000	9.051	9.5	89	0.00
49	T,M	Bromodichloromethane	10.000	9.309	6.9	90	0.00
50	T,M	1,4-Dioxane	200.000	171.651	14.2	86	0.00
51	T,M	Dibromomethane	10.000	9.190	8.1	88	0.00
52	T,M	2-Chloroethyl vinyl ether	10.000	8.361	16.4	81	0.00
53	T,M	4-Methyl-2-pentanone	50.000	45.670	8.7	88	0.00
54	T,M	cis-1,3-Dichloropropene	10.000	9.312	6.9	91	0.00
55	S	Toluene-d8	10.000	10.035	-0.4	106	0.02
56	C,T,M	Toluene	10.000	9.350	6.5	89	0.02
57	T,M	Ethyl methacrylate	10.000	8.795	12.1	85	0.00
58	T,M	trans-1,3-Dichloropropene	10.000	9.323	6.8	90	0.00
59	T,M	1,1,2-Trichloroethane	10.000	8.999	10.0	88	0.00
60	T,M	2-Hexanone	50.000	44.701	10.6	88	0.00
61	T,M	1,3-Dichloropropane	10.000	8.971	10.3	88	0.02
62	T,M	Tetrachloroethene	10.000	9.429	5.7	91	0.00
63	T,M	Dibromochloromethane	10.000	9.195	8.0	89	0.00
64	T,M	1,2-Dibromoethane	10.000	9.124	8.8	88	0.00
65	T,M	1-Chlorohexane	10.000	9.457	5.4	91	0.00
66	P,M	Chlorobenzene	10.000	9.102	9.0	88	0.02
67	T,M	1,1,1,2-Tetrachloroethane	10.000	9.093	9.1	88	0.00
68	C,T,M	Ethylbenzene	10.000	9.251	7.5	89	0.00
69	T,M	m-Xylene & p-Xylene	20.000	18.789	6.1	89	0.00
70	T,M	o-Xylene	10.000	9.296	7.0	89	0.00
71	T,M	Styrene	10.000	9.273	7.3	88	0.00
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	101	0.02
73	T,M	Isopropylbenzene	10.000	9.418	5.8	89	0.00
74	P,T,M	Bromoform	10.000	9.209	7.9	89	0.00
75	T,M	trans-1,4-Dichloro-2-butene	10.000	8.704	13.0	91	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	9.045	9.6	88	0.00
77	S	4-Bromofluorobenzene	10.000	9.864	1.4	106	0.02
78	T,M	1,2,3-Trichloropropane	10.000	9.039	9.6	87	0.00
79	T,M	n-Propylbenzene	10.000	9.395	6.1	90	0.02
80	T,M	Bromobenzene	10.000	8.926	10.7	87	0.00
81	T,M	1,3,5-Trimethylbenzene	10.000	9.222	7.8	88	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K30\RKC367.D Vial: 2
Acq On : 30 Nov 2011 10:25 am Operator: AS
Sample : CVO67K2303 10ppb Inst : TO67
Misc : 10ppb 8260/50ppb KET-ACR-ACN-TBA Multiplr: 1.00
MS Integration Params: LSCINT1.P

Method : D:\HPCHEM\1\METHODS\VO67K23.M (RTE Integrator)
Title : METHOD 8260B 4.0
Last Update : Mon Nov 28 09:48:33 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	9.243	7.6	88	0.02
83	T,M	4-Chlorotoluene	10.000	9.172	8.3	92	0.00
84	T,M	tert-Butylbenzene	10.000	9.271	7.3	89	0.00
85	T,M	1,2,4-Trimethylbenzene	10.000	9.223	7.8	89	0.00
86	T,M	sec-Butylbenzene	10.000	9.431	5.7	88	0.02
87	T,M	p-Isopropyltoluene	10.000	9.486	5.1	89	0.00
88	T,M	1,3-Dichlorobenzene	10.000	9.221	7.8	89	0.00
89	T,M	1,4-Dichlorobenzene	10.000	9.012	9.9	88	0.00
90	T,M	n-Butylbenzene	10.000	9.580	4.2	89	0.00
91	T,M	1,2-Dichlorobenzene	10.000	9.059	9.4	88	0.02
92	T,M	1,2-Dibromo-3-chloropropane	10.000	9.050	9.5	88	0.00
93	T,M	1,2,4-Trichlorobenzene	10.000	8.889	11.1	86	0.00
94	T,M	Hexachlorobutadiene	10.000	9.246	7.5	87	0.00
95	T,M	Naphthalene	10.000	8.260	17.4	81	0.00
96	T,M	1,2,3-Trichlorobenzene	10.000	8.510	14.9	82	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K30\RKC367.D Vial: 2
Acq On : 30 Nov 2011 10:25 am Operator: AS
Sample : CV067K2303 10ppb Inst : TO67
Misc : 10ppb 8260/50ppb KET-ACR-ACN-TBA Multiplr: 1.00
MS Integration Params: LSCINT1.P

Method : D:\HPCHEM\1\METHODS\VO67K23.M (RTE Integrator)
Title : METHOD 8260B 4.0
Last Update : Mon Nov 28 09:48:33 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	105	0.00
2	T,M	Dichlorodifluoromethane	0.288	0.277	3.8	95	0.00
3	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	0#	0.00
4	P,T,M	Chloromethane	0.444	0.427	3.8	94	-0.01
5	C,T,M	Vinyl chloride	0.445	0.426	4.3	95	0.00
6	T,M	Bromomethane	0.260	0.243	6.5	94	0.00
7	T,M	Chloroethane	0.267	0.248	7.1	95	0.00
8	T,M	Dichlorofluoromethane	0.617	0.580	6.0	93	0.00
9	T,M	Trichlorofluoromethane	0.363	0.362	0.3	98	-0.01
10	T,M	sec-Propyl alcohol	0.000	0.000	0.0	0#	0.00
11	T,M	Acrolein	0.013	0.012	7.7	94	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.224	0.210	6.3	92	0.00
13	T,M	Acetone	0.025	0.022	12.0	94	0.00
14	C,T,M	1,1-Dichloroethene	0.573	0.534	6.8	91	0.00
15	T,M	tert-Butyl alcohol	0.007	0.006	14.3	82	0.00
16	T,M	Methyl acetate	0.000	0.000	0.0	0#	-4.30#
17	T,M	Iodomethane	0.542	0.499	7.9	91	0.00
18	T,M	Acetonitrile	0.068	0.065	4.4	91	0.00
19	T,M	Methylene chloride	0.406	0.375	7.6	95	0.00
20	T,M	Carbon disulfide	1.315	1.330	-1.1	105	0.00
21	T,M	Acrylonitrile	0.038	0.034	10.5	90	0.00
22	T,M	tert-Butyl methyl ether (MT	0.342	0.298	12.9	86	0.00
23	T,M	trans-1,2-Dichloroethene	0.582	0.533	8.4	91	0.00
24	T,M	Isopropyl ether (DIPE)	1.053	0.946	10.2	89	-0.01
25	P,T,M	1,1-Dichloroethane	0.656	0.599	8.7	90	0.00
26	T,M	Vinyl acetate	0.277	0.244	11.9	91	0.00
27	T,M	2-Butanol	0.000	0.000	0.0	0#	-5.75#
28	T,M	tert-Butyl ethyl ether (ETB	0.626	0.565	9.7	88	0.00
29	T,M	2-Butanone	0.045	0.040	11.1	92	0.00
30	T,M	2,2-Dichloropropane	0.384	0.397	-3.4	102	0.00
31	T,M	cis-1,2-Dichloroethene	0.372	0.339	8.9	93	0.00
32	C,T,M	Chloroform	0.512	0.470	8.2	90	0.00
33	T,M	Bromochloromethane	0.226	0.207	8.4	89	0.00
34	T,M	tert-Amyl alcohol	0.000	0.000	0.0	0#	-6.73#
35	S	Dibromofluoromethane	0.277	0.271	2.2	106	0.00
36	T,M	Tetrahydrofuran	0.031	0.024	22.6#	89	0.00
37	T,M	1,1,1-Trichloroethane	0.490	0.459	6.3	92	0.00
38	T,M	Cyclohexane	0.000	0.000	0.0	0#	-7.09#
39	T,M	tert-Amyl methyl ether (TAM	0.092	0.080	13.0	87	0.00
40	S	1,2-Dichloroethane-d4	0.175	0.170	2.9	106	0.00
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	102	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K30\RKC367.D Vial: 2
Acq On : 30 Nov 2011 10:25 am Operator: AS
Sample : CVO67K2303 10ppb Inst : TO67
Misc : 10ppb 8260/50ppb KET-ACR-ACN-TBA Multiplr: 1.00
MS Integration Params: LSCINT1.P

Method : D:\HPCHEM\1\METHODS\VO67K23.M (RTE Integrator)
Title : METHOD 8260B 4.0
Last Update : Mon Nov 28 09:48:33 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.252	0.236	6.3	90	0.00
43	T,M	Carbon tetrachloride	0.553	0.527	4.7	91	0.00
44	T,M	1,2-Dichloroethane	0.279	0.262	6.1	90	0.00
45	T,M	Benzene	1.770	1.649	6.8	90	0.00
46	T,M	Trichloroethene	0.490	0.450	8.2	90	0.00
47	T,M	Methylcyclohexane	0.000	0.000	0.0	0#	-8.71#
48	C,T,M	1,2-Dichloropropane	0.415	0.376	9.4	89	0.00
49	T,M	Bromodichloromethane	0.415	0.386	7.0	90	0.00
50	T,M	1,4-Dioxane	0.001	0.001	0.0	86	0.00
51	T,M	Dibromomethane	0.142	0.130	8.5	88	0.00
52	T,M	2-Chloroethyl vinyl ether	0.097	0.081	16.5	81	0.00
53	T,M	4-Methyl-2-pentanone	0.150	0.137	8.7	88	0.00
54	T,M	cis-1,3-Dichloropropene	0.505	0.471	6.7	91	0.00
55	S	Toluene-d8	1.526	1.531	-0.3	106	0.02
56	C,T,M	Toluene	1.813	1.695	6.5	89	0.02
57	T,M	Ethyl methacrylate	0.217	0.191	12.0	85	0.00
58	T,M	trans-1,3-Dichloropropene	0.326	0.304	6.7	90	0.00
59	T,M	1,1,2-Trichloroethane	0.169	0.152	10.1	88	0.00
60	T,M	2-Hexanone	0.090	0.080	11.1	88	0.00
61	T,M	1,3-Dichloropropane	0.322	0.289	10.2	88	0.02
62	T,M	Tetrachloroethene	0.377	0.355	5.8	91	0.00
63	T,M	Dibromochloromethane	0.220	0.202	8.2	89	0.00
64	T,M	1,2-Dibromoethane	0.176	0.160	9.1	88	0.00
65	T,M	1-Chlorohexane	0.815	0.770	5.5	91	0.00
66	P,M	Chlorobenzene	1.030	0.938	8.9	88	0.02
67	T,M	1,1,1,2-Tetrachloroethane	0.297	0.270	9.1	88	0.00
68	C,T,M	Ethylbenzene	2.067	1.912	7.5	89	0.00
69	T,M	m-Xylene & p-Xylene	1.497	1.406	6.1	89	0.00
70	T,M	o-Xylene	1.420	1.320	7.0	89	0.00
71	T,M	Styrene	1.128	1.046	7.3	88	0.00
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	101	0.02
73	T,M	Isopropylbenzene	6.809	6.413	5.8	89	0.00
74	P,T,M	Bromoform	0.339	0.313	7.7	89	0.00
75	T,M	trans-1,4-Dichloro-2-butene	0.189	0.164	13.2	91	0.00
76	P,T,M	1,1,2,2-Tetrachloroethane	0.558	0.505	9.5	88	0.00
77	S	4-Bromofluorobenzene	1.367	1.348	1.4	106	0.02
78	T,M	1,2,3-Trichloropropane	0.146	0.132	9.6	87	0.00
79	T,M	n-Propylbenzene	8.617	8.096	6.0	90	0.02
80	T,M	Bromobenzene	1.111	0.992	10.7	87	0.00
81	T,M	1,3,5-Trimethylbenzene	5.468	5.043	7.8	88	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11K30\RKC367.D Vial: 2
Acq On : 30 Nov 2011 10:25 am Operator: AS
Sample : CVO67K2303 10ppb Inst : TO67
Misc : 10ppb 8260/50ppb KET-ACR-ACN-TBA Multiplr: 1.00
MS Integration Params: LSCINT1.P

Method : D:\HPCHEM\1\METHODS\VO67K23.M (RTE Integrator)
Title : METHOD 8260B 4.0
Last Update : Mon Nov 28 09:48:33 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	4.903	4.532	7.6	88	0.02
83	T,M	4-Chlorotoluene	3.965	3.636	8.3	92	0.00
84	T,M	tert-Butylbenzene	1.251	1.160	7.3	89	0.00
85	T,M	1,2,4-Trimethylbenzene	5.081	4.686	7.8	89	0.00
86	T,M	sec-Butylbenzene	7.613	7.181	5.7	88	0.02
87	T,M	p-Isopropyltoluene	6.028	5.718	5.1	89	0.00
88	T,M	1,3-Dichlorobenzene	2.197	2.026	7.8	89	0.00
89	T,M	1,4-Dichlorobenzene	2.049	1.846	9.9	88	0.00
90	T,M	n-Butylbenzene	5.817	5.573	4.2	89	0.00
91	T,M	1,2-Dichlorobenzene	1.617	1.465	9.4	88	0.02
92	T,M	1,2-Dibromo-3-chloropropane	0.074	0.067	9.5	88	0.00
93	T,M	1,2,4-Trichlorobenzene	1.086	0.966	11.0	86	0.00
94	T,M	Hexachlorobutadiene	1.049	0.970	7.5	87	0.00
95	T,M	Naphthalene	1.309	1.081	17.4	81	0.00
96	T,M	1,2,3-Trichlorobenzene	0.799	0.680	14.9	82	0.00

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☒ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No.0 ☐ EMAX-TCPSIM Rev.No.1 ☐ EMAX-M8260SIM Rev.No.0 ☐

Start Date: 11-23-11 ☐ 5-mL Purge ☐ 10-mL Purge ☒ 25-mL Purge

Book # A67 -047

BATCH V067K23.06

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RKC300	BFB67K14	1µL					T/CHECK 17545
02	301		V067K2301	.15/.15/.2/.3µL					.3ppb 8260/1.5ppb Ket-Alk-TBA
03	302		02	.25/.25/.5/.5µL					.5 /2.5
04	303		03	.5/.5/.1/.1µL					1 /5
05	304		04	1/1/.2/.2µL					2 /10
06	305		05	2.5/2.5/.5/.5µL					5 /25
07	306		06	5/5/1/1µL					10 /50
08	307		07	10/10/2/2µL					20 /100
09	308		08	15/15/3/3µL					30 /150
10	309		09	25/25/5/5µL					50 /250
11	310		10	50/50/10/10µL					100 /500
12	311		25mls	25mls	1.0				
13	312		IS/SS						
14	313		V067K14B						MB
15	314		IV067K2301	5/5/1/1µL					10 /50
16	315		25mls	25mls	1.0				
17	316								
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									AS 11/28/11

Instrument No.	67
INITIAL CALIBRATION REFERENCE	
DATE	11-23-11
ICAL ID	V067K23

STANDARDS

NAME	ID	Amount (µl)	Conc. (mg/L)
DCC 8260	SV1-19-08-1	VARIES	50/250
DCC Ket-Alk	-07-2		250
DCC gases	-06-2		250
DCC CS_2	-09-1		250
BFB	-03-2	1	50
IS/SURR. IS SS	SV1-17 -01-1 -02-2	VARIES	250
ICV/LCS 8260	-100-2	5	50/250
ICV/LCS Ket-Alk	SV1-19 -9-2	5	250
ICV/LCS gases	-10-3	1	250
ICV/LCS CS_2	SV1-17-97-3	1	250

DATA FILE FOLDER 11K23

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO67	

Comments: IS/SS SV1-19-10-1

Analyzed By: AS

Date Disposed: 11-28-11

Disposed By: AS

2010

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☒ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No.0 ☐ EMAX-TCPSIM Rev.No.1 ☐ EMAX-M8260SIM Rev.No.0 ☐

Start Date: 11-29-11 ☐ 5-mL Purge ☐ 10-mL Purge ☒ 25-mL Purge

Book # A67 -047

BATCH CV067K2302

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RFC341	BFB67K16-	1µL					T/CHECK 14:12
02		342	CV067K2302-	5/5/1/1µL					
03		343	V067K16L-						
04		344	C-						
05		345	Rinse	25mls	1.0				
06		346	V067K16B						MB
07		347	Q-						MB
08		348	11K218-01-			7	4.5		VIAL LOT# 25022211323
09		349	11K220-09-			<2	-		TB
10		350	11K221-05-			-	-		TB
11		351	-04-			-	-		EB
12		352	11K220-05-			-	-		
13		353	-05MS-			-	-		MS
14		354	-05SD-			-	-		MSD
15		355	Rinse						
16		356	11K221-01-			<2	4.5		NRX25
17		357	-03			-	-		XI C/O?
18		358	-02			7	-		XI
19		359	11K220-01-			<2	-		
20		360	-02-			AS 11/30 7	-		pH<2
21		361	-03-			<2	-		
22		362	-04-			-	-		
23		363	-06-			-	-		01:45
24		364	Rinse						
25		365							
26									
27									
28									
29									
30									AS 11-30-11

Instrument No.	67
INITIAL CALIBRATION REFERENCE	
DATE	11-23-11
ICAL ID	V067K23

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC 8260	SVI-19-08-1	5	
DCC Ket-GA	-07-2	5	
DCC gases	-06-2	1	
DCC CS2	-07-1	1	50/250
BFB	-03-2	1	
IS/SURR.	-10-1	1	
ICV/LCS 8260	SVI-17-100-2	5	
ICV/LCS Ket-GA	SVI-19-9-2	5	
ICV/LCS gases	-10-3	1	
ICV/LCS CS1	SVI-17-97-3	1	
DATA FILE FOLDER	11K29		

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO67 ~~P. 7K TO P74~~	~~11-28-11 AS~~ 11/29

Comments:

Analyzed By: AS

Date Disposed: 11-30-11

Disposed By: AS

2041

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☒ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No.0 ☐ EMAX-TCPSIM Rev.No.1 ☐ EMAX-M8260SIM Rev.No.0 ☐

Start Date: 11-30-11 ☐ 5-mL Purge ☐ 10-mL Purge ☒ 25-mL Purge Book # A67 -047

BATCH V067K2303

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RKC366	BFB67K17	1ml					TUNECK 09:50
02		367	CV067K2303	5/5/1/1µl					
03		368	V067K17L						
04		369	C						
05		370	rinse	25mls	1.0				
06		371	V067K17B						MB
07		372	11K221-01T	1ml	25	<2	<5		
08		373	-02	25mls	40	7			
09		374	-03			<2			
10		375	rinse						
11		376	11K220-07			<2	<5		
12		377	-08						15:34
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									AS 12-1-11

Instrument No.	67
INITIAL CALIBRATION REFERENCE	
DATE	11-23-11
ICAL ID	V067K23

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC 8260	SVL-19-08-1	5	
DCC Ketone	-07-2	5	
DCC gases	-06-2	1	
DCC CS2	-04-1	1	50/250
BFB	-03-2	1	
IS/SURR.	-10-1	1	
ICV/LCS 8260	SVL-17-100-2	5	
ICV/LCS Ketone	-89-2	5	
ICV/LCS gases	SVL-19-10-3	1	
ICV/LCS CS2	SVL-17-97-3	1	

DATA FILE FOLDER	11K30
Electronic Data Archival	
Location	Date
HPCHEM_VOA/TO67	

Comments:

Analyzed By: AS

Date Disposed: 12-1-11

Disposed By: AS

2012

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD RSK-175
DISSOLVED GASES

SDG#: 11K221

CASE NARRATIVE

Client : [illegible]

Project : NWF [illegible] MONTH, [illegible]

SDG : [illegible]

MATRIX SOX-17
LIQUID/SOLID

A total of three (3) water samples were [illegible]
Upon completion of the analysis, Matrix SOX-17 [illegible]
West Environmental Research Laboratory, Inc, [illegible]

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method [illegible]
using a secondary source (ICV). All calibration requirements were
within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. [illegible]
Lab ID, one method blank was analyzed with the sample [illegible]
compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this [illegible]
Internal recoveries for LCS/LCSD were all within QC [illegible]

Matrix QC Sample
No matrix QC sample was designated in this [illegible]

Sample Analysis
Samples were analyzed according to prescribed analytical procedures [illegible]
all project requirements were met otherwise anomalies are discussed
within the associated QC parameter.

LAB CHRONICLE
DISSOLVED GASES

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K221
Instrument ID : GCT010

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DGL001WB	1	NA	12/01/1113:08	12/01/1111:30	FL01004A	FL01003A	DGL001W	Method Blank
LCS1W	DGL001WL	1	NA	12/01/1113:22	12/01/1111:30	FL01005A	FL01003A	DGL001W	Lab Control Sample (LCS)
LCD1W	DGL001WC	1	NA	12/01/1113:35	12/01/1111:30	FL01006A	FL01003A	DGL001W	LCS Duplicate
MW-70-RDO-4-174	K221-01	1	NA	12/01/1113:48	12/01/1111:30	FL01007A	FL01003A	DGL001W	Field Sample
MW-70-RDO-4-174DL	K221-01T	2	NA	12/01/1114:06	12/01/1111:30	FL01008A	FL01003A	DGL001W	Diluted Sample
MW-70-RDO-4-174DL	K221-01I	1000	NA	12/01/1114:27	12/01/1111:30	FL01009A	FL01003A	DGL001W	Diluted Sample
IR-70-FSB229-175	K221-02	1	NA	12/01/1114:39	12/01/1111:30	FL01010A	FL01003A	DGL001W	Field Sample
IR-70-FSB229-175DL	K221-02T	1000	NA	12/01/1114:53	12/01/1111:30	FL01011A	FL01003A	DGL001W	Diluted Sample
MW-70-49-176	K221-03	1	NA	12/01/1115:05	12/01/1111:30	FL01012A	FL01003A	DGL001W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/28/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/28/11
Batch No. : 11K221	Date Extracted: 12/01/11 11:30
Sample ID: MW-70-RDO-4-174	Date Analyzed: 12/01/11 13:48
Lab Samp ID: K221-01	Dilution Factor: 1
Lab File ID: FL01007A	Matrix : WATER
Ext Btch ID: DGL001W	% Moisture : NA
Calib. Ref.: FL01003A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	1.1J	2.0	0.64
ETHENE	66E	2.0	0.60
METHANE	160E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/28/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/28/11
Batch No.	: 11K221	Date Extracted:	12/01/11 11:30
Sample ID:	MW-70-RDO-4-174DL	Date Analyzed:	12/01/11 14:06
Lab Samp ID:	K221-01T	Dilution Factor:	2
Lab File ID:	FL01008A	Matrix :	WATER
Ext Btch ID:	DGL001W	% Moisture :	NA
Calib. Ref.:	FL01003A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	4.0	1.3
ETHENE	64	4.0	1.2
METHANE	230E	4.0	0.68

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/28/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/28/11
Batch No.	: 11K221	Date Extracted:	12/01/11 11:30
Sample ID:	MW-70-RDO-4-174DL	Date Analyzed:	12/01/11 14:27
Lab Samp ID:	K221-01I	Dilution Factor:	1000
Lab File ID:	FL01009A	Matrix :	WATER
Ext Btch ID:	DGL001W	% Moisture :	NA
Calib. Ref.:	FL01003A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	24000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client	: INSIGHT EEC, INC.	Date Collected:	11/28/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/28/11
Batch No.	: 11K221	Date Extracted:	12/01/11 11:30
Sample ID:	IR-70-FSB229-175	Date Analyzed:	12/01/11 14:39
Lab Samp ID:	K221-02	Dilution Factor:	1
Lab File ID:	FL01010A	Matrix :	WATER
Ext Btch ID:	DGL001W	% Moisture :	NA
Calib. Ref.:	FL01003A	Instrument ID :	GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	150E	2.0	0.34

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/28/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/28/11
Batch No. : 11K221	Date Extracted: 12/01/11 11:30
Sample ID: IR-70-FSB229-175DL	Date Analyzed: 12/01/11 14:53
Lab Samp ID: K221-02T	Dilution Factor: 1000
Lab File ID: FL01011A	Matrix : WATER
Ext Btch ID: DGL001W	% Moisture : NA
Calib. Ref.: FL01003A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2000	640
ETHENE	ND	2000	600
METHANE	27000	2000	340

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: 11/28/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/28/11
Batch No. : 11K221	Date Extracted: 12/01/11 11:30
Sample ID: MW-70-49-176	Date Analyzed: 12/01/11 15:05
Lab Samp ID: K221-03	Dilution Factor: 1
Lab File ID: FL01012A	Matrix : WATER
Ext Btch ID: DGL001W	% Moisture : NA
Calib. Ref.: FL01003A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	4.8	2.0	0.64
ETHENE	7.2	2.0	0.60
METHANE	33	2.0	0.34

QC SUMMARIES

METHOD RSK-175
DISSOLVED GASES

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 12/01/11
Batch No. : 11K221	Date Extracted: 12/01/11 11:30
Sample ID: MBLK1W	Date Analyzed: 12/01/11 13:08
Lab Samp ID: DGL001WB	Dilution Factor: 1
Lab File ID: FL01004A	Matrix : WATER
Ext Btch ID: DGL001W	% Moisture : NA
Calib. Ref.: FL01003A	Instrument ID : GCT010

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANE	ND	2.0	0.64
ETHENE	ND	2.0	0.60
METHANE	ND	2.0	0.34

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD RSK-175

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	DGL001WB	DGL001WL	DGL001WC		
LAB FILE ID:	FL01004A	FL01005A	FL01006A		
DATE EXTRACTED:	12/01/1111:30	12/01/1111:30	12/01/1111:30	DATE COLLECTED:	NA
DATE ANALYZED:	12/01/1113:08	12/01/1113:22	12/01/1113:35	DATE RECEIVED:	12/01/11
PREP. BATCH:	DGL001W	DGL001W	DGL001W		
CALIB. REF:	FL01003A	FL01003A	FL01003A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethane	ND	25.4	28.3	112	25.4	27.9	110	1	70-140	30
Ethene	ND	23.7	27.1	114	23.7	27.2	115	0	70-140	30
Methane	ND	13.6	13.7	101	13.6	13.6	100	0	70-130	30

INITIAL CALIBRATIONS

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	25.00X	40.00X	75.00X	100.00X	MEAN	%RSD
Methane	0.34	31626	33510	29954	29307	29338	29307	30507.1	5.6
Acetylene	0.55	2465	2595	2723	2744	2716	2643	2647.7	4.0
Ethylene	0.59	14655	16070	16617	16602	17123	16803	16311.8	5.4
Ethane	0.64	22748	24144	25289	25073	26185	26048	24914.4	5.2
Propane	0.93	29887	24871	26520	26214	27735	27800	27171.2	6.3

DG10K01.MET

FORM VI DGAS -2 1/96 Rev 2/2006

11/03/11

INITIAL CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
LFID & Datetime: FK01002A 11/01/11 11:28
LFID & Datetime: FK01003A 11/01/11 11:41
LFID & Datetime: FK01004A 11/01/11 11:55
LFID & Datetime: FK01005A 11/01/11 12:09
LFID & Datetime: FK01006A 11/01/11 12:38
LFID & Datetime: FK01007A 11/01/11 12:53

COMPOUND	RT OF STANDARDS (MIN)						MEAN	RT WINDOW		RTWINDOW
	2.0X	10.0X	25.0X	40.0X	75.0X	100.0X	RT	FROM	TO	WIDTH
Methane	1.083	1.075	1.083	1.083	1.083	1.083	1.082	1.056	1.108	0.026
Acetylene	2.208	2.192	2.208	2.217	2.217	2.217	2.210	2.184	2.236	0.026
Ethylene	2.642	2.633	2.650	2.658	2.658	2.658	2.650	2.599	2.701	0.051
Ethane	3.067	3.067	3.075	3.083	3.092	3.083	3.078	3.028	3.128	0.050
Propane	5.942	5.883	5.900	5.917	5.917	5.908	5.911	5.835	5.987	0.076

DG10K01.MET

AS 11/03/11

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FK01008A 11/01/2011 13:45
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	416247	13.64	1		15
Acetylene	2.175	2.149	2.201	22.0	2647.6	66913	25.27	15		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	437326	26.81	13		15
Ethane	3.075	3.025	3.125	25.4	24914.4	691218	27.74	9		15
Propane	5.900	5.824	5.976	37.3	27171.2	1111008	40.89	10		15

DG10K01.MET

AJ
11/3/11

DAILY CALIBRATIONS

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Columm : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FL01003A 12/01/2011 12:55
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.058	1.032	1.084	13.6	30507.1	417362	13.68	1		15
Acetylene	2.183	2.157	2.209	22.0	2647.6	62870	23.75	8		15
Ethylene	2.617	2.566	2.668	23.7	16311.8	416063	25.51	7		15
Ethane	3.050	3.000	3.100	25.4	24914.4	678117	27.22	7		15
Propane	5.850	5.774	5.926	37.3	27171.2	1051569	38.70	4		15

CONTINUE CALIBRATION
DISSOLVED GASES

Lab Name : EMAX Inc
Instrument ID : GCT010
GC Column : CARBOXEN 1006PLOT
Column size ID : 30MX0.53MM
Mid Conc Init LFID & Datetime: FK01005A 11/01/2011 12:09
Conc Cont LFID & Datetime: FL01013A 12/01/2011 15:20
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Methane	1.067	1.041	1.093	13.6	30507.1	418707	13.73	1		15
Acetylene	2.192	2.166	2.218	22.0	2647.6	64304	24.29	10		15
Ethylene	2.633	2.582	2.684	23.7	16311.8	410803	25.18	6		15
Ethane	3.058	3.008	3.108	25.4	24914.4	659562	26.47	4		15
Propane	5.867	5.791	5.943	37.3	27171.2	1005507	37.01	-1		15

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGAS ICAL

Book #:	A10-025
Instrument No.:	10
Analytical Sequence:	FK01
Method File:	DG10K01
Analytical Batch:	N/A

SOP #	Rev. #
☑ EMAX-RSK175	2
☐ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGAS ICAL SSSA-05-01-10	500 ppm
DGAS ICV SSSA-05-01-7	500 ppm
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: SC

Date: 11/01/11

Disposed By: SC

Date Disposed: 11/01/11

Method: Dg10k01.met Batch: Fk01.seq Data: Fk01.011 - [Batch: fk01.SEQ]

File Edit Method Batch Options Analysis Control Window Help

Run	Run Type	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
1	Unknown	IB10K407	dg10k01.met	FK01.001	100:1 1	1	
2	Unknown	DG10K01-01	dg10k01.met	FK01.002	1	1	
3	Unknown	DG10K01-02	dg10k01.met	FK01.003	1	1	
4	Unknown	DG10K01-03	dg10k01.met	FK01.004	1	1	DGAS 1CML
5	Unknown	DG10K01-04	dg10k01.met	FK01.005	1	1	
6	Unknown	DG10K01-05	dg10k01.met	FK01.006	1	1	
7	Unknown	DG10K01-06	dg10k01.met	FK01.007	1	1	
8	Unknown	IDG10K0101	dg10k01.met	FK01.008	1	1	DGAS 1CV
9	Unknown	IB	dg10k01.met	FK01.009	1	1	
10	Unknown	IB	dg10k01.met	FK01.010	1	1	
11	Unknown	IB	dg10k01.met	FK01.011	1	1	
12	Unknown	IB	dg10k01.met	FK01.012	1	1	
13	Unknown	IB	dg10k01.met	FK01.013	1	1	
14	Unknown	IB	dg10k01.met	FK01.014	1	1	
15	Unknown	IB	dg10k01.met	FK01.015	1	1	FINAL
16	Unknown	IB	dg10k01.met	FK01.016	1	1	
17	Unknown	IB	dg10k01.met	FK01.017	1	1	
18	Unknown	IB	dg10k01.met	FK01.018	1	1	
19	Unknown	IB	dg10k01.met	FK01.019	1	1	
20	Unknown	IB	dg10k01.met	FK01.020	1	1	
21	Unknown	IB	dg10k01.met	FK01.021	1	1	
22	Unknown	IB	dg10k01.met	FK01.022	1	1	
23	Unknown	IB	dg10k01.met	FK01.023	1	1	
24	Unknown	IB	dg10k01.met	FK01.024	1	1	
25	Unknown	IB	dg10k01.met	FK01.025	1	1	
26	Unknown	IB	dg10k01.met	FK01.026	1	1	
27	Unknown	IB	dg10k01.met	FK01.027	1	1	
28	Unknown	IB	dg10k01.met	FK01.028	1	1	
29	Unknown	IB	dg10k01.met	FK01.029	1	1	
30	Unknown	IB	dg10k01.met	FK01.030	1	1	
31	Unknown	IB	dg10k01.met	FK01.031	1	1	
32	Unknown	IB	dg10k01.met	FK01.032	1	1	
33	Unknown	IB	dg10k01.met	FK01.033	1	1	
34	Unknown	IB	dg10k01.met	FK01.034	1	1	

EC 11/01/11

Waiting For Trigger...

Start | EZChrom Chromatograp... | Method: Dg10k01.... | Calculator | Method: Dg10k01.met | untitled - Paint | Exploring | Tuesday, November 01, 2011

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
DISSOLVED GAS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DGL001W: K221

DGL002: K974

Book #:	A10-026
Instrument No.:	10
Analytical Sequence:	FL01f 12/01/11
Method File:	DG10K01/DG10C19M
Analytical Batch:	CDG10K01476

SOP #	Rev. #
☑ EMAX-RSK175	2
☑ EMAX-RSK175M	2
☐ EMAX-	

STANDARDS ID	Conc (µg/L)
DGas DCC SSSB-07-42-1	200
Air DCC SSSA-05-01-10	500 ppm
Air LCS SSSA-05-01-7	500 ppm
Temperature (°C) 22	
Data File	

ELECTRONIC DATA ARCHIVAL	
Location	Date
Labbkup/Ezchrom/EZC_9_DGAS	

Analyzed By: RW

Date: 12/01/11

Disposed By: RW

Date Disposed: 12/01/11

Method: Dg10c18m.met Batch: FI01.seq Data: FI01.025 - [Batch: fI01.seq]

File Edit Method Batch Options Analysis Control Window Help

Method | Data | Batch | Setup | Batch | Preview | Single | STOP | Recalib | Analyze | Reports

Run	Sample ID	Method	Filename	Sample Amt.	Mult.	Description
1	IB10L476	dg10k01.met	FL01.001	100ul He 1	1	
2	TEST	dg10k01.met	FL01.002	— 1	1	
3	CDG10K01476	dg10k01.met	FL01.003	100ul 1	1	
4	DGL001WB	dg10k01.met	FL01.004	1	1	
5	DGL001WL	dg10k01.met	FL01.005	1	1	
6	DGL001WC	dg10k01.met	FL01.006	1	1	
7	11K221-01	dg10k01.met	FL01.007	1	1	
8	11K221-01T DF=2	dg10k01.met	FL01.008	5ul 1	2	
9	11K221-01I DF=1000	dg10k01.met	FL01.009	2ul (2ex) 1	1000	
10	11K221-02	dg10k01.met	FL01.010	100ul 1	1	
11	11K221-02T DF=1000	dg10k01.met	FL01.011	2ul (2ex) 1	1000	
12	11K221-03	dg10k01.met	FL01.012	100ul 1	1	
13	CDG10K01477	dg10k01.met	FL01.013	1	1	
14	IB10L478	ods\dg10c18m.met	FL01.014	100ul He 1	1	
15	CDG10C18M478	ods\dg10c18m.met	FL01.015	5ul ICAL STD 1	1	
16	DGL002B	ods\dg10c18m.met	FL01.016	100ul 1	1	
17	DGL002L	ods\dg10c18m.met	FL01.017	5ul ICV STD 1	1	
18	DGL002C	ods\dg10c18m.met	FL01.018	1	1	
19	VA83J02B	ods\dg10c18m.met	FL01.019	100ul 1	1	
20	11K974-01	ods\dg10c18m.met	FL01.020	1	1	
21	11K974-02	ods\dg10c18m.met	FL01.021	1	1	
22	11K974-02D	ods\dg10c18m.met	FL01.022	1	1	
23	11K974-03	ods\dg10c18m.met	FL01.023	1	1	
24	11K974-04	ods\dg10c18m.met	FL01.024	1	1	
25	11K974-05	ods\dg10c18m.met	FL01.025	1	1	
26	CDG10C18M479	ods\dg10c18m.met	FL01.026	5ul ICAL STD 1	1	
27	IB	ods\dg10c18m.met	FL01.027	1	1	
28	IB	ods\dg10c18m.met	FL01.028	1	1	
29	IB	ods\dg10c18m.met	FL01.029	1	1	
30	IB	ods\dg10c18m.met	FL01.030	1	1	
31	IB	ods\dg10c18m.met	FL01.031	1	1	
32	IB	ods\dg10c18m.met	FL01.032	1	1	
33	IB	ods\dg10c18m.met	FL01.033	1	1	
34	IB	ods\dg10c18m.met	FL01.034	1	1	

12/01/11

Waiting For Trigger...

Start | EZChrom Chromatogra... | Method: Dg10c18... | Method: Dg10k01.met... | Calculator | Exploring - FI01 | untitled - Pai... | Thursday, December 01, 2011

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 11/01/11 Time: 10:00 End Date: 11/01/11 Time: 10:40

PREPARATION BATCH # N/A

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DG10K01-01	39	4	N/A	
02	-02			N/A	
03	-03			N/A	DGAS ICAL
04	-04			N/A	
05	-05			N/A	
06	-06			N/A	
07	IDG10K01 01			N/A	DGAS ICV
08					
09					
10					
11					
12					
13					SC 11/01/11
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Standards	ID	Amount Added (µl)
LCS/MS / ICV	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic free
He	Air Gas
ICAL STD (500 ppm)	SSSA-05-01-10 (SPECIALTY AIR)
ICV STD 500 ppm	SSSA-05-01-7 (MATHESON)

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #: (ESS)	28100705

Comments:

1) 0.08 ml ICAL STD + 3.92 ml He
2) 0.4 ml 3.6 ml
3) 1.0 ml 3.0 ml
4) 1.6 ml 2.4 ml
5) 3.0 ml 1.0 ml
6) 4.0 ml 0 ml

Prepared By: SC

Standard Added By: SC

4027

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR DISSOLVED GAS

SOP ☑ EMAX-RSK175 Revision No. 2 ☐ CO2 ☐ Room Temp. (°C): 22 Book # EDG-025

Start Date: 12/01/11 Time: 11:30 End Date: 12/01/11 Time: 12:05

PREPARATION BATCH # DGL001W

Sample Prep ID	Lab Sample ID	Sample Amount (g/ml)	Extract Volume (ml)	pH (<2)	Notes
01	DGL001WB	39	4	NA	
02	↓ L	↓	↓	NA	
03	C			NA	
04	11K221-01			✓	
05	02			✓	
06	03			✓	
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

PA 12/01/11

Standards	ID	Amount Added (µl)
LCS/MS	SSSA-05-01-7	1600

Reagent	Source
H_2O	Organic Free
He	AirGas

Thermometer ID #:	RSK175-01
Tedlar Bag Lot #:	25100705

Comments:

Prepared By: PA

Standard Added By: PA

4028

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

SDG#: 11K221

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K221

METHOD 3010A/6010B
DISSOLVED METALS BY TRACE ICP

A total of four (4) water samples were received on 11/28/11 for Dissolved Metals by ICP analysis, Method 3010A/6010B in accordance with Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source. Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for IPL003WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG. Analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

[illegible]

DISSOLVED METALS by SMART [illegible]

Client: [illegible] SITE [illegible]
Project: [illegible] STATE [illegible]

SDG No: [illegible]
Instrument ID: [illegible] ICP

AQUEOUS

Client Sample ID	Laboratory Sample ID	Dilution Factor	Matrix	Analysis Date/Time	Extraction Date/Time	Leachate Date/TN	Calibration Curve Date/TN	Calibration Curve Batch	Notes
MB-[illegible]	[illegible]	1	NA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Method Blank
LCS[illegible]	[illegible]	1	NA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Lab Control Sample (LCS)
LCD[illegible]	[illegible]	1	NA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	LCS Duplicate
[illegible]	[illegible]	1	NA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Analytical Spike Sample
[illegible]	[illegible]	1	NA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Field Sample
[illegible]	[illegible]	5	NA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Diluted Sample
[illegible]	[illegible]	1	NA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Field Sample
[illegible]	[illegible]	1	NA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Field Sample
[illegible]	[illegible]	1	NA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Field Sample
[illegible]	[illegible]	1	NA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Field Sample

[illegible]: [illegible]
Matrix: [illegible]

[illegible]

[illegible]

[illegible]	[illegible]	Date [illegible]	[illegible]
[illegible]	[illegible]	Date [illegible]	[illegible]
[illegible]	[illegible]	Date [illegible]	[illegible]
Sample ID	[illegible]	Date Analyzed	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	Matrix	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

PARAMETER	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
[illegible]	ND	[illegible]	[illegible]
[illegible]	ND	[illegible]	[illegible]
Mercury	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]

[illegible]	[illegible]	Date Collected	[illegible]
[illegible]	[illegible]	Date Received	[illegible]
[illegible]	[illegible]	Date Extracted	[illegible]
[illegible] ID	[illegible]	Date Analyzed	[illegible]
[illegible] ID	[illegible]	Dilution Factor	1
[illegible] ID	[illegible]	Matrix	WATER
[illegible] ID	[illegible]	[illegible]	NA
[illegible] Ref	[illegible]	[illegible] ID	[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

METHOD 8010/8011/8015
HALOGENATED VOLATILE ORGANICS

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	Dilution Factor	1
[illegible]	[illegible]	Matrix	WATER
[illegible]	[illegible]	Moisture	NA
[illegible]	[illegible]	Instrument ID	[illegible]

	RESULTS		
[illegible]	(ug/L)	[illegible]	(ug/L)
[illegible]	ND	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

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[illegible]	[illegible]	[illegible]	[illegible]
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	RESULTS	R.	MS.
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[illegible]	[illegible]	Date [illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

PARAMETER	Result mg/l	[illegible] mg/l	% [illegible]
[illegible]	ND	[illegible]	[illegible]
[illegible]	ND	[illegible]	[illegible]
Manganese	ND	[illegible]	[illegible]

[illegible]

[illegible]

[illegible]	[illegible]		
[illegible]	[illegible]		
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[illegible]

PAH QUALITY CONTROL DATA
SPIKE SOLUTION ANALYSIS

[illegible]

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
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[illegible]	[illegible]	
[illegible]	[illegible]	
[illegible]	[illegible]	
[illegible]	[illegible]	

[illegible]

PARAMETER	[illegible] (mg/L)	[illegible] (mg/L)	[illegible] (mg/L)	[illegible] (%)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

ICP QC CHECK TABLE

QC	ICV	CCV	ICSAB	ICSA	MLCV
Limit%	90-110	90-110	80-120	80-120	80-120
Comp	mg/L	mg/L	mg/L	mg/L	mg\L
Al	100	100	400	400	200
Sb	1.5	1.5	1	0	5
As	1	1	1	0	1
Ba	2	2	0.5	0	5
Be	1.5	1.5	0.5	0	5
B	2.5	2.5	0.5	0	5
Cd	2	2	1	0	5
Ca	75	75	500	500	250
Cr	2.5	2.5	0.5	0	5
Co	1	1	0.5	0	1
Cu	2.5	2.5	0.5	0	5
Fe	25	25	200	200	200
Pb	2.5	2.5	1	0	5
Li	0.5	0.5	1	0	0.5
Mg	60	60	200	200	100
Mn	2.5	2.5	0.5	0	5
Mo	2.5	2.5	1	0	5
Ni	2.5	2.5	1	0	5
K	60	60	75	0	250
Se	1	1	1	0	1
Ag	0.5	0.5	1	0	0.5
Na	60	60	75	0	150
Sr	0.5	0.5	0.5	0	0.5
Tl	2.5	2.5	1	0	5
Sn	0.5	0.5	1	0	0.5
Ti	0.5	0.5	1	0	0.5
V	1.5	1.5	0.5	0	5
Zn	2.5	2.5	1	0	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 12/7/11 15:42

End Date: 12/7/11 21:31

Book #: AD8-022

Instrument No.: D8

Analytical Batch: 1D8L006

Analytical Sequence: S-11L6010(V14)

Method File: 11L6010(V14)

Database: Emax14

SOP #	Rev. #
☑ EMAX-6010	7
☑ EMAX-6010C	1
☐ EMAX-200.7	2
☐ EMAX-	

Comments: TH 12/8/11

- CCB6 Na > ~~LOD~~. 3X1DL
- rerun K224-09 & K230-11 (Na J flag)
- ICSA As > LOD. Hunter associated SDG 11K221 detected ND.

	STANDARDS ID		STANDARDS ID
S0	SM11B14-88-02	S30	SM1B14-6802
S1	MA	S31	6803
S2		ICV	8201
S3		CCV	8301
S4		ICSA	8502
S5		ICSAB	6704
S6		CRI/MRL 1.3	8101
S7		MRL2.4	7401
S8			
S9			
S10			
S11			
S12			
S16			
S17			
S18			
S20	SM1B14-8401		
S21	6503		
S22	6504		
S23	8402		
S24	6702		
S25	6703		
S26	7801		
S27	7802		
S28	7803		
S29	7804		

Analyzed By: TH

Date: 12/7/11

[illegible]

[illegible]	K269 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	Blank	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	TPL003WB	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	TPL003WL	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	TPL003WC	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	K231 01A	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	K231 01	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	K231-01C	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	K231 01B	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	K231 01S	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	K231 02	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	Blank	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	K231 10	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	K231-11	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	K221 01	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	K221-02	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	K221-03	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	K221 04	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	K224-09	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	K230 01	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	Blank	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	K276-[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

SUMMARY OF [illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible] limit of each parameter are listed in a table attached next to all the HCP check forms.

[illegible] [illegible] [illegible] [illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible] of each parameter are listed in a table attached next to all the JCF check forms.

* [illegible]

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
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2	0	0	0	0	Unk	S20		ID8L006002			1	☒	unk	---
3	0	0	0	0	Unk	S21		ID8L006003			1	☒	unk	---
4	0	0	0	0	Unk	S22		ID8L006004			1	☒	unk	---
5	0	0	0	0	Unk	S23		ID8L006005			1	☒	unk	---
6	0	0	0	0	Unk	S24		ID8L006006			1	☒	unk	—
7	0	0	0	0	Unk	S25		ID8L006007			1	☒	unk	---
8	0	0	0	0	Unk	S26		ID8L006008			1	☒	unk	---
9	0	0	0	0	Unk	S27		ID8L006009			1	☒	unk	---
10	0	0	0	0	Unk	S28		ID8L006010			1	☒	unk	---
11	0	0	0	0	Unk	S29		ID8L006011			1	☒	unk	---
12	0	0	0	0	Unk	S30		ID8L006012			1	☒	unk	---
13	0	0	0	0	Unk	S31		ID8L006013			1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8L006014			1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8L006015			1	☒	3XIDL	None
16	3	2	3	1	QC	MRLL0701		ID8L006016			1	☒	MRL-EMAX	None
17	4	2	4	1	QC	MRLL0702		ID8L006017			1	☒	MRL-AFCEE	None
18	5	2	5	1	QC	ICSA1		ID8L006018			1	☒	ICSA	None
19	6	2	6	1	QC	ICSAB1		ID8L006019			1	☒	ICSAB	None
20	7	2	7	1	QC	CCV1		ID8L006020			1	☒	CCV	None
21	8	2	8	1	QC	CCB1		ID8L006021			1	☒	3XIDL	None
22	43	2	7	4	QC	IPL002SB		ID8L006022			1	☒	1/2LOQ	None
23	44	2	8	4	QC	IPL002SL		ID8L006023			1	☒	LCS	None
24	45	2	9	4	QC	IPL002SC		ID8L006024			1	☒	LCS	None
25	46	2	10	4	Unk	K224-07A		ID8L006025			1	☒	unk	---
26	47	2	11	4	Unk	K224-07		ID8L006026			1	☒	unk	---
27	48	2	12	4	Unk	K224-07J		ID8L006027			1	☒	unk	---
28	49	2	1	5	Unk	K224-02		ID8L006028			1	☒	unk	---
29	50	2	2	5	Unk	K224-03		ID8L006029			1	☒	unk	---
30	51	2	3	5	Unk	K224-04		ID8L006030			1	☒	unk	---
31	53	2	5	5	Blank	Blank		ID8L006031			1	☐		---
32	54	2	6	5	QC	CCV2		ID8L006032			1	☒	CCV	None
33	55	2	7	5	QC	CCB2		ID8L006033			1	☒	3XIDL	None
34	56	2	8	5	QC	IPL007SB		ID8L006034			1	☒	1/2LOQ	None
35	57	2	9	5	QC	IPL007SL		ID8L006035			1	☒	LCS	None
36	58	2	10	5	QC	IPL007SC		ID8L006036			1	☒	LCS	None
37	59	2	11	5	Unk	K230-01A		ID8L006037			1	☒	unk	---
38	60	2	12	5	Unk	K230-01		ID8L006038			1	☒	unk	---
39	61	3	1	1	Unk	K230-01J		ID8L006039			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
40	62	3	2	1	Unk	K230-01M		ID8L006040			1	☒	unk	---
41	63	3	3	1	Unk	K230-01S		ID8L006041			1	☒	unk	---
42	52	2	4	5	Unk	K224-06		ID8L006042			1	☒	unk	---
43	64	3	4	1	Blank	Blank		ID8L006043			1	☐		---
44	65	3	5	1	QC	CCV3		ID8L006044			1	☒	CCV	None
45	66	3	6	1	QC	CCB3		ID8L006045			1	☒	3XIDL	None
46	67	3	7	1	Unk	K230-02		ID8L006046			1	☒	unk	---
47	68	3	8	1	Unk	K230-03		ID8L006047			1	☒	unk	---
48	69	3	9	1	Unk	K230-04		ID8L006048			1	☒	unk	---
49	70	3	10	1	Unk	K230-05		ID8L006049			1	☒	unk	---
50	71	3	11	1	Unk	K230-06		ID8L006050			1	☒	unk	---
51	72	3	12	1	Unk	K230-07		ID8L006051			1	☒	unk	---
52	73	3	1	2	Unk	K230-08		ID8L006052			1	☒	unk	---
53	74	3	2	2	Unk	K230-09		ID8L006053			1	☒	unk	---
54	75	3	3	2	Blank	Blank		ID8L006054			1	☐		---
55	76	3	4	2	QC	CCV4		ID8L006055			1	☒	CCV	None
56	77	3	5	2	QC	CCB4		ID8L006056			1	☒	3XIDL	None
57	9	2	9	1	QC	IPL003WB		ID8L006057			1	☒	1/2LOQ	None
58	10	2	10	1	QC	IPL003WL		ID8L006058			1	☒	LCS	None
59	11	2	11	1	QC	IPL003WC		ID8L006059			1	☒	LCS	None
60	12	2	12	1	Unk	K231-01A		ID8L006060			1	☒	unk	---
61	13	2	1	2	Unk	K231-01		ID8L006061			1	☒	unk	---
62	14	2	2	2	Unk	K231-01J		ID8L006062			1	☒	unk	---
63	15	2	3	2	Unk	K231-01M		ID8L006063			1	☒	unk	---
64	16	2	4	2	Unk	K231-01S		ID8L006064			1	☒	unk	---
65	17	2	5	2	Unk	K231-02		ID8L006065			1	☒	unk	---
66	18	2	6	2	Blank	Blank		ID8L006066			1	☐		---
67	19	2	7	2	QC	CCV5		ID8L006067			1	☒	CCV	None
68	20	2	8	2	QC	CCB5		ID8L006068			1	☒	3XIDL	None
69	21	2	9	2	Unk	K231-10		ID8L006069			1	☒	unk	---
70	22	2	10	2	Unk	K231-11		ID8L006070			1	☒	unk	---
71	23	2	11	2	Unk	K221-01		ID8L006071			1	☒	unk	---
72	24	2	12	2	Unk	K221-02		ID8L006072			1	☒	unk	---
73	25	2	1	3	Unk	K221-03		ID8L006073			1	☒	unk	---
74	26	2	2	3	Unk	K221-04		ID8L006074			1	☒	unk	---
75	27	2	3	3	Unk	K224-09		ID8L006075			1	☒	unk	---
76	28	2	4	3	Unk	K230-11		ID8L006076			1	☒	unk	---
77	29	2	5	3	Blank	Blank		ID8L006077			1	☐		---
78	30	2	6	3	QC	CCV6		ID8L006078			1	☒	CCV	None

70223

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
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80	32	2	8	3	Unk	K226-01A		ID8L006080			1	☒	unk	---
81	33	2	9	3	Unk	K226-01		ID8L006081			1	☒	unk	---
82	34	2	10	3	Unk	K226-01J		ID8L006082			1	☒	unk	---
83	35	2	11	3	Unk	K226-01M		ID8L006083			1	☒	unk	---
84	36	2	12	3	Unk	K226-01S		ID8L006084			1	☒	unk	---
85	37	2	1	4	Unk	K226-02		ID8L006085			1	☒	unk	---
86	38	2	2	4	Unk	K226-03		ID8L006086			1	☒	unk	---
87	39	2	3	4	Unk	K226-04		ID8L006087			1	☒	unk	---
88	40	2	4	4	Blank	Blank		ID8L006088			1	☐		---
89	41	2	5	4	QC	CCV7		ID8L006089			1	☒	CCV	None
90	42	2	6	4	QC	CCB7		ID8L006090			1	☒	3XIDL	None
91	78	3	6	2	QC	IPL001WQ		ID8L006091			1	☒	1/2LOQ	None
92	79	3	7	2	QC	IPL001WX		ID8L006092			1	☒	LCS	None
93	80	3	8	2	QC	IPL001WY		ID8L006093			1	☒	LCS	None
94	81	3	9	2	Unk	K233-03A		ID8L006094			1	☒	unk	---
95	82	3	10	2	Unk	K233-03W		ID8L006095			1	☒	unk	---
96	83	3	11	2	Unk	K233-03J		ID8L006096			1	☒	unk	---
97	84	3	12	2	Unk	K233-03M		ID8L006097			1	☒	unk	---
98	85	3	1	3	Unk	K233-03S		ID8L006098			1	☒	unk	---
99	86	3	2	3	Unk	K233-01W		ID8L006099			1	☒	unk	---
100	87	3	3	3	Unk	K233-04W		ID8L006100			1	☒	unk	---
101	88	3	4	3	QC	CCV8		ID8L006101			1	☒	CCV	None
102	89	3	5	3	QC	CCB8		ID8L006102			1	☒	3XIDL	None
103	90	3	6	3	Unk	K597-09I	100X	ID8L006103			1	☒	unk	---
104	91	3	7	3	Unk	K597-20I	100X	ID8L006104			1	☒	unk	---
105	92	3	8	3	Unk	K597-23I	100X	ID8L006105			1	☒	unk	---
106	93	3	9	3	Unk	K597-43I	100X	ID8L006106			1	☒	unk	---
107	94	3	10	3	Unk	K597-44I	100X	ID8L006107			1	☒	unk	---
108	95	3	11	3	Unk	K594-14I	100X	ID8L006108			1	☒	unk	---
109	96	3	12	3	Unk	K594-16I	100X	ID8L006109			1	☒	unk	---
110	97	3	1	4	Blank	Blank		ID8L006110			1	☐		---
111	98	3	2	4	QC	MRLL0703		ID8L006111			1	☒	MRL-EMAX	None
112	99	3	3	4	QC	MRLL0704		ID8L006112			1	☒	MRL-AFCEE	None
113	100	3	4	4	QC	CCV9		ID8L006113			1	☒	CCV	None
114	101	3	5	4	QC	CCB9		ID8L006114			1	☒	3XIDL	None

7024

Distribution Section [illegible]

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[illegible]	[illegible]			.00308								533
[illegible]	[illegible]	107.84	1.4982	1.059	.9e53	1.5299	2.0221	1.0748	45.066	2.4377	97.751	[illegible]
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[illegible]	[illegible]	.351.17	.00198	.00021	.07005	.00304	.01206	.00174	464.09	.00098	.00057	[illegible]
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[illegible]	[illegible]	4.8154	2.4[illegible]	[illegible]	[illegible]	.50426	.48458	.49677	59.133	.50085	.50481	[illegible]
[illegible]	[illegible]	143.85	2.3620	.9e9e	1.2388	.51636	.45[illegible]9	.48e67	75.217	.67871	.5.61[illegible]	[illegible]
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[illegible]	[illegible]	139.74	-.0.69[illegible]	[illegible]	.73298	.00432	-.01354	.02176	[illegible].116	.5419	[illegible]	[illegible]
[illegible]	[illegible]	136.15	-.01984	[illegible]	.02852	.00457	-.0127	.00164	24.814	.18648	[illegible]	[illegible]
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[illegible]	[illegible]	178.[illegible]	-.01[illegible]	[illegible]	[illegible]	.0[illegible]	[illegible]	.0[illegible]	23.878	.0[illegible]	.0[illegible]	[illegible]
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[illegible]	[illegible]	120.41	-.0[illegible]1	[illegible]	[illegible]	.0[illegible]	-.0[illegible]	.0[illegible]	26.447	.1[illegible]	[illegible]	[illegible]

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[illegible] Section [illegible] 3

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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| | | |

106	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
109	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
112	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

OBS	[illegible]	Ap	Wr	Sr	I	Sr	[illegible]	V	[illegible]	[illegible]
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3	[illegible]									[illegible]
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14	[illegible]	.50781	21.596	.49423	2.4133	.47868	.51305	1.5313	2.5664	[illegible]
15	[illegible]	.00302	.03777	.00063	.00041	.00051	-.00058	.00057	.00070	[illegible]
16	MR..0701	.01336	1.0474	.01033	.01037	.00097	.01061	.01363	.02179	MR..0701
17	MR..0702	.00983	.53243	.00965	.00971	.00924	.01011	.01007	.01061	MR..0702
18	[illegible]	-.00017	.04730	.03309	.00.97	.00170	.00464	.00594	.04170	[illegible]
19	[illegible]	1.0641	.75.05	.47768	.90272	.94.07	1.0149	.29869	1.0149	[illegible]
20	[illegible]	.49583	11.277	.49372	2.3721	.53629	.50140	1.4897	2.5.73	[illegible]
21	[illegible]	-.00001	.01645	-.00010	-.00075	.00045	.00090	.00009	.00046	[illegible]
22	[illegible]	.04014	.05175	.00111	.05079	.03417	.00056	.00054	.03487	[illegible]
23	[illegible]	.50185	.07.17	.49445	.48172	.51905	.51112	.52501	.50557	[illegible]
24	[illegible]	.50564	[illegible]	.49634	.48611	.51466	.50111	.52714	.53672	[illegible]
25	[illegible]	[illegible]	.53.423	.67507	.40451	.50175	17.111*	.92821	[illegible]	[illegible]
26	[illegible]	[illegible]	[illegible]	.18.17	-.00398	[illegible]	11.895*	.1774	[illegible]	[illegible]
27	[illegible]	.00070	[illegible]	.03954	.07502	.00791	3.5279	.06808	[illegible]	[illegible]
28	[illegible]	[illegible]	[illegible]	.13977	-.00412	[illegible]	11.449*	.38748	[illegible]	[illegible]
29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12.614*	.41439	[illegible]	[illegible]
30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13.210*	.42780	[illegible]	[illegible]
31	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.00045	[illegible]	[illegible]
32	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
33	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
34	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.0579	[illegible]	[illegible]	[illegible]
35	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13.270*	[illegible]	[illegible]	[illegible]
38	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13.064*	[illegible]	[illegible]	[illegible]
39	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	14.357*	[illegible]	[illegible]	[illegible]
41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13.750*	[illegible]	[illegible]	[illegible]
42	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12.475*	[illegible]	[illegible]	[illegible]
43	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
44	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
46	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13.462*	[illegible]	[illegible]	[illegible]
47	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12.219*	[illegible]	[illegible]	[illegible]
48	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11.647*	[illegible]	[illegible]	[illegible]
49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12.603*	[illegible]	[illegible]	[illegible]
50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11.210*	[illegible]	[illegible]	[illegible]
51	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12.610*	[illegible]	[illegible]	[illegible]
52	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11.116*	[illegible]	[illegible]	[illegible]

| | | |

105	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	07220	03633	08101	[illegible]	[illegible]
106	[illegible]	[illegible]	00[illegible]	[illegible]	[illegible]	[illegible]	01984	05408	00507	[illegible]	[illegible]
107	Blank	[illegible]	[illegible]	[illegible]	[illegible]	00010	00020	[illegible]	[illegible]	[illegible]	Blank
108	Mc[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	00060	02947	01085	[illegible]	[illegible]	Mc[illegible]
109	MM[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	30947	[illegible]	01002	[illegible]	[illegible]	MM[illegible]
110	[illegible]	49037	95788	[illegible]	[illegible]	48769	48485	[illegible]	[illegible]	[illegible]	[illegible]
111	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	03026	[illegible]	00079	[illegible]	[illegible]	[illegible]
INDX	[illegible]	Ag	Na	Sr	[illegible]	Sn	[illegible]	V	[illegible]	[illegible]	

Lab+Cb Section 3 of 3

EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP METALS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:
All samples pH <2

Book #: EIP-104
Batch: 1PL003W
Matrix: Water
Digestor ID: E

SOP #	Rev. #
☐ EMAX-3005	4
☑ EMAX-3010	5
☐ EMAX-3050	4
☐ EMAX-200.7	2
☐ EMAX-	

Start	Temp	End	Temp
	95 °C		95 °C

Standards	ID	Amount Added (ml)
LCS-1	SM1A-013-04-13	0.25
LCS-2	SM1A-013-03-13	0.25
LCS-3	SM1A-013-04-14	0.5
MS	same spike vol and solns as LCS1, LCS2	
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SW1A-04-407	1.5 + 1.5
HCl	SW1A-04-408	2.5 + 2.5
H_2O_2	N/A	
HNO3(1:1)	N/A	

Digestate Location	ICP
Extract Location	
☑ Reagent Water ID: SMSA-02-075	
☑ Thermometer ID: 101993366	
☑ Pipette ID: ICP-07	
☑ Pipette ID: 14278C035	
☐ Pipette ID:	
☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask	
☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask	

Prepared By: GG
Standard Added By: GG Witnessed By: TH
Extract Rcvd By: TH Checked By: TH

FileID: IPL003W

EMAX LABORATORIES INC

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
11IPL003W01	IPL003WB	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W02	IPL003WL	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W03	IPL003WC	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W04	K224-09	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W05	K230-11	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W06	K237-01	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W07	K226-01	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W08	K226-01M	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W09	K226-01S	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W10	K226-02	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W11	K226-03	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W12	K226-04	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W13	K231-01	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W14	K231-01M	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W15	K231-01S	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W16	K231-02	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W17	K231-10	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W18	K231-11	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W19	K221-01	50	ml	12/2/11 11:02	50	50	50	1	DISSOLVED
11IPL003W20	K221-02	50	ml	12/2/11 11:02	50	50	50	1	DISSOLVED
11IPL003W21	K221-03	50	ml	12/2/11 11:02	50	50	50	1	DISSOLVED
11IPL003W22	K221-04	50	ml	12/2/11 11:02	50	50	50	1	DISSOLVED

12/2/11 GG

Vd=digestate volume PrepFctr=)ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 12/2/11 11:03 Prepared By GG

☑ Digestion Ended @ 12/2/11 15:20 Checked By TH

Comments: Date 12/2/11

7035

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

WET CHEMICAL ANALYSES

SDG#: 11K221

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K221

METHOD 300.0
ANIONS BY IC

A total of four (4) water samples were received on 11/28/11 for Anions (Chloride, Nitrate, Nitrite and Sulfate) by IC analysis, Method 300.0 in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for ICK085WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample was analyzed at the frequency prescribed by the project.
Percent recoveries for K221-01M/S were within project QC limits.
Sample duplicate was also analyzed with the samples. RPD was within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. Sample K221-03 for Nitrite was reported from 5x dilution due to chloride interference.

SAMPLE RESULTS

METHOD 300.0
CHLORIDE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K221

Matrix : WATER
Instrument ID : D0

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK085WB	ND	1	NA	0.200	0.100	11/29/1110:34	NA	AK39-03	AK39-01	ICK085W	NA	NA
LCS1W	ICK085WL	1.93	1	NA	0.200	0.100	11/29/1110:50	NA	AK39-04	AK39-01	ICK085W	NA	NA
LCD1W	ICK085WC	1.92	1	NA	0.200	0.100	11/29/1111:06	NA	AK39-05	AK39-01	ICK085W	NA	NA
IR-70-EB-177	K221-04	0.167J	1	NA	0.200	0.100	11/29/1113:48	NA	AK39-15	AK39-13	ICK085W	11/28/1115:00	11/28/11
IR-70-FSB229-175	K221-02	607	50	NA	10.0	5.00	11/29/1116:08	NA	AK39-22	AK39-13	ICK085W	11/28/1112:42	11/28/11
MW-70-49-176	K221-03	1540	100	NA	20.0	10.0	11/29/1116:24	NA	AK39-23	AK39-13	ICK085W	11/28/1114:38	11/28/11
MW-70-RDO-4-174	K221-01	998	100	NA	20.0	10.0	11/29/1117:13	NA	AK39-26	AK39-24	ICK085W	11/28/1110:54	11/28/11
MW-70-RDO-4-174DUP	K221-01D	998	100	NA	20.0	10.0	11/29/1117:29	NA	AK39-27	AK39-24	ICK085W	11/28/1110:54	11/28/11
MW-70-RDO-4-174MS	K221-01M	1170	100	NA	20.0	10.0	11/29/1117:45	NA	AK39-28	AK39-24	ICK085W	11/28/1110:54	11/28/11
MW-70-RDO-4-174MSD	K221-01S	1170	100	NA	20.0	10.0	11/29/1118:01	NA	AK39-29	AK39-24	ICK085W	11/28/1110:54	11/28/11

METHOD 300.0
NITRATE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K221

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK085WB	ND	1	NA	0.200	0.0500	11/29/1110:34	NA	AK39-03	AK39-01	ICK085W	NA	NA
LCS1W	ICK085WL	0.974	1	NA	0.200	0.0500	11/29/1110:50	NA	AK39-04	AK39-01	ICK085W	NA	NA
LCD1W	ICK085WC	0.975	1	NA	0.200	0.0500	11/29/1111:06	NA	AK39-05	AK39-01	ICK085W	NA	NA
IR-70-FSB229-175	K221-02	ND	1	NA	0.200	0.0500	11/29/1111:22	NA	AK39-06	AK39-01	ICK085W	11/28/1112:42	11/28/11
MW-70-49-176	K221-03	ND	1	NA	0.200	0.0500	11/29/1111:39	NA	AK39-07	AK39-01	ICK085W	11/28/1114:38	11/28/11
MW-70-RDO-4-174	K221-01	ND	1	NA	0.200	0.0500	11/29/1111:55	NA	AK39-08	AK39-01	ICK085W	11/28/1110:54	11/28/11
MW-70-RDO-4-174DUP	K221-01D	ND	1	NA	0.200	0.0500	11/29/1112:11	NA	AK39-09	AK39-01	ICK085W	11/28/1110:54	11/28/11
MW-70-RDO-4-174MS	K221-01M	1.07	1	NA	0.200	0.0500	11/29/1112:27	NA	AK39-10	AK39-01	ICK085W	11/28/1110:54	11/28/11
MW-70-RDO-4-174MSD	K221-01S	1.07	1	NA	0.200	0.0500	11/29/1112:43	NA	AK39-11	AK39-01	ICK085W	11/28/1110:54	11/28/11
IR-70-EB-177	K221-04	0.0828J	1	NA	0.200	0.0500	11/29/1113:48	NA	AK39-15	AK39-13	ICK085W	11/28/1115:00	11/28/11

METHOD 300.0
NITRITE-N

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K221

Matrix : WATER
Instrument ID : D0

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK085WB	ND	1	NA	0.200	0.0500	11/29/1110:34	NA	AK39-03	AK39-01	ICK085W	NA	NA
LCS1W	ICK085WL	2.08	1	NA	0.200	0.0500	11/29/1110:50	NA	AK39-04	AK39-01	ICK085W	NA	NA
LCD1W	ICK085WC	2.08	1	NA	0.200	0.0500	11/29/1111:06	NA	AK39-05	AK39-01	ICK085W	NA	NA
IR-70-FSB229-175	K221-02	ND	1	NA	0.200	0.0500	11/29/1111:22	NA	AK39-06	AK39-01	ICK085W	11/28/1112:42	11/28/11
MW-70-RDO-4-174	K221-01	ND	1	NA	0.200	0.0500	11/29/1111:55	NA	AK39-08	AK39-01	ICK085W	11/28/1110:54	11/28/11
MW-70-RDO-4-174DUP	K221-01D	ND	1	NA	0.200	0.0500	11/29/1112:11	NA	AK39-09	AK39-01	ICK085W	11/28/1110:54	11/28/11
MW-70-RDO-4-174MS	K221-01M	2.26	1	NA	0.200	0.0500	11/29/1112:27	NA	AK39-10	AK39-01	ICK085W	11/28/1110:54	11/28/11
MW-70-RDO-4-174MSD	K221-01S	2.25	1	NA	0.200	0.0500	11/29/1112:43	NA	AK39-11	AK39-01	ICK085W	11/28/1110:54	11/28/11
IR-70-EB-177	K221-04	ND	1	NA	0.200	0.0500	11/29/1113:48	NA	AK39-15	AK39-13	ICK085W	11/28/1115:00	11/28/11
MW-70-49-176	K221-03	ND	5	NA	1.00	0.250	11/29/1115:52	NA	AK39-21	AK39-13	ICK085W	11/28/1114:38	11/28/11

METHOD 300.0
SULFATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K221

Matrix : WATER
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ICK085WB	ND	1	NA	0.500	0.250	11/29/1110:34	NA	AK39-03	AK39-01	ICK085W	NA	NA
LCS1W	ICK085WL	5.02	1	NA	0.500	0.250	11/29/1110:50	NA	AK39-04	AK39-01	ICK085W	NA	NA
LCD1W	ICK085WC	5.01	1	NA	0.500	0.250	11/29/1111:06	NA	AK39-05	AK39-01	ICK085W	NA	NA
IR-70-FSB229-175	K221-02	9.12	1	NA	0.500	0.250	11/29/1111:22	NA	AK39-06	AK39-01	ICK085W	11/28/1112:42	11/28/11
IR-70-EB-177	K221-04	ND	1	NA	0.500	0.250	11/29/1113:48	NA	AK39-15	AK39-13	ICK085W	11/28/1115:00	11/28/11
MW-70-49-176	K221-03	341	100	NA	50.0	25.0	11/29/1116:24	NA	AK39-23	AK39-13	ICK085W	11/28/1114:38	11/28/11
MW-70-RDO-4-174	K221-01	490	100	NA	50.0	25.0	11/29/1117:13	NA	AK39-26	AK39-24	ICK085W	11/28/1110:54	11/28/11
MW-70-RDO-4-174DUP	K221-01D	496	100	NA	50.0	25.0	11/29/1117:29	NA	AK39-27	AK39-24	ICK085W	11/28/1110:54	11/28/11
MW-70-RDO-4-174MS	K221-01M	1030	100	NA	50.0	25.0	11/29/1117:45	NA	AK39-28	AK39-24	ICK085W	11/28/1110:54	11/28/11
MW-70-RDO-4-174MSD	K221-01S	1030	100	NA	50.0	25.0	11/29/1118:01	NA	AK39-29	AK39-24	ICK085W	11/28/1110:54	11/28/11

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK085WB	ICK085WL	ICK085WC		
LAB FILE ID:	AK39-03	AK39-04	AK39-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/29/1110:34	11/29/1110:50	11/29/1111:06	DATE RECEIVED:	NA
PREP. BATCH:	ICK085W	ICK085W	ICK085W		
CALIB. REF:	AK39-01	AK39-01	AK39-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	ND	2.00	1.93	96	2.00	1.92	96	0	90-110	20

8008

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD 300.0

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	100	100	100
SAMPLE ID:	MW-70-RDO-4-174		
LAB SAMP ID:	K221-01	K221-01M	K221-01S
LAB FILE ID:	AK39-26	AK39-28	AK39-29
DATE EXTRACTED:	NA	NA	NA
DATE ANALYZED:	11/29/1117:13	11/29/1117:45	11/29/1118:01
PREP. BATCH:	ICK085W	ICK085W	ICK085W
CALIB. REF:	AK39-24	AK39-24	AK39-24

DATE COLLECTED: 11/28/11 10:54
DATE RECEIVED: 11/28/11

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	998	200	1170	86	200	1170	87	0	80-120	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD 300.0

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 100 100
SAMPLE ID: MW-70-RDO-4-174
EMAX SAMP ID: K221-01 K221-01D
LAB FILE ID: AK39-26 AK39-27
DATE EXTRACTED: NA NA DATE COLLECTED: 11/28/11 10:54
DATE ANALYZED: 11/29/1117:13 11/29/1117:29 DATE RECEIVED: 11/28/11
PREP. BATCH: ICK085W ICK085W
CALIB. REF: AK39-24 AK39-24

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Chloride-Cl	998	998	0	20

8016

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK085WB	ICK085WL	ICK085WC		
LAB FILE ID:	AK39-03	AK39-04	AK39-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/29/1110:34	11/29/1110:50	11/29/1111:06	DATE RECEIVED:	NA
PREP. BATCH:	ICK085W	ICK085W	ICK085W		
CALIB. REF:	AK39-01	AK39-01	AK39-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrate-N	ND	1.00	0.974	97	1.00	0.975	97	0	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MW-70-RDO-4-174				
LAB SAMP ID:	K221-01	K221-01M	K221-01S		
LAB FILE ID:	AK39-08	AK39-10	AK39-11		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/28/11 10:54
DATE ANALYZED:	11/29/1111:55	11/29/1112:27	11/29/1112:43	DATE RECEIVED:	11/28/11
PREP. BATCH:	ICK085W	ICK085W	ICK085W		
CALIB. REF:	AK39-01	AK39-01	AK39-01		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrate-N	ND	1.00	1.07	107	1.00	1.07	107	0	80-120	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD 300.0

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MW-70-RDO-4-174
EMAX SAMP ID: K221-01 K221-01D
LAB FILE ID: AK39-08 AK39-09
DATE EXTRACTED: NA NA DATE COLLECTED: 11/28/11 10:54
DATE ANALYZED: 11/29/1111:55 11/29/1112:11 DATE RECEIVED: 11/28/11
PREP. BATCH: ICK085W ICK085W
CALIB. REF: AK39-01 AK39-01

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Nitrate-N	ND	ND	NA	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK085WB	ICK085WL	ICK085WC		
LAB FILE ID:	AK39-03	AK39-04	AK39-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/29/1110:34	11/29/1110:50	11/29/1111:06	DATE RECEIVED:	NA
PREP. BATCH:	ICK085W	ICK085W	ICK085W		
CALIB. REF:	AK39-01	AK39-01	AK39-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	2.00	2.08	104	2.00	2.08	104	0	90-110	20

8014

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MW-70-RDO-4-174				
LAB SAMP ID:	K221-01	K221-01M	K221-01S		
LAB FILE ID:	AK39-08	AK39-10	AK39-11		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/28/11 10:54
DATE ANALYZED:	11/29/1111:55	11/29/1112:27	11/29/1112:43	DATE RECEIVED:	11/28/11
PREP. BATCH:	ICK085W	ICK085W	ICK085W		
CALIB. REF:	AK39-01	AK39-01	AK39-01		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	2.00	2.26	113	2.00	2.25	113	0	80-120	20

8015

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD 300.0

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MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MW-70-RDO-4-174
EMAX SAMP ID: K221-01 K221-01D
LAB FILE ID: AK39-08 AK39-09
DATE EXTRACTED: NA NA DATE COLLECTED: 11/28/11 10:54
DATE ANALYZED: 11/29/1111:55 11/29/1112:11 DATE RECEIVED: 11/28/11
PREP. BATCH: ICK085W ICK085W
CALIB. REF: AK39-01 AK39-01

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Nitrite-N	ND	ND	NA	20

8016

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD 300.0

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ICK085WB	ICK085WL	ICK085WC		
LAB FILE ID:	AK39-03	AK39-04	AK39-05		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	11/29/1110:34	11/29/1110:50	11/29/1111:06	DATE RECEIVED:	NA
PREP. BATCH:	ICK085W	ICK085W	ICK085W		
CALIB. REF:	AK39-01	AK39-01	AK39-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	5.00	5.02	100	5.00	5.01	100	0	90-110	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD 300.0

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	100	100	100		
SAMPLE ID:	MW-70-RDO-4-174				
LAB SAMP ID:	K221-01	K221-01M	K221-01S		
LAB FILE ID:	AK39-26	AK39-28	AK39-29		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	11/28/11 10:54
DATE ANALYZED:	11/29/1117:13	11/29/1117:45	11/29/1118:01	DATE RECEIVED:	11/28/11
PREP. BATCH:	ICK085W	ICK085W	ICK085W		
CALIB. REF:	AK39-24	AK39-24	AK39-24		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	490	500	1030	107	500	1030	107	0	80-120	20

8018

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD 300.0

==========

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	100	100		
SAMPLE ID:	MW-70-RDO-4-174			
EMAX SAMP ID:	K221-01	K221-01D		
LAB FILE ID:	AK39-26	AK39-27		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/28/11 10:54
DATE ANALYZED:	11/29/1117:13	11/29/1117:29	DATE RECEIVED:	11/28/11
PREP. BATCH:	ICK085W	ICK085W		
CALIB. REF:	AK39-24	AK39-24		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
Sulfate	490	496	1	20

INITIAL CALIBRATIONS

IC Result Check FormVersion : I30/AI39

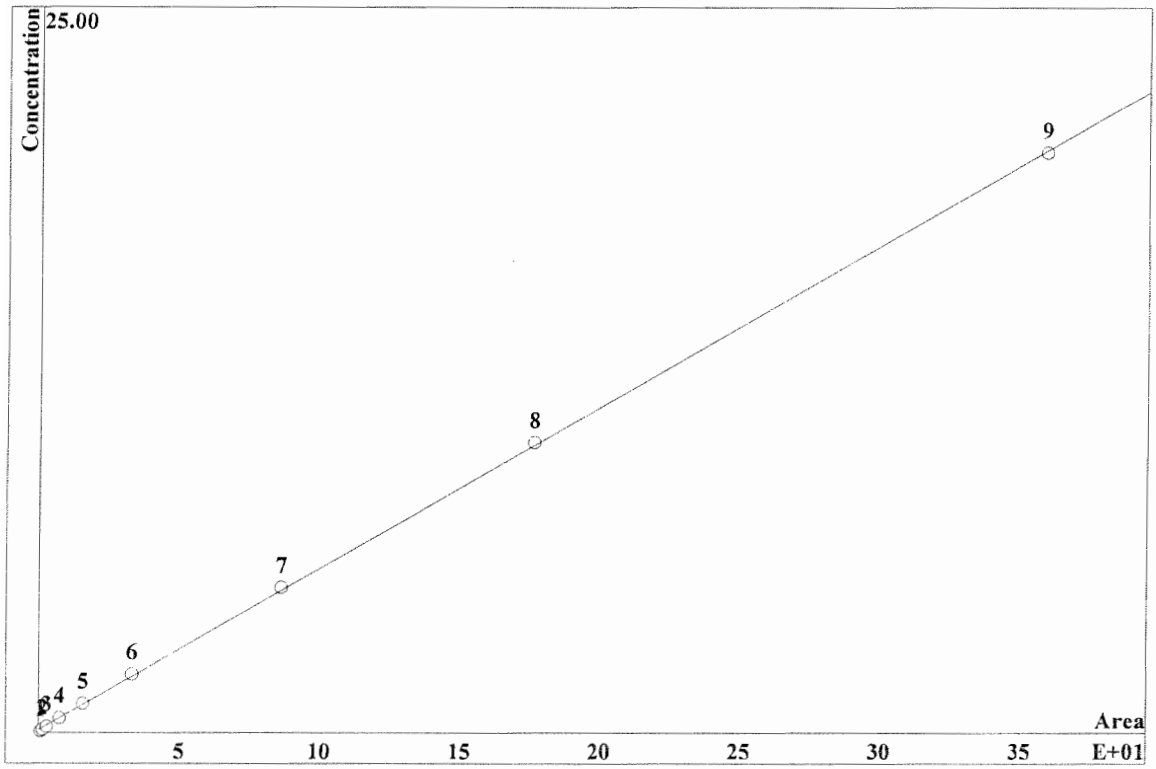
LFID	LSID	Selection	nitrite	fluoride	chloride	bromide	nitrate	phosphate	sulfate	RawNetID	DF
AI39-01	IB	IFCBNPS	0	0	0	0	0	0	0	v9301829	1
AI39-02	S0	IFCBNPS	0	0	0	0	0	0	0	v9301845	1
AI39-03	S1	IFCBNPS	0.0402732	0.0794447	0.137238	0.0962101	0.0900188	0.132659	0.181386	v9301901	1
AI39-04	S2	IFCBNPS	0.0827484	0.120657	0.172987	0.138434	0.127411	0.166211	0.219384	v9301917	1
AI39-05	S3	IFCBNPS	0.175829	0.207372	0.255839	0.223376	0.213499	0.241921	0.298411	v9301934	1
AI39-06	S4	IFCBNPS	0.468611	0.487287	0.510168	0.483675	0.481038	0.46682	0.535669	v9301950	1
AI39-07	S5	IFCBNPS	0.987232	0.975831	0.969747	0.947628	0.958434	0.904972	0.974277	v9302006	1
AI39-08	S6	IFCBNPS	2.03579	2.00618	1.92527	1.92275	1.95393	1.87863	1.87805	v9302022	1
AI39-09	S7	IFCBNPS	5.13141	5.00267	4.89791	5.03793	5.02567	5.05879	4.80122	v9302038	1
AI39-10	S8	IFCBNPS	9.9281	9.57748	9.9004	10.4648	10.1254	10.4079	9.8176	v9302054	1
AI39-11	S9	IFCBNPS	18.5849	17.9543	20.0804	21.615	20.3941	21.1232	20.144	v9302111	1
AI39-12	ICV	IFCBNPS	98.6%	100.1%	97.7%	94.1%	98.6%	92.5%	99.9%	v9302127	1
AI39-13	ICB	IFCBNPS	0	0	0	0	0	0	0	v9302143	1

AJ
15/03/11

8021

CALIBRATION OF COMPONENT chloride

Method: ICD0-I30.mtw
Equation: Q = 0.0557644·A + 0.0866239
RSD: 1.948 %
Correlation coefficient: 0.999932



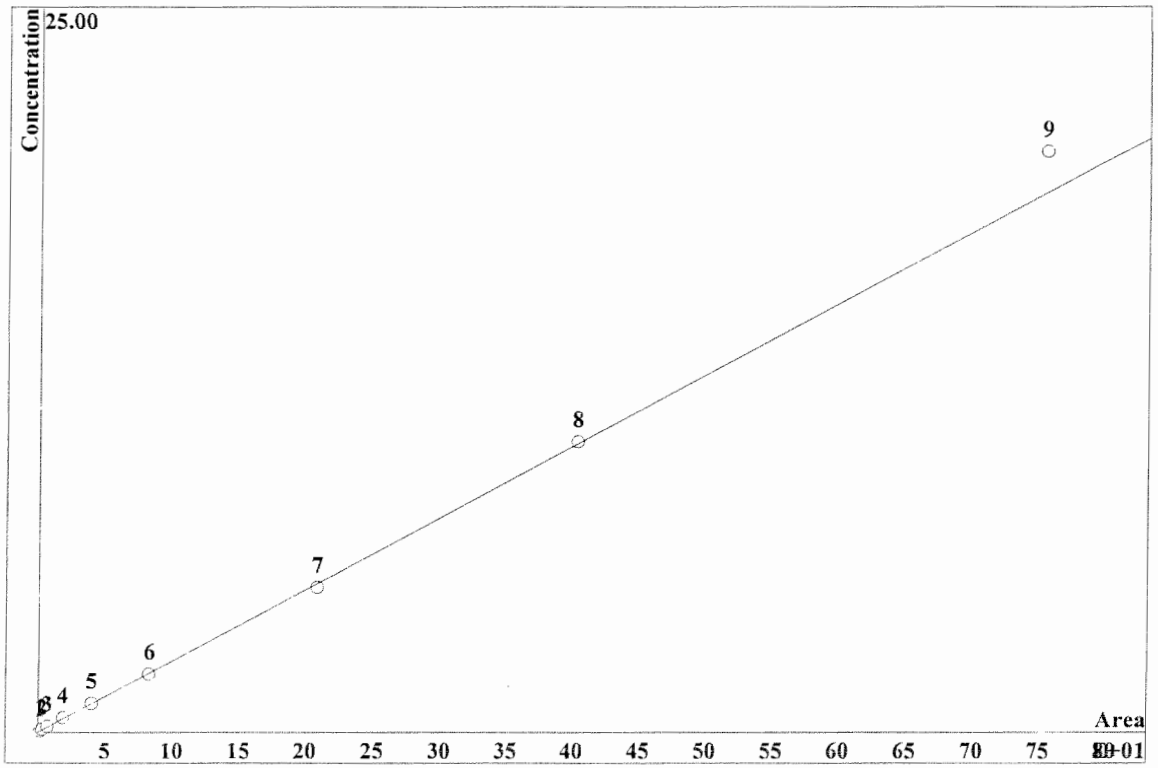
K3 = 0 K2 = 0 K1 = 0.0557644 K0 = 0.0866239
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1035	0.9076	0.05	1	4.26	Yes	v9301901.chw
2	0.1796	1.549	0.1	1	4.26	Yes	v9301917.chw
3	0.354	3.034	0.2	1	4.26	Yes	v9301934.chw
4	0.8921	7.595	0.5	1	4.26	Yes	v9301950.chw
5	1.896	15.84	1	1	4.26	Yes	v9302006.chw
6	3.983	32.97	2	1	4.26	Yes	v9302022.chw
7	10.38	86.28	5	1	4.26	Yes	v9302038.chw
8	21.04	176	10	1	4.26	Yes	v9302054.chw
9	42.24	358.5	20	1	4.26	Yes	v9302111.chw

AA
10/03/11

CALIBRATION OF COMPONENT nitrite

Method: ICD0-I30.mtw
Equation: Q = 0.024644·A + 0.00179217
RSD: 2.785 %
Correlation coefficient: 0.999850



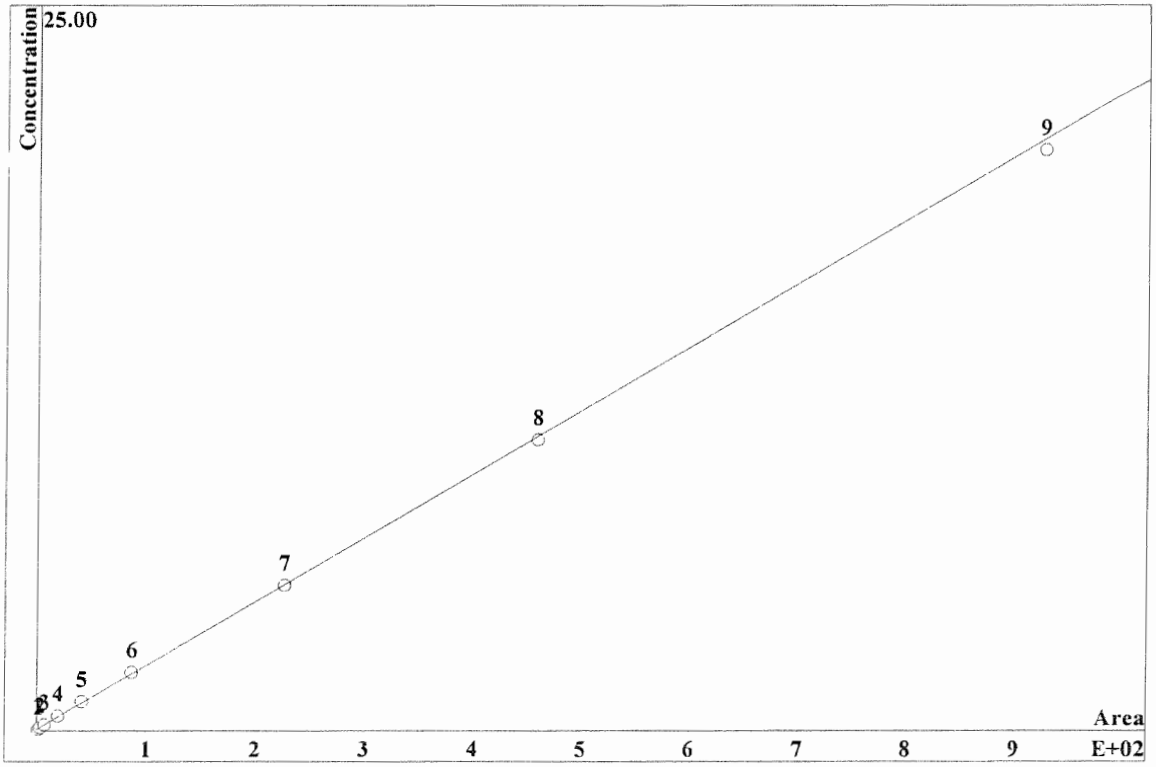
K3 = 0 K2 = 0 K1 = 0.024644 K0 = 0.00179217
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1597	1.561	0.05	1	4.932	Yes	v9301901.chw
2	0.3368	3.285	0.1	1	4.932	Yes	v9301917.chw
3	0.7305	7.062	0.2	1	4.932	Yes	v9301934.chw
4	1.964	18.94	0.5	1	4.932	Yes	v9301950.chw
5	4.115	39.99	1	1	4.932	Yes	v9302006.chw
6	8.392	82.54	2	1	4.932	Yes	v9302022.chw
7	19.91	208.1	5	1	4.932	Yes	v9302038.chw
8	35.83	402.8	10	1	4.932	Yes	v9302054.chw
9	61.98	754.1	20	1	4.932	No	v9302111.chw

RS
10/3/11

CALIBRATION OF COMPONENT nitrate

Method: ICD0-I30.mtw
Equation: Q = 0.0219574·A + 0.0522169
RSD: 3.044 %
Correlation coefficient: 0.999806



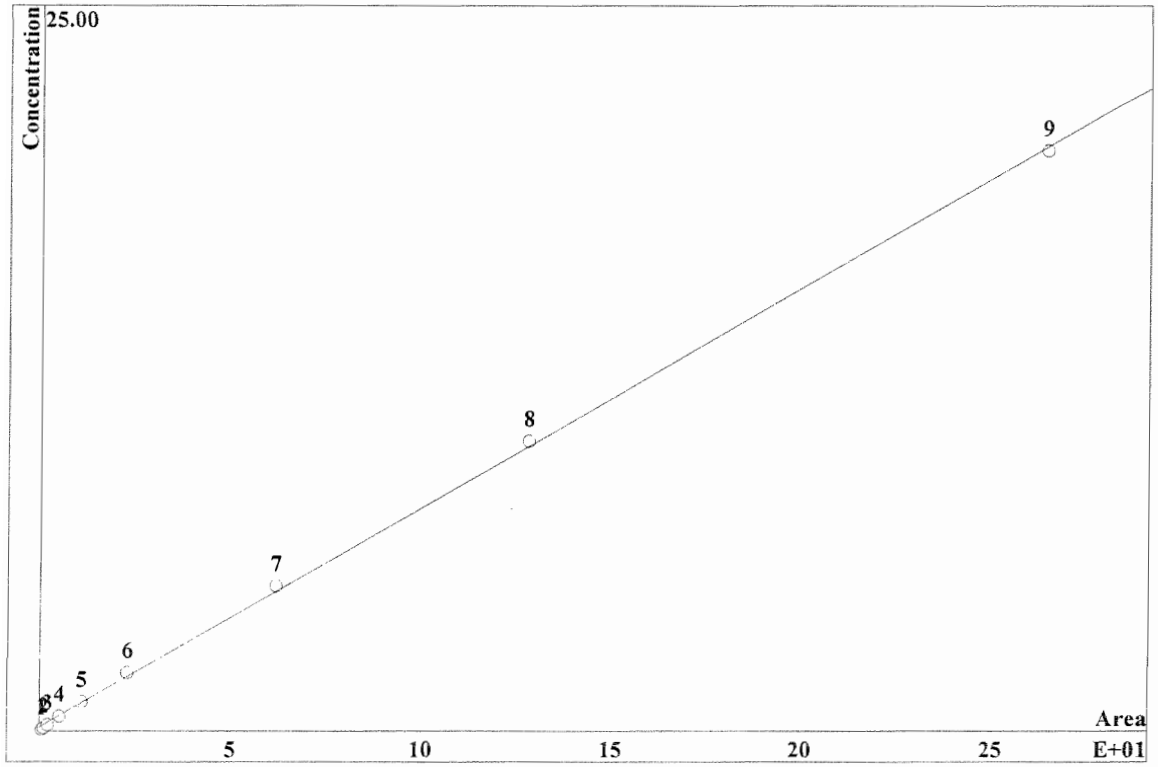
K3 = 0 K2 = 0 K1 = 0.0219574 K0 = 0.0522169
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1416	1.722	0.05	1	6.74	Yes	v9301901.chw
2	0.2866	3.425	0.1	1	6.74	Yes	v9301917.chw
3	0.6179	7.345	0.2	1	6.74	Yes	v9301934.chw
4	1.658	19.53	0.5	1	6.74	Yes	v9301950.chw
5	3.518	41.27	1	1	6.74	Yes	v9302006.chw
6	7.416	86.61	2	1	6.74	Yes	v9302022.chw
7	19.15	226.5	5	1	6.74	Yes	v9302038.chw
8	38.33	458.8	10	1	6.74	No	v9302054.chw
9	74.21	926.4	20	1	6.74	No	v9302111.chw

RS
10/03/11

CALIBRATION OF COMPONENT sulfate

Method: ICD0-I30.mtw ✓ ✓
Equation: Q = 0.0758014·A + 0.128926
RSD: 3.408 %
Correlation coefficient: 0.999791



K3 = 0 K2 = 0 K1 = 0.0758014 K0 = 0.128926
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.03861	0.6921 ✓	0.05	1	10.79	Yes	v9301901.chw
2	0.06635	1.193 ✓	0.1	1	10.79	Yes	v9301917.chw
3	0.1288	2.236 ✓	0.2	1	10.79	Yes	v9301934.chw
4	0.3105	5.366 ✓	0.5	1	10.79	Yes	v9301950.chw
5	0.6333	11.15 ✓	1	1	10.79	Yes	v9302006.chw
6	1.361	23.08 ✓	2	1	10.79	Yes	v9302022.chw
7	3.625	61.64 ✓	5	1	10.79	Yes	v9302038.chw
8	7.471	127.8 ✓	10	1	10.79	Yes	v9302054.chw
9	15.34	264 ✓	20	1	10.79	Yes	v9302111.chw

RA
10/03/11

SECOND SOURCE VERIFICATION

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	bromide	nitrite	sulfate	fluoride	chloride	nitrate	phosphate	RawNetID	DF
AI39-12	ICV	BISFCNP	94.1%	98.6%	99.9%	100.1%	97.7%	98.6%	92.5%	v9302127	1
AI39-13	ICB	BISFCNP	0	0	0	0	0	0	0	v9302143	1

AS 10/03/11

DAILY CALIBRATIONS

IC Result Check FormVersion : I30/AI39

LFID	LSID	Selection	bromide	chloride	fluoride	nitrite	nitrate	phosphate	sulfate	RawNetID	DF
AK39-01	CCV555	BCFINPS	98.9%	98.1%	103.5%	105.8%	97.4%	99.1%	100.6%	vb291002	1
AK39-02	CCB555	BCFINPS	0	0	0	0	0	0	0	vb291018	1
AK39-13	CCV557	BCFINPS	99.8%	98.8%	103.3%	106.1%	98.3%	99.7%	102%	vb291316	1
AK39-14	CCB557	BCFINPS	0	0	0	0	0	0	0	vb291332	1
AK39-24	CCV559	BCFINPS	98.2%	97.8%	103.5%	105.6%	97.6%	99.6%	101.8%	vb291641	1
AK39-25	CCB559	BCFINPS	0	0	0	0	0	0	0	vb291657	1
AK39-30	CCV561	BCFINPS	98.5%	97.8%	103.6%	105.9%	97.9%	101.4%	101.6%	vb291817	1
AK39-31	CCB561	BCFINPS	0	0	0	0	0	0	0	vb291834	1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Concentrations of:

S_1 — 0.05 ppm
S_2 — 0.1
S_3 — 0.2
S_4 — 0.5
S_5 — 1.0
S_6 — 2.0
S_7 — 5.0
S_8 — 10.0
S_9 — 20.0

Linearity (ppm)

F^- — 5
Cl^- — 20
NO_2N — 10
Br^- — 5
NO_3N — 5
PO_4P — 5
SO_4^{2-} — 20

Column: Metrosep A Supp 5-100

Flow Rate: 0.70 ml/min

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-220 (1000 mM H_2SO_4) 100 ml - 1 L

Book #:	AD0-031
Instrument No.:	D0
Pipette ID's:	039380124
	SW8A-02-12
	SW8A-02-13
Balance ID#:	40706360
Analytical Sequence:	AI39
Method File:	ICD0-I30.mtw
Analytical Batch:	NA

SOP #	Rev. #
☑ EMAX-300.0	6
☐ EMAX-4110B	0
☑ EMAX-9056	3
☐ EMAX-	

STANDARDS ID	
ICAL	SI1B-17-57-02
ICV	SI1B-17-57-03
CCV	NA
LCS	
MS	

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: JC

Date: 9/30/11

F1

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
v9301829.chw	ICD0-I30.mtw	AI39-01 IB	1	1.0	1.0	1.0	100.0	0		
v9301845.chw	ICD0-I30.mtw	AI39-02 S0	2	1.0	1.0	1.0	100.0	0		
v9301901.chw	ICD0-I30.mtw	AI39-03 S1	3	1.0	1.0	1.0	100.0	1		
v9301917.chw	ICD0-I30.mtw	AI39-04 S2	4	1.0	1.0	1.0	100.0	2		
v9301934.chw	ICD0-I30.mtw	AI39-05 S3	5	1.0	1.0	1.0	100.0	3		
v9301950.chw	ICD0-I30.mtw	AI39-06 S4	6	1.0	1.0	1.0	100.0	4		
v9302006.chw	ICD0-I30.mtw	AI39-07 S5	7	1.0	1.0	1.0	100.0	5		
v9302022.chw	ICD0-I30.mtw	AI39-08 S6	8	1.0	1.0	1.0	100.0	6		
v9302038.chw	ICD0-I30.mtw	AI39-09 S7	9	1.0	1.0	1.0	100.0	7		
v9302054.chw	ICD0-I30.mtw	AI39-10 S8	10	1.0	1.0	1.0	100.0	8		
v9302111.chw	ICD0-I30.mtw	AI39-11 S9	11	1.0	1.0	1.0	100.0	9	FINAL	
v9302127.chw	ICD0-I30.mtw	AI39-12 ICV	12	1.0	1.0	1.0	100.0	0		
v9302143.chw	ICD0-I30.mtw	AI39-13 ICB	13	1.0	1.0	1.0	100.0	0		

JC 10/3/11

A 5/03/11

8032

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AD0-032

Instrument No.: D0

Pipette ID's: 039380124

SW8A-02-12

SW8A-02-13

Balance ID#: 40706360

Analytical Sequence: AK39

Method File: ICD0 -130.mtw

Analytical Batch: ICK085W

SOP #	Rev. #
☑ EMAX-300.0	7
☐ EMAX-4110B	1
☑ EMAX-9056	4
☐ EMAX-	

STANDARDS ID	
ICAL	—
ICV	—
CCV	SI1B -17-98-01
LCS	SI1B - 17-98-02
MS	SKP Refer to LCS Percent Rec

Column: Metrosep A Supp 5-100 Filter 0.45µm: 21787469 ~~21784~~ 21112971

Flow Rate: 0.70 ml/min 0.20µm: 21772726

IC Eluent:

SW4-01-213 (320 mM Na_2CO_3 / 100 mM $NaHCO_3$) 20 ml - 2 L

IC Regenerant:

SW4-01-225 (1000 mM H_2SO_4) 100 ml - 1 L

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC-METROHM	
☐	

Analyzed By: Jc

Date: 11/29/11

F1

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
vb291002.chw	ICD0-I30.mtw	AK39-01 CCV555	1	1.0	1.0	1.0	100.0	0		
vb291018.chw	ICD0-I30.mtw	AK39-02 CCB555	2	1.0	1.0	1.0	100.0	0		
vb291034.chw	ICD0-I30.mtw	AK39-03 ICK085WB	3	1.0	1.0	1.0	100.0	0		
vb291050.chw	ICD0-I30.mtw	AK39-04 ICK085WL	4	1.0	1.0	1.0	100.0	0		
vb291106.chw	ICD0-I30.mtw	AK39-05 ICK085WC	5	1.0	1.0	1.0	100.0	0		
vb291122.chw	ICD0-I30.mtw	AK39-06 K221-02	6	1.0	1.0	1.0	100.0	0		
vb291139.chw	ICD0-I30.mtw	AK39-07 K221-03	7	1.0	1.0	1.0	100.0	0		
vb291155.chw	ICD0-I30.mtw	AK39-08 K221-01	8	1.0	1.0	1.0	100.0	0		
vb291211.chw	ICD0-I30.mtw	AK39-09 K221-01D	9	1.0	1.0	1.0	100.0	0		
vb291227.chw	ICD0-I30.mtw	AK39-10 K221-01M	10	1.0	1.0	1.0	100.0	0		
vb291243.chw	ICD0-I30.mtw	AK39-11 K221-01S	11	1.0	1.0	1.0	100.0	0		
vb291259.chw	ICD0-I30.mtw	AK39-12 RINSE	12	1.0	1.0	1.0	100.0	0		
vb291316.chw	ICD0-I30.mtw	AK39-13 CCV557	13	1.0	1.0	1.0	100.0	0		
vb291332.chw	ICD0-I30.mtw	AK39-14 CCB557	14	1.0	1.0	1.0	100.0	0		
vb291348.chw	ICD0-I30.mtw	AK39-15 K221-04	15	1.0	1.0	1.0	100.0	0		
vb291404.chw	ICD0-I30.mtw	AK39-16 K221-01 DF=5	16	1.0	5.0	1.0	100.0	0		
vb291420.chw	ICD0-I30.mtw	AK39-17 K221-01D DF=5	17	1.0	5.0	1.0	100.0	0		
vb291436.chw	ICD0-I30.mtw	AK39-18 K221-01M DF=5	18	1.0	5.0	1.0	100.0	0		
vb291453.chw	ICD0-I30.mtw	AK39-19 K221-01S DF=5	19	1.0	5.0	1.0	100.0	0		
vb291536.chw	ICD0-I30.mtw	AK39-20 K221-02 DF=2	20	1.0	2.0	1.0	100.0	0		
vb291552.chw	ICD0-I30.mtw	AK39-21 K221-03 DF=5	21	1.0	5.0	1.0	100.0	0		
vb291608.chw	ICD0-I30.mtw	AK39-22 K221-02 DF=50	22	1.0	50.0	1.0	100.0	0		
vb291624.chw	ICD0-I30.mtw	AK39-23 K221-03 DF=100	23	1.0	100.0	1.0	100.0	0		
vb291641.chw	ICD0-I30.mtw	AK39-24 CCV559	24	1.0	1.0	1.0	100.0	0		
vb291657.chw	ICD0-I30.mtw	AK39-25 CCB559	25	1.0	1.0	1.0	100.0	0		
vb291713.chw	ICD0-I30.mtw	AK39-26 K221-01 DF=100	26	1.0	100.0	1.0	100.0	0	FINAL	
vb291729.chw	ICD0-I30.mtw	AK39-27 K221-01D DF=100	27	1.0	100.0	1.0	100.0	0		
vb291745.chw	ICD0-I30.mtw	AK39-28 K221-01M DF=100	28	1.0	100.0	1.0	100.0	0		
vb291801.chw	ICD0-I30.mtw	AK39-29 K221-01S DF=100	29	1.0	100.0	1.0	100.0	0		
vb291817.chw	ICD0-I30.mtw	AK39-30 CCV561	30	1.0	1.0	1.0	100.0	0		
vb291834.chw	ICD0-I30.mtw	AK39-31 CCB561	31	1.0	1.0	1.0	100.0	0		

JC 11/30/11

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K221

METHOD 300.0(M)
ORGANIC ACIDS BY IC

A total of three (3) water samples were received on 11/28/11 for Organic Acids (Acetate, Butyrate, Lactate and Propionate) by IC analysis, Method 300.0(M) in accordance with Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100).

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for OAL002WL/Y were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

SAMPLE RESULTS

METHOD 300.0(M)
ACETATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K221

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAL002WB	ND	1	NA	1.00	0.0500	12/02/1115:02	NA	HL02012	HL02010	OAL002W	NA	NA
LCS1W	OAL002WL	19.6	1	NA	1.00	0.0500	12/02/1115:23	NA	HL02013	HL02010	OAL002W	NA	NA
MW-70-RDO-4-174	K221-01	ND	1	NA	1.00	0.0500	12/02/1116:05	NA	HL02015	HL02010	OAL002W	11/28/1110:54	11/28/11
LCD1W	OAL002WY	19.1	1	NA	1.00	0.0500	12/02/1116:46	NA	HL02016	HL02010	OAL002W	NA	NA
IR-70-FSB229-175	K221-02	ND	1	NA	1.00	0.0500	12/02/1117:07	NA	HL02017	HL02010	OAL002W	11/28/1112:42	11/28/11
MW-70-49-176	K221-03	ND	1	NA	1.00	0.0500	12/02/1117:48	NA	HL02018	HL02010	OAL002W	11/28/1114:38	11/28/11

METHOD 300.0(M)
BUTYRATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K221

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAL002WB	ND	1	NA	1.00	0.0500	12/02/1115:02	NA	HL02012	HL02010	OAL002W	NA	NA
LCS1W	OAL002WL	19.6	1	NA	1.00	0.0500	12/02/1115:23	NA	HL02013	HL02010	OAL002W	NA	NA
MW-70-RDO-4-174	K221-01	ND	1	NA	1.00	0.0500	12/02/1116:05	NA	HL02015	HL02010	OAL002W	11/28/1110:54	11/28/11
LCD1W	OAL002WY	18.2	1	NA	1.00	0.0500	12/02/1116:46	NA	HL02016	HL02010	OAL002W	NA	NA
IR-70-FSB229-175	K221-02	ND	1	NA	1.00	0.0500	12/02/1117:07	NA	HL02017	HL02010	OAL002W	11/28/1112:42	11/28/11
MW-70-49-176	K221-03	ND	1	NA	1.00	0.0500	12/02/1117:48	NA	HL02018	HL02010	OAL002W	11/28/1114:38	11/28/11

METHOD 300.0(M)
LACTATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K221

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAL002WB	ND	1	NA	1.00	0.0500	12/02/1115:02	NA	HL02012	HL02010	OAL002W	NA	NA
LCS1W	OAL002WL	19.2	1	NA	1.00	0.0500	12/02/1115:23	NA	HL02013	HL02010	OAL002W	NA	NA
MW-70-RDO-4-174	K221-01	ND	1	NA	1.00	0.0500	12/02/1116:05	NA	HL02015	HL02010	OAL002W	11/28/1110:54	11/28/11
LCD1W	OAL002WY	19.8	1	NA	1.00	0.0500	12/02/1116:46	NA	HL02016	HL02010	OAL002W	NA	NA
IR-70-FSB229-175	K221-02	ND	1	NA	1.00	0.0500	12/02/1117:07	NA	HL02017	HL02010	OAL002W	11/28/1112:42	11/28/11
MW-70-49-176	K221-03	ND	1	NA	1.00	0.0500	12/02/1117:48	NA	HL02018	HL02010	OAL002W	11/28/1114:38	11/28/11

METHOD 300.0(M)
PROPIONATE

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K221

Matrix : WATER
Instrument ID : D6

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	OAL002WB	ND	1	NA	1.00	0.0500	12/02/1115:02	NA	HL02012	HL02010	OAL002W	NA	NA
LCS1W	OAL002WL	19.5	1	NA	1.00	0.0500	12/02/1115:23	NA	HL02013	HL02010	OAL002W	NA	NA
MW-70-RDO-4-174	K221-01	ND	1	NA	1.00	0.0500	12/02/1116:05	NA	HL02015	HL02010	OAL002W	11/28/1110:54	11/28/11
LCD1W	OAL002WY	18.3	1	NA	1.00	0.0500	12/02/1116:46	NA	HL02016	HL02010	OAL002W	NA	NA
IR-70-FSB229-175	K221-02	ND	1	NA	1.00	0.0500	12/02/1117:07	NA	HL02017	HL02010	OAL002W	11/28/1112:42	11/28/11
MW-70-49-176	K221-03	ND	1	NA	1.00	0.0500	12/02/1117:48	NA	HL02018	HL02010	OAL002W	11/28/1114:38	11/28/11

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAL002WB	OAL002WL	OAL002WY		
LAB FILE ID:	HL02012	HL02013	HL02016		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	12/02/1115:02	12/02/1115:23	12/02/1116:46	DATE RECEIVED:	NA
PREP. BATCH:	OAL002W	OAL002W	OAL002W		
CALIB. REF:	HL02010	HL02010	HL02010		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acetate	ND	20.0	19.6	98	20.0	19.1	96	3	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD 300.0(M)

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAL002WB	OAL002WL	OAL002WY		
LAB FILE ID:	HL02012	HL02013	HL02016		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	12/02/1115:02	12/02/1115:23	12/02/1116:46	DATE RECEIVED:	NA
PREP. BATCH:	OAL002W	OAL002W	OAL002W		
CALIB. REF:	HL02010	HL02010	HL02010		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Butyrate	ND	20.0	19.6	98	20.0	18.2	91	7	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD 300.0(M)

==========

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAL002WB	OAL002WL	OAL002WY		
LAB FILE ID:	HL02012	HL02013	HL02016		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	12/02/1115:02	12/02/1115:23	12/02/1116:46	DATE RECEIVED:	NA
PREP. BATCH:	OAL002W	OAL002W	OAL002W		
CALIB. REF:	HL02010	HL02010	HL02010		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Lactate	ND	20.0	19.2	96	20.0	19.8	99	3	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD 300.0(M)

==========

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	OAL002WB	OAL002WL	OAL002WY		
LAB FILE ID:	HL02012	HL02013	HL02016		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	12/02/1115:02	12/02/1115:23	12/02/1116:46	DATE RECEIVED:	NA
PREP. BATCH:	OAL002W	OAL002W	OAL002W		
CALIB. REF:	HL02010	HL02010	HL02010		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Propionate	ND	20.0	19.5	98	20.0	18.3	92	6	90-110	20

INITIAL CALIBRATIONS

IC SEQ FORM\HL02(2011)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
HL02001	IB	ABLPY	OAD6L02	12/02/1111:12	1
HL02002	S-0	ABLPY	OAD6L02	12/02/1111:33	1
HL02003	S-1	ABLPY	OAD6L02	12/02/1111:54	1
HL02004	S-2	ABLPY	OAD6L02	12/02/1112:15	1
HL02005	S-3	ABLPY	OAD6L02	12/02/1112:36	1
HL02006	S-4	ABLPY	OAD6L02	12/02/1112:57	1
HL02007	S-5	ABLPY	OAD6L02	12/02/1113:18	1
HL02008	ICV	ABLPY	OAD6L02	12/02/1113:39	1
HL02009	ICB	ABLPY	OAD6L02	12/02/1114:00	1
HL02010	CCV2	ABLPY	OAD6L02	12/02/1114:20	1
HL02011	CCB2	ABLPY	OAD6L02	12/02/1114:41	1
HL02012	OAL002WB	ABLPY	OAD6L02	12/02/1115:02	1
HL02013	OAL002WL	ABLPY	OAD6L02	12/02/1115:23	1
HL02014	OAL002WC	ABLPY	OAD6L02	12/02/1115:44	1
HL02015	K221-01	ABLPY	OAD6L02	12/02/1116:05	1
HL02016	OAL002WY	ABLPY	OAD6L02	12/02/1116:46	1
HL02017	K221-02	ABLPY	OAD6L02	12/02/1117:07	1
HL02018	K221-03	ABLPY	OAD6L02	12/02/1117:48	1
HL02019	CCV4	ABLPY	OAD6L02	12/02/1119:11	1
HL02020	CCB4	ABLPY	OAD6L02	12/02/1119:32	1

No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square	Offset	Slope	Curve
1	5.03	LACTATE	0LOff	5	0.9985	-0.001544	0.0487	0.0000
2	5.37	ACETATE	0LOff	5	0.9999	-0.000133	0.0621	0.0000
3	6.18	PROPIONA⁻	0LOff	5	0.9975	0.000908	0.0443	0.0000
4	7.65	BUTYRATE	0LOff	5	0.9967	-0.000925	0.0356	0.0000
5	9.21	PYRUVATE	0LOff	5	0.9985	-0.002609	0.0541	0.0000
Average:					n.a.	n.a.	n.a.	0.0000

$$\text{conc} = \frac{\text{AREA} - \text{OFFSET}}{\text{slope}}$$

AS
12/05/11

SECOND SOURCE VERIFICATION

IC RESULT FORM CalVersion: 300M.L02\HL02(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HL02001	IB	ABLPY	ND	ND	ND	ND	ND	12/02/1111:12	1
HL02002	S-0	ABLPY	ND	ND	ND	ND	ND	12/02/1111:33	1
HL02003	S-1	ABLPY	.09	.098	.117	.074	.12	12/02/1111:54	1
HL02004	S-2	ABLPY	.494	.491	.498	.498	.475	12/02/1112:15	1
HL02005	S-3	ABLPY	1.024	.923	.96	1.027	.955	12/02/1112:36	1
HL02006	S-4	ABLPY	1.99	2.103	1.94	2.088	1.949	12/02/1112:57	1
HL02007	S-5	ABLPY	3	2.958	3.053	2.933	3.052	12/02/1113:18	1
HL02008	ICV	ABLPY	97.1%	96.6%	94.6%	98%	96.8%	12/02/1113:39	1
HL02009	ICB	ABLPY	ND	ND	ND	ND	ND	12/02/1114:00	1
HL02010	CCV2	ABLPY	93.3%	93.9%	92.8%	91.2%	95.8%	12/02/1114:20	1
HL02011	CCB2	ABLPY	ND	ND	ND	ND	ND	12/02/1114:41	1
HL02012	OAL002WB	ABLPY	ND	ND	ND	ND	ND	12/02/1115:02	1
HL02013	OAL002WL	ABLPY	1.96	1.96	1.92	1.95	1.94	12/02/1115:23	1
HL02014	OAL002WC	ABLPY	1.86	1.67	1.86	1.81	1.91	12/02/1115:44	1
HL02015	K221-01	ABLPY	ND	ND	ND	ND	ND	12/02/1116:05	1
HL02016	OAL002WY	ABLPY	1.91	1.82	1.98	1.83	2.02	12/02/1116:46	1
HL02017	K221-02	ABLPY	ND	ND	ND	ND	ND	12/02/1117:07	1
HL02018	K221-03	ABLPY	ND	ND	ND	ND	ND	12/02/1117:48	1
HL02019	CCV4	ABLPY	96.7%	91.8%	95.6%	98.2%	93.5%	12/02/1119:11	1
HL02020	CCB4	ABLPY	ND	ND	ND	ND	ND	12/02/1119:32	1

RS
12/05/11

8050

DAILY CALIBRATIONS

IC RESULT FORM CalVersion: 300M.L02\HL02(2011)

LFID	LSID	SELCOMP	ACETATE	BUTYRATE	LACTATE	PROPIONATE	PYRUVATE	DateTime	Df
HL02010	CCV2	ABLPY	93.3%	93.9%	92.8%	91.2%	95.8%	12/02/1114:20	1
HL02011	CCB2	ABLPY	ND	ND	ND	ND	ND	12/02/1114:41	1
HL02019	CCV4	ABLPY	96.7%	91.8%	95.6%	98.2%	93.5%	12/02/1119:11	1
HL02020	CCB4	ABLPY	ND	ND	ND	ND	ND	12/02/1119:32	1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Eluent : 60 mM NaOH: (60 ml - 2L) SW4-01-221

linear range

S_0 0 ppm S_3 1.0 ppm ICV 2.0 ppm

S_1 0.1 ppm S_4 20 ppm

S_2 0.5 ppm S_5 30 ppm

Sample loop 25 µl

Flow rate 1.5 ml/min

Suppressor ASRS 4mm

SRS Current 100 mA

Column Ion Pac AS11 4x250mm

Guard Column Ion Pac AG11 4x50mm

HL02014 not evaluated - bad inj

Book #:	AD6-009
Instrument No.:	D6
Pipette ID's:	SW8A-02-19
	SW8A-02-20
	SW8A-02-21
Balance ID#:	40706360
Analytical Sequence:	HL02
Method File:	OAD6L02
Analytical Batch:	OAL002W

SOP #	Rev. #
☑ EMAX-300.0M	1
☐ EMAX-7199	2
☐ EMAX-218.6	4
☐ EMAX-	

STANDARDS ID	
ICAL	SW12A-02-347
ICV	-348
CCV	-345
LCS	-346
MS	—

ELECTRONIC DATA ARCHIVAL	
Location	Date
☑ CHROMELEON	12/5/4
☐	

Analyzed By: AM

Date: 12/2/14

Sequence: HL02
Operator: cmadmin

Printed: 12/2/2011 10:42:35 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 19

Created: 12/2/2011 10:17:31 AM by cmadmin
(Modified, not saved)

No.	Sequence	Sample ID	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time	Dil. Factor
1	HL02	001	IB	Unknown	31	25.0	ORG	OAD6L02	Single		1.0000
2	HL02	002	S-0	Standard	32	25.0	ORG	OAD6L02	Single		1.0000
3	HL02	003	S-1	Standard	33	25.0	ORG	OAD6L02	Single		1.0000
4	HL02	004	S-2	Standard	34	25.0	ORG	OAD6L02	Single		1.0000
5	HL02	005	S-3	Standard	35	25.0	ORG	OAD6L02	Single		1.0000
6	HL02	006	S-4	Standard	36	25.0	ORG	OAD6L02	Single		1.0000
7	HL02	007	S-5	Standard	37	25.0	ORG	OAD6L02	Single		1.0000
8	HL02	008	ICV	Unknown	38	25.0	ORG	OAD6L02	Single		1.0000
9	HL02	009	ICB	Unknown	39	25.0	ORG	OAD6L02	Single		1.0000
10	HL02	010	CCV2	Unknown	100	25.0	ORG	OAD6L02	Single		1.0000
11	HL02	011	CCB2	Unknown	99	25.0	ORG	OAD6L02	Single		1.0000
12	HL02	012	OAL004WB	Unknown	98	25.0	ORG	OAD6L02	Single		1.0000
13	HL02	013	OAL004WL	Unknown	97	25.0	ORG	OAD6L02	Single		1.0000
14	HL02	014	OAL004WC	Unknown	96	25.0	ORG	OAD6L02	Single		1.0000
15	HL02	015	K221-01	Unknown	1	25.0	ORG	OAD6L02	Single		1.0000
16	HL02	016	K221-02	Unknown	2	25.0	ORG	OAD6L02	Single		1.0000
17	HL02	017	K221-03	Unknown	3	25.0	ORG	OAD6L02	Single		1.0000
18	HL02	018	CCV4	Unknown	100	25.0	ORG	OAD6L02	Single		1.0000
19	HL02	019	CCB4	Unknown	99	25.0	ORG	OAD6L02	Single		1.0000

FINAL

6055

Chromeleon © Dionex Corporation, Version 6.70 Build 1820

Sequence: HL02
Operator: cmadmin

Printed: 12/2/2011 10:42:35 AM

Title: Temporary sequence for manual data acquisition
Datasource: D39B3Q91_local
Location: Organic Acid\2011
Timebase: ICS1000
#Samples: 19

Created: 12/2/2011 10:17:31 AM by cmadmin
(Modified, not saved)

No.	Sequence	Comment
1	HL02	
2	HL02	
3	HL02	
4	HL02	
5	HL02	
6	HL02	
7	HL02	
8	HL02	
9	HL02	
10	HL02	
11	HL02	
12	HL02	
13	HL02	
14	HL02	
15	HL02	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
16	HL02	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
17	HL02	SAMPLE WAS PREPPED AT DF=10 PRIOR TO ANALYSIS
18	HL02	
19	HL02	

FINAL

8056

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CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K221

METHOD 2320B
TOTAL ALKALINITY

A total of three (3) water samples were received on 11/28/11 for Alkalinity analysis, Method 2320B in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for ALL001WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2320B
TOTAL ALKALINITY

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K221

Matrix : WATER
Instrument ID : E5

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	ALL001WB	ND	1	NA	5.00	5.00	12/12/1115:20	NA	11E5L01004	11E5L01002	ALL001W	NA	NA
LCS1W	ALL001WL	210	1	NA	5.00	5.00	12/12/1115:26	NA	11E5L01005	11E5L01002	ALL001W	NA	NA
LCD1W	ALL001WC	210	1	NA	5.00	5.00	12/12/1115:33	NA	11E5L01006	11E5L01002	ALL001W	NA	NA
MW-70-RDO-4-174	K221-01	9.88	1	NA	5.00	5.00	12/12/1118:37	NA	11E5L01030	11E5L01026	ALL001W	11/28/1110:54	11/28/11
IR-70-FSB229-175	K221-02	1350	1	NA	5.00	5.00	12/12/1118:53	NA	11E5L01031	11E5L01026	ALL001W	11/28/1112:42	11/28/11
MW-70-49-176	K221-03	197	1	NA	5.00	5.00	12/12/1119:00	NA	11E5L01032	11E5L01026	ALL001W	11/28/1114:38	11/28/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD 2320B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	ALL001WB	ALL001WL	ALL001WC		
LAB FILE ID:	11E5L01004	11E5L01005	11E5L01006		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	12/12/1115:20	12/12/1115:26	12/12/1115:33	DATE RECEIVED:	NA
PREP. BATCH:	ALL001W	ALL001W	ALL001W		
CALIB. REF:	11E5L01002	11E5L01002	11E5L01002		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Total Alkalinity	ND	230	210	91	230	210	91	0	80-120	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ALKALINITY

Note: For samples and relevent QCs/Standards analyzed, refer to attached analytical sequence.

☒ Titration end point: pH 4.5 ± 0.04

☒ Low alkalinity: pH 4.2 ± 0.04

MS/MSD amount of spike: See below.

Comments: Method 2320B for SDGs: 11L055, 11L805, and 11K221

0.4ml of SWP1-007-57-01 (10,000 ppm) was spiked into L055-02U with a final volume of 40 ml.

Results for L037-06 and L050-03 will be checked manually. If results are consistent, samples will be reported as ND for alkalinity.

Book#: AAL-031

Instrument No.: ☐ 53 ☐ 97 ☒ E5

Analytical Batch: AL001 ; AL002

Analytical Sequence: 11E5L01

SOP #	Rev. #
☒ EMAX-310.1	5
☒ EMAX-2320B	3
☐ EMAX-	

STANDARDS ID	CONC. (mg/L)
0.02N HCL SWR1-01-483	0.02
LCS/CCV SW1-01-407	230
MS/MSD SWP1-007-57-01	100
ICV SW1-01-344	108

pH Buffer	ID
pH 4	SW1-01-341
pH 7	-342
pH 10	-396
pH 8.0 (Check)	-347

Analyzed By: Re

Date: 12/12/11

8060

PC-TitratION PLUS

pH and Alkalinity In-Run Report

Run Number 548 **Analytical Batch#** **11E5L01**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
1	ICV PH8	11E5L01	12/12/2011	3:04 PM	7.96	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	
2	ICV	11E5L01	12/12/2011	3:11 PM	8.61	.83	2.65	-1.00	33.35	106.15	39.45	66.71	.00	
3	ICB	11E5L01	12/12/2011	3:15 PM	4.87	.00	.01	.01	.00	.00	.00	.00	.00	
4	ALL001WB	11E5L01	12/12/2011	3:20 PM	4.31	.00	.00	.00	.00	-.12	-.12	.00	.00	
5	ALL001WL	11E5L01	12/12/2011	3:26 PM	8.57	1.43	5.24	-1.00	57.10	209.69	95.48	114.21	.00	
6	ALL001WC	11E5L01	12/12/2011	3:33 PM	8.58	1.46	5.25	-1.00	58.40	210.01	93.20	116.80	.00	
7	L055-01	11E5L01	12/12/2011	3:41 PM	7.74	.00	4.29	-1.00	.00	171.55	171.55	.00	.00	
8	L055-02	11E5L01	12/12/2011	3:48 PM	7.93	.00	2.55	-1.00	.00	102.04	102.04	.00	.00	
9	L055-02D	11E5L01	12/12/2011	3:55 PM	7.94	.00	2.55	-1.00	.00	102.10	102.10	.00	.00	
10	L055-02M	11E5L01	12/12/2011	4:05 PM	9.29	1.33	5.19	-1.00	53.32	207.54	100.89	106.65	.00	
11	L055-03	11E5L01	12/12/2011	4:15 PM	8.19	.00	1.52	-1.00	.00	60.69	60.69	.00	.00	
12	L055-04	11E5L01	12/12/2011	4:22 PM	7.86	.00	4.88	-1.00	.00	195.35	195.35	.00	.00	
13	L055-05	11E5L01	12/12/2011	4:30 PM	7.90	.00	1.48	-1.00	.00	59.28	59.28	.00	.00	
14	CCV1	11E5L01	12/12/2011	4:37 PM	8.76	2.17	5.18	-1.00	86.90	207.01	33.21	173.80	.00	
15	CCB1	11E5L01	12/12/2011	4:42 PM	4.96	.00	.01	.02	.00	.07	.07	.00	.00	
16	L055-06	11E5L01	12/12/2011	4:49 PM	7.84	.00	1.46	-1.00	.00	58.51	58.51	.00	.00	
17	L037-06	11E5L01	12/12/2011	4:56 PM	4.45	.00	.00	6.47	.00	-258.97	-258.97	.00	.00	
18	L037-07	11E5L01	12/12/2011	5:02 PM	6.43	.00	2.09	-1.00	.00	83.61	83.61	.00	.00	

8061

Analyzed by: RC Reviewed by: RC Date: 12/13/11

PC-TitratION PLUS by Man-Tech Associates, Inc.

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Run Number 548 **Analytical Batch#** **11E5L01**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
19	L037-08	11E5L01	12/12/2011	5:09 PM	5.76	.00	.08	.10	.00	1.95	1.95	.00	.00	
20	L037-14	11E5L01	12/12/2011	5:18 PM	6.68	.00	15.23	-1.00	.00	609.39	609.39	.00	.00	
21	L037-15	11E5L01	12/12/2011	5:31 PM	6.81	.00	23.49	-1.00	.00	939.69	939.69	.00	.00	
22	L805-01	11E5L01	12/12/2011	5:38 PM	7.24	.00	.74	-1.00	.00	29.65	29.65	.00	.00	
23	L805-02	11E5L01	12/12/2011	5:45 PM	7.37	.00	.74	-1.00	.00	29.54	29.54	.00	.00	
24	L805-03	11E5L01	12/12/2011	5:52 PM	7.60	.00	1.39	-1.00	.00	55.61	55.61	.00	.00	
25	L805-04	11E5L01	12/12/2011	5:59 PM	7.47	.00	.94	-1.00	.00	37.48	37.48	.00	.00	
26	CCV2	11E5L01	12/12/2011	6:09 PM	8.88	2.54	5.20	-1.00	101.70	207.96	4.55	203.40	.00	
27	CCB2	11E5L01	12/12/2011	6:14 PM	5.08	.00	.01	.03	.00	-.14	-.14	.00	.00	
28	L805-05	11E5L01	12/12/2011	6:21 PM	7.47	.00	1.02	-1.00	.00	40.86	40.86	.00	.00	
29	L805-06	11E5L01	12/12/2011	6:28 PM	7.62	.00	1.71	-1.00	.00	68.34	68.34	.00	.00	
30	K221-01	11E5L01	12/12/2011	6:37 PM	8.66	.05	.31	.37	1.95	9.88	5.98	3.91	.00	
31	K221-02	11E5L01	12/12/2011	6:53 PM	7.29	.00	33.83	-1.00	.00	1,353.18	1,353.18	.00	.00	
32	K221-03	11E5L01	12/12/2011	7:00 PM	7.86	.00	4.93	-1.00	.00	197.13	197.13	.00	.00	
33	RINSE	11E5L01	12/12/2011	7:06 PM	5.91	.00	.07	.14	.00	-.19	-.19	.00	.00	
34	ALL002WB	11E5L01	12/12/2011	7:12 PM	5.47	.00	.05	.11	.00	-.61	-.61	.00	.00	
35	ALL002WL	11E5L01	12/12/2011	7:19 PM	8.94	2.78	5.19	-1.00	111.15	207.78	.00	193.25	14.53	
36	ALL002WC	11E5L01	12/12/2011	7:28 PM	8.91	2.66	5.19	-1.00	106.34	207.66	.00	202.63	5.03	
37	L028-01	11E5L01	12/12/2011	7:35 PM	7.45	.00	1.65	-1.00	.00	65.90	65.90	.00	.00	
38	CCV3	11E5L01	12/12/2011	7:42 PM	8.86	2.55	5.20	-1.00	102.08	207.87	3.71	204.15	.00	

3092

Analyzed by: Rc Reviewed by: RU Date: 12/13/11

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Run Number 548 **Analytical Batch#** **11E5L01**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
39	CCB3	11E5L01	12/12/2011	7:48 PM	5.32	.00	.02	.05	.00	-.10	-.10	.00	.00	
40	L028-03	11E5L01	12/12/2011	7:54 PM	6.05	.00	4.16	-1.00	.00	166.58	166.58	.00	.00	
41	L028-05	11E5L01	12/12/2011	7:59 PM	6.07	.00	1.68	-1.00	.00	67.24	67.24	.00	.00	
42	L028-07	11E5L01	12/12/2011	8:05 PM	5.47	.00	.20	.24	.00	6.41	6.41	.00	.00	
43	L028-08	11E5L01	12/12/2011	8:11 PM	6.29	.00	3.92	-1.00	.00	157.00	157.00	.00	.00	
44	L028-09	11E5L01	12/12/2011	8:18 PM	6.30	.00	2.19	-1.00	.00	87.66	87.66	.00	.00	
45	L050-03	11E5L01	12/12/2011	8:24 PM	4.35	.00	.00	7.41	.00	-296.57	-296.57	.00	.00	
46	L050-04	11E5L01	12/12/2011	8:37 PM	4.75	.00	14.56	-1.00	.00	582.53	582.53	.00	.00	
47	L050-05	11E5L01	12/12/2011	8:43 PM	6.76	.00	2.54	-1.00	.00	101.49	101.49	.00	.00	
48	L050-08	11E5L01	12/12/2011	8:52 PM	5.71	.00	8.68	-1.00	.00	347.22	347.22	.00	.00	
49	L050-09	11E5L01	12/12/2011	8:59 PM	6.93	.00	4.87	-1.00	.00	194.82	194.82	.00	.00	
50	CCV4	11E5L01	12/12/2011	9:06 PM	8.95	2.78	5.19	-1.00	111.20	207.73	.00	193.05	14.68	
51	CCB4	11E5L01	12/12/2011	9:11 PM	5.29	.00	.02	.05	.00	-.27	-.27	.00	.00	
52	L050-10	11E5L01	12/12/2011	9:17 PM	6.64	.00	1.44	-1.00	.00	57.42	57.42	.00	.00	
53	L050-12	11E5L01	12/12/2011	9:24 PM	6.79	.00	4.22	-1.00	.00	168.78	168.78	.00	.00	
54	L050-13	11E5L01	12/12/2011	9:30 PM	6.89	.00	4.22	-1.00	.00	168.84	168.84	.00	.00	
55	L050-14	11E5L01	12/12/2011	9:37 PM	6.13	.00	.10	.16	.00	1.83	1.83	.00	.00	
56	L052-02	11E5L01	12/12/2011	9:44 PM	6.17	.00	.09	.14	.00	1.60	1.60	.00	.00	
57	L060-01	11E5L01	12/12/2011	9:52 PM	6.07	.00	3.82	-1.00	.00	152.89	152.89	.00	.00	
58	L060-02	11E5L01	12/12/2011	9:58 PM	6.47	.00	2.40	-1.00	.00	95.91	95.91	.00	.00	

Analyzed by: RC Reviewed by: RC Date: 12/13/11

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Run Number 548 **Analytical Batch#** **11E5L01**

Seq. #	SampleID	Data File Name	RunDate	RunTime	pH	Volume @pH 8.3	Volume @pH 4.5	Volume @pH 4.2	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	Review Notes
59	L060-03	11E5L01	12/12/2011	10:04 PM	6.07	.00	4.83	-1.00	.00	193.07	193.07	.00	.00	
60	L061-01	11E5L01	12/12/2011	10:11 PM	7.89	.00	5.23	-1.00	.00	209.09	209.09	.00	.00	
61	L061-01D	11E5L01	12/12/2011	10:19 PM	8.00	.00	5.30	-1.00	.00	211.92	211.92	.00	.00	
62	CCV5	11E5L01	12/12/2011	10:28 PM	8.98	2.87	5.25	-1.00	114.71	209.91	.00	190.40	19.51	
63	CCB5	11E5L01	12/12/2011	10:33 PM	5.38	.00	.02	.05	.00	-.34	-.34	.00	.00	

Analyzed by: Ro Reviewed by: Ro Date: 12/13/11

pH AND ALKALINITY IN-RUN REPORT.SRW

PC-TitratION PLUS by Man-Tech Associates, Inc.

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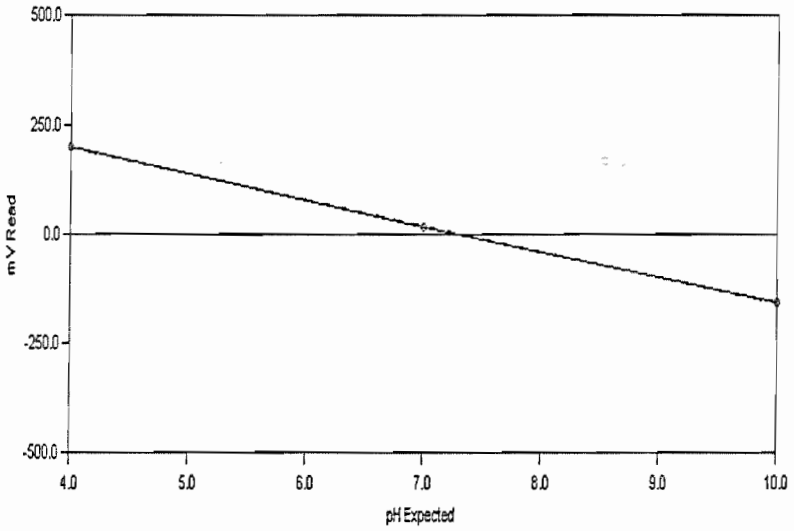
PC-TitratION PLUS
Calibration Report

Calibration Record # 286



Calibration Settings

Calibration ID	PH CAL 4-7-10	Date	12/12/2011
Channel	1	Time	3:01 PM
Probe Type	pH	Temperature	295.84 K 22.69 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit

Calibration Results

Slope	-59.487	CorrCoeff	0.9998
Intercept	19.897	Equation: Y = (-59.487) X + (19.897)	

Calibration Validity **True** Operator

	Result	Minimum	Maximum
Slope	-59.487	-65.00	-53.00
Intercept	19.897	-40.00	40.00
Correlation Coefficient	0.9998	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	**Standard**	**Reading**
	4.00	200.19
	7.00	16.23
	10.00	-156.73

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PC-Titrate For Windows

Running List Report

Order Number - 11E5L01

	Schedule	Sample Id	Vial	Weight	Volume
1	PH CAL	CAL	1	.00	25.00
2	PH ONLY	ICV PH8	4	.00	25.00
3	PH-ALK	ICV	5	.00	25.00
4	PH-ALK	ICB	6	.00	25.00
5	PH-ALK	ALL001WB	7	.00	25.00
6	PH-ALK	ALL001WL	8	.00	25.00
7	PH-ALK	ALL001WC	9	.00	25.00
8	PH-ALK	L055-01	10	.00	25.00
9	PH-ALK	L055-02	11	.00	25.00
10	PH-ALK	L055-02D	12	.00	25.00
11	PH-ALK	L055-02M	13	.00	25.00
12	PH-ALK	L055-03	14	.00	25.00
13	PH-ALK	L055-04	15	.00	25.00
14	PH-ALK	L055-05	16	.00	25.00
15	PH-ALK	CCV1	17	.00	25.00
16	PH-ALK	CCB1	18	.00	25.00
17	PH-ALK	L055-06	19	.00	25.00
18	PH-ALK	L037-06	20	.00	25.00
19	PH-ALK	L037-07	21	.00	25.00
20	PH-ALK	L037-08	22	.00	25.00
21	PH-ALK	L037-14	23	.00	25.00
22	PH-ALK	L037-15	24	.00	25.00
23	PH-ALK	L805-01	25	.00	25.00
24	PH-ALK	L805-02	26	.00	25.00
25	PH-ALK	L805-03	27	.00	25.00
26	PH-ALK	L805-04	28	.00	25.00
27	PH-ALK	CCV2	29	.00	25.00
28	PH-ALK	CCB2	30	.00	25.00
29	PH-ALK	L805-05	31	.00	25.00
30	PH-ALK	L805-06	32	.00	25.00
31	PH-ALK	K221-01	33	.00	25.00
32	PH-ALK	K221-02	34	.00	25.00
33	PH-ALK	K221-03	35	.00	25.00
34	PH-ALK	RINSE	36	.00	25.00
35	PH-ALK	ALL002WB	37	.00	25.00
36	PH-ALK	ALL002WL	38	.00	25.00
37	PH-ALK	ALL002WC	39	.00	25.00
38	PH-ALK	L028-01	40	.00	25.00
39	PH-ALK	CCV3	41	.00	25.00
40	PH-ALK	CCB3	42	.00	25.00

PC-TitratION PLUS by Man-Tech Associates, Inc.
Copyright Hinterland Software Ltd.

Running List Report

Order Number - 11E5L01

	Schedule	Sample Id	Vial	Weight	Volume
41	PH-ALK	L028-03	43	.00	25.00
42	PH-ALK	L028-05	44	.00	25.00
43	PH-ALK	L028-07	45	.00	25.00
44	PH-ALK	L028-08	46	.00	25.00
45	PH-ALK	L028-09	47	.00	25.00
46	PH-ALK	L050-03	48	.00	25.00
47	PH-ALK	L050-04	49	.00	25.00
48	PH-ALK	L050-05	50	.00	25.00
49	PH-ALK	L050-08	51	.00	25.00
50	PH-ALK	L050-09	52	.00	25.00
51	PH-ALK	CCV4	53	.00	25.00
52	PH-ALK	CCB4	54	.00	25.00
53	PH-ALK	L050-10	55	.00	25.00
54	PH-ALK	L050-12	56	.00	25.00
55	PH-ALK	L050-13	57	.00	25.00
56	PH-ALK	L050-14	58	.00	25.00
57	PH-ALK	L052-02	59	.00	25.00
58	PH-ALK	L060-01	60	.00	25.00
59	PH-ALK	L060-02	61	.00	25.00
60	PH-ALK	L060-03	62	.00	25.00
61	PH-ALK	L061-01	63	.00	25.00
62	PH-ALK	L061-01D	64	.00	25.00
63	PH-ALK	CCV5	65	.00	25.00
64	PH-ALK	CCB5	66	.00	25.00

PC-TitratION PLUS by Man-Tech Associates, Inc.
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CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K221

METHOD 2540C
TOTAL DISSOLVED SOLIDS

A total of three (3) water samples were received on 11/28/11 for Total Dissolved Solids analysis, Method 2540C in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Balance calibration was checked as prescribed by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TDL001WL/C were all within QC limits.

Matrix QC Sample
Sample duplicate was analyzed with the samples in this SDG. RPD was within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 2540C
TOTAL DISSOLVED SOLIDS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K221

Matrix : WATER
Instrument ID : 40706360

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TDL001WB	ND	1	NA	20.0	20.0	12/01/1115:09	NA	TDL00101	NA	TDL001W	NA	NA
LCS1W	TDL001WL	925	1	NA	20.0	20.0	12/01/1115:09	NA	TDL00102	NA	TDL001W	NA	NA
LCD1W	TDL001WC	955	1	NA	20.0	20.0	12/01/1115:09	NA	TDL00103	NA	TDL001W	NA	NA
MW-70-RDO-4-174	K221-01	2260	1	NA	20.0	20.0	12/01/1115:09	NA	TDL00104	NA	TDL001W	11/28/1110:54	11/28/11
MW-70-RDO-4-174DUP	K221-01D	2260	1	NA	20.0	20.0	12/01/1115:09	NA	TDL00105	NA	TDL001W	11/28/1110:54	11/28/11
IR-70-FSB229-175	K221-02	2300	1	NA	20.0	20.0	12/01/1115:09	NA	TDL00106	NA	TDL001W	11/28/1112:42	11/28/11
MW-70-49-176	K221-03	3440	1	NA	20.0	20.0	12/01/1115:09	NA	TDL00107	NA	TDL001W	11/28/1114:38	11/28/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD 2540C

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TDL001WB	TDL001WL	TDL001WC		
LAB FILE ID:	TDL00101	TDL00102	TDL00103		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	12/01/1115:09	12/01/1115:09	12/01/1115:09	DATE RECEIVED:	NA
PREP. BATCH:	TDL001W	TDL001W	TDL001W		
CALIB. REF:	NA	NA	NA		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TDS	ND	1000	925	92	1000	955	96	3	80-120	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD 2540C

==========

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MW-70-RDO-4-174			
EMAX SAMP ID:	K221-01	K221-01D		
LAB FILE ID:	TDL00104	TDL00105		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	11/28/11 10:54
DATE ANALYZED:	12/01/1115:09	12/01/1115:09	DATE RECEIVED:	11/28/11
PREP. BATCH:	TDL001W	TDL001W		
CALIB. REF:	NA	NA		

ACCESSION:

PARAMETER	SMPL RSLT (mg/L)	DUPL RSLT (mg/L)	RPD RSLT %	QC LIMIT (%)
TDS	2260	2260	0	5

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EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
GRAVIMETRIC

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AGV-047

Balance ID: 40706360

Analytical Batch: NM12/12 ~~TDL005~~ TDL-001

SOP #	Rev. #
☐ EMAX-160.1	6
☐ EMAX-160.2	4
☐ EMAX-160.3	2
☐ EMAX-2540B	1
☑ EMAX-2540C	5
☐ EMAX-2540D	1

STANDARDS ID	CONC. (mg/L)
LCS SW2-02-914	1000

Micropipette ID:

Analyzed By: NM

Date: 12/2/11

GRAVIMETRIC ANALYSES
RAW DATA

EMAX LABORATORIES, INC.

Analytical Batch: TDL001 Instrument ID: 40706360 Oven Temp IN (°C): 180 Oven Temp OUT (°C): 180 SOP: EMAX-2540C Rev.1

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish #	Dish (g)	Date	Time	1st Dry Weight + Dish (g)	Date	Time	2nd Dry Weight + Dish (g)	Date	Time	3rd Dry Weight + Dish (g)	Date	Time	Difference 1st & 2nd Dry Wt. Rdg.	Difference 2nd & 3rd Dry Wt. Rdg. (<0.5mg)	NOTES
TDL00101	TDL001WB	100	B	71.3225	12/01/11	15:09	71.3221	12/02/11	10:12	71.3221	12/02/11	12:15	71.3221	12/02/11	12:15	0	0.0	
TDL00102	TDL001WL	20	L	21.4586	12/01/11	15:09	21.4771	12/02/11	10:12	21.4771	12/02/11	12:15	21.4771	12/02/11	12:15	0	0.0	
TDL00103	TDL001WC	20	C	21.5580	12/01/11	15:09	21.5773	12/02/11	10:12	21.5771	12/02/11	12:15	21.5771	12/02/11	12:15	-0.0002	0.0	
TDL00104	K221-01	20	1	21.4562	12/01/11	15:09	21.5016	12/02/11	10:12	21.5013	12/02/11	12:16	21.5013	12/02/11	12:16	-0.0003	0.0	
TDL00105	K221-01D	20	2	21.5130	12/01/11	15:10	21.5584	12/02/11	10:13	21.5583	12/02/11	12:16	21.5583	12/02/11	12:16	-1E-04	0.0	
TDL00106	K221-02	20	3	21.5206	12/01/11	15:10	21.5669	12/02/11	10:13	21.5667	12/02/11	12:16	21.5667	12/02/11	12:16	-0.0002	0.0	
TDL00107	K221-03	20	4	21.4381	12/01/11	15:10	21.5072	12/02/11	10:13	21.5069	12/02/11	12:17	21.5069	12/02/11	12:17	-0.0003	0.0	

NM 12/2/11

Beginning Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.0999	12/1/11 15:08	PASSED
5	4.9996	12/1/11 15:08	PASSED
100	99.9932	12/1/11 15:08	PASSED

Ending Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	12/1/11 15:11	PASSED
5	4.9997	12/1/11 15:11	PASSED
100	99.9929	12/1/11 15:12	PASSED

Beginning Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	12/2/11 10:11	PASSED
5	4.9998	12/2/11 10:11	PASSED
100	99.9941	12/2/11 10:11	PASSED

Ending Balance Check

Std Weight (g)	Balance Rdg (g)	Date	Comments
0.1	0.1000	12/2/11 12:17	PASSED
5	5.0000	12/2/11 12:17	PASSED
100	99.9946	12/2/11 12:17	PASSED

Acceptance Criteria: ± 0.1% OR 0.5 mg

LCS Conc 1000 mg/L MDL 10 RL 10 mg/L Initial Rdg by NM Final Rdg by NM Reviewed by NM

Remarks Date 12/2/11

LABORATORIES, INC

GRAVIMETRIC CALCULATION

Analytical Batch: TDL001 Start Date/Time: 12/01/11 15:09 Temp IN(°C): 180

Balance ID: 40706360 End Date/Time: 12/02/11 12:17 Temp Out(°C): 180

DATA FILE ID	Sample ID	Sample Amount (ml)	Dish (g)	Dry Weight + Dish (g)	SOLIDS (mg)	RESULT (mg/L)	NOTES
TDL00101	TDL001WB	100	71.3225	71.3221	-0.4000	ND	
TDL00102	TDL001WL	20	21.4586	21.4771	18.5000	925	93
TDL00103	TDL001WC	20	21.558	21.5771	19.1000	955	96
TDL00104	K221-01	20	21.4562	21.5013	45.1000	2260	
TDL00105	K221-01D	20	21.513	21.5583	45.3000	2260	
TDL00106	K221-02	20	21.5206	21.5667	46.1000	2300	
TDL00107	K221-03	20	21.4381	21.5069	68.8000	3440	

12/2/11
NM

LCS Concentration: 1000 mg/L MDL(mg/L): 10 Initial Reading by: NM

SOP: EMAX-2540C Rev.1 RL (mg/L): 10 Final Reading by: NM

Remarks:

Reviewed by: NM

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K221

METHOD 4500F
DISSOLVED HYDROGEN SULFIDE

A total of three (3) water samples were received on 11/28/11 for Dissolved Hydrogen Sulfide analysis, Method 4500F in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Matrix QC Sample
Sample duplicate was analyzed with the samples. RPD was within project limit.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 4500F
Dissolved Hydrogen Sulfide

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K221

Matrix : WATER
Instrument ID : NA

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	HSK006WB	ND	1	NA	1.00	1.00	11/29/1111:35	NA	HSK00601	NA	HSK006W	NA	NA
MW-70-RDO-4-174	K221-01	ND	1	NA	1.00	1.00	11/29/1112:16	NA	HSK00604	NA	HSK006W	11/28/1110:54	11/28/11
MW-70-RDO-4-174DUP	K221-01D	ND	1	NA	1.00	1.00	11/29/1112:19	NA	HSK00605	NA	HSK006W	11/28/1110:54	11/28/11
IR-70-FSB229-175	K221-02	ND	1	NA	1.00	1.00	11/29/1112:25	NA	HSK00606	NA	HSK006W	11/28/1112:42	11/28/11
MW-70-49-176	K221-03	ND	1	NA	1.00	1.00	11/29/1112:28	NA	HSK00607	NA	HSK006W	11/28/1114:38	11/28/11

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EMAX QUALITY CONTROL DATA
DUPLICATE ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
METHOD: METHOD 4500F (DISSOLVED)
MATRIX: WATER
% MOISTURE: NA

BATCH NO.: 11K221
SAMPLE ID: MW-70-RDO-4-174DUP
CONTROL NO.: K221-01D

DATE RECEIVED: 11/28/11
DATE EXTRACTED: NA
DATE ANALYZED: 11/29/11 12:19

ACCESSION:

PARAMETER	SAMPLE (mg/L)	DUP. SAMPLE (mg/L)	RPD (%)	RPD LIMIT (%)
Hydrogen Sulfide	ND	ND	0	20

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
SULFIDE

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Book #: ASD-018

Analytical Batch: HSK006

Comments:

SOP #	Rev. #
☐ EMAX-376.1	3
☐ EMAX-9034	0
☐ EMAX-4500-S2F	1
☑ EMAX-4500-S2H	0
☐ EMAX-	

STANDARDS ID	conc.
LCS SWI-01-422	8.48
Spike NA	NA
$Na_2S_2O_3$ Standard SWRI-01-384	0.0248
Iodine SWRI-01-465	0.0250
HCl SWPI-007-60-63	6N
Indicator SWRI-01-340	–

Analyzed By: NM

Date: 11/29/11

EMAX LABORATORIES, INC.

ANALYSIS FOR SULFIDE

Method: SM4500-S2-H Analytical Batch: **HSK006** Book #: ASD-018 Page: 16

Data File Name	Lab Sample ID	V_e (ml)	V_I (ml)	Volume of Titant V_t (ml)	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Sulfide	Sample Result	Flag J	Unit
HSK0061	**HSK006WB**	100	2.5	2.48	11/29/11	11:35:39	0.15936	ND		mg/L
HSK0062	**HSK006WL**	100	2.5	0.66	11/29/11	11:46:36	7.38112	7.38		mg/L
HSK0063	**HSK006WC**	100	2.5	0.69	11/29/11	11:48:24	7.26208	7.26		mg/L
HSK0064	**K221-01**	100	2.5	2.52	11/29/11	12:16:39	0.00064	ND		mg/L
HSK0065	**K221-01D**	100	2.5	2.52	11/29/11	12:19:50	0.00064	ND		mg/L
HSK0066	**K221-02**	100	2.5	2.5	11/29/11	12:25:34	0.08	ND		mg/L
HSK0067	**K221-03**	100	2.5	2.51	11/29/11	12:28:38	0.04032	ND		mg/L

NM 11/29/11

STANDARDIZATION

V_I (ml)	V_{Na2SO3} (ml)	DATE	TIME	Titrant Na_2SO_3 (N)
Average Normality of Iodine (NI)=				**0.025**

☑ Standard Purchased as Certified Solution

$$N_I = \frac{(N * V)_{Na_2SO_3}}{V_I}$$

MISCELLANEOUS INFORMATION

Standard	Concentration		Unit
Iodine	0.025		N
$Na_2S_2O_3$	0.0248		N
LCS [WATER | SOIL]	8.48	84.8	mg/L | mg/Kg
MDL [WATER | SOIL]	1	10	mg/L | mg/Kg
RL	1	10	mg/L | mg/Kg

$$S(mg/L) = \frac{[(V_I * N_I) - (V_t * N_t)](16{,}000)}{V_S}$$

MS/MSD	TV=	8.48	mg/L
ID	Result (mg/L)	%Rec.	RPD

Comments:

Analyzed By: NM

8079

SM4500-S^2 H

EMAX LABORATORIES, INC.

ANALYSIS FOR UN-IONIZED HYDROGEN SULFIDE

Method SM4500-S2-H

Analytical Batch: HSK006

Data File Name	Lab Sample ID	Sulfide	Unit	Date Time	Temp. °C	pH	Conductivity µS/cm	H2S	Unit	COMMENTS
HSK0061	HSK006WB	ND	mg/L	11/29/11 11:35				ND	mg/L	
HSK0062	HSK006WL	7.38	mg/L	11/29/11 11:46				#VALUE!	mg/L	
HSK0063	HSK006WC	7.26	mg/L	11/29/11 11:48				#VALUE!	mg/L	
HSK0064	K221-01	ND	mg/L	11/29/11 12:16	25.4	9.1	3750	ND	mg/L	
HSK0065	K221-01D	ND	mg/L	11/29/11 12:19	25.4	9.11	3760	ND	mg/L	
HSK0066	K221-02	ND	mg/L	11/29/11 12:25	25.3	6.64	3790	ND	mg/L	
HSK0067	K221-03	ND	mg/L	11/29/11 12:28	25.3	7.46	5720	ND	mg/L	

MM 11/29/11

$$pK_1 = 32.5 + 1519.44/T - 15.672\log_{10}T + 0.02722T$$

$$A = 0.7083 - 2.277x10^{-3}T + 5.399x10^{-6}T^2$$

$$I = 1.6x10^{-5}\,Conductivity$$

$$pf_m = A\left(\frac{\sqrt{I}}{1+\sqrt{I}} - 0.3\right)$$

$$K'_1 = 10^{-pK_1+2pf_m}$$

$$H^+ = 10^{-pH+pf_m}$$

$$H_2S = \left(\frac{S_T}{1+\frac{K'_1}{H^+}}\right)$$

Analyzed by: NM

Reviewed by: NM

Date: 11/29/2011

Where: T(°K)= T°C+272.15 pK1=dissociation constant for zero ionic strength A= Debye-Huckel Parameter I= Ionic Strength pfm=negative logarithm of the monovalent ion activity coefficient K'_1=conditional ionization constant H^+=Hydrogen ion concentration S_T=Total Sulfide Concentration

8080

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K221

METHOD SM5310B
TOC

A total of three (3) water samples were received on 11/28/11 for Total Organic Carbon analysis, Method SM5310B in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for TCL001WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD SM5310B
TOC

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.
Batch No. : 11K221

Matrix : WATER
Instrument ID : I62

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	TCL001WB	ND	1	NA	1.00	0.500	12/02/1114:25	NA	TCL001-05	TCL001-02	TCL001W	NA	NA
LCS1W	TCL001WL	24.9	1	NA	1.00	0.500	12/02/1114:38	NA	TCL001-06	TCL001-02	TCL001W	NA	NA
LCD1W	TCL001WC	24.9	1	NA	1.00	0.500	12/02/1114:51	NA	TCL001-07	TCL001-02	TCL001W	NA	NA
MW-70-RDO-4-174	K221-01	3.23	1	NA	1.00	0.500	12/02/1115:37	NA	TCL001-11	TCL001-02	TCL001W	11/28/1110:54	11/28/11
IR-70-FSB229-175	K221-02	13.9	1	NA	1.00	0.500	12/02/1115:49	NA	TCL001-12	TCL001-02	TCL001W	11/28/1112:42	11/28/11
MW-70-49-176	K221-03	2.59	1	NA	1.00	0.500	12/02/1116:00	NA	TCL001-13	TCL001-02	TCL001W	11/28/1114:38	11/28/11

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K221
METHOD: METHOD SM5310B

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	TCL001WB	TCL001WL	TCL001WC		
LAB FILE ID:	TCL001-05	TCL001-06	TCL001-07		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	12/02/1114:25	12/02/1114:38	12/02/1114:51	DATE RECEIVED:	NA
PREP. BATCH:	TCL001W	TCL001W	TCL001W		
CALIB. REF:	TCL001-02	TCL001-02	TCL001-02		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
TOC	ND	25.0	24.9	100	25.0	24.9	100	0	85-115	20

6993

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TOC

	Date	Time
Start	12/2/11	1237
End	12/2/11	1620

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

TCL001W
K786 415.1
K599 5310B
K221 ↓

Book #:	A62-020
Instrument No.:	62
Pipette ID:	039380025
	SW3-01-33
	SI1A-01-4
Balance ID:	40706360
Analytical Sequence:	TCL001
Method File:	TCL001
Analytical Batch:	TCL001W

SOP #	Rev. #
☑ EMAX-415.1	2
☑ EMAX-5310B	1
☐ EMAX-9060	2
☐ EMAX-	

STANDARDS ID	CONC. (mg/L)
S0 nanopure	0
S1 SW10B-04-181	1
S2 ↓	5
S3	10
S4	40
S5	80
S6 —	—
ICV/LCS SW10B-04-180	25
CCV ↓ -179	25

ELECTRONIC DATA ARCHIVAL	
Location	Date
☑ TOC	12/5/11
☐	

Analyzed By: tm

Date: 12/2/11

2 M HCl SW4-01-223

8084

	Type	Analysi	Sample Name	Sample ID	ObjectID	Origin	Dilution	Result	Comment
1	Standard	NPOC	ICAL	TCL001-01	0A-123456-	C:\Program	1.000		
2	Control	NPOC	ICV	TCL001-02	0A-123456-	C:\Program	1.000	NPOC:24.99 mg/L	
3	Unknown	NPOC	ICB	TCL001-03	0A-123456-	C:\Program	1.000	NPOC:0.1725 mg/	
4	Unknown	NPOC	HCO3\CO3	TCL001-04	0A-123456-	C:\Program	1.000	NPOC:0.2891 mg/	
5	Unknown	NPOC	TCL001WB	TCL001-05	0A-123456-	C:\Program	1.000	NPOC:0.05991 mg	
6	Unknown	NPOC	TCL001WL	TCL001-06	0A-123456-	C:\Program	1.000	NPOC:24.91 mg/L	
7	Unknown	NPOC	TCL001WC	TCL001-07	0A-123456-	C:\Program	1.000	NPOC:24.94 mg/L	
8	Unknown	NPOC	K786-01	TCL001-08	0A-123456-	C:\Program	1.000	NPOC:4.281 mg/L	PH<2
9	Unknown	NPOC	K786-01D	TCL001-09	0A-123456-	C:\Program	1.000	NPOC:4.166 mg/L	
10	Unknown	NPOC	K599-01	TCL001-10	0A-123456-	C:\Program	1.000	NPOC:3.401 mg/L	PH<2
11	Unknown	NPOC	K221-01	TCL001-11	0A-123456-	C:\Program	1.000	NPOC:3.234 mg/L	PH<2
12	Unknown	NPOC	K221-02	TCL001-12	0A-123456-	C:\Program	1.000	NPOC:13.93 mg/L	PH<2
13	Unknown	NPOC	K221-03	TCL001-13	0A-123456-	C:\Program	1.000	NPOC:2.594 mg/L	PH<2
14	Control	NPOC	CCV1	TCL001-14	0A-123456-	C:\Program	1.000	NPOC:25.04 mg/L	
15	Unknown	NPOC	CCB1	TCL001-15	0A-123456-	C:\Program	1.000	NPOC:0.1217 mg/	
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8085

Instr.Information

System	toc
Detector	Combustion
Catalyst	Regular Sensitivity
Cell Length	long

Cal. Curve

Sample Name:	ICAL
Sample ID:	TCL001-01
Cal. Curve:	TCL001.2011_12_02_12_29_16.cal

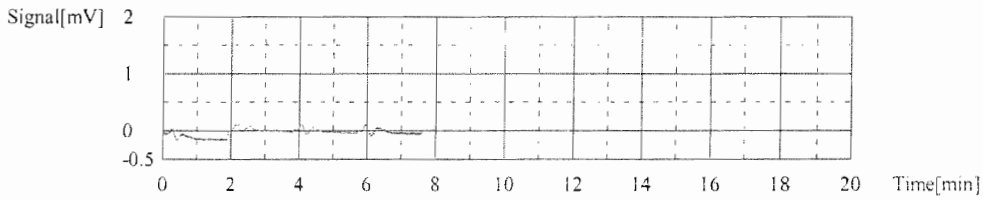
Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.000	50uL	1	*******		12/02/11 12:37:27 PM
2	0.000	50uL	1	*******		12/02/11 12:39:33 PM
3	0.000	50uL	1	*******		12/02/11 12:41:38 PM
4	0.000	50uL	1	*******		12/02/11 12:43:43 PM

Acid Add.	2.500%
Sp. Time	90.00sec
Mean Area	0.000

$\frac{\text{Mean area}}{\text{Slope}} = \frac{0.000}{2.102} = 0.000$

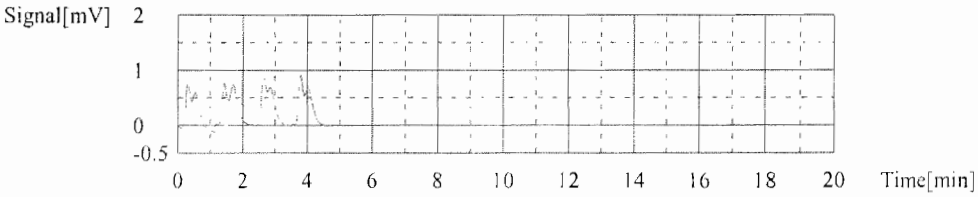


Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	1.939	50uL	10	*******		12/02/11 12:52:03 PM
2	2.093	50uL	10	*******		12/02/11 12:53:27 PM
3	2.130	50uL	10	*******		12/02/11 12:54:47 PM
4	2.117	50uL	10	*******		12/02/11 12:56:08 PM

Acid Add.	2.500%
Sp. Time	90.00sec
Mean Area	2.070

$\frac{\bar{A}}{M} = \frac{2.070}{2.102} = 0.9848$



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	9.907	50uL	2	*******		12/02/11 01:02:29 PM
2	10.28	50uL	2	*******		12/02/11 01:03:48 PM
3	10.29	50uL	2	*******		12/02/11 01:05:10 PM
4	10.26	50uL	2	*******		12/02/11 01:06:31 PM

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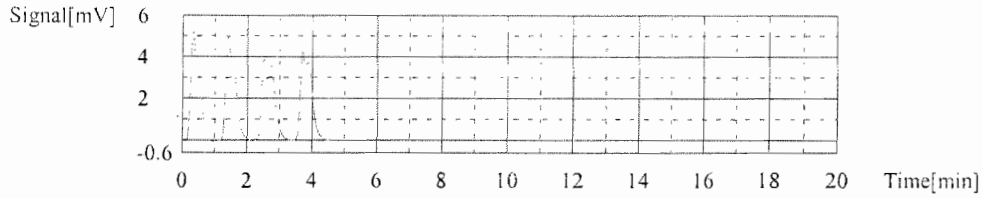
Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 10.18

$\frac{\bar{A}}{m} = \frac{10.18}{2.102} = 4.843$

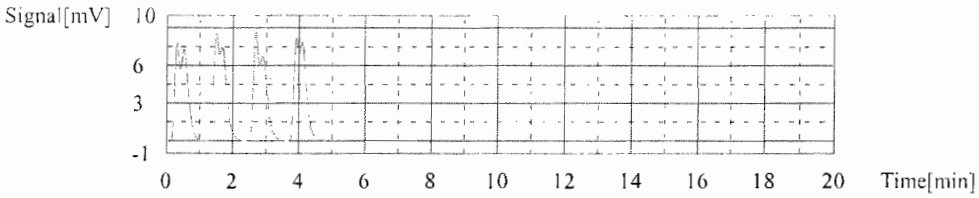


Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	19.89	50uL	1	*******		12/02/11 01:12:15 PM
2	20.49	50uL	1	*******		12/02/11 01:13:39 PM
3	20.55	50uL	1	*******		12/02/11 01:15:03 PM
4	20.33	50uL	1	*******		12/02/11 01:16:26 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 20.32

$\frac{\bar{A}}{m} = \frac{20.32}{2.102} = 9.667$

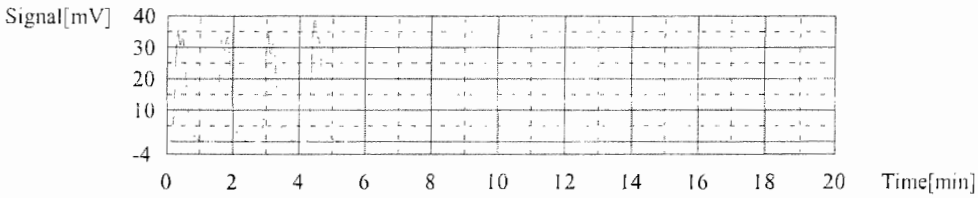


Conc: 40.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	79.51	50uL	2	*******		12/02/11 01:24:58 PM
2	81.16	50uL	2	*******		12/02/11 01:26:33 PM
3	82.41	50uL	2	*******		12/02/11 01:28:08 PM
4	82.54	50uL	2	*******		12/02/11 01:29:42 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 81.41

$\frac{\bar{A}}{m} = \frac{81.41}{2.102} = 38.73$

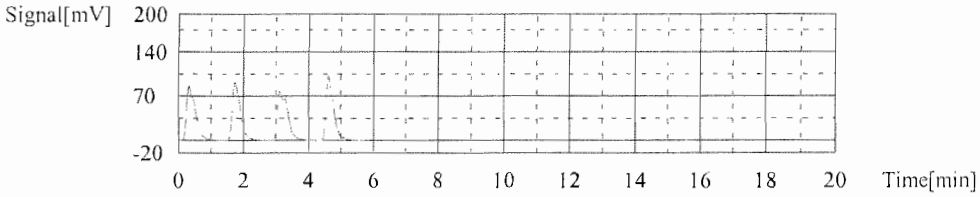


Conc: 80.00mg/L

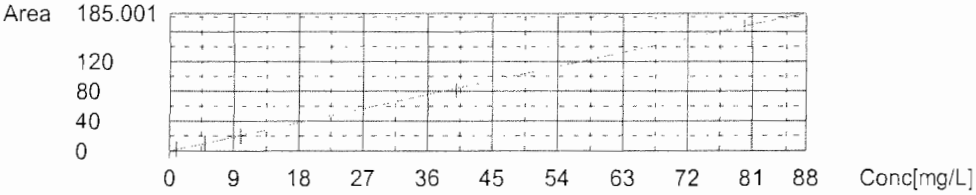
No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	166.0	50uL	1	*******		12/02/11 01:35:40 PM
2	168.4	50uL	1	*******		12/02/11 01:37:15 PM
3	169.8	50uL	1	*******		12/02/11 01:38:56 PM
4	170.7	50uL	1	*******		12/02/11 01:40:33 PM

Acid Add. 2.500%
Sp. Time 90.00sec
Mean Area 168.7

$\frac{\bar{A}}{m} = \frac{168.7}{2.102} = 80.26$



Slope: 2.102
Intercept 0.000
r^2 0.999713



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Control Sample

Sample Name: ICV
Sample ID: TCL001-02
Method: TCL001.tpl
Chk. Result Control value: 24.99 / Control exceeds range!

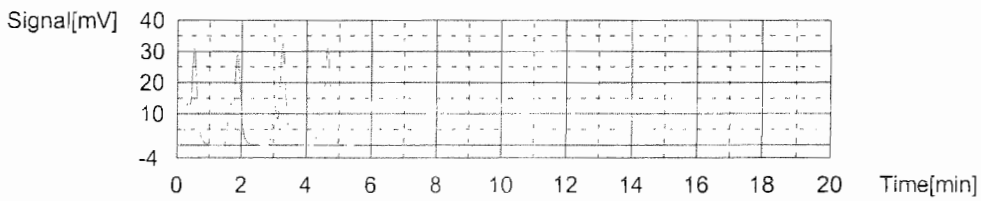
Type	Anal.	Dil.	Result
Control	NPOC	1.000	NPOC:24.99 mg/L

1. Det.

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	52.31	24.88mg/L	50uL	1		TCL001.2011_12_02_12_29_16.cal	12/02/11 01:48:37 PM
2	52.53	24.99mg/L	50uL	1		TCL001.2011_12_02_12_29_16.cal	12/02/11 01:50:11 PM
3	52.70	25.07mg/L	50uL	1		TCL001.2011_12_02_12_29_16.cal	12/02/11 01:51:46 PM
4	52.57	25.01mg/L	50uL	1		TCL001.2011_12_02_12_29_16.cal	12/02/11 01:53:18 PM

Mean Area 52.53
Mean Conc. 24.99mg/L



Sample

Sample Name: ICB
Sample ID: TCL001-03
Origin: TCL001.cal
Chk. Result

Type	Anal.	Dil.	Result
Unknown	NPOC	1.000	NPOC:0.1725 mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3843	0.1828mg/L	50uL	1		TCL001.2011_12_02_12_29_16.cal	12/02/11 02:00:45 PM
2	0.2845	0.1353mg/L	50uL	1		TCL001.2011_12_02_12_29_16.cal	12/02/11 02:01:53 PM
3	0.3937	0.1873mg/L	50uL	1		TCL001.2011_12_02_12_29_16.cal	12/02/11 02:03:04 PM
4	0.3882	0.1847mg/L	50uL	1		TCL001.2011_12_02_12_29_16.cal	12/02/11 02:04:10 PM

Mean Area 0.3627
Mean Conc. 0.1725mg/L

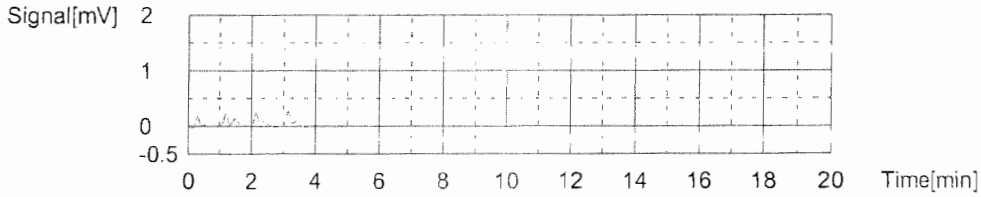


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TABLE OF CONTENTS

CLIENT: **INSIGHT EEC, INC.**

PROJECT: **NWS SEAL BEACH, IR SITE 70.**

SDG: **11K237**

SECTION		PAGE
Cover Letter, COC/Sample Receipt Form		1000 – 1004
GC/MS-VOA	METHOD 5030B/8260B	2000 – 2027
GC/MS-SVOA	**	3000 –
GC-VOA	METHOD 5030B/8015B	4000 – 4019
GC-SVOA	METHOD 3520C/8015B	5000 – 5024
HPLC	**	6000 –
METALS	METHOD 3010A/6010B METHOD 7470A	7000 – 7030 7031 – 7039
WET	**	8000 –
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 12-07-2011
EMAX Batch No.: 11K237

Attn: Nick Weinberger

Insight EEC, Inc.
3010 E. Miraloma Ave.
Anaheim, CA 92806

Subject: Laboratory Report
Project: NWS SEAL BEACH, IR SITE 70.

Enclosed is the Laboratory report for samples received on 11/30/11.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
IR-70-DR-178	K237-01	11/30/11	WATER	VOLATILE ORGANICS BY GC/MS
				TPH DIESEL
				TPH GASOLINE
				METALS BY ICP
				MERCURY
IR-70-TB-179	K237-02	11/30/11	WATER	VOLATILE ORGANICS BY GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

for

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: 310-618-8889 Fax #: 310-618-0818
Email: info@emaxlabs.com

PO NUMBER: 2011068-8042
SAMPLE STORAGE: A2, M1, W2
EMAX CONTROL NO. * 11K237
PROJECT CODE: 4-77101

CLIENT: INSIGHT EEC, INC
PROJECT: IR SITE 70 - NWS SEAL BEACH
COORDINATOR: NICK WEINBERGER
TEL: 7146786700 FAX: 7146786711 EMAIL: NWEINBERGER@EEC.COM
SEND REPORT TO: NICK WEINBERGER
COMPANY: INSIGHT EEC, INC.
ADDRESS: 3010 E MIRALOMA AVE. ANAHEIM, CA 92806
EMAX PM: Ye Myint

MATRIX CODE	PRESERVATIVE CODE
DW=Drinking Water	IC = Ice
GW=Ground Water	HC = HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/ Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

TAT: ☐ Rush ____ hrs. ☒ Rush 5 days ☐ 7 days ☐ ~~14 days~~ (TB) ☐ 21 days ☐ 30 days ☐ ____ days ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	VOCs HC	TPH-P HC	TPH-E NP	TITLE 22 METALS HN	COMMENTS
1	IR-70-DR-178	IR SITE 70	11-30-11	1445	9	vary	vary	GW	III	X	X	X	X	(IDW) - NO EDD REQUIRED FOR THIS SAMPLE.
2														
3														
4	IR-70-TB-179	IR SITE 70	11-30-11	1455	2	40mL	VOA	GW	III	X				TRIP BLANK.
5														
6														
7														
8														
9														
0														

Instructions: PLEASE BILL TO AIS. ATTN. STEVE ELLIOTT

Cooler #	Temp. (°C)	Sample #s
1	2.8C	

SAMPLER: CHASE BROWDON

COURIER/AIRBILL:

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	11-30-11	1545	[signature]
	11/30/11	16:48	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise

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EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 11K237
☑ EMAX Courier	SGE Core	Recepient I PATEL
☐ Client Delivery		Date 11/30/11
☐ Third Party		Time 1648

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☐ Preservative (if any)	☑ TAT
Safety Issues	☑ None	☐ High concentrations expected	☐ Superfund Site samples	☐ Rad screening required	

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☑ Plastic Bag
Temperatures (Cool, ≤6 °C but not frozen)	A ☑ Cooler 1 2.8 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C

Thermometer: ***A - S/N 101541371*** ***B - S/N 101541382***

Comments: ☐ **PM was informed on non-compliant coolers immediately.**

Note: **pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time .**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code

REVIEWS

Sample Labeling [signature] Date 11/30/11

SRF [signature] Date 12/1/11

PM LP for YG Date 12/1/11

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-a-vis label	D3	Date and/or time is inconsistent in COC vis-a-vis label	R3	Refer to attached instruction
A4	_____	E1	Insufficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	_____
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	_____
B3	Sample ID is inconsistent in COC vis-a-vis label	F2	Bubble is> 6mm		
B4	_____	G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	_____		
C4	_____	H2	_____		

Ye Myint

From: Ye Myint
Sent: Friday, December 02, 2011 1:29 PM
To: 'Nick Weinberger'
Cc: Sree Akkenapally; Linh Pham
Subject: Logins for Seal Beach
Attachments: 11K237.pdf

Nick,

Attached are the logins and COCs information for SDG: 11K237. Please review and let me know if there are any corrections necessary. This SDG will be billed to AIS and requested on 5 days TAT. Per Sree's instruction, there will be no EDD submitted.

Thanks.

Ye Myint
Project Manager
EMAX Laboratories, Inc.
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EMAX will be closed on the following days for Christmas and New Year.

Christmas:
Friday (12/23/2011), Saturday (12/24/11) and Monday (12/26/2011)
New Year:
Friday (12/30/2011), Saturday (12/31/2011) and Monday (01/02/2012)

The staff of EMAX wishes you a wonderful holidays season!!

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 11K237

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K237

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of two (2) water samples were received on 11/30/11 for Volatile Organics by GC/MS analysis, Method 5030B/8260B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms for ICAL, ICV and CCV for details.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for VO67L01L/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K237
Instrument ID : T-067

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V067L01B	1	NA	12/01/1112:49	12/01/1112:49	RLC007	RKC306	V067L01	Method Blank
LCS1W	V067L01L	1	NA	12/01/1111:16	12/01/1111:16	RLC004	RKC306	V067L01	Lab Control Sample (LCS)
LCD1W	V067L01C	1	NA	12/01/1111:47	12/01/1111:47	RLC005	RKC306	V067L01	LCS Duplicate
IR-70-TB-179	K237-02	1	NA	12/01/1113:19	12/01/1113:19	RLC008	RKC306	V067L01	Field Sample
IR-70-DR-178	K237-01	1	NA	12/01/1114:22	12/01/1114:22	RLC010	RKC306	V067L01	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : INSIGHT EEC, INC.	Date Collected: 11/30/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/30/11
Batch No. : 11K237	Date Extracted: 12/01/11 14:22
Sample ID: IR-70-DR-178	Date Analyzed: 12/01/11 14:22
Lab Samp ID: K237-01	Dilution Factor: 1
Lab File ID: RLC010	Matrix : WATER
Ext Btch ID: V067L01	% Moisture : NA
Calib. Ref.: RKC306	Instrument ID : 67

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	5.0J	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	34	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.86	10.00	98.6	70-140
4-BROMOFLUOROBENZENE	10.0	10.00	100	70-130
TOLUENE-D8	9.91	10.00	99.1	70-140

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	11/30/11
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	11/30/11
Batch No.	: 11K237	Date Extracted:	12/01/11 13:19
Sample ID:	IR-70-TB-179	Date Analyzed:	12/01/11 13:19
Lab Samp ID:	K237-02	Dilution Factor:	1
Lab File ID:	RLC008	Matrix	: WATER
Ext Btch ID:	V067L01	% Moisture	: NA
Calib. Ref.:	RKC306	Instrument ID	: 67

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	ND	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.76	10.00	97.6	70-140
4-BROMOFLUOROBENZENE	10.1	10.00	101	70-130
TOLUENE-D8	9.93	10.00	99.3	70-140

QC SUMMARIES

METHOD 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: INSIGHT EEC, INC.	Date Collected:	NA
Project	: NWS SEAL BEACH, IR SITE 70.	Date Received:	12/01/11
Batch No.	: 11K237	Date Extracted:	12/01/11 12:49
Sample ID:	MBLK1W	Date Analyzed:	12/01/11 12:49
Lab Samp ID:	V067L01B	Dilution Factor:	1
Lab File ID:	RLC007	Matrix :	WATER
Ext Btch ID:	V067L01	% Moisture :	NA
Calib. Ref.:	RKC306	Instrument ID :	67

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	1.0	0.20
1,1,1,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2,2-TETRACHLOROETHANE	ND	1.0	0.20
1,1,2-TRICHLOROETHANE	ND	1.0	0.20
FREON113	ND	1.0	0.30
1,1-DICHLOROETHANE	ND	1.0	0.20
1,1-DICHLOROETHENE	ND	0.50	0.20
1,1-DICHLOROPROPENE	ND	1.0	0.20
1,2-DIBROMO-3-CHLOROPROPANE	ND	2.0	0.50
1,2-DIBROMOETHANE	ND	1.0	0.20
1,2-DICHLOROBENZENE	ND	1.0	0.20
1,2-DICHLOROETHANE	ND	0.50	0.20
1,2-DICHLOROPROPANE	ND	1.0	0.20
1,2,3-TRICHLOROBENZENE	ND	1.0	0.30
1,2,3-TRICHLOROPROPANE	ND	1.0	0.50
1,2,4-TRICHLOROBENZENE	ND	1.0	0.30
1,2,4-TRIMETHYLBENZENE	ND	1.0	0.20
1,3-DICHLOROBENZENE	ND	1.0	0.20
1,3,5-TRIMETHYLBENZENE	ND	1.0	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.20
2-BUTANONE	ND	10	4.0
2-CHLOROTOLUENE	ND	1.0	0.20
2-HEXANONE	ND	10	4.0
2,2-DICHLOROPROPANE	ND	1.0	0.20
4-CHLOROTOLUENE	ND	1.0	0.20
4-METHYL-2-PENTANONE	ND	10	4.0
N-BUTYLBENZENE	ND	1.0	0.20
N-PROPYLBENZENE	ND	1.0	0.20
P-ISOPROPYLTOLUENE	ND	1.0	0.20
SEC-BUTYLBENZENE	ND	1.0	0.20
TERT-BUTYLBENZENE	ND	1.0	0.20
ACETONE	ND	10	5.0
BENZENE	ND	1.0	0.20
BROMOBENZENE	ND	1.0	0.20
BROMODICHLOROMETHANE	ND	1.0	0.20
CIS-1,3-DICHLOROPROPENE	ND	1.0	0.20
TRANS-1,3-DICHLOROPROPENE	ND	1.0	0.20
BROMOMETHANE	ND	2.0	0.30
BROMOFORM	ND	1.0	0.30
CARBON DISULFIDE	ND	1.0	0.20
CARBON TETRACHLORIDE	ND	0.50	0.20
CHLOROBENZENE	ND	1.0	0.20
CHLOROETHANE	ND	2.0	0.30
CHLOROFORM	ND	1.0	0.20
CHLOROMETHANE	ND	2.0	0.30
CIS-1,2-DICHLOROETHENE	ND	1.0	0.20
DICHLORODIFLUOROMETHANE	ND	2.0	0.30
DIBROMOCHLOROMETHANE	ND	1.0	0.20
DIBROMOMETHANE	ND	1.0	0.20
ETHYLBENZENE	ND	1.0	0.20
HEXACHLOROBUTADIENE	ND	1.0	0.30
ISOPROPYL BENZENE	ND	1.0	0.20
METHYLENE CHLORIDE	0.77J	1.0	0.50
MTBE	ND	1.0	0.20
STYRENE	ND	1.0	0.20
TETRACHLOROETHYLENE	ND	1.0	0.20
TOLUENE	ND	1.0	0.20
TRANS-1,2-DICHLOROETHENE	ND	1.0	0.20
TRICHLOROETHENE	ND	5.0	0.20
TRICHLOROFLUOROMETHANE	ND	2.0	0.30
VINYL CHLORIDE	ND	0.50	0.20
XYLENES (TOTAL)	ND	2.0	0.60
M/P-XYLENES	ND	1.0	0.40
O-XYLENE	ND	1.0	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.54	10.00	95.4	70-140
4-BROMOFLUOROBENZENE	9.73	10.00	97.3	70-130
TOLUENE-D8	10.1	10.00	101	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K237
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	V067L01B	V067L01L	V067L01C		
LAB FILE ID:	RLC007	RLC004	RLC005		
DATE EXTRACTED:	12/01/1112:49	12/01/1111:16	12/01/1111:47	DATE COLLECTED:	NA
DATE ANALYZED:	12/01/1112:49	12/01/1111:16	12/01/1111:47	DATE RECEIVED:	12/01/11
PREP. BATCH:	V067L01	V067L01	V067L01		
CALIB. REF:	RKC306	RKC306	RKC306		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10.0	9.47	95	10.0	9.57	96	1	60-130	30
Benzene	ND	10.0	9.43	94	10.0	9.55	95	1	70-130	30
Chlorobenzene	ND	10.0	9.56	96	10.0	9.70	97	1	70-120	30
Toluene	ND	10.0	9.35	93	10.0	9.48	95	1	70-130	30
Trichloroethene	ND	10.0	9.72	97	10.0	9.78	98	1	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10.0	9.73	97	10.0	9.75	97	70-140
4-Bromofluorobenzene	10.0	9.62	96	10.0	9.90	99	70-130
Toluene-d8	10.0	9.86	99	10.0	9.86	99	70-130

INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKC300
Instrument ID: 67
GC Column:RTX502.2ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K237
BFB Injection Date : 11/23/11
BFB Injection Time : 17:45
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.93
75	30.0 - 60.0% of mass 95	44.61
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.68
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	74.57
175	5.0 - 9.0% of mass 174	5.59(7.5)1
176	95.0 - 101.0% of mass 174	72.22(96.8)1
177	5.0 - 9.0% of mass 176	5.30(7.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD0.3	V067K2301	RKC301	11/23/11	18:16
2	VSTD0.5	V067K2302	RKC302	11/23/11	18:47
3	VSTD01	V067K2303	RKC303	11/23/11	19:18
4	VSTD02	V067K2304	RKC304	11/23/11	19:49
5	VSTD05	V067K2305	RKC305	11/23/11	20:20
6	VSTD010	V067K2306	RKC306	11/23/11	20:51
7	VSTD020	V067K2307	RKC307	11/23/11	21:22
8	VSTD030	V067K2308	RKC308	11/23/11	21:53
9	VSTD050	V067K2309	RKC309	11/23/11	22:24
10	VSTD100	V067K2310	RKC310	11/23/11	22:55
11	VSTD010	IV067K2301	RKC314	11/24/11	00:59

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :T067
Beginning DateTime :11/23/11 18:16
Spike Units :PPB
IC File :RKC306

Column Spec :RTX502.2 ID :0.25MM
Ending DateTime :11/23/11 22:55
HPChem Method :V067K23

M	IDX	Parameters	.3 18:16 RKC301	.5 18:47 RKC302	1 19:18 RKC303	2 19:49 RKC304	5 20:20 RKC305	10 20:51 RKC306	20 21:22 RKC307	30 21:53 RKC308	50 22:24 RKC309	100 22:55 RKC310	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	0	8.0926
	2	Dichlorodifluoromethane	0.260	0.293	0.249	0.290	0.296	0.304	0.294	0.303	0.286	0.303	0.288	6.51	1.9056
	3	Dichlorotetrafluoroethane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	4	Chloromethane	0.379	0.467	0.412	0.453	0.463	0.473	0.447	0.468	0.429	0.452	0.444	6.64	2.1494
	5	Vinyl chloride	0.402	0.460	0.419	0.464	0.467	0.468	0.445	0.461	0.415	------	0.445	5.75	2.2980
	6	Bromomethane	0.217	0.266	0.237	0.257	0.262	0.270	0.265	0.282	0.261	0.285	0.260	7.77	2.7699
	7	Chloroethane	0.285	0.280	0.250	0.266	0.262	0.272	0.260	0.273	0.252	0.274	0.267	4.37	2.8648
	8	Dichlorofluoromethane	0.597	0.651	0.615	0.595	0.594	0.650	0.616	0.640	0.588	0.624	0.617	3.84	2.9086
	9	Trichlorofluoromethane	0.311	0.353	0.314	0.373	0.374	0.385	0.374	0.393	0.364	0.386	0.363	7.91	3.1509
	10	sec-Propyl alcohol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
5	11	Acrolein	0.016	0.012	0.013	0.012	0.012	0.013	0.012	0.013	0.012	0.012	0.013	9.18	3.6371
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	0.226	0.231	0.215	0.214	0.216	0.237	0.224	0.228	0.221	0.231	0.224	3.41	3.6779
5	13	Acetone	------	------	0.035	0.031	0.024	0.025	0.022	0.022	0.019	0.021	0.025	21.57	3.7117
	14	1,1-Dichloroethene	0.549	0.613	0.573	0.556	0.568	0.613	0.569	0.581	0.548	0.562	0.573	4.06	3.8750
5	15	tert-Butyl alcohol	------	0.008	0.008	0.007	0.007	0.007	0.006	0.007	0.006	0.006	0.007	11.31	3.9718
	16	Methyl acetate	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	17	Iodomethane	0.488	0.539	0.540	0.517	0.539	0.575	0.537	0.574	0.534	0.578	0.542	5.17	4.2604
10	18	Acetonitrile	0.061	0.069	0.069	0.066	0.068	0.075	0.070	0.070	0.065	0.068	0.068	5.26	4.3232
	19	Methylene chloride	0.435	0.459	0.424	0.400	0.394	0.414	0.385	0.405	0.364	0.383	0.406	6.86	4.4692
	20	Carbon disulfide	1.033	1.440	1.268	1.386	1.351	1.328	1.330	1.400	1.269	1.346	1.315	8.57	4.4955
5	21	Acrylonitrile	0.039	0.040	0.037	0.038	0.035	0.039	0.036	0.039	0.035	0.038	0.038	4.45	4.6371
	22	tert-Butyl methyl ether (MTBE)	0.330	0.364	0.343	0.327	0.335	0.362	0.331	0.359	0.322	0.342	0.342	4.49	4.6721
	23	trans-1,2-Dichloroethene	0.545	0.606	0.592	0.563	0.578	0.615	0.583	0.595	0.560	0.582	0.582	3.70	4.8546
	24	Isopropyl ether (DIPE)	0.993	1.079	1.083	1.019	1.056	1.117	1.033	1.106	0.993	1.052	1.053	4.16	5.2707
	25	1,1-Dichloroethane	0.625	0.697	0.671	0.637	0.646	0.694	0.644	0.668	0.623	0.658	0.656	3.99	5.4181
	26	Vinyl acetate	0.292	0.273	0.267	0.271	0.279	0.279	0.260	0.299	0.268	0.281	0.277	4.22	5.4196
5	27	2-Butanol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	28	tert-Butyl ethyl ether (ETBE)	0.574	0.627	0.647	0.598	0.624	0.669	0.621	0.666	0.599	0.635	0.626	4.82	5.8239
5	29	2-Butanone	0.050	0.047	0.045	0.047	0.042	0.046	0.043	0.046	0.041	0.044	0.045	5.69	5.9962
	30	2,2-Dichloropropane	0.383	0.433	0.394	0.396	0.386	0.408	0.373	0.391	0.339	0.334	0.384	7.73	6.1889
	31	cis-1,2-Dichloroethene	0.363	0.390	0.377	0.349	0.369	0.381	0.365	0.385	0.357	0.389	0.372	3.79	6.2532
	32	Chloroform	0.486	0.535	0.518	0.493	0.513	0.544	0.503	0.528	0.485	0.515	0.512	3.96	6.4736
	33	Bromochloromethane	0.212	0.249	0.233	0.215	0.223	0.243	0.221	0.235	0.211	0.222	0.226	5.80	6.7072
5	34	tert-Amyl alcohol	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	35	Dibromofluoromethane	0.299	0.300	0.257	0.256	0.277	0.266	0.270	0.288	0.265	0.287	0.277	5.87	6.7875
	36	Tetrahydrofuran	------	------	0.047	0.034	0.034	0.029	0.026	0.029	0.025	0.026	0.031	22.65	6.7593
	37	1,1,1-Trichloroethane	0.489	0.503	0.483	0.475	0.487	0.521	0.490	0.497	0.467	0.484	0.490	3.07	7.0459
	38	Cyclohexane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	39	tert-Amyl methyl ether (TAME)	0.087	0.094	0.099	0.086	0.092	0.096	0.090	0.097	0.088	0.092	0.092	4.82	7.4459
	40	1,2-Dichloroethane-d4	0.214	0.188	0.181	0.168	0.171	0.168	0.168	0.175	0.155	0.164	0.175	9.43	7.5101
	41	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	0	13.1964
	42	1,1-Dichloropropene	0.263	0.252	0.244	0.243	0.247	0.268	0.250	0.249	0.246	0.260	0.252	3.41	7.2751
	43	Carbon tetrachloride	0.543	0.558	0.554	0.548	0.544	0.589	0.549	0.551	0.537	0.561	0.553	2.58	7.4181
	44	1,2-Dichloroethane	0.273	0.294	0.292	0.270	0.287	0.298	0.275	0.284	0.252	0.268	0.279	5.08	7.6488
	45	Benzene	1.830	1.889	1.812	1.745	1.749	1.874	1.744	1.793	1.694	1.567	1.770	5.32	7.6692
	46	Trichloroethene	0.485	0.513	0.494	0.465	0.474	0.513	0.478	0.494	0.474	0.515	0.490	3.74	8.5992
	47	Methylcyclohexane	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	48	1,2-Dichloropropane	0.417	0.434	0.424	0.401	0.405	0.433	0.405	0.422	0.391	0.421	0.415	3.41	8.8751

SG
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	49	Bromodichloromethane	0.392	0.431	0.425	0.397	0.408	0.437	0.408	0.430	0.395	0.428	0.415	4.06	9.2474
20	50	1,4-Dioxane	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5.16	9.2809
	51	Dibromomethane	0.130	0.138	0.152	0.139	0.130	0.151	0.142	0.150	0.138	0.148	0.142	5.71	9.3350
	52	2-Chloroethyl vinyl ether	0.105	0.100	0.096	0.089	0.091	0.102	0.093	0.099	0.093	0.101	0.097	5.48	9.7437
5	53	4-Methyl-2-pentanone	0.148	0.162	0.144	0.153	0.139	0.159	0.148	0.156	0.139	0.148	0.150	5.32	9.7905
	54	cis-1,3-Dichloropropene	0.503	0.497	0.515	0.489	0.501	0.531	0.492	0.524	0.481	0.522	0.505	3.29	10.1335
	55	Toluene-d8	1.798	1.650	1.443	1.441	1.493	1.477	1.498	1.544	1.467	1.449	1.526	7.50	10.5350
	56	Toluene	1.795	1.953	1.860	1.781	1.798	1.945	1.800	1.856	1.760	1.576	1.813	5.87	10.6693
	57	Ethyl methacrylate	0.206	0.228	0.221	0.203	0.213	0.230	0.213	0.230	0.208	0.222	0.217	4.67	10.9700
	58	trans-1,3-Dichloropropene	0.299	0.336	0.335	0.308	0.324	0.347	0.326	0.340	0.314	0.334	0.326	4.65	10.9832
	59	1,1,2-Trichloroethane	0.170	0.173	0.168	0.161	0.164	0.178	0.167	0.176	0.162	0.175	0.169	3.49	11.2503
5	60	2-Hexanone	0.106	0.100	0.085	0.088	0.082	0.093	0.087	0.091	0.081	0.085	0.090	9.06	11.2679
	61	1,3-Dichloropropane	0.322	0.336	0.329	0.312	0.314	0.337	0.313	0.332	0.303	0.327	0.322	3.59	11.6912
	62	Tetrachloroethene	0.384	0.384	0.382	0.364	0.371	0.401	0.370	0.373	0.362	0.380	0.377	3.07	11.7949
	63	Dibromochloromethane	0.209	0.225	0.226	0.208	0.214	0.233	0.216	0.230	0.212	0.229	0.220	4.27	12.1525
	64	1,2-Dibromoethane	0.155	0.176	0.178	0.169	0.174	0.187	0.176	0.188	0.172	0.184	0.176	5.53	12.5117
	65	1-Chlorohexane	0.834	0.846	0.809	0.785	0.794	0.865	0.812	0.808	0.783	0.809	0.815	3.26	12.8095
	66	Chlorobenzene	0.990	1.044	1.042	1.004	1.009	1.083	1.016	1.058	0.991	1.066	1.030	3.19	13.2635
	67	1,1,1,2-Tetrachloroethane	0.283	0.311	0.298	0.282	0.287	0.313	0.295	0.305	0.287	0.311	0.297	4.13	13.3497
	68	Ethylbenzene	2.063	2.185	2.070	1.992	2.037	2.198	2.046	2.063	1.953	------	2.067	3.87	13.3656
2	69	m-Xylene & p-Xylene	1.535	1.567	1.516	1.462	1.492	1.618	1.481	1.502	1.301	------	1.497	5.86	13.5099
	70	o-Xylene	1.444	1.467	1.455	1.394	1.392	1.514	1.407	1.440	1.337	1.349	1.420	3.84	14.3146
	71	Styrene	1.055	1.130	1.149	1.076	1.127	1.209	1.131	1.167	1.087	1.153	1.128	4.08	14.3862
	72	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	0	18.4169
	73	Isopropylbenzene	6.672	7.150	6.905	6.632	6.733	7.264	6.843	6.947	6.815	6.130	6.809	4.57	14.9993
	74	Bromoform	0.273	0.343	0.333	0.321	0.328	0.358	0.342	0.364	0.348	0.385	0.339	8.82	15.0154
	75	trans-1,4-Dichloro-2-butene	0.225	0.219	0.206	0.173	0.179	0.183	0.174	0.186	0.167	0.179	0.189	10.72	15.0957
	76	1,1,2,2-Tetrachloroethane	0.534	0.577	0.576	0.536	0.529	0.580	0.549	0.576	0.540	0.582	0.558	3.93	15.3307
	77	4-Bromofluorobenzene	------	1.669	1.374	1.284	1.335	1.284	1.312	1.346	1.293	1.405	1.367	8.82	15.4708
	78	1,2,3-Trichloropropane	0.131	0.141	0.152	0.144	0.144	0.154	0.145	0.154	0.143	0.154	0.146	5.01	15.6139
	79	n-Propylbenzene	8.550	8.846	8.591	8.268	8.449	9.163	8.629	8.665	8.392	------	8.617	3.07	15.7614
	80	Bromobenzene	1.068	1.150	1.118	1.055	1.075	1.155	1.086	1.130	1.090	1.187	1.111	3.92	15.8402
	81	1,3,5-Trimethylbenzene	5.397	5.806	5.536	5.204	5.365	5.777	5.443	5.488	5.328	5.337	5.468	3.54	16.0767
	82	2-Chlorotoluene	4.681	5.134	5.078	4.727	4.898	5.234	4.680	4.792	4.784	5.019	4.903	4.10	16.0957
	83	4-Chlorotoluene	4.165	4.429	4.066	3.701	3.752	3.992	3.992	3.997	3.646	3.906	3.965	5.88	16.1950
	84	tert-Butylbenzene	1.238	1.276	1.219	1.198	1.221	1.319	1.240	1.252	1.223	1.324	1.251	3.41	16.7643
	85	1,2,4-Trimethylbenzene	4.937	5.326	5.233	4.885	4.995	5.346	5.045	5.087	4.903	5.054	5.081	3.31	16.8388
	86	sec-Butylbenzene	7.621	8.075	7.697	7.562	7.574	8.245	7.744	7.672	7.537	6.406	7.613	6.36	17.1760
	87	p-Isopropyltoluene	5.782	6.275	6.066	5.888	6.030	6.517	6.075	6.094	5.944	5.611	6.028	4.17	17.4534
	88	1,3-Dichlorobenzene	2.217	2.314	2.186	2.058	2.147	2.301	2.139	2.219	2.120	2.266	2.197	3.76	17.6271
	89	1,4-Dichlorobenzene	2.047	2.207	2.071	1.942	1.987	2.125	1.992	2.058	1.954	2.106	2.049	4.06	17.8330
	90	n-Butylbenzene	5.788	6.130	5.776	5.669	5.836	6.376	5.915	5.863	5.768	5.053	5.817	5.82	18.2125
	91	1,2-Dichlorobenzene	1.578	1.735	1.625	1.524	1.584	1.680	1.577	1.641	1.560	1.668	1.617	3.98	18.4622
	92	1,2-Dibromo-3-chloropropane	------	0.070	0.075	0.065	0.070	0.077	0.074	0.079	0.075	0.081	0.074	7.02	19.5991
	93	1,2,4-Trichlorobenzene	1.068	1.069	1.061	1.001	1.047	1.133	1.067	1.128	1.109	1.182	1.086	4.76	20.6943
	94	Hexachlorobutadiene	1.041	1.065	0.996	1.004	1.013	1.126	1.045	1.042	1.064	1.091	1.049	3.82	20.8695
	95	Naphthalene	1.260	1.331	1.265	1.175	1.227	1.348	1.293	1.396	1.345	1.452	1.309	6.28	21.0272
	96	1,2,3-Trichlorobenzene	0.791	0.793	0.774	0.735	0.763	0.843	0.783	0.837	0.809	0.867	0.799	5.01	21.3454

Spike Amount = Nominal Amount * M

Ave_%RSD : 5.6 Max_%RSD : 22.7

Su
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Use Least Square Linear Regression with weighting factor of inverse concentration for comps with %_RSD > 15

Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
13	Acetone	0.00937	0.02037	0.9983
36	Tetrahydrofuran	0.00219	0.02588	0.9987

SECOND SOURCE VERIFICATION

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :TO67
IC_Beginning DateTime :11/23/11 18:16
Spike Amount :10 PPB
CC/CV File :RKC314
IC File :RKC306

Column Spec :RTX502.2 ID :0.25MM
IC_Ending DateTime :11/23/11 22:55
HPChem Method :VO67K23
Date_Time :11/24/11 00:59

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	10.000	0	1788448	1	1	8.093	8.093	0				
	2	Dichlorodifluoromethane	9.720	-2.8	500264	0.280	0.288	1.903	1.906	6.51				
	3	Dichlorotetrafluoroethane												
	4	Chloromethane	9.300	-7.0	738969	0.413	0.444	2.136	2.149	6.64				
	5	Vinyl chloride	9.365	-6.4	744725	0.416	0.445	2.283	2.298	5.75				
	6	Bromomethane	9.871	-1.3	459678	0.257	0.260	2.764	2.770	7.77				
	7	Chloroethane	9.637	-3.6	460924	0.258	0.267	2.866	2.865	4.37				
	8	Dichlorofluoromethane	10.276	2.8	1133916	0.634	0.617	2.910	2.909	3.84				
	9	Trichlorofluoromethane	10.912	9.1	708264	0.396	0.363	3.144	3.151	7.91				
	10	sec-Propyl alcohol												
5	11	Acrolein	53.199	6.4	120381	0.013	0.013	3.640	3.637	9.18				
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	11.300	13.0	453648	0.254	0.224	3.669	3.678	3.41				
5	13	Acetone	55.726	11.5	219754	0.025	0.025	3.713	3.712	21.57	0.0094	0.0204		0.9983
	14	1,1-Dichloroethene	10.272	2.7	1052753	0.589	0.573	3.874	3.875	4.06				
5	15	tert-Butyl alcohol	53.455	6.9	67519	0.008	0.007	3.976	3.972	11.31				
	16	Methyl acetate												
	17	Iodomethane	11.376	13.8	1103172	0.617	0.542	4.253	4.260	5.17				
10	18	Acetonitrile	103.186	3.2	1258616	0.070	0.068	4.326	4.323	5.26				
	19	Methylene chloride	10.288	2.9	747714	0.418	0.406	4.472	4.469	6.86				
	20	Carbon disulfide	11.612	16.1	2731052	1.527	1.315	4.487	4.496	8.57				
5	21	Acrylonitrile	53.192	6.4	357469	0.040	0.038	4.633	4.637	4.45				
	22	tert-Butyl methyl ether (MTBE)	10.348	3.5	632096	0.353	0.342	4.677	4.672	4.49				
	23	trans-1,2-Dichloroethene	9.956	-0.4	1036356	0.579	0.582	4.852	4.855	3.70				
	24	Isopropyl ether (DIPE)	10.103	1.0	1902502	1.064	1.053	5.261	5.271	4.16				
	25	1,1-Dichloroethane	10.278	2.8	1206518	0.675	0.656	5.421	5.418	3.99				
	26	Vinyl acetate	8.867	-11.3	439369	0.246	0.277	5.421	5.420	4.22				
5	27	2-Butanol												
	28	tert-Butyl ethyl ether (ETBE)	10.436	4.4	1168278	0.653	0.626	5.830	5.824	4.82				
5	29	2-Butanone	51.689	3.4	416346	0.047	0.045	5.991	5.996	5.69				
	30	2,2-Dichloropropane	9.668	-3.3	663358	0.371	0.384	6.180	6.189	7.73				
	31	cis-1,2-Dichloroethene	9.712	-2.9	646925	0.362	0.372	6.253	6.253	3.79				
	32	Chloroform	10.512	5.1	962665	0.538	0.512	6.472	6.474	3.96				
	33	Bromochloromethane	10.330	3.3	418056	0.234	0.226	6.706	6.707	5.80				
5	34	tert-Amyl alcohol												
	35	Dibromofluoromethane	10.674	6.7	528024	0.295	0.277	6.779	6.787	5.87				
	36	Tetrahydrofuran	10.834	8.3	54063	0.030	0.031	6.750	6.759	22.65	0.0022	0.0259		0.9987
	37	1,1,1-Trichloroethane	10.189	1.9	892428	0.499	0.490	7.042	7.046	3.07				
	38	Cyclohexane												
	39	tert-Amyl methyl ether (TAME)	10.489	4.9	172856	0.097	0.092	7.436	7.446	4.82				
	40	1,2-Dichloroethane-d4	10.507	5.1	329393	0.184	0.175	7.509	7.510	9.43				
	41	CHLOROBENZENE-D5	10.000	0	1362441	1	1	13.202	13.196	0				
	42	1,1-Dichloropropene	10.495	4.9	360560	0.265	0.252	7.275	7.275	3.41				
	43	Carbon tetrachloride	10.272	2.7	774387	0.568	0.553	7.421	7.418	2.58				
	44	1,2-Dichloroethane	10.383	3.8	394996	0.290	0.279	7.655	7.649	5.08				

SG
11/29/11

	45	Benzene	10.110	1.1	2437685	1.789	1.770	7.669	7.669	5.32				
	46	Trichloroethene	10.753	7.5	718572	0.527	0.490	8.604	8.599	3.74				
	47	Methylcyclohexane												
	48	1,2-Dichloropropane	10.243	2.4	579638	0.425	0.415	8.881	8.875	3.41				
	49	Bromodichloromethane	10.093	0.9	570669	0.419	0.415	9.246	9.247	4.06				
	50	1,4-Dioxane	208.865	4.4	32672	0.001	0.001	9.275	9.281	5.16				
	51	Dibromomethane	9.629	-3.7	185895	0.136	0.142	9.334	9.335	5.71				
	52	2-Chloroethyl vinyl ether	10.499	5.0	138370	0.102	0.097	9.743	9.744	5.48				
	53	4-Methyl-2-pentanone	51.514	3.0	1050271	0.154	0.150	9.786	9.790	5.32				
	54	cis-1,3-Dichloropropene	10.245	2.4	705531	0.518	0.505	10.137	10.134	3.29				
	55	Toluene-d8	10.683	6.8	2221159	1.630	1.526	10.531	10.535	7.50				
	56	Toluene	10.331	3.3	2551566	1.873	1.813	10.677	10.669	5.87				
	57	Ethyl methacrylate	9.900	-1.0	293083	0.215	0.217	10.969	10.970	4.67				
	58	trans-1,3-Dichloropropene	10.388	3.9	461812	0.339	0.326	10.983	10.983	4.65				
	59	1,1,2-Trichloroethane	10.757	7.6	248330	0.182	0.169	11.246	11.250	3.49				
	60	2-Hexanone	50.456	0.9	616587	0.091	0.090	11.261	11.268	9.06				
	61	1,3-Dichloropropane	10.406	4.1	457007	0.335	0.322	11.684	11.691	3.59				
	62	Tetrachloroethene	10.355	3.5	531946	0.390	0.377	11.801	11.795	3.07				
	63	Dibromochloromethane	10.383	3.8	311376	0.229	0.220	12.151	12.153	4.27				
	64	1,2-Dibromoethane	10.053	0.5	240937	0.177	0.176	12.516	12.512	5.53				
	65	1-Chlorohexane	10.468	4.7	1161901	0.853	0.815	12.808	12.809	3.26				
	66	Chlorobenzene	10.538	5.4	1479247	1.086	1.030	13.261	13.264	3.19				
	67	1,1,1,2-Tetrachloroethane	10.416	4.2	421748	0.310	0.297	13.348	13.350	4.13				
	68	Ethylbenzene	10.070	0.7	2836333	2.082	2.067	13.363	13.366	3.87				
	69	m-Xylene & p-Xylene	20.333	1.7	4147314	1.522	1.497	13.509	13.510	5.86				
	70	o-Xylene	10.134	1.3	1960683	1.439	1.420	14.312	14.315	3.84				
	71	Styrene	9.917	-0.8	1524546	1.119	1.128	14.385	14.386	4.08				
	72	1,2-DICHLOROBENZENE-D4	10.000	0	391560	1	1	18.414	18.417	0				
	73	Isopropylbenzene	10.858	8.6	2894946	7.393	6.809	14.998	14.999	4.57				
	74	Bromoform	10.719	7.2	142484	0.364	0.339	15.013	15.015	8.82				
	75	trans-1,4-Dichloro-2-butene	8.715	-12.8	64501	0.165	0.189	15.100	15.096	10.72				
	76	1,1,2,2-Tetrachloroethane	10.291	2.9	224778	0.574	0.558	15.334	15.331	3.93				
	77	4-Bromofluorobenzene	10.679	6.8	571686	1.460	1.367	15.465	15.471	8.82				
	78	1,2,3-Trichloropropane	10.742	7.4	61539	0.157	0.146	15.611	15.614	5.01				
	79	n-Propylbenzene	10.136	1.4	3420117	8.735	8.617	15.757	15.761	3.07				
	80	Bromobenzene	9.877	-1.2	429858	1.098	1.111	15.845	15.840	3.92				
	81	1,3,5-Trimethylbenzene	9.829	-1.7	2104616	5.375	5.468	16.078	16.077	3.54				
	82	2-Chlorotoluene	10.065	0.6	1932227	4.935	4.903	16.093	16.096	4.10				
	83	4-Chlorotoluene	9.821	-1.8	1524616	3.894	3.965	16.195	16.195	5.88				
	84	tert-Butylbenzene	10.150	1.5	497170	1.270	1.251	16.765	16.764	3.41				
	85	1,2,4-Trimethylbenzene	10.009	0.1	1991441	5.086	5.081	16.837	16.839	3.31				
	86	sec-Butylbenzene	10.486	4.9	3126276	7.984	7.613	17.173	17.176	6.36				
	87	p-Isopropyltoluene	10.200	2.0	2407852	6.149	6.028	17.451	17.453	4.17				
	88	1,3-Dichlorobenzene	10.347	3.5	890011	2.273	2.197	17.626	17.627	3.76				
	89	1,4-Dichlorobenzene	10.394	3.9	833898	2.130	2.049	17.830	17.833	4.06				
	90	n-Butylbenzene	10.031	0.3	2285098	5.836	5.817	18.210	18.212	5.82				
	91	1,2-Dichlorobenzene	10.361	3.6	656103	1.676	1.617	18.458	18.462	3.98				
	92	1,2-Dibromo-3-chloropropane	9.920	-0.8	28739	0.073	0.074	19.597	19.599	7.02				
	93	1,2,4-Trichlorobenzene	10.101	1.0	429723	1.097	1.086	20.692	20.694	4.76				
	94	Hexachlorobutadiene	10.094	0.9	414537	1.059	1.049	20.867	20.869	3.82				
	95	Naphthalene	9.699	-3.0	497211	1.270	1.309	21.027	21.027	6.28				
	96	1,2,3-Trichlorobenzene	9.848	-1.5	308259	0.787	0.799	21.349	21.345	5.01				

Spike Amount = Nominal Amount * M

Sa
11/29/11

DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RLC001
Instrument ID: 67
GC Column:RTX502.2ID:0.25mm (mm)

Contract: NWS SEAL BEACH, IR SITE 70.
SAS No.: SDG No.: 11K237
BFB Injection Date : 12/01/11
BFB Injection Time : 09:42
Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.63
75	30.0 - 60.0% of mass 95	46.14
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.69
173	Less than 2.0% of mass 174	0.38(0.5)1
174	Greater than 50% of mass 95	79.68
175	5.0 - 9.0% of mass 174	6.18(7.7)1
176	95.0 - 101.0% of mass 174	78.00(97.9)1
177	5.0 - 9.0% of mass 176	4.75(6.1)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD010	CV067K2304	RLC003	12/01/11	10:45
2	MBLK1W	V067L01B	RLC007	12/01/11	12:49
3	LCS1W	V067L01L	RLC004	12/01/11	11:16
4	LCD1W	V067L01C	RLC005	12/01/11	11:47
5	IR-70-TB-179	K237-02	RLC008	12/01/11	13:19
6	IR-70-DR-178	K237-01	RLC010	12/01/11	14:22

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RKC306
Instrument ID: 67
GC Column: RTX502.2 ID: 0.25mm (mm)

Project: NWS SEAL BEACH, IR SITE 70.
SDG No.: 11K237
Date Analyzed: 11/23/11
Time Analyzed: 20:51
Heated Purge: (Y/N) N

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2156765	8.09	1637638	13.20	477066	18.42
	UPPER LIMIT	4313530	8.59	3275276	13.70	954132	18.92
	LOWER LIMIT	1078383	7.59	818819	12.70	238533	17.92
	SAMPLE ID						
1	VSTD010	2339243	8.11	1746254	13.22	497520	18.44
2	MBLK1W	2281088	8.11	1669925	13.22	454685	18.44
3	LCS1W	2278944	8.11	1710538	13.22	488723	18.44
4	LCD1W	2256911	8.11	1701909	13.22	484909	18.44
5	IR-70-TB-179	2377514	8.11	1751923	13.22	474348	18.45
6	IR-70-DR-178	2349912	8.11	1731774	13.22	481556	18.44

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII VOA-8260 1/2000

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11L01\RLC003.D Vial: 3
Acq On : 1 Dec 2011 10:45 am Operator: AS
Sample : CVO67K2304 10ppb Inst : TO67
Misc : 10ppb 8260/50ppb KET-ACR-ACN-TBA Multiplr: 1.00
MS Integration Params: LSCINT1.P

Method : D:\HPCHEM\1\METHODS\VO67K23.M (RTE Integrator)
Title : METHOD 8260B 4.0
Last Update : Mon Nov 28 09:48:33 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	10.000	10.000	0.0	108	0.02
2	T,M	Dichlorodifluoromethane	10.000	9.554	4.5	98	0.02
3	T,M	Dichlorotetrafluoroethane	-1.000	0.000	0.0	0	0.00
4	P,T,M	Chloromethane	10.000	9.414	5.9	96	0.00
5	C,T,M	Vinyl chloride	10.000	9.285	7.1	96	0.00
6	T,M	Bromomethane	10.000	9.379	6.2	98	0.02
7	T,M	Chloroethane	10.000	9.322	6.8	99	0.00
8	T,M	Dichlorofluoromethane	10.000	9.345	6.5	96	0.00
9	T,M	Trichlorofluoromethane	10.000	10.627	-6.3	109	0.00
10	T,M	sec-Propyl alcohol	-1.000	0.000	0.0	0	0.00
11	T,M	Acrolein	50.000	26.469	47.1#	56	0.00 NT
12	T,M	1,1,2-Trichloro-1,2,2-trifl	10.000	9.619	3.8	99	0.00
13	T,M	Acetone	50.000	47.539	4.9	94	0.00
14	C,T,M	1,1-Dichloroethene	10.000	9.637	3.6	98	0.00
15	T,M	tert-Butyl alcohol	50.000	39.211	21.6#	84	0.00 NT
16	T,M	Methyl acetate	-1.000	0.000	0.0	0	-4.30#
17	T,M	Iodomethane	10.000	9.709	2.9	99	0.00
18	T,M	Acetonitrile	100.000	103.105	-3.1	102	0.02
19	T,M	Methylene chloride	10.000	9.974	0.3	106	0.02
20	T,M	Carbon disulfide	10.000	9.223	7.8	99	0.00
21	T,M	Acrylonitrile	50.000	42.030	15.9	88	0.02
22	T,M	tert-Butyl methyl ether (MT	10.000	8.974	10.3	92	0.00
23	T,M	trans-1,2-Dichloroethene	10.000	9.343	6.6	96	0.02
24	T,M	Isopropyl ether (DIPE)	10.000	9.359	6.4	96	0.00
25	P,T,M	1,1-Dichloroethane	10.000	9.689	3.1	99	0.00
26	T,M	Vinyl acetate	10.000	8.117	18.8	87	0.02
27	T,M	2-Butanol	-1.000	0.000	0.0	0	-5.75#
28	T,M	tert-Butyl ethyl ether (ETB	10.000	9.414	5.9	96	0.00
29	T,M	2-Butanone	50.000	43.960	12.1	93	0.02
30	T,M	2,2-Dichloropropane	10.000	10.122	-1.2	103	0.00
31	T,M	cis-1,2-Dichloroethene	10.000	8.757	12.4	93	0.02
32	C,T,M	Chloroform	10.000	9.794	2.1	100	0.02
33	T,M	Bromochloromethane	10.000	9.458	5.4	96	0.02
34	T,M	tert-Amyl alcohol	-1.000	0.000	0.0	0	-6.73#
35	S	Dibromofluoromethane	10.000	9.757	2.4	110	0.00
36	T,M	Tetrahydrofuran	10.000	8.636	13.6	93	0.00
37	T,M	1,1,1-Trichloroethane	10.000	9.595	4.0	98	0.02
38	T,M	Cyclohexane	-1.000	0.000	0.0	0	-7.09#
39	T,M	tert-Amyl methyl ether (TAM	10.000	9.237	7.6	96	0.00
40	S	1,2-Dichloroethane-d4	10.000	9.545	4.6	108	0.02
41	I	CHLOROBENZENE-D5	10.000	10.000	0.0	107	0.02

(#) = Out of Range

2019

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11L01\RLC003.D Vial: 3
Acq On : 1 Dec 2011 10:45 am Operator: AS
Sample : CVO67K2304 10ppb Inst : TO67
Misc : 10ppb 8260/50ppb KET-ACR-ACN-TBA Multiplr: 1.00
MS Integration Params: LSCINT1.P

Method : D:\HPCHEM\1\METHODS\VO67K23.M (RTE Integrator)
Title : METHOD 8260B 4.0
Last Update : Mon Nov 28 09:48:33 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	10.000	9.847	1.5	99	0.02
43	T,M	Carbon tetrachloride	10.000	9.792	2.1	98	0.00
44	T,M	1,2-Dichloroethane	10.000	9.862	1.4	99	0.00
45	T,M	Benzene	10.000	9.431	5.7	95	0.02
46	T,M	Trichloroethene	10.000	9.700	3.0	99	0.02
47	T,M	Methylcyclohexane	-1.000	0.000	0.0	0	-8.71#
48	C,T,M	1,2-Dichloropropane	10.000	9.461	5.4	97	0.00
49	T,M	Bromodichloromethane	10.000	9.384	6.2	95	0.02
50	T,M	1,4-Dioxane	200.000	191.997	4.0	101	0.02
51	T,M	Dibromomethane	10.000	9.502	5.0	95	0.02
52	T,M	2-Chloroethyl vinyl ether	10.000	8.987	10.1	91	0.02
53	T,M	4-Methyl-2-pentanone	50.000	45.381	9.2	91	0.02
54	T,M	cis-1,3-Dichloropropene	10.000	9.580	4.2	97	0.02
55	S	Toluene-d8	10.000	9.977	0.2	110	0.02
56	C,T,M	Toluene	10.000	9.398	6.0	93	0.02
57	T,M	Ethyl methacrylate	10.000	8.754	12.5	88	0.02
58	T,M	trans-1,3-Dichloropropene	10.000	9.744	2.6	98	0.02
59	T,M	1,1,2-Trichloroethane	10.000	9.180	8.2	93	0.02
60	T,M	2-Hexanone	50.000	44.506	11.0	92	0.02
61	T,M	1,3-Dichloropropane	10.000	9.397	6.0	96	0.02
62	T,M	Tetrachloroethene	10.000	9.637	3.6	97	0.02
63	T,M	Dibromochloromethane	10.000	9.485	5.2	96	0.02
64	T,M	1,2-Dibromoethane	10.000	8.628	13.7	87	0.02
65	T,M	1-Chlorohexane	10.000	10.057	-0.6	101	0.02
66	P,M	Chlorobenzene	10.000	9.516	4.8	96	0.02
67	T,M	1,1,1,2-Tetrachloroethane	10.000	9.388	6.1	95	0.02
68	C,T,M	Ethylbenzene	10.000	9.473	5.3	95	0.02
69	T,M	m-Xylene & p-Xylene	20.000	18.906	5.5	93	0.02
70	T,M	o-Xylene	10.000	9.491	5.1	95	0.02
71	T,M	Styrene	10.000	9.061	9.4	90	0.02
72	I	1,2-DICHLOROBENZENE-D4	10.000	10.000	0.0	104	0.02
73	T,M	Isopropylbenzene	10.000	10.079	-0.8	99	0.02
74	P,T,M	Bromoform	10.000	9.552	4.5	95	0.02
75	T,M	trans-1,4-Dichloro-2-butene	10.000	8.225	17.8	89	0.02
76	P,T,M	1,1,2,2-Tetrachloroethane	10.000	9.027	9.7	91	0.02
77	S	4-Bromofluorobenzene	10.000	9.894	1.1	110	0.03
78	T,M	1,2,3-Trichloropropane	10.000	9.518	4.8	95	0.02
79	T,M	n-Propylbenzene	10.000	9.677	3.2	95	0.03
80	T,M	Bromobenzene	10.000	8.943	10.6	90	0.02
81	T,M	1,3,5-Trimethylbenzene	10.000	9.038	9.6	89	0.02

(#) = Out of Range

2020

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11L01\RLC003.D Vial: 3
Acq On : 1 Dec 2011 10:45 am Operator: AS
Sample : CVO67K2304 10ppb Inst : TO67
Misc : 10ppb 8260/50ppb KET-ACR-ACN-TBA Multiplr: 1.00
MS Integration Params: LSCINT1.P

Method : D:\HPCHEM\1\METHODS\VO67K23.M (RTE Integrator)
Title : METHOD 8260B 4.0
Last Update : Mon Nov 28 09:48:33 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	10.000	9.392	6.1	92	0.02
83	T,M	4-Chlorotoluene	10.000	9.345	6.5	97	0.02
84	T,M	tert-Butylbenzene	10.000	9.362	6.4	93	0.02
85	T,M	1,2,4-Trimethylbenzene	10.000	9.194	8.1	91	0.02
86	T,M	sec-Butylbenzene	10.000	9.710	2.9	94	0.02
87	T,M	p-Isopropyltoluene	10.000	9.501	5.0	92	0.02
88	T,M	1,3-Dichlorobenzene	10.000	9.359	6.4	93	0.02
89	T,M	1,4-Dichlorobenzene	10.000	9.422	5.8	95	0.02
90	T,M	n-Butylbenzene	10.000	9.449	5.5	90	0.02
91	T,M	1,2-Dichlorobenzene	10.000	9.387	6.1	94	0.02
92	T,M	1,2-Dibromo-3-chloropropane	10.000	8.428	15.7	84	0.02
93	T,M	1,2,4-Trichlorobenzene	10.000	8.972	10.3	90	0.02
94	T,M	Hexachlorobutadiene	10.000	8.964	10.4	87	0.02
95	T,M	Naphthalene	10.000	8.353	16.5	85	0.02
96	T,M	1,2,3-Trichlorobenzene	10.000	8.584	14.2	85	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11L01\RLC003.D Vial: 3
Acq On : 1 Dec 2011 10:45 am Operator: AS
Sample : CV067K2304 10ppb Inst : TO67
Misc : 10ppb 8260/50ppb KET-ACR-ACN-TBA Multiplr: 1.00
MS Integration Params: LSCINT1.P

Method : D:\HPCHEM\1\METHODS\VO67K23.M (RTE Integrator)
Title : METHOD 8260B 4.0
Last Update : Mon Nov 28 09:48:33 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	108	0.02
2	T,M	Dichlorodifluoromethane	0.288	0.275	4.5	98	0.02
3	T,M	Dichlorotetrafluoroethane	0.000	0.000	0.0	0#	0.00
4	P,T,M	Chloromethane	0.444	0.418	5.9	96	0.00
5	C,T,M	Vinyl chloride	0.445	0.413	7.2	96	0.00
6	T,M	Bromomethane	0.260	0.244	6.2	98	0.02
7	T,M	Chloroethane	0.267	0.249	6.7	99	0.00
8	T,M	Dichlorofluoromethane	0.617	0.577	6.5	96	0.00
9	T,M	Trichlorofluoromethane	0.363	0.386	-6.3	109	0.00
10	T,M	sec-Propyl alcohol	0.000	0.000	0.0	0#	0.00
11	T,M	Acrolein	0.013	0.007	46.2#	56	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.224	0.216	3.6	99	0.00
13	T,M	Acetone	0.025	0.021	16.0	94	0.00
14	C,T,M	1,1-Dichloroethene	0.573	0.552	3.7	98	0.00
15	T,M	tert-Butyl alcohol	0.007	0.006	14.3	84	0.00
16	T,M	Methyl acetate	0.000	0.000	0.0	0#	-4.30#
17	T,M	Iodomethane	0.542	0.526	3.0	99	0.00
18	T,M	Acetonitrile	0.068	0.070	-2.9	102	0.02
19	T,M	Methylene chloride	0.406	0.405	0.2	106	0.02
20	T,M	Carbon disulfide	1.315	1.213	7.8	99	0.00
21	T,M	Acrylonitrile	0.038	0.032	15.8	88	0.02
22	T,M	tert-Butyl methyl ether (MT	0.342	0.306	10.5	92	0.00
23	T,M	trans-1,2-Dichloroethene	0.582	0.544	6.5	96	0.02
24	T,M	Isopropyl ether (DIPE)	1.053	0.985	6.5	96	0.00
25	P,T,M	1,1-Dichloroethane	0.656	0.636	3.0	99	0.00
26	T,M	Vinyl acetate	0.277	0.225	18.8	87	0.02
27	T,M	2-Butanol	0.000	0.000	0.0	0#	-5.75#
28	T,M	tert-Butyl ethyl ether (ETB	0.626	0.589	5.9	96	0.00
29	T,M	2-Butanone	0.045	0.040	11.1	93	0.02
30	T,M	2,2-Dichloropropane	0.384	0.388	-1.0	103	0.00
31	T,M	cis-1,2-Dichloroethene	0.372	0.326	12.4	93	0.02
32	C,T,M	Chloroform	0.512	0.501	2.1	100	0.02
33	T,M	Bromochloromethane	0.226	0.214	5.3	96	0.02
34	T,M	tert-Amyl alcohol	0.000	0.000	0.0	0#	-6.73#
35	S	Dibromofluoromethane	0.277	0.270	2.5	110	0.00
36	T,M	Tetrahydrofuran	0.031	0.025	19.4	93	0.00
37	T,M	1,1,1-Trichloroethane	0.490	0.470	4.1	98	0.02
38	T,M	Cyclohexane	0.000	0.000	0.0	0#	-7.09#
39	T,M	tert-Amyl methyl ether (TAM	0.092	0.085	7.6	96	0.00
40	S	1,2-Dichloroethane-d4	0.175	0.167	4.6	108	0.02
41	I	CHLOROBENZENE-D5	1.000	1.000	0.0	107	0.02

(#) = Out of Range

2022

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11L01\RLC003.D Vial: 3
Acq On : 1 Dec 2011 10:45 am Operator: AS
Sample : CVO67K2304 10ppb Inst : TO67
Misc : 10ppb 8260/50ppb KET-ACR-ACN-TBA Multiplr: 1.00
MS Integration Params: LSCINT1.P

Method : D:\HPCHEM\1\METHODS\VO67K23.M (RTE Integrator)
Title : METHOD 8260B 4.0
Last Update : Mon Nov 28 09:48:33 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	T,M	1,1-Dichloropropene	0.252	0.248	1.6	99	0.02
43	T,M	Carbon tetrachloride	0.553	0.542	2.0	98	0.00
44	T,M	1,2-Dichloroethane	0.279	0.275	1.4	99	0.00
45	T,M	Benzene	1.770	1.669	5.7	95	0.02
46	T,M	Trichloroethene	0.490	0.476	2.9	99	0.02
47	T,M	Methylcyclohexane	0.000	0.000	0.0	0#	-8.71#
48	C,T,M	1,2-Dichloropropane	0.415	0.393	5.3	97	0.00
49	T,M	Bromodichloromethane	0.415	0.389	6.3	95	0.02
50	T,M	1,4-Dioxane	0.001	0.001	0.0	101	0.02
51	T,M	Dibromomethane	0.142	0.135	4.9	95	0.02
52	T,M	2-Chloroethyl vinyl ether	0.097	0.087	10.3	91	0.02
53	T,M	4-Methyl-2-pentanone	0.150	0.136	9.3	91	0.02
54	T,M	cis-1,3-Dichloropropene	0.505	0.484	4.2	97	0.02
55	S	Toluene-d8	1.526	1.522	0.3	110	0.02
56	C,T,M	Toluene	1.813	1.703	6.1	93	0.02
57	T,M	Ethyl methacrylate	0.217	0.190	12.4	88	0.02
58	T,M	trans-1,3-Dichloropropene	0.326	0.318	2.5	98	0.02
59	T,M	1,1,2-Trichloroethane	0.169	0.156	7.7	93	0.02
60	T,M	2-Hexanone	0.090	0.080	11.1	92	0.02
61	T,M	1,3-Dichloropropane	0.322	0.303	5.9	96	0.02
62	T,M	Tetrachloroethene	0.377	0.363	3.7	97	0.02
63	T,M	Dibromochloromethane	0.220	0.209	5.0	96	0.02
64	T,M	1,2-Dibromoethane	0.176	0.152	13.6	87	0.02
65	T,M	1-Chlorohexane	0.815	0.819	-0.5	101	0.02
66	P,M	Chlorobenzene	1.030	0.980	4.9	96	0.02
67	T,M	1,1,1,2-Tetrachloroethane	0.297	0.279	6.1	95	0.02
68	C,T,M	Ethylbenzene	2.067	1.958	5.3	95	0.02
69	T,M	m-Xylene & p-Xylene	1.497	1.415	5.5	93	0.02
70	T,M	o-Xylene	1.420	1.348	5.1	95	0.02
71	T,M	Styrene	1.128	1.022	9.4	90	0.02
72	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	104	0.02
73	T,M	Isopropylbenzene	6.809	6.863	-0.8	99	0.02
74	P,T,M	Bromoform	0.339	0.324	4.4	95	0.02
75	T,M	trans-1,4-Dichloro-2-butene	0.189	0.155	18.0	89	0.02
76	P,T,M	1,1,2,2-Tetrachloroethane	0.558	0.504	9.7	91	0.02
77	S	4-Bromofluorobenzene	1.367	1.353	1.0	110	0.03
78	T,M	1,2,3-Trichloropropane	0.146	0.139	4.8	95	0.02
79	T,M	n-Propylbenzene	8.617	8.338	3.2	95	0.03
80	T,M	Bromobenzene	1.111	0.994	10.5	90	0.02
81	T,M	1,3,5-Trimethylbenzene	5.468	4.942	9.6	89	0.02

(#) = Out of Range

2023

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\11L01\RLC003.D Vial: 3
Acq On : 1 Dec 2011 10:45 am Operator: AS
Sample : CVO67K2304 10ppb Inst : TO67
Misc : 10ppb 8260/50ppb KET-ACR-ACN-TBA Multiplr: 1.00
MS Integration Params: LSCINT1.P

Method : D:\HPCHEM\1\METHODS\VO67K23.M (RTE Integrator)
Title : METHOD 8260B 4.0
Last Update : Mon Nov 28 09:48:33 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
82	T,M	2-Chlorotoluene	4.903	4.605	6.1	92	0.02
83	T,M	4-Chlorotoluene	3.965	3.705	6.6	97	0.02
84	T,M	tert-Butylbenzene	1.251	1.171	6.4	93	0.02
85	T,M	1,2,4-Trimethylbenzene	5.081	4.672	8.0	91	0.02
86	T,M	sec-Butylbenzene	7.613	7.393	2.9	94	0.02
87	T,M	p-Isopropyltoluene	6.028	5.728	5.0	92	0.02
88	T,M	1,3-Dichlorobenzene	2.197	2.056	6.4	93	0.02
89	T,M	1,4-Dichlorobenzene	2.049	1.930	5.8	95	0.02
90	T,M	n-Butylbenzene	5.817	5.497	5.5	90	0.02
91	T,M	1,2-Dichlorobenzene	1.617	1.518	6.1	94	0.02
92	T,M	1,2-Dibromo-3-chloropropane	0.074	0.062	16.2	84	0.02
93	T,M	1,2,4-Trichlorobenzene	1.086	0.975	10.2	90	0.02
94	T,M	Hexachlorobutadiene	1.049	0.940	10.4	87	0.02
95	T,M	Naphthalene	1.309	1.093	16.5	85	0.02
96	T,M	1,2,3-Trichlorobenzene	0.799	0.686	14.1	85	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

2024

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☒ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No.0 ☐ EMAX-TCPSIM Rev.No.1 ☐ EMAX-M8260SIM Rev.No.0 ☐

Start Date: 11-23-11 ☐ 5-mL Purge ☐ 10-mL Purge ☒ 25-mL Purge

Book # A67 -047

BATCH V067K2306

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RKC300	BFB67K14	1µL					BFB CHECK 17545
02	301		V067K2301	.05/.05/.2/.2µL					.3ppb 8260/1.5ppb Ket-AA-TBA
03	302		02	.25/.25/.5/.5µL					.5 /2.5
04	303		03	.5/.5/1/1µL					1 /5
05	304		04	1/1/2/2µL					2 /10
06	305		05	2.5/2.5/5/5µL					5 /25
07	306		06	5/5/10/10µL					10 /50
08	307		07	10/10/20/20µL					20 /100
09	308		08	15/15/30/30µL					30 /150
10	309		09	25/25/50/50µL					50 /250
11	310		10	50/50/100/100µL					100 /500
12	311		rinse	25mL	1.0				
13	312		IS/SS						
14	313		V067K14B						MB
15	314		IV067K2301	5/5/10/10µL					10 /50
16	315		rinse	25mL	1.0				
17	316								
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									AS 11/28/11

Instrument No.	67
INITIAL CALIBRATION REFERENCE	
DATE	11-23-11
ICAL ID	V067K23

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC 8260	SV1-19-08-1	VARIES	50/250
DCC KetAA	-07-2		250
DCC gases	-06-2		250
DCC CS_2	-07-1		250
BFB	-03-2	1	50
IS/SURR. IS SS	SV1-17 {-8/-1, -8/-2}	VARIES	{250
ICV/LCS 8260	-100-2	5	50/250
ICV/LCS KetAA	SV1-19 -9-2	5	250
ICV/LCS gases	-10-3	1	250
ICV/LCS CS_2	SV1-17-97-3	1	250

DATA FILE FOLDER: 11K23

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO67	

Comments: IS/SS SV1-19-10-1

Analyzed By: AS

Date Disposed: 11-28-11

Disposed By: AS

2023

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☒ EMAX-8260 Rev.No. 8 ☐ EMAX-524.2 Rev.No. 7 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No.0 ☐ EMAX-TCPSIM Rev.No.1 ☐ EMAX-M8260SIM Rev.No.0 ☐

Start Date: 12-01-11 ☐ 5-mL Purge ☐ 10-mL Purge ☒ 25-mL Purge

Book # A67 -047

BATCH CV067K2304

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl <5ppm	Matrix S	Notes
01		RLC001	BFB67L01	1 µL					T/CHECK 09:42
02		02	STD TEST	5/5/1/1 µL					
03		03	CV067K2304						
04		04	V067L01L						
05		05	C						
06		06	rinse	25 mL	1.0				
07		07	V067L01B						MB
08		08	11K237-02			<2	<.5		TB
09		09	-01T	1 mL	25				too Dilute
10		10	-01	25 mL	1.0				
11		11	rinse						
12		12	11K233-02			<2	<.5		TB
13		13	11L006-01						TB
14		14	11K233-04						EB
15		15	11L006-02						
16		16	-03						
17		17	11K233-01						
18		18	rinse						
19		19	11K233-03			<2	<.5		
20		20	-03M						MS
21		21	-03S						MSD 20:01
22		22	rinse						
23		23							
24									
25									
26									
27									
28									
29									
30									12--

Instrument No.	67
INITIAL CALIBRATION REFERENCE	
DATE	11-23-11
ICAL ID	V067K23

STANDARDS

NAME	ID	Amount (µL)	Conc. (mg/L)
DCC 8260	SVL-19-08-1	5	
DCC Ket-Ap	-07-2	5	
DCC gases	-06-2	1	
DCC CS_2	-07-1	1	80/250
BFB	-03-2	1	
IS/SURR.	-10-1	1	
ICV/LCS 8260	SVL-17-100-2	5	
ICV/LCS Ket-Ap	-89-2	5	
ICV/LCS gases	SVL-19-10-3	1	
ICV/LCS CS_2	SVL-17-97-3	1	

DATA FILE FOLDER	VL01

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO67	

Comments:

Analyzed By: AG

Date Disposed:

Disposed By:

2027

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

SDG#: 11K237

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K237

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

One (1) water sample was received on 11/30/11 for TPH Gasoline analysis, Method 5030B/8015B in accordance with USEPA SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for VA39L02L/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogate was added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K237
Instrument ID : GCT039

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VA39L02B	1	NA	12/03/1118:02	12/03/1118:02	EL01078A	EL01071A	VA39L02	Method Blank
LCS1W	VA39L02L	1	NA	12/03/1116:39	12/03/1116:39	EL01076A	EL01071A	VA39L02	Lab Control Sample (LCS)
LCD1W	VA39L02C	1	NA	12/03/1117:21	12/03/1117:21	EL01077A	EL01071A	VA39L02	LCS Duplicate
IR-70-DR-178	K237-01	1	NA	12/03/1120:48	12/03/1120:48	EL01082A	EL01071A	VA39L02	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : INSIGHT EEC, INC.	Date Collected: 11/30/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/30/11
Batch No. : 11K237	Date Extracted: 12/03/11 20:48
Sample ID: IR-70-DR-178	Date Analyzed: 12/03/11 20:48
Lab Samp ID: K237-01	Dilution Factor: 1
Lab File ID: EL01082A	Matrix : WATER
Ext Btch ID: VA39L02	% Moisture : NA
Calib. Ref.: EL01071A	Instrument ID : GCT039

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
GASOLINE	ND	0.10	0.010

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	0.0328	0.04000	81.9	60-140

Parameter	H-C Range
Gasoline	C6-C10

QC SUMMARIES

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 12/03/11
Batch No. : 11K237	Date Extracted: 12/03/11 18:02
Sample ID: MBLK1W	Date Analyzed: 12/03/11 18:02
Lab Samp ID: VA39L02B	Dilution Factor: 1
Lab File ID: EL01078A	Matrix : WATER
Ext Btch ID: VA39L02	% Moisture : NA
Calib. Ref.: EL01071A	Instrument ID : GCT039

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
GASOLINE	ND	0.10	0.010

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	0.0324	0.04000	80.9	70-130

Parameter	H-C Range
Gasoline	C6-C10

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K237
METHOD: METHOD 5030B/8015B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	VA39L02B	VA39L02L	VA39L02C		
LAB FILE ID:	EL01078A	EL01076A	EL01077A		
DATE EXTRACTED:	12/03/1118:02	12/03/1116:39	12/03/1117:21	DATE COLLECTED:	NA
DATE ANALYZED:	12/03/1118:02	12/03/1116:39	12/03/1117:21	DATE RECEIVED:	12/03/11
PREP. BATCH:	VA39L02	VA39L02	VA39L02		
CALIB. REF:	EL01071A	EL01071A	EL01071A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Gasoline	ND	0.500	0.467	93	0.500	0.463	93	1	60-130	30

SURROGATE PARAMETER	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	QC LIMIT (%)
Bromofluorobenzene	0.0400	0.0399	100	0.0400	0.0398	100	70-130

INITIAL CALIBRATIONS

INITIAL CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Columm : DB-5
Column size ID : 30MX.53MM
LFID & Datetime: EJ17008A 10/17/11 17:03
LFID & Datetime: EJ17007A 10/17/11 16:21
LFID & Datetime: EJ17006A 10/17/11 15:40
LFID & Datetime: EJ17005A 10/17/11 14:58
LFID & Datetime: EJ17004A 10/17/11 14:16
LFID & Datetime: EJ17003A 10/17/11 13:34
LFID & Datetime: EJ17002A 10/17/11 12:52
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 1.00X	2.50X	5.00X	25.00X	50.00X	100.00X	125.00X	MEAN	%RSD	
Gasoline(TOTAL)	20.00	17466	17199	17453	17230	17338	16756	16810	17178.9	1.7	✓
GRO(C6-C10)	20.00	13678	13780	14482	15139	14748	14598	14567	14427.2	3.6	✓
GRO(2MP-124TMB)	20.00	13678	13939	14682	15318	14918	14633	14609	14539.5	3.9	✓
GRO(C5-C12)	20.00	17466	16837	17428	17193	17203	16689	16721	17076.9	1.9	✓
GRO(C6-C12)	20.00	17359	16620	17174	17003	17022	16528	16556	16894.5	1.9	✓
GRO(C5-C10)	20.00	13784	13998	14737	15328	14929	14759	14732	14609.6	3.7	✓
SURROGATE	X	1.00X	2.00X	3.00X	4.00X	5.00X	7.50X	10.00X	MEAN	%RSD	
Bromofluorobenzene	10.00	14601	14645	15360	16505	18048	18806	18494	16637.1	10.9	✓
1,1,1-Trifluorotoluene	10.00	21627	20161	21247	22349	23598	24792	24465	22605.6	7.7	✓
		✓	✓	✓	✓	✓	✓	✓	✓	✓	

VG39J17.MET

FORM VI 8015P -2 1/96

AS
10/18/11

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EJ17004A 10/17/2011 14:16
Conc Cont LFID & Datetime: EJ17009A 10/17/2011 17:45
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	1000.0	17178.9	18020004	1048.96	5		15
GRO(C6-C10)	NA	NA	NA	1000.0	14427.2	14294787	990.82	-1		15
GRO(2MP-124TMB)	NA	NA	NA	1000.0	14539.5	14395050	990.06	-1		15
GRO(C5-C12)	NA	NA	NA	1000.0	17076.9	17797456	1042.19	4		15
GRO(C6-C12)	NA	NA	NA	1000.0	16894.5	17486460	1035.04	4		15
GRO(C5-C10)	NA	NA	NA	1000.0	14609.6	14605786	999.74	-0		15
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
Bromofluorobenzene	10.683	10.657	10.709	50.0	16637.1	870451	52.32	5		15
1,1,1-Trifluorotoluene	3.175	3.137	3.213	50.0	22605.6	1252461	55.40	11		15

VG39J17.MET

10/18/11

DAILY CALIBRATIONS

CONTINUE CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EJ17004A 10/17/2011 14:16
Conc Cont LFID & Datetime: EL01071A 12/03/2011 13:11
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	1000.0	17178.9	15149008	881.84	-12		15
GRO(C6-C10)	NA	NA	NA	1000.0	14427.2	13155838	911.87	-9		15
GRO(2MP-124TMB)	NA	NA	NA	1000.0	14539.5	13400856	921.68	-8		15
GRO(C5-C12)	NA	NA	NA	1000.0	17076.9	15128650	885.91	-11		15
GRO(C6-C12)	NA	NA	NA	1000.0	16894.5	14883632	880.97	-12		15
GRO(C5-C10)	NA	NA	NA	1000.0	14609.6	13400856	917.26	-8		15

SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
Bromofluorobenzene	10.667	10.641	10.693	50.0	16637.1	813613	48.90	-2		15
1,1,1-Trifluorotoluene	3.167	3.129	3.205	50.0	22605.6	1102124	48.76	-2		15

CONTINUE CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Columm : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EJ17004A 10/17/2011 14:16
Conc Cont LFID & Datetime: EL01083A 12/03/2011 21:30
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	1000.0	17178.9	15855770	922.98	-8		15
GRO(C6-C10)	NA	NA	NA	1000.0	14427.2	13821156	957.99	-4		15
GRO(2MP-124TMB)	NA	NA	NA	1000.0	14539.5	14071011	967.78	-3		15
GRO(C5-C12)	NA	NA	NA	1000.0	17076.9	15824480	926.66	-7		15
GRO(C6-C12)	NA	NA	NA	1000.0	16894.5	15574625	921.87	-8		15
GRO(C5-C10)	NA	NA	NA	1000.0	14609.6	14071011	963.13	-4		15
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
Bromofluorobenzene	10.675	10.649	10.701	50.0	16637.1	839871	50.48	1		15
1,1,1-Trifluorotoluene	3.175	3.137	3.213	50.0	22605.6	1103678	48.82	-2		15

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
NONHALOGENATED VOLATILES

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

GASOLINE ICAL

GM J003 (Soil) : J178

Book #:	A39- 038
Instrument No.:	39
Analytical Sequence:	EJ17
Method File:	☐ FID Channel A
	☐ PID Channel B
Analytical Batch:	CV639 J17001

SOP #	Rev. #
☐ EMAX-5030B	2
☐ EMAX-BTEXM	1
☑ EMAX-8015G	3
☐ EMAX-8015S	1
☐ EMAX-AK101	1
☐ EMAX-	

STANDARDS ID		CONC. (mg/L)
ICAL	V639J17. MET	—
ICV	IV639 J1701	—
DCC GAS	SV2-05-48	2500
DCC BTEX	—	—
DCC STODDARD	—	—
BFB/TFT	SV2-06-02-2	100
LCS/LCSD	SV2-05-47	5000
MS/MSD	—	—

Purge Volume	5 ml

SOLVENT	ID
Methanol	

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZC-3-BTEX	
☐	

Analyzed By: SC

Date: 10/17/11

4016

Method: Vg39j17.met Batch: Ej17.seq Data: Ej17.002 - [Batch: ej17.seq]

File Edit Method Batch Options Analysis Window Help

Method | Data | Batch | Integ. | Peaks | Batch | Custom | Review | Reproc | Recalib | Analyze | Reports

Run	Run Type	Sample ID	Method	Filename	Description
1	Unknown	IB39J001	vg39j17.met	EJ17.001	
2	Unknown	VG39J17-07 2500/100 5ul GAS DCC/5ml SWV	vg39j17.met	EJ17.002	
3	Unknown	VG39J17-06 2000/75 4ul / 3.75ml SWV	vg39j17.met	EJ17.003	
4	Unknown	VG39J17-05 1000/50 2ul / 2.5ml SWV	vg39j17.met	EJ17.004	
5	Unknown	VG39J17-04 500/40 1ul / 2ml SWV	vg39j17.met	EJ17.005	GASOLINE ICAL
6	Unknown	VG39J17-03 100/30 0.2ml / 1.5ml SWV	vg39j17.met	EJ17.006	
7	Unknown	VG39J17-02 50/20 0.1ml / 1ml SWV	vg39j17.met	EJ17.007	
8	Unknown	VG39J17-01 20/10 0.04ml / 0.5ml SWV	vg39j17.met	EJ17.008	
9	Unknown	IVG39J1701 1000/50 1ml GAS DCC /2.5ml SWV	vg39j17.met	EJ17.009	GASOLINE ICV
10	Unknown	IVG39J1702 500/40 0.5ml / 2ml SWV	vg39j17.met	EJ17.010	
11	Unknown	GRO	vg39j17.met	EJ17.011	SV2-05-36
12	Unknown	2MP/1,2,4-TMB	vg39j17.met	EJ17.012	2MP (SV2-05-84-1) / 1,2,4-TMB (SV2-05-23)
13	Unknown	PENTANE/NAPHTHALENE	vg39j17.met	EJ17.013	PENTANE LOT # 37165 / NAPHTHALENE (SV2-05-24)
14	Unknown	DRO	vg39j17.met	EJ17.014	SV2-05-31
15	Unknown	RINSE	vg39j17.met	EJ17.015	FINAL
16	Unknown	RINSE	vg39j17.met	EJ17.016	
17	Unknown	PENTANE (SV2-07-01-03)	vg39j17.met	EJ17.017	
18	Unknown	UNDECANE (SV2-07-01-02)	vg39j17.met	EJ17.018	Conc. only
19	Unknown	DODECANE (SV2-07-01-04)	vg39j17.met	EJ17.019	
20	Unknown	RINSE	vg39j17.met	EJ17.020	
21	Unknown	RINSE	vg39j17.met	EJ17.021	
22	Unknown	CVG39J17001 1000/50 2ml GAS DCC /2.5ml SWV	vg39j17.met	EJ17.022	
23	Unknown	GMJ003SL 100UL S	vg39j17.met	EJ17.023	Conc. 500/40
24	Unknown	GMJ003SC 100UL S	vg39j17.met	EJ17.024	
25	Unknown	GMJ003SB 100UL S	vg39j17.met	EJ17.025	
26	Unknown	11J178-01 100UL S	vg39j17.met	EJ17.026	
27	Unknown	11J178-02 100UL S	vg39j17.met	EJ17.027	
28	Unknown	11J178-03 100UL S	vg39j17.met	EJ17.028	
29	Unknown	11J178-04 100UL S	vg39j17.met	EJ17.029	
30	Unknown	11J178-05 100UL S	vg39j17.met	EJ17.030	
31	Unknown	11J178-08 100UL S	vg39j17.met	EJ17.031	
32	Unknown	11J178-09 100UL S	vg39j17.met	EJ17.032	
33	Unknown	11J178-10 100UL S	vg39j17.met	EJ17.033	
34	Unknown	CVG39J17002 1000/50 2ml GAS DCC /2.5ml SWV	vg39j17.met	EJ17.034	

SC 10/18/11

Method Development

Start | EZChrom Chromatogra... | Method: Vg39j17.met | untitled - Paint | Method: Vg39j17... | Exploring - Export | Calculator | Tuesday, October 18, 2011

EMAX LABORATORIES, INC.

ANALYTICAL RUN LOG
for
NONHALOGENATED VOLATILES

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Purge Volume = 5 mL

VA39L01
~~VA39K01~~ (water): K236, L002, L003
SC 12/05/11

GML002 (soil): L002

GML003 (soil): L003

GML004 (soil): L015

VA39L02
~~VA39K02~~ (water): L011, L015, K237
SC 12/5/11

Book #:	A39- 039
Instrument No.:	39
Analytical Sequence:	EL01
Method File:	☑ FID Channel A VG39T17
	☐ FID Channel A
	☐ PID Channel B
Analytical Batch:	CVG39J17142

SOP #	Rev. #
☑ EMAX-5030B	2
☐ EMAX-BTEXM	1
☑ EMAX-8015G	3
☐ EMAX-AK101	1
☐ EMAX-	

STANDARDS ID		CONC. (mg/L)
ICAL	—	—
ICAL	—	—
ICV	—	—
ICV	—	—
DCC GAS	SV2-07-01-5	2500
DCC BTEX	—	—
DCC	—	—
BFB/TFT	SV2-06-05-2	100
LCS/LCSD	SV2-05-47	5000
MS/MSD	SV2-05-47	5000

SOLVENT	ID
Methanol	

ELECTRONIC DATA ARCHIVAL	
Location	Date
☑ EZC-3-BTEX SC	12/5/11
☐	

Analyzed By: SC

Date: 12/01/11

Method: Vg39j17.met Batch: El01.seq Data: El01.078 - [Batch: el01.seq]

File Edit Method Batch Options Analysis Window Help

Method | Data | Batch | Integ. | Peaks | Batch | Custom | Review | Reproc | Recalib | Analyze | Reports

Run	Run Type	Sample ID	Method	Filename	Description
69	Unknown	11L015-07 100UL S	vg39j17.met	EL01.069	
70	Unknown	11L015-08 100UL S	vg39j17.met	EL01.070	
71	Unknown	CVG39J17148 1000/50	vg39j17.met	EL01.071	
72	Unknown	IB39L149	vg39j17.met	EL01.072	
73	Unknown	11L015-11 100UL S	vg39j17.met	EL01.073	
74	Unknown	11L015-12 100UL S	vg39j17.met	EL01.074	
75	Unknown	11L015-13 100UL S	vg39j17.met	EL01.075	
76	Unknown	VA39L02L 5.0ML W	vg39j17.met	EL01.076	
77	Unknown	VA39L02C 5.0ML W	vg39j17.met	EL01.077	
78	Unknown	VA39L02B 5.0ML W	vg39j17.met	EL01.078	
79	Unknown	11L011-01 5.0ML W	vg39j17.met	EL01.079	PH <2
80	Unknown	11L015-09 5.0ML W	vg39j17.met	EL01.080	PH <2
81	Unknown	11L015-10 5.0ML W	vg39j17.met	EL01.081	PH <2
82	Unknown	11K237-01 5.0ML W	vg39j17.met	EL01.082	PH <2
83	Unknown	CVG39J17149 1000/50	vg39j17.met	EL01.083	
84	Unknown	IB	vg39j17.met	EL01.084	
85	Unknown	IB	vg39j17.met	EL01.085	
86	Unknown	IB	vg39j17.met	EL01.086	
87	Unknown	IB	vg39j17.met	EL01.087	
88	Unknown	IB	vg39j17.met	EL01.088	
89	Unknown	IB	vg39j17.met	EL01.089	
90	Unknown	IB	vg39j17.met	EL01.090	
91	Unknown	IB	vg39j17.met	EL01.091	
92	Unknown	IB	vg39j17.met	EL01.092	
93	Unknown	IB	vg39j17.met	EL01.093	
94	Unknown	IB	vg39j17.met	EL01.094	
95	Unknown	IB	vg39j17.met	EL01.095	
96	Unknown	IB	vg39j17.met	EL01.096	
97	Unknown	IB	vg39j17.met	EL01.097	
98	Unknown	IB	vg39j17.met	EL01.098	
99	Unknown	IB	vg39j17.met	EL01.099	
100	Unknown	IB	vg39j17.met	EL01.100	
101	Unknown	IB	vg39j17.met	EL01.101	
102	Unknown	IB	vg39j17.met	EL01.102	

Method Development

Monday, December 05, 2011

Start | EZChrom Chromatogra... | Method: Vg39j17.met ... | unlilled - Paint | Method: Vg39j17... | Exploring - (C:) | Method: Vg55k23.met ... | 12:18 PM

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 11K237

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K237

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One (1) water sample was received on 11/30/11 for TPH Diesel analysis, Method 3520C/8015B in accordance with DoD Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for DSL002WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter. The sample displayed mix hydrocarbons.

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : INSIGHT EEC, INC.
Project : NWS SEAL BEACH, IR SITE 70.

SDG NO. : 11K237
Instrument ID : GCT105

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSL002WB	1	NA	12/02/1112:37	12/01/1112:15	LL02005A	LL02003A	DSL002W	Method Blank
LCS1W	DSL002WL	1	NA	12/02/1112:53	12/01/1112:15	LL02006A	LL02003A	DSL002W	Lab Control Sample (LCS)
LCD1W	DSL002WC	1	NA	12/02/1113:10	12/01/1112:15	LL02007A	LL02003A	DSL002W	LCS Duplicate
IR-70-DR-178	K237-01	1.02	NA	12/02/1114:01	12/01/1112:15	LL02010A	LL02003A	DSL002W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : INSIGHT EEC, INC.	Date Collected: 11/30/11
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 11/30/11
Batch No. : 11K237	Date Extracted: 12/01/11 12:15
Sample ID: IR-70-DR-178	Date Analyzed: 12/02/11 14:01
Lab Samp ID: K237-01	Dilution Factor: 1.02
Lab File ID: LL02010A	Matrix : WATER
Ext Btch ID: DSL002W	% Moisture : NA
Calib. Ref.: LL02003A	Instrument ID : GCT105

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
DIESEL	0.41J	0.51	0.051

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	0.792	1.020	77.7	40-130
HEXACOSANE	0.293	0.2550	115	40-150

RL : Reporting Limit

Parameter	H-C Range
Diesel	C10-C24

QC SUMMARIES

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : INSIGHT EEC, INC.	Date Collected: NA
Project : NWS SEAL BEACH, IR SITE 70.	Date Received: 12/01/11
Batch No. : 11K237	Date Extracted: 12/01/11 12:15
Sample ID: MBLK1W	Date Analyzed: 12/02/11 12:37
Lab Samp ID: DSL002WB	Dilution Factor: 1
Lab File ID: LL02005A	Matrix : WATER
Ext Btch ID: DSL002W	% Moisture : NA
Calib. Ref.: LL02003A	Instrument ID : GCT105

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
DIESEL	ND	0.50	0.050

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	0.760	1.000	76.0	50-130
HEXACOSANE	0.318	0.2500	127	60-140

RL : Reporting Limit

Parameter	H-C Range
Diesel	C10-C24

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: INSIGHT EEC, INC.
PROJECT: NWS SEAL BEACH, IR SITE 70.
BATCH NO.: 11K237
METHOD: METHOD 3520C/8015B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	DSL002WB	DSL002WL	DSL002WC		
LAB FILE ID:	LL02005A	LL02006A	LL02007A		
DATE EXTRACTED:	12/01/1112:15	12/01/1112:15	12/01/1112:15	DATE COLLECTED:	NA
DATE ANALYZED:	12/02/1112:37	12/02/1112:53	12/02/1113:10	DATE RECEIVED:	12/01/11
PREP. BATCH:	DSL002W	DSL002W	DSL002W		
CALIB. REF:	LL02003A	LL02003A	LL02003A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Diesel	ND	5.00	5.04	101	5.00	5.09	102	1	60-130	30

SURROGATE PARAMETER	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	QC LIMIT (%)
Bromobenzene	1.00	0.804	80	1.00	0.827	83	50-130
Hexacosane	0.250	0.240	96	0.250	0.293	117	60-140

INITIAL CALIBRATIONS

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LK30003A 11/30/11 11:28
LFID & Datetime: LK30004A 11/30/11 12:02
LFID & Datetime: LK30005A 11/30/11 12:19
LFID & Datetime: LK30006A 11/30/11 12:35
LFID & Datetime: LK30007A 11/30/11 12:52
LFID & Datetime: LK30008A 11/30/11 13:09
LFID & Datetime: LK30009A 11/30/11 13:26
CONC UNIT: ppm

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 1.00X	2.00X	10.00X	20.00X	100.00X	300.00X	600.00X	MEAN	%RSD	
DIESEL(TOTAL)	5.00	18704	19467	21566	23821	23264	24647	25039	22358.3	11.2	✓
DIESEL(C10-C24)	5.00	18041	18314	20806	22924	22366	23479	23907	21405.4	11.3	✓
DIESEL(C10-C28)	5.00	18184	18409	20818	22939	22385	23563	24012	21473.1	11.2	✓
DIESEL(C10-C25)	5.00	18108	18376	20818	22939	22383	23538	23977	21448.4	11.2	✓
DIESEL(C9-C24)	5.00	18245	19074	21387	23537	22968	24208	24555	21996.3	11.4	✓
DIESEL(C9-C25)	5.00	18311	19136	21399	23552	22986	24266	24625	22039.2	11.4	✓
DIESEL(C10-C36)	5.00	18184	18409	20818	22939	22385	23564	24014	21473.4	11.2	✓
DIESEL(C10-C40)	5.00	18184	18409	20818	22939	22385	23564	24014	21473.4	11.2	✓
SURROGATE	X	0.00X	1.00X	2.00X	3.00X	4.00X	5.00X	11.00X	MEAN	%RSD	
BROMOBENZENE	20.00	0	15755	15593	15402	16014	17199	16990	16159.0	4.7	✓
HEXACOSANE	5.00	0	19389	19769	19817	20361	20809	20819	20160.6	2.9	✓

DSD5K30.MET

AS
12/01/11

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LK30011A 11/30/11 14:11
LFID & Datetime: LK30012A 11/30/11 14:28
LFID & Datetime: LK30013A 11/30/11 14:45
LFID & Datetime: LK30014A 11/30/11 15:01
LFID & Datetime: LK30015A 11/30/11 15:18
LFID & Datetime: LK30016A 11/30/11 15:35
CONC UNIT: ppm

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	20.00X	100.00X	300.00X	600.00X	MEAN	%RSD	
JP5(C8-C18)	5.00	25005	23609	25369	26024	24141	24407	24759.0	3.5	✓
M.OIL(C18-C36)	5.00	16977	18758	20409	20136	18278	19567	19021.0	6.8	✓
M.OIL(C24-C36)	5.00	14486	15556	17126	16795	15751	16777	16081.7	6.2	✓
M.OIL(C24-C40)	5.00	14486	15556	17126	16795	15775	16845	16097.0	6.3	✓

DSD5K30.MET

AS
12/01/11

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK30007A 11/30/2011 12:52
Conc Cont LFID & Datetime: LK30010A 11/30/2011 13:43
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	22358.3	12718066	568.83	14		15
DIESEL(C10-C24)	NA	NA	NA	500.0	21405.4	11999028	560.56	12		15
DIESEL(C10-C28)	NA	NA	NA	500.0	21473.1	12003961	559.02	12		15
DIESEL(C10-C25)	NA	NA	NA	500.0	21448.4	12003506	559.65	12		15
DIESEL(C9-C24)	NA	NA	NA	500.0	21996.3	12374439	562.57	13		15
DIESEL(C9-C25)	NA	NA	NA	500.0	22039.2	12378917	561.68	12		15
DIESEL(C10-C36)	NA	NA	NA	500.0	21473.4	12003961	559.02	12		15
DIESEL(C10-C40)	NA	NA	NA	500.0	21473.4	12003961	559.02	12		15
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
BROMOBENZENE	1.738	1.735	1.741	80.0	16159.0	1309643	81.05	1		15
HEXACOSANE	4.963	4.813	5.113	20.0	20160.6	398970	19.79	-1		15

DSD5K30.MET

12/01/11

INITIAL CALIBRATION VERIFICATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK30014A 11/30/2011 15:01
Conc Cont LFID & Datetime: LK30017A 11/30/2011 15:52
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	24759.0	12776800	516.05	3		15
M.OIL(C18-C36)	NA	NA	NA	500.0	19021.0	9401280	494.26	-1		15
M.OIL(C24-C36)	NA	NA	NA	500.0	16081.7	7912067	491.99	-2		15
M.OIL(C24-C40)	NA	NA	NA	500.0	16097.0	7912067	491.53	-2		15

DSD5K30.MET

DA
12/01/11

DAILY CALIBRATIONS

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK30007A 11/30/2011 12:52
Conc Cont LFID & Datetime: LL02003A 12/02/2011 12:03
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	22358.3	10830958	484.43	-3		15
DIESEL(C10-C24)	NA	NA	NA	500.0	21405.4	10424995	487.03	-3		15
DIESEL(C10-C28)	NA	NA	NA	500.0	21473.1	10465910	487.40	-3		15
DIESEL(C10-C25)	NA	NA	NA	500.0	21448.4	10453680	487.39	-3		15
DIESEL(C9-C24)	NA	NA	NA	500.0	21996.3	10661615	484.70	-3		15
DIESEL(C9-C25)	NA	NA	NA	500.0	22039.2	10690300	485.06	-3		15
DIESEL(C10-C36)	NA	NA	NA	500.0	21473.4	10466386	487.41	-3		15
DIESEL(C10-C40)	NA	NA	NA	500.0	21473.4	10466386	487.41	-3		15
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
BROMOBENZENE	1.738	1.735	1.741	80.0	16159.0	1210729	74.93	-6		15
HEXACOSANE	4.995	4.845	5.145	20.0	20160.6	431828	21.42	7		15

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK30007A 11/30/2011 12:52
Conc Cont LFID & Datetime: LL02011A 12/02/2011 14:18
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	22358.3	10789338	482.57	-3		15
DIESEL(C10-C24)	NA	NA	NA	500.0	21405.4	10428212	487.18	-3		15
DIESEL(C10-C28)	NA	NA	NA	500.0	21473.1	10450712	486.69	-3		15
DIESEL(C10-C25)	NA	NA	NA	500.0	21448.4	10445201	486.99	-3		15
DIESEL(C9-C24)	NA	NA	NA	500.0	21996.3	10655800	484.44	-3		15
DIESEL(C9-C25)	NA	NA	NA	500.0	22039.2	10672789	484.26	-3		15
DIESEL(C10-C36)	NA	NA	NA	500.0	21473.4	10451147	486.70	-3		15
DIESEL(C10-C40)	NA	NA	NA	500.0	21473.4	10451147	486.70	-3		15
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
BROMOBENZENE	1.737	1.734	1.740	80.0	16159.0	1208122	74.76	-7		15
HEXACOSANE	4.950	4.800	5.100	20.0	20160.6	448411	22.24	11		15

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #:	AD5-018
Instrument No.:	D5
Analytical Sequence:	LK30
Method File:	DSD5K30
Analytical Batch:	CDSD5K30634

SOP #	Rev. #
☑ EMAX-8015D	4
☐ EMAX-LUFTE	3
☐ EMAX-AK102/AK103	3
☐ EMAX-	

STANDARDS ID	Conc (mg/L)
ICAL	
☑ Diesel ☐ Alcohol SS3B-13-72-01	5 → 3000 10 → 3000
☑ Motor Oil ☑ JP5 SS3B-13-72-03	
CH_2Cl_2 51154	Pure
DSL ~~DCC~~ ICV SS3B-13-72-02	500/80/20
LCS	
JP5/5W30 ~~DCC~~ ICV SS3B-13-73-01	500/500
Alaska DCC	
Arizona DCC	
DRO (C_8-C_{40} + C_9-C_{39}) SS3B-13-69-03	—
GRO (C_6-C_{10}) SS3B-13-47-02	—

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZCELITE-11	
☐	

Analyzed By: KHL

Date: 11/30/11

GCT-105 Method: DSD5K30.met Data: LK30001.dat Project: EZC331 [Sequence: LK30.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run Type	Level	Vial	Volume	Sample ID	Method	Filename	Sample	Action	Description
1	Acquiring	Unknown	0	100	2	IB	DSD5K30.met	LK30001.dat	1		
2		Unknown	0	99	2	IBD5K30634	DSD5K30.met	LK30002.dat	1		
3		Unknown	0	1	2	DSD5K3001 DSL 5PPM	DSD5K30.met	LK30003.dat	1		
4		Unknown	0	2	2	DSD5K3002 DSL 10/20/5PPM	DSD5K30.met	LK30004.dat	1		
5		Unknown	0	3	2	DSD5K3003 DSL 50/40/10PPM	DSD5K30.met	LK30005.dat	1		
6		Unknown	0	4	2	DSD5K3004 DSL 100/60/15PPM	DSD5K30.met	LK30006.dat	1		
7		Unknown	0	5	2	DSD5K3005 DSL 500/80/20PPM	DSD5K30.met	LK30007.dat	1		
8		Unknown	0	6	2	DSD5K3006 DSL 1500/100/25PPM	DSD5K30.met	LK30008.dat	1		
9		Unknown	0	7	2	DSD5K3007 DSL 3000/220/55PPM	DSD5K30.met	LK30009.dat	1		
10		Unknown	0	8	2	IDSD5K3001 DSL 500/80/20PPM	DSD5K30.met	LK30010.dat	1		
11		Unknown	0	9	2	DSD5K3008 JP5/5W30 10/10PPM	DSD5K30.met	LK30011.dat	1		
12		Unknown	0	10	2	DSD5K3009 JP5/5W30 50/50PPM	DSD5K30.met	LK30012.dat	1		
13		Unknown	0	11	2	DSD5K3010 JP5/5W30 100/100PPM	DSD5K30.met	LK30013.dat	1		
14		Unknown	0	12	2	DSD5K3011 JP5/5W30 500/500PPM	DSD5K30.met	LK30014.dat	1		
15		Unknown	0	13	2	DSD5K3012 JP5/5W30 1500/1500PPM	DSD5K30.met	LK30015.dat	1		
16		Unknown	0	14	2	DSD5K3013 JP5/5W30 3000/3000PPM	DSD5K30.met	LK30016.dat	1		
17		Unknown	0	15	2	IDSD5K3002 JP5/5W30 500/500PPM	DSD5K30.met	LK30017.dat	1		
18		Unknown	0	16	2	DRO(C8-C40 + C9-C39)	DSD5K30.met	LK30018.dat	1		
19		Unknown	0	17	2	GRO(C6-C10)	DSD5K30.met	LK30019.dat	1		
20		Unknown	0		2	IB	DSD5K30.met	LK30020.dat	1		
21		Unknown	0		2	IB	DSD5K30.met	LK30021.dat	1		
22		Unknown	0		2	IB	DSD5K30.met	LK30022.dat	1		
23		Unknown	0		2	IB	DSD5K30.met	LK30023.dat	1		
24		Unknown	0		2	IB	DSD5K30.met	LK30024.dat	1		
25		Unknown	0		2	IB	DSD5K30.met	LK30025.dat	1		
26		Unknown	0		2	IB	DSD5K30.met	LK30026.dat	1		
27		Unknown	0		2	IB	DSD5K30.met	LK30027.dat	1		
28		Unknown	0		2	IB	DSD5K30.met	LK30028.dat	1		
29		Unknown	0		2	IB	DSD5K30.met	LK30029.dat	1		
30		Unknown	0		2	IB	DSD5K30.met	LK30030.dat	1		
31		Unknown	0		2	IB	DSD5K30.met	LK30031.dat	1		
32		Unknown	0		2	IB	DSD5K30.met	LK30032.dat	1		
33		Unknown	0		2	IB	DSD5K30.met	LK30033.dat	1		
34		Unknown	0		2	IB	DSD5K30.met	LK30034.dat	1		
35		Unknown	0		2	IB	DSD5K30.met	LK30035.dat	1		
36		Unknown	0		2	IB	DSD5K30.met	LK30036.dat	1		
37		Unknown	0		2	IB	DSD5K30.met	LK30037.dat	1		

Km 11/30/11

FINAL

For Help, press F1 Running sample IB

Wednesday, November 30, 2011

Start | EZChrom Elite | GCT-105 Metho... | GCT-105 (Offline) | untitled - Paint | D:\Projects\EZC331\... | 11:00

5019

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DSL602W: L002 [EFH]
K237 ~~K230-20~~
Km 12/2/11

K230-20W [re-analysis]

Book #:	AD5-018
Instrument No.:	D5
Analytical Sequence:	LL02
Method File:	DSD5K30
Analytical Batch:	CDSD5K30641

SOP #	Rev. #
☑ EMAX-8015D	4
☐ EMAX-LUFTE	3
☐ EMAX-AK102/AK103	3
☐ EMAX-	

STANDARDS ID	Conc (mg/L)
ICAL	
☐ Diesel ☐ Alcohol	
☐ Motor Oil ☐ JP5	
CH_2Cl_2 511 54	Pure
DSL DCC SS3B-13-70-01	500/80/20
LCS	
JP5/5W30 DCC SS3B-13-70-02	500/500
Alaska DCC	
Arizona DCC	

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZCELITE-11	
☐	

Analyzed By: KHL

Date: 12/2/11

GCT-105 Method: DSD5K30.met Data: LL02001.dat Project: EZC331 - [Sequence: LL02.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run Type	Level	Vial	Volume	Sample ID	Method	Filename	Sample	Action	Description
1	Acquiring	Unknown	0	100	2	IB	DSD5K30.met	LL02001.dat	1		
2		Unknown	0	99	2	IBD5K30641	DSD5K30.met	LL02002.dat	1		
3		Unknown	0	1	2	CDSD5K30641 DSL 500/80/20PPM	DSD5K30.met	LL02003.dat	1		
4		Unknown	0	2	2	CDSD5K30642 JP5/5W30 500/500PPM	DSD5K30.met	LL02004.dat	1		
5		Unknown	0	3	2	DSL002WB	DSD5K30.met	LL02005.dat	1		
6		Unknown	0	4	2	DSL002WL	DSD5K30.met	LL02006.dat	1		
7		Unknown	0	5	2	DSL002WC	DSD5K30.met	LL02007.dat	1		
8		Unknown	0	6	2	11L002-11	DSD5K30.met	LL02008.dat	1		
9		Unknown	0	7	2	11K230-20W	DSD5K30.met	LL02009.dat	1		Light Yellow
10		Unknown	0	8	2	11K237-01	DSD5K30.met	LL02010.dat	1		Light Yellow
11		Unknown	0	1	2	CDSD5K30643 DSL 500/80/20PPM	DSD5K30.met	LL02011.dat	1		
12		Unknown	0	2	2	CDSD5K30644 JP5/5W30 500/500PPM	DSD5K30.met	LL02012.dat	1	ANY	
13		Unknown	0		2	IB	DSD5K30.met	LL02013.dat	1		
14		Unknown	0		2	IB	DSD5K30.met	LL02014.dat	1		
15		Unknown	0		2	IB	DSD5K30.met	LL02015.dat	1		
16		Unknown	0		2	IB	DSD5K30.met	LL02016.dat	1		
17		Unknown	0		2	IB	DSD5K30.met	LL02017.dat	1		
18		Unknown	0		2	IB	DSD5K30.met	LL02018.dat	1		
19		Unknown	0		2	IB	DSD5K30.met	LL02019.dat	1		
20		Unknown	0		2	IB	DSD5K30.met	LL02020.dat	1		
21		Unknown	0		2	IB	DSD5K30.met	LL02021.dat	1		
22		Unknown	0		2	IB	DSD5K30.met	LL02022.dat	1		
23		Unknown	0		2	IB	DSD5K30.met	LL02023.dat	1		
24		Unknown	0		2	IB	DSD5K30.met	LL02024.dat	1		
25		Unknown	0		2	IB	DSD5K30.met	LL02025.dat	1		
26		Unknown	0		2	IB	DSD5K30.met	LL02026.dat	1		
27		Unknown	0		2	IB	DSD5K30.met	LL02027.dat	1		
28		Unknown	0		2	IB	DSD5K30.met	LL02028.dat	1		
29		Unknown	0		2	IB	DSD5K30.met	LL02029.dat	1		
30		Unknown	0		2	IB	DSD5K30.met	LL02030.dat	1		
31		Unknown	0		2	IB	DSD5K30.met	LL02031.dat	1		
32		Unknown	0		2	IB	DSD5K30.met	LL02032.dat	1		
33		Unknown	0		2	IB	DSD5K30.met	LL02033.dat	1		
34		Unknown	0		2	IB	DSD5K30.met	LL02034.dat	1		
35		Unknown	0		2	IB	DSD5K30.met	LL02035.dat	1		
36		Unknown	0		2	IB	DSD5K30.met	LL02036.dat	1		
37		Unknown	0		2	IB	DSD5K30.met	LL02037.dat	1		

VM 12/2/11

FINAL

For Help, press F1 Running sample IB

Start | EZChrom Elite | untitled - Paint | D:\Projects\EZC331\... | GCT-105 Metho... | GCT-105 (Offline) ... | Friday, December 02, 2011 11:31

5021

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG
for
TPH

SOP	Rev. #
☐ EMAX-3510	1
☑ EMAX-3520	4
☐ EMAX-3540	1
☐ EMAX-3550	3
☐ EMAX-3580	1
☐ EMAX-8015AZ	0
☐ EMAX-AK 102/103	3
☐ EMAX-LUFT E	3
☐ EMAX-	

Note: For samples and relevant QCs/Standards extracted, refer to attached extraction sequence.

Lab Sample ID	Sonicator #	Concentrator # (35°C)
DSL002-WB		1
-WL		1
-WC		1
K237-01		1
L002-11		1

Book #: EDS-055

Preparation Batch: DSL002W

Matrix: WATER

Micropipette ID: 100µl: PE97C-03

Micropipette ID: 1000µl: PE00-03

STANDARDS	ID	Amount Added (ml)
Surrogate		
Surrogate	SS3-009-05-03	0.5
LCS/MS	SS3-009-04-17	0.1
LCS/MS		

Reagent	Lot # / ID
CH_2Cl_2	51154
Na_2SO_4	SW1B-002-21-24
HCl	4111040
Silica Sand	
Silica Gel	

TUNING	
Sonicator #	**Reading**

Concentrator Water Bath Temp. (°C)		
1	35	35
2		
3		
4		
5		
6		

Comments:

Test thermometer = T_1

Prepared By: JD Standard Added By: JD

Witnessed By: CS Checked By: JM

Extract Received By: [illegible] Extraction Location: SE06-06

Disposal Date: Disposed By:

5023

EMAX LABORATORIES, INC.

FileID: DSL002W

EXTRACTION LOG FOR EXTRACTABLE TPH

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Ve(ml)	ExpAmt	ExpVe(ml)	PrepFctr	Comments
11DSL002W01	DSL002WB	1000	ml	12/1/11 12:57	10	1000	10	1	
11DSL002W02	DSL002WL	1000	ml	12/1/11 12:57	10	1000	10	1	
11DSL002W03	DSL002WC	1000	ml	12/1/11 12:57	10	1000	10	1	
11DSL002W04	K237-01	980	ml	12/1/11 12:57	10	1000	10	1.02	
11DSL002W05	L002-11	1060	ml	12/1/11 12:57	10	1000	10	0.94	EB

Balance ID: 10304418. Calibration check was verified prior to use.

Ve=extract volume

PrepFctr=(ExpAmt/Aliquot)(Ve/ExpVe)

☑ Extraction Started @ 12/1/11 12:15

Prepared By: JDLSantos

☑ Extraction Ended @ 12/2/11 6:15

Checked By: JM

Comments: Volume entered after extraction started. PH adjusted to pH<2 with HCl.

Date 12/2/11

5024

LABORATORY REPORT FOR

INSIGHT EEC, INC.

NWS SEAL BEACH, IR SITE 70.

METALS / MERCURY

SDG#: 11K237

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K237

METHOD 3010A/6010B
METALS BY TRACE ICP

One (1) water sample was received on 11/30/11 for Metals by ICP analysis, Method 3010A/6010B in accordance with Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source. Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for IPL003WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG. Analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

[illegible]

[illegible]

Client: [illegible] Job No: [illegible]
Project: [illegible] Instrument ID: [illegible]

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	Matrix	Analysis Date/Time	Extraction Date/Time	Sample Data File	Calibration Prep Date File	Batch	Notes
MB-[illegible]W	IP[illegible]	1	NA	12/06/1116 [illegible]	12/06/1[illegible] [illegible]	ID8[illegible]	ID8[illegible]	IP[illegible]W	Method Blank
LCS-[illegible]	IP[illegible]	1	NA	12/06/1116 [illegible]	12/06/1[illegible] [illegible]	ID8[illegible]	ID8[illegible]	IP[illegible]W	Lab Control Sample [illegible]
LCSD-[illegible]	IP[illegible]	1	NA	12/06/1[illegible] [illegible]	12/06/1[illegible] [illegible]	ID8[illegible]	ID8[illegible]	IP[illegible]W	LCS Duplicate
[illegible]	[illegible]	1	NA	12/06/1[illegible] [illegible]	12/06/1[illegible] [illegible]	ID8[illegible]	ID8[illegible]	IP[illegible]W	Analytical Spike Sample
[illegible]	[illegible]	1	NA	12/06/1[illegible] [illegible]	12/06/1[illegible] [illegible]	ID8[illegible]	ID8[illegible]	IP[illegible]W	Field Sample
[illegible]	[illegible]	5	NA	12/06/1[illegible] [illegible]	12/06/1[illegible] [illegible]	ID8[illegible]	ID8[illegible]	IP[illegible]W	Diluted Sample

NA = [illegible]
% Moist = Percent Moisture

METALS BY EPA [illegible]

Client	[illegible]	Date Collected	[illegible]
Project	[illegible]	Date Received	[illegible]
[illegible]	[illegible]	Date Extracted	[illegible]
Project ID	[illegible]	Date Analyzed	[illegible]
Lab Sample ID	[illegible]	Dilution Factor	[illegible]
Lab File ID	[illegible]	Matrix	WATER
[illegible]	[illegible]	% Moisture	NA
[illegible]	[illegible]	Instrument ID	[illegible]

PARAMETER	RESULT (ppb)	RL (ppb)	MDL (ppb)
Antimony	ND	[illegible]	[illegible]
Arsenic	ND	[illegible]	[illegible]
Barium	[illegible]	[illegible]	[illegible]
Beryllium	ND	[illegible]	[illegible]
Cadmium	ND	[illegible]	[illegible]
Chromium	[illegible]	[illegible]	[illegible]
Cobalt	ND	[illegible]	[illegible]
Copper	[illegible]	[illegible]	[illegible]
Lead	ND	[illegible]	[illegible]
Molybdenum	[illegible]	[illegible]	[illegible]
Nickel	ND	[illegible]	[illegible]
Selenium	ND	[illegible]	[illegible]
Silver	ND	[illegible]	[illegible]
Thallium	ND	[illegible]	[illegible]
Vanadium	ND	[illegible]	[illegible]
Zinc	ND	[illegible]	[illegible]

METHOD 6010A (6010)
METALS BY ICAP (SW)

Client	[illegible]	Date Received	NA
Project	[illegible]	Date Analyzed	[illegible]
Lab File ID	[illegible]	Date Extracted	[illegible]
Method Blank ID	[illegible]	Matrix	[illegible]
Lab Sample ID	[illegible]	Dilution Factor	1
Client File ID	[illegible]	Matrix	AQUEOUS
Client Sample ID	[illegible]	Percent Solids	NA
Client Sample	[illegible]	Instrument ID	[illegible]

PARAMETER	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Aluminum	ND	0.100	0.0[illegible]
Antimony	ND	0.0100	0.00[illegible]
Barium	ND	0.0100	0.00[illegible]
Beryllium	ND	0.0100	0.00[illegible]
Boron	ND	0.0100	0.00[illegible]
Cadmium	ND	0.0100	0.00[illegible]
Calcium	ND	1.0100	[illegible]
Chromium	ND	0.0100	0.00[illegible]
Cobalt	ND	0.0100	0.00[illegible]
Copper	ND	0.0100	0.00[illegible]
Iron	ND	0.100	0.00[illegible]
Magnesium	ND	0.0500	0.00[illegible]
Manganese	ND	0.0100	0.00[illegible]
Nickel	ND	0.0100	0.00[illegible]
Potassium	ND	0.0100	0.00[illegible]
Silver	ND	0.0100	0.00[illegible]
Sodium	ND	0.0100	0.00[illegible]
Thallium	ND	0.0100	0.00[illegible]
Vanadium	ND	0.0100	0.00[illegible]
Zinc	ND	0.0200	0.00[illegible]

[illegible]

[illegible]

[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		

[illegible]

[illegible] INSIGHT ERC INC
[illegible] WAS SEAL BLACK 19 SITE 10.
[illegible] [illegible]
METHOD [illegible] 8010A/8015B

MATRIX	WATER		[illegible]	[illegible]
DILUTION FACTOR	1	1		
SAMPLE ID	[illegible]	[illegible]		
LAB SAMP ID	[illegible]	[illegible]		
LAB FILE ID	[illegible]	[illegible]		
DATE EXTRACTED	[illegible]	[illegible]	[illegible]	[illegible]
DATE ANALYZED	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] RATIO	[illegible]	[illegible]		
SOIL MOIST	[illegible]	[illegible]		

ACCESSION:

PARAMETER	SPIKE RESULT (ug/L)	SPIKE ADDED (ug/L)	DIF RESULT (ug/L)	% LIMIT
[illegible]	ND	ND	[illegible]	[illegible]
[illegible]	ND	ND	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	ND	ND	[illegible]	[illegible]
[illegible]	ND	ND	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	ND	ND	[illegible]	[illegible]
[illegible]	[illegible]	ND	[illegible]	[illegible]
[illegible]	ND	ND	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	ND	ND	[illegible]	[illegible]
[illegible]	ND	ND	[illegible]	[illegible]
[illegible]	ND	ND	[illegible]	[illegible]
[illegible]	ND	ND	[illegible]	[illegible]
[illegible]	ND	ND	[illegible]	[illegible]
[illegible]	ND	ND	[illegible]	[illegible]

[illegible] CONTROL DATA
[illegible]

[illegible] [illegible]
[illegible] [illegible] BRANCH OF SITE ID
[illegible] [illegible]
[illegible] [illegible]

[illegible] [illegible]

MATRIX	WATER		POLLUTANT	[illegible]
[illegible]	[illegible]	[illegible]		
[illegible] ID	[illegible]			
[illegible] NO	[illegible]	[illegible]		
[illegible] ID	[illegible]	[illegible]		
DATE [illegible]	[illegible]	[illegible]	DATE COLLECTED	[illegible]
DATE ANALYZED	[illegible]	[illegible]	DATE RECEIVED	[illegible]
FIELD BATCH	[illegible]	[illegible]		
[illegible] REF	[illegible]	[illegible]		

ACCESSION\

PARAMETER	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Cobalt	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lead	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Nickel	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

ICP QC CHECK TABLE

QC	ICV	CCV	ICSAB	ICSA	MLCV
Limit%	90-110	90-110	80-120	80-120	80-120
Comp	mg/L	mg/L	mg/L	mg/L	mg\L
Al	100	100	400	400	200
Sb	1.5	1.5	1	0	5
As	1	1	1	0	1
Ba	2	2	0.5	0	5
Be	1.5	1.5	0.5	0	5
B	2.5	2.5	0.5	0	5
Cd	2	2	1	0	5
Ca	75	75	500	500	250
Cr	2.5	2.5	0.5	0	5
Co	1	1	0.5	0	1
Cu	2.5	2.5	0.5	0	5
Fe	25	25	200	200	200
Pb	2.5	2.5	1	0	5
Li	0.5	0.5	1	0	0.5
Mg	60	60	200	200	100
Mn	2.5	2.5	0.5	0	5
Mo	2.5	2.5	1	0	5
Ni	2.5	2.5	1	0	5
K	60	60	75	0	250
Se	1	1	1	0	1
Ag	0.5	0.5	1	0	0.5
Na	60	60	75	0	150
Sr	0.5	0.5	0.5	0	0.5
Tl	2.5	2.5	1	0	5
Sn	0.5	0.5	1	0	0.5
Ti	0.5	0.5	1	0	0.5
V	1.5	1.5	0.5	0	5
Zn	2.5	2.5	1	0	5

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 12/6/11 12:09

End Date: 12/6/11 17:18

SOP #	Rev. #
☑ EMAX-6010	7
☐ EMAX-6010C	1
☐ EMAX-200.7	2
☐ EMAX-	

Comments:

CaB2 Zn7LOD

Book #: AD8-022

Instrument No.: D8

Analytical Batch: 1D8L004

Analytical Sequence: S-1L6010(V12)

Method File: 1L6010(V12)

Database: Emax14

	STANDARDS ID		STANDARDS ID
S0	SM1B148802	S30	SM1B146802
S1	MA	S31	6803
S2		ICV	8201
S3		CCV	8301
S4		ICSA	8502
S5		ICSAB	6704
S6		CRI/MRL 1	8101
S7		MRL2	7401
S8			
S9			
S10			
S11			
S12			
S16			
S17			
S18			
S20	SM1B148401		
S21	6503		
S22	6504		
S23	8402		
S24	6702		
S25	6703		
S26	7801		
S27	7802		
S28	7803		
S29	7804		

Analyzed By: TH

Date: 12/6/11

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
[illegible]																												

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

ANALYTE	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Mo	Ni	K	Se	Ag	Na	Sr	Tl	Sn	Ti	V	Zn
BLANK	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
S21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
S22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
S23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
S24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
S25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
S26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
S27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
S28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
S29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
S30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
S31	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TPP	2.39	1.15	-.412	.202	.185	3.76	.010	20.9	.010	-.042	-.042	2.87	-.396	-.110	.013	.060	.480	.000	.210	.200	.072	19.4	.120	.140	.090	.140	.130	.507
MB [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MB [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOC	[illegible]	2.32	-2.[illegible]	.470	.130	3.04	-1.76	[illegible]	.850	.680	1.78	[illegible]	2.21	3.83	[illegible]	1.33	1.24	1.43	.186	1.48	.000	[illegible]	1.01	.220	1.98	4.97	.970	4.13
TOC [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TSS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]

[illegible]

[illegible]

[illegible]

ANALYTE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BLANK	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]

| | | |

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
1	0	0	0	0	Unk	S0		ID8L004001			1	☒	unk	---
2	0	0	0	0	Unk	S20		ID8L004002			1	☒	unk	---
3	0	0	0	0	Unk	S21		ID8L004003			1	☒	unk	---
4	0	0	0	0	Unk	S22		ID8L004004			1	☒	unk	---
5	0	0	0	0	Unk	S23		ID8L004005			1	☒	unk	---
6	0	0	0	0	Unk	S24		ID8L004006			1	☒	unk	---
7	0	0	0	0	Unk	S25		ID8L004007			1	☒	unk	---
8	0	0	0	0	Unk	S26		ID8L004008			1	☒	unk	---
9	0	0	0	0	Unk	S27		ID8L004009			1	☒	unk	---
10	0	0	0	0	Unk	S28		ID8L004010			1	☒	unk	---
11	0	0	0	0	Unk	S29		ID8L004011			1	☒	unk	---
12	0	0	0	0	Unk	S30		ID8L004012			1	☒	unk	---
13	0	0	0	0	Unk	S31		ID8L004013			1	☒	unk	---
14	1	2	1	1	QC	ICV		ID8L004014			1	☒	CCV	None
15	2	2	2	1	QC	ICB		ID8L004015			1	☒	3XIDL	None
16	3	2	3	1	QC	MRLL0601		ID8L004016			1	☒	MRL-EMAX	None
17	4	2	4	1	QC	MRLL0602		ID8L004017			1	☒	MRL-AFCEE	None
18	5	2	5	1	QC	ICSA1		ID8L004018			1	☒	ICSA	None
19	6	2	6	1	QC	ICSAB1		ID8L004019			1	☒	ICSAB	None
20	7	2	7	1	QC	CCV1		ID8L004020			1	☒	CCV	None
21	8	2	8	1	QC	CCB1		ID8L004021			1	☒	LOD	None
22	9	2	9	1	QC	IPL003WQ		ID8L004022			1	☒	1/2LOQ	None
23	10	2	10	1	QC	IPL003WX		ID8L004023			1	☒	LCS	None
24	11	2	11	1	QC	IPL003WY		ID8L004024			1	☒	LCS	None
25	12	2	12	1	Unk	K226-01A		ID8L004025			1	☒	unk	---
26	13	2	1	2	Unk	K226-01W		ID8L004026			1	☒	unk	---
27	14	2	2	2	Unk	K226-01J		ID8L004027			1	☒	unk	---
28	15	2	3	2	Unk	K224-09W		ID8L004028			1	☒	unk	---
29	16	2	4	2	Unk	K230-11W		ID8L004029			1	☒	unk	---
30	17	2	5	2	Unk	K237-01W		ID8L004030			1	☒	unk	---
31	18	2	6	2	Blank	Blank		ID8L004031			1	☐		---
32	19	2	7	2	QC	CCV2		ID8L004032			1	☒	CCV	None
33	20	2	8	2	QC	CCB2		ID8L004033			1	☒	LOD	None
34	21	2	9	2	QC	IPL002SQ		ID8L004034			1	☒	1/2LOQ	None
35	22	2	10	2	QC	IPL002SX		ID8L004035			1	☒	LCS	None
36	23	2	11	2	QC	IPL002SY		ID8L004036			1	☒	LCS	None
37	24	2	12	2	Unk	K224-02A		ID8L004037			1	☒	unk	---
38	25	2	1	3	Unk	K224-02W		ID8L004038			1	☒	unk	---
39	26	2	2	3	Unk	K224-02J		ID8L004039			1	☒	unk	---

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
40	27	2	3	3	Unk	K224-03W		ID8L004040			1	☒	unk	---
41	28	2	4	3	Unk	K224-04W		ID8L004041			1	☒	unk	---
42	30	2	6	3	Blank	Blank		ID8L004042			1	☐		---
43	31	2	7	3	QC	CCV3		ID8L004043			1	☒	CCV	None
44	32	2	8	3	QC	CCB3		ID8L004044			1	☒	3XIDL	None
45	133	4	1	2	QC	IPL007SB		ID8L004045			1	☒	1/2LOQ	None
46	134	4	2	2	QC	IPL007SL		ID8L004046			1	☒	LCS	None
47	135	4	3	2	QC	IPL007SC		ID8L004047			1	☒	LCS	None
48	136	4	4	2	Unk	L419-01A		ID8L004048			1	☒	unk	---
49	137	4	5	2	Unk	L419-01		ID8L004049			1	☒	unk	---
50	138	4	6	2	Unk	L419-01J		ID8L004050			1	☒	unk	---
51	29	2	5	3	Unk	K973-01		ID8L004051			1	☒	unk	---
52	33	2	9	3	Unk	K224-06W		ID8L004052			1	☒	unk	---
53	34	2	10	3	Unk	K224-07W		ID8L004053			1	☒	unk	---
54	35	2	11	3	Blank	Blank		ID8L004054			1	☐		---
55	36	2	12	3	QC	CCV4		ID8L004055			1	☒	CCV	None
56	37	2	1	4	QC	CCB4		ID8L004056			1	☒	3XIDL	None
57	139	4	7	2	Unk	K950-01		ID8L004057			1	☒	unk	---
58	140	4	8	2	Unk	K950-02		ID8L004058			1	☒	unk	---
59	141	4	9	2	Unk	K950-03		ID8L004059			1	☒	unk	---
60	142	4	10	2	Unk	K950-04		ID8L004060			1	☒	unk	---
61	147	4	3	3	Unk	L419-01A	5X	ID8L004061			1	☒	unk	---
62	148	4	4	3	Unk	L419-01T	5X	ID8L004062			1	☒	unk	---
63	149	4	5	3	Unk	L419-01J	25X	ID8L004063			1	☒	unk	---
64	150	4	6	3	Unk	K231-11		ID8L004064			1	☒	unk	---
65	143	4	11	2	Blank	Blank		ID8L004065			1	☐		---
66	144	4	12	2	QC	CCV5		ID8L004066			1	☒	CCV	None
67	145	4	1	3	QC	CCB5		ID8L004067			1	☒	3XIDL	None
68	38	2	2	4	QC	IPL008SB		ID8L004068			1	☒	1/2LOQ	None
69	39	2	3	4	QC	IPL008SL		ID8L004069			1	☒	LCS	None
70	40	2	4	4	QC	IPL008SC		ID8L004070			1	☒	LCS	None
71	41	2	5	4	Unk	L008-03A	dried & sieved	ID8L004071			1	☒	unk	---
72	42	2	6	4	Unk	L008-03	dried & sieved	ID8L004072			1	☒	unk	---
73	43	2	7	4	Unk	L008-03J	dried & sieved	ID8L004073			1	☒	unk	---
74	44	2	8	4	Unk	L008-03M	dried & sieved	ID8L004074			1	☒	unk	---
75	45	2	9	4	Unk	L008-03S	dried & sieved	ID8L004075			1	☒	unk	---
76	46	2	10	4	Unk	L008-02	dried & sieved	ID8L004076			1	☒	unk	---
77	47	2	11	4	Blank	Blank		ID8L004077			1	☐		---
78	48	2	12	4	QC	CCV6		ID8L004078			1	☒	CCV	None

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
79	49	2	1	5	QC	CCB6		ID8L004079			1	☒	3XIDL	None
80	50	2	2	5	Unk	L008-05	dried & sieved	ID8L004080			1	☒	unk	---
81	51	2	3	5	Unk	K594-13T	5X	ID8L004081			1	☒	unk	---
82	52	2	4	5	Unk	K594-14T	5X	ID8L004082			1	☒	unk	---
83	53	2	5	5	Unk	K594-15T	5X	ID8L004083			1	☒	unk	---
84	54	2	6	5	Unk	K594-16T	5X	ID8L004084			1	☒	unk	---
85	55	2	7	5	Unk	K594-17T	5X	ID8L004085			1	☒	unk	---
86	56	2	8	5	Unk	K594-18T	5X	ID8L004086			1	☒	unk	---
87	57	2	9	5	Unk	K594-19T	5X	ID8L004087			1	☒	unk	---
88	146	4	2	3	Unk	K598-24T	10X GREEN	ID8L004088			1	☒	unk	---
89	58	2	10	5	Blank	Blank		ID8L004089			1	☐		---
90	59	2	11	5	QC	CCV7		ID8L004090			1	☒	CCV	None
91	60	2	12	5	QC	CCB7		ID8L004091			1	☒	3XIDL	None
92	151	4	7	3	QC	IPL003WQ		ID8L004092			1	☒	1/2LOQ	None
93	152	4	8	3	QC	IPL003WX		ID8L004093			1	☒	LCS	None
94	153	4	9	3	QC	IPL003WY		ID8L004094			1	☒	LCS	None
95	154	4	10	3	Unk	K237-01A		ID8L004095			1	☒	unk	---
96	155	4	11	3	Unk	K237-01W		ID8L004096			1	☒	unk	---
97	156	4	12	3	Unk	K237-01J		ID8L004097			1	☒	unk	---
98	157	4	1	4	Blank	Blank		ID8L004098			1	☐		---
99	158	4	2	4	QC	CCV8		ID8L004099			1	☒	CCV	None
100	159	4	3	4	QC	CCB8		ID8L004100			1	☒	LOD	None
101	61	3	1	1	Unk	K597-21T	5X	ID8L004101			1	☒	unk	---
102	62	3	2	1	Unk	K597-22T	5X	ID8L004102			1	☒	unk	---
103	63	3	3	1	Unk	K597-23T	5X	ID8L004103			1	☒	unk	---
104	64	3	4	1	Unk	K597-24T	5X	ID8L004104			1	☒	unk	---
105	65	3	5	1	Unk	K597-25T	5X	ID8L004105			1	☒	unk	---
106	66	3	6	1	Unk	K597-26T	5X	ID8L004106			1	☒	unk	---
107	67	3	7	1	Unk	K597-27T	5X	ID8L004107			1	☒	unk	---
108	68	3	8	1	Unk	K597-28T	5X	ID8L004108			1	☒	unk	---
109	69	3	9	1	Unk	K597-29T	5X	ID8L004109			1	☒	unk	---
110	70	3	10	1	Blank	Blank		ID8L004110			1	☐		---
111	71	3	11	1	QC	CCV9		ID8L004111			1	☒	CCV	None
112	72	3	12	1	QC	CCB9		ID8L004112			1	☒	3XIDL	None
113	73	3	1	2	QC	IPL009SB		ID8L004113			1	☒	1/2LOQ	None
114	74	3	2	2	QC	IPL009SL		ID8L004114			1	☒	LCS	None
115	75	3	3	2	QC	IPL009SC		ID8L004115			1	☒	LCS	None
116	76	3	4	2	Unk	K597-47A	5X	ID8L004116			1	☒	unk	---
117	77	3	5	2	Unk	K597-47T	5X	ID8L004117			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
118	78	3	6	2	Unk	K597-47J	25X	ID8L004118			1	☒	unk	---
119	79	3	7	2	Unk	K597-47M	5X	ID8L004119			1	☒	unk	---
120	80	3	8	2	Unk	K597-47S	5X	ID8L004120			1	☒	unk	---
121	81	3	9	2	Unk	K597-30T	10X GREEN	ID8L004121			1	☒	unk	---
122	82	3	10	2	Blank	Blank		ID8L004122			1	☐		---
123	83	3	11	2	QC	CCV10		ID8L004123			1	☒	CCV	None
124	84	3	12	2	QC	CCB10		ID8L004124			1	☒	3XIDL	None
125	85	3	1	3	Unk	K597-31T	5X	ID8L004125			1	☒	unk	---
126	86	3	2	3	Unk	K597-32T	5X	ID8L004126			1	☒	unk	---
127	87	3	3	3	Unk	K597-33T	5X	ID8L004127			1	☒	unk	---
128	88	3	4	3	Unk	K597-34T	5X	ID8L004128			1	☒	unk	---
129	89	3	5	3	Unk	K597-35T	5X	ID8L004129			1	☒	unk	---
130	90	3	6	3	Unk	K597-36T	10X GREEN	ID8L004130			1	☒	unk	---
131	91	3	7	3	Unk	K597-37T	5X	ID8L004131			1	☒	unk	---
132	92	3	8	3	Unk	K597-38T	5X	ID8L004132			1	☒	unk	---
133	93	3	9	3	Unk	K597-39T	10X GREEN	ID8L004133			1	☒	unk	---
134	94	3	10	3	Blank	Blank		ID8L004134			1	☐		---
135	95	3	11	3	QC	CCV11		ID8L004135			1	☒	CCV	None
136	96	3	12	3	QC	CCB11		ID8L004136			1	☒	3XIDL	None
137	97	3	1	4	Unk	K597-40T	10X GREEN	ID8L004137			1	☒	unk	---
138	98	3	2	4	Unk	K597-41T	5X	ID8L004138			1	☒	unk	---
139	99	3	3	4	Unk	K597-42T	5X	ID8L004139			1	☒	unk	---
140	100	3	4	4	Unk	K597-43T	5X	ID8L004140			1	☒	unk	---
141	101	3	5	4	Unk	K597-44T	5X	ID8L004141			1	☒	unk	---
142	102	3	6	4	Unk	K597-45T	5X	ID8L004142			1	☒	unk	---
143	103	3	7	4	Unk	K597-46T	5X	ID8L004143			1	☒	unk	---
144	104	3	8	4	Unk	K597-48T	5X	ID8L004144			1	☒	unk	---
145	105	3	9	4	Unk	K597-49T	5X	ID8L004145			1	☒	unk	---
146	106	3	10	4	Blank	Blank		ID8L004146			1	☐		---
147	107	3	11	4	QC	CCV12		ID8L004147			1	☒	CCV	None
148	108	3	12	4	QC	CCB12		ID8L004148			1	☒	3XIDL	None
149	109	3	1	5	QC	IPL010SB		ID8L004149			1	☒	1/2LOQ	None
150	110	3	2	5	QC	IPL010SL		ID8L004150			1	☒	LCS	None
151	111	3	3	5	QC	IPL010SC		ID8L004151			1	☒	LCS	None
152	112	3	4	5	Unk	K597-60A	20X GREEN	ID8L004152			1	☒	unk	---
153	113	3	5	5	Unk	K597-60T	20X GREEN	ID8L004153			1	☒	unk	---
154	114	3	6	5	Unk	K597-60J	100X GREEN	ID8L004154			1	☒	unk	---
155	115	3	7	5	Unk	K597-60M	20X GREEN	ID8L004155			1	☒	unk	---
156	116	3	8	5	Unk	K597-60S	20X GREEN	ID8L004156			1	☒	unk	---

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	Pos ID	Rack	Row	Col	Type	Samplename	Comment	Data File	Type	Diln Factor	CorrFact	Check	Check Table	Fail Action
157	117	3	9	5	Unk	K597-50T	5X	ID8L004157			1	☒	unk	---
158	118	3	10	5	Blank	Blank		ID8L004158			1	☐		---
159	119	3	11	5	QC	CCV13		ID8L004159			1	☒	CCV	None
160	120	3	12	5	QC	CCB13		ID8L004160			1	☒	3XIDL	None
161	121	4	1	1	Unk	K597-51T	5X	ID8L004161			1	☒	unk	---
162	122	4	2	1	Unk	K597-52T	5X	ID8L004162			1	☒	unk	---
163	123	4	3	1	Unk	K597-53T	5X	ID8L004163			1	☒	unk	---
164	124	4	4	1	Unk	K597-54T	5X	ID8L004164			1	☒	unk	---
165	125	4	5	1	Unk	K597-55T	5X	ID8L004165			1	☒	unk	---
166	126	4	6	1	Unk	K597-56T	5X	ID8L004166			1	☒	unk	---
167	127	4	7	1	Unk	K597-57T	5X	ID8L004167			1	☒	unk	---
168	128	4	8	1	Unk	K597-58T	5X	ID8L004168			1	☒	unk	---
169	129	4	9	1	Unk	K597-59T	5X	ID8L004169			1	☒	unk	---
170	130	4	10	1	Unk	K597-61T	10X GREEN	ID8L004170			1	☒	unk	---
171	131	4	11	1	QC	CCV14		ID8L004171			1	☒	CCV	None
172	132	4	12	1	QC	CCB14		ID8L004172			1	☒	3XIDL	None

7022

[illegible]	[illegible]	A	Sb	As	Ba	Be	B	Cd	Ca	Co	Cu	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	[illegible]					89969		11249				[illegible]
2	[illegible]					9.8642		1.0891				[illegible]
3	[illegible]				[illegible]						.15887	[illegible]
4	[illegible]				6.1513						1.5316	[illegible]
5	[illegible]						.05981					[illegible]
6	[illegible]						.02737					[illegible]
7	[illegible]	.20435							.90761	.12595		[illegible]
8	[illegible]	7.5640							8.3561	17.289		[illegible]
9	[illegible]		.00506									[illegible]
10	[illegible]		.04933									[illegible]
11	[illegible]			[illegible]								[illegible]
12	[illegible]			[illegible]								[illegible]
13	[illegible]	134.83	1.5687	1.0715	7.1886	1.5440	2.5677	2.3071	76.548	2.5171	.99005	[illegible]
14	[illegible]	.00739	.00715	.00341	.00312	.00008	.00376	.00001	.02093	.00001	.00004	[illegible]
15	MR..3601	21855*	1.0736*	.09741*	.01131*	.01074*	.10760*	.01373*	1.0385*	.01889*	.01277*	MR..3601
16	MR..3602	2.0653*	.05027*	.02944*	.00534*	.00428*	.10023*	.00518*	.54693*	.01025*	.01019*	MR..3602
17	ICSA1	431.17	.00232	.00771	.00067	.00083	.03704	.00176	486.19	.00055	.00368	ICSA1
18	ICSA2	412.96	1.3689	1.1119	53.769	.52775	.53715	.95759	490.60	.48875	.50312	ICSA2
19	CCV1	136.58	1.5546	1.0567	2.1345	1.5651	2.5507	1.9644	75.474	2.4956	.98941	CCV1
20	CCB1	.00807	.00133	.00147	.00023	.00035	.00385	.00007	.00836	.00013	.00010	CCB1
21	IPL003A0	.00748	.03064	.01139	.00311	.00002	.00164	.00003	.00943	.00003	.00002	IPL003A0
22	IPL003AX	6.5756	2.6008	.05614	.05462	.54570	.53764	.52575	53.398	.52371	.51705	IPL003AX
23	IPL003WY	5.0154	2.6731	.05527	.51134	.55277	.54168	.52527	53.829	.52728	.51902	IPL003WY
24	K276-01A	5.7301	2.6211	.05944	.05285	.55146	.60150	.52349	100.97	.56650	.52294	K276-01A
25	K276-01X	.05144	.00157	.00149	.00781	.00200	.01109	-.00001	49.856	.0454.	.00017	K276-01X
26	K276-01Y	.00928	.00128	.00114	.01075	.00038	.01465	.00005	18.593	.00979	.00017	K276-01Y
27	K274-04A	.00748	.00054	.00127	.01015	.00030	.00209	-.00008	.02571	.00037	.00002	K274-04A
28	K274-01A	.05976	.00054	.00148	.00002	.00196	-.00003	.02119	.00013	.00001	K274-01A
29	K274-01X	.13412	.00067	.00178	.05465	.00085	.03175	.00064	117.34	.00498	-.00057	K274-01X
30	[illegible]	.00108	.00046	[illegible]	.00021	.00033	.00060	.00003	.06562	.00063	.00006	[illegible]
31	[illegible]	137.36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.4861	[illegible]	[illegible]
32	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
33	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
34	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
35	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
38	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
39	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
42	[illegible]	[illegible]	.00380	.00340	[illegible]	.00005	.00116	.00001	.01536	-.00008	[illegible]	[illegible]
43	[illegible]	134.65	1.5667	1.0751	2.1654	1.5769	2.5672	2.3159	75.875	2.5408	.98619	[illegible]
44	[illegible]	.00382	.00182	.00347	.00016	.00009	.00116	-.00003	.03651	.00010	.00003	[illegible]
45	IPL003A9	6.5515	.00196	.05294	6.5[illegible]	.00203	.00000	-.00011	0.085	.00548	.00001	IPL003A9
46	IPL003A	5.7026	2.5673	.05771	.52347	.52477	.49156	.51738	52.741	.52264	.52093	IPL003A
47	IPL003W	5.7254	2.5997	.05911	.53[illegible]	.53469	.50038	.51844	54.781	.52979	.53082	IPL003W
48	[illegible]	402.62*	2.7.71	[illegible]	[illegible]	.53851	.49.468*	.47418	1[illegible].1*	.76954	.52444	[illegible]
49	[illegible]	457.71*	.05858	[illegible]	3.2894	3.1146	3.3600*	.00390	105.4*	.01678	.01512	[illegible]
50	[illegible]	103.12	200.72	.01186	.04590	.00847	.00245	5.6985	.00001	724.60	.00720	.00377	[illegible]
51	K973-01	.05265	.00927	.00135	.00763	.00103	.03893	.00009	.16488	.00094	.00184	K973-01
52	K274-06W	149.61	-.01625	.04[illegible]	[illegible]	.00008	.05496	.00366	28.021	.15798	.00270	K274-06W

| | | |

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]			[illegible]		[illegible]					[illegible]
[illegible]	[illegible]			[illegible]		[illegible]					[illegible]
[illegible]	[illegible]	[illegible]	[illegible]								[illegible]
[illegible]	[illegible]	[illegible]	[illegible]								[illegible]
[illegible]							[illegible]				[illegible]
[illegible]							[illegible]				[illegible]
[illegible]								[illegible]	[illegible]		[illegible]
[illegible]								[illegible]	[illegible]		[illegible]
[illegible]						[illegible]					[illegible]
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[illegible]					[illegible]					[illegible]	[illegible]
[illegible]					[illegible]					[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]	[illegible]	06684	718.8	3.0078	[illegible]	[illegible]	7.2443	3554	2531	22.887	00227	5274.07A
[illegible]	[illegible]	00036	00722	00348	00023	01128	00207	30006	00031	77796	00023	Blank
[illegible]	[illegible]	7.7387	76.182	7.4629	50981	28.081	4.3981	2.5126	7.5321	63.576	1.0778	[illegible]
[illegible]	[illegible]	00006	00258	00027	00251	00701	00001	00003	00012	7.7628	00076	[illegible]
[illegible]	[illegible]	3.4533	175.98	35561	27076	43.502	3.0386	35722	4.2154	48.380	35339	K556.[illegible]
[illegible]	[illegible]	3.7006	154.44	27851	32114	37.457	2.3335	34.756	34.664	46.622	35331	K540.[illegible]
[illegible]	[illegible]	3.5953	155.76	27862	32.[illegible]	42.138	2.0072	35.27	36.664	43.913	35351	K541.[illegible]
[illegible]	[illegible]	3.1527	154.53	28366	32462	43.139	2.7535	34861	38744	43.596	35354	K542.[illegible]
[illegible]	[illegible]	0.047	38.356	59[illegible]	34221	39.342	.3981	.35563	37777	66.663	56853	.419.31A
[illegible]	[illegible]	35326	37.775	27441	1415	14.258	28161	31.705	32386	4.8518	35368	.419.311
[illegible]	[illegible]	30960	5.3667	.31512	30.73	3.8967	17.78	31238	3474	96.243	.00395	1419.312
[illegible]	[illegible]	00.07	0.5274	00258	33539	26.775	00009	33293	33312	2.6293	03517	5231.[illegible]
[illegible]	[illegible]	.00008	.30717	.33024	00015	00646	00008	33302	33311	35722	.00046	Blank
[illegible]	[illegible]	7.7040	26.014	7.4697	51172	39.771	7.4419	7.6433	7.5433	63.515	.0834	[illegible]
[illegible]	[illegible]	00013	.00234	.0002.	3005.	37.744	.00032	33663	00037	.3557	00018	[illegible]
[illegible]	[illegible]	00014	00.[illegible]	00038	33.74	00834	33050	.30240	00008	.0294	.00107	P.00858
[illegible]	[illegible]	5177	5.3856	5.3[illegible]	33*22*	33.473	33.75	3.7[illegible]	3.841	33.523	32672	P.[illegible]85.
[illegible]	[illegible]	.04558	5.3291	5.[illegible]	33015*	30.231	5.[illegible]	5.6[illegible]	33140	33.253	31509	P.00858
[illegible]	[illegible]	72146	256.96	2.3535	74235	30.918	4.7224	3.6329	3.3275	61.338	5.8876	[illegible]
[illegible]	[illegible]	24576	156.97	7.6565	24343	31.470	3.8806	30.035	7.7053	8.2009	.33341	[illegible]
[illegible]	[illegible]	07814	32.732	56204	00881	2.485e	83.97	3.3201	3.2156	1.8561	33.158	[illegible]
[illegible]	[illegible]	72542	160.87	3.0428	35.70	61.746	4.1656	3.5528	.65.53	61.379	32.43	[illegible]
[illegible]	[illegible]	73318	157.95	3.[illegible]	35.04	53.543	4.3696	3.7151	3.1610	62.435	32.949	[illegible]
[illegible]	[illegible]	13608	154.59	4.7566	33.31	6.3042	4.0963	3.0416	3.9268	7.3111	33.37	[illegible]
[illegible]	[illegible]	.00009	31733	.03376	.00[illegible]	3.273	33347	33.[illegible]	33313	.32251	.00389	[illegible]
[illegible]	[illegible]	7.7349	26.129	7.4[illegible]	3.[illegible]	38.536	7.4256	2.6346	7.1448	64.270	1.2965	[illegible]
[illegible]	[illegible]	33024	30439	.3[illegible]	.00[illegible]	.07229	33014	3.3[illegible]	3.3[illegible]	.07244	0.0028	[illegible]
[illegible]	[illegible]	38655	195.14	3.3832	.4[illegible]	5.3[illegible]	7.7261	3.3[illegible]	7.7346	7.1363	.03035	[illegible]
[illegible]	[illegible]	30928	7.2.[illegible]	.1[illegible]	.3[illegible]	5.8849	.7[illegible]	.3[illegible]	.3[illegible]	.7614	.32254	[illegible]
[illegible]	[illegible]	.1256	194.72	1.3.[illegible]	[illegible]	14.54	.1[illegible]	3[illegible]	3[illegible]	53.58	0001[illegible]	[illegible]
[illegible]	[illegible]	.7351	1.8504	[illegible]	[illegible]	[illegible]	3.2[illegible]	3.0[illegible]	3.1[illegible]	2.9019	3.0025	[illegible]
[illegible]	[illegible]	.1882	16.317	2.6[illegible]	[illegible]	[illegible]	7.1[illegible]	7.3[illegible]	7.3[illegible]	1.2857	[illegible]	[illegible]
[illegible]	[illegible]	.3947	1.7961	1.4[illegible]	[illegible]	[illegible]	3.1[illegible]	3.3[illegible]	3.3[illegible]	.23548	0032.	[illegible]
[illegible]	[illegible]	.7256	37.183	[illegible]	[illegible]	[illegible]	1.9[illegible]	2.3[illegible]	2.3[illegible]	.7859	0.0227	[illegible]
[illegible]	[illegible]	[illegible]	87.83	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	27.8[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	31.1[illegible]	[illegible]	[illegible]	[illegible]	33.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	0.0728	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	3.1453	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	3.4996	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	3.2359	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	34388	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	0.046.	.3003[illegible]	3.4[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	33307	0.413	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	3.4[illegible]	74.[illegible]	.1[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	.0027	.70.38	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	03013	00950	01684	00081	00385	00073	00118	00768	[illegible]
2	[illegible]									[illegible]
3	[illegible]									[illegible]
4	[illegible]									[illegible]
5	[illegible]							17645		[illegible]
6	[illegible]							1 2457		[illegible]
7	[illegible]		1 1294							[illegible]
8	[illegible]		0 4159							[illegible]
9	[illegible]									[illegible]
10	[illegible]									[illegible]
11	[illegible]					00516				[illegible]
12	[illegible]					05140				[illegible]
13	[illegible]	03767		13603		02854	01606		03770	[illegible]
14	[illegible]	.18662		06149		.13581	.38542		0 1226	[illegible]
15	[illegible]	52737	05 302	49967	2 4190	.51481	[illegible]	1 5563	2 6311	[illegible]
16	[illegible]	.00802	.01943	00012	.00074	.00029	00077	00210	.00054	[illegible]
17	[illegible]	01389*	1 1173*	01103*	01116*	.00056*	01087*	01120*	02283*	[illegible]
18	[illegible]	01340*	05650*	01044*	.01024*	.01025*	01061*	01342*	.01232*	[illegible]
19	[illegible]	.00900	05416	00101	.00022	.00198	00497	00097	.00413	[illegible]
20	[illegible]	1 1436	05 956	50248	.89654	96307	1 3456	52036	1 3543	[illegible]
21	[illegible]	52337	05 955	50234	2 3516	.51644	[illegible]	1 5434	2 6129	[illegible]
22	[illegible]	00006	07982	00037	.00047	.00020	00018	00014	00165	[illegible]
23	[illegible]	.00607	00859	00012	00009	.00002	00019	00017	00125	[illegible]
24	[illegible]	.54436	55 778	51667	51552	.49932	[illegible]	54447	54703	[illegible]
25	[illegible]	54577	56 243	52755	51665	50315	[illegible]	54827	54825	[illegible]
26	[illegible]	53444	[illegible]	99827	11303	49073	[illegible]	55088	2 3657	[illegible]
27	[illegible]	[illegible]	[illegible]	[illegible]	00033	00028	[illegible]	00078	1 6449	[illegible]
28	[illegible]	.00652	8 0945	[illegible]	00040	00002	[illegible]	00141	.00014	[illegible]
29	[illegible]	00007	04983	[illegible]	00022	00017	[illegible]	00020	00565	[illegible]
30	[illegible]	[illegible]	[illegible]	[illegible]	00007	[illegible]	[illegible]	[illegible]	00098	[illegible]
31	[illegible]	[illegible]	[illegible]	[illegible]	00047	[illegible]	[illegible]	[illegible]	00729	[illegible]
32	[illegible]	[illegible]	[illegible]	[illegible]	00011	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
33	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	51867	[illegible]	[illegible]	[illegible]	[illegible]
34	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
35	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	03035	[illegible]	[illegible]	[illegible]	[illegible]
36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	03667	[illegible]	[illegible]	[illegible]	[illegible]
37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
38	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
39	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	03025	[illegible]	[illegible]	[illegible]	[illegible]
40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	30429	[illegible]	[illegible]	[illegible]	[illegible]
41	[illegible]	00176	[illegible]	[illegible]	00528*	02864	[illegible]	[illegible]	[illegible]	[illegible]
42	[illegible]	00117	1 0549	[illegible]	00485	02834	[illegible]	[illegible]	[illegible]	[illegible]
43	[illegible]	00005	[illegible]	[illegible]	00017	00004	[illegible]	[illegible]	00018	[illegible]
44	[illegible]	[illegible]	05 843	[illegible]	2 4927	51580	[illegible]	[illegible]	[illegible]	[illegible]
45	[illegible]	.00021	[illegible]	[illegible]	00001	.00036	[illegible]	[illegible]	.00005	[illegible]
46	[illegible]	00025	01247	[illegible]	00157	03480	[illegible]	[illegible]	[illegible]	[illegible]
47	[illegible]	57056	05 715	[illegible]	49354	53008	[illegible]	[illegible]	[illegible]	[illegible]
48	[illegible]	[illegible]	56 419	[illegible]	49716	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
49	[illegible]	[illegible]	79 580	[illegible]	4287	[illegible]	[illegible]	[illegible]	1 4447	[illegible]
50	[illegible]	00122	[illegible]	[illegible]	01089*	08064	[illegible]	47741	[illegible]	[illegible]
51	[illegible]	00014	4 9865	[illegible]	00196	[illegible]	[illegible]	[illegible]	.00944	[illegible]
52	[illegible]	00009	[illegible]	[illegible]	.50401	2.8123	[illegible]	00336	.02944	[illegible]
53	[illegible]	00157	1 1[illegible]	[illegible]	5.380	03187	[illegible]	43165	[illegible]	[illegible]

53	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.43139	[illegible]	[illegible]
54	[illegible]	.00013	[illegible]	.00012	[illegible]	.00017	.00013	.00020	[illegible]	[illegible]
55	[illegible]	52033	66.859*	[illegible]	[illegible]	51281	[illegible]	1.5723	[illegible]	[illegible]
56	[illegible]	.00005	[illegible]	.00035	[illegible]	.00040	.00026	.00020	[illegible]	[illegible]
57	[illegible]	65584	19.219	3.3667	[illegible]	26174	6.5071	1.1962	[illegible]	[illegible]
58	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	26259	6.3420	[illegible]	[illegible]	[illegible]
59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	26927	6.2556	1.7313	[illegible]	[illegible]
60	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	24898	[illegible]	[illegible]	[illegible]	[illegible]
61	[illegible]	54002	62.031	.95601	[illegible]	50470	2.0583	.62439	[illegible]	[illegible]
62	[illegible]	.00005	4.4114	.64614	[illegible]	0.1691	1.5132	.08788	.00013	[illegible]
63	[illegible]	.00000	8.3386	.08737	[illegible]	.00349	.29714	.01719	[illegible]	[illegible]
64	[illegible]	[illegible]	64.0.8	1.4417	[illegible]	.00011	.00235	.00474	[illegible]	[illegible]
65	Blank	.00001	0.843	.00010	.00016	.00030	.00317	.00006	.00007	Blank
66	[illegible]	.5286.2	66.792*	.49765	2.6309	.5.761	.50815	1.5640	[illegible]	[illegible]
67	[illegible]	[illegible]	[illegible]	.00011	[illegible]	[illegible]	[illegible]	.00013	[illegible]	[illegible]
68	[illegible]	.00007	.03069	.00013	[illegible]	.03433	.00021	.00025	[illegible]	[illegible]
69	[illegible]	.02614	[illegible]	[illegible]	.04651	.53352	.54434	.54980	.54823	[illegible]
70	[illegible]	.57053	[illegible]	.50889	.48566	.57927	.53081	.54210	[illegible]	[illegible]
71	[illegible]	.52527	66.458	.01637	.48283	.52449	2.4306	.80644	[illegible]	[illegible]
72	[illegible]	[illegible]	.00044	.47395	.11575	.00743	.04136	1.9740	.27101	[illegible]
73	[illegible]	.00057	.08376	.02418	.00292	.00474	.41616	.05293	[illegible]	[illegible]
74	[illegible]	.52122	[illegible]	.63309	.46332	.52681	2.4894	.80719	[illegible]	[illegible]
75	[illegible]	.52744	[illegible]	.64442	[illegible]	.54352	2.5887	.81792	[illegible]	[illegible]
76	.008.57	.00043	.93421	.08568	[illegible]	.04116	1.9359	.29119	[illegible]	[illegible]
77	Blank	.00011	.00027	.00010	[illegible]	.00027	.00098	.00012	[illegible]	Blank
78	[illegible]	[illegible]	[illegible]	.49913	2.4469	.51809	.50372	1.5701	[illegible]	[illegible]
79	[illegible]	[illegible]	.07064	.00001	.00041	.00012	.00004	.00014	[illegible]	[illegible]
80	[illegible]	.00058	.45646	.07700	[illegible]	.03801	1.3621	.03476	[illegible]	[illegible]
81	[illegible]	.00064	[illegible]	.19289	[illegible]	.01624	.07726	.00501	[illegible]	[illegible]
82	[illegible]	[illegible]	[illegible]	[illegible]	.00054	.04886	[illegible]	[illegible]	[illegible]	[illegible]
83	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.01981	[illegible]	.03049	[illegible]	[illegible]
84	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.4059	[illegible]	[illegible]	[illegible]
85	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.01762	[illegible]	[illegible]
86	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.35208	[illegible]	[illegible]	[illegible]	[illegible]
87	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
88	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.49683	.02025	[illegible]	[illegible]
89	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.00046	.00032	[illegible]	[illegible]
90	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
91	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.00642	.00620	[illegible]	[illegible]
92	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.01273	.07844	.3501	[illegible]	[illegible]
93	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.53[illegible]	[illegible]	.54796	[illegible]	[illegible]
94	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.51260	.55453	[illegible]	[illegible]
95	[illegible]	[illegible]	[illegible]	[illegible]	.38417	.46[illegible]	.53177	.55[illegible]	[illegible]	[illegible]
96	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.00160	.00025	[illegible]	[illegible]
97	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.00302	.00274	.00016	[illegible]	[illegible]
98	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.00002	.00016	[illegible]	[illegible]
99	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.50587	.50165	1.5032	[illegible]	[illegible]
100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.00025	.00024	[illegible]	[illegible]
TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP METALS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:
All samples pH <2

Book #: EIP-104
Batch: 1PL003W
Matrix: Water
Digestor ID: E

SOP #	Rev. #
☐ EMAX-3005	4
☑ EMAX-3010	5
☐ EMAX-3050	4
☐ EMAX-200.7	2
☐ EMAX-	

Start	Temp	End	Temp
	95 °C		95 °C

Standards	ID	Amount Added (ml)
LCS-1	SM1A-013-04-13	0.25
LCS-2	SM1A-013-03-13	0.25
LCS-3	SM1A-013-04-14	0.5
MS	same spike vol and solids as LCS1, LCS2	
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SW1A-04-407	1.5 + 1.5
HCl	SW1A-04-408	2.5 + 2.5
H_2O_2	N/A	
HNO3(1:1)	N/A	
Digestate Location	ICP	
Extract Location		
☑ Reagent Water ID: SMSA-02-075		
☑ Thermometer ID: 101993366		
☑ Pipette ID: ICP-07		
☑ Pipette ID: 14278 0035		
☐ Pipette ID:		
☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask		
☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask		

Prepared By: GG
Standard Added By: GG Witnessed By: TH
Extract Rcvd By: TH Checked By: TH

FileID: IPL003W

EMAX LABORATORIES, INC.

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
11IPL003W01	IPL003WB	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W02	IPL003WL	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W03	IPL003WC	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W04	K224-09	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W05	K230-11	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W06	K237-01	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W07	K226-01	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W08	K226-01M	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W09	K226-01S	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W10	K226-02	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W11	K226-03	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W12	K226-04	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W13	K231-01	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W14	K231-01M	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W15	K231-01S	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W16	K231-02	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W17	K231-10	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W18	K231-11	50	ml	12/2/11 11:02	50	50	50	1	
11IPL003W19	K221-01	50	ml	12/2/11 11:02	50	50	50	1	DISSOLVED
11IPL003W20	K221-02	50	ml	12/2/11 11:02	50	50	50	1	DISSOLVED
11IPL003W21	K221-03	50	ml	12/2/11 11:02	50	50	50	1	DISSOLVED
11IPL003W22	K221-04	50	ml	12/2/11 11:02	50	50	50	1	DISSOLVED

12/2/11 GG

Vd=digestate volume PrepFctr=)ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 12/2/11 11:03 Prepared By GG

☑ Digestion Ended @ 12/2/11 15:20 Checked By TH

Comments: Date 12/2/11

7030

CASE NARRATIVE

Client : INSIGHT EEC, INC.

Project : NWS SEAL BEACH, IR SITE 70.

SDG : 11K237

METHOD 7470A
MERCURY BY COLD VAPOR

One (1) water sample was received on 11/30/11 for Mercury analysis, Method 7470A in accordance with Department of Defense Quality Systems Manual for Environmental Laboratories, Version 4.1.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for HGL001WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

[illegible]

[illegible]

[illegible]	[illegible]	SDG NO	[illegible]
Project	[illegible]	Instrument ID	[illegible]

MATRIX

Client Sample ID	Laboratory Sample ID	Dilution Factor	Matrix	Analyzed Date/Time	Extraction Date/Time	Sample Data FN	Calibration Prep Data FN	Method	Notes
[illegible]	[illegible]	1	W	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Method Blank
[illegible]	[illegible]	1	W	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Lab Control Sample [illegible]
[illegible]	[illegible]	1	W	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] Duplicate
[illegible]	[illegible]	1	W	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] Sample

FN - Filename
Matrix - Percent Moisture

[illegible]

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]

[illegible]	[illegible]				
[illegible]	[illegible]				
[illegible]	[illegible]				
[illegible]	[illegible]				

[illegible]	[illegible]			[illegible]	[illegible]
[illegible]	[illegible]				
[illegible]	[illegible]				
[illegible]	[illegible]	[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	[illegible]		

[illegible]

	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
MERCURY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 12/5/11 Start Time: 18:47

End Date: 12/5/11 End Time: 20:22

Book #: A47-080

Instrument No.: 47

Analytical Sequence/Batch: M47L001

Method File: Hg

Comments:

QC OK

K952-02 is turbid w/ sediment. Diluted at 10X & 5X prior to analysis.

K952-02 was reported at 5X
2mL → 10mL = 5X

SOP #	Rev. #
☑ EMAX-7470	5
☐ EMAX-7471	5
☑ EMAX-245.1	2
☐ EMAX-	

STANDARDS ID	
S1	BLANK
S2	SM3B-10-07-09
S3	↓
S4	
S5	
S6	
CCV	
ICV	SM3B-10-07-10
LCS	↓
Analytical Spike	
SM3B-10-05-09	

Analyzed By: NT

Date: 12/5/11

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]		[illegible]

RunProt: HGCOM

RunFold: M47L001 Seq: 6 Batch:

Prmt: R/T On Pump: On

Rev: 4.2 18:57:38 05 Dec 2011 Xmit: Off Gas: 0.35 LPM

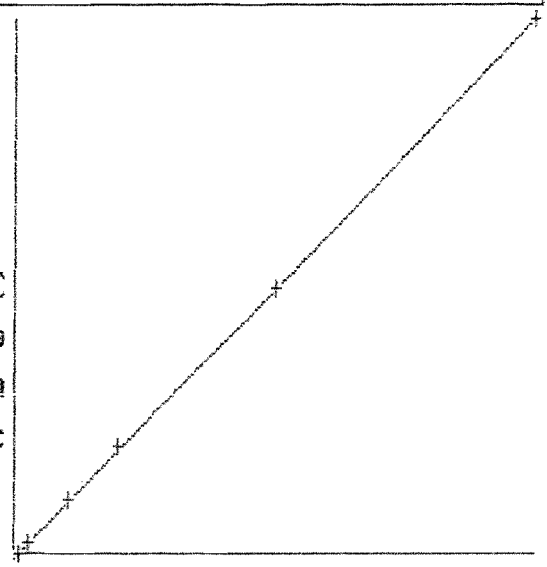
State: Idle User: MT A/S: On

CALIBRATION: Line proto: HGCOM

	Hg Conc.	Calc.	Dev.	Accepted ->linear	
S1	.000	.031	.031	Quadratic	
S2	.200	.219	.019	Wtdlinear	
S3	1.00	.993	-.007		C
S4	2.00	1.95	-.047	Accept	o
S5	5.00	4.99	-.012		n
S6	10.0	10.0	.015		c

A .0000000 r .999974

B 1.11050e-5 C -7.73567e-2



Relative Absorbance

	Mean		SD	
S1	9733	0	SD	9733
S2	26709	0	%RSD	26709
S3	96421	0	%RSD	96421
S4	182867	0	%RSD	182867
S5	456139	0	%RSD	456139
S6	908827	0	%RSD	908827

New cal coefficients stored

EMAX LABORATORIES, INC.

DIGESTION LOG
for
MERCURY

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

Book #: E47-085
Batch No.: HGL001W
Matrix: Water

SOP #	Rev. #
☑ EMAX-7470	5
☐ EMAX-7471	5
☑ EMAX-245.1	2
☐ EMAX-	

Standards	ID	Conc. (µg/L)	Amount Added (ml)
ICAL	SM3B-10-07-09	50	0.2, 1, 2, 5, 10
CCV	↓	↓	5
ICV	SM3B-10-07-10	↓	2
LCS/MS	↓	↓	5

Reagent	ID
HNO_3	SW1A-04-407
HCl	N/A
H_2SO_4	SW1A-04-334
$KMnO_4$	SM5B-02-214
$K_2S_2O_8$	↓ 215
$NH_2OH.HCl$	↓ 211
$SnCl_2$	↓ 212
Silica Sand	N/A

Temp of Digestion Bath: 95°C A Digestor

Thermometer ID: 111241125

Pipette ID: ICP DOE-1, HG03, HG04

☑ H_2SO_4 dispenser checked @ 2.5 ml with Class A graduated cylinder

☐ HCl dispenser checked @ ___ ml with Class A graduated cylinder

☐ HNO_3 dispenser checked @ ___ ml with Class A graduated cylinder

Prepared By: NT

Standard Added By: NT Witnessed By: [illegible]

EMAX LABORATORIES INC

DIGESTION LOG FOR MERCURY

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
11HGL001W01	HGL001WB	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W02	HGL001WL	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W03	HGL001WC	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W04	K220-01	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W05	K220-02	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W06	K220-03	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W07	K220-04	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W08	K220-05	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W09	K220-05M	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W10	K220-05S	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W11	K220-06	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W12	K220-07	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W13	K220-08	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W14	K952-01	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W15	K952-02	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W16	K952-03	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W17	K952-03M	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W18	K952-03S	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W19	K952-04	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W20	K230-11	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W21	K237-01	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W22	L002-11	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W23	S-0	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W24	S-0.2	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W25	S-1	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W26	S-2	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W27	S-5	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W28	S-10	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W29	ICV	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W30	CCV	50	ml	12/5/11 10:22	80	50	80	1	
11HGL001W31	ICB/CCB	50	ml	12/5/11 10:22	80	50	80	1	

NT 12/5/11

Vd=digestate volume PrepFctr=(ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 12/5/11 11:30 Prepared By NT NT

☑ Digestion Ended @ 12/5/11 14:00 Checked By CW

Comments: Date 12/5/11

SiREM
Site Recovery & Management
www.siremlab.com
130 Research Lane, Suite 2
Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3151

Certificate of Analysis: Gene-Trac® *Dehalococcoides* Assay

Customer: Rebecca Lesher, OTIE

Project: IR Site 70/NWS SEAL BEACH

Customer Reference: 4-77101

SiREM Reference: S-2374

Report Date: 18-Nov-11

Data Files: iQ5-DB-DHC-QPCR-0247
DHC-UP-0705
MyiQ-DHC-QPCR-0841
DHC-QPCR-check-gel-0597

Table 1a: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent Dhc *	*Dehalococcoides* Enumeration/Liter **
MW-70-MNA01-83	DHC-7788	2-Nov-11	Groundwater	0.02 - 0.06 %	6×10^4
MW-70-MNA03-84	DHC-7789	2-Nov-11	Groundwater	NA	4×10^3U
MW-70-MNA02-85	DHC-7790	2-Nov-11	Groundwater	NA	4×10^3U
MW-70-MNA04-86	DHC-7791	2-Nov-11	Groundwater	NA	4×10^3U
MW-70-MNA05-88	DHC-7792	2-Nov-11	Groundwater	0.4 - 1 %	2×10^6

Notes:

* Percent *Dehalococcoides* (Dhc) in microbial population. This value is calculated by dividing the number of Dhc 16S ribosomal ribonucleic acid (rRNA) gene copies by the total number of bacteria as estimated by the mass of DNA extracted from the sample. Range represents normal variation in Dhc enumeration.

** Based on quantification of Dhc 16S rRNA gene copies. Dhc are generally reported to contain one 16S rRNA gene copy per cell; therefore, this number is often interpreted to represent the number of Dhc cells present in the sample.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *Dehalococcoides* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.

Analyst: _____
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: _____
Ximena Druar, B.Sc.
Molecular Biology Coordinator

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Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3157

Certificate of Analysis: Gene-Trac® VC, Vinyl Chloride Reductase (*vcrA*) Assay

Customer: Rebecca Lesher,OTIE

Project: IR Site 70/NWS SEAL BEACH

Customer Reference: 4-77101

SiREM Reference: S-2374

Report Date: 18-Nov-11

Data Files: MyiQ-DB-VC-QPCR-0178
VC-QPCR-Check-gel-051a/b
MyiQ-VC-QPCR-0430

Table 1b: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent *vcrA* *	Vinyl Chloride Reductase (*vcrA*) Gene Copies/Liter
MW-70-MNA01-83	VCR-2945	2-Nov-11	Groundwater	0.001 - 0.03 %	3×10^4C
MW-70-MNA05-88	VCR-2946	2-Nov-11	Groundwater	0.001 - 0.004 %	8×10^3C

Notes:

* Percent *vcrA* in microbial population. This value is calculated by dividing the number of vinyl chloride reductase A (*vcrA)* gene copies quantified by the total number of bacteria estimated to be in the sample based on the mass of DNA extracted from the sample. Range represents normal variation in enumeration of *vcrA*.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *vcrA* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.
C Correction factor applied to correct for non-specific PCR amplification products.

Analyst: _____
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: _____
Ximena Druar, B.Sc.
Molecular Biology Coordinator

Table 2: Detailed Test Parameters, Test Reference S-2374

Customer Sample ID	MW-70-MNA01-83	MW-70-MNA03-84	MW-70-MNA02-85	MW-70-MNA04-86	MW-70-MNA05-88
SiREM Sample ID	DHC-7788/VCR-2945	DHC-7789	DHC-7790	DHC-7791	DHC-7792/VCR-2946
Date Received	3-Nov-11	3-Nov-11	3-Nov-11	3-Nov-11	3-Nov-11
Sample Temperature	2 ºC	2 ºC	2 ºC	2 ºC	2 ºC
Filtration Date	7-Nov-11	7-Nov-11	7-Nov-11	7-Nov-11	7-Nov-11
Volume Used for DNA Extraction	500 mL	500 mL	500 mL	500 mL	500 mL
DNA Extraction Date	10-Nov-11	10-Nov-11	10-Nov-11	10-Nov-11	10-Nov-11
DNA Concentration in Sample (extractable)	600 ng/L [1]	735 ng/L	1869 ng/L	695 ng/L	1203 ng/L
PCR Amplifiable DNA	Detected	Detected	Detected	Detected	Detected
Dhc qPCR Date Analyzed	15-Nov-11	15-Nov-11	15-Nov-11	15-Nov-11	15-Nov-11
***vcrA* qPCR Date Analyzed**	15-Nov-11	NA	NA	NA	15-Nov-11
qPCR Controls (see Tables 3 & 4)	Passed	Passed	Passed	Passed	Passed
Comments	- -	Sample not tested for *vcrA* and as it was ND for Dhc.	Sample not tested for *vcrA* and as it was ND for Dhc.	Sample not tested for *vcrA* and as it was ND for Dhc.	- -

Notes:

Refer to Tables 3 & 4 for detailed results of controls.
ND = not detected
°C = degrees Celsius
[1]Detected below quantification limit.

PCR = polymerase chain reaction
qPCR = quantitative PCR
Dhc = *Dehalococcoides*
vcrA = vinyl chloride reductase

ng/L = nanograms per liter
mL = milliliters
DNA = Deoxyribonucleic acid
NA = not applicable

Table 3: Gene-Trac Dhc Control Results, Test Reference S-2374

Laboratory Control	Analysis Date	Control Description	Spiked Dhc 16S rRNA Gene Copies per Liter	Recovered Dhc 16S rRNA Gene Copies per Liter	Comments
Positive Control Low Concentration	15-Nov-11	qPCR with KB-1 genomic DNA (CSLD-0478)	2.5×10^5	1.8×10^5	- -
Positive Control High Concentration	15-Nov-11	qPCR with KB-1 genomic DNA (CSHD-0478)	2.8×10^7	2.4×10^7	- -
DNA Extraction Blank	14-Nov-11	DNA extraction sterile water (FB-1565)	0	3.9×10^3U	- -
Negative Control	15-Nov-11	Tris Reagent Blank (TBD-0438)	0	3.9×10^3U	- -

Notes:

Dhc = *Dehalococcoides*

DNA = Deoxyribonucleic acid

qPCR = quantitative PCR

16S rRNA = 16S ribosomal ribonucleic acid

U Not detected, associated value is the quantification limit.

Table 4: Gene-Trac VC Control Results, Test Reference S-2374

Laboratory Control	Analysis Date	Control Description	Spiked *vcrA* reductase Gene Copies per Liter	Recovered *vcrA* reductase Gene Copies per Liter	Comments
Positive Control Low Concentration	15-Nov-11	qPCR with KB-1 genomic DNA (CSLV-0298)	2.8×10^5	2.0×10^5	- -
Positive Control High Concentration	15-Nov-11	qPCR with KB-1 genomic DNA (CSHV-0298)	3.2×10^7	2.9×10^7	- -
DNA Extraction Blank	15-Nov-11	DNA extraction sterile water (FB-1565)	0	3.9×10^3U	- -
Negative Control	15-Nov-11	Tris Reagent Blank (TBV-0269)	0	3.9×10^3U	- -

Notes:

qPCR = quantitative PCR

DNA = Deoxyribonucleic acid

16S rRNA = 16S ribosomal ribonucleic acid

vcrA = vinyl chloride reductase

U Not detected, associated value is the quantification limit.

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Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3151

Certificate of Analysis: Gene-Trac® *Dehalococcoides* Assay

Customer: Rebecca Lesher, OTIE

Project: IR Site 70/NWS SEAL BEACH

Customer Reference: 2011068-8061

SiREM Reference: S-2375

Report Date: 21-Nov-11

Data Files: iQ5-DB-DHC-QPCR-0247
MyiQ-DHC-QPCR-0841
DHC-QPCR-Check-gel-0597

Table 1a: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent Dhc *	*Dehalococcoides* Enumeration/Liter **
MW-70-PMW01A-089	DHC-7793	3-Nov-11	Groundwater	3 - 8 %	3×10^8
MW-70-PMW01B-091	DHC-7794	3-Nov-11	Groundwater	3 - 10 %	7×10^7
MW-70-27-092	DHC-7795	3-Nov-11	Groundwater	2 - 6 %	3×10^7
MW-70-28-094	DHC-7796	3-Nov-11	Groundwater	2 - 6 %	2×10^7

Notes:

* Percent *Dehalococcoides* (Dhc) in microbial population. This value is calculated by dividing the number of Dhc 16S ribosomal ribonucleic acid (rRNA) gene copies by the total number of bacteria as estimated by the mass of DNA extracted from the sample. Range represents normal variation in Dhc enumeration.

** Based on quantification of Dhc 16S rRNA gene copies. Dhc are generally reported to contain one 16S rRNA gene copy per cell; therefore, this number is often interpreted to represent the number of Dhc cells present in the sample.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *Dehalococcoides* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.

Analyst: _____
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: _____
Ximena Druar, B.Sc.
Molecular Biology Coordinator

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Fax (519) 822-3157

Certificate of Analysis: Gene-Trac® VC, Vinyl Chloride Reductase (*vcrA*) Assay

Customer: Rebecca Lesher, OTIE

Project: IR Site 70/NWS SEAL BEACH

Customer Reference: 2011068-8061

SiREM Reference: S-2375

Report Date: 21-Nov-11

Data Files: iQ5-DB-VC-QPCR-0178
MyiQ-VC-QPCR-0430
VC-QPCR-Check-gel-0451

Table 1b: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent *vcrA* *	Vinyl Chloride Reductase (*vcrA*) Gene Copies/Liter
MW-70-PMW01A-089	VCR-2947	3-Nov-11	Groundwater	1 - 4 %	2×10^8
MW-70-PMW01B-091	VCR-2948	3-Nov-11	Groundwater	2 - 6 %	4×10^7
MW-70-27-092	VCR-2949	3-Nov-11	Groundwater	0.2 - 0.7 %	4×10^6C
MW-70-28-094	VCR-2950	3-Nov-11	Groundwater	1 - 3 %	1×10^7C

Notes:

* Percent *vcrA* in microbial population. This value is calculated by dividing the number of vinyl chloride reductase A (*vcrA)* gene copies quantified by the total number of bacteria estimated to be in the sample based on the mass of DNA extracted from the sample. Range represents normal variation in enumeration of *vcrA* .

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *vcrA* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.
C Correction factor applied to correct for non-specific PCR amplification products.

Analyst: _____
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: _____
Ximena Druar, B.Sc.
Molecular Biology Coordinator

Table 2: Detailed Test Parameters, Test Reference S-2375

Customer Sample ID	MW-70-PMW01A-089	MW-70-PMW01B-091	MW-70-27-092	MW-70-28-094
SiREM Sample ID	DHC-7793/VCR-2947	DHC-7794/VCR-2948	DHC-7795/VCR-2949	DHC-7796/VCR-2950
Date Received	4-Nov-11	4-Nov-11	4-Nov-11	4-Nov-11
Sample Temperature	4 ºC	4 ºC	4 ºC	4 ºC
Filtration Date	7-Nov-11	7-Nov-11	7-Nov-11	7-Nov-11
Volume Used for DNA Extraction	100 mL	500 mL	500 mL	500 mL
DNA Extraction Date	10-Nov-11	10-Nov-11	10-Nov-11	10-Nov-11
DNA Concentration in Sample (extractable)	24795 ng/L	3933 ng/L	3263 ng/L	2055 ng/L
PCR Amplifiable DNA	Detected	Detected	Detected	Detected
Dhc qPCR Date Analyzed	15-Nov-11	15-Nov-11	15-Nov-11	15-Nov-11
***vcrA* qPCR Date Analyzed**	15-Nov-11	15-Nov-11	15-Nov-11	15-Nov-11
qPCR Controls (see Tables 3 & 4)	Passed	Passed	Passed	Passed
Comments	- -	- -	- -	- -

Notes:

Refer to Tables 3 & 4 for detailed results of controls.
DNA = Deoxyribonucleic acid
PCR = polymerase chain reaction
qPCR = quantitative PCR
Dhc = *Dehalococcoides*
vcrA = vinyl chloride reductase
ng/L = nanograms per liter
mL = milliliters
°C = degrees Celsius

Table 3: Gene-Trac Dhc Control Results, Test Reference S-2375

Laboratory Control	Analysis Date	Control Description	Spiked Dhc 16S rRNA Gene Copies per Liter	Recovered Dhc 16S rRNA Gene Copies per Liter	Comments
Positive Control Low Concentration	15-Nov-11	qPCR with KB1 genomic DNA (CSLD-0478)	2.5×10^5	1.8×10^5	- -
Positive Control High Concentration	15-Nov-11	qPCR with KB1 genomic DNA (CSHD-0478)	2.8×10^7	2.4×10^7	- -
DNA Extraction Blank	14-Nov-11	DNA extraction sterile water (FB-1565)	0	3.9×10^3U	- -
Negative Control	15-Nov-11	Tris Reagent Blank (TBD-0438)	0	3.9×10^3U	- -

Notes:

Dhc = *Dehalococcoides*

DNA = Deoxyribonucleic acid

qPCR = quantitative PCR

16S rRNA = 16S ribosomal ribonucleic acid

U Not detected, associated value is the quantification limit.

Table 4: Gene-Trac VC Control Results, Test Reference S-2375

Laboratory Control	Analysis Date	Control Description	Spiked *vcrA* reductase Gene Copies per Liter	Recovered *vcrA* reductase Gene Copies per Liter	Comments
Positive Control Low Concentration	15-Nov-11	qPCR with KB-1 genomic DNA (CSLV-0298)	2.8×10^5	2.0×10^5	- -
Positive Control High Concentration	15-Nov-11	qPCR with KB-1 genomic DNA (CSHV-0298)	3.2×10^7	2.9×10^7	- -
DNA Extraction Blank	15-Nov-11	DNA extraction sterile water (FB-1565)	0	3.9×10^3U	- -
Negative Control	15-Nov-11	Tris Reagent Blank (TBV-0269)	0	3.9×10^3U	- -

Notes:

qPCR = quantitative PCR

DNA = Deoxyribonucleic acid

16S rRNA = 16S ribosomal ribonucleic acid

vcrA = vinyl chloride reductase

U Not detected, associated value is the quantification limit.

№ 2010

SIREM Site Recovery & Management

Chain-of-Custody Form

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Page 1 of 1

Lab # S-2375

Project Name	IR SITE 70 - NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVE., ANAHEIM, CA 92806 U.S.A.
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	A.V. Sreedh
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
MW-70-PMW01A-089	11/3/11	1130	WATER	1	X	X		
MW-70-PMW01B-091	11/3/11	1317	WATER	1	X	X		
MW-70-27-092	11/3/11	1458	WATER	1	X	X		
MW-70-28-094	11/3/11	1616	WATER	1	X	X		

Sample Receipt	
Cooler Condition:	Good
Cooler Temperature:	4°C
Custody Seals:	Yes ☒ No ☐

Billing Information	
P.O. #	2011068-8061
Bill To:	OTIE
	2247 SAN DIEGO AVE, SUITE 238 SAN DIEGO, CA 92110

Turnaround Time Requested
Normal ☒
Rush ☐

For Lab Use Only
Proposal #: _____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: A.V. Sreedh	Signature: FEDEX	Signature:	Signature: J. Wilkinson	Signature:	Signature:
Printed Name: SREE AKKENAPALLY	Printed Name:	Printed Name:	Printed Name: J. Wilkinson	Printed Name:	Printed Name:
Firm: INSIGHT EEC, INC	Firm:	Firm:	Firm: SIREM	Firm:	Firm:
Date/Time: 11/3/11 1705	Date/Time:	Date/Time:	Date/Time: 11/4/11 12:35	Date/Time:	Date/Time:

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

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Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3151

Certificate of Analysis: Gene-Trac® *Dehalococcoides* Assay

Customer: Rebecca Lesher, OTIE
Project: IR Site 70/NWS SEAL BEACH
Customer Reference: 2011068-8061

SiREM Reference: S-2378
Report Date: 21-Nov-11
Data Files: MyiQ-DHC-QPCR-0841
DHC-QPCR-Check-gel-0597
iQ5-DB-DHC-QPCR-0247

Table 1a: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent Dhc *	*Dehalococcoides* Enumeration/Liter **
MW-70-PMW03A-095	DHC-7797	7-Nov-11	Groundwater	0.07 - 0.2 %	4×10^6
MW-70-PMW03B-097	DHC-7798	7-Nov-11	Groundwater	0.1 - 0.3 %	5×10^5
IW-70-SAB06-099	DHC-7799	7-Nov-11	Groundwater	0.1 - 0.3 %	8×10^6
MW-70-PMW02A-100	DHC-7800	7-Nov-11	Groundwater	0.06 - 0.2 %	2×10^5
MW-70-PMW02B-101	DHC-7801	7-Nov-11	Groundwater	0.2 - 0.6%	7×10^5

Notes:

* Percent *Dehalococcoides* (Dhc) in microbial population. This value is calculated by dividing the number of Dhc 16S ribosomal ribonucleic acid (rRNA) gene copies by the total number of bacteria as estimated by the mass of DNA extracted from the sample. Range represents normal variation in Dhc enumeration.

** Based on quantification of Dhc 16S rRNA gene copies. Dhc are generally reported to contain one 16S rRNA gene copy per cell; therefore, this number is often interpreted to represent the number of Dhc cells present in the sample.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *Dehalococcoides* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.

Analyst: Kela Bartle
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: Ximena Druar
Ximena Druar, B.Sc.
Molecular Biology Coordinator

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Site Recovery & Management
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Certificate of Analysis: Gene-Trac® VC, Vinyl Chloride Reductase (*vcrA*) Assay

Customer: Rebecca Lesher, OTIE

Project: IR Site 70/NWS SEAL BEACH

Customer Reference: 2011068-8061

SiREM Reference: S-2378

Report Date: 18-Nov-11

Data Files: MyiQ-VC-QPCR-0430
VC-QPCR-Check-gel-0451
iQ5-DB-VC-QPCR-0178

Table 1b: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent *vcrA* *	Vinyl Chloride Reductase (*vcrA*) Gene Copies/Liter
MW-70-PMW03A-095	VCR-2951	7-Nov-11	Groundwater	0.07 - 0.2 %	4×10^6C
MW-70-PMW03B-097	VCR-2952	7-Nov-11	Groundwater	NA	4×10^3U
IW-70-SAB06-099	VCR-2953	7-Nov-11	Groundwater	0.2 - 0.7 %	2×10^7C
MW-70-PMW02A-100	VCR-2954	7-Nov-11	Groundwater	NA	4×10^3U
MW-70-PMW02B-101	VCR-2955	7-Nov-11	Groundwater	NA	4×10^3U

Notes:

* Percent *vcrA* in microbial population. This value is calculated by dividing the number of vinyl chloride reductase A (*vcrA)* gene copies quantified by the total number of bacteria estimated to be in the sample based on the mass of DNA extracted from the sample. Range represents normal variation in enumeration of *vcrA* .

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *vcrA* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.
C Correction factor applied to correct for non-specific PCR amplification products.

Analyst: _____
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: _____
Ximena Druar, B.Sc.
Molecular Biology Coordinator

Table 2: Detailed Test Parameters, Test Reference S-2378

Customer Sample ID	MW-70-PMW03A-095	MW-70-PMW03B-097	IW-70-SAB06-099	MW-70-PMW02A-100	MW-70-PMW02B-101
SiREM Sample ID	DHC-7797/VCR-2951	DHC-7798/VCR-2952	DHC-7799/VCR-2953	DHC-7800/VCR-2954	DHC-7801/VCR-2955
Date Received	9-Nov-11	9-Nov-11	9-Nov-11	9-Nov-11	9-Nov-11
Sample Temperature	2 ºC	2 ºC	2 ºC	2 ºC	2 ºC
Filtration Date	10-Nov-11	10-Nov-11	10-Nov-11	10-Nov-11	10-Nov-11
Volume Used for DNA Extraction	200 mL	500 mL	100 mL	500 mL	500 mL
DNA Extraction Date	14-Nov-11	14-Nov-11	14-Nov-11	14-Nov-11	14-Nov-11
DNA Concentration in Sample (extractable)	10819 ng/L	816 ng/L	15053 ng/L	705 ng/L	696 ng/L
PCR Amplifiable DNA	Detected	Detected	Detected	Detected	Detected
Dhc qPCR Date Analyzed	15-Nov-11	15-Nov-11	15-Nov-11	15-Nov-11	15-Nov-11
***vcrA* qPCR Date Analyzed**	15-Nov-11	15-Nov-11	15-Nov-11	15-Nov-11	15-Nov-11
qPCR Controls (see Tables 3 & 4)	Passed	Passed	Passed	Passed	Passed
Comments	- -	- -	- -	- -	- -

Notes:

Refer to Tables 3 & 4 for detailed results of controls.
DNA = Deoxyribonucleic acid
PCR = polymerase chain reaction
qPCR = quantitative PCR
Dhc = *Dehalococcoides*
vcrA = vinyl chloride reductase
ng/L = nanograms per liter
mL = milliliters
°C = degrees Celsius

Table 3: Gene-Trac Dhc Control Results, Test Reference S-2378

Laboratory Control	Analysis Date	Control Description	Spiked Dhc 16S rRNA Gene Copies per Liter	Recovered Dhc 16S rRNA Gene Copies per Liter	Comments
Positive Control Low Concentration	15-Nov-11	qPCR with KB1 genomic DNA (CSLD-0478)	2.5×10^5	1.8×10^5	
Positive Control High Concentration	15-Nov-11	qPCR with KB1 genomic DNA (CSHD-0478)	2.8×10^7	2.4×10^7	
DNA Extraction Blank	14-Nov-11	DNA extraction sterile water (FB-1566)	0	3.9×10^3U	- -
Negative Control	15-Nov-11	Tris Reagent Blank (TBD-0438)	0	3.9×10^3U	- -

Notes:

Dhc = *Dehalococcoides*

DNA = Deoxyribonucleic acid

qPCR = quantitative PCR

16S rRNA = 16S ribosomal ribonucleic acid

U Not detected, associated value is the quantification limit.

Table 4: Gene-Trac VC Control Results, Test Reference S-2378

Laboratory Control	Analysis Date	Control Description	Spiked *vcrA* reductase Gene Copies per Liter	Recovered *vcrA* reductase Gene Copies per Liter	Comments
Positive Control Low Concentration	15-Nov-11	qPCR with KB-1 genomic DNA (CSLV-0298)	2.8×10^5	2.0×10^5	- -
Positive Control High Concentration	15-Nov-11	qPCR with KB-1 genomic DNA (CSHV-0298)	3.2×10^7	2.9×10^7	- -
DNA Extraction Blank	15-Nov-11	DNA extraction sterile water (FB-1566)	0	3.9×10^3U	- -
Negative Control	15-Nov-11	Tris Reagent Blank (TBV-0269)	0	3.9×10^3U	- -

Notes:

qPCR = quantitative PCR

DNA = Deoxyribonucleic acid

16S rRNA = 16S ribosomal ribonucleic acid

vcrA = vinyl chloride reductase

U Not detected, associated value is the quantification limit.

№ 3268

Chain-of-Custody Form

SIREM Site Recovery & Management

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Page 1 of 1

Lab # S-2378

Project Name	IRSITE70-NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RLESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVE., ANAHEIM, CA 92806 U.S.A
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	A.V. Sreed
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative Key
0. None
1. HCl
2. Other
3. Other

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
MW70-PMW03A-095	11/7/11	1042	WATER	1	X	X		
MW-70-PMW03B-097	11/7/11	1208	WATER	1	X	X		
IW-70-SAB06-099	11/7/11	1430	WATER	1	X	X		
MW-70-PMW02A-100	11/7/11	1542	WATER	1	X	X		
MW-70-PMW02B-101	11/7/11	1627	WATER	1	X	X		

Sample Receipt

Cooler Condition: Good

Cooler Temperature: 2°C

Custody Seals: Yes [X] No [ ]

Billing Information

P.O. # 2011068-8061

Bill To: OTIE

2247 SAN DIEGO AVE., SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested

Normal [X]

Rush [ ]

For Lab Use Only

Proposal #:

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: A.V. Sreed	Signature: FEDEX	Signature:	Signature: J. Wilkinson	Signature:	Signature:
Printed Name: SREE AKKENAPALLY	Printed Name:	Printed Name:	Printed Name: J. Wilkinson	Printed Name:	Printed Name:
Firm: INSIGHT EEC, INC.	Firm:	Firm:	Firm: SIREM	Firm:	Firm:
Date/Time: 11/7/11	Date/Time:	Date/Time:	Date/Time: 11/9/11 17:00	Date/Time:	Date/Time:

Distribution: White - Return to Originator: Yellow - Lab Copy: Pink - Retained by Client

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Guelph, Ontario N1G 5G3
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Fax (519) 822-3151

Certificate of Analysis: Gene-Trac® *Dehalococcoides* Assay

Customer: Rebecca Lesher, OTIE

Project: IR Site 70/NWS SEAL BEACH

Customer Reference: 2011068-8061

SiREM Reference: S-2379

Report Date: 24-Nov-11

Data Files: MyiQ-DHC-QPCR-0841
DHC-UP-0705
DHC-QPCR check gel-0597
iQ5-DB-DHC-QPCR-0247

Table 1a: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent Dhc *	*Dehalococcoides* Enumeration/Liter **
IW-70-SAB11-103	DHC-7804	8-Nov-11	Groundwater	0.01 - 0.04 %	4×10^6
IW-70-FSB118-104	DHC-7805	8-Nov-11	Groundwater	0.5 - 1 %	3×10^7
MW-70-PMW06A-105	DHC-7806	8-Nov-11	Groundwater	16 - 40 %	9×10^7
MW-70-PMW06B-106	DHC-7807	8-Nov-11	Groundwater	NA	4×10^3U
MW-70-38-108	DHC-7808	8-Nov-11	Groundwater	2 - 7 %	2×10^7

Notes:

* Percent *Dehalococcoides* (Dhc) in microbial population. This value is calculated by dividing the number of Dhc 16S ribosomal ribonucleic acid (rRNA) gene copies by the total number of bacteria as estimated by the mass of DNA extracted from the sample. Range represents normal variation in Dhc enumeration.

** Based on quantification of Dhc 16S rRNA gene copies. Dhc are generally reported to contain one 16S rRNA gene copy per cell; therefore, this number is often interpreted to represent the number of Dhc cells present in the sample.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *Dehalococcoides* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.

Analyst: _____
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: _____
Ximena Druar, B.Sc.
Molecular Biology Coordinator

SiREM
Site Recovery & Management
www.siremlab.com
130 Research Lane, Suite 2
Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3151

Certificate of Analysis: Gene-Trac® VC, Vinyl Chloride Reductase (*vcrA*) Assay

Customer: Rebecca Lesher, OTIE

Project: IR Site 70/NWS SEAL BEACH

Customer Reference: 2011068-8061

SiREM Reference: S-2379

Report Date: 24-Nov-11

Data Files: MyiQ-VC-QPCR-0430
VC-QPCR-Check-gel-0451
iQ5-DB-VC-QPCR-0178

Table 1b: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent *vcrA* *	Vinyl Chloride Reductase (*vcrA*) Gene Copies/Liter
IW-70-SAB11-103	VCR-2956	8-Nov-11	Groundwater	0.01 - 0.02 %	2×10^6C
IW-70-FSB118-104	VCR-2957	8-Nov-11	Groundwater	0.3 - 1 %	2×10^7
MW-70-PMW06A-105	VCR-2958	8-Nov-11	Groundwater	0.1 - 0.4 %	6×10^5
MW-70-38-108	VCR-2959	8-Nov-11	Groundwater	2 - 6 %	2×10^7

Notes:

* Percent *vcrA* in microbial population. This value is calculated by dividing the number of vinyl chloride reductase A (*vcrA)* gene copies quantified by the total number of bacteria estimated to be in the sample based on the mass of DNA extracted from the sample. Range represents normal variation in enumeration of *vcrA* .

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *vcrA* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.
C Correction factor applied to correct for non-specific PCR amplification products.

Analyst: _____
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: _____
Ximena Druar, B.Sc.
Molecular Biology Coordinator

Table 2: Detailed Test Parameters, Test Reference S-2379

Customer Sample ID	IW-70-SAB11-103	IW-70-FSB118-104	MW-70-PMW06A-105	MW-70-PMW06B-106	MW-70-38-108
SiREM Sample ID	DHC-7804/VCR-2956	DHC-7805/VCR-2957	DHC-7806/VCR-2958	DHC-7807	DHC-7808/VCR-2959
Date Received	10-Nov-11	10-Nov-11	10-Nov-11	10-Nov-11	10-Nov-11
Sample Temperature	3 ºC	3 ºC	3 ºC	3 ºC	3 ºC
Filtration Date	14-Nov-11	14-Nov-11	14-Nov-11	14-Nov-11	14-Nov-11
Volume Used for DNA Extraction	20 mL	400 mL	500 mL	500 mL	500 mL
DNA Extraction Date	14-Nov-11	14-Nov-11	14-Nov-11	14-Nov-11	14-Nov-11
DNA Concentration in Sample (extractable)	64088 ng/L	10264 ng/L	1017 ng/L	951 ng/L	1712 ng/L
PCR Amplifiable DNA	Detected	Detected	Detected	Detected	Detected
Dhc qPCR Date Analyzed	15-Nov-11	15-Nov-11	15-Nov-11	15-Nov-11	15-Nov-11
***vcrA* qPCR Date Analyzed**	15-Nov-11	15-Nov-11	15-Nov-11	NA	15-Nov-11
qPCR Controls (see Tables 3 & 4)	Passed	Passed	Passed	Passed	Passed
Comments	- -	- -	- -	Sample not tested for *vcrA* as it was ND for Dhc.	- -

Notes:

Refer to Tables 3 & 4 for detailed results of controls.

°C = degrees Celsius
ng/L = nanograms per liter
mL = milliliters

NA = not applicable
PCR = polymerase chain reaction
qPCR = quantitative PCR

Dhc = *Dehalococcoides*
vcrA = vinyl chloride reductase
DNA = Deoxyribonucleic acid

Table 3: Gene-Trac Dhc Control Results, Test Reference S-2379

Laboratory Control	Analysis Date	Control Description	Spiked Dhc 16S rRNA Gene Copies per Liter	Recovered Dhc 16S rRNA Gene Copies per Liter	Comments
Positive Control Low Concentration	15-Nov-11	qPCR with KB1 genomic DNA (CSLD-0478)	2.5×10^5	1.8×10^5	- -
Positive Control High Concentration	15-Nov-11	qPCR with KB1 genomic DNA (CSHD-0478)	2.8×10^7	2.4×10^7	- -
Negative Control	15-Nov-11	Tris Reagent Blank (TBD-0438)	0	3.9×10^3U	- -
DNA Extraction Blank	14-Nov-11	DNA extraction sterile water (FB-1568)	0	3.9×10^3U	- -

Notes:

Dhc = *Dehalococcoides*

DNA = Deoxyribonucleic acid

qPCR = quantitative PCR

16S rRNA = 16S ribosomal ribonucleic acid

U Not detected, associated value is the quantification limit.

Table 4: Gene-Trac VC Control Results, Test Reference S-2379

Laboratory Control	Analysis Date	Control Description	Spiked *vcrA* reductase Gene Copies per Liter	Recovered *vcrA* reductase Gene Copies per Liter	Comments
Positive Control Low Concentration	15-Nov-11	qPCR with KB-1 genomic DNA (CSLV-0298)	2.8×10^5	2.0×10^5	- -
Positive Control High Concentration	15-Nov-11	qPCR with KB-1 genomic DNA (CSHV-0298)	3.2×10^7	2.9×10^7	- -
Negative Control	15-Nov-11	Tris Reagent Blank (TBV-0269)	0	3.9×10^3U	- -
DNA Extraction Blank	15-Nov-11	DNA extraction sterile water (FB-1568)	0	3.9×10^3U	- -

Notes:

qPCR = quantitative PCR

DNA = Deoxyribonucleic acid

16S rRNA = 16S ribosomal ribonucleic acid

vcrA = vinyl chloride reductase

U Not detected, associated value is the quantification limit.

№ 3300

Chain-of-Custody Form

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Page 1 of 1

Lab # S-2379

Project Name	IRSITE 70 - NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RLESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVE., ANAHEIM, CA 92806 U.S.A.
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	[signature]
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
IW-70-SAB11-103	11/8/11	1035	WATER	1	X	X		
IW-70-FSB118-104	11/8/11	1201	WATER	1	X	X		
MW-70-PMW06A-105	11/8/11	1342	WATER	1	X	X		
MW-70-PMW06B-106	11/8/11	1448	WATER	1	X	X		
MW-70-38-108	11/8/11	1603	WATER	1	X	X		

Sample Receipt	
Cooler Condition:	GOOD
Cooler Temperature:	3°C
Custody Seals:	Yes ☒ No ☐

Billing Information	
P.O. #	2011068-8061
Bill To:	OTIE
	2247 SAN DIEGO AVE, SUITE 238 SAN DIEGO, CA 92110

Turnaround Time Requested
Normal ☒
Rush ☐

For Lab Use Only
Proposal #: _____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature [signature]	Signature FEDEX	Signature	Signature [signature]	Signature	Signature
Printed Name SREE AKKENAPALLY	Printed Name	Printed Name	Printed Name D. NESPOLI	Printed Name	Printed Name
Firm INSIGHT EEC, INC.	Firm	Firm	Firm SUREM	Firm	Firm
Date/Time 11/8/11 6:00	Date/Time	Date/Time	Date/Time NOV 10 '11 1:25 pm	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

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130 Research Lane, Suite 2
Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3151

Certificate of Analysis: Gene-Trac® *Dehalococcoides* Assay

Customer: Rebecca Lesher, OTIE

Project: IR Site 70 - NWS Seal Beach

Customer Reference: 2011068-8061

SiREM Reference: S-2382

Report Date: 1-Dec-11

Data Files: iQ5-DHC-QPCR-0843/0845
DHC-QPCR-Check-gel-0598
DHC-QPCR-Check-gel-0599
iQ5-DB-DHC-QPCR-0248
iQ5-DB-DHC-QPCR-0249
DHC-UP-0706/0707

Table 1a: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent Dhc *	*Dehalococcoides* Enumeration/Liter **
IR-70-RD05-117	DHC-7814	10-Nov-11	Groundwater	0.1-0.3%	5×10^5
MW-70-MNA05-118	DHC-7815	10-Nov-11	Groundwater	0.02-0.05%	1×10^5
MW-70-MNA08-119	DHC-7816	10-Nov-11	Groundwater	1-3%	1×10^7
MW-70-MNA09-120	DHC-7817	10-Nov-11	Groundwater	NA	4×10^3U
MW-70-MNA13-121	DHC-7840	10-Nov-11	Groundwater	NA	4×10^3U

Notes:

* Percent *Dehalococcoides* (Dhc) in microbial population. This value is calculated by dividing the number of Dhc 16S ribosomal ribonucleic acid (rRNA) gene copies by the total number of bacteria as estimated by the mass of DNA extracted from the sample. Range represents normal variation in Dhc enumeration.

** Based on quantification of Dhc 16S rRNA gene copies. Dhc are generally reported to contain one 16S rRNA gene copy per cell; therefore, this number is often interpreted to represent the number of Dhc cells present in the sample.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *Dehalococcoides* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.

Analyst: Jen Wilkinson
Jen Wilkinson
Biotechnology Technologist

Approved: Ximena Druar
Ximena Druar, B.Sc.
Molecular Biology Coordinator

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Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3157

Certificate of Analysis: Gene-Trac® VC, Vinyl Chloride Reductase (*vcrA*) Assay

Customer: Rebecca Lesher, OTIE

Project: IR Site 70 - NWS Seal Beach

Customer Reference: 2011068-8061

SiREM Reference: S-2382

Report Date: 1-Dec-11

Data Files: MyiQ-VC-QPCR-0432
VC-QPCR-Check-gel-0453
MyiQ-DB-VC-QPCR-0180

Table 1b: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent *vcrA* *	Vinyl Chloride Reductase (*vcrA*) Gene Copies/Liter
IR-70-RD05-117	VCR-2973	10-Nov-11	Groundwater	0.07-0.2%	3×10^5
MW-70-MNA05-118	VCR-2974	10-Nov-11	Groundwater	NA	4×10^3U
MW-70-MNA08-119	VCR-2975	10-Nov-11	Groundwater	NA	4×10^3U

Notes:

* Percent *vcrA* in microbial population. This value is calculated by dividing the number of vinyl chloride reductase A (*vcrA)* gene copies quantified by the total number of bacteria estimated to be in the sample based on the mass of DNA extracted from the sample. Range represents normal variation in enumeration of *vcrA*.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *vcrA* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.
C Correction factor applied to correct for non-specific PCR amplification products.

Analyst: Jen Wilkinson
Jen Wilkinson
Biotechnology Technologist

Approved: Ximena Druar
Ximena Druar, B.Sc.
Molecular Biology Coordinator

Table 2: Detailed Test Parameters, Test Reference S-2382

Customer Sample ID	IR-70-RD05-117	MW-70-MNA05-118	MW-70-MNA08-119	MW-70-MNA09-120	MW-70-MNA13-121
SiREM Sample ID	DHC-7814/VCR-2973	DHC-7815/VCR-2974	DHC-7816/VCR-2975	DHC-7817	DHC-7818
Date Received	11-Nov-11	11-Nov-11	11-Nov-11	11-Nov-11	11-Nov-11
Sample Temperature	6 ˚C	6 ˚C	6 ˚C	6 ˚C	6 ˚C
Filtration Date	15-Nov-11	15-Nov-11	15-Nov-11	15-Nov-11	25-Nov-11
Volume Used for DNA Extraction	500 mL	500 mL	500 mL	500 mL	500 mL
DNA Extraction Date	21-Nov-11	21-Nov-11	21-Nov-11	21-Nov-11	25-Nov-11
DNA Concentration in Sample (extractable)	956 ng/L	1157 ng/L	1766 ng/L	794 ng/L	1563 ng/L
PCR Amplifiable DNA	Detected	Detected	Detected	Detected	Detected
Dhc qPCR Date Analyzed	23-Nov-11	23-Nov-11	23-Nov-11	23-Nov-11	29-Nov-11
***vcrA* qPCR Date Analyzed**	25-Nov-11	25-Nov-11	25-Nov-11	NA	NA
qPCR Controls (see Tables 3 & 4)	Passed	Passed	Passed	Passed	Passed
Comments	- -	- -	- -	Sample not tested for *vcrA* and as it was ND for Dhc.	Sample not tested for *vcrA* and as it was ND for Dhc.

Notes:

Refer to Tables 3 & 4 for detailed results of controls.
°C = degrees Celsius
NA = not applicable
DNA = Deoxyribonucleic acid

PCR = polymerase chain reaction
qPCR = quantitative PCR
Dhc = *Dehalococcoides*
vcrA = vinyl chloride reductase

ng/L = nanograms per liter
mL = milliliters

Table 3: Gene-Trac Dhc Control Results, Test Reference S-2382

Laboratory Control	Analysis Date	Control Description	Spiked Dhc 16S rRNA Gene Copies per Liter	Recovered Dhc 16S rRNA Gene Copies per Liter	Comments
Positive Control Low Concentration	23-Nov-11	qPCR with KB-1 genomic DNA (CSLD-0480)	3.4×10^5	4.7×10^5	- -
Positive Control High Concentration	23-Nov-11	qPCR with KB-1 genomic DNA (CSHD-0480)	4.6×10^7	4.9×10^7	- -
Negative Control	23-Nov-11	Tris Reagent Blank (TBD-0440)	0	3.9×10^3U	- -
DNA Extraction Blank	22-Nov-11	DNA extraction sterile water (FB-1572)	0	1.1×10^3J	See Note 1
Positive Control Low Concentration	29-Nov-11	qPCR with KB-1 genomic DNA (CSLD-0482)	3.4×10^5	3.4×10^5	- -
Positive Control High Concentration	29-Nov-11	qPCR with KB-1 genomic DNA (CSHD-0482)	4.6×10^7	5.8×10^7	- -
Negative Control	29-Nov-11	Tris Reagent Blank (TBD-0442)	0	3.9×10^3U	- -
DNA Extraction Blank	29-Nov-11	DNA extraction sterile water (FB-1577)	0	3.9×10^3U	- -

Notes:

Dhc = *Dehalococcoides*

DNA = Deoxyribonucleic acid

qPCR = quantitative PCR

16S rRNA = 16S ribosomal ribonucleic acid

U Not detected, associated value is the quantification limit.

[1]Acceptable as test results for relevant samples exceeded DNA Extraction Blank test result by at least 10-fold.

Table 4: Gene-Trac VC Control Results, Test Reference S-2382

Laboratory Control	Analysis Date	Control Description	Spiked *vcrA* reductase Gene Copies per Liter	Recovered *vcrA* reductase Gene Copies per Liter	Comments
Positive Control Low Concentration	25-Nov-11	qPCR with KB-1 genomic DNA (CSLV-0300)	2.8×10^5	3.2×10^5	- -
Positive Control High Concentration	25-Nov-11	qPCR with KB-1 genomic DNA (CSHV-0300)	4.0×10^7	4.3×10^7	- -
Negative Control	25-Nov-11	Tris Reagent Blank (TBV-0271)	0	3.9×10^3U	- -
DNA Extraction Blank	24-Nov-11	DNA extraction sterile water (FB-1572)	0	3.9×10^3U	- -

Notes:

qPCR = quantitative PCR

DNA = Deoxyribonucleic acid

16S rRNA = 16S ribosomal ribonucleic acid

vcrA = vinyl chloride reductase

U Not detected, associated value is the quantification limit.

№ 2003

Chain-of-Custody Form

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Page 1 of 1

Lab # S-2382

Project Name	IR SITE 70 - NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RLESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVE., ANAHEIM, CA 92806 U.S.A.
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	S. R. Sreeck
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
IR-70-RD05-117	11/10/11	1107	WATER	1	X	X		
MW-70-MNA06-118	11/10/11	1218	WATER	1	X	X		
MW-70-MNA08-119	11/10/11	1342	WATER	1	X	X		
MW-70-MNA09-120	11/10/11	1445	WATER	1	X	X		
MW-70-MNA13-121	11/10/11	1533	WATER	1	X	X		

Sample Receipt	
Cooler Condition:	good
Cooler Temperature:	6 °C
Custody Seals:	Yes ☐ No ☒

Billing Information
P.O. # 2011068-8061
Bill To: OTIE
2247 SAN DIEGO AVE. SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested
Normal ☒
Rush ☐

For Lab Use Only
Proposal #: _____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: S. R. Sreeck	Signature: FedEx	Signature:	Signature: Kela Bartle	Signature:	Signature:
Printed Name: SREE AKKENAPALLY	Printed Name:	Printed Name:	Printed Name: Kela Bartle	Printed Name:	Printed Name:
Firm: INSIGHT EEC, INC.	Firm:	Firm:	Firm: SIREM	Firm:	Firm:
Date/Time: 11/10/2011 1750	Date/Time:	Date/Time:	Date/Time: NOV 11/11 14:10	Date/Time:	Date/Time:

Distribution: White - Return to Originator: Yellow - Lab Copy: Pink - Retained by Client

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130 Research Lane, Suite 2
Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3151

Certificate of Analysis: Gene-Trac® *Dehalococcoides* Assay

Customer: Rebecca Lesher, OTIE

Project: IR Site 70 - NWS Seal Beach

Customer Reference: 2011068-8061

SiREM Reference: S-2383

Report Date: 30-Nov-11

Data Files: iQ5-DHC-QPCR-0843
DHC-QPCR-Check-gel-0598
iQ5-DB-DHC-QPCR-0248
DHC-UP-0706

Table 1a: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent Dhc *	*Dehalococcoides* Enumeration/Liter **
MW-70-PMW09-124	DHC-7824	14-Nov-11	Groundwater	NA	4×10^3U
IR-70-SHB113-125	DHC-7825	14-Nov-11	Groundwater	0.08-0.3%	1×10^6
MW-70-PMW10-126	DHC-7826	14-Nov-11	Groundwater	0.0008-0.002	6×10^3
MW-70-MNA11-127	DHC-7827	14-Nov-11	Groundwater	NA	4×10^3U
MW-70-MNA07-128	DHC-7828	14-Nov-11	Groundwater	2-5%	9×10^6

Notes:

* Percent *Dehalococcoides* (Dhc) in microbial population. This value is calculated by dividing the number of Dhc 16S ribosomal ribonucleic acid (rRNA) gene copies by the total number of bacteria as estimated by the mass of DNA extracted from the sample. Range represents normal variation in Dhc enumeration.

** Based on quantification of Dhc 16S rRNA gene copies. Dhc are generally reported to contain one 16S rRNA gene copy per cell; therefore, this number is often interpreted to represent the number of Dhc cells present in the sample.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *Dehalococcoides* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.

Analyst: Jen Wilkinson
Jen Wilkinson
Biotechnology Technologist

Approved: Ximena Druar
Ximena Druar, B.Sc.
Molecular Biology Coordinator

SiREM
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www.siremlab.com
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Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3157

Certificate of Analysis: Gene-Trac® VC, Vinyl Chloride Reductase (*vcrA*) Assay

Customer: Rebecca Lesher, OTIE

Project: IR Site 70 - NWS Seal Beach

Customer Reference: 2011068-8061

SiREM Reference: S-2383

Report Date: 29-Nov-11

Data Files: MyiQ-VC-QPCR-0432
VC-QPCR-Check-gel-0453
MyiQ-DB-VC-QPCR-0180

Table 1b: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent *vcrA* *	Vinyl Chloride Reductase (*vcrA*) Gene Copies/Liter
IR-70-SHB113-125	VCR-2980	14-Nov-11	Groundwater	0.07-0.2%	1×10^6
MW-70-PMW10-126	VCR-2981	14-Nov-11	Groundwater	NA	4×10^3U
MW-70-MNA07-128	VCR-2982	14-Nov-11	Groundwater	0.5-1%	3×10^6

Notes:

* Percent *vcrA* in microbial population. This value is calculated by dividing the number of vinyl chloride reductase A (*vcrA)* gene copies quantified by the total number of bacteria estimated to be in the sample based on the mass of DNA extracted from the sample. Range represents normal variation in enumeration of *vcrA*.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *vcrA* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.
C Correction factor applied to correct for non-specific PCR amplification products.

Analyst: Jen Wilkinson
Jen Wilkinson
Biotechnology Technologist

Approved: Ximena Druar
Ximena Druar, B.Sc.
Molecular Biology Coordinator

Table 2: Detailed Test Parameters, Test Reference S-2383

Customer Sample ID	MW-70-PMW09-124	IR-70-SHB113-125	MW-70-PMW10-126	MW-70-MNA11-127	MW-70-MNA07-128
SiREM Sample ID	DHC-7824	DHC-7825/VCR-2980	DHC-7826/VCR-2981	DHC-7827	DHC-7828/VCR-2982
Date Received	15-Nov-11	15-Nov-11	15-Nov-11	15-Nov-11	15-Nov-11
Sample Temperature	4 ˚C	4 ˚C	4 ˚C	4 ˚C	4 ˚C
Filtration Date	17-Nov-11	17-Nov-11	17-Nov-11	17-Nov-11	17-Nov-11
Volume Used for DNA Extraction	500 mL	400 mL	500 mL	500 mL	500 mL
DNA Extraction Date	22-Nov-11	22-Nov-11	22-Nov-11	22-Nov-11	22-Nov-11
DNA Concentration in Sample (extractable)	1494 ng/L	2760 ng/L	1466 ng/L	768 ng/L	1097 ng/L
PCR Amplifiable DNA	Detected	Detected	Detected	Detected	Detected
Dhc qPCR Date Analyzed	23-Nov-11	23-Nov-11	23-Nov-11	23-Nov-11	23-Nov-11
***vcrA* qPCR Date Analyzed**	NA	25-Nov-11	25-Nov-11	NA	25-Nov-11
qPCR Controls (see Tables 3 & 4)	Passed	Passed	Passed	Passed	Passed
Comments	Sample not tested for *vcrA* and as it was ND for Dhc.	- -	- -	Sample not tested for *vcrA* and as it was ND for Dhc.	- -

Notes:

Refer to Tables 3 & 4 for detailed results of controls.
ND = not detected
°C = degrees Celsius
NA = not applicable

PCR = polymerase chain reaction
qPCR = quantitative PCR
Dhc = *Dehalococcoides*
vcrA = vinyl chloride reductase

ng/L = nanograms per liter
mL = milliliters
DNA = Deoxyribonucleic acid

Table 3: Gene-Trac Dhc Control Results, Test Reference S-2383

Laboratory Control	Analysis Date	Control Description	Spiked Dhc 16S rRNA Gene Copies per Liter	Recovered Dhc 16S rRNA Gene Copies per Liter	Comments
Positive Control Low Concentration	23-Nov-11	qPCR with KB-1 genomic DNA (CSLD-0480)	3.4×10^5	4.7×10^5	- -
Positive Control High Concentration	23-Nov-11	qPCR with KB-1 genomic DNA (CSHD-0480)	4.6×10^7	4.9×10^7	- -
Negative Control	23-Nov-11	Tris Reagent Blank (TBD-0440)	0	3.9×10^3U	- -
DNA Extraction Blank	22-Nov-11	DNA extraction sterile water (FB-1574)	0	3.9×10^3U	- -

Notes:

Dhc = *Dehalococcoides*

DNA = Deoxyribonucleic acid

qPCR = quantitative PCR

16S rRNA = 16S ribosomal ribonucleic acid

U Not detected, associated value is the quantification limit.

Table 4: Gene-Trac VC Control Results, Test Reference S-2383

Laboratory Control	Analysis Date	Control Description	Spiked *vcrA* reductase Gene Copies per Liter	Recovered *vcrA* reductase Gene Copies per Liter	Comments
Positive Control Low Concentration	25-Nov-11	qPCR with KB-1 genomic DNA (CSLV-0300)	2.8×10^5	3.2×10^5	- -
Positive Control High Concentration	25-Nov-11	qPCR with KB-1 genomic DNA (CSHV-0300)	4.0×10^7	4.3×10^7	- -
Negative Control	25-Nov-11	Tris Reagent Blank (TBV-0271)	0	3.9×10^3U	- -
DNA Extraction Blank	24-Nov-11	DNA extraction sterile water (FB-1574)	0	1.3×10^3	See Note 1

Notes:

qPCR = quantitative PCR

DNA = Deoxyribonucleic acid

16S rRNA = 16S ribosomal ribonucleic acid

vcrA = vinyl chloride reductase

U Not detected, associated value is the quantification limit.

[1]Acceptable as test results for relevant samples exceeded DNA Extraction Blank test result by at least 10-fold or relevant samples tested negative.

№ 2001

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Page 1 of 1

Lab # S-2383

Project Name	IRSITE 70-NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RLESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVE., ANAHEIM, CA 92806 U.S.A.
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	A.V. Sreeth
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative Key
0. None
1. HCL
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
MW-70-PMW09-124	11/14/11	10:49	WATER	1	X	X		
IR-70-SHB113-125	11/14/11	12:03	WATER	1	X	X		
MW-70-PMW10-126	11/14/11	1307	WATER	1	X	X		
MW-70-MNA11-127	11/14/11	1410	WATER	1	X	X		
MW-70-MNA07-128	11/14/11	1533	WATER	1	X	X		

Sample Receipt	
Cooler Condition:	GOOD
Cooler Temperature:	4°C
Custody Seals:	Yes ☒ No ☐

Billing Information
P.O. # 2011068-8061
Bill To: OTIE
2247 SAN DIEGO AVE, SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested
Normal ☒
Rush ☐

For Lab Use Only
Proposal #: _____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: A.V. Sreeth	Signature: [illegible]	Signature	Signature	Signature	Signature
Printed Name: SREE AKKENAPALLY	Printed Name: O. Vespoli	Printed Name	Printed Name	Printed Name	Printed Name
Firm: INSIGHT EEC, INC.	Firm: SIREM	Firm	Firm	Firm	Firm
Date/Time: 11/14/11 1530	Date/Time: nov 15 '11 1pm	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

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Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3151

Certificate of Analysis: Gene-Trac® *Dehalococcoides* Assay

Customer: Rebecca Lesher, OTIE
Project: IR Site 70/NWS SEAL BEACH
Customer Reference: 2011068-8061

SiREM Reference: S-2384
Report Date: 30-Nov-11
Data Files: iQ5-DHC-QPCR-0843
iQ5-DB-DHC-QPCR-0248

Table 1a: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent Dhc *	*Dehalococcoides* Enumeration/Liter **
MW-70-PMW07A-130	DHC-7829	15-Nov-11	Groundwater	0.0003 - 0.0008 %	4×10^3 J
MW-70-PMW07B-131	DHC-7830	15-Nov-11	Groundwater	0.1 - 0.4 %	7×10^5
IW-70-FSB216-132	DHC-7831	15-Nov-11	Groundwater	0.02 - 0.07 %	1×10^7
MW-70-PMW08A-133	DHC-7832	15-Nov-11	Groundwater	1 - 3 %	6×10^6
MW-70-PMW08B-134	DHC-7833	15-Nov-11	Groundwater	2 - 6 %	9×10^6
MW-70-MNA10-135	DHC-7834	15-Nov-11	Groundwater	0.07 - 0.2 %	5×10^5

Notes:

* Percent *Dehalococcoides* (Dhc) in microbial population. This value is calculated by dividing the number of Dhc 16S ribosomal ribonucleic acid (rRNA) gene copies by the total number of bacteria as estimated by the mass of DNA extracted from the sample. Range represents normal variation in Dhc enumeration.

** Based on quantification of Dhc 16S rRNA gene copies. Dhc are generally reported to contain one 16S rRNA gene copy per cell; therefore, this number is often interpreted to represent the number of Dhc cells present in the sample.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *Dehalococcoides* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.

Analyst: Kela Bartle
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: Ximena Druar
Ximena Druar, B.Sc.
Molecular Biology Coordinator

SiREM
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Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3157

Certificate of Analysis: Gene-Trac® VC, Vinyl Chloride Reductase (*vcrA*) Assay

Customer: Rebecca Lesher, OTIE

Project: IR Site 70/NWS SEAL BEACH

Customer Reference: 2011068-8061

SiREM Reference: S-2384

Report Date: 30-Nov-11

Data Files: MyiQ-VC-QPCR-0432
VC-QPCR-Check-gel-0453
MyiQ-DB-VC-QPCR-0180

Table 1b: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent Dhc *	*Dehalococcoides* Enumeration/Liter **
MW-70-PMW07A-130	VCR-2983	15-Nov-11	Groundwater	NA	5×10^3U
MW-70-PMW07B-131	VCR-2984	15-Nov-11	Groundwater	NA	4×10^3U
IW-70-FSB216-132	VCR-2985	15-Nov-11	Groundwater	0.004 - 0.01 %	2×10^6C
MW-70-PMW08A-133	VCR-2986	15-Nov-11	Groundwater	0.06 - 0.2 %	3×10^5
MW-70-PMW08B-134	VCR-2987	15-Nov-11	Groundwater	0.02 - 0.07 %	1×10^5
MW-70-MNA10-135	VCR-2988	15-Nov-11	Groundwater	NA	4×10^3U

Notes:

* Percent *vcrA* in microbial population. This value is calculated by dividing the number of vinyl chloride reductase A (*vcrA)* gene copies quantified by the total number of bacteria estimated to be in the sample based on the mass of DNA extracted from the sample. Range represents normal variation in enumeration of *vcrA* .

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *vcrA* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.
C Correction factor applied to correct for non-specific PCR amplification products.

Analyst: _____
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: _____
Ximena Druar, B.Sc.
Molecular Biology Coordinator

Table 2.1: Detailed Test Parameters, Test Reference S-2384

Customer Sample ID	MW-70-PMW07A-130	MW-70-PMW07B-131	IW-70-FSB216-132
SiREM Sample ID	DHC-7829/VCR-2983	DHC-7830/VCR-2984	DHC-7831/VCR-2985
Date Received	16-Nov-11	16-Nov-11	16-Nov-11
Sample Temperature	7 ºC	7 ºC	7 ºC
Filtration Date	17-Nov-11	17-Nov-11	17-Nov-11
Volume Used for DNA Extraction	400 mL	500 mL	20 mL
DNA Extraction Date	22-Nov-11	22-Nov-11	22-Nov-11
DNA Concentration in Sample (extractable)	3296 ng/L	1080 ng/L	116025 ng/L
PCR Amplifiable DNA	Detected	Detected	Detected
Dhc qPCR Date Analyzed	23-Nov-11	23-Nov-11	23-Nov-11
***vcrA* qPCR Date Analyzed**	25-Nov-11	25-Nov-11	25-Nov-11
qPCR Controls (see Tables 3 & 4)	Passed	Passed	Passed
Comments	- -	- -	- -

Notes:

Refer to Tables 3 & 4 for detailed results of controls.
ng/L = nanograms per liter
mL = milliliters

PCR = polymerase chain reaction
qPCR = quantitative PCR
DNA = Deoxyribonucleic acid

Dhc = *Dehalococcoides*
vcrA = vinyl chloride reductase
°C = degrees Celsius

Table 2.2: Detailed Test Parameters, Test Reference S-2384

Customer Sample ID	MW-70-PMW08A-133	MW-70-PMW08B-134	MW-70-MNA10-135
SiREM Sample ID	DHC-7832/VCR-2986	DHC-7833/VCR-2987	DHC-7834/VCR-2988
Date Received	16-Nov-11	16-Nov-11	16-Nov-11
Sample Temperature	7 ºC	7 ºC	7 ºC
Filtration Date	17-Nov-11	17-Nov-11	17-Nov-11
Volume Used for DNA Extraction	500 mL	500 mL	500 mL
DNA Extraction Date	22-Nov-11	22-Nov-11	22-Nov-11
DNA Concentration in Sample (extractable)	1046 ng/L	855 ng/L	1569 ng/L
PCR Amplifiable DNA	Detected	Detected	Detected
Dhc qPCR Date Analyzed	23-Nov-11	23-Nov-11	23-Nov-11
***vcrA* qPCR Date Analyzed**	25-Nov-11	25-Nov-11	25-Nov-11
qPCR Controls (see Tables 3 & 4)	Passed	Passed	Passed
Comments	- -	- -	- -

Notes:

Refer to Tables 3 & 4 for detailed results of controls.
ng/L = nanograms per liter
mL = milliliters

PCR = polymerase chain reaction
qPCR = quantitative PCR
DNA = Deoxyribonucleic acid

Dhc = *Dehalococcoides*
vcrA = vinyl chloride reductase
°C = degrees Celsius

Table 3: Gene-Trac Dhc Control Results, Test Reference S-2384

Laboratory Control	Analysis Date	Control Description	Spiked Dhc 16S rRNA Gene Copies per Liter	Recovered Dhc 16S rRNA Gene Copies per Liter	Comments
Positive Control Low Concentration	23-Nov-11	qPCR with KB1 genomic DNA (CSLD-0480)	3.4×10^5	4.7×10^5	- -
Positive Control High Concentration	23-Nov-11	qPCR with KB1 genomic DNA (CSHD-0480)	4.6×10^7	4.9×10^7	- -
Negative Control	23-Nov-11	Tris Reagent Blank (TBD-0440)	0	3.9×10^3U	- -
DNA Extraction Blank	22-Nov-11	DNA extraction sterile water (FB-1574)	0	3.9×10^3U	- -

Notes:

Dhc = *Dehalococcoides*

DNA = Deoxyribonucleic acid

qPCR = quantitative PCR

16S rRNA = 16S ribosomal ribonucleic acid

U Not detected, associated value is the quantification limit.

Table 4: Gene-Trac VC Control Results, Test Reference S-2384

Laboratory Control	Analysis Date	Control Description	Spiked *vcrA* reductase Gene Copies per Liter	Recovered *vcrA* reductase Gene Copies per Liter	Comments
Positive Control Low Concentration	25-Nov-11	qPCR with KB-1 genomic DNA (CSLV-0300)	2.8×10^5	3.2×10^5	- -
Positive Control High Concentration	25-Nov-11	qPCR with KB-1 genomic DNA (CSHV-0300)	4.0×10^7	4.3×10^7	- -
Negative Control	25-Nov-11	Tris Reagent Blank (TBV-0271)	0	3.9×10^3U	- -
DNA Extraction Blank	24-Nov-11	DNA extraction sterile water (FB-1574)	0	1.3×10^3J	See Note 1

Notes:

qPCR = quantitative PCR

DNA = Deoxyribonucleic acid

16S rRNA = 16S ribosomal ribonucleic acid

vcrA = vinyl chloride reductase

U Not detected, associated value is the quantification limit.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.

[1]Acceptable as test results for relevant samples exceeded DNA Extraction Blank test result by at least 10-fold or relevant samples tested negative.

№ 3295

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Page 1 of 1

Lab # S-2384

Project Name	IR SITE 70 - NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RLESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVENUE, ANAHIEM, CA 92806 U.S.A.
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	A.V. Sreed
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
MW-70-PMW07A-130	11/15/11	0947	WATER	1	X	X		
MW-70-PMW07B-131	11/15/11	1103	WATER	1	X	X		
IW-70-FSB216-132	11/15/11	1203	WATER	1	X	X		
MW-70-PMW08A-133	11/15/11	1319	WATER	1	X	X		
MW-70-PMW08B-134	11/15/11	1418	WATER	1	X	X		
MW-70-MNA10-135	11/15/11	1519	WATER	1	X	X		

Sample Receipt

Cooler Condition: good

Cooler Temperature: 7°C

Custody Seals: Yes ☒ No ☐

Billing Information

P.O. # 2011068-8061

Bill To: OTIE

2247 SAN DIEGO AVE., SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested

Normal ☒

Rush ☐

For Lab Use Only

Proposal #: _____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: A.V. Sreed	Signature: FEDEX	Signature:	Signature: Kela Bartle	Signature:	Signature:
Printed Name: SREE AKKENAPALLY	Printed Name:	Printed Name:	Printed Name: Kela Bartle	Printed Name:	Printed Name:
Firm: INSIGHT EEC, INC.	Firm:	Firm:	Firm: SIREM	Firm:	Firm:
Date/Time: 11/15/11 1545	Date/Time:	Date/Time:	Date/Time: NOV 16/11 13:30	Date/Time:	Date/Time:

Distribution: White - Return to Originator: Yellow - Lab Copy: Pink - Retained by Client

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Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3151

Certificate of Analysis: Gene-Trac® *Dehalococcoides* Assay

Customer: Rebecca Lesher, OTIE
Project: IR Site 70/NWS SEAL BEACH
Customer Reference: 2011068-8061

SiREM Reference: S-2385
Report Date: 1-Dec-11
Data Files: iQ5-DHC-QPCR-0843
DHC-QPCR-Check-gel-0598
iQ5-DB-DHC-QPCR-0248
DHC-UP-0706

Table 1a: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent Dhc *	*Dehalococcoides* Enumeration/Liter **
MW-70-43B-137	DHC-7819	16-Nov-11	Groundwater	NA	4×10^3U
MW-70-PMW11A-138	DHC-7820	16-Nov-11	Groundwater	0.006 - 0.02 %	3×10^4
MW-70-PMW11B-139	DHC-7821	16-Nov-11	Groundwater	2 - 6 %	2×10^7
MW-70-PMW12A-140	DHC-7822	16-Nov-11	Groundwater	0.2 - 0.5 %	3×10^6
MW-70-PMW12B-142	DHC-7823	16-Nov-11	Groundwater	0.2 - 0.5 %	9×10^5

Notes:

* Percent *Dehalococcoides* (Dhc) in microbial population. This value is calculated by dividing the number of Dhc 16S ribosomal ribonucleic acid (rRNA) gene copies by the total number of bacteria as estimated by the mass of DNA extracted from the sample. Range represents normal variation in Dhc enumeration.

** Based on quantification of Dhc 16S rRNA gene copies. Dhc are generally reported to contain one 16S rRNA gene copy per cell; therefore, this number is often interpreted to represent the number of Dhc cells present in the sample.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *Dehalococcoides* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.

Analyst: Kela Bartle
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: Ximena Druar
Ximena Druar, B.Sc.
Molecular Biology Coordinator

SiREM Site Recovery & Management
www.siremlab.com
130 Research Lane, Suite 2
Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3157

Certificate of Analysis: Gene-Trac® VC, Vinyl Chloride Reductase (*vcrA*) Assay

Customer: Rebecca Lesher, OTIE

Project: IR Site 70/NWS SEAL BEACH

Customer Reference: 2011068-8061

SiREM Reference: S-2385

Report Date: 1-Dec-11

Data Files: MyiQ-VC-QPCR-0432
VC-QPCR-Check-gel-0453a/b
MyiQ-DB-VC-QPCR-0180

Table 1b: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent *vcrA* *	Vinyl Chloride Reductase (*vcrA*) Gene Copies/Liter
MW-70-PMW11A-138	VCR-2976	16-Nov-11	Groundwater	NA	4×10^3U
MW-70-PMW11B-139	VCR-2977	16-Nov-11	Groundwater	NA	4×10^3U
MW-70-PMW12A-140	VCR-2978	16-Nov-11	Groundwater	NA	4×10^3U
MW-70-PMW12B-142	VCR-2979	16-Nov-11	Groundwater	0.1 - 0.3 %	6×10^5

Notes:

* Percent *vcrA* in microbial population. This value is calculated by dividing the number of vinyl chloride reductase A (*vcrA)* gene copies quantified by the total number of bacteria estimated to be in the sample based on the mass of DNA extracted from the sample. Range represents normal variation in enumeration of *vcrA* .

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *vcrA* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.
C Correction factor applied to correct for non-specific PCR amplification products.

Analyst: _____
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: _____
Ximena Druar, B.Sc.
Molecular Biology Coordinator

Table 2: Detailed Test Parameters, Test Reference S-2385

Customer Sample ID	MW-70-43B-137	MW-70-PMW11A-138	MW-70-PMW11B-139	MW-70-PMW12A-140	MW-70-PMW12B-142
SiREM Sample ID	DHC-7819	DHC-7820/VCR-2976	DHC-7821/VCR-2977	DHC-7822/VCR-2978	DHC-7823/VCR-2979
Date Received	17-Nov-11	17-Nov-11	17-Nov-11	17-Nov-11	17-Nov-11
Sample Temperature	4 ºC	4 ºC	4 ºC	4 ºC	4 ºC
Filtration Date	21-Nov-11	21-Nov-11	21-Nov-11	21-Nov-11	21-Nov-11
Volume Used for DNA Extraction	500 mL	500 mL	500 mL	500 mL	500 mL
DNA Extraction Date	21-Nov-11	21-Nov-11	21-Nov-11	21-Nov-11	21-Nov-11
DNA Concentration in Sample (extractable)	945 ng/L	996 ng/L	1835 ng/L	4047 ng/L	1184 ng/L
PCR Amplifiable DNA	Detected	Detected	Detected	Detected	Detected
Dhc qPCR Date Analyzed	23-Nov-11	23-Nov-11	23-Nov-11	23-Nov-11	23-Nov-11
***vcrA* qPCR Date Analyzed**	NA	25-Nov-11	25-Nov-11	25-Nov-11	25-Nov-11
qPCR Controls (see Tables 3 & 4)	Passed	Passed	Passed	Passed	Passed
Comments	Sample not tested for *vcrA* as it was ND for Dhc.	- -	- -	- -	- -

Notes:

Refer to Tables 3 & 4 for detailed results of controls.
°C = degrees Celsius
ng/L = nanograms per liter
mL = milliliters

DNA = Deoxyribonucleic acid
PCR = polymerase chain reaction
qPCR = quantitative PCR

Dhc = *Dehalococcoides*
vcrA = vinyl chloride reductase
NA = not applicable

Table 3: Gene-Trac Dhc Control Results, Test Reference S-2385

Laboratory Control	Analysis Date	Control Description	Spiked Dhc 16S rRNA Gene Copies per Liter	Recovered Dhc 16S rRNA Gene Copies per Liter	Comments
Positive Control Low Concentration	23-Nov-11	qPCR with KB1 genomic DNA (CSLD-0480)	3.4×10^5	4.7×10^5	- -
Positive Control High Concentration	23-Nov-11	qPCR with KB1 genomic DNA (CSHD-0480)	4.6×10^7	4.9×10^7	- -
Negative Control	23-Nov-11	Tris Reagent Blank (TBD-0440)	0	3.9×10^3U	- -
DNA Extraction Blank	22-Nov-11	DNA extraction sterile water (FB-1573)	0	3.9×10^3U	- -

Notes:

Dhc = *Dehalococcoides*

DNA = Deoxyribonucleic acid

qPCR = quantitative PCR

16S rRNA = 16S ribosomal ribonucleic acid

U Not detected, associated value is the quantification limit.

Table 4: Gene-Trac VC Control Results, Test Reference S-2385

Laboratory Control	Analysis Date	Control Description	Spiked *vcrA* reductase Gene Copies per Liter	Recovered *vcrA* reductase Gene Copies per Liter	Comments
Positive Control Low Concentration	25-Nov-11	qPCR with KB-1 genomic DNA (CSLV-0300)	2.8×10^5	3.2×10^5	- -
Positive Control High Concentration	25-Nov-11	qPCR with KB-1 genomic DNA (CSHV-0300)	4.0×10^7	4.3×10^7	- -
Negative Control	25-Nov-11	Tris Reagent Blank (TBV-0271)	0	3.9×10^3U	- -
DNA Extraction Blank	24-Nov-11	DNA extraction sterile water (FB-1573)	0	4.0×10^3	See Note 1

Notes:

qPCR = quantitative PCR

DNA = Deoxyribonucleic acid

16S rRNA = 16S ribosomal ribonucleic acid

vcrA = vinyl chloride reductase

U Not detected, associated value is the quantification limit.

[1]Acceptable as test results for relevant samples exceeded DNA Extraction Blank test result by at least 10-fold.

№ 3294

Chain-of-Custody Form

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Page 1 of 1

Lab # S-2385

Project Name	IRSITE70-NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RLESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVE., ANAHEIM, CA 92806 U.S.A.
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	A.V. Sreeeth
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative

Gene-Trac Dhc | Gene-Trac VC | Gene-Trac Dhb

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
MW-70-43B-137	11/16/11	0936	WATER	1	X	X		
MW-70-PMW11A-138	11/16/11	1042	WATER	1	X	X		
MW-70-PMW11B-139	11/16/11	1134	WATER	1	X	X		
MW-70-PMW12A-140	11/16/11	1410	WATER	1	X	X		
MW-70-PMW12B-142	11/16/11	1540	WATER	1	X	X		

Sample Receipt

Cooler Condition: Good

Cooler Temperature: 4°C

Custody Seals: Yes ☒ No ☐

Billing Information

P.O. # 2011068-8061

Bill To: OTIE

2247 SAN DIEGO AVE., SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested

Normal ☒

Rush ☐

For Lab Use Only

Proposal #: _____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: A.V. Sreeeth	Signature: FEDEX	Signature:	Signature: [illegible]	Signature:	Signature:
Printed Name: SREE AKKENAPALLY	Printed Name:	Printed Name:	Printed Name: D. Nespoli	Printed Name:	Printed Name:
Firm: INSIGHT EEC, INC.	Firm:	Firm:	Firm: SIREM	Firm:	Firm:
Date/Time: 11/16/11 1655	Date/Time:	Date/Time:	Date/Time: NOV 17 '11 1:30pm	Date/Time:	Date/Time:

Distribution: White - Return to Originator: Yellow - Lab Copy: Pink - Retained by Client

www.siremlab.com
130 Research Lane, Suite 2
Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3151

Certificate of Analysis: Gene-Trac® *Dehalococcoides* Assay

Customer: Rebecca Lesher, OTIE
Project: IR Site 70/NWS SEAL BEACH
Customer Reference: 2011068-8061

SiREM Reference: S-2389
Report Date: 5-Dec-11
Data Files: MyiQ-DHC-QPCR-0846
DHC-QPCR-Check-Gel-0249
iQ5-DB-DHC-QPCR-0249

Table 1a: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent Dhc *	*Dehalococcoides* Enumeration/Liter **
MW-70-PMW13A-153	DHC-7841	18-Nov-11	Groundwater	0.5 - 2 %	3×10^6
MW-70-PMW13B-154	DHC-7842	18-Nov-11	Groundwater	0.5 - 2 %	1×10^7
MW-70-PMW14A-155	DHC-7843	18-Nov-11	Groundwater	0.06 - 0.2 %	1×10^6
MW-70-PMW14B-156	DHC-7844	18-Nov-11	Groundwater	0.8 - 2 %	6×10^6
IW-70_SSB109-157	DHC-7845	18-Nov-11	Groundwater	0.02 - 0.07 %	2×10^5

Notes:

* Percent *Dehalococcoides* (Dhc) in microbial population. This value is calculated by dividing the number of Dhc 16S ribosomal ribonucleic acid (rRNA) gene copies by the total number of bacteria as estimated by the mass of DNA extracted from the sample. Range represents normal variation in Dhc enumeration.

** Based on quantification of Dhc 16S rRNA gene copies. Dhc are generally reported to contain one 16S rRNA gene copy per cell; therefore, this number is often interpreted to represent the number of Dhc cells present in the sample.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *Dehalococcoides* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.

Analyst: _____
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: _____
Ximena Druar, B.Sc.
Molecular Biology Coordinator

SiREM Site Recovery & Management
www.siremlab.com
130 Research Lane, Suite 2
Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3157

Certificate of Analysis: Gene-Trac® VC, Vinyl Chloride Reductase (*vcrA*) Assay

Customer: Rebecca Lesher, OTIE

Project: IR Site 70/NWS SEAL BEACH

Customer Reference: 2011068-8061

SiREM Reference: S-2389

Report Date: 5-Dec-11

Data Files: MyiQ-VC-QPCR-0434
VC-QPCR-Check-gel-0455
MyiQ-DB-VC-QPCR-0181

Table 1b: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent *vcrA* *	Vinyl Chloride Reductase (*vcrA*) Gene Copies/Liter
MW-70-PMW13A-153	VCR-2989	18-Nov-11	Groundwater	NA	4×10^3U
MW-70-PMW13B-154	VCR-2990	18-Nov-11	Groundwater	NA	4×10^3U
MW-70-PMW14A-155	VCR-2991	18-Nov-11	Groundwater	NA	4×10^3U
MW-70-PMW14B-156	VCR-2992	18-Nov-11	Groundwater	NA	4×10^3U
IW-70_SSB109-157	VCR-2993	18-Nov-11	Groundwater	0.04 - 0.1 %	3×10^5C

Notes:

* Percent *vcrA* in microbial population. This value is calculated by dividing the number of vinyl chloride reductase A (*vcrA)* gene copies quantified by the total number of bacteria estimated to be in the sample based on the mass of DNA extracted from the sample. Range represents normal variation in enumeration of *vcrA*.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *vcrA* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.
C Correction factor applied to correct for non-specific PCR amplification products.

Analyst: _____
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: _____
Ximena Druar, B.Sc.
Molecular Biology Coordinator

Table 2: Detailed Test Parameters, Test Reference S-2389

Customer Sample ID	MW-70-PMW13A-153	MW-70-PMW13B-154	MW-70-PMW14A-155	MW-70-PMW14B-156	IW-70_SSB109-157
SiREM Sample ID	DHC-7841/VCR-2989	DHC-7842/VCR-2990	DHC-7843/VCR-2991	DHC-7844/VCR-2992	DHC-7845/VCR-2993
Date Received	21-Nov-11	21-Nov-11	21-Nov-11	21-Nov-11	21-Nov-11
Sample Temperature	13 ºC	13 ºC	13 ºC	13 ºC	13 ºC
Filtration Date	22-Nov-11	22-Nov-11	22-Nov-11	22-Nov-11	22-Nov-11
Volume Used for DNA Extraction	500 mL	500 mL	500 mL	500 mL	500 mL
DNA Extraction Date	24-Nov-11	24-Nov-11	24-Nov-11	24-Nov-11	24-Nov-11
DNA Concentration in Sample (extractable)	1260 ng/L	4890 ng/L	4742 ng/L	1521 ng/L	1740 ng/L
PCR Amplifiable DNA	Detected	Detected	Detected	Detected	Detected
Dhc qPCR Date Analyzed	30-Nov-11	30-Nov-11	30-Nov-11	30-Nov-11	30-Nov-11
***vcrA* qPCR Date Analyzed**	2-Dec-11	2-Dec-11	2-Dec-11	2-Dec-11	2-Dec-11
qPCR Controls (see Tables 3 & 4)	Passed	Passed	Passed	Passed	Passed
Comments	- -	- -	- -	- -	- -

Notes:

Refer to Tables 3 & 4 for detailed results of controls.
ng/L = nanograms per liter
mL = milliliters

PCR = polymerase chain reaction
qPCR = quantitative PCR
DNA = Deoxyribonucleic acid

Dhc = *Dehalococcoides*
vcrA = vinyl chloride reductase
°C = degrees Celsius

Table 3: Gene-Trac Dhc Control Results, Test Reference S-2389

Laboratory Control	Analysis Date	Control Description	Spiked Dhc 16S rRNA Gene Copies per Liter	Recovered Dhc 16S rRNA Gene Copies per Liter	Comments
Positive Control Low Concentration	30-Nov-11	qPCR with KB1 genomic DNA (CSLD-0483)	2.5×10^5	2.9×10^5	- -
Positive Control High Concentration	30-Nov-11	qPCR with KB1 genomic DNA (CSHD-0483)	2.8×10^7	2.5×10^7	- -
DNA Extraction Blank	29-Nov-11	DNA extraction sterile water (FB-1575)	0	3.9×10^3U	- -
Negative Control	30-Nov-11	Tris Reagent Blank (TBD-0443)	0	3.9×10^3U	- -

Notes:

Dhc = *Dehalococcoides*

DNA = Deoxyribonucleic acid

qPCR = quantitative PCR

16S rRNA = 16S ribosomal ribonucleic acid

U Not detected, associated value is the quantification limit.

Table 4: Gene-Trac VC Control Results, Test Reference S-2389

Laboratory Control	Analysis Date	Control Description	Spiked *vcrA* reductase Gene Copies per Liter	Recovered *vcrA* reductase Gene Copies per Liter	Comments
Positive Control Low Concentration	2-Dec-11	qPCR with KB-1 genomic DNA (CSLV-0302)	2.8×10^5	3.8×10^5	- -
Positive Control High Concentration	2-Dec-11	qPCR with KB-1 genomic DNA (CSHV-0302)	3.2×10^7	5.0×10^7	See Note 1
DNA Extraction Blank	1-Dec-11	DNA extraction sterile water (FB-1575)	0	3.9×10^3U	- -
Negative Control	2-Dec-11	Tris Reagent Blank (TBV-0273)	0	3.9×10^3U	- -

Notes:

qPCR = quantitative PCR

DNA = Deoxyribonucleic acid

16S rRNA = 16S ribosomal ribonucleic acid

vcrA = vinyl chloride reductase

U Not detected, associated value is the quantification limit.

[1]Exceeds recovery limit guidelines of +/- 50%.

№ 2007

Chain-of-Custody Form

SIREM Site Recovery & Management

130 Research Lane, Suite 2 Guelph, Ontario, Canada N1G 5G3 Phone (519) 822-2265 or toll free 1-866-251-1747 Fax (519) 822-3151

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Page 1 of 1

Lab # 5-2389

Project Name	IR SITE 70 - NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RLESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVE., ANAHEIM, CA 92806 USA
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	A.V. Sreeth
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
MW-70-PMW13A-153	11/18/11	0945	WATER	1	X	X		
MW-70-PMW13B-154	11/18/11	1055	WATER	1	X	X		
MW-70-PMW14A-155	11/18/11	1209	WATER	1	X	X		
MW-70-PMW14B-156	11/18/11	1452	WATER	1	X	X		
IW-70-SSB109-157	11/18/11	1613	WATER	1	X	X		

Sample Receipt

Cooler Condition: GOOD

Cooler Temperature: 13°C

Custody Seals: Yes ☒ No ☐

Billing Information

P.O. # 2011068-8061

Bill To: OTIE

2247 SAN DIEGO AVE, SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested

Normal ☒

Rush ☐

For Lab Use Only

Proposal #: _____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: A.V. Sreeth	Signature: FEDEX	Signature:	Signature: [illegible]	Signature:	Signature:
Printed Name: SREE AKKENAPALLY	Printed Name:	Printed Name:	Printed Name: D. Nespoli	Printed Name:	Printed Name:
Firm: INSIGHT EEC, INC.	Firm:	Firm:	Firm: SIREM	Firm:	Firm:
Date/Time: 11/18/2011 1650	Date/Time:	Date/Time:	Date/Time: nov 21 '11 1pm	Date/Time:	Date/Time:

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SiREM
Site Recovery & Management
www.siremlab.com
130 Research Lane, Suite 2
Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3151

Certificate of Analysis: Gene-Trac® *Dehalococcoides* Assay

Customer: Rebecca Lesher, OTIE

Project: IR Site 70/NWS SEAL BEACH

Customer Reference: 2011068-8061

SiREM Reference: S-2390

Report Date: 6-Dec-11

Data Files: MyiQ-DHC-QPCR-0846
iQ5-DB-DHC-QPCR-0249
DHC-UP-0708
DHC-QPCR-check-gel-0600

Table 1a: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent Dhc *	*Dehalococcoides* Enumeration/Liter **
IW-70-SHB217-144	DHC-7846	17-Nov-11	Groundwater	0.0001 - 0.0004 %	2×10^3
MW-70-MNA12-146	DHC-7847	17-Nov-11	Groundwater	NA	4×10^3U
MW-70-MNA16-149	DHC-7848	17-Nov-11	Groundwater	4 - 12 %	2×10^7
MW-70-MNA14-151	DHC-7849	17-Nov-11	Groundwater	NA	4×10^3U

Notes:

* Percent *Dehalococcoides* (Dhc) in microbial population. This value is calculated by dividing the number of Dhc 16S ribosomal ribonucleic acid (rRNA) gene copies by the total number of bacteria as estimated by the mass of DNA extracted from the sample. Range represents normal variation in Dhc enumeration.

** Based on quantification of Dhc 16S rRNA gene copies. Dhc are generally reported to contain one 16S rRNA gene copy per cell; therefore, this number is often interpreted to represent the number of Dhc cells present in the sample.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *Dehalococcoides* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.

Analyst: _____
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: _____
Ximena Druar, B.Sc.
Molecular Biology Coordinator

SiREM
Site Recovery & Management
www.siremlab.com
130 Research Lane, Suite 2
Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3157

Certificate of Analysis: Gene-Trac® VC, Vinyl Chloride Reductase (*vcrA*) Assay

Customer: Rebecca Lesher, OTIE

Project: IR Site 70/NWS SEAL BEACH

Customer Reference: 2011068-8061

SiREM Reference: S-2390

Report Date: 6-Dec-11

Data Files: MyiQ-VC-QPCR-0434
iQ5-VC-QPCR-0436
VC-QPCR-Check-gel-0455
VC-QPCR-Check-gel-0457
MyiQ-DB-VC-QPCR-0181

Table 1b: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent *vcrA* *	Vinyl Chloride Reductase (*vcrA*) Gene Copies/Liter
IW-70-SHB217-144	VCR-2994	17-Nov-11	Groundwater	NA	4×10^3U
MW-70-MNA16-149	VCR-3014	17-Nov-11	Groundwater	2 - 6 %	9×10^6

Notes:

* Percent *vcrA* in microbial population. This value is calculated by dividing the number of vinyl chloride reductase A (*vcrA)* gene copies quantified by the total number of bacteria estimated to be in the sample based on the mass of DNA extracted from the sample. Range represents normal variation in enumeration of *vcrA*.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *vcrA* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.
C Correction factor applied to correct for non-specific PCR amplification products.

Analyst: _____
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: _____
Ximena Druar, B.Sc.
Molecular Biology Coordinator

Table 2: Detailed Test Parameters, Test Reference S-2390

Customer Sample ID	IW-70-SHB217-144	MW-70-MNA12-146	MW-70-MNA16-149	MW-70-MNA14-151
SiREM Sample ID	DHC-7846/VCR-2994	DHC-7847	DHC-7848/VCR-3014	DHC-7849
Date Received	21-Nov-11	21-Nov-11	21-Nov-11	21-Nov-11
Sample Temperature	5 ºC	5 ºC	5 ºC	5 ºC
Filtration Date	22-Nov-11	22-Nov-11	22-Nov-11	22-Nov-11
Volume Used for DNA Extraction	500 mL	500 mL	500 mL	500 mL
DNA Extraction Date	24-Nov-11	24-Nov-11	24-Nov-11	24-Nov-11
DNA Concentration in Sample (extractable)	2825 ng/L	1706 ng/L	791 ng/L	1544 ng/L
PCR Amplifiable DNA	Detected	Detected	Detected	Detected
Dhc qPCR Date Analyzed	30-Nov-11	30-Nov-11	30-Nov-11	30-Nov-11
***vcrA* qPCR Date Analyzed**	2-Dec-11	NA	6-Dec-11	NA
qPCR Controls (see Tables 3 & 4)	Passed	Passed	Passed	Passed
Comments	- -	Sample not tested for *vcrA* as it was ND for Dhc.	- -	Sample not tested for *vcrA* as it was ND for Dhc.

Notes:

Refer to Tables 3 & 4 for detailed results of controls.

NA = not applicable
°C = degrees Celsius
DNA = Deoxyribonucleic acid

PCR = polymerase chain reaction
qPCR = quantitative PCR
Dhc = *Dehalococcoides*

vcrA = vinyl chloride reductase
ng/L = nanograms per liter
mL = milliliters

Table 3: Gene-Trac Dhc Control Results, Test Reference S-2390

Laboratory Control	Analysis Date	Control Description	Spiked Dhc 16S rRNA Gene Copies per Liter	Recovered Dhc 16S rRNA Gene Copies per Liter	Comments
Positive Control Low Concentration	30-Nov-11	qPCR with KB1 genomic DNA (CSLD-0483)	2.5×10^5	2.9×10^5	- -
Positive Control High Concentration	30-Nov-11	qPCR with KB1 genomic DNA (CSHD-0483)	2.8×10^7	2.5×10^7	- -
Negative Control	30-Nov-11	Tris Reagent Blank (TBD-0443)	0	3.9×10^3U	- -
DNA Extraction Blank	29-Nov-11	DNA extraction sterile water (FB-1575)	0	3.9×10^3U	- -

Notes:

Dhc = *Dehalococcoides*

DNA = Deoxyribonucleic acid

qPCR = quantitative PCR

16S rRNA = 16S ribosomal ribonucleic acid

U Not detected, associated value is the quantification limit.

Table 4: Gene-Trac VC Control Results, Test Reference S-2390

Laboratory Control	Analysis Date	Control Description	Spiked *vcrA* reductase Gene Copies per Liter	Recovered *vcrA* reductase Gene Copies per Liter	Comments
Positive Control Low Concentration	2-Dec-11	qPCR with KB-1 genomic DNA (CSLV-0302)	2.8×10^5	3.8×10^5	- -
Positive Control High Concentration	2-Dec-11	qPCR with KB-1 genomic DNA (CSHV-0302)	3.2×10^7	5.0×10^7	See Note 1
Negative Control	2-Dec-11	Tris Reagent Blank (TBV-0273)	0	3.9×10^3U	- -
Positive Control Low Concentration	6-Dec-11	qPCR with KB-1 genomic DNA (CSLV-0304)	2.8×10^5	2.4×10^5	- -
Positive Control High Concentration	6-Dec-11	qPCR with KB-1 genomic DNA (CSHV-0304)	4.0×10^7	3.0×10^7	- -
Negative Control	6-Dec-11	Tris Reagent Blank (TBV-0275)	0	3.9×10^3U	- -
DNA Extraction Blank	1-Dec-11	DNA extraction sterile water (FB-1575)	0	3.9×10^3U	- -

Notes:

qPCR = quantitative PCR

DNA = Deoxyribonucleic acid

16S rRNA = 16S ribosomal ribonucleic acid

vcrA = vinyl chloride reductase

U Not detected, associated value is the quantification limit.

[1]Exceeds recovery limit guidelines of +/- 50%.

№ 3297

Chain-of-Custody Form

SIREM Site Recovery & Management

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Page 1 of 1

Lab # S-2390

Project Name	IRSITE 70 - NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RLESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVE., ANAHEIM, CA 92806 U.S.A.
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	A.V. Greed
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
IW-70-SHB217-144	11/17/11	0958	WATER	1	X	X		
MW-70-MNA12-146	11/17/11	1138	WATER	1	X	X		
MW-70-MNA16-149	11/17/11	1438	WATER	1	X	X		
MW-70-MNA14-151	11/17/11	1539	WATER	1	X	X		

Sample Receipt

Cooler Condition: GOOD

Cooler Temperature: 5°C

Custody Seals: Yes ☐ No ☒

Billing Information

P.O. # 2011068-8061

Bill To: OTIE

2247 SAN DIEGO AVE, SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested

Normal ☒

Rush ☐

For Lab Use Only

Proposal #: _____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: A.V. Greed	Signature: FEDEX	Signature:	Signature: [illegible]	Signature:	Signature:
Printed Name: SREE AKKENAPALLY	Printed Name:	Printed Name:	Printed Name: D. Vespoli	Printed Name:	Printed Name:
Firm: INSIGHT EEC, INC.	Firm:	Firm:	Firm: SIREM	Firm:	Firm:
Date/Time: 11/17/11 1655	Date/Time:	Date/Time:	Date/Time: NOV 21 '11 1:30pm	Date/Time:	Date/Time:

Distribution: White - Return to Originator: Yellow - Lab Copy: Pink - Retained by Client

SiREM
Site Recovery & Management
www.siremlab.com
130 Research Lane, Suite 2
Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3151

Certificate of Analysis: Gene-Trac® *Dehalococcoides* Assay

Customer: Rebecca Lesher, OTIE

Project: IR Site 70 - NWS Seal Beach

Customer Reference: 2011068-8061

SiREM Reference: S-2397

Report Date: 2-Dec-11

Data Files: MyiQ-DHC-QPCR-0846
DHC-QPCR-Check-gel-0600
MyiQ-DB-DHC-QPCR-0249
DHC-UP-0708

Table 1: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent Dhc *	*Dehalococcoides* Enumeration/Liter **
MW-70-15-159	DHC-7856	21-Nov-11	groundwater	NA	4×10^3U
MW-70-MNA17-160	DHC-7857	21-Nov-11	groundwater	NA	4×10^3U
IW-70-SHB310-161	DHC-7858	21-Nov-11	groundwater	NA	2×10^4U

Notes:

* Percent *Dehalococcoides* (Dhc) in microbial population. This value is calculated by dividing the number of Dhc 16S ribosomal ribonucleic acid (rRNA) gene copies by the total number of bacteria as estimated by the mass of DNA extracted from the sample. Range represents normal variation in Dhc enumeration.

** Based on quantification of Dhc 16S rRNA gene copies. Dhc are generally reported to contain one 16S rRNA gene copy per cell; therefore, this number is often interpreted to represent the number of Dhc cells present in the sample.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *Dehalococcoides* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.

Analyst: Jen Wilkinson
Jen Wilkinson
Biotechnology Technologist

Approved: Ximena Druar
Ximena Druar, B.Sc.
Molecular Biology Coordinator

Table 2: Detailed Test Parameters, Gene-Trac Test Reference S-2397

Customer Sample ID	MW-70-15-159	MW-70-MNA17-160	IW-70-SHB310-161
SiREM Sample ID	DHC-7856	DHC-7857	DHC-7858
Date Received	23-Nov-11	23-Nov-11	23-Nov-11
Sample Temperature	6 ˚C	6 ˚C	6 ˚C
Filtration Date	25-Nov-11	25-Nov-11	25-Nov-11
Volume Used for DNA Extraction	500 mL	500 mL	100 mL
DNA Extraction Date	25-Nov-11	25-Nov-11	25-Nov-11
DNA Concentration in Sample (extractable)	707 ng/L	1328 ng/L	8985 ng/L
PCR Amplifiable DNA	Detected	Detected	Detected
qPCR Date Analyzed	30-Nov-11	30-Nov-11	30-Nov-11
Laboratory Controls (see Table 3)	Passed	Passed	Passed
Comments	--	--	--

Notes:

Refer to Table 3 for detailed results of controls.
DNA = Deoxyribonucleic acid
Dhc = *Dehalococcoides*

PCR = polymerase chain reaction
qPCR = quantitative PCR
°C = degrees Celsius

ng/L = nanograms per liter
mL = milliliters

Table 3: Laboratory Controls, Test Reference S-2397

Laboratory Control	Analysis Date	Control Description	Spiked Dhc 16S rRNA Gene Copies per Liter	Recovered Dhc 16S rRNA Gene Copies per Liter	Comments
Positive Control Low Concentration	30-Nov-11	qPCR with KB-1 genomic DNA (CSLD-0483)	2.5×10^5	2.9×10^5	- -
Positive Control High Concentration	30-Nov-11	qPCR with KB-1 genomic DNA (CSHD-0483)	2.8×10^7	2.5×10^7	- -
Negative Control	30-Nov-11	Tris Reagent Blank (TBD-0443)	0	3.9×10^3U	- -
DNA Extraction Blank	29-Nov-11	DNA extraction sterile water (FB-1577)	0	3.9×10^3U	- -

Notes:

Dhc = *Dehalococcoides*

DNA = Deoxyribonucleic acid

qPCR = quantitative PCR

16S rRNA = 16S ribosomal ribonucleic acid

U Not detected, associated value is the quantification limit.

№ 2009

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Page 1 of 1

Lab # S-2397

Project Name	JRSITE 70-NWS SEAL BEACH
Project #	
Project Manager	REBECCA LEGHER
Email Address	RLEGHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVENUE, ANAHEIM, CA 92806 U.S.A.
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
MW-70-15-159	11/21/11	1044	WATER	1	X	X		
MW-70-MNA17-160	11/21/11	1154	WATER	1	X	X		
IW-70-SHB310-161	11/21/11	1334	WATER	1	X	X		

Sample Receipt	
Cooler Condition:	Good
Cooler Temperature:	6°C
Custody Seals:	Yes ☐ No ☒

Billing Information	
P.O. #	2011068-8061
Bill To:	OTIE
	2247 SAN DIEGO AVE, SUITE 238 SAN DIEGO, CA 92110

Turnaround Time Requested
Normal ☒
Rush ☐

For Lab Use Only
Proposal #: _____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature FEDEX	Signature	Signature J. Wilkinson	Signature	Signature
Printed Name SREE AKKENAPALLY	Printed Name	Printed Name	Printed Name J. Wilkinson	Printed Name	Printed Name
Firm INSIGHT EEC, INC.	Firm	Firm	Firm S-REM	Firm	Firm
Date/Time 11/21/2011 15:00	Date/Time	Date/Time	Date/Time 11/23/11 17:00	Date/Time	Date/Time

Distribution: White - Return to Originator: Yellow - Lab Copy: Pink - Retained by Client

SiREM Site Recovery & Management
www.siremlab.com
130 Research Lane, Suite 2
Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3151

Certificate of Analysis: Gene-Trac® *Dehalococcoides* Assay

Customer: Rebecca Lesher, OTIE
Project: IR Site 70-NWS Seal Beach
Customer Reference: 2011068-8061

SiREM Reference: S-2398
Report Date: 8-Dec-11
Data Files: MyiQ-DHC-QPCR-0848
MyiQ-DB-DHC-QPCR-0250

Table 1a: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent Dhc *	*Dehalococcoides* Enumeration/Liter **
IW-70-SSB119-163	DHC-7886	22-Nov-11	Groundwater	0.01 - 0.03 %	3×10^6B
IW-70-SHB311-164	DHC-7887	22-Nov-11	Groundwater	0.007 - 0.02 %	2×10^6B
IW-70-SAT35-167	DHC-7888	22-Nov-11	Groundwater	0.5 - 1 %	6×10^8B

Notes:

* Percent *Dehalococcoides* (Dhc) in microbial population. This value is calculated by dividing the number of Dhc 16S ribosomal ribonucleic acid (rRNA) gene copies by the total number of bacteria as estimated by the mass of DNA extracted from the sample. Range represents normal variation in Dhc enumeration.

** Based on quantification of Dhc 16S rRNA gene copies. Dhc are generally reported to contain one 16S rRNA gene copy per cell; therefore, this number is often interpreted to represent the number of Dhc cells present in the sample.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *Dehalococcoides* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.

Analyst: Kela Bartle
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: Ximena Druar
Ximena Druar, B.Sc.
Molecular Biology Coordinator

SiREM Site Recovery & Management
www.siremlab.com
130 Research Lane, Suite 2
Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3157

Certificate of Analysis: Gene-Trac® VC, Vinyl Chloride Reductase (*vcrA*) Assay

Customer: Rebecca Lesher, OTIE

Project: IR Site 70-NWS Seal Beach

Customer Reference: 2011068-8061

SiREM Reference: S-2398

Report Date: 8-Dec-11

Data Files: iQ5-VC-QPCR-0435
VC-QPCR-Check-gel-0456a/b
iQ5-DB-VC-QPCR-0182

Table 1b: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent *vcrA* *	Vinyl Chloride Reductase (*vcrA*) Gene Copies/Liter
IW-70-SSB119-163	VCR-3011	22-Nov-11	Groundwater	0.01 - 0.04 %	4×10^6C
IW-70-SHB311-164	VCR-3012	22-Nov-11	Groundwater	0.006 - 0.02 %	2×10^6C
IW-70-SAT35-167	VCR-3013	22-Nov-11	Groundwater	0.3 -0.9 %	3×10^8

Notes:

* Percent *vcrA* in microbial population. This value is calculated by dividing the number of vinyl chloride reductase A (*vcrA)* gene copies quantified by the total number of bacteria estimated to be in the sample based on the mass of DNA extracted from the sample. Range represents normal variation in enumeration of *vcrA*.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *vcrA* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.
C Correction factor applied to correct for non-specific PCR amplification products.

Analyst: _____
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: _____
Ximena Druar, B.Sc.
Molecular Biology Coordinator

Table 2: Detailed Test Parameters, Test Reference S-2398

Customer Sample ID	IW-70-SSB119-163	IW-70-SHB311-164	IW-70-SAT35-167
SiREM Sample ID	DHC-7886/VCR-3011	DHC-7887/VCR-3012	DHC-7888/VCR-3013
Date Received	23-Nov-11	23-Nov-11	23-Nov-11
Sample Temperature	5 ˚C	5 ˚C	5 ˚C
Filtration Date	29-Nov-11	29-Nov-11	29-Nov-11
Volume Used for DNA Extraction	100 mL	100 mL	10 mL
DNA Extraction Date	1-Dec-11	1-Dec-11	1-Dec-11
DNA Concentration in Sample (extractable)	61223 ng/L	50265 ng/L	241725 ng/L
PCR Amplifiable DNA	Detected	Detected	Detected
Dhc qPCR Date Analyzed	5-Dec-11	5-Dec-11	5-Dec-11
***vcrA* qPCR Date Analyzed**	5-Dec-11	5-Dec-11	5-Dec-11
qPCR Controls (see Tables 3 & 4)	Passed	Passed	Passed
Comments	- -	- -	- -

Notes:

Refer to Tables 3 & 4 for detailed results of controls.
ng/L = nanograms per liter
mL = milliliters

PCR = polymerase chain reaction
qPCR = quantitative PCR
DNA = Deoxyribonucleic acid

Dhc = *Dehalococcoides*
vcrA = vinyl chloride reductase
°C = degrees Celsius

Table 3: Gene-Trac Dhc Control Results, Test Reference S-2398

Laboratory Control	Analysis Date	Control Description	Spiked Dhc 16S rRNA Gene Copies per Liter	Recovered Dhc 16S rRNA Gene Copies per Liter	Comments
Positive Control Low Concentration	5-Dec-11	qPCR with KB-1 genomic DNA (CSLD-0485)	2.5×10^5	3.6×10^5	- -
Positive Control High Concentration	5-Dec-11	qPCR with KB-1 genomic DNA (CSHD-0485)	2.8×10^7	2.7×10^7	- -
Negative Control	5-Dec-11	Tris Reagent Blank (TBD-0445)	0	3.9×10^3U	- -
DNA Extraction Blank	1-Dec-11	DNA extraction sterile water (FB-1581)	0	1.0×10^3J	See Note 1

Notes:

Dhc = *Dehalococcoides*

DNA = Deoxyribonucleic acid

qPCR = quantitative PCR

16S rRNA = 16S ribosomal ribonucleic acid

U Not detected, associated value is the quantification limit.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.

[1]Acceptable as test results for relevant samples exceeded DNA Extraction Blank test result by at least 10-fold.

Table 4: Gene-Trac VC Control Results, Test Reference S-2398

Laboratory Control	Analysis Date	Control Description	Spiked *vcrA* reductase Gene Copies per Liter	Recovered *vcrA* reductase Gene Copies per Liter	Comments
Positive Control Low Concentration	5-Dec-11	qPCR with KB-1 genomic DNA (CSLV-0303)	2.8×10^5	2.6×10^5	- -
Positive Control High Concentration	5-Dec-11	qPCR with KB-1 genomic DNA (CSHV-0303)	4.0×10^7	3.3×10^7	- -
Negative Control	5-Dec-11	Tris Reagent Blank (TBV-0274)	0	3.9×10^3U	- -
DNA Extraction Blank	5-Dec-11	DNA extraction sterile water (FB-1581)	0	3.9×10^3U	- -

Notes:

qPCR = quantitative PCR

DNA = Deoxyribonucleic acid

16S rRNA = 16S ribosomal ribonucleic acid

vcrA = vinyl chloride reductase

U Not detected, associated value is the quantification limit.

№ 2002

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Lab # S-2398

Project Name	IRSITE 70-NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RLESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVE., ANAHEIM, CA 92806 U.S.A.
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	A.V. Sreek
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative Key
0. None
1. HCl
2. Other ___
3. Other ___

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
IW-70-SSB119-163	11/22/11	1145	WATER	1	X	X		
IW-70-SHB311-164	11/22/11	1347	WATER	1	X	X		
IW-70-SAT35-167	11/22/11	1623	WATER	1	X	X		

Sample Receipt

Cooler Condition: good

Cooler Temperature: 5°C

Custody Seals: Yes ☐ No ☒

Billing Information

P.O. # 2011068-8061

Bill To: OTIE

2247 SAN DIEGO AVE, SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested

Normal ☒

Rush ☐

For Lab Use Only

Proposal #: ___

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: A.V. Sreek	Signature: FEDEX	Signature:	Signature: Kela Bartle	Signature:	Signature:
Printed Name: SREE AKKENAPALLY	Printed Name:	Printed Name:	Printed Name: Kela Bartle	Printed Name:	Printed Name:
Firm: INSIGHT EEC, INC.	Firm:	Firm:	Firm: SIREM	Firm:	Firm:
Date/Time: 11/22/2011 1650	Date/Time:	Date/Time:	Date/Time: Nov 23/11 17:10	Date/Time:	Date/Time:

Distribution: White - Return to Originator: Yellow - Lab Copy: Pink - Retained by Client

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Site Recovery & Management
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Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3151

Certificate of Analysis: Gene-Trac® *Dehalococcoides* Assay

Customer: Rebecca Lesher, OTIE

Project: IR Site 70/NWS SEAL BEACH

Customer Reference: 2011068-8061

SiREM Reference: S-2402

Report Date: 15-Dec-11

Data Files: iQ5-DHC-QPCR-0849
DHC-QPCR check gel-0602
MyiQ-DB-DHC-QPCR-0251
DHC-UP-0710
iQ5-DHC-QPCR-0853
DHC-QPCR check gel-0604
iQ5-DB-DHC-QPCR-0253
DHC-UP-0712

Table 1a: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent Dhc *	*Dehalococcoides* Enumeration/Liter **
MW-70-RDO-4-174	DHC-7893	28-Nov-11	Groundwater	NA	4×10^3U
IW-70-FSB229-175	DHC-7894	28-Nov-11	Groundwater	0.001 - 0.004 %	1×10^5
MW-70-49-176	DHC-7918	28-Nov-11	Groundwater	NA	4×10^3U

Notes:

* Percent *Dehalococcoides* (Dhc) in microbial population. This value is calculated by dividing the number of Dhc 16S ribosomal ribonucleic acid (rRNA) gene copies by the total number of bacteria as estimated by the mass of DNA extracted from the sample. Range represents normal variation in Dhc enumeration.

** Based on quantification of Dhc 16S rRNA gene copies. Dhc are generally reported to contain one 16S rRNA gene copy per cell; therefore, this number is often interpreted to represent the number of Dhc cells present in the sample.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *Dehalococcoides* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.

Analyst: _____
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: _____
Jennifer Wilkinson
Biotechnology Technologist

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Guelph, Ontario N1G 5G3
Phone (519) 822-2265
Fax (519) 822-3157

Certificate of Analysis: Gene-Trac® VC, Vinyl Chloride Reductase (*vcrA*) Assay

Customer: Rebecca Lesher, OTIE

Project: IR Site 70/NWS SEAL BEACH

Customer Reference: 2011068-8061

SiREM Reference: S-2402

Report Date: 15-Dec-11

Data Files: MyiQ-VC-QPCR-0437
VC-QPCR-Check-gel-0458
iQ5-DB-VC-QPCR-0183

Table 1b: Test Results

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent *vcrA* *	Vinyl Chloride Reductase (*vcrA*) Gene Copies/Liter
IW-70-FSB229-175	VCR-3017	28-Nov-11	Groundwater	NA	2×10^4U

Notes:

* Percent *vcrA* in microbial population. This value is calculated by dividing the number of vinyl chloride reductase A (*vcrA)* gene copies quantified by the total number of bacteria estimated to be in the sample based on the mass of DNA extracted from the sample. Range represents normal variation in enumeration of *vcrA*.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *vcrA* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.
C Correction factor applied to correct for non-specific PCR amplification products.

Analyst: Kela Bartle
Kela Bartle, B.Sc.
Biotechnology Technologist

Approved: Jen Wilkinson
Jennifer Wilkinson
Biotechnology Technologist

Table 2: Detailed Test Parameters, Test Reference S-2402

Customer Sample ID	MW-70-RDO-4-174	IW-70-FSB229-175	MW-70-49-176
SiREM Sample ID	DHC-7893	DHC-7894/VCR-3017	DHC-7918
Date Received	1-Dec-11	1-Dec-11	1-Dec-11
Sample Temperature	1 ºC	1 ºC	1 ºC
Filtration Date	5-Dec-11	5-Dec-11	12-Dec-11
Volume Used for DNA Extraction	500 mL	100 mL	500 mL
DNA Extraction Date	5-Dec-11	5-Dec-11	13-Dec-11
DNA Concentration in Sample (extractable)	885 ng/L	23678 ng/L	2940 ng/L
PCR Amplifiable DNA	Detected	Detected	Detected
Dhc qPCR Date Analyzed	6-Dec-11	6-Dec-11	14-Dec-11
***vcrA* qPCR Date Analyzed**	NA	7-Dec-11	NA
qPCR Controls (see Tables 3 & 4)	Passed	Passed	Passed
Comments	Sample not tested for *vcrA* as it was ND for Dhc.	- -	Sample not tested for vcrA as it was ND for Dhc.

Notes:

Refer to Tables 3 & 4 for detailed results of controls.
NA = not applicable
ng/L = nanograms per liter
mL = milliliters

PCR = polymerase chain reaction
qPCR = quantitative PCR
Dhc = *Dehalococcoides*

vcrA = vinyl chloride reductase
DNA = Deoxyribonucleic acid
°C = degrees Celsius

Table 3: Gene-Trac Dhc Control Results, Test Reference S-2402

Laboratory Control	Analysis Date	Control Description	Spiked Dhc 16S rRNA Gene Copies per Liter	Recovered Dhc 16S rRNA Gene Copies per Liter	Comments
Positive Control Low Concentration	6-Dec-11	qPCR with KB1 genomic DNA (CSLD-0486)	3.4×10^5	2.8×10^5	- -
Positive Control High Concentration	6-Dec-11	qPCR with KB1 genomic DNA (CSHD-0486)	4.6×10^7	3.4×10^7	- -
Negative Control	6-Dec-11	Tris Reagent Blank (TBD-0446)	0	3.9×10^3U	- -
DNA Extraction Blank	6-Dec-11	DNA extraction sterile water (FB-1583)	0	1.7×10^3J	See Note 1
Positive Control Low Concentration	14-Dec-11	qPCR with KB1 genomic DNA (CSLD-0490)	3.4×10^5	2.8×10^5	- -
Positive Control High Concentration	14-Dec-11	qPCR with KB1 genomic DNA (CSHD-0490)	4.6×10^7	3.3×10^7	- -
Negative Control	14-Dec-11	Tris Reagent Blank (TBD-0450)	0	3.9×10^3U	- -
DNA Extraction Blank	13-Dec-11	DNA extraction sterile water (FB-1590)	0	3.9×10^3U	- -

Notes:

Dhc = *Dehalococcoides*

DNA = Deoxyribonucleic acid

qPCR = quantitative PCR

16S rRNA = 16S ribosomal ribonucleic acid

U Not detected, associated value is the quantification limit.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.

[1]Acceptable as test results for relevant samples exceeded DNA Extraction Blank test result by at least 10-fold or relevant samples tested negative.

Table 4: Gene-Trac VC Control Results, Test Reference S-2402

Laboratory Control	Analysis Date	Control Description	Spiked *vcrA* reductase Gene Copies per Liter	Recovered *vcrA* reductase Gene Copies per Liter	Comments
Positive Control Low Concentration	7-Dec-11	qPCR with KB-1 genomic DNA (CSLV-0305)	2.8×10^5	3.1×10^5	- -
Positive Control High Concentration	7-Dec-11	qPCR with KB-1 genomic DNA (CSHV-0305)	3.2×10^7	4.0×10^7	- -
Negative Control	7-Dec-11	Tris Reagent Blank (TBV-0276)	0	1.5×10^3J	See Note 1
DNA Extraction Blank	6-Dec-11	DNA extraction sterile water (FB-1583)	0	3.9×10^3U	- -

Notes:

qPCR = quantitative PCR

DNA = Deoxyribonucleic acid

16S rRNA = 16S ribosomal ribonucleic acid

vcrA = vinyl chloride reductase

U Not detected, associated value is the quantification limit.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.

[1]Acceptable as relevant sample tested negative.

№ 3298

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Lab # 5-2402

Project Name	IRSITE70-NWS SEAL BEACH
Project #	
Project Manager	REBECCA LESHER
Email Address	RLESHER@OTIE.COM
Company	INSIGHT EEC, INC.
Address	3010 E. MIRALOMA AVENUE, ANAHEIM, CA 92806 U.S.A.
Phone #	(714) 678-6700
Fax #	(714) 678-6711
Sampler's Signature	A.N. Sreedh
Sampler's Printed Name	SREE AKKENAPALLY

Analysis

Preservative Key
0. None
1. HCl
2. Other _____
3. Other _____

Customer Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Gene-Trac Dhc	Gene-Trac VC	Gene-Trac Dhb	Other Information
MW-70-RD04-174	11/28/11	1054	WATER	1	X	X		
IW-70-FSB229-175	11/28/11	1242	WATER	1	X	X		
MW-70-49-176	11/28/11	1438	WATER	1	X	X		

Sample Receipt

Cooler Condition: GOOD

Cooler Temperature: 1°C

Custody Seals: Yes ☒ No ☐

Billing Information

P.O. # 2011068-8061

Bill To: OTIE
2247 SAN DIEGO AVE., SUITE 238
SAN DIEGO, CA 92110

Turnaround Time Requested

Normal ☒

Rush ☐

For Lab Use Only

Proposal #: _____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: A.N. Sreedh	Signature: FEDEX	Signature:	Signature: [illegible]	Signature:	Signature:
Printed Name: SREE AKKENAPALLY	Printed Name:	Printed Name:	Printed Name: D. Vespoli	Printed Name:	Printed Name:
Firm: INSIGHT EEC, INC.	Firm:	Firm:	Firm: SIREM	Firm:	Firm:
Date/Time: 11/28/11 1545	Date/Time:	Date/Time:	Date/Time: DEC 1 '11 9:30 am	Date/Time:	Date/Time:

Distribution: White - Return to Originator: Yellow - Lab Copy: Pink - Retained by Client

APPENDIX D

LABORATORY DATA VALIDATION REPORTS

Laboratory Data Consultants, Inc.

7750 El Camino Real, Ste. 2L Carlsbad, CA 92009

Phone 760.634.0437 **Web** www.lab-data.com **Fax** 760.634.0439

Insight EEC, Inc.
3020 E. Miraloma
Anaheim, CA 92806
ATTN: Mr. Nick Weinberger

November 4, 2011

SUBJECT: NWS Seal Beach, IR Site 70, Data Validation

Dear Mr. Weinberger,

Enclosed is the final validation report for the fractions listed below. This SDG was received on October 26, 2011.

LDC project# 26470:

SDG #	Fraction
11I255	Volatiles (EPA SW 846 Method 8260B)

The following deliverables are submitted under this report:

- Attachment I — Sample ID Cross Reference and Data Review Level
- Attachment II — Overall Data Qualification Summary
- Enclosure I — EPA Level III ADR Outliers (including manual review outliers)

The data validation was performed in accordance to the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008. Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience. The following items were evaluated during the review:

- Holding Times
- Sample Preservation
- Cooler Temperatures
- Initial Calibration (Manual Review)
- Continuing Calibration (Manual Review)
- Blanks
- Surrogates
- Internal Standards (Manual Review)
- Matrix Spike/Matrix Spike Duplicates
- Laboratory Control Samples
- Detection and Quantitation Limits
- Field QC Samples

Please feel free to contact us if you have any questions.

Sincerely,

Andrew Kong
Project Manager/Chemist

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
27-Sep-2011	IR-70-GW-TB-065	I255-02	TB	5030B	8260B	3
27-Sep-2011	MW-70-44-064	I255-01	N	5030B	8260B	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11I255 **Laboratory: EMXT**

EDD Filename: 11I255 **eQAPP Name: SealBeach_IRSite70**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **MW-70-44-064** ***Collected:*** **9/27/2011 2:42:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	9.5	J	5.0	MDL	10	PQL	UG/L	J	RI
CHLOROFORM	0.29	J	0.20	MDL	1.0	PQL	UG/L	J	RI
METHYLENE CHLORIDE	0.66	J	0.50	MDL	1.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11I255 **Laboratory: EMXT**

EDD Filename: 11I255 **eQAPP Name: SealBeach_IRSite70**

Reason Code Legend

Reason Code	*Description*
Cb	Calibration Blank Contamination
Ccv	Continuing Calibration Verification Percent Difference Lower Estimation
Ccv	Continuing Calibration Verification Percent Difference Lower Rejection
Ccv	Continuing Calibration Verification Percent Difference Upper Estimation
Ccv	Continuing Calibration Verification Percent Difference Upper Rejection
Ccv	Continuing Calibration Verification Percent Recovery Lower Estimation
Ccv	Continuing Calibration Verification Percent Recovery Lower Rejection
Ccv	Continuing Calibration Verification Percent Recovery Upper Estimation
Ccv	Continuing Calibration Verification Percent Recovery Upper Rejection
CcvCC	Continuing Calibration Verification Correlation Coefficient
CcvRrf	Continuing Calibration Verification Relative Response Factor
ContTune	Continuing Tune
Dup=0	Duplicate Sample Count = 0
Dup>1	Duplicate Sample Count > 1
Eb	Equipment Blank Contamination
EtoA	Extraction to Analysis Estimation
EtoA	Extraction to Analysis Rejection
Fb	Field Blank Contamination
Fd	Field Duplicate Precision
Ft	Field Triplicate Precision
IcCC	Initial Calibration Correlation Coefficient
IcRrf	Initial Calibration Relative Response Factor
IcRsd	Initial Calibration Percent Relative Standard Deviation
Icv	Initial Calibration Verification Percent Difference Lower Estimation
Icv	Initial Calibration Verification Percent Difference Lower Rejection
Icv	Initial Calibration Verification Percent Difference Upper Estimation
Icv	Initial Calibration Verification Percent Difference Upper Rejection
Icv	Initial Calibration Verification Percent Recovery Lower Estimation
Icv	Initial Calibration Verification Percent Recovery Lower Rejection
Icv	Initial Calibration Verification Percent Recovery Upper Estimation

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11I255 **Laboratory: EMXT**

EDD Filename: 11I255 **eQAPP Name: SealBeach_IRSite70**

Icv	Initial Calibration Verification Percent Recovery Upper Rejection
IcvCC	Initial Calibration Verification Correlation Coefficient
IcvRrf	Initial Calibration Verification Relative Response Factor
IllogicalFraction	Illogical Fraction
InitTune	Initial Tune
Is	Internal Standard Estimation
Is	Internal Standard Rejection
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Lower Rejection
Lcs	Laboratory Control Spike Upper Estimation
Lcs	Laboratory Control Spike Upper Rejection
Lcs=0	Laboratory Control Sample Count = 0
Lcs>1	Laboratory Control Sample Count > 1
Ld	Laboratory Duplicate Precision
Lt	Laboratory Triplicate Precision
Mb	Method Blank Contamination
Mb=0	Method Blank Sample Count = 0
Mb>1	Method Blank Sample Count > 1
Moist	Percent Moisture
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Lower Rejection
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
Ms	Matrix Spike Upper Rejection
Ms=0	Matrix Spike Sample Count = 0
Ms>1	Matrix Spike Sample Count > 1
PEM	Performance Evaluation Mixture
Preservation	Preservation
ProfJudg	Professional Judgment
REM	Resolution Check Mixture
RI	Reporting Limit

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11I255 **Laboratory: EMXT**

EDD Filename: 11I255 **eQAPP Name: SealBeach_IRSite70**

RI	Reporting Limit > Project Maximum Contamination Limit
RI	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation
StoA	Sampling to Analysis Rejection
StoE	Sampling to Extraction Estimation
StoE	Sampling to Extraction Rejection
StoL	Sampling to Leaching Estimation
StoL	Sampling to Leaching Rejection
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Lower Rejection
Surr	Surrogate/Tracer Recovery Upper Estimation
Surr	Surrogate/Tracer Recovery Upper Rejection
Tb	Trip Blank Contamination
TempEst	Temperature Estimation
TempRej	Temperature Rejection

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11I255

Reporting Limit Outliers

Lab Reporting Batch ID: 11I255 **Laboratory: EMXT**

EDD Filename: 11I255 **eQAPP Name: SealBeach_IRSite70**

Method: **8260B**

Matrix: **AQ**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
MW-70-44-064	ACETONE	J	9.5	10	PQL	UG/L	
	CHLOROFORM	J	0.29	1.0	PQL	UG/L	J (all detects)
	METHYLENE CHLORIDE	J	0.66	1.0	PQL	UG/L	

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

LDC #: 26470A1

SDG #: 11I255

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 11-3-11

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/27/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤ 30
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25%
V.	Blanks	N	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	N	
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	
XI.	Target compound identification	N	
XII.	Compound quantitation/RLs	N	
XIII.	Tentitatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	N	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet

ND = No compounds detected
R = Rinsate
FB = Field blank

D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: All 40

1	MW-70-44-064	11		21		31	V001I33-Blk
2	IR-70-GW-TB-065	12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Laboratory Data Consultants, Inc.

7750 El Camino Real, Ste. 2L Carlsbad, CA 92009

Phone 760.634.0437 **Web** www.lab-data.com **Fax** 760.634.0439

Insight EEC, Inc.
3020 E. Miraloma
Anaheim, CA 92806
ATTN: Mr. Nick Weinberger

December 29, 2011

SUBJECT: NWS Seal Beach, IR Site 70, Data Validation

Dear Mr. Weinberger,

Enclosed is the final validation report for the fractions listed below. These SDGs were received on December 8, 2011.

LDC project# 26803:

SDG #	Fraction
11J302, 11J314	Volatiles (EPA SW 846 Method 8260B)
11K004, 11K014	Dissolved Metals (EPA SW 846 Method 6010B)
11K035, 11K063	Dissolved Gases (Method RSK-175)
11K070, 11K084	Wet Chemistry (EPA Method 300.0 and 300.0M and
11K101	Standard Method 2320B, 2540C, 4500F and 5310B)

The following deliverables are submitted under this report:

- Attachment I — Sample ID Cross Reference and Data Review Level
- Attachment II — Overall Data Qualification Summary
- Enclosure I — EPA Level III ADR Outliers (including manual review outliers)
- Enclosure II — EPA Level IV Validation Reports

The data validation was performed in accordance to the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008 and for Inorganic Data Review, January 2010. Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience. The following items were evaluated during the review:

- Holding Times
- Sample Preservation
- Cooler Temperatures
- Initial Calibration (Manual Review)
- Continuing Calibration (Manual Review)
- Blanks
- Surrogates
- Internal Standards (Manual Review)
- Matrix Spike/Matrix Spike Duplicates
- Laboratory Control Samples

- Detection and Quantitation Limits
- Field QC Samples

Please feel free to contact us if you have any questions.

Sincerely,

E Rauto for

Andrew Kong
Project Manager/Chemist

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
28-Oct-2011	MW-70-02-66	J302-01	N	5030B	8260B	3
28-Oct-2011	MW-70-POC01-67	J302-02	N	5030B	8260B	3
28-Oct-2011	MW-70-35-68	J302-03	N	5030B	8260B	3
28-Oct-2011	MW-70-17-69	J302-04	N	5030B	8260B	3
28-Oct-2011	MW-70-22-70	J302-05	N	5030B	8260B	3
28-Oct-2011	IR-70-TB-71	J302-06	TB	5030B	8260B	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11J302 **Laboratory: EMXT**

EDD Filename: 11J302 **eQAPP Name: SealBeach_IRSite70**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **MW-70-35-68** ***Collected:*** **10/28/2011 10:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
1,1-DICHLOROETHANE	0.55	J	0.20	MDL	1.0	PQL	UG/L	J	RI
1,1-DICHLOROETHENE	0.28	J	0.20	MDL	0.50	PQL	UG/L	J	RI
TRICHLOROETHENE	0.33	J	0.20	MDL	5.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11J302 **Laboratory: EMXT**

EDD Filename: 11J302 **eQAPP Name: SealBeach_IRSite70**

Reason Code Legend

Reason Code	*Description*
RI	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11J302

Reporting Limit Outliers

Lab Reporting Batch ID: 11J302 **Laboratory: EMXT**

EDD Filename: 11J302 **eQAPP Name: SealBeach_IRSite70**

Method: **8260B**

Matrix: **AQ**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
MW-70-35-68	1,1-DICHLOROETHANE	J	0.55	1.0	PQL	UG/L	J (all detects)
	1,1-DICHLOROETHENE	J	0.28	0.50	PQL	UG/L	
	TRICHLOROETHENE	J	0.33	5.0	PQL	UG/L	

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

LDC #: 26803A1

SDG #: 11J302

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/15/11

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 10/28/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤ 30, r^2
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	N	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	N	
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A ~~N~~	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/~~LOQ/LODs~~	N	
XIII.	Tentitatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A ~~N~~	
XVI.	Field duplicates	N	
XVII.	Field blanks	A	TB = 6

Note:
A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

1	MW-70-02-66 W	11	MBLKW	21		31	
2	MW-70-P~~D~~0C01-67	12		22		32	
3	MW-70-35-68	13		23		33	
4	MW-70-17-69	14		24		34	
5	MW-70-22-70	15		25		35	
6	IR-70-TB-71	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
31-Oct-2011	MW-70-11-72	J314-01	N	5030B	8260B	3
31-Oct-2011	MW-70-10-73	J314-02	N	5030B	8260B	3
31-Oct-2011	MW-70-POC03-74	J314-03	N	5030B	8260B	3
31-Oct-2011	MW-70-36-75	J314-04	N	5030B	8260B	3
31-Oct-2011	IR-70-TB-76	J314-05	TB	5030B	8260B	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11J314

Laboratory: EMXT

EDD Filename: 11J314

eQAPP Name: SealBeach_IRSite70

No Data Review Qualifiers Applied.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11J314

(No Outliers)

LDC #: 26803B1

SDG #: 11J314

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/15/11

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 10/31/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤ 30% v2
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	N	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	N	
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A N	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/~~LOQ/LOD~~s	N	
XIII.	Tentitatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A N	
XVI.	Field duplicates	A	
XVII.	Field blanks	A	TB: 5

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	MW-70-11-72 (N)	11	MBLK1W	21		31	
2	MW-70-10-73	12		22		32	
3	MW-70-POC03-74	13		23		33	
4	MW-70-36-75	14		24		34	
5	IR-70-TB-76	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
01-Nov-2011	MW-70-23-77	K004-01	N	5030B	8260B	3
01-Nov-2011	MW-70-POC02-78	K004-02	N	5030B	8260B	3
01-Nov-2011	MW-70-POC04-79	K004-03	N	5030B	8260B	3
01-Nov-2011	MW-70-21-80	K004-04	N	5030B	8260B	3
01-Nov-2011	MW-70-16-81	K004-05	N	5030B	8260B	3
01-Nov-2011	IR-70-TB-82	K004-06	TB	5030B	8260B	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11K004 **Laboratory: EMXT**

EDD Filename: 11K004 **eQAPP Name: SealBeach_IRSite70**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: IR-70-TB-82 ***Collected:*** 11/1/2011 2:20:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	0.67	J	0.50	MDL	1.0	PQL	UG/L	J	RI

Sample ID: MW-70-16-81 ***Collected:*** 11/1/2011 2:15:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	0.52	J	0.50	MDL	1.0	PQL	UG/L	U	Tb

Sample ID: MW-70-21-80 ***Collected:*** 11/1/2011 11:56:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	0.51	J	0.50	MDL	1.0	PQL	UG/L	U	Tb

Sample ID: MW-70-POC02-78 ***Collected:*** 11/1/2011 9:50:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	0.53	J	0.50	MDL	1.0	PQL	UG/L	U	Tb
VINYL CHLORIDE	0.24	J	0.20	MDL	0.50	PQL	UG/L	J	RI

Sample ID: MW-70-POC04-79 ***Collected:*** 11/1/2011 11:13:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	0.53	J	0.50	MDL	1.0	PQL	UG/L	U	Tb

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K004 **Laboratory: EMXT**

EDD Filename: 11K004 **eQAPP Name: SealBeach_IRSite70**

Reason Code Legend

Reason Code	*Description*
RI	Reporting Limit Trace Value
Tb	Trip Blank Contamination

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11K004

Trip Blank Outlier Report

Lab Reporting Batch ID: 11K004 **Laboratory: EMXT**

EDD Filename: 11K004 **eQAPP Name: SealBeach_IRSite70**

Method: **8260B**
Matrix: **AQ**

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
IR-70-TB-82(RES)	11/1/2011 2:20:00 PM	METHYLENE CHLORIDE	0.67 UG/L	MW-70-16-81 MW-70-21-80 MW-70-23-77 MW-70-POC02-78 MW-70-POC04-79

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
MW-70-16-81(RES)	METHYLENE CHLORIDE	0.52 UG/L	1.0U UG/L
MW-70-21-80(RES)	METHYLENE CHLORIDE	0.51 UG/L	1.0U UG/L
MW-70-POC02-78(RES)	METHYLENE CHLORIDE	0.53 UG/L	1.0U UG/L
MW-70-POC04-79(RES)	METHYLENE CHLORIDE	0.53 UG/L	1.0U UG/L

Reporting Limit Outliers

Lab Reporting Batch ID: 11K004 **Laboratory: EMXT**

EDD Filename: 11K004 **eQAPP Name: SealBeach_IRSite70**

Method: **8260B**

Matrix: **AQ**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
IR-70-TB-82	METHYLENE CHLORIDE	J	0.67	1.0	PQL	UG/L	J (all detects)
MW-70-16-81	METHYLENE CHLORIDE	J	0.52	1.0	PQL	UG/L	J (all detects)
MW-70-21-80	METHYLENE CHLORIDE	J	0.51	1.0	PQL	UG/L	J (all detects)
MW-70-POC02-78	METHYLENE CHLORIDE VINYL CHLORIDE	J J	0.53 0.24	1.0 0.50	PQL PQL	UG/L UG/L	J (all detects)
MW-70-POC04-79	METHYLENE CHLORIDE	J	0.53	1.0	PQL	UG/L	J (all detects)

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

LDC #: 26803C1

SDG #: 11K004

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/15/11

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/1/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤ 30, r²
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	N	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	N	
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A ~~N~~	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/~~LOQ/LOD~~s	N	
XIII.	Tentitatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A ~~N~~	
XVI.	Field duplicates	N	
XVII.	Field blanks	↓	TB = 6

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	MW-70-23-77 W	11	MBLK W	21		31	
2	MW-70-POC02-78	12		22		32	
3	MW-70-POC04-79	13		23		33	
4	MW-70-21-80	14		24		34	
5	MW-70-16-81	15		25		35	
6	IR-70-TB-82	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
02-Nov-2011	MW-70-MNA01-83	K014-01	N	5030B	8260B	3
02-Nov-2011	MW-70-MNA01-83	K014-01	N	GEN PREP	300.0M	3
02-Nov-2011	MW-70-MNA01-83	K014-01	N	GEN PREP	RSK175	3
02-Nov-2011	MW-70-MNA01-83	K014-01T	N	5030B	8260B	3
02-Nov-2011	MW-70-MNA01-83	K014-01T	N	GEN PREP	RSK175	3
02-Nov-2011	MW-70-MNA03-84	K014-02	N	GEN PREP	300.0M	3
02-Nov-2011	MW-70-MNA03-84	K014-02	N	GEN PREP	RSK175	3
02-Nov-2011	MW-70-MNA03-84	K014-02R	N	5030B	8260B	3
02-Nov-2011	MW-70-MNA03-84	K014-02T	N	GEN PREP	RSK175	3
02-Nov-2011	MW-70-MNA02-85	K014-03	N	GEN PREP	300.0M	3
02-Nov-2011	MW-70-MNA02-85	K014-03	N	GEN PREP	RSK175	3
02-Nov-2011	MW-70-MNA02-85	K014-03R	N	5030B	8260B	3
02-Nov-2011	MW-70-MNA02-85	K014-03T	N	GEN PREP	RSK175	3
02-Nov-2011	MW-70-MNA04-86	K014-04	N	5030B	8260B	3
02-Nov-2011	MW-70-MNA04-86	K014-04	N	GEN PREP	300.0M	3
02-Nov-2011	MW-70-MNA04-86	K014-04	N	GEN PREP	RSK175	3
02-Nov-2011	MW-70-MNA04-86	K014-04T	N	5030B	8260B	3
02-Nov-2011	MW-70-MNA04-86	K014-04T	N	GEN PREP	RSK175	3
02-Nov-2011	IR-70-TB-87	K014-05	TB	5030B	8260B	3
02-Nov-2011	MW-70-MNA05-88	K014-06	N	5030B	8260B	3
02-Nov-2011	MW-70-MNA05-88	K014-06	N	GEN PREP	300.0M	3
02-Nov-2011	MW-70-MNA05-88	K014-06	N	GEN PREP	RSK175	3
02-Nov-2011	MW-70-MNA05-88	K014-06T	N	GEN PREP	RSK175	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11K014 **Laboratory: EMXT**

EDD Filename: 11K014 **eQAPP Name: SealBeach_IRSite70**

Method Category: **SVOA**

Method: **RSK175** ***Matrix:*** **AQ**

Sample ID: **MW-70-MNA03-84** ***Collected:*** **11/2/2011 9:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHANE	0.72	J	0.64	MDL	2.0	PQL	UG/L	J	RI

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **MW-70-MNA01-83** ***Collected:*** **11/2/2011 8:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,2-TRICHLOROETHANE	0.24	J	0.20	MDL	1.0	PQL	UG/L	J	RI
1,1-DICHLOROETHANE	0.61	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TETRACHLOROETHYLENE	0.65	J	0.20	MDL	1.0	PQL	UG/L	J	RI

Sample ID: **MW-70-MNA02-85** ***Collected:*** **11/2/2011 10:52:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROPROPANE	0.91	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CHLOROETHANE	0.65	J	0.30	MDL	2.0	PQL	UG/L	J	RI
DICHLORODIFLUOROMETHANE	0.46	J	0.30	MDL	2.0	PQL	UG/L	J	RI

Sample ID: **MW-70-MNA03-84** ***Collected:*** **11/2/2011 9:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TRANS-1,2-DICHLOROETHENE	0.34	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	0.61	J	0.20	MDL	5.0	PQL	UG/L	J	RI
VINYL CHLORIDE	0.45	J	0.20	MDL	0.50	PQL	UG/L	J	RI

Sample ID: **MW-70-MNA04-86** ***Collected:*** **11/2/2011 11:48:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,2-TRICHLOROETHANE	0.42	J	0.20	MDL	1.0	PQL	UG/L	J	RI
BENZENE	0.30	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CHLOROFORM	0.63	J	0.20	MDL	1.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K014 **Laboratory: EMXT**

EDD Filename: 11K014 **eQAPP Name: SealBeach_IRSite70**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **MW-70-MNA05-88** ***Collected:*** **11/2/2011 12:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
1,1-DICHLOROETHANE	0.24	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CIS-1,2-DICHLOROETHENE	0.57	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRANS-1,2-DICHLOROETHENE	0.39	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	0.67	J	0.20	MDL	5.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K014 **Laboratory: EMXT**

EDD Filename: 11K014 **eQAPP Name: SealBeach_IRSite70**

Reason Code Legend

Reason Code	*Description*
ProfJudg	Professional Judgment
RI	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11K014

Reporting Limit Outliers

Lab Reporting Batch ID: 11K014 **Laboratory: EMXT**

EDD Filename: 11K014 **eQAPP Name: SealBeach_IRSite70**

Method: 8260B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
MW-70-MNA01-83	1,1,2-TRICHLOROETHANE	J	0.24	1.0	PQL	UG/L	J (all detects)
	1,1-DICHLOROETHANE	J	0.61	1.0	PQL	UG/L	
	TETRACHLOROETHYLENE	J	0.65	1.0	PQL	UG/L	
	TRANS-1,2-DICHLOROETHENE	J	63	100	PQL	UG/L	
MW-70-MNA02-85	1,2-DICHLOROPROPANE	J	0.91	1.0	PQL	UG/L	J (all detects)
	CHLOROETHANE	J	0.65	2.0	PQL	UG/L	
	DICHLORODIFLUOROMETHANE	J	0.46	2.0	PQL	UG/L	
MW-70-MNA03-84	TRANS-1,2-DICHLOROETHENE	J	0.34	1.0	PQL	UG/L	J (all detects)
	TRICHLOROETHENE	J	0.61	5.0	PQL	UG/L	
	VINYL CHLORIDE	J	0.45	0.50	PQL	UG/L	
MW-70-MNA04-86	1,1,2-TRICHLOROETHANE	J	0.42	1.0	PQL	UG/L	J (all detects)
	1,1-DICHLOROETHENE	J	2.3	5.0	PQL	UG/L	
	1,2-DICHLOROPROPANE	J	3.0	10	PQL	UG/L	
	BENZENE	J	0.30	1.0	PQL	UG/L	
	CHLOROFORM	J	0.63	1.0	PQL	UG/L	
	FREON113	J	3.9	10	PQL	UG/L	
	TETRACHLOROETHYLENE	J	4.5	10	PQL	UG/L	
	TRANS-1,2-DICHLOROETHENE	J	4.1	10	PQL	UG/L	
	VINYL CHLORIDE	J	4.5	5.0	PQL	UG/L	
MW-70-MNA05-88	1,1-DICHLOROETHANE	J	0.24	1.0	PQL	UG/L	J (all detects)
	CIS-1,2-DICHLOROETHENE	J	0.57	1.0	PQL	UG/L	
	TRANS-1,2-DICHLOROETHENE	J	0.39	1.0	PQL	UG/L	
	TRICHLOROETHENE	J	0.67	5.0	PQL	UG/L	

Method: RSK175

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
MW-70-MNA03-84	ETHANE	J	0.72	2.0	PQL	UG/L	J (all detects)
MW-70-MNA05-88	ETHENE	J	3.3	4.0	PQL	UG/L	J (all detects)

LDC #: 26803D1

SDG #: 11K014

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/15/11

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	J	Sampling dates: 11/2/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤ 30, r^2
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	N	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	N	
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A ~~N~~	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/L~~OQ/LODs~~	SW	
XIII.	Tentitatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	J ~~W~~	
XVI.	Field duplicates	J	
XVII.	Field blanks	J	TB = 7

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	MW-70-MNA01-83 W	11	MBLK1W	21		31	
2 2	MW-70-MNA01-83DL	12	↓ 2W	22		32	
3 2	MW-70-MNA02-84 3	13		23		33	
4 2	MW-70-MNA02-85	14		24		34	
5	MW-70-MNA04-86	15		25		35	
6 2	MW-70-MNA04-86DL	16		26		36	
7	IR-70-TB-87	17		27		37	
8	MW-70-MNA05-88	18		28		38	
9		19		29		39	
10		20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 26805A1

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and CRQLs

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?

Y N N/A Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	Compound	Finding	Associated Samples	Qualifications
		QQQ, S, C	> calib range	1	J det / A
		QQQ, S	> calib range	5	J

Comments: See sample calculation verification worksheet for recalculations

COMQUA.1S

LDC #: 26803D1
SDG #: -

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N (N/A) Was the overall quality and usability of the data acceptable?

#	Date	Sample ID	Finding	Associated Samples	Qualifications
		1	QQQ, S, C > calib	range	R/A
		2	all except QQQ, S, C - diluted		J
		5	QQQ, S > calib	range	R/A
		6	All except QQQ, S - diluted		J

Comments:

OVR.1S

LDC #: 26803D51 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/15/11
SDG #: 11K014 ADR Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: A
2nd Reviewer: V

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/2/11
II	Initial calibration	A	%RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	N	
V	Surrogate recovery	N	
VI.	Matrix spike/Matrix spike duplicates	N	
VII.	Laboratory control samples	N	
VIII.	Target compound identification	N	
IX.	Compound quantitation/RL/~~LOQ/LODs~~	SW	
X.	System Performance	N	
XI.	Overall assessment of data	SW	
XII.	Field duplicates	N	
XIII.	Field blanks	↓	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	MW-70-MNA01-83 W	11		21		31	
2	MW-70-MNA01-83DL	12		22		32	
3	MW-70-MNA0~~2~~3-84	13		23		33	
4	MW-70-MNA0~~2~~3-84DL	14		24		34	
5	MW-70-MNA02-85	15		25		35	
6	MW-70-MNA02-85DL	16		26		36	
7	MW-70-MNA04-86	17		27		37	
8	MW-70-MNA04-86DL	18		28		38	
9	MW-70-MNA05-88	19		29		39	
10	MW-70-MNA05-88DL	20		30		40	

Notes:

LDC #: 26803A51
SDG #: -

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N (N/A) Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	% calib range	1.3.5.7.9	J det/A

Comments: _____

OVRNew.wpd

LDC #: 26803D51

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Level IV/D Only
Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	> calib range	1.3.5.7.9	R/A
	Ethane, Ethene	Diluted out	2.4.6.8.10	+

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26803D6

SDG #: 11K014

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/15/11

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: (Analyte) Organic Acids (EPA Method 300.0M)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/2/11
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	N	Client Specific
VI.	Duplicates	N	
VII.	Laboratory control samples	N	LCS/D
VIII.	Sample result verification	N	
IX.	Overall assessment of data	A ~~N~~	
X.	Field duplicates	N	
XI	Field blanks	↓	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	MW-70-MNA01-83	11		21		31	
2	MW-70-MNA0~~2~~3-84	12		22		32	
3	MW-70-MNA02-85	13		23		33	
4	MW-70-MNA04-86	14		24		34	
5	MW-70-MNA05-88	15		25		35	
6	PR	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
03-Nov-2011	IR-70-FD-093	K035-05	FD	3010A	6010B	3
03-Nov-2011	IR-70-FD-093	K035-05	FD	5030B	8260B	3
03-Nov-2011	IR-70-FD-093	K035-05	FD	GEN PREP	2320B	3
03-Nov-2011	IR-70-FD-093	K035-05	FD	GEN PREP	2540C	3
03-Nov-2011	IR-70-FD-093	K035-05	FD	GEN PREP	300.0	3
03-Nov-2011	IR-70-FD-093	K035-05	FD	GEN PREP	300.0M	3
03-Nov-2011	IR-70-FD-093	K035-05	FD	GEN PREP	4500F	3
03-Nov-2011	IR-70-FD-093	K035-05	FD	GEN PREP	5310B	3
03-Nov-2011	IR-70-FD-093	K035-05	FD	GEN PREP	RSK175	3
03-Nov-2011	IR-70-FD-093	K035-05I	FD	GEN PREP	RSK175	3
03-Nov-2011	IR-70-FD-093	K035-05T	FD	5030B	8260B	3
03-Nov-2011	IR-70-FD-093	K035-05T	FD	GEN PREP	RSK175	3
03-Nov-2011	MW-70-PMW01A-089	K035-01	N	3010A	6010B	4
03-Nov-2011	MW-70-PMW01A-089	K035-01	N	GEN PREP	2320B	4
03-Nov-2011	MW-70-PMW01A-089	K035-01	N	GEN PREP	2540C	4
03-Nov-2011	MW-70-PMW01A-089	K035-01	N	GEN PREP	300.0	4
03-Nov-2011	MW-70-PMW01A-089	K035-01	N	GEN PREP	300.0M	4
03-Nov-2011	MW-70-PMW01A-089	K035-01	N	GEN PREP	4500F	4
03-Nov-2011	MW-70-PMW01A-089	K035-01	N	GEN PREP	RSK175	4
03-Nov-2011	MW-70-PMW01A-089	K035-01I	N	GEN PREP	RSK175	4
03-Nov-2011	MW-70-PMW01A-089	K035-01R	N	5030B	8260B	4
03-Nov-2011	MW-70-PMW01A-089	K035-01T	N	GEN PREP	5310B	4
03-Nov-2011	MW-70-PMW01A-089	K035-01T	N	GEN PREP	RSK175	4
03-Nov-2011	IR-70-TB-090	K035-06R	TB	5030B	8260B	3
03-Nov-2011	MW-70-PMW01B-091	K035-02	N	3010A	6010B	3
03-Nov-2011	MW-70-PMW01B-091	K035-02	N	5030B	8260B	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
03-Nov-2011	MW-70-PMW01B-091	K035-02	N	GEN PREP	2320B	3
03-Nov-2011	MW-70-PMW01B-091	K035-02	N	GEN PREP	2540C	3
03-Nov-2011	MW-70-PMW01B-091	K035-02	N	GEN PREP	300.0	3
03-Nov-2011	MW-70-PMW01B-091	K035-02	N	GEN PREP	300.0M	3
03-Nov-2011	MW-70-PMW01B-091	K035-02	N	GEN PREP	4500F	3
03-Nov-2011	MW-70-PMW01B-091	K035-02	N	GEN PREP	5310B	3
03-Nov-2011	MW-70-PMW01B-091	K035-02	N	GEN PREP	RSK175	3
03-Nov-2011	MW-70-PMW01B-091DUP	K035-02D	DUP	GEN PREP	2320B	3
03-Nov-2011	MW-70-PMW01B-091DUP	K035-02D	DUP	GEN PREP	2540C	3
03-Nov-2011	MW-70-PMW01B-091DUP	K035-02D	DUP	GEN PREP	300.0	3
03-Nov-2011	MW-70-PMW01B-091DUP	K035-02D	DUP	GEN PREP	300.0M	3
03-Nov-2011	MW-70-PMW01B-091DUP	K035-02D	DUP	GEN PREP	4500F	3
03-Nov-2011	MW-70-PMW01B-091	K035-02I	N	GEN PREP	RSK175	3
03-Nov-2011	MW-70-PMW01B-091MS	K035-02M	MS	3010A	6010B	3
03-Nov-2011	MW-70-PMW01B-091MS	K035-02M	MS	5030B	8260B	3
03-Nov-2011	MW-70-PMW01B-091MS	K035-02M	MS	GEN PREP	300.0	3
03-Nov-2011	MW-70-PMW01B-091MS	K035-02M	MS	GEN PREP	300.0M	3
03-Nov-2011	MW-70-PMW01B-091MS	K035-02M	MS	GEN PREP	5310B	3
03-Nov-2011	MW-70-PMW01B-091MS	K035-02M	MS	GEN PREP	RSK175	3
03-Nov-2011	MW-70-PMW01B-091MSD	K035-02S	MSD	3010A	6010B	3
03-Nov-2011	MW-70-PMW01B-091MSD	K035-02S	MSD	5030B	8260B	3
03-Nov-2011	MW-70-PMW01B-091MSD	K035-02S	MSD	GEN PREP	300.0	3
03-Nov-2011	MW-70-PMW01B-091MSD	K035-02S	MSD	GEN PREP	5310B	3
03-Nov-2011	MW-70-PMW01B-091MSD	K035-02S	MSD	GEN PREP	RSK175	3
03-Nov-2011	MW-70-PMW01B-091	K035-02T	N	5030B	8260B	3
03-Nov-2011	MW-70-PMW01B-091	K035-02T	N	GEN PREP	RSK175	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
03-Nov-2011	MW-70-27-092	K035-03	N	3010A	6010B	3
03-Nov-2011	MW-70-27-092	K035-03	N	5030B	8260B	3
03-Nov-2011	MW-70-27-092	K035-03	N	GEN PREP	2320B	3
03-Nov-2011	MW-70-27-092	K035-03	N	GEN PREP	2540C	3
03-Nov-2011	MW-70-27-092	K035-03	N	GEN PREP	300.0	3
03-Nov-2011	MW-70-27-092	K035-03	N	GEN PREP	300.0M	3
03-Nov-2011	MW-70-27-092	K035-03	N	GEN PREP	4500F	3
03-Nov-2011	MW-70-27-092	K035-03	N	GEN PREP	5310B	3
03-Nov-2011	MW-70-27-092	K035-03	N	GEN PREP	RSK175	3
03-Nov-2011	MW-70-27-092	K035-03I	N	GEN PREP	RSK175	3
03-Nov-2011	MW-70-27-092	K035-03T	N	5030B	8260B	3
03-Nov-2011	MW-70-27-092	K035-03T	N	GEN PREP	RSK175	3
03-Nov-2011	MW-70-28-094	K035-04	N	3010A	6010B	3
03-Nov-2011	MW-70-28-094	K035-04	N	GEN PREP	2320B	3
03-Nov-2011	MW-70-28-094	K035-04	N	GEN PREP	2540C	3
03-Nov-2011	MW-70-28-094	K035-04	N	GEN PREP	300.0	3
03-Nov-2011	MW-70-28-094	K035-04	N	GEN PREP	300.0M	3
03-Nov-2011	MW-70-28-094	K035-04	N	GEN PREP	4500F	3
03-Nov-2011	MW-70-28-094	K035-04	N	GEN PREP	5310B	3
03-Nov-2011	MW-70-28-094	K035-04	N	GEN PREP	RSK175	3
03-Nov-2011	MW-70-28-094	K035-04I	N	GEN PREP	RSK175	3
03-Nov-2011	MW-70-28-094	K035-04R	N	5030B	8260B	3
03-Nov-2011	MW-70-28-094	K035-04T	N	5030B	8260B	3
03-Nov-2011	MW-70-28-094	K035-04T	N	GEN PREP	RSK175	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11K035 **Laboratory: EMXT**

EDD Filename: Prep11K035 **eQAPP Name: SealBeach_IRSite70**

Method Category: METALS

Method: 6010B **Matrix: AQ**

Sample ID: MW-70-28-094 *Collected:* 11/3/2011 4:16:00 *Analysis Type:* RES/DIS *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.0541	J	0.00500	MDL	0.200	PQL	MG/L	J	RI

Sample ID: MW-70-PMW01A-089 *Collected:* 11/3/2011 11:30:00 *Analysis Type:* RES/DIS *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.0819	J	0.00500	MDL	0.200	PQL	MG/L	J	RI

Sample ID: MW-70-PMW01B-091 *Collected:* 11/3/2011 1:17:00 *Analysis Type:* RES/DIS *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.0936	J	0.00500	MDL	0.200	PQL	MG/L	J	RI

Method Category: SVOA

Method: RSK175 **Matrix: AQ**

Sample ID: MW-70-PMW01A-089 *Collected:* 11/3/2011 11:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHANE	1.3	J	0.64	MDL	2.0	PQL	UG/L	J	RI

Method Category: VOA

Method: 8260B **Matrix: AQ**

Sample ID: IR-70-FD-093 *Collected:* 11/3/2011 12:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1-TRICHLOROETHANE	0.30	J	0.20	MDL	1.0	PQL	UG/L	J	RI
1,1,2-TRICHLOROETHANE	0.51	J	0.20	MDL	1.0	PQL	UG/L	J	RI
1,2-DICHLOROPROPANE	0.39	J	0.20	MDL	1.0	PQL	UG/L	J	RI
ACETONE	5.1	J	5.0	MDL	10	PQL	UG/L	J	RI
CARBON DISULFIDE	0.24	J	0.20	MDL	1.0	PQL	UG/L	J	RI
METHYLENE CHLORIDE	0.80	J	0.50	MDL	1.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K035 **Laboratory: EMXT**

EDD Filename: Prep11K035 **eQAPP Name: SealBeach_IRSite70**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **MW-70-27-092** ***Collected:*** **11/3/2011 2:58:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1-TRICHLOROETHANE	0.29	J	0.20	MDL	1.0	PQL	UG/L	J	RI
1,1,2-TRICHLOROETHANE	0.54	J	0.20	MDL	1.0	PQL	UG/L	J	RI
1,2-DICHLOROPROPANE	0.41	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CARBON DISULFIDE	0.23	J	0.20	MDL	1.0	PQL	UG/L	J	RI
METHYLENE CHLORIDE	0.84	J	0.50	MDL	1.0	PQL	UG/L	J	RI

Sample ID: **MW-70-28-094** ***Collected:*** **11/3/2011 4:16:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHENE	0.49	J	0.20	MDL	0.50	PQL	UG/L	J	RI
CHLOROETHANE	0.53	J	0.30	MDL	2.0	PQL	UG/L	J	RI
TRICHLOROETHENE	4.3	J	0.20	MDL	5.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW01A-089** ***Collected:*** **11/3/2011 11:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CARBON DISULFIDE	0.83	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CIS-1,2-DICHLOROETHENE	0.81	J	0.20	MDL	1.0	PQL	UG/L	J	RI
METHYLENE CHLORIDE	0.66	J	0.50	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	1.0	J	0.20	MDL	5.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW01B-091** ***Collected:*** **11/3/2011 1:17:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,2-TRICHLOROETHANE	0.20	J	0.20	MDL	1.0	PQL	UG/L	J	RI
1,1-DICHLOROETHANE	0.92	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CARBON DISULFIDE	0.31	J	0.20	MDL	1.0	PQL	UG/L	J	RI
FREON113	0.97	J	0.30	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	4.4	J	0.20	MDL	5.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K035 **Laboratory: EMXT**

EDD Filename: Prep11K035 **eQAPP Name: SealBeach_IRSite70**

Reason Code Legend

Reason Code	*Description*
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Lower Rejection
ProfJudg	Professional Judgment
RI	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11K035

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 11K035 **Laboratory: EMXT**

EDD Filename: Prep11K035 **eQAPP Name: SealBeach_IRSite70**

Method: RSK175
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
MW-70-PMW01B -091MS MW-70-PMW01B -091MSD (MW-70-PMW01B -091)	METHANE	-53	-41	10.00-160.00	-	METHANE	No Qual, >4x

Method: 300.0
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
MW-70-PMW01B -091MS MW-70-PMW01B -091MSD (IR-70-FD-093 MW -70-27-092 MW -70-28-094 MW -70-PMW01A -089 MW -70-PMW01B -091)	Chloride-Cl	72	72	80.00-120.00	-	Chloride-Cl	No Qual, >4x

Reporting Limit Outliers

Lab Reporting Batch ID: 11K035 **Laboratory: EMXT**

EDD Filename: 11K035 **eQAPP Name: SealBeach_IRSite70**

Method: 6010B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
MW-70-28-094	ARSENIC	J	0.0541	0.200	PQL	MG/L	J (all detects)
MW-70-PMW01A-089	ARSENIC	J	0.0819	0.200	PQL	MG/L	J (all detects)
MW-70-PMW01B-091	ARSENIC	J	0.0936	0.200	PQL	MG/L	J (all detects)

Method: 8260B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-FD-093	1,1,1-TRICHLOROETHANE	J	0.30	1.0	PQL	UG/L	J (all detects)
	1,1,2-TRICHLOROETHANE	J	0.51	1.0	PQL	UG/L	
	1,2-DICHLOROPROPANE	J	0.39	1.0	PQL	UG/L	
	ACETONE	J	5.1	10	PQL	UG/L	
	CARBON DISULFIDE	J	0.24	1.0	PQL	UG/L	
	CHLOROFORM	J	74	100	PQL	UG/L	
	METHYLENE CHLORIDE	J	0.80	1.0	PQL	UG/L	
MW-70-27-092	1,1,1-TRICHLOROETHANE	J	0.29	1.0	PQL	UG/L	J (all detects)
	1,1,2-TRICHLOROETHANE	J	0.54	1.0	PQL	UG/L	
	1,2-DICHLOROPROPANE	J	0.41	1.0	PQL	UG/L	
	CARBON DISULFIDE	J	0.23	1.0	PQL	UG/L	
	CHLOROFORM	J	63	100	PQL	UG/L	
	METHYLENE CHLORIDE	J	0.84	1.0	PQL	UG/L	
MW-70-28-094	1,1-DICHLOROETHENE	J	0.49	0.50	PQL	UG/L	J (all detects)
	CHLOROETHANE	J	0.53	2.0	PQL	UG/L	
	TRANS-1,2-DICHLOROETHENE	J	12	25	PQL	UG/L	
	TRICHLOROETHENE	J	4.3	5.0	PQL	UG/L	
MW-70-PMW01A-089	CARBON DISULFIDE	J	0.83	1.0	PQL	UG/L	J (all detects)
	CIS-1,2-DICHLOROETHENE	J	0.81	1.0	PQL	UG/L	
	METHYLENE CHLORIDE	J	0.66	1.0	PQL	UG/L	
	TRICHLOROETHENE	J	1.0	5.0	PQL	UG/L	
MW-70-PMW01B-091	1,1,2-TRICHLOROETHANE	J	0.20	1.0	PQL	UG/L	J (all detects)
	1,1-DICHLOROETHANE	J	0.92	1.0	PQL	UG/L	
	CARBON DISULFIDE	J	0.31	1.0	PQL	UG/L	
	FREON113	J	0.97	1.0	PQL	UG/L	
	TRANS-1,2-DICHLOROETHENE	J	35	100	PQL	UG/L	
	TRICHLOROETHENE	J	4.4	5.0	PQL	UG/L	

Method: RSK175

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
MW-70-PMW01A-089	ETHANE	J	1.3	2.0	PQL	UG/L	J (all detects)
MW-70-PMW01B-091	ETHENE	J	310	1000	PQL	UG/L	J (all detects)

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Field Duplicate RPD Report

Lab Reporting Batch ID: 11K035 **Laboratory: EMXT**

EDD Filename: 11K035 **eQAPP Name: SealBeach_IRSite70**

Method: 2320B
Matrix: AQ

Analyte	Concentration (MG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-27-092	IR-70-FD-093			
Total Alkalinity	783	784	0	0.00	No Qualifiers Applied

Method: 2540C
Matrix: AQ

Analyte	Concentration (MG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-27-092	IR-70-FD-093			
TDS	7400	7320	1	20.00	No Qualifiers Applied

Method: 300.0
Matrix: AQ

Analyte	Concentration (MG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-27-092	IR-70-FD-093			
Chloride-Cl	1730	1760	2	20.00	No Qualifiers Applied
SULFATE	2630	2680	2	20.00	

Method: 5310B
Matrix: AQ

Analyte	Concentration (MG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-27-092	IR-70-FD-093			
TOC	4.16	4.05	3	20.00	No Qualifiers Applied

Method: 6010B
Matrix: AQ

Analyte	Concentration (MG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-27-092	IR-70-FD-093			
ARSENIC	0.353	0.358	1	20.00	No Qualifiers Applied
IRON	34.0	34.4	1	20.00	
MANGANESE	9.90	9.74	2	20.00	

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Field Duplicate RPD Report

Lab Reporting Batch ID: 11K035 **Laboratory: EMXT**

EDD Filename: 11K035 **eQAPP Name: SealBeach_IRSite70**

Method: 8260B
Matrix: AQ

Analyte	Concentration (UG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-27-092	IR-70-FD-093			
1,1,1-TRICHLOROETHANE	0.29	0.30	3	20.00	No Qualifiers Applied
1,1,2-TRICHLOROETHANE	0.54	0.51	6	20.00	
1,1-DICHLOROETHANE	3.6	3.5	3	20.00	
1,1-DICHLOROETHENE	4.2	4.0	5	20.00	
1,2-DICHLOROETHANE	0.54	0.53	2	20.00	
1,2-DICHLOROPROPANE	0.41	0.39	5	20.00	
ACETONE	10 U	5.1	200	20.00	
CARBON DISULFIDE	0.23	0.24	4	20.00	
CHLOROETHANE	3.2	3.1	3	20.00	
CHLOROFORM	59	58	2	20.00	
CIS-1,2-DICHLOROETHENE	1200	1500	22	20.00	
FREON113	14	14	0	20.00	
METHYLENE CHLORIDE	0.84	0.80	5	20.00	
TETRACHLOROETHYLENE	1.8	1.7	6	20.00	
TRANS-1,2-DICHLOROETHENE	12	12	0	20.00	
TRICHLOROETHENE	1800	2100	15	20.00	
VINYL CHLORIDE	1000	1300	26	20.00	

Method: RSK175
Matrix: AQ

Analyte	Concentration (UG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-27-092	IR-70-FD-093			
ETHANE	2.0 U	2.8	200	20.00	No Qualifiers Applied
ETHENE	72	67	7	20.00	
METHANE	12000	11000	9	20.00	

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

LDC #: 26803E1
SDG #: 11K035
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR IV

Date: 12/21/11
Page: 1 of 1
Reviewer: EJ
2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/3/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30, r^2
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	A	Not reviewed for ADR validation.
VI.	Surrogate spikes	A	Not reviewed for ADR validation.
VII.	Matrix spike/Matrix spike duplicates	A	Not reviewed for ADR validation.
VIII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS 1D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	Not reviewed for ADR validation.
XI.	Target compound identification	A	Not reviewed for ADR validation.
XII.	Compound quantitation/RL/LOQ/LODs	A	Not reviewed for ADR validation.
XIII.	Tentitatively identified compounds (TICs)	N	Not reviewed for ADR validation.
XIV.	System performance	A	Not reviewed for ADR validation.
XV.	Overall assessment of data	A	Not reviewed for ADR validation.
XVI.	Field duplicates	N	
XVII.	Field blanks	N	TB = 1 U

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

1 2	MW-70-PMW01A-089**	11 1	MBLK1W	21		31	
2 1	MW-~~07~~ 70-PMW01B-091	12 2	MBLK2W	22		32	
3 3	MW-07-PMW01B-091DL1	13	MBLK3W	23		33	
4 1	MW-70-27-092	14	#2 MS	24		34	
5 2	MW-70-27-092DL1	15	#2 MSD	25		35	
6 2	MW-70-28-094	16		26		36	
7 2	MW-70-28-094DL1	17		27		37	
8 1	IR-70-FD-093	18		28		38	
9 3	IR-70-FD-093DL1	19		29		39	
10 2	IR-70-TB-090	20		30		40	

LDC #: 26803E4

SDG #: 11K035

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR~~IV~~

Date: 12-16-11

Page: 1 of 1

Reviewer: MG

2nd Reviewer: ✓

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11-3-11
II.	ICP/MS Tune	N	not utilized
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	Not reviewed for ADR validation.
VI.	Matrix Spike Analysis	A	Not reviewed for ADR validation. MS/MSD
VII.	Duplicate Sample Analysis	N	Not reviewed for ADR validation.
VIII.	Laboratory Control Samples (LCS)	A	Not reviewed for ADR validation. LCS/LCSD
IX.	Internal Standard (ICP-MS)	N	Not reviewed for ADR validation. not utilized
X.	Furnace Atomic Absorption QC	N	Not reviewed for ADR validation. not utilized
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	A	Not reviewed for ADR validation.
XIII.	Overall Assessment of Data	A	Not reviewed for ADR validation.
XIV.	Field Duplicates	~~N~~	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

all water

1	MW-70-PMW01A-089**	11		21		31	
2	MW-07-PMW01B-091	12		22		32	
3	MW-70-27-092	13		23		33	
4	MW-70-28-094	14		24		34	
5	IR-70-FD-093	15		25		35	
6	MW-07-PMW01B-091MS	16		26		36	
7	MW-07-PMW01B-091MSD	17		27		37	
8		18		28		38	
9		19		29		39	
10		20	PBW	30		40	

Notes:

LDC #: 26803E4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: MG
2nd reviewer: ✓

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1→5	W	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
QC 6, 7	↓	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____

LDC #: 26803E51 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/21/11
SDG #: 11K035 ADR/IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/3/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	Not reviewed for ADR validation.
V	Surrogate recovery	N	Not reviewed for ADR validation. not Required
VI.	Matrix spike/Matrix spike duplicates	SW	Not reviewed for ADR validation. ~~no~~ Ass. sample
VII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS ID
VIII.	Target compound identification	A	Not reviewed for ADR validation.
IX.	Compound quantitation/RL/LOQ/LODs	SW	Not reviewed for ADR validation.
X.	System Performance	A	Not reviewed for ADR validation.
XI.	Overall assessment of data	SW	Not reviewed for ADR validation.
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water

1	MW-70-PMW01A-089**	11	MW-70-28-094DL1	21	MBLK1W	31	
2	MW-70-PMW01A-089DL1**	12	MW-70-28-094DL2	22		32	
3	MW-70-PMW01A-089DL2**	13	IR-70-FD-093	23		33	
4	MW-07-PMW01B-091	14	IR-70-FD-093DL1	24		34	
5	MW-07-PMW01B-091DL1	15	IR-70-FD-093DL2	25		35	
6	MW-07-PMW01B-091DL2	16	MW-07-PMW01B-091MS	26		36	
7	MW-70-27-092	17	MW-07-PMW01B-091MSD	27		37	
8	MW-70-27-092DL1	18		28		38	
9	MW-70-27-092DL2	19		29		39	
10	MW-70-28-094	20		30		40	

Notes:

LDC #: 26803E5

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer: FT
2nd Reviewer: _____

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Level IV/D Only
Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	Ethene, methane	x'd cal Range	1	J/Adit
	methane	↓.	2	J/Adit

Comments: See sample calculation verification worksheet for recalculations

COMQUANew.wpd

LDC #: 26803E5

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: FT
2nd Reviewer: _____

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y/N N/A Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	Ethene, methane	x'd cal Range	1	R/A
	all except ethene	diluted	2	↓
	all except methane	diluted	3	↓

Comments: _____

OVRNew.wpd

LDC #: 26803E6 **VALIDATION COMPLETENESS WORKSHEET** Date: 12-16-11

SDG #: 11K035 ADR/~~IV~~ Page: 1 of 1

Laboratory: EMAX Laboratories, Inc. Reviewer: MG

2nd Reviewer: [illegible]

METHOD: (Analyte) Alkalinity (Standard Method 2320B), Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Dissolved Hydrogen Sulfide (SM4500F), Organic Acids (EPA Method 300.0M), TDS (Standard Method 2540C), TOC (Standard Method 5310B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11-3-11
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	A	Not reviewed for ADR validation. MS/MSD
VI.	Duplicates	A	Not reviewed for ADR validation. DUP
VII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/LCSD
VIII.	Sample result verification	A	Not reviewed for ADR validation.
IX.	Overall assessment of data	A	Not reviewed for ADR validation.
X.	Field duplicates	~~N~~	
XI.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

all water

1	MW-70-PMW01A-089**	11		21		31	
2	MW-07-PMW01B-091	12		22		32	
3	MW-70-27-092	13		23		33	
4	MW-70-28-094	14		24		34	
5	IR-70-FD-093	15		25		35	
6	MW-07-PMW01B-091MS	16		26		36	
7	MW-07-PMW01B-091MSD	17		27		37	
8	MW-07-PMW01B-091DUP	18		28		38	
9		19	PBW1	29		39	
10		20	PBW2	30		40	

Notes:

LDC #: 26803E6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: MG
2nd reviewer: ✓

All circled methods are applicable to each sample.

Sample ID	Matrix	Parameter
1→5	W	pH (TDS) (Cl) F (NO3) (NO2) (SO4) PO4 (ALK) CN- NH3 TKN (TOC) CR6+ ClO4 (H2S) (Org Acids)
QC 6	↓	pH TDS (Cl) F (NO3) (NO2) (SO4) PO4 ALK CN- NH3 TKN (TOC) CR6+ ClO4 (Org Acids)
7	↓	pH TDS (Cl) F (NO3) (NO2) (SO4) PO4 ALK CN- NH3 TKN (TOC) CR6+ ClO4
8	↓	pH (TDS) (Cl) F (NO3) (NO2) (SO4) PO4 (ALK) CN- NH3 TKN TOC CR6+ ClO4 (H2S) (Org Acids)
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4

Comments:

Enclosure II

EPA Level IV Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 3, 2011
LDC Report Date:	December 21, 2011
Matrix:	Water
Parameters:	Volatiles
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K035

Sample Identification

MW-70-PMW01A-089

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample IR-70-TB-090 was identified as a trip blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K035	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Volatiles - Data Qualification Summary - SDG 11K035

SDG	Sample	Compound	Flag	A or P	Reason
11K035	MW-70-PMW01A-089	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs

NWS Seal Beach, IR Site 70
Volatiles - Laboratory Blank Data Qualification Summary - SDG 11K035

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Volatiles - Field Blank Data Qualification Summary - SDG 11K035

No Sample Data Qualified in this SDG

LDC #: 26803E1
SDG #: 11K035
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR/IV

Date: 12/21/11
Page: 1 of 1
Reviewer: EF
2nd Reviewer: A

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/3/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30, r^2
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	A	~~Not reviewed for ADR validation.~~
VI.	Surrogate spikes	A	Not reviewed for ADR validation.
VII.	Matrix spike/Matrix spike duplicates	A	Not reviewed for ADR validation.
VIII.	Laboratory control samples	A	~~Not reviewed for ADR validation.~~ LCS 1D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	~~Not reviewed for ADR validation.~~
XI.	Target compound identification	A	Not reviewed for ADR validation.
XII.	Compound quantitation/RL/LOQ/LODs	A	Not reviewed for ADR validation.
XIII.	Tentitatively identified compounds (TICs)	N	Not reviewed for ADR validation.
XIV.	System performance	A	Not reviewed for ADR validation.
XV.	Overall assessment of data	A	Not reviewed ~~for ADR validation.~~
XVI.	Field duplicates	N	
XVII.	Field blanks	N	TB = U

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

1 2	MW-70-PMW01A-089**	11 1	MBLK1W	21		31	
2 1	~~MW-07-PMW01B-091~~ MW-70	12 2	MBLK2W	22		32	
3 3	MW-07-PMW01B-091DL1	13	MBLK3W	23		33	
4 1	MW-70-27-092	14	#2 MS	24		34	
5 2	MW-70-27-092DL1	15	#2 MSD	25		35	
6 2	MW-70-28-094	16		26		36	
7 2	MW-70-28-094DL1	17		27		37	
8 1	IR-70-FD-093	18		28		38	
9 3	IR-70-FD-093DL1	19		29		39	
10 2	IR-70-TB-090	20		30		40	

DC #: 26803E)

VALIDATION FINDINGS CHECKLIST

Reviewer: FT

2nd Reviewer: [illegible]

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.			✓	
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

DC #: 268031

VALIDATION FINDINGS CHECKLIST

Reviewer: FT

2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System perfonmance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 26803E1

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the followin calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (10 std)	Recalculated RRF (10 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	V001131	10/31/11	C (1st internal standard)	0.515	0.515	0.461	0.461	7.36	7.36
			V (2nd internal standard)	1.714	1.714	1.767	1.767	3.77	3.77
			111 (3rd internal standard)	1.581	1.581	1.561	1.561	2.0	2.0
			(4th internal standard)						
2			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculate results.

LDC #: 26803 E1

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: C

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	RKV296	11/14/11	C (1st internal standard)	0.461	0.425	0.425	7.8	7.8
			Y (2nd internal standard)	1.767	1.756	1.756	0.6	0.6
			JJ (3rd internal standard)	1.561	1.658	1.658	6.2	6.2
			(4th internal standard)					
2			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
3			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

Surrogate Results Verification

Reviewer: FT
2nd reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4	10	11.42	114	114	0
Toluene-d8	↓	10.07	101	101	↓
Bromofluorobenzene	↓	10.30	103	103	↓

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 26803t1

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD = | MSC - MSC | * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD sample: 14 & 15

Compound	Spike Added (ug/L)		Sample Concentration (ug/L)	Spiked Sample Concentration (ug/L)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	10.0	10.0	ND	11.2	10.6	112	112	106	106	6	6
Trichloroethene			4.42	13.6	13.4	92	92	89	89	2	2
Benzene			ND	9.66	9.50	97	97	95	95	2	2
Toluene				9.79	9.56	98	98	96	96	2	2
Chlorobenzene				10.1	9.67	101	101	97	97	4	4

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803E1
SDG #: all cons

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = | LCS - LCSD | * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: lcs ID

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	10.0	10.0	9.98	9.99	100	100	100	100	0	0
Trichloroethene	↓	↓	10.1	10.0	101	101	100	100	1	1
Benzene	↓	↓	9.85	9.83	98	98	98	98	0	0
Toluene	↓	↓	10.1	10.0	101	101	100	100	1	1
Chlorobenzene	↓	↓	10.3	10.2	103	103	102	102	1	1

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803 F1

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer: C

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

V_o = Volume or weight of sample pruged in milliliters (ml) or grams (g).

Df = Dilution factor.

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. #1, C:

Conc. = (320387)(10)( )( )
(1243459)(0.46)( )( )

=

5.5

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 3, 2011
LDC Report Date:	December 21, 2011
Matrix:	Water
Parameters:	Dissolved Metals
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K035

Sample Identification

MW-70-PMW01A-089

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Dissolved Metals. The metals analyzed were Arsenic, Iron, and Manganese.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No dissolved metal contaminants were found in the initial, continuing and preparation blanks.

No field blanks were identified in this SDG.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

XII. Sample Result Verification

All sample result verifications were acceptable.

All metals reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 11K035	All analytes reported below the RL and above the MDL.	J (all detects)	A

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Dissolved Metals - Data Qualification Summary - SDG 11K035

SDG	Sample	Analyte	Flag	A or P	Reason
11K035	MW-70-PMW01A-089	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification

NWS Seal Beach, IR Site 70
Dissolved Metals - Laboratory Blank Data Qualification Summary - SDG 11K035

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Dissolved Metals - Field Blank Data Qualification Summary - SDG 11K035

No Sample Data Qualified in this SDG

LDC #: 26803E4

VALIDATION COMPLETENESS WORKSHEET

~~ADR~~/IV

Date: 12-16-11

SDG #: 11K035

Page: 1 of 1

Laboratory: EMAX Laboratories, Inc.

Reviewer: MG

2nd Reviewer: [illegible]

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11-3-11
II.	ICP/MS Tune	N	not utilized
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	Not reviewed for ADR validation.
VI.	Matrix Spike Analysis	A	Not reviewed for ADR validation. MS/MSD
VII.	Duplicate Sample Analysis	N	Not reviewed for ADR validation.
VIII.	Laboratory Control Samples (LCS)	A	Not reviewed for ADR validation. LCS/LCSD
IX.	Internal Standard (ICP-MS)	N	Not reviewed for ADR validation. not utilized
X.	Furnace Atomic Absorption QC	N	Not reviewed for ADR validation. not utilized
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	A	Not reviewed for ADR validation.
XIII.	Overall Assessment of Data	A	Not reviewed for ADR validation.
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

all water

1	MW-70-PMW01A-089**	11		21		31	
2	~~MW-07-PMW01B-091~~	12		22		32	
3	~~MW-70-27-092~~	13		23		33	
4	~~MW-70-28-094~~	14		24		34	
5	~~JR-70-FD-093~~	15		25		35	
6	~~MW-07-PMW01B-091MS~~	16		26		36	
7	~~MW-07-PMW01B-091MSD~~	17		27		37	
8		18		28		38	
9		19		29		39	
10		20	PBW	30		40	

Notes:

LDC #: 26803E4

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer: ✓

Method: Metals (EPA SW 846 Method 6010B/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. ICP/MS Tune				
Were all isotopes in the tuning solution mass resolution within 0.1 amu?			✓	
Were %RSD of isotopes in the tuning solution ≤5%?			✓	
III. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury) QC limits?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
IV. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
V. ICP Interference Check Sample				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.	✓			
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were ≤ 5X the RL.	✓			
VII. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			

LDC #: 26803E4

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer: V

Validation Area	Yes	No	NA	Findings/Comments
VIII. Furnace Atomic Absorption QC				
If MSA was performed, was the correlation coefficients > 0.995?			✓	
Do all applicable analysies have duplicate injections? (Level IV only)			✓	
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%? (Level IV only)			✓	
Were analytical spike recoveries within the 85-115% QC limits?			✓	
IX. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the MDL (ICP)/>100X the MDL(ICP/MS)?	✓			
Were all percent differences (%Ds) < 10%?	✓			
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.		✓		
X. Internal Standards (EPA SW 846 Method 6020/EPA 200.8)				
Were all the percent recoveries (%R) within the 30-120% (6020)/60-125% (200.8) of the intensity of the internal standard in the associated initial calibration?			✓	
If the %Rs were outside the criteria, was a reanalysis performed?			✓	
XI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
XII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 26803E4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: MG
2nd reviewer: ✓

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1→5	W	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
QC 6, 7	↓	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
Analysis Method		
ICP	W	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____

Comments: Mercury by CVAA if performed

LDC #: 26803E4

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: MG
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

$$\%R = \frac{\text{Found}}{\text{True}} \times 100$$

Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
1556 ICV	ICP (Initial calibration)	Fe	25017	25000	100	100	Y
	ICP/MS (Initial calibration)						
	CVAA (Initial calibration)						
1724 CCV3	ICP (Continuing calibration)	As	1026.0	1000	103	103	
	ICP/MS (Continuing calibration)						
	CVAA (Continuing calibration)						
	GFAA (Initial calibration)						
	GFAA (Continuing calibation)						

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803E4

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: MG
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$ Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
1611 ICSAB	ICP interference check	Fe	188.80 (mg/L)	200 (mg/L)	94	94	Y
1623 LCS	Laboratory control sample	As	0.53822 (mg/L)	0.5 (mg/L)	108	108	↓
1739 6	Matrix spike	Mn	(SSR-SR) 0.5014 (mg/L)	0.5 (mg/L)	100	100	↓
1739/1742 6/7	Duplicate	Fe	29.589 (mg/L)	29.765 (mg/L)	1	1	↓
1733/1736 2	ICP serial dilution	Mn	2.4384 (mg/L)	2.4675 (mg/L)	1	1	↓

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803E4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: MG
2nd reviewer: ✓

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for #1, Mn were recalculated and verified using the following equation:

Concentration = (RD)(FV)(Dil) / (In. Vol.)

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

$$\frac{(1.3372\ mg/L)(0.050\ L)}{0.050\ L} = 1.3372\ mg/L$$

#	Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
1	1	As	0.0819	0.0819	Y
		Fe	2.87	2.87	↓
		Mn	1.34	1.34	↓

Note:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 3, 2011
LDC Report Date:	December 21, 2011
Matrix:	Water
Parameters:	Wet Chemistry
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K035

Sample Identification

MW-70-PMW01A-089

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Standard Method 2320B for Alkalinity, EPA Method 300.0 for Chloride, Nitrate as Nitrogen, Nitrite as Nitrogen, and Sulfate, Standard Method 4500F for Dissolved Hydrogen Sulfide, EPA Method 300.0M for Organic Acids, Standard Method 2540C for Total Dissolved Solids, and Standard Method 5310B for Total Organic Carbon.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Continuing Calibration

Continuing calibration frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

No field blanks were identified in this SDG.

V. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VI. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Sample Result Verification

All sample result verifications were acceptable.

All analytes reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 11K035	All analytes reported below the RL and above the MDL.	J (all detects)	A

IX. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

X. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Wet Chemistry - Data Qualification Summary - SDG 11K035

SDG	Sample	Analyte	Flag	A or P	Reason
11K035	MW-70-PMW01A-089	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification

NWS Seal Beach, IR Site 70
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 11K035

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Wet Chemistry - Field Blank Data Qualification Summary - SDG 11K035

No Sample Data Qualified in this SDG

LDC #: 26803E6

SDG #: 11K035

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

~~ADR~~/IV

Date: 12-16-11

Page: 1 of 1

Reviewer: MG

2nd Reviewer: [illegible]

METHOD: (Analyte) Alkalinity (Standard Method 2320B), Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Dissolved Hydrogen Sulfide (SM4500F), Organic Acids (EPA Method 300.0M), TDS (Standard Method 2540C), TOC (Standard Method 5310B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11-3-11
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	A	Not reviewed for ADR validation. MS/MSD
VI.	Duplicates	A	Not reviewed for ADR validation. DUP
VII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/LCSD
VIII.	Sample result verification	A	Not reviewed for ADR validation.
IX.	Overall assessment of data	A	Not reviewed for ADR validation.
X.	Field duplicates	N	
XI	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

all water

1	MW-70-PMW01A-089**	11		21		31	
2	~~MW-07-PMW01B-091~~	12		22		32	
3	~~MW-70-27-092~~	13		23		33	
4	~~MW-70-28-094~~	14		24		34	
5	~~IR-70-FD-093~~	15		25		35	
6	~~MW-07-PMW01B-091MS~~	16		26		36	
7	~~MW-07-PMW01B-091MSD~~	17		27		37	
8	~~MW-07-PMW01B-091DUP~~	18		28		38	
9		19	PBW1	29		39	
10		20	~~PBW2~~	30		40	

Notes:

LDC #: 26803E6

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer: ✓

Method: Inorganics (EPA Method see cover)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?	✓			
Were titrant checks performed as required? (Level IV only)	✓			
Were balance checks performed as required? (Level IV only)	✓			
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.	✓			
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL(≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were ≤ 5X the CRDL.	✓			
V. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	✓			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26803E6

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer: V

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
X. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 26803E6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: MG
2nd reviewer: V

All circled methods are applicable to each sample.

Sample ID	Matrix	Parameter
1→5	W	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 H_2S Org Acids
QC 6	↓	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ Org Acids
7	↓	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____
8	↓	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 H_2S Org Acids
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____

LDC #: 26803E6

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: MG
2nd Reviewer: [illegible]

METHOD: Inorganics, Method see cover

The correlation coefficient (r) for the calibration of Lactate was recalculated. Calibration date: 9-26-11

An initial or continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found / True x 100 Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution
True = concentration of each analyte in the ICV or CCV source

Type of Analysis	Analyte	Standard ID	Conc Found (units)	Area True (units)	Recalculated r or %R	Reported r or %R	Acceptable (Y/N)
Initial calibration	Lactate	Blank	–	–	r^2=0.9996	r^2=0.9995	Y
		Standard 1	0.1 (mg/L)	0.004418			
		Standard 2	0.5 ( )	0.022353			
		Standard 3	1.0 ( )	0.047315			
		Standard 4	2.0 ( )	0.094349			
		Standard 5	3.0 ( )	0.146128			
		Standard 6					
		Standard 7					
Calibration verification	Cl	CCV337	1.886 (mg/L)	2.0 (mg/L)	94.3	94.3	
Calibration verification	NO_3-N	CCV333	0.956 (mg/L)	1.0 (mg/L)	95.6	95.6	
Calibration verification	TOC	CCV1	26.26 (mg/L)	25.0 (mg/L)	105	not reported	

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803E6

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: MG
2nd Reviewer: [illegible]

METHOD: Inorganics, Method see cover

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
LCS	Laboratory control sample	TDS	895 (mg/L)	1000 (mg/L)	90	90	Y
0503 6	Matrix spike sample	Butyrate	(SSR-SR) 8.13 (mg/L)	10.0 (mg/L)	81	81	↓
8	Duplicate sample	total Alk	766.96 (mg/L)	772.23 (mg/L)	1	1	↓

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

TOTCLC.6

LDC #: 26803E6

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: MG
2nd reviewer: [illegible]

METHOD: Inorganics, Method see cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments?
Y N N/A Are all detection limits below the CRQL?

Compound (analyte) results for # 1, Cl reported with a positive detect were recalculated and verified using the following equation:

Concentration =

$y = mx + b$
where $m = 0.0557644$
$b = 0.0866239$
dil = 50 x

Recalculation:

$Cl = 50 \times [0.0557644 (252.611) + 0.0866239]$
$= 708.66$

#	Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
1	1	Cl	709	709	Y
		SO4	1.33	1.33	↓
		Acetate	327	327	↓
		Butyrate	5.23	5.23	↓
		Propionate	18.4	18.4	↓
		total Alk	1120	1120	↓
		TDS	2370	2370	↓
		TOC	174	175	↓

Note:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 3, 2011
LDC Report Date:	December 21, 2011
Matrix:	Water
Parameters:	Methane, Ethane, & Ethene
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K035

Sample Identification

MW-70-PMW01A-089
MW-70-PMW01A-089DL1
MW-70-PMW01A-089DL2

Introduction

This data review covers 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Method RSK-175 for Methane, Ethane, and Ethene.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No methane, ethane, or ethene was found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were not required by the method.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were not within QC limits. Since there were no associated samples, no data were qualified.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
MW-70-PMW01A-089	Ethene Methane	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects) J (all detects)	A
MW-70-PMW01A-089DL1	Methane	Sample result exceeded calibration range.	Reported result should be within calibration range	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K035	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

The overall assessment of data was acceptable. In the case where more than one result was reported for an individual sample, the least technically acceptable results were rejected as follows:

Sample	Compound	Flag	A or P
MW-70-PMW01A-089	Ethene Methane	R	A
MW-70-PMW01A-089DL1	Ethane Methane	R R	A
MW-70-PMW01A-089DL2	Ethane Ethene	R R	A

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Methane, Ethane, & Ethene - Data Qualification Summary - SDG 11K035

SDG	Sample	Compound	Flag	A or P	Reason
11K035	MW-70-PMW01A-089	Ethene Methane	J (all detects)	A	Compound quantitation and RLs (exceeded range)
11K035	MW-70-PMW01A-089DL1	Methane	J (all detects)	A	Compound quantitation and RLs (exceeded range)
11K035	MW-70-PMW01A-089 MW-70-PMW01A-089DL1 MW-70-PMW01A-089DL2	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs
11K035	MW-70-PMW01A-089	Ethene Methane	R	A	Overall assessment of data
11K035	MW-70-PMW01A-089DL1	Ethane Methane	R R	A	Overall assessment of data
11K035	MW-70-PMW01A-089DL2	Ethane Ethene	R R	A	Overall assessment of data

NWS Seal Beach, IR Site 70
Methane, Ethane, & Ethene - Laboratory Blank Data Qualification Summary - SDG 11K035

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Methane, Ethane, & Ethene - Field Blank Data Qualification Summary - SDG 11K035

No Sample Data Qualified in this SDG

LDC #: 26803E51 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/21/11
SDG #: 11K035 ADR/IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/3/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	~~Not reviewed for ADR validation.~~
V	Surrogate recovery	N	Not reviewed for ADR validation. not Required
VI.	Matrix spike/Matrix spike duplicates	SW	Not reviewed for ADR validation. no Ass. sample
VII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS ID
VIII.	Target compound identification	A	Not reviewed for ADR validation.
IX.	Compound quantitation/RL/LOQ/LODs	SW	Not reviewed for ADR validation.
X.	System Performance	A	Not reviewed for ADR validation.
XI.	Overall assessment of data	SW	Not reviewed for ADR validation.
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water

1	MW-70-PMW01A-089**	11	~~MW-70-28-094DL1~~	21	MBLK1W	31	
2	MW-70-PMW01A-089DL1**	12	MW-70-28-094DL2	22		32	
3	MW-70-PMW01A-089DL2**	13	IR-70-FD-093	23		33	
4	~~MW-07-PMW01B-091~~	14	IR-70-FD-093DL1	24		34	
5	MW-07-PMW01B-091DL1	15	IR-70-FD-093DL2	25		35	
6	MW-07-PMW01B-091DL2	16	MW-07-PMW01B-091MS	26		36	
7	MW-70-27-092	17	MW-07-PMW01B-091MSD	27		37	
8	MW-70-27-092DL1	18		28		38	
9	MW-70-27-092DL2	19		29		39	
10	~~MW-70~~-28-094	20		30		40	

Notes:

LDC #: 26803ES1
SDG #: all waters

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FT
2nd Reviewer: [illegible]

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?			✓	
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26803E51
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: W

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26803E5

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: ✓ **GC** __ **HPLC**

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Level IV/D Only
Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	Ethene, methane	x'd cal Range	1	J/Adit
	methane	↓	2	J/Adit

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26803E5

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

✓ Y N N/A Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	Ethene, methane	x'd cal Range	1	R/A
	all except ethene	diluted	2	↓
	all except methane	diluted	3	↓

Comments:

OVRNew.wpd

LDC #: 26803E5/
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: PJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC_____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (13.6std)	Recalculated CF (13.6std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	1CAL	11/01/11	Methane	29307	29307	30507.1	30507.1	5.6	5.6
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803E5 /
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	FK090034	11/09/11	methane	13.6	13.65	13.65	1	1
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803E5 /
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: EZ
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added
RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 16 & 17

Compound	Spike Added (ug/L)		Sample Conc. (ug/L)	Spike Sample Concentration (ug/L)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	--	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)	13.6	13.6	465 E	458 E	460 E	-53	-53	-41	-41	0	0
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803E5 /
SDG #: µg cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = I LCS - LCSD I * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: Lcs 10

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)	13.6	13.6	14.0	14.3	103	103	105	105	2	2
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803E5 /
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. 3 Compound Name Methane

Concentration = 835201 (500) / 30507.1

= 14000 ug/L

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments:

SAMPCALew.wpd

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
07-Nov-2011	MW-70-PMW03A-095	K063-01	N	3010A	6010B	4
07-Nov-2011	MW-70-PMW03A-095	K063-01	N	GEN PREP	2320B	4
07-Nov-2011	MW-70-PMW03A-095	K063-01	N	GEN PREP	2540C	4
07-Nov-2011	MW-70-PMW03A-095	K063-01	N	GEN PREP	300.0	4
07-Nov-2011	MW-70-PMW03A-095	K063-01	N	GEN PREP	300.0M	4
07-Nov-2011	MW-70-PMW03A-095	K063-01	N	GEN PREP	4500F	4
07-Nov-2011	MW-70-PMW03A-095	K063-01	N	GEN PREP	5310B	4
07-Nov-2011	MW-70-PMW03A-095	K063-01	N	GEN PREP	RSK175	4
07-Nov-2011	MW-70-PMW03A-095	K063-01R	N	5030B	8260B	4
07-Nov-2011	MW-70-PMW03A-095	K063-01T	N	GEN PREP	RSK175	4
07-Nov-2011	IR-70-TB-096	K063-07	TB	5030B	8260B	3
07-Nov-2011	MW-70-PMW03B-097	K063-02	N	3010A	6010B	3
07-Nov-2011	MW-70-PMW03B-097	K063-02	N	GEN PREP	2320B	3
07-Nov-2011	MW-70-PMW03B-097	K063-02	N	GEN PREP	2540C	3
07-Nov-2011	MW-70-PMW03B-097	K063-02	N	GEN PREP	300.0	3
07-Nov-2011	MW-70-PMW03B-097	K063-02	N	GEN PREP	300.0M	3
07-Nov-2011	MW-70-PMW03B-097	K063-02	N	GEN PREP	4500F	3
07-Nov-2011	MW-70-PMW03B-097	K063-02	N	GEN PREP	5310B	3
07-Nov-2011	MW-70-PMW03B-097	K063-02	N	GEN PREP	RSK175	3
07-Nov-2011	MW-70-PMW03B-097DUP	K063-02D	DUP	GEN PREP	2320B	3
07-Nov-2011	MW-70-PMW03B-097DUP	K063-02D	DUP	GEN PREP	2540C	3
07-Nov-2011	MW-70-PMW03B-097DUP	K063-02D	DUP	GEN PREP	300.0	3
07-Nov-2011	MW-70-PMW03B-097DUP	K063-02D	DUP	GEN PREP	300.0M	3
07-Nov-2011	MW-70-PMW03B-097DUP	K063-02D	DUP	GEN PREP	4500F	3
07-Nov-2011	MW-70-PMW03B-097MS	K063-02M	MS	3010A	6010B	3
07-Nov-2011	MW-70-PMW03B-097MS	K063-02M	MS	5030B	8260B	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
07-Nov-2011	MW-70-PMW03B-097MS	K063-02M	MS	GEN PREP	300.0	3
07-Nov-2011	MW-70-PMW03B-097MS	K063-02M	MS	GEN PREP	300.0M	3
07-Nov-2011	MW-70-PMW03B-097MS	K063-02M	MS	GEN PREP	5310B	3
07-Nov-2011	MW-70-PMW03B-097MS	K063-02M	MS	GEN PREP	RSK175	3
07-Nov-2011	MW-70-PMW03B-097	K063-02R	N	5030B	8260B	3
07-Nov-2011	MW-70-PMW03B-097MSD	K063-02S	MSD	3010A	6010B	3
07-Nov-2011	MW-70-PMW03B-097MSD	K063-02S	MSD	5030B	8260B	3
07-Nov-2011	MW-70-PMW03B-097MSD	K063-02S	MSD	GEN PREP	5310B	3
07-Nov-2011	MW-70-PMW03B-097MSD	K063-02S	MSD	GEN PREP	RSK175	3
07-Nov-2011	MW-70-PMW03B-097	K063-02T	N	5030B	8260B	3
07-Nov-2011	MW-70-PMW03B-097	K063-02T	N	GEN PREP	RSK175	3
07-Nov-2011	IR-70-FD-098	K063-06	FD	3010A	6010B	3
07-Nov-2011	IR-70-FD-098	K063-06	FD	5030B	8260B	3
07-Nov-2011	IR-70-FD-098	K063-06	FD	GEN PREP	2320B	3
07-Nov-2011	IR-70-FD-098	K063-06	FD	GEN PREP	2540C	3
07-Nov-2011	IR-70-FD-098	K063-06	FD	GEN PREP	300.0	3
07-Nov-2011	IR-70-FD-098	K063-06	FD	GEN PREP	300.0M	3
07-Nov-2011	IR-70-FD-098	K063-06	FD	GEN PREP	4500F	3
07-Nov-2011	IR-70-FD-098	K063-06	FD	GEN PREP	5310B	3
07-Nov-2011	IR-70-FD-098	K063-06	FD	GEN PREP	RSK175	3
07-Nov-2011	IR-70-FD-098	K063-06T	FD	5030B	8260B	3
07-Nov-2011	IR-70-FD-098	K063-06T	FD	GEN PREP	RSK175	3
07-Nov-2011	IW-70-SAB06-099	K063-03	N	3010A	6010B	4
07-Nov-2011	IW-70-SAB06-099	K063-03	N	GEN PREP	2320B	4
07-Nov-2011	IW-70-SAB06-099	K063-03	N	GEN PREP	2540C	4
07-Nov-2011	IW-70-SAB06-099	K063-03	N	GEN PREP	300.0	4

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
07-Nov-2011	IW-70-SAB06-099	K063-03	N	GEN PREP	300.0M	4
07-Nov-2011	IW-70-SAB06-099	K063-03	N	GEN PREP	4500F	4
07-Nov-2011	IW-70-SAB06-099	K063-03	N	GEN PREP	5310B	4
07-Nov-2011	IW-70-SAB06-099	K063-03	N	GEN PREP	RSK175	4
07-Nov-2011	IW-70-SAB06-099	K063-03N	N	5030B	8260B	4
07-Nov-2011	IW-70-SAB06-099	K063-03T	N	GEN PREP	RSK175	4
07-Nov-2011	MW-70-PMW02A-100	K063-04	N	3010A	6010B	3
07-Nov-2011	MW-70-PMW02A-100	K063-04	N	GEN PREP	2320B	3
07-Nov-2011	MW-70-PMW02A-100	K063-04	N	GEN PREP	2540C	3
07-Nov-2011	MW-70-PMW02A-100	K063-04	N	GEN PREP	300.0	3
07-Nov-2011	MW-70-PMW02A-100	K063-04	N	GEN PREP	300.0M	3
07-Nov-2011	MW-70-PMW02A-100	K063-04	N	GEN PREP	4500F	3
07-Nov-2011	MW-70-PMW02A-100	K063-04	N	GEN PREP	5310B	3
07-Nov-2011	MW-70-PMW02A-100	K063-04	N	GEN PREP	RSK175	3
07-Nov-2011	MW-70-PMW02A-100	K063-04R	N	5030B	8260B	3
07-Nov-2011	MW-70-PMW02A-100	K063-04T	N	5030B	8260B	3
07-Nov-2011	MW-70-PMW02A-100	K063-04T	N	GEN PREP	RSK175	3
07-Nov-2011	MW-70-PMW02B-101	K063-05	N	3010A	6010B	3
07-Nov-2011	MW-70-PMW02B-101	K063-05	N	GEN PREP	2320B	3
07-Nov-2011	MW-70-PMW02B-101	K063-05	N	GEN PREP	2540C	3
07-Nov-2011	MW-70-PMW02B-101	K063-05	N	GEN PREP	300.0	3
07-Nov-2011	MW-70-PMW02B-101	K063-05	N	GEN PREP	300.0M	3
07-Nov-2011	MW-70-PMW02B-101	K063-05	N	GEN PREP	4500F	3
07-Nov-2011	MW-70-PMW02B-101	K063-05	N	GEN PREP	5310B	3
07-Nov-2011	MW-70-PMW02B-101	K063-05	N	GEN PREP	RSK175	3
07-Nov-2011	MW-70-PMW02B-101	K063-05R	N	5030B	8260B	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
07-Nov-2011	MW-70-PMW02B-101	K063-05T	N	5030B	8260B	3
07-Nov-2011	MW-70-PMW02B-101	K063-05T	N	GEN PREP	RSK175	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11K063 **Laboratory: EMXT**

EDD Filename: Prep11K063 **eQAPP Name: SealBeach_IRSite70**

Method Category: **GENCHEM**

Method: **300.0** ***Matrix:*** **AQ**

Sample ID: **IR-70-FD-098** ***Collected:*** **11/7/2011 12:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRATE-N	0.200	U	0.0500	MDL	0.200	PQL	MG/L	UJ	StoA
NITRITE-N	0.200	U	0.0500	MDL	0.200	PQL	MG/L	UJ	StoA

Sample ID: **IW-70-SAB06-099** ***Collected:*** **11/7/2011 2:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRATE-N	0.0651	J	0.0500	MDL	0.200	PQL	MG/L	J	RI, StoA
NITRITE-N	0.200	U	0.0500	MDL	0.200	PQL	MG/L	UJ	StoA

Sample ID: **MW-70-PMW03A-095** ***Collected:*** **11/7/2011 10:42:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRATE-N	0.0665	J	0.0500	MDL	0.200	PQL	MG/L	J	RI, StoA
NITRITE-N	0.200	U	0.0500	MDL	0.200	PQL	MG/L	UJ	StoA

Sample ID: **MW-70-PMW03B-097** ***Collected:*** **11/7/2011 12:08:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRATE-N	0.200	U	0.0500	MDL	0.200	PQL	MG/L	UJ	StoA
NITRITE-N	0.200	U	0.0500	MDL	0.200	PQL	MG/L	UJ	StoA

Method Category: **GENCHEM**

Method: **5310B** ***Matrix:*** **AQ**

Sample ID: **MW-70-PMW02A-100** ***Collected:*** **11/7/2011 3:42:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOC	0.948	J	0.500	MDL	1.00	PQL	MG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K063 **Laboratory: EMXT**

EDD Filename: Prep11K063 **eQAPP Name: SealBeach_IRSite70**

Method Category: **SVOA**

Method: **RSK175** ***Matrix:*** **AQ**

Sample ID: **MW-70-PMW02A-100** ***Collected:*** **11/7/2011 3:42:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHENE	0.74	J	0.60	MDL	2.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW02B-101** ***Collected:*** **11/7/2011 4:27:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHANE	0.82	J	0.64	MDL	2.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW03A-095** ***Collected:*** **11/7/2011 10:42:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHENE	0.68	J	0.60	MDL	2.0	PQL	UG/L	J	RI

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **IR-70-FD-098** ***Collected:*** **11/7/2011 12:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.69	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CARBON DISULFIDE	0.23	J	0.20	MDL	1.0	PQL	UG/L	U	Mb
DICHLORODIFLUOROMETHANE	0.59	J	0.30	MDL	2.0	PQL	UG/L	J	RI

Sample ID: **IW-70-SAB06-099** ***Collected:*** **11/7/2011 2:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.26	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CARBON DISULFIDE	0.51	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CIS-1,2-DICHLOROETHENE	0.48	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	0.38	J	0.20	MDL	5.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW02A-100** ***Collected:*** **11/7/2011 3:42:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.55	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CARBON DISULFIDE	0.20	J	0.20	MDL	1.0	PQL	UG/L	U	Mb

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K063 **Laboratory: EMXT**

EDD Filename: Prep11K063 **eQAPP Name: SealBeach_IRSite70**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **MW-70-PMW02A-100** ***Collected:*** **11/7/2011 3:42:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DICHLORODIFLUOROMETHANE	0.31	J	0.30	MDL	2.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW02B-101** ***Collected:*** **11/7/2011 4:27:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.73	J	0.20	MDL	1.0	PQL	UG/L	J	RI
DICHLORODIFLUOROMETHANE	0.86	J	0.30	MDL	2.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW03A-095** ***Collected:*** **11/7/2011 10:42:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CARBON DISULFIDE	0.34	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CHLOROETHANE	0.43	J	0.30	MDL	2.0	PQL	UG/L	J	RI
CIS-1,2-DICHLOROETHENE	0.73	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRANS-1,2-DICHLOROETHENE	0.82	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	0.42	J	0.20	MDL	5.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW03B-097** ***Collected:*** **11/7/2011 12:08:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.65	J	0.20	MDL	1.0	PQL	UG/L	J	RI
DICHLORODIFLUOROMETHANE	0.63	J	0.30	MDL	2.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K063 **Laboratory: EMXT**

EDD Filename: Prep11K063 **eQAPP Name: SealBeach_IRSite70**

Reason Code Legend

Reason Code	*Description*
Mb	Method Blank Contamination
Ms	Matrix Spike Lower Rejection
ProfJudg	Professional Judgment
RI	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11K063

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 11K063 **Laboratory: EMXT**
EDD Filename: Prep11K063 **eQAPP Name: SealBeach_IRSite70**

Method: 300.0 **Preparation Method: GEN PREP**
Matrix: AQ

Sample ID	Type	Actual	Criteria	Units	Flag
IR-70-FD-098 (RES)	Sampling To Analysis	53.00	48.00	HOURS	J (all detects)
IW-70-SAB06-099 (RES)		50.00	48.00	HOURS	UJ (all non-detects)
MW-70-PMW03A-095 (RES)		55.00	48.00	HOURS	
MW-70-PMW03B-097 (RES)		53.00	48.00	HOURS	

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 11K063 **Laboratory: EMXT**

EDD Filename: Prep11K063 **eQAPP Name: SealBeach_IRSite70**

Method: **RSK175**
Matrix: **AQ**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
MW-70-PMW03B -097MS MW-70-PMW03B -097MSD (MW-70-PMW03B-097)	METHANE	-28	-51	10.00-160.00	-	METHANE	No Qual, >4x

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Method Blank Outlier Report

Lab Reporting Batch ID: 11K063 **Laboratory: EMXT**

EDD Filename: 11K063 **eQAPP Name: SealBeach_IRSite70**

Method: **8260B**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VO01K16B	11/15/2011 10:04:00 PM	CARBON DISULFIDE	0.23 UG/L	IR-70-FD-098 IR-70-TB-096 MW-70-PMW02A-100 MW-70-PMW02B-101

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
IR-70-FD-098(RES)	CARBON DISULFIDE	0.23 UG/L	1.0U UG/L
MW-70-PMW02A-100(RES)	CARBON DISULFIDE	0.20 UG/L	1.0U UG/L

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Reporting Limit Outliers

Lab Reporting Batch ID: 11K063 **Laboratory: EMXT**

EDD Filename: 11K063 **eQAPP Name: SealBeach_IRSite70**

Method: 300.0

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IW-70-SAB06-099	NITRATE-N	J	0.0651	0.200	PQL	MG/L	J (all detects)
MW-70-PMW03A-095	NITRATE-N	J	0.0665	0.200	PQL	MG/L	J (all detects)

Method: 5310B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
MW-70-PMW02A-100	TOC	J	0.948	1.00	PQL	MG/L	J (all detects)

Method: 8260B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-FD-098	1,1-DICHLOROETHANE	J	0.69	1.0	PQL	UG/L	J (all detects)
	CARBON DISULFIDE	J	0.23	1.0	PQL	UG/L	
	DICHLORODIFLUOROMETHANE	J	0.59	2.0	PQL	UG/L	
IW-70-SAB06-099	1,1-DICHLOROETHANE	J	0.26	1.0	PQL	UG/L	J (all detects)
	CARBON DISULFIDE	J	0.51	1.0	PQL	UG/L	
	CIS-1,2-DICHLOROETHENE	J	0.48	1.0	PQL	UG/L	
	TRICHLOROETHENE	J	0.38	5.0	PQL	UG/L	
MW-70-PMW02A-100	1,1-DICHLOROETHANE	J	0.55	1.0	PQL	UG/L	J (all detects)
	CARBON DISULFIDE	J	0.20	1.0	PQL	UG/L	
	DICHLORODIFLUOROMETHANE	J	0.31	2.0	PQL	UG/L	
	TRICHLOROETHENE	J	17	50	PQL	UG/L	
MW-70-PMW02B-101	1,1-DICHLOROETHANE	J	0.73	1.0	PQL	UG/L	J (all detects)
	DICHLORODIFLUOROMETHANE	J	0.86	2.0	PQL	UG/L	
MW-70-PMW03A-095	CARBON DISULFIDE	J	0.34	1.0	PQL	UG/L	J (all detects)
	CHLOROETHANE	J	0.43	2.0	PQL	UG/L	
	CIS-1,2-DICHLOROETHENE	J	0.73	1.0	PQL	UG/L	
	TRANS-1,2-DICHLOROETHENE	J	0.82	1.0	PQL	UG/L	
	TRICHLOROETHENE	J	0.42	5.0	PQL	UG/L	
MW-70-PMW03B-097	1,1-DICHLOROETHANE	J	0.65	1.0	PQL	UG/L	J (all detects)
	DICHLORODIFLUOROMETHANE	J	0.63	2.0	PQL	UG/L	

Method: RSK175

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
MW-70-PMW02A-100	ETHENE	J	0.74	2.0	PQL	UG/L	J (all detects)
MW-70-PMW02B-101	ETHANE	J	0.82	2.0	PQL	UG/L	J (all detects)
MW-70-PMW03A-095	ETHENE	J	0.68	2.0	PQL	UG/L	J (all detects)

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Field Duplicate RPD Report

Lab Reporting Batch ID: 11K063 **Laboratory: EMXT**

EDD Filename: 11K063 **eQAPP Name: SealBeach_IRSite70**

Method: 2320B
Matrix: AQ

Analyte	Concentration (MG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-PMW03B-097	IR-70-FD-098			
Total Alkalinity	198	199	1	20.00	No Qualifiers Applied

Method: 2540C
Matrix: AQ

Analyte	Concentration (MG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-PMW03B-097	IR-70-FD-098			
TDS	1080	1100	2	20.00	No Qualifiers Applied

Method: 300.0
Matrix: AQ

Analyte	Concentration (MG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-PMW03B-097	IR-70-FD-098			
Chloride-Cl	253	253	0	20.00	No Qualifiers Applied
SULFATE	337	346	3	20.00	

Method: 5310B
Matrix: AQ

Analyte	Concentration (MG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-PMW03B-097	IR-70-FD-098			
TOC	1.07	1.09	2	20.00	No Qualifiers Applied

Method: 6010B
Matrix: AQ

Analyte	Concentration (MG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-PMW03B-097	IR-70-FD-098			
IRON	1.02	1.03	1	20.00	No Qualifiers Applied
MANGANESE	0.387	0.395	2	20.00	

Method: 8260B
Matrix: AQ

Analyte	Concentration (UG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-PMW03B-097	IR-70-FD-098			
1,1-DICHLOROETHANE	0.65	0.69	6	20.00	No Qualifiers Applied
1,1-DICHLOROETHENE	4.0	4.2	5	20.00	
CARBON DISULFIDE	1.0 U	0.23	200	20.00	
CIS-1,2-DICHLOROETHENE	1000	1100	10	20.00	
DICHLORODIFLUOROMETHANE	0.63	0.59	7	20.00	
TRANS-1,2-DICHLOROETHENE	8.6	8.9	3	20.00	
TRICHLOROETHENE	8.3	7.9	5	20.00	
VINYL CHLORIDE	83	89	7	20.00	

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Field Duplicate RPD Report

Lab Reporting Batch ID: 11K063 **Laboratory: EMXT**

EDD Filename: 11K063 **eQAPP Name: SealBeach_IRSite70**

Method: RSK175
Matrix: AQ

Analyte	Concentration (UG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-PMW03B-097	IR-70-FD-098			
ETHANE	2.0 U	5.7	200	20.00	No Qualifiers Applied
ETHENE	7.4	23	103	20.00	
METHANE	22000	18000	20	20.00	

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

LDC #: 26803F1

SDG #: 11K063

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

Date: 12/21/11

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method ~~8260B~~)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/7/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30, r²
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	A	Not reviewed for ADR validation.
VI.	Surrogate spikes	A	Not reviewed for ADR validation.
VII.	Matrix spike/Matrix spike duplicates	A	Not reviewed for ADR validation.
VIII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	Not reviewed for ADR validation.
XI.	Target compound identification	A	Not reviewed for ADR validation.
XII.	Compound quantitation/RL/LOQ/LODs	A	Not reviewed for ADR validation.
XIII.	Tentitatively identified compounds (TICs)	N	Not reviewed for ADR validation.
XIV.	System performance	A	Not reviewed for ADR validation.
XV.	Overall assessment of data	A	Not reviewed for ADR validation.
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	TB = 11

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

1	1	MW-70-PMW03A-095**	11	2	IR-70-TB-096	21	1	MBLK1W	
2	1	MW-70-PMW03B-097	12	1	MW-70-PMW03B-097MS	22	2	MBLK2W	
3	1	MW-70-PMW03B-097DL	13	1	MW-70-PMW03B-097MSD	23	3	MBLK3W	
4	3	IW-70-SAB06-099**	14			24			
5	2	MW-70-PMW02A-100	15			25			
6	2	MW-70-PMW02A-100DL	16			26			
7	2	MW-70-PMW02B-101	17			27			
8	2	MW-70-PMW02B-101DL	18			28			
9	2	IR-70-FD-098	19			29			
10	3	IR-70-FD-098DL	20			30			

LDC #: 26803F4

VALIDATION COMPLETENESS WORKSHEET

ADR/~~IV~~

Date: 12-16-11

SDG #: 11K063

Page: 1 of 1

Laboratory: EMAX Laboratories, Inc.

Reviewer: MG

2nd Reviewer: ✓

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11-7-11
II.	ICP/MS Tune	N	not utilized
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	Not reviewed for ADR validation.
VI.	Matrix Spike Analysis	A	Not reviewed for ADR validation. MS/MSD
VII.	Duplicate Sample Analysis	N	Not reviewed for ADR validation.
VIII.	Laboratory Control Samples (LCS)	A	Not reviewed for ADR validation. LCS/LCSD
IX.	Internal Standard (ICP-MS)	N	Not reviewed for ADR validation. not utilized
X.	Furnace Atomic Absorption QC	N	Not reviewed for ADR validation. not utilized
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	A	Not reviewed for ADR validation.
XIII.	Overall Assessment of Data	A	Not reviewed for ADR validation.
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

all Water

1	MW-70-PMW03A-095**	11		21		31	
2	MW-70-PMW03B-097	12		22		32	
3	IW-70-SAB06-099**	13		23		33	
4	MW-70-PMW02A-100	14		24		34	
5	MW-70-PMW02B-101	15		25		35	
6	IR-70-FD-098	16		26		36	
7	MW-70-PMW03B-097MS	17		27		37	
8	MW-70-PMW03B-097MSD	18		28		38	
9		19		29		39	
10		20	PBW	30		40	

Notes:

LDC #: 26803F4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: MG
2nd reviewer: ✓

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1→6	W	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
QC 7, 8	↓	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
Analysis Method		
ICP	W	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,

Comments: Mercury by CVAA if performed

LDC #: 26803F51 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/21/11
SDG #: 11K063 ADR/IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: FD
2nd Reviewer: 1

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/7/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	Not reviewed for ADR validation.
V	Surrogate recovery	A	Not reviewed for ADR validation.
VI.	Matrix spike/Matrix spike duplicates	SW	Not reviewed for ADR validation. ~~no Ass sample~~
VII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/D
VIII.	Target compound identification	A	Not reviewed for ADR validation.
IX.	Compound quantitation/RL/LOQ/LODs	SW	Not reviewed for ADR validation.
X.	System Performance	A	Not reviewed for ADR validation.
XI.	Overall assessment of data	SW	Not reviewed for ADR validation.
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water

1	MW-70-PMW03A-095**	11	IR-70-FD-098	21	MBLK1W	31	
2	MW-70-PMW03A-095DL**	12	IR-70-FD-098DL	22	MBLK2W	32	
3	MW-70-PMW03B-097	13	MW-70-PMW03B-097MS	23		33	
4	MW-70-PMW03B-097DL	14	MW-70-PMW03B-097MSD	24		34	
5	IW-70-SAB06-099**	15		25		35	
6	IW-70-SAB06-099DL**	16		26		36	
7	MW-70-PMW02A-100	17		27		37	
8	MW-70-PMW02A-100DL	18		28		38	
9	MW-70-PMW02B-101	19		29		39	
10	MW-70-PMW02B-101DL	20		30		40	

Notes:

LDC #: 26803F5 /

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer: FT
2nd Reviewer: _____

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Level IV/D Only
Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	x'd cal Range	1, 5	J/A det

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26803F5 /

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: FT
2nd Reviewer: _____

METHOD: ✓ **GC** __ **HPLC**

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	methane	x'd cal Range	1, 5	R/A
	All except methane	diluted	2, 6	R/A

Comments: _____

OVRNew.wpd

LDC #: 26803F6

SDG #: 11K063

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR~~IV~~

Date: 12-16-11

Page: 1 of 1

Reviewer: MG

2nd Reviewer: [illegible]

METHOD: (Analyte) Alkalinity (Standard Method 2320B), Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Dissolved Hydrogen Sulfide (SM4500F), Organic Acids (EPA Method 300.0M), TDS (Standard Method 2540C), TOC (Standard Method 5310B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	SW	Sampling dates: 11-7-11
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	A	Not reviewed for ADR validation. MS/MSD
VI.	Duplicates	A	Not reviewed for ADR validation. DUP
VII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/LCSD
VIII.	Sample result verification	A	Not reviewed for ADR validation.
IX.	Overall assessment of data	A	Not reviewed for ADR validation.
X.	Field duplicates	N	
XI	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

all water

1	MW-70-PMW03A-095**	11		21		31	
2	MW-70-PMW03B-097	12		22		32	
3	IW-70-SAB06-099**	13		23		33	
4	MW-70-PMW02A-100	14		24		34	
5	MW-70-PMW02B-101	15		25		35	
6	IR-70-FD-098	16		26		36	
7	MW-70-PMW03B-097MS	17		27		37	
8	MW-70-PMW03B-097MSD	18		28		38	
9	MW-70-PMW03B-097DUP	19	PBW 1	29		39	
10		20	PBW 2	30		40	

Notes:

LDC #: 26803F6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: MG
2nd reviewer: ✓

All circled methods are applicable to each sample.

Sample ID	Matrix	Parameter
1→6	W	pH (TDS) (Cl) F (NO3) (NO2) (SO4) PO4 (ALK) CN- NH3 TKN (TOC) CR6+ ClO4 (H2S) (Org Acids)
QC 7	↓	pH TDS (Cl) F (NO3) (NO2) (SO4) PO4 ALK CN- NH3 TKN (TOC) CR6+ ClO4 ____ (Org Acids)
8	↓	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN (TOC) CR6+ ClO4 ____
9	↓	pH (TDS) (Cl) F (NO3) (NO2) (SO4) PO4 (ALK) CN- NH3 TKN TOC CR6+ ClO4 (H2S) (Org Acids)
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 ____

Comments:

LDC #: 26803F6

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Page: 1 of 1
Reviewer: MG
2nd reviewer: [illegible]

All circled dates have exceeded the technical holding time.
(Y) N N/A Were all samples preserved as applicable to each method ?
(Y) N N/A Were all cooler temperatures within validation criteria?

Method:		300.0		300.0			
Parameters:		NO_3-N		NO_2-N			
Technical holding time:		48 hr		48 hr			
Sample ID	Sampling date	Analysis date	Analysis date	Analysis date	Analysis date	Analysis date	Qualifier
1	10:42 11-7-11	17:44 11-9-11	(55.00 hr)	17:44 11-9-11	(55.00 hr)		J/UJ/P
2	12:08 11-7-11	18:01 11-9-11	(54.00)	18:01 11-9-11	(54.00)		
3	14:30 11-7-11	16:30 11-9-11	(50.00)	16:30 11-9-11	(50.00)		
6	12:25 11-7-11	17:28 11-9-11	(53.00)	17:28 11-9-11	(53.00)		
7	12:08 11-7-11	18:33 11-9-11	(54.50)	18:33 11-9-11	(54.50)		
8	12:08 11-7-11	18:17 11-9-11	(54.25)	18:17 11-9-11	(54.25)		

Enclosure II

EPA Level IV Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 7, 2011
LDC Report Date:	December 23, 2011
Matrix:	Water
Parameters:	Volatiles
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K063

Sample Identification

MW-70-PMW03A-095
IW-70-SAB06-099

Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample IR-70-TB-096 was identified as a trip blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K063	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Volatiles - Data Qualification Summary - SDG 11K063

SDG	Sample	Compound	Flag	A or P	Reason
11K063	MW-70-PMW03A-095 IW-70-SAB06-099	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs

NWS Seal Beach, IR Site 70
Volatiles - Laboratory Blank Data Qualification Summary - SDG 11K063

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Volatiles - Field Blank Data Qualification Summary - SDG 11K063

No Sample Data Qualified in this SDG

LDC #: 26803F1
SDG #: 11K063
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR/IV

Date: 12/21/11
Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/7/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30, r²
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	A	~~Not reviewed for ADR validation.~~
VI.	Surrogate spikes	A	Not reviewed for ADR validation.
VII.	Matrix spike/Matrix spike duplicates	A	Not reviewed for ADR validation.
VIII.	Laboratory control samples	A	~~Not reviewed for ADR validation.~~ LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	~~Not reviewed for ADR validation.~~
XI.	Target compound identification	A	Not reviewed for ADR validation.
XII.	Compound quantitation/RL/LOQ/LODs	A	Not reviewed for ADR validation.
XIII.	Tentitatively identified compounds (TICs)	N	Not reviewed for ADR validation.
XIV.	System performance	A	Not reviewed for ADR validation.
XV.	Overall assessment of data	A	~~Not reviewed for ADR validation.~~
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	TB = 11

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

water

1	1	MW-70-PMW03A-095**	~~11~~ 2	~~IR-70-TB-096~~	21	1	MBLK1W	31	
2	1	~~MW-70-PMW03B-097~~	12	1 MW-70-PMW03B-097MS	22	2	MBLK2W	32	
3	1	MW-70-PMW03B-097DL	13	1 ~~MW-70-PMW03B-097MSD~~	23	3	MBLK3W	33	
4	3	IW-70-SAB06-099**	~~14~~		24			34	
5	2	MW-70-PMW02A-100	15		25			35	
6	2	MW-70-PMW02A-100DL	16		26			36	
7	2	MW-70-PMW02B-101	17		27			37	
8	2	MW-70-PMW02B-101DL	18		28			38	
9	2	IR-70-FD-098	19		29			39	
10	3	~~IR-70-FD-098DL~~	20		30			40	

DC #: 26803F1

VALIDATION FINDINGS CHECKLIST

Reviewer: FT

2nd Reviewer: C

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.			✓	
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

DC #: 26803F1

VALIDATION FINDINGS CHECKLIST

Reviewer: FT

2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethene	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethene*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 26803F1

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: C

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (10 std)	Recalculated RRF (10 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	V001J31	10/31/11	C (1st internal standard)	0.515	0.515	0.461	0.461	7.36	7.36
			V (2nd internal standard)	1.714	1.714	1.767	1.767	3.77	3.77
			JJJ (3rd internal standard)	1.581	1.581	1.561	1.561	2.0	2.0
			(4th internal standard)						
2			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803F1

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	RKV296	11/14/11	C (1st internal standard)	0.461	0.425	0.425	7.8	7.8
			V (2nd internal standard)	1.767	1.756	1.756	0.6	0.6
			JJJ (3rd internal standard)	1.561	1.658	1.658	6.2	6.2
			(4th internal standard)					
2	RKV442	11/18/11	C (1st internal standard)		0.485	0.485	5.2	5.2
			V (2nd internal standard)		1.917	1.917	8.5	8.5
			JJJ (3rd internal standard)		1.686	1.686	8.0	8.0
			(4th internal standard)					
3			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

Surrogate Results Verification

Reviewer: FT
2nd reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4	10.0	9.80	98.0	98.0	0
Toluene-d8	↓	10.60	106	106	↓
Bromofluorobenzene		11.66	117	117	

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 26803F1

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD = I MSC - MSC I * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD sample: 12 ✓ 13

Compound	Spike Added (ug/L)		Sample Concentration (ug/L)	Spiked Sample Concentration (ug/L)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	10.0	10.0	3.98	13.7	14.2	97	97	102	102	4	4
Trichloroethene	↓	↓	8.27	17.7	18.3	94	94	100	100	3	3
Benzene	↓	↓	ND	9.77	10.3	98	98	103	103	5	5
Toluene	↓	↓	↓	10.1	10.5	101	101	105	105	3	3
Chlorobenzene	↓	↓	↓	10.7	10.9	107	107	109	109	2	2

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803F1
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = | LCS - LCSD | * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: LCS/D (MB2K1W)

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
[redacted]	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	10.0	10.0	9.98	9.99	100	100	100	100	0	0
Trichloroethene			10.1	10.0	101	101	100	100	1	1
Benzene			9.85	9.83	98	98	98	98	0	0
Toluene			10.1	10.0	101	101	100	100	1	1
Chlorobenzene			10.3	10.2	103	103	102	102	1	1

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803F

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
RRF	=	Relative response factor of the calibration standard.
V_o	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).
Df	=	Dilution factor.
%S	=	Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. #1, C:

Conc. = $\frac{(47357)(10)(\quad)(\quad)}{(523058)(0.46)(\quad)(\quad)}$

=

0.67 ug/L

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 7, 2011
LDC Report Date:	December 21, 2011
Matrix:	Water
Parameters:	Dissolved Metals
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K063

Sample Identification

MW-70-PMW03A-095
IW-70-SAB06-099

Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Dissolved Metals. The metals analyzed were Arsenic, Iron, and Manganese.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No dissolved metal contaminants were found in the initial, continuing and preparation blanks.

No field blanks were identified in this SDG.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

XII. Sample Result Verification

All sample result verifications were acceptable.

All metals reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 11K063	All analytes reported below the RL and above the MDL.	J (all detects)	A

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Dissolved Metals - Data Qualification Summary - SDG 11K063

SDG	Sample	Analyte	Flag	A or P	Reason
11K063	MW-70-PMW03A-095 IW-70-SAB06-099	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification

NWS Seal Beach, IR Site 70
Dissolved Metals - Laboratory Blank Data Qualification Summary - SDG 11K063

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Dissolved Metals - Field Blank Data Qualification Summary - SDG 11K063

No Sample Data Qualified in this SDG

LDC #: 26803F4

VALIDATION COMPLETENESS WORKSHEET

~~ADR~~/IV

Date: 12-16-11

SDG #: 11K063

Page: 1 of 1

Laboratory: EMAX Laboratories, Inc.

Reviewer: MG

2nd Reviewer: [illegible]

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11-7-11
II.	ICP/MS Tune	N	not utilized
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	Not reviewed for ADR validation.
VI.	Matrix Spike Analysis	A	Not reviewed for ADR validation. MS/MSD
VII.	Duplicate Sample Analysis	N	Not reviewed for ADR validation.
VIII.	Laboratory Control Samples (LCS)	A	Not reviewed for ADR validation. LCS/LCSD
IX.	Internal Standard (ICP-MS)	N	Not reviewed for ADR validation. not utilized
X.	Furnace Atomic Absorption QC	N	Not reviewed for ADR validation. not utilized
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	A	Not reviewed for ADR validation.
XIII.	Overall Assessment of Data	A	Not reviewed for ADR validation.
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

all water

1	MW-70-PMW03A-095**	11		21		31	
2	~~MW-70-PMW03B-097~~	12		22		32	
3	IW-70-SAB06-099**	13		23		33	
4	~~MW-70-PMW02A-100~~	14		24		34	
5	~~MW-70-PMW02B-101~~	15		25		35	
6	~~IR-70-FD-098~~	16		26		36	
7	~~MW-70-PMW03B-097MS~~	17		27		37	
8	~~MW-70-PMW03B-097MSD~~	18		28		38	
9		19		29		39	
10		20	PBW	30		40	

Notes:

LDC #: 26803F4

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer: [illegible]

Method: Metals (EPA SW 846 Method 6010B/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. ICP/MS Tune				
Were all isotopes in the tuning solution mass resolution within 0.1 amu?			✓	
Were %RSD of isotopes in the tuning solution ≤5%?			✓	
III. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury) QC limits?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
IV. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
V. ICP Interference Check Sample				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.	✓			
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were ≤ 5X the RL.	✓			
VII. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			

LDC #: 26803F4

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
VIII. Furnace Atomic Absorption QC				
If MSA was performed, was the correlation coefficients > 0.995?			✓	
Do all applicable analysies have duplicate injections? (Level IV only)			✓	
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%? (Level IV only)			✓	
Were analytical spike recoveries within the 85-115% QC limits?			✓	
IX. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the MDL (ICP)/>100X the MDL(ICP/MS)?	✓			
Were all percent differences (%Ds) < 10%?	✓			
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.		✓		
X. Internal Standards (EPA SW 846 Method 6020/EPA 200.8)				
Were all the percent recoveries (%R) within the 30-120% (6020)/60-125% (200.8) of the intensity of the internal standard in the associated initial calibration?			✓	
If the %Rs were outside the criteria, was a reanalysis performed?			✓	
XI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
XII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 26803F4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: MG
2nd reviewer: [illegible]

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1→6	W	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
QC 7, 8	↓	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
Analysis Method		
ICP	W	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻, ____

Comments: Mercury by CVAA if performed

LDC #: 26803F4

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: MG
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found / True x 100 Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
1505 ICV	ICP (Initial calibration)	Mn	2421.5	2500	97	97	Y
	ICP/MS (Initial calibration)						
	CVAA (Initial calibration)						
1615 CCV3	ICP (Continuing calibration)	Fe	25131	25000	101	101	
	ICP/MS (Continuing calibration)						
	CVAA (Continuing calibration)						
	GFAA (Initial calibration)						
	GFAA (Continuing calibation)						

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803F4

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: MG
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$ Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
1520 ICSAB	ICP interference check	As	1.0609 (mg/L)	1.0 (mg/L)	106	106	Y
1549 LCS	Laboratory control sample	Fe	5.1935 (mg/L)	5 (mg/L)	104	104	↓
1603 7	Matrix spike	As	(SSR-SR) 0.5398 (mg/L)	0.5 (mg/L)	108	108	↓
1603/1606 7/8	Duplicate	Mn	0.8704 (mg/L)	0.8998 (mg/L)	3	3	↓
1557/1600 2	ICP serial dilution	Fe	1.0177 (mg/L)	1.0808 (mg/L)	6	6	↓

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

TOTCLC.4SW

LDC #: 26803F4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: MG
2nd reviewer: ✓

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Have results been reported and calculated correctly?
(Y) N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
(Y) N N/A Are all detection limits below the CRDL?

Detected analyte results for # 1, Fe were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

$$\frac{(13.420\ mg/L)(0.050\ L)}{0.050\ L} = 13.420\ mg/L$$

#	Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
1	1	Fe	13.4	13.4	Y
		Mn	0.358	0.358	↓

Note:

RECALC.4SW

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 7, 2011
LDC Report Date:	December 22, 2011
Matrix:	Water
Parameters:	Wet Chemistry
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K063

Sample Identification

MW-70-PMW03A-095
IW-70-SAB06-099

Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Standard Method 2320B for Alkalinity, EPA Method 300.0 for Chloride, Nitrate as Nitrogen, Nitrite as Nitrogen, and Sulfate, Standard Method 4500F for Dissolved Hydrogen Sulfide, EPA Method 300.0M for Organic Acids, Standard Method 2540C for Total Dissolved Solids, and Standard Method 5310B for Total Organic Carbon.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met with the following exceptions:

Sample	Analyte	Total Time From Sample Collection Until Analysis	Required Holding Time From Sample Collection Until Analysis	Flag	A or P
MW-70-PMW03A-095	Nitrate as N	55.00 hours	48 hours	J (all detects) UJ (all non-detects)	P
	Nitrite as N	55.00 hours	48 hours	J (all detects) UJ (all non-detects)	
IW-70-SAB06-099	Nitrate as N	50.00 hours	48 hours	J (all detects) UJ (all non-detects)	P
	Nitrite as N	50.00 hours	48 hours	J (all detects) UJ (all non-detects)	

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Continuing Calibration

Continuing calibration frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

No field blanks were identified in this SDG.

V. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VI. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Sample Result Verification

All sample result verifications were acceptable.

All analytes reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 11K063	All analytes reported below the RL and above the MDL.	J (all detects)	A

IX. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

X. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Wet Chemistry - Data Qualification Summary - SDG 11K063

SDG	Sample	Analyte	Flag	A or P	Reason
11K063	MW-70-PMW03A-095 IW-70-SAB06-099	Nitrate as N Nitrite as N	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	P	Technical holding time
11K063	MW-70-PMW03A-095 IW-70-SAB06-099	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification

NWS Seal Beach, IR Site 70
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 11K063

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Wet Chemistry - Field Blank Data Qualification Summary - SDG 11K063

No Sample Data Qualified in this SDG

LDC #: 26803F6

SDG #: 11K063

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

~~ADR~~/IV

Date: 12-16-11

Page: 1 of 1

Reviewer: MG

2nd Reviewer: [illegible]

METHOD: (Analyte) Alkalinity (Standard Method 2320B), Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Dissolved Hydrogen Sulfide (SM4500F), Organic Acids (EPA Method 300.0M), TDS (Standard Method 2540C), TOC (Standard Method 5310B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	SW	Sampling dates: 11-7-11
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	A	Not reviewed for ADR validation. MS/MSD
VI.	Duplicates	A	Not reviewed for ADR validation. DUP
VII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/LCSD
VIII.	Sample result verification	A	Not reviewed for ADR validation.
IX.	Overall assessment of data	A	Not reviewed for ADR validation.
X.	Field duplicates	N	
XI	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

all water

1	MW-70-PMW03A-095**	11		21		31	
2	~~MW-70-PMW03B-097~~	12		22		32	
3	IW-70-SAB06-099**	13		23		33	
4	~~MW-70-PMW02A-100~~	14		24		34	
5	~~MW-70-PMW02B-101~~	15		25		35	
6	~~IR-70-FD-098~~	16		26		36	
7	~~MW-70-PMW03B-097MS~~	17		27		37	
8	~~MW-70-PMW03B-097MSD~~	18		28		38	
9	~~MW-70-PMW03B-097DUP~~	19	PBW1	29		39	
10		20	~~PBW2~~	30		40	

Notes:

LDC #: 26803F6

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer: ✓

Method: Inorganics (EPA Method See cover)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.		✓		
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?	✓			
Were titrant checks performed as required? (Level IV only)	✓			
Were balance checks performed as required? (Level IV only)	✓			
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.	✓			
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL(≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were ≤ 5X the CRDL.	✓			
V. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	✓			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26803F6

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer: V

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
X. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 26803F6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: MG
2nd reviewer: [illegible]

All circled methods are applicable to each sample.

Sample ID	Matrix	Parameter
1→6	W	pH (TDS) (Cl) F (NO3) (NO2) (SO4) PO4 (ALK) CN- NH3 TKN (TOC) CR6+ ClO4 (H2S) (Org Acids)
QC 7	↓	pH TDS (Cl) F (NO3) (NO2) (SO4) PO4 ALK CN- NH3 TKN (TOC) CR6+ ClO4 (Org Acids)
8	↓	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN (TOC) CR6+ ClO4
↓ 9	↓	pH (TDS) (Cl) F (NO3) (NO2) (SO4) PO4 (ALK) CN- NH3 TKN TOC CR6+ ClO4 (H2S) (Org Acids)
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4

Comments:

LDC #: 26803F6

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: MG
2nd reviewer: ✓

All circled dates have exceeded the technical holding time.
(Y) N N/A Were all samples preserved as applicable to each method ?
(Y) N N/A Were all cooler temperatures within validation criteria?

Method:		300.0		300.0			
Parameters:		NO_3-N		NO_2-N			
Technical holding time:		48 hr		48 hr			
Sample ID	Sampling date	Analysis date	Analysis date	Analysis date	Analysis date	Analysis date	Qualifier
1	10:42 11-7-11	17:44 11-9-11	(55.00 hr)	17:44 11-9-11	(55.00 hr)		J/UJ/P
~~2~~	~~12:08 11-7-11~~	~~18:01 11-9-11~~	~~(54.00)~~	~~18:01 11-9-11~~	~~(54.00)~~		
3	14:30 11-7-11	16:30 11-9-11	(50.00)	16:30 11-9-11	(50.00)		
~~6~~	~~12:25 11-7-11~~	~~17:28 11-9-11~~	~~(53.00)~~	~~17:28 11-9-11~~	~~(53.00)~~		
~~7~~	~~12:08 11-7-11~~	~~18:33 11-9-11~~	~~(54.50)~~	~~18:33 11-9-11~~	~~(54.50)~~		
~~8~~	~~12:08 11-7-11~~	~~18:17 11-9-11~~	~~(54.25)~~	~~18:17 11-9-11~~	~~(54.25)~~		

LDC #: 26803F6

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: MG
2nd Reviewer: [illegible]

METHOD: Inorganics, Method see cover

The correlation coefficient (r) for the calibration of Cl was recalculated. Calibration date: 9-30-11

An initial or continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found / True x 100 Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution
True = concentration of each analyte in the ICV or CCV source

Type of Analysis	Analyte	Standard ID	Conc Found (units)	Area True (units)	Recalculated r or %R	Reported r or %R	Acceptable (Y/N)
Initial calibration	Cl	Blank	0.05 (mg/L)	0.908	r=0.999932	r=0.999932	Y
		Standard 1	0.1 ( )	1.549			
		Standard 2	0.2 ( )	3.034			
		Standard 3	0.5 ( )	7.595			
		Standard 4	1.0 ( )	15.837			
		Standard 5	2.0 ( )	32.972			
		Standard 6	5.0 ( )	86.279			
		Standard 7	10.0 20.0 ( )	175.986 358.541			
Calibration verification	Propionate	CCV52	2.050 (mg/L)	2.0 (mg/L)	102	102	
Calibration verification	Acetate	CCV52	2.030 mg/L ~~25.93~~ (mg/L)	2.0 mg/L ~~25.0~~ (mg/L)	102	101	
Calibration verification	NO_2-N	CCV369	2.066 (mg/L)	2.0 (mg/L)	103.3	103.3	

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803F6

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: MG
2nd Reviewer: —

METHOD: Inorganics, Method see cover

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
1735 LCS	Laboratory control sample	Acetate	20.97 (mg/L)	20.0 (mg/L)	105	105	Y
1513 7	Matrix spike sample	TOC	(SSR-SR) 24.62 (mg/L)	25.0 (mg/L)	98	98	↓
0729/0745 9	Duplicate sample	SO_4	337.459 (mg/L)	339.601 (mg/L)	1	1	↓

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803F6

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: MG
2nd reviewer: [illegible]

METHOD: Inorganics, Method see cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments?
Y N N/A Are all detection limits below the CRQL?

Compound (analyte) results for #1, TOC reported with a positive detect were recalculated and verified using the following equation:

Concentration =

$Y = mx + b$

where $m = 2.096$

$b = 0.000$

dil = 1x

Recalculation:

$18.76 = 2.096(x) + 0.000$

8.950 mg/L $= x$

#	Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
1	1	Cl	209	209	Y
		NO_3-N	0.0665	0.0665	↓
		SO_4	11.4	11.4	↓
		total Alk	696	696	↓
		TDS	1060	1060	↓
		TOC	8.95	8.95	↓

Note:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 7, 2011
LDC Report Date:	December 21, 2011
Matrix:	Water
Parameters:	Methane, Ethane, & Ethene
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K063

Sample Identification

MW-70-PMW03A-095
MW-70-PMW03A-095DL
IW-70-SAB06-099
IW-70-SAB06-099DL

Introduction

This data review covers 4 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Method RSK-175 for Methane, Ethane, and Ethene.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No methane, ethane, or ethene was found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were not required by the method.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were not within QC limits. Since there were no associated samples, no data were qualified.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
MW-70-PMW03A-095 IW-70-SAB06-099	Methane	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K063	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

The overall assessment of data was acceptable. In the case where more than one result was reported for an individual sample, the least technically acceptable results were rejected as follows:

Sample	Compound	Flag	A or P
MW-70-PMW03A-095 IW-70-SAB06-099	Methane	R	A
MW-70-PMW03A-095DL IW-70-SAB06-099DL	Ethane Ethene	R R	A

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Methane, Ethane, & Ethene - Data Qualification Summary - SDG 11K063

SDG	Sample	Compound	Flag	A or P	Reason
11K063	MW-70-PMW03A-095 IW-70-SAB06-099	Methane	J (all detects)	A	Compound quantitation and RLs (exceeded range)
11K063	MW-70-PMW03A-095 MW-70-PMW03A-095DL IW-70-SAB06-099 IW-70-SAB06-099DL	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs
11K063	MW-70-PMW03A-095 IW-70-SAB06-099	Methane	R	A	Overall assessment of data
11K063	MW-70-PMW03A-095DL IW-70-SAB06-099DL	Ethane Ethene	R R	A	Overall assessment of data

NWS Seal Beach, IR Site 70
Methane, Ethane, & Ethene - Laboratory Blank Data Qualification Summary - SDG 11K063

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Methane, Ethane, & Ethene - Field Blank Data Qualification Summary - SDG 11K063

No Sample Data Qualified in this SDG

LDC #: 26803F51 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/21/11
SDG #: 11K063 ADR/IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: EJ
2nd Reviewer: [illegible]

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/7/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	~~Not reviewed for ADR validation.~~
V	Surrogate recovery	A	Not reviewed for ADR validation. not Required
VI.	Matrix spike/Matrix spike duplicates	SW	Not reviewed for ADR validation. no Ass sample
VII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/D
VIII.	Target compound identification	A	Not reviewed for ADR validation.
IX.	Compound quantitation/RL/LOQ/LODs	SW	Not reviewed for ADR validation.
X.	System Performance	A	Not reviewed for ADR validation.
XI.	Overall assessment of data	SW	Not reviewed for ADR validation.
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water

1	MW-70-PMW03A-095**	11	~~IR-70-FD-098~~	21	MBLK1W	31	
2	MW-70-PMW03A-095DL**	12	IR-70-FD-098DL	22	MBLK2W	32	
3	~~MW-70-PMW03B-097~~	13	MW-70-PMW03B-097MS	23		33	
4	~~MW-70-PMW03B-097DL~~	14	MW-70-PMW03B-097MSD	24		34	
5	IW-70-SAB06-099**	15		25		35	
6	IW-70-SAB06-099DL**	16		26		36	
7	~~MW-70-PMW02A-100~~	17		27		37	
8	MW-70-PMW02A-100DL	18		28		38	
9	MW-70-PMW02B-101	19		29		39	
10	~~MW-70-PMW02B-101DL~~	20		30		40	

Notes:

LDC #: 26803F5\
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?			✓	
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓		✓	
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26803F51
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26803F5

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Level IV/D Only
Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	x'd cal Range	1, 5	J/A det

Comments: See sample calculation verification worksheet for recalculations

COMQUANew.wpd

LDC #: 26803F5 /

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: FT
2nd Reviewer: G

METHOD: ✓ **GC** __ **HPLC**

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	methane	x'd cal Range	1, 5	R/A
	All except methane	diluted	2, 6	R/A

Comments: _____

OVRNew.wpd

LDC #: 26803F51
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: F7
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (13.6 std)	Recalculated CF (13.6 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	11/01/11	methane	29307	29307	30507.1	30507	5.6	5.6
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803FS.1
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	FK080024	11/8/11	methane	13.6	13.94	13.94	3	3
	FK080024A	11/8/11	methane	13.6	13.10	13.10	3	3
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803F5

SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FZ

2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100

Where SSC = Spiked sample concentration; SA = Spike added; MS = Matrix spike; SC = Sample concentration; MSD = Matrix spike duplicate

MS/MSD samples: 13 & 14

Compound	Spike Added (ug/L)		Sample Conc. (ug/L)	Spike Sample Concentration (ug/L)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	—	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)	13.6	13.6	616	612	609	-28	-28	-51	-51	1	1
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803F5 /
SDG #: µu cones

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS 1P

Compound	Spike Added ( )		Spiked Sample Concentration ( )		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)	13.6	13.6	14.9	14.9	109	109	110	110	0	0
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803F5
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: F
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #2 Compound Name Methane

Concentration = $\frac{652375 \quad (1000)}{30507.1}$

= 21384 ug/L

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments:

SAMPCALew.wpd

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
08-Nov-2011	IR-70-TB-102	K070-07	TB	5030B	8260B	3
08-Nov-2011	IW-70-SAB11-103	K070-01	N	3010A	6010B	3
08-Nov-2011	IW-70-SAB11-103	K070-01	N	5030B	8260B	3
08-Nov-2011	IW-70-SAB11-103	K070-01	N	GEN PREP	2320B	3
08-Nov-2011	IW-70-SAB11-103	K070-01	N	GEN PREP	2540C	3
08-Nov-2011	IW-70-SAB11-103	K070-01	N	GEN PREP	300.0	3
08-Nov-2011	IW-70-SAB11-103	K070-01	N	GEN PREP	300.0M	3
08-Nov-2011	IW-70-SAB11-103	K070-01	N	GEN PREP	4500F	3
08-Nov-2011	IW-70-SAB11-103	K070-01	N	GEN PREP	RSK175	3
08-Nov-2011	IW-70-SAB11-103	K070-01I	N	GEN PREP	RSK175	3
08-Nov-2011	IW-70-SAB11-103	K070-01T	N	GEN PREP	5310B	3
08-Nov-2011	IW-70-FSB118-104	K070-02	N	3010A	6010B	3
08-Nov-2011	IW-70-FSB118-104	K070-02	N	5030B	8260B	3
08-Nov-2011	IW-70-FSB118-104	K070-02	N	GEN PREP	2320B	3
08-Nov-2011	IW-70-FSB118-104	K070-02	N	GEN PREP	2540C	3
08-Nov-2011	IW-70-FSB118-104	K070-02	N	GEN PREP	300.0	3
08-Nov-2011	IW-70-FSB118-104	K070-02	N	GEN PREP	300.0M	3
08-Nov-2011	IW-70-FSB118-104	K070-02	N	GEN PREP	4500F	3
08-Nov-2011	IW-70-FSB118-104	K070-02	N	GEN PREP	5310B	3
08-Nov-2011	IW-70-FSB118-104	K070-02	N	GEN PREP	RSK175	3
08-Nov-2011	IW-70-FSB118-104	K070-02T	N	GEN PREP	RSK175	3
08-Nov-2011	MW-70-PMW06A-105	K070-03	N	3010A	6010B	3
08-Nov-2011	MW-70-PMW06A-105	K070-03	N	5030B	8260B	3
08-Nov-2011	MW-70-PMW06A-105	K070-03	N	GEN PREP	2320B	3
08-Nov-2011	MW-70-PMW06A-105	K070-03	N	GEN PREP	2540C	3
08-Nov-2011	MW-70-PMW06A-105	K070-03	N	GEN PREP	300.0	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
08-Nov-2011	MW-70-PMW06A-105	K070-03	N	GEN PREP	300.0M	3
08-Nov-2011	MW-70-PMW06A-105	K070-03	N	GEN PREP	4500F	3
08-Nov-2011	MW-70-PMW06A-105	K070-03	N	GEN PREP	5310B	3
08-Nov-2011	MW-70-PMW06A-105	K070-03	N	GEN PREP	RSK175	3
08-Nov-2011	MW-70-PMW06A-105	K070-03I	N	GEN PREP	RSK175	3
08-Nov-2011	MW-70-PMW06A-105	K070-03T	N	5030B	8260B	3
08-Nov-2011	MW-70-PMW06A-105	K070-03T	N	GEN PREP	RSK175	3
08-Nov-2011	MW-70-PMW06B-106	K070-04	N	3010A	6010B	3
08-Nov-2011	MW-70-PMW06B-106	K070-04	N	5030B	8260B	3
08-Nov-2011	MW-70-PMW06B-106	K070-04	N	GEN PREP	2320B	3
08-Nov-2011	MW-70-PMW06B-106	K070-04	N	GEN PREP	2540C	3
08-Nov-2011	MW-70-PMW06B-106	K070-04	N	GEN PREP	300.0	3
08-Nov-2011	MW-70-PMW06B-106	K070-04	N	GEN PREP	300.0M	3
08-Nov-2011	MW-70-PMW06B-106	K070-04	N	GEN PREP	4500F	3
08-Nov-2011	MW-70-PMW06B-106	K070-04	N	GEN PREP	5310B	3
08-Nov-2011	MW-70-PMW06B-106	K070-04	N	GEN PREP	RSK175	3
08-Nov-2011	MW-70-PMW06B-106	K070-04T	N	5030B	8260B	3
08-Nov-2011	MW-70-PMW06B-106	K070-04T	N	GEN PREP	RSK175	3
08-Nov-2011	IR-70-FD-107	K070-06	FD	3010A	6010B	3
08-Nov-2011	IR-70-FD-107	K070-06	FD	5030B	8260B	3
08-Nov-2011	IR-70-FD-107	K070-06	FD	GEN PREP	2320B	3
08-Nov-2011	IR-70-FD-107	K070-06	FD	GEN PREP	2540C	3
08-Nov-2011	IR-70-FD-107	K070-06	FD	GEN PREP	300.0	3
08-Nov-2011	IR-70-FD-107	K070-06	FD	GEN PREP	300.0M	3
08-Nov-2011	IR-70-FD-107	K070-06	FD	GEN PREP	4500F	3
08-Nov-2011	IR-70-FD-107	K070-06	FD	GEN PREP	5310B	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
08-Nov-2011	IR-70-FD-107	K070-06	FD	GEN PREP	RSK175	3
08-Nov-2011	IR-70-FD-107	K070-06T	FD	5030B	8260B	3
08-Nov-2011	IR-70-FD-107	K070-06T	FD	GEN PREP	RSK175	3
08-Nov-2011	MW-70-38-108	K070-05	N	3010A	6010B	3
08-Nov-2011	MW-70-38-108	K070-05	N	5030B	8260B	3
08-Nov-2011	MW-70-38-108	K070-05	N	GEN PREP	2320B	3
08-Nov-2011	MW-70-38-108	K070-05	N	GEN PREP	2540C	3
08-Nov-2011	MW-70-38-108	K070-05	N	GEN PREP	300.0	3
08-Nov-2011	MW-70-38-108	K070-05	N	GEN PREP	300.0M	3
08-Nov-2011	MW-70-38-108	K070-05	N	GEN PREP	4500F	3
08-Nov-2011	MW-70-38-108	K070-05	N	GEN PREP	5310B	3
08-Nov-2011	MW-70-38-108	K070-05I	N	GEN PREP	RSK175	3
08-Nov-2011	MW-70-38-108	K070-05T	N	5030B	8260B	3
08-Nov-2011	MW-70-38-108	K070-05T	N	GEN PREP	RSK175	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11K070 **Laboratory: EMXT**

EDD Filename: 11K070 **eQAPP Name: SealBeach_IRSite70**

Method Category: **GENCHEM**

Method: **300.0** ***Matrix:*** **AQ**

Sample ID: IW-70-FSB118-104 ***Collected:*** 11/8/2011 12:01:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRATE-N	0.0693	J	0.0500	MDL	0.200	PQL	MG/L	J	RI

Sample ID: IW-70-SAB11-103 ***Collected:*** 11/8/2011 10:35:00 ***Analysis Type:*** DL1 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRATE-N	0.135	J	0.100	MDL	0.400	PQL	MG/L	J	RI

Sample ID: MW-70-38-108 ***Collected:*** 11/8/2011 4:03:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRATE-N	0.0645	J	0.0500	MDL	0.200	PQL	MG/L	J	RI

Method Category: **GENCHEM**

Method: **5310B** ***Matrix:*** **AQ**

Sample ID: IR-70-FD-107 ***Collected:*** 11/8/2011 3:10:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOC	0.571	J	0.500	MDL	1.00	PQL	MG/L	J	RI

Sample ID: MW-70-PMW06B-106 ***Collected:*** 11/8/2011 2:48:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOC	0.824	J	0.500	MDL	1.00	PQL	MG/L	J	RI

Method Category: **METALS**

Method: **6010B** ***Matrix:*** **AQ**

Sample ID: IR-70-FD-107 ***Collected:*** 11/8/2011 3:10:00 ***Analysis Type:*** RES/DIS ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	0.0628	J	0.0400	MDL	0.200	PQL	MG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K070 **Laboratory: EMXT**

EDD Filename: 11K070 **eQAPP Name: SealBeach_IRSite70**

Method Category: **METALS**

Method: **6010B** ***Matrix:*** **AQ**

Sample ID: **IW-70-SAB11-103** ***Collected:*** **11/8/2011 10:35:00** ***Analysis Type:*** **RES/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.0316	J	0.00500	MDL	0.200	PQL	MG/L	J	RI

Sample ID: **MW-70-38-108** ***Collected:*** **11/8/2011 4:03:00** ***Analysis Type:*** **RES/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.00623	J	0.00500	MDL	0.200	PQL	MG/L	J	RI

Sample ID: **MW-70-PMW06B-106** ***Collected:*** **11/8/2011 2:48:00** ***Analysis Type:*** **RES/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	0.0541	J	0.0400	MDL	0.200	PQL	MG/L	J	RI

Method Category: **SVOA**

Method: **RSK175** ***Matrix:*** **AQ**

Sample ID: **IR-70-FD-107** ***Collected:*** **11/8/2011 3:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHANE	0.91	J	0.64	MDL	2.0	PQL	UG/L	J	RI
ETHENE	1.7	J	0.60	MDL	2.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW06B-106** ***Collected:*** **11/8/2011 2:48:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHANE	0.66	J	0.64	MDL	2.0	PQL	UG/L	J	RI
ETHENE	0.96	J	0.60	MDL	2.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K070 **Laboratory: EMXT**

EDD Filename: 11K070 **eQAPP Name: SealBeach_IRSite70**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **IW-70-FSB118-104** ***Collected:*** **11/8/2011 12:01:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TRICHLOROETHENE	2.7	J	0.20	MDL	5.0	PQL	UG/L	J	RI

Sample ID: **IW-70-SAB11-103** ***Collected:*** **11/8/2011 10:35:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CIS-1,2-DICHLOROETHENE	0.33	J	0.20	MDL	1.0	PQL	UG/L	J	RI

Sample ID: **MW-70-38-108** ***Collected:*** **11/8/2011 4:03:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.92	J	0.20	MDL	1.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K070 **Laboratory: EMXT**

EDD Filename: 11K070 **eQAPP Name: SealBeach_IRSite70**

Reason Code Legend

Reason Code	*Description*
ProfJudg	Professional Judgment
RI	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11K070

Reporting Limit Outliers

Lab Reporting Batch ID: 11K070 **Laboratory: EMXT**

EDD Filename: 11K070 **eQAPP Name: SealBeach_IRSite70**

Method: 300.0

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IW-70-FSB118-104	NITRATE-N	J	0.0693	0.200	PQL	MG/L	J (all detects)
IW-70-SAB11-103	NITRATE-N	J	0.135	0.400	PQL	MG/L	J (all detects)
MW-70-38-108	NITRATE-N	J	0.0645	0.200	PQL	MG/L	J (all detects)

Method: 5310B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-FD-107	TOC	J	0.571	1.00	PQL	MG/L	J (all detects)
MW-70-PMW06B-106	TOC	J	0.824	1.00	PQL	MG/L	J (all detects)

Method: 6010B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-FD-107	IRON	J	0.0628	0.200	PQL	MG/L	J (all detects)
IW-70-SAB11-103	ARSENIC	J	0.0316	0.200	PQL	MG/L	J (all detects)
MW-70-38-108	ARSENIC	J	0.00623	0.200	PQL	MG/L	J (all detects)
MW-70-PMW06B-106	IRON	J	0.0541	0.200	PQL	MG/L	J (all detects)

Method: 8260B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-FD-107	TRANS-1,2-DICHLOROETHENE	J	52	100	PQL	UG/L	J (all detects)
IW-70-FSB118-104	TRICHLOROETHENE	J	2.7	5.0	PQL	UG/L	J (all detects)
IW-70-SAB11-103	CIS-1,2-DICHLOROETHENE	J	0.33	1.0	PQL	UG/L	J (all detects)
MW-70-38-108	1,1-DICHLOROETHANE	J	0.92	1.0	PQL	UG/L	J (all detects)
MW-70-PMW06B-106	TRANS-1,2-DICHLOROETHENE	J	51	100	PQL	UG/L	J (all detects)

Method: RSK175

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-FD-107	ETHANE ETHENE	J J	0.91 1.7	2.0 2.0	PQL PQL	UG/L UG/L	J (all detects)

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Reporting Limit Outliers

Lab Reporting Batch ID: 11K070 **Laboratory: EMXT**

EDD Filename: 11K070 **eQAPP Name: SealBeach_IRSite70**

Method: **RSK175**

Matrix: **AQ**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
MW-70-PMW06B-106	ETHANE	J	0.66	2.0	PQL	UG/L	J (all detects)
	ETHENE	J	0.96	2.0	PQL	UG/L	

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Field Duplicate RPD Report

Lab Reporting Batch ID: 11K070 **Laboratory: EMXT**

EDD Filename: 11K070 **eQAPP Name: SealBeach_IRSite70**

Method: 2320B
Matrix: AQ

Analyte	Concentration (MG/L) MW-70-PMW06B-106	Concentration (MG/L) IR-70-FD-107	Sample RPD	eQAPP RPD	Flag
Total Alkalinity	170	170	0	20.00	No Qualifiers Applied

Method: 2540C
Matrix: AQ

Analyte	Concentration (MG/L) MW-70-PMW06B-106	Concentration (MG/L) IR-70-FD-107	Sample RPD	eQAPP RPD	Flag
TDS	1210	1200	1	20.00	No Qualifiers Applied

Method: 300.0
Matrix: AQ

Analyte	Concentration (MG/L) MW-70-PMW06B-106	Concentration (MG/L) IR-70-FD-107	Sample RPD	eQAPP RPD	Flag
Chloride-Cl	314	318	1	20.00	No Qualifiers Applied
SULFATE	285	285	0	20.00	

Method: 5310B
Matrix: AQ

Analyte	Concentration (MG/L) MW-70-PMW06B-106	Concentration (MG/L) IR-70-FD-107	Sample RPD	eQAPP RPD	Flag
TOC	0.824	0.571	36	20.00	No Qualifiers Applied

Method: 6010B
Matrix: AQ

Analyte	Concentration (MG/L) MW-70-PMW06B-106	Concentration (MG/L) IR-70-FD-107	Sample RPD	eQAPP RPD	Flag
IRON	0.0541	0.0628	15	20.00	No Qualifiers Applied
MANGANESE	0.334	0.329	2	20.00	

Method: 8260B
Matrix: AQ

Analyte	Concentration (UG/L) MW-70-PMW06B-106	Concentration (UG/L) IR-70-FD-107	Sample RPD	eQAPP RPD	Flag
1,1-DICHLOROETHANE	1.8	1.8	0	20.00	No Qualifiers Applied
1,1-DICHLOROETHENE	8.1	8.3	2	20.00	
CIS-1,2-DICHLOROETHENE	550	550	0	20.00	
TRANS-1,2-DICHLOROETHENE	49	50	2	20.00	
TRICHLOROETHENE	3800	3900	3	20.00	
VINYL CHLORIDE	9.1	9.4	3	20.00	

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Field Duplicate RPD Report

Lab Reporting Batch ID: 11K070 **Laboratory: EMXT**

EDD Filename: 11K070 **eQAPP Name: SealBeach_IRSite70**

Method: RSK175
Matrix: AQ

Analyte	Concentration (UG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-PMW06B-106	IR-70-FD-107			
ETHANE	0.66	0.91	32	20.00	No Qualifiers Applied
ETHENE	0.96	1.7	56	20.00	
METHANE	64	160	86	20.00	

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

LDC #: 26803G1

SDG #: 11K070

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/15/11

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/8/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤ 30
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	N	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	N	
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A ~~N~~	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/L~~OQ/LODs~~	SW	
XIII.	Tentitatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	SW	
XVI.	Field duplicates	N	D_1: 5+9 D_2: 6+10
XVII.	Field blanks	↓	TB: 11

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

All water

1	IW-70-SAB11-103	11	IR-70-TB-102	21	MBLK/W	31	
2	IW-70-FSB118-104	12		22	+ 2W	32	
3	MW-70-PMW06A-105	13		23		33	
4 2	MW-70-PMW06A-105DL	14		24		34	
5	MW-70-PMW06B-106 D	15		25		35	
6 2	MW-70-PMW06B-106DL	16		26		36	
7	MW-70-38-108	17		27		37	
8 2	MW-70-38-108DL	18		28		38	
9	IR-70-FD-107 D	19		29		39	
10 2	IR-70-FD-107DL	20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 26803G1

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and CRQLs

Page: 1 of 1
Reviewer: A
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?

Y N N/A Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	Compound	Finding	Associated Samples	Qualifications
		QQQ, C	> calib range	3	J det/A
		QQQ, S	↓	5.9	↓
		C	↓	7	↓

Comments: See sample calculation verification worksheet for recalculations

COMQUA.1S

LDC #: 26803G1
SDG #: -

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: C
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Date	Sample ID	Finding	Associated Samples	Qualifications
		3	QQQ, C > calib range		R/A
		4	All except QQQ, C - diluted		↓
		5.9	QQQ, S > calib range		↓
		6.10	All except QQQ, S - diluted		↓
		7	C > calib range		↓
		8	All except C - diluted		↓

Comments:

OVR.1S

LDC #: 26803G4

SDG #: 11K070

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/15/11

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/8/11
II.	ICP/MS Tune	N	Not Utilized
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A N	
VI.	Matrix Spike Analysis	N	Client Specified
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	Not Utilized
X.	Furnace Atomic Absorption QC	N	↓ ↓
XI.	ICP Serial Dilution	N	Not Performed
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	A N	
XIV.	Field Duplicates	N	D = 4 + 6
XV	Field Blanks	+	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

All water

1	IW-70-SAB11-103	11		21		31	
2	IW-70-FSB118-104	12		22		32	
3	MW-70-PMW06A-105	13		23		33	
4	MW-70-PMW06B-106 D	14		24		34	
5	MW-70-38-108	15		25		35	
6	IR-70-FD-107 D	16		26		36	
7	MB	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26803G4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer:
2nd reviewer:

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-6	W	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-,

Comments: Mercury by CVAA if performed

LDC #: 26803G51 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/15/11
SDG #: 11K070 ADR Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer:
2nd Reviewer:

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11 / 8 / 11
II	Initial calibration	A	%RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	N	
V	Surrogate recovery	N	
VI.	Matrix spike/Matrix spike duplicates	N	
VII.	Laboratory control samples	N	
VIII.	Target compound identification	N	
IX.	Compound quantitation/RL/~~LOQ/LODs~~	SW N	
X.	System Performance	N	
XI.	Overall assessment of data	SW N	
XII.	Field duplicates	N	D1: 8+12 D2: 9+13
XIII.	Field blanks	↓	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	IW-70-SAB11-103	11	MW-70-38-108DL	21		31	
2	IW-70-SAB11-103DL	12	IR-70-FD-107 D	22		32	
3	IW-70-FSB118-104	13	IR-70-FD-107DL	23		33	
4	IW-70-FSB118-104DL	14		24		34	
5	MW-70-PMW06A-105	15		25		35	
6	MW-70-PMW06A-105DL1	16		26		36	
7	MW-70-PMW06A-105DL2	17		27		37	
8	MW-70-PMW06B-106 D	18		28		38	
9	MW-70-PMW06B-106DL	19		29		39	
10	MW-70-38-108	20		30		40	

Notes:

LDC #: 26803G51

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Level IV/D Only
Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	> calib range	1.3.6.8.10.12	J dut/A
	Methane, Ethane	> calib range	5	J

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26803G51
SDG #: -

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ **GC** __ **HPLC**

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	> calib range	1.3.8.10.12	R/A
	All except Methane	diluted out	2.4.9.11.13.7	↓
	Methane, Ethene	> calib range	5	↓
	All except Ethene	> calib range or diluted out	6	↓

Comments: _____

OVRNew.wpd

LDC #: 26803G6 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/15/11

SDG #: 11K070 ADR Page: 1 of 1

Laboratory: EMAX Laboratories, Inc. Reviewer: A

2nd Reviewer:

METHOD: (Analyte) Alkalinity (Standard Method 2320B), Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Dissolved Hydrogen Sulfide (SM4500F), Organic Acids (EPA Method 300.0M), TDS (Standard Method 2540C), TOC (Standard Method 5310B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/8/11
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	N	Client Specified
VI.	Duplicates	N	
VII.	Laboratory control samples	N	LCS/D
VIII.	Sample result verification	N	
IX.	Overall assessment of data	A ~~N~~	
X.	Field duplicates	N	D = 4 + 6
XI	Field blanks	+	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	IW-70-SAB11-103 W	11		21		31	
2	IW-70-FSB118-104	12		22		32	
3	MW-70-PMW06A-105	13		23		33	
4	MW-70-PMW06B-106	14		24		34	
5	MW-70-38-108	15		25		35	
6	IR-70-FD-107	16		26		36	
7	PB	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26803G6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: [illegible]

All circled methods are applicable to each sample.

Sample ID	Matrix	Parameter
1-6	W	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 H_2S Ors. Acid
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____

Comments:

METHODS.6

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-Nov-2011	IR-70-TB-109	K084-07R	TB	5030B	8260B	3
09-Nov-2011	MW-70-PMW04A-110	K084-01	N	3010A	6010B	3
09-Nov-2011	MW-70-PMW04A-110	K084-01	N	5030B	8260B	3
09-Nov-2011	MW-70-PMW04A-110	K084-01	N	GEN PREP	2320B	3
09-Nov-2011	MW-70-PMW04A-110	K084-01	N	GEN PREP	2540C	3
09-Nov-2011	MW-70-PMW04A-110	K084-01	N	GEN PREP	300.0	3
09-Nov-2011	MW-70-PMW04A-110	K084-01	N	GEN PREP	300.0M	3
09-Nov-2011	MW-70-PMW04A-110	K084-01	N	GEN PREP	4500F	3
09-Nov-2011	MW-70-PMW04A-110	K084-01	N	GEN PREP	5310B	3
09-Nov-2011	MW-70-PMW04A-110	K084-01	N	GEN PREP	RSK175	3
09-Nov-2011	MW-70-PMW04A-110	K084-01T	N	5030B	8260B	3
09-Nov-2011	MW-70-PMW04A-110	K084-01T	N	GEN PREP	RSK175	3
09-Nov-2011	IR-70-FD-111	K084-06	FD	3010A	6010B	3
09-Nov-2011	IR-70-FD-111	K084-06	FD	5030B	8260B	3
09-Nov-2011	IR-70-FD-111	K084-06	FD	GEN PREP	2320B	3
09-Nov-2011	IR-70-FD-111	K084-06	FD	GEN PREP	2540C	3
09-Nov-2011	IR-70-FD-111	K084-06	FD	GEN PREP	300.0	3
09-Nov-2011	IR-70-FD-111	K084-06	FD	GEN PREP	300.0M	3
09-Nov-2011	IR-70-FD-111	K084-06	FD	GEN PREP	4500F	3
09-Nov-2011	IR-70-FD-111	K084-06	FD	GEN PREP	5310B	3
09-Nov-2011	IR-70-FD-111	K084-06	FD	GEN PREP	RSK175	3
09-Nov-2011	IR-70-FD-111DUP	K084-06D	DUP	GEN PREP	2540C	3
09-Nov-2011	IR-70-FD-111DUP	K084-06D	DUP	GEN PREP	4500F	3
09-Nov-2011	IR-70-FD-111	K084-06T	FD	5030B	8260B	3
09-Nov-2011	IR-70-FD-111	K084-06T	FD	GEN PREP	RSK175	3
09-Nov-2011	MW-70-PMW04B-112	K084-02	N	3010A	6010B	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-Nov-2011	MW-70-PMW04B-112	K084-02	N	5030B	8260B	3
09-Nov-2011	MW-70-PMW04B-112	K084-02	N	GEN PREP	2320B	3
09-Nov-2011	MW-70-PMW04B-112	K084-02	N	GEN PREP	2540C	3
09-Nov-2011	MW-70-PMW04B-112	K084-02	N	GEN PREP	300.0	3
09-Nov-2011	MW-70-PMW04B-112	K084-02	N	GEN PREP	300.0M	3
09-Nov-2011	MW-70-PMW04B-112	K084-02	N	GEN PREP	4500F	3
09-Nov-2011	MW-70-PMW04B-112	K084-02	N	GEN PREP	5310B	3
09-Nov-2011	MW-70-PMW04B-112	K084-02	N	GEN PREP	RSK175	3
09-Nov-2011	MW-70-PMW04B-112	K084-02T	N	5030B	8260B	3
09-Nov-2011	MW-70-PMW04B-112	K084-02T	N	GEN PREP	RSK175	3
09-Nov-2011	IW-70-FSB118-113	K084-03	N	3010A	6010B	3
09-Nov-2011	IW-70-FSB118-113	K084-03	N	GEN PREP	2320B	3
09-Nov-2011	IW-70-FSB118-113	K084-03	N	GEN PREP	2540C	3
09-Nov-2011	IW-70-FSB118-113	K084-03	N	GEN PREP	300.0	3
09-Nov-2011	IW-70-FSB118-113	K084-03	N	GEN PREP	300.0M	3
09-Nov-2011	IW-70-FSB118-113	K084-03	N	GEN PREP	4500F	3
09-Nov-2011	IW-70-FSB118-113	K084-03	N	GEN PREP	RSK175	3
09-Nov-2011	IW-70-FSB118-113	K084-03R	N	5030B	8260B	3
09-Nov-2011	IW-70-FSB118-113	K084-03T	N	GEN PREP	5310B	3
09-Nov-2011	IW-70-FSB118-113	K084-03T	N	GEN PREP	RSK175	3
09-Nov-2011	MW-70-PMW05A-114	K084-04	N	3010A	6010B	3
09-Nov-2011	MW-70-PMW05A-114	K084-04	N	GEN PREP	2320B	3
09-Nov-2011	MW-70-PMW05A-114	K084-04	N	GEN PREP	2540C	3
09-Nov-2011	MW-70-PMW05A-114	K084-04	N	GEN PREP	300.0	3
09-Nov-2011	MW-70-PMW05A-114	K084-04	N	GEN PREP	300.0M	3
09-Nov-2011	MW-70-PMW05A-114	K084-04	N	GEN PREP	4500F	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-Nov-2011	MW-70-PMW05A-114	K084-04	N	GEN PREP	5310B	3
09-Nov-2011	MW-70-PMW05A-114	K084-04	N	GEN PREP	RSK175	3
09-Nov-2011	MW-70-PMW05A-114	K084-04R	N	5030B	8260B	3
09-Nov-2011	MW-70-PMW05A-114	K084-04T	N	GEN PREP	RSK175	3
09-Nov-2011	MW-70-PMW05B-115	K084-05	N	3010A	6010B	4
09-Nov-2011	MW-70-PMW05B-115	K084-05	N	5030B	8260B	4
09-Nov-2011	MW-70-PMW05B-115	K084-05	N	GEN PREP	2320B	4
09-Nov-2011	MW-70-PMW05B-115	K084-05	N	GEN PREP	2540C	4
09-Nov-2011	MW-70-PMW05B-115	K084-05	N	GEN PREP	300.0	4
09-Nov-2011	MW-70-PMW05B-115	K084-05	N	GEN PREP	300.0M	4
09-Nov-2011	MW-70-PMW05B-115	K084-05	N	GEN PREP	4500F	4
09-Nov-2011	MW-70-PMW05B-115	K084-05	N	GEN PREP	5310B	4
09-Nov-2011	MW-70-PMW05B-115	K084-05	N	GEN PREP	RSK175	4
09-Nov-2011	MW-70-PMW05B-115	K084-05I	N	GEN PREP	RSK175	4
09-Nov-2011	MW-70-PMW05B-115	K084-05T	N	5030B	8260B	4
09-Nov-2011	MW-70-PMW05B-115	K084-05T	N	GEN PREP	RSK175	4

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11K084 **Laboratory: EMXT**

EDD Filename: 11K084 **eQAPP Name: SealBeach_IRSite70**

Method Category: **GENCHEM**

Method: **300.0** ***Matrix:*** **AQ**

Sample ID: **IR-70-FD-111** ***Collected:*** **11/9/2011 11:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRATE-N	0.0567	J	0.0500	MDL	0.200	PQL	MG/L	J	RI

Sample ID: **IW-70-FSB118-113** ***Collected:*** **11/9/2011 12:59:00** ***Analysis Type:*** **DL1** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRATE-N	0.386	J	0.250	MDL	1.00	PQL	MG/L	J	RI
SULFATE	1.98	J	1.25	MDL	2.50	PQL	MG/L	J	RI

Sample ID: **MW-70-PMW04A-110** ***Collected:*** **11/9/2011 10:36:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRATE-N	0.0590	J	0.0500	MDL	0.200	PQL	MG/L	J	RI

Sample ID: **MW-70-PMW04B-112** ***Collected:*** **11/9/2011 11:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRATE-N	0.0609	J	0.0500	MDL	0.200	PQL	MG/L	J	RI

Sample ID: **MW-70-PMW05A-114** ***Collected:*** **11/9/2011 2:44:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRATE-N	0.0638	J	0.0500	MDL	0.200	PQL	MG/L	J	RI

Sample ID: **MW-70-PMW05B-115** ***Collected:*** **11/9/2011 3:51:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRATE-N	0.0638	J	0.0500	MDL	0.200	PQL	MG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K084 **Laboratory: EMXT**

EDD Filename: 11K084 **eQAPP Name: SealBeach_IRSite70**

Method Category: **GENCHEM**

Method: **5310B** ***Matrix:*** **AQ**

Sample ID: IR-70-FD-111 ***Collected:*** 11/9/2011 11:00:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOC	0.892	J	0.500	MDL	1.00	PQL	MG/L	J	RI

Sample ID: MW-70-PMW04A-110 ***Collected:*** 11/9/2011 10:36:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOC	0.858	J	0.500	MDL	1.00	PQL	MG/L	J	RI

Sample ID: MW-70-PMW04B-112 ***Collected:*** 11/9/2011 11:40:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOC	0.919	J	0.500	MDL	1.00	PQL	MG/L	J	RI

Method Category: **METALS**

Method: **6010B** ***Matrix:*** **AQ**

Sample ID: IR-70-FD-111 ***Collected:*** 11/9/2011 11:00:00 ***Analysis Type:*** RES/DIS ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	0.107	J	0.0400	MDL	0.200	PQL	MG/L	J	RI
MANGANESE	0.147	J	0.00300	MDL	0.200	PQL	MG/L	J	RI

Sample ID: IW-70-FSB118-113 ***Collected:*** 11/9/2011 12:59:00 ***Analysis Type:*** RES/DIS ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.0591	J	0.00500	MDL	0.200	PQL	MG/L	J	RI

Sample ID: MW-70-PMW04A-110 ***Collected:*** 11/9/2011 10:36:00 ***Analysis Type:*** RES/DIS ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	0.102	J	0.0400	MDL	0.200	PQL	MG/L	J	RI
MANGANESE	0.149	J	0.00300	MDL	0.200	PQL	MG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K084 **Laboratory: EMXT**

EDD Filename: 11K084 **eQAPP Name: SealBeach_IRSite70**

Method Category: **SVOA**

Method: **RSK175** ***Matrix:*** **AQ**

Sample ID: **IR-70-FD-111** ***Collected:*** **11/9/2011 11:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHENE	1.7	J	0.60	MDL	2.0	PQL	UG/L	J	RI

Sample ID: **IW-70-FSB118-113** ***Collected:*** **11/9/2011 12:59:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHENE	1.4	J	0.60	MDL	2.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW04A-110** ***Collected:*** **11/9/2011 10:36:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHENE	1.7	J	0.60	MDL	2.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW04B-112** ***Collected:*** **11/9/2011 11:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHANE	0.71	J	0.64	MDL	2.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW05A-114** ***Collected:*** **11/9/2011 2:44:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHANE	0.74	J	0.64	MDL	2.0	PQL	UG/L	J	RI

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **IW-70-FSB118-113** ***Collected:*** **11/9/2011 12:59:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-METHYL-2-PENTANONE	8.7	J	4.0	MDL	10	PQL	UG/L	J	RI
CIS-1,2-DICHLOROETHENE	0.23	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TOLUENE	0.22	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRANS-1,2-DICHLOROETHENE	0.44	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	0.21	J	0.20	MDL	5.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K084 **Laboratory: EMXT**

EDD Filename: 11K084 **eQAPP Name: SealBeach_IRSite70**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **MW-70-PMW04B-112** ***Collected:*** **11/9/2011 11:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TRICHLOROETHENE	4.2	J	0.20	MDL	5.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW05A-114** ***Collected:*** **11/9/2011 2:44:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TRICHLOROETHENE	0.55	J	0.20	MDL	5.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW05B-115** ***Collected:*** **11/9/2011 3:51:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.64	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	0.77	J	0.20	MDL	5.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K084 **Laboratory: EMXT**

EDD Filename: 11K084 **eQAPP Name: SealBeach_IRSite70**

Reason Code Legend

Reason Code	*Description*
ProfJudg	Professional Judgment
RI	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11K084

Reporting Limit Outliers

Lab Reporting Batch ID: 11K084 **Laboratory: EMXT**

EDD Filename: 11K084 **eQAPP Name: SealBeach_IRSite70**

Method: **300.0**

Matrix: **AQ**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-FD-111	NITRATE-N	J	0.0567	0.200	PQL	MG/L	J (all detects)
IW-70-FSB118-113	NITRATE-N SULFATE	J J	0.386 1.98	1.00 2.50	PQL PQL	MG/L MG/L	J (all detects)
MW-70-PMW04A-110	NITRATE-N	J	0.0590	0.200	PQL	MG/L	J (all detects)
MW-70-PMW04B-112	NITRATE-N	J	0.0609	0.200	PQL	MG/L	J (all detects)
MW-70-PMW05A-114	NITRATE-N	J	0.0638	0.200	PQL	MG/L	J (all detects)
MW-70-PMW05B-115	NITRATE-N	J	0.0638	0.200	PQL	MG/L	J (all detects)

Method: **5310B**

Matrix: **AQ**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-FD-111	TOC	J	0.892	1.00	PQL	MG/L	J (all detects)
MW-70-PMW04A-110	TOC	J	0.858	1.00	PQL	MG/L	J (all detects)
MW-70-PMW04B-112	TOC	J	0.919	1.00	PQL	MG/L	J (all detects)

Method: **6010B**

Matrix: **AQ**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-FD-111	IRON MANGANESE	J J	0.107 0.147	0.200 0.200	PQL PQL	MG/L MG/L	J (all detects)
IW-70-FSB118-113	ARSENIC	J	0.0591	0.200	PQL	MG/L	J (all detects)
MW-70-PMW04A-110	IRON MANGANESE	J J	0.102 0.149	0.200 0.200	PQL PQL	MG/L MG/L	J (all detects)

Method: **8260B**

Matrix: **AQ**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-FD-111	TRICHLOROETHENE	J	27	500	PQL	UG/L	J (all detects)
IW-70-FSB118-113	4-METHYL-2-PENTANONE CIS-1,2-DICHLOROETHENE TOLUENE TRANS-1,2-DICHLOROETHENE TRICHLOROETHENE	J J J J J	8.7 0.23 0.22 0.44 0.21	10 1.0 1.0 1.0 5.0	PQL PQL PQL PQL PQL	UG/L UG/L UG/L UG/L UG/L	J (all detects)
MW-70-PMW04A-110	TRICHLOROETHENE	J	29	500	PQL	UG/L	J (all detects)
MW-70-PMW04B-112	TRANS-1,2-DICHLOROETHENE TRICHLOROETHENE	J J	21 4.2	100 5.0	PQL PQL	UG/L UG/L	J (all detects)

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Reporting Limit Outliers

Lab Reporting Batch ID: 11K084 **Laboratory: EMXT**

EDD Filename: 11K084 **eQAPP Name: SealBeach_IRSite70**

Method: **8260B**

Matrix: **AQ**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
MW-70-PMW05A-114	TRICHLOROETHENE	J	0.55	5.0	PQL	UG/L	J (all detects)
MW-70-PMW05B-115	1,1-DICHLOROETHANE TRICHLOROETHENE	J J	0.64 0.77	1.0 5.0	PQL PQL	UG/L UG/L	J (all detects)

Method: **RSK175**

Matrix: **AQ**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-FD-111	ETHENE	J	1.7	2.0	PQL	UG/L	J (all detects)
IW-70-FSB118-113	ETHENE	J	1.4	2.0	PQL	UG/L	J (all detects)
MW-70-PMW04A-110	ETHENE	J	1.7	2.0	PQL	UG/L	J (all detects)
MW-70-PMW04B-112	ETHANE	J	0.71	2.0	PQL	UG/L	J (all detects)
MW-70-PMW05A-114	ETHANE	J	0.74	2.0	PQL	UG/L	J (all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: 11K084 **Laboratory: EMXT**

EDD Filename: 11K084 **eQAPP Name: SealBeach_IRSite70**

Method: 2320B
Matrix: AQ

Analyte	Concentration (MG/L) MW-70-PMW04A-110	Concentration (MG/L) IR-70-FD-111	Sample RPD	eQAPP RPD	Flag
Total Alkalinity	176	175	1	20.00	No Qualifiers Applied

Method: 2540C
Matrix: AQ

Analyte	Concentration (MG/L) MW-70-PMW04A-110	Concentration (MG/L) IR-70-FD-111	Sample RPD	eQAPP RPD	Flag
TDS	780	750	4	20.00	No Qualifiers Applied

Method: 300.0
Matrix: AQ

Analyte	Concentration (MG/L) MW-70-PMW04A-110	Concentration (MG/L) IR-70-FD-111	Sample RPD	eQAPP RPD	Flag
Chloride-Cl	152	159	5	20.00	No Qualifiers Applied
NITRATE-N	0.0590	0.0567	4	20.00	
SULFATE	189	190	1	20.00	

Method: 5310B
Matrix: AQ

Analyte	Concentration (MG/L) MW-70-PMW04A-110	Concentration (MG/L) IR-70-FD-111	Sample RPD	eQAPP RPD	Flag
TOC	0.858	0.892	4	20.00	No Qualifiers Applied

Method: 6010B
Matrix: AQ

Analyte	Concentration (MG/L) MW-70-PMW04A-110	Concentration (MG/L) IR-70-FD-111	Sample RPD	eQAPP RPD	Flag
IRON	0.102	0.107	5	20.00	No Qualifiers Applied
MANGANESE	0.149	0.147	1	20.00	

Method: 8260B
Matrix: AQ

Analyte	Concentration (UG/L) MW-70-PMW04A-110	Concentration (UG/L) IR-70-FD-111	Sample RPD	eQAPP RPD	Flag
1,1-DICHLOROETHANE	1.1	1.1	0	20.00	No Qualifiers Applied
1,1-DICHLOROETHENE	11	11	0	20.00	
CIS-1,2-DICHLOROETHENE	1400	1500	7	20.00	
TRANS-1,2-DICHLOROETHENE	9.4	9.3	1	20.00	
TRICHLOROETHENE	27	26	4	20.00	
VINYL CHLORIDE	4.3	4.5	5	20.00	

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Field Duplicate RPD Report

Lab Reporting Batch ID: 11K084 **Laboratory: EMXT**

EDD Filename: 11K084 **eQAPP Name: SealBeach_IRSite70**

Method: RSK175
Matrix: AQ

Analyte	Concentration (UG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-PMW04A-110	IR-70-FD-111			
ETHENE	1.7	1.7	0	20.00	No Qualifiers Applied
METHANE	5100	5000	2	20.00	

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

LDC #: 26803H4

SDG #: 11K084

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR/~~IV~~

Date: 12-16-11

Page: 1 of 1

Reviewer: MG

2nd Reviewer: ✓

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11-9-11
II.	ICP/MS Tune	N	not utilized
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	Not reviewed for ADR validation.
VI.	Matrix Spike Analysis	N	Not reviewed for ADR validation. client specified
VII.	Duplicate Sample Analysis	N	Not reviewed for ADR validation. " "
VIII.	Laboratory Control Samples (LCS)	A	Not reviewed for ADR validation. LCS/LCSD
IX.	Internal Standard (ICP-MS)	N	Not reviewed for ADR validation. not utilized
X.	Furnace Atomic Absorption QC	N	Not reviewed for ADR validation. not utilized
XI.	ICP Serial Dilution	N	not performed
XII.	Sample Result Verification	A	Not reviewed for ADR validation.
XIII.	Overall Assessment of Data	A	Not reviewed for ADR validation.
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

all water

1	MW-70-PMW04A-110	11		21		31	
2	MW-70-PMW04B-112	12		22		32	
3	IW-70-FSB118-113	13		23		33	
4	MW-70-PMW05A-114	14		24		34	
5	MW-70-PMW05B-115**	15		25		35	
6	IR-70-FD-111	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20	PBW	30		40	

Notes:

LDC #: 26803H4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: MG
2nd reviewer: ✓

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1 → 6	W	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN⁻,

LDC #: 26803H1 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/21/11
SDG #: 11K084 ADR/IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: FD
2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/9/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤30
IV.	Continuing calibration/ICV	A	ICV/CCV ≤25
V.	Blanks	A	Not reviewed for ADR validation.
VI.	Surrogate spikes	A	Not reviewed for ADR validation.
VII.	Matrix spike/Matrix spike duplicates	N	Not reviewed for ADR validation. client specific
VIII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	Not reviewed for ADR validation.
XI.	Target compound identification	A	Not reviewed for ADR validation.
XII.	Compound quantitation/RL/LOQ/LODs	SW	Not reviewed for ADR validation.
XIII.	Tentitatively identified compounds (TICs)	N	Not reviewed for ADR validation.
XIV.	System performance	A	Not reviewed for ADR validation.
XV.	Overall assessment of data	SW	Not reviewed for ADR validation.
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	TB = 1

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

1	1	MW-70-PMW04A-110	11	2 IR-70-TB-109	21	MBLK1W	31	
2	3	MW-70-PMW04A-110DL	12		22	MBLK2W	32	
3	1	MW-70-PMW04B-112	13		23	MBLK3W	33	
4	3	MW-70-PMW04B-112DL	14		24		34	
5	2	IW-70-FSB118-113	15		25		35	
6	2	MW-70-PMW05A-114	16		26		36	
7	1	MW-70-PMW05B-115**	17		27		37	
8	3	MW-70-PMW05B-115DL**	18		28		38	
9	1	IR-70-FD-111	19		29		39	
10	3	IR-70-FD-111DL	20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethena	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzena	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 26803H1

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer: FT
2nd Reviewer: _____

METHOD: GC/MS VOA (EPA Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?
Y N N/A Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	~~Sample ID~~ compd	Finding	Associated Samples	Qualifications
		C	x'd cal Range	7	J / A det

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26803H1

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: FT
2nd Reviewer: _____

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Date	~~Sample ID~~ compd	Finding	Associated Samples	Qualifications
		C	~~Diluted~~ x of cal Range	8	R/A
		all except C	diluted	9	R/A

Comments: _____

OVR.1S

LDC #: 26803H51 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/21/11
SDG #: 11K084 ADR/IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer:
2nd Reviewer:

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/9/11
II	Initial calibration	A	% RSD ≤20
III.	Calibration verification/ICV	A	ICV/CCV ≤20
IV.	Blanks	A	Not reviewed for ADR validation.
V	Surrogate recovery	N	Not reviewed for ADR validation. client specified
VI.	Matrix spike/Matrix spike duplicates	N	Not reviewed for ADR validation. client specified
VII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/D
VIII.	Target compound identification	A	Not reviewed for ADR validation.
IX.	Compound quantitation/RL/LOQ/LODs	SW	Not reviewed for ADR validation.
X.	System Performance	A	Not reviewed for ADR validation.
XI.	Overall assessment of data	SW	Not reviewed for ADR validation.
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation
water

1	MW-70-PMW04A-110	11	MW-70-PMW05B-115DL2**	21	MBLK/W	31	
2	MW-70-PMW04A-110DL	12	IR-70-FD-111	22		32	
3	MW-70-PMW04B-112	13	IR-70-FD-111DL	23		33	
4	MW-70-PMW04B-112DL	14		24		34	
5	IW-70-FSB118-113	15		25		35	
6	IW-70-FSB118-113DL	16		26		36	
7	MW-70-PMW05A-114	17		27		37	
8	MW-70-PMW05A-114DL	18		28		38	
9	MW-70-PMW05B-115**	19		29		39	
10	MW-70-PMW05B-115DL1**	20		30		40	

Notes:

LDC #: 26803 #5 /

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: FT
2nd Reviewer: _____

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Level IV/D Only
Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	Ethene, methane	X'd cal Range	9	J/A det
	methane	↓	10	J/A det

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26803/15

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: FT
2nd Reviewer: _____

METHOD: ✓ **GC** __ **HPLC**

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	ethene, methane	x'd cal Range	9	R/A
	all except ethene	diluted	10	R/A
	all except methane	diluted	11	R/A

Comments: _____

OVRNew.wpd

LDC #: 26803H6

SDG #: 11K084

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR/~~IV~~

Date: 12-16-11

Page: 1 of 1

Reviewer: MG

2nd Reviewer: [illegible]

METHOD: (Analyte) Alkalinity (Standard Method 2320B), Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Dissolved Hydrogen Sulfide (SM4500F), Organic Acids (EPA Method 300.0M), TDS (Standard Method 2540C), TOC (Standard Method 5310B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11-9-11
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	N	Not reviewed for ADR validation. client specified
VI.	Duplicates	A	Not reviewed for ADR validation. DUP
VII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/LCSD
VIII.	Sample result verification	A	Not reviewed for ADR validation.
IX.	Overall assessment of data	A	Not reviewed for ADR validation.
X.	Field duplicates	N	
XI.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

all water

1	MW-70-PMW04A-110	11		21		31	
2	MW-70-PMW04B-112	12		22		32	
3	IW-70-FSB118-113	13		23		33	
4	MW-70-PMW05A-114	14		24		34	
5	MW-70-PMW05B-115**	15		25		35	
6	IR-70-FD-111	16		26		36	
7	IR-70-FD-111DUP	17		27		37	
8		18		28		38	
9		19	PBW 1	29		39	
10		20	PBW 2	30		40	

Notes:

LDC #: 26803H6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: MG
2nd reviewer: [illegible]

All circled methods are applicable to each sample.

Sample ID	Matrix	Parameter
1→6	W	pH (TDS) (Cl) F (NO3) (NO2) (SO4) PO4 (ALK) CN- NH3 TKN (TOC) CR6+ ClO4 (H2S) (Org Acids)
QC 7	↓	pH (TDS) Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 (H2S)
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4

Comments:

Enclosure II

EPA Level IV Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 9, 2011
LDC Report Date:	December 21, 2011
Matrix:	Water
Parameters:	Volatiles
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K084

Sample Identification

MW-70-PMW05B-115
MW-70-PMW05B-115DL

Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample IR-70-TB-109 was identified as a trip blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
MW-70-PMW05B-115	Vinyl chloride	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K084	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

The overall assessment of data was acceptable. In the case where more than one result was reported for an individual sample, the least technically acceptable results were rejected as follows:

Sample	Compound	Flag	A or P
MW-70-PMW05B-115	Vinyl chloride	R	A
MW-70-PMW05B-115DL	All TCL compounds except Vinyl chloride	R	A

XVI. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Volatiles - Data Qualification Summary - SDG 11K084

SDG	Sample	Compound	Flag	A or P	Reason
11K084	MW-70-PMW05B-115	Vinyl chloride .	J (all detects)	A	Compound quantitation and RLs
11K084	MW-70-PMW05B-115 MW-70-PMW05B-115DL	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs
11K084	MW-70-PMW05B-115	Vinyl chloride	R	A	Overall assessment of data
11K084	MW-70-PMW05B-115DL	All TCL compounds except Vinyl chloride	R	A	Overall assessment of data

NWS Seal Beach, IR Site 70
Volatiles - Laboratory Blank Data Qualification Summary - SDG 11K084

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Volatiles - Field Blank Data Qualification Summary - SDG 11K084

No Sample Data Qualified in this SDG

LDC #: 26803H1
SDG #: 11K084
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR/IV

Date: 12/21/11
Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/9/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤30
IV.	Continuing calibration/ICV	A	ICV/CCV ≤25
V.	Blanks	A	~~Not reviewed for ADR validation.~~
VI.	Surrogate spikes	A	Not reviewed for ADR validation.
VII.	Matrix spike/Matrix spike duplicates	N	Not reviewed for ADR validation. client specific
VIII.	Laboratory control samples	A	~~Not reviewed for ADR validation.~~ LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	~~Not reviewed for ADR validation.~~
XI.	Target compound identification	A	Not reviewed for ADR validation.
XII.	Compound quantitation/RL/LOQ/LODs	SW	Not reviewed for ADR validation.
XIII.	Tentitatively identified compounds (TICs)	N	Not reviewed for ADR validation.
XIV.	System performance	A	Not reviewed for ADR validation.
XV.	Overall assessment of data	SW	~~Not reviewed for ADR validation.~~
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	TB = 1

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

1 ~~1~~	~~MW-70-PMW04A-110~~	~~112~~	~~IR-70-TB-109~~	21	MBLK1W	31	
2 3	MW-70-PMW04A-110DL	12		22	MBLK2W	32	
3 1	MW-70-PMW04B-112	13		23	MBLK3W	33	
4 3	MW-70-PMW04B-112DL	14		24		34	
5 2	IW-70-FSB118-113	15		25		35	
~~6~~ ~~2~~	~~MW-70-PMW05A-114~~	16		26		36	
7 1	MW-70-PMW05B-115**	17		27		37	
8 3	MW-70-PMW05B-115DL**	18		28		38	
9 1	~~IR-70-FD-111~~	19		29		39	
10 3	~~IR-70-FD-111DL~~	20		30		40	

VALIDATION FINDINGS CHECKLIST

Reviewer: FT

2nd Reviewer: [illegible]

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.			✓	
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

DC #: 26803H1

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethene	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthelene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethene	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 26803 H /

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer: FT
2nd Reviewer: h

METHOD: GC/MS VOA (EPA Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?
Y N N/A Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	~~Sample ID~~ compd	Finding	Associated Samples	Qualifications
		C	x'd cal Range	7	J / A det

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26803H1

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Date	~~Sample ID~~ compd	Finding	Associated Samples	Qualifications
		C	diluted x of cal Range	~~8~~ 7	R/A
		all except C	diluted	~~9~~ 8	R/A

Comments:

OVR.1S

LDC #: 26803H1

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (10 std)	Recalculated RRF (10 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	V006K02	11/2/11	C (1st internal standard)	0.248	0.248	0.239	0.239	10.17	10.17
			V (2nd internal standard)	1.451	1.451	1.408	1.408	3.18	3.18
			JJJ (3rd internal standard)	1.574	1.574	1.499	1.499	5.28	5.28
			(4th internal standard)						
2			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803H1

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	RKW173	11/10/11	C (1st internal standard)	0.239	0.250	0.250	4.6	4.6
			V (2nd internal standard)	1.408	1.433	1.433	1.8	1.8
			JJJ (3rd internal standard)	1.499	1.478	1.478	1.4	1.4
			(4th internal standard)					
2	RKW252	11/14/11	C (1st internal standard)	↓	0.240	0.240	0.4	0.4
			V (2nd internal standard)		1.446	1.446	2.7	2.7
			JJJ (3rd internal standard)		1.478	1.478	1.4	1.4
			(4th internal standard)					
3			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

Surrogate Results Verification

Reviewer: FT
2nd reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #7

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4	10.0	11.10	111	111	0
Toluene-d8	↓	10.19	102	102	↓
Bromofluorobenzene	↓	10.21	102	102	↓

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 26803#1

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = I LCS - LCSD I * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: LCS/D (MBLK1W)

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	10.0	10.0	9.86	9.49	99	99	95	95	4	4
Trichloroethene	↓	↓	10.2	9.89	102	102	99	99	3	3
Benzene	↓	↓	9.78	9.53	98	98	95	95	3	3
Toluene	↓	↓	9.61	9.44	96	96	94	94	2	2
Chlorobenzene	↓	↓	10.0	9.93	100	100	99	99	1	1

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803H

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

V_o = Volume or weight of sample pruged in milliliters (ml) or grams (g).

Df = Dilution factor.

%S = Percent solids, applicable to soils and solid matrices only.

Example: #7 QQQ

Sample I.D. #8

Conc. = (91998)(10)( )( ) / (1150024)(0.396)( )( )

= 2.0 ug/L

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 9, 2011
LDC Report Date:	December 21, 2011
Matrix:	Water
Parameters:	Dissolved Metals
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K084

Sample Identification

MW-70-PMW05B-115

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Dissolved Metals. The metals analyzed were Arsenic, Iron, and Manganese.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No dissolved metal contaminants were found in the initial, continuing and preparation blanks.

No field blanks were identified in this SDG.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XII. Sample Result Verification

All sample result verifications were acceptable.

All metals reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 11K084	All analytes reported below the RL and above the MDL.	J (all detects)	A

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Dissolved Metals - Data Qualification Summary - SDG 11K084

SDG	Sample	Analyte	Flag	A or P	Reason
11K084	MW-70-PMW05B-115	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification

NWS Seal Beach, IR Site 70
Dissolved Metals - Laboratory Blank Data Qualification Summary - SDG 11K084

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Dissolved Metals - Field Blank Data Qualification Summary - SDG 11K084

No Sample Data Qualified in this SDG

LDC #: 26803H4

SDG #: 11K084

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

~~ADR~~/IV

Date: 12-16-11

Page: 1 of 1

Reviewer: MG

2nd Reviewer: [illegible]

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11-9-11
II.	ICP/MS Tune	N	not utilized
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	Not reviewed for ADR validation.
VI.	Matrix Spike Analysis	N	Not reviewed for ADR validation. client specified
VII.	Duplicate Sample Analysis	N	Not reviewed for ADR validation. " "
VIII.	Laboratory Control Samples (LCS)	A	Not reviewed for ADR validation. LCS/LCSD
IX.	Internal Standard (ICP-MS)	N	Not reviewed for ADR validation. not utilized
X.	Furnace Atomic Absorption QC	N	Not reviewed for ADR validation. not utilized
XI.	ICP Serial Dilution	N	not performed
XII.	Sample Result Verification	A	Not reviewed for ADR validation.
XIII.	Overall Assessment of Data	A	Not reviewed for ADR validation.
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

all water

1	~~MW-70-PMW04A-110~~	11		21		31	
2	~~MW-70-PMW04B-112~~	12		22		32	
3	~~IW-70-FSB118-113~~	13		23		33	
4	~~MW-70-PMW05A-114~~	14		24		34	
5	MW-70-PMW05B-115**	15		25		35	
6	~~IR-70-FD-111~~	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20	PBW	30		40	

Notes:

LDC #: 26803H4

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer: [illegible]

Method: Metals (EPA SW 846 Method 6010B/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. ICP/MS Tune				
Were all isotopes in the tuning solution mass resolution within 0.1 amu?			✓	
Were %RSD of isotopes in the tuning solution ≤5%?			✓	
III. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury) QC limits?	✓			
Were all initial calibration correlation coefficients > 0.995?	✓			
IV. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
V. ICP Interference Check Sample				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.			✓	
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were ≤ 5X the RL.			✓	
VII. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			

LDC #: 26803H4

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
VIII. Furnace Atomic Absorption QC				
If MSA was performed, was the correlation coefficients > 0.995?			✓	
Do all applicable analysies have duplicate injections? (Level IV only)			✓	
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%? (Level IV only)			✓	
Were analytical spike recoveries within the 85-115% QC limits?			✓	
IX. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the MDL (ICP)/>100X the MDL(ICP/MS)?		✓		
Were all percent differences (%Ds) < 10%?			✓	
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.			✓	
X. Internal Standards (EPA SW 846 Method 6020/EPA 200.8)				
Were all the parcent recoveries (%R) within the 30-120% (6020)/60-125% (200.8) of the intensity of the internal standard in the associated initial calibration?			✓	
If the %Rs were outside the criteria, was a reanalysis performed?			✓	
XI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
XII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 26803H4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Page: 1 of 1
Reviewer: MG
2nd reviewer: ✓

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1 → 6	W	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
Analysis Method		
ICP	W	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-

Comments: Mercury by CVAA if performed

LDC #: 26803H4

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: MG
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found / True x 100 Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
1505 ICV	ICP (Initial calibration)	As	1046.2	1000	105	105	Y
	ICP/MS (Initial calibration)						
	CVAA (Initial calibration)		n.a.				
1716 CCV5	ICP (Continuing calibration)	Mn	2459.5 ~~2495.5~~	2500	98	98	
	ICP/MS (Continuing calibration)						
	CVAA (Continuing calibration)						
	GFAA (Initial calibration)						
	GFAA (Continuing calibation)						

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26 80344

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: MG
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$

Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$

Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$

Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
1520 ICSAB	ICP interference check	As	1.0609 (mg/L)	1.0 (mg/L)	106	106	Y
1651 LCS	Laboratory control sample	Mn	0.49652 (mg/L)	0.5 (mg/L)	99	99	↓
—	Matrix spike	—	(SSR-SR) — (mg/L)	— (mg/L)	—	—	—
—	Duplicate	—	— (mg/L)	— (mg/L)	—	—	—
—	ICP serial dilution	—	— (mg/L)	— (mg/L)	—	—	—

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

TOTCLC.4SW

LDC #: 26803H4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: MG
2nd reviewer: ✓

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for # 5, Mn were recalculated and verified using the following equation:

Concentration = (RD)(FV)(Dil) / (In. Vol.)

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

$$\frac{(0.79340\ mg/L)(0.050\ L)}{0.050\ L} = 0.79340\ mg/L$$

#	Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
1	5	Fe	4.73	4.73	Y
		Mn	0.793	0.793	↓

Note:

RECALC.4SW

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 9, 2011
LDC Report Date:	December 21, 2011
Matrix:	Water
Parameters:	Wet Chemistry
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K084

Sample Identification

MW-70-PMW05B-115

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Standard Method 2320B for Alkalinity, EPA Method 300.0 for Chloride, Nitrate as Nitrogen, Nitrite as Nitrogen, and Sulfate, Standard Method 4500F for Dissolved Hydrogen Sulfide, EPA Method 300.0M for Organic Acids, Standard Method 2540C for Total Dissolved Solids, and Standard Method 5310B for Total Organic Carbon.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Continuing Calibration

Continuing calibration frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

No field blanks were identified in this SDG.

V. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VI. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Sample Result Verification

All sample result verifications were acceptable.

All metals reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 11K084	All analytes reported below the RL and above the MDL.	J (all detects)	A

IX. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

X. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Wet Chemistry - Data Qualification Summary - SDG 11K084

SDG	Sample	Analyte	Flag	A or P	Reason
11K084	MW-70-PMW05B-115	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification

NWS Seal Beach, IR Site 70
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 11K084

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Wet Chemistry - Field Blank Data Qualification Summary - SDG 11K084

No Sample Data Qualified in this SDG

LDC #: 26803H6

VALIDATION COMPLETENESS WORKSHEET

~~ADR~~/IV

Date: 12-16-11

SDG #: 11K084

Page: 1 of 1

Laboratory: EMAX Laboratories, Inc.

Reviewer: MG

2nd Reviewer: [illegible]

METHOD: (Analyte) Alkalinity (Standard Method 2320B), Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Dissolved Hydrogen Sulfide (SM4500F), Organic Acids (EPA Method 300.0M), TDS (Standard Method 2540C), TOC (Standard Method 5310B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11-9-11
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	N	Not reviewed for ADR validation. client specified
VI.	Duplicates	A	Not reviewed for ADR validation. DUP
VII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/LCSD
VIII.	Sample result verification	A	Not reviewed for ADR validation.
IX.	Overall assessment of data	A	Not reviewed for ADR validation.
X.	Field duplicates	N	
XI	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

all water

1	~~MW-70-PMW04A-110~~	11		21		31	
2	~~MW-70-PMW04B-112~~	12		22		32	
3	~~IW-70-FSB118-113~~	13		23		33	
4	~~MW-70-PMW05A-114~~	14		24		34	
5	MW-70-PMW05B-115**	15		25		35	
6	~~IR-70-FD-111~~	16		26		36	
7	~~IR-70-FD-111DUP~~	17		27		37	
8		18		28		38	
9		19	PBW 1	29		39	
10		20	~~PBW 2~~	30		40	

Notes:

LDC #: 26803H6

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer: [illegible]

Method: Inorganics (EPA Method see cover)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?	✓			
Were titrant checks performed as required? (Level IV only)	✓			
Were balance checks performed as required? (Level IV only)	✓			
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water		✓		DUP only
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.			✓	
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL(≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were ≤ 5X the CRDL.	✓			
V. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	✓			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26803H6

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer: V

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
X. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 26803H6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: MG
2nd reviewer: ✓

All circled methods are applicable to each sample.

Sample ID	Matrix	Parameter
1→6	W	pH (TDS) (Cl) F (NO3) (NO2) (SO4) PO4 (ALK) CN- NH3 TKN (TOC) CR6+ ClO4 (H2S) (Org Acids)
QC 7	↓	pH (TDS) Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4 (H2S)
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4
		pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+ ClO4

Comments:

LDC #: 26803H6

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: MG
2nd Reviewer: [illegible]

METHOD: Inorganics, Method see cover

The correlation coefficient (r) for the calibration of TOC was recalculated. Calibration date: 11-14-11

An initial or continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found / True x 100 Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution
True = concentration of each analyte in the ICV or CCV source

Type of Analysis	Analyte	Standard ID	Conc Found (units)	Area True (units)	Recalculated r or %R	Reported r or %R	Acceptable (Y/N)
Initial calibration	TOC	Blank	0 (mg/L)	0.1658	r^2=0.999998	r^2=0.999998	Y
		Standard 1	1 ( )	2.356			
		Standard 2	5 ( )	10.70			
		Standard 3	10 ( )	21.11			
		Standard 4	40 ( )	84.59			
		Standard 5	80 ( )	168.8			
		Standard 6	-	-			
		Standard 7	-	-			
Calibration verification	Cl	CCV417	1.918 (mg/L)	2.0 (mg/L)	95.9	95.9	
Calibration verification	SO_4	CCV417	4.989 (mg/L)	5.0 (mg/L)	99.8	99.8	
Calibration verification	Propionate	CCV6	2.057 (mg/L)	2.0 (mg/L)	103	103	

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803H6

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: MG
2nd Reviewer: [illegible]

METHOD: Inorganics, Method see cover

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
LCS	Laboratory control sample	total Alk.	210.81 (mg/L)	230 (mg/L)	92	92	Y
—	Matrix spike sample	—	(SSR-SR) — (mg/L)	— (mg/L)	—	—	—
7	Duplicate sample	TDS	750 (mg/L)	770 (mg/L)	3	3	Y

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803H6

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: MG
2nd reviewer:

METHOD: Inorganics, Method see cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments?
Y N N/A Are all detection limits below the CRQL?

Compound (analyte) results for #5, TDS reported with a positive detect were recalculated and verified using the following equation:

Concentration = Recalculation:

$$\frac{(21.7285\,g - 21.703\,g)(1000\ mg/g)}{0.020\ L} = 1275\ mg/L$$

#	Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
1	5	Cl	279	279	Y
		NO_3-N	0.0638	0.0638	↓
		SO_4	174	174	↓
		total Alk	462	462	↓
		TDS	1280	1280	↓
		TOC	1.41	1.41	↓

Note:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 9, 2011
LDC Report Date:	December 22, 2011
Matrix:	Water
Parameters:	Methane, Ethane, & Ethene
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K084

Sample Identification

MW-70-PMW05B-115
MW-70-PMW05B-115DL1
MW-70-PMW05B-115DL2

Introduction

This data review covers 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Method RSK-175 for Methane, Ethane, and Ethene.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No methane, ethane, or ethene was found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were not required by the method.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
MW-70-PMW05B-115	Ethene Methane	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects) J (all detects)	A
MW-70-PMW05B-115DL1	Methane	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K084	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

The overall assessment of data was acceptable. In the case where more than one result was reported for an individual sample, the least technically acceptable results were rejected as follows:

Sample	Compound	Flag	A or P
MW-70-PMW05B-115	Ethene Methane	R R	A
MW-70-PMW05B-115DL1	Ethane Methane	R R	A
MW-70-PMW05B-115DL2	Ethane Ethene	R R	A

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Methane, Ethane, & Ethene - Data Qualification Summary - SDG 11K084

SDG	Sample	Compound	Flag	A or P	Reason
11K084	MW-70-PMW05B-115	Ethene Methane	J (all detects) J (all detects)	A	Compound quantitation and RLs (exceeded range)
11K084	MW-70-PMW05B-115DL1	Methane	J (all detects)	A	Compound quantitation and RLs (exceeded range)
11K084	MW-70-PMW05B-115 MW-70-PMW05B-115DL1 MW-70-PMW05B-115DL2	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs
11K084	MW-70-PMW05B-115	Ethene Methane	R R	A	Overall assessment of data
11K084	MW-70-PMW05B-115DL1	Ethane Methane	R R	A	Overall assessment of data
11K084	MW-70-PMW05B-115DL2	Ethane Ethene	R R	A	Overall assessment of data

NWS Seal Beach, IR Site 70
Methane, Ethane, & Ethene - Laboratory Blank Data Qualification Summary - SDG 11K084

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Methane, Ethane, & Ethene - Field Blank Data Qualification Summary - SDG 11K084

No Sample Data Qualified in this SDG

LDC #: 26803H51 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/21/11
SDG #: 11K084 ADR/IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/9/11
II	Initial calibration	A	% RSD ≤20
III.	Calibration verification/ICV	A	ICV/CCV ≤20
IV.	Blanks	A	~~Not reviewed for ADR validation~~.
V	Surrogate recovery	N	Not reviewed for ADR validation. client specified
VI.	Matrix spike/Matrix spike duplicates	N	Not reviewed for ADR validation. client specified
VII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/D
VIII.	Target compound identification	A	Not reviewed for ADR validation.
IX.	Compound quantitation/RL/LOQ/LODs	SW	Not reviewed for ADR validation.
X.	System Performance	A	Not reviewed for ADR validation.
XI.	Overall assessment of data	SW	~~Not reviewed for ADR validation~~.
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

1	~~MW-70-PMW04A-110~~	11	MW-70-PMW05B-115DL2**	21	MBLK/W	31	
2	MW-70-PMW04A-110DL	12	~~IR-70-FD-111~~	22		32	
3	MW-70-PMW04B-112	13	~~IR-70-FD-111DL~~	23		33	
4	MW-70-PMW04B-112DL	14		24		34	
5	IW-70-FSB118-113	15		25		35	
6	IW-70-FSB118-113DL	16		26		36	
7	MW-70-PMW05A-114	17		27		37	
8	~~MW-70-PMW05A-114DL~~	18		28		38	
9	MW-70-PMW05B-115**	19		29		39	
10	MW-70-PMW05B-115DL1**	20		30		40	

Notes:

LDC #: 26803#5
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?			✓	
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26803H5)
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: ✓

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26803 #5 /

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	Ethene, methane	X'd cal Range	9	J/A det
	methane	↓	10	J/A det

Comments: See sample calculation verification worksheet for recalculations

COMQUANew.wpd

LDC #: 26803H5

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	ethene, methane	x'd cal Range	9	R/A
	all except ethene	diluted	10	R/A
	all except methane	diluted	11	R/A

Comments:

OVRNew.wpd

LDC #: 26803115/
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC _____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (13.6 std)	Recalculated CF (13.6 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	11/01/11	methane	29307	29307	30507.1	30507.1	5.6	5.6
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803H5.1
SDG #: pw conv

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FD
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	FK14002A	11/14/11	methane	13.6	13.64	13.64	1	1
2	FK14012A	11/14/11	methane	13.6	13.05	13.05	4	4
3	FK14023A	11/14/11	methane	13.6	13.19	13.19	3	3
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803#5 /
SDG #: µu cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS 10

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)	13.6	13.6	13.9	13.8	103	103	102	102	1	1
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26803H5 /
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #11 Compound Name Methane

Concentration = 780780 (1000) / 30507

= 26000 ug/L

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments:

SAMPCALew.wpd

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
10-Nov-2011	IR-70-TB-116	K101-06	TB	5030B	8260B	3
10-Nov-2011	IR-70-RDO-5-117	K101-01	N	3010A	6010B	3
10-Nov-2011	IR-70-RDO-5-117	K101-01	N	5030B	8260B	3
10-Nov-2011	IR-70-RDO-5-117	K101-01	N	GEN PREP	2320B	3
10-Nov-2011	IR-70-RDO-5-117	K101-01	N	GEN PREP	2540C	3
10-Nov-2011	IR-70-RDO-5-117	K101-01	N	GEN PREP	300.0	3
10-Nov-2011	IR-70-RDO-5-117	K101-01	N	GEN PREP	300.0M	3
10-Nov-2011	IR-70-RDO-5-117	K101-01	N	GEN PREP	4500F	3
10-Nov-2011	IR-70-RDO-5-117	K101-01	N	GEN PREP	5310B	3
10-Nov-2011	IR-70-RDO-5-117	K101-01	N	GEN PREP	RSK175	3
10-Nov-2011	IR-70-RDO-5-117DUP	K101-01D	DUP	GEN PREP	2320B	3
10-Nov-2011	IR-70-RDO-5-117DUP	K101-01D	DUP	GEN PREP	5310B	3
10-Nov-2011	IR-70-RDO-5-117MS	K101-01M	MS	GEN PREP	5310B	3
10-Nov-2011	IR-70-RDO-5-117	K101-01T	N	GEN PREP	RSK175	3
10-Nov-2011	MW-70-MNA06-118	K101-02	N	5030B	8260B	3
10-Nov-2011	MW-70-MNA06-118	K101-02	N	GEN PREP	300.0M	3
10-Nov-2011	MW-70-MNA06-118	K101-02	N	GEN PREP	RSK175	3
10-Nov-2011	MW-70-MNA08-119	K101-03	N	5030B	8260B	3
10-Nov-2011	MW-70-MNA08-119	K101-03	N	GEN PREP	300.0M	3
10-Nov-2011	MW-70-MNA08-119	K101-03	N	GEN PREP	RSK175	3
10-Nov-2011	MW-70-MNA08-119	K101-03T	N	5030B	8260B	3
10-Nov-2011	MW-70-MNA08-119	K101-03T	N	GEN PREP	RSK175	3
10-Nov-2011	MW-70-MNA09-120	K101-04	N	5030B	8260B	3
10-Nov-2011	MW-70-MNA09-120	K101-04	N	GEN PREP	300.0M	3
10-Nov-2011	MW-70-MNA09-120	K101-04	N	GEN PREP	RSK175	3
10-Nov-2011	MW-70-MNA09-120	K101-04T	N	GEN PREP	RSK175	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
10-Nov-2011	MW-70-MNA13-121	K101-05	N	5030B	8260B	3
10-Nov-2011	MW-70-MNA13-121	K101-05	N	GEN PREP	300.0M	3
10-Nov-2011	MW-70-MNA13-121	K101-05	N	GEN PREP	RSK175	3
10-Nov-2011	MW-70-MNA13-121MS	K101-05M	MS	GEN PREP	300.0M	3
10-Nov-2011	MW-70-MNA13-121MSD	K101-05S	MSD	GEN PREP	300.0M	3
10-Nov-2011	MW-70-MNA13-121	K101-05T	N	5030B	8260B	3
10-Nov-2011	MW-70-MNA13-121	K101-05T	N	GEN PREP	RSK175	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11K101 **Laboratory: EMXT**

EDD Filename: 11K101 **eQAPP Name: SealBeach_IRSite70**

Method Category: **SVOA**

Method: **RSK175** ***Matrix:*** **AQ**

Sample ID: **MW-70-MNA08-119** ***Collected:*** **11/10/2011 1:42:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHANE	1.8	J	0.64	MDL	2.0	PQL	UG/L	J	RI

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **IR-70-RDO-5-117** ***Collected:*** **11/10/2011 11:07:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TRANS-1,2-DICHLOROETHENE	0.91	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	1.3	J	0.20	MDL	5.0	PQL	UG/L	J	RI

Sample ID: **MW-70-MNA06-118** ***Collected:*** **11/10/2011 12:18:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TRANS-1,2-DICHLOROETHENE	0.29	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	3.0	J	0.20	MDL	5.0	PQL	UG/L	J	RI

Sample ID: **MW-70-MNA09-120** ***Collected:*** **11/10/2011 2:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TRICHLOROETHENE	2.8	J	0.20	MDL	5.0	PQL	UG/L	J	RI

Sample ID: **MW-70-MNA13-121** ***Collected:*** **11/10/2011 3:53:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
VINYL CHLORIDE	0.26	J	0.20	MDL	0.50	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K101 **Laboratory: EMXT**

EDD Filename: 11K101 **eQAPP Name: SealBeach_IRSite70**

Reason Code Legend

Reason Code	*Description*
ProfJudg	Professional Judgment
RI	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11K101

Reporting Limit Outliers

Lab Reporting Batch ID: 11K101 **Laboratory: EMXT**

EDD Filename: 11K101 **eQAPP Name: SealBeach_IRSite70**

Method: **8260B**

Matrix: **AQ**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-RDO-5-117	TRANS-1,2-DICHLOROETHENE TRICHLOROETHENE	J J	0.91 1.3	1.0 5.0	PQL PQL	UG/L UG/L	J (all detects)
MW-70-MNA06-118	TRANS-1,2-DICHLOROETHENE TRICHLOROETHENE	J J	0.29 3.0	1.0 5.0	PQL PQL	UG/L UG/L	J (all detects)
MW-70-MNA09-120	TRICHLOROETHENE	J	2.8	5.0	PQL	UG/L	J (all detects)
MW-70-MNA13-121	TRANS-1,2-DICHLOROETHENE TRICHLOROETHENE VINYL CHLORIDE	J J J	4.2 16 0.26	10 50 0.50	PQL PQL PQL	UG/L UG/L UG/L	J (all detects)

Method: **RSK175**

Matrix: **AQ**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
MW-70-MNA08-119	ETHANE	J	1.8	2.0	PQL	UG/L	J (all detects)

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

LDC #: 26803I1

SDG #: 11K101

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/15/11

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/10/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤ 30
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	N	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	N	
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A ~~N~~	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/~~LOQ/LOD~~s	SW	
XIII.	Tentitatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	SW	
XVI.	Field duplicates	N	
XVII.	Field blanks	↓	TB = 8

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	IR-70-RDO-5-117	11	MBLK1W	21		31	
2	MW-70-MNA06-118	12	2W	22		32	
3	MW-70-MNA08-119	13	3W	23		33	
4	MW-70-MNA08-119DL	14		24		34	
5	MW-70-MNA09-120	15		25		35	
6	MW-70-MNA13-121	16		26		36	
7	MW-70-MNA13-121DL	17		27		37	
8	IR-70-TB-116	18		28		38	
9		19		29		39	
10		20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 26803I 1

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and CRQLs

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?

Y N N/A Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	Compound	Finding	Associated Samples	Qualifications
		QQQ	> calib range	3.6	J det /A

Comments: See sample calculation verification worksheet for recalculations

COMQUA.1S

LDC #: 26803I1
SDG #: -

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Date	Sample ID	Finding	Associated Samples	Qualifications
		3.6	DQQ > calib range		R/A
		4.7	All except DQQ - diluted		J

Comments:

OVR.1S

LDC #: 26803I4

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/15/11

SDG #: 11K101

Page: 1 of 1

Laboratory: EMAX Laboratories, Inc.

Reviewer:

2nd Reviewer:

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/10/11
II.	ICP/MS Tune	N	Not Utilized
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A~~N~~	
VI.	Matrix Spike Analysis	N	Client Specified
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	Not Utilized
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	N	Not Performed
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	A ~~N~~	
XIV.	Field Duplicates	N	
XV	Field Blanks		

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	IR-70-RDO-5-117 W	11		21		31	
2	MB	12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26803I4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer:
2nd reviewer:

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1	W	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___ ___
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-,

Comments: Mercury by CVAA if performed

LDC #: 26803I51

SDG #: 11K101

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/15/11

Page: 1 of 1

Reviewer: A

2nd Reviewer: [illegible]

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/10/11
II	Initial calibration	A	%RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	N	
V	Surrogate recovery	N	
VI.	Matrix spike/Matrix spike duplicates	N	
VII.	Laboratory control samples	N	
VIII.	Target compound identification	N	
IX.	Compound quantitation/RL/L~~OQ/LODs~~	SW N	
X.	System Performance	N	
XI.	Overall assessment of data	SW N	
XII.	Field duplicates	N	
XIII.	Field blanks	↓	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	IR-70-RDO-5-117 W	11		21		31	
2	IR-70-RDO-5-117DL	12		22		32	
3	MW-70-MNA06-118	13		23		33	
4	MW-70-MNA08-119	14		24		34	
5	MW-70-MNA08-119DL	15		25		35	
6	MW-70-MNA09-120	16		26		36	
7	MW-70-MNA09-120DL	17		27		37	
8	MW-70-MNA13-121	18		28		38	
9	MW-70-MNA13-121DL	19		29		39	
10		20		30		40	

Notes:

LDC #: 26803I 51

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Level IV/D Only
Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	> calib range	1.4.6.8	J det/A

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26803I S1
SDG #: -

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	Y calib range	1.4.6.8	R/A
	Ethane, Ethene	diluted out	2.5.7.9	J

Comments: _____

OVRNew.wpd

LDC #: 26803I6

SDG #: 11K101

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/15/11

Page: 1 of 1

Reviewer: A

2nd Reviewer: [illegible]

METHOD: (Analyte) Alkalinity (Standard Method 2320B), Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Dissolved Hydrogen Sulfide (SM4500F), Organic Acids (EPA Method 300.0M), TDS (Standard Method 2540C), TOC (Standard Method 5310B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/10/11
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	N	MS/MSD/Dup
VI.	Duplicates	N	
VII.	Laboratory control samples	N	
VIII.	Sample result verification	N	
IX.	Overall assessment of data	A	
X.	Field duplicates	A	
XI	Field blanks	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

All wet

1	IR-70-RDO-5-117	11		21		31	
2	MW-70-MNA06-118	12		22		32	
3	MW-70-MNA08-119	13		23		33	
4	MW-70-MNA09-120	14		24		34	
5	MW-70-MNA13-121	15		25		35	
6	IR-70-RDO-5-117MS	16		26		36	
7	IR-70-RDO-5-117DUP	17		27		37	
8	MW-70-MNA13-121MS	18		28		38	
9	MW-70-MNA13-121MSD	19		29		39	
10	PB	20		30		40	

Notes:

LDC #: 26803I6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: A
2nd reviewer: V

All circled methods are applicable to each sample.

Sample ID	Matrix	Parameter
1	W	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 H_2S Org Acids
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
2-5	W	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 Org Acids
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
QC 6	W	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
7	W	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
8-9	W	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 Org. Acids
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4

Comments:

Laboratory Data Consultants, Inc.

7750 El Camino Real, Ste. 2L Carlsbad, CA 92009

Phone 760.634.0437 **Web** www.lab-data.com **Fax** 760.634.0439

Insight EEC, Inc.
3020 E. Miraloma
Anaheim, CA 92806
ATTN: Mr. Nick Weinberger

December 27, 2011

SUBJECT: NWS Seal Beach, IR Site 70, Data Validation

Dear Mr. Weinberger,

Enclosed is the final validation report for the fractions listed below. These SDGs were received on December 14, 2011.

LDC project# 26845:

SDG #	Fraction
11K205, 11K217	Volatiles (EPA SW 846 Method 8260B) Dissolved Metals (EPA SW 846 Method 6010B) Dissolved Gases (Method RSK-175) Wet Chemistry (EPA Method 300.0 and 300.0M and Standard Method 2320B, 2540C, 4500F,and 5310B)

The following deliverables are submitted under this report:

- Attachment I — Sample ID Cross Reference and Data Review Level
- Attachment II — Overall Data Qualification Summary
- Enclosure I — EPA Level III ADR Outliers (including manual review outliers)

The data validation was performed in accordance to the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008 and for Inorganic Data Review, January 2010. Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience. The following items were evaluated during the review:

- Holding Times
- Sample Preservation
- Cooler Temperatures
- Initial Calibration (Manual Review)
- Continuing Calibration (Manual Review)
- Blanks
- Surrogates
- Internal Standards (Manual Review)
- Matrix Spike/Matrix Spike Duplicates
- Laboratory Control Samples
- Detection and Quantitation Limits

- Field QC Samples

Please feel free to contact us if you have any questions.

Sincerely,

E Rauto for

Andrew Kong
Project Manager/Chemist

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
22-Nov-2011	IR-70-TB-162	K205-06	TB	5030B	8260B	3
22-Nov-2011	IW-70-SSB119-163	K205-01	N	3010A	6010B	3
22-Nov-2011	IW-70-SSB119-163	K205-01	N	5030B	8260B	3
22-Nov-2011	IW-70-SSB119-163	K205-01	N	GEN PREP	2320B	3
22-Nov-2011	IW-70-SSB119-163	K205-01	N	GEN PREP	2540C	3
22-Nov-2011	IW-70-SSB119-163	K205-01	N	GEN PREP	300.0	3
22-Nov-2011	IW-70-SSB119-163	K205-01	N	GEN PREP	300.0M	3
22-Nov-2011	IW-70-SSB119-163	K205-01	N	GEN PREP	4500F	3
22-Nov-2011	IW-70-SSB119-163	K205-01	N	GEN PREP	5310B	3
22-Nov-2011	IW-70-SSB119-163	K205-01	N	GEN PREP	RSK175	3
22-Nov-2011	IW-70-SSB119-163DUP	K205-01D	DUP	GEN PREP	2320B	3
22-Nov-2011	IW-70-SSB119-163DUP	K205-01D	DUP	GEN PREP	2540C	3
22-Nov-2011	IW-70-SSB119-163DUP	K205-01D	DUP	GEN PREP	300.0	3
22-Nov-2011	IW-70-SSB119-163DUP	K205-01D	DUP	GEN PREP	4500F	3
22-Nov-2011	IW-70-SSB119-163MS	K205-01M	MS	3010A	6010B	3
22-Nov-2011	IW-70-SSB119-163MS	K205-01M	MS	5030B	8260B	3
22-Nov-2011	IW-70-SSB119-163MS	K205-01M	MS	GEN PREP	300.0	3
22-Nov-2011	IW-70-SSB119-163MS	K205-01M	MS	GEN PREP	300.0M	3
22-Nov-2011	IW-70-SSB119-163MS	K205-01M	MS	GEN PREP	5310B	3
22-Nov-2011	IW-70-SSB119-163MS	K205-01M	MS	GEN PREP	RSK175	3
22-Nov-2011	IW-70-SSB119-163MSD	K205-01S	MSD	3010A	6010B	3
22-Nov-2011	IW-70-SSB119-163MSD	K205-01S	MSD	5030B	8260B	3
22-Nov-2011	IW-70-SSB119-163MSD	K205-01S	MSD	GEN PREP	300.0	3
22-Nov-2011	IW-70-SSB119-163MSD	K205-01S	MSD	GEN PREP	300.0M	3
22-Nov-2011	IW-70-SSB119-163MSD	K205-01S	MSD	GEN PREP	5310B	3
22-Nov-2011	IW-70-SSB119-163MSD	K205-01S	MSD	GEN PREP	RSK175	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
22-Nov-2011	IW-70-SSB119-163	K205-01T	N	GEN PREP	RSK175	3
22-Nov-2011	IW-70-SHB311-164	K205-02	N	3010A	6010B	3
22-Nov-2011	IW-70-SHB311-164	K205-02	N	5030B	8260B	3
22-Nov-2011	IW-70-SHB311-164	K205-02	N	GEN PREP	2320B	3
22-Nov-2011	IW-70-SHB311-164	K205-02	N	GEN PREP	2540C	3
22-Nov-2011	IW-70-SHB311-164	K205-02	N	GEN PREP	300.0	3
22-Nov-2011	IW-70-SHB311-164	K205-02	N	GEN PREP	300.0M	3
22-Nov-2011	IW-70-SHB311-164	K205-02	N	GEN PREP	4500F	3
22-Nov-2011	IW-70-SHB311-164	K205-02	N	GEN PREP	5310B	3
22-Nov-2011	IW-70-SHB311-164	K205-02	N	GEN PREP	RSK175	3
22-Nov-2011	IW-70-SHB311-164	K205-02T	N	GEN PREP	RSK175	3
22-Nov-2011	IR-70-SB-165	K205-04	SB	3010A	6010B	3
22-Nov-2011	IR-70-SB-165	K205-04	SB	5030B	8260B	3
22-Nov-2011	IR-70-SB-165	K205-04	SB	GEN PREP	2540C	3
22-Nov-2011	IR-70-SB-165	K205-04	SB	GEN PREP	300.0	3
22-Nov-2011	IR-70-SB-165	K205-04	SB	GEN PREP	300.0M	3
22-Nov-2011	IR-70-SB-165	K205-04	SB	GEN PREP	4500F	3
22-Nov-2011	IR-70-SB-165	K205-04	SB	GEN PREP	5310B	3
22-Nov-2011	IR-70-SB-165	K205-04	SB	GEN PREP	RSK175	3
22-Nov-2011	IR-70-EB-166	K205-05	EB	3010A	6010B	3
22-Nov-2011	IR-70-EB-166	K205-05	EB	5030B	8260B	3
22-Nov-2011	IR-70-EB-166	K205-05	EB	GEN PREP	2540C	3
22-Nov-2011	IR-70-EB-166	K205-05	EB	GEN PREP	300.0	3
22-Nov-2011	IR-70-EB-166	K205-05	EB	GEN PREP	300.0M	3
22-Nov-2011	IR-70-EB-166	K205-05	EB	GEN PREP	4500F	3
22-Nov-2011	IR-70-EB-166	K205-05	EB	GEN PREP	5310B	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
22-Nov-2011	IR-70-EB-166	K205-05	EB	GEN PREP	RSK175	3
22-Nov-2011	IW-70-SAT35-167	K205-03	N	3010A	6010B	3
22-Nov-2011	IW-70-SAT35-167	K205-03	N	5030B	8260B	3
22-Nov-2011	IW-70-SAT35-167	K205-03	N	GEN PREP	2320B	3
22-Nov-2011	IW-70-SAT35-167	K205-03	N	GEN PREP	2540C	3
22-Nov-2011	IW-70-SAT35-167	K205-03	N	GEN PREP	300.0	3
22-Nov-2011	IW-70-SAT35-167	K205-03	N	GEN PREP	300.0M	3
22-Nov-2011	IW-70-SAT35-167	K205-03	N	GEN PREP	4500F	3
22-Nov-2011	IW-70-SAT35-167	K205-03	N	GEN PREP	5310B	3
22-Nov-2011	IW-70-SAT35-167	K205-03	N	GEN PREP	RSK175	3
22-Nov-2011	IW-70-SAT35-167	K205-03I	N	GEN PREP	RSK175	3
22-Nov-2011	IW-70-SAT35-167	K205-03R	N	GEN PREP	300.0M	3
22-Nov-2011	IW-70-SAT35-167	K205-03T	N	GEN PREP	RSK175	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11K205 **Laboratory: EMXT**

EDD Filename: 11K205 **eQAPP Name: SealBeach_IRSite70**

Method Category: GENCHEM

Method: 300.0 **Matrix:** AQ

Sample ID: IR-70-EB-166 *Collected:* 11/22/2011 2:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chloride-Cl	0.167	J	0.100	MDL	0.200	PQL	MG/L	J	RI
NITRATE-N	0.0830	J	0.0500	MDL	0.200	PQL	MG/L	J	RI

Sample ID: IR-70-SB-165 *Collected:* 11/22/2011 2:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chloride-Cl	0.165	J	0.100	MDL	0.200	PQL	MG/L	J	RI
NITRATE-N	0.0840	J	0.0500	MDL	0.200	PQL	MG/L	J	RI
SULFATE	0.290	J	0.250	MDL	0.500	PQL	MG/L	J	RI

Sample ID: IW-70-SHB311-164 *Collected:* 11/22/2011 1:47:00 *Analysis Type:* DL1 *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SULFATE	1.93	J	1.25	MDL	2.50	PQL	MG/L	U	Eb

Method Category: METALS

Method: 6010B **Matrix:** AQ

Sample ID: IW-70-SAT35-167 *Collected:* 11/22/2011 4:23:00 *Analysis Type:* RES/DIS *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.190	J	0.00500	MDL	0.200	PQL	MG/L	J	RI

Method Category: SVOA

Method: RSK175 **Matrix:** AQ

Sample ID: IW-70-SAT35-167 *Collected:* 11/22/2011 4:23:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHANE	0.94	J	0.64	MDL	2.0	PQL	UG/L	J	RI

Sample ID: IW-70-SHB311-164 *Collected:* 11/22/2011 1:47:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHANE	0.79	J	0.64	MDL	2.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K205 **Laboratory: EMXT**

EDD Filename: 11K205 **eQAPP Name: SealBeach_IRSite70**

Method Category: **SVOA**

Method: **RSK175** ***Matrix:*** **AQ**

Sample ID: **IW-70-SHB311-164** ***Collected:*** **11/22/2011 1:47:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHENE	0.62	J	0.60	MDL	2.0	PQL	UG/L	J	RI

Sample ID: **IW-70-SSB119-163** ***Collected:*** **11/22/2011 11:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHENE	1.9	J	0.60	MDL	2.0	PQL	UG/L	J	RI

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **IR-70-EB-166** ***Collected:*** **11/22/2011 2:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BROMODICHLOROMETHANE	0.25	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CHLOROBENZENE	0.28	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CHLOROFORM	0.34	J	0.20	MDL	1.0	PQL	UG/L	J	RI

Sample ID: **IR-70-SB-165** ***Collected:*** **11/22/2011 2:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BROMODICHLOROMETHANE	0.28	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CARBON DISULFIDE	0.26	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CHLOROBENZENE	0.29	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CHLOROFORM	0.35	J	0.20	MDL	1.0	PQL	UG/L	J	RI

Sample ID: **IW-70-SAT35-167** ***Collected:*** **11/22/2011 4:23:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CARBON DISULFIDE	0.27	J	0.20	MDL	1.0	PQL	UG/L	U	Fb
CHLOROETHANE	0.49	J	0.30	MDL	2.0	PQL	UG/L	J	RI
CIS-1,2-DICHLOROETHENE	0.50	J	0.20	MDL	1.0	PQL	UG/L	J	RI
METHYLENE CHLORIDE	0.55	J	0.50	MDL	1.0	PQL	UG/L	J	RI
TOLUENE	0.29	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	0.47	J	0.20	MDL	5.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K205 **Laboratory: EMXT**

EDD Filename: 11K205 **eQAPP Name: SealBeach_IRSite70**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **IW-70-SHB311-164** ***Collected:*** **11/22/2011 1:47:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	6.7	J	5.0	MDL	10	PQL	UG/L	J	RI
CIS-1,2-DICHLOROETHENE	0.48	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	0.30	J	0.20	MDL	5.0	PQL	UG/L	J	RI

Sample ID: **IW-70-SSB119-163** ***Collected:*** **11/22/2011 11:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CARBON DISULFIDE	0.22	J	0.20	MDL	1.0	PQL	UG/L	U	Fb
CHLOROETHANE	0.49	J	0.30	MDL	2.0	PQL	UG/L	J	RI
CIS-1,2-DICHLOROETHENE	0.74	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TOLUENE	0.45	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRANS-1,2-DICHLOROETHENE	0.43	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	0.24	J	0.20	MDL	5.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K205 **Laboratory: EMXT**

EDD Filename: 11K205 **eQAPP Name: SealBeach_IRSite70**

Reason Code Legend

Reason Code	*Description*
Cb	Calibration Blank Contamination
Ccv	Continuing Calibration Verification Percent Difference Lower Estimation
Ccv	Continuing Calibration Verification Percent Difference Lower Rejection
Ccv	Continuing Calibration Verification Percent Difference Upper Estimation
Ccv	Continuing Calibration Verification Percent Difference Upper Rejection
Ccv	Continuing Calibration Verification Percent Recovery Lower Estimation
Ccv	Continuing Calibration Verification Percent Recovery Lower Rejection
Ccv	Continuing Calibration Verification Percent Recovery Upper Estimation
Ccv	Continuing Calibration Verification Percent Recovery Upper Rejection
CcvCC	Continuing Calibration Verification Correlation Coefficient
CcvRrf	Continuing Calibration Verification Relative Response Factor
ContTune	Continuing Tune
Dup=0	Duplicate Sample Count = 0
Dup>1	Duplicate Sample Count > 1
Eb	Equipment Blank Contamination
EtoA	Extraction to Analysis Estimation
EtoA	Extraction to Analysis Rejection
Fb	Field Blank Contamination
Fd	Field Duplicate Precision
Ft	Field Triplicate Precision
IcCC	Initial Calibration Correlation Coefficient
IcRrf	Initial Calibration Relative Response Factor
IcRsd	Initial Calibration Percent Relative Standard Deviation
Icv	Initial Calibration Verification Percent Difference Lower Estimation
Icv	Initial Calibration Verification Percent Difference Lower Rejection
Icv	Initial Calibration Verification Percent Difference Upper Estimation
Icv	Initial Calibration Verification Percent Difference Upper Rejection
Icv	Initial Calibration Verification Percent Recovery Lower Estimation
Icv	Initial Calibration Verification Percent Recovery Lower Rejection
Icv	Initial Calibration Verification Percent Recovery Upper Estimation

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K205 **Laboratory: EMXT**

EDD Filename: 11K205 **eQAPP Name: SealBeach_IRSite70**

Icv	Initial Calibration Verification Percent Recovery Upper Rejection
IcvCC	Initial Calibration Verification Correlation Coefficient
IcvRrf	Initial Calibration Verification Relative Response Factor
IllogicalFraction	Illogical Fraction
InitTune	Initial Tune
Is	Internal Standard Estimation
Is	Internal Standard Rejection
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Lower Rejection
Lcs	Laboratory Control Spike Upper Estimation
Lcs	Laboratory Control Spike Upper Rejection
Lcs=0	Laboratory Control Sample Count = 0
Lcs>1	Laboratory Control Sample Count > 1
Ld	Laboratory Duplicate Precision
Lt	Laboratory Triplicate Precision
Mb	Method Blank Contamination
Mb=0	Method Blank Sample Count = 0
Mb>1	Method Blank Sample Count > 1
Moist	Percent Moisture
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Lower Rejection
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
Ms	Matrix Spike Upper Rejection
Ms=0	Matrix Spike Sample Count = 0
Ms>1	Matrix Spike Sample Count > 1
PEM	Performance Evaluation Mixture
Preservation	Preservation
ProfJudg	Professional Judgment
REM	Resolution Check Mixture
RI	Reporting Limit

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K205 **Laboratory: EMXT**

EDD Filename: 11K205 **eQAPP Name: SealBeach_IRSite70**

RI	Reporting Limit > Project Maximum Contamination Limit
RI	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation
StoA	Sampling to Analysis Rejection
StoE	Sampling to Extraction Estimation
StoE	Sampling to Extraction Rejection
StoL	Sampling to Leaching Estimation
StoL	Sampling to Leaching Rejection
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Lower Rejection
Surr	Surrogate/Tracer Recovery Upper Estimation
Surr	Surrogate/Tracer Recovery Upper Rejection
Tb	Trip Blank Contamination
TempEst	Temperature Estimation
TempRej	Temperature Rejection

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11K205

Field Blank Outlier Report

Lab Reporting Batch ID: 11K205 **Laboratory: EMXT**

EDD Filename: 11K205 **eQAPP Name: SealBeach_IRSite70**

Method: **8260B**
Matrix: **AQ**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
IR-70-SB-165(RES)	11/22/2011 2:15:00 PM	BROMODICHLOROMETHANE CARBON DISULFIDE CHLOROBENZENE CHLOROFORM	0.28 UG/L 0.26 UG/L 0.29 UG/L 0.35 UG/L	IW-70-SAT35-167 IW-70-SHB311-164 IW-70-SSB119-163

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
IW-70-SAT35-167(RES)	CARBON DISULFIDE	0.27 UG/L	1.0U UG/L
IW-70-SSB119-163(RES)	CARBON DISULFIDE	0.22 UG/L	1.0U UG/L

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Equipment Rinsate Blank Outlier Report

Lab Reporting Batch ID: 11K205 **Laboratory: EMXT**

EDD Filename: 11K205 **eQAPP Name: SealBeach_IRSite70**

Method: **300.0**
Matrix: **AQ**

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
IR-70-EB-166(RES)	11/22/2011 2:20:00 PM	Chloride-Cl NITRATE-N SULFATE	0.167 MG/L 0.083 MG/L 0.591 MG/L	IW-70-SAT35-167 IW-70-SHB311-164 IW-70-SSB119-163

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
IW-70-SHB311-164(DL1)	SULFATE	1.93 MG/L	1.93U MG/L

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Reporting Limit Outliers

Lab Reporting Batch ID: 11K205 **Laboratory: EMXT**

EDD Filename: 11K205 **eQAPP Name: SealBeach_IRSite70**

Method: 300.0

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-EB-166	Chloride-Cl	J	0.167	0.200	PQL	MG/L	J (all detects)
	NITRATE-N	J	0.0830	0.200	PQL	MG/L	
IR-70-SB-165	Chloride-Cl	J	0.165	0.200	PQL	MG/L	J (all detects)
	NITRATE-N	J	0.0840	0.200	PQL	MG/L	
	SULFATE	J	0.290	0.500	PQL	MG/L	
IW-70-SHB311-164	SULFATE	J	1.93	2.50	PQL	MG/L	J (all detects)

Method: 6010B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IW-70-SAT35-167	ARSENIC	J	0.190	0.200	PQL	MG/L	J (all detects)

Method: 8260B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-EB-166	BROMODICHLOROMETHANE	J	0.25	1.0	PQL	UG/L	J (all detects)
	CHLOROBENZENE	J	0.28	1.0	PQL	UG/L	
	CHLOROFORM	J	0.34	1.0	PQL	UG/L	
IR-70-SB-165	BROMODICHLOROMETHANE	J	0.28	1.0	PQL	UG/L	J (all detects)
	CARBON DISULFIDE	J	0.26	1.0	PQL	UG/L	
	CHLOROBENZENE	J	0.29	1.0	PQL	UG/L	
	CHLOROFORM	J	0.35	1.0	PQL	UG/L	
IW-70-SAT35-167	CARBON DISULFIDE	J	0.27	1.0	PQL	UG/L	J (all detects)
	CHLOROETHANE	J	0.49	2.0	PQL	UG/L	
	CIS-1,2-DICHLOROETHENE	J	0.50	1.0	PQL	UG/L	
	METHYLENE CHLORIDE	J	0.55	1.0	PQL	UG/L	
	TOLUENE	J	0.29	1.0	PQL	UG/L	
	TRICHLOROETHENE	J	0.47	5.0	PQL	UG/L	
IW-70-SHB311-164	ACETONE	J	6.7	10	PQL	UG/L	J (all detects)
	CIS-1,2-DICHLOROETHENE	J	0.48	1.0	PQL	UG/L	
	TRICHLOROETHENE	J	0.30	5.0	PQL	UG/L	
IW-70-SSB119-163	CARBON DISULFIDE	J	0.22	1.0	PQL	UG/L	J (all detects)
	CHLOROETHANE	J	0.49	2.0	PQL	UG/L	
	CIS-1,2-DICHLOROETHENE	J	0.74	1.0	PQL	UG/L	
	TOLUENE	J	0.45	1.0	PQL	UG/L	
	TRANS-1,2-DICHLOROETHENE	J	0.43	1.0	PQL	UG/L	
	TRICHLOROETHENE	J	0.24	5.0	PQL	UG/L	

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Reporting Limit Outliers

Lab Reporting Batch ID: 11K205 **Laboratory: EMXT**

EDD Filename: 11K205 **eQAPP Name: SealBeach_IRSite70**

Method: **RSK175**

Matrix: **AQ**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
IW-70-SAT35-167	ETHANE	J	0.94	2.0	PQL	UG/L	J (all detects)
IW-70-SHB311-164	ETHANE ETHENE	J J	0.79 0.62	2.0 2.0	PQL PQL	UG/L UG/L	J (all detects)
IW-70-SSB119-163	ETHENE	J	1.9	2.0	PQL	UG/L	J (all detects)

LDC #: 26845A1

SDG #: 11K205

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/23/11

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/22/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤ 30
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	N	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	N	
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A ~~N~~	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/~~LOQ/LOD~~s	N	
XIII.	Tentitatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A ~~N~~	
XVI.	Field duplicates	N	
XVII.	Field blanks	A	FB = 4 EB = 5 TB = 6

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

All water

1	IW-70-SSB119-163	11		21		31	
2	IW-70-SHB311-164	12		22		32	
3	IW-70-SAT35-167	13		23		33	
4	IR-70-SB-165	14		24		34	
5	IR-70-EB-166	15		25		35	
6	IR-70-TB-162	16		26		36	
7	IW-70-SSB119-163MS	17		27		37	
8	IW-70-SSB119-163MSD	18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 26845A4 **VALIDATION COMPLETENESS WORKSHEET** Date: 12-19-11
SDG #: 11K205 ADR Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: MG
2nd Reviewer: W

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11-22-11
II.	ICP/MS Tune	N	not utilized
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	N	MS/MSD
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/LCSD
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	ND	Source Blank = 4, EB = 5

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:
all water

1	IW-70-SSB119-163	11		21		31	
2	IW-70-SHB311-164	12		22		32	
3	IW-70-SAT35-167	13		23		33	
4	IR-70-SB-165	14		24		34	
5	IR-70-EB-166	15		25		35	
6	IW-70-SSB119-163MS	16		26		36	
7	IW-70-SSB119-163MSD	17		27		37	
8		18		28		38	
9		19		29		39	
10		20	PBW	30		40	

Notes:

LDC #: 26845A4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: MG
2nd reviewer: ✓

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1→5	W	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
QC 6,7	↓	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
Analysis Method		
ICP	W	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-,

Comments: Mercury by CVAA if performed

LDC #: 26845A51

SDG #: 11K205

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/23/11

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/22/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	N	
V	Surrogate recovery	N	
VI.	Matrix spike/Matrix spike duplicates	N	
VII.	Laboratory control samples	N	
VIII.	Target compound identification	N	
IX.	Compound quantitation/RL/LO~~Q/LOD~~s	SW N	
X.	System Performance	N	
XI.	Overall assessment of data	SW N	
XII.	Field duplicates	N	
XIII.	Field blanks	↓	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

All wet

1	IW-70-SSB119-163	11	IW-70-SSB119-163MSD	21		31	
2	IW-70-SSB119-163DL	12		22		32	
3	IW-70-SHB311-164	13		23		33	
4	IW-70-SHB311-164DL	14		24		34	
5	IW-70-SAT35-167	15		25		35	
6	IW-70-SAT35-167DL1	16		26		36	
7	IW-70-SAT35-167DL2	17		27		37	
8	IR-70-SB-165	18		28		38	
9	IR-70-EB-166	19		29		39	
10	IW-70-SSB119-163MS	20		30		40	

Notes:

LDC #: 26845A51

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: A
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Level IV/D Only
Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	> calib range	1.3.6	J det/A
	Methane, Ethane	> calib range	5	J

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26845A51
SDG #: –

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	> calib range	1.3.	R/A
	Ethane, Ethene	Diluted	2.4.7	J
	Methane, Ethene	> calib range	5	J
	Ethane, Methane	> calib range, diluted	6	J

Comments: _____

OVRNew.wpd

LDC #: 26845A6 **VALIDATION COMPLETENESS WORKSHEET** Date: 12-19-11

SDG #: 11K205 ADR Page: 1 of 1

Laboratory: EMAX Laboratories, Inc. Reviewer: MG

2nd Reviewer: ✓

METHOD: (Analyte) Alkalinity (Standard Method 2320B), Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Dissolved Hydrogen Sulfide (SM4500F), Organic Acids (EPA Method 300.0M), TDS (Standard Method 2540C), TOC (Standard Method 5310B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11-22-11
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	N	MS/MSD
VI.	Duplicates	N	DUP
VII.	Laboratory control samples	N	LCS/LCSD
VIII.	Sample result verification	N	
IX.	Overall assessment of data	N	
X.	Field duplicates	N	
XI	Field blanks	~~SW~~ N	Source Blank = 4 EB = 5 (Cl, NO_3-N, SO_4 hits in both)

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	IW-70-SSB119-163	11		21		31	
2	IW-70-SHB311-164	12		22		32	
3	IW-70-SAT35-167	13		23		33	
4	IR-70-SB-165	14		24		34	
5	IR-70-EB-166	15		25		35	
6	IW-70-SSB119-163MS	16		26		36	
7	IW-70-SSB119-163MSD	17		27		37	
8	IW-70-SSB119-163DUP	18		28		38	
9		19	PBW	29		39	
10		20	PBW	30		40	

Notes:

LDC #: 26845A6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: MG
2nd reviewer: [illegible]

All circled methods are applicable to each sample.

Sample ID	Matrix	Parameter
1→3	W	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 Org Acids H_2S
4,5	↓	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 Org Acids H_2S
QC 6,7	↓	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 Org Acids
↓ 8	↓	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 H_2S
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4

Comments:

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
23-Nov-2011	IR-70-TB-168	K217-05	TB	5030B	8260B	3
23-Nov-2011	MW-70-03-169	K217-01	N	5030B	8260B	3
23-Nov-2011	MW-70-43A-170	K217-02	N	5030B	8260B	3
23-Nov-2011	MW-70-43A-170	K217-02	N	GEN PREP	300.0M	3
23-Nov-2011	MW-70-43A-170	K217-02	N	GEN PREP	RSK175	3
23-Nov-2011	IR-70-EB-171	K217-04	EB	5030B	8260B	3
23-Nov-2011	IR-70-EB-171	K217-04	EB	GEN PREP	300.0	3
23-Nov-2011	IR-70-EB-171	K217-04	EB	GEN PREP	300.0M	3
23-Nov-2011	IR-70-EB-171	K217-04W	EB	3010A	6010B	3
23-Nov-2011	MW-70-14-172	K217-03	N	5030B	8260B	3
23-Nov-2011	MW-70-14-172	K217-03	N	GEN PREP	300.0M	3
23-Nov-2011	MW-70-14-172	K217-03	N	GEN PREP	RSK175	3
23-Nov-2011	MW-70-14-172	K217-03T	N	5030B	8260B	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11K217 **Laboratory: EMXT**

EDD Filename: 11K217 **eQAPP Name: SealBeach_IRSite70**

Method Category: **GENCHEM**

Method: **300.0** ***Matrix:*** **AQ**

Sample ID: IR-70-EB-171 ***Collected:*** 11/23/2011 11:50:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chloride-Cl	0.174	J	0.100	MDL	0.200	PQL	MG/L	J	RI
NITRATE-N	0.0837	J	0.0500	MDL	0.200	PQL	MG/L	J	RI
SULFATE	0.267	J	0.250	MDL	0.500	PQL	MG/L	J	RI

Method Category: **SVOA**

Method: **RSK175** ***Matrix:*** **AQ**

Sample ID: MW-70-14-172 ***Collected:*** 11/23/2011 1:06:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHENE	1.1	J	0.60	MDL	2.0	PQL	UG/L	J	RI

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: IR-70-EB-171 ***Collected:*** 11/23/2011 11:50:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BROMODICHLOROMETHANE	0.24	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CHLOROBENZENE	0.25	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CHLOROFORM	0.30	J	0.20	MDL	1.0	PQL	UG/L	J	RI

Sample ID: MW-70-03-169 ***Collected:*** 11/23/2011 9:17:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHENE	0.42	J	0.20	MDL	0.50	PQL	UG/L	J	RI
ACETONE	6.1	J	5.0	MDL	10	PQL	UG/L	J	RI
TRANS-1,2-DICHLOROETHENE	0.25	J	0.20	MDL	1.0	PQL	UG/L	J	RI
VINYL CHLORIDE	0.45	J	0.20	MDL	0.50	PQL	UG/L	J	RI

Sample ID: MW-70-14-172 ***Collected:*** 11/23/2011 1:06:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CARBON DISULFIDE	0.25	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	0.89	J	0.20	MDL	5.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K217 **Laboratory: EMXT**

EDD Filename: 11K217 **eQAPP Name: SealBeach_IRSite70**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **MW-70-43A-170** ***Collected:*** **11/23/2011 11:28:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
CIS-1,2-DICHLOROETHENE	0.22	J	0.20	MDL	1.0	PQL	UG/L	J	RI
ETHYLBENZENE	0.26	J	0.20	MDL	1.0	PQL	UG/L	J	RI
O-XYLENE	0.22	J	0.20	MDL	1.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K217 **Laboratory: EMXT**

EDD Filename: 11K217 **eQAPP Name: SealBeach_IRSite70**

Reason Code Legend

Reason Code	*Description*
Cb	Calibration Blank Contamination
Ccv	Continuing Calibration Verification Percent Difference Lower Estimation
Ccv	Continuing Calibration Verification Percent Difference Lower Rejection
Ccv	Continuing Calibration Verification Percent Difference Upper Estimation
Ccv	Continuing Calibration Verification Percent Difference Upper Rejection
Ccv	Continuing Calibration Verification Percent Recovery Lower Estimation
Ccv	Continuing Calibration Verification Percent Recovery Lower Rejection
Ccv	Continuing Calibration Verification Percent Recovery Upper Estimation
Ccv	Continuing Calibration Verification Percent Recovery Upper Rejection
CcvCC	Continuing Calibration Verification Correlation Coefficient
CcvRrf	Continuing Calibration Verification Relative Response Factor
ContTune	Continuing Tune
Dup=0	Duplicate Sample Count = 0
Dup>1	Duplicate Sample Count > 1
Eb	Equipment Blank Contamination
EtoA	Extraction to Analysis Estimation
EtoA	Extraction to Analysis Rejection
Fb	Field Blank Contamination
Fd	Field Duplicate Precision
Ft	Field Triplicate Precision
IcCC	Initial Calibration Correlation Coefficient
IcRrf	Initial Calibration Relative Response Factor
IcRsd	Initial Calibration Percent Relative Standard Deviation
Icv	Initial Calibration Verification Percent Difference Lower Estimation
Icv	Initial Calibration Verification Percent Difference Lower Rejection
Icv	Initial Calibration Verification Percent Difference Upper Estimation
Icv	Initial Calibration Verification Percent Difference Upper Rejection
Icv	Initial Calibration Verification Percent Recovery Lower Estimation
Icv	Initial Calibration Verification Percent Recovery Lower Rejection
Icv	Initial Calibration Verification Percent Recovery Upper Estimation

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K217 **Laboratory: EMXT**

EDD Filename: 11K217 **eQAPP Name: SealBeach_IRSite70**

Icv	Initial Calibration Verification Percent Recovery Upper Rejection
IcvCC	Initial Calibration Verification Correlation Coefficient
IcvRrf	Initial Calibration Verification Relative Response Factor
IllogicalFraction	Illogical Fraction
InitTune	Initial Tune
Is	Internal Standard Estimation
Is	Internal Standard Rejection
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Lower Rejection
Lcs	Laboratory Control Spike Upper Estimation
Lcs	Laboratory Control Spike Upper Rejection
Lcs=0	Laboratory Control Sample Count = 0
Lcs>1	Laboratory Control Sample Count > 1
Ld	Laboratory Duplicate Precision
Lt	Laboratory Triplicate Precision
Mb	Method Blank Contamination
Mb=0	Method Blank Sample Count = 0
Mb>1	Method Blank Sample Count > 1
Moist	Percent Moisture
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Lower Rejection
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
Ms	Matrix Spike Upper Rejection
Ms=0	Matrix Spike Sample Count = 0
Ms>1	Matrix Spike Sample Count > 1
PEM	Performance Evaluation Mixture
Preservation	Preservation
ProfJudg	Professional Judgment
REM	Resolution Check Mixture
RI	Reporting Limit

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K217 **Laboratory: EMXT**

EDD Filename: 11K217 **eQAPP Name: SealBeach_IRSite70**

RI	Reporting Limit > Project Maximum Contamination Limit
RI	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation
StoA	Sampling to Analysis Rejection
StoE	Sampling to Extraction Estimation
StoE	Sampling to Extraction Rejection
StoL	Sampling to Leaching Estimation
StoL	Sampling to Leaching Rejection
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Lower Rejection
Surr	Surrogate/Tracer Recovery Upper Estimation
Surr	Surrogate/Tracer Recovery Upper Rejection
Tb	Trip Blank Contamination
TempEst	Temperature Estimation
TempRej	Temperature Rejection

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11K217

Reporting Limit Outliers

Lab Reporting Batch ID: 11K217 **Laboratory: EMXT**

EDD Filename: 11K217 **eQAPP Name: SealBeach_IRSite70**

Method: 300.0

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-EB-171	Chloride-Cl	J	0.174	0.200	PQL	MG/L	J (all detects)
	NITRATE-N	J	0.0837	0.200	PQL	MG/L	
	SULFATE	J	0.267	0.500	PQL	MG/L	

Method: 8260B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-EB-171	BROMODICHLOROMETHANE	J	0.24	1.0	PQL	UG/L	J (all detects)
	CHLOROBENZENE	J	0.25	1.0	PQL	UG/L	
	CHLOROFORM	J	0.30	1.0	PQL	UG/L	
MW-70-03-169	1,1-DICHLOROETHENE	J	0.42	0.50	PQL	UG/L	J (all detects)
	ACETONE	J	6.1	10	PQL	UG/L	
	TRANS-1,2-DICHLOROETHENE	J	0.25	1.0	PQL	UG/L	
	VINYL CHLORIDE	J	0.45	0.50	PQL	UG/L	
MW-70-14-172	1,1-DICHLOROETHENE	J	2.3	5.0	PQL	UG/L	J (all detects)
	CARBON DISULFIDE	J	0.25	1.0	PQL	UG/L	
	TRICHLOROETHENE	J	0.89	5.0	PQL	UG/L	
MW-70-43A-170	CIS-1,2-DICHLOROETHENE	J	0.22	1.0	PQL	UG/L	J (all detects)
	ETHYLBENZENE	J	0.26	1.0	PQL	UG/L	
	O-XYLENE	J	0.22	1.0	PQL	UG/L	

Method: RSK175

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
MW-70-14-172	ETHENE	J	1.1	2.0	PQL	UG/L	J (all detects)

LDC #: 26845B1

SDG #: 11K217

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/23/11

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/23/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤30
IV.	Continuing calibration/ICV	A	ICV/CCV ≤25
V.	Blanks	N	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	N	
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A ~~N~~	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/~~LOQ/LODs~~	SW N	
XIII.	Tentitatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	SW	
XVI.	Field duplicates	N	
XVII.	Field blanks	↓	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	MW-70-03-169 W	11		21		31	
2	MW-70-43A-170	12		22		32	
3	MW-70-14-172	13		23		33	
4	MW-70-14-172DL	14		24		34	
5	IR-70-EB-171	15		25		35	
6	IR-70-TB-168	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 26845 B1

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and CRQLs

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?

Y N N/A Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	Compound	Finding	Associated Samples	Qualifications
		QQQ	> calib range	3	J det /A

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26845B1
SDG #: -

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Date	Sample ID	Finding	Associated Samples	Qualifications
		3	QQQ > cal. range		R/A
		4	All except QQQ - diluted		J

Comments:

OVR.1S

LDC #: 26845B4

SDG #: 11K217

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12-19-11

Page: 1 of 1

Reviewer: MG

2nd Reviewer: V

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11-23-11
II.	ICP/MS Tune	N	not utilized
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	N	
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/LCSD
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	N	not performed
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	ND	EB = 1

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:
water

1	IR-70-EB-171	11		21		31	
2		12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20	PBW	30		40	

Notes:

LDC #: 26845B4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: MG
2nd reviewer: [illegible]

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1	W	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
Analysis Method		
ICP	W	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN^-, ____

Comments: Mercury by CVAA if performed

LDC #: 26845B51

VALIDATION COMPLETENESS WORKSHEET

ADR

SDG #: 11K217

Laboratory: EMAX Laboratories, Inc.

Date: 12/28/11

Page: 1 of 1

Reviewer: A

2nd Reviewer: W

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/23/11
II	Initial calibration	A	%RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	N	
V	Surrogate recovery	N	
VI.	Matrix spike/Matrix spike duplicates	N	
VII.	Laboratory control samples	N	
VIII.	Target compound identification	N	
IX.	Compound quantitation/RL/~~LOQ/LOD~~s	N	
X.	System Performance	N	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	↓	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	MW-70-43A-170 W	11		21		31	
2	MW-70-14-172 ↓	12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26845B6 MG

VALIDATION COMPLETENESS WORKSHEET
ADR

SDG #: 11K~~05~~17
Laboratory: EMAX Laboratories, Inc.

Date: 12-19-11
Page: 1 of 1
Reviewer: MG
2nd Reviewer: [illegible]

METHOD: (Analyte) Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Organic Acids (EPA Method 300.0M)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11-23-11
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	N	
VI.	Duplicates	N	
VII.	Laboratory control samples	N	LCS/LCSD
VIII.	Sample result verification	N	
IX.	Overall assessment of data	N	
X.	Field duplicates	N	
XI.	Field blanks	N	EB=3 (Cl, NO3-N, SO4 hits)

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:
all water

1	MW-70-43A-170	11		21		31	
2	MW-70-14-172	12		22		32	
3	IR-70-EB-171	13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20	PBW	30		40	

Notes:

LDC #: 26845B6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: MG
2nd reviewer: ✓

All circled methods are applicable to each sample.

Sample ID	Matrix	Parameter
1, 2	W	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 Org Acids ____
3	↓	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 Org Acids ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 ____ ____

Comments:

Laboratory Data Consultants, Inc.

7750 El Camino Real, Ste. 2L Carlsbad, CA 92009

Phone 760.634.0437 **Web** www.lab-data.com **Fax** 760.634.0439

Insight EEC, Inc.
3020 E. Miraloma
Anaheim, CA 92806
ATTN: Mr. Nick Weinberger

January 9, 2012

SUBJECT: NWS Seal Beach, IR Site 70, Data Validation

Dear Mr. Weinberger,

Enclosed is the final validation report for the fractions listed below. These SDGs were received on December 13, 2011.

LDC project# 26847:

SDG #	Fraction
11K119, 11K133, 11K146, 11K173, 11K174, 11K184, 11K188	Volatiles (EPA SW 846 Method 8260B) Dissolved Metals (EPA SW 846 Method 6010B) Dissolved Gases (Method RSK-175) Wet Chemistry (EPA Method 300.0 and 300.0M and Standard Method 2320B, 2540C, 4500F,and 5310B)

The following deliverables are submitted under this report:

- Attachment I — Sample ID Cross Reference and Data Review Level
- Attachment II — Overall Data Qualification Summary
- Enclosure I — EPA Level III ADR Outliers (including manual review outliers)
- Enclosure II — EPA Level IV Validation Reports

The data validation was performed in accordance to the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008 and for Inorganic Data Review, January 2010. Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience. The following items were evaluated during the review:

- Holding Times
- Sample Preservation
- Cooler Temperatures
- Initial Calibration (Manual Review)
- Continuing Calibration (Manual Review)
- Blanks
- Surrogates
- Internal Standards (Manual Review)
- Matrix Spike/Matrix Spike Duplicates

- Laboratory Control Samples
- Detection and Quantitation Limits
- Field QC Samples

Please feel free to contact us if you have any questions.

Sincerely,

Andrew Kong
Project Manager/Chemist

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Nov-2011	IR-70-TB-123	K119-06	TB	5030B	8260B	3
14-Nov-2011	MW-70-PMW09-124	K119-01	N	5030B	8260B	4
14-Nov-2011	MW-70-PMW09-124	K119-01	N	GEN PREP	2320B	4
14-Nov-2011	MW-70-PMW09-124	K119-01	N	GEN PREP	2540C	4
14-Nov-2011	MW-70-PMW09-124	K119-01	N	GEN PREP	300.0	4
14-Nov-2011	MW-70-PMW09-124	K119-01	N	GEN PREP	300.0M	4
14-Nov-2011	MW-70-PMW09-124	K119-01	N	GEN PREP	4500F	4
14-Nov-2011	MW-70-PMW09-124	K119-01	N	GEN PREP	5310B	4
14-Nov-2011	MW-70-PMW09-124	K119-01	N	GEN PREP	RSK175	4
14-Nov-2011	MW-70-PMW09-124	K119-01T	N	5030B	8260B	4
14-Nov-2011	MW-70-PMW09-124	K119-01W	N	3010A	6010B	4
14-Nov-2011	IR-70-SHB113-125	K119-02	N	3010A	6010B	3
14-Nov-2011	IR-70-SHB113-125	K119-02	N	5030B	8260B	3
14-Nov-2011	IR-70-SHB113-125	K119-02	N	GEN PREP	2320B	3
14-Nov-2011	IR-70-SHB113-125	K119-02	N	GEN PREP	2540C	3
14-Nov-2011	IR-70-SHB113-125	K119-02	N	GEN PREP	300.0	3
14-Nov-2011	IR-70-SHB113-125	K119-02	N	GEN PREP	300.0M	3
14-Nov-2011	IR-70-SHB113-125	K119-02	N	GEN PREP	4500F	3
14-Nov-2011	IR-70-SHB113-125	K119-02	N	GEN PREP	5310B	3
14-Nov-2011	IR-70-SHB113-125	K119-02	N	GEN PREP	RSK175	3
14-Nov-2011	IR-70-SHB113-125	K119-02I	N	GEN PREP	RSK175	3
14-Nov-2011	MW-70-PMW10-126	K119-03	N	3010A	6010B	3
14-Nov-2011	MW-70-PMW10-126	K119-03	N	5030B	8260B	3
14-Nov-2011	MW-70-PMW10-126	K119-03	N	GEN PREP	2320B	3
14-Nov-2011	MW-70-PMW10-126	K119-03	N	GEN PREP	2540C	3
14-Nov-2011	MW-70-PMW10-126	K119-03	N	GEN PREP	300.0	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Nov-2011	MW-70-PMW10-126	K119-03	N	GEN PREP	300.0M	3
14-Nov-2011	MW-70-PMW10-126	K119-03	N	GEN PREP	4500F	3
14-Nov-2011	MW-70-PMW10-126	K119-03	N	GEN PREP	5310B	3
14-Nov-2011	MW-70-PMW10-126	K119-03	N	GEN PREP	RSK175	3
14-Nov-2011	MW-70-PMW10-126	K119-03T	N	5030B	8260B	3
14-Nov-2011	MW-70-PMW10-126	K119-03T	N	GEN PREP	RSK175	3
14-Nov-2011	MW-70-MNA11-127	K119-04	N	5030B	8260B	3
14-Nov-2011	MW-70-MNA11-127	K119-04	N	GEN PREP	300.0M	3
14-Nov-2011	MW-70-MNA11-127	K119-04	N	GEN PREP	RSK175	3
14-Nov-2011	MW-70-MNA07-128	K119-05	N	5030B	8260B	3
14-Nov-2011	MW-70-MNA07-128	K119-05	N	GEN PREP	300.0M	3
14-Nov-2011	MW-70-MNA07-128	K119-05	N	GEN PREP	RSK175	3
14-Nov-2011	MW-70-MNA07-128	K119-05T	N	GEN PREP	RSK175	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11K119 **Laboratory: EMXT**

EDD Filename: 11K119 **eQAPP Name: SealBeach_IRSite70**

Method Category: GENCHEM

Method: 300.0 **Matrix: AQ**

Sample ID: IR-70-SHB113-125 *Collected:* 11/14/2011 12:03:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRATE-N	0.0753	J	0.0500	MDL	0.200	PQL	MG/L	J	RI

Sample ID: MW-70-PMW09-124 *Collected:* 11/14/2011 10:49:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRATE-N	0.0585	J	0.0500	MDL	0.200	PQL	MG/L	J	RI

Sample ID: MW-70-PMW10-126 *Collected:* 11/14/2011 1:07:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRATE-N	0.0629	J	0.0500	MDL	0.200	PQL	MG/L	J	RI

Method Category: METALS

Method: 6010B **Matrix: AQ**

Sample ID: IR-70-SHB113-125 *Collected:* 11/14/2011 12:03:00 *Analysis Type:* RES/DIS *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.0176	J	0.00500	MDL	0.200	PQL	MG/L	J	RI, Ms

Sample ID: MW-70-PMW09-124 *Collected:* 11/14/2011 10:49:00 *Analysis Type:* RES/DIS *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	0.0988	J	0.00300	MDL	0.200	PQL	MG/L	J	RI

Method Category: SVOA

Method: RSK175 **Matrix: AQ**

Sample ID: MW-70-PMW09-124 *Collected:* 11/14/2011 10:49:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHENE	1.2	J	0.60	MDL	2.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K119 **Laboratory: EMXT**

EDD Filename: 11K119 **eQAPP Name: SealBeach_IRSite70**

Method Category: SVOA

Method: RSK175 **Matrix:** AQ

Sample ID: MW-70-PMW10-126 *Collected:* 11/14/2011 1:07:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHANE	0.84	J	0.64	MDL	2.0	PQL	UG/L	J	RI

Method Category: VOA

Method: 8260B **Matrix:** AQ

Sample ID: IR-70-SHB113-125 *Collected:* 11/14/2011 12:03:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CARBON DISULFIDE	0.23	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CHLOROETHANE	0.38	J	0.30	MDL	2.0	PQL	UG/L	J	RI
CIS-1,2-DICHLOROETHENE	0.85	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	0.92	J	0.20	MDL	5.0	PQL	UG/L	J	RI

Sample ID: MW-70-MNA07-128 *Collected:* 11/14/2011 3:33:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.34	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CARBON DISULFIDE	0.23	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CHLOROETHANE	0.52	J	0.30	MDL	2.0	PQL	UG/L	J	RI
TRICHLOROETHENE	1.8	J	0.20	MDL	5.0	PQL	UG/L	J	RI

Sample ID: MW-70-MNA11-127 *Collected:* 11/14/2011 2:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TRANS-1,2-DICHLOROETHENE	0.21	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	1.8	J	0.20	MDL	5.0	PQL	UG/L	J	RI

Sample ID: MW-70-PMW09-124 *Collected:* 11/14/2011 10:49:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.41	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CARBON DISULFIDE	0.31	J	0.20	MDL	1.0	PQL	UG/L	J	RI
DICHLORODIFLUOROMETHANE	0.42	J	0.30	MDL	2.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K119 **Laboratory: EMXT**

EDD Filename: 11K119 **eQAPP Name: SealBeach_IRSite70**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **MW-70-PMW10-126** ***Collected:*** **11/14/2011 1:07:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CARBON DISULFIDE	0.27	J	0.20	MDL	1.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K119 **Laboratory: EMXT**

EDD Filename: 11K119 **eQAPP Name: SealBeach_IRSite70**

Reason Code Legend

Reason Code	*Description*
Cb	Calibration Blank Contamination
Ccv	Continuing Calibration Verification Percent Difference Lower Estimation
Ccv	Continuing Calibration Verification Percent Difference Lower Rejection
Ccv	Continuing Calibration Verification Percent Difference Upper Estimation
Ccv	Continuing Calibration Verification Percent Difference Upper Rejection
Ccv	Continuing Calibration Verification Percent Recovery Lower Estimation
Ccv	Continuing Calibration Verification Percent Recovery Lower Rejection
Ccv	Continuing Calibration Verification Percent Recovery Upper Estimation
Ccv	Continuing Calibration Verification Percent Recovery Upper Rejection
CcvCC	Continuing Calibration Verification Correlation Coefficient
CcvRrf	Continuing Calibration Verification Relative Response Factor
ContTune	Continuing Tune
Dup=0	Duplicate Sample Count = 0
Dup>1	Duplicate Sample Count > 1
Eb	Equipment Blank Contamination
EtoA	Extraction to Analysis Estimation
EtoA	Extraction to Analysis Rejection
Fb	Field Blank Contamination
Fd	Field Duplicate Precision
Ft	Field Triplicate Precision
IcCC	Initial Calibration Correlation Coefficient
IcRrf	Initial Calibration Relative Response Factor
IcRsd	Initial Calibration Percent Relative Standard Deviation
Icv	Initial Calibration Verification Percent Difference Lower Estimation
Icv	Initial Calibration Verification Percent Difference Lower Rejection
Icv	Initial Calibration Verification Percent Difference Upper Estimation
Icv	Initial Calibration Verification Percent Difference Upper Rejection
Icv	Initial Calibration Verification Percent Recovery Lower Estimation
Icv	Initial Calibration Verification Percent Recovery Lower Rejection
Icv	Initial Calibration Verification Percent Recovery Upper Estimation

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K119 **Laboratory: EMXT**

EDD Filename: 11K119 **eQAPP Name: SealBeach_IRSite70**

Icv	Initial Calibration Verification Percent Recovery Upper Rejection
IcvCC	Initial Calibration Verification Correlation Coefficient
IcvRrf	Initial Calibration Verification Relative Response Factor
IllogicalFraction	Illogical Fraction
InitTune	Initial Tune
Is	Internal Standard Estimation
Is	Internal Standard Rejection
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Lower Rejection
Lcs	Laboratory Control Spike Upper Estimation
Lcs	Laboratory Control Spike Upper Rejection
Lcs=0	Laboratory Control Sample Count = 0
Lcs>1	Laboratory Control Sample Count > 1
Ld	Laboratory Duplicate Precision
Lt	Laboratory Triplicate Precision
Mb	Method Blank Contamination
Mb=0	Method Blank Sample Count = 0
Mb>1	Method Blank Sample Count > 1
Moist	Percent Moisture
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Lower Rejection
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
Ms	Matrix Spike Upper Rejection
Ms=0	Matrix Spike Sample Count = 0
Ms>1	Matrix Spike Sample Count > 1
PEM	Performance Evaluation Mixture
Preservation	Preservation
ProfJudg	Professional Judgment
REM	Resolution Check Mixture
RI	Reporting Limit

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K119 **Laboratory: EMXT**

EDD Filename: 11K119 **eQAPP Name: SealBeach_IRSite70**

RI	Reporting Limit > Project Maximum Contamination Limit
RI	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation
StoA	Sampling to Analysis Rejection
StoE	Sampling to Extraction Estimation
StoE	Sampling to Extraction Rejection
StoL	Sampling to Leaching Estimation
StoL	Sampling to Leaching Rejection
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Lower Rejection
Surr	Surrogate/Tracer Recovery Upper Estimation
Surr	Surrogate/Tracer Recovery Upper Rejection
Tb	Trip Blank Contamination
TempEst	Temperature Estimation
TempRej	Temperature Rejection

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11K119

Reporting Limit Outliers

Lab Reporting Batch ID: 11K119 **Laboratory: EMXT**

EDD Filename: 11K119 **eQAPP Name: SealBeach_IRSite70**

Method: 300.0
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-SHB113-125	NITRATE-N	J	0.0753	0.200	PQL	MG/L	J (all detects)
MW-70-PMW09-124	NITRATE-N	J	0.0585	0.200	PQL	MG/L	J (all detects)
MW-70-PMW10-126	NITRATE-N	J	0.0629	0.200	PQL	MG/L	J (all detects)

Method: 6010B
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-SHB113-125	ARSENIC	J	0.0176	0.200	PQL	MG/L	J (all detects)
MW-70-PMW09-124	MANGANESE	J	0.0988	0.200	PQL	MG/L	J (all detects)

Method: 8260B
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-SHB113-125	CARBON DISULFIDE	J	0.23	1.0	PQL	UG/L	J (all detects)
	CHLOROETHANE	J	0.38	2.0	PQL	UG/L	
	CIS-1,2-DICHLOROETHENE	J	0.85	1.0	PQL	UG/L	
	TRICHLOROETHENE	J	0.92	5.0	PQL	UG/L	
MW-70-MNA07-128	1,1-DICHLOROETHANE	J	0.34	1.0	PQL	UG/L	J (all detects)
	CARBON DISULFIDE	J	0.23	1.0	PQL	UG/L	
	CHLOROETHANE	J	0.52	2.0	PQL	UG/L	
	TRICHLOROETHENE	J	1.8	5.0	PQL	UG/L	
MW-70-MNA11-127	TRANS-1,2-DICHLOROETHENE	J	0.21	1.0	PQL	UG/L	J (all detects)
	TRICHLOROETHENE	J	1.8	5.0	PQL	UG/L	
MW-70-PMW09-124	1,1-DICHLOROETHANE	J	0.41	1.0	PQL	UG/L	J (all detects)
	CARBON DISULFIDE	J	0.31	1.0	PQL	UG/L	
	DICHLORODIFLUOROMETHANE	J	0.42	2.0	PQL	UG/L	
	TRICHLOROETHENE	J	11	250	PQL	UG/L	
MW-70-PMW10-126	CARBON DISULFIDE	J	0.27	1.0	PQL	UG/L	J (all detects)
	TRANS-1,2-DICHLOROETHENE	J	52	100	PQL	UG/L	
	TRICHLOROETHENE	J	55	500	PQL	UG/L	
	VINYL CHLORIDE	J	28	50	PQL	UG/L	

Method: RSK175
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
MW-70-PMW09-124	ETHENE	J	1.2	2.0	PQL	UG/L	J (all detects)
MW-70-PMW10-126	ETHANE	J	0.84	2.0	PQL	UG/L	J (all detects)

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

LDC #: 26847A1
SDG #: 11K119
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR/IV

Date: 12/29/11
Page: 1 of 1
Reviewer: JVL
2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/14/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30%
IV.	Continuing calibration/ICV	A	CCV/ICV ≤ 25%
V.	Blanks	N	Not reviewed for ADR validation.
VI.	Surrogate spikes	↓	Not reviewed for ADR validation.
VII.	Matrix spike/Matrix spike duplicates	↓	Not reviewed for ADR validation.
VIII.	Laboratory control samples	↓	Not reviewed for ADR validation.
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	↓	Not reviewed for ADR validation.
XI.	Target compound identification	↓	Not reviewed for ADR validation.
XII.	Compound quantitation/RLs	↓	Not reviewed for ADR validation.
XIII.	Tentitatively identified compounds (TICs)	↓	Not reviewed for ADR validation.
XIV.	System performance	↓	Not reviewed for ADR validation.
XV.	Overall assessment of data	SW	Not reviewed for ADR validation.
XVI.	Field duplicates	N	
XVII.	Field blanks	↓	TB = 8

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water

1	MW-70-PMW09-124**	11	MBLK1W	21		31	
2	MW-70-PMW09-124DL**	12	↓ 2W	22		32	
3	IR-70-SHB113-125	13		23		33	
4	MW-70-PMW10-126	14		24		34	
5	MW-70-PMW10-126DL	15		25		35	
6	MW-70-MNA11-127	16		26		36	
7	MW-70-MNA07-128	17		27		37	
8	IR-70-TB-123	18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 26847A1

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: JVC
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.
Y N N/A Was the overall quality and usability of the data acceptable?

#	Date	Sample ID	Compound	Finding	Qualifications
		1, 4	QQQ > cal range		Do not use
		2, 5	All except QQQ dil		

Comments:

LDC #: 26847A4

SDG #: 11K119

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR/IV

Date: 12-22-11

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/14/11
II.	ICP/MS Tune	N	Not utilized
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	Not reviewed for ADR validation.
VI.	Matrix Spike Analysis	SW	Not reviewed for ADR validation. ~~Client specific~~ MS/D (SDG 11K133)
VII.	Duplicate Sample Analysis	N	Not reviewed for ADR validation.
VIII.	Laboratory Control Samples (LCS)	A	Not reviewed for ADR validation. LCS/D
IX.	Internal Standard (ICP-MS)	N	Not reviewed for ADR validation. Not utilized
X.	Furnace Atomic Absorption QC	N	Not reviewed for ADR validation.
XI.	ICP Serial Dilution	A	Not reviewed for ADR validation.
XII.	Sample Result Verification	A	Not reviewed for ADR validation.
XIII.	Overall Assessment of Data	A	Not reviewed for ADR validation.
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water

1	MW-70-PMW09-124**	11		21		31	
2	IR-70-SHB113-125	12		22		32	
3	MW-70-PMW10-126	13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26847A4

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a matrix spike analyzed for each matrix in this SDG?

Y N N/A Were matrix spike percent recoveries (%R) within the control limits of 75-125? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

Y N N/A Were all duplicate sample relative percent differences (RPD) ≤ 20% for water samples and ≤35% for soil samples?

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	MS/MSD ID	Matrix	Analyte	MS %Recovery	MSD %Recovery	RPD (Limits)	Associated Samples	Qualifications
	MW70-PMV-07A-130 (SDG: 11K133)		As	132	133		All	~~J/UJ/Acc~~ Jdet/A

LDC #: 26847A6
SDG #: 11K119
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR/IV

Date: 12-22-11
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: (Analyte) Alkalinity (Standard Method 2320B), Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Organic Acids (EPA Method 300.0M), TDS (Standard Method 2540C), TOC (Standard Method 5310B), Dissolved Hydrogen Sulfide (SM4500F)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/14/11
II.	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	N	Not reviewed for ADR validation. Client specified
VI.	Duplicates	N	Not reviewed for ADR validation.
VII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/D
VIII.	Sample result verification	A	Not reviewed for ADR validation.
IX.	Overall assessment of data	A	Not reviewed for ADR validation.
X.	Field duplicates	N	
XI	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water

1	MW-70-PMW09-124**	11		21		31	
2	IR-70-SHB113-125	12		22		32	
3	MW-70-PMW10-126	13		23		33	
4	MW-70-MNA11-127	14		24		34	
5	MW-70-MNA-128	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26847A51 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/29/11
SDG #: 11K119 ADR/IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: SW
2nd Reviewer: A

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/14/11
IIa.	Initial calibration	A	% RSD ≤ 20%
IIb.	Calibration verification/ICV	A	CW/ICV ≤ 20%
III.	Blanks	N	Not reviewed for ADR validation.
IVa.	Surrogate recovery		Not reviewed for ADR validation.
IVb.	Matrix spike/Matrix spike duplicates		Not reviewed for ADR validation.
IVc.	Laboratory control samples		Not reviewed for ADR validation.
V.	Target compound identification		Not reviewed for ADR validation.
VI.	Compound Quantitation and CRQLs		Not reviewed for ADR validation.
VII.	System Performance		Not reviewed for ADR validation.
VIII.	Overall assessment of data	SW	Not reviewed for ADR validation.
IX.	Field duplicates	N	
X.	Field blanks		

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

1	MW-70-PMW09-124**	11		21		31	
2	IR-70-SHB113-125	12		22		32	
3	IR-70-SHB113-125DL	13		23		33	
4	MW-70-PMW10-126	14		24		34	
5	MW-70-PMW10-126DL	15		25		35	
6	MW-70-MNA11-127	16		26		36	
7	MW-70-MNA-128	17		27		37	
8	MW-70-MNA-128DL	18		28		38	
9	IR-70-TB-123	19		29		39	
10		20		30		40	

Notes:

LDC #: 26847 A51

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: OVG
2nd Reviewer: [illegible]

METHOD: ✓ **GC** __ **HPLC**

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

(Y) N N/A Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	> cal range	2, 4, 7	do not use
	All except Methane	dil	3, 5, 8	

Comments: _____

OVRNew.wpd

Enclosure II

EPA Level IV Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 14, 2011
LDC Report Date:	December 30, 2011
Matrix:	Water
Parameters:	Volatiles
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K119

Sample Identification

MW-70-PMW09-124
MW-70-PMW09-124DL

Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample IR-70-TB-123 was identified as a trip blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
MW-70-PMW09-124	cis-1,2-Dichloroethene	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K119	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

The overall assessment of data was acceptable. In the case where more than one result was reported for an individual sample, the least technically acceptable results were rejected as follows:

Sample	Compound	Flag	A or P
MW-70-PMW09-124	cis-1,2-Dichloroethene	R	A
MW-70-PMW09-124DL	All TCL compounds except cis-1,2-Dichloroethene	R	A

XVI. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Volatiles - Data Qualification Summary - SDG 11K119

SDG	Sample	Compound	Flag	A or P	Reason
11K119	MW-70-PMW09-124	cis-1,2-Dichloroethene	J (all detects)	A	Compound quantitation and RLs
11K119	MW-70-PMW09-124 MW-70-PMW09-124DL	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs
11K119	MW-70-PMW09-124	cis-1,2-Dichloroethene	R	A	Overall assessment of data
11K119	MW-70-PMW09-124DL	All TCL compounds except cis-1,2-Dichloroethene	R	A	Overall assessment of data

NWS Seal Beach, IR Site 70
Volatiles - Laboratory Blank Data Qualification Summary - SDG 11K119

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Volatiles - Field Blank Data Qualification Summary - SDG 11K119

No Sample Data Qualified in this SDG

LDC #: 26847A1
SDG #: 11K119
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

Date: 12/29/11
Page: 1 of 1
Reviewer: SW
2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/14/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30% ✓
IV.	Continuing calibration/ICV	A	CCV/ICV ≤ 25%
V.	Blanks	A	~~Not reviewed for ADR validation.~~
VI.	Surrogate spikes	A	Not reviewed for ADR validation.
VII.	Matrix spike/Matrix spike duplicates	N	Not reviewed for ADR validation. Client Spec
VIII.	Laboratory control samples	A	~~Not reviewed for ADR validation.~~ LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	~~Not reviewed for ADR validation.~~
XI.	Target compound identification	A	Not reviewed for ADR validation.
XII.	Compound quantitation/RLs	SW	Not reviewed for ADR validation.
XIII.	Tentitatively identified compounds (TICs)	N	Not reviewed for ADR validation.
XIV.	System performance	A	Not reviewed for ADR validation.
XV.	Overall assessment of data	SW	~~Not reviewed for ADR validation.~~
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	TB = 8

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water

1	MW-70-PMW09-124**	11	MB LK IW	21		31	
2	MW-70-PMW09-124DL**	12	↓ 2W	22		32	
3	~~IR-70-SHB113-125~~	13		23		33	
4	MW-70-PMW10-126	14		24		34	
5	MW-70-PMW10-126DL	15		25		35	
6	MW-70-MNA11-127	16		26		36	
7	MW-70-MNA-128	17		27		37	
8	~~IR-70-TB-123~~	18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 26847 A1

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer: C

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of > 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) > 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.		✓		
Was a MS/MSD analyzed every 20 samples of each matrix?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 26847 A1

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?				
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?		✓		
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.			✓	

LDC #: 26847 A1

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and CRQLs

Page: 1 of 1
Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

X N N/A Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?

Y N N/A Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	Sample ID	Compound	Finding	Qualifications
		1	QQQ > cal range		J dets / A

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26847A1

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: MC
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.
Y N N/A Was the overall quality and usability of the data acceptable?

#	Date	Sample ID	Compound	Finding	Qualifications
		1	QQQ > cal range		R /A
					↓
		2	All except QQQ dil		↓

Comments: _____

OVR.wpd

LDC #: 26847A1

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: JVG
2nd Reviewer: [signature]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of Compound
C_x = Concentration of compound,
S= Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (IS)	Reported RRF (RRF 10 std)	Recalculated RRF (RRF 10 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	10/31/2011	cis-1,2-DCE (IS1)	0.374	0.374	0.379	0.379	2.86	2.86
	TO01		Trichloroethene (IS2)	0.435	0.435	0.442	0.443	4.13	4.12
			1,1,2,2-TCA (IS3)	0.663	0.663	0.680	0.680	2.70	2.71

Cis/Cx	Ax	Ais
10/10	643660	1719891
10/10	643696	1480141
10/10	387320	584394

Conc	cis-1,2-DCE	Trichloroethene	1,1,2,2-TCA
0.3	0.393	0.487	0.708
0.5	0.357	0.420	0.641
1	0.386	0.428	0.683
2	0.385	0.433	0.668
5	0.379	0.441	0.684
10	0.374	0.435	0.663
20	0.391	0.444	0.694
30	0.380	0.437	0.682
50	0.379	0.449	0.687
100	0.368	0.451	0.686
X =	0.379	0.443	0.680
S =	0.011	0.018	0.018

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC # 26847A 1

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = (Ax)(Cis)/(Ais)(Cx)

ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound,

Cx = Concentration of compound,
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound	(IS)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported % D	Recalculated %D
1	RKV441	11/18/2011	cis-1,2-DCE	(IS1)	0.379	0.411	0.411	8.4	8.4
	TO01		Trichloroethene	(IS2)	0.442	0.470	0.470	6.3	6.3
			1,1,2,2-TCA	(IS3)	0.680	0.796	0.796	17.1	17.1
2	RFV057	6/16/2011	cis-1,2-DCE	(IS1)	0.379	0.372	0.372	1.8	1.8
	TO01		Trichloroethene	(IS2)	0.442	0.431	0.431	2.5	2.5
			1,1,2,2-TCA	(IS3)	0.680	0.728	0.728	7.1	7.1

		CCV1		CCV2	
Cis/Cx	Compound	Ax	Ais	Ax	Ais
10/10	cis-1,2-DCE (IS1)	834995	2031597	728516	1959391
10/10	Trichloroethene (IS2)	788645	1677234	704490	1634800
10/10	1,1,2,2-TCA (IS3)	480826	604047	459154	630679

LDC #: 26847A1

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: JVG
2nd reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:
% Recovery: SF/SS * 100 Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
1,2-Dichloroethane-d4	10	10.000	100	100	0
Bromofluorobenzene	10	10.600	106	106	0
Toluene-d8	10	10.300	103	103	0

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					

LDC #: 26847F1

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = I LCS - LCSD I * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: LCS/LCSD1W

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
1,1-Dichloroethene	10	10	10.03	9.30	100	100	93	93	8	7.6
Benzene	10	10	11.5	10.7	115	115	107	107	7	7.2
Chlorobenzene	10	10	11.7	10.9	117	117	109	109	7	7.1
Toluene	10	10	11.53	10.56	115	115	106	106	9	8.8
Trichloroethene	10	10	11.5	10.6	115	115	106	106	8	8.1

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26847A1

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: JVG
2nd reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

V_o = Volume or weight of sample pruged in milliliters (ml) or grams (g).

Df = Dilution factor.

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. # 7, cis-1,2-DCE

Conc. = $\frac{(559953)(10)(50)}{(1719518)(0.379)(\quad)(\quad)}$

= 429.6

≈ 430 ug/L

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 14, 2011
LDC Report Date:	December 23, 2011
Matrix:	Water
Parameters:	Dissolved Metals
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K119

Sample Identification

MW-70-PMW09-124

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Dissolved Metals. The metals analyzed were Arsenic, Iron, and Manganese.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No dissolved metal contaminants were found in the initial, continuing and preparation blanks.

No field blanks were identified in this SDG.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
MW-70-PMV-07A-130 (All samples in SDG 11K119)	Arsenic	132 (75-125)	133 (75-125)	-	J (all detects)	A

VII. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

XII. Sample Result Verification

All sample result verifications were acceptable.

All metals reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 11K119	All analytes reported below the RL and above the MDL.	J (all detects)	A

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Dissolved Metals - Data Qualification Summary - SDG 11K119

SDG	Sample	Analyte	Flag	A or P	Reason
11K119	MW-70-PMW09-124	Arsenic	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)
11K119	MW-70-PMW09-124	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification

NWS Seal Beach, IR Site 70
Dissolved Metals - Laboratory Blank Data Qualification Summary - SDG 11K119

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Dissolved Metals - Field Blank Data Qualification Summary - SDG 11K119

No Sample Data Qualified in this SDG

LDC #: 26847A4

SDG #: 11K119

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

Date: 12-22-11

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/14/11
II.	ICP/MS Tune	N	Not utilized
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	Not reviewed for ADR validation.
VI.	Matrix Spike Analysis	SW	Not reviewed for ADR validation. ~~Client specific~~ MS/D (SDG: 11K133)
VII.	Duplicate Sample Analysis	N	Not reviewed for ADR validation.
VIII.	Laboratory Control Samples (LCS)	A	Not reviewed for ADR validation. LCS/D
IX.	Internal Standard (ICP-MS)	N	Not reviewed for ADR validation. Not utilized
X.	Furnace Atomic Absorption QC	N	Not reviewed for ADR validation.
XI.	ICP Serial Dilution	A	Not reviewed for ADR validation.
XII.	Sample Result Verification	A	Not reviewed for ADR validation.
XIII.	Overall Assessment of Data	A	Not reviewed for ADR validation.
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

water

1	MW-70-PMW09-124**	11		21		31	
~~2~~	~~IR-70-SHB113-125~~	12		22		32	
~~3~~	~~MW-70-PMW10-126~~	13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26847A4

VALIDATION FINDINGS CHECKLIST

Reviewer: CB
2nd Reviewer: W

Method: Metals (EPA SW 846 Method 6010B/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. ICP/MS Tune				
Were all isotopes in the tuning solution mass resolution within 0.1 amu?			✓	
Were %RSD of isotopes in the tuning solution ≤5%?			✓	
III. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury) QC limits?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
IV. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
V. ICP Interference Check Sample				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓		~~Soil~~	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.		✓	~~Soil~~	
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were ≤ 5X the RL.	✓		~~Soil~~	
VII. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			

LDC #: 26847A4

VALIDATION FINDINGS CHECKLIST

Reviewer: CR
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
VIII. Furnace Atomic Absorption QC				
If MSA was performed, was the correlation coefficients > 0.995?			✓	
Do all applicable analysies have duplicate injections? (Level IV only)			✓	
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%? (Level IV only)			✓	
Were analytical spike recoveries within the 85-115% QC limits?			✓	
IX. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the MDL (ICP)/>100X the MDL(ICP/MS)?	✓			
Were all percent differences (%Ds) < 10%?	✓			
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.		✓		
X. Internal Standards (EPA SW 846 Method 6020/EPA 200.8)				
Were all the percent recoveries (%R) within the 30-120% (6020)/60-125% (200.8) of the intensity of the internal standard in the associated initial calibration?			✓	
If the %Rs were outside the criteria, was a reanalysis performed?			✓	
XI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
XII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 26847A4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: CR
2nd reviewer: W

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
L-3		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____

Comments: Mercury by CVAA if performed

LDC #: 26847A4

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a matrix spike analyzed for each matrix in this SDG?

Y N N/A Were matrix spike percent recoveries (%R) within the control limits of 75-125? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

Y N N/A Were all duplicate sample relative percent differences (RPD) ≤ 20% for water samples and ≤35% for soil samples?

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	MS/MSD ID	Matrix	Analyte	MS %Recovery	MSD %Recovery	RPD (Limits)	Associated Samples	Qualifications
	MW-70-PMV-07A-130 (SDG: 11K133)		As	132	133		All	~~J/UJ/Acc~~ Jdet/A

Comments:

LDC #: 20847A4

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

$$\%R = \frac{\text{Found}}{\text{True}} \times 100$$

Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
ICV	ICP (Initial calibration)	Fe	25.052	25	100	100	Y
	ICP/MS (Initial calibration)						
	CVAA (Initial calibration)						
CCV8	ICP (Continuing calibration)	Mn	2.402	2.5	96	96	Y
	ICP/MS (Continuing calibration)						
	CVAA (Continuing calibration)						
	GFAA (Initial calibration)						
	GFAA (Continuing calibation)						

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26847AY

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$

Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$

Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$

Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
ICSAB	ICP interference check	As	1.0606	1	106	106	Y
LCS	Laboratory control sample	As	0.535	0.5	107	107	Y
MW-70-PMW07A 1130	Matrix spike	Fe	(SSR-SR) 4.731	5	95	95	
	Duplicate	Mn	3.52	3.56	1	1	
	ICP serial dilution	Fe	0.436	0.452	NA	NA	Y

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

TOTCLC.4SW

LDC #: 26847A1

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: CR
2nd reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for Mn were recalculated and verified using the following equation:

Concentration = (RD)(FV)(Dil) / (In. Vol.)

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

Raw Data = 0.09882 mg/L

#	Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
	1	Fe	0.436	0.436	Y
		Mn	0.0988	0.0988	Y

Note:

LDC Report# 26847A51

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 14, 2011
LDC Report Date:	December 30, 2011
Matrix:	Water
Parameters:	Methane, Ethane, & Ethene
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K119

Sample Identification

MW-70-PMW09-124

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Method RSK-175 for Methane, Ethane, and Ethene.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No methane, ethane, or ethene was found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were not required by the method.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K119	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

The overall assessment of data was acceptable.

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Methane, Ethane, & Ethene - Data Qualification Summary - SDG 11K119

SDG	Sample	Compound	Flag	A or P	Reason
11K119	MW-70-PMW09-124	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs

NWS Seal Beach, IR Site 70
Methane, Ethane, & Ethene - Laboratory Blank Data Qualification Summary - SDG 11K119

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Methane, Ethane, & Ethene - Field Blank Data Qualification Summary - SDG 11K119

No Sample Data Qualified in this SDG

LDC #: 26847A51

SDG #: 11K119

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

Date: 12/29/11

Page: 1 of 1

Reviewer: JVC

2nd Reviewer:

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/14/11
IIa.	Initial calibration	A	% RSD ≤ 20 %
IIb.	Calibration verification/ICV	A	CCV/ICV ≤ 20 %
III.	Blanks	A	~~Not reviewed for ADR validation.~~
IVa.	Surrogate recovery	N	Not reviewed for ADR validation.
IVb.	Matrix spike/Matrix spike duplicates	N	Not reviewed for ADR validation.
IVc.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/b
V.	Target compound identification	A	Not reviewed for ADR validation.
VI.	Compound Quantitation and CRQLs	A	Not reviewed for ADR validation.
VII.	System Performance	A	Not reviewed for ADR validation.
VIII.	Overall assessment of data	A	~~Not reviewed for ADR validation.~~
IX.	Field duplicates	N	
X.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water

1	MW-70-PMW09-124**	11		21		31	
2	~~IR-70-SHB113-125~~	12		22		32	
3	IR-70-SHB113-125DL	13		23		33	
4	MW-70-PMW10-126	14		24		34	
5	MW-70-PMW10-126DL	15		25		35	
6	MW-70-MNA11-127	16		26		36	
7	MW-70-MNA-128 07	17		27		37	
8	~~MW-70-MNA-128DL~~ 07	18		28		38	
9	~~IR-70-TB-128~~	19		29		39	
10		20		30		40	

Notes:

LDC #: 26847 A51

VALIDATION FINDINGS CHECKLIST

Reviewer: JVC
2nd Reviewer:

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?		✓		
Did the initial calibration meet the curve fit acceptance criteria?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ✓ %D or ____ %R	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓		✓	
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.		✓		
Was a MS/MSD analyzed every 20 samples of each matrix?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				

LDC #: 26847A51

VALIDATION FINDINGS CHECKLIST

Reviewer: JG
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26847 A 51

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: JVG
2nd Reviewer: A

METHOD: GC ✓ HPLC _____

The calibration factors (CF), average CF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

Where:
A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported CF (13.56 std)	Recalculated CF (13.56 std)	Reported Average CF (Initial)	Recalculated Average CF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	11/1/2011	Methane	29307.0	29307.0	30507.0	30507.0	5.6	5.6
	GCT010								

Conc	Methane	Area
0.68	31626	
3.40	33510	
8.53	29954	
13.56	29307	397403.0
25.50	29338	
34.00	29307	
X =	30507.0	
S =	1721.775	

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC # 26847 A51

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC_____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration percent difference (%D) values were recalculated for the compounds identified below using the following calculation:

Percent difference (%D) = 100 * (N - C)/N

Where:
N = Initial Calibration Factor or Nominal Amount
C = Calibration Factor from Continuing Calibration Standard or Calculated Amount

#	Standard ID	Calibration Date	Compound	CCV Conc	Reported Conc	Recalculated Conc	Reported % D	Recalculated %D
1	FK16003A	11/16/2011	Methane	13.56	13.23	13.23	2	2.4
2	FK16014A	11/16/2011	Methane	13.56	12.66	12.66	7	6.6

	Compound	Area	CF
CCV1	Methane	403575	30507.0
CCV2	Methane	386222	30507.0

LDC #: 26847A51

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: JVG

2nd Reviewer: [illegible]

METHOD: X GC HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: LCS/LCSD1W

Compound	Spike Added (ug/L)		Spike Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)	13.6	13.6	13.3	12.8	98	98	94	94	4	4
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-TNT (8330)										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26847 A51

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: /GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound In the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. # 1 Compound Name Methane

Concentration = (638367) / (30507.1) = 20.93 ≈ 21 ug/L

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 14, 2011
LDC Report Date:	December 23, 2011
Matrix:	Water
Parameters:	Wet Chemistry
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K119

Sample Identification

MW-70-PMW09-124

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Standard Method 2320B for Alkalinity, EPA Method 300.0 for Chloride, Nitrate as Nitrogen, Nitrite as Nitrogen, and Sulfate, EPA Method 300.0M for Organic Acids, Standard Method 2540C for Total Dissolved Solids, Standard Method 5310B for Total Organic Carbon, and Standard Method 4500F for Dissolved Hydrogen Sulfide.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Continuing Calibration

Continuing calibration frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

No field blanks were identified in this SDG.

V. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VI. Duplicates

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Sample Result Verification

All sample result verifications were acceptable.

All metals reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 11K119	All analytes reported below the RL and above the MDL.	J (all detects)	A

IX. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

X. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Wet Chemistry - Data Qualification Summary - SDG 11K119

SDG	Sample	Analyte	Flag	A or P	Reason
11K119	MW-70-PMW09-124	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification

NWS Seal Beach, IR Site 70
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 11K119

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Wet Chemistry - Field Blank Data Qualification Summary - SDG 11K119

No Sample Data Qualified in this SDG

LDC #: 26847A6

SDG #: 11K119

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

~~ADR~~/IV

Date: 12-22-11

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: (Analyte) Alkalinity (Standard Method 2320B), Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Organic Acids (EPA Method 300.0M), TDS (Standard Method 2540C), TOC (Standard Method 5310B), Dissolved Hydrogen Sulfide (SM4500F)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/14/11
II.	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	N	Not reviewed for ADR validation. Client specified
VI.	Duplicates	N	Not reviewed for ADR validation.
VII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/D
VIII.	Sample result verification	A	Not reviewed for ADR validation.
IX.	Overall assessment of data	A	Not reviewed for ADR validation.
X.	Field duplicates	N	
XI	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water

1	MW-70-PMW09-124**	11		21		31	
2	~~IR-70-SHB113-125~~	12		22		32	
3	MW-70-PMW10-126	13		23		33	
4	MW-70-MNA11-127	14		24		34	
5	MW-70-MNA-128	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26842A6

VALIDATION FINDINGS CHECKLIST

Reviewer: OR
2nd Reviewer: [illegible]

Method: Inorganics (EPA Method See Cover)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?	✓			
Were titrant checks performed as required? (Level IV only)	✓			
Were balance checks performed as required? (Level IV only)	✓			
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.			✓	
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL(≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were ≤ 5X the CRDL.			✓	
V. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	✓			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26811r2

VALIDATION FINDINGS CHECKLIST

Reviewer: OR
2nd Reviewer: W

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
X. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 26886 rs

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: CR
2nd reviewer: W

All circled methods are applicable to each sample.

Sample ID	Parameter
1-3	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 HS
1-5	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 Organic Acids
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4

Comments:

LDC #: 26847A6

Validation Findings Worksheet
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: Inorganics, Method See cover

The correlation coefficient (r) for the calibration of NO_2-N was recalculated. Calibration date: 9/30/11

An initial or continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

$$\%R = \frac{\text{Found} \times 100}{\text{True}}$$

Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution
True = concentration of each analyte in the ICV or CCV source

Type of analysis	Analyte	Standard	Conc. (mg/l)	Area	Recalculated r or r^2	Reported r or r^2	Acceptable (Y/N)
Initial calibration	NO_2-N	s1	0.05	1.561	*0.999852*	0.999850	
		s2	0.1	3.285			
		s3	0.2	7.062			
		s4	0.5	18.94			
		s5	1	39.99			
		s6	2	82.54			
		s7	5	208.1			
		s8	10	402.8			
Calibration verification	SO_4	ICV	1	0.999	99.9	99.9	
Calibration verification	Acetate	CCV	2	1.485	99.3	99.2	
Calibration verification	TOC	↓	25	24.58	98.3	—	

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 20847A6

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: OR
2nd Reviewer: L

METHOD: Inorganics, Method see cover

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
LCS	Laboratory control sample	Cd	1.94	2	97	97	Y
✓	Matrix spike sample		(SSR-SR)				
✓	Duplicate sample						

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

TOTCLC.6

LDC #: 26847A6

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: CR
2nd reviewer: [illegible]

METHOD: Inorganics, Method See cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments?
Y N N/A Are all detection limits below the CRQL?

Compound (analyte) results for Cl reported with a positive detect were recalculated and verified using the following equation:

Concentration = 0.0557644(Area) + 0.0866239

Recalculation: 10(0.0557644(203325) + 0.0866239) = 114 mg/L

#	Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
	1	Cl	114	114	Y
		NO3-N	0.0585	0.058	
		SO4	109	109	
		Alk	163	163	
		TDS	525	525	

Note:

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
15-Nov-2011	IR-70-TB-129	K133-07	TB	5030B	8260B	3
15-Nov-2011	MW-70-PMW07A-130	K133-01	N	3010A	6010B	3
15-Nov-2011	MW-70-PMW07A-130	K133-01	N	5030B	8260B	3
15-Nov-2011	MW-70-PMW07A-130	K133-01	N	GEN PREP	2320B	3
15-Nov-2011	MW-70-PMW07A-130	K133-01	N	GEN PREP	2540C	3
15-Nov-2011	MW-70-PMW07A-130	K133-01	N	GEN PREP	300.0	3
15-Nov-2011	MW-70-PMW07A-130	K133-01	N	GEN PREP	4500F	3
15-Nov-2011	MW-70-PMW07A-130	K133-01	N	GEN PREP	5310B	3
15-Nov-2011	MW-70-PMW07A-130	K133-01	N	GEN PREP	RSK175	3
15-Nov-2011	MW-70-PMW07A-130DUP	K133-01D	DUP	GEN PREP	2320B	3
15-Nov-2011	MW-70-PMW07A-130DUP	K133-01D	DUP	GEN PREP	2540C	3
15-Nov-2011	MW-70-PMW07A-130DUP	K133-01D	DUP	GEN PREP	300.0	3
15-Nov-2011	MW-70-PMW07A-130DUP	K133-01D	DUP	GEN PREP	4500F	3
15-Nov-2011	MW-70-PMW07A-130MS	K133-01M	MS	3010A	6010B	3
15-Nov-2011	MW-70-PMW07A-130MS	K133-01M	MS	5030B	8260B	3
15-Nov-2011	MW-70-PMW07A-130MS	K133-01M	MS	GEN PREP	300.0	3
15-Nov-2011	MW-70-PMW07A-130MS	K133-01M	MS	GEN PREP	300.0M	3
15-Nov-2011	MW-70-PMW07A-130MS	K133-01M	MS	GEN PREP	5310B	3
15-Nov-2011	MW-70-PMW07A-130MS	K133-01M	MS	GEN PREP	RSK175	3
15-Nov-2011	MW-70-PMW07A-130	K133-01R	N	GEN PREP	300.0M	3
15-Nov-2011	MW-70-PMW07A-130MSD	K133-01S	MSD	3010A	6010B	3
15-Nov-2011	MW-70-PMW07A-130MSD	K133-01S	MSD	5030B	8260B	3
15-Nov-2011	MW-70-PMW07A-130MSD	K133-01S	MSD	GEN PREP	300.0	3
15-Nov-2011	MW-70-PMW07A-130MSD	K133-01S	MSD	GEN PREP	300.0M	3
15-Nov-2011	MW-70-PMW07A-130MSD	K133-01S	MSD	GEN PREP	5310B	3
15-Nov-2011	MW-70-PMW07A-130MSD	K133-01S	MSD	GEN PREP	RSK175	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
15-Nov-2011	MW-70-PMW07A-130	K133-01T	N	GEN PREP	RSK175	3
15-Nov-2011	MW-70-PMW07B-131	K133-02	N	3010A	6010B	3
15-Nov-2011	MW-70-PMW07B-131	K133-02	N	5030B	8260B	3
15-Nov-2011	MW-70-PMW07B-131	K133-02	N	GEN PREP	2320B	3
15-Nov-2011	MW-70-PMW07B-131	K133-02	N	GEN PREP	2540C	3
15-Nov-2011	MW-70-PMW07B-131	K133-02	N	GEN PREP	300.0	3
15-Nov-2011	MW-70-PMW07B-131	K133-02	N	GEN PREP	300.0M	3
15-Nov-2011	MW-70-PMW07B-131	K133-02	N	GEN PREP	4500F	3
15-Nov-2011	MW-70-PMW07B-131	K133-02	N	GEN PREP	5310B	3
15-Nov-2011	MW-70-PMW07B-131	K133-02	N	GEN PREP	RSK175	3
15-Nov-2011	MW-70-PMW07B-131	K133-02T	N	5030B	8260B	3
15-Nov-2011	MW-70-PMW07B-131	K133-02T	N	GEN PREP	RSK175	3
15-Nov-2011	IW-70-FSB216-132	K133-03	N	3010A	6010B	3
15-Nov-2011	IW-70-FSB216-132	K133-03	N	5030B	8260B	3
15-Nov-2011	IW-70-FSB216-132	K133-03	N	GEN PREP	2320B	3
15-Nov-2011	IW-70-FSB216-132	K133-03	N	GEN PREP	2540C	3
15-Nov-2011	IW-70-FSB216-132	K133-03	N	GEN PREP	300.0	3
15-Nov-2011	IW-70-FSB216-132	K133-03	N	GEN PREP	300.0M	3
15-Nov-2011	IW-70-FSB216-132	K133-03	N	GEN PREP	4500F	3
15-Nov-2011	IW-70-FSB216-132	K133-03	N	GEN PREP	5310B	3
15-Nov-2011	IW-70-FSB216-132	K133-03	N	GEN PREP	RSK175	3
15-Nov-2011	IW-70-FSB216-132	K133-03T	N	GEN PREP	RSK175	3
15-Nov-2011	MW-70-PMW08A-133	K133-04	N	3010A	6010B	3
15-Nov-2011	MW-70-PMW08A-133	K133-04	N	5030B	8260B	3
15-Nov-2011	MW-70-PMW08A-133	K133-04	N	GEN PREP	2320B	3
15-Nov-2011	MW-70-PMW08A-133	K133-04	N	GEN PREP	2540C	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
15-Nov-2011	MW-70-PMW08A-133	K133-04	N	GEN PREP	300.0	3
15-Nov-2011	MW-70-PMW08A-133	K133-04	N	GEN PREP	300.0M	3
15-Nov-2011	MW-70-PMW08A-133	K133-04	N	GEN PREP	4500F	3
15-Nov-2011	MW-70-PMW08A-133	K133-04	N	GEN PREP	5310B	3
15-Nov-2011	MW-70-PMW08A-133	K133-04	N	GEN PREP	RSK175	3
15-Nov-2011	MW-70-PMW08A-133	K133-04T	N	GEN PREP	RSK175	3
15-Nov-2011	MW-70-PMW08B-134	K133-05	N	3010A	6010B	3
15-Nov-2011	MW-70-PMW08B-134	K133-05	N	5030B	8260B	3
15-Nov-2011	MW-70-PMW08B-134	K133-05	N	GEN PREP	2320B	3
15-Nov-2011	MW-70-PMW08B-134	K133-05	N	GEN PREP	2540C	3
15-Nov-2011	MW-70-PMW08B-134	K133-05	N	GEN PREP	300.0	3
15-Nov-2011	MW-70-PMW08B-134	K133-05	N	GEN PREP	300.0M	3
15-Nov-2011	MW-70-PMW08B-134	K133-05	N	GEN PREP	4500F	3
15-Nov-2011	MW-70-PMW08B-134	K133-05	N	GEN PREP	5310B	3
15-Nov-2011	MW-70-PMW08B-134	K133-05	N	GEN PREP	RSK175	3
15-Nov-2011	MW-70-PMW08B-134	K133-05T	N	5030B	8260B	3
15-Nov-2011	MW-70-PMW08B-134	K133-05T	N	GEN PREP	RSK175	3
15-Nov-2011	MW-70-MNA10-135	K133-06	N	5030B	8260B	3
15-Nov-2011	MW-70-MNA10-135	K133-06	N	GEN PREP	300.0M	3
15-Nov-2011	MW-70-MNA10-135	K133-06	N	GEN PREP	RSK175	3
15-Nov-2011	MW-70-MNA10-135	K133-06T	N	GEN PREP	RSK175	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11K133 **Laboratory: EMXT**

EDD Filename: 11K133 **eQAPP Name: SealBeach_IRSite70**

Method Category: METALS

Method: 6010B **Matrix: AQ**

Sample ID: IW-70-FSB216-132 *Collected:* 11/15/2011 12:03:00 *Analysis Type:* RES/DIS *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.0168	J	0.00500	MDL	0.200	PQL	MG/L	J	RI, Ms

Sample ID: MW-70-PMW07A-130 *Collected:* 11/15/2011 9:47:00 *Analysis Type:* RES/DIS *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	3.07		0.00300	MDL	0.200	PQL	MG/L	J	ProfJudg

Method Category: SVOA

Method: RSK175 **Matrix: AQ**

Sample ID: IW-70-FSB216-132 *Collected:* 11/15/2011 12:03:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHENE	0.61	J	0.60	MDL	2.0	PQL	UG/L	J	RI

Sample ID: MW-70-PMW07B-131 *Collected:* 11/15/2011 11:03:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHENE	0.66	J	0.60	MDL	2.0	PQL	UG/L	J	RI

Method Category: VOA

Method: 8260B **Matrix: AQ**

Sample ID: IW-70-FSB216-132 *Collected:* 11/15/2011 12:03:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-METHYL-2-PENTANONE	8.6	J	4.0	MDL	10	PQL	UG/L	J	RI
ACETONE	5.6	J	5.0	MDL	10	PQL	UG/L	J	RI
CARBON DISULFIDE	0.65	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CIS-1,2-DICHLOROETHENE	0.36	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TOLUENE	0.20	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRANS-1,2-DICHLOROETHENE	0.26	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	0.38	J	0.20	MDL	5.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K133 **Laboratory: EMXT**

EDD Filename: 11K133 **eQAPP Name: SealBeach_IRSite70**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **MW-70-MNA10-135** ***Collected:*** **11/15/2011 3:19:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.34	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CARBON DISULFIDE	0.37	J	0.20	MDL	1.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW07A-130** ***Collected:*** **11/15/2011 9:47:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	6.9	J	5.0	MDL	10	PQL	UG/L	J	RI
CARBON DISULFIDE	0.98	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	1.1	J	0.20	MDL	5.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW07B-131** ***Collected:*** **11/15/2011 11:03:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.44	J	0.20	MDL	1.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW08A-133** ***Collected:*** **11/15/2011 1:19:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.28	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CARBON DISULFIDE	0.53	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	1.0	J	0.20	MDL	5.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW08B-134** ***Collected:*** **11/15/2011 2:18:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.70	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	4.4	J	0.20	MDL	5.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K133 **Laboratory: EMXT**

EDD Filename: 11K133 **eQAPP Name: SealBeach_IRSite70**

Reason Code Legend

Reason Code	*Description*
Cb	Calibration Blank Contamination
Ccv	Continuing Calibration Verification Percent Difference Lower Estimation
Ccv	Continuing Calibration Verification Percent Difference Lower Rejection
Ccv	Continuing Calibration Verification Percent Difference Upper Estimation
Ccv	Continuing Calibration Verification Percent Difference Upper Rejection
Ccv	Continuing Calibration Verification Percent Recovery Lower Estimation
Ccv	Continuing Calibration Verification Percent Recovery Lower Rejection
Ccv	Continuing Calibration Verification Percent Recovery Upper Estimation
Ccv	Continuing Calibration Verification Percent Recovery Upper Rejection
CcvCC	Continuing Calibration Verification Correlation Coefficient
CcvRrf	Continuing Calibration Verification Relative Response Factor
ContTune	Continuing Tune
Dup=0	Duplicate Sample Count = 0
Dup>1	Duplicate Sample Count > 1
Eb	Equipment Blank Contamination
EtoA	Extraction to Analysis Estimation
EtoA	Extraction to Analysis Rejection
Fb	Field Blank Contamination
Fd	Field Duplicate Precision
Ft	Field Triplicate Precision
IcCC	Initial Calibration Correlation Coefficient
IcRrf	Initial Calibration Relative Response Factor
IcRsd	Initial Calibration Percent Relative Standard Deviation
Icv	Initial Calibration Verification Percent Difference Lower Estimation
Icv	Initial Calibration Verification Percent Difference Lower Rejection
Icv	Initial Calibration Verification Percent Difference Upper Estimation
Icv	Initial Calibration Verification Percent Difference Upper Rejection
Icv	Initial Calibration Verification Percent Recovery Lower Estimation
Icv	Initial Calibration Verification Percent Recovery Lower Rejection
Icv	Initial Calibration Verification Percent Recovery Upper Estimation

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K133 **Laboratory: EMXT**

EDD Filename: 11K133 **eQAPP Name: SealBeach_IRSite70**

Icv	Initial Calibration Verification Percent Recovery Upper Rejection
IcvCC	Initial Calibration Verification Correlation Coefficient
IcvRrf	Initial Calibration Verification Relative Response Factor
IllogicalFraction	Illogical Fraction
InitTune	Initial Tune
Is	Internal Standard Estimation
Is	Internal Standard Rejection
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Lower Rejection
Lcs	Laboratory Control Spike Upper Estimation
Lcs	Laboratory Control Spike Upper Rejection
Lcs=0	Laboratory Control Sample Count = 0
Lcs>1	Laboratory Control Sample Count > 1
Ld	Laboratory Duplicate Precision
Lt	Laboratory Triplicate Precision
Mb	Method Blank Contamination
Mb=0	Method Blank Sample Count = 0
Mb>1	Method Blank Sample Count > 1
Moist	Percent Moisture
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Lower Rejection
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
Ms	Matrix Spike Upper Rejection
Ms=0	Matrix Spike Sample Count = 0
Ms>1	Matrix Spike Sample Count > 1
PEM	Performance Evaluation Mixture
Preservation	Preservation
ProfJudg	Professional Judgment
REM	Resolution Check Mixture
RI	Reporting Limit

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K133 **Laboratory: EMXT**

EDD Filename: 11K133 **eQAPP Name: SealBeach_IRSite70**

RI	Reporting Limit > Project Maximum Contamination Limit
RI	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation
StoA	Sampling to Analysis Rejection
StoE	Sampling to Extraction Estimation
StoE	Sampling to Extraction Rejection
StoL	Sampling to Leaching Estimation
StoL	Sampling to Leaching Rejection
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Lower Rejection
Surr	Surrogate/Tracer Recovery Upper Estimation
Surr	Surrogate/Tracer Recovery Upper Rejection
Tb	Trip Blank Contamination
TempEst	Temperature Estimation
TempRej	Temperature Rejection

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11K133

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 11K133 **Laboratory: EMXT**

EDD Filename: 11K133 **eQAPP Name: SealBeach_IRSite70**

Method: **6010B**

Matrix: **AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
MW-70-PMW07A-130MS **MW-70-PMW07A-130MSD** (IW-70-FSB216-132 MW-70-PMW07A-130 MW-70-PMW07B-131 MW-70-PMW08A-133 MW-70-PMW08B-134)	ARSENIC	132	133	75.00-125.00	-	ARSENIC	J (all detects)

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Reporting Limit Outliers

Lab Reporting Batch ID: 11K133 **Laboratory: EMXT**

EDD Filename: 11K133 **eQAPP Name: SealBeach_IRSite70**

Method: 6010B
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IW-70-FSB216-132	ARSENIC	J	0.0168	0.200	PQL	MG/L	J (all detects)

Method: 8260B
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IW-70-FSB216-132	4-METHYL-2-PENTANONE	J	8.6	10	PQL	UG/L	J (all detects)
	ACETONE	J	5.6	10	PQL	UG/L	
	CARBON DISULFIDE	J	0.65	1.0	PQL	UG/L	
	CIS-1,2-DICHLOROETHENE	J	0.36	1.0	PQL	UG/L	
	TOLUENE	J	0.20	1.0	PQL	UG/L	
	TRANS-1,2-DICHLOROETHENE	J	0.26	1.0	PQL	UG/L	
	TRICHLOROETHENE	J	0.38	5.0	PQL	UG/L	
MW-70-MNA10-135	1,1-DICHLOROETHANE	J	0.34	1.0	PQL	UG/L	J (all detects)
	CARBON DISULFIDE	J	0.37	1.0	PQL	UG/L	
MW-70-PMW07A-130	ACETONE	J	6.9	10	PQL	UG/L	J (all detects)
	CARBON DISULFIDE	J	0.98	1.0	PQL	UG/L	
	TRICHLOROETHENE	J	1.1	5.0	PQL	UG/L	
MW-70-PMW07B-131	1,1-DICHLOROETHANE	J	0.44	1.0	PQL	UG/L	J (all detects)
MW-70-PMW08A-133	1,1-DICHLOROETHANE	J	0.28	1.0	PQL	UG/L	J (all detects)
	CARBON DISULFIDE	J	0.53	1.0	PQL	UG/L	
	TRICHLOROETHENE	J	1.0	5.0	PQL	UG/L	
MW-70-PMW08B-134	1,1-DICHLOROETHANE	J	0.70	1.0	PQL	UG/L	J (all detects)
	TRICHLOROETHENE	J	4.4	5.0	PQL	UG/L	

Method: RSK175
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IW-70-FSB216-132	ETHENE	J	0.61	2.0	PQL	UG/L	J (all detects)
MW-70-PMW07B-131	ETHENE	J	0.66	2.0	PQL	UG/L	J (all detects)

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

LDC #: 26847B1

SDG #: 11K133

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/23/11

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/15/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30%
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	N	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	N	
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A ~~N~~	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/L~~OQ/LOD~~s	SW	
XIII.	Tentitatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	SW	
XVI.	Field duplicates	N	
XVII.	Field blanks	↓	TB = 9

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

All water

1	MW-70-PMW–07A-130	11	MW-70-PMW–07A-130MSD	21	MBLK1W	31	
2 2	MW-70-PMW07B-131	12		22	1 2W	32	
3 2	MW-70-PMW07B-131DL	13		23		33	
4	IW-70FSB216-132	14		24		34	
5	MW-70-PMW08A-133	15		25		35	
6 2	MW-70-PMW08B-134	16		26		36	
7 2	MW-70-PMW08B-134DL	17		27		37	
8	MW-70-MNA10-135	18		28		38	
9	IR-70-TB-129	19		29		39	
10	MW-70-PMW–07A-130MS	20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 26847B1

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and CRQLs

Reviewer: A
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?

Y N N/A Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	Compound	Finding	Associated Samples	Qualifications
		QQQ	> cal. range	2	J det /A
		QQQ, C	↓	6	↓

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26847B1
SDG #: -

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: A
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Date	Sample ID	Finding	Associated Samples	Qualifications
		2	QQQ > calib	vanga	R / A
		3	All except QQQ	- d. lerted	J
		6	QQQ, c > calib	vanga	J
		7	All except QQQ,	c - d. lerted	J

Comments:

OVR.1S

LDC #: 26847B4

SDG #: 11K133

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12-22-11

Page: 1 of 1

Reviewer: OL

2nd Reviewer: W

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/15/11
II.	ICP/MS Tune	N	
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	
VI.	Matrix Spike Analysis	N	MS/D (As: Sdet/A)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Water

1	MW-70-PMW–07A-130	11		21		31	
2	MW-70-PMW07B-131	12		22		32	
3	IW-70FSB216-132	13		23		33	
4	MW-70-PMW08A-133	14		24		34	
5	MW-70-PMW08B-134	15		25		35	
6	MW-70-PMW–07A-130MS	16		26		36	
7	MW-70-PMW–07A-130MSD	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26847B4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: CR
2nd reviewer: [illegible]

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-5		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
QC-67		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,

Comments: Mercury by CVAA if performed

LDC #: 26847B4

VALIDATION FINDINGS WORKSHEET
ICP Serial Dilution

Page: 1 of 1
Reviewer: OR
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A If analyte concentrations were > 50X the MDL (ICP) ,or >100X the MDL (ICP/MS), was a serial dilution analyzed?
Y N N/A Were ICP serial dilution percent differences (%D) ≤10%?
Y N N/A Is there evidence of negative interference? If yes, professional judgement will be used to qualify the data.

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	Diluted Sample ID	Matrix	Analyte	%D (Limits)	Associated Samples	Qualifications
		1	W	Mn	11	All except 1*	J/UJ/A

Comments: *Other client SD in batch that passed

SDILICPMS.wpd

LDC #: 26847B6

SDG #: 11K133

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12-22-11

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: (Analyte) Alkalinity (Standard Method 2320B), Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Dissolved Hydrogen Sulfide (SM4500F), Organic Acids (EPA Method 300.0M), TDS (Standard Method 2540C), TOC (Standard Method 5310B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/15/11
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	N	MS/D
VI.	Duplicates	N	D/D
VII.	Laboratory control samples	N	LCS/D
VIII.	Sample result verification	N	
IX.	Overall assessment of data	N	
X.	Field duplicates	N	
XI	Field blanks		

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: water

1	MW-70-PMW–07A-130	11		21		31	
2	MW-70-PMW07B-131	12		22		32	
3	IW-70FSB216-132	13		23		33	
4	MW-70-PMW08A-133	14		24		34	
5	MW-70-PMW08B-134	15		25		35	
6	MW-70-MNA10-135	16		26		36	
7	MW-70-PMW–07A-130MS	17		27		37	
8	MW-70-PMW–07A-130MSD	18		28		38	
9	MW-70-PMW–07A-130DUP	19		29		39	
10		20		30		40	

Notes:

LDC #: L6040 N0

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: CR
2nd reviewer: [illegible]

All circled methods are applicable to each sample.

Sample ID	Parameter
1-5	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 HS
1-6	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 Organic Acids
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
QC:7,8,9	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 Organic Acids
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 HS
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4

Comments:

LDC #: 26847B51

SDG #: 11K133

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/23/11

Page: 1 of 1

Reviewer: A

2nd Reviewer: W

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/15/11
II	Initial calibration	A	%RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	N	
V	Surrogate recovery	N	
VI.	Matrix spike/Matrix spike duplicates	N	
VII.	Laboratory control samples	N	
VIII.	Target compound identification	N	
IX.	Compound quantitation/RL/LOQ/LODs	SW	
X.	System Performance	N	
XI.	Overall assessment of data	SW	
XII.	Field duplicates	N	
XIII.	Field blanks	↓	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

All wet

1	MW-70-PMW-07A-130	11	MW-70-MNA10-135DL	21		31	
2	MW-70-PMW07B-131	12	MW-70-PMW–07A-130MS	22		32	
3	MW-70-PMW07B-131DL	13	MW-70-PMW–07A-130MSD	23		33	
4	IW-70-FSB216-132	14	#1 DL	24		34	
5	IW-70-FSB216-132DL	15		25		35	
6	MW-70-PMW08A-133	16		26		36	
7	MW-70-PMW08A-133DL	17		27		37	
8	MW-70-PMW08B-134	18		28		38	
9	MW-70-PMW08B-134DL	19		29		39	
10	MW-70-MNA10-135	20		30		40	

Notes:

LDC #: 26847B51

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Level IV/D Only
Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	> calib range	1.2.4.6.8.10	J dil/A

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26847B51
SDG #: -

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: A
2nd Reviewer: [illegible]

METHOD: ✓ **GC** ___ **HPLC**

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	> calib range	1.2.4.6.8.10	R/A
	Ethane, Ethene	Diluted	14.3.5.7.9.11	↓

Comments: _____

OVRNew.wpd

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
16-Nov-2011	IR-70-TB-136	K146-07	TB	5030B	8260B	3
16-Nov-2011	MW-70-43B-137	K146-01	N	5030B	8260B	3
16-Nov-2011	MW-70-43B-137	K146-01	N	GEN PREP	300.0M	3
16-Nov-2011	MW-70-43B-137	K146-01	N	GEN PREP	RSK175	3
16-Nov-2011	MW-70-43B-137	K146-01T	N	5030B	8260B	3
16-Nov-2011	MW-70-PMW11A-138	K146-02	N	3010A	6010B	4
16-Nov-2011	MW-70-PMW11A-138	K146-02	N	5030B	8260B	4
16-Nov-2011	MW-70-PMW11A-138	K146-02	N	GEN PREP	2320B	4
16-Nov-2011	MW-70-PMW11A-138	K146-02	N	GEN PREP	2540C	4
16-Nov-2011	MW-70-PMW11A-138	K146-02	N	GEN PREP	300.0	4
16-Nov-2011	MW-70-PMW11A-138	K146-02	N	GEN PREP	300.0M	4
16-Nov-2011	MW-70-PMW11A-138	K146-02	N	GEN PREP	4500F	4
16-Nov-2011	MW-70-PMW11A-138	K146-02	N	GEN PREP	5310B	4
16-Nov-2011	MW-70-PMW11A-138	K146-02	N	GEN PREP	RSK175	4
16-Nov-2011	MW-70-PMW11A-138	K146-02I	N	GEN PREP	RSK175	4
16-Nov-2011	MW-70-PMW11B-139	K146-03	N	3010A	6010B	3
16-Nov-2011	MW-70-PMW11B-139	K146-03	N	5030B	8260B	3
16-Nov-2011	MW-70-PMW11B-139	K146-03	N	GEN PREP	2320B	3
16-Nov-2011	MW-70-PMW11B-139	K146-03	N	GEN PREP	2540C	3
16-Nov-2011	MW-70-PMW11B-139	K146-03	N	GEN PREP	300.0	3
16-Nov-2011	MW-70-PMW11B-139	K146-03	N	GEN PREP	4500F	3
16-Nov-2011	MW-70-PMW11B-139	K146-03	N	GEN PREP	5310B	3
16-Nov-2011	MW-70-PMW11B-139	K146-03	N	GEN PREP	RSK175	3
16-Nov-2011	MW-70-PMW11B-139	K146-03R	N	GEN PREP	300.0M	3
16-Nov-2011	MW-70-PMW11B-139	K146-03T	N	5030B	8260B	3
16-Nov-2011	MW-70-PMW12A-140	K146-04	N	3010A	6010B	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
16-Nov-2011	MW-70-PMW12A-140	K146-04	N	5030B	8260B	3
16-Nov-2011	MW-70-PMW12A-140	K146-04	N	GEN PREP	2320B	3
16-Nov-2011	MW-70-PMW12A-140	K146-04	N	GEN PREP	2540C	3
16-Nov-2011	MW-70-PMW12A-140	K146-04	N	GEN PREP	300.0	3
16-Nov-2011	MW-70-PMW12A-140	K146-04	N	GEN PREP	300.0M	3
16-Nov-2011	MW-70-PMW12A-140	K146-04	N	GEN PREP	4500F	3
16-Nov-2011	MW-70-PMW12A-140	K146-04	N	GEN PREP	5310B	3
16-Nov-2011	MW-70-PMW12A-140	K146-04	N	GEN PREP	RSK175	3
16-Nov-2011	MW-70-PMW12A-140	K146-04T	N	5030B	8260B	3
16-Nov-2011	MW-70-PMW12A-140	K146-04T	N	GEN PREP	RSK175	3
16-Nov-2011	IR-70-FD-141	K146-06	FD	3010A	6010B	3
16-Nov-2011	IR-70-FD-141	K146-06	FD	5030B	8260B	3
16-Nov-2011	IR-70-FD-141	K146-06	FD	GEN PREP	2320B	3
16-Nov-2011	IR-70-FD-141	K146-06	FD	GEN PREP	2540C	3
16-Nov-2011	IR-70-FD-141	K146-06	FD	GEN PREP	300.0	3
16-Nov-2011	IR-70-FD-141	K146-06	FD	GEN PREP	300.0M	3
16-Nov-2011	IR-70-FD-141	K146-06	FD	GEN PREP	4500F	3
16-Nov-2011	IR-70-FD-141	K146-06	FD	GEN PREP	5310B	3
16-Nov-2011	IR-70-FD-141	K146-06	FD	GEN PREP	RSK175	3
16-Nov-2011	IR-70-FD-141DUP	K146-06D	DUP	GEN PREP	2540C	3
16-Nov-2011	IR-70-FD-141	K146-06T	FD	5030B	8260B	3
16-Nov-2011	IR-70-FD-141	K146-06T	FD	GEN PREP	RSK175	3
16-Nov-2011	MW-70-PMW12B-142	K146-05	N	3010A	6010B	3
16-Nov-2011	MW-70-PMW12B-142	K146-05	N	5030B	8260B	3
16-Nov-2011	MW-70-PMW12B-142	K146-05	N	GEN PREP	2320B	3
16-Nov-2011	MW-70-PMW12B-142	K146-05	N	GEN PREP	2540C	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
16-Nov-2011	MW-70-PMW12B-142	K146-05	N	GEN PREP	300.0	3
16-Nov-2011	MW-70-PMW12B-142	K146-05	N	GEN PREP	300.0M	3
16-Nov-2011	MW-70-PMW12B-142	K146-05	N	GEN PREP	4500F	3
16-Nov-2011	MW-70-PMW12B-142	K146-05	N	GEN PREP	5310B	3
16-Nov-2011	MW-70-PMW12B-142	K146-05	N	GEN PREP	RSK175	3
16-Nov-2011	MW-70-PMW12B-142DUP	K146-05D	DUP	GEN PREP	4500F	3
16-Nov-2011	MW-70-PMW12B-142	K146-05I	N	GEN PREP	RSK175	3
16-Nov-2011	MW-70-PMW12B-142	K146-05T	N	5030B	8260B	3
16-Nov-2011	MW-70-PMW12B-142	K146-05T	N	GEN PREP	RSK175	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11K146 **Laboratory: EMXT**

EDD Filename: 11K146 **eQAPP Name: SealBeach_IRSite70**

Method Category: METALS

Method: 6010B **Matrix: AQ**

Sample ID: MW-70-PMW11B-139 *Collected:* 11/16/2011 11:34:00 *Analysis Type:* RES/DIS *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.00597	J	0.00500	MDL	0.200	PQL	MG/L	J	RI, Ms

Sample ID: MW-70-PMW12B-142 *Collected:* 11/16/2011 3:40:00 *Analysis Type:* RES/DIS *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.0115	J	0.00500	MDL	0.200	PQL	MG/L	J	RI, Ms

Method Category: SVOA

Method: RSK175 **Matrix: AQ**

Sample ID: MW-70-PMW11A-138 *Collected:* 11/16/2011 10:42:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHENE	0.90	J	0.60	MDL	2.0	PQL	UG/L	J	RI

Sample ID: MW-70-PMW12B-142 *Collected:* 11/16/2011 3:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHANE	0.84	J	0.64	MDL	2.0	PQL	UG/L	J	RI

Method Category: VOA

Method: 8260B **Matrix: AQ**

Sample ID: IR-70-FD-141 *Collected:* 11/16/2011 2:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CARBON DISULFIDE	0.24	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	1.5	J	0.20	MDL	5.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K146 **Laboratory: EMXT**

EDD Filename: 11K146 **eQAPP Name: SealBeach_IRSite70**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **MW-70-43B-137** ***Collected:*** **11/16/2011 9:36:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHENE	0.38	J	0.20	MDL	0.50	PQL	UG/L	J	RI
CARBON DISULFIDE	0.29	J	0.20	MDL	1.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW11A-138** ***Collected:*** **11/16/2011 10:42:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CARBON DISULFIDE	0.28	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRANS-1,2-DICHLOROETHENE	0.98	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	1.9	J	0.20	MDL	5.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW11B-139** ***Collected:*** **11/16/2011 11:34:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.47	J	0.20	MDL	1.0	PQL	UG/L	J	RI
1,1-DICHLOROETHENE	0.44	J	0.20	MDL	0.50	PQL	UG/L	J	RI
CARBON DISULFIDE	0.26	J	0.20	MDL	1.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW12A-140** ***Collected:*** **11/16/2011 2:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CARBON DISULFIDE	0.27	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	1.5	J	0.20	MDL	5.0	PQL	UG/L	J	RI

Sample ID: **MW-70-PMW12B-142** ***Collected:*** **11/16/2011 3:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.39	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CARBON DISULFIDE	0.30	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CIS-1,2-DICHLOROETHENE	0.78	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	2.0	J	0.20	MDL	5.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K146 **Laboratory: EMXT**

EDD Filename: 11K146 **eQAPP Name: SealBeach_IRSite70**

Reason Code Legend

Reason Code	*Description*
Cb	Calibration Blank Contamination
Ccv	Continuing Calibration Verification Percent Difference Lower Estimation
Ccv	Continuing Calibration Verification Percent Difference Lower Rejection
Ccv	Continuing Calibration Verification Percent Difference Upper Estimation
Ccv	Continuing Calibration Verification Percent Difference Upper Rejection
Ccv	Continuing Calibration Verification Percent Recovery Lower Estimation
Ccv	Continuing Calibration Verification Percent Recovery Lower Rejection
Ccv	Continuing Calibration Verification Percent Recovery Upper Estimation
Ccv	Continuing Calibration Verification Percent Recovery Upper Rejection
CcvCC	Continuing Calibration Verification Correlation Coefficient
CcvRrf	Continuing Calibration Verification Relative Response Factor
ContTune	Continuing Tune
Dup=0	Duplicate Sample Count = 0
Dup>1	Duplicate Sample Count > 1
Eb	Equipment Blank Contamination
EtoA	Extraction to Analysis Estimation
EtoA	Extraction to Analysis Rejection
Fb	Field Blank Contamination
Fd	Field Duplicate Precision
Ft	Field Triplicate Precision
IcCC	Initial Calibration Correlation Coefficient
IcRrf	Initial Calibration Relative Response Factor
IcRsd	Initial Calibration Percent Relative Standard Deviation
Icv	Initial Calibration Verification Percent Difference Lower Estimation
Icv	Initial Calibration Verification Percent Difference Lower Rejection
Icv	Initial Calibration Verification Percent Difference Upper Estimation
Icv	Initial Calibration Verification Percent Difference Upper Rejection
Icv	Initial Calibration Verification Percent Recovery Lower Estimation

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K146 **Laboratory: EMXT**

EDD Filename: 11K146 **eQAPP Name: SealBeach_IRSite70**

Icv	Initial Calibration Verification Percent Recovery Lower Rejection
Icv	Initial Calibration Verification Percent Recovery Upper Estimation
Icv	Initial Calibration Verification Percent Recovery Upper Rejection
IcvCC	Initial Calibration Verification Correlation Coefficient
IcvRrf	Initial Calibration Verification Relative Response Factor
IllogicalFraction	Illogical Fraction
InitTune	Initial Tune
Is	Internal Standard Estimation
Is	Internal Standard Rejection
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Lower Rejection
Lcs	Laboratory Control Spike Upper Estimation
Lcs	Laboratory Control Spike Upper Rejection
Lcs=0	Laboratory Control Sample Count = 0
Lcs>1	Laboratory Control Sample Count > 1
Ld	Laboratory Duplicate Precision
Lt	Laboratory Triplicate Precision
Mb	Method Blank Contamination
Mb=0	Method Blank Sample Count = 0
Mb>1	Method Blank Sample Count > 1
Moist	Percent Moisture
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Lower Rejection
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
Ms	Matrix Spike Upper Rejection
Ms=0	Matrix Spike Sample Count = 0
Ms>1	Matrix Spike Sample Count > 1
PEM	Performance Evaluation Mixture

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K146 **Laboratory: EMXT**

EDD Filename: 11K146 **eQAPP Name: SealBeach_IRSite70**

Preservation	Preservation
ProfJudg	Professional Judgment
REM	Resolution Check Mixture
RI	Reporting Limit
RI	Reporting Limit > Project Maximum Contamination Limit
RI	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation
StoA	Sampling to Analysis Rejection
StoE	Sampling to Extraction Estimation
StoE	Sampling to Extraction Rejection
StoL	Sampling to Leaching Estimation
StoL	Sampling to Leaching Rejection
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Lower Rejection
Surr	Surrogate/Tracer Recovery Upper Estimation
Surr	Surrogate/Tracer Recovery Upper Rejection
Tb	Trip Blank Contamination
TempEst	Temperature Estimation
TempRej	Temperature Rejection

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11K146

Reporting Limit Outliers

Lab Reporting Batch ID: 11K146 **Laboratory: EMXT**

EDD Filename: 11K146 **eQAPP Name: SealBeach_IRSite70**

Method: 6010B
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
MW-70-PMW11B-139	ARSENIC	J	0.00597	0.200	PQL	MG/L	J (all detects)
MW-70-PMW12B-142	ARSENIC	J	0.0115	0.200	PQL	MG/L	J (all detects)

Method: 8260B
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-FD-141	CARBON DISULFIDE	J	0.24	1.0	PQL	UG/L	J (all detects)
	TRICHLOROETHENE	J	1.5	5.0	PQL	UG/L	
MW-70-43B-137	1,1-DICHLOROETHENE	J	0.38	0.50	PQL	UG/L	J (all detects)
	CARBON DISULFIDE	J	0.29	1.0	PQL	UG/L	
MW-70-PMW11A-138	CARBON DISULFIDE	J	0.28	1.0	PQL	UG/L	J (all detects)
	TRANS-1,2-DICHLOROETHENE	J	0.98	1.0	PQL	UG/L	
	TRICHLOROETHENE	J	1.9	5.0	PQL	UG/L	
MW-70-PMW11B-139	1,1-DICHLOROETHANE	J	0.47	1.0	PQL	UG/L	J (all detects)
	1,1-DICHLOROETHENE	J	0.44	0.50	PQL	UG/L	
	CARBON DISULFIDE	J	0.26	1.0	PQL	UG/L	
	TRICHLOROETHENE	J	6.0	50	PQL	UG/L	
MW-70-PMW12A-140	CARBON DISULFIDE	J	0.27	1.0	PQL	UG/L	J (all detects)
	TRICHLOROETHENE	J	1.5	5.0	PQL	UG/L	
MW-70-PMW12B-142	1,1-DICHLOROETHANE	J	0.39	1.0	PQL	UG/L	J (all detects)
	CARBON DISULFIDE	J	0.30	1.0	PQL	UG/L	
	CIS-1,2-DICHLOROETHENE	J	0.78	1.0	PQL	UG/L	
	TRICHLOROETHENE	J	2.0	5.0	PQL	UG/L	

Method: RSK175
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
MW-70-PMW11A-138	ETHENE	J	0.90	2.0	PQL	UG/L	J (all detects)
MW-70-PMW12B-142	ETHANE	J	0.84	2.0	PQL	UG/L	J (all detects)

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Field Duplicate RPD Report

Lab Reporting Batch ID: 11K146 **Laboratory: EMXT**

EDD Filename: 11K146 **eQAPP Name: SealBeach_IRSite70**

Method: 2320B
Matrix: AQ

Analyte	Concentration (MG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-PMW12A-140	IR-70-FD-141			
Total Alkalinity	248	250	1	20.00	No Qualifiers Applied

Method: 2540C
Matrix: AQ

Analyte	Concentration (MG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-PMW12A-140	IR-70-FD-141			
TDS	2590	2640	2	20.00	No Qualifiers Applied

Method: 300.0
Matrix: AQ

Analyte	Concentration (MG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-PMW12A-140	IR-70-FD-141			
Chloride-Cl	1310	1300	1	20.00	No Qualifiers Applied
SULFATE	219	218	0	20.00	

Method: 5310B
Matrix: AQ

Analyte	Concentration (MG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-PMW12A-140	IR-70-FD-141			
TOC	4.66	4.58	2	20.00	No Qualifiers Applied

Method: 6010B
Matrix: AQ

Analyte	Concentration (MG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-PMW12A-140	IR-70-FD-141			
IRON	3.61	3.65	1	20.00	No Qualifiers Applied
MANGANESE	0.716	0.722	1	20.00	

Method: 8260B
Matrix: AQ

Analyte	Concentration (UG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-PMW12A-140	IR-70-FD-141			
CARBON DISULFIDE	0.27	0.24	12	20.00	No Qualifiers Applied
CIS-1,2-DICHLOROETHENE	13	12	8	20.00	
TRANS-1,2-DICHLOROETHENE	26	25	4	20.00	
TRICHLOROETHENE	1.5	1.5	0	20.00	
VINYL CHLORIDE	250	230	8	20.00	

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Field Duplicate RPD Report

Lab Reporting Batch ID: 11K146 **Laboratory: EMXT**

EDD Filename: 11K146 **eQAPP Name: SealBeach_IRSite70**

Method: RSK175
Matrix: AQ

Analyte	Concentration (UG/L)		Sample RPD	eQAPP RPD	Flag
	MW-70-PMW12A-140	IR-70-FD-141			
ETHENE	14	14	0	20.00	No Qualifiers Applied
METHANE	120	12000	196	20.00	

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

LDC #: 26847C1

SDG #: 11K146

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

Date: 12/29/11

Page: 1 of 1

Reviewer: SW

2nd Reviewer: C

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/16/11
II.	GC/MS Instrument performance check	~~N~~ A	
III.	Initial calibration	A	% RSD ≤ 30 %
IV.	Continuing calibration/ICV	A	CW/ICW ≤ 25 %
V.	Blanks	N	Not reviewed for ADR validation.
VI.	Surrogate spikes	↓	Not reviewed for ADR validation.
VII.	Matrix spike/Matrix spike duplicates	↓	Not reviewed for ADR validation.
VIII.	Laboratory control samples	↓	Not reviewed for ADR validation.
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	↓	Not reviewed for ADR validation.
XI.	Target compound identification	↓	Not reviewed for ADR validation.
XII.	Compound quantitation/RLs	↓	Not reviewed for ADR validation.
XIII.	Tentitatively identified compounds (TICs)	↓	Not reviewed for ADR validation.
XIV.	System performance	↓	Not reviewed for ADR validation.
XV.	Overall assessment of data	SW	Not reviewed for ADR validation.
XVI.	Field duplicates	N	D_1 = 6, 10 D_2 = 7, 11
XVII.	Field blanks	↓	TB = 12

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water

1	MW-70-43B-137	11	IR-70-FD-141DL D_2	21	MB LK 1 W	31	
2	MW-70-43B-137DL	12	IR-70-TB-136	22	2W	32	
3	MW-70-PMW-11A-138**	13		23	3W	33	
4	MW-70-PMW1B-139	14		24		34	
5	MW-70-PMW1B-139DL	15		25		35	
6	MW-70-PMW12A-140 D_1	16		26		36	
7	MW-70-PMW12A-140DL D_2	17		27		37	
8	MW-70-PMW12B-142	18		28		38	
9	MW-70-PMW12B-142DL	19		29		39	
10	IR-70-FD-141 D_1	20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 26847 C1

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: NG
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.
Y N N/A Was the overall quality and usability of the data acceptable?

#	Date	Sample ID	Compound	Finding	Qualifications
		1	5 > cal range		Do not use
		2	All except 5 dil		
		4, 6, 8, 10	C > cal range		
		5, 7, 9, 11	All except C dil		✓

Comments:

OVR.wpd

LDC #: 26847C4

SDG #: 11K146

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

Date: 12-22-11

Page: 1 of 1

Reviewer: AL

2nd Reviewer: W

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/16/11
II.	ICP/MS Tune	N	Not utilized
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	Not reviewed for ADR validation.
VI.	Matrix Spike Analysis	~~N~~ SW	Not reviewed for ADR validation. MS/D ~~Client Specified~~ (11K133)
VII.	Duplicate Sample Analysis	N	Not reviewed for ADR validation. ↓
VIII.	Laboratory Control Samples (LCS)	A	Not reviewed for ADR validation. LCS/D
IX.	Internal Standard (ICP-MS)	N	Not reviewed for ADR validation. Not utilized
X.	Furnace Atomic Absorption QC	N	Not reviewed for ADR validation. ↓
XI.	ICP Serial Dilution	A	Not reviewed for ADR validation. (11K19)
XII.	Sample Result Verification	A	Not reviewed for ADR validation.
XIII.	Overall Assessment of Data	A	Not reviewed for ADR validation.
XIV.	Field Duplicates	—	(4,6)
XV	Field Blanks	—	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

~~1~~	~~MW-70-43B-137~~	11		21		31	
2	MW-70-PMW-11A-138**	12		22		32	
3	MW-70-PMW1B-139	13		23		33	
4	MW-70-PMW12A-140	14		24		34	
5	MW-70-PMW12B-142	15		25		35	
6	IR-70-FD-141	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26847K4

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a matrix spike analyzed for each matrix in this SDG?

Y N N/A Were matrix spike percent recoveries (%R) within the control limits of 75-125? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

Y N N/A Were all duplicate sample relative percent differences (RPD) ≤ 20% for water samples and ≤35% for soil samples?

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	MS/MSD ID	Matrix	Analyte	MS %Recovery	MSD %Recovery	RPD (Limits)	Associated Samples	Qualifications
	MW70-PMW-07A-130 (SDG: 11K133)		As	132	133		All	~~J/UJ/Acc~~ Jdet/A

Comments:

LDC #: 26847C6
SDG #: 11K146
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR/IV

Date: 12-22-11
Page: 1 of 1
Reviewer: CR
2nd Reviewer: [illegible]

METHOD: (Analyte) Alkalinity (Standard Method 2320B), Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Organic Acids (EPA Method 300.0M), TDS (Standard Method 2540C), TOC (Standard Method 5310B), Dissolved Hydrogen Sulfide (SM4500F)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/16/11
II.	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	~~SW~~	Not reviewed for ADR validation. Client specified
VI.	Duplicates	A	Not reviewed for ADR validation. DUP
VII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/P
VIII.	Sample result verification	A	Not reviewed for ADR validation.
IX.	Overall assessment of data	A	Not reviewed for ADR validation.
X.	Field duplicates	—	(4,6)
XI.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

water

1	MW-70-43B-137	11		21		31	
2	MW-70-PMW-11A-138**	12		22		32	
3	MW-70-PMW1B-139	13		23		33	
4	MW-70-PMW12A-140	14		24		34	
5	MW-70-PMW12B-142	15		25		35	
6	IR-70-FD-141	16		26		36	
7	MW-70-PMW12B-142DUP	17		27		37	
8	IR-70-FD-141DUP	18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26847C51
SDG #: 11K146
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR/IV

Date: 12/29/11
Page: 1 of 1
Reviewer: JVG
2nd Reviewer: C

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/16/11
IIa.	Initial calibration	A	% RSD ≤ 20%
IIb.	Calibration verification/ICV	A	CCV/ICV ≤ 20%
III.	Blanks	N	Not reviewed for ADR validation.
IVa.	Surrogate recovery		Not reviewed for ADR validation.
IVb.	Matrix spike/Matrix spike duplicates		Not reviewed for ADR validation.
IVc.	Laboratory control samples		Not reviewed for ADR validation.
V.	Target compound identification		Not reviewed for ADR validation.
VI.	Compound Quantitation and CRQLs		Not reviewed for ADR validation.
VII.	System Performance		Not reviewed for ADR validation.
VIII.	Overall assessment of data	SW	Not reviewed for ADR validation.
IX.	Field duplicates	N	D_1 = 5, 12 D_2 = 6, 13
X.	Field blanks		

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water

1	MW-70-43B-137	11	~~MW-70-PMW12B-142DL2~~	21	MBLK1W	31	
2	MW-70-PMW-11A-138**	12	IR-70-FD-141 D_1	22		32	
3	MW-70-PMW-11A-138DL**	13	IR-70-FD-141DL D_2	23		33	
4	MW-70-PMW1B-139	14		24		34	
5	MW-70-PMW12A-140 D_1	15		25		35	
6	MW-70-PMW12A-140DL D_2	16		26		36	
7	MW-70-PMW12B-142	17		27		37	
8	MW-70-PMW12B-142DL	18		28		38	
9	MW-70-PMW12B-142 DL2	19		29		39	
10	~~MW-70-PMW12B-142DL~~	20		30		40	

Notes:

LDC #: 26847C51

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

(Y) N N/A Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	> cal range	2, 5,	Do not use
	All except Methane	dil	3, 6, 9	
	Ethene, Methane	> cal range	7	
	All except Ethene	dil	8	

Comments: _____

Enclosure II

EPA Level IV Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 16, 2011
LDC Report Date:	December 30, 2011
Matrix:	Water
Parameters:	Volatiles
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K146

Sample Identification

MW-70-PMW-11A-138

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample IR-70-TB-136 was identified as a trip blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K146	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

The overall assessment of data was acceptable.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Volatiles - Data Qualification Summary - SDG 11K146

SDG	Sample	Compound	Flag	A or P	Reason
11K146	MW-70-PMW-11A-138	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs

NWS Seal Beach, IR Site 70
Volatiles - Laboratory Blank Data Qualification Summary - SDG 11K146

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Volatiles - Field Blank Data Qualification Summary - SDG 11K146

No Sample Data Qualified in this SDG

LDC #: 26847C1
SDG #: 11K146
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR IV

Date: 12/29/11
Page: 1 of 1
Reviewer: SVL
2nd Reviewer: A

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/16/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30 %
IV.	Continuing calibration/ICV	A	CCV/ICV ≤ 25 %
V.	Blanks	A	Not reviewed for ADR validation.
VI.	Surrogate spikes	A	Not reviewed for ADR validation.
VII.	Matrix spike/Matrix spike duplicates	N	Not reviewed for ADR validation. Client Spec
VIII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	Not reviewed for ADR validation.
XI.	Target compound identification	A	Not reviewed for ADR validation.
XII.	Compound quantitation/RLs	A	Not reviewed for ADR validation.
XIII.	Tentitatively identified compounds (TICs)	N	Not reviewed for ADR validation.
XIV.	System performance	A	Not reviewed for ADR validation.
XV.	Overall assessment of data	A	Not reviewed for ADR validation.
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	TB = 12

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water

1	~~MW-70-43B-137~~	11	~~IR-70-FD-141DL~~	21	MB LK IN	31	
2	~~MW-70-43B-137DL~~	12	~~IR-70-TB-136~~	22		32	
3	MW-70-PMW-11A-138**	13		23		33	
4	~~MW-70-PMW1B-139~~	14		24		34	
5	MW-70-PMW1B-139DL	15		25		35	
6	MW-70-PMW12A-140	16		26		36	
7	MW-70-PMW12A-140DL	17		27		37	
8	MW-70-PMW12B-142	18		28		38	
9	MW-70-PMW12B-142DL	19		29		39	
10	~~IR-70-FD-141~~	20		30		40	

LDC #: 26847C1

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer: A

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of > 0.990?			✓	
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) > 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?		✓		
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.		✓		
Was a MS/MSD analyzed every 20 samples of each matrix?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 26847C1

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?		✓		
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

LDC #: 26847C1

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of Compound
C_x = Concentration of compound,
S= Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (IS)	Reported RRF (RRF 10 std)	Recalculated RRF (RRF 10 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	8/16/2011	cis-1,2-DCE (IS1)	0.418	0.418	0.389	0.389	4.16	4.14
	TO03		TCE (IS2)	0.469	0.469	0.445	0.445	5.11	5.12
			1,1,2,2-TCA (IS3)	0.787	0.787	0.753	0.753	5.72	5.71

Cis/Cx	Ax	Ais
10/10	778768	1861981
10/10	808735	1722743
10/10	475240	603523

ICAL 1

Conc	cis-1,2-DCE	Trichloroethene	1,1,2,2-TCA
0.3	0.374	0.439	0.772
0.5	0.367	0.414	0.704
1	0.389	0.425	0.722
2	0.395	0.434	0.721
5	0.396	0.440	0.745
10	0.418	0.469	0.787
20	0.383	0.434	0.727
30	0.409	0.477	0.787
50	0.369	0.426	0.711
100	0.382	0.452	0.765
150	0.398	0.484	0.847
X =	0.389	0.445	0.753
S =	0.0161	0.0228	0.0431

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC # 26847C1

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = (Ax)(Cis)/(Ais)(Cx)

Where:
ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound,
Cx = Concentration of compound,
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (IS)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported % D	Recalculated %D
1	RKB262	11/18/2011	cis-1,2-DCE (IS1)	0.389	0.373	0.373	4.1	4.1
	TO03		Trichloroethene (IS2)	0.445	0.402	0.402	9.7	9.6
			1,1,2,2-TCA (IS3)	0.753	0.753	0.753	0.0	0.0

CCV1

Cis/Cx	Compound	Ax	Ais
10/10	cis-1,2-DCE (IS1)	812751	2180037
10/10	Trichloroethene (IS2)	841170	2089922
10/10	1,1,2,2-TCA (IS3)	563561	747939

LDC #: 26847C1

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: JVG
2nd reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:
% Recovery: SF/SS * 100 Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
1,2-Dichloroethane-d4	10	9.040	90.4	90.4	0
Bromofluorobenzene	10	9.250	92.5	92.5	0
Toluene-d8	10	9.200	92.0	92	0

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					

LDC #: 26847C1

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = I LCS - LCSD I * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: LCS/LCSD1W

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
1,1-Dichloroethene	10	10	9.34	9.18	93	93	92	92	2	1.7
Benzene	10	10	9.70	9.85	97	97	98	99	2	1.5
Chlorobenzene	10	10	10.2	10.3	102	102	103	103	1	1.0
Toluene	10	10	9.50	9.67	95	95	97	97	2	1.8
Trichloroethene	10	10	9.83	9.99	98	98	100	100	2	1.6

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26847C1

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: JVG
2nd reviewer: C

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

V_o = Volume or weight of sample pruged in milliliters (ml) or grams (g).

Df = Dilution factor.

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. # 3, ~~Trichloroethene~~ cis-1,2-DCE

Conc. = $\frac{(1306488)(10)(\quad)}{(2388041)(0.789)(\quad)(\quad)}$

= 14.06 ug/L

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 16, 2011
LDC Report Date:	December 23, 2011
Matrix:	Water
Parameters:	Dissolved Metals
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K146

Sample Identification

MW-70-PMW-11A-138

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Dissolved Metals. The metals analyzed were Arsenic, Iron, and Manganese.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No dissolved metal contaminants were found in the initial, continuing and preparation blanks.

No field blanks were identified in this SDG.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
MW-70-PMV-07A-130 (All samples in SDG 11K146)	Arsenic	132 (75-125)	133 (75-125)	-	J (all detects)	A

VII. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

XII. Sample Result Verification

All sample result verifications were acceptable.

All metals reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 11K146	All analytes reported below the RL and above the MDL.	J (all detects)	A

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Dissolved Metals - Data Qualification Summary - SDG 11K146

SDG	Sample	Analyte	Flag	A or P	Reason
11K146	MW-70-PMW-11A-138	Arsenic	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)
11K146	MW-70-PMW-11A-138	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification

NWS Seal Beach, IR Site 70
Dissolved Metals - Laboratory Blank Data Qualification Summary - SDG 11K146

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Dissolved Metals - Field Blank Data Qualification Summary - SDG 11K146

No Sample Data Qualified in this SDG

LDC #: 26847C4

SDG #: 11K146

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

Date: 12-22-11

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/16/11
II.	ICP/MS Tune	N	Not utilized
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	Not reviewed for ADR validation.
VI.	Matrix Spike Analysis	~~N~~SW	Not reviewed for ADR validation. MS/D ~~Client Specified~~ (11K133)
VII.	Duplicate Sample Analysis	N	Not reviewed for ADR validation. ↓
VIII.	Laboratory Control Samples (LCS)	A	Not reviewed for ADR validation. LCS/D
IX.	Internal Standard (ICP-MS)	N	Not reviewed for ADR validation. Not utilized
X.	Furnace Atomic Absorption QC	N	Not reviewed for ADR validation. ↓
XI.	ICP Serial Dilution	A	Not reviewed for ADR validation. (11K19)
XII.	Sample Result Verification	A	Not reviewed for ADR validation.
XIII.	Overall Assessment of Data	A	Not reviewed for ADR validation.
XIV.	Field Duplicates	N	~~(4,6)~~ 02
XV	Field Blanks		

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

water

~~1~~	~~MW-70-43B-137~~	11		21		31	
2	MW-70-PMW-11A-138**	12		22		32	
~~3~~	~~MW-70-PMW1B-139~~	13		23		33	
4	MW-70-PMW12A-140	14		24		34	
5	MW-70-PMW12B-142	15		25		35	
6	~~IR-70-FD-141~~	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26847C4

VALIDATION FINDINGS CHECKLIST

Reviewer: GR
2nd Reviewer: h

Method: Metals (EPA SW 846 Method 6010B/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. ICP/MS Tune				
Were all isotopes in the tuning solution mass resolution within 0.1 amu?			✓	
Were %RSD of isotopes in the tuning solution ≤5%?			✓	
III. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury) QC limits?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
IV. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
V. ICP Interference Check Sample				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.		✓		
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were ≤ 5X the RL.	✓			
VII. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			

LDC #: 26847C4

VALIDATION FINDINGS CHECKLIST

Reviewer: CR
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
VIII. Furnace Atomic Absorption QC				
If MSA was performed, was the correlation coefficients > 0.995?			✓	
Do all applicable analysies have duplicate injections? (Level IV only)			✓	
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%? (Level IV only)			✓	
Were analytical spike recoveries within the 85-115% QC limits?			✓	
IX. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the MDL (ICP)/>100X the MDL(ICP/MS)?	✓			
Were all percent differences (%Ds) < 10%?	✓			
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.		✓		
X. Internal Standards (EPA SW 846 Method 6020/EPA 200.8)				
Were all the percent recoveries (%R) within the 30-120% (6020)/60-125% (200.8) of the intensity of the internal standard in the associated initial calibration?			✓	
If the %Rs were outside the criteria, was a reanalysis performed?			✓	
XI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
XII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 26847C4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: CR
2nd reviewer: [illegible]

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
2-6		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___

Comments: Mercury by CVAA if performed

LDC #: 26847C4

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a matrix spike analyzed for each matrix in this SDG?

Y N N/A Were matrix spike percent recoveries (%R) within the control limits of 75-125? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

Y N N/A Were all duplicate sample relative percent differences (RPD) ≤ 20% for water samples and ≤35% for soil samples?

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	MS/MSD ID	Matrix	Analyte	MS %Recovery	MSD %Recovery	RPD (Limits)	Associated Samples	Qualifications
	MW-70-PMV-07A-130 (SDG: 11K133)		As	132	133		All	~~J/UJ/Acc~~ Jdet/A

LDC #: 26847C4

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
ICV	ICP (Initial calibration)	Fe	25.052	25	100	100	Y
	ICP/MS (Initial calibration)						
	CVAA (Initial calibration)						
CCV8	ICP (Continuing calibration)	Mn	2.4062	2.5	96	96	Y
	ICP/MS (Continuing calibration)						
	CVAA (Continuing calibration)						
	GFAA (Initial calibration)						
	GFAA (Continuing calibation)						

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26847C6

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: OR
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$

Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$

Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$

Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
ICSAB	ICP interference check	As	1.0606	1	106	106	Y
LCS	Laboratory control sample	Fe	5.5	5	104	104	Y
MW-20-PMW07A-130	Matrix spike	Fe	(SSR-SR) 4.731	5	95	95	✓
↓	Duplicate	Mn	3.52	3.56	1	1	✓
MW20-PMW09-124	ICP serial dilution	Mn	0.0988	0.110	NA	"	Y

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26847C4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: CR
2nd reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for Fe were recalculated and verified using the following equation:

Concentration = (RD)(FV)(Dil) / (In. Vol.)

Recalculation: Raw ~~Data~~ = 4.4186 mg/L

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

#	Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
	2	Fe	4.42	4.42	Y
		Mn	4.30	4.30	✓

Note:

RECALC.4SW

LDC Report# 26847C51

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 16, 2011
LDC Report Date:	December 30, 2011
Matrix:	Water
Parameters:	Methane, Ethane, & Ethene
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K146

Sample Identification

MW-70-PMW-11A-138
MW-70-PMW-11A-138DL

Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Method RSK-175 for Methane, Ethane, and Ethene.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No methane, ethane, or ethene was found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were not required by the method.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
MW-70-PMW-11A-138	Methane	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K146	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

The overall assessment of data was acceptable. In the case where more than one result was reported for an individual sample, the least technically acceptable results were rejected as follows:

Sample	Compound	Flag	A or P
MW-70-PMW-11A-138	Methane	R	A
MW-70-PMW-11A-138DL	Ethane Ethene	R R	A

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Methane, Ethane, & Ethene - Data Qualification Summary - SDG 11K146

SDG	Sample	Compound	Flag	A or P	Reason
11K146	MW-70-PMW-11A-138	Methane	J (all detects)	A	Compound quantitation and RLs (exceeded range)
11K146	MW-70-PMW-11A-138 MW-70-PMW-11A-138DL	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs
11K146	MW-70-PMW-11A-138	Methane	R	A	Overall assessment of data
11K146	MW-70-PMW-11A-138DL	Ethane Ethene	R R	A	Overall assessment of data

NWS Seal Beach, IR Site 70
Methane, Ethane, & Ethene - Laboratory Blank Data Qualification Summary - SDG 11K146

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Methane, Ethane, & Ethene - Field Blank Data Qualification Summary - SDG 11K146

No Sample Data Qualified in this SDG

LDC #: 26847C51 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/29/11
SDG #: 11K146 ADR/IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: JYR
2nd Reviewer: C

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/16/11
IIa.	Initial calibration	A	% RSD ≤ 20 %
IIb.	Calibration verification/ICV	A	CW/ICW ≤ 20 %
III.	Blanks	A	~~Not reviewed for ADR validation~~.
IVa.	Surrogate recovery	N	Not reviewed for ADR validation.
IVb.	Matrix spike/Matrix spike duplicates	N	Not reviewed for ADR validation.
IVc.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/D
V.	Target compound identification	A	Not reviewed for ADR validation.
VI.	Compound Quantitation and CRQLs	SW	Not reviewed for ADR validation.
VII.	System Performance	N	Not reviewed for ADR validation.
VIII.	Overall assessment of data	SW	~~Not reviewed for ADR validation~~.
IX.	Field duplicates	N	
X.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water

1	~~MW-70-43B-137~~	11	~~MW-70-PMW12B-142DL2~~	21	MB LK1W	31	
2	MW-70-PMW-11A-138**	12	IR-70-FD-141 D1	22		32	
3	MW-70-PMW-11A-138DL**	13	~~IR-70-FD-141DL~~ D2	23		33	
4	~~MW-70-PMW1B-139~~	14		24		34	
5	MW-70-PMW12A-140 D1	15		25		35	
6	MW-70-PMW12A-140DL D2	16		26		36	
7	MW-70-PMW12B-142	17		27		37	
8	MW-70-PMW12B-142DL	18		28		38	
9	MW-70-PMW12B-142 DL2	19		29		39	
10	~~MW-70-PMW12B-142DL~~	20		30		40	

Notes:

LDC #: 26847C51

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer: C

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?		✓		
Did the initial calibration meet the curve fit acceptance criteria?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ✓ %D or ____ %R	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?			✓	
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.		✓		
Was a MS/MSD analyzed every 20 samples of each matrix?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				

LDC #: 26847 (5)

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26847 C51

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer: JG
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	> cal range	2	J dets /A

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26847 C 51

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: VG
2nd Reviewer: CK

METHOD: ✓ **GC** __ **HPLC**

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

(Y) N N/A Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	> cal range	2	R/A
	All except Methane	dil	3	↓

Comments: _____

LDC #: 26847 C51

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC _____

The calibration factors (CF), average CF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

Where:
A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported CF (13.56 std)	Recalculated CF (13.56 std)	Reported Average CF (Initial)	Recalculated Average CF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	11/1/2011	Methane	29307.0	29307.0	30507.0	30507.0	5.6	5.6
	GCT010								

Conc	Methane	Area
0.68	31626	
3.40	33510	
8.53	29954	
13.56	29307	397403.0
25.50	29338	
34.00	29307	
X =	30507.0	
S =	1721.775	

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC # 26697C51

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration percent difference (%D) values were recalculated for the compounds identified below using the following calculation:

Percent difference (%D) = 100 * (N - C)/N

Where:
N = Initial Calibration Factor or Nominal Amount
C = Calibration Factor from Continuing Calibration Standard or Calculated Amount

#	Standard ID	Calibration Date	Compound	CCV Conc	Reported Conc	Recalculated Conc	Reported % D	Recalculated %D
1	FK29002A	11/29/2011	Methane	13.56	13.93	13.93	3	2.7

	Compound	Area	CF
CCV1	Methane	424993	30507.0
CCV2	Methane		

LDC #: 26847C51

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: JVG

2nd Reviewer: [illegible]

METHOD: X GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

Where SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: LCS/LCSD1W

Compound	Spike Added (ug/L)		Spike Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)	13.6	13.6	12.8	12.4	94	94	91	91	3	3
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-TNT (8330)										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26847 C5

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound In the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. # 2 Compound Name Methane

Concentration = (254464)(200) / (30507.1) = 1668.2

≈ 1700 ug/L

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments:

SAMPCALCnew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 16, 2011
LDC Report Date:	December 23, 2011
Matrix:	Water
Parameters:	Wet Chemistry
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K146

Sample Identification

MW-70-PMW-11A-138

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Standard Method 2320B for Alkalinity, EPA Method 300.0 for Chloride, Nitrate as Nitrogen, Nitrite as Nitrogen, and Sulfate, EPA Method 300.0M for Organic Acids, Standard Method 2540C for Total Dissolved Solids, Standard Method 5310B for Total Organic Carbon, and Standard Method 4500F for Dissolved Hydrogen Sulfide.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Continuing Calibration

Continuing calibration frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

No field blanks were identified in this SDG.

V. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VI. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Sample Result Verification

All sample result verifications were acceptable.

All metals reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 11K146	All analytes reported below the RL and above the MDL.	J (all detects)	A

IX. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

X. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Wet Chemistry - Data Qualification Summary - SDG 11K146

SDG	Sample	Analyte	Flag	A or P	Reason
11K146	MW-70-PMW-11A-138	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification

NWS Seal Beach, IR Site 70
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 11K146

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Wet Chemistry - Field Blank Data Qualification Summary - SDG 11K146

No Sample Data Qualified in this SDG

LDC #: 26847C6

SDG #: 11K146

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

Date: 12-22-11

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: (Analyte) Alkalinity (Standard Method 2320B), Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Organic Acids (EPA Method 300.0M), TDS (Standard Method 2540C), TOC (Standard Method 5310B), Dissolved Hydrogen Sulfide (SM4500F)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/16/11
II.	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	~~SW~~	Not reviewed for ADR validation. Client specified
VI.	Duplicates	A	Not reviewed for ADR validation. DUP
VII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/P
VIII.	Sample result verification	A	Not reviewed for ADR validation.
IX.	Overall assessment of data	A	Not reviewed for ADR validation.
X.	Field duplicates	N	
XI.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

water

~~1~~	~~MW-70-43B-137~~	11		21		31	
2	MW-70-PMW-11A-138**	12		22		32	
~~3~~	~~MW-70-PMW1B-139~~	13		23		33	
4	MW-70-PMW12A-140	14		24		34	
5	MW-70-PMW12B-142	15		25		35	
6	IR-70-FD-141	16		26		36	
7	MW-70-PMW12B-142DUP	17		27		37	
8	~~IR-70-FD-141DUP~~	18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26847G6

VALIDATION FINDINGS CHECKLIST

Reviewer: CR
2nd Reviewer: [illegible]

Method: Inorganics (EPA Method See cover)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?	✓			
Were titrant checks performed as required? (Level IV only)	✓			
Were balance checks performed as required? (Level IV only)	✓			
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.	~~✓~~	~~✓~~	✓	
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL(≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were ≤ 5X the CRDL.	✓			
V. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	✓			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?				
Were the performance evaluation (PE) samples within the acceptance limits?				

LDC #: 2684766

VALIDATION FINDINGS CHECKLIST

Reviewer: OR
2nd Reviewer: W

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
X. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: CR
2nd reviewer: W

All circled methods are applicable to each sample.

Sample ID	Parameter
2-6	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 HS
1-6	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 Organic Acids
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
8-7	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
8	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 HS
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4

Comments:

LDC #: 26847C6

Validation Findings Worksheet
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: OR
2nd Reviewer: [illegible]

Method: Inorganics, Method see cover

The correlation coefficient (r) for the calibration of NO_2-N was recalculated. Calibration date: ~~AUG~~ 9/30/11

An initial or continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found X 100 / True

Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution
True = concentration of each analyte in the ICV or CCV source

Type of analysis	Analyte	Standard	Conc. (mg/l)	Area	Recalculated r or r^2	Reported r or r^2	Acceptable (Y/N)
Initial calibration	NO_2-N	s1	0.05	1.561	*0.999852*	0.999850	Y
		s2	0.1	3.285			
		s3	0.2	7.062			
		s4	0.5	18.94			
		s5	1	39.99			
		s6	2	82.54			
		s7	5	208.1			
		s8	10	402.8			
Calibration verification	SO_4	ICV	0.991	1	99.9	99.01	
Calibration verification	Acetate	CCV	25.19	25	101	101	
Calibration verification	TOC	↓	24.16	↓	97	—	

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 28842C6

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: OR
2nd Reviewer: [illegible]

METHOD: Inorganics, Method see cover

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
LCS	Laboratory control sample	Boron	18.8	20	94	94	Y
N	Matrix spike sample		(SSR-SR)				
8	Duplicate sample	TDS	2640	2630	0	0	Y

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

TOTCLC.6

LDC #: 26847E6

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: OR
2nd reviewer: [illegible]

METHOD: Inorganics, Method See cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments?
Y N N/A Are all detection limits below the CRQL?

Compound (analyte) results for TOC reported with a positive detect were recalculated and verified using the following equation:

Concentration = $\frac{\text{Area}}{\text{Slope}}$

Recalculation: $\frac{5,329}{2.28} = 2.40 \text{ mg/L}$

#	Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
	2	Cl	13800	13800	Y
		SO4	2100	2100	Y
		Alk	215	215	
		TDS	25200	25200	
		TOC	2.40	2.40	

Note:

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
17-Nov-2011	MW-70-MNA15-148	K173-01	N	5030B	8260B	3
17-Nov-2011	MW-70-MNA15-148	K173-01T	N	5030B	8260B	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11K173 **Laboratory: EMXT**

EDD Filename: 11K173 **eQAPP Name: SealBeach_IRSite70**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **MW-70-MNA15-148** ***Collected:*** **11/17/2011 1:04:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.54	J	0.20	MDL	1.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K173 **Laboratory: EMXT**

EDD Filename: 11K173 **eQAPP Name: SealBeach_IRSite70**

Reason Code Legend

Reason Code	*Description*
Cb	Calibration Blank Contamination
Ccv	Continuing Calibration Verification Percent Difference Lower Estimation
Ccv	Continuing Calibration Verification Percent Difference Lower Rejection
Ccv	Continuing Calibration Verification Percent Difference Upper Estimation
Ccv	Continuing Calibration Verification Percent Difference Upper Rejection
Ccv	Continuing Calibration Verification Percent Recovery Lower Estimation
Ccv	Continuing Calibration Verification Percent Recovery Lower Rejection
Ccv	Continuing Calibration Verification Percent Recovery Upper Estimation
Ccv	Continuing Calibration Verification Percent Recovery Upper Rejection
CcvCC	Continuing Calibration Verification Correlation Coefficient
CcvRrf	Continuing Calibration Verification Relative Response Factor
ContTune	Continuing Tune
Dup=0	Duplicate Sample Count = 0
Dup>1	Duplicate Sample Count > 1
Eb	Equipment Blank Contamination
EtoA	Extraction to Analysis Estimation
EtoA	Extraction to Analysis Rejection
Fb	Field Blank Contamination
Fd	Field Duplicate Precision
Ft	Field Triplicate Precision
IcCC	Initial Calibration Correlation Coefficient
IcRrf	Initial Calibration Relative Response Factor
IcRsd	Initial Calibration Percent Relative Standard Deviation
Icv	Initial Calibration Verification Percent Difference Lower Estimation
Icv	Initial Calibration Verification Percent Difference Lower Rejection
Icv	Initial Calibration Verification Percent Difference Upper Estimation
Icv	Initial Calibration Verification Percent Difference Upper Rejection
Icv	Initial Calibration Verification Percent Recovery Lower Estimation

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K173 **Laboratory: EMXT**

EDD Filename: 11K173 **eQAPP Name: SealBeach_IRSite70**

Icv	Initial Calibration Verification Percent Recovery Lower Rejection
Icv	Initial Calibration Verification Percent Recovery Upper Estimation
Icv	Initial Calibration Verification Percent Recovery Upper Rejection
IcvCC	Initial Calibration Verification Correlation Coefficient
IcvRrf	Initial Calibration Verification Relative Response Factor
IllogicalFraction	Illogical Fraction
InitTune	Initial Tune
Is	Internal Standard Estimation
Is	Internal Standard Rejection
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Lower Rejection
Lcs	Laboratory Control Spike Upper Estimation
Lcs	Laboratory Control Spike Upper Rejection
Lcs=0	Laboratory Control Sample Count = 0
Lcs>1	Laboratory Control Sample Count > 1
Ld	Laboratory Duplicate Precision
Lt	Laboratory Triplicate Precision
Mb	Method Blank Contamination
Mb=0	Method Blank Sample Count = 0
Mb>1	Method Blank Sample Count > 1
Moist	Percent Moisture
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Lower Rejection
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
Ms	Matrix Spike Upper Rejection
Ms=0	Matrix Spike Sample Count = 0
Ms>1	Matrix Spike Sample Count > 1
PEM	Performance Evaluation Mixture

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K173 **Laboratory: EMXT**

EDD Filename: 11K173 **eQAPP Name: SealBeach_IRSite70**

Preservation	Preservation
ProfJudg	Professional Judgment
REM	Resolution Check Mixture
RI	Reporting Limit
RI	Reporting Limit > Project Maximum Contamination Limit
RI	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation
StoA	Sampling to Analysis Rejection
StoE	Sampling to Extraction Estimation
StoE	Sampling to Extraction Rejection
StoL	Sampling to Leaching Estimation
StoL	Sampling to Leaching Rejection
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Lower Rejection
Surr	Surrogate/Tracer Recovery Upper Estimation
Surr	Surrogate/Tracer Recovery Upper Rejection
Tb	Trip Blank Contamination
TempEst	Temperature Estimation
TempRej	Temperature Rejection

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11K173

Reporting Limit Outliers

Lab Reporting Batch ID: 11K173 **Laboratory: EMXT**

EDD Filename: 11K173 **eQAPP Name: SealBeach_IRSite70**

Method: **8260B**

Matrix: **AQ**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
MW-70-MNA15-148	1,1-DICHLOROETHANE TRICHLOROETHENE	J J	0.54 14	1.0 250	PQL PQL	UG/L UG/L	J (all detects)

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

LDC #: 26847D1

SDG #: 11K173

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/23/11

Page: 1 of 1

Reviewer: C

2nd Reviewer: V

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/17/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	N	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	N	
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A ~~N~~	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/L~~OQ/LOD~~s	SW	
XIII.	Tentitatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	SW	
XVI.	Field duplicates	N	
XVII.	Field blanks	↓	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	MW-70-MNA15-148 W	11		21		31	
2	MW-70-MNA15-148DL ↓	12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 26847D1

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and CRQLs

Reviewer: C
2nd Reviewer: M

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?

Y N N/A Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	Compound	Finding	Associated Samples	Qualifications
		QQQ	> calib range	1	J+ det/A

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26847D1
SDG #: -

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Date	Sample ID	Finding	Associated Samples	Qualifications
		1	QQQ > calib range		R/A
		2	All Hapt QQQ - diluted		+

Comments:

OVR.1S

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
17-Nov-2011	IR-70-TB-143	K174-08	TB	5030B	8260B	3
17-Nov-2011	IW-70-SHB217-144	K174-01	N	3010A	6010B	3
17-Nov-2011	IW-70-SHB217-144	K174-01	N	5030B	8260B	3
17-Nov-2011	IW-70-SHB217-144	K174-01	N	GEN PREP	2320B	3
17-Nov-2011	IW-70-SHB217-144	K174-01	N	GEN PREP	2540C	3
17-Nov-2011	IW-70-SHB217-144	K174-01	N	GEN PREP	300.0	3
17-Nov-2011	IW-70-SHB217-144	K174-01	N	GEN PREP	300.0M	3
17-Nov-2011	IW-70-SHB217-144	K174-01	N	GEN PREP	4500F	3
17-Nov-2011	IW-70-SHB217-144	K174-01	N	GEN PREP	5310B	3
17-Nov-2011	IW-70-SHB217-144	K174-01	N	GEN PREP	RSK175	3
17-Nov-2011	IW-70-SHB217-144	K174-01T	N	5030B	8260B	3
17-Nov-2011	IW-70-SHB217-144	K174-01T	N	GEN PREP	RSK175	3
17-Nov-2011	IR-70-FD-145	K174-07	FD	3010A	6010B	3
17-Nov-2011	IR-70-FD-145	K174-07	FD	5030B	8260B	3
17-Nov-2011	IR-70-FD-145	K174-07	FD	GEN PREP	2320B	3
17-Nov-2011	IR-70-FD-145	K174-07	FD	GEN PREP	2540C	3
17-Nov-2011	IR-70-FD-145	K174-07	FD	GEN PREP	300.0	3
17-Nov-2011	IR-70-FD-145	K174-07	FD	GEN PREP	300.0M	3
17-Nov-2011	IR-70-FD-145	K174-07	FD	GEN PREP	4500F	3
17-Nov-2011	IR-70-FD-145	K174-07	FD	GEN PREP	5310B	3
17-Nov-2011	IR-70-FD-145	K174-07	FD	GEN PREP	RSK175	3
17-Nov-2011	IR-70-FD-145	K174-07T	FD	5030B	8260B	3
17-Nov-2011	IR-70-FD-145	K174-07T	FD	GEN PREP	RSK175	3
17-Nov-2011	MW-70-MNA12-146	K174-02	N	5030B	8260B	3
17-Nov-2011	MW-70-MNA12-146	K174-02	N	GEN PREP	300.0M	3
17-Nov-2011	MW-70-MNA12-146	K174-02	N	GEN PREP	RSK175	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
17-Nov-2011	MW-70-MNA12-146	K174-02T	N	5030B	8260B	3
17-Nov-2011	MW-70-MNA12-146	K174-02T	N	GEN PREP	RSK175	3
17-Nov-2011	IR-70-FD-147	K174-06	FD	5030B	8260B	3
17-Nov-2011	IR-70-FD-147	K174-06	FD	GEN PREP	300.0M	3
17-Nov-2011	IR-70-FD-147	K174-06	FD	GEN PREP	RSK175	3
17-Nov-2011	IR-70-FD-147	K174-06T	FD	5030B	8260B	3
17-Nov-2011	IR-70-FD-147	K174-06T	FD	GEN PREP	RSK175	3
17-Nov-2011	MW-70-MNA16-149	K174-03	N	5030B	8260B	3
17-Nov-2011	MW-70-MNA16-149	K174-03	N	GEN PREP	300.0M	3
17-Nov-2011	MW-70-MNA16-149	K174-03	N	GEN PREP	RSK175	3
17-Nov-2011	MW-70-MNA16-149	K174-03T	N	5030B	8260B	3
17-Nov-2011	MW-70-MNA16-149	K174-03T	N	GEN PREP	RSK175	3
17-Nov-2011	IR-70-FD-150	K174-05	FD	5030B	8260B	3
17-Nov-2011	IR-70-FD-150	K174-05	FD	GEN PREP	300.0M	3
17-Nov-2011	IR-70-FD-150	K174-05	FD	GEN PREP	RSK175	3
17-Nov-2011	IR-70-FD-150	K174-05T	FD	5030B	8260B	3
17-Nov-2011	IR-70-FD-150	K174-05T	FD	GEN PREP	RSK175	3
17-Nov-2011	MW-70-MNA14-151	K174-04	N	5030B	8260B	3
17-Nov-2011	MW-70-MNA14-151	K174-04	N	GEN PREP	300.0M	3
17-Nov-2011	MW-70-MNA14-151	K174-04	N	GEN PREP	RSK175	3
17-Nov-2011	MW-70-MNA14-151	K174-04T	N	5030B	8260B	3
17-Nov-2011	MW-70-MNA14-151	K174-04T	N	GEN PREP	RSK175	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11K174 **Laboratory: EMXT**

EDD Filename: 11K174 **eQAPP Name: SealBeach_IRSite70**

Method Category: SVOA
Method: RSK175 **Matrix:** AQ

Sample ID: IR-70-FD-145 *Collected:* 11/17/2011 10:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHENE	1.3	J	0.60	MDL	2.0	PQL	UG/L	J	RI

Sample ID: IR-70-FD-147 *Collected:* 11/17/2011 11:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHENE	1.6	J	0.60	MDL	2.0	PQL	UG/L	J	RI

Sample ID: IW-70-SHB217-144 *Collected:* 11/17/2011 9:58:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHENE	1.3	J	0.60	MDL	2.0	PQL	UG/L	J	RI

Sample ID: MW-70-MNA12-146 *Collected:* 11/17/2011 11:38:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHENE	1.4	J	0.60	MDL	2.0	PQL	UG/L	J	RI

Method Category: VOA
Method: 8260B **Matrix:** AQ

Sample ID: IR-70-FD-145 *Collected:* 11/17/2011 10:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.43	J	0.20	MDL	1.0	PQL	UG/L	J	RI

Sample ID: IR-70-FD-147 *Collected:* 11/17/2011 11:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.44	J	0.20	MDL	1.0	PQL	UG/L	J	RI

Sample ID: IR-70-FD-150 *Collected:* 11/17/2011 3:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.37	J	0.20	MDL	1.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K174 **Laboratory: EMXT**

EDD Filename: 11K174 **eQAPP Name: SealBeach_IRSite70**

Method Category: VOA

Method: 8260B *Matrix:* AQ

Sample ID: IW-70-SHB217-144 *Collected:* 11/17/2011 9:58:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.44	J	0.20	MDL	1.0	PQL	UG/L	J	RI

Sample ID: MW-70-MNA12-146 *Collected:* 11/17/2011 11:38:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.43	J	0.20	MDL	1.0	PQL	UG/L	J	RI

Sample ID: MW-70-MNA14-151 *Collected:* 11/17/2011 3:39:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CARBON DISULFIDE	0.20	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRANS-1,2-DICHLOROETHENE	0.83	J	0.20	MDL	1.0	PQL	UG/L	J	RI

Sample ID: MW-70-MNA16-149 *Collected:* 11/17/2011 2:38:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.38	J	0.20	MDL	1.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K174 **Laboratory: EMXT**

EDD Filename: 11K174 **eQAPP Name: SealBeach_IRSite70**

Reason Code Legend

Reason Code	*Description*
Cb	Calibration Blank Contamination
Ccv	Continuing Calibration Verification Percent Difference Lower Estimation
Ccv	Continuing Calibration Verification Percent Difference Lower Rejection
Ccv	Continuing Calibration Verification Percent Difference Upper Estimation
Ccv	Continuing Calibration Verification Percent Difference Upper Rejection
Ccv	Continuing Calibration Verification Percent Recovery Lower Estimation
Ccv	Continuing Calibration Verification Percent Recovery Lower Rejection
Ccv	Continuing Calibration Verification Percent Recovery Upper Estimation
Ccv	Continuing Calibration Verification Percent Recovery Upper Rejection
CcvCC	Continuing Calibration Verification Correlation Coefficient
CcvRrf	Continuing Calibration Verification Relative Response Factor
ContTune	Continuing Tune
Dup=0	Duplicate Sample Count = 0
Dup>1	Duplicate Sample Count > 1
Eb	Equipment Blank Contamination
EtoA	Extraction to Analysis Estimation
EtoA	Extraction to Analysis Rejection
Fb	Field Blank Contamination
Fd	Field Duplicate Precision
Ft	Field Triplicate Precision
IcCC	Initial Calibration Correlation Coefficient
IcRrf	Initial Calibration Relative Response Factor
IcRsd	Initial Calibration Percent Relative Standard Deviation
Icv	Initial Calibration Verification Percent Difference Lower Estimation
Icv	Initial Calibration Verification Percent Difference Lower Rejection
Icv	Initial Calibration Verification Percent Difference Upper Estimation
Icv	Initial Calibration Verification Percent Difference Upper Rejection
Icv	Initial Calibration Verification Percent Recovery Lower Estimation
Icv	Initial Calibration Verification Percent Recovery Lower Rejection
Icv	Initial Calibration Verification Percent Recovery Upper Estimation

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K174 **Laboratory: EMXT**

EDD Filename: 11K174 **eQAPP Name: SealBeach_IRSite70**

Icv	Initial Calibration Verification Percent Recovery Upper Rejection
IcvCC	Initial Calibration Verification Correlation Coefficient
IcvRrf	Initial Calibration Verification Relative Response Factor
IllogicalFraction	Illogical Fraction
InitTune	Initial Tune
Is	Internal Standard Estimation
Is	Internal Standard Rejection
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Lower Rejection
Lcs	Laboratory Control Spike Upper Estimation
Lcs	Laboratory Control Spike Upper Rejection
Lcs=0	Laboratory Control Sample Count = 0
Lcs>1	Laboratory Control Sample Count > 1
Ld	Laboratory Duplicate Precision
Lt	Laboratory Triplicate Precision
Mb	Method Blank Contamination
Mb=0	Method Blank Sample Count = 0
Mb>1	Method Blank Sample Count > 1
Moist	Percent Moisture
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Lower Rejection
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
Ms	Matrix Spike Upper Rejection
Ms=0	Matrix Spike Sample Count = 0
Ms>1	Matrix Spike Sample Count > 1
PEM	Performance Evaluation Mixture
Preservation	Preservation
ProfJudg	Professional Judgment
REM	Resolution Check Mixture
RI	Reporting Limit

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K174 **Laboratory: EMXT**

EDD Filename: 11K174 **eQAPP Name: SealBeach_IRSite70**

RI	Reporting Limit > Project Maximum Contamination Limit
RI	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation
StoA	Sampling to Analysis Rejection
StoE	Sampling to Extraction Estimation
StoE	Sampling to Extraction Rejection
StoL	Sampling to Leaching Estimation
StoL	Sampling to Leaching Rejection
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Lower Rejection
Surr	Surrogate/Tracer Recovery Upper Estimation
Surr	Surrogate/Tracer Recovery Upper Rejection
Tb	Trip Blank Contamination
TempEst	Temperature Estimation
TempRej	Temperature Rejection

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11K174

Reporting Limit Outliers

Lab Reporting Batch ID: 11K174 **Laboratory: EMXT**

EDD Filename: 11K174 **eQAPP Name: SealBeach_IRSite70**

Method: 8260B
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-FD-145	1,1-DICHLOROETHANE TRANS-1,2-DICHLOROETHENE	J J	0.43 40	1.0 50	PQL PQL	UG/L UG/L	J (all detects)
IR-70-FD-147	1,1-DICHLOROETHANE TRANS-1,2-DICHLOROETHENE TRICHLOROETHENE	J J J	0.44 23 12	1.0 25 120	PQL PQL PQL	UG/L UG/L UG/L	J (all detects)
IR-70-FD-150	1,1-DICHLOROETHANE TRICHLOROETHENE	J J	0.37 13	1.0 120	PQL PQL	UG/L UG/L	J (all detects)
IW-70-SHB217-144	1,1-DICHLOROETHANE TRANS-1,2-DICHLOROETHENE	J J	0.44 39	1.0 50	PQL PQL	UG/L UG/L	J (all detects)
MW-70-MNA12-146	1,1-DICHLOROETHANE TRANS-1,2-DICHLOROETHENE TRICHLOROETHENE	J J J	0.43 25 12	1.0 50 250	PQL PQL PQL	UG/L UG/L UG/L	J (all detects)
MW-70-MNA14-151	CARBON DISULFIDE TRANS-1,2-DICHLOROETHENE TRICHLOROETHENE	J J J	0.20 0.83 4.4	1.0 1.0 25	PQL PQL PQL	UG/L UG/L UG/L	J (all detects)
MW-70-MNA16-149	1,1-DICHLOROETHANE TRICHLOROETHENE	J J	0.38 14	1.0 250	PQL PQL	UG/L UG/L	J (all detects)

Method: RSK175
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-FD-145	ETHENE	J	1.3	2.0	PQL	UG/L	J (all detects)
IR-70-FD-147	ETHENE	J	1.6	2.0	PQL	UG/L	J (all detects)
IW-70-SHB217-144	ETHENE	J	1.3	2.0	PQL	UG/L	J (all detects)
MW-70-MNA12-146	ETHENE	J	1.4	2.0	PQL	UG/L	J (all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: 11K174 **Laboratory: EMXT**

EDD Filename: 11K174 **eQAPP Name: SealBeach_IRSite70**

Method: 2320B
Matrix: AQ

Analyte	Concentration (MG/L) IW-70-SHB217-144	Concentration (MG/L) IR-70-FD-145	Sample RPD	eQAPP RPD	Flag
Total Alkalinity	217	217	0	20.00	No Qualifiers Applied

Method: 2540C
Matrix: AQ

Analyte	Concentration (MG/L) IW-70-SHB217-144	Concentration (MG/L) IR-70-FD-145	Sample RPD	eQAPP RPD	Flag
TDS	6900	6150	11	20.00	No Qualifiers Applied

Method: 300.0
Matrix: AQ

Analyte	Concentration (MG/L) IW-70-SHB217-144	Concentration (MG/L) IR-70-FD-145	Sample RPD	eQAPP RPD	Flag
Chloride-Cl	3300	3270	1	20.00	No Qualifiers Applied
SULFATE	733	726	1	20.00	

Method: 5310B
Matrix: AQ

Analyte	Concentration (MG/L) IW-70-SHB217-144	Concentration (MG/L) IR-70-FD-145	Sample RPD	eQAPP RPD	Flag
TOC	2.21	2.05	8	20.00	No Qualifiers Applied

Method: 6010B
Matrix: AQ

Analyte	Concentration (MG/L) IW-70-SHB217-144	Concentration (MG/L) IR-70-FD-145	Sample RPD	eQAPP RPD	Flag
IRON	3.95	3.90	1	20.00	No Qualifiers Applied
MANGANESE	0.963	0.953	1	20.00	

Method: 8260B
Matrix: AQ

Analyte	Concentration (UG/L) IW-70-SHB217-144	Concentration (UG/L) IR-70-FD-145	Sample RPD	eQAPP RPD	Flag
1,1-DICHLOROETHANE	0.44	0.43	2	20.00	No Qualifiers Applied
1,1-DICHLOROETHENE	3.2	3.1	3	20.00	
CIS-1,2-DICHLOROETHENE	890	910	2	20.00	
TRANS-1,2-DICHLOROETHENE	36	36	0	20.00	
TRICHLOROETHENE	6.6	6.4	3	20.00	
VINYL CHLORIDE	1.3	1.4	7	20.00	

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Field Duplicate RPD Report

Lab Reporting Batch ID: 11K174 **Laboratory: EMXT**

EDD Filename: 11K174 **eQAPP Name: SealBeach_IRSite70**

Method: 8260B
Matrix: AQ

Analyte	Concentration (UG/L) MW-70-MNA12-146	Concentration (UG/L) IR-70-FD-147	Sample RPD	eQAPP RPD	Flag
1,1-DICHLOROETHANE	0.43	0.44	2	20.00	No Qualifiers Applied
1,1-DICHLOROETHENE	3.3	3.2	3	20.00	
CIS-1,2-DICHLOROETHENE	950	870	9	20.00	
TRANS-1,2-DICHLOROETHENE	22	22	0	20.00	
TRICHLOROETHENE	11	11	0	20.00	
VINYL CHLORIDE	1.4	1.5	7	20.00	

Analyte	Concentration (UG/L) MW-70-MNA16-149	Concentration (UG/L) IR-70-FD-150	Sample RPD	eQAPP RPD	Flag
1,1-DICHLOROETHANE	0.38	0.37	3	20.00	No Qualifiers Applied
1,1-DICHLOROETHENE	3.9	3.8	3	20.00	
CIS-1,2-DICHLOROETHENE	1000	920	8	20.00	
TRANS-1,2-DICHLOROETHENE	46	45	2	20.00	
TRICHLOROETHENE	12	12	0	20.00	
VINYL CHLORIDE	25	24	4	20.00	

Method: RSK175
Matrix: AQ

Analyte	Concentration (UG/L) IW-70-SHB217-144	Concentration (UG/L) IR-70-FD-145	Sample RPD	eQAPP RPD	Flag
ETHENE	1.3	1.3	0	20.00	No Qualifiers Applied
METHANE	35	35	0	20.00	

Analyte	Concentration (UG/L) MW-70-MNA12-146	Concentration (UG/L) IR-70-FD-147	Sample RPD	eQAPP RPD	Flag
ETHENE	1.4	1.6	13	20.00	No Qualifiers Applied
METHANE	190	200	5	20.00	

Analyte	Concentration (UG/L) MW-70-MNA16-149	Concentration (UG/L) IR-70-FD-150	Sample RPD	eQAPP RPD	Flag
ETHENE	19	18	5	20.00	No Qualifiers Applied
METHANE	14000	18000	25	20.00	

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

LDC #: 26847E1

SDG #: 11K174

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/23/11

Page: 1 of 1

Reviewer: A

2nd Reviewer: E

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/17/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤ 30
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	N	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	N	
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A ~~N~~	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/~~LOQ/LOD~~s	SW	
XIII.	Tentitatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	SW	
XVI.	Field duplicates	N	
XVII.	Field blanks	↓	TB: 15

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

1	IW-70-SHB217-144 D1	11	IR-70-FD-147 D3	21		31	
2	IW-70-SHB217-144DL	12	IR-70-FD-147DL	22		32	
3	MW-70-MNA12-146 D3	13	IR-70-FD-145 D1	23		33	
4	MW-70-MNA12-146DL	14	IR-70-FD-145DL	24		34	
5	MW-70-MNA16-149 D5	15	IR-70-TB-143	25		35	
6	MW-70-MNA16-149DL	16		26		36	
7	MW-70-MNA14-151	17		27		37	
8	MW-70-MNA14-151DL	18		28		38	
9	IR-70-FD-150 D5	19		29		39	
10	IR-70-FD-150DL	20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 26847E1

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and CRQLs

Reviewer: A
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?

Y N N/A Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	Compound	Finding	Associated Samples	Qualifications
		Q Q Q	> calib range	1.3.5.7.9.11.13	J det /A

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26847E1
SDG #: —

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Date	Sample ID	Finding	Associated Samples	Qualifications
		1. 3. 5. 7. 9. 11.	QQQ > calib	range	R / A
		13			
		2. 4. 6. 8. 10. 12.	All except QQQ	- diluted	f
		14			

Comments: _____

OVR.1S

LDC #: 26847E4

SDG #: 11K174

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12-22-11

Page: 1 of 1

Reviewer: CC

2nd Reviewer: W

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates:
II.	ICP/MS Tune	N	
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A N	
VI.	Matrix Spike Analysis	N	CS
VII.	Duplicate Sample Analysis	N	↓
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	N	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	(1,3)
XV	Field Blanks	—	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet

ND = No compounds detected
R = Rinsate
FB = Field blank

D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: Water

1	IW-70-SHB217-144	11		21		31	
~~2~~	~~IR-70-FD-150~~	12		22		32	
3	IR-70-FD-145	13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26847E4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: CR
2nd reviewer: W

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1,3		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U,

Comments: Mercury by CVAA if performed

LDC #: 26847E6

VALIDATION COMPLETENESS WORKSHEET

ADR

SDG #: 11K174

Laboratory: EMAX Laboratories, Inc.

Date: 12-22-11

Page: 1 of 1

Reviewer: OL

2nd Reviewer: W

METHOD: (Analyte) Alkalinity (Standard Method 2320B), Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Dissolved Hydrogen Sulfide (SM4500F), Organic Acids (EPA Method 300.0M), TDS (Standard Method 2540C), TOC (Standard Method 5310B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/17/11
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	N	CS
VI.	Duplicates	N	L
VII.	Laboratory control samples	N	LCS/D
VIII.	Sample result verification	N	
IX.	Overall assessment of data	N	
X.	Field duplicates	—	(1,7), (2,6), (3,5)
XI	Field blanks	—	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: W

1	IW-70-SHB217-144	11		21		31	
2	MW-70-MNA12-146	12		22		32	
3	MW-70-MNA16-149	13		23		33	
4	MW-70-MNA14-151	14		24		34	
5	IR-70-FD-150	15		25		35	
6	IR-70-FD-147	16		26		36	
7	IR-70-FD-145	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 6004 R2

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: CR
2nd reviewer: W

All circled methods are applicable to each sample.

Sample ID	Parameter
1,7	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 HS
1-7	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 Organic Acids
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4

Comments:

LDC #: 26847E51

SDG #: 11K174

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/23/11

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/17/11
II	Initial calibration	A	%RSD ≤20
III.	Calibration verification/ICV	A	ICV/CCV ≤20
IV.	Blanks	N	
V	Surrogate recovery	N	
VI.	Matrix spike/Matrix spike duplicates	N	
VII.	Laboratory control samples	N	
VIII.	Target compound identification	N	
IX.	Compound quantitation/RL/~~LOQ/LOD~~s	SW	
X.	System Performance	N	
XI.	Overall assessment of data	SW	
XII.	Field duplicates	N	
XIII.	Field blanks	↓	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

All water

1	IW-70-SHB217-144	11	IR-70-FD-147	21		31	
2	IW-70-SHB217-144DL	12	IR-70-FD-147DL	22		32	
3	MW-70-MNA12-146	13	IR-70-FD-145	23		33	
4	MW-70-MNA12-146DL	14	IR-70-FD-145DL	24		34	
5	MW-70-MNA16-149	15		25		35	
6	MW-70-MNA16-149DL	16		26		36	
7	MW-70-MNA14-151	17		27		37	
8	MW-70-MNA14-151DL	18		28		38	
9	IR-70-FD-150	19		29		39	
10	IR-70-FD-150DL	20		30		40	

Notes:

LDC #: 26847E51

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ **GC** __ **HPLC**

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	> calib range	1.3.5.7.9.11.13	J det /A

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26847E51
SDG #: —

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: CA
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	> calib range	1.3.5.7.9.11.13	R/A
	Ethane, Ethene	Diluted	2.4.6.8.10.12.14	+

Comments: _____

OVRNew.wpd

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
18-Nov-2011	IR-70-TB-152	K184-06	TB	5030B	8260B	3
18-Nov-2011	MW-70-PMW13A-153	K184-01	N	3010A	6010B	4
18-Nov-2011	MW-70-PMW13A-153	K184-01	N	5030B	8260B	4
18-Nov-2011	MW-70-PMW13A-153	K184-01	N	GEN PREP	2320B	4
18-Nov-2011	MW-70-PMW13A-153	K184-01	N	GEN PREP	2540C	4
18-Nov-2011	MW-70-PMW13A-153	K184-01	N	GEN PREP	300.0	4
18-Nov-2011	MW-70-PMW13A-153	K184-01	N	GEN PREP	300.0M	4
18-Nov-2011	MW-70-PMW13A-153	K184-01	N	GEN PREP	4500F	4
18-Nov-2011	MW-70-PMW13A-153	K184-01	N	GEN PREP	5310B	4
18-Nov-2011	MW-70-PMW13A-153	K184-01	N	GEN PREP	RSK175	4
18-Nov-2011	MW-70-PMW13A-153MS	K184-01M	MS	GEN PREP	300.0M	3
18-Nov-2011	MW-70-PMW13A-153MSD	K184-01S	MSD	GEN PREP	300.0M	3
18-Nov-2011	MW-70-PMW13A-153	K184-01T	N	5030B	8260B	4
18-Nov-2011	MW-70-PMW13A-153	K184-01T	N	GEN PREP	RSK175	4
18-Nov-2011	MW-70-PMW13B-154	K184-02	N	3010A	6010B	3
18-Nov-2011	MW-70-PMW13B-154	K184-02	N	5030B	8260B	3
18-Nov-2011	MW-70-PMW13B-154	K184-02	N	GEN PREP	2320B	3
18-Nov-2011	MW-70-PMW13B-154	K184-02	N	GEN PREP	2540C	3
18-Nov-2011	MW-70-PMW13B-154	K184-02	N	GEN PREP	300.0	3
18-Nov-2011	MW-70-PMW13B-154	K184-02	N	GEN PREP	300.0M	3
18-Nov-2011	MW-70-PMW13B-154	K184-02	N	GEN PREP	4500F	3
18-Nov-2011	MW-70-PMW13B-154	K184-02	N	GEN PREP	5310B	3
18-Nov-2011	MW-70-PMW13B-154	K184-02	N	GEN PREP	RSK175	3
18-Nov-2011	MW-70-PMW13B-154	K184-02T	N	5030B	8260B	3
18-Nov-2011	MW-70-PMW14A-155	K184-03	N	3010A	6010B	3
18-Nov-2011	MW-70-PMW14A-155	K184-03	N	5030B	8260B	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
18-Nov-2011	MW-70-PMW14A-155	K184-03	N	GEN PREP	2320B	3
18-Nov-2011	MW-70-PMW14A-155	K184-03	N	GEN PREP	2540C	3
18-Nov-2011	MW-70-PMW14A-155	K184-03	N	GEN PREP	300.0	3
18-Nov-2011	MW-70-PMW14A-155	K184-03	N	GEN PREP	300.0M	3
18-Nov-2011	MW-70-PMW14A-155	K184-03	N	GEN PREP	4500F	3
18-Nov-2011	MW-70-PMW14A-155	K184-03	N	GEN PREP	5310B	3
18-Nov-2011	MW-70-PMW14A-155	K184-03	N	GEN PREP	RSK175	3
18-Nov-2011	MW-70-PMW14A-155	K184-03I	N	GEN PREP	RSK175	3
18-Nov-2011	MW-70-PMW14A-155	K184-03T	N	5030B	8260B	3
18-Nov-2011	MW-70-PMW14A-155	K184-03T	N	GEN PREP	RSK175	3
18-Nov-2011	MW-70-PMW14B-156	K184-04	N	3010A	6010B	3
18-Nov-2011	MW-70-PMW14B-156	K184-04	N	5030B	8260B	3
18-Nov-2011	MW-70-PMW14B-156	K184-04	N	GEN PREP	2320B	3
18-Nov-2011	MW-70-PMW14B-156	K184-04	N	GEN PREP	2540C	3
18-Nov-2011	MW-70-PMW14B-156	K184-04	N	GEN PREP	300.0	3
18-Nov-2011	MW-70-PMW14B-156	K184-04	N	GEN PREP	300.0M	3
18-Nov-2011	MW-70-PMW14B-156	K184-04	N	GEN PREP	4500F	3
18-Nov-2011	MW-70-PMW14B-156	K184-04	N	GEN PREP	5310B	3
18-Nov-2011	MW-70-PMW14B-156	K184-04	N	GEN PREP	RSK175	3
18-Nov-2011	MW-70-PMW14B-156	K184-04T	N	5030B	8260B	3
18-Nov-2011	MW-70-PMW14B-156	K184-04T	N	GEN PREP	RSK175	3
18-Nov-2011	IW-70-SSB109-157	K184-05	N	3010A	6010B	3
18-Nov-2011	IW-70-SSB109-157	K184-05	N	5030B	8260B	3
18-Nov-2011	IW-70-SSB109-157	K184-05	N	GEN PREP	2320B	3
18-Nov-2011	IW-70-SSB109-157	K184-05	N	GEN PREP	2540C	3
18-Nov-2011	IW-70-SSB109-157	K184-05	N	GEN PREP	300.0	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
18-Nov-2011	IW-70-SSB109-157	K184-05	N	GEN PREP	300.0M	3
18-Nov-2011	IW-70-SSB109-157	K184-05	N	GEN PREP	4500F	3
18-Nov-2011	IW-70-SSB109-157	K184-05	N	GEN PREP	RSK175	3
18-Nov-2011	IW-70-SSB109-157	K184-05T	N	GEN PREP	5310B	3
18-Nov-2011	IW-70-SSB109-157	K184-05T	N	GEN PREP	RSK175	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11K184 **Laboratory: EMXT**

EDD Filename: 11K184 **eQAPP Name: SealBeach_IRSite70**

Method Category: **GENCHEM**

Method: **300.0M** ***Matrix:*** **AQ**

Sample ID: **IW-70-SSB109-157** ***Collected:*** **11/18/2011 4:13:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Propionate	1.00	U	0.0500	MDL	1.00	PQL	MG/L	UJ	Ms

Sample ID: **MW-70-PMW13A-153** ***Collected:*** **11/18/2011 9:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Propionate	1.00	U	0.0500	MDL	1.00	PQL	MG/L	UJ	Ms

Sample ID: **MW-70-PMW13B-154** ***Collected:*** **11/18/2011 10:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Propionate	1.00	U	0.0500	MDL	1.00	PQL	MG/L	UJ	Ms

Sample ID: **MW-70-PMW14A-155** ***Collected:*** **11/18/2011 12:09:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Propionate	1.00	U	0.0500	MDL	1.00	PQL	MG/L	UJ	Ms

Sample ID: **MW-70-PMW14B-156** ***Collected:*** **11/18/2011 2:52:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Propionate	1.00	U	0.0500	MDL	1.00	PQL	MG/L	UJ	Ms

Method Category: **METALS**

Method: **6010B** ***Matrix:*** **AQ**

Sample ID: **IW-70-SSB109-157** ***Collected:*** **11/18/2011 4:13:00** ***Analysis Type:*** **RES/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.0247	J	0.00500	MDL	0.200	PQL	MG/L	J	RI

Sample ID: **MW-70-PMW14B-156** ***Collected:*** **11/18/2011 2:52:00** ***Analysis Type:*** **RES/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	0.00660	J	0.00500	MDL	0.200	PQL	MG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K184 **Laboratory: EMXT**

EDD Filename: 11K184 **eQAPP Name: SealBeach_IRSite70**

Method Category: SVOA

Method: RSK175 **Matrix: AQ**

Sample ID: IW-70-SSB109-157 *Collected:* 11/18/2011 4:13:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHENE	0.72	J	0.60	MDL	2.0	PQL	UG/L	J	RI

Sample ID: MW-70-PMW13B-154 *Collected:* 11/18/2011 10:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHENE	1.6	J	0.60	MDL	2.0	PQL	UG/L	J	RI

Method Category: VOA

Method: 8260B **Matrix: AQ**

Sample ID: IW-70-SSB109-157 *Collected:* 11/18/2011 4:13:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-METHYL-2-PENTANONE	7.3	J	4.0	MDL	10	PQL	UG/L	J	RI
CARBON DISULFIDE	0.42	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CHLOROETHANE	0.32	J	0.30	MDL	2.0	PQL	UG/L	J	RI
CIS-1,2-DICHLOROETHENE	0.30	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRANS-1,2-DICHLOROETHENE	0.43	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	0.30	J	0.20	MDL	5.0	PQL	UG/L	J	RI

Sample ID: MW-70-PMW13A-153 *Collected:* 11/18/2011 9:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.27	J	0.20	MDL	1.0	PQL	UG/L	J	RI

Sample ID: MW-70-PMW13B-154 *Collected:* 11/18/2011 10:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.47	J	0.20	MDL	1.0	PQL	UG/L	J	RI

Sample ID: MW-70-PMW14B-156 *Collected:* 11/18/2011 2:52:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.47	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CARBON DISULFIDE	0.26	J	0.20	MDL	1.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K184 **Laboratory: EMXT**

EDD Filename: 11K184 **eQAPP Name: SealBeach_IRSite70**

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K184 **Laboratory: EMXT**

EDD Filename: 11K184 **eQAPP Name: SealBeach_IRSite70**

Reason Code Legend

Reason Code	*Description*
Cb	Calibration Blank Contamination
Ccv	Continuing Calibration Verification Percent Difference Lower Estimation
Ccv	Continuing Calibration Verification Percent Difference Lower Rejection
Ccv	Continuing Calibration Verification Percent Difference Upper Estimation
Ccv	Continuing Calibration Verification Percent Difference Upper Rejection
Ccv	Continuing Calibration Verification Percent Recovery Lower Estimation
Ccv	Continuing Calibration Verification Percent Recovery Lower Rejection
Ccv	Continuing Calibration Verification Percent Recovery Upper Estimation
Ccv	Continuing Calibration Verification Percent Recovery Upper Rejection
CcvCC	Continuing Calibration Verification Correlation Coefficient
CcvRrf	Continuing Calibration Verification Relative Response Factor
ContTune	Continuing Tune
Dup=0	Duplicate Sample Count = 0
Dup>1	Duplicate Sample Count > 1
Eb	Equipment Blank Contamination
EtoA	Extraction to Analysis Estimation
EtoA	Extraction to Analysis Rejection
Fb	Field Blank Contamination
Fd	Field Duplicate Precision
Ft	Field Triplicate Precision
IcCC	Initial Calibration Correlation Coefficient
IcRrf	Initial Calibration Relative Response Factor
IcRsd	Initial Calibration Percent Relative Standard Deviation
Icv	Initial Calibration Verification Percent Difference Lower Estimation
Icv	Initial Calibration Verification Percent Difference Lower Rejection
Icv	Initial Calibration Verification Percent Difference Upper Estimation
Icv	Initial Calibration Verification Percent Difference Upper Rejection
Icv	Initial Calibration Verification Percent Recovery Lower Estimation
Icv	Initial Calibration Verification Percent Recovery Lower Rejection
Icv	Initial Calibration Verification Percent Recovery Upper Estimation

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K184 **Laboratory: EMXT**

EDD Filename: 11K184 **eQAPP Name: SealBeach_IRSite70**

Icv	Initial Calibration Verification Percent Recovery Upper Rejection
IcvCC	Initial Calibration Verification Correlation Coefficient
IcvRrf	Initial Calibration Verification Relative Response Factor
IllogicalFraction	Illogical Fraction
InitTune	Initial Tune
Is	Internal Standard Estimation
Is	Internal Standard Rejection
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Lower Rejection
Lcs	Laboratory Control Spike Upper Estimation
Lcs	Laboratory Control Spike Upper Rejection
Lcs=0	Laboratory Control Sample Count = 0
Lcs>1	Laboratory Control Sample Count > 1
Ld	Laboratory Duplicate Precision
Lt	Laboratory Triplicate Precision
Mb	Method Blank Contamination
Mb=0	Method Blank Sample Count = 0
Mb>1	Method Blank Sample Count > 1
Moist	Percent Moisture
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Lower Rejection
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
Ms	Matrix Spike Upper Rejection
Ms=0	Matrix Spike Sample Count = 0
Ms>1	Matrix Spike Sample Count > 1
PEM	Performance Evaluation Mixture
Preservation	Preservation
ProfJudg	Professional Judgment
REM	Resolution Check Mixture
RI	Reporting Limit

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K184 **Laboratory: EMXT**

EDD Filename: 11K184 **eQAPP Name: SealBeach_IRSite70**

RI	Reporting Limit > Project Maximum Contamination Limit
RI	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation
StoA	Sampling to Analysis Rejection
StoE	Sampling to Extraction Estimation
StoE	Sampling to Extraction Rejection
StoL	Sampling to Leaching Estimation
StoL	Sampling to Leaching Rejection
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Lower Rejection
Surr	Surrogate/Tracer Recovery Upper Estimation
Surr	Surrogate/Tracer Recovery Upper Rejection
Tb	Trip Blank Contamination
TempEst	Temperature Estimation
TempRej	Temperature Rejection

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11K184

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 11K184 **Laboratory: EMXT**

EDD Filename: 11K184 **eQAPP Name: SealBeach_IRSite70**

Method: **300.0M**
Matrix: **AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
MW-70-PMW13A-153MSD (IW-70-SSB109-157 MW-70-PMW13A-153 MW-70-PMW13B-154 MW-70-PMW14A-155 MW-70-PMW14B-156)	Propionate	-	-	75.00-125.00	31 (20.00)	Propionate	J (all detects) UJ (all non-detects)

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Reporting Limit Outliers

Lab Reporting Batch ID: 11K184 **Laboratory: EMXT**

EDD Filename: 11K184 **eQAPP Name: SealBeach_IRSite70**

Method: 6010B
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IW-70-SSB109-157	ARSENIC	J	0.0247	0.200	PQL	MG/L	J (all detects)
MW-70-PMW14B-156	ARSENIC	J	0.00660	0.200	PQL	MG/L	J (all detects)

Method: 8260B
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IW-70-SSB109-157	4-METHYL-2-PENTANONE	J	7.3	10	PQL	UG/L	J (all detects)
	CARBON DISULFIDE	J	0.42	1.0	PQL	UG/L	
	CHLOROETHANE	J	0.32	2.0	PQL	UG/L	
	CIS-1,2-DICHLOROETHENE	J	0.30	1.0	PQL	UG/L	
	TRANS-1,2-DICHLOROETHENE	J	0.43	1.0	PQL	UG/L	
	TRICHLOROETHENE	J	0.30	5.0	PQL	UG/L	
MW-70-PMW13A-153	1,1-DICHLOROETHANE	J	0.27	1.0	PQL	UG/L	J (all detects)
	1,1-DICHLOROETHENE	J	2.9	5.0	PQL	UG/L	
MW-70-PMW13B-154	1,1-DICHLOROETHANE	J	0.47	1.0	PQL	UG/L	J (all detects)
	TRICHLOROETHENE	J	14	250	PQL	UG/L	
	VINYL CHLORIDE	J	18	25	PQL	UG/L	
MW-70-PMW14A-155	TRICHLOROETHENE	J	5.9	50	PQL	UG/L	J (all detects)
MW-70-PMW14B-156	1,1-DICHLOROETHANE	J	0.47	1.0	PQL	UG/L	J (all detects)
	1,1-DICHLOROETHENE	J	2.1	5.0	PQL	UG/L	
	CARBON DISULFIDE	J	0.26	1.0	PQL	UG/L	
	TRICHLOROETHENE	J	11	50	PQL	UG/L	

Method: RSK175
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IW-70-SSB109-157	ETHENE	J	0.72	2.0	PQL	UG/L	J (all detects)
MW-70-PMW13B-154	ETHENE	J	1.6	2.0	PQL	UG/L	J (all detects)

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

LDC #: 26847F1
SDG #: 11K184
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR/IV

Date: 12/29/11
Page: 1 of 1
Reviewer: M
2nd Reviewer: C

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/18/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30 %
IV.	Continuing calibration/ICV	A	CW/ICW ≤ 25 %
V.	Blanks	N	Not reviewed for ADR validation.
VI.	Surrogate spikes		Not reviewed for ADR validation.
VII.	Matrix spike/Matrix spike duplicates		Not reviewed for ADR validation.
VIII.	Laboratory control samples		Not reviewed for ADR validation.
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards		Not reviewed for ADR validation.
XI.	Target compound identification		Not reviewed for ADR validation.
XII.	Compound quantitation/RLs		Not reviewed for ADR validation.
XIII.	Tentitatively identified compounds (TICs)		Not reviewed for ADR validation.
XIV.	System performance		Not reviewed for ADR validation.
XV.	Overall assessment of data	SW	Not reviewed for ADR validation.
XVI.	Field duplicates	N	
XVII.	Field blanks		TB = 10

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

1	MW-70-PMW13A-153**	11	MBLK1W	21		31	
2	MW-70-PMW13A-153DL**	12	2W	22		32	
3	MW-70-PMW13B-154	13	3W	23		33	
4	MW-70-PMW13B-154DL	14	4W	24		34	
5	MW-70-PMW14A-155	15		25		35	
6	MW-70-PMW14A-155DL	16		26		36	
7	MW-70-PMW14B-156	17		27		37	
8	MW-70-PMW14B-156DL	18		28		38	
9	IW-70-SSB109-157	19		29		39	
10	IR-70-TB-152	20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 26847F1

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: JVC
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.
Y N N/A Was the overall quality and usability of the data acceptable?

#	Date	Sample ID	Compound	Finding	Qualifications
		1	QQQ, S, C	> cal range	Do not use
		2	All except above	dil	
		3	QQQ > cal range		
		4	All except QQQ	dil	
		5	C > cal range		
		6	All except C	dil	
		7	QQQ, C >	cal range	
		8	All except above	dil	✓

Comments:

LDC #: 26847F4
SDG #: 11K184
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR/IV

Date: 12-22-11
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/18/11
II.	ICP/MS Tune	N	Not utilized
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	Not reviewed for ADR validation.
VI.	Matrix Spike Analysis	N	Not reviewed for ADR validation. Client specified
VII.	Duplicate Sample Analysis	N	Not reviewed for ADR validation. ↓
VIII.	Laboratory Control Samples (LCS)	A	Not reviewed for ADR validation.
IX.	Internal Standard (ICP-MS)	N	Not reviewed for ADR validation. Not utilized
X.	Furnace Atomic Absorption QC	N	Not reviewed for ADR validation. ↓
XI.	ICP Serial Dilution	N	Not reviewed for ADR validation. Not performed
XII.	Sample Result Verification	A	Not reviewed for ADR validation.
XIII.	Overall Assessment of Data	A	Not reviewed for ADR validation.
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation
water

1	MW-70-PMW13A-153**	11		21		31	
2	MW-70-PMW13B-154	12		22		32	
3	MW-70-PMW14A-155	13		23		33	
4	MW-70-PMW14B-156	14		24		34	
5	IW-70-SSB109-157	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26847F6
SDG #: 11K184
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR/IV

Date: 12-22-11
Page: 1 of 1
Reviewer: OR
2nd Reviewer: [illegible]

METHOD: (Analyte) Alkalinity (Standard Method 2320B), Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Organic Acids (EPA Method 300.0M), TDS (Standard Method 2540C), TOC (Standard Method 5310B), Dissolved Hydrogen Sulfide (SM4500F)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/18/11
II.	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	ASW	Not reviewed for ADR validation. MS/D Propionate qual all RPD out, J/UJ
VI.	Duplicates	N	Not reviewed for ADR validation.
VII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/D
VIII.	Sample result verification	A	Not reviewed for ADR validation.
IX.	Overall assessment of data	A	Not reviewed for ADR validation.
X.	Field duplicates	N	
XI.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water

1	MW-70-PMW13A-153**	11		21		31	
2	MW-70-PMW13B-154	12		22		32	
3	MW-70-PMW14A-155	13		23		33	
4	MW-70-PMW14B-156	14		24		34	
5	IW-70-SSB109-157	15		25		35	
~~6~~	~~IW-70-SSB109-157DL~~	16		26		36	
7	(IX) MS	17		27		37	
8	↓ MSD	18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26847F51
SDG #: 11K184
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR/IV

Date: 12/20/11
Page: 1 of 1
Reviewer: SW
2nd Reviewer: A

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/18/11
IIa.	Initial calibration	A	% RSD ≤ 20 %
IIb.	Calibration verification/ICV	A	CCV/ICV ≤ 20 %
III.	Blanks	N	Not reviewed for ADR validation.
IVa.	Surrogate recovery		Not reviewed for ADR validation.
IVb.	Matrix spike/Matrix spike duplicates		Not reviewed for ADR validation.
IVc.	Laboratory control samples		Not reviewed for ADR validation.
V.	Target compound identification		Not reviewed for ADR validation.
VI.	Compound Quantitation and CRQLs		Not reviewed for ADR validation.
VII.	System Performance		Not reviewed for ADR validation.
VIII.	Overall assessment of data	SW	Not reviewed for ADR validation.
IX.	Field duplicates	N	
X.	Field blanks		

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water

1	MW-70-PMW13A-153**	11		21		31	
2	MW-70-PMW13A-153DL**	12		22		32	
3	MW-70-PMW13B-154	13		23		33	
4	MW-70-PMW14A-155	14		24		34	
5	MW-70-PMW14A-155DL	15		25		35	
6	MW-70-PMW14A-155DL2	16		26		36	
7	MW-70-PMW14B-156	17		27		37	
8	MW-70-PMW14B-156DL	18		28		38	
9	IW-70-SSB109-157	19		29		39	
10	IW-70-SSB109-157DL	20		30		40	

Notes:

LDC #: 26847 F51

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: DMe
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	> cal range	1, ~~8~~ 7, 9	Do not use
	All except Methane	dil	2, 8, 10	
	Ethene, Methane	> cal range	4	
	All except Ethene	dil	5	

Comments: _____

Enclosure II

EPA Level IV Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 18, 2011
LDC Report Date:	December 30, 2011
Matrix:	Water
Parameters:	Volatiles
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K184

Sample Identification

MW-70-PMW13A-153
MW-70-PMW13A-153DL

Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample IR-70-TB-152 was identified as a trip blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
MW-70-PMW13A-153	cis-1,2-Dichloroethene Trichloroethene Vinyl chloride	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects) J (all detects) J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K184	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

The overall assessment of data was acceptable. In the case where more than one result was reported for an individual sample, the least technically acceptable results were rejected as follows:

Sample	Compound	Flag	A or P
MW-70-PMW13A-153	cis-1,2-Dichloroethene Trichloroethene Vinyl chloride	R R R	A
MW-70-PMW13A-153DL	All TCL compounds except cis-1,2-Dichloroethene Trichloroethene Vinyl chloride	R	A

XVI. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Volatiles - Data Qualification Summary - SDG 11K184

SDG	Sample	Compound	Flag	A or P	Reason
11K184	MW-70-PMW13A-153	cis-1,2-Dichloroethene Trichloroethene Vinyl chloride	J (all detects) J (all detects) J (all detects)	A	Compound quantitation and RLs (exceeded range)
11K184	MW-70-PMW13A-153 MW-70-PMW13A-153DL	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs
11K184	MW-70-PMW13A-153	cis-1,2-Dichloroethene Trichloroethene Vinyl chloride	R R R	A	Overall assessment of data
11K184	MW-70-PMW13A-153DL	All TCL compounds except cis-1,2-Dichloroethene Trichloroethene Vinyl chloride	R	A	Overall assessment of data

NWS Seal Beach, IR Site 70
Volatiles - Laboratory Blank Data Qualification Summary - SDG 11K184

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Volatiles - Field Blank Data Qualification Summary - SDG 11K184

No Sample Data Qualified in this SDG

LDC #: 26847F1
SDG #: 11K184
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

Date: 12/29/11
Page: 1 of 1
Reviewer: JVG
2nd Reviewer: A

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11 / 18 / 11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30 %
IV.	Continuing calibration/ICV	A	CW/ICW ≤ 25 %
V.	Blanks	A	~~Not reviewed for ADR validation~~.
VI.	Surrogate spikes	A	Not reviewed for ADR validation.
VII.	Matrix spike/Matrix spike duplicates	N	Not reviewed for ADR validation. Client Spec
VIII.	Laboratory control samples	A	~~Not reviewed for ADR validation~~. LCS /D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	~~Not reviewed for ADR validation~~.
XI.	Target compound identification	A	Not reviewed for ADR validation.
XII.	Compound quantitation/RLs	SW	Not reviewed for ADR validation.
XIII.	Tentitatively identified compounds (TICs)	N	Not reviewed for ADR validation.
XIV.	System performance	A	Not reviewed for ADR validation.
XV.	Overall assessment of data	SW	~~Not reviewed for ADR validation~~.
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	TB = 10

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water

1	MW-70-PMW13A-153**	11	MB LK 2W	21		31	
2	MW-70-PMW13A-153DL**	12	3W	22		32	
3	~~MW-70-PMW13B-154~~	13		23		33	
4	MW-70-PMW13B-154DL	14		24		34	
5	MW-70-PMW14A-155	15		25		35	
6	MW-70-PMW14A-155DL	16		26		36	
7	MW-70-PMW14B-156	17		27		37	
8	MW-70-PMW14B-156DL	18		28		38	
9	IW-70-SSB109-157	19		29		39	
10	~~IR-70-TB-152~~	20		30		40	

LDC #: 26847F1

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer: C

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	M	✓		
Did the initial calibration meet the curve fit acceptance criteria of > 0.990?			✓	
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) > 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.		✓		
Was a MS/MSD analyzed every 20 samples of each matrix?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 26847F1

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?		✓		
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.			✓	

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 26847F1

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and CRQLs

Reviewer: JM
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?

Y N N/A Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	Sample ID	Compound	Finding	Qualifications
		1	QQQ, S, C	> cal range	J dets /A

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26847F1

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: JM
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.
Y N N/A Was the overall quality and usability of the data acceptable?

#	Date	Sample ID	Compound	Finding	Qualifications
		1	QQQ, S, C	> cal range	R /A
		2	All except above	dil	

Comments:

LDC #: 26847 F1

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of Compound
C_x = Concentration of compound, .
S= Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (IS)	Reported RRF (RRF 10 std)	Recalculated RRF (RRF 10 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	8/16/2011	cis-1,2-DCE (IS1)	0.418	0.418	0.389	0.389	4.16	4.14
	TO03		TCE (IS2)	0.469	0.469	0.445	0.445	5.11	5.12
			1,1,2,2-TCA (IS3)	0.787	0.787	0.753	0.753	5.72	5.71

Cis/Cx	Ax	Ais
10/10	778768	1861981
10/10	808735	1722743
10/10	475240	603523

ICAL 1

Conc	cis-1,2-DCE	Trichloroethene	1,1,2,2-TCA
0.3	0.374	0.439	0.772
0.5	0.367	0.414	0.704
1	0.389	0.425	0.722
2	0.395	0.434	0.721
5	0.396	0.440	0.745
10	0.418	0.469	0.787
20	0.383	0.434	0.727
30	0.409	0.477	0.787
50	0.369	0.426	0.711
100	0.382	0.452	0.765
150	0.398	0.484	0.847
X =	0.389	0.445	0.753
S =	0.0161	0.0228	0.0431

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC # 26847 F1

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: JVG
2nd Reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = (Ax)(Cis)/(Ais)(Cx)

Where:
ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound,
Cx = Concentration of compound,
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (IS)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported % D	Recalculated %D
1	RKB373	11/22/2011	cis-1,2-DCE (IS1)	0.389	0.393	0.393	1.0	1.0
	TO03		Trichloroethene (IS2)	0.445	0.405	0.405	9.0	9.0
			1,1,2,2-TCA (IS3)	0.753	0.817	0.817	8.5	8.5
2	RKB414	11/23/2011	cis-1,2-DCE (IS1)	0.389	0.398	0.398	2.3	2.3
	TO03		Trichloroethene (IS2)	0.445	0.432	0.432	2.9	2.8
			1,1,2,2-TCA (IS3)	0.753	0.826	0.826	9.7	9.7

		CCV1		CCV2	
Cis/Cx	Compound	Ax	Ais	Ax	Ais
10/10	cis-1,2-DCE (IS1)	792801	2019134	789048	1983747
10/10	Trichloroethene (IS2)	794720	1963698	828771	1916314
10/10	1,1,2,2-TCA (IS3)	579745	710006	560396	678515

LDC #: 26847F1

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: JVG
2nd reviewer: C

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:
% Recovery: SF/SS * 100 Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
1,2-Dichloroethane-d4	10	8.050	80.5	80.5	0
Bromofluorobenzene	10	9.430	94.3	94	0
Toluene-d8	10	9.430	94.3	94	0

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					

LDC #: 26847F1

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: JVG
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = I LCS - LCSD I * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: LCS/LCSD2W

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc
1,1-Dichloroethene	10	10	9.83	9.32	98	98	93	93	5	5.3
Benzene	10	10	10.1	10.0	101	101	100	100	1	1.0
Chlorobenzene	10	10	10.5	10.3	105	105	103	103	2	1.9
Toluene	10	10	9.9	9.71	99	99	97	97	2	1.9
Trichloroethene	10	10	10.19	10.05	102	102	100	101	1	1.4

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26847 F1

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: JVG
2nd reviewer: C

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
RRF	=	Relative response factor of the calibration standard.
V_o	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).
Df	=	Dilution factor.
%S	=	Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. # 2, Trichloroethene

Conc. = $\frac{(2665759)(10.0)(10)}{(2007734)(0.445)(\quad)(\quad)}$

= 298 Y

≈ 300 ng/L

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 18, 2011
LDC Report Date:	December 23, 2011
Matrix:	Water
Parameters:	Dissolved Metals
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K184

Sample Identification

MW-70-PMW13A-153

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Dissolved Metals. The metals analyzed were Arsenic, Iron, and Manganese.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No dissolved metal contaminants were found in the initial, continuing and preparation blanks.

No field blanks were identified in this SDG.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XII. Sample Result Verification

All sample result verifications were acceptable.

All metals reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 11K184	All analytes reported below the RL and above the MDL.	J (all detects)	A

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Dissolved Metals - Data Qualification Summary - SDG 11K184

SDG	Sample	Analyte	Flag	A or P	Reason
11K184	MW-70-PMW13A-153	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification

NWS Seal Beach, IR Site 70
Dissolved Metals - Laboratory Blank Data Qualification Summary - SDG 11K184

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Dissolved Metals - Field Blank Data Qualification Summary - SDG 11K184

No Sample Data Qualified in this SDG

LDC #: 26847F4

SDG #: 11K184

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

~~ADR~~/IV

Date: 12-22-11

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/18/11
II.	ICP/MS Tune	N	Not utilized
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	Not reviewed for ADR validation.
VI.	Matrix Spike Analysis	N	Not reviewed for ADR validation. Client specified
VII.	Duplicate Sample Analysis	N	Not reviewed for ADR validation. ↓
VIII.	Laboratory Control Samples (LCS)	A	Not reviewed for ADR validation.
IX.	Internal Standard (ICP-MS)	N	Not reviewed for ADR validation. Not utilized
X.	Furnace Atomic Absorption QC	N	Not reviewed for ADR validation. ↓
XI.	ICP Serial Dilution	N	Not reviewed for ADR validation. Not performed
XII.	Sample Result Verification	A	Not reviewed for ADR validation.
XIII.	Overall Assessment of Data	A	Not reviewed for ADR validation.
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water

1	MW-70-PMW13A-153**	11		21		31	
2	~~MW-70-PMW13B-154~~	12		22		32	
3	MW-70-PMW14A-155	13		23		33	
4	MW-70-PMW14B-156	14		24		34	
5	~~IW-70-SSB109-157~~	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 20847F4

VALIDATION FINDINGS CHECKLIST

Reviewer: CR
2nd Reviewer: W

Method: Metals (EPA SW 846 Method 6010B/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. ICP/MS Tune				
Were all isotopes in the tuning solution mass resolution within 0.1 amu?			✓	
Were %RSD of isotopes in the tuning solution ≤5%?			✓	
III. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury) QC limits?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
IV. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
V. ICP Interference Check Sample				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.			✓	
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were ≤ 5X the RL.			✓	
VII. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			

LDC #: 20847F4

VALIDATION FINDINGS CHECKLIST

Reviewer: CR
2nd Reviewer: V

Validation Area	Yes	No	NA	Findings/Comments
VIII. Furnace Atomic Absorption QC				
If MSA was performed, was the correlation coefficients > 0.995?			✓	
Do all applicable analysies have duplicate injections? (Level IV only)			✓	
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%? (Level IV only)			✓	
Were analytical spike recoveries within the 85-115% QC limits?			✓	
IX. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the MDL (ICP)/>100X the MDL(ICP/MS)?		✓		
Were all percent differences (%Ds) < 10%?			✓	
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.			✓	
X. Internal Standards (EPA SW 846 Method 6020/EPA 200.8)				
Were all the percent recoveries (%R) within the 30-120% (6020)/60-125% (200.8) of the intensity of the internal standard in the associated initial calibration?			✓	
If the %Rs were outside the criteria, was a reanalysis performed?			✓	
XI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
XII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 20817F4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: CR
2nd reviewer: [illegible]

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
15		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ___

Comments: Mercury by CVAA if performed

LDC #: 26847B

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
FCV	ICP (Initial calibration)	Fe	25.061	25	100	100	Y
	ICP/MS (Initial calibration)						
	CVAA (Initial calibration)						
CCV 4	ICP (Continuing calibration)	Mn	2.284	2.5	92	92	Y
	ICP/MS (Continuing calibration)						
	CVAA (Continuing calibration)						
	GFAA (Initial calibration)						
	GFAA (Continuing calibation)						

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26847F4

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: OR
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$

Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$

Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$

Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
ICS AB	ICP interference check	As	1.0477	1	105	105	Y
LCS	Laboratory control sample	Fe	5.21	5	104	104	Y
N	Matrix spike		(SSR-SR)				
N	Duplicate						
N	ICP serial dilution						

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26847F4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: CR
2nd reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for Fe were recalculated and verified using the following equation:

Concentration = (RD)(FV)(Dil) / (In. Vol.)

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

Raw Data = 1.8839 mg/L

#	Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
	1	Fe	1.88	1.88	Y
		Mn	0.436	0.436	Y

Note:

LDC Report# 26847F51

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 18, 2011
LDC Report Date:	December 30, 2011
Matrix:	Water
Parameters:	Methane, Ethane, & Ethene
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K184

Sample Identification

MW-70-PMW13A-153
MW-70-PMW13A-153DL

Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Method RSK-175 for Methane, Ethane, and Ethene.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No methane, ethane, or ethene was found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were not required by the method.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
MW-70-PMW13A-153	Methane	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 11K184	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

The overall assessment of data was acceptable. In the case where more than one result was reported for an individual sample, the least technically acceptable results were rejected as follows:

Sample	Compound	Flag	A or P
MW-70-PMW13A-153	Methane	R	A
MW-70-PMW13A-153DL	Ethane Ethene	R R	A

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Methane, Ethane, & Ethene - Data Qualification Summary - SDG 11K184

SDG	Sample	Compound	Flag	A or P	Reason
11K184	MW-70-PMW13A-153	Methane	J (all detects)	A	Compound quantitation and RLs (exceeded range)
11K184	MW-70-PMW13A-153 MW-70-PMW13A-153DL	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs
11K184	MW-70-PMW13A-153	Methane	R	A	Overall assessment of data
11K184	MW-70-PMW13A-153DL	Ethane Ethene	R R	A	Overall assessment of data

NWS Seal Beach, IR Site 70
Methane, Ethane, & Ethene - Laboratory Blank Data Qualification Summary - SDG 11K184

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Methane, Ethane, & Ethene - Field Blank Data Qualification Summary - SDG 11K184

No Sample Data Qualified in this SDG

LDC #: 26847F51 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/29/11
SDG #: 11K184 ADR(IV) Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: JVG
2nd Reviewer: C

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/18/11
IIa.	Initial calibration	A	% RSD ≤ 20%
IIb.	Calibration verification/ICV	A	CCV/ICV ≤ 20%
III.	Blanks	A	~~Not reviewed for ADR validation.~~
IVa.	Surrogate recovery	N	Not reviewed for ADR validation.
IVb.	Matrix spike/Matrix spike duplicates	N	Not reviewed for ADR validation.
IVc.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/D
V.	Target compound identification	A	Not reviewed for ADR validation.
VI.	Compound Quantitation and CRQLs	SW	Not reviewed for ADR validation.
VII.	System Performance	N	Not reviewed for ADR validation.
VIII.	Overall assessment of data	SW	~~Not reviewed for ADR validation.~~
IX.	Field duplicates	N	
X.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

water

1	MW-70-PMW13A-153**	11	MBLK1W	21		31	
2	MW-70-PMW13A-153DL**	12	↓ 2W	22		32	
3	~~MW-70-PMW13B-154~~	13		23		33	
4	MW-70-PMW14A-155	14		24		34	
5	MW-70-PMW14A-155DL	15		25		35	
6	MW-70-PMW14A-155DL2	16		26		36	
7	MW-70-PMW14B-156	17		27		37	
8	MW-70-PMW14B-156DL	18		28		38	
9	IW-70-SSB109-157	19		29		39	
10	~~IW-70-SSB109-157DL~~	20		30		40	

Notes:

LDC #: 26847 F51

VALIDATION FINDINGS CHECKLIST

Reviewer: JVC
2nd Reviewer: C

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?		✓		
Did the initial calibration meet the curve fit acceptance criteria?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ✓ %D or ____ %R	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?			✓	
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.		✓		
Was a MS/MSD analyzed every 20 samples of each matrix?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				

LDC #: 24847 F51

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26847F51

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: JM
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	> cal range	1	J dets

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26847 F51

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: JVG
2nd Reviewer: CA

METHOD: ✓ **GC** __ **HPLC**

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	> cal range	1	R /A
	All except Methane	dil	2	

Comments: _____

LDC #: 26847 F51

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: GC / HPLC _____

The calibration factors (CF), average CF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

Where:
A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported CF (13.56 std)	Recalculated CF (13.56 std)	Reported Average CF (Initial)	Recalculated Average CF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	11/1/2011	Methane	29307.0	29307.0	30507.0	30507.0	5.6	5.6
	GCT010								

Conc	Methane	Area
0.68	31626	
3.40	33510	
8.53	29954	
13.56	29307	397403.0
25.50	29338	
34.00	29307	
X =	30507.0	
S =	1721.775	

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC # 26847F51

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: GC_____HPLC_____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration percent difference (%D) values were recalculated for the compounds identified below using the following calculation:

Percent difference (%D) = 100 * (N - C)/N

Where:
N = Initial Calibration Factor or Nominal Amount
C = Calibration Factor from Continuing Calibration Standard or Calculated Amount

#	Standard ID	Calibration Date	Compound	CCV Conc	Reported Conc	Recalculated Conc	Reported % D	Recalculated %D
1	FK22038A	11/22/2011	Methane	13.56	12.60	12.60	7	7.1

	Compound	Area	CF
CCV1	Methane	384476	30507.0
CCV2	Methane		

LDC #: 26847F51

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: JVG

2nd Reviewer: [illegible]

METHOD: X GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration; SA = Spike added; LCS = Laboratory Control Sample; SC = Sample concentration; LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: LCS/LCSD2W

Compound	Spike Added (ug/L)		Spike Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)	13.6	13.6	11.86	11.89	87	87	87	87	0	0
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-TNT (8330)										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26847 F51

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound In the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. # 7 Compound Name Methane

Concentration = (264860)(10) / (30507.1) = 86.8 ≈ 87 ug/L

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	NWS Seal Beach, IR Site 70
Collection Date:	November 18, 2011
LDC Report Date:	December 23, 2011
Matrix:	Water
Parameters:	Wet Chemistry
Validation Level:	EPA Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	11K184

Sample Identification

MW-70-PMW13A-153

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Standard Method 2320B for Alkalinity, EPA Method 300.0 for Chloride, Nitrate as Nitrogen, Nitrite as Nitrogen, and Sulfate, EPA Method 300.0M for Organic Acids, Standard Method 2540C for Total Dissolved Solids, Standard Method 5310B for Total Organic Carbon, and Standard Method 4500F for Dissolved Hydrogen Sulfide.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Continuing Calibration

Continuing calibration frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

No field blanks were identified in this SDG.

V. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
MW-70-PMW13A-153MS/MSD (All samples in SDG 11K184)	Propionate	-	-	31 (≤20)	J (all detects) UJ (all non-detects)	A

VI. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Sample Result Verification

All sample result verifications were acceptable.

All metals reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 11K184	All analytes reported below the RL and above the MDL.	J (all detects)	A

IX. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

X. Field Duplicates

No field duplicates were identified in this SDG.

NWS Seal Beach, IR Site 70
Wet Chemistry - Data Qualification Summary - SDG 11K184

SDG	Sample	Analyte	Flag	A or P	Reason
11K184	MW-70-PMW13A-153	Propionate	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (RPD)
11K184	MW-70-PMW13A-153	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification

NWS Seal Beach, IR Site 70
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 11K184

No Sample Data Qualified in this SDG

NWS Seal Beach, IR Site 70
Wet Chemistry - Field Blank Data Qualification Summary - SDG 11K184

No Sample Data Qualified in this SDG

LDC #: 26847F6
SDG #: 11K184
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

~~ADR~~/IV

Date: 12-22-11
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: (Analyte) Alkalinity (Standard Method 2320B), Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Organic Acids (EPA Method 300.0M), TDS (Standard Method 2540C), TOC (Standard Method 5310B), Dissolved Hydrogen Sulfide (SM4500F)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/18/11
II.	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	~~A~~SW	Not reviewed for ADR validation. MS/D Propionate RPD out, qual all J/UJ
VI.	Duplicates	N	Not reviewed for ADR validation.
VII.	Laboratory control samples	A	Not reviewed for ADR validation. LCS/D
VIII.	Sample result verification	A	Not reviewed for ADR validation.
IX.	Overall assessment of data	A	Not reviewed for ADR validation.
X.	Field duplicates	N	
XI	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water

1	MW-70-PMW13A-153**	11		21		31	
~~2~~	~~MW-70-PMW13B-154~~	12		22		32	
3	MW-70-PMW14A-155	13		23		33	
4	MW-70-PMW14B-156	14		24		34	
5	IW-70-SSB109-157	15		25		35	
~~6~~	~~IW-70-SSB109-157DL~~	16		26		36	
7	(X) MS	17		27		37	
8	~~MSD~~	18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26847F6

VALIDATION FINDINGS CHECKLIST

Reviewer: OR
2nd Reviewer: W

Method: Inorganics (EPA Method See Cover)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?				
Were titrant checks performed as required? (Level IV only)	✓			
Were balance checks performed as required? (Level IV only)	✓			
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.	✓			
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL(≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were ≤ 5X the CRDL.	✓			
V. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	✓			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26847F6

VALIDATION FINDINGS CHECKLIST

Reviewer: OR
2nd Reviewer: W

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
X. Field blanks				
Field blanks were identified in this SDG.		✓	✓	
Target analytes were detected in the field blanks.				

LDC #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: CR
2nd reviewer: [illegible]

All circled methods are applicable to each sample.

Sample ID	Parameter
1-5	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 Organic Acids 4/5
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
QC 7,8	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 Organic Acids
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4

Comments:

LDC #: 26847 F6

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: APL
2nd Reviewer: [illegible]

METHOD: Inorganics, EPA Method 300.0 M

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a matrix spike analyzed for each matrix in this SDG?

Y N N/A Were matrix spike percent recoveries (%R) within the control limits of 75-125? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

Y N N/A Were all duplicate sample relative percent differences (RPD) ≤ 20% for water samples and ≤35% for soil samples?

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	MS/MSD ID	Matrix	Analyte	MS %Recovery	MSD %Recovery	RPD (Limits)	Associated Samples	Qualifications
	7/8	AQ	Propionate			31 (20)	All	J/UJ/A

Comments:

LDC #: 26847F6

Validation Findings Worksheet
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: Inorganics, Method see cover

The correlation coefficient (r) for the calibration of NO_2N was recalculated. Calibration date: 9/30/11

An initial or continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

$$\%R = \frac{\text{Found} \times 100}{\text{True}}$$

Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution
True = concentration of each analyte in the ICV or CCV source

Type of analysis	Analyte	Standard	Conc. (mg/l)	Area	Recalculated r or r^2	Reported r or r^2	Acceptable (Y/N)
Initial calibration	NO_2N	s1	0.05	1.561	*0.999852*	0.999850	Y
		s2	0.1	3.285			
		s3	0.2	7.062			
		s4	0.5	18.94			
		s5	1	39.99			
		s6	2	82.54			
		s7	5	208.1			
		s8	10	402.8			
Calibration verification	NO_3N	ICV	0.986	1	99	99	
Calibration verification	Acetate	CCV	19.9	18.25	109	109	
Calibration verification	TOC	↓	23.81	25	95	–	✓

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26847F6

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: OR
2nd Reviewer: [illegible]

METHOD: Inorganics, Method see cover

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
LCS	Laboratory control sample	TDS	1000	1000	100	100	Y
7	Matrix spike sample	Butyrate	(SSR-SR) 10.7	10	107	107	↓
7/8	Duplicate sample	Lactate	10.3	10.4	1	1	↓

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26847F6

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: OR
2nd reviewer: [illegible]

METHOD: Inorganics, Method See cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments?
Y N N/A Are all detection limits below the CRQL?

Compound (analyte) results for SO_4 reported with a positive detect were recalculated and verified using the following equation:

Concentration = $0.0758014(Area)+0.128926$

Recalculation: $0.0758014(30.198)+0.128926 = 484 mg/L$

#	Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
	1	Cl	2230	2230	Y
		SO_4	484	484	
		Alk	196	196	
		TDS	4460	4460	
		TOC	1.73	1.73	

Note:

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Nov-2011	IR-70-TB-158	K188-04	TB	5030B	8260B	3
21-Nov-2011	MW-70-15-159	K188-01	N	5030B	8260B	3
21-Nov-2011	MW-70-15-159	K188-01	N	GEN PREP	300.0M	3
21-Nov-2011	MW-70-15-159	K188-01	N	GEN PREP	RSK175	3
21-Nov-2011	MW-70-MNA17-160	K188-02	N	5030B	8260B	3
21-Nov-2011	MW-70-MNA17-160	K188-02	N	GEN PREP	300.0M	3
21-Nov-2011	MW-70-MNA17-160	K188-02	N	GEN PREP	RSK175	3
21-Nov-2011	IW-70-SHB310-161	K188-03	N	3010A	6010B	3
21-Nov-2011	IW-70-SHB310-161	K188-03	N	5030B	8260B	3
21-Nov-2011	IW-70-SHB310-161	K188-03	N	GEN PREP	2320B	3
21-Nov-2011	IW-70-SHB310-161	K188-03	N	GEN PREP	2540C	3
21-Nov-2011	IW-70-SHB310-161	K188-03	N	GEN PREP	300.0	3
21-Nov-2011	IW-70-SHB310-161	K188-03	N	GEN PREP	300.0M	3
21-Nov-2011	IW-70-SHB310-161	K188-03	N	GEN PREP	4500F	3
21-Nov-2011	IW-70-SHB310-161	K188-03	N	GEN PREP	RSK175	3
21-Nov-2011	IW-70-SHB310-161	K188-03T	N	5030B	8260B	3
21-Nov-2011	IW-70-SHB310-161	K188-03T	N	GEN PREP	5310B	3
21-Nov-2011	IW-70-SHB310-161	K188-03T	N	GEN PREP	RSK175	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11K188 **Laboratory: EMXT**

EDD Filename: 11K188 **eQAPP Name: SealBeach_IRSite70**

Method Category: **GENCHEM**

Method: **300.0** ***Matrix:*** **AQ**

Sample ID: **IW-70-SHB310-161** ***Collected:*** **11/21/2011 1:34:00** ***Analysis Type:*** **DL1** ***Dilution:*** **10**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SULFATE	4.16	J	2.50	MDL	5.00	PQL	MG/L	J	RI

Method Category: **SVOA**

Method: **RSK175** ***Matrix:*** **AQ**

Sample ID: **IW-70-SHB310-161** ***Collected:*** **11/21/2011 1:34:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHANE	0.93	J	0.64	MDL	2.0	PQL	UG/L	J	RI
ETHENE	0.93	J	0.60	MDL	2.0	PQL	UG/L	J	RI

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **IW-70-SHB310-161** ***Collected:*** **11/21/2011 1:34:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOLUENE	0.50	J	0.20	MDL	1.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K188 **Laboratory: EMXT**

EDD Filename: 11K188 **eQAPP Name: SealBeach_IRSite70**

Reason Code Legend

Reason Code	*Description*
Cb	Calibration Blank Contamination
Ccv	Continuing Calibration Verification Percent Difference Lower Estimation
Ccv	Continuing Calibration Verification Percent Difference Lower Rejection
Ccv	Continuing Calibration Verification Percent Difference Upper Estimation
Ccv	Continuing Calibration Verification Percent Difference Upper Rejection
Ccv	Continuing Calibration Verification Percent Recovery Lower Estimation
Ccv	Continuing Calibration Verification Percent Recovery Lower Rejection
Ccv	Continuing Calibration Verification Percent Recovery Upper Estimation
Ccv	Continuing Calibration Verification Percent Recovery Upper Rejection
CcvCC	Continuing Calibration Verification Correlation Coefficient
CcvRrf	Continuing Calibration Verification Relative Response Factor
ContTune	Continuing Tune
Dup=0	Duplicate Sample Count = 0
Dup>1	Duplicate Sample Count > 1
Eb	Equipment Blank Contamination
EtoA	Extraction to Analysis Estimation
EtoA	Extraction to Analysis Rejection
Fb	Field Blank Contamination
Fd	Field Duplicate Precision
Ft	Field Triplicate Precision
IcCC	Initial Calibration Correlation Coefficient
IcRrf	Initial Calibration Relative Response Factor
IcRsd	Initial Calibration Percent Relative Standard Deviation
Icv	Initial Calibration Verification Percent Difference Lower Estimation
Icv	Initial Calibration Verification Percent Difference Lower Rejection
Icv	Initial Calibration Verification Percent Difference Upper Estimation
Icv	Initial Calibration Verification Percent Difference Upper Rejection
Icv	Initial Calibration Verification Percent Recovery Lower Estimation
Icv	Initial Calibration Verification Percent Recovery Lower Rejection
Icv	Initial Calibration Verification Percent Recovery Upper Estimation

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K188 **Laboratory: EMXT**

EDD Filename: 11K188 **eQAPP Name: SealBeach_IRSite70**

Icv	Initial Calibration Verification Percent Recovery Upper Rejection
IcvCC	Initial Calibration Verification Correlation Coefficient
IcvRrf	Initial Calibration Verification Relative Response Factor
IllogicalFraction	Illogical Fraction
InitTune	Initial Tune
Is	Internal Standard Estimation
Is	Internal Standard Rejection
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Lower Rejection
Lcs	Laboratory Control Spike Upper Estimation
Lcs	Laboratory Control Spike Upper Rejection
Lcs=0	Laboratory Control Sample Count = 0
Lcs>1	Laboratory Control Sample Count > 1
Ld	Laboratory Duplicate Precision
Lt	Laboratory Triplicate Precision
Mb	Method Blank Contamination
Mb=0	Method Blank Sample Count = 0
Mb>1	Method Blank Sample Count > 1
Moist	Percent Moisture
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Lower Rejection
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
Ms	Matrix Spike Upper Rejection
Ms=0	Matrix Spike Sample Count = 0
Ms>1	Matrix Spike Sample Count > 1
PEM	Performance Evaluation Mixture
Preservation	Preservation
ProfJudg	Professional Judgment
REM	Resolution Check Mixture
RI	Reporting Limit

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K188 **Laboratory: EMXT**

EDD Filename: 11K188 **eQAPP Name: SealBeach_IRSite70**

RI	Reporting Limit > Project Maximum Contamination Limit
RI	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation
StoA	Sampling to Analysis Rejection
StoE	Sampling to Extraction Estimation
StoE	Sampling to Extraction Rejection
StoL	Sampling to Leaching Estimation
StoL	Sampling to Leaching Rejection
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Lower Rejection
Surr	Surrogate/Tracer Recovery Upper Estimation
Surr	Surrogate/Tracer Recovery Upper Rejection
Tb	Trip Blank Contamination
TempEst	Temperature Estimation
TempRej	Temperature Rejection

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11K188

Reporting Limit Outliers

Lab Reporting Batch ID: 11K188 **Laboratory: EMXT**

EDD Filename: 11K188 **eQAPP Name: SealBeach_IRSite70**

Method: 300.0
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IW-70-SHB310-161	SULFATE	J	4.16	5.00	PQL	MG/L	J (all detects)

Method: 8260B
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IW-70-SHB310-161	2-HEXANONE	J	71	100	PQL	UG/L	J (all detects)
	TOLUENE	J	0.50	1.0	PQL	UG/L	
	TRICHLOROETHENE	J	19	50	PQL	UG/L	

Method: RSK175
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IW-70-SHB310-161	ETHANE	J	0.93	2.0	PQL	UG/L	J (all detects)
	ETHENE	J	0.93	2.0	PQL	UG/L	

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

LDC #: 26847G1

SDG #: 11K188

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/23/11

Page: 1 of 1

Reviewer: C

2nd Reviewer: V

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/21/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%RSD ≤ 30 v2
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	N	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	N	
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A ~~N~~	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/L~~OQ/LODs~~	SW N	
XIII.	Tentitatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	SW	
XVI.	Field duplicates	N	
XVII.	Field blanks	↓	TB = 5

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	MW-70-15-159 W	11		21		31	
2	MW-70-MNA17-160	12		22		32	
3	IW-70-SHB310-161	13		23		33	
4	IW-70-SHB310-161DL	14		24		34	
5	IR-70-TB-158	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 26847G1

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and CRQLs

Reviewer: A
2nd Reviewer: Th

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?

Y N N/A Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	Compound	Finding	Associated Samples	Qualifications
		QQQ	> calib range	3	J det / A

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26847G1
SDG #: -

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: C
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Date	Sample ID	Finding	Associated Samples	Qualifications
		3	QQQ > calib range		R / A
		4	All except QQQ -	diluted	+

Comments:

OVR.1S

LDC #: 26847G4

SDG #: 11K188

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12-22-11

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/21/11
II.	ICP/MS Tune	N	
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A N	
VI.	Matrix Spike Analysis	N	CS
VII.	Duplicate Sample Analysis	N	↓
VIII.	Laboratory Control Samples (LCS)	N	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	N	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	—	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: water

1	IW-70-SHB310-161	11		21		31	
2		12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 60071

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: CR
2nd reviewer: [illegible]

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, U, ____

Comments: Mercury by CVAA if performed

LDC #: 26847G6

SDG #: 11K188

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12-22-11

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: (Analyte) Alkalinity (Standard Method 2320B), Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Dissolved Hydrogen Sulfide (SM4500F), Organic Acids (EPA Method 300.0M), TDS (Standard Method 2540C), TOC (Standard Method 5310B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/21/11
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	N	CS
VI.	Duplicates	N	↓
VII.	Laboratory control samples	N	LCS/D
VIII.	Sample result verification	N	
IX.	Overall assessment of data	N	
X.	Field duplicates	—	
XI	Field blanks	—	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet

ND = No compounds detected
R = Rinsate
FB = Field blank

D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

1	MW-70-15-159	11		21		31	
2	MW-70-MNA17-160	12		22		32	
3	IW-70-SHB310-161	13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 60910W

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: CR
2nd reviewer:

All circled methods are applicable to each sample.

Sample ID	Parameter
3	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 HS
1-3	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 Organic Acids
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4

Comments:

LDC #: 26847G51

SDG #: 11K188

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 12/23/11

Page: 1 of 1

Reviewer: C

2nd Reviewer: ✓

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11 / 21 / 11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	N	
V	Surrogate recovery	N	
VI.	Matrix spike/Matrix spike duplicates	N	
VII.	Laboratory control samples	N	
VIII.	Target compound identification	N	
IX.	Compound quantitation/RL/LOQ/LODs	SW N	
X.	System Performance	N	
XI.	Overall assessment of data	SW N	
XII.	Field duplicates	N	
XIII.	Field blanks	↓	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	MW-70-15-159 (W)	11		21		31	
2	MW-70-MNA17-160	12		22		32	
3	IW-70-SHB310-161	13		23		33	
4	IW-70-SHB310-161DL	14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26847G51

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Level IV/D Only
Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	> calib range	3	J det/A

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26847G51
SDG #: -

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Reviewer: A
2nd Reviewer: [illegible]

METHOD: ✓ **GC** __ **HPLC**

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane	> calib range	3	R/A
	Ethane, Ethene	Diluted	4	↓

Comments: _____

Laboratory Data Consultants, Inc.

7750 El Camino Real, Ste. 2L Carlsbad, CA 92009

Phone 760.634.0437 **Web** www.lab-data.com **Fax** 760.634.0439

Insight EEC, Inc.
3020 E. Miraloma
Anaheim, CA 92806
ATTN: Mr. Nick Weinberger

January 3, 2012

SUBJECT: NWS Seal Beach, IR Site 70, Data Validation

Dear Mr. Weinberger,

Enclosed is the final validation report for the fractions listed below. This SDG was received on December 21, 2011.

LDC project# 26871:

SDG #	Fraction
11K221	Volatiles (EPA SW 846 Method 8260B) Dissolved Metals (EPA SW 846 Method 6010B) Dissolved Gases (Method RSK-175) Wet Chemistry (EPA Method 300.0 and 300.0M and Standard Method 2320B, 2540C, 4500F,and 5310B)

The following deliverables are submitted under this report:

- Attachment I — Sample ID Cross Reference and Data Review Level
- Attachment II — Overall Data Qualification Summary
- Enclosure I — EPA Level III ADR Outliers (including manual review outliers)

The data validation was performed in accordance to the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008 and for Inorganic Data Review, January 2010. Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience. The following items were evaluated during the review:

- Holding Times
- Sample Preservation
- Cooler Temperatures
- Initial Calibration (Manual Review)
- Continuing Calibration (Manual Review)
- Blanks
- Surrogates
- Internal Standards (Manual Review)
- Matrix Spike/Matrix Spike Duplicates
- Laboratory Control Samples
- Detection and Quantitation Limits

- Field QC Samples

Please feel free to contact us if you have any questions.

Sincerely,

Andrew Kong
Project Manager/Chemist

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
28-Nov-2011	IR-70-TB-173	K221-05	TB	5030B	8260B	3
28-Nov-2011	MW-70-RDO-4-174	K221-01	N	3010A	6010B	3
28-Nov-2011	MW-70-RDO-4-174	K221-01	N	5030B	8260B	3
28-Nov-2011	MW-70-RDO-4-174	K221-01	N	GEN PREP	2320B	3
28-Nov-2011	MW-70-RDO-4-174	K221-01	N	GEN PREP	2540C	3
28-Nov-2011	MW-70-RDO-4-174	K221-01	N	GEN PREP	300.0	3
28-Nov-2011	MW-70-RDO-4-174	K221-01	N	GEN PREP	300.0M	3
28-Nov-2011	MW-70-RDO-4-174	K221-01	N	GEN PREP	4500F	3
28-Nov-2011	MW-70-RDO-4-174	K221-01	N	GEN PREP	5310B	3
28-Nov-2011	MW-70-RDO-4-174	K221-01	N	GEN PREP	RSK175	3
28-Nov-2011	MW-70-RDO-4-174DUP	K221-01D	DUP	GEN PREP	2540C	3
28-Nov-2011	MW-70-RDO-4-174DUP	K221-01D	DUP	GEN PREP	300.0	3
28-Nov-2011	MW-70-RDO-4-174DUP	K221-01D	DUP	GEN PREP	4500F	3
28-Nov-2011	MW-70-RDO-4-174	K221-01I	N	GEN PREP	RSK175	3
28-Nov-2011	MW-70-RDO-4-174MS	K221-01M	MS	GEN PREP	300.0	3
28-Nov-2011	MW-70-RDO-4-174MSD	K221-01S	MSD	GEN PREP	300.0	3
28-Nov-2011	MW-70-RDO-4-174	K221-01T	N	5030B	8260B	3
28-Nov-2011	MW-70-RDO-4-174	K221-01T	N	GEN PREP	RSK175	3
28-Nov-2011	IR-70-FSB229-175	K221-02	N	3010A	6010B	3
28-Nov-2011	IR-70-FSB229-175	K221-02	N	5030B	8260B	3
28-Nov-2011	IR-70-FSB229-175	K221-02	N	GEN PREP	2320B	3
28-Nov-2011	IR-70-FSB229-175	K221-02	N	GEN PREP	2540C	3
28-Nov-2011	IR-70-FSB229-175	K221-02	N	GEN PREP	300.0	3
28-Nov-2011	IR-70-FSB229-175	K221-02	N	GEN PREP	300.0M	3
28-Nov-2011	IR-70-FSB229-175	K221-02	N	GEN PREP	4500F	3
28-Nov-2011	IR-70-FSB229-175	K221-02	N	GEN PREP	5310B	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
28-Nov-2011	IR-70-FSB229-175	K221-02	N	GEN PREP	RSK175	3
28-Nov-2011	IR-70-FSB229-175	K221-02T	N	GEN PREP	RSK175	3
28-Nov-2011	MW-70-49-176	K221-03	N	3010A	6010B	3
28-Nov-2011	MW-70-49-176	K221-03	N	5030B	8260B	3
28-Nov-2011	MW-70-49-176	K221-03	N	GEN PREP	2320B	3
28-Nov-2011	MW-70-49-176	K221-03	N	GEN PREP	2540C	3
28-Nov-2011	MW-70-49-176	K221-03	N	GEN PREP	300.0	3
28-Nov-2011	MW-70-49-176	K221-03	N	GEN PREP	300.0M	3
28-Nov-2011	MW-70-49-176	K221-03	N	GEN PREP	4500F	3
28-Nov-2011	MW-70-49-176	K221-03	N	GEN PREP	5310B	3
28-Nov-2011	MW-70-49-176	K221-03	N	GEN PREP	RSK175	3
28-Nov-2011	IR-70-EB-177	K221-04	EB	3010A	6010B	3
28-Nov-2011	IR-70-EB-177	K221-04	EB	5030B	8260B	3
28-Nov-2011	IR-70-EB-177	K221-04	EB	GEN PREP	300.0	3

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 11K221 **Laboratory: EMXT**

EDD Filename: 11K221 **eQAPP Name: SealBeach_IRSite70**

Method Category: **GENCHEM**

Method: **300.0** ***Matrix:*** **AQ**

Sample ID: IR-70-EB-177 ***Collected:*** 11/28/2011 3:00:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chloride-Cl	0.167	J	0.100	MDL	0.200	PQL	MG/L	J	RI
NITRATE-N	0.0828	J	0.0500	MDL	0.200	PQL	MG/L	J	RI

Method Category: **METALS**

Method: **6010B** ***Matrix:*** **AQ**

Sample ID: MW-70-RDO-4-174 ***Collected:*** 11/28/2011 10:54:00 ***Analysis Type:*** RES/DIS ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	0.0197	J	0.00300	MDL	0.200	PQL	MG/L	J	RI

Method Category: **SVOA**

Method: **RSK175** ***Matrix:*** **AQ**

Sample ID: MW-70-RDO-4-174 ***Collected:*** 11/28/2011 10:54:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHANE	1.1	J	0.64	MDL	2.0	PQL	UG/L	J	RI

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: IR-70-EB-177 ***Collected:*** 11/28/2011 3:00:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLOROBENZENE	0.38	J	0.20	MDL	1.0	PQL	UG/L	J	RI

Sample ID: IR-70-FSB229-175 ***Collected:*** 11/28/2011 12:42:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TRANS-1,2-DICHLOROETHENE	0.23	J	0.20	MDL	1.0	PQL	UG/L	J	RI
TRICHLOROETHENE	0.44	J	0.20	MDL	5.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K221 **Laboratory: EMXT**

EDD Filename: 11K221 **eQAPP Name: SealBeach_IRSite70**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **AQ**

Sample ID: **MW-70-49-176** ***Collected:*** **11/28/2011 2:38:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
VINYL CHLORIDE	0.33	J	0.20	MDL	0.50	PQL	UG/L	J	RI

Sample ID: **MW-70-RDO-4-174** ***Collected:*** **11/28/2011 10:54:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1-DICHLOROETHANE	0.47	J	0.20	MDL	1.0	PQL	UG/L	J	RI
CARBON DISULFIDE	0.39	J	0.20	MDL	1.0	PQL	UG/L	J	RI
DICHLORODIFLUOROMETHANE	0.47	J	0.30	MDL	2.0	PQL	UG/L	J	RI
TRICHLOROETHENE	3.5	J	0.20	MDL	5.0	PQL	UG/L	J	RI

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K221 **Laboratory: EMXT**

EDD Filename: 11K221 **eQAPP Name: SealBeach_IRSite70**

Reason Code Legend

Reason Code	*Description*
Cb	Calibration Blank Contamination
Ccv	Continuing Calibration Verification Percent Difference Lower Estimation
Ccv	Continuing Calibration Verification Percent Difference Lower Rejection
Ccv	Continuing Calibration Verification Percent Difference Upper Estimation
Ccv	Continuing Calibration Verification Percent Difference Upper Rejection
Ccv	Continuing Calibration Verification Percent Recovery Lower Estimation
Ccv	Continuing Calibration Verification Percent Recovery Lower Rejection
Ccv	Continuing Calibration Verification Percent Recovery Upper Estimation
Ccv	Continuing Calibration Verification Percent Recovery Upper Rejection
CcvCC	Continuing Calibration Verification Correlation Coefficient
CcvRrf	Continuing Calibration Verification Relative Response Factor
ContTune	Continuing Tune
Dup=0	Duplicate Sample Count = 0
Dup>1	Duplicate Sample Count > 1
Eb	Equipment Blank Contamination
EtoA	Extraction to Analysis Estimation
EtoA	Extraction to Analysis Rejection
Fb	Field Blank Contamination
Fd	Field Duplicate Precision
Ft	Field Triplicate Precision
IcCC	Initial Calibration Correlation Coefficient
IcRrf	Initial Calibration Relative Response Factor
IcRsd	Initial Calibration Percent Relative Standard Deviation
Icv	Initial Calibration Verification Percent Difference Lower Estimation
Icv	Initial Calibration Verification Percent Difference Lower Rejection
Icv	Initial Calibration Verification Percent Difference Upper Estimation
Icv	Initial Calibration Verification Percent Difference Upper Rejection
Icv	Initial Calibration Verification Percent Recovery Lower Estimation
Icv	Initial Calibration Verification Percent Recovery Lower Rejection
Icv	Initial Calibration Verification Percent Recovery Upper Estimation

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K221 **Laboratory: EMXT**

EDD Filename: 11K221 **eQAPP Name: SealBeach_IRSite70**

Icv	Initial Calibration Verification Percent Recovery Upper Rejection
IcvCC	Initial Calibration Verification Correlation Coefficient
IcvRrf	Initial Calibration Verification Relative Response Factor
IllogicalFraction	Illogical Fraction
InitTune	Initial Tune
Is	Internal Standard Estimation
Is	Internal Standard Rejection
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Lower Rejection
Lcs	Laboratory Control Spike Upper Estimation
Lcs	Laboratory Control Spike Upper Rejection
Lcs=0	Laboratory Control Sample Count = 0
Lcs>1	Laboratory Control Sample Count > 1
Ld	Laboratory Duplicate Precision
Lt	Laboratory Triplicate Precision
Mb	Method Blank Contamination
Mb=0	Method Blank Sample Count = 0
Mb>1	Method Blank Sample Count > 1
Moist	Percent Moisture
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Lower Rejection
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
Ms	Matrix Spike Upper Rejection
Ms=0	Matrix Spike Sample Count = 0
Ms>1	Matrix Spike Sample Count > 1
PEM	Performance Evaluation Mixture
Preservation	Preservation
ProfJudg	Professional Judgment
REM	Resolution Check Mixture
RI	Reporting Limit

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Data Qualifier Summary

Lab Reporting Batch ID: 11K221 **Laboratory: EMXT**

EDD Filename: 11K221 **eQAPP Name: SealBeach_IRSite70**

RI	Reporting Limit > Project Maximum Contamination Limit
RI	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation
StoA	Sampling to Analysis Rejection
StoE	Sampling to Extraction Estimation
StoE	Sampling to Extraction Rejection
StoL	Sampling to Leaching Estimation
StoL	Sampling to Leaching Rejection
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Lower Rejection
Surr	Surrogate/Tracer Recovery Upper Estimation
Surr	Surrogate/Tracer Recovery Upper Rejection
Tb	Trip Blank Contamination
TempEst	Temperature Estimation
TempRej	Temperature Rejection

* denotes a non-reportable result

Project Name and Number: 4-14114 - NWS SEAL BEACH, IR SITE 70.

Enclosure I

EPA Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

11K221

Reporting Limit Outliers

Lab Reporting Batch ID: 11K221 **Laboratory: EMXT**

EDD Filename: 11K221 **eQAPP Name: SealBeach_IRSite70**

Method: 300.0

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-EB-177	Chloride-Cl	J	0.167	0.200	PQL	MG/L	J (all detects)
	NITRATE-N	J	0.0828	0.200	PQL	MG/L	

Method: 6010B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
MW-70-RDO-4-174	MANGANESE	J	0.0197	0.200	PQL	MG/L	J (all detects)

Method: 8260B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
IR-70-EB-177	CHLOROBENZENE	J	0.38	1.0	PQL	UG/L	J (all detects)
IR-70-FSB229-175	TRANS-1,2-DICHLOROETHENE	J	0.23	1.0	PQL	UG/L	J (all detects)
	TRICHLOROETHENE	J	0.44	5.0	PQL	UG/L	
MW-70-49-176	VINYL CHLORIDE	J	0.33	0.50	PQL	UG/L	J (all detects)
MW-70-RDO-4-174	1,1-DICHLOROETHANE	J	0.47	1.0	PQL	UG/L	J (all detects)
	CARBON DISULFIDE	J	0.39	1.0	PQL	UG/L	
	DICHLORODIFLUOROMETHANE	J	0.47	2.0	PQL	UG/L	
	TRANS-1,2-DICHLOROETHENE	J	6.0	25	PQL	UG/L	
	TRICHLOROETHENE	J	3.5	5.0	PQL	UG/L	

Method: RSK175

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
MW-70-RDO-4-174	ETHANE	J	1.1	2.0	PQL	UG/L	J (all detects)

LDC #: 26871A1
SDG #: 11K221
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 1/3/12
Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/28/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30 ~~%~~ r²
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	N	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	N	
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A ~~N~~	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/~~LOQ/LOD~~s	SW	
XIII.	Tentitatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	SW	
XVI.	Field duplicates	N	
XVII.	Field blanks	↓	TB = 6 EB = 5

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet

ND = No compounds detected
R = Rinsate
FB = Field blank

D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

1	MW-70-RDO-4-174	11	MBLK1W	21		31	
2	MW-70-RDO-4-174DL	12	↓ 2W	22		32	
3	IR-~~71~~-70-FSB229-175	13		23		33	
4	MW-70-49-176	14		24		34	
5	IR-70-EB-177	15		25		35	
6	IR-70-TB-173	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 26871A1

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and CRQLs

Reviewer: A
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?

Y N N/A Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	Compound	Finding	Associated Samples	Qualifications
		QQQ, c	> calib range	1	J det/A

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26871A1

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: A
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Date	Sample ID	Finding	Associated Samples	Qualifications
		1	QQQ, c > calib	range	R/A
		2	All except QQQ, c - diluted		↓

Comments:

OVR.1S

LDC #: 26871A4
SDG #: 11K221
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 12/28/11
Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: Dissolved Metals (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/28/11
II.	ICP/MS Tune	N	
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	N A	
VI.	Matrix Spike Analysis	N	client specific
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N A	LCS/LCSD
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	N	not performed
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	ND	TB3

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

1	MW-70-RDO-4-174	11	MB	21		31	
2	IR-71-FSB229-175	12		22		32	
3	MW-70-49-176	13		23		33	
4	IR-70-EB-177	14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26671B4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: W
2nd reviewer: A

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-4	W	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ____
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-

Comments: Mercury by CVAA if performed

LDC #: 26871A6 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/28/11
SDG #: 11K221 ADR Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: (Analyte) Alkalinity (Standard Method 2320B), Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), Dissolved Hydrogen Sulfide (SM4500F), Organic Acids (EPA Method 300.0M), TDS (Standard Method 2540C), TOC (Standard Method 5310B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/28/11
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	N A	
VI.	Duplicates	N A	
VII.	Laboratory control samples	N A	LCS/LCSD
VIII.	Sample result verification	N	
IX.	Overall assessment of data	N	
X.	Field duplicates	N	
XI	Field blanks	—	TB=4

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: A2

1	MW-70-RDO-4-174	11	MB	21		31	
2	IR-71-FSB229-175	12		22		32	
3	MW-70-49-176	13		23		33	
4	IR-70-EB-177	14		24		34	
5	MW-70-RDO-4-174MS	15		25		35	
6	MW-70-RDO-4-174MSD	16		26		36	
7	MW-70-RDO-4-174DUP	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 16171A6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: [illegible]

All circled methods are applicable to each sample.

Sample ID	Matrix	Parameter
1-3	Aq	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 Organic acid Hg
4	✓	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
~5-7	Aq	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
7	✓	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4 Hg
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4

Comments:

LDC #: 26871A51 **VALIDATION COMPLETENESS WORKSHEET** Date: 1/3/12
SDG #: 11K221 ADR Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer:
2nd Reviewer:

METHOD: GC Methane, Ethane, & Ethene (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 11/28/11
II	Initial calibration	A	%RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	N	
V	Surrogate recovery	N	
VI.	Matrix spike/Matrix spike duplicates	N	
VII.	Laboratory control samples	N	
VIII.	Target compound identification	N	
IX.	Compound quantitation/RL/LOQ/LODs	SW	
X.	System Performance	N	
XI.	Overall assessment of data	SW	
XII.	Field duplicates	N	
XIII.	Field blanks	↓	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

All water

1	MW-70-RDO-4-174	11	MBLK1W	21		31	
2	MW-70-RDO-4-174DL1	12		22		32	
3	MW-70-RDO-4-174DL2	13		23		33	
4	IR-~~71~~-70-FSB229-175	14		24		34	
5	IR-~~71~~-70-FSB229-175DL	15		25		35	
6	MW-70-49-176	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26871A51

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: A
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Level IV/D Only
Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane, Ethane	> calib range	1	J Est /A
	Methane	1	3, 5	1

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26871A51
SDG #: -

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

Y N N/A Was the overall quality and usability of the data acceptable?

#	Compound Name	Finding	Associated Samples	Qualifications
	Methane, Ethane	> calib range	1	R/A
	Ethane, Methane	diluted or > calib range	2	J
	Methane	> calib range	4	J
	All except Methane	Diluted	3, 5	J

Comments: _____

OVRNew.wpd

APPENDIX E

DATABASE EXPORT OF ANALYTICAL RESULTS

Table E-1

Source Area Treatment Grid Analytical Results

			Well Number/Sampling Date/Screen Interval																											
Parameters	**Method**	**Unit**	**IW-70-SAT03 9/30/2010 (25-55)***	**IW-70-SAT16 9/29/2010 (25-55)***	**IW-70-SAT16 (D) 9/29/2010 (25-55)***	**IW-70-SAT31 9/29/2010 (25-55)***	**IW-70-SAT35 9/29/2010 (25-55)***	**IW-70-SAT36 9/29/2010 (25-55)***	**IW-70-SAT45 9/29/2010 (25-55)***	**IW-70-SAT46 9/29/2010 (25-55)***	**IW-70-SAT50 9/30/2010 (25-55)***	**MW-70-27 8/21/2008 (26-36)***	**MW-70-27 9/13/2010 (26-36)***	**MW-70-27 7/27/2011 (26-36)***	**MW-70-27 11/3/2011 (26-36)***	**MW-70-27 (D) 11/3/2011 (26-36)***	**MW-70-28 8/21/2008 (50-60)***	**MW-70-28 9/13/2010 (50-60)***	**MW-70-28 7/27/2011 (50-60)***	**MW-70-28 11/3/2011 (50-60)***	**IW-70-SAT35 11/22/2011 (25-55)***	**MW-70-MNA01 8/20/2008 (40-50)***	**MW-70-MNA01 (D) 8/20/2008 (40-50)***	**MW-70-MNA01 9/22/2010 (40-50)***	**MW-70-MNA01 11/2/2011 (40-50)***	**MW-70-MNA02 8/20/2008 (35-45)***	**MW-70-MNA02 9/10/2010 (35-45)***	**MW-70-MNA02 11/2/2011 (35-45)***
Wet Chemistry																														
TOTAL ALKALINITY	2320B	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	720	1190	810	783	784	348	1260	744	659	2640	NA	NA	NA	NA	NA	NA	NA
TDS	2540C	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	11,000 J	5650	7210	7400	7320	3,300 J	4060	3120	3150	4830	NA	NA	NA	NA	NA	NA	NA
BROMIDE	300	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.500 U	2.91	4.95	NA	NA	2.04	2.51	2.99	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE-CL	300	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,390	1420	1650	1730	1760	811	1370	933	884	1570	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	300	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.200 U	0.0706 J	1.00 U	0.400 U	0.400 U	0.396	0.200 U	1.00 U	0.400 U	2.00 U	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	300	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.00 U	1.00 U	1.00 U	2.00 U	2.00 U	0.200 U	1.00 U	1.00 U	0.400 U	2.00 U	NA	NA	NA	NA	NA	NA	NA
SULFATE	300	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,540	1360	2530	2630	2680	774	336	582	659	15.2	NA	NA	NA	NA	NA	NA	NA
ACETATE	300.0M	mg/L	2230	3850	3490	4780	2830	4120	630	3490	456	0.548 J	1.00 U	1.00 U	1.00 U	1.00 U	0.550 J	10.2	1.00 U	1.00 U	58.9	NA	NA	NA	1.00 U	NA	NA	1.00 U
BUTYRATE	300.0M	mg/L	2140	1390	1390	1050	2.00 U	277	16.8	374	11.5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	NA	NA	NA	1.00 U	NA	NA	1.00 U
LACTATE	300.0M	mg/L	4.00 U	2.00 U	2.00 U	4.00 U	2.00 U	4.00 U	3.19	2.00 U	1.03	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	NA	NA	NA	1.00 U	NA	NA	1.00 U
PROPIONATE	300.0M	mg/L	1460	1680	1590	643	175	717	45.4	184	25.8	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	3.13	NA	NA	NA	1.00 U	NA	NA	1.00 U
HYDROGEN SULFIDE	4500F	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.00 U	1.00 U	NA	NA	NA	1.00 U	4.53	NA	NA	NA	NA	NA	NA	NA
TOC	5310B	mg/L	4350	2910	2890	3110	1220	2180	258	1590	205	4.1	5.36	3.73	4.16	4.05	2.08 U	11.6	3.10	2.80	86.2	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																														
ARSENIC	6010B	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.353	0.358	NA	NA	NA	0.0541 J	0.190 J	NA	NA	NA	NA	NA	NA	NA
IRON	6010B	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.0	34.4	NA	NA	NA	9.92	0.217	NA	NA	NA	NA	NA	NA	NA
MANGANESE	6010B	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.90	9.74	NA	NA	NA	1.65	3.30	NA	NA	NA	NA	NA	NA	NA
VOCs																														
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	2.7	3.7	1.0 U	0.29 J	0.30 J	0.48 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.52 J	0.48 J	0.46 J	5.0 U	1.0 U	5.0 U	0.61 J	1.0 U	0.55 J	0.62 J	0.42 J	0.44 J	0.54 J	0.51 J	0.43 J	0.24 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.35 J	0.24 J	0.47 J	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	3.0	3.0	3.0	4.2 J	1.0 U	5.0	6.4	3.1	11	9.3	8	3.3	3.6	3.5	2.7	7.1	1.5	1.5	1.0 U	1.0 U	1.0 U	0.96 J	0.61 J	24	10	13
1,1-DICHLOROETHENE	8260B	µg/L	3.6 J	2.9	3.0	**10**	1.2	**22**	0.50 U	4.5	1.8	**13**	**18**	3.9	4.2	4.0	**6.2**	0.50 U	0.54	0.49 J	0.50 U	1.3	1.3	3.2	3.2	0.68	0.63	0.78
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 UJ	1.0 UJ	5.0 U	1.0 UJ	5.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 UJ	1.0 UJ	5.0 U	1.0 UJ	5.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	10 U	2.0 U	10 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.41 J	0.40 J	2.5 U	0.53	2.5 U	0.48 J	0.74	0.80	1	0.63	0.37 J	0.54	0.53	0.27 J	0.30 J	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.8	0.64	1.2
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	0.24 J	0.26 J	5.0 U	1.0 U	5.0 U	0.64 J	0.38 J	0.95 J	0.47 J	0.42 J	0.34 J	0.41 J	0.39 J	1.0 U	0.37 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.6	0.58 J	0.91 J
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	95	230	250	150	56	79	25	90	7.7 J	10 UJ	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	36	10 UJ	10 UJ	10 U	10 U	10 UJ	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	25	25	38 J	10 U	50 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	16	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	50 U	10 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 U	460	490	260	290	50 U	54	150	27	6.4 J	6.6 J	10 U	10 U	5.1 J	10 UJ	7.3 J	10 U	10 U	130	10 UJ	10 UJ	10 U	10 U	10 UJ	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	0.23 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	10 U	2.0 U	10 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U

Table E-1

Source Area Treatment Grid Analytical Results

			Well Number/Sampling Date/Screen Interval																									
Parameters	**Method**	**Unit**	**IW-70-SAT03 9/30/2010 (25-55)***	**IW-70-SAT16 9/29/2010 (25-55)***	**IW-70-SAT16 (D) 9/29/2010 (25-55)***	**IW-70-SAT31 9/29/2010 (25-55)***	**IW-70-SAT35 9/29/2010 (25-55)***	**IW-70-SAT36 9/29/2010 (25-55)***	**IW-70-SAT45 9/29/2010 (25-55)***	**IW-70-SAT46 9/29/2010 (25-55)***	**IW-70-SAT50 9/30/2010 (25-55)***	**MW-70-27 8/21/2008 (26-36)***	**MW-70-27 9/13/2010 (26-36)***	**MW-70-27 7/27/2011 (26-36)***	**MW-70-27 11/3/2011 (26-36)***	**MW-70-27 (D) 11/3/2011 (26-36)***	**MW-70-28 8/21/2008 (50-60)***	**MW-70-28 9/13/2010 (50-60)***	**MW-70-28 7/27/2011 (50-60)***	**MW-70-28 11/3/2011 (50-60)***	**IW-70-SAT35 11/22/2011 (25-55)***	**MW-70-MNA01 8/20/2008 (40-50)***	**MW-70-MNA01 (D) 8/20/2008 (40-50)***	**MW-70-MNA01 9/22/2010 (40-50)***	**MW-70-MNA01 11/2/2011 (40-50)***	**MW-70-MNA02 8/20/2008 (35-45)***	**MW-70-MNA02 9/10/2010 (35-45)***	**MW-70-MNA02 11/2/2011 (35-45)***
CARBON DISULFIDE	8260B	µg/L	1.2	1.5	1.6	6.9	0.68 J	5.5	1.5	0.36 J	0.67 J	0.61 J	14	1.0 U	0.23 J	0.24 J	1.0 U	5.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	2.5 U	0.50 U	2.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	10 U	2.3	10 U	2.0 U	0.96 J	0.99 J	2.0 U	2.0 U	4.1	3.2	3.1	2.0 U	2.0 U	2.0 U	0.53 J	0.49 J	2.0 U	2.0 U	2.0 U	3.3	2.0 U	2.0 U	0.65 J
CHLOROFORM	8260B	µg/L	9.8	11	11	8.1	1.0 U	26	42	0.98 J	2.9	39	17	67	59	58	3.9	20	1.0 U	1.0 U	1.0 U	5.5	6.1 U	7.2	1.7	0.52 J	0.21 J	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	10 U	1.3 J	10 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	**1300**	**1400**	**1200**	**4900**	**740**	**7300**	**300**	**2300**	**1400**	**4,600**	**6100**	**600**	**1200**	**1500**	**530**	**11**	**51**	**40**	0.50 J	**38**	**40**	**490**	**380**	**31**	**45**	**71**
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	10 U	2.0 U	10 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.46 J
ETHYLBENZENE	8260B	µg/L	0.21 J	0.28 J	0.27 J	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.5	2.6	2.5	3.9 J	1.0 U	7.8	0.80 J	1.2	0.85 J	41 J	140	12	14	14	35 J	2	0.92 J	1.6	1.0 U	0.59 J	0.60 J	3.4	1.6	2.9	3.1	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 UJ	1.0 UJ	5.0 U	1.0 UJ	5.0 UJ	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	4.1 U	3.7 U	3.8 U	6.5 U	2.6 U	11	3.7 U	5.7 U	2.6 U	1.2	1.0 U	0.77 J	0.84 J	0.80 J	1.0 U	1.3 U	1.0 U	1.0 U	0.55 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	0.23 J	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	0.26 J	0.29 J	5.0 U	1.0 U	5.0 U	0.54 J	1.0 U	1.0 U	**8**	1.7	1.6	1.8	1.7	4.7	0.30 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.66 J	0.65 J	0.21 J	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	0.22 J	0.21 J	5.0 U	1.0 U	5.0 U	0.22 J	1.0 U	1.0 U	0.28 J	0.21 J	1.0 U	1.0 U	1.0 U	0.20 J	1.0 U	1.0 U	1.0 U	0.29 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	**46**	**22**	**22**	**28**	**11**	**28**	**14**	**11**	**13**	**35**	**49**	**11**	**12**	**12**	**13**	**21**	**12**	**11**	5.3	**27**	**28**	**49**	**56**	1.5	1.9	3.3
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	**770**	**840**	**840**	**1400**	**5.3**	**660 J**	**180 J**	**63**	**130 J**	**7,100**	**1300**	**980**	**1800**	**2100**	**10,000**	**12**	**7.0**	4.3 J	0.47 J	**1,500**	**1,400**	**2200**	**2800**	**46**	**35 J**	**26**
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	10 U	2.0 U	10 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.25 J	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	**260**	**250**	**250**	**350**	**1300**	**530**	**370**	**200**	**330**	**32**	**3700**	**1300**	**1000**	**1300**	**18**	**230**	**480**	**340**	**3.3**	0.38 J	0.39 J	**300**	**290**	**7.1**	**4.5**	**10**
XYLENES (TOTAL)	8260B	µg/L	0.23 J	2.0 U	2.0 U	10 U	2.0 U	10 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)																												
DEHALOCOCCOIDES	qPCR	µg/L	5.00E+0 J	6.00E+02 J	6.00E+0 J	2.00E+06	4.00E+08	5.00E+05	1.00E+07	2.00E+07	4.00E+07	ND[a]	7.00E+08	NA	3.00E+07	NA	700	2.00E+08	NA	2.00E+07	600,000,000[b]	3.00E+05	NA	NA	6.00E+04	NA	NA	4.00E+03 U
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	2.00E+0 U	2.00E+03 J	2.00E+0 J	2.00E+06	3.00E+08	4.00E+04	2.00E+07	1.00E+07	5.00E+06	NA	3.00E+08	NA	4,000,000[c]	NA	8,000[b]	3.00E+08	NA	10,000,000[c]	3.00E+08	2.00E+05	NA	NA	30,000[c]	NA	NA	NA
Dissolved Hydrocarbon Gases																												
ETHANE	RSK175	µg/L	9.9	6.0	6.9	5.1	0.89 J	3.7	6.2	2.6	4.8	2.0 U	4	2.0	2.0 U	2.8	3.3	7.5	9.3	8.8	0.94 J	2.0 U	2.0 U	2.0 U	2.9	5.9	2.3	4.6
ETHENE	RSK175	µg/L	85	57	59	500 U	1000 U	55	46	1000 U	31	2.0 U	130	77	72	67	0.60 J	870	300	230	130	2.0 U	2.0 U	12	33	2.0 U	2.0 U	3.6
METHANE	RSK175	µg/L	1100	240	220	2600	12000	170	11000	10000	7400	26	160	12000	12000	11000	75	340	17000	13000	15000	31	30	26	5500	87	87	3100

Table E-1

Source Area Treatment Grid Analytical Results

			Well Number/Sampling Date/Screen Interval														
Parameters	**Method**	**Unit**	**MW-70-MNA03 8/25/2008 (35-45)***	**MW-70-MNA03 9/8/2010 (35-45)***	**MW-70-MNA03 11/2/2011 (35-45)***	**MW-70-MNA04 8/25/2008 (35-45)***	**MW-70-MNA04 9/10/2010 (35-45)***	**MW-70-MNA04 11/2/2011 (35-45)***	**MW-70-PMW01A 8/20/2008 (25-35)***	**MW-70-PMW01A 9/3/2010 (25-35)***	**MW-70-PMW01A (D) 9/3/2010 (25-35)***	**MW-70-PMW01A 7/27/2011 (25-35)***	**MW-70-PMW01A 11/3/2011 (25-35)***	**MW-70-PMW01B 8/20/2008 (45-55)***	**MW-70-PMW01B 9/3/2010 (45-55)***	**MW-70-PMW01B 7/27/2011 (45-55)***	**MW-70-PMW01B 11/3/2011 (45-55)***
Wet Chemistry																	
TOTAL ALKALINITY	2320B	mg/L	NA	NA	NA	NA	NA	NA	650	1130	1120	607	1120	320	1450	791	767
TDS	2540C	mg/L	NA	NA	NA	NA	NA	NA	5,150	4650	4200	1220	2370	2,420	4800	4110	4240
BROMIDE	300	mg/L	NA	NA	NA	NA	NA	NA	2.19	2.8	2.54	2.50 U	NA	1.14	2.46	3.48	NA
CHLORIDE-CL	300	mg/L	NA	NA	NA	NA	NA	NA	20.0 U	1270	1270	338	709	10.0 U	1630	1210	1250
NITRATE-N	300	mg/L	NA	NA	NA	NA	NA	NA	0.200 U	0.400 U	0.400 U	1.00 U	0.400 U	5.44	0.400 U	1.00 U	0.400 U
NITRITE-N	300	mg/L	NA	NA	NA	NA	NA	NA	0.200 U	0.400 U	0.400 U	1.00 U	0.400 U	0.200 U	0.400 U	1.00 U	1.00 U
SULFATE	300	mg/L	NA	NA	NA	NA	NA	NA	1,840	34.7	34.8	2.50 U	1.33	746	298	852	923
ACETATE	300.0M	mg/L	NA	NA	1.00 U	NA	NA	1.00 U	1.00 U	832	845	22.2	327	1.00 U	121	1.00 U	1.00 U
BUTYRATE	300.0M	mg/L	NA	NA	1.00 U	NA	NA	1.00 U	1.00 U	57.3	53.6	1.00 U	5.23	1.00 U	3.77	1.00 U	1.00 U
LACTATE	300.0M	mg/L	NA	NA	1.00 U	NA	NA	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
PROPIONATE	300.0M	mg/L	NA	NA	1.00 U	NA	NA	1.00 U	1.00 U	546	565	1.00 U	18.4	1.00 U	9.32	1.00 U	1.00 U
HYDROGEN SULFIDE	4500F	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U
TOC	5310B	mg/L	NA	NA	NA	NA	NA	NA	2.72 U	910	915	34.5	174	1.60 U	67.5	4.06	4.38
Dissolved Metals																	
ARSENIC	6010B	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0819 J	NA	NA	NA	0.0936 J
IRON	6010B	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.87	NA	NA	NA	24.5
MANGANESE	6010B	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.34	NA	NA	NA	2.44
VOCs																	
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.47 J	0.53 J	1.0 U	1.0 U	3.5	0.32 J	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.42 J	1.2	1.1	1.1	1.0 U	1.0 U	1.0 U	1	0.31 J	0.20 J
1,1-DICHLOROETHANE	8260B	µg/L	40	25	29	5	7.7	33	10	5.4	5.5	1.0 U	1.0 U	1.0 U	4.8	1.1	0.92 J
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	0.50 U	0.50 U	1.9	3	2.3	**16**	5.2	5.1	0.50 U	0.50 U	**6.6**	**23**	0.36 J	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	8.5	5.5	8.0	0.75	1.4	6.0	0.25 J	0.73	0.78	0.50 U	0.50 U	0.50 U	0.7	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	3.5	4.3	5.6	0.34 J	0.61 J	2.7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.28 J	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 UJ	10 U	10 U	10 UJ	10 U	10 U	10 UJ	68	58	4.7 J	10 U	10 UJ	13	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	10 U	10 U	10 UJ	10 U	10 U	8.6 J	53	47	45	28	24 J	19	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.30 J	0.46 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table E-1

Source Area Treatment Grid Analytical Results

			Well Number/Sampling Date/Screen Interval														
Parameters	**Method**	**Unit**	**MW-70-MNA03 8/25/2008 (35-45)***	**MW-70-MNA03 9/8/2010 (35-45)***	**MW-70-MNA03 11/2/2011 (35-45)***	**MW-70-MNA04 8/25/2008 (35-45)***	**MW-70-MNA04 9/10/2010 (35-45)***	**MW-70-MNA04 11/2/2011 (35-45)***	**MW-70-PMW01A 8/20/2008 (25-35)***	**MW-70-PMW01A 9/3/2010 (25-35)***	**MW-70-PMW01A (D) 9/3/2010 (25-35)***	**MW-70-PMW01A 7/27/2011 (25-35)***	**MW-70-PMW01A 11/3/2011 (25-35)***	**MW-70-PMW01B 8/20/2008 (45-55)***	**MW-70-PMW01B 9/3/2010 (45-55)***	**MW-70-PMW01B 7/27/2011 (45-55)***	**MW-70-PMW01B 11/3/2011 (45-55)***
CARBON DISULFIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.7	3.2	0.79 J	0.83 J	1.0 U	3.4	0.28 J	0.31 J
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.5	2.0 U	0.78 J	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	0.68 J	0.29 J	0.63 J	8.5	20	20	1.0 U	1.0 U	6.5	26	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	2.8	4.2	5.4	**270**	**170**	**130**	**1,300**	**4200**	**4400**	2.7	0.81 J	**33**	**4900**	**39**	**16**
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 UJ	1.0 U	1.0 U	7.5	1.3	3.9	21	9	9.1	1.0 U	1.0 U	130	15	0.35 J	0.97 J
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	7.2	7	1.0	0.66 J	1.0 U	3.4	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	0.39 J	0.22 J	1.0 U	2	3.8	4.8	**9.5**	1.1	1.1	1.0 U	1.0 U	3	0.48 J	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.37 J	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.21 J	0.27 J	0.34 J	**17**	7.3	3.9	**44**	**28**	**28**	6.6	7.9	1.4	**86**	**34**	**33**
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	1.3 J	0.85 J	0.61 J	**250**	**190 J**	**210**	**11,000**	**1800**	**1800**	1.3 J	1.0 J	**8,500**	**900**	**7.9**	4.4 J
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.26 J	0.23 J	0.22 J	2.0 U	2.0 U	2.0 U	2.0 U	0.67 J	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.50 U	0.35 J	0.45 J	**1.8**	**0.9**	**4.1**	**25**	**250**	**260**	**30**	**5.5**	**0.51**	**3000**	**2700**	**2200**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)																	
DEHALOCOCCOIDES	qPCR	µg/L	NA	NA	4.00E+03 U	NA	NA	4.00E+03 U	NA	NA	NA	NA	3.00E+08	NA	NA	NA	7.00E+07
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.00E+08	NA	NA	NA	4.00E+07
Dissolved Hydrocarbon Gases																	
ETHANE	RSK175	µg/L	0.65 J	2.0 U	0.72 J	19	20	63	18	6.1	6	0.66 J	1.3 J	2.0 U	16	3.6	4.2
ETHENE	RSK175	µg/L	0.64 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1.9 J	31	28	120	92	2.0 U	990	720	540
METHANE	RSK175	µg/L	70	94	250	190	170	400	450	94	88	15000	14000	2.4	3000	14000	12000

Notes:

(D) - Duplicate Sample
J - estimated value
µg/L - microgram per liter
mg/L - milligrams per liter
MTBE - methyl tertiary butyl ether
NA - not analyzed
ND - not detected
qPCR - Quantitation Polymerase Chain Reaction
U - not detected
UJ -analyte not reported above the detection limit; the sample qu
Bolded parameters are constituents of concern and bolded value
[a] Not detected: Sample specific quantitation limit is 4000 per liter.
[b] Correction factor applied to correct for non-specific polymerase
[c] Correction factor applied to correct for non-specific PCR amplifi
*(26-36) Well Screen Interval - feet below ground surface

Table E-2

Upper Fines Point of Compliance Analytical Results

			Well Number/Sampling Date/Screen Interval																	
			MW-70-02	MW-70-02	MW-70-02	MW-70-02	MW-70-03	MW-70-10	MW-70-10 (D)	MW-70-10	MW-70-10	MW-70-10	MW-70-17	MW-70-17	MW-70-17	MW-70-17	MW-70-22	MW-70-22	MW-70-22	MW-70-22
			9/3/2008	9/15/2009	9/14/2010	10/28/2011	10/23/2011	8/28/2008	8/28/2008	9/15/2009	9/14/2010	10/31/2011	8/27/2008	8/31/2009	9/14/2010	10/28/2011	9/3/2008	9/2/2009	9/14/2010	10/28/2011
Parameters	**Method**	**Unit**	**(20-30)***	**(20-30)***	**(20-30)***	**(20-30)***	**(20-30)***	**(30-40)***	**(30-40)***	**(30-40)***	**(30-40)***	**(30-40)***	**(30-40)***	**(30-40)***	**(30-40)***	**(30-40)***	**(20-30)***	**(20-30)***	**(20-30)***	**(20-30)***
Wet Chemistry																				
TOTAL ALKALINITY	2320B	mg/L	560	NA	NA	NA	NA	270	273	NA	NA	NA	323	NA	NA	NA	170	NA	NA	NA
TOTAL DISSOLVED SOLIDS	2540C	mg/L	3,210	NA	NA	NA	NA	3,870	3,860	NA	NA	NA	5,430	NA	NA	NA	37,200	NA	NA	NA
BROMIDE	300	mg/L	1.79	NA	NA	NA	NA	0.91	1.07	NA	NA	NA	1.37	NA	NA	NA	55.3	NA	NA	NA
CHLORIDE-CL	300	mg/L	293	NA	NA	NA	NA	1,070	1,080	NA	NA	NA	2,410	NA	NA	NA	19,900	NA	NA	NA
NITRATE-N	300	mg/L	9.63	NA	NA	NA	NA	0.200 U	0.200 U	NA	NA	NA	0.200 U	NA	NA	NA	1.00 U	NA	NA	NA
NITRITE-N	300	mg/L	0.200 U	NA	NA	NA	NA	0.400 U	0.400 U	NA	NA	NA	1.00 U	NA	NA	NA	2.00 U	NA	NA	NA
SULFATE	300	mg/L	1,190	NA	NA	NA	NA	973	972	NA	NA	NA	707	NA	NA	NA	2,610	NA	NA	NA
ACETATE	300.0M	mg/L	1.00 U	NA	NA	NA	NA	1.00 U	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA
BUTYRATE	300.0M	mg/L	1.00 U	NA	NA	NA	NA	1.00 U	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA
LACTATE	300.0M	mg/L	1.00 U	NA	NA	NA	NA	1.00 U	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA
PROPIONATE	300.0M	mg/L	1.00 U	NA	NA	NA	NA	1.00 U	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA
HYDROGEN SULFIDE	4500F	mg/L	1.00 U	NA	NA	NA	NA	1.00 U	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA
TOTAL ORGANIC CARBON	5310B	mg/L	4.12	NA	NA	NA	NA	1.9	1.85	NA	NA	NA	2.61	NA	NA	NA	1.45	NA	NA	NA
Dissolved Metals																		NA	NA	NA
ARSENIC	6010B	mg/L	0.200 U	NA	NA	NA	NA	0.200 U	0.200 U	NA	NA	NA	0.200 U	NA	NA	NA	0.200 U	NA	NA	NA
IRON	6010B	mg/L	0.200 U	NA	NA	NA	NA	0.200 U	0.200 U	NA	NA	NA	0.200 U	NA	NA	NA	0.200 U	NA	NA	NA
MANGANESE	6010B	mg/L	1.72	NA	NA	NA	NA	0.757	0.771	NA	NA	NA	1.21	NA	NA	NA	3.29	NA	NA	NA
Volatile Organic Compounds																				
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.42 J	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	1.6	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 UJ	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	10 U	10 U	10 U	6.1 J	10 UJ	10 UJ	6.0 J	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table E-2

Upper Fines Point of Compliance Analytical Results

			Well Number/Sampling Date/Screen Interval																	
Parameters	**Method**	**Unit**	**MW-70-02 9/3/2008 (20-30)***	**MW-70-02 9/15/2009 (20-30)***	**MW-70-02 9/14/2010 (20-30)***	**MW-70-02 10/28/2011 (20-30)***	**MW-70-03 10/23/2011 (20-30)***	**MW-70-10 8/28/2008 (30-40)***	**MW-70-10 (D) 8/28/2008 (30-40)***	**MW-70-10 9/15/2009 (30-40)***	**MW-70-10 9/14/2010 (30-40)***	**MW-70-10 10/31/2011 (30-40)***	**MW-70-17 8/27/2008 (30-40)***	**MW-70-17 8/31/2009 (30-40)***	**MW-70-17 9/14/2010 (30-40)***	**MW-70-17 10/28/2011 (30-40)***	**MW-70-22 9/3/2008 (20-30)***	**MW-70-22 9/2/2009 (20-30)***	**MW-70-22 9/14/2010 (20-30)***	**MW-70-22 10/28/2011 (20-30)***
CARBON DISULFIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	**7.6**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	2.4	2.8	27	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	0.25 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	**8.9**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.45 J	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dissolved Hydrocarbon Gases																				
ETHANE	RSK175	µg/L	2.0 U	NA	NA	NA	NA	2.0 U	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA
ETHENE	RSK175	µg/L	2.0 U	NA	NA	NA	NA	2.0 U	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA
METHANE	RSK175	µg/L	2.0 U	NA	NA	NA	NA	1.7 J	2.0 J	NA	NA	NA	6.8	NA	NA	NA	2.1	NA	NA	NA

Notes:

Bolded parameters are constituents of concern
*(20-30) Well Screen Interval - feet below ground surface
D - Duplicate Sample
J - estimated value
µg/L - microgram per liter
mg/L - milligrams per liter
MTBE - methyl tertiary butyl ether
NA - not anaylzed
U - not detected
UJ -analyte not reported above the detection limit; the sample quantiation limit is an estimated quantity

Table E-3

First Sand Source Area Biobarrier Analytical Results

			Well Number/Sampling Date/Screen Interval																		
			IW-70-SAB06	IW-70-SAB06	IW-70-SAB06	IW-70-SAB06	IW-70-SAB06	IW-70-SAB11	MW-70-MNA05	MW-70-MNA05	MW-70-MNA05	MW-70-MNA05	MW-70-PMW02A	MW-70-PMW02A (D)	MW-70-PMW02A	MW-70-PMW02A	MW-70-PMW02A	MW-70-PMW02B	MW-70-PMW02B	MW-70-PMW02B	MW-70-PMW02B
			8/25/2008	8/26/2009	9/2/2010	7/28/2011	11/7/2011	11/8/2011	8/25/2008	9/17/2009	9/10/2010	11/2/2011	8/21/2008	8/21/2008	8/25/2009	9/2/2010	11/7/2011	8/21/2008	8/25/2009	9/2/2010	11/7/2011
Parameters	**Method**	**Unit**	**(65-80/85-105)***	**(65-80/85-105)***	**(65-80/85-105)***	**(65-80/85-105)***	**(65-80/85-105)***	**(65-105)***	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(71-81)***	**(71-81)***	**(71-81)***	**(71-81)***	**(71-81)***	**(90-100)***	**(90-100)***	**(90-100)***	**(90-100)***
Wet Chemistry																					
TOTAL ALKALINITY	2320B	mg/L	203	994	906	870	614	1860	NA	NA	NA	NA	203	205	202	205	210	195	204	221	214
TOTAL DISSOLVED SOLIDS	2540C	mg/L	995	1440	1280	1290	1330	2540	NA	NA	NA	NA	1,010 J	1,020 J	865	1050	955	1,110 J	1000	1150	1430
BROMIDE	300	mg/L	0.457 J	0.525	2.30	2.50 U	NA	NA	NA	NA	NA	NA	0.532	0.529	0.689	0.279 J	NA	0.598	0.757	0.510	NA
CHLORIDE-CL	300	mg/L	178	160	203	229	289	457	NA	NA	NA	NA	163	162	165	206	197	197	203	239	353
NITRATE-N	300	mg/L	0.200 U	0.200 U	0.0544 J	0.277 J	0.0651 J	0.135 J	NA	NA	NA	NA	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
NITRITE-N	300	mg/L	0.200 U	0.200 U	0.400 U	1.00 U	0.200 UJ	0.400 U	NA	NA	NA	NA	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.400 U
SULFATE	300	mg/L	303	1.32	4.48	54.5	222	1.43	NA	NA	NA	NA	268	266	248	334	321	319	321	366	545
ACETATE	300.0M	mg/L	1.00 U	5.70	1.00 U	0.790 J	1.00 U	1.00 U	NA	NA	NA	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.738 J	1.00 U	1.00 U	1.00 U
BUTYRATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	NA	NA	NA	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
LACTATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	NA	NA	NA	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
PROPIONATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	NA	NA	NA	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
HYDROGEN SULFIDE	4500F	mg/L	NA	NA	NA	NA	1.00 U	1.00 U	NA	NA	NA	NA	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
TOTAL ORGANIC CARBON	5310B	mg/L	0.828 J	38.0	20.5	5.48	27.8	111	NA	NA	NA	NA	0.967 U	0.894 U	1.06	0.934 J	0.948 J	1.04 U	1.16	1.10	1.26
Dissolved Metals																					
ARSENIC	6010B	mg/L	NA	NA	NA	NA	0.200 U	0.0316 J	NA	NA	NA	NA	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
IRON	6010B	mg/L	NA	NA	NA	NA	0.208	30.8	NA	NA	NA	NA	0.34	0.343	0.366	0.443	0.553	0.318	0.267	0.287	0.509
MANGANESE	6010B	mg/L	NA	NA	NA	NA	0.429	1.08	NA	NA	NA	NA	0.329	0.317	0.281	0.273	0.287	0.267	0.217	0.238	0.322
Volatile Organic Compounds																					
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	0.46 J	1.0 U	1.0 U	1.0 U	0.26 J	1.0 U	0.23 J	1.0 U	1.0 U	0.24 J	0.36 J	0.36 J	0.29 J	0.72 J	0.55 J	0.43 J	0.55 J	0.87 J	0.73 J
1,1-DICHLOROETHENE	8260B	µg/L	0.36 J	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 J	0.30 J	0.50 U	0.68	0.68	0.94	0.77	1.1	1.2	1.3	1.8	3.4
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.23 J	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 UJ	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U

Table E-3

First Sand Source Area Biobarrier Analytical Results

			Well Number/Sampling Date/Screen Interval																		
			IW-70-SAB06	IW-70-SAB06	IW-70-SAB06	IW-70-SAB06	IW-70-SAB06	IW-70-SAB11	MW-70-MNA05	MW-70-MNA05	MW-70-MNA05	MW-70-MNA05	MW-70-PMW02A	MW-70-PMW02A (D)	MW-70-PMW02A	MW-70-PMW02A	MW-70-PMW02A	MW-70-PMW02B	MW-70-PMW02B	MW-70-PMW02B	MW-70-PMW02B
			8/25/2008	8/26/2009	9/2/2010	7/28/2011	11/7/2011	11/8/2011	8/25/2008	9/17/2009	9/10/2010	11/2/2011	8/21/2008	8/21/2008	8/25/2009	9/2/2010	11/7/2011	8/21/2008	8/25/2009	9/2/2010	11/7/2011
Parameters	**Method**	**Unit**	**(65-80/85-105)***	**(65-80/85-105)***	**(65-80/85-105)***	**(65-80/85-105)***	**(65-80/85-105)***	**(65-105)***	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(71-81)***	**(71-81)***	**(71-81)***	**(71-81)***	**(71-81)***	**(90-100)***	**(90-100)***	**(90-100)***	**(90-100)***
CARBON DISULFIDE	8260B	µg/L	1.0 U	0.68 J	0.25 J	0.25 J	0.51 J	1.0 U	1.0 U	1.0 U	0.66 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	0.25 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	**11**	1.4	0.49 J	0.35 J	0.48 J	0.33 J	2.7	**30**	**19**	0.57 J	**97**	**100**	**120**	**130**	**230**	**170**	**180**	**290**	**770**
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.31 J	2.0 U	2.0 U	2.0 U	0.86 J
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	2.9	1.9	0.26 J	1.0 U	2.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.26 J	0.66 J	0.73 J	0.86 J	1.3	1.7	1.0 U	0.42 J	0.53 J	0.39 J	0.75 J	0.73 J	1.0	1.2	1.4	1.6	1.9	2.5	6.0
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	**200**	0.48 J	0.39 J	0.26 J	0.38 J	5.0 U	**56**	4.5 J	4.6 J	0.67 J	**110**	**120**	4.8 J	**5.7**	**16**	**350**	**11**	**94**	**410**
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.39 J	**15**	**6.1**	**2.9**	**1.8**	**0.91**	0.50 U	0.50 U	**37**	**42**	0.30 J	0.33 J	0.31 J	**0.61**	**0.75**	**0.68**	0.49 J	**1.6**	**1.7**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)																					
DEHALOCOCCOIDES	qPCR	per Liter	ND[a, b]	2.00E+07	1.00E+06	NA	8.00E+06	4.00E+06	NA	NA	NA	2.00E+06	NA	NA	NA	NA	2.00E+05	NA	NA	NA	7.00E+05
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	NA	2.00E+07	2.00E+06	NA	20,000,000[c]	2,000,000[c]	NA	NA	NA	8,000[c]	NA	NA	NA	NA	4.00E+03 U	NA	NA	NA	4.00E+03 U
Dissolved Hydrocarbon Gases																					
ETHANE	RSK175	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.82 J
ETHENE	RSK175	µg/L	2.0 U	3.1	3.2	3.5	5.1	2.2	2.0 U	2.0 U	1.7 J	3.3	2.0 U	2.0 U	2.0 U	2.0 U	0.74 J	2.0 U	2.0 U	2.0 U	2.0 U
METHANE	RSK175	µg/L	11	19000	28000	14000	19000	15000	8.6	16	110	36	20	18	2300	5900	150	16	580	35	36

Table E-3

First Sand Source Area Biobarrier Analytical Results

			Well Number/Sampling Date/Screen Interval														
			MW-70-PMW03A	MW-70-PMW03A	MW-70-PMW03A (D)	MW-70-PMW03A	MW-70-PMW03A	MW-70-PMW03A	MW-70-PMW03A (IR-70-GW-DUPE-049)	MW-70-PMW03A	MW-70-PMW03B	MW-70-PMW03B	MW-70-PMW03B	MW-70-PMW03B	MW-70-PMW03B	MW-70-PMW03B	MW-70-PMW03B (D)
			8/21/2008	9/16/2009	9/16/2009	3/18/2010	9/2/2010	7/29/2011	7/29/2011	11/7/2011	8/21/2008	8/26/2009	3/18/2010	9/2/2010	7/28/2011	11/7/2011	11/7/2011
Parameters	**Method**	**Unit**	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(90-100)***	**(90-100)***	**(90-100)***	**(90-100)***	**(90-100)***	**(90-100)***	**(90-100)***
Wet Chemistry																	
TOTAL ALKALINITY	2320B	mg/L	205	695	699	NA	753	753	759	696	198	208	NA	212	213	198	199
TOTAL DISSOLVED SOLIDS	2540C	mg/L	1,210 J	1290	1240	NA	1140	1150	1190	1060	1,130 J	1120	NA	1110	1210	1080	1100
BROMIDE	300	mg/L	0.519	0.485 J	0.512	NA	1.35	0.849	0.872	NA	0.526	0.648	NA	0.349 J	0.824	NA	NA
CHLORIDE-CL	300	mg/L	190	188	189	NA	211	206	205	209	191	189	NA	230	222	253	253
NITRATE-N	300	mg/L	0.200 U	0.0520 J	0.0540 J	NA	0.400 U	0.0605 J	0.0617 J	0.0665 J	0.200 U	0.200 U	NA	0.200 U	0.200 U	0.200 UJ	0.200 UJ
NITRITE-N	300	mg/L	0.200 U	0.200 U	0.200 U	NA	0.400 U	0.200 U	0.200 U	0.200 UJ	0.200 U	0.200 U	NA	0.200 U	0.200 U	0.200 UJ	0.200 UJ
SULFATE	300	mg/L	328	1.89	0.687	NA	0.538 J	1.87	1.48	11.4	321	300	NA	349	336	337	346
ACETATE	300.0M	mg/L	0.563 J	85.5	81.9	95.0	11.9	1.08	0.950 J	1.00 U	0.533 J	1.00 U	1.49	1.00 U	0.720 J	1.00 U	1.00 U
BUTYRATE	300.0M	mg/L	1.00 U	2.25	1.89	1.39	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
LACTATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
PROPIONATE	300.0M	mg/L	1.00 U	11.0	10.5	2.08	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
HYDROGEN SULFIDE	4500F	mg/L	1.00 U	1.00 U	1.00 U	NA	1.00 U	NA	NA	1.00 U	1.00 U	1.00 U	NA	1.00 U	NA	1.00 U	1.00 U
TOTAL ORGANIC CARBON	5310B	mg/L	0.865 U	53.3	56.6	56.5	15.6	3.60	3.59	8.95	1.17 U	1.12	0.784 U	1.03	0.872 J	1.07	1.09
Dissolved Metals																	
ARSENIC	6010B	mg/L	0.200 U	0.00689 J	0.00707 J	NA	0.200 U	NA	NA	0.200 U	0.200 U	0.200 U	NA	0.200 U	NA	0.200 U	0.200 U
IRON	6010B	mg/L	0.245	49.7	50.6	NA	32.2	NA	NA	13.4	0.285	0.386	NA	0.525	NA	1.02	1.03
MANGANESE	6010B	mg/L	0.22	1.73	1.76	NA	0.656	NA	NA	0.358	0.23	0.217	NA	0.284	NA	0.387	0.395
Volatile Organic Compounds																	
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	0.51 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.48 J	0.46 J	0.48 J	0.61 J	0.48 J	0.65 J	0.69 J
1,1-DICHLOROETHENE	8260B	µg/L	0.40 J	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1	2.0	1.9	2.5	1.8	4.0	4.2
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 UJ	5.8 J	5.7 J	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	78	80	18	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U

Table E-3

First Sand Source Area Biobarrier Analytical Results

			Well Number/Sampling Date/Screen Interval														
			MW-70-PMW03A	MW-70-PMW03A	MW-70-PMW03A (D)	MW-70-PMW03A	MW-70-PMW03A	MW-70-PMW03A	MW-70-PMW03A (IR-70-GW-DUPE-049)	MW-70-PMW03A	MW-70-PMW03B	MW-70-PMW03B	MW-70-PMW03B	MW-70-PMW03B	MW-70-PMW03B	MW-70-PMW03B	MW-70-PMW03B (D)
			8/21/2008	9/16/2009	9/16/2009	3/18/2010	9/2/2010	7/29/2011	7/29/2011	11/7/2011	8/21/2008	8/26/2009	3/18/2010	9/2/2010	7/28/2011	11/7/2011	11/7/2011
Parameters	**Method**	**Unit**	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(90-100)***	**(90-100)***	**(90-100)***	**(90-100)***	**(90-100)***	**(90-100)***	**(90-100)***
CARBON DISULFIDE	8260B	µg/L	1.0 U	0.38 J	0.44 J	0.44 J	0.25 J	1.0 U	1.0 U	0.34 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	0.34 J	0.30 J	2.0 U	2.0 U	0.33 J	0.40 J	0.43 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	0.34 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	**9.2**	3.9	4.1	1.2	0.63 J	0.71 J	0.73 J	0.73 J	**190**	**310**	**370**	**510**	**380**	**1000**	**1100**
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 UJ	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.63 J	0.59 J
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	0.22 J	0.27 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.26 J	0.34 J	0.33 J	0.44 J	1.2	1.1	1.1	0.82 J	1.2	3.4	3.6	4.4	3.9	8.6	8.9
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	**270**	0.42 J	0.44 J	0.23 J	0.48 J	0.47 J	0.46 J	0.42 J	**110 J**	3.9 J	**14**	**9.8**	**8.0**	**8.3**	**7.9**
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 UJ	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.47 J	**9.9**	**11**	**3.6**	**5.0**	**1.6**	**1.6**	**0.67**	**0.56**	**3.0**	**13**	**38**	**73**	**83**	**89**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)																	
DEHALOCOCCOIDES	qPCR	per Liter	NA	2.00E+06	NA	9.00E+05	4.00E+05	NA	NA	4.00E+06	NA	1.00E+03	2.00E+05	3.00E+05	NA	5.00E+05	NA
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	NA	4.00E+06	NA	2.00E+06	2.00E+06	NA	NA	4,000,000[c]	NA	4E+03 U	4.00E+03 U	4.00E+03 U	NA	4.00E+03 U	NA
Dissolved Hydrocarbon Gases																	
ETHANE	RSK175	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.7
ETHENE	RSK175	µg/L	2.0 U	0.89 J	0.88 J	2.0 U	2.8	3.0	2.0	0.68 J	2.0 U	2.0 U	3.3	3.0	4.7	7.4	23
METHANE	RSK175	µg/L	24	34000	14000	26000	25000	26000	23000	21000	22	7800	7400	7200	14000	22000	18000

Notes:
Bolded parameters are constituents of concern and bold values are at
*(70-80) Well Screen Interval - feet below ground surface
D - duplicate sample
J - estimated value
µg/L - microgram per liter
mg/L - milligrams per liter
MTBE - methyl tertiary butyl ether
NA - not analyzed
ND - not detected
qPCR - quantation polymerase chain reaction
U - not detected
[a] Not detected: Sample specific quantitation limit is 4000 per liter.
[b] Correction factor applied to correct for non-specific polymerase ch

Table E-4

First Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval														
			IW-70-FSB108	IW-70-FSB108	IW-70-FSB108	IW-70-FSB108	IW-70-FSB108	IW-70-FSB118	IW-70-FSB118	IW-70-FSB118	IW-70-FSB118	IW-70-FSB118	MW-70-38	MW-70-38	MW-70-38	MW-70-38	MW-70-43A
Parameters	**Method**	**Unit**	**8/25/2008 (60-105)***	**6/30/2010 (60-105)***	**9/8/2010 (60-105)***	**8/2/2011 (60-105)***	**11/9/2011 (60-105)***	**8/26/2008 (60-105)***	**6/30/2010 (60-105)***	**9/8/2010 (60-105)***	**7/29/2011 (60-105)***	**11/8/2011 (60-105)***	**8/25/2008 (80-100)***	**9/3/2010 (80-100)***	**7/29/2011 (80-100)***	**11/8/2011 (80-100)***	**11/23/2011 (86-106)***
Wet Chemistry																	
TOTAL ALKALINITY	2320B	mg/L	178	NA	699	1130	1030	208	NA	1330	828	771	175	785	642	631	NA
TDS	2540C	mg/L	530	NA	1700	1830	1870	1,740	NA	2420	2050	1870	1,500	1560	1720	1510	NA
BROMIDE	300	mg/L	0.312 J	NA	2.50 U	2.50 U	NA	0.724	NA	1.77 J	1.73	NA	0.759	2.84	1.16	NA	NA
CHLORIDE-CL	300	mg/L	93.6	NA	373	306	287	411	NA	487	557	589	392	374	376	388	NA
NITRATE-N	300	mg/L	0.200 U	NA	1.00 U	1.00 U	0.386 J	0.200 U	NA	0.400 U	0.0643 J	0.0693 J	0.200 U	0.400 U	0.0573 J	0.0645 J	NA
NITRITE-N	300	mg/L	0.200 U	NA	1.00 U	1.00 U	1.00 U	0.400 U	NA	0.400 U	0.200 U	0.400 U	0.200 U	0.400 U	0.200 U	0.400 U	NA
SULFATE	300	mg/L	146	NA	2.50 U	1.69 J	1.98 J	490	NA	1.93	106	109	436	8.69	176	175	NA
ACETATE	300.0M	mg/L	1.00 U	11.3	18.8	1.00 U	1.00 U	4.00 U	30	1.00 U	1.00 U	1.00 U	1.00 U	25.1	0.860 J	1.00 U	1.00 U
BUTYRATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	4.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
LACTATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	4.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
PROPIONATE	300.0M	mg/L	1.00 U	190	15.3	1.00 U	1.00 U	4.00 U	16.5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
HYDROGEN SULFIDE	4500F	mg/L	NA	NA	NA	NA	1.00 U	NA	NA	NA	NA	1.00 U	1.00 U	1.00 U	NA	1.00 U	NA
TOTAL ORGANIC CARBON	5310B	mg/L	0.656 J	186	106	123	129	1.10 U	32	14	5.13	10.3	1.18	15.2	1.94	1.95	NA
Dissolved Metals																	
ARSENIC	6010B	mg/L	NA	NA	NA	NA	0.0591 J	NA	NA	NA	NA	0.200 U	0.200 U	0.00558 J	NA	0.00623 J	NA
IRON	6010B	mg/L	NA	NA	NA	NA	88.2	NA	NA	NA	NA	8.00	0.200 U	2.15	NA	14.2	NA
MANGANESE	6010B	mg/L	NA	NA	NA	NA	2.75	NA	NA	NA	NA	1.12	0.233	0.599	NA	1.05	NA
Volatile Organic Compounds																	
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.8	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.3	1.0 U	1.0 U	1.0 U	1.0 U	1.9	0.40 J	0.91 J	0.92 J	1.0 U
1,1-DICHLOROETHENE	8260B	µg/L	0.39 J	0.41 J	0.50 U	0.50 U	0.50 U	**6.2**	0.50 U	0.50 U	0.50 U	0.50 U	**7.5**	0.50 U	0.50 U	0.50 U	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 UJ	95	80	5.4 J	10 U	10 UJ	37	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	11	12	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	6.8 J	8.7 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	240	300	10 U	10 U	10 UJ	55	5.4 J	10 U	10 U	10 UJ	8.7 J	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	0.23 J	1.0 U	1.0 U	1.0 U	1.0 U	0.30 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table E-4

First Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval														
			IW-70-FSB108	**IW-70-FSB108**	**IW-70-FSB108**	**IW-70-FSB108**	**IW-70-FSB108**	**IW-70-FSB118**	**IW-70-FSB118**	**IW-70-FSB118**	**IW-70-FSB118**	**IW-70-FSB118**	**MW-70-38**	**MW-70-38**	**MW-70-38**	**MW-70-38**	**MW-70-43A**
Parameters	**Method**	**Unit**	**8/25/2008 (60-105)***	**6/30/2010 (60-105)***	**9/8/2010 (60-105)***	**8/2/2011 (60-105)***	**11/9/2011 (60-105)***	**8/26/2008 (60-105)***	**6/30/2010 (60-105)***	**9/8/2010 (60-105)***	**7/29/2011 (60-105)***	**11/8/2011 (60-105)***	**8/25/2008 (80-100)***	**9/3/2010 (80-100)***	**7/29/2011 (80-100)***	**11/8/2011 (80-100)***	**11/23/2011 (86-106)***
CARBON DISULFIDE	8260B	µg/L	1.0 U	1.5	3.9	0.71 J	1.0 U	1.0 U	1.1	1.3	1.0 U	1.0 U	1.0 UJ	2.1	1.0 U	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	1.2 J	0.67 J	2.0 U	2.0 U	2.0 U	0.63 J	0.29 J	0.35 J	2.0 U	2.0 U	0.53 J	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	0.22 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	0.23 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	**10**	**610**	1.0 U	0.41 J	0.23 J	**540**	1.8	0.98 J	2.8	2.6	**1,900**	**17**	**8.7**	**8.7**	0.22 J
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	0.47 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.26 J
FREON113	8260B	µg/L	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.22 J
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	0.22 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.22 J	4.7	1.5	0.81 J	0.44 J	8.7	1.1	1.6	2.1	2.3	**29**	8	7.9	7.4	1.0 U
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	**120**	0.36 J	0.38 J	0.33 J	0.21 J	**4,100**	1.1 J	0.58 J	2.8 J	2.7 J	**1,500**	1.3 J	**6.4**	**6.7**	5.0 U
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.50 U	**100**	**180**	**4**	**3.4**	**5.1**	**16**	**22**	**5.6**	**10**	**3.7**	**5.8**	**870**	**850**	0.50 U
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)																	
DEHALOCOCCOIDES	qPCR	per Liter	8,000	9.00E+06	4.00E+07	NA	NA	30,000	2.00E+07	3.00E+06	NA	3.00E+07	NA	NA	NA	2.00E+07	NA
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	Detected[a]	7.00E+05	3.00E+07	NA	NA	Detected[a]	3.00E+06	5.00E+06	NA	2.00E+07	NA	NA	NA	2.00E+07	NA
Dissolved Hydrocarbon Gases																	
ETHANE	RSK175	µg/L	2.0 U	1.4 J	2.0 U	2.0 U	2.0 U	1.0 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.71 J	4.4	12	2.0 U
ETHENE	RSK175	µg/L	2.0 U	1.3 J	8.9	2.3	1.4 J	2.0 U	4.6	15	9.9	16	2.0 U	200	120	130	2.0 U
METHANE	RSK175	µg/L	7.4	6200	22000	8300	25000	29	23000	26000	15000	25000	9.4	23000	16000	13000	12

Table E-4

First Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval													
			MW-70-MNA06	MW-70-MNA06	MW-70-MNA06 (D)	MW-70-MNA06	MW-70-MNA07	MW-70-MNA07	MW-70-MNA07	MW-70-MNA08	MW-70-MNA08	MW-70-MNA08	MW-70-MNA11	MW-70-MNA11 (D)	MW-70-MNA11	MW-70-MNA11
			8/26/2008	9/10/2010	9/10/2010	11/10/2011	8/22/2008	9/16/2010	11/14/2011	8/27/2008	9/16/2010	11/10/2011	8/28/2008	8/28/2008	9/10/2010	11/14/2011
Parameters	**Method**	**Unit**	**(80-90)***	**(80-90)***	**(80-90)***	**(80-90)***	**(90-100)***	**(90-100)***	**(90-100)***	**(80-90)***	**(80-90)***	**(80-90)***	**(80-90)***	**(80-90)***	**(80-90)***	**(80-90)***
Wet Chemistry																
TOTAL ALKALINITY	2320B	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TDS	2540C	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMIDE	300	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE-CL	300	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	300	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	300	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	300	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETATE	300.0M	mg/L	NA	NA	NA	1.00 U	NA	NA	1.00 U	NA	NA	1.00 U	NA	NA	NA	1.00 U
BUTYRATE	300.0M	mg/L	NA	NA	NA	1.00 U	NA	NA	1.00 U	NA	NA	1.00 U	NA	NA	NA	1.00 U
LACTATE	300.0M	mg/L	NA	NA	NA	1.00 U	NA	NA	1.00 U	NA	NA	1.00 U	NA	NA	NA	1.00 U
PROPIONATE	300.0M	mg/L	NA	NA	NA	1.00 U	NA	NA	1.00 U	NA	NA	1.00 U	NA	NA	NA	1.00 U
HYDROGEN SULFIDE	4500F	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL ORGANIC CARBON	5310B	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																
ARSENIC	6010B	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	6010B	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	6010B	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Organic Compounds																
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	0.28 J	1.0 U	0.34 J	2	1.6	1.5	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHENE	8260B	µg/L	0.59	0.59	0.64	0.50 U	1.1	0.50 U	0.50 U	3.8	**8.5**	4.9	0.50 U	0.50 U	0.50 U	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 UJ	10 U	10 U	10 U	10 UJ	7.9 J	10 U	10 UJ	10 U	10 U	10 UJ	10 UJ	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	10 U	10 U	10 U	10 UJ	13	10 U	10 UJ	10 U	10 U	10 UJ	10 UJ	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table E-4

First Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval													
			MW-70-MNA06	MW-70-MNA06	MW-70-MNA06 (D)	MW-70-MNA06	MW-70-MNA07	MW-70-MNA07	MW-70-MNA07	MW-70-MNA08	MW-70-MNA08	MW-70-MNA08	MW-70-MNA11	MW-70-MNA11 (D)	MW-70-MNA11	MW-70-MNA11
			8/26/2008	9/10/2010	9/10/2010	11/10/2011	8/22/2008	9/16/2010	11/14/2011	8/27/2008	9/16/2010	11/10/2011	8/28/2008	8/28/2008	9/10/2010	11/14/2011
Parameters	**Method**	**Unit**	**(80-90)***	**(80-90)***	**(80-90)***	**(80-90)***	**(90-100)***	**(90-100)***	**(90-100)***	**(80-90)***	**(80-90)***	**(80-90)***	**(80-90)***	**(80-90)***	**(80-90)***	**(80-90)***
CARBON DISULFIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	0.37 J	0.23 J	1.0 U	0.28 J	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.57 J	0.52 J	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	**9.9**	**34**	**37**	**18**	**70**	**20 J**	**7.8**	**390**	**2600 J**	**1600**	0.92 J	0.99 J	0.77 J	2.2
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.25 J	0.79 J	0.86 J	0.29 J	1.5	5	2.6	7.9	**19**	**15**	1.0 U	1.0 U	1.0 U	0.21 J
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	**55**	**11**	**12**	3.0 J	**610**	2.6 J	1.8 J	**3,000**	**17**	**11**	0.68 J	0.74 J	1.0 J	1.8 J
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.42 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.50 U	0.34 J	0.24 J	0.50 U	**0.51**	**2**	**4.6**	**5.6**	**4.7**	**97**	0.50 U	0.50 U	0.50 U	0.50 U
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)																
DEHALOCOCCOIDES	qPCR	per Liter	NA	NA	NA	NA	NA	1.00E+06	9.00E+06	4.00E+03 U	NA	1.00E+07	NA	NA	NA	4.00E+03 U
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	NA	NA	NA	NA	NA	2.00E+06	3.00E+06	NA	NA	4.00E+03 U	NA	NA	NA	NA
Dissolved Hydrocarbon Gases																
ETHANE	RSK175	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1.4 J	4.0	0.86 J	1.5 J	1.8 J	2.0 U	2.0 U	2.0 U	2.0 U
ETHENE	RSK175	µg/L	2.0 U	1.0 J	1.1 J	2.0 U	2.0 U	190	5.7	2.0 U	0.73 J	48	2.0 U	2.0 U	2.0 U	2.0 U
METHANE	RSK175	µg/L	2.4	9.8	10	5.9	23	17000	24000	27	68 J	1700	29	22	9.8	15

Table E-4

First Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval																
Parameters	**Method**	**Unit**	**MW-70-PMW04A 8/22/2008 (70-80)***	**MW-70-PMW04A 6/30/2010 (70-80)***	**MW-70-PMW04A 9/7/2010 (70-80)***	**MW-70-PMW04A 8/2/2011 (70-80)***	**MW-70-PMW04A 11/9/2011 (70-80)***	**MW-70-PMW04A (D) 11/9/2011 (70-80)***	**MW-70-PMW04B 8/22/2008 (90-100)***	**MW-70-PMW04B 6/30/2010 (90-100)***	**MW-70-PMW04B 9/7/2010 (90-100)***	**MW-70-PMW04B 8/2/2011 (70-80)***	**MW-70-PMW04B 11/9/2011 (70-80)***	**MW-70-PMW05A 8/22/2008 (70-80)***	**MW-70-PMW05A 6/30/2010 (70-80)***	**MW-70-PMW05A 9/8/2010 (70-80)***	**MW-70-PMW05A 8/2/2011 (70-80)***	**MW-70-PMW05A (IR-70-GW-051) 8/2/2011 (70-80)***	**MW-70-PMW05A 11/9/2011 (70-80)***
Wet Chemistry																			
TOTAL ALKALINITY	2320B	mg/L	180	NA	422	184	176	175	193	NA	173	179	174	185	NA	405	570	563	532
TDS	2540C	mg/L	680	NA	766	704	780	750	850	NA	652	762	830	685	NA	732	870	850	895
BROMIDE	300	mg/L	0.394 J	NA	0.787	0.549	NA	NA	0.703	NA	0.500 U	0.562	NA	0.370 J	NA	0.500 U	0.527	0.534	NA
CHLORIDE-CL	300	mg/L	111	NA	133	147	152	159	223	NA	152	169	164	105	NA	136	141	143	133
NITRATE-N	300	mg/L	0.200 U	NA	0.200 U	0.0551 J	0.0590 J	0.0567 J	0.200 U	NA	0.200 U	0.200 U	0.0609 J	0.200 U	NA	0.200 U	0.0587 J	0.0583 J	0.0638 J
NITRITE-N	300	mg/L	0.200 U	NA	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	NA	0.200 U	0.200 U	0.200 U	0.200 U	NA	0.200 U	0.200 U	0.200 U	0.200 U
SULFATE	300	mg/L	157	NA	106	185	189	190	139	NA	165	209	202	169	NA	53.8	34.3	35.3	58.0
ACETATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.610 J	1.00 U	1.00 U	1.00 U	1.00 U
BUTYRATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
LACTATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
PROPIONATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
HYDROGEN SULFIDE	4500F	mg/L	1.00 U	NA	1.00 U	NA	1.00 U	1.00 U	1.00 U	NA	1.00 U	NA	1.00 U	1.00 U	NA	1.00 U	NA	NA	1.00 U
TOTAL ORGANIC CARBON	5310B	mg/L	0.680 J	1.62	1.36	0.671 J	0.858 J	0.892 J	0.917 J	0.901 J	1.04	0.602 J	0.919 J	0.807 U	3.34	2.23	2.74	2.79	3.80
Dissolved Metals																			
ARSENIC	6010B	mg/L	0.200 U	NA	0.200 U	NA	0.200 U	0.200 U	0.200 U	NA	0.200 U	NA	0.200 U	0.200 U	NA	0.200 U	NA	NA	0.200 U
IRON	6010B	mg/L	0.0566 J	NA	0.328	NA	0.102 J	0.107 J	0.0677 J	NA	0.38	NA	0.395	0.154 J	NA	3.36	NA	NA	18.0
MANGANESE	6010B	mg/L	0.141 J	NA	0.224	NA	0.149 J	0.147 J	0.0646 J	NA	0.221	NA	0.247	0.127 J	NA	0.815	NA	NA	0.800
Volatile Organic Compounds																			
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	0.45 J	0.41 J	0.33 J	1.1	1.1	1.1	0.52 J	1	0.89 J	1.4	1.3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHENE	8260B	µg/L	3.4	4.4	3.3	**11**	**11**	**11**	4.8	**14**	**12**	**12**	**11**	0.48 J	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 UJ	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 UJ	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	10 U	6.1 J	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 UJ	14	10 U	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table E-4
First Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval																
			MW-70-PMW04A	MW-70-PMW04A	MW-70-PMW04A	MW-70-PMW04A	MW-70-PMW04A	MW-70-PMW04A (D)	MW-70-PMW04B	MW-70-PMW04B	MW-70-PMW04B	MW-70-PMW04B	MW-70-PMW04B	MW-70-PMW05A	MW-70-PMW05A	MW-70-PMW05A	MW-70-PMW05A	MW-70-PMW05A (IR-70-GW-051)	MW-70-PMW05A
			8/22/2008	6/30/2010	9/7/2010	8/2/2011	11/9/2011	11/9/2011	8/22/2008	6/30/2010	9/7/2010	8/2/2011	11/9/2011	8/22/2008	6/30/2010	9/8/2010	8/2/2011	8/2/2011	11/9/2011
Parameters	**Method**	**Unit**	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(90-100)***	**(90-100)***	**(90-100)***	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***
CARBON DISULFIDE	8260B	µg/L	1.0 UJ	1.0 U	0.85 J	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	0.34 J	1.0 U	1.0 U	1.0 UJ	0.32 J	0.32 J	1.0 U	0.48 J	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.20 J	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	**49**	**550**	**450**	**1300**	**1400**	**1500**	**340**	**1400**	**1400**	**1400**	**1500**	**18**	1.2	**6.8**	**11**	**7.2**	1.0
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.85 J	4.8	3.4	**11**	9.4	9.3	5	**21**	**16**	**22**	**21**	0.65 J	1.1	0.94 J	1.6	1.4	1.3
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	**790**	**9.2**	**12**	**23**	**27**	**26**	**890**	**55**	**15**	2.7 J	4.2 J	**130**	0.27 J	1.6 J	1.0 J	0.93 J	0.55 J
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.48 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.34 J	**13**	**31**	**9.7**	**4.3**	**4.5**	0.47 J	**2.2**	**1.5**	**2.8**	**3.7**	0.50 U	**1.7**	**2.1**	**21**	**24**	**4.1**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)																			
DEHALOCOCCOIDES	qPCR	per Liter	NA	1.00E+06	2.00E+05	NA	NA	NA	NA	4.00E+03 U	4.00E+03 U	NA	NA	NA	4.00E+07	1.00E+05	NA	NA	NA
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	NA	8.00E+05	4.00E+05	NA	NA	NA	NA	NA	4.00E+03 U	NA	NA	NA	4.00E+07	1.00E+06	NA	NA	NA
Dissolved Hydrocarbon Gases																			
ETHANE	RSK175	µg/L	2.0 U	2.0 U	0.77 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.71 J	2.0 U	2.0 U	0.91 J	0.85 J	0.86 J	0.74 J
ETHENE	RSK175	µg/L	2.0 U	9.5	40	2.5	1.7 J	1.7 J	2.0 U	1.6 J	1.1 J	3.2	4.3	2.0 U	32	15	12	12	8.3
METHANE	RSK175	µg/L	9.2	12000	490 J	5000	5100	5000	7.5	21	34	760	790	6.7	17000	16000	12000	13000	25000

Table E-4
First Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval																	
Parameters	**Method**	**Unit**	**MW-70-PMW05B 8/22/2008 (90-100)***	**MW-70-PMW05B 6/30/2010 (90-100)***	**MW-70-PMW05B 9/8/2010 (90-100)***	**MW-70-PMW05B 8/2/2011 (90-100)***	**MW-70-PMW05B 11/9/2011 (90-100)***	**MW-70-PMW06A 8/22/2008 (70-80)***	**MW-70-PMW06A 9/3/2010 (70-80)***	**MW-70-PMW06A 7/29/2011 (70-80)***	**MW-70-PMW06A 11/8/2011 (70-80)***	**MW-70-PMW06B 8/22/2008 (91-101)***	**MW-70-PMW06B 9/3/2010 (91-101)***	**MW-70-PMW06B 7/29/2011 (91-101)***	**MW-70-PMW06B 11/8/2011 (91-101)***	**MW-70-PMW06B 11/8/2011 (91-101)***	**RDO-4 11/28/2011 (65-105)***	**RDO-5 8/25/2008 (65-105)***	**RDO-5 9/16/2010 (65-105)***	**RDO-5 11/10/2011 (65-105)***
Wet Chemistry																				
TOTAL ALKALINITY	2320B	mg/L	175	NA	618	526	462	195	212	245	263	165	175	173	170	170	9.88	NA	NA	464
TDS	2540C	mg/L	620	NA	2330	1330	1280	1,500	1870	1790	1730	1,000	1280	1270	1210	1200	2260	NA	NA	895
BROMIDE	300	mg/L	0.397 J	NA	1.67 J	1.00	NA	0.721	0.729	1.42	NA	0.534	0.331 J	0.851	NA	NA	NA	NA	NA	NA
CHLORIDE-CL	300	mg/L	120	NA	823	291	279	338	426	453	501	247	318	320	314	318	998	NA	NA	125
NITRATE-N	300	mg/L	0.0734 J	NA	1.00 U	0.0570 J	0.0638 J	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	NA	NA	0.200 U
NITRITE-N	300	mg/L	0.200 U	NA	1.00 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.400 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	NA	NA	0.200 U
SULFATE	300	mg/L	123	NA	147	152	174	402	481	422	432	217	283	295	285	285	490	NA	NA	115
ACETATE	300.0M	mg/L	1.00 U	4.01	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.28	1.00 U	1.00 U	1.00 U	0.810 J	1.00 U	1.00 U	1.00 U	NA	NA	1.00 U
BUTYRATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	NA	NA	1.00 U
LACTATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	NA	NA	1.00 U
PROPIONATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	NA	NA	1.00 U
HYDROGEN SULFIDE	4500F	mg/L	1.00 U	NA	8.29	NA	1.00 U	1.00 U	1.00 U	NA	1.00 U	1.00 U	1.00 U	NA	1.00 U	1.00 U	1.00 U	NA	NA	1.00 U
TOTAL ORGANIC CARBON	5310B	mg/L	0.874 U	3.75	4.47	1.33	1.41	1.08	1.22	1.37	1.53	1.02	0.752 J	0.723 J	0.824 J	0.571 J	3.23	NA	NA	1.12
Dissolved Metals																				
ARSENIC	6010B	mg/L	0.200 U	NA	0.200 U	NA	0.200 U	0.200 U	0.200 U	NA	0.200 U	0.200 U	0.200 U	NA	0.200 U	0.200 U	0.200 U	NA	NA	0.200 U
IRON	6010B	mg/L	0.200 U	NA	0.374	NA	4.73	0.588	0.443	NA	0.814	0.0609 J	0.0479 J	NA	0.0541 J	0.0628 J	0.200 U	NA	NA	1.01
MANGANESE	6010B	mg/L	0.0606 J	NA	0.195 J	NA	0.793	0.242	0.376	NA	0.436	0.244	0.277	NA	0.334	0.329	0.0197 J	NA	NA	0.440
Volatile Organic Compounds																				
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	0.65 J	0.29 J	0.21 J	0.53 J	0.64 J	1.7	2	1.1	1.4	1.5	2.4	1.8	1.8	1.8	0.47 J	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHENE	8260B	µg/L	**7.3**	0.21 J	0.50 U	0.50 U	0.50 U	**10**	**13**	5.5	**8.1**	4.6	**9.8**	**7.7**	**8.1**	**8.3**	1.5	0.22 J	0.50 U	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 UJ	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 UJ	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	6.4 J	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U

Table E-4

First Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval																	
			MW-70-PMW05B	MW-70-PMW05B	MW-70-PMW05B	MW-70-PMW05B	MW-70-PMW05B	MW-70-PMW06A	MW-70-PMW06A	MW-70-PMW06A	MW-70-PMW06A	MW-70-PMW06B	MW-70-PMW06B	MW-70-PMW06B	MW-70-PMW06B	MW-70-PMW06B	RDO-4	RDO-5	RDO-5	RDO-5
			8/22/2008	6/30/2010	9/8/2010	8/2/2011	11/9/2011	8/22/2008	9/3/2010	7/29/2011	11/8/2011	8/22/2008	9/3/2010	7/29/2011	11/8/2011	11/8/2011	11/28/2011	8/25/2008	9/16/2010	11/10/2011
Parameters	**Method**	**Unit**	**(90-100)***	**(90-100)***	**(90-100)***	**(90-100)***	**(90-100)***	**(70-80)***	**(70-80)***	**(70-80)***	**(70-80)***	**(91-101)***	**(91-101)***	**(91-101)***	**(91-101)***	**(91-101)***	**(65-105)***	**(65-105)***	**(65-105)***	**(65-105)***
CARBON DISULFIDE	8260B	µg/L	1.0 UJ	3.2	2.1	1.0 U	1.0 U	1.0 UJ	1.7	1.0 U	1.0 U	1.0 UJ	1.1	1.0 U	1.0 U	1.0 U	0.39 J	1.0 U	0.24 J	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	0.30 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	**93**	**22**	4.5	1.9	2.0	**2,500**	**2700**	**1500**	**1800**	**130**	**430**	**620**	**550**	**550**	**310**	4.2	**12**	3.2
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1.1 J	2.0 U	2.0 U	2.0 U	1.4 J	2.0 U	2.0 U	0.47 J	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	1.3	3	3.2	3.8	4.1	**21**	**56**	**12**	**16**	**15**	**51**	**49**	**49**	**50**	6.2	0.23 J	0.79 J	0.91 J
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	**1,500**	0.53 J	0.99 J	0.51 J	0.77 J	**180 J**	**19**	**12**	**10**	**3,100**	**4400**	**4300**	**3800**	**3900**	3.5 J	**38**	4.2 J	1.3 J
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	**0.56**	**270**	**52**	**130**	**340**	**3.4**	**95**	**280**	**790**	**4.1**	**9.8 J**	**6.8**	**9.1**	**9.4**	**330**	0.50 U	**2.7**	**3.3**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)																				
DEHALOCOCCOIDES	qPCR	per Liter	NA	2.00E+08	4.00E+07	NA	NA	NA	NA	NA	9.00E+07	NA	NA	NA	4.00E+03 U	NA	4.00E+03 U	NA	1.00E+06	5.00E+05
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	NA	3.00E+05	4.00E+07	NA	NA	NA	NA	NA	6.00E+05	NA	NA	NA	NA	NA	NA	NA	2.00E+06	3.00E+05
Dissolved Hydrocarbon Gases																				
ETHANE	RSK175	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 J	1.8 J	1.9 J	2.8	2.0 U	2.0 U	2.0 U	0.66 J	0.91 J	1.1 J	2.0 U	2.0 U	2.0 U
ETHENE	RSK175	µg/L	2.0 U	19	95	56	72	2.0 U	6.5	35	68	2.0 U	0.64 J	0.95 J	0.96 J	1.7 J	64	2.0 U	9.3	5.1
METHANE	RSK175	µg/L	8.2	3600	23000	22000	26000	23	200	3800	3900	10	12	15	64	160	24000	4.5	7500	16000

Notes:
D - duplicate sample
J - estimated value
µg/L - microgram per liter
mg/L - milligrams per liter
NA - not analyzed
ND - not detected
qPCR - Quantitative Polymerase Chain Reaction
U - not detected
UJ - analyte not reported above the detection limit; the sample quant
Bolded parameters are constituents of concern and bolded values ar
*(70-80) Well Screen Interval - feet below ground surface
a vcrA detected but below specific quantiation limit. The sample spe

Table E-5

First Sand Biobarrier-2 Analytical Results

			Well Number/Sampling Date/Screen Interval															
			IW-70-FSB216	IW-70-FSB216	IW-70-FSB216	IW-70-FSB216	IW-70-FSB216	IR-70-FSB229	MW-70-MNA09	MW-70-MNA09	MW-70-MNA09	MW-70-MNA10	MW-70-MNA10	MW-70-MNA10	MW-70-MNA12	MW-70-MNA12	MW-70-MNA12	MW-70-MNA12 (D)
			8/27/2008	5/27/2010	9/1/2010	8/1/2011	11/15/2011	11/28/2011	8/27/2008	9/13/2010	11/10/2011	8/29/2008	9/22/2010	11/15/2011	9/4/2008	9/22/2010	11/17/2011	11/17/2011
Parameters	**Method**	**Unit**	**(65-100)***	**(65-100)***	**(65-100)***	**(65-100)***	**(65-100)***	**(65-100)***	**(64-74)***	**(64-74)***	**(64-74)***	**(75-85)***	**(75-85)***	**(75-85)***	**(75-85)***	**(75-85)***	**(75-85)***	**(75-85)***
Wet Chemistry																		
TOTAL ALKALINITY	2320B	mg/L	288	NA	1180	2340	2010	1350	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	2540C	mg/L	9,950	NA	19800	19700	21800	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMIDE	300	mg/L	1.3	NA	32.8	44.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE-CL	300	mg/L	4,850	NA	11900	12300	11800	607	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	300	mg/L	0.200 U	NA	1.00 U	2.00 U	2.00 U	0.200 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	300	mg/L	1.00 U	NA	4.00 U	4.00 U	5.00 U	0.200 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	300	mg/L	1120	NA	3.51	4.51 J	8.11	9.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETATE	300.0M	mg/L	1.00 U	233	682	1.00 U	5.00 U	1.00 U	NA	NA	5.00 U	NA	NA	1.00 U	NA	NA	1.00 U	1.00 U
BUTYRATE	300.0M	mg/L	1.00 U	7.33	11.8	1.00 U	5.00 U	1.00 U	NA	NA	5.00 U	NA	NA	1.00 U	NA	NA	1.00 U	1.00 U
LACTATE	300.0M	mg/L	1.00 U	1.00 U	2.00 U	1.00 U	5.00 U	1.00 U	NA	NA	5.00 U	NA	NA	1.00 U	NA	NA	1.00 U	1.00 U
PROPIONATE	300.0M	mg/L	1.00 U	113	75.3	1.00 U	5.00 U	1.00 U	NA	NA	5.00 U	NA	NA	1.00 U	NA	NA	1.00 U	1.00 U
HYDROGEN SULFIDE	4500F	mg/L	NA	NA	NA	NA	11.8	1.00 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL ORGANIC CARBON	5310B	mg/L	1.68	344	468	54.5	70.5	13.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																		
ARSENIC	6010B	mg/L	NA	NA	NA	NA	0.0168 J	0.200 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	6010B	mg/L	NA	NA	NA	NA	0.227	8.77	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	6010B	mg/L	NA	NA	NA	NA	4.59	0.554	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Organic Compounds																		
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	0.27 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.82 J	0.90 J	0.34 J	0.64 J	0.49 J	0.43 J	0.44 J
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.97	0.65	0.50 U	2.5	2.8	3.3	3.2
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 UJ	93	120	10 U	10 U	10 U	10 UJ	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	5.6 J	6.3 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	6.9 J	5.2 J	8.6 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	390	450	18	5.6 J	10 U	10 UJ	10 U	10 U	10 UJ	10 U	10 U	10 UJ	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.27 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table E-5

First Sand Biobarrier-2 Analytical Results

			Well Number/Sampling Date/Screen Interval															
			IW-70-FSB216	**IW-70-FSB216**	**IW-70-FSB216**	**IW-70-FSB216**	**IW-70-FSB216**	**IR-70-FSB229**	**MW-70-MNA09**	**MW-70-MNA09**	**MW-70-MNA09**	**MW-70-MNA10**	**MW-70-MNA10**	**MW-70-MNA10**	**MW-70-MNA12**	**MW-70-MNA12**	**MW-70-MNA12**	**MW-70-MNA12 (D)**
			8/27/2008	**5/27/2010**	**9/1/2010**	**8/1/2011**	**11/15/2011**	**11/28/2011**	**8/27/2008**	**9/13/2010**	**11/10/2011**	**8/29/2008**	**9/22/2010**	**11/15/2011**	**9/4/2008**	**9/22/2010**	**11/17/2011**	**11/17/2011**
Parameters	**Method**	**Unit**	**(65-100)***	**(65-100)***	**(65-100)***	**(65-100)***	**(65-100)***	**(65-100)***	**(64-74)***	**(64-74)***	**(64-74)***	**(75-85)***	**(75-85)***	**(75-85)***	**(75-85)***	**(75-85)***	**(75-85)***	**(75-85)***
CARBON DISULFIDE	8260B	µg/L	1.0 U	2.7	0.73 J	1.4	0.65 J	1.0 U	1.0 U	1.0 U	1.0 U	1.1	1.0 U	0.37 J	1.0 U	1.0 U	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	0.72 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	0.27 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	**7.7**	2.6	1.2	0.27 J	0.36 J	5.1	1.0 J	5.7	**13**	**100**	**160**	**24**	**140**	**720**	**950**	**870**
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	0.20 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.35 J	0.63 J	0.51 J	0.27 J	0.26 J	0.23 J	1.0 U	0.50 J	1.0	9.9	5.7	2.6	**47**	**20**	**22**	**22**
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	**63**	1.7 J	0.91 J	0.36 J	0.38 J	0.44 J	1.0 J	3.3 J	2.8 J	**510**	**8.8**	**6.5**	**970**	**14**	**11**	**11**
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.45 J	**23**	**12**	**3.9**	**2.9**	**4.1**	0.50 U	0.50 U	0.50 U	**2.4**	**110**	**25**	**2**	**1.6**	**1.4**	**1.5**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)																		
DEHALOCOCCOIDES	qPCR	per Liter	ND[a, b]	1.00E+08	1.00E+07	NA	1.00E+07	1.00E+05	NA	NA	4.00E+03 U	NA	3.00E+03 J	5.00E+05	4.00E+03 U	NA	4.00E+03 U	NA
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	NA	3.00E+06	5.00E+05	NA	2,000,000[c]	2.00E+04 U	NA	NA	NA	NA	3.00E+03	4.00E+03 U	NA	NA	NA	NA
Dissolved Hydrocarbon Gases																		
ETHANE	RSK175	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHENE	RSK175	µg/L	2.0 U	0.67 J	0.64 J	2.0 U	0.61 J	2.0 U	2.0 U	2.0 U	2.0 U	0.84 J	46	10	2.0 U	1.1 J	1.4 J	1.6 J
METHANE	RSK175	µg/L	6.9	17000	20000	7700	22000	27000	14	6200	5800	49	16000	15000	10	340	190	200

Table E-5

First Sand Biobarrier-2 Analytical Results

			Well Number/Sampling Date/Screen Interval										
Parameters	**Method**	**Unit**	**MW-70-PMW07A 8/28/2008 (65-75)***	**MW-70-PMW07A (D) 8/28/2008 (65-75)***	**MW-70-PMW07A 5/27/2010 (65-75)***	**MW-70-PMW07A 8/31/2010 (65-75)***	**MW-70-PMW07A 8/1/2011 (65-75)***	**MW-70-PMW07A 11/15/2011 (65-75)***	**MW-70-PMW07B 8/28/2008 (85-95)***	**MW-70-PMW07B 5/27/2010 (85-95)***	**MW-70-PMW07B 8/31/2010 (85-95)***	**MW-70-PMW07B 8/1/2011 (85-95)***	**MW-70-PMW07B 11/15/2011 (85-95)***
Wet Chemistry													
TOTAL ALKALINITY	2320B	mg/L	320	315	NA	778 J	785	380	245	NA	244 J	256	244
TOTAL DISSOLVED SOLIDS	2540C	mg/L	14,500	14400	NA	26000	17700	18900	5,310	NA	3280	3950	4060
BROMIDE	300	mg/L	18.9	19.4	NA	31.2	38.8	NA	5.18	NA	2.44	2.70	NA
CHLORIDE-CL	300	mg/L	7,150	7060	NA	14100	10400	10100	2,320	NA	1420	907	1620
NITRATE-N	300	mg/L	0.200 U	0.200 U	NA	0.206 J	2.00 U	2.00 U	0.200 U	NA	0.200 U	0.663 J	0.200 U
NITRITE-N	300	mg/L	1.00 U	1.00 U	NA	1.00 U	4.00 U	2.00 U	0.400 U	NA	0.200 U	1.00 U	1.00 U
SULFATE	300	mg/L	1,300	1290	NA	1370	863	1590	666	NA	591	130	656
ACETATE	300.0M	mg/L	1.00 U	1.00 U	18.8	9.69	1.00 U	5.00 U	1.00 U	9.71	1.14	1.00 U	1.00 U
BUTYRATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
LACTATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
PROPIONATE	300.0M	mg/L	1.00 U	1.00 U	1.09	1.00 U	1.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
HYDROGEN SULFIDE	4500F	mg/L	3.66	3.57	NA	1.00 U	NA	8.11	1.00 U	NA	1.33	NA	1.00 U
TOTAL ORGANIC CARBON	5310B	mg/L	1.92	1.73	7.32	9.31	6.45	2.37	1.35	1.52	1.7	1.29	2.01
Dissolved Metals													
ARSENIC	6010B	mg/L	0.200 U	0.200 U	NA	1.00 U	NA	0.200 U	0.200 U	NA	0.200 U	NA	0.200 U
IRON	6010B	mg/L	3.86	3.72	NA	1.00 U	NA	0.259	0.742	NA	0.302	NA	0.421
MANGANESE	6010B	mg/L	3.08	3.02	NA	3.43	NA	3.07 J	0.87	NA	0.574	NA	0.618
Volatile Organic Compounds													
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.76 J	0.55 J	0.64 J	0.45 J	0.44 J
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.2	2.5	3.3	2.1	2.3
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 UJ	10 UJ	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	10 UJ	11	12	25	6.9 J	10 UJ	10 U	9.0 J	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table E-5

First Sand Biobarrier-2 Analytical Results

			Well Number/Sampling Date/Screen Interval										
Parameters	**Method**	**Unit**	**MW-70-PMW07A 8/28/2008 (65-75)***	**MW-70-PMW07A (D) 8/28/2008 (65-75)***	**MW-70-PMW07A 5/27/2010 (65-75)***	**MW-70-PMW07A 8/31/2010 (65-75)***	**MW-70-PMW07A 8/1/2011 (65-75)***	**MW-70-PMW07A 11/15/2011 (65-75)***	**MW-70-PMW07B 8/28/2008 (85-95)***	**MW-70-PMW07B 5/27/2010 (85-95)***	**MW-70-PMW07B 8/31/2010 (85-95)***	**MW-70-PMW07B 8/1/2011 (85-95)***	**MW-70-PMW07B 11/15/2011 (85-95)***
CARBON DISULFIDE	8260B	µg/L	1.0 UJ	1.0 UJ	2.3	1.6	2.0	0.98 J	1.0 UJ	0.44 J	1.5	0.21 J	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	1.0 U	4.5	2.6	**8.8**	**11**	**97**	**550**	**880**	**590**	**550**
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.30 J	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	0.29 J	0.22 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.1	5.4	8.8	4.2	4.5
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	5.0 U	5.0 U	**5**	4.9 J	3.7 J	1.1 J	**600**	**6.4**	**8.4**	**5.8**	**6.1**
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.50 U	0.50 U	**3.2**	0.50 U	**0.50**	0.50 U	**2**	**1.5**	**1.5**	**1.1**	**1.1**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)													
DEHALOCOCCOIDES	qPCR	per Liter	NA	NA	7.00E+04	7.00E+04	NA	4.00E+03 J	NA	5.00E+03	1.00E+03 J	NA	7.00E+05
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	NA	NA	3.00E+04	6.00E+04	NA	5.00E+03 U	NA	4.00E+03 U	4.00E+03 U	NA	4.00E+03 U
Dissolved Hydrocarbon Gases													
ETHANE	RSK175	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHENE	RSK175	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.66 J	0.66 J
METHANE	RSK175	µg/L	5.9	5.4	2600	4800	5300	1100	35	860	680	1800	2000

Table E-5

First Sand Biobarrier-2 Analytical Results

			Well Number/Sampling Date/Screen Interval											
Parameters	**Method**	**Unit**	**MW-70-PMW08A 8/29/2008 (65-75)***	**MW-70-PMW08A 5/27/2010 (65-75)***	**MW-70-PMW08A 9/1/2010 (65-75)***	**MW-70-PMW08A 8/1/2011 (65-75)***	**MW-70-PMW08A 11/15/2011 (65-75)***	**MW-70-PMW08B 8/29/2008 (85-95)***	**MW-70-PMW08B 5/27/2010 (85-95)***	**MW-70-PMW08B 9/1/2010 (85-95)***	**MW-70-PMW08B (D) 9/1/2010 (85-95)***	**MW-70-PMW08B 8/1/2011 (85-95)***	**MW-70-PMW08B (D) 8/1/2011 (85-95)***	**MW-70-PMW08B 11/15/2011 (85-95)***
Wet Chemistry														
TOTAL ALKALINITY	2320B	mg/L	275	NA	264	304	326	280	NA	473	474	320	318	294
TOTAL DISSOLVED SOLIDS	2540C	mg/L	16,400 J	NA	15600	8800	9880	5,620 J	NA	4710	4600	3980	3920	3900
BROMIDE	300	mg/L	23.6	NA	25.7	15.0	NA	8.39	NA	6.48	6.41	5.51	5.65	NA
CHLORIDE-CL	300	mg/L	8260	NA	9000	4290	4840	2,610	NA	2400	2400	1590	1610	1660
NITRATE-N	300	mg/L	1.00 U	NA	0.0810 J	2.00 U	0.200 U	0.200 U	NA	0.200 U	0.200 U	1.00 U	1.00 U	0.374
NITRITE-N	300	mg/L	1.00 U	NA	2.00 U	2.00 U	4.00 U	0.400 U	NA	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
SULFATE	300	mg/L	1,430	NA	1520	924	1040	805	NA	342	352	513	517	608
ACETATE	300.0M	mg/L	1.00 U	8.23	1.00 U	1.00 U	1.00 U	1.00 U	9.15	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
BUTYRATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
LACTATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
PROPIONATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
HYDROGEN SULFIDE	4500F	mg/L	1.00 U	NA	1.00 U	NA	1.00 U	1.00 U	NA	1.00 U	1.00 U	NA	NA	1.00 U
TOTAL ORGANIC CARBON	5310B	mg/L	1.88	2.54	1.85	1.47	1.70	1.53	3.14	2.94	3.11	1.54	NA	1.60
Dissolved Metals														
ARSENIC	6010B	mg/L	0.200 U	NA	1.00 U	NA	0.200 U	0.200 U	NA	0.200 U	0.200 U	NA	NA	0.200 U
IRON	6010B	mg/L	2.26	NA	2.65	NA	2.77	1.33	NA	4.4	4.54	NA	NA	3.45
MANGANESE	6010B	mg/L	3.02	NA	3.3	NA	1.85	0.994	NA	1.14	1.16	NA	NA	0.933
Volatile Organic Compounds														
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	0.28 J	0.29 J	0.37 J	0.28 J	0.46 J	0.46 J	0.53 J	0.50 J	0.60 J	0.57 J	0.70 J
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	0.61	0.63	0.26 J	0.50 U	0.48 J	0.50 U	0.50 U	0.50 U	0.48 J	0.46 J	0.76
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 UJ	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 UJ	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 UJ	2.0 UJ	2.0 U	2.0 U	2.0 U

Table E-5

First Sand Biobarrier-2 Analytical Results

			Well Number/Sampling Date/Screen Interval											
Parameters	**Method**	**Unit**	**MW-70-PMW08A 8/29/2008 (65-75)***	**MW-70-PMW08A 5/27/2010 (65-75)***	**MW-70-PMW08A 9/1/2010 (65-75)***	**MW-70-PMW08A 8/1/2011 (65-75)***	**MW-70-PMW08A 11/15/2011 (65-75)***	**MW-70-PMW08B 8/29/2008 (85-95)***	**MW-70-PMW08B 5/27/2010 (85-95)***	**MW-70-PMW08B 9/1/2010 (85-95)***	**MW-70-PMW08B (D) 9/1/2010 (85-95)***	**MW-70-PMW08B 8/1/2011 (85-95)***	**MW-70-PMW08B (D) 8/1/2011 (85-95)***	**MW-70-PMW08B 11/15/2011 (85-95)***
CARBON DISULFIDE	8260B	µg/L	1.0 U	0.59 J	1.0 U	0.34 J	0.53 J	0.26 J	4.2	0.80 J	0.77 J	0.39 J	0.31 J	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	3.6	**140**	**170**	**49**	**33**	**40**	**12**	**12**	**13**	**84**	**83**	**120**
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.34 J	1.7	2	1.8	1.4	2.7	8.4	6.8	6.5	7.6	7.2	8.6
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	**20**	0.69 J	0.73 J	1.2 J	1.0 J	**220**	2.0 J	2.3 J	2.3 J	4.1 J	3.9 J	4.4 J
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.50 U	**11**	**20**	**45**	**39**	**0.94**	**350**	**330**	**330**	**410**	**410**	**390**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)														
DEHALOCOCCOIDES	qPCR	per Liter	NA	6.00E+05	3.00E+05	NA	6.00E+06	NA	2.00E+07	6.00E+06	7.00E+06	NA	NA	9.00E+06
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	NA	4.00E+04	9.00E+04	NA	3.00E+05	NA	2.00E+06	5.00E+05	3.00E+05	NA	NA	1.00E+05
Dissolved Hydrocarbon Gases														
ETHANE	RSK175	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHENE	RSK175	µg/L	2.0 U	2.0 U	0.95 J	4.7	6.7	2.0 U	41	29	28	23	23	19
METHANE	RSK175	µg/L	9.3	810	860	11000	17000	13	6500	5800	7000	9900	10000	8200

Notes:
(D) - Duplicate Sample
J - estimated value
µg/L - microgram per liter
mg/L milligrams per liter
MTBE - Methyl Tertiary Butyl Ether
NA - not analyzed
ND - not detected
qPCR - Quantitation Polymerase Chain Reaction
U - not detected
UJ -analyte not reported above the detection limit; the sample quantiatior
*(70-80) Well Screen Interval - feet below ground surface
Bolded parameters are constituents of concern and bolded values are al
[a] Not detected: Sample specific quantition limit is 4,000 per liter.

Table E-6

First Sand Point of Compliance Analytical Results

			Well Number/Sampling Date/Screen Interval															
Parameters	**Method**	**Unit**	**MW-70-11 9/3/2008 (80-100)***	**MW-70-11 8/26/2009 (80-100)***	**MW-70-11 9/14/2010 (80-100)***	**MW-70-11 10/31/2011 (80-100)***	**MW-70-16 9/2/2008 (95-105)***	**MW-70-16 9/2/2009 (95-105)***	**MW-70-16 9/17/2010 (95-105)***	**MW-70-16 11/1/2011 (95-105)***	**MW-70-35 8/27/2008 (90-100)***	**MW-70-35 9/15/2009 (90-100)***	**MW-70-35 9/17/2010 (90-100)***	**MW-70-35 10/28/2011 (90-100)***	**MW-70-POC01 9/4/2008 (80-90)***	**MW-70-POC01 9/15/2009 (80-90)***	**MW-70-POC01 9/17/2010 (80-90)***	**MW-70-POC01 10/28/2011 (80-90)***
Wet Chemistry																		
TOTAL ALKALINITY	2320B	mg/L	233	NA	NA	NA	260	NA	NA	NA	275	NA	NA	NA	148	NA	NA	NA
TOTAL DISSOLVED SOLIDS	2540C	mg/L	1,880	NA	NA	NA	2,830	NA	NA	NA	5,570	NA	NA	NA	710	NA	NA	NA
BROMIDE	300	mg/L	0.652	NA	NA	NA	2.59	NA	NA	NA	1.48	NA	NA	NA	0.373 J	NA	NA	NA
CHLORIDE-CL	300	mg/L	283	NA	NA	NA	1,120	NA	NA	NA	2,810	NA	NA	NA	87.8	NA	NA	NA
NITRATE-N	300	mg/L	0.200 U	NA	NA	NA	7.67	NA	NA	NA	0.200 U	NA	NA	NA	0.200 U	NA	NA	NA
NITRITE-N	300	mg/L	0.200 U	NA	NA	NA	0.400 U	NA	NA	NA	1.00 U	NA	NA	NA	0.200 U	NA	NA	NA
SULFATE	300	mg/L	517	NA	NA	NA	69.2	NA	NA	NA	605	NA	NA	NA	193	NA	NA	NA
ACETATE	300.0M	mg/L	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA
BUTYRATE	300.0M	mg/L	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA
LACTATE	300.0M	mg/L	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA
PROPIONATE	300.0M	mg/L	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA
HYDROGEN SULFIDE	4500F	mg/L	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA
TOTAL ORGANIC CARBON	5310B	mg/L	1.07	NA	NA	NA	8.24	NA	NA	NA	2.28	NA	NA	NA	0.549 J	NA	NA	NA
Dissolved Metals																		
ARSENIC	6010B	mg/L	0.200 U	NA	NA	NA	0.200 U	NA	NA	NA	0.200 U	NA	NA	NA	0.200 U	NA	NA	NA
IRON	6010B	mg/L	0.325	NA	NA	NA	0.200 U	NA	NA	NA	1.48	NA	NA	NA	0.138 J	NA	NA	NA
MANGANESE	6010B	mg/L	0.257	NA	NA	NA	0.0151 J	NA	NA	NA	0.698	NA	NA	NA	0.135 J	NA	NA	NA
Volatile Organic Compounds																		
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.34 J	0.34 J	0.52 J	0.55 J	1.0 U	1.0U	1.0 U	1.0 U
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.28 J	0.50 U	0.50U	0.50 U	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0UJ	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	11	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0U	2.0 U	2.0 U

Table E-6

First Sand Point of Compliance Analytical Results

			Well Number/Sampling Date/Screen Interval															
Parameters	**Method**	**Unit**	**MW-70-11 9/3/2008 (80-100)***	**MW-70-11 8/26/2009 (80-100)***	**MW-70-11 9/14/2010 (80-100)***	**MW-70-11 10/31/2011 (80-100)***	**MW-70-16 9/2/2008 (95-105)***	**MW-70-16 9/2/2009 (95-105)***	**MW-70-16 9/17/2010 (95-105)***	**MW-70-16 11/1/2011 (95-105)***	**MW-70-35 8/27/2008 (90-100)***	**MW-70-35 9/15/2009 (90-100)***	**MW-70-35 9/17/2010 (90-100)***	**MW-70-35 10/28/2011 (90-100)***	**MW-70-POC01 9/4/2008 (80-90)***	**MW-70-POC01 9/15/2009 (80-90)***	**MW-70-POC01 9/17/2010 (80-90)***	**MW-70-POC01 10/28/2011 (80-90)***
CARBON DISULFIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.23J	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.51J	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	1.1	1.2	1.4	1.1	1.0 U	1.0 U	1.0 U	1.0 U	1.2	1.3	1.6	1.4	1.0 U	1.0U	1.0 U	1.0 U
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0UJ	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0U	1.0 UJ	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.45 J	5.0 U	5.0 U	0.33 J	5.0 U	5.0U	5.0 U	5.0 U
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50U	0.50 U	0.50 U
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0U	2.0 U	2.0 U
Dissolved Hydrocarbon Gases																		
ETHANE	RSK175	µg/L	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA
ETHENE	RSK175	µg/L	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA
METHANE	RSK175	µg/L	21	NA	NA	NA	2.0 U	NA	NA	NA	15	NA	NA	NA	4.4	NA	NA	NA

Notes:
*(80-100) Well Screen Interval - feet below ground surface
Bolded parameters are constituents of concern
J - estimated value
µg/L - microgram per liter
mg/L - milligrams per liter
MTBE - methyl tertiary butyl ether
NA - not analyzed
U - not detected
UJ -analyte not reported above the detection limit; the sample quantiation limit is an estimated quantity

Table E-7

Shell Horizon Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval											
			IW-70-SHB113	IW-70-SHB113	IW-70-SHB113	IW-70-SHB113	IW-70-SHB113	IW-70-SHB217	IW-70-SHB217	IW-70-SHB217	IW-70-SHB217 (D)	MW-70-MNA13	MW-70-MNA13	MW-70-MNA13
Parameters	**Method**	**Unit**	**8/27/2008 (105-130)***	**7/1/2010 (105-130)***	**9/15/2010 (105-130)***	**8/3/2011 (105-130)***	**11/14/2011 (105-130)***	**8/29/2008 (105-130)***	**9/23/2010 (105-130)***	**11/17/2011 (105-130)***	**11/17/2011 (105-130)***	**8/27/2008 (115-125)***	**9/24/2010 (115-125)***	**11/10/2011 (115-125)***
Wet Chemistry														
TOTAL ALKALINITY	2320B	µg/L	198	NA	748	1140	1170	NA	NA	217	217	NA	NA	NA
TOTAL DISSOLVED SOLIDS	2540C	µg/L	1,520	NA	1570	1820	1890	NA	NA	6900	6150	NA	NA	NA
BROMIDE	300	µg/L	0.500 U	NA	1.00 U	2.50 U	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE-CL	300	µg/L	352	NA	350	342	369	NA	NA	3300	3270	NA	NA	NA
NITRATE-N	300	µg/L	0.200 U	NA	0.400 U	1.00 U	0.0753 J	NA	NA	0.200 U	0.200 U	NA	NA	NA
NITRITE-N	300	µg/L	0.200 U	NA	0.400 U	1.00 U	0.400 U	NA	NA	1.00 U	1.00 U	NA	NA	NA
SULFATE	300	µg/L	415	NA	10.0 U	2.77	3.06	NA	NA	733	726	NA	NA	NA
ACETATE	300.0M	µg/L	1.00 U	248	208	1.00 U	1.17	NA	NA	1.00 U	1.00 U	NA	NA	1.00 U
BUTYRATE	300.0M	µg/L	1.00 U	5.89	2.28	1.00 U	1.00 U	NA	NA	1.00 U	1.00 U	NA	NA	1.00 U
LACTATE	300.0M	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	NA	NA	1.00 U	1.00 U	NA	NA	1.00 U
PROPIONATE	300.0M	µg/L	1.00 U	39.1	21.0	1.00 U	1.00 U	NA	NA	1.00 U	1.00 U	NA	NA	1.00 U
HYDROGEN SULFIDE	4500F	µg/L	NA	NA	NA	NA	1.00 U	NA	NA	1.00 U	1.00 U	NA	NA	NA
TOTAL ORGANIC CARBON	5310B	µg/L	1.03	140	110	3.61	4.06	NA	NA	2.21	2.05	NA	NA	NA
Dissolved Metals														
ARSENIC	6010B	MG/L	NA	NA	NA	NA	0.0176 J	NA	NA	0.200 U	0.200 U	NA	NA	NA
IRON	6010B	MG/L	NA	NA	NA	NA	3.64	NA	NA	3.95	3.90	NA	NA	NA
MANGANESE	6010B	MG/L	NA	NA	NA	NA	1.08	NA	NA	0.963	0.953	NA	NA	NA
Volatile Organic Compounds														
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	2.1 J	1.0 U	1.0 U	1.0 U	1.0 U	0.51 J	0.82 J	0.44 J	0.43 J	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHENE	8260B	µg/L	**6**	0.50 U	0.50 U	0.50 U	0.50 U	2	5.5	3.2	3.1	0.47 J	0.72	1.3
1,1-DICHLOROPROPENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	10 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	2.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	50 UJ	9.6 J	10 UJ	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	50 UJ	27	10 UJ	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U
BENZENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	10 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table E-7

Shell Horizon Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval											
			IW-70-SHB113	IW-70-SHB113	IW-70-SHB113	IW-70-SHB113	IW-70-SHB113	IW-70-SHB217	IW-70-SHB217	IW-70-SHB217	IW-70-SHB217 (D)	MW-70-MNA13	MW-70-MNA13	MW-70-MNA13
Parameters	**Method**	**Unit**	**8/27/2008 (105-130)***	**7/1/2010 (105-130)***	**9/15/2010 (105-130)***	**8/3/2011 (105-130)***	**11/14/2011 (105-130)***	**8/29/2008 (105-130)***	**9/23/2010 (105-130)***	**11/17/2011 (105-130)***	**11/17/2011 (105-130)***	**8/27/2008 (115-125)***	**9/24/2010 (115-125)***	**11/10/2011 (115-125)***
CARBON DISULFIDE	8260B	µg/L	5.0 U	3.1	1.2	1.0 U	0.23 J	1.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	2.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	10 U	1.2 J	0.47 J	2.0 U	0.38 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	10 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	**270**	0.66 J	2.5	0.98 J	0.85 J	**180**	**1000**	**890**	**910**	**25**	**41**	**160**
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	10 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	5.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	5.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	5.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	5.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	5.0 U	0.21 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	6.9	9.2	5.5	5.9	4.8	**48**	**120**	**36**	**36**	0.90 J	1.4	4.0
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	**4,300**	0.52 J	4.1 J	0.90 J	0.92 J	**680**	**45**	**6.6**	**6.4**	**44**	**34**	**12**
TRICHLOROFLUOROMETHANE	8260B	µg/L	10 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	**4.4**	**26**	**3.3**	**3.7**	**2.2**	**1.2**	**3.2**	**1.3**	**1.4**	0.50 U	0.22 J	0.26 J
XYLENES (TOTAL)	8260B	µg/L	10 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)														
DEHALOCOCCOIDES	qPCR	per Liter	7,000	3.00E+09	1.00E+08	NA	1.00E+06	NA	4.00E+03 U	2.00E+03	NA	NA	NA	4.00E+03 U
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	Detected[a]	2.00E+09	9.00E+07	NA	1.00E+06	NA	4.00E+03 U	4.00E+03 U	NA	NA	NA	NA
Dissolved Hydrocarbon Gases														
ETHANE	RSK175	µg/L	0.65 J	1.3 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHENE	RSK175	µg/L	2.0 U	120	29 UJ	19	18	3	2.3	1.3 J	1.3 J	0.76 J	2.0 U	2.0 U
METHANE	RSK175	µg/L	18	23000	23000	29000	24000	12	110	35	35	22	990	420

Table E-7

Shell Horizon Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval											
Parameters	**Method**	**Unit**	**MW-70-PMW09 8/27/2008 (120-130)***	**MW-70-PMW09 (D) 8/27/2008 (120-130)***	**MW-70-PMW09 7/1/2010 (120-130)***	**MW-70-PMW09 9/15/2010 (120-130)***	**MW-70-PMW09 8/3/2011 (120-130)***	**MW-70-PMW09 11/14/2011 (120-130)***	**MW-70-PMW10 8/27/2008 (120-130)***	**MW-70-PMW10 7/1/2010 (120-130)***	**MW-70-PMW10 9/15/2010 (120-130)***	**MW-70-PMW10 (D) 9/15/2010 (120-130)***	**MW-70-PMW10 8/3/2011 (120-130)***	**MW-70-PMW10 11/14/2011 (120-130)***
Wet Chemistry														
TOTAL ALKALINITY	2320B	µg/L	170	180	NA	177	165	163	193	NA	196	196	199	188
TOTAL DISSOLVED SOLIDS	2540C	µg/L	860	920	NA	840	542	525	1,550	NA	1310	1320	1350	1300
BROMIDE	300	µg/L	0.301 J	0.316 J	NA	0.810	0.366 J	NA	0.500 U	NA	0.460 J	0.410 J	0.833	NA
CHLORIDE-CL	300	µg/L	190	197	NA	196	121	114	351	NA	321	324	311	317
NITRATE-N	300	µg/L	0.200 U	0.0608 J	NA	0.200 U	0.200 U	0.0585 J	0.200 U	NA	0.200 U	0.200 U	0.200 U	0.0629 J
NITRITE-N	300	µg/L	0.200 U	0.200 J	NA	0.200 U	0.200 U	0.200 U	0.200 U	NA	0.200 U	0.200 U	0.200 U	0.200 U
SULFATE	300	µg/L	198	209	NA	188	113	109	405	NA	370	374	374	372
ACETATE	300.0M	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	3.42	1.00 U	1.00 U	1.00 U	1.00 U
BUTYRATE	300.0M	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
LACTATE	300.0M	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
PROPIONATE	300.0M	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
HYDROGEN SULFIDE	4500F	µg/L	1.00 U	1.00 U		1.00 U	NA	1.00 U	1.00 U	NA	1.00 U	1.00 U	NA	1.00 U
TOTAL ORGANIC CARBON	5310B	µg/L	0.970 J	0.882 J	0.943 J	1.05	0.811 J	1.00 U	1.38	1.20	1.20	1.32	1.04	1.00 U
Dissolved Metals														
ARSENIC	6010B	MG/L	0.00531 J	0.00614 J	NA	0.200 U	NA	0.200 U	0.00582 J	NA	0.200 U	0.200 U	NA	0.200 U
IRON	6010B	MG/L	0.201	0.223	NA	0.433	NA	0.436	0.401	NA	0.505	0.494	NA	0.774
MANGANESE	6010B	MG/L	0.170 J	0.170 J	NA	0.155 J	NA	0.0988 J	0.303	NA	0.263	0.262	NA	0.324
Volatile Organic Compounds														
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	0.61 J	0.62 J	0.85 J	0.72 J	0.32 J	0.41 J	1.8	2.1	1.8	1.6	1.8	1.6
1,1-DICHLOROETHENE	8260B	µg/L	1.4	1.6	4.9	5.1	2.5	3.4	4	**7.7**	**12**	**11**	**13**	**11**
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 UJ	10 UJ	10 U	10 UJ	10 U	10 U	10 UJ	10 U	10 UJ	10 UJ	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 UJ	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	10 UJ	10 U	10 UJ	10 U	10 U	10 UJ	10 U	10 UJ	10 UJ	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table E-7

Shell Horizon Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval											
Parameters	**Method**	**Unit**	**MW-70-PMW09 8/27/2008 (120-130)***	**MW-70-PMW09 (D) 8/27/2008 (120-130)***	**MW-70-PMW09 7/1/2010 (120-130)***	**MW-70-PMW09 9/15/2010 (120-130)***	**MW-70-PMW09 8/3/2011 (120-130)***	**MW-70-PMW09 11/14/2011 (120-130)***	**MW-70-PMW10 8/27/2008 (120-130)***	**MW-70-PMW10 7/1/2010 (120-130)***	**MW-70-PMW10 9/15/2010 (120-130)***	**MW-70-PMW10 (D) 9/15/2010 (120-130)***	**MW-70-PMW10 8/3/2011 (120-130)***	**MW-70-PMW10 11/14/2011 (120-130)***
CARBON DISULFIDE	8260B	µg/L	1.0 U	1.0 U	0.50 J	0.23 J	1.0 U	0.31 J	1.0 U	0.58 J	0.26 J	1.0 U	1.0 U	0.27 J
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	**130**	**130**	**1300**	**1100 J**	**290**	**430**	**250**	**980**	**2200**	**2100**	**2600**	**2900**
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 UJ	2.0 UJ	2.0 U	2.0 U	2.0 U	0.42 J	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.3
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	3.1	3.2	**14**	**14 J**	4.6	6.3	5.3	**120**	**100**	**100**	**69**	**48**
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	**510**	**540**	**7.8**	**8.1**	**5.0**	**12**	**2,200**	**2200**	**690**	**530**	**32**	**45**
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	**1.5**	**1.7**	**2.9**	**2.1**	0.34 J	**0.65**	**4.3**	**5.1**	**3.8**	**3.5**	**28**	**25**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)														
DEHALOCOCCOIDES	qPCR	per Liter	NA	NA	4.00E+03 U	4.00E+03 U	NA	4.00E+03 U	NA	6.00E+02 J	4.00E+02 J	5.00E+02 J	NA	6.00E+03
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	NA	NA	NA	4.00E+03 U	NA	NA	NA	2.00E+03 J	4.00E+03 U	4.00E+03 U	NA	4.00E+03 U
Dissolved Hydrocarbon Gases														
ETHANE	RSK175	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.79 J	0.81 J	0.87 J	0.79 J	0.84 J
ETHENE	RSK175	µg/L	0.97 J	1.0 J	1.5 J	1.1 J	2.0 U	1.2 J	2	1.4 J	1.2 J	1.2 J	14	14
METHANE	RSK175	µg/L	280	260	22	23	17	21	460	27	25 UJ	25	2700	4000

Notes:
D - duplicate sample
J - estimated value
µg/L -
mg/L - milligrams per liter
MTBE - Methyl Tertiary Butyl Ether
NA - not analyzed
ND - not detected
qPCR - Quantitation Polymerase Chain Reaction
U - not detected
UJ -analyte not reported above the detection limit; the sample qu
*(105-130) Well Screen Interval - feet below ground surface
[a] vcrA detected but below specific quantitation limit. The sample s
Bolded parameters are constituents of concern and bolded values

Table E-8

Shell Horizon Biobarrier-3 Analytical Results

			Well Number/Sampling Date/Screen Intervals														
			IW-70-SHB310	IW-70-SHB310	IW-70-SHB310	IW-70-SHB310	IW-70-SHB311	MW-70-MNA14	MW-70-MNA14	MW-70-MNA14	MW-70-MNA14	MW-70-PMW11A	MW-70-PMW11A	MW-70-PMW11A (D)	MW-70-PMW11A	MW-70-PMW11A	MW-70-PMW11A
			8/28/2008	10/13/2009	8/31/2010	11/21/2011	11/22/2011	9/4/2008	8/31/2009	9/22/2010	11/17/2011	8/29/2008	9/8/2009	9/8/2009	9/9/2010	8/3/2011	11/16/2011
Parameters	**Method**	**Unit**	**(80-95/105-130)***	**(80-95/105-130)***	**(80-95/105-130)***	**(80-95/105-130)***	**(80-95)***	**(115-125)***	**(115-125)***	**(115-125)***	**(115-125)***	**(85-95)***	**(85-95)***	**(85-95)***	**(85-95)***	**(85-95)***	**(85-95)***
Wet Chemistry																	
TOTAL ALKALINITY	2320B	mg/L	210	325	754 J	670	640	NA	NA	NA	NA	158	148	148	224	214	215
TOTAL DISSOLVED SOLIDS	2540C	mg/L	3,890	7260	13700	7900	945	NA	NA	NA	NA	6,720 J	4260	4070	33800	24300	25200
BROMIDE	300.0	mg/L	3.47	25.0 U	23.0	NA	NA	NA	NA	NA	NA	11.7	7.26	7.08	55.7	49.0	NA
CHLORIDE-CL	300.0	mg/L	1,580	2890	5860	3120	173	NA	NA	NA	NA	3,470	2100	2030	18800	13600	13800
NITRATE-N	300.0	mg/L	0.200 U	10.0 U	0.400 U	2.00 U	1.00 U	NA	NA	NA	NA	0.200 U	0.105 J	0.0991 J	4.00 U	2.00 U	2.00 U
NITRITE-N	300.0	mg/L	0.400 U	10.0 U	1.00 U	2.00 U	1.00 U	NA	NA	NA	NA	0.400 U	0.200 U	0.200 U	4.00 U	4.00 U	5.00 U
SULFATE	300.0	mg/L	453	183	347	4.16 J	1.93 U	NA	NA	NA	NA	524	310	302	2760	1940	2100
ACETATE	300.0M	mg/L	1.00 U	662	1960	29.0	1.00 U	NA	NA	NA	NA	1.55	2.19	2.36	0.740 J	1.53	5.00 U
BUTYRATE	300.0M	mg/L	1.00 U	126	427	557	1.00 U	NA	NA	NA	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U
LACTATE	300.0M	mg/L	1.00 U	10.0 U	10.0 U	1.00 U	1.00 U	NA	NA	NA	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U
PROPIONATE	300.0M	mg/L	1.00 U	491	685	575	1.00 U	NA	NA	NA	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	5.00 U
PH	4500HB	mg/L	NA	5.10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HYDROGEN SULFIDE	4500F	mg/L	NA	NA	NA	9.14	1.00 U	NA	NA	NA	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	NA	1.00 U
TOTAL ORGANIC CARBON	5310B	mg/L	1.8	769	2080	1670	29.2	NA	NA	NA	NA	0.953 J	1.41	1.37	1.61	2.72	2.40
Metals																	
ARSENIC	6010B	mg/L	NA	NA	NA	0.200 U	0.200 U	NA	NA	NA	NA	0.200 U	0.200 U	0.200 U	1.00 U	NA	0.200 U
IRON	6010B	mg/L	NA	NA	NA	62.6	31.5	NA	NA	NA	NA	2.46	1.28	1.30	6.48	NA	4.42
MANGANESE	6010B	mg/L	NA	NA	NA	2.30	0.725	NA	NA	NA	NA	1.24	0.691	0.713	6.48	NA	4.30
Volatile Organic Compounds																	
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	0.50 J	250 U	0.31 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.20 J	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHENE	8260B	µg/L	1.7	**120 U**	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.60	0.68	0.83	0.84	0.50 U	0.50 U	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	500 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	120 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 UJ	250 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 UJ	2500 U	250	330	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	2500 U	27	100	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	2500 U	10 U	33	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	2500 U	370	400	6.7 J	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	500 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table E-8

Shell Horizon Biobarrier-3 Analytical Results

			Well Number/Sampling Date/Screen Intervals														
			IW-70-SHB310	IW-70-SHB310	IW-70-SHB310	IW-70-SHB310	IW-70-SHB311	MW-70-MNA14	MW-70-MNA14	MW-70-MNA14	MW-70-MNA14	MW-70-PMW11A	MW-70-PMW11A	MW-70-PMW11A (D)	MW-70-PMW11A	MW-70-PMW11A	MW-70-PMW11A
			8/28/2008	10/13/2009	8/31/2010	11/21/2011	11/22/2011	9/4/2008	8/31/2009	9/22/2010	11/17/2011	8/29/2008	9/8/2009	9/8/2009	9/9/2010	8/3/2011	11/16/2011
Parameters	**Method**	**Unit**	**(80-95/105-130)***	**(80-95/105-130)***	**(80-95/105-130)***	**(80-95/105-130)***	**(80-95)***	**(115-125)***	**(115-125)***	**(115-125)***	**(115-125)***	**(85-95)***	**(85-95)***	**(85-95)***	**(85-95)***	**(85-95)***	**(85-95)***
CARBON DISULFIDE	8260B	µg/L	1.0 UJ	250 U	17	1.5	1.0 U	1.0 U	1.0 U	1.0 U	0.20 J	0.56 J	1.0 U	1.0 U	1.0 U	1.0 U	0.28 J
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	120 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	500 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	**250 U**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	500 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	**300**	**110 J**	**210**	**160**	0.48 J	0.85 J	4.3	**14**	**130**	**37**	**75**	**78**	0.82 J	**9.8**	**14**
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	500 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	**250 U**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	250 U	0.36 J	0.50 J	1.7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	**60**	**250 U**	**17**	**11**	1.1	1.0 U	1.0 U	1.0 U	0.83 J	4.4	**21**	**20**	1.0 U	1.0 U	0.98 J
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	250 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	**580**	**1200 U**	**18**	**19**	0.30 J	0.99 J	0.35 J	0.58 J	**5.0**	**160**	**260**	**260**	0.50 J	1.3 J	1.9 J
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	500 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	**1.9**	**69 J**	**15**	**6.1**	**2.1**	0.50 U	0.50 U	0.25 J	**0.58**	0.47 J	**1.4**	**1.5**	0.34 J	**2.8**	**4.1**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	500 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)																	
DEHALOCOCCOIDES	qPCR	per Liter	ND[a]	3.00E+05	1.00E+04 U	2.00E+04 U	2,000,000[b]	NA	NA	4.00E+03 U	4.00E+03 U	NA	NA	NA	NA	NA	3.00E+04
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	NA	1.00E+05	1.00E+04 U	NA	2,000,000[c]	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.00E+03 U
Dissolved Hydrocarbon Gasses																	
ETHANE	RSK-175	µg/L	2.0 U	6.2	1.7 J	0.93 J	0.79 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHENE	RSK-175	µg/L	1.5 J	20	2.7	0.93 J	0.62 J	4.5	2.8	2.4	3.2	0.73 J	2.0 U	0.70 J	2.0 U	2.0 U	0.90 J
METHANE	RSK-175	µg/L	28	13000	8500	5200	20000	140	37	27	1300	26	370	360	650	1700	1700

Table E-8

Shell Horizon Biobarrier-3 Analytical Results

			Well Number/Sampling Date/Screen Intervals																		
			MW-70-PMW11B	MW-70-PMW11B	MW-70-PMW11B	MW-70-PMW11B	MW-70-PMW11B	MW-70-PMW12A	MW-70-PMW12A	MW-70-PMW12A	MW-70-PMW12A	MW-70-PMW12A	MW-70-PMW12A	MW-70-PMW12A	MW-70-PMW12B	MW-70-PMW12B	MW-70-PMW12B	MW-70-PMW12B	MW-70-PMW12B (D)	MW-70-PMW12B	MW-70-PMW12B
			8/29/2008	9/8/2009	9/9/2010	8/3/2011	11/16/2011	9/2/2008	9/17/2009	3/17/2010	9/16/2010	8/3/2011	11/16/2011	11/16/2011	9/2/2008	9/8/2009	3/17/2010	9/16/2010	9/16/2010	8/4/2011	11/16/2011
Parameters	**Method**	**Unit**	**(115-125)***	**(115-125)***	**(115-125)***	**(115-125)***	**(115-125)***	**(85-95)***	**(85-95)***	**(85-95)***	**(85-95)***	**(85-95)***	**(85-95)***	**(85-95)***	**(115-125)***	**(115-125)***	**(115-125)***	**(115-125)***	**(115-125)***	**(115-125)***	**(115-125)***
Wet Chemistry																					
TOTAL ALKALINITY	2320B	mg/L	200	210	220	232	217	163	180	NA	186	218	248	250	198	809	NA	372	373	242	223
TOTAL DISSOLVED SOLIDS	2540C	mg/L	2,820 J	3740	4350	4260	4200	2,970	2480	NA	3200	2650	2590	2640	2,930	3550	NA	3590	3700	3820	3890
BROMIDE	300.0	mg/L	3.86	5.52	5.12	6.37	NA	3.63	3.89	NA	5.32	4.12	NA	NA	2.56	4.71	NA	5.56	5.82	5.63	NA
CHLORIDE-CL	300.0	mg/L	1,240	1600	1820	1870	1950	1,460	1160	NA	1600	1120	1310	1300	1,260	1430	NA	1640	1630	1670	1800
NITRATE-N	300.0	mg/L	0.200 U	0.0868 J	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	NA	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.131 J	NA	0.200 U	0.200 U	0.273 U	0.400 U
NITRITE-N	300.0	mg/L	0.200 U	0.200 U	0.400 U	1.00 U	1.00 U	0.400 U	0.200 U	NA	0.200 U	0.400 U	1.00 U	1.00 U	0.400 U	0.200 U	NA	0.400 U	0.400 U	1.00 U	1.00 U
SULFATE	300.0	mg/L	440	493	542	501	550	207	139	NA	182	285	219	218	393	3.10	NA	354	349	421	512
ACETATE	300.0M	mg/L	2.93	2.94	1.00 U	1.00 U	1.00 U	1.00 U	3.43	1.35	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	25.7	1.11	1.38	1.00 U	1.00 U	1.00 U
BUTYRATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
LACTATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.750 J	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
PROPIONATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	25.8	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
PH	4500HB	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HYDROGEN SULFIDE	4500F	mg/L	1.00 U	1.00 U	1.00 U	NA	1.00 U	1.00 U	1.00 U	NA	1.00 U	NA	1.00 U	1.00 U	1.00 U	1.00 U	NA	1.00 U	1.00 U	NA	1.00 U
TOTAL ORGANIC CARBON	5310B	mg/L	1.38	2.00	2.06	2.38	2.12	1.23	1.05	7.11	1.32	1.97	4.66	4.58	1.67	27.7	2.48	2.39	2.47	2.07 U	1.78
Metals																					
ARSENIC	6010B	mg/L	0.200 U	0.200 U	0.200 U	NA	0.00597 J	0.200 U	0.200 U	NA	0.200 U	NA	0.200 U	0.200 U	0.200 U	0.0212 J	NA	0.0182 J	0.0181 J	NA	0.0115 J
IRON	6010B	mg/L	1.25	1.23	1.22	NA	1.83	0.581	0.643	NA	1.93	NA	3.61	3.65	1.36	13.6	NA	17.2	17.3	NA	8.81
MANGANESE	6010B	mg/L	0.369	0.311	0.375	NA	0.533	0.632	0.494	NA	0.762	NA	0.716	0.722	0.365	0.973	NA	0.728	0.735	NA	0.419
Volatile Organic Compounds																					
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	0.44 J	0.62 J	0.48 J	0.55 J	0.47 J	1.0 U	1.0 U	1.0 U	1.0 U	0.30 J	1.0 U	1.0 U	0.46 J	0.30 J	0.26 J	0.34 J	0.34 J	0.48 J	0.39 J
1,1-DICHLOROETHENE	8260B	µg/L	1.1	1.7	2.4	0.23 J	0.44 J	0.56	0.50 U	0.50 U	0.50 U	0.46 J	0.50 U	0.50 U	1.2	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 UJ	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	6.9 J	10 U	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	10 U	10 U	10 U	10 U	10 UJ	10 U	5.2 J	10 U	10 U	10 U	10 U	10 UJ	7.1 J	10 U	10 U	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table E-8

Shell Horizon Biobarrier-3 Analytical Results

			Well Number/Sampling Date/Screen Intervals																		
			MW-70-PMW11B	MW-70-PMW11B	MW-70-PMW11B	MW-70-PMW11B	MW-70-PMW11B	MW-70-PMW12A	MW-70-PMW12A	MW-70-PMW12A	MW-70-PMW12A	MW-70-PMW12A	MW-70-PMW12A	MW-70-PMW12A	MW-70-PMW12B	MW-70-PMW12B	MW-70-PMW12B	MW-70-PMW12B	MW-70-PMW12B (D)	MW-70-PMW12B	MW-70-PMW12B
			8/29/2008	9/8/2009	9/9/2010	8/3/2011	11/16/2011	9/2/2008	9/17/2009	3/17/2010	9/16/2010	8/3/2011	11/16/2011	11/16/2011	9/2/2008	9/8/2009	3/17/2010	9/16/2010	9/16/2010	8/4/2011	11/16/2011
Parameters	**Method**	**Unit**	**(115-125)***	**(115-125)***	**(115-125)***	**(115-125)***	**(115-125)***	**(85-95)***	**(85-95)***	**(85-95)***	**(85-95)***	**(85-95)***	**(85-95)***	**(85-95)***	**(115-125)***	**(115-125)***	**(115-125)***	**(115-125)***	**(115-125)***	**(115-125)***	**(115-125)***
CARBON DISULFIDE	8260B	µg/L	0.68 J	1.0 U	1.2 U	0.20 J	0.26 J	1	0.28 J	0.30 J	0.37 J	1.0 U	0.27 J	0.24 J	0.51 J	1.7	1.0 U	0.57 J	0.56 J	1.0 U	0.30 J
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	**70**	**140**	**610**	**31**	**67**	**39**	**6.2**	**13**	0.59 J	**96**	**13**	**12**	**96**	**37**	4.9	2.5 J	2.4 J	1.3	0.78 J
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	**41**	**66**	**57**	**53**	**44**	5.6	6.4	**15**	5.4	**42**	**26**	**25**	**41**	**35**	**34**	**45**	**45**	**54**	**42**
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	**500**	**950**	**9.6**	3.0 J	**5.5**	**170**	2.8 J	1.7 J	1.1 J	2.3 J	1.5 J	1.5 J	**870**	4.1 J	**7.6**	4.7 J	4.8 J	2.5 J	2.0 J
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	**1.3**	**2.0**	**120**	**320**	**330**	**3.5**	**51**	**150**	**53**	**290**	**250**	**230**	**1.2**	**430**	**270**	**99**	**99**	**210**	**130**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)																					
DEHALOCOCCOIDES	qPCR	per Liter	NA	NA	NA	NA	2.00E+07	NA	2E+06	5.00E+06	4.00E+04	NA	3.00E+06	NA	NA	1.00E+08	7.00E+05	5.00E+04	7.00E+04	NA	9.00E+05
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	NA	NA	NA	NA	4.00E+03 U	NA	7E+03 U	4.00E+03 U	7.00E+03	NA	4.00E+03 U	NA	NA	4.00E+03 U	1.00E+05	8.00E+04	1.00E+05	NA	6.00E+05
Dissolved Hydrocarbon Gasses																					
ETHANE	RSK-175	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1.7 J	1.7 J	1.0 J	0.84 J
ETHENE	RSK-175	µg/L	0.98 J	2.0 U	1.7 J	10	6.3	0.63 J	2.0 U	3.4	3.7	9.3	14	14	2.0 U	2.1	44	71	74	64	110
METHANE	RSK-175	µg/L	10	12	30	28	27	9.2	4700	6400	11000	15000	15000	12000	9.2	23000	26000	15000	13000	5300	5100

Notes:

*(115-125) Well Screen Interval - feet below ground surface

Bold parameters are constituents of concern and bolded values are

D - duplicate sample

J - estimated value

µg/L - micrograms per liter

mg /L - milligrams per liter

MTBE - methyl tertiary butyl ether

NA - not analyzed

qPCR - quantitation polymerase chain reaction

U - not detected

[a] Not detected: Sample specific quantition limit is 4,000 per liter.

Table E-9
Shell Horizon Point of Compliance Analytical Results

Parameters	Method	Unit	MW-70-23 8/28/2008 (110-130)*	MW-70-23 9/15/2009 (110-130)*	MW-70-23 9/17/2010 (110-130)*	MW-70-23 11/1/2011 (110-130)*
			Well Number/Sampling Date/Screen Interval			
Wet Chemistry						
TOTAL ALKALINITY	2320B	mg/L	168	NA	NA	NA
TOTAL DISSOLVED SOLIDS	2540C	mg/L	2,200	NA	NA	NA
BROMIDE	300	mg/L	0.500 U	NA	NA	NA
CHLORIDE-CL	300	mg/L	518	NA	NA	NA
NITRATE-N	300	mg/L	0.200 U	NA	NA	NA
NITRITE-N	300	mg/L	0.200 U	NA	NA	NA
SULFATE	300	mg/L	533	NA	NA	NA
ACETATE	300.0M	mg/L	1.00 U	NA	NA	NA
BUTYRATE	300.0M	mg/L	1.00 U	NA	NA	NA
LACTATE	300.0M	mg/L	1.00 U	NA	NA	NA
PROPIONATE	300.0M	mg/L	1.00 U	NA	NA	NA
HYDROGEN SULFIDE	4500F	mg/L	1.00 U	NA	NA	NA
TOTAL ORGANIC CARBON	5310B	mg/L	0.585 J	NA	NA	NA
Dissolved Metals						
ARSENIC	6010B	mg/L	0.200 U	NA	NA	NA
IRON	6010B	mg/L	0.323	NA	NA	NA
MANGANESE	6010B	mg/L	0.242	NA	NA	NA
Volatile Organic Compounds						
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 UJ	1.0 UJ	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 UJ	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	16	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U

Table E-9 (continued)

Table E-9
Shell Horizon Point of Compliance Analytical Results

Parameters	Method	Unit	MW-70-23 8/28/2008 (110-130)*	MW-70-23 9/15/2009 (110-130)*	MW-70-23 9/17/2010 (110-130)*	MW-70-23 11/1/2011 (110-130)*
			Well Number/Sampling Date/Screen Interval			
CARBON DISULFIDE	8260B	µg/L	1.0 UJ	1.0 U	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	0.25 J	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 UJ	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 UJ	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Dissolved Hydrocarbon Gases						
ETHANE	RSK175	µg/L	2.0 U	NA	NA	NA
ETHENE	RSK175	µg/L	2.0 U	NA	NA	NA
METHANE	RSK175	µg/L	8.3	NA	NA	NA

Notes:
*(110-130) Well Screen Interval - feet below ground surface
Bolded parameters are constituents of concern
J - estimated value
µg/L - micrograms per liter
mg/L - milligrams per liter
MTBE - methyl tertiary butyl ether
NA - not analyzed
U - not detected
UJ -analyte not reported above the detection limit; the sample quantiation limit is an estimated quantity

Table E-10

Second Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval																		
			IW-70-SSB109	IW-70-SSB109 (D)	IW-70-SSB109	IW-70-SSB109	IW-70-SSB109	IW-70-SSB109	IW-70-SSB119	IW-70-SSB119	IW-70-SSB119	IW-70-SSB119	MW-70-14	MW-70-14	MW-70-14	MW-70-14	MW-70-14	MW-70-15	MW-70-15	MW-70-15	MW-70-15
Parameters	**Method**	**Unit**	**8/28/2008 (126-166)***	**8/28/2008 (126-166)***	**9/3/2009 (126-166)***	**3/16/2010 (126-166)***	**9/20/2010 (126-166)***	**11/18/2011 (126-166)***	**3/16/2010 (125-165)***	**8/30/2010 (125-165)***	**8/5/2011 (125-165)***	**11/22/2011 (125-165)***	**9/9/2009 (161-171)***	**1/4/2010 (161-171)***	**9/28/2010 (161-171)***	**8/4/2011 (161-171)***	**11/23/2011 (161-171)***	**9/2/2008 (161-171)***	**9/2/2009 (161-171)***	**9/24/2010 (161-171)***	**11/21/2011 (161-171)***
Wet Chemistry																					
TOTAL ALKALINITY	2320B	mg/L	183	178	629	NA	693	1210	NA	NA	1010	1180	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	2540C	mg/L	10,000	9,980	11900	NA	8040	9520	NA	NA	4590	4920	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMIDE	300.0	mg/L	3.5	1.70 J	13.5	NA	11.9	NA	NA	NA	7.38	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE-CL	300.0	mg/L	4,940	4,910	3770	NA	4330	4740	NA	NA	2100	2550	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	300.0	mg/L	0.200 U	0.200 U	0.118 J	NA	0.0537 J	2.00 U	NA	NA	0.266 U	0.200 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	300.0	mg/L	1.00 U	1.00 U	0.200 U	NA	1.00 U	2.00 U	NA	NA	1.00 U	1.00 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	300.0	mg/L	719	711	0.875 U	NA	0.499 J	6.09	NA	NA	10.1	4.89	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETATE	300.0M	mg/L	1.00 U	1.00 U	303	7.92	15.1	1.00 U	1.59	3.12	1.00 U	1.00 U	NA	NA	NA	NA	1.00 U	NA	NA	NA	2.00 U
BUTYRATE	300.0M	mg/L	1.00 U	1.00 U	358	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	NA	NA	NA	NA	1.00 U	NA	NA	NA	2.00 U
LACTATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	NA	NA	NA	NA	1.00 U	NA	NA	NA	2.00 U
PROPIONATE	300.0M	mg/L	1.00 U	1.00 U	363	129	7.22	1.00 UJ	1.00 U	1.2	1.00 U	1.00 U	NA	NA	NA	NA	1.00 U	NA	NA	NA	2.00 U
HYDROGEN SULFIDE	4500F	mg/L	NA	NA	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL ORGANIC CARBON	5310B	mg/L	1.28	1.29	1110	309	121	96.3	18	15.2	15.8	14.9	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals																					
ARSENIC	6010B	mg/L	NA	NA	NA	NA	NA	0.0247 J	NA	NA	NA	0.200 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	6010B	mg/L	NA	NA	NA	NA	NA	9.85	NA	NA	NA	2.29	NA	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	6010B	mg/L	NA	NA	NA	NA	NA	0.987	NA	NA	NA	0.386	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Organic Compounds																					
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.35 J	0.28 J	0.49 J	0.50 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHENE	8260B	µg/L	0.58	0.63	4.7	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.80	0.52	1.5	2.4	2.1	0.50 U	0.50 U	0.50 U	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.20 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 UJ	10 UJ	110	83	27	10 U	5.1 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	12	17	8.1 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	33	32	7.3 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	10 UJ	190 J	360	240	10 U	12	7.4 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	5.1 J	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table E-10

Second Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval																		
			IW-70-SSB109	IW-70-SSB109 (D)	IW-70-SSB109	IW-70-SSB109	IW-70-SSB109	IW-70-SSB109	IW-70-SSB119	IW-70-SSB119	IW-70-SSB119	IW-70-SSB119	MW-70-14	MW-70-14	MW-70-14	MW-70-14	MW-70-14	MW-70-15	MW-70-15	MW-70-15	MW-70-15
Parameters	**Method**	**Unit**	**8/28/2008 (126-166)***	**8/28/2008 (126-166)***	**9/3/2009 (126-166)***	**3/16/2010 (126-166)***	**9/20/2010 (126-166)***	**11/18/2011 (126-166)***	**3/16/2010 (125-165)***	**8/30/2010 (125-165)***	**8/5/2011 (125-165)***	**11/22/2011 (125-165)***	**9/9/2009 (161-171)***	**1/4/2010 (161-171)***	**9/28/2010 (161-171)***	**8/4/2011 (161-171)***	**11/23/2011 (161-171)***	**9/2/2008 (161-171)***	**9/2/2009 (161-171)***	**9/24/2010 (161-171)***	**11/21/2011 (161-171)***
CARBON DISULFIDE	8260B	µg/L	1.0 UJ	1.0 UJ	200	1.1	0.77 J	0.42 J	7.6	2.3	1.0 U	1.0 U	1.0 UJ	0.64 J	1.0 U	1.0 U	0.25 J	1.0 U	1.0 UJ	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	0.56 J	0.41 J	0.32 J	0.45 J	0.35 J	2.0 U	0.49 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	**39**	**44**	**110**	**40**	1.4	0.30 J	**18**	0.69 J	**7.2**	0.74 J	**32**	**22**	**280**	**400**	**450**	2	2.7	4.2	3.4
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYL TERTIARY BUTYL ETHER	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.47 J	0.45 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	**12**	**14**	8.3	6.0	2.5	0.43 J	8.1	4.1	1.4	0.43 J	**18**	1.0 U	**23**	**29**	**29**	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	**300**	**310**	**12**	1.2 J	0.40 J	0.30 J	**59**	0.78 J	0.45 J	0.24 J	**530**	**210**	**260**	**5.6**	0.89 J	1.6 J	**6.9**	**14**	**16**
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.34 J	0.31	**94**	**13**	**5.3**	**1.3**	**5**	**3.5**	**2.2**	**1.7**	**1.5**	**0.65**	**1.1**	**1.6**	**1.2**	0.50 U	0.50 U	0.50 U	0.50 U
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)																					
DEHALOCOCCOIDES	qPCR	per Liter	5.00E+03	ND	1.00E+04	2.00E+06	1.00E+07	2.00E+05	3E+07	5E+06	NA	3,000,000[b]	NA	NA	NA	NA	NA	NA	NA	NA	4.00E+03 U
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	2.00E+03 J	NA	2.00E+04 U	2.00E+06	2.00E+07	300,000[c]	4E+07	8E+06	NA	4,000,000[c]	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Hydrocarbon Gasses																					
ETHANE	RSK-175	µg/L	2.0 U	2.0 U	0.61 J	2.0 U	0.76 J	2.3	2.0 U	5.1	5.9	9.3	2.0 U	NA	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHENE	RSK-175	µg/L	1.6 J	1.7	1.6 J	0.69 J	1.4 J	0.72 J	19	8	3.0	1.9 J	2.0 U	NA	NA	0.73 J	1.1 J	2.0 U	2.0 U	2.0 U	2.0 U
METHANE	RSK-175	µg/L	9.5	9.4	13000	9500	16000	17000	29000	25000	20000	23000	6.9	NA	NA	8.0	27	12	8.7	10	12

Table E-10

Second Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval																	
			MW-70-43B	MW-70-43B	MW-70-43B	MW-70-49	MW-70-49	MW-70-MNA15	MW-70-MNA15	MW-70-MNA15	MW-70-MNA15	MW-70-MNA16	MW-70-MNA16	MW-70-MNA16	MW-70-MNA16	MW-70-MNA16 (D)	MW-70-MNA17	MW-70-MNA17	MW-70-MNA17	MW-70-MNA17
Parameters	**Method**	**Unit**	**9/2/2009 (136-146)***	**9/22/2010 (136-146)***	**11/16/2011 (136-146)***	**9/27/2011 (125-165)***	**11/28/2011 (125-165)***	**9/4/2008 (140-150)***	**8/26/2009 (140-150)***	**9/23/2010 (140-150)***	**11/17/2011 (140-150)***	**8/29/2008 (141-151)***	**8/31/2009 (141-151)***	**9/23/2010 (141-151)***	**11/17/2011 (141-151)***	**11/17/2011 (141-151)***	**8/29/2008 (140-150)***	**9/1/2009 (140-150)***	**9/23/2010 (140-150)***	**11/21/2011 (140-150)***
Wet Chemistry																				
TOTAL ALKALINITY	2320B	mg/L	NA	NA	NA	NA	197	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	2540C	mg/L	NA	NA	NA	NA	3440	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMIDE	300.0	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE-CL	300.0	mg/L	NA	NA	NA	NA	1540	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	300.0	mg/L	NA	NA	NA	NA	0.200 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	300.0	mg/L	NA	NA	NA	NA	1.00 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	300.0	mg/L	NA	NA	NA	NA	341	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETATE	300.0M	mg/L	NA	NA	NA	NA	1.00 U	NA	NA	NA	NA	NA	NA	NA	1.00 U	1.00 U	NA	NA	NA	2.00 U
BUTYRATE	300.0M	mg/L	NA	NA	NA	NA	1.00 U	NA	NA	NA	NA	NA	NA	NA	1.00 U	1.00 U	NA	NA	NA	2.00 U
LACTATE	300.0M	mg/L	NA	NA	NA	NA	1.00 U	NA	NA	NA	NA	NA	NA	NA	1.00 U	1.00 U	NA	NA	NA	2.00 U
PROPIONATE	300.0M	mg/L	NA	NA	NA	NA	1.00 U	NA	NA	NA	NA	NA	NA	NA	1.00 U	1.00 U	NA	NA	NA	2.00 U
HYDROGEN SULFIDE	4500F	mg/L	NA	NA	NA	NA	1.00 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL ORGANIC CARBON	5310B	mg/L	NA	NA	NA	NA	2.59	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals																				
ARSENIC	6010B	mg/L	NA	NA	NA	NA	0.200 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	6010B	mg/L	NA	NA	NA	NA	1.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	6010B	mg/L	NA	NA	NA	NA	0.595	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Organic Compounds																				
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.31 J	0.74 J	1	0.54 J	0.25 J	0.29 J	0.42 J	0.38 J	0.37 J	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	0.21 J	0.38 J	0.50 U	0.50 U	1.6	2.6	3.3	4.4	4.1	4.7	3.9	3.9	3.8	0.50 U	0.50 U	0.50 U	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 U	6.5 J	10 U	9.5 J	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table E-10

Second Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval																	
			MW-70-43B	MW-70-43B	MW-70-43B	MW-70-49	MW-70-49	MW-70-MNA15	MW-70-MNA15	MW-70-MNA15	MW-70-MNA15	MW-70-MNA16	MW-70-MNA16	MW-70-MNA16	MW-70-MNA16	MW-70-MNA16 (D)	MW-70-MNA17	MW-70-MNA17	MW-70-MNA17	MW-70-MNA17
Parameters	**Method**	**Unit**	**9/2/2009 (136-146)***	**9/22/2010 (136-146)***	**11/16/2011 (136-146)***	**9/27/2011 (125-165)***	**11/28/2011 (125-165)***	**9/4/2008 (140-150)***	**8/26/2009 (140-150)***	**9/23/2010 (140-150)***	**11/17/2011 (140-150)***	**8/29/2008 (141-151)***	**8/31/2009 (141-151)***	**9/23/2010 (141-151)***	**11/17/2011 (141-151)***	**11/17/2011 (141-151)***	**8/29/2008 (140-150)***	**9/1/2009 (140-150)***	**9/23/2010 (140-150)***	**11/21/2011 (140-150)***
CARBON DISULFIDE	8260B	µg/L	1.0 UJ	1.0 U	0.29 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.5	1.0 U	1.0 U	1.0 U	1.0 U	1.3 J	1.0 U	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	0.29 J	1.0 U	1.0 U	0.20 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	**9**	**16**	**8.3**	**9.5**	**120**	**150**	**320**	**1000**	**1,100**	**1,000**	**670**	**1000**	**920**	0.79 J	1.4	**7.2**	**9.9**
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	0.35 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	0.66 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYL TERTIARY BUTYL ETHER	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	0.33 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	2.5	9.3	1.3	1.7	**17**	**39**	**84**	**55**	**39**	**47**	**54**	**46**	**45**	1.0 U	0.42 J	3.3	6.1
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	5.0 U	**37**	**180**	**20**	**17**	**540**	**930**	**1200**	**12**	**140 J**	**460**	**510**	**12**	**12**	0.21 J	2.4 J	**20**	**65**
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.50 U	0.43 J	**0.61**	0.50 U	0.33 J	0.50 U	**3.2**	**5.3**	**3.7**	**8.3**	**14**	**9.7**	**25**	**24**	0.50 U	0.50 U	0.27 J	0.50 U
XYLENES (TOTAL)	8260B	µg/L	2.0 U	0.33 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)																				
DEHALOCOCCOIDES	qPCR	per Liter	NA	NA	4.00E+03 U	NA	4.00E+03 U	NA	NA	4.00E+03 U	NA	NA	NA	2.00E+06	2.00E+07	NA	NA	NA	4.00E+03 U	4.00E+03 U
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+07	9.00E+06	NA	NA	NA	NA	NA
Dissolved Hydrocarbon Gasses																				
ETHANE	RSK-175	µg/L	2.0 U	NA	2.0 U	NA	4.8	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHENE	RSK-175	µg/L	2.0 U	NA	2.0 U	NA	7.2	2.0 U	2.0 U	2.0 U	NA	2.0 U	0.82 J	0.90 J	19	18	2.0 U	0.71 J	2.0 U	2.0 U
METHANE	RSK-175	µg/L	7.0	NA	10	NA	33	18	27	2100	NA	6.2	7.9	7.6	14000	18000	7.9	8.2	130	23

Table E-10

Second Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval										
			MW-70-PMW13A	MW-70-PMW13A	MW-70-PMW13A	MW-70-PMW13A	MW-70-PMW13A (IR-70-GW-DUPE-052)	MW-70-PMW13A	MW-70-PMW13B	MW-70-PMW13B	MW-70-PMW13B	MW-70-PMW13B	MW-70-PMW13B
			9/3/2008	9/1/2009	9/9/2010	8/5/2011	8/5/2011	11/18/2011	9/3/2008	9/1/2009	9/9/2010	8/5/2011	11/18/2011
Parameters	**Method**	**Unit**	**(125-135)***	**(125-135)***	**(125-135)***	**(125-135)***	**(125-135)***	**(125-135)***	**(145-155)***	**(145-155)***	**(145-155)***	**(145-155)***	**(145-155)***
Wet Chemistry													
TOTAL ALKALINITY	2320B	mg/L	225	217	205	206	205	196	205	205	207	214	205
TOTAL DISSOLVED SOLIDS	2540C	mg/L	3,660	5040	4770	4500	4500	4460	8,270	7840	7680	7850	8320
BROMIDE	300.0	mg/L	3.3	8.04	5.03	7.47	7.50	NA	11.6	11.8	11.7	13.1	NA
CHLORIDE-CL	300.0	mg/L	1,610	2320	2200	2150	2060	2230	3,780	3380	4060	3870	4390
NITRATE-N	300.0	mg/L	0.200 U	0.121 J	0.200 U	0.274 U	1.00 U	0.200 U	0.200 U	0.146 J	0.200 U	2.00 U	0.200 U
NITRITE-N	300.0	mg/L	0.400 U	1.00 U	0.400 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.400 U	2.00 U	2.00 U
SULFATE	300.0	mg/L	345	450	486	478	474	484	634	609	742	744	781
ACETATE	300.0M	mg/L	1.00 U	1.67	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.37	1.00 U	1.00 U	1.00 U
BUTYRATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
LACTATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
PROPIONATE	300.0M	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
HYDROGEN SULFIDE	4500F	mg/L	1.00 U	1.00 U	1.00 U	NA	NA	1.00 U	1.00 U	1.00 U	1.00 U	NA	1.00 U
TOTAL ORGANIC CARBON	5310B	mg/L	1.87	2.26	1.97	1.92 U	1.81 U	1.73	1.65	1.78	1.74	1.56 U	1.58
Metals													
ARSENIC	6010B	mg/L	0.200 U	0.00566 J	0.200 U	NA	NA	0.200 U	0.200 U	0.200 U	0.200 U	NA	0.200 U
IRON	6010B	mg/L	0.831	1.33	1.97	NA	NA	1.88	3.42	3.01	1.95	NA	2.62
MANGANESE	6010B	mg/L	0.492	0.532	0.475	NA	NA	0.436	0.647	0.545	0.524	NA	0.554
Volatile Organic Compounds													
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	0.26 J	0.35 J	0.28 J	0.29 J	0.30 J	0.27 J	0.56 J	0.85 J	0.59 J	0.51 J	0.47 J
1,1-DICHLOROETHENE	8260B	µg/L	1.1	1.9	3.7	3.4	2.8	2.6	2.4	2.8	3.1	5.4	4.4
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table E-10

Second Sand Biobarrier-1 Analytical Results

			Well Number/Sampling Date/Screen Interval										
Parameters	**Method**	**Unit**	**MW-70-PMW13A 9/3/2008 (125-135)***	**MW-70-PMW13A 9/1/2009 (125-135)***	**MW-70-PMW13A 9/9/2010 (125-135)***	**MW-70-PMW13A 8/5/2011 (125-135)***	**MW-70-PMW13A (IR-70-GW-DUPE-052) 8/5/2011 (125-135)***	**MW-70-PMW13A 11/18/2011 (125-135)***	**MW-70-PMW13B 9/3/2008 (145-155)***	**MW-70-PMW13B 9/1/2009 (145-155)***	**MW-70-PMW13B 9/9/2010 (145-155)***	**MW-70-PMW13B 8/5/2011 (145-155)***	**MW-70-PMW13B 11/18/2011 (145-155)***
CARBON DISULFIDE	8260B	µg/L	0.23 J	2.2	2.2	1.0 U	1.0 U	1.0 U	1.0 U	0.46 J	1.0 U	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	**63**	**75**	**150**	**130**	**130**	**150**	**180**	**360**	**270**	**940**	**1100**
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYL TERTIARY BUTYL ETHER	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	**18**	**58**	**110**	**110**	**110**	**99**	**38**	**99**	**66**	**76**	**47**
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	**320**	**370**	**490 J**	**200**	**200**	**300**	**900**	**1100**	**1300**	**11**	**13**
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	**410**	**460**	**350**	**280**	**210**	**300**	**2.9**	**59**	**10**	**26**	**16**
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dehalococcoides (Dhc)/Vinyl Chloride Reductase (vcrA)													
DEHALOCOCCOIDES	qPCR	per Liter	NA	NA	NA	NA	NA	3.00E+06	NA	NA	NA	NA	1.00E+07
VINYL CHLORIDE REDUCTASE	qPCR	per Liter	NA	NA	NA	NA	NA	4.00E+03 U	NA	NA	NA	NA	4.00E+03 U
Dissolved Hydrocarbon Gasses													
ETHANE	RSK-175	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHENE	RSK-175	µg/L	18	18	5.1	5.0	4.9	6.4	2.4	2.1	0.76 J	1.5 J	1.6 J
METHANE	RSK-175	µg/L	680	350	55	62	56	87	16	13	20	15	11

Notes:
*feet below ground level
Bolded parameters are constituents of concern and bolded values are above target cleanup goals or federal/state primary maximum contaminant limits.
D - duplicate sample
J - estimated value
µg/L - micrograms per liter
mg /L - milligrams per liter
NA - not analyzed
ND - not detected
qPCR - quantitation polymerase chain reaction
U - not detected

Table E-11
Second Sand Point of Compliance Analytical Results

			Well Number/SamplingDate/Screen Interval								
Parameters	**Method**	**Unit**	**MW-70-21 9/3/2008 (150-170)***	**MW-70-21 9/17/2009 (150-170)***	**MW-70-21 9/24/2010 (150-170)***	**MW-70-21 11/1/2011 (150-170)***	**MW-70-36 9/2/2008 (150-160)***	**MW-70-36 8/31/2009 (150-160)***	**MW-70-36 9/24/2010 (150-160)***	**MW-70-36 (D) 9/24/2010 (150-160)***	**MW-70-36 10/31/2011 (150-160)***
Wet Chemistry											
TOTAL ALKALINITY	2320B	mg/L	178	NA	NA	NA	180	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	2540C	mg/L	18,300	NA	NA	NA	9,840	NA	NA	NA	NA
BROMIDE	300	mg/L	27.9	NA	NA	NA	14.4	NA	NA	NA	NA
CHLORIDE-CL	300	mg/L	8,740	NA	NA	NA	5,080	NA	NA	NA	NA
NITRATE-N	300	mg/L	0.200 U	NA	NA	NA	0.200 U	NA	NA	NA	NA
NITRITE-N	300	mg/L	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	NA
SULFATE	300	mg/L	1190	NA	NA	NA	771	NA	NA	NA	NA
ACETATE	300.0M	mg/L	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	NA
BUTYRATE	300.0M	mg/L	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	NA
LACTATE	300.0M	mg/L	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	NA
PROPIONATE	300.0M	mg/L	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	NA
HYDROGEN SULFIDE	4500F	mg/L	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA	NA
TOTAL ORGANIC CARBON	5310B	mg/L	1.23	NA	NA	NA	1.57	NA	NA	NA	NA
Dissolved Metals											
ARSENIC	6010B	mg/L	0.00624 J	NA	NA	NA	0.200 U	NA	NA	NA	NA
IRON	6010B	mg/L	1.42	NA	NA	NA	0.751	NA	NA	NA	NA
MANGANESE	6010B	mg/L	0.59	NA	NA	NA	0.978	NA	NA	NA	NA
Volatile Organic Compounds											
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table E-11
Second Sand Point of Compliance Analytical Results

			Well Number/SamplingDate/Screen Interval								
Parameters	**Method**	**Unit**	**MW-70-21 9/3/2008 (150-170)***	**MW-70-21 9/17/2009 (150-170)***	**MW-70-21 9/24/2010 (150-170)***	**MW-70-21 11/1/2011 (150-170)***	**MW-70-36 9/2/2008 (150-160)***	**MW-70-36 8/31/2009 (150-160)***	**MW-70-36 9/24/2010 (150-160)***	**MW-70-36 (D) 9/24/2010 (150-160)***	**MW-70-36 10/31/2011 (150-160)***
CARBON DISULFIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	0.21 J	0.48 J	1.0 U	1.0 U	1.0 U
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYL TERTIARY BUTYL ETHER	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	2.4	**30**	2.7	3	**8.0**
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.74 J	5.0 U	5.0 U	5.0 U
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dissolved Hydrocarbon Gases											
ETHANE	RSK175	µg/L	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA	NA
ETHENE	RSK175	µg/L	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA	NA
METHANE	RSK175	µg/L	4.8	NA	NA	NA	10	NA	NA	NA	NA

Notes:

*(150-170) Well Screen Interval - feet below ground surface

Bolded parameters are constituents of concern and bolded values are above target cleanup goals for federal/state primary maximum contaminant limits.

J - estimated value

µg/L - micrograms per liter

mg/L - milligrams per liter

NA - not analyzed

U - not detected

UJ -analyte not reported above the detection limit; the sample quantiation limit is an estimated quantity

Table E-12
Deep Sand Point of Compliance Analytical Results

Parameters	Method	Unit	MW-70-POC02 9/4/2008 (190-200)*	MW-70-POC02 9/15/2009 (190-200)*	MW-70-POC02 9/27/2010 (190-200)*	MW-70-POC02 (D) 9/27/2010 (190-200)*	MW-70-POC02 11/1/2011 (190-200)*	MW-70-POC03 9/2/2008 (190-200)*	MW-70-POC03 9/15/2009 (190-200)*	MW-70-POC03 9/27/2010 (190-200)*	MW-70-POC03 10/31/2011 (190-200)*	MW-70-POC04 10/14/2008 (195-205)*	MW-70-POC04 9/1/2009 (195-205)*	MW-70-POC04 9/24/2010 (195-205)*	MW-70-POC04 11/1/2011 (195-205)*
			Well Number/SamplingDate/Screen Interval												
Wet Chemistry															
TOTAL ALKALINITY	2320B	mg/L	203	NA	NA	NA	NA	138	NA	NA	NA	198	NA	NA	NA
TOTAL DISSOLVED SOLIDS	2540C	mg/L	605	NA	NA	NA	NA	4,500	NA	NA	NA	20,600	NA	NA	NA
BROMIDE	300	mg/L	0.53	NA	NA	NA	NA	6.73	NA	NA	NA	38.4	NA	NA	NA
CHLORIDE-CL	300	mg/L	174	NA	NA	NA	NA	2,190	NA	NA	NA	11,900	NA	NA	NA
NITRATE-N	300	mg/L	0.200 U	NA	NA	NA	NA	0.200 U	NA	NA	NA	0.0915 J	NA	NA	NA
NITRITE-N	300	mg/L	0.200 U	NA	NA	NA	NA	0.400 U	NA	NA	NA	1.00 U	NA	NA	NA
SULFATE	300	mg/L	64	NA	NA	NA	NA	397	NA	NA	NA	1,650	NA	NA	NA
ACETATE	300.0M	mg/L	1.00 U	NA	NA	NA	NA	1.00 U	NA	NA	NA	9.34	NA	NA	NA
BUTYRATE	300.0M	mg/L	1.00 U	NA	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA
LACTATE	300.0M	mg/L	1.00 U	NA	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA
PROPIONATE	300.0M	mg/L	1.00 U	NA	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA
HYDROGEN SULFIDE	4500F	mg/L	1.00 U	NA	NA	NA	NA	1.00 U	NA	NA	NA	1.00 U	NA	NA	NA
TOTAL ORGANIC CARBON	5310B	mg/L	0.630 J	NA	NA	NA	NA	1.09	NA	NA	NA	2.75	NA	NA	NA
Dissolved Metals															
ARSENIC	6010B	mg/L	0.200 U	NA	NA	NA	NA	0.200 U	NA	NA	NA	0.200 U	NA	NA	NA
IRON	6010B	mg/L	0.282	NA	NA	NA	NA	0.555	NA	NA	NA	4.11	NA	NA	NA
MANGANESE	6010B	mg/L	0.0577 J	NA	NA	NA	NA	0.668	NA	NA	NA	2.1	NA	NA	NA
Volatile Organic Compounds															
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-TRICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-DICHLOROETHENE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-TRICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-DIBROMOETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DICHLOROETHANE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-DICHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-DICHLOROPROPANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-BUTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table E-12
Deep Sand Point of Compliance Analytical Results

			Well Number/SamplingDate/Screen Interval												
Parameters	**Method**	**Unit**	**MW-70-POC02 9/4/2008 (190-200)***	**MW-70-POC02 9/15/2009 (190-200)***	**MW-70-POC02 9/27/2010 (190-200)***	**MW-70-POC02 (D) 9/27/2010 (190-200)***	**MW-70-POC02 11/1/2011 (190-200)***	**MW-70-POC03 9/2/2008 (190-200)***	**MW-70-POC03 9/15/2009 (190-200)***	**MW-70-POC03 9/27/2010 (190-200)***	**MW-70-POC03 10/31/2011 (190-200)***	**MW-70-POC04 10/14/2008 (195-205)***	**MW-70-POC04 9/1/2009 (195-205)***	**MW-70-POC04 9/24/2010 (195-205)***	**MW-70-POC04 11/1/2011 (195-205)***
2-HEXANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-METHYL-2-PENTANONE	8260B	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	8260B	µg/L	10 UJ	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U	7.1 J	10 U
BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMODICHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
BROMOMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CARBON DISULFIDE	8260B	µg/L	1.0 U	0.27 J	1.0 U	0.31 J	1.0 U	0.38 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CARBON TETRACHLORIDE	8260B	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CHLOROBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CHLOROFORM	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CHLOROMETHANE	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
CIS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOCHLOROMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DIBROMOMETHANE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DICHLORODIFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 UJ	2.0 UJ	2.0 UJ	2.0 U	2.0 U	2.0 UJ	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
ETHYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
FREON113	8260B	µg/L	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
HEXACHLOROBUTADIENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ISOPROPYL BENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
M/P-XYLENES	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYLENE CHLORIDE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
METHYL TERTIARY BUTYL ETHER	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-PROPYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
O-XYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-ISOPROPYLTOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SEC-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
STYRENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TERT-BUTYLBENZENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TETRACHLOROETHYLENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOLUENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.45 J	1.5	4	2.0
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TRICHLOROETHENE	8260B	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
TRICHLOROFLUOROMETHANE	8260B	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VINYL CHLORIDE	8260B	µg/L	0.50 U	0.31 J	0.20 J	0.50 U	0.24 J	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U

Table E-12
Deep Sand Point of Compliance Analytical Results

			Well Number/SamplingDate/Screen Interval												
Parameters	**Method**	**Unit**	**MW-70-POC02 9/4/2008 (190-200)***	**MW-70-POC02 9/15/2009 (190-200)***	**MW-70-POC02 9/27/2010 (190-200)***	**MW-70-POC02 (D) 9/27/2010 (190-200)***	**MW-70-POC02 11/1/2011 (190-200)***	**MW-70-POC03 9/2/2008 (190-200)***	**MW-70-POC03 9/15/2009 (190-200)***	**MW-70-POC03 9/27/2010 (190-200)***	**MW-70-POC03 10/31/2011 (190-200)***	**MW-70-POC04 10/14/2008 (195-205)***	**MW-70-POC04 9/1/2009 (195-205)***	**MW-70-POC04 9/24/2010 (195-205)***	**MW-70-POC04 11/1/2011 (195-205)***
XYLENES (TOTAL)	8260B	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dissolved Hydrocarbon Gases															
ETHANE	RSK175	µg/L	2.0 U	NA	NA	NA	NA	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA
ETHENE	RSK175	µg/L	2.0 U	NA	NA	NA	NA	2.0 U	NA	NA	NA	2.0 U	NA	NA	NA
METHANE	RSK175	µg/L	2.7	NA	NA	NA	NA	5.5	NA	NA	NA	5.2	NA	NA	NA

Notes:

*(190-200) Well Screen Interval - feet below ground surface
Bolded parameters are constituents of concern and bolded values are above target cleanup goals for federal/state primary maximum contaminant limits.
J - estimated value
µg/L - micrograms per liter
mg/L - milligrams per liter
NA - not analyzed
U - not detected
UJ -analyte not reported above the detection limit; the sample quantiation limit is an estimated quantity

Table E-13

Soil Vapor Analytical Results

	Well Number/Sampling Date/Screen Intervals							
Sample Number	**Hydrogen Sulfide (ppbV) 8/26/2008**	**Hydrogen Sulfide (ppmV) 9/14/2009**	**Hydrogen Sulfide (ppmV) 9/10/2010**	**Hydrogen Sulfide (ppmV) 12/7/2011**	**Methane (ppmV) 8/26/2008**	**Methane (ppmV) 9/14/2009**	**Methane (ppmV) 9/10/2010**	**Methane (ppmV) 12/7/2011**
SV-70-01	4.2 J	1.0 U	1.0 U	1.0 U	1,650	11,000	230	2.1
SV-70-02	4.9 J	1.0 U	1.0 U	1.0 U	229,000	300,000	59,000	2.4
SV-70-03	5.0 U	1.0 U	NA	1.0 U	330	1,300	NA	2.1
SV-70-04	NA	1.0 U	1.0 U	1.0 U	NA	48,000	18,000	3.1
SV-70-05	990	1.0 U	1.3	1.0 U	739,000	>990,000	640,000	2.0
SV-70-06	5.0 U	1.0 U	1.0 U	1.0 U	3,360	31,000	2,400	2.0
SV-70-07	4.2 J	1.0 U	1.0 U	1.0 U	53	21,000	38,000	2.1
SV-70-08	3.3 J	1.0 U	1.0 U	1.0 U	27,100	2,000	19,000	41
SV-70-09	5.0 U	1.0 U	1.0 U	1.0 U	93,700	580,000	130,000	140,000
SV-70-10	4.4 J	1.0 U	1.0 U	1.0 U	3,600	1,500	380,000	700,000
SV-70-11	3.6 J	1.0 U	1.0 U	1.0 U	35	1,000	1,100	6,800
SV-70-12	5.0 U	1.0 U	1.0 U	1.0 U	610	20,000	29,000	28,000

Notes:

ppbV - parts per billion by volume
ppmV - parts per million by volume
J - estimated value
U - not detected
NA - not analyzed due to the presence of water in sample tubing
> - greater than

Table E-14
Field Parameter Data

Well ID	Date	Time	pH	Conductivity (µS/cm)	Turbidity (NTU)	DO (mg/L)	Temperature (°C)	ORP (mV)
SOURCE AREA TREATMENT/UPPER FINES								
MW-70-PMW01A	11/3/11	1106	7.22	4360	19.7	0.07	23.51	-224
	7/27/11	0932	6.57	2640	723.0	0.34	23.23	-236
	9/3/10	0956	5.61	5620	549.0	0.00	23.50	-378
	8/20/08	1145	6.56	6010	0.9	0.00	22.70	111
MW-70-PMW01B	11/3/11	1245	7.62	6700	0.0	0.03	23.56	-150
	7/27/11	1036	6.95	5720	652.0	0.27	23.50	-170
	9/3/10	1036	6.47	6770	174.0	0.00	24.26	-488
	8/20/08	1010	7.34	3250	15.6	0.00	22.80	87
IW-70-SAT03	9/30/10	0740	4.99	6750	20.8	0.00	22.38	-233
IW-70-SAT16	9/29/10	1303	5.22	6830	194.0	0.00	25.81	-243
IW-70-SAT31	9/29/10	1009	5.35	7030	268.0	0.00	24.09	-240
IW-70-SAT35	11/22/11	1601	7.65	7810	10.2	0.46	21.08	-329
	8/9/11	0946	7.00	8390	0.0	0.27	24.01	-300
	9/29/10	0834	6.33	7650	33.0	0.00	22.72	-311
IW-70-SAT36	9/29/10	0902	5.50	7310	0.0	0.00	23.52	-256
IW-70-SAT45	9/29/10	1346	6.72	9290	79.4	0.00	25.72	-391
IW-70-SAT46	9/29/10	0934	5.64	5750	0.0	0.00	23.79	-242
IW-70-SAT50	9/28/10	1415	6.66	4830	249.0	0.00	24.58	-373
MW-70-27	11/3/11	1442	7.66	12200	0.7	0.04	24.12	-136
	7/27/11	1133	7.07	10600	688.0	0.24	23.82	-113
	9/13/10	1003	6.48	7030	517.0	0.10	24.11	-242
	8/21/08	1355	6.75	1700	723.0	0.00	23.60	67
MW-70-28	11/3/11	1602	7.70	5180	0.9	0.07	23.61	-129
	7/27/11	1250	7.11	4570	626.0	0.25	24.33	-146
	9/13/10	0931	6.60	5940	683.0	0.00	23.48	-320
	8/21/08	1420	7.02	3490	101.0	0.00	22.60	-104
MW-70-MNA01	11/2/11	0849	5.20	5240	1.0	0.09	22.55	05
	9/22/10	0839	6.89	7400	160.0	0.00	22.80	35
	8/20/08	1245	6.99	1480	7.9	0.00	23.00	-171
MW-70-MNA02	11/2/11	1042	5.04	3080	0.9	0.00	22.14	-66
	9/10/10	0931	6.74	4830	79.8	0.00	21.36	-18
	8/20/08	1400	7.02	6880	12.2	0.00	21.50	-87
MW-70-MNA03	11/2/11	0939	4.88	3550	1.0	0.15	21.36	-49
	9/8/10	1318	6.66	4590	225.0	0.00	21.78	-92
	8/25/08	1015	6.77	3670	0.0	0.00	21.80	-167
MW-70-MNA04	11/2/11	1140	5.28	3630	1.4	0.49	24.57	01
	9/10/10	1043	6.89	5660	28.7	0.00	24.40	-42
	8/25/08	1030	7.05	5230	6.2	0.00	24.10	-16
SOURCE AREA BIOBARRIER/FIRST SAND								
MW-70-PMW02A	11/7/11	1527	8.54	1760	0.52	0.29	23.90	-206
	8/4/11	1248	7.79	1700	285.0	0.00	25.49	-232
	9/2/10	1303	7.47	1620	266.0	0.00	24.72	-210
	8/25/09	1110	6.92	1180	763.0	0.00	26.24	-214
	8/21/08	0905	7.50	1370	4.3	0.00	23.10	-199
MW-70-PMW02B	11/7/11	1613	8.48	2400	0.1	0.20	23.85	-234
	8/4/11	1215	7.81	2180	263.0	0.01	25.66	-238
	9/2/10	1330	7.46	1730	153.0	0.00	24.90	-200
	8/25/09	1210	7.08	1400	263.0	0.00	28.36	-252
	8/21/08	1135	7.51	1480	7.8	0.00	23.00	-199
IW-70-SAB03	8/30/10	1140	6.63	1730	55.3	0.00	28.95	-129
IW-70-SAB06	11/7/11	1416	7.22	2150	7.2	0.24	23.50	-225
	7/28/11	0935	6.54	2040	977.0	0.40	24.51	-110
	9/2/10	0855	6.56	2180	588.0	0.00	23.41	-214
	8/26/09	0905	6.08	1940	>800	0.00	25.61	-244
	8/25/08	1210	7.03	930	0.0	0.00	25.80	-85
IW-70-SAB11	11/8/11	1017	7.56	4410	18.1	0.00	21.35	-174
	8/4/11	1132	6.99	3980	*	0.10	23.05	-169

Table E-14
Field Parameter Data

Well ID	Date	Time	pH	Conductivity (µS/cm)	Turbidity (NTU)	DO (mg/L)	Temperature (°C)	ORP (mV)
	8/30/10	0958	6.65	3870	194.0	0.00	22.68	-167
MW-70-PMW03A	11/7/11	1026	7.02	1800	3.1	0.06	24.20	-101
	7/28/11	0824	6.63	1820	*	0.34	24.07	-108
	9/2/10	1021	6.48	1850	>800	0.00	23.91	-166
	9/16/09	0920	5.82	1970	142.0	0.00	24.14	-262
	8/21/08	1045	7.34	1300	0.0	0.00	24.00	-184
MW-70-PMW03B	11/7/11	1145	8.39	1750	0.6	0.05	23.87	-252
	7/28/11	1042	7.67	1560	785.0	0.19	24.94	-257
	9/2/10	1126	7.52	1600	>800	0.00	24.45	-276
	9/26/09	1020	7.10	1550	648.0	0.00	25.54	-260
	8/21/08	1240	7.09	1380	0.0	0.00	24.60	-170
MW-70-MNA05	11/2/11	1242	6.22	7860	1.3	0.06	25.02	-200
	9/10/10	1118	7.51	984	9.4	0.00	24.50	-257
	9/17/09	1240	7.34	1290	40.0	0.00	26.42	-201
	8/25/08	1120	7.14	1200	0.7	0.00	24.20	-151
FIRST SAND BIOBARRIER 1								
MW-70-PMW04A	11/9/11	1023	8.74	1430	0.49	0.17	23.34	-150
	8/2/11	1247	7.84	1260	168	0.23	24.88	-158
	9/7/10	1023	6.94	1440	>800	0.00	21.63	-165
	8/22/08	0910	7.63	1050	0.0	0.00	22.00	-160
MW-70-PMW04B	11/9/11	1129	8.77	1460	0.5	0.25	23.90	-255
	8/2/11	1330	7.75	1330	*	0.02	24.73	-208
	9/7/10	1114	7.52	1360	3.6	0.00	22.25	-279
	8/22/08	1015	7.52	1450	2.3	0.00	22.20	-118
MW-70-PMW06A	11/8/11	1326	8.31	288	0.7	0.17	22.04	-253
	7/29/11	1140	7.74	2690	*	0.11	22.67	-214
	9/3/10	1155	7.34	2570	40.7	0.00	22.56	-255
	8/22/08	1125	7.11	2000	0.0	0.00	22.70	-106
MW-70-PMW06B	11/18/11	1424	8.65	2090	0.5	0.09	22.10	-204
	7/29/11	1054	7.94	1990	224.0	0.26	23.45	-171
	9/3/10	1231	7.55	1950	32.9	0.00	24.01	-264
	8/22/08	0845	7.38	1430	0.0	0.00	22.00	-138
IW-70-FSB108	11/9/11	1241	7.16	2760	0.1	0.09	21.89	-154
	8/2/11	0910	6.33	2640	*	0.14	23.33	-144
	9/8/10	1018	6.17	2360	477.0	0.00	21.73	-222
	8/25/08	1335	7.14	1200	0.0	0.00	22.40	-151
IW-70-FSB118	11/8/11	1144	7.15	3290	0.5	0.03	21.07	-115
	7/29/11	0949	6.73	2890	*	0.22	21.70	-103
	9/8/10	1122	6.55	3300	724.0	0.00	21.93	-234
	8/26/08	1020	7.02	2450	0.6	0.00	22.00	-145
MW-70-PMW05A	11/9/11	1432	7.53	1700	0.2	0.12	21.69	-134
	8/2/11	1016	6.50	1610	772.0	0.13	22.49	-114
	9/8/10	0846	6.61	1370	>800	0.00	21.45	-169
	8/22/08	1145	7.63	1060	0.0	0.00	22.30	-176
MW-70-PMW05B	11/9/11	1532	7.59	2110	0.3	0.01	21.51	-260
	8/2/11	1116	6.90	2060	*	0.00	23.80	-183
	9/8/10	0924	6.73	3400	341.0	0.00	21.45	-343
	8/22/08	1255	7.37	1000	27.0	0.00	22.30	27
MW-70-38	11/8/11	1551	7.29	2680	0.0	0.08	21.23	-134
	7/29/11	1305	6.96	2620	494.0	0.24	23.12	-150
	9/3/10	1321	6.55	2460	122.0	0.00	23.22	-351
	8/25/08	1255	7.55	2340	9.5	0.00	21.90	-21
RDO-5	11/10/11	1053	7.86	1560	0.3	0.13	21.54	-255
	8/4/11	1448	7.17	1530	*	0.11	22.02	-168
	9/16/10	1318	7.46	1250	47.9	0.00	23.82	-206
	8/25/08	1420	7.33	990	0.0	0.00	22.20	-81
RDO-4	11/28/11	1043	10.56	3740	97.9	0.54	22.81	-191
MW-70-MNA06	11/10/11	1208	8.14	1010	0.5	0.09	21.71	-106

Table E-14
Field Parameter Data

Well ID	Date	Time	pH	Conductivity (µS/cm)	Turbidity (NTU)	DO (mg/L)	Temperature (°C)	ORP (mV)
	9/10/10	1255	7.37	1580	0.0	0.00	23.21	-180
	8/26/08	1215	6.87	6430	0.0	0.00	22.00	-58
MW-70-MNA07	11/14/11	1520	7.86	1920	0.4	0.03	21.34	-179
	8/4/11	1412	7.17	1840	*	0.15	23.08	-159
	9/16/10	1353	6.95	2060	198.0	0.00	23.34	-203
	8/22/08	1225	7.15	1030	0.0	0.00	22.40	-143
MW-70-MNA08	11/10/11	1331	8.15	3280	1.0	0.06	21.86	-240
	8/8/11	0924	7.26	3440	261.0	0.27	21.58	-228
	9/16/10	1428	7.34	2670	176.0	0.00	23.09	-202
	8/27/08	0930	7.12	2280	0.2	0.00	22.20	-148
MW-70-MNA11	11/14/11	1401	8.31	2780	2.4	0.06	20.90	-208
	9/10/10	1416	7.12	2620	118.0	0.00	22.83	-202
	8/28/08	0745	6.89	6300	0.6	0.00	21.10	-136
MW-70-43A	11/23/11	1114	9.30	6160	9.5	0.26	21.90	-220
	9/28/10	0919	11.81	6160	183.0	1.98	22.63	-169
FIRST SAND BIOBARRIER 2								
MW-70-PMW07A	11/15/11	0933	7.78	35200	1.51	0.09	21.49	-349
	8/1/11	0855	7.00	35100	*	0.18	22.29	-370
	8/31/10	1239	6.75	38300	259.0	0.00	23.31	-369
	8/28/08	0825	6.57	29500	0.4	0.00	21.30	-69
MW-70-PMW07B	11/15/11	1049	8.41	6010	1.5	0.14	21.45	-253
	8/1/11	0945	7.63	6320	255.0	0.15	22.58	-258
	8/31/10	1317	7.22	5460	265.0	0.00	22.98	-288
	8/28/08	1000	6.86	10000	0.0	0.00	21.20	-114
IW-70-FSB216	11/15/11	1140	7.62	34100	37.9	0.06	21.86	-341
	8/1/11	1050	6.99	36100	*	0.01	22.38	-338
	9/1/10	1052	6.25	30700	577.0	0.00	22.88	-329
	8/27/08	1425	6.80	11300	0.5	0.00	22.50	-89
IW-70-FSB229	11/28/11	1216	7.18	3790	16.0	0.60	22.74	-88
	8/9/11	1121	7.02	4490	0.0	0.45	27.67	-115
	9/1/10	0958	6.73	3560	716.0	0.00	23.68	-306
MW-70-PMW08A	11/15/11	1310	7.92	17000	2.5	0.12	21.60	-183
	8/1/11	1137	7.38	16800	675.0	0.06	23.33	-219
	9/1/10	1146	6.89	27300	81.8	0.00	24.04	-219
	8/29/08	0900	6.27	2360	NA	0.00	21.70	-110
MW-70-PMW08B	11/15/11	1407	8.21	6040	2.6	0.07	21.51	-233
	8/1/11	1251	7.48	6110	*	0.06	23.72	-218
	9/1/10	1233	6.94	7800	67.3	0.00	23.71	-244
	8/29/08	0955	6.52	8930	NA	0.00	22.40	-133
MW-70-MNA09	11/10/11	1434	7.87	21600	0.3	0.00	21.89	-177
	8/8/11	1032	7.13	21600	0.0	0.21	22.18	-130
	9/13/10	1128	6.90	15800	123.0	0.00	21.12	-229
	8/27/08	1210	6.28	2360	6.0	0.00	22.10	-105
MW-70-MNA10	11/15/11	1513	8.19	6060	2.8	0.09	21.05	-212
	9/22/10	0936	6.98	5850	180.0	0.00	21.40	-153
	8/29/08	1105	6.62	5330	11.8	0.01	22.20	-158
MW-70-MNA12	11/17/11	1122	8.24	12200	2.6	0.20	21.65	-202
	9/22/10	1048	7.01	29400	127.0	0.00	21.60	-217
	9/4/08	1145	6.67	8870	62.9	0.06	21.70	-135
SHELL HORIZON BIOBARRIER 1								
MW-70-PMW09	11/14/11	1037	8.35	1160	0.1	0.10	21.42	-213
	8/3/11	0845	7.45	1140	283.0	0.20	21.96	-135
	9/15/10	1136	7.76	1440	0.0	0.00	23.16	-264
	8/27/08	1040	7.68	2420	1.3	0.00	23.30	-202
IW-70-SHB113	11/14/11	1151	7.47	2730	0.3	0.09	21.47	-202
	8/3/11	1005	6.85	2690	*	0.01	22.85	-220
	9/15/10	1028	6.41	2210	401.0	0.00	23.04	-212
	8/27/08	1335	7.28	3790	0.0	0.00	22.50	-107

Table E-14
Field Parameter Data

Well ID	Date	Time	pH	Conductivity (µS/cm)	Turbidity (NTU)	DO (mg/L)	Temperature (°C)	ORP (mV)
IW-70-SHB217	11/17/11	0942	8.22	11800	3.5	0.14	21.21	-204
	9/23/10	1020	7.09	8280	0.0	0.00	22.37	-187
	8/29/08	1050	6.78	12700	4.1	0.00	23.10	-170
MW-70-PMW10	11/14/11	1255	8.58	2060	0.2	0.07	21.62	-234
	8/3/11	1107	7.88	1970	*	0.02	22.42	-216
	9/15/10	1228	7.58	2060	>800	0.00	21.69	-252
	8/27/08	1145	7.47	2300	1.1	0.00	22.80	-153
MW-70-MNA13	11/10/11	1540	8.43	7730	1.4	0.00	21.71	-247
	9/24/10	1101	7.27	8920	0.0	0.00	22.45	-188
	8/27/08	1130	6.91	4860	1.6	0.00	22.20	-196
SHELL HORIZON BIOBARRIER 3								
MW-70-PMW11A	11/16/11	1027	7.98	39900	3.9	0.10	21.94	-230
	8/3/11	1323	7.38	39100	373.0	0.00	25.52	-267
	9/9/10	0902	6.69	49700	0.0	0.00	21.88	-144
	9/8/09	1030	7.11	63600	254.0	0.00	23.66	-231
	8/29/08	0900	6.92	31000	0.4	0.00	22.80	-158
MW-70-PMW11B	11/16/11	1122	8.27	6610	2.9	0.08	22.12	-251
	8/3/11	1234	7.50	6340	605.0	0.00	23.44	-241
	9/9/10	0936	7.12	5870	35.1	0.00	22.30	-200
	9/8/09	0940	6.75	5230	147.0	0.00	22.90	-188
	8/29/08	0940	6.94	7700	0.0	0.00	22.70	-170
IW-70-SHB310	11/21/11	1311	5.67	9430	11.1	1.39	22.35	-191
	8/9/11	1308	5.31	11700	380.0	1.15	23.72	-199
	8/31/10	0919	4.99	18800	150.0	0.00	22.06	-206
	10/13/09	1110	4.96	5550	>800	0.00	22.50	-256
	8/28/08	1205	6.62	6500	3.8	0.00	22.90	-145
IW-70-SHB311	11/22/11	1326	7.06	1740	14.5	0.48	21.98	-126
	8/9/11	1346	6.50	1910	*	0.57	27.91	-136
	8/31/10	0947	6.51	3290	355.0	0.00	23.59	-210
IW-70-SHB319	8/31/10	0810	6.49	3400	540.0	0.00	20.98	-139
MW-70-PMW12A	11/16/11	1349	8.05	4340	4.1	0.23	21.72	-232
	8/3/11	1409	7.58	5080	238.0	0.05	26.82	-245
	9/16/10	0921	7.29	5080	169.5	0.00	23.34	-241
	9/17/09	1020	6.82	4730	58.5	0.00	28.44	-203
	9/2/08	0945	7.36	9520	0.0	0.00	22.60	-127
MW-70-PMW12B	11/16/11	1519	7.96	5940	2.7	0.11	21.68	-259
	8/5/11	0911	7.02	3390	846.0	0.14	21.73	-159
	9/16/10	1026	6.80	5260	429.0	0.00	22.48	-273
	9/8/09	1230	6.70	4630	684.0	0.00	23.99	-360
	9/2/08	0945	6.63	4900	0.7	0.02	22.70	-154
MW-70-MNA14	11/17/11	1528	8.65	3960	2.6	0.11	21.42	-216
	9/22/10	1338	7.58	3600	0.0	0.00	22.70	-215
	8/31/09	1210	7.24	3370	348.0	0.00	24.63	-243
	9/4/08	1040	6.89	3330	1.5	0.03	22.60	-170
SECOND SAND BIOBARRIER 1								
MW-70-PMW13A	11/18/11	0936	8.30	7540	3.0	0.10	20.17	-169
	8/5/11	1209	7.63	4400	303.0	0.17	21.58	-187
	9/9/10	1036	7.19	7250	>800	0.00	22.17	-187
	9/1/09	1045	7.09	8230	50.3	0.00	22.22	-238
	9/3/08	0900	6.82	6110	3.8	0.00	21.10	-254
MW-70-PMW13B	11/18/11	1044	8.40	14500	2.9	0.04	20.40	-217
	8/5/11	1311	7.66	6980	855.0	0.01	21.56	-231
	9/9/10	1118	7.24	12800	110.0	0.00	21.62	-229
	9/1/09	1200	7.14	12100	80.5	0.00	24.07	-255
	9/3/08	0945	6.73	1160	1.3	0.00	21.20	-207
IW-70-SSB109	11/18/11	1554	7.18	17100	16.4	0.03	20.68	-293
	8/5/11	1134	6.61	17600	*	0.11	22.04	-243
	9/20/10	1023	6.24	15800	55.3	0.00	21.72	-157

Table E-14
Field Parameter Data

Well ID	Date	Time	pH	Conductivity (µS/cm)	Turbidity (NTU)	DO (mg/L)	Temperature (°C)	ORP (mV)
	9/3/09	0950	5.54	13600	253.0	0.00	25.05	-234
	8/28/08	0820	6.61	1630	2.3	0.00	21.20	-169
IW-70-SSB119	11/21/11	1106	7.26	7850	11.5	0.26	21.59	-195
	8/5/11	1044	6.91	4160	*	0.32	22.08	-225
	8/30/10	1446	6.65	8520	140.0	0.00	23.80	-338
MW-70-PMW14A	11/18/11	1158	7.38	6500	4.9	0.04	20.71	-236
	8/5/11	1351	6.96	3920	841.0	0.00	21.97	-264
	9/20/10	1113	7.24	6850	1.9	0.00	24.51	-255
	9/16/09	1130	6.46	7380	20.8	0.00	22.73	-286
	9/3/08	1000	6.93	18100	0.0	0.00	21.80	-153
MW-70-PMW14B	11/18/11	1435	7.72	12400	3.4	0.04	21.18	-259
	8/5/11	1428	7.19	6110	*	0.00	22.36	-265
	9/23/10	1432	7.00	11500	312.0	0.00	22.87	-260
	9/3/09	0815	6.52	14100	266.0	0.00	27.71	-209
	9/3/08	0905	6.92	38900	0.0	0.00	22.20	-136
MW-70-MNA15	11/17/11	1300	8.19	14200	2.2	0.19	20.96	-207
	9/23/10	0914	7.08	12900	28.5	0.00	21.50	-123
	8/26/09	1240	6.88	9730	38.7	0.00	25.63	-204
	9/4/08	1250	6.83	16400	65.0	0.00	22.10	-164
MW-70-MNA16	11/17/11	1422	8.26	9300	2.1	0.09	21.08	-215
	8/8/11	1309	7.55	11300	12.0	0.10	22.16	-262
	9/23/10	1053	7.16	8780	15.0	0.00	21.93	-211
	8/31/09	1300	7.08	7990	343.0	0.00	24.57	-244
	8/29/08	1315	6.65	7600	3.7	0.00	22.30	-134
MW-70-MNA17	11/21/11	1145	8.29	27700	2.9	0.17	21.18	-229
	8/8/11	1427	7.49	28700	0.0	0.24	22.04	-266
	9/23/10	1330	7.11	21400	26.7	0.00	22.59	-216
	9/1/09	0945	6.87	21100	21.8	0.00	22.72	-230
	8/29/08	1320	6.76	28800	0.0	0.00	22.10	-108
MW-70-14	11/23/11	1249	8.11	4220	3.9	0.53	21.77	-113
	8/4/11	1023	7.31	3350	547.0	0.63	22.04	-78
	9/28/10	0828	6.93	2540	145.0	0.00	22.50	-81
	9/9/09	1035	6.90	3280	222.0	0.00	24.08	-91
MW-70-15	11/21/11	1032	8.20	28600	3.0	0.20	20.07	-77
	9/24/10	1134	7.02	28100	0.0	0.00	21.92	-90
	9/2/09	1155	6.93	27400	28.5	0.00	24.43	-128
	9/2/08	1415	6.90	24900	0.0	0.00	21.40	-87
MW-70-43B	11/16/11	0927	8.22	5300	3.1	0.19	21.20	-159
	9/22/10	1237	8.46	2920	78.0	0.00	22.28	-238
	9/29/09	0950	6.92	7170	33.0	0.00	23.31	-231
MW-70-49	11/28/11	1420	8.47	6250	8.7	0.52	21.28	-211
POINT OF COMPLIANCE - UPPER FINES								
MW-70-02	10/28/11	0837	7.33	4990	0.0	0.11	21.39	-203
	9/14/10	0908	6.61	2900	29.5	0.00	22.78	67
	9/15/09	1325	6.56	5490	0.2	0.00	24.90	-44
	9/3/08	1415	6.32	7960	0.0	0.00	23.10	111
MW-70-03	11/23/11	0912	7.86	2270	7.6	0.44	24.15	-77
	12/22/09	1230	6.99	1050	18.0	0.00	22.00	-89
MW-70-10	10/31/11	1007	7.99	6150	0.0	0.21	21.18	-16
	9/14/10	1148	7.14	5020	103.0	0.00	23.33	-44
	9/15/09	1150	6.97	6050	1.2	0.00	24.10	-91
	8/28/08	1005	6.54	5530	12.1	0.00	21.40	-12
MW-70-17	10/28/11	1146	7.79	12100	0.3	0.18	21.72	-40
	9/14/10	1018	6.78	8050	79.1	0.00	22.13	-138
	8/31/09	1000	6.66	8760	172.0	0.00	23.06	-151
	8/27/08	0955	6.30	8910	0.8	0.00	21.50	89
MW-70-22	10/28/11	1235	8.31	60900	0.0	0.74	21.76	-13
	9/14/10	1053	7.15	55200	20.8	0.00	22.17	-81

Table E-14
Field Parameter Data

Well ID	Date	Time	pH	Conductivity (µS/cm)	Turbidity (NTU)	DO (mg/L)	Temperature (°C)	ORP (mV)
	9/2/09	1100	7.01	57300	22.7	0.00	23.87	-125
	9/3/08	1300	6.65	53500	0.0	0.00	21.60	07
POINT OF COMPLIANCE - FIRST SAND								
MW-70-POC01	10/28/11	0921	8.45	1820	0.0	0.02	21.98	-162
	9/17/10	0858	7.28	1470	>800	0.00	21.40	-164
	9/15/09	1400	7.31	1250	0.2	0.00	23.60	-180
	9/4/08	0905	7.23	2970	0.0	0.00	22.50	-129
MW-70-11	10/31/11	0934	8.21	2780	0.0	0.08	21.14	-88
	9/14/10	1228	7.34	2280	93.7	0.00	22.97	-118
	8/26/09	1145	7.01	2230	143.0	0.00	24.79	-162
	9/3/08	1320	6.75	2260	NA	0.00	22.00	-128
MW-70-35	10/28/11	1047	8.01	14300	0.0	0.26	21.73	-87
	9/17/10	0948	6.93	12200	0.0	0.00	20.81	-87
	9/15/09	1440	6.87	13100	0.0	0.00	22.71	-140
	8/27/08	1310	6.55	990	0.6	0.00	22.00	-94
MW-70-16	11/1/11	1411	9.02	3650	0.0	4.23	20.73	-25
	9/17/10	1148	7.42	4670	9.4	3.58	20.59	-08
	9/2/09	1305	7.02	6330	30.7	0.00	24.46	-82
	9/2/08	1340	6.84	3960	NA	3.83	21.40	64
POINT OF COMPLIANCE - SHELL HORIZON								
MW-70-23	11/1/11	0837	8.24	4100	0.0	0.31	20.10	-71
	9/17/10	1048	7.40	3330	3.4	0.00	20.50	-91
	9/15/09	1100	7.20	3370	0.0	0.00	23.00	-148
	8/28/08	1230	7.19	3220	0.0	0.00	20.70	-97
POINT OF COMPLIANCE - SECOND SAND								
MW-70-21	11/1/11	1152	8.06	29500	0.0	0.73	21.30	-67
	9/24/10	0743	6.83	26900	0.0	0.00	19.19	-32
	9/17/09	1110	6.79	3.41	84.6	0.00	21.21	-120
	9/3/08	1215	6.46	2550	1.5	0.00	21.10	-100
MW-70-36	10/31/11	1352	8.30	23300	0.0	0.82	22.08	-125
	9/24/10	1204	7.19	18900	1.8	0.00	22.15	-155
	8/31/09	1050	7.02	18300	252.0	0.00	24.78	-225
	9/2/08	1115	6.69	1630	NA	0.00	21.80	-140
POINT OF COMPLIANCE - DEEP SAND								
MW-70-POC02	11/1/11	0948	8.79	1450	0.0	0.00	20.50	-226
	9/27/10	1036	7.58	1080	0.0	0.00	28.30	-259
	9/15/09	1020	7.42	1140	0.0	0.00	26.10	-270
	9/4/08	0925	7.15	1030	8.4	0.00	21.70	-171
MW-70-POC03	10/31/11	1132	8.17	18600	0.0	0.21	20.43	-67
	9/27/10	0948	7.03	11800	1.6	0.00	22.26	-125
	9/15/09	0935	6.77	9000	0.0	0.00	22.98	-182
	9/2/08	1110	7.34	13700	0.0	0.00	21.40	-127
MW-70-POC04	11/1/11	1108	8.23	38100	0.0	0.41	21.51	-179
	9/24/10	0835	6.54	36000	18.8	0.00	21.17	-198
	9/1/09	0855	6.55	36600	17.5	0.00	21.11	-201
	10/14/08	1020	7.32	37200	4.7	0.20	20.70	-195

Abbreviations:
°C – degrees Celsius
* out of instrument's range
> - greater than
DO – dissolved oxygen
µS/cm – microSiemens per centimeter
mg/L – milligrams per liter
mV – millivolt
NA - not available
NTU – nephelometric turbidity unit
ORP – oxidation-reduction potential
pH – potential of hydrogen

APPENDIX F

WELL CONSTRUCTION LOGS

INSIGHT
Environmental, Engineering and Construction, Inc.

3010 E. MIRALOMA AVENUE
ANAHEIM, CA 92806
TELEPHONE (714) 678-6700 · FAX (714) 678-6711
INTERNET: www.ieeci.com

BORING: MW-70-49

Project Name: Seal Beach IR Site 70 -Monitoring Well Installation	Project No: 4-77101
Date: 9/16/11	Drilling company: Boart & Longyear
Logged by: M. Mendoza	Drilling method: Sonic
Location: NWS Seal Beach	Ground surface elevation (feet above msl-NGVD29 datum):
Surveyor:	Northing (NAD83): Easting (NAD83):

Depth (ft.)	Soil Sample	Groundwater Sample	Sample Time	Well Construction Log	PID Reading (ppmv)	Graphic Log	Log Notes
0							0-1': artificial fill, silty sand, mixed with railroad base rock
-							1': silty sand (SM), very dark grayish brown (10YR, 3/2), moist, fine, soft, micaceous
-							
-							
-							
5							
-							7': silty clay, very dark gray (5Y, 3/1), moist, high plasticity, medium stiff, micaceous
-							
-							
-							9': some concretions
10							
-							
-							
-							
-							
15							
-							16': silty clay, dark greenish gray (10GY, 3/1), moist, stiff, low to medium plasticity, no odor
-							17.5': grades to sandy silt, dark greenish gray (5GY, 3/1), moist, fine, dense, micaceous, no odor
-							
-							
20							20': sand content increases
-							21': silty sand, dark greenish gray (5GY, 3/1), moist, fine, dense, micaceous, no odor
-							
-							
-							
25							25': sandy silt, olive (5Y, 4/3), moist, dense, fine, micaceous
-							
-							
-							27'-28': clayey silt interbed, olive (5Y, 5/3), moist, stiff, medium plasticity, some concretions
-							
30							
-							31': silt, olive (5Y, 4/4), moist, dense, fine, concretions, micaceous
-							
-							33'-34': silty clay interbed, olive (5Y, 5/3), moist, stiff, medium plasticity, some platy structure
-							
35							
-							36'-38': silty clay interbed, olive (5Ym 5/3), moist, stiff, medium plasticity, some platy structure
-							38': silty sand, olive, (5Y, 4/3), wet, soft, fine, micaceous
-							
-							
40							
-							
-							
-							
-							
45							
-							
-							47': sand, dark grayish brown (5GY, 3/1), wet, fine, medium dense, no odor
-							
-							
50							

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Date: 9/16/11	Drilling company: Boart & Longyear
Logged by: M. Mendoza	Drilling method: Sonic
Location: NWS Seal Beach	Ground surface elevation (feet above msl-NGVD29 datum):
Surveyor:	Northing (NAD83): Easting (NAD83):

Depth (ft.)	Soil Sample	Groundwater Sample	Sample Time	Well Construction Log	PID Reading (ppmv)	Graphic Log	Log Notes
50							
55							54': silt, dark greenish gray (5GY, 4/1), moist, dense, no odor 55': grades to clayey silt, dark greenish gray (5GY, 4/1)
							57'-59': sand, dark greenish gray (10Y, 4/1), moist, fine to medium, some fine gravel, dense, no odor 59': silt, dark greenish gray (5GY, 4/1), moist, dense, no odor
60							
65							67': some clay, wet
							69': silty sand, dark greenish gray (10Y, 4/1), moist, dense, fine, no odor
70							
75							75': sand, dark greenish gray (10Y, 3/1), moist, dense, fine to medium, no odor
							78': color change to greenish gray (10Y, 6/1)
80							
85							86': sand, dark greenish gray (10Y, 3/1), moist, dense, fine to medium, no odor
90							
							94'-97': shell fragments
95							
							98': silt, dark greenish gray (5GY, 4/1), moist, dense, no odor 99': silt mixed w/sand, dark greenish gray (5GY, 3/1) moist, fine to medium, no odor
100							

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BORING: MW-70-49

Project Name: Seal Beach IR Site 70 -Monitoring Well Installation	Project No: 4-77101
Date: 9/16/11	Drilling company: Boart & Longyear
Logged by: M. Mendoza	Drilling method: Sonic
Location: NWS Seal Beach	Ground surface elevation (feet above msl-NGVD29 datum):
Surveyor:	Northing (NAD83): Easting (NAD83):

Depth (ft.)	Soil Sample	Groundwater Sample	Sample Time	Well Construction Log	PID Reading (ppmv)	Graphic Log	Log Notes
100							
-							101': silty sand, dark greenish gray (10Y, 3/1), moist, fine, dense, no odor, shell fragments
-							
-							
-							
105							
-							
-							
-							
-							
110							110': sand, dark greenish gray (5GY, 3/1), moist, fine, dense, shell fragments, no odor
-							
-							
-							
-							114': silty sand, dark greenish gray (10Y, 3/1), moist, fine, dense, micaceous, no odor
115							
-							
-							
-							
-							
120							
-							
-							
-							
-							
125							
-							
-							
-							
-							
130							
-							
-							
-							
-							
135							135': sand, dark greenish gray (5GY, 3/1), moist, fine to medium, dense, no odor
-							
-							
-							
-							
140							
-							
-							
-							
-							
145							
-							
-							
-							
-							149'-149.5': silt interbed, dark greenish gray (10Y, 3/1), moist, dense
150							

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BORING: MW-70-49

Project Name: Seal Beach IR Site 70 -Monitoring Well Installation		Project No: 4-77101	
Date: 9/16/11		Drilling company: Boart & Longyear	
Logged by: M. Mendoza		Drilling method: Sonic	
Location: NWS Seal Beach		Ground surface elevation (feet above msl-NGVD29 datum):	
Surveyor:		Northing (NAD83):	Easting (NAD83):

Depth (ft.)	Soil Sample	Groundwater Sample	Sample Time	Well Construction Log	PID Reading (ppmv)	Graphic Log	Log Notes
150							150': sand, dark greenish gray (5GY, 3/1), moist, fine to medium, dense, no odor
-							
-							
-							
-							
155							
-							
-							
-							
-							
160							
-							
-							
-							
-							
165							
-							
-							167': End of Boring
-							
-							
170							
-							
-							
-							
-							
175							
-							
-							
-							
-							
180							
-							
-							
-							
-							
185							
-							
-							
-							
-							
190							
-							
-							
-							
-							
195							
-							
-							
-							
-							
200							

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Well Construction Log:MW-70-49

Project Name: Seal Beach IR Site 70 -Monitoring Well Installation	Project No: 4-77101
Date: 9/16/11	Drilling company: Boart & Longyear
Logged by: M. Mendoza	Drilling method: Sonic
Location: NWS Seal Beach	Ground surface elevation (feet above msl-NGVD29 datum):
Surveyor:	Northing (NAD83): 2222561.84 Easting (NAD83): 6007405.30

Flush-Mount Ground Surface Completion:
Surface Completion:

Type	Traffic Box
Well Casing Depth (ft.-bgs)	0.5

Depth (ft.)	Comments	Well Material Depth	Well Construction Log
	1'- grout	1-	
5	5'- casing stabilizers		-5'
10			
15			
20			
25			
30			
35			
40			
45			
50			
55	55' - casing stabilizers		-55'
60			
65			
70			
75			
80			
85			
90			
95			
100			

Borehole Depth (feet)	167
Pilot Borehole Diameter (inches)	8
Ream Borehole Diameter (inches)	N/A
Well Construction	
Well Construction Date	9/16/2011
Well Depth (feet)	165
Well Casing Diameter (inches)	4
Well Casing Material	SCH 80 PVC
Screen Slot Size/Direction	0.02 inches/horizontal
Top of Screen (ft.-bgs)	125
Bottom of Screen (ft.-bgs)	165
Grout	
Top Depth (ft.-bgs)	1
Type/Brand	Quikcrete/West Coast Concrete
Quantity Used	N/A
Volume Fluid Used	N/A
Placement Method	Tremie
Bentonite Seal	
Top Depth (ft.-bgs)	N/A
Type/Brand	N/A
Quantity Used	N/A
Volume Fluid Used	N/A
Set-Up Time	N/A
Placement Method	N/A
Transition Sand	
Top Depth (ft.-bgs)	N/A
Type/Brand	N/A
Quantity Used	N/A
Placement Method	N/A
Sand/Gravel Pack	
Top Depth (ft.-bgs)	N/A
Type/Brand	N/A
Quantity Used	N/A
Placement Method	N/A
Bottom Fill	
Top Depth (ft.-bgs)	N/A
Type/Brand	N/A
Quantity Used	N/A
Placement Method	N/A

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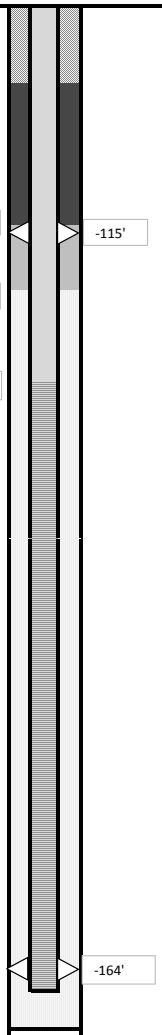
Well Construction Log:MW-70-49

Project Name: Seal Beach IR Site 70 -Monitoring Well Installation	Project No: 4-77101
Date: 9/16/11	Drilling company: Boart & Longyear
Logged by: M. Mendoza	Drilling method: Sonic
Location: NWS Seal Beach	Ground surface elevation (feet above msl-NGVD29 datum):
Surveyor:	Northing (NAD83):2222561.84 Easting (NAD83): 6007405.30

Depth (ft.)	Comments	Well Material Depth
105		
	106'- bentonite chips	106'-
110		
115	115'- casing stabilizers	115'-
	115'- transition sand	
120	120'- filter sand	120'-
125	125' - top of screen	125'-
130		
135		
140		
145		
150		
155		
160		
	164' - casing stabilizers	
165	165'- bottom of screen	
	167'- bottom of boring	
170		
175		
180		
185		
190		
195		
200		



Flush-Mount Ground Surface Completion:
Surface Completion:

Type	Traffic Box
Well Casing Depth (ft.-bgs)	0.5
Borehole Depth (feet)	167
Pilot Borehole Diameter (inches)	8
Ream Borehole Diameter (inches)	N/A
Well Construction	
Well Construction Date	9/16/2011
Well Depth (feet)	165
Well Casing Diameter (inches)	4
Well Casing Material	SCH 80 PVC
Screen Slot Size/Direction	0.02 inches/horizontal
Top of Screen (ft.-bgs)	125
Bottom of Screen (ft.-bgs)	165
Grout	
Top Depth (ft.-bgs)	1
Type/Brand	Quikcrete/West Coast Concrete
Quantity Used	N/A
Volume Fluid Used	N/A
Placement Method	Tremie
Bentonite Seal	
Top Depth (ft.-bgs)	106
Type/Brand	Kwik Plug Medium Chips
Quantity Used	2 bags
Volume Fluid Used	N/A
Set-Up Time	10 minutes
Placement Method	Pour through casing
Transition Sand	
Top Depth (ft.-bgs)	115
Type/Brand	Cemex Lapis Lustre #60
Quantity Used	4 bags-50 lbs each
Placement Method	Pour through casing
Sand/Gravel Pack	
Top Depth (ft.-bgs)	120
Type/Brand	Cemex Lapis Lustre Silicon Sand #2/12
Quantity Used	25 bags - 50 lbs each
Placement Method	Pour through casing
Bottom Fill	
Top Depth (ft.-bgs)	N/A
Type/Brand	N/A
Quantity Used	N/A
Placement Method	N/A

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Well Construction Log:RDO-4

Project Name: Seal Beach IR Site 70 -Monitoring Well Installation	Project No: 4-77101
Date: 9/13/11	Drilling company: Boart & Longyear
Logged by: M. Mendoza	Drilling method: Sonic
Location: NWS Seal Beach	Ground surface elevation (feet above msl-NGVD29 datum):
Surveyor:	Northing (NAD83): 2223450.58 Easting (NAD83): 6007075.43

Flush-Mount Ground Surface Completion:
Surface Completion:

Type	Traffic Box
Well Casing Depth (ft.-bgs)	0.5

Depth (ft.)	Comments	Well Material Depth
	1'- grout	1-
5	5'- casing stabilizers	-5'
10		
15		
20		
25		
30		
35		
40		
45	47' - bentonite seal	47-
50		
55	55' - transition sand	55-
60	60' - filter pack	60-
65	64' - casing stabilizers 65' - top of screen	65- -64'
70		
75		
80		
85		
90		
95		
100		

Borehole Depth (feet)	112
Pilot Borehole Diameter (inches)	8
Ream Borehole Diameter (inches)	N/A
Well Construction	
Well Construction Date	9/13/2011
Well Depth (feet)	105
Well Casing Diameter (inches)	4
Well Casing Material	SCH 80 PVC
Screen Slot Size/Direction	0.02 inches/horizontal
Top of Screen (ft.-bgs)	65
Bottom of Screen (ft.-bgs)	105
Grout	
Top Depth (ft.-bgs)	Top
Type/Brand	Westcoast Portland Cement
Quantity Used	N/A
Volume Fluid Used	N/A
Placement Method	Tremie
Bentonite Seal	
Top Depth (ft.-bgs)	47
Type/Brand	Kwik Plug Medium Chips
Quantity Used	2 bags
Volume Fluid Used	N/A
Set-Up Time	10 minutes
Placement Method	Pour through casing
Transition Sand	
Top Depth (ft.-bgs)	55
Type/Brand	Cemex Lapis Lustre #60
Quantity Used	2 bags-50 lbs each
Placement Method	Pour through casing
Sand/Gravel Pack	
Top Depth (ft.-bgs)	60
Type/Brand	Cemex Lapis Lustre Silicon Sand #2/12
Quantity Used	26 bags - 50 lbs each
Placement Method	Pour through casing
Bottom Fill	
Top Depth (ft.-bgs)	N/A
Type/Brand	N/A
Quantity Used	N/A
Placement Method	N/A

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Well Construction Log:RDO-4

Project Name: Seal Beach IR Site 70 -Monitoring Well Installation	Project No: 4-77101
Date: 9/13/11	Drilling company: Boart & Longyear
Logged by: M. Mendoza	Drilling method: Sonic
Location: NWS Seal Beach	Ground surface elevation (feet above msl-NGVD29 datum):
Surveyor:	Northing (NAD83): 2223450.58 Easting (NAD83): 6006075.43

Depth (ft.)	Comments	Well Material Depth
	104'- casing stabilizers	105'-
105	105' - bottom of screen	
110	112'- bottom of boring	112'-
115		
120		
125		
130		
135		
140		
145		
150		
155		
160		
165		
170		
175		
180		
185		
190		
195		
200		

Well Construction Log

-104'

Flush-Mount Ground Surface Completion:
Surface Completion:

Type	Traffic Box
Well Casing Depth (ft.-bgs)	0.5

Borehole Depth (feet)	112
Pilot Borehole Diameter (inches)	8
Ream Borehole Diameter (inches)	N/A
Well Construction	
Well Construction Date	9/13/2011
Well Depth (feet)	105
Well Casing Diameter (inches)	4
Well Casing Material	SCH 80 PVC
Screen Slot Size/Direction	0.02 inches/horizontal
Top of Screen (ft.-bgs)	65
Bottom of Screen (ft.-bgs)	105
Grout	
Top Depth (ft.-bgs)	N/A
Type/Brand	N/A
Quantity Used	N/A
Volume Fluid Used	N/A
Placement Method	N/A
Bentonite Seal	
Top Depth (ft.-bgs)	N/A
Type/Brand	N/A
Quantity Used	N/A
Volume Fluid Used	N/A
Set-Up Time	N/A
Placement Method	N/A
Transition Sand	
Top Depth (ft.-bgs)	N/A
Type/Brand	N/A
Quantity Used	N/A
Placement Method	N/A
Sand/Gravel Pack	
Top Depth (ft.-bgs)	60
Type/Brand	Cemex Lapis Lustre Silicon Sand #2/12
Quantity Used	26 bags - 50 lbs each
Placement Method	Pour through casing
Bottom Fill	
Top Depth (ft.-bgs)	N/A
Type/Brand	Cemex Lapis Lustre Silicon Sand #2/12
Quantity Used	N/A
Placement Method	Pour through casing

APPENDIX G

PERFORMANCE MONITORING TRENDS – DETAILED GRAPHS

IR Site 70
Naval Weapons Station Seal Beach

Chlorinated Volatile Organic Compounds (CVOC) Concentration Graphs
Total Organic Carbon (TOC) Graphs
Volatile Fatty Acids (VFAs) Concentration Graphs
Dissolved Oxygen (DO) and Oxidation Reduction Potential (ORP) Trends
Sulfate-Methane Concentration Trends
Dehalococcoides (Dhc) and vinyl chloride reductase A gene (vcrA) Trends

IR Site 70
Naval Weapons Station Seal Beach

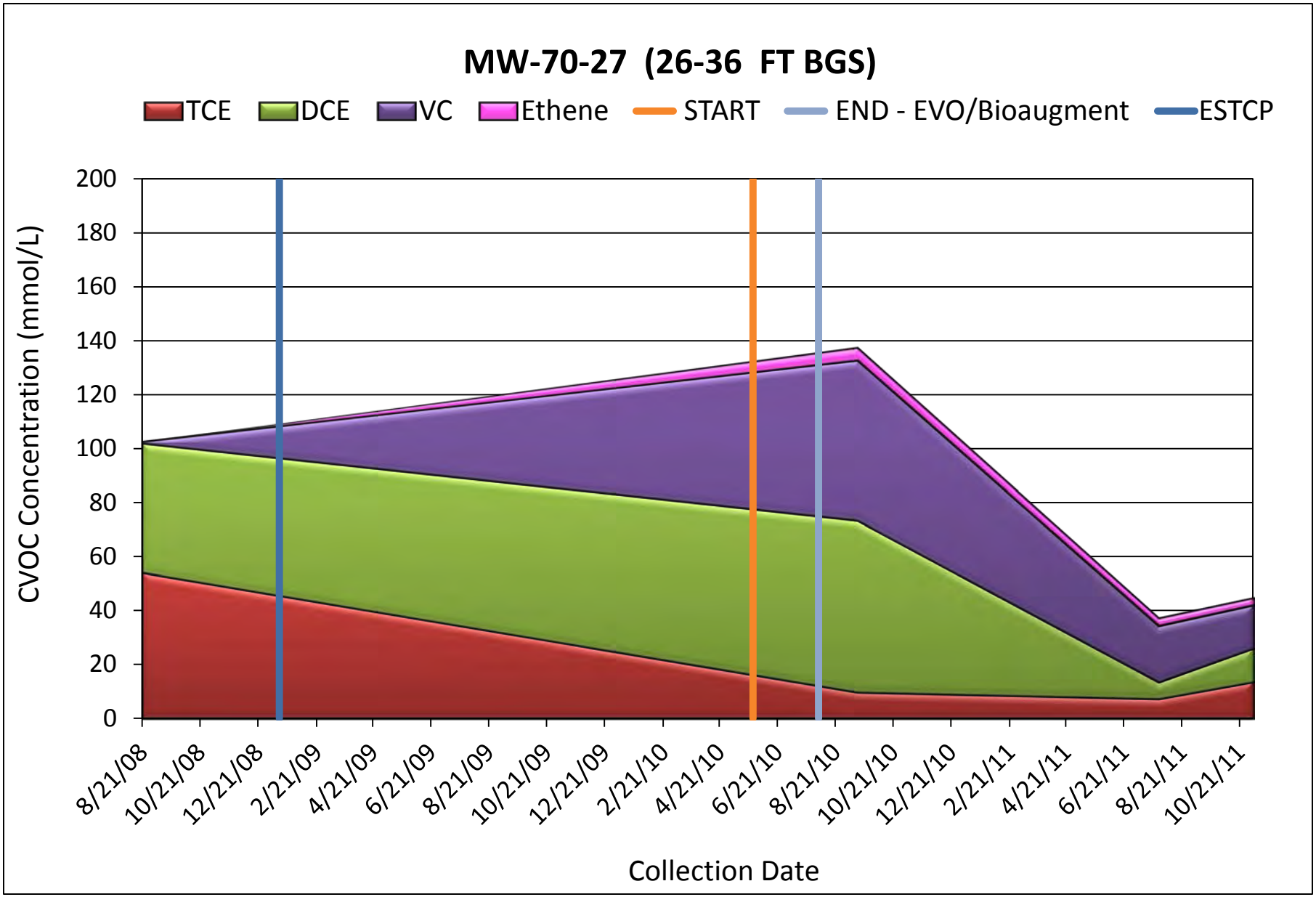
Chlorinated Volatile Organic Compounds (CVOC) Concentration Graphs

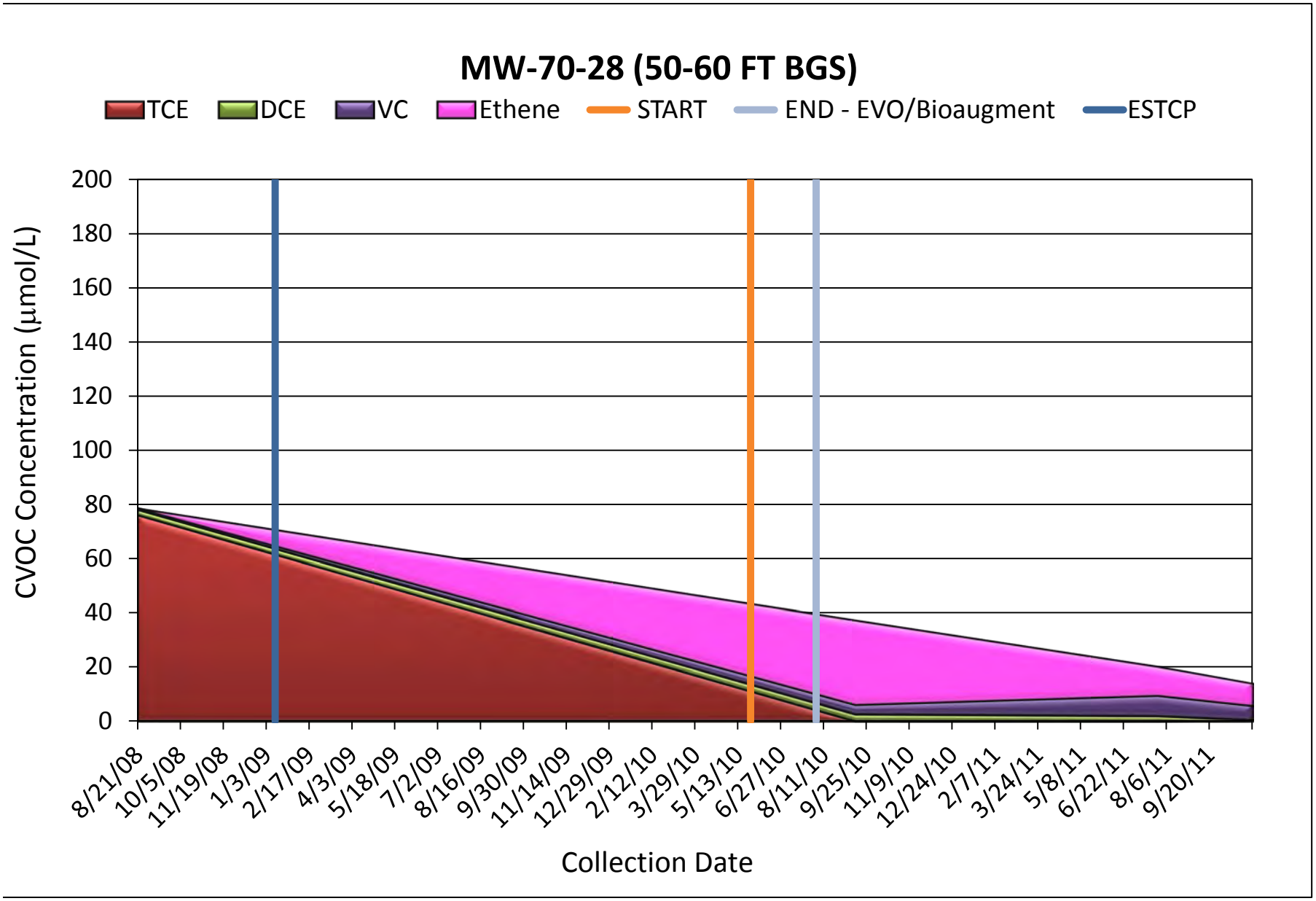
Source Area Treatment
Source Area Biobarrier
First Sand Biobarrier 1
First Sand Biobarrier 2
Shell Horizon Biobarrier 1
Shell Horizon Biobarrier 3
Second Sand Biobarrier 1

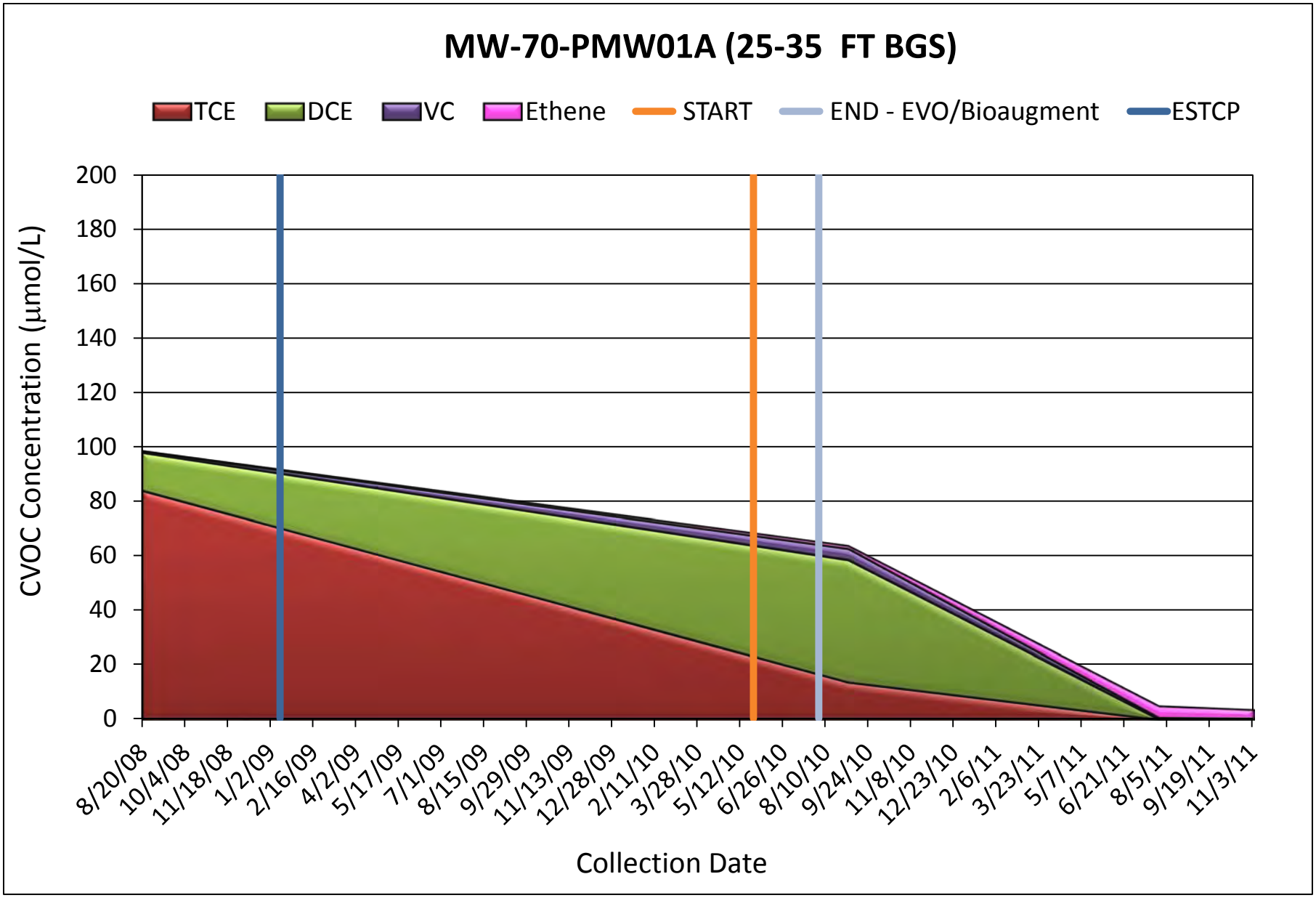
IR Site 70
Naval Weapons Station Seal Beach

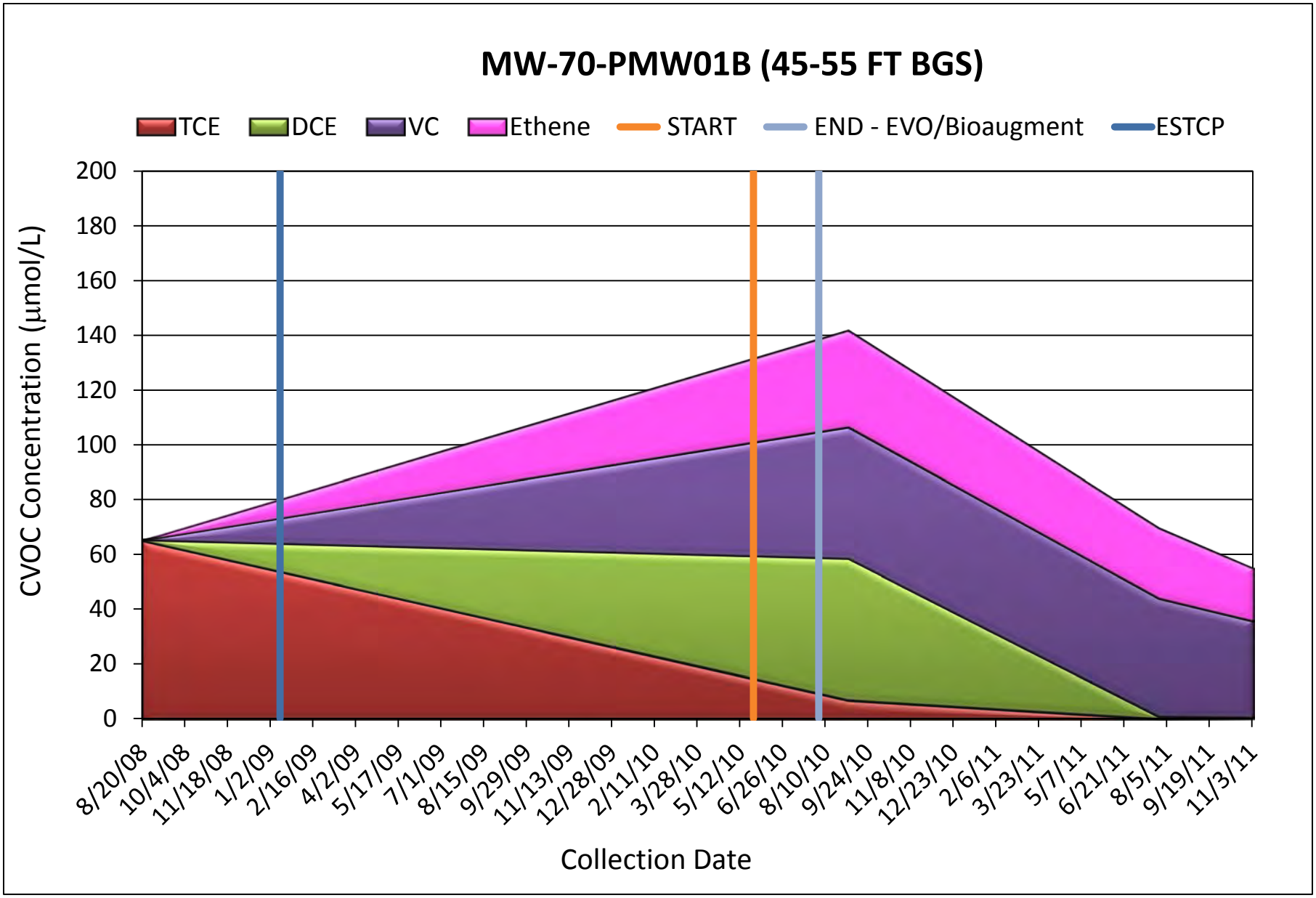
Chlorinated Volatile Organic Compounds (CVOC) Concentration Graphs

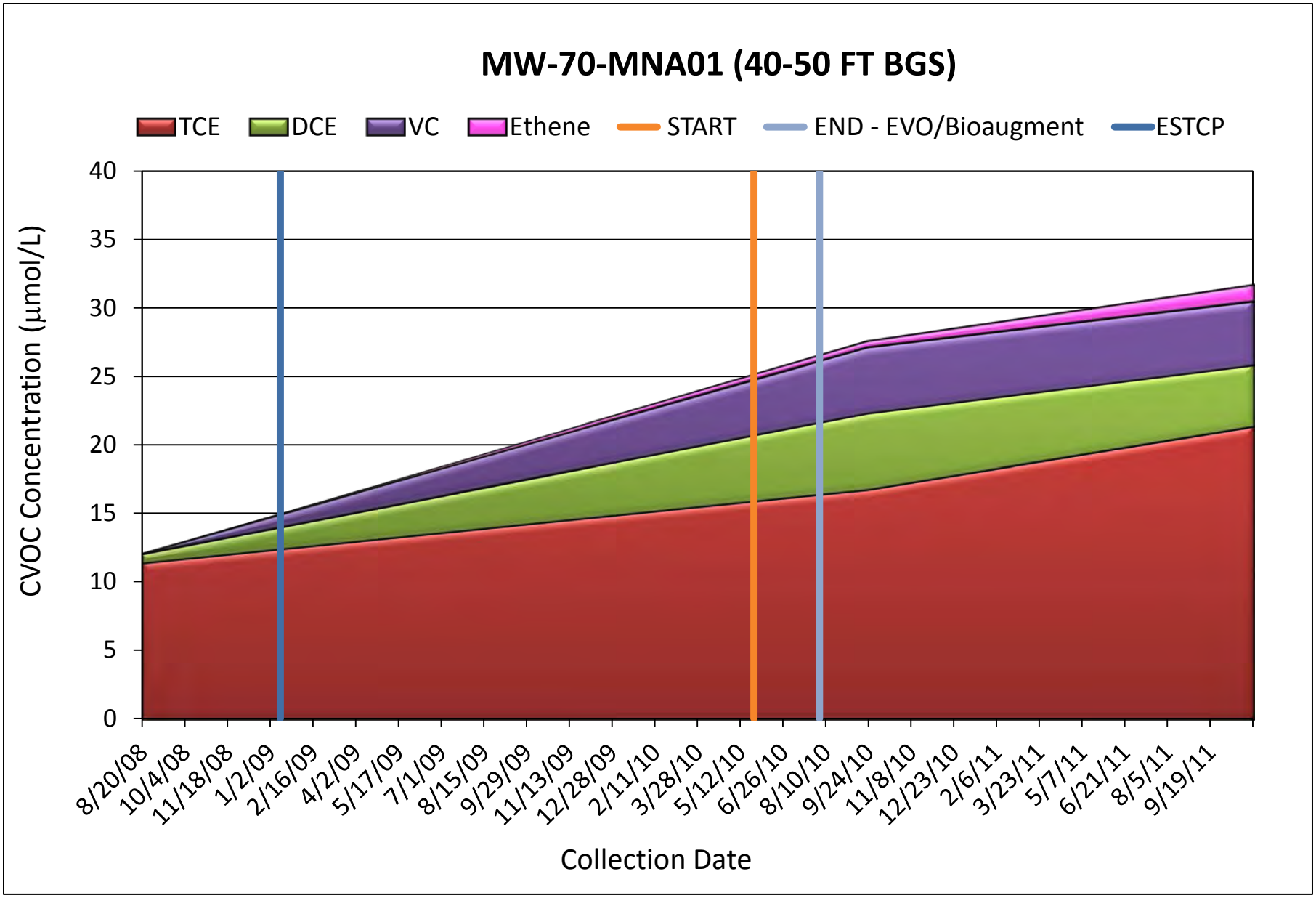
Source Area Treatment


MW-70-27 (26-36 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
ESTCP
CVOC Concentration (mmol/L)
200
180
160
140
120
100
80
60
40
20
0
8/21/08
10/21/08
12/21/08
2/21/09
4/21/09
6/21/09
8/21/09
10/21/09
12/21/09
2/21/10
4/21/10
6/21/10
8/21/10
10/21/10
12/21/10
2/21/11
4/21/11
6/21/11
8/21/11
10/21/11
Collection Date


MW-70-28 (50-60 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
ESTCP
CVOC Concentration (µmol/L)
200
180
160
140
120
100
80
60
40
20
0
8/21/08
10/5/08
11/19/08
1/3/09
2/17/09
4/3/09
5/18/09
7/2/09
8/16/09
9/30/09
11/14/09
12/29/09
2/12/10
3/29/10
5/13/10
6/27/10
8/11/10
9/25/10
11/9/10
12/24/10
2/7/11
3/24/11
5/8/11
6/22/11
8/6/11
9/20/11
Collection Date


MW-70-PMW01A (25-35 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
ESTCP
CVOC Concentration (µmol/L)
200
180
160
140
120
100
80
60
40
20
0
8/20/08
10/4/08
11/18/08
1/2/09
2/16/09
4/2/09
5/17/09
7/1/09
8/15/09
9/29/09
11/13/09
12/28/09
2/11/10
3/28/10
5/12/10
6/26/10
8/10/10
9/24/10
11/8/10
12/23/10
2/6/11
3/23/11
5/7/11
6/21/11
8/5/11
9/19/11
11/3/11
Collection Date


MW-70-PMW01B (45-55 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
ESTCP
CVOC Concentration (µmol/L)
200
180
160
140
120
100
80
60
40
20
0
8/20/08
10/4/08
11/18/08
1/2/09
2/16/09
4/2/09
5/17/09
7/1/09
8/15/09
9/29/09
11/13/09
12/28/09
2/11/10
3/28/10
5/12/10
6/26/10
8/10/10
9/24/10
11/8/10
12/23/10
2/6/11
3/23/11
5/7/11
6/21/11
8/5/11
9/19/11
11/3/11
Collection Date


MW-70-MNA01 (40-50 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
ESTCP
CVOC Concentration (µmol/L)
40
35
30
25
20
15
10
5
0
8/20/08
10/4/08
11/18/08
1/2/09
2/16/09
4/2/09
5/17/09
7/1/09
8/15/09
9/29/09
11/13/09
12/28/09
2/11/10
3/28/10
5/12/10
6/26/10
8/10/10
9/24/10
11/8/10
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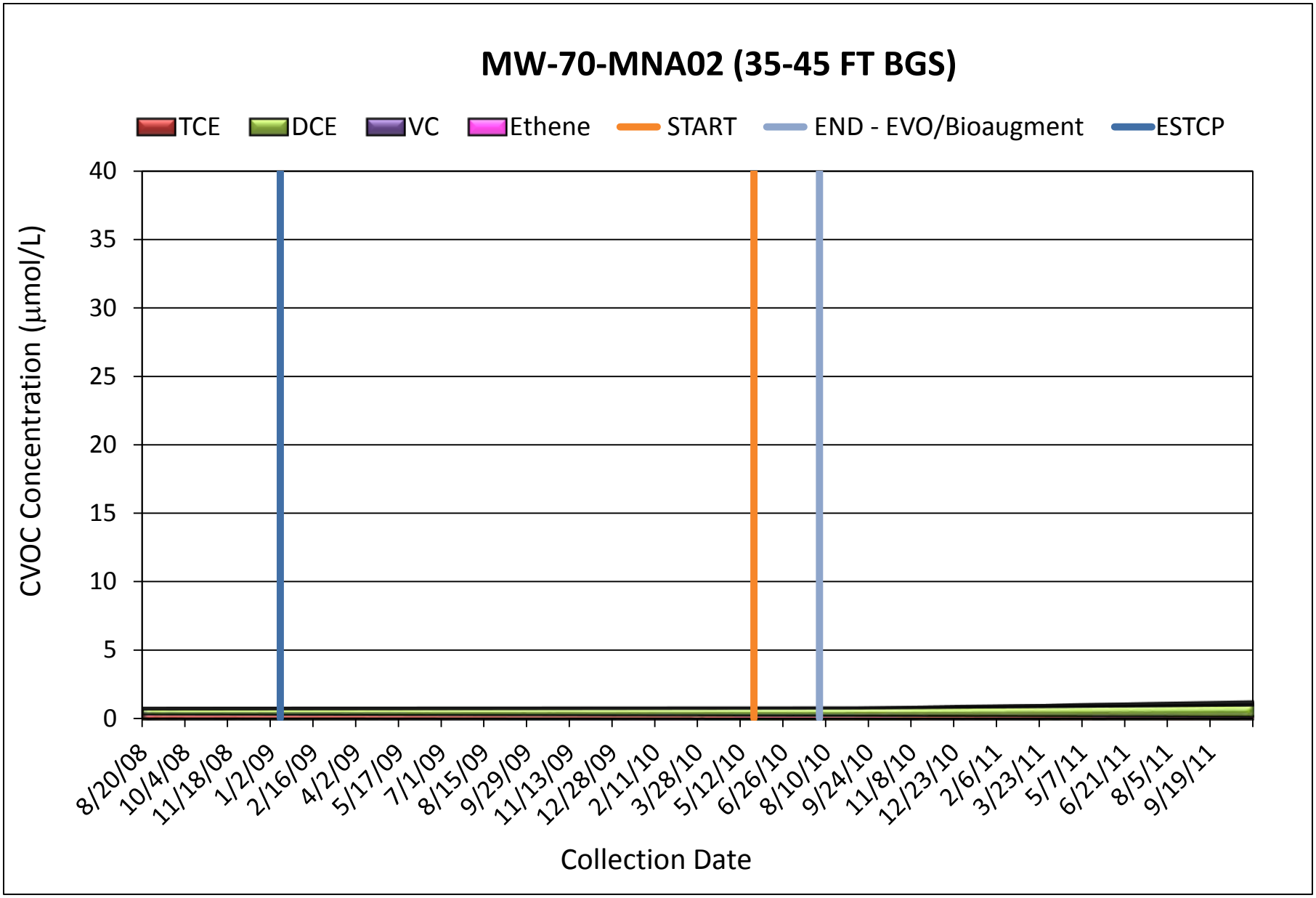
2/6/11
3/23/11
5/7/11
6/21/11
8/5/11
9/19/11
Collection Date


MW-70-MNA02 (35-45 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
ESTCP
CVOC Concentration (µmol/L)
40
35
30
25
20
15
10
5
0
8/20/08
10/4/08
11/18/08
1/2/09
2/16/09
4/2/09
5/17/09
7/1/09
8/15/09
9/29/09
11/13/09
12/28/09
2/11/10
3/28/10
5/12/10
6/26/10
8/10/10
9/24/10
11/8/10
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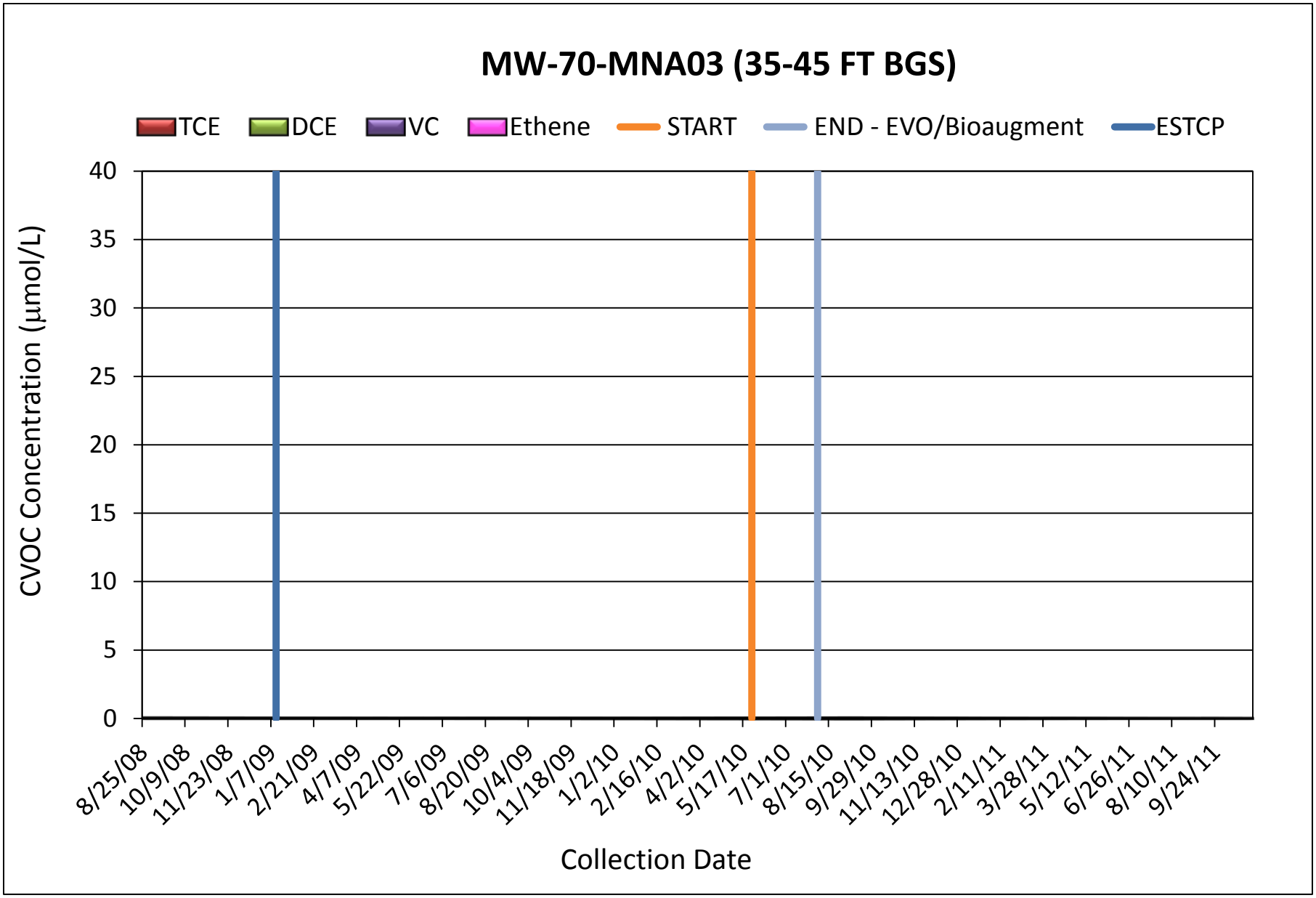
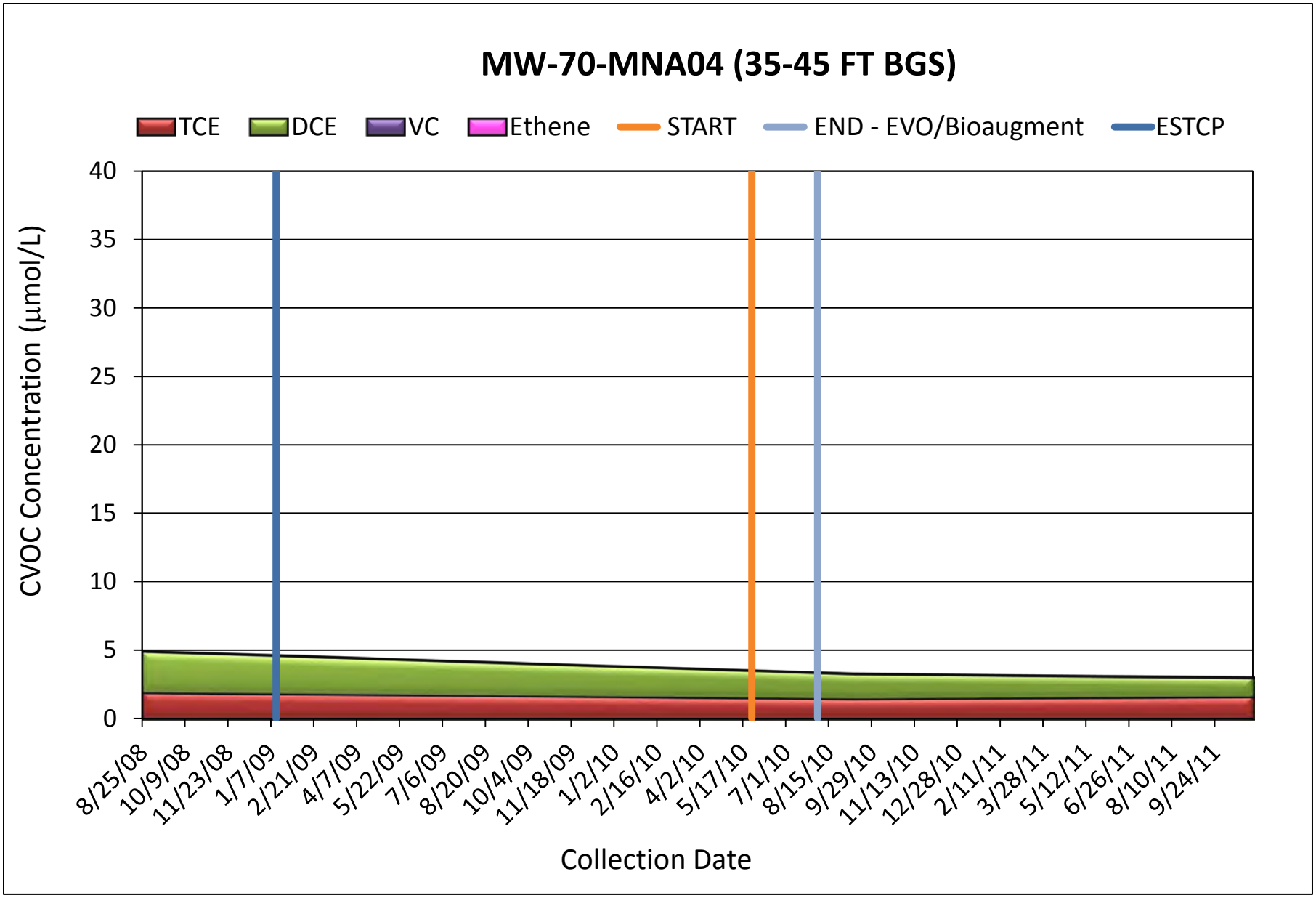
2/6/11
3/23/11
5/7/11
6/21/11
8/5/11
9/19/11
Collection Date

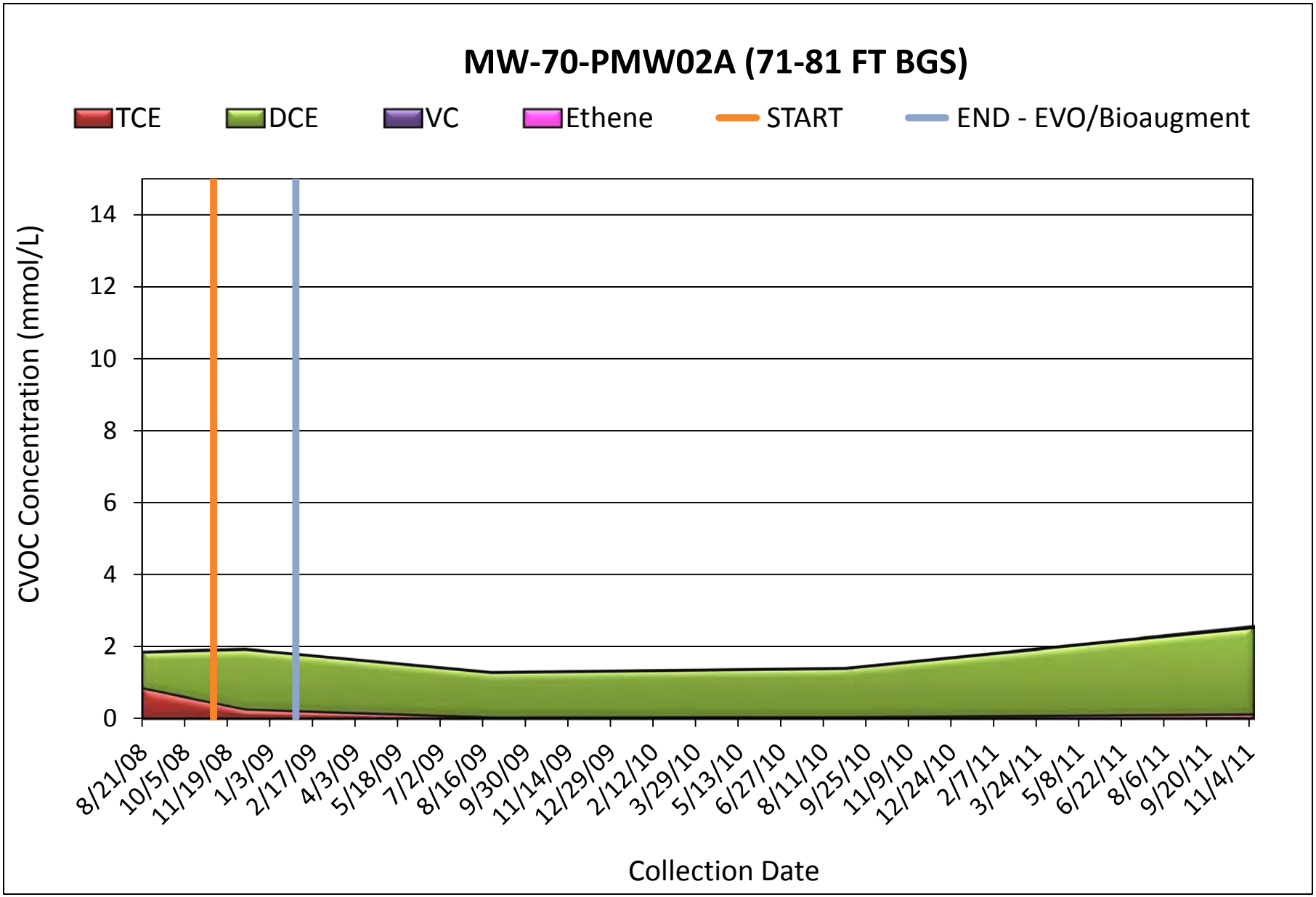

MW-70-MNA03 (35-45 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
ESTCP
CVOC Concentration (µmol/L)
40
35
30
25
20
15
10
5
0
8/25/08
10/9/08
11/23/08
1/7/09
2/21/09
4/7/09
5/22/09
7/6/09
8/20/09
10/4/09
11/18/09
1/2/10
2/16/10
4/2/10
5/17/10
7/1/10
8/15/10
9/29/10
11/13/10
12/28/10
2/11/11
3/28/11
5/12/11
6/26/11
8/10/11
9/24/11
Collection Date


MW-70-MNA04 (35-45 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
ESTCP
CVOC Concentration (µmol/L)
40
35
30
25
20
15
10
5
0
8/25/08
10/9/08
11/23/08
1/7/09
2/21/09
4/7/09
5/22/09
7/6/09
8/20/09
10/4/09
11/18/09
1/2/10
2/16/10
4/2/10
5/17/10
7/1/10
8/15/10
9/29/10
11/13/10
12/28/10
2/11/11
3/28/11
5/12/11
6/26/11
8/10/11
9/24/11
Collection Date

IR Site 70
Naval Weapons Station Seal Beach

Chlorinated Volatile Organic Compounds (CVOC) Concentration Graphs

Source Area Biobarrier


MW-70-PMW02A (71-81 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (mmol/L)
0
2
4
6
8
10
12
14
8/21/08
10/5/08
11/19/08
1/3/09
2/17/09
4/3/09
5/18/09
7/2/09
8/16/09
9/30/09
11/14/09
12/29/09
2/12/10
3/29/10
5/13/10
6/27/10
8/11/10
9/25/10
11/9/10
12/24/10
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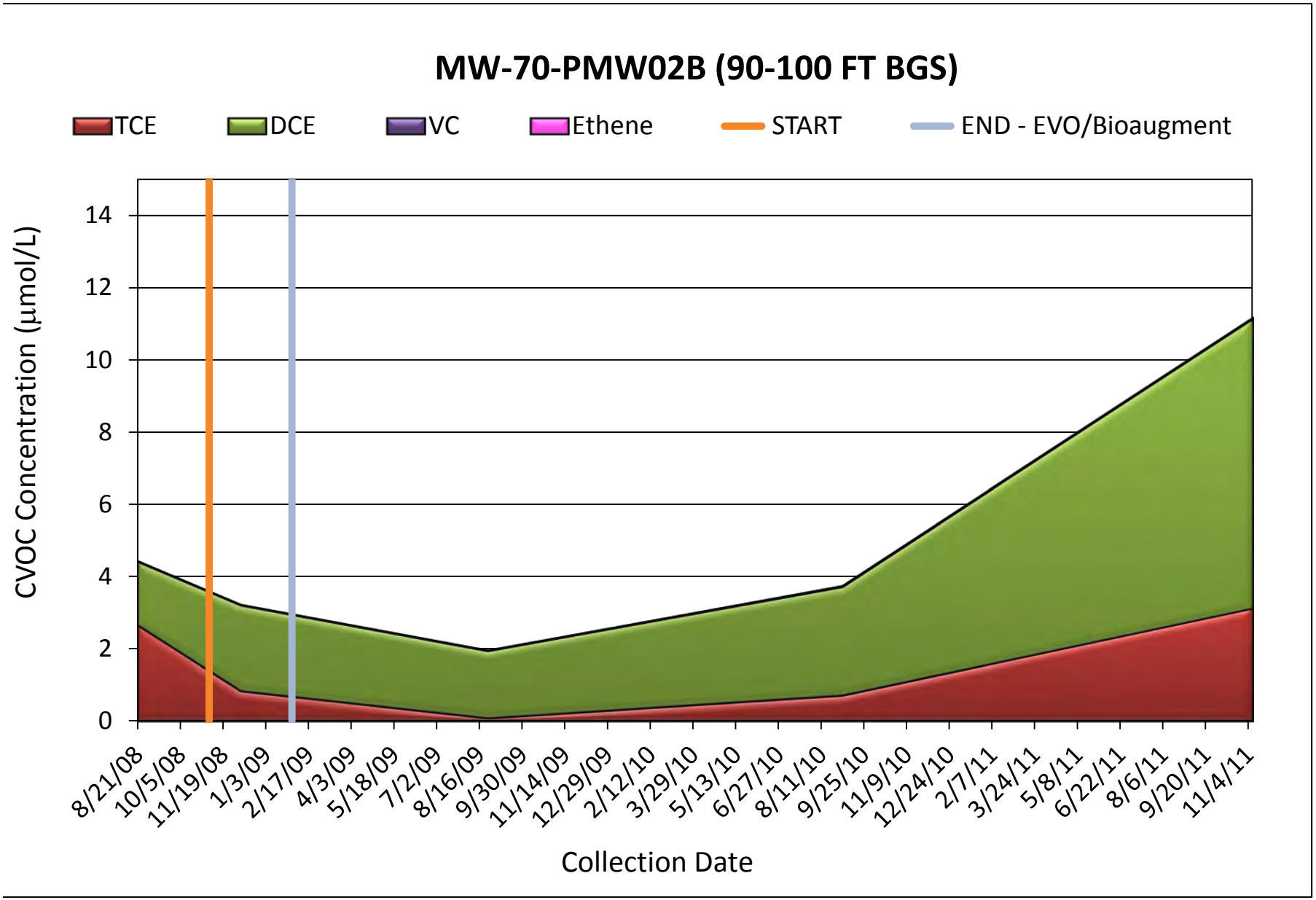
3/24/11
5/8/11
6/22/11
8/6/11
9/20/11
11/4/11
Collection Date


MW-70-PMW02B (90-100 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
0
2
4
6
8
10
12
14
8/21/08
10/5/08
11/19/08
1/3/09
2/17/09
4/3/09
5/18/09
7/2/09
8/16/09
9/30/09
11/14/09
12/29/09
2/12/10
3/29/10
5/13/10
6/27/10
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9/25/10
11/9/10
12/24/10
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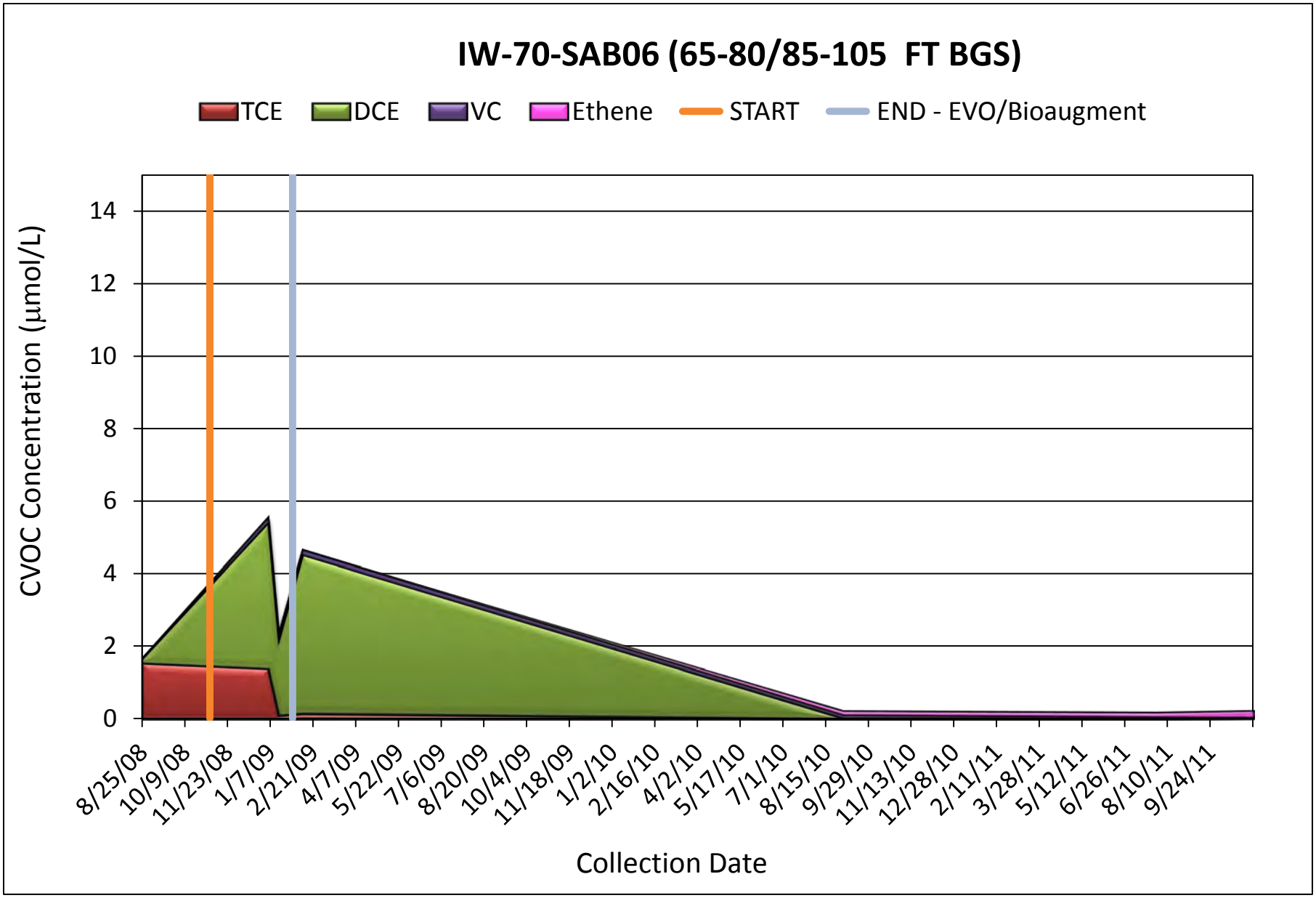
3/24/11
5/8/11
6/22/11
8/6/11
9/20/11
11/4/11
Collection Date


IW-70-SAB06 (65-80/85-105 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
0
2
4
6
8
10
12
14
8/25/08
10/9/08
11/23/08
1/7/09
2/21/09
4/7/09
5/22/09
7/6/09
8/20/09
10/4/09
11/18/09
1/2/10
2/16/10
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9/29/10
11/13/10
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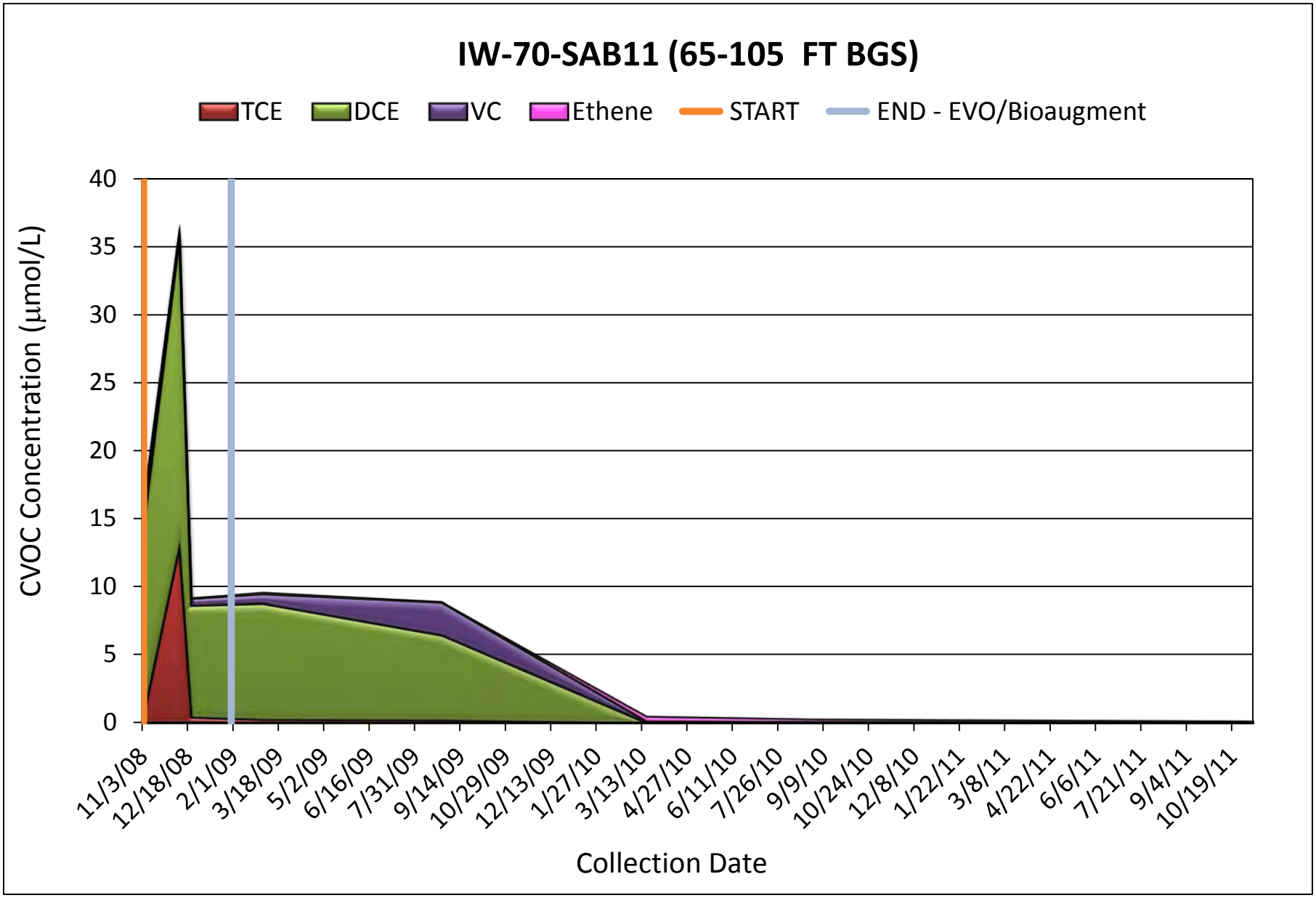
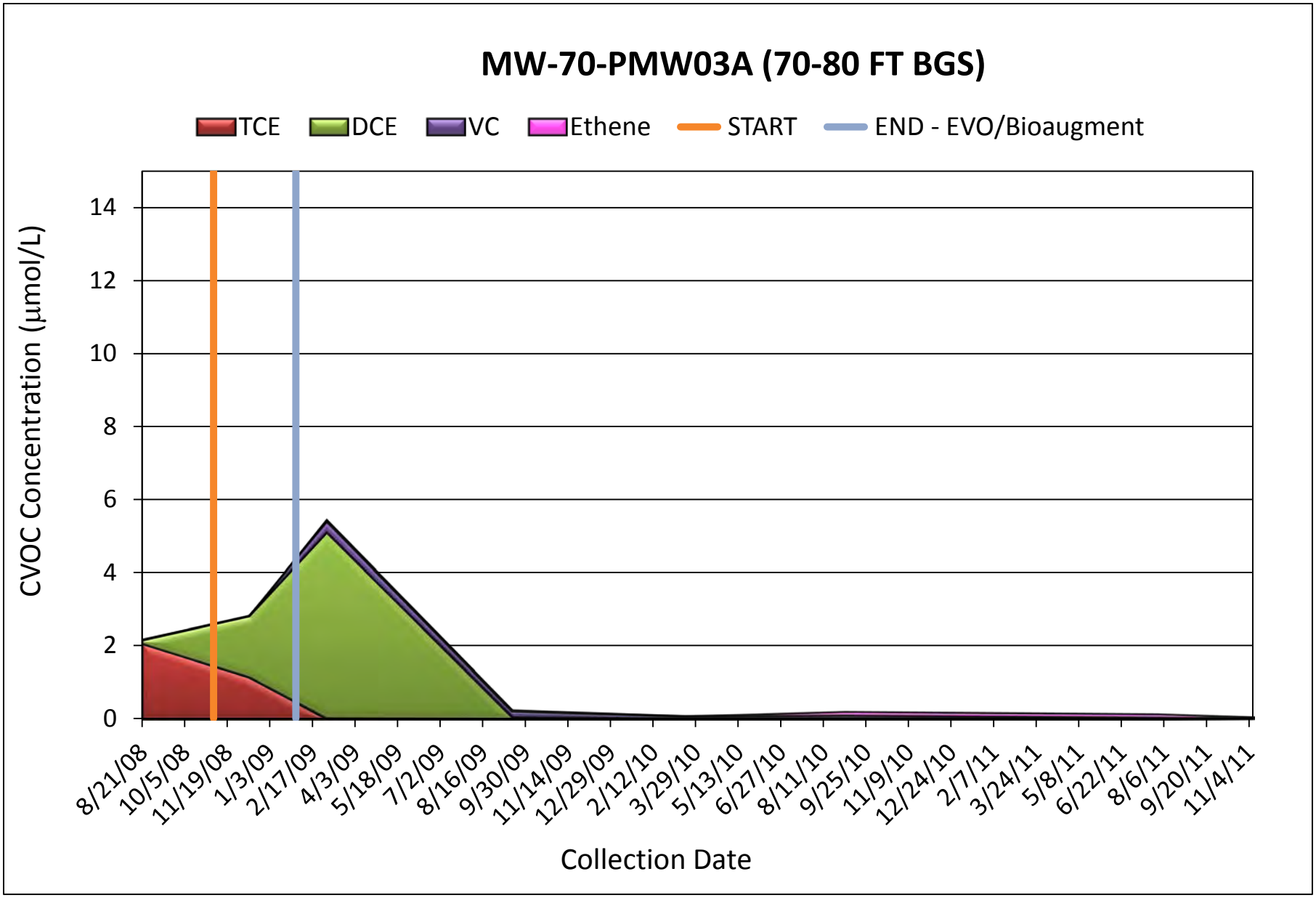
2/11/11
3/28/11
5/12/11
6/26/11
8/10/11
9/24/11
Collection Date


IW-70-SAB11 (65-105 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
40
35
30
25
20
15
10
5
0
11/3/08
12/18/08
2/1/09
3/18/09
5/2/09
6/16/09
7/31/09
9/14/09
10/29/09
12/13/09
1/27/10
3/13/10
4/27/10
6/11/10
7/26/10
9/9/10
10/24/10
12/8/10
1/22/11
3/8/11
4/22/11
6/6/11
7/21/11
9/4/11
10/19/11
Collection Date


MW-70-PMW03A (70-80 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
0
2
4
6
8
10
12
14
8/21/08
10/5/08
11/19/08
1/3/09
2/17/09
4/3/09
5/18/09
7/2/09
8/16/09
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11/9/10
12/24/10
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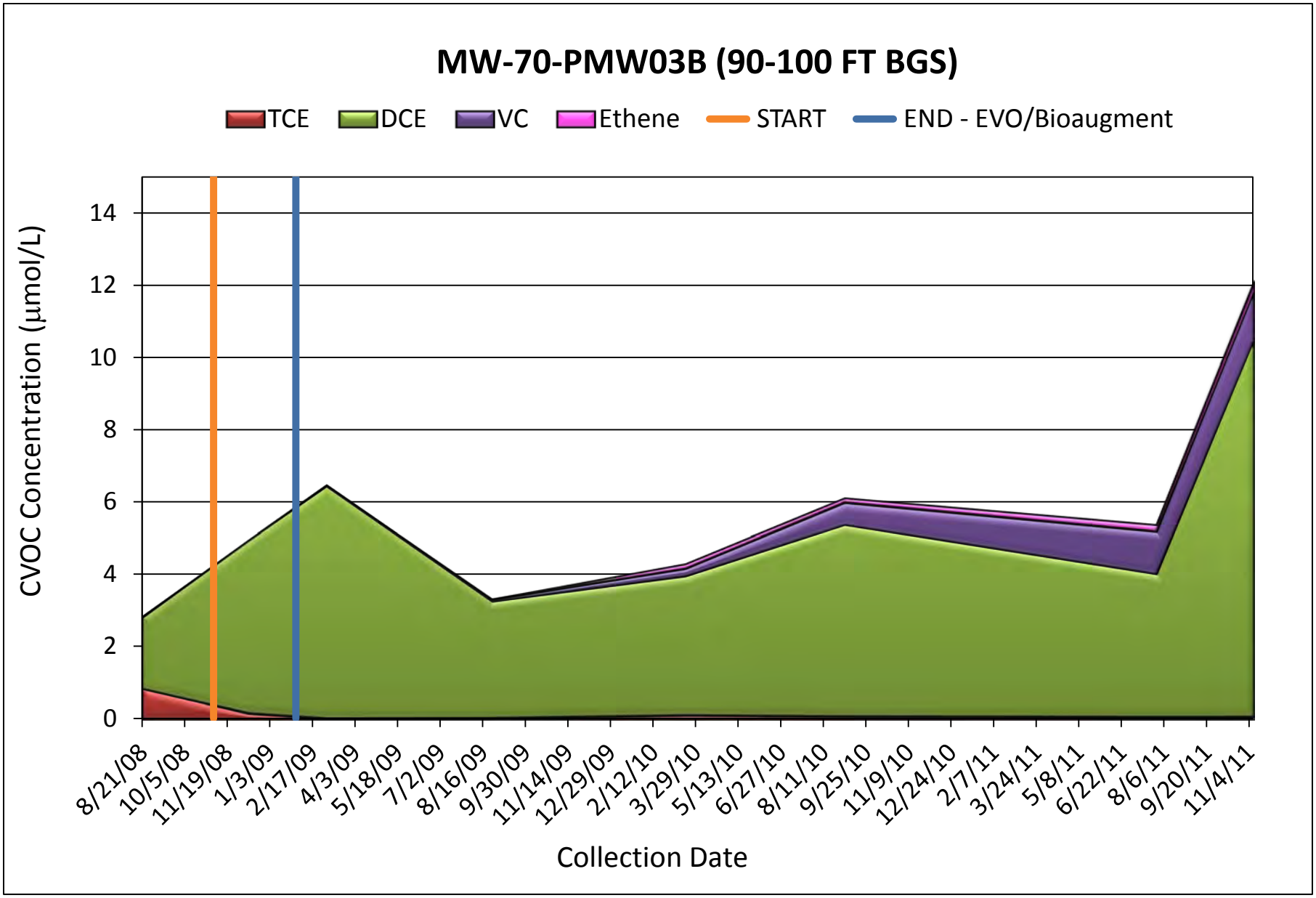
3/24/11
5/8/11
6/22/11
8/6/11
9/20/11
11/4/11
Collection Date


MW-70-PMW03B (90-100 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
0
2
4
6
8
10
12
14
8/21/08
10/5/08
11/19/08
1/3/09
2/17/09
4/3/09
5/18/09
7/2/09
8/16/09
9/30/09
11/14/09
12/29/09
2/12/10
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11/9/10
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3/24/11
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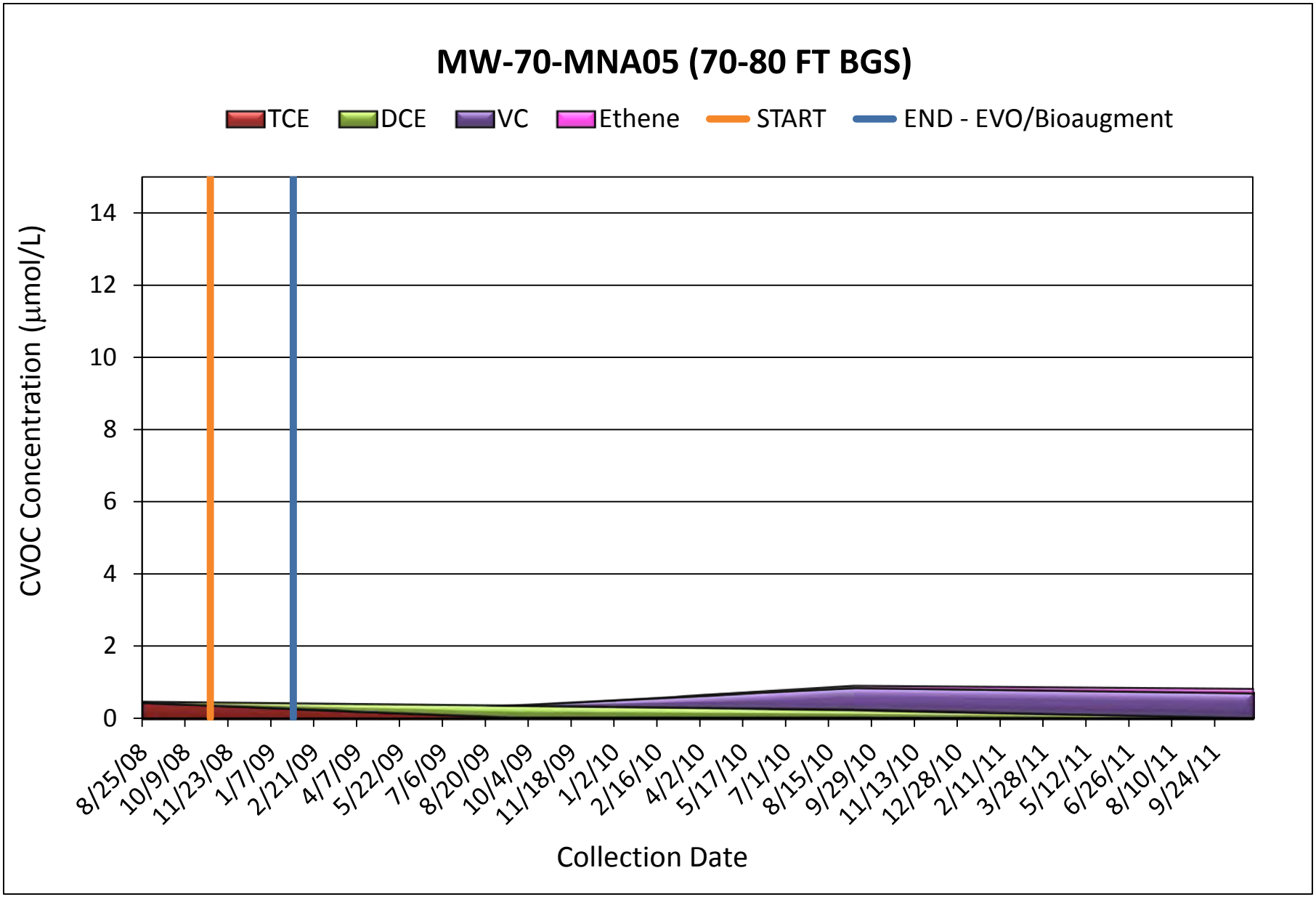
8/6/11
9/20/11
11/4/11
Collection Date


MW-70-MNA05 (70-80 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
0
2
4
6
8
10
12
14
8/25/08
10/9/08
11/23/08
1/7/09
2/21/09
4/7/09
5/22/09
7/6/09
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10/4/09
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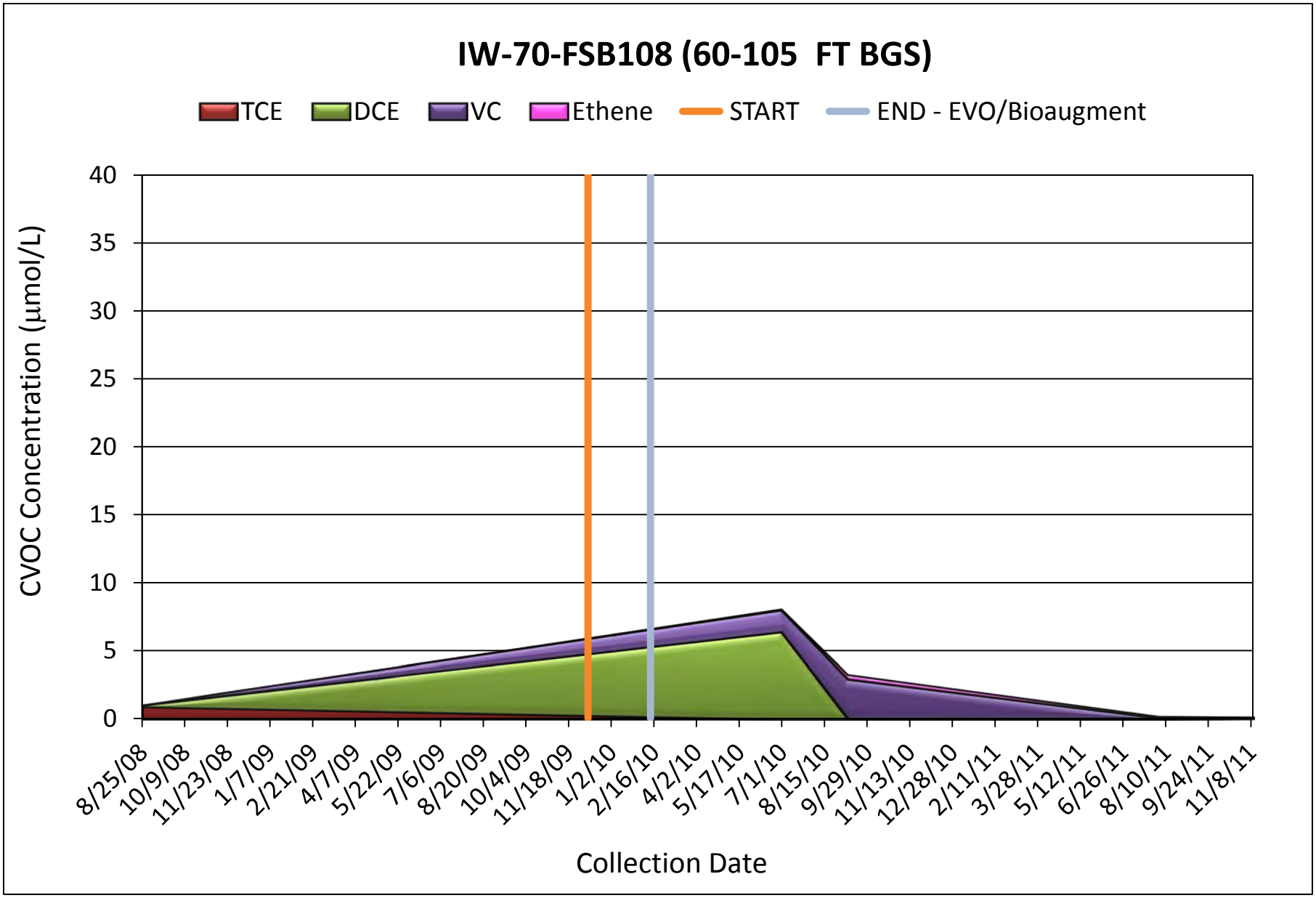
1/2/10
2/16/10
4/2/10
5/17/10
7/1/10
8/15/10
9/29/10
11/13/10
12/28/10
2/11/11
3/28/11
5/12/11
6/26/11
8/10/11
9/24/11
Collection Date

IR Site 70
Naval Weapons Station Seal Beach

Chlorinated Volatile Organic Compounds (CVOC) Concentration Graphs

First Sand Biobarrier 1


IW-70-FSB108 (60-105 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
40
35
30
25
20
15
10
5
0
8/25/08
10/9/08
11/23/08
1/7/09
2/21/09
4/7/09
5/22/09
7/6/09
8/20/09
10/4/09
11/18/09
1/2/10
2/16/10
4/2/10
5/17/10
7/1/10
8/15/10
9/29/10
11/13/10
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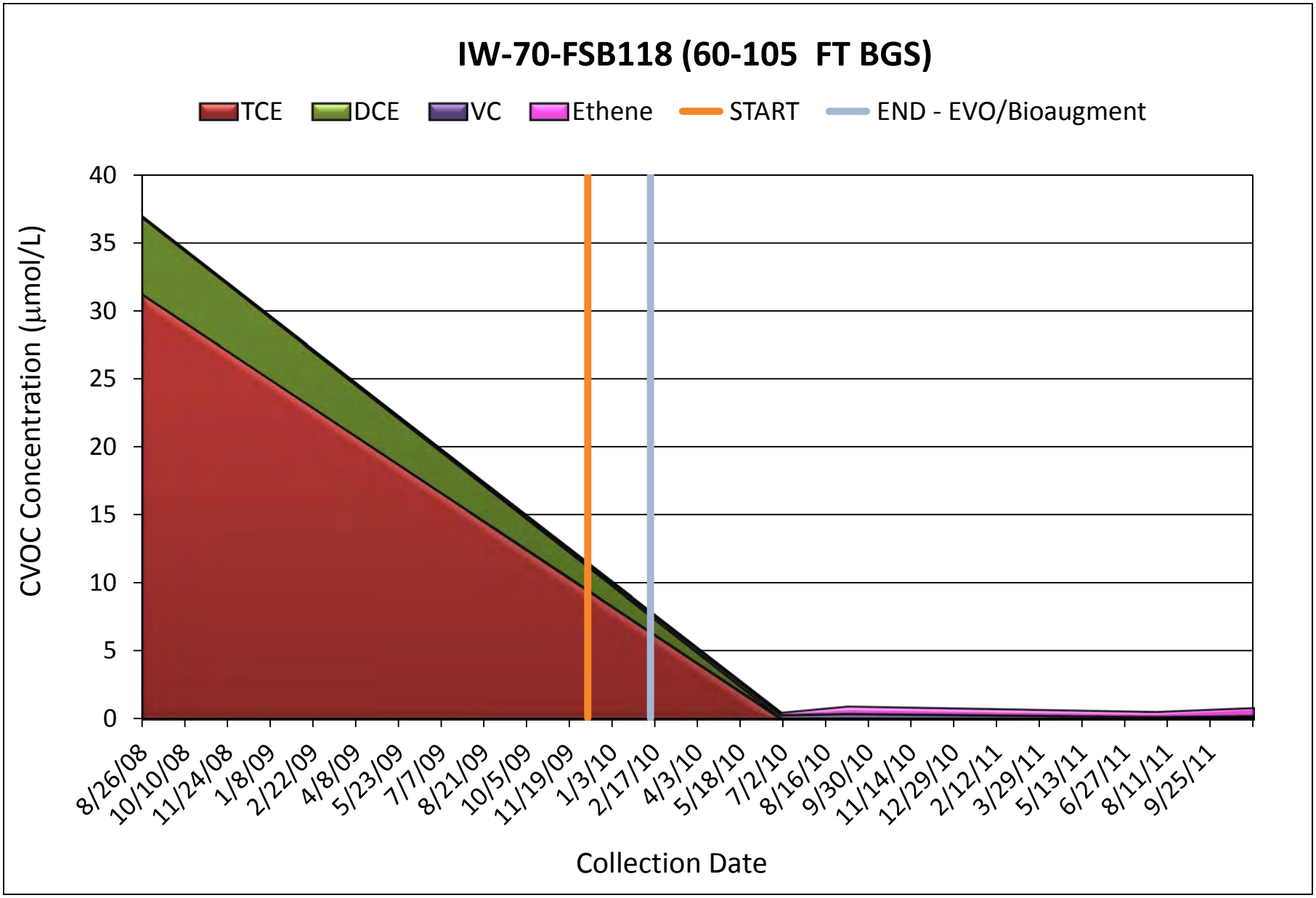
3/28/11
5/12/11
6/26/11
8/10/11
9/24/11
11/8/11
Collection Date


IW-70-FSB118 (60-105 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
40
35
30
25
20
15
10
5
0
8/26/08
10/10/08
11/24/08
1/8/09
2/22/09
4/8/09
5/23/09
7/7/09
8/21/09
10/5/09
11/19/09
1/3/10
2/17/10
4/3/10
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7/2/10
8/16/10
9/30/10
11/14/10
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2/12/11
3/29/11
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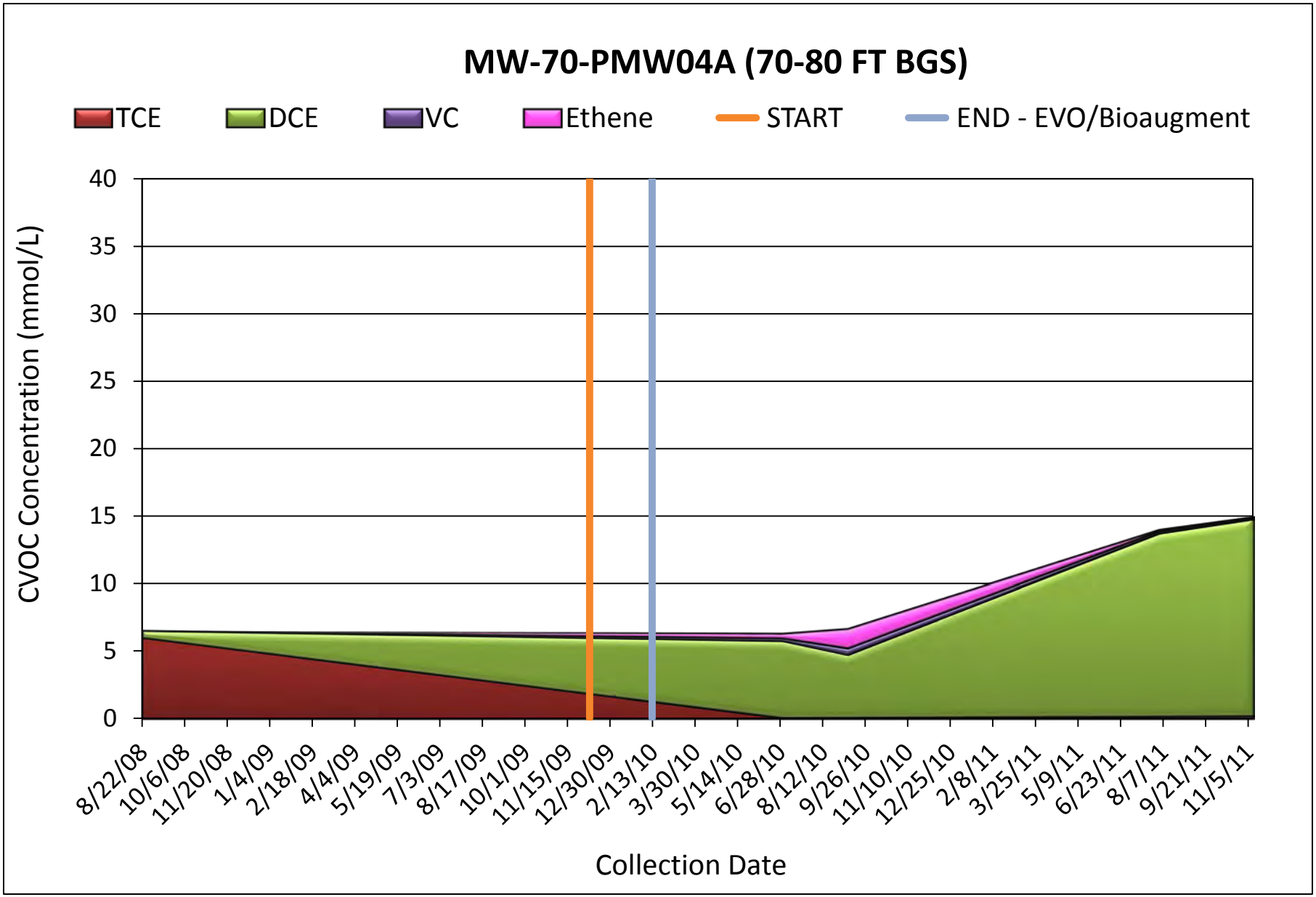
6/27/11
8/11/11
9/25/11
Collection Date


MW-70-PMW04A (70-80 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (mmol/L)
40
35
30
25
20
15
10
5
0
8/22/08
10/6/08
11/20/08
1/4/09
2/18/09
4/4/09
5/19/09
7/3/09
8/17/09
10/1/09
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11/10/10
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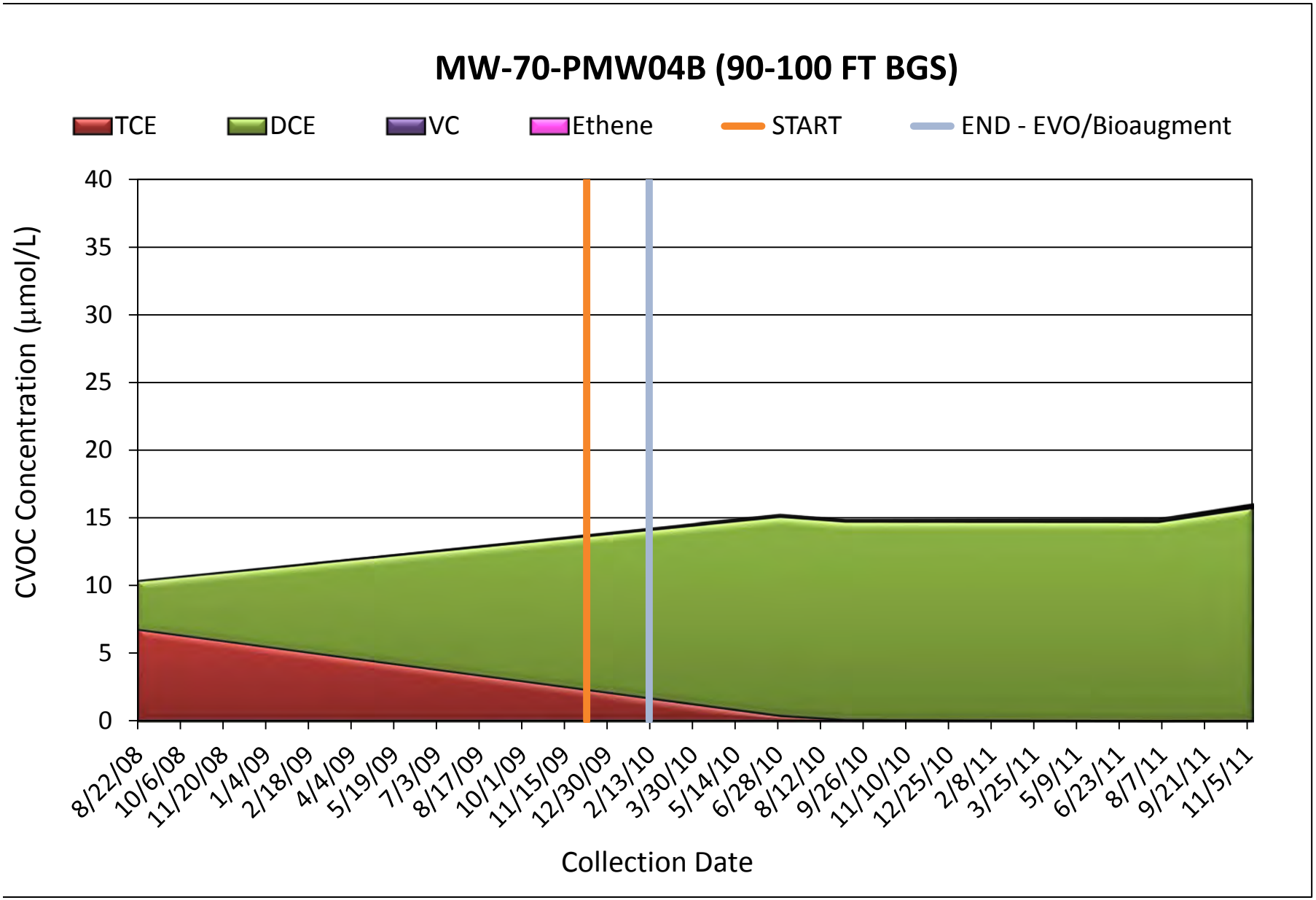
11/5/11
Collection Date


MW-70-PMW04B (90-100 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
40
35
30
25
20
15
10
5
0
8/22/08
10/6/08
11/20/08
1/4/09
2/18/09
4/4/09
5/19/09
7/3/09
8/17/09
10/1/09
11/15/09
12/30/09
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11/10/10
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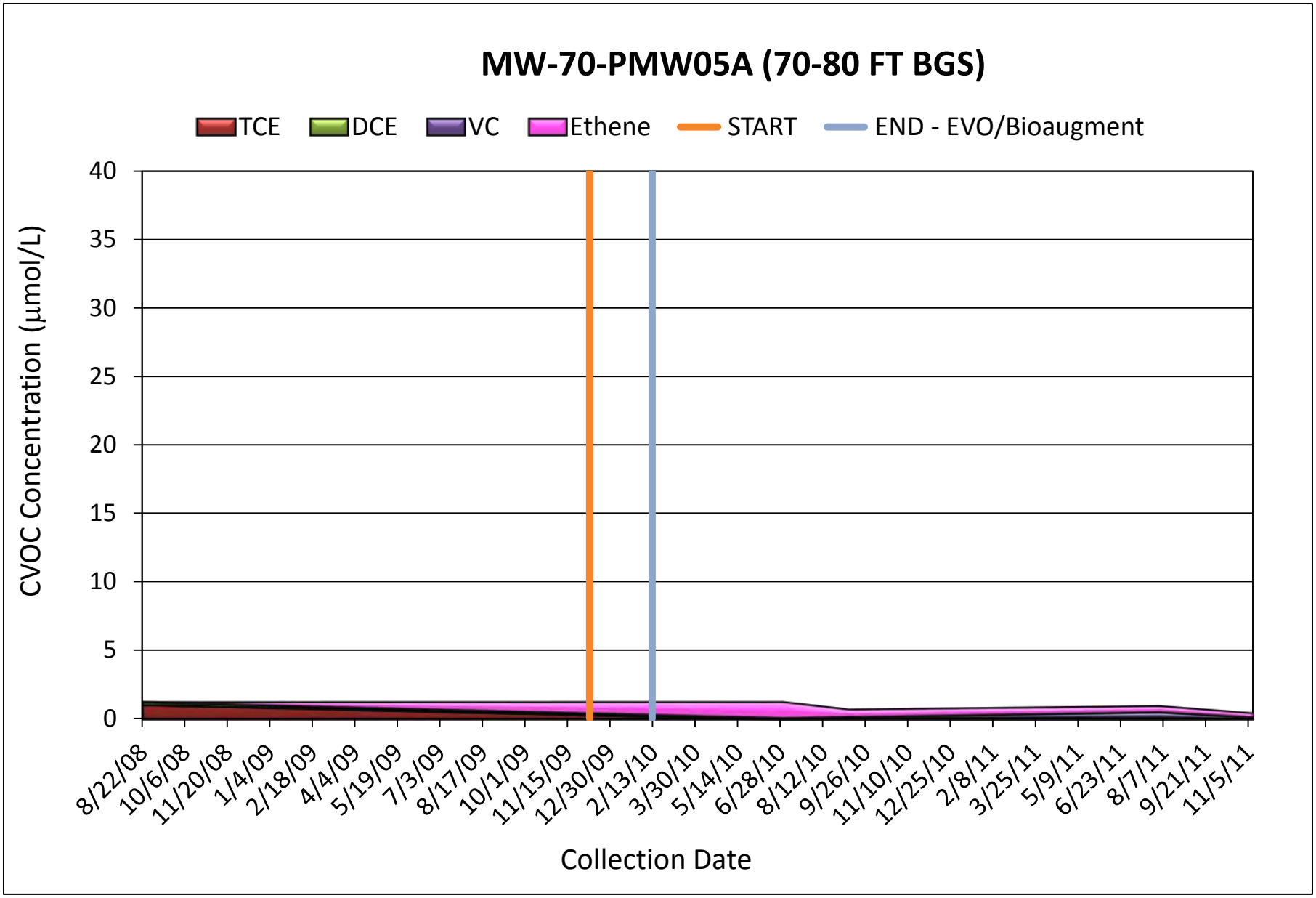
11/5/11
Collection Date


MW-70-PMW05A (70-80 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
40
35
30
25
20
15
10
5
0
8/22/08
10/6/08
11/20/08
1/4/09
2/18/09
4/4/09
5/19/09
7/3/09
8/17/09
10/1/09
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11/10/10
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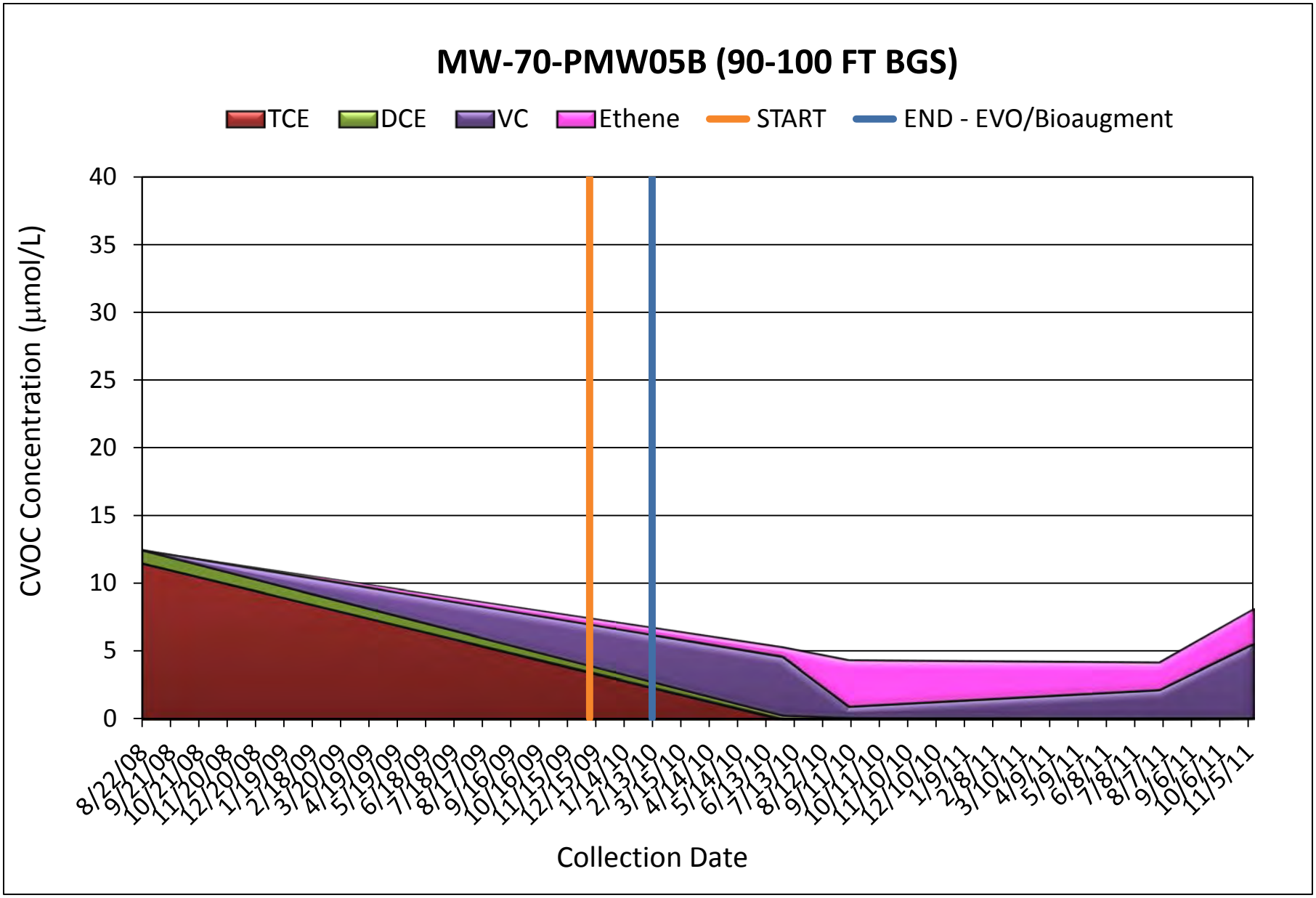
9/21/11
11/5/11
Collection Date


MW-70-PMW05B (90-100 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
40
35
30
25
20
15
10
5
0
8/22/08
9/21/08
10/21/08
11/20/08
12/20/08
1/19/09
2/18/09
3/20/09
4/19/09
5/19/09
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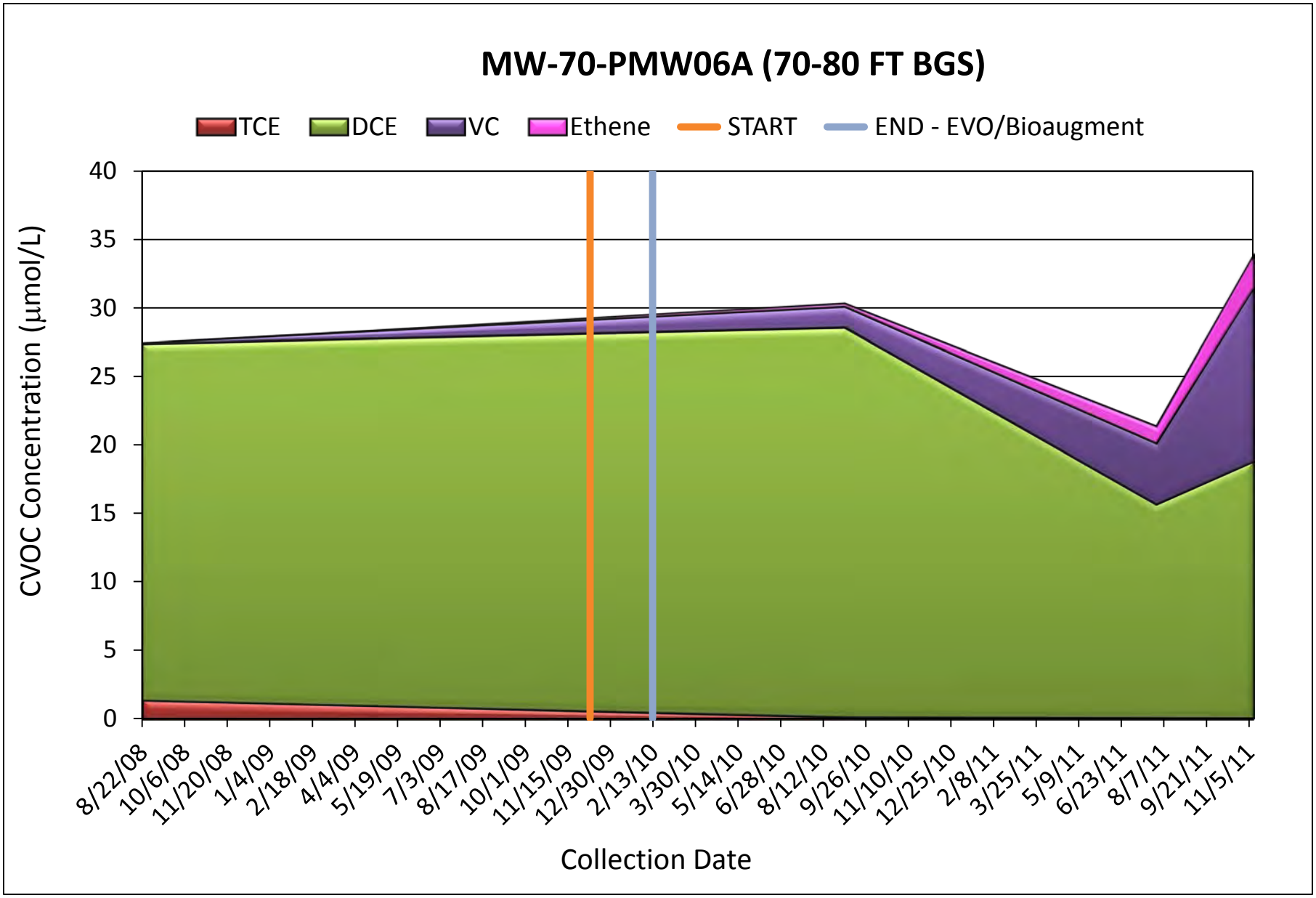
9/6/11
10/6/11
11/5/11
Collection Date


MW-70-PMW06A (70-80 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
40
35
30
25
20
15
10
5
0
8/22/08
10/6/08
11/20/08
1/4/09
2/18/09
4/4/09
5/19/09
7/3/09
8/17/09
10/1/09
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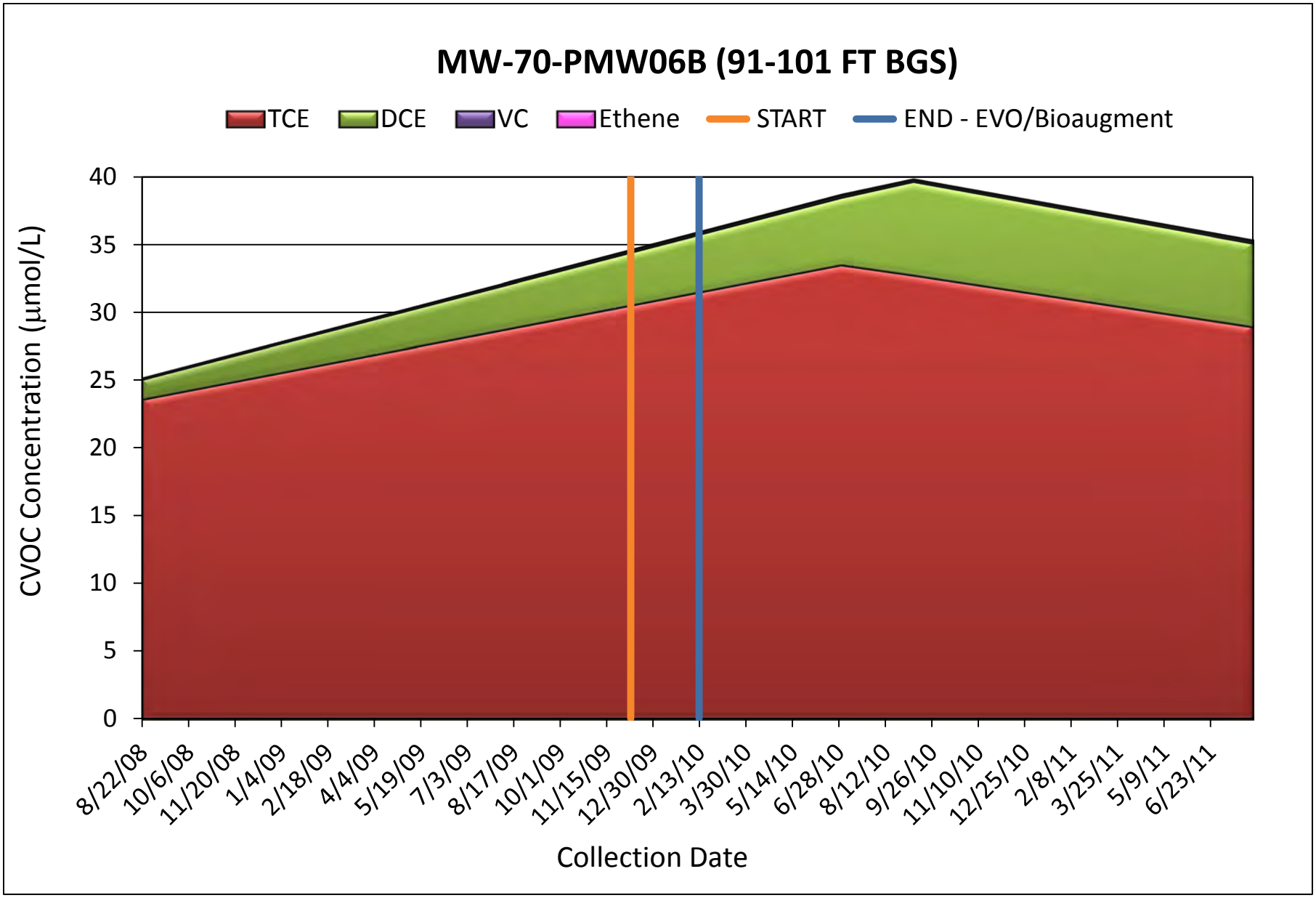
11/5/11
Collection Date


MW-70-PMW06B (91-101 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
40
35
30
25
20
15
10
5
0
8/22/08
10/6/08
11/20/08
1/4/09
2/18/09
4/4/09
5/19/09
7/3/09
8/17/09
10/1/09
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6/28/10
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11/10/10
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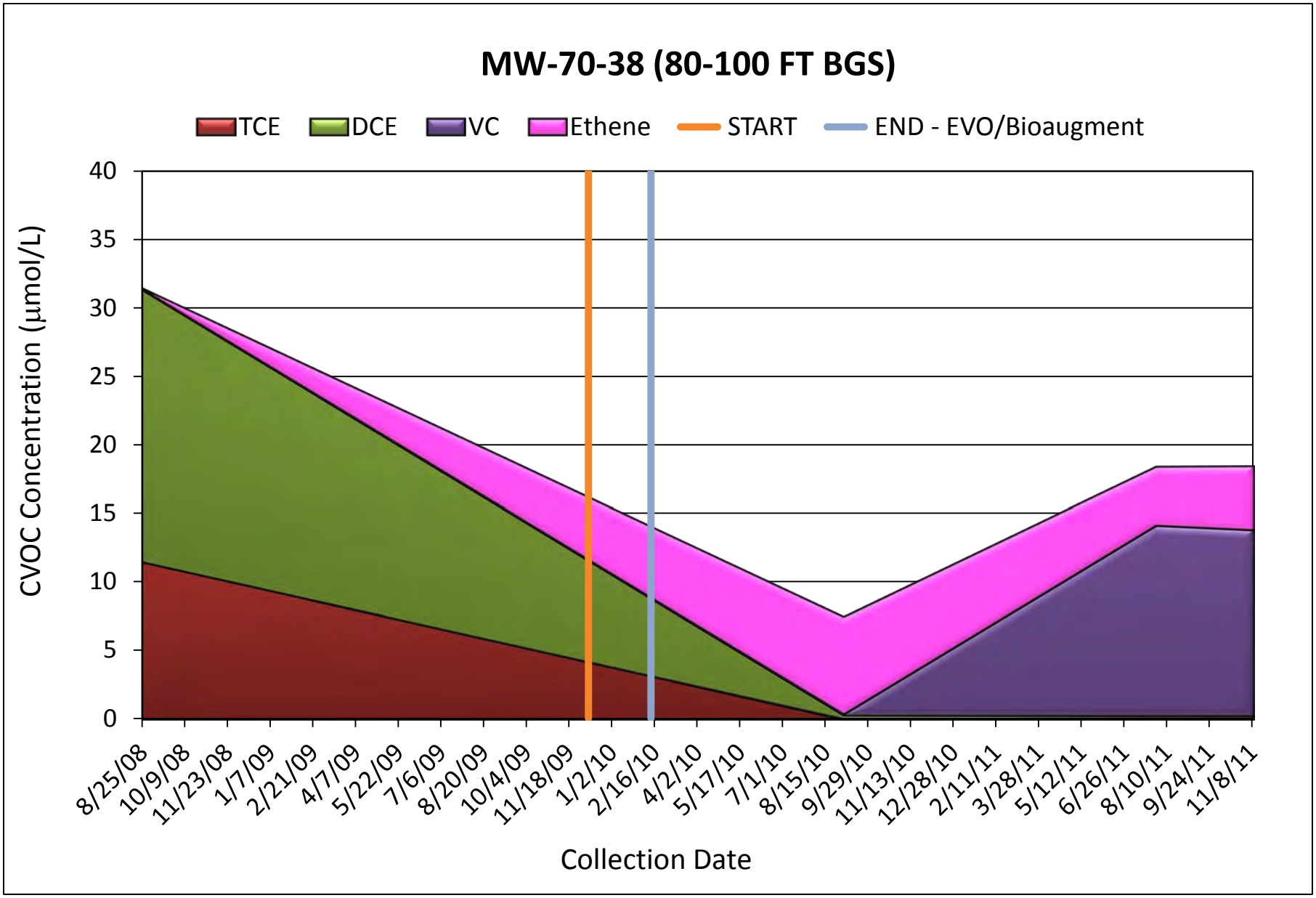
2/8/11
3/25/11
5/9/11
6/23/11
Collection Date


MW-70-38 (80-100 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
40
35
30
25
20
15
10
5
0
8/25/08
10/9/08
11/23/08
1/7/09
2/21/09
4/7/09
5/22/09
7/6/09
8/20/09
10/4/09
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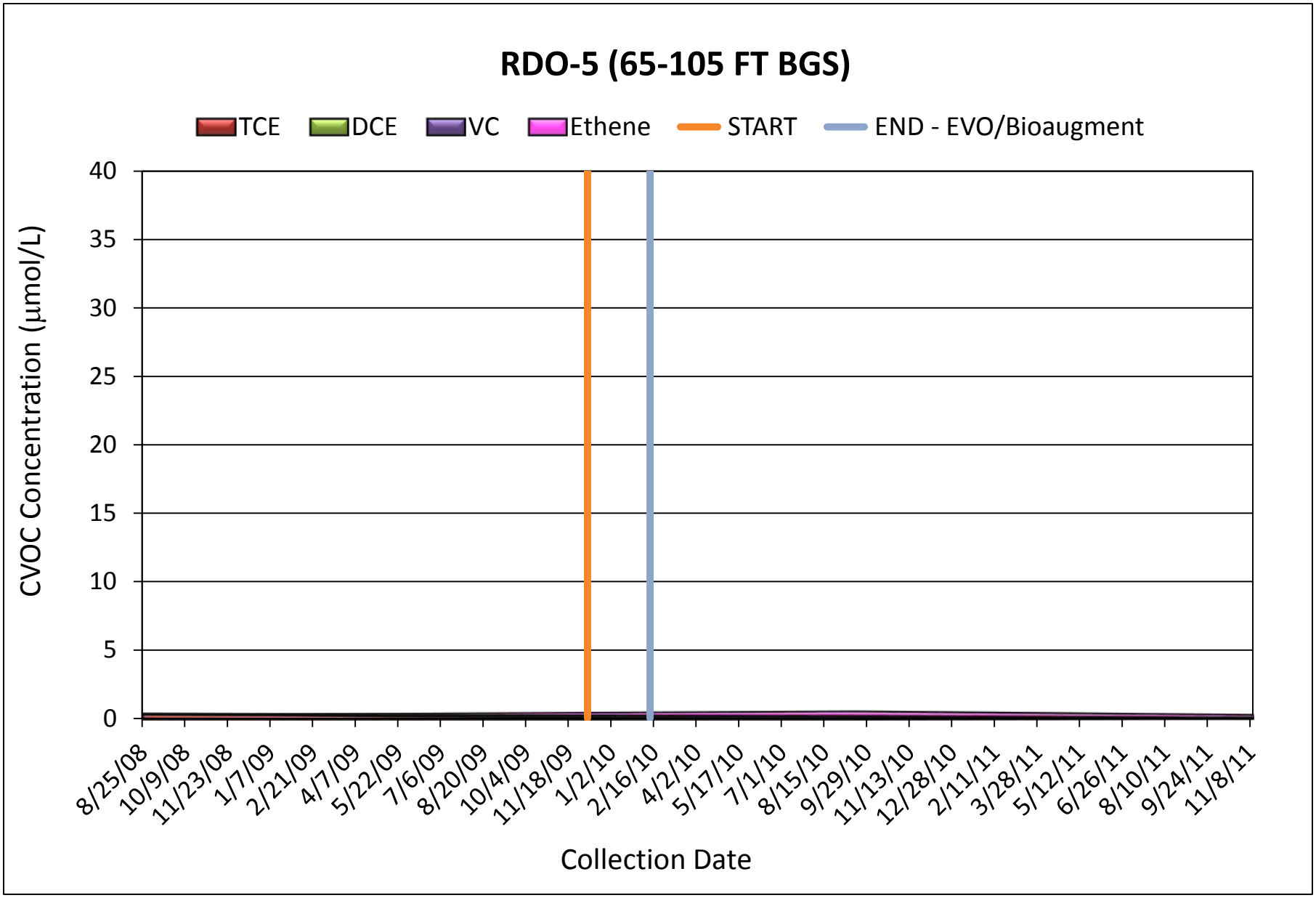
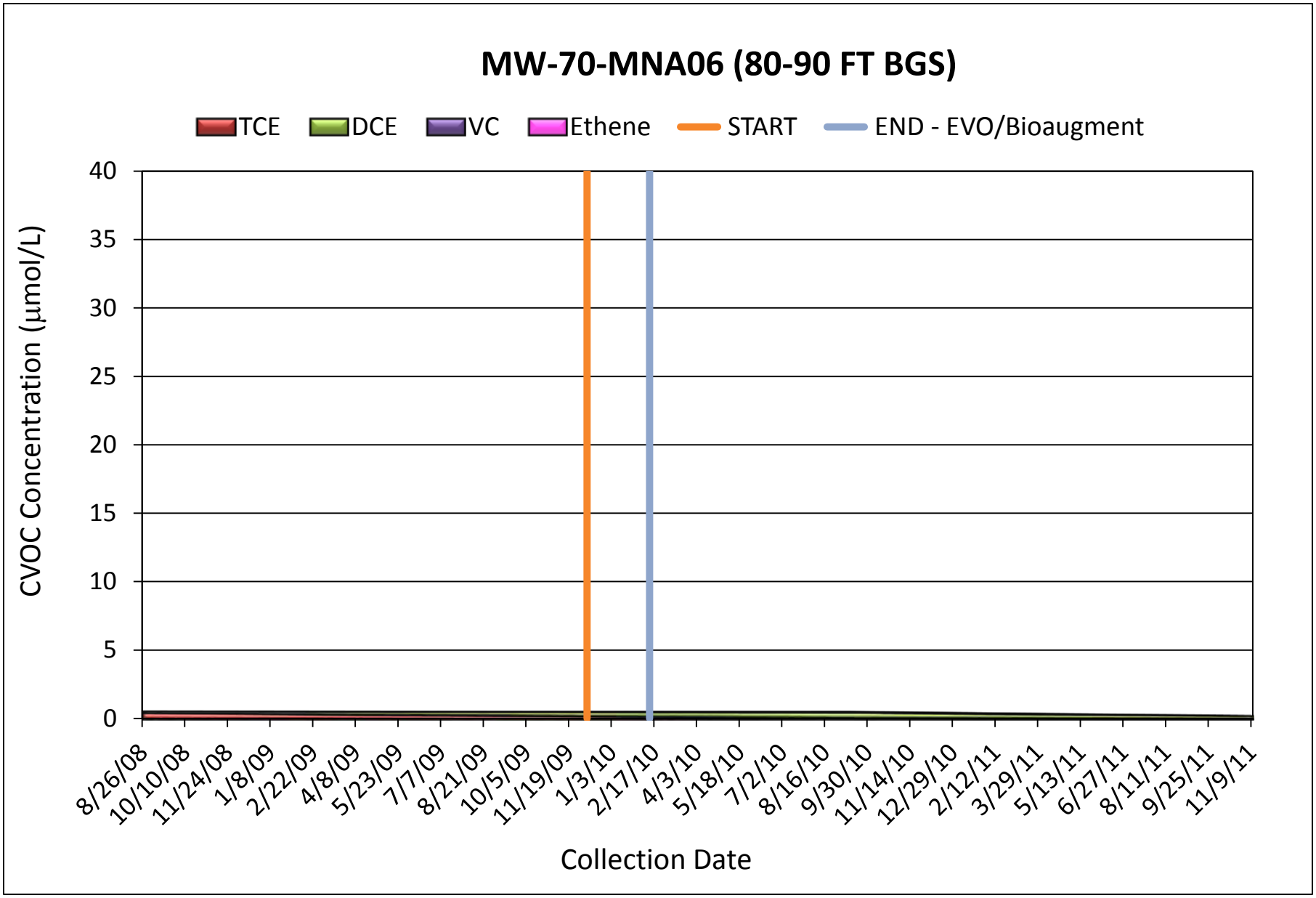
11/8/11
Collection Date


RDO-5 (65-105 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
40
35
30
25
20
15
10
5
0
8/25/08
10/9/08
11/23/08
1/7/09
2/21/09
4/7/09
5/22/09
7/6/09
8/20/09
10/4/09
11/18/09
1/2/10
2/16/10
4/2/10
5/17/10
7/1/10
8/15/10
9/29/10
11/13/10
12/28/10
2/11/11
3/28/11
5/12/11
6/26/11
8/10/11
9/24/11
11/8/11
Collection Date


MW-70-MNA06 (80-90 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
40
35
30
25
20
15
10
5
0
8/26/08
10/10/08
11/24/08
1/8/09
2/22/09
4/8/09
5/23/09
7/7/09
8/21/09
10/5/09
11/19/09
1/3/10
2/17/10
4/3/10
5/18/10
7/2/10
8/16/10
9/30/10
11/14/10
12/29/10
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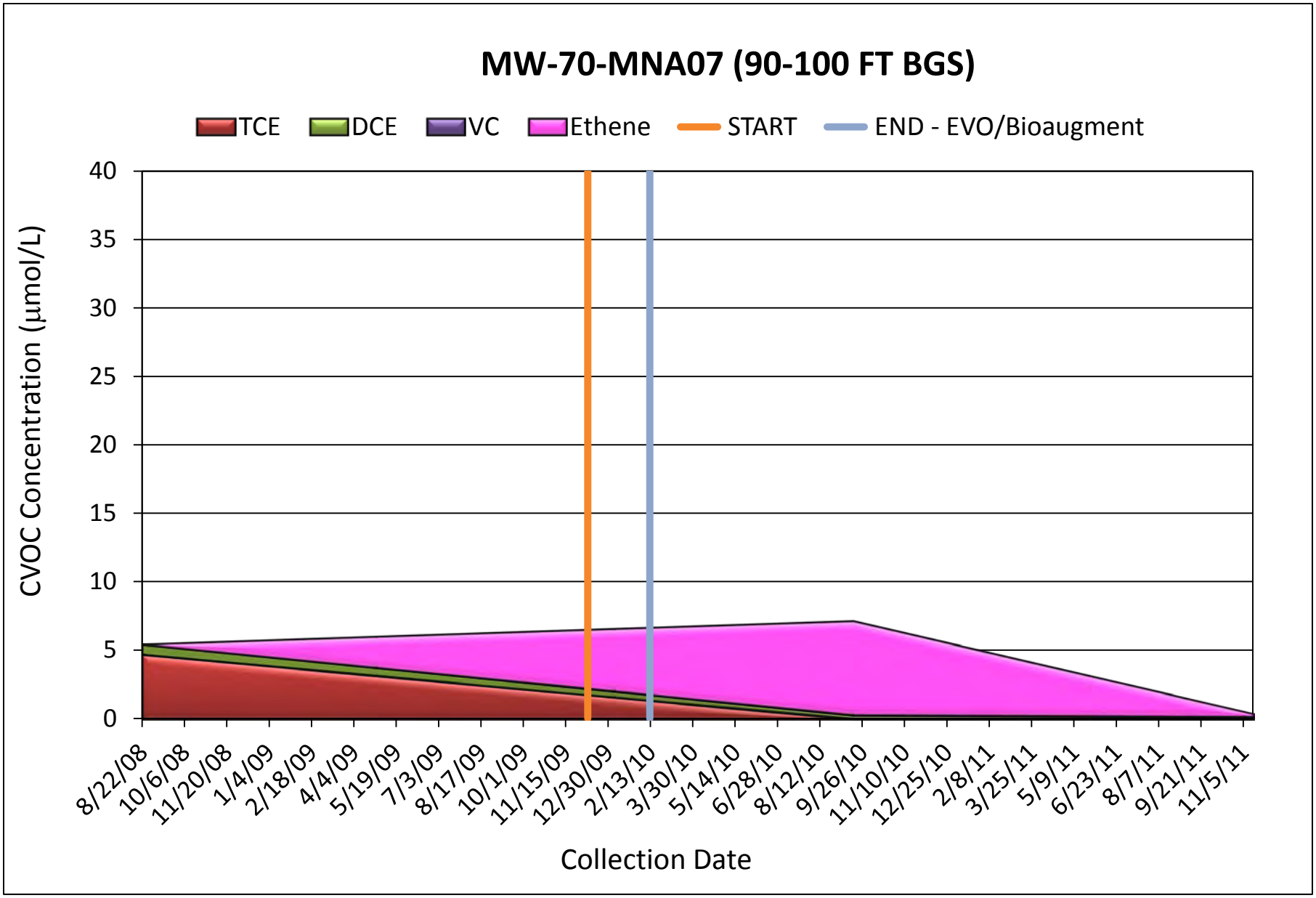
3/29/11
5/13/11
6/27/11
8/11/11
9/25/11
11/9/11
Collection Date


MW-70-MNA07 (90-100 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
40
35
30
25
20
15
10
5
0
8/22/08
10/6/08
11/20/08
1/4/09
2/18/09
4/4/09
5/19/09
7/3/09
8/17/09
10/1/09
11/15/09
12/30/09
2/13/10
3/30/10
5/14/10
6/28/10
8/12/10
9/26/10
11/10/10
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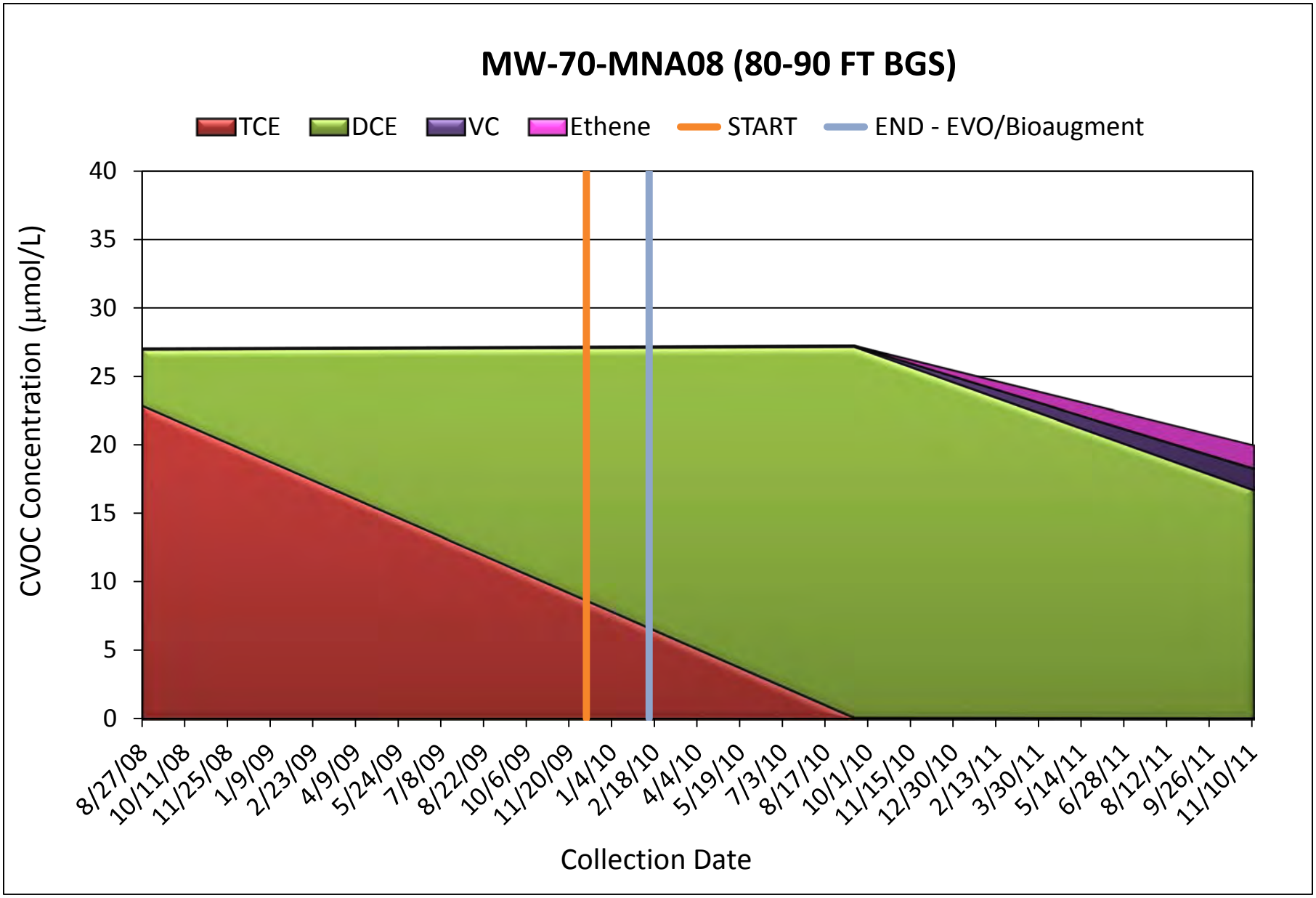
3/25/11
5/9/11
6/23/11
8/7/11
9/21/11
11/5/11
Collection Date


MW-70-MNA08 (80-90 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
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35
30
25
20
15
10
5
0
8/27/08
10/11/08
11/25/08
1/9/09
2/23/09
4/9/09
5/24/09
7/8/09
8/22/09
10/6/09
11/20/09
1/4/10
2/18/10
4/4/10
5/19/10
7/3/10
8/17/10
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11/15/10
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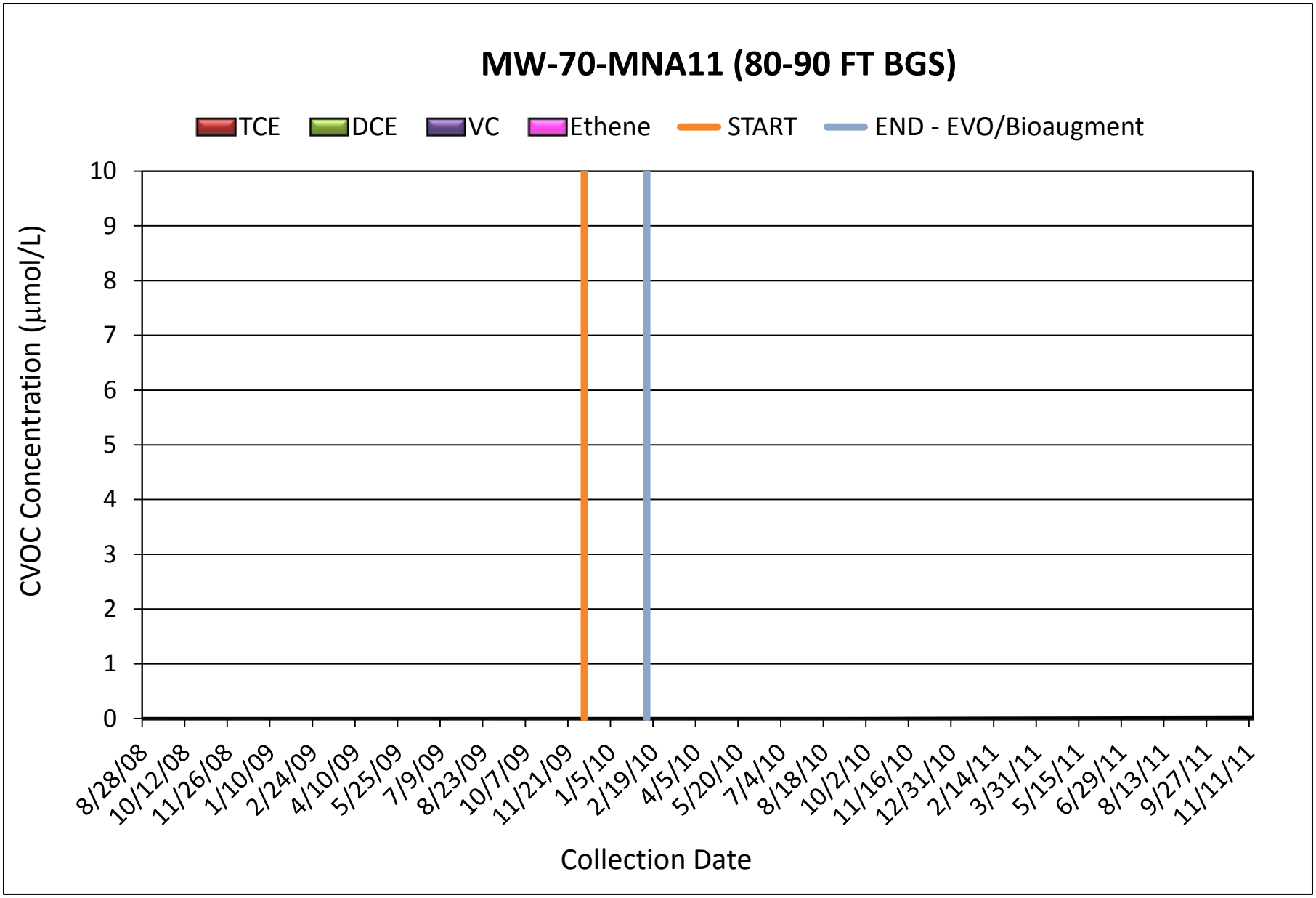
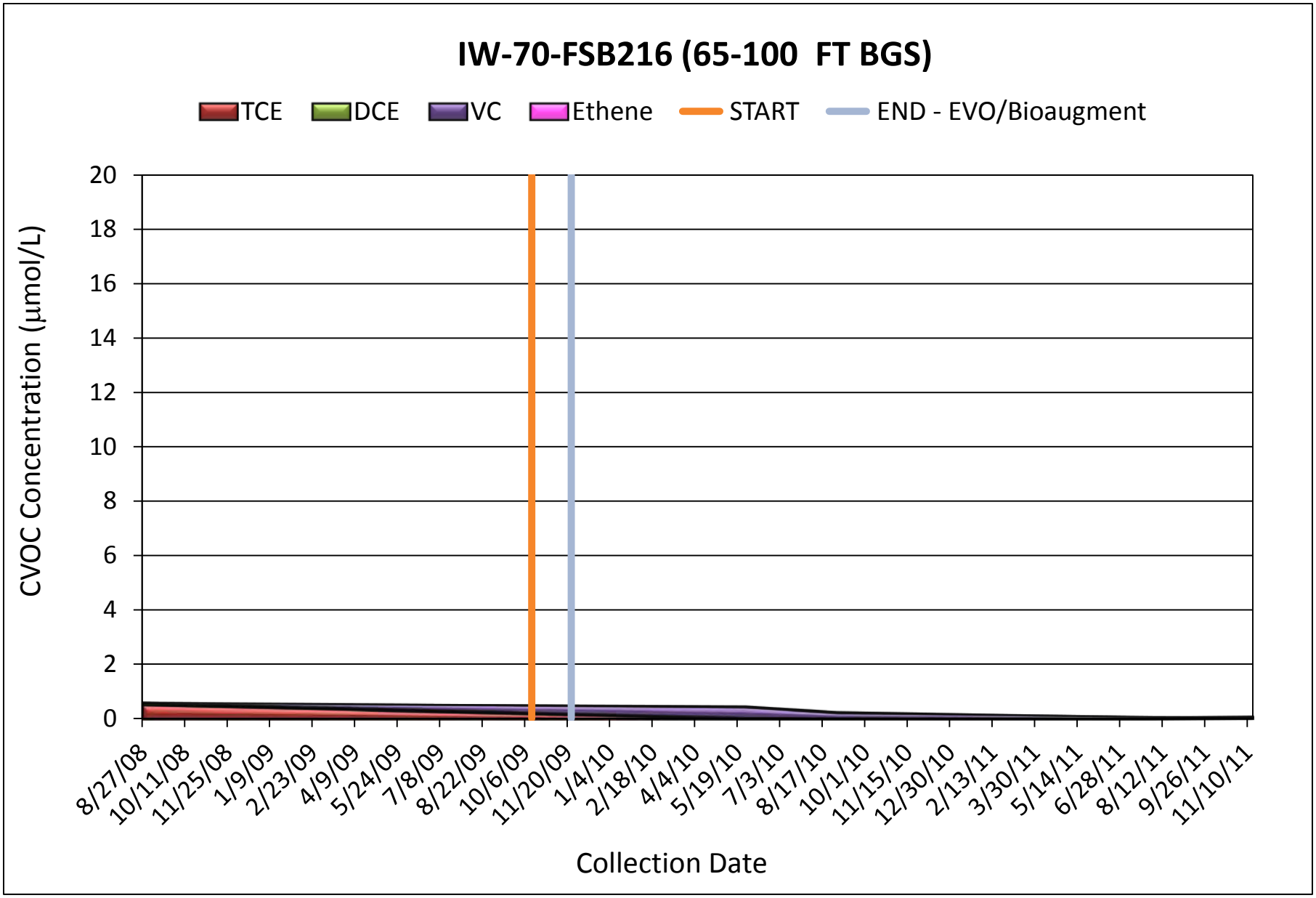
3/30/11
5/14/11
6/28/11
8/12/11
9/26/11
11/10/11
Collection Date


MW-70-MNA11 (80-90 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
10
9
8
7
6
5
4
3
2
1
0
8/28/08
10/12/08
11/26/08
1/10/09
2/24/09
4/10/09
5/25/09
7/9/09
8/23/09
10/7/09
11/21/09
1/5/10
2/19/10
4/5/10
5/20/10
7/4/10
8/18/10
10/2/10
11/16/10
12/31/10
2/14/11
3/31/11
5/15/11
6/29/11
8/13/11
9/27/11
11/11/11
Collection Date

IR Site 70
Naval Weapons Station Seal Beach

Chlorinated Volatile Organic Compounds (CVOC) Concentration Graphs

First Sand Biobarrier 2


IW-70-FSB216 (65-100 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
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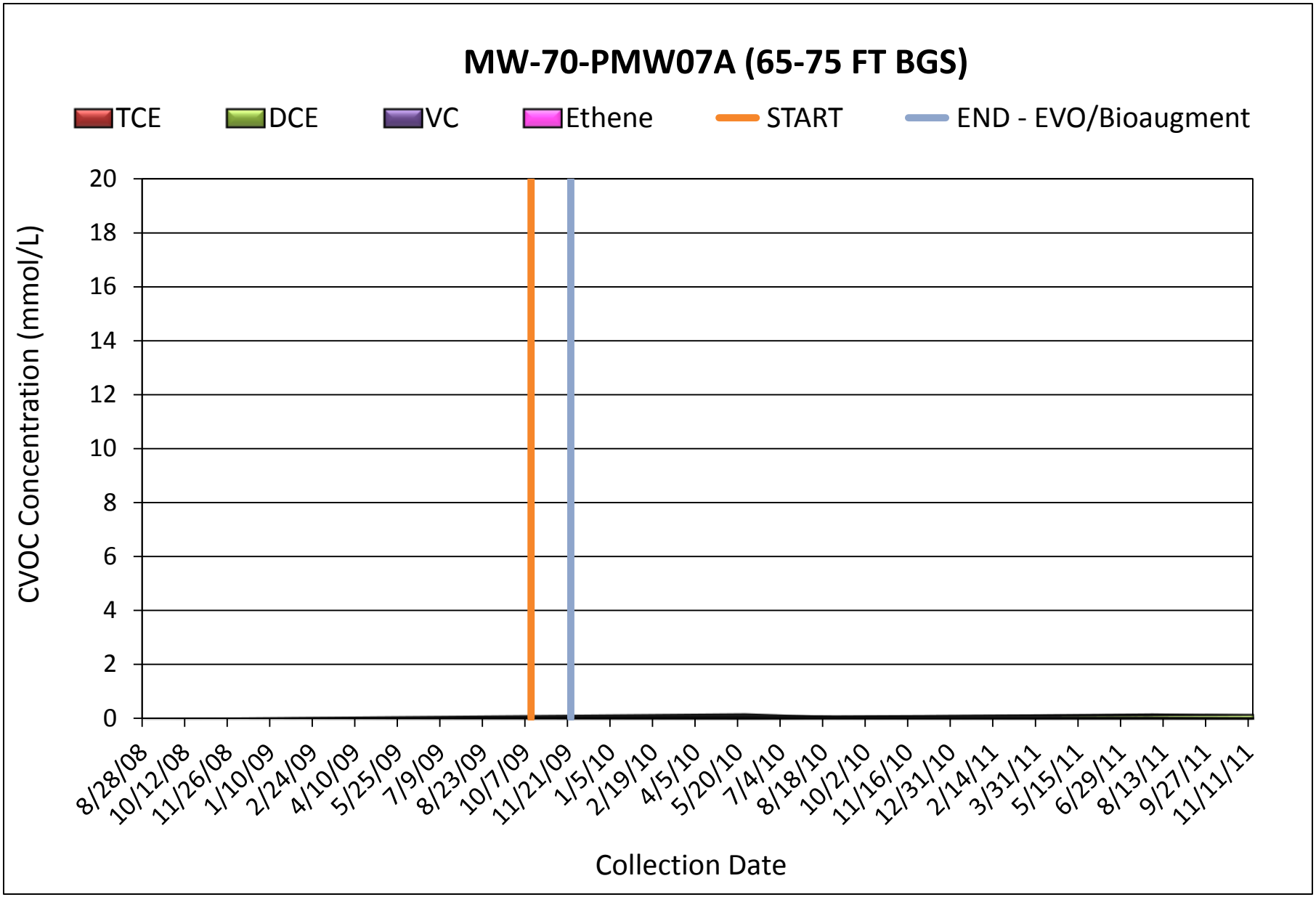
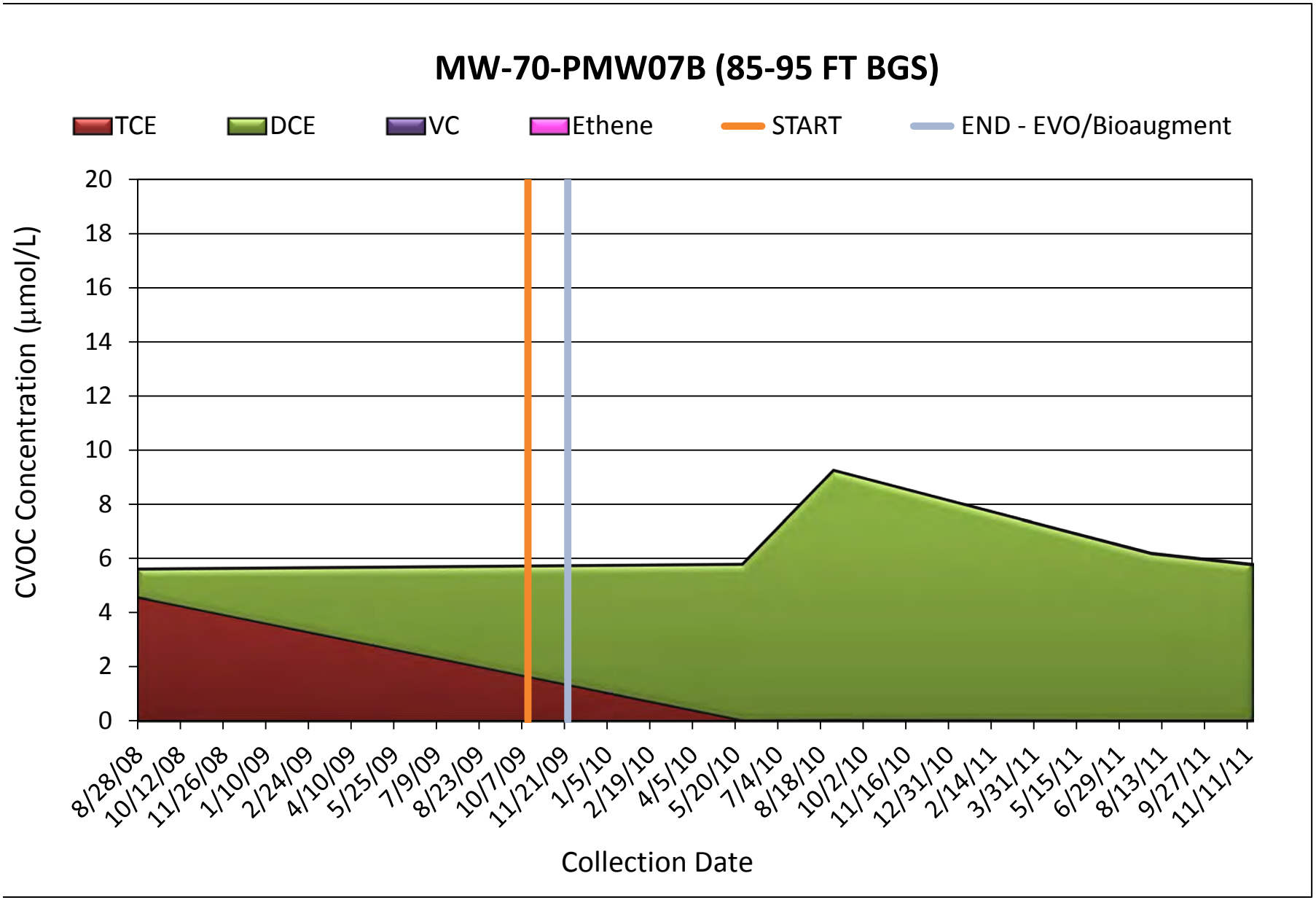
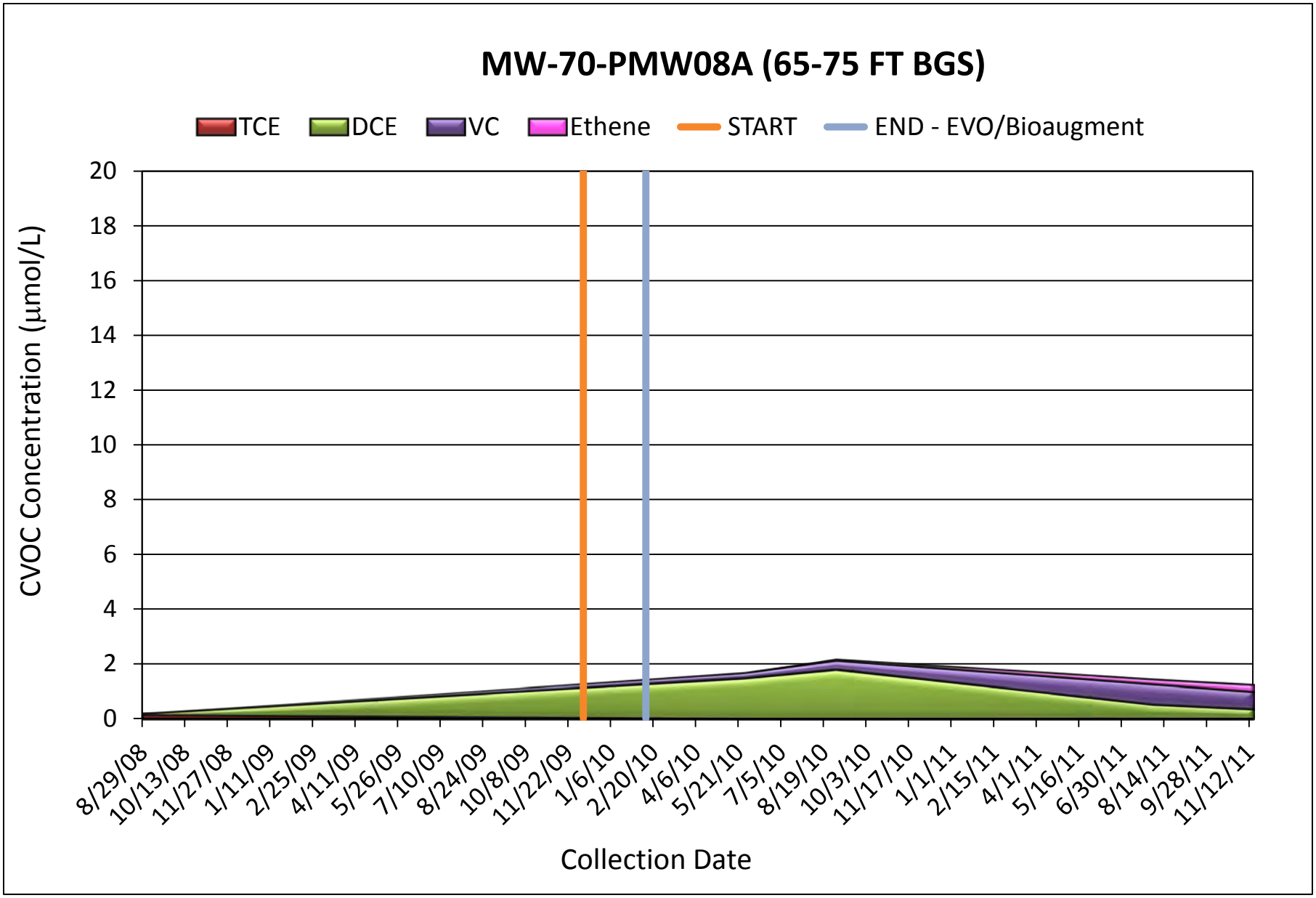
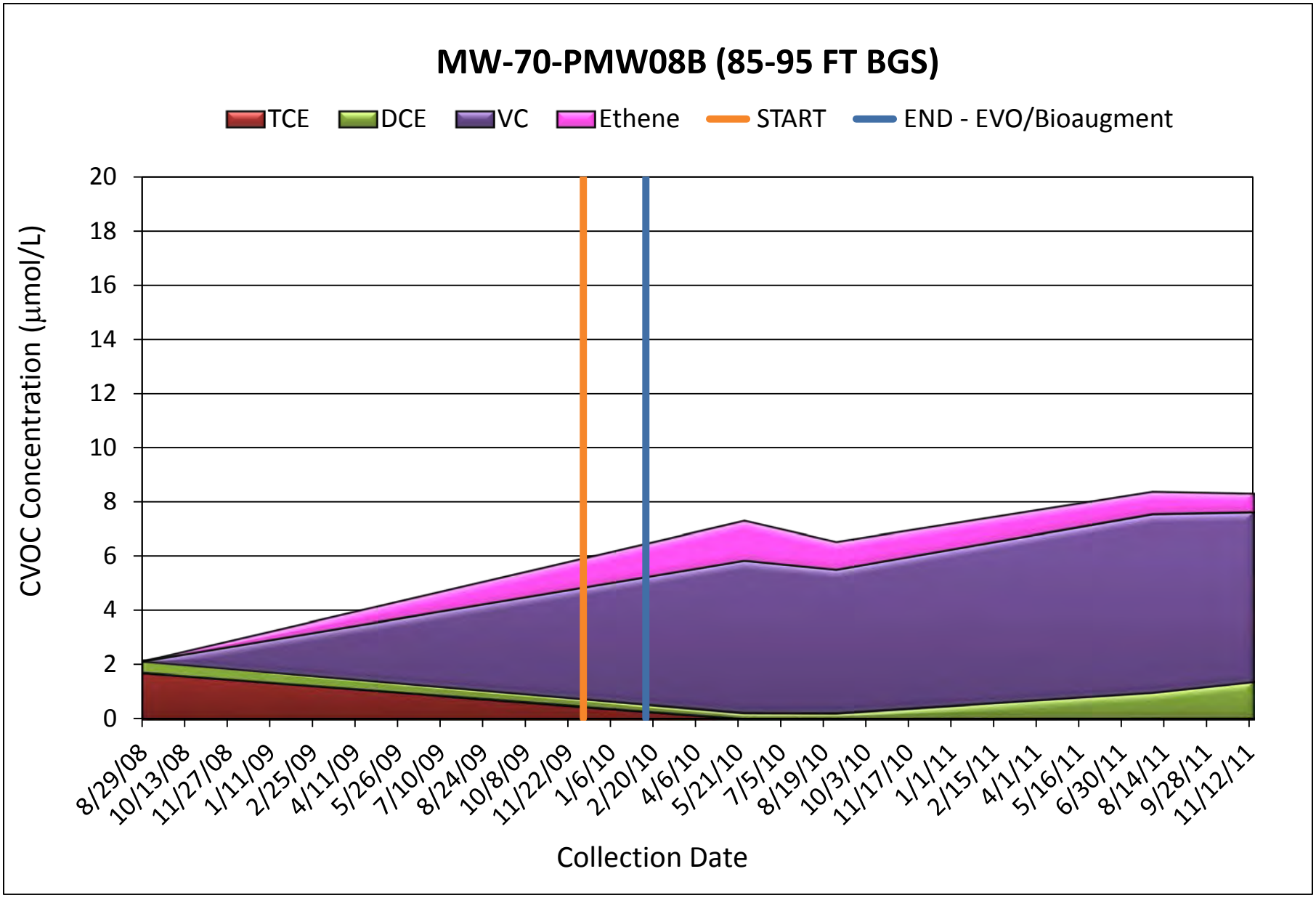
18
16
14
12
10
8
6
4
2
0
8/27/08
10/11/08
11/25/08
1/9/09
2/23/09
4/9/09
5/24/09
7/8/09
8/22/09
10/6/09
11/20/09
1/4/10
2/18/10
4/4/10
5/19/10
7/3/10
8/17/10
10/1/10
11/15/10
12/30/10
2/13/11
3/30/11
5/14/11
6/28/11
8/12/11
9/26/11
11/10/11
Collection Date


MW-70-PMW07A (65-75 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (mmol/L)
20
18
16
14
12
10
8
6
4
2
0
8/28/08
10/12/08
11/26/08
1/10/09
2/24/09
4/10/09
5/25/09
7/9/09
8/23/09
10/7/09
11/21/09
1/5/10
2/19/10
4/5/10
5/20/10
7/4/10
8/18/10
10/2/10
11/16/10
12/31/10
2/14/11
3/31/11
5/15/11
6/29/11
8/13/11
9/27/11
11/11/11
Collection Date


MW-70-PMW07B (85-95 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
20
18
16
14
12
10
8
6
4
2
0
8/28/08
10/12/08
11/26/08
1/10/09
2/24/09
4/10/09
5/25/09
7/9/09
8/23/09
10/7/09
11/21/09
1/5/10
2/19/10
4/5/10
5/20/10
7/4/10
8/18/10
10/2/10
11/16/10
12/31/10
2/14/11
3/31/11
5/15/11
6/29/11
8/13/11
9/27/11
11/11/11
Collection Date


MW-70-PMW08A (65-75 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
20
18
16
14
12
10
8
6
4
2
0
8/29/08
10/13/08
11/27/08
1/11/09
2/25/09
4/11/09
5/26/09
7/10/09
8/24/09
10/8/09
11/22/09
1/6/10
2/20/10
4/6/10
5/21/10
7/5/10
8/19/10
10/3/10
11/17/10
1/1/11
2/15/11
4/1/11
5/16/11
6/30/11
8/14/11
9/28/11
11/12/11
Collection Date


MW-70-PMW08B (85-95 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
20
18
16
14
12
10
8
6
4
2
0
8/29/08
10/13/08
11/27/08
1/11/09
2/25/09
4/11/09
5/26/09
7/10/09
8/24/09
10/8/09
11/22/09
1/6/10
2/20/10
4/6/10
5/21/10
7/5/10
8/19/10
10/3/10
11/17/10
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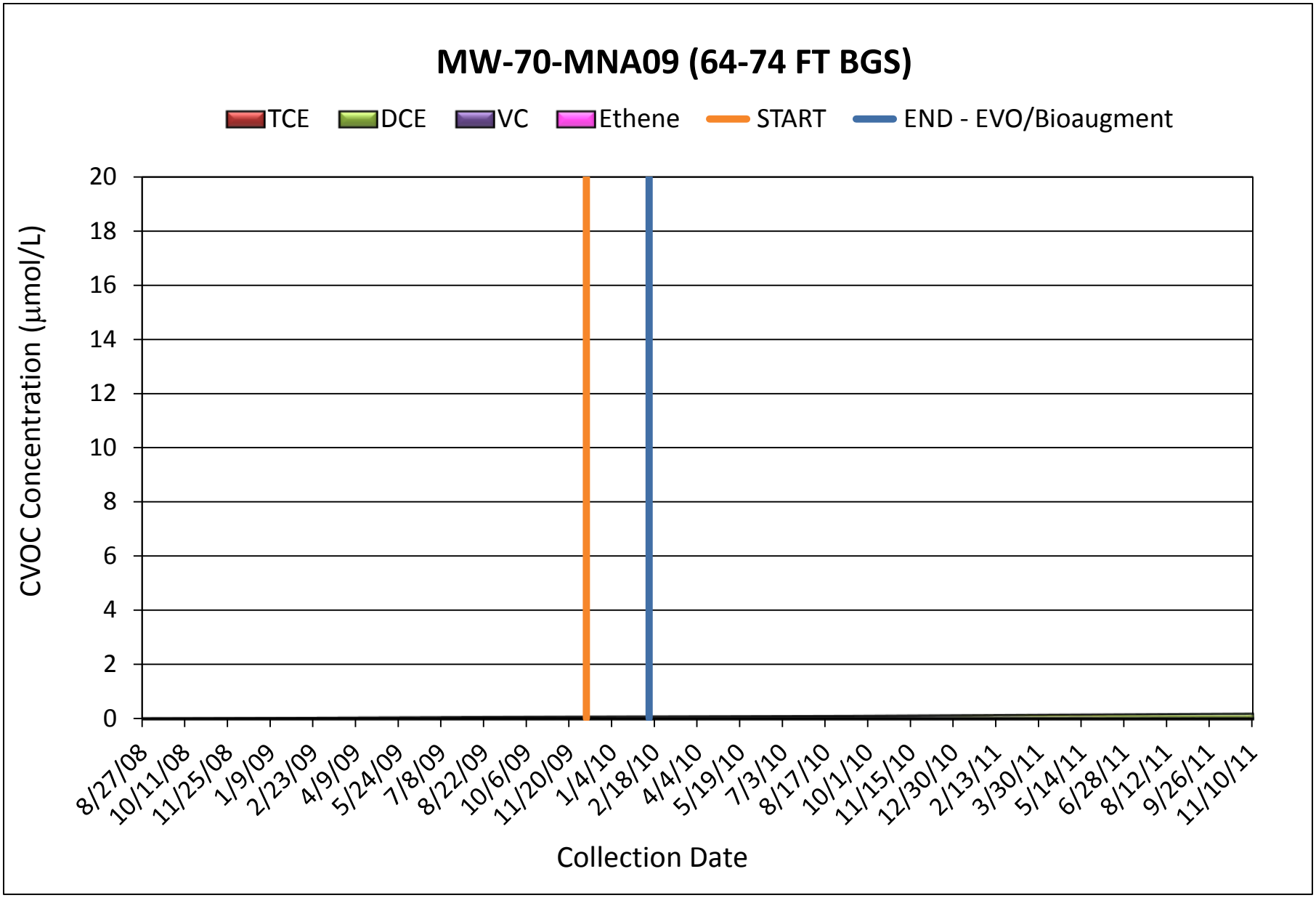
4/1/11
5/16/11
6/30/11
8/14/11
9/28/11
11/12/11
Collection Date


MW-70-MNA09 (64-74 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
20
18
16
14
12
10
8
6
4
2
0
8/27/08
10/11/08
11/25/08
1/9/09
2/23/09
4/9/09
5/24/09
7/8/09
8/22/09
10/6/09
11/20/09
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2/18/10
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5/19/10
7/3/10
8/17/10
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11/15/10
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3/30/11
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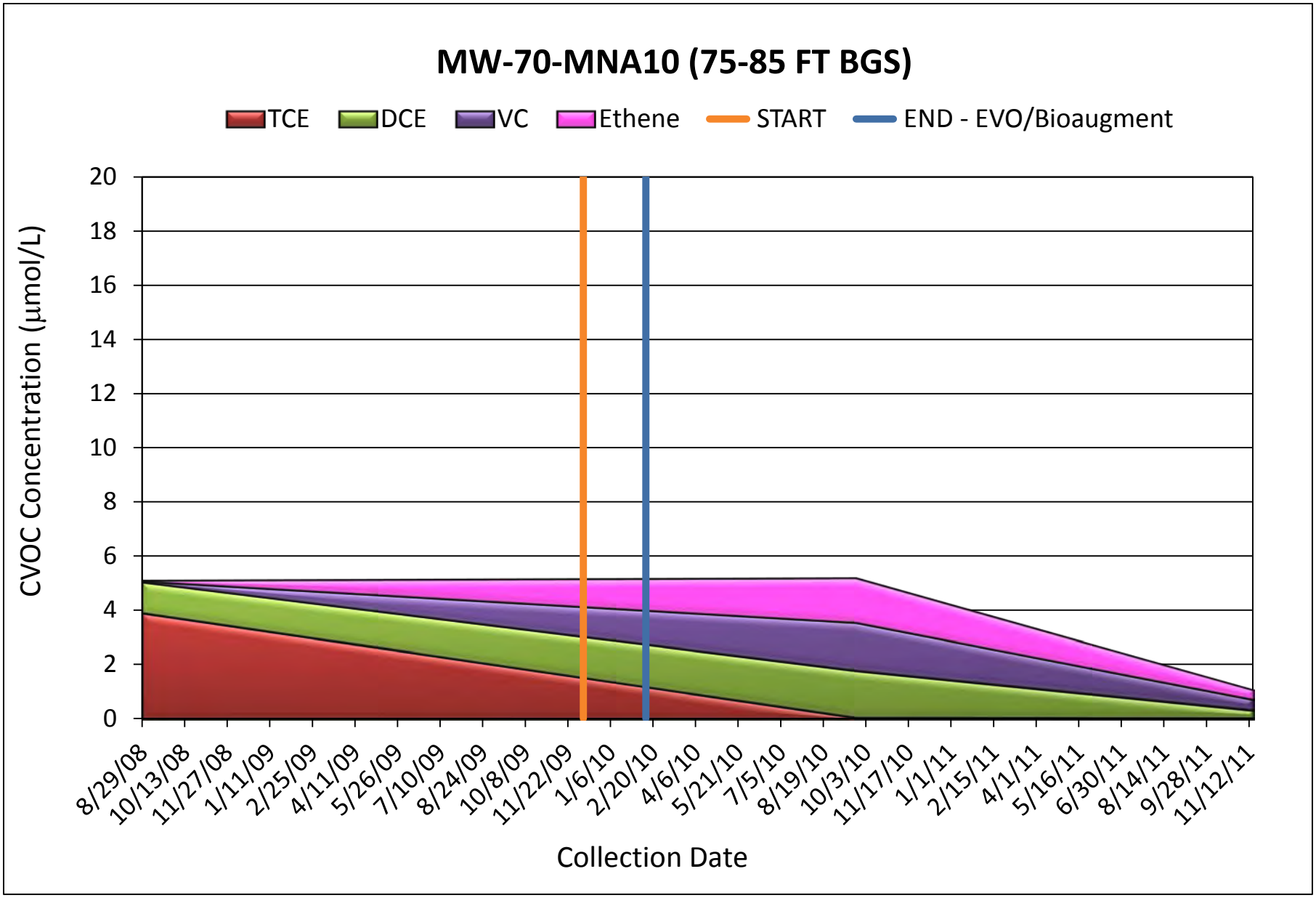
6/28/11
8/12/11
9/26/11
11/10/11
Collection Date


MW-70-MNA10 (75-85 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
20
18
16
14
12
10
8
6
4
2
0
8/29/08
10/13/08
11/27/08
1/11/09
2/25/09
4/11/09
5/26/09
7/10/09
8/24/09
10/8/09
11/22/09
1/6/10
2/20/10
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5/21/10
7/5/10
8/19/10
10/3/10
11/17/10
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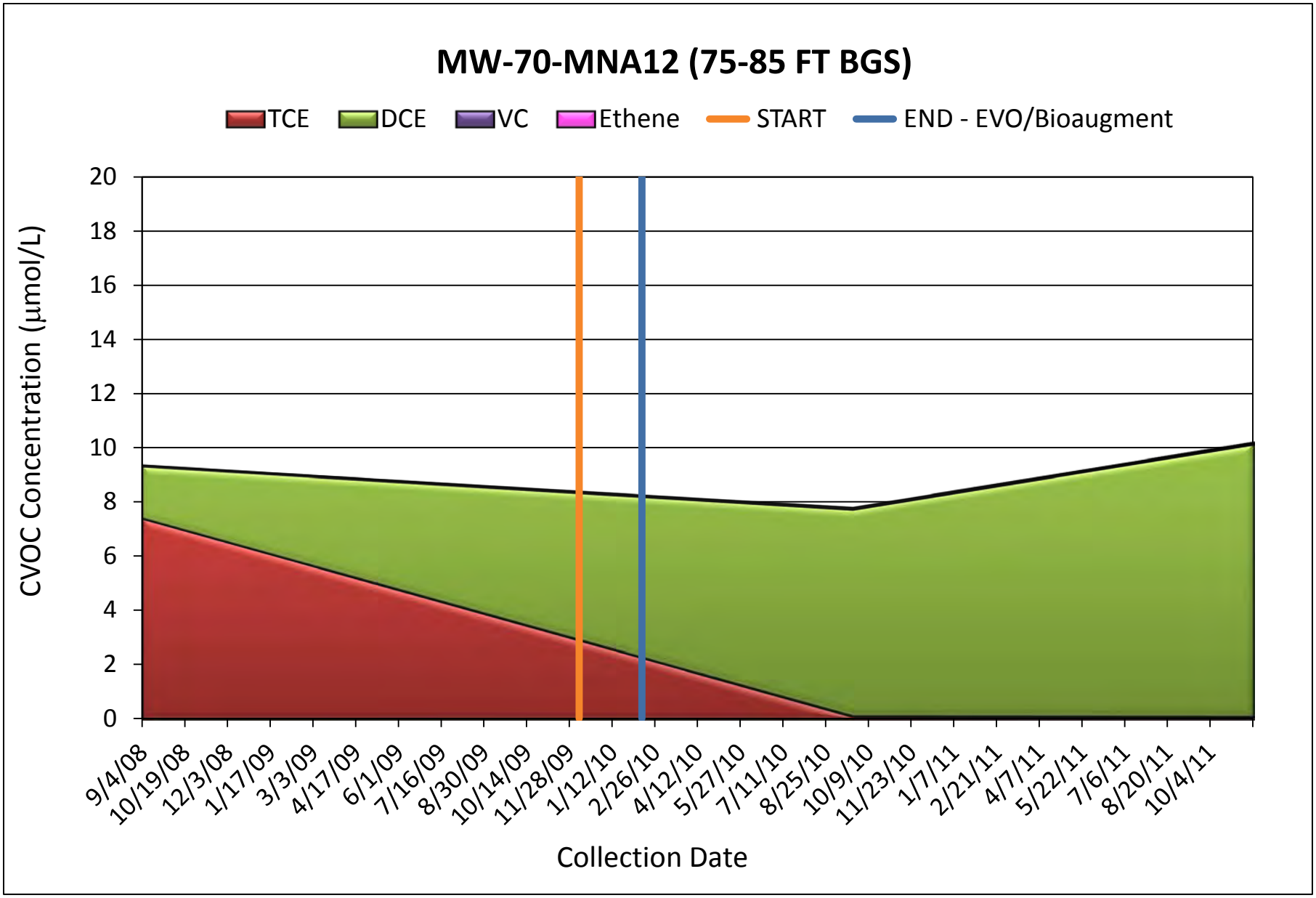
6/30/11
8/14/11
9/28/11
11/12/11
Collection Date


MW-70-MNA12 (75-85 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
20
18
16
14
12
10
8
6
4
2
0
9/4/08
10/19/08
12/3/08
1/17/09
3/3/09
4/17/09
6/1/09
7/16/09
8/30/09
10/14/09
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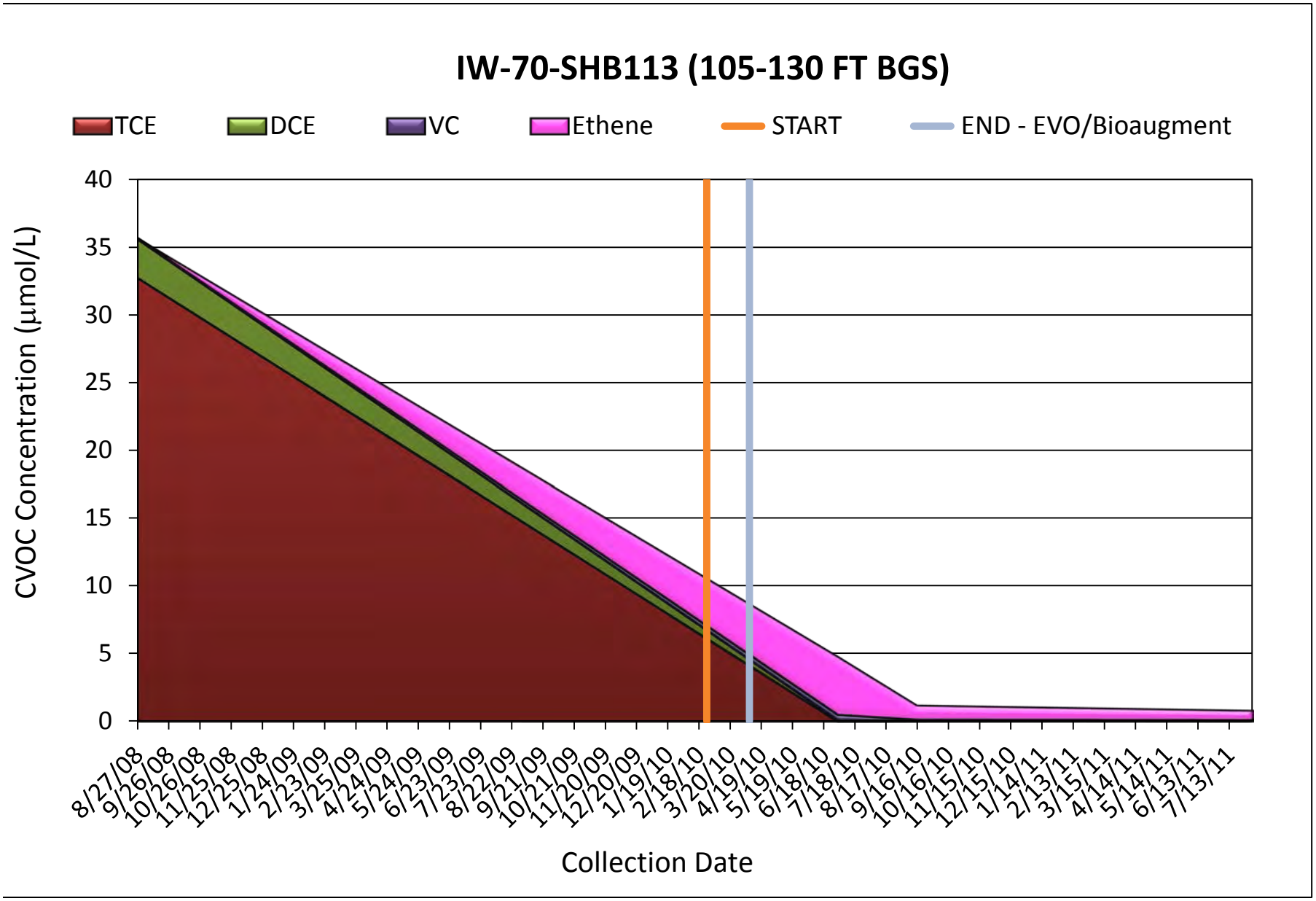
4/12/10
5/27/10
7/11/10
8/25/10
10/9/10
11/23/10
1/7/11
2/21/11
4/7/11
5/22/11
7/6/11
8/20/11
10/4/11
Collection Date

IR Site 70
Naval Weapons Station Seal Beach

Chlorinated Volatile Organic Compounds (CVOC) Concentration Graphs

Shell Horizon Biobarrier 1


IW-70-SHB113 (105-130 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
40
35
30
25
20
15
10
5
0
8/27/08
9/26/08
10/26/08
11/25/08
12/25/08
1/24/09
2/23/09
3/25/09
4/24/09
5/24/09
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9/21/09
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11/15/10
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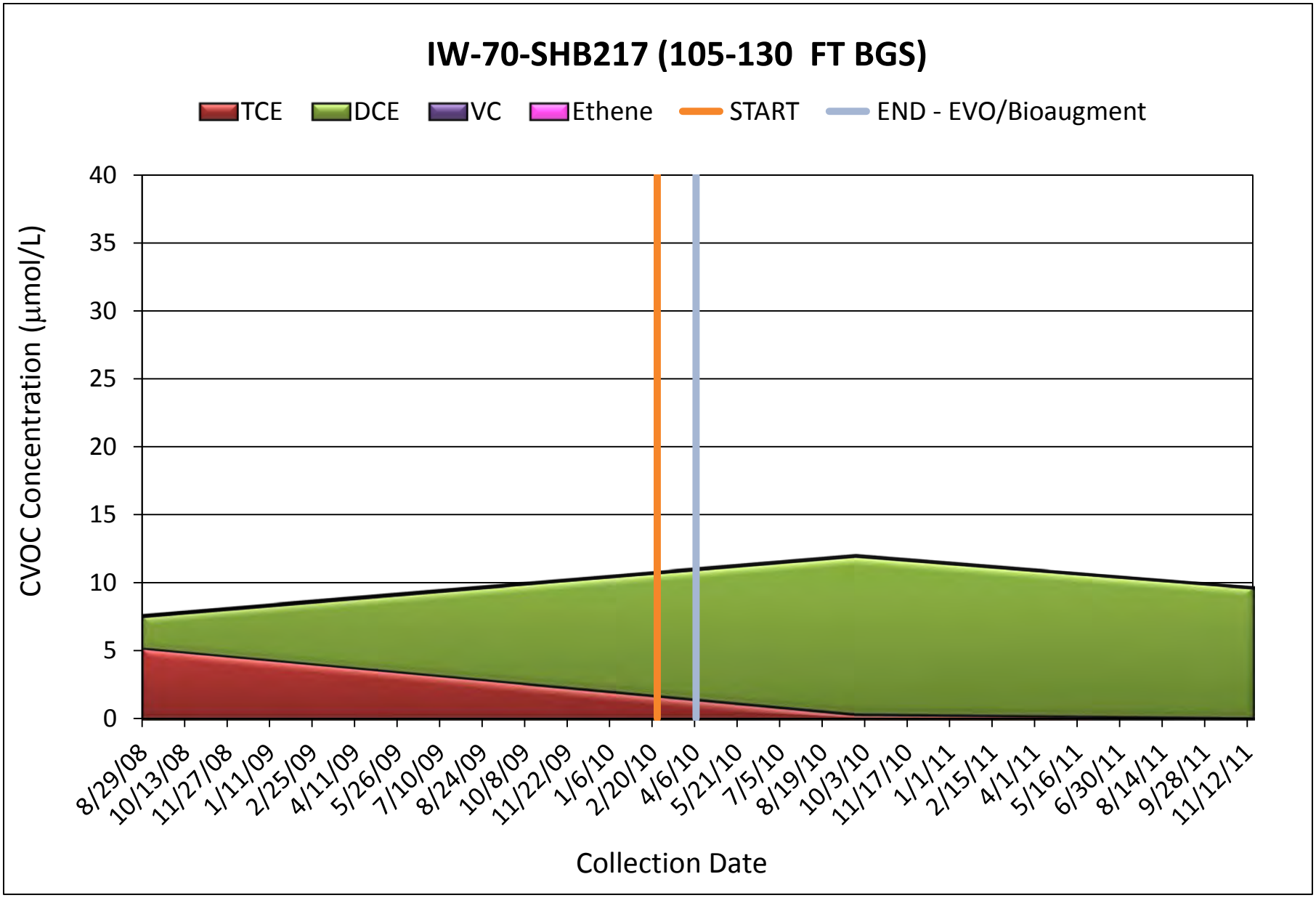
4/14/11
5/14/11
6/13/11
7/13/11
Collection Date


IW-70-SHB217 (105-130 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
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35
30
25
20
15
10
5
0
8/29/08
10/13/08
11/27/08
1/11/09
2/25/09
4/11/09
5/26/09
7/10/09
8/24/09
10/8/09
11/22/09
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11/17/10
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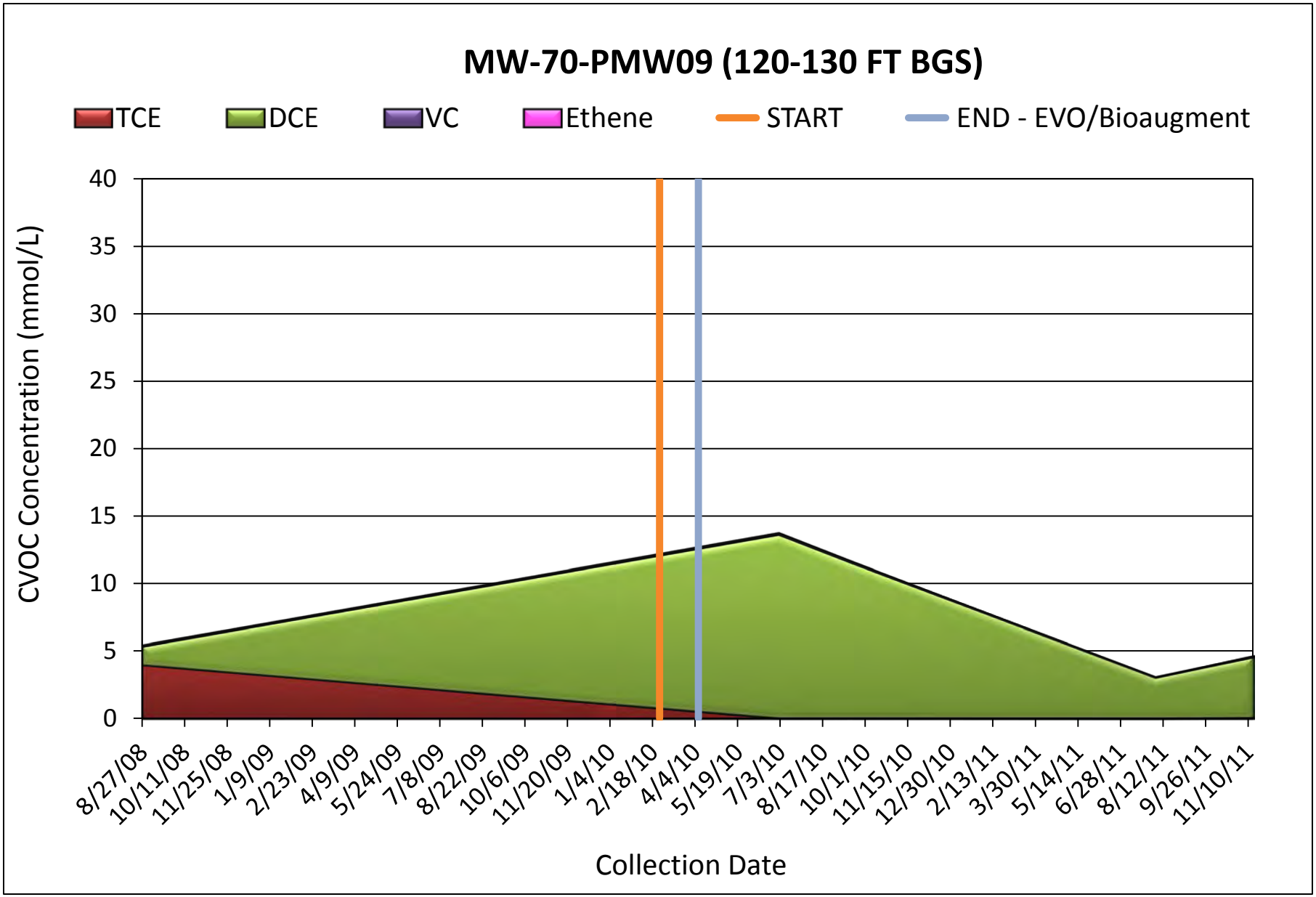
4/1/11
5/16/11
6/30/11
8/14/11
9/28/11
11/12/11
Collection Date


MW-70-PMW09 (120-130 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (mmol/L)
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35
30
25
20
15
10
5
0
8/27/08
10/11/08
11/25/08
1/9/09
2/23/09
4/9/09
5/24/09
7/8/09
8/22/09
10/6/09
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11/15/10
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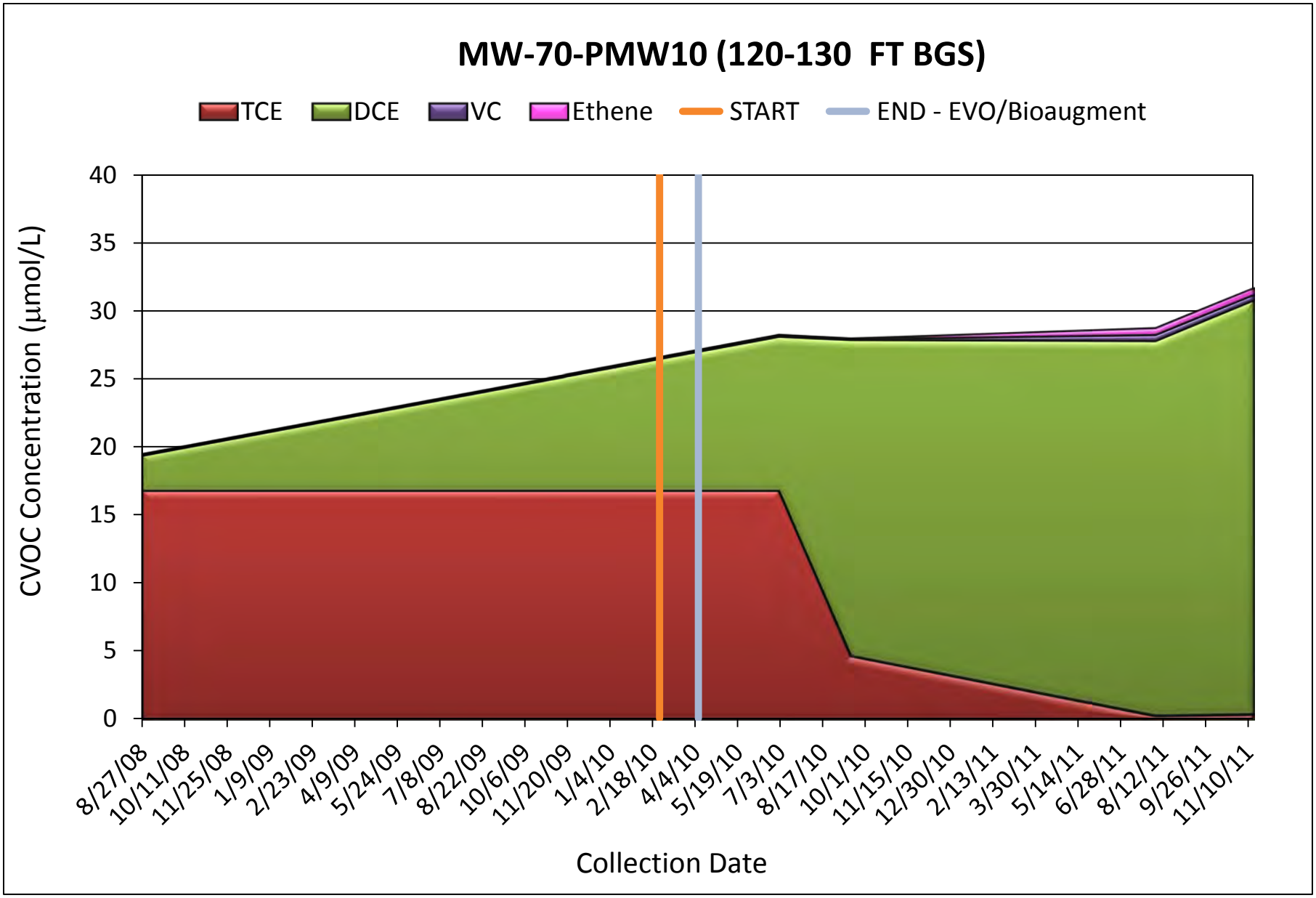
3/30/11
5/14/11
6/28/11
8/12/11
9/26/11
11/10/11
Collection Date


MW-70-PMW10 (120-130 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
40
35
30
25
20
15
10
5
0
8/27/08
10/11/08
11/25/08
1/9/09
2/23/09
4/9/09
5/24/09
7/8/09
8/22/09
10/6/09
11/20/09
1/4/10
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11/15/10
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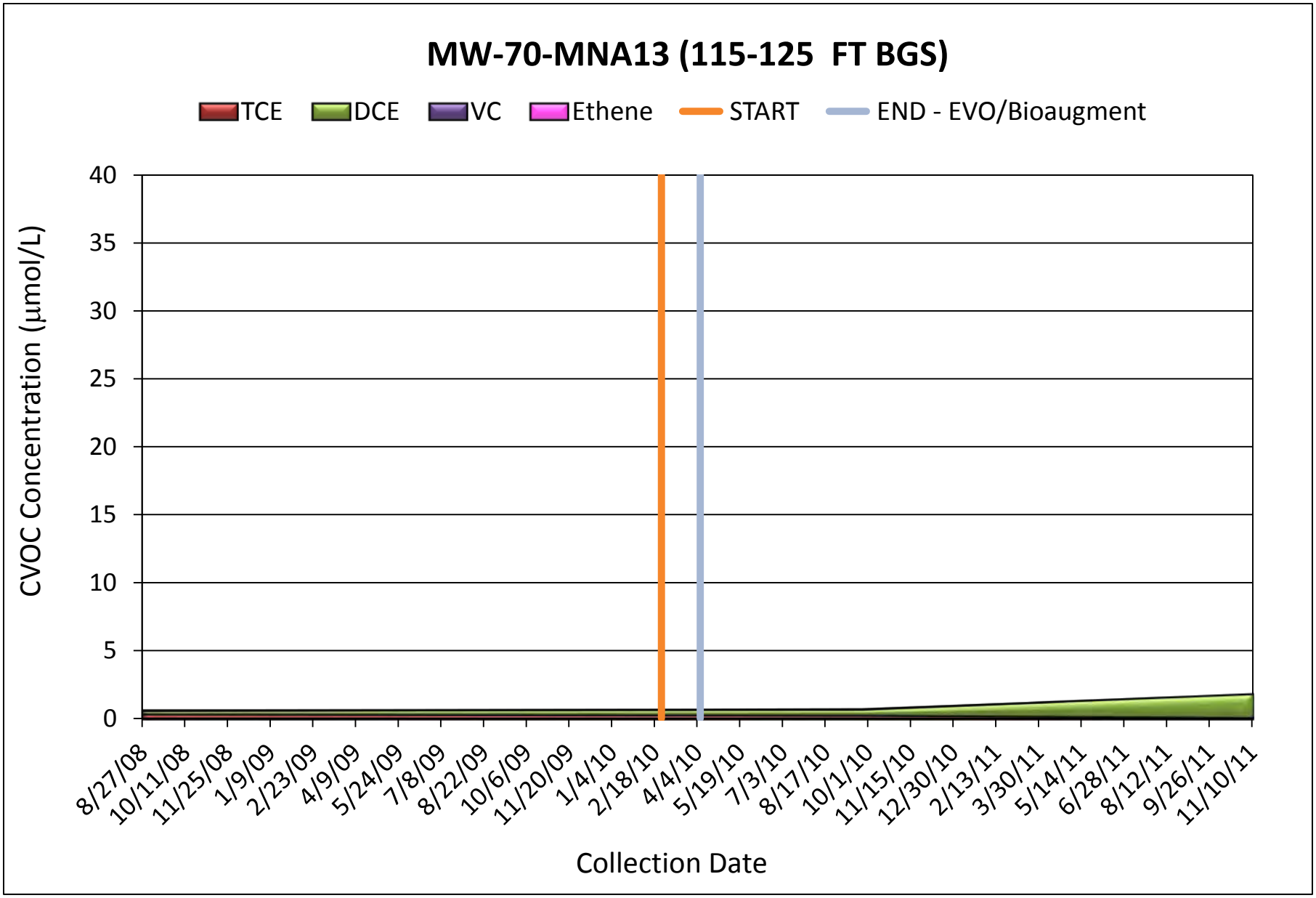
3/30/11
5/14/11
6/28/11
8/12/11
9/26/11
11/10/11
Collection Date


MW-70-MNA13 (115-125 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
40
35
30
25
20
15
10
5
0
8/27/08
10/11/08
11/25/08
1/9/09
2/23/09
4/9/09
5/24/09
7/8/09
8/22/09
10/6/09
11/20/09
1/4/10
2/18/10
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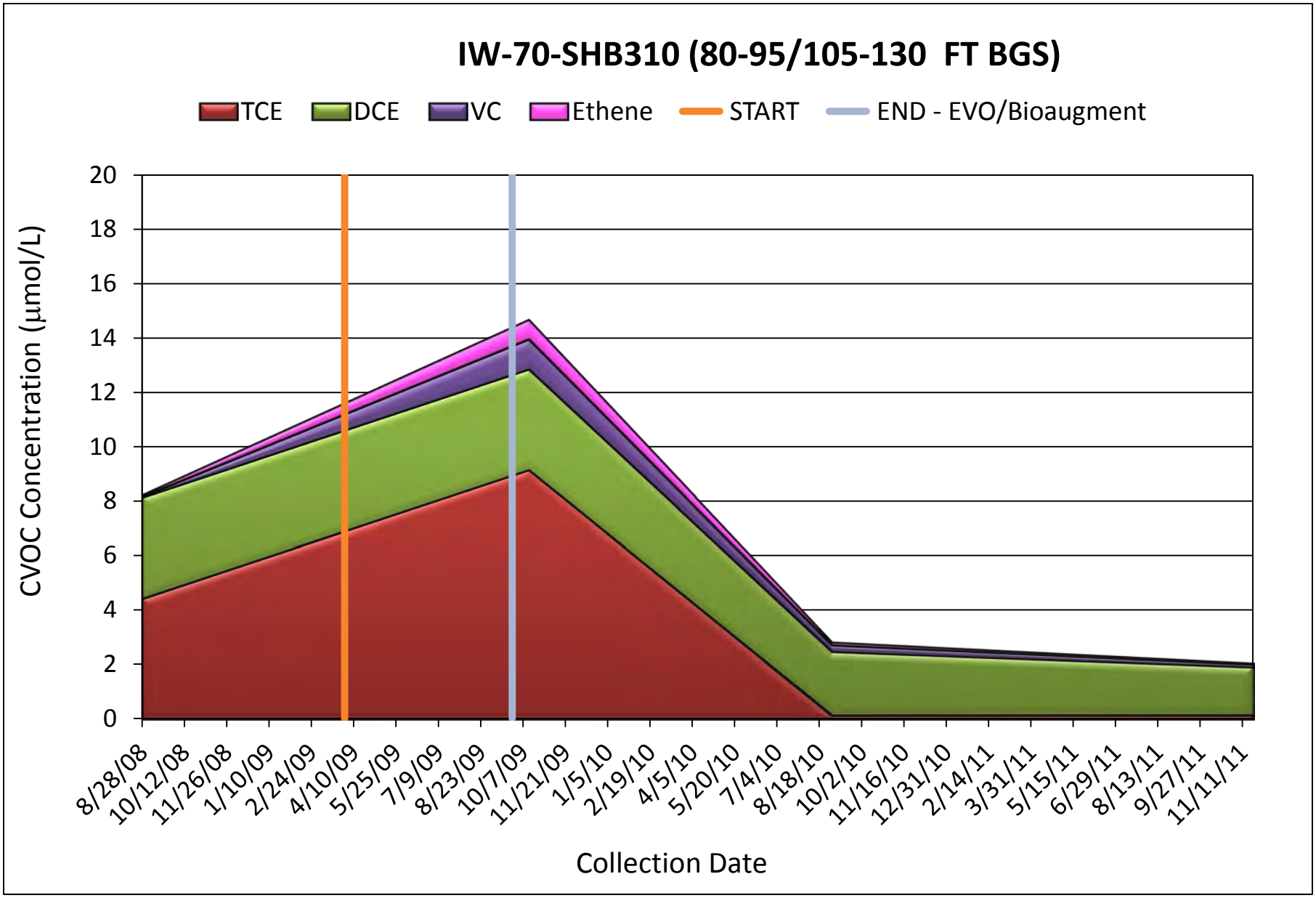
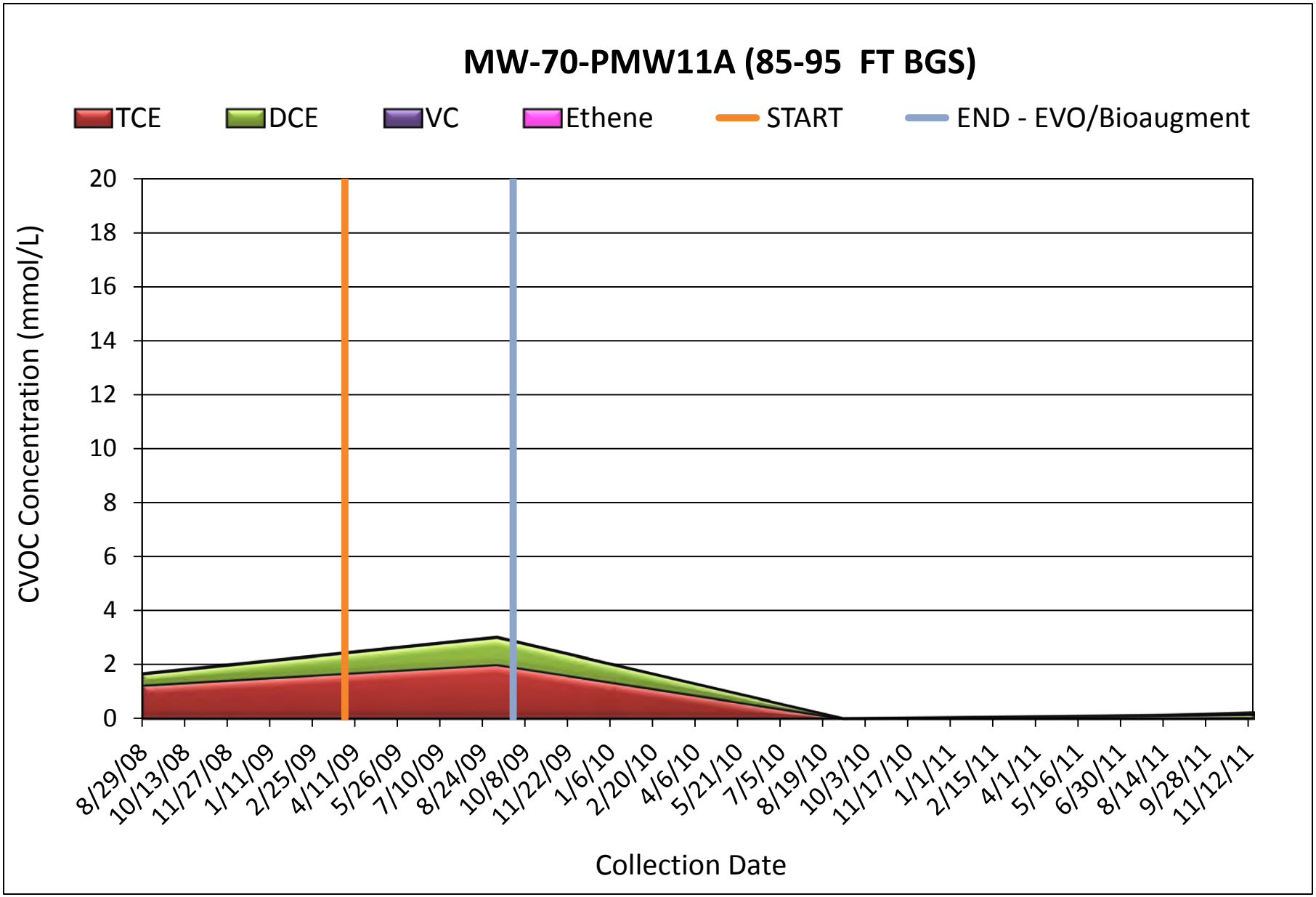
7/3/10
8/17/10
10/1/10
11/15/10
12/30/10
2/13/11
3/30/11
5/14/11
6/28/11
8/12/11
9/26/11
11/10/11
Collection Date

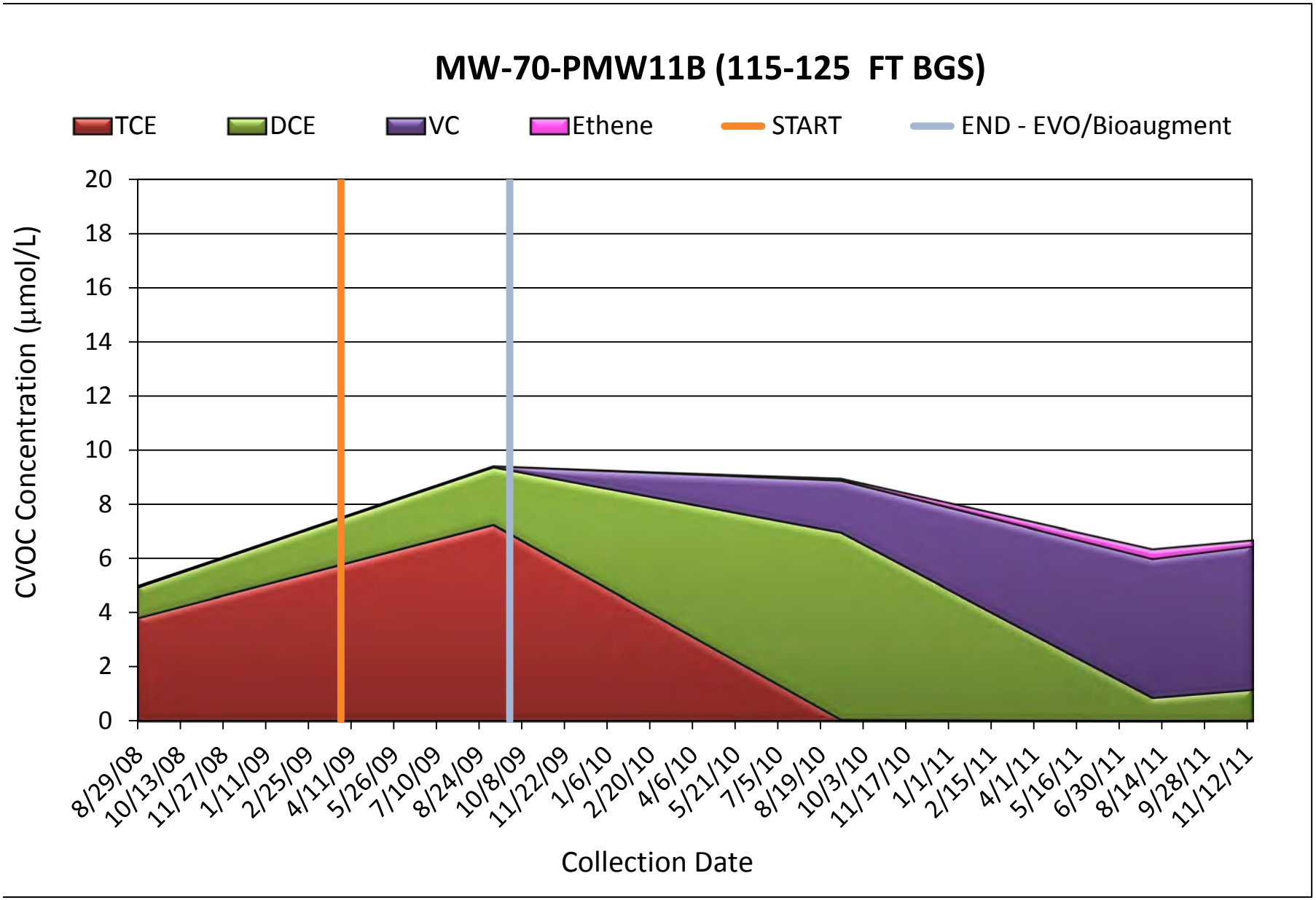
IR Site 70
Naval Weapons Station Seal Beach

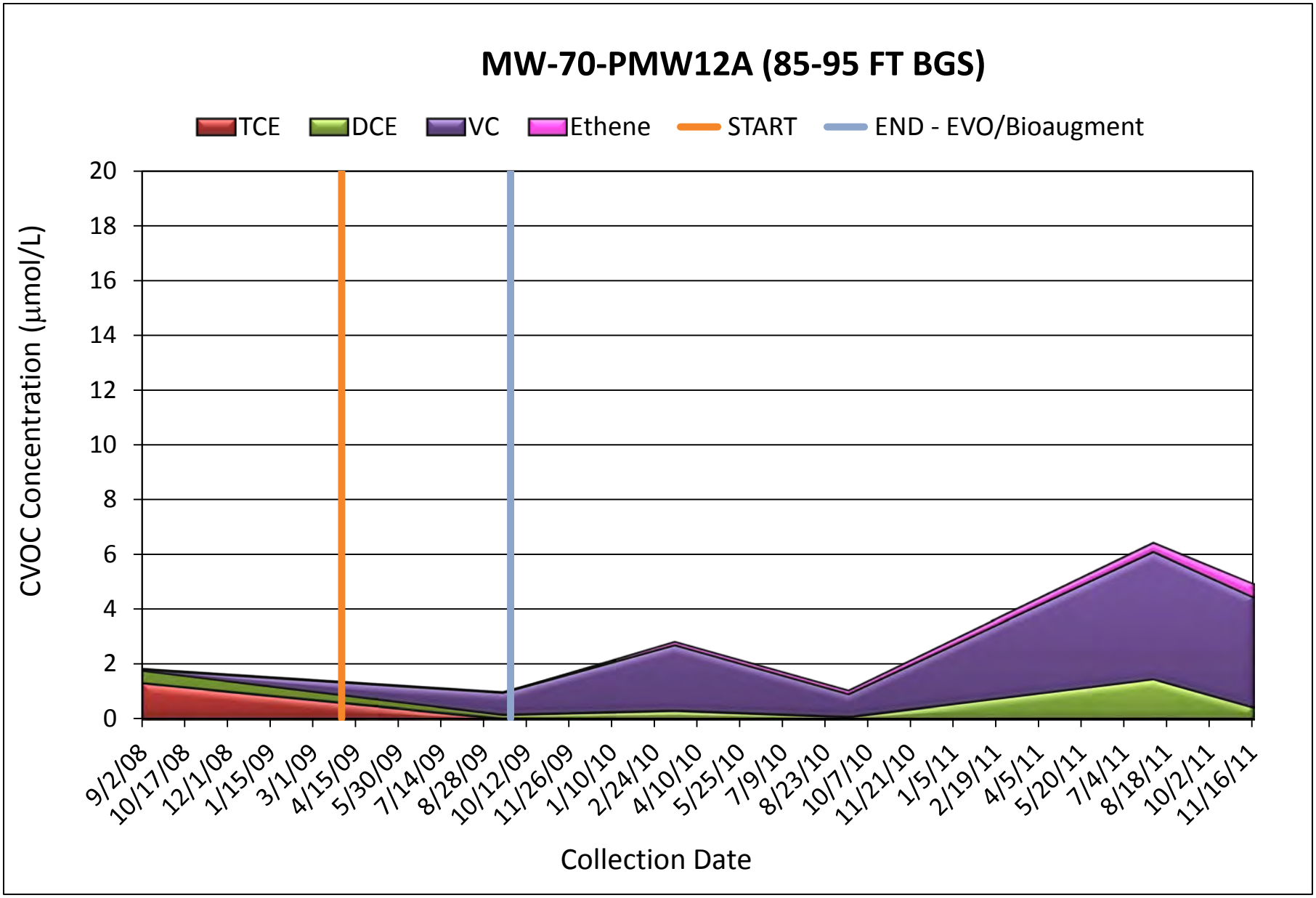
Chlorinated Volatile Organic Compounds (CVOC) Concentration Graphs

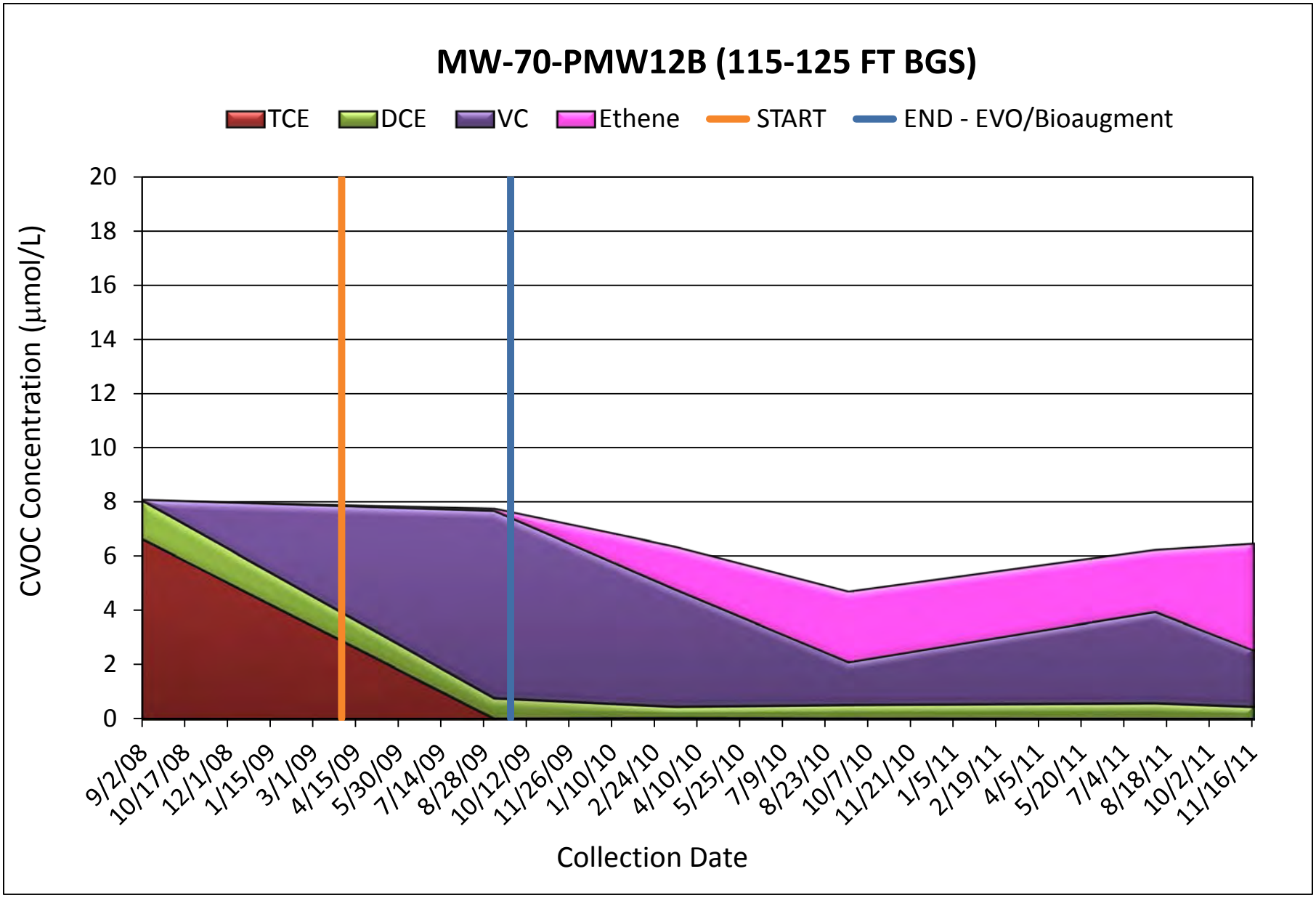
Shell Horizon Biobarrier 3

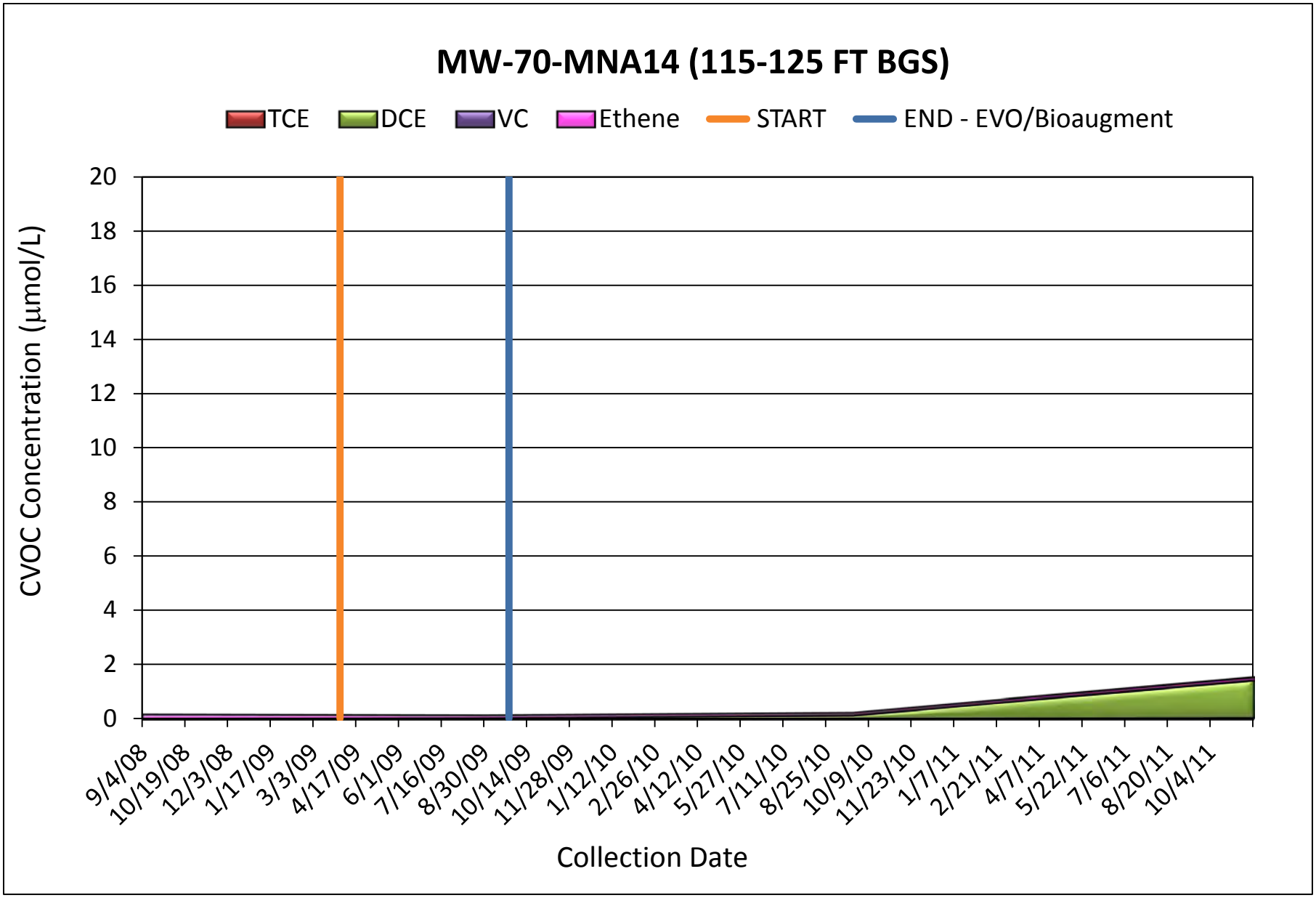

IW-70-SHB310 (80-95/105-130 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
20
18
16
14
12
10
8
6
4
2
0
8/28/08
10/12/08
11/26/08
1/10/09
2/24/09
4/10/09
5/25/09
7/9/09
8/23/09
10/7/09
11/21/09
1/5/10
2/19/10
4/5/10
5/20/10
7/4/10
8/18/10
10/2/10
11/16/10
12/31/10
2/14/11
3/31/11
5/15/11
6/29/11
8/13/11
9/27/11
11/11/11
Collection Date


MW-70-PMW11A (85-95 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (mmol/L)
20
18
16
14
12
10
8
6
4
2
0
8/29/08
10/13/08
11/27/08
1/11/09
2/25/09
4/11/09
5/26/09
7/10/09
8/24/09
10/8/09
11/22/09
1/6/10
2/20/10
4/6/10
5/21/10
7/5/10
8/19/10
10/3/10
11/17/10
1/1/11
2/15/11
4/1/11
5/16/11
6/30/11
8/14/11
9/28/11
11/12/11
Collection Date


MW-70-PMW11B (115-125 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
20
18
16
14
12
10
8
6
4
2
0
8/29/08
10/13/08
11/27/08
1/11/09
2/25/09
4/11/09
5/26/09
7/10/09
8/24/09
10/8/09
11/22/09
1/6/10
2/20/10
4/6/10
5/21/10
7/5/10
8/19/10
10/3/10
11/17/10
1/1/11
2/15/11
4/1/11
5/16/11
6/30/11
8/14/11
9/28/11
11/12/11
Collection Date


MW-70-PMW12A (85-95 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
20
18
16
14
12
10
8
6
4
2
0
9/2/08
10/17/08
12/1/08
1/15/09
3/1/09
4/15/09
5/30/09
7/14/09
8/28/09
10/12/09
11/26/09
1/10/10
2/24/10
4/10/10
5/25/10
7/9/10
8/23/10
10/7/10
11/21/10
1/5/11
2/19/11
4/5/11
5/20/11
7/4/11
8/18/11
10/2/11
11/16/11
Collection Date

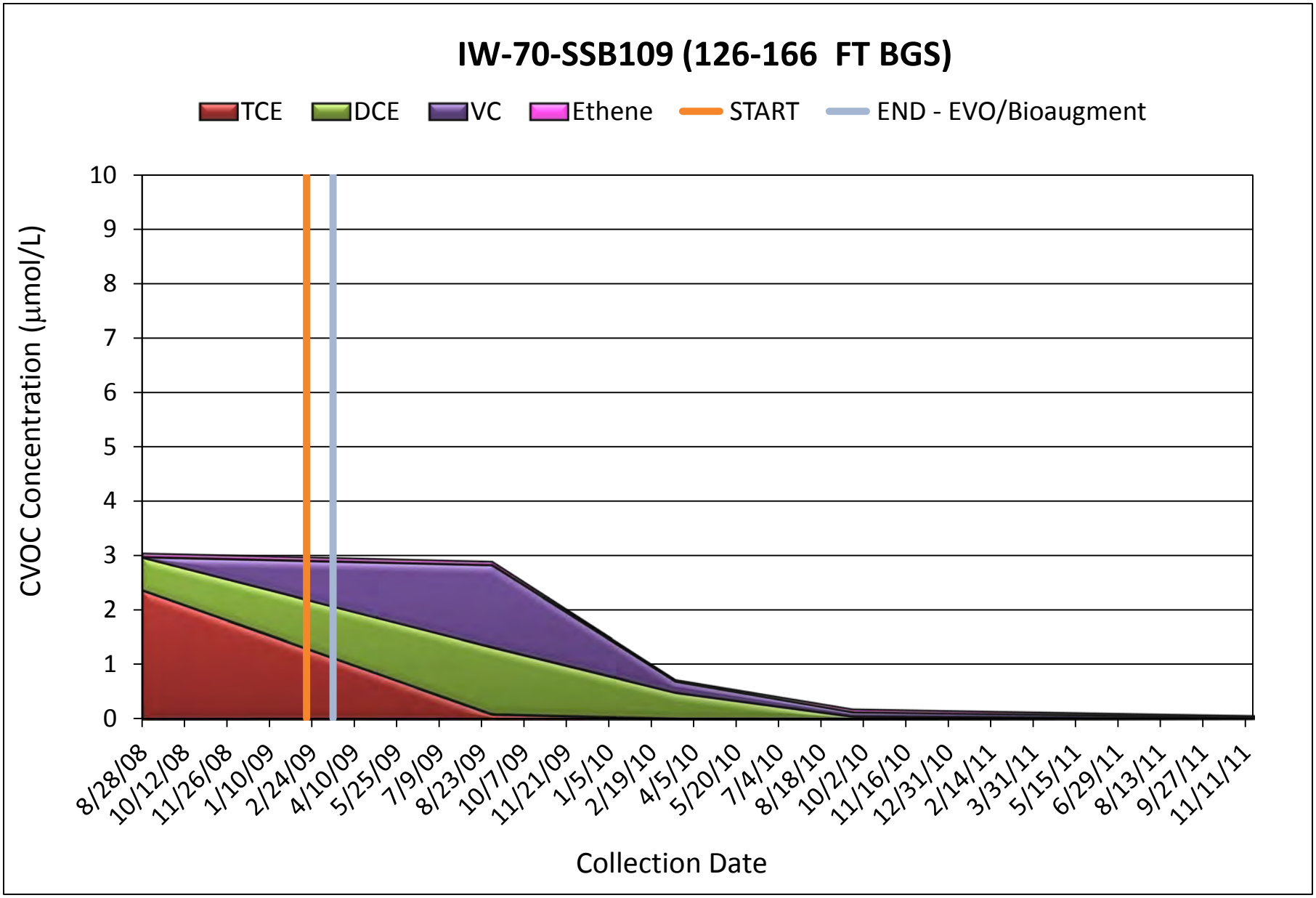

MW-70-PMW12B (115-125 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
20
18
16
14
12
10
8
6
4
2
0
9/2/08
10/17/08
12/1/08
1/15/09
3/1/09
4/15/09
5/30/09
7/14/09
8/28/09
10/12/09
11/26/09
1/10/10
2/24/10
4/10/10
5/25/10
7/9/10
8/23/10
10/7/10
11/21/10
1/5/11
2/19/11
4/5/11
5/20/11
7/4/11
8/18/11
10/2/11
11/16/11
Collection Date

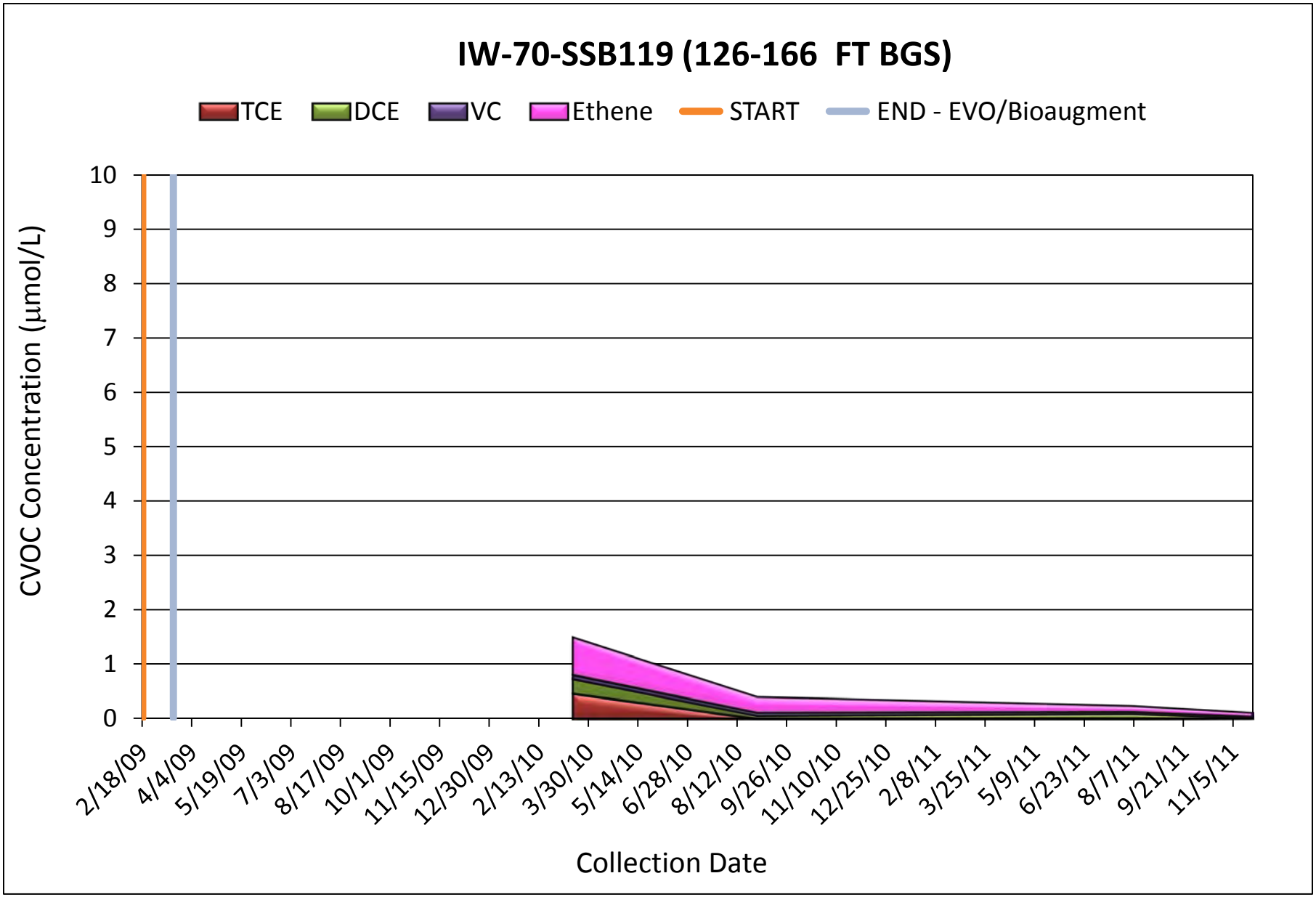

MW-70-MNA14 (115-125 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
20
18
16
14
12
10
8
6
4
2
0
9/4/08
10/19/08
12/3/08
1/17/09
3/3/09
4/17/09
6/1/09
7/16/09
8/30/09
10/14/09
11/28/09
1/12/10
2/26/10
4/12/10
5/27/10
7/11/10
8/25/10
10/9/10
11/23/10
1/7/11
2/21/11
4/7/11
5/22/11
7/6/11
8/20/11
10/4/11
Collection Date

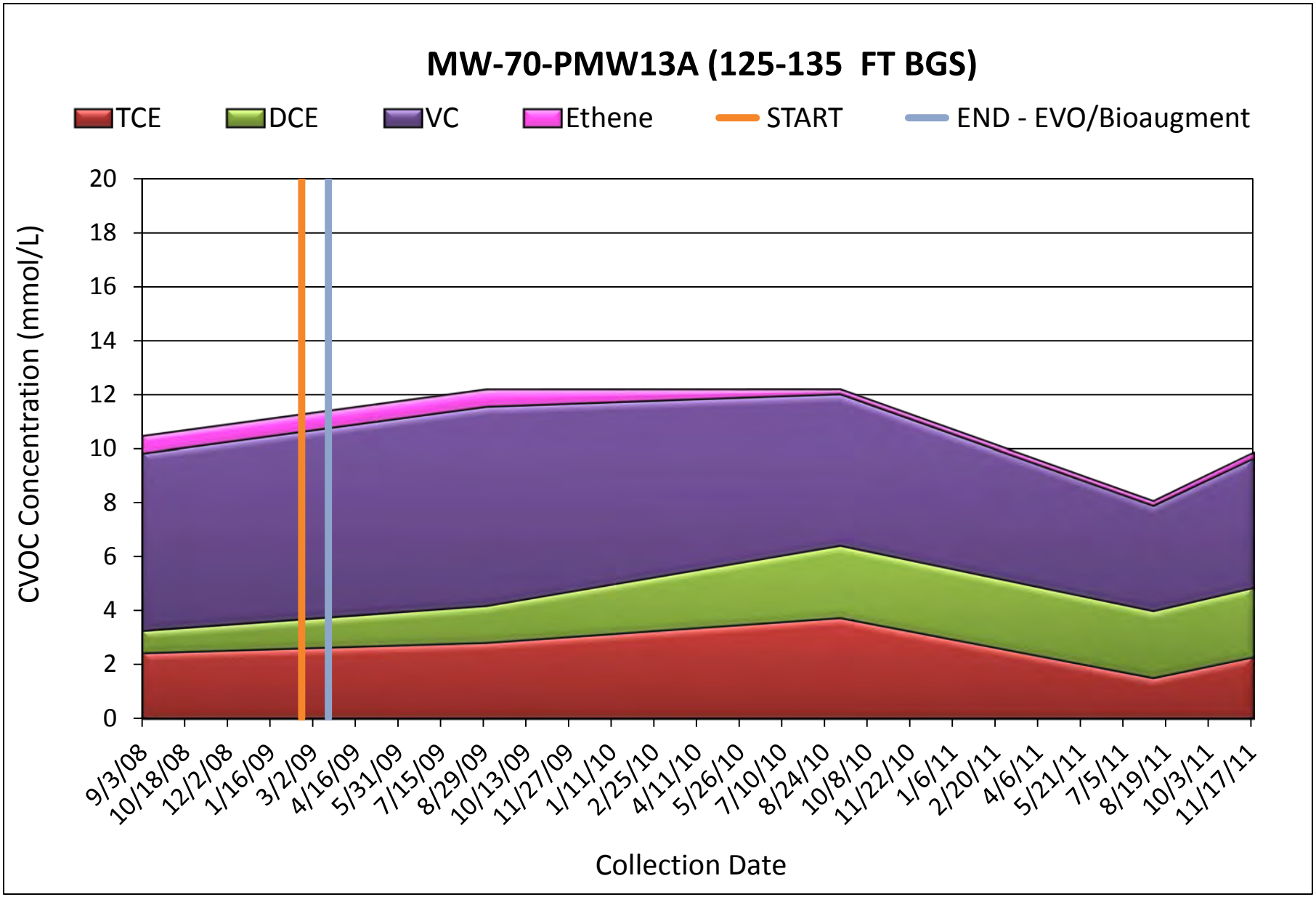
IR Site 70
Naval Weapons Station Seal Beach

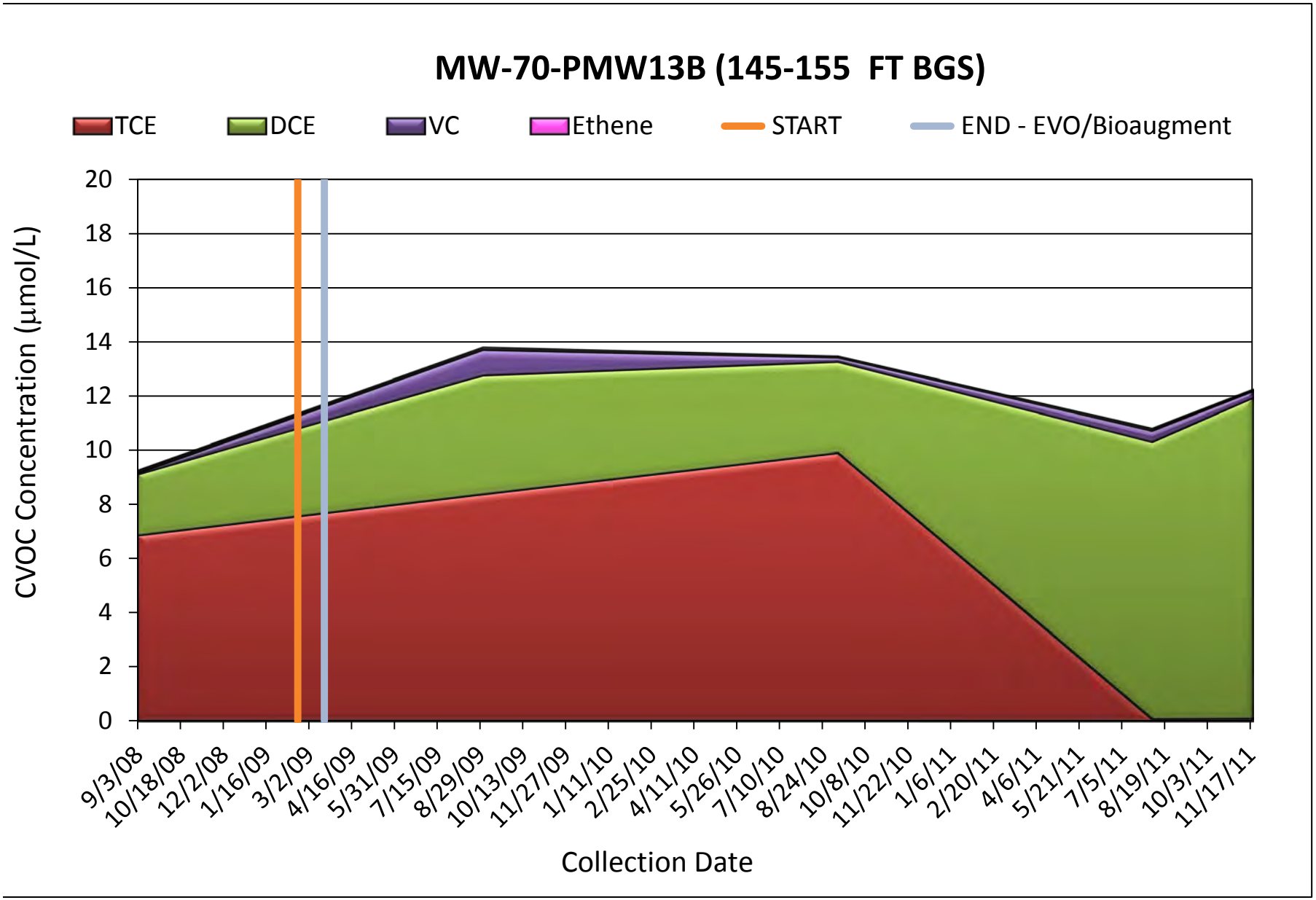
Chlorinated Volatile Organic Compounds (CVOC) Concentration Graphs

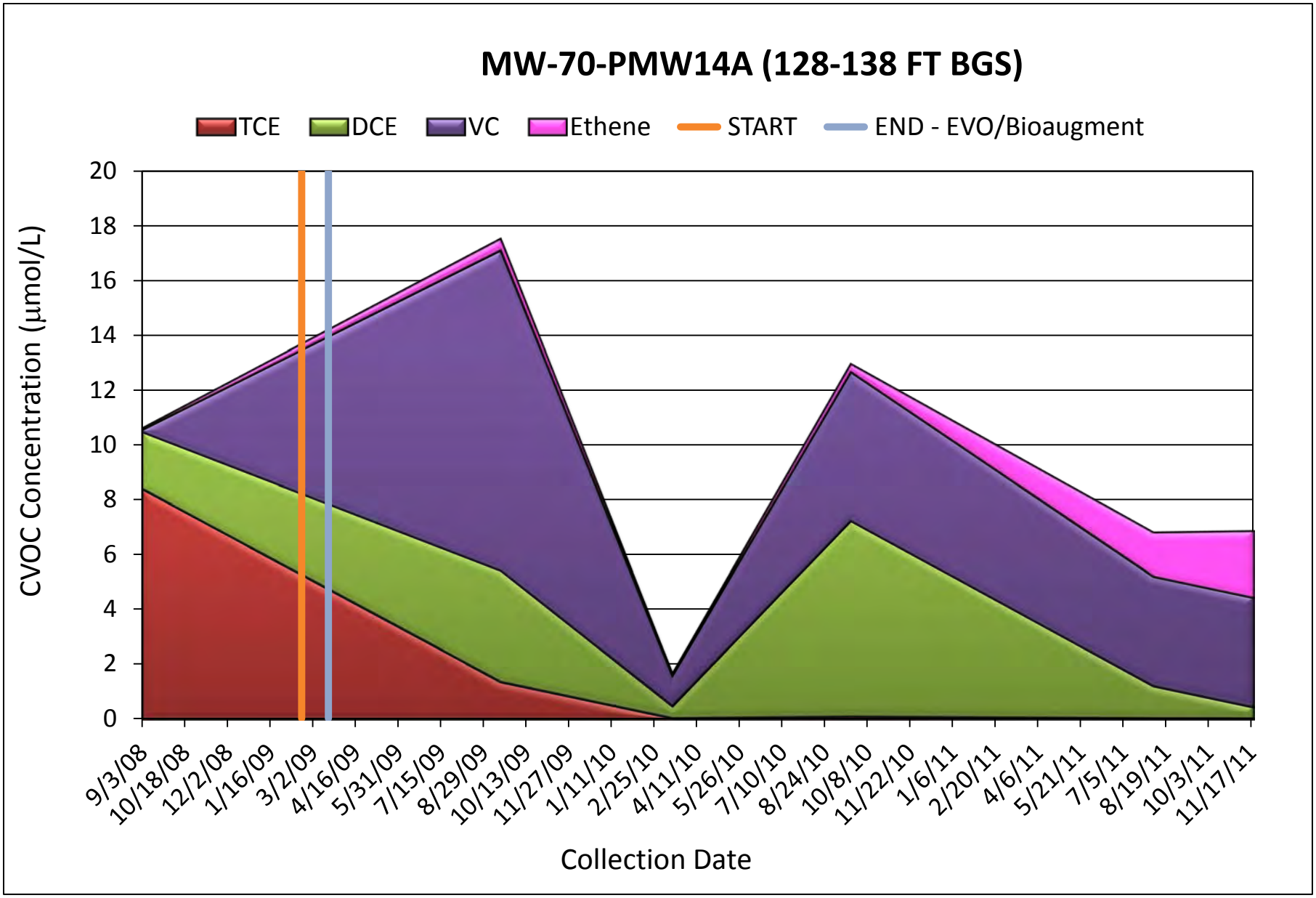
Second Sand Biobarrier 1

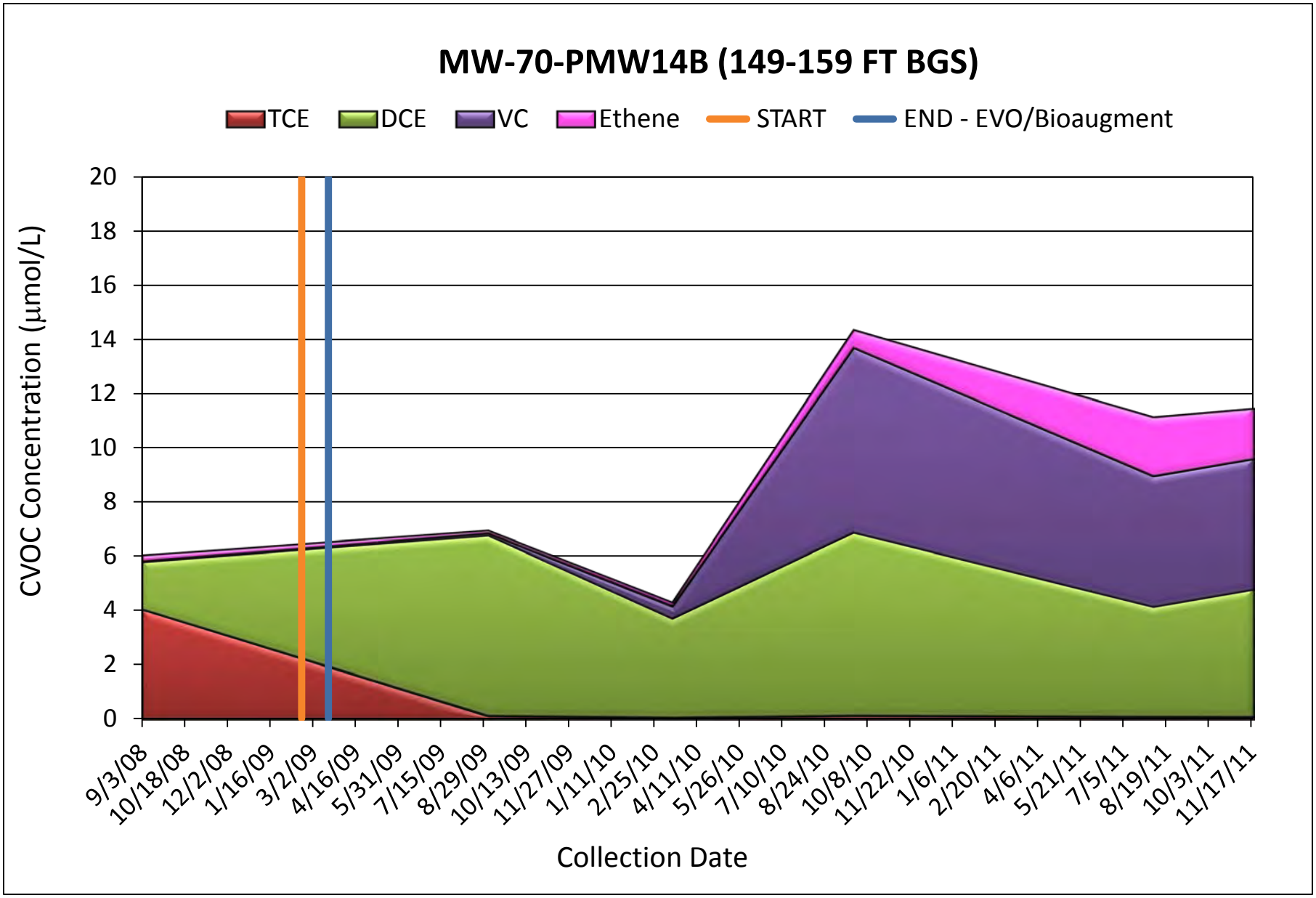

IW-70-SSB109 (126-166 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
10
9
8
7
6
5
4
3
2
1
0
8/28/08
10/12/08
11/26/08
1/10/09
2/24/09
4/10/09
5/25/09
7/9/09
8/23/09
10/7/09
11/21/09
1/5/10
2/19/10
4/5/10
5/20/10
7/4/10
8/18/10
10/2/10
11/16/10
12/31/10
2/14/11
3/31/11
5/15/11
6/29/11
8/13/11
9/27/11
11/11/11
Collection Date

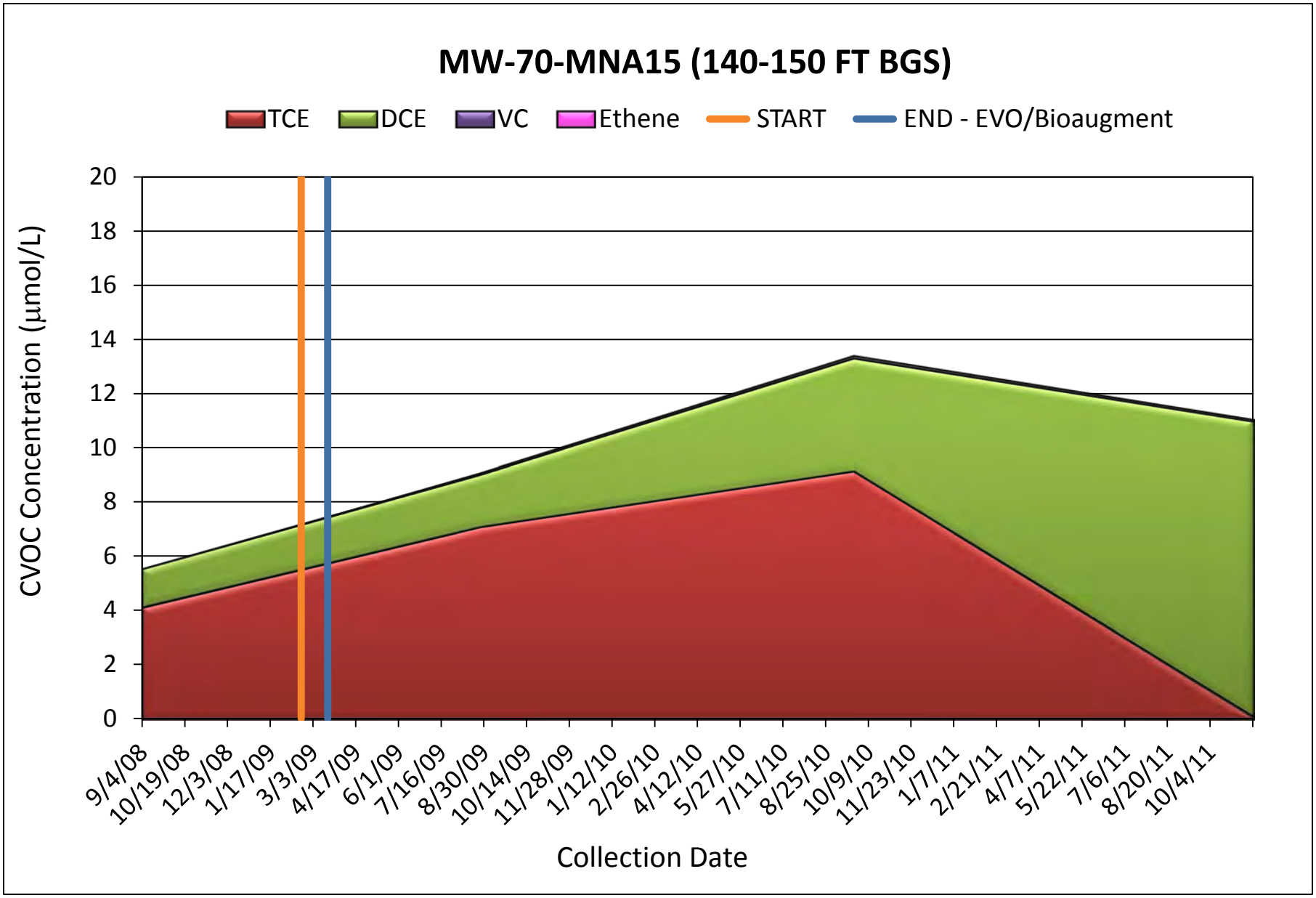

IW-70-SSB119 (126-166 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
10
9
8
7
6
5
4
3
2
1
0
2/18/09
4/4/09
5/19/09
7/3/09
8/17/09
10/1/09
11/15/09
12/30/09
2/13/10
3/30/10
5/14/10
6/28/10
8/12/10
9/26/10
11/10/10
12/25/10
2/8/11
3/25/11
5/9/11
6/23/11
8/7/11
9/21/11
11/5/11
Collection Date

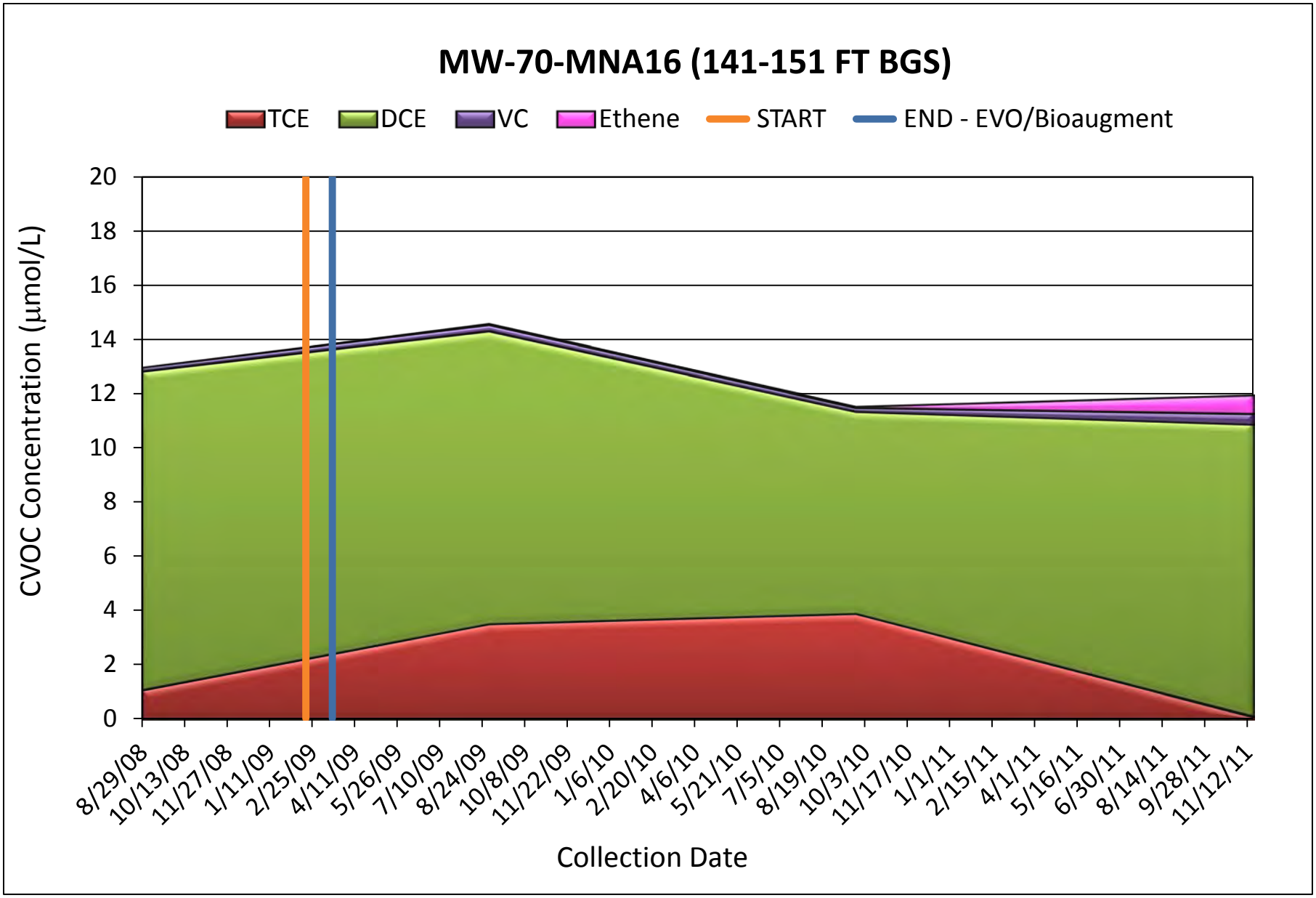

MW-70-PMW13A (125-135 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (mmol/L)
20
18
16
14
12
10
8
6
4
2
0
9/3/08
10/18/08
12/2/08
1/16/09
3/2/09
4/16/09
5/31/09
7/15/09
8/29/09
10/13/09
11/27/09
1/11/10
2/25/10
4/11/10
5/26/10
7/10/10
8/24/10
10/8/10
11/22/10
1/6/11
2/20/11
4/6/11
5/21/11
7/5/11
8/19/11
10/3/11
11/17/11
Collection Date

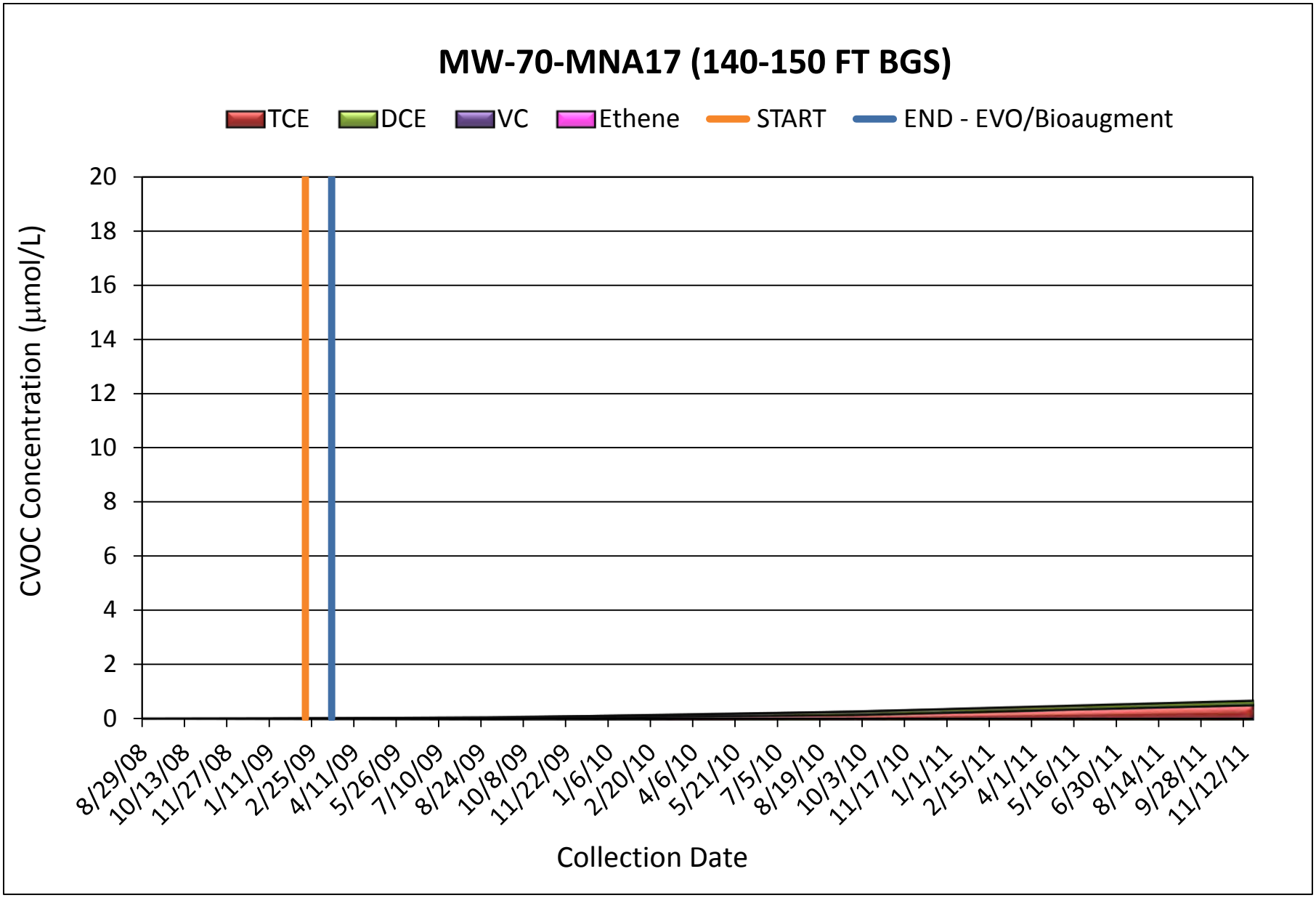

MW-70-PMW13B (145-155 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
20
18
16
14
12
10
8
6
4
2
0
9/3/08
10/18/08
12/2/08
1/16/09
3/2/09
4/16/09
5/31/09
7/15/09
8/29/09
10/13/09
11/27/09
1/11/10
2/25/10
4/11/10
5/26/10
7/10/10
8/24/10
10/8/10
11/22/10
1/6/11
2/20/11
4/6/11
5/21/11
7/5/11
8/19/11
10/3/11
11/17/11
Collection Date


MW-70-PMW14A (128-138 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
20
18
16
14
12
10
8
6
4
2
0
9/3/08
10/18/08
12/2/08
1/16/09
3/2/09
4/16/09
5/31/09
7/15/09
8/29/09
10/13/09
11/27/09
1/11/10
2/25/10
4/11/10
5/26/10
7/10/10
8/24/10
10/8/10
11/22/10
1/6/11
2/20/11
4/6/11
5/21/11
7/5/11
8/19/11
10/3/11
11/17/11
Collection Date


MW-70-PMW14B (149-159 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
20
18
16
14
12
10
8
6
4
2
0
9/3/08
10/18/08
12/2/08
1/16/09
3/2/09
4/16/09
5/31/09
7/15/09
8/29/09
10/13/09
11/27/09
1/11/10
2/25/10
4/11/10
5/26/10
7/10/10
8/24/10
10/8/10
11/22/10
1/6/11
2/20/11
4/6/11
5/21/11
7/5/11
8/19/11
10/3/11
11/17/11
Collection Date


MW-70-MNA15 (140-150 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
20
18
16
14
12
10
8
6
4
2
0
9/4/08
10/19/08
12/3/08
1/17/09
3/3/09
4/17/09
6/1/09
7/16/09
8/30/09
10/14/09
11/28/09
1/12/10
2/26/10
4/12/10
5/27/10
7/11/10
8/25/10
10/9/10
11/23/10
1/7/11
2/21/11
4/7/11
5/22/11
7/6/11
8/20/11
10/4/11
Collection Date


MW-70-MNA16 (141-151 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
20
18
16
14
12
10
8
6
4
2
0
8/29/08
10/13/08
11/27/08
1/11/09
2/25/09
4/11/09
5/26/09
7/10/09
8/24/09
10/8/09
11/22/09
1/6/10
2/20/10
4/6/10
5/21/10
7/5/10
8/19/10
10/3/10
11/17/10
1/1/11
2/15/11
4/1/11
5/16/11
6/30/11
8/14/11
9/28/11
11/12/11
Collection Date


MW-70-MNA17 (140-150 FT BGS)
TCE
DCE
VC
Ethene
START
END - EVO/Bioaugment
CVOC Concentration (µmol/L)
20
18
16
14
12
10
8
6
4
2
0
8/29/08
10/13/08
11/27/08
1/11/09
2/25/09
4/11/09
5/26/09
7/10/09
8/24/09
10/8/09
11/22/09
1/6/10
2/20/10
4/6/10
5/21/10
7/5/10
8/19/10
10/3/10
11/17/10
1/1/11
2/15/11
4/1/11
5/16/11
6/30/11
8/14/11
9/28/11
11/12/11
Collection Date

IR Site 70
Naval Weapons Station Seal Beach

Total Organic Carbon Graphs

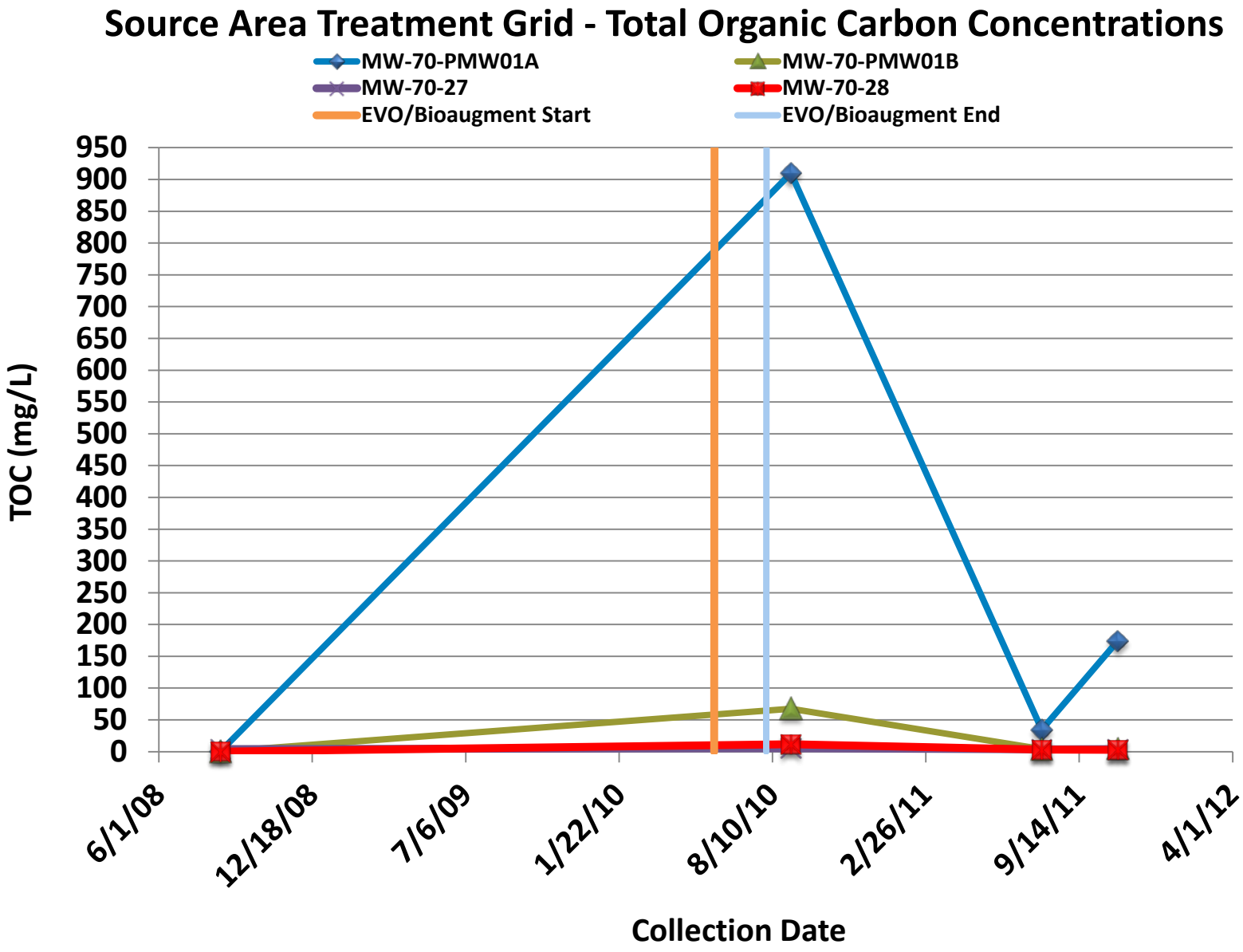
Source Area Treatment Grid
Source Area Biobarrier
First Sand Biobarrier 1
First Sand Biobarrier 2
Shell Horizon Biobarrier 1
Shell Horizon Biobarrier 3
Second Sand Biobarrier 1

IR Site 70
Naval Weapons Station Seal Beach

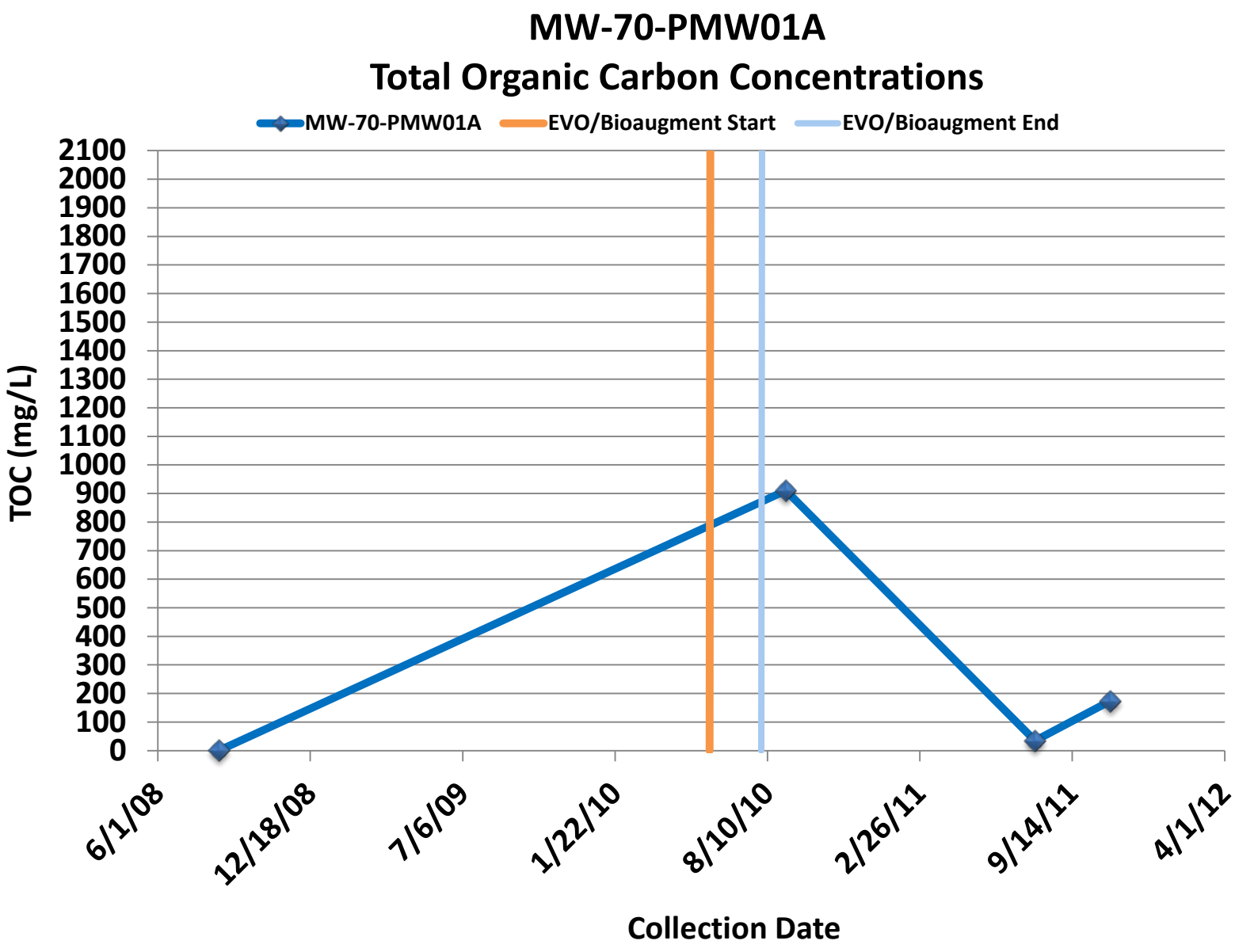
Total Organic Carbon Graphs

Source Area Treatment Grid

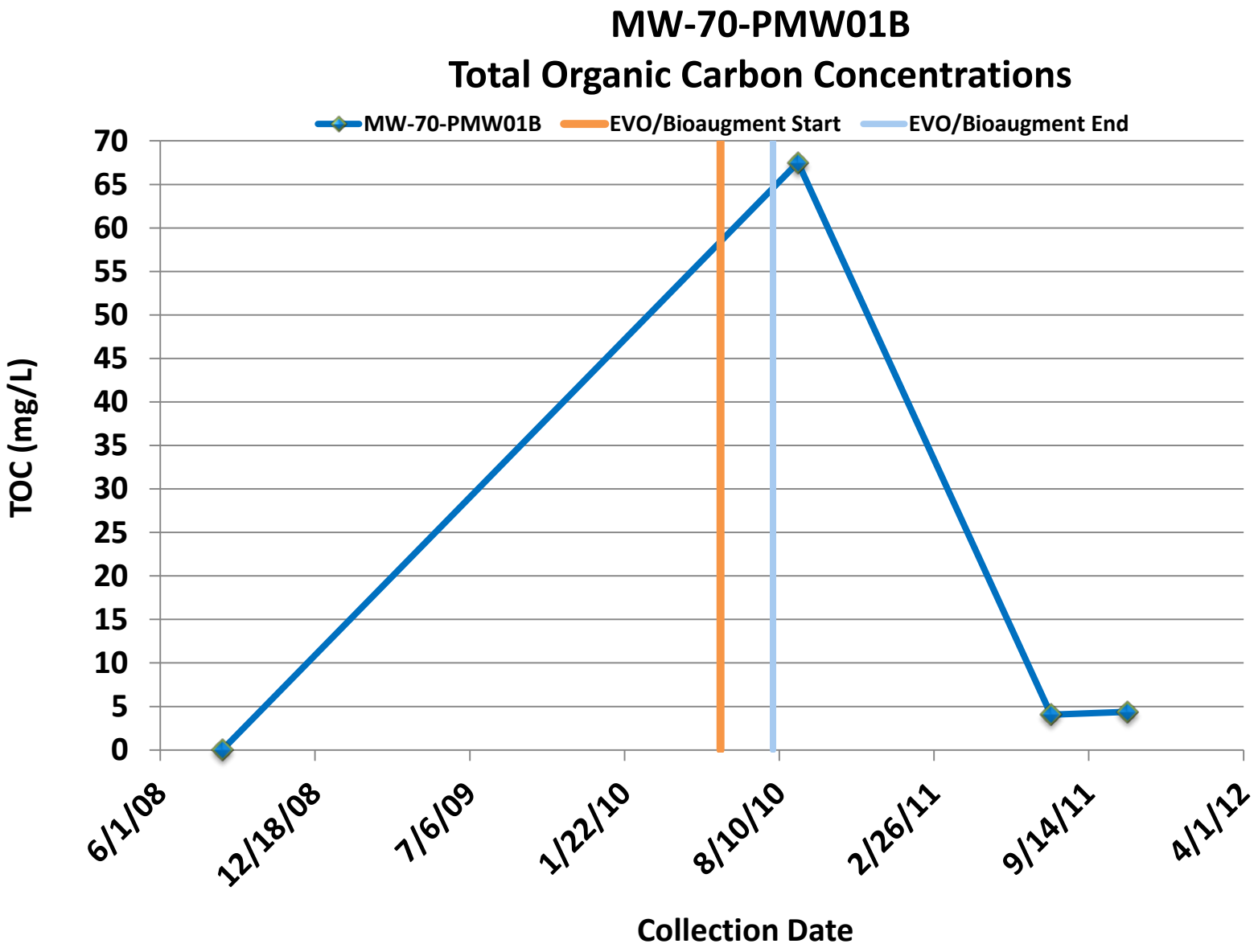
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



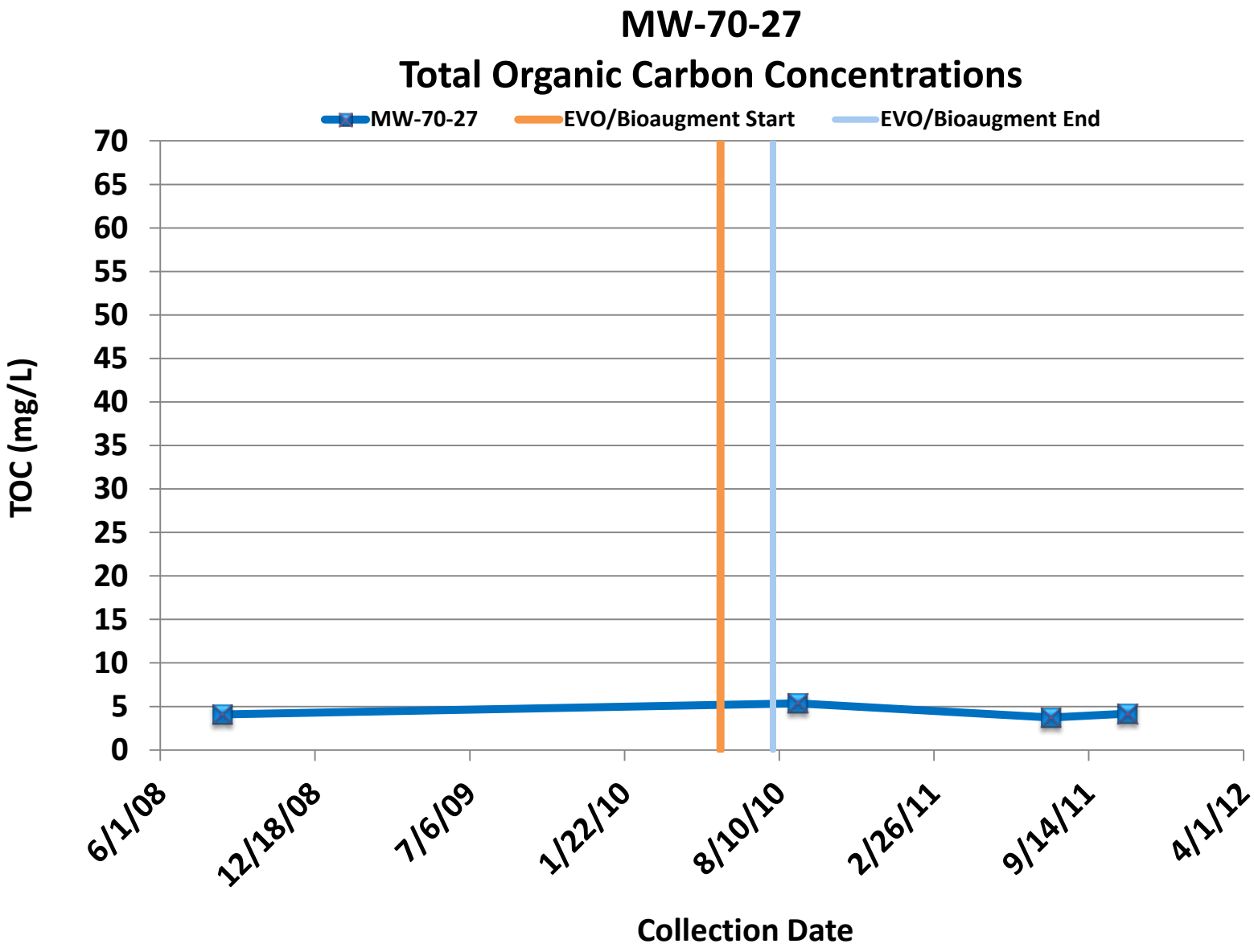
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

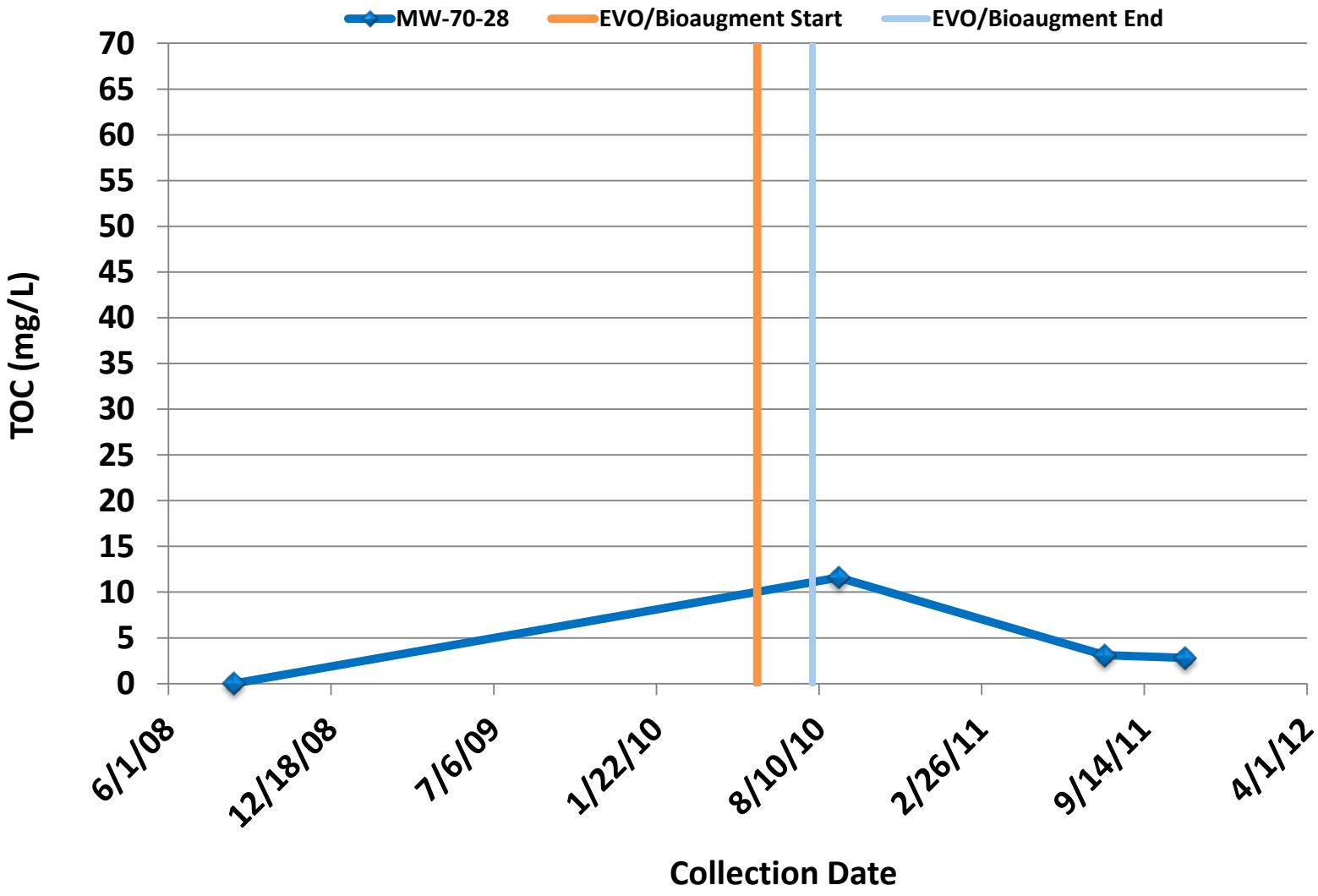


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-28
Total Organic Carbon Concentrations



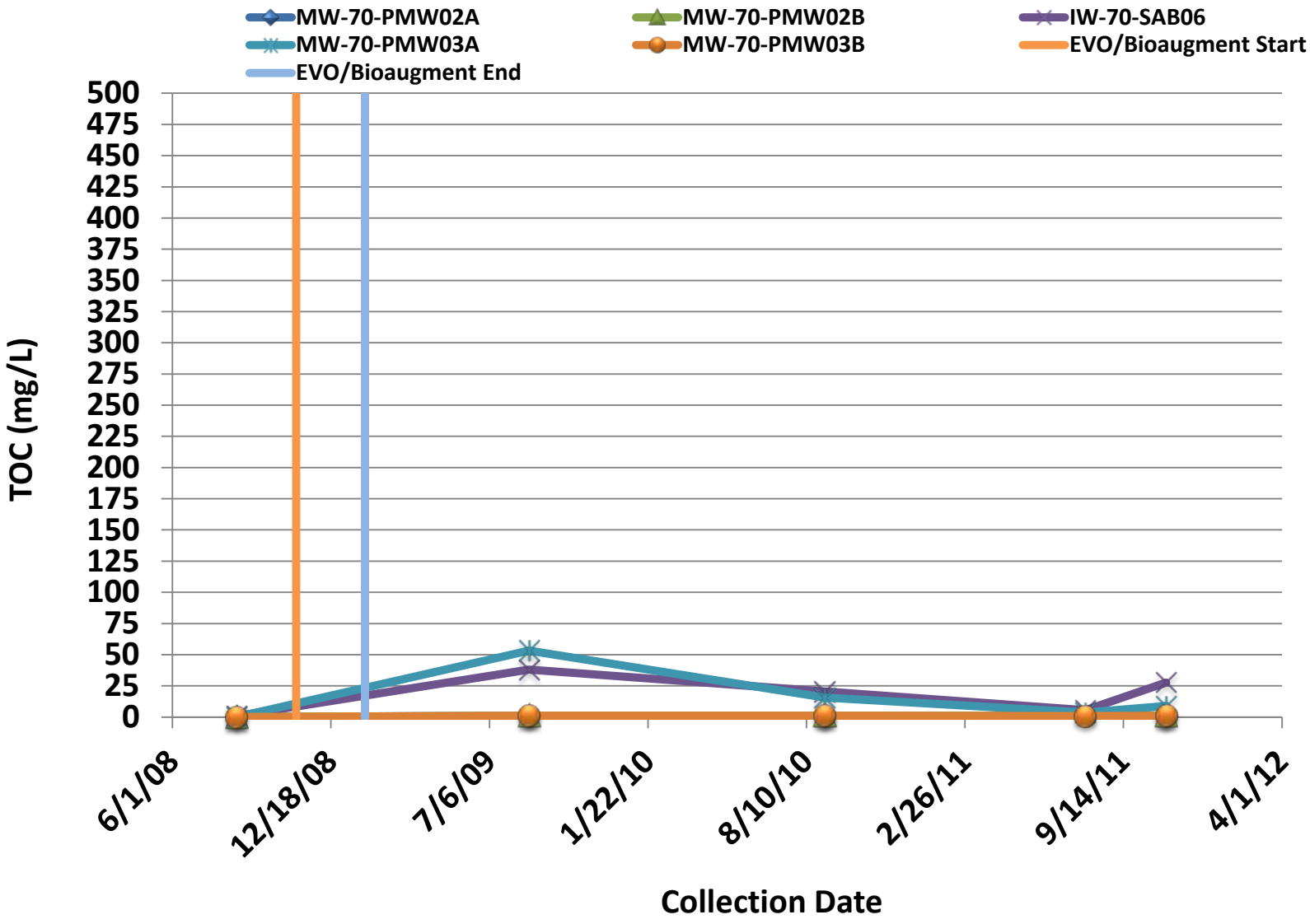
IR Site 70
Naval Weapons Station Seal Beach

Total Organic Carbon Graphs

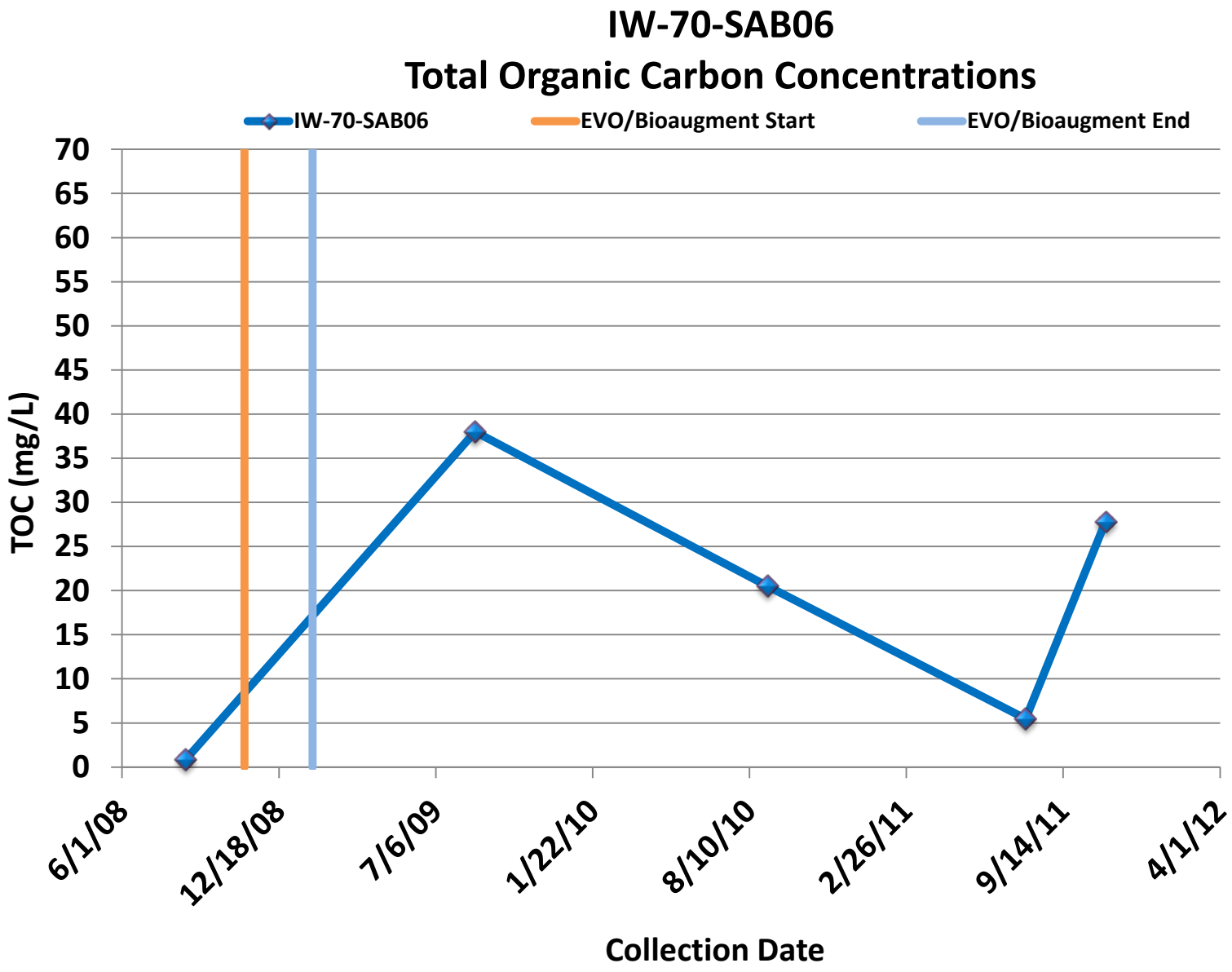
Source Area Biobarrier

Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

Source Area Biobarrier- Total Organic Carbon Concentrations

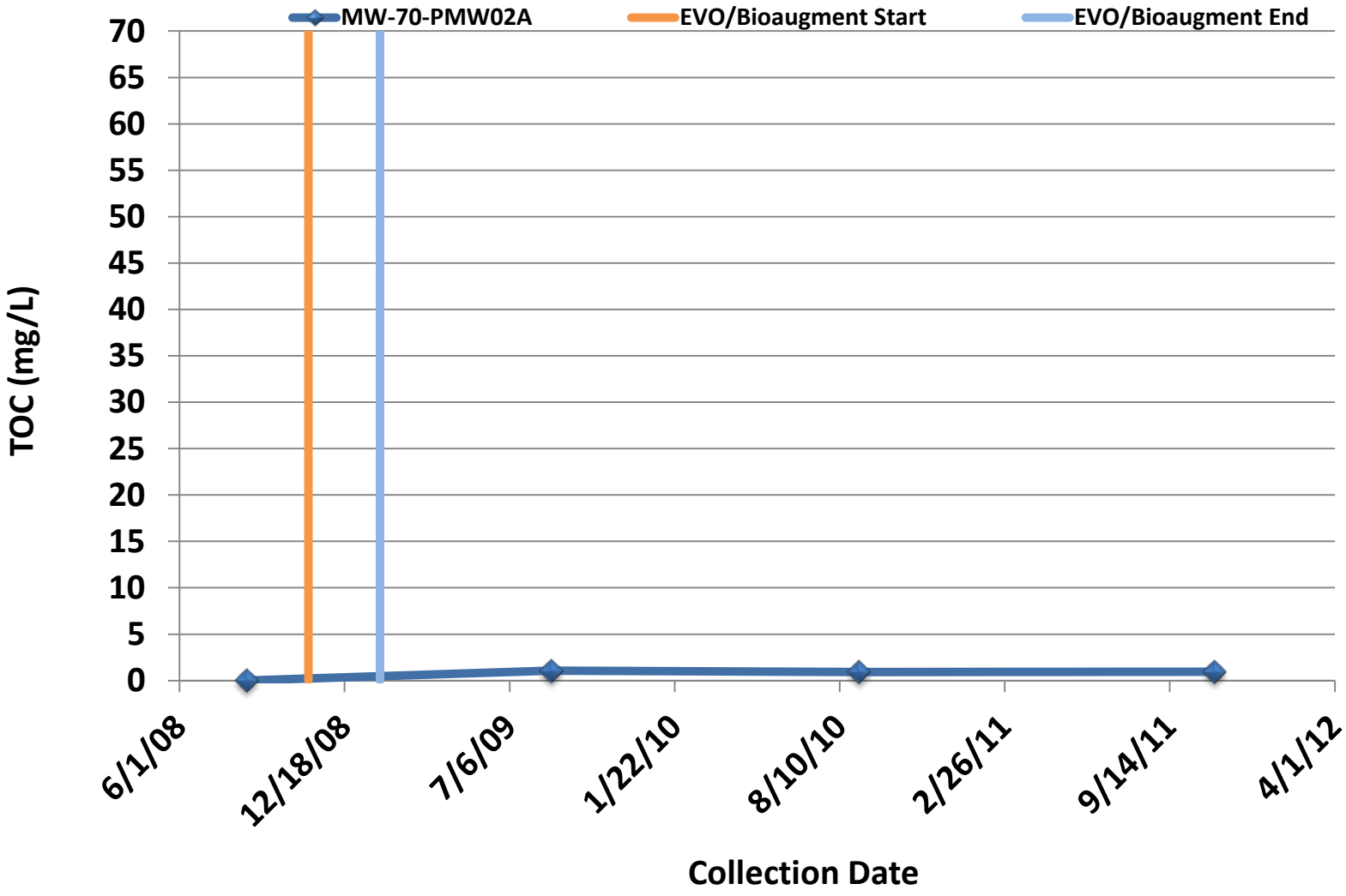


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

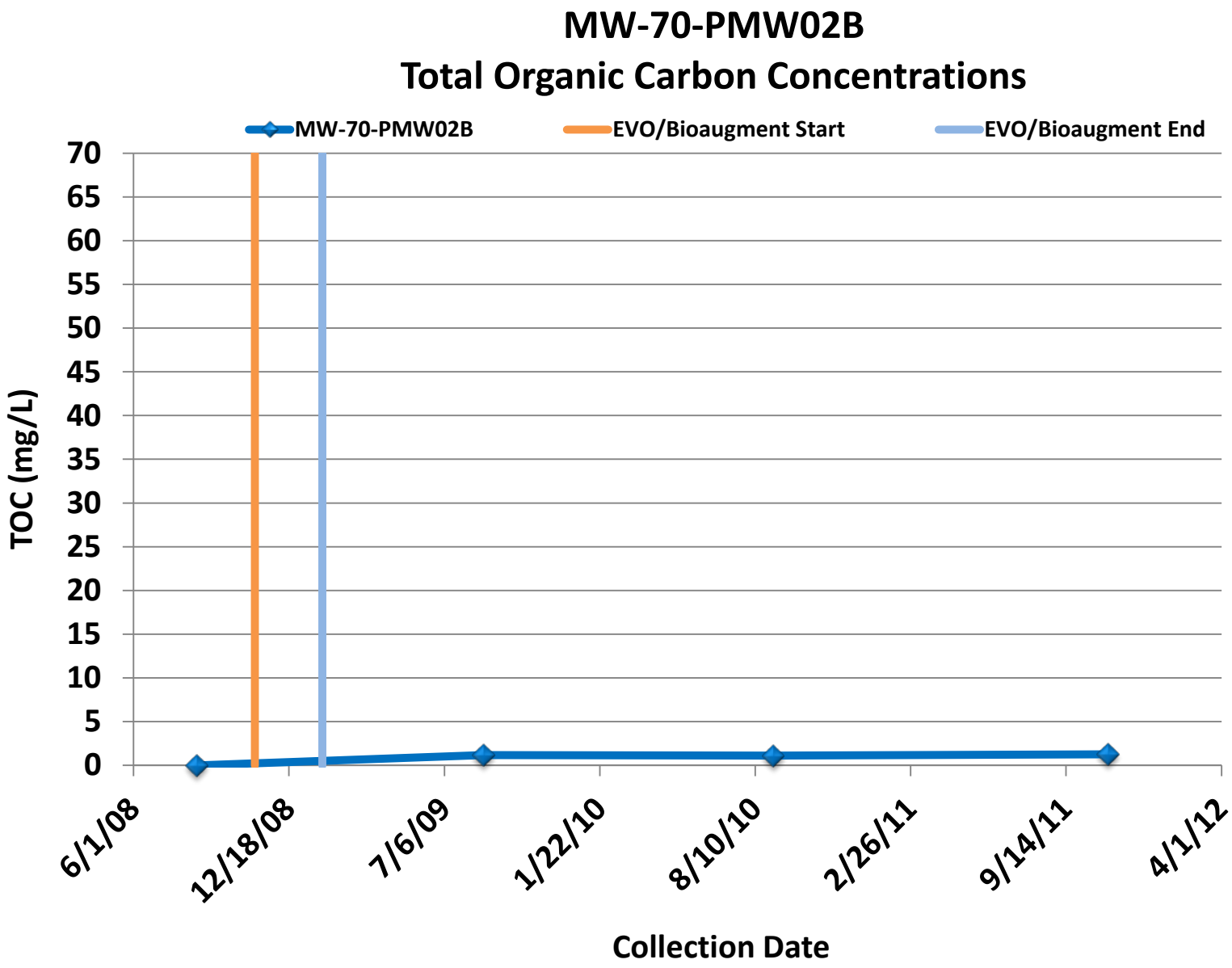


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW02A
Total Organic Carbon Concentrations

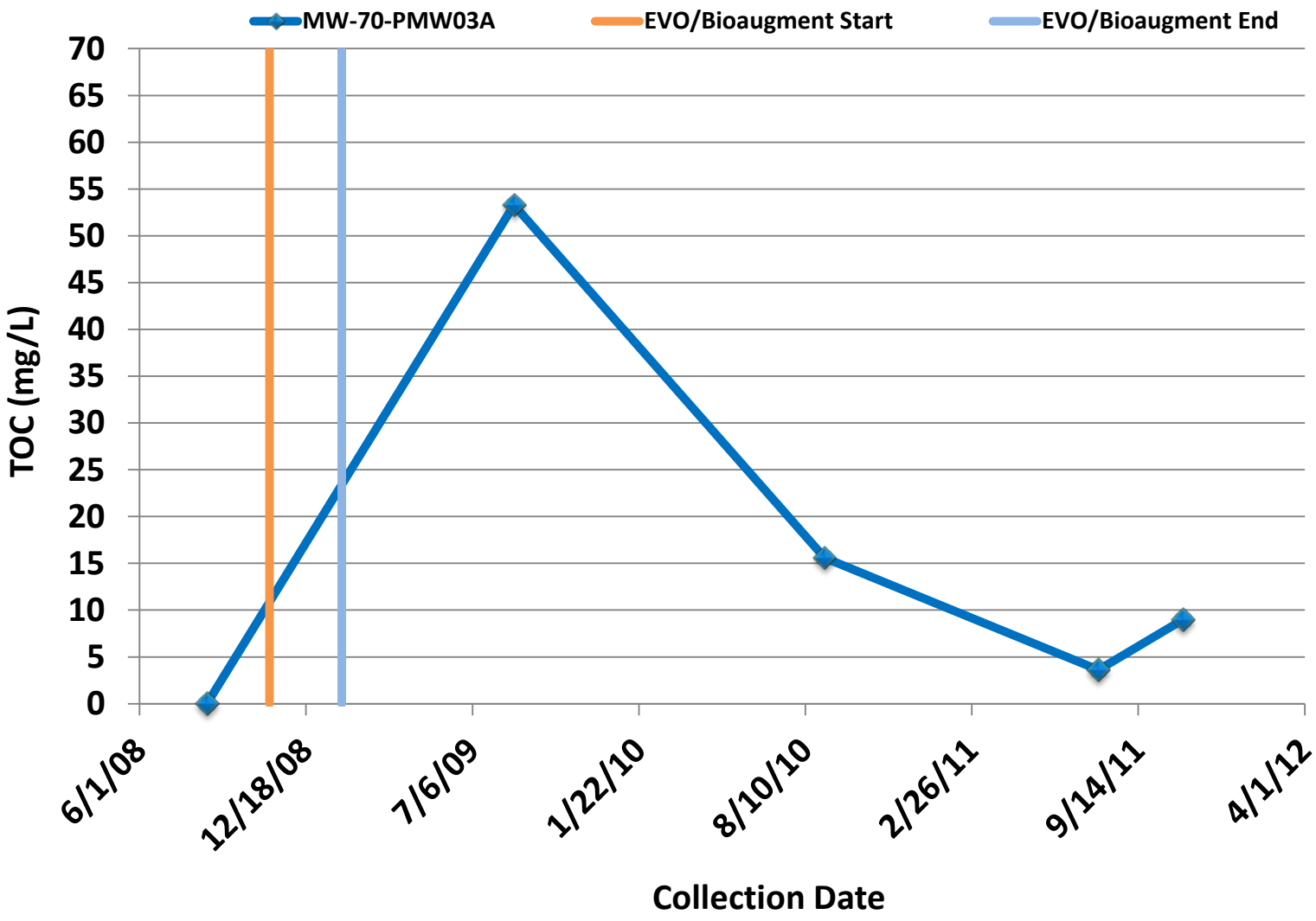


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



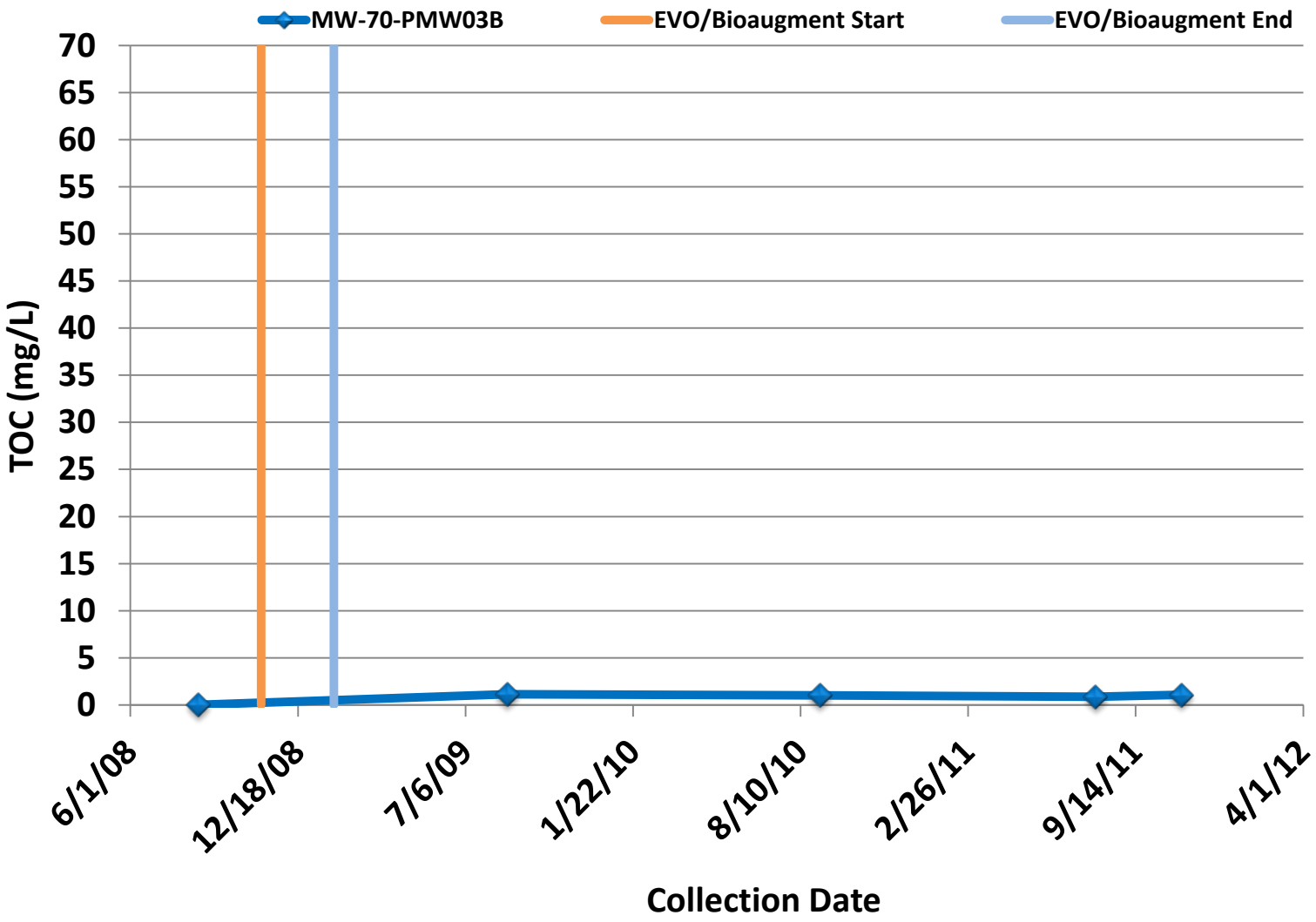
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW03A
Total Organic Carbon Concentrations



Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW03B
Total Organic Carbon Concentrations

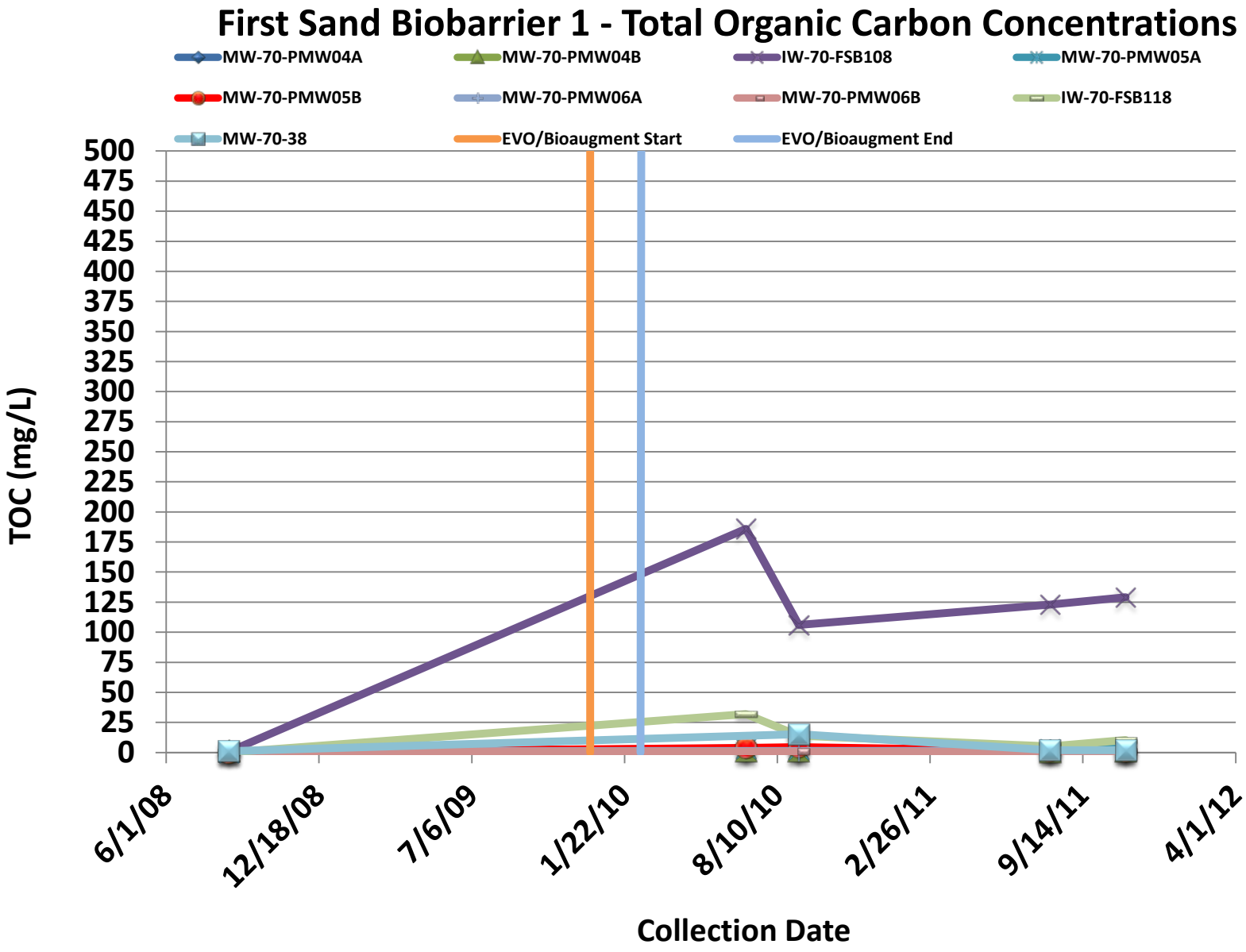


IR Site 70
Naval Weapons Station Seal Beach

Total Organic Carbon Graphs

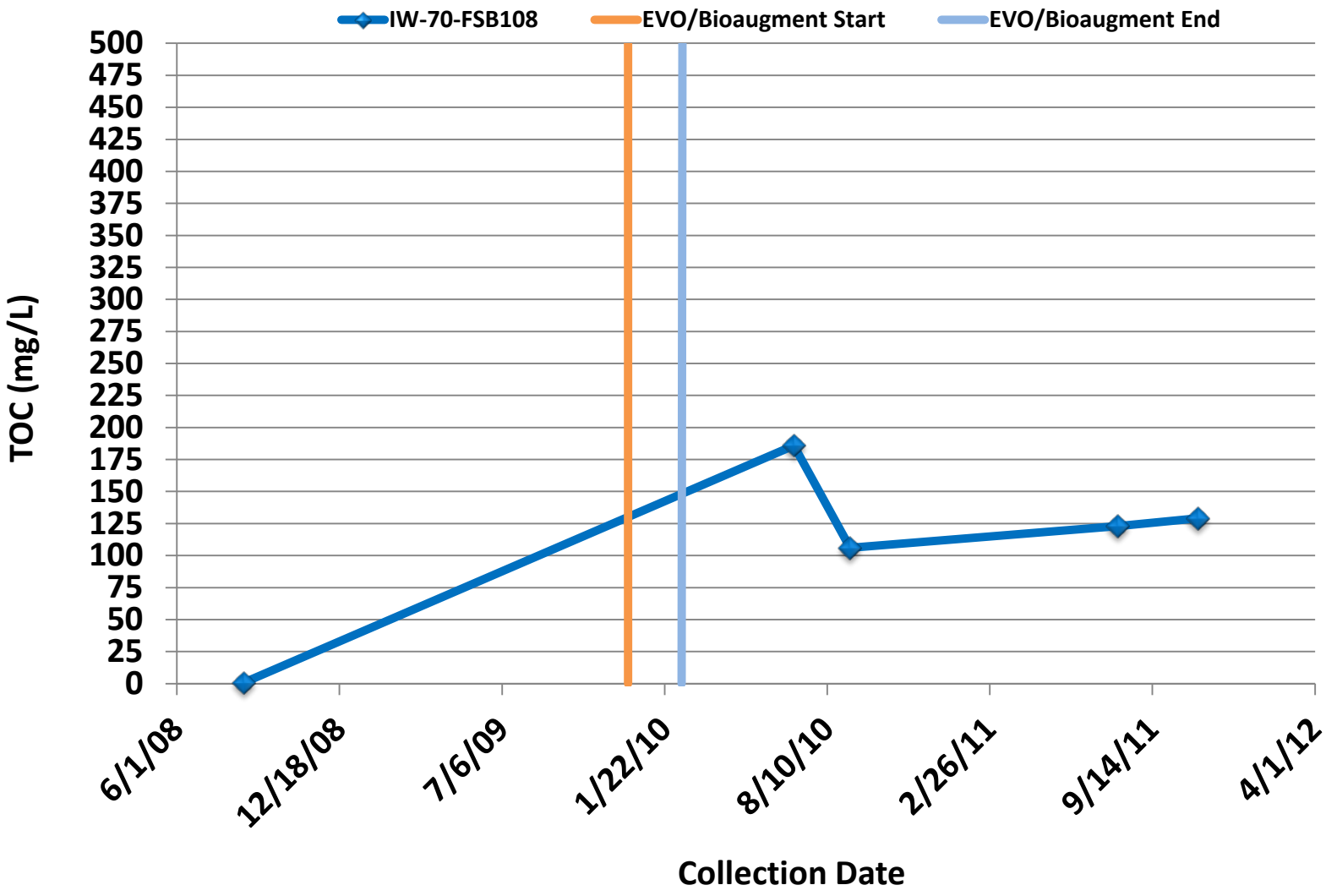
First Sand Biobarrier 1

Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



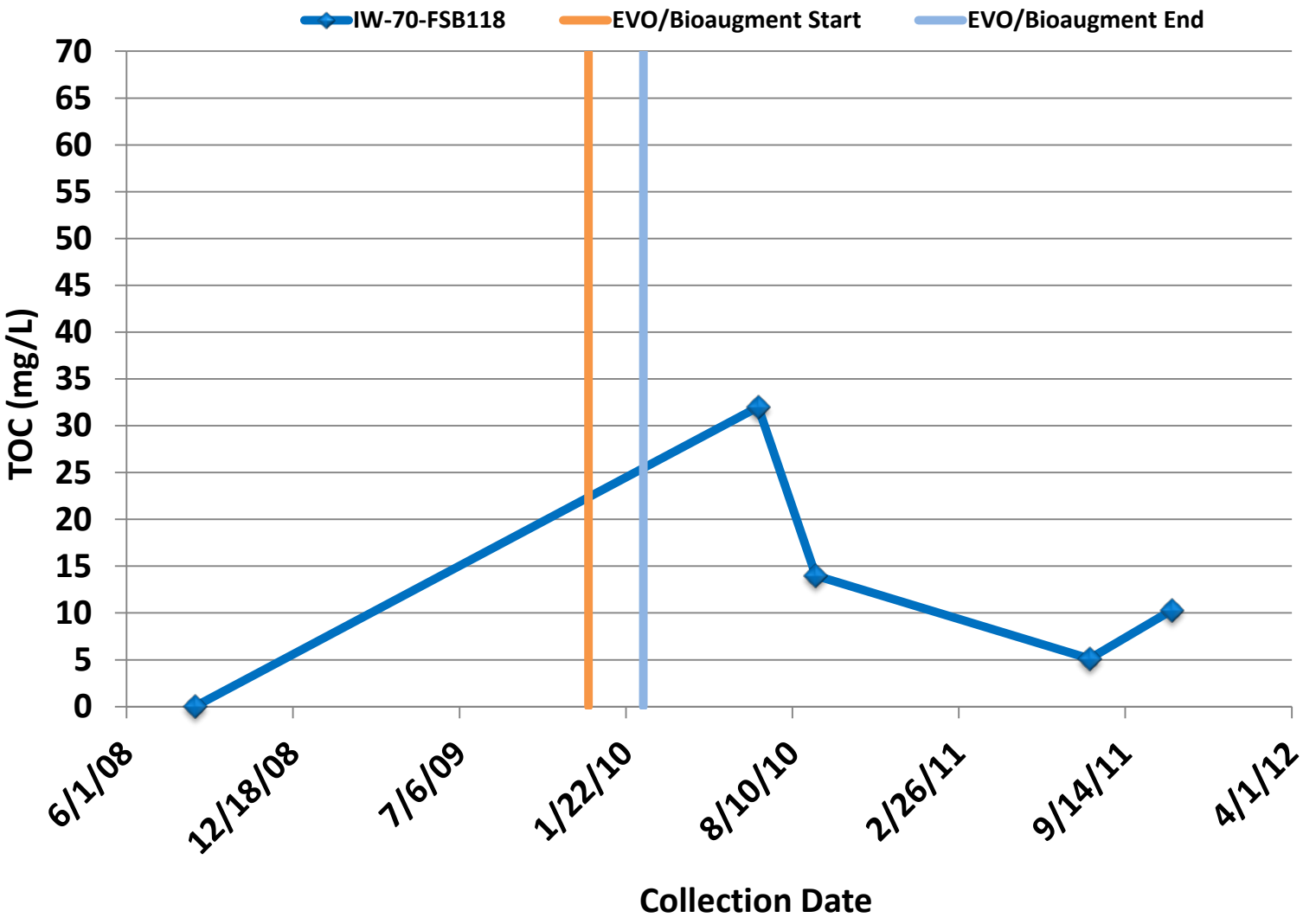
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

IW-70-FSB108
Total Organic Carbon Concentrations

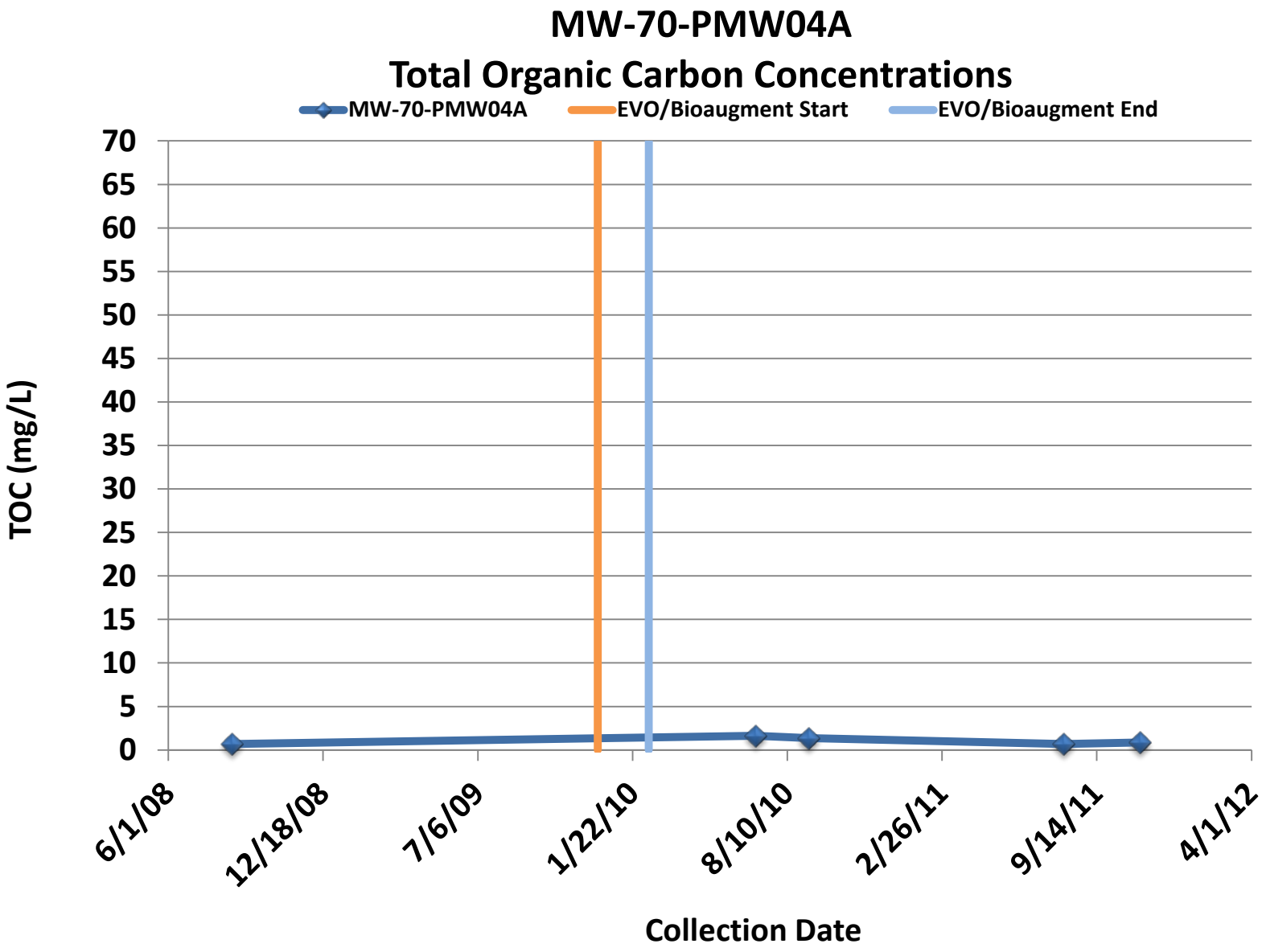


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

IW-70-FSB118
Total Organic Carbon Concentrations

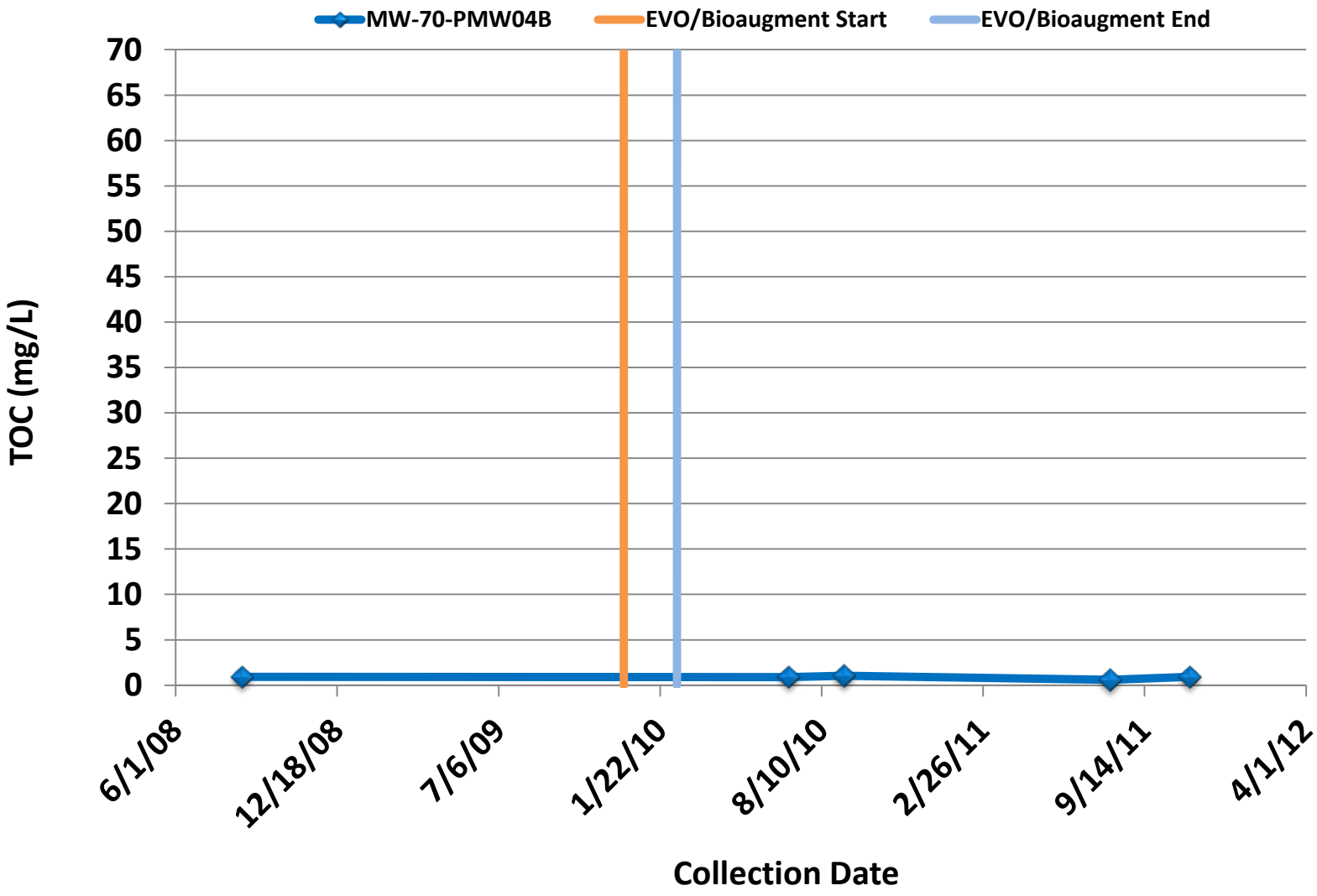


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



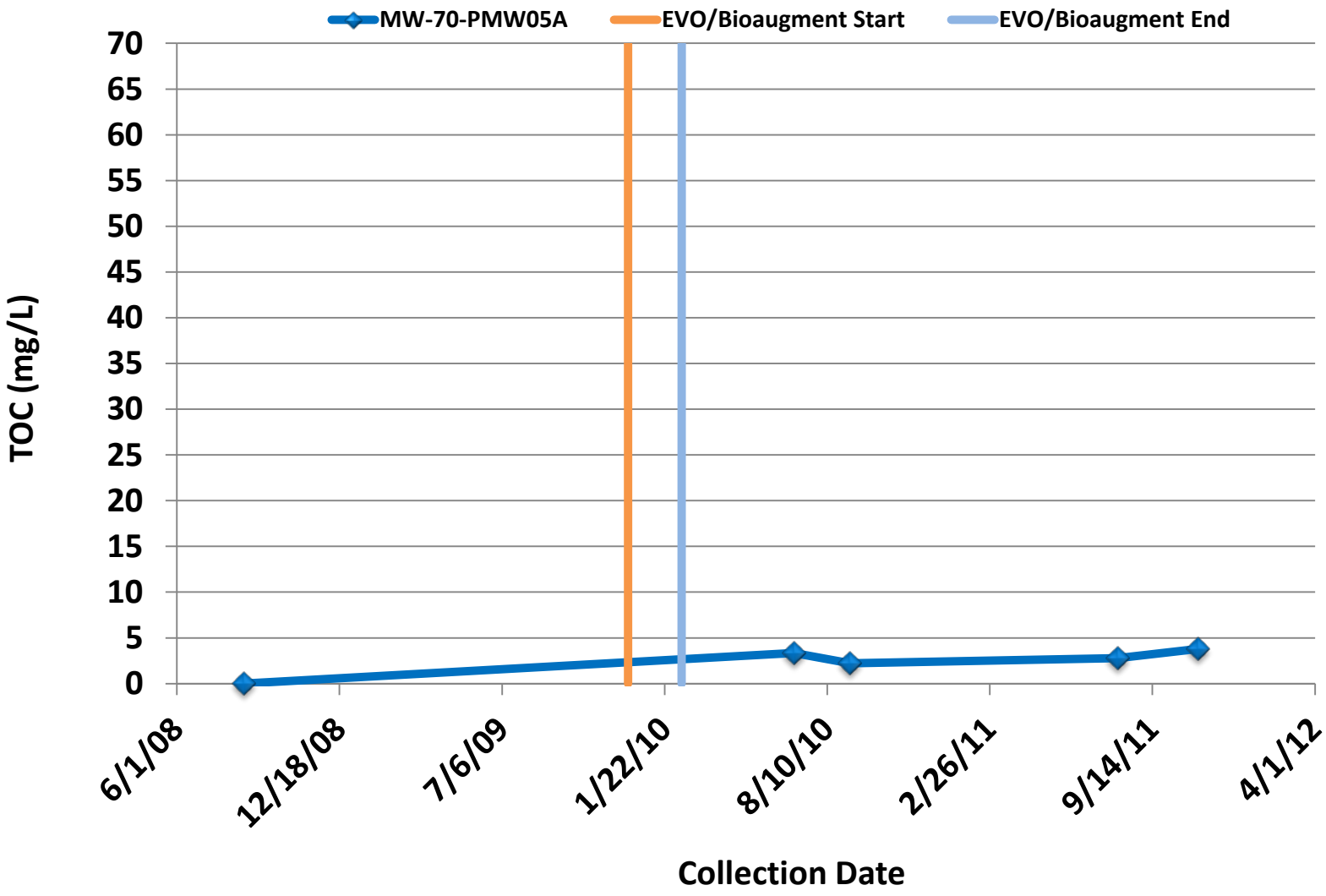
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW04B
Total Organic Carbon Concentrations



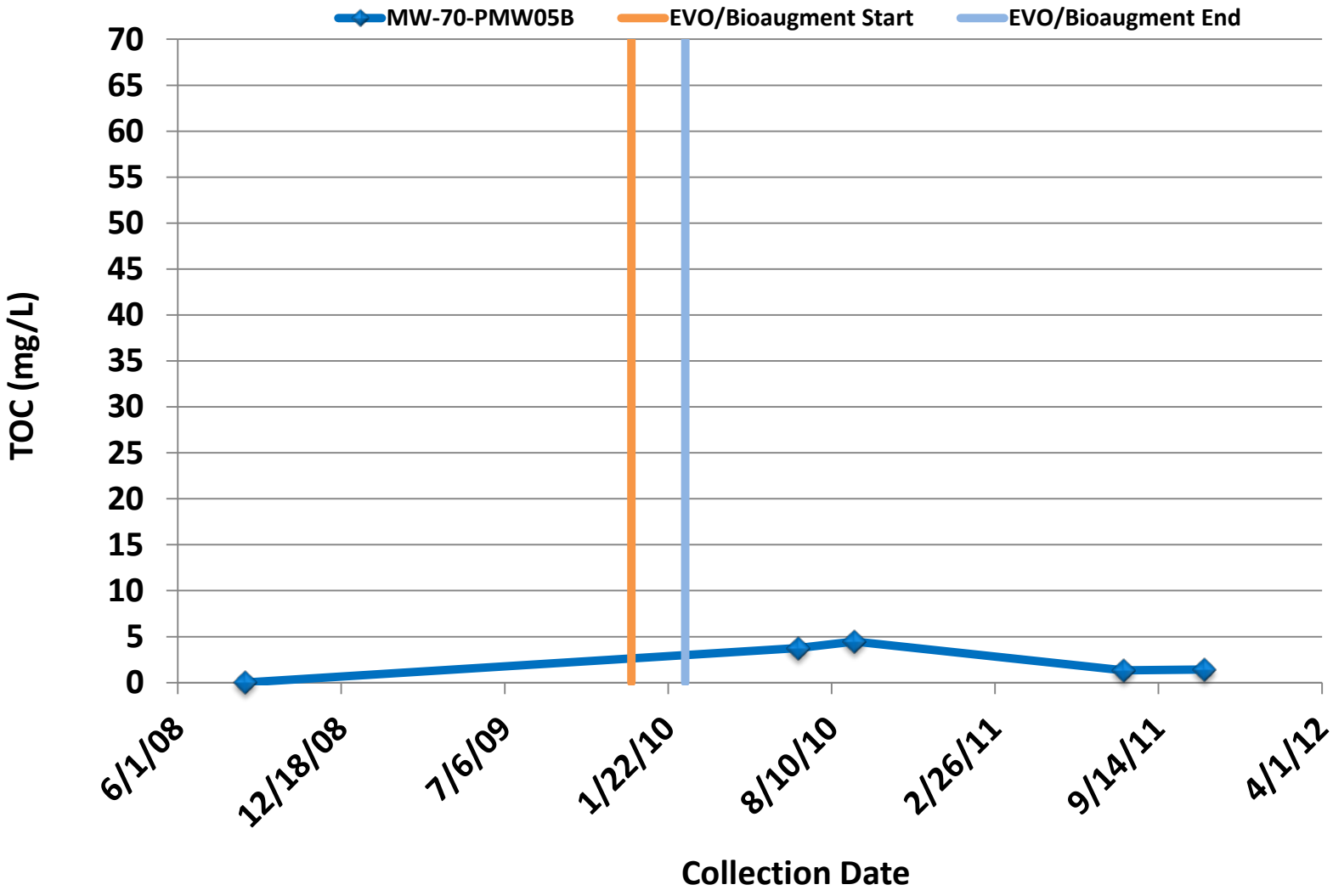
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW05A
Total Organic Carbon Concentrations



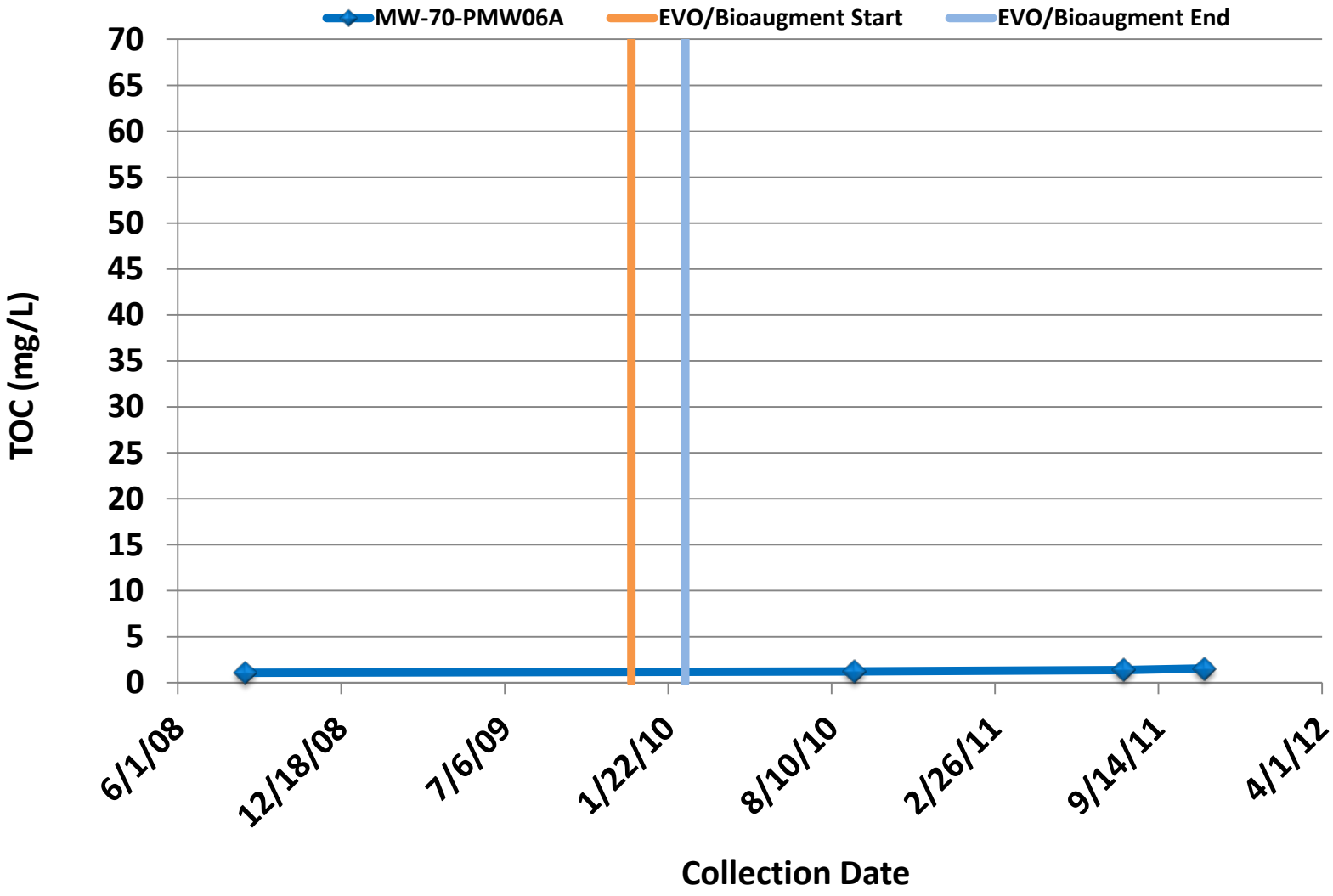
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW05B
Total Organic Carbon Concentrations

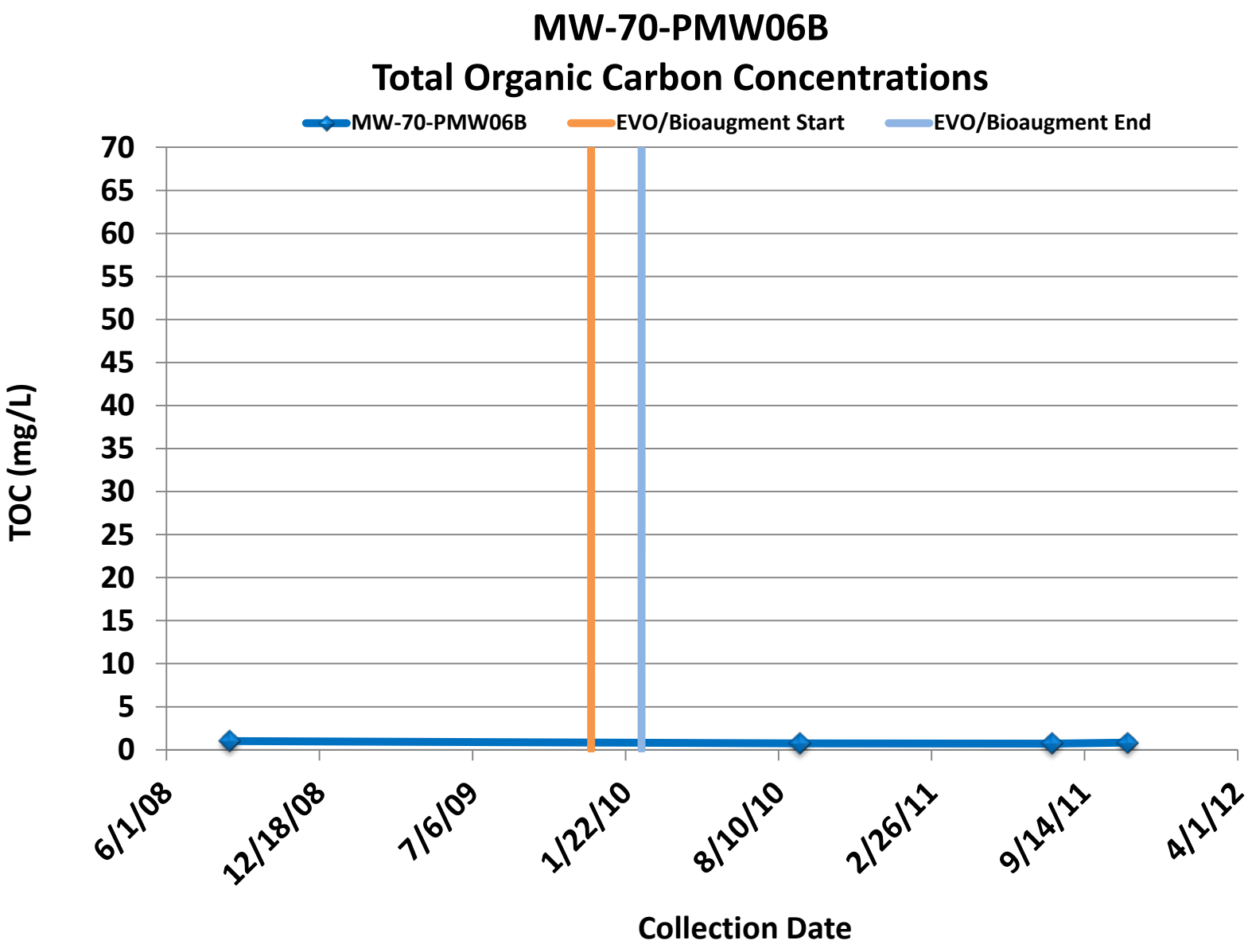


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

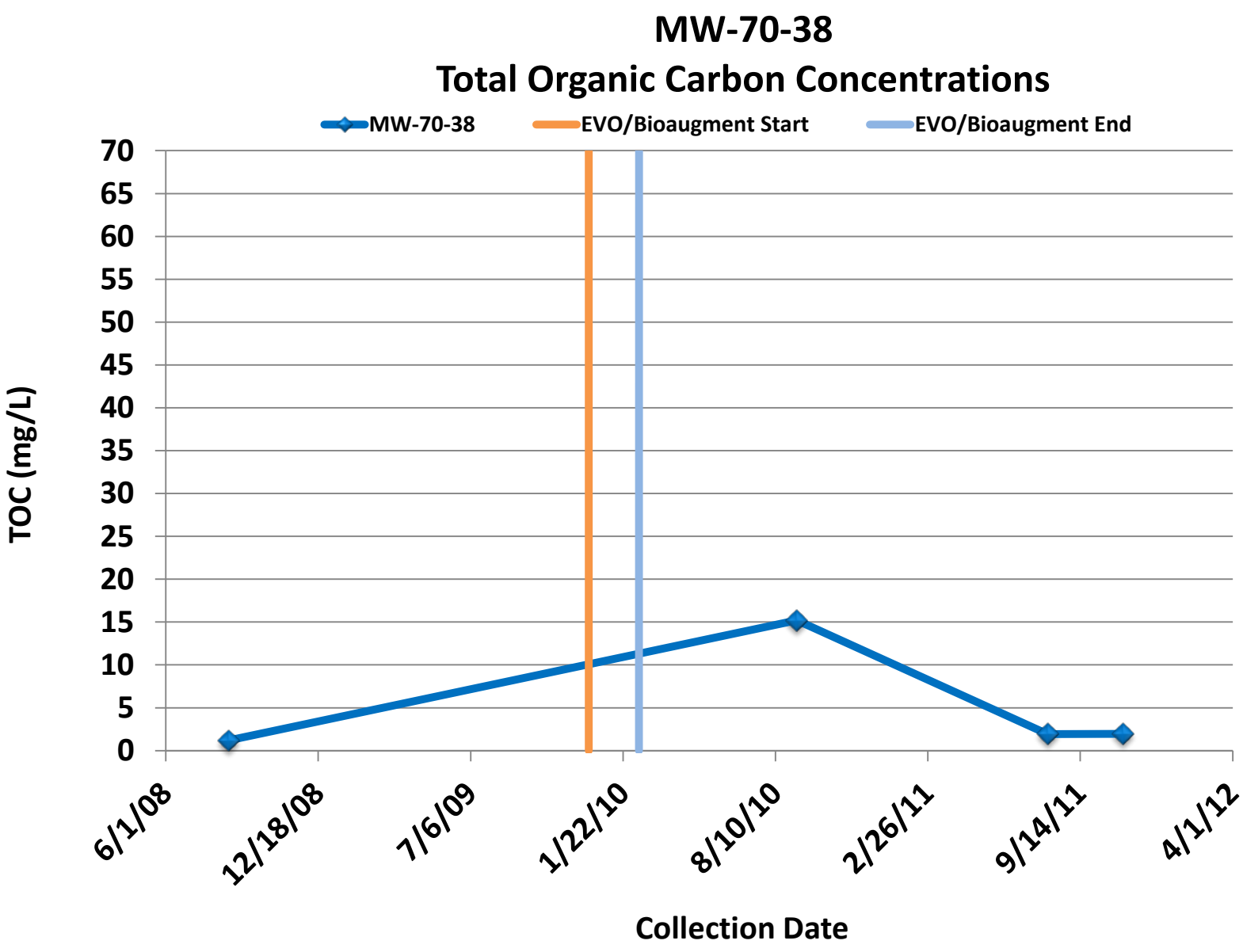
MW-70-PMW06A
Total Organic Carbon Concentrations



Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

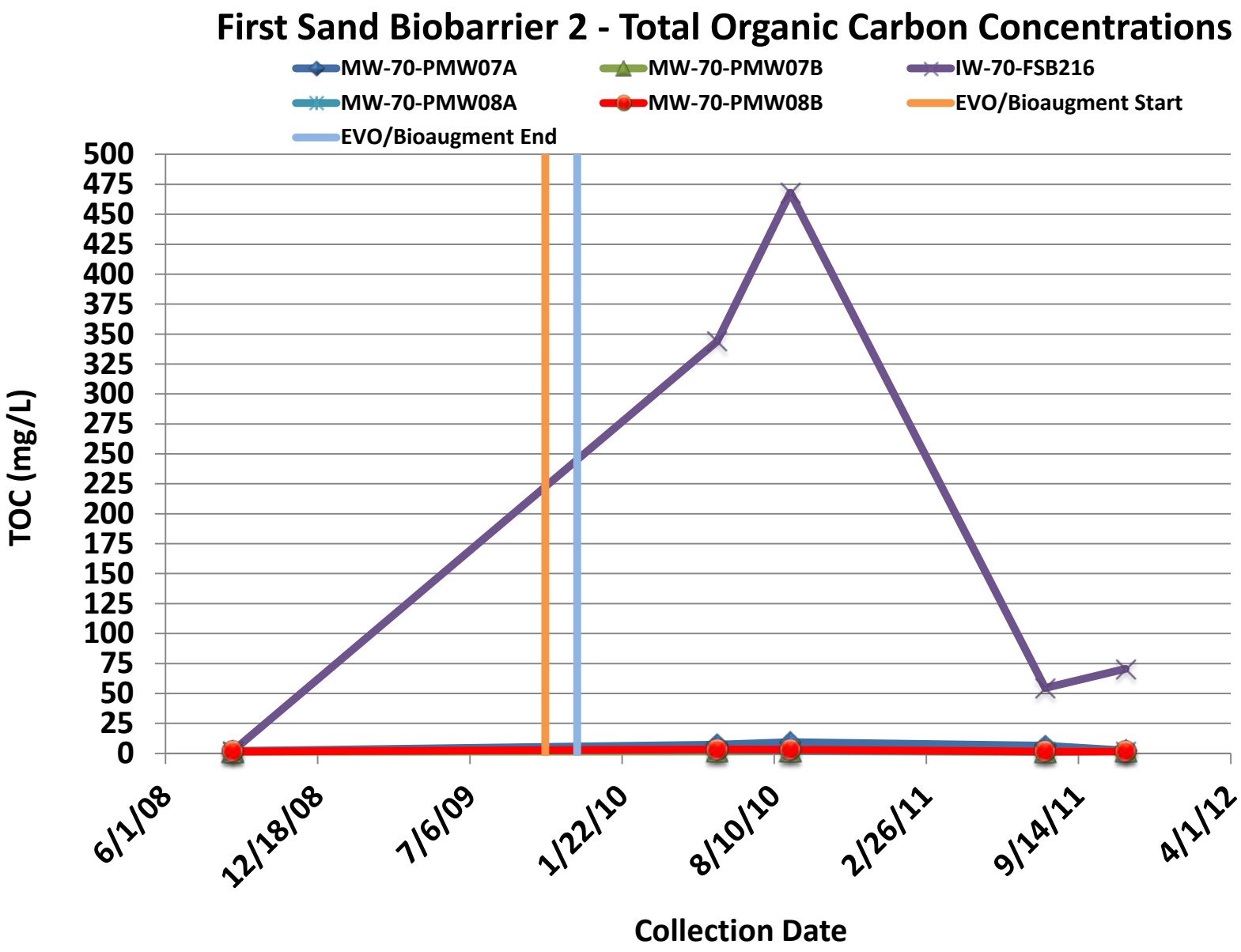


IR Site 70
Naval Weapons Station Seal Beach

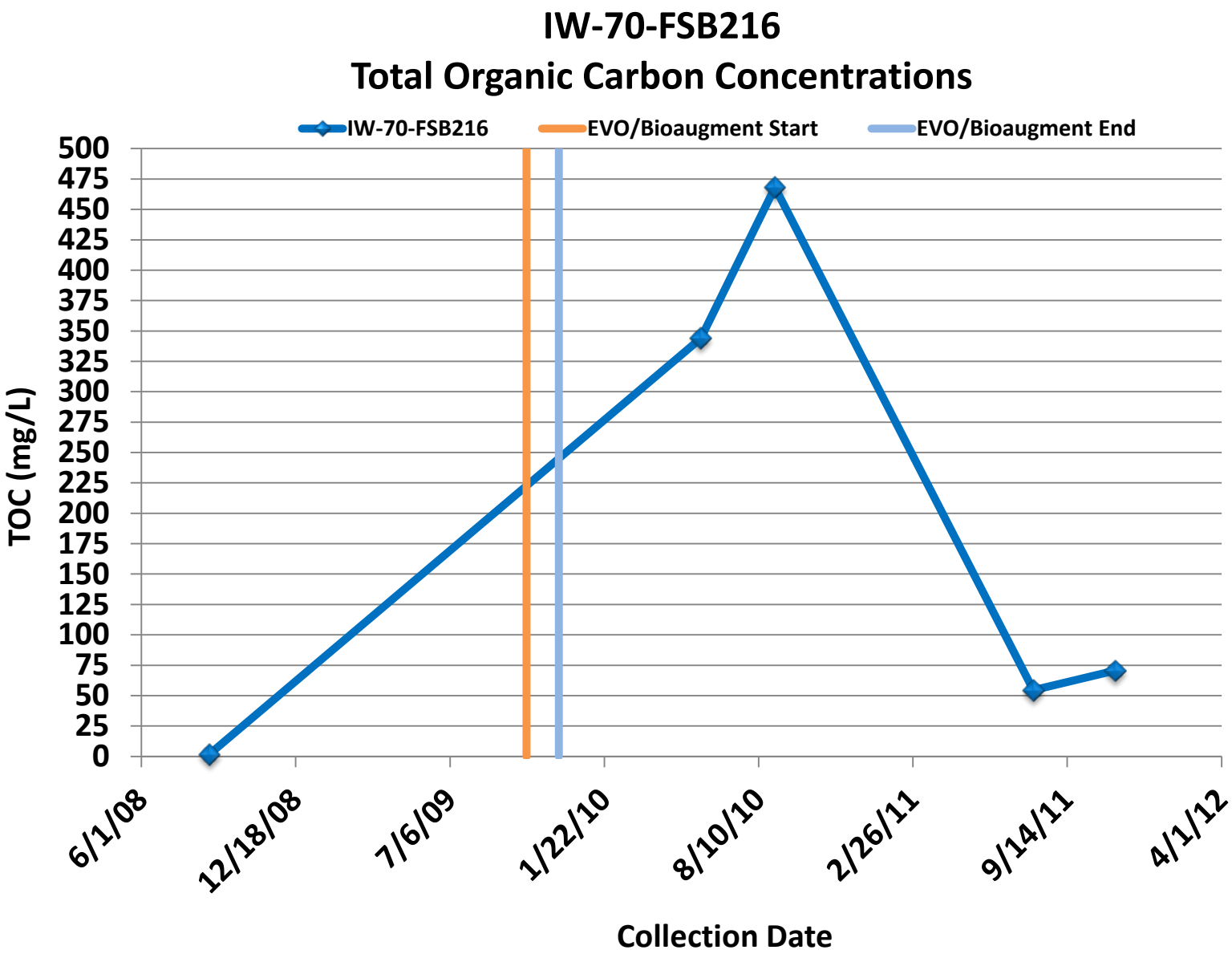
Total Organic Carbon Graphs

First Sand Biobarrier 2

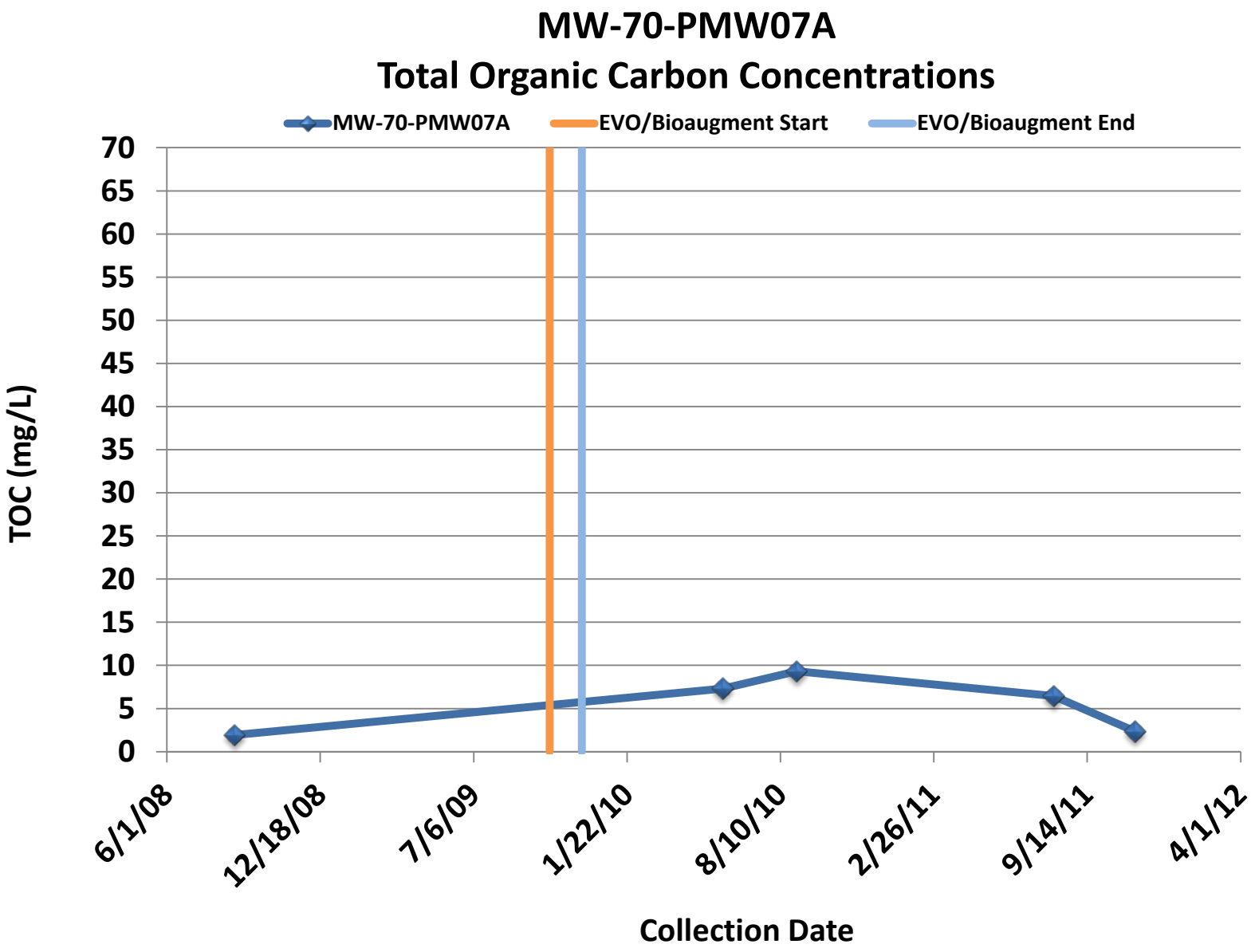
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

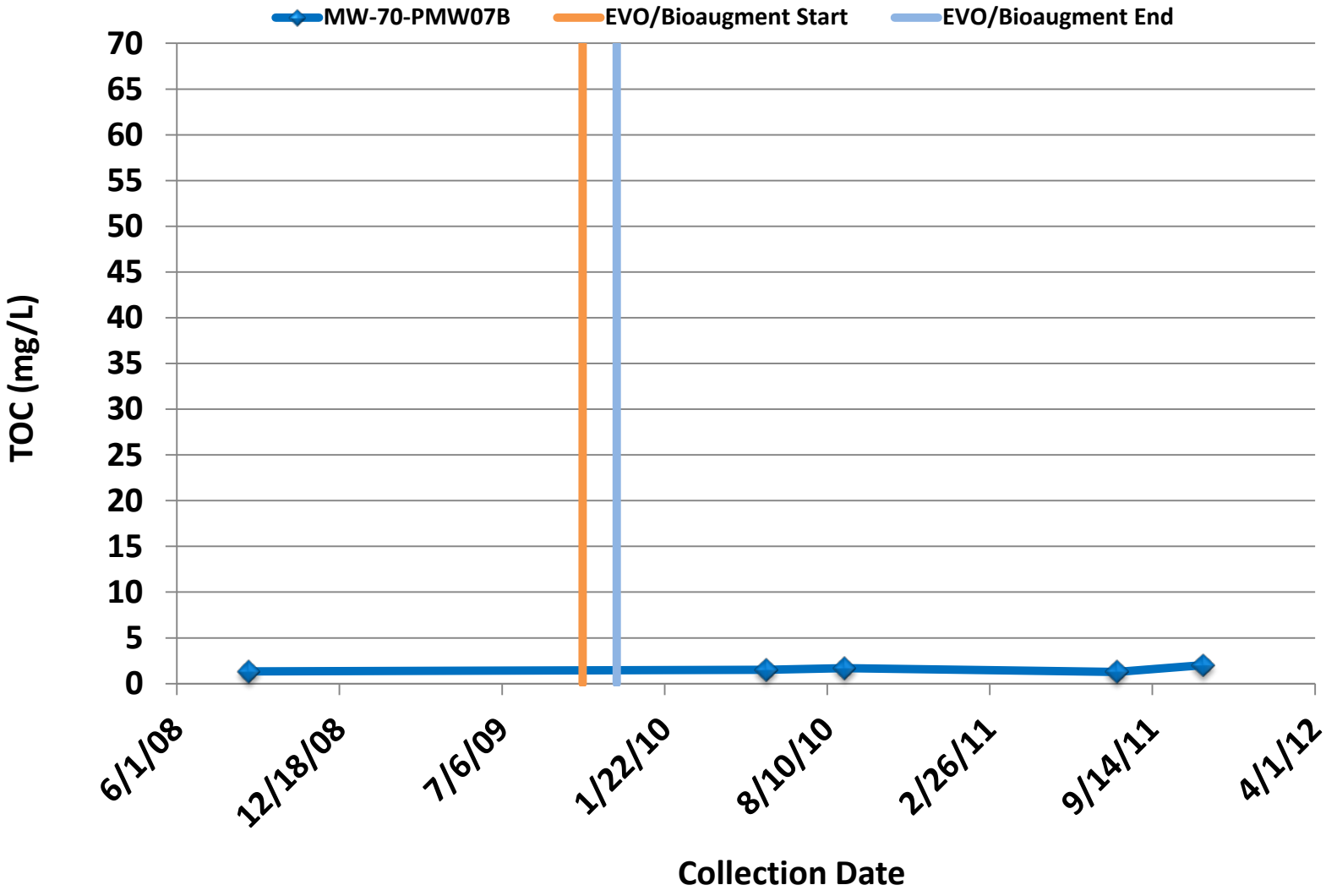


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



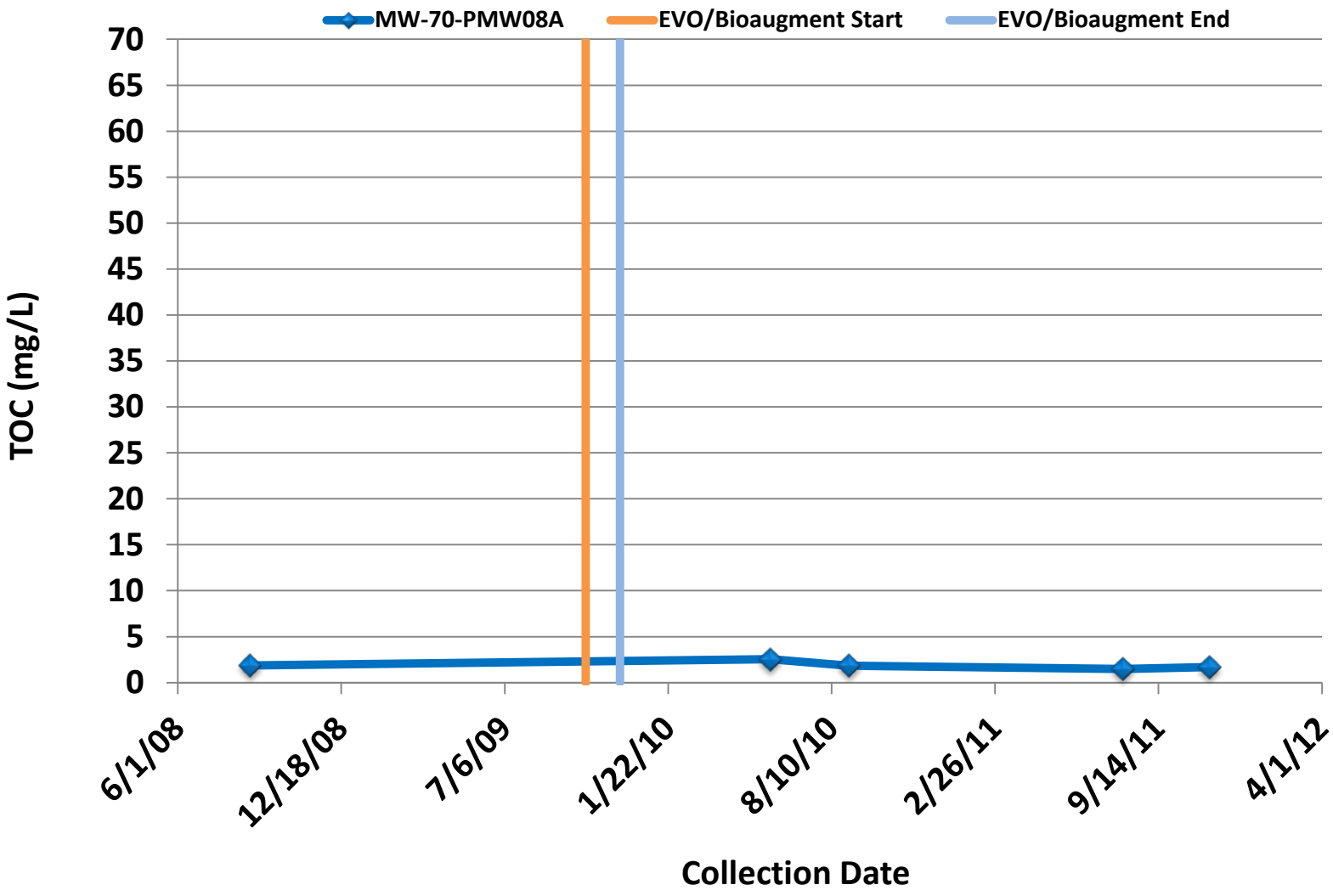
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW07B
Total Organic Carbon Concentrations

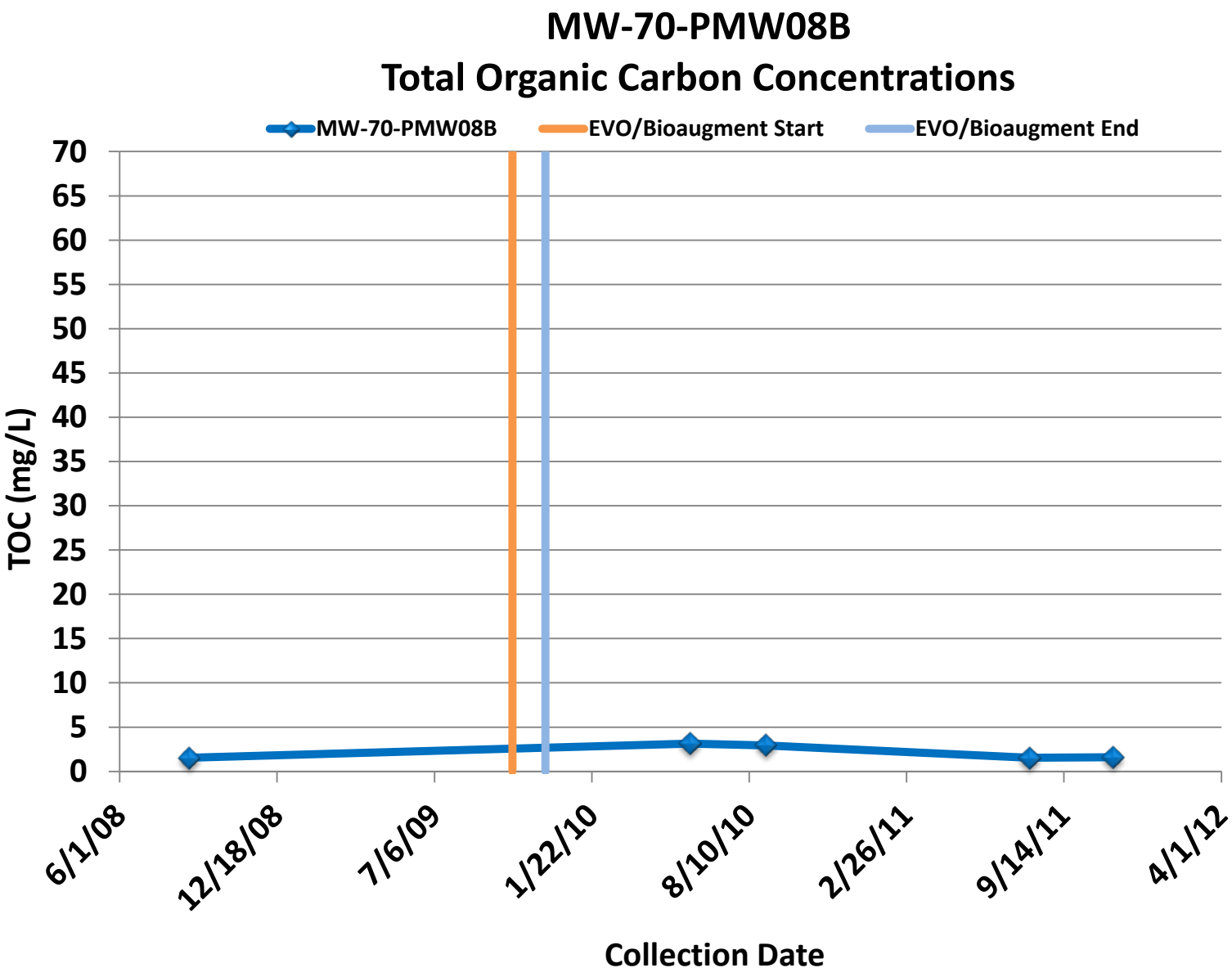


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW08A
Total Organic Carbon Concentrations



Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

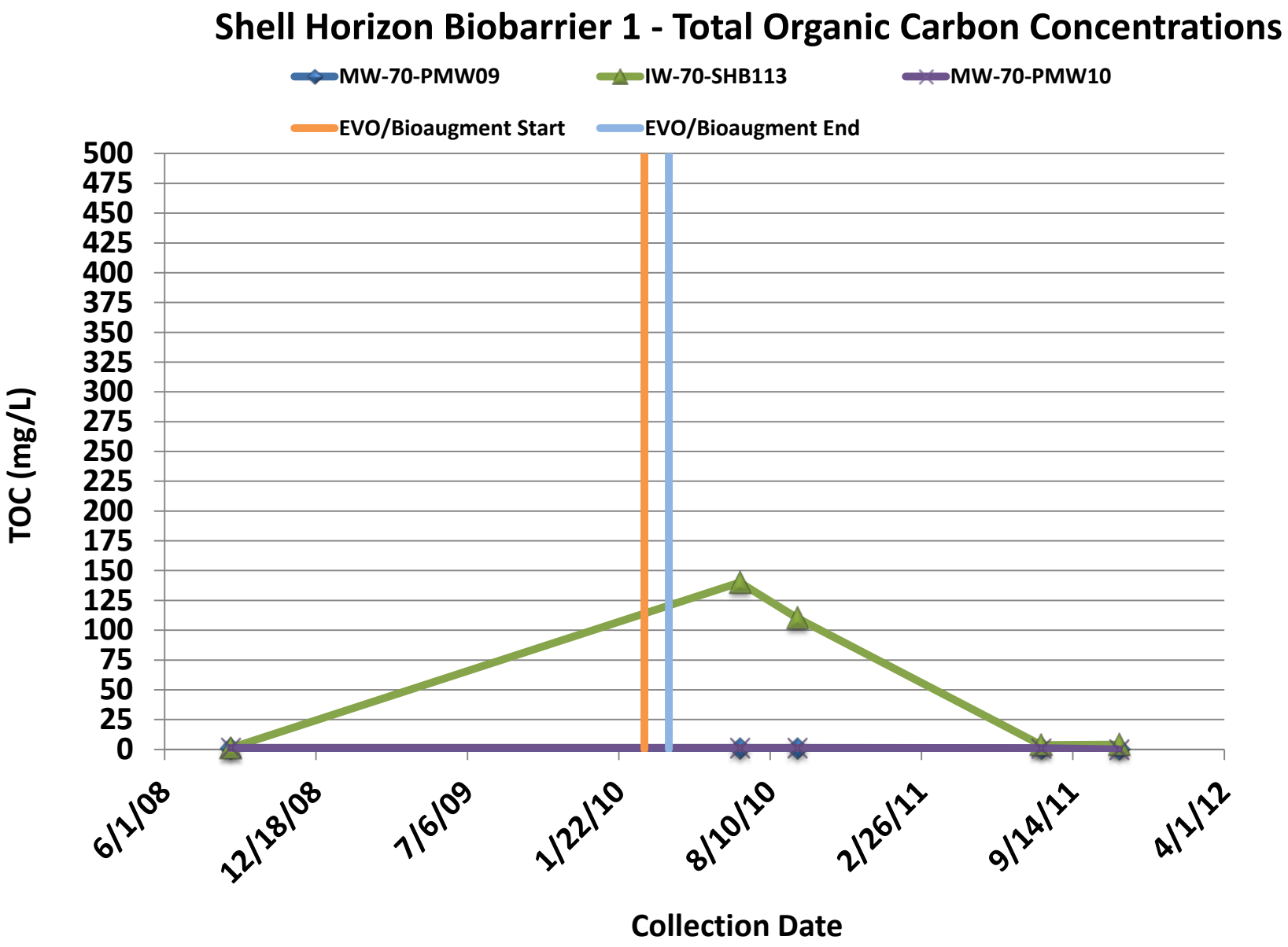


IR Site 70
Naval Weapons Station Seal Beach

Total Organic Carbon Graphs

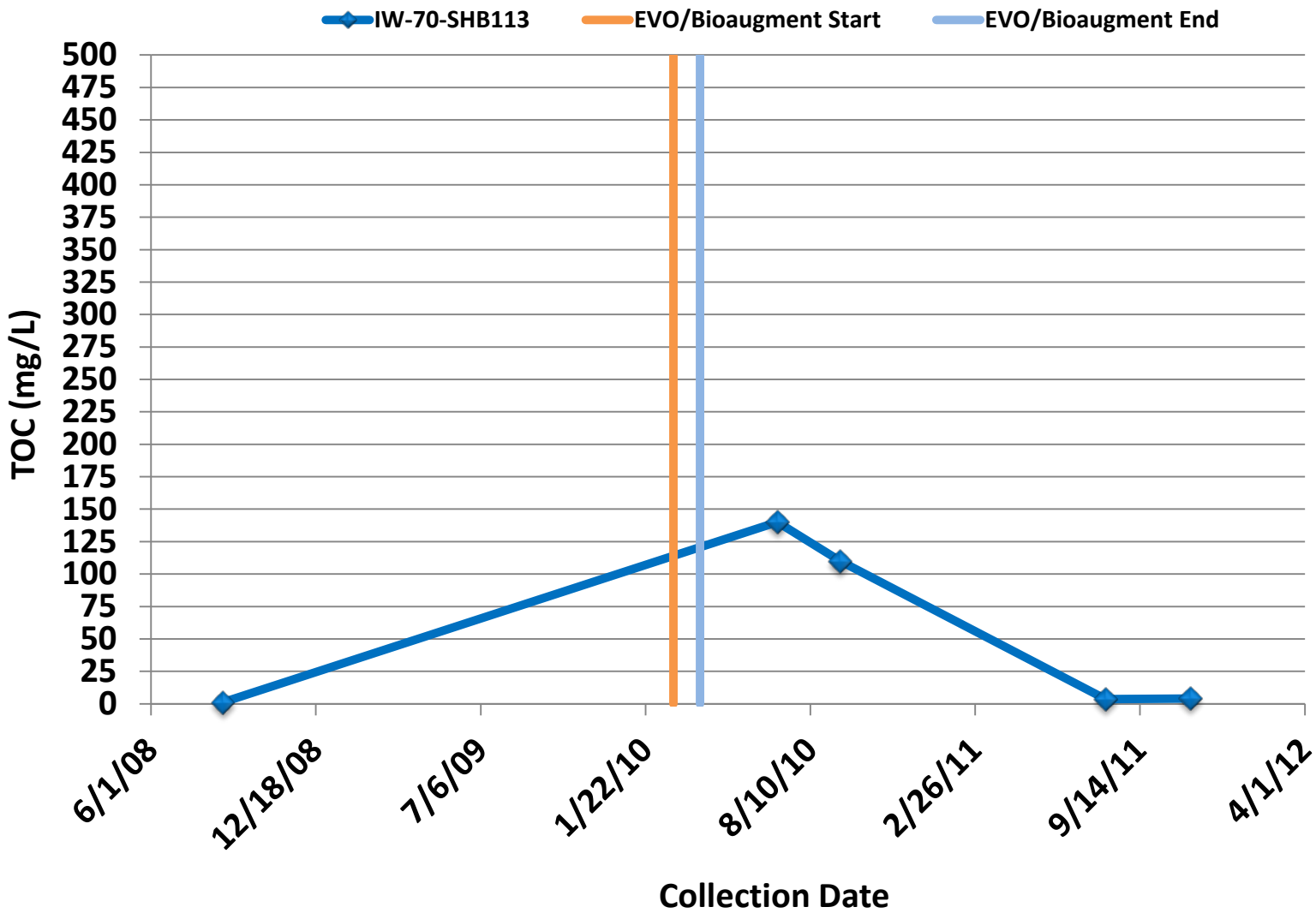
Shell Horizon Biobarrier 1

Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

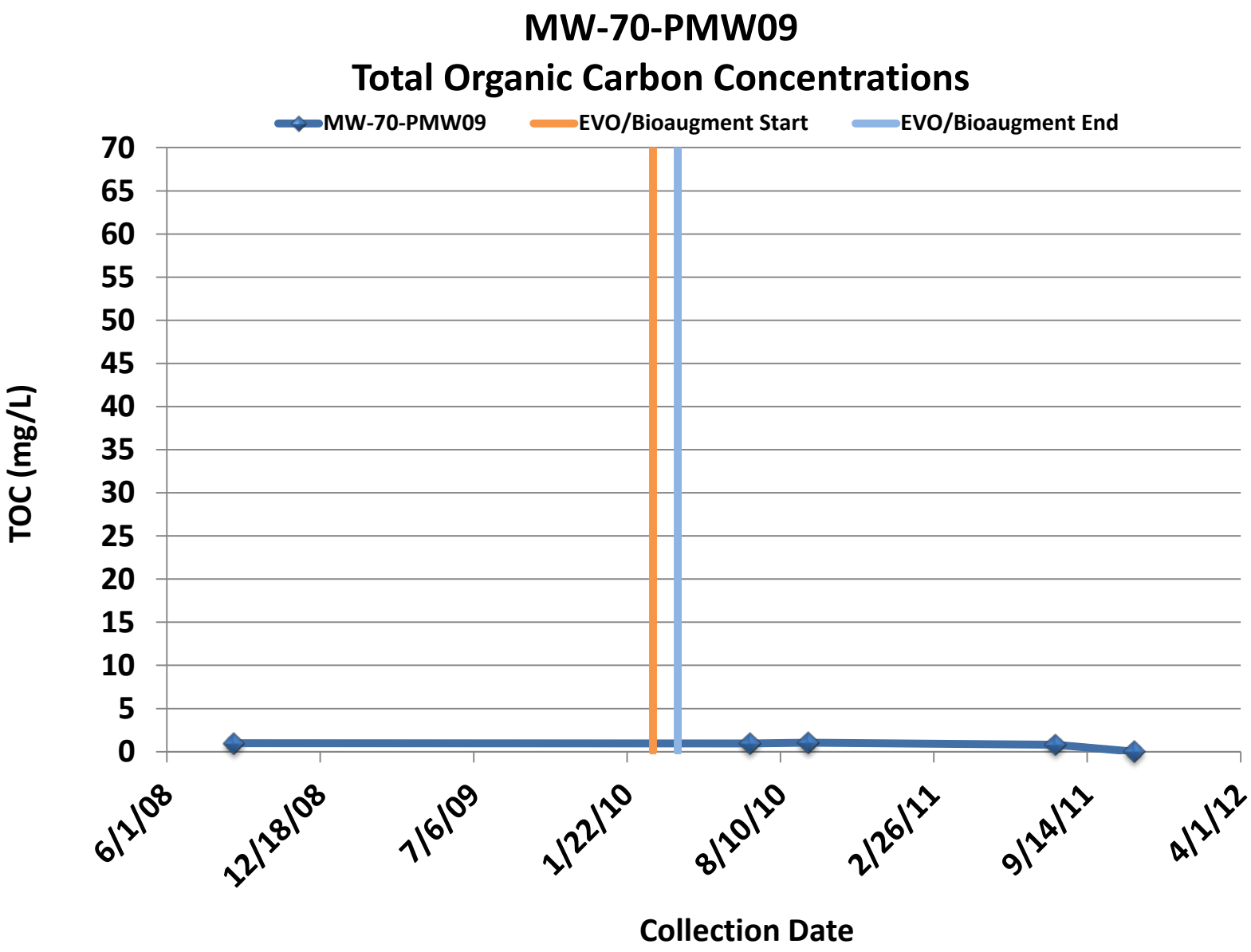


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

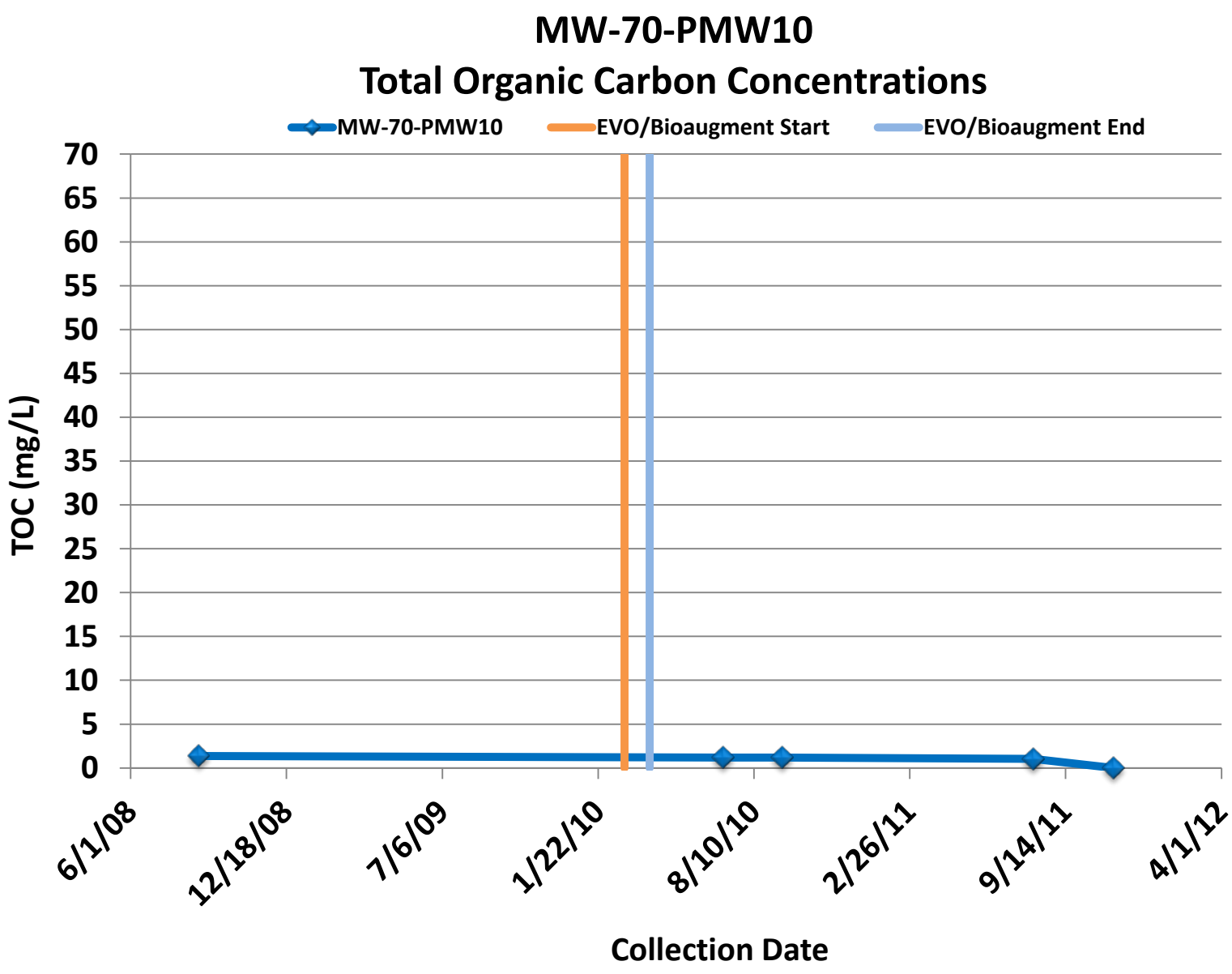
MW-70-SHB113
Total Organic Carbon Concentrations



Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

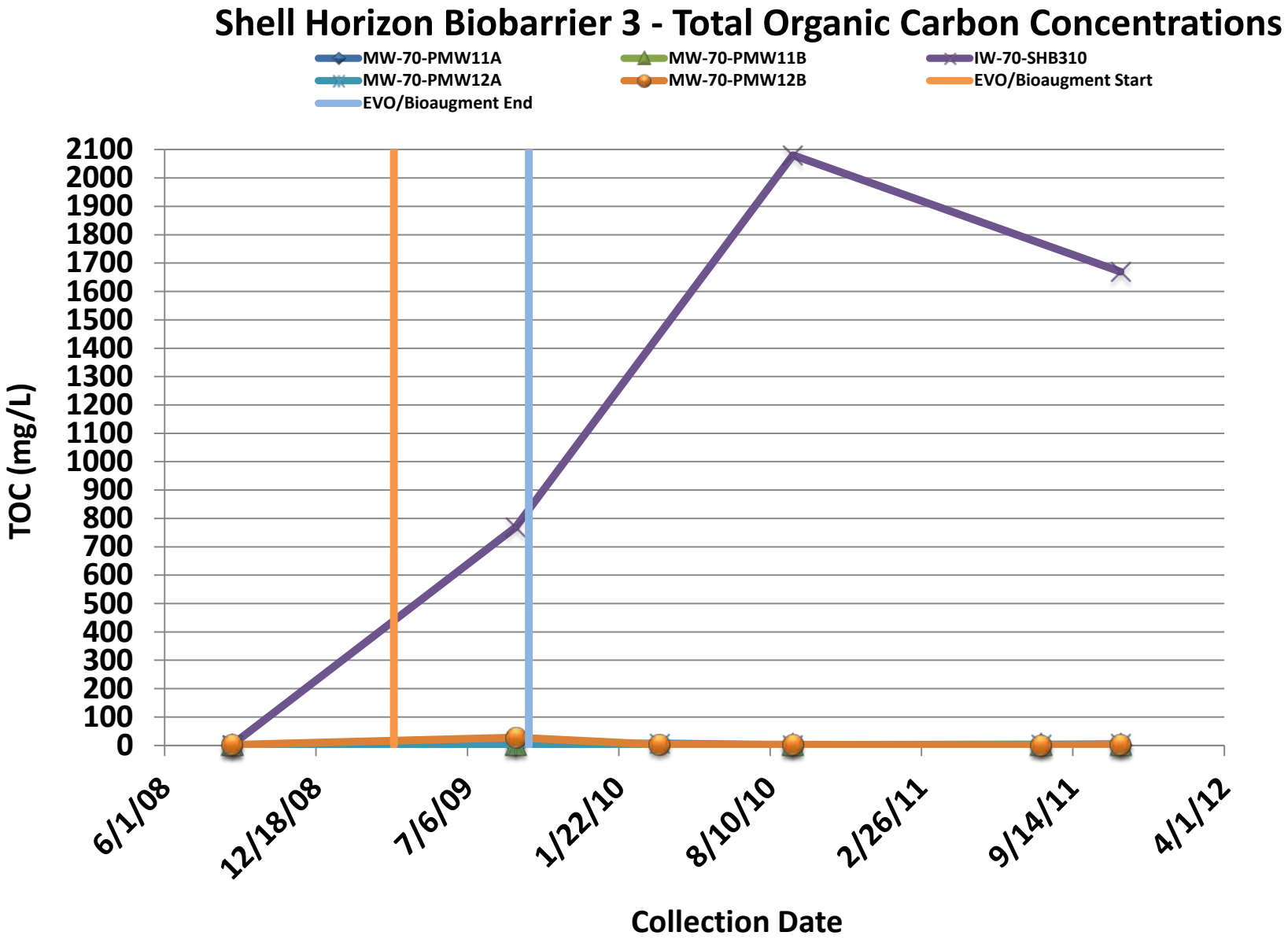


IR Site 70
Naval Weapons Station Seal Beach

Total Organic Carbon Graphs

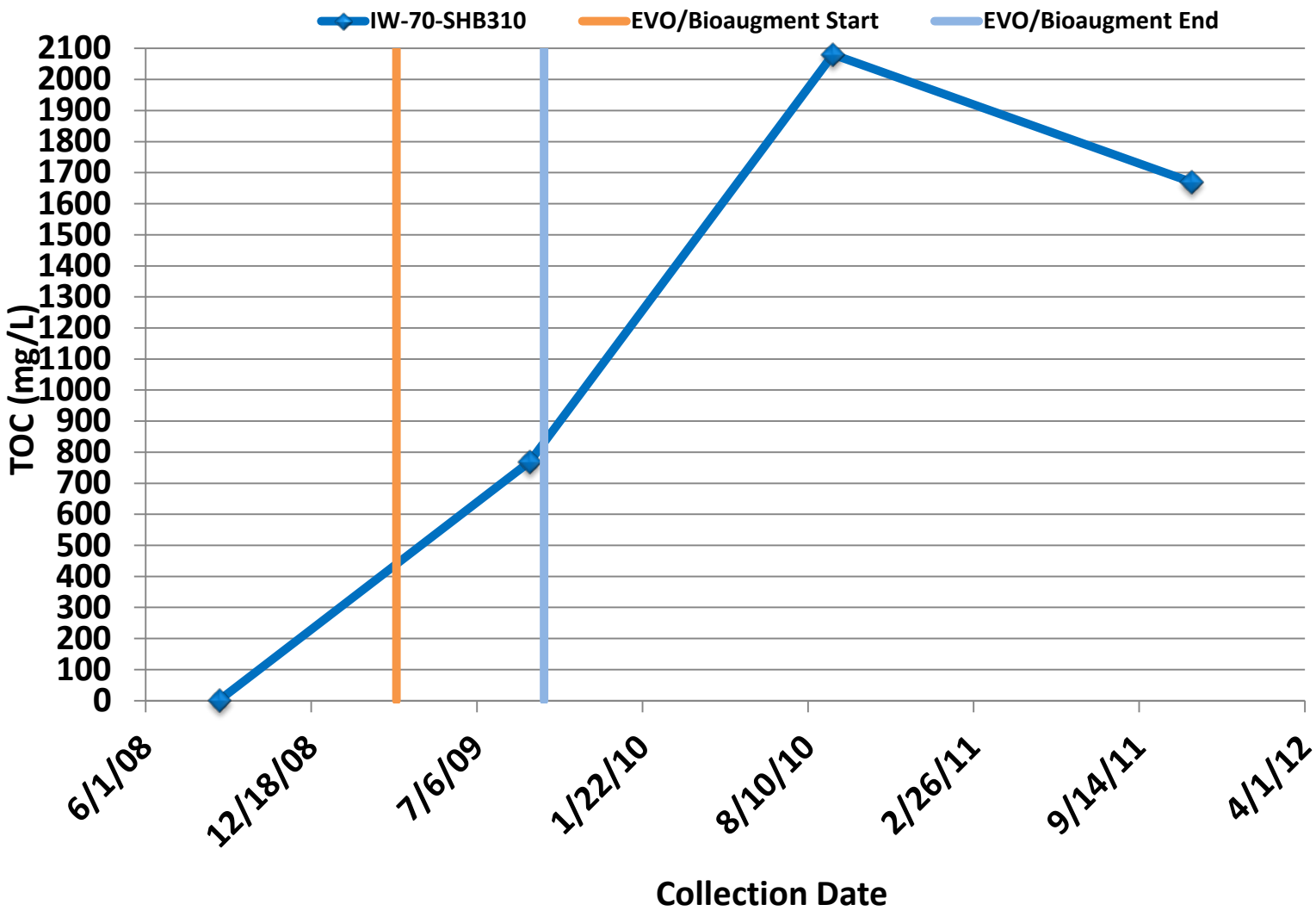
Shell Horizon Biobarrier 3

Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



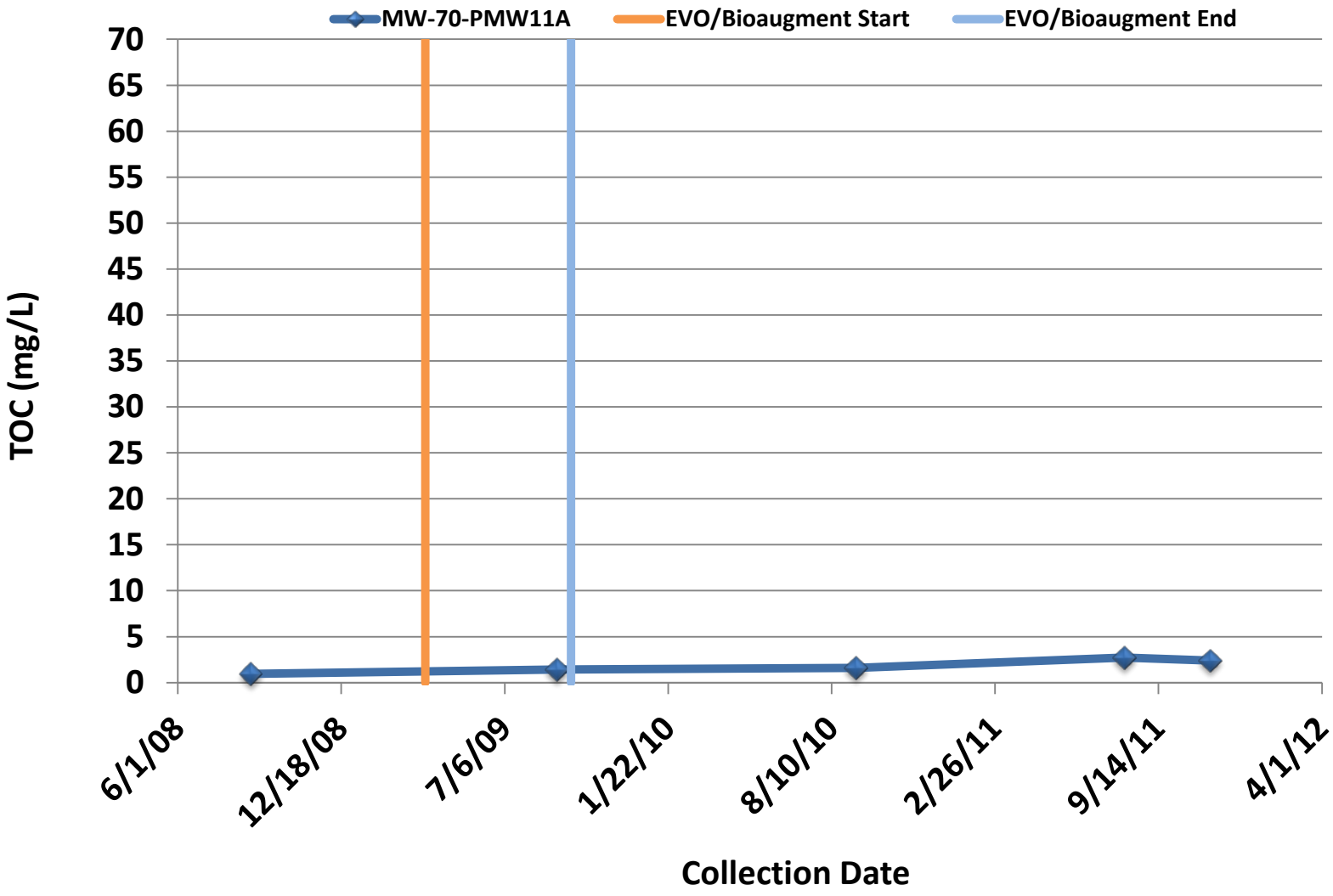
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

IW-70-SHB310
Total Organic Carbon Concentrations

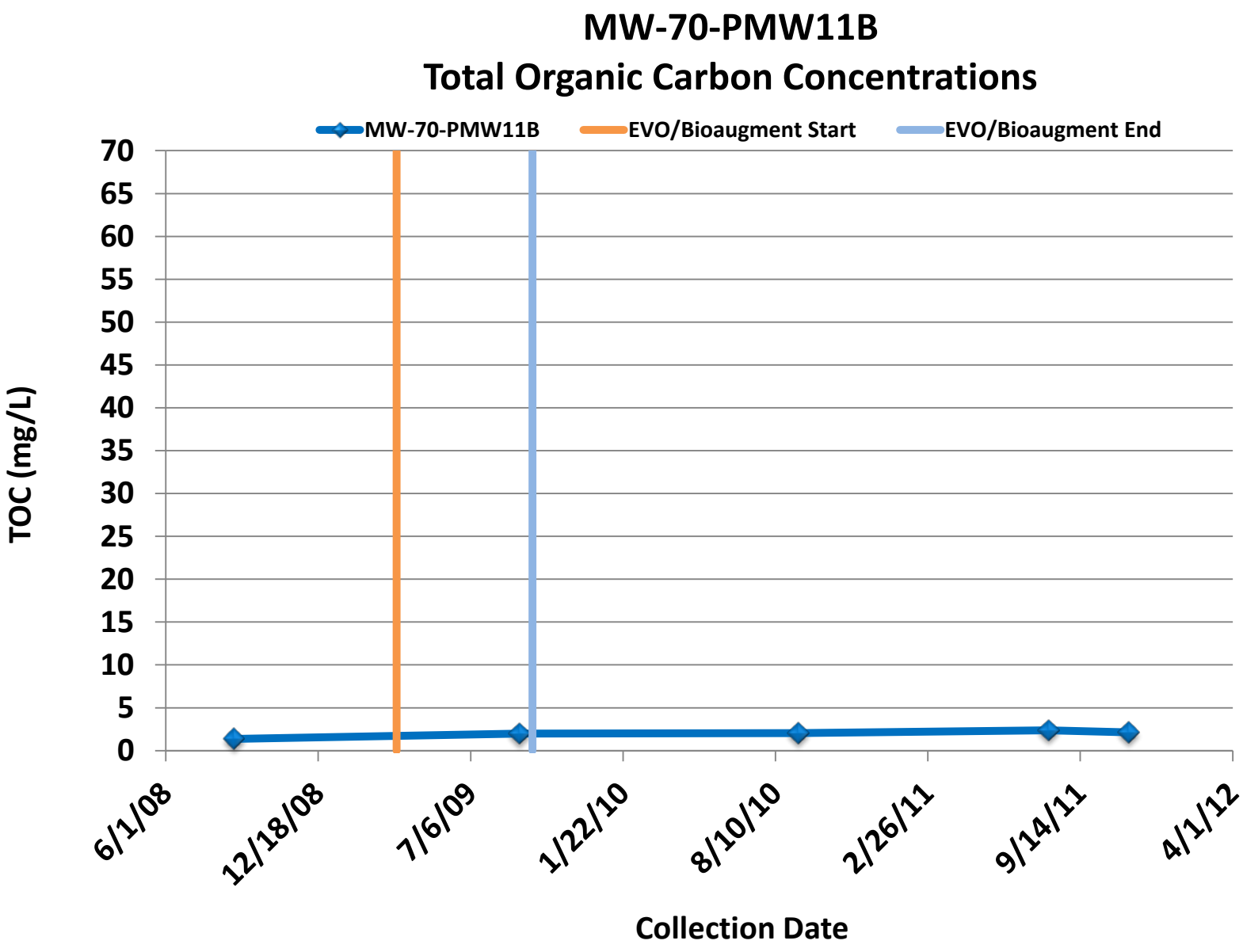


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

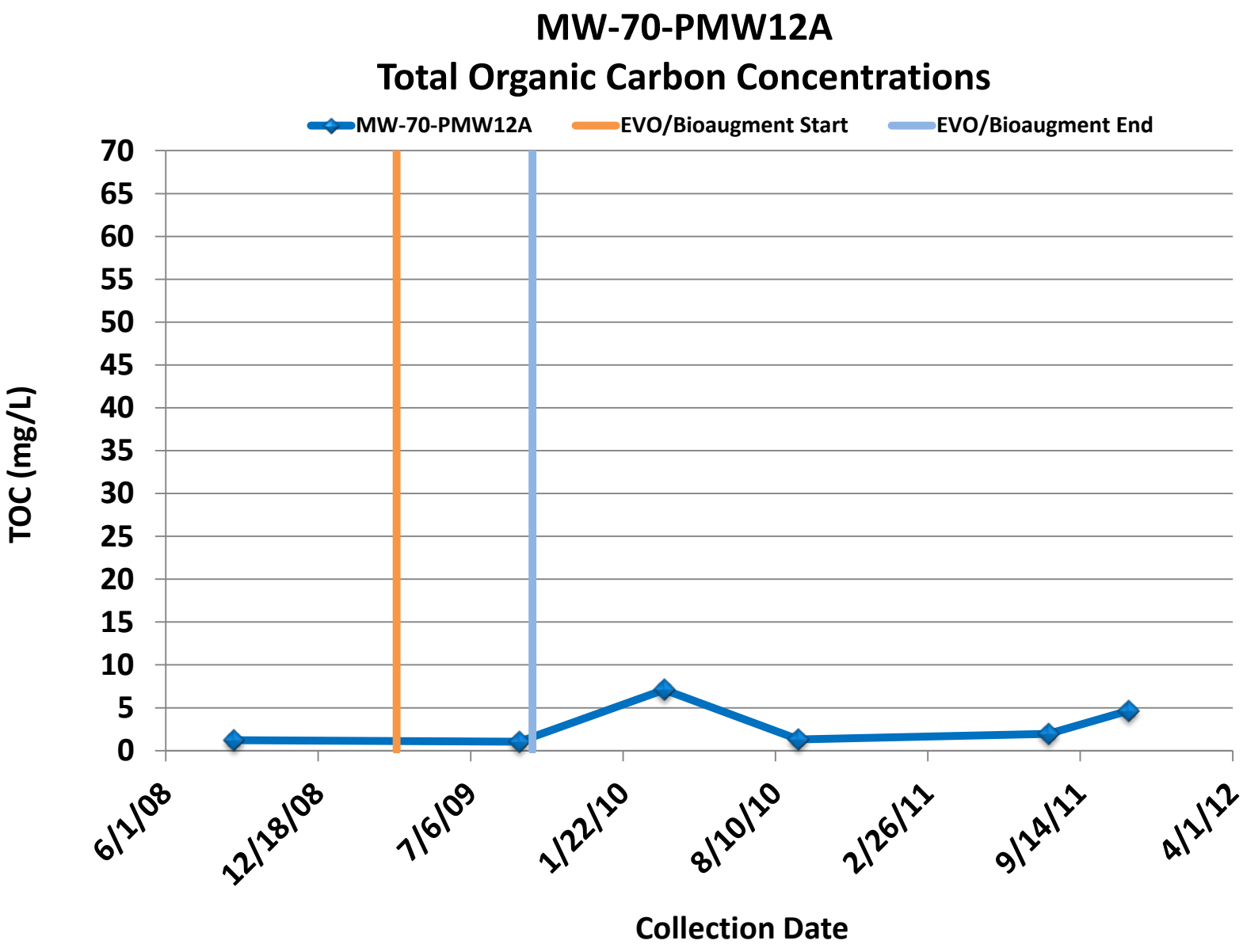
MW-70-PMW11A
Total Organic Carbon Concentrations



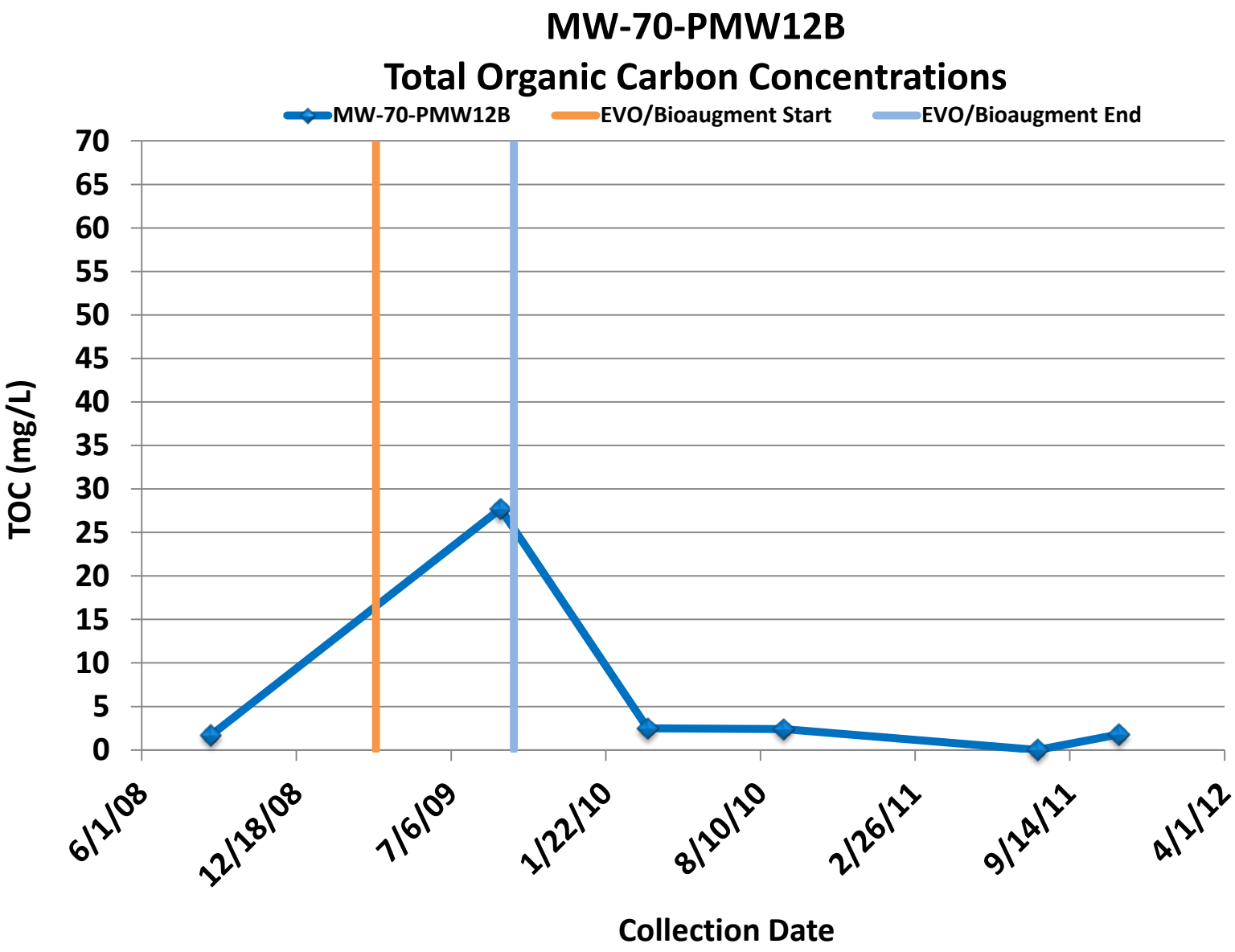
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

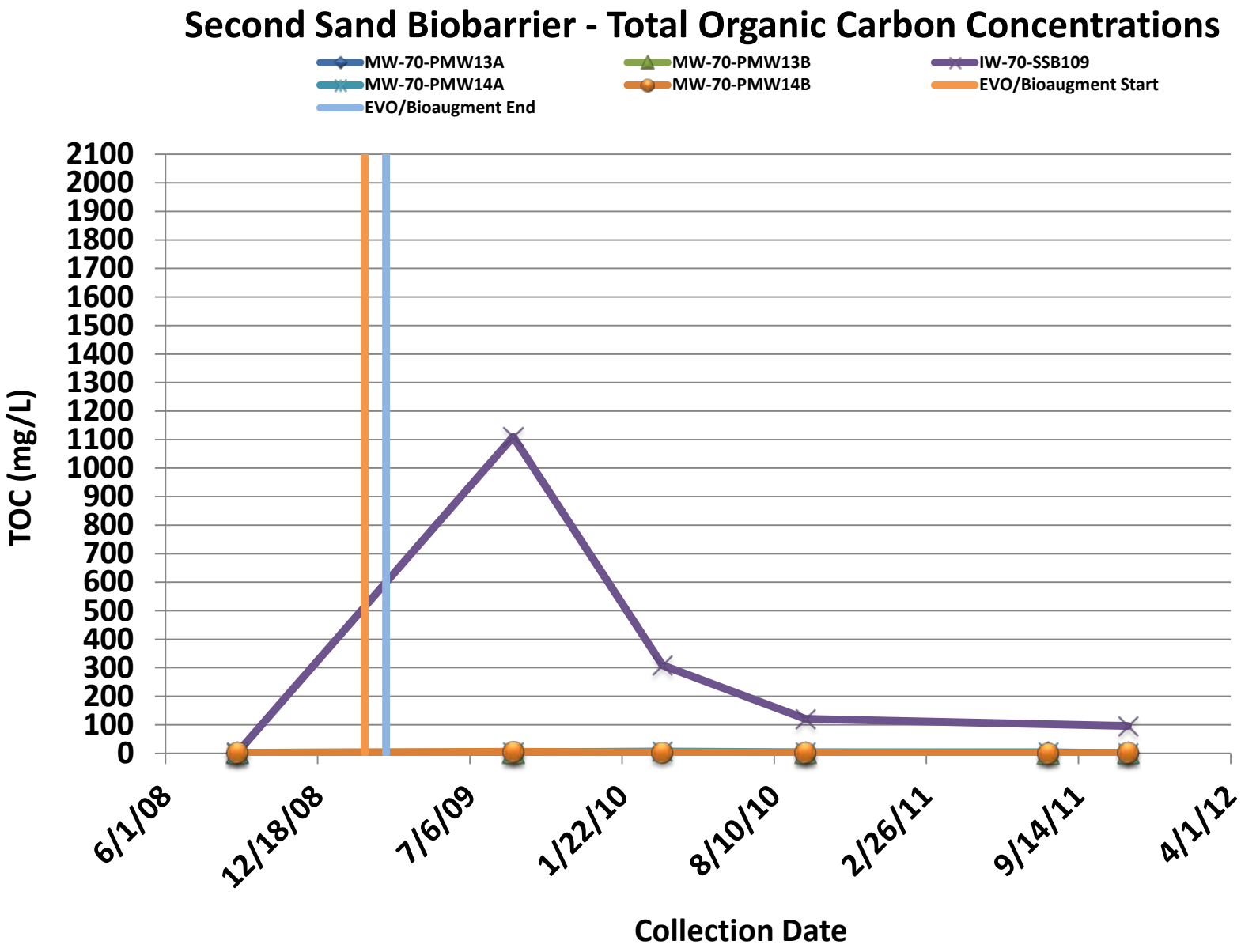


IR Site 70
Naval Weapons Station Seal Beach

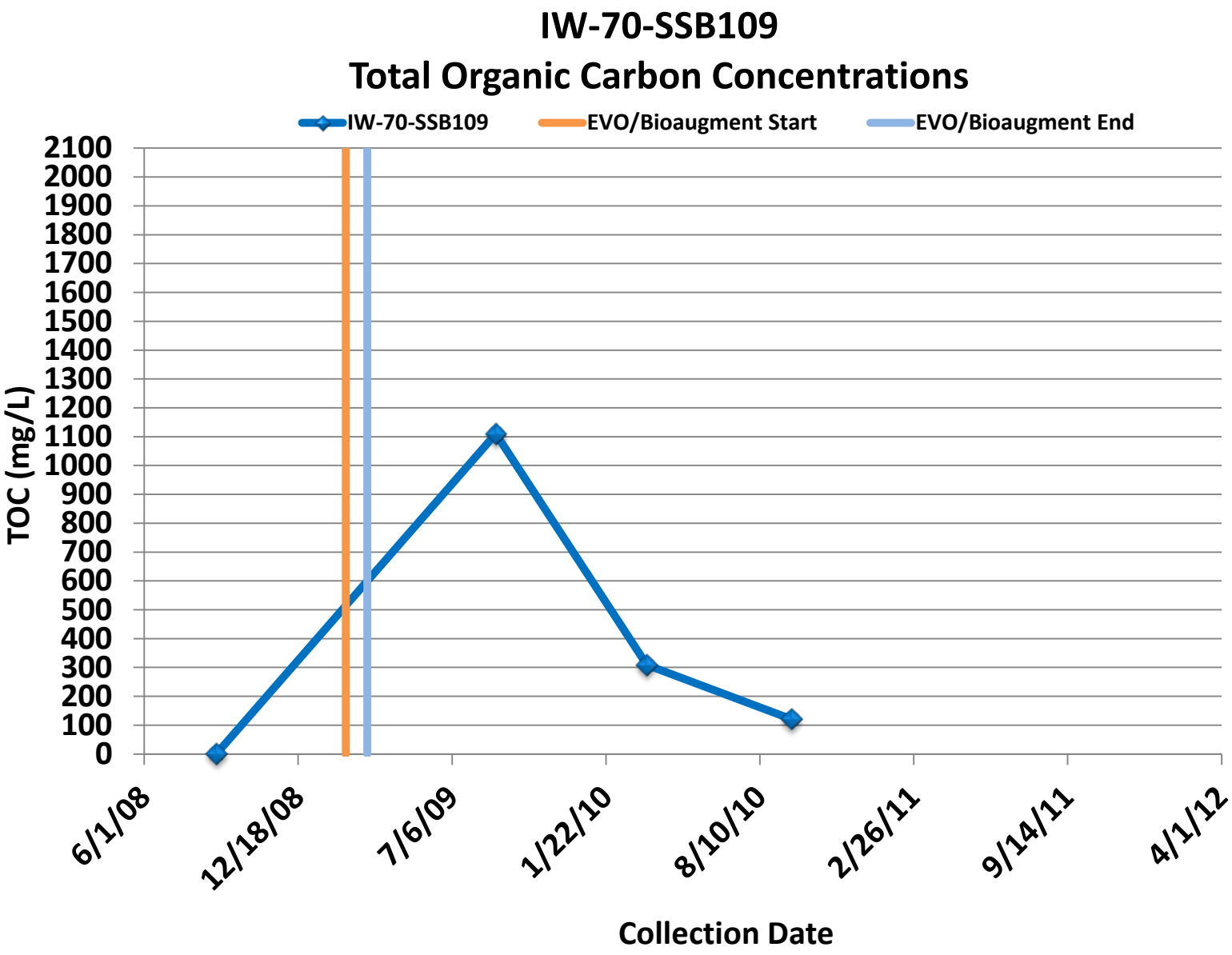
Total Organic Carbon Graphs

Second Sand Biobarrier 1

Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

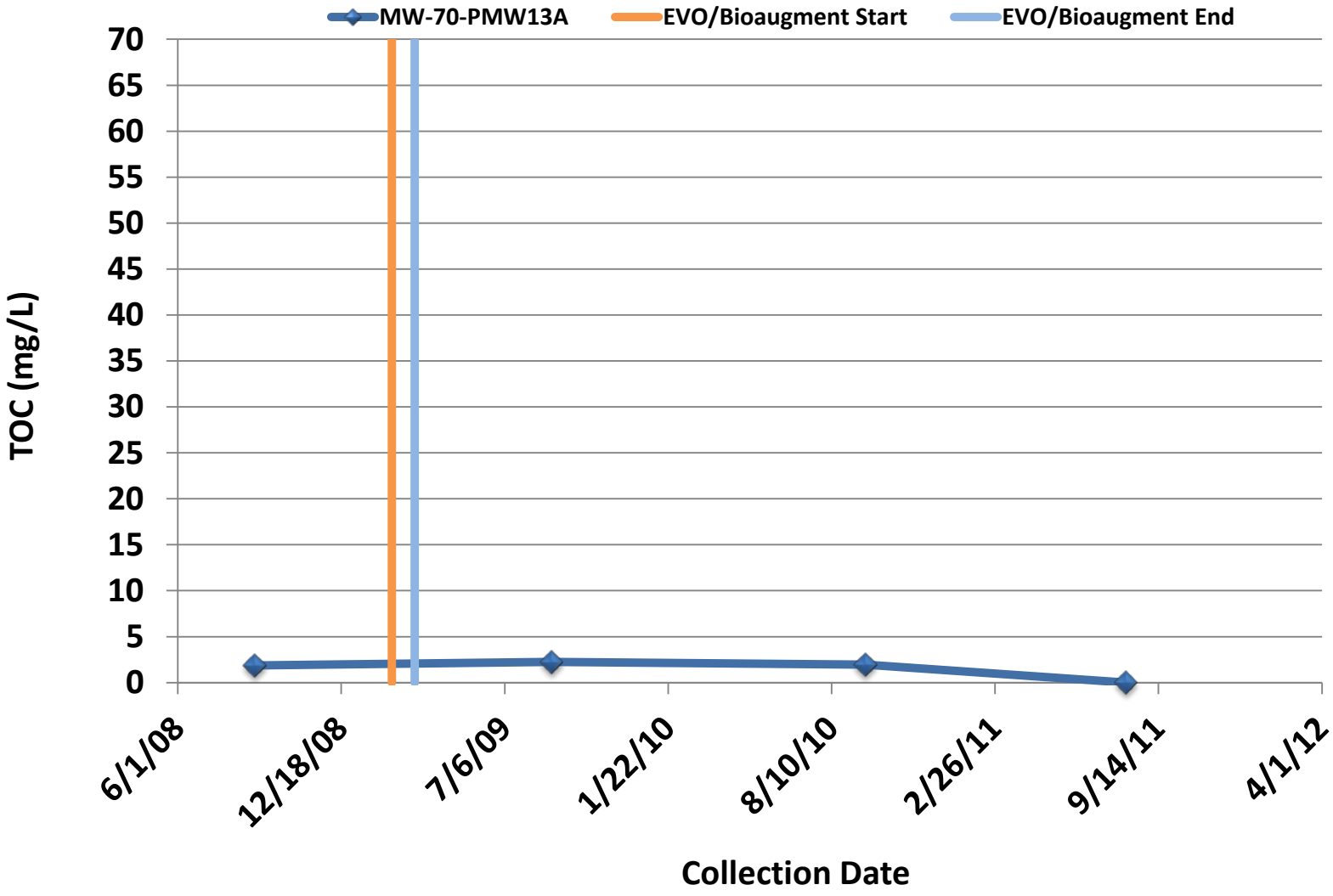


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



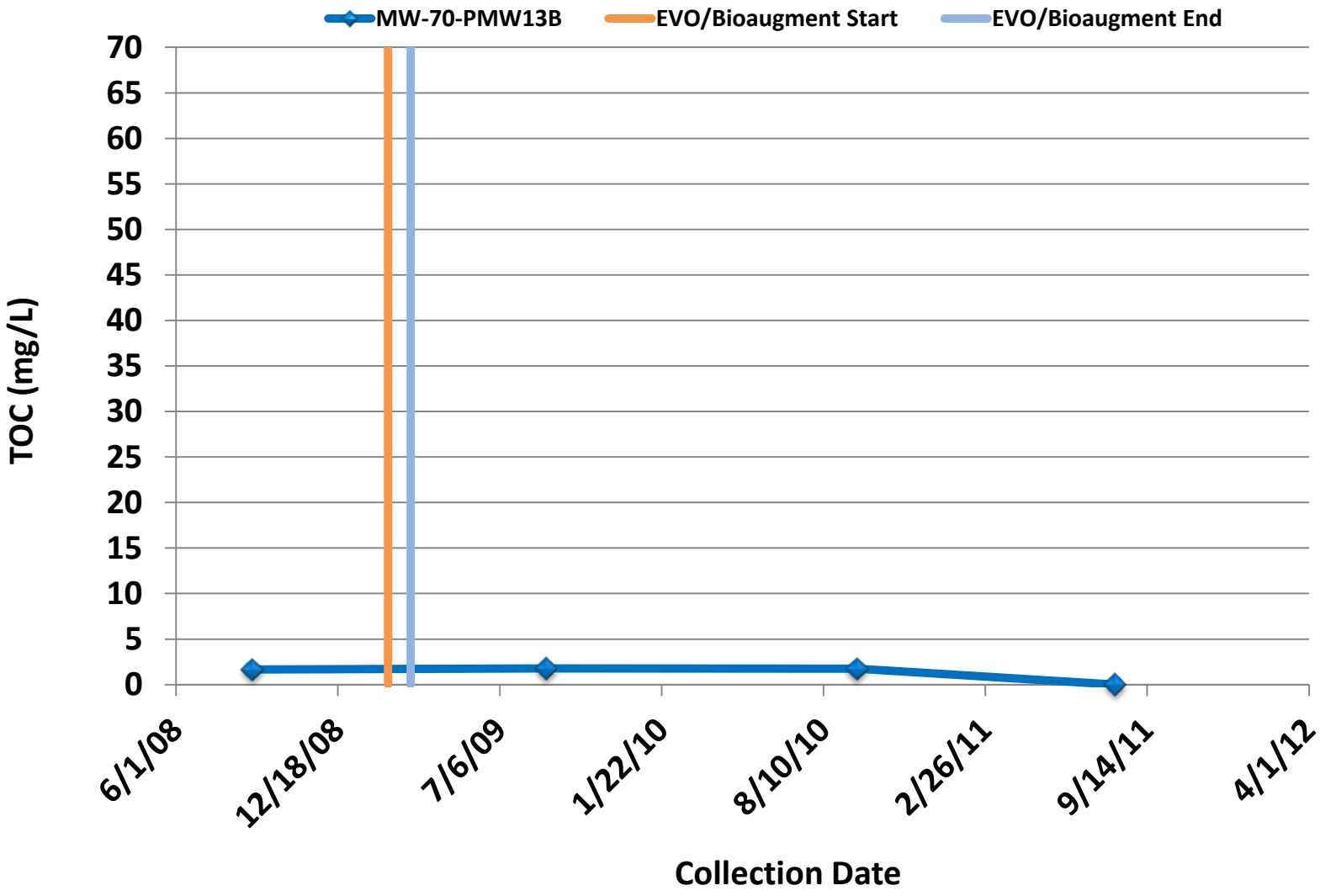
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW13A
Total Organic Carbon Concentrations



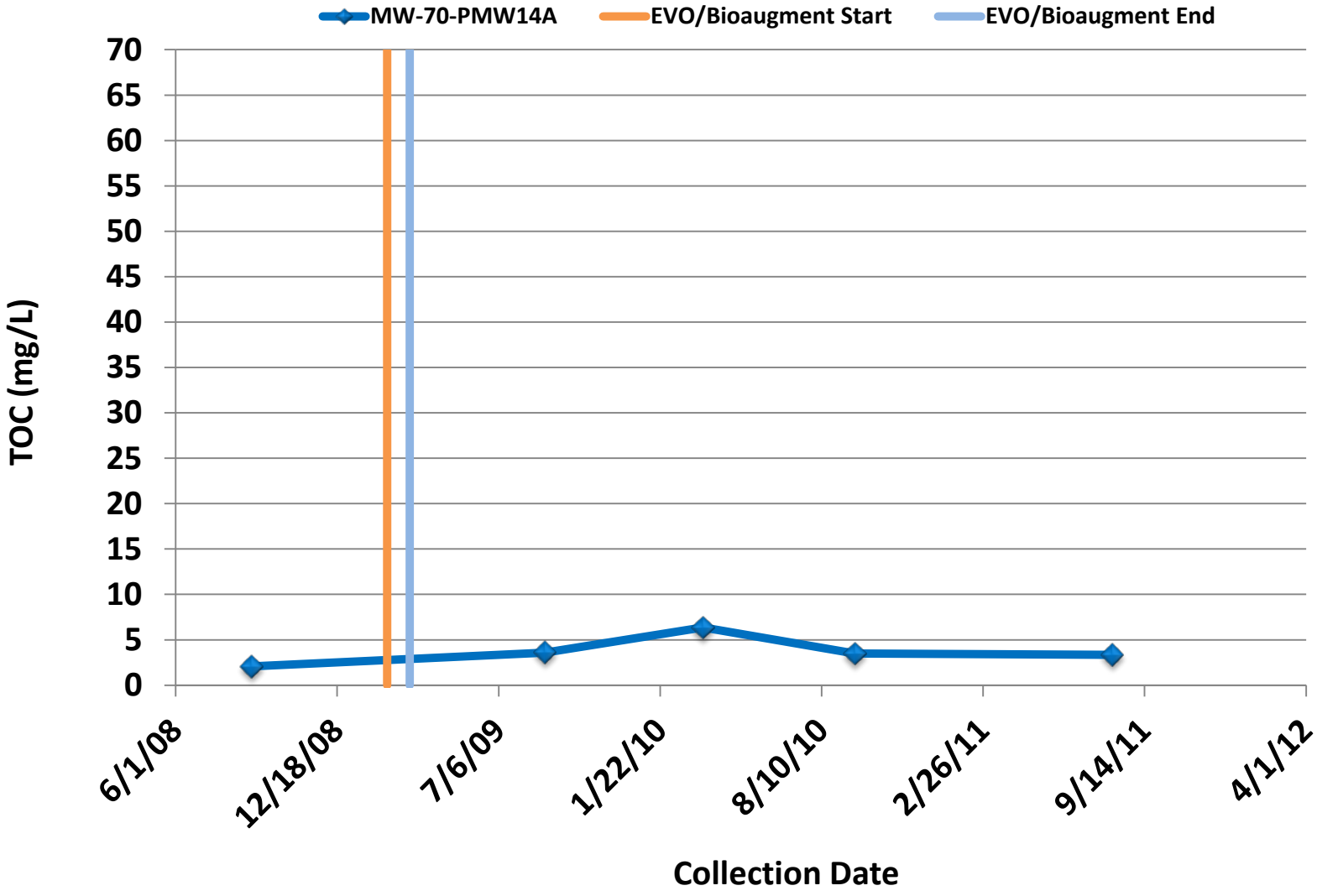
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW13B
Total Organic Carbon Concentrations



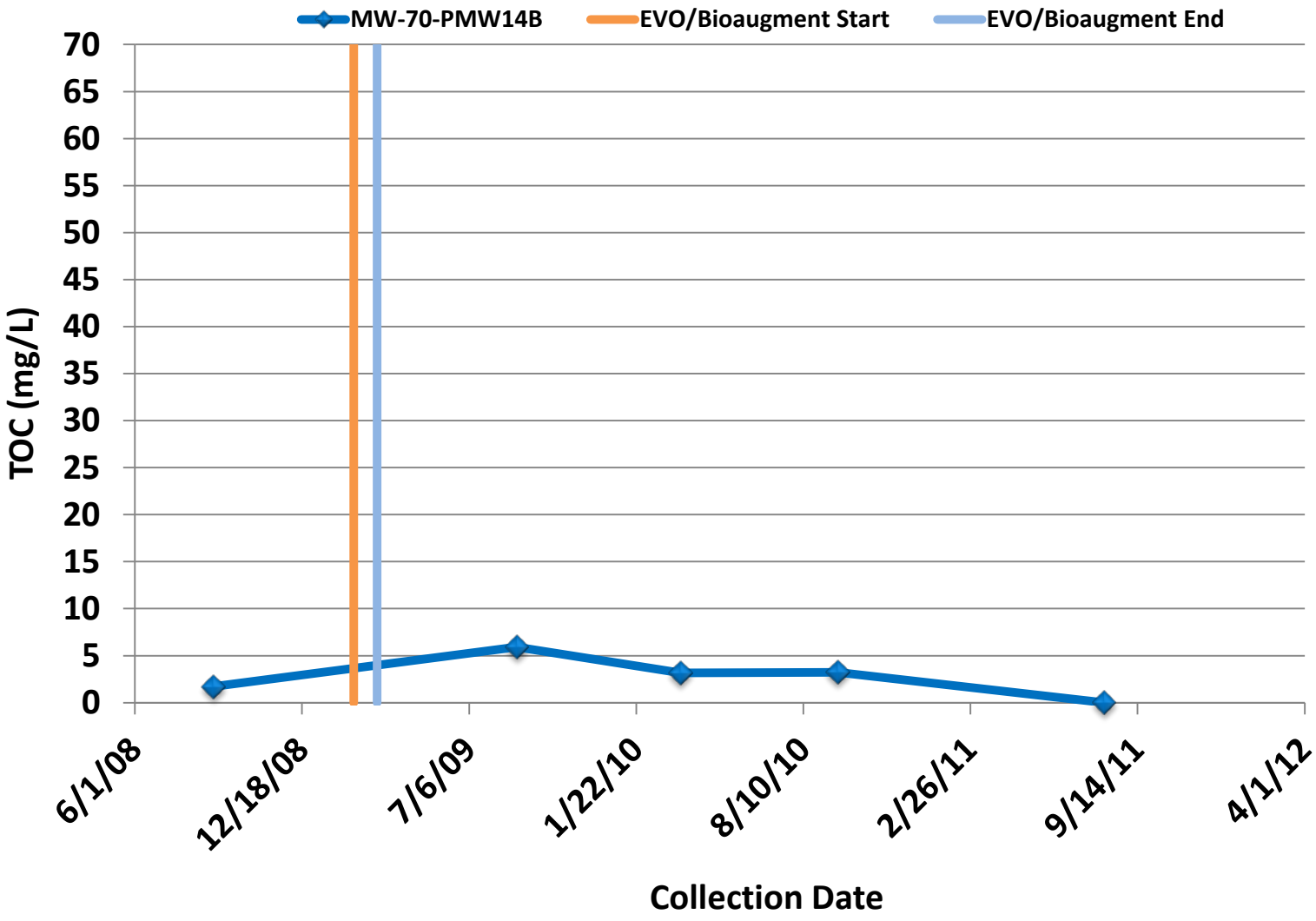
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW14A
Total Organic Carbon Concentrations



Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

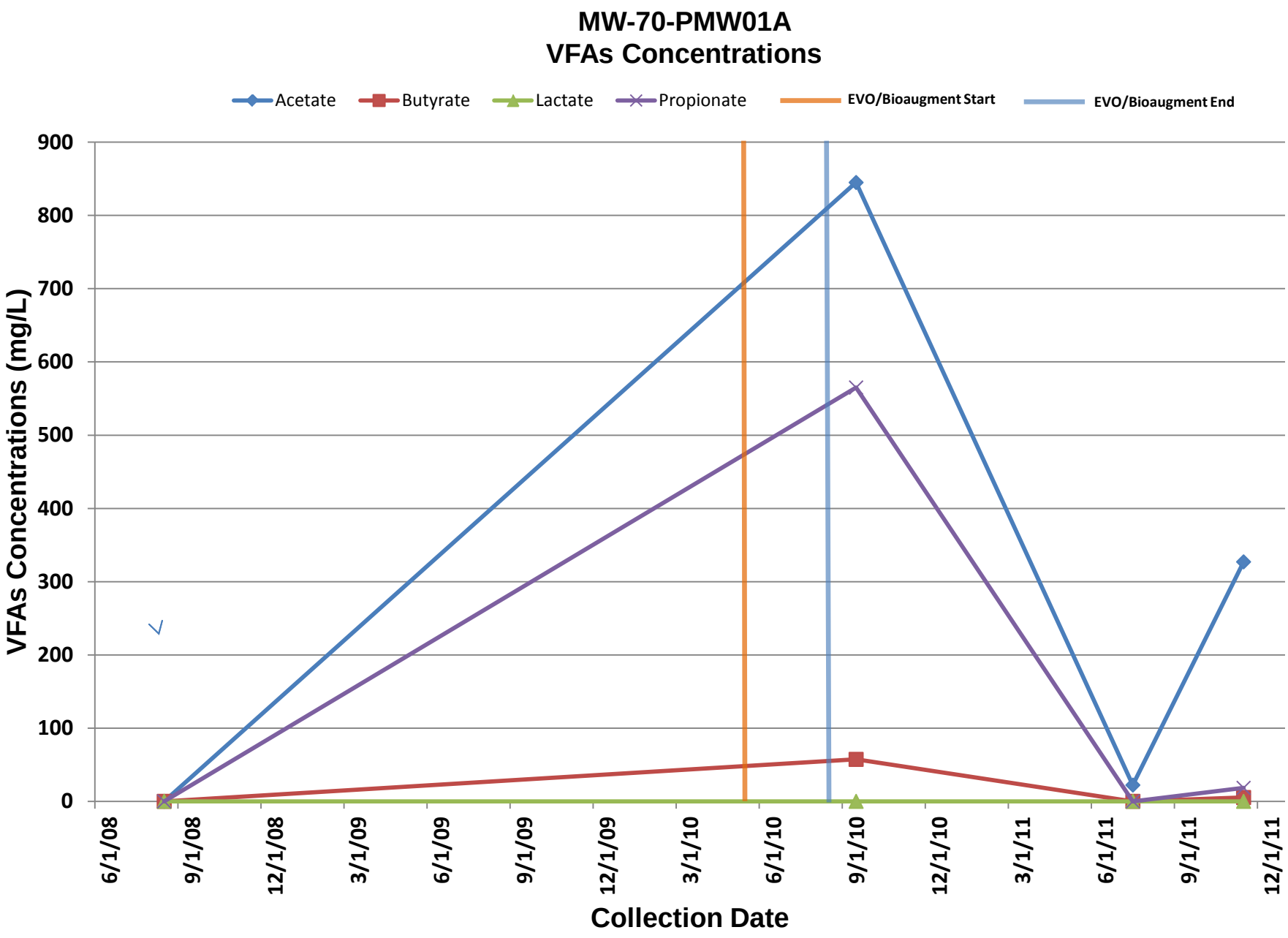
MW-70-PMW14B
Total Organic Carbon Concentrations

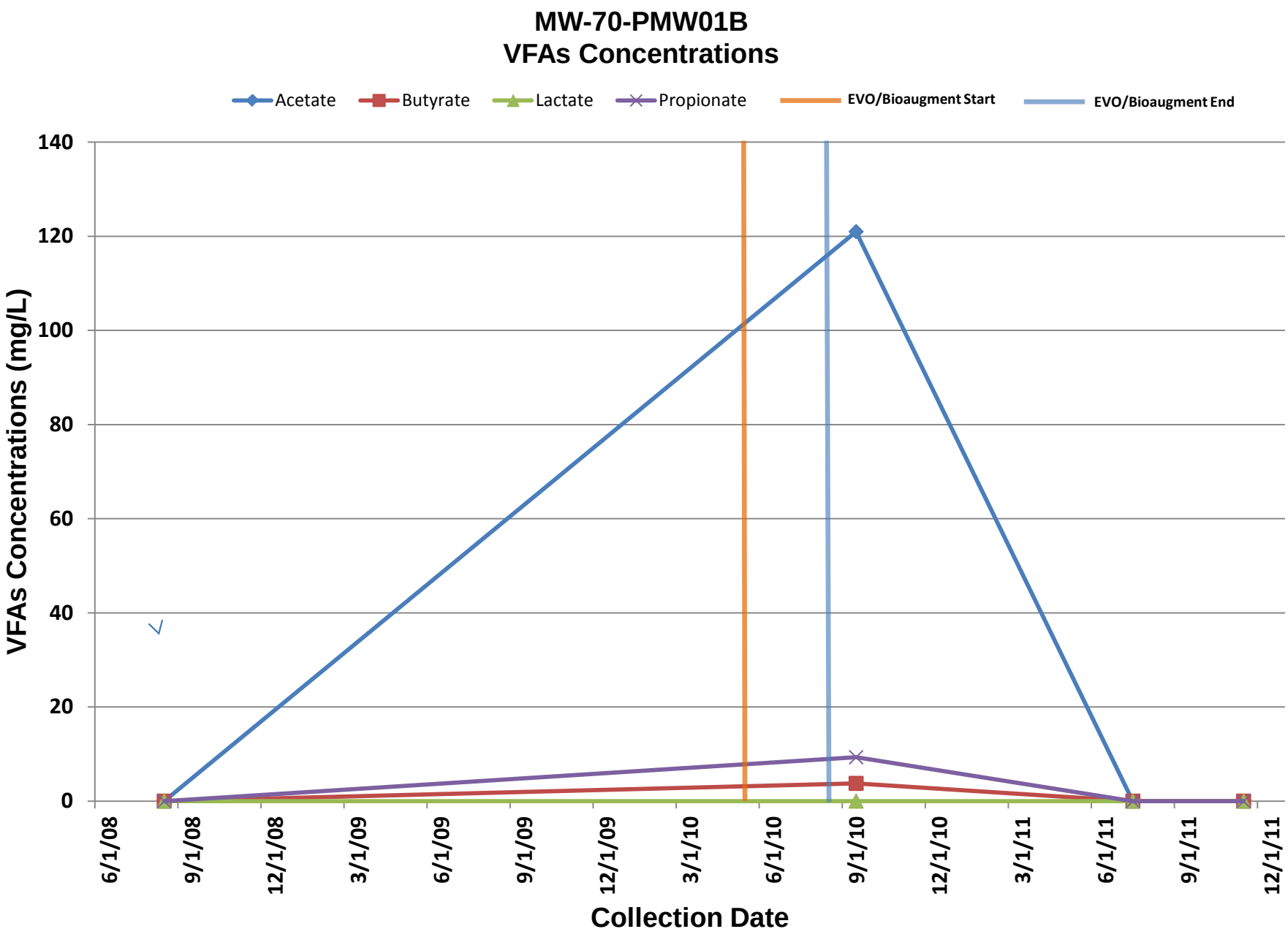


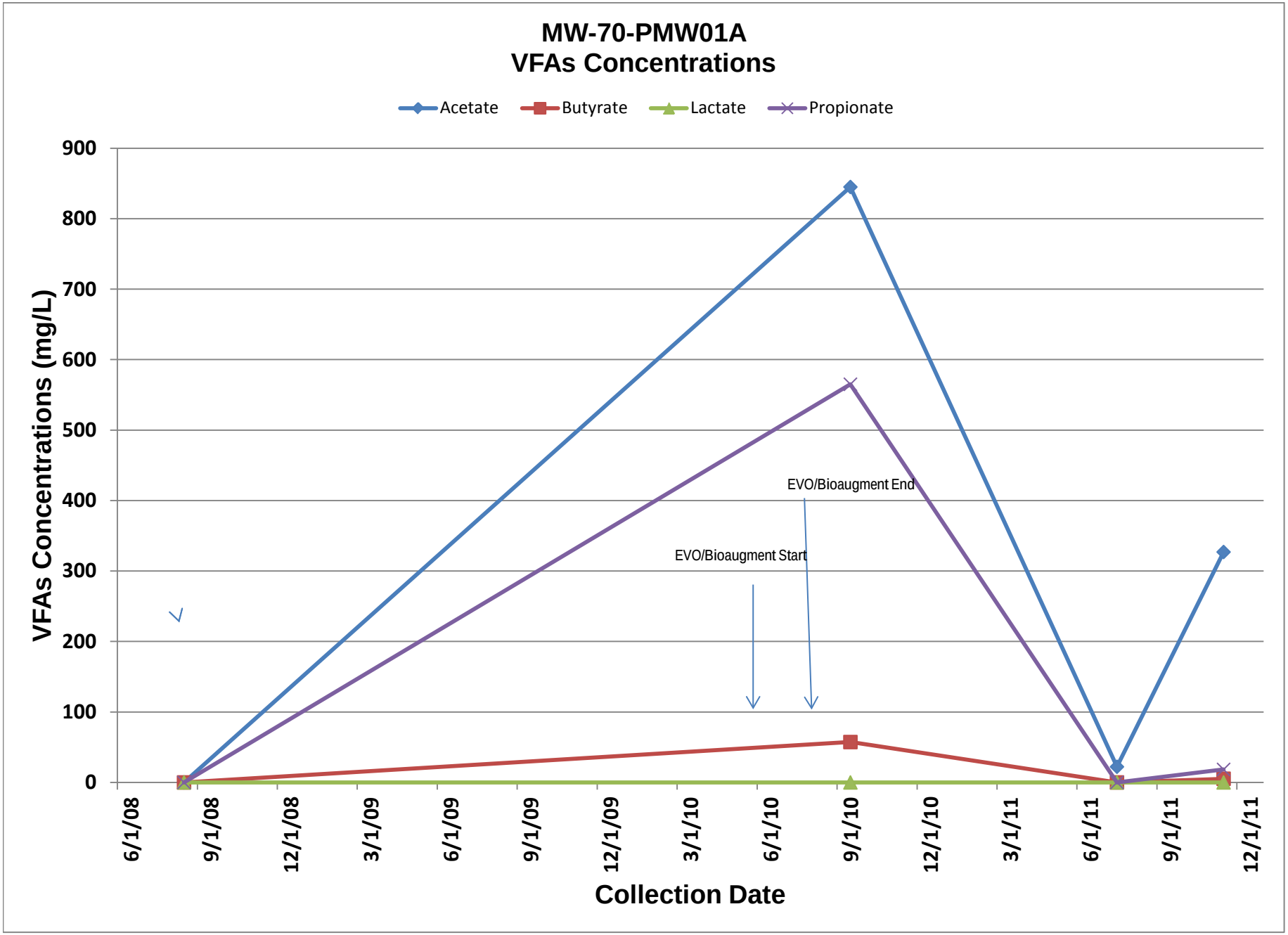
IR Site 70
Naval Weapons Station Seal Beach

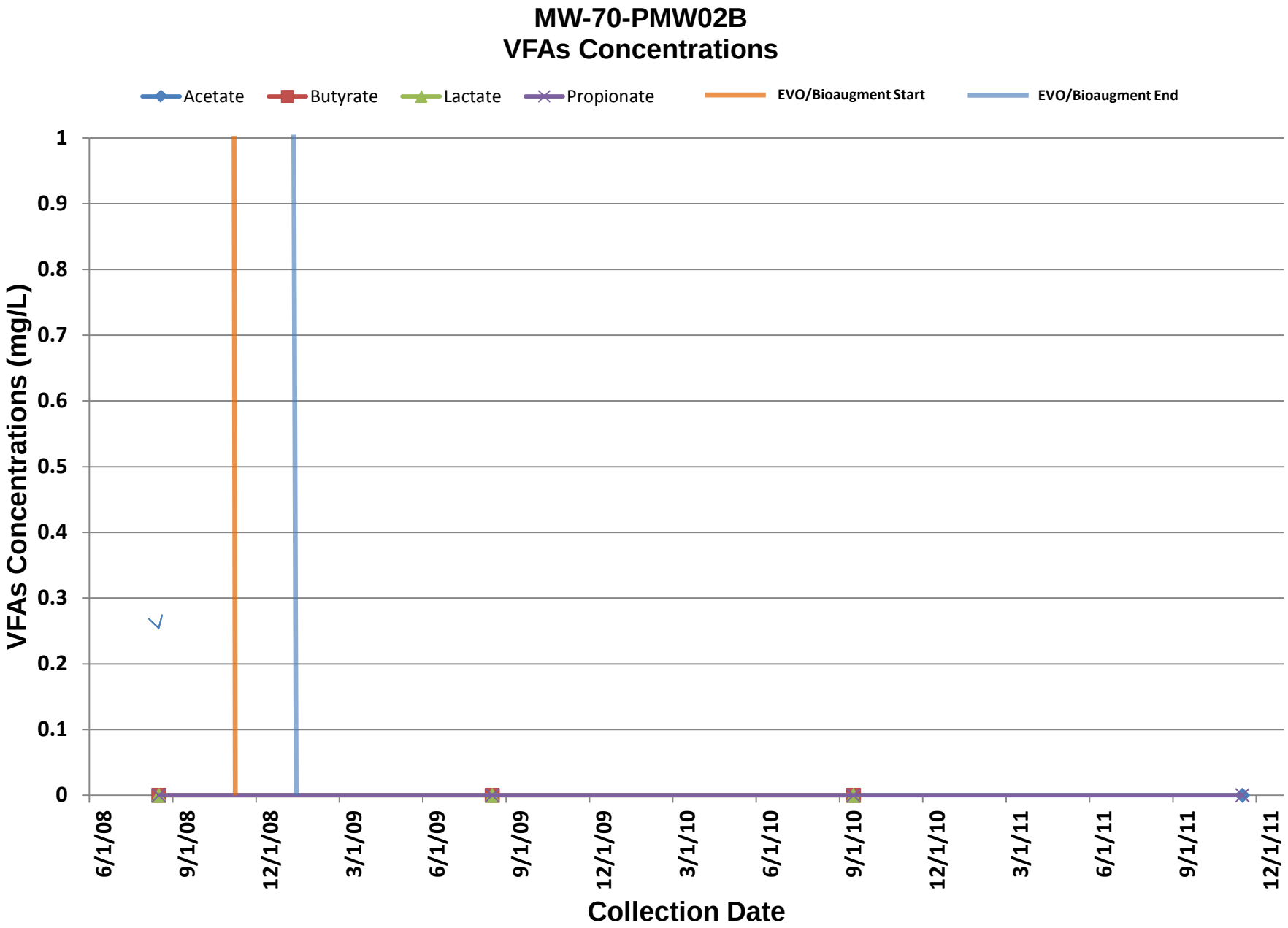
Volatile Fatty Acids (VFAs) Concentration Graphs

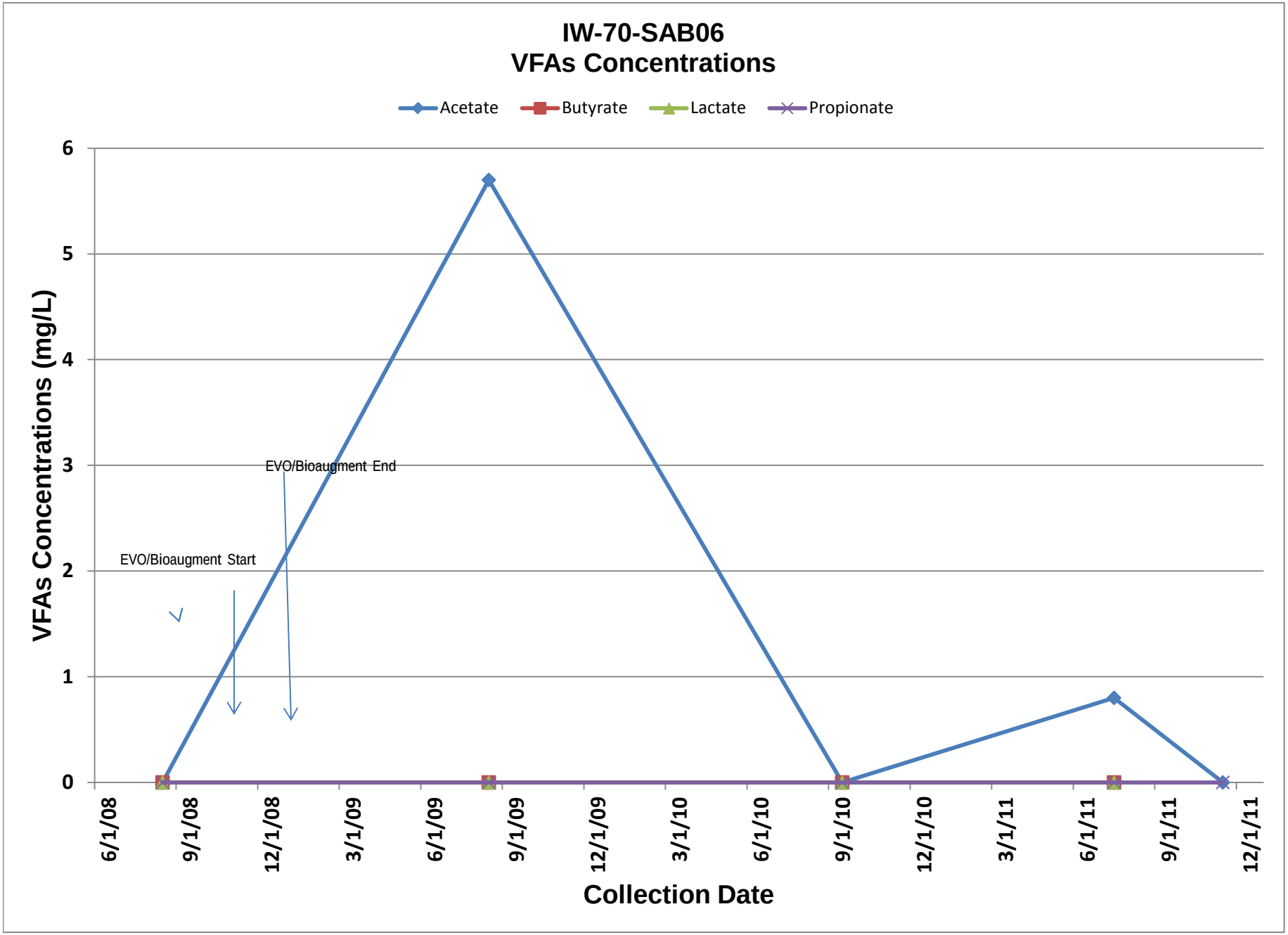
Source Area Treatment Grid
Source Area Biobarrier
First Sand Biobarrier 1
First Sand Biobarrier 2
Shell Horizon Biobarrier 1
Shell Horizon Biobarrier 3
Second Sand Biobarrier 1

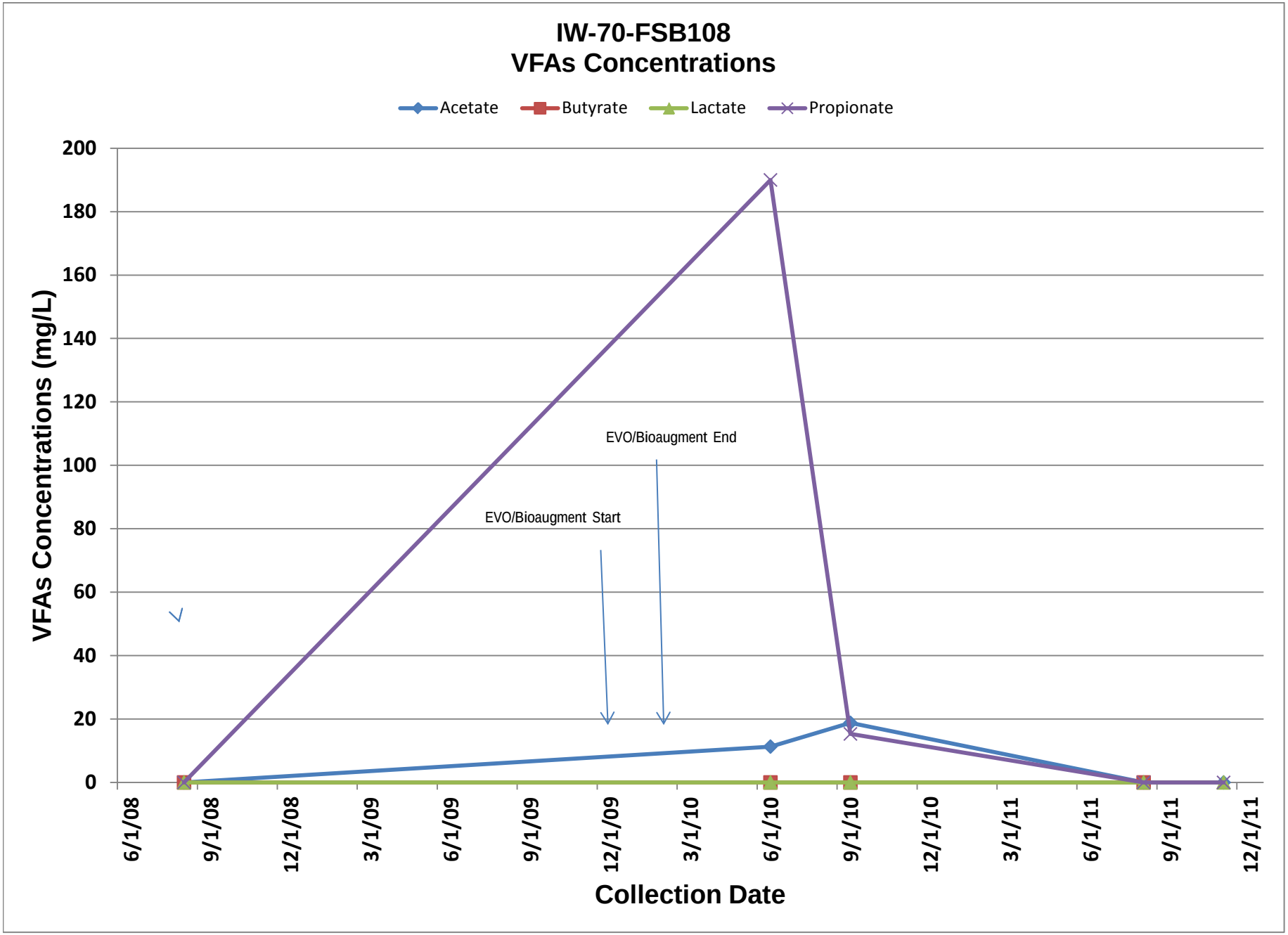

MW-70-PMW01A
VFAs Concentrations
Acetate
Butyrate
Lactate
Propionate
EVO/Bioaugment Start
EVO/Bioaugment End
VFAs Concentrations (mg/L)
900
800
700
600
500
400
300
200
100
0
6/1/08
9/1/08
12/1/08
3/1/09
6/1/09
9/1/09
12/1/09
3/1/10
6/1/10
9/1/10
12/1/10
3/1/11
6/1/11
9/1/11
12/1/11
Collection Date

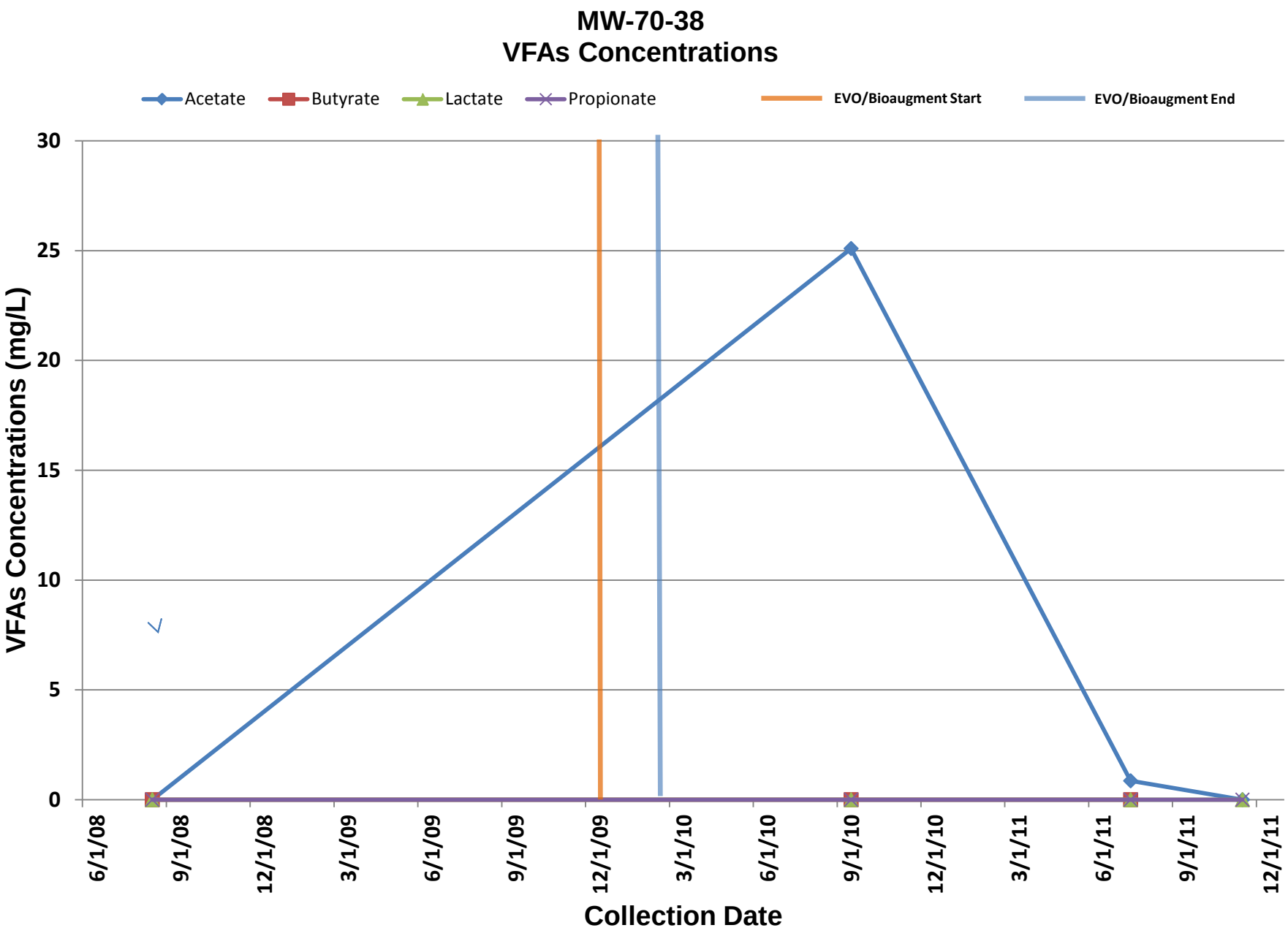

MW-70-PMW01B
VFAs Concentrations
Acetate
Butyrate
Lactate
Propionate
EVO/Bioaugment Start
EVO/Bioaugment End
VFAs Concentrations (mg/L)
140
120
100
80
60
40
20
0
6/1/08
9/1/08
12/1/08
3/1/09
6/1/09
9/1/09
12/1/09
3/1/10
6/1/10
9/1/10
12/1/10
3/1/11
6/1/11
9/1/11
12/1/11
Collection Date

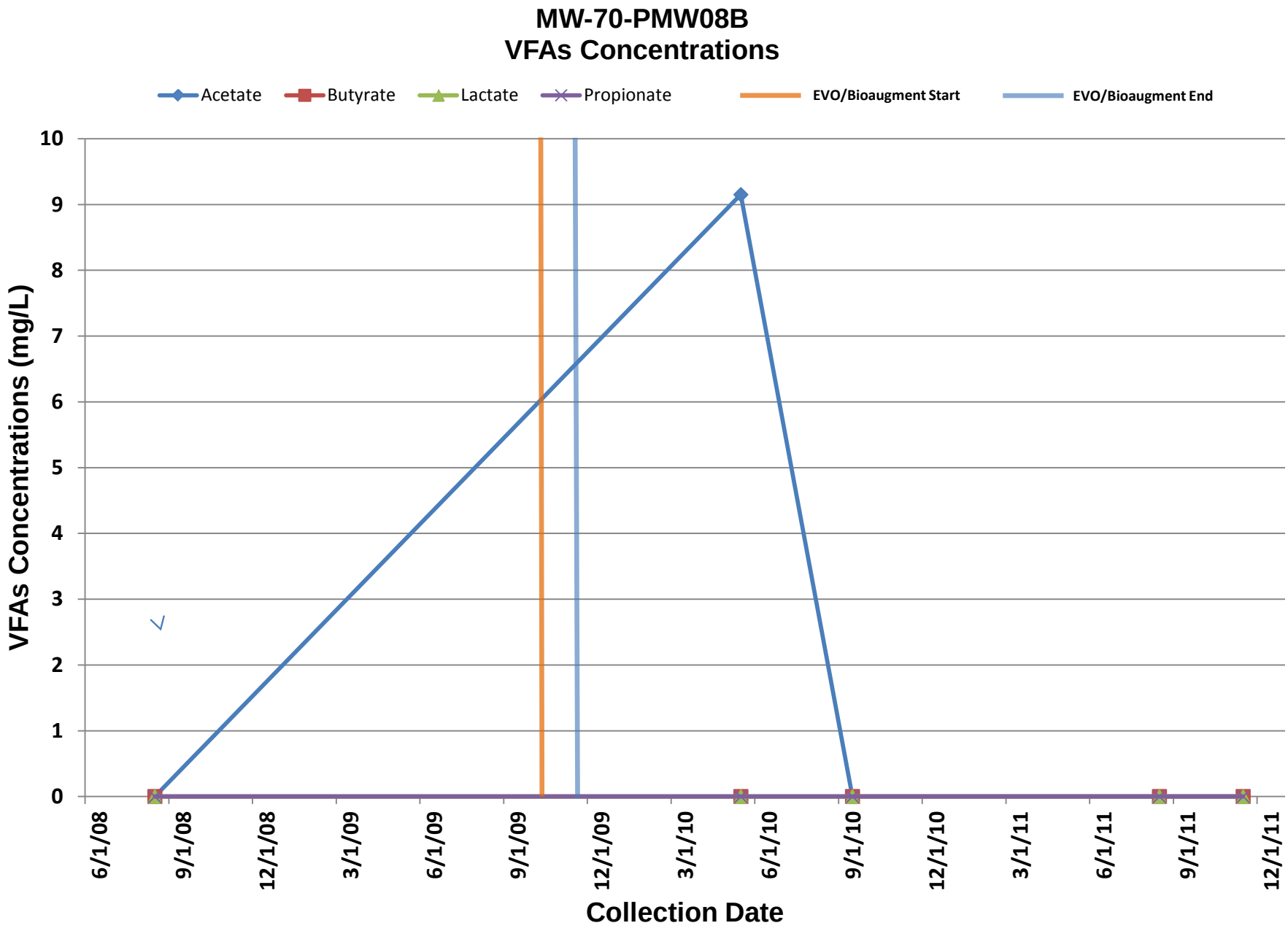

MW-70-PMW01A
VFAs Concentrations
Acetate
Butyrate
Lactate
Propionate
VFAs Concentrations (mg/L)
900
800
700
600
500
400
300
200
100
0
EVO/Bioaugment End
EVO/Bioaugment Start
6/1/08
9/1/08
12/1/08
3/1/09
6/1/09
9/1/09
12/1/09
3/1/10
6/1/10
9/1/10
12/1/10
3/1/11
6/1/11
9/1/11
12/1/11
Collection Date

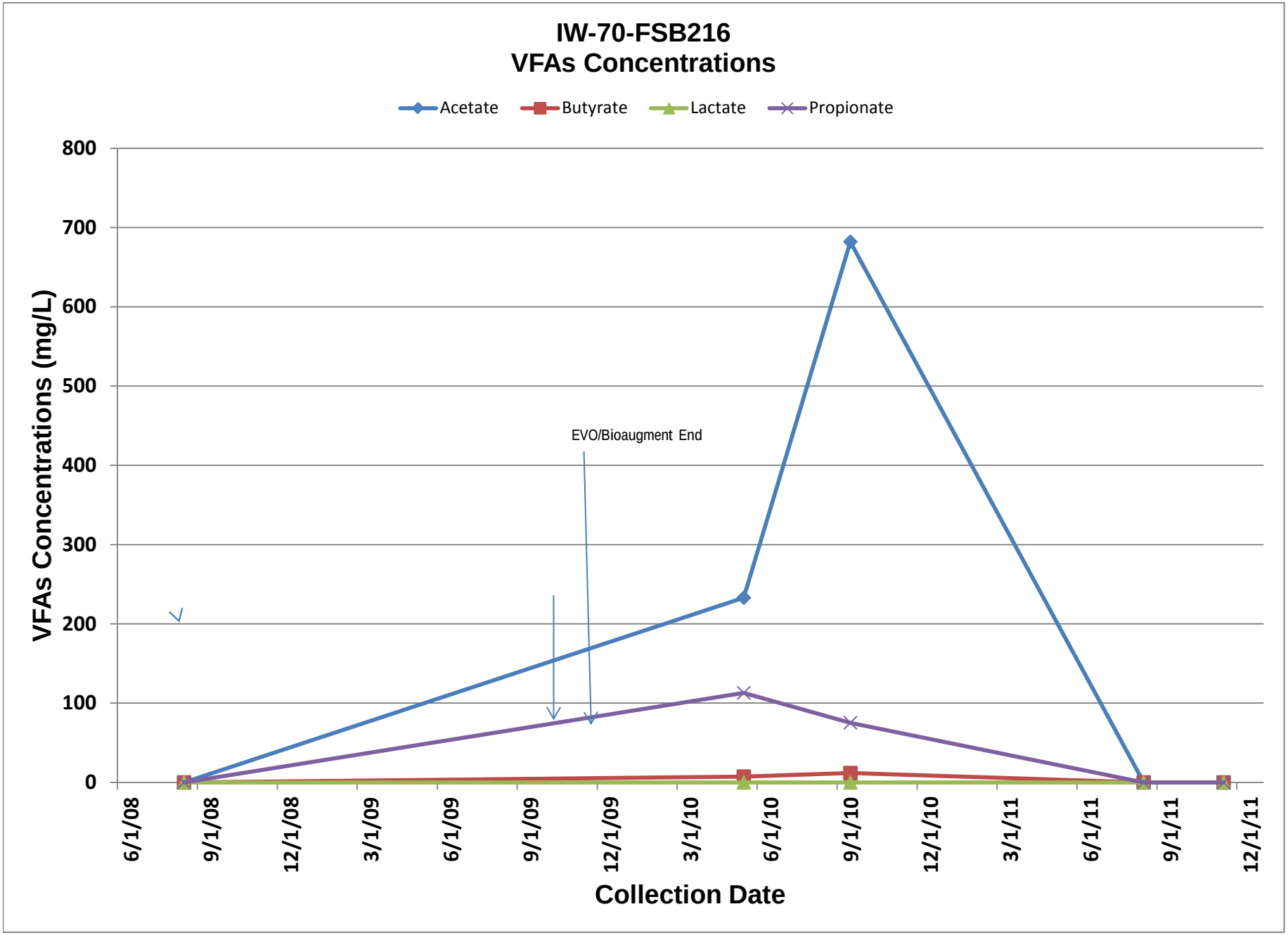

MW-70-PMW02B
VFAs Concentrations
Acetate
Butyrate
Lactate
Propionate
EVO/Bioaugment Start
EVO/Bioaugment End
VFAs Concentrations (mg/L)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
6/1/08
9/1/08
12/1/08
3/1/09
6/1/09
9/1/09
12/1/09
3/1/10
6/1/10
9/1/10
12/1/10
3/1/11
6/1/11
9/1/11
12/1/11
Collection Date

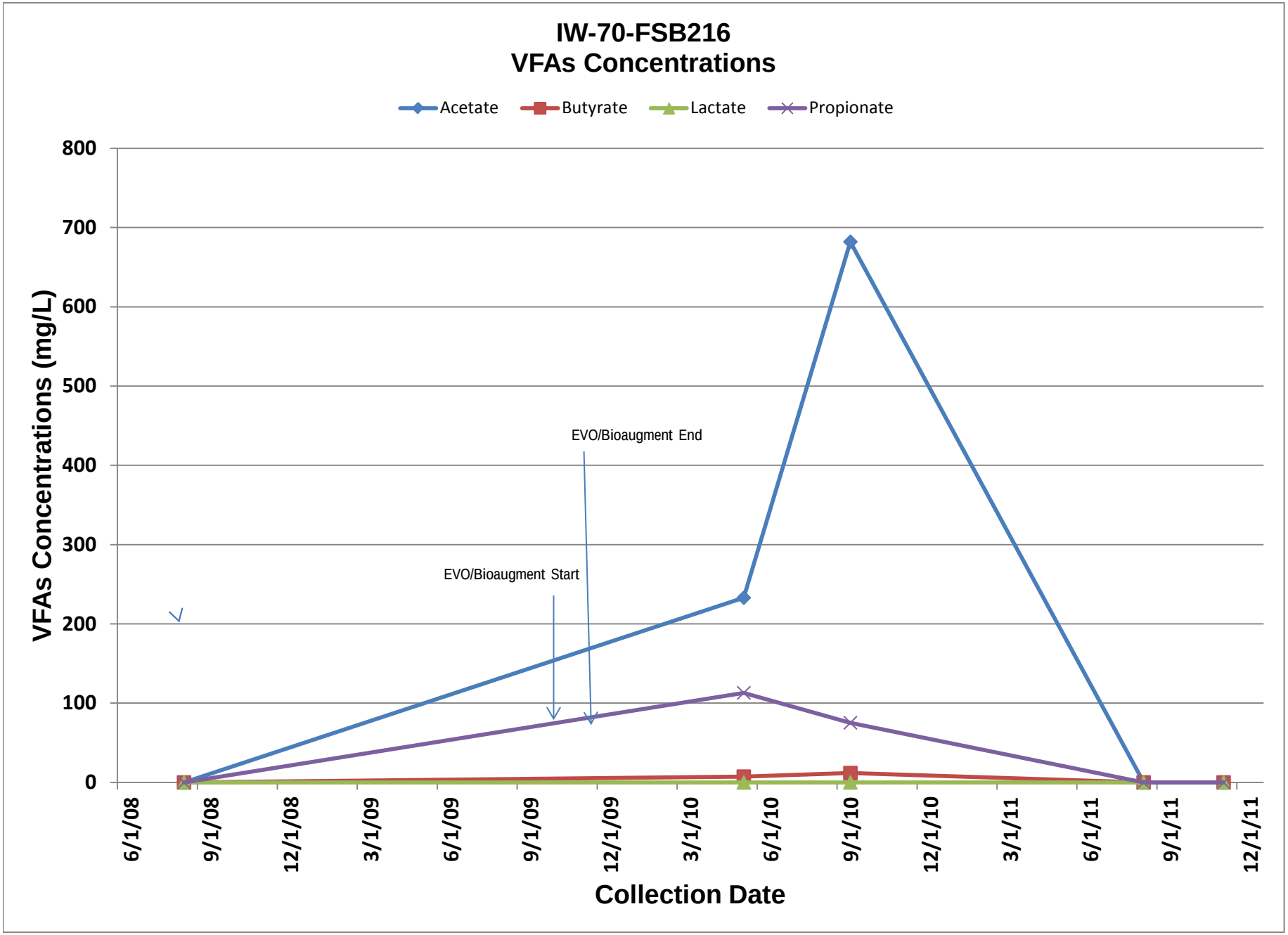

IW-70-SAB06
VFAs Concentrations
Acetate
Butyrate
Lactate
Propionate
VFAs Concentrations (mg/L)
6
5
4
3
2
1
0
EVO/Bioaugment End
EVO/Bioaugment Start
6/1/08
9/1/08
12/1/08
3/1/09
6/1/09
9/1/09
12/1/09
3/1/10
6/1/10
9/1/10
12/1/10
3/1/11
6/1/11
9/1/11
12/1/11
Collection Date

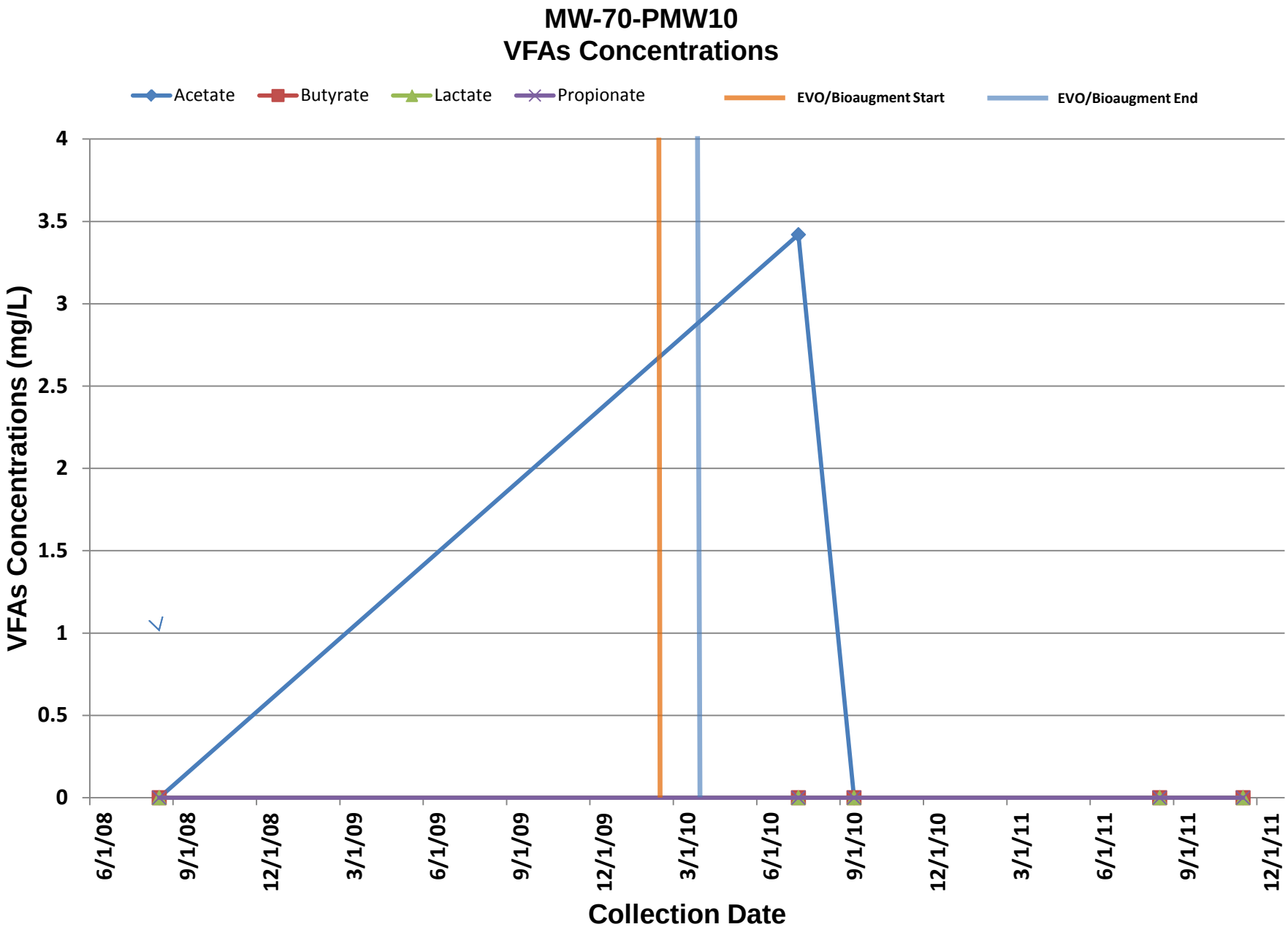

IW-70-FSB108
VFAs Concentrations
Acetate
Butyrate
Lactate
Propionate
VFAs Concentrations (mg/L)
200
180
160
140
120
100
80
60
40
20
0
EVO/Bioaugment End
EVO/Bioaugment Start
6/1/08
9/1/08
12/1/08
3/1/09
6/1/09
9/1/09
12/1/09
3/1/10
6/1/10
9/1/10
12/1/10
3/1/11
6/1/11
9/1/11
12/1/11
Collection Date

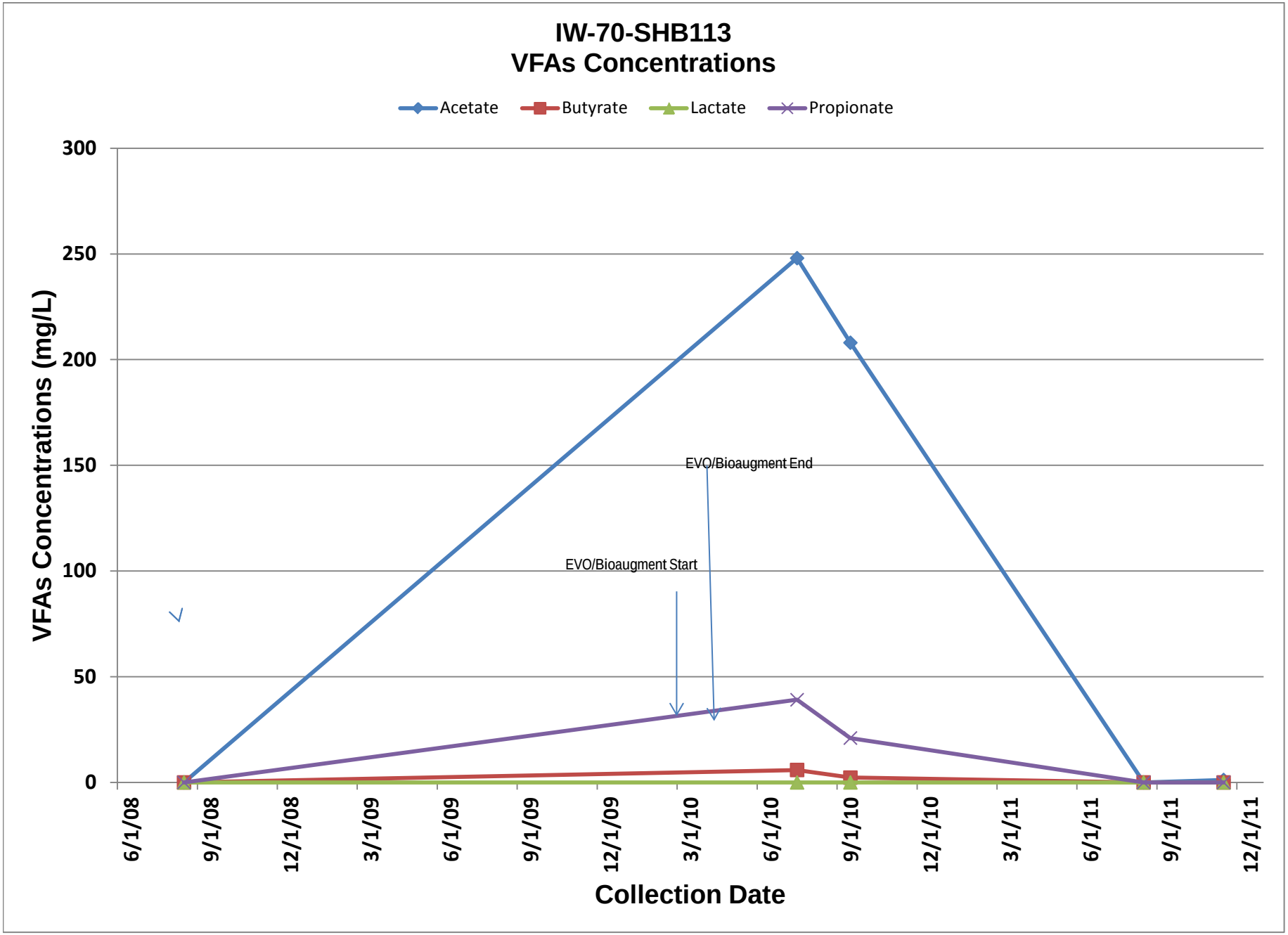

MW-70-38
VFAs Concentrations
Acetate
Butyrate
Lactate
Propionate
EVO/Bioaugment Start
EVO/Bioaugment End
VFAs Concentrations (mg/L)
30
25
20
15
10
5
0
6/1/08
9/1/08
12/1/08
3/1/09
6/1/09
9/1/09
12/1/09
3/1/10
6/1/10
9/1/10
12/1/10
3/1/11
6/1/11
9/1/11
12/1/11
Collection Date

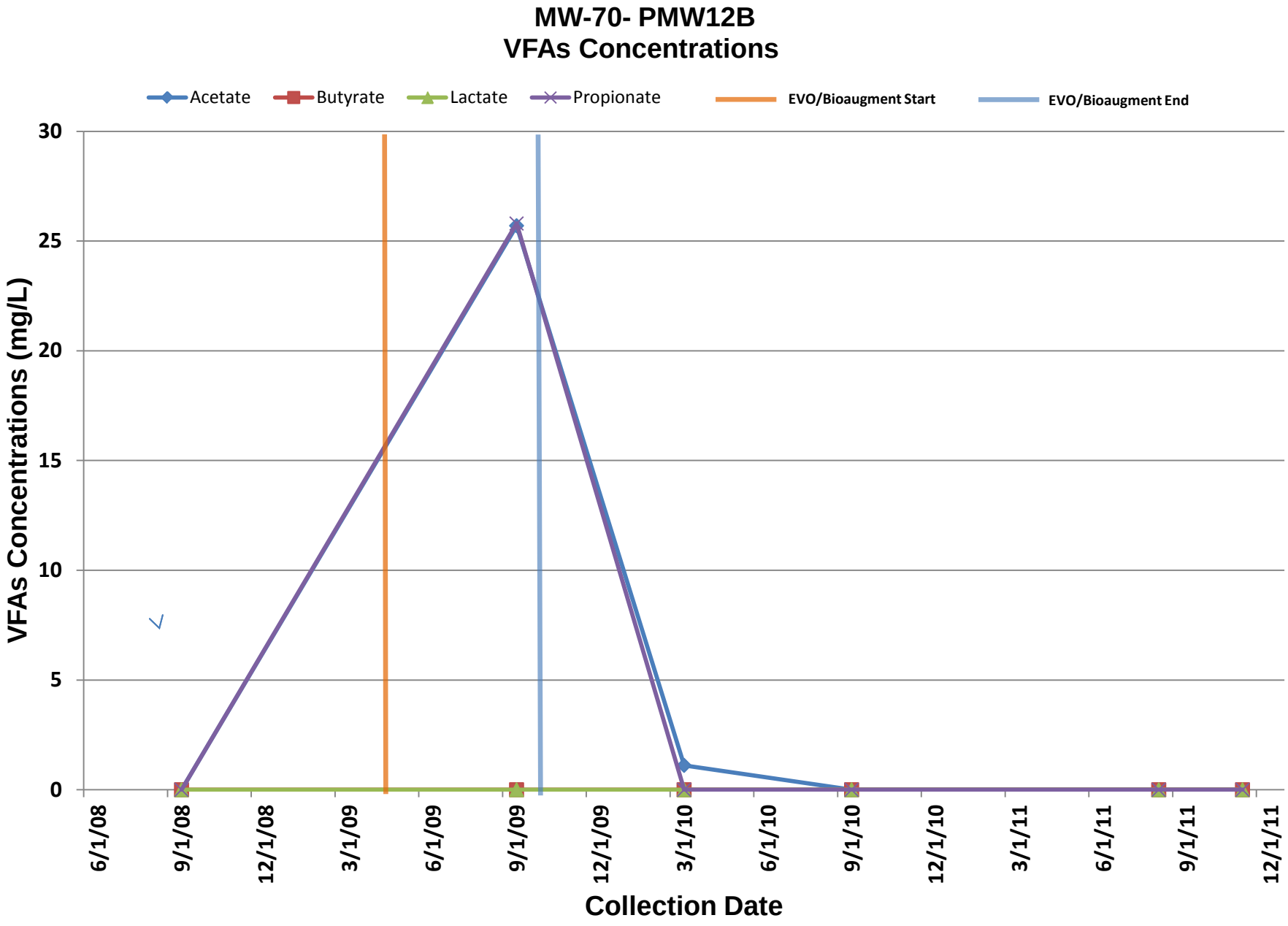

MW-70-PMW08B
VFAs Concentrations
Acetate
Butyrate
Lactate
Propionate
EVO/Bioaugment Start
EVO/Bioaugment End
VFAs Concentrations (mg/L)
10
9
8
7
6
5
4
3
2
1
0
6/1/08
9/1/08
12/1/08
3/1/09
6/1/09
9/1/09
12/1/09
3/1/10
6/1/10
9/1/10
12/1/10
3/1/11
6/1/11
9/1/11
12/1/11
Collection Date

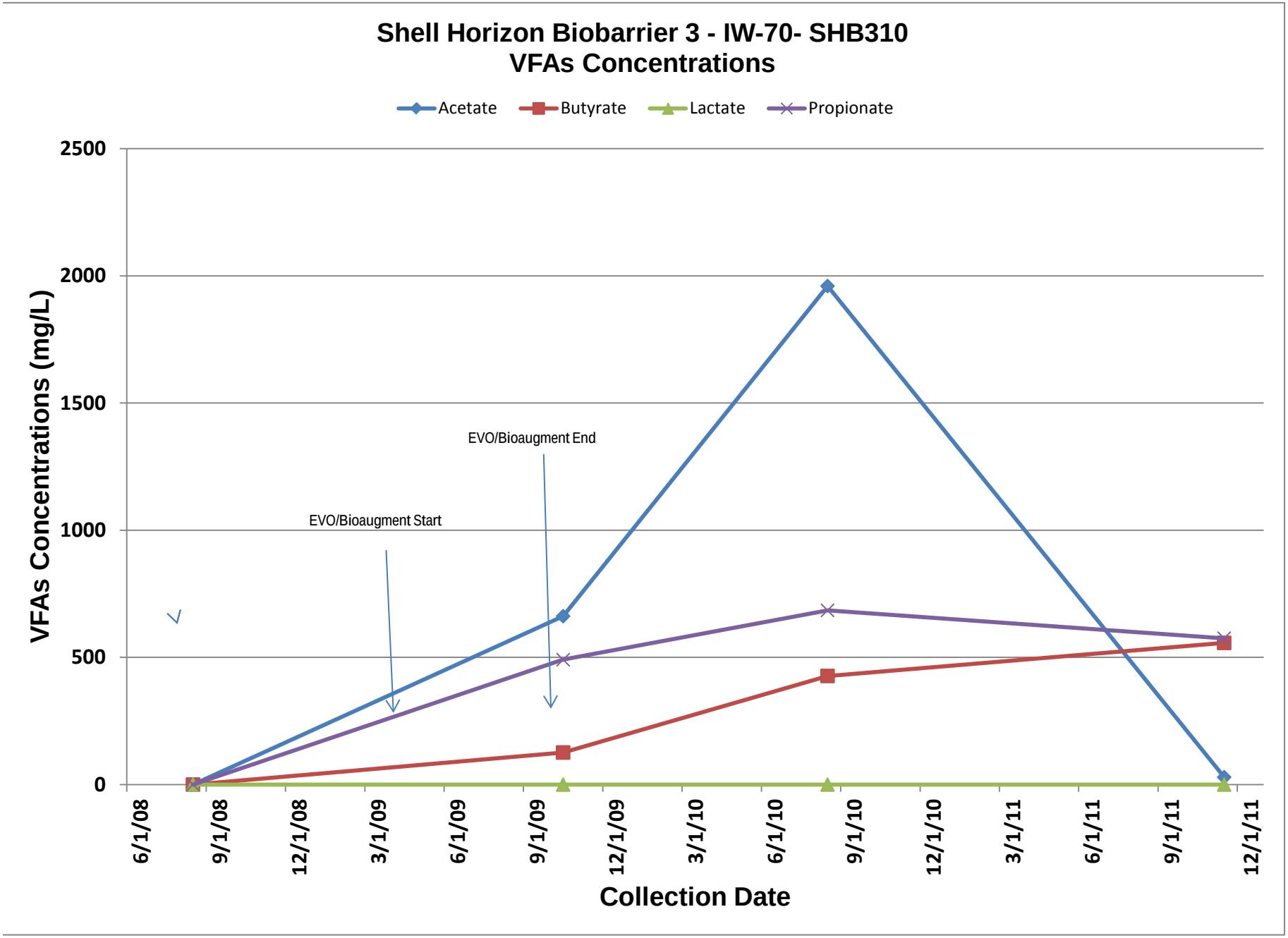

IW-70-FSB216
VFAs Concentrations
Acetate
Butyrate
Lactate
Propionate
VFAs Concentrations (mg/L)
800
700
600
500
400
300
200
100
0
EVO/Bioaugment End
6/1/08
9/1/08
12/1/08
3/1/09
6/1/09
9/1/09
12/1/09
3/1/10
6/1/10
9/1/10
12/1/10
3/1/11
6/1/11
9/1/11
12/1/11
Collection Date

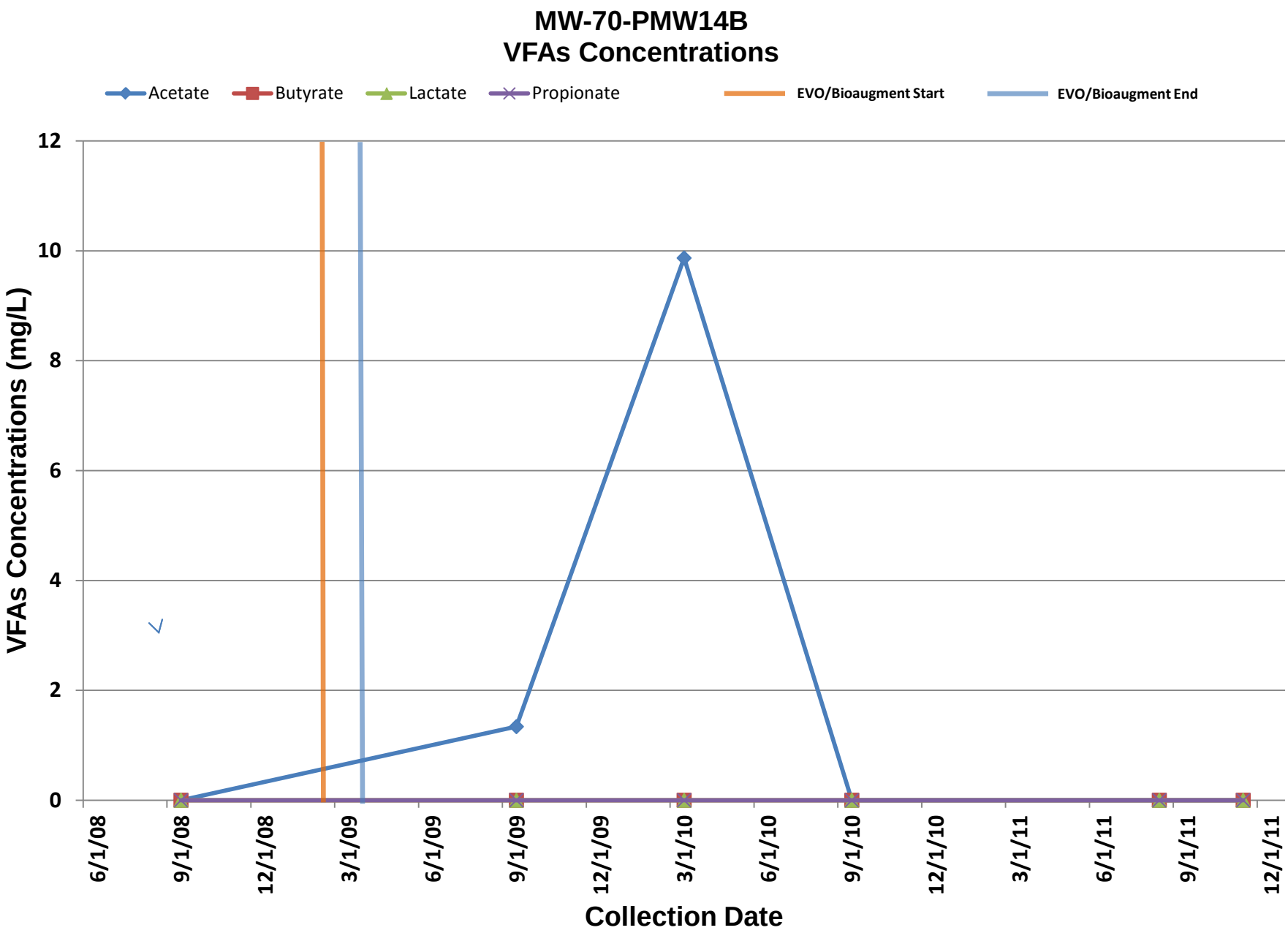

IW-70-FSB216
VFAs Concentrations
Acetate
Butyrate
Lactate
Propionate
VFAs Concentrations (mg/L)
800
700
600
500
400
300
200
100
0
EVO/Bioaugment End
EVO/Bioaugment Start
6/1/08
9/1/08
12/1/08
3/1/09
6/1/09
9/1/09
12/1/09
3/1/10
6/1/10
9/1/10
12/1/10
3/1/11
6/1/11
9/1/11
12/1/11
Collection Date


MW-70-PMW10
VFAs Concentrations
Acetate
Butyrate
Lactate
Propionate
EVO/Bioaugment Start
EVO/Bioaugment End
VFAs Concentrations (mg/L)
4
3.5
3
2.5
2
1.5
1
0.5
0
6/1/08
9/1/08
12/1/08
3/1/09
6/1/09
9/1/09
12/1/09
3/1/10
6/1/10
9/1/10
12/1/10
3/1/11
6/1/11
9/1/11
12/1/11
Collection Date


IW-70-SHB113
VFAs Concentrations
Acetate
Butyrate
Lactate
Propionate
VFAs Concentrations (mg/L)
300
250
200
150
100
50
0
EVO/Bioaugment End
EVO/Bioaugment Start
6/1/08
9/1/08
12/1/08
3/1/09
6/1/09
9/1/09
12/1/09
3/1/10
6/1/10
9/1/10
12/1/10
3/1/11
6/1/11
9/1/11
12/1/11
Collection Date


MW-70- PMW12B
VFAs Concentrations
Acetate
Butyrate
Lactate
Propionate
EVO/Bioaugment Start
EVO/Bioaugment End
VFAs Concentrations (mg/L)
30
25
20
15
10
5
0
6/1/08
9/1/08
12/1/08
3/1/09
6/1/09
9/1/09
12/1/09
3/1/10
6/1/10
9/1/10
12/1/10
3/1/11
6/1/11
9/1/11
12/1/11
Collection Date


Shell Horizon Biobarrier 3 - IW-70- SHB310
VFAs Concentrations
Acetate
Butyrate
Lactate
Propionate
VFAs Concentrations (mg/L)
2500
2000
1500
1000
500
0
EVO/Bioaugment End
EVO/Bioaugment Start
6/1/08
9/1/08
12/1/08
3/1/09
6/1/09
9/1/09
12/1/09
3/1/10
6/1/10
9/1/10
12/1/10
3/1/11
6/1/11
9/1/11
12/1/11
Collection Date


MW-70-PMW14B
VFAs Concentrations
Acetate
Butyrate
Lactate
Propionate
EVO/Bioaugment Start
EVO/Bioaugment End
VFAs Concentrations (mg/L)
12
10
8
6
4
2
0
6/1/08
9/1/08
12/1/08
3/1/09
6/1/09
9/1/09
12/1/09
3/1/10
6/1/10
9/1/10
12/1/10
3/1/11
6/1/11
9/1/11
12/1/11
Collection Date

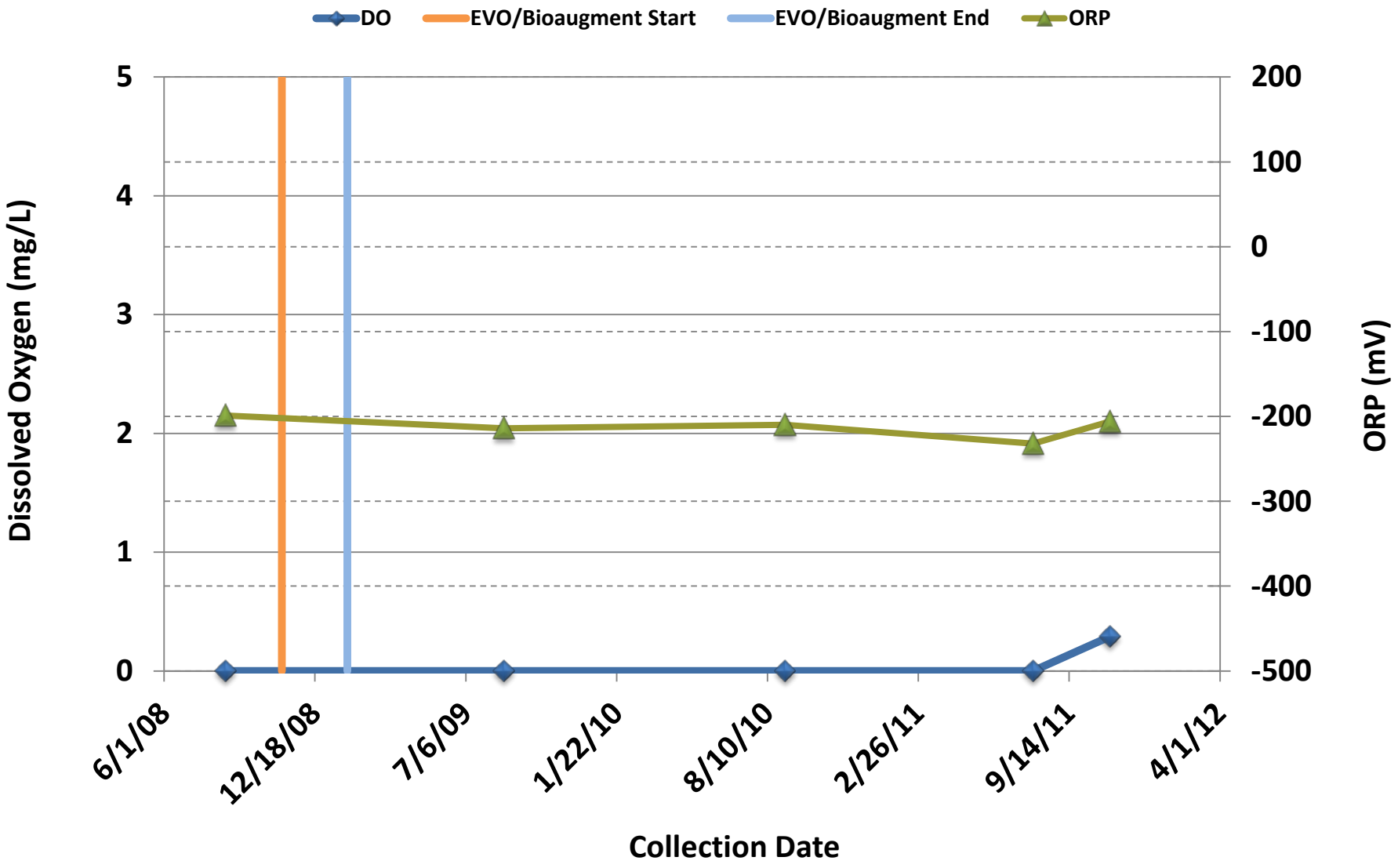
IR Site 70
Naval Weapons Station Seal Beach

Dissolved Oxygen (DO) and Oxidation Reduction Potential (ORP) Trends

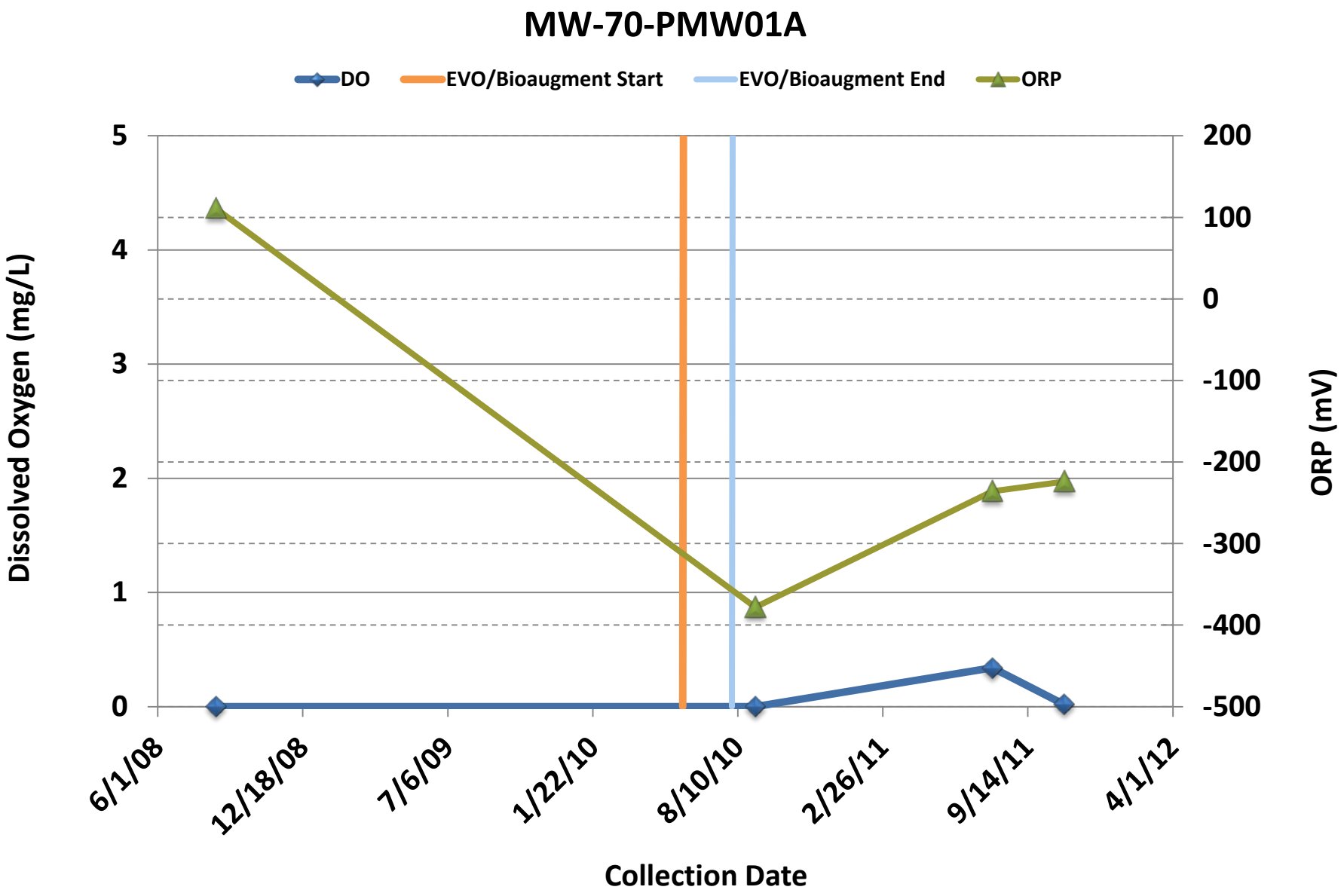
Source Area Treatment Grid
Source Area Biobarrier
First Sand Biobarrier 1
First Sand Biobarrier 2
Shell Horizon Biobarrier 1
Shell Horizon Biobarrier 3
Second Sand Biobarrier 1

Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

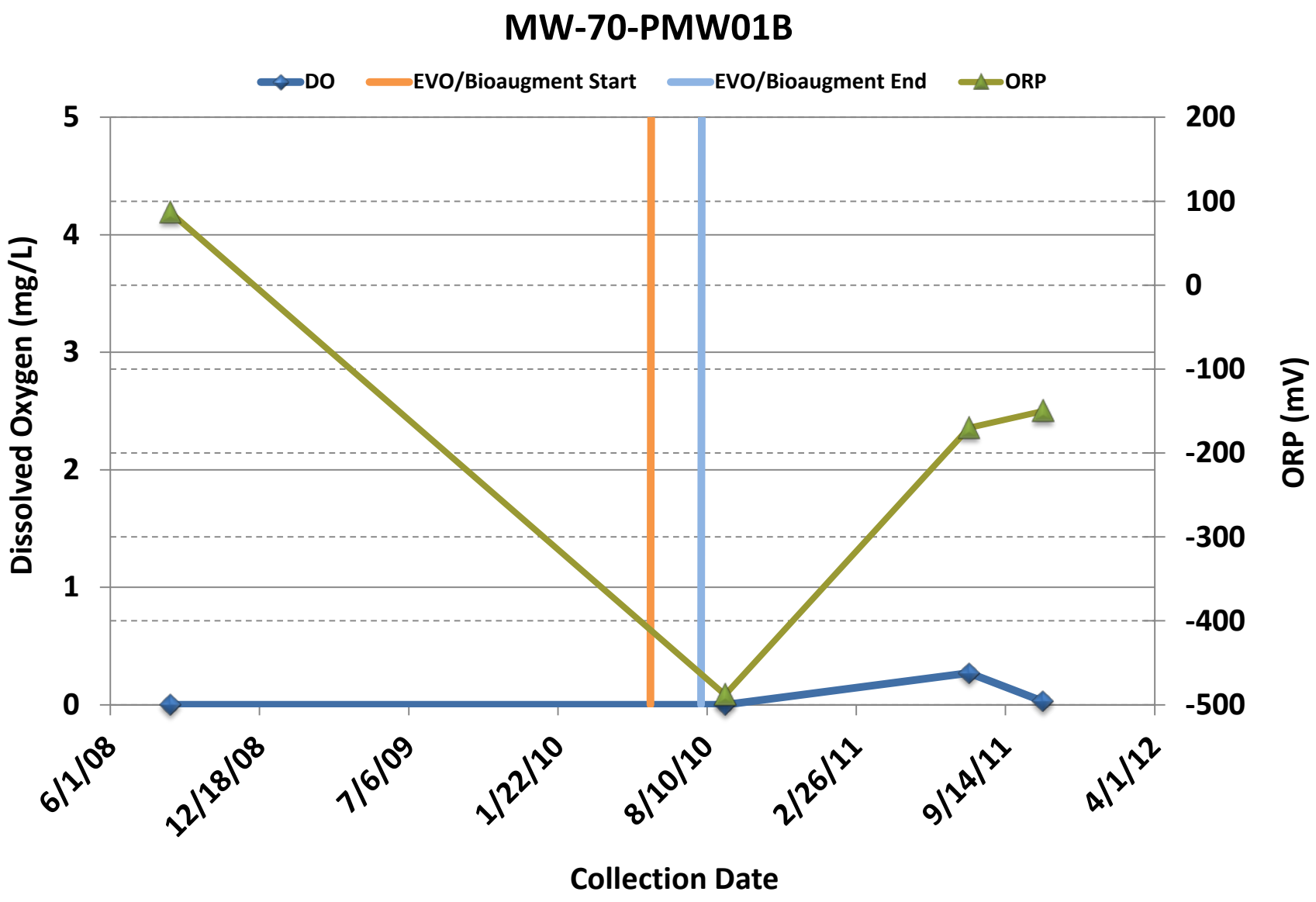
MW-70-PMW02A



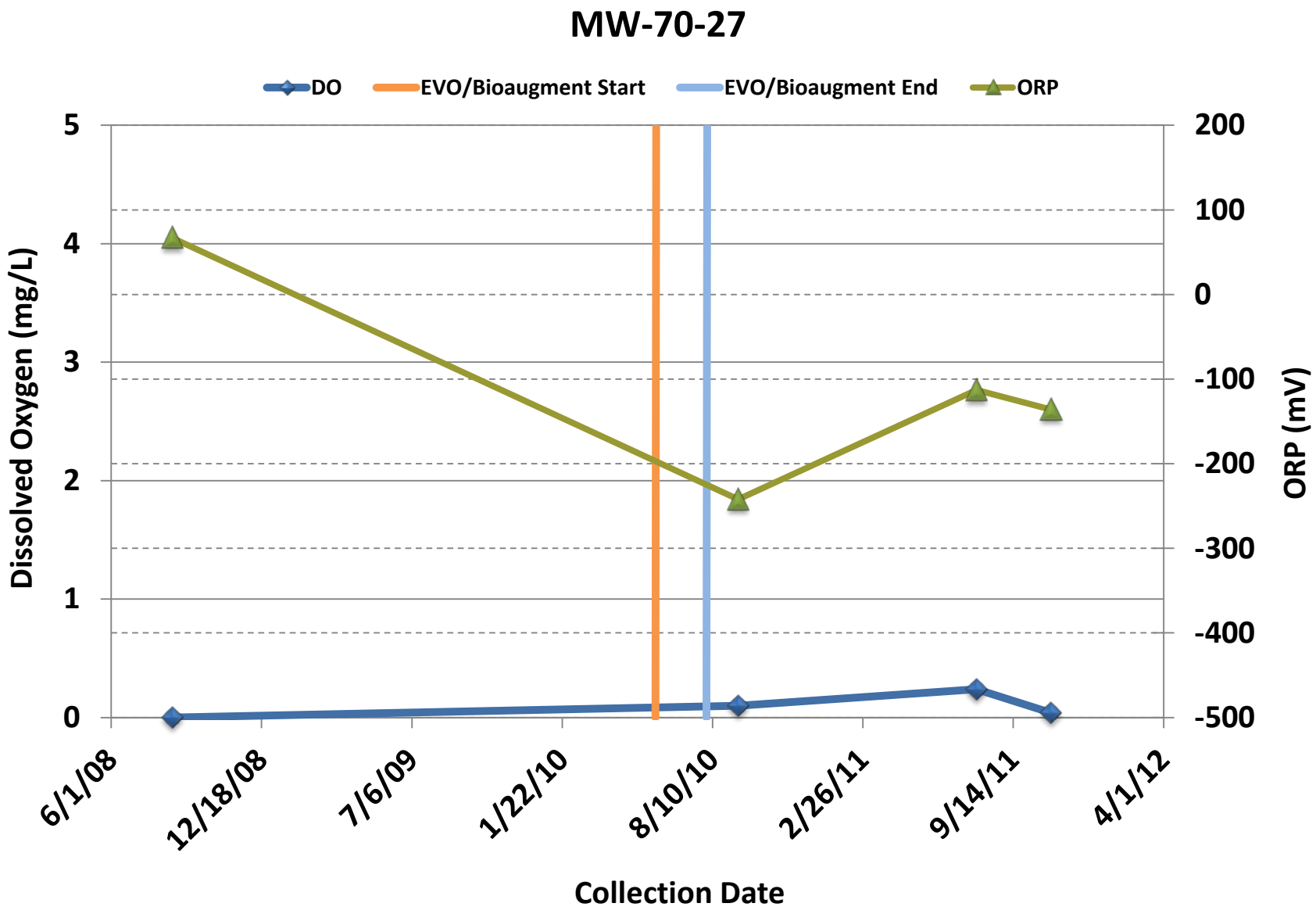
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



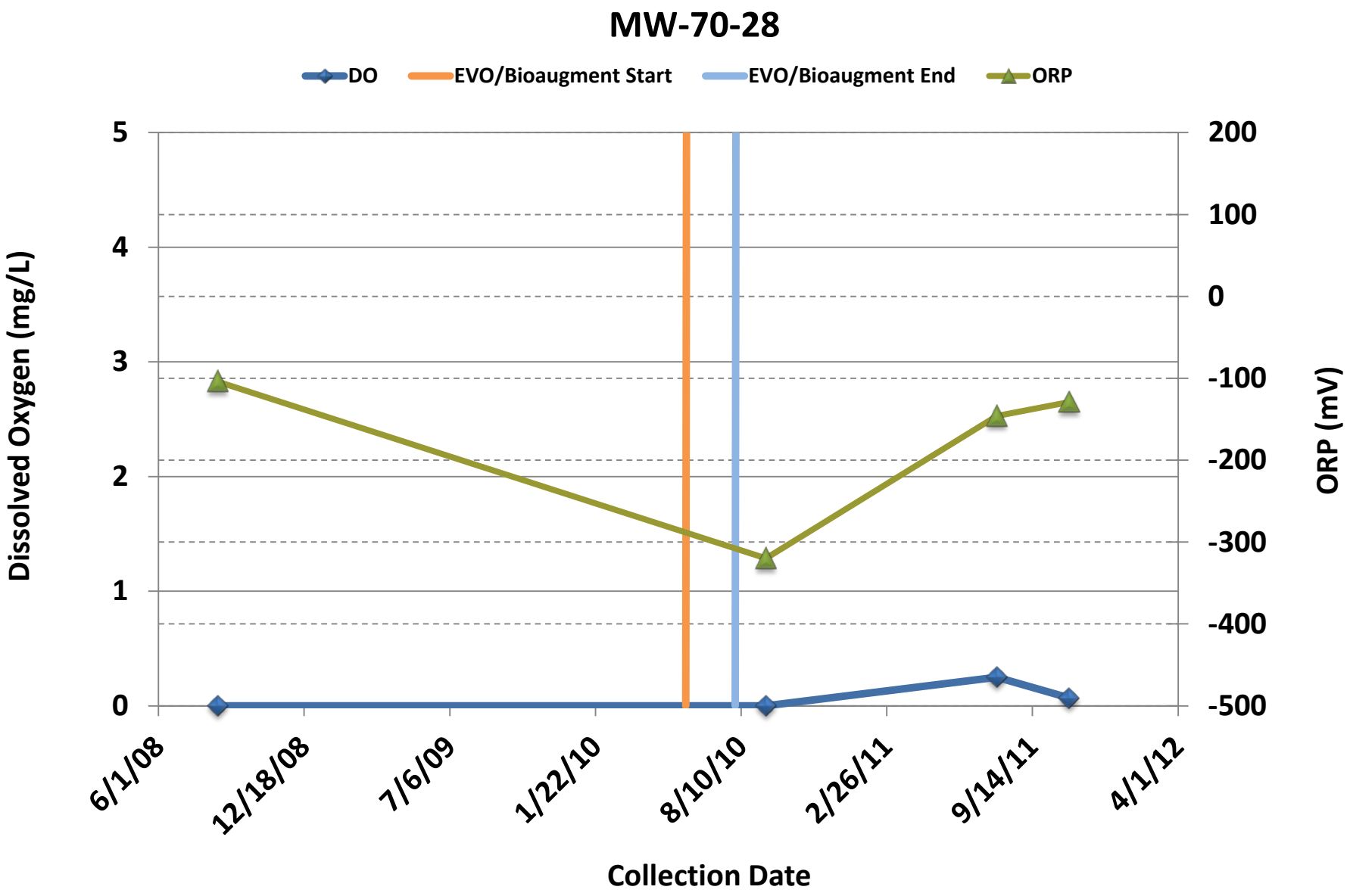
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

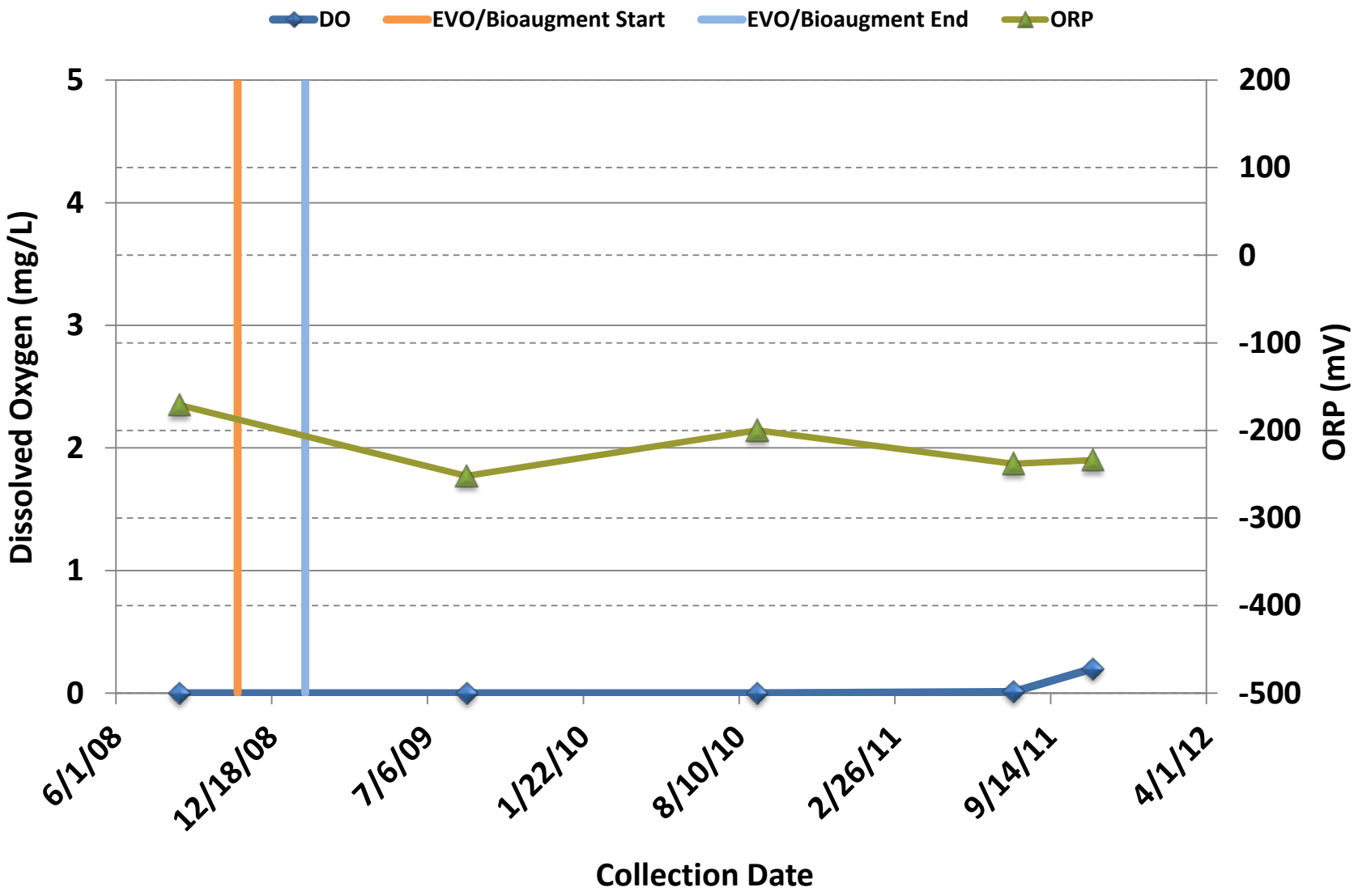


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



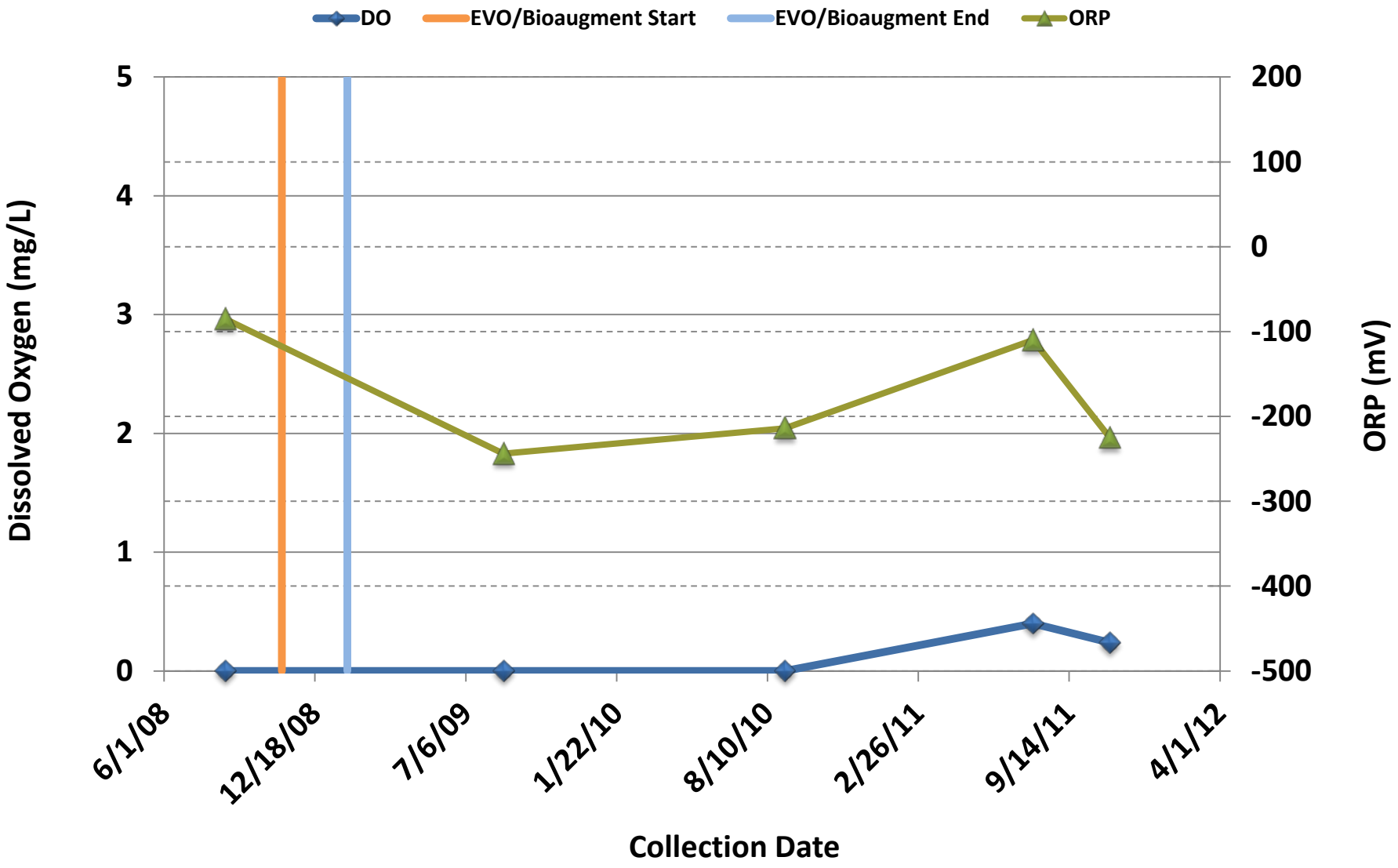
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW02B

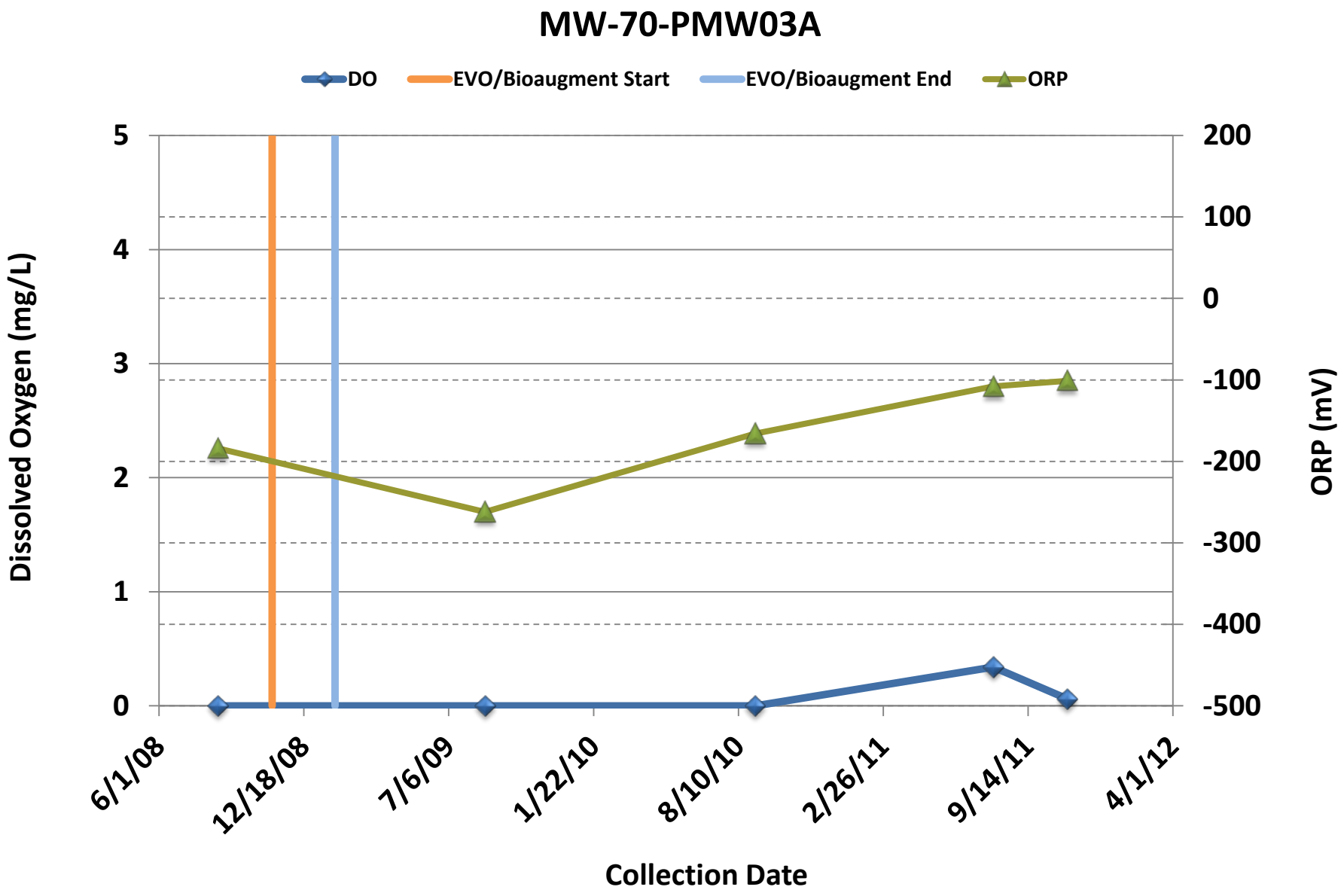


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

IW-70-SAB06

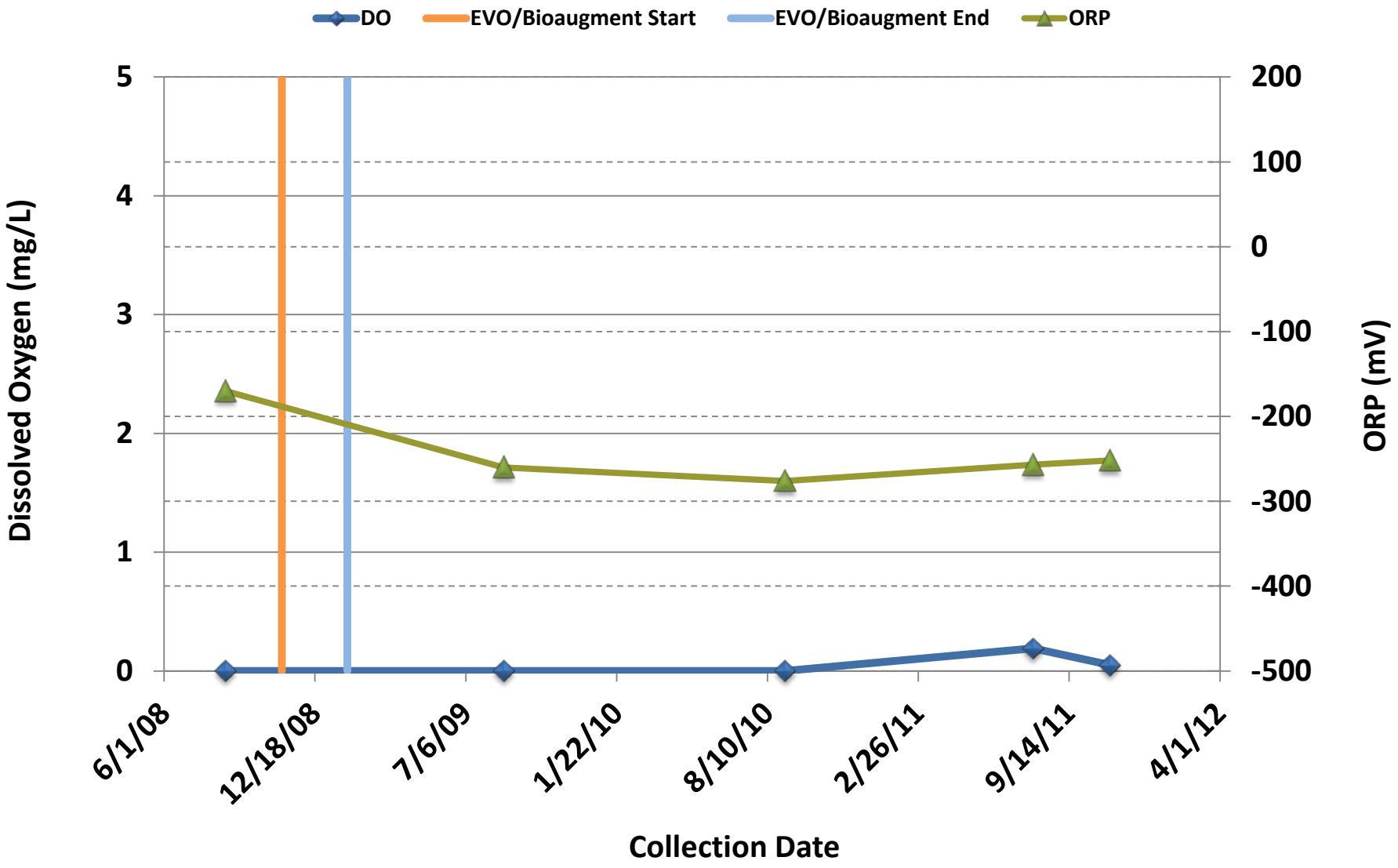


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

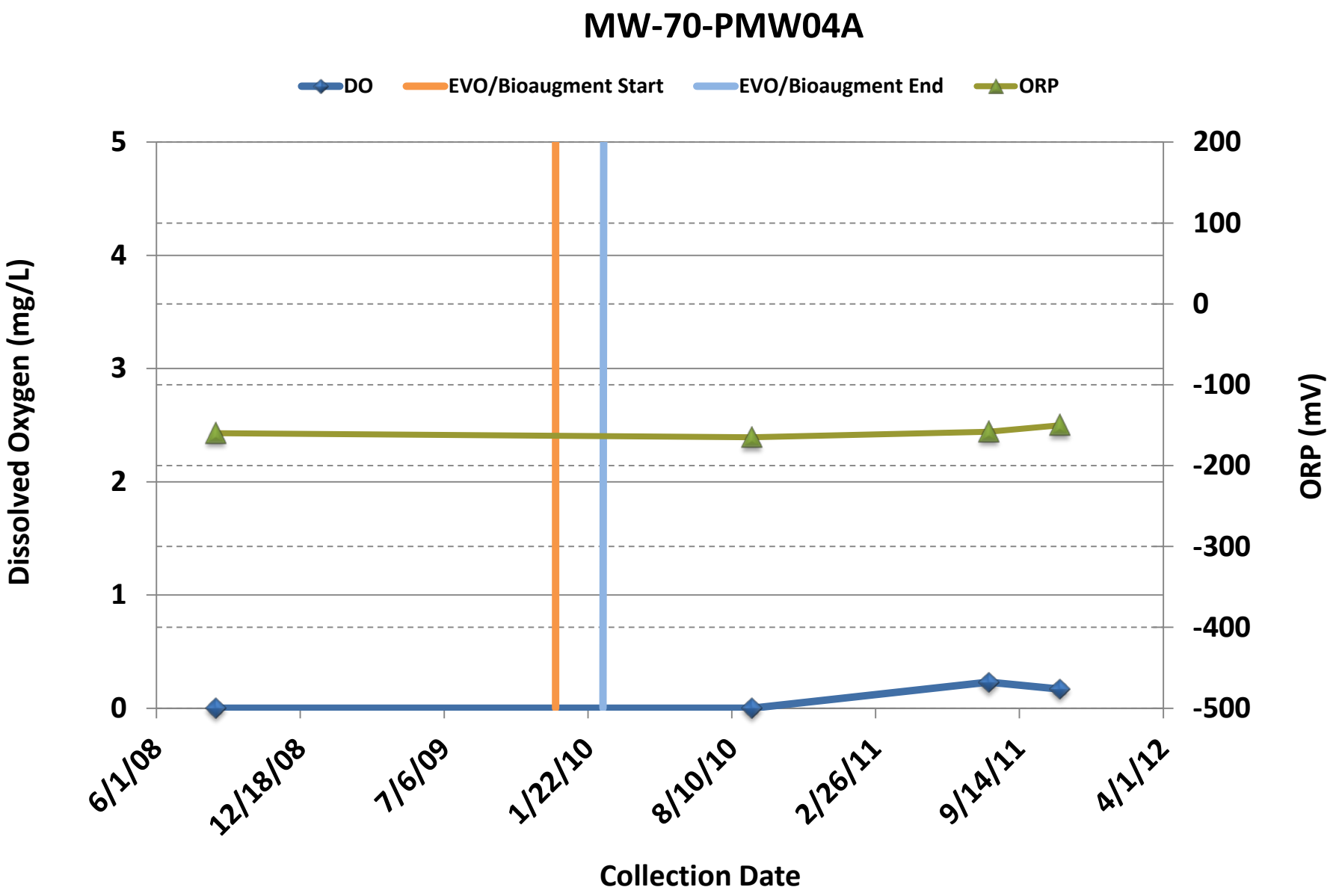


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW03B

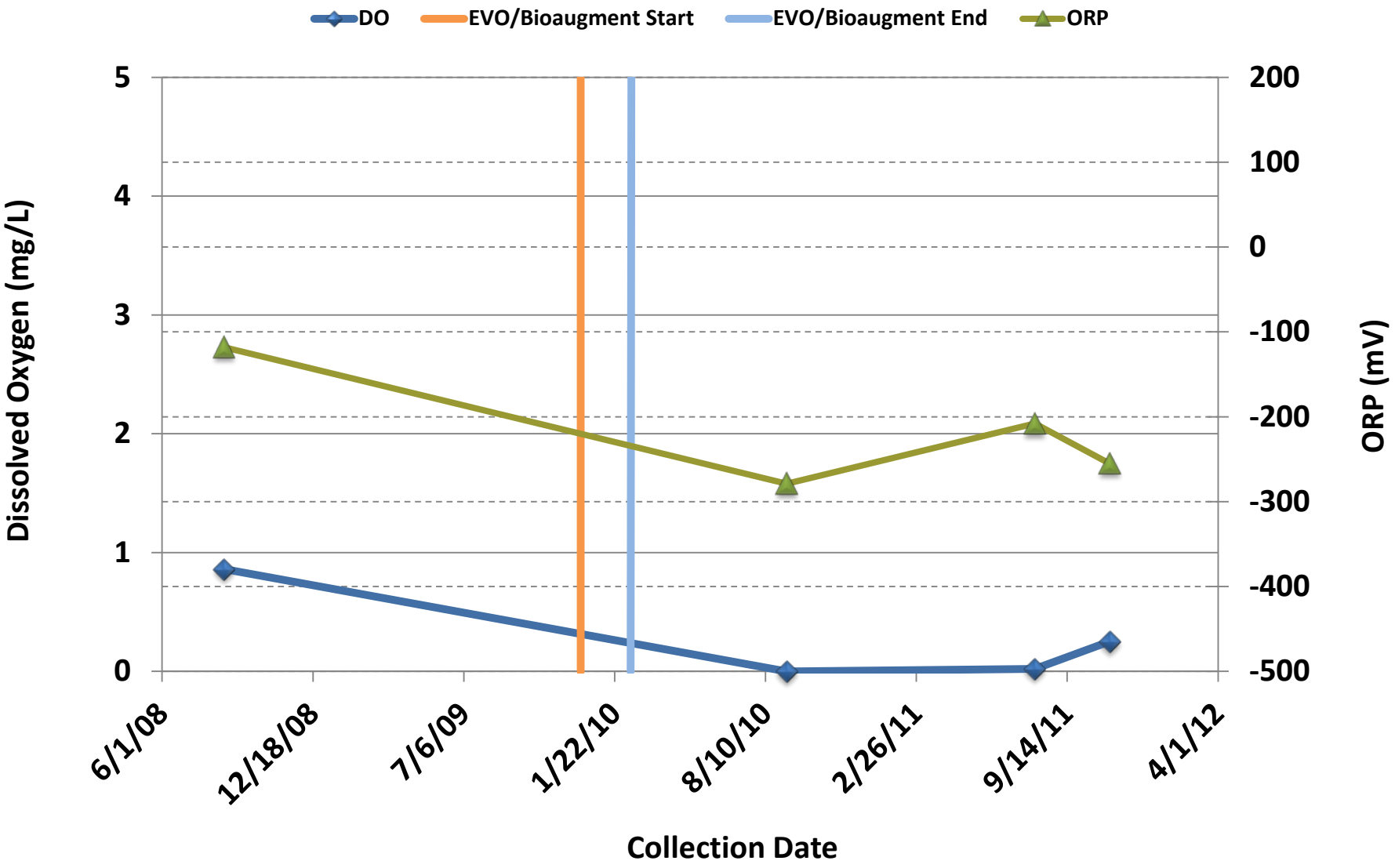


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



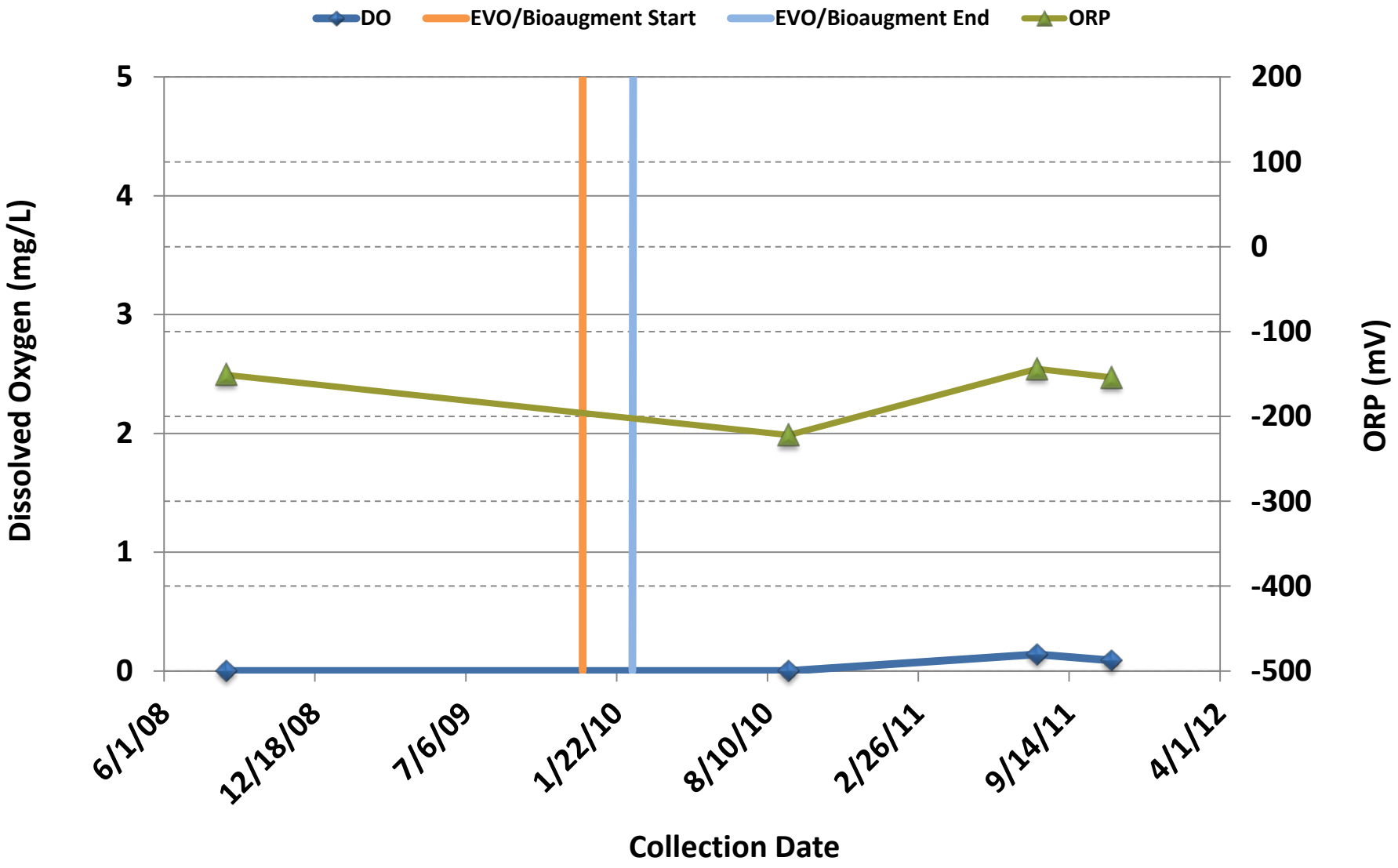
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW04B



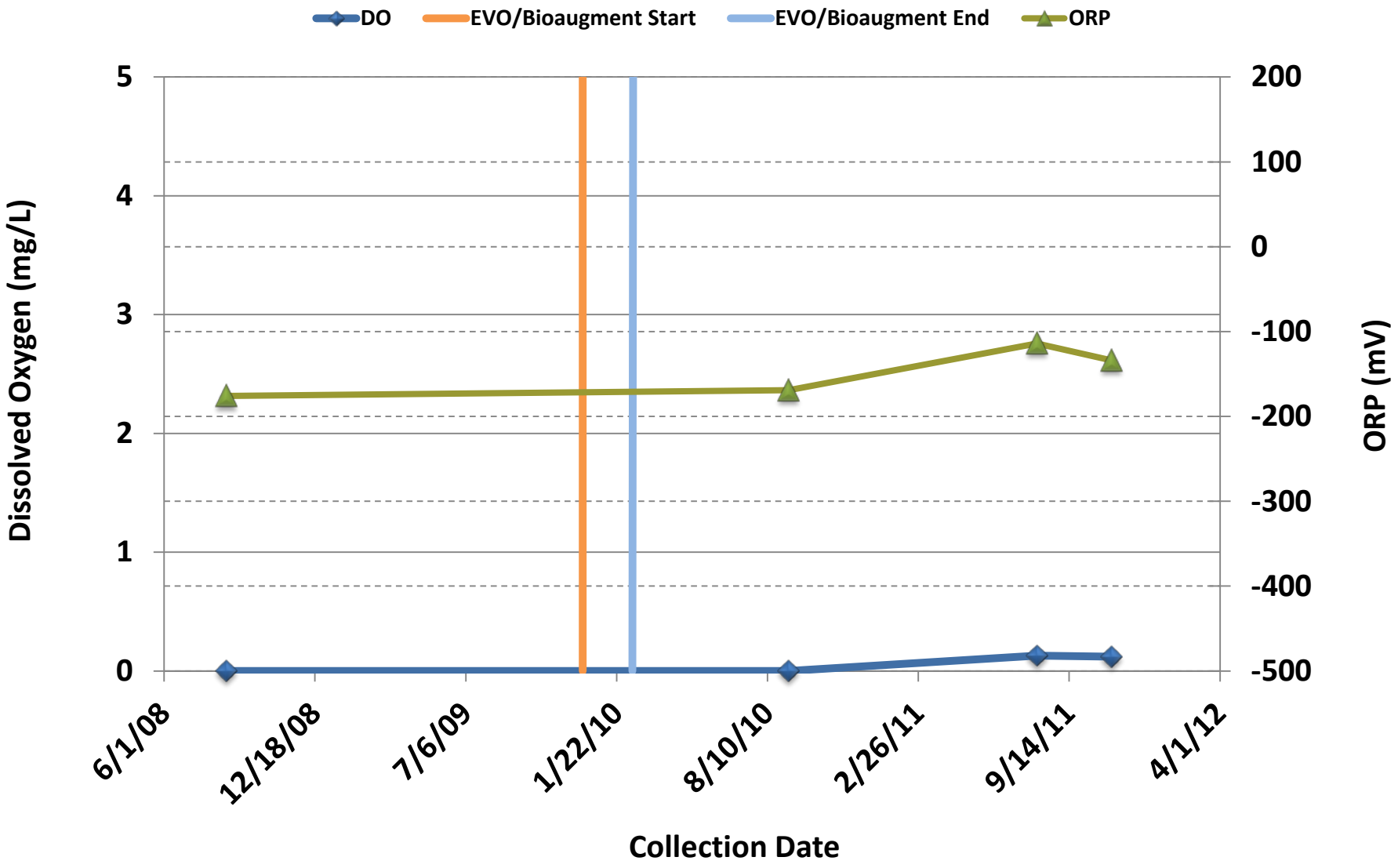
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

IW-70-FSB108



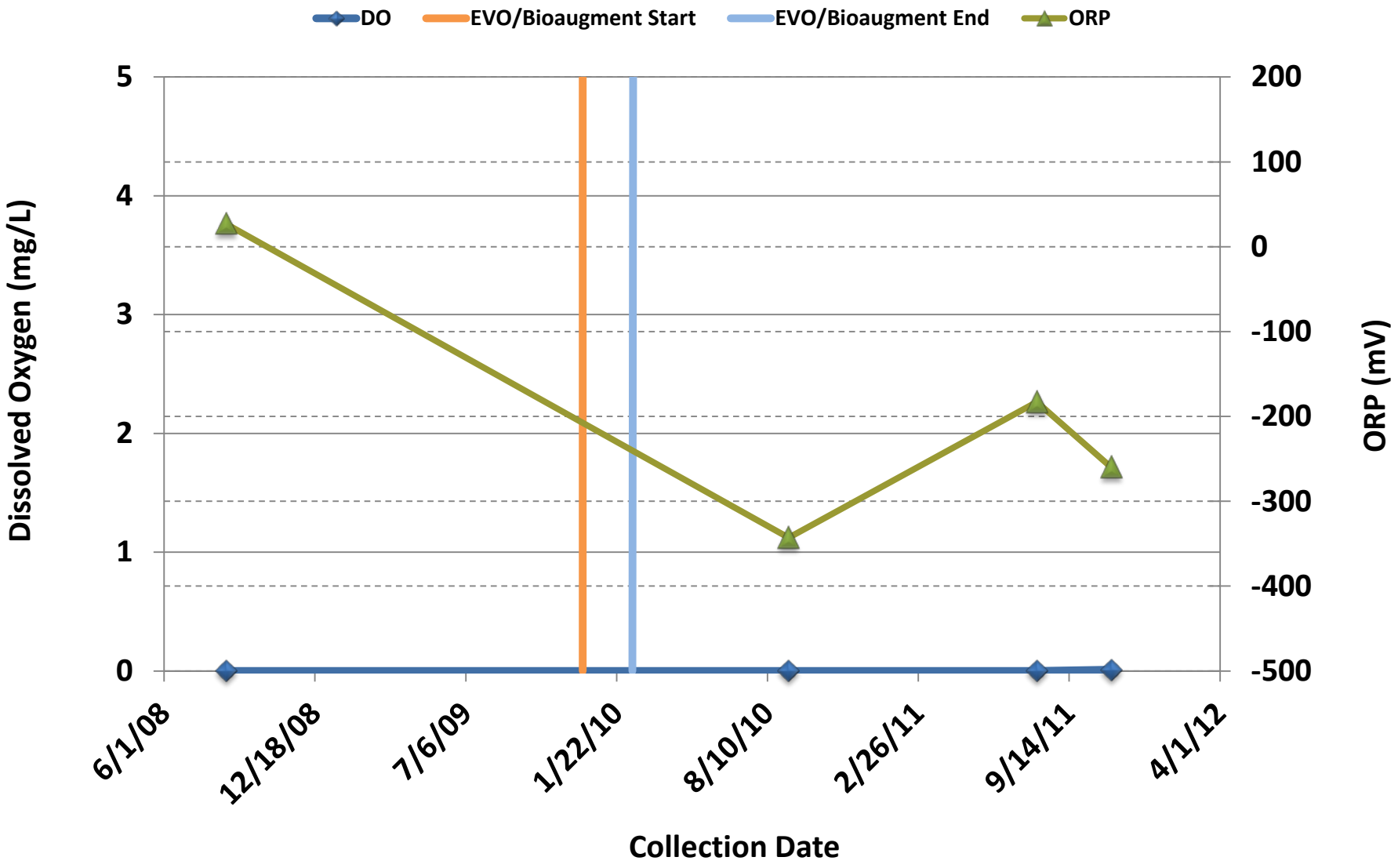
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW05A



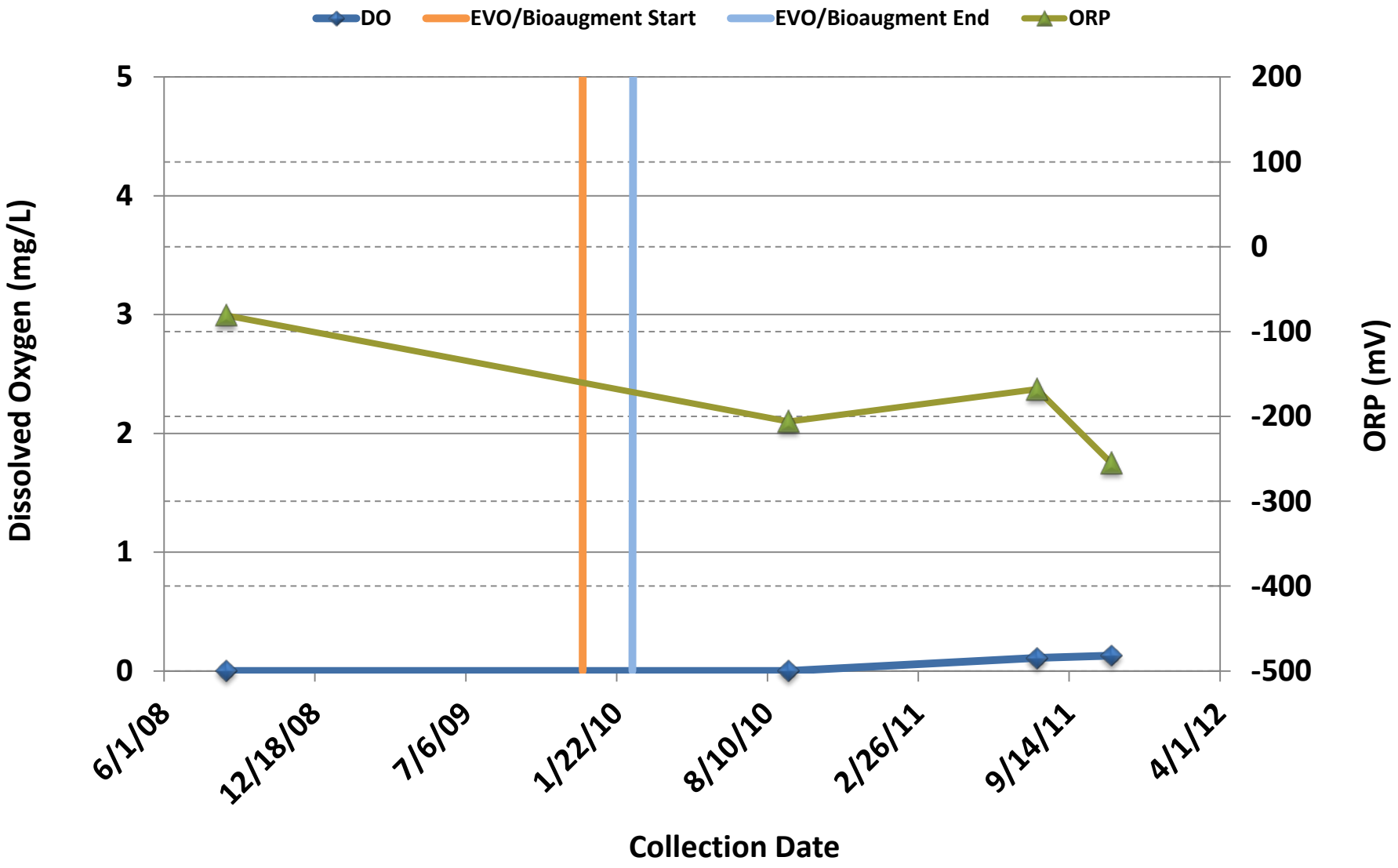
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW05B



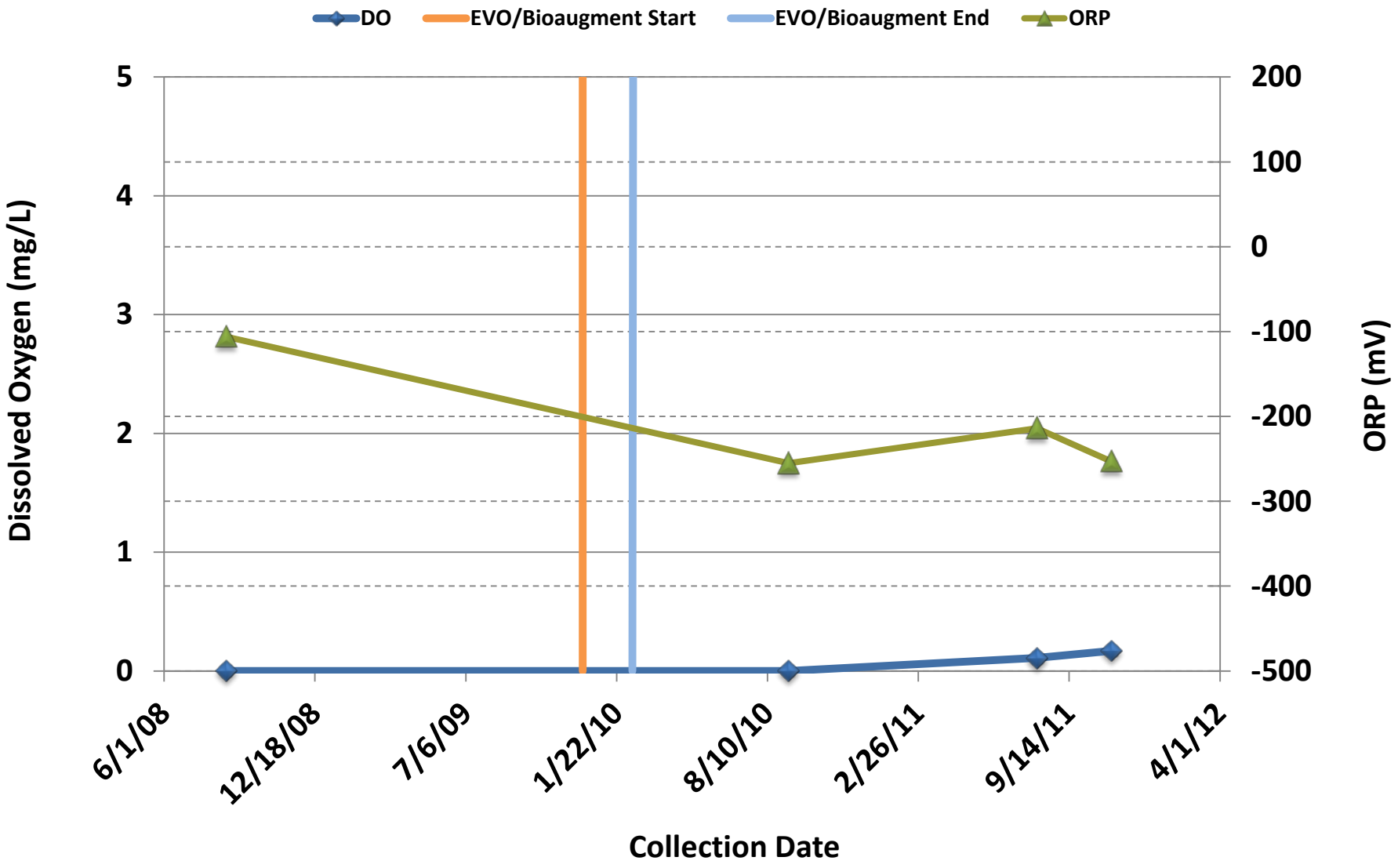
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

RDO-5



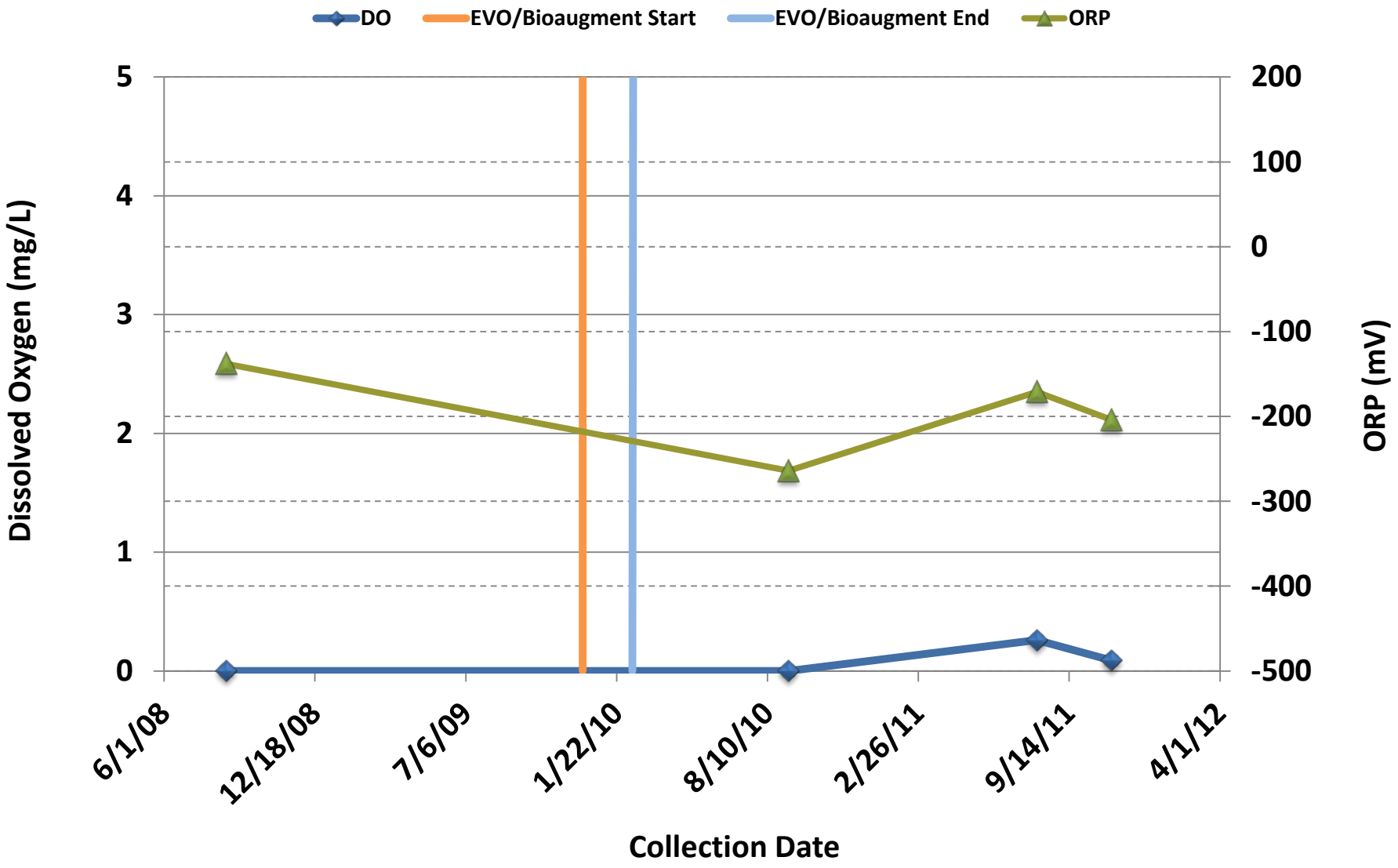
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW06A



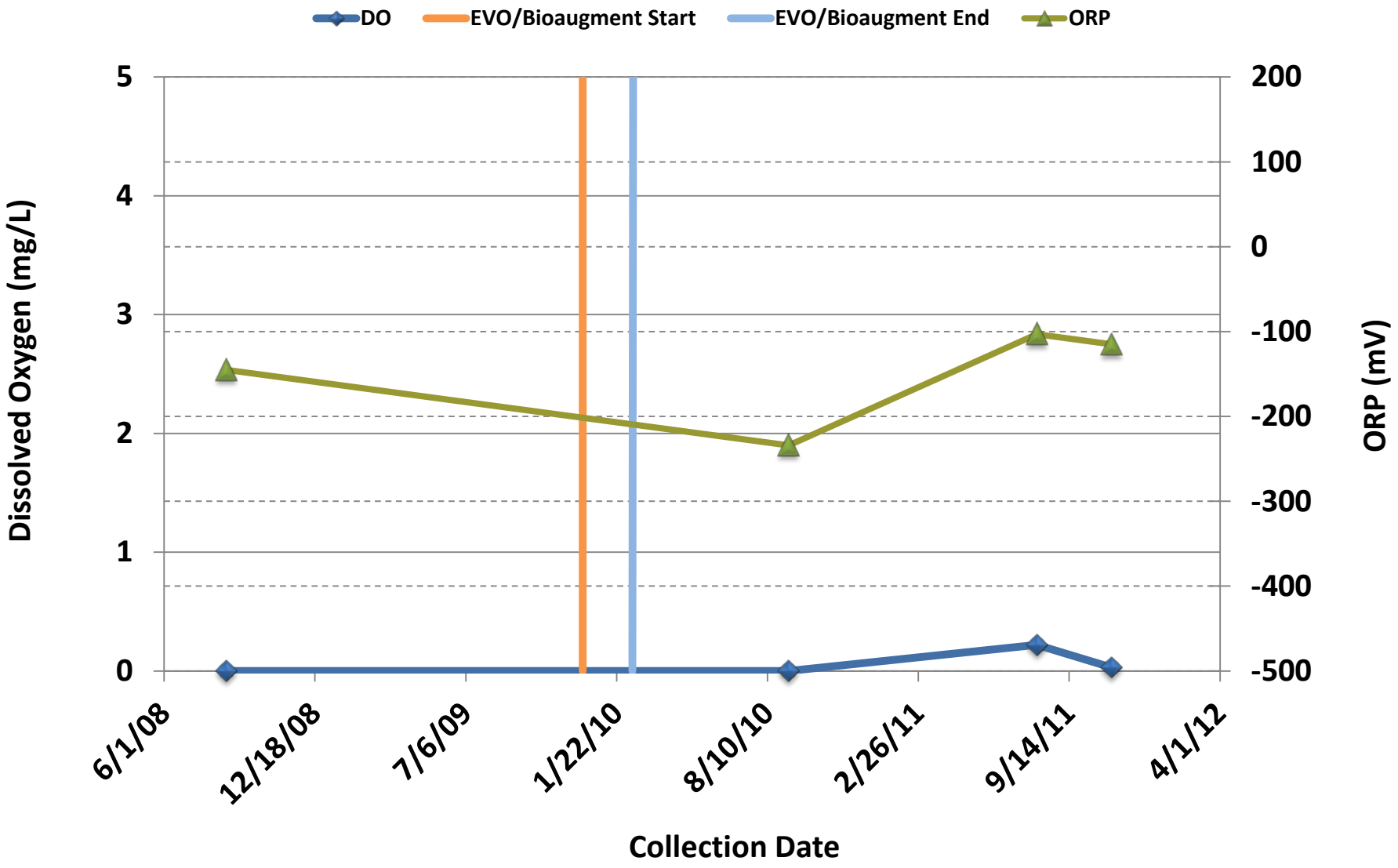
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW06B

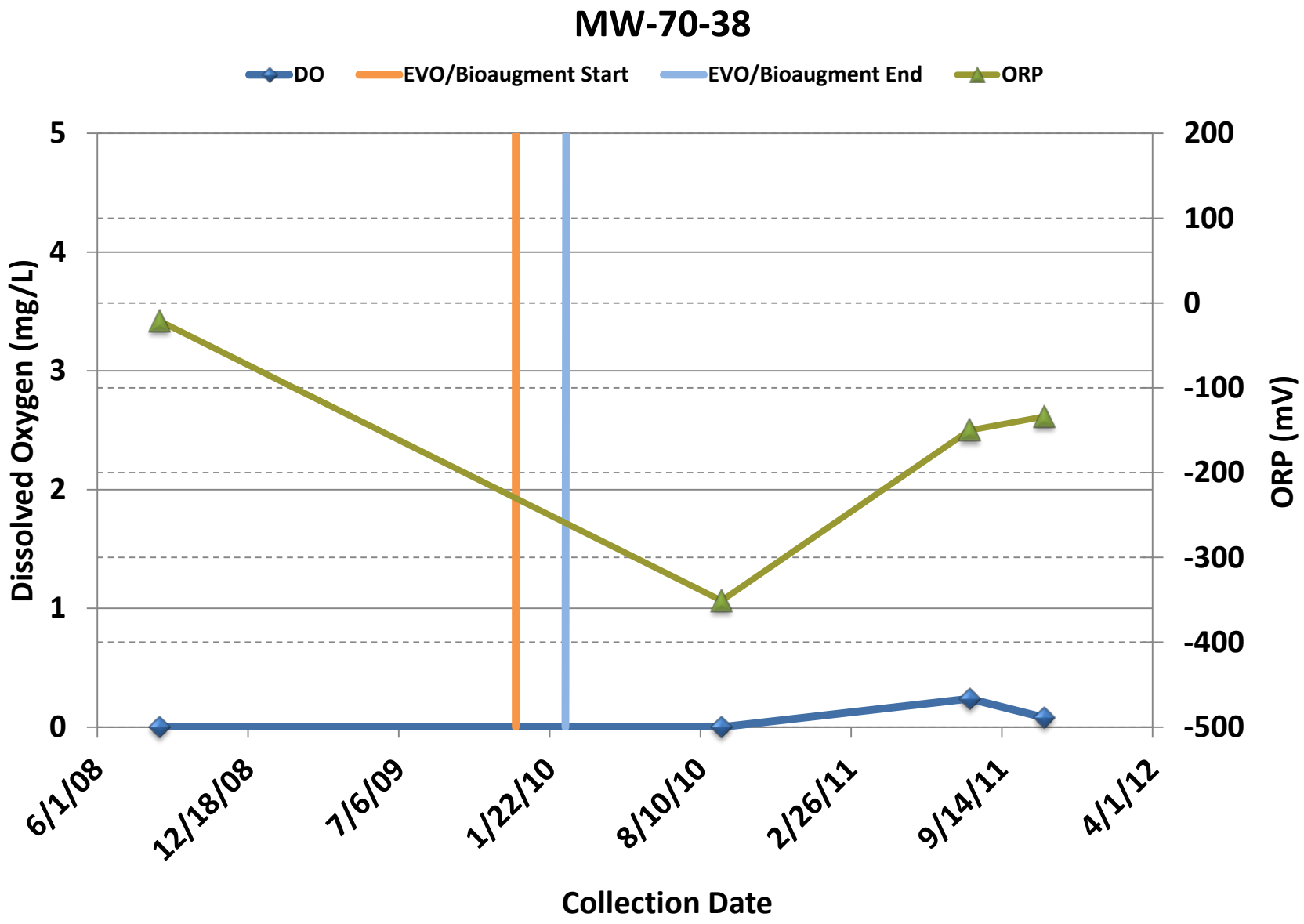


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

IW-70-FSB118

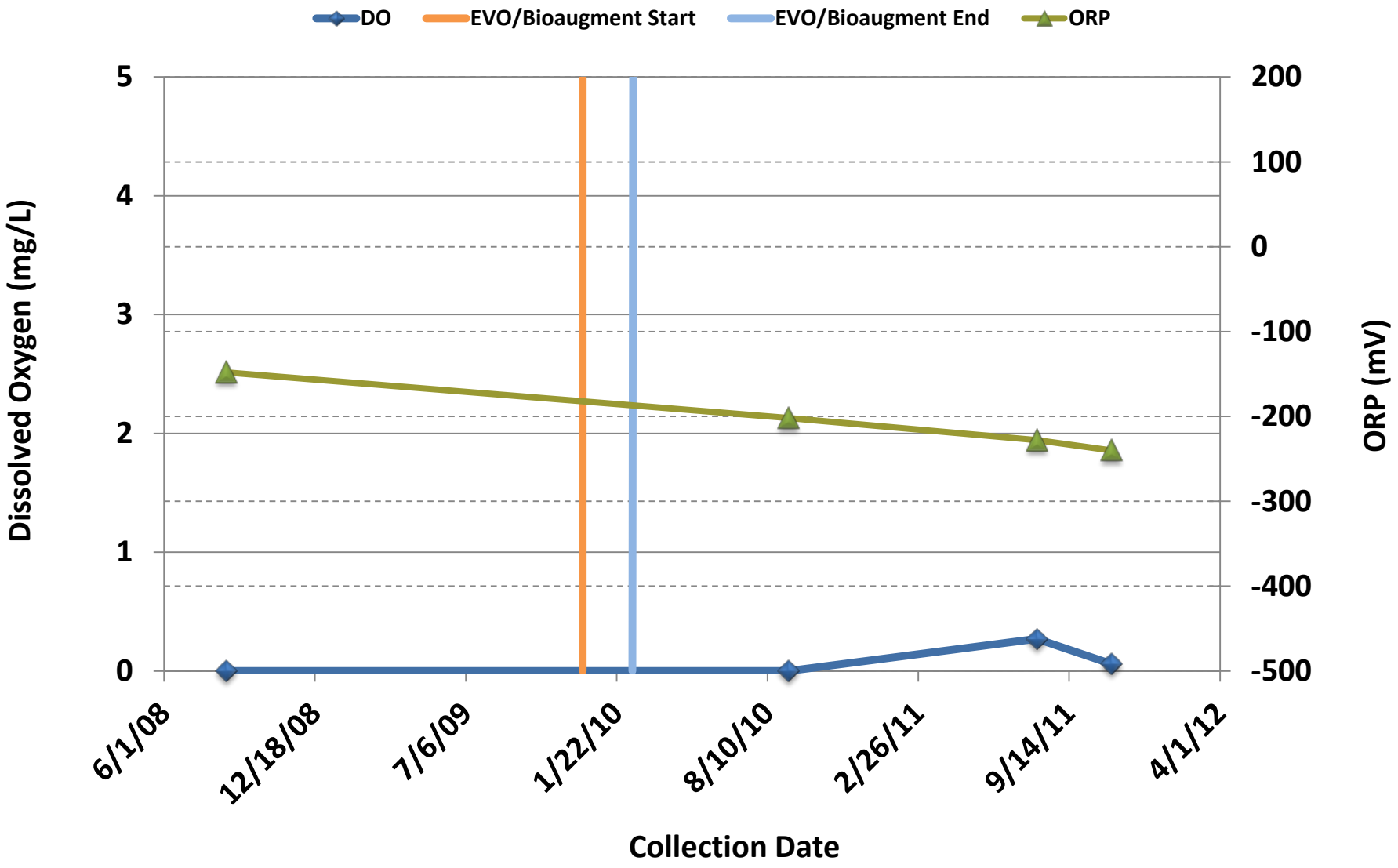


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



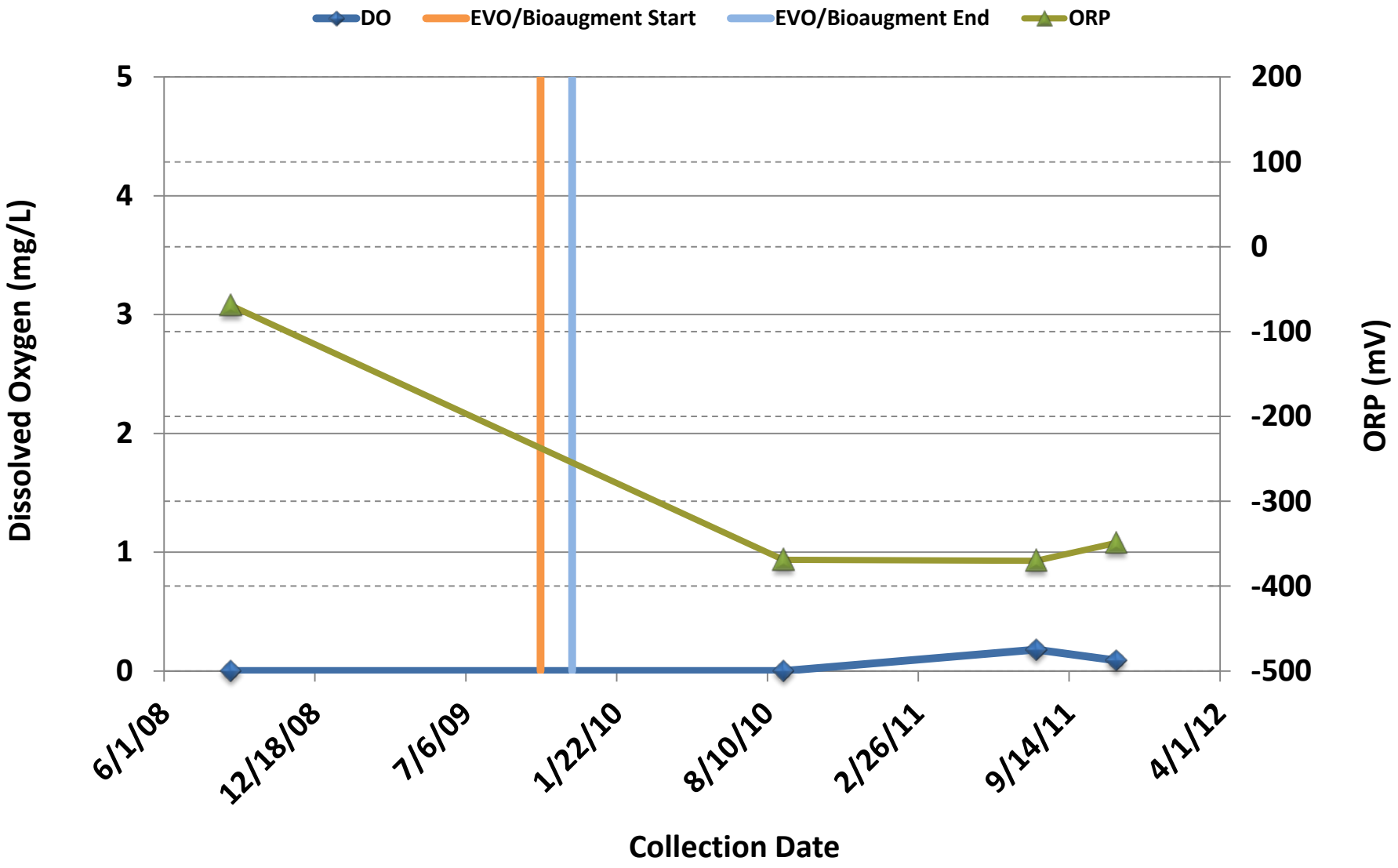
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-MNA08



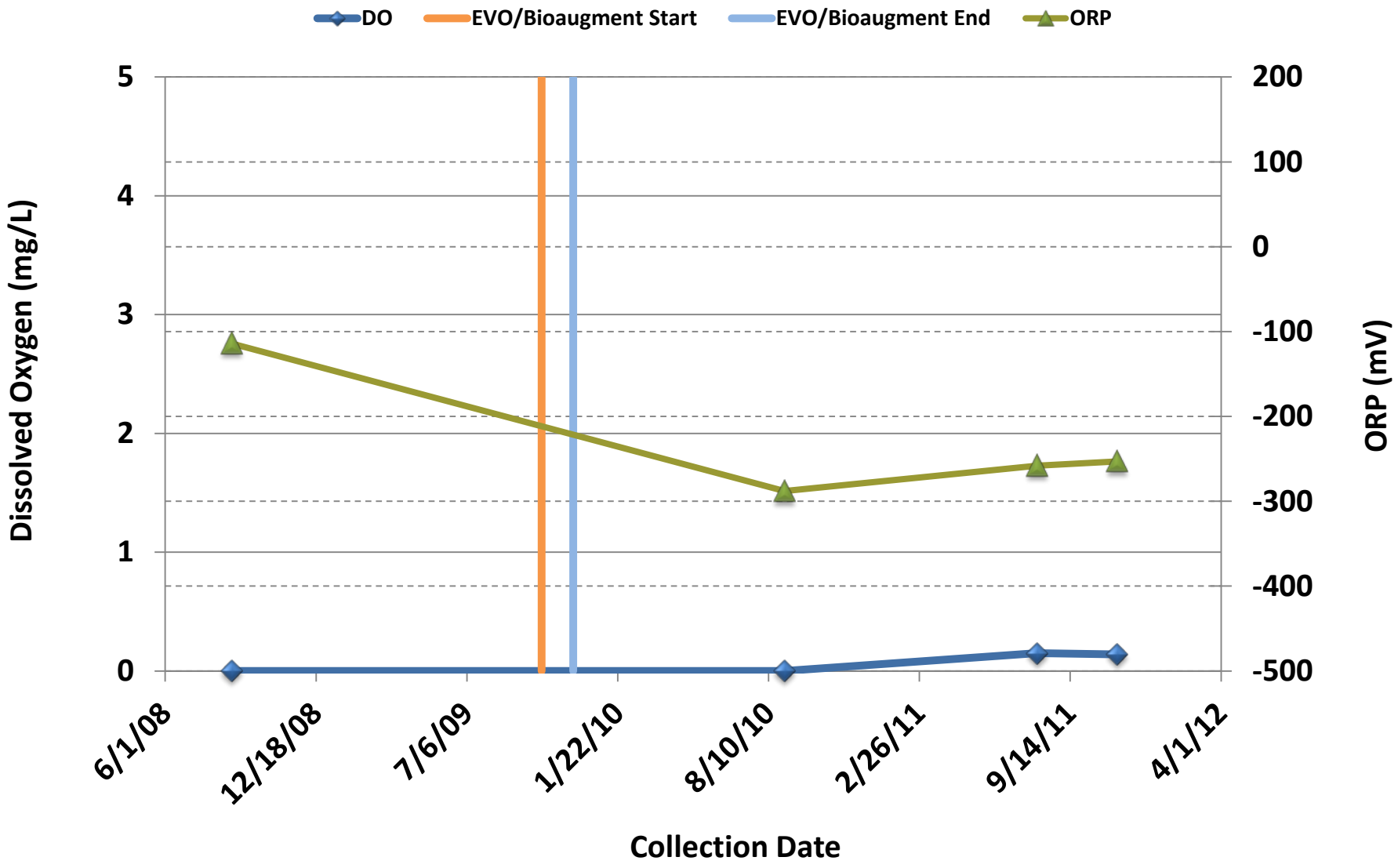
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW07A



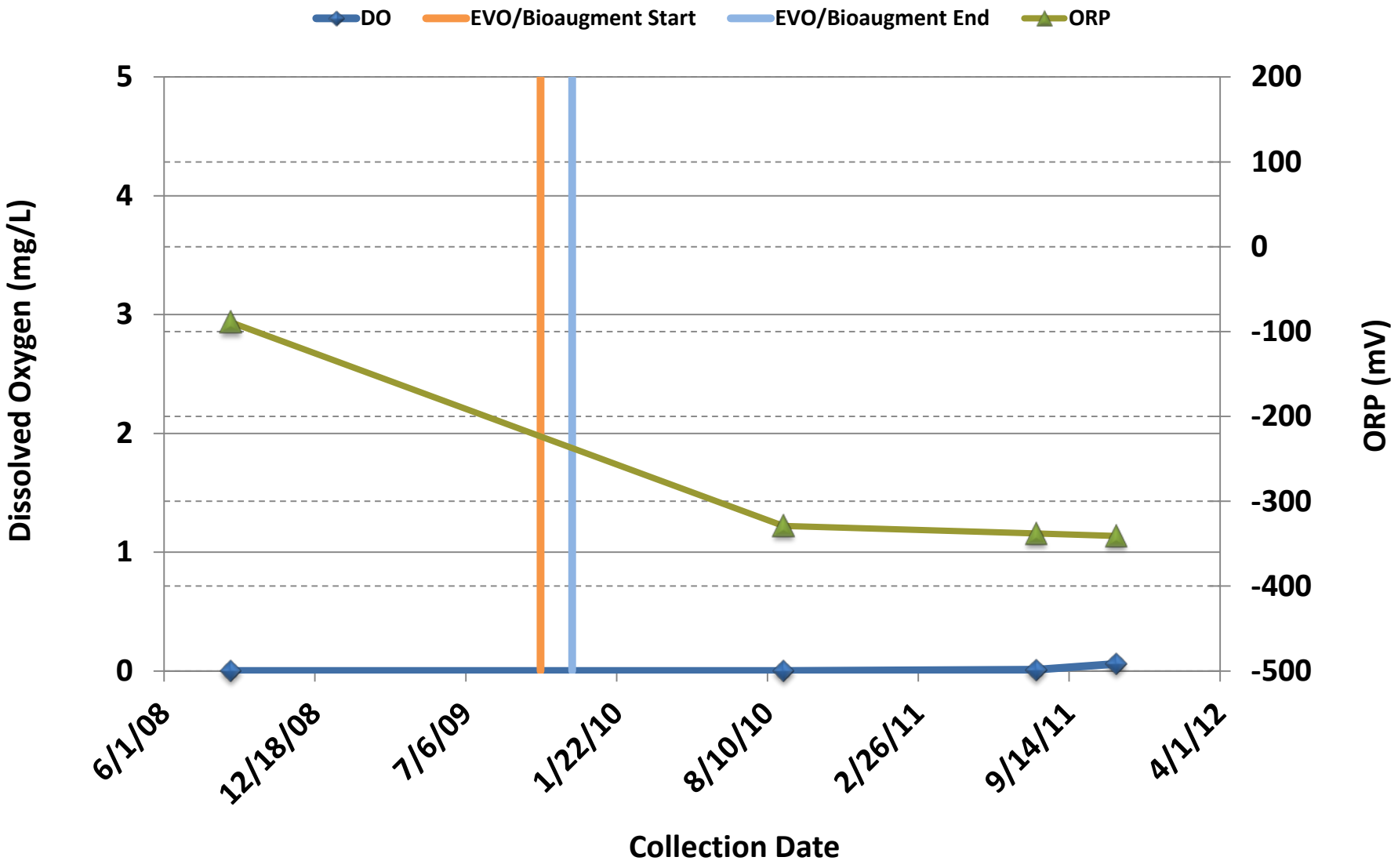
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW07B



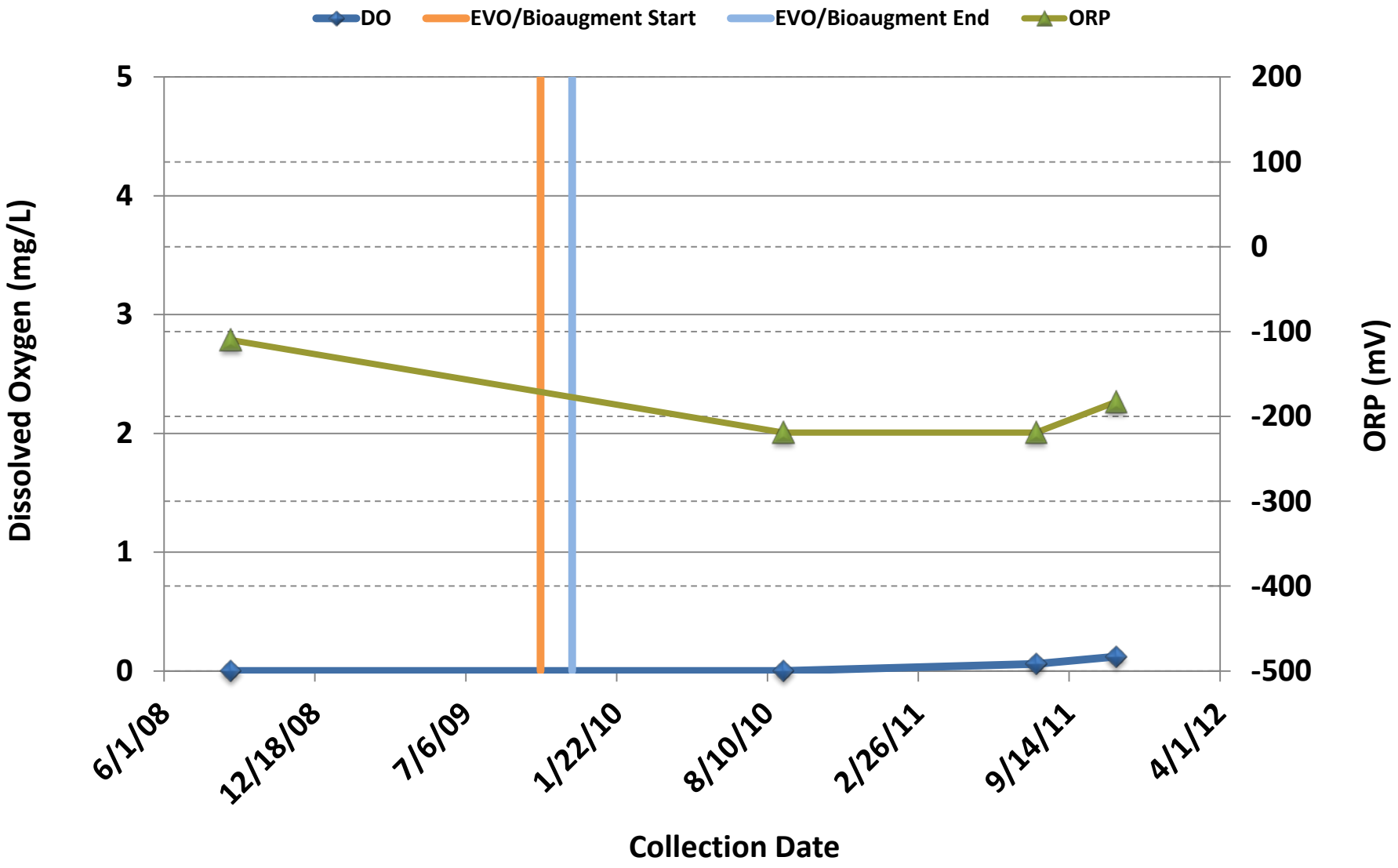
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

IW-70-FSB216

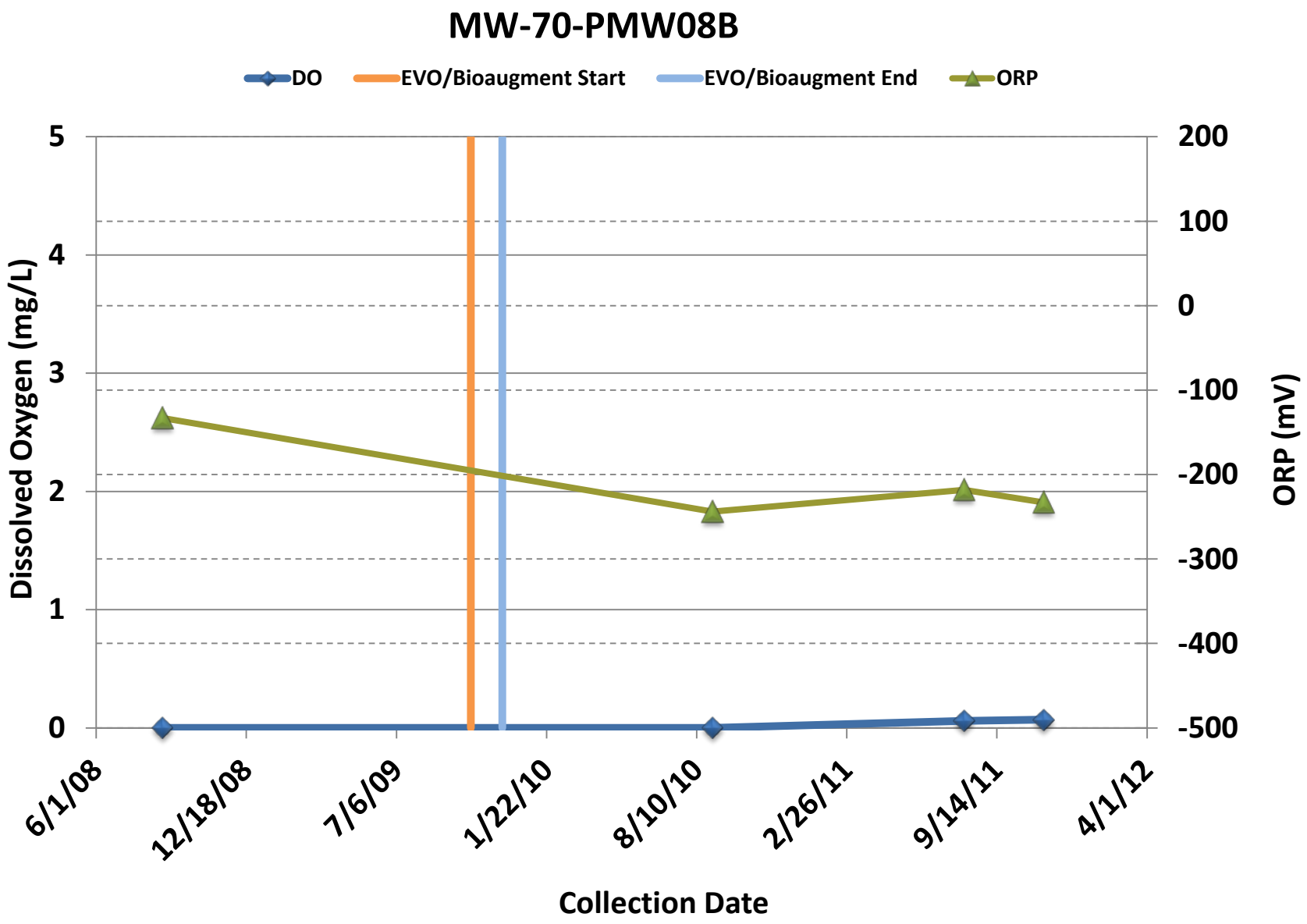


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW08A

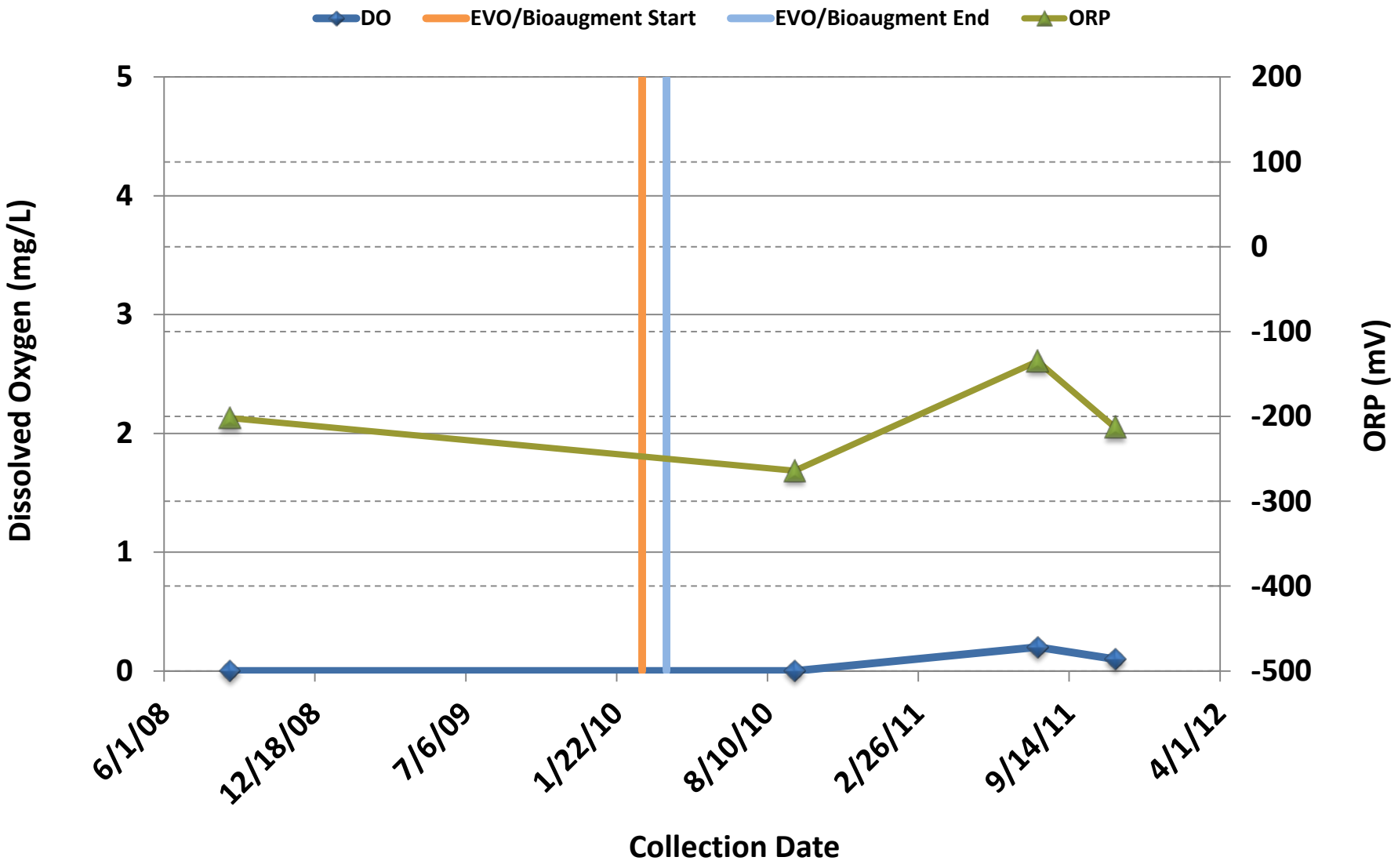


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



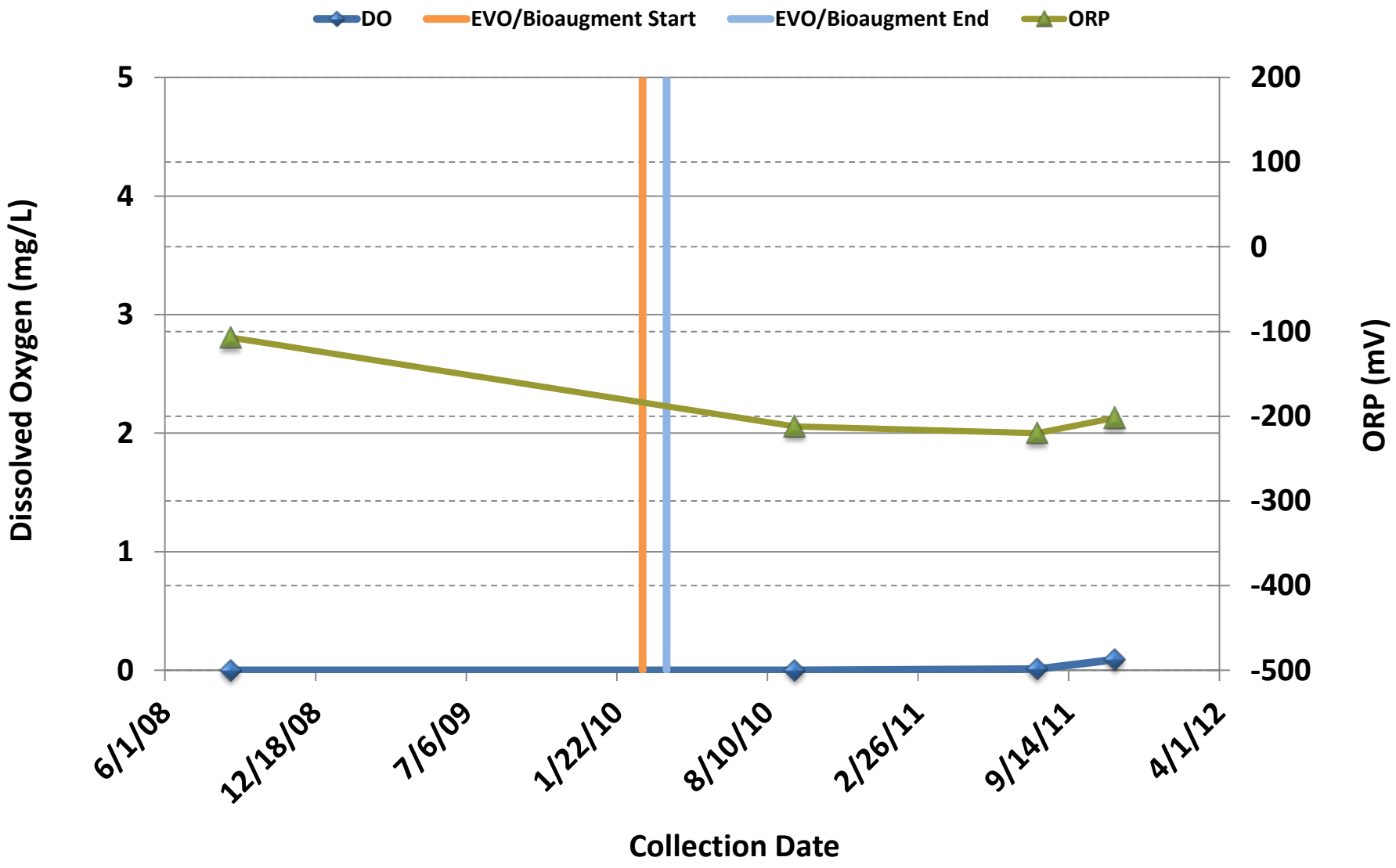
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW09

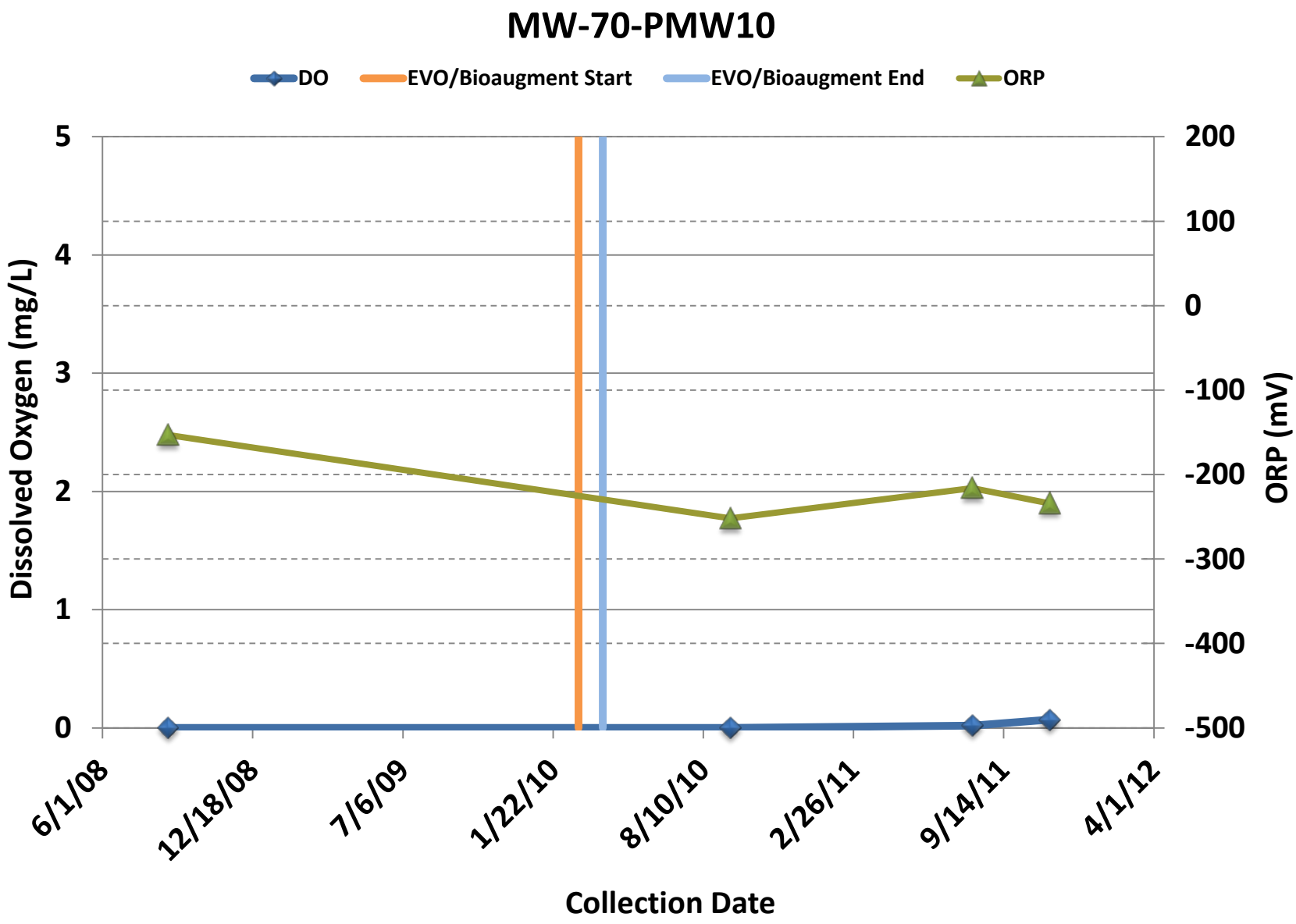


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

IW-70-SHB113

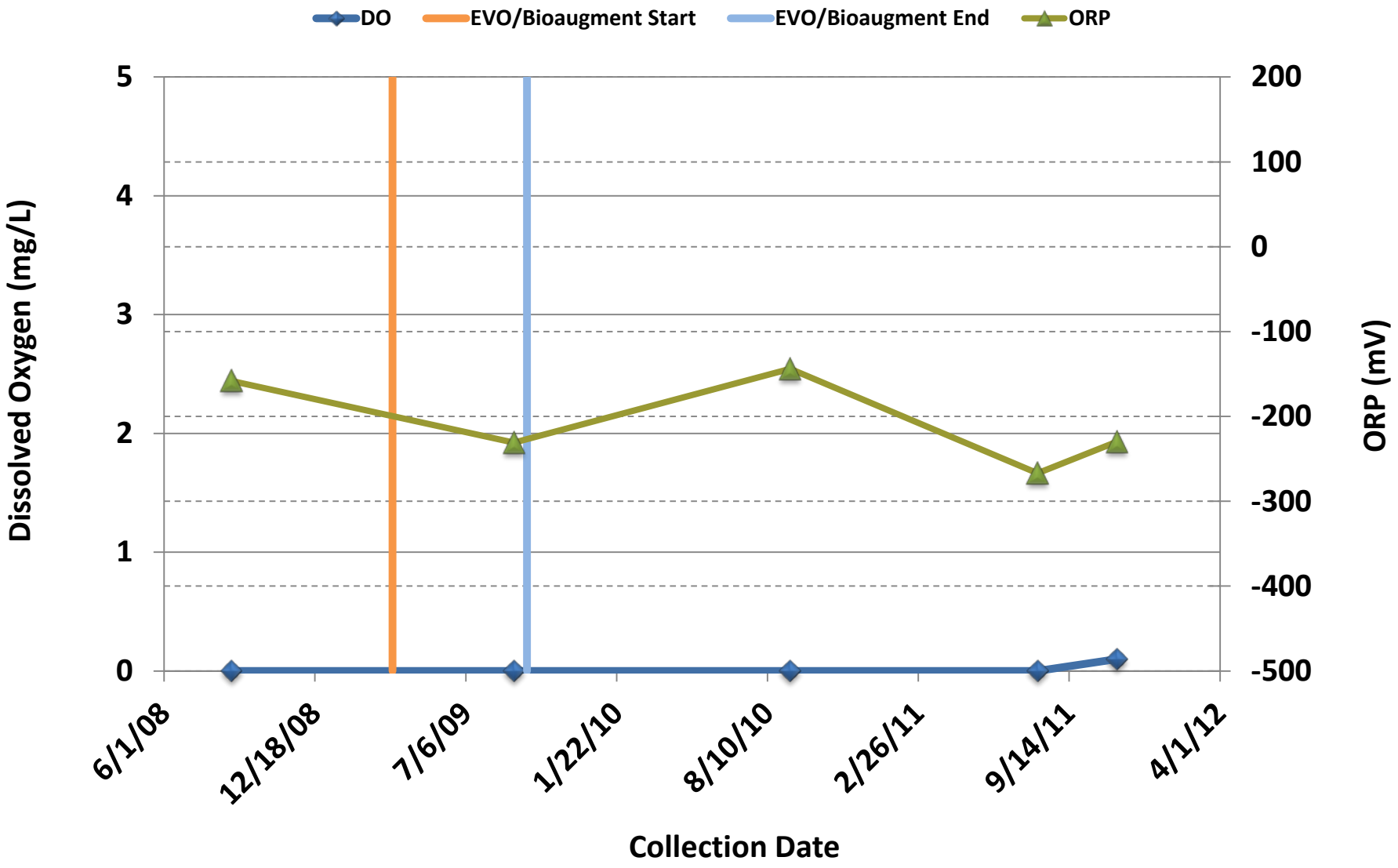


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



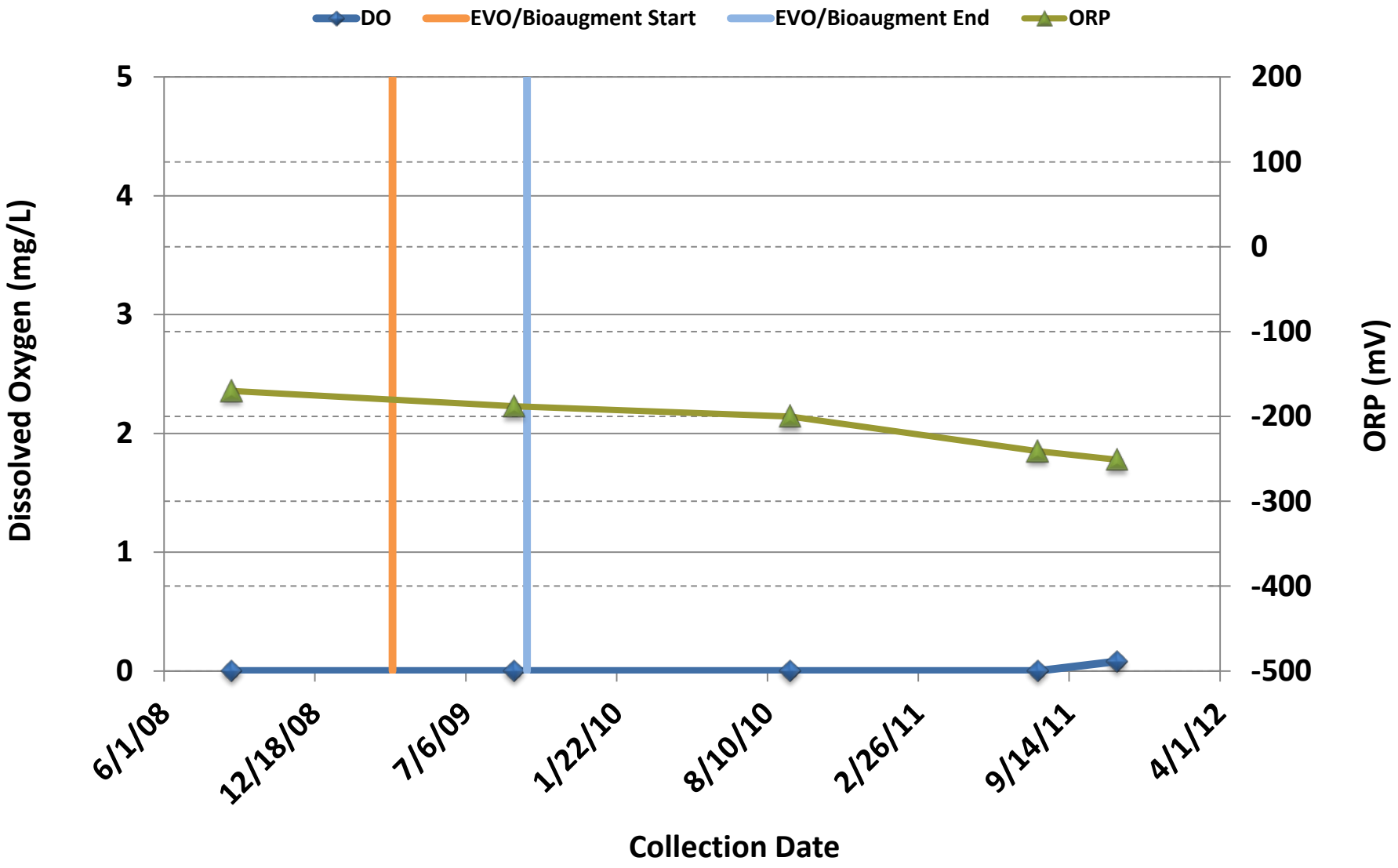
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW11A



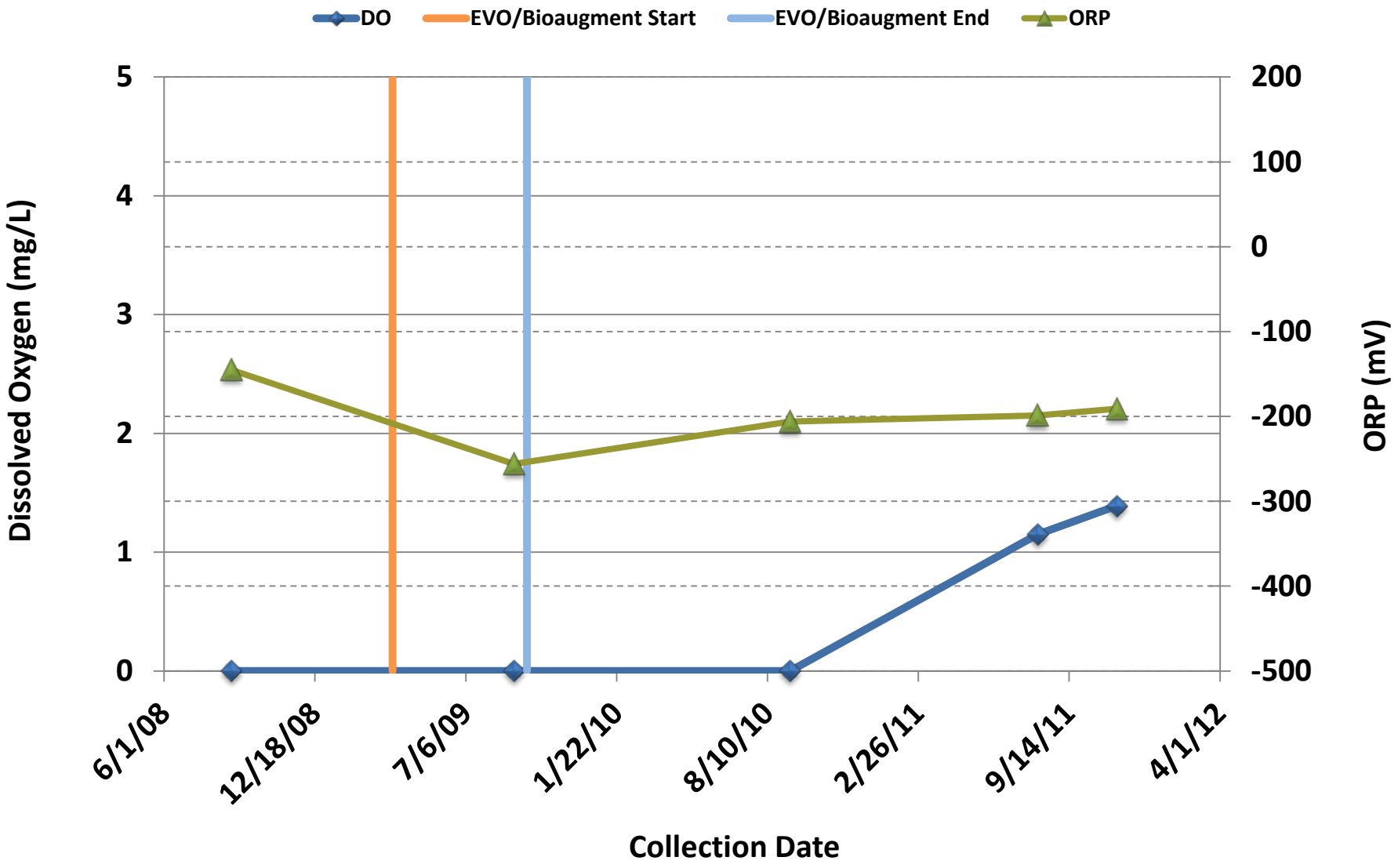
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW11B



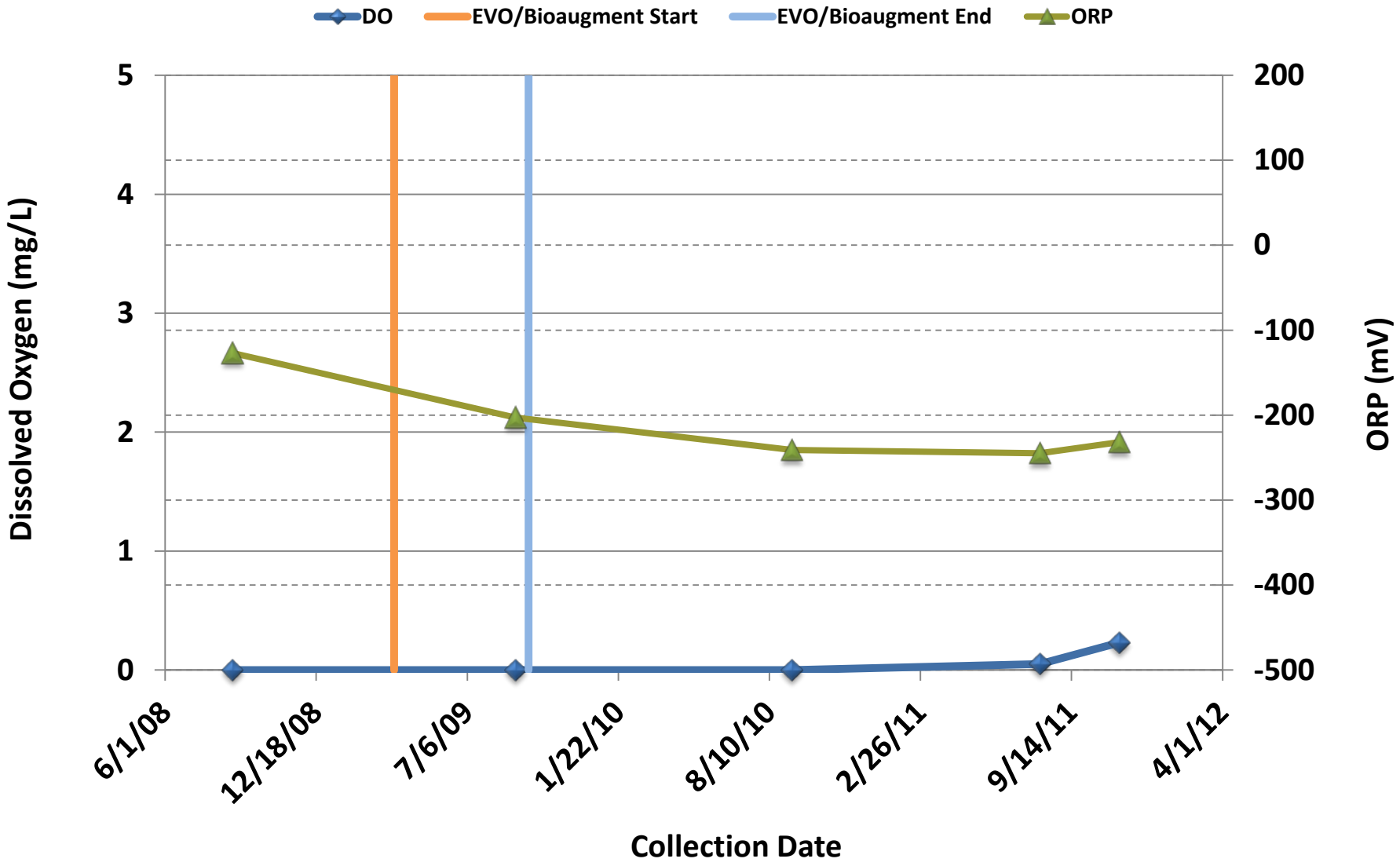
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

IW-70-SHB310

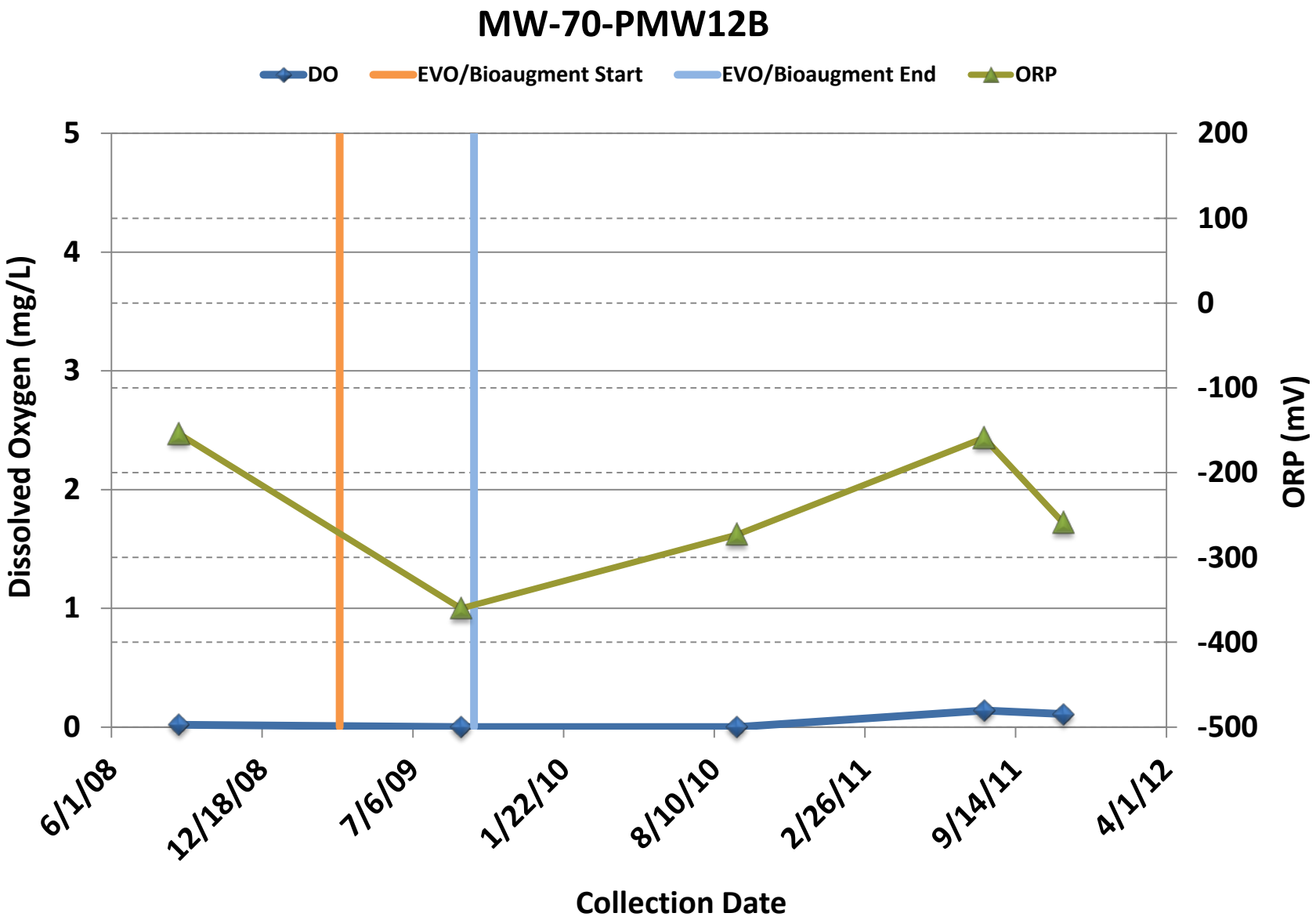


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW12A

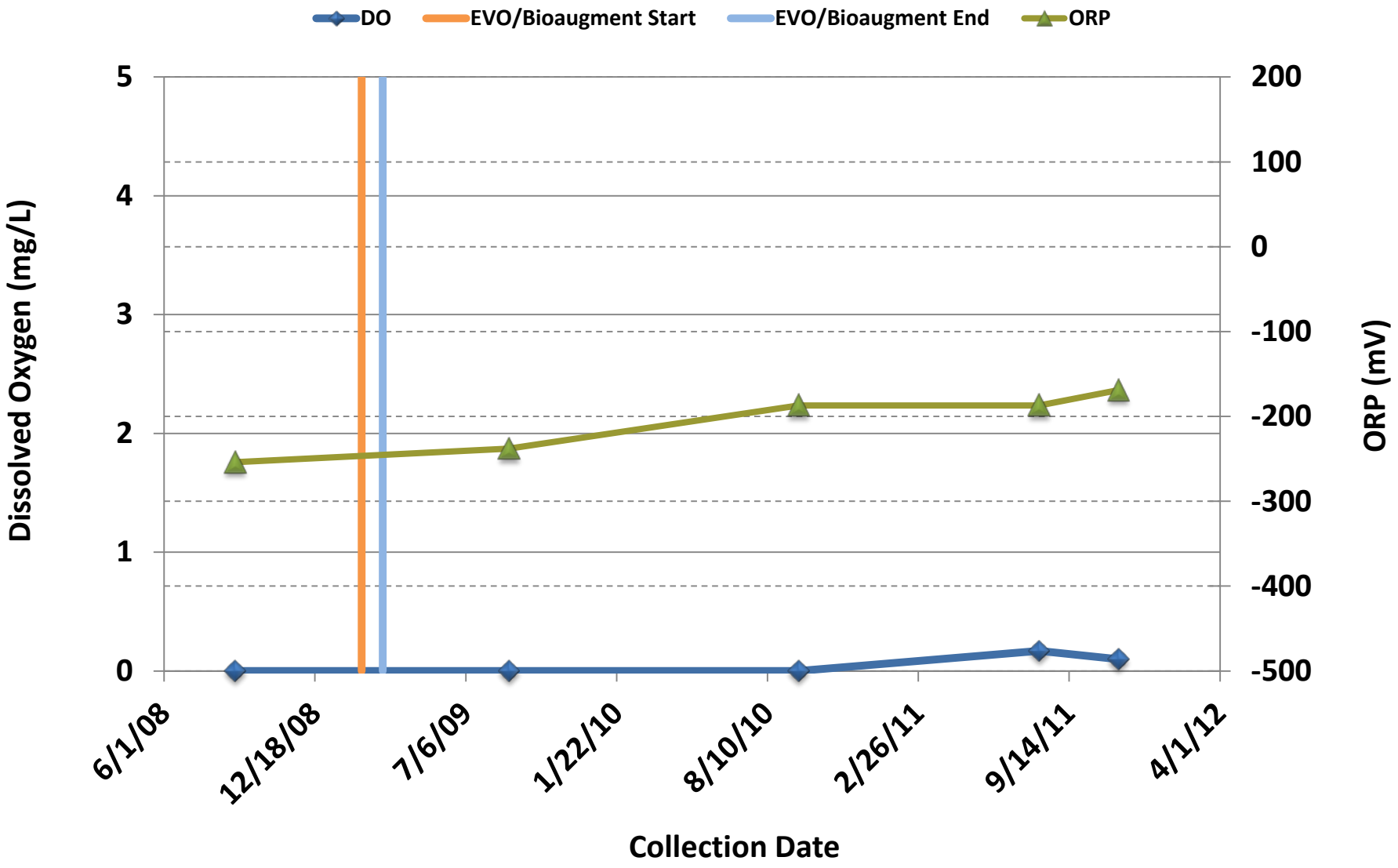


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



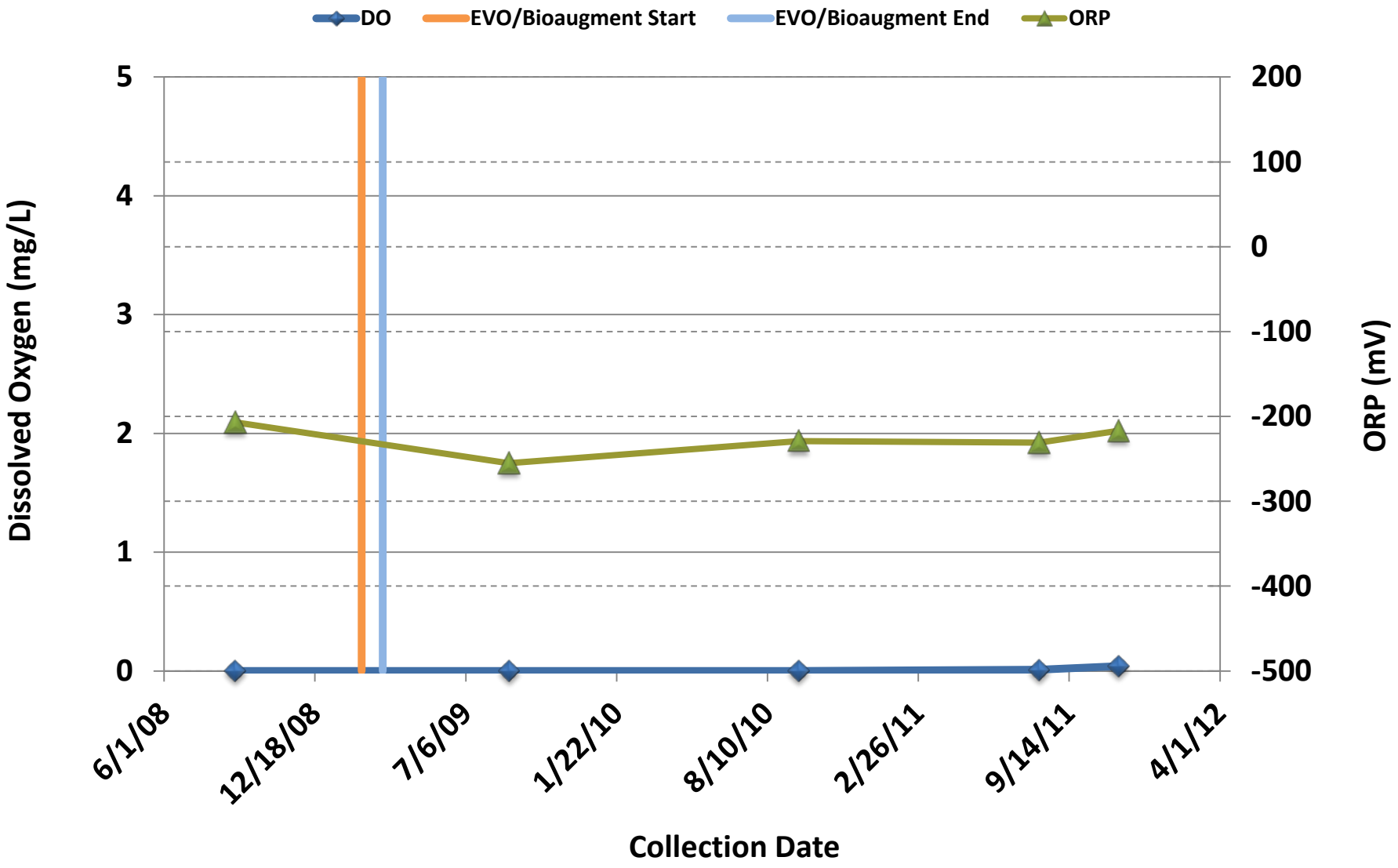
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW13A



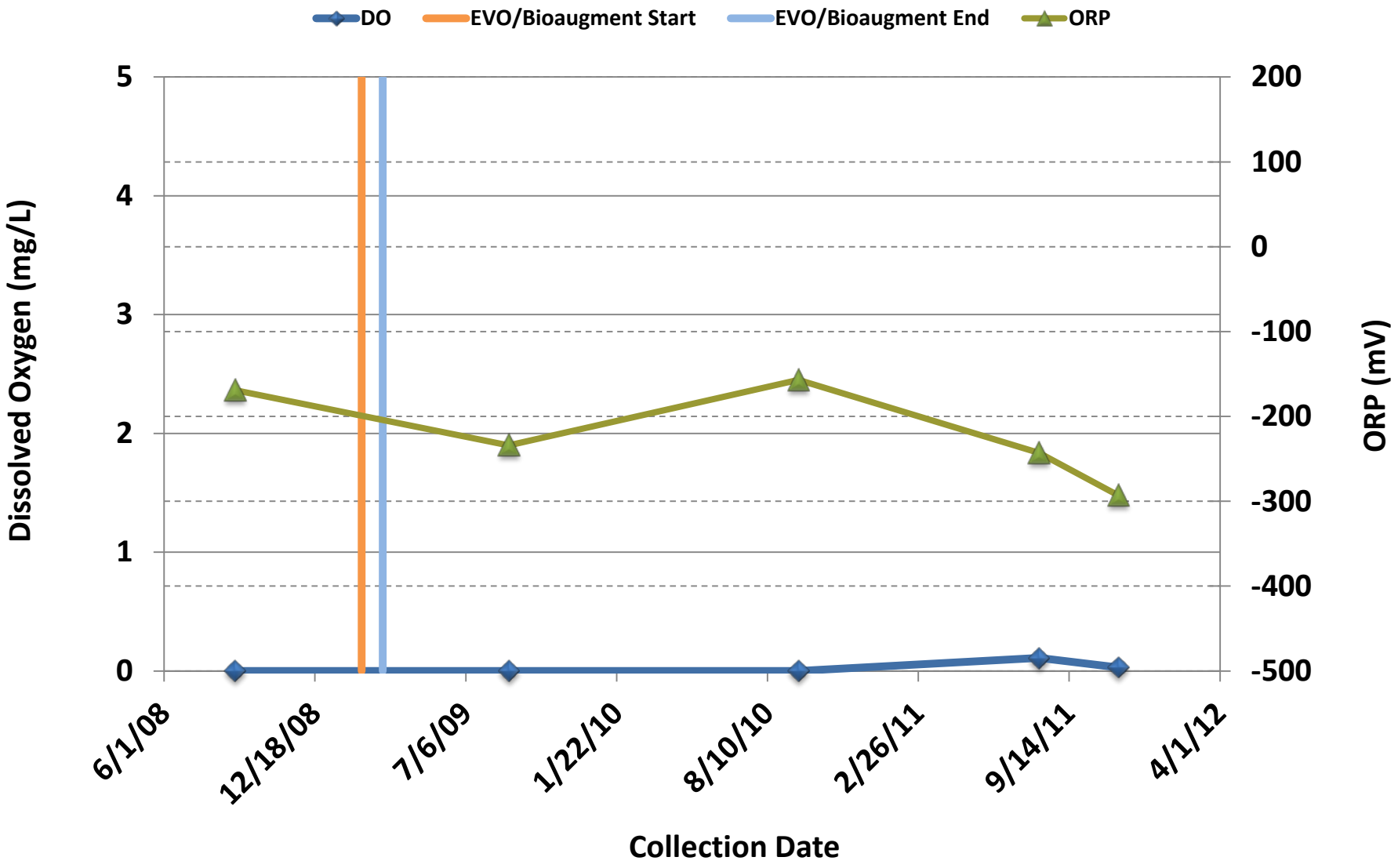
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

MW-70-PMW13B



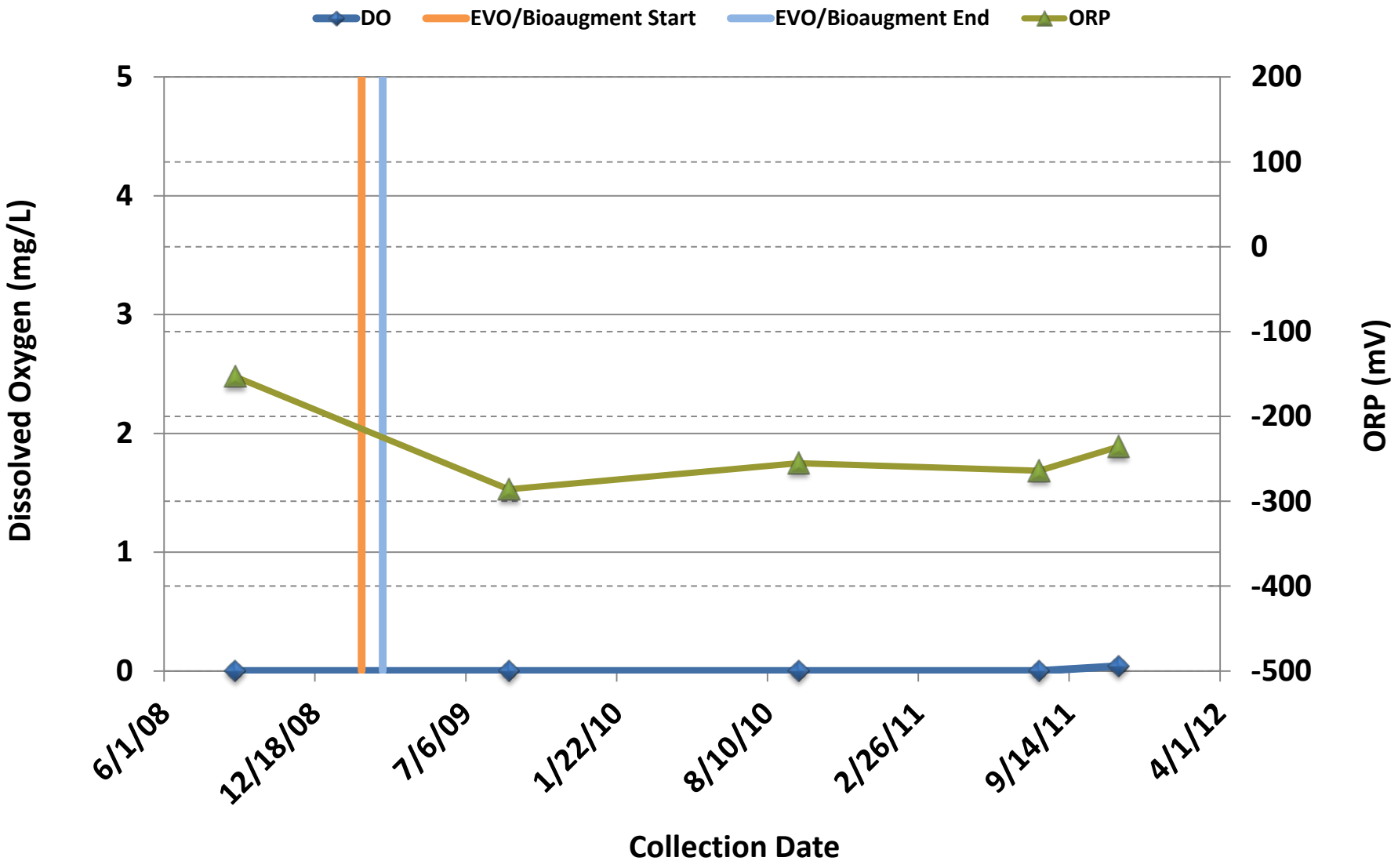
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

IW-70-SSB109

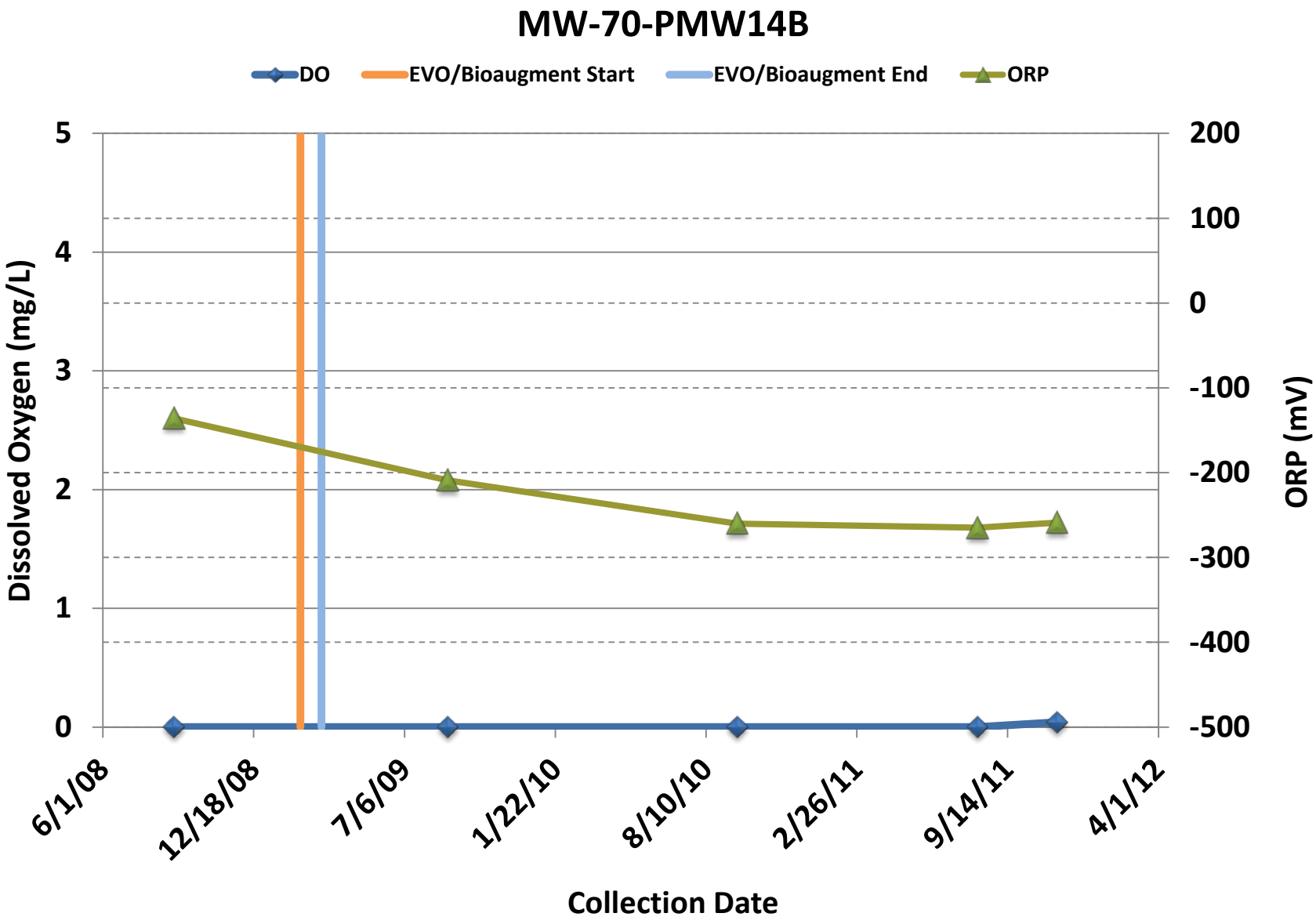


Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

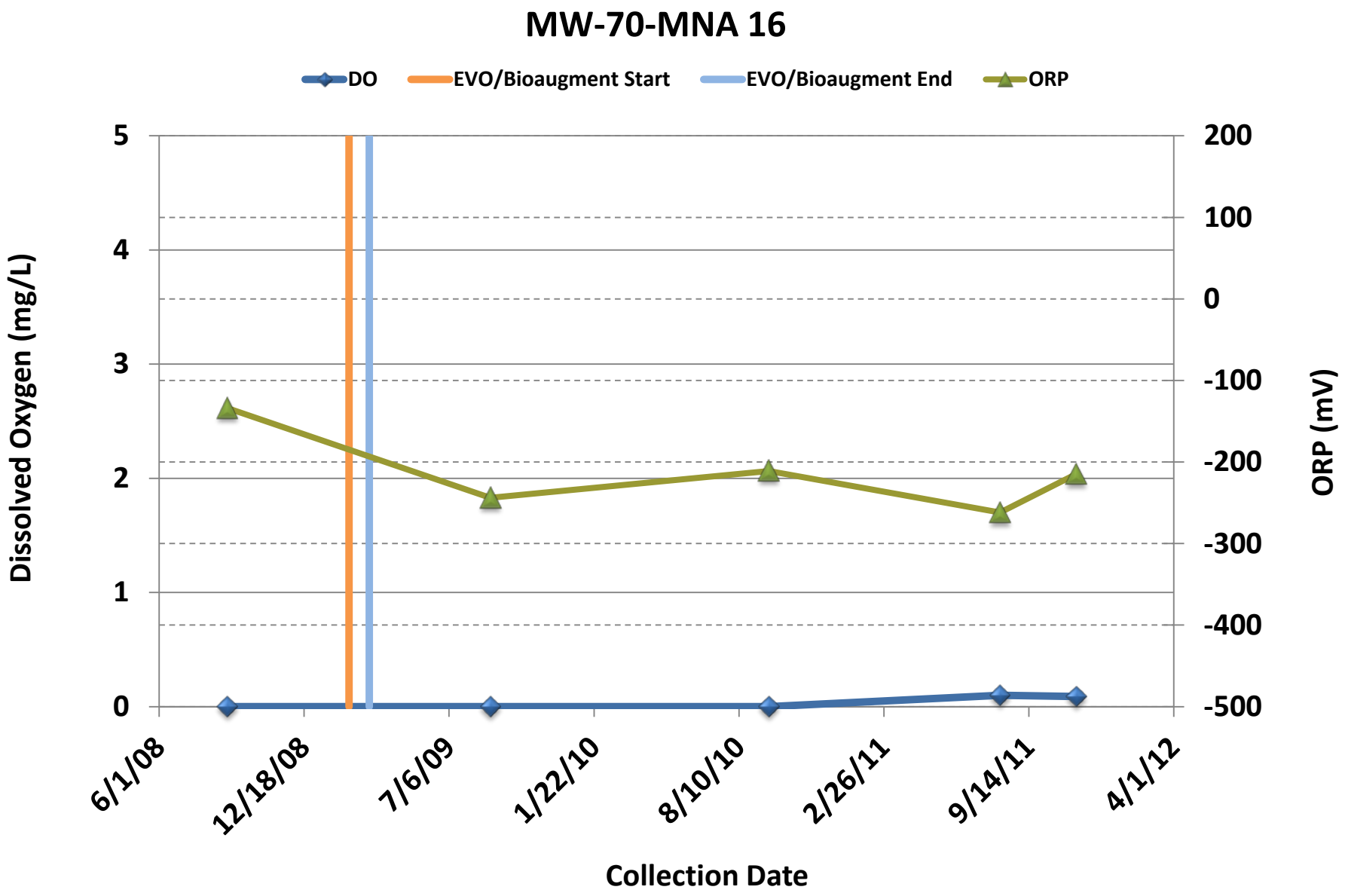
MW-70-PMW14A



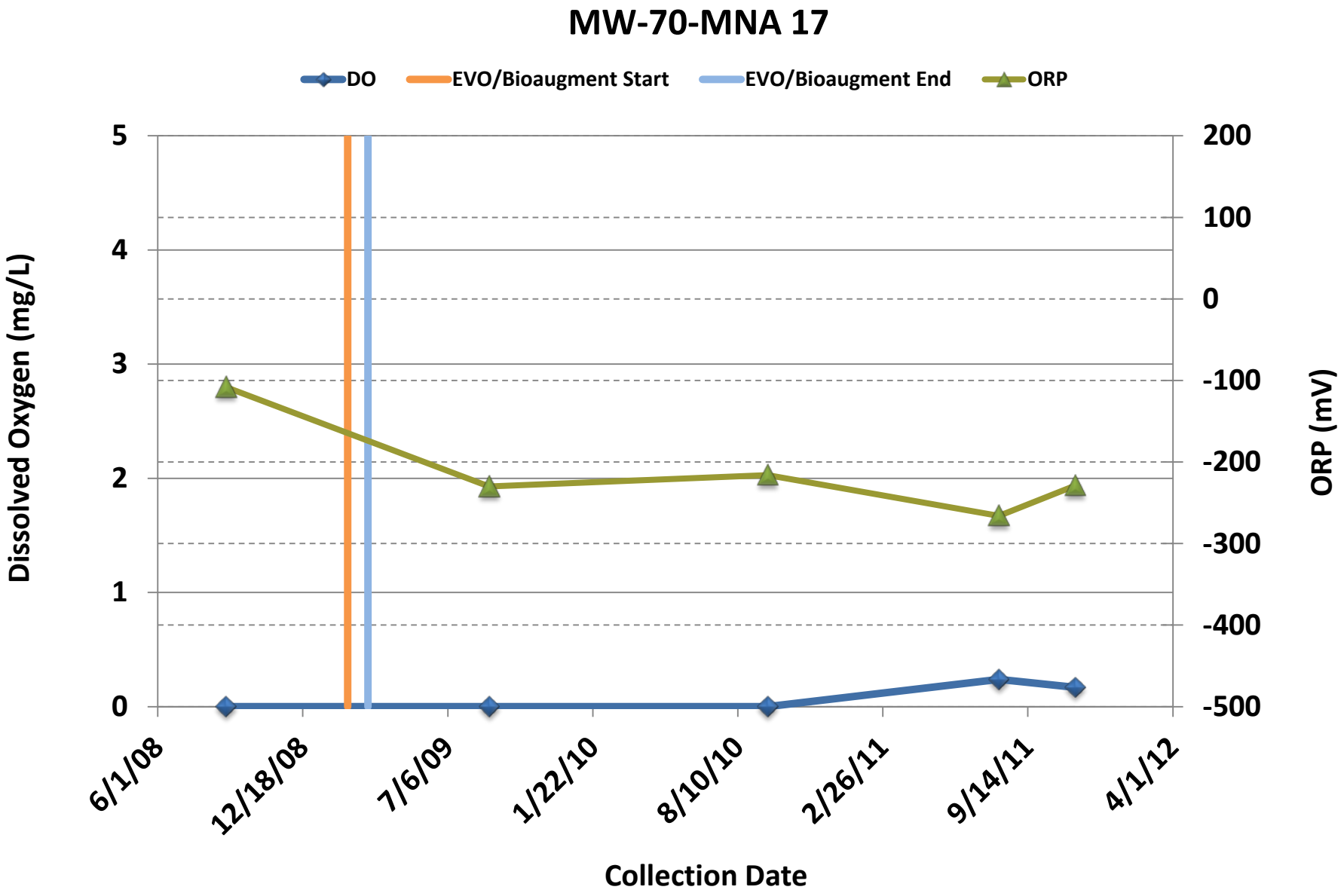
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA



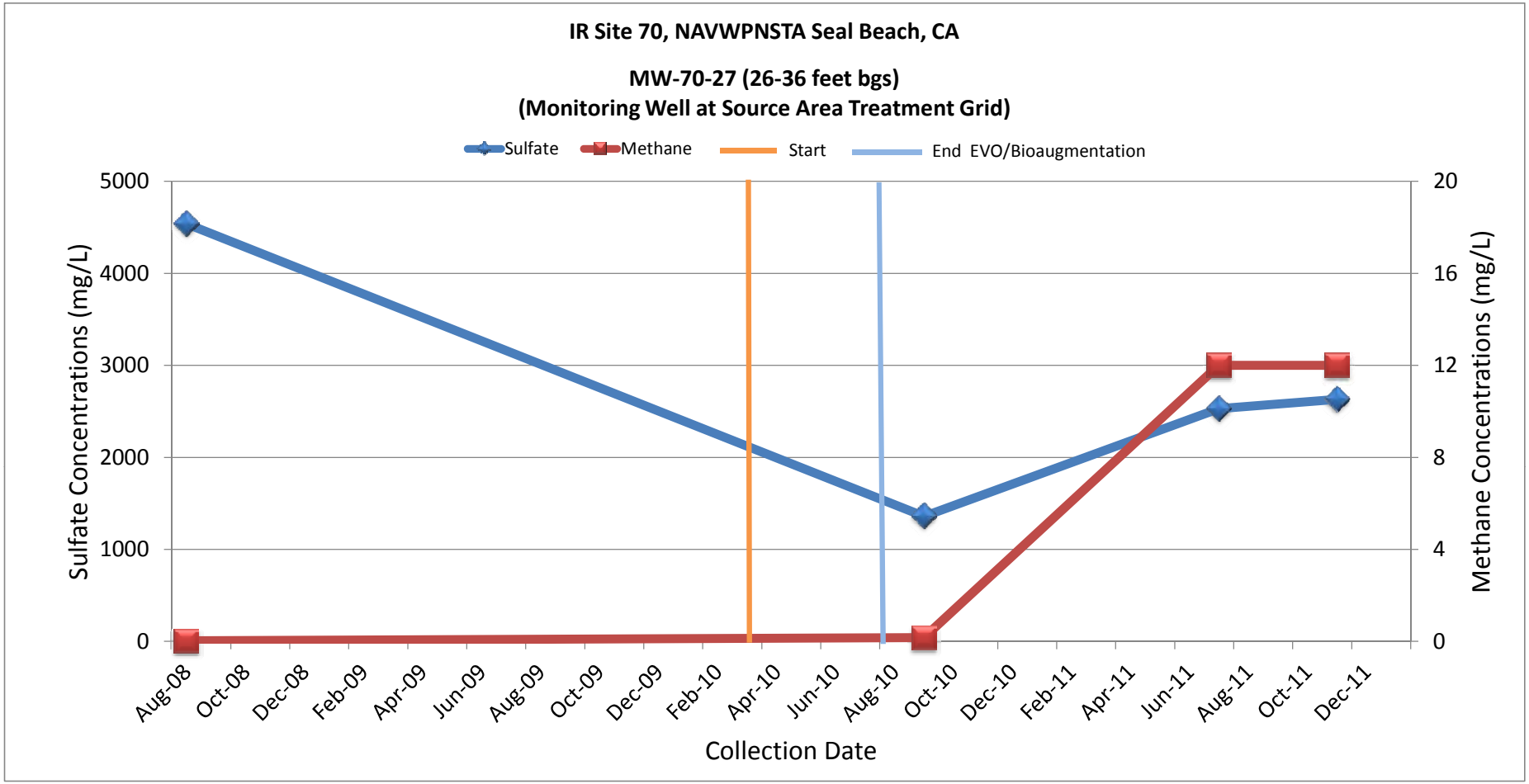
Installation Restoration Program Site 70
Naval Weapons Station Seal Beach, Seal Beach, CA

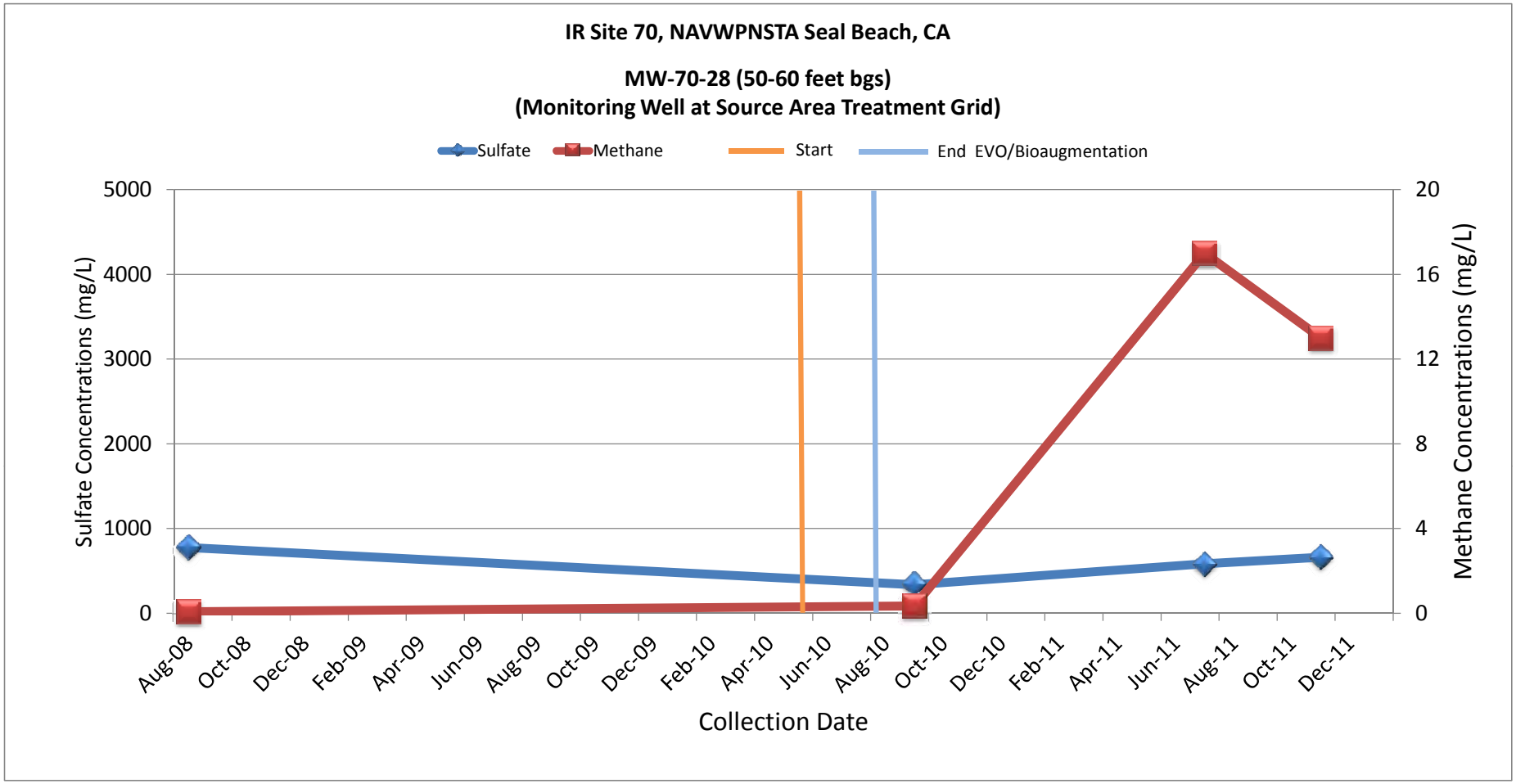


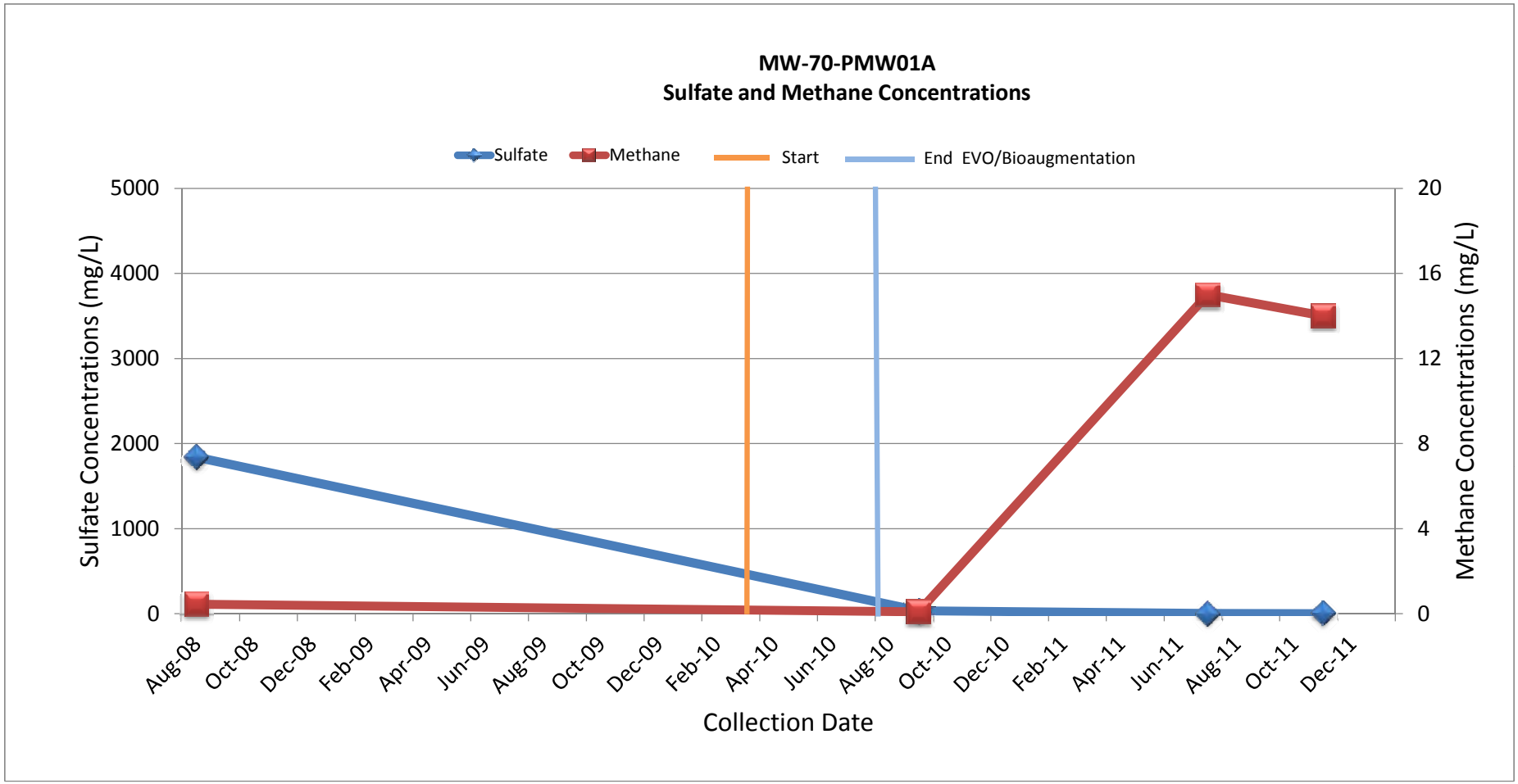
IR Site 70
Naval Weapons Station Seal Beach

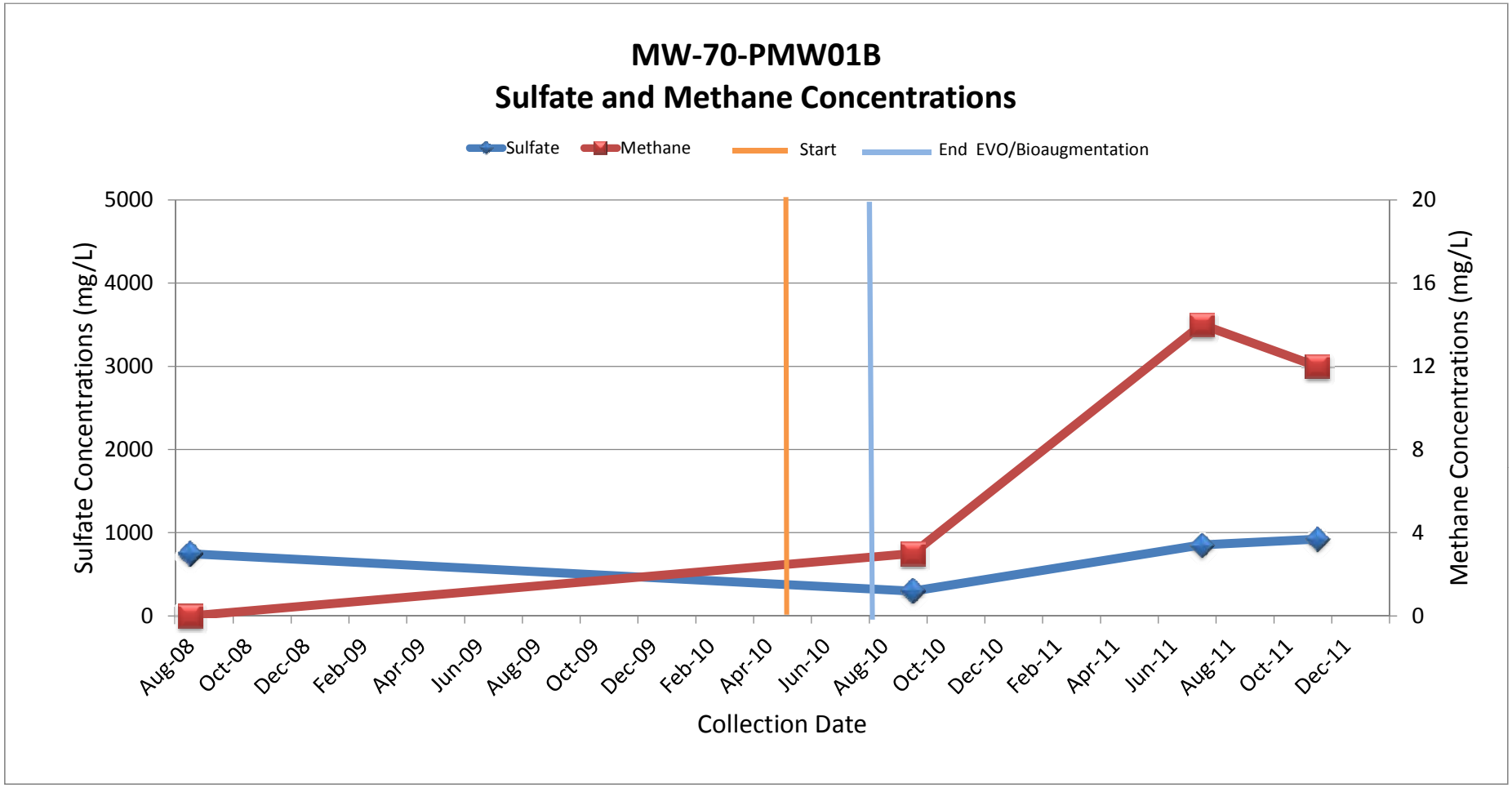
Sulfate-Methane Concentration Trends

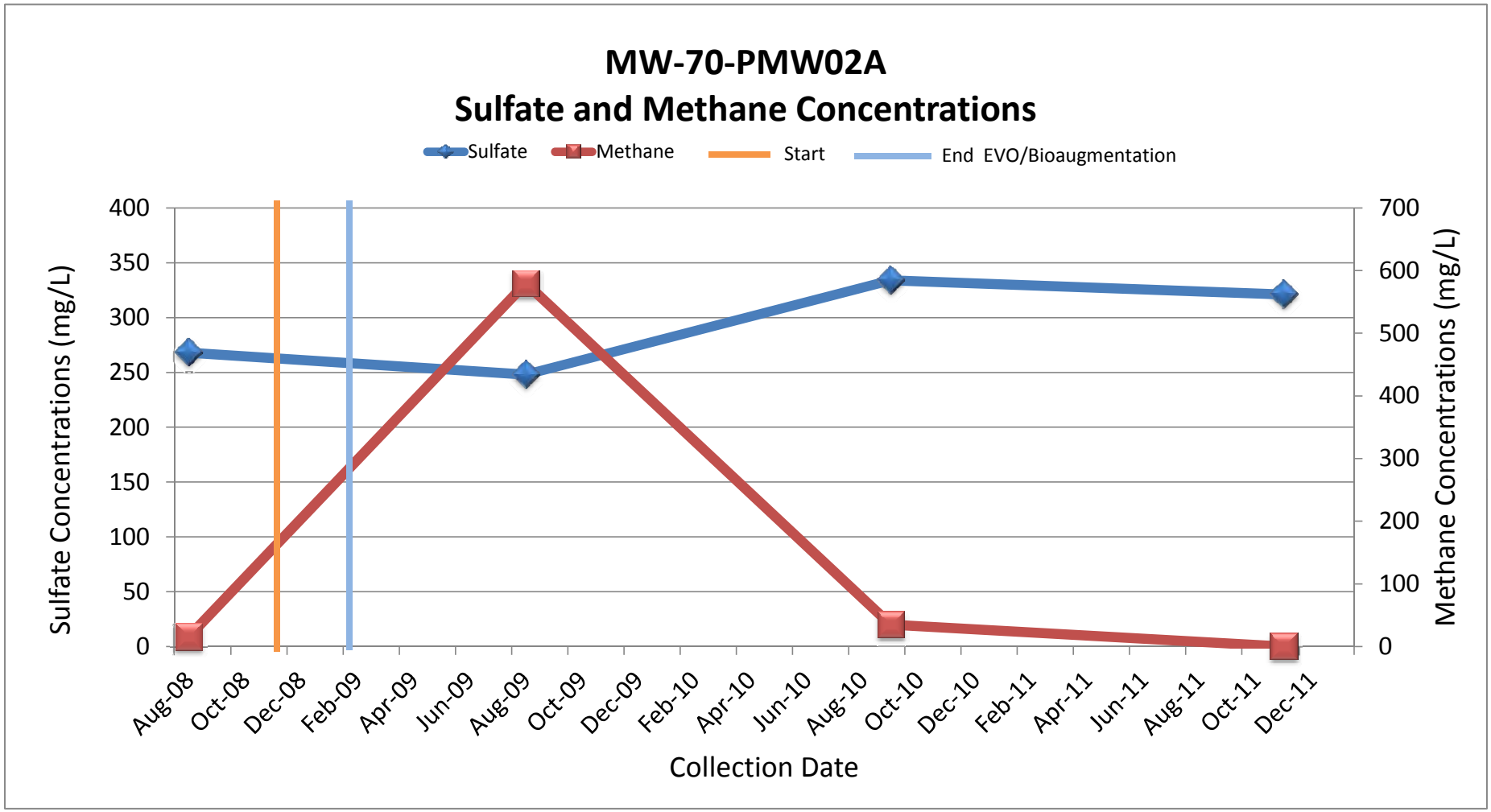
Source Area Treatment Grid
Source Area Biobarrier
First Sand Biobarrier 1
First Sand Biobarrier 2
Shell Horizon Biobarrier 1
Shell Horizon Biobarrier 3
Second Sand Biobarrier 1

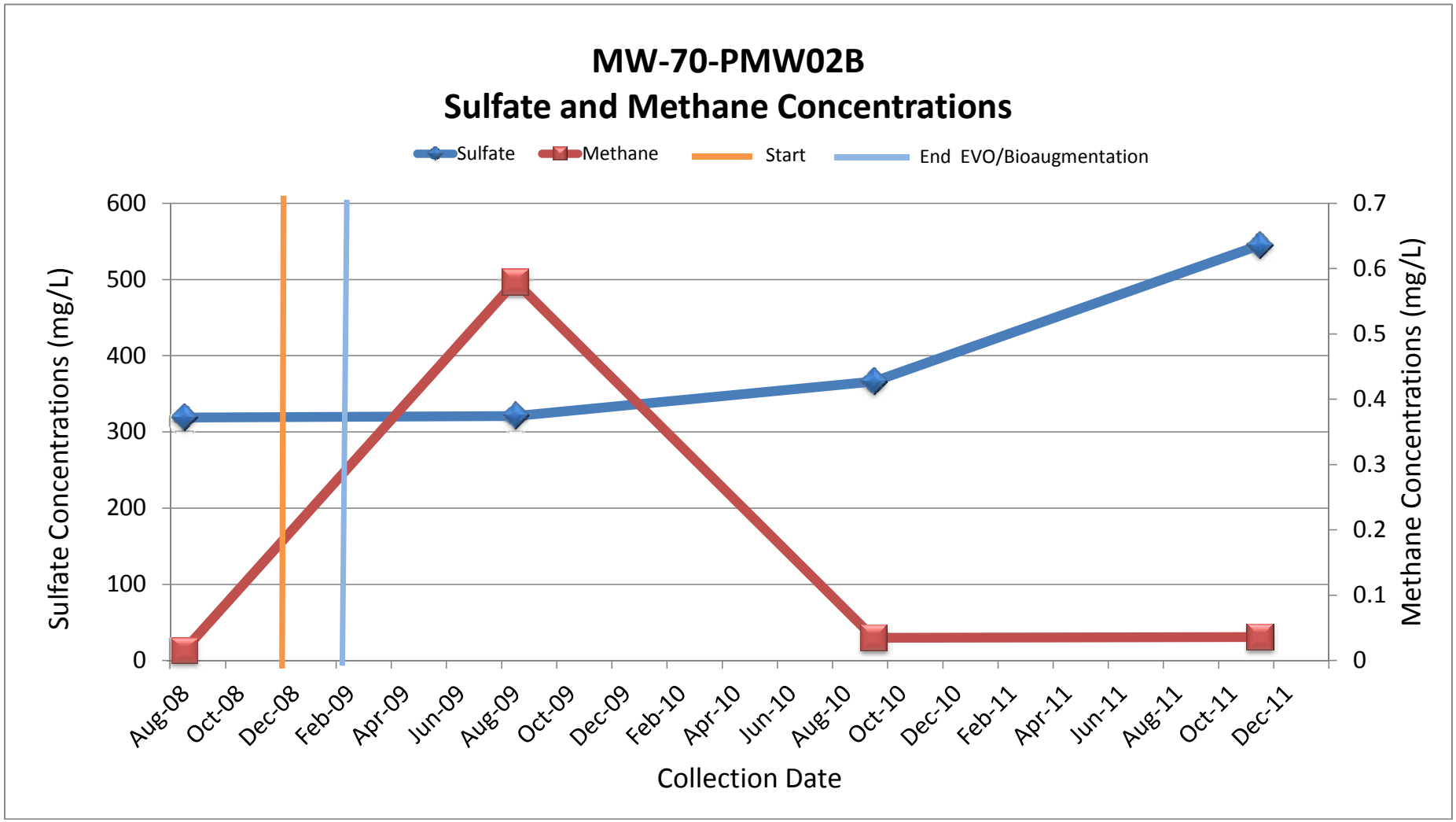

IR Site 70, NAVWPNSTA Seal Beach, CA
MW-70-27 (26-36 feet bgs)
(Monitoring Well at Source Area Treatment Grid)
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
5000
4000
3000
2000
1000
0
20
16
12
8
4
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date


IR Site 70, NAVWPNSTA Seal Beach, CA
MW-70-28 (50-60 feet bgs)
(Monitoring Well at Source Area Treatment Grid)
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
5000
4000
3000
2000
1000
0
20
16
12
8
4
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date


MW-70-PMW01A
Sulfate and Methane Concentrations
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
5000
4000
3000
2000
1000
0
20
16
12
8
4
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date


MW-70-PMW01B
Sulfate and Methane Concentrations
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
5000
4000
3000
2000
1000
0
20
16
12
8
4
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date


MW-70-PMW02A
Sulfate and Methane Concentrations
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
400
350
300
250
200
150
100
50
0
700
600
500
400
300
200
100
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date


MW-70-PMW02B
Sulfate and Methane Concentrations
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
600
500
400
300
200
100
0
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
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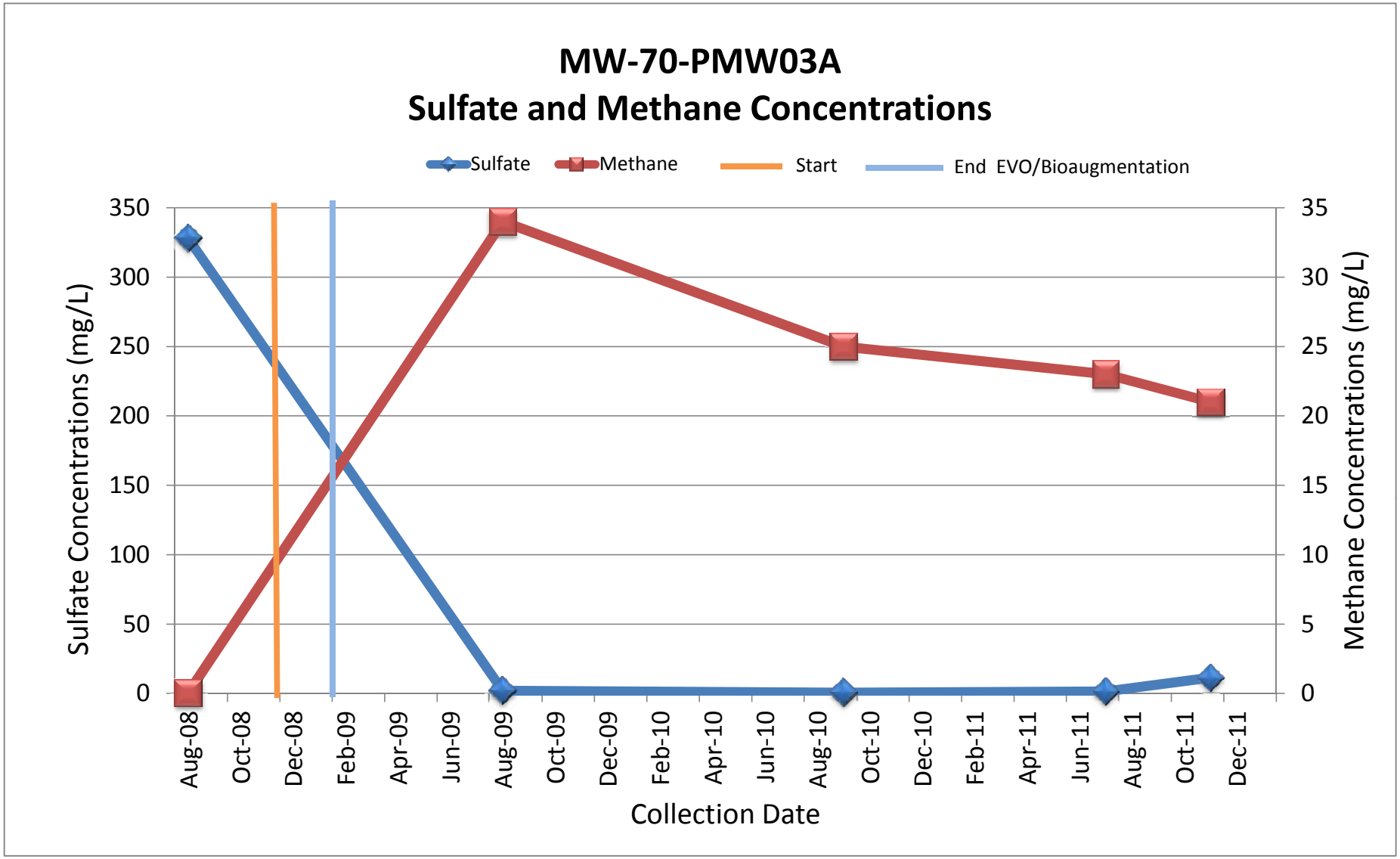
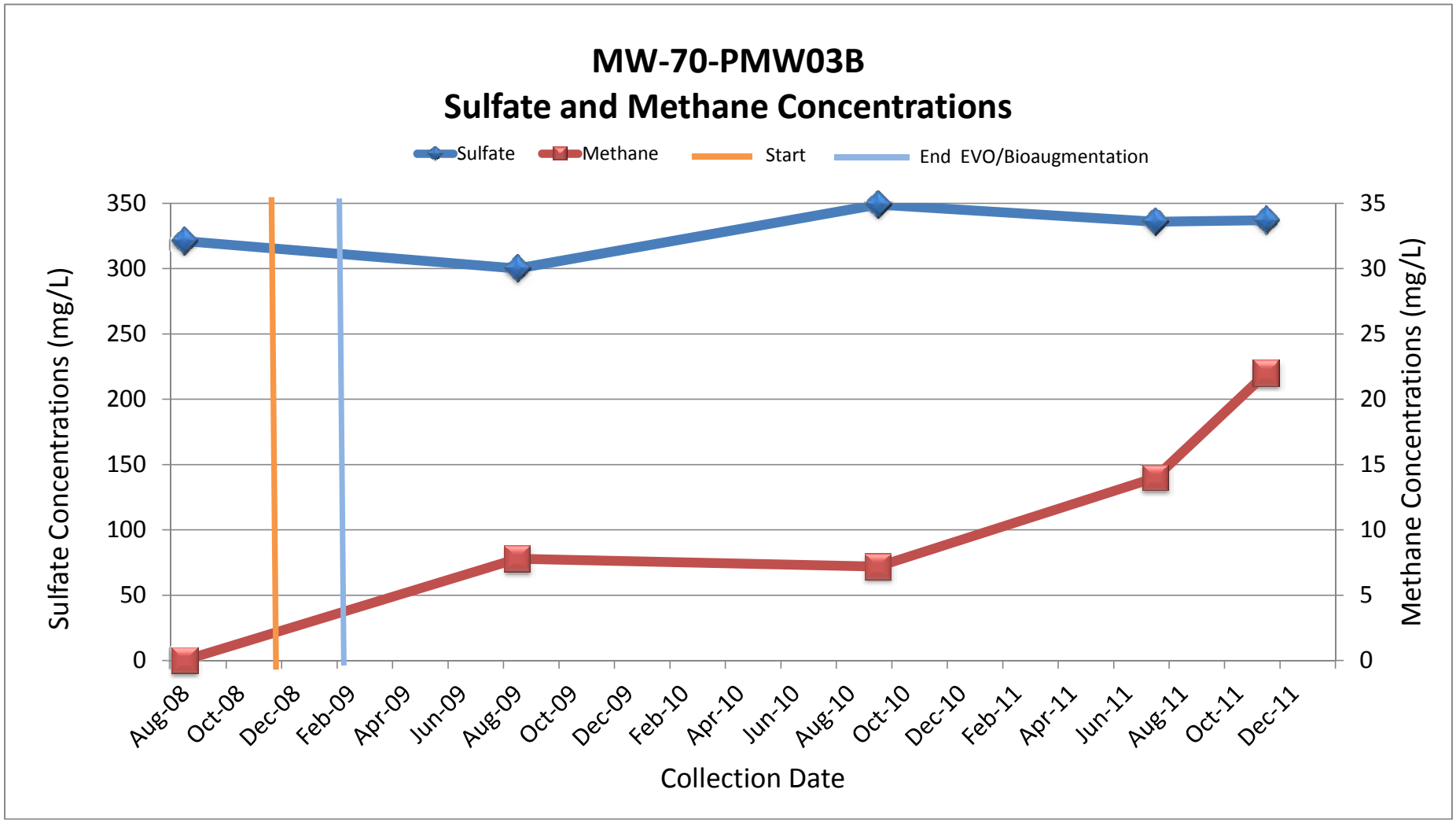
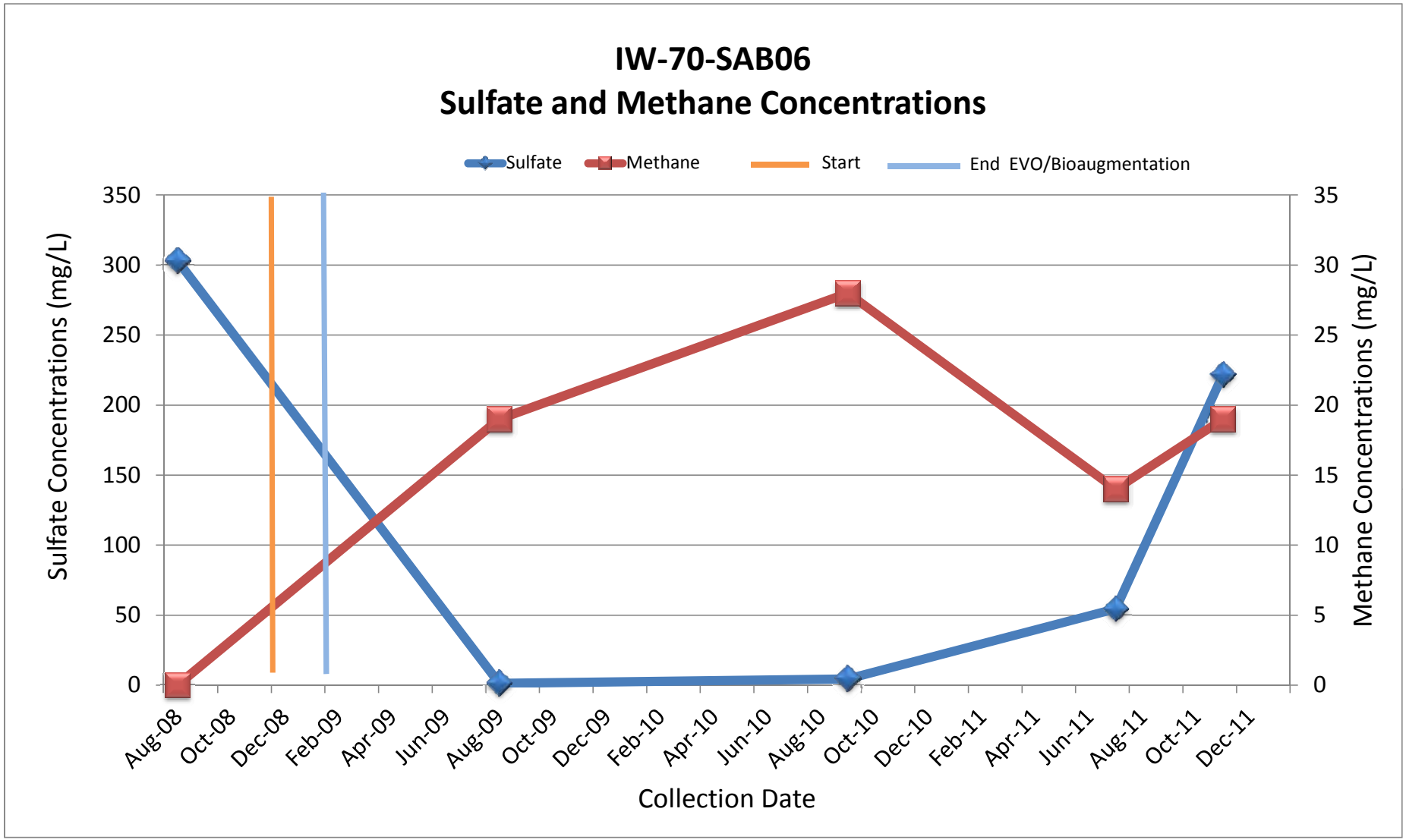
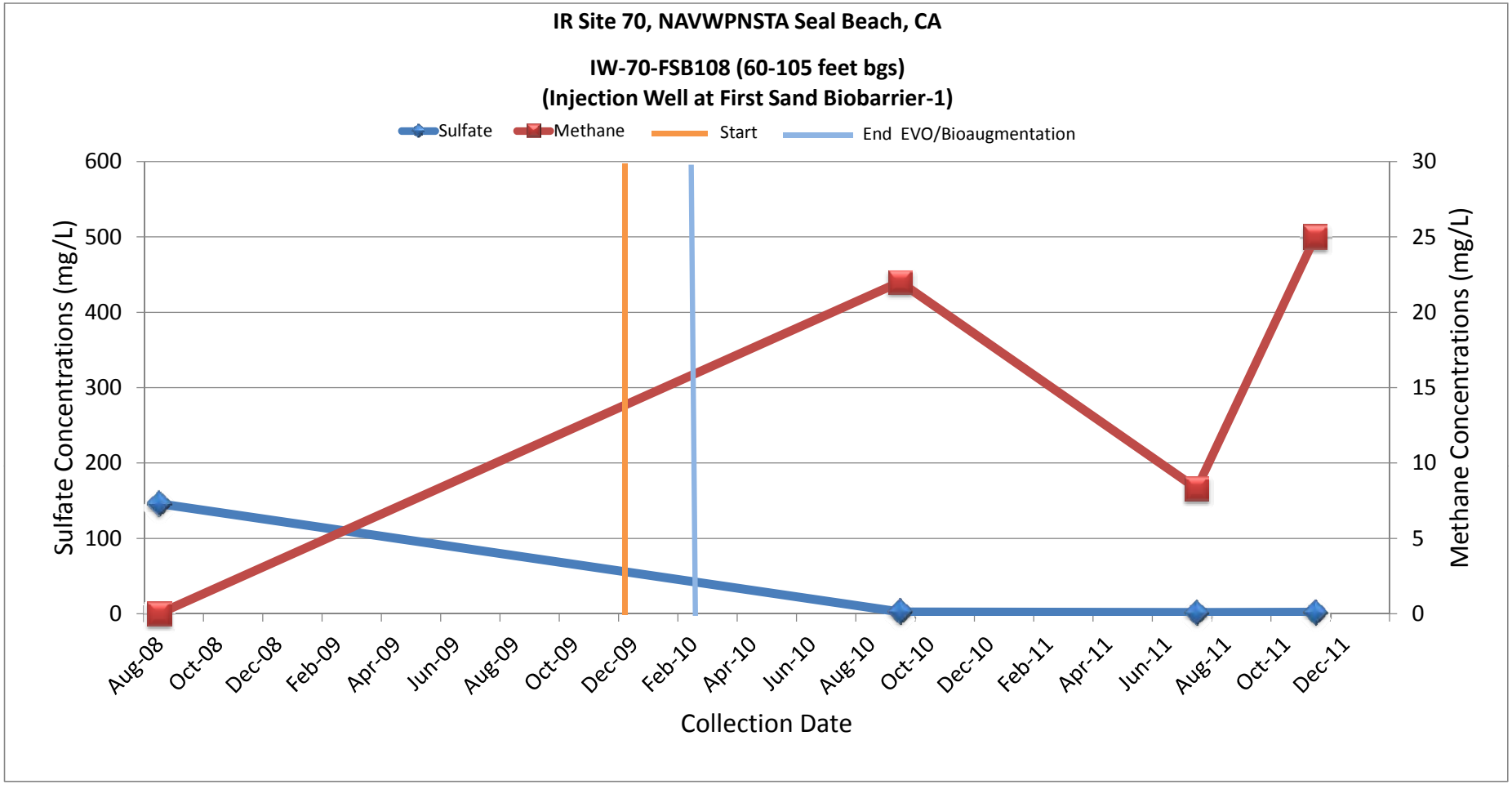
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date


MW-70-PMW03A
Sulfate and Methane Concentrations
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
350
300
250
200
150
100
50
0
35
30
25
20
15
10
5
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date


MW-70-PMW03B
Sulfate and Methane Concentrations
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
350
300
250
200
150
100
50
0
35
30
25
20
15
10
5
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date


IW-70-SAB06
Sulfate and Methane Concentrations
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
350
300
250
200
150
100
50
0
35
30
25
20
15
10
5
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date


IR Site 70, NAVWPNSTA Seal Beach, CA
IW-70-FSB108 (60-105 feet bgs)
(Injection Well at First Sand Biobarrier-1)
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
600
500
400
300
200
100
0
30
25
20
15
10
5
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
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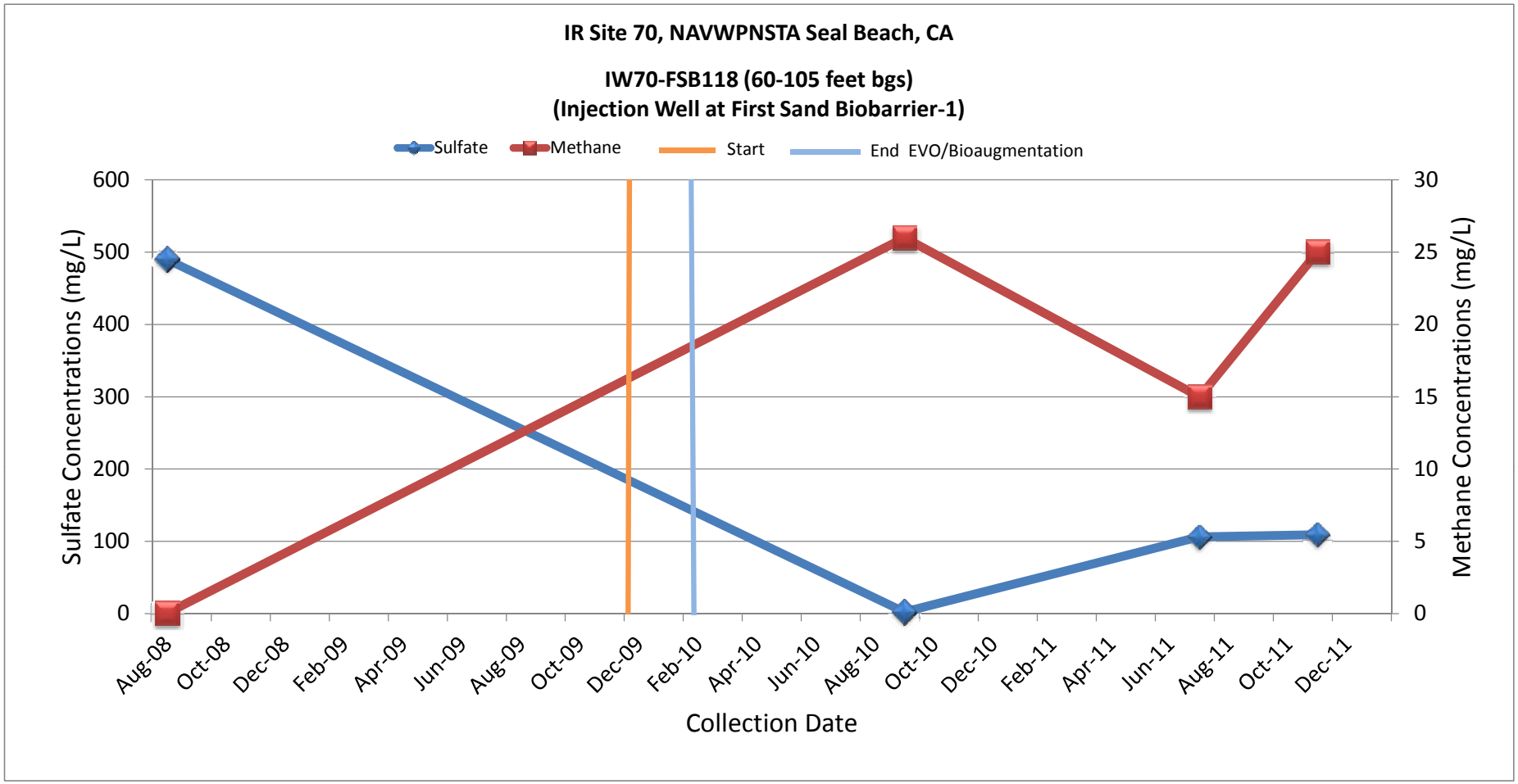
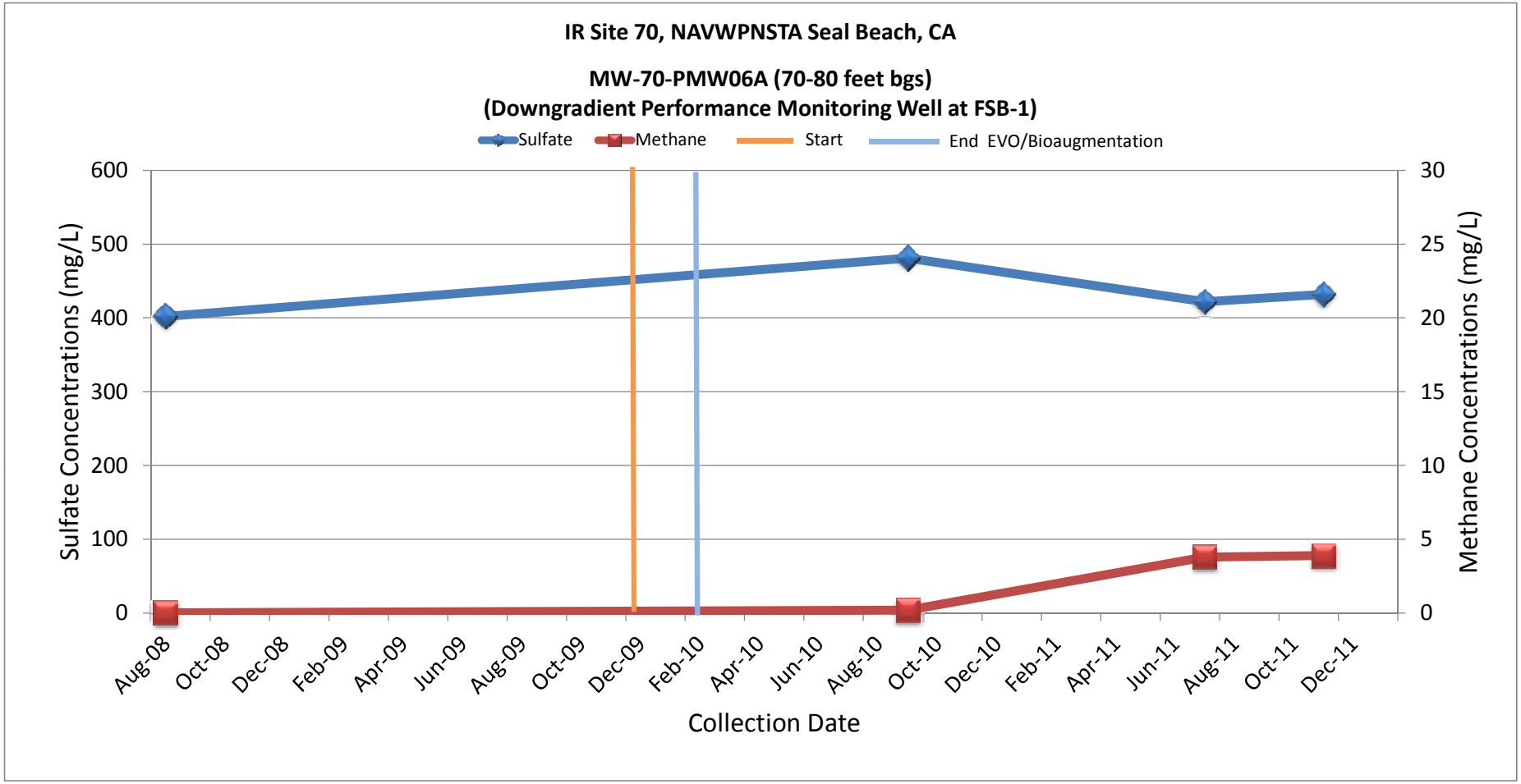
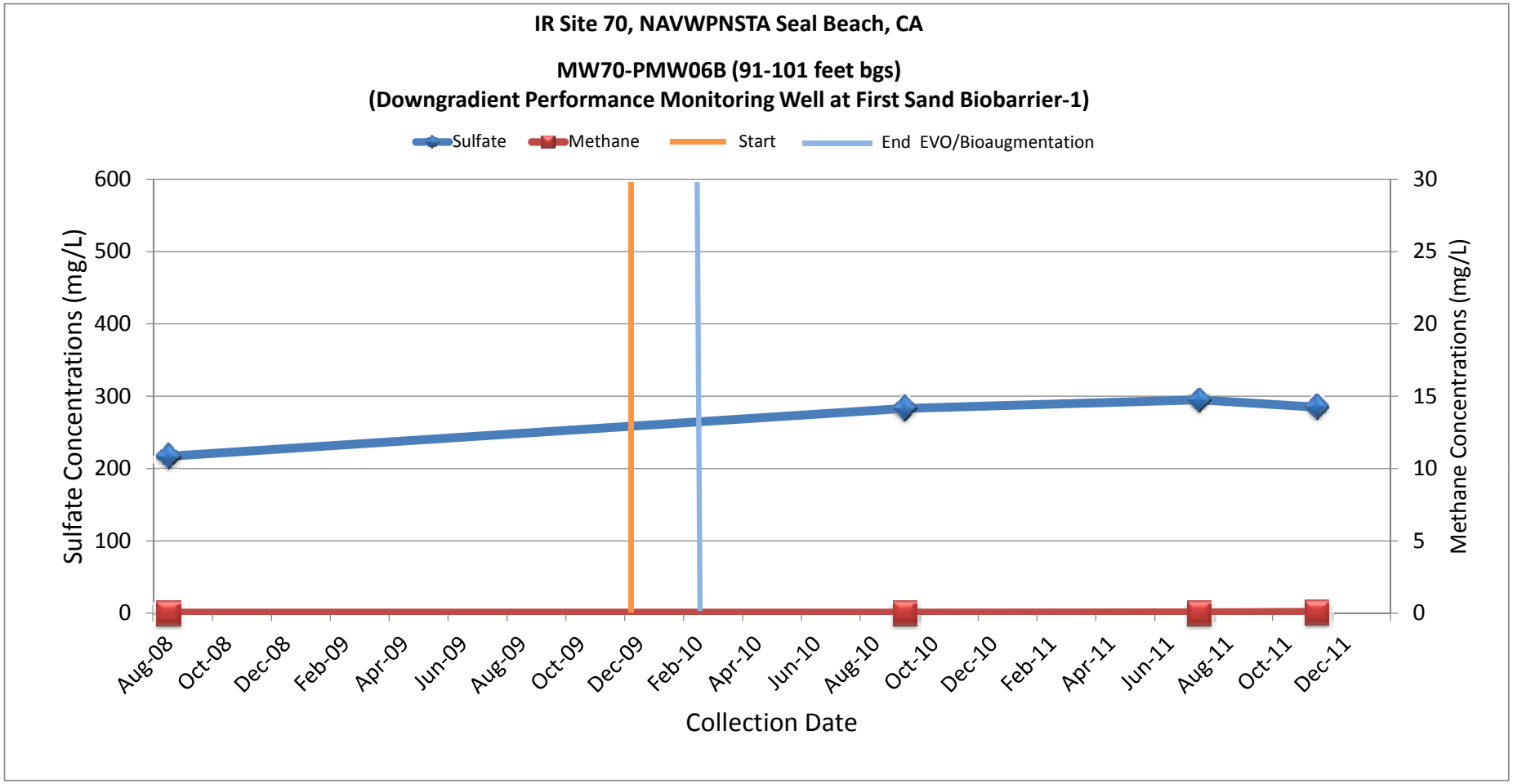
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date


IR Site 70, NAVWPNSTA Seal Beach, CA
IW70-FSB118 (60-105 feet bgs)
(Injection Well at First Sand Biobarrier-1)
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
600
500
400
300
200
100
0
30
25
20
15
10
5
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date


IR Site 70, NAVWPNSTA Seal Beach, CA
MW-70-PMW06A (70-80 feet bgs)
(Downgradient Performance Monitoring Well at FSB-1)
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
600
500
400
300
200
100
0
30
25
20
15
10
5
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date


IR Site 70, NAVWPNSTA Seal Beach, CA
MW70-PMW06B (91-101 feet bgs)
(Downgradient Performance Monitoring Well at First Sand Biobarrier-1)
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
600
500
400
300
200
100
0
30
25
20
15
10
5
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
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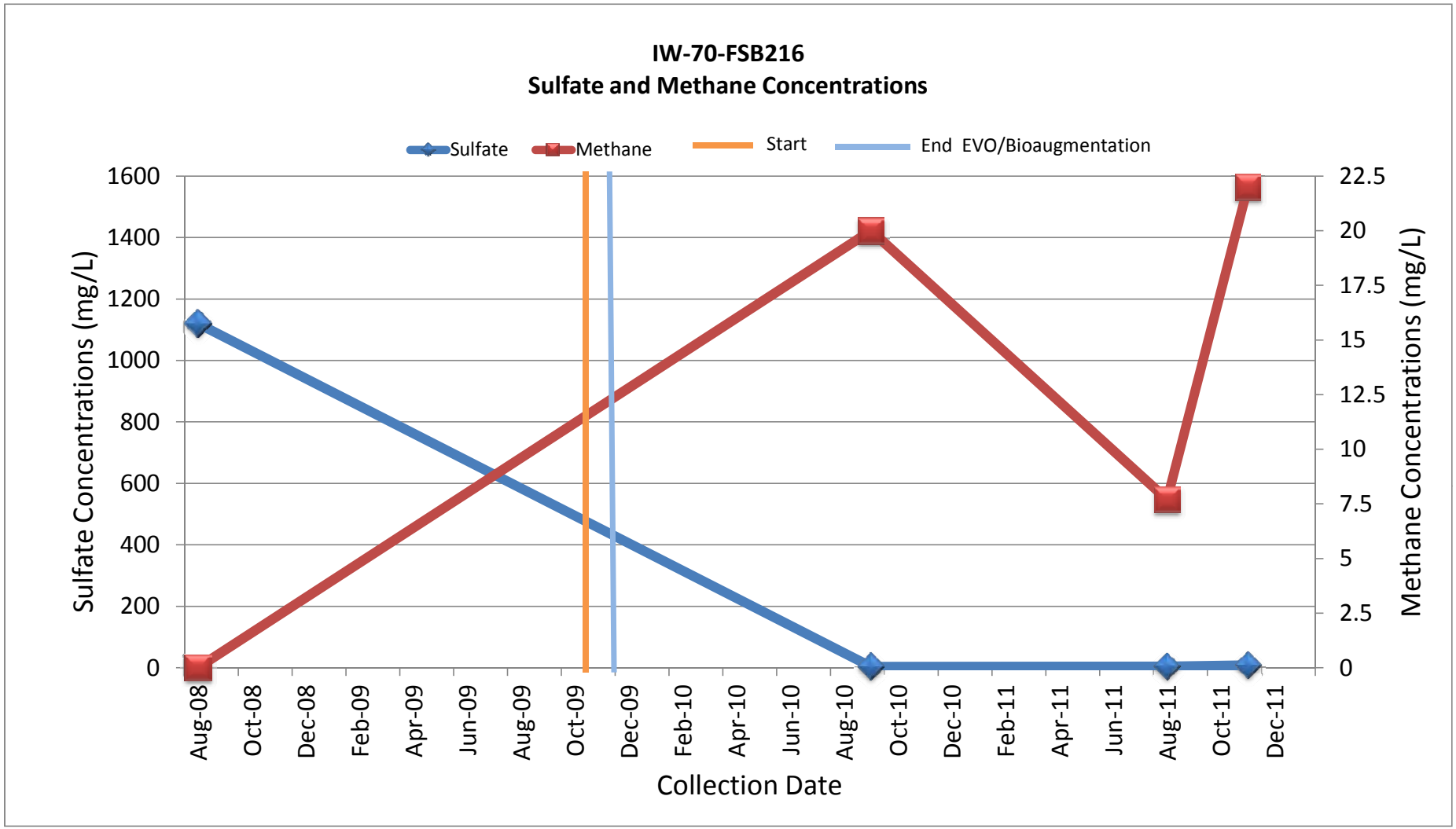
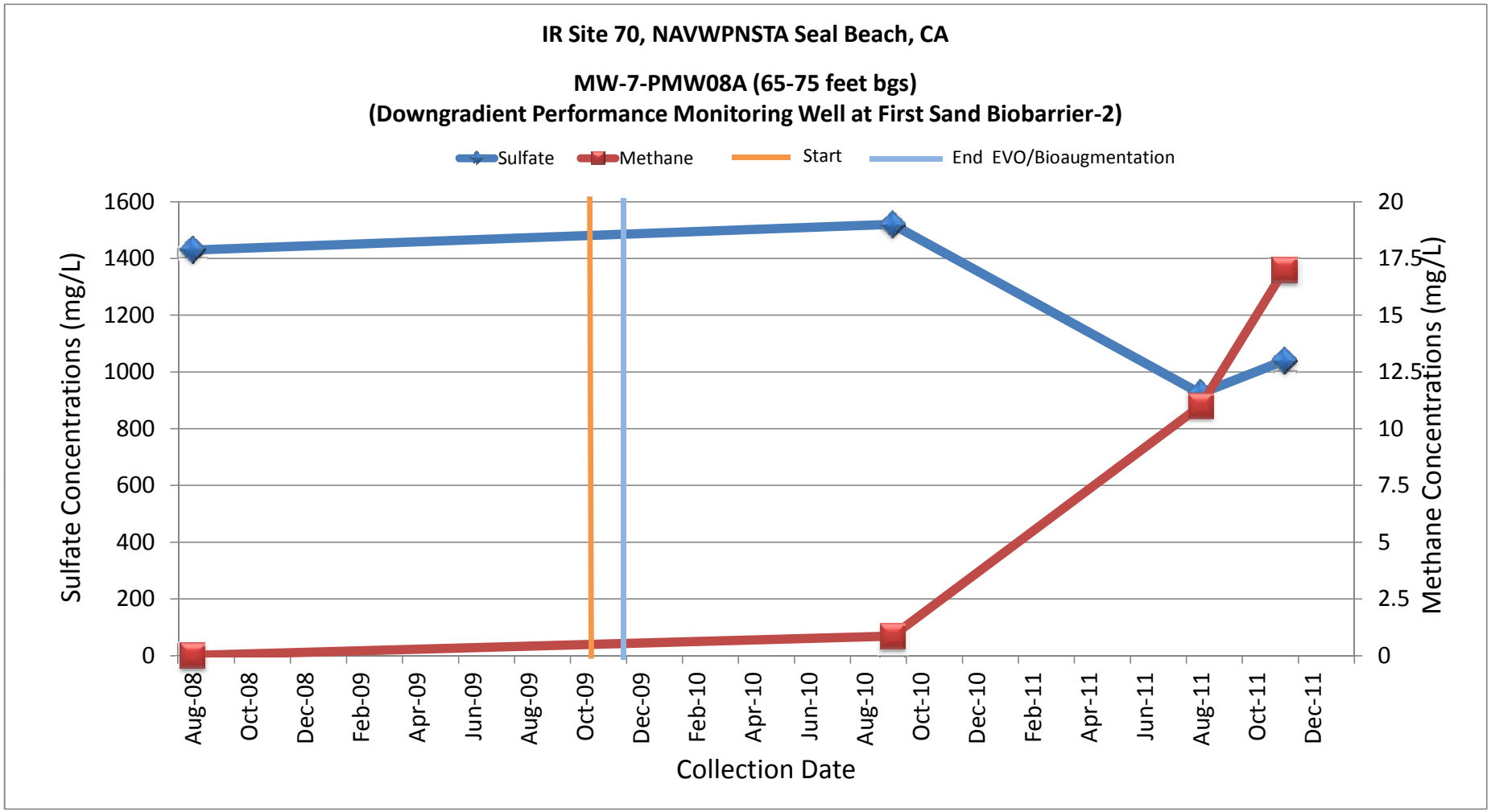
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date


IW-70-FSB216
Sulfate and Methane Concentrations
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
1600
1400
1200
1000
800
600
400
200
0
22.5
20
17.5
15
12.5
10
7.5
5
2.5
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date


IR Site 70, NAVWPNSTA Seal Beach, CA
MW-7-PMW08A (65-75 feet bgs)
(Downgradient Performance Monitoring Well at First Sand Biobarrier-2)
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
1600
1400
1200
1000
800
600
400
200
0
20
17.5
15
12.5
10
7.5
5
2.5
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
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Dec-10
Feb-11
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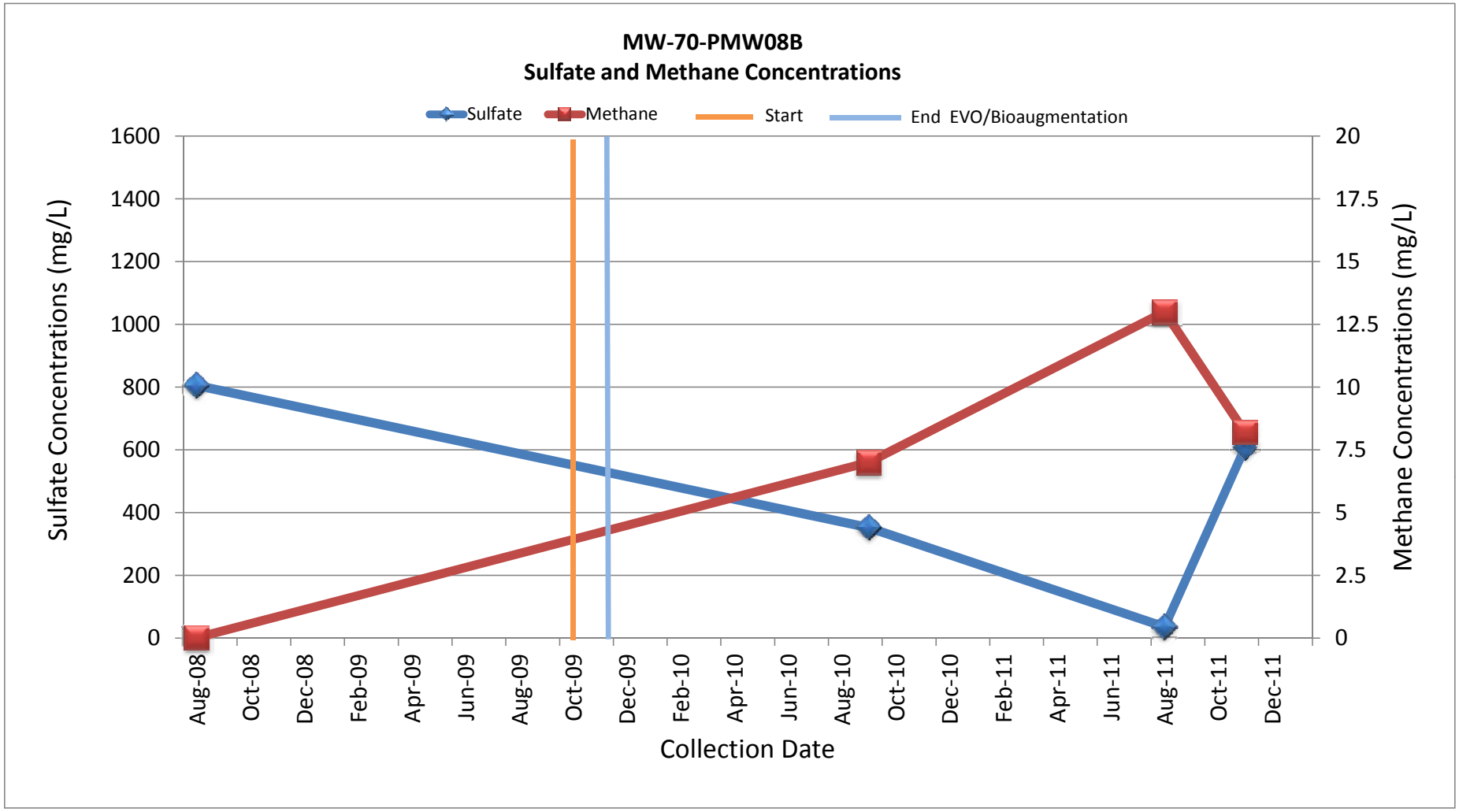
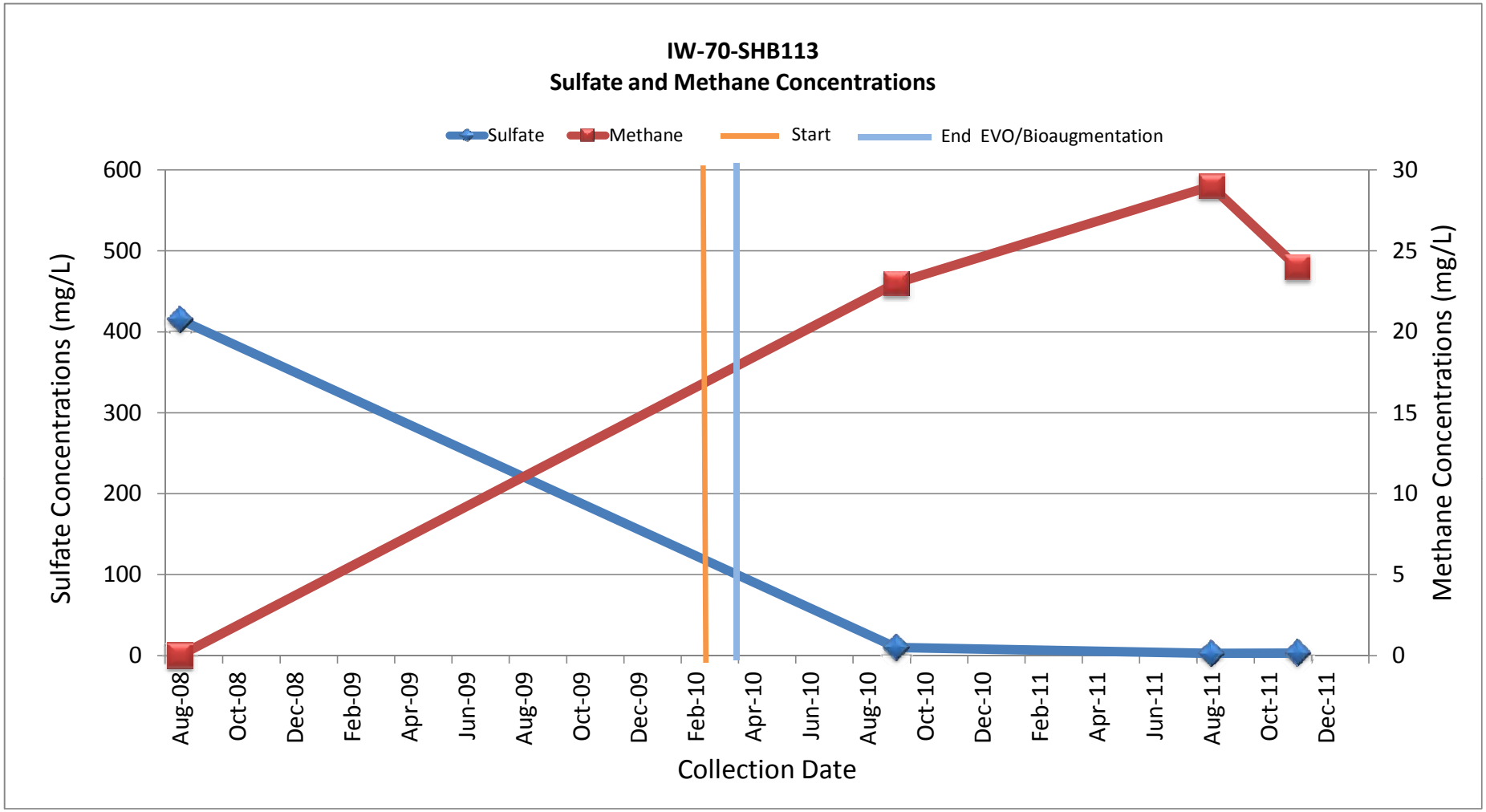
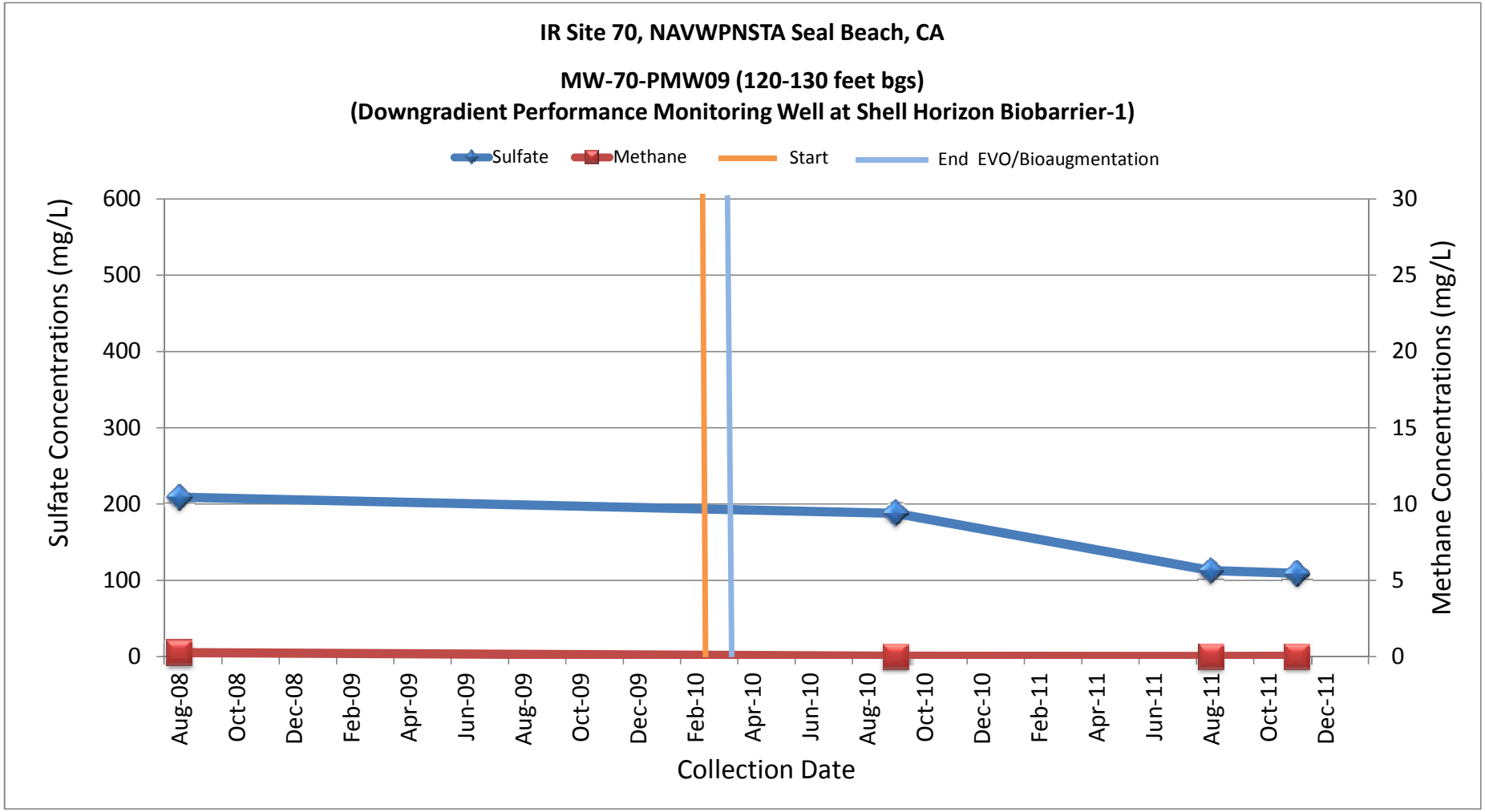
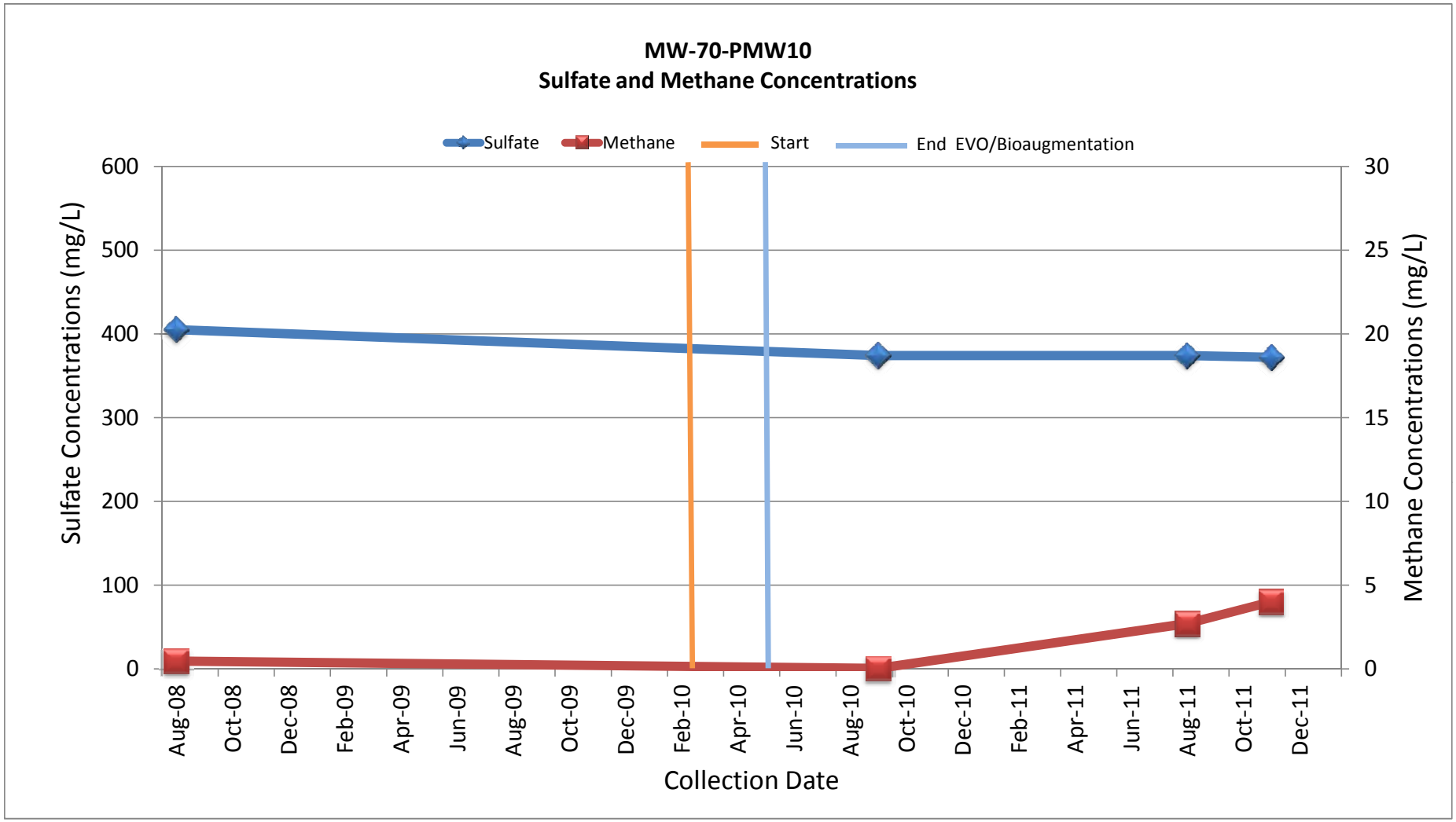
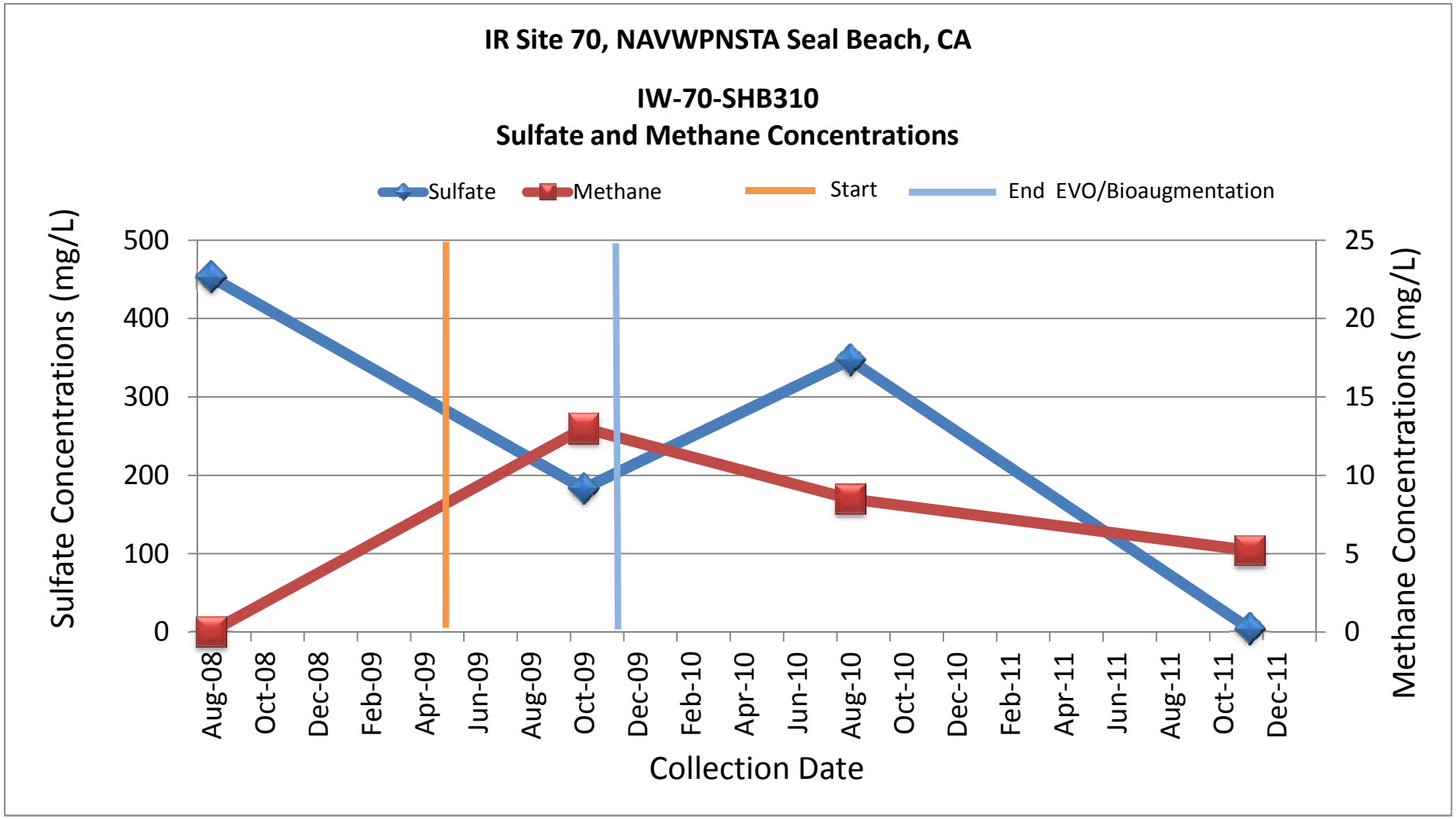
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date

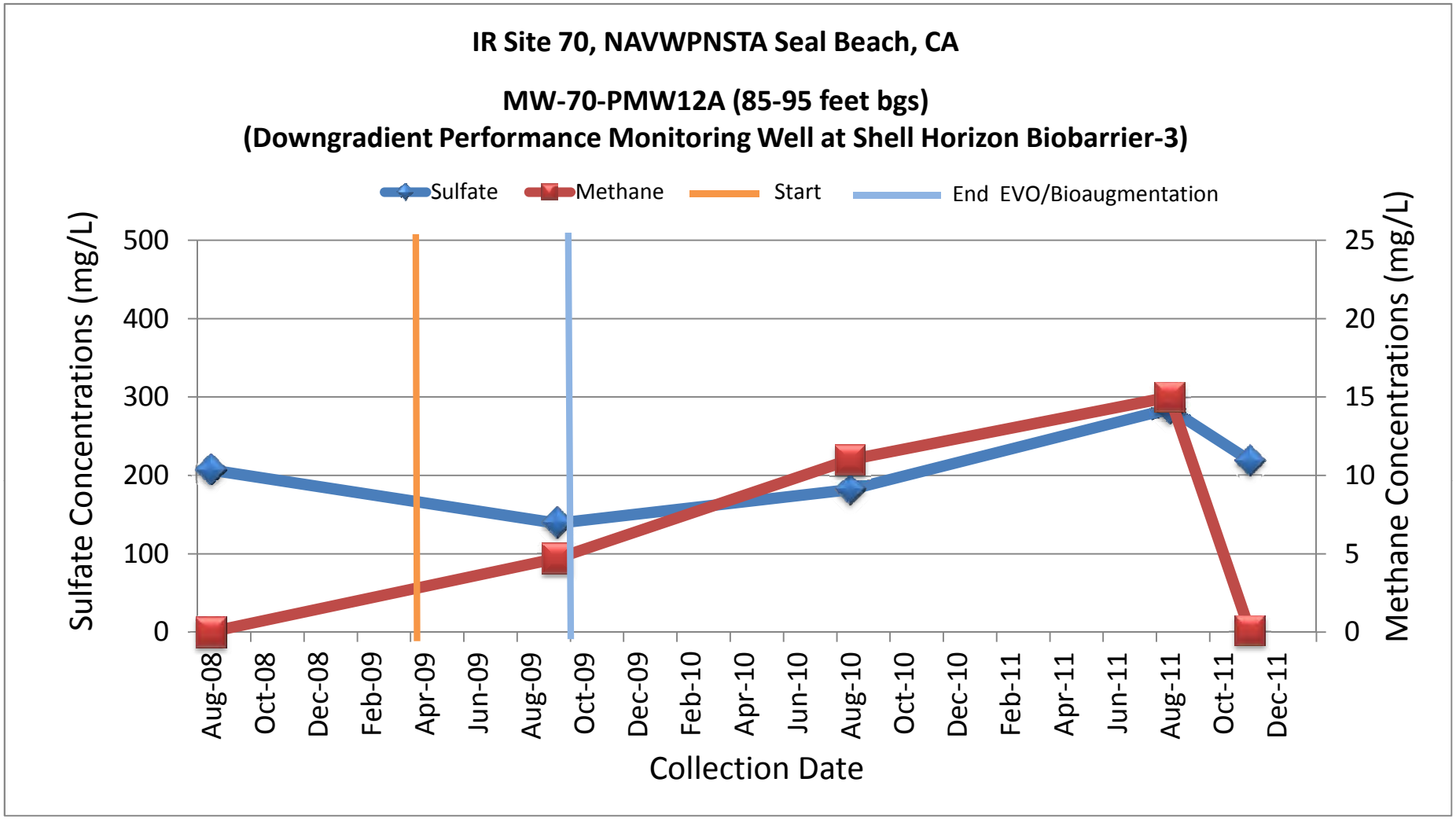

MW-70-PMW08B
Sulfate and Methane Concentrations
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
1600
1400
1200
1000
800
600
400
200
0
20
17.5
15
12.5
10
7.5
5
2.5
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date

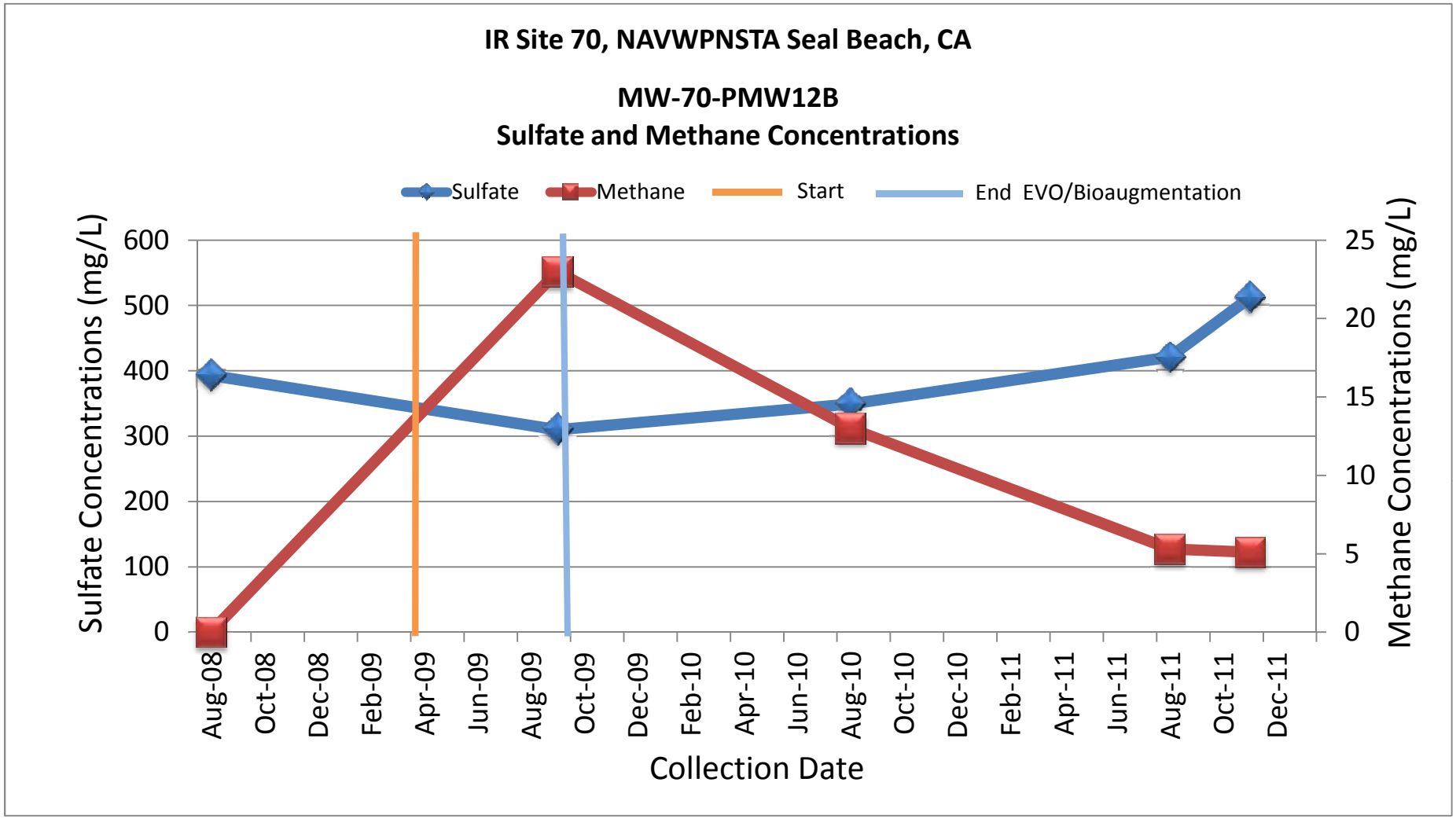

IW-70-SHB113
Sulfate and Methane Concentrations
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
600
500
400
300
200
100
0
30
25
20
15
10
5
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date

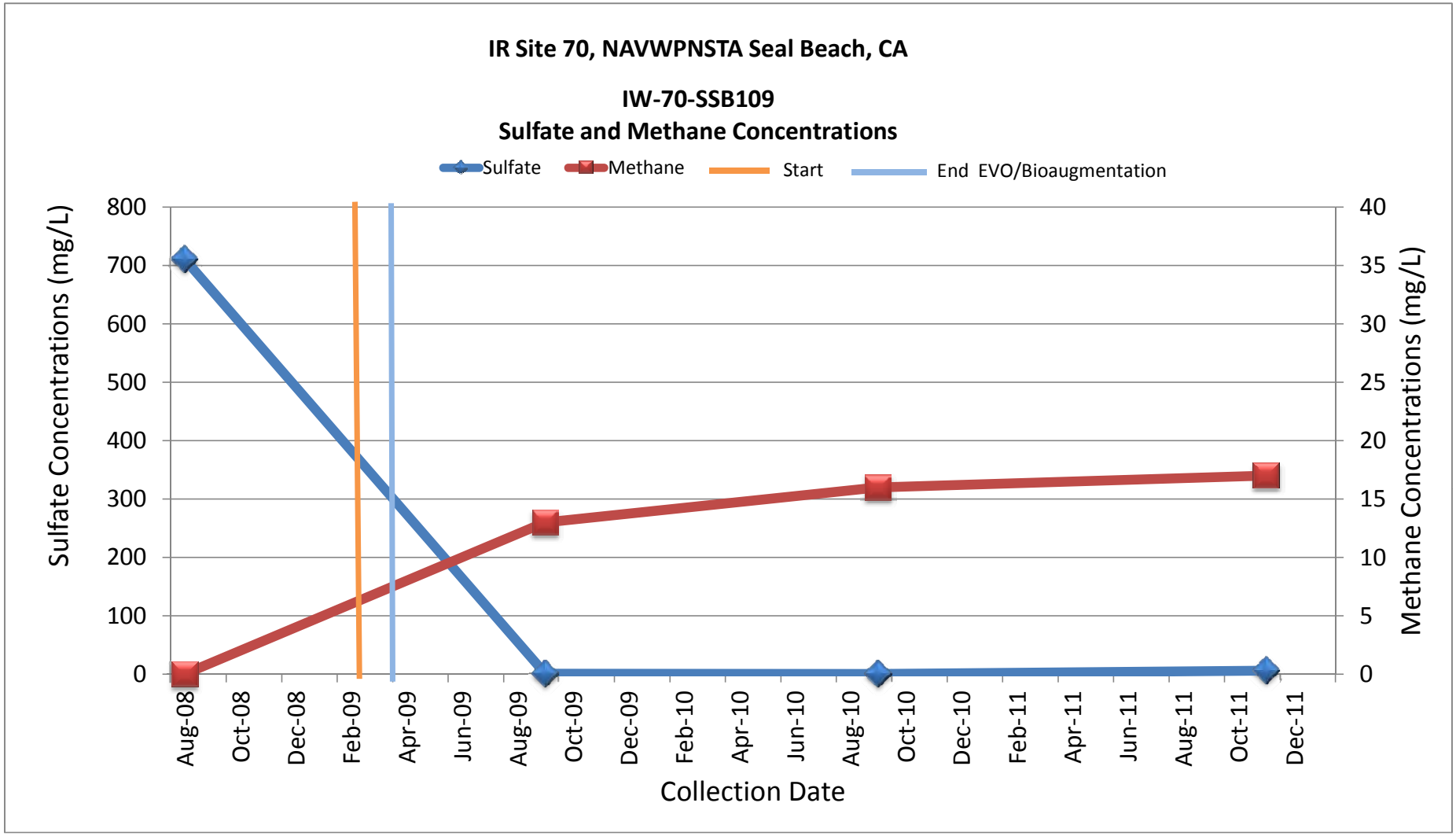

IR Site 70, NAVWPNSTA Seal Beach, CA
MW-70-PMW09 (120-130 feet bgs)
(Downgradient Performance Monitoring Well at Shell Horizon Biobarrier-1)
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
600
500
400
300
200
100
0
30
25
20
15
10
5
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date

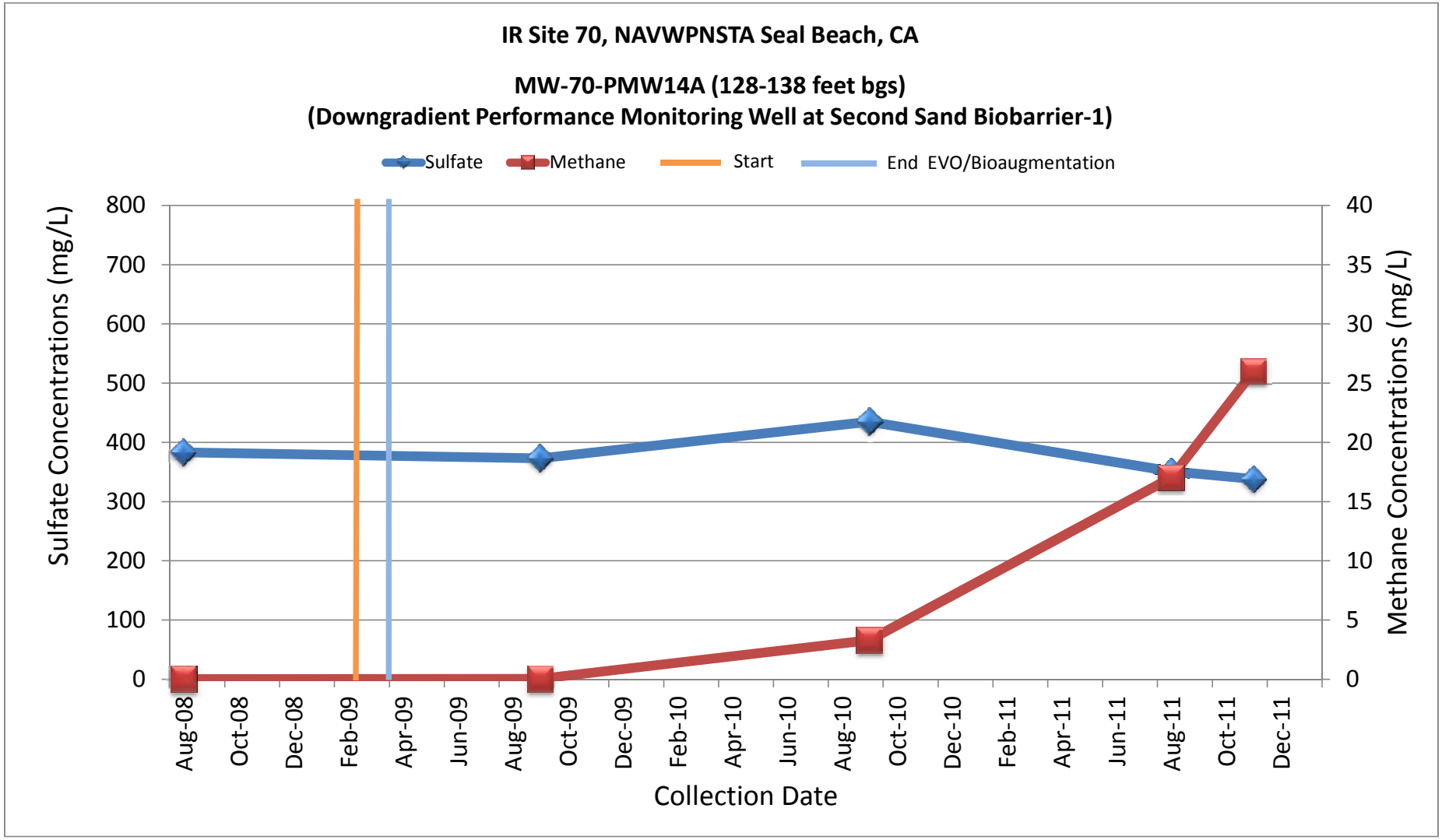

MW-70-PMW10
Sulfate and Methane Concentrations
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
600
500
400
300
200
100
0
30
25
20
15
10
5
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date

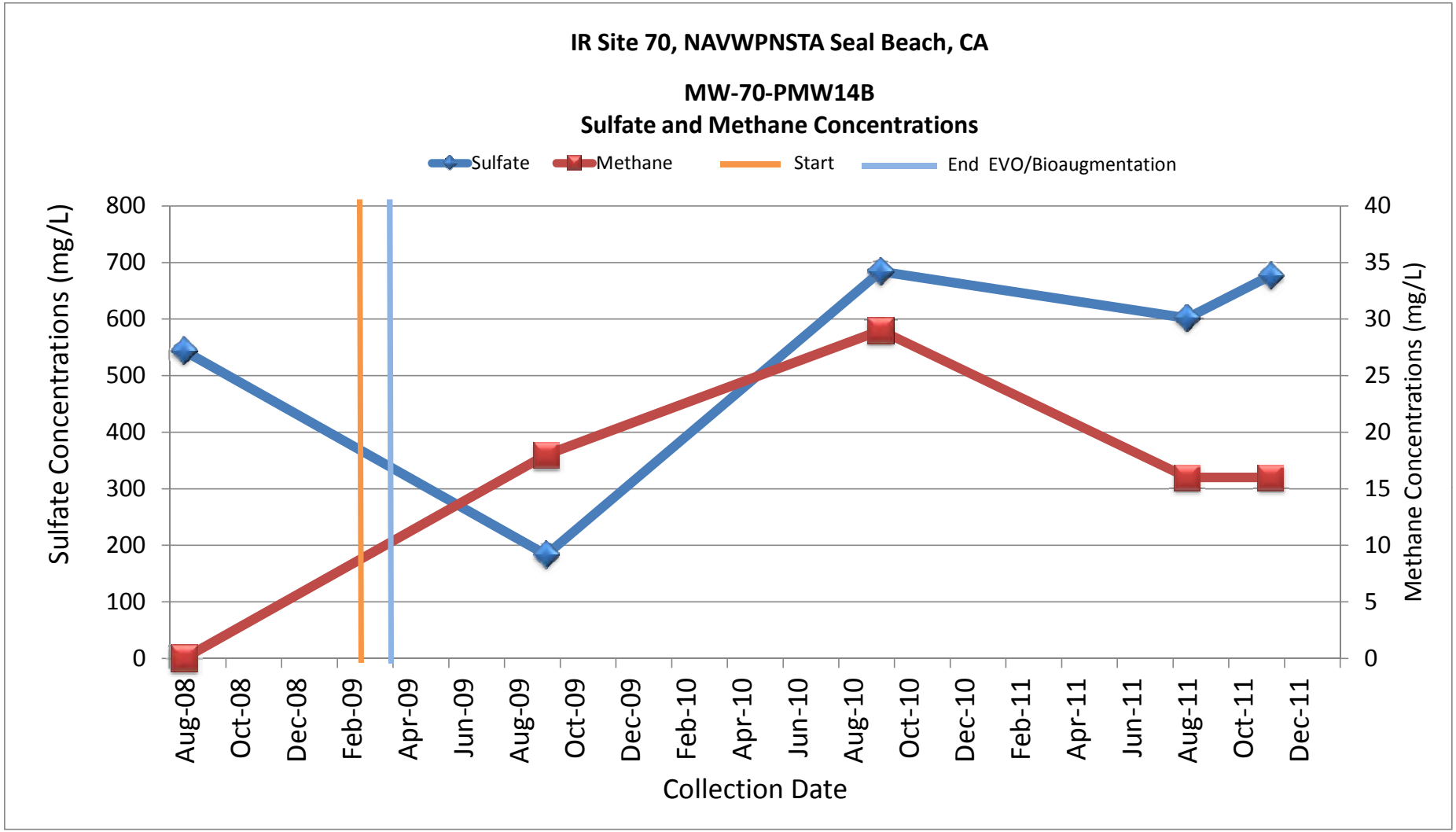

IR Site 70, NAVWPNSTA Seal Beach, CA
IW-70-SHB310
Sulfate and Methane Concentrations
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
500
400
300
200
100
0
25
20
15
10
5
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date


IR Site 70, NAVWPNSTA Seal Beach, CA
MW-70-PMW12A (85-95 feet bgs)
(Downgradient Performance Monitoring Well at Shell Horizon Biobarrier-3)
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
500
400
300
200
100
0
25
20
15
10
5
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date


IR Site 70, NAVWPNSTA Seal Beach, CA
MW-70-PMW12B
Sulfate and Methane Concentrations
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
600
500
400
300
200
100
0
25
20
15
10
5
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date


IR Site 70, NAVWPNSTA Seal Beach, CA
IW-70-SSB109
Sulfate and Methane Concentrations
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
800
700
600
500
400
300
200
100
0
40
35
30
25
20
15
10
5
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date

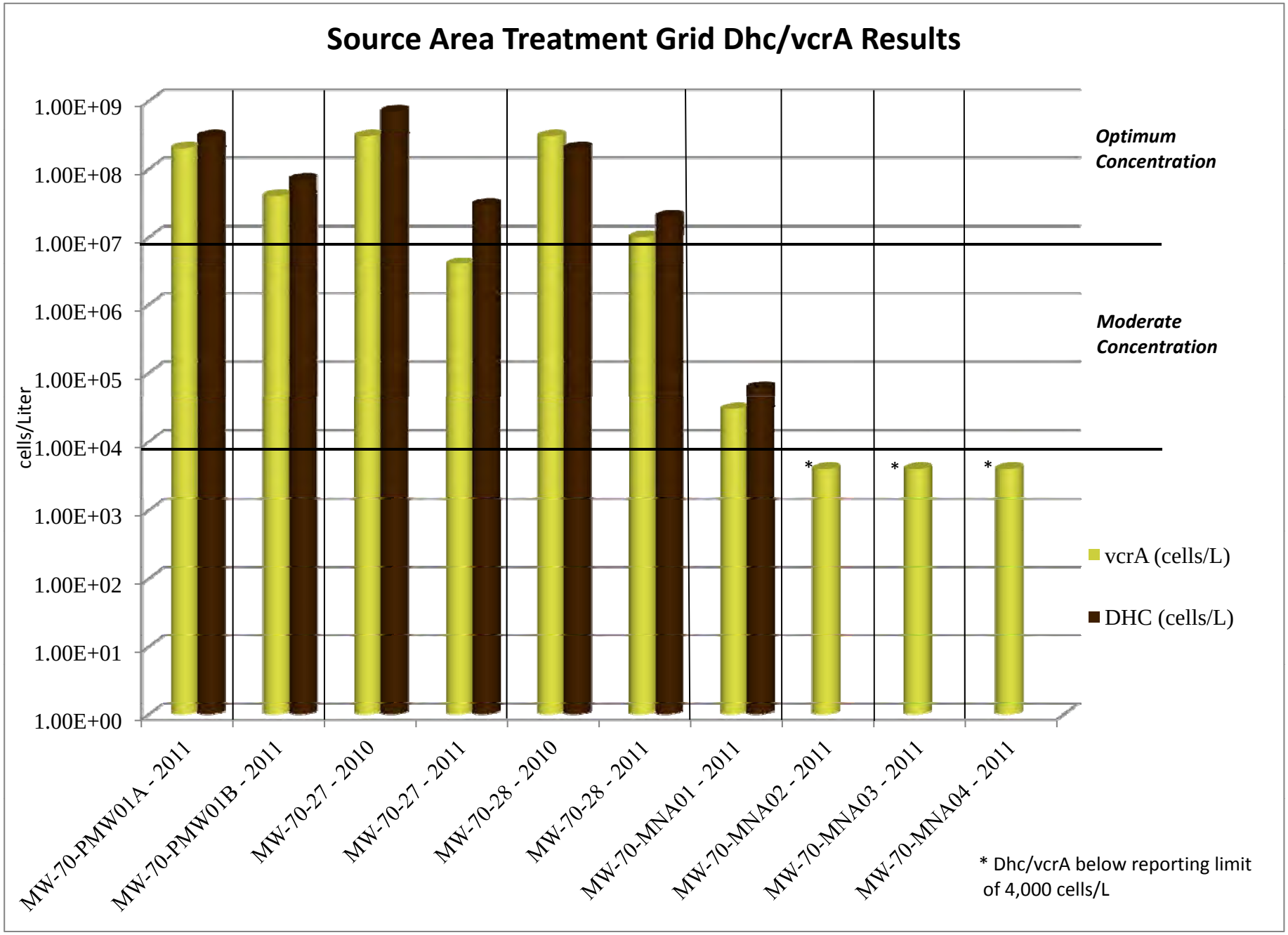

IR Site 70, NAVWPNSTA Seal Beach, CA
MW-70-PMW14A (128-138 feet bgs)
(Downgradient Performance Monitoring Well at Second Sand Biobarrier-1)
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
800
700
600
500
400
300
200
100
0
40
35
30
25
20
15
10
5
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date

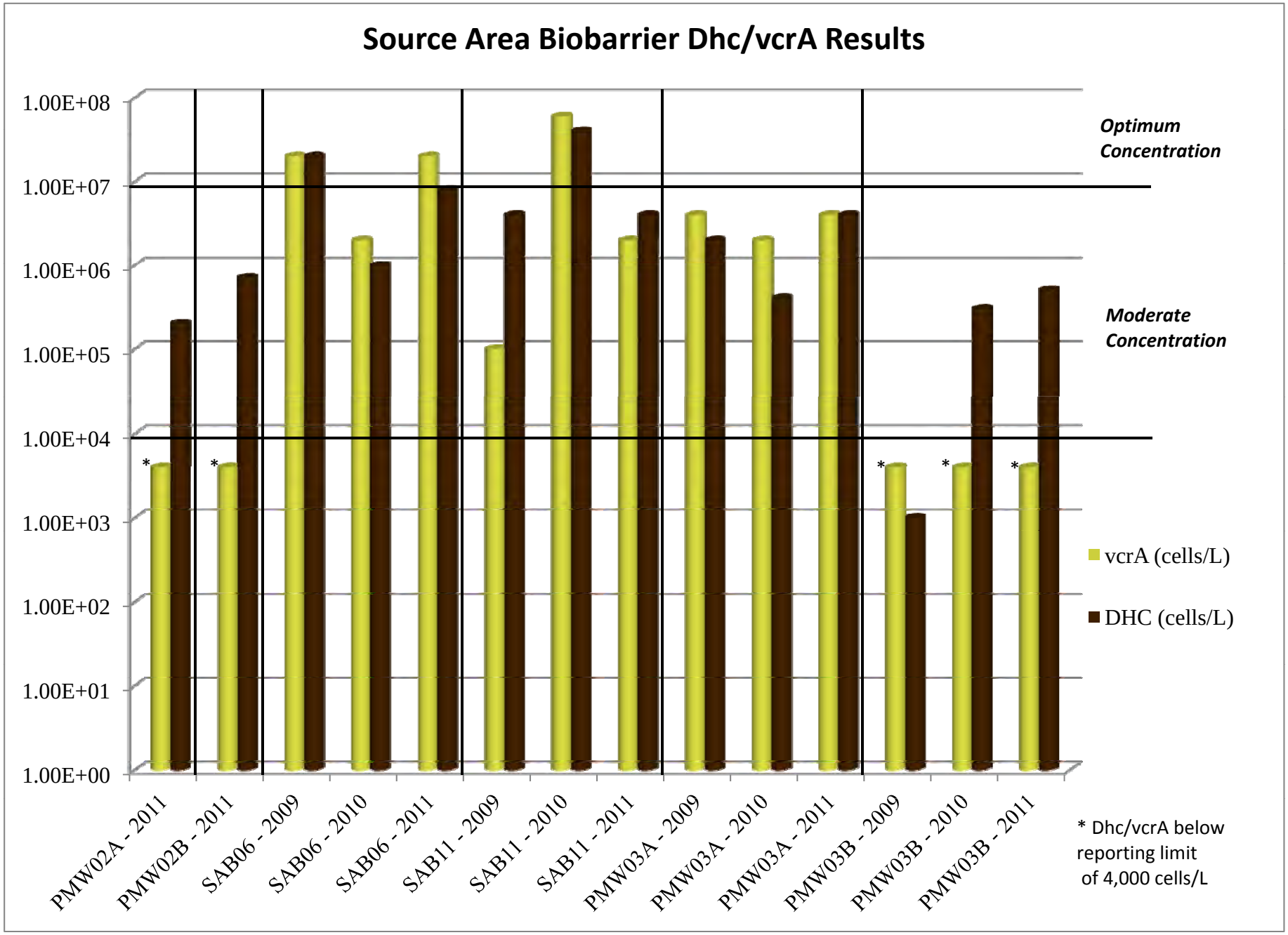

IR Site 70, NAVWPNSTA Seal Beach, CA
MW-70-PMW14B
Sulfate and Methane Concentrations
Sulfate
Methane
Start
End EVO/Bioaugmentation
Sulfate Concentrations (mg/L)
Methane Concentrations (mg/L)
800
700
600
500
400
300
200
100
0
40
35
30
25
20
15
10
5
0
Aug-08
Oct-08
Dec-08
Feb-09
Apr-09
Jun-09
Aug-09
Oct-09
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Collection Date

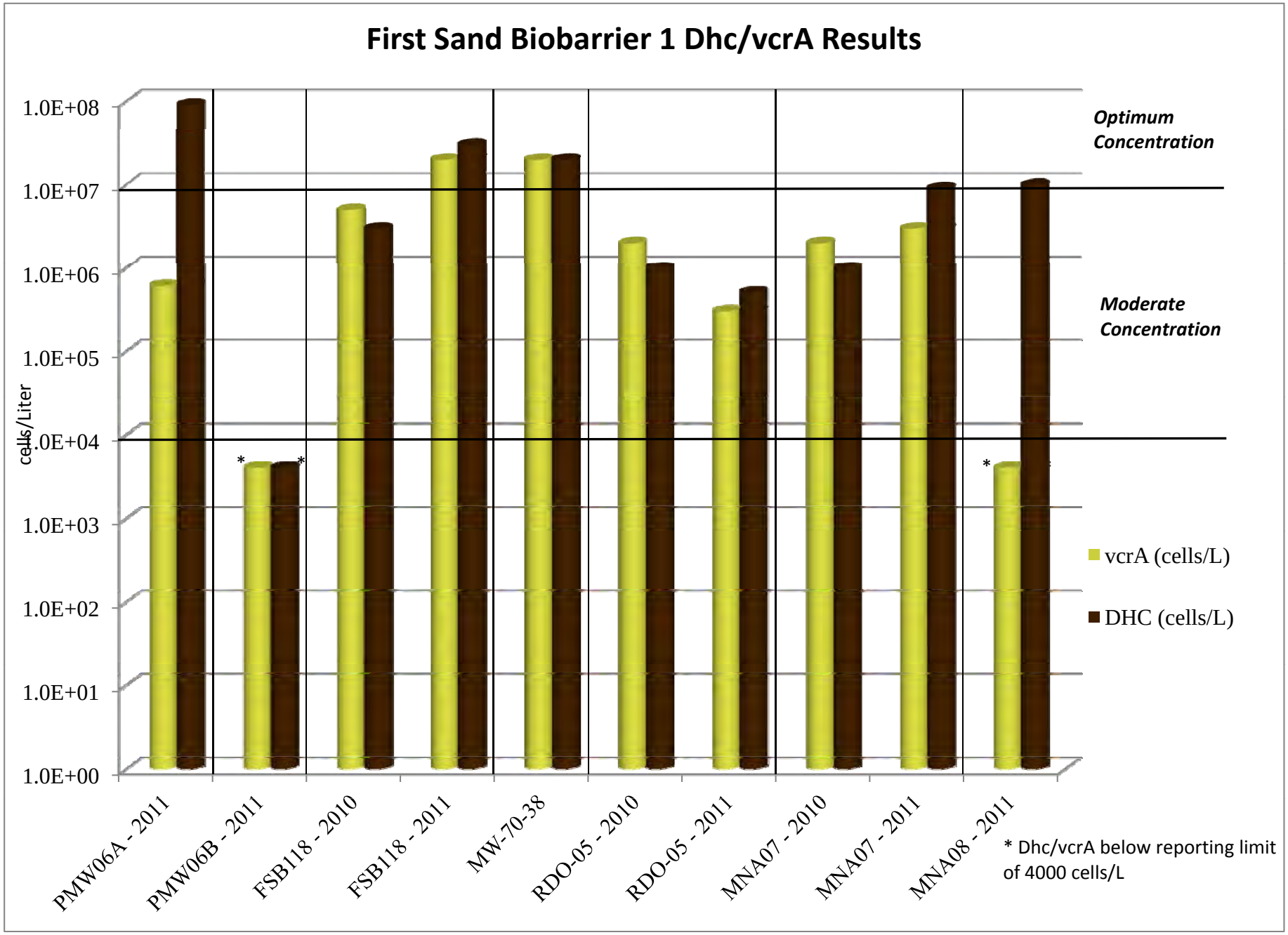
IR Site 70
Naval Weapons Station Seal Beach

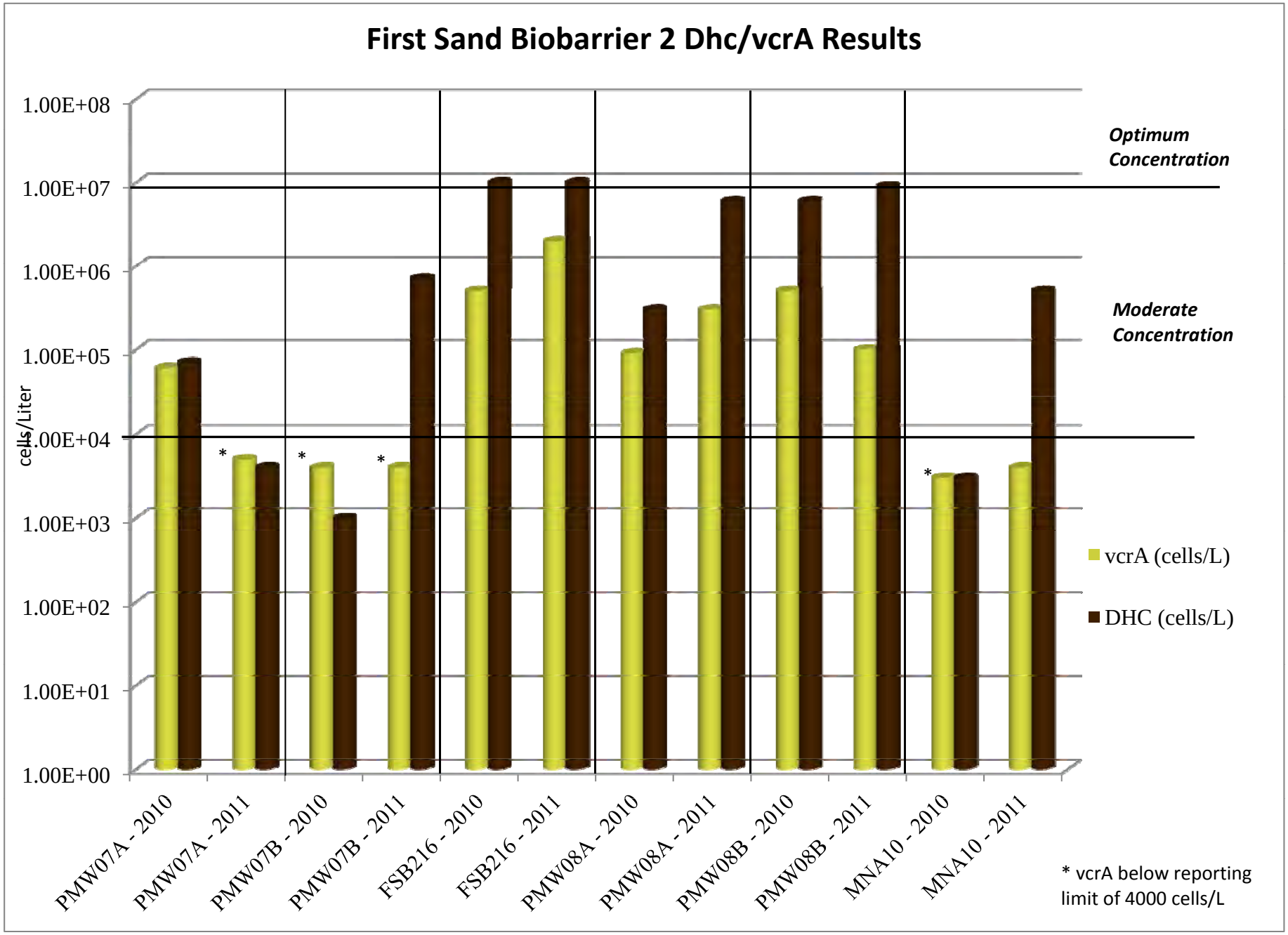
Dehalococcoides (Dhc) and vinyl chloride reductase A gene (vcrA) Trends

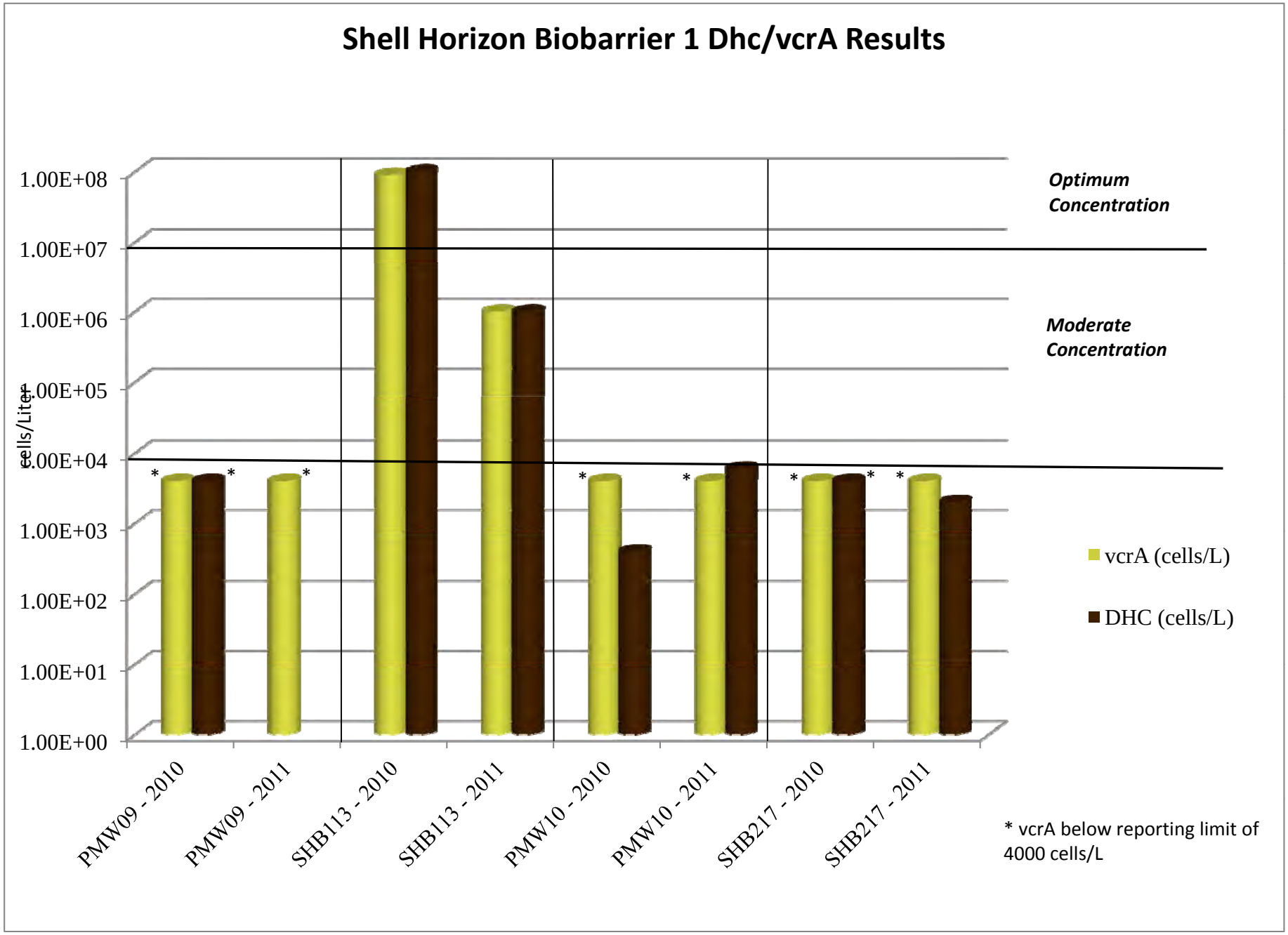
Source Area Treatment Grid
Source Area Biobarrier
First Sand Biobarrier 1
First Sand Biobarrier 2
Shell Horizon Biobarrier 1
Shell Horizon Biobarrier 3
Second Sand Biobarrier 1

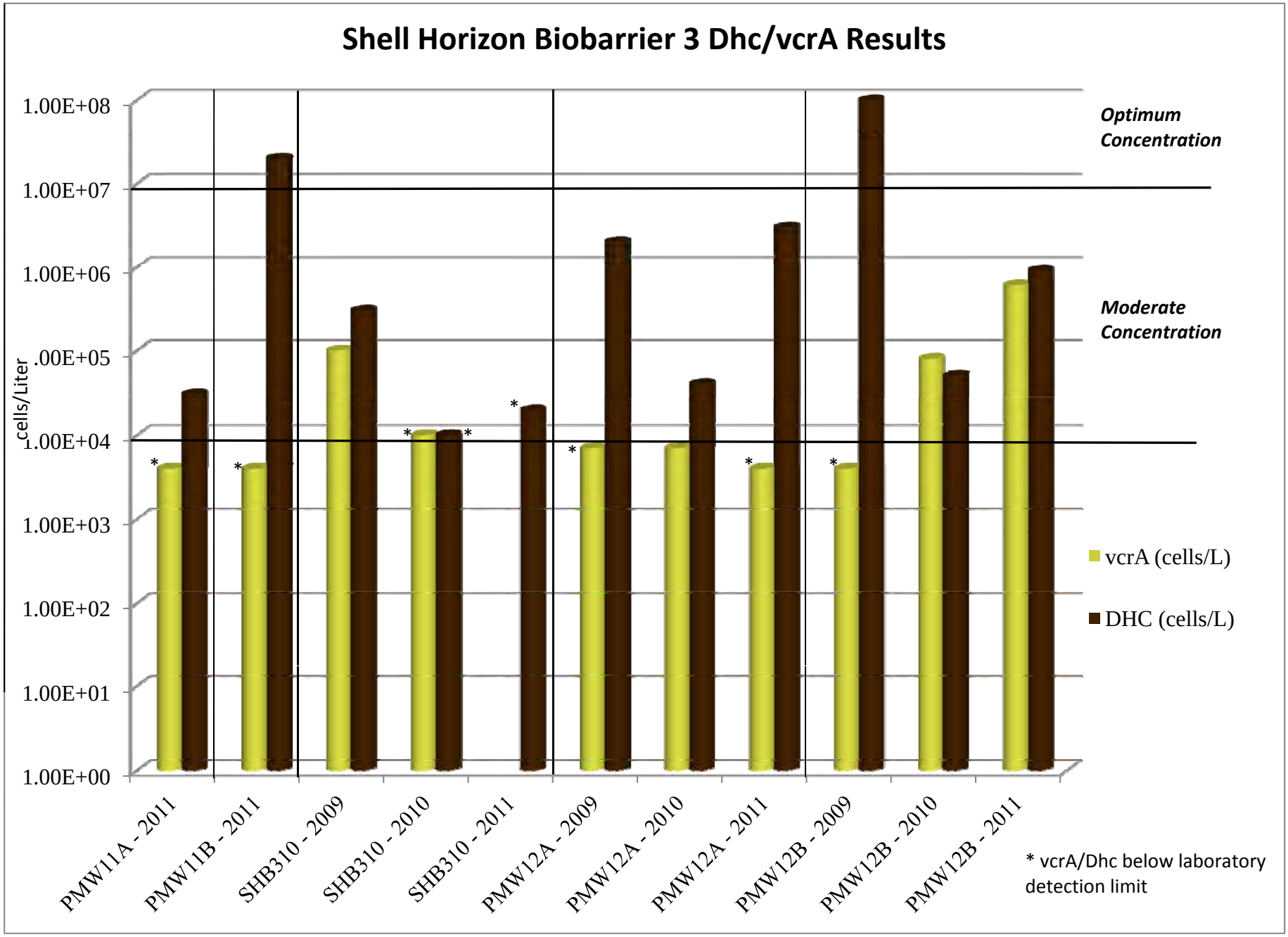

Source Area Treatment Grid Dhc/vcrA Results
cells/Liter
1.00E+09
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Optimum Concentration
Moderate Concentration
vcrA (cells/L)
DHC (cells/L)
*
*
*
MW-70-PMW01A - 2011
MW-70-PMW01B - 2011
MW-70-27 - 2010
MW-70-27 - 2011
MW-70-28 - 2010
MW-70-28 - 2011
MW-70-MNA01 - 2011
MW-70-MNA02 - 2011
MW-70-MNA03 - 2011
MW-70-MNA04 - 2011
* Dhc/vcrA below reporting limit of 4,000 cells/L

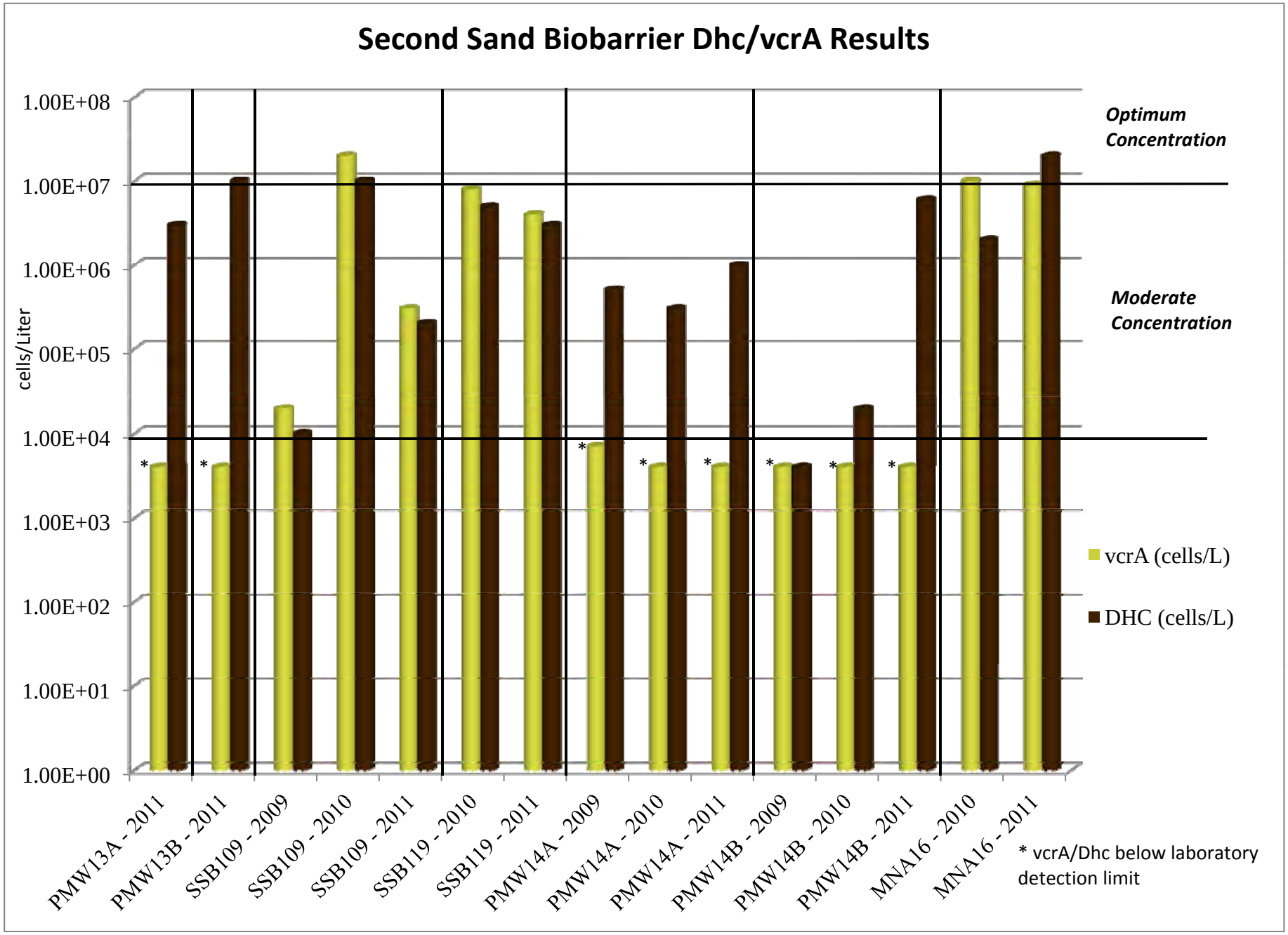

Source Area Biobarrier Dhc/vcrA Results
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Optimum Concentration
Moderate Concentration
vcrA (cells/L)
DHC (cells/L)
PMW02A - 2011
PMW02B - 2011
SAB06 - 2009
SAB06 - 2010
SAB06 - 2011
SAB11 - 2009
SAB11 - 2010
SAB11 - 2011
PMW03A - 2009
PMW03A - 2010
PMW03A - 2011
PMW03B - 2009
PMW03B - 2010
PMW03B - 2011
* Dhc/vcrA below reporting limit of 4,000 cells/L


First Sand Biobarrier 1 Dhc/vcrA Results
1.0E+08
1.0E+07
1.0E+06
1.0E+05
1.0E+04
1.0E+03
1.0E+02
1.0E+01
1.0E+00
cells/Liter
Optimum Concentration
Moderate Concentration
vcrA (cells/L)
DHC (cells/L)
PMW06A - 2011
PMW06B - 2011
FSB118 - 2010
FSB118 - 2011
MW-70-38
RDO-05 - 2010
RDO-05 - 2011
MNA07 - 2010
MNA07 - 2011
MNA08 - 2011
* Dhc/vcrA below reporting limit of 4000 cells/L


First Sand Biobarrier 2 Dhc/vcrA Results
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
cells/Liter
Optimum Concentration
Moderate Concentration
vcrA (cells/L)
DHC (cells/L)
PMW07A - 2010
PMW07A - 2011
PMW07B - 2010
PMW07B - 2011
FSB216 - 2010
FSB216 - 2011
PMW08A - 2010
PMW08A - 2011
PMW08B - 2010
PMW08B - 2011
MNA10 - 2010
MNA10 - 2011
* vcrA below reporting limit of 4000 cells/L

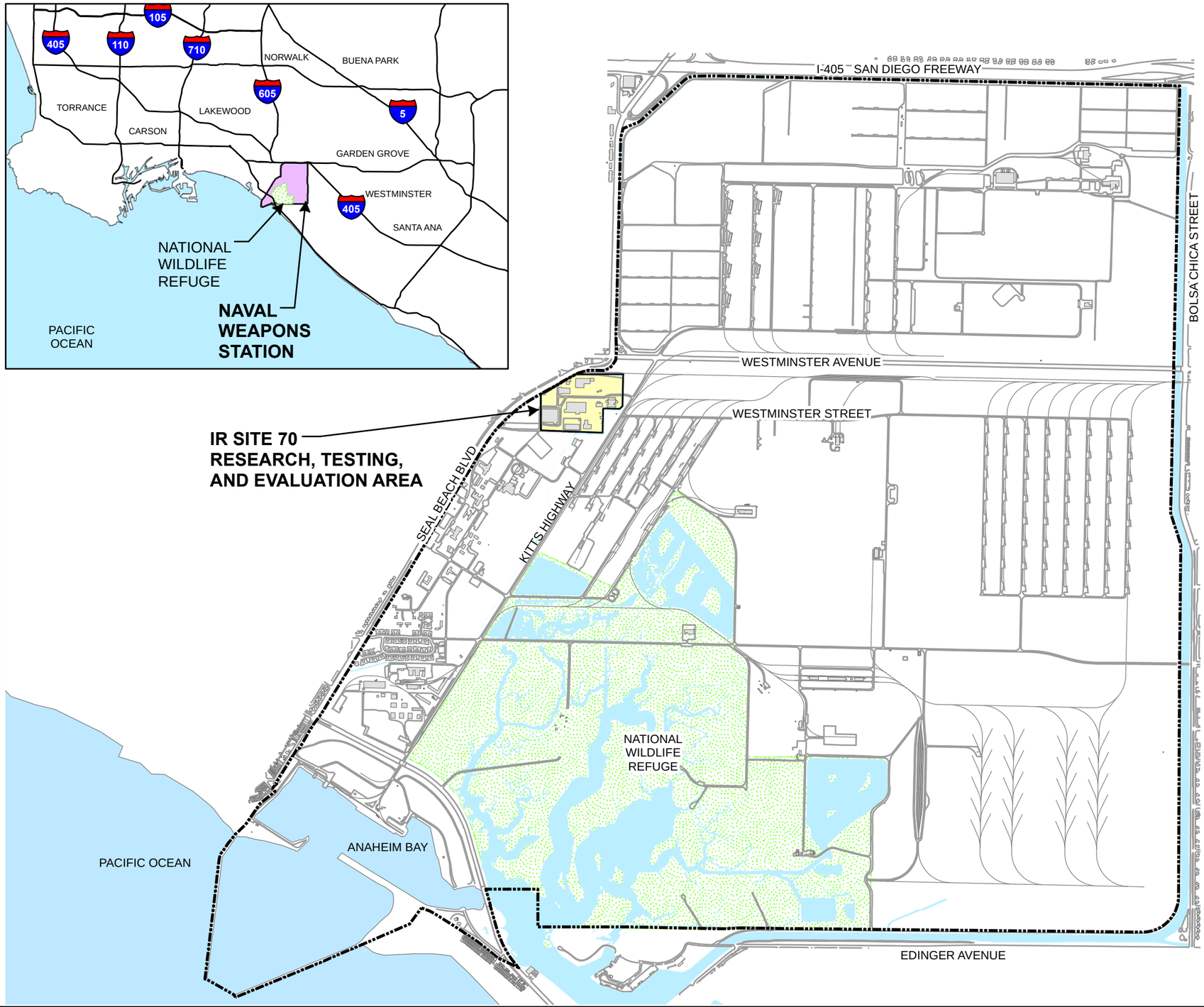

Shell Horizon Biobarrier 1 Dhc/vcrA Results
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
cells/Liter
Optimum Concentration
Moderate Concentration
vcrA (cells/L)
DHC (cells/L)
PMW09 - 2010
PMW09 - 2011
SHB113 - 2010
SHB113 - 2011
PMW10 - 2010
PMW10 - 2011
SHB217 - 2010
SHB217 - 2011
* vcrA below reporting limit of 4000 cells/L


Shell Horizon Biobarrier 3 Dhc/vcrA Results
1.00E+08
1.00E+07
1.00E+06
.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
cells/Liter
Optimum Concentration
Moderate Concentration
vcrA (cells/L)
DHC (cells/L)
PMW11A - 2011
PMW11B - 2011
SHB310 - 2009
SHB310 - 2010
SHB310 - 2011
PMW12A - 2009
PMW12A - 2010
PMW12A - 2011
PMW12B - 2009
PMW12B - 2010
PMW12B - 2011
* vcrA/Dhc below laboratory detection limit


Second Sand Biobarrier Dhc/vcrA Results
cells/Liter
1.00E+08
1.00E+07
1.00E+06
00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Optimum Concentration
Moderate Concentration
vcrA (cells/L)
DHC (cells/L)
PMW13A - 2011
PMW13B - 2011
SSB109 - 2009
SSB109 - 2010
SSB109 - 2011
SSB119 - 2010
SSB119 - 2011
PMW14A - 2009
PMW14A - 2010
PMW14A - 2011
PMW14B - 2009
PMW14B - 2010
PMW14B - 2011
MNA16 - 2010
MNA16 - 2011
* vcrA/Dhc below laboratory detection limit

APPENDIX H

2008 BASELINE FIGURES



LEGEND

- IR SITE 70 BOUNDARY
- BASE BOUNDARY
- ROAD
- RAILROAD TRACK
- BUILDING

N

0 1,000 2,000 4,000 Feet

Baseline Groundwater Monitoring Report

Figure 1

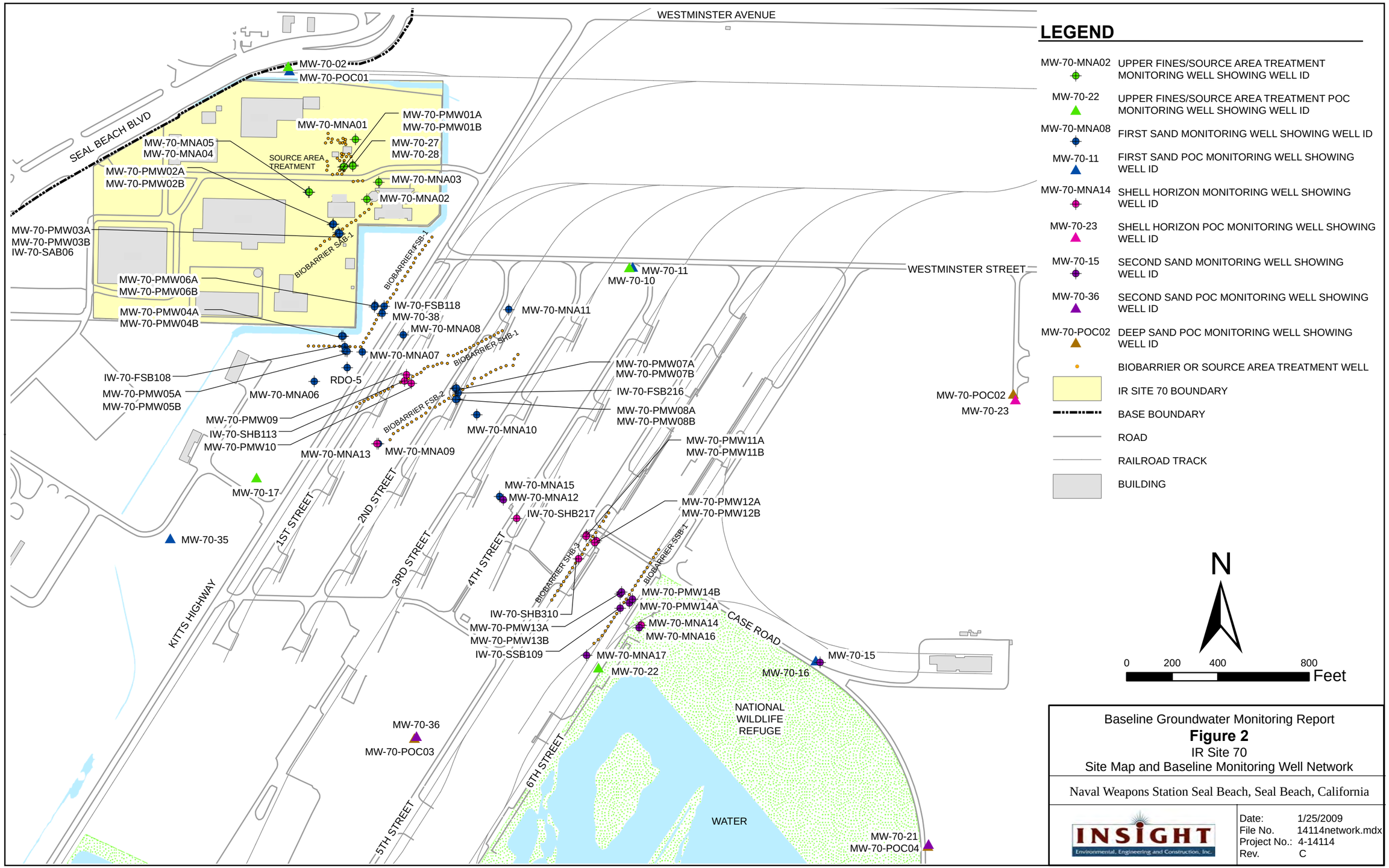
IR Site 70

Site Location Map

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT Environmental, Engineering and Construction, Inc.

Date:	12/14/2008
File No.	14114vic.mdx
Project No.:	4-14114
Rev.	A



Baseline Groundwater Monitoring Report

Figure 2

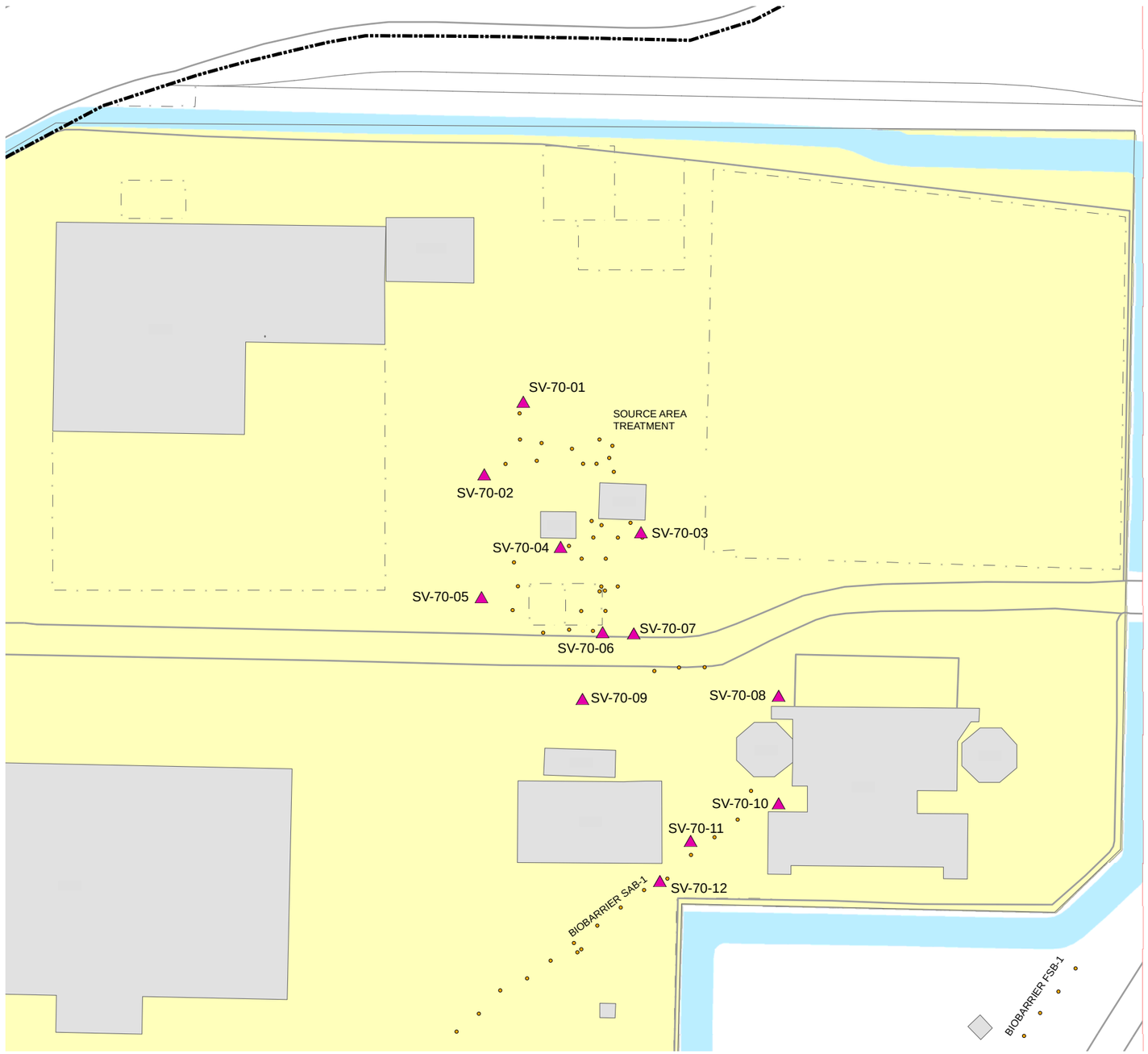
IR Site 70

Site Map and Baseline Monitoring Well Network

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT Environmental, Engineering and Construction, Inc.

Date:	1/25/2009
File No.	14114network.mdx
Project No.:	4-14114
Rev.	C



LEGEND

- SV-70-09 — SOIL VAPOR PROBE LOCATION SHOWING ID
- BIOBARRIER OR SOURCE AREA TREATMENT WELL
- IR SITE 70 BOUNDARY
- BASE BOUNDARY
- ROAD
- RAILROAD TRACK
- FENCE
- BUILDING

N

0 50 100 200 Feet

Baseline Groundwater Monitoring Report

Figure 3

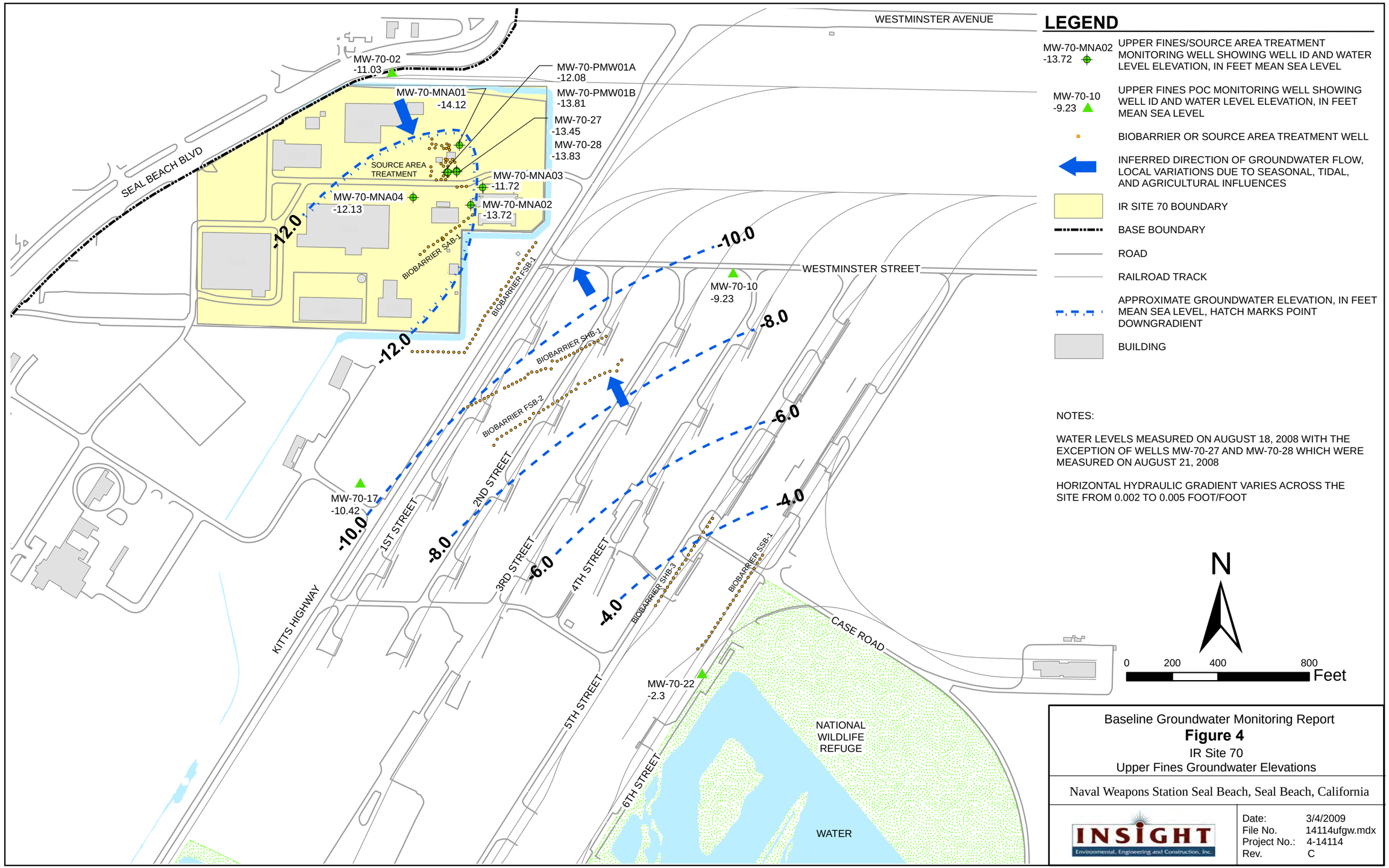
IR Site 70

Soil Vapor Location Map

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT Environmental, Engineering and Construction, Inc.

Date:	1/18/2009
File No.	14114sv.mdx
Project No.:	4-14114
Rev.	B



Baseline Groundwater Monitoring Report

Figure 4

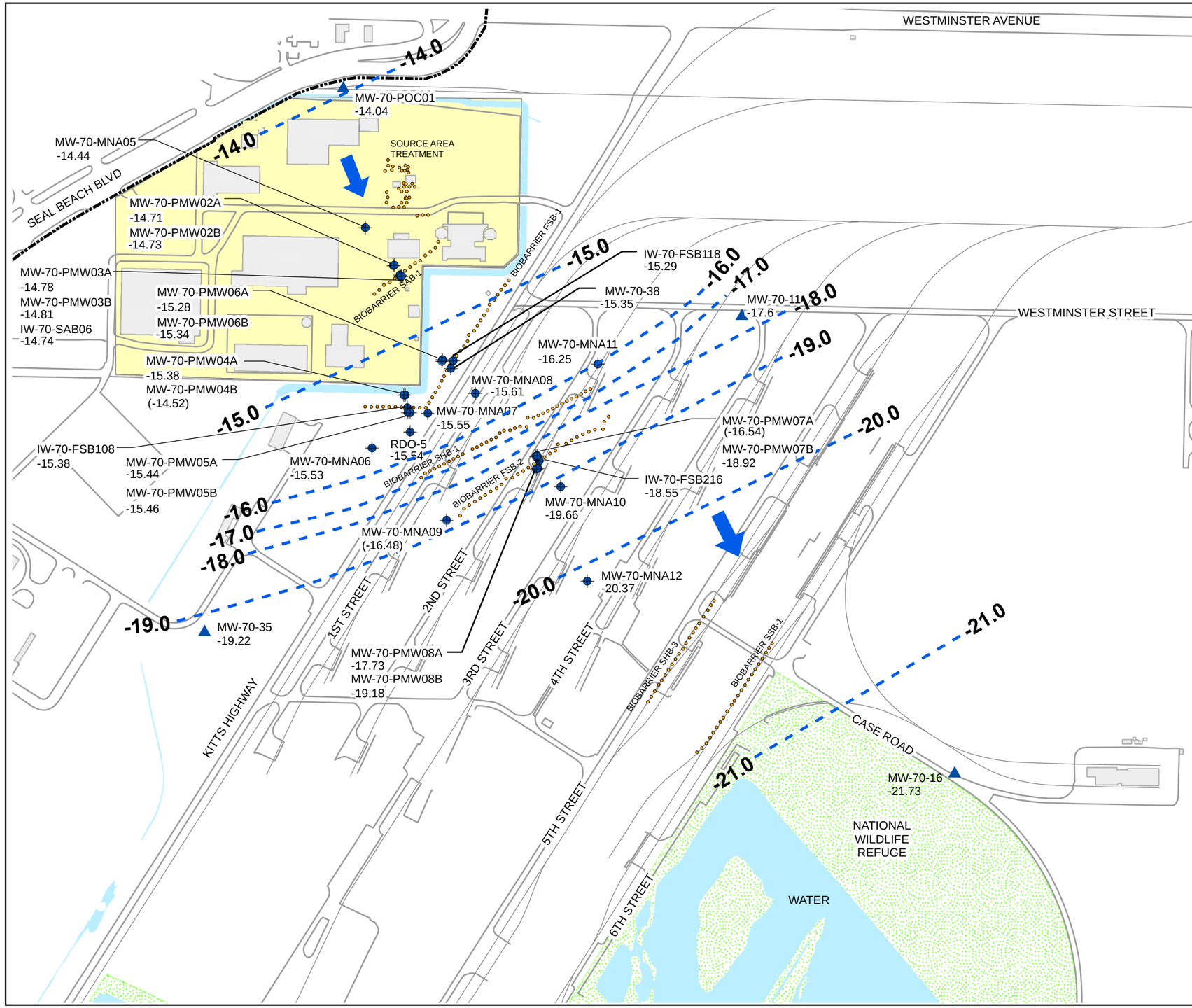
IR Site 70

Upper Fines Groundwater Elevations

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT
Environmental, Engineering and Construction, Inc.

Date:	3/4/2009
File No.	14114ufgw.mdx
Project No.:	4-14114
Rev.	C



LEGEND

MW-70-MNA08 -15.61	FIRST SAND MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET BGS MEAN SEA LEVEL
MW-70-16 -21.73	FIRST SAND POC MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET BGS MEAN SEA LEVEL
	BIOBARRIER OR SOURCE AREA TREATMENT WELL
	INFERRED DIRECTION OF GROUNDWATER FLOW, LOCAL VARIATIONS DUE TO SEASONAL, TIDAL, AND AGRICULTURAL INFLUENCES
	IR SITE 70 BOUNDARY
	BASE BOUNDARY
	ROAD
	RAILROAD TRACK
	APPROXIMATE GROUNDWATER ELEVATION, IN FEET MEAN SEA LEVEL
	BUILDING

NOTES:

( ) - PARENTHESES INDICATE THAT THE GROUNDWATER ELEVATION WAS NOT INCLUDED IN CONTOUR DUE TO SCREEN INTERVAL

WATER LEVELS MEASURED ON AUGUST 18, 2008

HORIZONTAL HYDRAULIC GRADIENT VARIES ACROSS THE SITE FROM 0.0007 TO 0.009 FOOT/FOOT

N

0 200 400 800 Feet

Baseline Groundwater Monitoring Report

Figure 5

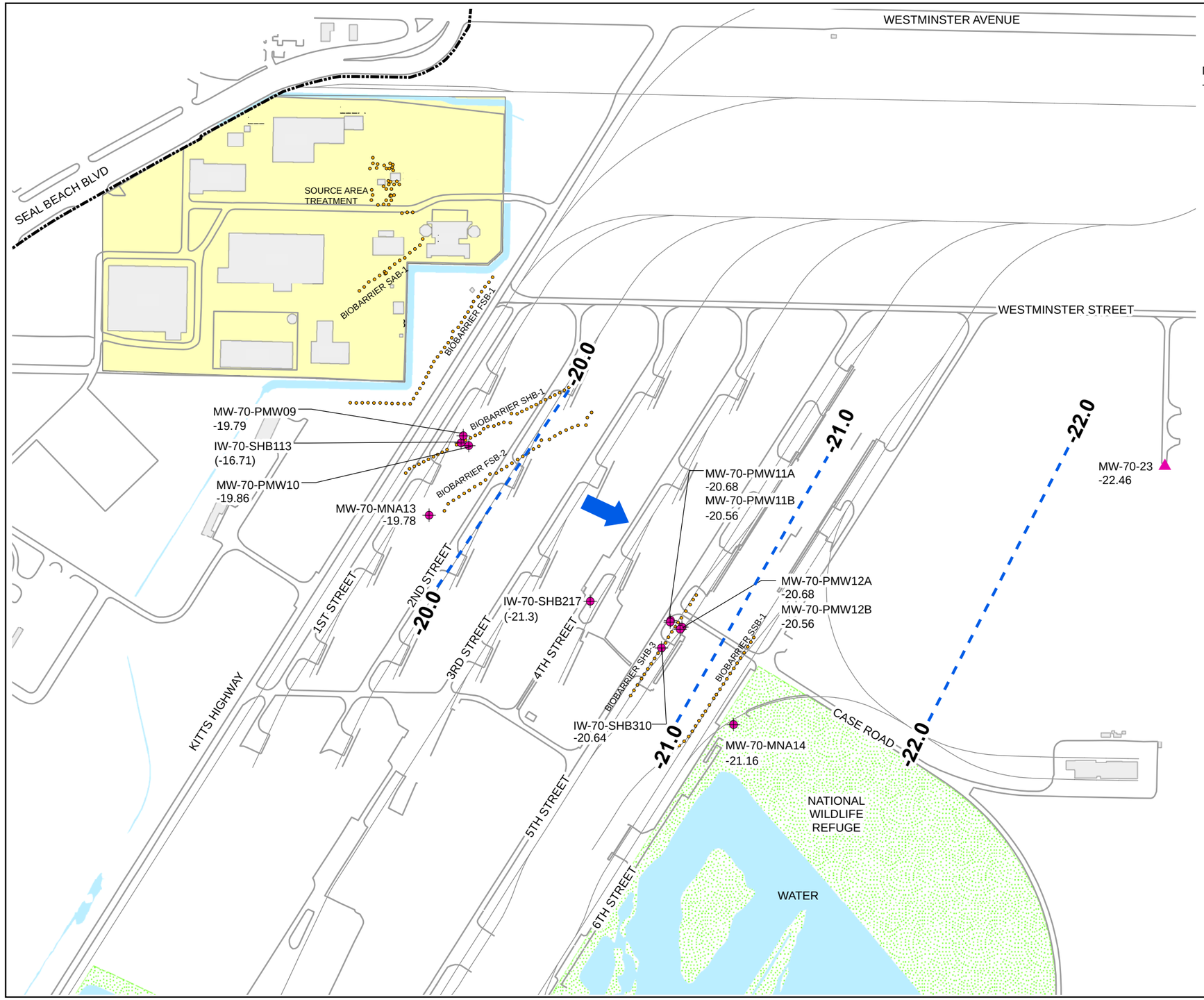
IR Site 70

First Sand Groundwater Elevations

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT Environmental, Engineering and Construction, Inc.

Date:	3/4/2009
File No.	14114fsgw.mdx
Project No.:	4-14114
Rev.	C



LEGEND

MW-70-MNA14 -21.16	SHELL HORIZON MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET MEAN SEA LEVEL
MW-70-23 -22.46	SHELL HORIZON POC MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET MEAN SEA LEVEL
	BIOBARRIER OR SOURCE AREA TREATMENT WELL
	INFERRED DIRECTION OF GROUNDWATER FLOW, LOCAL VARIATIONS DUE TO SEASONAL, TIDAL, AND AGRICULTURAL INFLUENCES
	IR SITE 70 BOUNDARY
	BASE BOUNDARY
	ROAD
	RAILROAD TRACK
	APPROXIMATE GROUNDWATER ELEVATION, IN FEET MEAN SEA LEVEL
	BUILDING

NOTES:

( ) - PARENTHESES INDICATE THAT THE GROUNDWATER ELEVATION WAS NOT INCLUDED IN CONTOUR DUE TO SCREEN INTERVAL

WATER LEVELS MEASURED ON AUGUST 18, 2008

HORIZONTAL HYDRAULIC GRADIENT ACROSS THE SITE IS APPROXIMATELY 0.001 FOOT/FOOT

N

0 200 400 800 Feet

Baseline Groundwater Monitoring Report

Figure 6

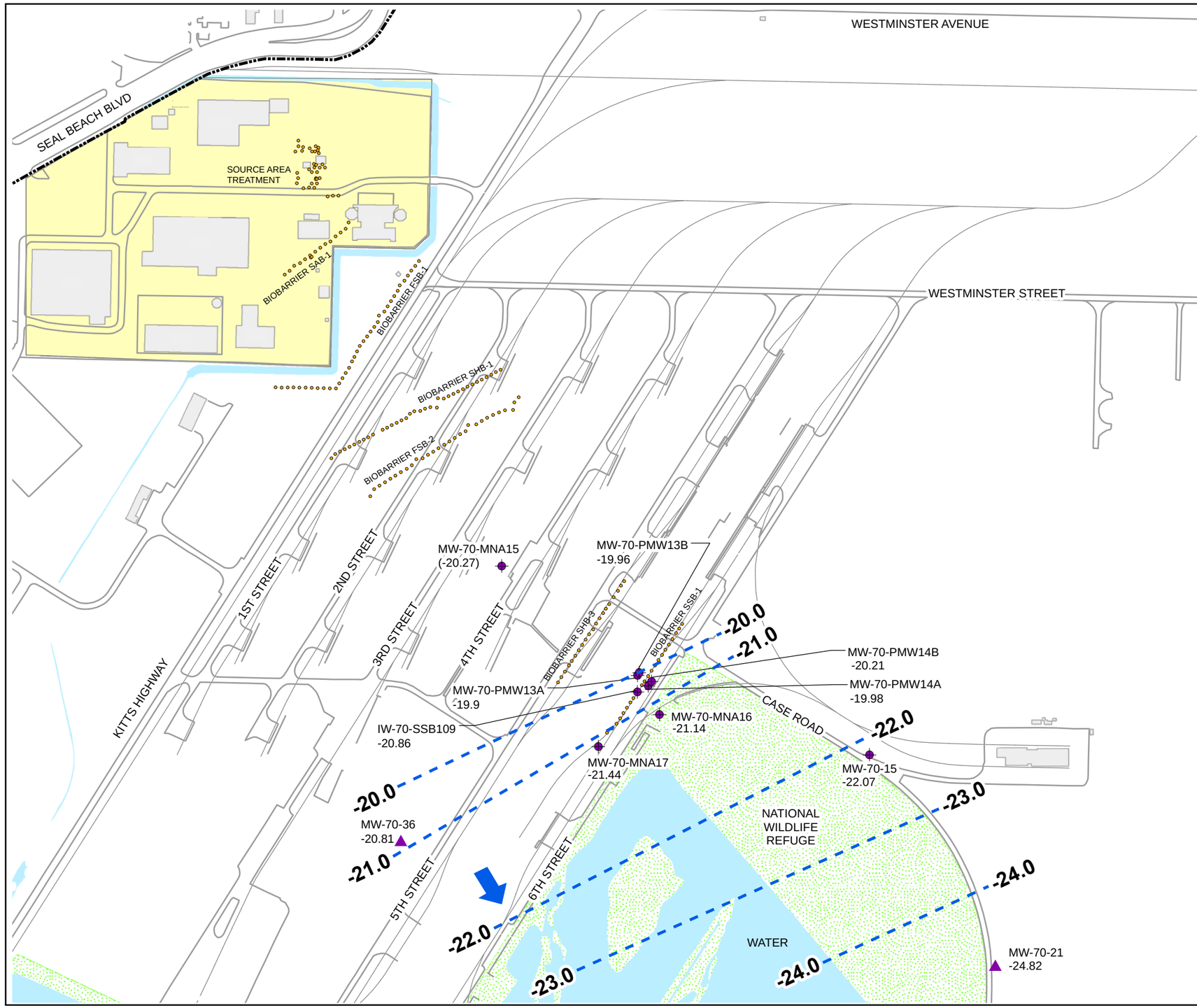
IR Site 70

Shell Horizon Groundwater Elevations

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT Environmental, Engineering and Construction, Inc.

Date:	3/4/2009
File No.	14114shgw.mdx
Project No.:	4-14114
Rev.	D



LEGEND

MW-70-15 -22.07	SECOND SAND MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET MEAN SEA LEVEL
MW-70-36 -20.81	SECOND SAND POC MONITORING WELL SHOWING WELL ID AND WATER LEVEL ELEVATION, IN FEET MEAN SEA LEVEL
	BIOBARRIER OR SOURCE AREA TREATMENT WELL
	INFERRED DIRECTION OF GROUNDWATER FLOW, LOCAL VARIATIONS DUE TO SEASONAL, TIDAL, AND AGRICULTURAL INFLUENCES
	IR SITE 70 BOUNDARY
	BASE BOUNDARY
	ROAD
	RAILROAD TRACK
	APPROXIMATE GROUNDWATER ELEVATION, IN FEET MEAN SEA LEVEL
	BUILDING

NOTES:

( ) - PARENTHESES INDICATE THAT THE GRONDWATER ELEVATION WAS NOT INCLUDED IN CONTOUR DUE TO SCREEN INTERVAL

WATER LEVELS MEASURED ON AUGUST 18, 2008

HORIZONTAL HYDRAULIC GRADIENT ACROSS THE SITE IS APPROXIMATELY 0.001 FOOT/FOOT

N

0 200 400 800 Feet

Baseline Groundwater Monitoring Report

Figure 7

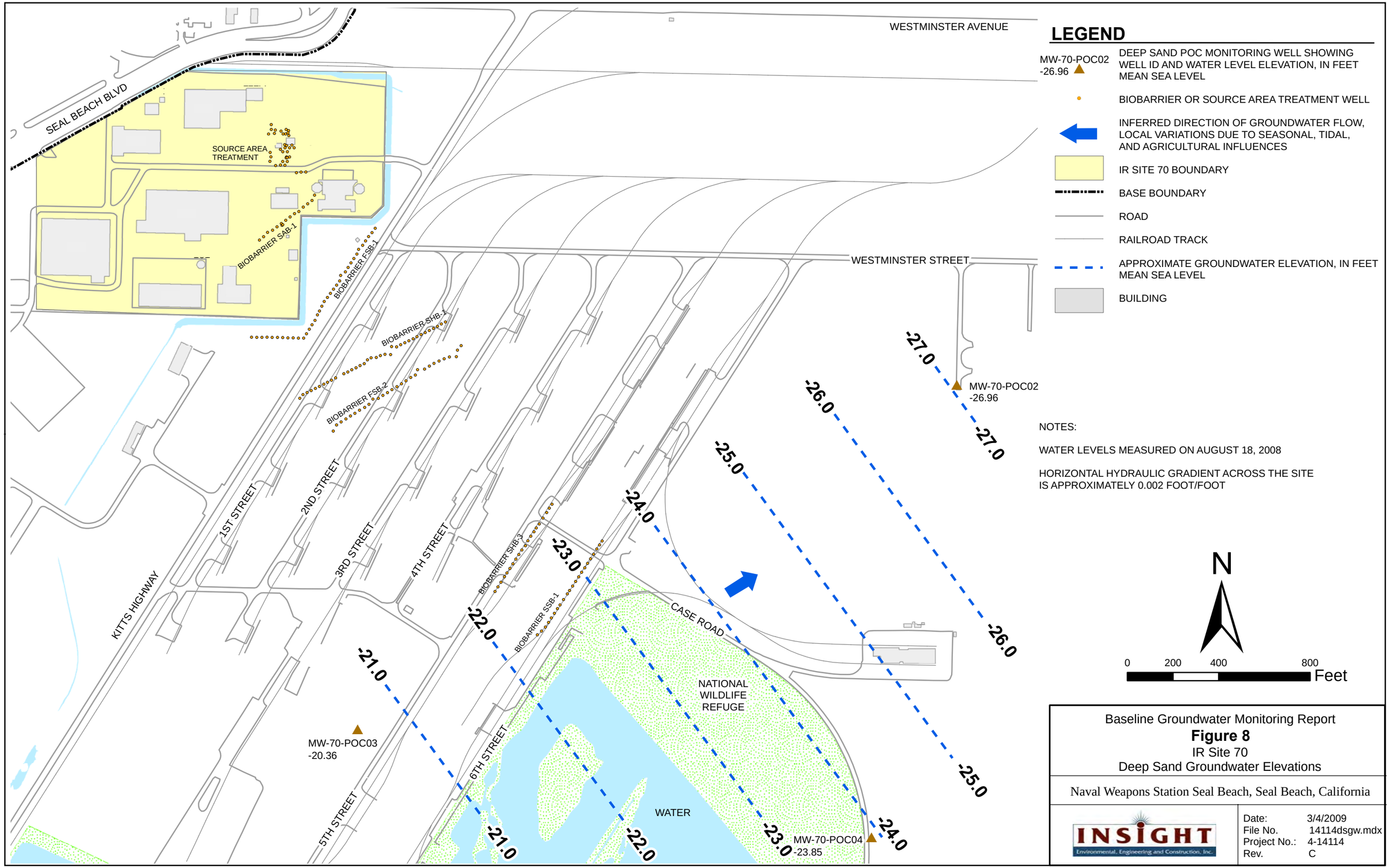
IR Site 70

Second Sand Groundwater Elevations

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT Environmental, Engineering and Construction, Inc.

Date: 3/4/2009
File No. 14114ssgw.mdx
Project No.: 4-14114
Rev. D



Baseline Groundwater Monitoring Report

Figure 8

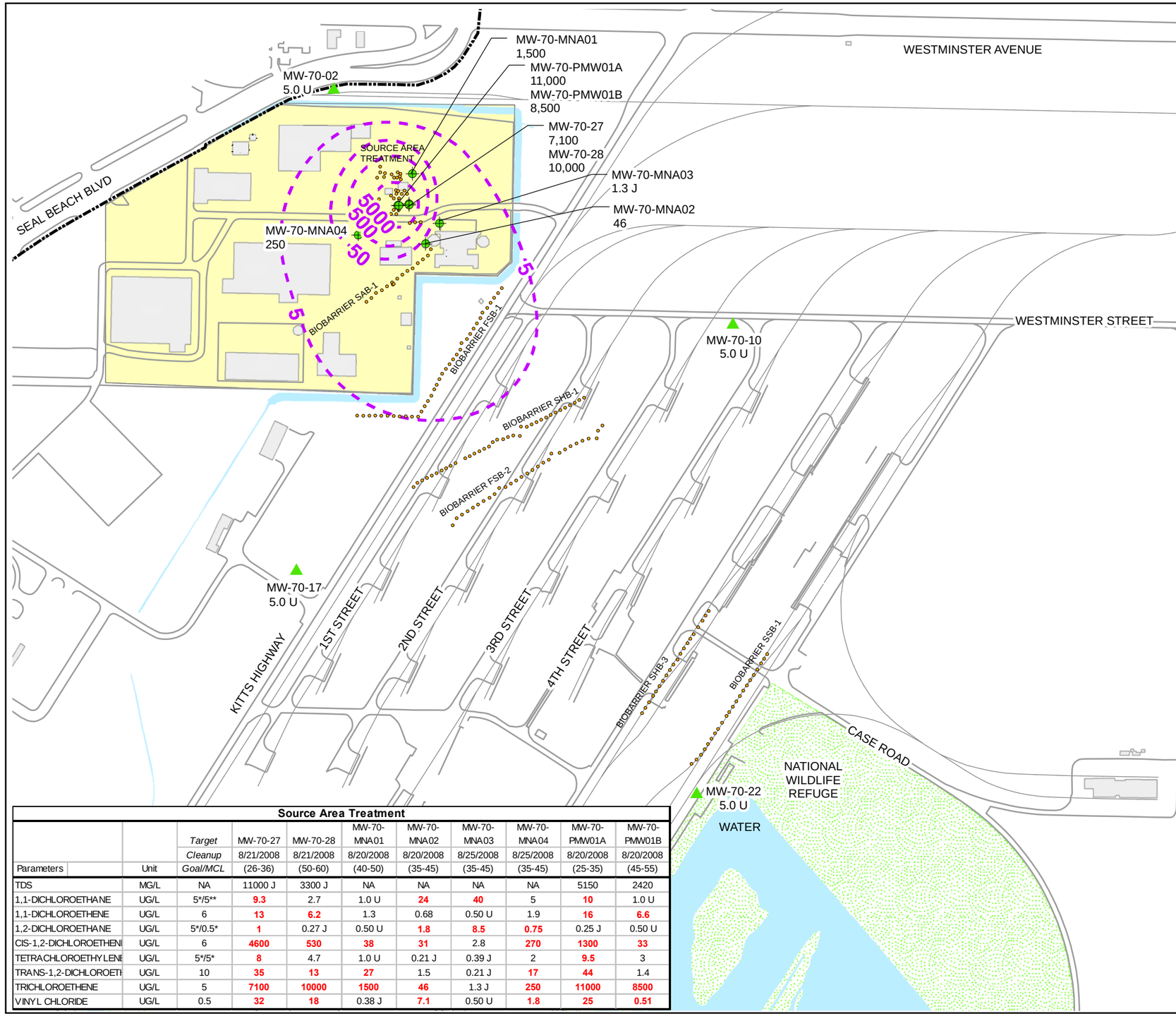
IR Site 70

Deep Sand Groundwater Elevations

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT Environmental, Engineering and Construction, Inc.

Date:	3/4/2009
File No.	14114dsgw.mdx
Project No.:	4-14114
Rev.	C



LEGEND

MW-70-MNA02 46	UPPER FINES/SOURCE AREA TREATMENT MONITORING WELL SHOWING STATION ID AND TCE CONCENTRATION IN ug/L
MW-70-02 5.0 U	UPPER FINES POC MONITORING WELL SHOWING STATION ID AND TCE CONCENTRATION IN ug/L
	BIOBARRIER OR SOURCE AREA TREATMENT WELL
	IR SITE 70 BOUNDARY
	BASE BOUNDARY
	ROAD
	RAILROAD TRACK
	BUILDING
5	APPROXIMATE TCE ISOCONCENTRATION CONTOUR (ug/L), DASHED WHERE INFERRED

NOTES:

ug/L - MICROGRAMS PER LITER
MCL - MAXIMUM CONTAMINANT LEVEL
mg/L - MILLIGRAMS PER LITER
NA - NOT ANALYZED
5.0 U - NOT DETECTED LESS THAN REPORTING LIMIT OF 5 ug/L
1.3 J - ESTIMATED VALUE OF 1.3 ug/L

TCE - TRICHLOROETHENE

BOLDED **RED** PARAMETERS ARE CONSTITUENTS OF CONCERN THAT EXCEED THE TARGET CLEANUP GOAL

(25-35) - WELL SCREEN INTERVAL, IN FEET BELOW GROUND SURFACE

* - U.S. EPA MCL

** - Cal/EPA MCL

ADDITIONAL INTERPRETATION BASED ON BEI (2006) FINAL FIFTH ANNUAL GROUNDWATER MONITORING REPORT, IR SITE 40 AND 70, NAVAL WEAPONS STATION, SEAL BEACH, CA, APRIL

N

0 200 400 800 Feet

Source Area Treatment

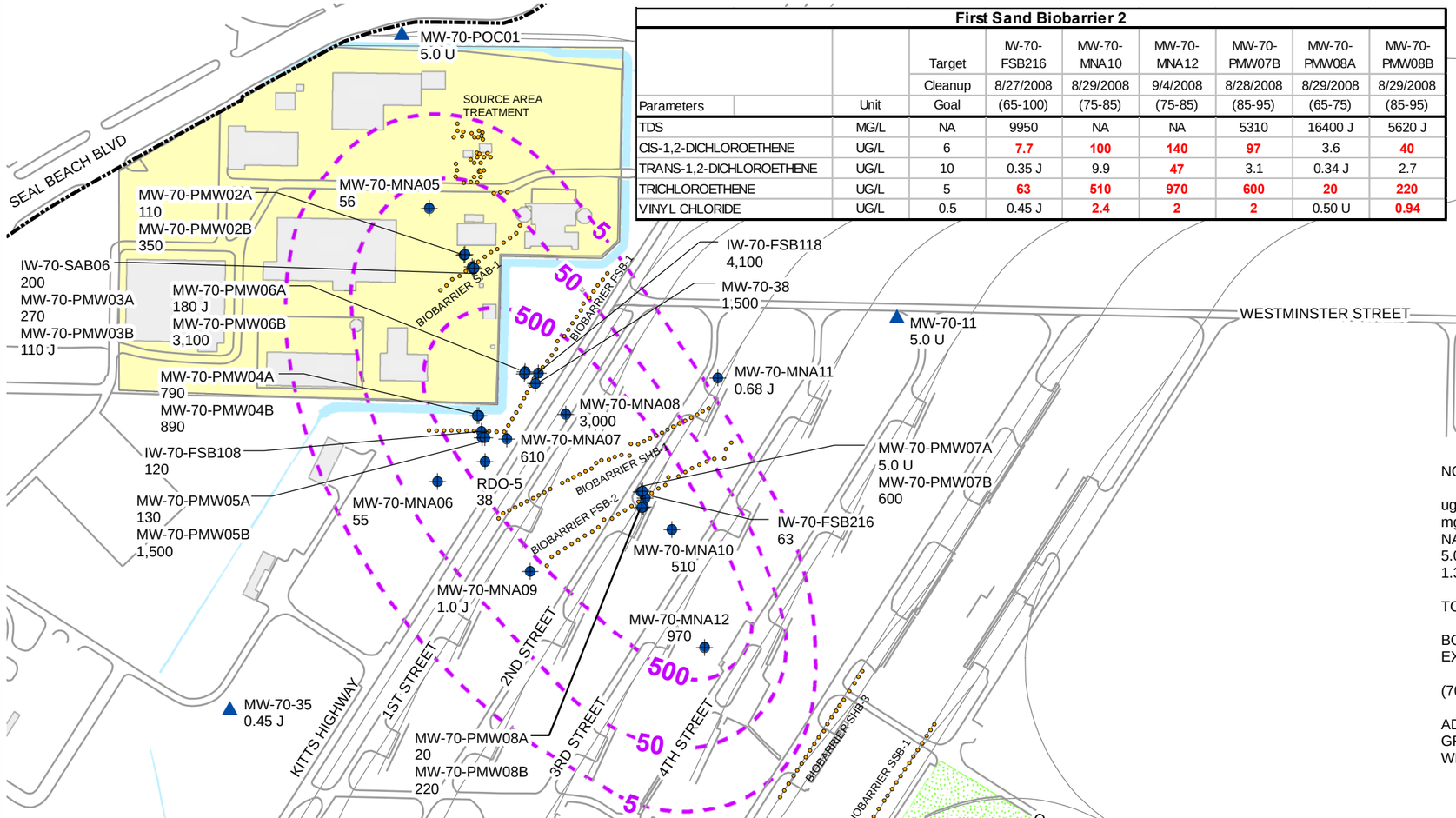
Parameters	Unit	Target Cleanup Goal/MCL	MW-70-27 8/21/2008 (26-36)	MW-70-28 8/21/2008 (50-60)	MW-70-MNA01 8/20/2008 (40-50)	MW-70-MNA02 8/20/2008 (35-45)	MW-70-MNA03 8/25/2008 (35-45)	MW-70-MNA04 8/25/2008 (35-45)	MW-70-PMW01A 8/20/2008 (25-35)	MW-70-PMW01B 8/20/2008 (45-55)
TDS	MG/L	NA	11000 J	3300 J	NA	NA	NA	NA	5150	2420
1,1-DICHLOROETHANE	UG/L	5*/5**	**9.3**	2.7	1.0 U	**24**	**40**	5	**10**	1.0 U
1,1-DICHLOROETHENE	UG/L	6	**13**	**6.2**	1.3	0.68	0.50 U	1.9	**16**	**6.6**
1,2-DICHLOROETHANE	UG/L	5*/0.5*	**1**	0.27 J	0.50 U	**1.8**	**8.5**	**0.75**	0.25 J	0.50 U
CIS-1,2-DICHLOROETHENE	UG/L	6	**4600**	**530**	**38**	**31**	2.8	**270**	**1300**	**33**
TETRACHLOROETHYLENE	UG/L	5*/5*	**8**	4.7	1.0 U	0.21 J	0.39 J	2	**9.5**	3
TRANS-1,2-DICHLOROETH	UG/L	10	**35**	**13**	**27**	1.5	0.21 J	**17**	**44**	1.4
TRICHLOROETHENE	UG/L	5	**7100**	**10000**	**1500**	**46**	1.3 J	**250**	**11000**	**8500**
VINYL CHLORIDE	UG/L	0.5	**32**	**18**	0.38 J	**7.1**	0.50 U	**1.8**	**25**	**0.51**

Baseline Groundwater Monitoring Report
Figure 9
IR Site 70
Upper Fines Groundwater Sampling Results

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT
Environmental, Engineering and Construction, Inc.

Date: 3/4/2009
File No. 14114ufcoc.mdx
Project No.: 4-14114
Rev. C



First Sand Biobarrier 2									
		Target	IW-70-FSB216	MW-70-MNA10	MW-70-MNA12	MW-70-PMW07B	MW-70-PMW08A	MW-70-PMW08B
		Cleanup	8/27/2008	8/29/2008	9/4/2008	8/28/2008	8/29/2008	8/29/2008
Parameters	Unit	Goal	(65-100)	(75-85)	(75-85)	(85-95)	(65-75)	(85-95)
TDS	MG/L	NA	9950	NA	NA	5310	16400 J	5620 J
CIS-1,2-DICHLOROETHENE	UG/L	6	**7.7**	**100**	**140**	**97**	3.6	**40**
TRANS-1,2-DICHLOROETHENE	UG/L	10	0.35 J	9.9	**47**	3.1	0.34 J	2.7
TRICHLOROETHENE	UG/L	5	**63**	**510**	**970**	**600**	**20**	**220**
VINYL CHLORIDE	UG/L	0.5	0.45 J	**2.4**	**2**	**2**	0.50 U	**0.94**

Source Area Biobarrier / First Sand								
		Target	IW-70-SAB06	MW-70-MNA05	MW-70-PMW02A	MW-70-PMW02B	MW-70-PMW03A	MW-70-PMW03B
		Cleanup	8/25/2008	8/25/2008	8/21/2008	8/21/2008	8/21/2008	8/21/2008
Parameters	Unit	Goal	(65-80/85-105)	(70-80)	(71-81)	(90-100)	(70-80)	(90-100)
TDS	MG/L	NA	995	NA	1010 J	1110 J	1210 J	1130 J
CIS-1,2-DICHLOROETHENE	UG/L	6	**11**	2.7	**97**	**170**	**9.2**	**190**
TRICHLOROETHENE	UG/L	5	**200**	**56**	**110**	**350**	**270**	**110 J**
VINYL CHLORIDE	UG/L	0.5	0.39 J	0.50 U	0.30 J	**0.68**	0.47 J	**0.56**

First Sand Biobarrier 1															
		Target	IW-70-FSB108	IW-70-FSB118	MW-70-38	MW-70-MNA06	MW-70-MNA07	MW-70-MNA08	MW-70-PMW04A	MW-70-PMW04B	MW-70-PMW05A	MW-70-PMW05B	MW-70-PMW06A	MW-70-PMW06B	RDO-5
		Cleanup	8/25/2008	8/26/2008	8/25/2008	8/26/2008	8/22/2008	8/27/2008	8/22/2008	8/22/2008	8/22/2008	8/22/2008	8/22/2008	8/22/2008	8/25/2008
Parameters	Unit	Goal	(60-105)	(60-105)	(80-100)	(80-90)	(90-100)	(80-90)	(70-80)	(90-100)	(70-80)	(90-100)	(70-80)	(91-101)	(65-105)
TDS	MG/L	NA	530	1740	1500	NA	NA	NA	680	850	685	620	1500	1000	NA
1,1-DICHLOROETHENE	UG/L	6	0.39 J	**6.2**	**7.5**	0.59	1.1	3.8	3.4	4.8	0.48 J	**7.3**	**10**	4.6	0.22 J
CIS-1,2-DICHLOROETHENE	UG/L	6	**10**	**540**	**1900**	9.9	**70**	**390**	**49**	**340**	**18**	**93**	**2500**	**130**	4.2
TRANS-1,2-DICHLOROETHENE	UG/L	10	0.22 J	8.7	**29**	0.25 J	1.5	7.9	0.85 J	5	0.65 J	1.3	**21**	**15**	0.23 J
TRICHLOROETHENE	UG/L	5	**120**	**4100**	**1500**	**55**	**610**	**3000**	**790**	**890**	**130**	**1500**	**180 J**	**3100**	**38**
VINYL CHLORIDE	UG/L	0.5	0.50 U	**5.1**	**3.7**	0.50 U	**0.51**	**5.6**	0.34 J	0.47 J	0.50 U	**0.56**	**3.4**	**4.1**	0.50 U

LEGEND

- MW-70-MNA08 3,000 — FIRST SAND MONITORING WELL SHOWING WELL ID AND TCE CONCENTRATION (ug/L)
- MW-70-11 5.0 U — FIRST SAND POC MONITORING WELL SHOWING WELL ID AND TCE CONCENTRATION (ug/L)
- BIOBARRIER OR SOURCE AREA TREATMENT WELL
- IR SITE 70 BOUNDARY
- BASE BOUNDARY
- ROAD
- RAILROAD TRACK
- BUILDING
- -5- APPROXIMATE TCE ISOCONCENTRATION CONTOUR (ug/L), DASHED WHERE INFERRED

NOTES:

ug/L - MICROGRAMS PER LITER
mg/L - MILLIGRAMS PER LITER
NA - NOT ANALYZED
5.0 U - NOT DETECTED LESS THAN REPORTING LIMIT OF 5 ug/L
1.3 J - ESTIMATED VALUE OF 1.3 ug/L

TCE - TRICHLOROETHENE

BOLDED **RED** PARAMETERS ARE CONSTITUENTS OF CONCERN THAT EXCEED THE TARGET CLEANUP GOAL

(70-80) - WELL SCREEN INTERVAL, IN FEET BELOW GROUND SURFACE

ADDITIONAL INTERPRETATION BASED ON BEI (2006) FINAL FIFTH ANNUAL GROUNDWATER MONITORING REPORT, IR SITE 40 AND 70, NAVAL WEAPONS STATION, SEAL BEACH, CA, APRIL

N

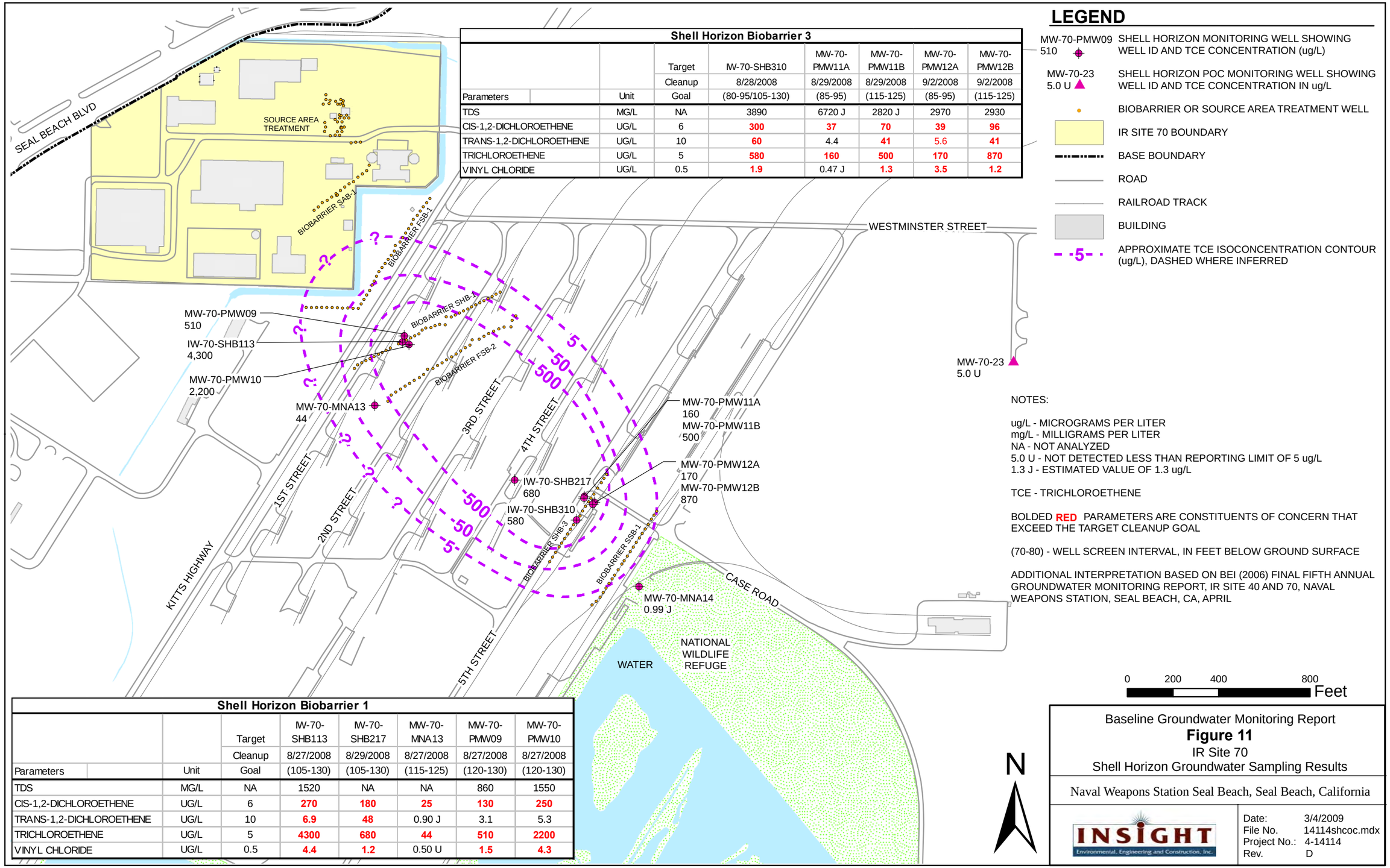
0 200 400 800 Feet

Baseline Groundwater Monitoring Report
Figure 10
IR Site 70
First Sand Groundwater Sampling Results

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT
Environmental, Engineering and Construction, Inc.

Date: 1/17/2009
File No. 14114fscoc.mdx
Project No.: 4-14114
Rev. B



LEGEND

MW-70-PMW09 510 — SHELL HORIZON MONITORING WELL SHOWING WELL ID AND TCE CONCENTRATION (ug/L)

MW-70-23 5.0 U — SHELL HORIZON POC MONITORING WELL SHOWING WELL ID AND TCE CONCENTRATION IN ug/L

BIOBARRIER OR SOURCE AREA TREATMENT WELL

IR SITE 70 BOUNDARY

BASE BOUNDARY

ROAD

RAILROAD TRACK

BUILDING

5 — APPROXIMATE TCE ISOCONCENTRATION CONTOUR (ug/L), DASHED WHERE INFERRED

Shell Horizon Biobarrier 3

Parameters	Unit	Target Cleanup Goal	IW-70-SHB310 8/28/2008 (80-95/105-130)	MW-70-PMW11A 8/29/2008 (85-95)	MW-70-PMW11B 8/29/2008 (115-125)	MW-70-PMW12A 9/2/2008 (85-95)	MW-70-PMW12B 9/2/2008 (115-125)
TDS	MG/L	NA	3890	6720 J	2820 J	2970	2930
CIS-1,2-DICHLOROETHENE	UG/L	6	**300**	**37**	**70**	**39**	**96**
TRANS-1,2-DICHLOROETHENE	UG/L	10	**60**	4.4	**41**	5.6	**41**
TRICHLOROETHENE	UG/L	5	**580**	**160**	**500**	**170**	**870**
VINYL CHLORIDE	UG/L	0.5	**1.9**	0.47 J	**1.3**	**3.5**	**1.2**

Shell Horizon Biobarrier 1

Parameters	Unit	Target Cleanup Goal	IW-70-SHB113 8/27/2008 (105-130)	IW-70-SHB217 8/29/2008 (105-130)	MW-70-MNA13 8/27/2008 (115-125)	MW-70-PMW09 8/27/2008 (120-130)	MW-70-PMW10 8/27/2008 (120-130)
TDS	MG/L	NA	1520	NA	NA	860	1550
CIS-1,2-DICHLOROETHENE	UG/L	6	**270**	**180**	**25**	**130**	**250**
TRANS-1,2-DICHLOROETHENE	UG/L	10	**6.9**	**48**	0.90 J	3.1	5.3
TRICHLOROETHENE	UG/L	5	**4300**	**680**	**44**	**510**	**2200**
VINYL CHLORIDE	UG/L	0.5	**4.4**	**1.2**	0.50 U	**1.5**	**4.3**

NOTES:

ug/L - MICROGRAMS PER LITER
mg/L - MILLIGRAMS PER LITER
NA - NOT ANALYZED
5.0 U - NOT DETECTED LESS THAN REPORTING LIMIT OF 5 ug/L
1.3 J - ESTIMATED VALUE OF 1.3 ug/L

TCE - TRICHLOROETHENE

BOLDED **RED** PARAMETERS ARE CONSTITUENTS OF CONCERN THAT EXCEED THE TARGET CLEANUP GOAL

(70-80) - WELL SCREEN INTERVAL, IN FEET BELOW GROUND SURFACE

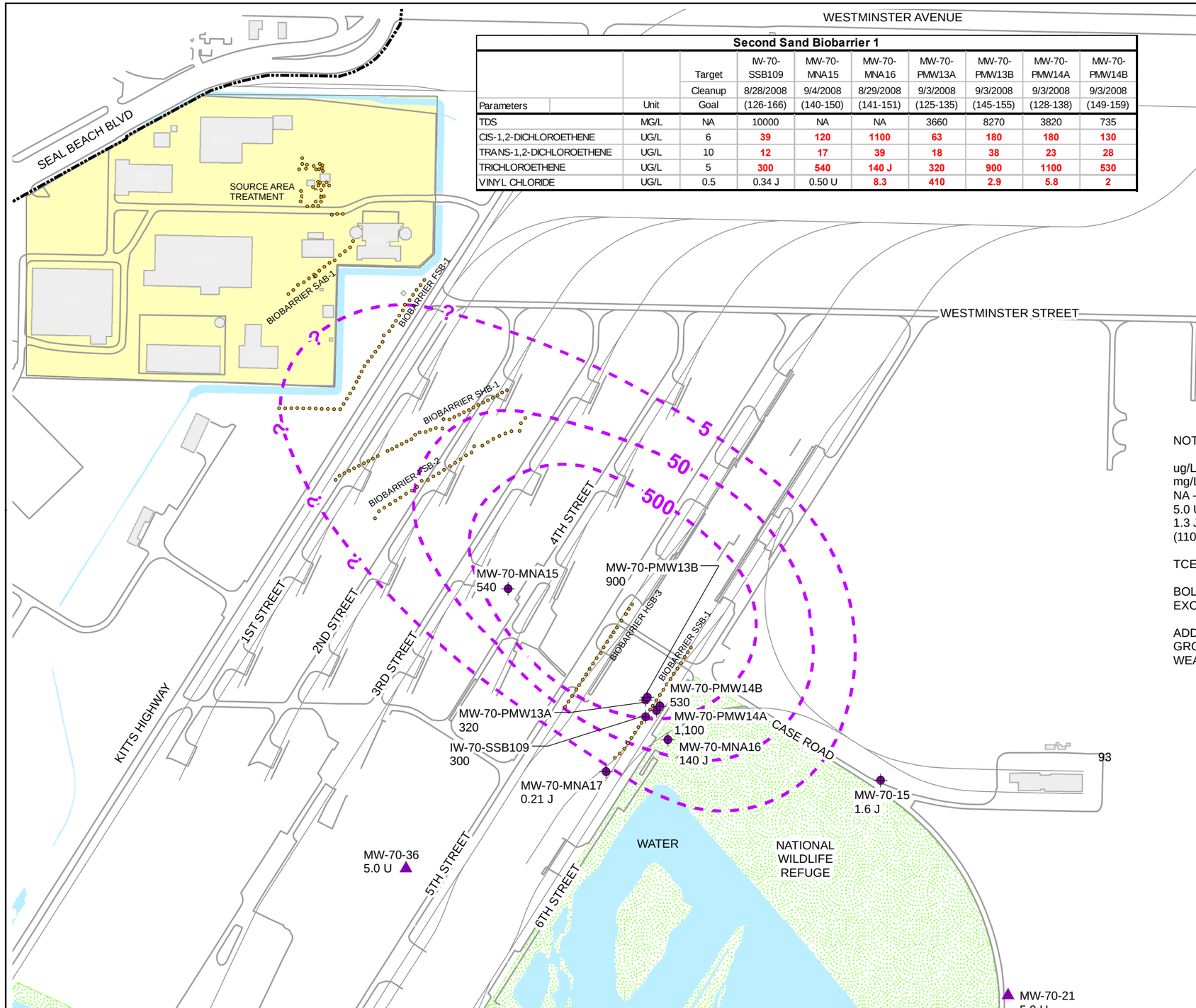
ADDITIONAL INTERPRETATION BASED ON BEI (2006) FINAL FIFTH ANNUAL GROUNDWATER MONITORING REPORT, IR SITE 40 AND 70, NAVAL WEAPONS STATION, SEAL BEACH, CA, APRIL

Baseline Groundwater Monitoring Report
Figure 11
IR Site 70
Shell Horizon Groundwater Sampling Results

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT
Environmental, Engineering and Construction, Inc.

Date: 3/4/2009
File No. 14114shcoc.mdx
Project No.: 4-14114
Rev. D



Second Sand Biobarrier 1

Parameters	Unit	Target Cleanup Goal	IW-70-SSB109 8/28/2008 (126-166)	MW-70-MNA15 9/4/2008 (140-150)	MW-70-MNA16 8/29/2008 (141-151)	MW-70-PMW13A 9/3/2008 (125-135)	MW-70-PMW13B 9/3/2008 (145-155)	MW-70-PMW14A 9/3/2008 (128-138)	MW-70-PMW14B 9/3/2008 (149-159)
TDS	MG/L	NA	10000	NA	NA	3660	8270	3820	735
CIS-1,2-DICHLOROETHENE	UG/L	6	**39**	**120**	**1100**	**63**	**180**	**180**	**130**
TRANS-1,2-DICHLOROETHENE	UG/L	10	**12**	**17**	**39**	**18**	**38**	**23**	**28**
TRICHLOROETHENE	UG/L	5	**300**	**540**	**140 J**	**320**	**900**	**1100**	**530**
VINYL CHLORIDE	UG/L	0.5	0.34 J	0.50 U	**8.3**	**410**	**2.9**	**5.8**	**2**

LEGEND

MW-70-MNA15 500 — SECOND SAND MONITORING WELL SHOWING WELL ID AND TCE CONCENTRATION (ug/L)

MW-70-36 5.0 U — SECOND SAND POC MONITORING WELL SHOWING WELL ID AND TCE CONCENTRATION (ug/L)

BIOBARRIER OR SOURCE AREA TREATMENT WELL

IR SITE 70 BOUNDARY

BASE BOUNDARY

ROAD

RAILROAD TRACK

BUILDING

-5- APPROXIMATE TCE ISOCONCENTRATION CONTOUR (ug/L), DASHED WHERE INFERRED

NOTES:

ug/L - MICROGRAMS PER LITER
mg/L - MILLIGRAMS PER LITER
NA - NOT ANALYZED
5.0 U - NOT DETECTED LESS THAN REPORTING LIMIT OF 5 ug/L
1.3 J - ESTIMATED VALUE OF 1.3 ug/L
(110 - 170) - WELL SCREEN INTERVAL, IN FEET BELOW GROUND SURFACE

TCE - TRICHLOROETHENE

BOLDED **RED** PARAMETERS ARE CONSTITUENTS OF CONCERN THAT EXCEED THE TARGET CLEANUP GOAL

ADDITIONAL INTERPRETATION BASED ON BEI (2006) FINAL FIFTH ANNUAL GROUNDWATER MONITORING REPORT, IR SITE 40 AND 70, NAVAL WEAPONS STATION, SEAL BEACH, CA, APRIL

N

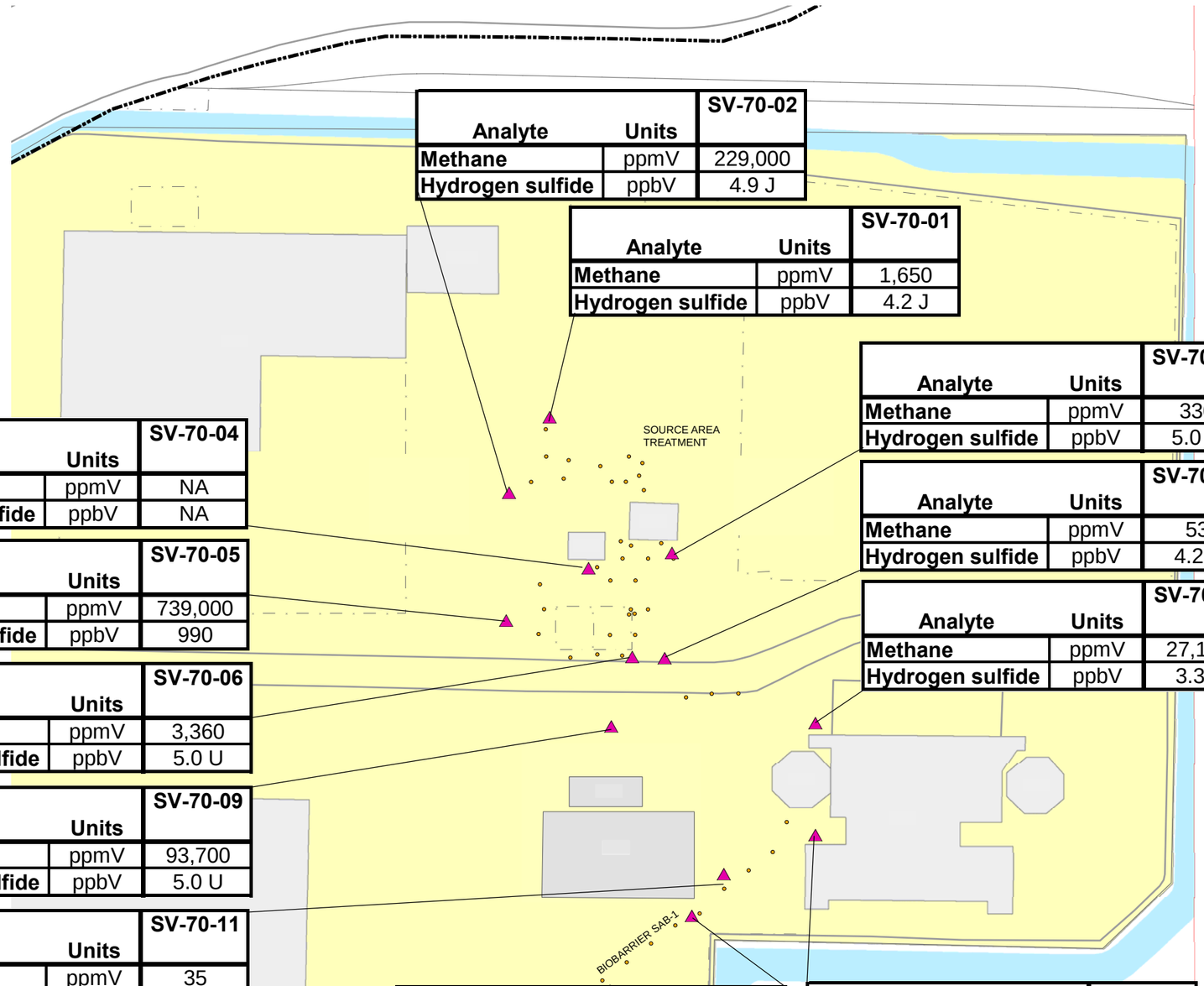
0 200 400 800 Feet

Baseline Groundwater Monitoring Report
Figure 12
IR Site 70
Second Sand Groundwater Sampling Results

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT Environmental, Engineering and Construction, Inc.

Date: 1/25/2009
File No. 14114sscoc.mdx
Project No.: 4-14114
Rev. C



Analyte	Units	SV-70-02
Methane	ppmV	229,000
Hydrogen sulfide	ppbV	4.9 J

Analyte	Units	SV-70-01
Methane	ppmV	1,650
Hydrogen sulfide	ppbV	4.2 J

Analyte	Units	SV-70-03
Methane	ppmV	330
Hydrogen sulfide	ppbV	5.0 U

Analyte	Units	SV-70-04
Methane	ppmV	NA
Hydrogen sulfide	ppbV	NA

Analyte	Units	SV-70-07
Methane	ppmV	53
Hydrogen sulfide	ppbV	4.2 J

Analyte	Units	SV-70-05
Methane	ppmV	739,000
Hydrogen sulfide	ppbV	990

Analyte	Units	SV-70-08
Methane	ppmV	27,100
Hydrogen sulfide	ppbV	3.3 J

Analyte	Units	SV-70-06
Methane	ppmV	3,360
Hydrogen sulfide	ppbV	5.0 U

Analyte	Units	SV-70-09
Methane	ppmV	93,700
Hydrogen sulfide	ppbV	5.0 U

Analyte	Units	SV-70-11
Methane	ppmV	35
Hydrogen sulfide	ppbV	3.6 J

Analyte	Units	SV-70-12
Methane	ppmV	610
Hydrogen sulfide	ppbV	5.0 U

Analyte	Units	SV-70-10
Methane	ppmV	3,600
Hydrogen sulfide	ppbV	4.4 J

LEGEND

- SOIL VAPOR PROBE LOCATION
- BIOBARRIER OR SOURCE AREA TREATMENT WELL
- IR SITE 70 BOUNDARY
- BASE BOUNDARY
- ROAD
- RAILROAD TRACK
- FENCE
- BUILDING

NOTES:

SOIL VAPOR SAMPLES WERE COLLECTED ON AUGUST 26, 2008

NA - NOT APPLICABLE; SAMPLE WAS NOT COLLECTED DUE TO THE PRESENCE OF WATER IN SAMPLE TUBING

ppmV - PARTS PER MILLION BY VOLUME

ppbV - PARTS PER BILLION BY VOLUME

J - ESTIMATED VALUE

U - NOT DETECTED

N

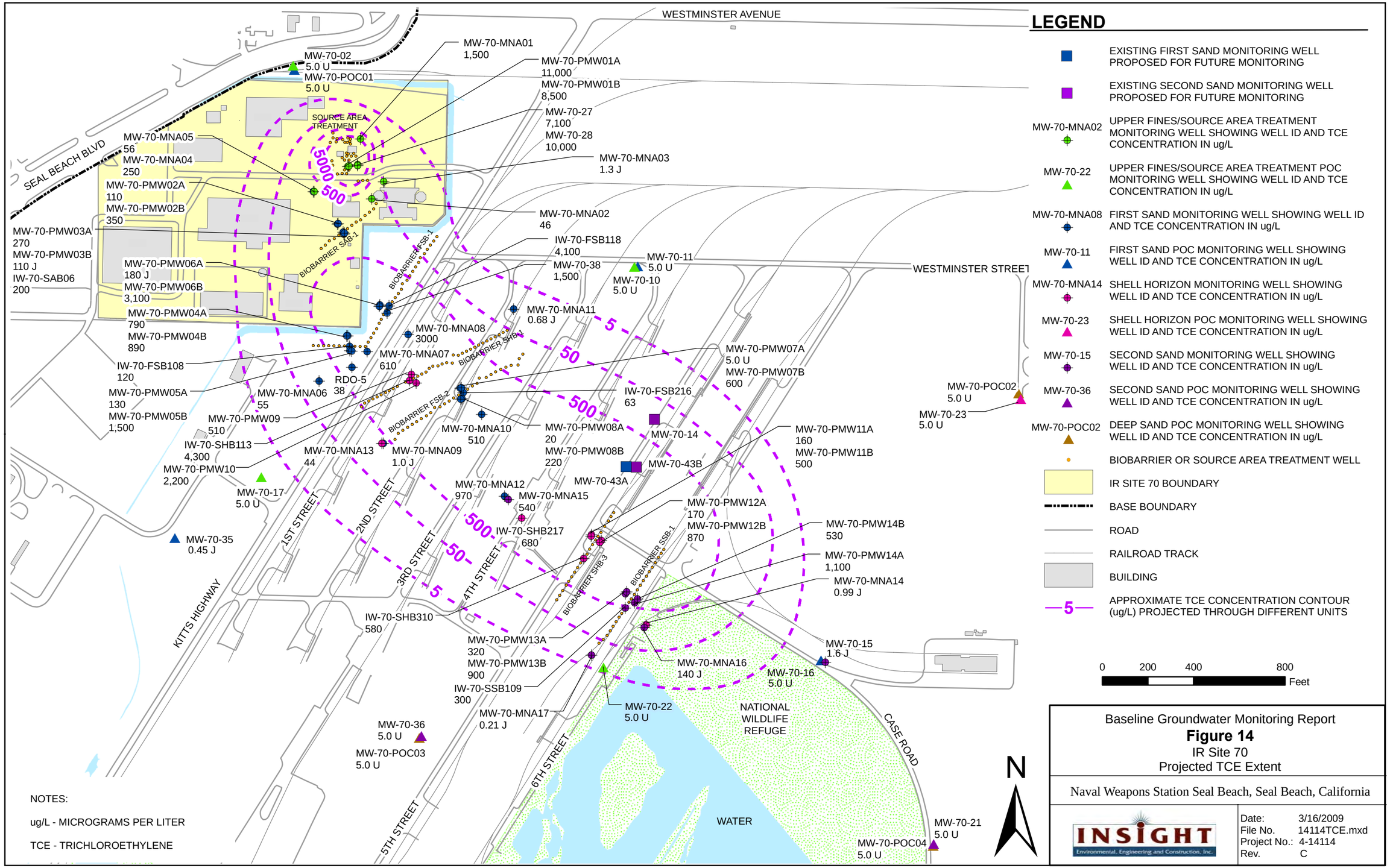
0 50 100 200 Feet

Baseline Groundwater Monitoring Report
Figure 13
IR Site 70
Soil Vapor Analytical Results

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT Environmental, Engineering and Construction, Inc.

Date: 1/18/2009
File No. 14114svbox.mdx
Project No.: 4-14114
Rev. B



Baseline Groundwater Monitoring Report

Figure 14

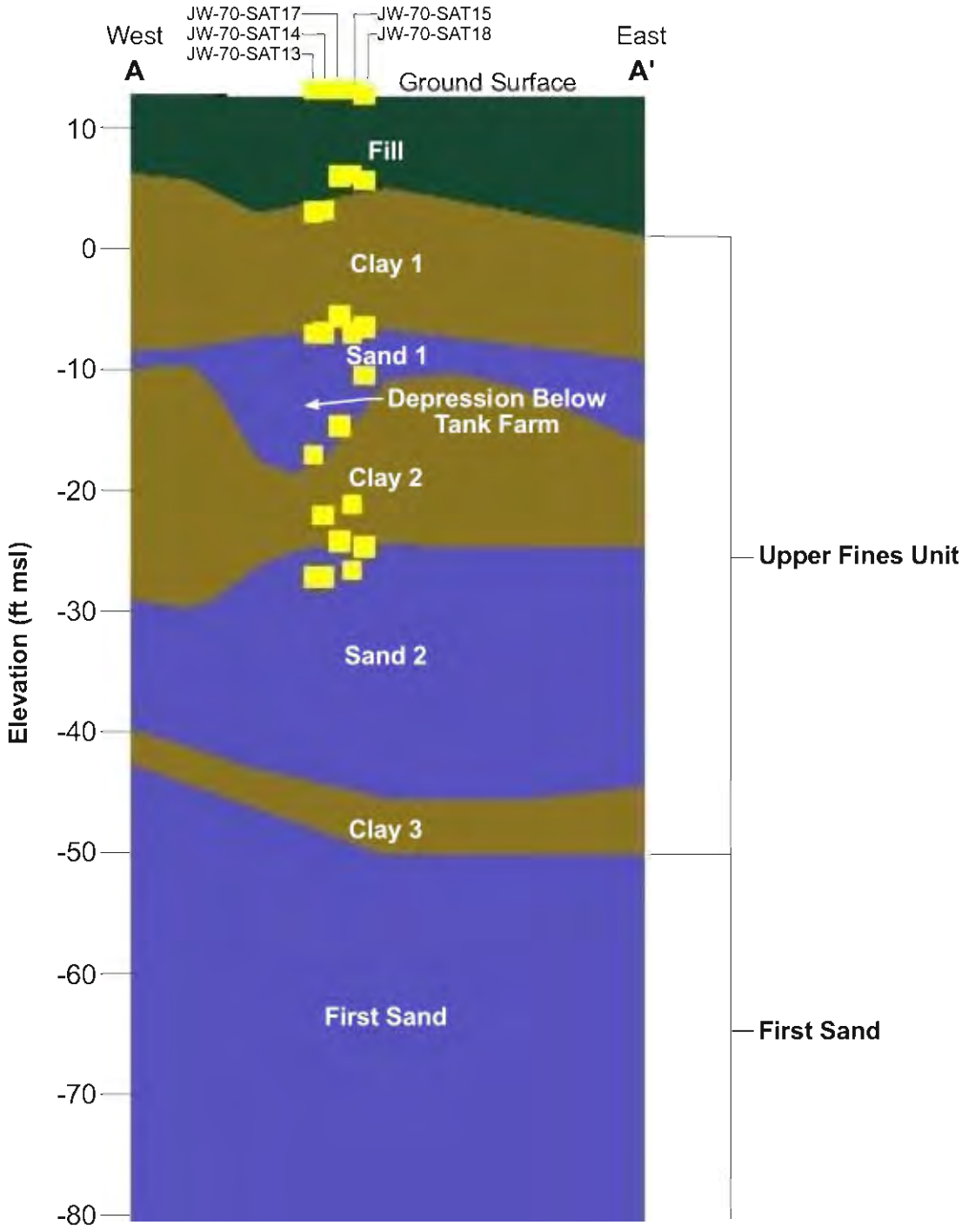
IR Site 70

Projected TCE Extent

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT Environmental, Engineering and Construction, Inc.

Date:	3/16/2009
File No.	14114TCE.mxd
Project No.:	4-14114
Rev.	C



LEGEND

- FILL UNIT
- UPPER FINES LOWER CONDUCTIVITY UNIT
- HIGHER CONDUCTIVITY UNIT
- ft msl — ELEVATION RELATIVE TO MEAN SEA LEVEL, IN FEET

N

0 100 200 300 Feet

VERTICAL EXAGGERATION = 10X

Baseline Groundwater Monitoring Report

Figure 15

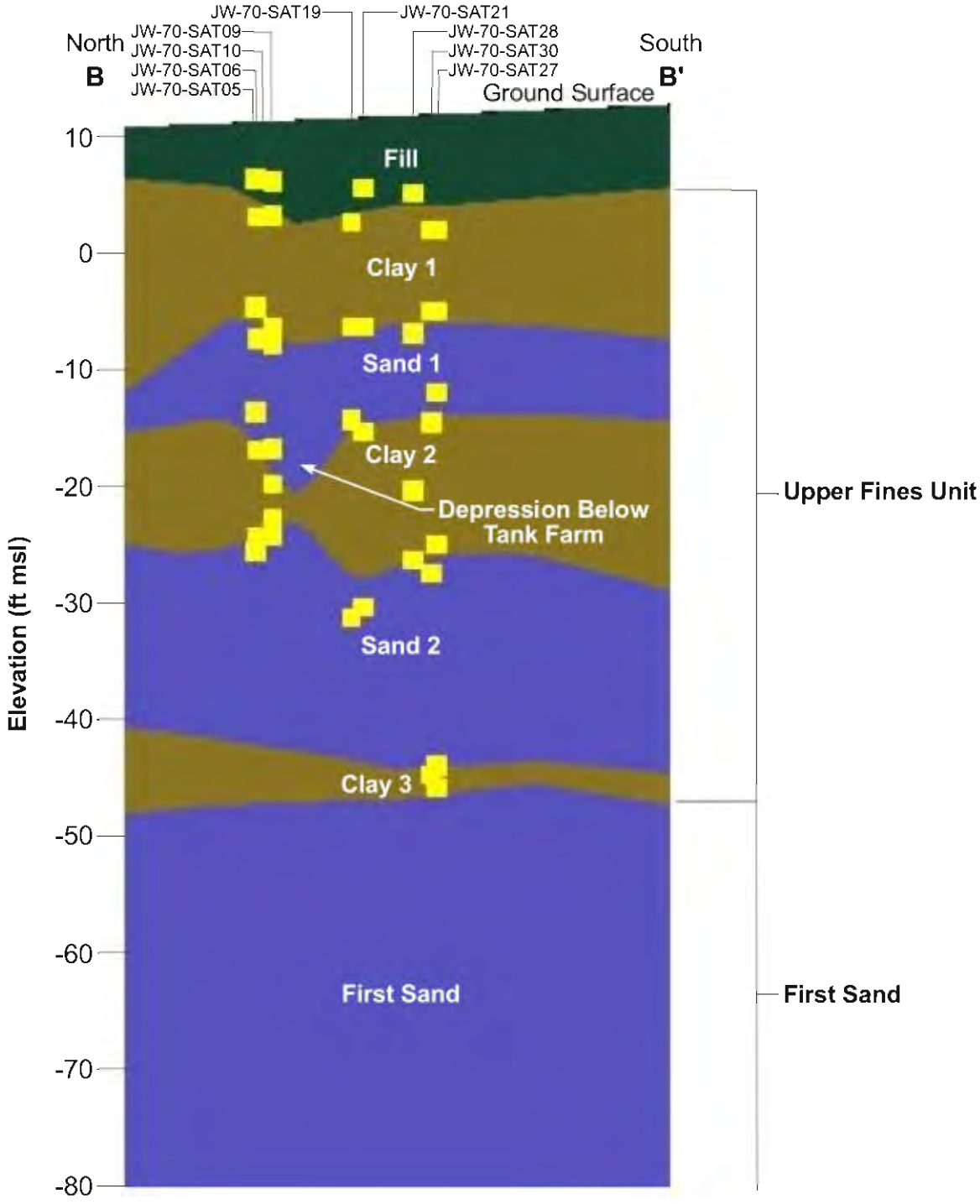
IR Site 70

Cross Section A-A'

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT
Environmental, Engineering and Construction, Inc.

Date: 03/09/2009
File No.: SB03-01_A-A'.CDR
Project No.: G006104-01
Rev. VJS



LEGEND

	FILL UNIT
	UPPER FINES LOWER CONDUCTIVITY UNIT
	HIGHER CONDUCTIVITY UNIT
ft msl	ELEVATION RELATIVE TO MEAN SEA LEVEL, IN FEET

N

0 100 200 300 Feet

VERTICAL EXAGGERATION = 10X

Baseline Groundwater Monitoring Report

Figure 16

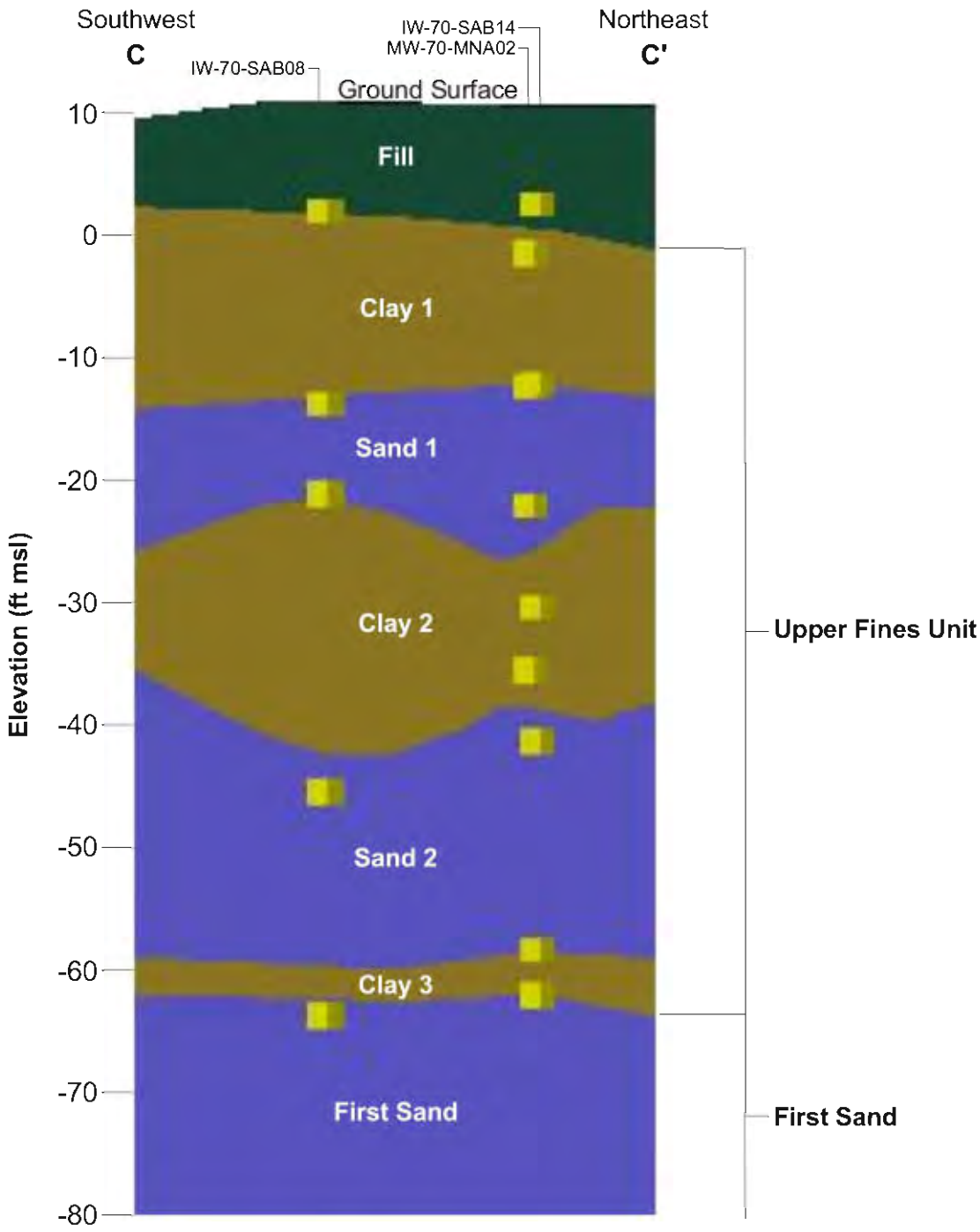
IR Site 70

Cross Section B-B'

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT
Environmental, Engineering and Construction, Inc.

Date: 03/10/2009
File No.: SB03-02_B-B.CDR
Project No.: G006104-01
Rev. VJS



LEGEND

- FILL UNIT
- UPPER FINES LOWER CONDUCTIVITY UNIT
- HIGHER CONDUCTIVITY UNIT
- ft msl — ELEVATION RELATIVE TO MEAN SEA LEVEL, IN FEET

N

0 100 200 300 Feet

VERTICAL EXAGGERATION = 10X

Baseline Groundwater Monitoring Report

Figure 17

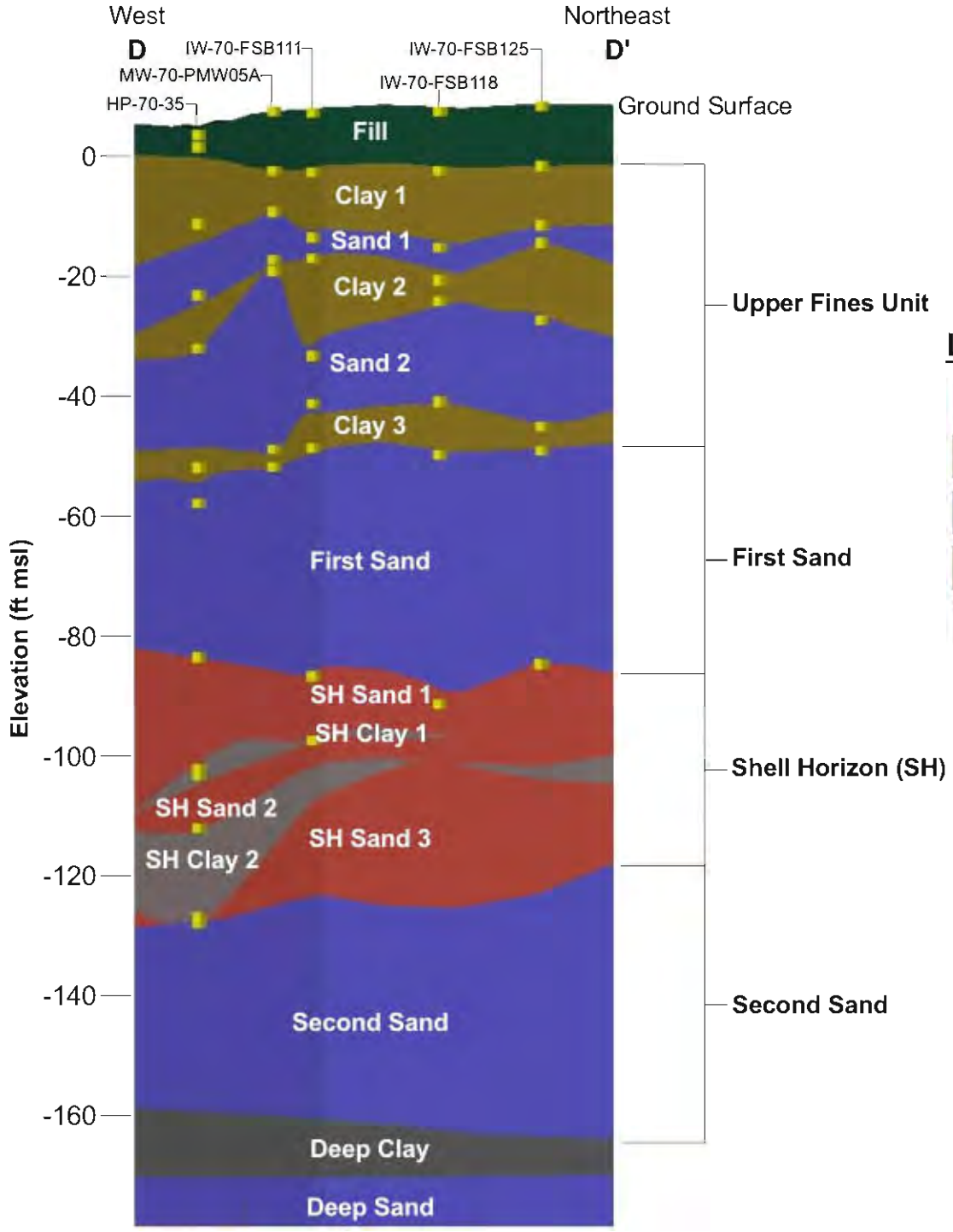
IR Site 70

Cross Section C-C'

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT
Environmental, Engineering and Construction, Inc.

Date: 03/10/2009
File No.: SB03-03_C-C'.CDR
Project No.: G006104-01
Rev. VJS



LEGEND

- FILL UNIT
- UPPER FINES LOWER CONDUCTIVITY UNIT
- HIGHER CONDUCTIVITY UNIT
- SHELL HORIZON HIGHER CONDUCTIVITY UNIT
- SHELL HORIZON LOWER CONDUCTIVITY UNIT
- DEEP SAND LOWER CONDUCTIVITY UNIT

ft msl — ELEVATION RELATIVE TO MEAN SEA LEVEL, IN FEET

N

0 500 Feet

VERTICAL EXAGGERATION = 10X

Baseline Groundwater Monitoring Report

Figure 18

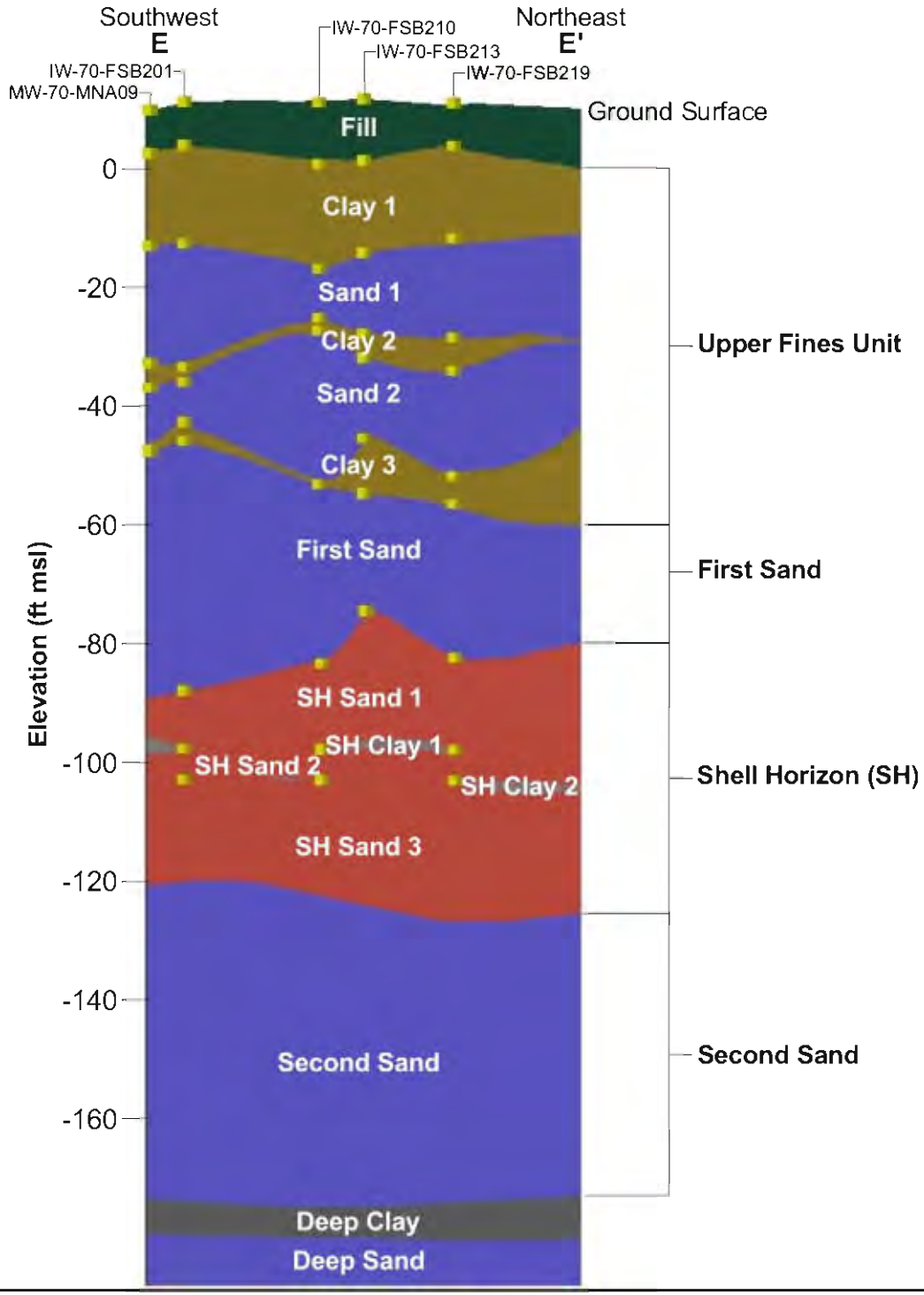
IR Site 70

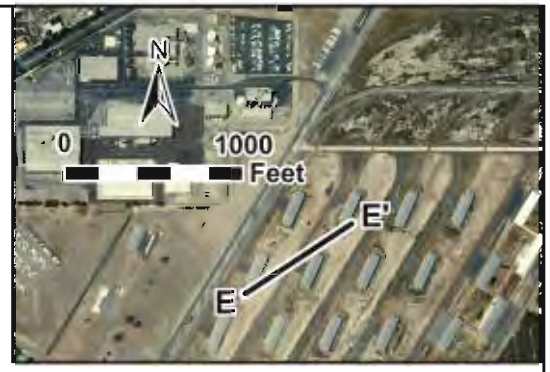
Cross Section D-D' – First Sand Biobarrier 1

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT
Environmental, Engineering and Construction, Inc.

Date: 03/11/2009
File No.: SB03-04_D-D'.CDR
Project No.: G006104-01
Rev. VJS





LEGEND

- FILL UNIT
- UPPER FINES LOWER CONDUCTIVITY UNIT
- HIGHER CONDUCTIVITY UNIT
- SHELL HORIZON HIGHER CONDUCTIVITY UNIT
- SHELL HORIZON LOWER CONDUCTIVITY UNIT
- DEEP SAND LOWER CONDUCTIVITY UNIT
- ft msl — ELEVATION RELATIVE TO MEAN SEA LEVEL, IN FEET

N

0 500 Feet

VERTICAL EXAGGERATION = 10X

Baseline Groundwater Monitoring Report

Figure 19

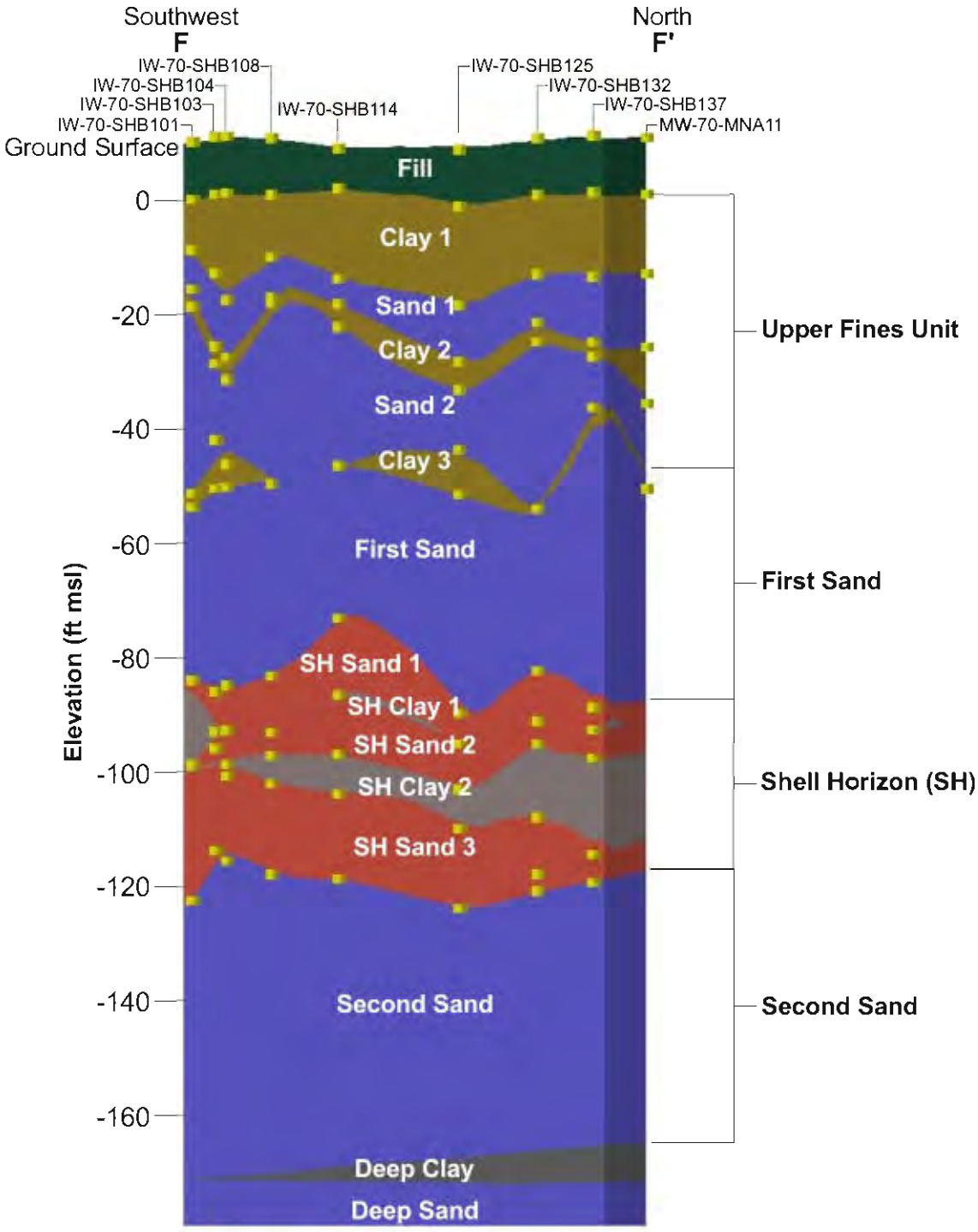
IR Site 70

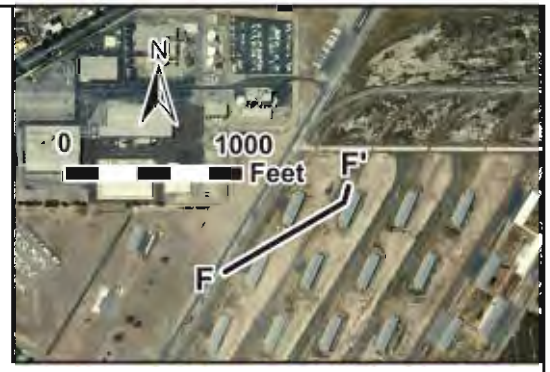
Cross Section E-E' – First Sand Biobarrier 2

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT
Environmental, Engineering and Construction, Inc.

Date: 03/11/2009
File No.: SB03-05_E-E'.CDR
Project No.: G006104-01
Rev. VJS





LEGEND

- FILL UNIT
- UPPER FINES LOWER CONDUCTIVITY UNIT
- HIGHER CONDUCTIVITY UNIT
- SHELL HORIZON HIGHER CONDUCTIVITY UNIT
- SHELL HORIZON LOWER CONDUCTIVITY UNIT
- DEEP SAND LOWER CONDUCTIVITY UNIT

ft msl — ELEVATION RELATIVE TO MEAN SEA LEVEL, IN FEET

N

0 500 Feet

VERTICAL EXAGGERATION = 10X

Baseline Groundwater Monitoring Report

Figure 20

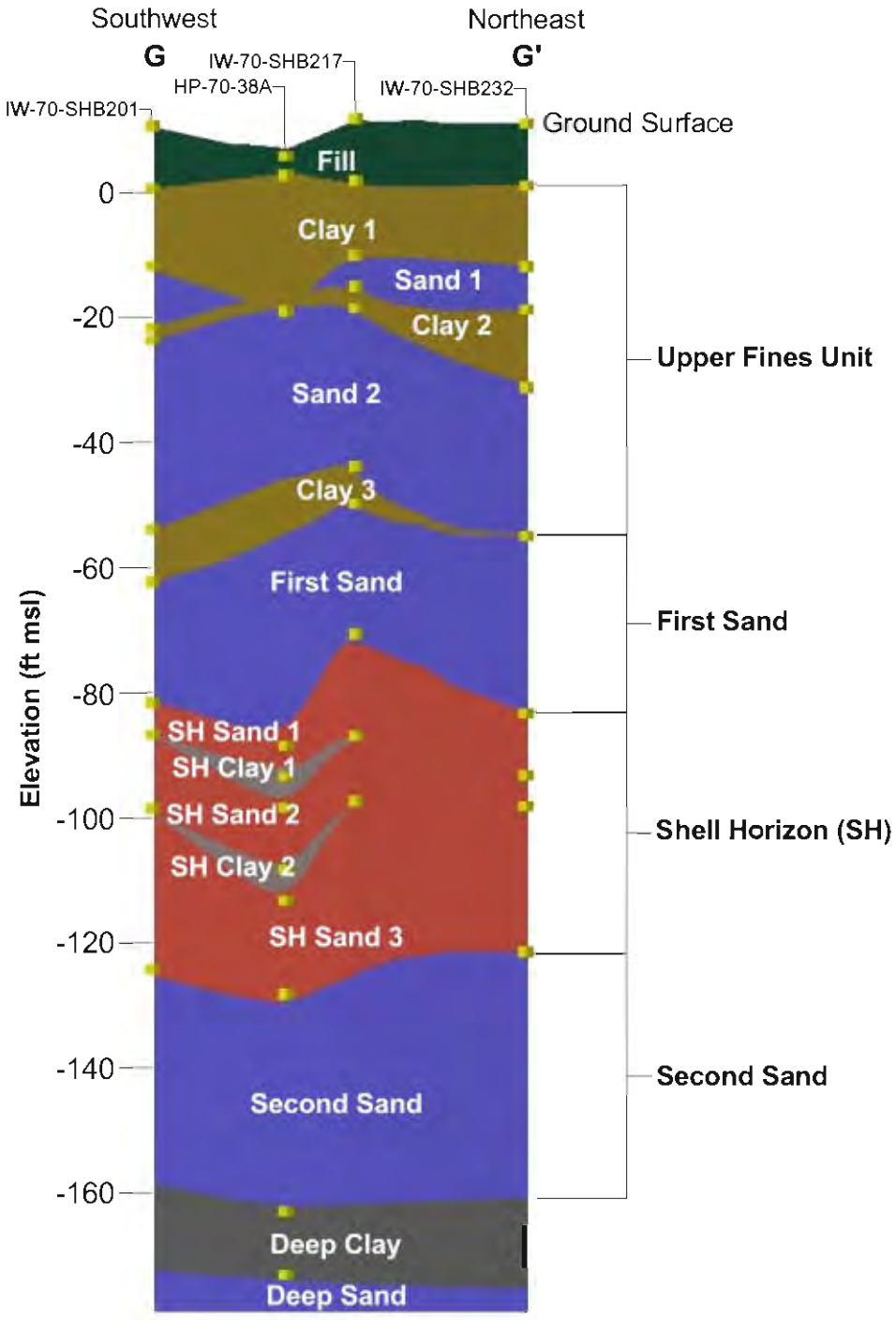
IR Site 70

Cross Section F-F' – Shell Horizon Biobarrier 1

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT Environmental, Engineering and Construction, Inc.

Date: 03/11/2009
File No.: SB03-06_F-F'.CDR
Project No.: G006104-01
Rev. VJS



LEGEND

- FILL UNIT
- UPPER FINES LOWER CONDUCTIVITY UNIT
- HIGHER CONDUCTIVITY UNIT
- SHELL HORIZON HIGHER CONDUCTIVITY UNIT
- SHELL HORIZON LOWER CONDUCTIVITY UNIT
- DEEP SAND LOWER CONDUCTIVITY UNIT
- ft msl — ELEVATION RELATIVE TO MEAN SEA LEVEL, IN FEET

N

0 500 Feet

VERTICAL EXAGGERATION = 10X

Baseline Groundwater Monitoring Report

Figure 21

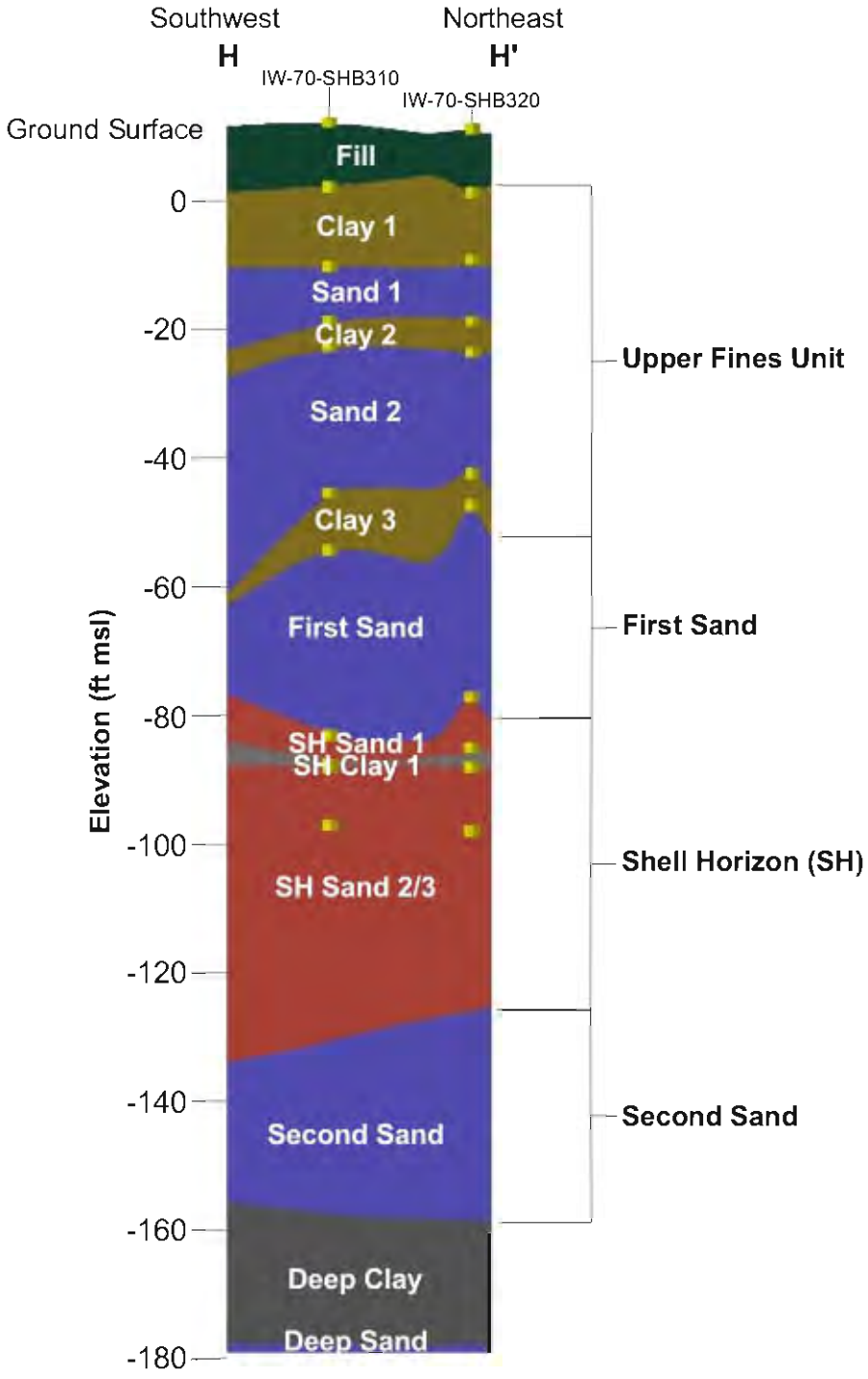
IR Site 70

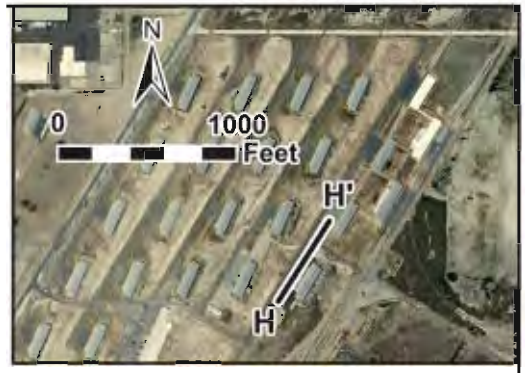
Cross Section G-G' – Shell Horizon Biobarrier 2

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT Environmental, Engineering and Construction, Inc.

Date: 03/11/2009
File No.: SB03-07_G-G'.CDR
Project No.: G006104-01
Rev. VJS





LEGEND

- FILL UNIT
- UPPER FINES LOWER CONDUCTIVITY UNIT
- HIGHER CONDUCTIVITY UNIT
- SHELL HORIZON HIGHER CONDUCTIVITY UNIT
- SHELL HORIZON LOWER CONDUCTIVITY UNIT
- DEEP SAND LOWER CONDUCTIVITY UNIT

ft msl — ELEVATION RELATIVE TO MEAN SEA LEVEL, IN FEET

N

0 500 Feet

VERTICAL EXAGGERATION = 10X

Baseline Groundwater Monitoring Report

Figure 22

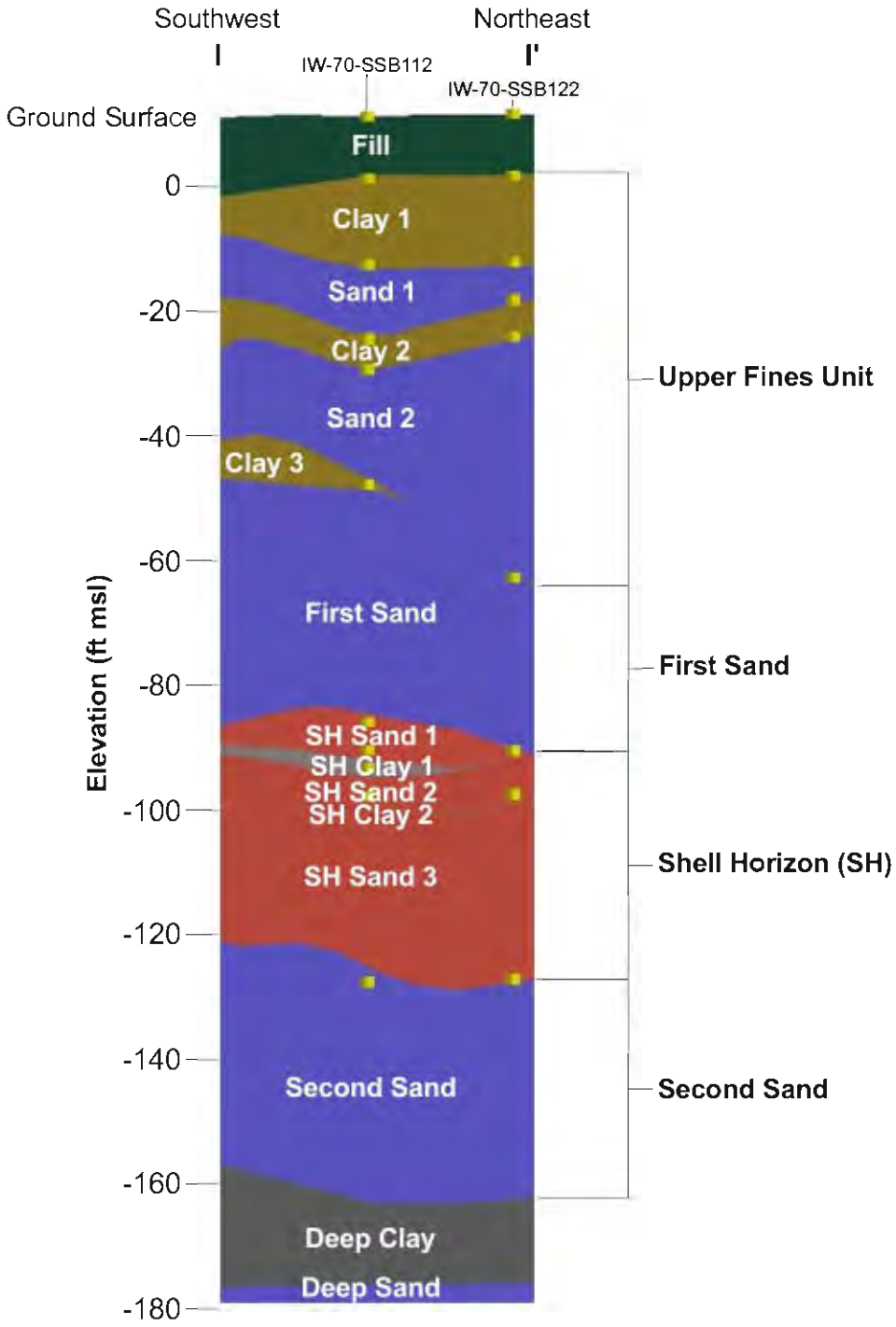
IR Site 70

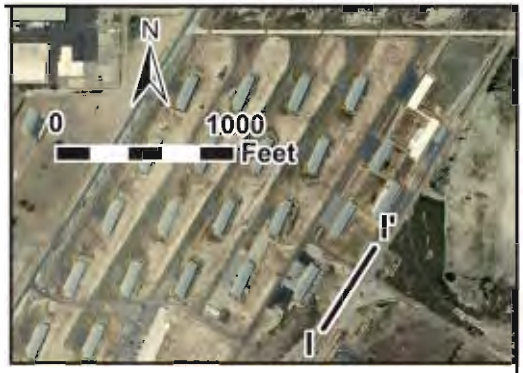
Cross Section H-H' – Shell Horizon Biobarrier 3

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT
Environmental, Engineering and Construction, Inc.

Date: 03/11/2009
File No.: SB03-08_H-H'.CDR
Project No.: G006104-01
Rev. VJS





LEGEND

- FILL UNIT
- UPPER FINES LOWER CONDUCTIVITY UNIT
- HIGHER CONDUCTIVITY UNIT
- SHELL HORIZON HIGHER CONDUCTIVITY UNIT
- SHELL HORIZON LOWER CONDUCTIVITY UNIT
- DEEP SAND LOWER CONDUCTIVITY UNIT

ft msl — ELEVATION RELATIVE TO MEAN SEA LEVEL, IN FEET

N

0 500 Feet

VERTICAL EXAGGERATION = 10X

Baseline Groundwater Monitoring Report

Figure 23

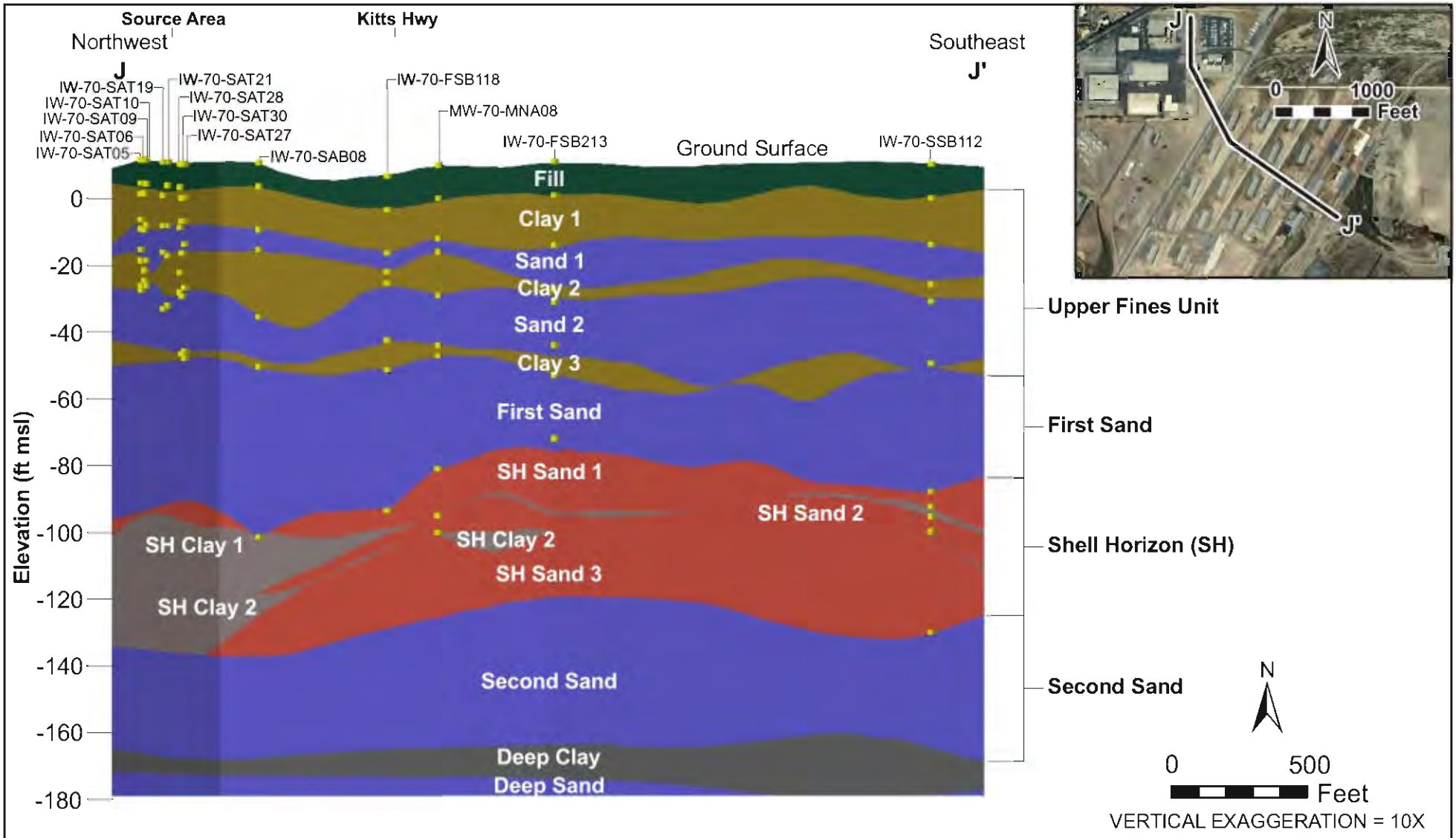
IR Site 70

Cross Section I-I' – Second Sand Biobarrier 1

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT
Environmental, Engineering and Construction, Inc.

Date: 03/11/2009
File No.: SB03-09_I-I'.CDR
Project No.: G006104-01
Rev. VJS



LEGEND

- FILL UNIT
- UPPER FINES LOWER CONDUCTIVITY UNIT
- HIGHER CONDUCTIVITY UNIT
- SHELL HORIZON HIGHER CONDUCTIVITY UNIT
- SHELL HORIZON LOWER CONDUCTIVITY UNIT
- DEEP SAND LOWER CONDUCTIVITY UNIT
- ft msl — ELEVATION RELATIVE TO MEAN SEA LEVEL, IN FEET

Baseline Groundwater Monitoring Report

Figure 24

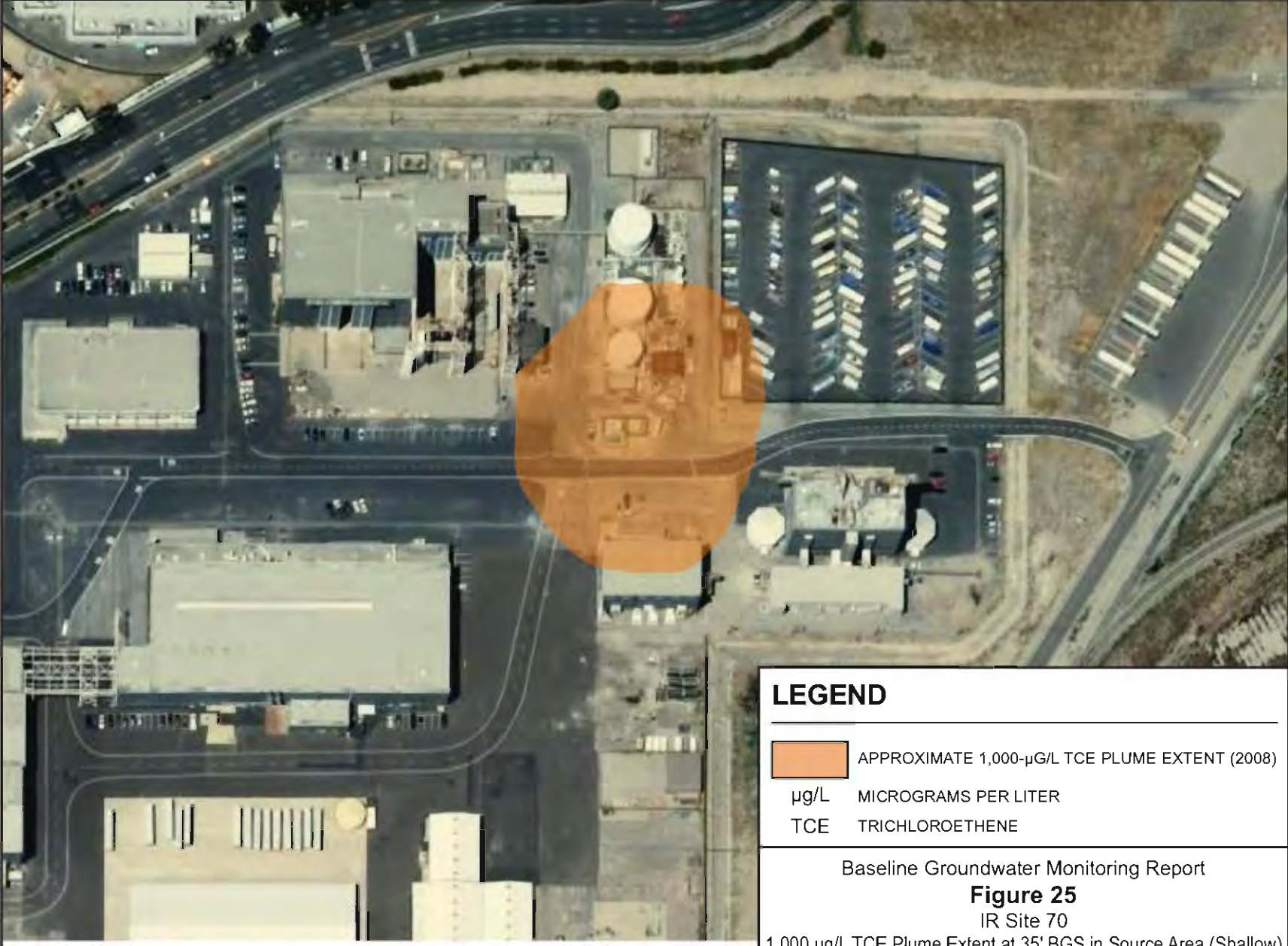
IR Site 70

Cross Section J-J'

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT
Environmental, Engineering and Construction, Inc.

Date: 03/11/2009
File No.: SB03-10_J-J'.CDR
Project No.: G006104-01
Rev. VJS



LEGEND

	APPROXIMATE 1,000-µG/L TCE PLUME EXTENT (2008)
µg/L	MICROGRAMS PER LITER
TCE	TRICHLOROETHENE

N

0 250 Feet

VERTICAL EXAGGERATION = 10X

Baseline Groundwater Monitoring Report

Figure 25

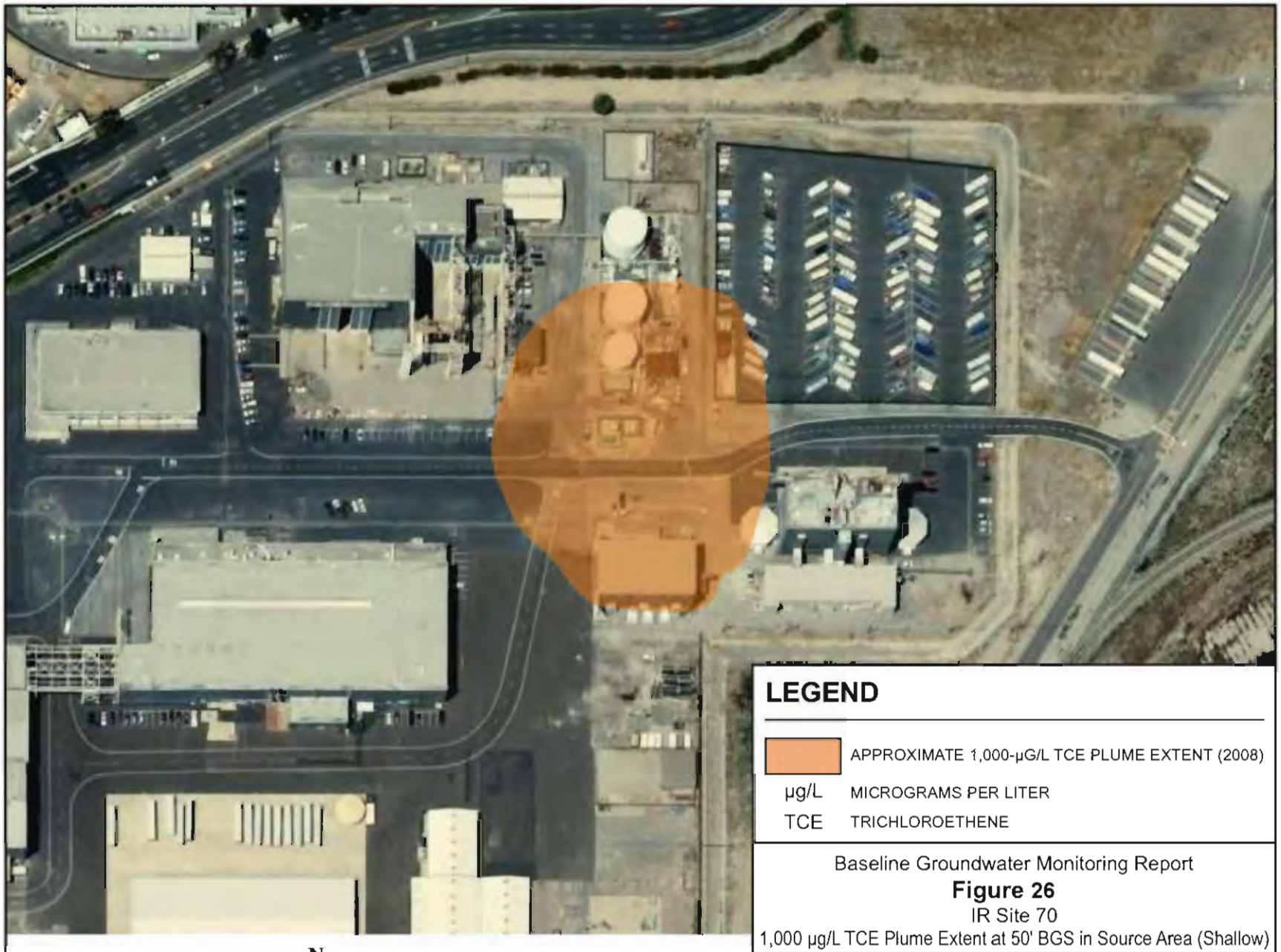
IR Site 70

1,000 µg/L TCE Plume Extent at 35' BGS in Source Area (Shallow)

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT
Environmental, Engineering and Construction, Inc.

Date:	03/25/2009
File No.:	SB03-11_TCE_1000_35FTBGS_BL.CDR
Project No.:	G006104-01
Rev.	VJS



LEGEND

APPROXIMATE 1,000-µG/L TCE PLUME EXTENT (2008)

µg/L MICROGRAMS PER LITER

TCE TRICHLOROETHENE

Baseline Groundwater Monitoring Report

Figure 26

IR Site 70

1,000 µg/L TCE Plume Extent at 50' BGS in Source Area (Shallow)

Naval Weapons Station Seal Beach, Seal Beach, California

N

Scale in Feet

0 125 250

INSIGHT

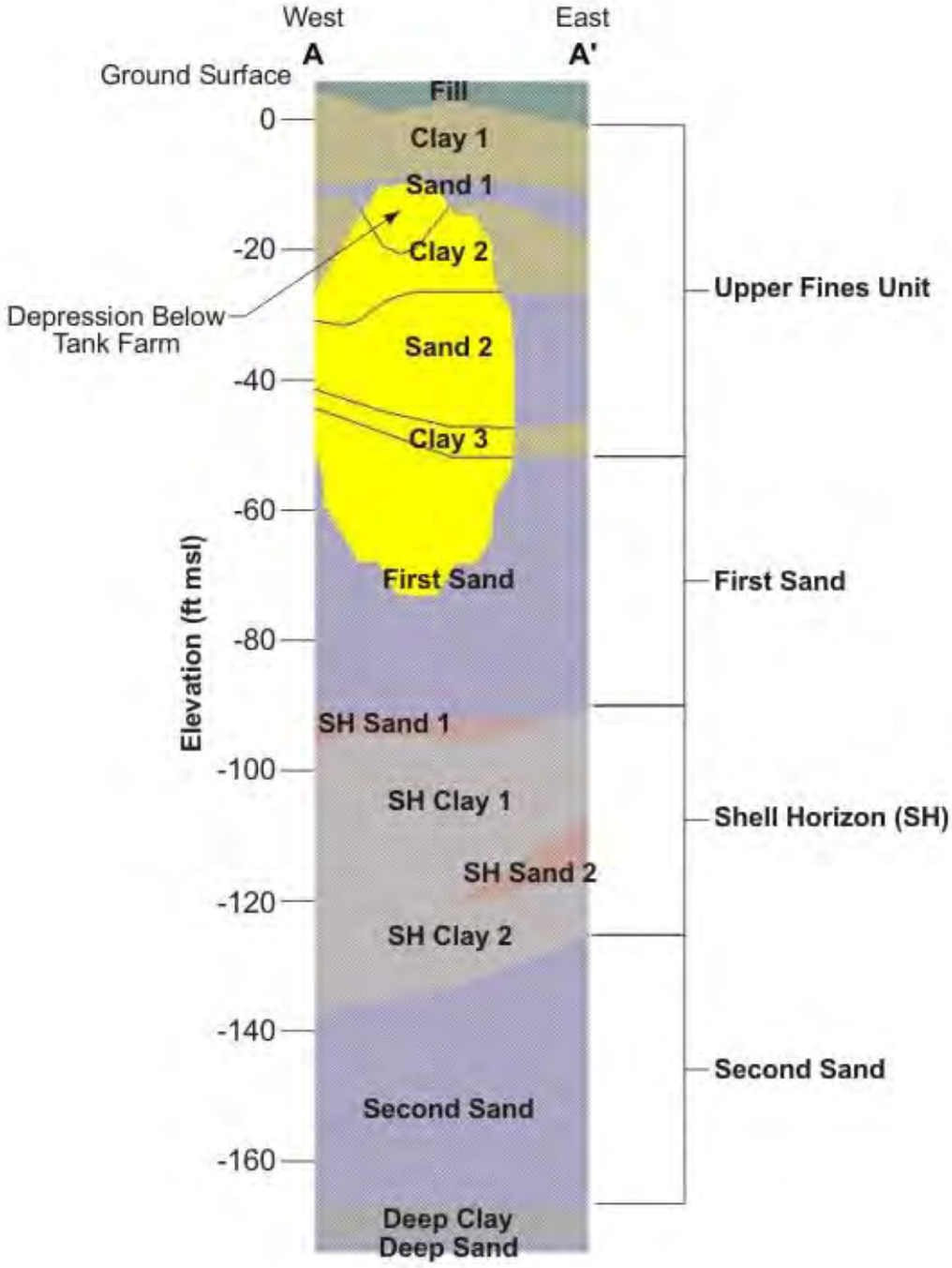
Environmental, Engineering and Construction, Inc.

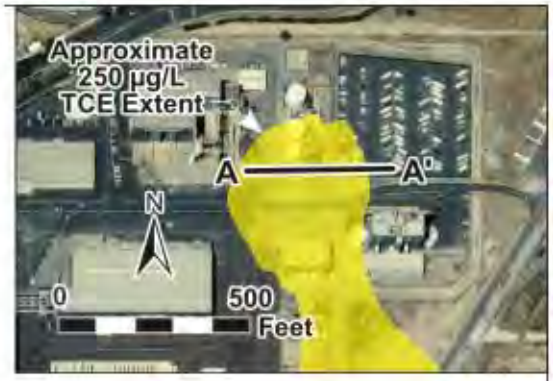
Date: 03/25/2009

File No.: SB03-I1_TCE_1000_50FTBGS_BL.CDR

Project No.: G006104-01

Rev. VJS





LEGEND

	250 µg/L TCE PLUME, 2008
µg/L	MICROGRAMS PER LITER
ft msl	ELEVATION RELATIVE TO MEAN SEA LEVEL, IN FEET
TCE	TRICHLOROETHENE

N

0 500 Feet

VERTICAL EXAGGERATION = 10X

Baseline Groundwater Monitoring Report

Figure 27

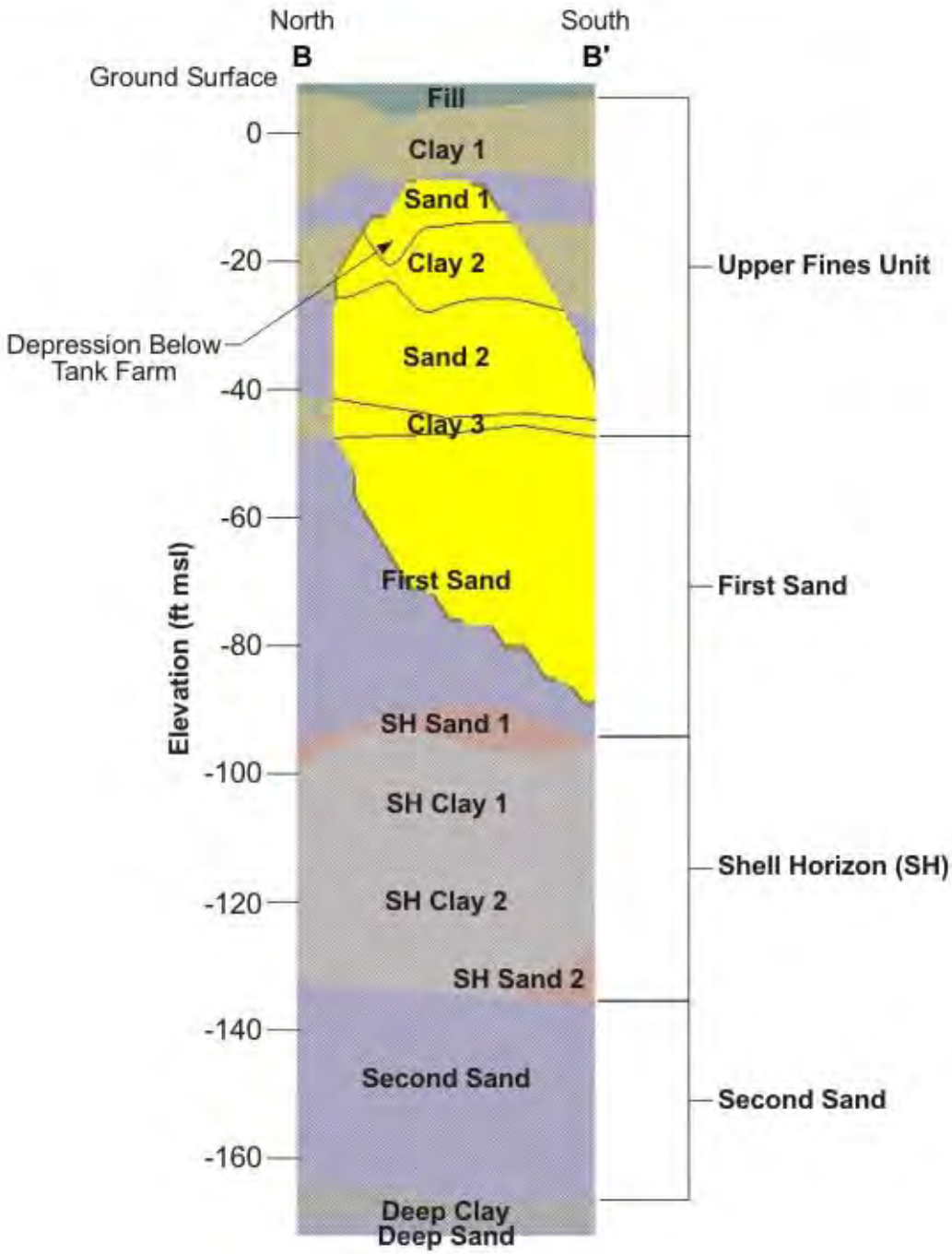
IR Site 70

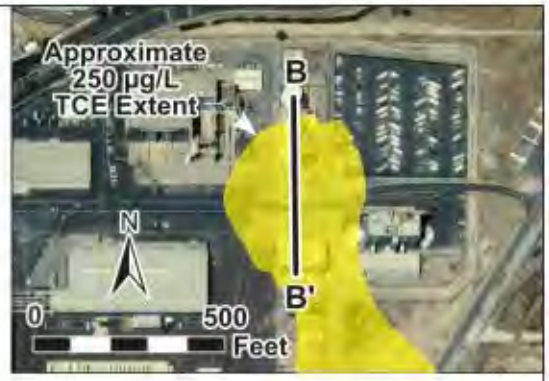
Cross Section A-A' With 250 µg/L TCE Plume

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT Environmental, Engineering and Construction, Inc.

Date: 03/11/2009
File No.: SB03-12_A-A'_TCE_wNDHPs_BLCDR
Project No.: G006104-01
Rev. VJS





LEGEND

	250 µg/L TCE PLUME, 2008
µg/L	MICROGRAMS PER LITER
ft msl	ELEVATION RELATIVE TO MEAN SEA LEVEL, IN FEET
TCE	TRICHLOROETHENE

N

0 500 Feet

VERTICAL EXAGGERATION = 10X

Baseline Groundwater Monitoring Report

Figure 28

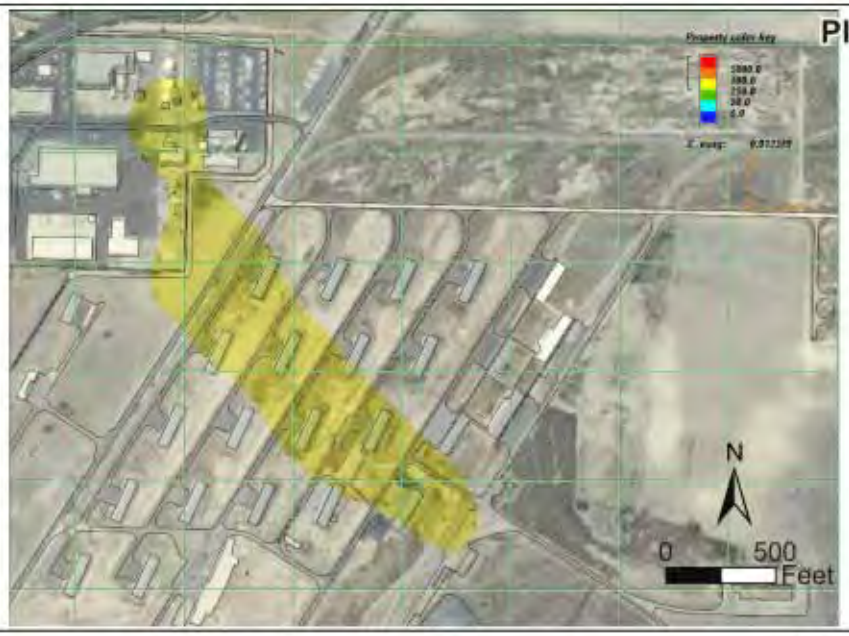
IR Site 70

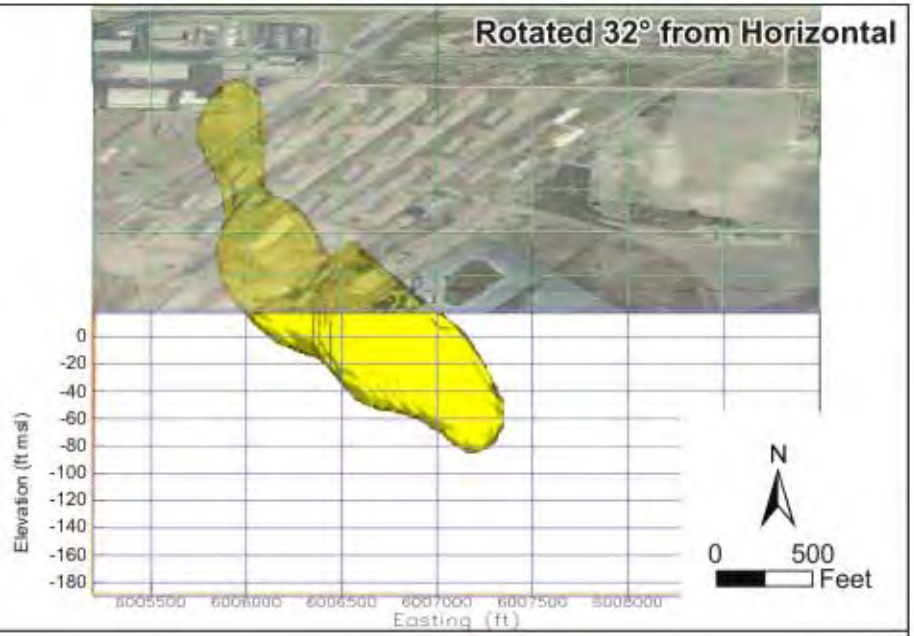
Cross Section B-B' With 250 µg/L TCE Plume

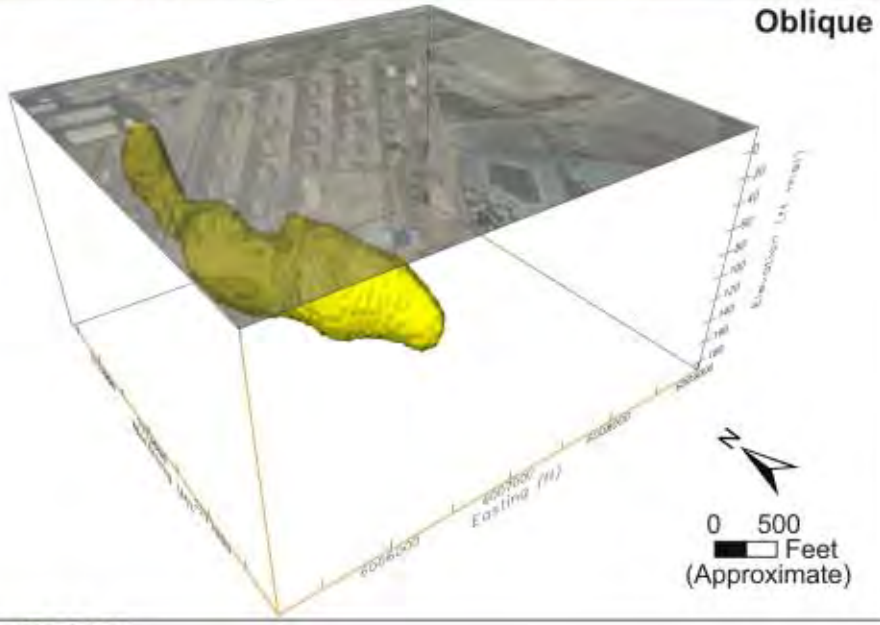
Naval Weapons Station Seal Beach, Seal Beach, California

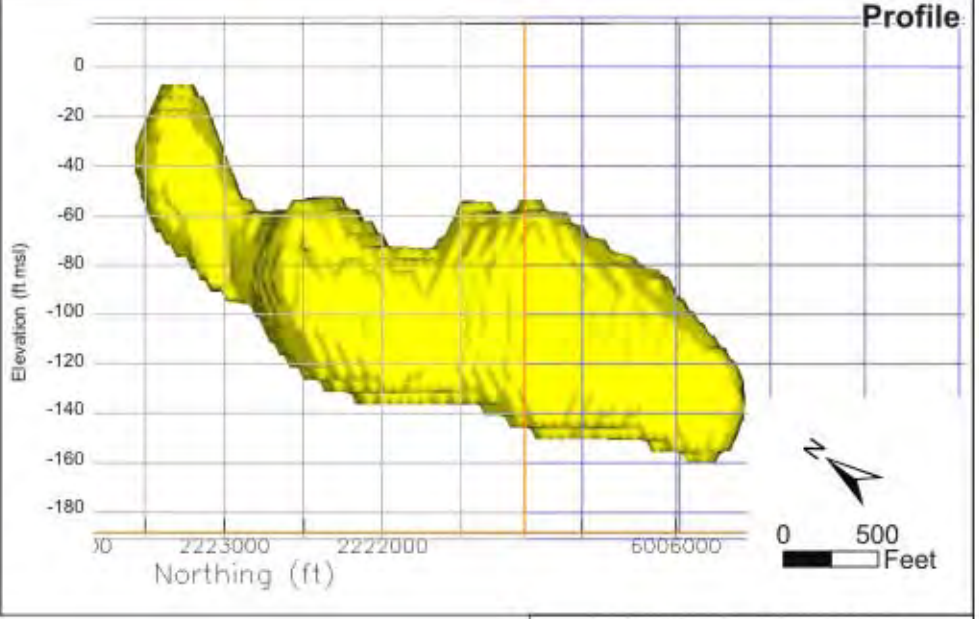
INSIGHT Environmental, Engineering and Construction, Inc.

Date: 03/11/2009
File No.: SB03-13_B-B'_TCE_wMDHPs_BLCDR
Project No.: G006104-01
Rev. VJS









LEGEND

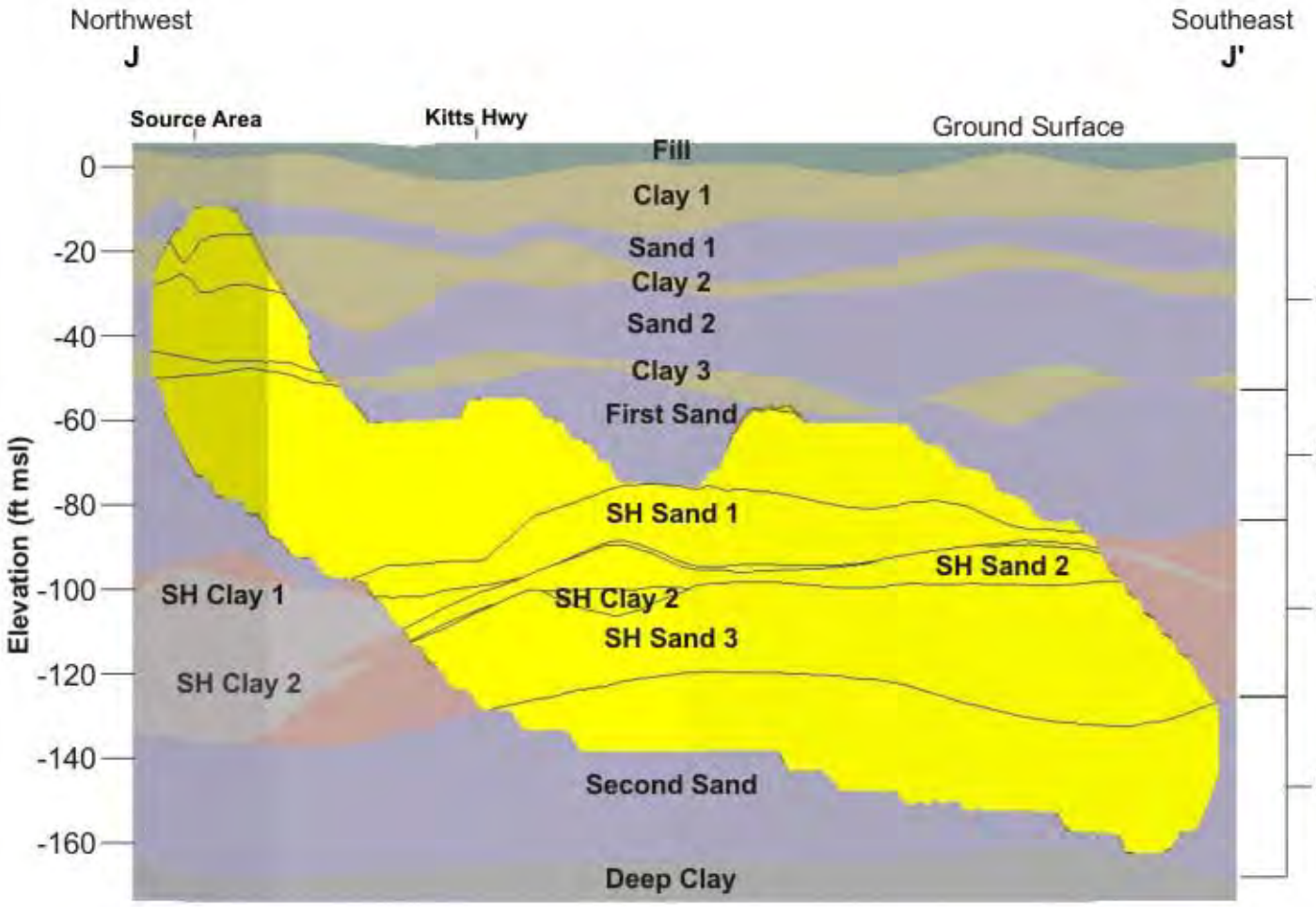
- APPROXIMATE 250 µG/L TCE PLUME, 2008
- µg/L MICROGRAMS PER LITER
- TCE TRICHLOROETHENE

Baseline Groundwater Monitoring Report
Figure 29
IR Site 70
Oblique Views of 250 µg/L TCE Plume

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT

Date: 03/11/2009
File No.: 3863-14_TCE_250_BL.CDR
Project No.: G006104-01
Rev. VJS



N

0 500 Feet

VERTICAL EXAGGERATION = 10X

LEGEND

	250 µg/L TCE PLUME, 2008
µg/L	MICROGRAMS PER LITER
ft msl	ELEVATION RELATIVE TO MEAN SEA LEVEL, IN FEET
TCE	TRICHLOROETHENE

Baseline Groundwater Monitoring Report

Figure 30

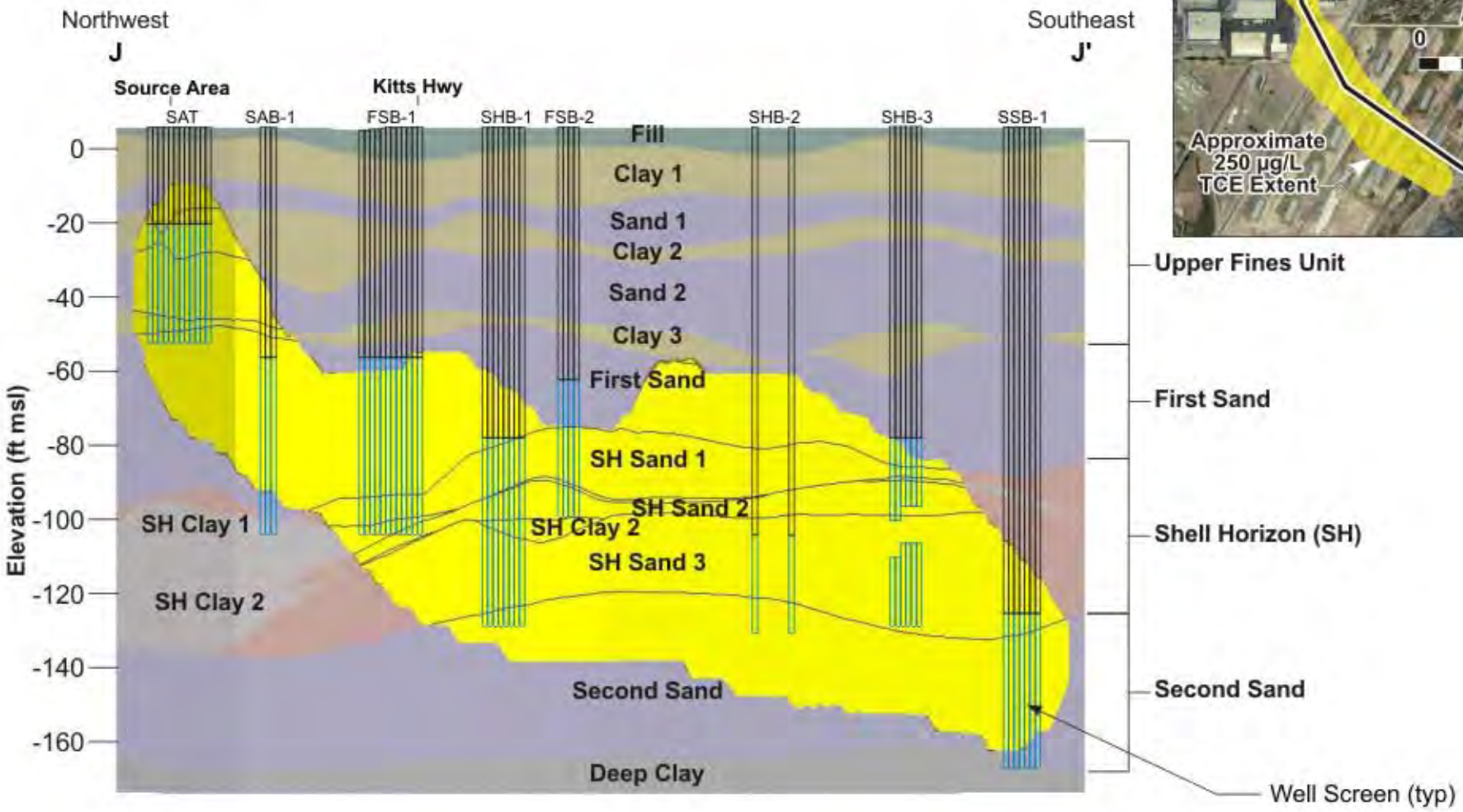
IR Site 70

Cross Section J-J' With 250 µg/L TCE Plume

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT
Environmental, Engineering and Construction, Inc.

Date: 03/11/2009
File No.: SB03-15_J-J'_TCE_wNDHPs_BL.CDR
Project No.: G006104-01
Rev. VJS



N

0 500 Feet

VERTICAL EXAGGERATION = 10X

LEGEND

	250 µg/L TCE PLUME, 2008
µg/L	MICROGRAMS PER LITER
ft msl	ELEVATION RELATIVE TO MEAN SEA LEVEL, IN FEET
TCE	TRICHLOROETHENE

Baseline Groundwater Monitoring Report

Figure 31

IR Site 70

Complete Injection System Cross Section

Naval Weapons Station Seal Beach, Seal Beach, California

INSIGHT
Environmental, Engineering and Construction, Inc.

Date: 03/11/2009
File No.: SB03-16_J-J'_TCE_INJ_wNDHPs_BLCOR
Project No.: G006104-01
Rev. VJS

APPENDIX I

ORANGE COUNTY WATER DISTRICT WELL INFORMATION, PRECIPITATION DATA, AND ALAMITOS BARRIER INJECTION PROJECT MAP

ORANGE COUNTY WATER DISTRICT

WATER QUALITY DEPARTMENT

18700 Ward Street
Fountain Valley, CA 92708

P.O. Box 8300
Fountain Valley, CA 92728-8300

Telephone (714) 378-3200 FAX (714) 378-3373
Information Request Line (714) 378-3209

INFORMATION REQUEST TRANSMITTAL

TO: MITRA FATTAHIPOUR
INSIGHT ENVIR ENG CONSTRUCTION
3010 E. MIRALOMA AVE.
ANAHEIM, CA 92806

EMAIL: MFattahipour@ieeci.com

TRANSMITTAL DATE: 02/22/2012
REQUEST NUMBER: 5375
REQUEST DATE: 02/22/2012
PROCESSED BY: RSH

SITE INFORMATION

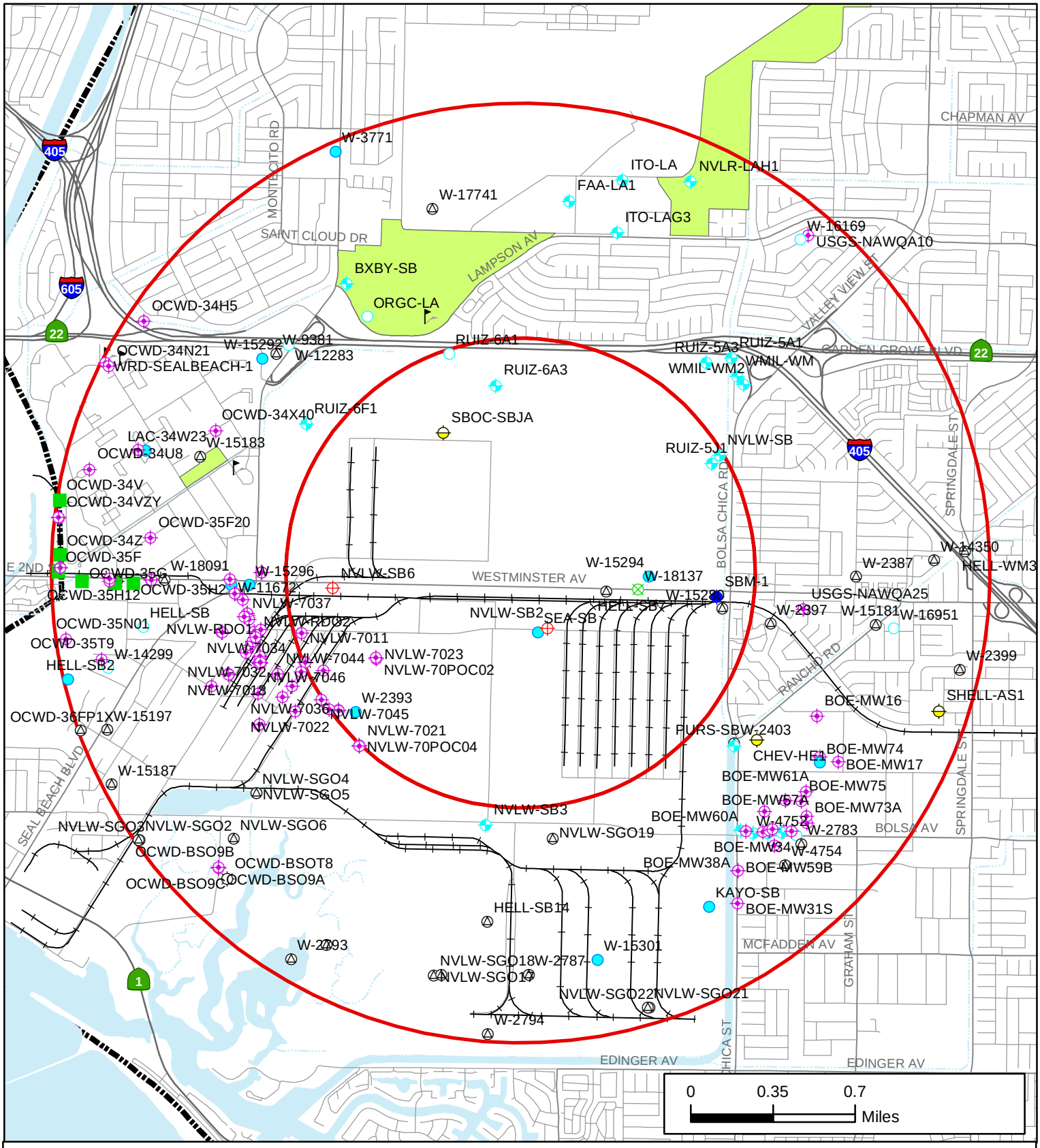
SITE NAME: NAVAL WEAPONS STATION, SEAL BEACH

ADDRESS: 800 SEAL BEACH BLVD.
CITY: SEAL BEACH
DESCRIPTION:
INTERSECTION: WESTMINSTER BLVD.
THOMAS BROS.: 826-H2
SEARCH RADIUS (MILES): 2.0
SEARCH YEARS: 2010 - 2011

INFORMATION PROCESSED

# of Pages	*Description*
9	GENERAL WELL INFO W/O SWN
452	INORGANICS DATA RPT (W/O SWN)
4	PRODUCTION WELL INFO W/O SWN
84	SEMIVOL DATA RPT (W/O SWN)
372	VOLATILE DATA RPT (W/O SWN)
46	WATER LEVEL DATA RPT (W/O SWN)
1	WELL LOCATION MAP
11	WELL PRODUCTION TOTALS W/O SWN

Comments: Please note that the attached map excludes drinking water wells, due to CA DPH guidelines. If you have any questions, please call 714-378-3252. Thank you.



H:\Document\WaterQuality\RSH\InfoRequestMap.mxd

Legend

Drinking water wells were excluded from this map.

- Active Large-System Production Well
- Active Small-System Production Well
- Borehole
- Cathodic Protection Well
- Destroyed Well, Sealed Status Unknown
- Destroyed and Sealed Well
- Inactive Production Well
- Injection Well
- Monitoring Well
- Multiport Monitoring Well
- Oil Well
- Other Active Production Well
- Reconstructed Well
- Soil Gas Monitoring Well
- Transfer Well
- Abandoned Well
- Unknown Type and/or Status Well

N W E S

Information Request

Request IDs:	5375
Request Date:	02/22/2012
Purpose:	GROUNDWATER INVESTIGATION
Client:	INSIGHT
Site Name:	NAVAL WEAPONS STATION, SB
Site Address:	800 SEAL BEACH BLVD.
Site City:	SEAL BEACH

ORANGE COUNTY WATER DISTRICT
GENERAL WELL INFORMATION

Well Name	Well Type	Well Subtype	Well Use	Well Status	Bore Depth	Lithology Log?	Electric Log?	Date Drilled	Elev GS	Casing Number	Elev RP	Cased Depth	PERFORATIONS Top	PERFORATIONS Bottom
BOE-EW101	PRODUCT	SINGLE	REMEDIA	ACTIVE	77	Y	N	09/07/2006	17.50	1		77	57	77
BOE-EW102	PRODUCT	SINGLE	REMEDIA	ACTIVE	87	Y	N	09/05/2006	17.50	1		82	62	82
BOE-EW103	PRODUCT	SINGLE	REMEDIA	ACTIVE	85	Y	N	09/27/2006	17.50	1		83	63	83
BOE-EW104	PRODUCT	SINGLE	REMEDIA	ACTIVE	83	Y	N	08/30/2006	17.50	1		83	57	82
BOE-MW16	MONITOR	SINGLE	TESTING	ACTIVE	297	Y	N		19.55	1	19.25	280	260	280
BOE-MW17	MONITOR	SINGLE	TESTING	ACTIVE	298	Y	N	06/05/2003	19.96	1	19.66	275	255	275
BOE-MW19A	MONITOR	SINGLE	TESTING	ACTIVE	173	Y	N	06/06/2008	18.24	1	17.84	173	153	173
BOE-MW20S	MONITOR	SINGLE	TESTING	ACTIVE	84	Y	N	02/05/2004	16.02	1	15.74	84	59	80
BOE-MW21S	MONITOR	SINGLE	TESTING	ACTIVE	81	Y	N	02/11/2004	16.20	1	15.87	79	59	79
BOE-MW27A	MONITOR	SINGLE	TESTING	ACTIVE	172	Y	N	05/22/2008	15.27	1	14.70	159	139	159
BOE-MW31S	MONITOR	SINGLE	TESTING	ACTIVE	92	Y	N	02/14/2005	12.07	1	11.99	88	78	88
BOE-MW34	MONITOR	SINGLE	TESTING	ACTIVE	278	Y	N	02/28/2005	15.72	1	15.19	267	252	267
BOE-MW37A	MONITOR	SINGLE	TESTING	ACTIVE	172	Y	N	05/11/2005	15.72	1	15.66	165	135	165
BOE-MW38A	MONITOR	SINGLE	TESTING	ACTIVE	170	Y	N	06/03/2005	12.93	1	12.72	165	135	165
BOE-MW41A	MONITOR	SINGLE	TESTING	ACTIVE	177	Y	N	12/10/2005	16.33	1	16.06		149	169
BOE-MW42A	MONITOR	SINGLE	TESTING	ACTIVE	173	Y	N	01/13/2006	17.22	1	16.76		140	170
BOE-MW57A	MONITOR	SINGLE	TESTING	ACTIVE	172	Y	N	06/16/2008	18.02	1	17.32	170	150	170
BOE-MW58A	MONITOR	SINGLE	TESTING	ACTIVE	175	Y	N	02/23/2009	15.64	1	15.64	170	150	170
BOE-MW59B	MONITOR	SINGLE	TESTING	ACTIVE	268	Y	N	01/09/2009	12.53	1	12.53	250	240	250
BOE-MW60A	MONITOR	SINGLE	TESTING	ACTIVE	172	Y	N	12/18/2008	14.81	1	14.81	170	150	170
BOE-MW61A	MONITOR	SINGLE	TESTING	ACTIVE	172	Y	N	01/02/2009	17.50	1	17.50	170	150	170
BOE-MW72A	MONITOR	SINGLE	TESTING	ACTIVE	132	Y	N	05/28/2010	16.08	1	16.08	127	112	127
BOE-MW73A	MONITOR	SINGLE	TESTING	ACTIVE	137	Y	N	06/04/2010	16.88	1	16.88	133	113	133
BOE-MW74	MONITOR	SINGLE	TESTING	DESTROY	132	Y	N	06/22/2010	18.19	1	18.19	132	107	132
BOE-MW75	MONITOR	SINGLE	TESTING	ACTIVE	227	Y	N	06/15/2010	16.68	1	16.68	222	202	222
BXBY-SB	PRODUCT	SINGLE	AGR/IRR	ACTIVE	305	Y	Y	11/17/1999	18.90	1		300	150	290
CHEV-HE1	PRODUCT	SINGLE	OIL	UNKNOWN	12455	N	Y		17.00	1				
FAA-LA1	PRODUCT	SINGLE	INDUST	ACTIVE		N	N		19.50	1	19.50	65		

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Well Name	Well Type	Well Subtype	Well Use	Well Status	Bore Depth	Lithology Log?	Electric Log?	Date Drilled	Elev GS	Casing Number	Elev RP	Cased Depth	PERFORATIONS Top	PERFORATIONS Bottom
GG-16	PRODUCT	SINGLE	LGSYS	ACTIVE	1000	Y	Y	06/09/1964	26.50	1	30.08	910	304	864
HB-12	PRODUCT	SINGLE	LGSYS	ACTIVE	807	Y	Y	11/10/1995	20.80	1	22.30	760	265	740
HB-13	PRODUCT	SINGLE	LGSYS	ACTIVE	860	Y	Y	04/01/2001	24.96	1	27.46	830	280	810
HB-4	PRODUCT	SINGLE	LGSYS	ACTIVE	826	Y	Y	03/25/1967	25.96	1	25.96	804	252	804
HELL-SB	PRODUCT	SINGLE	AGR/IRR	ABANDON	705	Y	N		5.00	1	5.00	473	417	473
HELL-SB14	UNKNOWN	SINGLE	UNKNOWN	UNKNOWN	902	Y	N		5.00	1		625	551	625
HELL-SB2	PRODUCT	SINGLE	DOMESTIC	DESTROY	382	N	N	08/28/1965	8.79	1	10.75	320	280	320
HELL-SB7	PRODUCT	SINGLE	UNKNOWN	UNKNOWN	915	Y	N	07/23/1923	16.00	1			633	870
HELL-WM3	PRODUCT	SINGLE	UNKNOWN	UNKNOWN	733	Y	N	12/31/1917	27.80	1		714	323	714
ITO-LA	PRODUCT	SINGLE	AGR/IRR	ACTIVE	860	Y	N	05/28/1975	22.00	1	22.29	860	70	710
ITO-LAG3	PRODUCT	SINGLE	AGR/IRR	ACTIVE	800	Y	N	09/15/1988	17.00	1	18.54	800	170	780
KAYO-SB	PRODUCT	SINGLE	AGR/IRR	DESTROY	320	Y	N	11/10/1926	15.00	1		299	203	299
LAC-34W23	MONITOR	SINGLE	TESTING	DESTROY	1760	Y	Y	04/01/1959	6.85	1	6.85	587	557	567
NVLR-LAH1	PRODUCT	SINGLE	AGR/IRR	ACTIVE	836	N	N		23.00	1				
NVLW-7001	MONITOR	SINGLE	TESTING	ACTIVE	33	Y	N	07/23/1997	4.90	1	6.87	32	20	30
NVLW-7002	MONITOR	SINGLE	TESTING	ACTIVE	32	Y	N	07/21/1997	5.90	1	7.85	32	20	30
NVLW-7003	MONITOR	SINGLE	TESTING	ACTIVE	32	Y	N	07/25/1997	8.48	1	8.03	32	20	30
NVLW-7004	MONITOR	SINGLE	TESTING	ACTIVE	62	Y	N	07/29/1997	8.65	1	8.28	60	49	59
NVLW-7005	MONITOR	SINGLE	TESTING	ACTIVE	62	Y	N	07/22/1997	5.90	1	7.77	62	50	60
NVLW-7006	MONITOR	SINGLE	TESTING	ACTIVE	62	Y	N	07/24/1997	8.48	1	8.25	62	50	60
NVLW-7007	MONITOR	SINGLE	TESTING	ACTIVE	62	Y	N	07/23/1997	4.90	1	6.31	62	50	60
NVLW-7008	MONITOR	SINGLE	TESTING	ACTIVE	111	Y	N	03/13/1998	7.38	1	10.00	111	96	105
NVLW-7009	MONITOR	SINGLE	TESTING	ACTIVE	175	N	N	03/17/1998	7.27	1	9.89	172	160	169
NVLW-7010	MONITOR	SINGLE	TESTING	ACTIVE	41	Y	N	04/13/2000	8.37	1	10.10	41	30	40
NVLW-7011	MONITOR	SINGLE	TESTING	ACTIVE	102	Y	N	04/21/2000	8.56	1	11.07	102	80	100
NVLW-7012	MONITOR	SINGLE	TESTING	ACTIVE	115	Y	N	02/27/1998	9.13	1	8.92	112	100	110
NVLW-7013	MONITOR	SINGLE	TESTING	ACTIVE	108	Y	N	03/24/1998	8.30	1	10.89	108	95	105

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NVLW-7014	MONITOR	SINGLE	TESTING	ACTIVE	187	Y	N	03/19/1998	8.51	1	11.01	173	160	170
NVLW-7015	MONITOR	SINGLE	TESTING	ACTIVE	179	N	N	03/23/1998	7.14	1	9.41	173	161	170
NVLW-7016	MONITOR	SINGLE	TESTING	ACTIVE	110	Y	N	03/26/1998	7.19	1	9.76	107	95	105
NVLW-7017	MONITOR	SINGLE	TESTING	ACTIVE	42	Y	N	04/14/2000	2.85	1	4.58	41	30	40
NVLW-7018	MONITOR	SINGLE	TESTING	ACTIVE	102	Y	N	04/26/2000	2.81	1	4.95	102	80	100
NVLW-7019	MONITOR	SINGLE	TESTING	ACTIVE	42	Y	N	04/18/2000	6.23	1	5.84	41	30	40
NVLW-7020	MONITOR	SINGLE	TESTING	ACTIVE		Y	N	04/24/2000	8.50	1	10.28	30	19	29
NVLW-7021	MONITOR	SINGLE	TESTING	ACTIVE	172	Y	N	04/25/2000	5.33	1	7.70	172	150	170
NVLW-7022	MONITOR	SINGLE	TESTING	ACTIVE	32	Y	N	04/17/2000	8.67	1	10.21	31	20	30
NVLW-7023	MONITOR	SINGLE	TESTING	ACTIVE	132	Y	N	04/18/2000	8.46	1	11.17	132	110	130
NVLW-7024	MONITOR	SINGLE	TESTING	ACTIVE	27	Y	N	04/14/2000	3.05	1	4.75	25	15	25
NVLW-7025	MONITOR	SINGLE	TESTING	ACTIVE	62	Y	N	04/17/2000	7.22	1	8.31	61	50	60
NVLW-7027	MONITOR	SINGLE	TESTING	ACTIVE	36	Y	N	07/03/2001	8.80	1	8.25	36	26	36
NVLW-7028	MONITOR	SINGLE	TESTING	ACTIVE	62	Y	N	07/03/2001	8.65	1	8.30	61	50	60
NVLW-7031	MONITOR	SINGLE	TESTING	ACTIVE	145	Y	N	02/22/2002	6.12	1	8.61	141	130	140
NVLW-7032	MONITOR	SINGLE	TESTING	INACTIVE	110	Y	N	02/14/2002	6.37	1	8.87	106	95	105
NVLW-7033	MONITOR	SINGLE	TESTING	INACTIVE	170	Y	N	02/20/2002	6.46	1	8.84	166	155	165
NVLW-7034	MONITOR	SINGLE	TESTING	INACTIVE	60	Y	N	02/19/2002	7.41	1	9.93	57	46	56
NVLW-7035	MONITOR	SINGLE	TESTING	ACTIVE	103	Y	N	03/01/2002	3.67	1	6.31	101	90	100
NVLW-7036	MONITOR	SINGLE	TESTING	ACTIVE	170	Y	N	03/04/2002	6.71	1	9.04	161	150	160
NVLW-7037	MONITOR	SINGLE	TESTING	ACTIVE	112	Y	N	09/24/2003	8.68	1	8.15	109	89	109
NVLW-7038	MONITOR	SINGLE	TESTING	ACTIVE	102	Y	N	09/17/2003	4.37	1	6.85	101	80	100
NVLW-7039	MONITOR	SINGLE	TESTING	ACTIVE	159	Y	N	09/24/2003	8.43	1	8.10	154	143	153
NVLW-7040	MONITOR	SINGLE	TESTING	ACTIVE	160	Y	N	09/25/2003	4.72	1	7.23	151	140	150
NVLW-7041	MONITOR	NESTED	TESTING	ACTIVE	146	Y	N	07/22/2005	7.70	1	10.34	103	83	103
										2	10.16	143	133	143
NVLW-7042	MONITOR	NESTED	TESTING	ACTIVE	151	Y	N	07/22/2005	7.67	1	10.24	106	86	106
										2	9.98	146	136	146

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NVLW-7043	MONITOR	NESTED	TESTING	ACTIVE	150	Y	N	07/22/2005	7.93	1	10.76	106	86	106
										2	10.58	146	136	146
NVLW-7044	MONITOR	NESTED	TESTING	ACTIVE	158	Y	N	09/15/2006	6.48	1	9.38	68	48	68
										2	9.36	102	82	102
										3	9.39	150	123	143
NVLW-7045	MONITOR	NESTED	TESTING	ACTIVE	157	Y	N	09/19/2006	6.86	1	9.28	70	50	70
										2	9.31	105	85	105
										3	9.31	155	135	155
NVLW-7046	MONITOR	NESTED	TESTING	ACTIVE	107	Y	N	09/15/2006	8.68	1	11.58	71	51	71
										2	11.65	105	85	105
NVLW-70POC02	MONITOR	SINGLE	TESTING	ACTIVE		Y	N	09/19/2007	8.68	1	8.25	201	190	201
NVLW-70POC03	MONITOR	SINGLE	TESTING	ACTIVE	205	Y	N	09/11/2007	7.19	1	9.64	201	190	200
NVLW-70POC04	MONITOR	SINGLE	TESTING	ACTIVE	210	Y	N	10/18/2007	5.87	1	8.50	206	195	206
NVLW-EW7001	PRODUCT	SINGLE	REMEDIA	INACTIVE	33	Y	N	07/31/1998	8.26	1	7.69	31	20	30
NVLW-EW7003	PRODUCT	SINGLE	REMEDIA	INACTIVE	130	Y	N	02/26/2002	7.29	1	10.43	126	95	120
NVLW-RDO1	MONITOR	SINGLE	TESTING	ACTIVE	110	Y	N	08/19/2005	5.35	1	5.21	106	65	105
NVLW-RDO2	MONITOR	SINGLE	TESTING	ACTIVE	110	Y	N	08/18/2005	4.65	1	4.62	106	65	105
NVLW-RDO3A	MONITOR	SINGLE	TESTING	ACTIVE	31	Y	N	08/23/2005	7.09	1	9.28	31	20	30
NVLW-RDO3B	MONITOR	SINGLE	TESTING	ACTIVE	107	Y	N	08/23/2005	4.35	1	6.96	106	65	105
NVLW-RDO4	MONITOR	SINGLE	TESTING	ACTIVE	112	Y	N	08/16/2005	4.15	1	4.13	106	65	105
NVLW-RDO5	MONITOR	SINGLE	TESTING	ACTIVE	107	Y	N	08/15/2005	4.00	1	6.01	106	65	105
NVLW-RDO6A	MONITOR	SINGLE	TESTING	ACTIVE	109	Y	N	08/30/2005	9.28	1	11.30	106	95	105
NVLW-RDO6B	MONITOR	SINGLE	TESTING	ACTIVE	145	Y	N	08/25/2005	8.44	1	10.60	141	130	140
NVLW-SB	PRODUCT	SINGLE	AGR/IRR	ACTIVE	430	Y	N	03/25/1999	14.90	1		420	200	420
NVLW-SB2	PRODUCT	SINGLE	AGR/IRR	INACTIVE	424	Y	Y	02/16/2010	20.00	1	20.00	407	207	407
NVLW-SB3	PRODUCT	SINGLE	AGR/IRR	ACTIVE	680	N	N	01/01/1950	7.00	1	8.00	680		
NVLW-SB6	PRODUCT	SINGLE	LGSYS	INACTIVE	802	Y	N	05/01/1950	10.00	1	10.63	802	548	655
NVLW-SGO12	MONITOR	NESTED	TESTING	UNKNOWN	130	N	N	06/01/1965	5.00	1		40	20	40
										2		75	52	75

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NVLW-SGO12	MONITOR	NESTED	TESTING	UNKNOWN	130	N	N	06/01/1965	5.00	3		130	98	130
NVLW-SGO17	MONITOR	SINGLE	TESTING	UNKNOWN	60	N	N	03/01/1966	3.00	1		60	50	60
NVLW-SGO18	MONITOR	SINGLE	TESTING	UNKNOWN	100	N	N	03/01/1966	3.00	1		100	90	100
NVLW-SGO19	MONITOR	SINGLE	TESTING	UNKNOWN	60	N	N	03/01/1966	8.00	1		60	50	60
NVLW-SGO2	MONITOR	SINGLE	TESTING	UNKNOWN	30	N	N		10.00	1		30	20	30
NVLW-SGO21	MONITOR	SINGLE	TESTING	UNKNOWN	30	N	N	03/31/1966	11.20	1		30	20	30
NVLW-SGO22	MONITOR	SINGLE	TESTING	UNKNOWN	100	N	N	03/01/1966	8.00	1		100	90	100
NVLW-SGO3	MONITOR	SINGLE	TESTING	UNKNOWN	90	N	N		10.00	1		90	80	90
NVLW-SGO4	MONITOR	SINGLE	TESTING	UNKNOWN	30	N	N		5.00	1		30	28	30
NVLW-SGO5	MONITOR	SINGLE	TESTING	UNKNOWN	90	N	N		5.00	1		90	80	90
NVLW-SGO6	MONITOR	NESTED	TESTING	UNKNOWN	120	N	N		0.00	1		40	10	40
										2		120	67	120
OCWD-34H5	MONITOR	NESTED	TESTING	ACTIVE	480	Y	Y	11/10/1999	7.21	1	7.20	360	300	340
										2	7.20	475	405	455
OCWD-34N21	MONITOR	NESTED	TESTING	ACTIVE	494	Y	Y	05/29/1965	6.80	1	6.80		329	366
										2	6.80		424	464
OCWD-34U8	MONITOR	NESTED	TESTING	ACTIVE	424	Y	Y	05/12/1965	5.40	1	5.40	180	149	174
										2	5.40	240	224	234
										3	5.40	325	279	319
										4	5.40	389	359	384
OCWD-34V	INJECT	NESTED	BARRIER	ACTIVE	320	Y	Y	04/26/1982	3.92	1			120	175
										2			200	230
										3			260	300
OCWD-34V20	MONITOR	NESTED	TESTING	ACTIVE	456	Y	Y	04/29/1965	6.30	1	6.30	313	235	307
										2	6.30	422	387	417
OCWD-34VZX	MONITOR	SINGLE	TESTING	ACTIVE	199	Y	N	05/23/1990	6.20	1	6.20	187	147	177
OCWD-34VZY	MONITOR	SINGLE	TESTING	ACTIVE	265	Y	Y	05/22/1990	6.20	1	6.20	245	215	235
OCWD-34X40	MONITOR	NESTED	TESTING	ACTIVE	450	Y	Y	11/09/2009	6.97	1	6.63	118	88	113
										2	6.50	159	139	154
										3	6.39	249	204	244

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OCWD-34X40	MONITOR	NESTED	TESTING	ACTIVE	450	Y	Y	11/09/2009	6.97	4	6.23	363	333	358
OCWD-34Z	INJECT	SINGLE	BARRIER	ACTIVE	191	Y	Y	02/22/1991	7.77	1		160	110	150
OCWD-35E01X	MONITOR	SINGLE	TESTING	ACTIVE	98	Y	N	05/15/1990	6.50	1	6.50	95	65	85
OCWD-35E01Y	MONITOR	SINGLE	TESTING	ACTIVE	343	Y	Y	05/14/1990	6.50	1	6.50	135	105	125
OCWD-35F	INJECT	SINGLE	BARRIER	ACTIVE	168	Y	Y	09/29/1999	5.45	1		135	80	115
OCWD-35F20	MONITOR	NESTED	TESTING	ACTIVE	300	Y	Y		6.50	1	6.50		70	95
										2	6.50		115	125
										3	6.50		145	180
										4	6.50		235	265
OCWD-35G	INJECT	SINGLE	BARRIER	ACTIVE	182	Y	Y	03/02/1991	7.39	1		155	80	145
OCWD-35H11	MONITOR	NESTED	TESTING	ACTIVE	230	Y	Y	08/10/1966	6.40	1	6.40	82	44	77
										2	6.40	163	125	158
										3	6.40	225	200	220
OCWD-35H12	MONITOR	SINGLE	TESTING	ACTIVE	300	Y	N	06/18/1959	6.50	1	6.50	159	137	147
OCWD-35H1X	INJECT	SINGLE	BARRIER	ACTIVE	257	Y	N	02/25/2000	9.13	1		186	131	171
OCWD-35H1Y	INJECT	SINGLE	BARRIER	ACTIVE	271	Y	N	01/28/2000	8.82	1		257	215	237
OCWD-35H2	INJECT	SINGLE	BARRIER	ACTIVE	260	Y	Y	08/17/2000	7.98	1		245	112	241
OCWD-35H2X	NA	NA	UNKNOWN	DESTROY	259	Y	N	06/29/2000	5.40	1		245		
OCWD-35J1	MONITOR	NESTED	TESTING	ACTIVE	271	Y	Y	01/20/2000	7.42	1	7.42	190	130	170
										2	7.42	260	190	240
OCWD-35J1Y	MONITOR	SINGLE	TESTING	ACTIVE	378	Y	Y	11/24/2009	7.10	1	6.58	299	264	294
OCWD-35K1	MONITOR	NESTED	TESTING	ACTIVE	275	Y	Y	01/31/2000	7.96	1	7.96	190	130	170
										2	7.96	263	193	243
OCWD-35K1V	MONITOR	SINGLE	TESTING	ACTIVE	112	Y	N	12/14/2009	7.58	1	6.92	111	90	110
OCWD-35K1Y	MONITOR	SINGLE	TESTING	ACTIVE	395	Y	Y	10/15/2009	7.73	1	7.50	391	366	386
OCWD-35N01	MONITOR	NESTED	TESTING	ACTIVE	101	Y	Y	08/05/1966	7.30	1	7.30	80	39	79
										2	7.30	90	80	85
OCWD-35T9	MONITOR	SINGLE	TESTING	ACTIVE	1020	Y	Y	05/01/1959	7.90	1	7.90	432	390	411
OCWD-36FP1X	UNKNOWN	SINGLE	UNKNOWN	UNKNOWN	160	Y	N	06/04/1959	39.50	1	39.50	160	136	146

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OCWD-BSO9A	MONITOR	NESTED	TESTING	ACTIVE	445	N	N	09/17/1963	5.00	1	5.19	24	10	24
										2	5.35	169	115	162
										3	5.24	285	195	285
OCWD-BSO9B	MONITOR	NESTED	TESTING	ACTIVE	624	Y	N	08/24/1963	5.00	1	5.19	101	56	101
										2	5.32	620	520	615
OCWD-BSO9C	MONITOR	SINGLE	TESTING	ACTIVE	450	Y	N		5.00	1	5.64	445	340	435
OCWD-BSOT8	NA	NA	NA	DESTROY	1010	Y	Y	09/12/1961	10.00					
ORGC-LA	PRODUCT	SINGLE	DOMESTIC	ABANDON	954	Y	N	11/18/1965	14.00	1		954	734	874
PURS-SB	PRODUCT	SINGLE	AGR/IRR	ACTIVE	252	N	N		17.00	1	17.00	252		
RUIZ-5A1	PRODUCT	SINGLE	AGR/IRR	ACTIVE		N	N		25.00	1				
RUIZ-5A3	PRODUCT	SINGLE	AGR/IRR	ACTIVE	425	Y	Y	08/04/1987	20.00	1	21.29	410	210	390
RUIZ-5J1	PRODUCT	SINGLE	AGR/IRR	ACTIVE	550	Y	N	10/05/1971	20.00	1		550	490	550
RUIZ-6A1	PRODUCT	SINGLE	AGR/IRR	ABANDON	1030	Y	N		17.00	1		1030	818	975
RUIZ-6A3	PRODUCT	SINGLE	AGR/IRR	ACTIVE		N	N		17.00	1				
RUIZ-6F1	PRODUCT	SINGLE	AGR/IRR	ACTIVE	426	Y	Y	04/27/1984	8.00	1		410	210	390
SB-7	PRODUCT	SINGLE	LGSYS	DESTROY	674	Y	N	07/01/1950	9.00	1	10.00	674	580	654
SB-BC	PRODUCT	SINGLE	LGSYS	ACTIVE	1050	Y	Y	01/14/1977	21.00	1	22.00	1040	370	1020
SB-BEV	PRODUCT	SINGLE	LGSYS	ACTIVE	920	Y	N	11/27/1968	11.20	1	11.86	800	400	800
SB-LAM	PRODUCT	SINGLE	LGSYS	ACTIVE	1200	Y	Y	04/24/2009	20.00	1	20.00	1190	360	1170
SB-LEI	PRODUCT	SINGLE	LGSYS	ACTIVE	840	Y	Y	04/07/1962	9.80	1	11.43	840	420	840
SBM-1	MONITOR	WESTBAY	TESTING	ACTIVE	2023	Y	Y	06/04/1993	17.07	1	17.99	1300	74	1260
SBOC-SBJA	PRODUCT	SINGLE	OIL	UNKNOWN	8014	N	Y		14.00	1				
SCWC-LAMO	PRODUCT	SINGLE	LGSYS	DESTROY	720	Y	N	01/02/1959	13.34	1	14.14	716	257	383
SCWC-LAYT	PRODUCT	SINGLE	LGSYS	ACTIVE	812	Y	Y	04/15/1960	12.00	1	12.58	800	250	800
SEA-SB	PRODUCT	SINGLE	AGR/IRR	DESTROY	415	Y	N	08/20/1971	14.00	1		415	220	380
SHELL-AS1	PRODUCT	SINGLE	OIL	UNKNOWN	11469	N	Y		23.00	1				
USGS-NAWQA10	MONITOR	SINGLE	TESTING	ACTIVE	24	Y	N	11/19/1999	20.10	1		24	14	19
USGS-NAWQA25	MONITOR	SINGLE	TESTING	ACTIVE	19	Y	N	12/06/1999	19.00	1		19	9	19

NOTE: All depths and elevations in feet.
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ORANGE COUNTY WATER DISTRICT
GENERAL WELL INFORMATION

Well Name	Well Type	Well Subtype	Well Use	Well Status	Bore Depth	Lithology Log?	Electric Log?	Date Drilled	Elev GS	Casing Number	Elev RP	Cased Depth	PERFORATIONS Top	PERFORATIONS Bottom
W-11672	PRODUCT	SINGLE	DOMESTIC	DESTROY	1172	Y	N		8.00	1				
W-12283	PRODUCT	SINGLE	DOMESTIC	ABANDON	712	Y	N	05/30/1923	12.00	1	12.00		662	684
W-14299	UNKNOWN	SINGLE	UNKNOWN	ABANDON	1080	Y	N	10/09/1925	10.00	1				
W-14350	PRODUCT	SINGLE	DOMESTIC	UNKNOWN	120	N	N		27.50	1	27.50	120		
W-15181	UNKNOWN	SINGLE	UNKNOWN	UNKNOWN	225	Y	N	06/01/1913	21.00	1		486	211	486
W-15183	UNKNOWN	SINGLE	UNKNOWN	UNKNOWN	724	Y	N	11/30/1953	5.40	1		637	232	637
W-15187	UNKNOWN	SINGLE	UNKNOWN	UNKNOWN	620	Y	N	07/19/1939	41.70	1		586	561	586
W-15197	UNKNOWN	SINGLE	UNKNOWN	UNKNOWN	723	Y	N		38.80	1		709	668	709
W-15280	UNKNOWN	SINGLE	UNKNOWN	UNKNOWN		N	N		14.00	1				
W-15292	UNKNOWN	SINGLE	UNKNOWN	DESTROY	104	N	N		10.70	1		104		
W-15294	UNKNOWN	SINGLE	UNKNOWN	DESTROY	185	N	N		15.00	1		185		
W-15296	UNKNOWN	SINGLE	UNKNOWN	DESTROY	158	N	N		6.60	1		158		
W-15301	UNKNOWN	SINGLE	UNKNOWN	DESTROY		N	N		8.40	1		216		
W-16169	PRODUCT	SINGLE	LGSYS	ABANDON	864	N	N	06/01/1964	19.10	1		864		
W-16951	PRODUCT	SINGLE	DOMESTIC	ABANDON	120	N	N		21.50	1		120		
W-17741	UNKNOWN	SINGLE	UNKNOWN	UNKNOWN		N	N		16.40	1				
W-18091	UNKNOWN	SINGLE	UNKNOWN	UNKNOWN	350	Y	N	02/14/1977	8.40	1		250		
W-18137	CATHODIC	SINGLE	CATHODIC	ACTIVE	350	Y	N	02/14/1977	15.50	1		250		
W-2387	PRODUCT	SINGLE	SMSYS	UNKNOWN	810	Y	N	06/01/1959	21.00	1		810	720	810
W-2393	PRODUCT	SINGLE	DOMESTIC	DESTROY	796	Y	N	01/01/1945	5.00	1				
W-2397	PRODUCT	SINGLE	AGR/IRR	UNKNOWN	316	Y	N	04/17/1951	19.00	1		316	260	290
W-2399	PRODUCT	SINGLE	AGR/IRR	UNKNOWN	670	Y	N	01/01/1951	25.80	1		670	281	617
W-2403	PRODUCT	SINGLE	AGR/IRR	UNKNOWN	535	Y	N	02/12/1960	17.50	1		535	221	535
W-2783	UNKNOWN	SINGLE	UNKNOWN	UNKNOWN	900	Y	N	05/01/1920	16.70	1				
W-2787	UNKNOWN	SINGLE	UNKNOWN	UNKNOWN	299	Y	N		7.00	1				
W-2793	UNKNOWN	SINGLE	UNKNOWN	UNKNOWN	1635	Y	N	01/01/1933	29.58	1	29.58	1635		
W-2794	PRODUCT	SINGLE	UNKNOWN	UNKNOWN	895	Y	N	08/04/1925	5.00	1		830	186	830
W-3771	PRODUCT	SINGLE	UNKNOWN	DESTROY	400	N	N	03/01/1947	16.00	1	16.00	379	182	379

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ORANGE COUNTY WATER DISTRICT
GENERAL WELL INFORMATION

Well Name	Well Type	Well Subtype	Well Use	Well Status	Bore Depth	Lithology Log?	Electric Log?	Date Drilled	Elev GS	Casing Number	Elev RP	Cased Depth	PERFORATIONS Top	PERFORATIONS Bottom
W-4752	PRODUCT	SINGLE	DOMESTIC	ABANDON	801	N	N		15.20	1	15.20			
W-4754	MONITOR	SINGLE	TESTING	UNKNOWN	400	N	N		16.00	1	16.00			
W-9381	PRODUCT	SINGLE	UNKNOWN	UNKNOWN	18	Y	N		11.00	1				
WM-124	PRODUCT	SINGLE	LGSYS	DESTROY	528	Y	N	01/01/1950	24.00	1	25.08	528	111	510
WM-125	PRODUCT	SINGLE	LGSYS	ACTIVE	930	Y	Y	01/06/1999	25.00	1	25.00	880	374	860
WMIL-WM	PRODUCT	SINGLE	DOMESTIC	ACTIVE	300	Y	N	06/25/1971	25.00	1	25.67	300	260	300
WMIL-WM2	PRODUCT	SINGLE	DOMESTIC	ACTIVE	650	Y	N	01/07/1993	20.00	1		650	150	640
WM-RES2	PRODUCT	SINGLE	LGSYS	ACTIVE	960	Y	Y	02/13/1968	28.00	1	29.00	937	340	937
WRD-SEALBEACH-1	MONITOR	NESTED	TESTING	ACTIVE	1505	Y	Y	06/09/2010	6.96	1	6.96	70	60	70
										2	6.96	235	215	235
										3	6.96	625	605	625
										4	6.96	795	775	795
										5	6.96	1040	1020	1040
										6	6.96	1180	1160	1180
										7	6.96	1365	1345	1365

NOTE: All depths and elevations in feet.
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ORANGE COUNTY WATER DISTRICT
PRODUCTION WELL INFORMATION

Well Name	WPF	Well Use	Well	Elev GS	Elev RP	Date	Cased Depth	Bowl Depth	Sanitary Seal Depth	Perforations Top	Perforations Bottom	Operational Discharge (gpm)	Specific Capacity (gpm/ft)
Owner Name: ANAHEIM SUGAR COMPANY													
W-2399		AGR/IRR	UNKNOWN	25.80		01/01/1951	670			281	617		
Owner Name: BIXBY LAND COMPANY													
ORGC-LA	87-02-10-D	DOMESTIC	ABANDON	14.00		11/18/1965	954			734	874		21.00
W-3771		UNKNOWN	DESTROY	16.00	16.00	03/01/1947	379			182	379		
Owner Name: BIXBY-BRYANT RANCH													
BXBY-SB	87-02-10-E	AGR/IRR	ACTIVE	18.90		11/17/1999	300			150	290		
Owner Name: CALIFORNIA GUN CLUB													
W-2393	95-02-2-D	DOMESTIC	DESTROY	5.00		01/01/1945							
Owner Name: CAMERON TRACT WATER COMPANY													
W-2387	95-04-5-A	SMSYS	UNKNOWN	21.00		06/01/1959	810		30	720	810		140.00
Owner Name: FEDERAL AVAIATION ADMIN.													
FAA-LA1	87-02-3-L	INDUST	ACTIVE	19.50	19.50		65						
Owner Name: GARDEN GROVE													
GG-16	87-02-9-C	LGSYS	ACTIVE	26.50	30.08	06/09/1964	910	215		304	864	1650	96.30
W-16169	87-02-9-D	LGSYS	ABANDON	19.10		06/01/1964	864						
Owner Name: GOLDEN STATE WATER CO - OC													
SCWC-LAMO	87-01-8-D	LGSYS	DESTROY	13.34	14.14	01/02/1959	716	156	24	257	383	400	10.20
SCWC-LAYT	87-01-8-E	LGSYS	ACTIVE	12.00	12.58	04/15/1960	800	143	282	250	800	806	66.66
Owner Name: HELLMAN ESTATES													
HELL-SB	95-01-4-A	AGR/IRR	ABANDON	5.00	5.00		473			417	473		
HELL-SB2	95-01-3-A	DOMESTIC	DESTROY	8.79	10.75	08/28/1965	320			280	320		
HELL-SB7		UNKNOWN	UNKNOWN	16.00		07/23/1923				633	870		
HELL-WM3		UNKNOWN	UNKNOWN	27.80		12/31/1917	714			323	714		
W-12283		DOMESTIC	ABANDON	12.00	12.00	05/30/1923				662	684		
W-2397	95-04-8-A	AGR/IRR	UNKNOWN	19.00		04/17/1951	316			260	290		
Owner Name: HUNTINGTON BEACH													
HB-12	95-04-09-B	LGSYS	ACTIVE	20.80	22.30	11/10/1995	760	200	192	265	740	1500	79.40

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ORANGE COUNTY WATER DISTRICT
PRODUCTION WELL INFORMATION

Well Name	WPF	Well Use	Well	Elev GS	Elev RP	Date	Cased Depth	Bowl Depth	Sanitary Seal Depth	Perforations Top	Perforations Bottom	Operational Discharge (gpm)	Specific Capacity (gpm/ft)
Owner Name: HUNTINGTON BEACH													
HB-13	95-04-10-E	LGSYS	ACTIVE	24.96	27.46	04/01/2001	830	200	222	280	810	2500	94.00
HB-4	95-04-10-C	LGSYS	ACTIVE	25.96	25.96	03/25/1967	804	150	250	252	804	450	112.50
Owner Name: ITO-OZAWA FARMS													
ITO-LA	87-02-3-G	AGR/IRR	ACTIVE	22.00	22.29	05/28/1975	860			70	710		35.90
ITO-LAG3	87-02-03-K	AGR/IRR	ACTIVE	17.00	18.54	09/15/1988	800		50	170	780		
Owner Name: LOMITA GUN CLUB													
W-2794		UNKNOWN	UNKNOWN	5.00		08/04/1925	830			186	830		
Owner Name: LOS ANGELES GAS & ELECTRIC CO.													
W-11672		DOMESTIC	DESTROY	8.00									
Owner Name: MARSHBURN FARMS													
W-2403		AGR/IRR	UNKNOWN	17.50		02/12/1960	535			221	535		
Owner Name: MILLER, WILLIS L.													
WMIL-WM	95-04-1-B	DOMESTIC	ACTIVE	25.00	25.67	06/25/1971	300		50	260	300		
WMIL-WM2	95-04-4-C	DOMESTIC	ACTIVE	20.00		01/07/1993	650		75	150	640		
Owner Name: NAVAL RECREATION STATION													
NVLR-LAH1	87-02-3-D	AGR/IRR	ACTIVE	23.00									
Owner Name: NAVAL WEAPONS STATION													
NVLW-EW7001		REMEDIA	INACTIVE	8.26	7.69	07/31/1998	31		18	20	30		
NVLW-EW7003		REMEDIA	INACTIVE	7.29	10.43	02/26/2002	126		89	95	120		2.70
NVLW-SB2	95-02-2-F	AGR/IRR	INACTIVE	20.00	20.00	02/16/2010	407		50	207	407		8.33
NVLW-SB6	95-02-2-A	LGSYS	INACTIVE	10.00	10.63	05/01/1950	802			548	655		31.25
Owner Name: ORANGE COUNTY PRODUCE LLC													
NVLW-SB	95-02-1-J	AGR/IRR	ACTIVE	14.90		03/25/1999	420			200	420		
RUIZ-5A1	95-02-1-A	AGR/IRR	ACTIVE	25.00									
RUIZ-5A3	95-02-1-H	AGR/IRR	ACTIVE	20.00	21.29	08/04/1987	410		40	210	390		
RUIZ-6A3	95-02-1-I	AGR/IRR	ACTIVE	17.00									
RUIZ-6F1	95-02-1-G	AGR/IRR	ACTIVE	8.00		04/27/1984	410		50	210	390		69.70

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ORANGE COUNTY WATER DISTRICT
PRODUCTION WELL INFORMATION

Well Name	WPF	Well Use	Well	Elev GS	Elev RP	Date	Cased Depth	Bowl Depth	Sanitary Seal Depth	Perforations Top	Perforations Bottom	Operational Discharge (gpm)	Specific Capacity (gpm/ft)
Owner Name: PURSCHE, ROY													
KAYO-SB	95-03-1-A	AGR/IRR	DESTROY	15.00		11/10/1926	299			203	299		
NVLW-SB3	95-03-4-A	AGR/IRR	ACTIVE	7.00	8.00	01/01/1950	680						
PURS-SB	95-03-2-A	AGR/IRR	ACTIVE	17.00	17.00		252						
SEA-SB	95-02-2-E	AGR/IRR	DESTROY	14.00		08/20/1971	415		30	220	380		10.64
Owner Name: SEAL BEACH													
SB-7	95-02-2-B	LGSYS	DESTROY	9.00	10.00	07/01/1950	674	160		580	654		31.60
SB-BC	95-02-1-F	LGSYS	ACTIVE	21.00	22.00	01/14/1977	1040	200	296	370	1020	2000	142.00
SB-BEV	95-01-1-D	LGSYS	ACTIVE	11.20	11.86	11/27/1968	800	160	320	400	800	2400	115.90
SB-LAM	87-02-03-M	LGSYS	ACTIVE	20.00	20.00	04/24/2009	1190	300	230	360	1170	2000	571.00
SB-LEI	95-01-1-C	LGSYS	ACTIVE	9.80	11.43	04/07/1962	840	160	420	420	840	2400	91.20
Owner Name: SEAL BEACH RANCH													
RUIZ-6A1	95-02-1-B	AGR/IRR	ABANDON	17.00			1030			818	975		
Owner Name: SEAVIEW AG, LLC													
RUIZ-5J1	95-02-1-E	AGR/IRR	ACTIVE	20.00		10/05/1971	550		30	490	550		
Owner Name: SHELL OIL COMPANY													
SHELL-AS1		OIL	UNKNOWN	23.00									
Owner Name: SOUTH BASIN OIL COMPANY													
SBOC-SBJA		OIL	UNKNOWN	14.00									
Owner Name: STANDARD OIL COMPANY													
CHEV-HE1		OIL	UNKNOWN	17.00									
Owner Name: THE BOEING COMPANY													
BOE-EW101	106-27-1-C	REMEDIA	ACTIVE	17.50		09/07/2006	77		55	57	77		
BOE-EW102	106-27-1-C	REMEDIA	ACTIVE	17.50		09/05/2006	82	77	60	62	82		
BOE-EW103	106-27-1-C	REMEDIA	ACTIVE	17.50		09/27/2006	83		61	63	83		
BOE-EW104	106-27-1-C	REMEDIA	ACTIVE	17.50		08/30/2006	83		55	57	82		
Owner Name: UNKNOWN													

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ORANGE COUNTY WATER DISTRICT
PRODUCTION WELL INFORMATION

Well Name	WPF	Well Use	Well	Elev GS	Elev RP	Date	Cased Depth	Bowl Depth	Sanitary Seal Depth	Perforations Top	Perforations Bottom	Operational Discharge (gpm)	Specific Capacity (gpm/ft)
Owner Name: UNKNOWN													
W-4752		DOMESTIC	ABANDON	15.20	15.20								
W-9381		UNKNOWN	UNKNOWN	11.00									
Owner Name: WESTMINSTER													
W-14350	95-131-13-A	DOMESTIC	UNKNOWN	27.50	27.50		120						
W-16951	95-051-1-A	DOMESTIC	ABANDON	21.50			120						
WM-124	95-04-4-A	LGSYS	DESTROY	24.00	25.08	01/01/1950	528			111	510	380	
WM-125	95-04-5-B	LGSYS	ACTIVE	25.00	25.00	01/06/1999	880	225	50	374	860	1714	107.56
WM-RES2	95-14-51-A	LGSYS	ACTIVE	28.00	29.00	02/13/1968	937	240	279	340	937	2186	149.41

NOTE: Depths are in feet below ground surface. Elevations in feet relatrive to mean sea level.
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WPF = Water Producing Facility gpm = gallons per minute

ORANGE COUNTY WATER DISTRICT
GROUNDWATER PRODUCTION TOTALS

Month and Year	Groundwater Production acre-fee/month	cubic feet/month
BIXBY-BRYANT RANCH		
BXBY-SB/1		
January 2010	40.8	1,778,700
February 2010	40.8	1,778,700
March 2010	40.8	1,778,700
April 2010	40.8	1,778,700
May 2010	40.8	1,778,700
June 2010	40.8	1,778,700
July 2010	49.2	2,143,152
August 2010	49.2	2,143,152
September 2010	49.2	2,143,152
October 2010	49.2	2,143,152
November 2010	49.2	2,143,152
December 2010	49.2	2,143,152
January 2011	31.9	1,391,016
February 2011	31.9	1,391,016
March 2011	31.9	1,391,016
April 2011	31.9	1,391,016
May 2011	31.9	1,391,016
June 2011	31.9	1,391,016
BXBY-SB/1 Subtotal:	***731.8***	***31,877,208***
BIXBY-BRYANT RANCH Subtotal:	***731.8***	***31,877,208***
GARDEN GROVE		
GG-16/1		
January 2010	0.0	0
February 2010	0.0	0
March 2010	0.0	0
April 2010	0.0	0
May 2010	0.0	0
June 2010	4.0	174,240
July 2010	0.0	0
August 2010	0.0	0
September 2010	0.0	0
October 2010	4.2	182,952
November 2010	0.0	0
December 2010	0.0	0
January 2011	0.0	0
February 2011	0.0	0
March 2011	0.0	0
April 2011	0.0	0
May 2011	0.0	0
June 2011	4.0	174,240
July 2011	0.0	0
August 2011	0.0	0
September 2011	0.0	0
October 2011	0.0	0
November 2011	0.0	0
December 2011	0.0	0
GG-16/1 Subtotal:	***12.2***	***531,432***
GARDEN GROVE Subtotal:	***12.2***	***531,432***
GOLDEN STATE WATER CO - OC		

ORANGE COUNTY WATER DISTRICT
GROUNDWATER PRODUCTION TOTALS

Month and Year	Groundwater Production acre-fee/month	cubic feet/month
SCWC-LAMO/1		
January 2010	0.0	0
February 2010	0.0	0
March 2010	0.0	0
April 2010	0.0	0
May 2010	0.0	0
June 2010	0.0	0
July 2010	0.0	0
August 2010	0.0	0
September 2010	0.0	0
October 2010	0.0	0
November 2010	0.0	0
December 2010	0.0	0
January 2011	0.0	0
February 2011	0.0	0
March 2011	0.0	0
April 2011	0.0	0
May 2011	0.0	0
SCWC-LAMO/1 Subtotal:	***0.0***	***0***
SCWC-LAYT/1		
January 2010	67.9	2,959,684
February 2010	47.1	2,052,678
March 2010	60.5	2,635,467
April 2010	43.8	1,908,102
May 2010	0.1	4,661
June 2010	64.9	2,826,565
July 2010	96.5	4,203,540
August 2010	98.0	4,268,749
September 2010	84.9	3,698,331
October 2010	40.4	1,758,648
November 2010	40.2	1,752,201
December 2010	12.7	551,557
January 2011	26.9	1,173,376
February 2011	6.2	268,939
March 2011	46.2	2,012,516
April 2011	59.9	2,608,678
May 2011	67.5	2,938,601
June 2011	74.2	3,233,067
July 2011	87.7	3,820,517
August 2011	70.9	3,087,794
September 2011	56.6	2,464,407
October 2011	64.3	2,799,340
November 2011	25.0	1,086,909
December 2011	60.3	2,624,795
SCWC-LAYT/1 Subtotal:	***1,302.6***	***56,739,122***
GOLDEN STATE WATER CO - OC Subtotal:	***1,302.6***	***56,739,122***
HUNTINGTON BEACH		
HB-12/1		
January 2010	7.0	304,920
February 2010	3.2	139,392
March 2010	1.9	82,764
April 2010	2.8	121,968

ORANGE COUNTY WATER DISTRICT
GROUNDWATER PRODUCTION TOTALS

Month and Year		Groundwater Production acre-fee/month	cubic feet/month
HB-12/1			
May 2010		3.8	165,528
June 2010		2.1	91,476
July 2010		1.6	69,696
August 2010		0.0	0
September 2010		0.0	0
October 2010		0.0	0
November 2010		44.8	1,951,488
December 2010		50.0	2,178,000
January 2011		0.8	34,848
February 2011		0.0	0
March 2011		0.0	0
April 2011		0.0	0
May 2011		0.0	0
June 2011		0.0	0
July 2011		94.2	4,103,352
August 2011		113.0	4,922,280
September 2011		108.0	4,704,480
October 2011		41.3	1,799,028
November 2011		5.5	239,580
December 2011		0.0	0
	HB-12/1 Subtotal:	***480.0***	***20,908,800***
HB-13/1			
January 2010		352.6	15,359,256
February 2010		335.0	14,592,600
March 2010		381.8	16,631,208
April 2010		352.7	15,363,612
May 2010		353.0	15,376,680
June 2010		356.9	15,546,564
July 2010		358.5	15,616,260
August 2010		283.4	12,344,904
September 2010		336.5	14,657,940
October 2010		253.2	11,029,392
November 2010		57.8	2,517,768
December 2010		329.5	14,353,020
January 2011		349.9	15,241,644
February 2011		345.1	15,032,556
March 2011		306.4	13,346,784
April 2011		365.2	15,908,112
May 2011		365.6	15,925,536
June 2011		51.8	2,256,408
July 2011		2.8	121,968
August 2011		2.8	121,968
September 2011		28.1	1,224,036
October 2011		377.7	16,452,612
November 2011		215.0	9,365,400
December 2011		420.0	18,295,200
	HB-13/1 Subtotal:	***6,581.3***	***286,681,428***
HB-4/1			
January 2010		33.4	1,454,904
February 2010		60.3	2,626,668
March 2010		41.8	1,820,808
April 2010		63.2	2,752,992

Month and Year	Groundwater Production acre-fee/month	cubic feet/month
HB-4/1		
May 2010	66.8	2,909,808
June 2010	60.6	2,639,736
July 2010	54.4	2,369,664
August 2010	53.1	2,313,036
September 2010	36.2	1,576,872
October 2010	14.7	640,332
November 2010	31.8	1,385,208
December 2010	64.6	2,813,976
January 2011	51.8	2,256,408
February 2011	42.4	1,846,944
March 2011	56.3	2,452,428
April 2011	37.9	1,650,924
May 2011	24.3	1,058,508
June 2011	4.1	178,596
July 2011	1.2	52,272
August 2011	3.1	135,036
September 2011	41.1	1,790,316
October 2011	42.9	1,868,724
November 2011	38.3	1,668,348
December 2011	13.9	605,484
HB-4/1 Subtotal:	***938.2***	***40,867,992***
HUNTINGTON BEACH Subtotal:	***7,999.5***	***348,458,220***
ITO-OZAWA FARMS		
ITO-LA/1		
January 2010	7.3	315,810
February 2010	7.3	315,810
March 2010	7.3	315,810
April 2010	7.3	315,810
May 2010	7.3	315,810
June 2010	7.3	315,810
July 2010	13.5	587,334
August 2010	13.5	587,334
September 2010	13.5	587,334
October 2010	13.5	587,334
November 2010	13.5	587,334
December 2010	13.5	587,334
January 2011	10.4	453,750
February 2011	10.4	453,750
March 2011	10.4	453,750
April 2011	10.4	453,750
May 2011	10.4	453,750
June 2011	10.4	453,750
ITO-LA/1 Subtotal:	***186.9***	***8,141,364***
ITO-LAG3/1		
January 2010	15.5	675,906
February 2010	15.5	675,906
March 2010	15.5	675,906
April 2010	15.5	675,906
May 2010	15.5	675,906
June 2010	15.5	675,906
July 2010	23.6	1,026,564

Month and Year	Groundwater Production acre-fee/month	cubic feet/month
ITO-LAG3/1		
August 2010	23.6	1,026,564
September 2010	23.6	1,026,564
October 2010	23.6	1,026,564
November 2010	23.6	1,026,564
December 2010	23.6	1,026,564
January 2011	15.3	665,016
February 2011	15.3	665,016
March 2011	15.3	665,016
April 2011	15.3	665,016
May 2011	15.3	665,016
June 2011	15.3	665,016
ITO-LAG3/1 Subtotal:	***326.1***	***14,204,916***
ITO-OZAWA FARMS Subtotal:	***513.0***	***22,346,280***
MILLER, WILLIS L.		
WMIL-WM2/1		
January 2010	0.1	2,904
February 2010	0.1	2,904
March 2010	0.1	2,904
April 2010	0.1	2,904
May 2010	0.1	2,904
June 2010	0.1	2,904
July 2010	0.1	5,808
August 2010	0.1	5,808
September 2010	0.1	5,808
October 2010	0.1	5,808
November 2010	0.1	5,808
December 2010	0.1	5,808
January 2011	0.1	5,808
February 2011	0.1	5,808
March 2011	0.1	5,808
April 2011	0.1	5,808
May 2011	0.1	5,808
June 2011	0.1	5,808
WMIL-WM2/1 Subtotal:	***2.0***	***87,120***
MILLER, WILLIS L. Subtotal:	***2.0***	***87,120***
NAVAL RECREATION STATION		
NVLR-LAH1/1		
January 2010	24.4	1,060,686
February 2010	24.4	1,060,686
March 2010	24.4	1,060,686
April 2010	24.4	1,060,686
May 2010	24.4	1,060,686
June 2010	24.4	1,060,686
July 2010	30.8	1,343,100
August 2010	30.8	1,343,100
September 2010	30.8	1,343,100
October 2010	30.8	1,343,100
November 2010	30.8	1,343,100
December 2010	30.8	1,343,100
January 2011	12.9	559,746

Month and Year	Groundwater Production acre-fee/month	cubic feet/month
NVLR-LAH1/1		
February 2011	12.9	559,746
March 2011	12.9	559,746
April 2011	12.9	559,746
May 2011	12.9	559,746
June 2011	12.9	559,746
NVLR-LAH1/1 Subtotal:	***408.2***	***17,781,192***
NAVAL RECREATION STATION Subtotal:	***408.2***	***17,781,192***
ORANGE COUNTY PRODUCE LLC		
NVLW-SB/1		
January 2010	1.1	46,464
February 2010	1.1	46,464
March 2010	1.1	46,464
April 2010	1.1	46,464
May 2010	1.1	46,464
June 2010	1.1	46,464
July 2010	5.2	225,786
August 2010	5.2	225,786
September 2010	5.2	225,786
October 2010	5.2	225,786
November 2010	5.2	225,786
December 2010	5.2	225,786
January 2011	5.7	246,114
February 2011	5.7	246,114
March 2011	5.7	246,114
April 2011	5.7	246,114
May 2011	5.7	246,114
June 2011	5.7	246,114
NVLW-SB/1 Subtotal:	***71.4***	***3,110,184***
RUIZ-5A1/1		
January 2010	9.8	424,710
February 2010	9.8	424,710
March 2010	9.8	424,710
April 2010	9.8	424,710
May 2010	9.8	424,710
June 2010	9.8	424,710
July 2010	23.0	999,702
August 2010	23.0	999,702
September 2010	23.0	999,702
October 2010	23.0	999,702
November 2010	23.0	999,702
December 2010	23.0	999,702
January 2011	1.1	45,738
February 2011	1.1	45,738
March 2011	1.1	45,738
April 2011	1.1	45,738
May 2011	1.1	45,738
June 2011	1.1	45,738
RUIZ-5A1/1 Subtotal:	***202.5***	***8,820,900***
RUIZ-5A3/1		
January 2010	3.3	143,022

Month and Year	Groundwater Production acre-fee/month	cubic feet/month
RUIZ-5A3/1		
February 2010	3.3	143,022
March 2010	3.3	143,022
April 2010	3.3	143,022
May 2010	3.3	143,022
June 2010	3.3	143,022
July 2010	4.8	209,814
August 2010	4.8	209,814
September 2010	4.8	209,814
October 2010	4.8	209,814
November 2010	4.8	209,814
December 2010	4.8	209,814
January 2011	0.0	0
February 2011	0.0	0
March 2011	0.0	0
April 2011	0.0	0
May 2011	0.0	0
June 2011	0.0	0
RUIZ-5A3/1 Subtotal:	***48.6***	***2,117,016***
RUIZ-6F1/1		
January 2010	12.4	537,966
February 2010	12.4	537,966
March 2010	12.4	537,966
April 2010	12.4	537,966
May 2010	12.4	537,966
June 2010	12.4	537,966
July 2010	25.4	1,104,246
August 2010	25.4	1,104,246
September 2010	25.4	1,104,246
October 2010	25.4	1,104,246
November 2010	25.4	1,104,246
December 2010	25.4	1,104,246
January 2011	12.2	530,706
February 2011	12.2	530,706
March 2011	12.2	530,706
April 2011	12.2	530,706
May 2011	12.2	530,706
June 2011	12.2	530,706
RUIZ-6F1/1 Subtotal:	***299.3***	***13,037,508***
ORANGE COUNTY PRODUCE LLC Subtotal:	***621.8***	***27,085,608***
PURSCHE, ROY		
NVLW-SB3/1		
January 2010	0.0	0
February 2010	0.0	0
March 2010	0.0	0
April 2010	0.0	0
May 2010	0.0	0
June 2010	0.0	0
July 2010	0.0	0
August 2010	0.0	0
September 2010	0.0	0
October 2010	0.0	0

Month and Year	Groundwater Production acre-fee/month	cubic feet/month
NVLW-SB3/1		
November 2010	0.0	0
December 2010	0.0	0
January 2011	0.0	0
February 2011	0.0	0
March 2011	0.0	0
April 2011	0.0	0
May 2011	0.0	0
June 2011	0.0	0
NVLW-SB3/1 Subtotal:	***0.0***	***0***
PURS-SB/1		
January 2010	0.9	39,930
February 2010	0.9	39,930
March 2010	0.9	39,930
April 2010	0.9	39,930
May 2010	0.9	39,930
June 2010	0.9	39,930
July 2010	3.2	140,844
August 2010	3.2	140,844
September 2010	3.2	140,844
October 2010	3.2	140,844
November 2010	3.2	140,844
December 2010	3.2	140,844
January 2011	0.6	25,410
February 2011	0.6	25,410
March 2011	0.6	25,410
April 2011	0.6	25,410
May 2011	0.6	25,410
June 2011	0.6	25,410
PURS-SB/1 Subtotal:	***28.4***	***1,237,104***
PURSCHE, ROY Subtotal:	***28.4***	***1,237,104***
SEAL BEACH		
SB-BC/1		
January 2010	222.1	9,673,805
February 2010	176.5	7,687,469
March 2010	235.1	10,240,520
April 2010	200.2	8,719,405
May 2010	162.8	7,090,697
June 2010	0.0	0
July 2010	0.0	0
August 2010	0.0	0
September 2010	0.0	0
October 2010	116.5	5,072,998
November 2010	156.6	6,821,060
December 2010	162.6	7,081,549
January 2011	115.7	5,039,892
February 2011	106.5	4,639,140
March 2011	156.0	6,795,360
April 2011	163.1	7,103,329
May 2011	180.4	7,856,917
June 2011	50.8	2,211,106
July 2011	0.0	0

ORANGE COUNTY WATER DISTRICT
GROUNDWATER PRODUCTION TOTALS

Month and Year		Groundwater Production acre-fee/month	cubic feet/month
SB-BC/1			
August 2011		0.0	0
September 2011		19.7	858,132
October 2011		150.5	6,555,780
November 2011		163.5	7,122,060
December 2011		189.8	8,267,688
	SB-BC/1 Subtotal:	***2,728.1***	***118,836,907***
SB-BEV/1			
January 2010		0.8	36,155
February 2010		0.8	36,155
March 2010		8.6	372,874
April 2010		49.4	2,151,864
May 2010		67.0	2,918,520
June 2010		18.2	790,614
July 2010		19.9	868,586
August 2010		19.9	868,586
September 2010		16.1	702,623
October 2010		35.3	1,538,539
November 2010		42.8	1,863,932
December 2010		27.0	1,176,991
January 2011		60.4	2,631,024
February 2011		58.5	2,548,260
March 2011		27.0	1,176,120
April 2011		37.0	1,610,849
May 2011		48.0	2,088,702
June 2011		12.7	554,954
July 2011		52.8	2,300,839
August 2011		76.6	3,334,518
September 2011		36.6	1,594,296
October 2011		36.3	1,581,228
November 2011		25.6	1,115,136
December 2011		12.8	557,568
	SB-BEV/1 Subtotal:	***790.2***	***34,418,934***
SB-LAM/1			
April 2011		34.8	1,516,759
May 2011		80.2	3,491,770
June 2011		62.4	2,716,837
July 2011		0.0	0
August 2011		5.7	248,728
September 2011		26.2	1,141,272
October 2011		64.9	2,827,044
November 2011		25.0	1,089,000
December 2011		28.6	1,245,816
	SB-LAM/1 Subtotal:	***327.8***	***14,277,226***
SB-LEI/1			
January 2010		1.4	62,726
February 2010		2.6	114,127
March 2010		8.0	350,222
April 2010		37.4	1,629,144
May 2010		47.4	2,065,180
June 2010		40.7	1,773,328
July 2010		45.8	1,996,790

Month and Year	Groundwater Production acre-fee/month	cubic feet/month
SB-LEI/1		
August 2010	46.2	2,012,908
September 2010	33.7	1,466,230
October 2010	26.8	1,169,150
November 2010	47.6	2,072,585
December 2010	13.2	574,121
January 2011	43.4	1,890,504
February 2011	41.9	1,825,164
March 2011	41.8	1,820,808
April 2011	43.0	1,873,951
May 2011	40.6	1,770,278
June 2011	28.6	1,247,558
July 2011	40.6	1,766,794
August 2011	1.8	78,844
September 2011	1.1	47,916
October 2011	1.7	74,052
November 2011	3.1	135,036
December 2011	2.2	95,832
SB-LEI/1 Subtotal:	***640.8***	***27,913,248***
SEAL BEACH Subtotal:	***4,486.8***	***195,446,315***
THE BOEING COMPANY		
BOE-EW101/1		
January 2010	1.8	79,134
February 2010	1.8	79,134
March 2010	1.8	79,134
April 2010	1.8	79,134
May 2010	1.8	79,134
June 2010	1.8	79,134
July 2010	25.5	1,110,780
August 2010	25.5	1,110,780
September 2010	25.5	1,110,780
October 2010	25.5	1,110,780
November 2010	25.5	1,110,780
December 2010	25.5	1,110,780
January 2011	10.8	471,174
February 2011	10.8	471,174
March 2011	10.8	471,174
April 2011	10.8	471,174
May 2011	10.8	471,174
June 2011	10.8	471,174
BOE-EW101/1 Subtotal:	***228.8***	***9,966,528***
THE BOEING COMPANY Subtotal:	***228.8***	***9,966,528***
WESTMINSTER		
WM-125/1		
January 2010	49.4	2,151,864
February 2010	89.5	3,898,620
March 2010	50.7	2,208,492
April 2010	62.9	2,739,924
May 2010	77.1	3,358,476
June 2010	53.5	2,330,460
July 2010	49.4	2,151,864

ORANGE COUNTY WATER DISTRICT
GROUNDWATER PRODUCTION TOTALS

Month and Year	Groundwater Production acre-fee/month	cubic feet/month
WM-125/1		
August 2010	51.6	2,247,696
September 2010	80.7	3,515,292
October 2010	5.5	239,580
November 2010	62.5	2,722,500
December 2010	7.5	326,700
January 2011	0.0	0
February 2011	53.7	2,339,172
March 2011	24.7	1,075,932
April 2011	1.0	43,560
May 2011	0.0	0
June 2011	0.0	0
July 2011	0.0	0
August 2011	29.5	1,285,020
September 2011	149.6	6,516,576
October 2011	35.8	1,559,448
November 2011	32.1	1,398,276
December 2011	35.8	1,559,448
WM-125/1 Subtotal:	***1,002.5***	***43,668,900***
WM-RES2/1		
January 2010	126.1	5,492,916
February 2010	149.1	6,494,796
March 2010	28.9	1,258,884
April 2010	95.1	4,142,556
May 2010	109.4	4,765,464
June 2010	107.9	4,700,124
July 2010	121.4	5,288,184
August 2010	77.4	3,371,544
September 2010	79.9	3,480,444
October 2010	68.5	2,983,860
November 2010	43.0	1,873,080
December 2010	40.0	1,742,400
January 2011	22.2	967,032
February 2011	44.4	1,934,064
March 2011	43.0	1,873,080
April 2011	32.3	1,406,988
May 2011	46.6	2,029,896
June 2011	8.9	387,684
July 2011	39.3	1,711,908
August 2011	103.8	4,521,528
September 2011	110.9	4,830,804
October 2011	9.1	396,396
November 2011	38.2	1,663,992
December 2011	36.6	1,594,296
WM-RES2/1 Subtotal:	***1,582.0***	***68,911,920***
WESTMINSTER Subtotal:	***2,584.5***	***112,580,820***
GRAND TOTALS:	***18,919.6***	***824,136,948***

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: BOE-MW16/1 Perfs: 260-280 Elev GS: 19.55 Aquifer: BETA								
06/14/2010		DAY	19.25	41.67	-22.42	STATIC	UNKWR	
12/13/2010		BY SECONI	19.25	31.78	-12.53	STATIC	UNKWR	
Station Name: BOE-MW17/1 Perfs: 255-275 Elev GS: 19.96 Aquifer: BETA								
06/14/2010		DAY	19.66	41.81	-22.15	STATIC	UNKWR	
12/13/2010		DAY	19.66	31.94	-12.28	STATIC	UNKWR	
Station Name: BOE-MW19A/1 Perfs: 153-172.5 Elev GS: 18.24 Aquifer: ALPHA								
06/14/2010		MONTHLY	17.84	37.65	-19.81	STATIC	UNKWR	
12/13/2010		DAY	17.84	28.40	-10.56	STATIC	UNKWR	
Station Name: BOE-MW20S/1 Perfs: 59-79.5 Elev GS: 16.02 Aquifer: UNDEFINED								
12/13/2010		BY SECONI	15.74	15.05	0.69	STATIC	UNKWR	
Station Name: BOE-MW21S/1 Perfs: 58.5-78.5 Elev GS: 16.2 Aquifer: UNDEFINED								
06/14/2010		DAY	15.87	16.58	-0.71	STATIC	UNKWR	
12/13/2010		DAY	15.87	15.04	0.83	STATIC	UNKWR	
Station Name: BOE-MW27A/1 Perfs: 139-159 Elev GS: 15.27 Aquifer: ALPHA								
06/14/2010		BY SECONI	14.70	34.23	-19.53	STATIC	UNKWR	
12/13/2010		DAY	14.70	25.93	-11.23	STATIC	UNKWR	
Station Name: BOE-MW31S/1 Perfs: 78-88 Elev GS: 12.07 Aquifer: UNDEFINED								
06/15/2010		BY SECONI	11.99	19.27	-7.28	STATIC	UNKWR	
12/14/2010		BY SECONI	11.99	15.94	-3.95	STATIC	UNKWR	
06/07/2011		BY SECONI	11.99	12.51	-0.52	STATIC	UNKWR	
Station Name: BOE-MW34/1 Perfs: 252-267 Elev GS: 15.72 Aquifer: BETA								
06/14/2010		BY SECONI	15.19	35.24	-20.05	STATIC	UNKWR	
12/13/2010		MONTHLY	15.19	26.42	-11.23	STATIC	UNKWR	
Station Name: BOE-MW37A/1 Perfs: 135-165 Elev GS: 15.72 Aquifer: ALPHA								
06/14/2010		BY SECONI	15.66	35.40	-19.74	STATIC	UNKWR	
12/13/2010		MONTHLY	15.66	27.13	-11.47	STATIC	UNKWR	
Station Name: BOE-MW38A/1 Perfs: 135-165 Elev GS: 12.93 Aquifer: ALPHA								
06/15/2010		BY SECONI	12.72	31.29	-18.57	STATIC	UNKWR	
12/13/2010		DAY	12.72	23.34	-10.62	STATIC	UNKWR	
06/08/2011		MONTHLY	12.72	18.55	-5.83	STATIC	UNKWR	
Station Name: BOE-MW41A/1 Perfs: 148.5-168.5 Elev GS: 16.33 Aquifer: ALPHA								
06/14/2010		MONTHLY	16.06	35.66	-19.60	STATIC	UNKWR	
12/13/2010		MONTHLY	16.06	27.18	-11.12	STATIC	UNKWR	
Station Name: BOE-MW42A/1 Perfs: 139.5-169.5 Elev GS: 17.22 Aquifer: ALPHA								
06/14/2010		MONTHLY	16.76	36.52	-19.76	STATIC	UNKWR	
12/13/2010		MONTHLY	16.76	27.95	-11.19	STATIC	UNKWR	
Station Name: BOE-MW57A/1 Perfs: 150-170 Elev GS: 18.02 Aquifer: ALPHA								
06/14/2010		DAY	17.32	36.91	-19.59	STATIC	UNKWR	
12/13/2010		DAY	17.32	28.47	-11.15	STATIC	UNKWR	

NOTE: All depths and elevations in feet.
Elev GS = Elevation of Ground Surface WL Status = Water level Status
Elev RP = Elevation of Reference Point Perfs = Perforated Interval
Elev WS = Elevation of Water Surface

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: BOE-MW58A/1 Perfs: 150-170 Elev GS: 15.64 Aquifer: UNDEFINED								
06/14/2010		MONTHLY	15.64	35.12	-19.48	STATIC	UNKWR	
12/13/2010		DAY	15.64	26.73	-11.09	STATIC	UNKWR	
Station Name: BOE-MW59B/1 Perfs: 240-250 Elev GS: 12.53 Aquifer: BETA								
06/15/2010		BY SECONI	12.53	31.12	-18.59	STATIC	UNKWR	
12/14/2010		DAY	12.53	23.08	-10.55	STATIC	UNKWR	
Station Name: BOE-MW60A/1 Perfs: 150-170 Elev GS: 14.81 Aquifer: ALPHA								
06/14/2010		BY SECONI	14.81	34.00	-19.19	STATIC	UNKWR	
12/13/2010		DAY	14.81	25.65	-10.84	STATIC	UNKWR	
Station Name: BOE-MW61A/1 Perfs: 150-170 Elev GS: 17.5 Aquifer: ALPHA								
06/14/2010		BY SECONI	17.50	37.05	-19.55	STATIC	UNKWR	
12/13/2010		DAY	17.50	28.15	-10.65	STATIC	UNKWR	
Station Name: BOE-MW72A/1 Perfs: 112-127 Elev GS: 16.08 Aquifer: UNDEFINED								
12/13/2010		DAY	16.08	27.34	-11.26	STATIC	UNKWR	
Station Name: BOE-MW73A/1 Perfs: 113-133 Elev GS: 16.88 Aquifer: UNDEFINED								
12/13/2010		DAY	16.88	26.83	-9.95	STATIC	UNKWR	
Station Name: BOE-MW74/1 Perfs: 107-132 Elev GS: 18.19 Aquifer: UNDEFINED								
12/13/2010		DAY	18.19	18.26	-0.07	STATIC	UNKWR	
Station Name: BOE-MW75/1 Perfs: 202-222 Elev GS: 16.68 Aquifer: UNDEFINED								
12/13/2010		DAY	16.68	28.43	-11.75	STATIC	UNKWR	
Station Name: GG-16/1 Perfs: 304-864 Elev GS: 26.5 Aquifer: UNDEFINED								
01/28/2010	09:50	MONTHLY	30.08	58.00	-27.92	STATIC	AIR	pump off 15 days
02/25/2010	09:37	DAY	30.08	56.00	-25.92	STATIC	AIR	pump off all month
03/30/2010	09:52	MONTHLY	30.08	58.00	-27.92	STATIC	AIR	pump off all month
04/28/2010	09:05	BY SECONI	30.08	58.00	-27.92	STATIC	AIR	pump off all month
05/27/2010	10:45	DAY	30.08	60.00	-29.92	STATIC	AIR	pump off all month
06/28/2010	09:20	MONTHLY	30.08	62.50	-32.42	STATIC	AIR	pump off all month
07/29/2010	13:00	MONTHLY	30.08	63.00	-32.92	STATIC	AIR	pump off all month
08/30/2010	09:45	BY SECONI	30.08	61.00	-30.92	STATIC	ELEC	pump off all month
09/29/2010	11:20	MONTHLY	30.08	62.00	-31.92	STATIC	AIR	pump off 9/22
10/26/2010	09:50	MONTHLY	30.08	55.00	-24.92	STATIC	AIR	pump off 24 hours
11/30/2010	10:15	DAY	30.08	48.00	-17.92	STATIC	AIR	pump off all month
12/31/2010	08:17	MONTHLY	30.08	38.00	-7.92	STATIC	AIR	pump off all month
01/28/2011	13:45	MONTHLY	30.08	38.00	-7.92	STATIC	AIR	pump off all month
02/28/2011	10:26	DAY	30.08	39.00	-8.92	STATIC	AIR	pump off 2/9/11
03/31/2011	09:09	DAY	30.08	39.00	-8.92	STATIC	AIR	pump off all year
04/27/2011	13:30	BY SECONI	30.08	39.00	-8.92	STATIC	AIR	pump off all month
05/31/2011	11:00	BY SECONI	30.08	41.00	-10.92	STATIC	AIR	pump off all month
06/27/2011	09:00	MONTHLY	30.08	38.00	-7.92	STATIC	AIR	pump off 24 hours
07/28/2011	09:30	DAY	30.08	38.00	-7.92	STATIC	AIR	pump off 19 hours
08/30/2011	13:32	DAY	30.08	38.00	-7.92	STATIC	AIR	pump off 7 days

Elev GS = Elevation of Ground Surface WL Status = Water level Status
Elev RP = Elevation of Reference Point Perfs = Perforated Interval
Elev WS = Elevation of Water Surface

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: GG-16/1 Perfs: 304-864 Elev GS: 26.5 Aquifer: UNDEFINED								
09/29/2011	09:27	BY SECONI	30.08	37.00	-6.92	STATIC	AIR	pump off 7 days
10/27/2011	13:50	DAY	30.08	38.00	-7.92	STATIC	AIR	pump off 7 days
12/01/2011	09:34	BY SECONI	30.08	32.00	-1.92	STATIC	AIR	pump off all month
12/29/2011	13:55	BY SECONI	30.08	30.00	0.08	STATIC	AIR	pump off 7 days
Station Name: HB-12/1 Perfs: 265-740 Elev GS: 20.8 Aquifer: BIII, L, UR, LR, MAIN								
01/22/2010		MONTHLY	22.30	48.00	-25.70	STATIC	ELEC	
01/22/2010		DAY	22.30	146.00	-123.70	PUMPING	ELEC	
02/17/2010		DAY	22.30	125.00	-102.70	PUMPING	ELEC	
02/17/2010		BY SECONI	22.30	44.00	-21.70	STATIC	ELEC	
03/24/2010		MONTHLY	22.30	43.00	-20.70	STATIC	ELEC	
04/23/2010		MONTHLY	22.30	43.00	-20.70	STATIC	ELEC	
04/23/2010		DAY	22.30	143.00	-120.70	PUMPING	ELEC	
05/21/2010		BY SECONI	22.30	46.00	-23.70	STATIC	ELEC	
05/21/2010		DAY	22.30	144.00	-121.70	PUMPING	ELEC	
06/25/2010		MONTHLY	22.30	146.00	-123.70	PUMPING	ELEC	
07/06/2010		MONTHLY	22.30	46.00	-23.70	STATIC	ELEC	pump off 96 hours
07/19/2010		DAY	22.30	125.00	-102.70	PUMPING	ELEC	
07/19/2010		BY SECONI	22.30	47.00	-24.70	STATIC	ELEC	
08/26/2010		BY SECONI	22.30	44.00	-21.70	STATIC	ELEC	
09/22/2010		DAY	22.30	48.00	-25.70	STATIC	ELEC	
10/25/2010		DAY	22.30	42.00	-19.70	STATIC	ELEC	pump off 3 months
12/20/2010		BY SECONI	22.30	32.00	-9.70	STATIC	ELEC	
05/02/2011		DAY	22.30	31.00	-8.70	STATIC	ELEC	
05/19/2011		MONTHLY	22.30	35.00	-12.70	STATIC	ELEC	
06/16/2011		MONTHLY	22.30	28.00	-5.70	STATIC	ELEC	pump off 24 hours
07/29/2011		BY SECONI	22.30	29.00	-6.70	STATIC	ELEC	
08/23/2011		DAY	22.30	26.00	-3.70	STATIC	ELEC	
09/21/2011		DAY	22.30	25.00	-2.70	STATIC	ELEC	
10/25/2011		DAY	22.30	31.00	-8.70	STATIC	ELEC	
11/29/2011		DAY	22.30	30.00	-7.70	STATIC	ELEC	
12/22/2011		MONTHLY	22.30	24.00	-1.70	STATIC	ELEC	
Station Name: HB-13/1 Perfs: 280-810 Elev GS: 24.96 Aquifer: UNDEFINED								
01/22/2010		DAY	27.46	78.00	-50.54	STATIC	ELEC	
01/22/2010		DAY	27.46	119.00	-91.54	PUMPING	ELEC	
02/17/2010		DAY	27.46	72.00	-44.54	STATIC	ELEC	
02/17/2010		MONTHLY	27.46	119.00	-91.54	PUMPING	ELEC	
03/31/2010		MONTHLY	27.46	119.00	-91.54	PUMPING	ELEC	
03/31/2010		MONTHLY	27.46	77.00	-49.54	STATIC	ELEC	
04/27/2010		DAY	27.46	118.00	-90.54	PUMPING	ELEC	
04/27/2010		DAY	27.46	73.00	-45.54	STATIC	ELEC	
05/18/2010		BY SECONI	27.46	76.00	-48.54	STATIC	ELEC	
05/18/2010		DAY	27.46	118.00	-90.54	PUMPING	ELEC	

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: HB-13/1 Perfs: 280-810 Elev GS: 24.96 Aquifer: UNDEFINED								
06/18/2010		DAY	27.46	119.00	-91.54	PUMPING	ELEC	
07/07/2010		BY SECONI	27.46	73.00	-45.54	STATIC	ELEC	pump off 24 hours
07/30/2010		BY SECONI	27.46	79.00	-51.54	STATIC	ELEC	
07/30/2010		DAY	27.46	118.00	-90.54	PUMPING	ELEC	
09/02/2010		DAY	27.46	125.00	-97.54	PUMPING	ELEC	
09/02/2010		DAY	27.46	82.00	-54.54	STATIC	ELEC	
09/22/2010		MONTHLY	27.46	78.00	-50.54	STATIC	ELEC	
09/22/2010		BY SECONI	27.46	122.00	-94.54	PUMPING	ELEC	
10/25/2010		MONTHLY	27.46	57.00	-29.54	STATIC	ELEC	pump off 68 hours
11/18/2010		MONTHLY	27.46	112.00	-84.54	PUMPING	ELEC	
11/18/2010		DAY	27.46	60.00	-32.54	STATIC	ELEC	
12/20/2010		MONTHLY	27.46	102.00	-74.54	PUMPING	ELEC	
01/26/2011		MONTHLY	27.46	63.00	-35.54	STATIC	ELEC	
01/26/2011		BY SECONI	27.46	105.00	-77.54	PUMPING	ELEC	
02/23/2011		MONTHLY	27.46	108.00	-80.54	PUMPING	ELEC	
02/23/2011		DAY	27.46	63.00	-35.54	STATIC	ELEC	
03/21/2011		MONTHLY	27.46	58.00	-30.54	STATIC	ELEC	
03/21/2011		MONTHLY	27.46	108.00	-80.54	PUMPING	ELEC	
04/28/2011		MONTHLY	27.46	57.00	-29.54	STATIC	ELEC	
05/03/2011		MONTHLY	27.46	105.00	-77.54	PUMPING	ELEC	
05/23/2011		MONTHLY	27.46	62.00	-34.54	STATIC	ELEC	
05/23/2011		BY SECONI	27.46	106.00	-78.54	PUMPING	ELEC	
06/16/2011		DAY	27.46	38.00	-10.54	STATIC	ELEC	pump off 166 hours
07/22/2011		DAY	27.46	33.00	-5.54	STATIC	ELEC	
08/23/2011		BY SECONI	27.46	38.00	-10.54	STATIC	ELEC	
09/21/2011		MONTHLY	27.46	34.00	-6.54	STATIC	ELEC	
11/01/2011		MONTHLY	27.46	100.00	-72.54	PUMPING	ELEC	
11/01/2011		DAY	27.46	52.00	-24.54	STATIC	ELEC	
11/21/2011		DAY	27.46	52.00	-24.54	STATIC	ELEC	
11/21/2011		DAY	27.46	100.00	-72.54	PUMPING	ELEC	
12/21/2011		DAY	27.46	90.00	-62.54	PUMPING	ELEC	
Station Name: HB-4/1 Perfs: 252-804 Elev GS: 25.96 Aquifer: B, L, O, UR, LR, MAIN								
01/22/2010		DAY	25.96	84.00	-58.04	STATIC	ELEC	
01/22/2010		MONTHLY	25.96	113.00	-87.04	PUMPING	ELEC	
02/17/2010		MONTHLY	25.96	77.00	-51.04	STATIC	ELEC	
02/17/2010		MONTHLY	25.96	111.00	-85.04	PUMPING	ELEC	
03/29/2010		MONTHLY	25.96	93.00	-67.04	PUMPING	ELEC	
03/29/2010		DAY	25.96	40.00	-14.04	STATIC	ELEC	
04/22/2010		MONTHLY	25.96	83.00	-57.04	STATIC	ELEC	
04/22/2010		DAY	25.96	111.00	-85.04	PUMPING	ELEC	
05/24/2010		DAY	25.96	110.00	-84.04	PUMPING	ELEC	
05/24/2010		BY SECONI	25.96	85.00	-59.04	STATIC	ELEC	
06/24/2010		DAY	25.96	107.00	-81.04	PUMPING	ELEC	

Elev GS = Elevation of Ground Surface WL Status = Water level Status
Elev RP = Elevation of Reference Point Perfs = Perforated Interval
Elev WS = Elevation of Water Surface

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: HB-4/1 Perfs: 252-804 Elev GS: 25.96 Aquifer: B, L, O, UR, LR, MAIN								
07/07/2010		MONTHLY	25.96	81.00	-55.04	STATIC	ELEC	pump off 24 hours
07/28/2010		MONTHLY	25.96	107.00	-81.04	PUMPING	ELEC	
07/28/2010		MONTHLY	25.96	88.00	-62.04	STATIC	ELEC	
08/24/2010		DAY	25.96	110.00	-84.04	PUMPING	ELEC	
08/24/2010		DAY	25.96	88.00	-62.04	STATIC	ELEC	
09/21/2010		BY SECONI	25.96	86.00	-60.04	STATIC	ELEC	
09/21/2010		MONTHLY	25.96	107.00	-81.04	PUMPING	ELEC	
10/20/2010		MONTHLY	25.96	69.00	-43.04	STATIC	ELEC	pump off 312 hours
10/20/2010		BY SECONI	25.96	104.00	-78.04	PUMPING	ELEC	
11/17/2010		MONTHLY	25.96	72.00	-46.04	STATIC	ELEC	
11/17/2010		MONTHLY	25.96	94.00	-68.04	PUMPING	ELEC	
12/20/2010		DAY	25.96	98.00	-72.04	PUMPING	ELEC	
12/20/2010		DAY	25.96	62.00	-36.04	STATIC	ELEC	
01/25/2011		MONTHLY	25.96	67.00	-41.04	STATIC	ELEC	
01/25/2011		BY SECONI	25.96	102.00	-76.04	PUMPING	ELEC	
02/16/2011		BY SECONI	25.96	98.00	-72.04	PUMPING	ELEC	
02/16/2011		DAY	25.96	64.00	-38.04	STATIC	ELEC	
03/23/2011		MONTHLY	25.96	59.00	-33.04	STATIC	ELEC	
03/23/2011		DAY	25.96	94.00	-68.04	PUMPING	ELEC	
04/25/2011		MONTHLY	25.96	70.00	-44.04	STATIC	ELEC	
05/23/2011		BY SECONI	25.96	94.00	-68.04	PUMPING	ELEC	
05/23/2011		BY SECONI	25.96	68.00	-42.04	STATIC	ELEC	
06/16/2011		DAY	25.96	37.00	-11.04	STATIC	ELEC	pump off 330 hours
07/22/2011		DAY	25.96	33.00	-7.04	STATIC	ELEC	
08/23/2011		BY SECONI	25.96	39.00	-13.04	STATIC	ELEC	
09/26/2011		MONTHLY	25.96	32.00	-6.04	STATIC	ELEC	
09/26/2011		MONTHLY	25.96	65.00	-39.04	PUMPING	ELEC	
10/26/2011		BY SECONI	25.96	58.00	-32.04	STATIC	ELEC	
10/26/2011		MONTHLY	25.96	85.00	-59.04	PUMPING	ELEC	
11/28/2011		MONTHLY	25.96	89.00	-63.04	PUMPING	ELEC	
11/28/2011		MONTHLY	25.96	48.00	-22.04	STATIC	ELEC	
12/21/2011		MONTHLY	25.96	79.00	-53.04	PUMPING	ELEC	
12/21/2011		BY SECONI	25.96	42.00	-16.04	STATIC	ELEC	
Station Name: ITO-LA/1 Perfs: 70-710 Elev GS: 22 Aquifer: UNDEFINED								
06/30/2010	06:50	MONTHLY	22.29	1,030.00	-1,007.71	STATIC	ELEC	
10/29/2010	07:20	DAY	22.29	12.76	9.53	STATIC	ELEC	
06/29/2011	06:50	BY SECONI	22.29	8.04	14.25	STATIC	ELEC	
10/31/2011	07:15	DAY	22.29	7.90	14.39	STATIC	ELEC	
Station Name: ITO-LAG3/1 Perfs: 170-780 Elev GS: 17 Aquifer: UNDEFINED								
06/30/2010	06:40	BY SECONI	18.54	48.81	-30.27	STATIC	ELEC	Oil
10/29/2010	07:10	MONTHLY	18.54	43.04	-24.50	STATIC	TAPE	Oil
06/29/2011	06:40	BY SECONI	18.54	32.48	-13.94	STATIC	TAPE	

Elev GS = Elevation of Ground Surface WL Status = Water level Status
Elev RP = Elevation of Reference Point Perfs = Perforated Interval
Elev WS = Elevation of Water Surface

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: ITO-LAG3/1 Perfs: 170-780 Elev GS: 17 Aquifer: UNDEFINED								
10/31/2011	07:10	MONTHLY	18.54	30.10	-11.56	STATIC	TAPE	
Station Name: NVLW-SB3/1 Perfs: - Elev GS: 7 Aquifer: UNDEFINED								
07/01/2010	09:55	MONTHLY	8.00	64.78	-56.78	STATIC	TAPE	
10/28/2010	09:10	MONTHLY	8.00	59.08	-51.08	STATIC	TAPE	
06/29/2011	09:05	MONTHLY	8.00	26.22	-18.22	STATIC	TAPE	
10/27/2011	08:50	BY SECONI	8.00	26.70	-18.70	STATIC	TAPE	
Station Name: NVLW-SB6/1 Perfs: 548-655 Elev GS: 10 Aquifer: UNDEFINED								
07/01/2010	09:40	DAY	10.63	66.36	-55.73	STATIC	ELEC	
10/28/2010	08:55	MONTHLY	10.63	63.66	-53.03	STATIC	ELEC	
07/13/2011	13:00	DAY	10.63	26.95	-16.32	STATIC	ELEC	
10/27/2011	08:35	BY SECONI	10.63	21.15	-10.52	STATIC	ELEC	
Station Name: OCWD-34H5/1 Perfs: 300-340 Elev GS: 7.21 Aquifer: A-ZONE								
03/23/2010		BY SECONI	7.20	37.20	-30.00	STATIC	ELEC	
10/05/2010		MONTHLY	7.20	28.60	-21.40	STATIC	ELEC	
03/30/2011		MONTHLY	7.20	15.99	-8.79	STATIC	ELEC	
Station Name: OCWD-34H5/2 Perfs: 405-455 Elev GS: 7.21 Aquifer: I-ZONE								
03/23/2010		DAY	7.20	24.20	-17.00	STATIC	ELEC	
10/05/2010		MONTHLY	7.20	42.60	-35.40	STATIC	ELEC	
03/30/2011		DAY	7.20	27.49	-20.29	STATIC	ELEC	
Station Name: OCWD-34N21/1 Perfs: 329-366 Elev GS: 6.8 Aquifer: A ZONE								
03/02/2010		BY SECONI	6.80	18.00	-11.20	STATIC	ELEC	
10/06/2010		MONTHLY	6.80	24.40	-17.60	STATIC	ELEC	
02/24/2011		DAY	6.80	12.40	-5.60	STATIC	ELEC	
Station Name: OCWD-34N21/2 Perfs: 424-464 Elev GS: 6.8 Aquifer: I ZONE								
03/02/2010		DAY	6.80	28.60	-21.80	STATIC	ELEC	
10/06/2010		DAY	6.80	33.20	-26.40	STATIC	ELEC	
02/24/2011		DAY	6.80	17.80	-11.00	STATIC	ELEC	
Station Name: OCWD-34U8/1 Perfs: 149-174 Elev GS: 5.4 Aquifer: C ZONE								
01/04/2010		DAY	5.40	13.00	-7.60	STATIC	ELEC	
02/03/2010		MONTHLY	5.40	12.60	-7.20	STATIC	ELEC	
03/03/2010		DAY	5.40	11.90	-6.50	STATIC	ELEC	
03/25/2010		MONTHLY	5.40	12.80	-7.40	STATIC	ELEC	
04/07/2010		DAY	5.40	12.70	-7.30	STATIC	ELEC	
05/10/2010		MONTHLY	5.40	13.10	-7.70	STATIC	ELEC	
06/08/2010		BY SECONI	5.40	13.30	-7.90	STATIC	ELEC	
07/08/2010		DAY	5.40	14.30	-8.90	STATIC	ELEC	
08/03/2010		DAY	5.40	14.70	-9.30	STATIC	ELEC	
09/02/2010		BY SECONI	5.40	16.00	-10.60	STATIC	ELEC	
09/21/2010		DAY	5.40	14.70	-9.30	STATIC	ELEC	
10/14/2010		BY SECONI	5.40	14.60	-9.20	STATIC	ELEC	
11/02/2010		BY SECONI	5.40	12.00	-6.60	STATIC	ELEC	

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-34U8/1 Perfs: 149-174 Elev GS: 5.4 Aquifer: C ZONE								
12/13/2010		BY SECONI	5.40	9.20	-3.80	STATIC	ELEC	
01/19/2011		BY SECONI	5.40	5.20	0.20	STATIC	ELEC	
02/17/2011		DAY	5.40	5.20	0.20	STATIC	ELEC	
03/28/2011		DAY	5.40	5.10	0.30	STATIC	ELEC	
04/05/2011		DAY	5.40	5.00	0.40	STATIC	ELEC	
04/13/2011		DAY	5.40	4.80	0.60	STATIC	ELEC	
05/11/2011		DAY	5.40	5.90	-0.50	STATIC	ELEC	
06/14/2011		BY SECONI	5.40	5.00	0.40	STATIC	ELEC	
07/12/2011		MONTHLY	5.40	4.30	1.10	STATIC	ELEC	
08/09/2011		BY SECONI	5.40	5.50	-0.10	STATIC	ELEC	
09/20/2011		DAY	5.40	6.00	-0.60	STATIC	ELEC	
10/12/2011		BY SECONI	5.40	6.30	-0.90	STATIC	ELEC	
10/17/2011		DAY	5.40	6.00	-0.60	STATIC	ELEC	
11/17/2011		MONTHLY	5.40	5.60	-0.20	STATIC	ELEC	
12/21/2011		MONTHLY	5.40	4.60	0.80	STATIC	ELEC	
01/11/2012		MONTHLY	5.40	4.30	1.10	STATIC	ELEC	
Station Name: OCWD-34U8/2 Perfs: 224-234 Elev GS: 5.4 Aquifer: B ZONE								
01/04/2010		DAY	5.40	15.80	-10.40	STATIC	ELEC	
02/03/2010		DAY	5.40	13.50	-8.10	STATIC	ELEC	
03/03/2010		MONTHLY	5.40	13.00	-7.60	STATIC	ELEC	
03/25/2010		BY SECONI	5.40	13.70	-8.30	STATIC	ELEC	
04/07/2010		DAY	5.40	14.10	-8.70	STATIC	ELEC	
05/10/2010		DAY	5.40	14.00	-8.60	STATIC	ELEC	
06/08/2010		MONTHLY	5.40	14.80	-9.40	STATIC	ELEC	
07/08/2010		BY SECONI	5.40	16.00	-10.60	STATIC	ELEC	
08/03/2010		DAY	5.40	16.30	-10.90	STATIC	ELEC	
09/02/2010		DAY	5.40	17.70	-12.30	STATIC	ELEC	
09/21/2010		BY SECONI	5.40	16.30	-10.90	STATIC	ELEC	
10/14/2010		BY SECONI	5.40	16.30	-10.90	STATIC	ELEC	
11/02/2010		BY SECONI	5.40	13.70	-8.30	STATIC	ELEC	
12/13/2010		DAY	5.40	10.30	-4.90	STATIC	ELEC	
01/19/2011		MONTHLY	5.40	6.30	-0.90	STATIC	ELEC	
02/17/2011		MONTHLY	5.40	6.70	-1.30	STATIC	ELEC	
03/28/2011		DAY	5.40	6.30	-0.90	STATIC	ELEC	
04/05/2011		BY SECONI	5.40	6.40	-1.00	STATIC	ELEC	
04/13/2011		BY SECONI	5.40	6.00	-0.60	STATIC	ELEC	
05/11/2011		BY SECONI	5.40	7.20	-1.80	STATIC	ELEC	
06/14/2011		MONTHLY	5.40	6.20	-0.80	STATIC	ELEC	
07/12/2011		MONTHLY	5.40	4.60	0.80	STATIC	ELEC	
08/09/2011		DAY	5.40	5.60	-0.20	STATIC	ELEC	
09/20/2011		MONTHLY	5.40	7.00	-1.60	STATIC	ELEC	
10/12/2011		DAY	5.40	7.10	-1.70	STATIC	ELEC	
10/17/2011		BY SECONI	5.40	6.60	-1.20	STATIC	ELEC	

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-34U8/2 Perfs: 224-234 Elev GS: 5.4 Aquifer: B ZONE								
11/17/2011		DAY	5.40	6.20	-0.80	STATIC	ELEC	
12/21/2011		DAY	5.40	5.20	0.20	STATIC	ELEC	
01/11/2012		BY SECONI	5.40	5.20	0.20	STATIC	ELEC	
Station Name: OCWD-34U8/3 Perfs: 279-319 Elev GS: 5.4 Aquifer: A ZONE								
01/04/2010		BY SECONI	5.40	8.80	-3.40	STATIC	ELEC	
02/03/2010		MONTHLY	5.40	8.90	-3.50	STATIC	ELEC	
03/03/2010		MONTHLY	5.40	6.90	-1.50	STATIC	ELEC	
03/25/2010		MONTHLY	5.40	9.20	-3.80	STATIC	ELEC	
04/07/2010		DAY	5.40	8.70	-3.30	STATIC	ELEC	
05/10/2010		DAY	5.40	12.30	-6.90	STATIC	ELEC	
06/08/2010		BY SECONI	5.40	10.90	-5.50	STATIC	ELEC	
07/08/2010		MONTHLY	5.40	12.00	-6.60	STATIC	ELEC	
08/03/2010		DAY	5.40	12.40	-7.00	STATIC	ELEC	
09/02/2010		DAY	5.40	13.80	-8.40	STATIC	ELEC	
09/21/2010		DAY	5.40	11.40	-6.00	STATIC	ELEC	
10/14/2010		BY SECONI	5.40	12.50	-7.10	STATIC	ELEC	
11/02/2010		BY SECONI	5.40	11.30	-5.90	STATIC	ELEC	
12/13/2010		DAY	5.40	7.80	-2.40	STATIC	ELEC	
01/19/2011		DAY	5.40	4.90	0.50	STATIC	ELEC	
02/17/2011		DAY	5.40	1.80	3.60	STATIC	ELEC	
03/28/2011		MONTHLY	5.40	2.90	2.50	STATIC	ELEC	
04/05/2011		DAY	5.40	2.70	2.70	STATIC	ELEC	
04/13/2011		MONTHLY	5.40	2.30	3.10	STATIC	ELEC	
05/11/2011		DAY	5.40	3.10	2.30	STATIC	ELEC	
06/14/2011		MONTHLY	5.40	1.90	3.50	STATIC	ELEC	
08/09/2011		DAY	5.40	2.50	2.90	STATIC	ELEC	
09/20/2011		BY SECONI	5.40	2.80	2.60	STATIC	ELEC	
10/12/2011		BY SECONI	5.40	5.50	-0.10	STATIC	ELEC	
10/17/2011		BY SECONI	5.40	3.00	2.40	STATIC	ELEC	
11/17/2011		BY SECONI	5.40	3.00	2.40	STATIC	ELEC	
12/21/2011		DAY	5.40	2.90	2.50	STATIC	ELEC	
01/11/2012		BY SECONI	5.40	2.50	2.90	STATIC	ELEC	
Station Name: OCWD-34U8/4 Perfs: 359-384 Elev GS: 5.4 Aquifer: I ZONE								
01/04/2010		BY SECONI	5.40	22.30	-16.90	STATIC	ELEC	
02/03/2010		DAY	5.40	20.30	-14.90	STATIC	ELEC	
03/03/2010		MONTHLY	5.40	20.40	-15.00	STATIC	ELEC	
03/25/2010		DAY	5.40	20.70	-15.30	STATIC	ELEC	
04/07/2010		DAY	5.40	18.30	-12.90	STATIC	ELEC	
05/10/2010		DAY	5.40	21.50	-16.10	STATIC	ELEC	
06/08/2010		BY SECONI	5.40	17.70	-12.30	STATIC	ELEC	
07/08/2010		DAY	5.40	19.20	-13.80	STATIC	ELEC	
08/03/2010		DAY	5.40	19.70	-14.30	STATIC	ELEC	

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-34U8/4 Perfs: 359-384 Elev GS: 5.4 Aquifer: I ZONE								
09/02/2010		MONTHLY	5.40	24.80	-19.40	STATIC	ELEC	
09/21/2010		MONTHLY	5.40	20.80	-15.40	STATIC	ELEC	
10/14/2010		DAY	5.40	21.90	-16.50	STATIC	ELEC	
11/02/2010		BY SECONI	5.40	18.50	-13.10	STATIC	ELEC	
12/13/2010		BY SECONI	5.40	12.00	-6.60	STATIC	ELEC	
01/19/2011		DAY	5.40	7.00	-1.60	STATIC	ELEC	
02/17/2011		MONTHLY	5.40	6.80	-1.40	STATIC	ELEC	
03/28/2011		DAY	5.40	11.30	-5.90	STATIC	ELEC	
04/04/2011		BY SECONI	5.40	11.10	-5.70	STATIC	ELEC	
04/13/2011		DAY	5.40	10.30	-4.90	STATIC	ELEC	
05/11/2011		MONTHLY	5.40	9.70	-4.30	STATIC	ELEC	
06/14/2011		BY SECONI	5.40	4.80	0.60	STATIC	ELEC	
07/12/2011		BY SECONI	5.40	1.30	4.10	STATIC	ELEC	
08/09/2011		BY SECONI	5.40	7.80	-2.40	STATIC	ELEC	
09/20/2011		BY SECONI	5.40	8.10	-2.70	STATIC	ELEC	
10/12/2011		BY SECONI	5.40	8.90	-3.50	STATIC	ELEC	
10/17/2011		BY SECONI	5.40	7.30	-1.90	STATIC	ELEC	
11/17/2011		DAY	5.40	5.80	-0.40	STATIC	ELEC	
12/21/2011		DAY	5.40	5.80	-0.40	STATIC	ELEC	
01/11/2012		MONTHLY	5.40	6.30	-0.90	STATIC	ELEC	
Station Name: OCWD-34V20/1 Perfs: 235-307 Elev GS: 6.3 Aquifer: A ZONE								
03/25/2010		MONTHLY	6.30	17.50	-11.20	STATIC	ELEC	
09/21/2010		DAY	6.30	20.80	-14.50	STATIC	ELEC	
10/12/2011		MONTHLY	6.30	9.30	-3.00	STATIC	ELEC	
Station Name: OCWD-34V20/2 Perfs: 387-417 Elev GS: 6.3 Aquifer: I ZONE								
03/25/2010		MONTHLY	6.30	27.50	-21.20	STATIC	ELEC	
09/21/2010		MONTHLY	6.30	29.80	-23.50	STATIC	ELEC	
10/12/2011		BY SECONI	6.30	11.70	-5.40	STATIC	ELEC	
Station Name: OCWD-34VZX/1 Perfs: 147-177 Elev GS: 6.2 Aquifer: UNDEFINED								
01/13/2010		DAY	6.20	8.00	-1.80	STATIC	ELEC	
01/28/2010		DAY	6.20	7.40	-1.20	STATIC	ELEC	
02/11/2010		BY SECONI	6.20	6.90	-0.70	STATIC	ELEC	
02/25/2010		DAY	6.20	9.90	-3.70	STATIC	ELEC	
03/15/2010		DAY	6.20	9.60	-3.40	STATIC	ELEC	
03/22/2010		BY SECONI	6.20	7.40	-1.20	STATIC	ELEC	
03/30/2010		DAY	6.20	10.50	-4.30	STATIC	ELEC	
04/15/2010		DAY	6.20	5.60	0.60	STATIC	ELEC	
04/29/2010		DAY	6.20	6.00	0.20	STATIC	ELEC	
05/13/2010		MONTHLY	6.20	26.40	-20.20	STATIC	ELEC	
05/27/2010		DAY	6.20	11.20	-5.00	STATIC	ELEC	
06/14/2010		MONTHLY	6.20	7.70	-1.50	STATIC	ELEC	
06/30/2010		DAY	6.20	7.80	-1.60	STATIC	ELEC	

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-34VZX/1 Perfs: 147-177 Elev GS: 6.2 Aquifer: UNDEFINED								
07/15/2010		DAY	6.20	9.70	-3.50	STATIC	ELEC	
07/27/2010		DAY	6.20	8.80	-2.60	STATIC	ELEC	
08/09/2010		MONTHLY	6.20	10.00	-3.80	STATIC	ELEC	
08/24/2010		BY SECONI	6.20	10.10	-3.90	STATIC	ELEC	
09/07/2010		BY SECONI	6.20	13.10	-6.90	STATIC	ELEC	
09/22/2010		MONTHLY	6.20	14.70	-8.50	STATIC	ELEC	
10/04/2010		BY SECONI	6.20	14.70	-8.50	STATIC	ELEC	
10/18/2010		DAY	6.20	9.30	-3.10	STATIC	ELEC	
10/26/2010		BY SECONI	6.20	8.50	-2.30	STATIC	ELEC	
11/09/2010		MONTHLY	6.20	8.10	-1.90	STATIC	ELEC	
11/24/2010		DAY	6.20	7.50	-1.30	STATIC	ELEC	
12/14/2010		DAY	6.20	6.70	-0.50	STATIC	ELEC	
12/27/2010		DAY	6.20	4.10	2.10	STATIC	ELEC	
01/13/2011		BY SECONI	6.20	3.70	2.50	STATIC	ELEC	
02/09/2011		BY SECONI	6.20	3.30	2.90	STATIC	ELEC	
03/14/2011		DAY	6.20	5.00	1.20	STATIC	ELEC	
03/30/2011		BY SECONI	6.20	-0.50	6.70	STATIC	ELEC	
05/02/2011		DAY	6.20	4.80	1.40	STATIC	ELEC	
05/16/2011		MONTHLY	6.20	6.10	0.10	STATIC	ELEC	
05/26/2011		BY SECONI	6.20	6.10	0.10	STATIC	ELEC	
06/14/2011		MONTHLY	6.20	3.20	3.00	STATIC	ELEC	
06/28/2011		DAY	6.20	3.20	3.00	STATIC	ELEC	
07/11/2011		MONTHLY	6.20	1.50	4.70	STATIC	ELEC	
07/27/2011		BY SECONI	6.20	-0.46	6.66	STATIC	ELEC	
08/16/2011		BY SECONI	6.20	6.60	-0.40	STATIC	ELEC	
08/30/2011		DAY	6.20	6.40	-0.20	STATIC	ELEC	
09/21/2011		DAY	6.20	6.80	-0.60	STATIC	ELEC	
10/03/2011		BY SECONI	6.20	6.50	-0.30	STATIC	ELEC	
10/12/2011		DAY	6.20	6.30	-0.10	STATIC	ELEC	
10/13/2011		BY SECONI	6.20	6.40	-0.20	STATIC	ELEC	
10/26/2011		DAY	6.20	5.30	0.90	STATIC	ELEC	
11/29/2011		BY SECONI	6.20	-0.23	6.43	STATIC	ELEC	
12/21/2011		MONTHLY	6.20	-0.23	6.43	STATIC	ELEC	
12/28/2011		DAY	6.20	4.10	2.10	STATIC	ELEC	
01/10/2012		MONTHLY	6.20	3.40	2.80	STATIC	ELEC	
01/25/2012		DAY	6.20	2.80	3.40	STATIC	ELEC	
Station Name: OCWD-34VZY/1 Perfs: 215-235 Elev GS: 6.2 Aquifer: UNDEFINED								
01/13/2010		MONTHLY	6.20	15.00	-8.80	STATIC	ELEC	
01/28/2010		BY SECONI	6.20	13.30	-7.10	STATIC	ELEC	
02/11/2010		BY SECONI	6.20	13.40	-7.20	STATIC	ELEC	
02/25/2010		BY SECONI	6.20	19.90	-13.70	STATIC	ELEC	
03/15/2010		DAY	6.20	17.80	-11.60	STATIC	ELEC	
03/22/2010		BY SECONI	6.20	9.10	-2.90	STATIC	ELEC	

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-34VZY/1 Perfs: 215-235 Elev GS: 6.2 Aquifer: UNDEFINED								
03/30/2010		DAY	6.20	19.70	-13.50	STATIC	ELEC	
04/15/2010		BY SECONI	6.20	5.17	1.03	STATIC	ELEC	
04/29/2010		BY SECONI	6.20	6.50	-0.30	STATIC	ELEC	
05/13/2010		MONTHLY	6.20	13.60	-7.40	STATIC	ELEC	
05/27/2010		DAY	6.20	15.70	-9.50	STATIC	ELEC	
06/14/2010		DAY	6.20	8.70	-2.50	STATIC	ELEC	
06/30/2010		BY SECONI	6.20	9.40	-3.20	STATIC	ELEC	
07/15/2010		DAY	6.20	8.80	-2.60	STATIC	ELEC	
07/27/2010		DAY	6.20	8.60	-2.40	STATIC	ELEC	
08/09/2010		DAY	6.20	10.60	-4.40	STATIC	ELEC	
08/24/2010		BY SECONI	6.20	9.50	-3.30	STATIC	ELEC	
09/07/2010		BY SECONI	6.20	22.50	-16.30	STATIC	ELEC	
09/22/2010		DAY	6.20	10.30	-4.10	STATIC	ELEC	
10/04/2010		BY SECONI	6.20	10.30	-4.10	STATIC	ELEC	
10/18/2010		DAY	6.20	14.20	-8.00	STATIC	ELEC	
10/26/2010		BY SECONI	6.20	4.10	2.10	STATIC	ELEC	
11/09/2010		MONTHLY	6.20	3.80	2.40	STATIC	ELEC	
11/24/2010		DAY	6.20	4.60	1.60	STATIC	ELEC	
12/14/2010		BY SECONI	6.20	0.10	6.10	STATIC	ELEC	
01/13/2011		BY SECONI	6.20	-1.70	7.90	STATIC	ELEC	
02/09/2011		DAY	6.20	-6.90	13.10	STATIC	ELEC	
02/24/2011		DAY	6.20	1.10	5.10	STATIC	ELEC	
03/14/2011		MONTHLY	6.20	9.60	-3.40	STATIC	ELEC	
03/29/2011		DAY	6.20	7.10	-0.90	STATIC	ELEC	
04/14/2011		BY SECONI	6.20	6.50	-0.30	STATIC	ELEC	
05/02/2011		DAY	6.20	1.70	4.50	STATIC	ELEC	
05/16/2011		MONTHLY	6.20	8.30	-2.10	STATIC	ELEC	
05/26/2011		DAY	6.20	8.00	-1.80	STATIC	ELEC	
06/15/2011		DAY	6.20	-1.15	7.35	STATIC	ELEC	
06/28/2011		DAY	6.20	0.60	5.60	STATIC	ELEC	
07/11/2011		DAY	6.20	-1.80	8.00	STATIC	ELEC	
07/27/2011		BY SECONI	6.20	-2.77	8.97	STATIC	ELEC	
08/16/2011		BY SECONI	6.20	9.50	-3.30	STATIC	ELEC	
08/30/2011		DAY	6.20	9.20	-3.00	STATIC	ELEC	
09/20/2011		BY SECONI	6.20	7.30	-1.10	STATIC	ELEC	
10/03/2011		BY SECONI	6.20	6.40	-0.20	STATIC	ELEC	
10/13/2011		DAY	6.20	6.50	-0.30	STATIC	ELEC	
10/26/2011		DAY	6.20	4.00	2.20	STATIC	ELEC	
11/29/2011		DAY	6.20	-3.23	9.43	STATIC	ELEC	
12/21/2011		MONTHLY	6.20	-3.47	9.67	STATIC	ELEC	
12/28/2011		BY SECONI	6.20	-3.23	9.43	STATIC	ELEC	
01/10/2012		BY SECONI	6.20	-0.46	6.66	STATIC	ELEC	
01/25/2012		BY SECONI	6.20	-3.47	9.67	STATIC	ELEC	

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-34X40/1 Perfs: 88-113 Elev GS: 6.97 Aquifer: C-ZONE								
01/13/2010	09:15	MONTHLY	6.63	13.95	-7.32	STATIC	ELEC	
03/23/2010		DAY	6.63	11.60	-4.97	STATIC	ELEC	
05/05/2010	14:28	DAY	6.63	11.29	-4.66	STATIC	ELEC	
05/17/2010	09:10	MONTHLY	6.63	13.35	-6.72	STATIC	ELEC	
06/04/2010	10:00	BY SECONI	6.63	12.32	-5.69	STATIC	ELEC	
07/13/2010	08:45	BY SECONI	6.63	12.46	-5.83	STATIC	ELEC	
08/25/2010	08:10	DAY	6.63	13.54	-6.91	STATIC	ELEC	
09/30/2010	08:08	BY SECONI	6.63	13.98	-7.35	STATIC	ELEC	
11/05/2010	11:00	MONTHLY	6.63	11.68	-5.05	STATIC	ELEC	
12/14/2010	12:35	DAY	6.63	9.75	-3.12	STATIC	ELEC	
01/28/2011	12:07	MONTHLY	6.63	5.92	0.71	STATIC	ELEC	
03/03/2011	09:10	DAY	6.63	5.73	0.90	STATIC	ELEC	
03/29/2011	09:32	DAY	6.63	5.60	1.03	STATIC	ELEC	
04/04/2011		DAY	6.63	5.73	0.90	STATIC	ELEC	
05/05/2011	09:02	MONTHLY	6.63	6.42	0.21	STATIC	ELEC	
06/01/2011	09:00	BY SECONI	6.63	6.83	-0.20	STATIC	ELEC	
07/26/2011	08:02	BY SECONI	6.63	6.15	0.48	STATIC	ELEC	
10/12/2011	14:52	DAY	6.63	6.57	0.06	STATIC	ELEC	
10/18/2011		BY SECONI	6.63	6.73	-0.10	STATIC	ELEC	
11/22/2011	07:55	MONTHLY	6.63	6.40	0.23	STATIC	ELEC	
12/22/2011	12:14	MONTHLY	6.63	5.45	1.18	STATIC	ELEC	
02/02/2012	10:54	DAY	6.63	5.32	1.31	STATIC	ELEC	
Station Name: OCWD-34X40/2 Perfs: 139-154 Elev GS: 6.97 Aquifer: B-ZONE								
01/13/2010	10:35	MONTHLY	6.50	18.10	-11.60	STATIC	ELEC	
03/23/2010		DAY	6.50	16.10	-9.60	STATIC	ELEC	
05/05/2010	14:30	MONTHLY	6.50	16.08	-9.58	STATIC	ELEC	
05/17/2010	09:10	MONTHLY	6.50	19.55	-13.05	STATIC	ELEC	
06/04/2010	10:02	BY SECONI	6.50	17.10	-10.60	STATIC	ELEC	
07/13/2010	08:42	DAY	6.50	17.40	-10.90	STATIC	ELEC	
08/25/2010	08:12	DAY	6.50	18.80	-12.30	STATIC	ELEC	
09/30/2010	08:10	MONTHLY	6.50	19.27	-12.77	STATIC	ELEC	
11/05/2010	11:02	MONTHLY	6.50	15.41	-8.91	STATIC	ELEC	
12/14/2010	12:37	DAY	6.50	12.50	-6.00	STATIC	ELEC	
01/28/2011	12:09	MONTHLY	6.50	7.90	-1.40	STATIC	ELEC	
03/03/2011	09:12	MONTHLY	6.50	7.72	-1.22	STATIC	ELEC	
03/29/2011	09:33	DAY	6.50	8.10	-1.60	STATIC	ELEC	
04/04/2011		BY SECONI	6.50	8.33	-1.83	STATIC	ELEC	
05/05/2011	09:06	DAY	6.50	8.61	-2.11	STATIC	ELEC	
06/01/2011	09:02	BY SECONI	6.50	9.10	-2.60	STATIC	ELEC	
07/26/2011	08:04	MONTHLY	6.50	7.23	-0.73	STATIC	ELEC	
10/12/2011	14:54	BY SECONI	6.50	8.28	-1.78	STATIC	ELEC	
10/18/2011		DAY	6.50	8.13	-1.63	STATIC	ELEC	
11/22/2011	07:57	MONTHLY	6.50	8.05	-1.55	STATIC	ELEC	

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-34X40/2 Perfs: 139-154 Elev GS: 6.97 Aquifer: B-ZONE								
12/22/2011	12:14	MONTHLY	6.50	6.37	0.13	STATIC	ELEC	
02/02/2012	10:56	MONTHLY	6.50	6.63	-0.13	STATIC	ELEC	
Station Name: OCWD-34X40/3 Perfs: 204-244 Elev GS: 6.97 Aquifer: A-ZONE								
01/13/2010	10:00	DAY	6.39	26.60	-20.21	STATIC	ELEC	
03/23/2010		MONTHLY	6.39	24.80	-18.41	STATIC	ELEC	
05/05/2010	14:32	MONTHLY	6.39	25.82	-19.43	STATIC	ELEC	
05/17/2010	09:10	DAY	6.39	29.43	-23.04	STATIC	ELEC	
06/04/2010	10:04	BY SECONI	6.39	28.03	-21.64	STATIC	ELEC	
07/13/2010	08:45	BY SECONI	6.39	28.72	-22.33	STATIC	ELEC	
08/25/2010	08:14	DAY	6.39	29.98	-23.59	STATIC	ELEC	
09/30/2010	08:12	BY SECONI	6.39	29.83	-23.44	STATIC	ELEC	
11/05/2010	11:04	MONTHLY	6.39	26.52	-20.13	STATIC	ELEC	
12/14/2010	12:39	BY SECONI	6.39	18.98	-12.59	STATIC	ELEC	
01/28/2011	12:10	MONTHLY	6.39	14.52	-8.13	STATIC	ELEC	
03/03/2011	09:14	DAY	6.39	14.75	-8.36	STATIC	ELEC	
03/29/2011	09:34	DAY	6.39	15.52	-9.13	STATIC	ELEC	
04/04/2011		DAY	6.39	16.43	-10.04	STATIC	ELEC	
05/05/2011	09:08	BY SECONI	6.39	16.80	-10.41	STATIC	ELEC	
06/01/2011	09:04	MONTHLY	6.39	17.72	-11.33	STATIC	ELEC	
07/26/2011	08:06	MONTHLY	6.39	14.95	-8.56	STATIC	ELEC	
10/12/2011	14:56	MONTHLY	6.39	14.70	-8.31	STATIC	ELEC	
10/18/2011		DAY	6.39	12.23	-5.84	STATIC	ELEC	
11/22/2011	07:59	MONTHLY	6.39	11.67	-5.28	STATIC	ELEC	
12/22/2011	12:16	BY SECONI	6.39	10.00	-3.61	STATIC	ELEC	
02/02/2012	10:58	DAY	6.39	11.32	-4.93	STATIC	ELEC	
Station Name: OCWD-34X40/4 Perfs: 333-358 Elev GS: 6.97 Aquifer: I-ZONE								
01/13/2010	09:10	DAY	6.23	27.50	-21.27	STATIC	ELEC	
03/23/2010		MONTHLY	6.23	26.20	-19.97	STATIC	ELEC	
05/05/2010	14:34	DAY	6.23	26.73	-20.50	STATIC	ELEC	
05/17/2010	09:10	DAY	6.23	29.85	-23.62	STATIC	ELEC	
06/04/2010	10:06	DAY	6.23	28.37	-22.14	STATIC	ELEC	
07/13/2010	08:47	MONTHLY	6.23	28.61	-22.38	STATIC	ELEC	
08/25/2010	08:16	MONTHLY	6.23	30.13	-23.90	STATIC	ELEC	
09/30/2010	08:14	BY SECONI	6.23	30.87	-24.64	STATIC	ELEC	
10/06/2010		BY SECONI	6.23	31.90	-25.67	STATIC	ELEC	
11/05/2010	11:05	BY SECONI	6.23	26.78	-20.55	STATIC	ELEC	
12/14/2010	12:41	DAY	6.23	20.10	-13.87	STATIC	ELEC	
01/28/2011	12:11	BY SECONI	6.23	15.39	-9.16	STATIC	ELEC	
03/03/2011	09:15	MONTHLY	6.23	15.68	-9.45	STATIC	ELEC	
03/29/2011	09:35	MONTHLY	6.23	16.63	-10.40	STATIC	ELEC	
04/04/2011		BY SECONI	6.23	17.33	-11.10	STATIC	ELEC	
05/05/2011	09:09	MONTHLY	6.23	16.45	-10.22	STATIC	ELEC	

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-34X40/4 Perfs: 333-358 Elev GS: 6.97 Aquifer: I-ZONE								
06/01/2011	09:06	BY SECONI	6.23	17.02	-10.79	STATIC	ELEC	
07/26/2011	08:08	DAY	6.23	14.24	-8.01	STATIC	ELEC	
10/12/2011	14:58	BY SECONI	6.23	14.05	-7.82	STATIC	ELEC	
10/18/2011		BY SECONI	6.23	12.73	-6.50	STATIC	ELEC	
11/22/2011	08:00	MONTHLY	6.23	12.15	-5.92	STATIC	ELEC	
12/22/2011	12:18	DAY	6.23	11.60	-5.37	STATIC	ELEC	
02/02/2012	11:00	MONTHLY	6.23	11.65	-5.42	STATIC	ELEC	
Station Name: OCWD-35E01X/1 Perfs: 65-85 Elev GS: 6.5 Aquifer: UNDEFINED								
01/13/2010		MONTHLY	6.50	12.50	-6.00	STATIC	ELEC	
01/28/2010		BY SECONI	6.50	11.20	-4.70	STATIC	ELEC	
02/11/2010		MONTHLY	6.50	10.90	-4.40	STATIC	ELEC	
02/25/2010		BY SECONI	6.50	11.38	-4.88	STATIC	ELEC	
03/15/2010		BY SECONI	6.50	11.00	-4.50	STATIC	ELEC	
03/25/2010		BY SECONI	6.50	11.90	-5.40	STATIC	ELEC	
03/30/2010		BY SECONI	6.50	11.64	-5.14	STATIC	ELEC	
04/15/2010		BY SECONI	6.50	8.90	-2.40	STATIC	ELEC	
04/29/2010		DAY	6.50	9.20	-2.70	STATIC	ELEC	
05/13/2010		MONTHLY	6.50	14.20	-7.70	STATIC	ELEC	
05/27/2010		DAY	6.50	11.50	-5.00	STATIC	ELEC	
06/14/2010		BY SECONI	6.50	9.10	-2.60	STATIC	ELEC	
06/30/2010		DAY	6.50	9.60	-3.10	STATIC	ELEC	
07/15/2010		DAY	6.50	10.20	-3.70	STATIC	ELEC	
07/27/2010		DAY	6.50	10.20	-3.70	STATIC	ELEC	
08/09/2010		BY SECONI	6.50	10.40	-3.90	STATIC	ELEC	
08/24/2010		DAY	6.50	10.60	-4.10	STATIC	ELEC	
09/07/2010		DAY	6.50	13.80	-7.30	STATIC	ELEC	
09/22/2010		MONTHLY	6.50	11.60	-5.10	STATIC	ELEC	
09/30/2010		DAY	6.50	11.90	-5.40	STATIC	ELEC	
10/18/2010		DAY	6.50	9.10	-2.60	STATIC	ELEC	
10/26/2010		DAY	6.50	9.20	-2.70	STATIC	ELEC	
11/09/2010		MONTHLY	6.50	8.90	-2.40	STATIC	ELEC	
11/24/2010		BY SECONI	6.50	8.20	-1.70	STATIC	ELEC	
12/14/2010		MONTHLY	6.50	7.50	-1.00	STATIC	ELEC	
12/27/2010		BY SECONI	6.50	5.20	1.30	STATIC	ELEC	
01/12/2011		MONTHLY	6.50	4.33	2.17	STATIC	ELEC	
02/09/2011		BY SECONI	6.50	5.10	1.40	STATIC	ELEC	
02/24/2011		DAY	6.50	5.00	1.50	STATIC	ELEC	
03/14/2011		BY SECONI	6.50	7.00	-0.50	STATIC	ELEC	
03/29/2011		DAY	6.50	4.20	2.30	STATIC	ELEC	
04/14/2011		BY SECONI	6.50	4.10	2.40	STATIC	ELEC	
05/02/2011		BY SECONI	6.50	4.70	1.80	STATIC	ELEC	
05/16/2011		BY SECONI	6.50	6.20	0.30	STATIC	ELEC	
05/26/2011		BY SECONI	6.50	6.20	0.30	STATIC	ELEC	

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-35E01X/1 Perfs: 65-85 Elev GS: 6.5 Aquifer: UNDEFINED								
06/14/2011		BY SECONI	6.50	5.10	1.40	STATIC	ELEC	
06/28/2011		BY SECONI	6.50	6.40	0.10	STATIC	ELEC	
07/11/2011		MONTHLY	6.50	6.30	0.20	STATIC	ELEC	
07/27/2011		DAY	6.50	5.80	0.70	STATIC	ELEC	
08/16/2011		BY SECONI	6.50	8.20	-1.70	STATIC	ELEC	
08/30/2011		DAY	6.50	7.70	-1.20	STATIC	ELEC	
09/20/2011		BY SECONI	6.50	7.80	-1.30	STATIC	ELEC	
10/03/2011		DAY	6.50	6.40	0.10	STATIC	ELEC	
10/26/2011		DAY	6.50	6.30	0.20	STATIC	ELEC	
11/17/2011		DAY	6.50	5.10	1.40	STATIC	ELEC	
11/29/2011		DAY	6.50	4.60	1.90	STATIC	ELEC	
12/21/2011		MONTHLY	6.50	4.90	1.60	STATIC	ELEC	
12/28/2011		BY SECONI	6.50	4.70	1.80	STATIC	ELEC	
01/10/2012		BY SECONI	6.50	4.00	2.50	STATIC	ELEC	
01/25/2012		DAY	6.50	4.30	2.20	STATIC	ELEC	
Station Name: OCWD-35E01Y/1 Perfs: 105-125 Elev GS: 6.5 Aquifer: UNDEFINED								
01/13/2010		MONTHLY	6.50	12.60	-6.10	STATIC	ELEC	
01/28/2010		DAY	6.50	11.10	-4.60	STATIC	ELEC	
02/11/2010		BY SECONI	6.50	11.00	-4.50	STATIC	ELEC	
02/25/2010		DAY	6.50	11.27	-4.77	STATIC	ELEC	
03/15/2010		MONTHLY	6.50	10.80	-4.30	STATIC	ELEC	
03/25/2010		DAY	6.50	11.90	-5.40	STATIC	ELEC	
03/30/2010		BY SECONI	6.50	11.64	-5.14	STATIC	ELEC	
04/15/2010		DAY	6.50	8.90	-2.40	STATIC	ELEC	
04/29/2010		DAY	6.50	9.00	-2.50	STATIC	ELEC	
05/13/2010		MONTHLY	6.50	14.00	-7.50	STATIC	ELEC	
05/27/2010		DAY	6.50	11.50	-5.00	STATIC	ELEC	
06/14/2010		MONTHLY	6.50	9.10	-2.60	STATIC	ELEC	
06/30/2010		DAY	6.50	9.50	-3.00	STATIC	ELEC	
07/15/2010		BY SECONI	6.50	10.20	-3.70	STATIC	ELEC	
07/27/2010		BY SECONI	6.50	10.10	-3.60	STATIC	ELEC	
08/09/2010		DAY	6.50	10.50	-4.00	STATIC	ELEC	
08/24/2010		BY SECONI	6.50	10.10	-3.60	STATIC	ELEC	
09/07/2010		BY SECONI	6.50	13.80	-7.30	STATIC	ELEC	
09/22/2010		DAY	6.50	11.50	-5.00	STATIC	ELEC	
09/30/2010		BY SECONI	6.50	12.00	-5.50	STATIC	ELEC	
10/18/2010		MONTHLY	6.50	9.10	-2.60	STATIC	ELEC	
10/26/2010		DAY	6.50	9.20	-2.70	STATIC	ELEC	
11/09/2010		MONTHLY	6.50	8.80	-2.30	STATIC	ELEC	
11/24/2010		DAY	6.50	8.20	-1.70	STATIC	ELEC	
12/14/2010		DAY	6.50	7.40	-0.90	STATIC	ELEC	
12/27/2010		BY SECONI	6.50	5.20	1.30	STATIC	ELEC	
01/12/2011		MONTHLY	6.50	3.43	3.07	STATIC	ELEC	

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-35E01Y/1 Perfs: 105-125 Elev GS: 6.5 Aquifer: UNDEFINED								
02/09/2011		DAY	6.50	5.00	1.50	STATIC	ELEC	
02/24/2011		DAY	6.50	5.00	1.50	STATIC	ELEC	
03/14/2011		MONTHLY	6.50	6.90	-0.40	STATIC	ELEC	
03/29/2011		DAY	6.50	4.10	2.40	STATIC	ELEC	
04/14/2011		DAY	6.50	4.00	2.50	STATIC	ELEC	
05/02/2011		DAY	6.50	4.80	1.70	STATIC	ELEC	
05/16/2011		MONTHLY	6.50	6.20	0.30	STATIC	ELEC	
05/26/2011		DAY	6.50	6.00	0.50	STATIC	ELEC	
06/14/2011		BY SECONI	6.50	4.90	1.60	STATIC	ELEC	
07/11/2011		DAY	6.50	6.30	0.20	STATIC	ELEC	
07/27/2011		BY SECONI	6.50	5.90	0.60	STATIC	ELEC	
08/16/2011		DAY	6.50	8.30	-1.80	STATIC	ELEC	
08/30/2011		DAY	6.50	7.90	-1.40	STATIC	ELEC	
09/20/2011		DAY	6.50	7.90	-1.40	STATIC	ELEC	
10/13/2011		BY SECONI	6.50	6.30	0.20	STATIC	ELEC	
10/26/2011		DAY	6.50	6.40	0.10	STATIC	ELEC	
11/17/2011		DAY	6.50	5.10	1.40	STATIC	ELEC	
11/29/2011		DAY	6.50	4.60	1.90	STATIC	ELEC	
12/21/2011		BY SECONI	6.50	4.90	1.60	STATIC	ELEC	
12/28/2011		DAY	6.50	4.70	1.80	STATIC	ELEC	
01/10/2012		MONTHLY	6.50	4.10	2.40	STATIC	ELEC	
01/25/2012		DAY	6.50	4.30	2.20	STATIC	ELEC	
Station Name: OCWD-35F20/1 Perfs: 70-95 Elev GS: 6.5 Aquifer: C								
01/05/2010		BY SECONI	6.50	14.00	-7.50	STATIC	ELEC	
02/03/2010		BY SECONI	6.50	11.80	-5.30	STATIC	ELEC	
03/03/2010		DAY	6.50	10.90	-4.40	STATIC	ELEC	
03/30/2010		DAY	6.50	11.70	-5.20	STATIC	ELEC	
04/07/2010		DAY	6.50	11.30	-4.80	STATIC	ELEC	
05/10/2010		MONTHLY	6.50	11.50	-5.00	STATIC	ELEC	
06/08/2010		DAY	6.50	11.90	-5.40	STATIC	ELEC	
07/08/2010		BY SECONI	6.50	12.30	-5.80	STATIC	ELEC	
08/03/2010		BY SECONI	6.50	12.80	-6.30	STATIC	ELEC	
09/02/2010		MONTHLY	6.50	13.80	-7.30	STATIC	ELEC	
09/21/2010		BY SECONI	6.50	13.20	-6.70	STATIC	ELEC	
10/14/2010		MONTHLY	6.50	12.90	-6.40	STATIC	ELEC	
11/02/2010		BY SECONI	6.50	11.30	-4.80	STATIC	ELEC	
12/13/2010		DAY	6.50	9.40	-2.90	STATIC	ELEC	
01/19/2011		DAY	6.50	5.50	1.00	STATIC	ELEC	
02/17/2011		MONTHLY	6.50	6.00	0.50	STATIC	ELEC	
03/28/2011		DAY	6.50	5.30	1.20	STATIC	ELEC	
04/13/2011		MONTHLY	6.50	5.30	1.20	STATIC	ELEC	
06/14/2011		MONTHLY	6.50	6.20	0.30	STATIC	ELEC	
07/12/2011		DAY	6.50	5.70	0.80	STATIC	ELEC	

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-35F20/1 Perfs: 70-95 Elev GS: 6.5 Aquifer: C								
09/20/2011		DAY	6.50	6.90	-0.40	STATIC	ELEC	
10/06/2011		BY SECONI	6.50	6.50	0.00	STATIC	ELEC	
11/17/2011		MONTHLY	6.50	6.20	0.30	STATIC	ELEC	
12/21/2011		BY SECONI	6.50	5.50	1.00	STATIC	ELEC	
01/11/2012		MONTHLY	6.50	5.30	1.20	STATIC	ELEC	
Station Name: OCWD-35F20/2 Perfs: 115-125 Elev GS: 6.5 Aquifer: B								
01/05/2010		DAY	6.50	17.90	-11.40	STATIC	ELEC	
02/03/2010		DAY	6.50	15.60	-9.10	STATIC	ELEC	
03/03/2010		BY SECONI	6.50	14.80	-8.30	STATIC	ELEC	
03/30/2010		BY SECONI	6.50	9.80	-3.30	STATIC	ELEC	
04/07/2010		BY SECONI	6.50	15.60	-9.10	STATIC	ELEC	
05/10/2010		DAY	6.50	15.70	-9.20	STATIC	ELEC	
06/08/2010		BY SECONI	6.50	15.80	-9.30	STATIC	ELEC	
07/08/2010		DAY	6.50	16.60	-10.10	STATIC	ELEC	
08/03/2010		DAY	6.50	17.20	-10.70	STATIC	ELEC	
09/02/2010		MONTHLY	6.50	18.40	-11.90	STATIC	ELEC	
09/21/2010		MONTHLY	6.50	17.40	-10.90	STATIC	ELEC	
10/14/2010		DAY	6.50	17.00	-10.50	STATIC	ELEC	
11/02/2010		BY SECONI	6.50	14.20	-7.70	STATIC	ELEC	
12/13/2010		BY SECONI	6.50	11.50	-5.00	STATIC	ELEC	
01/19/2011		DAY	6.50	7.40	-0.90	STATIC	ELEC	
02/17/2011		DAY	6.50	8.00	-1.50	STATIC	ELEC	
03/28/2011		MONTHLY	6.50	7.60	-1.10	STATIC	ELEC	
04/13/2011		BY SECONI	6.50	7.30	-0.80	STATIC	ELEC	
05/11/2011		BY SECONI	6.50	8.40	-1.90	STATIC	ELEC	
06/14/2011		MONTHLY	6.50	7.60	-1.10	STATIC	ELEC	
07/12/2011		DAY	6.50	7.00	-0.50	STATIC	ELEC	
08/09/2011		DAY	6.50	7.40	-0.90	STATIC	ELEC	
09/20/2011		DAY	6.50	7.70	-1.20	STATIC	ELEC	
10/06/2011		BY SECONI	6.50	7.40	-0.90	STATIC	ELEC	
10/17/2011		MONTHLY	6.50	7.60	-1.10	STATIC	ELEC	
11/17/2011		BY SECONI	6.50	7.60	-1.10	STATIC	ELEC	
12/21/2011		BY SECONI	6.50	6.00	0.50	STATIC	ELEC	
01/11/2012		BY SECONI	6.50	6.00	0.50	STATIC	ELEC	
Station Name: OCWD-35F20/3 Perfs: 145-180 Elev GS: 6.5 Aquifer: A								
01/05/2010		BY SECONI	6.50	18.30	-11.80	STATIC	ELEC	
02/03/2010		DAY	6.50	16.20	-9.70	STATIC	ELEC	
03/03/2010		DAY	6.50	15.10	-8.60	STATIC	ELEC	
03/30/2010		DAY	6.50	16.00	-9.50	STATIC	ELEC	
04/07/2010		DAY	6.50	16.00	-9.50	STATIC	ELEC	
05/10/2010		DAY	6.50	16.00	-9.50	STATIC	ELEC	
06/08/2010		MONTHLY	6.50	16.00	-9.50	STATIC	ELEC	

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-35F20/3 Perfs: 145-180 Elev GS: 6.5 Aquifer: A								
07/08/2010		BY SECONI	6.50	16.90	-10.40	STATIC	ELEC	
08/03/2010		BY SECONI	6.50	17.40	-10.90	STATIC	ELEC	
09/02/2010		MONTHLY	6.50	18.60	-12.10	STATIC	ELEC	
09/21/2010		BY SECONI	6.50	17.50	-11.00	STATIC	ELEC	
10/14/2010		MONTHLY	6.50	17.10	-10.60	STATIC	ELEC	
11/02/2010		DAY	6.50	14.20	-7.70	STATIC	ELEC	
12/13/2010		DAY	6.50	11.50	-5.00	STATIC	ELEC	
01/19/2011		MONTHLY	6.50	7.50	-1.00	STATIC	ELEC	
02/17/2011		BY SECONI	6.50	8.30	-1.80	STATIC	ELEC	
03/28/2011		MONTHLY	6.50	7.70	-1.20	STATIC	ELEC	
04/13/2011		DAY	6.50	7.70	-1.20	STATIC	ELEC	
05/11/2011		BY SECONI	6.50	8.60	-2.10	STATIC	ELEC	
06/14/2011		MONTHLY	6.50	7.70	-1.20	STATIC	ELEC	
07/12/2011		MONTHLY	6.50	7.00	-0.50	STATIC	ELEC	
08/09/2011		MONTHLY	6.50	7.40	-0.90	STATIC	ELEC	
09/20/2011		BY SECONI	6.50	7.70	-1.20	STATIC	ELEC	
10/06/2011		DAY	6.50	7.30	-0.80	STATIC	ELEC	
10/17/2011		MONTHLY	6.50	7.60	-1.10	STATIC	ELEC	
11/17/2011		BY SECONI	6.50	7.70	-1.20	STATIC	ELEC	
12/21/2011		BY SECONI	6.50	6.10	0.40	STATIC	ELEC	
01/11/2012		DAY	6.50	6.00	0.50	STATIC	ELEC	
Station Name: OCWD-35F20/4 Perfs: 235-265 Elev GS: 6.5 Aquifer: I								
01/05/2010		DAY	6.50	19.00	-12.50	STATIC	ELEC	
02/03/2010		MONTHLY	6.50	16.70	-10.20	STATIC	ELEC	
03/03/2010		BY SECONI	6.50	15.70	-9.20	STATIC	ELEC	
03/30/2010		DAY	6.50	16.30	-9.80	STATIC	ELEC	
04/07/2010		DAY	6.50	16.60	-10.10	STATIC	ELEC	
05/10/2010		MONTHLY	6.50	16.60	-10.10	STATIC	ELEC	
06/08/2010		MONTHLY	6.50	16.20	-9.70	STATIC	ELEC	
07/08/2010		MONTHLY	6.50	17.00	-10.50	STATIC	ELEC	
08/03/2010		DAY	6.50	17.50	-11.00	STATIC	ELEC	
09/02/2010		DAY	6.50	18.70	-12.20	STATIC	ELEC	
09/21/2010		DAY	6.50	17.50	-11.00	STATIC	ELEC	
10/14/2010		BY SECONI	6.50	16.80	-10.30	STATIC	ELEC	
11/02/2010		DAY	6.50	14.00	-7.50	STATIC	ELEC	
12/13/2010		DAY	6.50	11.30	-4.80	STATIC	ELEC	
01/19/2011		BY SECONI	6.50	7.50	-1.00	STATIC	ELEC	
02/17/2011		MONTHLY	6.50	8.40	-1.90	STATIC	ELEC	
03/28/2011		MONTHLY	6.50	7.80	-1.30	STATIC	ELEC	
04/13/2011		DAY	6.50	7.70	-1.20	STATIC	ELEC	
05/11/2011		MONTHLY	6.50	8.50	-2.00	STATIC	ELEC	
06/14/2011		MONTHLY	6.50	7.80	-1.30	STATIC	ELEC	
07/12/2011		DAY	6.50	7.00	-0.50	STATIC	ELEC	

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-35F20/4 Perfs: 235-265 Elev GS: 6.5 Aquifer: I								
08/09/2011		BY SECONI	6.50	7.10	-0.60	STATIC	ELEC	
09/20/2011		BY SECONI	6.50	7.40	-0.90	STATIC	ELEC	
10/06/2011		BY SECONI	6.50	7.30	-0.80	STATIC	ELEC	
10/17/2011		DAY	6.50	7.30	-0.80	STATIC	ELEC	
11/17/2011		BY SECONI	6.50	8.00	-1.50	STATIC	ELEC	
12/21/2011		DAY	6.50	6.20	0.30	STATIC	ELEC	
01/11/2012		BY SECONI	6.50	8.00	-1.50	STATIC	ELEC	
Station Name: OCWD-35H11/1 Perfs: 44-77 Elev GS: 6.4 Aquifer: RECENT ZONE								
01/13/2010		DAY	6.40	16.10	-9.70	STATIC	ELEC	
01/28/2010		DAY	6.40	14.10	-7.70	STATIC	ELEC	
02/11/2010		DAY	6.40	13.60	-7.20	STATIC	ELEC	
03/01/2010		BY SECONI	6.40	13.80	-7.40	STATIC	ELEC	
03/15/2010		DAY	6.40	13.80	-7.40	STATIC	ELEC	
03/30/2010		BY SECONI	6.40	16.20	-9.80	STATIC	ELEC	
04/15/2010		BY SECONI	6.40	13.50	-7.10	STATIC	ELEC	
04/29/2010		BY SECONI	6.40	13.10	-6.70	STATIC	ELEC	
05/13/2010		DAY	6.40	15.50	-9.10	STATIC	ELEC	
05/27/2010		DAY	6.40	14.30	-7.90	STATIC	ELEC	
06/14/2010		MONTHLY	6.40	13.10	-6.70	STATIC	ELEC	
06/30/2010		BY SECONI	6.40	16.60	-10.20	STATIC	ELEC	
07/15/2010		MONTHLY	6.40	16.50	-10.10	STATIC	ELEC	
07/27/2010		DAY	6.40	16.80	-10.40	STATIC	ELEC	
08/09/2010		BY SECONI	6.40	17.00	-10.60	STATIC	ELEC	
08/24/2010		DAY	6.40	17.00	-10.60	STATIC	ELEC	
09/08/2010		MONTHLY	6.40	17.80	-11.40	STATIC	ELEC	
09/22/2010		DAY	6.40	14.00	-7.60	STATIC	ELEC	
10/14/2010		MONTHLY	6.40	13.60	-7.20	STATIC	ELEC	
10/26/2010		DAY	6.40	13.30	-6.90	STATIC	ELEC	
11/10/2010		MONTHLY	6.40	15.20	-8.80	STATIC	ELEC	
11/24/2010		DAY	6.40	11.70	-5.30	STATIC	ELEC	
12/13/2010		BY SECONI	6.40	9.40	-3.00	STATIC	ELEC	
12/27/2010		DAY	6.40	7.70	-1.30	STATIC	ELEC	
01/18/2011		BY SECONI	6.40	5.90	0.50	STATIC	ELEC	
02/14/2011		DAY	6.40	7.40	-1.00	STATIC	ELEC	
02/24/2011		DAY	6.40	7.30	-0.90	STATIC	ELEC	
03/21/2011		DAY	6.40	7.70	-1.30	STATIC	ELEC	
03/30/2011		DAY	6.40	6.80	-0.40	STATIC	ELEC	
04/13/2011		MONTHLY	6.40	6.80	-0.40	STATIC	ELEC	
05/02/2011		DAY	6.40	7.00	-0.60	STATIC	ELEC	
05/16/2011		DAY	6.40	7.80	-1.40	STATIC	ELEC	
05/26/2011		BY SECONI	6.40	7.80	-1.40	STATIC	ELEC	
06/15/2011		DAY	6.40	6.80	-0.40	STATIC	ELEC	
06/27/2011		DAY	6.40	5.90	0.50	STATIC	ELEC	

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-35H11/1 Perfs: 44-77 Elev GS: 6.4 Aquifer: RECENT ZONE								
07/12/2011		DAY	6.40	6.00	0.40	STATIC	ELEC	
07/27/2011		DAY	6.40	6.00	0.40	STATIC	ELEC	
08/11/2011		BY SECONI	6.40	7.40	-1.00	STATIC	ELEC	
08/29/2011		DAY	6.40	7.30	-0.90	STATIC	ELEC	
10/03/2011		BY SECONI	6.40	6.70	-0.30	STATIC	ELEC	
10/31/2011		BY SECONI	6.40	6.60	-0.20	STATIC	ELEC	
11/17/2011		DAY	6.40	7.80	-1.40	STATIC	ELEC	
12/21/2011		DAY	6.40	5.40	1.00	STATIC	ELEC	
12/27/2011		BY SECONI	6.40	0.50	5.90	STATIC	ELEC	
01/25/2012		BY SECONI	6.40	5.00	1.40	STATIC	ELEC	
Station Name: OCWD-35H11/2 Perfs: 125-158 Elev GS: 6.4 Aquifer: A ZONE								
01/13/2010		BY SECONI	6.40	19.30	-12.90	STATIC	ELEC	
01/28/2010		DAY	6.40	17.00	-10.60	STATIC	ELEC	
02/11/2010		BY SECONI	6.40	16.40	-10.00	STATIC	ELEC	
03/01/2010		DAY	6.40	16.10	-9.70	STATIC	ELEC	
03/15/2010		DAY	6.40	15.30	-8.90	STATIC	ELEC	
03/30/2010		DAY	6.40	14.20	-7.80	STATIC	ELEC	
04/15/2010		DAY	6.40	17.00	-10.60	STATIC	ELEC	
04/29/2010		DAY	6.40	16.20	-9.80	STATIC	ELEC	
05/13/2010		DAY	6.40	18.80	-12.40	STATIC	ELEC	
05/27/2010		BY SECONI	6.40	-4.40	10.80	STATIC	ELEC	
06/14/2010		BY SECONI	6.40	15.80	-9.40	STATIC	ELEC	
06/30/2010		BY SECONI	6.40	13.60	-7.20	STATIC	ELEC	
07/15/2010		MONTHLY	6.40	13.60	-7.20	STATIC	ELEC	
07/27/2010		DAY	6.40	13.70	-7.30	STATIC	ELEC	
08/09/2010		BY SECONI	6.40	14.50	-8.10	STATIC	ELEC	
08/24/2010		BY SECONI	6.40	14.20	-7.80	STATIC	ELEC	
09/08/2010		DAY	6.40	15.40	-9.00	STATIC	ELEC	
09/22/2010		DAY	6.40	16.20	-9.80	STATIC	ELEC	
10/14/2010		DAY	6.40	15.40	-9.00	STATIC	ELEC	
10/26/2010		DAY	6.40	16.30	-9.90	STATIC	ELEC	
11/10/2010		MONTHLY	6.40	11.60	-5.20	STATIC	ELEC	
11/24/2010		DAY	6.40	10.40	-4.00	STATIC	ELEC	
12/13/2010		MONTHLY	6.40	10.10	-3.70	STATIC	ELEC	
12/27/2010		BY SECONI	6.40	7.30	-0.90	STATIC	ELEC	
02/14/2011		MONTHLY	6.40	6.90	-0.50	STATIC	ELEC	
02/24/2011		DAY	6.40	6.90	-0.50	STATIC	ELEC	
03/21/2011		MONTHLY	6.40	6.90	-0.50	STATIC	ELEC	
03/30/2011		BY SECONI	6.40	5.30	1.10	STATIC	ELEC	
04/13/2011		DAY	6.40	6.20	0.20	STATIC	ELEC	
05/02/2011		DAY	6.40	6.60	-0.20	STATIC	ELEC	
05/16/2011		BY SECONI	6.40	7.40	-1.00	STATIC	ELEC	
05/26/2011		DAY	6.40	7.30	-0.90	STATIC	ELEC	

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-35H11/2 Perfs: 125-158 Elev GS: 6.4 Aquifer: A ZONE								
06/15/2011		BY SECONI	6.40	6.60	-0.20	STATIC	ELEC	
06/27/2011		DAY	6.40	6.50	-0.10	STATIC	ELEC	
07/12/2011		DAY	6.40	6.20	0.20	STATIC	ELEC	
07/27/2011		BY SECONI	6.40	6.20	0.20	STATIC	ELEC	
08/11/2011		MONTHLY	6.40	6.60	-0.20	STATIC	ELEC	
08/29/2011		DAY	6.40	6.60	-0.20	STATIC	ELEC	
09/19/2011		DAY	6.40	7.10	-0.70	STATIC	ELEC	
10/03/2011		DAY	6.40	6.50	-0.10	STATIC	ELEC	
10/17/2011		BY SECONI	6.40	6.10	0.30	STATIC	ELEC	
10/31/2011		DAY	6.40	6.90	-0.50	STATIC	ELEC	
11/17/2011		MONTHLY	6.40	6.20	0.20	STATIC	ELEC	
11/30/2011		DAY	6.40	5.70	0.70	STATIC	ELEC	
12/21/2011		BY SECONI	6.40	5.70	0.70	STATIC	ELEC	
12/27/2011		DAY	6.40	0.00	6.40	STATIC	ELEC	
01/09/2012		DAY	6.40	6.20	0.20	STATIC	ELEC	
01/25/2012		BY SECONI	6.40	5.70	0.70	STATIC	ELEC	
Station Name: OCWD-35H11/3 Perfs: 200-220 Elev GS: 6.4 Aquifer: I ZONE								
01/13/2010		DAY	6.40	22.20	-15.80	STATIC	ELEC	
01/28/2010		DAY	6.40	18.50	-12.10	STATIC	ELEC	
02/11/2010		MONTHLY	6.40	18.90	-12.50	STATIC	ELEC	
03/01/2010		DAY	6.40	21.20	-14.80	STATIC	ELEC	
03/15/2010		MONTHLY	6.40	20.00	-13.60	STATIC	ELEC	
03/30/2010		DAY	6.40	21.80	-15.40	STATIC	ELEC	
04/15/2010		DAY	6.40	16.20	-9.80	STATIC	ELEC	
04/29/2010		DAY	6.40	16.30	-9.90	STATIC	ELEC	
05/13/2010		DAY	6.40	27.60	-21.20	STATIC	ELEC	
05/27/2010		DAY	6.40	20.90	-14.50	STATIC	ELEC	
06/14/2010		DAY	6.40	16.10	-9.70	STATIC	ELEC	
06/30/2010		BY SECONI	6.40	14.30	-7.90	STATIC	ELEC	
07/15/2010		DAY	6.40	15.50	-9.10	STATIC	ELEC	
07/27/2010		BY SECONI	6.40	13.60	-7.20	STATIC	ELEC	
08/09/2010		MONTHLY	6.40	17.20	-10.80	STATIC	ELEC	
08/24/2010		BY SECONI	6.40	16.80	-10.40	STATIC	ELEC	
09/08/2010		DAY	6.40	25.30	-18.90	STATIC	ELEC	
09/22/2010		DAY	6.40	20.20	-13.80	STATIC	ELEC	
10/14/2010		BY SECONI	6.40	21.30	-14.90	STATIC	ELEC	
10/26/2010		DAY	6.40	14.00	-7.60	STATIC	ELEC	
11/10/2010		DAY	6.40	12.30	-5.90	STATIC	ELEC	
11/24/2010		DAY	6.40	13.00	-6.60	STATIC	ELEC	
12/13/2010		MONTHLY	6.40	9.80	-3.40	STATIC	ELEC	
12/27/2010		BY SECONI	6.40	4.90	1.50	STATIC	ELEC	
01/18/2011		MONTHLY	6.40	2.70	3.70	STATIC	ELEC	
02/14/2011		MONTHLY	6.40	4.90	1.50	STATIC	ELEC	

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-35H11/3 Perfs: 200-220 Elev GS: 6.4 Aquifer: I ZONE								
02/24/2011		BY SECONI	6.40	5.60	0.80	STATIC	ELEC	
03/21/2011		MONTHLY	6.40	16.90	-10.50	STATIC	ELEC	
03/30/2011		BY SECONI	6.40	10.70	-4.30	STATIC	ELEC	
04/13/2011		DAY	6.40	10.20	-3.80	STATIC	ELEC	
05/02/2011		DAY	6.40	6.10	0.30	STATIC	ELEC	
05/16/2011		DAY	6.40	11.00	-4.60	STATIC	ELEC	
05/26/2011		DAY	6.40	10.60	-4.20	STATIC	ELEC	
06/15/2011		BY SECONI	6.40	5.00	1.40	STATIC	ELEC	
06/27/2011		DAY	6.40	4.70	1.70	STATIC	ELEC	
07/12/2011		DAY	6.40	3.20	3.20	STATIC	ELEC	
07/27/2011		DAY	6.40	4.40	2.00	STATIC	ELEC	
08/11/2011		BY SECONI	6.40	9.60	-3.20	STATIC	ELEC	
08/29/2011		DAY	6.40	9.90	-3.50	STATIC	ELEC	
09/19/2011		MONTHLY	6.40	9.00	-2.60	STATIC	ELEC	
10/03/2011		BY SECONI	6.40	6.90	-0.50	STATIC	ELEC	
10/17/2011		DAY	6.40	6.50	-0.10	STATIC	ELEC	
10/31/2011		BY SECONI	6.40	7.10	-0.70	STATIC	ELEC	
11/17/2011		MONTHLY	6.40	4.90	1.50	STATIC	ELEC	
11/30/2011		DAY	6.40	3.40	3.00	STATIC	ELEC	
12/21/2011		MONTHLY	6.40	3.20	3.20	STATIC	ELEC	
12/27/2011		BY SECONI	6.40	2.80	3.60	STATIC	ELEC	
01/09/2012		BY SECONI	6.40	5.20	1.20	STATIC	ELEC	
01/25/2012		DAY	6.40	3.30	3.10	STATIC	ELEC	
Station Name: OCWD-35H12/1 Perfs: 137-147 Elev GS: 6.5 Aquifer: UNDEFINED								
01/13/2010		MONTHLY	6.50	19.90	-13.40	STATIC	ELEC	
01/28/2010		DAY	6.50	17.50	-11.00	STATIC	ELEC	
02/11/2010		DAY	6.50	16.70	-10.20	STATIC	ELEC	
03/01/2010		BY SECONI	6.50	16.50	-10.00	STATIC	ELEC	
03/15/2010		DAY	6.50	15.60	-9.10	STATIC	ELEC	
03/29/2010		DAY	6.50	16.20	-9.70	STATIC	ELEC	
03/30/2010		DAY	6.50	16.60	-10.10	STATIC	ELEC	
04/15/2010		MONTHLY	6.50	17.40	-10.90	STATIC	ELEC	
04/29/2010		DAY	6.50	16.80	-10.30	STATIC	ELEC	
05/13/2010		DAY	6.50	19.30	-12.80	STATIC	ELEC	
05/27/2010		BY SECONI	6.50	17.80	-11.30	STATIC	ELEC	
06/14/2010		DAY	6.50	16.25	-9.75	STATIC	ELEC	
06/30/2010		DAY	6.50	16.90	-10.40	STATIC	ELEC	
07/15/2010		DAY	6.50	17.10	-10.60	STATIC	ELEC	
07/27/2010		DAY	6.50	17.30	-10.80	STATIC	ELEC	
08/09/2010		MONTHLY	6.50	17.60	-11.10	STATIC	ELEC	
08/24/2010		DAY	6.50	18.10	-11.60	STATIC	ELEC	
09/08/2010		DAY	6.50	18.90	-12.40	STATIC	ELEC	
09/23/2010		DAY	6.50	17.50	-11.00	STATIC	ELEC	

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-35H12/1 Perfs: 137-147 Elev GS: 6.5 Aquifer: UNDEFINED								
10/14/2010		MONTHLY	6.50	16.50	-10.00	STATIC	ELEC	
10/26/2010		DAY	6.50	17.20	-10.70	STATIC	ELEC	
11/10/2010		DAY	6.50	14.30	-7.80	STATIC	ELEC	
11/24/2010		BY SECONI	6.50	12.80	-6.30	STATIC	ELEC	
12/13/2010		MONTHLY	6.50	11.10	-4.60	STATIC	ELEC	
12/27/2010		DAY	6.50	8.80	-2.30	STATIC	ELEC	
01/18/2011		DAY	6.50	7.00	-0.50	STATIC	ELEC	
02/14/2011		BY SECONI	6.50	8.60	-2.10	STATIC	ELEC	
03/03/2011		DAY	6.50	7.90	-1.40	STATIC	ELEC	
03/21/2011		BY SECONI	6.50	8.80	-2.30	STATIC	ELEC	
03/28/2011		BY SECONI	6.50	8.00	-1.50	STATIC	ELEC	
03/30/2011		BY SECONI	6.50	8.00	-1.50	STATIC	ELEC	
04/13/2011		MONTHLY	6.50	7.80	-1.30	STATIC	ELEC	
05/02/2011		BY SECONI	6.50	8.00	-1.50	STATIC	ELEC	
05/16/2011		DAY	6.50	9.00	-2.50	STATIC	ELEC	
05/26/2011		BY SECONI	6.50	8.90	-2.40	STATIC	ELEC	
06/15/2011		DAY	6.50	7.90	-1.40	STATIC	ELEC	
06/27/2011		DAY	6.50	7.10	-0.60	STATIC	ELEC	
07/12/2011		BY SECONI	6.50	7.00	-0.50	STATIC	ELEC	
07/27/2011		DAY	6.50	7.00	-0.50	STATIC	ELEC	
08/11/2011		BY SECONI	6.50	7.30	-0.80	STATIC	ELEC	
08/29/2011		DAY	6.50	7.70	-1.20	STATIC	ELEC	
09/19/2011		MONTHLY	6.50	7.30	-0.80	STATIC	ELEC	
10/03/2011		DAY	6.50	7.60	-1.10	STATIC	ELEC	
10/17/2011		MONTHLY	6.50	7.50	-1.00	STATIC	ELEC	
10/19/2011		DAY	6.50	7.70	-1.20	STATIC	ELEC	
10/31/2011		DAY	6.50	8.00	-1.50	STATIC	ELEC	
11/17/2011		BY SECONI	6.50	8.80	-2.30	STATIC	ELEC	
11/30/2011		BY SECONI	6.50	7.50	-1.00	STATIC	ELEC	
12/21/2011		BY SECONI	6.50	6.90	-0.40	STATIC	ELEC	
12/28/2011		BY SECONI	6.50	6.70	-0.20	STATIC	ELEC	
01/09/2012		MONTHLY	6.50	7.60	-1.10	STATIC	ELEC	
01/25/2012		DAY	6.50	6.80	-0.30	STATIC	ELEC	
Station Name: OCWD-35J1/1 Perfs: 130-170 Elev GS: 7.42 Aquifer: A ZONE								
01/13/2010		BY SECONI	7.42	20.00	-12.58	STATIC	ELEC	
01/28/2010		DAY	7.42	17.80	-10.38	STATIC	ELEC	
02/11/2010		BY SECONI	7.42	19.00	-11.58	STATIC	ELEC	
03/01/2010		DAY	7.42	16.80	-9.38	STATIC	ELEC	
03/15/2010		BY SECONI	7.42	16.30	-8.88	STATIC	ELEC	
03/29/2010		DAY	7.42	17.40	-9.98	STATIC	ELEC	
03/30/2010		DAY	7.42	17.20	-9.78	STATIC	ELEC	
04/15/2010		DAY	7.42	17.50	-10.08	STATIC	ELEC	
04/29/2010		DAY	7.42	17.00	-9.58	STATIC	ELEC	

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-35J1/1 Perfs: 130-170 Elev GS: 7.42 Aquifer: A ZONE								
05/13/2010		MONTHLY	7.42	19.40	-11.98	STATIC	ELEC	
05/27/2010		BY SECONI	7.42	18.50	-11.08	STATIC	ELEC	
06/14/2010		BY SECONI	7.42	17.55	-10.13	STATIC	ELEC	
06/30/2010		BY SECONI	7.42	17.80	-10.38	STATIC	ELEC	
07/15/2010		MONTHLY	7.42	18.20	-10.78	STATIC	ELEC	
07/27/2010		BY SECONI	7.42	18.60	-11.18	STATIC	ELEC	
08/09/2010		BY SECONI	7.42	18.80	-11.38	STATIC	ELEC	
08/24/2010		DAY	7.42	19.40	-11.98	STATIC	ELEC	
09/08/2010		DAY	7.42	20.30	-12.88	STATIC	ELEC	
09/30/2010		BY SECONI	7.42	19.60	-12.18	STATIC	ELEC	
10/05/2010		BY SECONI	7.42	19.50	-12.08	STATIC	ELEC	
10/14/2010		MONTHLY	7.42	18.40	-10.98	STATIC	ELEC	
10/26/2010		DAY	7.42	17.60	-10.18	STATIC	ELEC	
11/10/2010		BY SECONI	7.42	15.80	-8.38	STATIC	ELEC	
11/24/2010		DAY	7.42	14.80	-7.38	STATIC	ELEC	
12/13/2010		MONTHLY	7.42	13.00	-5.58	STATIC	ELEC	
12/27/2010		DAY	7.42	10.40	-2.98	STATIC	ELEC	
01/18/2011		DAY	7.42	9.22	-1.80	STATIC	ELEC	
02/14/2011		DAY	7.42	10.12	-2.70	STATIC	ELEC	
03/03/2011		BY SECONI	7.42	9.22	-1.80	STATIC	ELEC	
03/21/2011		BY SECONI	7.42	10.32	-2.90	STATIC	ELEC	
03/28/2011		DAY	7.42	9.20	-1.78	STATIC	ELEC	
03/30/2011		DAY	7.42	9.22	-1.80	STATIC	ELEC	
04/14/2011		DAY	7.42	9.12	-1.70	STATIC	ELEC	
05/02/2011		BY SECONI	7.42	9.32	-1.90	STATIC	ELEC	
05/16/2011		DAY	7.42	10.32	-2.90	STATIC	ELEC	
05/26/2011		BY SECONI	7.42	10.22	-2.80	STATIC	ELEC	
06/27/2011		DAY	7.42	8.42	-1.00	STATIC	ELEC	
07/13/2011		MONTHLY	7.42	8.72	-1.30	STATIC	ELEC	
07/27/2011		BY SECONI	7.42	8.42	-1.00	STATIC	ELEC	
08/11/2011		DAY	7.42	8.72	-1.30	STATIC	ELEC	
08/30/2011		BY SECONI	7.42	9.02	-1.60	STATIC	ELEC	
09/19/2011		DAY	7.42	9.02	-1.60	STATIC	ELEC	
10/03/2011		DAY	7.42	8.62	-1.20	STATIC	ELEC	
10/17/2011		DAY	7.42	8.72	-1.30	STATIC	ELEC	
10/19/2011		BY SECONI	7.42	9.10	-1.68	STATIC	ELEC	
10/31/2011		BY SECONI	7.42	9.22	-1.80	STATIC	ELEC	
11/17/2011		BY SECONI	7.42	9.02	-1.60	STATIC	ELEC	
11/30/2011		DAY	7.42	7.82	-0.40	STATIC	ELEC	
12/21/2011		BY SECONI	7.42	7.72	-0.30	STATIC	ELEC	
01/09/2012		DAY	7.42	6.22	1.20	STATIC	ELEC	
01/26/2012		DAY	7.42	7.72	-0.30	STATIC	ELEC	
Station Name: OCWD-35J1/2 Perfs: 190-240 Elev GS: 7.42 Aquifer: I ZONE								

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-35J1/2 Perfs: 190-240 Elev GS: 7.42 Aquifer: I ZONE								
01/13/2010		DAY	7.42	20.00	-12.58	STATIC	ELEC	
01/28/2010		DAY	7.42	17.80	-10.38	STATIC	ELEC	
02/11/2010		BY SECONI	7.42	17.00	-9.58	STATIC	ELEC	
03/01/2010		DAY	7.42	16.90	-9.48	STATIC	ELEC	
03/15/2010		DAY	7.42	16.30	-8.88	STATIC	ELEC	
03/29/2010		DAY	7.42	17.20	-9.78	STATIC	ELEC	
03/30/2010		DAY	7.42	17.20	-9.78	STATIC	ELEC	
04/15/2010		BY SECONI	7.42	17.60	-10.18	STATIC	ELEC	
04/29/2010		DAY	7.42	17.00	-9.58	STATIC	ELEC	
05/13/2010		MONTHLY	7.42	19.40	-11.98	STATIC	ELEC	
05/27/2010		DAY	7.42	18.30	-10.88	STATIC	ELEC	
06/14/2010		DAY	7.42	17.20	-9.78	STATIC	ELEC	
06/30/2010		BY SECONI	7.42	17.60	-10.18	STATIC	ELEC	
07/15/2010		MONTHLY	7.42	17.90	-10.48	STATIC	ELEC	
07/27/2010		BY SECONI	7.42	18.10	-10.68	STATIC	ELEC	
08/09/2010		MONTHLY	7.42	18.40	-10.98	STATIC	ELEC	
08/24/2010		BY SECONI	7.42	18.90	-11.48	STATIC	ELEC	
09/08/2010		BY SECONI	7.42	19.90	-12.48	STATIC	ELEC	
09/30/2010		DAY	7.42	19.20	-11.78	STATIC	ELEC	
10/05/2010		DAY	7.42	18.90	-11.48	STATIC	ELEC	
10/14/2010		MONTHLY	7.42	17.70	-10.28	STATIC	ELEC	
10/26/2010		BY SECONI	7.42	17.50	-10.08	STATIC	ELEC	
11/10/2010		BY SECONI	7.42	15.00	-7.58	STATIC	ELEC	
11/24/2010		DAY	7.42	14.30	-6.88	STATIC	ELEC	
12/13/2010		DAY	7.42	12.30	-4.88	STATIC	ELEC	
12/27/2010		DAY	7.42	9.80	-2.38	STATIC	ELEC	
01/18/2011		DAY	7.42	8.52	-1.10	STATIC	ELEC	
02/14/2011		MONTHLY	7.42	9.62	-2.20	STATIC	ELEC	
03/03/2011		DAY	7.42	8.72	-1.30	STATIC	ELEC	
03/21/2011		BY SECONI	7.42	9.82	-2.40	STATIC	ELEC	
03/28/2011		BY SECONI	7.42	8.70	-1.28	STATIC	ELEC	
03/30/2011		DAY	7.42	8.62	-1.20	STATIC	ELEC	
04/14/2011		MONTHLY	7.42	8.72	-1.30	STATIC	ELEC	
05/02/2011		DAY	7.42	8.72	-1.30	STATIC	ELEC	
05/16/2011		DAY	7.42	9.92	-2.50	STATIC	ELEC	
05/26/2011		BY SECONI	7.42	9.72	-2.30	STATIC	ELEC	
06/27/2011		DAY	7.42	7.92	-0.50	STATIC	ELEC	
07/13/2011		MONTHLY	7.42	8.12	-0.70	STATIC	ELEC	
07/27/2011		BY SECONI	7.42	7.82	-0.40	STATIC	ELEC	
08/11/2011		BY SECONI	7.42	8.12	-0.70	STATIC	ELEC	
08/30/2011		BY SECONI	7.42	8.42	-1.00	STATIC	ELEC	
09/19/2011		DAY	7.42	8.32	-0.90	STATIC	ELEC	
10/03/2011		DAY	7.42	8.12	-0.70	STATIC	ELEC	

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-35J1/2 Perfs: 190-240 Elev GS: 7.42 Aquifer: I ZONE								
10/17/2011		BY SECONI	7.42	8.22	-0.80	STATIC	ELEC	
10/19/2011		BY SECONI	7.42	8.60	-1.18	STATIC	ELEC	
10/31/2011		DAY	7.42	8.72	-1.30	STATIC	ELEC	
11/17/2011		MONTHLY	7.42	9.02	-1.60	STATIC	ELEC	
11/30/2011		DAY	7.42	8.62	-1.20	STATIC	ELEC	
12/28/2011		BY SECONI	7.42	7.12	0.30	STATIC	ELEC	
01/09/2012		MONTHLY	7.42	7.02	0.40	STATIC	ELEC	
01/26/2012		DAY	7.42	7.52	-0.10	STATIC	ELEC	
Station Name: OCWD-35J1Y/1 Perfs: 264-294 Elev GS: 7.1 Aquifer: I-ZONE								
02/11/2010		DAY	6.58	21.40	-14.82	STATIC	ELEC	
03/01/2010		DAY	6.58	23.20	-16.62	STATIC	ELEC	East
03/15/2010		BY SECONI	6.58	21.90	-15.32	STATIC	ELEC	East
03/29/2010		DAY	6.58	23.00	-16.42	STATIC	ELEC	
03/30/2010		DAY	6.58	22.90	-16.32	STATIC	ELEC	East
04/15/2010		MONTHLY	6.58	18.70	-12.12	STATIC	ELEC	East
04/29/2010		DAY	6.58	18.80	-12.22	STATIC	ELEC	East
05/13/2010		MONTHLY	6.58	27.60	-21.02	STATIC	ELEC	East
05/27/2010		DAY	6.58	23.00	-16.42	STATIC	ELEC	East
06/14/2010		BY SECONI	6.58	19.10	-12.52	STATIC	ELEC	East
06/30/2010		DAY	6.58	18.80	-12.22	STATIC	ELEC	East
07/15/2010		DAY	6.58	18.90	-12.32	STATIC	ELEC	East
07/27/2010		DAY	6.58	19.30	-12.72	STATIC	ELEC	East
08/09/2010		BY SECONI	6.58	20.70	-14.12	STATIC	ELEC	East
08/24/2010		DAY	6.58	20.60	-14.02	STATIC	ELEC	
09/08/2010		DAY	6.58	27.00	-20.42	STATIC	ELEC	
09/30/2010		DAY	6.58	24.20	-17.62	STATIC	ELEC	
10/05/2010		DAY	6.58	24.60	-18.02	STATIC	ELEC	
10/14/2010		BY SECONI	6.58	23.80	-17.22	STATIC	ELEC	
10/26/2010		DAY	6.58	18.40	-11.82	STATIC	ELEC	
11/10/2010		DAY	6.58	16.10	-9.52	STATIC	ELEC	
11/24/2010		DAY	6.58	16.40	-9.82	STATIC	ELEC	
12/13/2010		DAY	6.58	13.10	-6.52	STATIC	ELEC	
12/27/2010		BY SECONI	6.58	8.70	-2.12	STATIC	ELEC	
01/18/2011		DAY	6.58	5.60	0.98	STATIC	ELEC	
02/14/2011		DAY	6.58	7.40	-0.82	STATIC	ELEC	
03/03/2011		BY SECONI	6.58	10.90	-4.32	STATIC	ELEC	
03/21/2011		MONTHLY	6.58	2.90	3.68	STATIC	ELEC	
03/28/2011		BY SECONI	6.58	11.90	-5.32	STATIC	ELEC	
03/30/2011		BY SECONI	6.58	11.70	-5.12	STATIC	ELEC	
04/14/2011		DAY	6.58	11.20	-4.62	STATIC	ELEC	
05/02/2011		BY SECONI	6.58	8.10	-1.52	STATIC	ELEC	
05/16/2011		DAY	6.58	11.50	-4.92	STATIC	ELEC	
05/26/2011		DAY	6.58	11.70	-5.12	STATIC	ELEC	

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-35J1Y/1 Perfs: 264-294 Elev GS: 7.1 Aquifer: I-ZONE								
06/15/2011		MONTHLY	6.58	6.90	-0.32	STATIC	ELEC	
06/27/2011		BY SECONI	6.58	6.30	0.28	STATIC	ELEC	
07/12/2011		MONTHLY	6.58	5.00	1.58	STATIC	ELEC	
07/27/2011		BY SECONI	6.58	5.90	0.68	STATIC	ELEC	
08/11/2011		DAY	6.58	9.70	-3.12	STATIC	ELEC	
08/30/2011		DAY	6.58	10.10	-3.52	STATIC	ELEC	
09/19/2011		BY SECONI	6.58	9.10	-2.52	STATIC	ELEC	
10/03/2011		BY SECONI	6.58	8.30	-1.72	STATIC	ELEC	
10/17/2011		MONTHLY	6.58	8.00	-1.42	STATIC	ELEC	
10/19/2011		DAY	6.58	7.50	-0.92	STATIC	ELEC	
10/31/2011		DAY	6.58	8.50	-1.92	STATIC	ELEC	
11/17/2011		DAY	6.58	6.70	-0.12	STATIC	ELEC	
11/30/2011		BY SECONI	6.58	5.10	1.48	STATIC	ELEC	
12/21/2011		BY SECONI	6.58	5.00	1.58	STATIC	ELEC	
12/28/2011		DAY	6.58	4.80	1.78	STATIC	ELEC	
01/09/2012		BY SECONI	6.58	6.60	-0.02	STATIC	ELEC	
01/26/2012		DAY	6.58	5.10	1.48	STATIC	ELEC	
Station Name: OCWD-35K1/1 Perfs: 130-170 Elev GS: 7.96 Aquifer: A ZONE								
01/13/2010		MONTHLY	7.96	19.46	-11.50	STATIC	ELEC	
01/28/2010		BY SECONI	7.96	19.56	-11.60	STATIC	ELEC	
02/11/2010		MONTHLY	7.96	19.26	-11.30	STATIC	ELEC	
03/01/2010		DAY	7.96	18.96	-11.00	STATIC	ELEC	
03/15/2010		BY SECONI	7.96	18.46	-10.50	STATIC	ELEC	
03/30/2010		DAY	7.96	19.66	-11.70	STATIC	ELEC	
04/15/2010		BY SECONI	7.96	19.76	-11.80	STATIC	ELEC	
04/29/2010		DAY	7.96	19.16	-11.20	STATIC	ELEC	
05/13/2010		MONTHLY	7.96	21.46	-13.50	STATIC	ELEC	
05/27/2010		DAY	7.96	20.96	-13.00	STATIC	ELEC	
06/14/2010		BY SECONI	7.96	19.66	-11.70	STATIC	ELEC	
06/30/2010		BY SECONI	7.96	20.66	-12.70	STATIC	ELEC	
07/15/2010		MONTHLY	7.96	20.56	-12.60	STATIC	ELEC	
07/27/2010		BY SECONI	7.96	20.86	-12.90	STATIC	ELEC	
08/09/2010		MONTHLY	7.96	21.06	-13.10	STATIC	ELEC	
08/24/2010		DAY	7.96	21.76	-13.80	STATIC	ELEC	
09/08/2010		MONTHLY	7.96	22.36	-14.40	STATIC	ELEC	
09/16/2010		BY SECONI	7.96	21.76	-13.80	STATIC	ELEC	
10/14/2010		DAY	7.96	20.76	-12.80	STATIC	ELEC	
10/26/2010		BY SECONI	7.96	19.46	-11.50	STATIC	ELEC	
11/10/2010		DAY	7.96	17.66	-9.70	STATIC	ELEC	
11/24/2010		BY SECONI	7.96	16.66	-8.70	STATIC	ELEC	
12/06/2010		DAY	7.96	15.16	-7.20	STATIC	ELEC	
12/27/2010		DAY	7.96	11.96	-4.00	STATIC	ELEC	
01/18/2011		BY SECONI	7.96	10.46	-2.50	STATIC	ELEC	

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-35K1/1 Perfs: 130-170 Elev GS: 7.96 Aquifer: A ZONE								
02/14/2011		DAY	7.96	11.56	-3.60	STATIC	ELEC	
03/03/2011		DAY	7.96	10.76	-2.80	STATIC	ELEC	
03/15/2011		MONTHLY	7.96	12.36	-4.40	STATIC	ELEC	
03/28/2011		DAY	7.96	11.16	-3.20	STATIC	ELEC	
04/13/2011		MONTHLY	7.96	10.76	-2.80	STATIC	ELEC	
05/02/2011		DAY	7.96	10.96	-3.00	STATIC	ELEC	
05/16/2011		DAY	7.96	11.96	-4.00	STATIC	ELEC	
05/26/2011		DAY	7.96	11.96	-4.00	STATIC	ELEC	
06/15/2011		MONTHLY	7.96	10.76	-2.80	STATIC	ELEC	
06/27/2011		BY SECONI	7.96	10.06	-2.10	STATIC	ELEC	
07/12/2011		DAY	7.96	10.26	-2.30	STATIC	ELEC	
07/27/2011		BY SECONI	7.96	10.06	-2.10	STATIC	ELEC	
08/11/2011		MONTHLY	7.96	10.36	-2.40	STATIC	ELEC	
08/30/2011		BY SECONI	7.96	10.76	-2.80	STATIC	ELEC	
09/19/2011		DAY	7.96	10.36	-2.40	STATIC	ELEC	
10/03/2011		DAY	7.96	9.96	-2.00	STATIC	ELEC	
10/17/2011		DAY	7.96	10.26	-2.30	STATIC	ELEC	
10/31/2011		BY SECONI	7.96	10.56	-2.60	STATIC	ELEC	
11/17/2011		DAY	7.96	10.26	-2.30	STATIC	ELEC	
11/29/2011		DAY	7.96	8.96	-1.00	STATIC	ELEC	
12/21/2011		DAY	7.96	8.46	-0.50	STATIC	ELEC	
12/28/2011		DAY	7.96	8.26	-0.30	STATIC	ELEC	
01/09/2012		MONTHLY	7.96	9.16	-1.20	STATIC	ELEC	
01/26/2012		BY SECONI	7.96	8.76	-0.80	STATIC	ELEC	
Station Name: OCWD-35K1/2 Perfs: 193-243 Elev GS: 7.96 Aquifer: I ZONE								
01/13/2010		BY SECONI	7.96	19.36	-11.40	STATIC	ELEC	
01/28/2010		DAY	7.96	19.46	-11.50	STATIC	ELEC	
02/11/2010		BY SECONI	7.96	19.06	-11.10	STATIC	ELEC	
03/01/2010		BY SECONI	7.96	18.76	-10.80	STATIC	ELEC	
03/15/2010		DAY	7.96	18.26	-10.30	STATIC	ELEC	
03/30/2010		BY SECONI	7.96	19.56	-11.60	STATIC	ELEC	
04/15/2010		BY SECONI	7.96	19.56	-11.60	STATIC	ELEC	
04/29/2010		BY SECONI	7.96	18.86	-10.90	STATIC	ELEC	
05/27/2010		BY SECONI	7.96	20.86	-12.90	STATIC	ELEC	
06/14/2010		BY SECONI	7.96	19.46	-11.50	STATIC	ELEC	
06/30/2010		DAY	7.96	20.26	-12.30	STATIC	ELEC	
07/15/2010		DAY	7.96	20.16	-12.20	STATIC	ELEC	
07/27/2010		BY SECONI	7.96	20.56	-12.60	STATIC	ELEC	
08/09/2010		MONTHLY	7.96	20.76	-12.80	STATIC	ELEC	
08/24/2010		BY SECONI	7.96	21.46	-13.50	STATIC	ELEC	
09/08/2010		MONTHLY	7.96	22.16	-14.20	STATIC	ELEC	
09/16/2010		DAY	7.96	21.26	-13.30	STATIC	ELEC	
10/14/2010		BY SECONI	7.96	20.46	-12.50	STATIC	ELEC	

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-35K1/2 Perfs: 193-243 Elev GS: 7.96 Aquifer: I ZONE								
10/26/2010		DAY	7.96	19.16	-11.20	STATIC	ELEC	
11/10/2010		DAY	7.96	17.56	-9.60	STATIC	ELEC	
11/24/2010		DAY	7.96	16.56	-8.60	STATIC	ELEC	
12/06/2010		DAY	7.96	15.06	-7.10	STATIC	ELEC	
12/27/2010		DAY	7.96	11.86	-3.90	STATIC	ELEC	
01/18/2011		BY SECONI	7.96	10.46	-2.50	STATIC	ELEC	
02/14/2011		MONTHLY	7.96	11.56	-3.60	STATIC	ELEC	
03/03/2011		DAY	7.96	10.66	-2.70	STATIC	ELEC	
03/15/2011		BY SECONI	7.96	12.36	-4.40	STATIC	ELEC	
03/28/2011		DAY	7.96	10.96	-3.00	STATIC	ELEC	
04/13/2011		BY SECONI	7.96	10.56	-2.60	STATIC	ELEC	
05/02/2011		DAY	7.96	10.96	-3.00	STATIC	ELEC	
05/16/2011		DAY	7.96	11.86	-3.90	STATIC	ELEC	
05/26/2011		DAY	7.96	11.76	-3.80	STATIC	ELEC	
06/15/2011		MONTHLY	7.96	10.66	-2.70	STATIC	ELEC	
06/27/2011		DAY	7.96	9.66	-1.70	STATIC	ELEC	
07/12/2011		DAY	7.96	10.26	-2.30	STATIC	ELEC	
07/27/2011		DAY	7.96	9.96	-2.00	STATIC	ELEC	
08/11/2011		DAY	7.96	10.16	-2.20	STATIC	ELEC	
08/30/2011		BY SECONI	7.96	10.56	-2.60	STATIC	ELEC	
09/19/2011		MONTHLY	7.96	10.16	-2.20	STATIC	ELEC	
10/03/2011		BY SECONI	7.96	9.76	-1.80	STATIC	ELEC	
10/17/2011		BY SECONI	7.96	9.96	-2.00	STATIC	ELEC	
10/31/2011		BY SECONI	7.96	10.46	-2.50	STATIC	ELEC	
11/17/2011		MONTHLY	7.96	10.26	-2.30	STATIC	ELEC	
11/29/2011		DAY	7.96	8.96	-1.00	STATIC	ELEC	
12/21/2011		DAY	7.96	8.46	-0.50	STATIC	ELEC	
12/28/2011		BY SECONI	7.96	8.26	-0.30	STATIC	ELEC	
01/09/2012		DAY	7.96	8.96	-1.00	STATIC	ELEC	
01/26/2012		BY SECONI	7.96	8.66	-0.70	STATIC	ELEC	
Station Name: OCWD-35K1V/1 Perfs: 90-110 Elev GS: 7.58 Aquifer: C-ZONE								
02/11/2010		BY SECONI	6.92	14.70	-7.78	STATIC	ELEC	
03/01/2010		DAY	6.92	14.90	-7.98	STATIC	ELEC	South
03/15/2010		BY SECONI	6.92	29.40	-22.48	STATIC	ELEC	South
03/30/2010		DAY	6.92	15.50	-8.58	STATIC	ELEC	South
04/15/2010		MONTHLY	6.92	15.20	-8.28	STATIC	ELEC	South
04/29/2010		DAY	6.92	15.00	-8.08	STATIC	ELEC	South
05/04/2010		DAY	6.92	15.70	-8.78	STATIC	ELEC	
05/13/2010		BY SECONI	6.92	15.80	-8.88	STATIC	ELEC	South
05/27/2010		DAY	6.92	16.20	-9.28	STATIC	ELEC	South
06/14/2010		MONTHLY	6.92	15.60	-8.68	STATIC	ELEC	South
06/30/2010		BY SECONI	6.92	16.00	-9.08	STATIC	ELEC	South
07/15/2010		DAY	6.92	16.00	-9.08	STATIC	ELEC	South

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-35K1V/1 Perfs: 90-110 Elev GS: 7.58 Aquifer: C-ZONE								
07/27/2010		BY SECONI	6.92	16.00	-9.08	STATIC	ELEC	South
08/09/2010		DAY	6.92	16.20	-9.28	STATIC	ELEC	South
08/24/2010		DAY	6.92	16.70	-9.78	STATIC	ELEC	
09/08/2010		DAY	6.92	17.40	-10.48	STATIC	ELEC	
09/16/2010		BY SECONI	6.92	17.00	-10.08	STATIC	ELEC	
10/14/2010		BY SECONI	6.92	16.50	-9.58	STATIC	ELEC	
10/26/2010		DAY	6.92	15.60	-8.68	STATIC	ELEC	
11/10/2010		MONTHLY	6.92	14.80	-7.88	STATIC	ELEC	
11/24/2010		DAY	6.92	14.40	-7.48	STATIC	ELEC	
12/06/2010		DAY	6.92	13.50	-6.58	STATIC	ELEC	
12/27/2010		MONTHLY	6.92	9.50	-2.58	STATIC	ELEC	
01/18/2011		MONTHLY	6.92	8.82	-1.90	STATIC	ELEC	
02/14/2011		DAY	6.92	9.22	-2.30	STATIC	ELEC	
03/03/2011		BY SECONI	6.92	8.82	-1.90	STATIC	ELEC	
03/15/2011		BY SECONI	6.92	9.52	-2.60	STATIC	ELEC	
03/28/2011		BY SECONI	6.92	8.72	-1.80	STATIC	ELEC	
04/13/2011		DAY	6.92	8.52	-1.60	STATIC	ELEC	
05/02/2011		BY SECONI	6.92	9.12	-2.20	STATIC	ELEC	
05/16/2011		BY SECONI	6.92	9.62	-2.70	STATIC	ELEC	
05/26/2011		BY SECONI	6.92	9.42	-2.50	STATIC	ELEC	
06/15/2011		BY SECONI	6.92	8.92	-2.00	STATIC	ELEC	
06/27/2011		BY SECONI	6.92	8.62	-1.70	STATIC	ELEC	
07/12/2011		BY SECONI	6.92	8.82	-1.90	STATIC	ELEC	
07/27/2011		DAY	6.92	8.62	-1.70	STATIC	ELEC	
08/11/2011		DAY	6.92	8.82	-1.90	STATIC	ELEC	
08/30/2011		DAY	6.92	9.02	-2.10	STATIC	ELEC	
09/19/2011		BY SECONI	6.92	7.22	-0.30	STATIC	ELEC	
10/03/2011		BY SECONI	6.92	8.82	-1.90	STATIC	ELEC	
10/17/2011		DAY	6.92	8.82	-1.90	STATIC	ELEC	
10/31/2011		BY SECONI	6.92	9.02	-2.10	STATIC	ELEC	
11/17/2011		BY SECONI	6.92	9.02	-2.10	STATIC	ELEC	
11/29/2011		BY SECONI	6.92	8.22	-1.30	STATIC	ELEC	
12/21/2011		BY SECONI	6.92	8.12	-1.20	STATIC	ELEC	
12/28/2011		DAY	6.92	7.82	-0.90	STATIC	ELEC	
01/09/2012		DAY	6.92	8.72	-1.80	STATIC	ELEC	
01/26/2012		BY SECONI	6.92	7.82	-0.90	STATIC	ELEC	
Station Name: OCWD-35K1Y/1 Perfs: 366-386 Elev GS: 7.73 Aquifer: I-ZONE								
02/11/2010		MONTHLY	7.50	31.30	-23.80	STATIC	ELEC	
03/01/2010		DAY	7.50	31.10	-23.60	STATIC	ELEC	North
03/15/2010		MONTHLY	7.50	14.90	-7.40	STATIC	ELEC	North
03/30/2010		DAY	7.50	31.20	-23.70	STATIC	ELEC	North
04/15/2010		MONTHLY	7.50	30.10	-22.60	STATIC	ELEC	North
04/29/2010		DAY	7.50	29.80	-22.30	STATIC	ELEC	North

NOTE: All depths and elevations in feet.
Elev GS = Elevation of Ground Surface WL Status = Water level Status
Elev RP = Elevation of Reference Point Perfs = Perforated Interval
Elev WS = Elevation of Water Surface

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-35K1Y/1 Perfs: 366-386 Elev GS: 7.73 Aquifer: I-ZONE								
05/13/2010		DAY	7.50	32.50	-25.00	STATIC	ELEC	North
05/27/2010		DAY	7.50	32.50	-25.00	STATIC	ELEC	North
06/14/2010		DAY	7.50	30.50	-23.00	STATIC	ELEC	North
06/30/2010		DAY	7.50	31.60	-24.10	STATIC	ELEC	North
07/15/2010		DAY	7.50	31.00	-23.50	STATIC	ELEC	North
07/27/2010		DAY	7.50	21.30	-13.80	STATIC	ELEC	North
08/09/2010		MONTHLY	7.50	32.50	-25.00	STATIC	ELEC	North
08/24/2010		DAY	7.50	32.40	-24.90	STATIC	ELEC	
09/08/2010		MONTHLY	7.50	34.70	-27.20	STATIC	ELEC	
09/16/2010		BY SECONI	7.50	33.40	-25.90	STATIC	ELEC	
10/14/2010		MONTHLY	7.50	33.70	-26.20	STATIC	ELEC	
10/26/2010		BY SECONI	7.50	30.60	-23.10	STATIC	ELEC	
11/10/2010		DAY	7.50	27.90	-20.40	STATIC	ELEC	
11/24/2010		BY SECONI	7.50	26.90	-19.40	STATIC	ELEC	
12/06/2010		DAY	7.50	24.20	-16.70	STATIC	ELEC	
12/27/2010		DAY	7.50	19.10	-11.60	STATIC	ELEC	
01/18/2011		BY SECONI	7.50	16.57	-9.07	STATIC	ELEC	
02/14/2011		BY SECONI	7.50	18.97	-11.47	STATIC	ELEC	
03/03/2011		DAY	7.50	19.07	-11.57	STATIC	ELEC	
03/15/2011		MONTHLY	7.50	20.37	-12.87	STATIC	ELEC	
03/28/2011		BY SECONI	7.50	19.77	-12.27	STATIC	ELEC	
04/13/2011		MONTHLY	7.50	19.27	-11.77	STATIC	ELEC	
05/02/2011		DAY	7.50	17.27	-9.77	STATIC	ELEC	
05/16/2011		MONTHLY	7.50	19.57	-12.07	STATIC	ELEC	
05/26/2011		BY SECONI	7.50	19.17	-11.67	STATIC	ELEC	
06/15/2011		BY SECONI	7.50	15.37	-7.87	STATIC	ELEC	
06/27/2011		BY SECONI	7.50	13.57	-6.07	STATIC	ELEC	
07/12/2011		BY SECONI	7.50	12.77	-5.27	STATIC	ELEC	
07/27/2011		DAY	7.50	13.07	-5.57	STATIC	ELEC	
08/11/2011		BY SECONI	7.50	13.67	-6.17	STATIC	ELEC	
08/30/2011		DAY	7.50	14.37	-6.87	STATIC	ELEC	
09/19/2011		DAY	7.50	14.37	-6.87	STATIC	ELEC	
10/03/2011		BY SECONI	7.50	13.37	-5.87	STATIC	ELEC	
10/17/2011		BY SECONI	7.50	13.47	-5.97	STATIC	ELEC	
10/31/2011		BY SECONI	7.50	15.17	-7.67	STATIC	ELEC	
11/17/2011		BY SECONI	7.50	14.37	-6.87	STATIC	ELEC	
11/29/2011		BY SECONI	7.50	12.57	-5.07	STATIC	ELEC	
12/21/2011		MONTHLY	7.50	12.57	-5.07	STATIC	ELEC	
12/28/2011		DAY	7.50	12.27	-4.77	STATIC	ELEC	
01/09/2012		MONTHLY	7.50	13.37	-5.87	STATIC	ELEC	
01/26/2012		BY SECONI	7.50	13.27	-5.77	STATIC	ELEC	
Station Name: OCWD-35N01/1 Perfs: 39-79 Elev GS: 7.3 Aquifer: A ZONE								
02/27/2010		BY SECONI	7.30	15.40	-8.10	STATIC	ELEC	

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-35N01/1 Perfs: 39-79 Elev GS: 7.3 Aquifer: A ZONE								
10/07/2010		MONTHLY	7.30	16.40	-9.10	STATIC	ELEC	
03/03/2011		BY SECONI	7.30	9.50	-2.20	STATIC	ELEC	
Station Name: OCWD-35N01/2 Perfs: 80-85 Elev GS: 7.3 Aquifer: I ZONE								
02/27/2010		MONTHLY	7.30	15.40	-8.10	STATIC	ELEC	
10/07/2010		DAY	7.30	16.00	-8.70	STATIC	ELEC	
03/03/2011		DAY	7.30	9.00	-1.70	STATIC	ELEC	
Station Name: OCWD-36FP1X/1 Perfs: 136-146 Elev GS: 39.5 Aquifer: UNDEFINED								
03/08/2010		DAY	39.50	46.00	-6.50	STATIC	ELEC	
09/27/2010		BY SECONI	39.50	93.10	-53.60	STATIC	ELEC	
Station Name: OCWD-BSO9A/1 Perfs: 10-24 Elev GS: 5 Aquifer: SEMIPERCHED								
01/07/2010	09:54	DAY	5.19	3.18	2.01	STATIC	ELEC	
03/05/2010	07:07	DAY	5.19	2.92	2.27	STATIC	ELEC	
05/05/2010	11:24	MONTHLY	5.19	3.28	1.91	STATIC	ELEC	
07/01/2010	16:11	DAY	5.19	2.70	2.49	STATIC	ELEC	
09/09/2010	12:32	DAY	5.19	3.11	2.08	STATIC	ELEC	
10/28/2010	14:22	DAY	5.19	3.35	1.84	STATIC	ELEC	
01/13/2011	13:00	MONTHLY	5.19	3.31	1.88	STATIC	ELEC	
03/10/2011	12:04	MONTHLY	5.19	3.43	1.76	STATIC	ELEC	
05/05/2011	10:35	DAY	5.19	3.38	1.81	STATIC	ELEC	
06/30/2011	14:37	DAY	5.19	3.03	2.16	STATIC	ELEC	
08/31/2011	11:10	DAY	5.19	2.92	2.27	STATIC	ELEC	
11/01/2011	06:21	MONTHLY	5.19	1.50	3.69	STATIC	ELEC	
01/12/2012	09:45	DAY	5.19	2.00	3.19	STATIC	ELEC	
Station Name: OCWD-BSO9A/2 Perfs: 115-162 Elev GS: 5 Aquifer: ALPHA								
01/07/2010	09:56	DAY	5.35	21.40	-16.05	STATIC	ELEC	
03/05/2010	07:10	MONTHLY	5.35	18.34	-12.99	STATIC	ELEC	
05/05/2010	11:26	BY SECONI	5.35	18.51	-13.16	STATIC	ELEC	
07/01/2010	16:12	BY SECONI	5.35	18.28	-12.93	STATIC	ELEC	
09/09/2010	12:33	DAY	5.35	19.63	-14.28	STATIC	ELEC	
10/28/2010	14:23	DAY	5.35	16.46	-11.11	STATIC	ELEC	
01/13/2011	13:00	MONTHLY	5.35	9.85	-4.50	STATIC	ELEC	
03/10/2011	12:05	MONTHLY	5.35	9.86	-4.51	STATIC	ELEC	
05/05/2011	10:36	DAY	5.35	9.90	-4.55	STATIC	ELEC	
06/30/2011	14:38	MONTHLY	5.35	7.79	-2.44	STATIC	ELEC	
08/31/2011	11:10	BY SECONI	5.35	7.70	-2.35	STATIC	ELEC	
11/01/2011	06:21	DAY	5.35	7.10	-1.75	STATIC	ELEC	
01/12/2012	09:48	MONTHLY	5.35	5.40	-0.05	STATIC	ELEC	
Station Name: OCWD-BSO9A/3 Perfs: 195-285 Elev GS: 5 Aquifer: BETA-LAMBDA								
01/07/2010	09:57	DAY	5.24	20.80	-15.56	STATIC	ELEC	
03/05/2010	07:12	BY SECONI	5.24	19.55	-14.31	STATIC	ELEC	
05/05/2010	11:29	MONTHLY	5.24	17.57	-12.33	STATIC	ELEC	

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-BSO9A/3 Perfs: 195-285 Elev GS: 5 Aquifer: BETA-LAMBDA								
07/01/2010	16:13	DAY	5.24	19.57	-14.33	STATIC	ELEC	
09/09/2010	12:36	MONTHLY	5.24	21.05	-15.81	STATIC	ELEC	
10/28/2010	14:24	MONTHLY	5.24	17.89	-12.65	STATIC	ELEC	
01/13/2011	13:00	DAY	5.24	10.73	-5.49	STATIC	ELEC	
03/10/2011	12:06	BY SECONI	5.24	10.87	-5.63	STATIC	ELEC	
05/05/2011	10:37	DAY	5.24	11.20	-5.96	STATIC	ELEC	
06/30/2011	14:39	MONTHLY	5.24	9.95	-4.71	STATIC	ELEC	
08/31/2011	11:10	BY SECONI	5.24	9.60	-4.36	STATIC	ELEC	
11/01/2011	06:22	MONTHLY	5.24	10.75	-5.51	STATIC	ELEC	
01/12/2012	09:49	MONTHLY	5.24	7.25	-2.01	STATIC	ELEC	
Station Name: OCWD-BSO9B/1 Perfs: 56-101 Elev GS: 5 Aquifer: ALPHA								
01/07/2010	10:01	BY SECONI	5.19	2.72	2.47	STATIC	ELEC	
03/05/2010	07:14	MONTHLY	5.19	0.30	4.89	STATIC	ELEC	
05/05/2010	11:30	BY SECONI	5.19	2.88	2.31	STATIC	ELEC	
07/01/2010	16:13	DAY	5.19	3.53	1.66	STATIC	ELEC	
09/09/2010	12:27	MONTHLY	5.19	3.59	1.60	STATIC	ELEC	
10/28/2010	14:25	BY SECONI	5.19	3.72	1.47	STATIC	ELEC	
01/13/2011	13:00	BY SECONI	5.19	2.01	3.18	STATIC	ELEC	
03/10/2011	12:07	MONTHLY	5.19	2.62	2.57	STATIC	ELEC	
05/05/2011	10:40	DAY	5.19	2.85	2.34	STATIC	ELEC	
06/30/2011	14:40	MONTHLY	5.19	2.92	2.27	STATIC	ELEC	
08/31/2011	11:10	DAY	5.19	2.01	3.18	STATIC	ELEC	
11/01/2011	06:23	MONTHLY	5.19	2.60	2.59	STATIC	ELEC	
01/12/2012	09:53	BY SECONI	5.19	2.25	2.94	STATIC	ELEC	
Station Name: OCWD-BSO9B/2 Perfs: 520-615 Elev GS: 5 Aquifer: MAIN								
01/07/2010	10:02	DAY	5.32	59.86	-54.54	STATIC	ELEC	
03/05/2010	07:16	MONTHLY	5.32	52.77	-47.45	STATIC	ELEC	
05/05/2010	11:31	DAY	5.32	53.00	-47.68	STATIC	ELEC	
07/01/2010	16:13	BY SECONI	5.32	54.52	-49.20	STATIC	ELEC	
09/09/2010	12:28	BY SECONI	5.32	57.72	-52.40	STATIC	ELEC	
01/13/2011	13:00	MONTHLY	5.32	34.90	-29.58	STATIC	ELEC	
03/10/2011	12:08	MONTHLY	5.32	37.88	-32.56	STATIC	ELEC	
05/05/2011	10:42	BY SECONI	5.32	36.80	-31.48	STATIC	ELEC	
06/30/2011	14:41	MONTHLY	5.32	26.39	-21.07	STATIC	ELEC	
08/31/2011	11:10	DAY	5.32	17.20	-11.88	STATIC	ELEC	
01/12/2012	09:54	MONTHLY	5.32	19.12	-13.80	STATIC	ELEC	
Station Name: OCWD-BSO9C/1 Perfs: 340-435 Elev GS: 5 Aquifer: MEADOWLARK								
03/05/2010	07:18	MONTHLY	5.64	26.32	-20.68	STATIC	ELEC	
05/05/2010	11:33	MONTHLY	5.64	25.24	-19.60	STATIC	ELEC	
07/01/2010	16:14	DAY	5.64	26.00	-20.36	STATIC	ELEC	
09/09/2010	12:29	MONTHLY	5.64	28.08	-22.44	STATIC	ELEC	
10/28/2010	14:26	BY SECONI	5.64	24.00	-18.36	STATIC	ELEC	

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: OCWD-BSO9C/1 Perfs: 340-435 Elev GS: 5 Aquifer: MEADOWLARK								
01/13/2011	13:00	DAY	5.64	13.30	-7.66	STATIC	ELEC	
03/10/2011	12:09	MONTHLY	5.64	14.59	-8.95	STATIC	ELEC	
05/05/2011	10:39	BY SECONI	5.64	14.14	-8.50	STATIC	ELEC	
06/30/2011	14:41	MONTHLY	5.64	10.12	-4.48	STATIC	ELEC	
08/31/2011	11:10	BY SECONI	5.64	10.00	-4.36	STATIC	ELEC	
11/01/2011	06:26	MONTHLY	5.64	10.35	-4.71	STATIC	ELEC	
01/12/2012	09:50	MONTHLY	5.64	7.90	-2.26	STATIC	ELEC	
Station Name: SB-BC/1 Perfs: 370-1020 Elev GS: 21 Aquifer: UNDEFINED								
01/25/2010	09:00	DAY	22.00	112.00	-90.00	PUMPING	ELEC	pump on 336 hours
01/25/2010	14:00	DAY	22.00	81.00	-59.00	STATIC	ELEC	pump off 5 hours
02/23/2010	09:30	DAY	22.00	119.00	-97.00	PUMPING	ELEC	pump on 168 hours
02/23/2010	13:30	BY SECONI	22.00	80.00	-58.00	STATIC	ELEC	pump off 4 hours
03/29/2010	11:00	DAY	22.00	122.00	-100.00	PUMPING	ELEC	pump on 336 hours
03/29/2010	15:00	DAY	22.00	82.00	-60.00	STATIC	ELEC	pump off 4 hours
04/26/2010	11:00	MONTHLY	22.00	117.00	-95.00	PUMPING	ELEC	pump on 672 hours
04/26/2010	15:00	MONTHLY	22.00	82.00	-60.00	STATIC	ELEC	pump off 4 hours
05/24/2010	10:00	MONTHLY	22.00	117.00	-95.00	PUMPING	ELEC	pump on 696 hours
05/24/2010	14:00	MONTHLY	22.00	79.00	-57.00	STATIC	ELEC	pump off 4 hours
06/28/2010	09:00	DAY	22.00	79.00	-57.00	STATIC	ELEC	pump off 792 hours
07/26/2010	14:00	DAY	22.00	80.00	-58.00	STATIC	ELEC	pump off 720 hours
08/30/2010	11:00	DAY	22.00	79.00	-57.00	STATIC	ELEC	pump off 720 hours
09/28/2010	10:30	MONTHLY	22.00	78.00	-56.00	STATIC	ELEC	pump off 1 month
10/27/2010	09:00	MONTHLY	22.00	110.00	-88.00	PUMPING	ELEC	pump on 432 hours
10/28/2010	10:30	DAY	22.00	80.00	-58.00	STATIC	ELEC	pump off 24 hours
11/29/2010	10:30	MONTHLY	22.00	100.00	-78.00	PUMPING	ELEC	pump on 144 hours
11/29/2010	15:30	MONTHLY	22.00	71.00	-49.00	STATIC	ELEC	pump off 5 hours
12/20/2010	10:30	MONTHLY	22.00	99.00	-77.00	PUMPING	ELEC	pump on 336 hours
12/20/2010	15:00	DAY	22.00	63.00	-41.00	STATIC	ELEC	pump off 4 hours
01/31/2011	10:30	DAY	22.00	104.00	-82.00	PUMPING	ELEC	pump on 600 hours
01/31/2011	14:30	MONTHLY	22.00	67.00	-45.00	STATIC	ELEC	pump off 4 hours
02/28/2011	10:30	MONTHLY	22.00	90.00	-68.00	PUMPING	ELEC	pump on 336 hours
02/28/2011	12:30	MONTHLY	22.00	67.00	-45.00	STATIC	ELEC	pump off 2 hours
03/24/2011	11:00	DAY	22.00	95.00	-73.00	STATIC	ELEC	pump on 336 hours
03/24/2011	15:00	BY SECONI	22.00	66.00	-44.00	STATIC	ELEC	pump off 4 hours
04/25/2011	10:30	MONTHLY	22.00	90.00	-68.00	PUMPING	ELEC	pump on 330 hours
04/25/2011	14:30	DAY	22.00	63.00	-41.00	STATIC	ELEC	pump off 4 hours
05/31/2011	09:00	MONTHLY	22.00	95.00	-73.00	PUMPING	ELEC	pump on 28 days
05/31/2011	11:00	DAY	22.00	63.00	-41.00	STATIC	ELEC	pump off 2 hours
06/29/2011	10:00	MONTHLY	22.00	64.00	-42.00	STATIC	ELEC	pump off 480 hours
08/30/2011	08:00	MONTHLY	22.00	51.00	-29.00	STATIC	ELEC	pump off 4 hours
09/27/2011	11:30	DAY	22.00	31.00	-9.00	STATIC	ELEC	pump off 160 hours
11/07/2011	10:00	BY SECONI	22.00	55.00	-33.00	PUMPING	ELEC	pump on 430 hours
11/08/2011	10:00	DAY	22.00	36.00	-14.00	STATIC	ELEC	pump off 24 hours

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: SB-BC/1 Perfs: 370-1020 Elev GS: 21 Aquifer: UNDEFINED								
12/05/2011		DAY	22.00	34.00	-12.00	STATIC	ELEC	
12/05/2011		BY SECONI	22.00	59.00	-37.00	PUMPING	ELEC	
12/27/2011		BY SECONI	22.00	35.00	-13.00	STATIC	ELEC	
12/27/2011		DAY	22.00	62.00	-40.00	PUMPING	ELEC	
Station Name: SB-BEV/1 Perfs: 400-800 Elev GS: 11.2 Aquifer: UNDEFINED								
01/25/2010	07:00	BY SECONI	11.86	76.00	-64.14	STATIC	ELEC	pump off 432 hours
01/25/2010	11:00	BY SECONI	11.86	94.00	-82.14	PUMPING	ELEC	pump on 1/2 hour
02/23/2010	08:00	BY SECONI	11.86	72.00	-60.14	STATIC	ELEC	pump off 24 hours
02/23/2010	08:30	DAY	11.86	94.00	-82.14	PUMPING	ELEC	pump on 1/2 hour
03/29/2010	08:30	MONTHLY	11.86	76.00	-64.14	STATIC	ELEC	pump off 48 hours
03/29/2010	10:00	DAY	11.86	95.00	-83.14	PUMPING	ELEC	pump on 1 1/2 hours
04/26/2010	08:30	DAY	11.86	79.00	-67.14	STATIC	ELEC	pump off 16 hours
04/26/2010	10:00	BY SECONI	11.86	98.00	-86.14	PUMPING	ELEC	pump on 1 1/2 hours
05/24/2010	08:00	DAY	11.86	77.00	-65.14	STATIC	ELEC	pump off 20 hours
05/24/2010	09:30	MONTHLY	11.86	98.00	-86.14	PUMPING	ELEC	pump on 1 hour
06/28/2010	08:00	DAY	11.86	79.00	-67.14	STATIC	ELEC	pump off 40 hours
06/28/2010	11:00	MONTHLY	11.86	100.00	-88.14	PUMPING	ELEC	pump on 3 hours
07/26/2010	07:30	BY SECONI	11.86	81.00	-69.14	STATIC	ELEC	pump off 48 hours
07/26/2010	11:00	MONTHLY	11.86	100.00	-88.14	PUMPING	ELEC	pump on 2 hours
08/30/2010	08:00	DAY	11.86	83.00	-71.14	STATIC	ELEC	pump off 18 hours
08/30/2010	10:00	BY SECONI	11.86	101.00	-89.14	PUMPING	ELEC	pump on 2 hours
09/28/2010	08:30	MONTHLY	11.86	83.00	-71.14	STATIC	ELEC	pump off 146 hours
09/28/2010	09:30	MONTHLY	11.86	102.00	-90.14	PUMPING	ELEC	pump on 1 hour
10/25/2010	10:30	MONTHLY	11.86	98.00	-86.14	PUMPING	ELEC	pump on 2 hours
10/26/2010	11:00	MONTHLY	11.86	79.00	-67.14	STATIC	ELEC	pump off 24 hours
11/29/2010	07:30	DAY	11.86	64.00	-52.14	STATIC	ELEC	pump off 48 hours
11/29/2010	09:00	DAY	11.86	84.00	-72.14	PUMPING	ELEC	pump on 1/2 hour
12/20/2010	07:30	DAY	11.86	53.00	-41.14	STATIC	ELEC	pump off 264 hours
12/20/2010	08:30	DAY	11.86	74.00	-62.14	PUMPING	ELEC	pump on 1 hour
01/31/2011	08:00	DAY	11.86	54.00	-42.14	STATIC	ELEC	pump off 14 hours
01/31/2011	09:30	DAY	11.86	74.00	-62.14	PUMPING	ELEC	pump on 1 hour
02/28/2011	08:30	DAY	11.86	58.00	-46.14	STATIC	ELEC	pump off 10 hours
02/28/2011	09:30	MONTHLY	11.86	79.00	-67.14	PUMPING	ELEC	pump on 1 hour
03/24/2011	08:00	BY SECONI	11.86	62.00	-50.14	STATIC	ELEC	pump off 25 hours
03/24/2011	09:30	BY SECONI	11.86	83.00	-71.14	STATIC	ELEC	pump on 1/2 hour
04/25/2011	07:00	BY SECONI	11.86	54.00	-42.14	STATIC	ELEC	pump off 7 hours
04/25/2011	09:00	DAY	11.86	78.00	-66.14	PUMPING	ELEC	pump on 1 hour
05/31/2011	08:00	MONTHLY	11.86	52.00	-40.14	STATIC	ELEC	pump off 5 days
05/31/2011	09:00	BY SECONI	11.86	72.00	-60.14	PUMPING	ELEC	pump on 1 hour
06/28/2011	09:00	BY SECONI	11.86	70.00	-58.14	PUMPING	ELEC	pump on 1 hour
06/29/2011	08:00	BY SECONI	11.86	45.00	-33.14	STATIC	ELEC	pump off 24 hours
07/25/2011	08:00	BY SECONI	11.86	39.00	-27.14	STATIC	ELEC	pump off 12 hours
07/25/2011	11:00	MONTHLY	11.86	64.00	-52.14	PUMPING	ELEC	pump on 2 hours

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: SB-BEV/1 Perfs: 400-800 Elev GS: 11.2 Aquifer: UNDEFINED								
08/30/2011	08:00	DAY	11.86	35.00	-23.14	STATIC	ELEC	pump off 4 hours
08/30/2011	10:00	BY SECONI	11.86	57.00	-45.14	PUMPING	ELEC	pump on 2 hours
09/27/2011	08:00	MONTHLY	11.86	27.00	-15.14	STATIC	ELEC	pump off 120 hours
09/27/2011	08:30	BY SECONI	11.86	49.00	-37.14	PUMPING	ELEC	pump on 1/2 hour
11/07/2011	08:00	DAY	11.86	30.00	-18.14	STATIC	ELEC	pump off 144 hours
11/08/2011	07:30	DAY	11.86	55.00	-43.14	PUMPING	ELEC	pump on 2 hours
12/05/2011		MONTHLY	11.86	42.00	-30.14	STATIC	ELEC	
12/05/2011		BY SECONI	11.86	64.00	-52.14	PUMPING	ELEC	
12/27/2011		MONTHLY	11.86	64.00	-52.14	PUMPING	ELEC	
12/27/2011		DAY	11.86	42.00	-30.14	STATIC	ELEC	
Station Name: SB-LAM/1 Perfs: 360-1170 Elev GS: 20 Aquifer: UNDEFINED								
07/26/2010	09:00	BY SECONI	20.00	80.00	-60.00	STATIC	ELEC	pump off 1 hour
09/28/2010		DAY	20.00	72.00	-52.00	STATIC	ELEC	Well still being developed...submitted by phone Alan Bramlett
10/26/2010	14:00	MONTHLY	20.00	68.00	-48.00	STATIC	ELEC	pump off 24 hours
11/29/2010	11:30	BY SECONI	20.00	54.00	-34.00	STATIC	ELEC	
12/20/2010	11:30	DAY	20.00	45.00	-25.00	STATIC	ELEC	
01/31/2011	15:00	MONTHLY	20.00	46.00	-26.00	STATIC	ELEC	
02/28/2011	08:00	DAY	20.00	47.00	-27.00	STATIC	ELEC	
03/24/2011		MONTHLY	20.00	48.00	-28.00	STATIC	ELEC	
04/27/2011		MONTHLY	20.00	87.00	-67.00	PUMPING	ELEC	pump on 6 hours
04/27/2011		DAY	20.00	53.00	-33.00	STATIC	ELEC	pump off 2 years, new
05/31/2011	11:30	DAY	20.00	75.00	-55.00	PUMPING	ELEC	pump on 7 days
05/31/2011	15:30	BY SECONI	20.00	54.00	-34.00	STATIC	ELEC	pump off 4 hours
06/29/2011	15:00	BY SECONI	20.00	44.00	-24.00	STATIC	ELEC	pump off 336 hours
08/30/2011	08:00	BY SECONI	20.00	36.00	-16.00	STATIC	ELEC	pump off 4 hours
09/27/2011	07:00	BY SECONI	20.00	46.00	-26.00	PUMPING	ELEC	pump on 160 hours
09/27/2011	09:00	MONTHLY	20.00	31.00	-11.00	STATIC	ELEC	pump off 1 hour
11/02/2011	11:00	BY SECONI	20.00	49.00	-29.00	PUMPING	ELEC	pump on 336 hours
11/07/2011	09:00	BY SECONI	20.00	34.00	-14.00	STATIC	ELEC	pump off 24 hours
12/05/2011		BY SECONI	20.00	40.00	-20.00	STATIC	ELEC	
12/05/2011		DAY	20.00	52.00	-32.00	PUMPING	ELEC	
12/27/2011		DAY	20.00	42.00	-30.14	STATIC	ELEC	
Station Name: SB-LEI/1 Perfs: 420-840 Elev GS: 9.8 Aquifer: UNDEFINED								
01/25/2010	08:00	DAY	11.43	74.00	-62.57	STATIC	ELEC	pump off 120 hours
01/25/2010	10:30	DAY	11.43	96.00	-84.57	PUMPING	ELEC	pump on 1/2 hour
02/23/2010	07:30	MONTHLY	11.43	71.00	-59.57	STATIC	ELEC	pump off 24 hours
02/23/2010	07:30	DAY	11.43	93.00	-81.57	PUMPING	ELEC	pump on 1/2 hour
03/29/2010	08:00	MONTHLY	11.43	73.00	-61.57	STATIC	ELEC	pump off 72 hours
03/29/2010	09:00	DAY	11.43	96.00	-84.57	PUMPING	ELEC	pump on 1 hour
04/26/2010	07:00	DAY	11.43	98.00	-86.57	PUMPING	ELEC	pump on 3 hours
04/26/2010	08:00	MONTHLY	11.43	77.00	-65.57	STATIC	ELEC	pump off 1 hour

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: SB-LEI/1 Perfs: 420-840 Elev GS: 9.8 Aquifer: UNDEFINED								
05/24/2010	07:00	BY SECONI	11.43	99.00	-87.57	PUMPING	ELEC	pump on 3 1/2 hours
05/24/2010	15:30	DAY	11.43	75.00	-63.57	STATIC	ELEC	pump off 8 hours
06/28/2010	07:30	BY SECONI	11.43	100.00	-88.57	PUMPING	ELEC	pump on 3 hours
06/29/2010	09:00	MONTHLY	11.43	78.00	-66.57	STATIC	ELEC	pump off 25 hours
07/26/2010	07:00	MONTHLY	11.43	101.00	-89.57	PUMPING	ELEC	pump on 3 hours
08/30/2010	07:00	MONTHLY	11.43	104.00	-92.57	PUMPING	ELEC	pump on 2 1/2 hours
08/30/2010	08:30	DAY	11.43	82.00	-70.57	STATIC	ELEC	pump off 1 hour
09/28/2010	07:30	DAY	11.43	104.00	-92.57	PUMPING	ELEC	pump on 1/2 hour
09/28/2010	11:30	DAY	11.43	82.00	-70.57	STATIC	ELEC	pump off 4 hours
10/25/2010	07:30	MONTHLY	11.43	102.00	-90.57	PUMPING	ELEC	pump on 3 hours
10/26/2010	08:00	BY SECONI	11.43	78.00	-66.57	STATIC	ELEC	pump off 24 hours
11/29/2010	07:00	BY SECONI	11.43	87.00	-75.57	PUMPING	ELEC	pump on 2 1/2 hours
11/29/2010	09:30	BY SECONI	11.43	62.00	-50.57	STATIC	ELEC	pump off 2 hours
12/20/2010	09:00	MONTHLY	11.43	51.00	-39.57	STATIC	ELEC	pump off 264 hours
12/20/2010	09:30	BY SECONI	11.43	78.00	-66.57	PUMPING	ELEC	pump on 1/2 hour
01/31/2011	07:00	DAY	11.43	79.00	-67.57	PUMPING	ELEC	pump on 2 1/2 hours
01/31/2011	09:00	MONTHLY	11.43	52.00	-40.57	STATIC	ELEC	pump off 1 1/2 hours
02/28/2011	07:30	DAY	11.43	84.00	-72.57	PUMPING	ELEC	pump on 4 hours
02/28/2011	10:00	DAY	11.43	56.00	-44.57	STATIC	ELEC	pump off 2 hours
03/24/2011	07:00	BY SECONI	11.43	87.00	-75.57	STATIC	ELEC	pump on 3 hours
03/24/2011	08:30	BY SECONI	11.43	60.00	-48.57	STATIC	ELEC	pump off 1 hour
04/25/2011	07:30	BY SECONI	11.43	79.00	-67.57	PUMPING	ELEC	pump on 4 hours
04/25/2011	09:30	BY SECONI	11.43	55.00	-43.57	STATIC	ELEC	pump off 2 hours
05/31/2011	07:30	MONTHLY	11.43	50.00	-38.57	STATIC	ELEC	pump off 5 days
05/31/2011	08:30	DAY	11.43	78.00	-66.57	PUMPING	ELEC	pump on 1 hour
06/28/2011	07:50	BY SECONI	11.43	71.00	-59.57	PUMPING	ELEC	pump on 4 hours
06/29/2011	13:00	BY SECONI	11.43	43.00	-31.57	STATIC	ELEC	pump off 24 hours
07/25/2011	07:00	MONTHLY	11.43	69.00	-57.57	PUMPING	ELEC	pump on 3.5 hours
07/25/2011	09:30	DAY	11.43	40.00	-28.57	STATIC	ELEC	pump off 2 hours
08/30/2011	08:00	BY SECONI	11.43	33.00	-21.57	STATIC	ELEC	pump off 4 hours
08/30/2011	10:00	MONTHLY	11.43	63.00	-51.57	PUMPING	ELEC	pump on 2 hours
09/27/2011	07:30	DAY	11.43	26.00	-14.57	STATIC	ELEC	pump off 288 hours
11/07/2011	08:30	BY SECONI	11.43	27.00	-15.57	STATIC	ELEC	pump off 144 hours
11/08/2011	14:00	BY SECONI	11.43	62.00	-50.57	PUMPING	ELEC	pump on 2 hours
12/05/2011		BY SECONI	11.43	70.00	-58.57	PUMPING	ELEC	
12/05/2011		MONTHLY	11.43	39.00	-27.57	STATIC	ELEC	
12/27/2011		BY SECONI	11.43	40.00	-28.57	STATIC	ELEC	
12/27/2011		MONTHLY	11.43	68.00	-56.57	PUMPING	ELEC	
Station Name: SBM-1/1/WB1/MP1 Zone Interval: 74-84 Elev GS: 17.07								
01/15/2010	10:29	BY SECONI	19.07	15.33	3.74	STATIC	WBMAN	
02/25/2010	11:02	BY SECONI	19.07	13.09	5.98	STATIC	WBMAN	
03/24/2010	10:37	DAY	19.07	12.93	6.14	STATIC	WBMAN	
05/05/2010	13:46	MONTHLY	19.07	13.30	5.77	STATIC	WBMAN	

Elev GS = Elevation of Ground Surface WL Status = Water level Status
Elev RP = Elevation of Reference Point Perfs = Perforated Interval
Elev WS = Elevation of Water Surface

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: SBM-1/1/WB1/MP1 Zone Interval: 74-84 Elev GS: 17.07								
06/08/2010	10:31	DAY	19.07	13.57	5.50	STATIC	WBMAN	
07/01/2010	10:20	BY SECONI	19.07	13.78	5.29	STATIC	WBMAN	
08/17/2010	10:16	DAY	19.07	14.15	4.92	STATIC	WBMAN	
09/15/2010	10:31	BY SECONI	19.07	14.70	4.37	STATIC	WBMAN	
11/01/2010	10:26	MONTHLY	19.07	14.06	5.01	STATIC	WBMAN	
12/14/2010	12:04	MONTHLY	19.07	13.07	6.00	STATIC	WBMAN	
02/17/2011	10:09	BY SECONI	19.07	10.90	8.17	STATIC	WBMAN	
03/29/2011	10:38	DAY	19.07	10.27	8.80	STATIC	WBMAN	
04/21/2011	10:21	MONTHLY	19.07	10.27	8.80	STATIC	WBMAN	
05/24/2011	10:30	MONTHLY	19.07	10.41	8.66	STATIC	WBMAN	
06/30/2011	10:27	BY SECONI	19.07	10.27	8.80	STATIC	WBMAN	
08/11/2011	10:13	BY SECONI	19.07	10.27	8.80	STATIC	WBMAN	
09/20/2011	10:43	BY SECONI	19.07	10.23	8.84	STATIC	WBMAN	
11/08/2011	10:21	MONTHLY	19.07	10.14	8.93	STATIC	WBMAN	
12/19/2011	10:26	DAY	19.07	9.24	9.83	STATIC	WBMAN	
01/30/2012	10:29	MONTHLY	19.07	9.24	9.83	STATIC	WBMAN	
Station Name: SBM-1/1/WB1/MP2 Zone Interval: 144-154 Elev GS: 17.07								
01/15/2010	10:26	DAY	19.07	41.21	-22.15	STATIC	WBMAN	
02/25/2010	10:59	MONTHLY	19.07	37.53	-18.47	STATIC	WBMAN	
03/24/2010	10:34	MONTHLY	19.07	36.75	-17.69	STATIC	WBMAN	
05/05/2010	13:43	MONTHLY	19.07	37.12	-18.06	STATIC	WBMAN	
06/08/2010	10:28	MONTHLY	19.07	38.61	-19.55	STATIC	WBMAN	
07/01/2010	10:16	BY SECONI	19.07	39.92	-20.86	STATIC	WBMAN	
08/17/2010	10:13	DAY	19.07	41.54	-22.48	STATIC	WBMAN	
09/15/2010	10:28	MONTHLY	19.07	42.44	-23.38	STATIC	WBMAN	
11/01/2010	10:23	BY SECONI	19.07	32.92	-13.86	STATIC	WBMAN	
12/14/2010	12:00	MONTHLY	19.07	30.21	-11.15	STATIC	WBMAN	
02/17/2011	10:05	MONTHLY	19.07	26.66	-7.60	STATIC	WBMAN	
03/29/2011	10:35	MONTHLY	19.07	24.11	-5.05	STATIC	WBMAN	
04/21/2011	10:18	DAY	19.07	25.70	-6.64	STATIC	WBMAN	
05/24/2011	10:26	BY SECONI	19.07	28.69	-9.63	STATIC	WBMAN	
06/30/2011	10:23	DAY	19.07	22.96	-3.90	STATIC	WBMAN	
08/11/2011	10:09	BY SECONI	19.07	23.33	-4.27	STATIC	WBMAN	
09/20/2011	10:23	BY SECONI	19.07	12.35	6.72	STATIC	WBMAN	
11/08/2011	10:18	BY SECONI	19.07	24.95	-5.89	STATIC	WBMAN	
12/19/2011	10:23	DAY	19.07	18.90	0.17	STATIC	WBMAN	
01/30/2012	10:27	BY SECONI	19.07	21.13	-2.07	STATIC	WBMAN	
Station Name: SBM-1/1/WB1/MP3 Zone Interval: 240-250 Elev GS: 17.07								
01/15/2010	10:22	MONTHLY	19.07	42.17	-23.11	STATIC	WBMAN	
02/25/2010	10:55	DAY	19.07	38.44	-19.38	STATIC	WBMAN	
03/24/2010	10:31	MONTHLY	19.07	37.70	-18.64	STATIC	WBMAN	
05/05/2010	13:40	BY SECONI	19.07	37.88	-18.82	STATIC	WBMAN	

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: SBM-1/1/WB1/MP3 Zone Interval: 240-250 Elev GS: 17.07								
06/08/2010	10:24	MONTHLY	19.07	39.79	-20.73	STATIC	WBMAN	
07/01/2010	10:13	DAY	19.07	40.94	-21.88	STATIC	WBMAN	
08/17/2010	10:10	MONTHLY	19.07	42.64	-23.58	STATIC	WBMAN	
09/15/2010	10:24	BY SECONI	19.07	43.65	-24.59	STATIC	WBMAN	
11/01/2010	10:19	DAY	19.07	33.34	-14.28	STATIC	WBMAN	
12/14/2010	11:56	MONTHLY	19.07	30.77	-11.71	STATIC	WBMAN	
02/17/2011	10:02	BY SECONI	19.07	27.01	-7.95	STATIC	WBMAN	
03/29/2011	10:32	BY SECONI	19.07	24.27	-5.21	STATIC	WBMAN	
04/21/2011	10:15	BY SECONI	19.07	26.19	-7.13	STATIC	WBMAN	
05/24/2011	10:23	MONTHLY	19.07	29.43	-10.37	STATIC	WBMAN	
06/30/2011	10:20	MONTHLY	19.07	23.05	-3.99	STATIC	WBMAN	
08/11/2011	10:06	DAY	19.07	23.63	-4.57	STATIC	WBMAN	
09/20/2011	10:19	MONTHLY	19.07	23.16	-4.10	STATIC	WBMAN	
11/08/2011	10:15	BY SECONI	19.07	25.27	-6.21	STATIC	WBMAN	
12/19/2011	10:20	BY SECONI	19.07	18.90	0.17	STATIC	WBMAN	
01/30/2012	10:24	BY SECONI	19.07	21.31	-2.25	STATIC	WBMAN	
Station Name: SBM-1/1/WB1/MP4 Zone Interval: 370-380 Elev GS: 17.07								
01/15/2010	10:18	DAY	19.07	54.37	-35.31	STATIC	WBMAN	
02/25/2010	10:57	DAY	19.07	52.04	-32.98	STATIC	WBMAN	
03/24/2010	10:28	MONTHLY	19.07	49.21	-30.15	STATIC	WBMAN	
05/05/2010	13:36	MONTHLY	19.07	53.59	-34.53	STATIC	WBMAN	
06/08/2010	10:21	DAY	19.07	49.89	-30.83	STATIC	WBMAN	
07/01/2010	10:09	DAY	19.07	54.10	-35.04	STATIC	WBMAN	
08/17/2010	10:06	BY SECONI	19.07	51.94	-32.88	STATIC	WBMAN	
09/15/2010	10:21	DAY	19.07	52.36	-33.30	STATIC	WBMAN	
11/01/2010	10:16	DAY	19.07	45.99	-26.93	STATIC	WBMAN	
12/14/2010	11:52	DAY	19.07	41.64	-22.58	STATIC	WBMAN	
02/17/2011	09:58	BY SECONI	19.07	37.17	-18.11	STATIC	WBMAN	
03/29/2011	10:28	DAY	19.07	34.06	-15.00	STATIC	WBMAN	
04/21/2011	10:11	DAY	19.07	36.05	-16.99	STATIC	WBMAN	
05/24/2011	10:20	DAY	19.07	37.67	-18.61	STATIC	WBMAN	
06/30/2011	10:16	MONTHLY	19.07	26.83	-7.77	STATIC	WBMAN	
08/11/2011	10:03	DAY	19.07	26.98	-7.92	STATIC	WBMAN	
09/20/2011	10:15	BY SECONI	19.07	12.60	6.47	STATIC	WBMAN	
11/08/2011	10:12	DAY	19.07	33.02	-13.96	STATIC	WBMAN	
12/19/2011	10:17	MONTHLY	19.07	27.40	-8.34	STATIC	WBMAN	
01/30/2012	10:20	MONTHLY	19.07	28.78	-9.72	STATIC	WBMAN	
Station Name: SBM-1/1/WB1/MP5 Zone Interval: 510-520 Elev GS: 17.07								
01/15/2010	10:14	DAY	19.07	57.58	-38.52	STATIC	WBMAN	
02/25/2010	10:47	DAY	19.07	55.13	-36.07	STATIC	WBMAN	
03/24/2010	10:24	DAY	19.07	51.96	-32.90	STATIC	WBMAN	
05/05/2010	13:32	MONTHLY	19.07	56.81	-37.75	STATIC	WBMAN	

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: SBM-1/1/WB1/MP5 Zone Interval: 510-520 Elev GS: 17.07								
06/08/2010	10:17	DAY	19.07	53.51	-34.45	STATIC	WBMAN	
07/01/2010	10:05	BY SECONI	19.07	58.18	-39.12	STATIC	WBMAN	
08/17/2010	10:03	BY SECONI	19.07	55.24	-36.18	STATIC	WBMAN	
09/15/2010	10:17	MONTHLY	19.07	55.97	-36.91	STATIC	WBMAN	
11/01/2010	10:12	DAY	19.07	48.55	-29.49	STATIC	WBMAN	
12/14/2010	11:48	MONTHLY	19.07	45.32	-26.26	STATIC	WBMAN	
02/17/2011	09:54	MONTHLY	19.07	40.19	-21.13	STATIC	WBMAN	
03/29/2011	10:24	DAY	19.07	36.98	-17.92	STATIC	WBMAN	
04/21/2011	10:08	MONTHLY	19.07	38.94	-19.88	STATIC	WBMAN	
05/24/2011	10:16	DAY	19.07	40.06	-21.00	STATIC	WBMAN	
06/30/2011	10:13	MONTHLY	19.07	27.88	-8.82	STATIC	WBMAN	
08/11/2011	09:59	BY SECONI	19.07	28.71	-9.65	STATIC	WBMAN	
09/20/2011	10:11	BY SECONI	19.07	30.39	-11.33	STATIC	WBMAN	
11/08/2011	10:09	MONTHLY	19.07	35.19	-16.13	STATIC	WBMAN	
12/19/2011	10:13	BY SECONI	19.07	29.61	-10.55	STATIC	WBMAN	
01/30/2012	10:17	MONTHLY	19.07	31.28	-12.22	STATIC	WBMAN	
Station Name: SBM-1/1/WB1/MP6 Zone Interval: 696-706 Elev GS: 17.07								
01/15/2010	10:09	MONTHLY	19.07	77.21	-58.15	STATIC	WBMAN	
02/25/2010	10:42	BY SECONI	19.07	71.26	-52.20	STATIC	WBMAN	
03/24/2010	10:09	BY SECONI	19.07	68.25	-49.19	STATIC	WBMAN	
05/05/2010	13:24	DAY	19.07	71.07	-52.01	STATIC	WBMAN	
06/08/2010	10:13	DAY	19.07	71.86	-52.80	STATIC	WBMAN	
07/01/2010	10:01	DAY	19.07	74.15	-55.09	STATIC	WBMAN	
08/17/2010	09:58	DAY	19.07	76.05	-56.99	STATIC	WBMAN	
09/15/2010	10:13	DAY	19.07	78.49	-59.43	STATIC	WBMAN	
11/01/2010	10:08	MONTHLY	19.07	61.99	-42.93	STATIC	WBMAN	
12/14/2010	11:43	BY SECONI	19.07	60.74	-41.68	STATIC	WBMAN	
02/17/2011	09:49	MONTHLY	19.07	54.69	-35.63	STATIC	WBMAN	
03/29/2011	10:20	BY SECONI	19.07	52.47	-33.41	STATIC	WBMAN	
04/21/2011	10:03	BY SECONI	19.07	56.01	-36.95	STATIC	WBMAN	
05/24/2011	10:11	DAY	19.07	55.60	-36.54	STATIC	WBMAN	
06/30/2011	10:08	DAY	19.07	31.65	-12.59	STATIC	WBMAN	
08/11/2011	09:54	DAY	19.07	30.78	-11.72	STATIC	WBMAN	
09/20/2011	10:07	MONTHLY	19.07	28.86	-9.80	STATIC	WBMAN	
11/08/2011	10:05	BY SECONI	19.07	39.78	-20.72	STATIC	WBMAN	
12/19/2011	10:09	MONTHLY	19.07	34.85	-15.79	STATIC	WBMAN	
01/30/2012	10:12	DAY	19.07	42.69	-23.63	STATIC	WBMAN	
Station Name: SBM-1/1/WB1/MP7 Zone Interval: 910-920 Elev GS: 17.07								
01/15/2010	10:03	BY SECONI	19.07	78.61	-59.55	STATIC	WBMAN	
02/25/2010	10:37	BY SECONI	19.07	70.45	-51.39	STATIC	WBMAN	
03/24/2010	10:04	DAY	19.07	71.04	-51.98	STATIC	WBMAN	
05/05/2010	13:21	MONTHLY	19.07	73.28	-54.22	STATIC	WBMAN	

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: SBM-1/1/WB1/MP7 Zone Interval: 910-920 Elev GS: 17.07								
06/08/2010	10:08	MONTHLY	19.07	71.99	-52.93	STATIC	WBMAN	
07/01/2010	09:56	DAY	19.07	75.02	-55.96	STATIC	WBMAN	
08/17/2010	09:53	DAY	19.07	77.19	-58.13	STATIC	WBMAN	
09/15/2010	10:08	BY SECONI	19.07	80.25	-61.19	STATIC	WBMAN	
11/01/2010	10:04	DAY	19.07	72.10	-53.04	STATIC	WBMAN	
12/14/2010	11:38	BY SECONI	19.07	55.87	-36.81	STATIC	WBMAN	
02/17/2011	09:43	BY SECONI	19.07	53.55	-34.49	STATIC	WBMAN	
03/29/2011	10:15	BY SECONI	19.07	56.21	-37.15	STATIC	WBMAN	
04/21/2011	09:58	MONTHLY	19.07	53.06	-34.00	STATIC	WBMAN	
05/24/2011	10:06	MONTHLY	19.07	51.29	-32.23	STATIC	WBMAN	
06/30/2011	10:02	DAY	19.07	37.39	-18.33	STATIC	WBMAN	
08/11/2011	09:49	DAY	19.07	32.09	-13.03	STATIC	WBMAN	
09/20/2011	09:54	MONTHLY	19.07	23.81	-4.75	STATIC	WBMAN	
11/08/2011	09:59	MONTHLY	19.07	32.68	-13.62	STATIC	WBMAN	
12/19/2011	10:04	MONTHLY	19.07	34.35	-15.29	STATIC	WBMAN	
01/30/2012	10:08	MONTHLY	19.07	42.06	-23.00	STATIC	WBMAN	
Station Name: SBM-1/1/WB1/MP8 Zone Interval: 1250-1260 Elev GS: 17.07								
01/15/2010	09:56	MONTHLY	19.07	54.04	-34.98	STATIC	WBMAN	
02/25/2010	10:28	DAY	19.07	54.50	-35.44	STATIC	WBMAN	
03/24/2010	09:57	DAY	19.07	53.89	-34.83	STATIC	WBMAN	
05/05/2010	13:13	DAY	19.07	53.77	-34.71	STATIC	WBMAN	
06/08/2010	10:01	MONTHLY	19.07	54.24	-35.18	STATIC	WBMAN	
07/01/2010	09:49	BY SECONI	19.07	54.36	-35.30	STATIC	WBMAN	
08/17/2010	09:44	MONTHLY	19.07	55.34	-36.28	STATIC	WBMAN	
09/15/2010	10:01	DAY	19.07	56.11	-37.05	STATIC	WBMAN	
11/01/2010	09:57	MONTHLY	19.07	57.06	-38.00	STATIC	WBMAN	
12/14/2010	11:31	DAY	19.07	48.99	-29.93	STATIC	WBMAN	
02/17/2011	09:37	DAY	19.07	38.78	-19.72	STATIC	WBMAN	
03/29/2011	10:08	DAY	19.07	38.27	-19.21	STATIC	WBMAN	
04/21/2011	09:51	BY SECONI	19.07	36.27	-17.21	STATIC	WBMAN	
05/24/2011	09:59	DAY	19.07	31.86	-12.80	STATIC	WBMAN	
06/30/2011	09:55	DAY	19.07	27.71	-8.65	STATIC	WBMAN	
08/11/2011	09:41	BY SECONI	19.07	22.01	-2.95	STATIC	WBMAN	
09/20/2011	09:47	DAY	19.07	13.83	5.24	STATIC	WBMAN	
11/08/2011	09:53	DAY	19.07	11.36	7.71	STATIC	WBMAN	
12/19/2011	09:58	DAY	19.07	14.08	4.99	STATIC	WBMAN	
01/30/2012	10:01	DAY	19.07	19.42	-0.36	STATIC	WBMAN	
Station Name: SCWC-LAYT/1 Perfs: 250-800 Elev GS: 12 Aquifer: UNDEFINED								
01/25/2010		BY SECONI	12.58	68.00	-55.42	STATIC	CALAIR	
01/25/2010		DAY	12.58	93.00	-80.42	PUMPING	CALAIR	
02/23/2010		DAY	12.58	68.00	-55.42	STATIC	CALAIR	
02/23/2010		DAY	12.58	98.00	-85.42	PUMPING	CALAIR	

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: SCWC-LAYT/1 Perfs: 250-800 Elev GS: 12 Aquifer: UNDEFINED								
03/28/2010		MONTHLY	12.58	67.00	-54.42	STATIC	CALAIR	
03/28/2010		BY SECONI	12.58	97.00	-84.42	PUMPING	CALAIR	
04/14/2010		MONTHLY	12.58	102.00	-89.42	PUMPING	CALAIR	
04/28/2010		DAY	12.58	71.00	-58.42	STATIC	CALAIR	
05/20/2010		BY SECONI	12.58	102.00	-89.42	PUMPING	CALAIR	
05/26/2010		MONTHLY	12.58	72.00	-59.42	STATIC	CALAIR	
06/30/2010		BY SECONI	12.58	104.00	-91.42	PUMPING	CALAIR	
06/30/2010		DAY	12.58	77.00	-64.42	STATIC	CALAIR	
07/05/2010		DAY	12.58	71.00	-58.42	STATIC	CALAIR	pump off 4 hours
07/28/2010		MONTHLY	12.58	106.00	-93.42	PUMPING	CALAIR	
07/28/2010		DAY	12.58	76.00	-63.42	STATIC	CALAIR	
08/24/2010		DAY	12.58	77.00	-64.42	STATIC	CALAIR	
08/24/2010		MONTHLY	12.58	110.00	-97.42	PUMPING	CALAIR	
09/28/2010		MONTHLY	12.58	109.00	-96.42	PUMPING	CALAIR	
09/28/2010		DAY	12.58	77.00	-64.42	STATIC	CALAIR	
10/13/2010		MONTHLY	12.58	107.00	-94.42	PUMPING	CALAIR	
10/25/2010		MONTHLY	12.58	72.00	-59.42	STATIC	CALAIR	
11/16/2010		MONTHLY	12.58	67.00	-54.42	STATIC	CALAIR	
11/17/2010		MONTHLY	12.58	104.00	-91.42	PUMPING	CALAIR	
12/03/2010		BY SECONI	12.58	88.00	-75.42	PUMPING	CALAIR	
12/26/2010		DAY	12.58	52.00	-39.42	STATIC	CALAIR	
01/24/2011		BY SECONI	12.58	78.00	-65.42	PUMPING	CALAIR	
01/26/2011		MONTHLY	12.58	48.00	-35.42	STATIC	CALAIR	
02/23/2011		MONTHLY	12.58	55.00	-42.42	STATIC	CALAIR	
02/25/2011		DAY	12.58	85.00	-72.42	PUMPING	CALAIR	
03/28/2011		BY SECONI	12.58	88.00	-75.42	PUMPING	CALAIR	
03/28/2011		MONTHLY	12.58	57.00	-44.42	STATIC	CALAIR	
04/25/2011		MONTHLY	12.58	85.00	-72.42	PUMPING	CALAIR	
04/25/2011		MONTHLY	12.58	54.00	-41.42	STATIC	CALAIR	
05/23/2011		BY SECONI	12.58	82.00	-69.42	PUMPING	CALAIR	
05/23/2011		DAY	12.58	52.00	-39.42	STATIC	CALAIR	
06/29/2011		MONTHLY	12.58	77.00	-64.42	PUMPING	CALAIR	
06/30/2011		DAY	12.58	41.00	-28.42	STATIC	CALAIR	pump off 21 hours
07/27/2011		DAY	12.58	40.00	-27.42	STATIC	CALAIR	
07/27/2011		DAY	12.58	76.00	-63.42	PUMPING	CALAIR	
08/24/2011		DAY	12.58	72.00	-59.42	PUMPING	ELEC	
08/24/2011		MONTHLY	12.58	34.00	-21.42	STATIC	ELEC	
09/26/2011		BY SECONI	12.58	29.00	-16.42	STATIC	ELEC	
09/26/2011		BY SECONI	12.58	70.00	-57.42	PUMPING	CALAIR	
10/25/2011		BY SECONI	12.58	69.00	-56.42	PUMPING	CALAIR	
10/30/2011		DAY	12.58	29.00	-16.42	STATIC	CALAIR	pump off 24 hours
11/26/2011		MONTHLY	12.58	31.00	-18.42	STATIC	CALAIR	
11/28/2011		BY SECONI	12.58	74.00	-61.42	PUMPING	CALAIR	

Elev GS = Elevation of Ground Surface WL Status = Water level Status
Elev RP = Elevation of Reference Point Perfs = Perforated Interval
Elev WS = Elevation of Water Surface

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: SCWC-LAYT/1 Perfs: 250-800 Elev GS: 12 Aquifer: UNDEFINED								
12/06/2011		DAY	12.58	77.00	-64.42	PUMPING	ELEC	
12/19/2011		MONTHLY	12.58	34.00	-21.42	STATIC	ELEC	
Station Name: WM-125/1 Perfs: 374-860 Elev GS: 25 Aquifer: UNDEFINED								
01/06/2010	09:30	BY SECONI	25.00	89.00	-64.00	PUMPING	ELEC	pump on 3.5 hours
01/11/2010	07:55	BY SECONI	25.00	70.00	-45.00	STATIC	ELEC	pump off 72 hours
02/08/2010	08:55	DAY	25.00	89.40	-64.40	PUMPING	ELEC	pump on 97 hours
02/18/2010	14:40	DAY	25.00	61.40	-36.40	STATIC	ELEC	pump off 166 hours
03/01/2010	10:04	DAY	25.00	86.00	-61.00	PUMPING	ELEC	pump on 1 hour
03/18/2010	08:37	DAY	25.00	60.00	-35.00	STATIC	ELEC	pump off 171 hours
04/01/2010	07:30	MONTHLY	25.00	86.80	-61.80	PUMPING	ELEC	pump on 112.9 hours
04/07/2010	10:00	DAY	25.00	62.30	-37.30	STATIC	ELEC	pump off 100.8 hours
05/10/2010	14:37	BY SECONI	25.00	62.50	-37.50	STATIC	ELEC	pump off 103 hours
05/12/2010	09:00	DAY	25.00	86.00	-61.00	PUMPING	ELEC	pump on 26 hours
06/02/2010	10:37	BY SECONI	25.00	61.50	-36.50	STATIC	ELEC	pump off 164.2 hours
06/09/2010	08:12	DAY	25.00	84.90	-59.90	PUMPING	ELEC	pump on 1.5 hours
06/28/2010	13:00	DAY	25.00	63.10	-38.10	STATIC	ELEC	pump off 69.2 hours
06/29/2010	10:05	DAY	25.00	84.00	-59.00	PUMPING	ELEC	pump on 2 hours
08/04/2010	13:05	MONTHLY	25.00	90.00	-65.00	PUMPING	ELEC	pump on 21.5 hours
08/13/2010	11:30	DAY	25.00	62.00	-37.00	STATIC	ELEC	pump off 70.8 hours
09/07/2010	14:40	DAY	25.00	68.60	-43.60	STATIC	ELEC	pump off 95 hours
09/08/2010	13:00	MONTHLY	25.00	91.30	-66.30	PUMPING	ELEC	pump on 20 hours
10/04/2010	13:00	BY SECONI	25.00	64.90	-39.90	STATIC	ELEC	pump off 148 hours
10/26/2010	08:17	BY SECONI	25.00	58.00	-33.00	STATIC	ELEC	pump off 336 hours
12/01/2010	07:45	DAY	25.00	51.50	-26.50	STATIC	ELEC	pump off 97.5 hours
12/02/2010	11:18	MONTHLY	25.00	74.00	-49.00	PUMPING	ELEC	pump on 1 hour
01/03/2011	12:45	DAY	25.00	41.00	-16.00	STATIC	ELEC	pump off 745 hours
02/02/2011	09:15	MONTHLY	25.00	72.80	-47.80	PUMPING	ELEC	pump on 3 hours
02/07/2011	12:50	DAY	25.00	47.10	-22.10	STATIC	ELEC	pump off 191 hours
03/02/2011	07:40	MONTHLY	25.00	47.00	-22.00	STATIC	ELEC	pump off 111 hours
03/10/2011	08:15	DAY	25.00	68.00	-43.00	PUMPING	ELEC	pump on 1 hour
04/21/2011	13:25	MONTHLY	25.00	47.00	-22.00	STATIC	ELEC	pump off 314 hours
05/02/2011	08:30	DAY	25.00	44.00	-19.00	STATIC	ELEC	pump off 571.9 hours
06/01/2011	07:25	MONTHLY	25.00	48.00	-23.00	STATIC	ELEC	pump off 1267 hours
06/27/2011	15:40	DAY	25.00	34.00	-9.00	STATIC	ELEC	pump off 1891 hours
08/01/2011	10:15	DAY	25.00	37.00	-12.00	STATIC	ELEC	pump off 2803 hours
09/01/2011	07:15	BY SECONI	25.00	69.00	-44.00	PUMPING	ELEC	pump on 66.3 hours
09/19/2011	07:51	MONTHLY	25.00	40.00	-15.00	STATIC	ELEC	pump off 64.9 hours
10/03/2011	14:00	BY SECONI	25.00	36.00	-11.00	STATIC	ELEC	pump off 142 hours
10/13/2011	09:30	MONTHLY	25.00	65.00	-40.00	PUMPING	ELEC	pump on 2.5 hours
10/26/2011	15:30	DAY	25.00	40.50	-15.50	STATIC	ELEC	pump off 52.5 hours
10/28/2011	10:30	BY SECONI	25.00	71.50	-46.50	PUMPING	ELEC	pump on 18.5 hours
12/01/2011	08:00	BY SECONI	25.00	62.00	-37.00	PUMPING	ELEC	pump on 1.8 hours
12/05/2011	15:30	MONTHLY	25.00	35.00	-10.00	STATIC	ELEC	pump off 32.5 hours

Elev GS = Elevation of Ground Surface WL Status = Water level Status
Elev RP = Elevation of Reference Point Perfs = Perforated Interval
Elev WS = Elevation of Water Surface

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: WMIL-WM/1 Perfs: 260-300 Elev GS: 25 Aquifer: UNDEFINED								
06/29/2010	14:40	MONTHLY	25.67	47.57	-21.90	STATIC	TAPE	
10/25/2010	13:30	DAY	25.67	38.57	-12.90	STATIC	TAPE	wl very difficult to obtain, tape sticking to well casing
06/27/2011	12:20	MONTHLY	25.67	31.11	-5.44	STATIC	TAPE	WL difficult to obtain. WL tape getting stuck to casing on the way up and down.
10/27/2011	12:45	DAY	25.67	27.70	-2.03	STATIC	TAPE	
Station Name: WM-RES2/1 Perfs: 340-937 Elev GS: 28 Aquifer: UNDEFINED								
01/06/2010	10:20	BY SECONI	29.00	97.00	-68.00	PUMPING	ELEC	pump on 11 hours
01/14/2010	14:47	DAY	29.00	65.00	-36.00	STATIC	ELEC	pump off 48 hours
02/01/2010	13:35	DAY	29.00	94.40	-65.40	PUMPING	ELEC	pump on 94 hours
02/16/2010	14:52	MONTHLY	29.00	61.10	-32.10	STATIC	ELEC	pump off 144 hours
03/01/2010	10:57	DAY	29.00	93.30	-64.30	PUMPING	ELEC	pump on 82 hours
03/04/2010	11:40	DAY	29.00	61.00	-32.00	STATIC	ELEC	pump off 58 hours
04/01/2010	13:20	DAY	29.00	61.90	-32.90	STATIC	ELEC	pump off 118.5 hours
04/12/2010	07:30	DAY	29.00	95.50	-66.50	PUMPING	ELEC	pump on 43.7 hours
05/03/2010	13:25	DAY	29.00	93.00	-64.00	PUMPING	ELEC	pump on 100 hours
05/10/2010	12:50	MONTHLY	29.00	62.40	-33.40	STATIC	ELEC	pump off 101 hours
06/07/2010	13:15	BY SECONI	29.00	62.70	-33.70	STATIC	ELEC	pump off 68.2 hours
06/09/2010	07:38	MONTHLY	29.00	94.10	-65.10	PUMPING	ELEC	pump on 15.5 hours
06/28/2010	13:46	MONTHLY	29.00	64.50	-35.50	STATIC	ELEC	pump off 70 hours
06/29/2010	09:35	DAY	29.00	93.00	-64.00	PUMPING	ELEC	pump on 1.5 hours
08/11/2010	09:45	DAY	29.00	65.00	-14.33	STATIC	ELEC	pump off 138 hours
08/19/2010	14:30	MONTHLY	29.00	95.80	-66.80	PUMPING	ELEC	pump on 7.3 hours
09/07/2010	10:42	BY SECONI	29.00	100.00	-71.00	PUMPING	ELEC	pump on 77 hours
09/09/2010	13:00	DAY	29.00	69.00	-40.00	STATIC	ELEC	pump off 25 hours
10/04/2010	13:48	DAY	29.00	65.60	-36.60	STATIC	ELEC	pump off 79 hours
10/11/2010	07:12	DAY	29.00	97.00	-68.00	PUMPING	ELEC	pump on 66 hours
10/25/2010	15:20	BY SECONI	29.00	57.00	-28.00	STATIC	ELEC	pump off 103 hours
10/27/2010	07:10	DAY	29.00	89.00	-60.00	PUMPING	ELEC	pump on 14.2 hours
12/01/2010	08:20	BY SECONI	29.00	49.40	-20.40	STATIC	ELEC	pump off 168 hours
12/02/2010	09:25	DAY	29.00	82.00	-53.00	PUMPING	ELEC	pump on 3 hours
01/03/2011	13:50	DAY	29.00	41.90	-12.90	STATIC	ELEC	pump off 95 hours
01/07/2011	15:49	DAY	29.00	75.50	-46.50	PUMPING	ELEC	pump on 6 hours
02/07/2011	13:55	BY SECONI	29.00	48.00	-19.00	STATIC	ELEC	pump off 191 hours
02/14/2011	09:58	MONTHLY	29.00	83.00	-54.00	PUMPING	ELEC	pump on 66.7 hours
03/02/2011	07:10	DAY	29.00	79.00	-50.00	PUMPING	ELEC	pump on 13 hours
03/07/2011	11:40	MONTHLY	29.00	45.00	-16.00	STATIC	ELEC	pump off 96 hours
04/06/2011	15:50	DAY	29.00	45.00	-16.00	STATIC	ELEC	pump off 28 hours
04/19/2011	15:50	BY SECONI	29.00	78.00	-49.00	PUMPING	ELEC	pump on 2.3 hours
05/02/2011	08:00	DAY	29.00	45.00	-16.00	STATIC	ELEC	pump off 289.3 hours
05/05/2011	10:10	DAY	29.00	83.00	-54.00	PUMPING	ELEC	pump on 47.3 hours
06/02/2011	11:35	DAY	29.00	49.00	-20.00	STATIC	ELEC	pump off 46.2 hours
06/09/2011	10:04	BY SECONI	29.00	73.00	-44.00	PUMPING	ELEC	pump on 1.5 hours

Elev GS = Elevation of Ground Surface WL Status = Water level Status
Elev RP = Elevation of Reference Point Perfs = Perforated Interval
Elev WS = Elevation of Water Surface

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: WM-RES2/1 Perfs: 340-937 Elev GS: 28 Aquifer: UNDEFINED								
06/27/2011	14:50	DAY	29.00	38.00	-9.00	STATIC	ELEC	pump off 145.2 hours
06/29/2011	10:20	BY SECONI	29.00	68.00	-39.00	PUMPING	ELEC	pump on 2.3 hours
08/01/2011	10:55	DAY	29.00	69.00	-40.00	PUMPING	ELEC	pump on 4.6 hours
08/08/2011	13:00	DAY	29.00	38.00	-9.00	STATIC	ELEC	pump off 117 hours
09/02/2011	08:50	BY SECONI	29.00	40.50	-11.50	STATIC	ELEC	pump off 93.3 hours
09/09/2011	08:30	BY SECONI	29.00	73.00	-44.00	PUMPING	ELEC	pump on 3.6 hours
10/03/2011	13:00	DAY	29.00	39.00	-10.00	STATIC	ELEC	pump off 68 hours
10/13/2011	08:30	BY SECONI	29.00	72.00	-43.00	PUMPING	ELEC	pump on 1.5 hours
10/26/2011	14:30	BY SECONI	29.00	42.00	-13.00	STATIC	ELEC	pump off 317 hours
10/27/2011	08:15	DAY	29.00	76.00	-47.00	PUMPING	ELEC	pump on 16 hours
12/01/2011	09:05	DAY	29.00	36.00	-7.00	STATIC	ELEC	pump off 24.2 hours
12/12/2011	08:45	MONTHLY	29.00	68.00	-39.00	PUMPING	ELEC	pump on 2.6 hours
Station Name: WRD-SEALBEACH-1/1 Perfs: 60-70 Elev GS: 6.96 Aquifer: RECENT								
06/24/2010		MONTHLY	7.00	11.28	-4.28	STATIC	ELEC	
10/28/2010		DAY	7.00	11.12	-4.12	STATIC	ELEC	
12/23/2010		BY SECONI	7.00	6.61	0.39	STATIC	ELEC	
06/30/2011		DAY	6.96	5.96	1.00	STATIC	ELEC	
11/08/2011		BY SECONI	6.96	6.78	0.18	STATIC	ELEC	
Station Name: WRD-SEALBEACH-1/2 Perfs: 215-235 Elev GS: 6.96 Aquifer: C ZONE								
06/24/2010		DAY	7.00	20.07	-13.07	STATIC	ELEC	
10/28/2010		BY SECONI	7.00	18.26	-11.26	STATIC	ELEC	
12/23/2010		BY SECONI	7.00	11.93	-4.93	STATIC	ELEC	
06/30/2011		DAY	6.96	8.71	-1.75	STATIC	ELEC	
11/08/2011		DAY	6.96	9.47	-2.51	STATIC	ELEC	
Station Name: WRD-SEALBEACH-1/3 Perfs: 605-625 Elev GS: 6.96 Aquifer: I ZONE								
06/24/2010		DAY	7.00	57.10	-50.10	STATIC	ELEC	
10/28/2010		DAY	7.00	58.13	-51.13	STATIC	ELEC	
12/23/2010		DAY	7.00	37.76	-30.76	STATIC	ELEC	
06/30/2011		BY SECONI	6.96	29.50	-22.54	STATIC	ELEC	
11/08/2011		BY SECONI	6.96	24.03	-17.07	STATIC	ELEC	
Station Name: WRD-SEALBEACH-1/4 Perfs: 775-795 Elev GS: 6.96 Aquifer: MAIN								
06/24/2010		MONTHLY	7.00	77.64	-70.64	STATIC	ELEC	
10/28/2010		DAY	7.00	81.01	-74.01	STATIC	ELEC	
12/23/2010		DAY	7.00	46.66	-39.66	STATIC	ELEC	
06/30/2011		MONTHLY	6.96	37.52	-30.56	STATIC	ELEC	
11/08/2011		BY SECONI	6.96	26.02	-19.06	STATIC	ELEC	
Station Name: WRD-SEALBEACH-1/5 Perfs: 1020-1040 Elev GS: 6.96 Aquifer: LOWER MAIN								
06/24/2010		BY SECONI	7.00	52.12	-45.12	STATIC	ELEC	
10/28/2010		DAY	7.00	54.09	-47.09	STATIC	ELEC	
12/23/2010		MONTHLY	7.00	39.01	-32.01	STATIC	ELEC	
06/30/2011		DAY	6.96	19.12	-12.16	STATIC	ELEC	

NOTE: All depths and elevations in feet.
Elev GS = Elevation of Ground Surface WL Status = Water level Status
Elev RP = Elevation of Reference Point Perfs = Perforated Interval
Elev WS = Elevation of Water Surface

ORANGE COUNTY WATER DISTRICT
WATER LEVEL DATA

Date	Time	Time Period	Elev RP	Depth to Water	Elev WS	WL Status	Method	Comments
Station Name: WRD-SEALBEACH-1/5 Perfs: 1020-1040 Elev GS: 6.96 Aquifer: LOWER MAIN								
11/08/2011		BY SECONI	6.96	2.32	4.64	STATIC	ELEC	
Station Name: WRD-SEALBEACH-1/6 Perfs: 1160-1180 Elev GS: 6.96 Aquifer: LOWER MAIN								
06/24/2010		MONTHLY	7.00	52.23	-45.23	STATIC	ELEC	
10/28/2010		DAY	7.00	54.22	-47.22	STATIC	ELEC	
12/23/2010		BY SECONI	7.00	39.05	-32.05	STATIC	ELEC	
06/30/2011		BY SECONI	6.96	19.28	-12.32	STATIC	ELEC	
11/08/2011		MONTHLY	6.96	2.95	4.01	STATIC	ELEC	
Station Name: WRD-SEALBEACH-1/7 Perfs: 1345-1365 Elev GS: 6.96 Aquifer: LOWER MAIN								
06/24/2010		DAY	7.00	52.04	-45.04	STATIC	ELEC	
10/28/2010		DAY	7.00	54.02	-47.02	STATIC	ELEC	
12/23/2010		BY SECONI	7.00	39.09	-32.09	STATIC	ELEC	
06/30/2011		MONTHLY	6.96	19.07	-12.11	STATIC	ELEC	
11/08/2011		BY SECONI	6.96	3.02	3.94	STATIC	ELEC	

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW16/1
Station Type: WELL CASING
Perf Interval (ft bgs): 260-280
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007779
Sample ID: 10015031
Sample Date/Time: 06/15/2010 12:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060451-03
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 4080
pH (UNITS): 7.2
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): 0.25
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		06/23/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW16/1
Station Type: WELL CASING
Perf Interval (ft bgs): 260-280
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007779
Sample ID: 10015064
Sample Date/Time: 06/15/2010 12:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060451-02
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 4080
pH (UNITS): 7.2
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): 0.25
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		06/15/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	06/17/2010	06/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		06/17/2010	5.2	mg/L	.1	mg/L
Ca	Calcium	X200.7	06/17/2010	06/22/2010	502	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/17/2010	1250	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		06/15/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		06/16/2010	4380	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		06/15/2010	167	mg/L	1	mg/L
K	Potassium	X200.7	06/17/2010	06/22/2010	11.3	mg/L	.1	mg/L
Mg	Magnesium	X200.7	06/17/2010	06/22/2010	86.3	mg/L	.1	mg/L
Na	Sodium	X200.7	06/17/2010	06/22/2010	317	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		06/17/2010	0.34	mg/L	.1	mg/L
pH	pH	4500H+B		06/15/2010	7.6	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		06/17/2010	221	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		06/15/2010	2720	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/16/2010	<0.05	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		06/15/2010	167	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW16/1
Station Type: WELL CASING
Perf Interval (ft bgs): 260-280
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006089
Sample ID: 11012613
Sample Date/Time: 06/08/2011 09:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060226-03
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 4060
pH (UNITS): 7.3
Temperature (°C): 23.8
Dissolved Oxygen (mg/L): 0.24
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH; TO TANK; SPLIT W/AVOCETENVIRONMENTAL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		06/09/2011	5.	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/09/2011	1570	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		06/08/2011	4840	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		06/09/2011	3350	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/13/2011	0.09	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW17/1
Station Type: WELL CASING
Perf Interval (ft bgs): 255-275
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007780
Sample ID: 10015032
Sample Date/Time: 06/15/2010 13:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060452-03
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 978
pH (UNITS): 7.6
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.18
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		06/23/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW17/1
Station Type: WELL CASING
Perf Interval (ft bgs): 255-275
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007780
Sample ID: 10015359
Sample Date/Time: 06/15/2010 13:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060452-02
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 978
pH (UNITS): 7.6
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.18
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		06/15/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	06/17/2010	06/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		06/17/2010	0.48	mg/L	.1	mg/L
Ca	Calcium	X200.7	06/17/2010	06/22/2010	94.6	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/17/2010	128	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		06/15/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		06/15/2010	890	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		06/15/2010	178	mg/L	1	mg/L
K	Potassium	X200.7	06/17/2010	06/22/2010	3.6	mg/L	.1	mg/L
Mg	Magnesium	X200.7	06/17/2010	06/22/2010	17.3	mg/L	.1	mg/L
Na	Sodium	X200.7	06/17/2010	06/22/2010	57.2	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		06/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		06/15/2010	7.9	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		06/17/2010	65.7	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		06/17/2010	516	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/16/2010	0.15	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		06/15/2010	178	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW17/1
Station Type: WELL CASING
Perf Interval (ft bgs): 255-275
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006090
Sample ID: 11012614
Sample Date/Time: 06/08/2011 11:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060227-03
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 865
pH (UNITS): 7.6
Temperature (°C): 21.3
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH; TO TANK; SPLIT W/AVOCETENVIRONMENTAL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		06/09/2011	0.94	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/09/2011	222	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		06/08/2011	1290	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		06/09/2011	880	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/13/2011	0.22	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW19A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 153-172.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007781
Sample ID: 10015033
Sample Date/Time: 06/15/2010 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060453-03
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 489
pH (UNITS): 7.8
Temperature (°C): 21.7
Dissolved Oxygen (mg/L): 0.36
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		06/23/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW19A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 153-172.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007781
Sample ID: 10015899
Sample Date/Time: 06/15/2010 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060453-02
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 489
pH (UNITS): 7.8
Temperature (°C): 21.7
Dissolved Oxygen (mg/L): 0.36
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		06/15/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	06/17/2010	06/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		06/17/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	06/17/2010	06/22/2010	53.6	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/17/2010	11.6	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		06/15/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		06/15/2010	437	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		06/15/2010	183	mg/L	1	mg/L
K	Potassium	X200.7	06/17/2010	06/22/2010	2.8	mg/L	.1	mg/L
Mg	Magnesium	X200.7	06/17/2010	07/12/2010	9.1	mg/L	.1	mg/L
Na	Sodium	X200.7	06/17/2010	07/12/2010	32.7	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		06/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		06/15/2010	8.1	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		07/13/2010	32.	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		06/17/2010	264	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/16/2010	0.16	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		06/15/2010	183	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW19A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 153-172.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012494
Sample ID: 10025070
Sample Date/Time: 09/16/2010 14:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090410-03
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 462
pH (UNITS): 7.8
Temperature (°C): 20.4
Dissolved Oxygen (mg/L): 0.15
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS; 3 VOLUME PURGE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/17/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	09/21/2010	09/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/17/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/21/2010	09/30/2010	51.9	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/17/2010	11.6	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/17/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/17/2010	440	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/17/2010	171	mg/L	1	mg/L
K	Potassium	X200.7	09/21/2010	09/22/2010	2.	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/21/2010	09/22/2010	7.9	mg/L	.1	mg/L
Na	Sodium	X200.7	09/21/2010	09/22/2010	27.8	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		09/17/2010	7.7	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		09/17/2010	32.7	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		09/21/2010	254	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		09/20/2010	0.14	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/17/2010	171	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW19A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 153-172.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012480
Sample ID: 10025443
Sample Date/Time: 09/15/2010 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090362-03
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 433
pH (UNITS): 7.7
Temperature (°C): 21.4
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/15/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	09/21/2010	09/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/15/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/21/2010	10/04/2010	45.8	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/15/2010	11.9	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/15/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/15/2010	424	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/15/2010	170	mg/L	1	mg/L
K	Potassium	X200.7	09/21/2010	10/04/2010	2.4	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/21/2010	09/22/2010	8.	mg/L	.1	mg/L
Na	Sodium	X200.7	09/21/2010	09/22/2010	28.1	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/15/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		09/15/2010	7.9	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		09/15/2010	33.1	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		09/16/2010	248	mg/L	1	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/15/2010	170	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW19A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 153-172.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015292
Sample ID: 10031502
Sample Date/Time: 12/15/2010 09:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120311-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 437
pH (UNITS): 7.5
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): 0.43
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		12/16/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW19A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 153-172.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015292
Sample ID: 10031783
Sample Date/Time: 12/15/2010 09:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120311-03
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 437
pH (UNITS): 7.5
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): 0.43
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/16/2010	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/16/2010	11.7	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/15/2010	425	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		12/16/2010	246	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		12/18/2010	0.23	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW19A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 153-172.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006091
Sample ID: 11012615
Sample Date/Time: 06/08/2011 12:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060228-02
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 423
pH (UNITS): 7.7
Temperature (°C): 23.
Dissolved Oxygen (mg/L): 0.37
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH; TO TANK; SPLIT W/AVOCETENVIRONMENTAL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		06/09/2011	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/09/2011	12.4	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		06/08/2011	412	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		06/09/2011	256	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/13/2011	0.24	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW19A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 153-172.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030523
Sample ID: 11042481
Sample Date/Time: 12/06/2011 09:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120113-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 377
pH (UNITS): 7.8
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): 0.4
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/07/2011	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/07/2011	11.6	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/06/2011	448	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		12/07/2011	0.27	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW27A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139-159
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007784
Sample ID: 10015036
Sample Date/Time: 06/15/2010 16:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060457-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 572
pH (UNITS): 7.7
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): 0.3
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		06/23/2010	<2.5	ug/L	2.5	ug/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW27A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139-159
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007784
Sample ID: 10016037
Sample Date/Time: 06/15/2010 16:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060457-03
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 572
pH (UNITS): 7.7
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): 0.3
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		06/16/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	06/17/2010	06/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		06/17/2010	0.14	mg/L	.1	mg/L
Ca	Calcium	X200.7	06/17/2010	06/22/2010	69.2	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/17/2010	58.9	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		06/16/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		06/16/2010	583	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		06/16/2010	168	mg/L	1	mg/L
K	Potassium	X200.7	06/17/2010	06/22/2010	2.8	mg/L	.1	mg/L
Mg	Magnesium	X200.7	06/17/2010	06/22/2010	11.9	mg/L	.1	mg/L
Na	Sodium	X200.7	06/17/2010	07/15/2010	36.6	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		06/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		06/16/2010	7.9	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		06/17/2010	43.5	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		06/17/2010	360	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/16/2010	0.29	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		06/16/2010	168	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW27A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139-159
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015302
Sample ID: 10031512
Sample Date/Time: 12/15/2010 12:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120322-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 879
pH (UNITS): 7.7
Temperature (°C): 20.4
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		12/17/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW27A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139-159
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015302
Sample ID: 10031790
Sample Date/Time: 12/15/2010 12:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120322-03
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 879
pH (UNITS): 7.7
Temperature (°C): 20.4
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/16/2010	0.17	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/16/2010	97.8	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/15/2010	792	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		12/16/2010	414	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		12/18/2010	0.37	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW27A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139-159
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006096
Sample ID: 11012620
Sample Date/Time: 06/08/2011 13:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP/KWO
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060233-03
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 835
pH (UNITS): 7.4
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.11
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH;SPLIT W/AVOCET ENVIRONMENTL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		06/09/2011	0.23	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/09/2011	103	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		06/08/2011	777	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		06/09/2011	516	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/14/2011	0.41	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW27A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139-159
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030532
Sample ID: 11042491
Sample Date/Time: 12/06/2011 14:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120124-03
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 768
pH (UNITS): 7.7
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): 0.41
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/07/2011	0.18	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/07/2011	91.9	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/06/2011	790	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		12/07/2011	0.36	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW31S/1
Station Type: WELL CASING
Perf Interval (ft bgs): 78-88
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007773
Sample ID: 10015025
Sample Date/Time: 06/15/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060444-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 3090
pH (UNITS): 7.2
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): 0.46
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		06/23/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW31S/1
Station Type: WELL CASING
Perf Interval (ft bgs): 78-88
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007773
Sample ID: 10016036
Sample Date/Time: 06/15/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060444-04
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 3090
pH (UNITS): 7.2
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): 0.46
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		06/15/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	06/17/2010	06/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		06/17/2010	3.2	mg/L	.1	mg/L
Ca	Calcium	X200.7	06/17/2010	06/22/2010	381	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/22/2010	955	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		06/15/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		06/15/2010	3390	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		06/15/2010	144	mg/L	1	mg/L
K	Potassium	X200.7	06/17/2010	06/22/2010	9.	mg/L	.1	mg/L
Mg	Magnesium	X200.7	06/17/2010	06/22/2010	65.9	mg/L	.1	mg/L
Na	Sodium	X200.7	06/17/2010	06/22/2010	166	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		06/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		06/15/2010	7.5	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		06/17/2010	87.1	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		06/17/2010	2210	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/16/2010	0.13	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		06/15/2010	144	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW34/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-267
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007782
Sample ID: 10015034
Sample Date/Time: 06/15/2010 11:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060454-03
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 6130
pH (UNITS): 7.1
Temperature (°C): 21.7
Dissolved Oxygen (mg/L): 0.6
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		06/23/2010	<2.5	ug/L	2.5	ug/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW34/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-267
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007782
Sample ID: 10015065
Sample Date/Time: 06/15/2010 11:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060454-02
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 6130
pH (UNITS): 7.1
Temperature (°C): 21.7
Dissolved Oxygen (mg/L): 0.6
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		06/15/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	06/17/2010	06/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		06/17/2010	7.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	06/17/2010	06/22/2010	567	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/17/2010	1690	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		06/15/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		06/15/2010	5770	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		06/15/2010	159	mg/L	1	mg/L
K	Potassium	X200.7	06/17/2010	06/22/2010	13.	mg/L	.1	mg/L
Mg	Magnesium	X200.7	06/17/2010	06/22/2010	102	mg/L	.1	mg/L
Na	Sodium	X200.7	06/17/2010	06/22/2010	452	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		06/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		06/15/2010	7.6	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		06/17/2010	231	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		06/15/2010	3630	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/16/2010	<0.05	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		06/15/2010	159	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW34/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-267
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015299
Sample ID: 10031509
Sample Date/Time: 12/15/2010 09:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120319-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 5060
pH (UNITS): 7.1
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.23
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		12/17/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW34/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-267
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015299
Sample ID: 10031787
Sample Date/Time: 12/15/2010 09:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120319-04
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 5060
pH (UNITS): 7.1
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.23
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/16/2010	4.8	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/16/2010	1630	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/15/2010	5490	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		12/16/2010	3310	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		12/18/2010	0.07	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW34/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-267
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006097
Sample ID: 11012621
Sample Date/Time: 06/08/2011 11:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP/KWO
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060234-02
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 5770
pH (UNITS): 7.1
Temperature (°C): 21.5
Dissolved Oxygen (mg/L): 0.07
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH;SPLIT W/AVOCET ENVIRONMENTL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		06/09/2011	6.	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/09/2011	1730	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		06/08/2011	5530	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		06/09/2011	3830	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/14/2011	0.09	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW34/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-267
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030601
Sample ID: 11042771
Sample Date/Time: 12/07/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120142-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 5550
pH (UNITS): 7.5
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): 0.9
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/08/2011	6.	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/08/2011	1770	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/07/2011	5930	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		12/07/2011	0.09	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW37A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007774
Sample ID: 10015026
Sample Date/Time: 06/15/2010 13:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060445-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 582
pH (UNITS): 7.7
Temperature (°C): 22.4
Dissolved Oxygen (mg/L): 0.22
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		06/23/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW37A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007774
Sample ID: 10015355
Sample Date/Time: 06/15/2010 13:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060445-03
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 582
pH (UNITS): 7.7
Temperature (°C): 22.4
Dissolved Oxygen (mg/L): 0.22
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		06/15/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	06/17/2010	06/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		06/17/2010	0.13	mg/L	.1	mg/L
Ca	Calcium	X200.7	06/17/2010	06/22/2010	67.8	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/17/2010	42.6	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		06/15/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		06/15/2010	595	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		06/15/2010	172	mg/L	1	mg/L
K	Potassium	X200.7	06/17/2010	06/22/2010	2.7	mg/L	.1	mg/L
Mg	Magnesium	X200.7	06/17/2010	06/22/2010	11.2	mg/L	.1	mg/L
Na	Sodium	X200.7	06/17/2010	06/22/2010	38.4	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		06/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		06/15/2010	8.	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		06/17/2010	74.2	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		06/17/2010	368	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/16/2010	0.27	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		06/15/2010	172	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW37A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015301
Sample ID: 10031511
Sample Date/Time: 12/15/2010 11:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120321-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 800
pH (UNITS): 7.7
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.15
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		12/17/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW37A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015301
Sample ID: 10031789
Sample Date/Time: 12/15/2010 11:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120321-03
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 800
pH (UNITS): 7.7
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.15
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/16/2010	0.15	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/16/2010	81.6	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/15/2010	734	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		12/16/2010	410	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		12/18/2010	0.36	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW37A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006098
Sample ID: 11012622
Sample Date/Time: 06/08/2011 11:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP/KWO
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060235-03
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 575
pH (UNITS): 7.5
Temperature (°C): 21.6
Dissolved Oxygen (mg/L): 0.05
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH;SPLIT W/AVOCET ENVIRONMENTL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		06/09/2011	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/09/2011	45.	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		06/08/2011	536	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		06/09/2011	340	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/14/2011	3.7	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW37A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030602
Sample ID: 11042772
Sample Date/Time: 12/07/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120143-03
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 630
pH (UNITS): 8.
Temperature (°C): 21.3
Dissolved Oxygen (mg/L): 0.5
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/08/2011	0.17	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/08/2011	56.3	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/07/2011	639	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		12/07/2011	0.38	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW38A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007775
Sample ID: 10015027
Sample Date/Time: 06/15/2010 11:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060446-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 498
pH (UNITS): 7.7
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.24
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		06/23/2010	<2.5	ug/L	2.5	ug/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW38A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007775
Sample ID: 10015356
Sample Date/Time: 06/15/2010 11:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060446-04
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 498
pH (UNITS): 7.7
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.24
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		06/15/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	06/17/2010	06/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		06/17/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	06/17/2010	06/22/2010	62.	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/17/2010	24.4	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		06/15/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		06/15/2010	518	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		06/15/2010	183	mg/L	1	mg/L
K	Potassium	X200.7	06/17/2010	06/22/2010	2.9	mg/L	.1	mg/L
Mg	Magnesium	X200.7	06/17/2010	06/22/2010	11.1	mg/L	.1	mg/L
Na	Sodium	X200.7	06/17/2010	06/22/2010	35.7	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		06/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		06/15/2010	8.	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		06/17/2010	51.4	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		06/17/2010	304	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/16/2010	0.17	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		06/15/2010	183	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW38A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11026604
Sample ID: 11035859
Sample Date/Time: 09/12/2011 12:04
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: UNKNOWN WQ SAMPLING METHOD
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: MARK GREENING
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11090234-02
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 487
pH (UNITS): 7.7
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: PURGED BY BLAINE TECH

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		09/13/2011	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/13/2011	16.7	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		09/12/2011	484	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		09/13/2011	302	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		09/14/2011	0.25	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW41A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 148.5-168.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007776
Sample ID: 10015028
Sample Date/Time: 06/15/2010 12:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN RODRIQUEZ
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060447-03
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 487
pH (UNITS): 7.6
Temperature (°C): 22.7
Dissolved Oxygen (mg/L): 0.16
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	*Qualifier: Validated Sample*							
CLO4	Perchlorate	X1-314.0		06/23/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW41A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 148.5-168.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007776
Sample ID: 10015898
Sample Date/Time: 06/15/2010 12:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN RODRIQUEZ
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060447-02
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 487
pH (UNITS): 7.6
Temperature (°C): 22.7
Dissolved Oxygen (mg/L): 0.16
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		06/15/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	06/17/2010	06/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		06/17/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	06/17/2010	06/22/2010	57.4	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		07/13/2010	23.8	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		06/15/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		06/15/2010	499	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		06/15/2010	175	mg/L	1	mg/L
K	Potassium	X200.7	06/17/2010	06/22/2010	3.4	mg/L	.1	mg/L
Mg	Magnesium	X200.7	06/17/2010	06/22/2010	10.	mg/L	.1	mg/L
Na	Sodium	X200.7	06/17/2010	06/22/2010	38.3	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		06/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		06/15/2010	7.9	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		07/13/2010	49.8	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		06/17/2010	294	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/16/2010	2.22	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		06/15/2010	175	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW41A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 148.5-168.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015300
Sample ID: 10031510
Sample Date/Time: 12/15/2010 10:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120320-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 576
pH (UNITS): 7.6
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.17
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		12/17/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW41A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 148.5-168.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015300
Sample ID: 10031788
Sample Date/Time: 12/15/2010 10:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120320-03
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 576
pH (UNITS): 7.6
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.17
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/16/2010	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/16/2010	27.1	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/15/2010	510	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		12/16/2010	334	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		12/18/2010	1.13	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW41A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 148.5-168.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006099
Sample ID: 11012623
Sample Date/Time: 06/08/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP/KWO
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060236-02
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 519
pH (UNITS): 7.3
Temperature (°C): 21.6
Dissolved Oxygen (mg/L): 0.1
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH;SPLIT W/AVOCET ENVIRONMENTL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		06/09/2011	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/09/2011	25.1	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		06/08/2011	480	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		06/09/2011	284	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/14/2011	1.56	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW41A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 148.5-168.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030531
Sample ID: 11042490
Sample Date/Time: 12/06/2011 12:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120123-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 499
pH (UNITS): 7.7
Temperature (°C): 22.2
Dissolved Oxygen (mg/L): 0.36
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH 3900mL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/07/2011	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/07/2011	23.9	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/06/2011	510	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		12/07/2011	1.47	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007785
Sample ID: 10015037
Sample Date/Time: 06/15/2010 15:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060458-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 600
pH (UNITS): 8.2
Temperature (°C): 21.
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		06/23/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007785
Sample ID: 10015901
Sample Date/Time: 06/15/2010 15:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060458-04
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 600
pH (UNITS): 8.2
Temperature (°C): 21.
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		06/16/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	06/17/2010	06/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		06/17/2010	0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	06/17/2010	06/22/2010	44.5	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/17/2010	32.7	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		06/16/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		06/16/2010	530	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		06/16/2010	154	mg/L	1	mg/L
K	Potassium	X200.7	06/17/2010	06/22/2010	3.8	mg/L	.1	mg/L
Mg	Magnesium	X200.7	06/17/2010	06/22/2010	10.5	mg/L	.1	mg/L
Na	Sodium	X200.7	06/17/2010	07/12/2010	57.9	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		06/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		06/16/2010	8.1	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		06/17/2010	70.3	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		06/17/2010	328	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/16/2010	1.68	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		06/16/2010	154	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012481
Sample ID: 10024453
Sample Date/Time: 09/15/2010 08:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090363-03
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 532
pH (UNITS): 7.9
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): 0.13
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/15/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	09/21/2010	09/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/15/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/21/2010	09/22/2010	41.5	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/15/2010	35.6	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/15/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/15/2010	528	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/15/2010	135	mg/L	1	mg/L
K	Potassium	X200.7	09/21/2010	09/22/2010	3.4	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/21/2010	09/22/2010	9.6	mg/L	.1	mg/L
Na	Sodium	X200.7	09/21/2010	09/22/2010	50.3	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/15/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		09/15/2010	8.	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		09/15/2010	78.4	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		09/16/2010	306	mg/L	1	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/15/2010	135	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015293
Sample ID: 10031503
Sample Date/Time: 12/15/2010 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120312-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 560
pH (UNITS): 8.
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): 0.36
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		12/16/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015293
Sample ID: 10031784
Sample Date/Time: 12/15/2010 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120312-04
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 560
pH (UNITS): 8.
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): 0.36
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/16/2010	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/16/2010	36.7	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/15/2010	538	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		12/16/2010	324	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		12/18/2010	10.8	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006092
Sample ID: 11012616
Sample Date/Time: 06/08/2011 13:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060229-04
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 490
pH (UNITS): 8.1
Temperature (°C): 21.5
Dissolved Oxygen (mg/L): 0.29
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH; TO TANK; SPLIT W/AVOCETENVIRONMENTAL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		06/09/2011	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/09/2011	29.3	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		06/08/2011	485	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		06/09/2011	316	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/14/2011	3.56	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030528
Sample ID: 11042486
Sample Date/Time: 12/06/2011 10:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120118-04
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 428
pH (UNITS): 8.2
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): 0.4
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/07/2011	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/07/2011	22.6	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/06/2011	489	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		12/07/2011	0.67	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW57A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007777
Sample ID: 10015029
Sample Date/Time: 06/15/2010 08:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060448-03
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 425
pH (UNITS): 8.
Temperature (°C): 21.4
Dissolved Oxygen (mg/L): 0.35
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		06/23/2010	<2.5	ug/L	2.5	ug/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW57A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007777
Sample ID: 10015357
Sample Date/Time: 06/15/2010 08:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060448-02
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 425
pH (UNITS): 8.
Temperature (°C): 21.4
Dissolved Oxygen (mg/L): 0.35
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		06/15/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	06/17/2010	06/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		06/17/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	06/17/2010	06/22/2010	49.5	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/17/2010	12.8	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		06/15/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		06/15/2010	450	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		06/15/2010	193	mg/L	1	mg/L
K	Potassium	X200.7	06/17/2010	06/22/2010	4.4	mg/L	.1	mg/L
Mg	Magnesium	X200.7	06/17/2010	06/22/2010	11.	mg/L	.1	mg/L
Na	Sodium	X200.7	06/17/2010	06/22/2010	34.1	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		06/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		06/15/2010	8.2	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		06/17/2010	26.7	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		06/17/2010	266	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/16/2010	0.69	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		06/15/2010	193	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW57A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015294
Sample ID: 10031504
Sample Date/Time: 12/15/2010 12:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120313-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 448
pH (UNITS): 7.7
Temperature (°C): 21.
Dissolved Oxygen (mg/L): 0.32
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		12/16/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW57A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015294
Sample ID: 10031785
Sample Date/Time: 12/15/2010 12:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120313-03
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 448
pH (UNITS): 7.7
Temperature (°C): 21.
Dissolved Oxygen (mg/L): 0.32
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/16/2010	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/16/2010	12.6	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/15/2010	429	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		12/16/2010	246	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		12/17/2010	2.99	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW57A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006100
Sample ID: 11012624
Sample Date/Time: 06/08/2011 14:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP/KWO
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060237-02
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 459
pH (UNITS): 7.7
Temperature (°C): 22.1
Dissolved Oxygen (mg/L): 0.1
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH;SPLIT W/AVOCET ENVIRONMENTL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		06/09/2011	0.14	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/09/2011	13.6	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		06/08/2011	422	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		06/09/2011	264	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/14/2011	6.17	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW57A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030525
Sample ID: 11042483
Sample Date/Time: 12/06/2011 12:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120115-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 403
pH (UNITS): 7.7
Temperature (°C): 21.4
Dissolved Oxygen (mg/L): 0.3
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/07/2011	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/07/2011	12.8	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/06/2011	446	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		12/07/2011	17.3	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW58A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007786
Sample ID: 10015038
Sample Date/Time: 06/15/2010 15:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060459-03
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 897
pH (UNITS): 7.6
Temperature (°C): 22.1
Dissolved Oxygen (mg/L): 0.31
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		06/23/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW58A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007786
Sample ID: 10015067
Sample Date/Time: 06/15/2010 15:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060459-02
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 897
pH (UNITS): 7.6
Temperature (°C): 22.1
Dissolved Oxygen (mg/L): 0.31
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		06/16/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	06/17/2010	06/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		06/17/2010	0.31	mg/L	.1	mg/L
Ca	Calcium	X200.7	06/17/2010	06/22/2010	117	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/17/2010	125	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		06/16/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		06/16/2010	904	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		06/16/2010	172	mg/L	1	mg/L
K	Potassium	X200.7	06/17/2010	06/22/2010	3.6	mg/L	.1	mg/L
Mg	Magnesium	X200.7	06/17/2010	06/22/2010	19.4	mg/L	.1	mg/L
Na	Sodium	X200.7	06/17/2010	06/22/2010	47.2	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		06/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		06/16/2010	7.9	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		06/17/2010	104	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		06/16/2010	570	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/16/2010	0.37	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		06/16/2010	172	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW58A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015304
Sample ID: 10031514
Sample Date/Time: 12/15/2010 14:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120324-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 1010
pH (UNITS): 7.7
Temperature (°C): 21.1
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		12/17/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW58A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015304
Sample ID: 10031792
Sample Date/Time: 12/15/2010 14:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120324-04
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 1010
pH (UNITS): 7.7
Temperature (°C): 21.1
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/16/2010	0.17	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/16/2010	109	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/15/2010	940	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		12/16/2010	542	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		12/18/2010	0.38	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW58A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006093
Sample ID: 11012617
Sample Date/Time: 06/08/2011 08:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060230-02
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 1050
pH (UNITS): 7.7
Temperature (°C): 21.6
Dissolved Oxygen (mg/L): 0.46
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH; TO TANK; SPLIT W/AVOCETENVIRONMENTAL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		06/09/2011	0.23	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/09/2011	106	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		06/08/2011	807	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		06/09/2011	516	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/13/2011	0.6	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW58A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030529
Sample ID: 11042488
Sample Date/Time: 12/06/2011 08:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120121-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 836
pH (UNITS): 7.9
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): 0.96
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH 4000mL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/07/2011	0.21	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/07/2011	107	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/06/2011	854	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		12/07/2011	0.37	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW59B/1
Station Type: WELL CASING
Perf Interval (ft bgs): 240-250
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007807
Sample ID: 10015066
Sample Date/Time: 06/15/2010 10:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060455-02
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 8310
pH (UNITS): 7.4
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): 0.14
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		06/15/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	06/17/2010	06/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		06/17/2010	9.4	mg/L	.1	mg/L
Ca	Calcium	X200.7	06/17/2010	06/22/2010	708	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/17/2010	2280	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		06/15/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		06/15/2010	7720	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		06/15/2010	167	mg/L	1	mg/L
K	Potassium	X200.7	06/17/2010	06/22/2010	16.4	mg/L	.1	mg/L
Mg	Magnesium	X200.7	06/17/2010	06/22/2010	122	mg/L	.1	mg/L
Na	Sodium	X200.7	06/17/2010	06/22/2010	749	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		06/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		06/15/2010	7.5	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		06/17/2010	284	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		06/15/2010	4670	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/16/2010	0.22	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		06/15/2010	167	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW59B/1
Station Type: WELL CASING
Perf Interval (ft bgs): 240-250
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007807
Sample ID: 10015360
Sample Date/Time: 06/15/2010 10:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060455-03
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 8310
pH (UNITS): 7.4
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): 0.14
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		06/24/2010	<2.5	ug/L	2.5	ug/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW59B/1
Station Type: WELL CASING
Perf Interval (ft bgs): 240-250
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006094
Sample ID: 11012618
Sample Date/Time: 06/08/2011 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060231-02
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 6860
pH (UNITS): 7.4
Temperature (°C): 20.4
Dissolved Oxygen (mg/L): 0.23
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH; TO TANK; SPLIT W/AVOCETENVIRONMENTAL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		06/09/2011	8.5	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/09/2011	2400	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		06/08/2011	7480	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		06/09/2011	4950	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/14/2011	0.26	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW60A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007778
Sample ID: 10015030
Sample Date/Time: 06/15/2010 14:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060449-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 749
pH (UNITS): 7.7
Temperature (°C): 21.3
Dissolved Oxygen (mg/L): 0.27
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		06/23/2010	<2.5	ug/L	2.5	ug/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW60A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007778
Sample ID: 10015358
Sample Date/Time: 06/15/2010 14:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060449-03
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 749
pH (UNITS): 7.7
Temperature (°C): 21.3
Dissolved Oxygen (mg/L): 0.27
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		06/15/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	06/17/2010	06/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		06/17/2010	0.25	mg/L	.1	mg/L
Ca	Calcium	X200.7	06/17/2010	06/22/2010	95.9	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/17/2010	73.3	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		06/15/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		06/15/2010	799	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		06/15/2010	180	mg/L	1	mg/L
K	Potassium	X200.7	06/17/2010	06/22/2010	3.8	mg/L	.1	mg/L
Mg	Magnesium	X200.7	06/17/2010	06/22/2010	15.4	mg/L	.1	mg/L
Na	Sodium	X200.7	06/17/2010	06/22/2010	48.3	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		06/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		06/15/2010	7.9	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		06/17/2010	118	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		06/17/2010	488	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/16/2010	0.82	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		06/15/2010	180	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW60A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015303
Sample ID: 10031513
Sample Date/Time: 12/15/2010 13:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120323-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 931
pH (UNITS): 7.7
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): 0.17
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		12/17/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW60A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015303
Sample ID: 10031791
Sample Date/Time: 12/15/2010 13:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120323-04
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 931
pH (UNITS): 7.7
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): 0.17
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/16/2010	0.21	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/16/2010	84.4	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/15/2010	846	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		12/16/2010	546	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		12/18/2010	0.73	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW60A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006101
Sample ID: 11012625
Sample Date/Time: 06/08/2011 09:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP/KWO
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060238-03
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 953
pH (UNITS): 7.3
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): 0.09
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH;SPLIT W/AVOCET ENVIRONMENTL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		06/09/2011	0.32	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/09/2011	108	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		06/08/2011	893	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		06/09/2011	564	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/14/2011	0.74	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW60A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030600
Sample ID: 11042763
Sample Date/Time: 12/06/2011 13:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120125-03
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 971
pH (UNITS): 7.6
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): 0.35
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH 4200mL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/07/2011	0.26	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/08/2011	120	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/06/2011	1000	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		12/07/2011	0.47	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW61A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007783
Sample ID: 10015035
Sample Date/Time: 06/15/2010 14:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060456-03
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 532
pH (UNITS): 7.6
Temperature (°C): 22.6
Dissolved Oxygen (mg/L): 0.24
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		06/23/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW61A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007783
Sample ID: 10015900
Sample Date/Time: 06/15/2010 14:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060456-02
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 532
pH (UNITS): 7.6
Temperature (°C): 22.6
Dissolved Oxygen (mg/L): 0.24
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		06/15/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	06/17/2010	06/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		06/17/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	06/17/2010	06/22/2010	53.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		07/07/2010	17.8	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		06/15/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		06/15/2010	470	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		06/15/2010	189	mg/L	1	mg/L
K	Potassium	X200.7	06/17/2010	06/22/2010	2.5	mg/L	.1	mg/L
Mg	Magnesium	X200.7	06/17/2010	06/22/2010	9.1	mg/L	.1	mg/L
Na	Sodium	X200.7	06/17/2010	06/22/2010	31.3	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		06/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		06/15/2010	8.1	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		07/07/2010	35.4	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		06/17/2010	280	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/16/2010	0.32	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		06/15/2010	189	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW61A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012482
Sample ID: 10024454
Sample Date/Time: 09/15/2010 09:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090364-03
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 465
pH (UNITS): 7.4
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): 0.2
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/15/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	09/21/2010	09/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/15/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/21/2010	09/22/2010	50.6	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/15/2010	20.3	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/15/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/15/2010	464	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/15/2010	172	mg/L	1	mg/L
K	Potassium	X200.7	09/21/2010	09/22/2010	2.	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/21/2010	09/22/2010	8.4	mg/L	.1	mg/L
Na	Sodium	X200.7	09/21/2010	09/22/2010	30.2	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/15/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		09/15/2010	7.8	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		09/15/2010	36.1	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		09/16/2010	258	mg/L	1	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/15/2010	172	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW61A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015295
Sample ID: 10031505
Sample Date/Time: 12/15/2010 08:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120314-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 470
pH (UNITS): 6.9
Temperature (°C): 21.1
Dissolved Oxygen (mg/L): 1.06
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		12/16/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW61A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015295
Sample ID: 10031786
Sample Date/Time: 12/15/2010 08:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120314-04
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 470
pH (UNITS): 6.9
Temperature (°C): 21.1
Dissolved Oxygen (mg/L): 1.06
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/16/2010	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/16/2010	18.5	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/15/2010	447	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		12/16/2010	260	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		12/18/2010	0.44	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW61A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006095
Sample ID: 11012619
Sample Date/Time: 06/08/2011 14:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060232-02
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 373
pH (UNITS): 6.9
Temperature (°C): 23.2
Dissolved Oxygen (mg/L): 0.47
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH;SPLIT W/AVOCET ENVIRONMENTL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		06/09/2011	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/09/2011	17.4	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		06/08/2011	437	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		06/09/2011	260	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/14/2011	0.39	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW61A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11026605
Sample ID: 11035860
Sample Date/Time: 09/12/2011 09:17
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: UNKNOWN WQ SAMPLING METHOD
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: MARK GREENING
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11090235-02
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 430
pH (UNITS): 7.7
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: PURGED AND SAMPLED BY BLAINE TECH

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		09/13/2011	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/13/2011	16.1	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		09/12/2011	454	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		09/13/2011	270	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		09/14/2011	0.32	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW61A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030524
Sample ID: 11042482
Sample Date/Time: 12/06/2011 11:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120114-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 401
pH (UNITS): 7.3
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): 0.5
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/07/2011	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/07/2011	14.5	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/06/2011	444	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		12/07/2011	0.23	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW72A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 112-127
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012483
Sample ID: 10024455
Sample Date/Time: 09/15/2010 13:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090365-04
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 467
pH (UNITS): 8.
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): 0.24
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/15/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	09/21/2010	09/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/16/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/21/2010	09/22/2010	45.3	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/16/2010	11.7	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/15/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/15/2010	429	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/15/2010	172	mg/L	1	mg/L
K	Potassium	X200.7	09/21/2010	09/22/2010	2.7	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/21/2010	09/22/2010	7.6	mg/L	.1	mg/L
Na	Sodium	X200.7	09/21/2010	09/22/2010	30.6	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/16/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		09/15/2010	8.	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		09/16/2010	28.7	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		09/16/2010	242	mg/L	1	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/15/2010	172	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW72A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 112-127
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015298
Sample ID: 10031508
Sample Date/Time: 12/15/2010 08:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120318-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 414
pH (UNITS): 7.4
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): 0.17
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		12/17/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW72A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 112-127
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015298
Sample ID: 11000143
Sample Date/Time: 12/15/2010 08:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120318-03
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 414
pH (UNITS): 7.4
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): 0.17
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/16/2010	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/16/2010	11.9	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/15/2010	425	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		12/16/2010	230	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		12/30/2010	0.46	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW72A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 112-127
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006102
Sample ID: 11012626
Sample Date/Time: 06/08/2011 10:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP/KWO
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060239-02
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 445
pH (UNITS): 7.7
Temperature (°C): 22.8
Dissolved Oxygen (mg/L): 0.13
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH;SPLIT W/AVOCET ENVIRONMENTL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		06/09/2011	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/09/2011	12.9	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		06/08/2011	414	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		06/09/2011	264	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/14/2011	0.51	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW72A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 112-127
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030530
Sample ID: 11042489
Sample Date/Time: 12/06/2011 09:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120122-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 426
pH (UNITS): 8.3
Temperature (°C): 21.7
Dissolved Oxygen (mg/L): 0.7
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH 4400mL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/07/2011	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/07/2011	12.8	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/06/2011	436	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		12/07/2011	0.46	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW73A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 113-133
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012485
Sample ID: 10024462
Sample Date/Time: 09/15/2010 14:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090376-04
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 478
pH (UNITS): 8.
Temperature (°C): 23.6
Dissolved Oxygen (mg/L): 0.69
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/15/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	09/21/2010	09/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/15/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/21/2010	09/22/2010	45.5	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/15/2010	15.2	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/15/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/15/2010	437	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/15/2010	169	mg/L	1	mg/L
K	Potassium	X200.7	09/21/2010	09/22/2010	3.3	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/21/2010	09/22/2010	6.9	mg/L	.1	mg/L
Na	Sodium	X200.7	09/21/2010	09/22/2010	32.5	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/15/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		09/15/2010	8.2	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		09/15/2010	34.2	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		09/16/2010	258	mg/L	1	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/15/2010	169	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW73A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 113-133
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015296
Sample ID: 10031506
Sample Date/Time: 12/15/2010 11:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120315-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 443
pH (UNITS): 7.9
Temperature (°C): 19.4
Dissolved Oxygen (mg/L): 0.49
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		12/17/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW73A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 113-133
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015296
Sample ID: 11000141
Sample Date/Time: 12/15/2010 11:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120315-03
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 443
pH (UNITS): 7.9
Temperature (°C): 19.4
Dissolved Oxygen (mg/L): 0.49
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/16/2010	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/16/2010	15.2	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/15/2010	430	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		12/16/2010	260	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		12/30/2010	0.44	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW73A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 113-133
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006103
Sample ID: 11012627
Sample Date/Time: 06/08/2011 14:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP/KWO
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060240-02
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 459
pH (UNITS): 7.7
Temperature (°C): 21.8
Dissolved Oxygen (mg/L): 0.13
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH;SPLIT W/AVOCET ENVIRONMENTL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		06/09/2011	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/09/2011	16.7	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		06/08/2011	430	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		06/09/2011	252	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/14/2011	0.42	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW73A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 113-133
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030526
Sample ID: 11042484
Sample Date/Time: 12/06/2011 13:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120116-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 357
pH (UNITS): 7.6
Temperature (°C): 21.1
Dissolved Oxygen (mg/L): 0.17
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/07/2011	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/07/2011	15.4	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/06/2011	438	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		12/07/2011	0.35	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW74/1
Station Type: WELL CASING
Perf Interval (ft bgs): 107-132
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012486
Sample ID: 10024463
Sample Date/Time: 09/15/2010 15:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090377-04
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 434
pH (UNITS): 7.9
Temperature (°C): 21.8
Dissolved Oxygen (mg/L): 0.08
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS; SAMPLED AT STANDARD FLOW

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/15/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	09/21/2010	09/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/15/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/21/2010	09/22/2010	53.6	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/15/2010	13.6	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/15/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/15/2010	431	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/15/2010	171	mg/L	1	mg/L
K	Potassium	X200.7	09/21/2010	09/22/2010	1.7	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/21/2010	09/22/2010	5.8	mg/L	.1	mg/L
Na	Sodium	X200.7	09/21/2010	09/22/2010	32.6	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/15/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		09/15/2010	8.	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		09/15/2010	30.1	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		09/16/2010	258	mg/L	1	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/15/2010	171	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW74/1
Station Type: WELL CASING
Perf Interval (ft bgs): 107-132
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012495
Sample ID: 10024679
Sample Date/Time: 09/16/2010 16:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090411-04
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 462
pH (UNITS): 8.1
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): 0.07
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS; 3 VOLUME PURGE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/17/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	09/21/2010	09/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/17/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/21/2010	09/22/2010	52.2	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/17/2010	13.	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/17/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/17/2010	432	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/17/2010	173	mg/L	1	mg/L
K	Potassium	X200.7	09/21/2010	09/22/2010	1.3	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/21/2010	09/22/2010	5.8	mg/L	.1	mg/L
Na	Sodium	X200.7	09/21/2010	09/22/2010	31.7	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		09/17/2010	8.	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		09/17/2010	28.6	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		09/21/2010	252	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		09/20/2010	0.54	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/17/2010	173	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW74/1
Station Type: WELL CASING
Perf Interval (ft bgs): 107-132
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012484
Sample ID: 10025068
Sample Date/Time: 09/15/2010 11:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090366-04
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 436
pH (UNITS): 7.9
Temperature (°C): 22.8
Dissolved Oxygen (mg/L): 0.97
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/15/2010	7.1	mg/L	1	mg/L
B	Boron	X200.7	09/21/2010	09/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/16/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/21/2010	09/22/2010	49.9	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/16/2010	13.5	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/15/2010	14.2	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/15/2010	437	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/15/2010	159	mg/L	1	mg/L
K	Potassium	X200.7	09/21/2010	09/22/2010	5.3	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/21/2010	09/22/2010	5.5	mg/L	.1	mg/L
Na	Sodium	X200.7	09/21/2010	09/30/2010	31.2	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/16/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		09/15/2010	8.5	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		09/16/2010	29.6	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		09/16/2010	264	mg/L	1	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/15/2010	173	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW75/1
Station Type: WELL CASING
Perf Interval (ft bgs): 202-222
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012487
Sample ID: 10025069
Sample Date/Time: 09/15/2010 15:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090378-04
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 1880
pH (UNITS): 12.1
Temperature (°C): 21.7
Dissolved Oxygen (mg/L): 0.4
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/15/2010	271	mg/L	1	mg/L
B	Boron	X200.7	09/21/2010	09/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/15/2010	0.15	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/21/2010	09/22/2010	3.8	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/15/2010	26.1	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/15/2010	141	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/15/2010	1530	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/15/2010	<1	mg/L	1	mg/L
K	Potassium	X200.7	09/21/2010	09/22/2010	105	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/21/2010	09/22/2010	1.2	mg/L	.1	mg/L
Na	Sodium	X200.7	09/21/2010	09/22/2010	123	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/15/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		09/15/2010	11.4	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		09/15/2010	41.7	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		09/16/2010	936	mg/L	1	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/15/2010	342	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW75/1
Station Type: WELL CASING
Perf Interval (ft bgs): 202-222
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015297
Sample ID: 10031507
Sample Date/Time: 12/15/2010 13:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120316-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 1330
pH (UNITS): 11.5
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): 0.38
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		12/17/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW75/1
Station Type: WELL CASING
Perf Interval (ft bgs): 202-222
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015297
Sample ID: 11000142
Sample Date/Time: 12/15/2010 13:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120316-03
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 1330
pH (UNITS): 11.5
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): 0.38
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/16/2010	0.22	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/16/2010	26.2	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/15/2010	1180	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		12/21/2010	446	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		12/30/2010	5.25	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW75/1
Station Type: WELL CASING
Perf Interval (ft bgs): 202-222
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006104
Sample ID: 11012628
Sample Date/Time: 06/08/2011 15:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP/KWO
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060241-02
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 931
pH (UNITS): 11.
Temperature (°C): 21.6
Dissolved Oxygen (mg/L): 0.16
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH;SPLIT W/AVOCET ENVIRONMENTL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		06/09/2011	0.34	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		06/09/2011	30.7	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		06/08/2011	834	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		06/09/2011	464	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/14/2011	9.02	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW75/1
Station Type: WELL CASING
Perf Interval (ft bgs): 202-222
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030527
Sample ID: 11042485
Sample Date/Time: 12/06/2011 14:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120117-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 739
pH (UNITS): 11.3
Temperature (°C): 21.1
Dissolved Oxygen (mg/L): 0.4
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		12/07/2011	0.13	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/07/2011	36.4	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		12/06/2011	766	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		12/07/2011	2.24	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: FAA-LA1/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: FEDERAL AVAIATION ADMIN.
Well Name:
City: LOS ALAMITOS

Sample Group ID: 11029353
Sample ID: 11041139
Sample Date/Time: 10/20/2011 11:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100573-03
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 438
pH (UNITS): 8.1
Temperature (°C): 22.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: SILTY SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		10/20/2011	<1	mg/L	1	mg/L
B	Boron	X200.7	10/24/2011	10/25/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		10/21/2011	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	10/24/2011	10/25/2011	53.6	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		11/15/2011	18.6	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		10/20/2011	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		10/20/2011	469	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		10/20/2011	170	mg/L	1	mg/L
K	Potassium	X200.7	10/24/2011	10/25/2011	3.2	mg/L	.1	mg/L
Mg	Magnesium	X200.7	10/24/2011	10/25/2011	10.4	mg/L	.1	mg/L
Na	Sodium	X200.7	10/24/2011	10/25/2011	35.1	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		10/20/2011	0.057	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		10/21/2011	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		10/20/2011	<1	mg/L	1	mg/L
pH	pH	4500H+B		10/20/2011	8.1	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		10/20/2011	0.15	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		11/15/2011	38.8	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		10/20/2011	266	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		10/20/2011	0.32	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		10/20/2011	170	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	10/24/2011	10/25/2011	177	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: GG-16/1
Station Type: WELL CASING
Perf Interval (ft bgs): 304-864
Aquifer: UNDEFINED

Well Owner: GARDEN GROVE
Well Name: Well No. 16
City: GARDEN GROVE

Sample Group ID: 10004381
Sample ID: 10008693
Sample Date/Time: 04/07/2010 14:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10040156-03
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 510
pH (UNITS): 7.8
Temperature (°C): 18.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		04/08/2010	0.003	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		04/08/2010	1.31	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		04/08/2010	0.3	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: GG-16/1
Station Type: WELL CASING
Perf Interval (ft bgs): 304-864
Aquifer: UNDEFINED

Well Owner: GARDEN GROVE
Well Name: Well No. 16
City: GARDEN GROVE

Sample Group ID: 10004381
Sample ID: 10009179
Sample Date/Time: 04/07/2010 14:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10040156-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 510
pH (UNITS): 7.8
Temperature (°C): 18.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		04/19/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: GG-16/1
Station Type: WELL CASING
Perf Interval (ft bgs): 304-864
Aquifer: UNDEFINED

Well Owner: GARDEN GROVE
Well Name: Well No. 16
City: GARDEN GROVE

Sample Group ID: 11003790
Sample ID: 11007919
Sample Date/Time: 04/06/2011 13:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11040130-06
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 519
pH (UNITS): 8.
Temperature (°C): 18.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		04/07/2011	0.003	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		04/06/2011	1.51	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		04/06/2011	0.34	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: GG-16/1
Station Type: WELL CASING
Perf Interval (ft bgs): 304-864
Aquifer: UNDEFINED

Well Owner: GARDEN GROVE
Well Name: Well No. 16
City: GARDEN GROVE

Sample Group ID: 11003790
Sample ID: 11007920
Sample Date/Time: 04/06/2011 13:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11040130-07
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 519
pH (UNITS): 8.
Temperature (°C): 18.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		04/07/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: GG-16/1
Station Type: WELL CASING
Perf Interval (ft bgs): 304-864
Aquifer: UNDEFINED

Well Owner: GARDEN GROVE
Well Name: Well No. 16
City: GARDEN GROVE

Sample Group ID: 11003790
Sample ID: 11008944
Sample Date/Time: 04/06/2011 13:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11040130-05
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 519
pH (UNITS): 8.
Temperature (°C): 18.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Ag	Silver	X200.8	04/12/2011	04/13/2011	<1	ug/L	1	ug/L
Al	Aluminum	X200.8	04/12/2011	04/13/2011	19.7	ug/L	1	ug/L
ALKPHE	Alkalinity-Phenolphthalein	2320B		04/06/2011	<1	mg/L	1	mg/L
APCOLR	Apparent Color (unfiltered)	2120B		04/06/2011	<3	UNITS	3	UNITS
As	Arsenic	X200.8	04/12/2011	04/13/2011	3.9	ug/L	1	ug/L
B	Boron	X200.7	04/07/2011	04/14/2011	<0.1	mg/L	.1	mg/L
Ba	Barium	X200.8	04/12/2011	04/13/2011	49.9	ug/L	1	ug/L
Be	Beryllium	X200.8	04/12/2011	04/13/2011	<0.5	ug/L	.5	ug/L
Br	Bromide	X1-300.0		04/07/2011	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	04/07/2011	04/14/2011	61.1	mg/L	.1	mg/L
Cd	Cadmium	X200.8	04/12/2011	04/13/2011	<1	ug/L	1	ug/L
Cl	Chloride	X1-300.0		04/07/2011	26.8	mg/L	.5	mg/L
CN	Cyanide	X1-335.4		04/14/2011	<5	ug/L	5	ug/L
Co	Cobalt	X200.8	04/12/2011	04/13/2011	<1	ug/L	1	ug/L
CO3	Carbonate (as CO3)	2320B		04/06/2011	<0.6	mg/L	.6	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		04/06/2011	<1	mg/L	1	mg/L
Cr	Chromium	X200.7	04/07/2011	04/13/2011	<1	ug/L	1	ug/L
Cu	Copper	X200.8	04/12/2011	04/13/2011	<1	ug/L	1	ug/L
EC	Electrical Conductivity	2510B		04/06/2011	518	um/cm	1	um/cm
F	Fluoride	X1-300.0		04/07/2011	0.47	mg/L	.1	mg/L
Fe	Iron	X200.7	04/07/2011	04/13/2011	51.9	ug/L	1	ug/L
Gd	Gadolinium	X200.8	04/12/2011	04/13/2011	<10	ng/L	10	ng/L
HCO3	Bicarbonate (as HCO3)	2320B		04/06/2011	213	mg/L	1.2	mg/L
HCO3Ca	Bicarbonate (as CaCO3)	2320B		04/06/2011	175	mg/L	1	mg/L
Hg	Mercury	X200.8	04/12/2011	04/13/2011	<0.1	ug/L	.1	ug/L
K	Potassium	X200.7	04/07/2011	04/14/2011	2.5	mg/L	.1	mg/L
MBAS	Surfactants	5540C		04/07/2011	<0.02	mg/L	.02	mg/L
Mg	Magnesium	X200.7	04/07/2011	04/14/2011	11.4	mg/L	.1	mg/L
Mn	Manganese	X200.8	04/12/2011	04/13/2011	20.2	ug/L	1	ug/L
Na	Sodium	X200.7	04/07/2011	04/14/2011	36.1	mg/L	.1	mg/L
Ni	Nickel	X200.8	04/12/2011	04/13/2011	<1	ug/L	1	ug/L
ODOR	Threshold Odor Number (Median)	2150B		04/06/2011	0.	TON	0	TON
ODORHI	Odor Range High	2150B		04/06/2011	0.	TON	0	TON
ODORLO	Odor Range Low	2150B		04/06/2011	0.	TON	0	TON
OH	Hydroxide (as OH)	2320B		04/06/2011	<0.3	mg/L	.3	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		04/06/2011	<1	mg/L	1	mg/L
Pb	Lead	X200.8	04/12/2011	04/13/2011	<1	ug/L	1	ug/L
pH	pH	4500H+B		04/06/2011	8.	UNITS	1	UNITS
Sb	Antimony	X200.8	04/12/2011	04/13/2011	<0.5	ug/L	.5	ug/L
Se	Selenium	X200.8	04/12/2011	04/13/2011	1.4	ug/L	1	ug/L
SO4	Sulfate	X1-300.0		04/07/2011	52.3	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		04/07/2011	306	mg/L	1	mg/L
Tl	Thallium	X200.8	04/12/2011	04/13/2011	<0.5	ug/L	.5	ug/L
TOC	Total Organic Carbon (Unfiltered)	5310C		04/11/2011	0.15	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: GG-16/1
Station Type: WELL CASING
Perf Interval (ft bgs): 304-864
Aquifer: UNDEFINED

Well Owner: GARDEN GROVE
Well Name: Well No. 16
City: GARDEN GROVE

Sample Group ID: 11003790
Sample ID: 11008944
Sample Date/Time: 04/06/2011 13:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11040130-05
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 519
pH (UNITS): 8.
Temperature (°C): 18.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
TOTALK	Total Alkalinity (as CaCO3)	2320B		04/06/2011	175	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	04/07/2011	04/14/2011	200	mg/L	1	mg/L
TURB	Turbidity	2130B		04/07/2011	0.7	NTU	.1	NTU
V	Vanadium	X200.8	04/12/2011	04/13/2011	1.9	ug/L	1	ug/L
Zn	Zinc	X200.8	04/12/2011	04/13/2011	1.3	ug/L	1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 10001877
Sample ID: 10004542
Sample Date/Time: 02/17/2010 10:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10020508-04
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 2160
pH (UNITS): 7.5
Temperature (°C): 19.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISHCARGED TO WASTE, 1640 GPM

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		02/17/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	02/18/2010	02/18/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		02/22/2010	1.6	mg/L	.1	mg/L
Ca	Calcium	X200.7	02/18/2010	02/18/2010	236	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		02/22/2010	564	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		02/17/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		02/17/2010	2100	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		02/17/2010	166	mg/L	1	mg/L
K	Potassium	X200.7	02/18/2010	02/18/2010	5.9	mg/L	.1	mg/L
Mg	Magnesium	X200.7	02/18/2010	02/18/2010	41.4	mg/L	.1	mg/L
Na	Sodium	X200.7	02/18/2010	02/18/2010	126	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		02/17/2010	0.11	mg/L	.1	mg/L
pH	pH	4500H+B		02/17/2010	7.8	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		02/22/2010	111	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		02/22/2010	1350	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		02/18/2010	0.13	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		02/17/2010	166	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 10005655
Sample ID: 10010688
Sample Date/Time: 05/06/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10050175-04
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 2240
pH (UNITS): 7.5
Temperature (°C): 19.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		05/06/2010	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		05/06/2010	.63	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		05/06/2010	0.15	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 10005655
Sample ID: 10011060
Sample Date/Time: 05/06/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10050175-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 2240
pH (UNITS): 7.5
Temperature (°C): 19.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		05/06/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 10005655
Sample ID: 10011804
Sample Date/Time: 05/06/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10050175-03
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 2240
pH (UNITS): 7.5
Temperature (°C): 19.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		05/06/2010	1.6	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		05/06/2010	640	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		05/06/2010	2250	um/cm	1	um/cm
SO4	Sulfate	X1-300.0		05/06/2010	104	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		05/10/2010	1320	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		05/06/2010	0.08	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 10014623
Sample ID: 10030436
Sample Date/Time: 11/10/2010 13:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10110381-02
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 2900
pH (UNITS): 7.6
Temperature (°C): 19.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: TO WASTE,ON FOR 28 HRS.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		11/10/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	11/15/2010	11/29/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		11/10/2010	2.4	mg/L	.1	mg/L
Ca	Calcium	X200.7	11/15/2010	11/29/2010	316	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		11/10/2010	771	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		11/10/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		11/10/2010	2960	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		11/10/2010	149	mg/L	1	mg/L
K	Potassium	X200.7	11/15/2010	11/29/2010	7.5	mg/L	.1	mg/L
Mg	Magnesium	X200.7	11/15/2010	11/29/2010	56.6	mg/L	.1	mg/L
Na	Sodium	X200.7	11/15/2010	11/29/2010	170	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		11/10/2010	0.011	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		11/10/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		11/10/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		11/10/2010	7.5	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		11/10/2010	<0.01	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		11/10/2010	129	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		11/12/2010	1840	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		11/11/2010	0.08	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		11/10/2010	149	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	11/15/2010	11/29/2010	1020	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 10014627
Sample ID: 10030190
Sample Date/Time: 11/16/2010 12:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10110493-02
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 2220
pH (UNITS): 7.6
Temperature (°C): 20.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RUNNING TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		11/16/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	11/18/2010	11/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		11/17/2010	1.7	mg/L	.1	mg/L
Ca	Calcium	X200.7	11/18/2010	11/22/2010	231	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		11/17/2010	562	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		11/16/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		11/16/2010	2290	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		11/16/2010	145	mg/L	1	mg/L
K	Potassium	X200.7	11/18/2010	11/22/2010	6.1	mg/L	.1	mg/L
Mg	Magnesium	X200.7	11/18/2010	11/22/2010	40.8	mg/L	.1	mg/L
Na	Sodium	X200.7	11/18/2010	11/22/2010	134	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		11/17/2010	0.005	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		11/17/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		11/16/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		11/16/2010	7.5	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		11/17/2010	0.01	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		11/17/2010	107	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		11/16/2010	1340	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		11/17/2010	0.07	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		11/16/2010	145	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	11/18/2010	11/22/2010	745	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 10014672
Sample ID: 10030616
Sample Date/Time: 11/23/2010 10:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10110696-03
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 1790
pH (UNITS): 7.7
Temperature (°C): 20.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 550 GPM DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		11/23/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	11/29/2010	12/02/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		11/23/2010	1.3	mg/L	.1	mg/L
Ca	Calcium	X200.7	11/29/2010	12/02/2010	194	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		11/23/2010	422	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		11/23/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		11/23/2010	1800	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		11/23/2010	140	mg/L	1	mg/L
K	Potassium	X200.7	11/29/2010	12/02/2010	5.1	mg/L	.1	mg/L
Mg	Magnesium	X200.7	11/29/2010	12/02/2010	34.	mg/L	.1	mg/L
Na	Sodium	X200.7	11/29/2010	12/02/2010	114	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		11/23/2010	0.003	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		11/23/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		11/23/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		11/24/2010	7.7	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		11/23/2010	0.01	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		11/23/2010	89.4	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		11/23/2010	988	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		11/24/2010	0.08	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		11/23/2010	140	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	11/29/2010	12/02/2010	624	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 10015105
Sample ID: 10031299
Sample Date/Time: 12/07/2010 10:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10120127-02
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 1250
pH (UNITS): 7.8
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE 550 GPM

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		12/07/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	12/09/2010	12/13/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		12/07/2010	0.83	mg/L	.1	mg/L
Ca	Calcium	X200.7	12/09/2010	12/13/2010	128	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/08/2010	265	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		12/07/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		12/07/2010	1260	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		12/07/2010	133	mg/L	1	mg/L
K	Potassium	X200.7	12/09/2010	12/13/2010	4.3	mg/L	.1	mg/L
Mg	Magnesium	X200.7	12/09/2010	12/13/2010	22.9	mg/L	.1	mg/L
Na	Sodium	X200.7	12/09/2010	12/13/2010	86.3	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		12/07/2010	0.003	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		12/07/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		12/07/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		12/07/2010	7.7	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		12/07/2010	0.01	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		12/07/2010	70.2	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		12/08/2010	740	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		12/15/2010	0.12	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		12/07/2010	133	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	12/09/2010	12/13/2010	414	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 11000150
Sample ID: 11000653
Sample Date/Time: 12/20/2010 10:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10120380-02
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 1090
pH (UNITS): 8.
Temperature (°C): 21.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 640 GAL. PER MIN. TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		12/20/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	12/21/2010	12/22/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		12/20/2010	0.64	mg/L	.1	mg/L
Ca	Calcium	X200.7	12/21/2010	12/22/2010	111	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		12/21/2010	220	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		12/20/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		12/20/2010	1100	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		12/20/2010	129	mg/L	1	mg/L
K	Potassium	X200.7	12/21/2010	12/22/2010	4.	mg/L	.1	mg/L
Mg	Magnesium	X200.7	12/21/2010	12/22/2010	18.9	mg/L	.1	mg/L
Na	Sodium	X200.7	12/21/2010	12/22/2010	84.1	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		12/21/2010	0.003	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		12/20/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		12/20/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		12/20/2010	7.8	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		12/21/2010	0.02	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		12/20/2010	64.4	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		12/21/2010	656	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		12/29/2010	0.16	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		12/20/2010	129	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	12/21/2010	12/22/2010	355	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 11025393
Sample ID: 11033490
Sample Date/Time: 08/09/2011 12:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11080310-04
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 743
pH (UNITS): 7.8
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		08/10/2011	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		08/10/2011	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		08/10/2011	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 11025393
Sample ID: 11033703
Sample Date/Time: 08/09/2011 12:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11080310-06
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 743
pH (UNITS): 7.8
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		08/16/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 11025393
Sample ID: 11034487
Sample Date/Time: 08/09/2011 12:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11080310-05
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 743
pH (UNITS): 7.8
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		08/09/2011	<1	mg/L	1	mg/L
B	Boron	X200.7	08/10/2011	08/11/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		08/11/2011	0.37	mg/L	.1	mg/L
Ca	Calcium	X200.7	08/10/2011	08/22/2011	63.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		08/17/2011	122	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		08/09/2011	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		08/09/2011	766	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		08/09/2011	124	mg/L	1	mg/L
K	Potassium	X200.7	08/10/2011	08/22/2011	2.5	mg/L	.1	mg/L
Mg	Magnesium	X200.7	08/10/2011	08/22/2011	9.9	mg/L	.1	mg/L
Na	Sodium	X200.7	08/10/2011	08/11/2011	73.8	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		08/11/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		08/09/2011	8.	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		08/17/2011	51.9	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		08/11/2011	448	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		08/12/2011	0.18	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		08/09/2011	124	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 11027769
Sample ID: 11040100
Sample Date/Time: 10/12/2011 10:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11100330-04
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 600
pH (UNITS): 7.9
Temperature (°C): 22.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE: SAND

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		10/12/2011	<1	mg/L	1	mg/L
B	Boron	X200.7	10/13/2011	10/17/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		10/13/2011	0.23	mg/L	.1	mg/L
Ca	Calcium	X200.7	10/13/2011	10/17/2011	55.	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		10/13/2011	80.5	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		10/12/2011	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		10/12/2011	621	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		10/12/2011	129	mg/L	1	mg/L
K	Potassium	X200.7	10/13/2011	10/17/2011	2.7	mg/L	.1	mg/L
Mg	Magnesium	X200.7	10/13/2011	10/17/2011	8.6	mg/L	.1	mg/L
Na	Sodium	X200.7	10/13/2011	10/17/2011	56.2	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		10/13/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		10/12/2011	8.	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		10/13/2011	44.7	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		10/17/2011	362	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		10/12/2011	0.12	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		10/12/2011	129	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 10001878
Sample ID: 10003926
Sample Date/Time: 02/17/2010 10:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10020509-04
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 706
pH (UNITS): 7.9
Temperature (°C): 21.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		02/17/2010	0.003	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		02/22/2010	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		02/22/2010	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 10001878
Sample ID: 10006483
Sample Date/Time: 02/17/2010 10:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10020509-05
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 706
pH (UNITS): 7.9
Temperature (°C): 21.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		02/17/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	02/18/2010	02/18/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		02/17/2010	0.24	mg/L	.1	mg/L
Ca	Calcium	X200.7	02/18/2010	02/18/2010	77.6	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		02/17/2010	98.4	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		02/17/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		02/17/2010	675	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		03/03/2010	150	mg/L	1	mg/L
K	Potassium	X200.7	02/18/2010	02/18/2010	2.8	mg/L	.1	mg/L
Mg	Magnesium	X200.7	02/18/2010	02/18/2010	12.1	mg/L	.1	mg/L
Na	Sodium	X200.7	02/18/2010	02/18/2010	56.6	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		02/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		02/17/2010	8.	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		02/17/2010	55.6	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		02/22/2010	402	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		02/18/2010	0.16	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		03/03/2010	150	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 10010343
Sample ID: 10020596
Sample Date/Time: 08/11/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10080266-06
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 891
pH (UNITS): 7.7
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		08/19/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 10010343
Sample ID: 10021470
Sample Date/Time: 08/11/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10080266-05
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 891
pH (UNITS): 7.7
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		08/12/2010	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		08/13/2010	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		08/13/2010	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 10010343
Sample ID: 10023853
Sample Date/Time: 08/11/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10080266-04
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 891
pH (UNITS): 7.7
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Ag	Silver	X200.8	08/18/2010	08/23/2010	<1	ug/L	1	ug/L
Al	Aluminum	X200.8	08/18/2010	08/23/2010	2.	ug/L	1	ug/L
ALKPHE	Alkalinity-Phenolphthalein	2320B		08/11/2010	<1	mg/L	1	mg/L
APCOLR	Apparent Color (unfiltered)	2120B		08/12/2010	<3	UNITS	3	UNITS
As	Arsenic	X200.8	08/18/2010	08/23/2010	1.2	ug/L	1	ug/L
B	Boron	X200.7	08/19/2010	08/23/2010	<0.1	mg/L	.1	mg/L
Ba	Barium	X200.8	08/18/2010	09/01/2010	112	ug/L	1	ug/L
Be	Beryllium	X200.8	08/18/2010	08/23/2010	<0.5	ug/L	.5	ug/L
Br	Bromide	X1-300.0		08/11/2010	0.42	mg/L	.1	mg/L
Ca	Calcium	X200.7	08/19/2010	09/16/2010	94.6	mg/L	.1	mg/L
Cd	Cadmium	X200.8	08/18/2010	08/23/2010	<1	ug/L	1	ug/L
Cl	Chloride	X1-300.0		08/11/2010	147	mg/L	.5	mg/L
Co	Cobalt	X200.8	08/18/2010	08/23/2010	<1	ug/L	1	ug/L
CO3	Carbonate (as CO3)	2320B		08/11/2010	<0.6	mg/L	.6	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		08/11/2010	<1	mg/L	1	mg/L
Cr	Chromium	X200.7	08/19/2010	08/24/2010	<1	ug/L	1	ug/L
Cu	Copper	X200.8	08/18/2010	08/23/2010	<1	ug/L	1	ug/L
EC	Electrical Conductivity	2510B		08/11/2010	945	um/cm	1	um/cm
F	Fluoride	X1-300.0		08/11/2010	0.32	mg/L	.1	mg/L
Fe	Iron	X200.7	08/19/2010	08/24/2010	7.9	ug/L	1	ug/L
HCO3	Bicarbonate (as HCO3)	2320B		08/11/2010	181	mg/L	1.2	mg/L
HCO3Ca	Bicarbonate (as CaCO3)	2320B		08/11/2010	148	mg/L	1	mg/L
Hg	Mercury	X200.8	08/18/2010	08/23/2010	<0.1	ug/L	.1	ug/L
K	Potassium	X200.7	08/19/2010	08/23/2010	3.4	mg/L	.1	mg/L
MBAS	Surfactants	5540C		08/11/2010	<0.02	mg/L	.02	mg/L
Mg	Magnesium	X200.7	08/19/2010	08/23/2010	17.1	mg/L	.1	mg/L
Mn	Manganese	X200.8	08/18/2010	08/23/2010	17.4	ug/L	1	ug/L
Na	Sodium	X200.7	08/19/2010	09/16/2010	54.6	mg/L	.1	mg/L
Ni	Nickel	X200.8	08/18/2010	08/23/2010	1.3	ug/L	1	ug/L
ODOR	Threshold Odor Number (Median)	2150B		08/11/2010	0.	TON	0	TON
ODORHI	Odor Range High	2150B		08/11/2010	0.	TON	0	TON
ODORLO	Odor Range Low	2150B		08/11/2010	0.	TON	0	TON
OH	Hydroxide (as OH)	2320B		08/11/2010	<0.3	mg/L	.3	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		08/11/2010	<1	mg/L	1	mg/L
Pb	Lead	X200.8	08/18/2010	08/23/2010	<1	ug/L	1	ug/L
pH	pH	4500H+B		08/11/2010	7.9	UNITS	1	UNITS
Sb	Antimony	X200.8	08/18/2010	08/23/2010	<0.5	ug/L	.5	ug/L
Se	Selenium	X200.8	08/18/2010	08/23/2010	1.9	ug/L	1	ug/L
SO4	Sulfate	X1-300.0		08/11/2010	68.	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		08/12/2010	536	mg/L	1	mg/L
Tl	Thallium	X200.8	08/18/2010	08/23/2010	<0.5	ug/L	.5	ug/L
TOC	Total Organic Carbon (Unfiltered)	5310C		08/12/2010	0.15	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		08/11/2010	148	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	08/19/2010	09/16/2010	307	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 10010343
Sample ID: 10023853
Sample Date/Time: 08/11/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10080266-04
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 891
pH (UNITS): 7.7
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
TURB	Turbidity	2130B		08/11/2010	<0.1	NTU	.1	NTU
Zn	Zinc	X200.8	08/18/2010	08/23/2010	4.6	ug/L	1	ug/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 11001927
Sample ID: 11004461
Sample Date/Time: 02/17/2011 09:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11020436-03
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 687
pH (UNITS): 8.2
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		02/17/2011	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		02/22/2011	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		02/22/2011	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 11001927
Sample ID: 11005224
Sample Date/Time: 02/17/2011 09:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11020436-04
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 687
pH (UNITS): 8.2
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		02/17/2011	<1	mg/L	1	mg/L
B	Boron	X200.7	02/22/2011	02/23/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		02/17/2011	0.24	mg/L	.1	mg/L
Ca	Calcium	X200.7	02/22/2011	02/23/2011	68.8	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		02/17/2011	91.2	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		02/17/2011	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		02/17/2011	689	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		02/17/2011	142	mg/L	1	mg/L
K	Potassium	X200.7	02/22/2011	02/23/2011	2.7	mg/L	.1	mg/L
Mg	Magnesium	X200.7	02/22/2011	02/23/2011	10.7	mg/L	.1	mg/L
Na	Sodium	X200.7	02/22/2011	02/23/2011	52.5	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		02/17/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		02/17/2011	7.6	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		02/17/2011	55.9	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		02/24/2011	404	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		02/23/2011	0.15	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		02/17/2011	142	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 11025479
Sample ID: 11033704
Sample Date/Time: 08/09/2011 11:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11080311-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 847
pH (UNITS): 7.9
Temperature (°C): 19.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		08/16/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 11025479
Sample ID: 11034488
Sample Date/Time: 08/09/2011 11:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11080311-04
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 847
pH (UNITS): 7.9
Temperature (°C): 19.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		08/09/2011	<1	mg/L	1	mg/L
B	Boron	X200.7	08/10/2011	08/11/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		08/11/2011	0.4	mg/L	.1	mg/L
Ca	Calcium	X200.7	08/10/2011	08/22/2011	90.8	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		08/11/2011	129	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		08/09/2011	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		08/09/2011	878	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		08/09/2011	149	mg/L	1	mg/L
K	Potassium	X200.7	08/10/2011	08/22/2011	3.1	mg/L	.1	mg/L
Mg	Magnesium	X200.7	08/10/2011	08/22/2011	15.5	mg/L	.1	mg/L
Na	Sodium	X200.7	08/10/2011	08/22/2011	57.1	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		08/11/2011	0.14	mg/L	.1	mg/L
pH	pH	4500H+B		08/09/2011	8.	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		08/11/2011	72.4	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		08/11/2011	504	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		08/12/2011	0.26	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		08/09/2011	149	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 12001328
Sample ID: 12002797
Sample Date/Time: 02/01/2012 09:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 12020025-03
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 664
pH (UNITS): 8.
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		02/02/2012	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		02/02/2012	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		02/02/2012	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10001875
Sample ID: 10004538
Sample Date/Time: 02/17/2010 10:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10020504-04
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 733
pH (UNITS): 7.8
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		02/17/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	02/23/2010	02/24/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		02/17/2010	0.27	mg/L	.1	mg/L
Ca	Calcium	X200.7	02/23/2010	02/24/2010	75.5	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		02/17/2010	113	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		02/17/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		02/17/2010	706	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		02/17/2010	149	mg/L	1	mg/L
K	Potassium	X200.7	02/23/2010	02/24/2010	2.8	mg/L	.1	mg/L
Mg	Magnesium	X200.7	02/23/2010	02/24/2010	12.5	mg/L	.1	mg/L
Na	Sodium	X200.7	02/23/2010	02/24/2010	51.4	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		02/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		02/17/2010	7.9	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		02/17/2010	48.6	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		02/22/2010	400	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		02/18/2010	0.14	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		02/17/2010	149	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10005653
Sample ID: 10010686
Sample Date/Time: 05/06/2010 09:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10050173-03
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 756
pH (UNITS): 7.8
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		05/06/2010	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		05/06/2010	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		05/06/2010	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10010342
Sample ID: 10020594
Sample Date/Time: 08/11/2010 10:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10080264-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 760
pH (UNITS): 7.8
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		08/19/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10010342
Sample ID: 10023589
Sample Date/Time: 08/11/2010 10:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10080264-04
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 760
pH (UNITS): 7.8
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		08/11/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	08/19/2010	08/23/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		08/11/2010	0.32	mg/L	.1	mg/L
Ca	Calcium	X200.7	08/19/2010	09/02/2010	78.5	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		08/11/2010	116	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		08/11/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		08/11/2010	800	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		08/11/2010	146	mg/L	1	mg/L
K	Potassium	X200.7	08/19/2010	09/02/2010	2.9	mg/L	.1	mg/L
Mg	Magnesium	X200.7	08/19/2010	09/02/2010	13.1	mg/L	.1	mg/L
Na	Sodium	X200.7	08/19/2010	09/02/2010	57.3	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		08/11/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		08/11/2010	7.9	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		08/11/2010	49.6	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		08/12/2010	441	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		08/12/2010	0.14	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		08/11/2010	146	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11001923
Sample ID: 11005385
Sample Date/Time: 02/17/2011 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11020432-03
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 1300
pH (UNITS): 7.8
Temperature (°C): 19.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		02/17/2011	<1	mg/L	1	mg/L
B	Boron	X200.7	02/22/2011	02/23/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		02/17/2011	0.85	mg/L	.1	mg/L
Ca	Calcium	X200.7	02/22/2011	03/02/2011	153	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		02/18/2011	277	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		02/17/2011	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		02/17/2011	1340	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		02/17/2011	155	mg/L	1	mg/L
K	Potassium	X200.7	02/22/2011	02/23/2011	4.	mg/L	.1	mg/L
Mg	Magnesium	X200.7	02/22/2011	02/23/2011	24.2	mg/L	.1	mg/L
Na	Sodium	X200.7	02/22/2011	02/23/2011	65.8	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		02/17/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		02/17/2011	7.7	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		02/17/2011	74.6	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		02/24/2011	744	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		02/23/2011	0.15	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		02/17/2011	155	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11006110
Sample ID: 11012650
Sample Date/Time: 06/09/2011 10:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: MARK GREENING
Monitoring Program: Title 22

Lab Sample Number: 11060259-03
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 1400
pH (UNITS): 7.5
Temperature (°C): 19.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		06/09/2011	0.003	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		06/13/2011	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		06/13/2011	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11025392
Sample ID: 11033489
Sample Date/Time: 08/09/2011 11:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11080307-05
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 1300
pH (UNITS): 7.7
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		08/10/2011	0.004	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		08/10/2011	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		08/10/2011	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11025392
Sample ID: 11033702
Sample Date/Time: 08/09/2011 11:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11080307-06
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 1300
pH (UNITS): 7.7
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		08/16/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11025392
Sample ID: 11034690
Sample Date/Time: 08/09/2011 11:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11080307-04
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 1300
pH (UNITS): 7.7
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Ag	Silver	X200.8	08/10/2011	08/11/2011	<1	ug/L	1	ug/L
Al	Aluminum	X200.8	08/10/2011	08/11/2011	14.4	ug/L	1	ug/L
ALKPHE	Alkalinity-Phenolphthalein	2320B		08/09/2011	<1	mg/L	1	mg/L
APCOLR	Apparent Color (unfiltered)	2120B		08/10/2011	12	UNITS	3	UNITS
As	Arsenic	X200.8	08/10/2011	08/11/2011	1.5	ug/L	1	ug/L
B	Boron	X200.7	08/10/2011	08/11/2011	<0.1	mg/L	.1	mg/L
Ba	Barium	X200.8	08/10/2011	08/11/2011	116	ug/L	1	ug/L
Be	Beryllium	X200.8	08/10/2011	08/11/2011	<0.5	ug/L	.5	ug/L
Br	Bromide	X1-300.0		08/11/2011	0.92	mg/L	.1	mg/L
Ca	Calcium	X200.7	08/10/2011	08/11/2011	141	mg/L	.1	mg/L
Cd	Cadmium	X200.8	08/10/2011	08/11/2011	<1	ug/L	1	ug/L
Cl	Chloride	X1-300.0		08/25/2011	270	mg/L	.5	mg/L
Co	Cobalt	X200.8	08/10/2011	08/11/2011	<1	ug/L	1	ug/L
CO3	Carbonate (as CO3)	2320B		08/09/2011	<0.6	mg/L	.6	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		08/09/2011	<1	mg/L	1	mg/L
Cr	Chromium	X200.7	08/10/2011	08/23/2011	<1	ug/L	1	ug/L
Cu	Copper	X200.8	08/10/2011	08/11/2011	1.4	ug/L	1	ug/L
EC	Electrical Conductivity	2510B		08/09/2011	1340	um/cm	1	um/cm
F	Fluoride	X1-300.0		08/11/2011	0.42	mg/L	.1	mg/L
Fe	Iron	X200.7	08/10/2011	08/16/2011	591	ug/L	1	ug/L
Gd	Gadolinium	X200.8	08/10/2011	08/11/2011	<10	ng/L	10	ng/L
HCO3	Bicarbonate (as HCO3)	2320B		08/09/2011	185	mg/L	1.2	mg/L
HCO3Ca	Bicarbonate (as CaCO3)	2320B		08/09/2011	151	mg/L	1	mg/L
Hg	Mercury	X200.8	08/10/2011	08/11/2011	<0.1	ug/L	.1	ug/L
K	Potassium	X200.7	08/10/2011	08/11/2011	4.4	mg/L	.1	mg/L
MBAS	Surfactants	5540C		08/10/2011	<0.02	mg/L	.02	mg/L
Mg	Magnesium	X200.7	08/10/2011	08/11/2011	28.8	mg/L	.1	mg/L
Mn	Manganese	X200.8	08/10/2011	08/11/2011	37.8	ug/L	1	ug/L
Na	Sodium	X200.7	08/10/2011	08/11/2011	83.	mg/L	.1	mg/L
Ni	Nickel	X200.8	08/10/2011	08/11/2011	1.8	ug/L	1	ug/L
ODOR	Threshold Odor Number (Median)	2150B		08/09/2011	0.	TON	0	TON
ODORHI	Odor Range High	2150B		08/09/2011	2.	TON	0	TON
ODORLO	Odor Range Low	2150B		08/09/2011	0.	TON	0	TON
OH	Hydroxide (as OH)	2320B		08/09/2011	<0.3	mg/L	.3	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		08/09/2011	<1	mg/L	1	mg/L
Pb	Lead	X200.8	08/10/2011	08/11/2011	<1	ug/L	1	ug/L
pH	pH	4500H+B		08/09/2011	7.9	UNITS	1	UNITS
Sb	Antimony	X200.8	08/10/2011	08/11/2011	<0.5	ug/L	.5	ug/L
Se	Selenium	X200.8	08/10/2011	08/11/2011	1.3	ug/L	1	ug/L
SO4	Sulfate	X1-300.0		08/25/2011	74.9	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		08/11/2011	924	mg/L	1	mg/L
Tl	Thallium	X200.8	08/10/2011	08/11/2011	<0.5	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11025392
Sample ID: 11034690
Sample Date/Time: 08/09/2011 11:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11080307-04
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 1300
pH (UNITS): 7.7
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
TOC	Total Organic Carbon (Unfiltered)	5310C		08/12/2011	0.22	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		08/09/2011	151	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	08/10/2011	08/11/2011	471	mg/L	1	mg/L
TURB	Turbidity	2130B		08/09/2011	4.1	NTU	.1	NTU
V	Vanadium	X200.8	08/10/2011	08/11/2011	1.3	ug/L	1	ug/L
Zn	Zinc	X200.8	08/10/2011	08/11/2011	6.9	ug/L	1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11027767
Sample ID: 11040901
Sample Date/Time: 10/12/2011 10:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11100328-04
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 775
pH (UNITS): 7.9
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		10/12/2011	<1	mg/L	1	mg/L
B	Boron	X200.7	10/13/2011	10/17/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		10/13/2011	0.36	mg/L	.1	mg/L
Ca	Calcium	X200.7	10/13/2011	11/03/2011	75.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		10/13/2011	120	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		10/12/2011	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		10/12/2011	799	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		10/12/2011	145	mg/L	1	mg/L
K	Potassium	X200.7	10/13/2011	11/03/2011	2.9	mg/L	.1	mg/L
Mg	Magnesium	X200.7	10/13/2011	11/03/2011	12.9	mg/L	.1	mg/L
Na	Sodium	X200.7	10/13/2011	11/03/2011	56.9	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		10/13/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		10/12/2011	7.9	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		10/13/2011	52.5	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		10/13/2011	426	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		10/12/2011	0.18	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		10/12/2011	145	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 12001324
Sample ID: 12002794
Sample Date/Time: 02/01/2012 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 12020021-03
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 694
pH (UNITS): 7.7
Temperature (°C): 20.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		02/02/2012	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		02/02/2012	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		02/02/2012	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: ITO-LA/1
Station Type: WELL CASING
Perf Interval (ft bgs): 70-710
Aquifer: UNDEFINED

Well Owner: ITO-OZAWA FARMS
Well Name: Ito-Ozawa Old
City: LOS ALAMITOS

Sample Group ID: 10014609
Sample ID: 10030170
Sample Date/Time: 11/10/2010 11:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10110376-03
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 1030
pH (UNITS): 7.9
Temperature (°C): 19.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: FLUSHED 5 MIN., PUMP RUNNING,,AGRATED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		11/10/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	11/15/2010	11/18/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		11/10/2010	0.37	mg/L	.1	mg/L
Ca	Calcium	X200.7	11/15/2010	11/18/2010	142	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		11/10/2010	118	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		11/10/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		11/10/2010	1050	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		11/10/2010	201	mg/L	1	mg/L
K	Potassium	X200.7	11/15/2010	11/18/2010	3.	mg/L	.1	mg/L
Mg	Magnesium	X200.7	11/15/2010	11/18/2010	19.9	mg/L	.1	mg/L
Na	Sodium	X200.7	11/15/2010	11/18/2010	57.2	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		11/10/2010	0.009	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		11/10/2010	0.23	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		11/10/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		11/10/2010	7.8	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		11/10/2010	0.05	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		11/10/2010	153	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		11/12/2010	656	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		11/11/2010	0.62	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		11/10/2010	201	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	11/15/2010	11/18/2010	437	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: ITO-LAG3/1
Station Type: WELL CASING
Perf Interval (ft bgs): 170-780
Aquifer: UNDEFINED

Well Owner: ITO-OZAWA FARMS
Well Name: Ito-Ozawa New
City: LOS ALAMITOS

Sample Group ID: 11029351
Sample ID: 11040798
Sample Date/Time: 10/20/2011 11:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100571-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 405
pH (UNITS): 8.1
Temperature (°C): 18.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		10/31/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: ITO-LAG3/1
Station Type: WELL CASING
Perf Interval (ft bgs): 170-780
Aquifer: UNDEFINED

Well Owner: ITO-OZAWA FARMS
Well Name: Ito-Ozawa New
City: LOS ALAMITOS

Sample Group ID: 11029351
Sample ID: 11041138
Sample Date/Time: 10/20/2011 11:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100571-03
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 405
pH (UNITS): 8.1
Temperature (°C): 18.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use *Qualifier: Validated Sample*

Parameter Abbreviation	Parameter Name	Analysis Method	Dates Extract	Dates Analysis	Results Value	Results Units	Detection Limit Value	Detection Limit Units
ALKPHE	Alkalinity-Phenolphthalein	2320B		10/20/2011	<1	mg/L	1	mg/L
B	Boron	X200.7	10/24/2011	10/25/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		10/21/2011	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	10/24/2011	10/25/2011	46.6	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		11/15/2011	12.8	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		10/20/2011	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		10/20/2011	438	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		10/20/2011	163	mg/L	1	mg/L
K	Potassium	X200.7	10/24/2011	10/25/2011	3.9	mg/L	.1	mg/L
Mg	Magnesium	X200.7	10/24/2011	10/25/2011	11.5	mg/L	.1	mg/L
Na	Sodium	X200.7	10/24/2011	10/25/2011	34.4	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		10/20/2011	0.035	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		10/21/2011	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		10/20/2011	<1	mg/L	1	mg/L
pH	pH	4500H+B		10/20/2011	8.	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		10/20/2011	0.1	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		11/15/2011	35.4	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		10/20/2011	258	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		10/20/2011	0.24	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		10/20/2011	163	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	10/24/2011	10/25/2011	164	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: NVLR-LAH1/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: NAVAL RECREATION STATION
Well Name:
City: LOS ALAMITOS

Sample Group ID: 10014608
Sample ID: 10030169
Sample Date/Time: 11/10/2010 08:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10110375-03
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 468
pH (UNITS): 8.
Temperature (°C): 18.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: FLUSHED 5 MIN., PUMP RUNNING

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		11/10/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	11/15/2010	11/18/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		11/10/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	11/15/2010	11/18/2010	52.	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		11/10/2010	15.9	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		11/10/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		11/10/2010	459	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		11/10/2010	170	mg/L	1	mg/L
K	Potassium	X200.7	11/15/2010	11/18/2010	2.4	mg/L	.1	mg/L
Mg	Magnesium	X200.7	11/15/2010	11/18/2010	9.9	mg/L	.1	mg/L
Na	Sodium	X200.7	11/15/2010	11/18/2010	32.1	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		11/10/2010	0.002	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		11/10/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		11/10/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		11/10/2010	7.8	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		11/10/2010	0.03	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		11/10/2010	41.6	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		11/12/2010	298	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		11/11/2010	0.19	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		11/10/2010	170	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	11/15/2010	11/18/2010	171	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: NVLR-LAH1/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: NAVAL RECREATION STATION
Well Name:
City: LOS ALAMITOS

Sample Group ID: 11029350
Sample ID: 11040797
Sample Date/Time: 10/20/2011 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100570-03
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 441
pH (UNITS): 7.8
Temperature (°C): 18.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		10/31/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: NVLW-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): 200-420
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 10013789
Sample ID: 10027695
Sample Date/Time: 10/21/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10100632-03
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 448
pH (UNITS): 8.
Temperature (°C): 18.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: PUMP RUNNING; FLUSHED 5 MIN.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		10/21/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	10/25/2010	10/26/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		10/21/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	10/25/2010	10/26/2010	51.6	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		10/21/2010	12.9	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		10/21/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		10/21/2010	453	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		10/21/2010	171	mg/L	1	mg/L
K	Potassium	X200.7	10/25/2010	10/26/2010	2.2	mg/L	.1	mg/L
Mg	Magnesium	X200.7	10/25/2010	10/26/2010	9.4	mg/L	.1	mg/L
Na	Sodium	X200.7	10/25/2010	10/26/2010	30.9	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		10/22/2010	0.003	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		10/21/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		10/21/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		10/21/2010	7.9	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		10/22/2010	0.03	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		10/21/2010	37.8	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		10/21/2010	270	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		10/26/2010	0.14	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		10/21/2010	171	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	10/25/2010	10/26/2010	168	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: NVLW-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): 200-420
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 11029324
Sample ID: 11040445
Sample Date/Time: 10/19/2011 10:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100523-03
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 453
pH (UNITS): 7.9
Temperature (°C): 18.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		10/27/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: NVLW-SB2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 207-407
Aquifer: UNDEFINED

Well Owner: NAVAL WEAPONS STATION
Well Name:
City: SEAL BEACH

Sample Group ID: 10001268
Sample ID: 10002305
Sample Date/Time: 01/26/2010 10:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10010617-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 558
pH (UNITS): 7.9
Temperature (°C): 19.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: AG WELL PUMP TEST AT SBNWS; AG WELL DEVELOPMENTAT SBNWS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		01/28/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: NVLW-SB2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 207-407
Aquifer: UNDEFINED

Well Owner: NAVAL WEAPONS STATION
Well Name:
City: SEAL BEACH

Sample Group ID: 10001268
Sample ID: 10004020
Sample Date/Time: 01/26/2010 10:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10010617-04
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 558
pH (UNITS): 7.9
Temperature (°C): 19.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: AG WELL PUMP TEST AT SBNWS; AG WELL DEVELOPMENTAT SBNWS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		01/26/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	01/28/2010	02/01/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		01/26/2010	0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	01/28/2010	02/01/2010	61.8	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		01/26/2010	41.8	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		01/26/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		01/26/2010	545	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		01/26/2010	166	mg/L	1	mg/L
K	Potassium	X200.7	01/28/2010	02/01/2010	2.3	mg/L	.1	mg/L
Mg	Magnesium	X200.7	01/28/2010	02/01/2010	11.2	mg/L	.1	mg/L
Na	Sodium	X200.7	01/28/2010	02/01/2010	39.	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		01/26/2010	0.004	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		01/26/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		01/26/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		01/26/2010	8.1	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		01/26/2010	0.03	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		01/26/2010	55.1	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		01/27/2010	330	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		01/28/2010	0.22	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		01/26/2010	166	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	01/28/2010	02/01/2010	200	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34H5/1
Station Type: WELL CASING
Perf Interval (ft bgs): 300-340
Aquifer: A-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: UNINCORPORATED

Sample Group ID: 11025025
Sample ID: 11032971
Sample Date/Time: 03/23/2010
End Sample Date/Time:
Sample Depth(ft): 305.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			190	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34H5/1
Station Type: WELL CASING
Perf Interval (ft bgs): 300-340
Aquifer: A-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: UNINCORPORATED

Sample Group ID: 11025026
Sample ID: 11032972
Sample Date/Time: 03/23/2010
End Sample Date/Time:
Sample Depth(ft): 320.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			160	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34H5/1
Station Type: WELL CASING
Perf Interval (ft bgs): 300-340
Aquifer: A-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: UNINCORPORATED

Sample Group ID: 11025027
Sample ID: 11032973
Sample Date/Time: 03/23/2010
End Sample Date/Time:
Sample Depth(ft): 335.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			120	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34H5/1
Station Type: WELL CASING
Perf Interval (ft bgs): 300-340
Aquifer: A-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: UNINCORPORATED

Sample Group ID: 11025028
Sample ID: 11032974
Sample Date/Time: 10/05/2010
End Sample Date/Time:
Sample Depth(ft): 305.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			85	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34H5/1
Station Type: WELL CASING
Perf Interval (ft bgs): 300-340
Aquifer: A-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: UNINCORPORATED

Sample Group ID: 11025029
Sample ID: 11032975
Sample Date/Time: 10/05/2010
End Sample Date/Time:
Sample Depth(ft): 320.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			75	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34H5/1
Station Type: WELL CASING
Perf Interval (ft bgs): 300-340
Aquifer: A-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: UNINCORPORATED

Sample Group ID: 11025030
Sample ID: 11032976
Sample Date/Time: 10/05/2010
End Sample Date/Time:
Sample Depth(ft): 335.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			90	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34H5/2
Station Type: WELL CASING
Perf Interval (ft bgs): 405-455
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: UNINCORPORATED

Sample Group ID: 11024989
Sample ID: 11032935
Sample Date/Time: 03/23/2010
End Sample Date/Time:
Sample Depth(ft): 415.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			250	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34H5/2
Station Type: WELL CASING
Perf Interval (ft bgs): 405-455
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: UNINCORPORATED

Sample Group ID: 11024990
Sample ID: 11032936
Sample Date/Time: 03/23/2010
End Sample Date/Time:
Sample Depth(ft): 430.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			310	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34H5/2
Station Type: WELL CASING
Perf Interval (ft bgs): 405-455
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: UNINCORPORATED

Sample Group ID: 11024991
Sample ID: 11032937
Sample Date/Time: 03/23/2010
End Sample Date/Time:
Sample Depth(ft): 450.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			270	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34H5/2
Station Type: WELL CASING
Perf Interval (ft bgs): 405-455
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: UNINCORPORATED

Sample Group ID: 11024992
Sample ID: 11032938
Sample Date/Time: 10/05/2010
End Sample Date/Time:
Sample Depth(ft): 415.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			270	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34H5/2
Station Type: WELL CASING
Perf Interval (ft bgs): 405-455
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: UNINCORPORATED

Sample Group ID: 11024993
Sample ID: 11032939
Sample Date/Time: 10/05/2010
End Sample Date/Time:
Sample Depth(ft): 430.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			205	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34H5/2
Station Type: WELL CASING
Perf Interval (ft bgs): 405-455
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: UNINCORPORATED

Sample Group ID: 11024994
Sample ID: 11032940
Sample Date/Time: 10/05/2010
End Sample Date/Time:
Sample Depth(ft): 450.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			175	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34N21/1
Station Type: WELL CASING
Perf Interval (ft bgs): 329-366
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-2AI
City: SEAL BEACH

Sample Group ID: 11022099
Sample ID: 11030045
Sample Date/Time: 03/02/2010
End Sample Date/Time:
Sample Depth(ft): 334.80
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			95	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34N21/1
Station Type: WELL CASING
Perf Interval (ft bgs): 329-366
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-2AI
City: SEAL BEACH

Sample Group ID: 11022100
Sample ID: 11030046
Sample Date/Time: 03/02/2010
End Sample Date/Time:
Sample Depth(ft): 360.80
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			105	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34N21/2
Station Type: WELL CASING
Perf Interval (ft bgs): 424-464
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-2AI
City: SEAL BEACH

Sample Group ID: 11024668
Sample ID: 11032614
Sample Date/Time: 03/02/2010
End Sample Date/Time:
Sample Depth(ft): 429.80
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			120	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34N21/2
Station Type: WELL CASING
Perf Interval (ft bgs): 424-464
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-2AI
City: SEAL BEACH

Sample Group ID: 11024669
Sample ID: 11032615
Sample Date/Time: 03/02/2010
End Sample Date/Time:
Sample Depth(ft): 459.80
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			120	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34U8/1
Station Type: WELL CASING
Perf Interval (ft bgs): 149-174
Aquifer: C ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-4CBAI
City: SEAL BEACH

Sample Group ID: 11022139
Sample ID: 11030085
Sample Date/Time: 03/25/2010
End Sample Date/Time:
Sample Depth(ft): 155.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			120	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34U8/1
Station Type: WELL CASING
Perf Interval (ft bgs): 149-174
Aquifer: C ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-4CBAI
City: SEAL BEACH

Sample Group ID: 11022140
Sample ID: 11030086
Sample Date/Time: 03/25/2010
End Sample Date/Time:
Sample Depth(ft): 170.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			130	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34U8/1
Station Type: WELL CASING
Perf Interval (ft bgs): 149-174
Aquifer: C ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-4CBAI
City: SEAL BEACH

Sample Group ID: 11022141
Sample ID: 11030087
Sample Date/Time: 09/21/2010
End Sample Date/Time:
Sample Depth(ft): 155.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			100	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34U8/1
Station Type: WELL CASING
Perf Interval (ft bgs): 149-174
Aquifer: C ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-4CBAI
City: SEAL BEACH

Sample Group ID: 11022142
Sample ID: 11030088
Sample Date/Time: 09/21/2010
End Sample Date/Time:
Sample Depth(ft): 170.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			110	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34U8/2
Station Type: WELL CASING
Perf Interval (ft bgs): 224-234
Aquifer: B ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-4CBAI
City: SEAL BEACH

Sample Group ID: 11022158
Sample ID: 11030104
Sample Date/Time: 03/25/2010
End Sample Date/Time:
Sample Depth(ft): 230.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			2300	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34U8/2
Station Type: WELL CASING
Perf Interval (ft bgs): 224-234
Aquifer: B ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-4CBAI
City: SEAL BEACH

Sample Group ID: 11022159
Sample ID: 11030105
Sample Date/Time: 09/21/2010
End Sample Date/Time:
Sample Depth(ft): 230.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			2260	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34U8/3
Station Type: WELL CASING
Perf Interval (ft bgs): 279-319
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-4CBAI
City: SEAL BEACH

Sample Group ID: 11022190
Sample ID: 11030136
Sample Date/Time: 03/25/2010
End Sample Date/Time:
Sample Depth(ft): 285.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			350	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34U8/3
Station Type: WELL CASING
Perf Interval (ft bgs): 279-319
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-4CBAI
City: SEAL BEACH

Sample Group ID: 11022191
Sample ID: 11030137
Sample Date/Time: 03/25/2010
End Sample Date/Time:
Sample Depth(ft): 315.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			200	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34U8/3
Station Type: WELL CASING
Perf Interval (ft bgs): 279-319
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-4CBAI
City: SEAL BEACH

Sample Group ID: 11022192
Sample ID: 11030138
Sample Date/Time: 09/21/2010
End Sample Date/Time:
Sample Depth(ft): 285.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			105	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34U8/3
Station Type: WELL CASING
Perf Interval (ft bgs): 279-319
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-4CBAI
City: SEAL BEACH

Sample Group ID: 11022193
Sample ID: 11030139
Sample Date/Time: 09/21/2010
End Sample Date/Time:
Sample Depth(ft): 315.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			115	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34U8/4
Station Type: WELL CASING
Perf Interval (ft bgs): 359-384
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-4CBAI
City: SEAL BEACH

Sample Group ID: 11022224
Sample ID: 11030170
Sample Date/Time: 03/25/2010
End Sample Date/Time:
Sample Depth(ft): 365.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			160	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34U8/4
Station Type: WELL CASING
Perf Interval (ft bgs): 359-384
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-4CBAI
City: SEAL BEACH

Sample Group ID: 11022225
Sample ID: 11030171
Sample Date/Time: 03/25/2010
End Sample Date/Time:
Sample Depth(ft): 380.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			160	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34U8/4
Station Type: WELL CASING
Perf Interval (ft bgs): 359-384
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-4CBAI
City: SEAL BEACH

Sample Group ID: 11022226
Sample ID: 11030172
Sample Date/Time: 09/21/2010
End Sample Date/Time:
Sample Depth(ft): 365.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			185	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34U8/4
Station Type: WELL CASING
Perf Interval (ft bgs): 359-384
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-4CBAI
City: SEAL BEACH

Sample Group ID: 11022227
Sample ID: 11030173
Sample Date/Time: 09/21/2010
End Sample Date/Time:
Sample Depth(ft): 380.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			190	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34V20/1
Station Type: WELL CASING
Perf Interval (ft bgs): 235-307
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-3AI
City: SEAL BEACH

Sample Group ID: 11022547
Sample ID: 11030493
Sample Date/Time: 03/25/2010
End Sample Date/Time:
Sample Depth(ft): 240.30
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			140	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34V20/1
Station Type: WELL CASING
Perf Interval (ft bgs): 235-307
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-3AI
City: SEAL BEACH

Sample Group ID: 11022548
Sample ID: 11030494
Sample Date/Time: 03/25/2010
End Sample Date/Time:
Sample Depth(ft): 271.30
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			150	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34V20/1
Station Type: WELL CASING
Perf Interval (ft bgs): 235-307
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-3AI
City: SEAL BEACH

Sample Group ID: 11022549
Sample ID: 11030495
Sample Date/Time: 03/25/2010
End Sample Date/Time:
Sample Depth(ft): 298.30
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			140	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34V20/1
Station Type: WELL CASING
Perf Interval (ft bgs): 235-307
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-3AI
City: SEAL BEACH

Sample Group ID: 11022550
Sample ID: 11030496
Sample Date/Time: 09/21/2010
End Sample Date/Time:
Sample Depth(ft): 240.30
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			125	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34V20/1
Station Type: WELL CASING
Perf Interval (ft bgs): 235-307
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-3AI
City: SEAL BEACH

Sample Group ID: 11022551
Sample ID: 11030497
Sample Date/Time: 09/21/2010
End Sample Date/Time:
Sample Depth(ft): 271.30
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			110	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34V20/1
Station Type: WELL CASING
Perf Interval (ft bgs): 235-307
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-3AI
City: SEAL BEACH

Sample Group ID: 11022552
Sample ID: 11030498
Sample Date/Time: 09/21/2010
End Sample Date/Time:
Sample Depth(ft): 298.30
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			105	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34V20/2
Station Type: WELL CASING
Perf Interval (ft bgs): 387-417
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-3AI
City: SEAL BEACH

Sample Group ID: 11022573
Sample ID: 11030519
Sample Date/Time: 03/25/2010
End Sample Date/Time:
Sample Depth(ft): 392.30
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			90	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34V20/2
Station Type: WELL CASING
Perf Interval (ft bgs): 387-417
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-3AI
City: SEAL BEACH

Sample Group ID: 11022574
Sample ID: 11030520
Sample Date/Time: 09/21/2010
End Sample Date/Time:
Sample Depth(ft): 392.30
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			65	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34VZX/1
Station Type: WELL CASING
Perf Interval (ft bgs): 147-177
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: ALBM4-A
City: LONG BEACH

Sample Group ID: 11021162
Sample ID: 11029108
Sample Date/Time: 03/22/2010
End Sample Date/Time:
Sample Depth(ft): 152.20
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			140	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34VZX/1
Station Type: WELL CASING
Perf Interval (ft bgs): 147-177
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: ALBM4-A
City: LONG BEACH

Sample Group ID: 11021163
Sample ID: 11029109
Sample Date/Time: 03/22/2010
End Sample Date/Time:
Sample Depth(ft): 162.20
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			130	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34VZX/1
Station Type: WELL CASING
Perf Interval (ft bgs): 147-177
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: ALBM4-A
City: LONG BEACH

Sample Group ID: 11021164
Sample ID: 11029110
Sample Date/Time: 10/04/2010
End Sample Date/Time:
Sample Depth(ft): 152.20
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			75	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34VZX/1
Station Type: WELL CASING
Perf Interval (ft bgs): 147-177
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: ALBM4-A
City: LONG BEACH

Sample Group ID: 11021165
Sample ID: 11029111
Sample Date/Time: 10/04/2010
End Sample Date/Time:
Sample Depth(ft): 162.20
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			75	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34VZY/1
Station Type: WELL CASING
Perf Interval (ft bgs): 215-235
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: ALBM4-I
City: LONG BEACH

Sample Group ID: 11021094
Sample ID: 11029040
Sample Date/Time: 03/22/2010
End Sample Date/Time:
Sample Depth(ft): 220.20
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			250	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34VZY/1
Station Type: WELL CASING
Perf Interval (ft bgs): 215-235
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: ALBM4-I
City: LONG BEACH

Sample Group ID: 11021095
Sample ID: 11029041
Sample Date/Time: 03/22/2010
End Sample Date/Time:
Sample Depth(ft): 230.20
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			170	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34VZY/1
Station Type: WELL CASING
Perf Interval (ft bgs): 215-235
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: ALBM4-I
City: LONG BEACH

Sample Group ID: 11021096
Sample ID: 11029042
Sample Date/Time: 10/04/2010
End Sample Date/Time:
Sample Depth(ft): 220.20
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			80	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34VZY/1
Station Type: WELL CASING
Perf Interval (ft bgs): 215-235
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: ALBM4-I
City: LONG BEACH

Sample Group ID: 11021097
Sample ID: 11029043
Sample Date/Time: 10/04/2010
End Sample Date/Time:
Sample Depth(ft): 230.20
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			75	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/1
Station Type: WELL CASING
Perf Interval (ft bgs): 88-113
Aquifer: C-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000519
Sample ID: 10000997
Sample Date/Time: 01/13/2010 09:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010341-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 698
pH (UNITS): 7.9
Temperature (°C): 22.4
Dissolved Oxygen (mg/L): 0.
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 60 GAL. STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	*Qualifier: Validated Sample*							
CLO4	Perchlorate	X1-314.0		01/14/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/1
Station Type: WELL CASING
Perf Interval (ft bgs): 88-113
Aquifer: C-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000519
Sample ID: 10002248
Sample Date/Time: 01/13/2010 09:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010341-04
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 698
pH (UNITS): 7.9
Temperature (°C): 22.4
Dissolved Oxygen (mg/L): 0.
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 60 GAL. STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		01/13/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	01/14/2010	01/18/2010	0.11	mg/L	.1	mg/L
Br	Bromide	X1-300.0		01/14/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	01/14/2010	01/18/2010	46.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		01/14/2010	28.2	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		01/13/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		01/13/2010	680	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		01/13/2010	206	mg/L	1	mg/L
K	Potassium	X200.7	01/14/2010	02/01/2010	3.1	mg/L	.1	mg/L
Mg	Magnesium	X200.7	01/14/2010	02/01/2010	12.3	mg/L	.1	mg/L
Na	Sodium	X200.7	01/14/2010	02/01/2010	96.3	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		01/14/2010	0.005	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		01/14/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		01/13/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		01/13/2010	8.1	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		01/14/2010	0.11	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		01/14/2010	116	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		01/19/2010	432	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		01/15/2010	3.55	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		01/13/2010	206	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	01/14/2010	02/01/2010	166	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/1
Station Type: WELL CASING
Perf Interval (ft bgs): 88-113
Aquifer: C-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025223
Sample ID: 11033169
Sample Date/Time: 03/23/2010
End Sample Date/Time:
Sample Depth(ft): 91.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			80	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/1
Station Type: WELL CASING
Perf Interval (ft bgs): 88-113
Aquifer: C-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025224
Sample ID: 11033170
Sample Date/Time: 03/23/2010
End Sample Date/Time:
Sample Depth(ft): 107.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			90	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/1
Station Type: WELL CASING
Perf Interval (ft bgs): 88-113
Aquifer: C-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10006352
Sample ID: 10012074
Sample Date/Time: 05/17/2010 11:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10050430-02
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 630
pH (UNITS): 7.1
Temperature (°C): 21.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 60 GAL. TO STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		05/19/2010	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		05/19/2010	27.3	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		05/18/2010	635	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		05/19/2010	396	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		05/20/2010	0.8	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/1
Station Type: WELL CASING
Perf Interval (ft bgs): 88-113
Aquifer: C-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025225
Sample ID: 11033171
Sample Date/Time: 09/30/2010
End Sample Date/Time:
Sample Depth(ft): 91.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			30	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/1
Station Type: WELL CASING
Perf Interval (ft bgs): 88-113
Aquifer: C-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025226
Sample ID: 11033172
Sample Date/Time: 09/30/2010
End Sample Date/Time:
Sample Depth(ft): 107.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			30	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/2
Station Type: WELL CASING
Perf Interval (ft bgs): 139-154
Aquifer: B-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000520
Sample ID: 10000998
Sample Date/Time: 01/13/2010 11:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010342-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 823
pH (UNITS): 7.9
Temperature (°C): 21.5
Dissolved Oxygen (mg/L): 0.
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 80 GAL. STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	*Qualifier: Validated Sample*							
CLO4	Perchlorate	X1-314.0		01/14/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/2
Station Type: WELL CASING
Perf Interval (ft bgs): 139-154
Aquifer: B-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000520
Sample ID: 10002842
Sample Date/Time: 01/13/2010 11:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010342-04
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 823
pH (UNITS): 7.9
Temperature (°C): 21.5
Dissolved Oxygen (mg/L): 0.
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 80 GAL. STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		01/13/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	01/14/2010	01/18/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		01/14/2010	0.11	mg/L	.1	mg/L
Ca	Calcium	X200.7	01/14/2010	01/18/2010	73.9	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		01/28/2010	64.3	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		01/13/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		01/13/2010	801	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		01/13/2010	139	mg/L	1	mg/L
K	Potassium	X200.7	01/14/2010	01/18/2010	2.5	mg/L	.1	mg/L
Mg	Magnesium	X200.7	01/14/2010	01/18/2010	13.3	mg/L	.1	mg/L
Na	Sodium	X200.7	01/14/2010	01/18/2010	66.9	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		01/14/2010	0.004	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		01/14/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		01/13/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		01/13/2010	8.1	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		01/14/2010	0.04	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		01/28/2010	167	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		01/19/2010	532	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		01/15/2010	1.42	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		01/13/2010	139	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	01/14/2010	01/18/2010	239	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/2
Station Type: WELL CASING
Perf Interval (ft bgs): 139-154
Aquifer: B-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025227
Sample ID: 11033173
Sample Date/Time: 03/23/2010
End Sample Date/Time:
Sample Depth(ft): 143.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			80	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/2
Station Type: WELL CASING
Perf Interval (ft bgs): 139-154
Aquifer: B-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10006353
Sample ID: 10012075
Sample Date/Time: 05/17/2010 11:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10050431-02
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 790
pH (UNITS): 7.3
Temperature (°C): 21.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 81 GAL. TO STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		05/19/2010	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		05/19/2010	62.9	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		05/18/2010	805	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		05/19/2010	498	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		05/17/2010	1.13	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/2
Station Type: WELL CASING
Perf Interval (ft bgs): 139-154
Aquifer: B-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025228
Sample ID: 11033174
Sample Date/Time: 09/30/2010
End Sample Date/Time:
Sample Depth(ft): 143.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			35	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/3
Station Type: WELL CASING
Perf Interval (ft bgs): 204-244
Aquifer: A-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000521
Sample ID: 10000999
Sample Date/Time: 01/13/2010 10:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010343-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 1690
pH (UNITS): 7.9
Temperature (°C): 22.1
Dissolved Oxygen (mg/L): 0.05
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 127 GAL. STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	*Qualifier: Validated Sample*							
CLO4	Perchlorate	X1-314.0		01/14/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/3
Station Type: WELL CASING
Perf Interval (ft bgs): 204-244
Aquifer: A-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000521
Sample ID: 10002249
Sample Date/Time: 01/13/2010 10:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010343-04
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 1690
pH (UNITS): 7.9
Temperature (°C): 22.1
Dissolved Oxygen (mg/L): 0.05
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 127 GAL. STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		01/13/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	01/14/2010	01/18/2010	0.2	mg/L	.1	mg/L
Br	Bromide	X1-300.0		01/14/2010	1.4	mg/L	.1	mg/L
Ca	Calcium	X200.7	01/14/2010	02/01/2010	134	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		01/14/2010	370	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		01/13/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		01/13/2010	1680	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		01/13/2010	143	mg/L	1	mg/L
K	Potassium	X200.7	01/14/2010	02/01/2010	4.2	mg/L	.1	mg/L
Mg	Magnesium	X200.7	01/14/2010	02/01/2010	27.	mg/L	.1	mg/L
Na	Sodium	X200.7	01/14/2010	02/01/2010	179	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		01/14/2010	<0.002	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		01/14/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		01/13/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		01/13/2010	8.	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		01/14/2010	0.04	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		01/14/2010	238	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		01/19/2010	954	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		01/15/2010	1.63	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		01/13/2010	143	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	01/14/2010	01/18/2010	446	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/3
Station Type: WELL CASING
Perf Interval (ft bgs): 204-244
Aquifer: A-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025229
Sample ID: 11033175
Sample Date/Time: 03/23/2010
End Sample Date/Time:
Sample Depth(ft): 208.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			90	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/3
Station Type: WELL CASING
Perf Interval (ft bgs): 204-244
Aquifer: A-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025230
Sample ID: 11033176
Sample Date/Time: 03/23/2010
End Sample Date/Time:
Sample Depth(ft): 238.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			90	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/3
Station Type: WELL CASING
Perf Interval (ft bgs): 204-244
Aquifer: A-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10006387
Sample ID: 10012118
Sample Date/Time: 05/17/2010 10:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10050432-02
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 1570
pH (UNITS): 7.
Temperature (°C): 21.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 125 GAL. TO STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		05/19/2010	1.2	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		05/19/2010	311	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		05/18/2010	1620	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		05/19/2010	882	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		05/17/2010	1.08	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/3
Station Type: WELL CASING
Perf Interval (ft bgs): 204-244
Aquifer: A-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025231
Sample ID: 11033177
Sample Date/Time: 09/30/2010
End Sample Date/Time:
Sample Depth(ft): 208.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			40	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/4
Station Type: WELL CASING
Perf Interval (ft bgs): 333-358
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000522
Sample ID: 10001000
Sample Date/Time: 01/13/2010 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010344-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 10000
pH (UNITS): 7.2
Temperature (°C): 22.8
Dissolved Oxygen (mg/L): 0.1
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 192 GAL. STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	*Qualifier: Validated Sample*							
CLO4	Perchlorate	X1-314.0		01/14/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/4
Station Type: WELL CASING
Perf Interval (ft bgs): 333-358
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000522
Sample ID: 10002843
Sample Date/Time: 01/13/2010 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010344-04
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 10000
pH (UNITS): 7.2
Temperature (°C): 22.8
Dissolved Oxygen (mg/L): 0.1
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 192 GAL. STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		01/13/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	01/15/2010	01/27/2010	1.62	mg/L	.1	mg/L
Br	Bromide	X1-300.0		01/14/2010	14	mg/L	.1	mg/L
Ca	Calcium	X200.7	01/15/2010	01/27/2010	590	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		01/28/2010	3000	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		01/13/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		01/13/2010	9950	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		01/13/2010	156	mg/L	1	mg/L
K	Potassium	X200.7	01/15/2010	01/27/2010	14.6	mg/L	.1	mg/L
Mg	Magnesium	X200.7	01/15/2010	01/27/2010	116	mg/L	.1	mg/L
Na	Sodium	X200.7	01/15/2010	01/27/2010	1240	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		01/14/2010	0.006	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		01/14/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		01/13/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		01/13/2010	7.6	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		01/14/2010	0.02	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		01/28/2010	416	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		01/19/2010	7090	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		01/15/2010	0.84	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		01/13/2010	156	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	01/15/2010	01/27/2010	1950	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/4
Station Type: WELL CASING
Perf Interval (ft bgs): 333-358
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025232
Sample ID: 11033178
Sample Date/Time: 03/23/2010
End Sample Date/Time:
Sample Depth(ft): 337.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			3100	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/4
Station Type: WELL CASING
Perf Interval (ft bgs): 333-358
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025233
Sample ID: 11033179
Sample Date/Time: 03/23/2010
End Sample Date/Time:
Sample Depth(ft): 352.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			3150	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/4
Station Type: WELL CASING
Perf Interval (ft bgs): 333-358
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10006388
Sample ID: 10012119
Sample Date/Time: 05/17/2010 10:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10050433-02
Laboratory: OCWD
Analysis Requested: Q23SG

FIELD PARAMETERS
EC (umhos/cm): 10200
pH (UNITS): 6.9
Temperature (°C): 22.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 190 GAL. TO STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		05/19/2010	12	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		05/19/2010	3370	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		05/18/2010	10600	um/cm	1	um/cm
TDS	Total Dissolved Solids	2540C		05/19/2010	6280	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		05/20/2010	0.46	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/4
Station Type: WELL CASING
Perf Interval (ft bgs): 333-358
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025234
Sample ID: 11033180
Sample Date/Time: 10/06/2010
End Sample Date/Time:
Sample Depth(ft): 337.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			2580	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/4
Station Type: WELL CASING
Perf Interval (ft bgs): 333-358
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025235
Sample ID: 11033181
Sample Date/Time: 10/06/2010
End Sample Date/Time:
Sample Depth(ft): 352.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			2820	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35E01X/1
Station Type: WELL CASING
Perf Interval (ft bgs): 65-85
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: ALBM5-A
City: LONG BEACH

Sample Group ID: 11021113
Sample ID: 11029059
Sample Date/Time: 03/25/2010
End Sample Date/Time:
Sample Depth(ft): 80.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			130	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35E01X/1
Station Type: WELL CASING
Perf Interval (ft bgs): 65-85
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: ALBM5-A
City: LONG BEACH

Sample Group ID: 11021114
Sample ID: 11029060
Sample Date/Time: 09/30/2010
End Sample Date/Time:
Sample Depth(ft): 80.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			95	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35E01Y/1
Station Type: WELL CASING
Perf Interval (ft bgs): 105-125
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: ALBM5-I
City: LONG BEACH

Sample Group ID: 11021130
Sample ID: 11029076
Sample Date/Time: 03/25/2010
End Sample Date/Time:
Sample Depth(ft): 120.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			2650	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35E01Y/1
Station Type: WELL CASING
Perf Interval (ft bgs): 105-125
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: ALBM5-I
City: LONG BEACH

Sample Group ID: 11021131
Sample ID: 11029077
Sample Date/Time: 09/30/2010
End Sample Date/Time:
Sample Depth(ft): 120.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			4240	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35F20/1
Station Type: WELL CASING
Perf Interval (ft bgs): 70-95
Aquifer: C

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: Well No. 2
City: SEAL BEACH

Sample Group ID: 11024763
Sample ID: 11032709
Sample Date/Time: 03/30/2010
End Sample Date/Time:
Sample Depth(ft): 75.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			280	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35F20/1
Station Type: WELL CASING
Perf Interval (ft bgs): 70-95
Aquifer: C

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: Well No. 2
City: SEAL BEACH

Sample Group ID: 11024764
Sample ID: 11032710
Sample Date/Time: 03/30/2010
End Sample Date/Time:
Sample Depth(ft): 83.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			350	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35F20/1
Station Type: WELL CASING
Perf Interval (ft bgs): 70-95
Aquifer: C

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: Well No. 2
City: SEAL BEACH

Sample Group ID: 11024765
Sample ID: 11032711
Sample Date/Time: 03/30/2010
End Sample Date/Time:
Sample Depth(ft): 90.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			690	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35F20/1
Station Type: WELL CASING
Perf Interval (ft bgs): 70-95
Aquifer: C

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: Well No. 2
City: SEAL BEACH

Sample Group ID: 11024766
Sample ID: 11032712
Sample Date/Time: 09/21/2010
End Sample Date/Time:
Sample Depth(ft): 75.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			185	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35F20/1
Station Type: WELL CASING
Perf Interval (ft bgs): 70-95
Aquifer: C

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: Well No. 2
City: SEAL BEACH

Sample Group ID: 11024767
Sample ID: 11032713
Sample Date/Time: 09/21/2010
End Sample Date/Time:
Sample Depth(ft): 83.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			210	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35F20/1
Station Type: WELL CASING
Perf Interval (ft bgs): 70-95
Aquifer: C

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: Well No. 2
City: SEAL BEACH

Sample Group ID: 11024768
Sample ID: 11032714
Sample Date/Time: 09/21/2010
End Sample Date/Time:
Sample Depth(ft): 90.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			195	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35F20/2
Station Type: WELL CASING
Perf Interval (ft bgs): 115-125
Aquifer: B

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: Well No. 2
City: SEAL BEACH

Sample Group ID: 11024784
Sample ID: 11032730
Sample Date/Time: 09/21/2010
End Sample Date/Time:
Sample Depth(ft): 120.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			430	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35F20/3
Station Type: WELL CASING
Perf Interval (ft bgs): 145-180
Aquifer: A

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: Well No. 2
City: SEAL BEACH

Sample Group ID: 11024812
Sample ID: 11032758
Sample Date/Time: 09/21/2010
End Sample Date/Time:
Sample Depth(ft): 163.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			125	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35F20/4
Station Type: WELL CASING
Perf Interval (ft bgs): 235-265
Aquifer: I

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: Well No. 2
City: SEAL BEACH

Sample Group ID: 11024854
Sample ID: 11032800
Sample Date/Time: 03/30/2010
End Sample Date/Time:
Sample Depth(ft): 240.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			1300	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35F20/4
Station Type: WELL CASING
Perf Interval (ft bgs): 235-265
Aquifer: I

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: Well No. 2
City: SEAL BEACH

Sample Group ID: 11024855
Sample ID: 11032801
Sample Date/Time: 03/30/2010
End Sample Date/Time:
Sample Depth(ft): 250.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			1850	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35F20/4
Station Type: WELL CASING
Perf Interval (ft bgs): 235-265
Aquifer: I

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: Well No. 2
City: SEAL BEACH

Sample Group ID: 11024856
Sample ID: 11032802
Sample Date/Time: 03/30/2010
End Sample Date/Time:
Sample Depth(ft): 260.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			2500	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35F20/4
Station Type: WELL CASING
Perf Interval (ft bgs): 235-265
Aquifer: I

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: Well No. 2
City: SEAL BEACH

Sample Group ID: 11024857
Sample ID: 11032803
Sample Date/Time: 09/21/2010
End Sample Date/Time:
Sample Depth(ft): 240.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			2920	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35F20/4
Station Type: WELL CASING
Perf Interval (ft bgs): 235-265
Aquifer: I

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: Well No. 2
City: SEAL BEACH

Sample Group ID: 11024858
Sample ID: 11032804
Sample Date/Time: 09/21/2010
End Sample Date/Time:
Sample Depth(ft): 250.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	*Qualifier: Validated Sample*							
Cl	Chloride	2320B			3630	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35F20/4
Station Type: WELL CASING
Perf Interval (ft bgs): 235-265
Aquifer: I

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: Well No. 2
City: SEAL BEACH

Sample Group ID: 11024859
Sample ID: 11032805
Sample Date/Time: 09/21/2010
End Sample Date/Time:
Sample Depth(ft): 260.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			3690	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35H11/1
Station Type: WELL CASING
Perf Interval (ft bgs): 44-77
Aquifer: RECENT ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-10RAI
City: SEAL BEACH

Sample Group ID: 11021865
Sample ID: 11029811
Sample Date/Time: 03/30/2010
End Sample Date/Time:
Sample Depth(ft): 48.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			450	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35H11/1
Station Type: WELL CASING
Perf Interval (ft bgs): 44-77
Aquifer: RECENT ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-10RAI
City: SEAL BEACH

Sample Group ID: 11021866
Sample ID: 11029812
Sample Date/Time: 03/30/2010
End Sample Date/Time:
Sample Depth(ft): 71.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			900	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35H11/1
Station Type: WELL CASING
Perf Interval (ft bgs): 44-77
Aquifer: RECENT ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-10RAI
City: SEAL BEACH

Sample Group ID: 11021867
Sample ID: 11029813
Sample Date/Time: 09/22/2010
End Sample Date/Time:
Sample Depth(ft): 48.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			335	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35H11/1
Station Type: WELL CASING
Perf Interval (ft bgs): 44-77
Aquifer: RECENT ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-10RAI
City: SEAL BEACH

Sample Group ID: 11021868
Sample ID: 11029814
Sample Date/Time: 09/22/2010
End Sample Date/Time:
Sample Depth(ft): 71.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			1105	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35H11/1
Station Type: WELL CASING
Perf Interval (ft bgs): 44-77
Aquifer: RECENT ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-10RAI
City: SEAL BEACH

Sample Group ID: 10014303
Sample ID: 10029353
Sample Date/Time: 11/04/2010 09:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: JC/KWO
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10110193-02
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 2630
pH (UNITS): 7.3
Temperature (°C): 22.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 152 GAL. TO DIRT

Reported Values

Data Access: Approved for External Use ***Qualifier: Validated Sample***

Parameter Abbreviation	Parameter Name	Analysis Method	Dates Extract	Dates Analysis	Results Value	Results Units	Detection Limit Value	Detection Limit Units
ALKPHE	Alkalinity-Phenolphthalein	2320B		11/04/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	11/08/2010	11/15/2010	0.2	mg/L	.1	mg/L
Br	Bromide	X1-300.0		11/04/2010	2.2	mg/L	.1	mg/L
Ca	Calcium	X200.7	11/08/2010	11/15/2010	288	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		11/04/2010	534	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		11/04/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		11/04/2010	2700	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		11/04/2010	292	mg/L	1	mg/L
K	Potassium	X200.7	11/08/2010	11/15/2010	5.7	mg/L	.1	mg/L
Mg	Magnesium	X200.7	11/08/2010	11/15/2010	55.5	mg/L	.1	mg/L
Na	Sodium	X200.7	11/08/2010	11/15/2010	223	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		11/04/2010	0.005	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		11/04/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		11/04/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		11/04/2010	7.5	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		11/04/2010	0.09	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		11/04/2010	291	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		11/04/2010	1720	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		11/05/2010	0.5	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		11/04/2010	292	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	11/08/2010	11/15/2010	948	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35H11/2
Station Type: WELL CASING
Perf Interval (ft bgs): 125-158
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-10RAI
City: SEAL BEACH

Sample Group ID: 11021831
Sample ID: 11029777
Sample Date/Time: 03/30/2010
End Sample Date/Time:
Sample Depth(ft): 129.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			1900	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35H11/2
Station Type: WELL CASING
Perf Interval (ft bgs): 125-158
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-10RAI
City: SEAL BEACH

Sample Group ID: 11021832
Sample ID: 11029778
Sample Date/Time: 03/30/2010
End Sample Date/Time:
Sample Depth(ft): 152.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			6000	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35H11/2
Station Type: WELL CASING
Perf Interval (ft bgs): 125-158
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-10RAI
City: SEAL BEACH

Sample Group ID: 11021833
Sample ID: 11029779
Sample Date/Time: 09/22/2010
End Sample Date/Time:
Sample Depth(ft): 129.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			1730	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35H11/2
Station Type: WELL CASING
Perf Interval (ft bgs): 125-158
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-10RAI
City: SEAL BEACH

Sample Group ID: 11021834
Sample ID: 11029780
Sample Date/Time: 09/22/2010
End Sample Date/Time:
Sample Depth(ft): 152.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			5750	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35H11/2
Station Type: WELL CASING
Perf Interval (ft bgs): 125-158
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-10RAI
City: SEAL BEACH

Sample Group ID: 10014467
Sample ID: 10029573
Sample Date/Time: 11/04/2010 09:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: JC/KWO
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10110194-02
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 2950
pH (UNITS): 7.8
Temperature (°C): 21.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 348 GAL. TO DIRT; LIGHT SILT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		11/04/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	11/08/2010	11/15/2010	0.22	mg/L	.1	mg/L
Br	Bromide	X1-300.0		11/04/2010	3.8	mg/L	.1	mg/L
Ca	Calcium	X200.7	11/08/2010	11/15/2010	216	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		11/04/2010	792	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		11/04/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		11/17/2010	3000	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		11/04/2010	111	mg/L	1	mg/L
K	Potassium	X200.7	11/08/2010	11/15/2010	6.1	mg/L	.1	mg/L
Mg	Magnesium	X200.7	11/08/2010	11/15/2010	27.	mg/L	.1	mg/L
Na	Sodium	X200.7	11/08/2010	11/15/2010	320	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		11/04/2010	0.003	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		11/04/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		11/04/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		11/04/2010	7.7	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		11/04/2010	0.03	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		11/04/2010	123	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		11/04/2010	1840	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		11/05/2010	0.54	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		11/04/2010	111	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	11/08/2010	11/15/2010	651	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35H11/3
Station Type: WELL CASING
Perf Interval (ft bgs): 200-220
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-10RAI
City: SEAL BEACH

Sample Group ID: 11021799
Sample ID: 11029745
Sample Date/Time: 03/30/2010
End Sample Date/Time:
Sample Depth(ft): 209.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			1450	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35H11/3
Station Type: WELL CASING
Perf Interval (ft bgs): 200-220
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-10RAI
City: SEAL BEACH

Sample Group ID: 11021800
Sample ID: 11029746
Sample Date/Time: 09/22/2010
End Sample Date/Time:
Sample Depth(ft): 209.40
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			1400	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35H11/3
Station Type: WELL CASING
Perf Interval (ft bgs): 200-220
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-10RAI
City: SEAL BEACH

Sample Group ID: 10014619
Sample ID: 10030435
Sample Date/Time: 11/04/2010 09:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: JC/KWO
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10110195-02
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 3250
pH (UNITS): 7.9
Temperature (°C): 22.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 495 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		11/04/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	11/08/2010	11/15/2010	0.16	mg/L	.1	mg/L
Br	Bromide	X1-300.0		11/04/2010	3.6	mg/L	.1	mg/L
Ca	Calcium	X200.7	11/08/2010	11/29/2010	270	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		11/04/2010	903	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		11/04/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		11/04/2010	3360	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		11/04/2010	94.7	mg/L	1	mg/L
K	Potassium	X200.7	11/08/2010	11/29/2010	5.5	mg/L	.1	mg/L
Mg	Magnesium	X200.7	11/08/2010	11/29/2010	22.	mg/L	.1	mg/L
Na	Sodium	X200.7	11/08/2010	11/29/2010	344	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		11/04/2010	0.003	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		11/04/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		11/04/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		11/04/2010	7.8	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		11/04/2010	0.01	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		11/04/2010	182	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		11/04/2010	2210	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		11/05/2010	0.56	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		11/04/2010	94.7	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	11/08/2010	11/29/2010	766	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35H12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 137-147
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: LADPW-514D
City: SEAL BEACH

Sample Group ID: 11022779
Sample ID: 11030725
Sample Date/Time: 09/23/2010
End Sample Date/Time:
Sample Depth(ft): 142.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			220	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 130-170
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025169
Sample ID: 11033115
Sample Date/Time: 03/29/2010
End Sample Date/Time:
Sample Depth(ft): 135.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			1150	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 130-170
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025170
Sample ID: 11033116
Sample Date/Time: 03/29/2010
End Sample Date/Time:
Sample Depth(ft): 150.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			1650	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 130-170
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025171
Sample ID: 11033117
Sample Date/Time: 03/29/2010
End Sample Date/Time:
Sample Depth(ft): 155.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			1450	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 130-170
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025172
Sample ID: 11033118
Sample Date/Time: 10/05/2010
End Sample Date/Time:
Sample Depth(ft): 135.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			630	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 130-170
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025173
Sample ID: 11033119
Sample Date/Time: 10/05/2010
End Sample Date/Time:
Sample Depth(ft): 150.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			630	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 130-170
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025174
Sample ID: 11033120
Sample Date/Time: 10/05/2010
End Sample Date/Time:
Sample Depth(ft): 155.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			610	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1/2
Station Type: WELL CASING
Perf Interval (ft bgs): 190-240
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025133
Sample ID: 11033079
Sample Date/Time: 03/29/2010
End Sample Date/Time:
Sample Depth(ft): 200.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			350	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1/2
Station Type: WELL CASING
Perf Interval (ft bgs): 190-240
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025134
Sample ID: 11033080
Sample Date/Time: 03/29/2010
End Sample Date/Time:
Sample Depth(ft): 215.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			640	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1/2
Station Type: WELL CASING
Perf Interval (ft bgs): 190-240
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025135
Sample ID: 11033081
Sample Date/Time: 03/29/2010
End Sample Date/Time:
Sample Depth(ft): 235.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			1000	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1/2
Station Type: WELL CASING
Perf Interval (ft bgs): 190-240
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025136
Sample ID: 11033082
Sample Date/Time: 10/05/2010
End Sample Date/Time:
Sample Depth(ft): 200.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			75	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1/2
Station Type: WELL CASING
Perf Interval (ft bgs): 190-240
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025137
Sample ID: 11033083
Sample Date/Time: 10/05/2010
End Sample Date/Time:
Sample Depth(ft): 215.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			290	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1/2
Station Type: WELL CASING
Perf Interval (ft bgs): 190-240
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025138
Sample ID: 11033084
Sample Date/Time: 10/05/2010
End Sample Date/Time:
Sample Depth(ft): 235.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			580	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1Y/1
Station Type: WELL CASING
Perf Interval (ft bgs): 264-294
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000494
Sample ID: 10000964
Sample Date/Time: 01/12/2010 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010284-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 718
pH (UNITS): 8.1
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): 0.02
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 157 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	*Qualifier: Validated Sample*							
CLO4	Perchlorate	X1-314.0		01/12/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1Y/1
Station Type: WELL CASING
Perf Interval (ft bgs): 264-294
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000494
Sample ID: 10002193
Sample Date/Time: 01/12/2010 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010284-04
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 718
pH (UNITS): 8.1
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): 0.02
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 157 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		01/12/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	01/14/2010	01/18/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		01/12/2010	0.41	mg/L	.1	mg/L
Ca	Calcium	X200.7	01/14/2010	01/18/2010	63.3	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		01/12/2010	119	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		01/12/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		01/12/2010	757	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		01/12/2010	114	mg/L	1	mg/L
K	Potassium	X200.7	01/14/2010	01/18/2010	2.3	mg/L	.1	mg/L
Mg	Magnesium	X200.7	01/14/2010	01/18/2010	6.	mg/L	.1	mg/L
Na	Sodium	X200.7	01/14/2010	01/18/2010	81.6	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		01/12/2010	0.004	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		01/12/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		01/12/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		01/12/2010	8.2	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		01/12/2010	0.02	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		01/12/2010	91.8	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		01/18/2010	432	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		01/15/2010	0.95	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		01/12/2010	114	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	01/14/2010	01/18/2010	183	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1Y/1
Station Type: WELL CASING
Perf Interval (ft bgs): 264-294
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025236
Sample ID: 11033182
Sample Date/Time: 03/29/2010
End Sample Date/Time:
Sample Depth(ft): 268.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			400	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1Y/1
Station Type: WELL CASING
Perf Interval (ft bgs): 264-294
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025237
Sample ID: 11033183
Sample Date/Time: 03/29/2010
End Sample Date/Time:
Sample Depth(ft): 278.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			350	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1Y/1
Station Type: WELL CASING
Perf Interval (ft bgs): 264-294
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025238
Sample ID: 11033184
Sample Date/Time: 10/05/2010
End Sample Date/Time:
Sample Depth(ft): 268.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			140	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1Y/1
Station Type: WELL CASING
Perf Interval (ft bgs): 264-294
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025239
Sample ID: 11033185
Sample Date/Time: 10/05/2010
End Sample Date/Time:
Sample Depth(ft): 278.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			160	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 130-170
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000540
Sample ID: 10001018
Sample Date/Time: 01/14/2010 13:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS/BRIAN OKEY
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010386-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 683
pH (UNITS): 7.8
Temperature (°C): 21.7
Dissolved Oxygen (mg/L): 0.04
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 545 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	*Qualifier: Validated Sample*							
CLO4	Perchlorate	X1-314.0		01/14/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 130-170
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000540
Sample ID: 10002847
Sample Date/Time: 01/14/2010 13:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS/BRIAN OKEY
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010386-04
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 683
pH (UNITS): 7.8
Temperature (°C): 21.7
Dissolved Oxygen (mg/L): 0.04
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 545 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		01/14/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	01/15/2010	01/18/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		01/14/2010	0.3	mg/L	.1	mg/L
Ca	Calcium	X200.7	01/15/2010	01/18/2010	72.	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		01/14/2010	77.1	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		01/14/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		01/14/2010	669	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		01/14/2010	162	mg/L	1	mg/L
K	Potassium	X200.7	01/15/2010	01/18/2010	2.3	mg/L	.1	mg/L
Mg	Magnesium	X200.7	01/15/2010	01/18/2010	12.7	mg/L	.1	mg/L
Na	Sodium	X200.7	01/15/2010	01/18/2010	49.9	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		01/14/2010	0.004	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		01/14/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		01/14/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		01/14/2010	8.	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		01/14/2010	0.03	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		01/14/2010	54.4	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		01/20/2010	384	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		01/19/2010	0.72	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		01/14/2010	162	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	01/15/2010	01/18/2010	232	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 130-170
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025061
Sample ID: 11033007
Sample Date/Time: 03/30/2010
End Sample Date/Time:
Sample Depth(ft): 205.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			80	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 130-170
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025062
Sample ID: 11033008
Sample Date/Time: 03/30/2010
End Sample Date/Time:
Sample Depth(ft): 220.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			70	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 130-170
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025063
Sample ID: 11033009
Sample Date/Time: 03/30/2010
End Sample Date/Time:
Sample Depth(ft): 235.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			470	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 130-170
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025064
Sample ID: 11033010
Sample Date/Time: 09/16/2010
End Sample Date/Time:
Sample Depth(ft): 205.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			25	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 130-170
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025065
Sample ID: 11033011
Sample Date/Time: 09/16/2010
End Sample Date/Time:
Sample Depth(ft): 220.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			350	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 130-170
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025066
Sample ID: 11033012
Sample Date/Time: 09/16/2010
End Sample Date/Time:
Sample Depth(ft): 235.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			480	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/2
Station Type: WELL CASING
Perf Interval (ft bgs): 193-243
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000541
Sample ID: 10001019
Sample Date/Time: 01/14/2010 13:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS/BRIAN OKEY
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010387-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 1760
pH (UNITS): 7.7
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): 0.05
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 555 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		01/14/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/2
Station Type: WELL CASING
Perf Interval (ft bgs): 193-243
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000541
Sample ID: 10002960
Sample Date/Time: 01/14/2010 13:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS/BRIAN OKEY
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010387-04
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 1760
pH (UNITS): 7.7
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): 0.05
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 555 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		01/14/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	01/15/2010	01/18/2010	0.17	mg/L	.1	mg/L
Br	Bromide	X1-300.0		01/14/2010	1.7	mg/L	.1	mg/L
Ca	Calcium	X200.7	01/15/2010	01/18/2010	144	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		02/04/2010	392	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		01/14/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		01/14/2010	1750	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		01/14/2010	138	mg/L	1	mg/L
K	Potassium	X200.7	01/15/2010	01/18/2010	4.	mg/L	.1	mg/L
Mg	Magnesium	X200.7	01/15/2010	01/18/2010	26.6	mg/L	.1	mg/L
Na	Sodium	X200.7	01/15/2010	01/18/2010	160	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		01/14/2010	0.003	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		01/14/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		01/14/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		01/14/2010	7.9	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		01/14/2010	0.02	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		02/04/2010	122	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		01/20/2010	1110	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		01/19/2010	0.97	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		01/14/2010	138	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	01/15/2010	01/18/2010	469	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/2
Station Type: WELL CASING
Perf Interval (ft bgs): 193-243
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025097
Sample ID: 11033043
Sample Date/Time: 03/30/2010
End Sample Date/Time:
Sample Depth(ft): 135.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			160	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/2
Station Type: WELL CASING
Perf Interval (ft bgs): 193-243
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025098
Sample ID: 11033044
Sample Date/Time: 03/30/2010
End Sample Date/Time:
Sample Depth(ft): 150.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			190	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/2
Station Type: WELL CASING
Perf Interval (ft bgs): 193-243
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025099
Sample ID: 11033045
Sample Date/Time: 03/30/2010
End Sample Date/Time:
Sample Depth(ft): 165.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			220	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/2
Station Type: WELL CASING
Perf Interval (ft bgs): 193-243
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025100
Sample ID: 11033046
Sample Date/Time: 09/16/2010
End Sample Date/Time:
Sample Depth(ft): 135.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			101	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/2
Station Type: WELL CASING
Perf Interval (ft bgs): 193-243
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025101
Sample ID: 11033047
Sample Date/Time: 09/16/2010
End Sample Date/Time:
Sample Depth(ft): 150.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			160	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/2
Station Type: WELL CASING
Perf Interval (ft bgs): 193-243
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025102
Sample ID: 11033048
Sample Date/Time: 09/16/2010
End Sample Date/Time:
Sample Depth(ft): 165.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			140	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1V/1
Station Type: WELL CASING
Perf Interval (ft bgs): 90-110
Aquifer: C-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000495
Sample ID: 10000965
Sample Date/Time: 01/12/2010 11:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010285-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 3010
pH (UNITS): 6.8
Temperature (°C): 21.8
Dissolved Oxygen (mg/L): 0.
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 53 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	*Qualifier: Validated Sample*							
CLO4	Perchlorate	X1-314.0		01/12/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1V/1
Station Type: WELL CASING
Perf Interval (ft bgs): 90-110
Aquifer: C-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000495
Sample ID: 10003197
Sample Date/Time: 01/12/2010 11:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010285-04
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 3010
pH (UNITS): 6.8
Temperature (°C): 21.8
Dissolved Oxygen (mg/L): 0.
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 53 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		01/12/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	01/18/2010	01/18/2010	0.15	mg/L	.1	mg/L
Br	Bromide	X1-300.0		01/12/2010	0.78	mg/L	.1	mg/L
Ca	Calcium	X200.7	01/18/2010	02/10/2010	398	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		02/02/2010	348	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		01/12/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		01/28/2010	3130	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		01/12/2010	286	mg/L	1	mg/L
K	Potassium	X200.7	01/18/2010	01/18/2010	8.6	mg/L	.1	mg/L
Mg	Magnesium	X200.7	01/18/2010	01/18/2010	85.2	mg/L	.1	mg/L
Na	Sodium	X200.7	01/18/2010	02/10/2010	171	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		01/12/2010	0.005	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		01/12/2010	0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		01/12/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		01/12/2010	7.6	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		01/12/2010	0.03	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		02/02/2010	922	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		01/18/2010	2400	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		01/15/2010	1.03	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		01/12/2010	286	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	01/18/2010	02/10/2010	1340	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1V/1
Station Type: WELL CASING
Perf Interval (ft bgs): 90-110
Aquifer: C-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025240
Sample ID: 11033186
Sample Date/Time: 05/04/2010
End Sample Date/Time:
Sample Depth(ft): 94.80
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			405	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1V/1
Station Type: WELL CASING
Perf Interval (ft bgs): 90-110
Aquifer: C-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025241
Sample ID: 11033187
Sample Date/Time: 05/04/2010
End Sample Date/Time:
Sample Depth(ft): 105.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			460	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1V/1
Station Type: WELL CASING
Perf Interval (ft bgs): 90-110
Aquifer: C-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025242
Sample ID: 11033188
Sample Date/Time: 09/16/2010
End Sample Date/Time:
Sample Depth(ft): 94.80
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			410	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1V/1
Station Type: WELL CASING
Perf Interval (ft bgs): 90-110
Aquifer: C-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025243
Sample ID: 11033189
Sample Date/Time: 09/16/2010
End Sample Date/Time:
Sample Depth(ft): 105.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			390	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1Y/1
Station Type: WELL CASING
Perf Interval (ft bgs): 366-386
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000539
Sample ID: 10001017
Sample Date/Time: 01/14/2010 12:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: AIRLIFT
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS/BRIAN OKEY
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010385-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 375
pH (UNITS): 8.3
Temperature (°C): 22.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 205 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		01/14/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1Y/1
Station Type: WELL CASING
Perf Interval (ft bgs): 366-386
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000539
Sample ID: 10002846
Sample Date/Time: 01/14/2010 12:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: AIRLIFT
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS/BRIAN OKEY
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010385-03
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 375
pH (UNITS): 8.3
Temperature (°C): 22.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 205 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		01/14/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	01/15/2010	01/18/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		01/14/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	01/15/2010	01/18/2010	20.	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		01/14/2010	16.8	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		01/14/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		01/14/2010	363	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		01/14/2010	128	mg/L	1	mg/L
K	Potassium	X200.7	01/15/2010	01/18/2010	1.5	mg/L	.1	mg/L
Mg	Magnesium	X200.7	01/15/2010	01/18/2010	2.4	mg/L	.1	mg/L
Na	Sodium	X200.7	01/15/2010	01/18/2010	56.4	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		01/14/2010	0.003	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		01/14/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		01/14/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		01/14/2010	8.3	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		01/14/2010	0.03	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		01/14/2010	36.3	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		01/20/2010	218	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		01/19/2010	0.44	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		01/14/2010	128	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	01/15/2010	01/18/2010	59.9	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1Y/1
Station Type: WELL CASING
Perf Interval (ft bgs): 366-386
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025219
Sample ID: 11033165
Sample Date/Time: 03/30/2010
End Sample Date/Time:
Sample Depth(ft): 370.80
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			60	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1Y/1
Station Type: WELL CASING
Perf Interval (ft bgs): 366-386
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025220
Sample ID: 11033166
Sample Date/Time: 03/30/2010
End Sample Date/Time:
Sample Depth(ft): 380.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			60	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1Y/1
Station Type: WELL CASING
Perf Interval (ft bgs): 366-386
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025221
Sample ID: 11033167
Sample Date/Time: 09/16/2010
End Sample Date/Time:
Sample Depth(ft): 370.80
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			35	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1Y/1
Station Type: WELL CASING
Perf Interval (ft bgs): 366-386
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 11025222
Sample ID: 11033168
Sample Date/Time: 09/16/2010
End Sample Date/Time:
Sample Depth(ft): 380.50
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			30	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35N01/1
Station Type: WELL CASING
Perf Interval (ft bgs): 39-79
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-12RI
City: SEAL BEACH

Sample Group ID: 11021888
Sample ID: 11029834
Sample Date/Time: 02/27/2010
End Sample Date/Time:
Sample Depth(ft): 45.30
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			5950	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35N01/1
Station Type: WELL CASING
Perf Interval (ft bgs): 39-79
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-12RI
City: SEAL BEACH

Sample Group ID: 11021889
Sample ID: 11029835
Sample Date/Time: 02/27/2010
End Sample Date/Time:
Sample Depth(ft): 75.30
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			13500	mg/L	.5	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35N01/2
Station Type: WELL CASING
Perf Interval (ft bgs): 80-85
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: OCWD-12RI
City: SEAL BEACH

Sample Group ID: 11021875
Sample ID: 11029821
Sample Date/Time: 02/27/2010
End Sample Date/Time:
Sample Depth(ft): 83.30
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			14100	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-36FP1X/1
Station Type: WELL CASING
Perf Interval (ft bgs): 136-146
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name: W-12588
City: SEAL BEACH

Sample Group ID: 11024364
Sample ID: 11032310
Sample Date/Time: 03/08/2010
End Sample Date/Time:
Sample Depth(ft): 142.00
Sample Matrix: WATER
Sampling Method: THIEF SAMPLER
Sampling Agency: LOS ANGELES COUNTY
Sampled By:
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number:
Laboratory: UNKN
Analysis Requested: HINORG

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl	Chloride	2320B			1200	mg/L	.5	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-BSO9A/2
Station Type: WELL CASING
Perf Interval (ft bgs): 115-162
Aquifer: ALPHA

Well Owner: DEPARTMENT OF WATER RESOUF
Well Name: BSO-9
City: SEAL BEACH

Sample Group ID: 10002473
Sample ID: 10006257
Sample Date/Time: 03/04/2010 10:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: AIRLIFT
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR/CLP
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030168-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 32200
pH (UNITS): 7.4
Temperature (°C): 18.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 50 GAL. TO DIRT; FE PARTICLES IN SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		03/04/2010	39	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		03/04/2010	12400	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		03/04/2010	33200	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		03/09/2010	0.5	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-BSO9A/2
Station Type: WELL CASING
Perf Interval (ft bgs): 115-162
Aquifer: ALPHA

Well Owner: DEPARTMENT OF WATER RESOUF
Well Name: BSO-9
City: SEAL BEACH

Sample Group ID: 10013239
Sample ID: 10026093
Sample Date/Time: 10/07/2010 11:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: AIRLIFT
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR/KWO/PKH
Monitoring Program: Bolsa Sunset Monitoring Wells

Lab Sample Number: 10100195-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 29600
pH (UNITS): 7.3
Temperature (°C): 19.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 90 G., DIRT, HEAVY SAND

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		10/07/2010	38	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		10/07/2010	11530	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		10/11/2010	32800	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		10/08/2010	0.53	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-BSO9A/2
Station Type: WELL CASING
Perf Interval (ft bgs): 115-162
Aquifer: ALPHA

Well Owner: DEPARTMENT OF WATER RESOUF
Well Name: BSO-9
City: SEAL BEACH

Sample Group ID: 11003638
Sample ID: 11007863
Sample Date/Time: 03/31/2011 11:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: AIRLIFT
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR/PKH
Monitoring Program: Bolsa Sunset Monitoring Wells

Lab Sample Number: 11030740-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 22500
pH (UNITS): 7.4
Temperature (°C): 19.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 120 GAL. TO DIRT; FINE BLACK PARTICLES

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		04/01/2011	29	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		04/05/2011	7460	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		03/31/2011	24200	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		04/02/2011	0.32	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-BSO9A/2
Station Type: WELL CASING
Perf Interval (ft bgs): 115-162
Aquifer: ALPHA

Well Owner: DEPARTMENT OF WATER RESOUF
Well Name: BSO-9
City: SEAL BEACH

Sample Group ID: 11026413
Sample ID: 11035386
Sample Date/Time: 08/31/2011 11:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: AIRLIFT
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: MG/PKH
Monitoring Program: Bolsa Sunset Monitoring Wells

Lab Sample Number: 11080871-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 21600
pH (UNITS): 7.
Temperature (°C): 19.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 120 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		08/31/2011	27	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		08/31/2011	7660	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		08/31/2011	22900	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		09/02/2011	0.33	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-BSO9A/3
Station Type: WELL CASING
Perf Interval (ft bgs): 195-285
Aquifer: BETA-LAMBDA

Well Owner: DEPARTMENT OF WATER RESOUF
Well Name: BSO-9
City: SEAL BEACH

Sample Group ID: 10002474
Sample ID: 10006258
Sample Date/Time: 03/04/2010 10:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: AIRLIFT
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR/CLP
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030169-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 37800
pH (UNITS): 7.1
Temperature (°C): 18.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 320 GAL. TO DIRT; FE PARTICLES IN SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		03/04/2010	45	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		03/04/2010	14500	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		03/04/2010	38900	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		03/09/2010	0.4	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-BSO9A/3
Station Type: WELL CASING
Perf Interval (ft bgs): 195-285
Aquifer: BETA-LAMBDA

Well Owner: DEPARTMENT OF WATER RESOUF
Well Name: BSO-9
City: SEAL BEACH

Sample Group ID: 10013240
Sample ID: 10026094
Sample Date/Time: 10/07/2010 10:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: AIRLIFT
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR/KWO/PKH
Monitoring Program: Bolsa Sunset Monitoring Wells

Lab Sample Number: 10100196-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 36700
pH (UNITS): 6.6
Temperature (°C): 22.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 350 G., DIRT, HEAVY BLACK PARTICLES

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		10/07/2010	48	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		10/07/2010	14200	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		10/11/2010	40000	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		10/08/2010	0.28	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-BSO9A/3
Station Type: WELL CASING
Perf Interval (ft bgs): 195-285
Aquifer: BETA-LAMBDA

Well Owner: DEPARTMENT OF WATER RESOUF
Well Name: BSO-9
City: SEAL BEACH

Sample Group ID: 11003639
Sample ID: 11007864
Sample Date/Time: 03/31/2011 10:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: AIRLIFT
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR/PKH
Monitoring Program: Bolsa Sunset Monitoring Wells

Lab Sample Number: 11030741-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 36600
pH (UNITS): 7.1
Temperature (°C): 21.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 400 GAL. TO DIRT; FINE BLACK PARTICLES

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		04/01/2011	50	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		04/05/2011	8030	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		03/31/2011	38900	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		04/02/2011	0.54	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-BSO9A/3
Station Type: WELL CASING
Perf Interval (ft bgs): 195-285
Aquifer: BETA-LAMBDA

Well Owner: DEPARTMENT OF WATER RESOUF
Well Name: BSO-9
City: SEAL BEACH

Sample Group ID: 11026414
Sample ID: 11035387
Sample Date/Time: 08/31/2011 10:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: MG/PKH
Monitoring Program: Bolsa Sunset Monitoring Wells

Lab Sample Number: 11080872-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 36400
pH (UNITS): 7.5
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: ~400 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		08/31/2011	47	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		08/31/2011	13900	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		08/31/2011	38500	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		09/02/2011	0.48	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-BSO9B/2
Station Type: WELL CASING
Perf Interval (ft bgs): 520-615
Aquifer: MAIN

Well Owner: DEPARTMENT OF WATER RESOUF
Well Name: BSO-9
City: SEAL BEACH

Sample Group ID: 10002475
Sample ID: 10006259
Sample Date/Time: 03/04/2010 09:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: AIRLIFT
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR/CLP
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030170-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 319
pH (UNITS): 8.8
Temperature (°C): 23.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 350 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		03/04/2010	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		03/04/2010	15.4	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		03/04/2010	332	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		03/09/2010	2.41	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-BSO9B/2
Station Type: WELL CASING
Perf Interval (ft bgs): 520-615
Aquifer: MAIN

Well Owner: DEPARTMENT OF WATER RESOUF
Well Name: BSO-9
City: SEAL BEACH

Sample Group ID: 10013242
Sample ID: 10026096
Sample Date/Time: 10/07/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: UNKNOWN WQ SAMPLING METHOD
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR/KWO/PKH
Monitoring Program: Bolsa Sunset Monitoring Wells

Lab Sample Number: 10100198-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 307
pH (UNITS): 8.7
Temperature (°C): 23.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 360 G., DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		10/07/2010	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		10/07/2010	16.4	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		10/11/2010	334	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		10/08/2010	2.65	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-BSO9B/2
Station Type: WELL CASING
Perf Interval (ft bgs): 520-615
Aquifer: MAIN

Well Owner: DEPARTMENT OF WATER RESOUF
Well Name: BSO-9
City: SEAL BEACH

Sample Group ID: 11003640
Sample ID: 11007865
Sample Date/Time: 03/31/2011 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: AIRLIFT
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR/PKH
Monitoring Program: Bolsa Sunset Monitoring Wells

Lab Sample Number: 11030742-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 320
pH (UNITS): 8.6
Temperature (°C): 22.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 360 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		04/01/2011	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		04/01/2011	16.9	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		04/04/2011	317	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		04/02/2011	2.4	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-BSO9B/2
Station Type: WELL CASING
Perf Interval (ft bgs): 520-615
Aquifer: MAIN

Well Owner: DEPARTMENT OF WATER RESOUF
Well Name: BSO-9
City: SEAL BEACH

Sample Group ID: 11026415
Sample ID: 11035388
Sample Date/Time: 08/31/2011 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: AIRLIFT
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: MG/PKH
Monitoring Program: Bolsa Sunset Monitoring Wells

Lab Sample Number: 11080873-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 320
pH (UNITS): 7.7
Temperature (°C): 24.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 400 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		08/31/2011	<0.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		08/31/2011	17.1	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		09/01/2011	326	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		09/02/2011	2.56	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-BSO9C/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-435
Aquifer: MEADOWLARK

Well Owner: DEPARTMENT OF WATER RESOUF
Well Name: BSO-9
City: SEAL BEACH

Sample Group ID: 10002476
Sample ID: 10006260
Sample Date/Time: 03/04/2010 10:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: AIRLIFT
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR/CLP
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030171-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 8950
pH (UNITS): 7.8
Temperature (°C): 21.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 250 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		03/04/2010	9.	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		03/04/2010	2770	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		03/04/2010	9110	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		03/09/2010	0.27	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-BSO9C/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-435
Aquifer: MEADOWLARK

Well Owner: DEPARTMENT OF WATER RESOUF
Well Name: BSO-9
City: SEAL BEACH

Sample Group ID: 10013241
Sample ID: 10026095
Sample Date/Time: 10/07/2010 10:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: AIRLIFT
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR/KWO/PKH
Monitoring Program: Bolsa Sunset Monitoring Wells

Lab Sample Number: 10100197-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 8450
pH (UNITS): 7.7
Temperature (°C): 21.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 242 G., DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		10/07/2010	8.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		10/07/2010	2740	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		10/11/2010	9390	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		10/08/2010	0.22	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-BSO9C/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-435
Aquifer: MEADOWLARK

Well Owner: DEPARTMENT OF WATER RESOUF
Well Name: BSO-9
City: SEAL BEACH

Sample Group ID: 11003641
Sample ID: 11007866
Sample Date/Time: 03/31/2011 11:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: AIRLIFT
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR/PKH
Monitoring Program: Bolsa Sunset Monitoring Wells

Lab Sample Number: 11030743-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 8850
pH (UNITS): 7.7
Temperature (°C): 21.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 300 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		04/01/2011	9.2	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		04/01/2011	2920	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		03/31/2011	9330	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		04/02/2011	0.27	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-BSO9C/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-435
Aquifer: MEADOWLARK

Well Owner: DEPARTMENT OF WATER RESOUF
Well Name: BSO-9
City: SEAL BEACH

Sample Group ID: 11026416
Sample ID: 11035389
Sample Date/Time: 08/31/2011 10:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: AIRLIFT
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: MG/PKH
Monitoring Program: Bolsa Sunset Monitoring Wells

Lab Sample Number: 11080874-02
Laboratory: OCWD
Analysis Requested: Q23SG-T

FIELD PARAMETERS
EC (umhos/cm): 9050
pH (UNITS): 6.9
Temperature (°C): 22.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 270 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Br	Bromide	X1-300.0		08/31/2011	9.8	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		08/31/2011	2900	mg/L	.5	mg/L
EC	Electrical Conductivity	2510B		08/31/2011	9580	um/cm	1	um/cm
TOC	Total Organic Carbon (Unfiltered)	5310C		09/02/2011	0.3	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: PURS-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: PURSCHE, ROY
Well Name:
City: WESTMINSTER

Sample Group ID: 10012438
Sample ID: 10024090
Sample Date/Time: 09/14/2010 10:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10090288-04
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 7970
pH (UNITS): 7.
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/14/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	09/16/2010	09/20/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/15/2010	8.7	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/16/2010	09/20/2010	875	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/16/2010	2530	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/14/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/14/2010	8130	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/14/2010	144	mg/L	1	mg/L
K	Potassium	X200.7	09/16/2010	09/20/2010	15.6	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/16/2010	09/20/2010	158	mg/L	.1	mg/L
Na	Sodium	X200.7	09/16/2010	09/20/2010	592	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		09/15/2010	0.004	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/15/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		09/14/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		09/14/2010	7.4	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		09/15/2010	<0.01	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		09/15/2010	314	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		09/14/2010	4860	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		09/15/2010	0.11	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/14/2010	144	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	09/16/2010	09/20/2010	2840	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: PURS-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: PURSCHE, ROY
Well Name:
City: WESTMINSTER

Sample Group ID: 11003041
Sample ID: 11007244
Sample Date/Time: 03/10/2011 11:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Talbert Barrier Annual Report

Lab Sample Number: 11030252-04
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 6120
pH (UNITS): 7.3
Temperature (°C): 17.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		03/10/2011	<1	mg/L	1	mg/L
B	Boron	X200.7	03/14/2011	03/15/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		03/10/2011	6.8	mg/L	.1	mg/L
Ca	Calcium	X200.7	03/14/2011	03/15/2011	676	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		03/10/2011	2100	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		03/10/2011	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		03/10/2011	6770	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		03/10/2011	62.8	mg/L	1	mg/L
K	Potassium	X200.7	03/14/2011	03/15/2011	15.6	mg/L	.1	mg/L
Mg	Magnesium	X200.7	03/14/2011	03/15/2011	132	mg/L	.1	mg/L
Na	Sodium	X200.7	03/14/2011	03/15/2011	503	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		03/10/2011	0.146	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		03/10/2011	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		03/10/2011	<1	mg/L	1	mg/L
pH	pH	4500H+B		03/10/2011	7.5	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		03/10/2011	0.04	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		03/10/2011	276	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		03/16/2011	4060	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		03/18/2011	0.33	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		03/10/2011	62.8	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	03/14/2011	03/15/2011	2230	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: PURS-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: PURSCHE, ROY
Well Name:
City: WESTMINSTER

Sample Group ID: 11026374
Sample ID: 11035269
Sample Date/Time: 08/25/2011 12:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11080732-04
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 6770
pH (UNITS): 7.5
Temperature (°C): 22.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		08/25/2011	<1	mg/L	1	mg/L
B	Boron	X200.7	08/29/2011	09/02/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		08/25/2011	6.3	mg/L	.1	mg/L
Ca	Calcium	X200.7	08/29/2011	09/02/2011	630	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		08/25/2011	1790	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		08/25/2011	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		08/29/2011	6110	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		08/25/2011	148	mg/L	1	mg/L
K	Potassium	X200.7	08/29/2011	08/31/2011	12.3	mg/L	.1	mg/L
Mg	Magnesium	X200.7	08/29/2011	08/31/2011	114	mg/L	.1	mg/L
Na	Sodium	X200.7	08/29/2011	08/31/2011	453	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		08/25/2011	<0.002	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		08/25/2011	0.35	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		08/25/2011	<1	mg/L	1	mg/L
pH	pH	4500H+B		08/25/2011	7.6	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		08/25/2011	0.02	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		08/25/2011	244	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		08/29/2011	3860	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		08/29/2011	0.13	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		08/25/2011	148	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	08/29/2011	09/02/2011	2040	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-5A1/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name: Navy Well No. 1
City: SEAL BEACH

Sample Group ID: 10013786
Sample ID: 10027692
Sample Date/Time: 10/21/2010 10:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10100629-03
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 451
pH (UNITS): 7.9
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: PUMP RUNNING; FLUSHED 5 MIN.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		10/21/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	10/25/2010	10/26/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		10/21/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	10/25/2010	10/26/2010	51.9	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		10/21/2010	13.2	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		10/21/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		10/21/2010	455	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		10/21/2010	172	mg/L	1	mg/L
K	Potassium	X200.7	10/25/2010	10/26/2010	2.1	mg/L	.1	mg/L
Mg	Magnesium	X200.7	10/25/2010	10/26/2010	9.6	mg/L	.1	mg/L
Na	Sodium	X200.7	10/25/2010	10/26/2010	31.8	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		10/22/2010	<0.002	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		10/21/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		10/21/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		10/21/2010	7.9	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		10/22/2010	0.04	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		10/21/2010	37.7	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		10/21/2010	268	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		10/26/2010	0.12	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		10/21/2010	172	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	10/25/2010	10/26/2010	169	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-5A1/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name: Navy Well No. 1
City: SEAL BEACH

Sample Group ID: 11029322
Sample ID: 11040443
Sample Date/Time: 10/19/2011 10:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100521-03
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 457
pH (UNITS): 7.7
Temperature (°C): 19.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		10/27/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-5A3/1
Station Type: WELL CASING
Perf Interval (ft bgs): 210-390
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 10013787
Sample ID: 10027693
Sample Date/Time: 10/21/2010 10:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10100630-03
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 430
pH (UNITS): 8.
Temperature (°C): 19.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: PUMP RUNNING; FLUSHED 5 MIN.; H2S ODOR

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		10/21/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	10/25/2010	10/26/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		10/21/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	10/25/2010	10/26/2010	44.	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		10/21/2010	12.2	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		10/21/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		10/21/2010	435	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		10/21/2010	165	mg/L	1	mg/L
K	Potassium	X200.7	10/25/2010	10/26/2010	1.6	mg/L	.1	mg/L
Mg	Magnesium	X200.7	10/25/2010	10/26/2010	8.5	mg/L	.1	mg/L
Na	Sodium	X200.7	10/25/2010	10/26/2010	33.4	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		10/22/2010	<0.002	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		10/21/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		10/21/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		10/21/2010	8.	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		10/22/2010	0.04	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		10/21/2010	36.	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		10/21/2010	262	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		10/26/2010	0.19	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		10/21/2010	165	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	10/25/2010	10/26/2010	145	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-5A3/1
Station Type: WELL CASING
Perf Interval (ft bgs): 210-390
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 11029323
Sample ID: 11040444
Sample Date/Time: 10/19/2011 10:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100522-03
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 446
pH (UNITS): 8.
Temperature (°C): 19.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: NEW PUMP

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		10/27/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-6F1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 210-390
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 10013788
Sample ID: 10027694
Sample Date/Time: 10/21/2010 10:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10100631-03
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 953
pH (UNITS): 8.
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: PUMP RUNNING; FLUSHED 5 MIN.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		10/21/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	10/25/2010	10/26/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		10/21/2010	0.46	mg/L	.1	mg/L
Ca	Calcium	X200.7	10/25/2010	10/26/2010	86.2	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		10/21/2010	133	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		10/21/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		10/21/2010	981	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		10/21/2010	137	mg/L	1	mg/L
K	Potassium	X200.7	10/25/2010	10/26/2010	2.2	mg/L	.1	mg/L
Mg	Magnesium	X200.7	10/25/2010	10/26/2010	18.2	mg/L	.1	mg/L
Na	Sodium	X200.7	10/25/2010	10/26/2010	76.9	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		10/22/2010	<0.002	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		10/21/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		10/21/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		10/21/2010	7.9	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		10/22/2010	0.02	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		10/21/2010	136	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		10/21/2010	586	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		10/26/2010	0.79	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		10/21/2010	137	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	10/25/2010	10/26/2010	290	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-6F1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 210-390
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 11026320
Sample ID: 11035095
Sample Date/Time: 08/25/2011 12:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11080731-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 965
pH (UNITS): 8.1
Temperature (°C): 21.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: WINDY; NEARBY EXHAUST; WELL BEING RUN ALL DAY FORWATER TRUCK

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		08/31/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-6F1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 210-390
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 11026320
Sample ID: 11035691
Sample Date/Time: 08/25/2011 12:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11080731-04
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 965
pH (UNITS): 8.1
Temperature (°C): 21.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: WINDY; NEARBY EXHAUST; WELL BEING RUN ALL DAY FORWATER TRUCK

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		08/25/2011	<1	mg/L	1	mg/L
B	Boron	X200.7	08/29/2011	08/31/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		08/25/2011	0.66	mg/L	.1	mg/L
Ca	Calcium	X200.7	08/29/2011	08/31/2011	100	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		08/25/2011	152	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		08/25/2011	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		08/25/2011	963	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/08/2011	138	mg/L	1	mg/L
K	Potassium	X200.7	08/29/2011	09/12/2011	2.5	mg/L	.1	mg/L
Mg	Magnesium	X200.7	08/29/2011	09/12/2011	18.1	mg/L	.1	mg/L
Na	Sodium	X200.7	08/29/2011	09/12/2011	72.6	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		08/25/2011	<0.002	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		08/25/2011	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		08/25/2011	<1	mg/L	1	mg/L
pH	pH	4500H+B		08/25/2011	8.	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		08/25/2011	0.02	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		08/25/2011	110	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		08/29/2011	548	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		08/29/2011	0.76	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/08/2011	138	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	08/29/2011	09/12/2011	324	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BC/1
Station Type: WELL CASING
Perf Interval (ft bgs): 370-1020
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Bolsa Chica Well
City: SEAL BEACH

Sample Group ID: 10001266
Sample ID: 10002302
Sample Date/Time: 01/26/2010 08:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: GRAB SAMPLE
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN RODRIQUEZ
Monitoring Program: Title 22

Lab Sample Number: 10010614-03
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.1
Temperature (°C): 19.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		01/26/2010	0.003	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		01/27/2010	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		01/27/2010	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BC/1
Station Type: WELL CASING
Perf Interval (ft bgs): 370-1020
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Bolsa Chica Well
City: SEAL BEACH

Sample Group ID: 10001266
Sample ID: 10002303
Sample Date/Time: 01/26/2010 08:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: GRAB SAMPLE
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN RODRIQUEZ
Monitoring Program: Title 22

Lab Sample Number: 10010614-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.1
Temperature (°C): 19.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		01/28/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BC/1
Station Type: WELL CASING
Perf Interval (ft bgs): 370-1020
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Bolsa Chica Well
City: SEAL BEACH

Sample Group ID: 11001249
Sample ID: 11002311
Sample Date/Time: 01/27/2011 07:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11010740-05
Laboratory: OCWD
Analysis Requested: CrVI

FIELD PARAMETERS
EC (umhos/cm): 386
pH (UNITS): 8.5
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CrVI	Hexavalent Chromium (dissolved)	X1-218.6	01/27/2011	01/27/2011	<0.2	ug/L	.2	ug/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BC/1
Station Type: WELL CASING
Perf Interval (ft bgs): 370-1020
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Bolsa Chica Well
City: SEAL BEACH

Sample Group ID: 11001249
Sample ID: 11002312
Sample Date/Time: 01/27/2011 07:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11010740-06
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 386
pH (UNITS): 8.5
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		01/27/2011	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		01/27/2011	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		01/27/2011	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BC/1
Station Type: WELL CASING
Perf Interval (ft bgs): 370-1020
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Bolsa Chica Well
City: SEAL BEACH

Sample Group ID: 11001249
Sample ID: 11002805
Sample Date/Time: 01/27/2011 07:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11010740-07
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 386
pH (UNITS): 8.5
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		01/28/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BC/1
Station Type: WELL CASING
Perf Interval (ft bgs): 370-1020
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Bolsa Chica Well
City: SEAL BEACH

Sample Group ID: 12001105
Sample ID: 12002129
Sample Date/Time: 01/24/2012 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 12010532-05
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 386
pH (UNITS): 8.2
Temperature (°C): 21.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		01/24/2012	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		01/25/2012	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		01/25/2012	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BC/1
Station Type: WELL CASING
Perf Interval (ft bgs): 370-1020
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Bolsa Chica Well
City: SEAL BEACH

Sample Group ID: 12001105
Sample ID: 12002566
Sample Date/Time: 01/24/2012 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 12010532-06
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 386
pH (UNITS): 8.2
Temperature (°C): 21.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		01/30/2012	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BC/1
Station Type: WELL CASING
Perf Interval (ft bgs): 370-1020
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Bolsa Chica Well
City: SEAL BEACH

Sample Group ID: 12001105
Sample ID: 12002857
Sample Date/Time: 01/24/2012 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 12010532-04
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 386
pH (UNITS): 8.2
Temperature (°C): 21.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Ag	Silver	X200.8	01/25/2012	01/31/2012	<1	ug/L	1	ug/L
Al	Aluminum	X200.8	01/25/2012	01/31/2012	3.1	ug/L	1	ug/L
ALKPHE	Alkalinity-Phenolphthalein	2320B		01/24/2012	<1	mg/L	1	mg/L
APCOLR	Apparent Color (unfiltered)	2120B		01/25/2012	<3	UNITS	3	UNITS
As	Arsenic	X200.8	01/25/2012	01/31/2012	1.8	ug/L	1	ug/L
B	Boron	X200.7	01/25/2012	02/01/2012	<0.1	mg/L	.1	mg/L
Ba	Barium	X200.8	01/25/2012	01/31/2012	31.4	ug/L	1	ug/L
Be	Beryllium	X200.8	01/25/2012	01/31/2012	<0.5	ug/L	.5	ug/L
Br	Bromide	X1-300.0		01/25/2012	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	01/25/2012	02/01/2012	33.3	mg/L	.1	mg/L
Cd	Cadmium	X200.8	01/25/2012	01/31/2012	<1	ug/L	1	ug/L
Cl	Chloride	X1-300.0		01/25/2012	12.9	mg/L	.5	mg/L
CN	Cyanide	X1-335.4		01/26/2012	<5	ug/L	5	ug/L
Co	Cobalt	X200.8	01/25/2012	01/31/2012	<1	ug/L	1	ug/L
CO3	Carbonate (as CO3)	2320B		01/24/2012	<0.6	mg/L	.6	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		01/24/2012	<1	mg/L	1	mg/L
Cr	Chromium	X200.7	01/25/2012	01/31/2012	<1	ug/L	1	ug/L
Cu	Copper	X200.8	01/25/2012	01/31/2012	<1	ug/L	1	ug/L
EC	Electrical Conductivity	2510B		01/25/2012	395	um/cm	1	um/cm
F	Fluoride	X1-300.0		01/25/2012	0.4	mg/L	.1	mg/L
Fe	Iron	X200.7	01/25/2012	01/31/2012	2.8	ug/L	1	ug/L
Gd	Gadolinium	X200.8	01/25/2012	01/31/2012	<10	ng/L	10	ng/L
HCO3	Bicarbonate (as HCO3)	2320B		01/24/2012	181	mg/L	1.2	mg/L
HCO3Ca	Bicarbonate (as CaCO3)	2320B		01/24/2012	148	mg/L	1	mg/L
Hg	Mercury	X200.8	01/25/2012	01/31/2012	<0.1	ug/L	.1	ug/L
K	Potassium	X200.7	01/25/2012	02/01/2012	1.8	mg/L	.1	mg/L
MBAS	Surfactants	5540C		01/24/2012	<0.02	mg/L	.02	mg/L
Mg	Magnesium	X200.7	01/25/2012	02/01/2012	5.7	mg/L	.1	mg/L
Mn	Manganese	X200.8	01/25/2012	01/31/2012	2.1	ug/L	1	ug/L
Na	Sodium	X200.7	01/25/2012	02/01/2012	48.5	mg/L	.1	mg/L
Ni	Nickel	X200.8	01/25/2012	01/31/2012	<1	ug/L	1	ug/L
ODOR	Threshold Odor Number (Median)	2150B		01/24/2012	0.	TON	0	TON
ODORHI	Odor Range High	2150B		01/24/2012	0.	TON	0	TON
ODORLO	Odor Range Low	2150B		01/24/2012	0.	TON	0	TON
OH	Hydroxide (as OH)	2320B		01/24/2012	<0.3	mg/L	.3	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		01/24/2012	<1	mg/L	1	mg/L
Pb	Lead	X200.8	01/25/2012	01/31/2012	<1	ug/L	1	ug/L
pH	pH	4500H+B		01/24/2012	8.2	UNITS	1	UNITS
Sb	Antimony	X200.8	01/25/2012	01/31/2012	<0.5	ug/L	.5	ug/L
Se	Selenium	X200.8	01/25/2012	01/31/2012	<1	ug/L	1	ug/L
SO4	Sulfate	X1-300.0		01/25/2012	37.6	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		01/24/2012	233	mg/L	1	mg/L
Tl	Thallium	X200.8	01/25/2012	01/31/2012	<0.5	ug/L	.5	ug/L
TOC	Total Organic Carbon (Unfiltered)	5310C		01/27/2012	0.12	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BC/1
Station Type: WELL CASING
Perf Interval (ft bgs): 370-1020
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Bolsa Chica Well
City: SEAL BEACH

Sample Group ID: 12001105
Sample ID: 12002857
Sample Date/Time: 01/24/2012 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 12010532-04
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 386
pH (UNITS): 8.2
Temperature (°C): 21.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
TOTALK	Total Alkalinity (as CaCO3)	2320B		01/24/2012	148	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	01/25/2012	02/01/2012	107	mg/L	1	mg/L
TURB	Turbidity	2130B		01/24/2012	<0.1	NTU	.1	NTU
V	Vanadium	X200.8	01/25/2012	01/31/2012	2.7	ug/L	1	ug/L
Zn	Zinc	X200.8	01/25/2012	01/31/2012	2.8	ug/L	1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BEV/1
Station Type: WELL CASING
Perf Interval (ft bgs): 400-800
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Beverly Manor
City: SEAL BEACH

Sample Group ID: 10001295
Sample ID: 10002336
Sample Date/Time: 01/27/2010 11:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10010654-03
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 403
pH (UNITS): 8.4
Temperature (°C): 24.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: WELL ON 1 HR.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		01/28/2010	0.004	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		01/29/2010	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		01/29/2010	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BEV/1
Station Type: WELL CASING
Perf Interval (ft bgs): 400-800
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Beverly Manor
City: SEAL BEACH

Sample Group ID: 10001295
Sample ID: 10002337
Sample Date/Time: 01/27/2010 11:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10010654-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 403
pH (UNITS): 8.4
Temperature (°C): 24.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: WELL ON 1 HR.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		01/28/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BEV/1
Station Type: WELL CASING
Perf Interval (ft bgs): 400-800
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Beverly Manor
City: SEAL BEACH

Sample Group ID: 11001250
Sample ID: 11002313
Sample Date/Time: 01/27/2011 11:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11010748-05
Laboratory: OCWD
Analysis Requested: CrVI

FIELD PARAMETERS
EC (umhos/cm): 398
pH (UNITS): 8.8
Temperature (°C): 24.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: WELL ON 2 HRS.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CrVI	Hexavalent Chromium (dissolved)	X1-218.6	01/27/2011	01/27/2011	<0.2	ug/L	.2	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BEV/1
Station Type: WELL CASING
Perf Interval (ft bgs): 400-800
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Beverly Manor
City: SEAL BEACH

Sample Group ID: 11001250
Sample ID: 11002314
Sample Date/Time: 01/27/2011 11:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11010748-07
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 398
pH (UNITS): 8.8
Temperature (°C): 24.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: WELL ON 2 HRS.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		01/27/2011	0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		01/27/2011	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		01/27/2011	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BEV/1
Station Type: WELL CASING
Perf Interval (ft bgs): 400-800
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Beverly Manor
City: SEAL BEACH

Sample Group ID: 11001250
Sample ID: 11002808
Sample Date/Time: 01/27/2011 11:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11010748-08
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 398
pH (UNITS): 8.8
Temperature (°C): 24.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: WELL ON 2 HRS.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		01/28/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BEV/1
Station Type: WELL CASING
Perf Interval (ft bgs): 400-800
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Beverly Manor
City: SEAL BEACH

Sample Group ID: 12001106
Sample ID: 12002130
Sample Date/Time: 01/24/2012 08:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 12010533-05
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 400
pH (UNITS): 8.6
Temperature (°C): 22.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		01/24/2012	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		01/25/2012	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		01/25/2012	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BEV/1
Station Type: WELL CASING
Perf Interval (ft bgs): 400-800
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Beverly Manor
City: SEAL BEACH

Sample Group ID: 12001106
Sample ID: 12002567
Sample Date/Time: 01/24/2012 08:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 12010533-06
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 400
pH (UNITS): 8.6
Temperature (°C): 22.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		01/30/2012	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BEV/1
Station Type: WELL CASING
Perf Interval (ft bgs): 400-800
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Beverly Manor
City: SEAL BEACH

Sample Group ID: 12001106
Sample ID: 12003021
Sample Date/Time: 01/24/2012 08:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 12010533-04
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 400
pH (UNITS): 8.6
Temperature (°C): 22.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Ag	Silver	X200.8	01/25/2012	01/31/2012	<1	ug/L	1	ug/L
Al	Aluminum	X200.8	01/25/2012	01/31/2012	4.8	ug/L	1	ug/L
ALKPHE	Alkalinity-Phenolphthalein	2320B		01/24/2012	<1	mg/L	1	mg/L
APCOLR	Apparent Color (unfiltered)	2120B		01/25/2012	5	UNITS	3	UNITS
As	Arsenic	X200.8	01/25/2012	01/31/2012	1.7	ug/L	1	ug/L
B	Boron	X200.7	01/25/2012	02/01/2012	<0.1	mg/L	.1	mg/L
Ba	Barium	X200.8	01/25/2012	01/31/2012	17.9	ug/L	1	ug/L
Be	Beryllium	X200.8	01/25/2012	01/31/2012	<0.5	ug/L	.5	ug/L
Br	Bromide	X1-300.0		01/25/2012	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	01/25/2012	02/01/2012	23.5	mg/L	.1	mg/L
Cd	Cadmium	X200.8	01/25/2012	01/31/2012	<1	ug/L	1	ug/L
Cl	Chloride	X1-300.0		01/25/2012	24.1	mg/L	.5	mg/L
CN	Cyanide	X1-335.4		01/26/2012	<5	ug/L	5	ug/L
Co	Cobalt	X200.8	01/25/2012	01/31/2012	<1	ug/L	1	ug/L
CO3	Carbonate (as CO3)	2320B		01/24/2012	<0.6	mg/L	.6	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		01/24/2012	<1	mg/L	1	mg/L
Cr	Chromium	X200.7	01/25/2012	01/31/2012	<1	ug/L	1	ug/L
Cu	Copper	X200.8	01/25/2012	01/31/2012	<1	ug/L	1	ug/L
EC	Electrical Conductivity	2510B		01/25/2012	412	um/cm	1	um/cm
F	Fluoride	X1-300.0		01/25/2012	0.41	mg/L	.1	mg/L
Fe	Iron	X200.7	01/25/2012	01/31/2012	9.9	ug/L	1	ug/L
Gd	Gadolinium	X200.8	01/25/2012	01/31/2012	<10	ng/L	10	ng/L
HCO3	Bicarbonate (as HCO3)	2320B		01/24/2012	153	mg/L	1.2	mg/L
HCO3Ca	Bicarbonate (as CaCO3)	2320B		01/24/2012	126	mg/L	1	mg/L
Hg	Mercury	X200.8	01/25/2012	01/31/2012	0.1	ug/L	.1	ug/L
K	Potassium	X200.7	01/25/2012	02/01/2012	1.3	mg/L	.1	mg/L
MBAS	Surfactants	5540C		01/24/2012	<0.02	mg/L	.02	mg/L
Mg	Magnesium	X200.7	01/25/2012	02/01/2012	1.9	mg/L	.1	mg/L
Mn	Manganese	X200.8	01/25/2012	01/31/2012	4.3	ug/L	1	ug/L
Na	Sodium	X200.7	01/25/2012	02/01/2012	60.2	mg/L	.1	mg/L
Ni	Nickel	X200.8	01/25/2012	01/31/2012	<1	ug/L	1	ug/L
ODOR	Threshold Odor Number (Median)	2150B		01/24/2012	0.	TON	0	TON
ODORHI	Odor Range High	2150B		01/24/2012	1.	TON	0	TON
ODORLO	Odor Range Low	2150B		01/24/2012	0.	TON	0	TON
OH	Hydroxide (as OH)	2320B		01/24/2012	<0.3	mg/L	.3	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		01/24/2012	<1	mg/L	1	mg/L
Pb	Lead	X200.8	01/25/2012	01/31/2012	<1	ug/L	1	ug/L
pH	pH	4500H+B		01/24/2012	8.3	UNITS	1	UNITS
Sb	Antimony	X200.8	01/25/2012	01/31/2012	<0.5	ug/L	.5	ug/L
Se	Selenium	X200.8	01/25/2012	01/31/2012	<1	ug/L	1	ug/L
SO4	Sulfate	X1-300.0		01/25/2012	43.7	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		01/24/2012	210	mg/L	1	mg/L
Tl	Thallium	X200.8	01/25/2012	01/31/2012	<0.5	ug/L	.5	ug/L
TOC	Total Organic Carbon (Unfiltered)	5310C		01/27/2012	0.43	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BEV/1
Station Type: WELL CASING
Perf Interval (ft bgs): 400-800
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Beverly Manor
City: SEAL BEACH

Sample Group ID: 12001106
Sample ID: 12003021
Sample Date/Time: 01/24/2012 08:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 12010533-04
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 400
pH (UNITS): 8.6
Temperature (°C): 22.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
TOTALK	Total Alkalinity (as CaCO3)	2320B		01/24/2012	127	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	01/25/2012	02/01/2012	66.6	mg/L	1	mg/L
TURB	Turbidity	2130B		01/24/2012	<0.1	NTU	.1	NTU
V	Vanadium	X200.8	01/25/2012	01/31/2012	<1	ug/L	1	ug/L
Zn	Zinc	X200.8	01/25/2012	01/31/2012	3.5	ug/L	1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11003707
Sample ID: 11007905
Sample Date/Time: 04/05/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11040068-05
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 392
pH (UNITS): 8.4
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RUSH; 14 DAYS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		04/05/2011	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		04/06/2011	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		04/06/2011	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11003707
Sample ID: 11007906
Sample Date/Time: 04/05/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11040068-06
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 392
pH (UNITS): 8.4
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RUSH; 14 DAYS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		04/06/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11003707
Sample ID: 11008142
Sample Date/Time: 04/05/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11040068-03
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 392
pH (UNITS): 8.4
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RUSH; 14 DAYS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		04/05/2011	<1	mg/L	1	mg/L
APCOLR	Apparent Color (unfiltered)	2120B		04/06/2011	4	UNITS	3	UNITS
B	Boron	X200.7	04/07/2011	04/13/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		04/05/2011	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	04/07/2011	04/13/2011	34.9	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		04/05/2011	12.5	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		04/05/2011	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		04/05/2011	391	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		04/05/2011	149	mg/L	1	mg/L
K	Potassium	X200.7	04/07/2011	04/13/2011	1.6	mg/L	.1	mg/L
Mg	Magnesium	X200.7	04/07/2011	04/13/2011	7.3	mg/L	.1	mg/L
Na	Sodium	X200.7	04/07/2011	04/13/2011	40.7	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		04/05/2011	<0.002	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		04/05/2011	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		04/05/2011	<1	mg/L	1	mg/L
pH	pH	4500H+B		04/05/2011	8.1	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		04/05/2011	0.03	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		04/05/2011	32.9	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		04/06/2011	232	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		04/06/2011	0.31	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		04/05/2011	149	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	04/07/2011	04/13/2011	117	mg/L	1	mg/L
TURB	Turbidity	2130B		04/07/2011	0.3	NTU	.1	NTU

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11012684
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-17
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		06/14/2011	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		06/13/2011	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		06/13/2011	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11013556
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-16
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Ag	Silver	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L
Al	Aluminum	X200.8	06/15/2011	06/22/2011	5.9	ug/L	1	ug/L
ALKPHE	Alkalinity-Phenolphthalein	2320B		06/13/2011	<1	mg/L	1	mg/L
APCOLR	Apparent Color (unfiltered)	2120B		06/13/2011	7	UNITS	3	UNITS
As	Arsenic	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L
B	Boron	X200.7	06/14/2011	06/15/2011	<0.1	mg/L	.1	mg/L
Ba	Barium	X200.8	06/15/2011	06/22/2011	28.7	ug/L	1	ug/L
Be	Beryllium	X200.8	06/15/2011	06/22/2011	<0.5	ug/L	.5	ug/L
Br	Bromide	X1-300.0		06/13/2011	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	06/14/2011	06/15/2011	24.4	mg/L	.1	mg/L
Cd	Cadmium	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L
Cl	Chloride	X1-300.0		06/13/2011	12.1	mg/L	.5	mg/L
CN	Cyanide	X1-335.4		06/27/2011	<5	ug/L	5	ug/L
Co	Cobalt	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L
CO3	Carbonate (as CO3)	2320B		06/13/2011	0.8	mg/L	.6	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		06/13/2011	1.4	mg/L	1	mg/L
Cr	Chromium	X200.7	06/14/2011	06/16/2011	<1	ug/L	1	ug/L
CrVI	Hexavalent Chromium (dissolved)	X1-218.6		06/14/2011	<0.2	ug/L	.2	ug/L
Cu	Copper	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L
EC	Electrical Conductivity	2510B		06/13/2011	354	um/cm	1	um/cm
F	Fluoride	X1-300.0		06/13/2011	0.45	mg/L	.1	mg/L
Fe	Iron	X200.7	06/14/2011	06/16/2011	8.8	ug/L	1	ug/L
Gd	Gadolinium	X200.8	06/15/2011	06/22/2011	13.6	ng/L	10	ng/L
HCO3	Bicarbonate (as HCO3)	2320B		06/13/2011	160	mg/L	1.2	mg/L
HCO3Ca	Bicarbonate (as CaCO3)	2320B		06/13/2011	131	mg/L	1	mg/L
Hg	Mercury	X200.8	06/15/2011	06/22/2011	<0.1	ug/L	.1	ug/L
K	Potassium	X200.7	06/14/2011	06/15/2011	1.4	mg/L	.1	mg/L
MBAS	Surfactants	5540C		06/14/2011	<0.02	mg/L	.02	mg/L
Mg	Magnesium	X200.7	06/14/2011	06/15/2011	4.4	mg/L	.1	mg/L
Mn	Manganese	X200.8	06/15/2011	06/22/2011	17.7	ug/L	1	ug/L
Na	Sodium	X200.7	06/14/2011	06/15/2011	49.8	mg/L	.1	mg/L
Ni	Nickel	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L
ODOR	Threshold Odor Number (Median)	2150B		06/13/2011	16	TON	0	TON
ODORHI	Odor Range High	2150B		06/13/2011	16	TON	0	TON
ODORLO	Odor Range Low	2150B		06/13/2011	0.	TON	0	TON
OH	Hydroxide (as OH)	2320B		06/13/2011	<0.3	mg/L	.3	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		06/13/2011	<1	mg/L	1	mg/L
Pb	Lead	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L
pH	pH	4500H+B		06/13/2011	8.3	UNITS	1	UNITS
Sb	Antimony	X200.8	06/15/2011	06/22/2011	<0.5	ug/L	.5	ug/L
Se	Selenium	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L
SO4	Sulfate	X1-300.0		06/13/2011	30.7	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		06/16/2011	228	mg/L	1	mg/L
Tl	Thallium	X200.8	06/15/2011	06/22/2011	<0.5	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11013556
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-16
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
TOC	Total Organic Carbon (Unfiltered)	5310C		06/15/2011	0.66	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		06/13/2011	133	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	06/14/2011	06/15/2011	78.9	mg/L	1	mg/L
TURB	Turbidity	2130B		06/14/2011	0.2	NTU	.1	NTU
V	Vanadium	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L
Zn	Zinc	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11014002
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-18
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		06/15/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11036126
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-18
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		09/21/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11036380
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-17
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		09/21/2011	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		09/21/2011	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		09/21/2011	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11037056
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-16
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Ag	Silver	X200.8	09/22/2011	09/27/2011	<1	ug/L	1	ug/L
Al	Aluminum	X200.8	09/22/2011	09/27/2011	4.4	ug/L	1	ug/L
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/21/2011	<1	mg/L	1	mg/L
APCOLR	Apparent Color (unfiltered)	2120B		09/22/2011	4	UNITS	3	UNITS
As	Arsenic	X200.8	09/22/2011	09/27/2011	<1	ug/L	1	ug/L
B	Boron	X200.7	09/22/2011	09/26/2011	<0.1	mg/L	.1	mg/L
Ba	Barium	X200.8	09/22/2011	09/27/2011	33.4	ug/L	1	ug/L
Be	Beryllium	X200.8	09/22/2011	09/27/2011	<0.5	ug/L	.5	ug/L
Br	Bromide	X1-300.0		09/22/2011	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/22/2011	10/05/2011	25.1	mg/L	.1	mg/L
Cd	Cadmium	X200.8	09/22/2011	09/27/2011	<1	ug/L	1	ug/L
Cl	Chloride	X1-300.0		09/22/2011	13.6	mg/L	.5	mg/L
CN	Cyanide	X1-335.4		10/04/2011	<5	ug/L	5	ug/L
Co	Cobalt	X200.8	09/22/2011	09/27/2011	<1	ug/L	1	ug/L
CO3	Carbonate (as CO3)	2320B		09/21/2011	<0.6	mg/L	.6	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/21/2011	<1	mg/L	1	mg/L
Cr	Chromium	X200.7	09/22/2011	09/28/2011	<1	ug/L	1	ug/L
CrVI	Hexavalent Chromium (dissolved)	X1-218.6	09/22/2011	09/22/2011	<0.2	ug/L	.2	ug/L
Cu	Copper	X200.8	09/22/2011	09/27/2011	<1	ug/L	1	ug/L
EC	Electrical Conductivity	2510B		10/03/2011	382	um/cm	1	um/cm
F	Fluoride	X1-300.0		09/22/2011	0.4	mg/L	.1	mg/L
Fe	Iron	X200.7	09/22/2011	09/28/2011	4.9	ug/L	1	ug/L
Gd	Gadolinium	X200.8	09/22/2011	09/27/2011	<10	ng/L	10	ng/L
HCO3	Bicarbonate (as HCO3)	2320B		09/21/2011	166	mg/L	1.2	mg/L
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/21/2011	136	mg/L	1	mg/L
Hg	Mercury	X200.8	09/22/2011	09/27/2011	<0.1	ug/L	.1	ug/L
K	Potassium	X200.7	09/22/2011	10/05/2011	1.4	mg/L	.1	mg/L
MBAS	Surfactants	5540C		09/22/2011	<0.02	mg/L	.02	mg/L
Mg	Magnesium	X200.7	09/22/2011	10/05/2011	4.1	mg/L	.1	mg/L
Mn	Manganese	X200.8	09/22/2011	09/27/2011	18.	ug/L	1	ug/L
Na	Sodium	X200.7	09/22/2011	10/05/2011	51.6	mg/L	.1	mg/L
Ni	Nickel	X200.8	09/22/2011	09/27/2011	<1	ug/L	1	ug/L
ODOR	Threshold Odor Number (Median)	2150B		09/21/2011	8.	TON	0	TON
ODORHI	Odor Range High	2150B		09/21/2011	16	TON	0	TON
ODORLO	Odor Range Low	2150B		09/21/2011	1.	TON	0	TON
OH	Hydroxide (as OH)	2320B		09/21/2011	<0.3	mg/L	.3	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		09/21/2011	<1	mg/L	1	mg/L
Pb	Lead	X200.8	09/22/2011	09/27/2011	<1	ug/L	1	ug/L
pH	pH	4500H+B		09/21/2011	8.3	UNITS	1	UNITS
Sb	Antimony	X200.8	09/22/2011	09/27/2011	<0.5	ug/L	.5	ug/L
Se	Selenium	X200.8	09/22/2011	09/27/2011	<1	ug/L	1	ug/L
SO4	Sulfate	X1-300.0		09/22/2011	36.1	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		09/21/2011	240	mg/L	1	mg/L
Tl	Thallium	X200.8	09/22/2011	09/27/2011	<0.5	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11037056
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-16
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
TOC	Total Organic Carbon (Unfiltered)	5310C		09/26/2011	0.31	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/21/2011	136	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	09/22/2011	10/05/2011	79.7	mg/L	1	mg/L
TURB	Turbidity	2130B		09/21/2011	<0.1	NTU	.1	NTU
V	Vanadium	X200.8	09/22/2011	09/27/2011	<1	ug/L	1	ug/L
Zn	Zinc	X200.8	09/22/2011	09/27/2011	<1	ug/L	1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 11042843
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-17
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		12/15/2011	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		12/15/2011	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		12/15/2011	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 11043422
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-18
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		12/20/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 12000530
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-16
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Ag	Silver	X200.8	12/19/2011	12/22/2011	<1	ug/L	1	ug/L
Al	Aluminum	X200.8	12/19/2011	12/22/2011	7.5	ug/L	1	ug/L
ALKPHE	Alkalinity-Phenolphthalein	2320B		12/14/2011	<1	mg/L	1	mg/L
APCOLR	Apparent Color (unfiltered)	2120B		12/15/2011	7	UNITS	3	UNITS
As	Arsenic	X200.8	12/19/2011	12/22/2011	<1	ug/L	1	ug/L
B	Boron	X200.7	12/19/2011	12/20/2011	<0.1	mg/L	.1	mg/L
Ba	Barium	X200.8	12/19/2011	12/22/2011	26.1	ug/L	1	ug/L
Be	Beryllium	X200.8	12/19/2011	12/22/2011	<0.5	ug/L	.5	ug/L
Br	Bromide	X1-300.0		12/14/2011	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	12/19/2011	01/06/2012	20.1	mg/L	.1	mg/L
Cd	Cadmium	X200.8	12/19/2011	12/22/2011	<1	ug/L	1	ug/L
Cl	Chloride	X1-300.0		01/10/2012	13.1	mg/L	.5	mg/L
CN	Cyanide	X1-335.4		12/21/2011	<5	ug/L	5	ug/L
Co	Cobalt	X200.8	12/19/2011	12/22/2011	<1	ug/L	1	ug/L
CO3	Carbonate (as CO3)	2320B		12/14/2011	<0.6	mg/L	.6	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		12/14/2011	<1	mg/L	1	mg/L
Cr	Chromium	X200.7	12/19/2011	12/22/2011	<1	ug/L	1	ug/L
CrVI	Hexavalent Chromium (dissolved)	X1-218.6	12/14/2011	12/15/2011	0.3	ug/L	.2	ug/L
Cu	Copper	X200.8	12/19/2011	12/22/2011	<1	ug/L	1	ug/L
EC	Electrical Conductivity	2510B		12/14/2011	364	um/cm	1	um/cm
F	Fluoride	X1-300.0		12/14/2011	0.41	mg/L	.1	mg/L
Fe	Iron	X200.7	12/19/2011	12/22/2011	6.8	ug/L	1	ug/L
Gd	Gadolinium	X200.8	12/19/2011	12/22/2011	19.4	ng/L	10	ng/L
HCO3	Bicarbonate (as HCO3)	2320B		12/14/2011	156	mg/L	1.2	mg/L
HCO3Ca	Bicarbonate (as CaCO3)	2320B		12/14/2011	128	mg/L	1	mg/L
Hg	Mercury	X200.8	12/19/2011	12/22/2011	0.1	ug/L	.1	ug/L
K	Potassium	X200.7	12/19/2011	12/20/2011	1.1	mg/L	.1	mg/L
MBAS	Surfactants	5540C		12/15/2011	<0.02	mg/L	.02	mg/L
Mg	Magnesium	X200.7	12/19/2011	12/20/2011	3.4	mg/L	.1	mg/L
Mn	Manganese	X200.8	12/19/2011	12/22/2011	14.2	ug/L	1	ug/L
Na	Sodium	X200.7	12/19/2011	12/20/2011	56.7	mg/L	.1	mg/L
Ni	Nickel	X200.8	12/19/2011	12/22/2011	<1	ug/L	1	ug/L
ODOR	Threshold Odor Number (Median)	2150B		12/14/2011	2.	TON	0	TON
ODORHI	Odor Range High	2150B		12/14/2011	8.	TON	0	TON
ODORLO	Odor Range Low	2150B		12/14/2011	0.	TON	0	TON
OH	Hydroxide (as OH)	2320B		12/14/2011	<0.3	mg/L	.3	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		12/14/2011	<1	mg/L	1	mg/L
Pb	Lead	X200.8	12/19/2011	12/22/2011	<1	ug/L	1	ug/L
pH	pH	4500H+B		12/14/2011	8.3	UNITS	1	UNITS
Sb	Antimony	X200.8	12/19/2011	12/22/2011	<0.5	ug/L	.5	ug/L
Se	Selenium	X200.8	12/19/2011	12/22/2011	<1	ug/L	1	ug/L
SO4	Sulfate	X1-300.0		01/10/2012	31.6	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		12/14/2011	222	mg/L	1	mg/L
Tl	Thallium	X200.8	12/19/2011	12/22/2011	<0.5	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 12000530
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-16
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
TOC	Total Organic Carbon (Unfiltered)	5310C		12/15/2011	0.58	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		12/14/2011	128	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	12/19/2011	01/06/2012	64.1	mg/L	1	mg/L
TURB	Turbidity	2130B		12/15/2011	<0.1	NTU	.1	NTU
V	Vanadium	X200.8	12/19/2011	12/22/2011	<1	ug/L	1	ug/L
Zn	Zinc	X200.8	12/19/2011	12/22/2011	3.	ug/L	1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10014021
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-17
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		06/08/2010	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		06/09/2010	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		06/09/2010	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10014954
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-18
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		06/18/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10015108
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-16
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Ag	Silver	X200.8	06/09/2010	06/14/2010	<1	ug/L	1	ug/L
Al	Aluminum	X200.8	06/09/2010	06/14/2010	7.2	ug/L	1	ug/L
ALKPHE	Alkalinity-Phenolphthalein	2320B		06/08/2010	4.7	mg/L	1	mg/L
APCOLR	Apparent Color (unfiltered)	2120B		06/08/2010	13	UNITS	3	UNITS
As	Arsenic	X200.8	06/09/2010	06/14/2010	2.	ug/L	1	ug/L
B	Boron	X200.7	06/09/2010	06/10/2010	<0.1	mg/L	.1	mg/L
Ba	Barium	X200.8	06/09/2010	06/14/2010	12.8	ug/L	1	ug/L
Be	Beryllium	X200.8	06/09/2010	06/14/2010	<0.5	ug/L	.5	ug/L
Br	Bromide	X1-300.0		06/09/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	06/09/2010	06/24/2010	13.7	mg/L	.1	mg/L
Cd	Cadmium	X200.8	06/09/2010	06/14/2010	<1	ug/L	1	ug/L
Cl	Chloride	X1-300.0		06/09/2010	14.6	mg/L	.5	mg/L
CN	Cyanide	X1-335.4		06/22/2010	<5	ug/L	5	ug/L
Co	Cobalt	X200.8	06/09/2010	06/14/2010	<1	ug/L	1	ug/L
CO3	Carbonate (as CO3)	2320B		06/08/2010	5.6	mg/L	.6	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		06/08/2010	9.4	mg/L	1	mg/L
Cr	Chromium	X200.7	06/09/2010	06/14/2010	<1	ug/L	1	ug/L
CrVI	Hexavalent Chromium (dissolved)	X1-218.6		06/08/2010	<0.2	ug/L	.2	ug/L
Cu	Copper	X200.8	06/09/2010	06/14/2010	<1	ug/L	1	ug/L
EC	Electrical Conductivity	2510B		06/08/2010	346	um/cm	1	um/cm
F	Fluoride	X1-300.0		06/09/2010	0.55	mg/L	.1	mg/L
Fe	Iron	X200.7	06/09/2010	06/14/2010	9.1	ug/L	1	ug/L
HCO3	Bicarbonate (as HCO3)	2320B		06/08/2010	143	mg/L	1.2	mg/L
HCO3Ca	Bicarbonate (as CaCO3)	2320B		06/08/2010	118	mg/L	1	mg/L
Hg	Mercury	X200.8	06/09/2010	06/14/2010	0.2	ug/L	.1	ug/L
K	Potassium	X200.7	06/09/2010	06/10/2010	1.3	mg/L	.1	mg/L
MBAS	Surfactants	5540C		06/09/2010	<0.02	mg/L	.02	mg/L
Mg	Magnesium	X200.7	06/09/2010	06/10/2010	1.3	mg/L	.1	mg/L
Mn	Manganese	X200.8	06/09/2010	06/14/2010	3.1	ug/L	1	ug/L
Na	Sodium	X200.7	06/09/2010	06/24/2010	65.2	mg/L	.1	mg/L
Ni	Nickel	X200.8	06/09/2010	06/14/2010	<1	ug/L	1	ug/L
ODOR	Threshold Odor Number (Median)	2150B		06/08/2010	2.	TON	0	TON
ODORHI	Odor Range High	2150B		06/08/2010	2.	TON	0	TON
ODORLO	Odor Range Low	2150B		06/08/2010	1.	TON	0	TON
OH	Hydroxide (as OH)	2320B		06/08/2010	<0.3	mg/L	.3	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		06/08/2010	<1	mg/L	1	mg/L
Pb	Lead	X200.8	06/09/2010	06/14/2010	<1	ug/L	1	ug/L
pH	pH	4500H+B		06/08/2010	8.6	UNITS	1	UNITS
Sb	Antimony	X200.8	06/09/2010	06/14/2010	<0.5	ug/L	.5	ug/L
Se	Selenium	X200.8	06/09/2010	06/14/2010	<1	ug/L	1	ug/L
SO4	Sulfate	X1-300.0		06/09/2010	34.8	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		06/10/2010	200	mg/L	1	mg/L
Tl	Thallium	X200.8	06/09/2010	06/14/2010	<0.5	ug/L	.5	ug/L
TOC	Total Organic Carbon (Unfiltered)	5310C		06/10/2010	0.56	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10015108
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-16
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
TOTALK	Total Alkalinity (as CaCO3)	2320B		06/08/2010	127	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	06/09/2010	06/24/2010	39.4	mg/L	1	mg/L
TURB	Turbidity	2130B		06/08/2010	<0.1	NTU	.1	NTU
V	Vanadium	X200.8	06/09/2010	06/14/2010	<1	ug/L	1	ug/L
Zn	Zinc	X200.8	06/09/2010	06/14/2010	<1	ug/L	1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11012685
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-17
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		06/14/2011	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		06/13/2011	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		06/13/2011	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11013557
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-16
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Ag	Silver	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L
Al	Aluminum	X200.8	06/15/2011	06/22/2011	10.9	ug/L	1	ug/L
ALKPHE	Alkalinity-Phenolphthalein	2320B		06/13/2011	5.9	mg/L	1	mg/L
APCOLR	Apparent Color (unfiltered)	2120B		06/13/2011	12	UNITS	3	UNITS
As	Arsenic	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L
B	Boron	X200.7	06/14/2011	06/15/2011	<0.1	mg/L	.1	mg/L
Ba	Barium	X200.8	06/15/2011	06/22/2011	9.1	ug/L	1	ug/L
Be	Beryllium	X200.8	06/15/2011	06/22/2011	<0.5	ug/L	.5	ug/L
Br	Bromide	X1-300.0		06/13/2011	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	06/14/2011	06/15/2011	12.6	mg/L	.1	mg/L
Cd	Cadmium	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L
Cl	Chloride	X1-300.0		06/13/2011	14.1	mg/L	.5	mg/L
CN	Cyanide	X1-335.4		06/27/2011	<5	ug/L	5	ug/L
Co	Cobalt	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L
CO3	Carbonate (as CO3)	2320B		06/13/2011	7.	mg/L	.6	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		06/13/2011	11.7	mg/L	1	mg/L
Cr	Chromium	X200.7	06/14/2011	06/16/2011	<1	ug/L	1	ug/L
CrVI	Hexavalent Chromium (dissolved)	X1-218.6		06/14/2011	<0.2	ug/L	.2	ug/L
Cu	Copper	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L
EC	Electrical Conductivity	2510B		06/13/2011	354	um/cm	1	um/cm
F	Fluoride	X1-300.0		06/13/2011	0.5	mg/L	.1	mg/L
Fe	Iron	X200.7	06/14/2011	06/16/2011	8.1	ug/L	1	ug/L
Gd	Gadolinium	X200.8	06/15/2011	06/22/2011	<10	ng/L	10	ng/L
HCO3	Bicarbonate (as HCO3)	2320B		06/13/2011	135	mg/L	1.2	mg/L
HCO3Ca	Bicarbonate (as CaCO3)	2320B		06/13/2011	110	mg/L	1	mg/L
Hg	Mercury	X200.8	06/15/2011	06/22/2011	0.2	ug/L	.1	ug/L
K	Potassium	X200.7	06/14/2011	06/15/2011	1.	mg/L	.1	mg/L
MBAS	Surfactants	5540C		06/14/2011	<0.02	mg/L	.02	mg/L
Mg	Magnesium	X200.7	06/14/2011	06/15/2011	0.9	mg/L	.1	mg/L
Mn	Manganese	X200.8	06/15/2011	06/22/2011	2.5	ug/L	1	ug/L
Na	Sodium	X200.7	06/14/2011	06/15/2011	64.1	mg/L	.1	mg/L
Ni	Nickel	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L
ODOR	Threshold Odor Number (Median)	2150B		06/13/2011	0.	TON	0	TON
ODORHI	Odor Range High	2150B		06/13/2011	2.	TON	0	TON
ODORLO	Odor Range Low	2150B		06/13/2011	0.	TON	0	TON
OH	Hydroxide (as OH)	2320B		06/13/2011	<0.3	mg/L	.3	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		06/13/2011	<1	mg/L	1	mg/L
Pb	Lead	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L
pH	pH	4500H+B		06/13/2011	8.6	UNITS	1	UNITS
Sb	Antimony	X200.8	06/15/2011	06/22/2011	<0.5	ug/L	.5	ug/L
Se	Selenium	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L
SO4	Sulfate	X1-300.0		06/13/2011	34.6	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		06/16/2011	232	mg/L	1	mg/L
Tl	Thallium	X200.8	06/15/2011	06/22/2011	<0.5	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11013557
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-16
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
TOC	Total Organic Carbon (Unfiltered)	5310C		06/15/2011	0.8	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		06/13/2011	122	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	06/14/2011	06/15/2011	35.	mg/L	1	mg/L
TURB	Turbidity	2130B		06/14/2011	0.5	NTU	.1	NTU
V	Vanadium	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L
Zn	Zinc	X200.8	06/15/2011	06/22/2011	<1	ug/L	1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11014003
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-18
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		06/15/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP1
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 74-84
Port Depth (ft bgs): 79

Sample Group ID: 10003512
Sample ID: 10007768
Sample Date/Time: 03/17/2010 12:49
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030518-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 422
pH (UNITS): 8.1
Temperature (°C): 21.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		03/17/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	03/18/2010	03/23/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		03/17/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	03/18/2010	03/23/2010	50.6	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		03/17/2010	12.4	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		03/17/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		03/17/2010	398	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		03/17/2010	169	mg/L	1	mg/L
K	Potassium	X200.7	03/18/2010	03/23/2010	2.	mg/L	.1	mg/L
Mg	Magnesium	X200.7	03/18/2010	03/23/2010	5.8	mg/L	.1	mg/L
Na	Sodium	X200.7	03/18/2010	03/23/2010	33.5	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		03/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		03/17/2010	8.1	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		03/17/2010	33.	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		03/19/2010	0.24	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		03/17/2010	169	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP1
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 74-84
Port Depth (ft bgs): 79

Sample Group ID: 10003512
Sample ID: 10007769
Sample Date/Time: 03/17/2010 12:49
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030518-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 422
pH (UNITS): 8.1
Temperature (°C): 21.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		03/23/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP1
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 74-84
Port Depth (ft bgs): 79

Sample Group ID: 10013347
Sample ID: 10026549
Sample Date/Time: 10/13/2010 13:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100375-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 419
pH (UNITS): 8.2
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		10/14/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP1
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 74-84
Port Depth (ft bgs): 79

Sample Group ID: 10013347
Sample ID: 10027072
Sample Date/Time: 10/13/2010 13:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100375-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 419
pH (UNITS): 8.2
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		10/13/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	10/14/2010	10/19/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		10/14/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	10/14/2010	10/19/2010	49.	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		10/14/2010	11.5	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		10/13/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		10/13/2010	412	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		10/13/2010	165	mg/L	1	mg/L
K	Potassium	X200.7	10/14/2010	10/19/2010	2.	mg/L	.1	mg/L
Mg	Magnesium	X200.7	10/14/2010	10/19/2010	6.1	mg/L	.1	mg/L
Na	Sodium	X200.7	10/14/2010	10/19/2010	35.	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		10/14/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		10/13/2010	8.1	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		10/14/2010	32.5	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		10/14/2010	0.2	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		10/13/2010	165	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP1
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 74-84
Port Depth (ft bgs): 79

Sample Group ID: 11003150
Sample ID: 11007161
Sample Date/Time: 03/16/2011 14:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030417-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 420
pH (UNITS): 8.1
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		03/16/2011	<1	mg/L	1	mg/L
B	Boron	X200.7	03/17/2011	03/21/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		03/17/2011	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	03/17/2011	03/21/2011	45.8	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		03/17/2011	11.8	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		03/16/2011	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		03/16/2011	424	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		03/16/2011	168	mg/L	1	mg/L
K	Potassium	X200.7	03/17/2011	03/21/2011	2.3	mg/L	.1	mg/L
Mg	Magnesium	X200.7	03/17/2011	03/21/2011	6.2	mg/L	.1	mg/L
Na	Sodium	X200.7	03/17/2011	03/21/2011	34.5	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		03/17/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		03/16/2011	8.2	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		03/17/2011	33.2	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		03/24/2011	0.37	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		03/16/2011	168	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP1
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 74-84
Port Depth (ft bgs): 79

Sample Group ID: 11003150
Sample ID: 11007162
Sample Date/Time: 03/16/2011 14:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030417-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 420
pH (UNITS): 8.1
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		03/22/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP1
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 74-84
Port Depth (ft bgs): 79

Sample Group ID: 11026654
Sample ID: 11035880
Sample Date/Time: 09/14/2011 13:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090334-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 418
pH (UNITS): 8.2
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		09/16/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP1
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 74-84
Port Depth (ft bgs): 79

Sample Group ID: 11026654
Sample ID: 11036812
Sample Date/Time: 09/14/2011 13:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090334-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 418
pH (UNITS): 8.2
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/14/2011	<1	mg/L	1	mg/L
B	Boron	X200.7	09/15/2011	09/16/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/16/2011	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/15/2011	09/29/2011	45.6	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/16/2011	11.1	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/14/2011	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/14/2011	427	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/21/2011	162	mg/L	1	mg/L
K	Potassium	X200.7	09/15/2011	09/16/2011	1.9	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/15/2011	09/16/2011	5.4	mg/L	.1	mg/L
Na	Sodium	X200.7	09/15/2011	09/16/2011	35.3	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/16/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		09/14/2011	8.1	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		09/16/2011	31.7	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		09/20/2011	0.22	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/21/2011	162	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP2
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 144-154
Port Depth (ft bgs): 149

Sample Group ID: 10003513
Sample ID: 10007770
Sample Date/Time: 03/17/2010 12:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030519-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 434
pH (UNITS): 8.2
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		03/17/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	03/18/2010	03/23/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		03/17/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	03/18/2010	03/23/2010	51.8	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		03/17/2010	12.3	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		03/17/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		03/17/2010	413	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		03/17/2010	182	mg/L	1	mg/L
K	Potassium	X200.7	03/18/2010	03/23/2010	2.2	mg/L	.1	mg/L
Mg	Magnesium	X200.7	03/18/2010	03/23/2010	8.9	mg/L	.1	mg/L
Na	Sodium	X200.7	03/18/2010	03/23/2010	31.	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		03/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		03/17/2010	8.2	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		03/17/2010	28.6	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		03/19/2010	0.35	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		03/17/2010	182	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP2
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 144-154
Port Depth (ft bgs): 149

Sample Group ID: 10003513
Sample ID: 10007771
Sample Date/Time: 03/17/2010 12:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030519-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 434
pH (UNITS): 8.2
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		03/23/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP2
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 144-154
Port Depth (ft bgs): 149

Sample Group ID: 10013348
Sample ID: 10026550
Sample Date/Time: 10/13/2010 12:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100376-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 432
pH (UNITS): 8.3
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		10/14/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP2
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 144-154
Port Depth (ft bgs): 149

Sample Group ID: 10013348
Sample ID: 10027073
Sample Date/Time: 10/13/2010 12:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100376-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 432
pH (UNITS): 8.3
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		10/13/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	10/14/2010	10/19/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		10/14/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	10/14/2010	10/19/2010	49.3	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		10/14/2010	11.9	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		10/13/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		10/13/2010	431	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		10/13/2010	177	mg/L	1	mg/L
K	Potassium	X200.7	10/14/2010	10/19/2010	2.1	mg/L	.1	mg/L
Mg	Magnesium	X200.7	10/14/2010	10/19/2010	8.9	mg/L	.1	mg/L
Na	Sodium	X200.7	10/14/2010	10/19/2010	32.3	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		10/14/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		10/13/2010	8.2	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		10/14/2010	29.	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		10/14/2010	0.4	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		10/13/2010	177	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP2
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 144-154
Port Depth (ft bgs): 149

Sample Group ID: 11003151
Sample ID: 11007163
Sample Date/Time: 03/16/2011 14:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030418-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 427
pH (UNITS): 8.5
Temperature (°C): 20.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		03/16/2011	4.6	mg/L	1	mg/L
B	Boron	X200.7	03/17/2011	03/21/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		03/17/2011	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	03/17/2011	03/21/2011	46.5	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		03/17/2011	12.	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		03/16/2011	9.2	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		03/16/2011	430	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		03/16/2011	170	mg/L	1	mg/L
K	Potassium	X200.7	03/17/2011	03/21/2011	2.5	mg/L	.1	mg/L
Mg	Magnesium	X200.7	03/17/2011	03/21/2011	9.9	mg/L	.1	mg/L
Na	Sodium	X200.7	03/17/2011	03/21/2011	33.5	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		03/17/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		03/16/2011	8.4	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		03/17/2011	28.	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		03/24/2011	0.62	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		03/16/2011	179	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP2
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 144-154
Port Depth (ft bgs): 149

Sample Group ID: 11003151
Sample ID: 11007164
Sample Date/Time: 03/16/2011 14:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030418-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 427
pH (UNITS): 8.5
Temperature (°C): 20.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		03/22/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP2
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 144-154
Port Depth (ft bgs): 149

Sample Group ID: 11026655
Sample ID: 11035881
Sample Date/Time: 09/14/2011 12:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090335-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 423
pH (UNITS): 8.4
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		09/16/2011	<2.5	ug/L	2.5	ug/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP2
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 144-154
Port Depth (ft bgs): 149

Sample Group ID: 11026655
Sample ID: 11036061
Sample Date/Time: 09/14/2011 12:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090335-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 423
pH (UNITS): 8.4
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/14/2011	2.1	mg/L	1	mg/L
B	Boron	X200.7	09/15/2011	09/16/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/16/2011	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/15/2011	09/16/2011	47.6	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/16/2011	11.7	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/14/2011	4.1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/14/2011	436	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/14/2011	166	mg/L	1	mg/L
K	Potassium	X200.7	09/15/2011	09/16/2011	2.	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/15/2011	09/16/2011	8.5	mg/L	.1	mg/L
Na	Sodium	X200.7	09/15/2011	09/16/2011	31.6	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/16/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		09/14/2011	8.4	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		09/16/2011	27.4	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		09/20/2011	0.39	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/14/2011	170	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP3
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 240-250
Port Depth (ft bgs): 244

Sample Group ID: 10003514
Sample ID: 10007618
Sample Date/Time: 03/17/2010 11:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030520-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 461
pH (UNITS): 8.1
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		03/17/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	03/18/2010	03/23/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		03/17/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	03/18/2010	03/23/2010	55.7	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		03/17/2010	14.5	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		03/17/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		03/17/2010	438	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		03/17/2010	178	mg/L	1	mg/L
K	Potassium	X200.7	03/18/2010	03/23/2010	2.8	mg/L	.1	mg/L
Mg	Magnesium	X200.7	03/18/2010	03/23/2010	9.5	mg/L	.1	mg/L
Na	Sodium	X200.7	03/18/2010	03/23/2010	31.2	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		03/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		03/17/2010	8.	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		03/17/2010	38.2	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		03/19/2010	0.16	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		03/17/2010	178	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP3
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 240-250
Port Depth (ft bgs): 244

Sample Group ID: 10003514
Sample ID: 10007772
Sample Date/Time: 03/17/2010 11:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030520-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 461
pH (UNITS): 8.1
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		03/23/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP3
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 240-250
Port Depth (ft bgs): 244

Sample Group ID: 10013349
Sample ID: 10026551
Sample Date/Time: 10/13/2010 12:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100377-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 460
pH (UNITS): 8.2
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		10/14/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP3
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 240-250
Port Depth (ft bgs): 244

Sample Group ID: 10013349
Sample ID: 10027074
Sample Date/Time: 10/13/2010 12:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100377-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 460
pH (UNITS): 8.2
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		10/13/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	10/14/2010	10/19/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		10/14/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	10/14/2010	10/19/2010	51.8	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		10/14/2010	16.	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		10/13/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		10/13/2010	451	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		10/13/2010	172	mg/L	1	mg/L
K	Potassium	X200.7	10/14/2010	10/19/2010	2.6	mg/L	.1	mg/L
Mg	Magnesium	X200.7	10/14/2010	10/19/2010	9.8	mg/L	.1	mg/L
Na	Sodium	X200.7	10/14/2010	10/19/2010	31.4	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		10/14/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		10/13/2010	8.1	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		10/14/2010	39.6	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		10/14/2010	0.19	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		10/13/2010	172	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP3
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 240-250
Port Depth (ft bgs): 244

Sample Group ID: 11003152
Sample ID: 11007165
Sample Date/Time: 03/16/2011 13:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030419-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 452
pH (UNITS): 8.2
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		03/16/2011	<1	mg/L	1	mg/L
B	Boron	X200.7	03/17/2011	03/21/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		03/17/2011	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	03/17/2011	03/21/2011	48.5	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		03/17/2011	15.8	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		03/16/2011	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		03/16/2011	454	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		03/16/2011	171	mg/L	1	mg/L
K	Potassium	X200.7	03/17/2011	03/21/2011	3.2	mg/L	.1	mg/L
Mg	Magnesium	X200.7	03/17/2011	03/21/2011	10.7	mg/L	.1	mg/L
Na	Sodium	X200.7	03/17/2011	03/21/2011	33.4	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		03/17/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		03/16/2011	8.3	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		03/17/2011	38.5	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		03/24/2011	0.5	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		03/16/2011	171	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP3
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 240-250
Port Depth (ft bgs): 244

Sample Group ID: 11003152
Sample ID: 11007166
Sample Date/Time: 03/16/2011 13:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030419-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 452
pH (UNITS): 8.2
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		03/22/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP3
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 240-250
Port Depth (ft bgs): 244

Sample Group ID: 11026656
Sample ID: 11035882
Sample Date/Time: 09/14/2011 12:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090336-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 440
pH (UNITS): 8.2
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		09/16/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP3
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 240-250
Port Depth (ft bgs): 244

Sample Group ID: 11026656
Sample ID: 11036813
Sample Date/Time: 09/14/2011 12:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090336-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 440
pH (UNITS): 8.2
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/14/2011	<1	mg/L	1	mg/L
B	Boron	X200.7	09/15/2011	09/16/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/16/2011	0.14	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/15/2011	09/29/2011	44.5	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/16/2011	15.7	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/14/2011	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/21/2011	452	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/14/2011	160	mg/L	1	mg/L
K	Potassium	X200.7	09/15/2011	09/29/2011	2.7	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/15/2011	09/29/2011	9.6	mg/L	.1	mg/L
Na	Sodium	X200.7	09/15/2011	09/29/2011	32.5	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/16/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		09/14/2011	8.2	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		09/16/2011	37.3	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		09/20/2011	0.2	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/14/2011	160	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP4
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 370-380
Port Depth (ft bgs): 374

Sample Group ID: 10003515
Sample ID: 10007773
Sample Date/Time: 03/17/2010 10:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030521-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 424
pH (UNITS): 8.2
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		03/23/2010	<2.5	ug/L	2.5	ug/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP4
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 370-380
Port Depth (ft bgs): 374

Sample Group ID: 10003515
Sample ID: 10008170
Sample Date/Time: 03/17/2010 10:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030521-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 424
pH (UNITS): 8.2
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		03/17/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	03/18/2010	03/23/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		04/03/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	03/18/2010	03/23/2010	40.3	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		04/03/2010	13.	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		03/17/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		03/17/2010	413	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		03/17/2010	167	mg/L	1	mg/L
K	Potassium	X200.7	03/18/2010	03/23/2010	2.	mg/L	.1	mg/L
Mg	Magnesium	X200.7	03/18/2010	03/23/2010	8.9	mg/L	.1	mg/L
Na	Sodium	X200.7	03/18/2010	03/23/2010	33.7	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		03/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		03/17/2010	8.1	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		04/03/2010	34.1	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		03/19/2010	0.23	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		03/17/2010	167	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP4
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 370-380
Port Depth (ft bgs): 374

Sample Group ID: 10013350
Sample ID: 10026552
Sample Date/Time: 10/13/2010 11:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100378-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 428
pH (UNITS): 8.3
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		10/14/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP4
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 370-380
Port Depth (ft bgs): 374

Sample Group ID: 10013350
Sample ID: 10027075
Sample Date/Time: 10/13/2010 11:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100378-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 428
pH (UNITS): 8.3
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		10/13/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	10/14/2010	10/19/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		10/14/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	10/14/2010	10/19/2010	40.8	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		10/14/2010	13.9	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		10/13/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		10/13/2010	413	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		10/13/2010	161	mg/L	1	mg/L
K	Potassium	X200.7	10/14/2010	10/19/2010	2.	mg/L	.1	mg/L
Mg	Magnesium	X200.7	10/14/2010	10/19/2010	9.6	mg/L	.1	mg/L
Na	Sodium	X200.7	10/14/2010	10/19/2010	36.6	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		10/14/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		10/13/2010	8.1	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		10/14/2010	36.1	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		10/14/2010	0.19	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		10/13/2010	161	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP4
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 370-380
Port Depth (ft bgs): 374

Sample Group ID: 11003153
Sample ID: 11007167
Sample Date/Time: 03/16/2011 12:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030420-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 419
pH (UNITS): 8.2
Temperature (°C): 19.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		03/16/2011	<1	mg/L	1	mg/L
B	Boron	X200.7	03/17/2011	03/21/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		03/17/2011	0.11	mg/L	.1	mg/L
Ca	Calcium	X200.7	03/17/2011	03/21/2011	35.	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		03/17/2011	14.	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		03/16/2011	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		03/16/2011	422	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		03/16/2011	160	mg/L	1	mg/L
K	Potassium	X200.7	03/17/2011	03/21/2011	2.2	mg/L	.1	mg/L
Mg	Magnesium	X200.7	03/17/2011	03/21/2011	9.6	mg/L	.1	mg/L
Na	Sodium	X200.7	03/17/2011	03/21/2011	35.3	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		03/17/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		03/16/2011	8.3	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		03/17/2011	35.5	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		03/24/2011	0.4	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		03/16/2011	160	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP4
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 370-380
Port Depth (ft bgs): 374

Sample Group ID: 11003153
Sample ID: 11007168
Sample Date/Time: 03/16/2011 12:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030420-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 419
pH (UNITS): 8.2
Temperature (°C): 19.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		03/22/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP4
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 370-380
Port Depth (ft bgs): 374

Sample Group ID: 11026657
Sample ID: 11035883
Sample Date/Time: 09/14/2011 11:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090337-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 417
pH (UNITS): 8.4
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		09/16/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP4
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 370-380
Port Depth (ft bgs): 374

Sample Group ID: 11026657
Sample ID: 11036814
Sample Date/Time: 09/14/2011 11:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090337-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 417
pH (UNITS): 8.4
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/14/2011	<1	mg/L	1	mg/L
B	Boron	X200.7	09/19/2011	09/21/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/16/2011	0.14	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/19/2011	09/29/2011	37.9	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/16/2011	13.9	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/14/2011	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/26/2011	423	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/14/2011	156	mg/L	1	mg/L
K	Potassium	X200.7	09/19/2011	09/29/2011	2.2	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/19/2011	09/21/2011	9.4	mg/L	.1	mg/L
Na	Sodium	X200.7	09/19/2011	09/29/2011	38.5	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/16/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		09/14/2011	8.2	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		09/16/2011	35.1	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		09/20/2011	0.32	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/14/2011	156	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP5
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 510-520
Port Depth (ft bgs): 514

Sample Group ID: 10003516
Sample ID: 10007619
Sample Date/Time: 03/17/2010 10:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030522-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 304
pH (UNITS): 9.3
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		03/17/2010	11.7	mg/L	1	mg/L
B	Boron	X200.7	03/18/2010	03/23/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		03/17/2010	0.74	mg/L	.1	mg/L
Ca	Calcium	X200.7	03/18/2010	03/23/2010	4.	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		03/17/2010	10.5	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		03/17/2010	23.3	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		03/17/2010	280	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		03/17/2010	84.3	mg/L	1	mg/L
K	Potassium	X200.7	03/18/2010	03/23/2010	1.8	mg/L	.1	mg/L
Mg	Magnesium	X200.7	03/18/2010	03/23/2010	1.9	mg/L	.1	mg/L
Na	Sodium	X200.7	03/18/2010	03/23/2010	56.2	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		03/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		03/17/2010	9.1	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		03/17/2010	23.2	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		03/19/2010	0.39	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		03/17/2010	108	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP5
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 510-520
Port Depth (ft bgs): 514

Sample Group ID: 10013351
Sample ID: 10026553
Sample Date/Time: 10/13/2010 11:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100379-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 298
pH (UNITS): 9.3
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		10/14/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP5
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 510-520
Port Depth (ft bgs): 514

Sample Group ID: 10013351
Sample ID: 10027076
Sample Date/Time: 10/13/2010 11:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100379-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 298
pH (UNITS): 9.3
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		10/13/2010	12.3	mg/L	1	mg/L
B	Boron	X200.7	10/14/2010	10/19/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		10/14/2010	0.71	mg/L	.1	mg/L
Ca	Calcium	X200.7	10/14/2010	10/19/2010	4.3	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		10/14/2010	10.7	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		10/13/2010	24.6	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		10/13/2010	287	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		10/13/2010	81.2	mg/L	1	mg/L
K	Potassium	X200.7	10/14/2010	10/19/2010	1.8	mg/L	.1	mg/L
Mg	Magnesium	X200.7	10/14/2010	10/19/2010	2.2	mg/L	.1	mg/L
Na	Sodium	X200.7	10/14/2010	10/19/2010	61.9	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		10/14/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		10/13/2010	9.1	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		10/14/2010	25.2	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		10/14/2010	0.27	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		10/13/2010	106	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP5
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 510-520
Port Depth (ft bgs): 514

Sample Group ID: 11003154
Sample ID: 11007169
Sample Date/Time: 03/16/2011 12:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030421-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 305
pH (UNITS): 9.6
Temperature (°C): 19.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		03/16/2011	15.2	mg/L	1	mg/L
B	Boron	X200.7	03/17/2011	03/21/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		03/17/2011	0.71	mg/L	.1	mg/L
Ca	Calcium	X200.7	03/17/2011	03/21/2011	3.3	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		03/17/2011	10.6	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		03/16/2011	30.5	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		03/16/2011	306	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		03/16/2011	79.3	mg/L	1	mg/L
K	Potassium	X200.7	03/17/2011	03/21/2011	1.8	mg/L	.1	mg/L
Mg	Magnesium	X200.7	03/17/2011	03/21/2011	2.	mg/L	.1	mg/L
Na	Sodium	X200.7	03/17/2011	03/21/2011	60.5	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		03/17/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		03/16/2011	9.3	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		03/17/2011	23.9	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		03/24/2011	0.44	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		03/16/2011	110	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP5
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 510-520
Port Depth (ft bgs): 514

Sample Group ID: 11003154
Sample ID: 11007170
Sample Date/Time: 03/16/2011 12:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030421-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 305
pH (UNITS): 9.6
Temperature (°C): 19.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		03/22/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP5
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 510-520
Port Depth (ft bgs): 514

Sample Group ID: 11026658
Sample ID: 11035884
Sample Date/Time: 09/14/2011 10:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090338-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 313
pH (UNITS): 9.7
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		09/16/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP5
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 510-520
Port Depth (ft bgs): 514

Sample Group ID: 11026658
Sample ID: 11036347
Sample Date/Time: 09/14/2011 10:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090338-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 313
pH (UNITS): 9.7
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/14/2011	19.5	mg/L	1	mg/L
B	Boron	X200.7	09/19/2011	09/21/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/16/2011	0.92	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/19/2011	09/21/2011	2.7	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/16/2011	10.5	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/14/2011	38.9	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/14/2011	317	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/14/2011	71.9	mg/L	1	mg/L
K	Potassium	X200.7	09/19/2011	09/21/2011	1.9	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/19/2011	09/21/2011	1.6	mg/L	.1	mg/L
Na	Sodium	X200.7	09/19/2011	09/21/2011	62.	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/16/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		09/14/2011	9.4	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		09/16/2011	21.8	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		09/20/2011	0.46	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/14/2011	111	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP6
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 696-706
Port Depth (ft bgs): 706

Sample Group ID: 10003517
Sample ID: 10007620
Sample Date/Time: 03/17/2010 09:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030523-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 358
pH (UNITS): 8.7
Temperature (°C): 19.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		03/17/2010	2.9	mg/L	1	mg/L
B	Boron	X200.7	03/18/2010	03/23/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		03/17/2010	0.31	mg/L	.1	mg/L
Ca	Calcium	X200.7	03/18/2010	03/23/2010	18.5	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		03/17/2010	11.5	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		03/17/2010	5.8	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		03/17/2010	337	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		03/17/2010	124	mg/L	1	mg/L
K	Potassium	X200.7	03/18/2010	03/23/2010	1.1	mg/L	.1	mg/L
Mg	Magnesium	X200.7	03/18/2010	03/23/2010	1.2	mg/L	.1	mg/L
Na	Sodium	X200.7	03/18/2010	03/23/2010	59.5	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		03/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		03/17/2010	8.4	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		03/17/2010	32.6	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		03/19/2010	0.37	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		03/17/2010	129	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP6
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 696-706
Port Depth (ft bgs): 706

Sample Group ID: 10013352
Sample ID: 10026554
Sample Date/Time: 10/13/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100380-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 360
pH (UNITS): 8.7
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		10/14/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP6
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 696-706
Port Depth (ft bgs): 706

Sample Group ID: 10013352
Sample ID: 10027664
Sample Date/Time: 10/13/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100380-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 360
pH (UNITS): 8.7
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		10/13/2010	4.6	mg/L	1	mg/L
B	Boron	X200.7	10/14/2010	10/19/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		10/14/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	10/14/2010	10/26/2010	19.5	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		10/14/2010	11.8	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		10/13/2010	9.2	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		10/13/2010	345	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		10/13/2010	117	mg/L	1	mg/L
K	Potassium	X200.7	10/14/2010	10/26/2010	1.	mg/L	.1	mg/L
Mg	Magnesium	X200.7	10/14/2010	10/26/2010	1.6	mg/L	.1	mg/L
Na	Sodium	X200.7	10/14/2010	10/26/2010	57.8	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		10/14/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		10/13/2010	8.5	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		10/14/2010	33.7	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		10/14/2010	0.29	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		10/13/2010	126	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP6
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 696-706
Port Depth (ft bgs): 706

Sample Group ID: 11003155
Sample ID: 11007171
Sample Date/Time: 03/16/2011 11:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030422-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 358
pH (UNITS): 8.8
Temperature (°C): 19.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		03/16/2011	5.4	mg/L	1	mg/L
B	Boron	X200.7	03/17/2011	03/21/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		03/17/2011	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	03/17/2011	03/21/2011	16.	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		03/17/2011	12.	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		03/16/2011	10.7	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		03/16/2011	356	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		03/16/2011	116	mg/L	1	mg/L
K	Potassium	X200.7	03/17/2011	03/21/2011	1.2	mg/L	.1	mg/L
Mg	Magnesium	X200.7	03/17/2011	03/21/2011	1.3	mg/L	.1	mg/L
Na	Sodium	X200.7	03/17/2011	03/21/2011	60.8	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		03/17/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		03/16/2011	8.6	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		03/17/2011	34.	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		03/24/2011	0.48	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		03/16/2011	126	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP6
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 696-706
Port Depth (ft bgs): 706

Sample Group ID: 11003155
Sample ID: 11007172
Sample Date/Time: 03/16/2011 11:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030422-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 358
pH (UNITS): 8.8
Temperature (°C): 19.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		03/22/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP6
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 696-706
Port Depth (ft bgs): 706

Sample Group ID: 11026659
Sample ID: 11035885
Sample Date/Time: 09/14/2011 10:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090339-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.8
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		09/16/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP6
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 696-706
Port Depth (ft bgs): 706

Sample Group ID: 11026659
Sample ID: 11036348
Sample Date/Time: 09/14/2011 10:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090339-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.8
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/14/2011	4.4	mg/L	1	mg/L
B	Boron	X200.7	09/19/2011	09/21/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/16/2011	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/19/2011	09/21/2011	18.	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/16/2011	11.9	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/14/2011	8.8	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/14/2011	367	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/14/2011	116	mg/L	1	mg/L
K	Potassium	X200.7	09/19/2011	09/21/2011	1.1	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/19/2011	09/21/2011	0.9	mg/L	.1	mg/L
Na	Sodium	X200.7	09/19/2011	09/21/2011	60.	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/16/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		09/14/2011	8.5	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		09/16/2011	33.7	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		09/20/2011	0.42	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/14/2011	124	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP7
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 910-920
Port Depth (ft bgs): 916

Sample Group ID: 10003518
Sample ID: 10008171
Sample Date/Time: 03/17/2010 09:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030524-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 338
pH (UNITS): 9.4
Temperature (°C): 19.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		03/17/2010	16.5	mg/L	1	mg/L
B	Boron	X200.7	03/18/2010	03/23/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		04/03/2010	0.19	mg/L	.1	mg/L
Ca	Calcium	X200.7	03/18/2010	03/23/2010	3.4	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		04/03/2010	10.7	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		03/17/2010	32.9	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		03/17/2010	317	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		03/17/2010	98.	mg/L	1	mg/L
K	Potassium	X200.7	03/18/2010	03/23/2010	0.6	mg/L	.1	mg/L
Mg	Magnesium	X200.7	03/18/2010	03/23/2010	0.3	mg/L	.1	mg/L
Na	Sodium	X200.7	03/18/2010	03/23/2010	67.6	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		03/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		03/17/2010	9.2	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		04/03/2010	17.7	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		03/22/2010	1.13	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		03/17/2010	131	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP7
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 910-920
Port Depth (ft bgs): 916

Sample Group ID: 10013353
Sample ID: 10026555
Sample Date/Time: 10/13/2010 09:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100381-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 338
pH (UNITS): 9.4
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		10/14/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP7
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 910-920
Port Depth (ft bgs): 916

Sample Group ID: 10013353
Sample ID: 10027077
Sample Date/Time: 10/13/2010 09:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100381-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 338
pH (UNITS): 9.4
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		10/13/2010	17.5	mg/L	1	mg/L
B	Boron	X200.7	10/14/2010	10/19/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		10/14/2010	0.4	mg/L	.1	mg/L
Ca	Calcium	X200.7	10/14/2010	10/19/2010	4.	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		10/14/2010	11.6	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		10/13/2010	35.1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		10/13/2010	323	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		10/13/2010	94.3	mg/L	1	mg/L
K	Potassium	X200.7	10/14/2010	10/19/2010	0.6	mg/L	.1	mg/L
Mg	Magnesium	X200.7	10/14/2010	10/19/2010	0.3	mg/L	.1	mg/L
Na	Sodium	X200.7	10/14/2010	10/19/2010	71.5	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		10/14/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		10/13/2010	9.3	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		10/14/2010	17.1	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		10/14/2010	1.75	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		10/13/2010	129	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP7
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 910-920
Port Depth (ft bgs): 916

Sample Group ID: 11003156
Sample ID: 11007173
Sample Date/Time: 03/16/2011 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030423-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 336
pH (UNITS): 9.5
Temperature (°C): 18.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		03/16/2011	16.8	mg/L	1	mg/L
B	Boron	X200.7	03/17/2011	03/21/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		03/17/2011	0.46	mg/L	.1	mg/L
Ca	Calcium	X200.7	03/17/2011	03/21/2011	4.1	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		03/17/2011	12.	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		03/16/2011	33.5	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		03/16/2011	337	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		03/16/2011	96.6	mg/L	1	mg/L
K	Potassium	X200.7	03/17/2011	03/21/2011	0.8	mg/L	.1	mg/L
Mg	Magnesium	X200.7	03/17/2011	03/21/2011	0.5	mg/L	.1	mg/L
Na	Sodium	X200.7	03/17/2011	03/21/2011	72.3	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		03/17/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		03/16/2011	9.3	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		03/17/2011	17.9	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		03/24/2011	1.3	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		03/16/2011	130	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP7
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 910-920
Port Depth (ft bgs): 916

Sample Group ID: 11003156
Sample ID: 11007174
Sample Date/Time: 03/16/2011 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030423-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 336
pH (UNITS): 9.5
Temperature (°C): 18.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		03/23/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP7
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 910-920
Port Depth (ft bgs): 916

Sample Group ID: 11026660
Sample ID: 11035938
Sample Date/Time: 09/14/2011 09:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090340-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 338
pH (UNITS): 9.6
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		09/16/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP7
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 910-920
Port Depth (ft bgs): 916

Sample Group ID: 11026660
Sample ID: 11036349
Sample Date/Time: 09/14/2011 09:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090340-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 338
pH (UNITS): 9.6
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/14/2011	17.8	mg/L	1	mg/L
B	Boron	X200.7	09/19/2011	09/21/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/16/2011	0.54	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/19/2011	09/21/2011	2.9	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/16/2011	11.3	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/14/2011	35.6	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/14/2011	340	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/14/2011	91.6	mg/L	1	mg/L
K	Potassium	X200.7	09/19/2011	09/21/2011	0.6	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/19/2011	09/21/2011	<0.1	mg/L	.1	mg/L
Na	Sodium	X200.7	09/19/2011	09/21/2011	68.9	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/16/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		09/14/2011	9.3	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		09/16/2011	16.9	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		09/20/2011	1.63	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/14/2011	127	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP8
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 1250-1260
Port Depth (ft bgs): 1256

Sample Group ID: 10003519
Sample ID: 10007621
Sample Date/Time: 03/17/2010 08:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030525-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 406
pH (UNITS): 9.3
Temperature (°C): 19.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		03/17/2010	18.8	mg/L	1	mg/L
B	Boron	X200.7	03/18/2010	03/23/2010	0.24	mg/L	.1	mg/L
Br	Bromide	X1-300.0		03/17/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	03/18/2010	03/23/2010	3.4	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		03/17/2010	13.9	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		03/17/2010	37.7	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		03/17/2010	384	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		03/17/2010	153	mg/L	1	mg/L
K	Potassium	X200.7	03/18/2010	03/23/2010	0.6	mg/L	.1	mg/L
Mg	Magnesium	X200.7	03/18/2010	03/23/2010	0.2	mg/L	.1	mg/L
Na	Sodium	X200.7	03/18/2010	03/23/2010	89.3	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		03/17/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		03/17/2010	9.1	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		03/17/2010	0.9	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		03/22/2010	3.82	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		03/17/2010	191	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP8
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 1250-1260
Port Depth (ft bgs): 1256

Sample Group ID: 10013354
Sample ID: 10026556
Sample Date/Time: 10/13/2010 08:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100382-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 411
pH (UNITS): 9.2
Temperature (°C): 20.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		10/14/2010	<2.5	ug/L	2.5	ug/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP8
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 1250-1260
Port Depth (ft bgs): 1256

Sample Group ID: 10013354
Sample ID: 10027665
Sample Date/Time: 10/13/2010 08:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100382-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 411
pH (UNITS): 9.2
Temperature (°C): 20.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		10/13/2010	19.8	mg/L	1	mg/L
B	Boron	X200.7	10/14/2010	10/19/2010	0.21	mg/L	.1	mg/L
Br	Bromide	X1-300.0		10/14/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	10/14/2010	10/26/2010	3.3	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		10/14/2010	14.1	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		10/13/2010	39.7	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		10/13/2010	394	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		10/13/2010	147	mg/L	1	mg/L
K	Potassium	X200.7	10/14/2010	10/26/2010	0.5	mg/L	.1	mg/L
Mg	Magnesium	X200.7	10/14/2010	10/26/2010	<0.1	mg/L	.1	mg/L
Na	Sodium	X200.7	10/14/2010	10/26/2010	95.3	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		10/14/2010	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		10/13/2010	9.1	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		10/14/2010	<0.5	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		10/14/2010	4.6	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		10/13/2010	187	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP8
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 1250-1260
Port Depth (ft bgs): 1256

Sample Group ID: 11003157
Sample ID: 11007175
Sample Date/Time: 03/16/2011 09:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030424-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 413
pH (UNITS): 9.4
Temperature (°C): 18.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		03/23/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP8
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 1250-1260
Port Depth (ft bgs): 1256

Sample Group ID: 11003157
Sample ID: 11007801
Sample Date/Time: 03/16/2011 09:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030424-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 413
pH (UNITS): 9.4
Temperature (°C): 18.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		03/16/2011	21.8	mg/L	1	mg/L
B	Boron	X200.7	03/17/2011	03/23/2011	0.24	mg/L	.1	mg/L
Br	Bromide	X1-300.0		03/17/2011	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	03/17/2011	03/23/2011	3.2	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		03/17/2011	14.3	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		03/16/2011	43.7	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		03/30/2011	398	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		03/16/2011	146	mg/L	1	mg/L
K	Potassium	X200.7	03/17/2011	03/23/2011	0.7	mg/L	.1	mg/L
Mg	Magnesium	X200.7	03/17/2011	03/23/2011	0.2	mg/L	.1	mg/L
Na	Sodium	X200.7	03/17/2011	04/08/2011	91.8	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		03/17/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		03/16/2011	9.2	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		03/17/2011	<0.5	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		03/23/2011	4.11	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		03/16/2011	190	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP8
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 1250-1260
Port Depth (ft bgs): 1256

Sample Group ID: 11026661
Sample ID: 11035886
Sample Date/Time: 09/14/2011 08:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090341-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 412
pH (UNITS): 9.2
Temperature (°C): 20.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		09/16/2011	<2.5	ug/L	2.5	ug/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP8
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 1250-1260
Port Depth (ft bgs): 1256

Sample Group ID: 11026661
Sample ID: 11036350
Sample Date/Time: 09/14/2011 08:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090341-03
Laboratory: OCWD
Analysis Requested: TRCEL1-T

FIELD PARAMETERS
EC (umhos/cm): 412
pH (UNITS): 9.2
Temperature (°C): 20.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/14/2011	20.8	mg/L	1	mg/L
B	Boron	X200.7	09/19/2011	09/21/2011	0.2	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/16/2011	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/19/2011	09/21/2011	2.8	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/16/2011	13.9	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/14/2011	41.7	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/14/2011	417	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/14/2011	141	mg/L	1	mg/L
K	Potassium	X200.7	09/19/2011	09/21/2011	0.7	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/19/2011	09/21/2011	<0.1	mg/L	.1	mg/L
Na	Sodium	X200.7	09/19/2011	09/21/2011	88.9	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/16/2011	<0.1	mg/L	.1	mg/L
pH	pH	4500H+B		09/14/2011	9.2	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		09/16/2011	<0.5	mg/L	.5	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		09/20/2011	3.94	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/14/2011	182	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SCWC-LAYT/1
Station Type: WELL CASING
Perf Interval (ft bgs): 250-800
Aquifer: UNDEFINED

Well Owner: GOLDEN STATE WATER CO - OC
Well Name: YellowTail
City: UNINCORPORATED

Sample Group ID: 10001771
Sample ID: 10003355
Sample Date/Time: 02/16/2010 11:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: LAURA MOORE
Monitoring Program: Title 22

Lab Sample Number: 10020438-04
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 403
pH (UNITS): 8.5
Temperature (°C): 25.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		02/17/2010	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		02/16/2010	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		02/16/2010	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SCWC-LAYT/1
Station Type: WELL CASING
Perf Interval (ft bgs): 250-800
Aquifer: UNDEFINED

Well Owner: GOLDEN STATE WATER CO - OC
Well Name: YellowTail
City: UNINCORPORATED

Sample Group ID: 10001771
Sample ID: 10004524
Sample Date/Time: 02/16/2010 11:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: LAURA MOORE
Monitoring Program: Title 22

Lab Sample Number: 10020438-03
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 403
pH (UNITS): 8.5
Temperature (°C): 25.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Ag	Silver	X200.8	02/22/2010	02/23/2010	<1	ug/L	1	ug/L
Al	Aluminum	X200.8	02/22/2010	02/23/2010	4.8	ug/L	1	ug/L
ALKPHE	Alkalinity-Phenolphthalein	2320B		02/16/2010	1.5	mg/L	1	mg/L
APCOLR	Apparent Color (unfiltered)	2120B		02/16/2010	4	UNITS	3	UNITS
As	Arsenic	X200.8	02/22/2010	02/23/2010	1.2	ug/L	1	ug/L
B	Boron	X200.7	02/17/2010	02/18/2010	<0.1	mg/L	.1	mg/L
Ba	Barium	X200.8	02/22/2010	02/23/2010	20.9	ug/L	1	ug/L
Be	Beryllium	X200.8	02/22/2010	02/23/2010	<0.5	ug/L	.5	ug/L
Br	Bromide	X1-300.0		02/17/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	02/17/2010	02/18/2010	19.1	mg/L	.1	mg/L
Cd	Cadmium	X200.8	02/22/2010	02/23/2010	<1	ug/L	1	ug/L
Cl	Chloride	X1-300.0		02/17/2010	22.	mg/L	.5	mg/L
Co	Cobalt	X200.8	02/22/2010	02/23/2010	<1	ug/L	1	ug/L
CO3	Carbonate (as CO3)	2320B		02/16/2010	1.7	mg/L	.6	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		02/16/2010	2.9	mg/L	1	mg/L
Cr	Chromium	X200.7	02/17/2010	02/19/2010	<1	ug/L	1	ug/L
Cu	Copper	X200.8	02/22/2010	02/23/2010	<1	ug/L	1	ug/L
EC	Electrical Conductivity	2510B		02/16/2010	380	um/cm	1	um/cm
F	Fluoride	X1-300.0		02/17/2010	0.46	mg/L	.1	mg/L
Fe	Iron	X200.7	02/17/2010	02/19/2010	4.4	ug/L	1	ug/L
HCO3	Bicarbonate (as HCO3)	2320B		02/16/2010	153	mg/L	1.2	mg/L
HCO3Ca	Bicarbonate (as CaCO3)	2320B		02/16/2010	126	mg/L	1	mg/L
Hg	Mercury	X200.8	02/22/2010	02/23/2010	<0.1	ug/L	.1	ug/L
K	Potassium	X200.7	02/17/2010	02/18/2010	1.2	mg/L	.1	mg/L
MBAS	Surfactants	5540C		02/17/2010	<0.02	mg/L	.02	mg/L
Mg	Magnesium	X200.7	02/17/2010	02/18/2010	1.8	mg/L	.1	mg/L
Mn	Manganese	X200.8	02/22/2010	02/23/2010	5.3	ug/L	1	ug/L
Na	Sodium	X200.7	02/17/2010	02/18/2010	65.	mg/L	.1	mg/L
Ni	Nickel	X200.8	02/22/2010	02/23/2010	<1	ug/L	1	ug/L
ODOR	Threshold Odor Number (Median)	2150B		02/16/2010	2.	TON	0	TON
ODORHI	Odor Range High	2150B		02/16/2010	8.	TON	0	TON
ODORLO	Odor Range Low	2150B		02/16/2010	1.	TON	0	TON
OH	Hydroxide (as OH)	2320B		02/16/2010	<0.3	mg/L	.3	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		02/16/2010	<1	mg/L	1	mg/L
Pb	Lead	X200.8	02/22/2010	02/23/2010	<1	ug/L	1	ug/L
pH	pH	4500H+B		02/16/2010	8.4	UNITS	1	UNITS
Sb	Antimony	X200.8	02/22/2010	02/23/2010	<0.5	ug/L	.5	ug/L
Se	Selenium	X200.8	02/22/2010	02/23/2010	<1	ug/L	1	ug/L
SO4	Sulfate	X1-300.0		02/17/2010	40.	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		02/18/2010	232	mg/L	1	mg/L
Tl	Thallium	X200.8	02/22/2010	02/23/2010	<0.5	ug/L	.5	ug/L
TOC	Total Organic Carbon (Unfiltered)	5310C		02/17/2010	0.36	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		02/16/2010	129	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	02/17/2010	02/18/2010	55.	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SCWC-LAYT/1
Station Type: WELL CASING
Perf Interval (ft bgs): 250-800
Aquifer: UNDEFINED

Well Owner: GOLDEN STATE WATER CO - OC
Well Name: YellowTail
City: UNINCORPORATED

Sample Group ID: 10001771
Sample ID: 10004524
Sample Date/Time: 02/16/2010 11:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: LAURA MOORE
Monitoring Program: Title 22

Lab Sample Number: 10020438-03
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 403
pH (UNITS): 8.5
Temperature (°C): 25.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
TURB	Turbidity	2130B		02/16/2010	0.1	NTU	.1	NTU
Zn	Zinc	X200.8	02/22/2010	02/23/2010	1.9	ug/L	1	ug/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SCWC-LAYT/1
Station Type: WELL CASING
Perf Interval (ft bgs): 250-800
Aquifer: UNDEFINED

Well Owner: GOLDEN STATE WATER CO - OC
Well Name: YellowTail
City: UNINCORPORATED

Sample Group ID: 10001771
Sample ID: 10005112
Sample Date/Time: 02/16/2010 11:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: LAURA MOORE
Monitoring Program: Title 22

Lab Sample Number: 10020438-05
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 403
pH (UNITS): 8.5
Temperature (°C): 25.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		03/02/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SCWC-LAYT/1
Station Type: WELL CASING
Perf Interval (ft bgs): 250-800
Aquifer: UNDEFINED

Well Owner: GOLDEN STATE WATER CO - OC
Well Name: YellowTail
City: UNINCORPORATED

Sample Group ID: 10010369
Sample ID: 10022411
Sample Date/Time: 08/16/2010 09:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10080389-03
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 401
pH (UNITS): 8.5
Temperature (°C): 24.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		08/16/2010	3.4	mg/L	1	mg/L
B	Boron	X200.7	08/26/2010	08/30/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		08/17/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	08/26/2010	08/30/2010	22.	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		08/17/2010	20.8	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		08/16/2010	6.8	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		08/16/2010	398	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		08/16/2010	121	mg/L	1	mg/L
K	Potassium	X200.7	08/26/2010	08/30/2010	1.3	mg/L	.1	mg/L
Mg	Magnesium	X200.7	08/26/2010	08/30/2010	1.7	mg/L	.1	mg/L
Na	Sodium	X200.7	08/26/2010	08/30/2010	65.5	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		08/17/2010	<0.1	mg/L	.1	mg/L
ODOR	Threshold Odor Number (Median)	2150B		08/16/2010	2.	TON	0	TON
ODORHI	Odor Range High	2150B		08/16/2010	4.	TON	0	TON
ODORLO	Odor Range Low	2150B		08/16/2010	1.	TON	0	TON
pH	pH	4500H+B		08/16/2010	8.4	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		08/17/2010	38.5	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		08/18/2010	250	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		08/17/2010	0.31	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		08/16/2010	128	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SCWC-LAYT/1
Station Type: WELL CASING
Perf Interval (ft bgs): 250-800
Aquifer: UNDEFINED

Well Owner: GOLDEN STATE WATER CO - OC
Well Name: YellowTail
City: UNINCORPORATED

Sample Group ID: 11003490
Sample ID: 11007297
Sample Date/Time: 03/28/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030644-05
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 429
pH (UNITS): 8.6
Temperature (°C): 24.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		03/28/2011	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		03/28/2011	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		03/28/2011	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SCWC-LAYT/1
Station Type: WELL CASING
Perf Interval (ft bgs): 250-800
Aquifer: UNDEFINED

Well Owner: GOLDEN STATE WATER CO - OC
Well Name: YellowTail
City: UNINCORPORATED

Sample Group ID: 11003490
Sample ID: 11007336
Sample Date/Time: 03/28/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030644-06
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 429
pH (UNITS): 8.6
Temperature (°C): 24.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		03/30/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SCWC-LAYT/1
Station Type: WELL CASING
Perf Interval (ft bgs): 250-800
Aquifer: UNDEFINED

Well Owner: GOLDEN STATE WATER CO - OC
Well Name: YellowTail
City: UNINCORPORATED

Sample Group ID: 11026615
Sample ID: 11035930
Sample Date/Time: 09/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090262-02
Laboratory: OCWD
Analysis Requested: TRCELVI

FIELD PARAMETERS
EC (umhos/cm): 388
pH (UNITS): 8.6
Temperature (°C): 24.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/13/2011	3.2	mg/L	1	mg/L
B	Boron	X200.7	09/14/2011	09/15/2011	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		09/13/2011	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/14/2011	09/15/2011	18.4	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		09/13/2011	19.	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/13/2011	6.5	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		09/13/2011	398	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/13/2011	116	mg/L	1	mg/L
K	Potassium	X200.7	09/14/2011	09/15/2011	1.2	mg/L	.1	mg/L
Mg	Magnesium	X200.7	09/14/2011	09/15/2011	1.3	mg/L	.1	mg/L
Na	Sodium	X200.7	09/14/2011	09/15/2011	64.9	mg/L	.1	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		09/13/2011	<0.1	mg/L	.1	mg/L
ODOR	Threshold Odor Number (Median)	2150B		09/13/2011	2.	TON	0	TON
ODORHI	Odor Range High	2150B		09/13/2011	4.	TON	0	TON
ODORLO	Odor Range Low	2150B		09/13/2011	0.	TON	0	TON
pH	pH	4500H+B		09/13/2011	8.4	UNITS	1	UNITS
SO4	Sulfate	X1-300.0		09/13/2011	37.4	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		09/13/2011	242	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		09/16/2011	0.34	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/13/2011	123	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SCWC-LAYT/1
Station Type: WELL CASING
Perf Interval (ft bgs): 250-800
Aquifer: UNDEFINED

Well Owner: GOLDEN STATE WATER CO - OC
Well Name: YellowTail
City: UNINCORPORATED

Sample Group ID: 12001500
Sample ID: 12003111
Sample Date/Time: 02/08/2012 07:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 12020228-05
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		02/09/2012	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		02/09/2012	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		02/09/2012	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SCWC-LAYT/1
Station Type: WELL CASING
Perf Interval (ft bgs): 250-800
Aquifer: UNDEFINED

Well Owner: GOLDEN STATE WATER CO - OC
Well Name: YellowTail
City: UNINCORPORATED

Sample Group ID: 12001500
Sample ID: 12003112
Sample Date/Time: 02/08/2012 07:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 12020228-06
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): NA
pH (UNITS): NA
Temperature (°C): NA
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		02/09/2012	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-125/1
Station Type: WELL CASING
Perf Interval (ft bgs): 374-860
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Well No. 125
City: WESTMINSTER

Sample Group ID: 10005006
Sample ID: 10009449
Sample Date/Time: 04/20/2010 08:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10040489-05
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 406
pH (UNITS): 7.9
Temperature (°C): 19.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		04/20/2010	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		04/21/2010	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		04/21/2010	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-125/1
Station Type: WELL CASING
Perf Interval (ft bgs): 374-860
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Well No. 125
City: WESTMINSTER

Sample Group ID: 10005006
Sample ID: 10009902
Sample Date/Time: 04/20/2010 08:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10040489-04
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 406
pH (UNITS): 7.9
Temperature (°C): 19.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		04/20/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	04/21/2010	04/29/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		04/20/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	04/21/2010	04/29/2010	37.8	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		04/20/2010	12.7	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		04/20/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		04/20/2010	395	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		04/20/2010	155	mg/L	1	mg/L
K	Potassium	X200.7	04/21/2010	04/29/2010	1.9	mg/L	.1	mg/L
Mg	Magnesium	X200.7	04/21/2010	04/29/2010	7.9	mg/L	.1	mg/L
Na	Sodium	X200.7	04/21/2010	04/29/2010	34.1	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		04/20/2010	<0.002	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		04/20/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		04/20/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		04/20/2010	7.9	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		04/20/2010	0.02	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		04/20/2010	37.5	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		04/20/2010	240	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		04/21/2010	0.19	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		04/20/2010	155	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	04/21/2010	04/29/2010	127	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-125/1
Station Type: WELL CASING
Perf Interval (ft bgs): 374-860
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Well No. 125
City: WESTMINSTER

Sample Group ID: 10005006
Sample ID: 10009903
Sample Date/Time: 04/20/2010 08:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10040489-06
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 406
pH (UNITS): 7.9
Temperature (°C): 19.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		04/28/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-125/1
Station Type: WELL CASING
Perf Interval (ft bgs): 374-860
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Well No. 125
City: WESTMINSTER

Sample Group ID: 11026419
Sample ID: 11035307
Sample Date/Time: 09/01/2011 08:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS
Monitoring Program: Title 22

Lab Sample Number: 11090012-06
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 405
pH (UNITS): 8.1
Temperature (°C): 19.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		09/01/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-125/1
Station Type: WELL CASING
Perf Interval (ft bgs): 374-860
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Well No. 125
City: WESTMINSTER

Sample Group ID: 11026419
Sample ID: 11035462
Sample Date/Time: 09/01/2011 08:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS
Monitoring Program: Title 22

Lab Sample Number: 11090012-05
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 405
pH (UNITS): 8.1
Temperature (°C): 19.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		09/01/2011	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		09/02/2011	<0.4	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		09/02/2011	<0.1	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-125/1
Station Type: WELL CASING
Perf Interval (ft bgs): 374-860
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Well No. 125
City: WESTMINSTER

Sample Group ID: 11026419
Sample ID: 11036017
Sample Date/Time: 09/01/2011 08:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS
Monitoring Program: Title 22

Lab Sample Number: 11090012-04
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 405
pH (UNITS): 8.1
Temperature (°C): 19.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Ag	Silver	X200.8	09/08/2011	09/13/2011	<1	ug/L	1	ug/L
Al	Aluminum	X200.8	09/08/2011	09/13/2011	<1	ug/L	1	ug/L
ALKPHE	Alkalinity-Phenolphthalein	2320B		09/01/2011	<1	mg/L	1	mg/L
APCOLR	Apparent Color (unfiltered)	2120B		09/01/2011	<3	UNITS	3	UNITS
As	Arsenic	X200.8	09/08/2011	09/13/2011	1.1	ug/L	1	ug/L
B	Boron	X200.7	09/06/2011	09/08/2011	<0.1	mg/L	.1	mg/L
Ba	Barium	X200.8	09/08/2011	09/13/2011	38.	ug/L	1	ug/L
Be	Beryllium	X200.8	09/08/2011	09/13/2011	<0.5	ug/L	.5	ug/L
Br	Bromide	X1-300.0		09/01/2011	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	09/06/2011	09/15/2011	38.8	mg/L	.1	mg/L
Cd	Cadmium	X200.8	09/08/2011	09/13/2011	<1	ug/L	1	ug/L
Cl	Chloride	X1-300.0		09/01/2011	12.1	mg/L	.5	mg/L
CN	Cyanide	X1-335.4		09/14/2011	<5	ug/L	5	ug/L
Co	Cobalt	X200.8	09/08/2011	09/13/2011	<1	ug/L	1	ug/L
CO3	Carbonate (as CO3)	2320B		09/01/2011	<0.6	mg/L	.6	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		09/01/2011	<1	mg/L	1	mg/L
Cr	Chromium	X200.7	09/06/2011	09/07/2011	<1	ug/L	1	ug/L
Cu	Copper	X200.8	09/08/2011	09/13/2011	<1	ug/L	1	ug/L
EC	Electrical Conductivity	2510B		09/01/2011	416	um/cm	1	um/cm
F	Fluoride	X1-300.0		09/01/2011	0.44	mg/L	.1	mg/L
Fe	Iron	X200.7	09/06/2011	09/07/2011	14.	ug/L	1	ug/L
Gd	Gadolinium	X200.8	09/08/2011	09/13/2011	<10	ng/L	10	ng/L
HCO3	Bicarbonate (as HCO3)	2320B		09/01/2011	183	mg/L	1.2	mg/L
HCO3Ca	Bicarbonate (as CaCO3)	2320B		09/01/2011	150	mg/L	1	mg/L
Hg	Mercury	X200.8	09/08/2011	09/13/2011	<0.1	ug/L	.1	ug/L
K	Potassium	X200.7	09/06/2011	09/15/2011	1.8	mg/L	.1	mg/L
MBAS	Surfactants	5540C		09/01/2011	<0.02	mg/L	.02	mg/L
Mg	Magnesium	X200.7	09/06/2011	09/15/2011	7.2	mg/L	.1	mg/L
Mn	Manganese	X200.8	09/08/2011	09/13/2011	7.4	ug/L	1	ug/L
Na	Sodium	X200.7	09/06/2011	09/15/2011	35.6	mg/L	.1	mg/L
Ni	Nickel	X200.8	09/08/2011	09/13/2011	<1	ug/L	1	ug/L
ODOR	Threshold Odor Number (Median)	2150B		09/01/2011	1.	TON	0	TON
ODORHI	Odor Range High	2150B		09/01/2011	1.	TON	0	TON
ODORLO	Odor Range Low	2150B		09/01/2011	0.	TON	0	TON
OH	Hydroxide (as OH)	2320B		09/01/2011	<0.3	mg/L	.3	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		09/01/2011	<1	mg/L	1	mg/L
Pb	Lead	X200.8	09/08/2011	09/13/2011	<1	ug/L	1	ug/L
pH	pH	4500H+B		09/01/2011	8.1	UNITS	1	UNITS
Sb	Antimony	X200.8	09/08/2011	09/13/2011	<0.5	ug/L	.5	ug/L
Se	Selenium	X200.8	09/08/2011	09/13/2011	<1	ug/L	1	ug/L
SO4	Sulfate	X1-300.0		09/01/2011	35.9	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		09/06/2011	254	mg/L	1	mg/L
Tl	Thallium	X200.8	09/08/2011	09/13/2011	<0.5	ug/L	.5	ug/L
TOC	Total Organic Carbon (Unfiltered)	5310C		09/06/2011	0.12	mg/L	.05	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-125/1
Station Type: WELL CASING
Perf Interval (ft bgs): 374-860
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Well No. 125
City: WESTMINSTER

Sample Group ID: 11026419
Sample ID: 11036017
Sample Date/Time: 09/01/2011 08:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS
Monitoring Program: Title 22

Lab Sample Number: 11090012-04
Laboratory: OCWD
Analysis Requested: TITLE22

FIELD PARAMETERS
EC (umhos/cm): 405
pH (UNITS): 8.1
Temperature (°C): 19.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
TOTALK	Total Alkalinity (as CaCO3)	2320B		09/01/2011	150	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	09/06/2011	09/15/2011	126	mg/L	1	mg/L
TURB	Turbidity	2130B		09/01/2011	<0.1	NTU	.1	NTU
V	Vanadium	X200.8	09/08/2011	09/13/2011	1.8	ug/L	1	ug/L
Zn	Zinc	X200.8	09/08/2011	09/15/2011	<1	ug/L	1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WMIL-WM2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-640
Aquifer: UNDEFINED

Well Owner: MILLER, WILLIS L.
Well Name:
City: WESTMINSTER

Sample Group ID: 10013311
Sample ID: 10027648
Sample Date/Time: 10/11/2010 09:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10100287-03
Laboratory: OCWD
Analysis Requested: GENLVLI

FIELD PARAMETERS
EC (umhos/cm): 423
pH (UNITS): 7.8
Temperature (°C): 19.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALKPHE	Alkalinity-Phenolphthalein	2320B		10/11/2010	<1	mg/L	1	mg/L
B	Boron	X200.7	10/12/2010	10/13/2010	<0.1	mg/L	.1	mg/L
Br	Bromide	X1-300.0		10/12/2010	<0.1	mg/L	.1	mg/L
Ca	Calcium	X200.7	10/12/2010	10/13/2010	47.	mg/L	.1	mg/L
Cl	Chloride	X1-300.0		10/12/2010	12.2	mg/L	.5	mg/L
CO3Ca	Carbonate (as CaCO3)	2320B		10/11/2010	<1	mg/L	1	mg/L
EC	Electrical Conductivity	2510B		10/19/2010	418	um/cm	1	um/cm
HCO3Ca	Bicarbonate (as CaCO3)	2320B		10/11/2010	164	mg/L	1	mg/L
K	Potassium	X200.7	10/12/2010	10/13/2010	2.1	mg/L	.1	mg/L
Mg	Magnesium	X200.7	10/12/2010	10/13/2010	7.8	mg/L	.1	mg/L
Na	Sodium	X200.7	10/12/2010	10/26/2010	32.2	mg/L	.1	mg/L
NO2-N	Nitrite Nitrogen	4500NO3F		10/12/2010	0.004	mg/L	.002	mg/L
NO3-N	Nitrate Nitrogen	X1-300.0		10/12/2010	<0.1	mg/L	.1	mg/L
OHCa	Hydroxide (as CaCO3)	2320B		10/11/2010	<1	mg/L	1	mg/L
pH	pH	4500H+B		10/11/2010	8.	UNITS	1	UNITS
PO4-P	Phosphate Phosphorus (orthophosphate)	365.1		10/12/2010	0.04	mg/L	.01	mg/L
SO4	Sulfate	X1-300.0		10/12/2010	33.8	mg/L	.5	mg/L
TDS	Total Dissolved Solids	2540C		10/11/2010	258	mg/L	1	mg/L
TOC	Total Organic Carbon (Unfiltered)	5310C		10/12/2010	0.23	mg/L	.05	mg/L
TOTALK	Total Alkalinity (as CaCO3)	2320B		10/11/2010	164	mg/L	1	mg/L
TOTHRD	Total Hardness (as CaCO3)	X200.7	10/12/2010	10/13/2010	149	mg/L	1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WMIL-WM2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-640
Aquifer: UNDEFINED

Well Owner: MILLER, WILLIS L.
Well Name:
City: WESTMINSTER

Sample Group ID: 11029325
Sample ID: 11040446
Sample Date/Time: 10/19/2011 12:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100524-03
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 438
pH (UNITS): 8.
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		10/27/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 10005031
Sample ID: 10009474
Sample Date/Time: 04/21/2010 08:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10040547-03
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 553
pH (UNITS): 7.8
Temperature (°C): 17.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		04/21/2010	<0.002	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		04/21/2010	4.8	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		04/21/2010	1.08	mg/L	.1	mg/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 10005031
Sample ID: 10009929
Sample Date/Time: 04/21/2010 08:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10040547-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 553
pH (UNITS): 7.8
Temperature (°C): 17.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		04/29/2010	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 11005134
Sample ID: 11010427
Sample Date/Time: 05/04/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11050128-03
Laboratory: OCWD
Analysis Requested: TITLE22N

FIELD PARAMETERS
EC (umhos/cm): 529
pH (UNITS): 7.6
Temperature (°C): 18.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NO2-N	Nitrite Nitrogen	4500NO3F		05/04/2011	0.004	mg/L	.002	mg/L
NO3	Nitrate	4500NO3F		05/09/2011	3.1	mg/L	.4	mg/L
NO3NO2-N	Nitrate + Nitrite Nitrogen	4500NO3F		05/09/2011	0.71	mg/L	.1	mg/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 11005134
Sample ID: 11010569
Sample Date/Time: 05/04/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11050128-04
Laboratory: OCWD
Analysis Requested: CLO4

FIELD PARAMETERS
EC (umhos/cm): 529
pH (UNITS): 7.6
Temperature (°C): 18.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLO4	Perchlorate	X1-314.0		05/11/2011	<2.5	ug/L	2.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW16/1
Station Type: WELL CASING
Perf Interval (ft bgs): 260-280
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006089
Sample ID: 11013324
Sample Date/Time: 06/08/2011 09:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060226-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 4060
pH (UNITS): 7.3
Temperature (°C): 23.8
Dissolved Oxygen (mg/L): 0.24
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH; TO TANK; SPLIT W/AVOCETENVIRONMENTAL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		06/14/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		06/14/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		06/14/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		06/14/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		06/14/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		06/14/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		06/14/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		06/14/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		06/14/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		06/14/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		06/14/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		06/14/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		06/14/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		06/14/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		06/14/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		06/14/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		06/14/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		06/14/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		06/14/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		06/14/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		06/14/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW16/1
Station Type: WELL CASING
Perf Interval (ft bgs): 260-280
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006089
Sample ID: 11013324
Sample Date/Time: 06/08/2011 09:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060226-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 4060
pH (UNITS): 7.3
Temperature (°C): 23.8
Dissolved Oxygen (mg/L): 0.24
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH; TO TANK; SPLIT W/AVOCETENVIRONMENTAL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		06/14/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		06/14/2011	8.3	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		06/14/2011	2.2	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		06/14/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		06/14/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		06/14/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		06/14/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		06/14/2011	1.7	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		06/14/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		06/14/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		06/14/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		06/14/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		06/14/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		06/14/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		06/14/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		06/14/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		06/14/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		06/14/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		06/14/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		06/14/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		06/14/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		06/14/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		06/14/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		06/14/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		06/14/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		06/14/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		06/14/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		06/14/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		06/14/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW17/1
Station Type: WELL CASING
Perf Interval (ft bgs): 255-275
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006090
Sample ID: 11013325
Sample Date/Time: 06/08/2011 11:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060227-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 865
pH (UNITS): 7.6
Temperature (°C): 21.3
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH; TO TANK; SPLIT W/AVOCETENVIRONMENTAL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		06/14/2011	0.9	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		06/14/2011	2.5	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		06/14/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		06/14/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		06/14/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		06/14/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		06/14/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		06/14/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		06/14/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		06/14/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		06/14/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		06/14/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		06/14/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		06/14/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		06/14/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		06/14/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		06/14/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		06/14/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		06/14/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		06/14/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		06/14/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		06/14/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW17/1
Station Type: WELL CASING
Perf Interval (ft bgs): 255-275
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006090
Sample ID: 11013325
Sample Date/Time: 06/08/2011 11:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060227-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 865
pH (UNITS): 7.6
Temperature (°C): 21.3
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH; TO TANK; SPLIT W/AVOCETENVIRONMENTAL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		06/14/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		06/14/2011	2.	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		06/14/2011	TR	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		06/14/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		06/14/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		06/14/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		06/14/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		06/14/2011	TR	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		06/14/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		06/14/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		06/14/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		06/14/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		06/14/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		06/14/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		06/14/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		06/14/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		06/14/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		06/14/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		06/14/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		06/14/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		06/14/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		06/14/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		06/14/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		06/14/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		06/14/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		06/14/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		06/14/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		06/14/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		06/14/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW19A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 153-172.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012480
Sample ID: 10025170
Sample Date/Time: 09/15/2010 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090362-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 433
pH (UNITS): 7.7
Temperature (°C): 21.4
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/23/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/23/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/23/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/23/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/23/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/23/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/23/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/23/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/23/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/23/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/23/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/23/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/23/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/23/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/23/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/23/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW19A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 153-172.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012480
Sample ID: 10025170
Sample Date/Time: 09/15/2010 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090362-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 433
pH (UNITS): 7.7
Temperature (°C): 21.4
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		09/23/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/23/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		09/23/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/23/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/23/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		09/23/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/23/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/23/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/23/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/23/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/23/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/23/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/23/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/23/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/23/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/23/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/23/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/23/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/23/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/23/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/23/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/23/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/23/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/23/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/23/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW19A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 153-172.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012494
Sample ID: 10025193
Sample Date/Time: 09/16/2010 14:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090410-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 462
pH (UNITS): 7.8
Temperature (°C): 20.4
Dissolved Oxygen (mg/L): 0.15
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS; 3 VOLUME PURGE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/18/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/18/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/18/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/18/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/18/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/18/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/18/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/18/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/18/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/18/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/18/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/18/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/18/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/18/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/18/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/18/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/18/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/18/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/18/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/18/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/18/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW19A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 153-172.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012494
Sample ID: 10025193
Sample Date/Time: 09/16/2010 14:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090410-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 462
pH (UNITS): 7.8
Temperature (°C): 20.4
Dissolved Oxygen (mg/L): 0.15
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS; 3 VOLUME PURGE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		09/18/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/18/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		09/18/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/18/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/18/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/18/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		09/18/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/18/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/18/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/18/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/18/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/18/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/18/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/18/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/18/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/18/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/18/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/18/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/18/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/18/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/18/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/18/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/18/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/18/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/18/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/18/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/18/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW19A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 153-172.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015292
Sample ID: 11000115
Sample Date/Time: 12/15/2010 09:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120311-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 437
pH (UNITS): 7.5
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): 0.43
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		12/20/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		12/20/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		12/20/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		12/20/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		12/20/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		12/20/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW19A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 153-172.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015292
Sample ID: 11000115
Sample Date/Time: 12/15/2010 09:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120311-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 437
pH (UNITS): 7.5
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): 0.43
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		12/20/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		12/20/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		12/20/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		12/20/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		12/20/2010	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		12/20/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		12/20/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		12/20/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		12/20/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		12/20/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		12/20/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		12/20/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		12/20/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		12/20/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		12/20/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		12/20/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		12/20/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		12/20/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		12/20/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		12/20/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW27A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139-159
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007784
Sample ID: 10015801
Sample Date/Time: 06/15/2010 16:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060457-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 572
pH (UNITS): 7.7
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): 0.3
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		06/17/2010	11.4	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		06/17/2010	4.6	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		06/17/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		06/17/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		06/17/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		06/17/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		06/17/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		06/17/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		06/17/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		06/17/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		06/17/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		06/17/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		06/17/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		06/17/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		06/17/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		06/17/2010	TR	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		06/17/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		06/17/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		06/17/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		06/17/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		06/17/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		06/17/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW27A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139-159
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007784
Sample ID: 10015801
Sample Date/Time: 06/15/2010 16:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060457-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 572
pH (UNITS): 7.7
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): 0.3
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		06/17/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		06/17/2010	8.	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		06/17/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		06/17/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		06/17/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		06/17/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		06/17/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		06/17/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		06/17/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		06/17/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		06/17/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		06/17/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		06/17/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		06/17/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		06/17/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		06/17/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		06/17/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		06/17/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		06/17/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		06/17/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		06/17/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		06/17/2010	22.6	ug/L	.5	ug/L
TOLU	Toluene	524.2		06/17/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		06/17/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		06/17/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		06/17/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		06/17/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW27A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139-159
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015302
Sample ID: 11000126
Sample Date/Time: 12/15/2010 12:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120322-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 879
pH (UNITS): 7.7
Temperature (°C): 20.4
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		12/21/2010	5.	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		12/21/2010	3.	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		12/21/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		12/21/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		12/21/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		12/21/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		12/21/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		12/21/2010	TR	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		12/21/2010	236	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW27A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139-159
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015302
Sample ID: 11000126
Sample Date/Time: 12/15/2010 12:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120322-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 879
pH (UNITS): 7.7
Temperature (°C): 20.4
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		12/21/2010	1.6	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		12/21/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		12/21/2010	140	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		12/21/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		12/21/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		12/21/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		12/21/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		12/21/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		12/21/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		12/21/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		12/21/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		12/21/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		12/21/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		12/21/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		12/21/2010	13.6	ug/L	.5	ug/L
TOLU	Toluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		12/21/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		12/21/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW27A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139-159
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006096
Sample ID: 11013327
Sample Date/Time: 06/08/2011 13:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP/KWO
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060233-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 835
pH (UNITS): 7.4
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.11
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH;SPLIT W/AVOCET ENVIRONMENTL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		06/15/2011	4.1	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		06/15/2011	2.5	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		06/15/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		06/15/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		06/15/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		06/15/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		06/15/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		06/15/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		06/15/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		06/15/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		06/15/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		06/15/2011	TR	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		06/15/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		06/15/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		06/15/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW27A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139-159
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006096
Sample ID: 11013327
Sample Date/Time: 06/08/2011 13:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP/KWO
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060233-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 835
pH (UNITS): 7.4
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.11
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH;SPLIT W/AVOCET ENVIRONMENTL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		06/15/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		06/15/2011	117	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		06/15/2011	0.9	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		06/15/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		06/15/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		06/15/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		06/15/2011	76.8	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		06/15/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		06/15/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		06/15/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		06/15/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		06/15/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		06/15/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		06/15/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		06/15/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		06/15/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		06/15/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		06/15/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		06/15/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		06/15/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		06/15/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		06/15/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		06/15/2011	12.1	ug/L	.5	ug/L
TOLU	Toluene	524.2		06/15/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		06/15/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		06/15/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		06/15/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		06/15/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW27A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139-159
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030532
Sample ID: 12002687
Sample Date/Time: 12/06/2011 14:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120124-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 768
pH (UNITS): 7.7
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): 0.41
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	*Qualifier: Validated Sample*							
1112PC	1,1,1,2-Tetrachloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		12/08/2011	6.1	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		12/08/2011	3.2	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		12/08/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		12/08/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		12/08/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		12/08/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		12/08/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		12/08/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		12/08/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		12/08/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		12/08/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		12/08/2011	TR	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		12/08/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		12/08/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		12/08/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW27A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139-159
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030532
Sample ID: 12002687
Sample Date/Time: 12/06/2011 14:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120124-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 768
pH (UNITS): 7.7
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): 0.41
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		12/08/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		12/08/2011	187	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		12/08/2011	0.9	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		12/08/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		12/08/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		12/08/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		12/08/2011	127	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		12/08/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		12/08/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		12/08/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		12/08/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		12/08/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		12/08/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		12/08/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		12/08/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		12/08/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		12/08/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		12/08/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		12/08/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		12/08/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		12/08/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		12/08/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		12/08/2011	13.5	ug/L	.5	ug/L
TOLU	Toluene	524.2		12/08/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		12/08/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		12/08/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		12/08/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		12/08/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW31S/1
Station Type: WELL CASING
Perf Interval (ft bgs): 78-88
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007773
Sample ID: 10015796
Sample Date/Time: 06/15/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060444-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 3090
pH (UNITS): 7.2
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): 0.46
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		06/16/2010	11.3	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		06/16/2010	26.9	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		06/16/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		06/16/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		06/16/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		06/16/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		06/16/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		06/16/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		06/16/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		06/16/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		06/16/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		06/16/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		06/16/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		06/16/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		06/16/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		06/16/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		06/16/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		06/16/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		06/16/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		06/16/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		06/16/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		06/16/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW31S/1
Station Type: WELL CASING
Perf Interval (ft bgs): 78-88
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007773
Sample ID: 10015796
Sample Date/Time: 06/15/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060444-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 3090
pH (UNITS): 7.2
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): 0.46
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		06/16/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		06/16/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		06/16/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		06/16/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		06/16/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		06/16/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		06/16/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		06/16/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		06/16/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		06/16/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		06/16/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		06/16/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		06/16/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		06/16/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		06/16/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		06/16/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		06/16/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		06/16/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		06/16/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		06/16/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		06/16/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		06/16/2010	6.7	ug/L	.5	ug/L
TOLU	Toluene	524.2		06/16/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		06/16/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		06/16/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		06/16/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		06/16/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW31S/1
Station Type: WELL CASING
Perf Interval (ft bgs): 78-88
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007773
Sample ID: 10017788
Sample Date/Time: 06/15/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060444-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 3090
pH (UNITS): 7.2
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): 0.46
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		06/17/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		06/17/2010	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		06/17/2010	ND	ug/L	.1	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		06/17/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		06/17/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		06/17/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW34/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-267
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015299
Sample ID: 11000123
Sample Date/Time: 12/15/2010 09:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120319-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 5060
pH (UNITS): 7.1
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.23
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		12/21/2010	2.3	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		12/21/2010	11.7	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		12/21/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		12/21/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		12/21/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		12/21/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		12/21/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW34/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-267
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015299
Sample ID: 11000123
Sample Date/Time: 12/15/2010 09:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120319-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 5060
pH (UNITS): 7.1
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.23
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		12/21/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		12/21/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		12/21/2010	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		12/21/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		12/21/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		12/21/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		12/21/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		12/21/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		12/21/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		12/21/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		12/21/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		12/21/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		12/21/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		12/21/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		12/21/2010	0.9	ug/L	.5	ug/L
TOLU	Toluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		12/21/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		12/21/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW34/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-267
Aquifer: BETA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015299
Sample ID: 11000731
Sample Date/Time: 12/15/2010 09:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120319-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 5060
pH (UNITS): 7.1
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.23
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		12/16/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		12/16/2010	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		12/16/2010	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		12/16/2010	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		12/16/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		12/16/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		12/16/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW37A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007774
Sample ID: 10015797
Sample Date/Time: 06/15/2010 13:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060445-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 582
pH (UNITS): 7.7
Temperature (°C): 22.4
Dissolved Oxygen (mg/L): 0.22
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		06/16/2010	3.6	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		06/16/2010	5.6	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		06/16/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		06/16/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		06/16/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		06/16/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		06/16/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		06/16/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		06/16/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		06/16/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		06/16/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		06/16/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		06/16/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		06/16/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		06/16/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		06/16/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		06/16/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		06/16/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		06/16/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		06/16/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		06/16/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		06/16/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW37A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007774
Sample ID: 10015797
Sample Date/Time: 06/15/2010 13:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060445-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 582
pH (UNITS): 7.7
Temperature (°C): 22.4
Dissolved Oxygen (mg/L): 0.22
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		06/16/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		06/16/2010	4.7	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		06/16/2010	0.5	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		06/16/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		06/16/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		06/16/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		06/16/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		06/16/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		06/16/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		06/16/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		06/16/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		06/16/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		06/16/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		06/16/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		06/16/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		06/16/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		06/16/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		06/16/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		06/16/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		06/16/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		06/16/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		06/16/2010	18.6	ug/L	.5	ug/L
TOLU	Toluene	524.2		06/16/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		06/16/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		06/16/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		06/16/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		06/16/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW37A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015301
Sample ID: 11000125
Sample Date/Time: 12/15/2010 11:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120321-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 800
pH (UNITS): 7.7
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.15
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		12/21/2010	6.7	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		12/21/2010	4.8	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		12/21/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		12/21/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		12/21/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		12/21/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		12/21/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		12/21/2010	216	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW37A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015301
Sample ID: 11000125
Sample Date/Time: 12/15/2010 11:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120321-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 800
pH (UNITS): 7.7
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.15
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		12/21/2010	1.3	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		12/21/2010	0.7	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		12/21/2010	150	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		12/21/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		12/21/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		12/21/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		12/21/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		12/21/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		12/21/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		12/21/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		12/21/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		12/21/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		12/21/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		12/21/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		12/21/2010	15.2	ug/L	.5	ug/L
TOLU	Toluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		12/21/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		12/21/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW37A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006098
Sample ID: 11013328
Sample Date/Time: 06/08/2011 11:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP/KWO
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060235-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 575
pH (UNITS): 7.5
Temperature (°C): 21.6
Dissolved Oxygen (mg/L): 0.05
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH;SPLIT W/AVOCET ENVIRONMENTL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		06/15/2011	18.2	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		06/15/2011	5.6	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		06/15/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		06/15/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		06/15/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		06/15/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		06/15/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		06/15/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		06/15/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		06/15/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		06/15/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		06/15/2011	0.5	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		06/15/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		06/15/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		06/15/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW37A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006098
Sample ID: 11013328
Sample Date/Time: 06/08/2011 11:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP/KWO
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060235-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 575
pH (UNITS): 7.5
Temperature (°C): 21.6
Dissolved Oxygen (mg/L): 0.05
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH;SPLIT W/AVOCET ENVIRONMENTL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		06/15/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		06/15/2011	370	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		06/15/2011	96.3	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		06/15/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		06/15/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		06/15/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		06/15/2011	116	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		06/15/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		06/15/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		06/15/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		06/15/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		06/15/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		06/15/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		06/15/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		06/15/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		06/15/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		06/15/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		06/15/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		06/15/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		06/15/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		06/15/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		06/15/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		06/15/2011	33.	ug/L	.5	ug/L
TOLU	Toluene	524.2		06/15/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		06/15/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		06/15/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		06/15/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		06/15/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW37A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030602
Sample ID: 12001929
Sample Date/Time: 12/07/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120143-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 630
pH (UNITS): 8.
Temperature (°C): 21.3
Dissolved Oxygen (mg/L): 0.5
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		12/08/2011	14.3	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		12/08/2011	5.9	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		12/08/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		12/08/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		12/08/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		12/08/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		12/08/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		12/08/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		12/08/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		12/08/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		12/08/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		12/08/2011	TR	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		12/08/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		12/08/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		12/08/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW37A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030602
Sample ID: 12001929
Sample Date/Time: 12/07/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120143-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 630
pH (UNITS): 8.
Temperature (°C): 21.3
Dissolved Oxygen (mg/L): 0.5
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		12/08/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		12/08/2011	793	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		12/08/2011	44.8	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		12/08/2011	0.6	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		12/08/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		12/08/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		12/08/2011	231	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		12/08/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		12/08/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		12/08/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		12/08/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		12/08/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		12/08/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		12/08/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		12/08/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		12/08/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		12/08/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		12/08/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		12/08/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		12/08/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		12/08/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		12/08/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		12/08/2011	36.6	ug/L	.5	ug/L
TOLU	Toluene	524.2		12/08/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		12/08/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		12/08/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		12/08/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		12/08/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW38A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007775
Sample ID: 10015798
Sample Date/Time: 06/15/2010 11:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060446-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 498
pH (UNITS): 7.7
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.24
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		06/16/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		06/16/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		06/16/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		06/16/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		06/16/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		06/16/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		06/16/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		06/16/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		06/16/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		06/16/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		06/16/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		06/16/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		06/16/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		06/16/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		06/16/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		06/16/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		06/16/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		06/16/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		06/16/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		06/16/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		06/16/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW38A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007775
Sample ID: 10015798
Sample Date/Time: 06/15/2010 11:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060446-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 498
pH (UNITS): 7.7
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.24
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		06/16/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		06/16/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		06/16/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		06/16/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		06/16/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		06/16/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		06/16/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		06/16/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		06/16/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		06/16/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		06/16/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		06/16/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		06/16/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		06/16/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		06/16/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		06/16/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		06/16/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		06/16/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		06/16/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		06/16/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		06/16/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		06/16/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		06/16/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		06/16/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		06/16/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		06/16/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		06/16/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		06/16/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		06/16/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW38A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 135-165
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007775
Sample ID: 10017789
Sample Date/Time: 06/15/2010 11:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060446-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 498
pH (UNITS): 7.7
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.24
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		06/17/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		06/17/2010	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		06/17/2010	ND	ug/L	.1	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		06/17/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		06/17/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		06/17/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW41A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 148.5-168.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015300
Sample ID: 11000124
Sample Date/Time: 12/15/2010 10:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120320-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 576
pH (UNITS): 7.6
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.17
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		12/21/2010	TR	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		12/21/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		12/21/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		12/21/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		12/21/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		12/21/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		12/21/2010	14.6	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW41A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 148.5-168.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015300
Sample ID: 11000124
Sample Date/Time: 12/15/2010 10:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120320-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 576
pH (UNITS): 7.6
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): 0.17
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		12/21/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		12/21/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		12/21/2010	13.4	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		12/21/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		12/21/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		12/21/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		12/21/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		12/21/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		12/21/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		12/21/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		12/21/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		12/21/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		12/21/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		12/21/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		12/21/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		12/21/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007785
Sample ID: 10016431
Sample Date/Time: 06/15/2010 15:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060458-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 600
pH (UNITS): 8.2
Temperature (°C): 21.
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		06/23/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		06/23/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		06/23/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		06/23/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		06/23/2010	2.4	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		06/23/2010	TR	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		06/23/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		06/23/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		06/23/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		06/23/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		06/23/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		06/23/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		06/23/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		06/23/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		06/23/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		06/23/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		06/23/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		06/23/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		06/23/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		06/23/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		06/23/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		06/23/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		06/23/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		06/23/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		06/23/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		06/23/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		06/23/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		06/23/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		06/23/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		06/23/2010	0.5	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		06/23/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		06/23/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		06/23/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		06/23/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		06/23/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		06/23/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		06/23/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		06/23/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		06/23/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		06/23/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		06/23/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		06/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007785
Sample ID: 10016431
Sample Date/Time: 06/15/2010 15:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060458-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 600
pH (UNITS): 8.2
Temperature (°C): 21.
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		06/23/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		06/23/2010	2.8	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		06/23/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		06/23/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		06/23/2010	0.5	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		06/23/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		06/23/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		06/23/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		06/23/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		06/23/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		06/23/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		06/23/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		06/23/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		06/23/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		06/23/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		06/23/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		06/23/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		06/23/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		06/23/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		06/23/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		06/23/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		06/23/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		06/23/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		06/23/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		06/23/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		06/23/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		06/23/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		06/23/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		06/23/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		06/23/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		06/23/2010	3.6	ug/L	.5	ug/L
TOLU	Toluene	524.2		06/23/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		06/23/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		06/23/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		06/23/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		06/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007785
Sample ID: 10017790
Sample Date/Time: 06/15/2010 15:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060458-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 600
pH (UNITS): 8.2
Temperature (°C): 21.
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		06/17/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		06/17/2010	3.2	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		06/17/2010	ND	ug/L	.1	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		06/17/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		06/17/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		06/17/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012481
Sample ID: 10025171
Sample Date/Time: 09/15/2010 08:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090363-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 532
pH (UNITS): 7.9
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): 0.13
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

11/06/10 PV FIRST TIME DETECT OF TBA. SENT TO LAB FOR VERIFICATION. LEE YOO IN LAB CONFIRMED RESULT ON SECOND GC/MS.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/23/2010	2.6	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/23/2010	0.5	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/23/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/23/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/23/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/23/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/23/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/23/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/23/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/23/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/23/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/23/2010	TR	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/23/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/23/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/23/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/23/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		09/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012481
Sample ID: 10025171
Sample Date/Time: 09/15/2010 08:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090363-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 532
pH (UNITS): 7.9
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): 0.13
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

11/06/10 PV FIRST TIME DETECT OF TBA. SENT TO LAB FOR VERIFICATION. LEE YOO IN LAB CONFIRMED RESULT ON SECOND GC/MS.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHBr3	Bromoform	524.2		09/23/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		09/23/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/23/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		09/23/2010	0.6	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/23/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/23/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		09/23/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/23/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/23/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/23/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/23/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/23/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/23/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/23/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/23/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/23/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/23/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/23/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/23/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/23/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/23/2010	5.1	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/23/2010	5.4	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/23/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/23/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/23/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/23/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015293
Sample ID: 11000116
Sample Date/Time: 12/15/2010 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120312-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 560
pH (UNITS): 8.
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): 0.36
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		12/20/2010	2.7	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		12/20/2010	0.6	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		12/20/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		12/20/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		12/20/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		12/20/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		12/20/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		12/20/2010	TR	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		12/20/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		12/20/2010	44.8	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015293
Sample ID: 11000116
Sample Date/Time: 12/15/2010 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120312-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 560
pH (UNITS): 8.
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): 0.36
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		12/20/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		12/20/2010	0.8	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		12/20/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		12/20/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		12/20/2010	4.1	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		12/20/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		12/20/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		12/20/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		12/20/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		12/20/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		12/20/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		12/20/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		12/20/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		12/20/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		12/20/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		12/20/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		12/20/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		12/20/2010	6.9	ug/L	.5	ug/L
TOLU	Toluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		12/20/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		12/20/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		12/20/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015293
Sample ID: 11000729
Sample Date/Time: 12/15/2010 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120312-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 560
pH (UNITS): 8.
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): 0.36
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		12/16/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		12/16/2010	2.1	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		12/16/2010	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		12/16/2010	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		12/16/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		12/16/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		12/16/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006092
Sample ID: 11012758
Sample Date/Time: 06/08/2011 13:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060229-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 490
pH (UNITS): 8.1
Temperature (°C): 21.5
Dissolved Oxygen (mg/L): 0.29
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH; TO TANK; SPLIT W/AVOCETENVIRONMENTAL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		06/09/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		06/09/2011	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		06/09/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		06/09/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		06/09/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		06/09/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		06/09/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006092
Sample ID: 11013326
Sample Date/Time: 06/08/2011 13:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060229-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 490
pH (UNITS): 8.1
Temperature (°C): 21.5
Dissolved Oxygen (mg/L): 0.29
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH; TO TANK; SPLIT W/AVOCETENVIRONMENTAL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		06/14/2011	5.5	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		06/14/2011	2.1	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		06/14/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		06/14/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		06/14/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		06/14/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		06/14/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		06/14/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		06/14/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		06/14/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		06/14/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		06/14/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		06/14/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		06/14/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		06/14/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		06/14/2011	1.	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		06/14/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		06/14/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		06/14/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		06/14/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		06/14/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		06/14/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006092
Sample ID: 11013326
Sample Date/Time: 06/08/2011 13:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060229-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 490
pH (UNITS): 8.1
Temperature (°C): 21.5
Dissolved Oxygen (mg/L): 0.29
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH; TO TANK; SPLIT W/AVOCETENVIRONMENTAL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		06/14/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		06/14/2011	170	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		06/14/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		06/14/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		06/14/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		06/14/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		06/14/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		06/14/2011	2.3	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		06/14/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		06/14/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		06/14/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		06/14/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		06/14/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		06/14/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		06/14/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		06/14/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		06/14/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		06/14/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		06/14/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		06/14/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		06/14/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		06/14/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		06/14/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		06/14/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		06/14/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		06/14/2011	28.5	ug/L	.5	ug/L
TOLU	Toluene	524.2		06/14/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		06/14/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		06/14/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		06/14/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		06/14/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030528
Sample ID: 12000671
Sample Date/Time: 12/06/2011 10:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120118-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 428
pH (UNITS): 8.2
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): 0.4
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		12/09/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		12/09/2011	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		12/09/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		12/09/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		12/09/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		12/09/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		12/09/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030528
Sample ID: 12002684
Sample Date/Time: 12/06/2011 10:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120118-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 428
pH (UNITS): 8.2
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): 0.4
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	*Qualifier: Validated Sample*							
1112PC	1,1,1,2-Tetrachloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		12/08/2011	5.5	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		12/08/2011	2.3	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		12/08/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		12/08/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		12/08/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		12/08/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		12/08/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		12/08/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		12/08/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		12/08/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		12/08/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		12/08/2011	1.4	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		12/08/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		12/08/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		12/08/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW42A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 139.5-169.5
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030528
Sample ID: 12002684
Sample Date/Time: 12/06/2011 10:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120118-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 428
pH (UNITS): 8.2
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): 0.4
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		12/08/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		12/08/2011	160	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		12/08/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		12/08/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		12/08/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		12/08/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		12/08/2011	3.	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		12/08/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		12/08/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		12/08/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		12/08/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		12/08/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		12/08/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		12/08/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		12/08/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		12/08/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		12/08/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		12/08/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		12/08/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		12/08/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		12/08/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		12/08/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		12/08/2011	30.4	ug/L	.5	ug/L
TOLU	Toluene	524.2		12/08/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		12/08/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		12/08/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		12/08/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		12/08/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW57A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015294
Sample ID: 11000117
Sample Date/Time: 12/15/2010 12:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120313-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 448
pH (UNITS): 7.7
Temperature (°C): 21.
Dissolved Oxygen (mg/L): 0.32
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		12/20/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		12/20/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		12/20/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		12/20/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		12/20/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		12/20/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		12/20/2010	TR	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW57A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015294
Sample ID: 11000117
Sample Date/Time: 12/15/2010 12:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120313-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 448
pH (UNITS): 7.7
Temperature (°C): 21.
Dissolved Oxygen (mg/L): 0.32
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		12/20/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		12/20/2010	0.7	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		12/20/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		12/20/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		12/20/2010	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		12/20/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		12/20/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		12/20/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		12/20/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		12/20/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		12/20/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		12/20/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		12/20/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		12/20/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		12/20/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		12/20/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		12/20/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		12/20/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		12/20/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		12/20/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW58A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015304
Sample ID: 11000128
Sample Date/Time: 12/15/2010 14:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120324-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1010
pH (UNITS): 7.7
Temperature (°C): 21.1
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		12/21/2010	2.9	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		12/21/2010	1.	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		12/21/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		12/21/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		12/21/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		12/21/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		12/21/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		12/21/2010	105	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW58A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015304
Sample ID: 11000128
Sample Date/Time: 12/15/2010 14:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120324-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1010
pH (UNITS): 7.7
Temperature (°C): 21.1
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		12/21/2010	4.4	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		12/21/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		12/21/2010	47.9	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		12/21/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		12/21/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		12/21/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		12/21/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		12/21/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		12/21/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		12/21/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		12/21/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		12/21/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		12/21/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		12/21/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		12/21/2010	2.8	ug/L	.5	ug/L
TOLU	Toluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		12/21/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		12/21/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW58A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015304
Sample ID: 11000733
Sample Date/Time: 12/15/2010 14:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120324-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 1010
pH (UNITS): 7.7
Temperature (°C): 21.1
Dissolved Oxygen (mg/L): 0.21
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		12/17/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		12/17/2010	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		12/17/2010	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		12/17/2010	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		12/17/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		12/17/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		12/17/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW60A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007778
Sample ID: 10015799
Sample Date/Time: 06/15/2010 14:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060449-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 749
pH (UNITS): 7.7
Temperature (°C): 21.3
Dissolved Oxygen (mg/L): 0.27
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		06/17/2010	0.6	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		06/17/2010	0.6	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		06/17/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		06/17/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		06/17/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		06/17/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		06/17/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		06/17/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		06/17/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		06/17/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		06/17/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		06/17/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		06/17/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		06/17/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		06/17/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		06/17/2010	TR	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		06/17/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		06/17/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		06/17/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		06/17/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		06/17/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		06/17/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW60A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10007778
Sample ID: 10015799
Sample Date/Time: 06/15/2010 14:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BLR
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10060449-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 749
pH (UNITS): 7.7
Temperature (°C): 21.3
Dissolved Oxygen (mg/L): 0.27
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		06/17/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		06/17/2010	49.8	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		06/17/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		06/17/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		06/17/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		06/17/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		06/17/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		06/17/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		06/17/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		06/17/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		06/17/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		06/17/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		06/17/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		06/17/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		06/17/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		06/17/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		06/17/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		06/17/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		06/17/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		06/17/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		06/17/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		06/17/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		06/17/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		06/17/2010	3.2	ug/L	.5	ug/L
TOLU	Toluene	524.2		06/17/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		06/17/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		06/17/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		06/17/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		06/17/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW60A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015303
Sample ID: 11000127
Sample Date/Time: 12/15/2010 13:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120323-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 931
pH (UNITS): 7.7
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): 0.17
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		12/21/2010	TR	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		12/21/2010	0.6	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		12/21/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		12/21/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		12/21/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		12/21/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		12/21/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		12/21/2010	TR	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		12/21/2010	36.	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW60A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015303
Sample ID: 11000127
Sample Date/Time: 12/15/2010 13:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120323-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 931
pH (UNITS): 7.7
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): 0.17
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		12/21/2010	30.3	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		12/21/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		12/21/2010	23.3	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		12/21/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		12/21/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		12/21/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		12/21/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		12/21/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		12/21/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		12/21/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		12/21/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		12/21/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		12/21/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		12/21/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		12/21/2010	2.8	ug/L	.5	ug/L
TOLU	Toluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		12/21/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		12/21/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW60A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015303
Sample ID: 11000732
Sample Date/Time: 12/15/2010 13:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120323-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 931
pH (UNITS): 7.7
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): 0.17
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		12/17/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		12/17/2010	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		12/17/2010	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		12/17/2010	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		12/17/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		12/17/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		12/17/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW60A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006101
Sample ID: 11013329
Sample Date/Time: 06/08/2011 09:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP/KWO
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060238-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 953
pH (UNITS): 7.3
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): 0.09
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH;SPLIT W/AVOCET ENVIRONMENTL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		06/15/2011	TR	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		06/15/2011	TR	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		06/15/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		06/15/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		06/15/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		06/15/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		06/15/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		06/15/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		06/15/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		06/15/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		06/15/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		06/15/2011	TR	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		06/15/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		06/15/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		06/15/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW60A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11006101
Sample ID: 11013329
Sample Date/Time: 06/08/2011 09:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CLP/KWO
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11060238-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 953
pH (UNITS): 7.3
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): 0.09
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LOW PURGE W/BLAINETECH;SPLIT W/AVOCET ENVIRONMENTL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		06/15/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		06/15/2011	64.7	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		06/15/2011	2.4	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		06/15/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		06/15/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		06/15/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		06/15/2011	6.9	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		06/15/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		06/15/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		06/15/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		06/15/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		06/15/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		06/15/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		06/15/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		06/15/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		06/15/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		06/15/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		06/15/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		06/15/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		06/15/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		06/15/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		06/15/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		06/15/2011	2.3	ug/L	.5	ug/L
TOLU	Toluene	524.2		06/15/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		06/15/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		06/15/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		06/15/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		06/15/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW60A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030600
Sample ID: 12002688
Sample Date/Time: 12/06/2011 13:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120125-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 971
pH (UNITS): 7.6
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): 0.35
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH 4200mL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		12/08/2011	0.5	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		12/08/2011	0.6	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		12/08/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		12/08/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		12/08/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		12/08/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		12/08/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		12/08/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		12/08/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		12/08/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		12/08/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		12/08/2011	TR	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		12/08/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		12/08/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		12/08/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW60A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 11030600
Sample ID: 12002688
Sample Date/Time: 12/06/2011 13:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 11120125-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 971
pH (UNITS): 7.6
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): 0.35
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: BOEING SPLIT W/AVOCET ENVIRONMENTAL;LOW FLOW PURGEBY BLAINETECH 4200mL

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		12/08/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		12/08/2011	56.9	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		12/08/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		12/08/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		12/08/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		12/08/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		12/08/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		12/08/2011	TR	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		12/08/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		12/08/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		12/08/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		12/08/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		12/08/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		12/08/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		12/08/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		12/08/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		12/08/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		12/08/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		12/08/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		12/08/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		12/08/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		12/08/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		12/08/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		12/08/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		12/08/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		12/08/2011	2.3	ug/L	.5	ug/L
TOLU	Toluene	524.2		12/08/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		12/08/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		12/08/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		12/08/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		12/08/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW61A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012482
Sample ID: 10025172
Sample Date/Time: 09/15/2010 09:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090364-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 465
pH (UNITS): 7.4
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): 0.2
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/23/2010	11.4	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/23/2010	2.	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/23/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/23/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/23/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/23/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/23/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/23/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/23/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/23/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/23/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/23/2010	0.8	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/23/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/23/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/23/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/23/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		09/23/2010	11.5	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/23/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW61A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012482
Sample ID: 10025172
Sample Date/Time: 09/15/2010 09:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090364-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 465
pH (UNITS): 7.4
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): 0.2
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		09/23/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/23/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		09/23/2010	2.5	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/23/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/23/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		09/23/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/23/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/23/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/23/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/23/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/23/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/23/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/23/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/23/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/23/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/23/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/23/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/23/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/23/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/23/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/23/2010	4.3	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/23/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/23/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/23/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/23/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW61A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015295
Sample ID: 11000118
Sample Date/Time: 12/15/2010 08:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120314-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 470
pH (UNITS): 6.9
Temperature (°C): 21.1
Dissolved Oxygen (mg/L): 1.06
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		12/20/2010	8.5	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		12/20/2010	1.4	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		12/20/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		12/20/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		12/20/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		12/20/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		12/20/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		12/20/2010	TR	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		12/20/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		12/20/2010	330	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW61A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015295
Sample ID: 11000118
Sample Date/Time: 12/15/2010 08:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120314-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 470
pH (UNITS): 6.9
Temperature (°C): 21.1
Dissolved Oxygen (mg/L): 1.06
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		12/20/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		12/20/2010	0.8	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		12/20/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		12/20/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		12/20/2010	282	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		12/20/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		12/20/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		12/20/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		12/20/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		12/20/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		12/20/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		12/20/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		12/20/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		12/20/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		12/20/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		12/20/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		12/20/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		12/20/2010	1.4	ug/L	.5	ug/L
TOLU	Toluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		12/20/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		12/20/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		12/20/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW61A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-170
Aquifer: ALPHA

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015295
Sample ID: 11000730
Sample Date/Time: 12/15/2010 08:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120314-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 470
pH (UNITS): 6.9
Temperature (°C): 21.1
Dissolved Oxygen (mg/L): 1.06
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		12/16/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		12/16/2010	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		12/16/2010	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		12/16/2010	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		12/16/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		12/16/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		12/16/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW72A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 112-127
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012483
Sample ID: 10024562
Sample Date/Time: 09/15/2010 13:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090365-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 467
pH (UNITS): 8.
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): 0.24
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/28/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/28/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/28/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/28/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/28/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/28/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/28/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/28/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/28/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/28/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/28/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/28/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/28/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/28/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/28/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/28/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/28/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/28/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/28/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/28/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/28/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/28/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/28/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/28/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/28/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/28/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/28/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/28/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/28/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/28/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/28/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/28/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/28/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/28/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/28/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/28/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/28/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/28/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		09/28/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		09/28/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/28/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/28/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW72A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 112-127
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012483
Sample ID: 10024562
Sample Date/Time: 09/15/2010 13:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090365-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 467
pH (UNITS): 8.
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): 0.24
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		09/28/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/28/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/28/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		09/28/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		09/28/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/28/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/28/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/28/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/28/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/28/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		09/28/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/28/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/28/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/28/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/28/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/28/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/28/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/28/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/28/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/28/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/28/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/28/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/28/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/28/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/28/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/28/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/28/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/28/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/28/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/28/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/28/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/28/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/28/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/28/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/28/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/28/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW72A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 112-127
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012483
Sample ID: 10024563
Sample Date/Time: 09/15/2010 13:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090365-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 467
pH (UNITS): 8.
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): 0.24
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		09/18/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		09/18/2010	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		09/18/2010	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		09/18/2010	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		09/18/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		09/18/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		09/18/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW72A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 112-127
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015298
Sample ID: 11000122
Sample Date/Time: 12/15/2010 08:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120318-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 414
pH (UNITS): 7.4
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): 0.17
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		12/21/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		12/21/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		12/21/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		12/21/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		12/21/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		12/21/2010	TR	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW72A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 112-127
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015298
Sample ID: 11000122
Sample Date/Time: 12/15/2010 08:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120318-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 414
pH (UNITS): 7.4
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): 0.17
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		12/21/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		12/21/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		12/21/2010	2.9	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		12/21/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		12/21/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		12/21/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		12/21/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		12/21/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		12/21/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		12/21/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		12/21/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		12/21/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		12/21/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		12/21/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		12/21/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		12/21/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW73A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 113-133
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012485
Sample ID: 10024850
Sample Date/Time: 09/15/2010 14:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090376-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 478
pH (UNITS): 8.
Temperature (°C): 23.6
Dissolved Oxygen (mg/L): 0.69
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		09/20/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		09/20/2010	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		09/20/2010	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		09/20/2010	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		09/20/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		09/20/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		09/20/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW73A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 113-133
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012485
Sample ID: 10025182
Sample Date/Time: 09/15/2010 14:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090376-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 478
pH (UNITS): 8.
Temperature (°C): 23.6
Dissolved Oxygen (mg/L): 0.69
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/17/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/17/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/17/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/17/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/17/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/17/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/17/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/17/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/17/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/17/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/17/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/17/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/17/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/17/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/17/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/17/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/17/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/17/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/17/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/17/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/17/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW73A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 113-133
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012485
Sample ID: 10025182
Sample Date/Time: 09/15/2010 14:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090376-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 478
pH (UNITS): 8.
Temperature (°C): 23.6
Dissolved Oxygen (mg/L): 0.69
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		09/17/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/17/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		09/17/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/17/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/17/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/17/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		09/17/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/17/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/17/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/17/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/17/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/17/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/17/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/17/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/17/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/17/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/17/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/17/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/17/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/17/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/17/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/17/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/17/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/17/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/17/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/17/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/17/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW73A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 113-133
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015296
Sample ID: 11000119
Sample Date/Time: 12/15/2010 11:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120315-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 443
pH (UNITS): 7.9
Temperature (°C): 19.4
Dissolved Oxygen (mg/L): 0.49
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		12/20/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		12/20/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		12/20/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		12/20/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		12/20/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		12/20/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		12/20/2010	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		12/20/2010	1.	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW73A/1
Station Type: WELL CASING
Perf Interval (ft bgs): 113-133
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015296
Sample ID: 11000119
Sample Date/Time: 12/15/2010 11:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120315-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 443
pH (UNITS): 7.9
Temperature (°C): 19.4
Dissolved Oxygen (mg/L): 0.49
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		12/20/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		12/20/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		12/20/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		12/20/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		12/20/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		12/20/2010	11.9	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		12/20/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		12/20/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		12/20/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		12/20/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		12/20/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		12/20/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		12/20/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		12/20/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		12/20/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		12/20/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		12/20/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		12/20/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		12/20/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		12/20/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		12/20/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		12/20/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		12/20/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		12/20/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		12/20/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		12/20/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW74/1
Station Type: WELL CASING
Perf Interval (ft bgs): 107-132
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012484
Sample ID: 10024564
Sample Date/Time: 09/15/2010 11:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090366-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 436
pH (UNITS): 7.9
Temperature (°C): 22.8
Dissolved Oxygen (mg/L): 0.97
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		09/18/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		09/18/2010	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		09/18/2010	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		09/18/2010	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		09/18/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		09/18/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		09/18/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW74/1
Station Type: WELL CASING
Perf Interval (ft bgs): 107-132
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012486
Sample ID: 10024851
Sample Date/Time: 09/15/2010 15:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090377-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 434
pH (UNITS): 7.9
Temperature (°C): 21.8
Dissolved Oxygen (mg/L): 0.08
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS; SAMPLED AT STANDARD FLOW

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		09/20/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		09/20/2010	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		09/20/2010	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		09/20/2010	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		09/20/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		09/20/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		09/20/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW74/1
Station Type: WELL CASING
Perf Interval (ft bgs): 107-132
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012495
Sample ID: 10024856
Sample Date/Time: 09/16/2010 16:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090411-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 462
pH (UNITS): 8.1
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): 0.07
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS; 3 VOLUME PURGE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		09/20/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		09/20/2010	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		09/20/2010	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		09/20/2010	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		09/20/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		09/20/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		09/20/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW74/1
Station Type: WELL CASING
Perf Interval (ft bgs): 107-132
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012484
Sample ID: 10025173
Sample Date/Time: 09/15/2010 11:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090366-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 436
pH (UNITS): 7.9
Temperature (°C): 22.8
Dissolved Oxygen (mg/L): 0.97
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/23/2010	TR	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/23/2010	15.4	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/23/2010	3.4	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/23/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/23/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/23/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/23/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/23/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/23/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/23/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/23/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/23/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/23/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/23/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/23/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/23/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/23/2010	0.6	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		09/23/2010	1.7	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/23/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW74/1
Station Type: WELL CASING
Perf Interval (ft bgs): 107-132
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012484
Sample ID: 10025173
Sample Date/Time: 09/15/2010 11:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090366-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 436
pH (UNITS): 7.9
Temperature (°C): 22.8
Dissolved Oxygen (mg/L): 0.97
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		09/23/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/23/2010	1550	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		09/23/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/23/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/23/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/23/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/23/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		09/23/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/23/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/23/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/23/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/23/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/23/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/23/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/23/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/23/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/23/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/23/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/23/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/23/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/23/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/23/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/23/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/23/2010	46.5	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/23/2010	4.4	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/23/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/23/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/23/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW74/1
Station Type: WELL CASING
Perf Interval (ft bgs): 107-132
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012486
Sample ID: 10025183
Sample Date/Time: 09/15/2010 15:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090377-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 434
pH (UNITS): 7.9
Temperature (°C): 21.8
Dissolved Oxygen (mg/L): 0.08
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS; SAMPLED AT STANDARD FLOW

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/17/2010	0.6	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/17/2010	15.1	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/17/2010	3.1	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/17/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/17/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/17/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/17/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/17/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/17/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/17/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/17/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/17/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/17/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/17/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/17/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/17/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/17/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/17/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/17/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/17/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/17/2010	0.6	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		09/17/2010	1.	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/17/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/17/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW74/1
Station Type: WELL CASING
Perf Interval (ft bgs): 107-132
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012486
Sample ID: 10025183
Sample Date/Time: 09/15/2010 15:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090377-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 434
pH (UNITS): 7.9
Temperature (°C): 21.8
Dissolved Oxygen (mg/L): 0.08
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS; SAMPLED AT STANDARD FLOW

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		09/17/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/17/2010	877	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		09/17/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/17/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/17/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/17/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/17/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		09/17/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/17/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/17/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/17/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/17/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/17/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/17/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/17/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/17/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/17/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/17/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/17/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/17/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/17/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/17/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/17/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/17/2010	37.6	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/17/2010	3.7	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/17/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/17/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/17/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/17/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW74/1
Station Type: WELL CASING
Perf Interval (ft bgs): 107-132
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012495
Sample ID: 10025194
Sample Date/Time: 09/16/2010 16:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090411-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 462
pH (UNITS): 8.1
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): 0.07
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS; 3 VOLUME PURGE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/18/2010	0.6	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/18/2010	14.8	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/18/2010	3.1	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/18/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/18/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/18/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/18/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/18/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/18/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/18/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/18/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/18/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/18/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/18/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/18/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/18/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/18/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/18/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/18/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/18/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/18/2010	0.6	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		09/18/2010	TR	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/18/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/18/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW74/1
Station Type: WELL CASING
Perf Interval (ft bgs): 107-132
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012495
Sample ID: 10025194
Sample Date/Time: 09/16/2010 16:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090411-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 462
pH (UNITS): 8.1
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): 0.07
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS; 3 VOLUME PURGE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		09/18/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/18/2010	1180	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		09/18/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/18/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/18/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/18/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/18/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		09/18/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/18/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/18/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/18/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/18/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/18/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/18/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/18/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/18/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/18/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/18/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/18/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/18/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/18/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/18/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/18/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/18/2010	36.1	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/18/2010	3.6	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/18/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/18/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/18/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/18/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW75/1
Station Type: WELL CASING
Perf Interval (ft bgs): 202-222
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012487
Sample ID: 10024852
Sample Date/Time: 09/15/2010 15:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090378-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 1880
pH (UNITS): 12.1
Temperature (°C): 21.7
Dissolved Oxygen (mg/L): 0.4
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		09/20/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		09/20/2010	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		09/20/2010	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		09/20/2010	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		09/20/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		09/20/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		09/20/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW75/1
Station Type: WELL CASING
Perf Interval (ft bgs): 202-222
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012487
Sample ID: 10025184
Sample Date/Time: 09/15/2010 15:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090378-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1880
pH (UNITS): 12.1
Temperature (°C): 21.7
Dissolved Oxygen (mg/L): 0.4
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/21/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/21/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/21/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/21/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/21/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/21/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/21/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/21/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/21/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/21/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/21/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/21/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/21/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/21/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/21/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/21/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/21/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/21/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/21/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/21/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/21/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/21/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/21/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/21/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/21/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/21/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/21/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/21/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/21/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/21/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/21/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/21/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/21/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/21/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/21/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/21/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/21/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/21/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		09/21/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		09/21/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/21/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/21/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW75/1
Station Type: WELL CASING
Perf Interval (ft bgs): 202-222
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10012487
Sample ID: 10025184
Sample Date/Time: 09/15/2010 15:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10090378-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1880
pH (UNITS): 12.1
Temperature (°C): 21.7
Dissolved Oxygen (mg/L): 0.4
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: W/BOEING SPLITS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		09/21/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/21/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/21/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		09/21/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		09/21/2010	9.1	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/21/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/21/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/21/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/21/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/21/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		09/21/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/21/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/21/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/21/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/21/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/21/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/21/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/21/2010	TR	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/21/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/21/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/21/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/21/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/21/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/21/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/21/2010	TR	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/21/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/21/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/21/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/21/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/21/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/21/2010	0.5	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/21/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/21/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/21/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/21/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/21/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW75/1
Station Type: WELL CASING
Perf Interval (ft bgs): 202-222
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015297
Sample ID: 11000120
Sample Date/Time: 12/15/2010 13:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120316-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1330
pH (UNITS): 11.5
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): 0.38
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		12/21/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		12/21/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		12/21/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		12/21/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		12/21/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		12/21/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		12/21/2010	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		12/21/2010	0.6	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: BOE-MW75/1
Station Type: WELL CASING
Perf Interval (ft bgs): 202-222
Aquifer: UNDEFINED

Well Owner: THE BOEING COMPANY
Well Name:
City: HUNTINGTON BEACH

Sample Group ID: 10015297
Sample ID: 11000120
Sample Date/Time: 12/15/2010 13:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Unknown Water Quality Program

Lab Sample Number: 10120316-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1330
pH (UNITS): 11.5
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): 0.38
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		12/21/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		12/21/2010	13.6	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		12/21/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		12/21/2010	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		12/21/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		12/21/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		12/21/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		12/21/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		12/21/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		12/21/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		12/21/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		12/21/2010	TR	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		12/21/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		12/21/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		12/21/2010	TR	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		12/21/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		12/21/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		12/21/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		12/21/2010	TR	ug/L	.5	ug/L
TOLU	Toluene	524.2		12/21/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		12/21/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		12/21/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		12/21/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		12/21/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: FAA-LA1/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: FEDERAL AVAIATION ADMIN.
Well Name:
City: LOS ALAMITOS

Sample Group ID: 10014611
Sample ID: 10029794
Sample Date/Time: 11/10/2010 10:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10110378-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 432
pH (UNITS): 8.2
Temperature (°C): 19.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: FLUSHED 10 MIN., NO ACCESS TO PUMP

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		11/17/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		11/17/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		11/17/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		11/17/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		11/17/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		11/17/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		11/17/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		11/17/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		11/17/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		11/17/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		11/17/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		11/17/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		11/17/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		11/17/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		11/17/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		11/17/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		11/17/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		11/17/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		11/17/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		11/17/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		11/17/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: FAA-LA1/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: FEDERAL AVAIATION ADMIN.
Well Name:
City: LOS ALAMITOS

Sample Group ID: 10014611
Sample ID: 10029794
Sample Date/Time: 11/10/2010 10:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10110378-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 432
pH (UNITS): 8.2
Temperature (°C): 19.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: FLUSHED 10 MIN., NO ACCESS TO PUMP

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		11/17/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		11/17/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		11/17/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		11/17/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		11/17/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		11/17/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		11/17/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		11/17/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		11/17/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		11/17/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		11/17/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		11/17/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		11/17/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		11/17/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		11/17/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		11/17/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		11/17/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		11/17/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		11/17/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		11/17/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		11/17/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		11/17/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		11/17/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		11/17/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		11/17/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		11/17/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		11/17/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: FAA-LA1/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: FEDERAL AVAIATION ADMIN.
Well Name:
City: LOS ALAMITOS

Sample Group ID: 11029353
Sample ID: 11041697
Sample Date/Time: 10/20/2011 11:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100573-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 438
pH (UNITS): 8.1
Temperature (°C): 22.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: SILTY SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/27/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/27/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/27/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/27/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/27/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/27/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/27/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/27/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/27/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/27/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/27/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/27/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: FAA-LA1/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: FEDERAL AVAIATION ADMIN.
Well Name:
City: LOS ALAMITOS

Sample Group ID: 11029353
Sample ID: 11041697
Sample Date/Time: 10/20/2011 11:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100573-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 438
pH (UNITS): 8.1
Temperature (°C): 22.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: SILTY SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		10/27/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/27/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/27/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/27/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/27/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		10/27/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/27/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/27/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/27/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/27/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/27/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/27/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/27/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/27/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/27/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/27/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/27/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/27/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/27/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/27/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/27/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/27/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/27/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/27/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: GG-16/1
Station Type: WELL CASING
Perf Interval (ft bgs): 304-864
Aquifer: UNDEFINED

Well Owner: GARDEN GROVE
Well Name: Well No. 16
City: GARDEN GROVE

Sample Group ID: 10004381
Sample ID: 10011145
Sample Date/Time: 04/07/2010 14:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10040156-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 510
pH (UNITS): 7.8
Temperature (°C): 18.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		04/12/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		04/12/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		04/12/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		04/12/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		04/12/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		04/12/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		04/12/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		04/12/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		04/12/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		04/12/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		04/12/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		04/12/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		04/12/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		04/12/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		04/12/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		04/12/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		04/12/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		04/12/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		04/12/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		04/12/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		04/12/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		04/12/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		04/12/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		04/12/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		04/12/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		04/12/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		04/12/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		04/12/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		04/12/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		04/12/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		04/12/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		04/12/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		04/12/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		04/12/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		04/12/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		04/12/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		04/12/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		04/12/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		04/12/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		04/12/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		04/12/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		04/12/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: GG-16/1
Station Type: WELL CASING
Perf Interval (ft bgs): 304-864
Aquifer: UNDEFINED

Well Owner: GARDEN GROVE
Well Name: Well No. 16
City: GARDEN GROVE

Sample Group ID: 10004381
Sample ID: 10011145
Sample Date/Time: 04/07/2010 14:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10040156-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 510
pH (UNITS): 7.8
Temperature (°C): 18.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		04/12/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		04/12/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		04/12/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		04/12/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		04/12/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		04/12/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		04/12/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		04/12/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		04/12/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		04/12/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		04/12/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		04/12/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		04/12/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		04/12/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		04/12/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		04/12/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		04/12/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		04/12/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		04/12/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		04/12/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		04/12/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		04/12/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		04/12/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		04/12/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		04/12/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		04/12/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		04/12/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		04/12/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		04/12/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		04/12/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		04/12/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		04/12/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		04/12/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		04/12/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		04/12/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		04/12/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: GG-16/1
Station Type: WELL CASING
Perf Interval (ft bgs): 304-864
Aquifer: UNDEFINED

Well Owner: GARDEN GROVE
Well Name: Well No. 16
City: GARDEN GROVE

Sample Group ID: 11003790
Sample ID: 11009262
Sample Date/Time: 04/06/2011 13:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11040130-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 519
pH (UNITS): 8.
Temperature (°C): 18.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		04/07/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		04/07/2011	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		04/07/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		04/07/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		04/07/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		04/07/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		04/07/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: GG-16/1
Station Type: WELL CASING
Perf Interval (ft bgs): 304-864
Aquifer: UNDEFINED

Well Owner: GARDEN GROVE
Well Name: Well No. 16
City: GARDEN GROVE

Sample Group ID: 11003790
Sample ID: 11009591
Sample Date/Time: 04/06/2011 13:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11040130-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 519
pH (UNITS): 8.
Temperature (°C): 18.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use ***Qualifier: Validated Sample***

Parameter Abbreviation	Parameter Name	Analysis Method	Dates Extract	Dates Analysis	Results Value	Results Units	Detection Limit Value	Detection Limit Units
1112PC	1,1,1,2-Tetrachloroethane	524.2		04/07/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		04/07/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		04/07/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		04/07/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		04/07/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		04/07/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		04/07/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		04/07/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		04/07/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		04/07/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		04/07/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		04/07/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		04/07/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		04/07/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		04/07/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		04/07/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		04/07/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		04/07/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		04/07/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		04/07/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		04/07/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		04/07/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		04/07/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		04/07/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		04/07/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		04/07/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		04/07/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		04/07/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		04/07/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		04/07/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		04/07/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		04/07/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		04/07/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		04/07/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		04/07/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		04/07/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		04/07/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		04/07/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		04/07/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		04/07/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		04/07/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		04/07/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		04/07/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		04/07/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: GG-16/1
Station Type: WELL CASING
Perf Interval (ft bgs): 304-864
Aquifer: UNDEFINED

Well Owner: GARDEN GROVE
Well Name: Well No. 16
City: GARDEN GROVE

Sample Group ID: 11003790
Sample ID: 11009591
Sample Date/Time: 04/06/2011 13:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11040130-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 519
pH (UNITS): 8.
Temperature (°C): 18.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		04/07/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		04/07/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		04/07/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		04/07/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		04/07/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		04/07/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		04/07/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		04/07/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		04/07/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		04/07/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		04/07/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		04/07/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		04/07/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		04/07/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		04/07/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		04/07/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		04/07/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		04/07/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		04/07/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		04/07/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		04/07/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		04/07/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		04/07/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		04/07/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		04/07/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		04/07/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		04/07/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		04/07/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		04/07/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		04/07/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		04/07/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		04/07/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		04/07/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		04/07/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		04/07/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		04/07/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		04/07/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 10001877
Sample ID: 10004296
Sample Date/Time: 02/17/2010 10:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10020508-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 2160
pH (UNITS): 7.5
Temperature (°C): 19.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISHCARGED TO WASTE, 1640 GPM

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		02/18/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		02/18/2010	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		02/18/2010	ND	ug/L	.1	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		02/18/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		02/18/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		02/18/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 10001877
Sample ID: 10005562
Sample Date/Time: 02/17/2010 10:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10020508-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 2160
pH (UNITS): 7.5
Temperature (°C): 19.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISHCARGED TO WASTE, 1640 GPM

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		02/25/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		02/25/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		02/25/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		02/25/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		02/25/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		02/25/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		02/25/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		02/25/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		02/25/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		02/25/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		02/25/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		02/25/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		02/25/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		02/25/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		02/25/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		02/25/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		02/25/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		02/25/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		02/25/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		02/25/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		02/25/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 10001877
Sample ID: 10005562
Sample Date/Time: 02/17/2010 10:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10020508-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 2160
pH (UNITS): 7.5
Temperature (°C): 19.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISHCARGED TO WASTE, 1640 GPM

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		02/25/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		02/25/2010	TR	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		02/25/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		02/25/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		02/25/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		02/25/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		02/25/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		02/25/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		02/25/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		02/25/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		02/25/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		02/25/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		02/25/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		02/25/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		02/25/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		02/25/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		02/25/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		02/25/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		02/25/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		02/25/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		02/25/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		02/25/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		02/25/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		02/25/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		02/25/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		02/25/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		02/25/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 10005655
Sample ID: 10012694
Sample Date/Time: 05/06/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10050175-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 2240
pH (UNITS): 7.5
Temperature (°C): 19.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		05/18/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		05/18/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		05/18/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		05/18/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		05/18/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		05/18/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		05/18/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		05/18/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		05/18/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		05/18/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		05/18/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		05/18/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		05/18/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		05/18/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		05/18/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		05/18/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		05/18/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		05/18/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		05/18/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		05/18/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		05/18/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		05/18/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 10005655
Sample ID: 10012694
Sample Date/Time: 05/06/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10050175-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 2240
pH (UNITS): 7.5
Temperature (°C): 19.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		05/18/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		05/18/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		05/18/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		05/18/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		05/18/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		05/18/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		05/18/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		05/18/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		05/18/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		05/18/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		05/18/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		05/18/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		05/18/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		05/18/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		05/18/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		05/18/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		05/18/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		05/18/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		05/18/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		05/18/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		05/18/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		05/18/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		05/18/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		05/18/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		05/18/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 10014672
Sample ID: 10031941
Sample Date/Time: 11/23/2010 10:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10110696-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1790
pH (UNITS): 7.7
Temperature (°C): 20.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 550 GPM DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		11/24/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		11/24/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		11/24/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		11/24/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		11/24/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		11/24/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		11/24/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		11/24/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		11/24/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		11/24/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		11/24/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		11/24/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		11/24/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		11/24/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		11/24/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		11/24/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		11/24/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		11/24/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		11/24/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		11/24/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		11/24/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		11/24/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		11/24/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		11/24/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		11/24/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		11/24/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		11/24/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		11/24/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		11/24/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		11/24/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		11/24/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		11/24/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		11/24/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		11/24/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		11/24/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		11/24/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		11/24/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		11/24/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		11/24/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		11/24/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		11/24/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		11/24/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 10014672
Sample ID: 10031941
Sample Date/Time: 11/23/2010 10:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10110696-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1790
pH (UNITS): 7.7
Temperature (°C): 20.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 550 GPM DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		11/24/2010	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		11/24/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		11/24/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		11/24/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		11/24/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		11/24/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		11/24/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		11/24/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		11/24/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		11/24/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		11/24/2010	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		11/24/2010	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		11/24/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		11/24/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		11/24/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		11/24/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		11/24/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		11/24/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		11/24/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		11/24/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		11/24/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		11/24/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		11/24/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		11/24/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		11/24/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		11/24/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		11/24/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		11/24/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		11/24/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		11/24/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		11/24/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		11/24/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		11/24/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		11/24/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		11/24/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		11/24/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		11/24/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		11/24/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		11/24/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 11025393
Sample ID: 11036425
Sample Date/Time: 08/09/2011 12:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11080310-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 743
pH (UNITS): 7.8
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		08/20/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		08/20/2011	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		08/20/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		08/20/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		08/20/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		08/20/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		08/20/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 11025393
Sample ID: 11036507
Sample Date/Time: 08/09/2011 12:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11080310-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 743
pH (UNITS): 7.8
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		08/19/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		08/19/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		08/19/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		08/19/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		08/19/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		08/19/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		08/19/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		08/19/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		08/19/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		08/19/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		08/19/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		08/19/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		08/19/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		08/19/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		08/19/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		08/19/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		08/19/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		08/19/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		08/19/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		08/19/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		08/19/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 11025393
Sample ID: 11036507
Sample Date/Time: 08/09/2011 12:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11080310-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 743
pH (UNITS): 7.8
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		08/19/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		08/19/2011	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		08/19/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		08/19/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		08/19/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		08/19/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		08/19/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		08/19/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		08/19/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		08/19/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		08/19/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		08/19/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		08/19/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		08/19/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		08/19/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		08/19/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		08/19/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		08/19/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		08/19/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		08/19/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		08/19/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		08/19/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		08/19/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		08/19/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		08/19/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		08/19/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		08/19/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		08/19/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		08/19/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 11027769
Sample ID: 11040054
Sample Date/Time: 10/12/2011 10:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11100330-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 600
pH (UNITS): 7.9
Temperature (°C): 22.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE: SAND

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		10/20/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		10/20/2011	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		10/20/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		10/20/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		10/20/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		10/20/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		10/20/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 11027769
Sample ID: 11040682
Sample Date/Time: 10/12/2011 10:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11100330-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 600
pH (UNITS): 7.9
Temperature (°C): 22.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE: SAND

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/14/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/14/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/14/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/14/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/14/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/14/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/14/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/14/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/14/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/14/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/14/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/14/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/14/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/14/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/14/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/14/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/14/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/14/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/14/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/14/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/14/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-12/1
Station Type: WELL CASING
Perf Interval (ft bgs): 265-740
Aquifer: BIII, L, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 12
City: HUNTINGTON BEACH

Sample Group ID: 11027769
Sample ID: 11040682
Sample Date/Time: 10/12/2011 10:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11100330-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 600
pH (UNITS): 7.9
Temperature (°C): 22.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE: SAND

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		10/14/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		10/14/2011	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/14/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/14/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/14/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/14/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/14/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		10/14/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/14/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/14/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/14/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/14/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/14/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/14/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/14/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/14/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/14/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/14/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/14/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/14/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/14/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/14/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/14/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/14/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/14/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/14/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/14/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/14/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/14/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 10001428
Sample ID: 10004898
Sample Date/Time: 01/28/2010 08:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10010699-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 726
pH (UNITS): 7.8
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		02/05/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		02/05/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		02/05/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		02/05/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		02/05/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		02/05/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		02/05/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		02/05/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		02/05/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		02/05/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		02/05/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		02/05/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		02/05/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		02/05/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		02/05/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		02/05/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		02/05/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		02/05/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		02/05/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		02/05/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		02/05/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		02/05/2010	0.6	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 10001428
Sample ID: 10004898
Sample Date/Time: 01/28/2010 08:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10010699-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 726
pH (UNITS): 7.8
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		02/05/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		02/05/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		02/05/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		02/05/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		02/05/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		02/05/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		02/05/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		02/05/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		02/05/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		02/05/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		02/05/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		02/05/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		02/05/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		02/05/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		02/05/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		02/05/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		02/05/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		02/05/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		02/05/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		02/05/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		02/05/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		02/05/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		02/05/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		02/05/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		02/05/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 10001878
Sample ID: 10005563
Sample Date/Time: 02/17/2010 10:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10020509-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 706
pH (UNITS): 7.9
Temperature (°C): 21.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use ***Qualifier: Validated Sample***

Parameter Abbreviation	Parameter Name	Analysis Method	Dates Extract	Dates Analysis	Results Value	Results Units	Detection Limit Value	Detection Limit Units
1112PC	1,1,1,2-Tetrachloroethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		02/25/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		02/25/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		02/25/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		02/25/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		02/25/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		02/25/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		02/25/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		02/25/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		02/25/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		02/25/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		02/25/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		02/25/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		02/25/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		02/25/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		02/25/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		02/25/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		02/25/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		02/25/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		02/25/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		02/25/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		02/25/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		02/25/2010	TR	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 10001878
Sample ID: 10005563
Sample Date/Time: 02/17/2010 10:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10020509-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 706
pH (UNITS): 7.9
Temperature (°C): 21.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		02/25/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		02/25/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		02/25/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		02/25/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		02/25/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		02/25/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		02/25/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		02/25/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		02/25/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		02/25/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		02/25/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		02/25/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		02/25/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		02/25/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		02/25/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		02/25/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		02/25/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		02/25/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		02/25/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		02/25/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		02/25/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		02/25/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		02/25/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		02/25/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		02/25/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		02/25/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		02/25/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 10005968
Sample ID: 10012696
Sample Date/Time: 05/06/2010 09:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10050177-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 703
pH (UNITS): 7.9
Temperature (°C): 21.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		05/18/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		05/18/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		05/18/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		05/18/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		05/18/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		05/18/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		05/18/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		05/18/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		05/18/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		05/18/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		05/18/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		05/18/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		05/18/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		05/18/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		05/18/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		05/18/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		05/18/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		05/18/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		05/18/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		05/18/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		05/18/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		05/18/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 10005968
Sample ID: 10012696
Sample Date/Time: 05/06/2010 09:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10050177-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 703
pH (UNITS): 7.9
Temperature (°C): 21.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		05/18/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		05/18/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		05/18/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		05/18/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		05/18/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		05/18/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		05/18/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		05/18/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		05/18/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		05/18/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		05/18/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		05/18/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		05/18/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		05/18/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		05/18/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		05/18/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		05/18/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		05/18/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		05/18/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		05/18/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		05/18/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		05/18/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		05/18/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		05/18/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		05/18/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 10010343
Sample ID: 10020874
Sample Date/Time: 08/11/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10080266-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 891
pH (UNITS): 7.7
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		08/12/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		08/12/2010	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		08/12/2010	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		08/12/2010	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		08/12/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		08/12/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		08/12/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 10010343
Sample ID: 10022268
Sample Date/Time: 08/11/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10080266-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 891
pH (UNITS): 7.7
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		08/18/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		08/18/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		08/18/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		08/18/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		08/18/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		08/18/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		08/18/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		08/18/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		08/18/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		08/18/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		08/18/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		08/18/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		08/18/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		08/18/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		08/18/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		08/18/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		08/18/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		08/18/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		08/18/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		08/18/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		08/18/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		08/18/2010	0.5	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 10010343
Sample ID: 10022268
Sample Date/Time: 08/11/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10080266-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 891
pH (UNITS): 7.7
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		08/18/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		08/18/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		08/18/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		08/18/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		08/18/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		08/18/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		08/18/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		08/18/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		08/18/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		08/18/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		08/18/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		08/18/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		08/18/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		08/18/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		08/18/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		08/18/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		08/18/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		08/18/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		08/18/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		08/18/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		08/18/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		08/18/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		08/18/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		08/18/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		08/18/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 10014204
Sample ID: 10028989
Sample Date/Time: 11/04/2010 09:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10110199-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 848
pH (UNITS): 7.9
Temperature (°C): 20.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		11/08/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		11/08/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		11/08/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		11/08/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		11/08/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		11/08/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		11/08/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		11/08/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		11/08/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		11/08/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		11/08/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		11/08/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		11/08/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		11/08/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		11/08/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		11/08/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		11/08/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		11/08/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		11/08/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		11/08/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		11/08/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		11/08/2010	TR	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 10014204
Sample ID: 10028989
Sample Date/Time: 11/04/2010 09:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10110199-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 848
pH (UNITS): 7.9
Temperature (°C): 20.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		11/08/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		11/08/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		11/08/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		11/08/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		11/08/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		11/08/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		11/08/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		11/08/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		11/08/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		11/08/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		11/08/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		11/08/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		11/08/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		11/08/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		11/08/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		11/08/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		11/08/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		11/08/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		11/08/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		11/08/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		11/08/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		11/08/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		11/08/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		11/08/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		11/08/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 11001927
Sample ID: 11004999
Sample Date/Time: 02/17/2011 09:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11020436-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 687
pH (UNITS): 8.2
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

FTH for CHTFEE, verified by Lab 3/9, Resampled 3-10. Resamples confirm CHTFEE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		02/24/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		02/24/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		02/24/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		02/24/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		02/24/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		02/24/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		02/24/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		02/24/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		02/24/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		02/24/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		02/24/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		02/24/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		02/24/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		02/24/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		02/24/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		02/24/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		02/24/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		02/24/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		02/24/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		02/24/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		02/24/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		02/24/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		02/24/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		02/24/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		02/24/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		02/24/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		02/24/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		02/24/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		02/24/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		02/24/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		02/24/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		02/24/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		02/24/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		02/24/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		02/24/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		02/24/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		02/24/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		02/24/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		02/24/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		02/24/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		02/24/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		02/24/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 11001927
Sample ID: 11004999
Sample Date/Time: 02/17/2011 09:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11020436-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 687
pH (UNITS): 8.2
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

FTH for CHTFEE, verified by Lab 3/9, Resampled 3-10. Resamples confirm CHTFEE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		02/24/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		02/24/2011	1.1	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		02/24/2011	TR	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		02/24/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		02/24/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		02/24/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		02/24/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		02/24/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		02/24/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		02/24/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		02/24/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		02/24/2011	TR	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		02/24/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		02/24/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		02/24/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		02/24/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		02/24/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		02/24/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		02/24/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		02/24/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		02/24/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		02/24/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		02/24/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		02/24/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		02/24/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		02/24/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		02/24/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		02/24/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		02/24/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		02/24/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		02/24/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		02/24/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		02/24/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		02/24/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		02/24/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		02/24/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		02/24/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		02/24/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		02/24/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 11003071
Sample ID: 11007622
Sample Date/Time: 03/10/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030238-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 697
pH (UNITS): 8.2
Temperature (°C): 21.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RESAMPLE #1

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/15/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/15/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/15/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/15/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/15/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/15/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/15/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/15/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/15/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/15/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/15/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/15/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 11003071
Sample ID: 11007622
Sample Date/Time: 03/10/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030238-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 697
pH (UNITS): 8.2
Temperature (°C): 21.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RESAMPLE #1

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		03/15/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		03/15/2011	0.6	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/15/2011	TR	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/15/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/15/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/15/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		03/15/2011	TR	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/15/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/15/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/15/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/15/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/15/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/15/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/15/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/15/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/15/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/15/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/15/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/15/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/15/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/15/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/15/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/15/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/15/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/15/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 11003072
Sample ID: 11007623
Sample Date/Time: 03/10/2011 08:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030239-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 697
pH (UNITS): 8.
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RESAMPLE #2

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/15/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/15/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/15/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/15/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/15/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/15/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/15/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/15/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/15/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/15/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/15/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/15/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 11003072
Sample ID: 11007623
Sample Date/Time: 03/10/2011 08:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030239-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 697
pH (UNITS): 8.
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RESAMPLE #2

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		03/15/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		03/15/2011	0.7	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/15/2011	TR	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/15/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/15/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/15/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		03/15/2011	TR	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/15/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/15/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/15/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/15/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/15/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/15/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/15/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/15/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/15/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/15/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/15/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/15/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/15/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/15/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/15/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/15/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/15/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/15/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 11005127
Sample ID: 11011329
Sample Date/Time: 05/03/2011 10:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11050079-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 691
pH (UNITS): 8.1
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		05/09/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		05/09/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		05/09/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		05/09/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		05/09/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		05/09/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		05/09/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		05/09/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		05/09/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		05/09/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		05/09/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		05/09/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		05/09/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		05/09/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		05/09/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		05/09/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		05/09/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		05/09/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		05/09/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		05/09/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		05/09/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		05/09/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		05/09/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		05/09/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		05/09/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		05/09/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		05/09/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		05/09/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		05/09/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		05/09/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		05/09/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		05/09/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		05/09/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		05/09/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		05/09/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		05/09/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		05/09/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		05/09/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		05/09/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		05/09/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		05/09/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		05/09/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		05/09/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		05/09/2011	1.7	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 11005127
Sample ID: 11011329
Sample Date/Time: 05/03/2011 10:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11050079-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 691
pH (UNITS): 8.1
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		05/09/2011	TR	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		05/09/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		05/09/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		05/09/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		05/09/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		05/09/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		05/09/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		05/09/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		05/09/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		05/09/2011	TR	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		05/09/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		05/09/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		05/09/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		05/09/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		05/09/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		05/09/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		05/09/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		05/09/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		05/09/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		05/09/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		05/09/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		05/09/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		05/09/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		05/09/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		05/09/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		05/09/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		05/09/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		05/09/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		05/09/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		05/09/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		05/09/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		05/09/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		05/09/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		05/09/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		05/09/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		05/09/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		05/09/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 11025479
Sample ID: 11036426
Sample Date/Time: 08/09/2011 11:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11080311-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 847
pH (UNITS): 7.9
Temperature (°C): 19.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		08/20/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		08/20/2011	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		08/20/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		08/20/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		08/20/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		08/20/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		08/20/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 11025479
Sample ID: 11036508
Sample Date/Time: 08/09/2011 11:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11080311-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 847
pH (UNITS): 7.9
Temperature (°C): 19.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

FTH fot TTHMs resampled 10/12/11. Resamples were both ND

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		08/19/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		08/19/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		08/19/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		08/19/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		08/19/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		08/19/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		08/19/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		08/19/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		08/19/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		08/19/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		08/19/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		08/19/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		08/19/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		08/19/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		08/19/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		08/19/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		08/19/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		08/19/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		08/19/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		08/19/2011	TR	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		08/19/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		08/19/2011	0.5	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 11025479
Sample ID: 11036508
Sample Date/Time: 08/09/2011 11:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11080311-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 847
pH (UNITS): 7.9
Temperature (°C): 19.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

FTH fot TTHMs resampled 10/12/11. Resamples were both ND

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		08/19/2011	0.9	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		08/19/2011	1.6	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		08/19/2011	TR	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		08/19/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		08/19/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		08/19/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		08/19/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		08/19/2011	0.6	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		08/19/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		08/19/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		08/19/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		08/19/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		08/19/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		08/19/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		08/19/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		08/19/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		08/19/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		08/19/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		08/19/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		08/19/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		08/19/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		08/19/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		08/19/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		08/19/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		08/19/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		08/19/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		08/19/2011	1.4	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		08/19/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		08/19/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 11027772
Sample ID: 11040685
Sample Date/Time: 10/12/2011 10:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11100333-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 688
pH (UNITS): 7.9
Temperature (°C): 21.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RESAMPLE #1

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	*Qualifier: Validated Sample*							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/14/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/14/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/14/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/14/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/14/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/14/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/14/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/14/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/14/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/14/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/14/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/14/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/14/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/14/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/14/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/14/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/14/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/14/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/14/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/14/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/14/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 11027772
Sample ID: 11040685
Sample Date/Time: 10/12/2011 10:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11100333-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 688
pH (UNITS): 7.9
Temperature (°C): 21.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RESAMPLE #1

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		10/14/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		10/14/2011	1.6	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/14/2011	TR	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/14/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/14/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/14/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/14/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		10/14/2011	TR	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/14/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/14/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/14/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/14/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/14/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/14/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/14/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/14/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/14/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/14/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/14/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/14/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/14/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/14/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/14/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/14/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/14/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/14/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/14/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/14/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/14/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 11027773
Sample ID: 11040686
Sample Date/Time: 10/12/2011 10:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11100334-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 684
pH (UNITS): 7.9
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RESAMPLE #2

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/15/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/15/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/15/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/15/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/15/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/15/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/15/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/15/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/15/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/15/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/15/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/15/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/15/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/15/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/15/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/15/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/15/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/15/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/15/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/15/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/15/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/15/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/15/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/15/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/15/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/15/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/15/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/15/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/15/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/15/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/15/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/15/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/15/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/15/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/15/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/15/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/15/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/15/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/15/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/15/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/15/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/15/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 11027773
Sample ID: 11040686
Sample Date/Time: 10/12/2011 10:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11100334-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 684
pH (UNITS): 7.9
Temperature (°C): 21.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RESAMPLE #2

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		10/15/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		10/15/2011	1.7	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/15/2011	TR	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		10/15/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/15/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/15/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/15/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/15/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/15/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/15/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/15/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		10/15/2011	TR	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		10/15/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/15/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/15/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/15/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/15/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/15/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/15/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/15/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/15/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/15/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/15/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/15/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/15/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/15/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/15/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/15/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/15/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/15/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/15/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/15/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/15/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/15/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/15/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/15/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/15/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/15/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/15/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10001314
Sample ID: 10004895
Sample Date/Time: 01/28/2010 09:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10010696-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 816
pH (UNITS): 7.7
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

FTH for Bromoform [TR], Confirmed and resampled [3/15] resamples both ND

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		02/05/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		02/05/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		02/05/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		02/05/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		02/05/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		02/05/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		02/05/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		02/05/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		02/05/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		02/05/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		02/05/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		02/05/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		02/05/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		02/05/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		02/05/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		02/05/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		02/05/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		02/05/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		02/05/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		02/05/2010	TR	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		02/05/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10001314
Sample ID: 10004895
Sample Date/Time: 01/28/2010 09:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10010696-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 816
pH (UNITS): 7.7
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

FTH for Bromoform [TR], Confirmed and resampled [3/15] resamples both ND

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		02/05/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		02/05/2010	2.2	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		02/05/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		02/05/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		02/05/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		02/05/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		02/05/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		02/05/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		02/05/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		02/05/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		02/05/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		02/05/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		02/05/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		02/05/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		02/05/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		02/05/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		02/05/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		02/05/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		02/05/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		02/05/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		02/05/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		02/05/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		02/05/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		02/05/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		02/05/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		02/05/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		02/05/2010	TR	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		02/05/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		02/05/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10001875
Sample ID: 10005555
Sample Date/Time: 02/17/2010 10:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10020504-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 733
pH (UNITS): 7.8
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		02/24/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		02/24/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		02/24/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		02/24/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		02/24/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		02/24/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		02/24/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		02/24/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		02/24/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		02/24/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		02/24/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		02/24/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		02/24/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		02/24/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		02/24/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		02/24/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		02/24/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		02/24/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		02/24/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		02/24/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		02/24/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		02/24/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		02/24/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		02/24/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		02/24/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		02/24/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		02/24/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		02/24/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		02/24/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		02/24/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		02/24/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		02/24/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		02/24/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		02/24/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		02/24/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		02/24/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		02/24/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		02/24/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		02/24/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		02/24/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		02/24/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		02/24/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		02/24/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		02/24/2010	1.4	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10001875
Sample ID: 10005555
Sample Date/Time: 02/17/2010 10:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10020504-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 733
pH (UNITS): 7.8
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		02/24/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		02/24/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		02/24/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		02/24/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		02/24/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		02/24/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		02/24/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		02/24/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		02/24/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		02/24/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		02/24/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		02/24/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		02/24/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		02/24/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		02/24/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		02/24/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		02/24/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		02/24/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		02/24/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		02/24/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		02/24/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		02/24/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		02/24/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		02/24/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		02/24/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		02/24/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		02/24/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		02/24/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		02/24/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		02/24/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		02/24/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		02/24/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		02/24/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		02/24/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10003442
Sample ID: 10007982
Sample Date/Time: 03/15/2010 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10030403-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 885
pH (UNITS): 7.7
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use ***Qualifier: Validated Sample***

Parameter Abbreviation	Parameter Name	Analysis Method	Dates Extract	Dates Analysis	Results Value	Results Units	Detection Limit Value	Detection Limit Units
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/17/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/17/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/17/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/17/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/17/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/17/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/17/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/17/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/17/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/17/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/17/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/17/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/17/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/17/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/17/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/17/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/17/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/17/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/17/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/17/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		03/17/2010	TR	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/17/2010	1.9	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10003442
Sample ID: 10007982
Sample Date/Time: 03/15/2010 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10030403-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 885
pH (UNITS): 7.7
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/17/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/17/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/17/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/17/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/17/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/17/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/17/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/17/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/17/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/17/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/17/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/17/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/17/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/17/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/17/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/17/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/17/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/17/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/17/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/17/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/17/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/17/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/17/2010	TR	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/17/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/17/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10003444
Sample ID: 10007984
Sample Date/Time: 03/15/2010 08:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10030405-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 879
pH (UNITS): 7.7
Temperature (°C): 20.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RESAMPLE #2

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/17/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/17/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/17/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/17/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/17/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/17/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/17/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/17/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/17/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/17/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/17/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/17/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/17/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/17/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/17/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/17/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/17/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/17/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/17/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/17/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/17/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10003444
Sample ID: 10007984
Sample Date/Time: 03/15/2010 08:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10030405-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 879
pH (UNITS): 7.7
Temperature (°C): 20.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RESAMPLE #2

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		03/17/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/17/2010	1.8	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/17/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/17/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/17/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/17/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/17/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/17/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/17/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/17/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/17/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/17/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/17/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/17/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/17/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/17/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/17/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/17/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/17/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/17/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/17/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/17/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/17/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/17/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/17/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/17/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/17/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/17/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/17/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10005653
Sample ID: 10012692
Sample Date/Time: 05/06/2010 09:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10050173-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 756
pH (UNITS): 7.8
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use *Qualifier: Validated Sample*

Parameter Abbreviation	Parameter Name	Analysis Method	Dates Extract	Dates Analysis	Results Value	Results Units	Detection Limit Value	Detection Limit Units
1112PC	1,1,1,2-Tetrachloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		05/18/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		05/18/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		05/18/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		05/18/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		05/18/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		05/18/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		05/18/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		05/18/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		05/18/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		05/18/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		05/18/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		05/18/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		05/18/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		05/18/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		05/18/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		05/18/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		05/18/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		05/18/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		05/18/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		05/18/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		05/18/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		05/18/2010	1.	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10005653
Sample ID: 10012692
Sample Date/Time: 05/06/2010 09:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10050173-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 756
pH (UNITS): 7.8
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		05/18/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		05/18/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		05/18/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		05/18/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		05/18/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		05/18/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		05/18/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		05/18/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		05/18/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		05/18/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		05/18/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		05/18/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		05/18/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		05/18/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		05/18/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		05/18/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		05/18/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		05/18/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		05/18/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		05/18/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		05/18/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		05/18/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		05/18/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		05/18/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		05/18/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		05/18/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		05/18/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10010342
Sample ID: 10020872
Sample Date/Time: 08/11/2010 10:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10080264-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 760
pH (UNITS): 7.8
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		08/12/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		08/12/2010	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		08/12/2010	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		08/12/2010	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		08/12/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		08/12/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		08/12/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10010342
Sample ID: 10022266
Sample Date/Time: 08/11/2010 10:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10080264-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 760
pH (UNITS): 7.8
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		08/18/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		08/18/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		08/18/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		08/18/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		08/18/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		08/18/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		08/18/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		08/18/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		08/18/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		08/18/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		08/18/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		08/18/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		08/18/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		08/18/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		08/18/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		08/18/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		08/18/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		08/18/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		08/18/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		08/18/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		08/18/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		08/18/2010	0.9	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10010342
Sample ID: 10022266
Sample Date/Time: 08/11/2010 10:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10080264-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 760
pH (UNITS): 7.8
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		08/18/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		08/18/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		08/18/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		08/18/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		08/18/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		08/18/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		08/18/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		08/18/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		08/18/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		08/18/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		08/18/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		08/18/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		08/18/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		08/18/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		08/18/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		08/18/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		08/18/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		08/18/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		08/18/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		08/18/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		08/18/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		08/18/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		08/18/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		08/18/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		08/18/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		08/18/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		08/18/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10014206
Sample ID: 10028991
Sample Date/Time: 11/04/2010 09:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10110201-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1300
pH (UNITS): 7.6
Temperature (°C): 19.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

FTH TR hit for 11DCE, Verified 11/18, resampled 11/15. Resamples were ND.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		11/08/2010	TR	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		11/08/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		11/08/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		11/08/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		11/08/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		11/08/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		11/08/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		11/08/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		11/08/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		11/08/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		11/08/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		11/08/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		11/08/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		11/08/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		11/08/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		11/08/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		11/08/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		11/08/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		11/08/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		11/08/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		11/08/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10014206
Sample ID: 10028991
Sample Date/Time: 11/04/2010 09:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10110201-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1300
pH (UNITS): 7.6
Temperature (°C): 19.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

FTH TR hit for 11DCE, Verified 11/18, resampled 11/15. Resamples were ND.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		11/08/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		11/08/2010	2.3	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		11/08/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		11/08/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		11/08/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		11/08/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		11/08/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		11/08/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		11/08/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		11/08/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		11/08/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		11/08/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		11/08/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		11/08/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		11/08/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		11/08/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		11/08/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		11/08/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		11/08/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		11/08/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		11/08/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		11/08/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		11/08/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		11/08/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		11/08/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		11/08/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		11/08/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		11/08/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		11/08/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10014596
Sample ID: 10029760
Sample Date/Time: 11/15/2010 13:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10110478-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 852
pH (UNITS): 7.6
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RUSH; RESAMPLE #1

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		11/16/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		11/16/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		11/16/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		11/16/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		11/16/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		11/16/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		11/16/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		11/16/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		11/16/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		11/16/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		11/16/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		11/16/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		11/16/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		11/16/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		11/16/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		11/16/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		11/16/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		11/16/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		11/16/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		11/16/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		11/16/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10014596
Sample ID: 10029760
Sample Date/Time: 11/15/2010 13:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10110478-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 852
pH (UNITS): 7.6
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RUSH; RESAMPLE #1

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		11/16/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		11/16/2010	0.9	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		11/16/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		11/16/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		11/16/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		11/16/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		11/16/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		11/16/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		11/16/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		11/16/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		11/16/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		11/16/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		11/16/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		11/16/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		11/16/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		11/16/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		11/16/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		11/16/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		11/16/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		11/16/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		11/16/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		11/16/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		11/16/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		11/16/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		11/16/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		11/16/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		11/16/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10014597
Sample ID: 10029761
Sample Date/Time: 11/15/2010 13:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10110479-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 847
pH (UNITS): 7.8
Temperature (°C): 20.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RUSH; RESAMPLE #2

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		11/16/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		11/16/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		11/16/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		11/16/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		11/16/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		11/16/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		11/16/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		11/16/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		11/16/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		11/16/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		11/16/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		11/16/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		11/16/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		11/16/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		11/16/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		11/16/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		11/16/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		11/16/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		11/16/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		11/16/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		11/16/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10014597
Sample ID: 10029761
Sample Date/Time: 11/15/2010 13:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10110479-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 847
pH (UNITS): 7.8
Temperature (°C): 20.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RUSH; RESAMPLE #2

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		11/16/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		11/16/2010	0.9	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		11/16/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		11/16/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		11/16/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		11/16/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		11/16/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		11/16/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		11/16/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		11/16/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		11/16/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		11/16/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		11/16/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		11/16/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		11/16/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		11/16/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		11/16/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		11/16/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		11/16/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		11/16/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		11/16/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		11/16/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		11/16/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		11/16/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		11/16/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		11/16/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		11/16/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		11/16/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		11/16/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11001923
Sample ID: 11004995
Sample Date/Time: 02/17/2011 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11020432-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1300
pH (UNITS): 7.8
Temperature (°C): 19.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

FTH for CHTFEE Verified by Lab 3-9, resampled 3-10 Resamples show CHTFEE at lower levels, but still present.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		02/22/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		02/22/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		02/22/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		02/22/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		02/22/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		02/22/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		02/22/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		02/22/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		02/22/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		02/22/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		02/22/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		02/22/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		02/22/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		02/22/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		02/22/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		02/22/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		02/22/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		02/22/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		02/22/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		02/22/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		02/22/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		02/22/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		02/22/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		02/22/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		02/22/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		02/22/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		02/22/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		02/22/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		02/22/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		02/22/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		02/22/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		02/22/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		02/22/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		02/22/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		02/22/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		02/22/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		02/22/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		02/22/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		02/22/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		02/22/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		02/22/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		02/22/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11001923
Sample ID: 11004995
Sample Date/Time: 02/17/2011 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11020432-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1300
pH (UNITS): 7.8
Temperature (°C): 19.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

FTH for CHTFEE Verified by Lab 3-9, resampled 3-10 Resamples show CHTFEE at lower levels, but still present.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		02/22/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		02/22/2011	3.3	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		02/22/2011	2.9	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		02/22/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		02/22/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		02/22/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		02/22/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		02/22/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		02/22/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		02/22/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		02/22/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		02/22/2011	1.2	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		02/22/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		02/22/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		02/22/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		02/22/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		02/22/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		02/22/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		02/22/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		02/22/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		02/22/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		02/22/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		02/22/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		02/22/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		02/22/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		02/22/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		02/22/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		02/22/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		02/22/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		02/22/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		02/22/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		02/22/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		02/22/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		02/22/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		02/22/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		02/22/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		02/22/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		02/22/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		02/22/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11003069
Sample ID: 11007620
Sample Date/Time: 03/10/2011 08:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030236-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 738
pH (UNITS): 7.8
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RESAMPLE #1

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	*Qualifier: Validated Sample*							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/15/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/15/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/15/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/15/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/15/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/15/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/15/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/15/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/15/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/15/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/15/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/15/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11003069
Sample ID: 11007620
Sample Date/Time: 03/10/2011 08:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030236-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 738
pH (UNITS): 7.8
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RESAMPLE #1

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		03/15/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		03/15/2011	0.5	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/15/2011	1.1	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/15/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/15/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/15/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		03/15/2011	TR	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/15/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/15/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/15/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/15/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/15/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/15/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/15/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/15/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/15/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/15/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/15/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/15/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/15/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/15/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/15/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/15/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/15/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/15/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11003070
Sample ID: 11007621
Sample Date/Time: 03/10/2011 08:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030237-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 736
pH (UNITS): 7.8
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RESAMPLE #2

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/15/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/15/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/15/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/15/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/15/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/15/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/15/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/15/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/15/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/15/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/15/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/15/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11003070
Sample ID: 11007621
Sample Date/Time: 03/10/2011 08:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030237-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 736
pH (UNITS): 7.8
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RESAMPLE #2

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		03/15/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		03/15/2011	0.6	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/15/2011	1.1	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/15/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/15/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/15/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/15/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		03/15/2011	TR	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		03/15/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/15/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/15/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/15/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/15/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/15/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/15/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/15/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/15/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/15/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/15/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/15/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/15/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/15/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/15/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/15/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/15/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/15/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/15/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/15/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/15/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11003081
Sample ID: 11006738
Sample Date/Time: 03/14/2011 08:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030301-02
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 738
pH (UNITS): 8.
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		03/15/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		03/15/2011	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		03/15/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		03/15/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		03/15/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		03/15/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		03/15/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11006110
Sample ID: 11013335
Sample Date/Time: 06/09/2011 10:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: MARK GREENING
Monitoring Program: Title 22

Lab Sample Number: 11060259-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1400
pH (UNITS): 7.5
Temperature (°C): 19.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		06/15/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		06/15/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		06/15/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		06/15/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		06/15/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		06/15/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		06/15/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		06/15/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		06/15/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		06/15/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		06/15/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		06/15/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		06/15/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		06/15/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		06/15/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		06/15/2011	4.6	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11006110
Sample ID: 11013335
Sample Date/Time: 06/09/2011 10:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: MARK GREENING
Monitoring Program: Title 22

Lab Sample Number: 11060259-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1400
pH (UNITS): 7.5
Temperature (°C): 19.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		06/15/2011	2.6	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		06/15/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		06/15/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		06/15/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		06/15/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		06/15/2011	1.1	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		06/15/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		06/15/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		06/15/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		06/15/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		06/15/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		06/15/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		06/15/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		06/15/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		06/15/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		06/15/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		06/15/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		06/15/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		06/15/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		06/15/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		06/15/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		06/15/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		06/15/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		06/15/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		06/15/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		06/15/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		06/15/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		06/15/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		06/15/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11025392
Sample ID: 11036423
Sample Date/Time: 08/09/2011 11:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11080307-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 1300
pH (UNITS): 7.7
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		08/19/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		08/19/2011	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		08/19/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		08/19/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		08/19/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		08/19/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		08/19/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11025392
Sample ID: 11036505
Sample Date/Time: 08/09/2011 11:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11080307-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1300
pH (UNITS): 7.7
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		08/19/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		08/19/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		08/19/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		08/19/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		08/19/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		08/19/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		08/19/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		08/19/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		08/19/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		08/19/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		08/19/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		08/19/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		08/19/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		08/19/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		08/19/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		08/19/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		08/19/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		08/19/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		08/19/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		08/19/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		08/19/2011	TR	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11025392
Sample ID: 11036505
Sample Date/Time: 08/09/2011 11:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11080307-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1300
pH (UNITS): 7.7
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGED TO WASTE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		08/19/2011	TR	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		08/19/2011	3.2	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		08/19/2011	2.	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		08/19/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		08/19/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		08/19/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		08/19/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		08/19/2011	1.1	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		08/19/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		08/19/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		08/19/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		08/19/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		08/19/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		08/19/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		08/19/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		08/19/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		08/19/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		08/19/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		08/19/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		08/19/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		08/19/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		08/19/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		08/19/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		08/19/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		08/19/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		08/19/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		08/19/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		08/19/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		08/19/2011	TR	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		08/19/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		08/19/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11027767
Sample ID: 11040052
Sample Date/Time: 10/12/2011 10:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11100328-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 775
pH (UNITS): 7.9
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		10/20/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		10/20/2011	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		10/20/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		10/20/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		10/20/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		10/20/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		10/20/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11027767
Sample ID: 11040680
Sample Date/Time: 10/12/2011 10:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11100328-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 775
pH (UNITS): 7.9
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/14/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/14/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/14/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/14/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/14/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/14/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/14/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/14/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/14/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/14/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/14/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/14/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/14/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/14/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/14/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/14/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/14/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/14/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/14/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/14/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		10/14/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		10/14/2011	1.8	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 11027767
Sample ID: 11040680
Sample Date/Time: 10/12/2011 10:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11100328-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 775
pH (UNITS): 7.9
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/14/2011	0.8	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/14/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/14/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/14/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/14/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		10/14/2011	TR	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		10/14/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/14/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/14/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/14/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/14/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/14/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/14/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/14/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/14/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/14/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/14/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/14/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/14/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/14/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/14/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/14/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/14/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/14/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/14/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/14/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/14/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/14/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/14/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: ITO-LA/1
Station Type: WELL CASING
Perf Interval (ft bgs): 70-710
Aquifer: UNDEFINED

Well Owner: ITO-OZAWA FARMS
Well Name: Ito-Ozawa Old
City: LOS ALAMITOS

Sample Group ID: 10014609
Sample ID: 10029792
Sample Date/Time: 11/10/2010 11:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10110376-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1030
pH (UNITS): 7.9
Temperature (°C): 19.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: FLUSHED 5 MIN., PUMP RUNNING,,AGRATED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		11/17/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		11/17/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		11/17/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		11/17/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		11/17/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		11/17/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		11/17/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		11/17/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		11/17/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		11/17/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		11/17/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		11/17/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		11/17/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		11/17/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		11/17/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		11/17/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		11/17/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		11/17/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		11/17/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		11/17/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		11/17/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: ITO-LA/1
Station Type: WELL CASING
Perf Interval (ft bgs): 70-710
Aquifer: UNDEFINED

Well Owner: ITO-OZAWA FARMS
Well Name: Ito-Ozawa Old
City: LOS ALAMITOS

Sample Group ID: 10014609
Sample ID: 10029792
Sample Date/Time: 11/10/2010 11:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10110376-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1030
pH (UNITS): 7.9
Temperature (°C): 19.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: FLUSHED 5 MIN., PUMP RUNNING,,AGRATED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		11/17/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		11/17/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		11/17/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		11/17/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		11/17/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		11/17/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		11/17/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		11/17/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		11/17/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		11/17/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		11/17/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		11/17/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		11/17/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		11/17/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		11/17/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		11/17/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		11/17/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		11/17/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		11/17/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		11/17/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		11/17/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		11/17/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		11/17/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		11/17/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		11/17/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		11/17/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		11/17/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: ITO-LA/1
Station Type: WELL CASING
Perf Interval (ft bgs): 70-710
Aquifer: UNDEFINED

Well Owner: ITO-OZAWA FARMS
Well Name: Ito-Ozawa Old
City: LOS ALAMITOS

Sample Group ID: 11029352
Sample ID: 11041696
Sample Date/Time: 10/20/2011 11:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100572-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 951
pH (UNITS): 7.7
Temperature (°C): 19.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use ***Qualifier: Validated Sample***

Parameter Abbreviation	Parameter Name	Analysis Method	Dates Extract	Dates Analysis	Results Value	Results Units	Detection Limit Value	Detection Limit Units
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/27/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/27/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/27/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/27/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/27/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/27/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/27/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/27/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/27/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/27/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/27/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/27/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		10/27/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: ITO-LA/1
Station Type: WELL CASING
Perf Interval (ft bgs): 70-710
Aquifer: UNDEFINED

Well Owner: ITO-OZAWA FARMS
Well Name: Ito-Ozawa Old
City: LOS ALAMITOS

Sample Group ID: 11029352
Sample ID: 11041696
Sample Date/Time: 10/20/2011 11:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100572-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 951
pH (UNITS): 7.7
Temperature (°C): 19.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/27/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/27/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/27/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/27/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		10/27/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/27/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/27/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/27/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/27/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/27/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/27/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/27/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/27/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/27/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/27/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/27/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/27/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/27/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/27/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/27/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/27/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/27/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/27/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: ITO-LAG3/1
Station Type: WELL CASING
Perf Interval (ft bgs): 170-780
Aquifer: UNDEFINED

Well Owner: ITO-OZAWA FARMS
Well Name: Ito-Ozawa New
City: LOS ALAMITOS

Sample Group ID: 10013790
Sample ID: 10027612
Sample Date/Time: 10/21/2010 12:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10100633-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 430
pH (UNITS): 8.2
Temperature (°C): 18.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: PUMP RUNNING; FLUSHED 5 MIN.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/23/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/23/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/23/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/23/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/23/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/23/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/23/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: ITO-LAG3/1
Station Type: WELL CASING
Perf Interval (ft bgs): 170-780
Aquifer: UNDEFINED

Well Owner: ITO-OZAWA FARMS
Well Name: Ito-Ozawa New
City: LOS ALAMITOS

Sample Group ID: 10013790
Sample ID: 10027612
Sample Date/Time: 10/21/2010 12:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10100633-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 430
pH (UNITS): 8.2
Temperature (°C): 18.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: PUMP RUNNING; FLUSHED 5 MIN.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		10/23/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/23/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/23/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/23/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/23/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/23/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/23/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/23/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/23/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/23/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/23/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/23/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/23/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/23/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/23/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/23/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/23/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/23/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/23/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/23/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: ITO-LAG3/1
Station Type: WELL CASING
Perf Interval (ft bgs): 170-780
Aquifer: UNDEFINED

Well Owner: ITO-OZAWA FARMS
Well Name: Ito-Ozawa New
City: LOS ALAMITOS

Sample Group ID: 11029351
Sample ID: 11041695
Sample Date/Time: 10/20/2011 11:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100571-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 405
pH (UNITS): 8.1
Temperature (°C): 18.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use ***Qualifier: Validated Sample***

Parameter Abbreviation	Parameter Name	Analysis Method	Dates Extract	Dates Analysis	Results Value	Results Units	Detection Limit Value	Detection Limit Units
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/27/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/27/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/27/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/27/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/27/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/27/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/27/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/27/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/27/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/27/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/27/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/27/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		10/27/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: ITO-LAG3/1
Station Type: WELL CASING
Perf Interval (ft bgs): 170-780
Aquifer: UNDEFINED

Well Owner: ITO-OZAWA FARMS
Well Name: Ito-Ozawa New
City: LOS ALAMITOS

Sample Group ID: 11029351
Sample ID: 11041695
Sample Date/Time: 10/20/2011 11:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100571-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 405
pH (UNITS): 8.1
Temperature (°C): 18.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/27/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/27/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/27/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/27/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		10/27/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/27/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/27/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/27/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/27/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/27/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/27/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/27/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/27/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/27/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/27/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/27/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/27/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/27/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/27/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/27/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/27/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/27/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/27/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: NVLR-LAH1/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: NAVAL RECREATION STATION
Well Name:
City: LOS ALAMITOS

Sample Group ID: 10014608
Sample ID: 10029791
Sample Date/Time: 11/10/2010 08:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10110375-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 468
pH (UNITS): 8.
Temperature (°C): 18.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: FLUSHED 5 MIN., PUMP RUNNING

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		11/17/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		11/17/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		11/17/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		11/17/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		11/17/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		11/17/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		11/17/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		11/17/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		11/17/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		11/17/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		11/17/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		11/17/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		11/17/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		11/17/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		11/17/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		11/17/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		11/17/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		11/17/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		11/17/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		11/17/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		11/17/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: NVLR-LAH1/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: NAVAL RECREATION STATION
Well Name:
City: LOS ALAMITOS

Sample Group ID: 10014608
Sample ID: 10029791
Sample Date/Time: 11/10/2010 08:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10110375-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 468
pH (UNITS): 8.
Temperature (°C): 18.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: FLUSHED 5 MIN., PUMP RUNNING

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		11/17/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		11/17/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		11/17/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		11/17/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		11/17/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		11/17/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		11/17/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		11/17/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		11/17/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		11/17/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		11/17/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		11/17/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		11/17/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		11/17/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		11/17/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		11/17/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		11/17/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		11/17/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		11/17/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		11/17/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		11/17/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		11/17/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		11/17/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		11/17/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		11/17/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		11/17/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		11/17/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		11/17/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		11/17/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: NVLR-LAH1/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: NAVAL RECREATION STATION
Well Name:
City: LOS ALAMITOS

Sample Group ID: 11029350
Sample ID: 11041694
Sample Date/Time: 10/20/2011 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100570-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 441
pH (UNITS): 7.8
Temperature (°C): 18.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/27/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/27/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/27/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/27/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/27/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/27/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/27/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/27/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/27/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/27/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/27/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/27/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		10/27/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: NVLR-LAH1/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: NAVAL RECREATION STATION
Well Name:
City: LOS ALAMITOS

Sample Group ID: 11029350
Sample ID: 11041694
Sample Date/Time: 10/20/2011 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100570-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 441
pH (UNITS): 7.8
Temperature (°C): 18.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/27/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/27/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/27/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/27/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/27/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		10/27/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		10/27/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/27/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/27/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/27/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/27/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/27/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/27/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/27/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/27/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/27/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/27/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/27/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/27/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/27/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/27/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/27/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/27/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/27/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/27/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/27/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/27/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: NVLW-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): 200-420
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 10013789
Sample ID: 10027611
Sample Date/Time: 10/21/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10100632-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 448
pH (UNITS): 8.
Temperature (°C): 18.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: PUMP RUNNING; FLUSHED 5 MIN.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/23/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/23/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/23/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/23/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/23/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/23/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/23/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: NVLW-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): 200-420
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 10013789
Sample ID: 10027611
Sample Date/Time: 10/21/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10100632-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 448
pH (UNITS): 8.
Temperature (°C): 18.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: PUMP RUNNING; FLUSHED 5 MIN.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		10/23/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/23/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/23/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/23/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/23/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/23/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/23/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/23/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/23/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/23/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/23/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/23/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/23/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/23/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/23/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/23/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/23/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/23/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/23/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/23/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: NVLW-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): 200-420
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 11029324
Sample ID: 11041666
Sample Date/Time: 10/19/2011 10:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100523-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 453
pH (UNITS): 7.9
Temperature (°C): 18.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/24/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/24/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/24/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/24/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/24/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/24/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: NVLW-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): 200-420
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 11029324
Sample ID: 11041666
Sample Date/Time: 10/19/2011 10:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100523-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 453
pH (UNITS): 7.9
Temperature (°C): 18.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/24/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/24/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/24/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/24/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		10/24/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/24/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/24/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/24/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/24/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/24/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/24/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/24/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/24/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/24/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/24/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/24/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/24/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/24/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/24/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/24/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: NVLW-SB2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 207-407
Aquifer: UNDEFINED

Well Owner: NAVAL WEAPONS STATION
Well Name:
City: SEAL BEACH

Sample Group ID: 10001268
Sample ID: 10003663
Sample Date/Time: 01/26/2010 10:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10010617-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 558
pH (UNITS): 7.9
Temperature (°C): 19.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: AG WELL PUMP TEST AT SBNWS; AG WELL DEVELOPMENTAT SBNWS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		02/03/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		02/03/2010	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		02/03/2010	ND	ug/L	.1	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		02/03/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		02/03/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		02/03/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: NVLW-SB2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 207-407
Aquifer: UNDEFINED

Well Owner: NAVAL WEAPONS STATION
Well Name:
City: SEAL BEACH

Sample Group ID: 10001268
Sample ID: 10004094
Sample Date/Time: 01/26/2010 10:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10010617-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 558
pH (UNITS): 7.9
Temperature (°C): 19.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: AG WELL PUMP TEST AT SBNWS; AG WELL DEVELOPMENTAT SBNWS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		01/28/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		01/28/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		01/28/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		01/28/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		01/28/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		01/28/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		01/28/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		01/28/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		01/28/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		01/28/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		01/28/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		01/28/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		01/28/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		01/28/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		01/28/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		01/28/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		01/28/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		01/28/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		01/28/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		01/28/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		01/28/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		01/28/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		01/28/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		01/28/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		01/28/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		01/28/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		01/28/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		01/28/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		01/28/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		01/28/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		01/28/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		01/28/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		01/28/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		01/28/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		01/28/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		01/28/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		01/28/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		01/28/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		01/28/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		01/28/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		01/28/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		01/28/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: NVLW-SB2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 207-407
Aquifer: UNDEFINED

Well Owner: NAVAL WEAPONS STATION
Well Name:
City: SEAL BEACH

Sample Group ID: 10001268
Sample ID: 10004094
Sample Date/Time: 01/26/2010 10:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10010617-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 558
pH (UNITS): 7.9
Temperature (°C): 19.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: AG WELL PUMP TEST AT SBNWS; AG WELL DEVELOPMENTAT SBNWS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		01/28/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		01/28/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		01/28/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		01/28/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		01/28/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		01/28/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		01/28/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		01/28/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		01/28/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		01/28/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		01/28/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		01/28/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		01/28/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		01/28/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		01/28/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		01/28/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		01/28/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		01/28/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		01/28/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		01/28/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		01/28/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		01/28/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		01/28/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		01/28/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		01/28/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		01/28/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		01/28/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		01/28/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		01/28/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		01/28/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		01/28/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		01/28/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		01/28/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		01/28/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		01/28/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		01/28/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/1
Station Type: WELL CASING
Perf Interval (ft bgs): 88-113
Aquifer: C-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000519
Sample ID: 10002096
Sample Date/Time: 01/13/2010 09:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010341-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 698
pH (UNITS): 7.9
Temperature (°C): 22.4
Dissolved Oxygen (mg/L): 0.
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 60 GAL. STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		01/15/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		01/15/2010	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		01/15/2010	ND	ug/L	.1	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		01/15/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		01/15/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		01/15/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/1
Station Type: WELL CASING
Perf Interval (ft bgs): 88-113
Aquifer: C-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000519
Sample ID: 10002473
Sample Date/Time: 01/13/2010 09:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010341-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 698
pH (UNITS): 7.9
Temperature (°C): 22.4
Dissolved Oxygen (mg/L): 0.
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 60 GAL. STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		01/16/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		01/16/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		01/16/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		01/16/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		01/16/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		01/16/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		01/16/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		01/16/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		01/16/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		01/16/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		01/16/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		01/16/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/1
Station Type: WELL CASING
Perf Interval (ft bgs): 88-113
Aquifer: C-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000519
Sample ID: 10002473
Sample Date/Time: 01/13/2010 09:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010341-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 698
pH (UNITS): 7.9
Temperature (°C): 22.4
Dissolved Oxygen (mg/L): 0.
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 60 GAL. STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		01/16/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		01/16/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		01/16/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		01/16/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		01/16/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		01/16/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		01/16/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		01/16/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		01/16/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		01/16/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		01/16/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		01/16/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		01/16/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		01/16/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		01/16/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		01/16/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		01/16/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		01/16/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		01/16/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		01/16/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		01/16/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		01/16/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		01/16/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/2
Station Type: WELL CASING
Perf Interval (ft bgs): 139-154
Aquifer: B-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000520
Sample ID: 10002097
Sample Date/Time: 01/13/2010 11:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010342-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 823
pH (UNITS): 7.9
Temperature (°C): 21.5
Dissolved Oxygen (mg/L): 0.
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 80 GAL. STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		01/15/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		01/15/2010	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		01/15/2010	ND	ug/L	.1	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		01/15/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		01/15/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		01/15/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/2
Station Type: WELL CASING
Perf Interval (ft bgs): 139-154
Aquifer: B-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000520
Sample ID: 10002474
Sample Date/Time: 01/13/2010 11:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010342-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 823
pH (UNITS): 7.9
Temperature (°C): 21.5
Dissolved Oxygen (mg/L): 0.
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 80 GAL. STORM DRAIN
02/03/10 PV WELL WAS RECENTLY DRILLED (NOV. 2009) TOLUENE HIT IS MOST LIKELY DUE TO DRILLING OPERATIONS. NY SPOKE TO DAVID BOLIN AND IT WAS DECIDED THERE ARE NO RE-SAMPLE NEEDED

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	*Qualifier: Validated Sample*							
1112PC	1,1,1,2-Tetrachloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		01/16/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		01/16/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		01/16/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		01/16/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		01/16/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		01/16/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		01/16/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		01/16/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		01/16/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		01/16/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		01/16/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/2
Station Type: WELL CASING
Perf Interval (ft bgs): 139-154
Aquifer: B-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000520
Sample ID: 10002474
Sample Date/Time: 01/13/2010 11:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010342-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 823
pH (UNITS): 7.9
Temperature (°C): 21.5
Dissolved Oxygen (mg/L): 0.
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 80 GAL. STORM DRAIN
02/03/10 PV WELL WAS RECENTLY DRILLED (NOV. 2009) TOLUENE HIT IS MOST LIKELY DUE TO DRILLING OPERATIONS. NY SPOKE TO DAVID BOLIN AND IT WAS DECIDED THERE ARE NO RE-SAMPLE NEEDED

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHBr3	Bromoform	524.2		01/16/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		01/16/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		01/16/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		01/16/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		01/16/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		01/16/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		01/16/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		01/16/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		01/16/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		01/16/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		01/16/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		01/16/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		01/16/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		01/16/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		01/16/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		01/16/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		01/16/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		01/16/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		01/16/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		01/16/2010	TR	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		01/16/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		01/16/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		01/16/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		01/16/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/3
Station Type: WELL CASING
Perf Interval (ft bgs): 204-244
Aquifer: A-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000521
Sample ID: 10002098
Sample Date/Time: 01/13/2010 10:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010343-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 1690
pH (UNITS): 7.9
Temperature (°C): 22.1
Dissolved Oxygen (mg/L): 0.05
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 127 GAL. STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		01/15/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		01/15/2010	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		01/15/2010	ND	ug/L	.1	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		01/15/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		01/15/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		01/15/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/3
Station Type: WELL CASING
Perf Interval (ft bgs): 204-244
Aquifer: A-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000521
Sample ID: 10002475
Sample Date/Time: 01/13/2010 10:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010343-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1690
pH (UNITS): 7.9
Temperature (°C): 22.1
Dissolved Oxygen (mg/L): 0.05
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 127 GAL. STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		01/16/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		01/16/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		01/16/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		01/16/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		01/16/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		01/16/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		01/16/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		01/16/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		01/16/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		01/16/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		01/16/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		01/16/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/3
Station Type: WELL CASING
Perf Interval (ft bgs): 204-244
Aquifer: A-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000521
Sample ID: 10002475
Sample Date/Time: 01/13/2010 10:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010343-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1690
pH (UNITS): 7.9
Temperature (°C): 22.1
Dissolved Oxygen (mg/L): 0.05
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 127 GAL. STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		01/16/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		01/16/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		01/16/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		01/16/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		01/16/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		01/16/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		01/16/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		01/16/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		01/16/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		01/16/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		01/16/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		01/16/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		01/16/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		01/16/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		01/16/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		01/16/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		01/16/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		01/16/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		01/16/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		01/16/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		01/16/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		01/16/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		01/16/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/4
Station Type: WELL CASING
Perf Interval (ft bgs): 333-358
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000522
Sample ID: 10002099
Sample Date/Time: 01/13/2010 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010344-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 10000
pH (UNITS): 7.2
Temperature (°C): 22.8
Dissolved Oxygen (mg/L): 0.1
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 192 GAL. STORM DRAIN

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		01/15/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		01/15/2010	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		01/15/2010	ND	ug/L	.1	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		01/15/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		01/15/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		01/15/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/4
Station Type: WELL CASING
Perf Interval (ft bgs): 333-358
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000522
Sample ID: 10002476
Sample Date/Time: 01/13/2010 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010344-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 10000
pH (UNITS): 7.2
Temperature (°C): 22.8
Dissolved Oxygen (mg/L): 0.1
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 192 GAL. STORM DRAIN
02/03/10 PV WELL WAS RECENTLY DRILLED (NOV. 2009) TOLUENE HIT IS MOST LIKELY DUE TO DRILLING OPERATIONS. NY SPOKE TO DAVID BOLIN AND IT WAS DECIDED THERE ARE NO RE-SAMPLE NEEDED

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		01/16/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		01/16/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		01/16/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		01/16/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		01/16/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		01/16/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		01/16/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		01/16/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		01/16/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		01/16/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		01/16/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-34X40/4
Station Type: WELL CASING
Perf Interval (ft bgs): 333-358
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000522
Sample ID: 10002476
Sample Date/Time: 01/13/2010 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/JIM CAVER
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010344-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 10000
pH (UNITS): 7.2
Temperature (°C): 22.8
Dissolved Oxygen (mg/L): 0.1
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 192 GAL. STORM DRAIN
02/03/10 PV WELL WAS RECENTLY DRILLED (NOV. 2009) TOLUENE HIT IS MOST LIKELY DUE TO DRILLING OPERATIONS. NY SPOKE TO DAVID BOLIN AND IT WAS DECIDED THERE ARE NO RE-SAMPLE NEEDED

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHBr3	Bromoform	524.2		01/16/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		01/16/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		01/16/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		01/16/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		01/16/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		01/16/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		01/16/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		01/16/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		01/16/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		01/16/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		01/16/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		01/16/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		01/16/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		01/16/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		01/16/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		01/16/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		01/16/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		01/16/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		01/16/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		01/16/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		01/16/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		01/16/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		01/16/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		01/16/2010	TR	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		01/16/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		01/16/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		01/16/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		01/16/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1Y/1
Station Type: WELL CASING
Perf Interval (ft bgs): 264-294
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000494
Sample ID: 10001837
Sample Date/Time: 01/12/2010 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010284-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 718
pH (UNITS): 8.1
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): 0.02
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 157 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		01/14/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		01/14/2010	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		01/14/2010	ND	ug/L	.1	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		01/14/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		01/14/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		01/14/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1Y/1
Station Type: WELL CASING
Perf Interval (ft bgs): 264-294
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000494
Sample ID: 10002072
Sample Date/Time: 01/12/2010 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010284-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 718
pH (UNITS): 8.1
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): 0.02
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 157 GAL. TO DIRT

01/29/10 PV WELL WAS RECENTLY DRILLED IN NOVEMBER 2009. TOLUENE IS MOST LIKELY FROM DRILLING EQUIPMENT. NO RESAMPLE PER NY (01/18/10). RESULT CONFIRMED BY LY IN LAB (01/28/10).

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		01/14/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		01/14/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		01/14/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		01/14/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		01/14/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		01/14/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		01/14/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		01/14/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		01/14/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		01/14/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		01/14/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		01/14/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		01/14/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		01/14/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		01/14/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		01/14/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		01/14/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		01/14/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		01/14/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		01/14/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35J1Y/1
Station Type: WELL CASING
Perf Interval (ft bgs): 264-294
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000494
Sample ID: 10002072
Sample Date/Time: 01/12/2010 10:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010284-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 718
pH (UNITS): 8.1
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): 0.02
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 157 GAL. TO DIRT

01/29/10 PV WELL WAS RECENTLY DRILLED IN NOVEMBER 2009. TOLUENE IS MOST LIKELY FROM DRILLING EQUIPMENT. NO RESAMPLE PER NY (01/18/10). RESULT CONFIRMED BY LY IN LAB (01/28/10).

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHBr3	Bromoform	524.2		01/14/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		01/14/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		01/14/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		01/14/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		01/14/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		01/14/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		01/14/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		01/14/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		01/14/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		01/14/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		01/14/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		01/14/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		01/14/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		01/14/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		01/14/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		01/14/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		01/14/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		01/14/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		01/14/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		01/14/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		01/14/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		01/14/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		01/14/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		01/14/2010	TR	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		01/14/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		01/14/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		01/14/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		01/14/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 130-170
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000540
Sample ID: 10002103
Sample Date/Time: 01/14/2010 13:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS/BRIAN OKEY
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010386-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 683
pH (UNITS): 7.8
Temperature (°C): 21.7
Dissolved Oxygen (mg/L): 0.04
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 545 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		01/15/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		01/15/2010	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		01/15/2010	ND	ug/L	.1	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		01/15/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		01/15/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		01/15/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 130-170
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000540
Sample ID: 10003109
Sample Date/Time: 01/14/2010 13:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS/BRIAN OKEY
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010386-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 683
pH (UNITS): 7.8
Temperature (°C): 21.7
Dissolved Oxygen (mg/L): 0.04
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 545 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		01/18/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		01/18/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		01/18/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		01/18/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		01/18/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		01/18/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		01/18/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		01/18/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		01/18/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		01/18/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		01/18/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		01/18/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		01/18/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		01/18/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		01/18/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		01/18/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		01/18/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		01/18/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		01/18/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		01/18/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		01/18/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 130-170
Aquifer: A ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000540
Sample ID: 10003109
Sample Date/Time: 01/14/2010 13:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS/BRIAN OKEY
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010386-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 683
pH (UNITS): 7.8
Temperature (°C): 21.7
Dissolved Oxygen (mg/L): 0.04
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 545 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		01/18/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		01/18/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		01/18/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		01/18/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		01/18/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		01/18/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		01/18/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		01/18/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		01/18/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		01/18/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		01/18/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		01/18/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		01/18/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		01/18/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		01/18/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		01/18/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		01/18/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		01/18/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		01/18/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		01/18/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		01/18/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		01/18/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		01/18/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		01/18/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		01/18/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		01/18/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		01/18/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/2
Station Type: WELL CASING
Perf Interval (ft bgs): 193-243
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000541
Sample ID: 10002104
Sample Date/Time: 01/14/2010 13:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS/BRIAN OKEY
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010387-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 1760
pH (UNITS): 7.7
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): 0.05
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 555 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		01/15/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		01/15/2010	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		01/15/2010	ND	ug/L	.1	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		01/15/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		01/15/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		01/15/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/2
Station Type: WELL CASING
Perf Interval (ft bgs): 193-243
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000541
Sample ID: 10003110
Sample Date/Time: 01/14/2010 13:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS/BRIAN OKEY
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010387-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1760
pH (UNITS): 7.7
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): 0.05
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 555 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		01/18/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		01/18/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		01/18/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		01/18/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		01/18/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		01/18/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		01/18/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		01/18/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		01/18/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		01/18/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		01/18/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		01/18/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		01/18/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		01/18/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		01/18/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		01/18/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		01/18/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		01/18/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		01/18/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		01/18/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		01/18/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1/2
Station Type: WELL CASING
Perf Interval (ft bgs): 193-243
Aquifer: I ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000541
Sample ID: 10003110
Sample Date/Time: 01/14/2010 13:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS/BRIAN OKEY
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010387-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1760
pH (UNITS): 7.7
Temperature (°C): 21.9
Dissolved Oxygen (mg/L): 0.05
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 555 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		01/18/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		01/18/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		01/18/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		01/18/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		01/18/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		01/18/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		01/18/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		01/18/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		01/18/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		01/18/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		01/18/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		01/18/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		01/18/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		01/18/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		01/18/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		01/18/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		01/18/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		01/18/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		01/18/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		01/18/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		01/18/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		01/18/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		01/18/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		01/18/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		01/18/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		01/18/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		01/18/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		01/18/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		01/18/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1V/1
Station Type: WELL CASING
Perf Interval (ft bgs): 90-110
Aquifer: C-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000495
Sample ID: 10001838
Sample Date/Time: 01/12/2010 11:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010285-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 3010
pH (UNITS): 6.8
Temperature (°C): 21.8
Dissolved Oxygen (mg/L): 0.
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 53 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		01/14/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		01/14/2010	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		01/14/2010	ND	ug/L	.1	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		01/14/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		01/14/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		01/14/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1V/1
Station Type: WELL CASING
Perf Interval (ft bgs): 90-110
Aquifer: C-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000495
Sample ID: 10002073
Sample Date/Time: 01/12/2010 11:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010285-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 3010
pH (UNITS): 6.8
Temperature (°C): 21.8
Dissolved Oxygen (mg/L): 0.
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 53 GAL. TO DIRT

01/29/10 PV WELL WAS RECENTLY DRILLED IN OCTOBER 2009. TOLUENE IS MOST LIKELY FROM DRILLING EQUIPMENT. NO RESAMPLE PER NY (01/18/10). RESULT CONFIRMED BY LY IN LAB (01/28/10).

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		01/14/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		01/14/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		01/14/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		01/14/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		01/14/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		01/14/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		01/14/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		01/14/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		01/14/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		01/14/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		01/14/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		01/14/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		01/14/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		01/14/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		01/14/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		01/14/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		01/14/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		01/14/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		01/14/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		01/14/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1V/1
Station Type: WELL CASING
Perf Interval (ft bgs): 90-110
Aquifer: C-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000495
Sample ID: 10002073
Sample Date/Time: 01/12/2010 11:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: SUBMERSIBLE PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010285-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 3010
pH (UNITS): 6.8
Temperature (°C): 21.8
Dissolved Oxygen (mg/L): 0.
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 53 GAL. TO DIRT

01/29/10 PV WELL WAS RECENTLY DRILLED IN OCTOBER 2009. TOLUENE IS MOST LIKELY FROM DRILLING EQUIPMENT. NO RESAMPLE PER NY (01/18/10). RESULT CONFIRMED BY LY IN LAB (01/28/10).

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHBr3	Bromoform	524.2		01/14/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		01/14/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		01/14/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		01/14/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		01/14/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		01/14/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		01/14/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		01/14/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		01/14/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		01/14/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		01/14/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		01/14/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		01/14/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		01/14/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		01/14/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		01/14/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		01/14/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		01/14/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		01/14/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		01/14/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		01/14/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		01/14/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		01/14/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		01/14/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		01/14/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		01/14/2010	0.6	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		01/14/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		01/14/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		01/14/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		01/14/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: OCWD-35K1Y/1
Station Type: WELL CASING
Perf Interval (ft bgs): 366-386
Aquifer: I-ZONE

Well Owner: ORANGE COUNTY WATER DISTRIC
Well Name:
City: SEAL BEACH

Sample Group ID: 10000539
Sample ID: 10002102
Sample Date/Time: 01/14/2010 12:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: AIRLIFT
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS/BRIAN OKEY
Monitoring Program: Alamitos Barrier WQ Monitoring

Lab Sample Number: 10010385-02
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 375
pH (UNITS): 8.3
Temperature (°C): 22.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: 205 GAL. TO DIRT

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		01/15/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		01/15/2010	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		01/15/2010	ND	ug/L	.1	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		01/15/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		01/15/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		01/15/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: PURS-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: PURSCHE, ROY
Well Name:
City: WESTMINSTER

Sample Group ID: 10012438
Sample ID: 10024329
Sample Date/Time: 09/14/2010 10:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10090288-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 7970
pH (UNITS): 7.
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/15/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/15/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/15/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/15/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/15/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/15/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/15/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/15/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/15/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/15/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/15/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/15/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/15/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/15/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/15/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/15/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/15/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/15/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/15/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/15/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/15/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/15/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/15/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/15/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/15/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/15/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/15/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/15/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/15/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/15/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/15/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/15/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/15/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/15/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/15/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/15/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/15/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/15/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		09/15/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		09/15/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/15/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/15/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		09/15/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/15/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: PURS-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: PURSCHE, ROY
Well Name:
City: WESTMINSTER

Sample Group ID: 10012438
Sample ID: 10024329
Sample Date/Time: 09/14/2010 10:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10090288-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 7970
pH (UNITS): 7.
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		09/15/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		09/15/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		09/15/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/15/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/15/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/15/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/15/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/15/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		09/15/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/15/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/15/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/15/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/15/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/15/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/15/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/15/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/15/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/15/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/15/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/15/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/15/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/15/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/15/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/15/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/15/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/15/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/15/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/15/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/15/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/15/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/15/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/15/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/15/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/15/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: PURS-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: PURSCHE, ROY
Well Name:
City: WESTMINSTER

Sample Group ID: 10012438
Sample ID: 10025044
Sample Date/Time: 09/14/2010 10:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10090288-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 7970
pH (UNITS): 7.
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		09/15/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		09/15/2010	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		09/15/2010	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		09/15/2010	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		09/15/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		09/15/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		09/15/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: PURS-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: PURSCHE, ROY
Well Name:
City: WESTMINSTER

Sample Group ID: 11003041
Sample ID: 11006274
Sample Date/Time: 03/10/2011 11:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Talbert Barrier Annual Report

Lab Sample Number: 11030252-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 6120
pH (UNITS): 7.3
Temperature (°C): 17.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		03/12/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		03/12/2011	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		03/12/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		03/12/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		03/12/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		03/12/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		03/12/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: PURS-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: PURSCHE, ROY
Well Name:
City: WESTMINSTER

Sample Group ID: 11003041
Sample ID: 11006949
Sample Date/Time: 03/10/2011 11:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Talbert Barrier Annual Report

Lab Sample Number: 11030252-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 6120
pH (UNITS): 7.3
Temperature (°C): 17.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/11/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/11/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/11/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/11/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/11/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/11/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/11/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/11/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/11/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/11/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/11/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/11/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/11/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/11/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/11/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/11/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/11/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/11/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/11/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/11/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		03/11/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		03/11/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: PURS-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: PURSCHE, ROY
Well Name:
City: WESTMINSTER

Sample Group ID: 11003041
Sample ID: 11006949
Sample Date/Time: 03/10/2011 11:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Talbert Barrier Annual Report

Lab Sample Number: 11030252-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 6120
pH (UNITS): 7.3
Temperature (°C): 17.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/11/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/11/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/11/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/11/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/11/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		03/11/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/11/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/11/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/11/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/11/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/11/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/11/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/11/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/11/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/11/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/11/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/11/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/11/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/11/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/11/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/11/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/11/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/11/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/11/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/11/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/11/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/11/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: PURS-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: PURSCHE, ROY
Well Name:
City: WESTMINSTER

Sample Group ID: 11026374
Sample ID: 11035776
Sample Date/Time: 08/25/2011 12:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11080732-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 6770
pH (UNITS): 7.5
Temperature (°C): 22.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/02/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/02/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/02/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/02/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/02/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/02/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/02/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/02/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/02/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/02/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/02/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/02/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/02/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/02/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/02/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/02/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/02/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/02/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/02/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/02/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		09/02/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		09/02/2011	TR	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: PURS-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: PURSCHE, ROY
Well Name:
City: WESTMINSTER

Sample Group ID: 11026374
Sample ID: 11035776
Sample Date/Time: 08/25/2011 12:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11080732-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 6770
pH (UNITS): 7.5
Temperature (°C): 22.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/02/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		09/02/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/02/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/02/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/02/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		09/02/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		09/02/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/02/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/02/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/02/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/02/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/02/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/02/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/02/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/02/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/02/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/02/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/02/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/02/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/02/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/02/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/02/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/02/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/02/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/02/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/02/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/02/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: PURS-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: PURSCHE, ROY
Well Name:
City: WESTMINSTER

Sample Group ID: 11026374
Sample ID: 11037282
Sample Date/Time: 08/25/2011 12:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11080732-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 6770
pH (UNITS): 7.5
Temperature (°C): 22.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		08/25/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		08/25/2011	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		08/25/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		08/25/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		08/25/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		08/25/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		08/25/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: PURS-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: PURSCHE, ROY
Well Name:
City: WESTMINSTER

Sample Group ID: 11029328
Sample ID: 11041670
Sample Date/Time: 10/19/2011 09:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11100527-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 6110
pH (UNITS): 7.3
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RESAMPLE #1 FOR CHTFEE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/24/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/24/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/24/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/24/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/24/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/24/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: PURS-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: PURSCHE, ROY
Well Name:
City: WESTMINSTER

Sample Group ID: 11029328
Sample ID: 11041670
Sample Date/Time: 10/19/2011 09:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11100527-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 6110
pH (UNITS): 7.3
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RESAMPLE #1 FOR CHTFEE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/24/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/24/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/24/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/24/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		10/24/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/24/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/24/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/24/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/24/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/24/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/24/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/24/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/24/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/24/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/24/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/24/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/24/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/24/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/24/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/24/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: PURS-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: PURSCHE, ROY
Well Name:
City: WESTMINSTER

Sample Group ID: 11029329
Sample ID: 11041671
Sample Date/Time: 10/19/2011 09:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11100528-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 6920
pH (UNITS): 7.4
Temperature (°C): 20.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RESAMPLE #2 FOR CHTFEE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/25/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/25/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/25/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/25/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/25/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/25/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/25/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/25/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/25/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/25/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/25/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/25/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/25/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/25/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/25/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/25/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/25/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/25/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/25/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/25/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/25/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/25/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/25/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/25/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/25/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/25/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/25/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/25/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/25/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/25/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/25/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/25/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/25/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/25/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/25/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/25/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/25/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/25/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/25/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/25/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/25/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/25/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: PURS-SB/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: PURSCHE, ROY
Well Name:
City: WESTMINSTER

Sample Group ID: 11029329
Sample ID: 11041671
Sample Date/Time: 10/19/2011 09:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11100528-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 6920
pH (UNITS): 7.4
Temperature (°C): 20.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RESAMPLE #2 FOR CHTFEE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		10/25/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		10/25/2011	TR	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/25/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		10/25/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/25/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/25/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/25/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/25/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/25/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/25/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/25/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		10/25/2011	TR	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		10/25/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/25/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/25/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/25/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/25/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/25/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/25/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/25/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/25/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/25/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/25/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/25/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/25/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/25/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/25/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/25/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/25/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/25/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/25/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/25/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/25/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/25/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/25/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/25/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/25/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/25/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/25/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-5A1/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name: Navy Well No. 1
City: SEAL BEACH

Sample Group ID: 10013786
Sample ID: 10027608
Sample Date/Time: 10/21/2010 10:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10100629-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 451
pH (UNITS): 7.9
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: PUMP RUNNING; FLUSHED 5 MIN.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/23/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/23/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/23/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/23/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/23/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/23/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/23/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-5A1/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name: Navy Well No. 1
City: SEAL BEACH

Sample Group ID: 10013786
Sample ID: 10027608
Sample Date/Time: 10/21/2010 10:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10100629-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 451
pH (UNITS): 7.9
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: PUMP RUNNING; FLUSHED 5 MIN.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		10/23/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/23/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/23/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/23/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/23/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/23/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/23/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/23/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/23/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/23/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/23/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/23/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/23/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/23/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/23/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/23/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/23/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/23/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/23/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/23/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-5A1/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name: Navy Well No. 1
City: SEAL BEACH

Sample Group ID: 11029322
Sample ID: 11041664
Sample Date/Time: 10/19/2011 10:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100521-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 457
pH (UNITS): 7.7
Temperature (°C): 19.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use ***Qualifier: Validated Sample***

Parameter Abbreviation	Parameter Name	Analysis Method	Dates Extract	Dates Analysis	Results Value	Results Units	Detection Limit Value	Detection Limit Units
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/24/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/24/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/24/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/24/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/24/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/24/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-5A1/1
Station Type: WELL CASING
Perf Interval (ft bgs): -
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name: Navy Well No. 1
City: SEAL BEACH

Sample Group ID: 11029322
Sample ID: 11041664
Sample Date/Time: 10/19/2011 10:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100521-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 457
pH (UNITS): 7.7
Temperature (°C): 19.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/24/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/24/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/24/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/24/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		10/24/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/24/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/24/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/24/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/24/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/24/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/24/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/24/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/24/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/24/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/24/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/24/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/24/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/24/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/24/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/24/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-5A3/1
Station Type: WELL CASING
Perf Interval (ft bgs): 210-390
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 10013787
Sample ID: 10027609
Sample Date/Time: 10/21/2010 10:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10100630-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 430
pH (UNITS): 8.
Temperature (°C): 19.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: PUMP RUNNING; FLUSHED 5 MIN.; H2S ODOR

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/23/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/23/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/23/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/23/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/23/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/23/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/23/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-5A3/1
Station Type: WELL CASING
Perf Interval (ft bgs): 210-390
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 10013787
Sample ID: 10027609
Sample Date/Time: 10/21/2010 10:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10100630-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 430
pH (UNITS): 8.
Temperature (°C): 19.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: PUMP RUNNING; FLUSHED 5 MIN.; H2S ODOR

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		10/23/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/23/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/23/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/23/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/23/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/23/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/23/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/23/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/23/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/23/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/23/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/23/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/23/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/23/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/23/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/23/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/23/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/23/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/23/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/23/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-5A3/1
Station Type: WELL CASING
Perf Interval (ft bgs): 210-390
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 11029323
Sample ID: 11041665
Sample Date/Time: 10/19/2011 10:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100522-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 446
pH (UNITS): 8.
Temperature (°C): 19.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: NEW PUMP

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/24/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/24/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/24/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/24/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/24/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/24/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-5A3/1
Station Type: WELL CASING
Perf Interval (ft bgs): 210-390
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 11029323
Sample ID: 11041665
Sample Date/Time: 10/19/2011 10:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100522-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 446
pH (UNITS): 8.
Temperature (°C): 19.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: NEW PUMP

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/24/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/24/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/24/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/24/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		10/24/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/24/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/24/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/24/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/24/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/24/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/24/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/24/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/24/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/24/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/24/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/24/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/24/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/24/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/24/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/24/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-6F1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 210-390
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 10013788
Sample ID: 10027610
Sample Date/Time: 10/21/2010 10:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10100631-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 953
pH (UNITS): 8.
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: PUMP RUNNING; FLUSHED 5 MIN.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/23/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/23/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/23/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/23/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/23/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/23/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/23/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-6F1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 210-390
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 10013788
Sample ID: 10027610
Sample Date/Time: 10/21/2010 10:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10100631-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 953
pH (UNITS): 8.
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: PUMP RUNNING; FLUSHED 5 MIN.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		10/23/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/23/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/23/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/23/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/23/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/23/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/23/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/23/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/23/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/23/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/23/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/23/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/23/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/23/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/23/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/23/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/23/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/23/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/23/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/23/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-6F1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 210-390
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 11003078
Sample ID: 11006952
Sample Date/Time: 03/10/2011 12:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030255-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1510
pH (UNITS): 7.9
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/11/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/11/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/11/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/11/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/11/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/11/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/11/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/11/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/11/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/11/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/11/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/11/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/11/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/11/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/11/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/11/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/11/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/11/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/11/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/11/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		03/11/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		03/11/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-6F1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 210-390
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 11003078
Sample ID: 11006952
Sample Date/Time: 03/10/2011 12:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030255-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 1510
pH (UNITS): 7.9
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/11/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/11/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/11/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/11/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/11/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		03/11/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		03/11/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/11/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/11/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/11/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/11/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/11/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/11/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/11/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/11/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/11/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/11/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/11/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/11/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/11/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/11/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/11/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/11/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/11/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/11/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/11/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/11/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/11/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/11/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-6F1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 210-390
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 11026320
Sample ID: 11035775
Sample Date/Time: 08/25/2011 12:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11080731-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 965
pH (UNITS): 8.1
Temperature (°C): 21.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: WINDY; NEARBY EXHAUST; WELL BEING RUN ALL DAY FORWATER TRUCK

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/02/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/02/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/02/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/02/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/02/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/02/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/02/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/02/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/02/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/02/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/02/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/02/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/02/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/02/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/02/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/02/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/02/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/02/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/02/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/02/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/02/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-6F1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 210-390
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 11026320
Sample ID: 11035775
Sample Date/Time: 08/25/2011 12:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11080731-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 965
pH (UNITS): 8.1
Temperature (°C): 21.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: WINDY; NEARBY EXHAUST; WELL BEING RUN ALL DAY FORWATER TRUCK

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		09/02/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		09/02/2011	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/02/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		09/02/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/02/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/02/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/02/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		09/02/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		09/02/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		09/02/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/02/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/02/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/02/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/02/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/02/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/02/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/02/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/02/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/02/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/02/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/02/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/02/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/02/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/02/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/02/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/02/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/02/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/02/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/02/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/02/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/02/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: RUIZ-6F1/1
Station Type: WELL CASING
Perf Interval (ft bgs): 210-390
Aquifer: UNDEFINED

Well Owner: ORANGE COUNTY PRODUCE LLC
Well Name:
City: SEAL BEACH

Sample Group ID: 11026320
Sample ID: 11037281
Sample Date/Time: 08/25/2011 12:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11080731-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 965
pH (UNITS): 8.1
Temperature (°C): 21.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: WINDY; NEARBY EXHAUST; WELL BEING RUN ALL DAY FORWATER TRUCK

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		08/25/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		08/25/2011	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		08/25/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		08/25/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		08/25/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		08/25/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		08/25/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BC/1
Station Type: WELL CASING
Perf Interval (ft bgs): 370-1020
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Bolsa Chica Well
City: SEAL BEACH

Sample Group ID: 10001266
Sample ID: 10005809
Sample Date/Time: 01/26/2010 08:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: GRAB SAMPLE
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN RODRIQUEZ
Monitoring Program: Title 22

Lab Sample Number: 10010614-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.1
Temperature (°C): 19.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		01/30/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		01/30/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		01/30/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		01/30/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		01/30/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		01/30/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		01/30/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		01/30/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		01/30/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		01/30/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		01/30/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		01/30/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		01/30/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		01/30/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		01/30/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		01/30/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		01/30/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		01/30/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		01/30/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		01/30/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		01/30/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		01/30/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		01/30/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		01/30/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		01/30/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		01/30/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		01/30/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		01/30/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		01/30/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		01/30/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		01/30/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		01/30/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		01/30/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		01/30/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		01/30/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		01/30/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		01/30/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		01/30/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		01/30/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		01/30/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		01/30/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		01/30/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		01/30/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		01/30/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BC/1
Station Type: WELL CASING
Perf Interval (ft bgs): 370-1020
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Bolsa Chica Well
City: SEAL BEACH

Sample Group ID: 10001266
Sample ID: 10005809
Sample Date/Time: 01/26/2010 08:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: GRAB SAMPLE
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN RODRIQUEZ
Monitoring Program: Title 22

Lab Sample Number: 10010614-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.1
Temperature (°C): 19.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		01/30/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		01/30/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		01/30/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		01/30/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		01/30/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		01/30/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		01/30/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		01/30/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		01/30/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		01/30/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		01/30/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		01/30/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		01/30/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		01/30/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		01/30/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		01/30/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		01/30/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		01/30/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		01/30/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		01/30/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		01/30/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		01/30/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		01/30/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		01/30/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		01/30/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		01/30/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		01/30/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		01/30/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		01/30/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		01/30/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		01/30/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		01/30/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		01/30/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		01/30/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BC/1
Station Type: WELL CASING
Perf Interval (ft bgs): 370-1020
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Bolsa Chica Well
City: SEAL BEACH

Sample Group ID: 11001249
Sample ID: 11003355
Sample Date/Time: 01/27/2011 07:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11010740-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 386
pH (UNITS): 8.5
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		02/01/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		02/01/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		02/01/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		02/01/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		02/01/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		02/01/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		02/01/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		02/01/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		02/01/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		02/01/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		02/01/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		02/01/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		02/01/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		02/01/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		02/01/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		02/01/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		02/01/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		02/01/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		02/01/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		02/01/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		02/01/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		02/01/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BC/1
Station Type: WELL CASING
Perf Interval (ft bgs): 370-1020
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Bolsa Chica Well
City: SEAL BEACH

Sample Group ID: 11001249
Sample ID: 11003355
Sample Date/Time: 01/27/2011 07:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11010740-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 386
pH (UNITS): 8.5
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		02/01/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		02/01/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		02/01/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		02/01/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		02/01/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		02/01/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		02/01/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		02/01/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		02/01/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		02/01/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		02/01/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		02/01/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		02/01/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		02/01/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		02/01/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		02/01/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		02/01/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		02/01/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		02/01/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		02/01/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		02/01/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		02/01/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		02/01/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		02/01/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		02/01/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		02/01/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		02/01/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BC/1
Station Type: WELL CASING
Perf Interval (ft bgs): 370-1020
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Bolsa Chica Well
City: SEAL BEACH

Sample Group ID: 11001249
Sample ID: 11003356
Sample Date/Time: 01/27/2011 07:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11010740-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 386
pH (UNITS): 8.5
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		01/28/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		01/28/2011	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		01/28/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		01/28/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		01/28/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		01/28/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		01/28/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BEV/1
Station Type: WELL CASING
Perf Interval (ft bgs): 400-800
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Beverly Manor
City: SEAL BEACH

Sample Group ID: 10001295
Sample ID: 10004113
Sample Date/Time: 01/27/2010 11:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10010654-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 403
pH (UNITS): 8.4
Temperature (°C): 24.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: WELL ON 1 HR.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	*Qualifier: Validated Sample*							
1112PC	1,1,1,2-Tetrachloroethane	524.2		01/29/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		01/29/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		01/29/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		01/29/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		01/29/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		01/29/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		01/29/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		01/29/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		01/29/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		01/29/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		01/29/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		01/29/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		01/29/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		01/29/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		01/29/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		01/29/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		01/29/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		01/29/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		01/29/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		01/29/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		01/29/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		01/29/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		01/29/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		01/29/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		01/29/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		01/29/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		01/29/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		01/29/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		01/29/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		01/29/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		01/29/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		01/29/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		01/29/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		01/29/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		01/29/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		01/29/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		01/29/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		01/29/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		01/29/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		01/29/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		01/29/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		01/29/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BEV/1
Station Type: WELL CASING
Perf Interval (ft bgs): 400-800
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Beverly Manor
City: SEAL BEACH

Sample Group ID: 10001295
Sample ID: 10004113
Sample Date/Time: 01/27/2010 11:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10010654-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 403
pH (UNITS): 8.4
Temperature (°C): 24.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: WELL ON 1 HR.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		01/29/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		01/29/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		01/29/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		01/29/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		01/29/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		01/29/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		01/29/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		01/29/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		01/29/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		01/29/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		01/29/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		01/29/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		01/29/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		01/29/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		01/29/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		01/29/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		01/29/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		01/29/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		01/29/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		01/29/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		01/29/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		01/29/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		01/29/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		01/29/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		01/29/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		01/29/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		01/29/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		01/29/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		01/29/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		01/29/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		01/29/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		01/29/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		01/29/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		01/29/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		01/29/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		01/29/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BEV/1
Station Type: WELL CASING
Perf Interval (ft bgs): 400-800
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Beverly Manor
City: SEAL BEACH

Sample Group ID: 11001250
Sample ID: 11003364
Sample Date/Time: 01/27/2011 11:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11010748-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 398
pH (UNITS): 8.8
Temperature (°C): 24.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: WELL ON 2 HRS.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		02/01/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		02/01/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		02/01/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		02/01/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		02/01/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		02/01/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		02/01/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		02/01/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		02/01/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		02/01/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		02/01/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		02/01/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		02/01/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		02/01/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		02/01/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		02/01/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		02/01/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		02/01/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		02/01/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		02/01/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		02/01/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BEV/1
Station Type: WELL CASING
Perf Interval (ft bgs): 400-800
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Beverly Manor
City: SEAL BEACH

Sample Group ID: 11001250
Sample ID: 11003364
Sample Date/Time: 01/27/2011 11:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11010748-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 398
pH (UNITS): 8.8
Temperature (°C): 24.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: WELL ON 2 HRS.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		02/01/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		02/01/2011	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		02/01/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		02/01/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		02/01/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		02/01/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		02/01/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		02/01/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		02/01/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		02/01/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		02/01/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		02/01/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		02/01/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		02/01/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		02/01/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		02/01/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		02/01/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		02/01/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		02/01/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		02/01/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		02/01/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		02/01/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		02/01/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		02/01/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		02/01/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		02/01/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		02/01/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		02/01/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		02/01/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		02/01/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		02/01/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BEV/1
Station Type: WELL CASING
Perf Interval (ft bgs): 400-800
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Beverly Manor
City: SEAL BEACH

Sample Group ID: 11001250
Sample ID: 11003365
Sample Date/Time: 01/27/2011 11:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11010748-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 398
pH (UNITS): 8.8
Temperature (°C): 24.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: WELL ON 2 HRS.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		01/28/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		01/28/2011	ND	ug/L	1	ug/L
2CIEVE	2-Chloroethylvinyl ether	14DIOX		01/28/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		01/28/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		01/28/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		01/28/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		01/28/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11003707
Sample ID: 11007756
Sample Date/Time: 04/05/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11040068-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 392
pH (UNITS): 8.4
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RUSH; 14 DAYS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		04/05/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		04/05/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		04/05/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		04/05/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		04/05/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		04/05/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		04/05/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		04/05/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		04/05/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		04/05/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		04/05/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		04/05/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		04/05/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		04/05/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		04/05/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		04/05/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		04/05/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		04/05/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		04/05/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		04/05/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		04/05/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		04/05/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		04/05/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		04/05/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		04/05/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		04/05/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		04/05/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		04/05/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		04/05/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		04/05/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		04/05/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		04/05/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		04/05/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		04/05/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		04/05/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		04/05/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		04/05/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		04/05/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		04/05/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		04/05/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		04/05/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		04/05/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11003707
Sample ID: 11007756
Sample Date/Time: 04/05/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11040068-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 392
pH (UNITS): 8.4
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: RUSH; 14 DAYS

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		04/05/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		04/05/2011	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		04/05/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		04/05/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		04/05/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		04/05/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		04/05/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		04/05/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		04/05/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		04/05/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		04/05/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		04/05/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		04/05/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		04/05/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		04/05/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		04/05/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		04/05/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		04/05/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		04/05/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		04/05/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		04/05/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		04/05/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		04/05/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		04/05/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		04/05/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		04/05/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		04/05/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		04/05/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		04/05/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		04/05/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		04/05/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		04/05/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		04/05/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		04/05/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		04/05/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		04/05/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		04/05/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		04/05/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		04/05/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11013342
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-04
Laboratory: OCWD
Analysis Requested: NDMA-LOW

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NDMA	n-Nitrosodimethylamine	NDMA-LOW	06/14/2011	06/15/2011	ND	ng/L	2	ng/L
NDPhA	n-Nitrosodiphenylamine	NDMA-LOW	06/14/2011	06/15/2011	ND	ng/L	2	ng/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11013749
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		06/21/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		06/21/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		06/21/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		06/21/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		06/21/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		06/21/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		06/21/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		06/21/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		06/21/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		06/21/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		06/21/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		06/21/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		06/21/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		06/21/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		06/21/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		06/21/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		06/21/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		06/21/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		06/21/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		06/21/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		06/21/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		06/21/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		06/21/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		06/21/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		06/21/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		06/21/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		06/21/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		06/21/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		06/21/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		06/21/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		06/21/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		06/21/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		06/21/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		06/21/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		06/21/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		06/21/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		06/21/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		06/21/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		06/21/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		06/21/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		06/21/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		06/21/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		06/21/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		06/21/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11013749
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		06/21/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		06/21/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		06/21/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		06/21/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		06/21/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		06/21/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		06/21/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		06/21/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		06/21/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		06/21/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		06/21/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		06/21/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		06/21/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		06/21/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		06/21/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		06/21/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		06/21/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		06/21/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		06/21/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		06/21/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		06/21/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		06/21/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		06/21/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		06/21/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		06/21/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		06/21/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		06/21/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		06/21/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		06/21/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		06/21/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		06/21/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		06/21/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		06/21/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		06/21/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		06/21/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		06/21/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		06/21/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11013750
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		06/14/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		06/14/2011	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		06/14/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		06/14/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		06/14/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		06/14/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		06/14/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11037493
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		09/30/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		09/30/2011	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		09/30/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		09/30/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		09/30/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		09/30/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		09/30/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11039692
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/30/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/30/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/30/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/30/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/30/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/30/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/30/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/30/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/30/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/30/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/30/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/30/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/30/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/30/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/30/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/30/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/30/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/30/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/30/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/30/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/30/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/30/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/30/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/30/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/30/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/30/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/30/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/30/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/30/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/30/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/30/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/30/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/30/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/30/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/30/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/30/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/30/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/30/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		09/30/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		09/30/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/30/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/30/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		09/30/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		09/30/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11039692
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/30/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/30/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		09/30/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		09/30/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/30/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/30/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/30/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/30/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/30/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		09/30/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		09/30/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		09/30/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/30/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/30/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/30/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/30/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/30/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/30/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/30/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/30/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/30/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/30/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/30/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/30/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/30/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/30/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/30/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/30/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/30/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/30/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/30/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/30/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/30/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/30/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/30/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/30/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/30/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11040609
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-04
Laboratory: OCWD
Analysis Requested: NDMA-LOW

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NDMA	n-Nitrosodimethylamine	NDMA-LOW	09/27/2011	10/06/2011	ND	ng/L	2	ng/L
NDPhA	n-Nitrosodiphenylamine	NDMA-LOW	09/27/2011	10/06/2011	ND	ng/L	2	ng/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 11043136
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		12/15/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		12/15/2011	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		12/15/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		12/15/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		12/15/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		12/15/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		12/15/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 12000977
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		12/15/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		12/15/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		12/15/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		12/15/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		12/15/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		12/15/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		12/15/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		12/15/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		12/15/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		12/15/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		12/15/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		12/15/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		12/15/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		12/15/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		12/15/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		12/15/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		12/15/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		12/15/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		12/15/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		12/15/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		12/15/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		12/15/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		12/15/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		12/15/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		12/15/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		12/15/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		12/15/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		12/15/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		12/15/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		12/15/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		12/15/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		12/15/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		12/15/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		12/15/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		12/15/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		12/15/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		12/15/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		12/15/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		12/15/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		12/15/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		12/15/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		12/15/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		12/15/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		12/15/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 12000977
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		12/15/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		12/15/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		12/15/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		12/15/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		12/15/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		12/15/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		12/15/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		12/15/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		12/15/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		12/15/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		12/15/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		12/15/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		12/15/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		12/15/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		12/15/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		12/15/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		12/15/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		12/15/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		12/15/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		12/15/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		12/15/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		12/15/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		12/15/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		12/15/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		12/15/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		12/15/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		12/15/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		12/15/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		12/15/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		12/15/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		12/15/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		12/15/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		12/15/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		12/15/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		12/15/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		12/15/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		12/15/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 12000978
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-04
Laboratory: OCWD
Analysis Requested: NDMA-LOW

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NDMA	n-Nitrosodimethylamine	NDMA-LOW	12/15/2011	12/20/2011	ND	ng/L	2	ng/L
NDPhA	n-Nitrosodiphenylamine	NDMA-LOW	12/15/2011	12/20/2011	3.	ng/L	2	ng/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10014272
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		06/10/2010	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		06/10/2010	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		06/10/2010	ND	ug/L	.1	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		06/10/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		06/10/2010	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		06/10/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10015246
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		06/09/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		06/09/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		06/09/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		06/09/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		06/09/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		06/09/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		06/09/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		06/09/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		06/09/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		06/09/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		06/09/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		06/09/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		06/09/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		06/09/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		06/09/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		06/09/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		06/09/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		06/09/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		06/09/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		06/09/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		06/09/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		06/09/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		06/09/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		06/09/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		06/09/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		06/09/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		06/09/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		06/09/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		06/09/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		06/09/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		06/09/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		06/09/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		06/09/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		06/09/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		06/09/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		06/09/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		06/09/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		06/09/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		06/09/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		06/09/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		06/09/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		06/09/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		06/09/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		06/09/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10015246
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		06/09/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		06/09/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		06/09/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		06/09/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		06/09/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		06/09/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		06/09/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		06/09/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		06/09/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		06/09/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		06/09/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		06/09/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		06/09/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		06/09/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		06/09/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		06/09/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		06/09/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		06/09/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		06/09/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		06/09/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		06/09/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		06/09/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		06/09/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		06/09/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		06/09/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		06/09/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		06/09/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		06/09/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		06/09/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		06/09/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		06/09/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		06/09/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		06/09/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		06/09/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10018069
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-04
Laboratory: OCWD
Analysis Requested: NDMA-LOW

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NDMA	n-Nitrosodimethylamine	NDMA	06/16/2010	06/16/2010	ND	ng/L	2	ng/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11013347
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-04
Laboratory: OCWD
Analysis Requested: NDMA-LOW

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
NDMA	n-Nitrosodimethylamine	NDMA-LOW	06/14/2011	06/15/2011	ND	ng/L	2	ng/L
NDPhA	n-Nitrosodiphenylamine	NDMA-LOW	06/14/2011	06/15/2011	ND	ng/L	2	ng/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11013756
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		06/22/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		06/22/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		06/22/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		06/22/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		06/22/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		06/22/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		06/22/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		06/22/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		06/22/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		06/22/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		06/22/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		06/22/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		06/22/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		06/22/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		06/22/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		06/22/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		06/22/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		06/22/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		06/22/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		06/22/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		06/22/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		06/22/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		06/22/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		06/22/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		06/22/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		06/22/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		06/22/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		06/22/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		06/22/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		06/22/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		06/22/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		06/22/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		06/22/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		06/22/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		06/22/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		06/22/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		06/22/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		06/22/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		06/22/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		06/22/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		06/22/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		06/22/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		06/22/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		06/22/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11013756
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		06/22/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		06/22/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		06/22/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		06/22/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		06/22/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		06/22/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		06/22/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		06/22/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		06/22/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		06/22/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		06/22/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		06/22/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		06/22/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		06/22/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		06/22/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		06/22/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		06/22/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		06/22/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		06/22/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		06/22/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		06/22/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		06/22/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		06/22/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		06/22/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		06/22/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		06/22/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		06/22/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		06/22/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		06/22/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		06/22/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		06/22/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		06/22/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		06/22/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		06/22/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		06/22/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		06/22/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		06/22/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11013757
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		06/14/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		06/14/2011	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		06/14/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		06/14/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		06/14/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		06/14/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		06/14/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP1
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 74-84
Port Depth (ft bgs): 79

Sample Group ID: 10003512
Sample ID: 10010182
Sample Date/Time: 03/17/2010 12:49
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030518-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 422
pH (UNITS): 8.1
Temperature (°C): 21.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/24/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/24/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/24/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/24/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/24/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/24/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/24/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/24/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/24/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/24/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/24/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/24/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/24/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/24/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/24/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/24/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/24/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/24/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/24/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/24/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/24/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/24/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/24/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/24/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/24/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/24/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/24/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/24/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/24/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/24/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/24/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/24/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/24/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/24/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/24/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/24/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/24/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/24/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/24/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/24/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/24/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/24/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP1
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 74-84
Port Depth (ft bgs): 79

Sample Group ID: 10003512
Sample ID: 10010182
Sample Date/Time: 03/17/2010 12:49
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030518-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 422
pH (UNITS): 8.1
Temperature (°C): 21.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		03/24/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/24/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/24/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/24/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/24/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/24/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/24/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/24/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/24/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/24/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/24/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/24/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/24/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/24/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/24/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/24/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/24/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/24/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/24/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/24/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/24/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/24/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/24/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/24/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/24/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/24/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/24/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/24/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/24/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/24/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/24/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/24/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/24/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/24/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/24/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/24/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP1
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 74-84
Port Depth (ft bgs): 79

Sample Group ID: 10013347
Sample ID: 10027958
Sample Date/Time: 10/13/2010 13:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100375-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 419
pH (UNITS): 8.2
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/15/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/15/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/15/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/15/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/15/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		10/15/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/15/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP1
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 74-84
Port Depth (ft bgs): 79

Sample Group ID: 10013347
Sample ID: 10027958
Sample Date/Time: 10/13/2010 13:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100375-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 419
pH (UNITS): 8.2
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/15/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/15/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/15/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/15/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/15/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/15/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/15/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/15/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/15/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/15/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/15/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/15/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/15/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/15/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP1
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 74-84
Port Depth (ft bgs): 79

Sample Group ID: 11003150
Sample ID: 11010964
Sample Date/Time: 03/16/2011 14:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030417-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 420
pH (UNITS): 8.1
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/17/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/17/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/17/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/17/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/17/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/17/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP1
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 74-84
Port Depth (ft bgs): 79

Sample Group ID: 11003150
Sample ID: 11010964
Sample Date/Time: 03/16/2011 14:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030417-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 420
pH (UNITS): 8.1
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/17/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/17/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/17/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/17/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		03/17/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/17/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/17/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/17/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/17/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/17/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/17/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/17/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/17/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/17/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/17/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/17/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/17/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/17/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/17/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/17/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP1
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 74-84
Port Depth (ft bgs): 79

Sample Group ID: 11026654
Sample ID: 11037401
Sample Date/Time: 09/14/2011 13:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090334-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 418
pH (UNITS): 8.2
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/20/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/20/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/20/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/20/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/20/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/20/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CH3Cl	Chloromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CHBr2C	Dibromochloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		09/20/2011	ND	ug/L	2	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP1
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 74-84
Port Depth (ft bgs): 79

Sample Group ID: 11026654
Sample ID: 11037401
Sample Date/Time: 09/14/2011 13:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090334-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 418
pH (UNITS): 8.2
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/20/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CS2	Carbon Disulfide	524.2		09/20/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		09/20/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
HClBut	Hexachlorobutadiene	524.2		09/20/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/20/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/20/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/20/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/20/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/20/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/20/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/20/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/20/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/20/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/20/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/20/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/20/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/20/2011	ND	ug/L	2	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP2
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 144-154
Port Depth (ft bgs): 149

Sample Group ID: 10003513
Sample ID: 10010183
Sample Date/Time: 03/17/2010 12:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030519-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 434
pH (UNITS): 8.2
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/25/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/25/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/25/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/25/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/25/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP2
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 144-154
Port Depth (ft bgs): 149

Sample Group ID: 10003513
Sample ID: 10010183
Sample Date/Time: 03/17/2010 12:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030519-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 434
pH (UNITS): 8.2
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		03/25/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/25/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/25/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/25/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/25/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/25/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/25/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/25/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/25/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/25/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/25/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/25/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/25/2010	TR	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/25/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/25/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/25/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP2
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 144-154
Port Depth (ft bgs): 149

Sample Group ID: 10013348
Sample ID: 10027959
Sample Date/Time: 10/13/2010 12:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100376-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 432
pH (UNITS): 8.3
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/15/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/15/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/15/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/15/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/15/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		10/15/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/15/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP2
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 144-154
Port Depth (ft bgs): 149

Sample Group ID: 10013348
Sample ID: 10027959
Sample Date/Time: 10/13/2010 12:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100376-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 432
pH (UNITS): 8.3
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/15/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/15/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/15/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/15/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/15/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/15/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/15/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/15/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/15/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/15/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/15/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/15/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/15/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/15/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP2
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 144-154
Port Depth (ft bgs): 149

Sample Group ID: 11003151
Sample ID: 11010965
Sample Date/Time: 03/16/2011 14:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030418-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 427
pH (UNITS): 8.5
Temperature (°C): 20.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/17/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/17/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/17/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/17/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/17/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/17/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP2
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 144-154
Port Depth (ft bgs): 149

Sample Group ID: 11003151
Sample ID: 11010965
Sample Date/Time: 03/16/2011 14:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030418-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 427
pH (UNITS): 8.5
Temperature (°C): 20.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/17/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/17/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/17/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/17/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		03/17/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/17/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/17/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/17/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/17/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/17/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/17/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/17/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/17/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/17/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/17/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/17/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/17/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/17/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/17/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/17/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP2
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 144-154
Port Depth (ft bgs): 149

Sample Group ID: 11026655
Sample ID: 11037402
Sample Date/Time: 09/14/2011 12:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090335-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 423
pH (UNITS): 8.4
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/20/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/20/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/20/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/20/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/20/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/20/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CH3Cl	Chloromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CHBr2C	Dibromochloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		09/20/2011	ND	ug/L	2	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP2
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 144-154
Port Depth (ft bgs): 149

Sample Group ID: 11026655
Sample ID: 11037402
Sample Date/Time: 09/14/2011 12:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090335-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 423
pH (UNITS): 8.4
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/20/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CS2	Carbon Disulfide	524.2		09/20/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		09/20/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
HClBut	Hexachlorobutadiene	524.2		09/20/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/20/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/20/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/20/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/20/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/20/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/20/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/20/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/20/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/20/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/20/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/20/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/20/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/20/2011	ND	ug/L	2	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP3
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 240-250
Port Depth (ft bgs): 244

Sample Group ID: 10003514
Sample ID: 10010184
Sample Date/Time: 03/17/2010 11:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030520-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 461
pH (UNITS): 8.1
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/25/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/25/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/25/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/25/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/25/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP3
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 240-250
Port Depth (ft bgs): 244

Sample Group ID: 10003514
Sample ID: 10010184
Sample Date/Time: 03/17/2010 11:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030520-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 461
pH (UNITS): 8.1
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		03/25/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/25/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/25/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/25/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/25/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/25/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/25/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/25/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/25/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/25/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/25/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/25/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/25/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/25/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/25/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/25/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP3
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 240-250
Port Depth (ft bgs): 244

Sample Group ID: 10013349
Sample ID: 10027960
Sample Date/Time: 10/13/2010 12:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100377-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 460
pH (UNITS): 8.2
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/15/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/15/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/15/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/15/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/15/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		10/15/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/15/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP3
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 240-250
Port Depth (ft bgs): 244

Sample Group ID: 10013349
Sample ID: 10027960
Sample Date/Time: 10/13/2010 12:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100377-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 460
pH (UNITS): 8.2
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/15/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/15/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/15/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/15/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/15/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/15/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/15/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/15/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/15/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/15/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/15/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/15/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/15/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/15/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP3
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 240-250
Port Depth (ft bgs): 244

Sample Group ID: 11003152
Sample ID: 11010966
Sample Date/Time: 03/16/2011 13:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030419-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 452
pH (UNITS): 8.2
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/17/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/17/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/17/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/17/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/17/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/17/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP3
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 240-250
Port Depth (ft bgs): 244

Sample Group ID: 11003152
Sample ID: 11010966
Sample Date/Time: 03/16/2011 13:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030419-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 452
pH (UNITS): 8.2
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/17/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/17/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/17/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/17/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		03/17/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/17/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/17/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/17/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/17/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/17/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/17/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/17/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/17/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/17/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/17/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/17/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/17/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/17/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/17/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/17/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP3
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 240-250
Port Depth (ft bgs): 244

Sample Group ID: 11026656
Sample ID: 11037403
Sample Date/Time: 09/14/2011 12:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090336-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 440
pH (UNITS): 8.2
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/20/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/20/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/20/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/20/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/20/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/20/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CH3Cl	Chloromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CHBr2C	Dibromochloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		09/20/2011	ND	ug/L	2	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP3
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 240-250
Port Depth (ft bgs): 244

Sample Group ID: 11026656
Sample ID: 11037403
Sample Date/Time: 09/14/2011 12:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090336-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 440
pH (UNITS): 8.2
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/20/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CS2	Carbon Disulfide	524.2		09/20/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		09/20/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
HClBut	Hexachlorobutadiene	524.2		09/20/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/20/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/20/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/20/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/20/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/20/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/20/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/20/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/20/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/20/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/20/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/20/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/20/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/20/2011	ND	ug/L	2	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP4
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 370-380
Port Depth (ft bgs): 374

Sample Group ID: 10003515
Sample ID: 10010185
Sample Date/Time: 03/17/2010 10:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030521-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 424
pH (UNITS): 8.2
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/25/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/25/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/25/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/25/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/25/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP4
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 370-380
Port Depth (ft bgs): 374

Sample Group ID: 10003515
Sample ID: 10010185
Sample Date/Time: 03/17/2010 10:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030521-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 424
pH (UNITS): 8.2
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		03/25/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/25/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/25/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/25/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/25/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/25/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/25/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/25/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/25/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/25/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/25/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/25/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/25/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/25/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/25/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/25/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP4
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 370-380
Port Depth (ft bgs): 374

Sample Group ID: 10013350
Sample ID: 10027961
Sample Date/Time: 10/13/2010 11:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100378-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 428
pH (UNITS): 8.3
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/15/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/15/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/15/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/15/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/15/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		10/15/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/15/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP4
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 370-380
Port Depth (ft bgs): 374

Sample Group ID: 10013350
Sample ID: 10027961
Sample Date/Time: 10/13/2010 11:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100378-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 428
pH (UNITS): 8.3
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/15/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/15/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/15/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/15/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/15/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/15/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/15/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/15/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/15/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/15/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/15/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/15/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/15/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/15/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP4
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 370-380
Port Depth (ft bgs): 374

Sample Group ID: 11003153
Sample ID: 11010967
Sample Date/Time: 03/16/2011 12:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030420-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 419
pH (UNITS): 8.2
Temperature (°C): 19.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/17/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/17/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/17/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/17/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/17/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/17/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP4
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 370-380
Port Depth (ft bgs): 374

Sample Group ID: 11003153
Sample ID: 11010967
Sample Date/Time: 03/16/2011 12:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030420-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 419
pH (UNITS): 8.2
Temperature (°C): 19.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/17/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/17/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/17/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/17/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		03/17/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/17/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/17/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/17/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/17/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/17/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/17/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/17/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/17/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/17/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/17/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/17/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/17/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/17/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/17/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/17/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP4
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 370-380
Port Depth (ft bgs): 374

Sample Group ID: 11026657
Sample ID: 11037404
Sample Date/Time: 09/14/2011 11:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090337-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 417
pH (UNITS): 8.4
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/20/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/20/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/20/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/20/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/20/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/20/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CH3Cl	Chloromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CHBr2C	Dibromochloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		09/20/2011	ND	ug/L	2	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP4
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 370-380
Port Depth (ft bgs): 374

Sample Group ID: 11026657
Sample ID: 11037404
Sample Date/Time: 09/14/2011 11:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090337-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 417
pH (UNITS): 8.4
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/20/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CS2	Carbon Disulfide	524.2		09/20/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		09/20/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
HClBut	Hexachlorobutadiene	524.2		09/20/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/20/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/20/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/20/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/20/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/20/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/20/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/20/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/20/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/20/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/20/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/20/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/20/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/20/2011	ND	ug/L	2	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP5
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 510-520
Port Depth (ft bgs): 514

Sample Group ID: 10003516
Sample ID: 10010186
Sample Date/Time: 03/17/2010 10:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030522-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 304
pH (UNITS): 9.3
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/25/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/25/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/25/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/25/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/25/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP5
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 510-520
Port Depth (ft bgs): 514

Sample Group ID: 10003516
Sample ID: 10010186
Sample Date/Time: 03/17/2010 10:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030522-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 304
pH (UNITS): 9.3
Temperature (°C): 19.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		03/25/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/25/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/25/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/25/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/25/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/25/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/25/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/25/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/25/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/25/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/25/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/25/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/25/2010	0.7	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/25/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/25/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/25/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP5
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 510-520
Port Depth (ft bgs): 514

Sample Group ID: 10013351
Sample ID: 10027962
Sample Date/Time: 10/13/2010 11:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100379-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 298
pH (UNITS): 9.3
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/15/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/15/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/15/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/15/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/15/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		10/15/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/15/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP5
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 510-520
Port Depth (ft bgs): 514

Sample Group ID: 10013351
Sample ID: 10027962
Sample Date/Time: 10/13/2010 11:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100379-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 298
pH (UNITS): 9.3
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/15/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/15/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/15/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/15/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/15/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/15/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/15/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/15/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/15/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/15/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/15/2010	TR	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/15/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/15/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/15/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP6
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 696-706
Port Depth (ft bgs): 706

Sample Group ID: 10003517
Sample ID: 10010187
Sample Date/Time: 03/17/2010 09:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030523-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 358
pH (UNITS): 8.7
Temperature (°C): 19.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/25/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/25/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/25/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/25/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/25/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP6
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 696-706
Port Depth (ft bgs): 706

Sample Group ID: 10003517
Sample ID: 10010187
Sample Date/Time: 03/17/2010 09:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030523-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 358
pH (UNITS): 8.7
Temperature (°C): 19.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		03/25/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/25/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/25/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/25/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/25/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/25/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/25/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/25/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/25/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/25/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/25/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/25/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/25/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/25/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/25/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/25/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP6
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 696-706
Port Depth (ft bgs): 706

Sample Group ID: 10013352
Sample ID: 10027963
Sample Date/Time: 10/13/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100380-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 360
pH (UNITS): 8.7
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/15/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/15/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/15/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/15/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/15/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		10/15/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/15/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP6
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 696-706
Port Depth (ft bgs): 706

Sample Group ID: 10013352
Sample ID: 10027963
Sample Date/Time: 10/13/2010 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100380-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 360
pH (UNITS): 8.7
Temperature (°C): 20.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/15/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/15/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/15/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/15/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/15/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/15/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/15/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/15/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/15/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/15/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/15/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/15/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/15/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/15/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP6
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 696-706
Port Depth (ft bgs): 706

Sample Group ID: 11003155
Sample ID: 11010969
Sample Date/Time: 03/16/2011 11:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030422-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 358
pH (UNITS): 8.8
Temperature (°C): 19.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/17/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/17/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/17/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/17/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/17/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/17/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP6
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 696-706
Port Depth (ft bgs): 706

Sample Group ID: 11003155
Sample ID: 11010969
Sample Date/Time: 03/16/2011 11:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030422-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 358
pH (UNITS): 8.8
Temperature (°C): 19.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/17/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/17/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/17/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/17/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		03/17/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/17/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/17/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/17/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/17/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/17/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/17/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/17/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/17/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/17/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/17/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/17/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/17/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/17/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/17/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/17/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP6
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 696-706
Port Depth (ft bgs): 706

Sample Group ID: 11026659
Sample ID: 11037406
Sample Date/Time: 09/14/2011 10:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090339-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.8
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/20/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/20/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/20/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/20/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/20/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/20/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CH3Cl	Chloromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CHBr2C	Dibromochloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		09/20/2011	ND	ug/L	2	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP6
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 696-706
Port Depth (ft bgs): 706

Sample Group ID: 11026659
Sample ID: 11037406
Sample Date/Time: 09/14/2011 10:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090339-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.8
Temperature (°C): 20.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/20/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CS2	Carbon Disulfide	524.2		09/20/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		09/20/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
HClBut	Hexachlorobutadiene	524.2		09/20/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/20/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/20/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/20/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/20/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/20/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/20/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/20/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/20/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/20/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/20/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/20/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/20/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/20/2011	ND	ug/L	2	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP7
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 910-920
Port Depth (ft bgs): 916

Sample Group ID: 10003518
Sample ID: 10010188
Sample Date/Time: 03/17/2010 09:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030524-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 338
pH (UNITS): 9.4
Temperature (°C): 19.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/25/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/25/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/25/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/25/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/25/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP7
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 910-920
Port Depth (ft bgs): 916

Sample Group ID: 10003518
Sample ID: 10010188
Sample Date/Time: 03/17/2010 09:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030524-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 338
pH (UNITS): 9.4
Temperature (°C): 19.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		03/25/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/25/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/25/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/25/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/25/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/25/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/25/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/25/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/25/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/25/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/25/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/25/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/25/2010	0.5	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/25/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/25/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/25/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP7
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 910-920
Port Depth (ft bgs): 916

Sample Group ID: 10013353
Sample ID: 10027964
Sample Date/Time: 10/13/2010 09:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100381-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 338
pH (UNITS): 9.4
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/15/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/15/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/15/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/15/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/15/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		10/15/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/15/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP7
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 910-920
Port Depth (ft bgs): 916

Sample Group ID: 10013353
Sample ID: 10027964
Sample Date/Time: 10/13/2010 09:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100381-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 338
pH (UNITS): 9.4
Temperature (°C): 20.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/15/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/15/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/15/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/15/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/15/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/15/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/15/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/15/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/15/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/15/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/15/2010	TR	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/15/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/15/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/15/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP7
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 910-920
Port Depth (ft bgs): 916

Sample Group ID: 11003156
Sample ID: 11010970
Sample Date/Time: 03/16/2011 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030423-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 336
pH (UNITS): 9.5
Temperature (°C): 18.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/17/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/17/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/17/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/17/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/17/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/17/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		03/17/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP7
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 910-920
Port Depth (ft bgs): 916

Sample Group ID: 11003156
Sample ID: 11010970
Sample Date/Time: 03/16/2011 10:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030423-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 336
pH (UNITS): 9.5
Temperature (°C): 18.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/17/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/17/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/17/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/17/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/17/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		03/17/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		03/17/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/17/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/17/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/17/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/17/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/17/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/17/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/17/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/17/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/17/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/17/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/17/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/17/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/17/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/17/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/17/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/17/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/17/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP7
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 910-920
Port Depth (ft bgs): 916

Sample Group ID: 11026660
Sample ID: 11037407
Sample Date/Time: 09/14/2011 09:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090340-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 338
pH (UNITS): 9.6
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use *Qualifier: Validated Sample*

Parameter Abbreviation	Parameter Name	Analysis Method	Dates Extract	Dates Analysis	Results Value	Results Units	Detection Limit Value	Detection Limit Units
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/20/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/20/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/20/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/20/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/20/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/20/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CHBr2C	Dibromochloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/20/2011	ND	ug/L	2	ug/L
CHBrCl	Bromodichloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		09/20/2011	ND	ug/L	2	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP7
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 910-920
Port Depth (ft bgs): 916

Sample Group ID: 11026660
Sample ID: 11037407
Sample Date/Time: 09/14/2011 09:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090340-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 338
pH (UNITS): 9.6
Temperature (°C): 20.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/20/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CS2	Carbon Disulfide	524.2		09/20/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		09/20/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
HClBut	Hexachlorobutadiene	524.2		09/20/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/20/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/20/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/20/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/20/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/20/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/20/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/20/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/20/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/20/2011	TR	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/20/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/20/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/20/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/20/2011	ND	ug/L	2	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP8
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 1250-1260
Port Depth (ft bgs): 1256

Sample Group ID: 10003519
Sample ID: 10010189
Sample Date/Time: 03/17/2010 08:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030525-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 406
pH (UNITS): 9.3
Temperature (°C): 19.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/25/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/25/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/25/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/25/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/25/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/25/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/25/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/25/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP8
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 1250-1260
Port Depth (ft bgs): 1256

Sample Group ID: 10003519
Sample ID: 10010189
Sample Date/Time: 03/17/2010 08:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: KEVIN OTOOLE/BRIAN OKEY
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 10030525-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 406
pH (UNITS): 9.3
Temperature (°C): 19.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: LIMITED SAMPLE

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CHCl3	Chloroform	524.2		03/25/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/25/2010	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
CIETHA	Chloroethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/25/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/25/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/25/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/25/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/25/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/25/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/25/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/25/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/25/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/25/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/25/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/25/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/25/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/25/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/25/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/25/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/25/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/25/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/25/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/25/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP8
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 1250-1260
Port Depth (ft bgs): 1256

Sample Group ID: 10013354
Sample ID: 10027965
Sample Date/Time: 10/13/2010 08:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100382-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 411
pH (UNITS): 9.2
Temperature (°C): 20.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use ***Qualifier: Validated Sample***

Parameter Abbreviation	Parameter Name	Analysis Method	Dates Extract	Dates Analysis	Results Value	Results Units	Detection Limit Value	Detection Limit Units
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/15/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/15/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/15/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/15/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/15/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/15/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		10/15/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/15/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP8
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 1250-1260
Port Depth (ft bgs): 1256

Sample Group ID: 10013354
Sample ID: 10027965
Sample Date/Time: 10/13/2010 08:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 10100382-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 411
pH (UNITS): 9.2
Temperature (°C): 20.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/15/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/15/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/15/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/15/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/15/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/15/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/15/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/15/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/15/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/15/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/15/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/15/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/15/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/15/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/15/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/15/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/15/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/15/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/15/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/15/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP8
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 1250-1260
Port Depth (ft bgs): 1256

Sample Group ID: 11003157
Sample ID: 11010971
Sample Date/Time: 03/16/2011 09:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030424-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 413
pH (UNITS): 9.4
Temperature (°C): 18.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/18/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/18/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/18/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/18/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/18/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/18/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/18/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/18/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/18/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/18/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/18/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/18/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/18/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/18/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/18/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/18/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/18/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/18/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/18/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/18/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/18/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/18/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/18/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/18/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/18/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/18/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/18/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/18/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/18/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/18/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/18/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/18/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/18/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/18/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/18/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/18/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/18/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/18/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/18/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/18/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/18/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/18/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		03/18/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		03/18/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP8
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 1250-1260
Port Depth (ft bgs): 1256

Sample Group ID: 11003157
Sample ID: 11010971
Sample Date/Time: 03/16/2011 09:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BMO/KWO
Monitoring Program: Talbert Barrier Q23 Monitoring

Lab Sample Number: 11030424-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 413
pH (UNITS): 9.4
Temperature (°C): 18.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/18/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/18/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/18/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/18/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/18/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/18/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/18/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/18/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/18/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		03/18/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		03/18/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/18/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/18/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/18/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/18/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/18/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/18/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/18/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/18/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/18/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/18/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/18/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/18/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/18/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/18/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/18/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/18/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/18/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/18/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/18/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/18/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/18/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/18/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/18/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/18/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/18/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/18/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP8
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 1250-1260
Port Depth (ft bgs): 1256

Sample Group ID: 11026661
Sample ID: 11037408
Sample Date/Time: 09/14/2011 08:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090341-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 412
pH (UNITS): 9.2
Temperature (°C): 20.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/20/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/20/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/20/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/20/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/20/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/20/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/20/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CH3Cl	Chloromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CHBr2C	Dibromochloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		09/20/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		09/20/2011	ND	ug/L	2	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SBM-1/1/WB1/MP8
Station Type: WESTBAY PORT
Old Well Name: SBM-1

Zone Interval (ft bgs): 1250-1260
Port Depth (ft bgs): 1256

Sample Group ID: 11026661
Sample ID: 11037408
Sample Date/Time: 09/14/2011 08:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: WESTBAY TOOL
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: CRAIG PATTERSON/PAT HOLLINDEN
Monitoring Program: Colored Water

Lab Sample Number: 11090341-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 412
pH (UNITS): 9.2
Temperature (°C): 20.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/20/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		09/20/2011	ND	ug/L	2	ug/L
CS2	Carbon Disulfide	524.2		09/20/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/20/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/20/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		09/20/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		09/20/2011	ND	ug/L	2	ug/L
HClBut	Hexachlorobutadiene	524.2		09/20/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/20/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/20/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/20/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/20/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/20/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/20/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/20/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/20/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/20/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/20/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/20/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/20/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/20/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/20/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/20/2011	ND	ug/L	2	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/20/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SCWC-LAYT/1
Station Type: WELL CASING
Perf Interval (ft bgs): 250-800
Aquifer: UNDEFINED

Well Owner: GOLDEN STATE WATER CO - OC
Well Name: YellowTail
City: UNINCORPORATED

Sample Group ID: 10001771
Sample ID: 10005971
Sample Date/Time: 02/16/2010 11:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: LAURA MOORE
Monitoring Program: Title 22

Lab Sample Number: 10020438-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 403
pH (UNITS): 8.5
Temperature (°C): 25.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		02/23/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		02/23/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		02/23/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		02/23/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		02/23/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		02/23/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		02/23/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		02/23/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		02/23/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		02/23/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		02/23/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		02/23/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		02/23/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		02/23/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		02/23/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		02/23/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		02/23/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		02/23/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		02/23/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		02/23/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		02/23/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		02/23/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		02/23/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		02/23/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		02/23/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		02/23/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		02/23/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		02/23/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		02/23/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		02/23/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		02/23/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		02/23/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		02/23/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		02/23/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		02/23/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		02/23/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		02/23/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		02/23/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		02/23/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		02/23/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		02/23/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		02/23/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		02/23/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		02/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SCWC-LAYT/1
Station Type: WELL CASING
Perf Interval (ft bgs): 250-800
Aquifer: UNDEFINED

Well Owner: GOLDEN STATE WATER CO - OC
Well Name: YellowTail
City: UNINCORPORATED

Sample Group ID: 10001771
Sample ID: 10005971
Sample Date/Time: 02/16/2010 11:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: LAURA MOORE
Monitoring Program: Title 22

Lab Sample Number: 10020438-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 403
pH (UNITS): 8.5
Temperature (°C): 25.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		02/23/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		02/23/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		02/23/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		02/23/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		02/23/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		02/23/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		02/23/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		02/23/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		02/23/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		02/23/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		02/23/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		02/23/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		02/23/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		02/23/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		02/23/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		02/23/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		02/23/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		02/23/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		02/23/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		02/23/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		02/23/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		02/23/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		02/23/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		02/23/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		02/23/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		02/23/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		02/23/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		02/23/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		02/23/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		02/23/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		02/23/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		02/23/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		02/23/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		02/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SCWC-LAYT/1
Station Type: WELL CASING
Perf Interval (ft bgs): 250-800
Aquifer: UNDEFINED

Well Owner: GOLDEN STATE WATER CO - OC
Well Name: YellowTail
City: UNINCORPORATED

Sample Group ID: 11003490
Sample ID: 11007711
Sample Date/Time: 03/28/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030644-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 429
pH (UNITS): 8.6
Temperature (°C): 24.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		03/30/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		03/30/2011	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		03/30/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		03/30/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		03/30/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		03/30/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		03/30/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SCWC-LAYT/1
Station Type: WELL CASING
Perf Interval (ft bgs): 250-800
Aquifer: UNDEFINED

Well Owner: GOLDEN STATE WATER CO - OC
Well Name: YellowTail
City: UNINCORPORATED

Sample Group ID: 11003490
Sample ID: 11008670
Sample Date/Time: 03/28/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030644-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 429
pH (UNITS): 8.6
Temperature (°C): 24.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	*Qualifier: Validated Sample*							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/30/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/30/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/30/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/30/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/30/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/30/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/30/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/30/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/30/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/30/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/30/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/30/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/30/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/30/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/30/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/30/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/30/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/30/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/30/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/30/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/30/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/30/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/30/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/30/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/30/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/30/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/30/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/30/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/30/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/30/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/30/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/30/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/30/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/30/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/30/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/30/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/30/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/30/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/30/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/30/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/30/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/30/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		03/30/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		03/30/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SCWC-LAYT/1
Station Type: WELL CASING
Perf Interval (ft bgs): 250-800
Aquifer: UNDEFINED

Well Owner: GOLDEN STATE WATER CO - OC
Well Name: YellowTail
City: UNINCORPORATED

Sample Group ID: 11003490
Sample ID: 11008670
Sample Date/Time: 03/28/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030644-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 429
pH (UNITS): 8.6
Temperature (°C): 24.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/30/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/30/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/30/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/30/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/30/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/30/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/30/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/30/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/30/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		03/30/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		03/30/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/30/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/30/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/30/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/30/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/30/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/30/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/30/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/30/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/30/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/30/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/30/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/30/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/30/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/30/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/30/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/30/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/30/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/30/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/30/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/30/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/30/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/30/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/30/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/30/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/30/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/30/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-125/1
Station Type: WELL CASING
Perf Interval (ft bgs): 374-860
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Well No. 125
City: WESTMINSTER

Sample Group ID: 10005006
Sample ID: 10011703
Sample Date/Time: 04/20/2010 08:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10040489-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 406
pH (UNITS): 7.9
Temperature (°C): 19.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		04/28/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		04/28/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		04/28/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		04/28/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		04/28/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		04/28/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		04/28/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		04/28/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		04/28/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		04/28/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		04/28/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		04/28/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		04/28/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		04/28/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		04/28/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		04/28/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		04/28/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		04/28/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		04/28/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		04/28/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		04/28/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		04/28/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		04/28/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		04/28/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		04/28/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		04/28/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		04/28/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		04/28/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		04/28/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		04/28/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		04/28/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		04/28/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		04/28/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		04/28/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		04/28/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		04/28/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		04/28/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		04/28/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		04/28/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		04/28/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		04/28/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		04/28/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		04/28/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		04/28/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-125/1
Station Type: WELL CASING
Perf Interval (ft bgs): 374-860
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Well No. 125
City: WESTMINSTER

Sample Group ID: 10005006
Sample ID: 10011703
Sample Date/Time: 04/20/2010 08:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10040489-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 406
pH (UNITS): 7.9
Temperature (°C): 19.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		04/28/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		04/28/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		04/28/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		04/28/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		04/28/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		04/28/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		04/28/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		04/28/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		04/28/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		04/28/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		04/28/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		04/28/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		04/28/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		04/28/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		04/28/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		04/28/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		04/28/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		04/28/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		04/28/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		04/28/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		04/28/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		04/28/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		04/28/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		04/28/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		04/28/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		04/28/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		04/28/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		04/28/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		04/28/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		04/28/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		04/28/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		04/28/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		04/28/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		04/28/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-125/1
Station Type: WELL CASING
Perf Interval (ft bgs): 374-860
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Well No. 125
City: WESTMINSTER

Sample Group ID: 11026419
Sample ID: 11035444
Sample Date/Time: 09/01/2011 08:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS
Monitoring Program: Title 22

Lab Sample Number: 11090012-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 405
pH (UNITS): 8.1
Temperature (°C): 19.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		09/03/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		09/03/2011	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		09/03/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		09/03/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		09/03/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		09/03/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		09/03/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-125/1
Station Type: WELL CASING
Perf Interval (ft bgs): 374-860
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Well No. 125
City: WESTMINSTER

Sample Group ID: 11026419
Sample ID: 11037297
Sample Date/Time: 09/01/2011 08:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS
Monitoring Program: Title 22

Lab Sample Number: 11090012-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 405
pH (UNITS): 8.1
Temperature (°C): 19.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		09/09/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		09/09/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		09/09/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		09/09/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		09/09/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		09/09/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		09/09/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		09/09/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		09/09/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		09/09/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		09/09/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		09/09/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		09/09/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		09/09/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		09/09/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		09/09/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		09/09/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		09/09/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		09/09/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		09/09/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		09/09/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		09/09/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		09/09/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		09/09/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		09/09/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		09/09/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		09/09/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		09/09/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		09/09/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		09/09/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		09/09/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		09/09/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		09/09/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		09/09/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		09/09/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		09/09/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		09/09/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		09/09/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		09/09/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		09/09/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		09/09/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		09/09/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		09/09/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		09/09/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-125/1
Station Type: WELL CASING
Perf Interval (ft bgs): 374-860
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Well No. 125
City: WESTMINSTER

Sample Group ID: 11026419
Sample ID: 11037297
Sample Date/Time: 09/01/2011 08:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS
Monitoring Program: Title 22

Lab Sample Number: 11090012-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 405
pH (UNITS): 8.1
Temperature (°C): 19.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		09/09/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		09/09/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		09/09/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		09/09/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		09/09/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		09/09/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		09/09/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		09/09/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		09/09/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		09/09/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		09/09/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		09/09/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		09/09/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		09/09/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		09/09/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		09/09/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		09/09/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		09/09/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		09/09/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		09/09/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		09/09/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		09/09/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		09/09/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		09/09/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		09/09/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		09/09/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		09/09/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		09/09/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		09/09/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		09/09/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		09/09/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		09/09/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		09/09/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		09/09/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		09/09/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		09/09/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		09/09/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WMIL-WM2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-640
Aquifer: UNDEFINED

Well Owner: MILLER, WILLIS L.
Well Name:
City: WESTMINSTER

Sample Group ID: 10013311
Sample ID: 10026692
Sample Date/Time: 10/11/2010 09:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10100287-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 423
pH (UNITS): 7.8
Temperature (°C): 19.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/13/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/13/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/13/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/13/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/13/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/13/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/13/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/13/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/13/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/13/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/13/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/13/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/13/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/13/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/13/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/13/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/13/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/13/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/13/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/13/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/13/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/13/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/13/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/13/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/13/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/13/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/13/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/13/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/13/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/13/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/13/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/13/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/13/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/13/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/13/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/13/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/13/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/13/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/13/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/13/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/13/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/13/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		10/13/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/13/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WMIL-WM2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-640
Aquifer: UNDEFINED

Well Owner: MILLER, WILLIS L.
Well Name:
City: WESTMINSTER

Sample Group ID: 10013311
Sample ID: 10026692
Sample Date/Time: 10/11/2010 09:20
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 10100287-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 423
pH (UNITS): 7.8
Temperature (°C): 19.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		10/13/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/13/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/13/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/13/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/13/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/13/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/13/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/13/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/13/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/13/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/13/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/13/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/13/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/13/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/13/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/13/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/13/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/13/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/13/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/13/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/13/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/13/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/13/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/13/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/13/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/13/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/13/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/13/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/13/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/13/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/13/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/13/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/13/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/13/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WMIL-WM2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-640
Aquifer: UNDEFINED

Well Owner: MILLER, WILLIS L.
Well Name:
City: WESTMINSTER

Sample Group ID: 11029325
Sample ID: 11041667
Sample Date/Time: 10/19/2011 12:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100524-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 438
pH (UNITS): 8.
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/24/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/24/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/24/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/24/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/24/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/24/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		10/24/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WMIL-WM2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 150-640
Aquifer: UNDEFINED

Well Owner: MILLER, WILLIS L.
Well Name:
City: WESTMINSTER

Sample Group ID: 11029325
Sample ID: 11041667
Sample Date/Time: 10/19/2011 12:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Basinwide Monitoring

Lab Sample Number: 11100524-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 438
pH (UNITS): 8.
Temperature (°C): 20.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/24/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/24/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/24/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/24/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/24/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		10/24/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		10/24/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/24/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/24/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/24/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/24/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/24/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/24/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/24/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/24/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/24/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/24/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/24/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/24/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/24/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/24/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/24/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/24/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/24/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 10001398
Sample ID: 10003603
Sample Date/Time: 01/25/2010 08:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10010558-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 538
pH (UNITS): 7.8
Temperature (°C): 18.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use ***Qualifier: Validated Sample***

Parameter Abbreviation	Parameter Name	Analysis Method	Dates Extract	Dates Analysis	Results Value	Results Units	Detection Limit Value	Detection Limit Units
1112PC	1,1,1,2-Tetrachloroethane	524.2		01/26/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		01/26/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		01/26/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		01/26/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		01/26/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		01/26/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		01/26/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		01/26/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		01/26/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		01/26/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		01/26/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		01/26/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		01/26/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		01/26/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		01/26/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		01/26/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		01/26/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		01/26/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		01/26/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		01/26/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		01/26/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		01/26/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		01/26/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		01/26/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		01/26/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		01/26/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		01/26/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		01/26/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		01/26/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		01/26/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		01/26/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		01/26/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		01/26/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		01/26/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		01/26/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		01/26/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		01/26/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		01/26/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		01/26/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		01/26/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		01/26/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		01/26/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		01/26/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		01/26/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 10001398
Sample ID: 10003603
Sample Date/Time: 01/25/2010 08:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10010558-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 538
pH (UNITS): 7.8
Temperature (°C): 18.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		01/26/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		01/26/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		01/26/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		01/26/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		01/26/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		01/26/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		01/26/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		01/26/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		01/26/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		01/26/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		01/26/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		01/26/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		01/26/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		01/26/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		01/26/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		01/26/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		01/26/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		01/26/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		01/26/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		01/26/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		01/26/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		01/26/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		01/26/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		01/26/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		01/26/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		01/26/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		01/26/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		01/26/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		01/26/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		01/26/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		01/26/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		01/26/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		01/26/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		01/26/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 10005031
Sample ID: 10011515
Sample Date/Time: 04/21/2010 08:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10040547-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 553
pH (UNITS): 7.8
Temperature (°C): 17.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		04/24/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		04/24/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		04/24/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		04/24/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		04/24/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		04/24/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		04/24/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		04/24/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		04/24/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		04/24/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		04/24/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		04/24/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		04/24/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		04/24/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		04/24/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		04/24/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		04/24/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		04/24/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		04/24/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		04/24/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		04/24/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		04/24/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		04/24/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		04/24/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		04/24/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		04/24/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		04/24/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		04/24/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		04/24/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		04/24/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		04/24/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		04/24/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		04/24/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		04/24/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		04/24/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		04/24/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		04/24/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		04/24/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		04/24/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		04/24/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		04/24/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		04/24/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		04/24/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		04/24/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 10005031
Sample ID: 10011515
Sample Date/Time: 04/21/2010 08:35
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10040547-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 553
pH (UNITS): 7.8
Temperature (°C): 17.9
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		04/24/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		04/24/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		04/24/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		04/24/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		04/24/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		04/24/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		04/24/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		04/24/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		04/24/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		04/24/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		04/24/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		04/24/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		04/24/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		04/24/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		04/24/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		04/24/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		04/24/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		04/24/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		04/24/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		04/24/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		04/24/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		04/24/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		04/24/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		04/24/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		04/24/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		04/24/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		04/24/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		04/24/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		04/24/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		04/24/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		04/24/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		04/24/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		04/24/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		04/24/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 10008695
Sample ID: 10020136
Sample Date/Time: 07/21/2010 08:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS
Monitoring Program: Title 22

Lab Sample Number: 10070468-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 536
pH (UNITS): 7.8
Temperature (°C): 18.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		07/28/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		07/28/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		07/28/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		07/28/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		07/28/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		07/28/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		07/28/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		07/28/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		07/28/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		07/28/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		07/28/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		07/28/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		07/28/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		07/28/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		07/28/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		07/28/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		07/28/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		07/28/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		07/28/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		07/28/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		07/28/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		07/28/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		07/28/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		07/28/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		07/28/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		07/28/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		07/28/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		07/28/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		07/28/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		07/28/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		07/28/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		07/28/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		07/28/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		07/28/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		07/28/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		07/28/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		07/28/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		07/28/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		07/28/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		07/28/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		07/28/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		07/28/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		07/28/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		07/28/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 10008695
Sample ID: 10020136
Sample Date/Time: 07/21/2010 08:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: PAT VERSLUIS
Monitoring Program: Title 22

Lab Sample Number: 10070468-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 536
pH (UNITS): 7.8
Temperature (°C): 18.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		07/28/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		07/28/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		07/28/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		07/28/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		07/28/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		07/28/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		07/28/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		07/28/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		07/28/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		07/28/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		07/28/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		07/28/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		07/28/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		07/28/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		07/28/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		07/28/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		07/28/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		07/28/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		07/28/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		07/28/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		07/28/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		07/28/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		07/28/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		07/28/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		07/28/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		07/28/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		07/28/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		07/28/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		07/28/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		07/28/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		07/28/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		07/28/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		07/28/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		07/28/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 10013783
Sample ID: 10027605
Sample Date/Time: 10/21/2010 09:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10100625-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 550
pH (UNITS): 7.8
Temperature (°C): 18.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		10/23/2010	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		10/23/2010	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		10/23/2010	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		10/23/2010	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		10/23/2010	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		10/23/2010	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		10/23/2010	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		10/23/2010	ND	ug/L	.5	ug/L
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		10/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 10013783
Sample ID: 10027605
Sample Date/Time: 10/21/2010 09:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10100625-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 550
pH (UNITS): 7.8
Temperature (°C): 18.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
CLBENZ	Chlorobenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		10/23/2010	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		10/23/2010	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		10/23/2010	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		10/23/2010	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		10/23/2010	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		10/23/2010	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		10/23/2010	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		10/23/2010	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		10/23/2010	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		10/23/2010	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		10/23/2010	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		10/23/2010	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		10/23/2010	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		10/23/2010	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		10/23/2010	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		10/23/2010	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		10/23/2010	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		10/23/2010	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		10/23/2010	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		10/23/2010	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		10/23/2010	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		10/23/2010	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 11003579
Sample ID: 11007524
Sample Date/Time: 03/23/2011 08:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030560-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 555
pH (UNITS): 8.
Temperature (°C): 18.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		03/25/2011	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		03/25/2011	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		03/25/2011	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		03/25/2011	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		03/25/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		03/25/2011	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		03/25/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 11003579
Sample ID: 11007703
Sample Date/Time: 03/23/2011 08:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030560-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 555
pH (UNITS): 8.
Temperature (°C): 18.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
1112PC	1,1,1,2-Tetrachloroethane	524.2		03/24/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		03/24/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		03/24/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		03/24/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		03/24/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		03/24/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		03/24/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		03/24/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		03/24/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		03/24/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		03/24/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		03/24/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		03/24/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		03/24/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		03/24/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		03/24/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		03/24/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		03/24/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		03/24/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		03/24/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		03/24/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		03/24/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		03/24/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		03/24/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		03/24/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		03/24/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		03/24/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		03/24/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		03/24/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		03/24/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		03/24/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		03/24/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		03/24/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		03/24/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		03/24/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		03/24/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		03/24/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		03/24/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		03/24/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		03/24/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		03/24/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		03/24/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		03/24/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		03/24/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 11003579
Sample ID: 11007703
Sample Date/Time: 03/23/2011 08:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030560-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 555
pH (UNITS): 8.
Temperature (°C): 18.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		03/24/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		03/24/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		03/24/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		03/24/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		03/24/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		03/24/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		03/24/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		03/24/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		03/24/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		03/24/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		03/24/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		03/24/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		03/24/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		03/24/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		03/24/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		03/24/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		03/24/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		03/24/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		03/24/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		03/24/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		03/24/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		03/24/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		03/24/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		03/24/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		03/24/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		03/24/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		03/24/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		03/24/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		03/24/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		03/24/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		03/24/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		03/24/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		03/24/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		03/24/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		03/24/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		03/24/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		03/24/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 11005134
Sample ID: 11011351
Sample Date/Time: 05/04/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11050128-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 529
pH (UNITS): 7.6
Temperature (°C): 18.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use *Qualifier: Validated Sample*

Parameter Abbreviation	Parameter Name	Analysis Method	Dates Extract	Dates Analysis	Results Value	Results Units	Detection Limit Value	Detection Limit Units
1112PC	1,1,1,2-Tetrachloroethane	524.2		05/07/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		05/07/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		05/07/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		05/07/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		05/07/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		05/07/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		05/07/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		05/07/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		05/07/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		05/07/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		05/07/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		05/07/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		05/07/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		05/07/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		05/07/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		05/07/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		05/07/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		05/07/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		05/07/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		05/07/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		05/07/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		05/07/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		05/07/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		05/07/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		05/07/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		05/07/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		05/07/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		05/07/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		05/07/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		05/07/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		05/07/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		05/07/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		05/07/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		05/07/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		05/07/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		05/07/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		05/07/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		05/07/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		05/07/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		05/07/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		05/07/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		05/07/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		05/07/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		05/07/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 11005134
Sample ID: 11011351
Sample Date/Time: 05/04/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11050128-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 529
pH (UNITS): 7.6
Temperature (°C): 18.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		05/07/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		05/07/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		05/07/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		05/07/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		05/07/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		05/07/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		05/07/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		05/07/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		05/07/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		05/07/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		05/07/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		05/07/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		05/07/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		05/07/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		05/07/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		05/07/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		05/07/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		05/07/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		05/07/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		05/07/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		05/07/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		05/07/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		05/07/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		05/07/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		05/07/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		05/07/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		05/07/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		05/07/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		05/07/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		05/07/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		05/07/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		05/07/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		05/07/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		05/07/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		05/07/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		05/07/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		05/07/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 11007638
Sample ID: 11016124
Sample Date/Time: 07/21/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11070562-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 539
pH (UNITS): 7.9
Temperature (°C): 18.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use ***Qualifier: Validated Sample***

Parameter Abbreviation	Parameter Name	Analysis Method	Dates Extract	Dates Analysis	Results Value	Results Units	Detection Limit Value	Detection Limit Units
1112PC	1,1,1,2-Tetrachloroethane	524.2		07/22/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		07/22/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		07/22/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		07/22/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		07/22/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		07/22/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		07/22/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		07/22/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		07/22/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		07/22/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		07/22/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		07/22/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		07/22/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		07/22/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		07/22/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		07/22/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		07/22/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		07/22/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		07/22/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		07/22/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		07/22/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		07/22/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		07/22/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		07/22/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		07/22/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		07/22/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		07/22/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		07/22/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		07/22/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		07/22/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		07/22/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		07/22/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		07/22/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		07/22/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		07/22/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		07/22/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		07/22/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		07/22/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		07/22/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		07/22/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		07/22/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		07/22/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		07/22/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		07/22/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 11007638
Sample ID: 11016124
Sample Date/Time: 07/21/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11070562-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 539
pH (UNITS): 7.9
Temperature (°C): 18.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		07/22/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		07/22/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		07/22/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		07/22/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		07/22/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		07/22/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		07/22/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		07/22/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		07/22/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		07/22/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		07/22/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		07/22/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		07/22/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		07/22/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		07/22/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		07/22/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		07/22/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		07/22/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		07/22/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		07/22/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		07/22/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		07/22/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		07/22/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		07/22/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		07/22/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		07/22/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		07/22/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		07/22/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		07/22/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		07/22/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		07/22/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		07/22/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		07/22/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		07/22/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		07/22/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		07/22/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		07/22/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 11029423
Sample ID: 11040886
Sample Date/Time: 10/27/2011 08:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11100775-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 549
pH (UNITS): 8.
Temperature (°C): 18.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use ***Qualifier: Validated Sample***

Parameter Abbreviation	Parameter Name	Analysis Method	Dates Extract	Dates Analysis	Results Value	Results Units	Detection Limit Value	Detection Limit Units
1112PC	1,1,1,2-Tetrachloroethane	524.2		11/03/2011	ND	ug/L	.5	ug/L
111TCA	1,1,1-Trichloroethane	524.2		11/03/2011	ND	ug/L	.5	ug/L
1122PC	1,1,2,2-Tetrachloroethane	524.2		11/03/2011	ND	ug/L	.5	ug/L
112TCA	1,1,2-Trichloroethane	524.2		11/03/2011	ND	ug/L	.5	ug/L
11DCA	1,1-Dichloroethane	524.2		11/03/2011	ND	ug/L	.5	ug/L
11DCE	1,1-Dichloroethene	524.2		11/03/2011	ND	ug/L	.5	ug/L
11DCP	1,1-Dichloropropene	524.2		11/03/2011	ND	ug/L	.5	ug/L
123TCB	1,2,3-Trichlorobenzene	524.2		11/03/2011	ND	ug/L	.5	ug/L
123TCP	1,2,3-Trichloropropane	524.2		11/03/2011	ND	ug/L	.5	ug/L
124TCB	1,2,4-Trichlorobenzene	524.2		11/03/2011	ND	ug/L	.5	ug/L
124TMB	1,2,4-Trimethylbenzene	524.2		11/03/2011	ND	ug/L	.5	ug/L
12DCA	1,2-Dichloroethane	524.2		11/03/2011	ND	ug/L	.5	ug/L
12DCB	1,2-Dichlorobenzene	524.2		11/03/2011	ND	ug/L	.5	ug/L
12DCP	1,2-Dichloropropane	524.2		11/03/2011	ND	ug/L	.5	ug/L
135TMB	1,3,5-Trimethylbenzene	524.2		11/03/2011	ND	ug/L	.5	ug/L
13DCB	1,3-Dichlorobenzene	524.2		11/03/2011	ND	ug/L	.5	ug/L
13DCP	1,3-Dichloropropane	524.2		11/03/2011	ND	ug/L	.5	ug/L
14DCB	1,4-Dichlorobenzene	524.2		11/03/2011	ND	ug/L	.5	ug/L
22DCP	2,2-Dichloropropane	524.2		11/03/2011	ND	ug/L	.5	ug/L
2CLTOL	2-Chlorotoluene	524.2		11/03/2011	ND	ug/L	.5	ug/L
4CLTOL	4-Chlorotoluene	524.2		11/03/2011	ND	ug/L	.5	ug/L
4IPTOL	4-Isopropyltoluene	524.2		11/03/2011	ND	ug/L	.5	ug/L
AAVE	Vinyl Acetate	524.2		11/03/2011	ND	ug/L	10	ug/L
ACETNE	Acetone	524.2		11/03/2011	ND	ug/L	10	ug/L
ACROLN	Acrolein	524.2		11/03/2011	ND	ug/L	10	ug/L
ACRYLO	Acrylonitrile	524.2		11/03/2011	ND	ug/L	10	ug/L
B2CLEE	bis (2-chloroethyl) ether	524.2		11/03/2011	ND	ug/L	5	ug/L
BENZ	Benzene	524.2		11/03/2011	ND	ug/L	.5	ug/L
BRBENZ	Bromobenzene	524.2		11/03/2011	ND	ug/L	.5	ug/L
c12DCE	cis-1,2-Dichloroethene	524.2		11/03/2011	ND	ug/L	.5	ug/L
c13DCP	cis-1,3-Dichloropropene	524.2		11/03/2011	ND	ug/L	.5	ug/L
CCl2F2	Dichlorodifluoromethane	524.2		11/03/2011	ND	ug/L	.5	ug/L
CCl3F	Trichlorofluoromethane (Freon 11)	524.2		11/03/2011	ND	ug/L	.5	ug/L
CCl4	Carbon tetrachloride	524.2		11/03/2011	ND	ug/L	.5	ug/L
CH2Br2	Dibromomethane	524.2		11/03/2011	ND	ug/L	.5	ug/L
CH2BrC	Bromochloromethane	524.2		11/03/2011	ND	ug/L	.5	ug/L
CH2Cl2	Methylene Chloride	524.2		11/03/2011	ND	ug/L	.5	ug/L
CH3Br	Bromomethane	524.2		11/03/2011	ND	ug/L	.5	ug/L
CH3Cl	Chloromethane	524.2		11/03/2011	ND	ug/L	.5	ug/L
CHBr2C	Dibromochloromethane	524.2		11/03/2011	ND	ug/L	.5	ug/L
CHBr3	Bromoform	524.2		11/03/2011	ND	ug/L	.5	ug/L
CHBrCl	Bromodichloromethane	524.2		11/03/2011	ND	ug/L	.5	ug/L
CHCl3	Chloroform	524.2		11/03/2011	ND	ug/L	.5	ug/L
CHTFEE	Chlorotrifluoroethene	524.2		11/03/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 11029423
Sample ID: 11040886
Sample Date/Time: 10/27/2011 08:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11100775-02
Laboratory: OCWD
Analysis Requested: 524

FIELD PARAMETERS
EC (umhos/cm): 549
pH (UNITS): 8.
Temperature (°C): 18.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
Cl3F3E	Trichlorotrifluoroethane (Freon 113)	524.2		11/03/2011	ND	ug/L	.5	ug/L
CLBENZ	Chlorobenzene	524.2		11/03/2011	ND	ug/L	.5	ug/L
ClETHA	Chloroethane	524.2		11/03/2011	ND	ug/L	.5	ug/L
CS2	Carbon Disulfide	524.2		11/03/2011	ND	ug/L	.5	ug/L
DBCP	1,2-Dibromo-3-chloropropane	524.2		11/03/2011	ND	ug/L	.5	ug/L
DIPE	Diisopropyl ether	524.2		11/03/2011	ND	ug/L	1	ug/L
EDB	1,2-Dibromoethane	524.2		11/03/2011	ND	ug/L	.5	ug/L
ETBE	Ethyl tert-butyl ether	524.2		11/03/2011	ND	ug/L	1	ug/L
EtBENZ	Ethylbenzene	524.2		11/03/2011	ND	ug/L	.5	ug/L
FR123A	Freon 123a	524.2		11/03/2011	ND	ug/L	.5	ug/L
FREN22	Chlorodifluoromethane	524.2		11/03/2011	ND	ug/L	.5	ug/L
HClBut	Hexachlorobutadiene	524.2		11/03/2011	ND	ug/L	.5	ug/L
ISPBNZ	Isopropylbenzene	524.2		11/03/2011	ND	ug/L	.5	ug/L
MBK	2-Hexanone	524.2		11/03/2011	ND	ug/L	10	ug/L
MEK	Methyl Ethyl Ketone (MEK)	524.2		11/03/2011	ND	ug/L	5	ug/L
MIBK	Methyl Isobutyl Ketone (MIBK)	524.2		11/03/2011	ND	ug/L	5	ug/L
mp-XYL	m,p-Xylene	524.2		11/03/2011	ND	ug/L	.5	ug/L
MTBE	Methyl tert-butyl ether	524.2		11/03/2011	ND	ug/L	.2	ug/L
NAP	Naphthalene	524.2		11/03/2011	ND	ug/L	.5	ug/L
nBBENZ	n-Butylbenzene	524.2		11/03/2011	ND	ug/L	.5	ug/L
NBENZ	Nitrobenzene	524.2		11/03/2011	ND	ug/L	5	ug/L
o-XYL	o-Xylene	524.2		11/03/2011	ND	ug/L	.5	ug/L
PCE	Tetrachloroethene	524.2		11/03/2011	ND	ug/L	.5	ug/L
PRPBNZ	Propylbenzene	524.2		11/03/2011	ND	ug/L	.5	ug/L
sBBENZ	sec-Butylbenzene	524.2		11/03/2011	ND	ug/L	.5	ug/L
STYR	Styrene	524.2		11/03/2011	ND	ug/L	.5	ug/L
t12DCE	trans-1,2 Dichloroethene	524.2		11/03/2011	ND	ug/L	.5	ug/L
t13DCP	trans-1,3-Dichloropropene	524.2		11/03/2011	ND	ug/L	.5	ug/L
TAME	Tert-amyl methyl ether	524.2		11/03/2011	ND	ug/L	1	ug/L
TBA	tert-butyl alcohol	524.2		11/03/2011	ND	ug/L	2	ug/L
tBBENZ	tert-Butylbenzene	524.2		11/03/2011	ND	ug/L	.5	ug/L
TCE	Trichloroethene	524.2		11/03/2011	ND	ug/L	.5	ug/L
TOLU	Toluene	524.2		11/03/2011	ND	ug/L	.5	ug/L
TOTALX	Total Xylenes (m,p,&o)	524.2		11/03/2011	ND	ug/L	.5	ug/L
TTHMs	Total Trihalomethanes	524.2		11/03/2011	ND	ug/L	.5	ug/L
VNYLCL	Vinyl chloride	524.2		11/03/2011	ND	ug/L	.5	ug/L
x13DCP	Total 1,3-Dichloropropene	524.2		11/03/2011	ND	ug/L	.5	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 12001232
Sample ID: 12002831
Sample Date/Time: 01/25/2012 08:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 12010581-03
Laboratory: OCWD
Analysis Requested: 14DIOX

FIELD PARAMETERS
EC (umhos/cm): 554
pH (UNITS): 8.
Temperature (°C): 18.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	14DIOX		02/03/2012	ND	ug/L	.005	ug/L
14DIOX	1,4-Dioxane	14DIOX		02/03/2012	ND	ug/L	1	ug/L
2ClEVE	2-Chloroethylvinyl ether	14DIOX		02/03/2012	ND	ug/L	.1	ug/L
ACETNE	Acetone	14DIOX		02/03/2012	ND	ug/L	10	ug/L
DBCP	1,2-Dibromo-3-chloropropane	14DIOX		02/03/2012	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	14DIOX		02/03/2012	ND	ug/L	.005	ug/L
MITC	Methylisothiocyanate	14DIOX		02/03/2012	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: GG-16/1
Station Type: WELL CASING
Perf Interval (ft bgs): 304-864
Aquifer: UNDEFINED

Well Owner: GARDEN GROVE
Well Name: Well No. 16
City: GARDEN GROVE

Sample Group ID: 11003790
Sample ID: 11009263
Sample Date/Time: 04/06/2011 13:55
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11040130-04
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 519
pH (UNITS): 8.
Temperature (°C): 18.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALACHL	Alachlor	507	04/07/2011	04/07/2011	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	04/07/2011	04/07/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	04/07/2011	04/07/2011	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	04/07/2011	04/07/2011	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	04/07/2011	04/07/2011	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	04/07/2011	04/07/2011	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	04/07/2011	04/07/2011	ND	ug/L	5	ug/L
EPTC	EPTC	507	04/07/2011	04/07/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	507	04/07/2011	04/07/2011	ND	ug/L	.1	ug/L
MALATH	Malathion	507	04/07/2011	04/07/2011	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	04/07/2011	04/07/2011	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	04/07/2011	04/07/2011	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	04/07/2011	04/07/2011	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	04/07/2011	04/07/2011	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	04/07/2011	04/07/2011	ND	ug/L	.5	ug/L
PARA	Parathion	507	04/07/2011	04/07/2011	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	04/07/2011	04/07/2011	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	04/07/2011	04/07/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	04/07/2011	04/07/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	04/07/2011	04/07/2011	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	04/07/2011	04/07/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	04/07/2011	04/07/2011	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	04/07/2011	04/07/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: GG-16/1
Station Type: WELL CASING
Perf Interval (ft bgs): 304-864
Aquifer: UNDEFINED

Well Owner: GARDEN GROVE
Well Name: Well No. 16
City: GARDEN GROVE

Sample Group ID: 11026365
Sample ID: 11036201
Sample Date/Time: 08/24/2011 13:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BEN LOCKHART
Monitoring Program: Title 22

Lab Sample Number: 11080696-02
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 541
pH (UNITS): 7.8
Temperature (°C): 20.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: DISCHARGING TO STREET

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALACHL	Alachlor	507	08/25/2011	08/25/2011	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	08/25/2011	08/25/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	08/25/2011	08/25/2011	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	08/25/2011	08/25/2011	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	08/25/2011	08/25/2011	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	08/25/2011	08/25/2011	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	08/25/2011	08/25/2011	ND	ug/L	5	ug/L
EPTC	EPTC	507	08/25/2011	08/25/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	507	08/25/2011	08/25/2011	ND	ug/L	.1	ug/L
MALATH	Malathion	507	08/25/2011	08/25/2011	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	08/25/2011	08/25/2011	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	08/25/2011	08/25/2011	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	08/25/2011	08/25/2011	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	08/25/2011	08/25/2011	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	08/25/2011	08/25/2011	ND	ug/L	.5	ug/L
PARA	Parathion	507	08/25/2011	08/25/2011	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	08/25/2011	08/25/2011	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	08/25/2011	08/25/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	08/25/2011	08/25/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	08/25/2011	08/25/2011	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	08/25/2011	08/25/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	08/25/2011	08/25/2011	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	08/25/2011	08/25/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-13/1
Station Type: WELL CASING
Perf Interval (ft bgs): 280-810
Aquifer: UNDEFINED

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 13
City: HUNTINGTON BEACH

Sample Group ID: 10001878
Sample ID: 10005564
Sample Date/Time: 02/17/2010 10:25
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10020509-03
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 706
pH (UNITS): 7.9
Temperature (°C): 21.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use *Qualifier: Validated Sample*

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
ALACHL	Alachlor	507	02/18/2010	02/22/2010	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	02/18/2010	02/22/2010	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	02/18/2010	02/22/2010	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	02/18/2010	02/22/2010	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	02/18/2010	02/22/2010	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	02/18/2010	02/22/2010	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	02/18/2010	02/22/2010	ND	ug/L	5	ug/L
EPTC	EPTC	507	02/18/2010	02/22/2010	ND	ug/L	.1	ug/L
ETHION	Ethion	507	02/18/2010	02/22/2010	ND	ug/L	.1	ug/L
MALATH	Malathion	507	02/18/2010	02/22/2010	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	02/18/2010	02/22/2010	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	02/18/2010	02/22/2010	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	02/18/2010	02/22/2010	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	02/18/2010	02/22/2010	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	02/18/2010	02/22/2010	ND	ug/L	.5	ug/L
PARA	Parathion	507	02/18/2010	02/22/2010	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	02/18/2010	02/22/2010	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	02/18/2010	02/22/2010	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	02/18/2010	02/22/2010	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	02/18/2010	02/22/2010	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	02/18/2010	02/22/2010	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	02/18/2010	02/22/2010	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	02/18/2010	02/22/2010	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: HB-4/1
Station Type: WELL CASING
Perf Interval (ft bgs): 252-804
Aquifer: B, L, O, UR, LR, MAIN

Well Owner: HUNTINGTON BEACH
Well Name: Well No. 4
City: HUNTINGTON BEACH

Sample Group ID: 10001875
Sample ID: 10005556
Sample Date/Time: 02/17/2010 10:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10020504-03
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 733
pH (UNITS): 7.8
Temperature (°C): 20.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use *Qualifier: Validated Sample*

Parameter Abbreviation	Parameter Name	Analysis Method	Dates Extract	Dates Analysis	Results Value	Results Units	Detection Limit Value	Detection Limit Units
ALACHL	Alachlor	507	02/18/2010	02/22/2010	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	02/18/2010	02/22/2010	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	02/18/2010	02/22/2010	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	02/18/2010	02/22/2010	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	02/18/2010	02/22/2010	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	02/18/2010	02/22/2010	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	02/18/2010	02/22/2010	ND	ug/L	5	ug/L
EPTC	EPTC	507	02/18/2010	02/22/2010	ND	ug/L	.1	ug/L
ETHION	Ethion	507	02/18/2010	02/22/2010	ND	ug/L	.1	ug/L
MALATH	Malathion	507	02/18/2010	02/22/2010	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	02/18/2010	02/22/2010	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	02/18/2010	02/22/2010	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	02/18/2010	02/22/2010	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	02/18/2010	02/22/2010	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	02/18/2010	02/22/2010	ND	ug/L	.5	ug/L
PARA	Parathion	507	02/18/2010	02/22/2010	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	02/18/2010	02/22/2010	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	02/18/2010	02/22/2010	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	02/18/2010	02/22/2010	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	02/18/2010	02/22/2010	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	02/18/2010	02/22/2010	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	02/18/2010	02/22/2010	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	02/18/2010	02/22/2010	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BC/1
Station Type: WELL CASING
Perf Interval (ft bgs): 370-1020
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Bolsa Chica Well
City: SEAL BEACH

Sample Group ID: 11001249
Sample ID: 11003497
Sample Date/Time: 01/27/2011 07:15
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11010740-04
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 386
pH (UNITS): 8.5
Temperature (°C): 20.6
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use ***Qualifier: Validated Sample***

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
ALACHL	Alachlor	507	02/01/2011	02/01/2011	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	02/01/2011	02/01/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	02/01/2011	02/01/2011	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	02/01/2011	02/01/2011	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	02/01/2011	02/01/2011	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	02/01/2011	02/01/2011	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	02/01/2011	02/01/2011	ND	ug/L	5	ug/L
EPTC	EPTC	507	02/01/2011	02/01/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	507	02/01/2011	02/01/2011	ND	ug/L	.1	ug/L
MALATH	Malathion	507	02/01/2011	02/01/2011	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	02/01/2011	02/01/2011	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	02/01/2011	02/01/2011	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	02/01/2011	02/01/2011	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	02/01/2011	02/01/2011	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	02/01/2011	02/01/2011	ND	ug/L	.5	ug/L
PARA	Parathion	507	02/01/2011	02/01/2011	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	02/01/2011	02/01/2011	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	02/01/2011	02/01/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	02/01/2011	02/01/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	02/01/2011	02/01/2011	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	02/01/2011	02/01/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	02/01/2011	02/01/2011	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	02/01/2011	02/01/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BC/1
Station Type: WELL CASING
Perf Interval (ft bgs): 370-1020
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Bolsa Chica Well
City: SEAL BEACH

Sample Group ID: 11027144
Sample ID: 11037915
Sample Date/Time: 09/19/2011 07:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090461-02
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 377
pH (UNITS): 8.2
Temperature (°C): 17.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALACHL	Alachlor	507	09/26/2011	09/26/2011	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	09/26/2011	09/26/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	09/26/2011	09/26/2011	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	09/26/2011	09/26/2011	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	09/26/2011	09/26/2011	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	09/26/2011	09/26/2011	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	09/26/2011	09/26/2011	ND	ug/L	5	ug/L
EPTC	EPTC	507	09/26/2011	09/26/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	507	09/26/2011	09/26/2011	ND	ug/L	.1	ug/L
MALATH	Malathion	507	09/26/2011	09/26/2011	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	09/26/2011	09/26/2011	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	09/26/2011	09/26/2011	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	09/26/2011	09/26/2011	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	09/26/2011	09/26/2011	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	09/26/2011	09/26/2011	ND	ug/L	.5	ug/L
PARA	Parathion	507	09/26/2011	09/26/2011	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	09/26/2011	09/26/2011	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	09/26/2011	09/26/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	09/26/2011	09/26/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	09/26/2011	09/26/2011	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	09/26/2011	09/26/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	09/26/2011	09/26/2011	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	09/26/2011	09/26/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BC/1
Station Type: WELL CASING
Perf Interval (ft bgs): 370-1020
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Bolsa Chica Well
City: SEAL BEACH

Sample Group ID: 11029412
Sample ID: 11042530
Sample Date/Time: 10/26/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11100752-02
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 379
pH (UNITS): 8.3
Temperature (°C): 21.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALACHL	Alachlor	507	10/31/2011	11/01/2011	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	10/31/2011	11/01/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	10/31/2011	11/01/2011	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	10/31/2011	11/01/2011	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	10/31/2011	11/01/2011	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	10/31/2011	11/01/2011	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	10/31/2011	11/01/2011	ND	ug/L	5	ug/L
EPTC	EPTC	507	10/31/2011	11/01/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	507	10/31/2011	11/01/2011	ND	ug/L	.1	ug/L
MALATH	Malathion	507	10/31/2011	11/01/2011	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	10/31/2011	11/01/2011	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	10/31/2011	11/01/2011	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	10/31/2011	11/01/2011	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	10/31/2011	11/01/2011	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	10/31/2011	11/01/2011	ND	ug/L	.5	ug/L
PARA	Parathion	507	10/31/2011	11/01/2011	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	10/31/2011	11/01/2011	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	10/31/2011	11/01/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	10/31/2011	11/01/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	10/31/2011	11/01/2011	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	10/31/2011	11/01/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	10/31/2011	11/01/2011	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	10/31/2011	11/01/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BEV/1
Station Type: WELL CASING
Perf Interval (ft bgs): 400-800
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Beverly Manor
City: SEAL BEACH

Sample Group ID: 11001250
Sample ID: 11003498
Sample Date/Time: 01/27/2011 11:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11010748-04
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 398
pH (UNITS): 8.8
Temperature (°C): 24.4
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Comments: WELL ON 2 HRS.

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALACHL	Alachlor	507	02/01/2011	02/02/2011	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	02/01/2011	02/02/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	02/01/2011	02/02/2011	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	02/01/2011	02/02/2011	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	02/01/2011	02/02/2011	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	02/01/2011	02/02/2011	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	02/01/2011	02/02/2011	ND	ug/L	5	ug/L
EPTC	EPTC	507	02/01/2011	02/02/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	507	02/01/2011	02/02/2011	ND	ug/L	.1	ug/L
MALATH	Malathion	507	02/01/2011	02/02/2011	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	02/01/2011	02/02/2011	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	02/01/2011	02/02/2011	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	02/01/2011	02/02/2011	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	02/01/2011	02/02/2011	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	02/01/2011	02/02/2011	ND	ug/L	.5	ug/L
PARA	Parathion	507	02/01/2011	02/02/2011	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	02/01/2011	02/02/2011	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	02/01/2011	02/02/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	02/01/2011	02/02/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	02/01/2011	02/02/2011	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	02/01/2011	02/02/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	02/01/2011	02/02/2011	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	02/01/2011	02/02/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BEV/1
Station Type: WELL CASING
Perf Interval (ft bgs): 400-800
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Beverly Manor
City: SEAL BEACH

Sample Group ID: 11007851
Sample ID: 11036148
Sample Date/Time: 07/26/2011 07:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11070661-02
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 367
pH (UNITS): 8.8
Temperature (°C): 24.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use ***Qualifier: Validated Sample***

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
ALACHL	Alachlor	507	08/03/2011	08/03/2011	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	08/03/2011	08/03/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	08/03/2011	08/03/2011	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	08/03/2011	08/03/2011	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	08/03/2011	08/03/2011	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	08/03/2011	08/03/2011	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	08/03/2011	08/03/2011	ND	ug/L	5	ug/L
EPTC	EPTC	507	08/03/2011	08/03/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	507	08/03/2011	08/03/2011	ND	ug/L	.1	ug/L
MALATH	Malathion	507	08/03/2011	08/03/2011	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	08/03/2011	08/03/2011	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	08/03/2011	08/03/2011	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	08/03/2011	08/03/2011	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	08/03/2011	08/03/2011	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	08/03/2011	08/03/2011	ND	ug/L	.5	ug/L
PARA	Parathion	507	08/03/2011	08/03/2011	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	08/03/2011	08/03/2011	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	08/03/2011	08/03/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	08/03/2011	08/03/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	08/03/2011	08/03/2011	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	08/03/2011	08/03/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	08/03/2011	08/03/2011	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	08/03/2011	08/03/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-BEV/1
Station Type: WELL CASING
Perf Interval (ft bgs): 400-800
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Beverly Manor
City: SEAL BEACH

Sample Group ID: 11029410
Sample ID: 11042528
Sample Date/Time: 10/26/2011 07:45
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11100750-02
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 9.
Temperature (°C): 25.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use *Qualifier: Validated Sample*

Parameter Abbreviation	Parameter Name	Analysis Method	Dates Extract	Dates Analysis	Results Value	Results Units	Detection Limit Value	Detection Limit Units
ALACHL	Alachlor	507	10/31/2011	11/01/2011	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	10/31/2011	11/01/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	10/31/2011	11/01/2011	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	10/31/2011	11/01/2011	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	10/31/2011	11/01/2011	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	10/31/2011	11/01/2011	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	10/31/2011	11/01/2011	ND	ug/L	5	ug/L
EPTC	EPTC	507	10/31/2011	11/01/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	507	10/31/2011	11/01/2011	ND	ug/L	.1	ug/L
MALATH	Malathion	507	10/31/2011	11/01/2011	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	10/31/2011	11/01/2011	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	10/31/2011	11/01/2011	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	10/31/2011	11/01/2011	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	10/31/2011	11/01/2011	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	10/31/2011	11/01/2011	ND	ug/L	.5	ug/L
PARA	Parathion	507	10/31/2011	11/01/2011	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	10/31/2011	11/01/2011	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	10/31/2011	11/01/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	10/31/2011	11/01/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	10/31/2011	11/01/2011	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	10/31/2011	11/01/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	10/31/2011	11/01/2011	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	10/31/2011	11/01/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11013343
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-05
Laboratory: OCWD
Analysis Requested: 504

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	504.1	06/20/2011	06/21/2011	ND	ug/L	.05	ug/L
DBCP	1,2-Dibromo-3-chloropropane	504.1	06/20/2011	06/21/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	504.1	06/20/2011	06/21/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11013344
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-06
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use ***Qualifier: Validated Sample***

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
ALACHL	Alachlor	507	06/16/2011	06/16/2011	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	06/16/2011	06/16/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	06/16/2011	06/16/2011	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	06/16/2011	06/16/2011	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	06/16/2011	06/16/2011	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	06/16/2011	06/16/2011	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	06/16/2011	06/16/2011	ND	ug/L	5	ug/L
EPTC	EPTC	507	06/16/2011	06/16/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	507	06/16/2011	06/16/2011	ND	ug/L	.1	ug/L
MALATH	Malathion	507	06/16/2011	06/16/2011	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	06/16/2011	06/16/2011	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	06/16/2011	06/16/2011	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	06/16/2011	06/16/2011	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	06/16/2011	06/16/2011	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	06/16/2011	06/16/2011	ND	ug/L	.5	ug/L
PARA	Parathion	507	06/16/2011	06/16/2011	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	06/16/2011	06/16/2011	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	06/16/2011	06/16/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	06/16/2011	06/16/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	06/16/2011	06/16/2011	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	06/16/2011	06/16/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	06/16/2011	06/16/2011	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	06/16/2011	06/16/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11013345
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-13
Laboratory: OCWD
Analysis Requested: 548

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ENDOTL	Endothall	548.1	06/15/2011	06/15/2011	ND	ug/L	45	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11013346
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-15
Laboratory: OCWD
Analysis Requested: 550

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	*Qualifier: Validated Sample*							
ACENAP	Acenapthylene	550.1	06/15/2011	06/16/2011	ND	ug/L	1	ug/L
ACNAPE	Acenapthene	550.1	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
ANTHRA	Anthracene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
BaANTH	Benzo(a)anthracene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
BaPYRE	Benzo(a)pyrene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
BbFLUR	Benzo(b)fluoranthene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
BghiPR	Benzo(g,h,i)perylene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
BkFLUR	Benzo[k]fluoranthene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
CHRYS	Chrysene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
DBahAN	Dibenzo(a,h)anthracene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
FLANTH	Fluoranthene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
FLUOR	Fluorene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
INDPYR	Indeno(1,2,3-cd)pyrene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
NAP	Naphthalene	550.1	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
PHENAN	Phenanthrene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
PYRENE	Pyrene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11013751
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-07
Laboratory: OCWD
Analysis Requested: 508

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALACHL	Alachlor	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
ALDRIN	Aldrin	508	06/15/2011	06/16/2011	ND	ug/L	.03	ug/L
BHCa	HCH-alpha(Alpha-BHC)	508	06/15/2011	06/16/2011	ND	ug/L	.02	ug/L
BHCb	HCH-beta(Beta-BHC)	508	06/15/2011	06/16/2011	ND	ug/L	.02	ug/L
BHCd	HCH-delta(Delta-BHC)	508	06/15/2011	06/16/2011	ND	ug/L	.02	ug/L
CAPTAN	Captan	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L
CLBZLA	Chlorobenzilate	508	06/15/2011	06/16/2011	ND	ug/L	.05	ug/L
CLDA	Chlordane-alpha	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L
CIDANE	Chlordane	508	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
CLDG	Chlordane-gamma	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L
CLNEB	Chloroneb	508	06/15/2011	06/16/2011	ND	ug/L	.4	ug/L
CIPYRI	Chlorpyrifos	508	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
CLTNIL	Chlorothalonil	508	06/15/2011	06/16/2011	ND	ug/L	5	ug/L
DCPA	DCPA-Dacthal	508	06/15/2011	06/16/2011	ND	ug/L	.05	ug/L
DDD	4,4'-DDD	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L
DDE	4,4'-DDE	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L
DDT	4,4'-DDT	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L
DIELDR	Dieldrin	508	06/15/2011	06/16/2011	ND	ug/L	.02	ug/L
ENDOI	Endosulfan I	508	06/15/2011	06/16/2011	ND	ug/L	.05	ug/L
ENDOII	Endosulfan II	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L
ENDOSL	Endosulfan sulfate	508	06/15/2011	06/16/2011	ND	ug/L	.05	ug/L
ENDR-A	Endrin Aldehyde	508	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
ENDR-K	Endrin Ketone	508	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
ENDRIN	Endrin	508	06/15/2011	06/16/2011	ND	ug/L	.03	ug/L
ETRDZL	Etridiazole	508	06/15/2011	06/16/2011	ND	ug/L	.05	ug/L
HCICPD	Hexachlorocyclopentadiene	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
HEPEPX	Heptachlor epoxide	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L
HEPTA	Heptachlor	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L
HEXCLB	Hexachlorobenzene	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
LINDNE	HCH-gamma (Lindane)	508	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
METHOX	Methoxychlor	508	06/15/2011	06/16/2011	ND	ug/L	1	ug/L
PCB16	PCB-1016	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
PCB21	PCB-1221	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
PCB32	PCB-1232	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
PCB42	PCB-1242	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
PCB48	PCB-1248	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
PCB54	PCB-1254	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
PCB60	PCB-1260	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
PMTHRN	Permethrin-(total of cis/trans)	508	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
TOXA	Toxaphene Mixture	508	06/15/2011	06/16/2011	ND	ug/L	1	ug/L
TRFLRN	Trifluralin	508	06/15/2011	06/16/2011	ND	ug/L	.05	ug/L
TRTION	Trithion	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11013752
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-08
Laboratory: OCWD
Analysis Requested: 515

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
245TP	2,4,5-TP (Silvex)	515.4	06/16/2011	06/17/2011	ND	ug/L	.5	ug/L
24D	2,4-Dichlorophenoxyacetic Acid	515.4	06/16/2011	06/17/2011	ND	ug/L	.5	ug/L
ACIFEN	Acifluorfen	515.4	06/16/2011	06/17/2011	ND	ug/L	.5	ug/L
BENTAZ	Bentazon	515.4	06/16/2011	06/17/2011	ND	ug/L	1	ug/L
DALAPN	Dalapon	515.4	06/16/2011	06/17/2011	ND	ug/L	1	ug/L
DICAMB	Dicamba	515.4	06/16/2011	06/17/2011	ND	ug/L	.081	ug/L
DINOSB	Dinoseb	515.4	06/16/2011	06/17/2011	ND	ug/L	.5	ug/L
PCP	Pentachlorophenol (PCP)	515.4	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
PICLOR	Picloram	515.4	06/16/2011	06/17/2011	ND	ug/L	.5	ug/L
tDCPA	Dacthal Acid Metabolites	515.4	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11013753
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-09
Laboratory: OCWD
Analysis Requested: 525

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
24DNT	2,4-Dinitrotoluene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
26DNT	2,6-Dinitrotoluene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ACENAP	Acenapthylene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ACETOC	Acetochlor	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ALACHL	Alachlor	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ALDRIN	Aldrin	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
AMERYN	Ametryn	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ANTHRA	Anthracene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ATRAZ	Atrazine	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BaANTH	Benzo(a)anthracene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BaPYRE	Benzo(a)pyrene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BbFLUR	Benzo(b)fluoranthene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BBP	Butylbenzyl phthalate	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
BDE100	2,2',4,4',6,-Pentabromodiphenyl ether	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BDE153	2,2',4,4',5,5'-Hexabromodiphenyl ether	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BDE154	2,2',4,4',5,6'-Hexabromodiphenyl ether	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BDE183	2,2',3,4,4',5',6-Heptabromodiphenylether	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BDE28	2,4,4'-Tribromodiphenyl ether	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BDE47	2,2',4,4'-Tetrabromodiphenyl ether	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BDE99	2,2',4,4',5,-Pentabromodiphenyl ether	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BghiPR	Benzo(g,h,i)perylene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BHCa	HCH-alpha(Alpha-BHC)	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BHCb	HCH-beta(Beta-BHC)	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BHCd	HCH-delta(Delta-BHC)	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BkFLUR	Benzo[k]fluoranthene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BTYATE	Butylate	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BUTACL	Butachlor	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CAFFEI	Caffeine	525.2	06/16/2011	06/17/2011	ND	ng/L	100	ng/L
CAPTAN	Captan	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CBP	2-Chlorobiphenyl	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CHRYS	Chrysene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CLBZLA	Chlorobenzilate	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CLDA	Chlordane-alpha	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CLDG	Chlordane-gamma	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CLNEB	Chloroneb	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ClPYRI	Chlorpyrifos	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CLTNIL	Chlorothalonil	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CPRPHM	Chloropropham	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CYCATE	Cycloate	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
DBahAN	Dibenzo(a,h)anthracene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
DCBP	2,3-Dichlorobiphenyl	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
DCLVOS	Dichlorvos	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
DCPA	DCPA-Dacthal	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11013753
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-09
Laboratory: OCWD
Analysis Requested: 525

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
DDD	4,4'-DDD	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
DDE	4,4'-DDE	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
DDT	4,4'-DDT	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
DEHA	bis (2-ethylhexyl) adipate	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
DEHP	bis (2-ethylhexyl) phthalate	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
DEP	Diethyl phthalate	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
DIELDR	Dieldrin	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
DMP	Dimethyl phthalate	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
DMTH	Dimethoate	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
DnBP	Di-n-butylphthalate	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
DnOP	Di-n-octyl phthalate	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
DPHNMD	Diphenamid	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ENDOI	Endosulfan I	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ENDOII	Endosulfan II	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ENDOSL	Endosulfan sulfate	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ENDR-A	Endrin Aldehyde	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ENDRIN	Endrin	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
EPTC	EPTC	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ETHPRP	Ethoprop	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ETRDZL	Etridiazole	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
FLRDNE	Fluoridone	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
FLUOR	Fluorene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
FNAIML	Fenarimol	525.2	06/16/2011	06/17/2011	ND	ug/L	1	ug/L
HCBP	2,2',3,3',4,4',6-Heptachlorobiphenyl	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
HCICPD	Hexachlorocyclopentadiene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
HEPEPX	Heptachlor epoxide	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
HEPTA	Heptachlor	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
HEXCLB	Hexachlorobenzene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
HEXZON	Hexazinone	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
HXCBP	2,2',4,4',5,6'-Hexachlorobiphenyl	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
INDPYR	Indeno(1,2,3-cd)pyrene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
IPHOR	Isophorone	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
LINDNE	HCH-gamma (Lindane)	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
METHOX	Methoxychlor	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
METOCL	Metolachlor	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
MGK264	MGK 264	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
MOLINT	Molinate	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
MPRXON	Methyl paraoxon	525.2	06/16/2011	06/17/2011	ND	ug/L	1	ug/L
MVNPHS	Mevinphos	525.2	06/16/2011	06/17/2011	ND	ug/L	1	ug/L
NORFLR	Norflurazon	525.2	06/16/2011	06/17/2011	ND	ug/L	1	ug/L
NPRMDE	Napropamide	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
OCBP	2,2',3,3',4,5',6,6'-Octachlorobiphenyl	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
PBUATE	Pebulate	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11013753
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-09
Laboratory: OCWD
Analysis Requested: 525

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
PCBP	2,2',3',4,6-Pentachlorobiphenyl	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
PCP	Pentachlorophenol (PCP)	525.2	06/16/2011	06/17/2011	ND	ug/L	1	ug/L
PHENAN	Phenanthrene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
PMTHRN	Permethrin-(total of cis/trans)	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
PROAMD	Pronamide	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
PROMET	Prometryn	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
PYRENE	Pyrene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
SIMAZ	Simazine	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
SIMETY	Simetryn	525.2	06/16/2011	06/17/2011	ND	ug/L	1	ug/L
STRFOS	Stirofos	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
t-NONA	trans-nonachlor	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
TBTURN	Tebuthiuron	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
TCBP	2,4,5-Trichlorobiphenyl	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
TECBP	2,2',4,4'-Tetrachlorobiphenyl	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
TERSUL	Terbufos Sulfone	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
TRBACL	Terbacil	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
TRBURN	Terbutryn	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
TRCZOL	Tricyclazole	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
TRDMFN	Tridemefon	525.2	06/16/2011	06/17/2011	ND	ug/L	1	ug/L
TRFLRN	Trifluralin	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
TRTION	Trithion	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
VRNLTE	Vernolate	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11013754
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-10
Laboratory: OCWD
Analysis Requested: 531

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALDI	Aldicarb	531	06/23/2011	06/24/2011	ND	ug/L	1	ug/L
ALDISN	Aldicarb sulfone	531	06/23/2011	06/24/2011	ND	ug/L	2	ug/L
ALDISX	Aldicarb sulfoxide	531	06/23/2011	06/24/2011	ND	ug/L	2	ug/L
BAYGON	Baygon	531	06/23/2011	06/24/2011	ND	ug/L	1	ug/L
CARBAR	Carbaryl	531	06/23/2011	06/24/2011	ND	ug/L	2	ug/L
CARBOF	Carbofuran	531	06/23/2011	06/24/2011	ND	ug/L	1	ug/L
HYDCFR	3-Hydroxycarbofuran	531	06/23/2011	06/24/2011	ND	ug/L	2	ug/L
MTHCRB	Methiocarb	531	06/23/2011	06/24/2011	ND	ug/L	4	ug/L
MTHOMY	Methomyl	531	06/23/2011	06/24/2011	ND	ug/L	1	ug/L
NPTHOL	1-Naphthol	531	06/23/2011	06/24/2011	ND	ug/L	5	ug/L
OXAMYL	Oxamyl	531	06/23/2011	06/24/2011	ND	ug/L	2	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11013755
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-14
Laboratory: OCWD
Analysis Requested: 549

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
DIQUAT	Diquat	549.1	06/15/2011	06/15/2011	ND	ug/L	4	ug/L
PARAQT	Paraquat	549.1	06/15/2011	06/15/2011	ND	ug/L	4	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11015066
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-12
Laboratory: OCWD
Analysis Requested: 547

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
GLYPHO	Glyphosate	547		06/28/2011	ND	ug/L	25	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11006230
Sample ID: 11015438
Sample Date/Time: 06/13/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060320-11
Laboratory: OCWD
Analysis Requested: 532

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.4
Temperature (°C): 23.1
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	*Qualifier: Validated Sample*							
DFLBNZ	Diflubenzuron	532	06/20/2011	06/21/2011	ND	ug/L	1	ug/L
DIURON	Diuron	532	06/20/2011	06/21/2011	ND	ug/L	1	ug/L
FLMTRN	Fluometuron	532	06/20/2011	06/21/2011	ND	ug/L	1	ug/L
LINURN	Linuron	532	06/20/2011	06/21/2011	ND	ug/L	1	ug/L
PRPANL	Propanil	532	06/20/2011	06/21/2011	ND	ug/L	1	ug/L
SIDURN	Siduron	532	06/20/2011	06/21/2011	ND	ug/L	1	ug/L
TBTURN	Tebuthiuron	532	06/20/2011	06/21/2011	ND	ug/L	1	ug/L
THDURN	Thidiazuron	532	06/20/2011	06/21/2011	ND	ug/L	1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11037494
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-09
Laboratory: OCWD
Analysis Requested: 525

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
24DNT	2,4-Dinitrotoluene	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
26DNT	2,6-Dinitrotoluene	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
ACENAP	Acenapthylene	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
ACETOC	Acetochlor	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
ALACHL	Alachlor	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
ALDRIN	Aldrin	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
AMERYN	Ametryn	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
ANTHRA	Anthracene	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
ATRAZ	Atrazine	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
BaANTH	Benzo(a)anthracene	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
BaPYRE	Benzo(a)pyrene	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
BbFLUR	Benzo(b)fluoranthene	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
BBP	Butylbenzyl phthalate	525.2	09/26/2011	09/28/2011	ND	ug/L	2	ug/L
BghiPR	Benzo(g,h,i)perylene	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
BHCa	HCH-alpha(Alpha-BHC)	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
BHCb	HCH-beta(Beta-BHC)	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
BHCd	HCH-delta(Delta-BHC)	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
BkFLUR	Benzo[k]fluoranthene	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
BTYATE	Butylate	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
BUTACL	Butachlor	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
CAFFEI	Caffeine	525.2	09/26/2011	09/28/2011	ND	ng/L	100	ng/L
CAPTAN	Captan	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
CBP	2-Chlorobiphenyl	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
CHRYS	Chrysene	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
CLBZLA	Chlorobenzilate	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
CLDA	Chlordane-alpha	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
CLDG	Chlordane-gamma	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
CLNEB	Chloroneb	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
CIPYRI	Chlorpyrifos	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
CLTNIL	Chlorothalonil	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
CPRPHM	Chloropropham	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
CYCATE	Cycloate	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
DBahAN	Dibenzo(a,h)anthracene	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
DCBP	2,3-Dichlorobiphenyl	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
DCLVOS	Dichlorvos	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
DCPA	DCPA-Dacthal	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
DDD	4,4'-DDD	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
DDE	4,4'-DDE	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
DDT	4,4'-DDT	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
DEHA	bis (2-ethylhexyl) adipate	525.2	09/26/2011	09/28/2011	ND	ug/L	2	ug/L
DEHP	bis (2-ethylhexyl) phthalate	525.2	09/26/2011	09/28/2011	ND	ug/L	2	ug/L
DEP	Diethyl phthalate	525.2	09/26/2011	09/28/2011	ND	ug/L	2	ug/L
DIELDR	Dieldrin	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11037494
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-09
Laboratory: OCWD
Analysis Requested: 525

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
DMP	Dimethyl phthalate	525.2	09/26/2011	09/28/2011	ND	ug/L	2	ug/L
DMTH	Dimethoate	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
DnBP	Di-n-butylphthalate	525.2	09/26/2011	09/28/2011	ND	ug/L	2	ug/L
DnOP	Di-n-octyl phthalate	525.2	09/26/2011	09/28/2011	ND	ug/L	2	ug/L
DPHNMD	Diphenamid	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
ENDOI	Endosulfan I	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
ENDOII	Endosulfan II	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
ENDOSL	Endosulfan sulfate	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
ENDR-A	Endrin Aldehyde	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
ENDRIN	Endrin	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
EPTC	EPTC	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
ETHPRP	Ethoprop	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
ETRDZL	Etridiazole	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
FLRDNE	Fluoridone	525.2	09/26/2011	09/28/2011	ND	ug/L	2	ug/L
FLUOR	Fluorene	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
FNAIML	Fenarimol	525.2	09/26/2011	09/28/2011	ND	ug/L	1	ug/L
HCBP	2,2',3,3',4,4',6-Heptachlorobiphenyl	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
HClCPD	Hexachlorocyclopentadiene	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
HEPEPX	Heptachlor epoxide	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
HEPTA	Heptachlor	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
HEXCLB	Hexachlorobenzene	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
HEXZON	Hexazinone	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
HXCBP	2,2',4,4',5,6'-Hexachlorobiphenyl	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
INDPYR	Indeno(1,2,3-cd)pyrene	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
IPHOR	Isophorone	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
LINDNE	HCH-gamma (Lindane)	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
METHOX	Methoxychlor	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
METOCL	Metolachlor	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
MGK264	MGK 264	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
MOLINT	Molinate	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
MPRXON	Methyl paraoxon	525.2	09/26/2011	09/28/2011	ND	ug/L	1	ug/L
MVNPHS	Mevinphos	525.2	09/26/2011	09/28/2011	ND	ug/L	1	ug/L
NORFLR	Norflurazon	525.2	09/26/2011	09/28/2011	ND	ug/L	1	ug/L
NPRMDE	Napropamide	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
OCBP	2,2',3,3',4,5',6,6'-Octachlorobiphenyl	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
PBUATE	Pebulate	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
PCBP	2,2',3',4,6-Pentachlorobiphenyl	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
PCP	Pentachlorophenol (PCP)	525.2	09/26/2011	09/28/2011	ND	ug/L	1	ug/L
PHENAN	Phenanthrene	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
PMTHRN	Permethrin-(total of cis/trans)	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
PROAMD	Pronamide	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
PROMET	Prometryn	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11037494
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-09
Laboratory: OCWD
Analysis Requested: 525

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
PROPCL	Propachlor	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
PYRENE	Pyrene	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
SIMAZ	Simazine	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
SIMETY	Simetryn	525.2	09/26/2011	09/28/2011	ND	ug/L	1	ug/L
STRFOS	Stirofos	525.2	09/26/2011	09/28/2011	ND	ug/L	2	ug/L
t-NONA	trans-nonachlor	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
TBTURN	Tebuthiuron	525.2	09/26/2011	09/28/2011	ND	ug/L	2	ug/L
TCBP	2,4,5-Trichlorobiphenyl	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
TECBP	2,2',4,4'-Tetrachlorobiphenyl	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
TERSUL	Terbufos Sulfone	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
TRBACL	Terbacil	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
TRBURN	Terbutryn	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
TRCZOL	Tricyclazole	525.2	09/26/2011	09/28/2011	ND	ug/L	2	ug/L
TRDMFN	Tridemefon	525.2	09/26/2011	09/28/2011	ND	ug/L	1	ug/L
TRFLRN	Trifluralin	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
TRTION	Trithion	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L
VRNLTE	Vernolate	525.2	09/26/2011	09/28/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11037495
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-10
Laboratory: OCWD
Analysis Requested: 531

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALDI	Aldicarb	531	10/03/2011	10/04/2011	ND	ug/L	1	ug/L
ALDISN	Aldicarb sulfone	531	10/03/2011	10/04/2011	ND	ug/L	2	ug/L
ALDISX	Aldicarb sulfoxide	531	10/03/2011	10/04/2011	ND	ug/L	2	ug/L
BAYGON	Baygon	531	10/03/2011	10/04/2011	ND	ug/L	1	ug/L
CARBAR	Carbaryl	531	10/03/2011	10/04/2011	ND	ug/L	2	ug/L
CARBOF	Carbofuran	531	10/03/2011	10/04/2011	ND	ug/L	1	ug/L
HYDCFR	3-Hydroxycarbofuran	531	10/03/2011	10/04/2011	ND	ug/L	2	ug/L
MTHCRB	Methiocarb	531	10/03/2011	10/04/2011	ND	ug/L	4	ug/L
MTHOMY	Methomyl	531	10/03/2011	10/04/2011	ND	ug/L	1	ug/L
NPTHOL	1-Naphthol	531	10/03/2011	10/04/2011	ND	ug/L	5	ug/L
OXAMYL	Oxamyl	531	10/03/2011	10/04/2011	ND	ug/L	2	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11037496
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-13
Laboratory: OCWD
Analysis Requested: 548

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ENDOTL	Endothall	548.1	09/22/2011	09/22/2011	ND	ug/L	45	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11037497
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-14
Laboratory: OCWD
Analysis Requested: 549

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
DIQUAT	Diquat	549.1	09/22/2011	09/23/2011	ND	ug/L	4	ug/L
PARAQT	Paraquat	549.1	09/22/2011	09/23/2011	ND	ug/L	4	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11037498
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-15
Laboratory: OCWD
Analysis Requested: 550

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	*Qualifier: Validated Sample*							
ACENAP	Acenapthylene	550.1	09/26/2011	09/27/2011	ND	ug/L	1	ug/L
ACNAPE	Acenapthene	550.1	09/26/2011	09/27/2011	ND	ug/L	.5	ug/L
ANTHRA	Anthracene	550.1	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
BaANTH	Benzo(a)anthracene	550.1	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
BaPYRE	Benzo(a)pyrene	550.1	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
BbFLUR	Benzo(b)fluoranthene	550.1	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
BghiPR	Benzo(g,h,i)perylene	550.1	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
BkFLUR	Benzo[k]fluoranthene	550.1	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
CHRYS	Chrysene	550.1	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
DBahAN	Dibenzo(a,h)anthracene	550.1	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
FLANTH	Fluoranthene	550.1	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
FLUOR	Fluorene	550.1	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
INDPYR	Indeno(1,2,3-cd)pyrene	550.1	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
NAP	Naphthalene	550.1	09/26/2011	09/27/2011	ND	ug/L	.5	ug/L
PHENAN	Phenanthrene	550.1	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
PYRENE	Pyrene	550.1	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11037935
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-06
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use ***Qualifier: Validated Sample***

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
ALACHL	Alachlor	507	09/26/2011	09/27/2011	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	09/26/2011	09/27/2011	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	09/26/2011	09/27/2011	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	09/26/2011	09/27/2011	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	09/26/2011	09/27/2011	ND	ug/L	5	ug/L
EPTC	EPTC	507	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	507	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
MALATH	Malathion	507	09/26/2011	09/27/2011	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	09/26/2011	09/27/2011	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	09/26/2011	09/27/2011	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	09/26/2011	09/27/2011	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	09/26/2011	09/27/2011	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	09/26/2011	09/27/2011	ND	ug/L	.5	ug/L
PARA	Parathion	507	09/26/2011	09/27/2011	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	09/26/2011	09/27/2011	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	09/26/2011	09/27/2011	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11037936
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-07
Laboratory: OCWD
Analysis Requested: 508

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALACHL	Alachlor	508	09/22/2011	09/23/2011	ND	ug/L	.5	ug/L
ALDRIN	Aldrin	508	09/22/2011	09/23/2011	ND	ug/L	.03	ug/L
BHCa	HCH-alpha(Alpha-BHC)	508	09/22/2011	09/23/2011	ND	ug/L	.02	ug/L
BHCb	HCH-beta(Beta-BHC)	508	09/22/2011	09/23/2011	ND	ug/L	.02	ug/L
BHCd	HCH-delta(Delta-BHC)	508	09/22/2011	09/23/2011	ND	ug/L	.02	ug/L
CAPTAN	Captan	508	09/22/2011	09/23/2011	ND	ug/L	.01	ug/L
CLBZLA	Chlorobenzilate	508	09/22/2011	09/23/2011	ND	ug/L	.05	ug/L
CLDA	Chlordane-alpha	508	09/22/2011	09/23/2011	ND	ug/L	.01	ug/L
CIDANE	Chlordane	508	09/22/2011	09/23/2011	ND	ug/L	.1	ug/L
CLDG	Chlordane-gamma	508	09/22/2011	09/23/2011	ND	ug/L	.01	ug/L
CLNEB	Chloroneb	508	09/22/2011	09/23/2011	ND	ug/L	.4	ug/L
CIPYRI	Chlorpyrifos	508	09/22/2011	09/23/2011	ND	ug/L	.1	ug/L
CLTNIL	Chlorothalonil	508	09/22/2011	09/23/2011	ND	ug/L	5	ug/L
DCPA	DCPA-Dacthal	508	09/22/2011	09/23/2011	ND	ug/L	.05	ug/L
DDD	4,4'-DDD	508	09/22/2011	09/23/2011	ND	ug/L	.01	ug/L
DDE	4,4'-DDE	508	09/22/2011	09/23/2011	ND	ug/L	.01	ug/L
DDT	4,4'-DDT	508	09/22/2011	09/23/2011	ND	ug/L	.01	ug/L
DIELDR	Dieldrin	508	09/22/2011	09/23/2011	ND	ug/L	.02	ug/L
ENDOI	Endosulfan I	508	09/22/2011	09/23/2011	ND	ug/L	.05	ug/L
ENDOII	Endosulfan II	508	09/22/2011	09/23/2011	ND	ug/L	.01	ug/L
ENDOSL	Endosulfan sulfate	508	09/22/2011	09/23/2011	ND	ug/L	.05	ug/L
ENDR-A	Endrin Aldehyde	508	09/22/2011	09/23/2011	ND	ug/L	.1	ug/L
ENDR-K	Endrin Ketone	508	09/22/2011	09/23/2011	ND	ug/L	.1	ug/L
ENDRIN	Endrin	508	09/22/2011	09/23/2011	ND	ug/L	.03	ug/L
ETRDZL	Etridiazole	508	09/22/2011	09/23/2011	ND	ug/L	.05	ug/L
HCICPD	Hexachlorocyclopentadiene	508	09/22/2011	09/23/2011	ND	ug/L	.5	ug/L
HEPEPX	Heptachlor epoxide	508	09/22/2011	09/23/2011	ND	ug/L	.01	ug/L
HEPTA	Heptachlor	508	09/22/2011	09/23/2011	ND	ug/L	.01	ug/L
HEXCLB	Hexachlorobenzene	508	09/22/2011	09/23/2011	ND	ug/L	.5	ug/L
LINDNE	HCH-gamma (Lindane)	508	09/22/2011	09/23/2011	ND	ug/L	.1	ug/L
METHOX	Methoxychlor	508	09/22/2011	09/23/2011	ND	ug/L	1	ug/L
PCB16	PCB-1016	508	09/22/2011	09/23/2011	ND	ug/L	.5	ug/L
PCB21	PCB-1221	508	09/22/2011	09/23/2011	ND	ug/L	.5	ug/L
PCB32	PCB-1232	508	09/22/2011	09/23/2011	ND	ug/L	.5	ug/L
PCB42	PCB-1242	508	09/22/2011	09/23/2011	ND	ug/L	.5	ug/L
PCB48	PCB-1248	508	09/22/2011	09/23/2011	ND	ug/L	.5	ug/L
PCB54	PCB-1254	508	09/22/2011	09/23/2011	ND	ug/L	.5	ug/L
PCB60	PCB-1260	508	09/22/2011	09/23/2011	ND	ug/L	.5	ug/L
PMTHRN	Permethrin-(total of cis/trans)	508	09/22/2011	09/23/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	508	09/22/2011	09/23/2011	ND	ug/L	.5	ug/L
TOXA	Toxaphene Mixture	508	09/22/2011	09/23/2011	ND	ug/L	1	ug/L
TRFLRN	Trifluralin	508	09/22/2011	09/23/2011	ND	ug/L	.05	ug/L
TRTION	Trithion	508	09/22/2011	09/23/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11037937
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-11
Laboratory: OCWD
Analysis Requested: 532

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
DFLBNZ	Diflubenzuron	532	09/23/2011	09/26/2011	ND	ug/L	1	ug/L
DIURON	Diuron	532	09/23/2011	09/26/2011	ND	ug/L	1	ug/L
FLMTRN	Fluometuron	532	09/23/2011	09/26/2011	ND	ug/L	1	ug/L
LINURN	Linuron	532	09/23/2011	09/26/2011	ND	ug/L	1	ug/L
PRPANL	Propanil	532	09/23/2011	09/26/2011	ND	ug/L	1	ug/L
SIDURN	Siduron	532	09/23/2011	09/26/2011	ND	ug/L	1	ug/L
TBTURN	Tebuthiuron	532	09/23/2011	09/26/2011	ND	ug/L	1	ug/L
THDURN	Thidiazuron	532	09/23/2011	09/26/2011	ND	ug/L	1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11037938
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-12
Laboratory: OCWD
Analysis Requested: 547

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
GLYPHO	Glyphosate	547	09/28/2011	09/29/2011	ND	ug/L	25	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11039693
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-08
Laboratory: OCWD
Analysis Requested: 515

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
245TP	2,4,5-TP (Silvex)	515.4	09/26/2011	09/27/2011	ND	ug/L	.5	ug/L
24D	2,4-Dichlorophenoxyacetic Acid	515.4	09/26/2011	09/27/2011	ND	ug/L	.5	ug/L
ACIFEN	Acifluorfen	515.4	09/26/2011	09/27/2011	ND	ug/L	.5	ug/L
BENTAZ	Bentazon	515.4	09/26/2011	09/27/2011	ND	ug/L	1	ug/L
DALAPN	Dalapon	515.4	09/26/2011	09/27/2011	ND	ug/L	1	ug/L
DICAMB	Dicamba	515.4	09/26/2011	09/27/2011	ND	ug/L	.081	ug/L
DINOSB	Dinoseb	515.4	09/26/2011	09/27/2011	ND	ug/L	.5	ug/L
PCP	Pentachlorophenol (PCP)	515.4	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L
PICLOR	Picloram	515.4	09/26/2011	09/27/2011	ND	ug/L	.5	ug/L
tDCPA	Dacthal Acid Metabolites	515.4	09/26/2011	09/27/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11026977
Sample ID: 11039889
Sample Date/Time: 09/21/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11090521-05
Laboratory: OCWD
Analysis Requested: 504

FIELD PARAMETERS
EC (umhos/cm): 387
pH (UNITS): 8.4
Temperature (°C): 22.5
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	504.1	09/27/2011	09/28/2011	ND	ug/L	.05	ug/L
DBCP	1,2-Dibromo-3-chloropropane	504.1	09/27/2011	09/28/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	504.1	09/27/2011	09/28/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 12000468
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-05
Laboratory: OCWD
Analysis Requested: 504

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	504.1	12/19/2011	12/20/2011	ND	ug/L	.05	ug/L
DBCP	1,2-Dibromo-3-chloropropane	504.1	12/19/2011	12/20/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	504.1	12/19/2011	12/20/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 12000469
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-06
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use ***Qualifier: Validated Sample***

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
ALACHL	Alachlor	507	12/19/2011	12/20/2011	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	12/19/2011	12/20/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	12/19/2011	12/20/2011	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	12/19/2011	12/20/2011	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	12/19/2011	12/20/2011	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	12/19/2011	12/20/2011	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	12/19/2011	12/20/2011	ND	ug/L	5	ug/L
EPTC	EPTC	507	12/19/2011	12/20/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	507	12/19/2011	12/20/2011	ND	ug/L	.1	ug/L
MALATH	Malathion	507	12/19/2011	12/20/2011	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	12/19/2011	12/20/2011	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	12/19/2011	12/20/2011	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	12/19/2011	12/20/2011	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	12/19/2011	12/20/2011	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	12/19/2011	12/20/2011	ND	ug/L	.5	ug/L
PARA	Parathion	507	12/19/2011	12/20/2011	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	12/19/2011	12/20/2011	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	12/19/2011	12/20/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	12/19/2011	12/20/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	12/19/2011	12/20/2011	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	12/19/2011	12/20/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	12/19/2011	12/20/2011	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	12/19/2011	12/20/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 12000470
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-07
Laboratory: OCWD
Analysis Requested: 508

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALACHL	Alachlor	508	12/14/2011	12/15/2011	ND	ug/L	.5	ug/L
ALDRIN	Aldrin	508	12/14/2011	12/15/2011	ND	ug/L	.03	ug/L
BHCa	HCH-alpha(Alpha-BHC)	508	12/14/2011	12/15/2011	ND	ug/L	.02	ug/L
BHCb	HCH-beta(Beta-BHC)	508	12/14/2011	12/15/2011	ND	ug/L	.02	ug/L
BHCd	HCH-delta(Delta-BHC)	508	12/14/2011	12/15/2011	ND	ug/L	.02	ug/L
CAPTAN	Captan	508	12/14/2011	12/15/2011	ND	ug/L	.01	ug/L
CLBZLA	Chlorobenzilate	508	12/14/2011	12/15/2011	ND	ug/L	.05	ug/L
CLDA	Chlordane-alpha	508	12/14/2011	12/15/2011	ND	ug/L	.01	ug/L
CIDANE	Chlordane	508	12/14/2011	12/15/2011	ND	ug/L	.1	ug/L
CLDG	Chlordane-gamma	508	12/14/2011	12/15/2011	ND	ug/L	.01	ug/L
CLNEB	Chloroneb	508	12/14/2011	12/15/2011	ND	ug/L	.4	ug/L
CIPYRI	Chlorpyrifos	508	12/14/2011	12/15/2011	ND	ug/L	.1	ug/L
CLTNIL	Chlorothalonil	508	12/14/2011	12/15/2011	ND	ug/L	5	ug/L
DCPA	DCPA-Dacthal	508	12/14/2011	12/15/2011	ND	ug/L	.05	ug/L
DDD	4,4'-DDD	508	12/14/2011	12/15/2011	ND	ug/L	.01	ug/L
DDE	4,4'-DDE	508	12/14/2011	12/15/2011	ND	ug/L	.01	ug/L
DDT	4,4'-DDT	508	12/14/2011	12/15/2011	ND	ug/L	.01	ug/L
DIELDR	Dieldrin	508	12/14/2011	12/15/2011	ND	ug/L	.02	ug/L
ENDOI	Endosulfan I	508	12/14/2011	12/15/2011	ND	ug/L	.05	ug/L
ENDOII	Endosulfan II	508	12/14/2011	12/15/2011	ND	ug/L	.01	ug/L
ENDOSL	Endosulfan sulfate	508	12/14/2011	12/15/2011	ND	ug/L	.05	ug/L
ENDR-A	Endrin Aldehyde	508	12/14/2011	12/15/2011	ND	ug/L	.1	ug/L
ENDR-K	Endrin Ketone	508	12/14/2011	12/15/2011	ND	ug/L	.1	ug/L
ENDRIN	Endrin	508	12/14/2011	12/15/2011	ND	ug/L	.03	ug/L
ETRDZL	Etridiazole	508	12/14/2011	12/15/2011	ND	ug/L	.05	ug/L
HCICPD	Hexachlorocyclopentadiene	508	12/14/2011	12/15/2011	ND	ug/L	.5	ug/L
HEPEPX	Heptachlor epoxide	508	12/14/2011	12/15/2011	ND	ug/L	.01	ug/L
HEPTA	Heptachlor	508	12/14/2011	12/15/2011	ND	ug/L	.01	ug/L
HEXCLB	Hexachlorobenzene	508	12/14/2011	12/15/2011	ND	ug/L	.5	ug/L
LINDNE	HCH-gamma (Lindane)	508	12/14/2011	12/15/2011	ND	ug/L	.1	ug/L
METHOX	Methoxychlor	508	12/14/2011	12/15/2011	ND	ug/L	1	ug/L
PCB16	PCB-1016	508	12/14/2011	12/15/2011	ND	ug/L	.5	ug/L
PCB21	PCB-1221	508	12/14/2011	12/15/2011	ND	ug/L	.5	ug/L
PCB32	PCB-1232	508	12/14/2011	12/15/2011	ND	ug/L	.5	ug/L
PCB42	PCB-1242	508	12/14/2011	12/15/2011	ND	ug/L	.5	ug/L
PCB48	PCB-1248	508	12/14/2011	12/15/2011	ND	ug/L	.5	ug/L
PCB54	PCB-1254	508	12/14/2011	12/15/2011	ND	ug/L	.5	ug/L
PCB60	PCB-1260	508	12/14/2011	12/15/2011	ND	ug/L	.5	ug/L
PMTHRN	Permethrin-(total of cis/trans)	508	12/14/2011	12/15/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	508	12/14/2011	12/15/2011	ND	ug/L	.5	ug/L
TOXA	Toxaphene Mixture	508	12/14/2011	12/15/2011	ND	ug/L	1	ug/L
TRFLRN	Trifluralin	508	12/14/2011	12/15/2011	ND	ug/L	.05	ug/L
TRTION	Trithion	508	12/14/2011	12/15/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 12000471
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-08
Laboratory: OCWD
Analysis Requested: 515

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
245TP	2,4,5-TP (Silvex)	515.4	12/19/2011	12/21/2011	ND	ug/L	.5	ug/L
24D	2,4-Dichlorophenoxyacetic Acid	515.4	12/19/2011	12/21/2011	ND	ug/L	.5	ug/L
ACIFEN	Acifluorfen	515.4	12/19/2011	12/21/2011	ND	ug/L	.5	ug/L
BENTAZ	Bentazon	515.4	12/19/2011	12/21/2011	ND	ug/L	1	ug/L
DALAPN	Dalapon	515.4	12/19/2011	12/21/2011	ND	ug/L	1	ug/L
DICAMB	Dicamba	515.4	12/19/2011	12/21/2011	ND	ug/L	.081	ug/L
DINOSB	Dinoseb	515.4	12/19/2011	12/21/2011	ND	ug/L	.5	ug/L
PCP	Pentachlorophenol (PCP)	515.4	12/19/2011	12/21/2011	ND	ug/L	.1	ug/L
PICLOR	Picloram	515.4	12/19/2011	12/21/2011	ND	ug/L	.5	ug/L
tDCPA	Dacthal Acid Metabolites	515.4	12/19/2011	12/21/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 12000472
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-11
Laboratory: OCWD
Analysis Requested: 532

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
DFLBNZ	Diflubenzuron	532	12/27/2011	12/27/2011	ND	ug/L	1	ug/L
DIURON	Diuron	532	12/27/2011	12/27/2011	ND	ug/L	1	ug/L
FLMTRN	Fluometuron	532	12/27/2011	12/27/2011	ND	ug/L	1	ug/L
LINURN	Linuron	532	12/27/2011	12/27/2011	ND	ug/L	1	ug/L
PRPANL	Propanil	532	12/27/2011	12/27/2011	ND	ug/L	1	ug/L
SIDURN	Siduron	532	12/27/2011	12/27/2011	ND	ug/L	1	ug/L
TBTURN	Tebuthiuron	532	12/27/2011	12/27/2011	ND	ug/L	1	ug/L
THDURN	Thidiazuron	532	12/27/2011	12/27/2011	ND	ug/L	1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 12000473
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-12
Laboratory: OCWD
Analysis Requested: 547

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
GLYPHO	Glyphosate	547	12/21/2011	12/22/2011	ND	ug/L	25	ug/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 12000474
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-13
Laboratory: OCWD
Analysis Requested: 548

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ENDOTL	Endothall	548.1	12/14/2011	12/14/2011	ND	ug/L	45	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 12000475
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-14
Laboratory: OCWD
Analysis Requested: 549

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
DIQUAT	Diquat	549.1	12/16/2011	12/16/2011	ND	ug/L	4	ug/L
PARAQT	Paraquat	549.1	12/16/2011	12/16/2011	ND	ug/L	4	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 12000476
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-15
Laboratory: OCWD
Analysis Requested: 550

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ACENAP	Acenapthylene	550.1	12/14/2011	12/14/2011	ND	ug/L	1	ug/L
ACNAPE	Acenapthene	550.1	12/14/2011	12/14/2011	ND	ug/L	.5	ug/L
ANTHRA	Anthracene	550.1	12/14/2011	12/14/2011	ND	ug/L	.1	ug/L
BaANTH	Benzo(a)anthracene	550.1	12/14/2011	12/14/2011	ND	ug/L	.1	ug/L
BaPYRE	Benzo(a)pyrene	550.1	12/14/2011	12/14/2011	ND	ug/L	.1	ug/L
BbFLUR	Benzo(b)fluoranthene	550.1	12/14/2011	12/14/2011	ND	ug/L	.1	ug/L
BghiPR	Benzo(g,h,i)perylene	550.1	12/14/2011	12/14/2011	ND	ug/L	.1	ug/L
BkFLUR	Benzo[k]fluoranthene	550.1	12/14/2011	12/14/2011	ND	ug/L	.1	ug/L
CHRYS	Chrysene	550.1	12/14/2011	12/14/2011	ND	ug/L	.1	ug/L
DBahAN	Dibenzo(a,h)anthracene	550.1	12/14/2011	12/14/2011	ND	ug/L	.1	ug/L
FLANTH	Fluoranthene	550.1	12/14/2011	12/14/2011	ND	ug/L	.1	ug/L
FLUOR	Fluorene	550.1	12/14/2011	12/14/2011	ND	ug/L	.1	ug/L
INDPYR	Indeno(1,2,3-cd)pyrene	550.1	12/14/2011	12/14/2011	ND	ug/L	.1	ug/L
NAP	Naphthalene	550.1	12/14/2011	12/14/2011	ND	ug/L	.5	ug/L
PHENAN	Phenanthrene	550.1	12/14/2011	12/14/2011	ND	ug/L	.1	ug/L
PYRENE	Pyrene	550.1	12/14/2011	12/14/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 12000979
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-09
Laboratory: OCWD
Analysis Requested: 525

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
24DNT	2,4-Dinitrotoluene	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
26DNT	2,6-Dinitrotoluene	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
ACENAP	Acenapthylene	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
ACETOC	Acetochlor	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
ALACHL	Alachlor	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
ALDRIN	Aldrin	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
AMERYN	Ametryn	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
ANTHRA	Anthracene	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
ATRAZ	Atrazine	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
BaANTH	Benzo(a)anthracene	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
BaPYRE	Benzo(a)pyrene	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
BbFLUR	Benzo(b)fluoranthene	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
BBP	Butylbenzyl phthalate	525.2	12/16/2011	12/21/2011	ND	ug/L	2	ug/L
BghiPR	Benzo(g,h,i)perylene	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
BHCa	HCH-alpha(Alpha-BHC)	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
BHCb	HCH-beta(Beta-BHC)	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
BHCd	HCH-delta(Delta-BHC)	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
BkFLUR	Benzo[k]fluoranthene	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
BTYATE	Butylate	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
BUTACL	Butachlor	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
CAFFEI	Caffeine	525.2	12/16/2011	12/21/2011	ND	ng/L	100	ng/L
CAPTAN	Captan	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
CBP	2-Chlorobiphenyl	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
CHRYS	Chrysene	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
CLBZLA	Chlorobenzilate	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
CLDA	Chlordane-alpha	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
CLDG	Chlordane-gamma	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
CLNEB	Chloroneb	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
CIPYRI	Chlorpyrifos	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
CLTNIL	Chlorothalonil	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
CPRPHM	Chloropropham	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
CYCATE	Cycloate	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
DBahAN	Dibenzo(a,h)anthracene	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
DCBP	2,3-Dichlorobiphenyl	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
DCLVOS	Dichlorvos	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
DCPA	DCPA-Dacthal	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
DDD	4,4'-DDD	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
DDE	4,4'-DDE	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
DDT	4,4'-DDT	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
DEHA	bis (2-ethylhexyl) adipate	525.2	12/16/2011	12/21/2011	ND	ug/L	2	ug/L
DEHP	bis (2-ethylhexyl) phthalate	525.2	12/16/2011	12/21/2011	ND	ug/L	2	ug/L
DEP	Diethyl phthalate	525.2	12/16/2011	12/21/2011	ND	ug/L	2	ug/L
DIELDR	Dieldrin	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 12000979
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-09
Laboratory: OCWD
Analysis Requested: 525

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
DMP	Dimethyl phthalate	525.2	12/16/2011	12/21/2011	ND	ug/L	2	ug/L
DMTH	Dimethoate	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
DnBP	Di-n-butylphthalate	525.2	12/16/2011	12/21/2011	ND	ug/L	2	ug/L
DnOP	Di-n-octyl phthalate	525.2	12/16/2011	12/21/2011	ND	ug/L	2	ug/L
DPHNMD	Diphenamid	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
ENDOI	Endosulfan I	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
ENDOII	Endosulfan II	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
ENDOSL	Endosulfan sulfate	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
ENDR-A	Endrin Aldehyde	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
ENDRIN	Endrin	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
EPTC	EPTC	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
ETHPRP	Ethoprop	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
ETRDZL	Etridiazole	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
FLRDNE	Fluoridone	525.2	12/16/2011	12/21/2011	ND	ug/L	2	ug/L
FLUOR	Fluorene	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
FNAIML	Fenarimol	525.2	12/16/2011	12/21/2011	ND	ug/L	1	ug/L
HCBP	2,2',3,3',4,4',6-Heptachlorobiphenyl	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
HClCPD	Hexachlorocyclopentadiene	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
HEPEPX	Heptachlor epoxide	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
HEPTA	Heptachlor	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
HEXCLB	Hexachlorobenzene	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
HEXZON	Hexazinone	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
HXCBP	2,2',4,4',5,6'-Hexachlorobiphenyl	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
INDPYR	Indeno(1,2,3-cd)pyrene	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
IPHOR	Isophorone	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
LINDNE	HCH-gamma (Lindane)	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
METHOX	Methoxychlor	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
METOCL	Metolachlor	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
MGK264	MGK 264	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
MOLINT	Molinate	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
MPRXON	Methyl paraoxon	525.2	12/16/2011	12/21/2011	ND	ug/L	1	ug/L
MVNPHS	Mevinphos	525.2	12/16/2011	12/21/2011	ND	ug/L	1	ug/L
NORFLR	Norflurazon	525.2	12/16/2011	12/21/2011	ND	ug/L	1	ug/L
NPRMDE	Napropamide	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
OCBP	2,2',3,3',4,5',6,6'-Octachlorobiphenyl	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
PBUATE	Pebulate	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
PCBP	2,2',3',4,6-Pentachlorobiphenyl	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
PCP	Pentachlorophenol (PCP)	525.2	12/16/2011	12/21/2011	ND	ug/L	1	ug/L
PHENAN	Phenanthrene	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
PMTHRN	Permethrin-(total of cis/trans)	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
PROAMD	Pronamide	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
PROMET	Prometryn	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 12000979
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-09
Laboratory: OCWD
Analysis Requested: 525

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
PROPCL	Propachlor	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
PYRENE	Pyrene	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
SIMAZ	Simazine	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
SIMETY	Simetryn	525.2	12/16/2011	12/21/2011	ND	ug/L	1	ug/L
STRFOS	Stirofos	525.2	12/16/2011	12/21/2011	ND	ug/L	2	ug/L
t-NONA	trans-nonachlor	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
TBTURN	Tebuthiuron	525.2	12/16/2011	12/21/2011	ND	ug/L	2	ug/L
TCBP	2,4,5-Trichlorobiphenyl	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
TECBP	2,2',4,4'-Tetrachlorobiphenyl	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
TERSUL	Terbufos Sulfone	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
TRBACL	Terbacil	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
TRBURN	Terbutryn	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
TRCZOL	Tricyclazole	525.2	12/16/2011	12/21/2011	ND	ug/L	2	ug/L
TRDMFN	Tridemefon	525.2	12/16/2011	12/21/2011	ND	ug/L	1	ug/L
TRFLRN	Trifluralin	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
TRTION	Trithion	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L
VRNLTE	Vernolate	525.2	12/16/2011	12/21/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LAM/1
Station Type: WELL CASING
Perf Interval (ft bgs): 360-1170
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name:
City: SEAL BEACH

Sample Group ID: 11030652
Sample ID: 12000980
Sample Date/Time: 12/14/2011 08:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120292-10
Laboratory: OCWD
Analysis Requested: 531

FIELD PARAMETERS
EC (umhos/cm): 356
pH (UNITS): 8.6
Temperature (°C): 23.7
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALDI	Aldicarb	531		12/21/2011	ND	ug/L	1	ug/L
ALDISN	Aldicarb sulfone	531		12/21/2011	ND	ug/L	2	ug/L
ALDISX	Aldicarb sulfoxide	531		12/21/2011	ND	ug/L	2	ug/L
BAYGON	Baygon	531		12/21/2011	ND	ug/L	1	ug/L
CARBAR	Carbaryl	531		12/21/2011	ND	ug/L	2	ug/L
CARBOF	Carbofuran	531		12/21/2011	ND	ug/L	1	ug/L
HYDCFR	3-Hydroxycarbofuran	531		12/21/2011	ND	ug/L	2	ug/L
MTHCRB	Methiocarb	531		12/21/2011	ND	ug/L	4	ug/L
MTHOMY	Methomyl	531		12/21/2011	ND	ug/L	1	ug/L
NPTHOL	1-Naphthol	531		12/21/2011	ND	ug/L	5	ug/L
OXAMYL	Oxamyl	531		12/21/2011	ND	ug/L	2	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10014509
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-13
Laboratory: OCWD
Analysis Requested: 548

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ENDOTL	Endothall	548.1	06/09/2010	06/11/2010	ND	ug/L	45	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10014510
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-14
Laboratory: OCWD
Analysis Requested: 549

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
DIQUAT	Diquat	549.1	06/10/2010	06/10/2010	ND	ug/L	4	ug/L
PARAQT	Paraquat	549.1	06/10/2010	06/10/2010	ND	ug/L	4	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10014511
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-15
Laboratory: OCWD
Analysis Requested: 550

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use *Qualifier: Validated Sample*

Parameter Abbreviation	Parameter Name	Analysis Method	Dates Extract	Dates Analysis	Results Value	Results Units	Detection Limit Value	Detection Limit Units
ACENAP	Acenapthylene	550.1	06/09/2010	06/09/2010	ND	ug/L	1	ug/L
ACNAPE	Acenapthene	550.1	06/09/2010	06/09/2010	ND	ug/L	.5	ug/L
ANTHRA	Anthracene	550.1	06/09/2010	06/09/2010	ND	ug/L	.1	ug/L
BaANTH	Benzo(a)anthracene	550.1	06/09/2010	06/09/2010	ND	ug/L	.1	ug/L
BaPYRE	Benzo(a)pyrene	550.1	06/09/2010	06/09/2010	ND	ug/L	.1	ug/L
BbFLUR	Benzo(b)fluoranthene	550.1	06/09/2010	06/09/2010	ND	ug/L	.1	ug/L
BghiPR	Benzo(g,h,i)perylene	550.1	06/09/2010	06/09/2010	ND	ug/L	.1	ug/L
BkFLUR	Benzo[k]fluoranthene	550.1	06/09/2010	06/09/2010	ND	ug/L	.1	ug/L
CHRYS	Chrysene	550.1	06/09/2010	06/09/2010	ND	ug/L	.1	ug/L
DBahAN	Dibenzo(a,h)anthracene	550.1	06/09/2010	06/09/2010	ND	ug/L	.1	ug/L
FLANTH	Fluoranthene	550.1	06/09/2010	06/09/2010	ND	ug/L	.1	ug/L
FLUOR	Fluorene	550.1	06/09/2010	06/09/2010	ND	ug/L	.1	ug/L
INDPYR	Indeno(1,2,3-cd)pyrene	550.1	06/09/2010	06/09/2010	ND	ug/L	.1	ug/L
NAP	Naphthalene	550.1	06/09/2010	06/09/2010	ND	ug/L	.5	ug/L
PHENAN	Phenanthrene	550.1	06/09/2010	06/09/2010	ND	ug/L	.1	ug/L
PYRENE	Pyrene	550.1	06/09/2010	06/09/2010	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10016805
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-05
Laboratory: OCWD
Analysis Requested: 504

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	504.1	06/10/2010	06/10/2010	ND	ug/L	.05	ug/L
DBCP	1,2-Dibromo-3-chloropropane	504.1	06/10/2010	06/10/2010	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	504.1	06/10/2010	06/10/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10016806
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-11
Laboratory: OCWD
Analysis Requested: 532

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
DFLBNZ	Diflubenzuron	532	06/15/2010	06/15/2010	ND	ug/L	1	ug/L
DIURON	Diuron	532	06/15/2010	06/15/2010	ND	ug/L	1	ug/L
FLMTRN	Fluometuron	532	06/15/2010	06/15/2010	ND	ug/L	1	ug/L
LINURN	Linuron	532	06/15/2010	06/15/2010	ND	ug/L	1	ug/L
PRPANL	Propanil	532	06/15/2010	06/15/2010	ND	ug/L	1	ug/L
SIDURN	Siduron	532	06/15/2010	06/15/2010	ND	ug/L	1	ug/L
TBTURN	Tebuthiuron	532	06/15/2010	06/15/2010	ND	ug/L	1	ug/L
THDURN	Thidiazuron	532	06/15/2010	06/15/2010	ND	ug/L	1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10016807
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-12
Laboratory: OCWD
Analysis Requested: 547

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
GLYPHO	Glyphosate	547	06/16/2010	06/17/2010	ND	ug/L	25	ug/L

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10018070
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-06
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALACHL	Alachlor	507	06/15/2010	06/15/2010	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	06/15/2010	06/15/2010	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	06/15/2010	06/15/2010	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	06/15/2010	06/15/2010	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	06/15/2010	06/15/2010	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	06/15/2010	06/15/2010	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	06/15/2010	06/15/2010	ND	ug/L	5	ug/L
EPTC	EPTC	507	06/15/2010	06/15/2010	ND	ug/L	.1	ug/L
ETHION	Ethion	507	06/15/2010	06/15/2010	ND	ug/L	.1	ug/L
MALATH	Malathion	507	06/15/2010	06/15/2010	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	06/15/2010	06/15/2010	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	06/15/2010	06/15/2010	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	06/15/2010	06/15/2010	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	06/15/2010	06/15/2010	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	06/15/2010	06/15/2010	ND	ug/L	.5	ug/L
PARA	Parathion	507	06/15/2010	06/15/2010	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	06/15/2010	06/15/2010	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	06/15/2010	06/15/2010	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	06/15/2010	06/15/2010	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	06/15/2010	06/15/2010	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	06/15/2010	06/15/2010	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	06/15/2010	06/15/2010	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	06/15/2010	06/15/2010	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10018071
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-07
Laboratory: OCWD
Analysis Requested: 508

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALACHL	Alachlor	508	06/09/2010	06/22/2010	ND	ug/L	.5	ug/L
ALDRIN	Aldrin	508	06/09/2010	06/22/2010	ND	ug/L	.03	ug/L
BHCa	HCH-alpha(Alpha-BHC)	508	06/09/2010	06/22/2010	ND	ug/L	.02	ug/L
BHCb	HCH-beta(Beta-BHC)	508	06/09/2010	06/22/2010	ND	ug/L	.02	ug/L
BHCd	HCH-delta(Delta-BHC)	508	06/09/2010	06/22/2010	ND	ug/L	.02	ug/L
CAPTAN	Captan	508	06/09/2010	06/22/2010	ND	ug/L	.01	ug/L
CLBZLA	Chlorobenzilate	508	06/09/2010	06/22/2010	ND	ug/L	.05	ug/L
CLDA	Chlordane-alpha	508	06/09/2010	06/22/2010	ND	ug/L	.01	ug/L
CIDANE	Chlordane	508	06/09/2010	06/22/2010	ND	ug/L	.1	ug/L
CLDG	Chlordane-gamma	508	06/09/2010	06/22/2010	ND	ug/L	.01	ug/L
CLNEB	Chloroneb	508	06/09/2010	06/22/2010	ND	ug/L	.4	ug/L
CIPYRI	Chlorpyrifos	508	06/09/2010	06/22/2010	ND	ug/L	.1	ug/L
CLTNIL	Chlorothalonil	508	06/09/2010	06/22/2010	ND	ug/L	5	ug/L
DCPA	DCPA-Dacthal	508	06/09/2010	06/22/2010	ND	ug/L	.05	ug/L
DDD	4,4'-DDD	508	06/09/2010	06/22/2010	ND	ug/L	.01	ug/L
DDE	4,4'-DDE	508	06/09/2010	06/22/2010	ND	ug/L	.01	ug/L
DDT	4,4'-DDT	508	06/09/2010	06/22/2010	ND	ug/L	.01	ug/L
DIELDR	Dieldrin	508	06/09/2010	06/22/2010	ND	ug/L	.02	ug/L
ENDOI	Endosulfan I	508	06/09/2010	06/22/2010	ND	ug/L	.05	ug/L
ENDOII	Endosulfan II	508	06/09/2010	06/22/2010	ND	ug/L	.01	ug/L
ENDOSL	Endosulfan sulfate	508	06/09/2010	06/22/2010	ND	ug/L	.05	ug/L
ENDR-A	Endrin Aldehyde	508	06/09/2010	06/22/2010	ND	ug/L	.1	ug/L
ENDR-K	Endrin Ketone	508	06/09/2010	06/22/2010	ND	ug/L	.1	ug/L
ENDRIN	Endrin	508	06/09/2010	06/22/2010	ND	ug/L	.03	ug/L
ETRDZL	Etridiazole	508	06/09/2010	06/22/2010	ND	ug/L	.05	ug/L
HCICPD	Hexachlorocyclopentadiene	508	06/09/2010	06/22/2010	ND	ug/L	.5	ug/L
HEPEPX	Heptachlor epoxide	508	06/09/2010	06/22/2010	ND	ug/L	.01	ug/L
HEPTA	Heptachlor	508	06/09/2010	06/22/2010	ND	ug/L	.01	ug/L
HEXCLB	Hexachlorobenzene	508	06/09/2010	06/22/2010	ND	ug/L	.5	ug/L
LINDNE	HCH-gamma (Lindane)	508	06/09/2010	06/22/2010	ND	ug/L	.1	ug/L
METHOX	Methoxychlor	508	06/09/2010	06/22/2010	ND	ug/L	1	ug/L
PCB16	PCB-1016	508	06/09/2010	06/22/2010	ND	ug/L	.5	ug/L
PCB21	PCB-1221	508	06/09/2010	06/22/2010	ND	ug/L	.5	ug/L
PCB32	PCB-1232	508	06/09/2010	06/22/2010	ND	ug/L	.5	ug/L
PCB42	PCB-1242	508	06/09/2010	06/22/2010	ND	ug/L	.5	ug/L
PCB48	PCB-1248	508	06/09/2010	06/22/2010	ND	ug/L	.5	ug/L
PCB54	PCB-1254	508	06/09/2010	06/22/2010	ND	ug/L	.5	ug/L
PCB60	PCB-1260	508	06/09/2010	06/22/2010	ND	ug/L	.5	ug/L
PMTHRN	Permethrin-(total of cis/trans)	508	06/09/2010	06/22/2010	ND	ug/L	.1	ug/L
PROPCL	Propachlor	508	06/09/2010	06/22/2010	ND	ug/L	.5	ug/L
TOXA	Toxaphene Mixture	508	06/09/2010	06/22/2010	ND	ug/L	1	ug/L
TRFLRN	Trifluralin	508	06/09/2010	06/22/2010	ND	ug/L	.05	ug/L
TRTION	Trithion	508	06/09/2010	06/22/2010	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10018072
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-08
Laboratory: OCWD
Analysis Requested: 515

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
245TP	2,4,5-TP (Silvex)	515.4	06/09/2010	06/17/2010	ND	ug/L	.5	ug/L
24D	2,4-Dichlorophenoxyacetic Acid	515.4	06/09/2010	06/17/2010	ND	ug/L	.5	ug/L
ACIFEN	Acifluorfen	515.4	06/09/2010	06/17/2010	ND	ug/L	.5	ug/L
BENTAZ	Bentazon	515.4	06/09/2010	06/17/2010	ND	ug/L	1	ug/L
DALAPN	Dalapon	515.4	06/09/2010	06/17/2010	ND	ug/L	1	ug/L
DICAMB	Dicamba	515.4	06/09/2010	06/17/2010	ND	ug/L	.081	ug/L
DINOSB	Dinoseb	515.4	06/09/2010	06/17/2010	ND	ug/L	.5	ug/L
PCP	Pentachlorophenol (PCP)	515.4	06/09/2010	06/17/2010	ND	ug/L	.1	ug/L
PICLOR	Picloram	515.4	06/09/2010	06/17/2010	ND	ug/L	.5	ug/L
tDCPA	Dacthal Acid Metabolites	515.4	06/09/2010	06/17/2010	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10018073
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-10
Laboratory: OCWD
Analysis Requested: 531

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALDI	Aldicarb	531	06/14/2010	06/15/2010	ND	ug/L	1	ug/L
ALDISN	Aldicarb sulfone	531	06/14/2010	06/15/2010	ND	ug/L	2	ug/L
ALDISX	Aldicarb sulfoxide	531	06/14/2010	06/15/2010	ND	ug/L	2	ug/L
BAYGON	Baygon	531	06/14/2010	06/15/2010	ND	ug/L	1	ug/L
CARBAR	Carbaryl	531	06/14/2010	06/15/2010	ND	ug/L	2	ug/L
CARBOF	Carbofuran	531	06/14/2010	06/15/2010	ND	ug/L	1	ug/L
HYDCFR	3-Hydroxycarbofuran	531	06/14/2010	06/15/2010	ND	ug/L	2	ug/L
MTHCRB	Methiocarb	531	06/14/2010	06/15/2010	ND	ug/L	4	ug/L
MTHOMY	Methomyl	531	06/14/2010	06/15/2010	ND	ug/L	1	ug/L
NPTHOL	1-Naphthol	531	06/14/2010	06/15/2010	ND	ug/L	5	ug/L
OXAMYL	Oxamyl	531	06/14/2010	06/15/2010	ND	ug/L	2	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10022207
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-09
Laboratory: OCWD
Analysis Requested: 525

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
24DNT	2,4-Dinitrotoluene	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
26DNT	2,6-Dinitrotoluene	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
ACENAP	Acenapthylene	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
ACETOC	Acetochlor	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
ALACHL	Alachlor	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
ALDRIN	Aldrin	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
AMERYN	Ametryn	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
ANTHRA	Anthracene	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
ATRAZ	Atrazine	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
BaANTH	Benzo(a)anthracene	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
BaPYRE	Benzo(a)pyrene	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
BbFLUR	Benzo(b)fluoranthene	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
BBP	Butylbenzyl phthalate	525.2	06/14/2010	06/21/2010	ND	ug/L	2	ug/L
BDE100	2,2',4,4',6,-Pentabromodiphenyl ether	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
BDE153	2,2',4,4',5,5'-Hexabromodiphenyl ether	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
BDE154	2,2',4,4',5,6'-Hexabromodiphenyl ether	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
BDE183	2,2',3,4,4',5',6-Heptabromodiphenylether	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
BDE28	2,4,4'-Tribromodiphenyl ether	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
BDE47	2,2',4,4'-Tetrabromodiphenyl ether	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
BDE99	2,2',4,4',5,-Pentabromodiphenyl ether	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
BghiPR	Benzo(g,h,i)perylene	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
BHCa	HCH-alpha(Alpha-BHC)	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
BHCb	HCH-beta(Beta-BHC)	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
BHCd	HCH-delta(Delta-BHC)	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
BkFLUR	Benzo[k]fluoranthene	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
BROMAC	Bromacil	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
BTYATE	Butylate	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
BUTACL	Butachlor	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
CAFFEI	Caffeine	525.2	06/14/2010	06/21/2010	ND	ng/L	100	ng/L
CAPTAN	Captan	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
CBP	2-Chlorobiphenyl	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
CHRYS	Chrysene	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
CLBZLA	Chlorobenzilate	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
CLDA	Chlordane-alpha	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
CLDG	Chlordane-gamma	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
CLNEB	Chloroneb	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
ClPYRI	Chlorpyrifos	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
CLTNIL	Chlorothalonil	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
CPRPHM	Chloropropham	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
CYCATE	Cycloate	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
DBahAN	Dibenzo(a,h)anthracene	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
DCBP	2,3-Dichlorobiphenyl	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
DCLVOS	Dichlorvos	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
DCPA	DCPA-Dacthal	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10022207
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-09
Laboratory: OCWD
Analysis Requested: 525

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
DDD	4,4'-DDD	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
DDE	4,4'-DDE	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
DDT	4,4'-DDT	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
DEHA	bis (2-ethylhexyl) adipate	525.2	06/14/2010	06/21/2010	ND	ug/L	2	ug/L
DEHP	bis (2-ethylhexyl) phthalate	525.2	06/14/2010	06/21/2010	ND	ug/L	2	ug/L
DEP	Diethyl phthalate	525.2	06/14/2010	06/21/2010	ND	ug/L	2	ug/L
DIELDR	Dieldrin	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
DMP	Dimethyl phthalate	525.2	06/14/2010	06/21/2010	ND	ug/L	2	ug/L
DMTH	Dimethoate	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
DnBP	Di-n-butylphthalate	525.2	06/14/2010	06/21/2010	ND	ug/L	2	ug/L
DnOP	Di-n-octyl phthalate	525.2	06/14/2010	06/21/2010	ND	ug/L	2	ug/L
DPHNMD	Diphenamid	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
ENDOI	Endosulfan I	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
ENDOII	Endosulfan II	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
ENDOSL	Endosulfan sulfate	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
ENDR-A	Endrin Aldehyde	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
ENDRIN	Endrin	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
EPTC	EPTC	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
ETHION	Ethion	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
ETHPRP	Ethoprop	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
ETRDZL	Etridiazole	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
FLRDNE	Fluoridone	525.2	06/14/2010	06/21/2010	ND	ug/L	2	ug/L
FLUOR	Fluorene	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
FNAIML	Fenarimol	525.2	06/14/2010	06/21/2010	ND	ug/L	1	ug/L
HCBP	2,2',3,3',4,4',6-Heptachlorobiphenyl	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
HCICPD	Hexachlorocyclopentadiene	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
HEPEPX	Heptachlor epoxide	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
HEPTA	Heptachlor	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
HEXCLB	Hexachlorobenzene	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
HEXZON	Hexazinone	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
HXCBP	2,2',4,4',5,6'-Hexachlorobiphenyl	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
INDPYR	Indeno(1,2,3-cd)pyrene	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
IPHOR	Isophorone	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
LINDNE	HCH-gamma (Lindane)	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
METHOX	Methoxychlor	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
METOCL	Metolachlor	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
MGK264	MGK 264	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
MOLINT	Molinate	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
MPRXON	Methyl paraoxon	525.2	06/14/2010	06/21/2010	ND	ug/L	1	ug/L
MVNPHS	Mevinphos	525.2	06/14/2010	06/21/2010	ND	ug/L	1	ug/L
NORFLR	Norflurazon	525.2	06/14/2010	06/21/2010	ND	ug/L	1	ug/L
NPRMDE	Napropamide	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
OCBP	2,2',3,3',4,5',6,6'-Octachlorobiphenyl	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
PBUATE	Pebulate	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L

NA: Not Analyzed
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ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 10007269
Sample ID: 10022207
Sample Date/Time: 06/08/2010 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10060242-09
Laboratory: OCWD
Analysis Requested: 525

FIELD PARAMETERS
EC (umhos/cm): 362
pH (UNITS): 8.6
Temperature (°C): 25.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
PCBP	2,2',3',4,6-Pentachlorobiphenyl	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
PCP	Pentachlorophenol (PCP)	525.2	06/14/2010	06/21/2010	ND	ug/L	1	ug/L
PHENAN	Phenanthrene	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
PMTHRN	Permethrin-(total of cis/trans)	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
PROAMD	Pronamide	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
PROMET	Prometryn	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
PROPAZ	Propazine	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
PROPCL	Propachlor	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
PYRENE	Pyrene	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
SIMAZ	Simazine	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
SIMETY	Simetryn	525.2	06/14/2010	06/21/2010	ND	ug/L	1	ug/L
STRFOS	Stirofos	525.2	06/14/2010	06/21/2010	ND	ug/L	2	ug/L
t-NONA	trans-nonachlor	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
TBTURN	Tebuthiuron	525.2	06/14/2010	06/21/2010	ND	ug/L	2	ug/L
TCBP	2,4,5-Trichlorobiphenyl	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
TECBP	2,2',4,4'-Tetrachlorobiphenyl	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
TERSUL	Terbufos Sulfone	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
THIO	Thiobencarb	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
TRBACL	Terbacil	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
TRBURN	Terbutryn	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
TRCZOL	Tricyclazole	525.2	06/14/2010	06/21/2010	ND	ug/L	2	ug/L
TRDMFN	Tridemefon	525.2	06/14/2010	06/21/2010	ND	ug/L	1	ug/L
TRFLRN	Trifluralin	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
TRTION	Trithion	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L
VRNLTE	Vernolate	525.2	06/14/2010	06/21/2010	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
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ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11013348
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-05
Laboratory: OCWD
Analysis Requested: 504

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
123TCP	1,2,3-Trichloropropane	504.1	06/20/2011	06/21/2011	ND	ug/L	.05	ug/L
DBCP	1,2-Dibromo-3-chloropropane	504.1	06/20/2011	06/21/2011	ND	ug/L	.01	ug/L
EDB	1,2-Dibromoethane	504.1	06/20/2011	06/21/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11013349
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-06
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALACHL	Alachlor	507	06/16/2011	06/16/2011	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	06/16/2011	06/16/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	06/16/2011	06/16/2011	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	06/16/2011	06/16/2011	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	06/16/2011	06/16/2011	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	06/16/2011	06/16/2011	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	06/16/2011	06/16/2011	ND	ug/L	5	ug/L
EPTC	EPTC	507	06/16/2011	06/16/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	507	06/16/2011	06/16/2011	ND	ug/L	.1	ug/L
MALATH	Malathion	507	06/16/2011	06/16/2011	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	06/16/2011	06/16/2011	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	06/16/2011	06/16/2011	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	06/16/2011	06/16/2011	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	06/16/2011	06/16/2011	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	06/16/2011	06/16/2011	ND	ug/L	.5	ug/L
PARA	Parathion	507	06/16/2011	06/16/2011	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	06/16/2011	06/16/2011	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	06/16/2011	06/16/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	06/16/2011	06/16/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	06/16/2011	06/16/2011	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	06/16/2011	06/16/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	06/16/2011	06/16/2011	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	06/16/2011	06/16/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11013350
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-13
Laboratory: OCWD
Analysis Requested: 548

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ENDOTL	Endothall	548.1	06/15/2011	06/15/2011	ND	ug/L	45	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11013351
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-15
Laboratory: OCWD
Analysis Requested: 550

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ACENAP	Acenapthylene	550.1	06/15/2011	06/16/2011	ND	ug/L	1	ug/L
ACNAPE	Acenapthene	550.1	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
ANTHRA	Anthracene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
BaANTH	Benzo(a)anthracene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
BaPYRE	Benzo(a)pyrene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
BbFLUR	Benzo(b)fluoranthene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
BghiPR	Benzo(g,h,i)perylene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
BkFLUR	Benzo[k]fluoranthene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
CHRYS	Chrysene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
DBahAN	Dibenzo(a,h)anthracene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
FLANTH	Fluoranthene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
FLUOR	Fluorene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
INDPYR	Indeno(1,2,3-cd)pyrene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
NAP	Naphthalene	550.1	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
PHENAN	Phenanthrene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
PYRENE	Pyrene	550.1	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11013758
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-07
Laboratory: OCWD
Analysis Requested: 508

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALACHL	Alachlor	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
ALDRIN	Aldrin	508	06/15/2011	06/16/2011	ND	ug/L	.03	ug/L
BHCa	HCH-alpha(Alpha-BHC)	508	06/15/2011	06/16/2011	ND	ug/L	.02	ug/L
BHCb	HCH-beta(Beta-BHC)	508	06/15/2011	06/16/2011	ND	ug/L	.02	ug/L
BHCd	HCH-delta(Delta-BHC)	508	06/15/2011	06/16/2011	ND	ug/L	.02	ug/L
CAPTAN	Captan	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L
CLBZLA	Chlorobenzilate	508	06/15/2011	06/16/2011	ND	ug/L	.05	ug/L
CLDA	Chlordane-alpha	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L
CIDANE	Chlordane	508	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
CLDG	Chlordane-gamma	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L
CLNEB	Chloroneb	508	06/15/2011	06/16/2011	ND	ug/L	.4	ug/L
CIPYRI	Chlorpyrifos	508	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
CLTNIL	Chlorothalonil	508	06/15/2011	06/16/2011	ND	ug/L	5	ug/L
DCPA	DCPA-Dacthal	508	06/15/2011	06/16/2011	ND	ug/L	.05	ug/L
DDD	4,4'-DDD	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L
DDE	4,4'-DDE	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L
DDT	4,4'-DDT	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L
DIELDR	Dieldrin	508	06/15/2011	06/16/2011	ND	ug/L	.02	ug/L
ENDOI	Endosulfan I	508	06/15/2011	06/16/2011	ND	ug/L	.05	ug/L
ENDOII	Endosulfan II	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L
ENDOSL	Endosulfan sulfate	508	06/15/2011	06/16/2011	ND	ug/L	.05	ug/L
ENDR-A	Endrin Aldehyde	508	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
ENDR-K	Endrin Ketone	508	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
ENDRIN	Endrin	508	06/15/2011	06/16/2011	ND	ug/L	.03	ug/L
ETRDZL	Etridiazole	508	06/15/2011	06/16/2011	ND	ug/L	.05	ug/L
HCICPD	Hexachlorocyclopentadiene	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
HEPEPX	Heptachlor epoxide	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L
HEPTA	Heptachlor	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L
HEXCLB	Hexachlorobenzene	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
LINDNE	HCH-gamma (Lindane)	508	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
METHOX	Methoxychlor	508	06/15/2011	06/16/2011	ND	ug/L	1	ug/L
PCB16	PCB-1016	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
PCB21	PCB-1221	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
PCB32	PCB-1232	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
PCB42	PCB-1242	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
PCB48	PCB-1248	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
PCB54	PCB-1254	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
PCB60	PCB-1260	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
PMTHRN	Permethrin-(total of cis/trans)	508	06/15/2011	06/16/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	508	06/15/2011	06/16/2011	ND	ug/L	.5	ug/L
TOXA	Toxaphene Mixture	508	06/15/2011	06/16/2011	ND	ug/L	1	ug/L
TRFLRN	Trifluralin	508	06/15/2011	06/16/2011	ND	ug/L	.05	ug/L
TRTION	Trithion	508	06/15/2011	06/16/2011	ND	ug/L	.01	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11013759
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-08
Laboratory: OCWD
Analysis Requested: 515

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
245TP	2,4,5-TP (Silvex)	515.4	06/16/2011	06/17/2011	ND	ug/L	.5	ug/L
24D	2,4-Dichlorophenoxyacetic Acid	515.4	06/16/2011	06/17/2011	ND	ug/L	.5	ug/L
ACIFEN	Acifluorfen	515.4	06/16/2011	06/17/2011	ND	ug/L	.5	ug/L
BENTAZ	Bentazon	515.4	06/16/2011	06/17/2011	ND	ug/L	1	ug/L
DALAPN	Dalapon	515.4	06/16/2011	06/17/2011	ND	ug/L	1	ug/L
DICAMB	Dicamba	515.4	06/16/2011	06/17/2011	ND	ug/L	.081	ug/L
DINOSB	Dinoseb	515.4	06/16/2011	06/17/2011	ND	ug/L	.5	ug/L
PCP	Pentachlorophenol (PCP)	515.4	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
PICLOR	Picloram	515.4	06/16/2011	06/17/2011	ND	ug/L	.5	ug/L
tDCPA	Dacthal Acid Metabolites	515.4	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11013760
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-09
Laboratory: OCWD
Analysis Requested: 525

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
24DNT	2,4-Dinitrotoluene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
26DNT	2,6-Dinitrotoluene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ACENAP	Acenapthylene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ACETOC	Acetochlor	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ALACHL	Alachlor	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ALDRIN	Aldrin	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
AMERYN	Ametryn	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ANTHRA	Anthracene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ATRAZ	Atrazine	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BaANTH	Benzo(a)anthracene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BaPYRE	Benzo(a)pyrene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BbFLUR	Benzo(b)fluoranthene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BBP	Butylbenzyl phthalate	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
BDE100	2,2',4,4',6,-Pentabromodiphenyl ether	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BDE153	2,2',4,4',5,5'-Hexabromodiphenyl ether	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BDE154	2,2',4,4',5,6'-Hexabromodiphenyl ether	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BDE183	2,2',3,4,4',5',6-Heptabromodiphenylether	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BDE28	2,4,4'-Tribromodiphenyl ether	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BDE47	2,2',4,4'-Tetrabromodiphenyl ether	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BDE99	2,2',4,4',5,-Pentabromodiphenyl ether	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BghiPR	Benzo(g,h,i)perylene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BHCa	HCH-alpha(Alpha-BHC)	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BHCb	HCH-beta(Beta-BHC)	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BHCd	HCH-delta(Delta-BHC)	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BkFLUR	Benzo[k]fluoranthene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BTYATE	Butylate	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
BUTACL	Butachlor	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CAFFEI	Caffeine	525.2	06/16/2011	06/17/2011	ND	ng/L	100	ng/L
CAPTAN	Captan	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CBP	2-Chlorobiphenyl	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CHRYS	Chrysene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CLBZLA	Chlorobenzilate	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CLDA	Chlordane-alpha	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CLDG	Chlordane-gamma	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CLNEB	Chloroneb	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ClPYRI	Chlorpyrifos	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CLTNIL	Chlorothalonil	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CPRPHM	Chloropropham	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
CYCATE	Cycloate	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
DBahAN	Dibenzo(a,h)anthracene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
DCBP	2,3-Dichlorobiphenyl	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
DCLVOS	Dichlorvos	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
DCPA	DCPA-Dacthal	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11013760
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-09
Laboratory: OCWD
Analysis Requested: 525

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
DDD	4,4'-DDD	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
DDE	4,4'-DDE	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
DDT	4,4'-DDT	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
DEHA	bis (2-ethylhexyl) adipate	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
DEHP	bis (2-ethylhexyl) phthalate	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
DEP	Diethyl phthalate	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
DIELDR	Dieldrin	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
DMP	Dimethyl phthalate	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
DMTH	Dimethoate	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
DnBP	Di-n-butylphthalate	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
DnOP	Di-n-octyl phthalate	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
DPHNMD	Diphenamid	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ENDOI	Endosulfan I	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ENDOII	Endosulfan II	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ENDOSL	Endosulfan sulfate	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ENDR-A	Endrin Aldehyde	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ENDRIN	Endrin	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
EPTC	EPTC	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ETHPRP	Ethoprop	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
ETRDZL	Etridiazole	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
FLRDNE	Fluoridone	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
FLUOR	Fluorene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
FNAIML	Fenarimol	525.2	06/16/2011	06/17/2011	ND	ug/L	1	ug/L
HCBP	2,2',3,3',4,4',6-Heptachlorobiphenyl	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
HCICPD	Hexachlorocyclopentadiene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
HEPEPX	Heptachlor epoxide	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
HEPTA	Heptachlor	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
HEXCLB	Hexachlorobenzene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
HEXZON	Hexazinone	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
HXCBP	2,2',4,4',5,6'-Hexachlorobiphenyl	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
INDPYR	Indeno(1,2,3-cd)pyrene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
IPHOR	Isophorone	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
LINDNE	HCH-gamma (Lindane)	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
METHOX	Methoxychlor	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
METOCL	Metolachlor	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
MGK264	MGK 264	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
MOLINT	Molinate	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
MPRXON	Methyl paraoxon	525.2	06/16/2011	06/17/2011	ND	ug/L	1	ug/L
MVNPHS	Mevinphos	525.2	06/16/2011	06/17/2011	ND	ug/L	1	ug/L
NORFLR	Norflurazon	525.2	06/16/2011	06/17/2011	ND	ug/L	1	ug/L
NPRMDE	Napropamide	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
OCBP	2,2',3,3',4,5',6,6'-Octachlorobiphenyl	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
PBUATE	Pebulate	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11013760
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-09
Laboratory: OCWD
Analysis Requested: 525

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
PCBP	2,2',3',4,6-Pentachlorobiphenyl	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
PCP	Pentachlorophenol (PCP)	525.2	06/16/2011	06/17/2011	ND	ug/L	1	ug/L
PHENAN	Phenanthrene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
PMTHRN	Permethrin-(total of cis/trans)	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
PROAMD	Pronamide	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
PROMET	Prometryn	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
PYRENE	Pyrene	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
SIMAZ	Simazine	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
SIMETY	Simetryn	525.2	06/16/2011	06/17/2011	ND	ug/L	1	ug/L
STRFOS	Stirofos	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
t-NONA	trans-nonachlor	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
TBTURN	Tebuthiuron	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
TCBP	2,4,5-Trichlorobiphenyl	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
TECBP	2,2',4,4'-Tetrachlorobiphenyl	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
TERSUL	Terbufos Sulfone	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
TRBACL	Terbacil	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
TRBURN	Terbutryn	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
TRCZOL	Tricyclazole	525.2	06/16/2011	06/17/2011	ND	ug/L	2	ug/L
TRDMFN	Tridemefon	525.2	06/16/2011	06/17/2011	ND	ug/L	1	ug/L
TRFLRN	Trifluralin	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
TRTION	Trithion	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L
VRNLTE	Vernolate	525.2	06/16/2011	06/17/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11013761
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-10
Laboratory: OCWD
Analysis Requested: 531

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALDI	Aldicarb	531	06/23/2011	06/24/2011	ND	ug/L	1	ug/L
ALDISN	Aldicarb sulfone	531	06/23/2011	06/24/2011	ND	ug/L	2	ug/L
ALDISX	Aldicarb sulfoxide	531	06/23/2011	06/24/2011	ND	ug/L	2	ug/L
BAYGON	Baygon	531	06/23/2011	06/24/2011	ND	ug/L	1	ug/L
CARBAR	Carbaryl	531	06/23/2011	06/24/2011	ND	ug/L	2	ug/L
CARBOF	Carbofuran	531	06/23/2011	06/24/2011	ND	ug/L	1	ug/L
HYDCFR	3-Hydroxycarbofuran	531	06/23/2011	06/24/2011	ND	ug/L	2	ug/L
MTHCRB	Methiocarb	531	06/23/2011	06/24/2011	ND	ug/L	4	ug/L
MTHOMY	Methomyl	531	06/23/2011	06/24/2011	ND	ug/L	1	ug/L
NPTHOL	1-Naphthol	531	06/23/2011	06/24/2011	ND	ug/L	5	ug/L
OXAMYL	Oxamyl	531	06/23/2011	06/24/2011	ND	ug/L	2	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11013762
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-12
Laboratory: OCWD
Analysis Requested: 547

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
GLYPHO	Glyphosate	547		06/28/2011	ND	ug/L	25	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11013763
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-14
Laboratory: OCWD
Analysis Requested: 549

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
DIQUAT	Diquat	549.1	06/15/2011	06/15/2011	ND	ug/L	4	ug/L
PARAQT	Paraquat	549.1	06/15/2011	06/15/2011	ND	ug/L	4	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11006231
Sample ID: 11015439
Sample Date/Time: 06/13/2011 09:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11060321-11
Laboratory: OCWD
Analysis Requested: 532

FIELD PARAMETERS
EC (umhos/cm): 364
pH (UNITS): 8.8
Temperature (°C): 25.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
DFLBNZ	Diflubenzuron	532	06/20/2011	06/21/2011	ND	ug/L	1	ug/L
DIURON	Diuron	532	06/20/2011	06/21/2011	ND	ug/L	1	ug/L
FLMTRN	Fluometuron	532	06/20/2011	06/21/2011	ND	ug/L	1	ug/L
LINURN	Linuron	532	06/20/2011	06/21/2011	ND	ug/L	1	ug/L
PRPANL	Propanil	532	06/20/2011	06/21/2011	ND	ug/L	1	ug/L
SIDURN	Siduron	532	06/20/2011	06/21/2011	ND	ug/L	1	ug/L
TBTURN	Tebuthiuron	532	06/20/2011	06/21/2011	ND	ug/L	1	ug/L
THDURN	Thidiazuron	532	06/20/2011	06/21/2011	ND	ug/L	1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SB-LEI/1
Station Type: WELL CASING
Perf Interval (ft bgs): 420-840
Aquifer: UNDEFINED

Well Owner: SEAL BEACH
Well Name: Leisure World
City: SEAL BEACH

Sample Group ID: 11007852
Sample ID: 11036149
Sample Date/Time: 07/26/2011 07:30
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11070662-02
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 353
pH (UNITS): 8.9
Temperature (°C): 26.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALACHL	Alachlor	507	08/03/2011	08/03/2011	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	08/03/2011	08/03/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	08/03/2011	08/03/2011	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	08/03/2011	08/03/2011	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	08/03/2011	08/03/2011	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	08/03/2011	08/03/2011	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	08/03/2011	08/03/2011	ND	ug/L	5	ug/L
EPTC	EPTC	507	08/03/2011	08/03/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	507	08/03/2011	08/03/2011	ND	ug/L	.1	ug/L
MALATH	Malathion	507	08/03/2011	08/03/2011	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	08/03/2011	08/03/2011	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	08/03/2011	08/03/2011	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	08/03/2011	08/03/2011	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	08/03/2011	08/03/2011	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	08/03/2011	08/03/2011	ND	ug/L	.5	ug/L
PARA	Parathion	507	08/03/2011	08/03/2011	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	08/03/2011	08/03/2011	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	08/03/2011	08/03/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	08/03/2011	08/03/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	08/03/2011	08/03/2011	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	08/03/2011	08/03/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	08/03/2011	08/03/2011	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	08/03/2011	08/03/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: SCWC-LAYT/1
Station Type: WELL CASING
Perf Interval (ft bgs): 250-800
Aquifer: UNDEFINED

Well Owner: GOLDEN STATE WATER CO - OC
Well Name: YellowTail
City: UNINCORPORATED

Sample Group ID: 10010369
Sample ID: 10022705
Sample Date/Time: 08/16/2010 09:50
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10080389-02
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 401
pH (UNITS): 8.5
Temperature (°C): 24.8
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use ***Qualifier: Validated Sample***

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
ALACHL	Alachlor	507	08/18/2010	08/19/2010	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	08/18/2010	08/19/2010	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	08/18/2010	08/19/2010	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	08/18/2010	08/19/2010	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	08/18/2010	08/19/2010	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	08/18/2010	08/19/2010	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	08/18/2010	08/19/2010	ND	ug/L	5	ug/L
EPTC	EPTC	507	08/18/2010	08/19/2010	ND	ug/L	.1	ug/L
ETHION	Ethion	507	08/18/2010	08/19/2010	ND	ug/L	.1	ug/L
MALATH	Malathion	507	08/18/2010	08/19/2010	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	08/18/2010	08/19/2010	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	08/18/2010	08/19/2010	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	08/18/2010	08/19/2010	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	08/18/2010	08/19/2010	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	08/18/2010	08/19/2010	ND	ug/L	.5	ug/L
PARA	Parathion	507	08/18/2010	08/19/2010	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	08/18/2010	08/19/2010	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	08/18/2010	08/19/2010	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	08/18/2010	08/19/2010	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	08/18/2010	08/19/2010	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	08/18/2010	08/19/2010	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	08/18/2010	08/19/2010	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	08/18/2010	08/19/2010	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-125/1
Station Type: WELL CASING
Perf Interval (ft bgs): 374-860
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Well No. 125
City: WESTMINSTER

Sample Group ID: 10005006
Sample ID: 10012196
Sample Date/Time: 04/20/2010 08:05
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10040489-03
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 406
pH (UNITS): 7.9
Temperature (°C): 19.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use ***Qualifier: Validated Sample***

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
ALACHL	Alachlor	507	04/27/2010	04/28/2010	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	04/27/2010	04/28/2010	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	04/27/2010	04/28/2010	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	04/27/2010	04/28/2010	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	04/27/2010	04/28/2010	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	04/27/2010	04/28/2010	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	04/27/2010	04/28/2010	ND	ug/L	5	ug/L
EPTC	EPTC	507	04/27/2010	04/28/2010	ND	ug/L	.1	ug/L
ETHION	Ethion	507	04/27/2010	04/28/2010	ND	ug/L	.1	ug/L
MALATH	Malathion	507	04/27/2010	04/28/2010	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	04/27/2010	04/28/2010	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	04/27/2010	04/28/2010	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	04/27/2010	04/28/2010	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	04/27/2010	04/28/2010	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	04/27/2010	04/28/2010	ND	ug/L	.5	ug/L
PARA	Parathion	507	04/27/2010	04/28/2010	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	04/27/2010	04/28/2010	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	04/27/2010	04/28/2010	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	04/27/2010	04/28/2010	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	04/27/2010	04/28/2010	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	04/27/2010	04/28/2010	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	04/27/2010	04/28/2010	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	04/27/2010	04/28/2010	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-125/1
Station Type: WELL CASING
Perf Interval (ft bgs): 374-860
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Well No. 125
City: WESTMINSTER

Sample Group ID: 11030356
Sample ID: 12000403
Sample Date/Time: 12/01/2011 08:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11120013-02
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 405
pH (UNITS): 8.2
Temperature (°C): 19.3
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
ALACHL	Alachlor	507	12/05/2011	12/07/2011	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	12/05/2011	12/07/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	12/05/2011	12/07/2011	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	12/05/2011	12/07/2011	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	12/05/2011	12/07/2011	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	12/05/2011	12/07/2011	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	12/05/2011	12/07/2011	ND	ug/L	5	ug/L
EPTC	EPTC	507	12/05/2011	12/07/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	507	12/05/2011	12/07/2011	ND	ug/L	.1	ug/L
MALATH	Malathion	507	12/05/2011	12/07/2011	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	12/05/2011	12/07/2011	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	12/05/2011	12/07/2011	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	12/05/2011	12/07/2011	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	12/05/2011	12/07/2011	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	12/05/2011	12/07/2011	ND	ug/L	.5	ug/L
PARA	Parathion	507	12/05/2011	12/07/2011	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	12/05/2011	12/07/2011	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	12/05/2011	12/07/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	12/05/2011	12/07/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	12/05/2011	12/07/2011	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	12/05/2011	12/07/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	12/05/2011	12/07/2011	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	12/05/2011	12/07/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 10001398
Sample ID: 10004051
Sample Date/Time: 01/25/2010 08:10
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 10010558-03
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 538
pH (UNITS): 7.8
Temperature (°C): 18.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

Data Access: Approved for External Use *Qualifier: Validated Sample*

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
ALACHL	Alachlor	507	01/26/2010	01/26/2010	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	01/26/2010	01/26/2010	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	01/26/2010	01/26/2010	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	01/26/2010	01/26/2010	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	01/26/2010	01/26/2010	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	01/26/2010	01/26/2010	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	01/26/2010	01/26/2010	ND	ug/L	5	ug/L
EPTC	EPTC	507	01/26/2010	01/26/2010	ND	ug/L	.1	ug/L
ETHION	Ethion	507	01/26/2010	01/26/2010	ND	ug/L	.1	ug/L
MALATH	Malathion	507	01/26/2010	01/26/2010	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	01/26/2010	01/26/2010	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	01/26/2010	01/26/2010	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	01/26/2010	01/26/2010	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	01/26/2010	01/26/2010	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	01/26/2010	01/26/2010	ND	ug/L	.5	ug/L
PARA	Parathion	507	01/26/2010	01/26/2010	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	01/26/2010	01/26/2010	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	01/26/2010	01/26/2010	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	01/26/2010	01/26/2010	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	01/26/2010	01/26/2010	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	01/26/2010	01/26/2010	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	01/26/2010	01/26/2010	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	01/26/2010	01/26/2010	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 11003579
Sample ID: 11012493
Sample Date/Time: 03/23/2011 08:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030560-04
Laboratory: OCWD
Analysis Requested: 525

FIELD PARAMETERS
EC (umhos/cm): 555
pH (UNITS): 8.
Temperature (°C): 18.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
24DNT	2,4-Dinitrotoluene	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
26DNT	2,6-Dinitrotoluene	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
ACENAP	Acenapthylene	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
ACETOC	Acetochlor	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
ALACHL	Alachlor	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
ALDRIN	Aldrin	525.2	03/24/2011	04/20/2011	ND	ug/L	1	ug/L
AMERYN	Ametryn	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
ANTHRA	Anthracene	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
ATRAZ	Atrazine	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
BaANTH	Benzo(a)anthracene	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
BaPYRE	Benzo(a)pyrene	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
BbFLUR	Benzo(b)fluoranthene	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
BBP	Butylbenzyl phthalate	525.2	03/24/2011	04/20/2011	ND	ug/L	2	ug/L
BDE100	2,2',4,4',6,-Pentabromodiphenyl ether	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
BDE153	2,2',4,4',5,5'-Hexabromodiphenyl ether	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
BDE154	2,2',4,4',5,6'-Hexabromodiphenyl ether	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
BDE183	2,2',3,4,4',5',6-Heptabromodiphenylether	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
BDE28	2,4,4'-Tribromodiphenyl ether	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
BDE47	2,2',4,4'-Tetrabromodiphenyl ether	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
BDE99	2,2',4,4',5,-Pentabromodiphenyl ether	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
BghiPR	Benzo(g,h,i)perylene	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
BHCa	HCH-alpha(Alpha-BHC)	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
BHCb	HCH-beta(Beta-BHC)	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
BHCd	HCH-delta(Delta-BHC)	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
BkFLUR	Benzo[k]fluoranthene	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
BTYATE	Butylate	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
BUTACL	Butachlor	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
CAFFEI	Caffeine	525.2	03/24/2011	04/20/2011	ND	ng/L	100	ng/L
CAPTAN	Captan	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
CBP	2-Chlorobiphenyl	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
CHRYS	Chrysene	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
CLBZLA	Chlorobenzilate	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
CLDA	Chlordane-alpha	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
CLDG	Chlordane-gamma	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
CLNEB	Chloroneb	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
ClPYRI	Chlorpyrifos	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
CLTNIL	Chlorothalonil	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
CPRPHM	Chloropropham	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
CYCATE	Cycloate	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
DBahAN	Dibenzo(a,h)anthracene	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
DCBP	2,3-Dichlorobiphenyl	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
DCLVOS	Dichlorvos	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
DCPA	DCPA-Dacthal	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 11003579
Sample ID: 11012493
Sample Date/Time: 03/23/2011 08:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030560-04
Laboratory: OCWD
Analysis Requested: 525

FIELD PARAMETERS
EC (umhos/cm): 555
pH (UNITS): 8.
Temperature (°C): 18.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
DDD	4,4'-DDD	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
DDE	4,4'-DDE	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
DDT	4,4'-DDT	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
DEHA	bis (2-ethylhexyl) adipate	525.2	03/24/2011	04/20/2011	ND	ug/L	2	ug/L
DEHP	bis (2-ethylhexyl) phthalate	525.2	03/24/2011	04/20/2011	ND	ug/L	2	ug/L
DEP	Diethyl phthalate	525.2	03/24/2011	04/20/2011	ND	ug/L	2	ug/L
DIELDR	Dieldrin	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
DMP	Dimethyl phthalate	525.2	03/24/2011	04/20/2011	ND	ug/L	2	ug/L
DMTH	Dimethoate	525.2	03/24/2011	04/20/2011	ND	ug/L	1	ug/L
DnBP	Di-n-butylphthalate	525.2	03/24/2011	04/20/2011	ND	ug/L	2	ug/L
DnOP	Di-n-octyl phthalate	525.2	03/24/2011	04/20/2011	ND	ug/L	2	ug/L
DPHNMD	Diphenamid	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
ENDOI	Endosulfan I	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
ENDOII	Endosulfan II	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
ENDOSL	Endosulfan sulfate	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
ENDR-A	Endrin Aldehyde	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
ENDRIN	Endrin	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
EPTC	EPTC	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
ETHPRP	Ethoprop	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
ETRDZL	Etridiazole	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
FLRDNE	Fluoridone	525.2	03/24/2011	04/20/2011	ND	ug/L	2	ug/L
FLUOR	Fluorene	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
FNAIML	Fenarimol	525.2	03/24/2011	04/20/2011	ND	ug/L	1	ug/L
HCBP	2,2',3,3',4,4',6-Heptachlorobiphenyl	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
HCICPD	Hexachlorocyclopentadiene	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
HEPEPX	Heptachlor epoxide	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
HEPTA	Heptachlor	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
HEXCLB	Hexachlorobenzene	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
HEXZON	Hexazinone	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
HXCBP	2,2',4,4',5,6'-Hexachlorobiphenyl	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
INDPYR	Indeno(1,2,3-cd)pyrene	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
IPHOR	Isophorone	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
LINDNE	HCH-gamma (Lindane)	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
METHOX	Methoxychlor	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
METOCL	Metolachlor	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
MGK264	MGK 264	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
MOLINT	Molinate	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
MPRXON	Methyl paraoxon	525.2	03/24/2011	04/20/2011	ND	ug/L	1	ug/L
MVNPHS	Mevinphos	525.2	03/24/2011	04/20/2011	ND	ug/L	1	ug/L
NORFLR	Norflurazon	525.2	03/24/2011	04/20/2011	ND	ug/L	1	ug/L
NPRMDE	Napropamide	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
OCBP	2,2',3,3',4,5',6,6'-Octachlorobiphenyl	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
PBUATE	Pebulate	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 11003579
Sample ID: 11012493
Sample Date/Time: 03/23/2011 08:40
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11030560-04
Laboratory: OCWD
Analysis Requested: 525

FIELD PARAMETERS
EC (umhos/cm): 555
pH (UNITS): 8.
Temperature (°C): 18.
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
Reported Values								
Data Access: Approved for External Use	***Qualifier: Validated Sample***							
PCBP	2,2',3',4,6-Pentachlorobiphenyl	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
PCP	Pentachlorophenol (PCP)	525.2	03/24/2011	04/20/2011	ND	ug/L	1	ug/L
PHENAN	Phenanthrene	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
PMTHRN	Permethrin-(total of cis/trans)	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
PROAMD	Pronamide	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
PROMET	Prometryn	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
PYRENE	Pyrene	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
SIMAZ	Simazine	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
SIMETY	Simetryn	525.2	03/24/2011	04/20/2011	ND	ug/L	1	ug/L
STRFOS	Stirofos	525.2	03/24/2011	04/20/2011	ND	ug/L	2	ug/L
t-NONA	trans-nonachlor	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
TBTURN	Tebuthiuron	525.2	03/24/2011	04/20/2011	ND	ug/L	2	ug/L
TCBP	2,4,5-Trichlorobiphenyl	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
TECBP	2,2',4,4'-Tetrachlorobiphenyl	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
TERSUL	Terbufos Sulfone	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
TRBACL	Terbacil	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
TRBURN	Terbutryn	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
TRCZOL	Tricyclazole	525.2	03/24/2011	04/20/2011	ND	ug/L	2	ug/L
TRDMFN	Tridemefon	525.2	03/24/2011	04/20/2011	ND	ug/L	1	ug/L
TRFLRN	Trifluralin	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
TRTION	Trithion	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L
VRNLTE	Vernolate	525.2	03/24/2011	04/20/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

ORANGE COUNTY WATER DISTRICT
HISTORICAL SAMPLE INFORMATION AND RESULTS

Station Name: WM-RES2/1
Station Type: WELL CASING
Perf Interval (ft bgs): 340-937
Aquifer: UNDEFINED

Well Owner: WESTMINSTER
Well Name: Res. Well No. 2
City: WESTMINSTER

Sample Group ID: 11030586
Sample ID: 12000396
Sample Date/Time: 11/30/2011 08:00
End Sample Date/Time:
Sample Depth(ft):
Sample Matrix: WATER
Sampling Method: DEDICATED PUMP
Sampling Agency: ORANGE COUNTY WATER DISTRICT
Sampled By: BRIAN OKEY
Monitoring Program: Title 22

Lab Sample Number: 11110740-02
Laboratory: OCWD
Analysis Requested: 507

FIELD PARAMETERS
EC (umhos/cm): 512
pH (UNITS): 7.9
Temperature (°C): 18.2
Dissolved Oxygen (mg/L): NA
Dissolved Oxygen Temperature (°C): NA
Total Chlorine (mg/L): NA
Free Chlorine (mg/L): NA

Reported Values

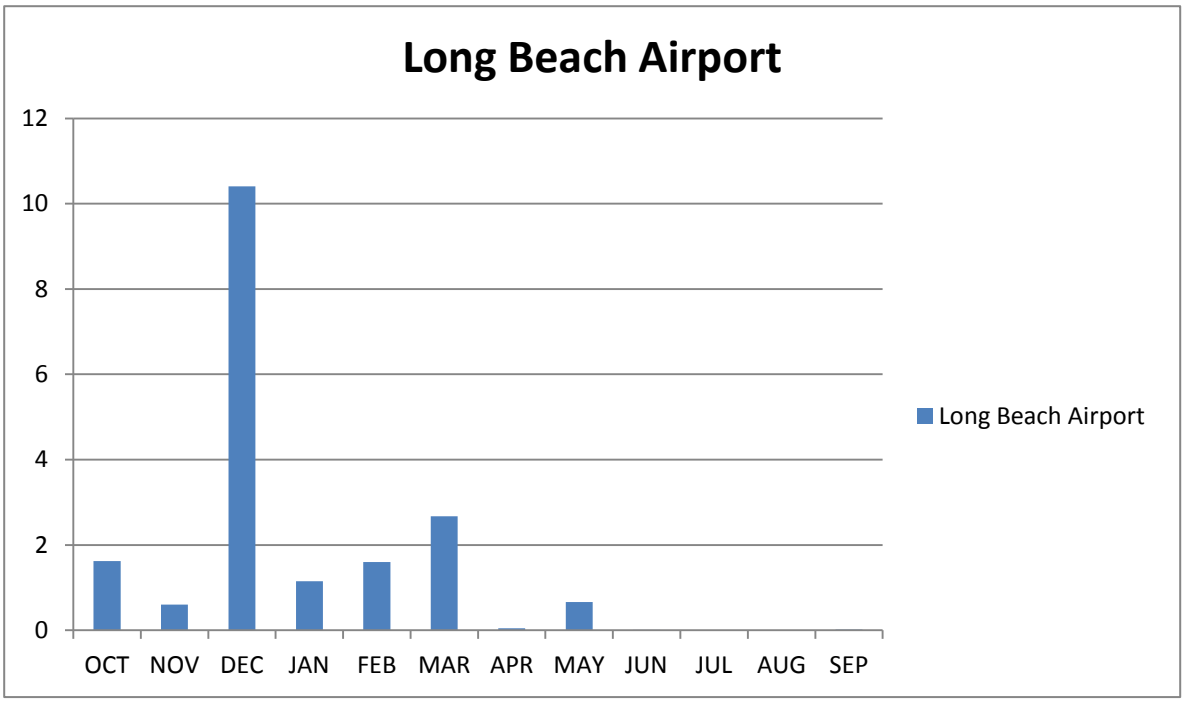
Data Access: Approved for External Use ***Qualifier: Validated Sample***

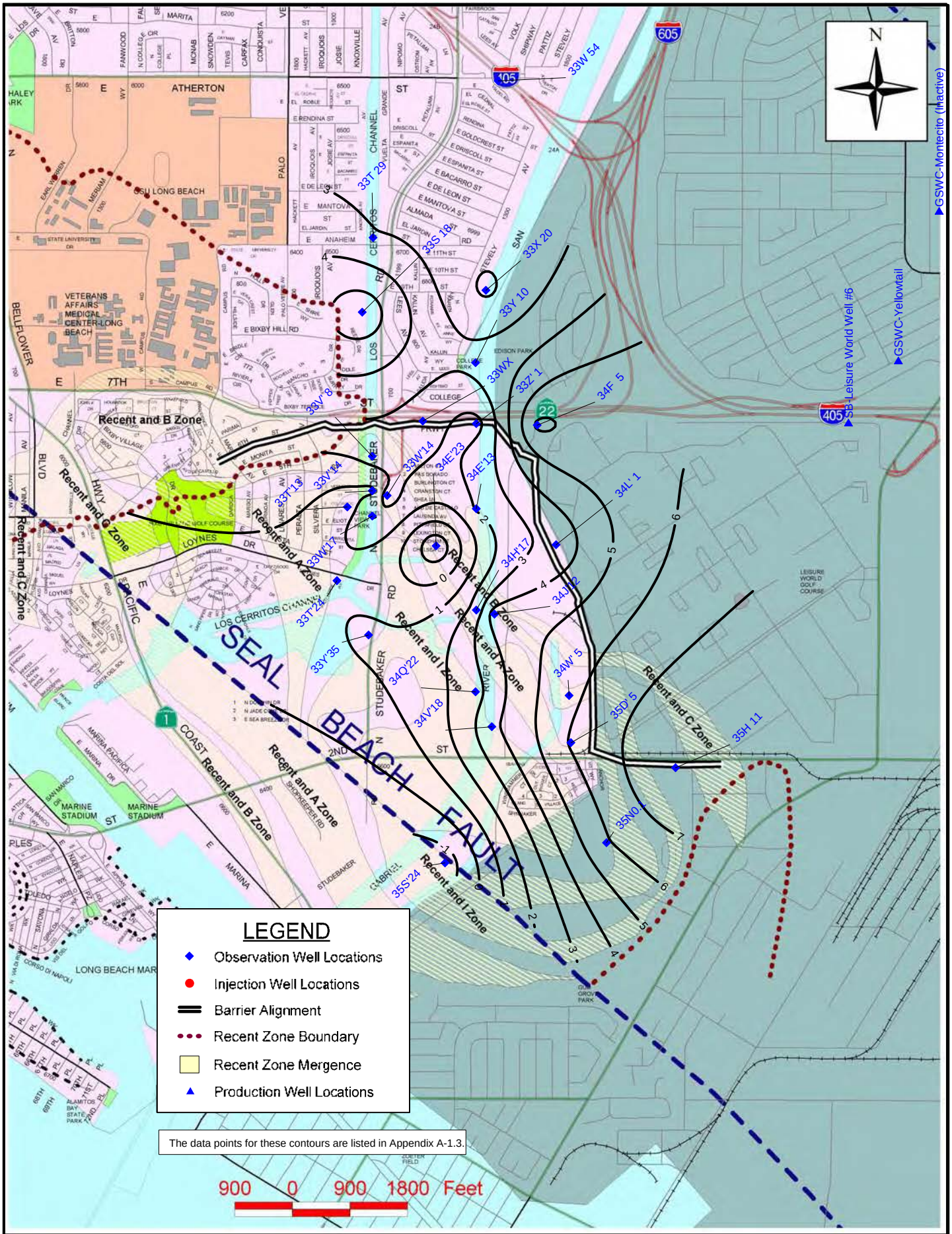
Parameter		Analysis	Dates		Results		Detection Limit	
Abbreviation	Name	Method	Extract	Analysis	Value	Units	Value	Units
ALACHL	Alachlor	507	12/05/2011	12/06/2011	ND	ug/L	.05	ug/L
ATRAZ	Atrazine	507	12/05/2011	12/06/2011	ND	ug/L	.1	ug/L
BROMAC	Bromacil	507	12/05/2011	12/06/2011	ND	ug/L	.5	ug/L
BUTACL	Butachlor	507	12/05/2011	12/06/2011	ND	ug/L	.38	ug/L
CAFFEI	Caffeine	507	12/05/2011	12/06/2011	ND	ng/L	300	ng/L
DIAZI	Diazinon	507	12/05/2011	12/06/2011	ND	ug/L	.1	ug/L
DMTH	Dimethoate	507	12/05/2011	12/06/2011	ND	ug/L	5	ug/L
EPTC	EPTC	507	12/05/2011	12/06/2011	ND	ug/L	.1	ug/L
ETHION	Ethion	507	12/05/2011	12/06/2011	ND	ug/L	.1	ug/L
MALATH	Malathion	507	12/05/2011	12/06/2011	ND	ug/L	10	ug/L
METOCL	Metolachlor	507	12/05/2011	12/06/2011	ND	ug/L	.8	ug/L
MOLINT	Molinate	507	12/05/2011	12/06/2011	ND	ug/L	.5	ug/L
MPARA	methyl-Parathion	507	12/05/2011	12/06/2011	ND	ug/L	.5	ug/L
MTRBZN	Metribuzin	507	12/05/2011	12/06/2011	ND	ug/L	.2	ug/L
NORFLR	Norflurazon	507	12/05/2011	12/06/2011	ND	ug/L	.5	ug/L
PARA	Parathion	507	12/05/2011	12/06/2011	ND	ug/L	.5	ug/L
PROMET	Prometryn	507	12/05/2011	12/06/2011	ND	ug/L	.1	ug/L
PROMTN	Prometon	507	12/05/2011	12/06/2011	ND	ug/L	.1	ug/L
PROPAZ	Propazine	507	12/05/2011	12/06/2011	ND	ug/L	.1	ug/L
PROPCL	Propachlor	507	12/05/2011	12/06/2011	ND	ug/L	.5	ug/L
SIMAZ	Simazine	507	12/05/2011	12/06/2011	ND	ug/L	.1	ug/L
THIO	Thiobencarb	507	12/05/2011	12/06/2011	ND	ug/L	.5	ug/L
TRBACL	Terbacil	507	12/05/2011	12/06/2011	ND	ug/L	.1	ug/L

NA: Not Analyzed
ND: Not Detected
TR: Trace

LONG BEACH AIRPORT PRECIPITATION DATA for Water Year 2011												
Location	**OCT**	**NOV**	**DEC**	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**
Long Beach Airport	1.62	0.60	10.41	1.15	1.60	2.67	0.05	0.66	0.01	0.00	0.00	0.02

Notes:
The water year starts on October 1 and ends on September 30. All units of the precipitaion are in inches.
Total water Year 2011 percipitation is 18.79 inches.





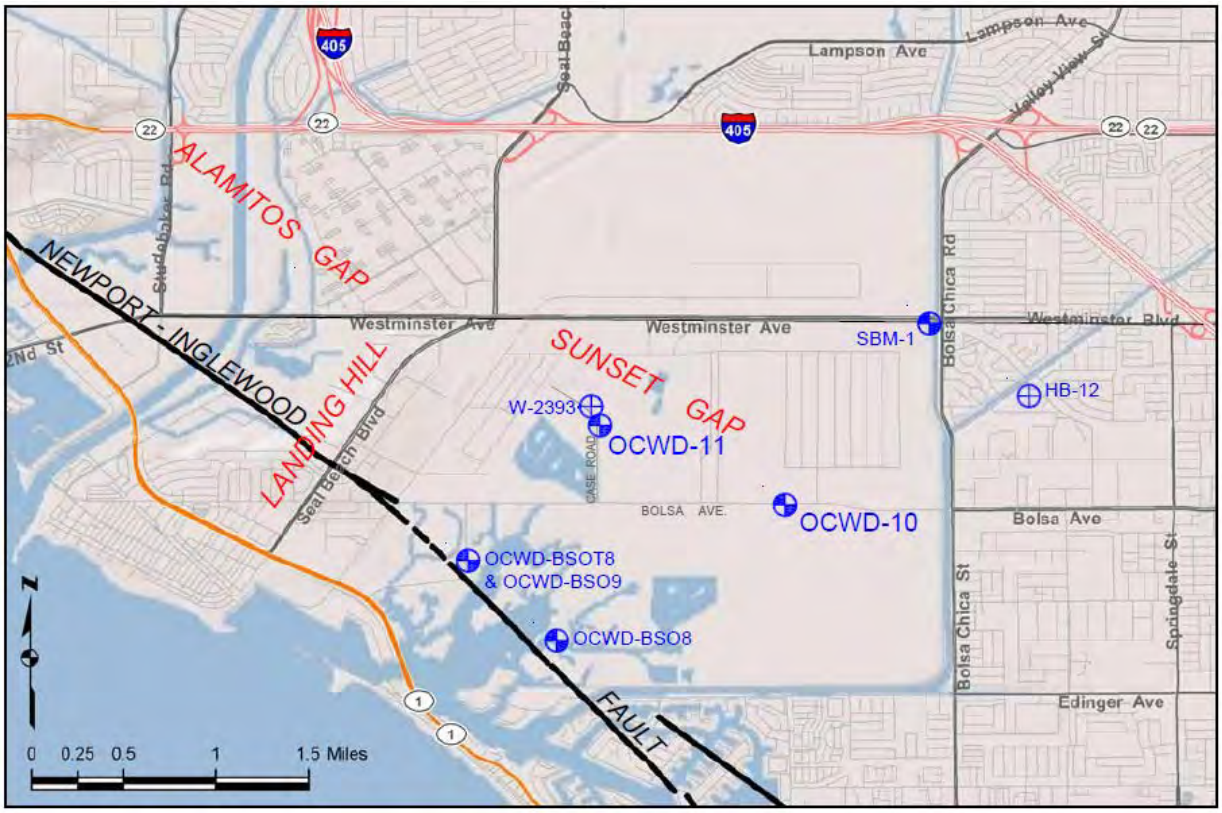
Alamitos Barrier Project
R Zone: Change in Elevation(ft), Spring 2010 to Spring 2011

A-1.2

R zone GW.srf

Source: http://dpw.lacounty.gov/wrd/barriers/files/ABP_FY10-11_Annual_JMC_Report.pdf

Location of Orange County Water District Wells OCWD-BS10 and OCWD-BS11



Source: Geotechnical Consultants, Inc. Summary of Operations, Nested Monitoring Wells, OCWD-BS10 and OCWD-BS11, Seal Beach, California, Orange County Water District, May 12.